

CHAPTER 4 POPULATION & HOUSING

Consistent with its zoning Harvard is a community dominated by single-family dwellings on large lots. A limited number of condominiums and subsidized rental units have been built over the past 20 years, permitted under the state's affordable housing law, Chapter 40B, as part of an Ayer Road Village Special Permit, and within Devens. Most new development, however, consists of large residences on large lots. This is true even though Harvard's households are getting smaller, a trend seen in most towns. Homebuyers seem to want the spacious homes, good schools, and residential amenities that Harvard has to offer. A combination of restrictive zoning, market demand, high land costs, and a dependence on wells and septic systems in most of the Town help to explain why the non-Chapter 40B housing pipeline is limited and fairly homogenous.

Housing was a major focus area in Phase I of the Master Plan, and has been a topic of great concern among Harvard residents for many years. The high cost of housing and the lack of housing diversity have limited the opportunities for those of modest means to afford to live in Town. In particular, Phase 1 noted the lack of housing alternatives for seniors who may have lived in Harvard for most of their adult lives in a detached single family home, but now wish to move to smaller quarters with less maintenance responsibilities or perhaps to live in a community of their peers. Long-time residents may have to leave Harvard to find an acceptable housing option. To meet changing housing needs, the report concluded that the Town should investigate ways to create smaller houses for seniors, non-family households, and first-time homebuyers. The report also identified a need for more affordable housing as a means of fostering diversity of age, income and household make-up. The analysis contained in this chapter supports the conclusions of Phase I and offers actions that can begin to overcome the lack of housing alternatives in Harvard.

1. POPULATION AND HOUSEHOLD TRENDS

Harvard is home to about 5,000 people and 1,800 households. Table 4.1 shows that from 1930 to 2000, population growth in Residential Harvard (excluding Devens) consistently outpaced that of Central Massachusetts; however this trend was reversed over the previous decade (2000-2010), as the Town's population dropped slightly while the County as a whole grew by over 6%. Harvard is not alone. Many of the state's developing suburbs that grew quickly for several decades have also experienced a significant slowdown in population growth since 2000. Many of the state's most affluent communities have also seen their populations stagnate or decline as the result of shrinking household size and limited new construction.

Table 4.1 - Population Change in Harvard, 1930-2010

Year	Local Population (Without Devens)	Percent Change	Worcester County Population	Percent Change
1930	987		490,737	
1940	1,119	13.4%	504,470	2.8%
1950	1,315	17.5%	546,401	8.3%
1960	1,840	39.9%	583,228	6.7%
1970	2,962	61.0%	638,114	9.4%
1980	3,744	26.4%	646,352	1.3%
1990	4,662	24.5%	709,705	9.8%
2000	5,230	12.2%	750,963	5.8%
2010	5,063	-3.2%	798,552	6.3%
Source: Harvard Master Plan 2002, Table 2.6; Census 2010, and RKG Associates, Inc.				

Table 4.1 does not account for the entire population of Harvard today. It updates a similar table from the 2002 Master Plan that excluded Devens' population in order to report changes that relate to zoning and infrastructure policies that Harvard actually controls. In the 2010 Census, Devens had a population of 1,457 people, of which 1,238 lived in group quarters and 219 lived in households. When Devens is included in the Town's demographic data, Harvard experienced a slight population gain (1.8 percent). Devens has a federal prison (primarily a federal medical center), and the Census Bureau includes all 1,194 inmates in Harvard's total population count.

In 2000, Harvard consisted of two census tracts, but with the loss of military personnel at Fort Devens, the Census Bureau combined the two tracts into one with six block groups, one of which (block group 6) includes Harvard's land at Devens (Fig. 2.1). This reunification for census purposes provides a more complete picture of the Town's residents but makes it harder to compare current conditions with those reported in previous plans and studies.

Race

Harvard has few people of color living within its borders – in or outside of Devens. There are 126 minority households in Harvard, including twelve living at Devens. Most are Asian families. By contrast, the Town has only eleven African American families. Of the 264 African American people living in Harvard today, 244 reside at Devens and 230 are inmates at the federal prison. The residential population remains almost exclusively white, non-Hispanic, as it was in 2000. In 2010, Harvard had 264 Hispanic individuals, 219 of whom were white; most of the Hispanics, 166, lived in Devens, of whom 147 were white.

Population Density

Except for small pockets of compact development in the historic villages, Harvard is a low-density town. At 206 people per sq. mi., Harvard's population density is much lower than that of adjacent towns, with only Bolton approximating Harvard. By contrast, the population density of Ayer is 832 people per sq. mi. and Boxborough, a town with similar rural-residential characteristics, has 486 people per sq. mi. Harvard's low density is a result of its scarcity of water and sewer infrastructure and 1.5-acre minimum lot size throughout town. In the Town Center, which developed prior to the adoption of zoning and now has water and sewer systems, the median lot size of single family homes, is ½ acre.

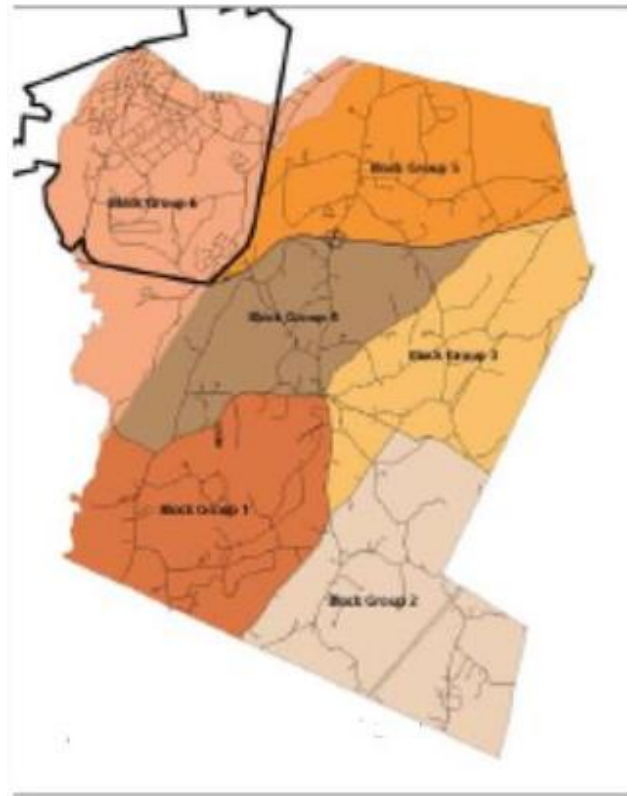


Figure 4.1 - Census 2010 Block Groups

Table 4.2 - Population Density (2010)

Location	Population	Land Area (sq. mi.)	Population Density (per sq. mi.)
HARVARD			
Residential Harvard	5,063	24.6	205.8
Total (including Devens*)	6,520	26.4	246.6
Ayer	7,427	8.9	832.2
Bolton	4,897	20.0	245.4
Boxborough	4,996	19.3	485.7
Lancaster	8,055	27.5	293.3
Littleton	8,924	16.5	540.1
Shirley	7,211	15.9	454.8
Stow	6,590	17.3	380.6
Source: U.S. Census, Census 2010.			
*Devens population includes federal prison inmates.			

