

WINDSOR

Plan of Conservation and Development

Adopted September 29, 2015
Windsor Town Planning and Zoning Commission

WELCOME



Dear Windsor Residents,

Welcome to the 2015 Plan of Conservation & Development for Windsor. This Plan represents nearly two years of work, largely by the Town Planning and Zoning Commission, who conducted numerous public meetings and workshops involving both Town staff and the citizens of Windsor.

I would like to thank all of the citizens of Windsor who participated in the many public meetings and workshops. Their participation and input was used to formulate a vision for Windsor's future, setting the tone for the Plan and how it will be implemented. It is the hope of the Planning Commission that this Plan will be actively used as a guide to implement the continued good planning that has gained Windsor national recognition in the past.

This Plan was adopted after a public hearing of the Town Planning and Zoning Commission on September 29, 2015 and shall have an effective date of October 14, 2015.

Sincerely,

A handwritten signature in black ink, appearing to read "Anita M. Mips", is written over the typed name.

Anita M. Mips
Town Planning and Zoning Commission Chair

TABLE OF CONTENTS



Introduction

1	Introduction	1-1
2	Planning Context	2-1

Conservation Themes

3	Conserve Natural Resources	3-1
4	Preserve Open Space	4-1
5	Conserve Agricultural Resources	5-1
6	Preserve Historic Resources	6-1

Development Themes

7	Guide Housing & Residential Development	7-1
8	Support Business & Economic Development	8-1
9	Enhance Villages	9-1
10	Day Hill Corporate Area	10-1

Infrastructure Themes

11	Maintain Excellent Community Facilities & Services	11-1
12	Improve Transportation Facilities	12-1
13	Guide Utility Infrastructure	13-1

Conclusion

14	Future Land Use Plan	14-1
15	Conclusion	15-1

Acknowledgments

INTRODUCTION

1

Introduction to Windsor

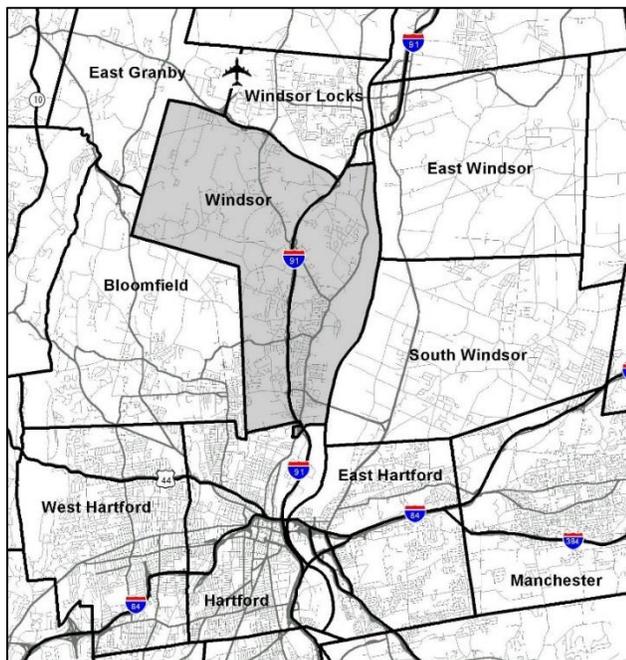
Located in north-central Connecticut, Windsor is strategically located between Hartford, CT and Springfield, MA.

The oldest town in Connecticut, Windsor is a diverse, amenity-rich community: a recurring theme evident throughout this plan. Windsor's diversity stems from its variety of housing options, its broad commercial base, its racial and ethnic mix of residents, and its varied character; ranging from historic to modern and rural to urban.

Windsor is amenity-rich due to its unparalleled transportation facilities, excellent community facilities, ubiquitous utilities, wide variety of cultural facilities/events, abundant natural/scenic resources and rich heritage. This Plan of Conservation and Development is intended to continue and enhance Windsor's role as a diverse and amenity-rich community.

This Plan has been prepared to help guide Windsor's future conservation and development ...

Windsor's Regional Location



Statutory Reference

Section 8-23 of the Connecticut General Statutes requires that the Town Planning and Zoning Commission prepare, adopt, and amend a Plan of Conservation and Development for Windsor.

The requirements for the Plan are presented on the facing page.

About Plans of Conservation & Development

A Plan of Conservation and Development is a tool for guiding the future of a community. Its purpose is to establish a common vision for the community's future and provide strategies to guide conservation and development towards attaining that vision. While intended to guide conservation and development over the course of a decade, a Plan of Conservation and Development can lay the foundation for goals and visions reaching much farther into the future.

In addition to guiding the conservation and development of Windsor, this Plan is intended to address the social and economic development of the community as well.

This document is the sixth in a series of plans dating back to Windsor's first Plan of Development, adopted in 1955. A map-based plan was adopted in the mid-1960s followed by a more comprehensive plan, prepared by Brown, Donald, & Donald and adopted in 1973. The most recent plan was adopted in 2004 and various chapters have been updated in the interim.

These plans influenced Windsor's land use regulations and helped guide the overall conservation and development of the community over the last 60 plus years. Continuing Windsor's long planning tradition, this Plan will guide Windsor through the next ten years and beyond.

This Plan of Conservation and Development is primarily an advisory document intended to provide a framework for consistent decision-making by the Town Planning and Zoning Commission (TPZC), other town boards and commissions, and local residents with regard to conservation and development activities in Windsor over the next decade and beyond.

While the statutory responsibility to adopt the Plan rests with the TPZC, implementation will only occur with the diligent efforts of the residents and officials of the Town of Windsor. The Plan will only be effective if it is understood and supported by the people of Windsor, and implemented by local boards and commissions.

HIGHLIGHTS FROM CONNECTICUT GENERAL STATUTES 8-23 - PLAN OF CONSERVATION AND DEVELOPMENT

The Commission shall:

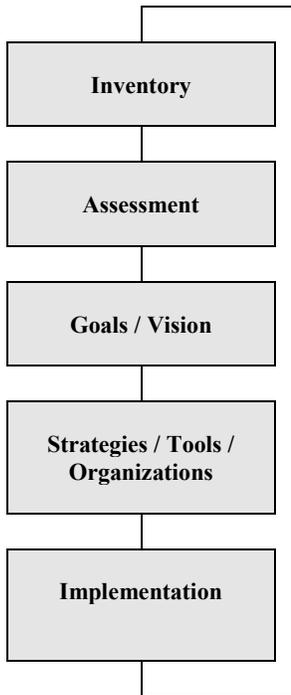
- Prepare or amend and adopt a plan of conservation and development at least once every 10 years
- Regularly review and maintain the plan after adoption

The Plan shall:

- be a statement of policies, goals and standards for the physical and economic development of the municipality;
- provide for a system of principal thoroughfares, parkways, bridges, streets, sidewalks, multipurpose trails and other public ways;
- promote, with the greatest efficiency and economy, the coordinated development of the municipality and the general welfare and prosperity of its people and identify areas where it is feasible and prudent (i) to have compact, transit accessible, pedestrian-oriented mixed use development patterns and land reuse, and (ii) to promote such development patterns and land reuse;
- recommend the most desirable use of land within the municipality for residential, recreational, commercial, industrial, conservation, agricultural and other purposes and include a map showing such proposed land uses;
- recommend the most desirable density of population in the several parts of the municipality;
- note inconsistencies with the State's growth management principles;
- make provision for the development of housing opportunities and promote housing choice and economic diversity in housing;
- consider state and regional plans of conservation and development and note any inconsistencies with the following growth management principles (see Chapter 14):
 - (i) Redevelopment and revitalization of commercial centers and areas of mixed land uses with existing or planned physical infrastructure;
 - (ii) expansion of housing opportunities and design choices to accommodate a variety of household types and needs;
 - (iii) concentration of development around transportation nodes and along major transportation corridors to support the viability of transportation options and land reuse;
 - (iv) conservation and restoration of the natural environment, cultural and historical resources and existing farmlands;
 - (v) protection of environmental assets critical to public health and safety; and
 - (vi) integration of planning across all levels of government to address issues on a local, regional and state-wide basis.

The Plan may show recommendations for:

- parks, playgrounds and other public grounds
- the general location, relocation and improvement of schools and other public buildings
- the general location and extent of public utilities
- programs for the implementation of the plan
- plans for implementation of affordable housing
- plans for open space acquisition and greenways protection and development
- plans for corridor management areas along limited access highways or rail lines
- proposed priority funding areas
- any other recommendations as will, in the commission's or any special committee's judgment, be beneficial to the municipality



The Planning Process

The planning process used to prepare the elements of the Plan is illustrated by the adjacent flowchart.

While the planning process continued after the adoption of the 2004 Plan, with the update of numerous chapters, the final push to complete a comprehensive update of the Plan began by identifying local issues and preparing an assessment of conditions and trends to put the planning process into the proper context.

A series of public meetings and community workshops, including the extensive effort to produce the Windsor Center Transit Oriented Development Plan, were held to solicit public input; generate discussion; set goals and define visions; and test preliminary strategies through planning exercises and open forums designed to give residents and business owners a say in the future of Windsor. Many boards and commissions were consulted for their insight as well. The results of these meetings were used to refine or develop alternative strategies to be incorporated into topical draft chapters for further review and refinement by the TPZC as well as the public.

A second round of workshops with the TPZC was used to refine the draft chapters, followed by an open public meeting to give the public an opportunity to comment on the entire plan prior to referral to the Town Council and Capitol Region Council of Governments and eventual hearing on adoption by the TPZC.

The implementation phase takes place after the Plan is adopted and the various recommendations are put into action and evaluated. The TPZC has both the statutory responsibility to adopt the Plan and the lead role in overseeing the Plan's implementation (see separate Implementation Element).

However, implementation will only occur with the diligent efforts of the residents and officials of the Town of Windsor. As a result, responsibility for implementation rests with all boards, agencies, and individuals in Windsor.

Public Workshop



Public Workshop



PLANNING CONTEXT

2

Historical Context

Windsor's landscape evolved over millions of years as a result of natural and geologic processes. Over the course of a comparatively few 370 years since Windsor's first European settlement, residents have made significant changes in both the natural and developed landscape.

Native American people are known to have inhabited this region as early as 10,000 years ago. By the early 1600s, several tribes, including the Wampanoags and their infamous Sachem, "King Phillip," were known to inhabit the region, living nomadic lives as hunter/gatherers supplemented by subsistence farming.

Colonial Settlement

In 1614, Dutchman Adriaen Block sailed through Long Island Sound and up the Connecticut River, leading to the establishment of a trading post and fort in Hartford in 1633. In that same year, a company from Plymouth Colony established a trading post at the strategic confluence of the Connecticut and Farmington Rivers. The resulting settlement gives rise to Windsor claim as oldest town in Connecticut.

The 17th century was marked by agriculture and early industry in Windsor. The fertile alluvial soils found in the floodplains of both major rivers supported subsistence agriculture. As Windsor's population increased, so did demand for additional farmland. Growth and abundant water power would lead to the construction of Connecticut's first gristmill around 1639, followed by sawmills, textile mills, and tool shops. By 1641, the Bissell Ferry gave Windsor a strategic edge. This vital river crossing connected the two roads used to travel between Hartford and Springfield.

By the mid-1700s, residents were involved in agricultural activities (especially tobacco), brick-making, shipbuilding, and the production of "wooden ware" as well as other lumber products. The productivity of Windsor's farmers helped make Connecticut the "breadbasket" of the Revolutionary War. By 1790, Windsor had grown to a community of about 2,700 residents.

Since the Connecticut River was not navigable much further beyond Windsor, merchant ships trading with Europe and the West Indies would make Windsor an important trading center for tobacco, beef, lumber, wooden utensils, bricks, grain

Settlement Pattern

Windsor's initial settlement was an enclosed village compound, surrounded by a tall log fence called a palisade (the origin of the name Palisado Avenue) that offered some protection from certain hostile Native American inhabitants of the area.

As the population grew and Native American conflicts subsided, settlement patterns became more dispersed as residents moved to outlying areas to be nearer to their fields.

Community Formation

New communities in Connecticut generally were formed as follows.

People built houses in outlying areas so that they did not have to travel back and forth from the village to their fields on a daily basis.

Settlers then established parishes or ecclesiastical societies in these outlying areas so that they would not have to travel back and forth to the village for religious services.

Finally, parishioners established a town (with the approval of the General Assembly) so that they would not have to travel to the village for town meetings and other governmental purposes.

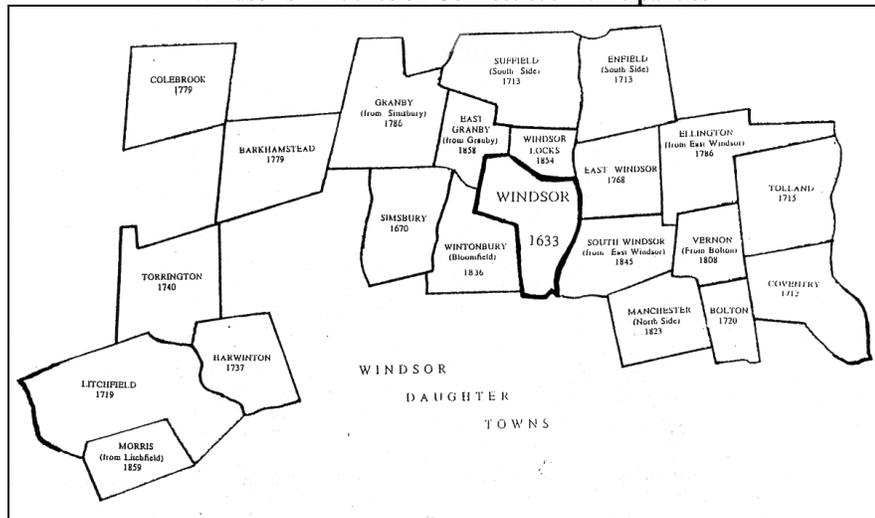
and cotton products. This changed after the first stone bridge was built in Hartford in 1820, effectively blocking up-river passage.

While agriculture was still the major economic activity in Windsor, other activities were also significant. Brick-making was a major industry and over one-fourth of the bricks used in Connecticut by 1845 were made in Windsor. Mills located in the Poquonock area (powered by the Farmington River) produced paper and cotton products.

Establishment of Other Communities

Like other early communities in Connecticut, Windsor originally encompassed a large geographic area. Windsor proprietors (property owners) were granted land rights in other parts of Connecticut as well.

Windsor's Influence on Connecticut Municipalities



As Windsor's population spread, the distances between homes, mills, meeting halls and churches became unmanageable for the transportation modes of the day. As a result, petitions were made to the General Assembly, creating 22 separate parishes, and later towns, out of the original Town of Windsor and the holdings of its proprietors.

Community Evolution

The arrival of the railroad in 1844 coincided with the Industrial Revolution, a period of economic transformation in the country. Despite agriculture remaining the principal economic activity in town, Windsor saw significant change during this period. The Eddy Electric Company, a major national supplier of electroplating equipment after 1885, became the main industry in town and was eventually sold to the General Electric Company in 1910. The Windsor Canning Company, established in 1894, was well known for commercial canning of locally grown produce. The first Rainbow Dam was constructed in 1890 to harness the Farmington River for the production of electricity.

The introduction of trolley cars in 1895 marked the beginning of Windsor's transformation into a suburban community as trolley routes connected Windsor to both Hartford and Springfield, allowing residents to work in Hartford and other surrounding towns. Between 1900 and 1940, Windsor's population increased from about 3,600 people to about 10,000 people.

The first shade tent in New England was established in Poquonock in 1900, recreating the tropical growing conditions found in locations such as Sumatra that are ideal for shade leaf tobacco used for cigar wrappers. The Windsor Company, established in 1918 by John Luddy, produced tentcloth for shading tobacco and other plants. A Tobacco Experiment Station was established in 1921 at Bloomfield Avenue to experiment with refinements in growing shade leaf tobacco and by 1935 Windsor was the center of the shade tobacco industry in Connecticut.

Shade Tobacco Field



Tobacco Barns



History of Planning

Windsor established a Town Plan Commission in 1918.

A 1920 court case (Windsor v. Whitney) clarified that a community could require the dedication of streets as a prerequisite to platting of lots.

A zoning commission and a zoning board of appeals were established in 1931.

The Town Plan and Zoning Commission was established in 1947 by combining the two commissions.

Subdivision regulations were adopted in 1955.

Windsor adopted its first Plan of Development in 1955.

A map-based Plan of Development was adopted in the 1960s.

A comprehensive Plan of Development was adopted in 1973 and 1991.

The last Plan of Conservation and Development was adopted in 2004 and updated in 2008.

Post-War Suburbanization

Windsor, like many towns, experienced a surge of post World War II housing development as soldiers returned home to start families and purchase new homes and federal policies encouraged suburban single-family housing. The construction of Interstate 91 and the emergence of the automobile as the predominant form of transportation in the 1950s fueled suburban residential expansion and led to the establishment of the Day Hill Road industrial area.

Between 1950 and 1970, Windsor's economy shifted from predominantly agricultural to industrial as companies such as the Taylor and Fenn Company, the Hartford Machine Screw Company, and Combustion Engineering swelled the number of manufacturing jobs in Windsor from 100 to roughly 5,400. Windsor's population nearly doubled during this period, increasing from nearly 12,000 to over 22,500 residents. By the year 2000, Windsor had grown to become a community of 28,237 residents.

Lessons of History

Throughout its history, Windsor has taken advantage of its strategic location, beginning with its settlement at the confluence of two major rivers through today with its easy access to Interstates 91 and 291 as well as Bradley International Airport. From its earliest start as a trading post, through transitions to agricultural, industrial and now service based economies Windsor continues to maintain a diversified economy. These factors that have contributed to Windsor's growth and prosperity, together with a diverse housing stock, an abundance of amenities, community character and overall quality of life are expected to continue attracting future residential and commercial growth.

Windsor Train Station

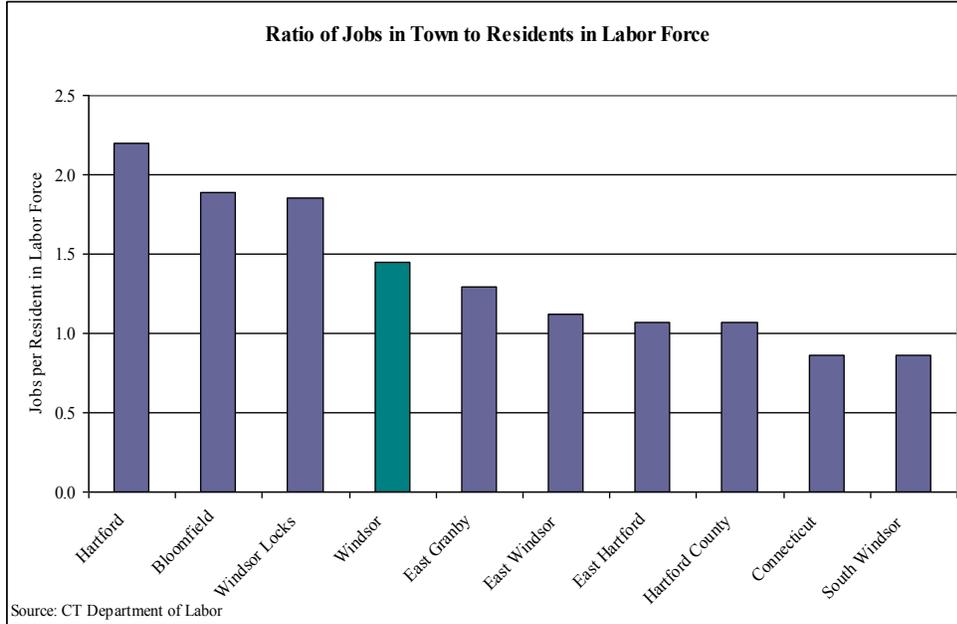


Historic Home



Regional Role

Windsor serves as a regional employment center, with 1.45 jobs per resident in the labor force. That means that even if all working residents filled jobs in Windsor, employers would need to import workers from the region to fill all jobs.



Despite having more jobs available than resident workers in town, many Windsor residents work elsewhere in the region as residents from other communities come to Windsor to work. The tables in the sidebar indicate jobs in Hartford draw the highest percentage of Windsor residents, while only 16% of Windsor’s working residents are employed in town.

Conversely, Windsor employers fill only 10% of their positions with Windsor residents – in fact more workers commute from Massachusetts than from within Windsor.

Windsor also offers many amenities to residents of the region. These include:

- Cultural venues (e.g., SummerWind Performing Arts Center, historic sites)
- Recreational destinations (e.g., Northwest Park, boat launches, river trails, Bissell Bridge Trail)

Key components of the region’s transportation infrastructure are located in Windsor. Drivers from neighboring communities must travel through Windsor to access I-91 and I-291. The Windsor train station links commuters to New Haven, New York and northern New England.

Where Windsor Residents Work, 2010

Top 10 Destinations	% of Windsor Working Residents
Hartford	24%
Windsor	16%
Bloomfield	6%
W. Hartford	4%
E. Hartford	4%
Manchester	4%
Farmington	3%
Windsor Locks	3%
Enfield	2%
E. Windsor	2%

Source: US Census.

Where Workers in Windsor Live, 2010

Top 10 Origins	% of Windsor Jobs
Massachusetts	13%
Windsor	10%
Enfield	7%
Hartford	5%
Manchester	4%
E. Hartford	3%
W. Hartford	3%
Windsor Locks	3%
S. Windsor	3%
Suffield	2%

Source: US Census.

Rate of Growth

	Windsor	State
1940s	18%	17%
1950s	65%	26%
1960s	16%	20%
1970s	12%	3%
1980s	10%	6%
1990s	2%	4%
2000s	3%	5%
2010-2012	0.1%	-0.05%

Source: US Census.

Population Change, 2000 to 2010

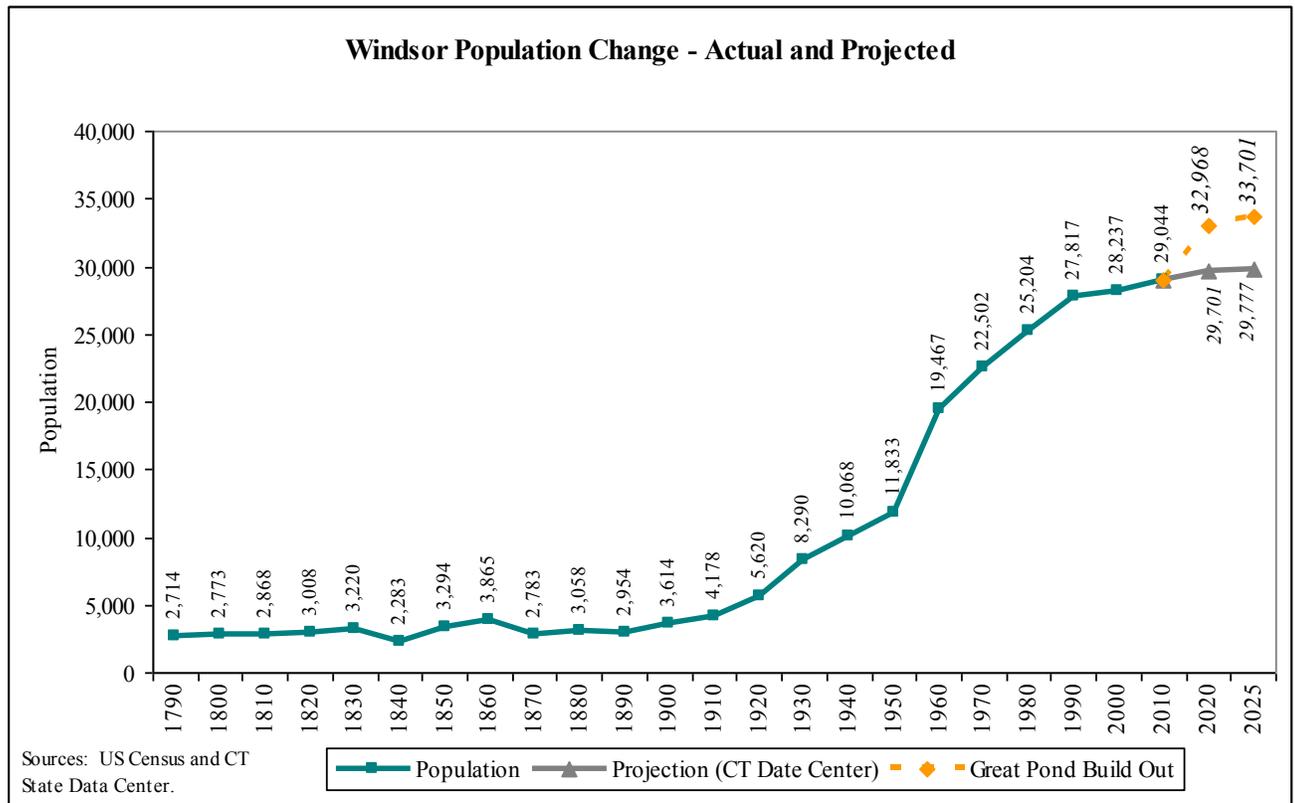
Central City & Inner Ring Suburbs	
Hartford	3,197
East Hartford	1,677
Newington	1,256
Bloomfield	899
Windsor	807
Wethersfield	397
Other Suburbs	
Glastonbury	2,551
East Windsor	1,344
South Windsor	1,297
Windsor Locks	455
East Granby	403

Source: US Census

People of Windsor

Population Change

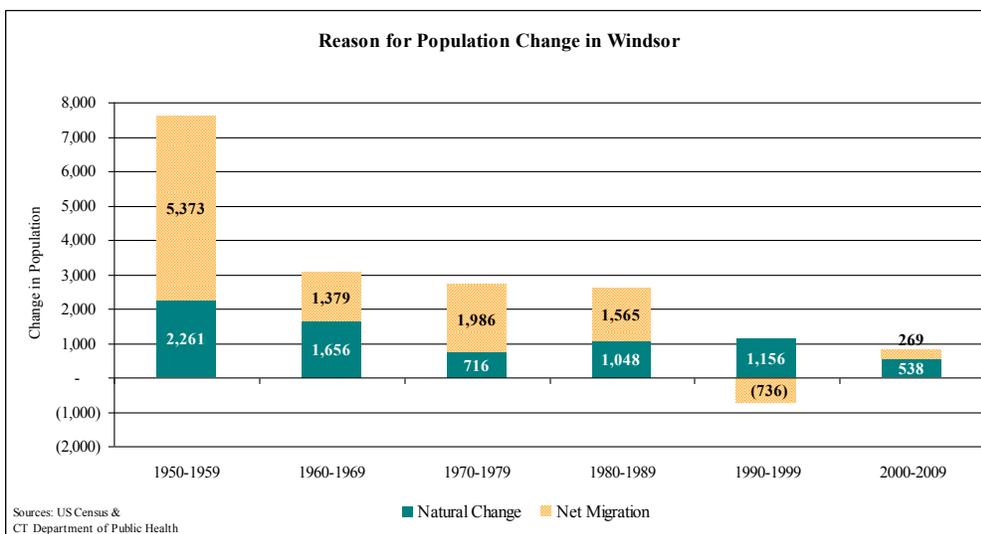
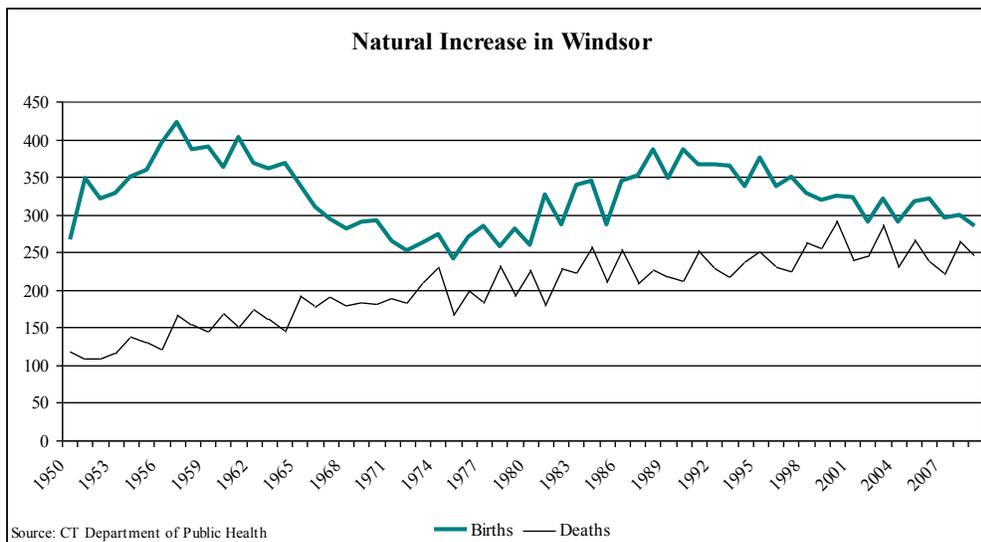
Windsor’s population reached 29,067 by 2012, according the US Census. Windsor’s overall growth rate of 3% from 2000 to 2010 was only slightly less than that of the State. But in terms of number of new residents, Windsor lagged behind not only other inner ring suburbs, but other suburbs in the region. Only Wethersfield, Windsor Locks and East Granby experienced less growth (see sidebar). If current trends continue, population growth will remain relatively flat. But given the number of new housing units approved but not yet built, Windsor could see a greater growth rate. The following chart incorporates a higher amount of growth, based on the anticipated population at Great Pond (a mixed use development with over 4,000 housing units slated for development).



Reasons for Population Change

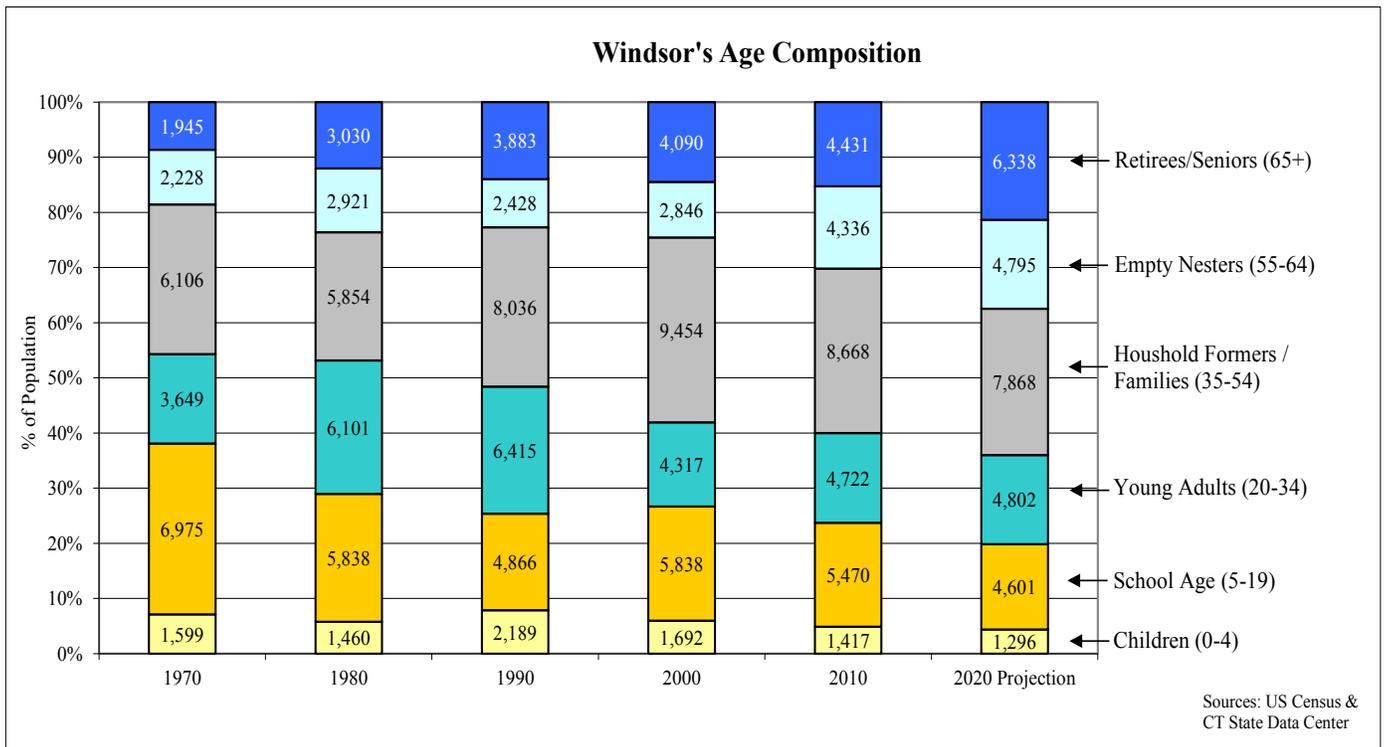
Communities grow when births outnumber deaths and when new people move to town. The reasons for Windsor's growth from 1950 to 2010 have been mixed. During three decades (1950s, 1970s, and 1980s), Windsor's growth was predominantly driven by people moving to town. In the 1960s, and again from 1990 to 2010, natural change was the leading cause of population growth (i.e., more births than deaths), but growth overall is down as fewer people are migrating to Windsor.

It is reasonable to expect that birth rates in Windsor will follow state-wide trends and continue to decrease. With decreased birth rates and lower migration rates, Windsor would see a drop in population. However, a large number of multi-family units have been approved but not yet built (over 4,000). New development means that Windsor might see in-migration play a more prominent role in the next ten years and spur population growth.



Age Composition

Each age group has different public facility and service needs and demands. While Windsor's total population is expected to experience only modest growth over the next 20 years, there will be significant change in the age makeup of the community. The most notable trend is the continued growth of the age 55 and over population, both in total number and in proportion. It should be noted that the growth of the 55 and over population is not unique to Windsor as it is a national phenomenon caused by the aging of the "Baby Boom" generation.



A continued decrease in children and increase in the older population might affect demand for public facilities, services and programs as follows:

Age Group	Needs	Future Trend
Children (0 - 4)	<ul style="list-style-type: none"> • Child Care • Pre-school programs 	↓
School Age (5-19)	<ul style="list-style-type: none"> • School facilities • Recreation programs & facilities 	↓
Young Adults (20-34)	<ul style="list-style-type: none"> • Rental housing, starter homes • Social destinations 	↑
Household Formers / Families (35-54)	<ul style="list-style-type: none"> • Starter housing, trade-up homes • Family programs 	↓
Empty Nesters (55-64)	<ul style="list-style-type: none"> • Smaller homes • Leisure programs & facilities 	↑
Retirees / Seniors (65+)	<ul style="list-style-type: none"> • Lower upkeep, higher service housing • Elderly programs, tax relief 	↑

Percentage of Population that is Minority

	Windsor	State
1950	3%	3%
1960	4%	4%
1970	3%	7%
1980	12%	10%
1990	21%	13%
2000	33%	18%
2010	45%	22%

Source: US Census

Percentage of Population that is of Hispanic Origin

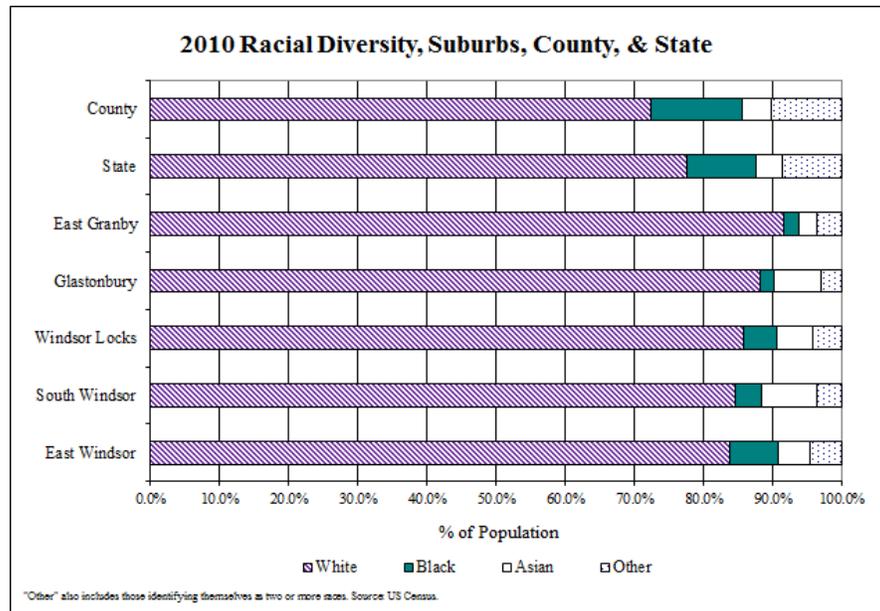
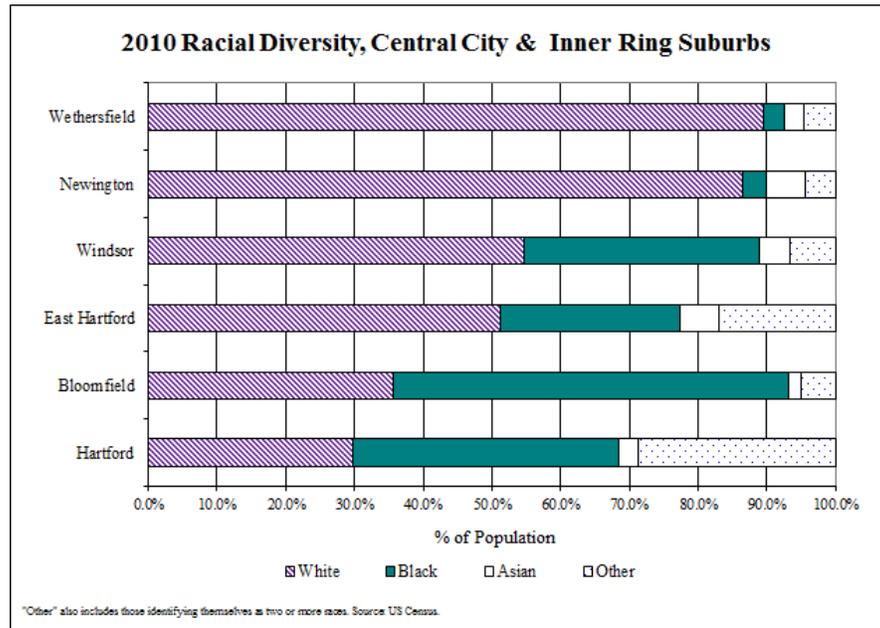
	Windsor	State
2000	5%	9%
2010	8%	13%

Source: US Census

Racial Diversity

Windsor has a more racially diverse population than many of the region’s communities. In 2010, almost half of Windsor’s population identified themselves as either black, Asian or other. Windsor’s racial composition is more similar to East Hartford and Bloomfield and more diverse than Hartford County, the State, and other suburban communities.

Since 1970, the Town’s racial diversity has increased significantly as upwardly mobile minority residents have been attracted to the amenities and relatively affordable housing choices that Windsor offers.



Household Characteristics

Windsor's average household size continues to shrink, following national and statewide trends. In 2010, Windsor's average household size was 2.54, down from 3.63 in 1960 (see sidebar). This smaller household size is influenced by families choosing to have fewer children, delaying having children, divorce, and simply more people living alone.

The majority of households in Windsor in 2010 only have 1 or 2 persons and no children (only 32% of Windsor's households have a child under age 18). Just over a quarter of households have at least one person age 65 or older. Windsor's household composition does not greatly differ from the County, State or other communities.

% of Households with Children Under Age 18, 2010

Central City and Inner Ring Suburbs	
Hartford	37%
East Hartford	33%
Windsor	32%
Newington	29%
Wethersfield	28%
Bloomfield	24%

Other Suburbs	
Glastonbury	37%
East Granby	35%
South Windsor	35%
Windsor Locks	28%
East Windsor	26%

State	33%
County	32%

Source: US Census

% of Households with Person Age 65+, 2010

Central City and Inner Ring Suburbs	
Bloomfield	29%
Wethersfield	36%
Newington	31%
Windsor	27%
East Hartford	26%
Hartford	20%

Other Suburbs	
Windsor Locks	29%
South Windsor	29%
Glastonbury	26%
East Windsor	26%
East Granby	26%

State	27%
County	27%

Average Household Size

	Windsor	State
1950	3.62	3.37
1960	3.63	3.27
1970	3.42	2.80
1980	2.88	2.76
1990	2.75	2.67
2000	2.61	2.53
2010	2.54	2.52

Source: US Census

Household Size, Windsor, 2010

	% of Households
1 Person	24%
2 Persons	35%
3+ Persons	41%

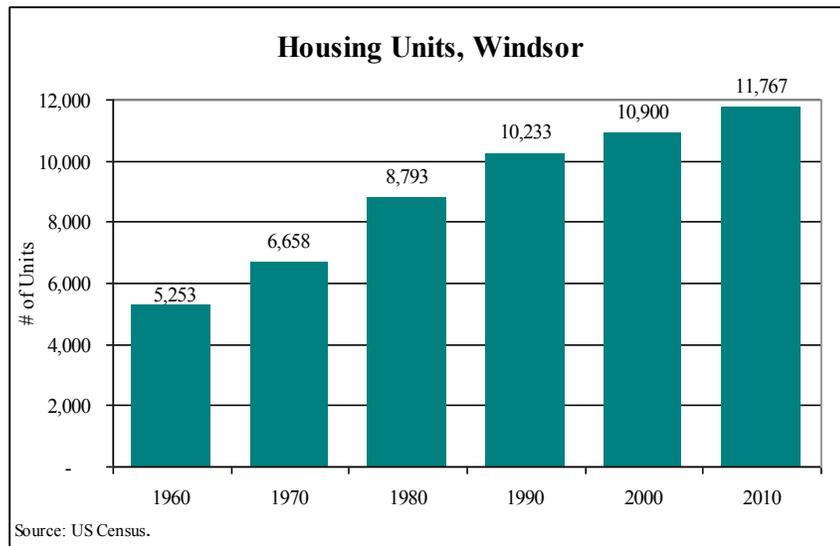
Source: US Census

Housing Conditions

Housing Growth

By 2010, Windsor’s housing stock reached 11,767 units. From 1990 to 2000 and 2000 to 2010, the growth rates were 7% and 8% respectively. These more recent growth rates are much slower than previous decades, which were a period of tremendous growth in communities along the newly built interstate highways.

Despite the recent, slower growth rate, Windsor has consistently added more housing units than other Inner Ring Suburbs over the last 30 years.



Comparison of Housing Growth

	1970s	1980s	1990s	2000s
Inner Ring Suburbs				
Windsor	2,135	1,440	667	867
Bloomfield	1,132	1,225	457	824
Newington	2,790	1,164	655	747
Wethersfield	9,201	1,133	664	223
East Hartford	1,347	1,064	-1	55
Other Suburbs				
South Windsor	1,594	2,454	1,027	1,172
Glastonbury	2,415	2,239	1,666	1,042
East Windsor	586	879	241	689
Windsor Locks	3	697	172	328
East Granby	452	252	218	249

Source: US Census

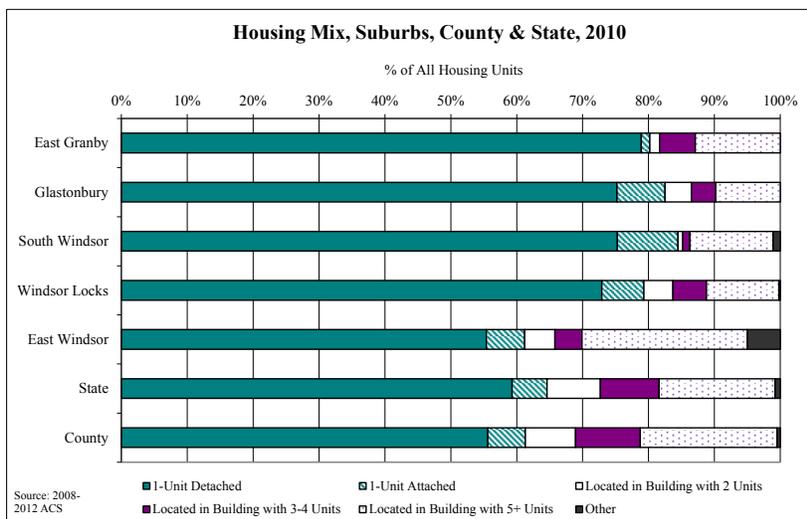
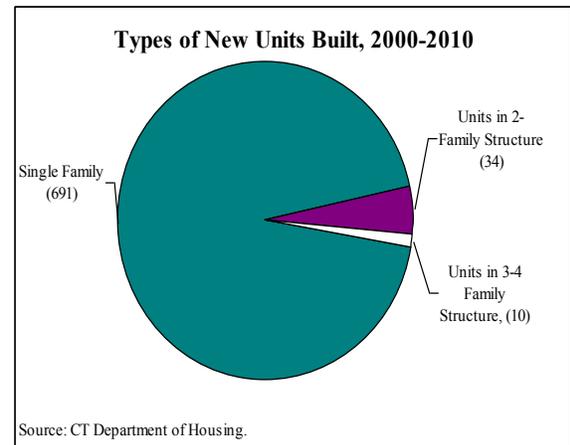
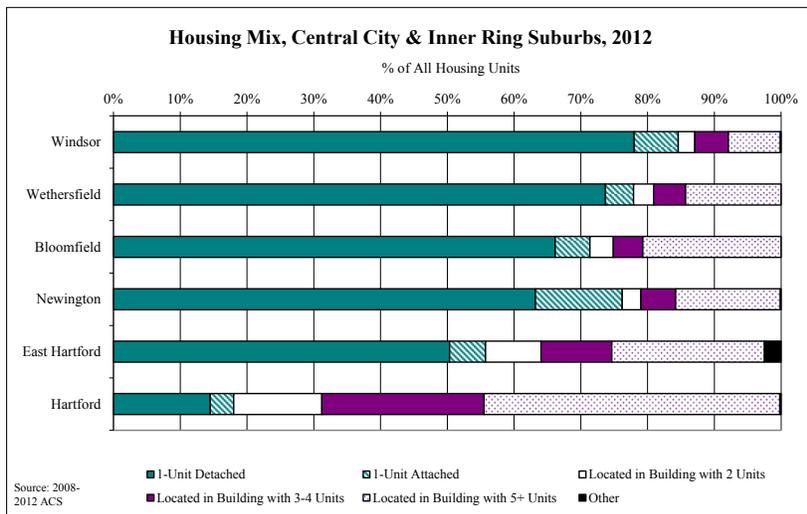
Housing Mix and Tenure

The majority of new units built in Windsor from 2000 to 2010 are single-family houses. A small number of multi-family structures were also built. Windsor also added 219 units of active-adult housing, restricted to residents 55 years of age and older. Windsor's housing mix is heavily weighted towards owner-occupied single-family detached housing, far exceeding State averages and comparable to more rural neighboring communities. High owner occupancy is a good indicator of community stability and Windsor's relatively affordable housing prices provide greater ownership opportunities than many other Capitol Region communities.

Housing Tenure, 2010

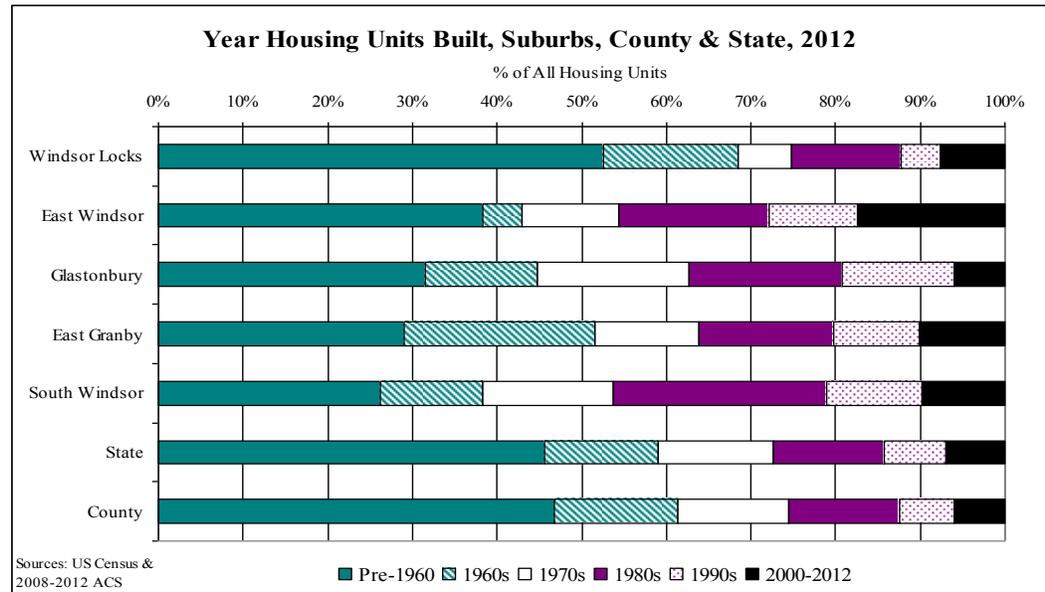
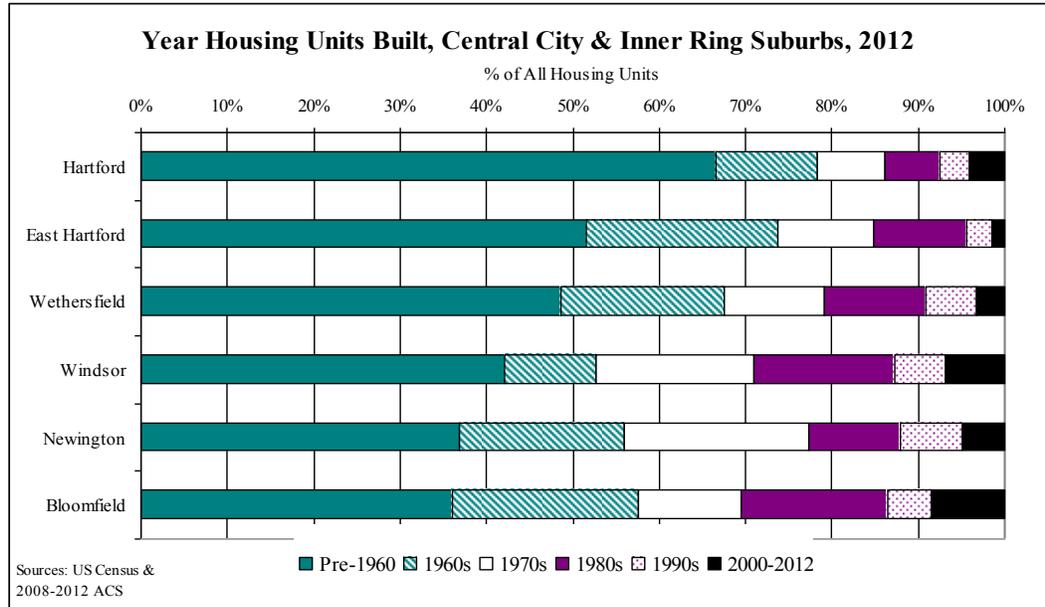
	% of All Units	
	Owner-Occupied	Renter-Occupied
Center City & Inner Ring Suburbs		
Windsor	82%	18%
Newington	81%	19%
Wethersfield	79%	21%
Bloomfield	74%	26%
East Hartford	59%	42%
Hartford	24%	76%
Other Suburbs		
South Windsor	88%	12%
East Granby	84%	16%
Glastonbury	84%	16%
Windsor Locks	79%	21%
East Windsor	68%	33%
State	68%	33%
County	66%	35%

Source: US Census



Age of Housing Units

The majority of Windsor's housing units were built over 40 years ago. Older housing can provide historic charm to Windsor's neighborhoods if well maintained. Conversely, older units that are not maintained can impact the appearance of the community and depress property values. Older houses also can be functionally obsolete with smaller rooms, a lack of closet space, and fewer bathrooms. Without updates or expansions, they can be less attractive to buyers.



Housing Prices and Affordability

Affordability Analysis

Windsor’s housing stock is generally considered affordable based on analyses conducted by both a state housing advocacy organization and the Town. The Partnership for Strong Communities 2014 affordability analysis for Windsor calculates the sales price considered affordable to those earning 80% and 60% of the area median income (AMI) for the Hartford area (i.e., low-income and very low-income households). The analysis shows that Windsor’s housing stock remains affordable to low-income households. Like most communities, those households earning very low incomes have fewer homeownership opportunities in Windsor.

Area Median Income (AMI) - \$85,700		
	Low Income Household (earning 80% AMI)	Very Low Income Household (earning 60% AMI)
Affordable Sale Price for a 3-Bedroom House	\$236,999	\$137,381
Median Sales Price in Windsor	\$217,000	\$217,000
Affordable?	YES	NO

Low and very low incomes adjusted for family size and unit size.

“Affordable Units”

The State counts the following types of units as affordable:

- Assisted (housing units funded under a state or federal program for providing affordable housing, including rental housing programs).
- Financed by the Connecticut Housing Finance Authority or US Dept. of Agriculture (USDA) under a program for income-qualifying persons or families.
- Units with deed restrictions that require the unit to be affordable to low or moderate income persons for families for at least 40 year.

Affordable Units

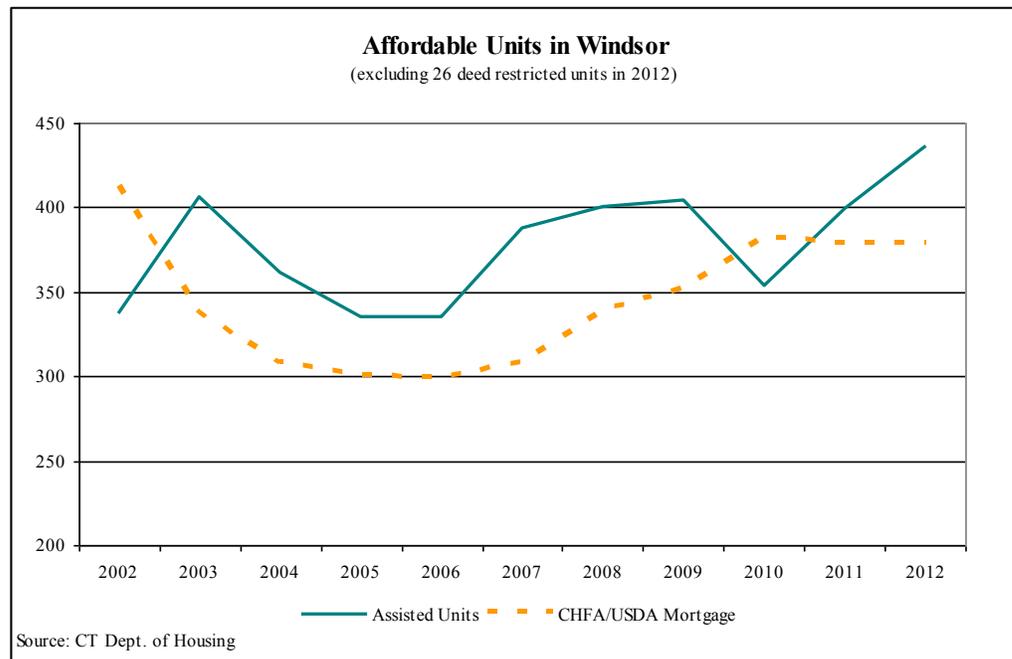
Despite the relative affordability of Windsor’s housing stock, the Town does not meet the State’s goal that 10% of housing units in each municipality meet the State’s definition of “affordable”. Communities that do not meet this goal are subject to Connecticut General Statutes Section 8-30g, which allows developers to override zoning regulations if they are building affordable units. As of 2012, 7.15% of Windsor’s housing units are “affordable” by the State standard. A large portion of the affordable units are CHFA or USDA mortgaged. Such mortgages are tied to the owner, not the unit. Therefore if such an owner moves out of Windsor, the unit will no longer be counted as affordable.

To reach the State’s 10% goal, Windsor would have to add 336 additional affordable units. From 2000 to 2010, an average of 87 new housing units were constructed. Given that the amount of affordable units needed increases with each new market rate unit built, the 10 percent goal can be a moving target and difficult to achieve.

“Affordable Unit” in Windsor, 2012

Assisted Units	436
CHFA/USDA Mortgage	379
Deed Restricted	26
Total Affordable	841
Total Units	11,767
% Affordable	7.15%

Source: CT Dept. of Housing



Economic Conditions

Economic Characteristics of Residents

Windsor's median household income of \$77,377 is greater than many other suburbs in the region, the County and the State overall. However, Windsor's per capita income (total income divided by total number of residents) of \$35,594 is lower than that of the State and many of the suburbs. This lower per capita income might be explained by Windsor's slightly larger household size and because Windsor has more residents living in group quarters than any of the other comparable suburbs.

Approximately 56% of Windsor residents are working or seeking work (labor force). Windsor had an unemployment rate of 7.6% in 2013, which was lower than that County's rate of 8.1% and the State's rate of 7.8%. The largest percentages of Windsor residents are employed in educational, health care, and social services sector as the following table shows. The proportion of working residents employed in each industry is very similar to that of the County and State overall.

