

2.2

Market Analysis

Introduction

This section evaluates the future demand for potential residential development at Devens. The methodology utilized in preparing this analysis consisted of a review of household formations in the market areas to ascertain age, income and tenure characteristics. Five-year household forecasts were also analyzed and the annual turnover of existing households was estimated. This in turn provided an understanding of future annual demand for households by different age, income and tenure levels within the market areas. The analysis concludes with an allocation of this demand to potential residential development at Devens over the next 5 and 20 year time frames.

Key assumptions in preparing this demand analysis for potential residential development at Devens included the following:

- Housing and households trends identified in this analysis will continue into the future, and serve as the basis for forecasting future development at Devens.
- Future economic trends will remain stable and no adverse legislative action will be adopted that would impact residential development statewide.
- Home mortgage interest rates will remain within a 6% to 8% range.
- The Devens Enterprise Commission will phase the potential residential development at Devens so as not to create any adverse impact in the market areas from an oversupply.
- Potential absorption at Devens is evenly allocated across all age, income and tenure demand cohorts, and not heavily concentrated to any particular cohort.
- Dollars are represented in constant 2005 figures, unless otherwise noted.



Household Trends

This section identifies household growth in the market areas and compares that with the growth in housing units identified from permit data to ascertain any potential

over or under supply.¹ Total households in the three Core Communities increased by 407 between 2000 and 2004. Comparing this growth in the Core Communities to housing starts of 260 units, suggests an undersupply of about 147 units, as shown in Table 2-9.

	Households			Housing Starts		Vacancy in 2004	
	2000	2004	# Change	2000-04	Under/Over	Units	Rate
Ayer	2,982	3,163	181	79	(102)	70	2.2%
Harvard [1]	1,809	1,949	140	48	(92)	324	14.3%
Shirley	2,067	2,153	86	133	47	138	6.0%
Core Communities	6,858	7,265	407	260	(147)	532	6.8%
Devens Region	55,540	58,333	2,793	3,419	626	2,704	4.4%
Middlesex Co.	561,220	570,806	9,586	16,184	6,598	22,059	3.7%

[1] Includes 313 vacant units in the Devens portion of Harvard – see footnote 6 below.
Source: US Census, DemographicsNOW & RKG Associates, Inc.

In the larger Devens region, households increased by 2,793 since 2000, while the housing supply increased by nearly 3,420 units, indicating an oversupply of 626 units during this period, or 18% of the housing starts. In Middlesex County the oversupply of new units in relation to household growth was nearly 6,700 units or 41% of the new housing starts. This suggests that housing starts in the Devens region and in Middlesex County outpaced household growth, and the result was a higher vacancy rate in these geographies in 2004. However, the 2004 vacancy rates in the Devens region and Middlesex County were below those indicated in the Core Communities, and within acceptable standards.²

Household by Age in 2004

Table 2-10 exhibits the distribution of households by age (of the head of household) cohorts in 2004. Findings from a review of this data include:

- The Core Communities had a higher concentration of younger (less than 35) and older households (55 and over) than the region. The Core Communities had a lower percentage in the other age cohorts than the region.
- Middlesex County had the highest distribution of households in the 65 and over, and the under 35 cohort, than the region or the Core Communities.
- Shirley had the highest distribution of those 65 and older, while Ayer had the highest percent of those less than 35. Harvard’s percentage of households age 45 to 54 was higher than the other market areas.



¹ A household is a group of one-or-more persons, related or unrelated, that occupy a housing unit.

² The Core Communities and specifically Harvard had a higher vacancy in 2004 since 313 units in the Harvard portion of Devens (Census Tract 7141) was categorized as vacant in 2000 and 2004. Assuming these units were removed from the supply, the vacancy in Harvard would be reduced to 0.7% in 2004, and 3.2% in the Core Communities, effectively lower than the surrounding region and Middlesex County.

**Table 2-10
Distribution of Households by Age (2004)**

	Ayer	Harvard	Shirley	Core Comm.	Region	Middlesex Co
Households	3,163	1,949	2,153	7,265	58,333	570,806
Less than 35	23.7%	7.0%	15.2%	16.7%	14.5%	19.3%
35 to 44	27.3%	22.0%	27.4%	25.9%	28.1%	22.8%
45 to 54	18.0%	34.0%	24.3%	24.2%	26.2%	21.7%
55 to 64	14.1%	23.2%	14.9%	16.8%	16.1%	15.5%
65 to 74	9.7%	7.8%	10.1%	9.3%	8.2%	10.2%
75 and up	7.2%	6.1%	8.2%	7.2%	6.9%	10.5%

Source: DemographicNOW & RKG Associates, Inc.

Five-Year Household Forecasts

Five-year forecasts indicate households in the Devens region will increase by more than 3,400, as shown in Table 2-11, and represent 30% of the household growth in Middlesex County (11,280). The increase in new households in the Devens region over the next five years equates to nearly the same number of new housing starts that occurred over the last five years (3,419 units). In comparison, the forecasted growth in households in Middlesex County (11,280) represents 70% of the increase in housing units in this market (16,180). This last finding suggests that if housing starts in Middlesex County mirror those of the last five years then it will outpace household growth by nearly 30%.

**Table 2-11
Increase in Households by Age (2004-2009)**

	Ayer	Harvard	Shirley	Core Comm.	Region	Middlesex Co
Households	202	182	95	479	3,404	11,278
Less than 35	(59)	3	(42)	(97)	(459)	(11,017)
35 to 44	(12)	(35)	(24)	(71)	(705)	(8,395)
45 to 54	79	65	51	196	1,522	8,615
55 to 64	141	131	83	355	2,271	16,928
65 to 74	49	21	24	94	769	6,805
75 and up	3	(3)	2	2	6	(1,658)

Source: DemographicNOW & RKG Associates, Inc.

Most of the household growth in the Devens region is forecasted to be in the older age cohorts (ages 45 to 54, 55 to 64, and 65 to 74), while declines may take place in the younger cohorts (age 35 to 44, and under 35). A similar trend was indicated in Middlesex County, as shown in the table above.

A similar trend is also forecasted in the Core Communities, as most of the growth may occur in the three age cohorts between age 45 and 74, as shown in Table X. Ayer is forecasted to experience the most growth in households over the next five years (202), followed by Harvard (182) and Shirley (95). In total, the five-year household

forecast for the Core Communities (480) is similar to the average annual household starts between 1990 and 2004 in the Core Communities (465 starts-93 units x 5 years). This finding suggests household formation over the next five-years will mirror historic housing trends over the last 15 years in the Core Communities. However, household forecasts in the Devens region and Middlesex County would be slower over the next five years than the historic rate of housing production.

Household by Income in 2004

Median household income in the Core Communities was estimated at \$66,340 in 2004, although median incomes in Ayer and Shirley were below this level, and higher in Harvard, as shown in Table 2-12 below. In comparison, the median household income in the Devens region was \$78,020, nearly 18% higher than indicated for the Core Communities. In Middlesex County, median household income was estimate at \$65,530 in 2004, or 16.0% lower than in the Devens region, and only 1.2% less than the Core Communities. Table 2-12 also exhibits the distribution of households by various income levels in 2004 for each of the geographies.

	Ayer	Harvard	Shirley	Core Comm.	Region	Middlesex Co
Median Hhold Income	\$49,986	\$119,387	\$59,752	\$66,336	\$78,015	\$65,531
Households by Income	3,163	1,949	2,153	7,265	58,333	570,806
Less than \$25,000	23.6%	6.0%	16.8%	16.8%	12.9%	17.6%
\$25,000 to \$49,999	26.4%	10.6%	24.1%	21.5%	17.4%	20.1%
\$50,000 to \$74,999	18.0%	9.3%	22.5%	17.0%	17.6%	18.6%
\$75,000 to \$99,999	14.8%	13.9%	18.3%	15.6%	16.1%	15.0%
\$100,000 to \$149,999	12.6%	23.6%	15.9%	16.5%	20.7%	16.9%
\$150,000 and up	4.7%	36.6%	2.5%	12.6%	15.3%	11.8%

Source: DemographicNOW & RKG Associates, Inc.

The following are some observations about the data.

- In the Core Communities, households within the \$25,000 to \$49,999 income bracket represented the largest group on a percentage basis, and the distribution of households within that income level was more similar to that in Middlesex County than the surrounding region. In fact, the percentages of all income levels in the Core Communities were closer in most cases to that indicated for Middlesex County.
- Within the Core Communities, Harvard had the highest percentages of households with incomes of \$100,000 or more, and the lowest percentages of households below the \$100,000 level.

- ▶ Ayer had the highest percentage of households with income less than \$25,000, while the percentage in Shirley for this income group was similar to that indicated for the Core Communities, and slightly lower than indicated for Middlesex County

Five-Year Household Income Forecasts

Most of the growth in households over the next five years is forecasted to occur in those households with incomes of \$100,000 or more, as shown in Table 2-13. Declines are forecasted for households earning incomes of less than \$50,000 in all geographies, while some growth is anticipated in a few locations in those household earning \$50,000 to \$100,000. This trend reflects in part, rising income levels across all income brackets along with household migration.