Population Age

Harvard's demographic profile has long differed from that of the Commonwealth and region in terms of distribution by age. School-age children have traditionally made up larger shares of Harvard's population, and this remains true today. However, school enrollments have begun to fall because the youngest age cohort – children under 5 years – was already shrinking when the last federal census occurred in April 2010. As shown in Table 4.3, in 1980 5.9% of the population was under 5 years; by 2010, it dropped to 3.4%. A contributing factor is the decline in the young adult population (ages 25-34), which decreased from 15.4% in 1980 to just 3.6% in 2010. This is perhaps due to the high cost of housing in Harvard, which puts the Town beyond the reach of young, newly formed households. Adults in the 35-54 age cohort make up almost 1/3 of the population, attracted in part by Harvard's excellent schools.

As the number of householders of child rearing age have decreased, the number of "Baby Boom" empty nesters and retirees have increased in Harvard over the previous ten years. Those 65 and over comprised 12.7% of Harvard households in 2010, up from 5.6% in 1980. The leading edge of Boomers, those born in 1946, turned 65 in 2011. Data from the 2020 Census will undoubtedly show the growth in the 65+ population continuing as residents age in place and new housing starts remain low. The 2010 Census had Harvard's 55-64 age cohort at 18.8%, which is over 6% greater than the statewide percentage (12.3%).

Table 4.3 - Population by Age in Harvard

	1980		1990		2000		2010	
Age Cohort	Harvard	State	Harvard	State	Harvard	State	Harvard	State
<5	5.9%	5.6%	6.5%	6.9%	6.5%	6.3%	3.4%	5.6%
5 to 14	19.5%	14.2%	15.6%	12.1%	19.0%	13.6%	17.6%	12.1%
15-19	9.5%	9.4%	7.2%	6.8%	6.4%	6.5%	8.4%	7.1%
20-24	4.2%	16.2%	4.5%	8.5%	2.0%	6.4%	2.9%	7.3%
25-34	15.4%	16.3%	9.5%	18.3%	5.8%	14.6%	3.6%	12.9%
35-54	34.1%	21.2%	41.6%	25.2%	39.7%	30.5%	32.6%	29.0%
55-64	5.6%	10.6%	8.0%	8.6%	12.2%	8.6%	18.8%	12.3%
65+	5.6%	13.2%	7.0%	13.6%	8.5%	13.5%	12.7%	13.8%
Sources: Harvard Master Plan, Table 2.8; Census 2010, and RKG Associates, Inc.								

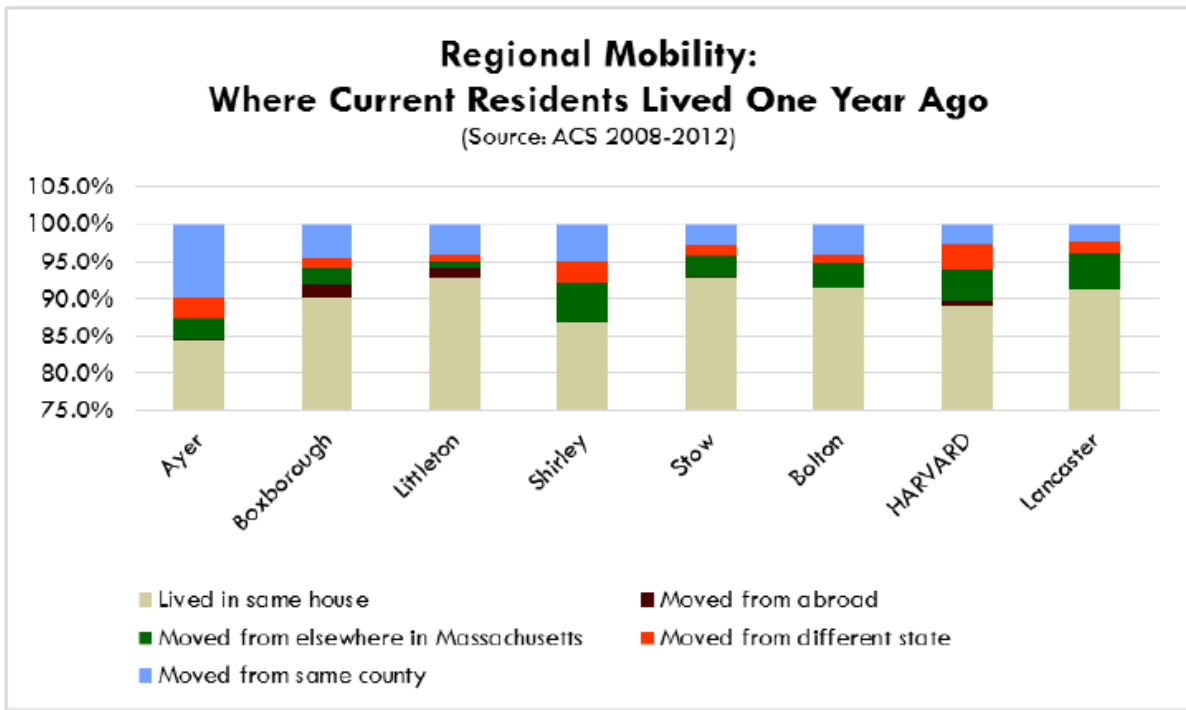
Disability

Approximately 6.4 percent of Harvard's population (about 350 people) has some type of disability: a long-lasting physical, mental, or emotional condition that severely limits activities such as walking, dressing, bathing, learning, or remembering. A disability can make it very difficult or impossible for people to leave their home alone or go to work. In Harvard, seniors make up about 40 percent of the total disability population. Providing housing for people with disabilities should be part of the Town's long-range housing policy.

Geographic Mobility

Harvard's population is generally stable, but compared with surrounding towns, Harvard has a somewhat higher rate of population mobility, i.e., in- and out-migration. Fig. 4.2 indicates that Harvard residents are somewhat more likely to move to Harvard from another part of Massachusetts, outside of Worcester County, and also more likely to move from another state. During planning workshops for this plan, participants reported that families may move to Harvard for its high educational quality, then move out of town once their children pass through the school system to avoid large property tax payments.

Figure 4.2 - Regional Mobility

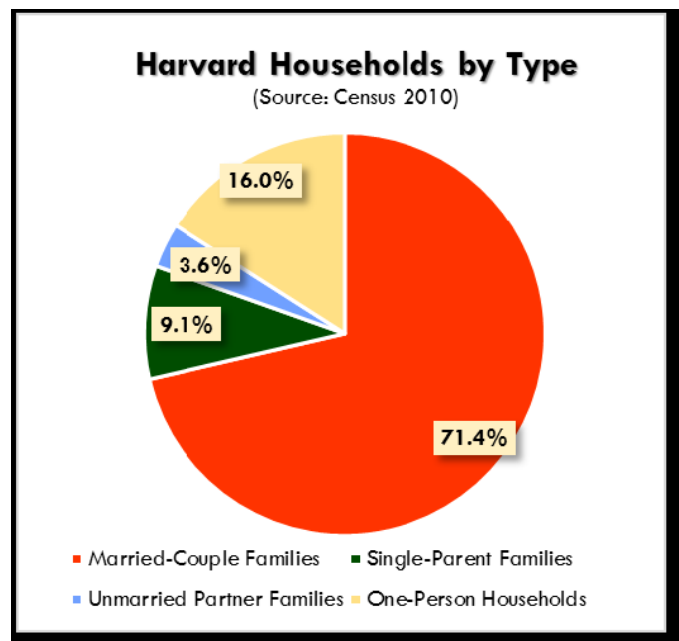


Household Types

According to the Census Bureau, Harvard's 1,893 households (including Devens) are predominantly families, especially married-couple families, much like neighboring Bolton. "Family" is a household of two or more people related by blood, marriage, or adoption, or an unmarried partner household, living together in the same house. It is clear that Harvard's great schools draw families to the Town because almost half of Harvard's married-couple families and 35 percent of all other families have children under 18.²⁹

There are remarkably few nonfamily households in Harvard – mainly senior citizens living alone. In fact the Town has the smallest percentage of nonfamily households of any town in the region (19.5%). The

Figure 4.3 - Households by Type



²⁹ Census 2010, Tables PCT15, P38.

aging of Harvard's population goes hand-in-hand with the aging of its householders: the person who owns or rents a housing unit (sometimes referred to as the head of the household). Over half of Harvard's 1,665 owner households and 43 percent of its 148 renter households are headed by someone 55 years or older. The trend toward older householders has implications for everything from demands on municipal services and school enrollments to residents' willingness to pay for essential services when they move from the labor force and earnings to retirement and fixed incomes. Devens residents tend to be somewhat younger reflecting the fact that housing at Devens is priced for a broader range of incomes.