Sector of Employment, Windsor Residents

Industry	Windsor		County	Connecticut
	# of Windsor Residents	% of Working Residents	% of Working Residents	% of Working Residents
Agriculture, Forestry, Fishing, Hunting	34	<1%	<1%	<1%
Construction	878	6%	5%	6%
Manufacturing	1,132	7%	11%	11%
Wholesale Trade	328	2%	2%	2%
Retail Trade	1,260	8%	11%	11%
Transportation, Warehousing, Utilities	787	5%	4%	4%
Information	403	3%	3%	3%
Finance, Insurance, Real Estate, Leasing	2,412	16%	12%	9%
Professional, Scientific, Technical, Management, Health Care, Waste	1,520	10%	10%	11%
Educational, Entertainment, Recreation, Accommodations, Food Service	4,004	26%	26%	26%
Arts, Entertainment, Recreation, Accommodations, Food Service	978	6%	8%	8%
Other Services	658	4%	4%	5%
Federal, State or Local Government	881	6%	5%	4%

Source: 2008-2012 ACS

2012 Median Household Income

Central City & Inner Ring Suburbs	
Windsor	\$77,377
Wethersfield	\$76,196
Newington	\$75,237
Bloomfield	\$71,579
E. Hartford	\$48,438
Hartford	\$28,931
Other Suburbs	
Glastonbury	\$106,672
S. Windsor	\$91,519
E. Granby	\$73,074
E. Windsor	\$62,640
Windsor Locks	\$62,640
State	\$69,519
County	\$64,752

Source: 2008-2012 ACS

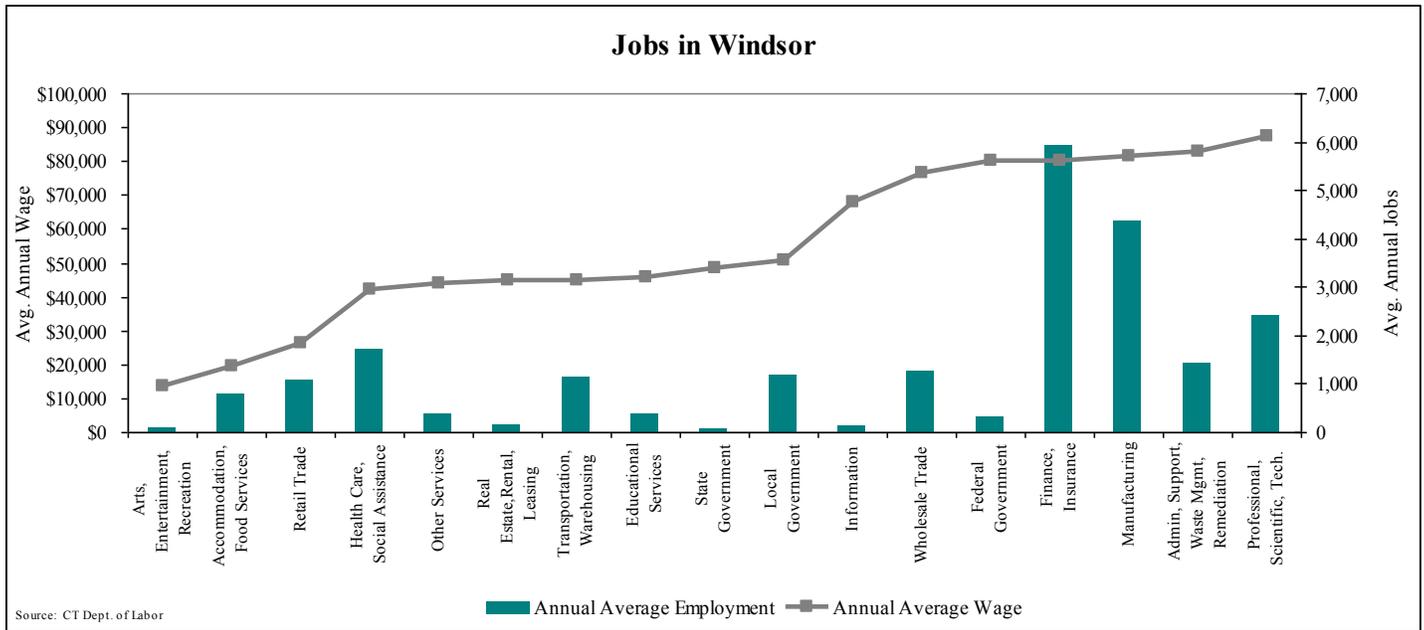
2012 Per Capita Income

Central City & Inner Ring Suburbs	
Bloomfield	\$40,761
Wethersfield	\$39,663
Newington	\$36,209
Windsor	\$35,594
E. Hartford	\$25,549
Hartford	\$16,488
Other Suburbs	
Glastonbury	\$51,179
E. Granby	\$42,999
S. Windsor	\$40,318
Windsor Locks	\$33,313
E. Windsor	\$33,078
State	\$37,807
County	\$34,356

Source: 2008-2012 ACS

Jobs in Windsor

Almost 5,000 jobs were added in Windsor from 2000 to 2010, bringing the total to 23,809 jobs (a 26% increase). By contrast, jobs in the State overall decreased by 4% over the same decade. A large number of jobs in Windsor provide high wages (see chart). Windsor's overall annual average wage for all industries is \$68,000, which is greater than for the County (\$61,207) and State (\$62,159).



Windsor is particularly strong in the finance and insurance sector and transportation and warehousing when compared to the State (see sidebar) in both 2000 and 2010. Wholesale trade is still a strong sector in Windsor but, relative to the State overall, that sector became less concentrated in Windsor from 2000 to 2010 due to a reduction of jobs in that sector.

Analysis of Windsor's Strengths

Industry	Location Quotient 2000	Location Quotient 2010	Trend
<i>Greater Concentration than State</i>			
Finance & Insurance	1.6	3.4	↑
Transportation & Warehousing	1.7	2.0	↑
Professional, Scientific, Tech. Services	0.8	1.9	↑
Manufacturing	1.9	1.8	↓
Wholesale Trade	2.3	1.3	↓
Administrative & Support & Waste Management	1.0	1.2	↑
<i>On Par with State</i>			
Federal Government	0.3	1.0	↑
<i>Lower Concentration than State</i>			
Real Estate, Rental, Leasing	0.2	0.5	↑
Educational Services	0.8	0.5	↓
Health Care & Social Assistance	0.6	0.5	↓
Accommodation & Food Services	0.5	0.5	--
Other Services	1.4	0.5	↓
Municipal Government	0.7	0.5	↓
Retail Trade	0.5	0.4	↓
Information	0.8	0.3	↓
Arts, Entertainment, Recreation	*	0.2	--
State Government	0.1	0.1	--

*2000 local data not available

Sources: CT Dept. of Labor. Analysis conducted by town staff.

Location Quotient

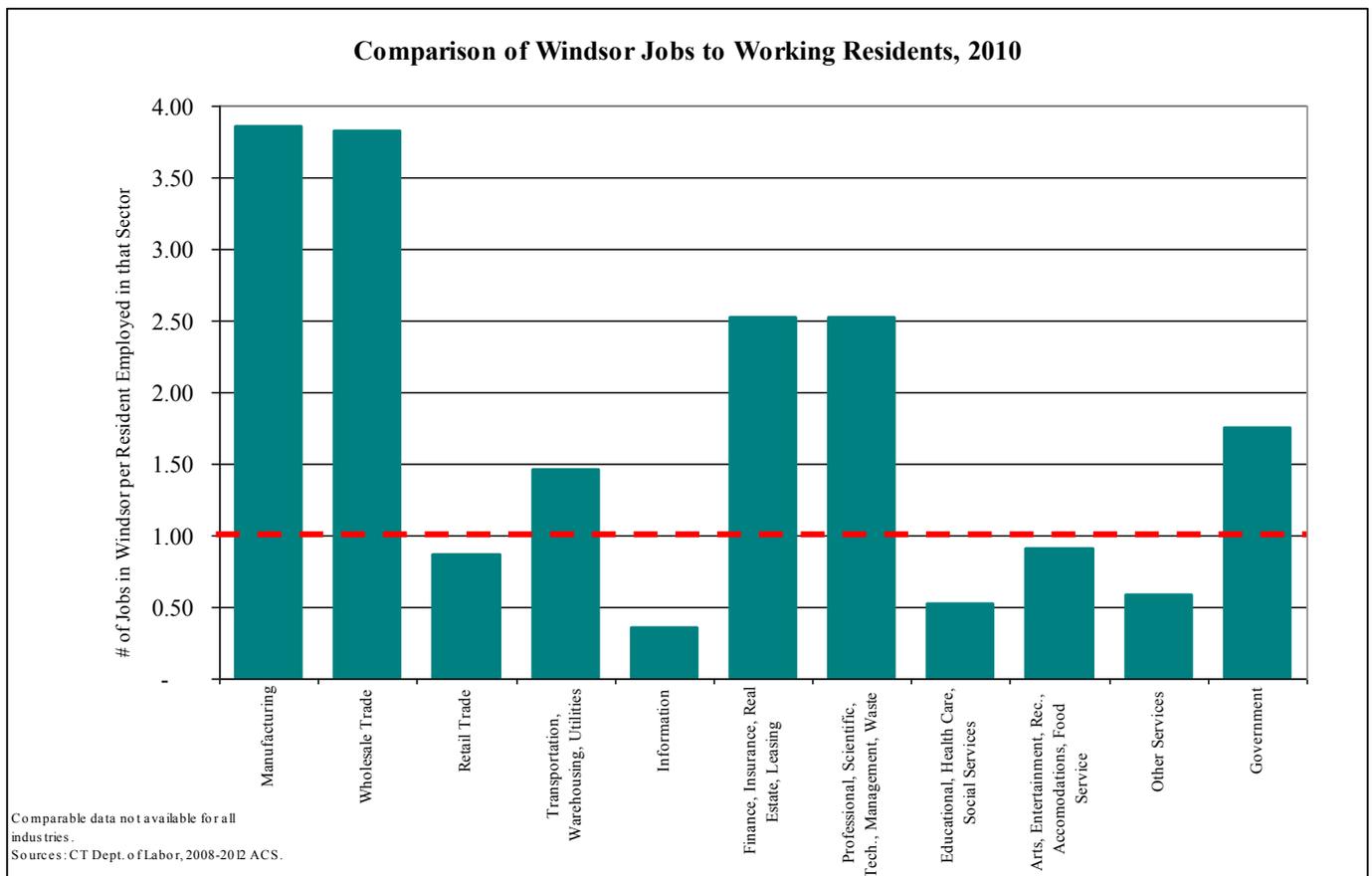
The location quotient (LQ) is a calculation used to determine if an area has a higher or lower concentration of a particular industry when compared to a larger geography. In this case, Windsor is compared to the State.

If the LQ is greater than 1, it means Windsor has a greater concentration of that sector than might otherwise be expected based on how that sector is doing in the State overall.

If the LQ is less than 1, it means that the sector is not well represented in Windsor.

Industry Comparison

There appears to be a mismatch between the industrial sectors that Windsor residents work in and the types of jobs in town. The following chart shows the ratio of jobs in town by sector for each resident employed in that sector. For example, for each resident employed in manufacturing, there are 3.85 manufacturing jobs in town. This analysis confirms that local employers depend upon residents of the greater region to fill jobs. Conversely, residents who work in the information sector, must travel elsewhere to work, since there are less than one job per each resident employed in that sector (“information” includes publishing, broadcasting, telecommunications, data processing and other occupations).



Fiscal Overview

Revenues

Windsor’s revenues from property taxes and intergovernmental revenues totaled \$97,913,820 in Fiscal Year (FY) 2012. This represented a 2% increase from the previous year. Windsor’s per capita revenues (total revenue per resident) is less than many other comparable communities (see tables).

Windsor relies on property taxes for most of its revenue – 76% of revenues are from property taxes. This is slightly higher than the State average of 71%. Windsor is less reliant on residential property taxes than the State overall with residential uses accounting for 51% of taxes compared to 70% for the State. Conversely, 27% of Windsor’s tax revenue comes from commercial, industrial and public utility uses compared to just 17% for the State average. Windsor’s strong commercial and industrial development climate help to moderate residential taxes while still providing the services that the community depends upon. Despite the heavy reliance on the tax base, Windsor surpasses other nearby communities in terms of Equalized Net Grand List per capita. This is an improvement over the last decade when Windsor trailed behind comparable communities.

Available Data

This section uses data for the Fiscal Year ending in 2012. More recent data for Windsor is available, but the same information is not readily available for other communities. Therefore to allow comparisons, the FY 2012 data is used here.

Equalized Net Grand List

ENGL estimates the market value of property in every town across the State for a given year, adjusting for varying revaluation dates.

Windsor Revenues*			FY 2012 Per Capita Revenue*		FY2012 Per Capita ENGL	
FY	Revenues	% Change	Central City & Inner Ring Suburbs		Central City & Inner Ring Suburbs	
2008	\$96,039,401		Hartford	\$4,594	Windsor	\$138,513
2009	\$100,503,089	5%	Bloomfield	\$3,911	Bloomfield	\$126,792
2010	\$97,207,998	-3%	Newington	\$3,603	Newington	\$119,558
2011	\$102,267,246	5%	Windsor	\$3,593	Wethersfield	\$117,977
2012	\$104,442,171	2%	East Hartford	\$3,491	East Hartford	\$75,222
			Wethersfield	\$3,414	Hartford	\$52,261
			Other Suburbs		Other Suburbs	
			Glastonbury	\$4,371	Glastonbury	\$166,943
			South Windsor	\$3,962	East Granby	\$151,329
			Windsor Locks	\$3,786	South Windsor	\$131,844
			East Granby	\$3,630	Windsor Locks	\$127,888
			East Windsor	\$3,226	East Windsor	\$117,304

*Includes property taxes and intergovernmental revenues. Excludes transfers in.
Source: CT Office of Policy and Management (OPM).

*Includes property taxes and intergovernmental revenues. Excludes transfers in.
Source: OPM

AAA Bond Rating

Windsor has the highest bond rating that a municipality can achieve: AAA. Factors that lead to a strong rating include:

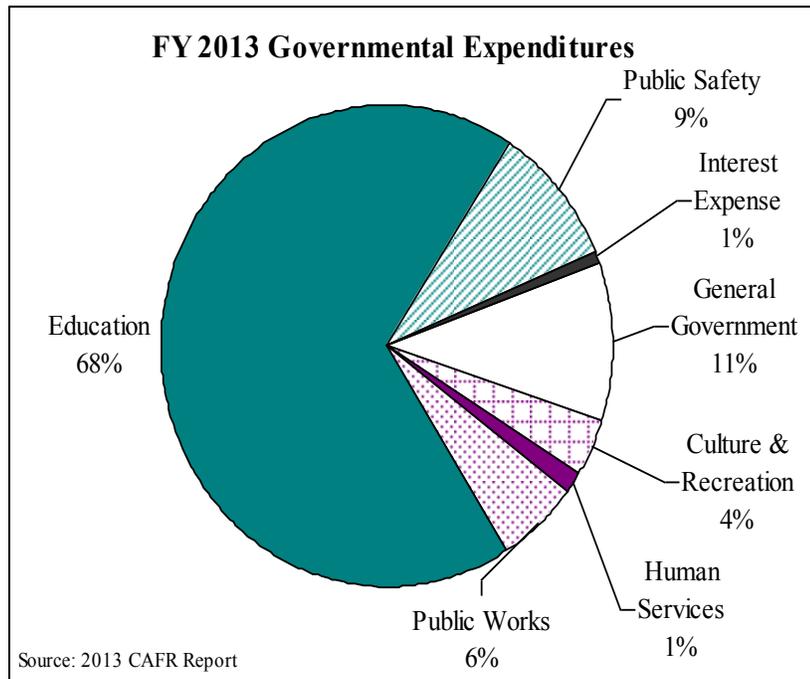
- Strong economy
- Strong budgetary performance and reserves
- Strong management and financial policies

Expenditures

Windsor’s per capita expenditures and per capita debt are lower than Hartford and many of the comparable suburbs. Similar to most communities, the majority of expenditures (68%) are for education. The breakdown is provided in the chart below.

Per Capita Expenditures, FY 2012		Per Capita Debt, FY 2012	
Central City & Inner Ring Suburbs		Central City & Inner Ring Suburbs	
Hartford	\$4,265	Bloomfield	\$3,087
Bloomfield	\$3,904	Hartford	\$2,699
East Hartford	\$3,453	Windsor	\$1,320
Newington	\$3,392	East Hartford	\$1,177
Windsor	\$3,369	Wethersfield	\$1,068
Wethersfield	\$3,300	Newington	\$477
Other Suburbs		Other Suburbs	
Glastonbury	\$4,285	Glastonbury	\$2,709
South Windsor	\$3,980	South Windsor	\$1,389
Windsor Locks	\$3,709	East Granby	\$1,389
East Granby	\$3,511	Windsor Locks	\$1,106
East Windsor	\$3,042	East Windsor	\$726

*Includes education and operating expenses. Excludes transfers out.
Source: CT OPM.



Current Zoning

Windsor’s residential zones allow densities from 1.2 to 3 housing units per acre. Single-family residential development at 0.3 units per acre is permitted in the Agricultural Zone, but the primary function of the zone is to retain areas suitable for agriculture use. Until recently few houses have been built at this relatively low density. Multi-family development is allowed in some residential zones but is mostly encouraged in Planned Urban Development Zone and Design Development Districts which allow single and multi-family housing at varying densities.

According to the Capitol Region Regional Plan, over 60% of the residential land in the region requires $\frac{3}{4}$ of an acre for a single family house. By comparison, only 45% of Windsor’s residentially zoned land requires a minimum lot size of $\frac{3}{4}$ of an acre or greater (the AG zone requires three acres for a house and the AA zone can require 0.77 acres in certain circumstances). The fact that Windsor offers smaller lots sizes than most of the region is likely one factor why house prices are more affordable.

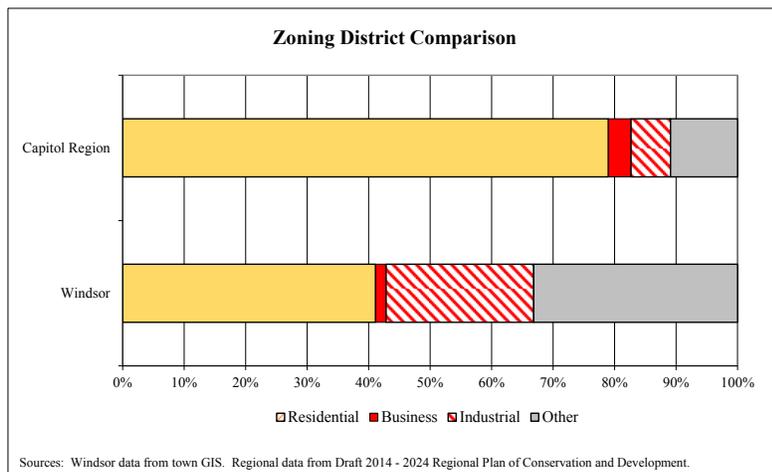
Windsor has six zoning districts for commercial and industrial development with the majority (4,082 acres or 24% of Windsor) zoned for industrial use and warehouses. These industrial and warehouse zones are concentrated primarily in the Day Hill Corporate Area, near the airport, and the northern end of Kennedy Road. The remaining business zones are intended for office, retail, and services.

Compared to the region, Windsor has a substantial percentage of land zoned for industrial uses.

Zoning in Windsor

Zone	Acres	% of Land
Residential	6,992	41%
Single Family AA	4,451	26%
Single Family A	1,076	6%
Single Family R-13	519	3%
Single Family R-11	447	3%
Single Family R-10	154	1%
Single Family R-8	260	2%
High Density (RHD)	85	0.5%
Agricultural (AG)	3,822	22%
Planned Urban Development (PUD)	135	1%
Business	293	2%
B-1 Business	10	0.1%
B-2 Business	220	1%
Professional (P)	14	0.1%
Restricted	49	0.3%
Commercial (RC)		
Industrial	4,082	24%
Industrial (I)	3,684	22%
Warehouse (W)	398	2%
Public / Quasi-Public (NZ)	1,681	10%

Source: Calculated using GIS.



Sources: Windsor data from town GIS. Regional data from Draft 2014 - 2024 Regional Plan of Conservation and Development.

Existing Land Use

Residential land uses cover the greatest percentage of land in Windsor, at 30%, or 5,890 acres. This represents an increase of roughly 400 acres since 2004. Windsor also has more land used for business purposes than ten years ago. Meanwhile, 13% of land in Windsor is open space, with most of that open space (just over 2,000 acres) permanently protected from development. In addition, 9% of Windsor's land is vacant. Communities do not usually gain vacant land, but Windsor did. The Combustion Engineering site housed industry ten years ago, but is now vacant as the buildings have been cleared and the site awaits redevelopment.

Windsor's Land Use, 2015

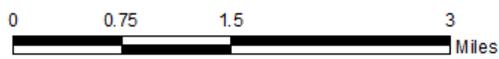
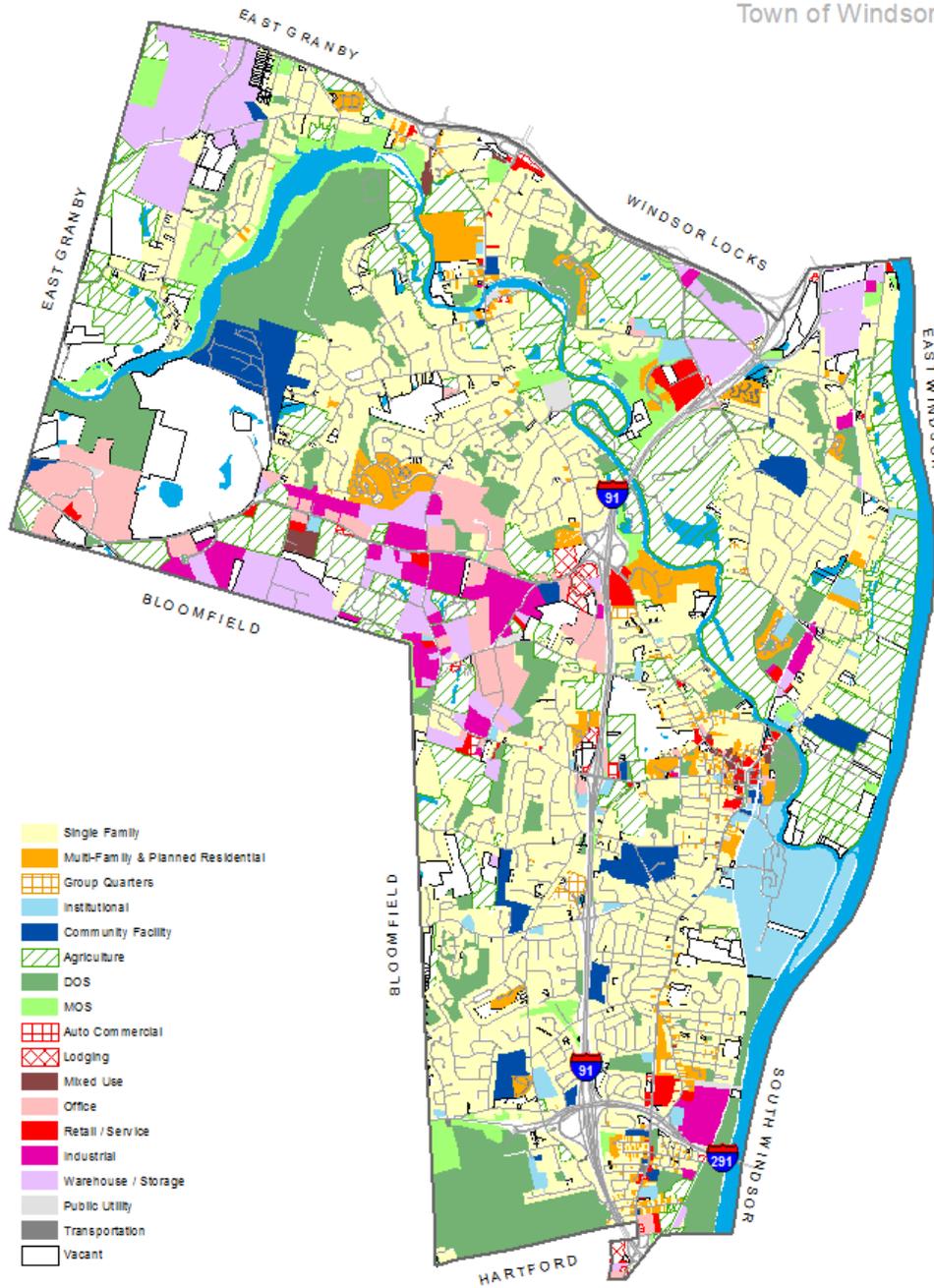
Use	Acres	% of Total Land	Change Since 2004 (Acres)
Agriculture	3,116	16%	-609
Residential	5,890	30%	+401
Single Family	5,217		
Multi-Family & Planned Residential	624		
Group Quarters	49		
Business	952	5%	+184
Office	631		
Retail / Service / Auto	204		
Lodging	63		
Mixed Use	54		
Industrial	1,467	7%	-32
Industrial	455		
Warehouse / Storage	1,012		
Public Utility	59	0.3%	-35
Open Space	2,612	13%	+427
Dedicated Open Space	2,044		
Managed Open Space	568		
Community Facilities	1,210	6%	+164
Municipal Facilities	647		
Institutional / Other	563		
Other (private roads, railroad, water)	1,606	8%	n/a
Vacant	1,862	9%	+136

Notes: Totals may not add due to rounding. Land use as of February, 2015. Change in acres not provided for "other" due to difference in measured in 2004 and 2014. Remaining land is water.

Source: Assessors data and field verifications.

Existing Land Use*

Town of Windsor



* as of February 2015



CONSERVE NATURAL RESOURCES

3

Overview

Windsor is an inner-ring suburb, yet home to landscapes that provide scenic and ecological value. Windsor's forested wetlands, bogs, floodplains, grasslands, upland areas, and water bodies not only provide important ecological functions, but also help protect our health and safety, offer recreational opportunities, and contribute to community character. Residents are proud of the natural treasures that are in or run through Windsor, including two of the State's most important rivers – the Connecticut and Farmington Rivers.

Natural resources are impacted by human and natural forces. Windsor has adopted policies and regulations that allow for appropriate development of land while protecting natural resources. This balanced approach can and should continue. Natural forces can also alter Windsor's environment, as evidenced by recent destructive storms. Windsor can take additional steps to better withstand the forces of more frequent and intense storms.

Conserve, protect, and enhance Windsor's natural resources to ensure a healthy environment while instilling a sense of stewardship for future generations.

Flooding on Pleasant St.



Silver Birch Pond



Northwest Park



Photos by Ford Parker

Resources to Preserve

Some natural resources are so important to environmental quality that alterations should be avoided to the extent feasible and prudent:

- inland wetlands and water courses
- slopes greater than 25% (mapping shows slopes 15% or greater)
- 100-year floodplain (1% probability of flooding each year)

Resources to Conserve

Other natural resources can continue to provide important functions if development occurs in an environmentally sensitive manner:

- 500-year floodplain (0.2% probability of flooding each year)
- aquifers, areas of high ground water availability
- unique or special habitats
- scenic areas or vistas

Protect Important Natural Resources

Natural resource conservation priorities in Windsor are based on the value or function of the natural resource, if preserved; the sensitivity of the resource to development; and/or the degree of constraint to development. This philosophy ensures that important resources and functions are preserved and appropriate areas are identified for development at appropriate densities. Measures to preserve and conserve Windsor's land, flora, fauna, and air quality are outlined here. Water resources are discussed in the next section.

Reduce Development Potential in Sensitive Areas

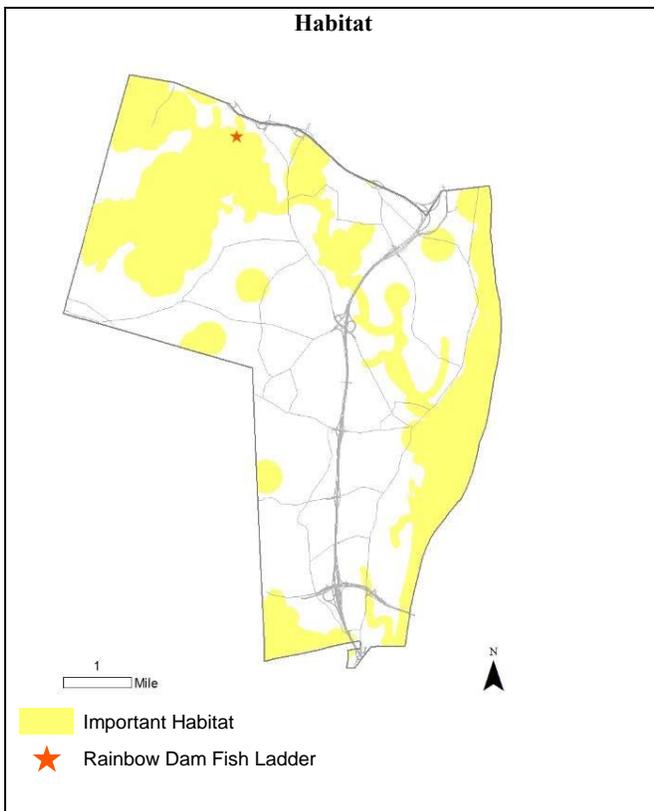
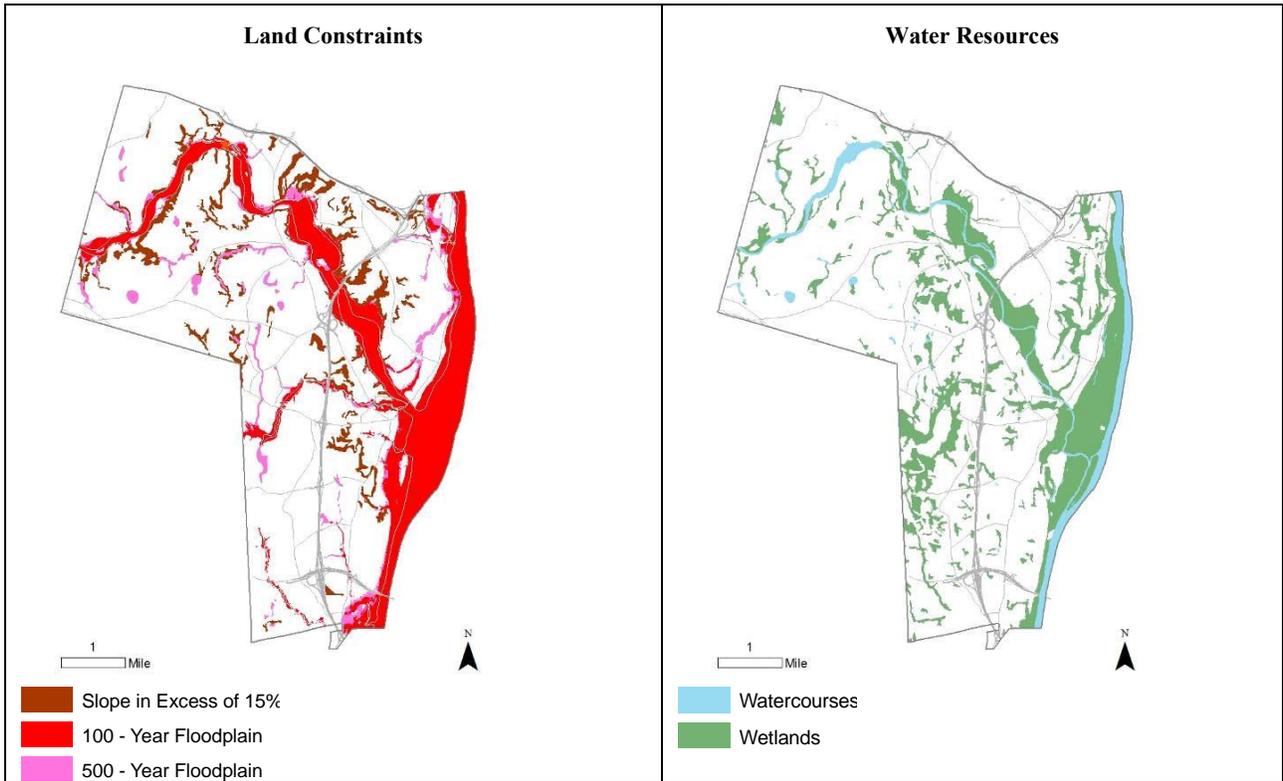
Zoning and wetland regulations control development in those areas that are most sensitive to development and therefore must be preserved (see sidebar). The most effective method to protect resources is to preserve the land permanently. But that is not feasible for all land in Windsor. The town can instead reduce the level of development allowed in environmentally sensitive areas. Windsor's Zoning Regulations accomplish this by excluding wetlands, watercourses, steep slopes, and floodplains when calculating the number of dwellings that can be built (development yield) in residential subdivisions. When development occurs on properties containing these resources, it is critical to design the site to minimize impacts, monitor activities, and actively enforce regulations and conditions of approvals.

One of Windsor's most sensitive areas is along the Connecticut and Farmington Rivers. Much of this land is located in the 100-year floodplain, where regulations prevent most types of new development from occurring. However, many structures predate regulation. Preserving floodplains protects the safety of people who live nearby because functioning floodplain can absorb flood waters, thereby minimizing downstream and inland flooding. Over the long term, opportunities to acquire floodplain, especially along these two rivers, should be a priority.

The Federal Emergency Management Administration (FEMA) has several programs designed to limit exposure to flood hazards and lower flood insurance premiums for residents and businesses. The Community Rating System (CRS) is a voluntary program in which communities can earn points for activities, such as educational programs and adopting flood management regulations that can cumulatively result in discounts from 5% to 45% off of flood insurance premiums within the community, which could save a typical homeowner in a floodplain up to \$290 annually in premiums. Windsor already conducts many eligible activities and with nominal effort to document existing activities and add a few simple activities, could easily become eligible for discounts of 5% to 15% for all Windsor property owners, while making them safer in the process.

FEMA's Flood Mitigation Assistance Program provides grants for preparing flood mitigation plans, for mitigating repeat flood claims (by acquiring, moving, or raising flood prone structures), and for administering flood mitigation programs. Windsor should take advantage of these readily available funds when opportunities present themselves.

Natural Resource Snap-Shot



Notes: See Windsor Natural Resource Inventory (NRI) for detailed maps of these and other natural features. Slope is based on soil classification, not topographic data. "Habitat" includes areas generally identified in the NRI as "significant habitat areas" with some modifications; areas identified by CT DEEP as "Natural Diversity Database Areas" which contain state and federally listed species and significant natural communities.

Conserve Biological Corridors and Sensitive Habitat

In 2005, the Town created a Natural Resource Inventory (NRI), which provides detailed information about important and unique habitat and biological resources found in Windsor. Also, the State Department of Energy and Environmental Protection (DEEP) has identified areas with unique habitat for species of special concern that may be threatened or endangered (Natural Diversity Database or NDDB).

Windsor's wetlands and waterways are protected through the Town's Inland Wetland and Watercourses Regulations. Other types of habitat and biological corridors are relatively unprotected. These areas provide not just habitat, but can help control stormwater and provide aesthetic benefits. Simply knowing where important habitat is located can help the Town and landowners avoid or minimize impacts to habitat. For example, Windsor's farmland and fields provide habitat for grassland species which, according to the DEEP, are among the fastest declining birds in North America. The NRI shows where these significant habitat areas are located and describes the notable features of each area.

Both the NRI and NDDB are valuable tools that should be regularly consulted by staff, commissions, and applicants when reviewing development applications and considering zoning changes. The NRI, including its maps, should be placed online so that it is easily accessible. Applicants should use the NRI to determine potential impacts on Windsor's natural resources, particularly rare wetlands and significant habitat, and offer appropriate mitigation. In addition to avoiding impacts to wetlands in these rare and special areas, care should be taken to reduce tree clearing, minimize impervious surfaces, minimize nighttime lighting, and avoid pollutants such as pesticides.

Preserve Trees on Development Sites and Along Roadways

Trees and vegetation reduce erosion and sedimentation, provide habitat, clean the air, and contribute to an attractive and scenic landscape. Generally the planting and removal of trees on private land is not locally regulated unless the clearing is part of a development application or near a wetland. When development is proposed, thoughtful site planning and diligence during construction can protect existing trees. The first priority should be to preserve existing trees. The Zoning Regulations provide an incentive to preserve trees by crediting each tree saved as two required trees. The Town should identify other zoning incentives that can help preserve trees, such as modifying yard requirements so that builders have more flexibility to avoid treed areas when laying out a site.

During construction, site disturbance can accidentally damage trees if proper measures are not taken. For example, if equipment is stored under the tree crown, the weight could injure the root system. Applications should include detailed specifications on how trees will be protected, in addition to specifications for newly planted trees. Prior to construction, the limits of site clearing should be marked on-site and reviewed at the pre-construction site visit with town staff.

When new trees are planted, care should be taken to ensure that the selected species are tolerant of conditions such as wind, ice, and, if planted near a paved surface, salt. Planting a diversity of species will help counter disease, parasites, and extreme weather. In addition to planting the “right tree” in the “right place”, it is important that appropriate species are planted (see sidebar). The Town could prepare standard specifications with preferred practices for on-site protection and guidelines for selecting, planting and maintaining trees.

Many towns set standards for trees on public property by adopting a tree ordinance. The intent is to provide guidance on planting, managing, and removing trees on all town-land. Proactive measures to ensure the “Right Tree, Right Place” approach on town land can be codified in a tree ordinance.

The Town has replaced trees that were removed for projects, such as road projects, and the 2015-2020 Capital Improvement Program funds the planting of over 600 trees along streets and in parks. The Town could encourage the planting of trees on private property also, with tree-planting programs. One idea is to provide free saplings to interested homeowners, perhaps through a lottery system.

Use Outside Experts when Warranted

For most applications, town staff has the expertise to address all aspects of the development. There may be some cases however where outside expertise is needed, particularly when there could be significant wetland and habitat impacts. The Town should ensure it has the contacts, tools, and procedures in place to quickly hire outside experts in such cases. For projects with potentially significant impacts on the environment, the State of Connecticut has two Environmental Review Teams (ERT), which are multi-disciplinary teams of environmental experts that can be called upon to do a comprehensive environmental review of a project on a free, first-come, first-served basis, with the service paid for in-part by a \$60 land use surcharge collected by the State for every land use application.

Right Tree, Right Place

Recent strong storms in the State destroyed many trees, causing damage to buildings and electrical wires and affecting public safety. The State prepared guidelines to ensure that when new trees are planted, species are chosen based upon site conditions. For example, trees with shorter heights at maturity are more appropriate near electrical wires.

Certain trees are also more tolerant of high winds, ice and road salt.

Stormwise Program

The University of Connecticut is researching forest management practices that improve the storm-resistance of roadside vegetation. Workshops and demonstration sites help convey best practices.

Natural Resource Protection Strategies

1. Monitor development in or near sensitive areas and enforce regulations and conditions of approval.
2. Participate in FEMA's Community Rating System and Flood Mitigation Assistance Programs to reduce flood hazards as well as flood insurance claims and premiums.
3. Require applicants to identify potential impacts to resources contained in Windsor's natural resources inventory and provide mitigation measures, if feasible and prudent.
4. Design development sites to minimize tree clearance; ensure that site plans include detailed protocols to protect trees during construction; and ensure that the limits of clearing and trees to be saved are marked and/or protected on-site before construction begins.
5. Provide additional zoning incentives or flexibility to minimize tree clearing when designing a site for development.
6. Adopt a tree ordinance for public trees and ensure that newly planted trees are: storm-resistant, adaptable to changing climate conditions, appropriately sized if near utilities, and offer a mixture of species.
7. Consider providing free saplings to home-owners to encourage tree planting on private property.
8. Promote simple climate change adaptation and mitigation strategies that residents and businesses can do for themselves.
9. For complex projects in sensitive areas, seek outside expertise to review environmental impacts, if necessary.

Protect Water Resources and Water Quality

Stormwater runoff (rainwater that flows overland instead of being absorbed into the ground) can cause property damage, reduce the life of public infrastructure such as roads, and cause safety issues. Stormwater also can carry pollutants and sediments, depositing them into catch basins, wetlands, and water bodies.

Increase the Use of Low Impact Development Techniques

Windsor has adopted a comprehensive program to manage stormwater quantity and quality. In 2009, the Town adopted a stormwater management ordinance and developed a stormwater manual that incorporated modern approaches. The manual promotes on-site infiltration and other natural methods to reduce the amount of water that runs off of a site. This approach, called low impact development (LID) is recommended by stormwater experts and environmental advocates as the preferred way to address storm water. Key components of low impact development include:

- reducing impervious surfaces – e.g., smaller building footprint, grass parking areas, porous pavement, green roofs;
- increasing infiltration – e.g., vegetated buffers, swales, rain gardens, tree boxes, perforated pipe and other structural infiltrators;
- re-using stormwater on-site – e.g., rain barrels, cisterns; and
- detaining stormwater on-site – e.g., stormwater wetlands.

Recent and planned projects in Windsor use these techniques (see box on next page).

Not all LID techniques will work in all locations or in all situations. Soil types, slopes, and types of pollutants likely to be generated guide the approach for a site. Some communities have adopted detailed LID manuals to outline which techniques will work in which parts of town, based on water quality goals and soil types, among other considerations. The Town could expand upon its stormwater manual by incorporating these types of specifications.

As LID practices become more commonplace and establish a track record as being an effective stormwater management approach, the Town might consider requiring LID approaches except in situations where site conditions make it infeasible – i.e., make LID the norm for Windsor. Most importantly, the Town should continue to set an example by incorporating LID techniques in all town projects and showcasing the projects so the public, developers and their design professionals can see this approach in action.

All stormwater infrastructure – both structural and natural measures – must be maintained in order to carry out their intended functions. The Town should continue to fund maintenance of town-owned drainage infrastructure and ensure that developers comply with the maintenance requirements for privately-owned drainage infrastructure.

Rainfall Data

One emerging concern that will likely receive greater attention in the next ten years is changes in rainfall. The standard accepted methods for calculating stormwater runoff is based on outdated rainfall data generally from the early 1900s to the 1960s.

According to Cornell's Extreme Precipitation in New York and New England Project, in New England "the frequency of 2 inch rainfall events has increased since the 1950s and storms once considered a 1 in 100-year event have become more frequent. Such storms are now likely to occur twice as often."

Westbrook, CT requires the use of more recent rainfall data when calculating stormwater run-off. Other communities may follow suit in late 2015 when national standards for stormwater models are expected to be updated based on modern data.

Low Impact Development in Action in Windsor



Industrial Development – Recent projects have incorporated elements of LID to manage stormwater. Well-drained soils for a large industrial building provided an opportunity focus on infiltration for managing stormwater. Infiltration measures include sending stormwater from the 1 million square foot roof directly underground via roof infiltrators (top left photo). Additional infiltration measures at this site include vegetated swales (bottom left photo) and a constructed wetlands.

Sec. 7.4 Stormwater Management

- 7.4.1 Applicants shall apply for a Stormwater Management Permit, Erosion and Sediment Control Permit, and all other applicable Town Permits.
- 7.4.2 Permitted Stormwater Management Practices
Site Plan and Subdivision applications shall meet the requirements of the Stormwater Permit, when required. Techniques, such as those shown in the most current Table of Stormwater Management Practices (found in Chapter 10: Appendix, Section 10.2), may be used if the applicant can show such techniques to be effective in meeting town standards. Site Plans that are utilizing community-wide stormwater management facilities shall be identified and shown to have sufficient capacity to support the application.
- 7.4.3 Developments shall meet the minimum performance criteria set forth in the Town of Windsor Stormwater Manual, as amended.
- 7.4.4 Low Impact Development (LID) devices and Best Management Practice (BMP) measures shall be based on acceptable industry standards including the Town of Windsor Stormwater Manual and the Connecticut Department of Environmental Protection Stormwater Quality Manual. Details of stormwater and collection design elements shall be reviewed and approved by the Town of Windsor Engineering Department.

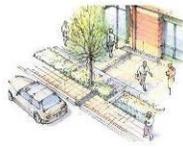


Figure 725 Rain garden along an urban street that collects rain water from abutting rooftop down systems



Figure 727 Typical bioswale section

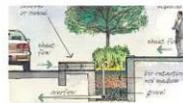


Figure 726 Infiltration beds

Great Pond Regulations – New development regulations for a 680 acre area slated for mixed-use development in a village setting (plus open space) requires the use of LID from urban street-side rain gardens to larger retention ponds. The regulations recognize that specific LID techniques will vary and provides guidance on which ones are appropriate for which districts within the development.

Not all land clearing and development activities require a stormwater review. In Windsor, disturbance of a one-half acre or greater triggers the need for an Erosion and Sediment Control review. A Storm Water Permit is required when 5,000 square feet or more of impervious surface is created or one acre or more of land is disturbed. Some communities are finding that smaller disturbances cause drainage issues downstream and have lowered their threshold for a stormwater review. For example, Trumbull requires review of projects that create as little as 800 square feet of impervious surface, including residential and accessory uses. Projects in the Candlewood Lake watershed in New Milford that cover 20% or more of a lot with impervious surfaces require stormwater review. The intent of these towns is not to halt such small projects but rather to ensure that best practices are applied to reduce stormwater impacts downslope. Windsor might consider lowering the review threshold in areas experiencing drainage problems or in key watersheds where extra protection measures will help protect water resources.

Continue to Address Water Quality

For years, water quality protection focused on eliminating the obvious “point” sources of pollution such as industrial discharges and underground storage tank leaks. Having made great strides in reducing or eliminating pollution from these sources, attention now focuses on “non-point” sources of pollution such as fertilizers, pesticides and petroleum products that are washed from lawns, streets and parking lots and concentrate in stormwater runoff. Windsor’s stormwater ordinance and manual address water quality issues and non-point pollution. In addition, the Town:

- educates and engages residents in ways to reduce nonpoint pollution. Activities include programs with children, clean-up days, and providing information on the town website;
- detects and eliminates illicit discharges into stormwater pipes;
- undertakes regular activities to reduce pollution potential, such as catch basin cleaning and street sweeping; and
- collects and tests stormwater quality at designated locations.

Continuing these activities and deploying more low-impact development techniques will help the Town reduce stormwater pollution. Education is also important for conveying information on pollutants that result from day-to-day activities such as the use of pesticides, fertilizers, disposal of household wastes and prescriptions. The Town can also take steps to reduce its use of these pollutants. State law bans pesticide use at elementary schools, but not on other public schools and properties. The Town should investigate ways to eliminate their use on other town-owned properties.

Agricultural practices can impact water quality, as fertilizer and pesticides are commonly used and raising livestock generates animal waste. Since river valleys and floodplains usually provide the most fertile soils, it is no surprise that the Connecticut and Farmington Rivers are lined with farms in Windsor. While farming is an important economic activity and part of Windsor’s heritage, protecting these two rivers is of utmost importance. The Town should work with farmers to determine practical approaches to reducing pollutant runoff, and tap

MSSSS or MS4

Municipal Separate Storm Sewer Systems (MSSSS or MS4 for short) are municipally owned storm sewer systems that are not tied together with sanitary sewers. Since 1999, the US EPA has made towns responsible for the quality of stormwater exiting their MS4s into wetlands and watercourses, even though these systems receive stormwater from private stormwater sources such as commercial parking lots and industrial stormwater basins.

To comply with federal regulations, we must pass on the responsibility for maintaining the quality of stormwater to these private sources through regulations and monitoring programs; as well as through educational programs designed to reduce both point and non-point pollution sources such as pouring motor oil into catch basins or over fertilizing lawns.

Riparian Buffers

Through a Policy Statement, CT DEEP urges a minimum 100 foot vegetated buffer along perennial streams. The buffer helps naturally filter sediments and pollutants, maintains water temperature, stabilizes stream banks and channels, and provides habitat.

Recognizing this, Windsor's Inland Wetland and Watercourses Regulations define the upland review area as 150 feet from a wetland or watercourse.

Most of the 150 foot buffer along the Connecticut and Farmington rivers is located in the 100-year floodplain, affording even greater protection. This is not the case for all rivers and streams in Windsor. Therefore maintaining this 150 foot upland review area is important to provide continued protection to Windsor's watercourses.

into the technical assistance and funding provided by the state and federal governments for this specific purpose.

Continue Enforcement and Ensure Compliance with Approvals

Windsor has regulatory tools to address many common water pollution issues. Monitoring and enforcement are necessary to ensure that the regulatory tools work. In some cases, landowners are simply unaware that their actions require a permit or are illegal. The Town should continue to make it easy for residents, businesses and landowners to understand when permits are required and help residents and businesses come into compliance when violations occur.

For projects that have received permits, it is important to monitor construction activity (especially sediment and erosion controls) and ensure that all conditions of approval are met and maintained when construction is completed.

Protect Groundwater Quality

The Metropolitan District Commission (MDC) provides drinking water from out-of-town reservoirs to most of Windsor. Only a small proportion of properties depend upon groundwater for drinking water. Still, groundwater feeds into rivers, ponds and streams, thereby affecting both their water levels and quality. So, while groundwater quality does not seem like it would be an imminent health concern in Windsor, it still warrants consideration. The water quality strategies outlined in the previous section will help protect groundwater quality. Two additional strategies also can help reduce threats.

When septic systems fail or are not properly maintained, biological and nutrient contaminants can find their way into the groundwater. Generally there has been no indication of wide-spread septic failures since the extension of sewers along the north shore of Rainbow Reservoir. When problems occur, it is usually due to the age of the system rather than lack of maintenance and often is not addressed until a house is up for sale. It is typically the seller's responsibility to upgrade or replace the system. In cases where the affordability of repairs becomes an issue, the Town should help identify grants or loans that can help the property owner. As for septic maintenance, the MDC offers a reimbursement for septic tank cleaning to Windsor property owners to offset their contribution to the MDC through property taxes despite not using MDC sewers. The Town could ensure that residents know about this program by mailing alerts to all qualifying property owners.

A leaking underground fuel tank also can be a serious water quality concern. While Windsor does not discourage the installation of new underground storage tanks, few are installed and those that are, are engineered to a higher standard that reduces the likelihood of a leak. Financial institutions generally require the removal of residential underground oil tanks when providing mortgages and refinancing. The Town is one of few in the State that tracks and monitors the removal status. With continued monitoring of the removal status, issues related to leaks are expected to be minimal over the next ten years.

Given concerns related to the disposal of oil and gas fracking waste, such as groundwater pollution and the earthquakes experienced in Oklahoma, the Town should monitor the status of the current statewide moratorium on disposing of such waste, due to expire in 2017. As the term moratorium suggests, it is a temporary measure to allow the State time to investigate the matter and develop legislation to address it accordingly. If the state chooses not to ban the disposal of fracking waste, the Town should investigate the most effective local legal remedy.

Water Resource Protection Strategies

10. Provide additional LID guidance in the Stormwater Manual.
11. Consider requiring LID approaches except where infeasible.
12. Incorporate LID into town projects and showcase the practices.
13. Ensure maintenance of town and private drainage infrastructure.
14. Consider reducing the threshold that triggers stormwater review.
15. Continue efforts and educational programs to reduce water pollution.
16. Reduce town use of pesticides and fertilizers.
17. Work with farmers to minimize water quality impacts of agricultural practices.
18. Continue to provide user-friendly information about when permits are needed.
19. Continue to monitor construction activity and enforce conditions of approval.
20. Identify funding assistance for low-income homeowners with failing and outdated septic systems.
21. Ensure that all homeowners with a septic system are aware of the MDC pump-out assistance program.
22. Continue to track and monitor the removal of underground storage tanks.
23. Monitor the state moratorium on fracking waste and consider appropriate local controls if necessary.

Air Pollution

Air pollution directly affects our health, contributing to respiratory and cardiopulmonary problems. Air pollution can also impact water quality as pollutants settle on roads and wash into water bodies and wetlands.

Local actions can help reduce some sources of air pollution. “No idle” zones can be adopted town-wide or at high impact areas, such as schools. Trees and vegetation help filter air, so retaining and planting trees can make a difference. Measures to reduce driving and encourage lower emission vehicles can also help.

One type of air pollutant, particulate matter, has been of concern because the fine particles can get deep into lungs, causing serious health issues. Traffic is a key generator of particulate matter. The California Air Resources Board has led efforts in researching impacts from well-travelled highways and issued land use policies for impacted areas, including discouraging land uses that serve children or elderly from locating near high traffic highways (www.arb.ca.gov).

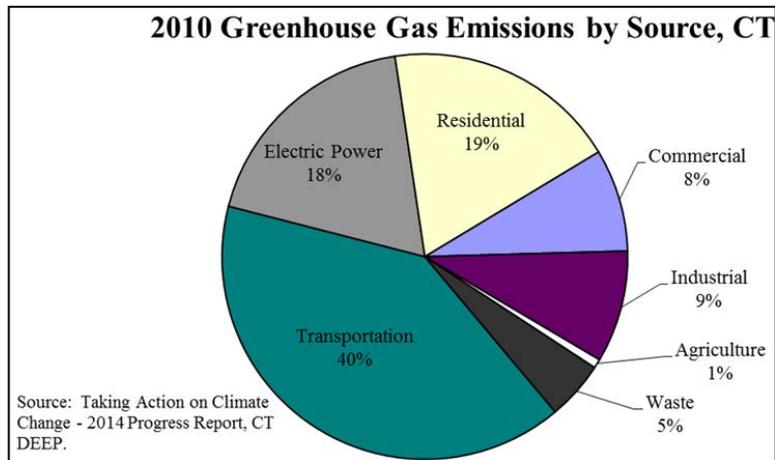
Reduce Greenhouse Gas Emissions

Whether you believe that global warming is caused by human activity or is a natural cycle, there is no denying that global temperatures are slowly rising. While many of the major impacts such as rising sea levels, changing weather cycles, and more severe droughts and storms are well documented and publicized, there are countless other impacts that can increasingly affect us all including the spread of tropical, insect-borne diseases (e.g., West Nile Virus and Eastern Equine Encephalitis); shifting vegetative habitats (i.e. the habitat ranges for sugar maples and temperate fruit trees is moving north, leading to declines in maple sap production and fruit trees failing to flower or set fruit due to insufficient “chill hours”), increasing levels of pollen, leading to increased allergies and respiratory ailments; and ice storms that damage trees and result in severe power outages. Mounting evidence suggests that greenhouse gas emissions are the root cause of the problem.

Connecticut has achieved a key milestone for reducing greenhouse gas emissions, having decreased emissions to 1990 levels. The next goal is to reduce emissions to 10% below the 1990 level. The Town has taken its role in reducing greenhouse gases seriously by participating in various programs aimed at conserving energy, providing alternative energy sources and encouraging residents and businesses to do the same. To date, Windsor has:

- joined the Cities for Climate Protection Campaign;
- participated in the green energy program sponsored by the Connecticut Clean Energy Fund;
- installed geothermal HVAC systems at the Wilson Library and Northwest Park;
- achieved its goal of getting 20% of its energy from renewable energy sources by 2010;
- created an Energy Task Team, charged with developing energy conservation and education programs;
- participated in the Solarize CT program designed to increase residential solar installations;
- incorporated renewable energy systems into its Zoning Regulations;
- promoted renewable energy and other conservation measures as part of the development review process;
- switched four public buildings from oil to natural gas; installed a combination of high-efficiency boilers, a heat recovery system, radiant heating and new skylights in another facility; and increased insulation in several town facilities;
- installed solar arrays on three elementary schools and white membrane roofs on four public buildings;
- installed small wind generation and green roof demonstration projects at the nature center and Town Library;
- retrofitted lighting and windows, adding insulation, motion sensors, and programmable thermostats in many facilities;
- retrofitted traffic lights with LED heads;
- purchased 12 hybrid fleet vehicles; and
- retrofitted school bus emission systems.

Most greenhouse gas emissions are generated by transportation sources, with electric power and residential uses contributing the next largest emissions. Reducing greenhouse gas emissions may seem difficult to accomplish locally, but communities can adopt policies and programs that can curb emissions in these higher emitting sectors.



Many of the policies contained elsewhere in the Plan can help reduce emissions from the transportation sector. Increased transit options, making it easier to walk and bike around town, and putting housing and jobs next to each other can help reduce vehicle trips. Alternative fuel sources for vehicles can also reduce emissions. The Town's vehicle fleet does include hybrid cars; the use of hybrids and alternative fuel sources should be expanded.

Windsor can continue to encourage residences and businesses to reduce energy use and install alternative sources. The Town has convened information sessions about available programs, passed resolutions in support of programs, and actively promotes programs aimed at residents and businesses. Residents and businesses are starting to embrace alternative energy as evidenced by solar and geothermal around town. Cost will likely remain the biggest challenge, but the State continues to offer incentives and create new programs to make alternative sources more affordable. The Town should continue its role in promoting these programs.

Perhaps the largest impact a town can have on emissions is by reducing the energy use of its own facilities. Windsor recognizes that building upgrades should address energy efficiency. The 2015-2020 Capital Improvement Program includes energy-efficient updates to HVAC, electrical and energy systems, and windows at a number of buildings including the Town Hall and schools. Street lights, which can use a surprisingly large amount of energy, will also be converted to an energy efficient bulb. The Towns should also strive that any new buildings meet energy efficient standards, such as the Leadership in Energy and Environmental Design Standards (LEED) set forth by the US Green Building Council. It can be difficult to gain public support for energy efficient buildings, because the construction cost may be higher. Yet over time the reduced operating costs results in a net savings. It is important that energy efficiency programs for town facilities include a public education component to convey these long term cost savings.

Keeping track of all energy programs available to municipalities, residents and businesses is a daunting task as programs seem to be continually emerging. The Town created an energy task force to help spearhead efforts and to help the Town

stay apprised of state programs, but keeping interest in this task force has been difficult.

Taking the attitude that global warming is out of our hands, irreversible, too expensive to correct, or an issue best dealt with on a global basis will only perpetuate the problem. If nations cannot step up and address the problem for economic or political reasons, we need to take matters into our own hands at the local level and hope that others do the same. The solution does not have to be as complicated as installing a solar array on your roof or rewiring your garage for a plug-in hybrid vehicle, although those are excellent options. Your role can be as simple as:

- replacing incandescent light bulbs in your house with LED or CFL bulbs;
- turning off lights when you leave a room;
- adding insulation to your attic;
- installing a programmable thermostat or programming one that you already have to adjust the temperature on weekdays when the house is empty;
- purchasing a more fuel efficient car when you replace your current vehicle, which does not have to be a hybrid to make a difference; and
- planting a vegetable garden or shopping at farmers markets instead of eating produce that has been refrigerated and shipped across the country or the globe.

Greenhouse Gas Emission Reduction Strategies

24. Continue to replace vehicles with low-emission and alternative fuel vehicles.
25. Continue to promote energy conservation programs, alternative energy incentive programs, and simple steps that residents and businesses can take to reduce greenhouse gas emissions.
26. Continue to upgrade town facilities to be more energy efficient and to install alternative energy sources.
27. Commit to designing new town facilities to meet or emulate green building standards, such as LEED.
28. Educate the public on long-term cost savings of energy efficient buildings.
29. Reinvalidate the town Energy Task Force.

Promote Stewardship and Local Pride in our Natural Environment

Many Windsor residents volunteer their time and energy to help protect the natural environment. The Town should continue educational programs to engage these interested residents and convey information on the latest best practices they can take to do their part to preserve Windsor's resources.

Others may not give a second thought to how their everyday actions or the actions of others might affect natural resources and are not motivated to alter their ways simply to protect the environment, as it may not resonate personally. The Town can shift its communication approach to convey that the forests, rivers, streams and fields are integral to Windsor's identity and ours to protect. We can convey that Windsor can do it all – we can provide good jobs, tax revenue, a diversity of housing choices, and preserve these critical elements of our natural identity – and that it is up to us to do so. Chapter 6 mentions the need for a brand when marketing Windsor as a heritage tourism destination. A similar branding can help Windsor increase local support and passion for preserving natural resources. The Connecticut and Farmington Rivers and Northwest Park provide an easy place to start.

