

The Greater Boston Housing Report Card 2015

The Housing Cost Conundrum

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Letter

Dear Friends,

Each year, the Boston Foundation asks economist Barry Bluestone and his team at Northeastern University's Kitty and Michael Dukakis Center for Urban and Regional Policy to dive into the data and find out what is happening in the Greater Boston housing market and why. For many years, the Northeastern team has been documenting the falling vacancy rates and rising prices that have wreaked such hardship on renters and potential home buyers. *As the authors note in these pages, we are now at the point where it takes an annual income of \$100,000 a year to comfortably afford Boston's median monthly rent of \$2,497.*

Attracted by a robust economy, almost 172,000 people moved into the region between 2010 and 2014, yet only 15,000 new houses, condominiums and apartments were built. To find out why supply has stubbornly been unable to meet demand year after year, the authors collected and analyzed cost data from developers and housing agencies. Their conclusion is very unsettling: the numbers just don't add up. Land, construction and development costs in Massachusetts are so high and zoning against high-density developments is so pervasive that builders simply can't produce housing that working and middle-income families can afford. Virtually all new low-density projects cater to the high end of the market.

We believe this state of affairs poses a real threat to Greater Boston's future health and prosperity. As the Boston Foundation celebrates its Centennial this year, we not only look back with pride on our accomplishments on behalf of this great city, we position ourselves for another century of service. That means asking some hard questions. What will Boston be like in 20, 50 or 100 years if we don't build more homes and apartments that working people can afford? Will our now thriving economy continue to flourish if people won't come here for jobs or leave for more affordable cities elsewhere? How will we close the achievement gap in our schools if the children in them lack the stable foundation that a safe, affordable place to live can provide?

For decades, we have funded the work of advocates, community development corporations, and others who believe along with us that everyone deserves a decent home to live in and a paycheck big enough to pay for it. To that end, we convened the Commonwealth Housing Task Force in 2003. This year, we are reaffirming our commitment to the task force and expanding it so it can be an even more potent force for shaping and guiding the public policy changes we need in order to create and preserve affordable housing in the future.



Paul S. Grogan
President and CEO
The Boston Foundation

Executive Summary

Fifteen years ago, the newly founded Center for Urban and Regional Policy at Northeastern University (now the Dukakis Center) published its first research on housing. Titled *A New Paradigm for Housing in Greater Boston*, it began with what would become prophetic words:

. . . prosperity brings its own challenges. None is more acute than the region's severe housing crisis. Vacancy rates are now so low that home prices and rents are being bid up substantially faster than most household incomes. As a result, many long-time residents of the region, in addition to many newcomers, are facing a severe affordability gap between their incomes and what they must pay to rent housing or purchase a home. Prices and rents are rising so quickly that not only are the poor in trouble, but an increasing number of working and lower middle income families worry that prosperity may price them out of the Boston housing market.

Those words written in 2000 are just as valid today in 2015.

The *New Paradigm* report analyzed the supply and demand gap for housing and concluded that Greater Boston would need to produce approximately 7,200 additional new units per year—a total of 36,000 units above current production levels—if supply were to match demand. Otherwise, prices and rents would continue to escalate faster than household and family incomes.

Beginning in 2002, The Boston Foundation asked the Center to produce an annual *Greater Boston Housing Report Card* (GBHRC) so that we could keep track of how well the region was doing at meeting this target. Ever since, with the full support of the Foundation, an annual report has been prepared. This is the 13th edition.

Our research has shown that in only one year since 2000 did the region come close to meeting the target set out in our first report. That was in 2005, when more

than 15,000 units of housing were permitted in a single year. The number permitted would drop to little more than 4,700 in 2009 before slowly recovering. The consequence, as we warned in that original report, would be rising home prices—only to be interrupted by the Great Recession—and rents that have increased nearly every year regardless of the state of the economy.