Table 4.4 - Householder Ages: Harvard and Devens

	Residential Harvard		Devens	
Householder Age Cohort	Total	Percent	Total	Percent
15 to 24	8	0.4%	0	0.0%
25 to 34	51	2.8%	2	2.5%
35 to 44	244	13.5%	18	22.5%
45 to 54	588	32.4%	31	38.8%
54 to 64	531	29.3%	16	20.0%
65 to 74	269	14.8%	9	11.3%
75 and over	122	6.7%	4	5.0%
Total	1,813	100.%	80	100.%
Source: Census 2010, RKG Associates, Inc.				

Income And Poverty

Harvard has evolved from an agricultural enclave to a prestigious, low-density suburb within the orbit of the Boston and Worcester metro areas. Not surprisingly, the economic position of Harvard households is higher than that of households in most Worcester County towns. Overall, Harvard residents have higher levels of educational attainment and better-paying jobs, and they are more likely to have more wage earners, too. Table 4.5 presents a set of standard wealth indicators for Harvard, Worcester County, and the state, and compares today's statistics with those published in the last Master Plan. Harvard remains a town with high household income and high housing values despite the recent recession. Despite this affluence, a number of residents live in poverty (earning less than \$11,770 for a single individual, \$20,090 for a family of three in 2015). The most recent data from the U.S. Census Bureau estimate that 95 Harvard families (6.2%) lived below the federal poverty threshold in 2014, and most of these (63) owned their homes. Of the 499 residents living in poverty, 209 were children under the age of 18; only

39 were 65 or older.³⁰

Table 4.5 - Comparative Economic Indicators

Indicator	2002 Master Plan			Harvard in 2014		
	Harvard	Worcester County	State	Harvard	Worcester County	State
Median Family Income	\$119,352	\$58,394	\$61,664	\$150,859	\$82,736	\$86,132
Per Capita Income	\$40,867	\$22,983	\$25,952	\$50,853	\$32,072	\$36,441
Median Home Value	\$368,700	\$146,000	\$185,700	\$552,300	\$255,600	\$329,900
% Population with College Education or Higher	65.1%	26.9%	33.2%	62.5%	31.4%	40.0%
% Management, Business Science and Arts Employment	73.9%	37.6%	41.1%	64.9%	40.7%	43.9%
Sources: Master Plan 2002, Table 2-7; American Community Survey Five-Year Estimates, 2010-2014.						

2. HOUSING CHARACTERISTICS

Physical Characteristics of Housing in Harvard

Excluding Devens, almost 96 percent of the housing units in Harvard are detached single-unit homes. Homes here are generally larger than those found in all of the adjacent towns. Over 80 percent of the homes in Harvard have three or four bedrooms, and 10 percent have five or more bedrooms.³¹ Harvard has only a few multi-unit housing structures in older two-family and multifamily dwellings, two apartment buildings for seniors, and condominiums in 2-, 3- or 4-unit buildings. Variety and greater density can generally be found in the Town Center, around Bare Hill Pond, Still River Village, the Shaker Village area, and in newer neighborhoods around Ayer Road north of Route 2, where several mixed-income properties have been developed.

Devens has a mix of dwelling units. An early phase renovated 102 units that were originally built for military families. In 2012, Transformations, Inc. completed construction of eight moderately-priced zero net energy single family homes on Adams Circle, and near-by, Metric Corp. completed 20 energy-efficient townhouses in 2014. In 2015 MassDevelopment approved Emerson Green, a 124-unit development of single family homes and duplexes for sale and multifamily homes for rent, configured in a traditional neighborhood design (compact lots, sidewalks, shared public space, and rear entry driveways). Build-out of this project will approach the 282-unit limit allowed under the Devens Reuse Plan. Finally, in 2015, Harvard, Ayer and Shirley approved a re-zoning in Shirley's portion of Devens to allow a 120-unit Senior Residential Development

³⁰ U.S. Census; ACS 2010-2014, 5 Year Estimates There is a high incidence of poverty (36.2%) among residents – all male - living in “other living arrangements,” most likely the supportive (transitional) housing for veterans at Devens.

³¹ U.S. Census; ACS 2005-2009, 5 Year Estimates, DP-04

whose units are outside of the 282-unit cap.

Appendix 1 contains a detailed Development Suitability Analysis. The physical characteristics of Harvard make development difficult. The Analysis takes into account environmentally sensitive areas that are not suitable for building, such as wetlands, floodplains, and BioMap core habitats, as well as areas where development may harm important resources, such as water supply protection areas and prime farmland soils. Removing such lands from consideration leaves 1,471 acres that are not currently developed, are not protected from development, do not have environmental constraints, and are potentially developable based on size and access. Of this total, about 1,000 acres are enrolled in a Chapter 61 tax abatement program for forestry management, agricultural production, or recreation. Owners temporarily enjoy benefits of lower taxes but may remove the property for development at any time. These unconstrained lands may be suitable for higher residential density to help meet local housing needs. See Appendix 1 for more information on the methodology behind the Analysis.

Age and Location of Housing

Harvard generally has newer a newer housing stock than most of its neighbors, with the exception of Boxborough and Bolton. Almost 59 percent of homes Town-wide (including Devens) were built after 1970 and over 18% were built since 1990.³² Harvard also has a substantially newer housing stock than either the county or the state: 16.9 percent of Harvard homes were built prior to 1940 compared to 32.9 percent of the homes in Worcester County and 34.3 percent of homes statewide. There are also many inter-war (1920-1940) houses and treasured historic homes in Harvard's housing supply, and they account for 19.3 percent of all units (excluding Devens).³³

There is a marked difference in the location and concentration of housing by age in Harvard. Most homes dating from the eighteenth and nineteenth centuries are located relatively close to each other in the village centers or along the original roads that crossed the Town. Mid- to late-twentieth century development spread to all sections of town, first in a lot-by-lot pattern in areas south of the Town Center, and eventually in the form of subdivisions of larger areas, e.g., Ann Lee Road and along Littleton Road. By the 1990s, single-family home development reverted to the pattern of separate, individual lots (typically created as "Approval Not Required" or ANR lots), supplemented by multi-family production through comprehensive permits.

While renovations and additions are common in Harvard, "teardowns" have been limited; in fact, the Town issued just seven demolition/rebuild permits (2004-2013).³⁴ While older homes usually present greater maintenance and cost issues for owners, the oldest are often either protected by preservation covenants or present a high enough building value to stave off demolition. Moreover, Harvard has buildable land available, so the demolition/rebuild trend experienced in towns closer to Boston has not yet been felt in Harvard.