	Ayer	Harvard	Shirley	Core Comm.	Region	Middlesex Co
Households by Income	202	182	95	479	3,404	11,278
Less than \$25,000	(30)	(11)	(25)	(67)	(362)	(7,335)
\$25,000 to \$49,000	(53)	(29)	(71)	(153)	(1,223)	(12,991)
\$50,000 to \$74,999	18	1	(4)	15	(373)	(7,692)
\$75,000 to \$99,999	2	(2)	0	(0)	(170)	1,337
\$100,000 to \$150,000	125	42	111	278	2,381	17,232
\$150,000 and up	140	181	85	406	3,151	20,727

Source: DemographicNOW & RKG Associates, Inc.

Household Tenure Characteristics

Over the next five years, nearly 90% of the increase in households in the Devens region is forecasted to be from owner-households, and the remaining 10% from renters, as shown in Table 2-14. This is similar to the trend experienced over the last five years. In Middlesex County, the increase in owner-households is projected to account for 97% of the growth in households, while the remaining 3% would be renter-households.

In the Core Communities, approximately 90% of the growth is forecast to be in owner-households, which are estimated to increase by 426 households in the next five years, with Harvard growing by 166, followed by Ayer at 150, and Shirley with 111 new owner-households. This represents 14% of the increase in owner-households in the Devens region, which in turn represents 28% of the growth in Middlesex County. For the Core Communities, this forecast averages 85 owner-households per year over the next five years, slightly lower than the 93 units per year indicated from housing starts between 1990 and 2004.

As shown in Table 2-14, the owner-occupancy rate in the Core Communities for 2009 is estimated to be 72%, ranging from a low of 59% in Ayer, to 74% in Shirley and 91% in Harvard. In comparison, the rate is forecasted to be 80% in the Devens region and 63% in Middlesex County.

Table 2-14
Increase in Households by Tenure (2004-2009) & Tenure Rates in 2009

	Ayer	Harvard	Shirley	Core Comm.	Region	Middlesex Co
Households	202	182	95	479	3,404	11,278
Owners	150	166	111	426	3,071	10,907
Renter	52	16	(16)	53	333	371
Owner-Occ. Rate	59.0%	91.0%	74.0%	72.1%	80.0%	63.0%
Renter-Occ. Rate	41.0%	9.0%	26.0%	27.9%	20.0%	37.0%

Source: US Census, DemographicsNOW & RKG Associates, Inc.

Renter households in the Core Communities are forecasted to increase by 53 over the next five years, as shown above. Shirley is anticipated to have a small decline in its renter households, similar to trends over the last four years, and similar to trends in the 1990s. Ayer is forecasted to have an increase of 52 renter households. The region is forecasted to experience an increase of 333 renter households in the next five years, while a gain of 371 renter households is forecasted in Middlesex County. One possible reason for the small gain in renter households in Middlesex County could be attributed to a diminishing supply because of recent conversions to condominiums.



Annual Household Turnover and Demand

Another component of housing demand is a result of the annual turnover of existing households as they seek to change/upgrade their living conditions. Utilizing an average turnover rate from Census 2000 data³, the number of existing households seeking alternative housing on an annual basis was estimated for each of the geographies. This turnover of households was added to the average annual growth in household forecasts over the next five years, for an indication of annual household demand. The reader should recognize that that not all this turnover and demand will be captured within the geographies, since some of the households may expire or move outside the area.

As shown in Table 2-15, the average annual demand for households though 2009 in the three Core Communities totals 742, including 445 owner units and 297 renter units. In the region, average annual demand is estimated at 5,229 households, indicating that the Core Communities account for 14.2% of this annual demand. The total demand in Middlesex County is estimated to be 50,917 households with 44% owners and 56% renters. Total housing demand in the Devens region reflects about

▼
³Annual turnover is based on the average number of households that reported moving into their current residence between 1995 and March 2000 (Census 2000).

10.3% of the demand in Middlesex County. However, ownership demand in the Devens region represents 16.0% of the owner demand in Middlesex County.

	Ayer	Harvard	Shirley	Core Comm.	Region	Middlesex Co
Owner Households						
Annual Growth	32	35	23	90	604	2,181
Annual Turnover	126	129	99	355	2,980	20,281
Owner Housing Demand	158	164	123	445	3,584	22,462
Renter Households						
Annual Growth	9	3	(3)	9	79	74
Annual Turnover	226	7	55	288	1,566	28,380
Renter Housing Demand	235	10	52	297	1,645	28,454
Total	393	174	175	742	5,229	50,917

Source: US Census, Demographics NOW and RKG Associates, inc.

Future annual demand as indicated by growth in households totaled approximately 100 households per year in the three Core Communities. Nearly 90% of this demand comes from owners, while the remainder would be renters. This figure was similar to historic trends indicated by housing starts between 1990 and 2004 (93 units per year). Annual turnover is another source of future housing demand in the Core Communities and in the Devens region. Annual demand from turnover totaled more than 640 households, with 48% owners and the remainder renters. Future annual demand for renter units relies on turnover since growth in this sector is weak in comparison to growth in owner households. However, not all of the turnover will be captured within the market areas. In spite of these limitations, the estimates of annual demand shown in Table 2-15 are a reasonable basis for projecting short-term (5 year) and long-term (20 year) absorption for potential residential development at Devens, assuming land is made available for the appropriate products to capture this demand.



Affordability

Table 2-16 exhibits the potential range in household incomes that would be required to buy or rent a housing unit at different price levels based on typical financing standards. The low-end represents an interest rate of 6%, while the high-end uses an interest rate of 8%, since interest rates may rise in the future. The low-end also assumes a down payment of 20% while the high-end assumes a down payment of 5%. A fixed interest rate for a thirty-year term and annual ownership cost, including real estate taxes and insurance, does not exceed 28% of annual income, was assumed for this analysis. A tax rate of \$11/\$1,000 was used since it represents the current rate in Shirley, which is the highest of the three Core Communities. For insurance cost, a factor of \$5/\$1,000 was utilized, and this factor is also considered a surrogate

for condominium fees.⁴ For the cost of renter housing a 30% standard of annual income was used. Based on these financial assumptions, Table 2-16 summarizes the affordability criteria for owners and renters.

Unit Value	Ownership [1]		Renter [2]	
	Low Income	High Income	Monthly Rent	Income
\$100,000	\$26,270	\$37,160	\$625	\$25,000
\$150,000	\$39,400	\$55,740	\$900	\$36,000
\$200,000	\$52,540	\$74,320	\$1,250	\$50,000
\$250,000	\$65,680	\$92,900	\$1,500	\$60,000
\$300,000	\$78,810	\$111,480	\$1,875	\$75,000
\$400,000	\$105,080	\$148,650	\$2,100	\$84,000
\$500,000	\$131,350	\$185,810	\$2,500	\$100,000
\$750,000	\$197,030	\$278,710	\$3,125	\$125,000

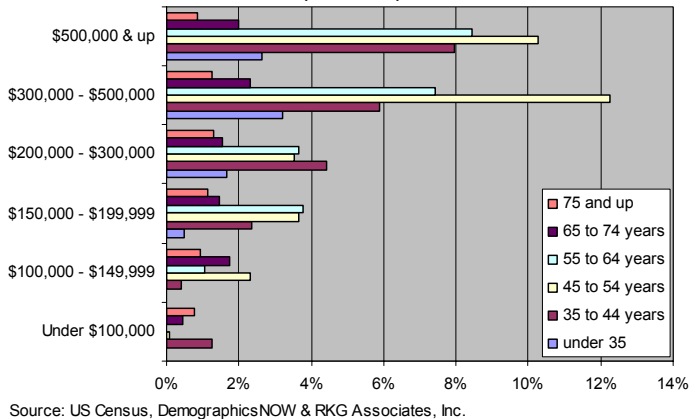
[1] Ownership Assumptions	Low	High
Interest Rate	6.0%	8.0%
Term	30	30
Downpayment	20%	5%
RE TAXES/1000	\$11	\$11
Insurance /1000	\$5	\$5
Cost as % of Income	28%	28%

[2] Renter Cost factored at 30% of gross income
Source: RKG Associates, Inc.

Annual Demand by Age and Price Range in Devens Region

Households in the 45 to 54 age group represent the highest percentage of owners (32%) and most of these households could afford homes in the \$300,000 or more range. Households in the 55 to 64 age cohort (24%) and in the 35 to 44 age group (22%) represent the next highest percentages. Households under 35 years (8%) and 75 years and older (6%) represent the smallest groups, followed by households in 65 to 74 age group (10%). Approximately 64%

Figure 2.13
Distribution of Annual Owner Demand in Devens Region (2004-2009)



⁴ These assumptions may be considered conservative since some mortgage companies reportedly use a higher percentage of annual income for housing costs, and others offer lower interest rates such as adjustable rate mortgages or interest only mortgages.