Why has housing supply not kept up with housing demand? This is the question we decided to finally tackle head-on in this edition of the *Greater Boston Housing Report Card* by undertaking an in-depth study of detailed housing cost data that we have collected from housing agencies and developers. The answer to our question is an unsettling one. *We have failed to meet housing production targets because there is no way to do so given the high cost of producing housing for working and middle-income households. In part, this is because of the extreme barriers to new construction, especially in the form of severely restrictive zoning at the local level across much of Massachusetts.* The cost of developing new housing requires a price point or rent beyond the pocketbooks of such households and therefore developers only produce such housing, in quite limited numbers, when they are required to do so by so-called “inclusionary zoning” regulations or when they are able to secure limited public funding and subsidies to support affordability. The very high cost of land and site preparation, major contributors to prohibitive total development costs, will not come down until zoning restrictions are relaxed.

The lack of new housing then drives up the price and rent on *all* housing as the number of housing units demanded far exceeds the number of total units on the market.

Solving this problem of insufficient housing supply will require a battery of new approaches to zoning and construction techniques—something that has eluded developers and policymakers alike. We suggest in these pages some new approaches to increase housing supply.

The Current State of the Greater Boston Economy

What is compounding the housing crisis today is the strength of the Greater Boston economy, which is now attracting more young people to settle here given the attractiveness of the region's labor market. Over the past seven years, the Massachusetts economy has outperformed the national economy, often by a good deal, and this year is projected to grow at its fastest pace since the early 2000s. The result is that the state's unemployment rate is now below 5 percent for the first time in eight years. Between December 2009 and December 2014, employment in the five counties of Greater Boston (Essex, Middlesex, Norfolk, Plymouth, and Suffolk) has increased by more than 213,000. Nearly 100,000 of those new jobs were generated in the last two years. Those working here have to find a place to live, and this has driven demand for housing to new heights.

Population Growth and Housing Production

With such strong employment growth, Greater Boston has been a magnet for population growth. Between 2010 and 2014, the five-county region added 67,000 households. Unfortunately, the number of housing units increased by only 15,000 during that period, despite the fact that 41,000 building permits were issued. Even if every one of those permits had resulted in a constructed unit, household growth would have exceeded housing production. In 2015, we project that nearly 12,800 building permits will be issued, the most since 2005. This should help boost the number of new housing units over the next few years. But it can hardly make up for the actual lack of production between 2010 and 2014. Demand for housing continues to outstrip supply by a fair margin.

The one really good piece of news we have to report on the housing front, besides the tick up in overall production, is that developers have read the tea leaves and now recognize the demographic shifts in the region. As such, we estimate that by the end of the year, more than two-thirds (68.2 percent) of the permits issued will be for multi-family developments with five or more units. Back in 2000, such developments

accounted for only a quarter of total permits while two-thirds were for the construction of single-family homes. We should add that there is also some good news on the Chapter 40R front. As of this year, an additional 370 units of new housing, virtually all of it in multi-unit developments, were completed under this 10-year-old Smart Growth Zoning and Housing Production statute.

Home Sales and Prices

With the increase in the number of households, sales of existing homes as well as new ones increased to more than 30,000 in the region in 2015, somewhat higher than in the previous three years and one-third higher (32.8 percent) than in 2011. Condo sales have been relatively stable over the same three-year period, but up by 39 percent since 2011.

But with the shortfall in production, the increase in home sales could only be accomplished through reduced vacancy rates and indeed this is what occurred. In 2010, the homeowner vacancy rate in Greater Boston was just 1.2 percent, less than half the U.S. average for metro regions. But by 2014, it was down to just 0.8 percent and would fall to 0.7 percent in 2015. Such a "hot" market is a seller's market, where those who are selling homes or offering them for rent can boost their asking prices and households who want to live here are forced to pay them.