Housing Size and Density

The median number of rooms (a common measure of housing unit size) in Harvard is greater than in all neighboring towns, except Bolton, and is considerably more than county and state

³² U.S. Census; ACS 2010-2014. Census Tract 7614.

³³ Harvard Assessor's Parcel Database (2014).

³⁴ "Building Permits," CY 2004 to 2013, from Harvard Planning Department.

averages. The median number of rooms per unit in Harvard is 8.0. Forty-seven percent of Harvard homes have four bedrooms compared with just 16.3 percent in Worcester County, 34.1 percent in Boxborough, and 11.5 percent in Ayer, both communities with substantially greater shares of rental apartments and condominiums.

Table 4.6 - Distribution of Housing by Number of Bedrooms (Estimated; 2012)

Location	Number of Bedrooms			
	2 Bedroom	3 Bedroom	4 Bedroom	5+ Bedroom
HARVARD (Excluding Devens)	5.6%	34.4%	47.0%	10.2%
Devens	0	59%	0	0
Shirley	30.2%	40.6%	18.1%	2.9%
Ayer	38.6%	27.3%	11.5%	2.2%
Littleton	18.1%	43.0%	25.9%	2.6%
Boxborough	23.5%	26.1%	34.1%	3.4%
Stow	16.0%	38.8%	37.6%	4.8%
Bolton	7.5%	27.1%	51.3%	8.4%
Lancaster	21.8%	42.4%	22.2%	2.6%
Worcester County	27.2%	39.2%	16.3%	3.8%
Source: U.S. Census; ACS 2008-2012, 5-Year Estimates, DP-04				
*In Devens, 31% of the units are one-bedroom units.				

Tenure and Occupancy

Residential Harvard has an extremely high rate of owner-occupancy (92 percent), well above the Worcester County rate and higher than all neighboring towns except Bolton. The homeownership rate has been relatively stable, but it is up modestly from 90.5 percent since 2000.

Due to Harvard's distance from Boston (35 miles) and major employment centers, its lack of public transportation, few local employment options, limited public water and sewer systems, and zoning that does not allow multifamily housing anywhere in town as of-right), it is not surprising that rental options are limited. Other than two senior rental housing developments on Ayer Road (the 24 unit Foxglove and 42 unit Bowers Brook apartments), most renters live in 1-4 unit dwellings: two-thirds rent single family houses and another 17 percent rent in small structures of 2-4 units. With such a limited supply, the few units that are available rent quickly. Real estate listings in March 2014 indicate zero vacancy in the rental market. Construction is expected to start in the spring of 2016 on the proposed nine rental family units at Great Elms on Stow Road but these are replacement units for units previously removed from the Subsidized Housing Inventory.

Table 4.7 – Households and Household Size by Tenure

		Occupied Units (Households)			Average Household Size	
Location	Total Housing Units	Total	Owner-Occupied	Renter-Occupied	Owner-Occupied	Renter-Occupied
Harvard						
Residential	1,965	1,813	1,665	148	2.84	1.89
Devens	82	80	65	15	2.69	2.93
Total	2,047	1,893	1,730	163	2.84	1.98
Ayer	3,462	3,118	1,861	1,257	2.53	1.96
Shirley	1,738	1,670	1,542	128	3.01	2.05
Littleton	2,073	1,949	1,532	417	2.77	1.79
Boxborough	2,614	2,409	1,932	477	2.76	2.22
Stow	3,477	3,297	2,804	493	2.81	1.81
Bolton	2,427	2,264	1,669	595	2.71	2.09
Lancaster	2,526	2,429	2,158	271	2.82	1.82
Worcester County	326,788	303,080	200,322	102,758	2.71	2.23
Census 2010, RKG Associates, Inc.						

Within owner-occupied units, Harvard has the highest average family size, 3.10 people per family, and the highest under-18 population percent among neighboring towns. This can be connected to the strong demand for Harvard schools, and also correlates to the large house size.

Housing Development Trends

Between 2004 and 2014, the Harvard Building Department issued 69 new building permits for single-family homes, including seven demolition/rebuilds (Table 4.8). In addition, 14 permits were given to multi-unit structures with a combined total of sixty-eight new units.

Table 4.8 - Residential Construction Permits in Harvard

Year	Single-Family Home	Multi-Unit Dwelling	Demolition/ Rebuild
2004	8	0	4
2005	10	0	0
2006	5	2	0
2007	10	2	0
2008	5	1	1
2009	4	2	0
2010	5	2	0
2011	6	1	0
2012	8	0	0
2013	3	2	0
2014	5	2	0
Total	69	14	5
Source: Town of Harvard, Building Permits Database, 2004-2014			

According to building permit records from the Town, eight new homes and four 2-unit condominium structures at Trail Ridge were permitted from 2013 - 2014. Except for an occasional comprehensive permit project, the long-term trend indicates a low rate of housing growth, which is not likely to change given the high cost and limited supply of buildable land and zoning that favors single family homes.

3. HOUSING MARKET

Housing Values

As shown in Table 4.9, the 2010 - 2014 American Community Survey (ACS) estimated Harvard's median owner-occupied housing value at \$552,300, which is greater than neighboring towns of Ayer, Shirley, and Boxborough. Among towns with high housing values west of Boston, Harvard is at the lower end of the range because it is considerably west of the city. Between 2000 and 2014, the median housing value in Harvard increased by 50%, which was greater than Boxborough (38%) and Lincoln (44%); Carlisle had the greatest percentage gain (61%) and one of the highest median values among comparable communities, \$735,600. The supply of housing in Harvard has been relatively low, adding to the substantial rise in overall value.

Table 4.9 - Comparison of Median Housing Values in Selected Suburbs

Location	Median Housing Value (2014)	Median Housing Value (2000)	Change in Housing Value (2000-2014)
Shirley	\$268,900	\$163,400	65%
Ayer	\$288,600	\$171,000	69%
Acton	\$502,,000	\$332,400	+51%
Boxborough	\$511,400	\$371,000	+38%
HARVARD*	\$552,300	\$368,700	+50%
Concord	\$668,300	\$453,400	+52%
Carlisle	\$735,600	\$456,000	+61%
Lincoln	\$847,200	\$590,300	+44%
Weston	\$1,000,000+	\$739,200	n/a
Source: U.S. Census; ACS 2010-2014 DP-04, Census 2000 DP-4 (SF-3) *Including Devens			

Based on sales figures from 2013, the age, location and lot size of housing have an important and contrasting impact on housing values. Houses on small lots around Bare Hill Pond, in Still River and Town Center generally command higher prices per square foot (sq. ft.) and per acre. Historic homes dating to the early to mid-nineteenth century are quite valuable on a per acre basis. Large single family homes on the minimum 1.5-acre lots tend to have the highest absolute values. In 2013, eight market-rate units at the Harvard Common condominiums on Littleton Road sold for \$299,000 - \$640,000 for units ranging in size from 1,400 sq. ft. to 3,200 sq. ft., for an average of \$193 per sq. ft.³⁵

Housing Sales

The recession of the late 2000s significantly lowered Harvard housing sales prices, and the median single family sales price is still below the peak in 2005. Worcester County was affected in a greater way by the “Great Recession” because of its location west of metropolitan Boston and lower housing demand. Sales activity in Harvard began to pick up in 2013, and prices, while recovering have not yet rebounded to the high before the recession. Housing values in communities similar to Harvard but closer to the metro area have recovered faster than Harvard; as a result, with good schools and plentiful open space, Harvard’s comparatively lower cost housing provides good value for those willing to accept a longer commute.