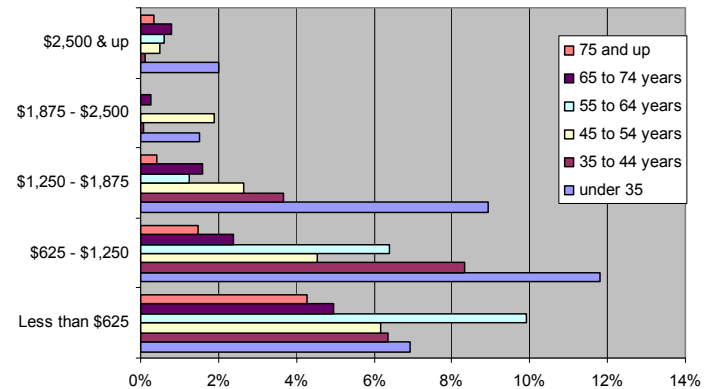
of this annual demand could afford units priced at \$300,000 or more, and the highest distribution would be among households between the ages of 35 and 64. About 16% of the demand would be for housing priced in the \$200,000 to \$300,000 range, and again most of the households would be between 35 and 64. Housing priced under \$200,000 represent about 19% of annual demand, and households in the 35 to 64 age group represent the greatest amount who could afford product at this level. Figure 2.13 shows the distribution of annual owner demand within the Devens region.⁵

Households under age 35 represent about 31% of annual demand for rental housing in the Devens region and nearly 60% could afford rents of \$1,250 or less including 22% with rents of \$625 or less. About 16.5% of renter households would be 65 years and older, and more than 55% of these elderly households could only afford rents of \$625 or less. About 18.5% of annual renter demand

could afford units in the \$1,250 to \$1,875 range, and about 48% of these households would be under 35. Less than 8% of renter demand could afford units excess of \$1,875 and 44% of these households would be under 35. Figure 2.14 shows the distribution of annual renter demand within the Devens region.

Figure 2.14

Distribution of Annual Renter Demand in Devens Region (2004-2009)



Source: US Census, DemographicsNOW & RKG Associates, Inc.

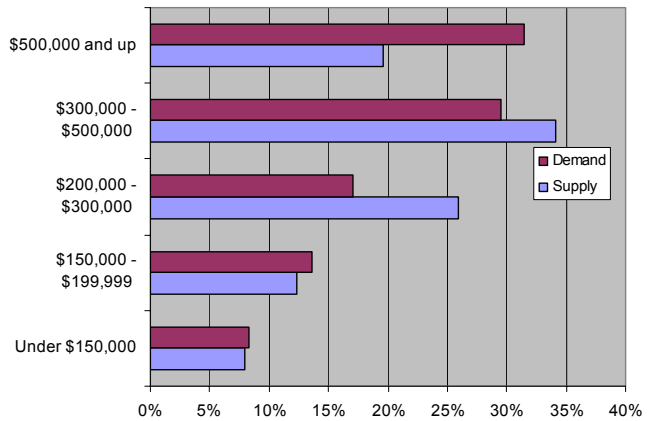
Supply and Demand

In this section, the distribution of annual demand from owner and renter households in the Core Communities is compared to the distribution of owner and renter supply. For owner units, home and condominium sales in 2004 were used as a proxy for supply, and for renter units, the rental units by pricing from Census 2000 was used as a proxy for supply. While data from Census 2000 could be considered somewhat out-of-date at this point, rental increases between 2000 and 2004 have been nominal in comparison to the increases in ownership pricing.

⁵ The demand by unit price shown here is based on historic supply and demand trends in the local and regional market. As a result of the lack of supply of home ownership units priced under \$200,000 as well as the declines in the age/income cohorts that can typically afford this range of housing, the imputed demand is low. In reality, demand for lower-priced housing, if available, would be far greater and can be seen by the very strong demand for lower cost rental units in the market. Any project that can provide affordably priced ownership units to these demand cohorts would shift a significant portion of the forecasted unit demand for rental units under \$1,875 per month discussed below

As shown in Figure 2.15, most of the owner demand in the Core Communities was from households who could afford housing in excess of \$300,000, however sales data indicated that the supply of housing in excess of \$500,000 did not meet that demand, while the supply of housing in the \$300,000 to \$500,000 range exceeded the demand. In addition, the supply of housing in the \$200,000 to \$300,000 range was greater than the demand from households that could afford that price level. The annual demand for homes in the Core Communities under the \$200,000 level slightly outpaces the supply, based on pricing in 2004.

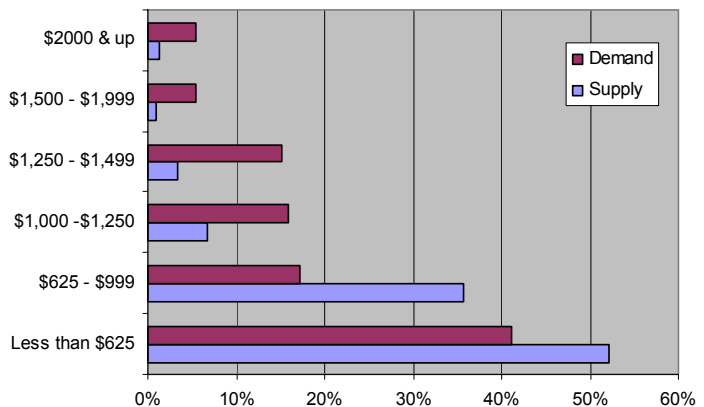
Figure 2.15
Core Communities: Owner Demand Versus Supply



Source: US Census, DemographicsNOW, Warren Information Services & RKG Associates, Inc.

On the rental side, the supply of units under the \$1,000 level exceeds the annual demand, while the supply of units over \$1,000 is below annual demand (see Figure 2.16). This finding suggests that more households could afford paying higher rental pricing but

Figure 2.16
Core Communities: Renter Demand Versus Supply



Source: US Census, DemographicsNOW & RKG Associates, Inc.

not much product is available in the Core Communities in excess of \$1,000 or \$1,250. The imbalances at the lower price points are likely attributed to older rents and some shifting in the supply to the next price range has likely resulted, but the supply does not seem significantly out of balance as one might assume. This higher supply at the lower price point could also be caused by the lower rents attained at the 350 units of Chapter 40B in the Core Communities, which equates to about 18% of the renter supply in the Core Communities.



Potential Residential Housing at Devens

Based on the annual housing demand in the Core Communities and the Devens region, an amount of potential housing that could be absorbed at Devens under two scenarios (low and high) was estimated. These estimates are preliminary and may change with further discussion and fieldwork.

The low scenario was developed by utilizing a 3% capture rate for potential residential development of annual demand in the Core Communities for owner and renter households. For the rest of the region, a capture rate of 0.5% was used for owner and renter demand. This annual rate was multiplied by five for an indication of a 5-year capture, and by twenty for a 20-year capture. It should be noted that a 20-year forecast is highly speculative and assumes continuation of existing economic conditions.

The low range of development potential reflects future conditions at Devens as if the residential land was part of the individual Core Communities rather than a single entity as it is presently. The low range of development reflects a scenario of “marginal” or “incremental” expansion of the existing housing market in these three communities. The potential annual pace of development would average about 45 units per year, which is slightly less than half the annual pace of new housing development that occurred in the Core Communities between 1990 and 2004 (93 units per year) and about 5% of the region’s new average annual housing increase.

For the high scenario, the capture rate in the Core Communities was increased to 10% for owner and renter units, and the capture rate in the rest of the region was increased to 1%. This high-end of potential development demand reflects Devens as a single master planned and marketed community, since it would require more of a critical mass to be self-sustaining. The high scenario also assumes higher density which would take advantage of the existing infrastructure (water/sewer) in place as well as the chance to redevelop some of the historic buildings in place. The potential annual pace of development in the high scenario would average about 120 units per year, which is 29% greater than the combined pace of residential development in the Core Communities and about 14% of average annual development in the region.

Table 2-17 summarizes the range in the potential number of units that residential development at Devens could potentially capture in the next five-and twenty years, provided development opportunities are made available that are similar to the current overall market profile. Over the next five years, residential development at Devens would likely range between 223 and 595 units, and over the next twenty years, Devens may possibly capture between 894 units and 2,381 units. Approximately 64% to 65% of the housing would be for owners and the remainder

renters. Approximately 50% of the households in the low scenario would come from the Devens region, while 62% of the high scenario would come from the Core Communities.

Table 2-17
Range in Potential Absorption at Devens (5 year and 20 year)

Market	Annual Demand	Potential Absorption at Devens				
		Low [1]		High [2]		
		5-year	20-year	5-year	20-year	
Owner						
Communities	445	67	267	222	890	
Rest of Region	3,139	78	314	157	628	
	Owner	3,584	145	581	379	1,517
Renter						
Communities	297	45	178	149	594	
Rest of Region	1,349	34	135	67	270	
	Renter	1,646	78	313	216	864
Total						
Communities	742	111	445	371	1,484	
Rest of Region	4,488	112	449	224	898	
	Total	5,320	223	894	595	2,381

[1] Assumes development at Devens would capture 3% of owner & renter demand in communities, & 0.5% of owner & renter demand in rest of region
[2] Assumes development at Devens would capture 10% of owner & renter demand in communities, & 1% of owner & renter demand in rest of region
Source: RKG Associates, Inc.

Demand by Tenure, Age and Income (Low Scenario)

This section quantifies the different age, income and tenure characteristics of the households in the communities and the Devens region that may be captured by the potential residential development at Devens, based on the absorption figures identified above.

Table 2-18 exhibits the cumulative absorption at Devens over the 20 years under the low scenario, and categorizes the households by tenure, age and income. The following highlights some of the detail in the table:

Owner Households

An estimated 581 households would be owners and likely prefer single-family units

- 316 households (54%) would be of family formation years (35 to 44) or child-rearing age (45 to 54).
- 211 households (67%) would have incomes of \$100,000 or more,
- 26% would have incomes between \$50,000 and \$100,000.
- 7% would have incomes of less than \$50,000.

Households between the ages of 55 and 64 years account for 24% of the owner households in the low scenario

- Nearly 66% of these households have incomes of \$100,000 or more.
- Another 30% have incomes between \$50,000 and \$100,000.
- 4% have incomes below \$50,000.