With such low vacancy rates, prices had to rise and they did. Between 2010 and 2014, the median price of a single-family home in the region increased by 12 percent—from \$354,207 to \$395,740. By the middle of 2015, the median price exceeded \$405,000. Over the longer period, 2000–2014, the median price of a single-family home in Greater Boston soared by 52 percent while the nominal growth of homeowner household income rose by just 34 percent. As such, today 38.4 percent of owner-occupied households are paying more than 30 percent of their gross income for housing (the federal standard for affordability) compared with just 26.7 percent in 2000.

Not all municipalities experienced such an escalation in home prices, but some have exceeded it by a wide margin. Wealthier communities like Belmont, Wellesley, Concord, Lexington, Newton, Brookline, downtown Boston, and Cambridge had single-family

prices that have skyrocketed since the end of the last housing bubble in 2005. Today, median home prices in Wellesley are 24 percent higher than in 2005; Newton's prices are 47 percent higher; and downtown Boston's have increased by 76 percent over the previous peak. Cambridge set a new record with single-family prices now averaging more than twice what they were in 2005.

Condo and Triple Decker Prices

The demographic shift toward both aging baby boom empty nesters and a new crop of millennials has changed the nature of housing demand. These growing demographic groups are seeking smaller housing units, often in multi-family developments. As such, the demand for condominiums has soared so much that the median price of a condo unit in Greater Boston today is \$401,398—only 1 percent below the median single-family sales price. As late as 2000, the typical condo sold for just 68 percent of the typical single-family home.

What has really exploded in price are the iconic “triple-deckers” in Greater Boston. Built for the most part between 1870 and 1920 when massive immigration tripled the city's population, the median price of a single unit in a triple-decker was \$244,172 in 2009. By mid-2015, the median sales price had shot up to \$477,057—an increase of 95 percent in the span of just six years. The demand for units in such buildings—driven in large part by undergraduate and graduate students, medical interns and residents and other young professionals who can pair up, triple up, and quadruple up to pay mushrooming rents—has made such housing an investment bonanza. Rental-unit vacancy rates have fallen to 2.6 percent in Greater Boston, less than half the 5.5 percent that research shows is needed to stabilize rents so they rise no faster than normal inflation. Landlords compete aggressively to purchase such buildings and in doing so have pushed prices up to astounding levels.

Rents

With such a decline in rental vacancy rates, rents have continued to spiral upward. By the second quarter of 2015, the average monthly rent for a two-bedroom apartment had reached \$2,602, up 42 percent from the

last quarter of 2009. At this rent, a household spends \$31,224 per year in rent. Not surprisingly, slightly more than half of all renter households (50.6 percent) now pay more than 30 percent of their gross income on rent while more than a quarter of such households (26.4 percent) are forced to pay more than half their income for shelter.

Foreclosures

Finally, despite the strong improvement in the regional economy, foreclosure activity is on the rise again as banks and mortgage companies accelerate the pace of getting these properties off their books. Between 2013 and 2015, foreclosure petitions that begin the foreclosure process nearly doubled in Greater Boston from 1,682 in 2013 to 3,154 in 2015. Completed foreclosure deeds are up over the same period from 737 to 1,112. The number of foreclosure petitions and deeds is a fraction of what they were between 2006 and 2012, but the new trend foretells some more stress, particularly in low-income communities.

The Cost of New Housing Development

During the past summer, the Dukakis Center staff worked with housing agencies, as well as for-profit and nonprofit developers, to generate a new database including 115 new rental housing development projects. These are located in both urban and suburban municipalities in Massachusetts and other states. We collected data on the size of each project and the individual components of housing cost, including the costs of land acquisition, site preparation, construction, soft costs including legal and accounting fees, project financing, and developer fees. We focused our attention on low-rise and town house multi-family developments rather than luxury high-rises.

What we found is that across Massachusetts, the total development cost per square foot for urban housing projects completed between 2004 and 2008 averaged nearly \$242. That meant total development costs would amount to more than \$387,000 for a family-sized unit of 1,600 square feet. By 2011 to 2015, the cost of that same unit had increased to nearly \$274 per square foot, or more than \$438,000. For a new rental unit of

this size, monthly rent would amount \$3,215 in order to cover development costs, taxes, insurance, utilities, and maintenance.