The Town should continue existing programs and consider new programs to promote stewardship and local pride:

- continue hands-on programs that allow participants to see direct results from their actions, such as community and river clean-up days;
- continue programs that draw people to Northwest Park;
- build local pride surrounding the Connecticut and Farmington Rivers by programming special events and educational campaigns focused on the rivers;
- support the Wild & Scenic designation of the Farmington River;
- organize a BioBlitz, which the Center for Conservation and Biodiversity and Connecticut State Museum of Natural History describe as “part contest, part festival, part educational event, part scientific endeavor.”

Activities at Northwest Park



Photos by Ford Parker

Stewardship and Pride Strategies

30. Engage interested residents in environmental programs and disseminate best practices.
31. Shift approach for communicating with residents by focusing on local pride, identity and sense of ownership over Windsor's natural treasures.
32. Continue hands-on programs and events town-wide and at Northwest Park.
33. Promote the Connecticut and Farmington Rivers with events.
34. Continue to support the Wild and Scenic designation for the Farmington River.
35. Host a BioBlitz event at Northwest Park.

Coordinate Conservation Efforts

A number of public and private organizations are involved in various aspects of natural resource conservation in Windsor (see sidebar). As noted in the 2004 POCD, the activities of these organizations are uncoordinated and lack a larger vision or strategic direction. This POCD re-emphasizes the importance of designating the Conservation Commission as the entity to monitor and coordinate natural resource protection efforts in Windsor.

To accomplish this goal, the following steps are recommended.

- Use this POCD to create an annual work plan for the Conservation Commission. The first year should be modest in workload and scope in order to give the Commission and the Town time to become comfortable in its role. The work plan should include concrete tasks that can be completed to provide the Commission with a sense of accomplishment along with steps to implement larger policies contained in the POCD.
- Dedicate one meeting annually to review the work plan and prepare an update for the upcoming year.
- Attend meetings with other town commissions and committees that also play a role in protecting Windsor's natural resources (e.g., TPZC, IWWC, the Energy Task Force, etc.) to discuss mutual environmental issues.
- Staff and members of the Conservation Commission should regularly network and partner with other organizations.

It is recognized that implementing most of the recommendations in this chapter (and the Open Space and Agricultural Chapters) are outside of the power of a Conservation Commission. But the Commission can take initial steps, conduct research, monitor progress, and garner public support for the initiatives in the POCD.

Conservation Commission

Appointed by the Town Council, the Conservation Commission's duties include:

- preparing an inventory of open spaces for the purposes of obtaining information on the proper use of such areas;
- conducting research on the utilization of land in town; and
- disseminating education materials on protecting the environment.

Other Municipal Agencies

Inland Wetlands &
Watercourses Commission
Planning & Zoning
Commission
Windsor Health Department

State & Federal Agencies

CT Department of Energy &
Environmental Protection
US Environmental Protection
Agency

Private Organizations

Connecticut River
Watershed Council
Farmington River Watershed
Association
Friends of Northwest Park
Windsor Land Trust
Wintonbury Land Trust

Conservation Coordination Strategy

36. Create an annual work plan for the Conservation Commission to implement this Chapter of the POCD.
37. Attend meetings of town commissions involved in protecting Windsor's natural resources.
38. Maintain regular contact with non-municipal partners.

Connecticut River, Farmington River, Northwest Park

New England's longest river, the Connecticut River, forms Windsor's eastern border. The river flows 410 miles from the Canadian border to Long Island Sound. Its fertile floodplains drew Windsor's earliest inhabitants and sustained both Native Americans and colonial settlers. The Farmington River flows for 81 miles from Western Massachusetts to its confluence with the Connecticut River, in Windsor. The Farmington River is the Connecticut River's longest tributary and has the distinction of being the only river in the northern hemisphere that flows north, south, east and west. Historically, the rivers supported industry and provided transportation. Today, they provide drinking water, power, recreational opportunities, a healthy and diverse ecosystem, and scenic value. Windsor has created trails along both riverfronts and continues to expand the trails.

Farmington River



Both rivers are of state-wide importance for their biological diversity. The Connecticut and Farmington Rivers have the highest diversity of fish in the State, and the Farmington River is considered one of the most important for diadromous (i.e. migrate out to sea to live as adults and return to spawn) fish restoration. According to the 2011 Lower Farmington River and Salmon Brook Management Plan “[t]he mouth of the Farmington River where it meets the Connecticut River is the most diverse and one of the most important areas within New England in terms of fish resources.”

Barred Owl at Northwest Park



Photos by Ford Parker

A portion of the Farmington River has achieved the Federal “Wild and Scenic Designation”, afforded to a select group of rivers that provide natural and cultural values and should be protected for the benefit and enjoyment of future generations. Efforts are underway to designate the lower reach, including a stretch in Windsor south of Poquonock, as wild and scenic.

Along the Farmington River lies Northwest Park – a 473 acre town park with a unique history and landscape. Former tobacco fields are maintained as an open, meadow landscape, while other fields have regenerated as forest. An on-site museum depicts Windsor's tobacco growing legacy. The Park's combination of fields, forest, wetlands, streams and riverine land provide habitat diversity that is unique to this part of the State. With over 130 bird species, the National Audubon Society designated Northwest Park as an “Important Bird Area,” making it one of only 20 in Connecticut and the only one in Hartford County. The park connects people to nature, with 12 miles of trails and programs for children and adults including concerts, educational programs and summer camps. Together, the Town and the Friends of Northwest Park work to maintain the park and offer community programs.

PRESERVE OPEN SPACE

4

Overview

There are currently over 2,500 acres of dedicated or managed open space in Windsor, accounting for approximately 12 percent of Windsor’s land area. It is important to keep in mind that there is no accepted standard for how much open space land a community needs. Every community is different in terms of physical features and residents’ concepts of what is appropriate. Appropriately located open spaces of sufficient size and quality to be meaningful, help protect community character, conserve important natural resources, shape development patterns, and enhance the quality of life for Windsor residents.

Many residents attending public meetings during the planning process were concerned that land development was changing the character of the community, resulting in a feeling of less “openness” and creating a sense of urgency that more needed to be done to preserve open space in Windsor. Residents also expressed strong interest in providing for public access to preserved open space and establishing an open space strategy to guide open space preservation efforts.

Windsor has significant opportunities to create a meaningful open space and greenway system that over the long term will enhance community character and quality of life.

Natural Resource Protection



Recreational Use



Since 2004, approximately 261 additional acres of open space have been preserved in Windsor; approximately 182.5 acres have been preserved as a result of the Town Planning and Zoning process, 66 acres have been purchased by the State and Town, and approximately 12.5 acres have been donated to the Town.

Defining Open Space

Open space comes in many forms and is characterized by a number of factors including: level of protection, natural features, access, ownership, and intended use. These characteristics are all interrelated and influence one another.

Level of Protection

In terms of level of protection, open space falls into two simple categories: “managed” and “protected” open space. Managed or “perceived” open space is land that appears to be open or serves as recreational open space, but is unprotected from future development. Managed open space includes: vacant state land (non-DEEP); future town-owned school sites; public utility land; non-municipal golf courses, driving ranges and other privately held outdoor recreation facilities; and undeveloped land enrolled in the Public Act 490 (PA 490) tax relief program (see Page 4-16). As can be seen with the past development proposal for the Traditions Golf Course, there is no guarantee that managed open space will remain open in the future.

Protected open space is land that has been permanently protected from development. This can be achieved through outright ownership by an entity that seeks to preserve it (i.e. DEEP, the Town of Windsor, the Windsor Land Trust, or a homeowners association); through the transfer or purchase of development rights; by conservation easement; or regulations. Examples of protected open space are state parks and forests, town parks, and wetlands or steep slopes protected by conservation easements or regulations.

Access

Like the natural features that define them, the desired level of access to open space can help determine its appropriate ownership and use. The nature of access may be as varied as the types of land conserved. If land is to be used for active or passive recreation, it must be accessible to the public, have sufficient parking, and be owned by an entity that invites public use. Open space that lacks access to the public at large due to its remote location or natural barriers is inappropriate for recreational purposes and does not need to be owned by a public entity.

Natural Features

Open space comes in infinite natural forms, ranging from flat to steep and wet to dry land and everything in between. These natural characteristics help determine the appropriate level of protection, ownership, access, and intended use. For example, steep or wet land is unsuitable for active recreational use and may in fact be so undevelopable that it is self-preserving. This type of open space might function as a wildlife corridor or habitat, a visual buffer between incompatible land uses, or as passive open space for hiking, fishing, or bird watching. With the exception of open space used for passive recreation, it may need no more protection than a conservation easement left in private ownership. On the other hand, dry flat land is not always appropriate for active recreation, as there are

fiscal considerations for maintaining small or scattered active recreation facilities.

Ownership

Open space ownership is predominantly a factor of its intended use, although access and natural characteristics can also be a factor. If the open space is accessible, naturally suitable, and intended to be used for recreational purposes, it should be owned by an entity comfortable with public access. Active recreation facilities such as parks, public beaches, boat launches, etc. should be owned by a responsible public entity such as the DEEP or Town of Windsor, which have the ability to maintain the facilities and handle the liability that comes with more intensive public use. Depending on its accessibility, passive recreation land can be owned by the Windsor Land Trust, a homeowners association, or even a private owner, if they are comfortable with limited public use. Self-preserving open space and/or open space intended for wildlife purposes does not need to be publicly owned and can be owned by the Windsor Land Trust, a homeowners association, or a private owner (with a conservation easement in the form of a deed restriction).

Intended Use

The use of open space can range from passive uses, such as visual buffers and wildlife corridors, to the most active recreational uses such as playing fields. Typical passive uses include visual buffers, scenic vistas, wildlife corridors/habitat, and protection of important natural or man-made resources such as an inland pine barren (Matianuck State Park) or scenic road frontage (Palisado Avenue). Passive uses can also include low-intensity, passive recreational uses such as bird watching, canoeing, fishing, or hiking, which leave little evidence of their use upon the land or water. Active recreation typically involves managed facilities such as ball fields or courts, golf courses, swimming pools and public beaches. Active recreation facilities often fall into the category of managed open space or may be serving a dual function, such as recreational facilities on school grounds that are open to the public after school hours.

Other Considerations

The perception of open space will vary from one person to the next, with some people perceiving anything that is undeveloped (including agricultural land or cemeteries) as open space while another might not consider a school playground as open space because it is not in its natural state. The use of open space can be for purposes as tangible as a tennis court or as abstract as preserving community character. In the latter regard, preserving agricultural resources, scenic roadsides, scenic vistas, and historic properties can be considered a legitimate open space purpose and deserve further discussion in this planning process.

The Benefits of Open Space

Open space has many environmental, recreational, and financial benefits, as well as less tangible quality-of-life benefits associated with it. Open space protects valuable natural resources, provides active and passive recreation space, separates incompatible land uses, and protects the character of Windsor.

Environmental Benefits

The environmental benefits of open space are numerous. Open space can be used to protect fragile ecosystems, erodible slopes, and wildlife habitats, as well as surface and groundwater resources. It can also be used to provide wildlife corridors linking habitats and providing relief from the heat island effect and visual impacts of suburban development.

Recreation

Open spaces provide active and passive outdoor recreation opportunities for residents, which is becoming more important in today's increasingly sedentary society. As Windsor's population continues to grow, increasing pressure on existing recreational facilities may require the expansion of existing facilities or the creation of new ones. Passive recreation opportunities such as walking, hiking, and biking can also be incorporated into open space buffers between incompatible land uses, as is the case with a proposed trail system in the open space between the Berrios Hill/Winterwood neighborhoods and the industrial/warehouse uses of the New England Tradeport.

Quality of Life

Aside from the obvious recreational opportunities, many quality-of-life benefits of open space are intangible because it is difficult to place a price on community walkability, scenic beauty, biodiversity, or maintaining local sources of food. One potential use for open space that has not been considered in Windsor in the past is the protection of community character from new development. By requiring open space to be set aside along the frontage of a new development instead of to the rear, as has traditionally been the case, scenic road frontage can be preserved. This technique has been used in other towns in Connecticut to preserve street trees, stone walls, meadows, pastures and wooded buffers, as well as reduce curb cuts on busy arterial roads. In one instance, the retained pasture is owned by an association of homeowners who have access to a community stable for their horses, rather than maintaining individual stables and confining their horses to a single-family lot.

Agricultural Benefits

Agriculture has played an important historic role in Windsor, particularly the production of shade-grown tobacco. Preserving our agricultural heritage helps to maintain community character and could provide needed land for sustainable, locally grown produce in the face of increasing energy and transportation costs. The diversity of our economy, long-term land stewardship, employment

opportunities, the stability of family ownership, and preservation of wildlife habitat are just a few of the multitude of reasons that a healthy agricultural sector strengthens a community. The State of Connecticut's Farmland Preservation Program provides aid to municipalities in preserving their existing farmland. Windsor should ensure that all of its current farm owners are fully aware of the resources available to them and provide assistance in securing available funds.

Financial Benefits

Several published studies have determined that open space can have a long-term positive effect on the Town's tax structure. When one considers that new residential construction adds to the demand for education and general services, while not always generating enough property taxes to offset its demand, it is easy to see that open space preservation in lieu of new market-rate residential construction can be cost effective despite generating little or no taxes. When existing school facilities lack additional capacity to absorb new students, the capital costs of new or expanded facilities make the argument even more compelling. While purchasing development rights or open space can be cost effective, doing so as an anti-growth measure may only forestall the construction of housing, shifting it to less developable properties and resulting in fewer homes in the long term. The tax benefits of open space are not limited to the Town.

Private property owners can enjoy several financial benefits as a result of preserving open space. The sale of development rights can provide an infusion of cash to farmers, while allowing them to continue to farm the land. With proper estate planning, the sale of development rights or land for open space can be used to reduce the burden of estate taxes on beneficiaries. The donation of land or development rights can also reduce income taxes, capital gains taxes and property taxes. While only a temporary measure, Public Act 490 allows farm and forest land to be set aside for ten years in return for local property tax abatements.

Studies have also shown that property values decrease with distance from open space and more particularly, recreational facilities such as parks and trails. Given a choice between a half-acre conventional lot or a slightly smaller lot adjacent to significant open space, the average person would not perceive the difference in lot size but prefer the relative privacy and enjoyment of adjacent open space.

Identifying Appropriate Open Space

While the quantity of open space in Windsor is important, the quality (i.e. location, configuration and utility) of that open space may be more important. With the exception of several large tracts of open space, such as Northwest Park and Matianuck Sand Dunes Natural Area Preserve, Windsor's pattern of open space can best be described as "open space measles". Rather than acquire open space land because it is available for purchase or unquestioningly accept open space through the subdivision process, Windsor should continue to create a meaningful system of open spaces. While not precluding the acquisition of isolated parcels that may have individual merit, it is important to carefully analyze how each parcel relates to the Town's overall open space strategy.

Determining the value of open space is not an easy task or an exact science. Due to the many variables that enter into the open space equation, there will always be exceptions to the rules, requiring open-minded flexibility when a proposed acquisition has not been identified in this Plan.

Factors that enter into defining appropriate open space include:

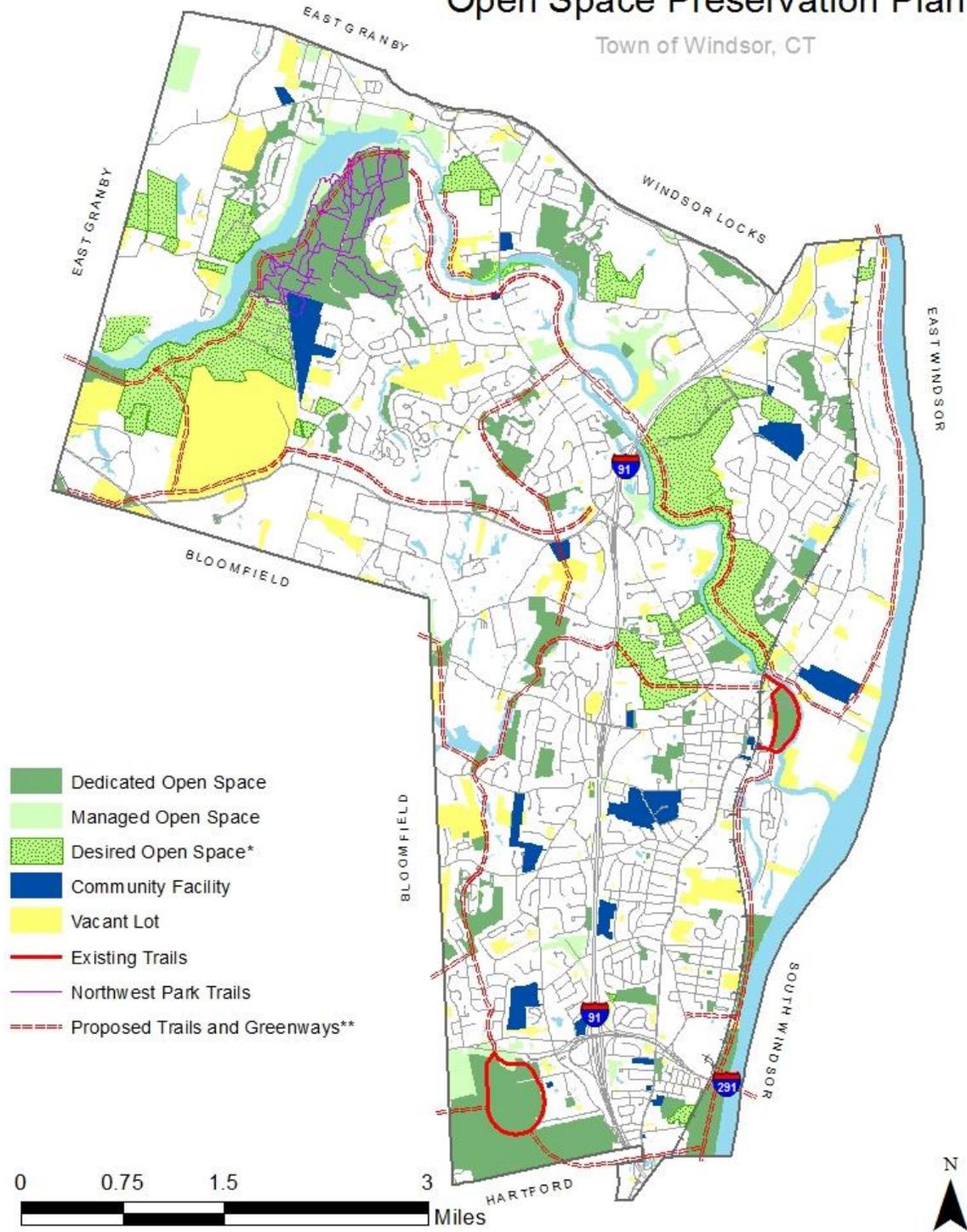
- proximity to existing open space;
- the desirability for active or passive recreation;
- the presence of an unprotected recreational resource;
- a location along a wildlife/greenway/trail corridor;
- the presence of a special wildlife habitat (Natural Diversity Database (NDDB) site) or other fragile/rare natural resource;
- a location at a transition point between incompatible land uses or zones; and/or
- the presence of an historic/scenic resource or scenic views of these resources.

Many of these factors have been mapped using the Town's geographic information system (GIS) to aid in identifying appropriate open space.

To avoid any misconceptions about the open space acquisition process, identification of a particular area or parcel in this Plan does not imply that the Town intends to acquire the land through eminent domain (condemnation). It simply means that if and when the land becomes available, the Town would rather see it preserved than developed, and the Town (or some other open space organization) would have to pay fair market value for that land, or acquire a smaller portion of the land as part of the development process.

Open Space Preservation Plan

Town of Windsor, CT



*Properties that are of agricultural, community character, or environmental importance and should be preserved.
**Trail locations are conceptual and may require shared roadway use.

Greenbelts and Greenways

A greenbelt is another word for a greenway. A greenway is a corridor of open space that:

- may protect natural resources, preserve scenic landscapes and historical resources or offer opportunities for recreation or non-motorized transportation;
- may connect existing protected areas and provide access to the outdoors;
- may be located along a defining natural feature, such as a waterway, along a man-made corridor, including an unused right-of-way, traditional trail routes or historic barge canals; or
- may be a green space along a highway or around a village.

Connecticut General Assembly
Public Act 95-335

Existing Greenways/Trails

Northwest Park	8.0 Miles Unpaved
Windsor Center Trail	1.3 Miles Paved
Matianuck State Park	1.5 Miles Unpaved
Bissell Bridge Trail	1.7 Miles Paved

Work To Establish a Greenway System

An isolated parcel of open space may preserve an important natural resource or maintain the appearance of undeveloped land, but it may not contribute to a meaningful open space system. If that same parcel of open space can be interconnected into a cohesive system, its value to residents and impact on the community grows significantly. Such open spaces can be connected by trails, providing increased accessibility, significant functional wildlife corridors, more opportunities for active or passive recreation, and enhanced quality of life for residents.

Over the long term, Windsor needs to work towards establishing an overall greenway/trail network that connects open space areas together. Such a greenway system could build upon the efforts of Riverfront Recapture and others to create a greenway of regional or even statewide significance along the Connecticut River. This greenway/trail system should also be extended along the Farmington River. The Windsor Center Trail could be a first link in a trail system connecting the Connecticut River Trail in Hartford, the Barber Street Boat Launch, the Bissell Bridge Bikeway, Pleasant Street Park, River Street Park, Welch Park, the Rainbow Boat Launch and/or Northwest Park.

Much of the needed land along the Connecticut River is already under State or Town control, and significant stretches of the Farmington River remain undeveloped due to floodplains. Windsor should work with major property owners to obtain reasonable public access to their properties and integrate them into an overall greenway trail network.

Establishing a greenway/trail system will be the most successful open space strategy for Windsor but it is also likely to be difficult, requiring dedication and effort. The map page 4-7 depicts the Open Space Plan for Windsor and shows how greenways might interconnect different parts of Windsor with a town-wide greenway/trail network.

Prioritizing Open Space Acquisitions

Once the general location of desirable open space areas are identified and mapped, their acquisition must be prioritized to make the most of limited resources available for acquisition. Prioritization can be more challenging than identifying the desirable open space because many of the variables can be subjective. Factors taken into consideration when prioritizing open space parcels for acquisition include:

- the developability of the land (i.e. is the land self-preserving by virtue of significant natural constraints) and if developable, the level of threat of imminent development;
- the unique value of the recreational, natural, historic, or scenic resource it would protect (e.g. a critical link in a greenway/trail/wildlife corridor, a critical addition to an existing open space such as a parcel projecting into or adjacent to Northwest Park);
- the current use of the land (e.g. actively farmed, a fallow field, a private recreation facility, public utility land, a wooded buffer between incompatible uses, etc.);
- if containing a Natural Diversity Database (NDDB) site or other fragile/rare natural resource, the potential for damage from nearby development;
- the fair distribution of open spaces throughout town;
- the amount of money available locally for acquisition (i.e. you can't target large parcels without significant funds available); and
- the type of grant funds available (e.g. agricultural preservation, open space, trails).

Like the process of identifying appropriate open space, prioritization has many "exceptions to the rules". Clearly, self-preserving open space such as a floodplain is not in imminent danger of development and therefore is not generally a high-priority for acquisition, but if it will be needed for a future trail corridor and access is in danger of being blocked by future development, it should be considered for acquisition.

Prioritization is an iterative or cyclical process that must be revisited from time to time as acquisitions are made that affect the value of other parcels (i.e. acquiring a significant open space parcel makes adjacent vacant parcels more valuable for creating an even more significant contiguous open space).

Ownership

The appropriate ownership for desirable open space is dependent upon its natural features, accessibility, and intended use. While there will always be exceptions, the following rules of thumb typically apply:

- if accessible and intended for general public access, it should be owned by a public agency or an organization comfortable with the intended level of public access;
- if inaccessible to the general public but accessible to current or abutting private property owners, it should be held privately or by an association of abutting owners;
- if intended for active recreation, it should be owned by a public entity capable of maintaining facilities and managing liability;
- if intended for passive recreation, both public and private organizations can own and manage the property with minimal risk;
- if not intended for public access and serving purposes other than active or passive recreation, it need not be owned by a public entity or other open space organization;
- if hydrologically or topographically self-preserving (i.e. too wet, subject to flooding, or too steep to develop), it may not need to be preserved by acquisition; and
- if it contains an important natural resource that is vulnerable to clearing, filling, or other encroachment, private ownership should be discouraged.

The table on page 4-11 illustrates the most appropriate ownership based on the intended use of the open space.

Most Appropriate Ownership by Open Space Type

	State	Town	Recreation Association	Land Trust	Conservation Organization	Homeowners Association	Public Utility	Private Owner
Park	√	√					√	
Playground		√	√			√		
Athletic Field		√	√			√		
Beach	√	√	√			√	√	
Pool		√	√			√		
Multi-use Trail Corridor	√	√		√		√	√	
Hiking Trail	√	√		√	√		√	
Boat Launch	√	√			√		√	
Wildlife Habitat or Corridor				√	√	√	√	√
Natural Resource				√	√	√	√	√
Critical Natural Resource	√	√		√	√		√	
Self-Preserving Open Space				√	√		√	√
Historic Resource	√	√		√	√			√
Scenic Resource	√	√		√	√	√	√	√
Agricultural Resource				√	√	√		√
Visual Buffer				√	√	√		√

Stewardship is an important consideration in the ownership of open space. The owner must be capable of managing the open space, which can range from simple forest management, to oversight of conservation easements and uses, to the maintenance and operation of recreational facilities. The choice between the three main preservation options: outright (fee-simple) ownership, purchase or transfer of development rights, and private conservation easements, must be made with an understanding that the open space needs to be monitored to some degree. Responsibility for the maintenance and supervision of the open space should be clearly designated at the time of acquisition.

Ownership provides maximum flexibility in terms of public access and use of the land, as well as maximum protection of important resources. However, fee-simple ownership of open space can be the most expensive option if land must be purchased. Ownership by a homeowner’s association provides an intermediate option between dedicated ownership by the Town or other responsible preservation organization and privately held conservation easements, by taking control of the land out of the hands of private owners who may willfully or unwittingly violate the terms of a conservation easement.

The purchase or transfer of development rights offers a less expensive alternative to fee-simple ownership but can severely limit public access and use of the property. This method is most appropriate for preserving agricultural land or open spaces not intended for public use. The DEEP’s annual open space grant

program mandates public access while the DOAG’s farmland preservation grants do not.

A conservation easement can be a valuable tool most suited for preserving open spaces that are not intended for public use and not containing critical environmental resources. While freeing the Town or other organization from direct responsibility for the open space, the Town or other beneficiary of the easement cannot maintain constant vigilance over every conservation easement, leaving them susceptible to clearing, filling or other encroachment by their owners.

Most Appropriate Type of Ownership by Open Space Type

	Fee-Simple Ownership	Development Rights	Conservation Easement
Park	√		
Playground	√		
Athletic Field	√		
Beach	√		
Pool	√		
Multi-use Trail Corridor	√		√
Hiking Trail	√		√
Boat Launch	√		
Wildlife Habitat or Corridor		√	√
Natural Resource		√	√
Critical Natural Resource	√		
Self-Preserving Open Space			√
Historic Resource		√	√
Scenic Resource		√	√
Agricultural Resource		√	
Visual Buffer		√	√

Strategies for Acquiring More Meaningful Dedicated Open Space

1. Encourage open space preservation that contributes to a meaningful overall open space system.
2. Establish a greenway/trail network in Windsor that interconnects open space areas together.
3. Prepare more detailed plans for the main spine of the greenway/trail along the Connecticut and Farmington Rivers.
4. Work with major property owners to obtain reasonable public access to their properties and integrate into an overall trail network.
5. Prioritize open space acquisitions according to established criteria in order to make the most of limited resources available for acquisition
6. Ensure that the ownership of open space matches the intended use.
7. Partner with the Windsor Land Trust as an alternative to public ownership, where appropriate.

Open Space Success Story

The Windsor Land Trust approached the Town with the idea of preserving the Mill Brook corridor as a more meaningful open space greenway. Three adjacent properties in the corridor were for sale but the Town could only agree on the price of one; purchasing 7.7 acres on Pigeon Hill Road

Subsequently, three local businesses needed to expand but lacked the available impervious coverage to do so. They purchased one of the remaining two parcels, transferred the non-residential coverage to their sites, and deeded 24.3 acres to the Town for open space at no cost (see Regulatory Flexibility).

When the CT Department of Transportation needed to mitigate the inland wetlands impacts of the New Haven-Hartford-Springfield Commuter Rail Project, the Town suggested the remaining 21.8 acre parcel as a mitigation site and the State agreed to purchase the land, create a parking area and trail, and eventually turn the property over to the Town at no cost. In doing so, the Town achieved its original goal at a fraction of the original cost and has gone on to purchase 20.95 additional acres in the corridor.

Utilize Available Open Space Tools

Open space can and should be obtained whenever property is developed or redeveloped for residential use. Windsor has a number of regulatory and other tools in place for acquiring open space.

Open Space Set-Aside Regulations

An open space set-aside requirement is authorized under State Statute (CGS 8-25) as part of every subdivision. The Commission, through its Subdivision Regulations, can require that each residential subdivision set aside 15 percent of the development for open space purposes with the Commission retaining the ability to determine the location and ownership of open space.

Windsor currently allows for the off-site dedication of open space as part of a subdivision. The Commission can accept land in another part of Windsor if they believe that land to be more desirable in terms of achieving open space objectives, such as adding to existing open space or implementing a greenway system.

Fees in-Lieu of Open Space

Another effective means of assuring quality open space is to accept a fee in-lieu of open space. When dedicated open space in a subdivision is too small to be meaningful or does not fulfill a desired open space goal, a fee in-lieu of open space allows the Town to purchase open space in more appropriate locations. The fee or combination of land and fee cannot exceed 10 percent of the fair market value of the undeveloped land. The donation of a fee is at the discretion of the owner/developer and receipt of a fee in-lieu of open space remains at the discretion of the Commission. In other words, the Commission cannot require a fee in-lieu of open space but may insist on acquiring actual open space despite an offer of a fee in-lieu thereof. These funds have been used to acquire more meaningful open space elsewhere in town. The Commission has used this technique to raise \$115,000 to date for the Town's open space acquisition fund, with another \$137,000 pending the sale of building lots.

Regulatory Flexibility

To further encourage the dedication of open space Windsor has adopted open space flexibility provisions that offer developers flexibility in lot area, lot width, yard setbacks, lot coverage, and other requirements in return for the dedication of additional open space (see sidebar), but they have not been widely used. One method of increasing its use is to permit open space/cluster subdivisions as of right, or perhaps require a special use for more conventional subdivisions.

Transfer of residential density and transfer of non-residential coverage are two tools unique to Windsor that could be improved upon to make them more effective open space tools. These programs allow development potential to be transferred from one property to another, leaving one parcel open, while increasing development on another. Until recently, these regulations only

allowed residential density to be transferred to another residential property under the same ownership and industrial coverage to be transferred to another industrial property under the same ownership but now allow cooperative efforts between different owners. To make these tools more attractive to land owners and developers, density bonuses are now granted for preserving land that achieves identified community goals such as preserving active farmland and/or prime agricultural soils (see Chapter 5), or providing a critical linkage in a greenway/trail system. Conversely, the regulations were also tightened to ensure that the development potential being transferred is realistic (i.e. the development potential being transferred can actually be built after consideration of wetlands, floodplain, and steep slopes).

If environmental and financial issues arising from the conversion of residential density to industrial coverage and disparate residential and industrial land values can be resolved, consideration should be given to allowing residential density to be converted into impervious coverage on non-residential properties, thereby preserving open space and farmland in residential and agricultural areas where it could be more beneficial to residents and farmers, while increasing coverage in industrial areas that are less likely to impact abutting residents. Such expanded flexibility could achieve community goals far beyond preservation of open space and community character. For example, density can be transferred from prime farmland in areas less suited for development to support infill development on key parcels in Windsor Center, thus providing the critical mass of population needed to support the pending Springfield-New Haven commuter rail as well as local businesses, while simultaneously adding to the vitality of the Center.

Open Space Fund

There are several fiscal methods that Windsor uses to make existing open space tools more effective. The Conservation Commission was successful in working with the Town Council to establish an Open Space Fund to set aside funds for the purchase of open space. This fund can be enhanced by annual contributions through the Town budget; by a one-time bond issue or other infusion of money; through fees-in-lieu-of open space; through State real estate conveyance fees, through private donations, or thanks to a recent town ordinance, by inland wetlands fines.

Open Space Grants

To make the most of limited open space funds, Windsor should use these funds to leverage additional funds through various grant programs. The State of Connecticut currently operates an open space grant program where they provide 60 percent matching funds for qualifying open space purchases.

Purchase of Development Rights

Another way to make our limited resources go farther is to purchase development rights instead of purchasing property outright. Purchase of development rights is ideal for preserving farmland by giving farmers an infusion of money to pay taxes and make improvements, while allowing them or a future owner to continue farming the land in perpetuity. It can also be used to protect other

important resources where public access is not needed or desired (i.e. an historic homestead on significant developable acreage). Although cheaper than outright purchase, the obvious drawback is the lack of unrestricted public access.

A variation on purchase of development rights is an agricultural land purchase and leaseback program, where the Town purchases fee-simple farmland and leases it back to the farmer, or a farming cooperative, with rent being used to pay down the cost of the purchase.

Conservation Easements

Conservation easements are another effective tool for protecting open space that allows the owner to retain the limited use of their land. Conservation easements are ideal for situations where public access is not desired but may not be the best option when sensitive resources such as extremely steep slopes and vernal pools could be compromised if not closely monitored.

Public Act 490

Public Act 490 (PA 490) refers to a state tax abatement program for preserving farms, forest, and open space. Windsor currently participates in the farm and forest programs. Qualifying property owners participating in the programs receive a reduction in their property taxes, provided that they do not develop their farm or forest land for ten years after enrolling in the program. If the property is developed or sold within the first ten years, a prorated penalty applies, which basically allows the town to recoup the difference in property taxes paid to that date. There is no penalty for developing or selling the property after the first ten years but tax benefits continue to accrue. Clearly the PA 490 program is not a permanent solution for protecting open space, but if the modest reduction in property taxes is enough to keep a farm viable or eliminate the need for a land-rich, cash-poor property owner to sell their land for development, it can be an effective stopgap measure until a more permanent solution is achieved.

Philanthropy

Many property owners have an emotional attachment to their land and if given a choice, would prefer to see their property preserved in a way that enhances the community rather than see it developed. The active solicitation of land or development right donations or easements is an increasingly popular and successful open space implementation device that should be promoted in Windsor. There are several possible tax benefits of such donations as well. The Windsor Land Trust is an ideal entity to both educate residents about the benefits of land donation and to receive donations of land that do not warrant public ownership.

Strategies for Improving Regulatory Tools

8. Ensure that open space as part of a subdivision contributes to an overall system and is deeded to the Town, the Windsor Land Trust, or similar approved conservation organization.
9. Enhance existing open space incentive programs to better encourage their use and maximize their potential for preserving the most appropriate open space and agricultural land.
10. Consider expanding transfer of non-residential coverage to allow preservation of open space outside of commercial and industrial zones.
11. Create a more effective open space fund through annual budget contributions, inland wetlands fines, donations, and/or consider a municipal bond issue to provide seed money so that it can be used to acquire significant open space when it becomes available.
12. Enhance incentives for private landowners to dedicate a portion of their land to trails for public use.

Organizational Roles

The preservation of open space in Windsor is a coordinated effort among many organizations responsible for funding, identifying, acquiring, and maintaining open space. The Town Council, Town Planning and Zoning Commission, Inland Wetlands and Watercourses Commission, and Conservation Commission all play vital town roles in preserving open space. Locally, there is also the Windsor Land Trust, while on the state and national level there are countless other organizations such as American Farmland Trust, Riverfront Recapture, and The Trust for Public Land, dedicated to preserving farmland and open space as well as providing access to recreational opportunities.

Town Council

The Town Council appoints land use commissioners, reviews open space policies, adopts ordinances and budgets for the funding and maintenance of open space, and accepts open space parcels on behalf of the Town. As the financial authority for the Town, the Town Council also controls the major allocation of funds from the open space account. The Town Council has made preservation of open space and community character a priority under its goals for growth management and green technology.

Town Planning and Zoning Commission

The Town Planning and Zoning Commission is the lead agency in the open space process, legislating open space policy through the Plan of Conservation and Development, Subdivision Regulations, and Zoning Regulations; approving open space set-asides and fees in-lieu thereof through the subdivision process; and administering transfers of residential density and non-residential coverage through the zoning process.

Inland Wetlands and Watercourses Commission

The Inland Wetlands and Watercourses Commission (IWWC) acts somewhat independently of the other agencies with respect to open space. In their efforts to protect significant wetlands and watercourses, the IWWC can require conservation easements in new subdivisions and site developments, which may be in addition to any open space mandated by the Town Planning and Zoning Commission through the subdivision or zoning processes.

Conservation Commission

The Conservation Commission does not have a direct financial or regulatory role in the open space process but can provide several important advisory and educational functions. The Conservation Commission can provide significant input into the open space planning process by helping to identify the most appropriate future open space, prioritizing acquisitions, advocating the pursuit of agricultural and open space preservation grants, making recommendations to the Town Planning and Zoning Commission and Town Council on key acquisitions, and serving as a liaison between the Town and the Windsor Land Trust. The

Conservation Commission can also work with Town Staff to maintain an open space inventory and provide markers to developers and property owners to clearly mark the boundaries of open space and conservation easements so that they are less likely to be encroached upon by their owners or abutters. The Conservation Commission can also educate residents on the many benefits of open space and the donation thereof by sponsoring seminars and preparing educational materials.

Windsor Land Trust

The Windsor Land Trust is a non-profit organization dedicated to the preservation of open space in Windsor. The Windsor Land Trust operates outside of local government control but is a significant ally in the open space preservation process: pursuing their own open space initiatives; co-sponsoring educational opportunities with the Conservation Commission; collaborating with the Town on open space acquisitions; and potentially accepting open space set-asides from the subdivision process when public ownership is not ideal.

Riverfront Recapture

Riverfront Recapture is another non-profit organization dedicated to reconnecting Hartford and surrounding communities with the Connecticut River. Riverfront Recapture funded a plan for a Connecticut River Trail system from Windsor Center to Wethersfield, which the Town is pursuing funds to construct. Riverfront Recapture can be a strong ally in the continuing development of the trail and other river related improvements as well as increasing awareness of the river through events such as river races and fishing tournaments.

Other Organizations

The Connecticut Department of Agriculture, Department of Energy and Environmental Protection, and even the Department of Transportation are important sources of funding for agricultural and open space preservation, as well as recreational improvements. Through grant programs such as the Farmland Preservation Program, River Restoration Grants, Municipal Outdoor Recreation Grants, Open Space and Watershed Acquisition Grants, and various transportation improvement programs, these agencies provide grants of up to 80 percent for acquiring, preserving, and improving agricultural land and open space.

National organizations such as The Nature Conservancy, The Trust for Public Land, and American Farmland Trust provide valuable information, educational materials, and occasionally funding to local organizations for the preservation of farmland and open space. The Nature Conservancy, for example, was instrumental in securing a portion of the Matianuck Dunes Natural Area Preserve.

If Windsor's open space program is to be successful, cooperation among local agencies and the leveraging of state and national resources will be critical.

Land Trusts

Land trusts are important open space organizations since they can devote far more time and energy towards open space preservation than a municipality can.

More importantly, land trusts can, over many years, work with property owners to understand their motivations and needs and help them preserve their land as open space. Many property owners would, if given equal returns, prefer to preserve their land as open space.

Since taxes incurred from property sale or development can reduce the net proceeds to a landowner, land trusts can, with expert advice, show property owners how their land can be partially donated as open space and produce the same (or greater) return to the property owner. Such transactions can also reduce the amount of cash required to purchase the property as open space.

Organizational Strategies

- 13. Collaborate with the Conservation Commission on prioritizing open space and other preservation activities.
- 14. Promote open space preservation through partnerships with the Windsor Land Trust and other organizations.

Windsor Center Trail



River Street Park



AGRICULTURAL RESOURCES

5

Overview

For most of its 382 year history, Windsor has been an agricultural community. At its agricultural peak, Windsor was the center of the shade-grown tobacco industry in the Connecticut River Valley. In more recent decades, the iconic tobacco sheds and shade tents of the shade-grown tobacco industry are giving way to food production, residential and industrial development, and even Northwest Park, but remain a significant part of the Town's character.

As of 2014, approximately 3,100 acres or 16 percent of Windsor's land area is being used for agricultural purposes. Preserving agricultural land will help to maintain local food capacity, economic diversity, as well as historic and community character.

Conserve agricultural resources to preserve local food capacity, economic diversity, agricultural heritage, and community character.

Shade Grown Tobacco



Food Production



Agricultural Zone -AG

The purpose of the Agricultural Zone as defined by the Windsor Zoning Regulations is to “provide for the retention of suitable areas for agricultural uses, because of the singularly primary role of agriculture in the socio-economic chain, because of its value in the community’s cultural heritage and as visual open space and to provide, where appropriate, for low density transitional uses”.

Open Space Development

Open space development patterns can not only preserve significant amounts of open space and farmland, they can also significantly reduce development costs by requiring up to two-thirds less infrastructure such as roads, storm sewers and water and sewer lines.

Encourage Preservation of Prime Soils for Agricultural Use

“Prime farmland” is defined by the Connecticut Department of Energy and Environmental Protection (DEEP) as “land that has the best combination of physical and chemical characteristics for producing food, feed, forage fiber, oilseed crops, and is also available for these uses” (i.e. undeveloped). This land could be cropland, pastureland, rangeland or forestland. Prime agricultural soils are mapped by DEEP and their location in Windsor is illustrated by the map on the following page.

“Additional farmland of statewide importance” is defined by DEEP as those that are “nearly prime farmland and that economically produce high yields of crops when treated and managed according to modern farming methods”. These areas may produce as high a yield as prime farmlands under the right conditions.

As the following map illustrates, there is not always a correlation between prime farmland, actual farming and the Agricultural (AG) Zone, which allows many agricultural uses, ranging from raising crops and livestock to housing migrant workers. The areas identified as prime agricultural soils at risk are currently zoned for some other purpose than agriculture, but may still be actively farmed. The protected prime agricultural soils benefit from AG zoning that generally limits their use to agricultural purposes. However, the AG zone does allow for housing at a low density of one unit per three acres.

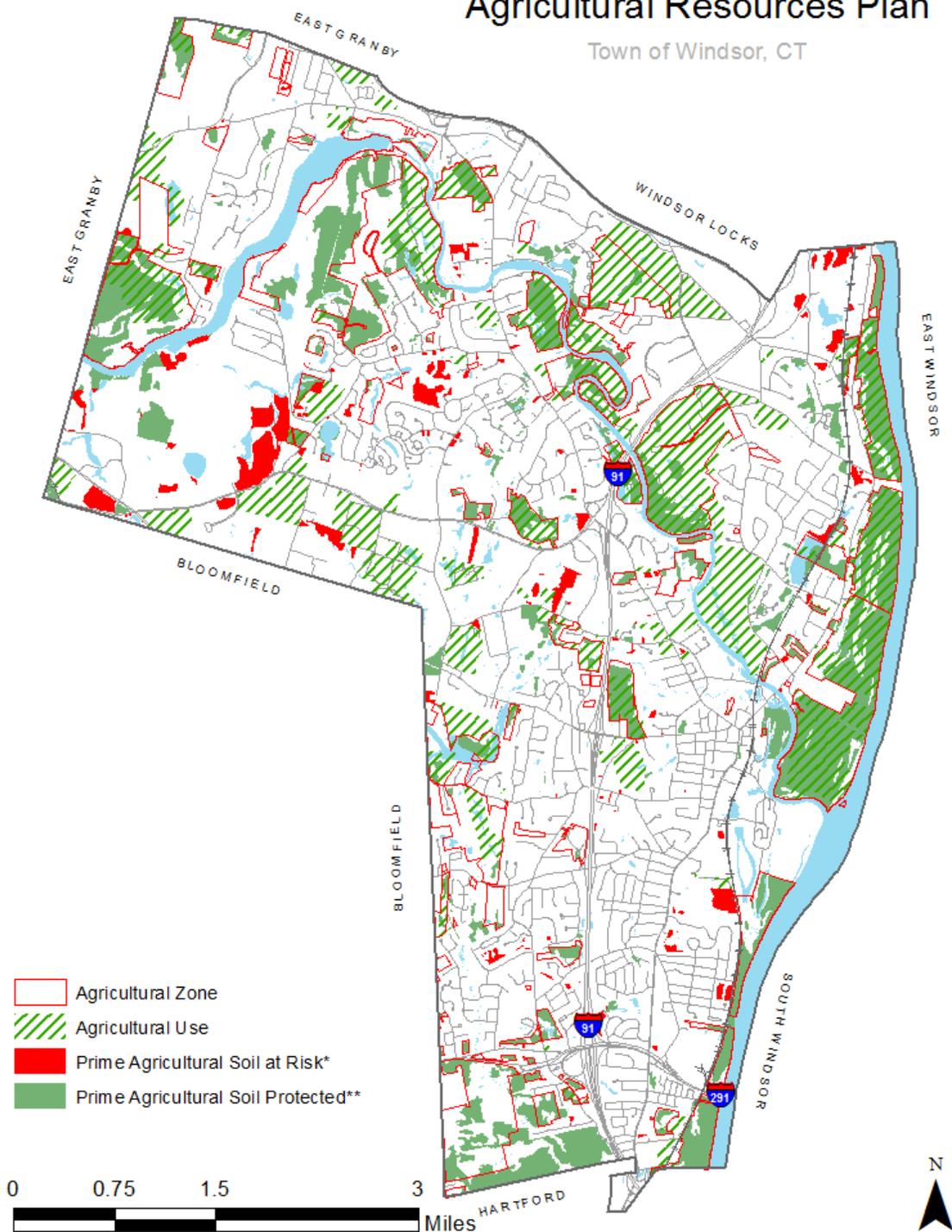
The AG Zone was once but is no longer considered as a holding zone, to be rezoned for higher density residential development in the future. The AG zoning of prime agricultural soils, especially those that are being actively farmed, should be maintained to preserve some of Windsor’s local food capacity as well as its rich agricultural heritage in the most appropriate locations. Those AG zoned areas that are not actively farmed should retain their AG zoning for future agricultural use, as a buffer between incompatible uses, or as a last resort, for low-density housing at the allowed density of 0.3 units per acre. Where practical, such residential development should employ an open space development pattern that clusters development on one-third of the parcel; preserving two-thirds of the acreage for future farming or open space and significantly reducing infrastructure development and maintenance costs. AG zoned land that has already been put to more intensive uses such as nursing homes, and tiny isolated parcels that may be impractical to farm could be reevaluated for possible rezoning.

Strategy for Encouraging Preservation of Prime Agricultural Areas for Agricultural Use

1. Maintain the Agricultural Zone as a tool to help preserve prime farmland soils for agricultural use.
2. When developed residentially, encourage open space development patterns that maximize preservation of farmland or open space while minimizing infrastructure costs.

Agricultural Resources Plan

Town of Windsor, CT



*Vacant Parcel and Not in Agricultural Zone
**Currently Farmed and in Agricultural Zone; in Agricultural Zone; Dedicated Open Space

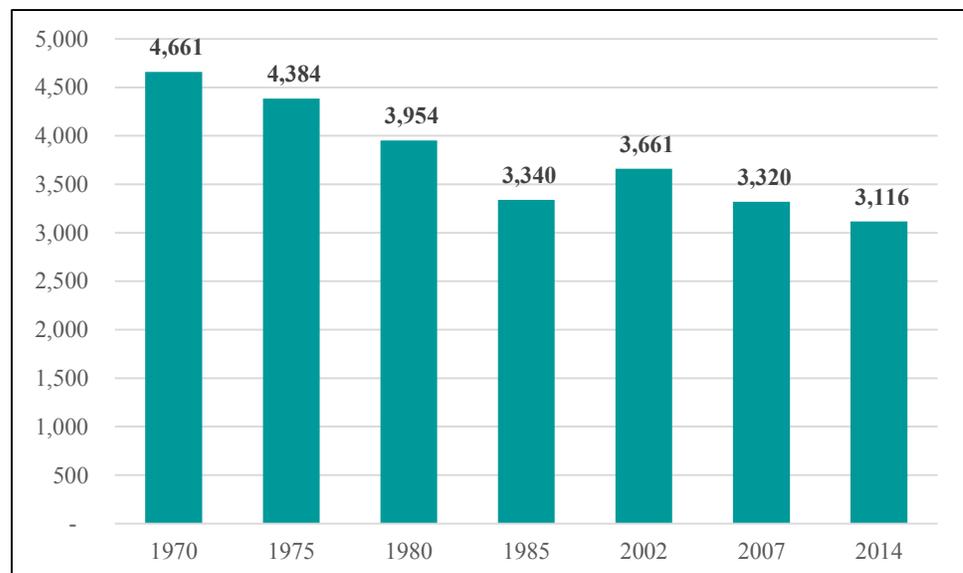
Promote Preservation of Agricultural Land Uses

The map on the preceding page illustrates land in Windsor that is used for agricultural purposes. There are four major areas of farmland concentrations:

- along the west bank of the Connecticut River, north of Windsor Center, almost to Windsor Locks,
- north of the Farmington River between I-91 and Rainbow Reservoir,
- the northwest corner of Windsor, north of the Farmington River to the East Granby town line, and
- south and west of Day Hill and Marshall Phelps Roads to the Bloomfield town line.

Over the last 44 years, the amount of agricultural land in Windsor has been declining. While there has been a recent increase due to the resurgent popularity of cigars, agricultural activities have been affected by a number of economic and other factors. As of 2014, approximately 3,100 acres are currently used for agricultural activities.

Acres of Farmland in Windsor



Source: Windsor Planning Department and Assessor's data as of June 2014.

While preserving all remaining agricultural land for farm use may seem like a prudent goal, such a goal is not practical, considering that a significant portion of this land is already zoned for industrial use and constitutes the bulk of available land for economic development in Windsor. Without this pool of land to draw upon for economic development, Windsor would not be able to continue to provide excellent public services without significant increases in property taxes. Town staff should collaborate with the Conservation Commission and Windsor Land Trust to establish a realistic goal for preserving agricultural land and monitoring remaining acreage. For those agricultural areas that are not so vital to the economic wellbeing of the community, there are a number of programs that Windsor can undertake to preserve operating farms.

State Programs - Purchase of Development Rights

The best method of preserving prime farmland is through a program that purchases development rights from farmers. The State of Connecticut has such a Farmland Preservation Program that accomplishes four things:

- the farms remain in private ownership and can be farmed in perpetuity;
- the farmland can never be developed;
- farmers receive an infusion of cash, eliminating the need to sell for development; and
- property taxes are permanently reduced.

CASE STUDY – Purchase of Development Rights Program

Suffield, CT (pop. 15,692) has an ambitious and highly effective agricultural preservation program. Suffield set a goal of preserving 55% of the Town's residentially zoned land and to date has preserved 20 farms totaling approximately 2,100 acres, with as many as 25 more farmers waiting to sell their development rights. Their preservation process includes:

1. creating an Open Space / Farmland Preservation Committee;
2. setting goals for how much open space / farmland to preserve;
3. implementing a ranking system for identifying the highest quality land and prioritizing acquisitions;
4. allowing flexibility for future farm growth, which may include an additional homestead for family members;
5. conducting off-season workshops to educate farmers and residents on the benefits of the program;
6. budgeting local funds for acquisition, which is currently \$300,000 annually;
7. drawing on multiple financial resources for making local funds go further, such as the Connecticut Department of Agriculture, the U.S. Department of Agriculture, the Connecticut Farmland Trust; and
8. choosing a good initial test case to set an example for how the process works, in order to encourage other acquisitions to follow.

A typical acquisition requires two years to complete, to allow for a survey (if necessary), an appraisal, and securing grant funding. Depending on the quality and development potential of a farm, the development rights can cost between 40% and 60% of the fair market value of the property. Suffield's financial participation is typically 25% of the cost of the development rights with the balance paid for by private, state, and federal sources, allowing Suffield's \$500,000 annual investment to leverage an additional \$1,500,000 annually.

This is a voluntary program and applications from property owners are required to document existing farm use and prime agricultural soil types. Funding limitations at the state level have made this program very competitive but thousands of acres of farmland throughout Connecticut have been preserved.

Purchase of Development Rights

Programs that purchase development rights assist farmers by:

- preserving the best agricultural lands as farmlands,
- providing an opportunity for future farmers to purchase land at affordable prices,
- providing working capital to stabilize farming operations, and
- helping farmers overcome estate planning issues that often result in development of farmland.

Despite the positive benefits of this program, no farmland has been preserved in Windsor through this program. Windsor and its Conservation Commission, in cooperation with the Windsor Land Trust, should encourage local farmers to apply for this program and offer assistance if necessary.

State Programs – Farmlink Program

The Connecticut Department of Agriculture (DOAG) sponsors a program called Farmlink, which connects current owners of farmland to farmers looking to rent or own, and actively farm the land. Windsor should encourage and assist current and future farmers to participate in this program.

State Programs – Farm to Chef and Farm to School Programs

The DOAG operates the Farm to Chef and Farm to School Programs, which help farmers find reliable markets for their agricultural products and vice versa. Chefs and schools can work with farmers to get the exact products they want, taking the guesswork out of growing, marketing and purchasing food for everyone involved, and resulting in high-quality local ingredients for restaurants and safe, nutritious food for school children.

Local Programs – Regulatory

The map on page 5-3 illustrates the approximately 3,800 acres of land in Windsor that are zoned AG. Of this land, approximately:

- 1,600 acres are used for agricultural purposes (50%);
- Roughly 740 acres are used as managed or dedicated open space;
- Roughly 360 acres are vacant land; and
- Just over 450 acres, or 14% of the zone, is developed for other uses, typically single-family residences.

The AG zone allows for a variety of agricultural activities and the accessory uses necessary to support them. However, as previously noted, the zone allows single-family residential uses at the low density of 0.3 families per acre (i.e. three-acre lots). The AG zone has become a more effective preservation tool by discouraging the rezoning of AG zoned land, especially actively farmed land and land containing prime agricultural soils, to higher density residential zones. The simple act of rezoning AG land to an AA or A zone results in a four- to five-fold increase in density, making a persuasive argument not to continue farming as long as there is an expectation that such a density windfall is within reach.

As an incentive to preserve farmland and continue farming, the transfer of residential density program was expanded within the AG Zone to allow density bonuses for preserving agricultural land, with higher densities awarded for more desirable farmland that is actively farmed and/or contains prime agricultural soils. For example, an acre of actively farmed, prime agricultural soil might be equivalent to three times the allowed density for the purpose of transferring density compared to an acre of fallow, non-prime soil. As discussed in Chapter 4, even more flexibility could be added by allowing the conversion of residential density to commercial/industrial impervious coverage in the Industrial Zone,

where a small increase in coverage could provide significant development flexibility with minimal aesthetic impact, if an equitable means of doing so between two zones with disparate land values can be achieved.

While the agricultural and residential zoning regulations have been amended in recent years to make them more farm friendly to encourage the continued agricultural use of land within these zones (e.g., expanded transfer of residential density, new farm stand signs, allowing hens in residential zones), more could be done in this regard. Farm stands, community supported agriculture (see sidebar), commercial nurseries, wineries, and similar outlets for farm-grown products should be encouraged for their contributions to the local economy and community character, as well as a source of locally-grown food products. Windsor could further assist farmers and be farm friendly by providing for good signage and marketing of local farms in the community and organizing local fairs and events around agricultural themes.

Local Programs – Farmers’ Markets

With concerns over food safety, genetically modified organisms, and human impact on the planet, the local food and organic farming movements are quickly gaining popularity nationwide, as well as in Windsor. Windsor now has two farmers markets in Windsor Center and Wilson, with the former operated by First Town Downtown, to coincide with the Thursday night summer concert series on the green.

Local Programs - Farm Assessment

Windsor participates in a program authorized under Section 12-107 of the Connecticut General Statutes, often referred to as PA 490, which allows a community to assess farmland at a lower value when it is actively farmed. As a result, active farms benefit from a lower tax assessment, helping maintain the viability of the farm under sometimes difficult economic conditions. Windsor should continue to offer this program to assist farmers with maintenance of agricultural uses.

Local Programs – Purchase of Land or Development Rights

Towns have used local funds to purchase farms or development rights for the benefit of the community. Towns can:

- purchase farms outright to operate them;
- purchase farms outright to lease them back to the farmer or others for farm use; or
- purchase development rights allowing the farm to remain in private ownership, but ensuring the property will be used in perpetuity for agricultural uses.

Town staff should collaborate with the Conservation Commission on the local purchase of development rights as part of the ongoing open space acquisition program.

Community Supported Agriculture

Community supported agriculture or CSAs, are an increasingly popular innovation in farming that matches farmers with individual buyers before the growing season begins; guaranteeing income for the farmer and affordable access to a variety of locally grown food. Individuals or families agree to purchase one or more of a fixed number of shares of the products grown by the CSA and in return, the CSA invests that money in the material and labor needed to grow the promised food; sharing the risks inherent in farming with the shareholders. Many CSAs hedge their bets by planting extra or alternative crops to ensure their shareholders get value for their shares.

Depending on the CSA, weekly food bundles are available for pickup or are even delivered to shareholders, with a changing array of foods as the growing season progresses. Some CSAs can extend their seasons to provide winter greens, stored produce, while others provide eggs, dairy products and even meats. Windsor has several operating CSAs.

Right-to-Farm Policies

A right-to-farm policy is a tool designed to educate and raise awareness of future property owners about the realities of owning land adjacent to existing agricultural uses in order to reduce future conflicts between residents and farmers.

Right-to-farm policies can be adopted as a town ordinance and commonly contain:

- 1) a statement of purpose to preserve agricultural uses, promote neighborliness between farmers and abutters, and to affirm the Town's commitment to agriculture as a vital part of the local economy;
- 2) definitions of agricultural uses and activities;
- 3) nuisance provisions, typically referring to the state statute that prohibits a finding of nuisance if the agricultural use is operated according to reasonable and safe farming practices; and
- 4) disclosure provisions, requiring potential new property owners near farms to be notified of the impacts of the agricultural operation.