Absorption	Total	under 35	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 and up
Owner Households	581	32	129	187	140	55	36
Less than \$25,000	11	(3)	7	1	(1)	2	5
\$25,000 to \$49,000	26	(11)	2	13	6	10	5
\$50,000 to \$74,999	75	3	14	21	22	9	7
\$75,000 to \$99,999	94	10	26	21	21	9	7
\$100,000 to \$150,000	188	19	34	71	43	13	7
\$150,000 and up	187	15	46	60	49	12	5
Renter Households	313	98	58	50	56	31	20
Less than \$25,000	121	22	20	19	31	16	13
\$25,000 to \$49,000	109	37	26	14	20	7	5
\$50,000 to \$74,999	58	28	12	8	4	5	1
\$75,000 to \$99,999	11	5	0	6	(1)	1	0
\$100,000 to \$150,000	9	4	0	2	1	1	0
\$150,000 and up	5	2	(0)	0	1	1	1

Source: US Census; DemographicsNOW & RKG Associates, Inc.

The elderly (65 and over) account for 16% of owner households

- 41% have incomes of \$100,000 or more.
- Another 35% have incomes in the \$50,000 to \$100,000 range
- 24% have incomes below \$50,000.

Younger households (under 35) account for nearly 6% of owners

- Approximately 34 have incomes of over \$100,000
- 13 households have incomes between the \$50,000 and \$100,000.

Renter Households

Renter households under 35 represent 31% of the potential renter households

- 60% of them have incomes of less than \$50,000,
- 40% have incomes higher than \$100,000.

Households between the ages of 35 and 44 represent 19% of renters

- 79% have incomes of less than \$50,000.

Renters between the ages of 45 and 54 represent 16% of households

- Nearly two-thirds have incomes below \$50,000.

Renter households in the 55 to 64 age group represent 18% of the renters

- More than 91% have incomes below \$50,000.

Elderly renter households (65 and older) represent 16% of renters

- 80% have incomes less than \$50,000.

As discussed previously, the demand analysis is based on historic trends in the housing supply and projected household demographics. A substantial portion of the strong demand for rental units exhibited by the younger and lower income segments would also exist for ownership units if available. However, the economic feasibility of developing affordable units (under \$200,000) generally requires some kind of subsidy or other inducement. This issue is discussed in more detail in the Affordable Housing section of this task.

Demand by Tenure, Age and Income (High Scenario)

Table 2-19 exhibits the cumulative absorption at Devens over the 20 year period under the high scenario, and categorizes the households by tenure, age and income. The following summarizes a review of this data:

Owner Households

- An estimated 1,517 households would be owners and would most likely prefer single-family homes,
- 826 households (54%) would be of family formation years (35 to 44) and child-rearing age (45 to 54).
- Approximately 65% (535 households) of these households would have incomes of \$100,000 or more,
- 27% would have incomes between \$50,000 and \$100,000.
- 9% would have incomes of less than \$50,000.

Households between the ages of 55 and 64 years account for 25% of the owners

- Nearly 65% of these households have incomes of \$100,000 or more,.
- Another 29% have incomes between \$50,000 and \$100,000
- The remaining 7% have incomes below \$50,000.

The elderly (65 and over) account for 15% of owner households

- 43% have incomes of \$100,000 or more.
- Another 38% have incomes in the \$50,000 to \$100,000 range
- 19% have incomes below \$50,000.

The younger households (under 35) account for nearly 6% of the owners

- Approximately 92 households have incomes of over \$100,000

- 34 households have incomes between the \$50,000 and \$100,000.

Renter Households

Households under 35 represent 30% of the potential renters at Devens

- 63% of them have incomes of less than \$50,000,
- 37% have incomes higher than \$100,000.

Renter households between the ages of 35 and 44 represent 18% of renters

- 81% have incomes of less than \$50,000.

Renters between the ages of 45 and 54 represent 16% of renters

- Nearly 65% have incomes below \$50,000,
- Including 38% with incomes below \$25,000

Renter households in the 55 to 64 age group represent 18% of the renters

- Nearly 88% have incomes below \$50,000,
- including 57% with incomes below \$25,000

Elderly households (65 and older) represent 18% of renter households

- 80% have incomes less than \$50,000,
- Including 56% with incomes below \$25,000

**Table 2-19
HOUSEHOLDS BY TENURE, AGE AND INCOME
TWENTY YEAR ABSORPTION AT DEVENS (HIGH SCENARIO)**

Absorption	Total	under 35	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 and up
Owner Households	1,517	85	340	486	373	143	91
Less than \$25,000	26	(8)	22	2	(1)	6	5
\$25,000 to \$49,000	78	(33)	7	42	26	25	11
\$50,000 to \$74,999	199	5	44	56	51	25	19
\$75,000 to \$99,999	248	29	68	50	56	24	20
\$100,000 to \$150,000	481	49	86	181	110	34	21
\$150,000 and up	486	43	113	155	131	30	15
Renter Households	864	262	154	138	154	92	63
Less than \$25,000	339	62	52	52	88	47	40
\$25,000 to \$49,000	297	102	73	37	47	22	16
\$50,000 to \$74,999	159	75	27	24	15	13	4
\$75,000 to \$99,999	32	10	1	20	(1)	2	0
\$100,000 to \$150,000	25	10	1	5	3	4	1
\$150,000 and up	13	4	(0)	0	3	4	2

Source: US Census; DemographicsNOW & RKG Associates, Inc.

Low-Income Eligibility

Table 2-20 exhibits the FY-2005 income limits for households based on different sizes that are used to qualify families for Federal low-income housing programs within the Boston MA-NH PMSA (in which Devens is located)⁶. As shown, a one-person household with an income of \$46,300 would be at the upper income limit of low-income status under the HUD guidelines.

Household Size	Income Limits by Programs		
	Low Income	Very Low Income	30% of Median
One-Person	\$46,300	\$29,850	\$17,350
Two-Person	\$52,950	\$33,100	\$19,850
Three-Person	\$59,550	\$37,200	\$22,350
Four-Person	\$66,150	\$41,350	\$24,800
Five-Person	\$71,450	\$44,650	\$26,800
Six-Person	\$76,750	\$47,950	\$28,800

Source: US Department of Housing & Urban Development

Assuming an income limit of \$50,000, the potential number of households with incomes below \$50,000 who would potentially be seeking housing at Devens, is estimated to range between 267 (low scenario) and 636 (high scenario) households, which represent about 30% of the potential residential households in each scenario at Devens. While only a portion of these potential households at Devens will be one person, a relatively large percentage would likely qualify under the other household size ranges. Eligibility limits for state public housing programs are slightly lower, varying from \$40,800 to \$67,000.

Absorption by Tenure and Unit Pricing

The last step in the analysis involved correlating the estimated households by income at Devens over a twenty-year period with various unit price and renter ranges, based on the affordability assumptions previously discussed. Tables 2-21 and 2-22 exhibit the potential number of households at Devens under the low and high scenarios over the twenty-year absorption period. The following highlights a review of the data:

More than 64% of the households could afford homes in the \$300,000 and over range

- Nearly half could afford to pay \$500,000 or more
- Households in the 45 to 54 year cohort account for 35% of this group
- Households in the 55 to 64 age cohort represent another 25%
- Households in the 35 to 44 group represent another 14%
- Households under 35 would represent 9%



⁶ Devens is located on the western edge of the Boston market area used to establish eligible rent and income levels. For comparison purposes, qualifying incomes for the Worcester area range from \$38,800 to \$64,300.

- Elderly households (65 and up) would represent 9%

Units in the \$200,000 to \$300,000 range would be affordable to 16% of the households

- The highest concentration ranges between the ages of 35 and 64.

Units valued between \$150,000 and \$200,000 would be affordable to 13% of owner households

- Most would be for households between the ages of 35 and 64.

Approximately 6% of the owners could only afford a unit priced at less than \$150,000

- 59% of these would be elderly households (65 and up).

39% of the potential renter households at Devens could afford a monthly rent of \$625 or less.

- The demand is fairly evenly distributed among the different age cohorts.

Another 35% could afford a unit in the \$625 and \$1,250 range

- 58% of these are in the two age cohorts under 45.

26% could afford a rental unit priced at \$1,250 or more per month

- Most would be in the under 35 age cohort

**Table 2-21
HOUSING UNITS BY PRICE LEVELS AND TENURE
TWENTY YEAR ABSORPTION AT DEVENS (LOW SCENARIO)**

Price Levels	Total	under 35	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 and up
Owners	581	32	129	187	140	55	36
Under \$100,000	11	(3)	7	1	(1)	2	5
\$100,000 - \$149,999	26	(11)	2	13	6	10	5
\$150,000 - \$199,999	75	3	14	21	22	9	7
\$200,000 - \$300,000	94	10	26	21	21	9	7
\$300,000 - \$500,000	188	19	34	71	43	13	7
\$500,000 & up	187	15	46	60	49	12	5
Renter	313	98	58	50	56	31	20
Less than \$625	121	22	20	19	31	16	13
\$625 - \$1,250	109	37	26	14	20	7	5
\$1,250 - \$1,875	58	28	12	8	4	5	1
\$1,875 - \$2,500	11	5	0	6	(1)	1	0
\$2,500 & up	14	6	0	2	2	3	1

Source: RKG Associates, Inc.