³⁵ Trulia.com

Table 4.10 - Housing Sale Prices, Number of Sales, and Percent Change in Harvard

	Median Sale Price						
	2000	2006	2012	2013	% Change 2000-2013	% Change 2012-2013	% Change 2006-2013
Median Sale Price	420,500	567,500	412,335	425,000	1.1%	3.1%	-25.1%
	Number of Sales						
Single Family Homes	80	46	47	66	-17.5%	40.4%	43.5%
Condominium Units	12	12	15	16	33.3%	6.7%	33.3%
Other	36	18	27	31			
Total	128	76	89	113	-11.7%	27%	48.7%
Source: The Warren Group, Town Stats.							

Market Rents

Only 8 percent of all occupied housing units in Harvard are occupied by renters. The median household size of Harvard's renter households is 1.89 people. The average gross median rent is \$1,305, which is a 35 percent increase from \$964 in 2000.³⁶ The majority of rental units (75 of an estimated 148 rental units (2010-2014 ACS)) qualify as "affordable" units on the Subsidized Housing Inventory (SHI). These 75 affordable rentals represent more than two-thirds of the town's 110 affordable units counted on the SHI as of December 2014.³⁷ The comprehensive permit process is the primary vehicle for building rental units in Harvard.

4. CURRENT DEVELOPMENTS IN HARVARD

Trail Ridge: Trail Ridge is a 52-unit residential condominium complex developed by Northwest Communities, LLC. The project is located on a new cul-de-sac, Trail Ridge Way, off of Littleton County Road near the Boxborough line. The complex is comprised of 2- and 4-unit structures, 24 of which are age-restricted residents aged fifty-five and older. Trail Ridge received a comprehensive permit from the ZBA, and 13 units (25%) will qualify as affordable units on the SHI. As of 2014, twenty-eight units had received building permits. Work on Trail Ridge began in 2006, but was slowed by the recession. Six of the planned 13 affordable units were on the December 2014 SHI. The affordable units will be split proportionately between the age-restricted units and the non-restricted units. Trail Ridge is the only new multi-unit housing development currently being built in Harvard.

Great Elms: The existing 5-unit rental complex in the historic farmhouse at Great Elms is now being planned for re-development. The property was in risk of foreclosure and sold in September 2013 to CHOICE, the non-profit arm of the Chelmsford Housing Authority, to be redeveloped as

³⁶ U.S. Census 2000 (SF3), Selected Housing Characteristics, ACS 2005-2009

³⁷ MA Department of Housing and Community Development (DHCD) Chapter 40B Subsidized Housing Inventory (SHI)

nine family rental units. Originally proposed as rehab/new construction, the project will now be entirely new development. All units in the project will be affordable, i.e. restricted to households earning no more than 80% of the area median income (AMI). Four new units created on the site will replace those lost when the Harvard Inn went into foreclosure, and the affordable units located there were converted to market-rate. The historic barn was not preserved on the property, but re-located off-site and the existing farmhouse (with three units) will be demolished. The nine apartment units at Great Elms represent a zero net increase from the Great Elms/Harvard Inn project.

Village Green: In 2015 MassDevelopment approved Village Green, a 124-unit Innovative Residential Development in the Grant Road area of Devens. The project design will promote a compact, walkable, neighborhood with a variety of dwelling types, including 40 multi-family units, 19 townhouse units, 22 duplex units, and 43 single-small homes. The multi-family units will be rental and the remainder will be for sale. The 32.7-acre property has a density of 4.3 units per acre in contrast to Harvard's .67 units per acre. The project offers park and open space amenities, energy conservation construction, and "low impact development" storm water management strategies.

The Devens Reuse Plan calls for 25% of the units to be affordable, that is, affordable to households earning less than 80% of the Area Median Income. In this way, Harvard will gain units on the Subsidized Housing Inventory (SHI) and make progress toward achieving its goal of providing 10% of its housing stock as affordable as required by MGL Chapter 40B. However, this project does not comply with the Reuse Plan. It will provide 27 units to middle income households i.e. those earning between 80% and 100% of the AMI; thus, none of the units will qualify as affordable housing. The Municipal Affordable Housing Trust (MAHT) will contribute a cash payment of \$140,000 to the developer to make 25% of the rental units (10 units) available to households earning less than 80% of the AMI. Under the state's affordable housing regulations, all 40 rental units would then count toward the Town's 10% goal.

Pine Hill Village (Transformations, Inc.): The Board of Appeals approved a comprehensive permit for Pine Hill Village in 2008, and the project will likely get underway in 2016. The 20.5-acre development consists of 24 condominium units in 17 buildings. Six of the units (25%) will be sold to households earning less than 80% of the AMI. Homes contain two or three bedrooms and range in area from 900 to 2300 square feet; by Harvard standards these are small units and will help to fill a niche for buyers looking for homes of moderate size and for empty-nesters to move from their large single family homes. These will be zero net energy homes with high insulation values (R-value of 45), roof-top solar electric, and triple-glazed windows.

5. HOUSING AFFORDABILITY

Defining Housing Affordability

There are many ways to define affordable housing, but the most widely accepted definition is that used by the federal government. The U.S. Department of Housing and Urban Development (HUD) calls housing costs — rent plus basic utilities or mortgage, tax and insurance payments — affordable when they consume no more than 30% of a household's income. Households are deemed by HUD to have an affordability problem, or cost burden, if they pay more than 30% of income for housing; those paying over 50% are said to have a severe cost burden.

Housing Cost Burden

The Census Bureau estimates that of Harvard's 1,675 homeowners, about 130 (8 percent) have low or moderate incomes and 92 percent of them (120 households) are housing cost burdened.³⁸ Among the 125 renter households, seventy-nine (63 percent) have low or moderate incomes, but only 57 percent (45 households) are housing cost burdened. The lower rate of rental housing cost burden can be attributed to the larger percentage of affordable apartments available than affordable for-sale dwellings.

The percentage of cost-burdened households (owners and renters) has changed very little, though the percentage with severe housing cost burdens (over 50 percent of gross income) increased from about 5 percent to 14 percent between 2000 and 2010. The number and share of low or moderate income homeowners has not changed since 2000 (133 households, 8 percent). Among renters, however, there was a substantial rise in the proportion of low and moderate income households from 47 percent in 2000 to 63 percent in 2010.³⁹

Low and Moderate-Income Housing

Most housing assistance programs are targeted to low and moderate income households, defined by HUD until the mid-1990s as those earning up to 80% of the area median. HUD now considers 80% the ceiling for low income (and classifies as moderate income those earning up to 95%). In common usage, and under the Massachusetts Comprehensive Permit Law (MGL Chapter 40B), those earning less than 80% of median income are still considered low and moderate income.

Housing may be affordable without being subsidized under a specific state or federal program, and most low income families do not live in subsidized housing. Many towns have some modestly priced housing, such as small, post-war single-family homes, multi-family units, or lakeside cottages converted for year-round occupancy. These units fill an important market niche, but they are subject to the vagaries of the market. They do not represent a predictable permanent affordable housing resource. Moreover, there are no requirements that such units serve low income households nor that they be fairly and affirmatively marketed. They do not carry any implied warranty as to condition or accessibility. To ensure that the state had an adequate supply of low and moderate income housing, Massachusetts enacted "An Act Providing for the Construction of Low and Moderate Income Housing in Cities and Towns in Which Local Restrictions Hamper Such Construction" in 1969 as Sections 20-23 of MGL Chapter 40B, the state's Regional Planning Law, to increase the supply and improve the distribution of housing for low and moderate income families.