Local Programs – Right to Farm Policy

A right-to-farm policy affirms a town's commitment to preserving agriculture as a historical and vital part of Windsor's economy and character. While such a policy will probably not eliminate litigation between farmers and abutting neighbors, it can raise awareness of the impacts that existing farm operations can have on residential and other neighbors by requiring new property owners to sign an acknowledgement that they are aware of such potential issues as dust from tilling, application of pesticides, odors from application of manure, loose livestock, and noise from farm animals or pest control measures.

Agricultural Land Trusts

Land trusts are a good vehicle for preserving land. Agricultural land trusts are dedicated to holding and leasing farmlands. The American Farmland Trust operates nationwide to preserve farms and address farmland issues. The Working Land Alliance, a recently established Connecticut farmland preservation organization, has established the Connecticut Farmland Trust for the donation of land and funds for agricultural preservation.

Strategies for Promoting the Preservation of Agricultural Land Uses

3. Encourage local farmers to apply for the Connecticut Farmland Preservation Program and assist them in submitting applications if necessary, in order to preserve farmland and agricultural uses.
4. Continue the farm assessment program (PA 490) in order to assist farmers with maintenance of agricultural uses.
5. Expand the open space program to include purchase of farm development rights.
6. Work with agricultural land trusts to preserve agricultural land in Windsor.
7. Implement educational and other farm friendly programs to support agricultural activities.
8. Collaborate with the Conservation Commission to promote/coordinate the preservation of farmland.
9. Collaborate with the Conservation Commission, and Windsor Land Trust to establish a goal for agricultural land preservation and monitor the amount of agriculturally used land in town.

PRESERVE HISTORIC RESOURCES

6

Overview

Windsor is Connecticut's "First Town", from which 21 cities and towns were formed. Windsor's unique role in the birth of Connecticut is a source of local pride. Historic buildings, landscapes, and villages remind us of our historic role, influence town character, and add to our quality of life. In addition to these physical and scenic connections to our history, Windsor's historic resources tell the story of our cultural history:

- Roger Ludlow and Oliver Ellsworth's roles in framing the state and federal constitutions and the early governance of each respectively;
- Windsor's role in a national revolution of the tobacco industry is depicted at the Luddy/Taylor Connecticut Valley Tobacco Museum; and
- the role that our residents played in promoting the freedom of African American citizens is now memorialized as part of the Connecticut Freedom Trail.

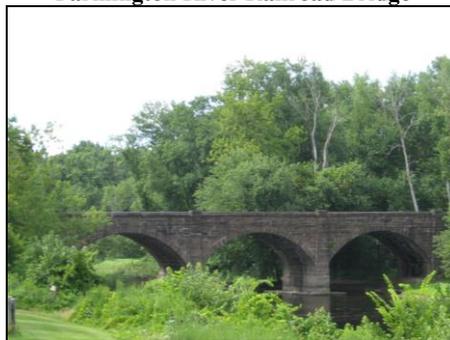
This chapter focuses on protecting and capitalizing upon historic resources to celebrate our collective history, promote community character, and provide housing and economic opportunities. Measures to recognize and protect archaeological resources are also found in this chapter.

Preserve historic resources to celebrate Windsor's community character and unique heritage.

Historic Home



Farmington River Railroad Bridge



What do Historic Designations Mean?

A listing on the National and State Registers of Historic Places or as a National Historic Landmark provides recognition but limited protection. Projects involving state or federal funds must prevent unreasonable destruction of listed resources. Additionally, under the Connecticut Environmental Policy Act, citizens can intervene in the proposed demolition of structures listed on the State or National Register.

Listing on the National and State Registers may also open up funding opportunities, tax credits, and incentives.

A Local Historic District or Place designation provides the highest level of protection. The local historic district is given the authority to regulate the construction and demolition of structures and alterations to architectural features.

Background

Historic Resources

Many historic buildings and areas have received National and State recognition for their historic relevance. In addition, Windsor has one Local Historic District which provides the greatest level of protection. The following table lists recognized buildings and districts (see sidebar for an explanation of historic designations).

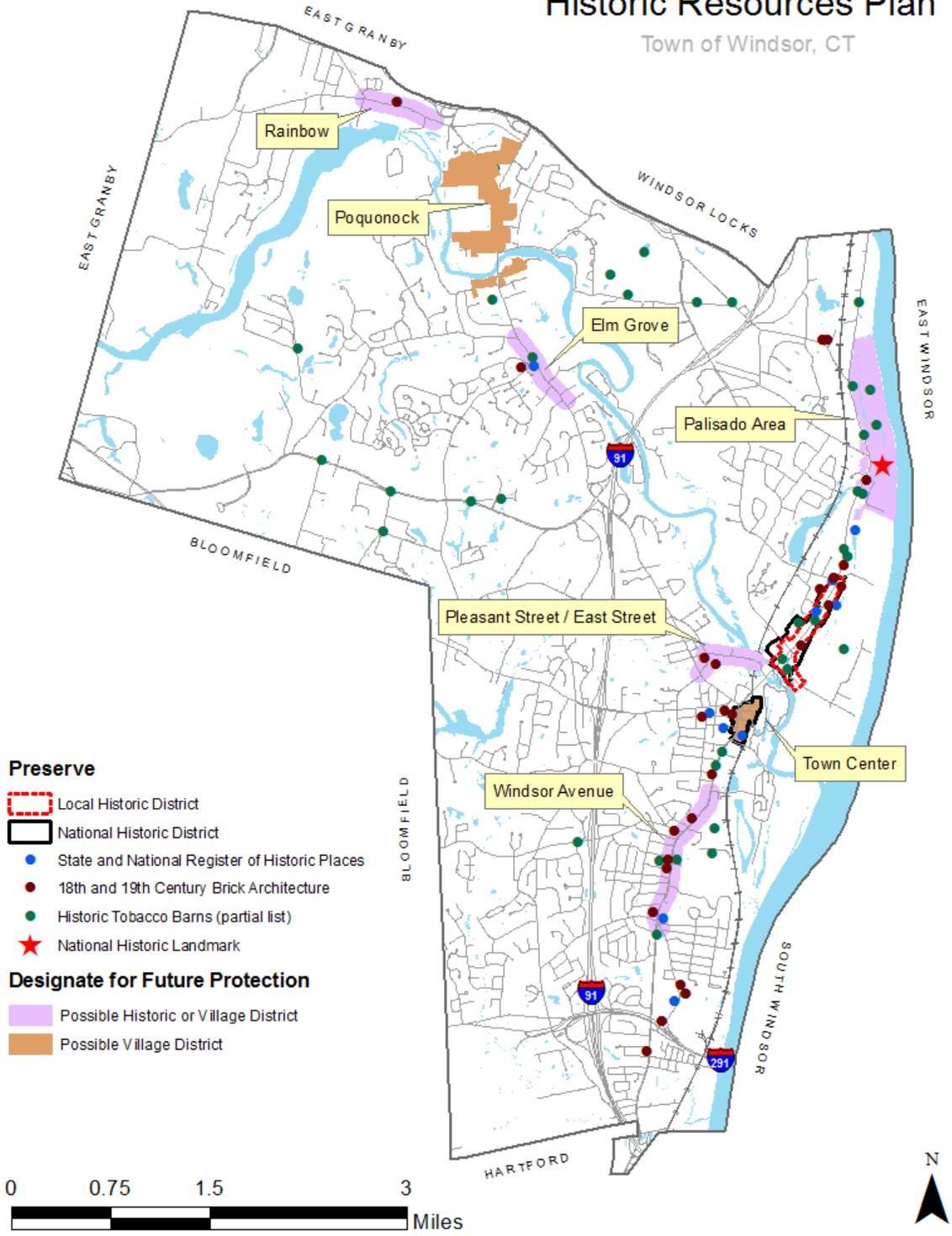
Designated Historic Resources

	Location	National Historic Landmark	National Register of Historic Places	State Register of Historic Places	Local Historic District
Districts					
Broad Street Green Historic District	Broad St.		✓	✓	
Palisado Avenue Historic District (National)	Palisado Ave.		✓	✓	
Palisado Avenue Historic District (Local)	Palisado Ave.			✓	✓
18 th / 19 th Century Brick Architecture	Various		✓	✓	
Sites*					
Bissell Tavern / Bissell's Stage House	Palisado Ave.		✓	✓	
Hezekiah Chaffee House	Palisado Ave.		✓	✓	
Captain Benjamin Allyn II House	Deerfield Rd.		✓	✓	
Oliver Ellsworth Homestead (museum)	Palisado Ave.	✓	✓	✓	
Farmington River Railroad Bridge	Spans river		✓	✓	
John Fitch School	Bloomfield Ave.		✓	✓	
Joseph Webb House	Windsor Ave.		✓	✓	
Deacon John Moore House	Elm St.		✓	✓	

* Not all buildings are listed individually here. This list provides highlights only. Sources: National Register of Historic Places and 2004 Windsor POCD.

Historic Resources Plan

Town of Windsor, CT



Historic Districts

Public perception of historic district commissions in CT is often confused as to what commissions can and cannot do. A local historic district or place designation provides the highest level of protection, but there are limits to what can be regulated.

Local historic districts have the authority to regulate the construction and demolition of structures and alterations to architectural features that are visible from public streets. They do not have the authority to regulate interior renovations, improvements to the rear of the property that are not visible from the street, and despite a commonly held belief, they cannot regulate the color of the exterior of a building, though they may recommend a period appropriate color.

Many other important historic buildings, which are too numerous to list here, were identified in the 1981 “Town of Windsor Historic Survey”. Some of these buildings have been lost due to neglect or have been demolished. Others might be candidates for future historic designation.

Some of Windsor’s historic houses are open to the public, including:

- The Oliver Ellsworth Homestead (a museum located in a building owned by the Daughters of the American Revolution)
- The John and Sarah Strong House (home to the Windsor Historical Society and open to the public for research, programs and collections)
- The Hezekiah Chaffee House (a museum in a building leased from the Town by the Historical Society)
- The Luddy / Taylor Connecticut Valley Tobacco Museum (showcases several old tobacco sheds and the shade tobacco industry)

Five sites in Windsor have also been designated as part of Connecticut’s Freedom Trail:

- The Archer Memorial A.M.E. Zion Church (Hayden Station Rd.)
- Joseph Fainey House (Palisado Ave.)
- Palisado Cemetery
- Riverside Cemetery (off of East St.)
- William Best House (Hayden Station Rd.)

Archeological Resources

Windsor’s river valleys have revealed clues about our ancient past. Archeological sites dating back to the Paleoindian Period, 11,000 to 9,000 years ago, have been found along the Farmington River and artifacts from inhabitants from 2,000 years ago have been uncovered where the Farmington River and Connecticut River originally met (just south of the current junction). In addition to these discoveries, the University of Connecticut has over 20 archaeology surveys on file of areas in Windsor, including along the I-91 and I-291 corridors, Day Hill Road and Kennedy Road; conducted as part of development projects.

These findings likely represent just a sampling of artifacts in Windsor. A recent study by the Farmington River Watershed Association concluded that “[t]he potential of the Lower Farmington River corridor to harbor significant and outstanding archaeological resources, we conclude, is extremely high.”

In addition to planned digs and investigations, archaeological resources can be discovered when land is developed. Many communities have adopted provisions in zoning and subdivision regulations that require, or allow the Planning and Zoning Commission to require a review by the State Archaeologist. The intent is not to halt development, but to seek suggestions on how to protect artifacts, avoid or minimize impacts, or to document findings during construction. The sidebar provides a sampling of communities that incorporate archaeological protection provisions in their zoning approval process. Windsor’s Subdivision Regulations do require consideration of

potential archaeological resources when determining which areas should be preserved as open space, but the Zoning Regulations do not address such resources.

Archaeological Review in Zoning Regulations

Many CT municipalities have incorporated some level of archaeological review in their zoning regulations including referrals to the State Archaeologist. Here is a sample of communities:

- Cheshire
- Deep River
- Essex
- Granby
- Killingworth
- Ledyard
- Madison
- Portland
- Prospect
- Rocky Hill
- South Windsor
- Southington
- Stonington
- Tolland
- Westbrook

Mosier House, Poquonock Ave., 1880s



Source: CT Historical Society.

Broad Street, 1880s



Source: CT Historical Society.

Village Districts

Connecticut General Statutes Section 8-2j authorizes municipal zoning commissions to create village districts in areas of “distinctive character, landscape or historic value that are specifically identified in the plan of conservation and development.”

The districts are created in the same manner as other zoning districts. The Commission is then allowed to regulate aspects of design for those parts of the building and site visible to the public way, including building materials, color, and other architectural elements.

Protect Historic Resources

Continue to Identify and Designate Historic Resources

As noted, the most recent, comprehensive compilation of Windsor’s historic resources is the 1981 “Town of Windsor Historic Survey”. The survey includes 429 sites, with information (as available) on the date of construction, building materials, descriptions of notable features, and a photograph. This inventory has served the Town well and is used for many purposes including determining which structures are subject to the demolition delay ordinance. It is time to update the survey to include additional resources such as historic markers and monuments, updated information, and account for structures that were substantially altered or demolished. The survey should also be modernized by placing it on-line and creating a GIS-compatible database that can be easily accessed by staff and the public.

The survey and past POCDs have supported designating additional National Historic Districts (see map on p. 6-3 and descriptions on p. 6-7). However, stronger protection would be provided if the areas are designated as either a Local Historic District or a Village District instead (see sidebar on left and on page 6-4). A local historic district designation would give a historic district commission authority to review exterior changes to buildings. Creating village districts would give the Planning and Zoning Commission the ability to review and approve changes to the sites and their buildings. Each method has its benefits and drawbacks and the best approach may differ from area to area. It should be noted that in addition to these areas, the Windsor Center Transit Oriented Development Plan suggested that Windsor Center might benefit from a Village District as well.

Windsor’s agricultural heritage is still evidenced by the many barns and tobacco sheds scattered throughout the Town. But many have been lost as former agricultural lands are developed. The Connecticut Trust for Historic Preservation mapped the locations of a number of Connecticut barns, including 58 in Windsor. Their intent is to raise awareness of the role barns played in our past and encourage their preservation. The Town could explore options to preserve the barns, such as eligibility for inclusion on the National Register. A new state law (Public Act 14-101) allows municipalities to offer tax abatements for older barns in exchange for a preservation easement that assures the owner will maintain the historic integrity of the barn. The Town might adopt such a provision. Allowing the re-use of barns for other purposes can also motivate owners to preserve them.

Create User-Friendly Design Guidelines

For those buildings located within the Local Historic District, it is important to communicate appropriate and desirable design elements to ensure that the design review process is smooth and predictable. The Town should update its historic design guidelines to provide user-friendly depictions and graphics of preferred practices and design elements. The guidelines should also consider if, how, and when modern architectural treatments, such as PVC trim boards, might be suitable within the historic district.

Historic Value of Areas to Consider for Designation as Local Historic District or Creation of Village District

Rainbow

This is a former mill community with mill owner and mill worker housing still standing. The houses include early examples of frame construction.



Elm Grove

This was a cohesive community associated with nearby small mills. Later it provided housing for tobacco workers. The area still portrays the character of its past importance.



Pleasant St. / East St.

This area was an early mill worker and artisan community. Building layouts maintain early development patterns. The area housed workers in mills and brickyards and represents a transition from agriculture to industry.



Windsor Ave.

This corridor has retained the essential character of early residential development in Windsor. Of particular note are the brick houses, built using bricks from Windsor's brickyards.



Upper Palisado Ave.

This area was home to the first town settlers. Many 18th and 19th century houses still stand, depicting Windsor's settlement patterns.



Windsor Center and Poquonock

See Chapter 9 for details.



Descriptions of historic importance from past POCDs.

Heritage Tourism Plans

In 1993, Windsor commissioned a report, “Windsor Heritage Tourism”. The report recommended steps Windsor can take to attract more visitors to the Town overall and to its historic attractions. Two key strategies included creating an identity and marketing under that identity.

In 2003, a consultant provided updated strategies including the importance of having an organizational structure in place to spearhead heritage tourism efforts. This report re-emphasized the need for Windsor to establish a brand identity.

Celebrate Windsor's Heritage and History

Raising awareness and connecting people to Windsor’s historic resources creates community pride and can help build support for preservation efforts. The Windsor Historical Society has a great track record of engaging residents, students and visitors in learning about local history. Programs and events that draw visitors can also bring dollars to the local economy. These types of programs and events should continue and efforts to further promote Windsor’s historic assets should be expanded.

Efforts could also focus on cultivating a new generation of supporters for historic preservation, including those who otherwise might not actively seek to learn about Windsor’s history. This can be accomplished with opportunities for passive or incidental learning. For example, Ridgefield, Connecticut created a “Museum in the Streets”, with

plaques about particular sites installed throughout town, including in the town center. People passing by easily learn a bit about the Town’s past while going about their everyday business. Similar displays could be installed in Windsor Center, Wilson, Poquonock, and other historic areas.

Museum in the Streets, Ridgefield, CT



Events that create an “experience” or combine history with other popular topics in a hands-on setting can help cultivate wider interest. The Historical Society has held non-traditional events that blend current interests with history, such as “Herbs Past and Present”, bike tours, and scavenger hunts. An example from elsewhere in the State is the programming at the Noah Webster House in West Hartford, which regularly holds Tavern Nights, where the focus is on period food and games in a historic house museum. Additional events like these that actively engage residents should be encouraged. These types of events can also draw from outside Windsor. The Town and the Chamber of Commerce recognize the economic benefits of using local history to attract visitors and have conducted past studies on how to better draw visitors (see sidebar).

Expanded use of media can help spread the word about Windsor’s historic resources and events. For example, the Windsor Chamber of Commerce and Windsor Historical Society are collaborating on a mobile app to allow visitors to take self-guided historic tours of Windsor. In addition to print and on-line media, a television spot could be produced and played on community access television and at area hotels in the guest rooms.

Encourage Active Use of Historic Buildings

Historic buildings are best preserved when occupied by homeowners or business-owners who are sensitive to and appreciative of the architectural detail of the

building (i.e., “active use”). Strategies to promote the following types of active use are outlined here.

Windsor is fortunate that the majority of houses built over 75 years ago are owner-occupied. However, a large number of Windsor’s older homes are located on lots that do not meet today’s zoning requirements (see sidebar) and require a variance for simple improvements. To reduce part of the burden of owning an older house, the zoning regulations could be revised to make it easier to update older, non-conforming houses without the need to spend additional time and money seeking regulatory relief. For example, the zoning regulations were recently amended to allow residential additions within required front yards in older neighborhoods where many adjoining houses are similarly non-conforming in their distance to the street. Many building owners may not be aware that building and fire codes already provide some exemptions for historic buildings and there are opportunities for further modifications at the state level. The same relief also could be extended to historic commercial buildings.

Older houses and buildings can be more expensive to maintain than newer buildings and often need to be updated or expanded to meet modern needs. The Town should promote existing funding programs and may wish to adopt additional programs. Windsor allows deferred increases in the tax assessment for residential structures that are 25 years or older and non-residential structures that are 40 years or older, resulting from improvements made to them. This encourages owners to improve their older buildings without immediately penalizing them through increased taxes for their investment. State statutes (CGS Sec. 12-127a) also allow municipalities to abate taxes for buildings of historic or architectural merit if the owner can demonstrate that the current level of taxes is an impediment to the continued preservation of the building. The Town should consider adopting such an ordinance. Lastly, buildings listed on the National Register may be eligible for tax credits from the State or Federal Governments if improvements are done in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

In some cases, historic houses might be more suitable for business use. Adaptive re-use of a house for small-scale business use can effectively preserve the building because it allows economic opportunity while retaining the historic character. Windsor’s zoning regulations contain three provisions that allow some level of re-use of historic buildings. Modifications are recommended in order to allow greater use of this important historic preservation tool.

Older Houses on Undersized Lots

Of the 1,440 houses that were built at least 75 years ago and are located in residential zones, 33% are on lots that do not meet the minimum lot size of the zone.

Zone	# Old Houses on Undersized Lots
AA	92
A	37
R-13	36
R-11	55
R-10	52
R-8	198

Source: Assessor’s data, 2014

From 2000 to June 2014, there were 27 applications to the Zoning Board of Appeals by owners of these older homes to vary the dimensional requirements of their properties.

Limited conversion of historic homes to business uses



Re-use of larger, historic buildings for new uses



Adaptive Re-use - Existing Zoning Provisions and Suggested Updates

Zoning Provision	Limitations	Suggested Updates
Section 4.5.1: in part, allows the conversion of existing buildings to office use.	The provision for converting buildings to office applies to portions of Windsor Center and Wilson. The alterations cannot detract from the residential character and additions are limited to 150 square feet.	<ul style="list-style-type: none"> Loosen the 150 square foot expansion limit, provided the addition does not detract from the historic and residential character of the building.
Section 4.5.5: allows a professional office in an owner-occupied housing unit, with limits on size and number of employees.	No limitations - this provision is town-wide and not tied to the age of the building.	<ul style="list-style-type: none"> No suggested changes.
Section 15.2.9: allows adaptive re-use.	Limited to buildings listed on the National Register that are unsuitable for and unused for their original purpose. The types of uses allowed are limited.	<ul style="list-style-type: none"> Expand eligibility (e.g., all buildings over a certain age or listed in the Historic Survey), but limit to certain roads only, such as only arterial roads with careful attention to traffic impacts and compatibility with the neighborhood. Allow some amount of expansion with strict design and landscaping standards. Monitor the need for allowing additional uses, such as small offices. Allow relief from setbacks and other dimensional requirements.

The redevelopment and re-use of larger historic buildings can be a long and expensive effort. Often developers find that it is faster and less costly to build a new building on vacant land than to rehabilitate an older building, due to environmental and regulatory constraints. Both the state and federal governments recognize these challenges and offer tax credits and other assistance. As noted in the Windsor Center Transit Oriented Development Plan, Windsor Center's economic vitality will depend upon expanding and improving historic buildings and economic incentives, loans and grants may be necessary to achieve these goals.

The Town's zoning regulations, through the Center Design Development District provisions, allowed for the successful transformation of a 110 year old factory into 50 condominium units. The building, located on Mechanic Street, was renovated to meet modern residential needs while retaining the historic, industrial façade. This development demonstrated that there is a market for re-using Windsor's historic buildings and demand for town-center living, and proved that economic and preservation goals can both be achieved. In fact, the Windsor Historical Society stated that this project "is a testament to the transformative power of creative design."

The Town should continue to work with property owners to identify desirable and marketable uses, help them navigate the redevelopment approval process, and help them identify funding needs and resources.

For all types of re-use, the Town should ensure that owners of older buildings are well-aware of all programs and opportunities that can help them maintain and improve their buildings. The Town should prepare a simple brochure that outlines funding assistance, tax relief options, and zoning relief/opportunities. This information should be readily available on-line and actively distributed to owners of historic buildings, perhaps targeting buildings that are least 75 years old or listed in the Historic Survey. The Town should ensure that real estate agents are aware of these programs so that they can provide information to buyers and sellers.

Successful Re-Use – First Town Square at 33 Mechanic Street



Proactively Protect Threatened Historic Resources

There will be cases in which a historic building is slated for demolition by its owner. Windsor has a Demolition Delay Ordinance that applies to buildings contained in the Historic Survey and requires a maximum 90-day waiting period before demolition. This waiting period can allow preservation advocates to work with the owner to explore options to purchase and preserve, move, dismantle and save, or at least document the building. Windsor's ordinance should be updated to provide greater public notice of pending demolitions, similar to the level of notice that other towns require (see table on the following page). Windsor also requires that those who wish to be notified of proposed demolitions must re-register annually, presumably to address the issue of registrants moving away or being no longer interested in being notified. This provision should be modified to at least remove the annual registration for organizations such as the Windsor Historical Society, the Windsor Historic District Commission and the CT Trust for Historic Preservation that play a key role in marshalling resources to preserve historic resources, and consider requiring signs or other forms of public notice to increase awareness of a pending demolition.

Sampling of Demolition Delay Notice Requirements

Required Notice	Windsor	Branford	Bristol	East Windsor	Greenwich	Madison	Norwalk	Plainville	South Windsor	Vernon	West Hartford
Abutters*	█	█	█	█	█	█	█	█	█	█	█
Registry of Interested Parties	█	█	█	█		█	█	█	█	█	█
Sign on Property		█	█	█	█	█	█	█	█		
Newspaper		█	█	█	█	█	█	█	█	█	█
Historical Society, Commission, or Historian		█		█	█	█			█	█	
Other Town Boards/Commissions		█									

*Notice to abutters is required by State Statutes,

There may also be cases of “demolition by neglect” where a building owner is no longer providing basic maintenance to the point that the building must be demolished due to safety concerns. The Town’s blight ordinance applies to, among other things, buildings in which more than 25% of a publically-visible façade is blighted. This gives the Town a tool to prevent willful neglect. Active monitoring and reporting of structural blight is important to prevent demolition by neglect. Simply talking to the owner may provide insight into the reason for a neglectful appearance and, in some cases, staff may be able to point the owner to grant or loan programs or to groups that volunteer to help with upkeep tasks.

Historic Resource Protection Strategies

1. Update the 1981 Historic Survey and place on-line. Incorporate the data into the Town's GIS.
2. Pursue either Local Historic District or Village District designations for key historic areas identified on the Historic Resources Plan map.
3. Determine appropriate protection measures for barns and tobacco sheds.
4. Update the historic district design guidelines.
5. Continue programs and events that highlight Windsor's heritage and encourage "experience" type events, such as a "Museum in the Street" program to showcase Windsor's history.
6. Expand use of media to celebrate Windsor's historic assets.
7. Update zoning regulations to provide additional dimensional relief for older homes on small lots.
8. Consider adopting a tax abatement ordinance for historic homes (CGS Sec. 12-127a).
9. Ensure that owners of historic buildings are aware of zoning provisions, funding opportunities, and possible exemptions from building and fire codes.
10. Update Sections 4.5.1 and 15.2.9 of the Zoning Regulations to allow more adaptive re-use opportunities.
11. Work proactively with property owners to rehabilitate larger historic buildings.
12. Update the demolition delay ordinance.

**Funding for
Historic Preservation**

Grants for preserving buildings:

- Endangered Property Fund
- Historic Restoration Fund

Grants for projects, plans, programs:

- Survey and Planning Grants
- Strategic Initiative Grant (Windsor has received this for its “Come Home to Windsor Program.”)
- Historic Preservation Enhancement Grant (for CLGs)
- Supplemental Certified Local Government Grant

Increase Capacity to Protect Historic Resources

Implementing the strategies in this chapter will occur over time. Some can be achieved in the short term while others might not be achieved for years. Windsor may need to increase its capacity for historic preservation to accomplish many of these strategies. Steps to increase capacity might include:

- Collaborate with the Windsor Historical Society, Windsor Historic District Commission and interested residents to champion the preservation of historic resources.
- Work with historic preservation experts. The State Historic Preservation Office and the Connecticut Trust for Historic Preservation can provide training on funding, tools, and programs to commissioners, staff, and others who serve as advocates for Windsor’s historic resources.
- Establish a historic preservation line item in the town budget to fund historic preservation initiatives. While it might take time to provide meaningful contributions to the line item, simply establishing the line item is a start. Ultimately such funding could be used to implement the strategies contained in this chapter.
- Apply for grants. Windsor is a Certified Local Government (CLG). CLG is a federal program administered by the State, where communities are certified if they can demonstrate their commitment to historic resource preservation. CLG designation opens the door for additional grant opportunities. The Town should regularly seek grants to implement the strategies in this plan and for specific projects that will help meet other goals in this Plan.

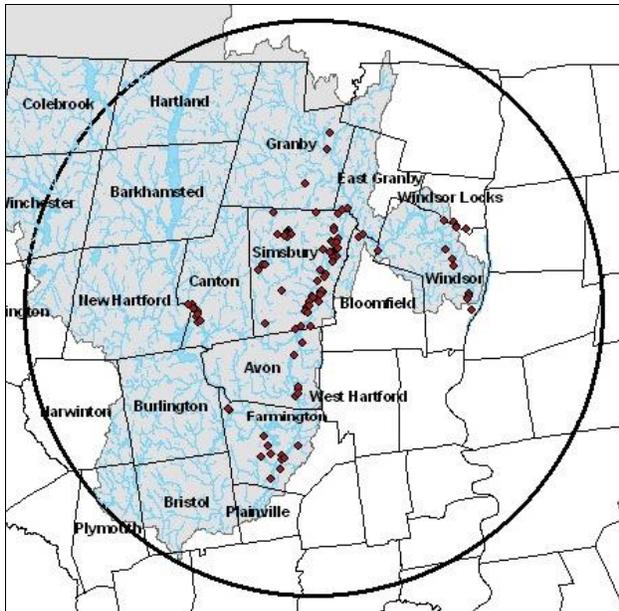
<p>Strategies to Increase Capacity to Protect Historic Resources</p> <p>13. Collaborate with individuals and preservation organizations to champion historic preservation initiatives.</p> <p>14. Take advantage of technical assistance offered by the state and non-profit preservation organizations.</p> <p>15. Establish a historic preservation line item in the budget and seek other funding to implement the strategies in this Chapter.</p>
--

Document Archaeological Resources

The Town should encourage archaeological surveys in likely prehistoric settlement areas, including along the Connecticut and Farmington Rivers and in the vicinity of the original town settlement. Many residents may not be aware of Windsor's archaeological importance and the Town should promote awareness and appreciation for our ancient history. If warranted by a potentially significant site, such as Windsor's original settlement palisade and trading post, or a known prehistoric settlement, the State Archeologist, in cooperation with the University of Connecticut, can conduct an archaeological survey at no cost to the property owner.

When triggered by a one of several criteria during the development review process, the Connecticut Environmental Policy Act (CEPA) requires an archaeological and historical resources assessment to be conducted prior to approval to determine the potential of the project to adversely impact significant archaeological or historic resources, and if any are found, recommend a process for moving forward in accordance with CEPA standards and the guidelines found in the State Historic Preservation Office's (SHPO) Environmental Review Primer for Connecticut's Archaeological Resources. A number of Connecticut cities and towns have archaeological resource protection provisions in their subdivision and zoning regulations, giving their commissions the ability to require similar analyses and mitigation measures.

Known Archaeological Sites, Lower Farmington River



Source: Archaeological Assessment of the Lower Farmington River and Salmon Brook, undated, Farmington River Watershed Association.

The town should consider updating the subdivision and zoning regulations to provide some level of archaeological review during the development approval process, perhaps working with the State Archaeologist to identify and map the areas most likely to contain these resources, to give potential developers advanced warning of a possible review prior to development similar to how the Natural Diversity Database (NDDDB) map identifies general areas likely to

contain critical species habitats. Such a regulation should be clear that the intent is not to halt development, but to ensure that where possible, development is situated to avoid sensitive areas and that any artifacts found on site are documented.

Archaeological Resource Protection Strategies

16. Encourage additional archaeological surveys, especially along the rivers.
17. Promote Windsor's archaeological resources.
18. Consider updating the subdivision and zoning regulations to require some level of archaeological review.

GUIDE HOUSING & RESIDENTIAL DEVELOPMENT



Overview

Over its history, Windsor’s rate and pattern of development evolved with the needs and tastes of its residents. As development spread out from the village centers of Windsor Center, Wilson, and Poquonock, there was always abundant available land beyond the fringe of existing development. As Windsor approaches the limits of its residential development, the Town must decide how to best use its limited land resources.

For many people, their homes represent their biggest investment and their biggest expense. This creates the problem of balancing affordability with the protection of our investment.

As residents age and move through life, their housing needs change, requiring a variety of housing options ranging from starter homes to nursing homes. Demographic trends over the life of this plan and beyond will dictate what type of housing will be in demand and allow us to plan for those needs accordingly.

Improve Windsor’s existing housing as well as the pattern and quality of new development to: maintain housing diversity; bring housing values into balance with regional values; create more livable neighborhoods; and enhance the quality of life for all Windsor residents.

Single-Family Housing



Multi-Family Condominiums



Residential Development Patterns

Existing Patterns and Trends

Windsor's historic residential development pattern is generally reflected in the residential densities depicted on the current zoning map. Development began north of Windsor Center in what is today the Palisado Historic District and spread from there in a sparse pattern of farms until commercial activity in Windsor Center and the other villages began to concentrate residents. The arrival of trolleys at the beginning of the 20th Century resulted in Windsor's first streetcar suburbs and the rapid expansion of Wilson and Windsor Center. With rapid growth in automobile usage after World War II, some development occurred on slightly larger lots around the fringes of Wilson and Windsor, with the bulk of development occurring between these two village centers. Apartments were initially built on the fringe of Windsor Center and Deerfield, spreading out over time to more highway-oriented locations near Exits 37, 38, and 39 of I-91. Single-family development continued to spread north and west, utilizing continually larger lot sizes, before settling on the current pattern of approximately half-acre lots found in the A and AA Zones.

Managing Development Patterns

If one assumes that the easiest developable land is generally consumed first, the remainder of Windsor's residential development potential will be developed on increasingly difficult land, constrained by wetlands, steep slopes, and similar sensitive soils. Past zoning practice treated all parcels equally, resulting in near maximum densities for most subdivisions, regardless of the quality of the land. As a means of ensuring adequate buildable area on residential lots, the 1991 Plan of Development recommended restrictions to protect sensitive soils in residential developments. An amendment to Section 4.2.1 of the Zoning Regulations implemented a measure excluding inland wetlands, watercourses, special flood hazard areas, and slopes in excess of 25 percent from density calculations for new subdivisions. This measure reduces development pressure on sensitive areas and may slightly reduce residential densities townwide. The Town Planning and Zoning Commission (TPZC) should remain open to refinements to further reduce impacts on these sensitive areas, increase the feeling of openness, and improve the quality of residential development.

To ensure the quality of future open space and prevent the acceptance of mostly undevelopable land, the TPZC enacted similar regulations to ensure that the acreage of steep slopes, wetlands, and floodplains in open space is proportional to the overall subdivision unless waived by the Commission for good cause, such as floodplain that serves as a trail corridor. To date, the regulation has been effective in improving the quality of open space

Another effective means of assuring quality open space is to accept fees in-lieu of open space. When open space in a subdivision is too small to be meaningful or does not fulfill a desired open space goal, a fee in-lieu of open space can contribute towards the purchase of more appropriate open space in another

location. The donation of a fee is at the discretion of the owner/developer and receipt of a fee in-lieu of open space remains at the discretion of the TPZC.

Walkable/Bikeable Neighborhoods

The walkability and bikeability of Windsor's neighborhoods was a major topic of concern during workshop discussions. Windsor Center and Wilson are very walkable by most measures, with only minor gaps in sidewalks and few safety concerns. Poquonock is not so fortunate and a concerted effort is needed to ensure that new development or redevelopment projects include sidewalks if Poquonock is to become a truly walkable village. The streetcar neighborhoods along Route 159 such as Deerfield are also well served by sidewalks, but like Poquonock, there are significant gaps in the network and deficiencies such as lack of handicapped ramps that limit their use. Many of Windsor's more suburban neighborhoods lack sidewalks altogether, which residents have become accustomed to as both drivers and pedestrians, but there are areas, such as busy arterial and collector streets, where traffic volumes and speeds create a dangerous mix when everyone is forced to share the road.

Since 2004, the TPZC adopted regulations to require a sidewalk or trail along all new streets, and when development occurs along existing collector or arterial streets, sidewalks are required on one or both sides of the street respectively. Walkability and bikeability are also major tenets of both Smart Growth and neotraditional development that are being incorporated into the Great Pond development, providing an unparalleled internal network of sidewalks and trails, as well as major external trail connections to the developing Farmington River Greenway and Day Hill sidewalk/multi-use trail system. The TPZC should consider amending the Zoning Regulations to require new sidewalks or trails for significant expansions of existing developments when such an expansion is likely to encourage pedestrian traffic and the cost of the pedestrian improvements are reasonably proportional to that of the overall development. For example, doubling the size of a business served by a nearby bus stop might warrant a sidewalk along the facility's frontage to allow employees to walk safely to and from the bus stop.

The Town has not relied solely on the development community to close gaps in existing trail and sidewalk networks. The Town attempted to use grant funds to complete sidewalks along Deerfield Road and make other pedestrian improvements throughout the neighborhood, and town funds to connect Walden Meadow with Day Hill Road as a first phase of the Day Hill Road sidewalk/trail system. Both projects met with surprising neighborhood opposition during public hearings before the Town Council, considering that both projects were to the neighborhoods' benefit.

The Town also has a policy of considering bicycles and pedestrians in all significant road projects. Both sidewalks and a bike lane are proposed for the reconstruction of Prospect Hill Road between Poquonock Avenue and Lang Road, providing pedestrian and bicycle access to Northwest Park and a safe route between neighborhoods for hundreds of households in neighborhoods along Prospect Hill Road. Pigeon Hill Road, River Street and other roads are slated for sidewalks when parts of those streets are reconstructed in the future. To avoid a

repeat of the recent failures to approve sidewalks, grass roots support from both within neighborhoods as well as town and regional advocates for bicycle and pedestrian amenities need to be marshaled to show support for these and other beneficial amenities in future hearings.

Another sidewalk program is the Safe Routes to School Program, which is designed to provide sidewalks and safe road crossings within walking distance of schools as well as educate students on bicycle and pedestrian safety. The Capitol Region Council of Governments (CRCOG) and more recently, the Connecticut Department of Transportation (ConnDOT), have taken lead roles in this national program and are assisting towns with meeting program requirements. The Planning Department has attended all required planning workshops but representatives of Windsor Public Schools have not participated to date as required. As a testament to the poor pedestrian access in many parts of town, it is estimated that 61 miles of sidewalk, at a cost of \$26 million, would be needed to provide safe routes for every school in town. While complete success is unlikely, continued participation in this program could yield significant grant funds to provide the education component and tackle the sidewalk issue one school at a time or at least close critical sidewalk and safety gaps in the immediate vicinity of schools.

Strategies for Residential Development Patterns

1. Consider refinements to buildable land regulations to further reduce impacts on sensitive areas, increase the feeling of openness, and improve the quality of residential development.
2. Consider amending the Zoning Regulations to require new sidewalks or trails for significant expansions of existing developments.
3. Develop grass roots support from both within neighborhoods as well as town and regional advocates for bicycle and pedestrian amenities.
4. Continue to participate in the Safe Routes to School Program, tackling pedestrian safety one school at a time, and/or closing critical sidewalk and safety gaps in the immediate vicinity of schools.

Preserve and Enhance Housing Values and Neighborhoods

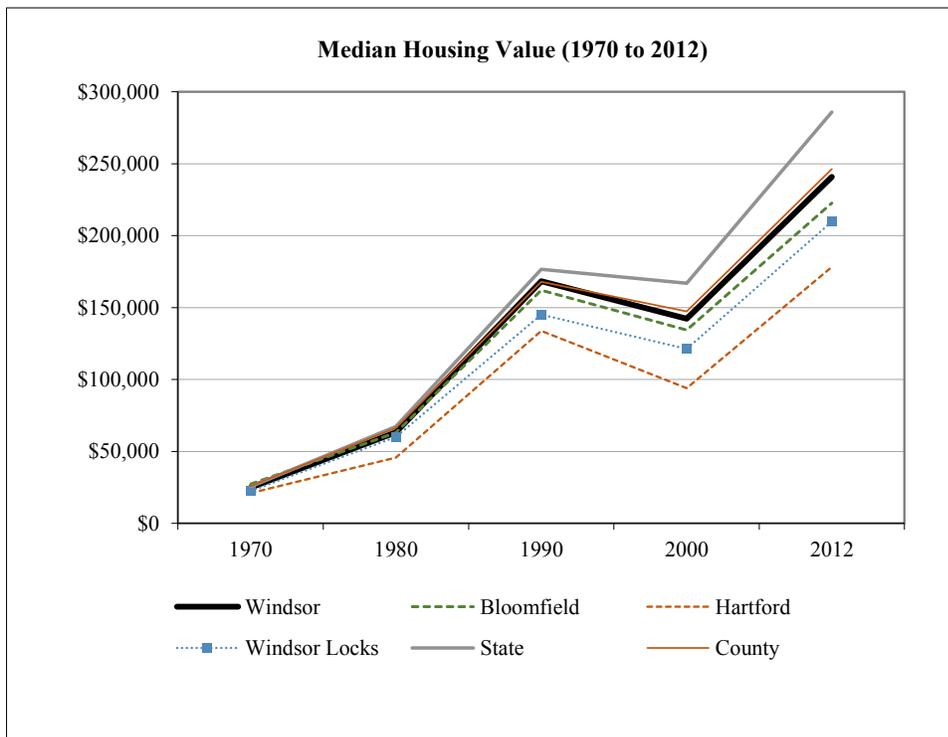
The 1970s and 1980s were a period of runaway housing inflation, where some towns in the Capitol Region experienced six-fold increases in housing values. During the real estate collapse of the 1990s, housing values throughout Connecticut declined significantly before slowly recovering. The late 2000's brought yet another real estate collapse, fueled by sub-prime mortgages bundled into mortgage backed securities.

During the 1990's Windsor house values fared relatively the same as the county and its fellow inner-ring, suburban towns but declined slightly more than the state or outer ring suburb. The same held true through the collapse and slow recovery during the 2000's and 2010's.

Home Value vs. Price

Median home values represent an average of homeowners' estimated home values as reported by a sample of households in the 2000 Census and more recently in the Census Bureau's Annual Community Surveys. Because these estimates are not always based on recent appraisals or sales, they can vary substantially from actual sales.

Median home prices reflect an average of actual sale prices. A small sample of homes sold in a given year may not be representative of Windsor as a whole.



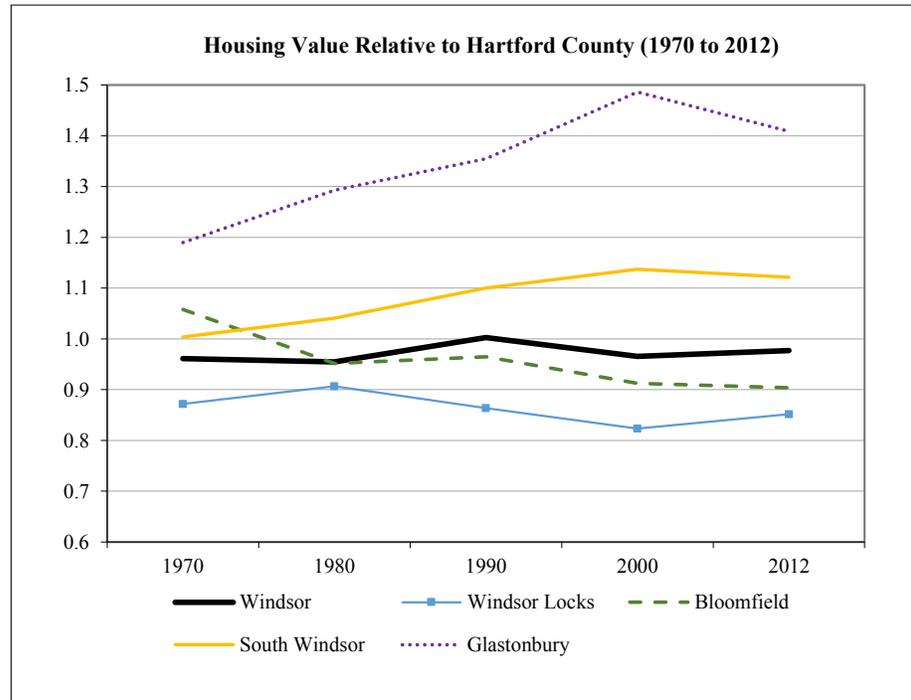
Functional Obsolescence

As technology and social norms change over time, buildings can become functionally obsolete. When thinking of functionally obsolescent buildings, images of multi-story factories, and warehouses with low ceiling heights come to mind, but housing stock can also become functionally obsolete.

When the streetcar and post-war suburbs of Windsor were being constructed, small houses with two or three bedrooms, one to one and one-half bathrooms, and a single, often detached garage were the norm. Over the last 40 years, the average living space per person has doubled, and despite shrinking family size, the size of the average home has increased by 1,000 square feet over that time. New luxury homes in outer-ring suburbs can average more than one bathroom per bedroom and three-car garages are the norm.

Much of Windsor's older housing stock is at a distinct disadvantage when compared to newer housing, but with flexible regulations to allow for modest upgrades, it can serve as starter housing for young families and allow empty nesters to downsize within Windsor.

To put Windsor's (and a select number of other communities') housing values into perspective, the following chart illustrates Windsor's house values relative to Hartford County as a whole over the last four decades. A value of one represents the county average for each census or annual community survey.



Unlike typical inner-ring suburbs, Windsor has a considerable area (just under 4,000 acres of vacant or under-developed land, including the AG Zone) available for residential development. New single-family development should be in line with the current regional housing market to help enhance the value of Windsor's housing stock, recognizing that continuing efforts to improve the value of existing homes through renovation programs will also be effective to this end.

Over the last four decades, less populated second-tier suburbs were experiencing higher growth rates during a period of demand for larger, more expensive homes, rendering the existing housing stock of inner-ring suburbs, such as Windsor's, relatively older and cheaper when compared to these towns. Much of the construction that occurred in the inner-ring suburbs after World War II to accommodate returning soldiers and their families was relatively dense, single-family and multi-family development. Currently, many of these single-family homes are somewhat obsolete and less desirable in today's predominantly single-family market, which places a premium on larger, high-quality homes on larger lots.

Encourage Reinvestment

One way to help stabilize and perhaps increase the value of existing housing stock is to encourage investment in older neighborhoods and their functionally obsolescent homes. Many communities look to their older housing stock as

treasures to be restored, attracting urban and now suburban pioneers willing to invest in these structures. With the Smart Growth movement gaining momentum nationwide, housing in cities and on the urban fringe is coming full-circle, becoming desirable once again.

Windsor’s many multi-family homes are at once a source of affordable housing and an opportunity for absentee ownership, which can lead to disinvestment and the decline of older neighborhoods. Two- and three-family homes in Windsor could be converted to single- or two-family homes respectively with larger rooms, more bathrooms per unit and many of the modern amenities found in newer homes: all within minutes of jobs and cultural amenities in Hartford. Such conversions would not only reduce landlord absenteeism; they would create a housing value multiplier effect by reducing the number of inexpensive units by one or two and creating a single, higher value, owner-occupied unit.

There is little the Town can do to attract such investment except maintain the stability of these older neighborhoods through the provision of quality services and the maintenance of streets and infrastructure. Windsor has effectively used Community Development Block Grants to this effect in the past. A relaxation of zoning standards for existing non-conforming homes to allow modest expansions might also help to spur investment.

Another issue facing some Windsor neighborhoods is a proliferation of group homes. Windsor and similar inner-ring suburbs are targeted for group homes because of the availability of affordably priced housing. While Windsor supports independent living for physically and mentally handicapped residents, the impacts of some of these facilities, such as excessive parking demands, can be out of character with their neighborhoods and increased service costs can be an unfair burden on the community. The Connecticut General Statutes prohibit planning and zoning commissions from regulating group homes to mitigate any impacts. The State should strive to distribute these facilities fairly and subsidize the purchase of homes in more exclusive towns with higher housing prices.

Support Windsor Schools

There is an old adage that says “as the schools go, so goes the town.” Windsor may have been a case in point during the 1990s when severe budget cuts significantly impacted the school system and other town services, possibly contributing to a nearly 2,200 resident decline in net-migration relative to the 1980s. To illustrate this, median home values in Hartford County towns were compared against Connecticut Mastery Test (CMT) scores as well as the median age and size of housing (number of rooms) to determine if there were correlations between these factors. The chart on the following page illustrates a strong correlation between average CMT scores and median home values throughout Hartford County, with Windsor nearly fitting the countywide trend. CMT scores were the strongest of the three variables for predicting median home values by town.

Windsor should focus on promoting itself as an amenity-rich community.

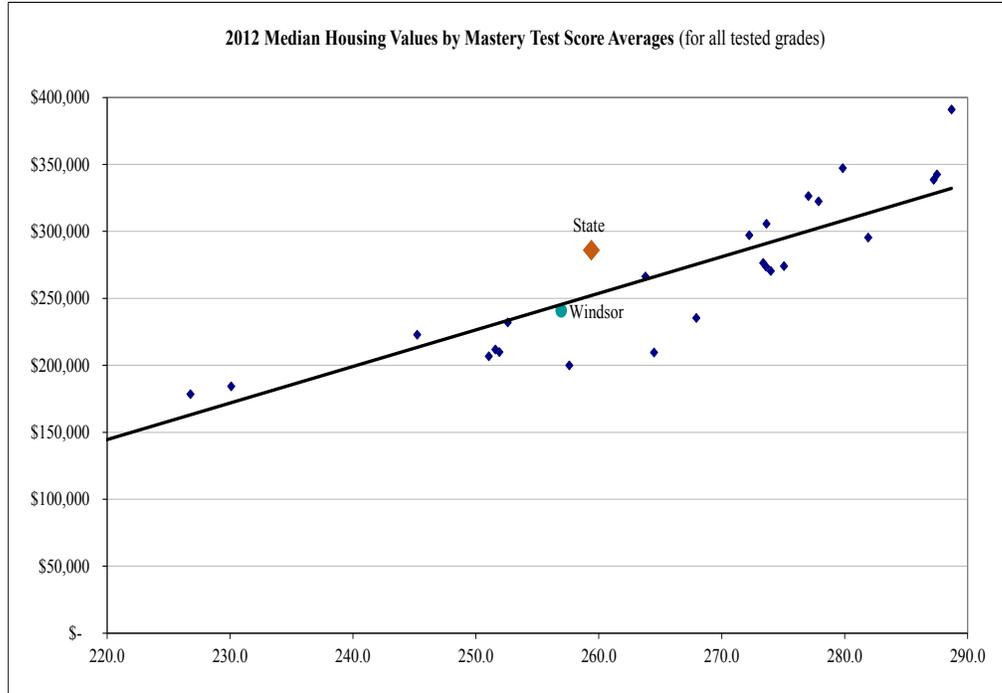
Components of Windsor Population Change

	1990s	2000s
Natural Increase	1,156	538
Net Migration	-736	269
Total Change	420	807

Source: US Census Bureau

Home Value vs. CMT Score

The trend-line in the chart to the right illustrates the countywide trend for expected cumulative CMT scores relative to median home value and the points along the trend-line represent each town in the county. Towns located above the trend-line experienced lower than expected CMT performance relative to housing values while towns located below the trend-line experienced higher than expected CMT scores relative to housing values. Windsor is located on the trend-line, mirroring the countywide trend.



Housing/Economic Development Paradox

Economic development can help defray the cost of improving Windsor Public Schools, making Windsor more attractive to residential home buyers. However, by lowering the residential tax burden, it may also attract home buyers that are more concerned with lower property taxes and home values than quality schools; reinforcing Windsor’s lower priced housing market.

When faced with increasing taxes, many residents may not stop to consider all of the impacts of tax cuts or freezes. A small annual investment in Windsor’s schools today can lead to marked improvements in the quality of education and an increased desire to live in Town, which in-turn can lead to increased housing values.

Luxury single-family home buyers are often looking for both a quality education for their children and a secure investment in their home. As one of the most significant factors in choosing a home and determining the value of homes, investment in Windsor’s schools is the key to increasing the value of Windsor’s existing housing stock and attracting the type of luxury single-family homes that are prevalent in the outer suburbs.

The health of a school system can also be a contributing factor in corporate relocation decisions, making economic development an easier task and turning a major shortcoming into a positive locational attribute. Increased economic development can eventually help offset and sustain the increased investment in schools, reducing the burden on residents.

Town Festivals



Recreation Facilities



Strategies to Preserve and Enhance Housing Values

5. Continue providing quality facilities and services to residents and businesses.
6. Increase the lot size in new residential developments wherever possible and avoid rezoning to higher residential densities or smaller lot sizes.
7. Support Windsor public schools, not only to provide quality education but as a means of improving Windsor's overall quality-of-life, residential property values and marketability for economic development.
8. Petition the State Legislature for more equitable distribution of group homes.
9. Promote Windsor as an amenity-rich community.

Statutory Reference

“The Plan shall make provision for the development of housing opportunities, including opportunities for multi-family dwellings consistent with soil types, terrain and infrastructure capacity, for all residents of the municipality and the planning region.”

“The Plan shall promote housing choice and economic diversity in housing, including housing for both low- and moderate-income households, and encourage the development of housing which will meet the housing needs.”

CT General Statutes 8-23

Address Housing Needs

Housing for an Aging Population

Like many towns, Windsor’s population as a whole is aging. With low residential growth rates, life expectancies growing longer due to advances in medicine, and the Baby Boom generation reaching full maturity, fully one-third of Windsor’s population is projected to be 55 years of age or older by the year 2020.

As residents grow older, their housing needs change due to changes in lifestyle, declining health, and other factors. The following table illustrates the various housing options typically available to aging residents.

Category	Housing Options	Current Use Status	Possible Policy Options
Remain in Current Home	1. Remain in current home with no special Town services.	No restrictions	
	2. Remain in current home and rely on local senior programs.	No restrictions	Enhance existing senior services (meals-on-wheels, dial-a-ride, etc.)
	3. Remain in current home with elderly tax relief.	No restrictions	Enhance elderly tax relief programs.
Accessory Housing Units	4. Remain in home with accessory unit for related caretaker or caregiver.	Permitted by Special Use in residential zones	Continue current policies
	5. Move in with family in their home or accessory unit.	Permitted by Special Use in Residential Zones	Continue current policies
Multi-Family Housing	6. Move to a market rate condominium or rental housing.	Permitted by Special Use in Residential Zones	Locate in close proximity to existing village or commercial nodes.
	7. Move to a market rate active-adult or elderly housing development.	Permitted by Special Use in Residential Zones	Locate in close proximity to existing village or commercial nodes.
	8. Move to subsidized elderly housing development.	Permitted by Special Use in Residential Zones	Locate in close proximity to existing village or commercial nodes.
Congregate Living Facility	9. Move to congregate or assisted living facility providing some services.	Permitted by Special Use in Residential Zones	Locate in close proximity to existing village or commercial nodes.
	10. Move to a life-care facility providing extended services.	Permitted by Special Use in Residential Zones	Locate in close proximity to existing village or commercial nodes.
Skilled Nursing Facility	11. Move to nursing/convalescent home.	Permitted by Special Use in Agricultural Zone	Consider allowing in compatible locations in other zones by special permit.

Active-adult housing, restricted to residents 55 years of age and older, has been a popular option for “empty nesters” in Windsor. Active-adult units tend to be smaller homes with first-floor master bedrooms that can be easily adapted if residents become less mobile. Active-adult communities often provide exterior maintenance and other amenities through dues paid to a homeowners association. There are currently six active-adult communities approved or under construction in Windsor today. If Windsor’s 55+ population peaks and begins to decline after 2020, the demand for such restricted units may decline as well, prompting requests for unrestricted occupancy. Phase II of River Town Village was converted to market-rate single-family housing prior to construction due to either intense competition from existing and proposed units for sale, or lack of interest. To ensure their continued viability, measures should be considered to provide for their eventual adaptive reuse (see sidebar).

Housing for older persons is age-restricted housing for residents 62 years of age and older. These units appeal predominantly to retirees and share many of the same features as active-adult housing.

Elderly assisted living is financially (not medically) assisted housing for residents 62 and older. Assisted living units are typically higher density, handicapped adaptable apartments that receive government subsidies to keep the units affordable to residents on fixed, retirement incomes.

Congregate housing is intended for older or infirm residents that require limited medical attention and other basic services. Congregate facilities are commonly higher density, handicapped-accessible apartments or condominiums with common elements such as dining halls, community rooms, limited medical facilities and convenience shopping.

Accessory apartments allow elderly or infirm residents to remain in their homes, or the homes of their adult children, who provide limited care. Accessory apartments can fit seamlessly into existing residential homes and neighborhoods, without altering the residential character of either.

Nursing homes are intended for older or infirm residents who are unable to function independently and require constant medical attention. Connecticut strictly controls the allocation of nursing home beds throughout the State.

A positive attribute of these housing styles is that when you consider that two-thirds of the annual Town budget goes to the public schools, these households do not create high service demands. Many older residents are eligible for tax relief to compensate for this discrepancy. On the down side of the equation, every existing Windsor household that downsizes from a conventional single-family home into one of these living arrangements makes their existing home available for a new household that may have school-age children.

When density bonuses are granted in return for meeting perceived housing needs for older persons, these developments should be located in or within walking distance of existing village nodes or similar concentrations of services. In doing so, residents will be within easy reach of basic services, less dependent on

Adaptive Reuse

To reduce the potential for the functional obsolescence of active-adult units after 2020, Windsor should consider modifying the active-adult regulations in the future to provide for their adaptive reuse for conventional housing. The simple conversion of unfinished second floor space can be facilitated through the provision of stairs, dormers, rafters, ceiling joist construction (instead of truss construction) able to support floor loads, etc. at the time of construction.

Age-Restricted Housing Paradox

While age-restricted housing can have positive tax implications for the Town by generating more tax revenue than it requires in public service expenditures (due to lack of school children and private roads), too many age-restricted housing units could potentially lead to less support for the Town Budget (approximately two-thirds of which is the Windsor Public Schools Budget).

The state definition of a qualifying affordable housing unit is artificial and does not account for the large percentage of Windsor's housing stock that is truly affordable. If Windsor was experiencing housing inflation similar to the 1970s and 1980s, the state definition, guaranteeing affordability over a 40-year period, would be more meaningful.

automobiles or dial-a-ride services, and will in-turn contribute to the economic viability of businesses in these areas.

Housing Affordability

During the economic boom of the 1980s, Connecticut experienced housing inflation that drove the cost of housing out of reach of many low- and moderate-income households, prompting the passage of a housing affordability act to make every town accountable for addressing the State's affordable housing needs. While well intentioned, the act, as interpreted by the court system, opened many towns to development abuses, prompting several amendments since its adoption. Since the "housing bubble" burst in the late 1980s and early 1990s, affordable housing has not been as major a concern in Windsor as it has been in the outer suburbs. Despite this, housing affordability remains an issue that bears discussion.