Absorption by Tenure and Unit Pricing (High Scenario)

Based on the affordability assumptions, the estimated households by age and income that could be attracted to Devens at various unit prices and rents over a twenty-year

period under the high scenario are presented in Table 2-22. The following highlights a review of the data:

Nearly 64% of the owner households could afford units in the \$300,000 and over range

- More than half could be afford \$500,000 and over.
- Households in the 45 to 54 year cohort account for 22%
- Households in the 55 to 64 age cohort represent another 16%
- Households in the 35 to 44 group represent another 13%
- Households under 35 would represent 6%
- Elderly households (65 and up) would represent 7%

Units in the \$200,000 to \$300,000 range would be affordable to 16.3% of the households

- The highest concentration ranges between the ages of 35 and 64.

Units valued between \$150,000 and \$200,000 would be affordable to 13.19% of owner households

- Most would be for households between the ages of 35 and 64.

Approximately 6.9% of the owners could afford a unit priced at less than \$150,000

- 44% would be for elderly households (65 and up).

39.2% of potential renters at Devens could afford a monthly rent of \$625 or less.

- The 55-64 age cohort and the elderly (65 and over) each account for 26% of this demand
- The under 35 cohort represent another 18.3% of this demand

Another 34.4% could afford a unit in the \$625 and \$1,250 range

- 58.9% are in the two age cohorts under 45.

26.3% could afford a rent at \$1,250 or more

- Most would be in the two age cohorts under 35 and 45 to 54.

Price Levels	Total	under 35	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 and up
Owners	1,517	85	340	486	373	143	91
Under \$100,000	26	(8)	22	2	(1)	6	5
\$100,000 - \$149,999	78	(33)	7	42	26	25	11
\$150,000 - \$199,999	199	5	44	56	51	25	19
\$200,000 - \$300,000	248	29	68	50	56	24	20
\$300,000 - \$500,000	481	49	86	181	110	34	21
\$500,000 and up	486	43	113	155	131	30	15
Renter	864	262	154	138	154	92	63

Less than \$625	339	62	52	52	88	47	40
\$625 - \$1,250	297	102	73	37	47	22	16
\$1,250 - \$1,875	159	75	27	24	15	13	4
\$1,875 - \$2,500	32	10	1	20	(1)	2	0
\$2,500 & up	37	14	1	5	6	7	4

Source: RKG Associates, Inc.

On a percentage basis the difference between the low and high scenario is not too dissimilar in terms of the two development scenarios proposed for Devens. Table 2-23 summarizes the potential demand at Devens into more condensed age and price categories.

Table 2-23			
Estimated Future Demand Allocation by Age & Price Levels			
Potential Devens Home Owners			
Home Price	Under 35	35 to 54	55 & over
Under \$200,000	--	11%	11%
\$200,000 to \$500,000	5%	26%	17%
Over \$500,000	2%	18%	11%
Potential Devens Renters			
Monthly Rent	Under 35	35 to 54	55 & over
Less than \$625	7%	12%	20%
\$625 to \$1,250	12%	12%	10%
\$1,250 to \$1,875	9%	6%	3%
Over \$1,875	3%	3%	2%
Note: Totals may not add due to rounding			
Source: RKG Associates, Inc.			



Housing Unit Types and Styles

To meet the potential demand for housing at Devens estimated in the previous section assumes that a wide range of housing product types and styles covering a broad price range will be available. While the development choices are many, successful developers tend to stick to product with which the market is familiar. Since much of the demand illustrated above is generated by local resident turnover, or from households moving to the area from elsewhere in New England, the choice of housing types will undoubtedly reflect the type and styles of housing found in other suburban and semi-rural markets.

In order to satisfy the potential market demand, developers at Devens will deliver product that reflects not only the tastes of potential buyers and renters, but also that “fits” with the available land within the planning regulations enforced by the Devens Enterprise Commission.

The typical defining elements in housing are the unit size (expressed in square feet) and the number of bedrooms. Larger homes are suitable for larger households but

are also more expensive to build. Families with children prefer homes with two or more bedrooms. Some older households tend to favor apartment or condominium living without the need for physical maintenance. Although single family homes on relatively large lots are the norm in the region, increasingly consumers are accepting higher density housing alternatives including cluster developments, zero-lot line units and traditional multi-family projects. New urbanism and smart growth initiatives, discussed later in this task, favor development of “walkable” neighborhoods as well as energy efficient infrastructure and utility systems. All of these housing choices are potentially available at Devens.

On the home ownership side, about 40% of the demand for housing at Devens will come from individuals 55 years of age and older (often referred to as “empty-nesters”), with about 60% of those age 55 to 64 and 40% 65 and older. These age groups, generally without children living in the home and including a significant number of retirees, can support a variety of housing types ranging from large, showcase style homes to smaller, more efficient units suitable perhaps for part-time living as they travel or winter in other locations. Many may prefer condominium living both for the ease of common maintenance as well as for the social activity opportunities that may be offered. One common marketing element would include single level living for most of these households.

Breaking this group down by income level (which generally corresponds to housing price levels) indicates that they are roughly evenly divided between low (homes priced under \$200,000), moderate (\$200,000 to \$500,000) and high (over \$500,000). Using the Low Scenario estimates, this older home owner market could support about 60-80 homes in each of the low and high categories and 80 to 120 homes in the mid-price range, over the 20 year projection period. Specific housing product types could range from garden style condominiums or manufacturing housing units that would appeal to those at the lower end of the price range, to more spacious mid-rise units or golf-course homes at the upper end.

Middle-aged homeowners, who make up approximately 60% of the demand, are concentrated in the 35-44 (37%) and 45-54 (54%) age cohorts. These tend to be the family-raising years with the need for bedrooms and space to grow. Historically these market segments have driven single-family home sales, however as prices have risen, many are turning to other housing options such as townhomes, zero-lot line units and other denser developments. Interior space and outdoor access are important considerations to these groups, who are also focused on building equity as home ownership is typically the largest investment that households make. This market is also driven by location – close to schools (those with excellent reputations), shopping and other activities. While intimately tied to their cars, some are rediscovering the benefits of in-town living where walking and bike riding are acceptable means of travel. The younger age cohort (under 35) makes up only 9% of this group and includes couples without children as well as families with very young children whose space needs are less.

On the affordability side (based on incomes) about half of the younger home owners are in the moderate category, looking at homes in the \$200,000 to \$500,000 range. About one third are at the upper end (more the \$500,000) while less than 15% are in the less expensive end of the spectrum. For the Low Scenario (of 20 year demand at Devens) this works out to 40 to 60 homes priced under \$200,000, 150 to 200 in the \$200,000 to \$500,000 range and 100 to 140 at the upper end (over \$500,000). Since this part of the market is primarily focused on single family homes, whether or not Devens can accommodate their desires and needs within the available development footprints will need to be discussed further.

It is important to point out that the affordability of home ownership based on income level alone is not exact, in that many households may buy houses above or below what is considered “acceptable” by typically standards for a variety of reasons. Higher income individuals may choose to live in less expensive housing in order to save money for other purposes. Or, and this is increasingly the case in this region, individual buyers may bring with them relatively large amounts of equity, thereby allowing them to buy more house for a given income level, obtained through appreciation of previously owned real estate or through intergenerational transfers. This is certainly happening in the Devens region and has strongly influence the type of new housing that is being brought to market.

On the rental side, the demand forecast indicates the potential for about 300 (Low Scenario) to 900 units (High Scenario) over the next 20 years at Devens. Two-thirds of the potential renter households are under 55 years of age, and a third of these are under 35. These renters are concentrated in the more “affordable” rent ranges based on incomes, with 30% of the under-35 group requiring rents in the low range (under \$625 per month) and 70% in the moderate range (\$625 to \$1,825). Among older renters, more than half are in need of low rents and about 40% are in the moderate range. Only a small number of renters can afford rents in the upper range (\$1,875 and up). On a unit count basis, this translates into the need for 100 to 140 very affordable units, 150 to 180 moderate rent units and 20 to 30 high rent homes. From a design perspective, about one third of the rental units will need to accommodate family-aged households (35 to 54 years old) with the remainder aimed at younger and older households.

It is important to recognize that the demand forecast utilized for this analysis assumes absorption at Devens is proportional to the historic trends observed in the local and regional market. Actual development may focus on one or more of the age/income segments described above and generate demand in excess of the conservative absorption assumptions used to generate the Low and High Scenarios.



Summary of Future Housing Demand Implications

The following summarizes the housing demand implications for the future of the Core Communities as well as the Devens region.

- Most of the owner demand in the Core Communities was from households who could afford housing in excess of \$300,000. However, sales data indicated that the supply of housing in excess of \$500,000 did not meet that demand, while the supply of housing in the \$300,000 to \$500,000 range exceeded the demand. In addition, the supply of housing in the \$200,000 to \$300,000 range was greater than the demand from households that could afford that price level. The annual demand for homes in the Core Communities under the \$200,000 level slightly outpaces the supply, based on pricing in 2004.
- On the renter side, the supply of units under the \$1,000 level exceeds the annual demand, while the supply of units over \$1,000 is below annual demand. This finding suggests that more households could afford paying higher rental pricing but not much product is available in the Core Communities in excess of \$1,000 or \$1,250.
- Over the next five years, residential development at Devens would likely range between 223 and 595 units, and over the next twenty years, Devens may possibly capture between 894 units and 2,381 units. Approximately 64% to 65% of the housing would be for owners and the remainder renters. Approximately 50% of the households in the low scenario would come from the Devens region, while 62% of the high scenario would come from the Core Communities.