Chapter 40B

Under Chapter 40B, the state's affordable housing law, all communities are supposed to have housing that remains affordable to low- or moderate-income households even when home values appreciate under robust market conditions. The units retain their affordability under a deed restriction that lasts for many years, if not in perpetuity. Both types of affordable housing meet a variety of needs. However, the market determines the price of unrestricted affordable units while a recorded legal instrument regulates the price of deed restricted units. Any household

³⁸ Comprehensive Housing Affordability Strategy (CHAS) data from HUD, 2010. Harvard figures include Devens.

³⁹ CHAS, 2000, 2010

(regardless of income) may purchase or rent an unrestricted unit, but only a low- or moderate-income household may purchase or rent a deed restricted unit.

Chapter 40B allows developers of subsidized housing to apply to the Zoning Board of Appeals (ZBA) for all necessary approvals in the form of a single (comprehensive) permit and to request overrides of local zoning and other restrictions if necessary to make the housing economically feasible. When less than 10 percent of a town's year-round housing is restricted for occupancy lower-income households at prices they can afford, Chapter 40B all but requires approval of comprehensive permits for affordable or mixed-income housing developments.⁴⁰ Under Chapter 40B, the ZBA may approve, conditionally approve, or deny a comprehensive permit, but in communities that do not meet the 10 percent statutory minimum, developers may appeal to the state Housing Appeals Committee (HAC). The HAC, in turn, may overturn local denials of a comprehensive permit or the imposition of conditions they believe make a project infeasible, absent a finding that the project presents serious health or safety hazards.

Because the comprehensive permit allows a (limited) override of local zoning and other regulations for eligible subsidized housing development, its use has been controversial since its enactment more than 45 years ago. It remains the principal production engine for the creation of low and moderate income housing, however, in many suburban and rural communities – like Harvard – where multi-family housing and other compact forms of development are generally not allowed. By facilitating the development of mixed income housing, 40B is now responsible for much of the region's market rate multi-family development as well as its affordable development. As Harvard advances toward meeting its 10% goal, "friendly" 40B developments can provide housing for a variety of target groups, including seniors, families, disabled persons, and apartment dwellers that otherwise would not be permitted.

To qualify as affordable under the Comprehensive Permit Law, the housing must involve some government subsidy, even if just in the form of state-rendered technical assistance. This statute, enacted more than 30 years ago to facilitate development of low and moderate income housing, established an affordable housing goal of 10% for every community in the Commonwealth. For purposes of determining whether a community has met the 10% standard, the State defines affordable, or low or moderate income housing, as housing developed with a state or federal subsidy or financing mechanism, in which at least 25% of the units are reserved for households with incomes not exceeding 80% of the area median income and which restricts rents or home prices for a specific period of time (generally at least 30 years for new construction and 15 years for rehabilitation). Proponents must provide open and fair marketing. Donation of town-owned land or technical assistance provided by the Massachusetts Department of Housing and Community Development (DHCD), in conjunction with the Local Initiative Program, are also considered eligible forms of public subsidy.

The Massachusetts Department of Housing and Community Development (DHCD) maintains the official tally of units that qualify as affordable housing on its Subsidized Housing Inventory (SHI, or "40B" list). These are the units that count toward a municipality's 10 percent goal under Massachusetts General Law Chapter 40B. To be included on the SHI, housing must involve some government subsidy, even if just in the form of technical assistance. What constitutes an eligible

⁴⁰ "Year-round housing" is the Town's total number of housing units minus the number of seasonal or vacation units, as determined by the decennial census.

“subsidy program” has changed over time, as have the production tools, but it is now broadly defined to include local initiatives that involve only minimal technical support provided by DHCD and developments financed by conventional lenders under the Federal Home Loan Bank of Boston’s New England Fund in addition to traditional government subsidy programs.

The inventory may include rental as well as ownership housing, group homes for populations with special needs, and existing homes that are repaired or upgraded using state or federal resources, as long as the occupant is income eligible. In rental projects, all units count, including the market rate ones; in homeownership projects, only the affordable units count. Households subsidized with tenant based rental assistance are not included in the Inventory.

The SHI dated December 2014 credits Harvard with 110 low- or moderate-income units, as reported in Table 4.11. This includes 13 affordable units at Devens located within Harvard’s borders. To reach the 10 percent minimum, Harvard would need another ninety-four qualified units. Today, nearly 70 percent of the units in Harvard’s SHI are located in or very close to the C district on Ayer Road. Residents of North Harvard have expressed concern about the concentration of affordable housing in their part of town. Map 4.1 shows the locations of the existing and approved affordable housing projects in Harvard.

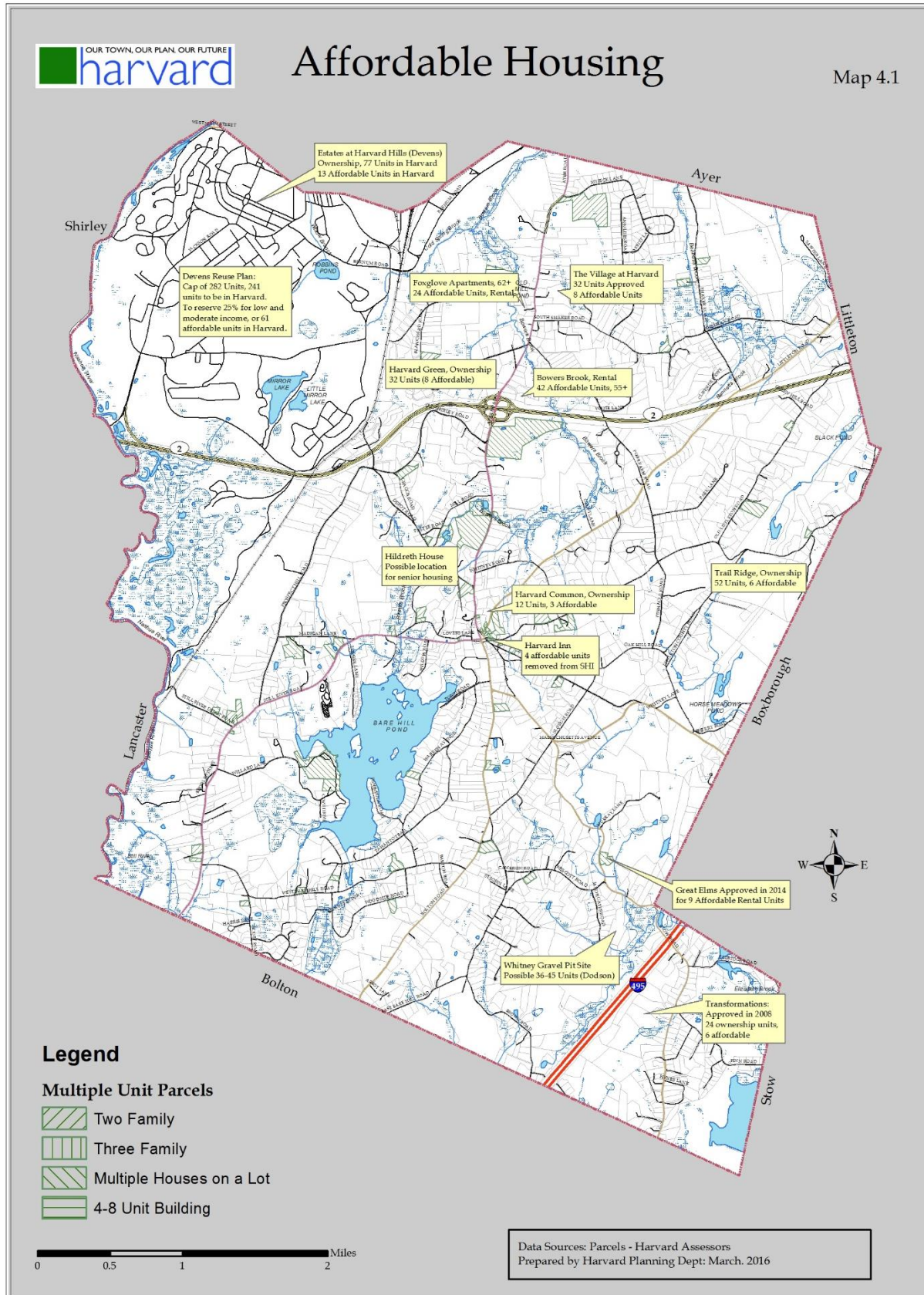
The Devens Reuse Plan stipulates that 25 percent of the housing units shall be affordable, but this has not happened thus far. Compliance with the requirement would boost the Town’s record of meeting its Chapter 40B obligation since the law requires 10 percent of the units to be affordable. But if 10 percent of the units at Devens do not qualify as affordable under Chapter 40B, Harvard will have to compensate by creating more affordable units elsewhere within its borders.