By state definition, as prescribed in Section 8-30g of the Connecticut General Statutes, an affordable housing unit must be: assisted housing, funded under a recognized state or federal program such as Section 8 under the Housing Act of 1937; CHFA-financed housing for income-qualifying persons or families; or deed-restricted to be affordable to moderate- and low-income persons or families for at least 40 years. A moderate-income household earning 80% of the regional median household income or a low-income household earning 60% of the regional median household income cannot spend more than 30% of its gross income on rent, mortgage, utilities, taxes or other basic housing costs. To spend more than 30% places such a family or household under financial stress.

A household of four earning \$71,300 or less in Windsor is considered a low-income household, eligible for affordable housing. A qualifying home for a low-income household of four would currently have to cost less than approximately \$197,000 with a 20% down payment or \$180,500 with only a 10% down payment. That same low-income household can only afford \$1,748 in rental costs and utilities (excluding phone, Internet and Cable TV).

As the following table illustrates, there are a high percentage of renter- and owner-occupied households in Windsor earning less than \$75,000 and paying too much for housing. At even lower income levels, there is little that a town can do to improve the condition of these households since a household earning only 60% of the regional median household income, or approximately \$53,000, can comfortably afford no more than a \$126,000 home with a 10% down payment.

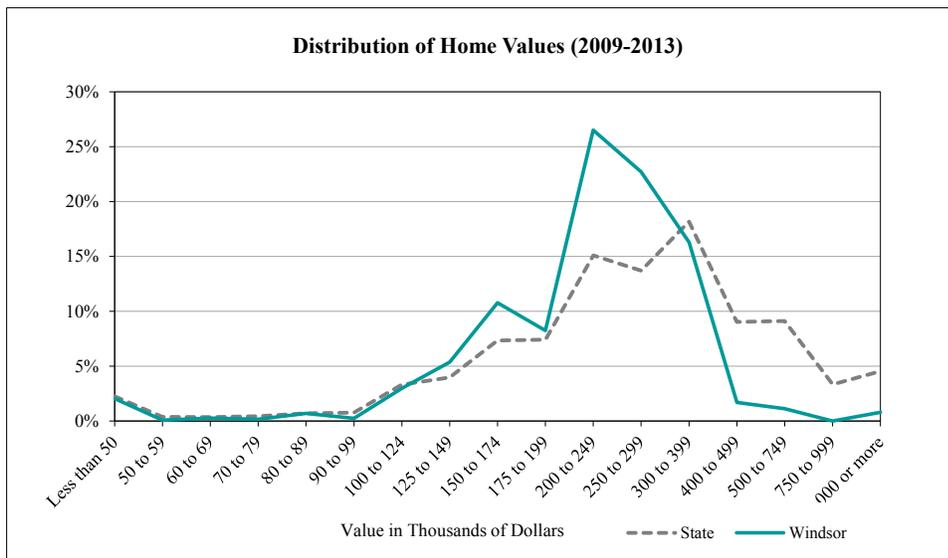
Percentage of Households Spending more than 30% of Income on Housing Costs

Household Income	Renters		Owners	
	Windsor	State	Windsor	State
<\$20,000	18.3%	22.6%	4.3%	5.6%
\$20,000-\$34,999	11.4%	15.7%	5.8%	6.6%
\$35,000-\$49,999	10.6%	7.3%	6.0%	5.5%
\$50,000-\$74,999	5.0%	3.7%	8.2%	7.9%
\$75,000+	0.0%	0.9%	5.7%	8.4%

Source: 2011-2013 American Community Survey

Despite these numbers, over seven percent of Windsor’s housing stock meets the state requirement for affordability by virtue of either CHFA financing or Section 8 housing certificates. While there are no deed-restricted, affordable housing units at this time, approximately 31 percent of Windsor’s housing stock was valued at less than \$200,000, which is roughly the affordability threshold (\$197,000).

The following chart illustrates the percentage of housing units in each price range. What is readily apparent is that the bulk of Windsor’s housing stock has a greater proportion of lower and mid-priced units and fewer expensive houses. What is also evident is that Windsor’s housing prices are out of balance with those of other municipalities in the State. Efforts must be made to correct this imbalance and promote higher value housing.



One ongoing affordable housing initiative that should be continued is the use of Community Development Block Grant funds to rehabilitate older homes and retain or create affordable housing units in the process. This program also serves to stabilize property values by eliminating blight in some cases.

Acting in a passive capacity, Windsor should encourage affordable housing proposals that do not compromise quality for the sake of affordability. Density bonuses that could allow developers to reduce land and construction costs, combined with the ability to sell 80 percent of the units at market rate, should allow for the construction of quality housing developments in which the outward appearance of affordable units is indistinguishable from the market rate units.

Strategies to Address Housing Needs

10. Continue to encourage and permit a variety of alternative housing styles for older persons, especially in the village centers.
11. Consider requiring structural adaptability of active-adult housing units so that they can be easily converted to conventional units in the future if warranted by declining numbers of elderly residents.
12. Continue to provide tax relief programs so that older residents can remain in their homes if they choose.
13. Maintain a passive approach to affordable housing as long as Windsor continues to have a large supply of affordable market rate housing units.
14. Continue to participate in State and regional affordable housing initiatives.
15. Ensure that the development of affordable housing that encourages homeownership and does not compromise quality for the sake of affordability.
16. Continue to use Community Development Block Grant (CDBG) and other funds to rehabilitate older homes, remove blight and preserve or create affordable housing units.

Active Adult Housing



Eliminate Zoning Conflicts

Throughout Windsor, there are residential developments that are in conflict with nearby incompatible land uses and/or zoning with the potential for future conflict. There are also several undeveloped areas that are ripe for future conflicts and the Town has an opportunity to correct them before they occur.

Rainbow

An older neighborhood known as Pine Acres lies near the south end of Runway 06-24 of Bradley International Airport, yet still receives development pressure on its remaining vacant land. When the neighborhood was first created, Bradley Field was not the international airport that it is today. As the airport grows both physically and operationally, Pine Acres will continue to be a source of airplane noise complaints. If this area was zoned for the first time today, residential zones would not be put here. More housing should not be put in conflict with the airport, which is vital to the entire region, and efforts to increase residential densities within established flight paths should be discouraged.

The majority of the undeveloped land to the south and west of this neighborhood has been rezoned to the AG Zone, thereby reducing the number of additional houses that can be built within the flight path. Another option at some point in the future could be to rezone a portion of this area to the I Zone, adding development potential to the rear of existing developments to the west to meet coverage requirements for expansions of those facilities towards International Drive, provided that there are opportunities for effective buffers.

A 22-acre parcel known as 965 Stone Road presents a challenge, as its only access is via a 50 foot right-of-way located in a residential area on a sharp curve on a truck-restricted road, where heavy truck traffic would be unwelcome by residents of both Windsor and East Granby. One possible compromise to this problem might be to rezone the northern portion of the adjacent agricultural zoned parcel, under the same ownership, to the Industrial Zone, making it useful in increasing the utility of the adjacent 105 International Drive to the north, in exchange for rezoning the more southerly industrial zoned property to the Agricultural Zone, in keeping with the surrounding neighborhood. This would be dependent on the two property owners coming to an agreement. Purchasing 965 Stone Road and the adjacent agricultural property as open space would eliminate the potential conflict but the price would have to reflect the reality of its limited industrial access to Stone Road.

Wilson

In Wilson, there is industrially zoned land west of the railroad tracks, between East Barber Street and Wilson Avenue, as well as commercially zoned land south of and fronting on Wilson Avenue that threaten the stability of the adjacent residential neighborhood. These areas are poorly situated for their intended uses and discourage maintenance and investment in surrounding residential properties. These areas should be rezoned to appropriate residential densities, while being mindful of the adjacent railroad tracks. Industrially zoned land adjacent to

Sharshon Park could also be considered for open space acquisition to increase the utility of the park.

Windsor Avenue contains a mix of commercial businesses and residences, interspersed along its entire length. Many properties along the east side of Windsor Avenue are zoned commercially despite their longstanding residential use, discouraging investment and upkeep. These properties should be rezoned to residential use where their commercial value is in doubt.

Windsor Center

A similar situation exists on the northwest corner of Sycamore and Broad Streets, where a single-family home is zoned commercial. The commercial zoning discourages residential investment in the property and future commercial use of the property would destabilize the residential areas to the south and west. The TPZC should proactively rezone this and the other noted properties to more appropriate zoning designations.

Mitigate Conflicts Between Incompatible Uses

As residential, commercial and industrial development continues and available land becomes scarce, conflicts between these uses may increase. To reduce the potential for future conflicts, the TPZC has already increased buffer requirements for new commercial, industrial and warehouse uses when they abut residential zones; created flexible buffer requirements that trade off buffer width for additional landscaping such as berms, walls and vegetation; and clarified truck parking and loading regulations, restricting truck parking in front yards, especially when adjacent to agricultural and residential zones. As evidenced by a recent development, these measures, while well meaning, are insufficient when dealing with large-scale, truck-oriented development.

The Commission should take additional measures to help mitigate the conflicts between these large-scale developments and nearby residential neighbors. When development is proposed near residential areas, a floor area threshold, building height to setback ratio, number of loading docks and/or loading dock to floor area ratio could serve as trigger points, warranting a special use permit that would give neighbors a voice in the planning process and the Commission the flexibility to mitigate concerns or deny a project when those concerns cannot be adequately addressed. Additional requirements might include increased building setbacks for multi-story or taller one-story buildings, noise abatement measures, lighting restrictions, etc.

Strategies to Eliminate Zoning Conflicts

17. Resist requests to increase residential densities within known flight paths.
18. Carefully consider rezoning the area west of Pine Ares to I Zone if additional buffers are provided against the existing residential neighborhood.
19. Rezone vacant B-2 and I-1 zoned land to the east of Wilson to appropriate residential zones.
20. Rezone B-2 zoned residences on the east side of Windsor Avenue in Wilson and at the corner of Broad and Sycamore Streets in Windsor Center to appropriate residential zones.
21. Consider additional measures to help mitigate the conflicts between large-scale developments and nearby residential neighbors.

SUPPORT BUSINESS & ECONOMIC DEVELOPMENT

8

Overview

Communities seek to attract economic development for a number of reasons including increased employment, availability of goods and services, and tax base. Windsor's primary economic development focus is to increase the tax base to help offset the cost of providing quality facilities and services to its residents and businesses.

The Day Hill Corporate Area with its economic development potential, the New England Tradeport and the villages of Windsor Center, Wilson and to a lesser degree Poquonock are key components in Windsor's economic development strategy. Due to their significance, they have been addressed comprehensively in Chapter 9 – Enhance Villages, and Chapter 10 – Day Hill Corporate Area.

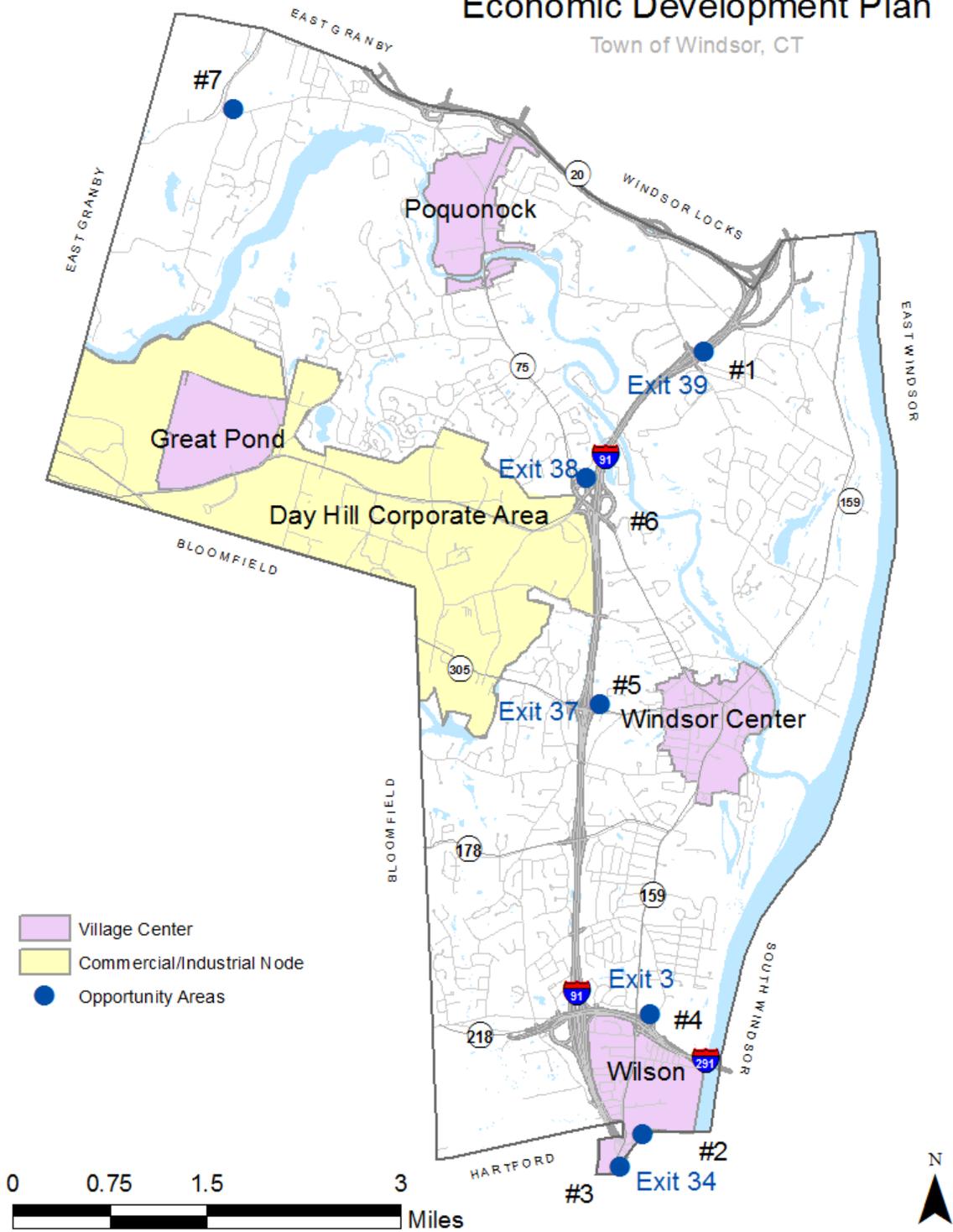
Dispersed throughout Windsor, outlying commercial/industrial areas such as the New England Tradeport (near the airport) and the many highway interchanges together make a significant contribution to Windsor's economy. The commercial development of these areas must be handled carefully to ensure that their development does not undermine efforts to strengthen Windsor's traditional commercial centers and the Day Hill Corporate Area.

The theme binding Windsor's economic development efforts together should again be that Windsor is an amenity rich community, making it attractive to all types of businesses and their employees as a great place to live and do business.

Attract a broad range of appropriately designed and located commercial/corporate uses that improve Windsor's tax base while enhancing shopping and employment opportunities for Windsor residents.

Economic Development Plan

Town of Windsor, CT



Opportunity Area Strategies

Nodes of commercial and industrial activity located outside of the traditional village centers and the Day Hill Corporate Area present opportunities for significant development or redevelopment as part of Windsor's overall economic development strategy. The map on the following page illustrates the location and distribution of these opportunity areas.

Hayden Station Road/Kennedy Road/Archer Memorial Drive - Opportunity Area #1

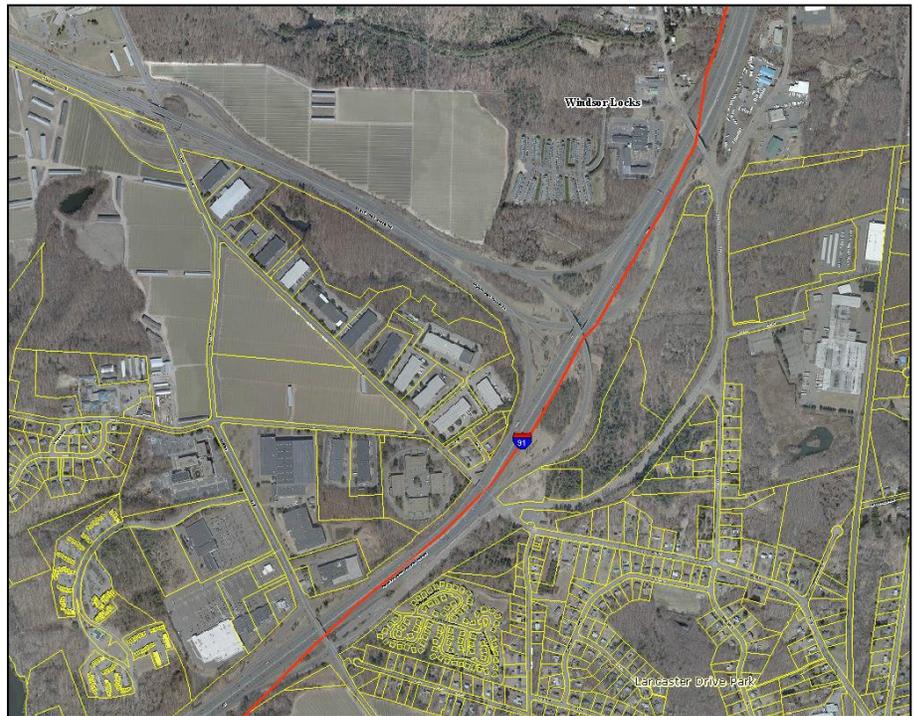
The Hayden Station Road/Kennedy Road/Archer Memorial Drive area is a dispersed area of manufacturing and warehousing with general office space limited to a small area served by both public water and sewers. Good roads and relatively easy access to I-91, Route 20, and Bradley International Airport should continue to make this area an attractive alternative to the more formal Day Hill Corporate Area and New England Tradeport.

Windsor should consider extending or encourage the extension of public sewers beyond the Kennedy Road PUD. Doing so would increase overall business attractiveness by allowing more intensive use of available land and could encourage redevelopment of underutilized properties to higher and better uses. Without such extensions, development will continue to be limited to uses with minimal employees such as warehousing and highly automated manufacturing operations.

The partial interchange at Kennedy Road and I-91 limits the attractiveness of this area for retail use, requiring southbound patrons to use either Exit 40 or Exit 41 and navigate their way to the Kennedy Road shopping area. Further retail development in this area should be limited to available buildings and land within the commercial portion of the Kennedy Road PUD.

Consider extending or encourage the extension of public sewers beyond the vicinity of the Kennedy Road PUD.

Further retail development in this area should be limited to the Kennedy Road PUD.



Rezone inappropriate B-2 land to residential.

Encourage highway-oriented commercial and regional retail uses to take advantage of access and visibility from I-91.

Minimize intrusion upon residential areas to the north.

Exit 34 – Wilson – Opportunity Area #2

The B-2 zoned land and buildings along Meadow Road should be redeveloped to take advantage of adjacent Exit 34, extensive bus service along Windsor Avenue and close proximity to Hartford. The northernmost B-2 zoned land along Wilson Avenue is recommended to be rezoned to residential in Chapter 7. The balance of the land is most suited to highway-oriented commercial development (gas, food and lodging) and regional shopping that takes advantage of the high visibility and access from adjacent I-91. Special care should be taken to minimize further intrusion and impacts on adjacent residential areas to the north.



Decorative Street Signs



Wilson Avenue Redevelopment Parcel



Exit 34 – Wilson - Opportunity Area #3

The B-2 properties south of I-91 should also be redeveloped to take advantage of Exit 34, excellent bus service and close proximity to Hartford.

While upscale office development would be preferable, the economic reality of the area may warrant redevelopment into regional business opportunities that take advantage of the high visibility and access from adjacent I-91.

As this area is the southern gateway into town, care should be taken to ensure that attractive, quality development occurs that does not detract from ongoing enhancement programs taking place to the north.

Encourage office and highway-oriented businesses to take advantage of access and visibility from I-91



Carville's Ranch House



Highway Oriented Retail Development



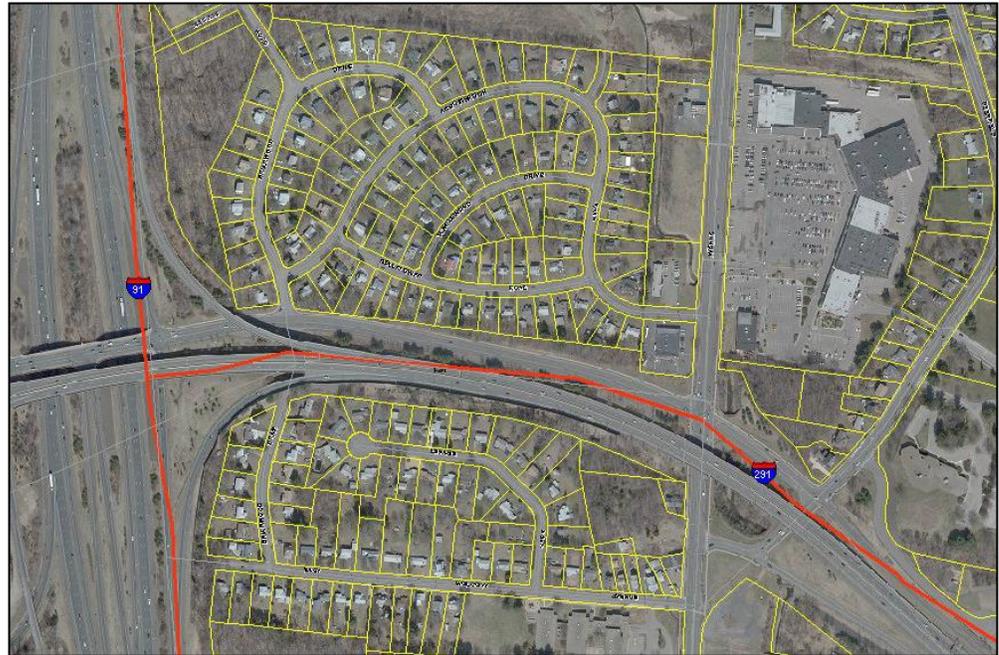
If revised parking standards allow, additional outbuildings and landscaping, especially along the street frontage can be accommodated.

Windsor Shopping Center at I-291 Exit 3 – Opportunity Area #4

The Windsor Shopping Center currently meets many of the local shopping needs of Wilson/Deerfield residents as well as town and regional shoppers. For this reason, its continued survival is important to the surrounding neighborhoods, many residents of which walk to and from the facility.

Like the Kennedy Road PUD, interstate access to the Windsor Shopping Center is limited by a partial interchange with I-291, although the Putnam Highway makes access to nearby I-91 relatively straightforward. Despite this, the shopping center is visible from I-291.

As an older shopping center predating stringent coverage requirements, nearly all of the site is covered by buildings or pavement, creating a large, unattractive expanse of pavement that affords little landscaping or refuge from heat. As recommended in the previous update of this plan, parking requirements have been eased to reduce the amount of impervious surfaces and create more attractive commercial developments. These changes facilitate additional development of outbuildings and enhanced landscaping, especially along the street frontage.



Exit 37 – Bloomfield Avenue - Opportunity Area #5

Exit 37 has significant commercial acreage to be developed or redeveloped. The blighted Tobacco Valley Inn (TVI) has been demolished and is now a key redevelopment location with the potential to negatively impact both the Day Hill Corporate Area (DHCA) and Windsor Center. The TVI site should be redeveloped as a hotel/banquet/ restaurant facility, medical offices, health club or other highway-oriented commercial activity that will not undermine Windsor Center or generate excessive peak-hour traffic that would impair access to the DHCA.

Encourage highway-oriented businesses that do not generate excessive peak-hour traffic or undermine efforts to enhance Windsor Center



Bloomfield Avenue at Exit 37



Highway Oriented Retail Development



Consolidate or cooperatively develop the southeast corner of Exit 38 with small-scale office, retail and alternative housing that does not create excessive peak-hour traffic or add curb cuts

Exit 38 – Poquonock Avenue - Opportunity Area #6

The southeast corner of Exit 38 has been successfully developed into a highway-oriented commercial development as recommended in the last update of this plan. The remaining development potential here is contained within three parcels situated on Corporate Drive and at the foot of Day Hill Road below the Marriott hotel. As they are situated at or near the main gateway into the Day Hill Corporate Area (DHCA), it is critical that the development of these parcels does not create a significant increase in peak-hour traffic and turning movements at the Corporate Drive and Lamberton Road intersections with Day Hill Road.



Marriott Hotel



Price Chopper



New England Tradeport -Opportunity Area #7

Like the Day Hill Corporate Area (DHCA), the New England Tradeport (Tradeport) has seen tremendous growth with Dollar Tree, Tire Rack, Walgreens, and hundreds of thousands of square feet of other flex space in the last ten years, leaving only 136 acres of vacant industrial land: much of which is located in close proximity to residential development. The Tradeport should continue to be developed with manufacturing, warehouse and flex space that is compatible with surrounding residential uses and the takeoff and approach patterns of the airport.

Additional land may become available if a recommendation found in Chapter 7 is implemented, changing vacant residentially zoned land directly in the flight path of Bradley Airport's runway 06-24 to more compatible warehouse use, appropriately buffered from the Pine Acres neighborhood.

A 22 acre parcel known as 965 Stone Road presents a challenge, as its only access is via a 50 foot right-of-way located in a residential area where heavy truck traffic would be unwelcome. One possible compromise to this problem might be to rezone the northern portion of the adjacent agricultural zoned parcel under the same ownership to industrial, making it useful in increasing the utility of the adjacent 105 International Drive to the north, in exchange for rezoning the more southerly industrial zoned property to agricultural, in keeping with the surrounding neighborhood. This would be dependent on the two property owners coming to an agreement.

Continue to develop with manufacturing, warehouse and flex space that is compatible with both surrounding residential development and the nearby airport.



Opportunity Area Strategies

1. Consider extending or encouraging the extension of public sewers throughout the Kennedy Road/Hayden Station Road/Archer Memorial Drive area.
2. Rezone the B-2 land adjacent to Wilson Avenue to residential and promote highway-oriented commercial and regional shopping opportunities on remaining B-2 land that does not conflict with residential areas to the north.
3. Promote highway-oriented commercial and regional shopping opportunities or offices that take advantage of access from adjacent Interstate 91.
4. Strive for high-quality development around Exit 34 that creates an attractive gateway into Windsor and positively influences enhancement efforts in Wilson to the north.
5. Take advantage of reduced parking requirements by encouraging additional landscaping and possibly additional outbuildings at the Windsor Shopping Center.
6. Encourage the redevelopment of the Tobacco Valley Inn site into a hotel/banquet facility, medical office, or other highway-oriented use that does not generate excessive peak-hour traffic or undermine efforts to enhance Windsor Center.
7. Discourage significant peak-hour traffic generators on the remaining industrial land near the end of Day Hill Road.
8. Rezone remaining vacant land south and west of Pine Acres to the AG Zone or W Zone and consider additional buffers for the latter against existing residential neighborhood.
9. Continue to petition for the completion of the Bradley Airport Loop Road to divert northbound traffic away from Day Hill Road and Bloomfield Ave.

Adapt to Changing Conditions

Increase Competitiveness and Flexibility

As Windsor continues its successful economic development program, industrial land, and more specifically large parcels of industrial land, are becoming scarcer. Windsor's 50% impervious coverage requirement, designed to accommodate groundwater recharge, stormwater management, open space buffers, landscaping, and other environmental concerns, is conservative in relation to some regional towns, potentially putting Windsor at a competitive disadvantage and creating hardships for successful businesses that are unable to continue growing in place. Relaxing the impervious coverage requirement would increase the corporate industrial development potential, lessening the impact of the diminishing supply of available land.

One tool that has been successfully used to alleviate this issue is the transfer of non-residential coverage, which has allowed several businesses to grow in place while preserving meaningful open space. Consideration might be given to finding an equitable means of converting residential development potential into impervious coverage; increasing economic development potential while preserving open space in agricultural and residential areas where it can do the most good, while still offsetting the increased environmental impacts of higher impervious coverage.

Another available tool that has not been used to date allows increased impervious coverage when photovoltaic systems are incorporated into buildings. Without simply giving away impervious coverage, additional tools should be considered to create a palate of options for increasing impervious coverage and/or growing in place while mitigating environmental concerns or meeting other planning goals, such as building structured parking, greenway trails, green roofs, grey water irrigation systems, ground source heating and cooling systems, or stormwater infiltration systems.

Anticipate Structural Workplace Changes

With significant advancements in mobile communications, business software, and computers; traditional office workforces are becoming more distributed, with employees working from home on a part- and full-time basis, perhaps checking in at an office for weekly meetings or to collaborate on projects. As a result, back office roles such as customer service, billing, payroll, and printing are being outsourced; software and data are being moved offsite onto "the cloud" to facilitate more distributed computing; and traditional large corporate workplaces are at risk of becoming obsolete. With several large corporate presences in Windsor, we need to be vigilant in monitoring these trends. There may always be a need for central corporate offices but these facilities may migrate into smaller footprints with shared workstations; collaborative, meeting and training spaces; and perhaps shared concierge style services among tenants in a building, similar to an incubator space. By staying ahead of the curve and anticipating these trends, we can better adapt to changing corporate needs and work towards providing the office spaces of the future, meeting the needs of our own corporate

community and attracting new businesses from those communities that fail to adapt: preferably making use of our larger corporate facilities if necessary.

Between the structured corporate and academic world lurks an untapped resource dubbed the shadow economy; consisting of highly educated, independent entrepreneurs, working from homes and small offices; collaborating or socializing with peers and clients over coffee or lunch, and injecting uncounted wealth into local economies for the goods and services that keep their businesses and households running. It is a known axiom in the economic development world that chasing economic development is a losing game, especially when the vast majority of job growth lies within small businesses and not the occasional footloose corporation searching for a better offer. Windsor has done well for itself by creating an attractive development environment and letting development come to us. Our mixed-use housing efforts in both Windsor Center and Great Pond can help create attractive housing options in close proximity to goods and services, making them attractive to both members of the shadow economy as well as the employees of ever more distributed employers, which could eventually lead to the smaller, more adaptive workplaces following the employees instead of vice versa.

Market Windsor in a Regional Context

The link between community image and corporate location is complicated. Both Windsor and its corporate areas are amenity-rich, making the town an ideal location for corporate development. Regional quality-of-life factors, such as hospitals and sports/cultural venues are available only minutes away in neighboring cities and towns.

Windsor has done an admirable job of touting its attributes to its residents through its various electronic portals, “There’s a Lot to do in Windsor” and various other publications but we must work harder to actively shape outsiders’ perceptions of the Town by promoting its positive attributes in a regional context, comparable to other areas of the country.

The Metro Hartford Alliance, the State of Connecticut, Commonwealth of Massachusetts and other organizations have initiated a regional/interstate marketing strategy that promotes the I-91 corridor between Hartford, CT and Northampton, MA as “The Knowledge Corridor”, taking advantage of the combined positive attributes of two states and regions such as 32 institutions of higher learning, new economy investment and central location between New York and Boston. Windsor should take maximum advantage of these marketing efforts, adding regional advantages to its own to give Windsor the positive reputation it deserves.

Maximize Marketing Opportunities

The Connecticut Economic Resource Center (CERC) is a point of contact for many corporations interested in relocating to Connecticut. CERC maintains services called “SiteFinder” and “Quick Tracts” that allow buyers, brokers, and site selection consultants to easily find information on available buildings and land in Connecticut. “Quick Tracts” highlights properties that have available infrastructure and commitments by both the Town and owner that the properties are ready to build on in a matter of months. Both programs are voluntary and the “Quick Tracts” program is free. Some of the major building owners in Windsor have consistently used SiteFinder to their advantage, but Windsor must do a better job with vacant land.

Adaptive Strategies

10. Consider creating a palate of options for increasing non-residential impervious coverage that continue to protect the environment while achieving multiple planning and community goals.
11. Monitor structural changes in the workplace and work with the business community to maintain competitiveness by adapting to changing needs.
12. Continue to promote attractive mixed-use housing options to attract and retain workers in an effort to grow Windsor’s economy from within.
13. Work cooperatively with the local and regional business organizations to promote Windsor as an amenity-rich community in a regional context
14. Work with property owners and brokers to take full advantage of State and regional site locator programs.

ENHANCE THE VILLAGES

9

Overview

In our auto-oriented society, the importance of the village has diminished over time but planning principles such as “smart growth” and “neo-traditional design” are beginning to reverse this trend. Residents nationwide are looking to create livable communities and maintain a “sense of place” to distinguish their neighborhoods, villages, and towns from homogeneous communities that have surrendered their local character to ubiquitous corporate character and disposable architecture. Neo-traditionalism goes so far as to create new livable communities utilizing the best elements of traditional village design.

Windsor has not one but three villages: a dominant town center in Windsor Center and two smaller, distinct village centers in Wilson and Poquonock. Economic forces, cultural preferences, and in the case of Poquonock, a tornado, have left Windsor’s three villages in varying states of decline relative to their respective heydays as the centers of town life but many of the structural elements and sense of place that made them vibrant, livable neighborhoods remain. These three villages have significant physical and cultural elements that contribute to the Town’s overall community character. By preserving and enhancing these villages, they can begin to return to their former stature.

Protect and enhance Windsor’s villages to restore their prominence as the centers of community life and significant elements of community character.

Wilson



Poquonock



Wilson

Wilson grew initially due to the manufacturing of brick and later as a streetcar suburb of Hartford. Its dense development pattern of mixed-use and multifamily housing allowed Wilson to become a significant commercial node in its own right, but without a village green or seat of town government to attract activity to a central location and the demolition of a number of residential and mixed-use buildings for flood control, commercial development took on more of a commercial-strip character along Windsor Avenue. Despite significant changes over time, Wilson retains many of its original functions.

Stabilize and Enhance Wilson

The issues facing Wilson are very different from Windsor Center and Poquonock. While additional retail activity is invited in the heart of Windsor Center, where adequate transition areas exist to buffer residential neighborhoods, Wilson requires the potential for future commercial and industrial activity to be scaled back in many areas in order to protect its primary function as a residential neighborhood. Chapter 7 (Guide Housing and Residential Development) and Chapter 8 (Support Business and Economic Development) contain several recommendations for rezoning commercial and industrial zoned buildings and land to agricultural and residential zoning to stabilize and encourage investment in existing residential properties along Windsor Avenue and to remove the threat of inappropriate development at the end of Wilson Avenue and Skitchewaug Street that could destabilize the eastern side of Wilson.

Another way to stabilize and spur investment in Wilson is to provide zoning flexibility for upgrading existing housing; allowing residents to modify and stay in their homes as they age (e.g., creating first-floor master suites), and to attract suburban homesteaders, willing to add bathrooms, closets, and address other deficiencies often found in older housing stock (e.g. lack of garage space, insufficient insulation, etc.). Encouraging the conversion of two- and three-family dwellings to single- and two-family dwellings with larger dwelling units is another method of addressing functional obsolescence in older housing, which could lead to increased owner occupancy. Chapter 7 (Guide Housing and Residential Development) contains more details on these important strategies for Wilson.

Multi-Family Housing



Redevelopment Parcel Awaits Development



For decades, Wilson has been the focus of the Town's community development activities, utilizing Community Development Block Grant (CDBG) and other funds to rehabilitate blighted residential properties; create and retain affordable housing units; make facade improvements to businesses; diligently repair and upgrade streets and drainage facilities; and pay for facilities and programs that benefit the entire neighborhood. These activities have all shown positive results and should be continued.

Property maintenance, junk car, and zoning enforcement also help to stabilize the neighborhood. Promoting SeeClickFix, the town's online, non-emergency, neighborhood issue reporting system, to neighborhood residents can help residents easily report these issues and hold appropriate town staff accountable for addressing them in a timely manner.

A comprehensive series of improvements to Windsor Avenue in Wilson, similar in scope and effect to the "road diet" proposed in Windsor Center, were scheduled for funding in FY 2006, including on-street parking, a new traffic light at Bina Avenue, granite curbing, decorative pavers, landscaped medians, street lighting and street furniture that would have added to Wilson's character and "sense of place"; created a more pedestrian-friendly environment; and created "visual friction" or subtle cues that warn a driver that they are entering a more densely developed neighborhood, making speeding feel uncomfortable. Unfortunately, that plan met with opposition at several levels and was never implemented. With both Connecticut Department of Transportation (ConnDOT) and public buy-in on the road diet in Windsor Center, this similar proposal for Wilson should be revisited when the road diet in Windsor Center can be pointed to as a positive example.

In the meantime, a scaled back set of improvements, including restoring the medians with granite curbing, hardscape improvements, and planters are still planned, with the substitution of a traffic light at Corey Street instead of Bina Avenue, due to a series of accidents at the Corey Street intersection, making it a priority. It was suggested at the Wilson public workshop that in place of a raised median with landscaping that would continue to struggle, that a brick paver median, similar to Farmington Avenue in West Hartford be implemented instead. Additional street lights, and a banner program, or at least American flags during holiday weeks, would add to the walkability and character of the neighborhood. Regardless of what treatment is given to the medians, care should be taken to ensure that whatever is done does not conflict with the possibility of implementing the aforementioned road diet in the future (e.g., the proposed traffic light at Corey Street should be able to be cheaply modified to accommodate lane reconfigurations).

The redevelopment parcel at the north end of Wilson, adjacent to I-291, has potential for municipal use, mixed-use development along its Windsor Avenue frontage, and commercial development along its frontage with I-291, west of Decker's Brook. This parcel calls for an attractive development to anchor the north end of Wilson and set the tone for redevelopment efforts to the south as well as directly across the street. One attempt to solicit live-work housing (combined workplace and dwelling units) for the parcel, that would have fulfilled this requirement failed when none of the proposals included an integrated retail

component. It was suggested during the 2015 public workshop for Wilson that the parcel be programmed for use during all four seasons, such as semi-permanent community gardens during the spring and summer, and short-term events such as a winter carnival, with snow sculpting, skating, or other winter themed activities.

The southern end of Wilson is anchored by two large commercial areas to the north and south of Exit 34 of I-91. Chapter 8 contains specific recommendations for the redevelopment of these areas but generally the redevelopment of these areas should be with attractive, quality development that serves as a southern gateway into both Wilson and Windsor, and sets the tone for the redevelopment of Windsor Avenue to the north. It should be noted that while the redevelopment and enhancement of commercial properties further north is encouraged, their conversion to highway-oriented regional shopping venues that invite excessive traffic into the heart of Wilson should be discouraged.

Windsor Avenue and streets to its west are well served by sidewalks but many of the streets to the east are not. Significant omissions include Meadow Road, which is a critical link to the Connecticut River Trail between Meadow Road and East Barber Street, and the neighborhood north of East Barber Street. The Town is in discussions with ConnDOT regarding either a sidewalk on Meadow Road or a trail along the west side of the railroad tracks to compensate for the proposed closing of the Wilson Avenue crossing, where a stub of the Connecticut River Trail currently terminates. Chapter 12 (Improve Transportation Facilities) contains a sidewalk strategy focusing on completing the sidewalk network in Windsor's villages and within walking distance of schools, and the Capital Improvement Program (CIP) contains annual sidewalk funding towards this goal.

Gateway Sign at Exit 34



State Boat Launch at East Barber Street



Strategies to Stabilize and Enhance Wilson

1. Discourage high-intensity commercial uses in the center of Wilson.
2. Encourage commercial uses that meet local needs and enhance the attractiveness of the village.
3. Consider adopting Village Districts to provide a higher level of architectural and aesthetic control over redevelopment.
4. Continue to target key parcels for redevelopment.
5. Rezone inappropriate commercial and industrial zoned land to residential use to encourage reinvestment and stabilize impacted properties.
6. Continue the housing rehabilitation, facade improvement and vigilant infrastructure maintenance programs using CDBG and other funds when available.
7. Reinforce “gateways” to provide a sense of entry at Town and village boundaries.
8. Discourage inter-town traffic on Windsor Avenue that would detract from the neighborhood.
9. Continue efforts to improve the overall environment of village areas through the use of sidewalks, signage, graphic symbols, planting of trees, provision of street furniture, and other aesthetic and functional items that should make the village more desirable to pedestrians, residents and shoppers.
10. Promote SeeClickFix as a tool to maintain vigilance in enforcing junk cars, property maintenance, and zoning.
11. Program year-round seasonal activities on the redevelopment parcel until it is redeveloped.

Windsor Center

Windsor Center has a character and sense of place befitting the heart of the community. The first settlement of Windsor occurred not far from present day Windsor Center for the purpose of establishing a trading post, making the area the center of town commerce from the beginning. Religious, governmental, commercial, financial and cultural functions followed and grew, adding to Windsor Center's role as the functional center of Windsor, as well as a significant mixed-use neighborhood. Brick, tobacco shade tent, firearm, and electrical component manufacturers, as well as an electrical engineering firm have come and gone as major employers in Windsor Center, as have various trades, car dealers, theaters, and the circuit court, which supported numerous other businesses.

Residentially, Windsor Center began as a sparsely populated colonial village; grew as a modest employment center; expanded west as a streetcar suburb of Hartford; and was nearly built-out prior to the post-World War II housing boom. Today, like many town centers, its dominance as the center of community life has been eroded by suburbanization and auto-oriented shopping destinations, but recent trends indicate that Windsor Center may be poised for a renaissance as “empty nesters” and young workers alike are searching for compact, walkable, transit-oriented, mixed-use neighborhoods where they can live, work, and play without being dependent on personal vehicles.

Windsor Center has been the focus of many plans over the years, filled with recommendations for its preservation, enhancement, and the adaptive reuse of many of its buildings: the latest being the comprehensive Windsor Center Transit-Oriented Development Plan (TOD Plan), completed in 2014, which will serve as the core of this plan for Windsor Center. Many of the recommendations of these planning efforts are echoed in this Plan or included by reference. Evidence of their implementation over time is evident throughout the Center, from the existing condominiums at First Town Square and the pending Windsor Station Apartments, to the banners that adorn the street lights, and implementation of the Windsor Center TOD Plan is already underway to ensure that Windsor Center is ready to attract new residents and businesses as new apartments and enhanced train service come online in 2016.

Vision for Windsor Center

Based on a series of workshops and planning exercises, participants in the Windsor Center transit-oriented development planning process developed an overall vision for the future of Windsor Center, which is as follows:

- **Walkable and Connected** – a compact district that takes advantage of transit and reinforces all of the uses by becoming an increasingly walkable, well-connected cluster of uses, places, services, and amenities;
- **Vibrant and Diverse Uses** – a vibrant district that boasts a diverse mix of uses that enhances the area as a place to live, work, visit, and play;

- **Accessible and Safe** – a convenient district that is easy to access from other areas and allows pedestrians, bicycles and automobiles to get around safely and efficiently; and
- **Attractive and Distinctive** – a clearly defined district through the urban design of its streets, ways and public spaces and through the consistent qualities of its constituent buildings that preserve and enhance the existing village character and historic and iconic assets, while encouraging new uses that provide additional attractions for people to come to the Center.

The Windsor Center TOD Plan identified ten keys to the future success of Windsor Center, outlined below.

The Broad Street Road Diet

While only one strategy in name, the Broad Street Road Diet is actually a hybrid of multiple strategies addressing traffic, parking, and both pedestrian comfort and safety. The road diet proposes to narrow Broad Street between Sycamore Street and Poquonock Avenue from four through-lanes to two through-lanes with center turn lanes, making room for parking on both sides of the street, and pedestrian bump-outs at street corners; resulting in smoother traffic flow, more on-street parking, and significantly shorter pedestrian crossings, while actually increasing the size of the green. The Connecticut Department of Transportation (ConnDOT) is onboard with the concept but significant funding will be needed to make it a reality.

Preliminary Broad Street Road Diet Schematic



Credit: Cecil Group – Windsor Center Transit Oriented Development Plan

In the meantime, there is potential for an interim road diet, wherein ConnDOT would restripe the existing pavement to match the desired configuration, if the traffic lights can also be reconfigured to match. This interim step could serve as a functional demonstration of the ultimate concept without paying for all of the necessary hardscape improvements such as new sidewalks, pedestrian bump outs, curbs, etc. in the near-term.

Parking and Parking Management

There appears to be a sufficient amount of parking in Windsor Center to meet the needs of businesses and residents but unfortunately it is not in optimal locations or configurations to meet everyone's desires. The TOD Plan recommends that the Town and private owners manage their parking lots and spaces through a coordinated program directly tied to their joint goals of enhancing the mixed-use vitality of the Center and attracting new investment. Such a program would create an appropriate supply of parking spaces in convenient, efficient, targeted locations, rather than the existing scattered collection of parking lots that vary considerably in their use. This is considered a top priority and a joint effort of the Town and private property owners is already underway to coordinate and enhance parking between Central and Union Streets in the hope of fostering future investment in the block.

Given that many properties in Windsor Center predate parking requirements, regulatory changes are needed to reflect the availability of existing and proposed public and shared parking if we are to spur investment and attract new businesses to the Center. Existing regulations already allow reductions of 30 to 50% but they have not proven effective enough. An approach adopted by West Hartford that appears to be effective is a combination of both managed parking, as described above, and eliminating the parking requirement for changes of use for existing floor area, such as from hair salon to take-out restaurant. Under this approach, new floor area must provide additional parking or perhaps pay a fee-in-lieu of parking as allowed under Connecticut zoning statutes.

New Housing

New multi-family housing in well-designed projects, such as First Town Square, the pending 130 unit Windsor Station Apartments, and other potential multi-family and mixed-use developments will put underutilized land to good use and provide additional high-quality housing choices appealing to both younger generations and "empty nesters" in search of walkable mixed-use neighborhoods, which is a growing national trend in these age groups. These new housing units will "put feet on the streets" as residents live, work, play, shop, and dine in Windsor Center, creating a captive market for local businesses, supporting investments in mass transit such as the planned commuter rail station, and generally adding to the vitality of the Center.

Collaborative Reinvestment in Central/Union Street Block

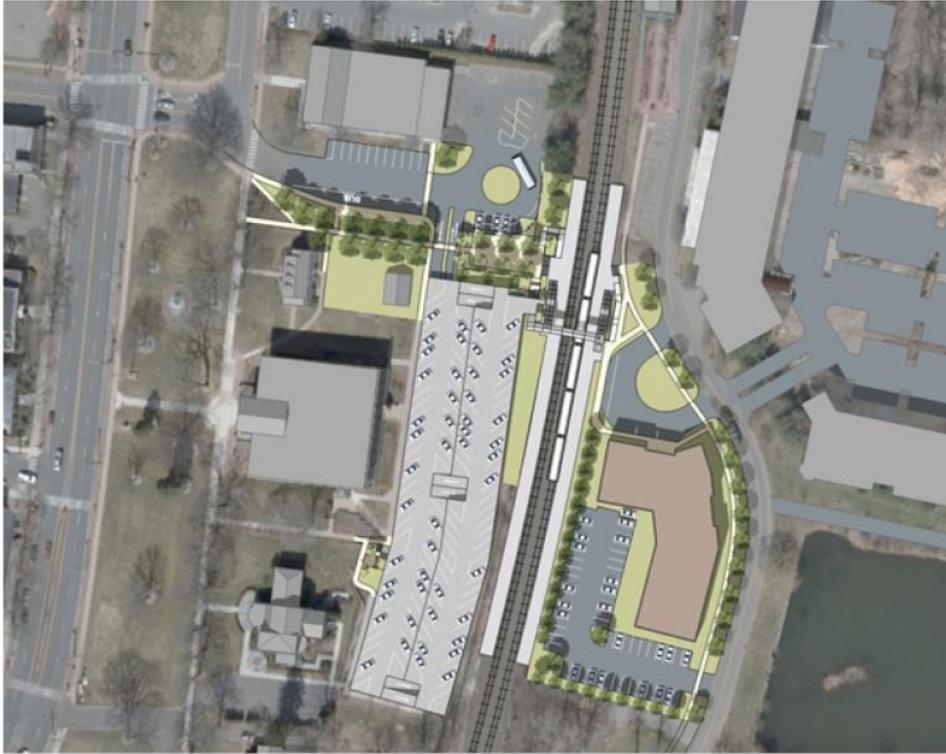
The previously mentioned cluster of properties and buildings between Central and Union Streets can become a "village within a village" – an attractive combination of restored historic buildings, new construction, and additions connected by a shared landscape, walkways, and parking lot that enhance the attractiveness and identity for all of the properties. Parking is critical to the successful implementation of this strategy.

Station Area Redevelopment

Station area redevelopment has the great potential to influence the future vitality of Windsor Center, and like the road diet, is actually multiple strategies rolled into one. In one bold stroke, the strategy to move the Connecticut Department of Transportation's (ConnDOT) proposed train station parking garage from the east side of the railroad tracks to the west side, behind Town Hall:

- brings the parking garage closer to the Center, where it can serve commuters by day and restaurants and entertainment venues by night;
- brings bus service to the west side of the tracks, where it can be integrated into a multi-modal transit hub serving bicyclists and pedestrians as well as both park and ride and “kiss and ride” commuters; and
- frees the existing parking area on the east side of the tracks for more transit-oriented development, similar in character to Windsor Station Apartments, with the added potential for offices and ground level businesses.

Schematic of Station Area Redevelopment



Source: Cecil Group – Windsor Center Transit-Oriented Development Plan.

Topping off Broad Street

The former Arthur's Plaza provides an opportunity for strategic, multi-story reinvestment that can cap the Town Green with a signature building, reinforcing the green as an “outdoor room” enclosed by pedestrian-scale development; moving parking to the rear and emphasizing pedestrian access; adding vitality to the center with potential new residences overlooking the green; and taking advantage of the

enhanced pedestrian links and increased on-street parking associated with the proposed “road diet.”

Bringing the Plaza Building Back to Life

The Plaza Building, with its window shopping storefronts and apartments overlooking the town green exemplifies the type of pedestrian-scale, mixed-use development needed to maintain a vibrant town center. The building could be reinvigorated with ground-level restaurants and shops and upper-level offices and/or apartments. The theater space still holds potential for a unique entertainment or event destination that can restore the weekend and evening vitality that was once its role in the life of Windsor Center. In the short term, restoring and energizing the marquee, if only for its role as a community event sign, would create interest in the building and the Center.

Mixed-Use Design Guidelines and Regulations

While not a new strategy for Windsor Center, the Zoning Regulations can be used to enhance the value of the entire Center by providing incentives for appropriate village-scale development and innovative parking solutions to protect historic buildings and neighborhood character, while providing for a consistent design quality that will enhance the value of properties. The regulations currently contain a fragmented series of design and parking standards that have not been entirely effective in spurring development compatible with the character of the Windsor Green National Register Historic District and as well as the Bloomfield and Poquonock Avenue commercial corridors. The Center Design Development District, on the other hand, has been used to great effect at First Town Square and Windsor Station Apartments, but is a voluntary regulation on the part of the developer.

Two alternatives to the combination of general standards and special use permits currently used to regulate conventional development in the Center are a village district and a form-based code; the latter similar to that developed for Great Pond, which will become a mixed-use village in its own right. A village district would give the commission more architectural and aesthetic control over the form, design, and materials of both new development and additions to existing development than otherwise allowed under Connecticut’s zoning statutes, but would require a new board to develop and administer the design guidelines, which has been done successfully in Simsbury and other towns with well-defined historic villages.

A form-based code could achieve the same results, but leaves the development of architectural and aesthetic controls in the hands of the Town Planning and Zoning Commission. Once developed, a form-based code typically transfers review authority to town staff, which like the developer, would be bound by the form-based standards, ensuring a consistent outcome. Developers often appreciate the specificity and consistency of a form-based code, as opposed to guessing what will be acceptable in designing their development, as well as the assurance that their investment will not be wasted if their plan meets the code.

As the name implies, a form-based code values form over function and as a result, the commission would only reserve special use control over those uses likely to

produce conflicts in a mixed-use environment, leaving property owners free to interchange permitted uses within their form-based buildings, provided that they meet all other building, fire, and health codes in the process.

New and Expanded Active Uses around the Green

In order to draw and retain visitors from both Windsor and other communities, a combination of public and private initiatives are needed to complete a continuous border of active, visually engaging buildings and uses around the Town Green, with enough variety and interest to collectively boost the market for all surrounding uses. A larger, more diverse cluster of quality restaurants and other food-oriented establishments is an attainable goal when paired with well-publicized events on or near the Town Green, such as the farmers' market and summer concert series.

Neighborhood Streetscape and Traffic Calming

The compact neighborhoods around the Center already provide the fundamental qualities of a safe, walkable and bikeable place but can be enhanced through a series of coordinated sidewalk repairs and extensions, traffic calming, and streetscape improvements at strategic locations to reduce cut-through traffic and increase their attractiveness and value.

Windsor Center Transit Oriented Development Plan Strategy Summary

As the Windsor Center TOD Plan is a 76-page document with 42 separate strategies, dozens of illustrations, and hundreds of pages of supporting documentation; this plan will not repeat that effort in its entirety but will instead summarize key strategies by topic on the following pages with the understanding that the full Windsor Center TOD Plan is incorporated into this plan by reference.

Strategies to Enhance Windsor Center

Urban Design

1. Promote new development and designs that enhance the overall district by replacing parking or underutilized land with new structures that contribute to the pedestrian orientation of the district and the architectural character as a compact center.
2. Enhance the Town Green as a flexible and informal open space.
3. Preserve historic buildings.
4. Integrate new construction as good neighbors to historic buildings and to reinforce the pedestrian scale and orientation along lower floors, in keeping with a compact, traditional character.
5. Repair the fundamental pattern of traditional building forms and town center fabric where it was removed or disturbed by auto-oriented patterns.
6. Create an architecturally interesting rail depot that acts as a physical and visible connector between the east and west sides of the rail alignment.
7. Reduce the visual impact of parking.
8. Create an attractive, thematic streetscape that reinforces the landscape of a traditional New England town center.

Land Use and Development

9. Promote and actively support additional housing as an essential component of a vital and economically successful mixed-use district.
10. Promote and support redevelopment at locations that are suitable for complete or partial redevelopment, including sites developed with an auto-orientation and underutilized sites along the major streets serving the Town Center, Town-owned land, institutional properties or other parcels to add vitality, enhanced economic activity and property values.
11. Promote and support renovation and appropriate modifications to existing buildings to fill underutilized and empty space.
12. Support concepts and proposals to restore an entertainment-related use for the Plaza Building's theater and encourage other recreation and entertainment related projects that would serve local needs, be available for Windsor residents and attract patrons to the Town Center.
13. Install incremental improvements that benefit multiple properties and uses, including shared parking arrangements, common signage and landscaping themes.

Strategies to Enhance Windsor Center (continued)

Station Area Development

14. Create a shared-use parking structure behind Town Hall that will serve enhanced rail patronage, redevelopment of properties near the Town Green, Town and civic needs.
15. Create a transit hub on the west side by reconfiguring the end of post office parking lot as a pick-up and drop-off space for buses, shuttles and cars, and as a pedestrian link to the Town Center, Town Green and neighborhoods, and providing bicycle parking facilities.
16. Design the rail station so that it provides a visible and attractive architectural and landscaped pedestrian link proceeding from the Town Green, through the transit hub, across the tracks, into the redevelopment along Mechanic Street and to the open spaces and other uses beyond.
17. Redevelop the Town's existing park-and-ride lot as a companion to the new housing on Mechanic Street and linked to the pedestrian bridge, trail head and open space.
18. Provide visitor information at the transit hub and within the Chamber of Commerce, identifying destinations and features.
19. Connect the Library and Town Parking lots with a driveway connection behind Grace Episcopal Church, if this is approved by the Church.
20. Work with the U.S. Post Office to obtain reconfiguration and off-site provision of employee and postal vehicle parking and related operations if feasible, to allow for redevelopment and parking adjacent to the transit hub and the Green.

Circulation and Mobility

21. Reorganize Broad Street to balance pedestrian and vehicle traffic and to remove inefficient paved areas through a "road diet," by reducing excess paving, tightening intersections, expanding pedestrian paths, shortening cross-walk distances and adding on-street parking.
22. Improve the east-west connections across the rail tracks by re-aligning the Batchelder Road underpass in the short term and widening the underpass in the long term, and extending sidewalks and crosswalks connecting Loomis Chaffee School, the Mechanic Street area, open space and the Town Center along Broad Street.
23. Install traffic-calming enhancements and pedestrian-friendly sidewalks and crossings to reduce the traffic impact on and provide safe paths for pedestrians in the surrounding neighborhoods and to reduce conflicts among drivers, pedestrians and bicyclists.

Strategies to Enhance Windsor Center (continued)

Circulation and Mobility (continued)

24. Expand the walking and bicycling network throughout the Town Center, and improve and extend segments through public open spaces.
25. Improve and expand bicycle connections through signage, links to adjacent networks, shared paths or dedicated links.
26. Provide for bicycle racks and storage within the new transit hub.

Parking

27. Institute a coordinated parking management program and responsibilities for the entire Town Center to better support the goals for the entire area.
28. Emphasize the Town-owned lots as a central resource for customers, residents and passengers.
29. Provide striped and managed on-street parking where possible.
30. Promote and implement shared parking solutions and modify required on-site parking to efficiently meet needs for businesses, institutions, housing and civic uses through amended regulations, programs and policies.
31. Establish policies to allocate time limits, fees and enforcement procedures.
32. Examine parking and circulation on Maple Avenue west of Spring Street; consider allowing parking on one side of street only.

Complete Streets and Streetscape Plan

33. Install traffic calming features such as neck-downs and crosswalks.
34. Adopt cross-section standards for a hierarchy of streets to guide future improvements.
35. Keep residential streets narrow to allow sidewalks and on-street parking and reduce traffic speeds.
36. Emphasize a pedestrian-oriented east-west corridor from Maple Avenue to Mechanic Street.

Stewardship

37. Strengthen and focus the policies and programs of stewardship committees and organizations to help implement relevant aspects of the Town Center.
38. Actively recruit businesses or uses that will be attractive to both Town residents and patrons from other communities.

Strategies to Enhance Windsor Center (continued)

Stewardship (continued)

39. Support collaborative redevelopment and improvement projects sponsored by multiple owners and businesses.
40. Strengthen collaboration and communication with the Loomis Chaffee School.

Poquonock

Poquonock was once a mill village, with paper and textiles mills employing over 500 workers in their heyday. With the mills razed long ago, Poquonock lost much of the cohesiveness that makes Windsor Center and Wilson such identifiable neighborhoods today.