Can a Boston family afford this typical unit? The answer is clearly no. The median income of households in Greater Boston was \$73,935 in 2013. To afford that \$3,215 per month payment, such a household would need to spend 52 percent of its gross income for shelter alone. Even if the family downsized to a 1,200-foot unit, at current development and operating costs it would need to spend \$2,544 per month on rent, or 41 percent of its income. Because of the exorbitant cost of development relative to household income, developers have been unable to produce housing for most working and middle-income families. And because demand exceeds supply for existing housing, prices and rents continue to surge beyond the simple increase in cost. *As such, under current conditions it is virtually impossible for supply to match demand and therefore the vicious cycle of price appreciation and rent escalation in Greater Boston is fundamentally unmanageable under current economic and political conditions.*

What is driving the high cost of housing development? Of the average \$274 per-square-foot cost of urban projects in Massachusetts, \$159 is devoted to construction. This amounts to 58 percent of total development costs. Land acquisition is the second biggest cost component at nearly \$41 per square foot. For a 2,000-square-foot unit, the cost of urban land is now close to \$66,000. Site preparation costs add another \$29 per square foot so that land acquisition and site preparation together account for \$70 per square foot with developer fees, on average, of \$19 and financing fees of \$17.

Suburban projects in the Commonwealth are no longer much cheaper to build as the cost of acquiring land, preparing the site, and building the housing has soared. Today, the cost of building in Massachusetts suburbs is \$262 per square foot, only 4 percent less than in cities. Back in 2004–2008, the suburban “discount” was 17 percent.

We were somewhat surprised to find that nonprofit developments were more expensive to build than for-profit projects. A large part of this difference is due to the fact that nonprofit developments tend to be smaller undertakings that lack some of the economies of scale of the larger projects built by for-profit companies.

Indeed, our analysis suggests that developments with fewer than 30 units cost, on average, in excess of \$263 per square foot to build while large projects with 151 units or more cost “only” \$164 per square foot. *Clearly, making it possible to build much larger housing projects could reduce the cost of development significantly.*

Suburban housing projects in Massachusetts continue to be more expensive to develop than similar projects in other states with a cost differential of more than 20 percent. On the other hand, while out-of-state urban projects in the early part of last decade tended to be much less expensive than those in the Commonwealth (\$158 vs. \$242 per square foot), the cost of developing out-of-state urban housing projects has nearly caught up with the cost here. The cost differential today is less than 2 percent—mainly because of soaring urban construction and land acquisition costs in other states.

What makes development so expensive? Here are the factors we found to be most important:

- Land costs are very high in desirable places to work and live
- Few want to reduce the quality of the housing units produced
- We have a strong focus on preserving “community character,” which means little or no new construction and a limit on the size and density of developments under current zoning regulations
- We favor strong government regulations for rental housing, especially for low-income families, the elderly, and the disabled and this drives up the cost of construction
- Strong public support for “green” construction drives up current costs even as they may reduce long-term expenses.

For all these reasons, the cost of developing new housing for working and middle-income households has become prohibitive in Massachusetts. Radical remedies will be needed to overcome the barriers to housing production or supply will continue to fall behind demand and prices and rents will continue to escalate.

Public Policy and Public Spending on Housing in the Commonwealth

The Commonwealth has been a leader in the initiation of public programs to encourage the production of affordable housing. Massachusetts Chapter 13A provides an analogue to the Federal Section 236 interest subsidy program, and the Massachusetts Rental Voucher Program (MRVP) adds to the assistance already provided to low-income families by the Federal Section 8 rental subsidy. The state has a Low-Income Housing Tax Credit (LIHTC) and a Historic Tax Credit, which help subsidize the production of housing for low- and moderate-income households. Other programs are administered by a battery of quasi-public agencies including MassHousing, the Community Economic Development Assistance Corporation (CEDAC), the Massachusetts Housing Partnership and MassDevelopment. It has implemented both Chapter 40B and 40R to address zoning restrictions in local municipalities. All of this has helped meet the housing needs of families who cannot afford market prices and rents.