Table 4.11 - Chapter 40B Subsidized Housing Inventory

Project Name	Address	Type	Restrictions	Number of SHI Units	Total Units in project
Great Elms (1)	105 Stow Road	Rental		5	5
Harvard Inn (1)	11 Fairbank	Rental		4	4
Harvard Elderly / Foxglove Apartments	253, 453 Ayer Rd	Rental	Over age 62; or disabled of any age	24	24
Harvard Green (LIP)	Lancaster County Road	Ownership		8	32
Estates at Harvard Hills	Walnut St. and Elm Road (Devens)	Ownership		13	n/a
Harvard HOR Program	Ayer Road	Ownership		1	1
Harvard HOR Program	Old Mill Road	Ownership		1	1
Harvard HOR Program	Withington Lane	Ownership		1	1
Harvard HOR Program	Littleton Road	Ownership		1	1
Harvard HOR Program	Massachusetts Avenue	Ownership		1	1
Trail Ridge (2)	Littleton County Road	Ownership	50 percent: Age 55+	6	20
Harvard Commons Condominiums	15 Littleton Road	Ownership		3	12
Bowers Brook	196 Ayer Road	Rental	Age 55+	42	42
Total SHI Units				110	
Percent of Year-Round Housing Stock				5.55%	

Source: DHCD, March 2014.

1. Great Elms and Harvard Inn are listed together on the DHCD inventory, but kept separate on this list to reflect current changes. The Harvard Inn was sold for market-rate housing after foreclosure of the property in 2012, and will come off the SHI. Four new units are planned for Great Elms to replace those lost at the Harvard Inn.
2. Trail Ridge is still under construction. Planned build-out: 52 units (13 affordable).



6. MEETING HARVARD'S AFFORDABLE HOUSING NEEDS

Affordable Housing Planning

Harvard created an Affordable Housing Plan in 2004 and updated it in 2011. These plans have been approved by the Massachusetts Department of Housing and Community Development (DHCD). They were prepared as part of a DHCD-sanctioned Housing Production Planning (HPP) process, which encourages municipalities to plan and develop affordable housing that is consistent with their community planning goals. It is intended to encourage communities to take a proactive approach to meeting their affordable housing obligations under the Chapter 40B statute. It gives municipalities that are under the 10 percent threshold, but who are making steady progress in producing affordable housing on an annual basis, more control over comprehensive permit applications. If a municipality has a DHCD-approved affordable housing plan *and* certification from the agency that it has complied with that plan by having produced qualified units equal to at least 1/2 of one percent of its year round housing stock in a calendar year can get a one year reprieve from comprehensive permit petitions that are inconsistent with their plan; if it has produced 1.0 percent, it can get a two year reprieve.⁴¹

The Plan includes a needs assessment for affordable housing in Harvard and outlines possible ways to create housing in the Town. It also identifies opportunities and describes strategies for providing affordable housing for various household types and ages. According to the plan, the Town's greatest affordable housing need is for "smaller, moderately priced ownership units and rentals in a range of price levels" by young individuals and families who "work in the area but cannot afford to buy" and by "older homeowners wishing to downsize." The 2004 plan and the 2011 update relied upon 2000 Census data. Harvard should perform a new analysis based upon 2010 Census data and the latest American Community Survey information.

The Affordable Housing Plan sets an annual production goal of at least eleven qualified, affordable housing units each year. It outlines actions the Town could implement, including amending the Zoning Bylaw, providing public land for housing, and supporting private development that helps create affordable housing units. The zoning concepts outlined in the plan include revisiting several existing and potential provisions, e.g., accessory apartments, cluster zoning, conversion for multiple residences, and mixed-use development in the Commercial district. Furthermore, it outlines "preservation strategies" that include maintaining the affordability of all existing Chapter 40B units, physically maintaining the properties, and exploring zoning changes to "allow the subdivision of older farmsteads and larger homes into one and two bedroom affordable units." Lastly, it promotes effective use of Harvard's Municipal Affordable Housing Trust and Community Preservation Act (CPA) revenues.

Financial Support for Affordable Housing

Harvard was one of the first communities to adopt the provisions of the Community Preservation Act (CPA). Established by the Legislature in 2000, the CPA allows municipalities to create a local Community Preservation Fund through the imposition of a surcharge of up to 3 percent of the tax levy against real property. The funds may be used to preserve open space and historic sites,

⁴¹ The current HPP regulation (760 CMR 56.03(4)) became effective in 2008, replacing a similar regulation, the Planned Production Plan that had been adopted in 2002. The Housing Production Plan regulation is found at (760 CMR 56.03(4))

create affordable housing, and develop outdoor recreational facilities. The legislation also created a statewide Community Preservation Trust Fund, administered by the Department of Revenue, which provides distributions each year to communities that have adopted the CPA. Each CPA community is required to spend, or reserve for future spending, a minimum of 10 percent of the CPA funds collected each year (including state match) for each of the following community preservation purposes: open space; historic preservation; and community housing. Harvard adopted a 1.1 percent surcharge in 2002. In FY 2016, the surcharge generated \$204,723; with the state match of \$60,702, Harvard had \$265,425 for community preservation purposes. Most of the housing funds have been transferred to the Harvard Municipal Affordable Housing Trust Fund (MAHTF).

Harvard Municipal Affordable Housing Trust

The Municipal Affordable Housing Trust (MAHT) was created in 2006 pursuant to Chapter 491 of the Acts of 2004, to create and preserve affordable housing for low and moderate income households. As a quasi-government agency the MAHTF is capable of acting quickly and decisively to take advantage of opportunities to create or preserve affordable housing. Since it was established the MAHTF has contributed to the support of a number of affordable housing initiatives, including:

- A \$200,000 loan to assist in the development of Bowers Brook, a Low Income Housing Tax Credit development in the Ayer Road Commercial District (year);
- Acquisition of 28 acres of land on Littleton Road, for the purpose of developing mixed income housing. The MAHT issued a Request for Proposals (RFP) in 2014 to develop this site, but the project was subsequently abandoned;
- The Trust will provide a \$140,000 subsidy to the developers of Emerson Green in Devens to write-down the cost of constructing ten rental units. The subsidy will help to lower rents to levels that will qualify the units for inclusion on the SHI.