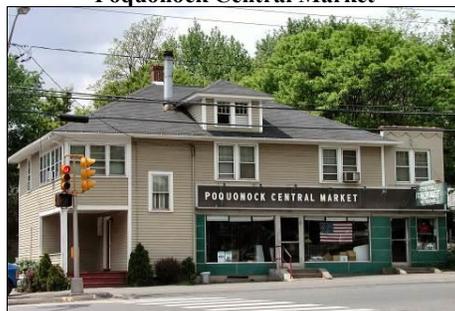
Residents at a recent Poquonock workshop overwhelmingly ranked village enhancement as the most important issue to address in Poquonock and clearly articulated that they do not want significant change, but instead want enhancements on the status quo, such as:

- cohesive, historic street signs and other signage identifying Poquonock, with limited commercial signage for home occupations;
- using open spaces and pedestrian enhancements as cohesive elements to tie the village together;
- careful use of street trees to create visual friction for motorists, without creating conflicts with overhead utilities;
- a façade improvement program similar to Windsor Center and Wilson; and
- other unifying elements such as flags or hanging flowers on light poles, and street furniture, including trash receptacles.

Open space and pedestrian/bicycle circulation were virtually tied for the second and third most important issues. The concern for preserving open space stemmed from both a desire to limit growth in Poquonock as well as for protecting Brown’s Harvest as a defining element of the village (identified in another workshop exercise as something residents were proud of). Concern for pedestrian and bicycle circulation focused on the need for continuous sidewalks throughout the village, with particular emphasis on Poquonock Avenue, Rainbow Road, and River Street.

Traffic and parking were raised during a separate workshop exercise as being a significant negative influence on Poquonock that residents are not proud of. Issues raised by both exercises included speeding, traffic, and turning movements on Route 75 as well as parking along Tunxis Street.

Poquonock Central Market



Wide Open Feeling Invites Speeding



Carefully Enhance Poquonock

The pattern of land use in Poquonock is predominantly residential, with small clusters of B-1 and B-2 zoning along Route 75 and Tunxis Street. Multi-family dwellings, mixed-use buildings, several churches and public facilities, and Welch Park all contribute to the village character. Commercial development at the interchange with Route 20 is more highway-oriented and meets several more basic village needs with banks, a hardware store, and a new restaurant in place of the former Dale Drugs. Agriculture rounds out the existing uses and gives Poquonock a more rural character than either Windsor Center or Wilson: an attribute that residents want to preserve.

The Villages at Poquonock was approved under the Poquonock Village Design Development District, resulting in a mix of single-family homes, townhouses, and low-rise apartment/condominiums interspersed with significant open space amenities. Despite the lack of small-scale mixed-use development along Route 75 and being generally hidden to the rear of existing development, the added population will ultimately add vitality to the village, patronizing existing businesses, churches, and public facilities; potentially supporting additional businesses in several prominent vacant commercial spaces, such as the Poquonock Central Market; and perhaps increasing the demand for community services, warranting increased programming at neighborhood parks and facilities.

Significant changes in land use are not required to preserve and enhance the character of Poquonock. The B-2 zoning of multi-family homes on Tunxis Street should be considered for rezoning to an appropriate residential zone to encourage their upkeep or improvement, especially adjacent to the river where intensive redevelopment might be inappropriate. The B-1 and B-2 zones along Poquonock Avenue south of Rainbow Road should be considered for rezoning to a village district to encourage attractive mixed-use development that is more in keeping with the traditional pattern of development (see page 9-10 for more information). Without impacting current development, such a district would allow the Town Planning and Zoning Commission to regulate the character of future development and might include such elements as:

- architectural and landscape design standards;
- reduced building setbacks with parking to the side or rear;
- pedestrian friendly elements such as sidewalks or seating areas; and
- mixed-uses that encourage two-story development that is similar to many buildings in the village.

Pedestrian and vehicular circulation are issues that can both enhance and detract from the character of Poquonock. Route 75, which is the spine of development in Poquonock, has been improved over the years to enhance vehicular circulation at the expense of pedestrians. Wide traffic lanes and shoulders create a sense of openness and driving comfort that tends to increase the speed of traffic through the village. They also create a broad expanse of pavement that may be daunting for some pedestrians to cross.

One way to slow down traffic is to create “visual friction” or subtle cues that warn a driver that they are entering a more densely developed neighborhood and make speeding feel uncomfortable. Elements of visual friction might include:

- narrower travel lanes and wider shoulders;
- village development patterns with buildings close to the street; and
- unifying elements such as street trees, pedestrian scale street lighting.

Many of these elements would also add to the sense of place that distinguishes the village from the surrounding town. Pedestrian improvements can also add to the sense of place and in some cases even slow traffic.

Small islands midway across pedestrian crosswalks can create a “safe harbor” for pedestrians in the middle of Route 75 so that they may cross as each lane becomes safe rather than waiting for both lanes to be clear. Such islands also neck down the roadway, requiring drivers to slow down as they pass. The opportunity to implement this and similar strategies, such as restriping to narrow travel lanes and widen shoulders on a state route is when the Connecticut Department of Transportation (ConnDOT) schedules periodic maintenance under its Vendor in Place (VIP) program, in which pre-selected vendors regularly reconstruct, repair, and or repaint state routes under state contract.

Like many areas of Town, Poquonock’s sidewalk network contains significant gaps that need to be closed to make the village pedestrian friendly. Both Welch Park and River Street Park lack sidewalks or trails connecting them to the heart of the village along Route 75. River Street, with its close proximity to the river, several dwellings, and mature trees, poses engineering challenges that will have to be overcome. As a major arterial, Route 75 should have sidewalks along both sides of the road to allow residents to safely walk between the many village activities. These gaps should be remedied as new development or significant redevelopment occurs, or under the town-wide sidewalk improvement program discussed in Chapter 12.

Strategies to Enhance Poquonock

1. Discourage high-intensity commercial uses in the village center.
2. Encourage commercial uses that meet local needs and enhance the attractiveness of the village.
3. Consider adopting Village Districts to provide a higher level of architectural and aesthetic control over redevelopment in the village.
4. Rezone inappropriate commercial land to residential use to encourage reinvestment and stabilize impacted properties.
5. Consider reinforcing “gateways” to provide a sense of entry at Town boundaries and village centers.
6. Discourage inter-town traffic on Route 75 that would detract from the neighborhood character of the village and ask ConnDOT to narrow the travel lanes and widen shoulders when restriping is necessary.
7. Continue efforts to improve the overall environment of village areas through use of signage, graphic symbols, careful planting of trees, provision of street furniture, and other aesthetic and functional items that create visual friction to slow traffic and make the village more desirable to pedestrians, residents and shoppers.
8. Strive to fill gaps in the sidewalk network and improve pedestrian safety in the village.
9. Monitor population increases for possible expansion of community facilities and services, such as a library.

DAY HILL CORPORATE AREA

10

Overview

When Combustion Engineering broke ground in the 1950s, Day Hill and Prospect Hill Roads were little more than farm roads and I-91 had yet to be built. By 1960, the first segments of I-91 were completed, opening Windsor and the Day Hill Corporate Area (DHCA) to further expansion. Foreseeing the tremendous potential for economic development in the DHCA, Windsor zoned several thousand acres of land for industrial development and made substantial investments in the infrastructure and appearance of Day Hill and Prospect Hill Roads. In doing so, Windsor helped facilitate the development of nearly 11 million square feet of floor area that exists today, making it a corporate and industrial powerhouse that is the envy of most suburban communities.

In the last ten years, there have been nearly 3.2 million square feet of new commercial and industrial floor area built in the DHCA, achieving a 50% increase in floor area over 10 years, far outpacing anticipated growth and bringing long-term goals and strategies to the forefront. This plan update is intended to assess current conditions and future potential of the area by providing a statistical as well as strategic update to reflect recent changes and maintain the DHCA's competitiveness in the face of growing traffic and competition from other corporate areas within the region.

Maintain and enhance the Day Hill Corporate Area's role as the region's preeminent suburban business location by maximizing its economic development potential relative to its transportation network.

Amazon



Day Hill Road



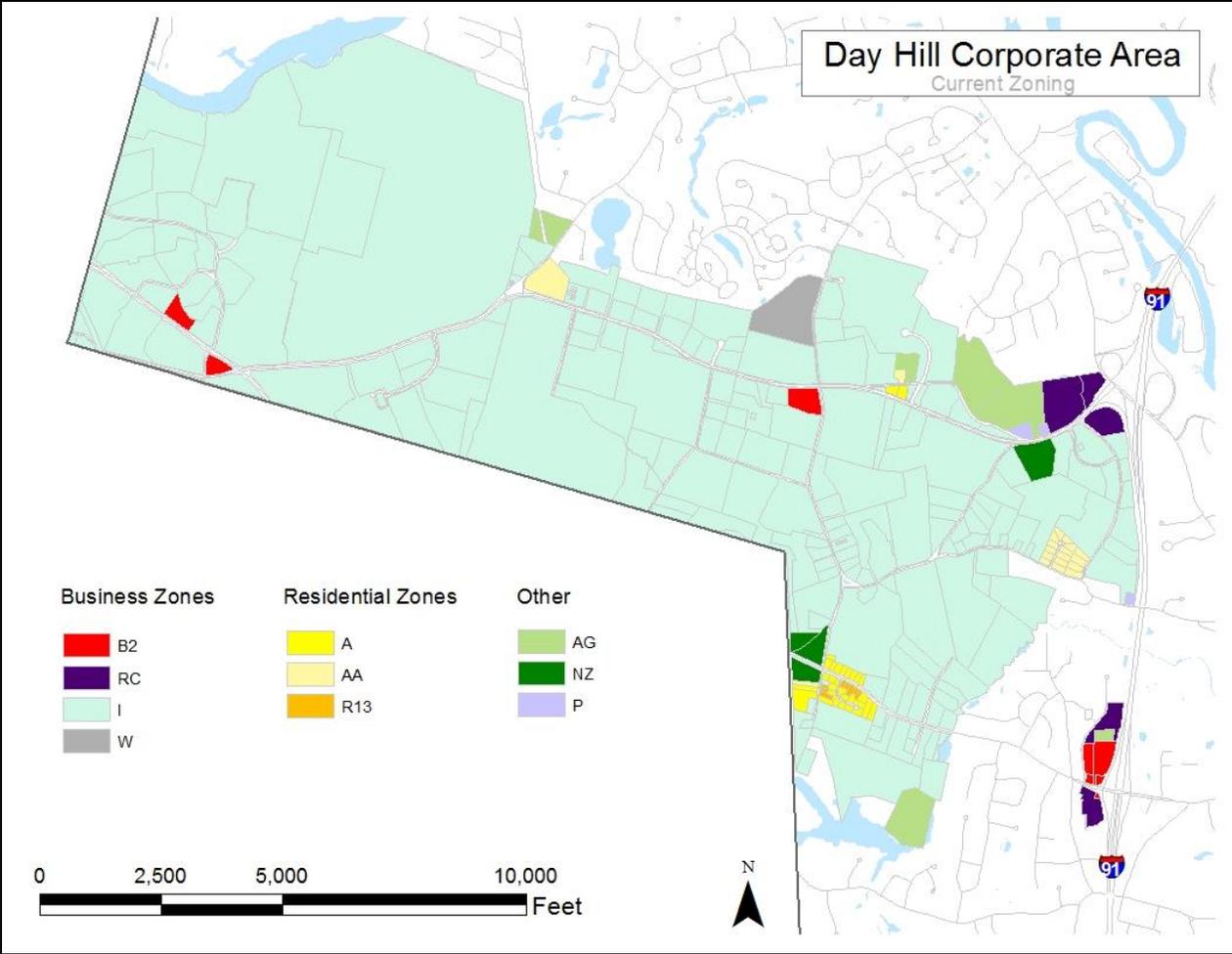
Expand Traffic Capacity

The Day Hill Corporate Area (DHCA) is comprised of approximately 3,000 acres of industrially and commercially zoned land stretching from Day Hill Road south to Bloomfield Avenue and from I-91 west to the Bloomfield town line (see following map). To date, just over 1,400 of these acres have been developed with over 10.3 million square feet of commercial and industrial floor area. Under current zoning requirements and assuming a similar mix of land uses to what already exists, there is potential for an additional 1.2 million square feet on the many underutilized parcels within the DHCA.

The remaining 720 acres of undeveloped land could possibly accommodate 5.8 million square feet of floor area under current zoning requirements (excluding the 640 acres slated for the Great Pond – see p. 10-19). Combining existing and potential new floor area results in the potential for over 16.5 million square feet of total floor area plus that proposed at Great Pond. To put this into perspective, this potential new floor area is greater than the amount of office floor area in Hartford (9.9 million). Despite this tremendous potential based on zoning requirements and available acreage, the ability to achieve that potential is dependent on other factors.

With the suburbanization of jobs and housing since the 1950s, traffic in the I-91 corridor has increased significantly. Less than 30 years after opening to traffic, the Connecticut Department of Transportation (ConnDOT) recognized that I-91 was destined to exceed capacity and reconstructed it. Although substantial improvements were made to Exits 37 and 38, compromises were made to save money and comply with current highway standards. With continuing growth, both State and Town investments in traffic capacity will reach the end of their useful life unless consideration is given to significant reinvestment and/or changing the course of development in the area.

Traffic capacity, both within and at major access points to the DHCA, is a potential constraint on development. If traffic congestion is not addressed in a timely fashion, opportunities for development may be lost to more accessible locations. With the fate of the DHCA firmly in the hands of the Connecticut Department of Transportation (ConnDOT) due to their control of Routes 75, 187, 189, 305 and I-91, significant lead time is necessary to lobby, secure funding, design, approve and build improvements to these roads. A number of factors contribute towards the overall traffic conditions within the DHCA including: the capacity of the road network; the availability of transportation alternatives (buses, vanpools, telecommuting, traffic demand management, etc.); the mix of uses utilizing the road network; and pass through traffic between I-91 and Bloomfield as well as other northwestern suburbs.



A number of improvements have been made throughout the DHCA in the last ten years, including intersection improvements, adding exclusive turn lanes, and adding through lanes. Approximately two miles of Day Hill Road have been rehabilitated and resurfaced. The Town also installed larger and clearer signs to better identify cross-streets.

The 2004 POCD and updates in 2008, along with transportation studies conducted by the Capitol Region Council of Governments have identified short- and long-term transportation improvements to address existing issues and accommodate further business growth. Over the short-term, road improvements can buy time until more substantial investments can be made to avoid serious traffic problems. Additional road improvements that should be pursued are listed below. Projects that will provide more opportunities for alternative transportation are discussed later.

Proposed Traffic Capacity Improvements

Location	Description	Timeframe	Status
Rt. 187	Add NB through lane at Griffin Rd. North intersection	Short	Uncertain (State road)
Day Hill Rd.	Add WB left turn lane onto Blue Hills Ave.	Short	Uncertain
Day Hill Rd.	Add roundabout at Blue Hills Ave. intersection	Long	CIP – unscheduled
Day Hill Rd.	Add right turn lane WB at LIMRA driveway	Long	CIP – unscheduled
Day Hill Rd.	Add turn lanes at Lamberton Rd. intersection	Long	CIP – unscheduled
Day Hill Rd.	Construct flyover EB to connect to I-91 & additional lanes on I-91	Long	CIP – FY 2019
Day Hill Rd.	Corridor-wide – coordinate town-owned traffic signals to reduce delays by 35%	Short	CIP – FY 2015
Day Hill Rd.	Corridor-wide – add travel lanes and turning lanes in various spots.	Long	CIP – unscheduled
Route 305	Corridor-wide – add turn lanes, extend through lanes and other improvements.	Short	CIP – unscheduled (State road)
Route 305	Corridor-wide – Widen in accordance with corridor study.	Long	Uncertain (State road)

As indicated, the Town will be coordinating signals along Day Hill Road. However, ConnDOT owns and operates the traffic signals on Routes 187 and 75 (Blue Hills and Poquonock Avenues). For a progressive traffic control system to be truly effective, the Town and State systems would have to be coordinated under one system so that the benefit of efficient traffic flow along Day Hill Road is not negated by uncoordinated signals at either end of the corridor. Such intergovernmental cooperation would be especially critical between Day Hill Road and northbound I-91 until the Exit 38 flyover is constructed.

Comprehensive Traffic Study

While a number of studies have been conducted, before the more serious traffic problems can be addressed, a detailed traffic study of the DHCA that models the entire road network may be necessary. Such a study would allow the creation of a comprehensive improvement program with detailed cost/benefit analysis for each improvement and would help prioritize improvements and assign costs to them. Given the regional importance of Day Hill Road as a major route to Bloomfield, Simsbury and other northwest suburbs, the Capitol Region Council of Governments (CRCOG) and the Connecticut Department of Transportation (ConnDOT) should participate both officially and financially in such a study.

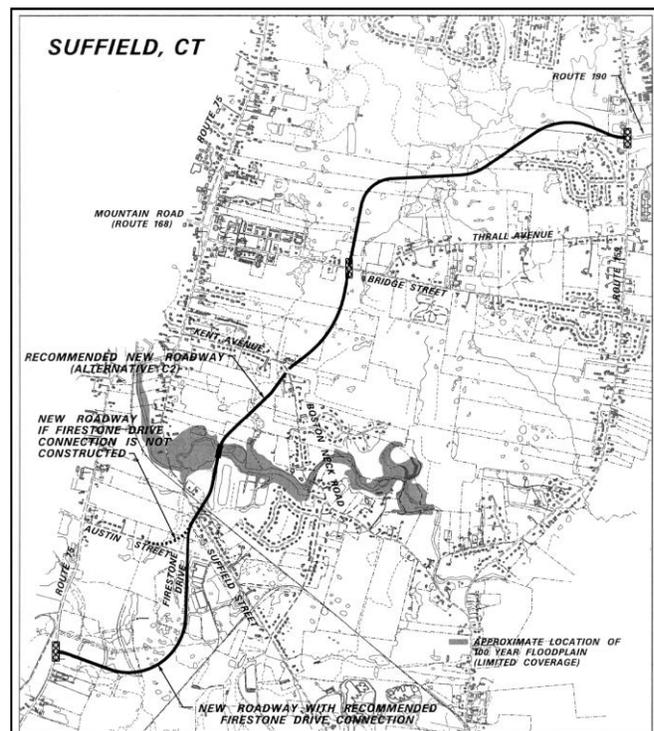
Route 305 Corridor Study

The Route 305 Corridor Study, completed in 2009, recommends improvements for traffic, safety, accessibility, pedestrian and bicycle facilities, and transit. Less expensive, short-term improvements are suggested in order to address some immediate issues. Ultimately, to address DHCA growth and resulting demand on Route 305, reconstruction is likely needed. The study analyzes four possible reconstruction options, stating that they are a “starting point for dialogue” about a feasible and preferred solution. All options would widen Route 305 in Windsor to four lanes, add sidewalks and a bicycle friendly shoulder. They vary in terms of necessary takings, landscaping, and the use of medians, among other differences. Estimated costs, in 2009 dollars, range from \$8.7 million to \$10.5 million. As noted in Chapter 12, the preferred approach should help transform Route 305 into a “complete street”, suitable for all transportation modes.

Bradley Airport Loop Road

A Bradley Airport loop road, connecting Routes 187 and 189 with I-91 in Enfield is a concept supported by several recommendations of CRCOG’s Bradley Area Transportation Study. Such a road would enhance access, provide additional traffic capacity, and divert traffic to and from Bloomfield and the western end of the DHCA away from Day Hill Road and Bloomfield Avenue. International Drive and Seymour Road (in East Granby) would represent the southernmost segment of the loop road. Although not contiguous, recommended improvements to Bradley Park Road in East Granby and a new Northern Bradley Connector Roadway between Routes 75 and 190 in Suffield would complete the loop road.

To improve traffic capacity in the western extent of the New England Tradeport, Windsor has completed a four-lane boulevard between Seymour Road and Route 20 in East Granby, but a roundabout at the town line, discouraging through-

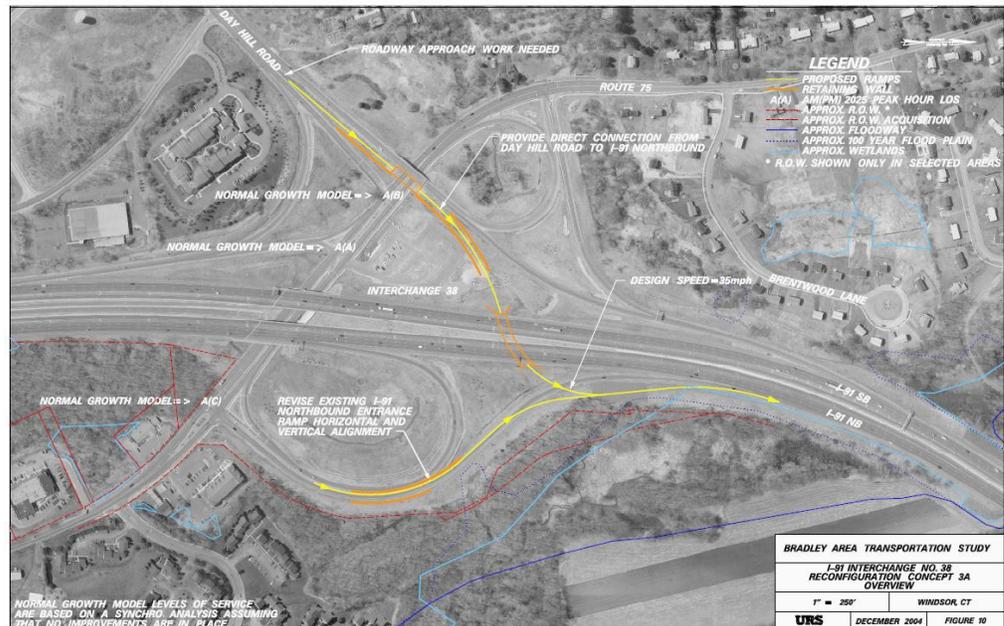


truck traffic to and from Route 187 was installed at East Granby's request. If the Northern Bradley Connector Roadway is to be completed, an alternative to the route identified in the CRCOG Bradley Area Transportation Study will have to be found due to a new residential development directly in the path of the preferred route. Route 187 and International Drive may still have some utility as part of a circulating bus system between the DHCA, Bradley Airport and potential Springfield-New Haven commuter rail stops in Windsor Center and Windsor Locks.

The Town of Windsor believes that the Bradley Area Transportation Study's recommended addition of westbound left- and right-turn lanes on Route 20 at the intersection of International Drive and Bradley Park Road may be insufficient to handle anticipated truck traffic in the long-term and the intersection should be studied for a possible grade separated interchange or other high-capacity configuration to handle anticipated traffic within the New England Tradeport. Such an improvement would help to mitigate traffic impacts on neighboring residential areas.

Exit 38 Flyover

By omitting a northbound flyover as a cost saving measure when reconstructing I-91, Exit 38 must rely upon a dog-leg traffic movement (a right-turn followed by an immediate left-turn) between Day Hill Road and I-91 northbound during the evening rush hour. As an offshoot of the Bradley Area Transportation Study, CRCOG and the Town completed a Day Hill Road Interchange Study, which recommended Alternative 3A, a flyover from eastbound Day Hill Road to northbound I-91, as the preferred alternative (see graphic). To mitigate traffic "turbulence" from increased high-speed traffic entering northbound I-91 from Day Hill Road as well as weaving movements between southbound traffic entering from Route 20 and exiting onto Day Hill Road, additional northbound and southbound travel lanes are also proposed on I-91 between Exits 38 and 40.



Given the regional significance of Day Hill Road as an inter-town arterial, the DHCA as a regional economic engine, and the time frame needed to complete such a project, Windsor and CRCOG should intensify efforts to construct a flyover so that it can be completed before traffic exceeds the capacity of one or more of the three intersections currently needed to convey northbound commuter traffic.

Strategies for Preserving and Expanding Traffic Capacity

1. Continue to make incremental improvements to buy time for further study and implementation of a comprehensive improvement program.
2. Aggressively pursue identified capacity improvements through both the Town's CIP and the State Traffic Commission process as new development occurs.
3. Continue to petition for the completion of a Day Hill Road northbound flyover at Exit 38.

Encourage Traffic Demand Management

Traffic Demand Management or TDM is a series of strategies designed to modify travel behavior in congested areas, particularly during the morning and evening rush hours.

TDM can range from adjusting employers' work hours to providing high-occupancy toll lanes. Common TDM strategies include: staggered or flexible work hours; compressed work weeks (e.g. four 10-hour workdays; telecommuting, where employees work from home one or more days a week; congestion pricing (i.e. drivers are charged to enter a congested area or to bypass congestion in a toll lane); increased availability of public transit and/or reduced/subsidized fares to encourage ridership; transit-oriented and mixed-use development (i.e. employee housing convenient to public transit or to work); pedestrian improvements (e.g., sidewalks/trails and bus shelters); and travel information/traffic incident management systems that inform motorists of accidents/congestion and recommend alternate routes.

From a total daily traffic standpoint, Day Hill Road and other roads serving the DHCA would have tremendous traffic capacity if traffic could be spread evenly over a 12- to 18-hour period. Unfortunately, the majority of traffic seeks to enter and exit the DHCA during the morning and evening peak travel hours, creating congested conditions while traffic on Day Hill Road remains relatively light for most of the remaining hours of the day. Traffic demand management (TDM) can be an affordable, flexible, and effective means of preserving existing traffic capacity and increasing growth potential within the DHCA. Rather than increasing traffic capacity solely through costly physical improvements, TDM seeks to alter travel behavior through a number of alternative strategies designed to take vehicles off the road at the most congested times of the day: the morning and evening rush hours.

Some strategies such as staggered schedules, flexible work hours, compressed work weeks, and telecommuting are simple no- or low-cost solutions that can disperse peak-hour traffic and even take significant numbers of cars off the road altogether. Variable work hours can be implemented on an individual or corporate-wide basis. Flexible work hours let individual employees choose their start time (within certain parameters), with the theory being that traffic will seek its own optimal levels and employees will adjust their schedules to avoid the most congested travel times.

Staggered work schedules can be applied both within a work site and among employers in the DHCA. Under staggered work hours, employers break their workforce into large fractions and give each fraction a staggered start time, which could vary by as little as 10 or 15 minutes to an hour or more. For example, Amazon starts one-half of its day shift to begin unloading trucks, followed a half-hour later by the second half, which will begin loading outgoing trucks. The process is repeated in the evening with a half-hour between the departure of the second half of the day shift and the arrival of the first half of the night shift, effectively spreading four large traffic movements over a two-hour period in two directions and reducing the traffic impact by three-quarters at any given time. In another example, two or more major employers could collaborate with one starting its workday for all employees at 8:00am, while another might start at 8:30am or 9:00am, cutting their collective traffic impact in half or more depending on how many employers participate.

Telecommuting and compressed work weeks have the potential to remove cars from the road altogether. Telecommuting allows employees to work from home one or more days a week, removing one car per day for each participating employee. For example, if a worksite with 2,000 employees allowed 20% of their workforce to telecommute one day a week, it could remove 80 to 400 cars on a given day from rush-hour traffic.

Compressed work weeks allow employees to work longer shifts for fewer days per week, removing one car per employee for one to two days per week. For example, an employer may schedule employees to work four ten-hour shifts, earning one additional day off per week. The employer can stagger those days

off across its workforce to reduce its overall traffic impact by 20% per day, or if feasible, close entirely one day per week, reducing their traffic impact by 100% on that day and cutting their weekday utility costs by up to 20%.

The State of Connecticut, through its CTRides program, funds three non-profit companies to provide commuter services in Connecticut. The Rideshare Company operates three programs within the region, providing individual and fleet vanpool services to individuals and businesses as well as a carpool matching service with incentives to reward participants. The Capitol Region Plan of Conservation and Development recommends: “work with CTRides and Connecticut DOT to encourage greater implementation of transportation demand management strategies, including flexible work hours, employer provided transit benefits, telecommuting, bike commuting, and development of transportation management associations (TMAs) where applicable (beginning with the Day Hill Road corridor).” While these Rideshare programs can effectively to emulate a TMA by strategically staging vans at local train stations, CRCOG’s 2009 Northwest Corridor Transit Study recommends the creation of a transportation management association to provide local shuttle service both within the corridor and to nearby commuter lots and train stations, which is discussed in further detail below.

Strategies for Encouraging Traffic Demand Management

4. Continue to work with the Chamber of Commerce, Rideshare and DHCA employers to develop policy-, regulatory-, and incentive-based approaches to promote implementation of Traffic Demand Management.
5. Encourage the formation of a DHCA transportation management association.

**Springfield-New Haven
Commuter Rail**



CT Transit Bus Service



Easy Street Vanpools



Guaranteed Ride Program

One major drawback discouraging the use of bus service is that it can be inflexible when employees need to unexpectedly work late or have an emergency, and bus schedules leave them stranded. To address this issue, CT Transit offers 31-day transit pass holders up to four emergency taxi rides per year, arranged through a special hotline. While reassuring to current riders, expanding the program to allow more frequent opportunities could increase ridership.

Promote Multi-Modal Transportation Options

While considered a form of traffic demand management, public transit, transportation management associations, and other transportation alternatives are worthy of separate attention in the context of a comprehensive multi-modal transportation strategy. In its simplest form, a multi-modal transportation system integrates multiple transportation modes such as buses and trains into one system, allowing commuters to get from Point A to Point B using one or more modes. At its best, a multi-modal transportation system is a highly accessible, seamlessly integrated system with extensive node to node routes and frequent headways (departure times) between vehicles, allowing commuters to efficiently get where they want, when they want, paying one fare and transferring between modes with little or no waiting. While the latter system sounds ideal, the cost of implementing and operating such a system is prohibitive unless there is a major societal shift back to pre-World War II style public transit.

What the DHCA needs to help reduce traffic demand is a bus-based system that maximizes flexibility during the peak-hour commutes; makes stops at or near major employers, hotels and retail centers; and is integrated with the proposed Springfield-New Haven commuter rail line and improved bus service to Bradley Airport. Building public transit capacity and other traffic demand management (TDM) strategies will play a vital role in extending the development potential of the DHCA beyond our ability to physically or financially expand traffic capacity through roadway improvements.

The CRCOG Northwest Corridor Transit Study provides detailed recommendations for providing multi-modal choices in the DHCA. These include:

- creating transit nodes along Day Hill Road;
- creating a multi-modal hub at the Poquonock Avenue park-and-ride lot;
- improving CT Transit service within the DHCA;
- establishing new CT Transit inter-town routes that do not rely on Hartford as a hub;
- providing local shuttle service;
- coordinating bus and train schedules;
- creating a Griffin park-and-ride lot near the intersection of Day Hill Road and Blue Hills Avenue;
- establishing a Day Hill transportation management association; and
- expanding CT Transit's Guaranteed Ride Home program.

One method of increasing bus ridership identified in the Northwest Corridor Transit Study is to create strategically located transit nodes along Day Hill Road. Transit nodes would invert Day Hill Road's traditional suburban campus form of development (buildings set back from the road, surrounded by parking) by clustering buildings closer to major intersections, with parking to the rear, thus giving transit riders a shorter walk to their respective buildings (see page 10-11 for a more detailed explanation).

Transit Oriented Development Typologies for the DHCA, CRCOG

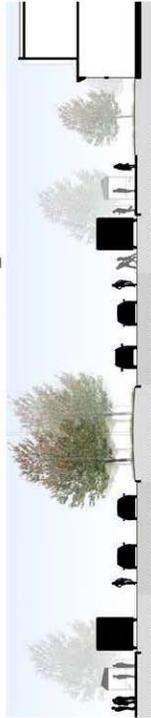
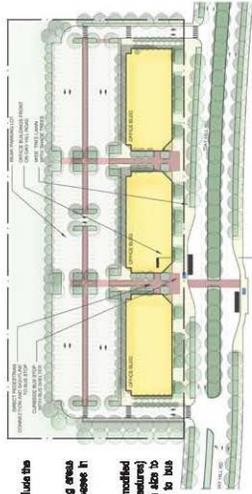
Day Hill Road Site Typologies

Typology A

Transit-oriented development in Typology A would include the following:

New development fronts Day Hill Road and parking areas are located in the rear. Development density increases in proximity to the bus stop on Day Hill Road.

A regular street grid pattern is developed (however, modified to follow existing topography and respect natural features) with blocks between 200' X 300' and 300' X 400' in size to increase opportunities for pedestrian connections to bus stops.



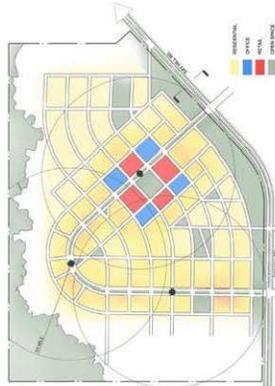
Typology A: Cross section of Day Hill Road illustrating new curbside bus stops and sidewalks, bike lanes, and new buildings and site addresses close to the station on Day Hill.

Typology B

Transit-oriented development in Typology B would include the following:

High-density development is provided within the mixed-use "village center," and mid-to-low density residential development surrounds the commercial core. A hierarchical street system, including a primary looping street and connecting secondary streets, serves the new development. Buses circulate along the primary street and stop at bus shelters spaced every quarter-mile. Alternatively, buses stop once in the village center and loop out to Day Hill Road. High-density development is located around the bus stops with pockets of convenience retail proximate to bus stops.

A regular street grid pattern is developed (however, modified to follow existing topography and respect natural features) with blocks between 200' X 300' and 300' X 400' in size to increase opportunities for pedestrian connections to bus stops.



Typology B: Cross section of Day Hill Road illustrating new wide sidewalks, wide bike lanes, bike lanes and green boulevards close to the station on Day Hill.

TOD Design Guidelines

The following guidelines apply to transit-oriented development in both Typologies A & B:

Building Design

- Design buildings that create an interesting active and safe pedestrian environment. Encourage active ground-floor uses in areas where commercial activity is concentrated.
- Provide a minimum of 60% glazing of ground floor facades of retail and office buildings to create a transparent environment and to provide "eyes on the street."
- Retain individual entrances from the street for commercial uses to create more on-street pedestrian activity.
- Provide vegetation in roof lines (e.g. setbacks and pocket roads) to add architectural interest.
- Site parking, loading and service areas behind buildings with landscaping and/or operable fencing to screen views from adjacent streets and pedestrian ways.

Site Design

- Create a physical street character that is pedestrian friendly, consistent with the surrounding area. This includes street lighting, street furniture, building setbacks, and landscaping. Street lighting should be placed at the back of the sidewalk, not at the street edge, and with setbacks parallel to the street, and using landscape elements that define the street edge.
- Provide walking opportunities from bus stops to nearby retail stores, restaurants, and other destinations. This includes providing for on-street parking to facilitate pedestrian connections without impeding traffic circulation.
- Incorporate existing topography, streams and other defining site characteristics into the site design.



Vegetation in roof lines and continuous building facades are contributory to street



Landscaping within and near pedestrian environment



Sample illustrative plan with site design and parking principles applied (e.g. regular street grid pattern with pedestrian sidewalks, pocket-parks, higher density around transit center and structured parking)

The Last Quarter-Mile

There is an established axiom in the telecommunications industry that a network is only as good as the last mile, meaning that investment in a state-of-the-art network backbone can be wasted if the connections to the end users are slow and antiquated (e.g., U-Verse cable service). The same axiom can be applied to the last quarter-mile of a multi-modal transportation network (the practical limit that a typical commuter will walk). If commuters cannot get to and from the system easily, the system will not be used effectively and investments in infrastructure and equipment may be wasted.

Because a transit system cannot effectively provide door-to-door service to every home or business, extensive pedestrian and bicycle facilities must be used to close the last quarter-mile gap in the transportation network and amenities such as bus shelters, bicycle racks, and commuter parking lots must be integrated into the system for the comfort and convenience of its riders.

While less effective than transit nodes due to the added trip time, major employers can also coordinate with CT Transit to bring buses into their facilities if they can encourage enough employees to ride the bus to justify the lengthier trips. For example, Amazon has installed a bus circulation system in their facility with bi-directional bus pull-outs and shelters on each side of their perimeter driveway between Iron Ore Road and Goodwin Drive. Great Pond will similarly promote bringing CT Transit service into its mixed-use village. Ideally, Great Pond should be connected by at least an exclusive bus corridor, if not a through road, to the Griffin North office park for the mutual benefit of resident-employees.

Even if enhanced service is implemented, the CT Transit system cannot meet all of the DHCA's needs due to the size of their buses and their frequency of stops (headways). To fill the gap, the aforementioned transportation management association can provide bus service using smaller "jitney" buses funded by employers within the DHCA. Such a service could:

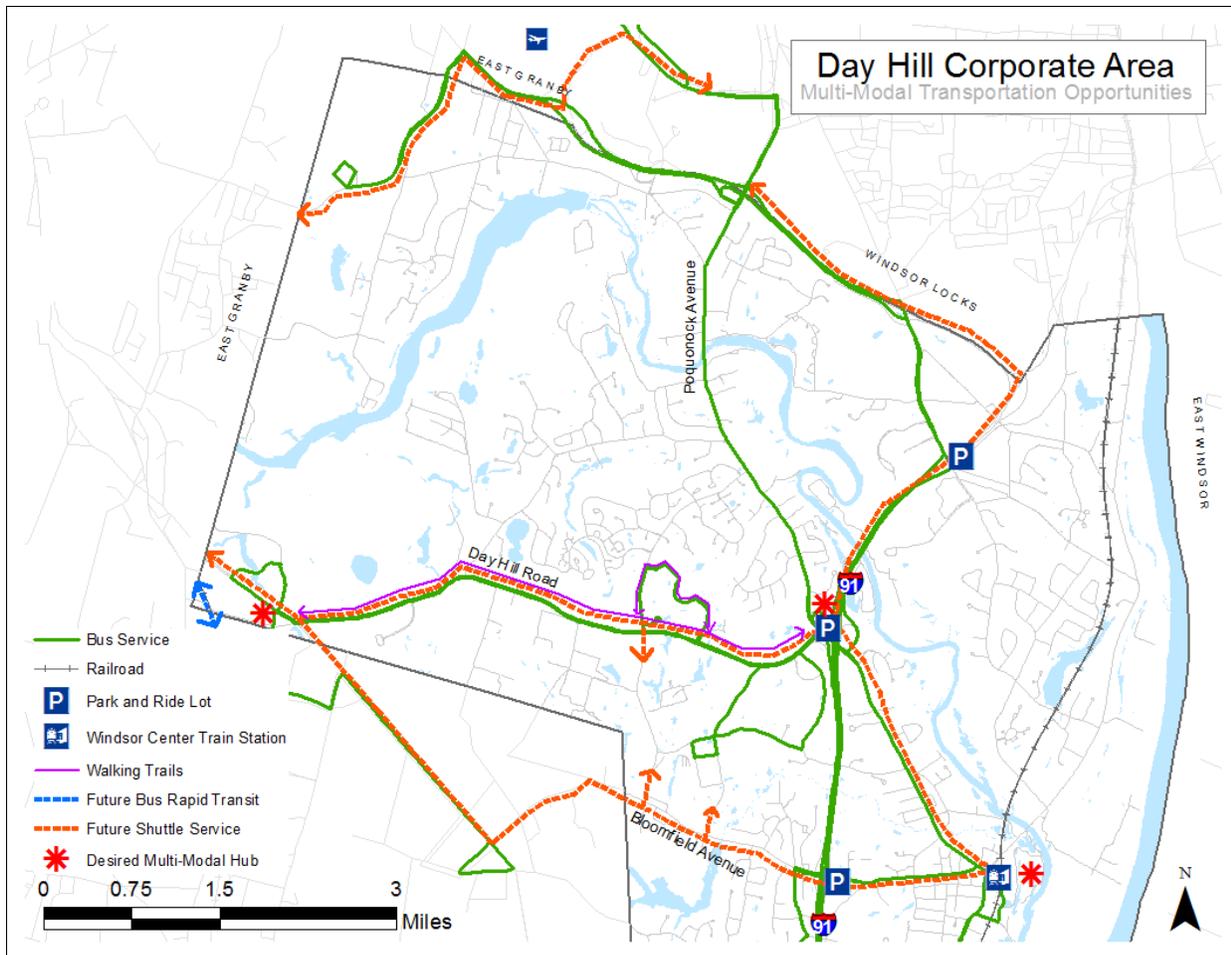
- provide local service within the corridor, such as between Great Pond, the hotels, the Day Hill Shoppes, and major employers;
- meet trains in Windsor Center on the proposed New Haven-Hartford-Springfield Commuter Rail service, beginning in 2016; and
- meet local and express buses at the Poquonock Avenue and CRCOG recommended Griffin park-and-ride facilities.

In order for any multi-modal transit system to be effective, it must be convenient and easily accessed by its users (see sidebar). With few exceptions, roads within the DHCA lack complete sidewalks or have none at all, discouraging employees from walking, jogging or biking between bus stops and work; walking to a nearby restaurant; or simply walking for recreation during lunch breaks. During pleasant weather, DHCA roadsides are dotted with employees avoiding cars and trucks as they walk, jog or bike along the shoulders. Even during winter months, hardier employees will venture out despite piles of snow filling the shoulders of roads, forcing them into the travel lanes.

A system of sidewalks and trails is incrementally under construction along Day Hill Road to provide a safe location for commuters and others to walk, jog, or bike. To enhance recreation opportunities, this sidewalk/trail system should be linked wherever possible with a town-wide system of open space greenways and trails (see Chapter 4), allowing residents of surrounding areas to enjoy the trail system in the relative quiet of the corridor after hours and on weekends. Segments are being constructed in a prioritized fashion by the town, and as new development occurs by requiring trail segments or sidewalks as part of subdivision and site plan approvals/revisions. Existing employers are being asked to voluntarily participate by providing easements, sidewalk or trail segments, and could even be asked to provide equivalent funding for the benefit of their employees in much the same way that Combustion Engineering constructed a trail along the south side of Day Hill Road between Blue Hills Avenue and their credit union.

Strategies for Promoting Multi-Modal Transportation Options

6. Continue to pursue multi-modal transportation initiatives including integrated bus, TMA jitney, and commuter rail service.
7. Require sidewalk and trail segments for new developments where appropriate as part of the site plan approval process and request current employers within the DHCA to provide or contribute rights-of-way and/or funds towards trail segments to help complete the network.
8. Connect the planned DHCA sidewalk and trail system to a town-wide trail system.



Maximize Revenue Potential

TDM, mass transit, and physical road improvements are not the only means of preserving or extending traffic capacity. Changes in land uses utilizing the road network can also significantly impact the amount of traffic in the DHCA.

Not surprisingly, an analysis of tax revenue in the DHCA conducted in 2004 revealed that offices generate almost twice the taxes per square foot than warehouses and nearly 20 percent more than manufacturing. However, given that available land is relatively abundant and traffic capacity is the more limiting factor with capacity improvements costing significant tax dollars, pursuing a high proportion of office space may not be the best way to maximize tax revenue. Subsequent trends in warehouse automation have also closed the gap with office tax revenues due to the increased personal property tax associated with automated/robotic conveyance systems.

As the following table illustrates, offices generate more than twice the peak-hour traffic of manufacturing uses and nearly four times that of warehouse uses. Because of this, manufacturing and warehouse space can generate twice the tax revenue of office space within the available traffic capacity, while minimizing capacity improvements. There may be other uses such as hotels and recreational uses that produce significant revenue while generating a significant portion of their traffic during off-peak hours, or in the case of hotels, practicing traffic demand management by providing shuttle bus service for guests to nearby major employers.

Use	Mean Taxes Per Square Foot	AM Peak Trips Per Square Foot	Taxes Per AM Peak Trip	Tax Ratio Per AM Peak Trip Relative to Office	Tax Ratio Per Sq. ft. Relative to Office
Data Center	\$10.58	NA	NA	NA	\$5.71
Hotel	\$2.64	NA	NA	NA	\$1.42
Office	\$1.86	0.00222	\$835.59	\$1.00	\$1.00
Manufacturing	\$1.51	0.00092	\$1,636.67	\$1.96	\$0.81
Warehouse	\$0.96	0.00057	\$1,684.51	\$2.02	\$0.52
Other	\$1.57	NA	NA	NA	\$0.85

Source: Windsor Assessor's Office, 2004, Institute of Traffic Engineers Trip Generation Manual

The 2004 plan recommended cautiously placing more emphasis on manufacturing, research and development facilities, and small-scale warehouse uses in appropriate locations given that if Windsor curtails office development to optimize tax revenue relative to traffic capacity but surrounding towns such as Bloomfield, using Windsor's industrial roads to access I-91, do not adhere to this policy, they could continue to develop office buildings, using up Windsor's road capacity at a high rate. As a result, Windsor could end up with warehouses, traffic congestion and increased road maintenance while surrounding towns end up with office buildings in park-like settings. Because of this, Windsor should not exclusively pursue lower traffic generating uses.

Another reason for caution is that while manufacturing and warehousing generate one-quarter to one-half of the employee trips of an equivalent floor area of office, at least one comprehensive study has shown that heavy truck traffic associated with these uses can have a tremendous negative impact on road maintenance relative to light trucks and passenger vehicles (see sidebar).

The Transportation Research Board's Traffic Capacity Manual has attempted over the years to quantify the capacity impact of truck traffic in terms of passenger car equivalents (PCEs), but numerous studies have shown that these PCEs are understated in many cases due to factors such as the percentage of trucks in the traffic mix, the grade of the road, flow conditions, the number of lanes, and the location of trucks in traffic signal queues (i.e. a heavy truck near the front of the line will significantly reduce the number of vehicles able to make it through the intersection) can all affect the calculation of PCEs. The result is that peak-hour heavy trucks have the potential to significantly impact traffic capacity far beyond the number of passenger and light trucks displaced by their greater length.

The recent construction of the Amazon fulfillment center south of Day Hill Road appears to fly in the face of these recommendations, but careful analysis by the town, including firsthand observation of a similar facility, showed that despite the floor area in excess of 1.5 million square feet, the facility has a relatively low truck count compared to smaller facilities in town. This is due to the unique nature of the facility, which focuses on bulky, low-velocity (slower selling) items such as large-screen televisions and kayaks, that tend to be shipped individually, resulting in fewer trucks and fewer employees than other Amazon fulfillment centers.

As development occurs in either town, Windsor and Bloomfield should work cooperatively with the Connecticut Department of Transportation (ConnDOT) and the Office of the State Traffic Administration (OSTA) to pursue improvements to Bloomfield Avenue, Day Hill Road, Poquonock Avenue and the I-91 interchanges for both towns' mutual benefit.

Impact of Truck Traffic

In 1990, the University of California-Davis studied 1,100 randomly sampled one-mile sections of California highways and created a model of pavement maintenance costs using an integrated database of traffic, weather, pavement and geometric conditions, as well as maintenance costs for the sample sections. The results indicated that each additional heavy truck (per day) would cost an additional \$3.73 per mile of roadway annually for pavement maintenance compared to \$0.04 for each additional light truck or passenger vehicle. Put simply, each additional heavy truck added to the traffic stream has a roadway maintenance impact equivalent to over 90 light trucks or passenger vehicles.

Source: Gibby, A. R., Ryuichi Kitamura, Huichun Zhao (1990) Evaluation of Truck Impacts on Pavement Maintenance Costs. *Transportation Research Record* (1262), 48 – 56.

Strategies for Maximizing Revenue Potential

10. Continue to focus economic development activity on manufacturing, warehousing, data centers, hotels and other uses with low- or off-peak traffic demand in appropriate locations where traffic congestion is critical.
11. Windsor and Bloomfield should work cooperatively with the Connecticut Department of Transportation (ConnDOT) and the Office of the State Traffic Administration (OSTA) to pursue improvements to Bloomfield Avenue, Day Hill Road, Poquonock Avenue and the I-91 interchanges for both towns' mutual benefit.

Workforce Housing

Workforce housing is not just another euphemism to avoid the undeserved stigma of affordable housing. Workforce housing is housing that is affordable to often young, well-educated, entry-level employees who might otherwise choose to leave the state in search of jobs in more affordable metro areas due to the high cost of housing in Connecticut.

According to the Partnership for Strong Communities, the State's leading proponent of workforce housing, only six other states are losing a higher percentage of 25-34 year olds than CT.

According to the CT Department of Higher Education, Connecticut is also a net-exporter of college students, many of whom never return from college to CT, which is compounded by resident students who take their state subsidized education out of state to work in more affordable areas of the country.

These young adults represent the future of our State's economy.

Increase the Competitiveness of the Day Hill Corporate Area

Despite transportation access unparalleled in the State (three expressways; bus transit service; intercity and soon commuter passenger, and freight rail service; and easy access to adjacent Bradley Airport), Windsor's location north of Hartford places several commuting obstacles between the DHCA and the bulk of the region's population (traffic congestion in Hartford to the south, limited Connecticut River crossings to the east, and the Metacomet Ridge to the west). Unless a company's executives or employee base live generally north of Hartford, relocating a Connecticut company to Windsor can be difficult without leaving behind employees unwilling to relocate with their company or face a long commute. Another factor that may contribute to the rental disparity is a lack of ancillary services such as convenience retail and restaurants to meet the needs of employers and their employees within the DHCA, something that towns like West Hartford and Rocky Hill have in abundance.

Provide a Variety of Housing Opportunities

To attract and retain a skilled labor force to meet the needs of existing and prospective businesses, Windsor must provide an array of quality housing opportunities that are attractive to everyone from corporate executives to entry level employees. At the same time, we do not want to promote suburban sprawl that consumes our remaining farmland and open spaces in existing neighborhoods, nor do we want to create isolated enclaves of high-density housing with little or no social fabric or sense of community. One strategy, exemplified in the proposal for the proposed Great Pond (see sidebar on next page), offers the potential to provide a variety of workforce housing in a vibrant mixed-use setting that appeals to residents of all ages and provides some of the needed ancillary services within the DHCA, all while minimizing sprawl and the resulting traffic congestion.

Provide Ancillary Goods and Services

Despite the abundance of available land in the DHCA, Windsor must resist the urge to allow significant amounts of commercial retail development that could become traffic destinations in their own right and compete for limited traffic capacity. Retail and restaurant developments are among the most intense traffic generators of any land use (see sidebar on the following page). While a significant portion of the traffic to and from these developments could be drive-by traffic that is already on the road, additional traffic lights and the friction caused by high volumes of cars entering and exiting the flow of traffic can increase congestion.

Regardless of the traffic implications, the DHCA still needs to provide retail, restaurant, and service establishments to meet the expectations of current and prospective employers and their employees and put the DHCA on even footing with competing employment centers. To balance the need for basic goods and services with the need to protect traffic capacity, retail commercial development should be limited to establishments that provide ancillary goods and services that

meet the daily needs of DHCA employers and their employees. These might include: office supplies, postal/shipping/copy services, banking, specialty goods (e.g., cards/gifts, prescription drugs, flowers, jewelry, books), convenience food/goods, personal services (e.g., barber/salon, fitness, dry cleaning, tailor/shoe repair, travel planning), day care, computer sales/service, and professional services (e.g., accounting, engineering, medical), some of which already exist in the DHCA. In addition to these ancillary uses, limited neighborhood commercial developments serving residents in or adjacent to the DHCA might include stores such as a small/specialty grocer, a liquor store, a bakery, a hardware store, etc. Together, these ancillary and neighborhood commercial establishments could meet the daily needs of employers, employees and neighboring residents without becoming a significant weekday draw to customers outside of the DHCA.

Once ancillary and neighborhood commercial development is in place, either as part of Great Pond or stand-alone development, opportunities for additional, carefully planned residential development could arise, taking advantage of and perhaps contributing to the amenities that these developments offer, provided that they do not preclude future industrial development on adjacent land. Suggested future land uses designed to maintain/increase the competitiveness of the DHCA are shown on the following page.

A New Development Type for the DHCA

Traditional Neighborhood Design (TND) is a design philosophy that combines the best aspects of a traditional mixed-use village like Windsor Center with the modern realities of stricter codes and an automobile-oriented society. Transit-Oriented Development (TOD) places housing, jobs, and services at sufficient densities and within walking distance to transit facilities to support mass transit facility and service investments. Both TND and TOD mix land uses in close proximity while mitigating potential conflicts between such uses and placing emphasis on pedestrians. Benefits within the DHCA could include:

- significantly reduced dependency on automobiles;
- a healthier, greener lifestyle for resident employees;
- accommodating higher densities in attractive settings;
- providing a captive market or critical mass of residents to support retail/service establishments; and
- allowing residents to live within walking distance of employment, shopping, dining and more.

In order for TND to be successful, it must be comprehensively planned to:

- ensure the appropriate location and mix of uses;
- mitigate both internal and external land use conflicts;
- provide an orderly transition between higher and lower intensity uses and/or residential densities;
- ensure an efficient transportation network that manages access to major arterials and accommodates pedestrians, mass transit, and private motor vehicles;
- provide for the meaningful arrangement of open spaces and more heavily utilized public spaces; and

Land Use and Traffic

Different land uses vary significantly in the amount of traffic that they generate and when they generate the most or reach their peak demand. Traffic engineers are most concerned with the periods known as weekday A.M. and P.M. peak-hours, when most people are commuting to and from work and traffic congestion is typically at its worst.

Restaurants and retail stores can be two of the most intense land uses in terms of traffic generation. For example, grocery stores have the double impact of up to 12 trips per 1,000 square feet during the P.M. peak-hour combined with floor areas as large as 60,000 to 70,000 square feet or more, for a potential impact of 720 to 840 P.M. peak-hour trips.

While significantly smaller in floor area, fast-food restaurants with drive-through windows such as coffee, donut or bagel shops can generate more than 70 A.M. peak-hour trips per 1,000 square feet of floor area or more than 40 times the traffic per square foot of office development.

Great Pond

In 2011, the Town adopted an innovative zoning code, to allow the creation of Great Pond – a new, mixed-use village on roughly 500 acres in the Day Hill Corporate Area. The village, when built will include a mixture of housing types, office, retail, parks and community gathering spaces in a walkable, community-oriented setting. The plan organizes development into “transects” which transition from a natural zone (265 acres of open space) through neighborhoods of different densities to an employment districts.

When fully built, Great Pond will include up to:

- 4,010 housing units
- 85,000 square feet of neighborhood commercial
- 640,000 square feet of office space
- 128,000 square feet of civic and institutional uses

- provide varied, yet cohesive architectural and landscape designs that create a vibrant sense of place.

The “form-based code” developed for Great Pond (see sidebar) translates TND goals into a comprehensive set of zoning regulations that values form over function by placing more emphasis on the appearance of development and the human environment than on what takes place within the buildings, which is the main concern of conventional zoning codes. Extending the form-based code, or elements of it, to other sites in Windsor can help Windsor meet the demand for workforce housing with minimal increases in traffic by placing employee housing within walking or biking distance of employers (or a bus route) and/or by allowing residents to commute to jobs outside of the DHCA, creating a reverse peak-hour traffic flow using underutilized travel lanes into and out of the area.

The true elegance of this TND strategy lies in its ability to simultaneously achieve housing and transportation goals while preserving open space and community character in other areas of Windsor. Chapters 4 and 5 recommend expanding transfers of residential density between agricultural and residential properties to include transfers to non-residential properties, possibly under different ownership, thus directing development away from active farmland and preserving open space in established residential neighborhoods. To continue the present practice of keeping transfers of residential density on a unit-for-unit basis offers little incentive to developers looking to reduce the cost of workforce housing through increased density if they must purchase equivalent residential density elsewhere in Windsor. However, automatically allowing significantly higher residential densities in industrial zones than those already permitted in actual residential zones through the design development process would be not only inequitable but possibly counterproductive. The TND and TOD master planning process (perhaps also regulated through the design development process) should include layers of density incentives to achieve numerous community goals. Transfers of residential density to the DHCA or even Windsor Center could receive additional density bonuses if the developer:

- protects active farmland and/or prime agricultural soils elsewhere in Windsor;
- provides workforce housing in the DHCA;
- supports mass transit initiatives such as the Griffin Busway or Springfield-New Haven Commuter Rail project;
- creates vertically mixed-use development that allows for shared parking and reduced dependency on automobiles;
- builds structured parking that provides reduced impervious coverage and other benefits; and/or
- creates or enhances a critical mass of residents living within walking distance of local businesses, thus creating more vibrant villages.

Strategies for Increasing the Competitiveness of the Day Hill Corporate Area

12. Provide a variety of housing opportunities for employees within the DHCA in master-planned mixed-use communities that are compatible with surrounding commercial and industrial development.
13. Provide density incentives for transfers of residential density that achieve desirable community goals such as creating workforce housing, protecting farmland and open space, or creating vibrant residential villages.
14. Provide opportunities for limited ancillary and neighborhood level retail services designed to attract, retain, and meet the daily needs of employers, employees, and residents in and around the DHCA, preferably as part of master-planned mixed-use developments.
15. Provide opportunities for additional housing that creates mutually beneficial relationships with adjacent mixed-use and stand-alone retail commercial developments.