Affordable Housing in the Devens Market Area

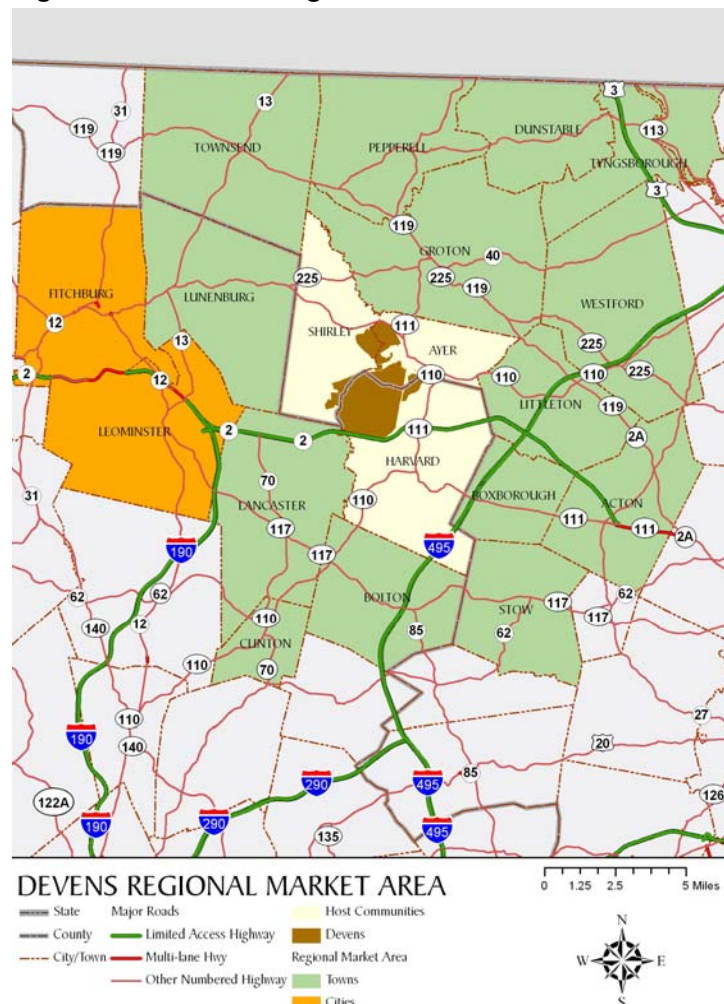
A community's growth from village to modern suburb can be traced through the styles, age and location of its homes. As fields and forests gradually gave way to development, the homes that replaced them tell a story about the physical evolution of each city and town. However, the attendant loss of open land has led residents and local officials just about everywhere to resist new housing development. Objections to growth are hardly limited to Massachusetts. The unwanted environmental, traffic and fiscal impacts of development have been felt across the country, and the response from suburbs and small towns is virtually the same from state to state. Ironically, the techniques often used to limit new growth have led to unintended consequences: sprawl, the fragmentation of open space, and the demise

of housing choice, i.e., a range of housing types, prices and locations so that homebuyers and renters have meaningful choices about where they will live. Housing choice is an important part of community planning, but it is a difficult concept to sell in many towns today.

This section of our report provides information about the potential need for affordable housing among low- and moderate-income people already living in the Devens regional market area. As the term is used in most housing subsidy programs, “low- and moderate-income” means households with incomes at or below 80% of area median income (AMI), adjusted for household size, for the urban or rural area in which a community is located. The Devens market area includes the three host communities and 14 surrounding towns, generally covering a 10-mile radius around Devens. The following sources were consulted to estimate unmet affordable housing needs on a regional basis:

- U.S. Census Bureau, Census 2000
- U.S. Department of Housing and Urban Development (HUD), Comprehensive Housing Affordability Strategy (CHAS) Data Sets
- DHCD, Chapter 40B Subsidized Housing Inventory

Figure 2.17: Devens Regional Market Area



■ Housing Needs

Chapter 40B

When less than 10% of a community's housing units are affordable to low- and moderate-income people, G.L. c.40B, Sections 20-23 ("Chapter 40B") requires local officials to grant a comprehensive permit to qualified affordable housing developers unless there is an unusual, compelling basis to deny one. Enacted by the legislature in 1969, Chapter 40B seeks to remove barriers to low- and moderate-income housing, particularly in non-urban areas. A comprehensive permit overrides zoning and other local regulations that make it too costly to build low- and moderate-income housing. By consolidating the approval powers of multiple town boards into one permit issued by the board of appeals, legislators hoped to assure an equitable distribution of affordable housing throughout the state. In the Devens regional market area, 4.3% of all 57, 105 year-round housing units qualify for listing on the Chapter 40B Subsidized Housing Inventory, as shown in Table 2-24.

Table 2-24: Devens Region Subsidized Housing Inventory (SHI)

Community	2000 Census Year Round Housing Units	Total Units in Chapter 40B Developments	Chapter 40B SHI Units	Percent Chapter 40B Units
Acton	7,645	298	177	2.30%
Ayer	3,141	242	234	7.40%
Bolton	1,472	98	53	3.60%
Boxborough	1,900	76	22	1.20%
Clinton	5,817	533	533	9.20%
Dunstable	933	0	0	0.00%
Groton	3,339	241	182	5.50%
Harvard	2,156	136	54	2.50%
Lancaster	2,103	192	95	4.50%
Littleton	3,018	303	271	9.00%
Lunenburg	3,605	62	62	1.70%
Pepperell	3,905	132	117	3.00%
Shirley	2,140	57	57	2.70%
Stow	2,108	231	117	5.60%
Townsend	3,162	80	80	2.50%
Tyngsborough	3,784	460	260	6.90%
Westford	6,877	239	148	2.20%
Non-Urban Total	57,105	3,380	2,462	4.31%
Fitchburg	15,963	1,617	1,616	10.10%
Leominster	16,937	1,413	1,376	8.10%

Source: DHCD, May 2005.

It is tempting to define housing need as the shortfall of Chapter 40B units in a city or town, but a few factors make Chapter 40B an inaccurate measure of unmet housing needs. First, Chapter 40B developments do not always meet local housing needs; rather, they respond to the strength of a regional housing market. Second, in most parts of the Commonwealth, low- and moderate-income households comprise a significantly larger percentage of all households than 10%. For example, the 14 towns in the Devens market area have a combined total of 2,462 Chapter 40B units. Meeting the state's 10% target on a region-wide basis requires 5,711 affordable units, or 3,249 Chapter 40B units in addition to the existing inventory. However, there are more than 16,800 low- and moderate-income households in the same 14 communities.⁷ Including the adjacent cities of Fitchburg and Leominster, the number of low- and moderate-income households is 32,141 – yet the adjusted Subsidized Housing Inventory for the Devens area, Fitchburg and Leominster is only 5,454 Chapter 40B units. The potential to underestimate housing needs is fairly obvious, for even if all 14 non-urban communities met the state's 10% goal, there would be 2.95 low- and moderate-income households for every one Chapter 40B unit.

The same conditions exist throughout the state. According to data reported by the U.S. Department of Housing and Urban Development (HUD), 39.7% of all households in Massachusetts have incomes in the low- or moderate-income range. Providing enough low- or moderate-income housing to reach 10% of all homes in Massachusetts would appear to require 262,199 units, but since the 10% formula under Chapter 40B excludes seasonal and vacation homes, 10% for the state as a whole would actually be 252,696 units. Aside from the fact that Chapter 40B places less responsibility on resort towns to house the state's poor, the reality is that even at 10% of all year-round homes in Massachusetts, there would still be 732,004 families without access to an affordable housing unit as the term is defined by law.

Cost Burdened Households

Since the legislature's intent in enacting Chapter 40B was to assure a fair-share distribution of low-income housing across the state, the number of Chapter 40B units in a city or town does not really measure local housing needs or the degree to which a community is affordable to its residents. To a housing policy analyst, a home is unaffordable to low- and moderate-income people if their monthly housing cost – a mortgage payment, property taxes, and house insurance for homeowners, or rent and utilities for tenants – exceeds 30% of their monthly gross income. In housing industry parlance, they are classified as "housing-cost burdened." Federal census data show that in the Devens region, nearly 20% of all homeowners spend more than 30% of their income on housing. However, the condition is more pronounced among renters: high housing costs in relation to income affect 29% of all renters in the 14-town area. Table 2-25 reports the percentage of low- and moderate-income

▼
⁷U.S. Department of Housing and Urban Development, Census 2000 Data Sets, Low- and Moderate-Income Census Blocks Groups.

households with housing cost burden and *severe* housing cost burden, i.e., housing costs exceeding 50% of monthly gross income.