The MAHT should continue to seek out opportunities to develop affordable housing, both rental and owner, to increase the supply of alternatives to conventional single-family homes. The MAHT should be sensitive to the concerns of residents on the effect of dense developments on their property values, but careful site design and building treatments reflective of Harvard's rural agricultural heritage can help integrate a development into its neighborhood without harming adjacent properties. The former Whitney Gravel Pit and Hildreth House site are possible candidates for town-sponsored housing.

Accessory Apartments

The Zoning Bylaw allows accessory apartments in the AR district by special permit of the Board of Appeals. This technique is an important means of providing small rental units without undue impacts on surrounding property. The Bylaw does not require an "in-law" relationship between the parties. The accessory apartment may be within the single family home or in a detached structure on the property, and the Bylaw generously allows up to 1200 square feet but not more than 1/3 of the combined floor area of both units. However, just a few owners have taken advantage of the provision. Some changes that would make it more "user-friendly" include eliminating the provision that the main dwelling must be in existence for five years prior to submitting an application, and allowing such apartments as a by-right use within a dwelling but

still require a special permit for units in detached buildings.

7. DEVENS' EFFECT ON HOUSING

Resuming jurisdiction of Devens would assist with diversifying Harvard's overall available housing stock, a Master Plan goal, due to Devens' existing residential developments. Devens contains a mix of neighborhoods comprised of both former military housing and new housing constructed as part of redevelopment efforts. The newest, and one of the largest developments (at 124 units), is Emerson Green, also known as "Grant Road".

The addition of existing and permitted affordable housing within Devens assists Harvard in meeting its affordable housing goals. While only limited additional housing (after construction of the Grant Road development) would be permitted under Devens' existing housing cap of 282 total residential units, the remaining allowable units would provide some opportunity for additional housing stock diversity. The housing cap could conceivably be revisited at some time in the future, and if this were to happen, Devens could potentially provide opportunities for additional developments similar to Grant Road, or potentially for other affordable, age-restricted, or multi-family housing.

Harvard should consider studying various residential "build-out" scenarios that achieve desired (or target) levels of housing proportions for various housing types (such as affordable housing and senior housing). This would allow for a better understanding of what actions and numbers of units would be needed to meet required/desired housing stock percentage goals, and could be helpful in planning for Harvard's future growth under various disposition outcomes. In lieu of resuming jurisdiction of Devens, Harvard could also consider overlay zones or special development districts to help allow for housing stock diversity in the future.

Devens residents who live within Harvard's historical boundaries are currently included in evaluations of Harvard's affordable housing goals. A study should be conducted to determine the impact on Residential Harvard's affordable housing goals if jurisdiction is not resumed and these residents are no longer included within such evaluations.

To assist with the stated goal of ensuring that new housing is harmonious with community character, existing neighborhoods within Devens should be kept intact to the extent practical. Since some neighborhoods cross historic town boundaries, special or additional provisions may be required during the disposition process, in lieu of host towns each resuming jurisdiction of their portion of Devens, to ensure that these neighborhoods do not become split by jurisdictional lines. For this, and other housing-related issues, extensive public feedback should be solicited from the residents and landowners.

8. SUMMARY OF HOUSING NEEDS

Senior Housing Needs: Harvard's changing demographics show a clear trend toward an increase in the senior population. As noted in Table 4.3, in 1980 5.6% of the Town's population was 65 years and older, and in 2010, the percentage had increased to 12.7%. As people age, their housing needs change. Many seniors bought large single family homes in Harvard to raise families, and as empty-nesters today, they no longer have need of a large home or care little for the demands of house and yard maintenance. Health issues may also affect seniors' ability to manage stairs. As noted previously, many seniors live alone and may desire a setting with greater social interaction. Thus, housing needs for seniors point to a potential demand for various housing alternatives:

1. Smaller housing units for seniors who wish to stay in Harvard but no longer need a large single family home;
2. Assisted living, where low-level medical services can help seniors with less serious medical conditions to live semi-independently; and
3. Retirement housing, where seniors with common interests can enjoy social interactions and down-size to a smaller unit with minimal yard and house maintenance responsibilities;

Providing housing alternatives for seniors has the added benefit of creating greater turnover in the housing market. Detached houses that accommodated families will once again become available for new families to help fill a need for that occupancy. Resuming jurisdiction of Devens would potentially assist Harvard in addressing senior housing needs.

Family Housing Needs: As noted in Table 4.9 it is expensive to enter Harvard's housing market. For a 2014 median priced home valued at \$552,300, first-time buyers would need a 20% down payment of \$110,460. Principal and interest for a 30-year mortgage at 4% on the balance would amount to \$2,100 per month; taxes and insurance would add to the burden. Few first time home buyers can afford a single family home given the current housing market dynamics. While there is little the Town can do to affect single family housing prices in eastern Massachusetts, the Town can pursue the following strategies to help meet the need for family housing:

1. Revise standards for the Open Space Development Bylaw to allow a greater density than one unit per 1.5 acres. Consider a density of 2 units per acre or higher as a means to lower the land cost portion of development. Simplify the approval process while still insuring the development provides resource protection and open space benefits to the Town.
2. Revise the prohibition on communal sewage treatment systems, which are now allowed only in Ayer Road Village Special Permit developments and in Open Space developments.
3. With Community Preservation Act (CPA) funds conduct planning studies of Town-owned lands that may be appropriate sites for family housing. Provide an open participation process at the outset to involve neighborhood residents in discussions of density and design to minimize impacts on surrounding neighborhoods.
4. With CPA funds, provide a subsidy to write-down the cost of market rate units in return for guarantees that units will remain affordable for low- and moderate-income families.
5. Resuming jurisdiction of Devens could potentially assist Harvard in addressing family housing needs by providing additional, more diversified housing options.

Chapter 40B Developments: Many communities resent Chapter 40B because of its heavy-handed manner of over-riding local zoning to enable the production of affordable housing. Harvard, on the other hand, has benefited from this approach by obtaining needed housing that would not otherwise be possible without the financial assistance from state and federal funding sources. This tool has allowed developers to submit applications for medium size projects that have not over-whelmed neighborhood scale or created unwanted traffic or school impacts. As Harvard advances toward meeting its 10% goal, 40B developments can provide housing for a variety of target groups, including seniors, families, disabled persons, and apartment dwellers who cannot afford the cost of entry into Harvard's expensive housing market. A more culturally diverse community will result.

Harvard has made use of the Local Initiative Program (LIP) to encourage developers to work with local officials to provide housing that meets local needs. Designation by the Board of Selectmen as a LIP project (often referred to as a friendly 40B) will create a smoother approval process and flexible consideration of developer requests in matters of density and design. According to the Town's adopted LIP criteria, benefits to the Town include innovative site design, units in excess of the 25% minimum, enhancements to the site and surrounding neighborhood, and energy efficient design and construction. Harvard Green received the Selectmen's approval as a LIP, which allowed development of 32 units on 22 acres and provided eight affordable units (25%).

Resuming jurisdiction of Devens will assist Harvard in addressing Chapter 40B housing needs due to housing stock requirements within the 1994 Reuse Plan.