Traditional Neighborhood and Transit Oriented Development

Kentlands, MD



Beaufort, SC



Washington, DC



Rezone Excess Industrial Land

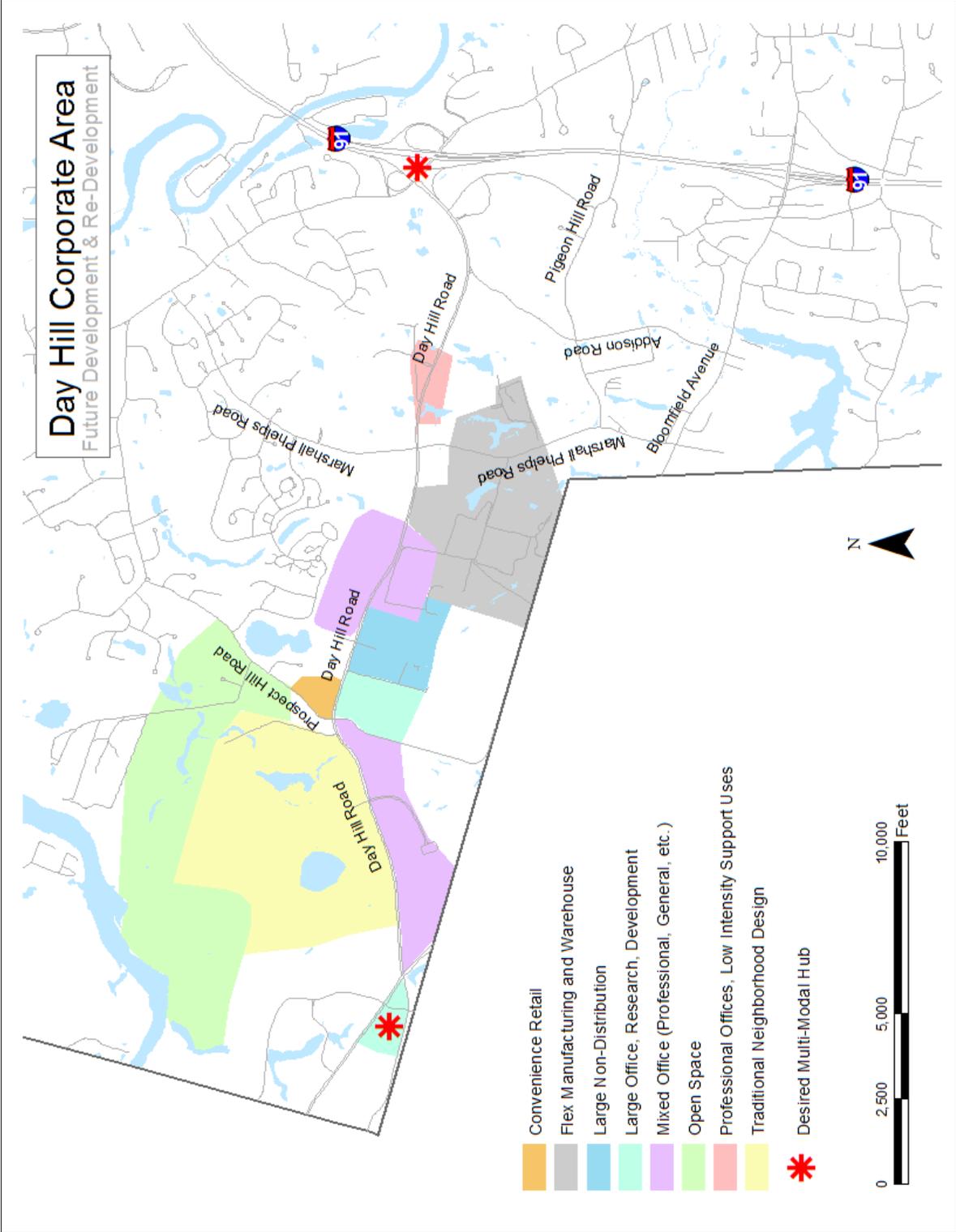
If the comprehensive traffic study of the Day Hill Corporate Area (DHCA) recommended earlier in this chapter reveals a point of diminishing return on infrastructure investment, where the cost of infrastructure improvements exceeds the tax revenue benefits, there will be a surplus of industrial land. In this instance, the least desirable industrial land (or most suitable for alternative uses) should be rezoned with emphasis on preserving traffic capacity and limiting future transportation expenditures.

Much of the vacant land within the DHCA is currently under cultivation or contains remnants of shade tobacco production that would facilitate their use if the fortunes of that industry improve again or as local food production continues to become more of a priority. Rezoning these areas to the agricultural AG Zone would be logical since they are already being put to productive use and would also help to preserve agricultural activities as recommended in Chapter 5.

Residential use is another alternative to industrial zoning, but attempts to rezone would have to be carefully considered so that when housing becomes established, new residents do not oppose the continued industrial development of adjacent areas. As mentioned during the discussion of TND, residential development can have a two-fold impact on traffic patterns in the DHCA. Considering that the most critical movements of traffic are the A.M. peak-hour commute into the area and the P.M. peak-hour commute out, residential uses could create a reverse traffic flow during these times, using relatively underutilized travel lanes. Better still, residents might also live and work in the area, requiring only a short commute, bicycle ride or walk to work. Higher-density multi-family housing might be used as a buffer between higher intensity commercial/industrial uses and the single-family developments that surround the area.

Strategies for Rezoning Excess Industrial Land

16. If a comprehensive traffic study determines that traffic capacity will limit the full potential of industrial zoned land within the DHCA, consider rezoning actively farmed land that exceeds anticipated traffic capacity to the AG Zone.
17. If a comprehensive traffic study determines that traffic capacity will limit the full potential of industrial zoned land within the DHCA, carefully consider rezoning to residential use where appropriate and encourage revenue positive housing such as active adult housing.



Maintain Quality Corporate Image

Contributing to the Day Hill Corporate Area's image as one of the premier business locations in the region is the quality of development that has occurred along Day Hill Road. While many towns have settled for ubiquitous metal buildings that have set the tone for all development to follow, Windsor has tried to maintain a higher standard, insisting on quality designs and materials, especially along the frontage of Day Hill Road.

As the nation and region continue to shift towards a service-based economy and warehousing becomes more prevalent, maintaining high architectural standards along Day Hill Road will remain a challenge. Warehousing and manufacturing buildings are often utilitarian in design, with long high walls and few windows. Allowing them to be built along the frontage of Day Hill Road would undermine future attempts to attract quality office development to the Day Hill Road corridor.

To maintain a quality corporate image, the plan recommended in 2004 that a Day Hill Road Overlay District be created to limit the frontage of Day Hill Road to corporate office development within 500 feet of the road. The less visible areas to the rear and elsewhere within the Day Hill Corporate Area would remain open to manufacturing and warehousing facilities, such as the Amazon fulfillment center, where the architectural standards need not be as stringent. Changes were made to the Zoning Regulations to this effect without creating an actual overlay zone. The effectiveness of these amendments should continue to be monitored to determine whether a more comprehensive overlay district needs to be created.

An added benefit of this strategy is that office development, while not prohibited in other areas, will tend to locate along the frontage of Day Hill Road, creating an artificial limit on office development, which has significantly higher traffic generation rates than warehousing and manufacturing. The result is that a limited amount of high-quality office development will be concentrated in the most appropriate location.

Mixed use developments recommended earlier will have their own specific standards governing retail, office, residential and other uses. These will likely supersede the architectural requirements currently in place within 500 feet of Day Hill Road.

Strategy for Maintaining Quality Corporate Image

18. Monitor the effectiveness of current development standards within 500 feet of Day Hill Road to determine whether a Day Hill Road Office Overlay District is still needed to foster high-quality corporate office development in this area.

MAINTAIN EXCELLENT COMMUNITY FACILITIES & SERVICES

11

Overview

Community facilities and services contribute significantly to community character and quality of life. Throughout this Plan, it has been noted that Windsor is an amenity rich community. Nowhere is that more apparent than in its public facilities. In addition to traditional town functions, Windsor offers such services as a child day care center, an adult day care center, a Montessori, a cross-country ski center, and more.

This chapter will inventory and review the physical attributes of these facilities and services to ensure that they are appropriately located and sized to meet community needs during the planning period and beyond. Through its Capital Improvement Program (CIP), Windsor has already addressed many of the anticipated community facility needs during the life of this plan. The main community facility and service issues facing Windsor during the planning period are: relocating the dog pound and parks garage from Mechanic Street, enlarging or relocating the public safety complex, and relocating or partially relocating the public works garage, perhaps consolidated with the parks garage.

Continue to provide the excellent public facilities and services that contribute towards Windsor's role as an amenity rich community and high quality of life.

Town Hall



Hayden Station Firehouse



General Government

L.P. Wilson Community Center

The L.P. Wilson Community Center provides many social services programs for both the general population and its senior citizens. Recently L.P. Wilson has seen a growing demand for its services, particularly amongst its seniors as the mature adult population increases. To ensure L.P. Wilson is able to continue to meet the needs of residents, ongoing consideration is given to expanding programs that might include an enhanced senior fitness center, improved computer lab, and additional programs and activities such as hobby-related clubs, which would provide more opportunities for socialization. A consideration in determining program expansion is the need to extend hours of operation and additional staff. It is also important to examine transportation options for seniors so they are able to take advantage of the programs offered.

While consideration should be given to expanding programs and services, the facility itself is also in need of improvements. Currently Social Services lacks privacy for counseling clients and an updated food bank storage and distribution area is needed. Adequate parking at the L.P. Wilson Community Center is also a consideration. Upgrade and renovations to the restrooms and locker room is also planned in Fiscal Year 2016/2017 to better serve day to day needs as well.

Milo Peck Center

The Discovery Center is a child development program operated by the Town of Windsor, serving children aged eight weeks through eleven years and is housed in the Milo Peck Center. For preschool programming, the Town offers a Montessori School. The Discovery Center and Montessori School have been experiencing declining enrollment due to competition and continues to pursue marketing activities to build enrollment. Several facility repairs are needed such as heating/ventilation and parking lot repairs.

Community Center at 330 Windsor Avenue

The facility at 330 Windsor Avenue houses both the Caring Connection adult day care center and a community center. The Caring Connection is also experiencing enrollment declines and is restructuring in order to meet the needs of residents. The community center hosts many functions including a teen center and various recreation programs. The facility also offers a gym, indoor playscape, and rock climbing wall. It is anticipated that the community center will continue to meet the needs of residents during the planning period. Recent improvements include a new roof, electrical upgrades, backup generator, and roof top solar arrays.

Animal Shelter

The location of the animal shelter conflicts with redevelopment on the east side of Windsor Center and possible commuter rail parking. Alternative locations have been identified to relocate the facility and a Town Council decision on funding is expected in the first year of the planning period.

Education Facilities

Overall Trends

Looking back to 2000-2001 to today, school enrollment peaked at 4,495 students in the 2002-03 school year and is projected to decline system-wide over the next ten years. The following details enrollment by grade:

- Kindergarten enrollment peaked in 1995-96 and declined through 2010 before leveling off and is projected to remain steady through 2020.
- Elementary school enrollment peaked at 1,758 in 1997-98 and is projected to decline through 2015 before leveling off through 2020.
- Middle school enrollment peaked at 1,119 in 2002-03 and is projected to generally decline through 2020.
- High School enrollment peaked at 1,515 in 2002-03 and is projected to decline through 2020.

Given declining enrollment, the schools should have adequate capacity over the planning period. However it is important to continue to monitor and reassess impacts of planned developments such as The Villages at Poquonock and Great Pond. While significant in size, Great Pond will contain many smaller units that are not expected to result in significant numbers of school children, and will take upwards of 20 years to complete. A fiscal impact analysis of Great Pond indicated that the present school facilities should be able to handle any influx of children due to current excess capacity.

Poquonock Elementary School



Sage Park Middle School



School Enrollment Factors

In most communities, school enrollment is a function of overall demographic trends.

For example, the “baby boom” refers to a large number of people born in the United States between 1945 and 1965 (with a peak around 1955). As a result, school enrollments in the nation peaked around 1970 as the peak of the baby boom moved through the school system.

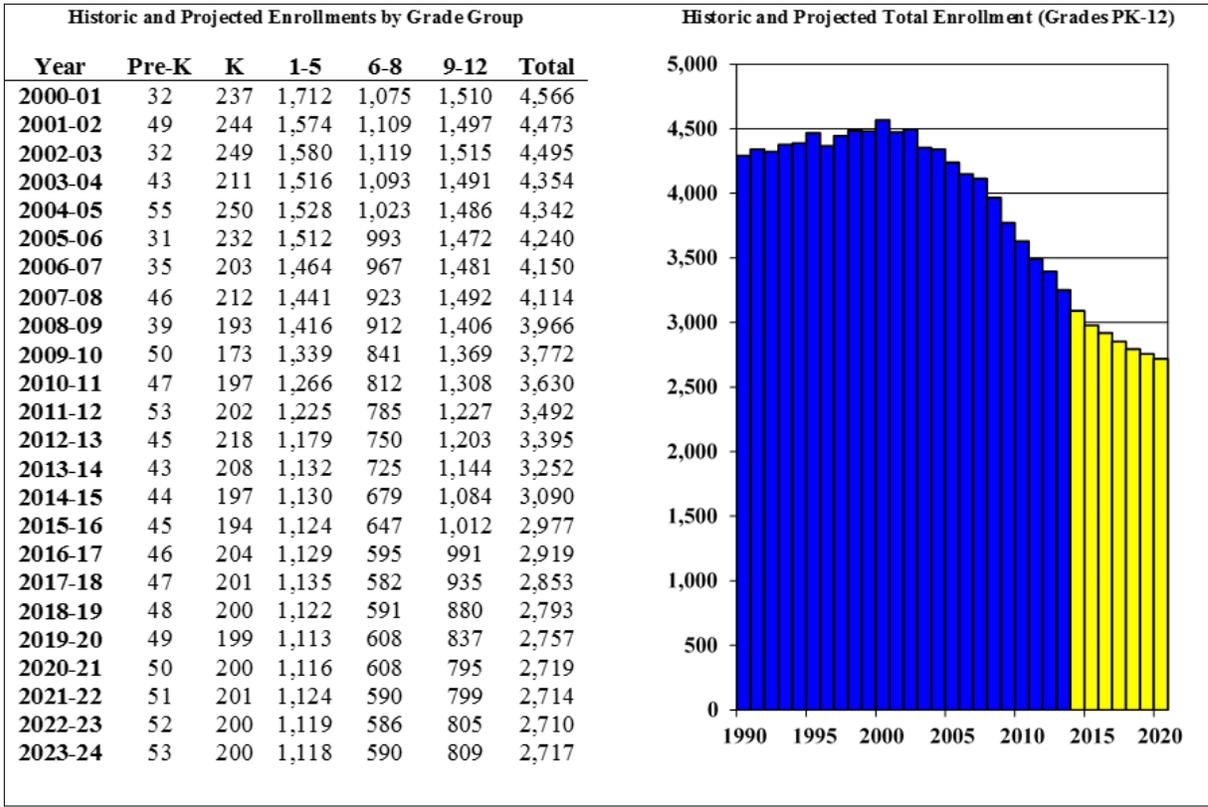
Since residents born at the peak of the baby boom were 35 years old in 1990, the birth rate in Connecticut peaked again around that time. As a result, enrollments in many communities peaked again around 2005 as this “baby boom echo” moved through the school system.

Net migration can also affect enrollment as students move in and out of the school system. As Windsor’s population continues to grow, so will its school enrollment as it is expected to maintain an enrollment ratio of approximately 15%.

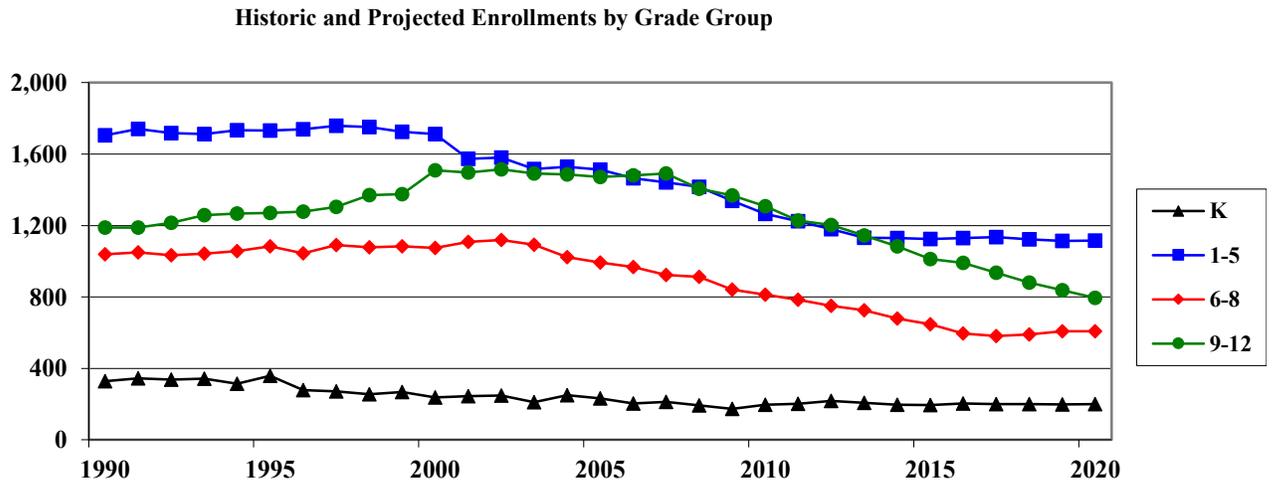
Recurring Peaks

Due to life stage and family formation cycles, enrollment peaks can be anticipated every 35 years, which in Windsor’s case is 2035.

Historic and Projected Enrollments for Windsor Public Schools



Source: NESDEC 2013 Windsor School Enrollment Projections



Source: NESDEC 2013 Windsor School Enrollment Projections

Public Safety

Police Department

Design is currently underway for a renovated and expanded safety complex, which will meet identified needs, including an expanded female locker room, storage space, upgraded training facilities and compliant holding cells. In addition to facility needs, the Police Department has ongoing equipment needs. It is important to monitor legislation and pursue funding opportunities to meet changing needs. Incremental staffing additions may be needed over the course of the planning period to address potential population growth due to development projects like Great Pond.

Fire Department

Over the course of the planning period, the Fire Department will need additional members, an enhanced facility, new vehicles, and additional fire protection resources as detailed below.

Windsor currently has a volunteer fire department with approximately 100 members in four companies. Like many volunteer fire departments, daytime response levels are decreasing, further consideration to add paid staff for emergency response is needed. In the meantime, it is important to continue programs to attract/retain volunteers.

The current Wilson Fire Station, the Rainbow Fire Substation and the Poquonock Fire Station should meet response needs over the next ten to twenty years. However if paid staff is added in the future, modifications may be needed for sleeping quarters.

The study of the public safety complex found that the Fire Department needs additional space, including larger apparatus bays, improved parking/circulation, and both office and training space. The project is expected to begin construction within five years.

In addition to facility and membership needs, additional fire protection resources and replacement vehicles are needed. Specifically Palisado Avenue north of Clapp Road has no reliable source of water for fire protection. If the situation warrants, extend the water line north from Clapp Road or south from Windsor Locks, or provide an alternative water source such as a cistern(s). To maintain both fire protection and ISO standards, the following vehicles will need to be replaced with like vehicles: Engine 10, Engine 7, Engine 22, and a 1972 tanker, following the vehicle replacement schedule detailed in the CIP.

Emergency Medical Response

The Town contracts with Windsor Volunteer Ambulance, Inc. (WVA) for ambulance/emergency medical services. WVA is transitioning from a volunteer medical service to a paid EMS staff. WVA currently sub-contracts with Ambulance Service of Manchester for backup emergency medical personnel to

supplement their corps for 24-hour rapid response. Over the planning period, the Town should continue to support WVA and their programs. As Windsor Volunteer Fire Department considers staffing needs, consideration of a combined Fire/EMS model is suggested.

Emergency Communications

The town-wide radio system was replaced in 2004. Consideration should be made for a full review in the next several years to match the needs of the town and technology changes.

Public Works

James Lee Public Works Complex

The current public works facility is overcrowded, has no room for expansion in place, and occupies prime real estate on Day Hill Road. Given current space needs and the recent closure of the Mechanic Street garage, a study of future space needs and possible alternative sites for all or part of the facility is needed. This will be a priority for the current planning period.

Maintenance

Public Works oversees road, sidewalk, park, and grounds maintenance. The current road maintenance budget provides for major street repairs to be performed on each street on a 25-year schedule. There are significant gaps in sidewalks and streets with no sidewalks.

Continued programmed sidewalk construction and replacement as outlined in the CIP, including construction of sidewalks within one mile of all schools and enhanced pedestrian circulation in the Day Hill Road area is recommended. The construction of sidewalks/trails should be included as part of site plan and subdivision approval process where appropriate.

Windsor's traffic signals have been updated with light-emitting diode (LED) lights, and as the technology matures, eventually street lights will be replaced with LED lamps to achieve long-term savings in both energy and maintenance due to the life expectancy of LEDs vs. high-intensity discharge (HID) lamps.

There is a multi-year effort underway to develop and implement a stormwater management system, including replacing old, damaged storm sewers, catch basins, and storm sewer laterals. The Town should continue to support the program and prioritize improvements to the stormwater system as detailed in the CIP.

Vehicles/Equipment

The average age of public works equipment and the town-wide fleet is growing older. Continue planned increases to the fleet replacement budget to allow scheduled purchases of new vehicles.

Waste Disposal

The municipal solid waste landfill reached capacity and stopped receiving waste in 2014. A methane gas collection system was installed and the capping and closure of the landfill will be ongoing through 2017 using enterprise funds collected for the purpose. A resident transfer station is operating with municipal solid waste and bulky items disposed off-site at state permitted facilities.

The Town recently began a biweekly curbside recycling collection program, using larger rollout containers.

Town Facility Improvements

Heating and air conditioning (HVAC), electrical, and energy improvements have been completed at a number of town facilities but additional improvements will be needed at many remaining facilities over the next ten years. In addition, updates and replacement of fire alarm control panels and security systems are required, as are roof replacements for several town buildings, including the Poquonock Fire Station and Clover Street School.

The Town Hall is in need of several improvements. The Town Hall windows are from the original construction in 1965 and will be replaced with more energy efficient units in 2015. Furthermore, the interior of Town Hall was last renovated 25 years ago and in need of new carpet, doors, repainting, and upgraded light fixtures. The first phase of this project is slated for 2015, with renovations to the second and third floors planned.

Recreation / Cultural Facilities

Outdoor Recreation

The Town of Windsor has five major parks including Northwest Park, Sharshon Park, Stroh Park, Washington Park, and Welch Park. In addition, the Town has various other parks and facilities including the Barber Street Boat Launch (owned by Connecticut Department of Energy and Environmental Protection (DEEP)), Custer Drive Playground, Deerfield Park, Fitch Court Playground, Lancaster Drive Park, L.P. Wilson Community Center, Pleasant Street Park, Rainbow Boat Launch (owned by DEEP), River Street Park, Trent Drive Park, Windsor Center Riverwalk, and all school playground and athletic facilities.

In the coming years, improvements will be needed at various facilities. An Athletic Field Master Plan, commissioned and adopted by the Town Council in 2013, recommends improvements to various athletic fields; the skate park equipment is outdated and showing signs of deterioration; the Northwest Park Caretaker House is in need of new windows and doors; two barns at Northwest Park need to be re-roofed; the boat launch at Pleasant Street is inadequate and upgrades are required; and playground equipment at Custer and Lancaster Parks are outdated and need to be replaced. The Town should stay on track with projects outlined in the Athletic Field Plan and the CIP, including: design and construction of athletic field projects; design and construction of a new skate park facility; and improvements at Northwest Park. In addition to the projects outlined in the CIP above, changing and bathroom facilities are needed at Welch and Goslee Pools, and Welch Park is in need of wading pool area improvements.

The Connecticut and Farmington Rivers are an untapped resource for greenways and an extension of the Windsor Center Riverwalk. The Day Hill Road corridor has also been identified as needing a trail system for workers.

Libraries

Improvements have recently been completed at both the Windsor Library and Wilson Branch Library, including an energy retrofit to the Wilson Branch and an extensive addition to the Windsor Library. With the increase in space at the Windsor Library, limited parking continues to be an issue to be addressed. The Town should continue discussion with Grace Episcopal Church to connect the library parking lot with the Huntington House and Town Hall parking lots to the rear of the church.

Windsor Library



Jack O'Brien Stadium



Strategies to Address Current Needs

1. Continue programs to attract and retain fire and ambulance volunteers.
2. Relocate the animal shelter.
3. Continue design and construction of the public safety complex.
4. Continue with scheduled construction and replacement of sidewalks.
5. Study future space needs and possible alternative sites for all or part of the public works complex.
6. Work cooperatively with Grace Episcopal Church to connect the library parking lot with the Town Hall parking lot to the rear of the church.

Strategies to Prepare for Mid- and Long-Range Needs

1. Continue to monitor changes in the senior population to anticipate program and staff needs.
2. Increase fleet replacement funding.
3. Continue implementation of 2013 Athletic Field Master Plan including increasing annual funding for turf management.
4. Monitor changing demographic and recreation trends to anticipate future program and facility needs.
5. Construct greenway trails along the Connecticut and Farmington Rivers.
6. Construct a trail along the Day Hill Road Corridor.
7. Extend the water line north from Clapp Road or south from Windsor Locks or provide an alternative water source such as a cistern(s) for fire protection.

IMPROVE TRANSPORTATION FACILITIES

12

Overview

Transportation continues to play a significant role in shaping the amount and pattern of development in Windsor. Easy highway access helped Windsor grow as a residential community and employment center. Proximity to Bradley International Airport gives Windsor a competitive edge in attracting new businesses. Rail service connects passengers and moves goods to other parts of the region and beyond.

Most people will continue to get around Windsor by driving, so maintaining and improving roads will remain an important component of transportation planning efforts in the next ten years. However, mobility needs will change as Windsor's economy grows, demographics shift, and new transit opportunities emerge. Windsor is prepared to provide a comprehensive, interconnected transportation system that serves:

- residents, employers, employees, visitors and those passing through;
- drivers, commuters, walkers, bicyclists; and
- those too young to drive, who cannot drive, or who choose not to drive.

Perhaps more than any other topic in this plan, addressing transportation requires partnerships. Windsor works with neighboring communities, the Capitol Region Council of Governments (CRCOG) and the Connecticut Department of Transportation (ConnDOT) to advance roadway and transit projects. These and new partnerships with private sector employers will be key to meeting Windsor's vision for increasing transportation options and economic opportunity, while enhancing overall quality of life.

Chapter 10 - Day Hill Corporate Area contains detailed recommendations for roads, transit and traffic demand management within the corporate area. This chapter will briefly touch on these topics or simply refer back to Chapter 10 rather than repeat these key strategies in their entirety.

Provide a safe, efficient and interconnected transportation system that offers choice, boosts economic competitiveness, and fits within our community landscape.

Transportation Studies

In the last ten years a number of transportation studies and plans with implications for Windsor have been conducted. Many of their recommendations are referenced in this chapter. Studies include:

- 2014 Windsor Center Transit-Oriented Development Plan and Redevelopment Strategy, Town of Windsor
- 2009 Northwest Corridor Transit Study, CRCOG. Focused on Day Hill Corporate Area.
- 2009 Route 305 Corridor Study, CRCOG
- 2005 Bradley Area Transportation Study, CRCOG
- 2004 Griffin Busway Feasibility Study, CRCOG
- Day Hill Road Traffic Light Synchronization Study

In addition, a number of studies are ongoing as part of the Springfield-Hartford-New Haven Commuter Rail Program.

Maintain and Enhance Roads for All Users

Traffic on state roads in Windsor has declined over the last ten years, except for segments of Routes 178 and 305 connecting Bloomfield to I-91. While traffic decreases are not unusual during a recession, given the amount of development that is planned or underway and the overall improving economy, it is reasonable to anticipate that this trend will reverse in some instances and traffic will increase over the next ten years. As development continues in neighboring Bloomfield and East Granby as well as Windsor, more people will rely on arterial and collector roads leading to and from I-91. Existing traffic issues will not resolve themselves and without intervention, may worsen.

Balancing economic growth with resultant traffic demand warrants a three-pronged approach for Windsor. First and foremost, reduce the demand that existing development and new development have on Windsor's roadways. There are numerous strategies in this plan that increase transportation choices or decrease the need to advance this approach.

- Continue to implement "tweaks" to roads that will help address immediate safety and traffic flow issues. A number of recent studies provide very specific recommendations for short-term implementation (see sidebar).
- Ensure that road widening and expansion are a last resort and support multiple town goals – not just traffic flow goals. Any new or expanded roadway will define that area for decades to come. Easier, less expensive solutions tend to focus primarily or solely on moving vehicles, with little attention to pedestrians, bicyclists, streetscapes and landscape elements that help make Windsor a desirable place to live and work. Windsor can and should raise the bar for new road design and capacity improvements.

Strategies contained here can help to expand use of roadways for other modes, improve traffic flow, reduce overall single-occupancy vehicle demand, and minimize the impacts of traffic in well-travelled corridors.

Make "Complete Streets" a Standard Practice

Most communities have built and managed their roadway network almost exclusively for motor vehicles. Communities and transportation engineers are recognizing that roadways can and should accommodate more transportation options including walking and biking. This concept, called "Complete Streets", is also embraced by the Connecticut Department of Transportation (ConnDOT); they are creating Complete Street policies, updating their design manual and training staff on Complete Street techniques.

Not all improvements require extensive engineering and construction. One key element of the State's approach is to provide wider shoulders for bicyclists by reducing travel lanes to 11 feet through restriping. This low-cost approach helps makes existing streets friendlier to pedestrians and bicyclists, while potentially slowing vehicular traffic due to the less comfortable lane width; and should be implemented on Routes 75, 159 and other state routes as the state repaves and restripes these arterial roads.

While Windsor supports the concept of Complete Streets, it has taken an ad-hoc approach thus far. The Town has incorporated a Complete Streets approach into recent road construction projects such as the Prospect Hill Road reconstruction. The Zoning Regulations include provisions that Design Development Districts are expected to include facilities for “pedestrians, bicycles, transit, and motor vehicles.” The Subdivision regulations specify sidewalk requirements for new roads, but are silent on bicycle provisions. The Windsor Center Transit Oriented Development (TOD) Plan conceptualizes how streets of varying widths can be turned in to complete streets. The TOD Plan also provides specific recommendations to better accommodate pedestrians and bicyclists on Broad Street via a “road diet” (i.e. reducing travel lanes from four to two, with center turn lanes, dedicated parking on both sides of the street, and pedestrian bump-outs at intersections to reduce the amount of pavement for pedestrians to cross).

The next step may be for the Town to shift from an ad hoc to a formal approach. Over the short-term, the Town should adopt a Complete Streets policy that describes what a Complete Street in Windsor is and why it is important. Windsor’s Complete Streets approach could focus on major travel corridors, since many low traffic through streets and cul-de-sacs are naturally bike and pedestrian friendly and may not need improvements. The policy should require that the needs of all current and potential roadway users are addressed when a road is improved, built or reconstructed. Restriping, providing sidewalks or adding bicycle lanes should not be treated as add-ons or amenities, but rather integral components to any road project. The Town should also advocate that ConnDOT do the same for state roads in Windsor.

Longer term, the Town should create a Complete Streets Plan to identify priority streets and provide specific recommendations on how to make those streets more bike and pedestrian-friendly.

Improve Safety and Efficiency

Well-maintained roads improve both driving conditions and safety, and convey a positive image to residents, employers, visitors and commuters. Ongoing maintenance extends the life of a road resulting in less frequent reconstruction and long-term cost savings. Windsor has adopted a Pavement Management System to help determine road maintenance and construction priorities. The program uses real-time data and road monitoring, allowing for cost effective allocation of dollars. The Capital Improvement Program (CIP) provides annual funds for road maintenance, ranging from \$584,000 in FY 2015 to \$919,000 in FY 2020. This funding level allows major streets to be reconstructed every 25 years which is longer than the 20-year life expectancy of most road projects.

The Windsor Police Department and ConnDOT maintain accident data for state and local roads. Based on combined data, top accident locations in Windsor include Day Hill Road (as it approaches Route 75) and Routes 305, 178 and 218 as they approach interstate ramps. Various studies have proposed improvements such as new signals, turn lanes and other measures.

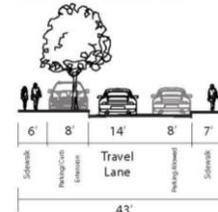
Complete Streets

Connecticut General Statutes Section 13a-153f(a)(c) Accommodations and Provisions of Facilities for All Users, requires ConnDOT to consider the needs of all users in the planning, programming, design, construction, retrofit and maintenance of its roads, and ConnDOT has adopted a Complete Streets policy in accordance with that statute.

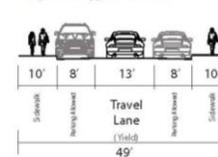
The CRCOG 2014-2024 Regional Plan endorses Complete Streets and calls for the: "Adoption of a complete streets ethic, with accommodations for all users being a routine transportation project consideration..."

The Windsor Center TOD Plan conceptualized Complete Streets:

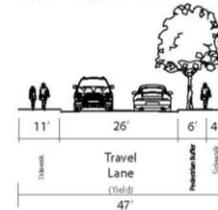
Proposed Type A Street



Proposed Type B Street



Proposed Type C Street



Sample street cross section standards that balance vehicular flow with pedestrian needs

Private Roads

Private roads, maintained by the developer or a homeowners association, serve some Windsor neighborhoods. Potential residents on these roads need to understand that living on a private road has both pros and cons and may not be for everyone.

The same regulations that allow these private road, allow developers to build at higher densities, with narrower roads, less road frontage, smaller setbacks for homes, and generally less expensive homes due to infrastructure and land cost savings.

The Town should ensure that new homeowners are both aware of their shared responsibility for the perpetual maintenance of their private roads, and that there is no property tax relief despite the lack of maintenance by the town.

Cars turning into and out of private developments can create safety issues and cause congestion. This problem is aggravated where there are many driveways close together on a busy road. “Access Management” is a strategy to optimize access to land while ensuring safe and efficient traffic flows. Windsor’s Zoning Regulations regulate the distance a new driveway must be from other driveways and encourage shared driveways. The regulations could be updated to provide strong incentives for sharing driveways, such as reduced frontage or setbacks, increases in allowable signage, or other provisions.

However, existing driveways can also cause issues and zoning regulations only apply to sites seeking a permit. The 2011 Capitol Region Transportation Plan calls for funding for access management plans. Some of the recent transportation studies conducted for roads in Windsor provide recommendations related to driveways, but a detailed plan has not been developed for key busy corridors. The Town should seek funding for access management plans to identify problem driveways, provide specific recommendations on which driveways to close and/or consolidate, and identify ideal driveway locations for new development. The recommendations in such a plan are not mandatory, but are intended to provide guidance to land owners, developers, staff, and commissions when properties are developed or redeveloped.

While too many driveways in a small area can create safety issues and congestion, sign congestion can also distract drivers and pose safety risks. Signage along Windsor’s roadways must follow ConnDOT standards and state roads in particular are directly controlled by ConnDOT, however Windsor should collaborate with ConnDOT to eliminate redundant signs where possible. Windsor is also able to control signs on private property through its Zoning Regulations, which limit the number of freestanding signs permitted on each property, require signage to be located outside of the right of way, and restrict the height, illumination, and size of signs. In this manner, the Town is able to prevent oversized, flashing signs that may be distracting to drivers.

As noted, recent traffic studies recommend short-term improvements to help address congestion along key state roads such as Bloomfield Avenue. The Town should continue to pursue funding for these improvements and work with ConnDOT and developers to make improvements when development is proposed. Improvements along town roads should continue to be programmed in the CIP based upon the pavement management program, the need to address safety issues, the need to support business areas, and to address overall quality of life issues. Lastly, the Town should ensure that private driveways and roads are constructed and maintained to standards that ensure safe and efficient passage, and that potential homeowners on private roads understand the pros and cons of living on a private road (see sidebar).

Reduce Demand on Roads

Chapter 10 - Day Hill Corporate Area emphasizes expanding traffic capacity in this regionally-important employment area. Strategies also are provided to reduce trips and expand transit options. Elsewhere in town, emphasis should focus on reducing the need for costly road expansions by managing demand. Demand management strategies can include:

- reducing trips by shifting some amount of existing and future traffic to transit, walking, or biking (see later parts of this chapter);
- reducing trips through ride-sharing (see Chapter 10 - Day Hill Corporate Area);
- spreading trips out so there are fewer drivers during peak congestion hours (see below and Chapter 10 - Day Hill Corporate Area); and
- eliminating trips completely by encouraging telecommuting or shorter work weeks (see Chapter 10 - Day Hill Corporate Area).

Another way to reduce or eliminate vehicle trips is to align land uses by placing origins (housing) and destinations (jobs, services, parks, schools) within walking distance of one another (mixed-use development) or to transit nodes such as the Windsor train station or a park-and-ride lot (“transit-oriented development”). Windsor, Wilson, and to some degree Poquonock, naturally evolved in this manner due to street car service and local employment opportunities, while the balance of Windsor grew in typical post-war suburban fashion, with dissimilar land uses deliberately separated from one another. The recently approved Great Pond village is a perfect example of mixing land uses to lessen the transportation impact of development.

In locating at the western end of Day Hill Road, Great Pond will place future residents within walking distance of major employers; provide daytime amenities to employees working in the corridor; and for those who choose to live in Great Pond and work elsewhere, create a reverse traffic flow into and out of the corridor using underutilized travel lanes during the peak hours. Windsor should continue to encourage mixed uses in its villages and in other suitable areas (see Chapters 7, 8, and 9).

Account for Context and Livability along Roads

Streets contribute significantly to the image of the Town and its neighborhoods. Wide spans of pavement, deteriorating pavement, heavy traffic, litter, unkempt landscaping (or lack of), and speeding traffic negatively affect our perception of an area. Streets should complement adjacent neighborhoods and be designed to minimize, as much as possible, typical quality of life issues that a busy street can generate.

Roadway classifications generally dictate aspects of road improvements such as lane and shoulder widths and design speed (see sidebar) with little regard for adjacent land uses (i.e. lack of context). Context Sensitive Design aims to balance roadway function with the adjacent environs. The Roadway Transportation Plan map and table on the following pages identify areas of special context in Windsor. When major road improvements are planned by either the Town or ConnDOT, the considerations in the table should be equally as important as the roadway classification, if not more so.

The Town began a traffic calming program that aims to reduce the impact that traffic can have on neighborhoods. The program takes a multi-prong approach to reduce speeding and cut-through traffic on existing streets with engineering

Road Classifications

Roads are typically classified based on function (serving regional or local traffic), major land use, traffic volumes, and overall location. Road classifications used in this POCD are:

Limited Access Highway – Regional, higher speeds with controlled access points.

Arterial Road – Primarily intended to carry regional traffic and serve major activity centers.

Collector Road – Intended to distribute traffic between arterial roads and neighborhoods. May serve businesses.

Local Street – Intended to provide access to abutting properties and not serve through-traffic.

The State also uses road classification for incident management (i.e., diverting traffic from I-91 when needed).

solutions, enforcement, education, and other enhancements. The Town created a Traffic Calming Manual that depicts engineering and design practices designed to slow vehicles down. For example, drivers tend to slow when a road is narrow or appears narrow, so measures such as restriping lanes and allowing on-street parking can all slow traffic. The manual explains what types of calming measures are appropriate in Windsor and provides a protocol for determining which streets should be eligible for traffic calming.

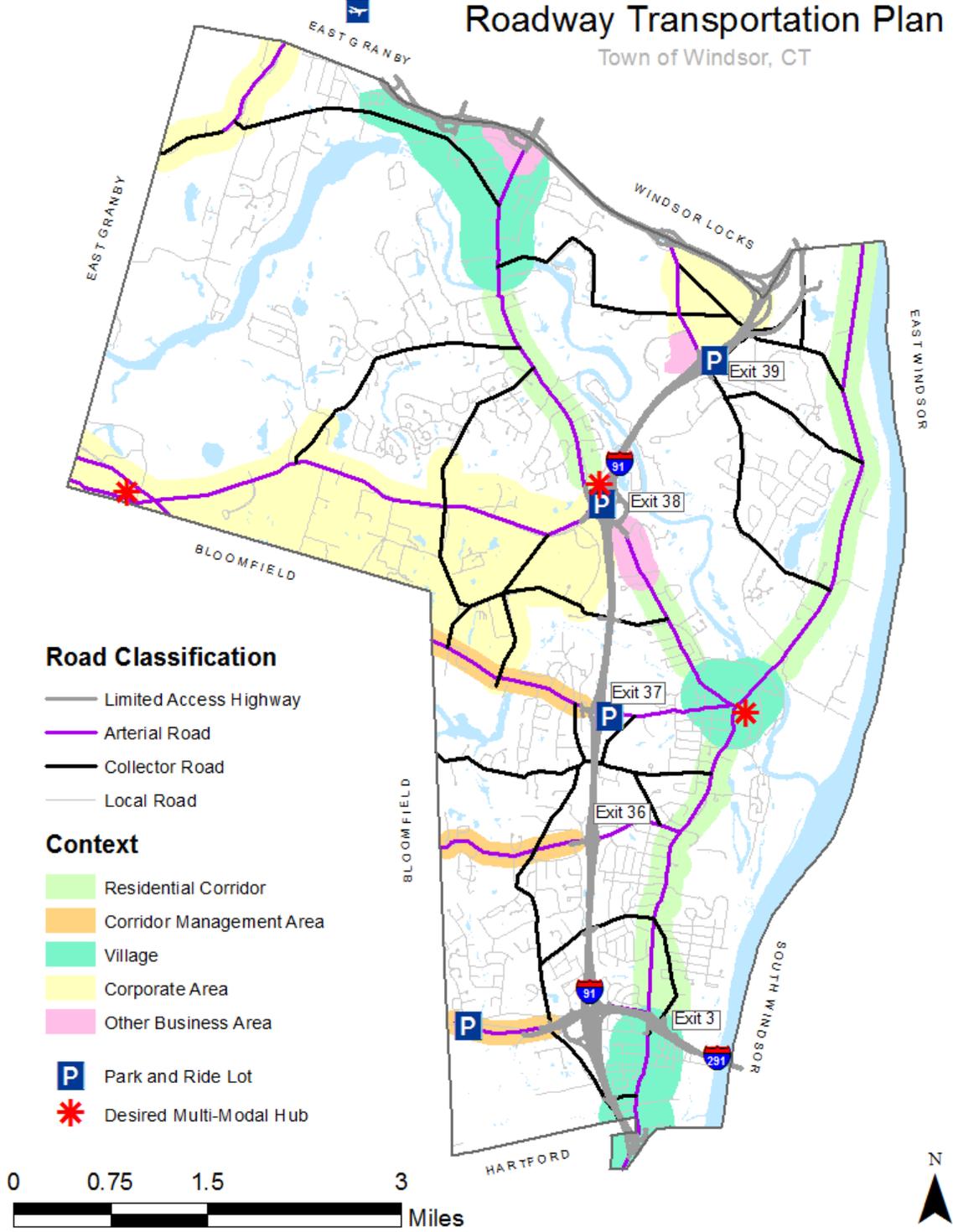
The Town's Drive Wise program is the educational component of traffic calming. The program is available on request by a neighborhood. Yard signs remind motorists to slow down, a radar equipped sign tracks and shows drivers their speed, and police step up speed enforcement in the neighborhood.

Truck traffic has affected some parts of town more than others. With its proximity to Bradley International Airport, easy interstate access, and large, flat, vacant parcels, Windsor has drawn industry and warehouses that in some cases generate significant truck traffic. For the most part, trucks do not travel through residential neighborhoods to reach their destinations, but some problems persist, and even a few daily occurrences can unsettle residents.

The Town should continue to monitor truck traffic, speeds, and any associated noise concerns; work with businesses and their trucking companies to ensure that truck drivers avoid residential roads; and identify solutions to direct truck traffic to appropriate roads. The Planning and Zoning Commission should continue to carefully analyze potential truck traffic and likely routes during the permitting process. The Town should continue to work with neighboring communities to stay apprised of development outside of Windsor that might add to in-town truck traffic.

Roadway Transportation Plan

Town of Windsor, CT



Context Sensitive Approach for Windsor

Context	Roadway Considerations
Village	Distinct nodes with a focus on pedestrian activity. The flow of traffic is important, but should be secondary to providing access to abutting land uses. Streetscape improvements are important. Avoid / reduce excess road pavement and widths that encourage speeding. Provide a safe pedestrian environment with complete sidewalks and safe crosswalks.
Corporate Area	Area with large scale economic uses with an emphasis on moving traffic between businesses and I-91 and Bradley Airport. Improvements should convey a first class corporate feel, with landscaping, greenery, and multi-use pathways. Manage access at driveway and street intersections.
Corridor Management	Implement recommendations from recent studies to address immediate issues. Work with the Office of State Traffic Administration and developers to carefully manage the location of new driveways to minimize conflicts.
Other Business Areas	Provides access to businesses. Key focus on access management.
Residential Corridor	Important road for through-traffic, but mainly residential. Greenery and landscaping contributes to a residential lawn appearance. Retain and increase the residential feel with more trees, landscaping, and green medians. Allow for the smooth and efficient flow of traffic, while discouraging speeding

Road Maintenance and Enhancement Strategies*

1. Adopt a formal Complete Streets policy which makes complete streets the default approach unless proven infeasible.
2. Create a Complete Streets plan.
3. Update the Zoning Regulations to provide additional incentives for driveway sharing.
4. Create access management plans for critical areas.
5. Implement safety and access recommendations from recent transportation studies when road improvements are planned and when new development is proposed.
6. Ensure that private roads are constructed and maintained to standards that ensure safe and efficient passage.
7. Encourage employers to take measures to reduce employee trips.
8. Encourage mixed-use to reduce trips.
9. Account for context when road improvements are planned.
10. Continue to implement traffic calming measures and programs to improve the quality of life along roads.
11. Continue to monitor and address truck traffic levels, speeds and noise concerns.
12. When ConnDOT plans improvements to state routes, advocate for the improvements to incorporate the policies outlined in this Chapter.

*See additional strategies in Chapter 10.

Implement the Windsor Center Transit Oriented Development Plan

In 2014 the Planning and Zoning Commission finalized a strategic plan to revitalize Windsor Center as an economic, civic, and commuter hub by capitalizing on rail service improvements planned for 2016 and beyond. Those elements of the Windsor Center Transit Oriented Development (TOD) Plan related to Windsor's transportation system are summarized here.

The TOD Plan outlines two key transportation related visions for Windsor Center:

- **Windsor Center will be walkable and connected.** It will be a compact district that takes advantage of transit and reinforces all of the uses by becoming an increasingly walkable, well-connected cluster of uses, places, services and amenities.
- **Windsor Center will be accessible and safe.** It will be a convenient district that is easy to access from other areas and that allows pedestrians, bicycles and automobiles to get around safely and efficiently.

Key strategies focus on five areas:

- **Intermodal Hub**
 - A new rail station with a parking deck will serve as a hub connecting transit users, drivers, pedestrians, and bicyclists.
 - It will link both sides of tracks, with a pedestrian overpass.
- **Pedestrian & Bicycle Connections**
 - It should be easier to cross roads (road diet, traffic calming).
 - A principle east-west pedestrian corridor could be created along Maple Street to the rail station and to pathways linking to the River Trail.
 - Sidewalks should be extended down Batchelder Road.
 - Better bicycle signage and storage racks should be provided.
- **Road Improvements**
 - Broad Street should be put on a "Road Diet," reducing four through lanes to two through lanes with center turn lanes at key intersections, allowing for on-street parking on both sides of the street, pedestrian bump-outs at intersections and removal of excess pavement.
 - Intersections should be better organized.
- **Parking Management**
 - A coordinated parking management program should be implemented.
 - Parking spaces should be in convenient, efficient, and targeted locations.

- **Periphery Neighborhoods**
 - Streets should be made more walkable and bikeable.
 - Traffic should be calmed, with cut-through traffic reduced.

Windsor Center TOD Strategies

13. Implement the transportation strategies contained in the Windsor Center TOD Plan.

Broad Street “Road Diet”



Transit Hub and Parking Garage



Integrate Transportation Modes

Create Intermodal Facilities

The proposed new rail station in Windsor Center is envisioned to be an intermodal hub that connects five modes of transportation: trains, buses, walking, bicycling and driving. To ensure the creation of this multi-modal transportation hub, the Town will need to:

- support building the new rail station and parking garage in a manner that supports multi-modal objectives;
- push for bus service to the station that is timed to optimize connections to train service to meet the needs of both residents and workers;
- improve pedestrian and bike connections to and from the station so that those who live or work nearby can safely and comfortably access the station without a car; and
- push ConnDOT to locate the parking garage behind Town Hall to serve not only transit riders, but also Town Hall employees/visitors during the day, as well as center business patrons in the evenings and on weekends.

The Windsor Center train station is just one opportunity to connect transportation modes in Windsor. The Capitol Region Plan of Conservation and Development identifies the Poquonock Avenue Park and Ride facility at Exit 38 as a future “mobility hub”, which would provide access to transit, bicycle and pedestrian facilities. The lot could include berthing space for buses and shuttles, an enclosed and heated waiting space, transit information, and possibly vending services. The Northwest Corridor Transit Study recommends a “focused marketing strategy” to encourage people to park here and use transit. The Town should encourage the creation of a multi-modal transit hub at this parking lot and work with ConnDOT to explore creative funding approaches, such as vendor fees and advertising rights. While the other commuter lots are not specifically targeted as multimodal facilities, opportunities to better link modes and provide commuter services at those lots could be examined.

Intermodal Facilities Strategies

14. Support building the new rail station and garage in manner that supports multi-modal objectives.
15. Ensure that bus service to the station is timed to optimize connections to train service and that bus routes meet the needs of Windsor residents and workers.
16. Improve pedestrian and bike connections to and from the station so that those who live or work nearby can safely and comfortably access the station without a car.
17. Strategically locate a parking deck to serve transit riders and businesses in the Center.
18. Encourage the creation of a multimodal transit hub at the Exit 38 commuter lot and work with ConnDOT to explore creative funding approaches.

Support Expansion of Mass Transit

Windsor has the opportunity to provide a comprehensive, integrated transit system unlike most Connecticut suburbs. Windsor’s transit system evolved in the traditional approach of connecting residents to jobs in downtown Hartford. As more jobs moved to the suburbs, the origins and destinations of transit riders changed. Yet transit service has been slow to respond to this shift in commuting patterns, mainly due to costs and the ease of simply driving from home to work in the suburbs. With the commitment of the Town and CRCOG, planned rail service improvements, and interest by employers, Windsor is poised to see a realignment of transit service to better match today’s commuting patterns and anticipate tomorrow’s needs.

Support Planned Passenger Rail Service Expansion

Over the next 15 years, the planned New Haven-Hartford-Springfield Commuter Rail project and enhanced Amtrak intercity rail service will dramatically improve passenger rail service in Windsor Center. Recent studies counted 10,000 boardings or detrainings at Windsor station annually. With the planned improvements, Windsor’s ridership is expected to increase five-fold to 51,600 by 2030 (see sidebar). Expanded service can help alleviate congestion, offer greater transportation choices, and boost Windsor’s businesses.

To accommodate new and expanded service, capital improvements in Windsor Center include:

- a new station with high-level platforms and a pedestrian overpass;
- track improvements including restoration of the second track, new passing sidings, upgrades and changes to bridges and culverts;
- improved quieter crossings and signals;
- parking, kiss and ride, and bus drop-off facilities.

The Windsor Center TOD Plan identifies a preferred location and recommended design for the station, platforms, parking and bus drop-off areas. The Town should actively support funding for these projects and ensure that the ultimate design supports the goals for Windsor Center as outlined in the TOD Plan.

Encourage Bus Service Improvements

Connecticut Transit operates six bus routes in Windsor, which connect Hartford with some of Windsor’s employment areas such as the Day Hill Corporate Area, the New England Tradeport, and Windsor Center. Three routes have limited service, with Route #15 being an express bus with just one stop in Windsor and the #34 and #36 routes only provide weekday service.

CRCOG has studied ways to improve bus service to Day Hill Corporate Area and the latest regional transportation work plan includes continued work with Windsor to identify bus service improvements. Recommendations have included expanding hours of service, extending routes, increasing frequency, and diverting the Route 5 Enfield express to Day Hill Road. New regional routes are suggested

Train Service in Windsor

Existing Service with Stops in Windsor

- Four round trip shuttles between Springfield and New Haven
- One round trip train with direct service between Springfield and Washington DC

Proposed Service with Stops in Windsor

By 2016

- Eight round trips between Springfield and New Haven
- Vermonter service to the Pioneer Valley and Vermont via improved Connecticut River Line trackage

By 2030

- Double track service with bi-directional commuting to Enfield and Springfield, more frequent rush-hour trains, and reduced travel times
- Direct service to Boston via an inland route between Boston and Washington DC

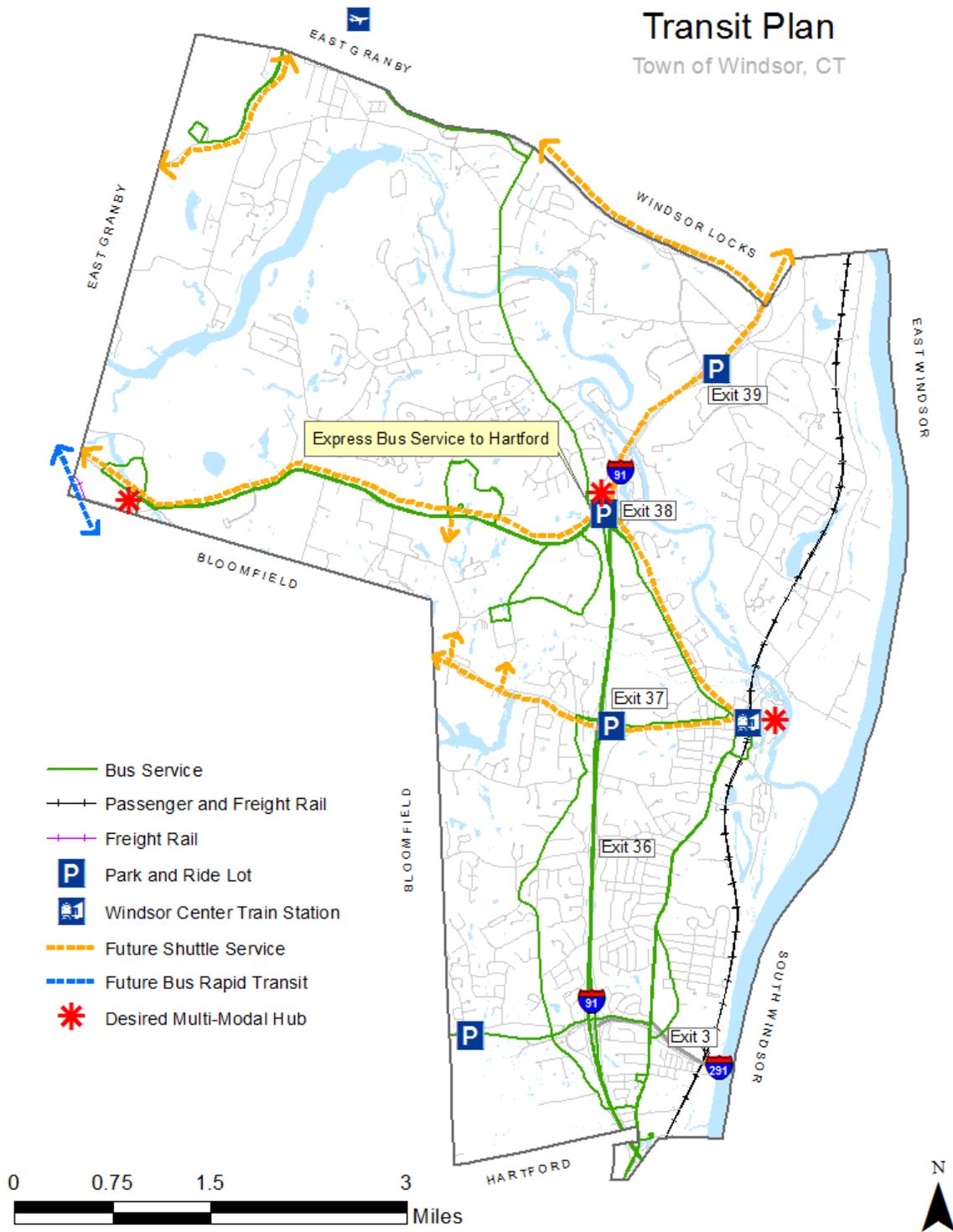
to better connect the airport and other suburbs to Day Hill Road. As discussed earlier, shuttle service could help fill service gaps between Day Hill Road and Windsor Center and CT Transit bus schedules should align with future peak-hour train schedules if possible.

Some aspects of the current bus system might be deterring new riders. User-friendliness includes safe and comfortable bus stops, easy-to-understand scheduling and routes, and more frequent service. Some bus stops do not provide shelters or even paved areas for waiting. CT Transit has improved its on-line bus route information but it can still be confusing for novice riders to understand scheduling: especially for routes with multiple spurs, such as Route #32. The TOD Plan recommends clearly marked and well-located bus stops with shelters in Windsor Center and shelters should also be provided or improved at heavily used bus stops outside of Windsor Center.

The Griffin Line corridor was examined for its potential to support mass transit, with a Bus Rapid Transit (BRT) system selected as the preferred alternative to provide businesses located in western Windsor and Bloomfield with a quick, convenient connection to Union Station in Hartford, and potentially Bradley International Airport, using a fixed guideway dedicated solely to buses. Due to projected ridership failing to meet federal funding guidelines, CRCOG shifted its local transit focus to the Northwest Transit Study, described previously, and any further consideration of a Griffin Line BRT will depend on the success of the Hartford to New Britain CTfastrak program, which opened in 2015. Windsor should monitor the success of CTfastrak together with Great Pond and reevaluate the Griffin Line if it appears that it will prove beneficial for Windsor residents and businesses.

Transit Plan

Town of Windsor, CT



Continue Ride Programs for Those in Need

Several segments of Windsor’s population are not able to use, or have great difficulty using bus or train service because of either disabilities or the services do not connect them as frequently or as close to their place of employment as they would like. Three public transportation programs help to fill that gap in Windsor.

- The Greater Hartford Transit District provides paratransit service for residents with disabilities throughout the region, including Windsor.
- Windsor dial-a-ride service is available to elderly and disabled residents, providing approximately 28,000 trips per year to destinations within town as well as to Bloomfield, Hartford, and West Hartford. The service is free, with a suggested annual donation of \$35.
- The Jobs Access Program is a regional program that provides rides for people who cannot access their job without assistance. The program provides service from Hartford to shopping centers and employment corridors in Windsor.

Additional services are provided by non-profit and private providers for seniors and residents with disabilities who need assistance.

According to Windsor Social Services, younger seniors are often not aware of many of the services available to them. The Town should continue to support the provision of these services and better promote them to ensure that all eligible residents are aware of their transportation options.

<p>Mass Transit Strategies</p> <ol style="list-style-type: none">19. Support building the new rail station and garage in manner that supports objectives in the Windsor Center TOD Plan.20. Continue to identify bus service improvements to better serve employment areas.21. Ensure that bus service aligns with train scheduled.22. Work with CT Transit to provide comfortable bus shelters and clear bus signage.23. Monitor the success of the CTfastrak system and Great pond growth for potential use of the Griffin Line for Bus Rapid Transit.24. Support the provision of paratransit services for seniors, people with disabilities and those who need assistance getting to and from work.

Enhance Pedestrian and Bicycle Circulation

Overall Windsor is a walkable community due to historic village settlement patterns, relatively flat terrain, and a history of investing in sidewalks. Many origins (neighborhoods) and destinations (schools, parks, and commercial areas) are close together making it easy to get around on foot or by bike.