Table 2-25: Unaffordably Housed Renters and Homeowners in Devens Region

Community	Renters	Cost Burden %		Homeowners	Cost Burden %	
		30%+	50%+		30%+	50%+
Acton	1,795	30.2%	13.2%	4,810	18.9%	6.4%
Ayer	1,320	36.0%	14.2%	1,308	19.6%	5.7%
Bolton	65	22.4%	0.0%	1,133	26.6%	10.4%
Boxborough	519	19.7%	10.2%	1,028	18.1%	6.5%
Clinton	2,549	27.2%	11.8%	2,305	20.7%	7.9%
Dunstable	61	43.6%	36.4%	766	21.5%	6.4%
Groton	497	22.1%	10.2%	2,365	20.6%	6.6%
Harvard	155	36.4%	25.6%	1,434	19.9%	4.0%
Lancaster	425	26.2%	9.5%	1,433	19.5%	5.5%
Littleton	499	40.4%	14.6%	2,173	16.1%	5.3%
Lunenburg	433	29.3%	10.5%	2,668	16.5%	4.8%
Pepperell	776	21.9%	12.9%	2,540	15.1%	3.1%
Shirley	599	27.5%	7.9%	1,090	20.6%	7.7%
Stow	271	32.8%	13.9%	1,699	20.0%	6.7%
Townsend	471	24.2%	9.2%	2,262	23.0%	8.2%
Tyngsborough	579	27.8%	16.8%	2,812	23.5%	7.0%
Westford	550	27.8%	10.0%	5,854	16.1%	4.0%
Non-Urban Total	11,564	28.6%	12.4%	37,680	19.1%	5.9%
Fitchburg	7,231	37.3%	18.2%	5,586	17.8%	4.8%
Leominster	6,960	32.8%	15.2%	7,584	16.3%	4.9%

Source: Census Bureau, Census 2000 Summary File 3, Tables H69, H94. "Homeowners" includes households with a mortgage.

Considering the 14 towns alone, approximately 3,100 renters live in homes or apartments they cannot afford, and 1,350 of these renters have severe housing cost burdens. Of the region's homeowners, 7,200 are housing cost burdened and 2,200 are severely cost burdened. Special user-defined data sets and cross-tabulations of Census 2000 data from HUD show that 72% of all households with housing affordability problems are low- or moderate-income and about one-third are *also* elderly households. There are existing, unmet needs in the 14-town area for 800-850 rental units and approximately 1,600 affordable homeownership units.

Characteristics of Smart Growth

Since the early 1990s, the phrase “Smart Growth” and its antonym, “sprawl,” have become part of our national vocabulary. “Smart Growth” refers to a set of planning principles to reduce the consumption of land and water for new growth in order to restore environmental quality and promote social fairness. Although Smart Growth has conceptual appeal for many people, it remains a difficult sell in suburbs and small towns that have evolved under decades of uniform, low-density development rules. Indeed, Smart Growth runs contrary to most conventional planning and zoning practices and their associated outcomes, such as:

- The separation of land uses into distinct, unrelated zones;
- Widely dispersed residential development, comprised mainly of detached single-family homes on individual house lots;
- The organization of residential areas around cul-de-sac streets, unconnected to adjacent neighborhoods;
- Highway commercial districts that cater to cars, with franchise architecture, deep setbacks covered by pavement, and large signs directed at persons driving by; and
- The fragmentation of open space caused by rigid dimensional rules that impede the preservation of habitat, farmland and scenic landscapes.

Explaining Smart Growth to residents and local officials today is difficult because it challenges so many aspects of modern development: excessive consumption of land and water, infrastructure that is very expensive to build and maintain relative to the amount of development and population served, physical seclusion, housing as an agent of age and class segregation, and the roadway as public space. In contrast, Smart Growth promotes places that meet human needs efficiently, inclusively, and without destroying the natural environment.



Massachusetts Context

For a variety of reasons, Massachusetts does not have an abundance of Smart Growth models. A weak regional planning framework, outdated zoning and subdivision control laws, and local government’s dependence on the property tax all pose challenges to a comprehensive Smart Growth agenda. These and other barriers have largely been overcome in states such as Maryland, New Jersey, Oregon, North Carolina, Wisconsin and Vermont, where Smart Growth is a recurring theme in state laws and local ordinances. Recently, the Romney Administration and the Massachusetts legislature unveiled some tools to encourage elements of Smart Growth, but while these tools have promise, the state has yet to embrace or implement a consistent Smart Growth plan. As a result, efforts to calibrate

transportation, environmental, land use and housing policies remain fragmented and largely decentralized.



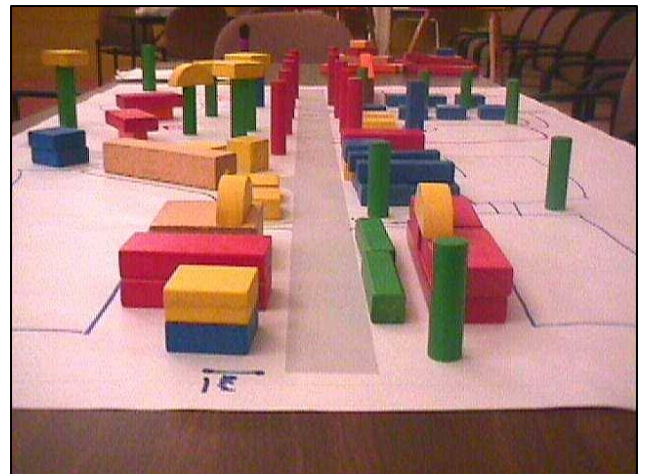
Regional Context

For many communities, the places residents say they love most often have Smart Growth characteristics, yet ironically these places could not be replicated under current zoning. Some obvious examples include the physical form, mix of uses and density of downtowns, town centers and villages. Moreover, the types of development that residents usually dislike are memorialized in zoning regulations across the Commonwealth. Deep setbacks that force new homes and businesses far back from the road, or cumbersome rules and lengthy permitting procedures that incentivize the path of least resistance – approval-not-required lots along rural byways – bring about the environmental and visual impacts that communities say they do not want.

In the Devens regional market area, however, several suburbs and towns have either enacted or begun to consider new ways to regulate development in order to achieve Smart Growth goals. Communities have also explored creative ways to convert older buildings into new uses by tapping grants and low-interest loans for housing and economic development projects. For example:

Town of Acton

Acton has adopted comprehensive zoning changes for East Acton Village to promote small-scale, mixed-use development and access management. The new zoning regulations came at the heels of a two-year process to prepare an East Acton Village Plan. The process was steered by a committee appointed by the Planning Board. Many neighborhood residents participated in public meetings to define a vision for East Acton and evaluate regulatory options to achieve it. This consensus-based planning effort paid off, for Acton town meeting voted unanimously to adopt the East

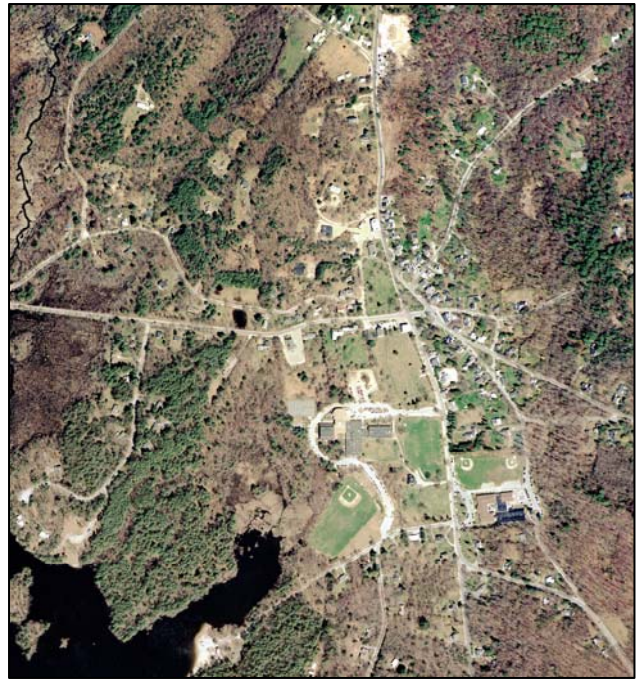


Acton planners used building blocks to help residents create conceptual development models on a collection of streets in East Acton Village (June 2001).

Acton Village District in 2003. Last year, the town also obtained a grant for a feasibility study and developer's kit to create a small, mixed-income housing development on a remediated brownfields site adjacent to another of Acton's village centers.

Town of Harvard

In 2004, Harvard adopted new regulations for the Commercial District on Ayer Road. The bylaw's purpose is to encourage village-style development, distinctive architectural and site designs, curb cut consolidation and shared parking. Harvard also has a fine example of an affordable housing reuse project in the Town Center: the Harvard Inn, with five affordable rental units owned and managed by the Harvard Conservation Trust since the early 1980s.



Harvard Town Center, where a network of radial roadways converges northeast of Bare Hill Pond (lower left). This historic village is largely surrounded by open space and serves as Harvard's civic, social, cultural and governmental center.

Town of Shirley

Shirley recently adopted significant zoning changes, including a stronger site plan approval process with design review, a mixed-use overlay district for Shirley Village and a mandatory open space-residential development bylaw for new developments of six or more dwelling units. After receiving one of the first Smart Growth Technical Assistance Grants awarded by the Executive Office of Environmental Affairs (EOEA), the Planning Board embarked on a comprehensive revision of Shirley's Zoning Bylaw: use and dimensional regulations for all of the village and business districts, low-impact development regulations, and infill development regulations for established residential neighborhoods. These proposals are slated for consideration by a fall special town meeting.