Some view sidewalks as a recreational amenity. Indeed workers appreciate the opportunity to walk outside on a nice day and residents enjoy walking around town and along the river. But sidewalks are much more than an amenity – they are a legitimate and integral component of Windsor’s transportation system. For some, walking or biking is one of the only ways they can get around Windsor. Stricter driver permit laws require teens to wait longer to obtain their license. More young adults cannot drive, choose not to drive or delay obtaining a license. Our over-65 population is growing and will likely increase demand for non-driving options to get around. For these populations, walking (or biking for some) is not a “choice” but rather their key mode of transportation.

Expand and Improve Sidewalks

The Town has over 86 miles of sidewalks, according to the FY 2015 – 2020 CIP. A number of projects that will enhance Windsor’s walkability are included in the CIP. Generally, the Town prioritizes areas for sidewalk installation based on:

- areas likely to generate pedestrian traffic (schools, Windsor Center), and
- areas where encouraging more pedestrian traffic can help reduce car traffic (Day Hill Road, major roads).

The Windsor Center TOD Plan identified specific pedestrian improvements in Windsor Center:

- provide a continuous and complete sidewalk network, with sidewalks on all residential streets in the Center;
- provide sidewalks on both sides of Palisado Avenue to the river;
- provide a sidewalk on Batchelder Road between Broad Street and the causeway;
- provide sidewalks on Mechanic Street to connect Batchelder Road to the Windsor Center Trail and train station; and
- make intersections easier to cross, with crosswalks, pedestrian ramps and bump-outs (curb extensions).



Pedestrian Infrastructure

- sidewalks
- trails
- visible crosswalks
- signalized crosswalks
- ADA upgrades
- pedestrian signage
- street furniture (e.g., trash receptacles, and benches,)

Bicycle Infrastructure

- wide shoulders
- dedicated bike lanes or off-road paths
- signage
- bike-friendly catch basin grates
- bike racks and storage
- bicycle accommodations on buses and trains

Dolan vs. City of Tigard

The Supreme Court case of Dolan vs. the City of Tigard, OR established a two-pronged test for land use commissions requiring public improvements as a condition of approval: 1) there must be a rational nexus between the approval condition and a legitimate public interest, and 2) the required improvement must be proportionally related to the impact of the proposed development (e.g., expansion of a car wash would not warrant a public sidewalk where none existed previously).

Safe Routes to School – A Success Story

South Windsor parents began to realize that, for some students, bus transportation was not the best way for their children to get to and from school. To respond to this concern, the Superintendent looked to the Safe Routes to School Program to provide safe alternatives for South Windsor's children. The program has been rolled out enthusiastically in two elementary schools and federal funding helped build more sidewalks, crosswalks, and speed tables.

Their key to success might help Windsor implement a Safe Routes to School program:

- Avoid a “Top Down” approach. The desire for a program should begin with parents and their children.
- Start Small – Focus on 1 or 2 schools to start.
- Build a Team – South Windsor created a Task force with the School, Planning, Engineering, DPW, Police, Recreation and others involved.

The Town should continue to invest in its pedestrian infrastructure and focus funding on priority areas including the above improvements in Windsor Center. The Pedestrian and Bicycle Infrastructure Plan on the following page depicts priority areas and should be referenced by the Town and applicants in determining when sidewalks and pedestrian infrastructure is warranted.

The Subdivision and Zoning Regulations require that sidewalks or alternative trails are provided for all new development. The Commission should consider expanding the zoning requirement to include significant expansions of existing developments, when the cost of the sidewalk or trail is not disproportional to the cost of such expansion and the development is likely to generate pedestrian traffic from either employees or patrons.

With the exception of Day Hill Road, the Town does not have control over its arterial roads – the state routes. Codifying sidewalk priorities in this plan, on the Pedestrian and Bicycle Infrastructure Plan on the following page, and in the Capital Improvement Program (CIP) can help the Town make its case to ConnDOT that sidewalks should be created or upgraded when it undertakes improvements to those roads.

Past experience has shown that Windsor cannot take public support for sidewalk projects as a given. Several recent sidewalk, handicapped accessible ramp, and trail projects, including one with full grant funding, were not approved when adjacent property owners, despite the greater good, objected to the projects based on the Town's snow removal requirements and other perceived issues. Efforts to re-frame public perception and build town-wide grass-roots support for sidewalks and trails are needed. Town documents, the CIP, and public information about capital projects should emphasize the role sidewalks and trails play in increasing transportation choices, supporting economic development, improving our health, and enhancing our overall quality of life.

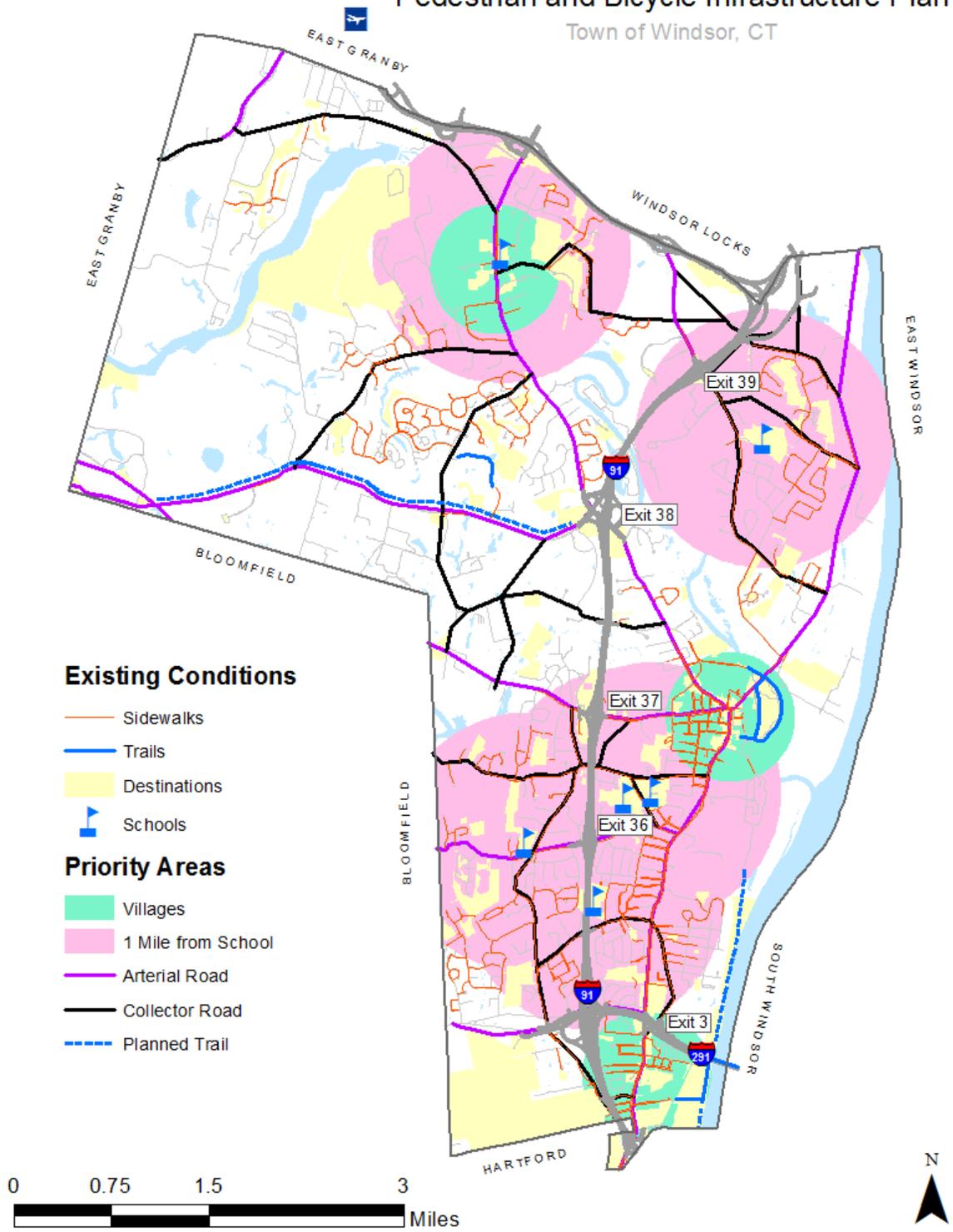
The Safe Routes to School program, which is designed to plan for and fund sidewalks and other pedestrian safety improvements within walking distances of schools, is another tool to promote sidewalks. With the help of the Capitol Region Council of Governments (CRCOG), the Planning Department initiated the planning process for funding of sidewalks and other pedestrian improvements under the program, but could not secure the required participation from school transportation officials or parents, stalling the program. The Town and Board of Education need to collaborate on re-launching this effort by focusing on one pilot school and working directly with parents and school staff (see sidebar), then building on that success with other schools.

Increase Opportunities to Bike Safely

Windsor has only one segment of dedicated bike lane along its roads, yet the relatively flat topography and many wide shoulders make on-road biking easier than in many other Connecticut communities. The Town is making Windsor

Pedestrian and Bicycle Infrastructure Plan

Town of Windsor, CT



easier to navigate by bike with the addition of a ten-foot wide multi-use path along Day Hill Road and by planning for a northern extension of the 14,000 foot Connecticut River Trail.

The Town should continue to expand its biking infrastructure and reduce barriers to biking. Similar to sidewalks, the Town can prioritize funding for bicycle improvements according to where the need is greatest and where providing bicycle infrastructure might reduce trips by car. The focus should be on connecting neighborhoods to schools, parks, shopping areas and employment areas.

The Windsor Center Transit-Oriented Development (TOD) Plan recommends better signage, lane markings such as “sharrows” (see following page), and bicycle parking in Windsor Center. As discussed early under the “Complete Streets” discussion, bicycle accommodations should be a part of all road improvement projects. Not all improvements need be expensive. For example, when resurfacing/restriping roads, reduce the travel lanes and widen the shoulders where possible to provide more room for bicyclists. More extensive improvements should be incorporated into major new or reconstructed roads, such as providing bike lanes, bike-friendly drainage grates, and signage.

The development approval process and zoning regulations pay detailed attention to parking for cars. Windsor’s Zoning Regulations provide some consideration for bicycle parking. The regulations should be updated with more detailed bicycle parking and storage requirements, perhaps targeting key destinations such as Windsor Center, Day Hill Corporate Area and Wilson. The lack of a safe place to store a bicycle can deter people from using a bike to get around town. Similar to sidewalks, residents do not often view bicycling as a mode of transportation and may not support funding for improvements. Windsor does not have a bicycling advocacy group to help make that case, yet there are likely bicycling advocates who live or work in town.

The Town could identify a bicycling lead or “ambassador” (staff, volunteer or committee) to:

- recommend projects and improvements;
- actively publicize bike-friendly efforts planned or underway;
- provide education on bicycling safety for bicyclists and drivers;
- remind residents, businesses, public leaders that bicycling is a form of transportation worthy of attention and funding; and
- organize events that bring attention to bicycling in Windsor.

Pedestrian and Bicycle Strategies

25. Continue to invest in sidewalks with a focus on priority areas.
26. Implement the pedestrian improvements outlined in the Windsor Center TOD Plan.
27. Encourage ConnDOT to provide sidewalks and pedestrian improvements along state roads in priority areas.
28. Re-frame public perception of sidewalks' value and benefits.
29. Modify the Zoning Regulations to require sidewalks when their cost and use is proportional to the expansion of an existing development.
30. Re-launch the Safe Routes to School effort by identifying a pilot school and working directly with parents and school staff.
31. Ensure that road improvements account for bicycling especially in priority areas.
32. Implement bicycle infrastructure improvements identified in the Windsor Center TOD Plan.
33. Update Zoning Regulations to include detailed bicycle parking and storage requirements.
34. Identify bicycling advocates to help accomplish these strategies.

Example of simple re-striping



“Sharrow”



Support Freight Transport by Rail

The “Connecticut: Strategic Economic Framework” or “Gallus Report,” commissioned by the Connecticut Regional Institute for the 21st Century, famously warned that transportation gridlock could turn Connecticut into an “economic cul-de-sac.” Central to this notion is the lack of a direct rail freight connection across the Hudson River south of Albany, NY. As a result, all rail freight to New England, New York City, and Long Island must take an extra day and as much as a 300-mile trek out of its way (compared to a mile long truck trip from Fort Lee, NJ to Manhattan) to reach points east of the Hudson; requiring extra mileage charges, tariffs, and sorting in one or more freight yards along the way. The end result is that most shippers choose trucks over rail freight; Connecticut highways bear the bulk of truck traffic going to and from New England; Connecticut’s commuters suffer rush-hour gridlock, aggravated by regional truck traffic; Connecticut residents suffer from increased air pollution; and we all generally pay more for our daily goods. While Windsor is not in a position to fix this problem, it should support any future federal, regional, or state efforts to create an alternative trans-Hudson freight route.

While Connecticut’s rail freight system may not be as strong as other parts of the country, Windsor’s freight lines do give us a potential economic advantage over other communities. Amtrak owns the 6.8 miles of track through Windsor that connect Windsor to Springfield and New Haven, with CSX and the Connecticut Southern Railroad handling freight along this corridor. The New Haven–Hartford–Springfield Commuter Rail project will not preclude the continued movement of freight along this line. The Griffin Line, connecting Hartford and Windsor, is owned by the State and operated by the Central New England Railroad. While there is no opportunity for freight service in Windsor on this line, unless intermodal service can be accommodated in the Griffin area of Windsor and Bloomfield, it does remove truck traffic from Bloomfield Avenue and Day Hill Road by serving heavy industries in Bloomfield.

The Town should support any improvements to rail freight through Connecticut and more specifically, the continued use of both of these rail lines for the movement of freight, any improvements to expand capacity as needed, and ensure that freight service can coexist with planned passenger service improvements. CRCOG will be starting a freight planning initiative that will include an inventory of freight infrastructure and strategies to improve freight transportation access, which Windsor should actively participate in.

Rail Freight Strategies

35. Support any effort to improve rail freight access to Connecticut as well as the Greater New York and New England regions.
36. Support continued freight traffic on both rail lines in Windsor.
37. Encourage improvements that will increase the capacity of both lines to support freight movement.
38. Participate in regional efforts to address freight transportation access.

GUIDE UTILITY INFRASTRUCTURE

13

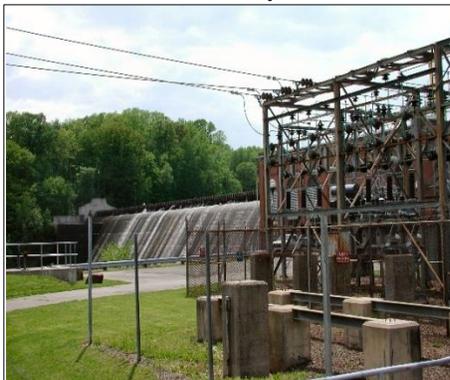
Overview

The availability of infrastructure such as public water and sewer service strongly influences development patterns. Other utilities, such as electricity, natural gas and communications, have less direct impact on the location and intensity of development, but their availability and adequacy impact Windsor's competitiveness in attracting and retaining businesses and residents.

With the exception of most of our stormwater management infrastructure, Windsor is reliant on other entities to provide utilities. Open, two-way communication about planned upgrades, extensions and development goals is critical in order to best serve the needs of the community.

Ensure the adequate provision of utilities to accommodate future development and enhance quality of life.

Electricity



Wireless Communications



Ensure Adequacy and Availability of Piped Utilities

The MDC is the water and sewer authority for the bulk of Windsor. The MDC is a quasi-municipal agency made up of eight member towns and is generally funded through a combination of local property taxes, user fees, and water and sewer assessments. While the MDC has sufficient water and sewage treatment capacity to serve its member towns, pipe capacities serving developable areas are sometimes insufficient to meet developmental needs, creating uncertainty and delays in the development process.

Sewer

Windsor is generally served by the Metropolitan District Commission (MDC) sewer system. Sewage generated in the northern portion of Windsor flows to the Poquonock treatment plant and the remainder of town flows to the Hartford treatment plant. The Poquonock facility currently treats 0.5 million gallons of wastewater per day (mgd) and is sized to handle up to 2.5 mgd. The MDC is making upgrades to the Poquonock facility and has additional improvements planned in the near future that should improve the quality of water being discharged from the plant.

As part of its federally mandated Clean Water Project, the MDC is making significant improvements system-wide to reduce the mixing of stormwater and sewage that leads to pollution discharges into the Connecticut River during significant storms, due to lack of capacity to treat the volume of diluted sewage. In Windsor, the MDC has eliminated stormwater connections to their sanitary sewers and is lining pipes and flood-proofing manholes to reduce the inflow and infiltration of groundwater into the system.

Windsor faces two challenges regarding sewer service over the next ten years – the lack of sewers in limited areas of town and more importantly, the inability of the system to accommodate anticipated growth.

The Hayden Station Road/Archer Memorial Drive industrial areas lack sewer service, limiting them to low-intensity uses. Extending sewers to this area would support more intensive use, resulting in higher tax revenues and jobs. Funding options for extending sewers include:

- assessments on the benefiting property owners,
- bonding by the Town if cost effective, or
- with a grant (e.g., Federal Public Works grant from the Economic Development Administration).

Recently built and proposed developments have called into question the ability of the sewer system to handle future growth. While the treatment plants have extra capacity, the MDC has determined that the sewer line serving the Day Hill Road corridor has limited capacity to handle the full buildout of Day Hill Road and need to be expanded.

Regional and state policies encourage mixed-use, traditional neighborhood developments such as Great Pond because they channel growth to areas designed

to maximize transportation options; place people near jobs and provide an array of housing choices; utilize existing infrastructure rather than require costly extensions into new sprawling suburbs; all while preserving open space. If the sewer infrastructure cannot support this form of development in an inner-ring suburb, finding a solution should be a priority. The MDC's current approach is to require developers who wish to tie into the system to pay for upgrades. This has been the MDC's approach throughout its service area and they are not likely to change this approach in the next ten years. However, the development community should not be solely responsible for upgrading the MDC's sewer system in order to support the growth policies of the Town, the region and the state. It may be time for the MDC member communities to work together and develop a new approach to financing improvements to the system.

Water Supply

With few exceptions, Windsor residences and businesses are served by (MDC) water. The MDC also provides fire hydrants throughout Windsor. The MDC has made some improvements to the system over the last ten years.

The MDC prioritizes domestic water use over firefighting capacity. The Kennedy Road/Hayden Station Road area and the Poquonock Avenue/Route 20 area experience low water pressure for fire protection, requiring pumps and storage systems in taller buildings. Recent large developments have been required to provide significant on-site water storage for fire protection. Developers may not know whether they will need to install a water tank until the MDC runs their hydraulic model to determine potential pressure issues.

This ad-hoc approach is expected to continue over the next ten years, as the MDC has no plans to upgrade its system to accommodate firefighting needs. Similar to issues related to water-service, this approach and other issues arising from the lack of planning and clear direction on the part of the MDC creates uncertainty and delays in the development process and can unnecessarily burden new users rather than sharing the costs of systemic issues across all ratepayers.

The MDC is planning to install a new 30-inch water main in Bloomfield over the next five years. Although its purpose is to improve domestic supply, it might also alleviate some of the pressure issues related to fire fighting in the western part of Windsor.

If the existing water infrastructure cannot accommodate new growth without compromising existing customers, Windsor and other affected communities should be more proactive in working with the MDC to ensure that they can meet the future needs of their member communities.

The Town has taken its own steps to provide water for fighting fires in areas without water infrastructure or with inadequate pressure. For example, Palisado Avenue north of Clapp Road has no reliable source of water for fire protection. To be prepared for fires in areas with no hydrants or low pressure, the Fire Department keeps a tanker truck and dry hydrants were installed at Washington Park, International Drive, and on Merriman Road. The Town has identified a need for

Gas Availability Mapping

Natural gas companies are reluctant to release detailed maps about their system due to security concerns. Information about whether a given parcel is served by is available through the Town's on-line parcel database however.

80 new hydrants and the 2015-2020 Capital Improvement Plan (CIP) includes funding for the installation of some of these hydrants.

Natural Gas

Through its 2013 Comprehensive Energy Strategy (CES) for Connecticut, the State has prioritized the expansion of natural gas infrastructure to offer consumers greater choice and cleaner energy options. Windsor is fortunate in that natural gas is available throughout most of the town, allowing the town to attract businesses that prefer or rely upon natural gas and providing more options for both town facilities and residents.

Natural gas in Windsor is provided by Connecticut Natural Gas (CNG) and Yankee Gas with mutually exclusive service areas. Yankee Gas provides service to the very northern part of Windsor, while CNG provides service to the remainder of town. Yankee Gas has no planned upgrades in the Windsor area and if a need arises, potential upgrades would be evaluated. They expect to have adequate capacity for at least the next ten years.

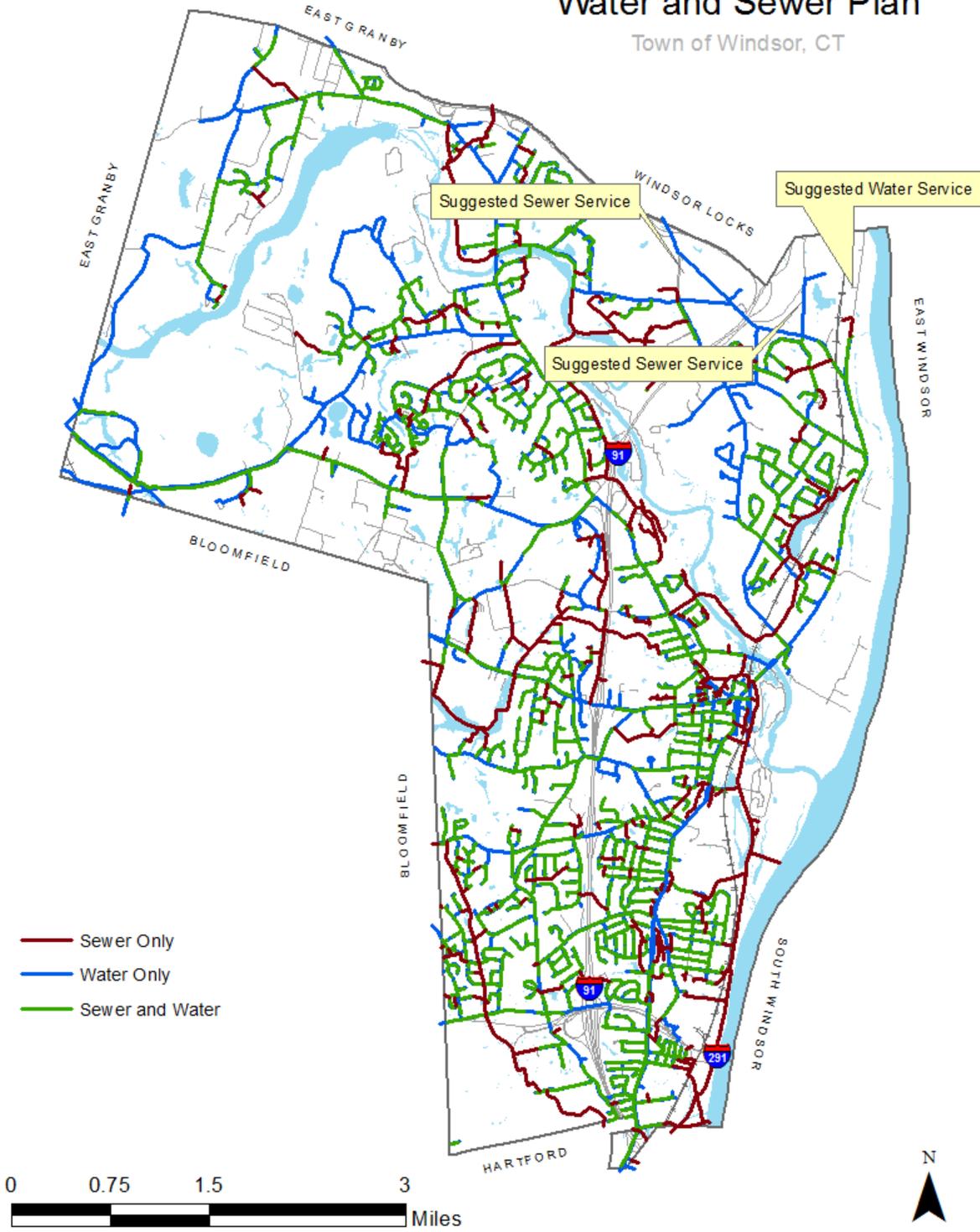
CNG has recently undertaken a number of gas line extensions, including providing new service to the LP Wilson Community Center, the Wilson Fire Station and a number of town schools. The new pipes also opened up natural gas access to hundreds of residences along their routes.

In most cases, either gas company will extend service if they determine that the return-on-investment is adequate to cover the installation costs (i.e., enough customers will convert to natural gas along the route). Natural gas providers expect that the CES will promote and facilitate further service expansions.

The Town should continue to support the wide-spread availability of natural gas as an affordable energy source for residents and businesses, and advocate for service extensions if warranted.

Water and Sewer Plan

Town of Windsor, CT



Strategies to Ensure the Adequacy of Piped Utilities

1. Consider extending or partially subsidizing the extension of sewers to industrial areas along Hayden Station Road and Archer Memorial Drive to make the area more attractive to high-quality office/industrial development.
2. Support and encourage the MDC to make sewer capacity upgrades at the Rainbow pump station and in the Day Hill Corporate Area.
3. Work regionally to ensure that sewer and water infrastructure can meet growth needs and encourage the MDC to rethink its approach of placing infrastructure burdens on the development community.
4. Continue to work with the MDC and the Great Pond developers to resolve sewer and water infrastructure issues.
5. Pursue the extension of water and sewer service to other areas illustrated on the Utility Infrastructure Plan.
6. Continue to install new fire hydrants as funding allows.
7. Encourage natural gas providers to extend gas lines where desired by businesses and residents.

Ensure Adequacy of Other Utility Services

Stormwater

Windsor has over 4,700 catch basins and over 100 miles of drainpipes and swales, not including state and private facilities. There are also uncounted public and private stormwater detention ponds throughout the town.

The Town continues to make progress in improving how it manages its drainage system. As discussed in Chapter 3, Windsor has adopted a Stormwater Management Ordinance and comprehensive stormwater management plan. The Town also adopted an Illicit Discharge and Connections Ordinance to address illegal connections to the town's drainage system and gives the Town the ability to take action if needed. The Town has also mapped all stormwater outfalls (discharges into wetlands and watercourses) that are 12 inches or greater (over 550 outfalls).

Long-term maintenance and repair is also critical to ensure that both the Town's and private investments in stormwater infrastructure are protected. Best management practices (BMPs), such as catch basin cleaning and street sweeping help to ensure that drainage infrastructure functions properly. Approximately 1.3% of the FY2015-2020 CIP is comprised of stormwater management projects, including replacement of old and damaged storm sewers, catch basins, sewer laterals and addressing problem areas. Other projects in the CIP, such as road improvements, also include drainage work. Small watershed analyses are also proposed to be funded and completed. Unscheduled improvements include culvert and stream bed repairs along River Street.

In accordance with the newly adopted Stormwater Management Ordinance, privately-owned developments are required to record inspection and maintenance (I&M) agreements on the land records. I&M agreements hold property owners responsible to conduct scheduled BMPs, which should ensure the long-term viability of the systems and decrease impacts on the Town's stormwater infrastructure.

The CT Department of Energy and Environmental Protection (DEEP) is currently updating stormwater regulations. The update will likely require additional maintenance and monitoring protocols. The draft DEEP regulations do emphasize low-impact development techniques (see Chapter 3), which the Town also emphasizes, but other aspects of the updated regulation will require significant additional spending. Windsor is committed to reducing the impact that stormwater can have on natural systems, but is cognizant of the added costs that new requirements may bring. How to pay for compliance, whether it is through increased property tax or the creation of a stormwater utility able to levy taxes or fees, is up to the Town to decide.

Electricity

Eversource (formerly Connecticut Light & Power) provides electricity in Windsor. Eversource and ISO New England are studying potential improvements to the transmission system that serves central Connecticut in order to meet anticipated load growth through 2022 (the transmission system brings electricity from power plants and other power sources to local substations).

However, most electrical issues in Windsor have been related to the local distribution system (distributing electricity from substations to customers). Some distribution improvements have been made since the 2004 plan, such as a new substation, built off of Rood Avenue in 2011, and the distribution system that serves the Day Hill Corporate Area was improved by moving residential customers off of the West Bloomfield substation, which also benefitted from recent improvements. Eversource does not have any projects planned in Windsor. As new development is proposed, they evaluate their ability to serve the new development and identify any needed improvements.

Power outages during storms or other incidents can impact public safety and hurt the local economy. Despite over three decades of requiring all new utilities to be underground, the system remains vulnerable due to the legacy of miles of older overhead utilities. After experiencing long-term and widespread power outages during recent intense storms, the State worked with utility providers to develop protocols for tree trimming that better balance public safety with community and roadway aesthetics, although efforts to date in Windsor continue to appear overly aggressive. As discussed in Chapter 3 - Natural Resources, careful attention should be paid to selecting appropriate species of trees and appropriate locations when new trees are planted to help reducing the risk of outages.

Having alternative sources of electricity can further reduce the risk of outages. Connecticut has started a pilot program of establishing “micro-grids” to serve select geographic areas. A micro-grid is a small-scale electrical system with its own power source and distribution system. Micro-grids help reduce the reliance on a larger utility company and its smaller scale (and if implemented in Windsor, its entire distribution system buried underground) can mean a quicker repair times when outages occur. Windsor should monitor the success of and lessons learned by the pilot program and support their use in Windsor if warranted.

High energy costs, incentive programs, and general interest in reducing greenhouse gas emissions will likely continue to drive interest in alternative energy sources. Windsor will likely see more residents and businesses install photovoltaic panels, ground-source heating and cooling (HVAC) systems, and fuel cells. Windsor participates in C-Pace: a state program that provides businesses with 100% upfront, low-cost, long-term financing for clean energy improvements. Windsor is also participating in a multi-town effort to promote residential solar called Solarize CT that uses group purchasing power and other incentives to reduce the cost of installation. The Town should continue to encourage alternative energy installations and keep residents and businesses apprised of programs that reduce costs.

Communications

Communication infrastructure includes the wires, cables, towers and facilities needed to support voice, television, and data services (i.e., land line and internet phones, Internet access, cable television, and wireless phones). Of all utilities in this chapter, communications capabilities have changed the most over the last ten years and will likely rapidly evolve over the next ten years. Therefore, rather than listing companies that provide services, the focus is on ensuring that latest, fastest, and most reliable services are available in Windsor.

Virtually all residents, businesses, and town departments depend upon reliable internet service to conduct everyday business as well as for general communication, shopping, and entertainment. Over the last 15 years, Internet service has drastically improved in Windsor and complaints about slow connections have subsided. When the 2004 POCD was written, Internet speeds ranged from 56KBs (one kilobyte of data per second equals 1,000 bytes per seconds) to 4.3MBs (one megabyte per second equals 1,000 KBs). Today, companies advertise speeds in Windsor of 100 MBs to 1 GBs (one gigabyte per second equals 1,000 MBs). Such service helps Windsor remain competitive in attracting new businesses. It is also important for residents to have the highest possible capacity for overall quality of life, but also to allow employees to work from home.

The State has taken interest in working with municipalities in connecting public facilities to a high-speed fiber optic network called the Nutmeg Network. The initial focus has been on connecting public safety departments and schools, and Windsor has received a grant to cover the cost of infrastructure to connect to the network.

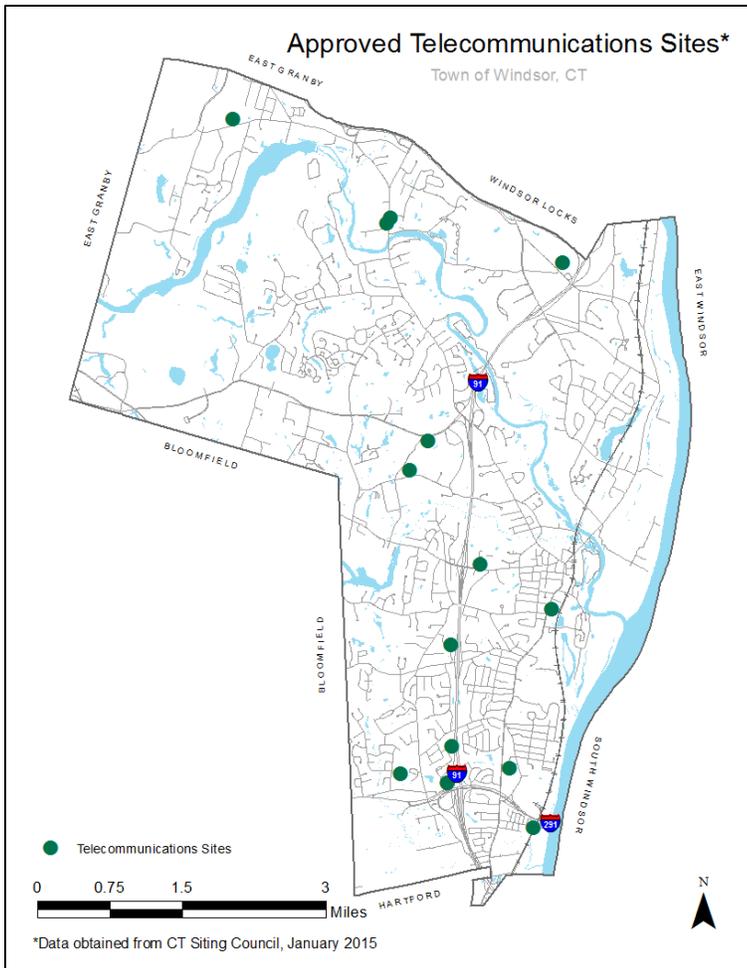
Windsor can work with service providers to expand its high-speed, high-capacity infrastructure throughout town. A number of towns and cities, including Windsor, have expressed interest in developing a gigabyte speed fiber network. The goal is to work with a high-speed service provider to set up a network in town via the “municipal gain” provision of state statutes (see sidebar). Windsor should continue to work with the State, other municipalities, and service providers on this initiative, with the ultimate goal of building the infrastructure for gigabyte service.

Municipal Gain

CT General Statutes Sec. 16-233 gives municipalities the right to occupy, without payment, one “gain” upon each utility pole and underground utility duct system.

Small Cell Technology

While wireless communication providers continue to upgrade their existing tower and antenna sites with the latest technology to handle ever growing data needs, there is an emerging trend towards small cells designed to be small enough to mount on existing utility poles and buildings to fill small gaps in their networks or to better serve heavily used areas.



In terms of phone services, no issues related to land line phone service have been identified. Long ago, interstate highways such as I-91 became the backbone of most wireless networks due to the high density of mobile customers, and as a result, Windsor has better than average wireless communication coverage, though small gaps in service and/or lack of capacity still exist. Most networks continue to upgrade their voice and data capacity as new technology and growing demand require. Small cell technology is likely to be the next wave in Windsor as providers seek to install small, short-range antennae on buildings and utility poles to meet pockets of high demand.

When new wireless towers or antenna are needed, town staff should continue to work closely with the Connecticut Siting Council and applicants to ensure the most efficient and least visually intrusive network for Windsor.

Windsor has regulations in place to regulate both conventional and satellite dish antennae, available from several providers. However, the Telecommunications Act of

1996 prohibits any regulation or procedure that inhibits access to satellite signals, which has been strictly construed by the courts to prohibit municipalities from requiring more aesthetic locations if they increase the cost of installation.

Cable television service is available throughout Windsor and in many cases, users have a choice between either Comcast or Frontier for TV, data, and phone service with no known reliability issues beyond any temporary disruptions associated with the transition from AT&T to Frontier.

Strategies to Ensure the Adequacy of Other Utility Services

8. Continue best practices to maintain drainage infrastructure and continue to fund long-term maintenance.
9. Consider a stormwater management utility to fund, construct and maintain stormwater management facilities.
10. Ensure private drainage infrastructure is properly maintained.
11. Continue to work with Eversource to ensure Windsor is served by a reliable electrical distribution system.
12. Monitor the results of the micro-grid pilot program and determine if a micro-grid might be appropriate in Windsor.
13. Continue to encourage alternative energy sources and keep residents and businesses apprised of incentive programs.
14. Continue to work with the State, other municipalities and service providers to bring gigabyte service to Windsor.
15. Ensure that new wireless towers and antenna are appropriately sited with minimal visual impacts.

FUTURE LAND USE PLAN & CONSISTENCY WITH STATE & REGIONAL PLANS

14

Overview

The recommendations of each of the preceding chapters can be combined to present an overall Future Land Use Plan (FLUP) for Windsor. The Future Land Use Plan is a reflection of the stated goals, objectives, and recommendations of the Plan.

In essence, the Future Land Use Plan is a visual statement of what the Windsor of tomorrow should look like. While it suggests changes in zoning, where desirable future land uses do not match existing zoning, it is not intended to be used as a zoning map. Rather, the Commission should consider and be guided in its actions by the FLUP.

As the Future Land Use Plan concludes and distills the essence of this entire plan, this chapter presents an opportunity to provide a comprehensive check for consistency with state and regional plans of conservation and development, as required by law.

The Future Land Use Plan is a depiction of the Plan's recommendations for the future conservation and development of Windsor...

Conservation



Development



Descriptions of Future Land Use Categories

Natural Resources	
Environmental Constraint	Areas with significant environmental constraints that represent the highest priorities for conservation. (See Chapter 3 for more detail.)
Open Space	Areas that are currently preserved for open space purposes and areas that may not be preserved currently, but are desirable for future open space, as they make a significant contribution to Windsor's feeling of "openness". (See Open Space Preservation Plan on page 4-7 for more detail.)
Agriculture	Areas that are suitable for agricultural uses.

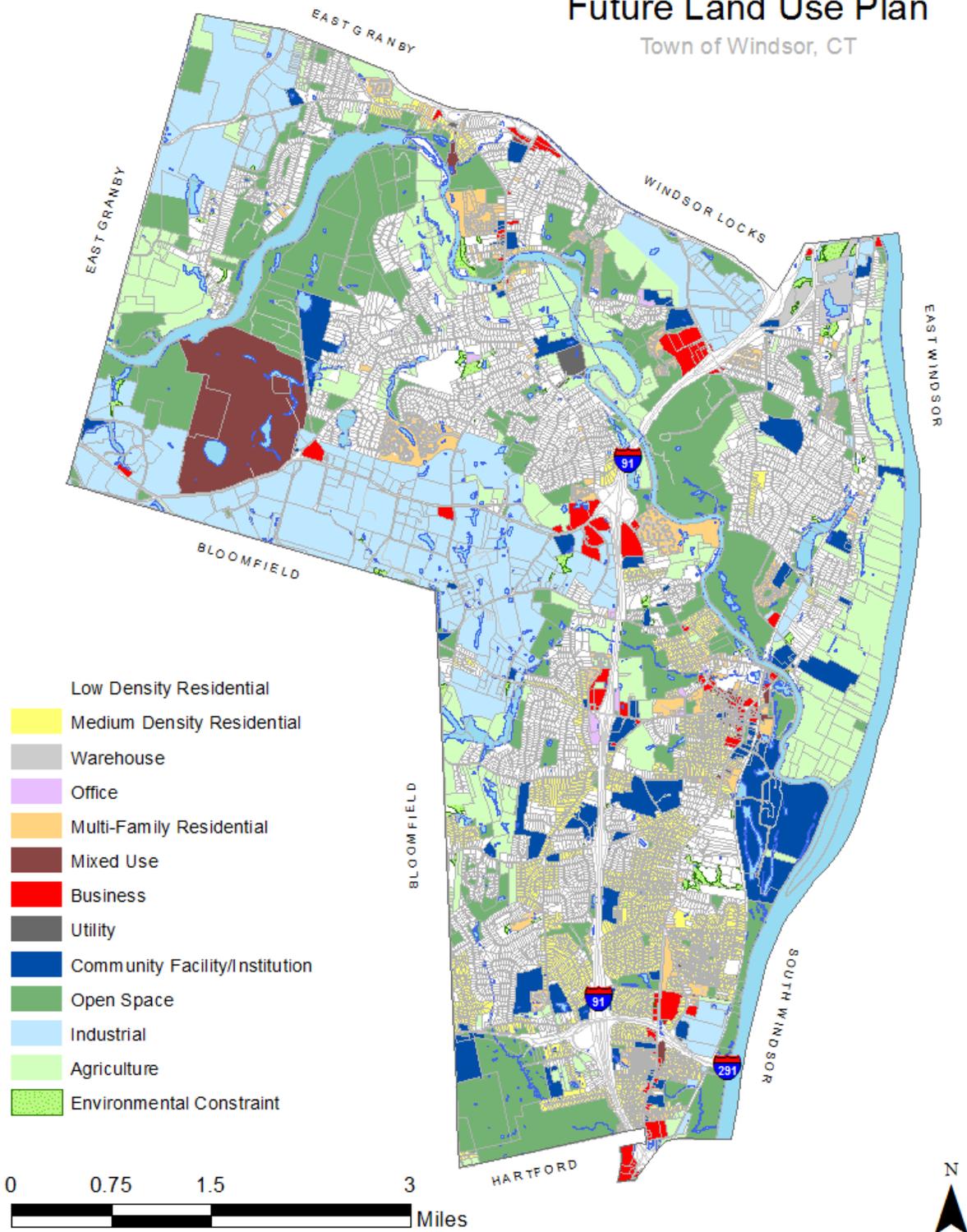
Residential Areas	
Low Density	Residential densities generally between 1.3 and 1.6 units per acre due to existing zoning, natural resources, infrastructure availability, or desirable patterns of development.
Medium Density	Residential densities generally greater than 1.6 units per acre due to existing zoning, natural resources, infrastructure availability, or desirable patterns of development.
Existing Multi-Family Uses	Areas where apartments, condominiums, congregate facilities or other multiple dwelling units exist.
Mixed Use	Areas that are suitable for a mix of uses, including retail, residential, and professional office.

Commercial / Industrial (see Chapters 8, 9 and 10 for more detail)	
Business	Areas that are suitable for retail, restaurant, service and general offices uses.
Office	Areas that are suitable for professional offices.
Industrial	Areas that are suitable for manufacturing, assembly, warehousing and distribution.
Warehouse	Areas where warehousing uses currently exist.

Other Areas	
Comm. Facility / Institution	Areas that have developed or are intended to develop with community facilities or institutional uses.
Utility	Areas where utilities exist.

Future Land Use Plan

Town of Windsor, CT



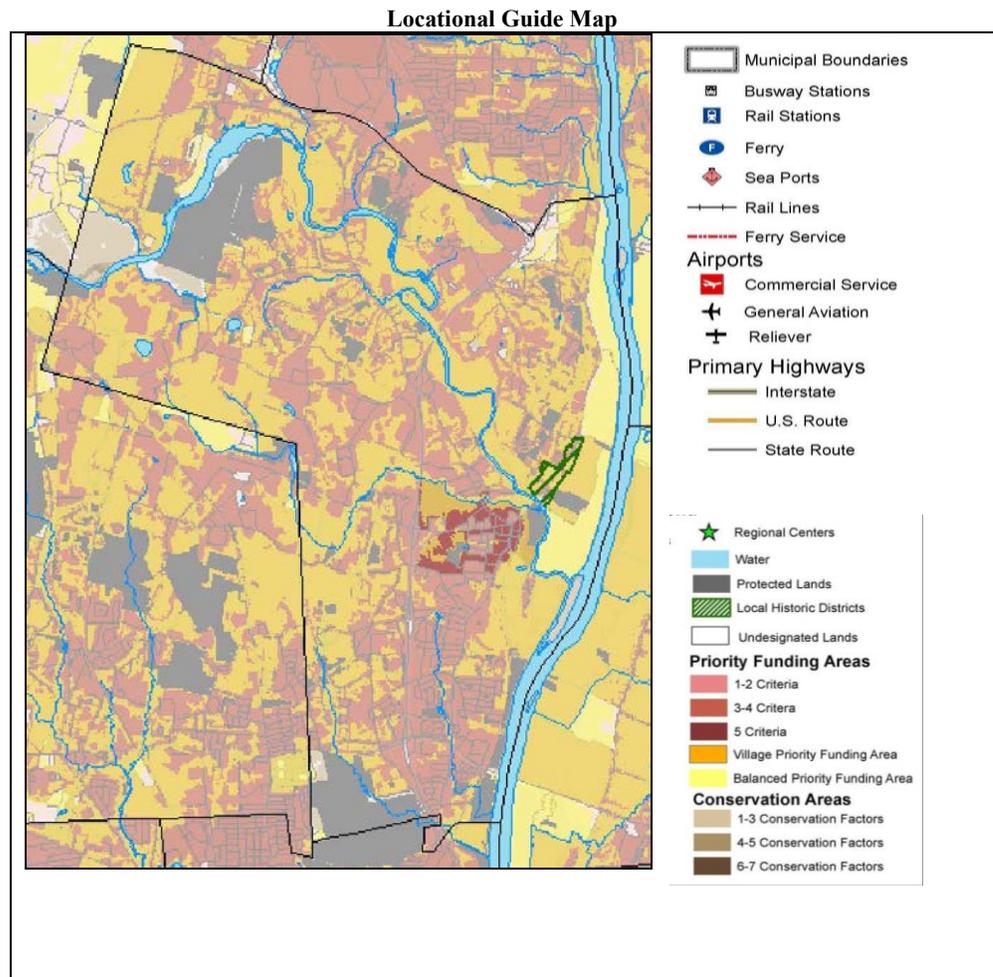
*Please see Planning Department webpage for larger plan.

Plan Consistency

The following represents a comparison of this Plan to both the state and regional plans of conservation and development, as required by Connecticut General Statutes Section 8-23.

Connecticut Conservation and Development Policies Plan Update, 2013-2018

Windsor's Future Land Use Map is generally consistent with the State's Locational Guide Map.



This Plan is also consistent with the six state growth management principles as follows:

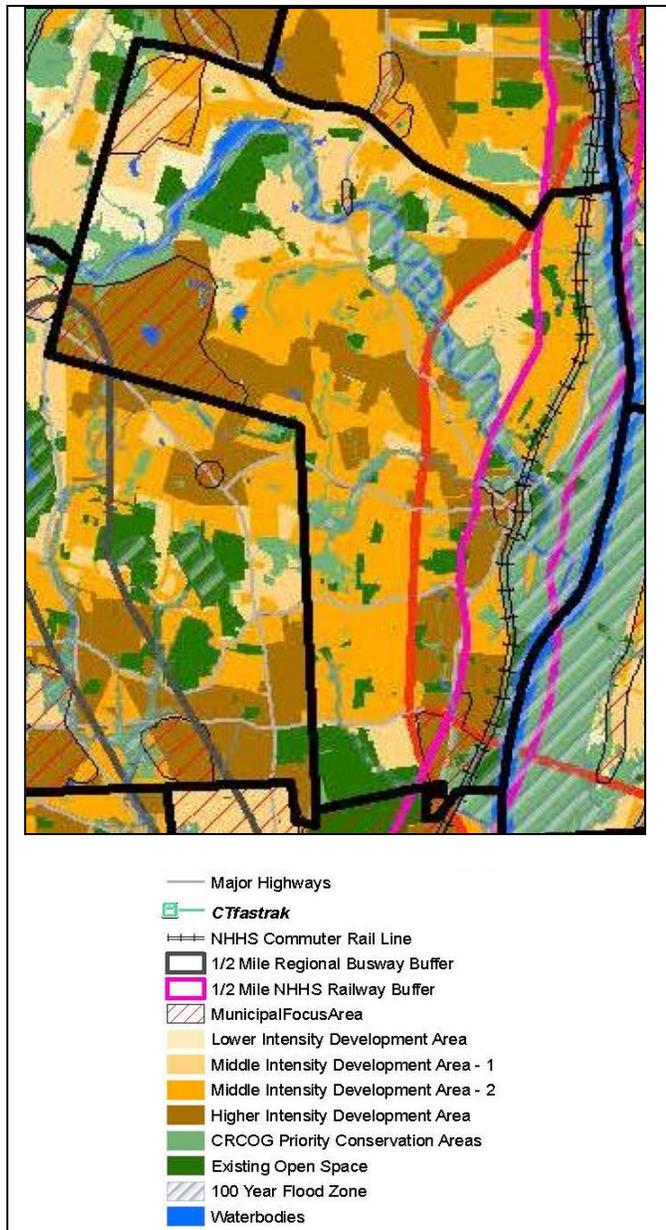
CT Growth Management Principle	Windsor POCD
<p>CT Principle 1: Redevelop and revitalize regional centers and areas with existing or currently planned physical infrastructure.</p>	<p>This Plan supports the growth and revitalization of Windsor’s three key village areas: Windsor Center, Wilson, and Poquonock. A strong emphasis is placed on Windsor Center, where business development and residential growth will support and benefit from planned transit improvements. This Plan also supports continued investment in the Day Hill Corporate Area, which is a major regional employment center.</p>
<p>CT Principle 2: Expand housing opportunities and design choices to accommodate a variety of household types and needs.</p>	<p>This Plan supports reinvestment in older housing stock, including the continued use of CDBG funds to rehabilitate older houses and preserve or create affordable housing. This Plan also recognizes the need for a variety of housing types (including both walkable and transit-oriented development), with a particular concern for providing opportunities for older residents.</p>
<p>CT Principle 3: Concentrate development around transportation nodes and along major transportation corridors to support the viability of transportation options.</p>	<p>This Plan incorporates policies for transit-oriented development (TOD) in Windsor Center as described in full detail in the Windsor Center Transit-Oriented Development Plan. This Plan also includes strategies that are actively being pursued to make integrate our regional employment center, the Day Hill Corporate Area, into a multi-modal network with multi-purpose trails, sidewalks, and improved transit service, with links to proposed commuter and intercity rail improvements.</p>

CT Growth Management Principle	Windsor POCD
<p>CT Principle 4: Conserve and restore the natural environment, cultural and historic resources, and traditional rural lands.</p>	<p>This Plan includes four chapters dedicated to conserving, protecting, and enhancing open space as well as agricultural, historic, and natural resources. These chapters recommend the continuation of preservation strategies that have served the Town well and suggests new approaches, including wider use of low-impact development techniques to address stormwater, additional open space preservation, and working more closely with farmers to preserve their working lands while also minimizing environmental impacts from farming. The preservation and re-use of Windsor’s historic buildings is supported in that doing so will help meet business and housing goals while protecting local heritage.</p>
<p>CT Principle 5: Protect and ensure the integrity of environmental assets critical to public health and safety.</p>	<p>Many measures to minimize surface and groundwater pollution, reduce stormwater runoff, reduce local sources of greenhouse gas emissions, avoiding development in hazardous or sensitive areas, and other strategies to protect the environment and public health are included in this Plan.</p>
<p>CT Principle 6: Promote integrated planning across all levels of government to address issues on a statewide, regional and local basis.</p>	<p>Windsor has worked collaboratively with neighboring communities as well as state and regional agencies to address traffic issues, connect trails, provide water and sewer service, and improve rail service. This Plan recognizes the need to continue working with neighboring communities, the Capitol Region Council of Governments, the State and other organizations that are involved with the topics contained in this Plan (e.g., land trusts, CT Transit, ConnDOT, DEEP, the Bradley Development League, the Metropolitan District Commission, etc.)</p>

The Capitol Region Plan of Conservation and Development, 2014-2024

The Future Land Use Map is generally consistent with CRCOG's Land Use Policy Map, with key conservation areas along the Connecticut and Farmington Rivers and growth areas in the three villages (Windsor Center, Wilson and Poquonock) and the Day Hill Corporate Area.

Land Use Policy Map



This Plan is consistent with many of the goals outlined in the regional plan.

Regional Goal	Windsor POCD
<p>Natural Resource Conservation (Protect air, water, soil quality; grow in harmony with natural resources; promote stewardship)</p>	<p>This Plan includes strategies to protect Windsor’s land, biologic, water and air resources, while allowing for compatible growth. The natural resources chapter contains a special section building a sense of stewardship. This Plan recognizes Windsor’s role in helping to protect two of the State’s most important natural resources: the Connecticut and Farmington Rivers.</p>
<p>Watersheds and Water Quality (Improve and maintain water quality, protect water supply, conserve water, reduce pollution, use innovative wastewater treatment techniques)</p>	<p>This Plan emphasizes expanded use of low impact development (LID) techniques to address stormwater quality and quantity along with public education. The MDC provides Windsor’s drinking water from outside sources and is also responsible for wastewater treatment. There are no public drinking water aquifers requiring statutory protection in Windsor</p>
<p>Open Space and Farmland Preservation (Preserve open space, farmland, and declassified water company land; protect open space along major rivers)</p>	<p>The open space chapter contains strategies to acquire more meaningful, dedicated open space, with an emphasis on establishing criteria to prioritize open space acquisitions and improving regulatory tools, such as ensuring that open space as part of a subdivision contributes to an overall system and enhancing existing open space programs.</p>
<p>Food Systems and Food Security (Reclaim working lands, improve access to food, improve health and nutrition, reduce environmental impacts of food system)</p>	<p>The natural resources chapter recommends that the Town work with farmers, particularly along the Connecticut and Farmington Rivers, to reduce the impact of farming operations. The agricultural resources chapter outlines ongoing strategies to preserve agricultural land uses and prime agricultural soils, as well as collaborating with other organizations to coordinate preservation of farmland.</p>

Regional Goal	Windsor POCD
<p>Climate Change (Work regionally to address climate change; provide greater transportation options)</p>	<p>This Plan provides strategies to reduce local greenhouse gas emissions, promote non-fossil fuel energy development. It also recognizes that changes in precipitation necessitate monitoring our stormwater management practices to mitigate any changes over time. The transportation chapter supports increased transit (rail and bus) and recommends strategies to make Windsor more walkable and bikable.</p>
<p>Sustainable Land Use and Zoning (guide growth to regional centers and areas with infrastructure; infill and redevelop)</p>	<p>This Plan supports the growth and revitalization of Windsor’s three key village areas: Windsor Center, Wilson, and Poquonock. A strong emphasis is placed on Windsor Center, where business development and residential growth will support and benefit from planned transit improvements. This Plan also supports continued investment in the regional employment center known as the Day Hill Corporate Area, which includes a</p>
<p>Public Water and Sewer Service (Ensure adequate and high quality water supply; reduce impacts of sewage discharge; use existing water and sewer infrastructure to guide growth; balance water supply and ecosystem considerations)</p>	<p>Windsor relies upon the MDC to provide water and sewer service. For those few areas that depend upon private wells or septic systems, this Plan addresses water quality issues that might be of concern to those properties.</p>
<p>Transportation (Provide a range of options; coordinate land use, environmental and transportation efforts; anticipate and plan for future transportation needs)</p>	<p>This Plan incorporates strategies contained in the Windsor Center Transit-Oriented Development plan to capitalize on planned rail service improvements and to make Windsor Center more walkable and bikable. This Plan also recognizes the need for a variety of housing types (including both walkable and transit-oriented development), with a particular concern for providing opportunities for older residents.</p>

Regional Goal	Windsor POCD
<p>Housing (Increase range of choice for all ages and incomes; enforce fair housing laws; support maintenance of viable neighborhoods; preserve and expand rental opportunities; better link housing to jobs)</p>	<p>This Plan supports reinvestment in older housing stock including the continued use of CDBG funds to rehabilitate older houses and preserve or create affordable housing. This Plan also recognizes the need for a variety of housing types (including choices in a walkable setting and close to transit), with a particular concern for provided opportunities for older residents.</p>
<p>Economic Development (Increase recognition of regional identity; focus on workforce development; improve business development strategies)</p>	<p>The Windsor POCD recommends marketing Windsor in a regional context. The Plan strongly supports additional business development especially given the Town's role as a regional employment center.</p>

CONCLUSION

15

Overview

The Plan of Conservation & Development has been developed to prepare the Town of Windsor for the challenges that it will face during the next decade and beyond.

Throughout the preparation of this Plan, a great deal of information was collected, analyzed, presented and discussed during many interviews, meetings and workshops. Through this process, an overall vision, general goals and policies were developed, resulting in the specific strategies summarized throughout this Plan.

While challenging, the preparation of the Plan is not the most important step in the planning process. Once adopted, the Plan must be implemented in order for its strategies to be put into action and its vision fulfilled. While the task of implementation rests with all Windsor residents, boards and commissions, the responsibility for coordinating efforts and evaluating progress rests with the Town Planning and Zoning Commission and Town Staff.

The Plan is intended as a guide to be followed in order to enhance the quality of life and the community character of Windsor. It is intended to be flexible in order to allow adjustments in the manner that specific goals and objectives are achieved while maintaining stability in the long-term goals of the community.

During implementation, some goals may be achieved quickly, some goals will be achieved incrementally as time and money allow and the premise behind others will undoubtedly change, calling recommendations into question. Such situations are to be welcomed since they will mean that the Plan is being used.

To measure our progress in implementing this Plan, the Planning Department will provide the Commission with regular progress updates: report cards if you will. These updates will allow the Commission to gauge our success, reprioritize strategies and amend them if necessary.

The Plan of Conservation and Development is not static but a living document that is meant to be referenced, challenged and if changing circumstances warrant, amended to keep in tune with the goals and vision of the community. If Windsor is successful in implementing this Plan, the character of the community and its villages will be preserved and enhanced. Windsor's reputation as an amenity-rich community will grow, making it an attractive place to live, work, shop and play.

The Plan of Conservation & Development has been developed to prepare the Town of Windsor for the challenges of the next decade and beyond.

ACKNOWLEDGMENTS



The Residents of Windsor

The Town Planning and Zoning Commission

David Kelsey	Secretary
Anita Mips	Chair
Michael O'Brien	
Karl Profe	
Kenneth Smith	

Lawrence Jaggon	Alternate
Elaine Levine	Alternate
Nathan Scharoff	Alternate

Town Staff

Peter Souza	Town Manager
Jonathan Luiz	Assistant Town Manager
Eric Barz	Town Planner
Abby St. Peter	Assistant Town Planner
Tom Hazel	Environmental Planner
Marian Madison	Planning Secretary
Heidi Samokar	Planning Consultant
James Burke	Director of Economic Development
Laura Casey	Director of Windsor Discovery & Montessori School
Brian Funk	Director of Public Works
Paul Goldberg	Safety Services
Victoria Houle	Project Engineer
Rebecca Joyce	Senior Services
Captain LePore	Windsor Police Department
Paul Norris	Director of Recreation and Leisure Services
Gaye Rizzo	Library Director
William Sandwell	Assistant Assessor
Anne Wakelin	Human Services