Town of Westford

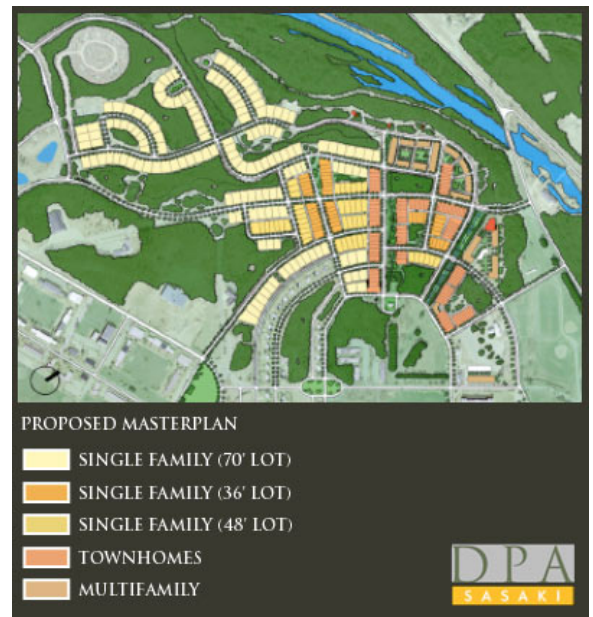
When Westford voters adopted a historic mill reuse bylaw in 2002, they made possible the redevelopment of Brookside Mill for 35 mixed-income housing units.

The developer, Nabnasset Mill Partners, has obtained a grant from the Massachusetts Technology Collaborative, Green Buildings and Infrastructure Initiative, to restore the mill's hydropower facility as a renewable energy source for the project. Brookside Mill has been registered for LEED certification.

Town of Groton

Groton is one of a handful of small towns with a Transfer of Development Rights (TDR) bylaw that has protected a considerable amount of open space. Although the town originally adopted TDR in the early 1980s, no developer came forward with a TDR proposal until Groton revised the entire zoning bylaw in 1988 and instituted rate-of-development regulations. Thereafter, applicants could use TDR to increase density or accelerate the rate of building permit approvals for their projects. Most of Groton's TDR activity has been for the purpose of accelerating development rather than achieving higher density. Since the 1988 zoning changes, Groton has been able to secure permanent protection of more than 500 acres of open space as a direct result of its TDR bylaw.

The Devens Reuse Plan also embraces many principles of Smart Growth, such as concentrating redevelopment activity on the Main Post and capitalizing on existing infrastructure to serve new land uses. MassDevelopment recently commissioned a master plan for future housing development in the Grant Road area of Devens. The project was undertaken by a team of landscape architects and architects whose conceptual plan protects significant site features and promotes compact development nodes served by a traditional neighborhood street grid.



Proposed master plan for Grant Road, prepared by Donald Powers Architects (Providence) for Sasaki Associates and MassDevelopment.

The next section of this task includes brief case studies of four developments with Smart Growth characteristics in the Devens market area:

- The Spaulding Block, Ayer
- River Court Residences, Groton
- Crossroads Condominiums, Acton
- The Woodlands, Clinton

It is important to note that for the most part, these projects address some Smart Growth principles and deviate from others. Where applicable, we have tried to point out the challenges to implementing Smart Growth policy.

In Search of Smart Growth



Project Evaluation Criteria

To identify developments with Smart Growth characteristics, we applied the following criteria to several projects in the Devens market area:

- A housing or mixed-use development located adjacent to or within walking distance of public transportation.
- A project involving redevelopment and reuse of pre-existing buildings, whether for housing alone or mixed residential and other uses.
- A project resulting in the clean-up and reuse of a brownfields site.
- A transfer of development rights (TDR) project.
- A project clearly designed with walkability in mind, i.e., internal walkability and walkability to goods and services.
- A development featuring a compact mix of single-family and attached housing units and preserved, contiguous, accessible open space.
- Infill housing in a town center or an established village, oriented toward the street, with evidence of streetscape improvements.
- A small affordable housing development in pre-existing space (such as a use conversion to multi-family housing), or new if adjacent to schools, a town center or village, established neighborhoods, or public transportation.



Smart Growth paired with New Urbanism: high density toward the middle of the village and declining density toward the edge, with buildings organized along a grid of streets and a distinctive sense of urban boundary, civic space at the core, and unaltered open space at the outskirts of the community. The premise is that villages such as these are walkable, human-scale, and ecologically sensitive. Source: New Urban Builders for the Local Government Commission, TND: The Developer's Perspective, December 2002.

- A residential-commercial mixed-use project, whether by conversion or new construction, in a town center or an established village node, with compatible uses and designed for walkability, preferably with streetscape improvements.
- A residential or mixed-use project that incorporates green building technology and/or green elements in site design.
- A residential or mixed-use redevelopment project that resulted in access management improvements, such as curb cut consolidation and shared parking.



Case Studies

The Spaulding Block, Ayer

Location: Main Street, Ayer

Year Built: Under construction (2005)

Developer: Page-Moore Realty Trust

Zoning: Downtown Business (DB) zoning allows residential units over commercial space and reduced parking requirements of only 1 space per unit.

Units: 7 one-bedroom low- and moderate-income rental units (with affordable housing restrictions)

Financing: \$300,000 in equity (purchase price)
 \$750,000 HDSP grant funds
 \$650,000 developer contribution (through a \$650,000 mortgage loan from MassDevelopment)
 \$200,000 developer contribution (in cash)

Benefits: 7 units added to Ayer’s Subsidized Housing Inventory, higher property value and increased tax revenue for the Town, contributes to downtown revitalization.

Smart Growth Characteristics:

- Walking distance to public transportation
- Redevelopment and reuse
- Walkable neighborhood
- Small affordable housing development in existing space



Details: The Spaulding Block is a \$1.6 million rehabilitation of historic mixed-use structure in Ayer's historic downtown district. The upper two floors have been vacant for over 30 years. The project is across the street from the MBTA commuter rail station and proximate to the Nashua River Rail Trail, and government, banking, food, postal, retail and personal services.

River Court Residences, Groton

Location: West Main Street, West Groton, MA

Year Built: 2002

Developer: Town of Groton & River Court Associates

Zoning: Business District (B-1)

Units: 74 assisted living, independent care, and special care units (20% for low- and moderate-income seniors)



Financing: Property acquired for back taxes
Inclusion in the Ayer Economic Development Area
20-year TIF financing
\$25,000 MassDevelopment feasibility grant
\$50,000 MassDevelopment pre-construction grant
\$82,300 Brownfields Redevelopment Loan
\$12.0m tax exempt and taxable bonds

Benefits: Property returned to tax rolls, environmental remediation, and increased housing opportunities for low- and moderate-income seniors.

Smart Growth Characteristics:

- Redevelopment and reuse
- Brownfields reclamation
- Small mixed-income/affordable housing development in existing space

Details: River Court Residences consists of a redeveloped mill building along the banks of the Squannacook River in West Groton. The former mill sits on 8 acres of

land and had not been occupied since the 1980s. Twenty-percent of the 74 assisted living, independent care, and special care units are subsidized for low- and moderate-income seniors.

Crossroads Condominiums, Acton

Location: 244 Main Street, Acton

Year Built: 2003

Developer: James Fenton d/b/a Crossroads, LLC

Zoning: Chapter 40B project in Residence II (20,000 SF lots); Affordable Housing Overlay District applies to part of the site

Units: 12 condominiums (25% affordable)

Financing: Privately financed

Benefits: Three units on Acton's Subsidized Housing Inventory, increased tax revenue, advances goals of the Acton Master Plan

Smart Growth Characteristics:

- Small mixed-income/affordable housing development adjacent to a business district
- Infill development

Details: Crossroads Condominiums is a Chapter 40B homeownership project adjacent to the Kelly's Corner business district (near the intersection of Route 2 and Route 111). The development was completed in 2003 with private financing. From a design perspective, the buildings are not particularly imaginative. There are two two-story, gray vinyl-clad multi-family buildings close to the road, and they share two common driveways and mailbox posts. Although Acton encourages garage access from the side or rear of a dwelling, extensive wetlands and associated buffers on the western portion of the site led the developer to locate garages on the front of the building. (*Auto-oriented design is generally inconsistent with the principles of Smart Growth.*)



The Woodlands, Clinton

Location: Berlin Street, Clinton

Year Built: Under construction (2005)

Developer: Albro Construction⁸

Zoning: Approved by special permit.

Units: 493 units in a mix of residential uses (multi-family, townhouses, one-story villas, single family homes) and price ranges.

Financing: Privately financed.

Benefits: Preserved open space through increased density and compact design, increased tax revenue for the Town.

Smart Growth Characteristics:

- Compact development preserving large amount of open space
- Mix of residential uses

Details: The Woodlands is a mixed-use condominium community with a variety of home types and sizes, although the exterior designs are extremely uniform with little variation in color or style. A different condominium association represents each distinct neighborhood within the development, such as The Birches, The Oaks, The Briarwoods and The Aspens. The project is phased, with the first phase almost complete and some townhouse units already occupied. Preserved open space surrounds the development and is punctuated by public walking trails. However, the open space is not accessible to all residents of the project. A Smart Growth shortcoming of The Woodlands is that generally, the site plan is more auto-oriented than pedestrian-oriented.

A very small village center under construction at the entrance to the site was intended for small service establishments. In addition, a restaurant was proposed for the rear of the site, next to the clubhouse. However, Clinton Town Meeting (June 2005) defeated the “Neighborhood Services Overlay District” that was necessary for neighborhood commercial activity at The Woodlands.



⁸ The same developer produced Ridgefield, another well-known condominium development in Clinton.