Public spending from the state treasury for housing program operating funds (in inflation-adjusted dollars) has risen over the past few years from \$123.7 million in FY2010 to \$182.5 million in FY2016, but it still falls well behind what the Commonwealth was spending on housing in the late 1980s and early 1990s when annual outlays exceeded \$300 million.

Federal funding for Massachusetts housing programs peaked in 2011 once economic recovery funds dried up following the Great Recession. Today, federal aid to Massachusetts housing programs amounts to \$483.2 million, down from \$853.9 million five years ago. Altogether, state plus federal housing expenditures have shrunk from \$1.14 billion in FY2011 to \$875 million in FY2016. This does not bode well for the production of low- and moderate-income housing or rental subsidies. With the price of housing rising due to supply constraints, the need for rental subsidies and public housing is greater than ever.

What Is To Be Done?

In order to reverse the trend toward soaring development costs, constrained housing supply, rising home prices, and soaring condo prices and rents in Greater Boston, we have suggested the following steps:

1. Encourage larger housing projects to take advantage of economies of scale in construction
2. Encourage zoning for multi-family housing at higher density
3. Create incentives for communities, housing authorities, nonprofit organizations and businesses to donate land for affordable and mixed-income housing
4. Push for local zoning reform more forcefully
5. Encourage innovation in the design of more efficient housing units and buildings including such projects as the *Millennial Village* for young professionals in order to reduce price pressure on the older housing stock
6. Create incentives for the production of more affordable modular housing
7. Encourage labor agreements for affordable and mixed-income housing
8. Encourage the appropriation of more public funding for affordable housing developments

Only by taking aggressive action now to find innovative solutions to the high cost of housing development can Greater Boston bring supply into accord with demand and thereby slow the increase in housing costs. Until then, housing will become more and more unaffordable for all but the wealthy.

CHAPTER ONE

Introduction

In this 13th edition of the *Greater Boston Housing Report Card*, we have some good news to convey about the state of the Massachusetts economy, an upturn in new housing production, and a continuing shift in the type of housing developments that can help meet the needs of seniors and young millennials alike. For existing homeowners whose main asset is their home, we have good news about the recovery of housing prices from the depths of the Great Recession and the bursting of the housing bubble a decade ago.

But there is also troubling news for working families in the region and their attempts to find housing they can afford. The rise in home prices that benefits existing homeowners has added to the housing cost burden of those seeking to enter the market. While production of new housing has increased over the past year, especially in multi-unit developments, demand for that housing still far outstrips supply, leading to steeper prices. As a result, especially for those who rent homes or apartments, the cost of housing has increased to all-time highs throughout much of the region. Moreover, demand from a growing number of single-person households and smaller families has driven the median price of condos to a point where it nearly equals the selling price of single-family homes.

What is driving the cost of new housing is analyzed for the first time in this series of report cards. Here we present a detailed analysis of the costs of developing housing in Massachusetts and the barriers that both for-profit and nonprofit developers face in building new affordable housing for middle-income households. Based on data acquired on 115 new multi-unit rental housing developments completed between 2004 and 2015 in both urban and suburban communities in Massachusetts and other states, this research provides the first comprehensive analysis of what components of cost are rising the fastest and where. It helps to explain why it is so difficult, if not virtually impossible, to build new housing that middle-income families can afford in Greater Boston. More than that, it shows that unless government and the private sector can figure out how to reduce the cost of producing housing, it

will continue to be virtually impossible to build new houses, condos and apartments anywhere near Boston that working families can afford.

And once again, we track state and federal expenditures in support of housing. Despite clarion calls from both municipal and state officials to boost housing production, this analysis suggests that funding to encourage the production of affordable housing remains well below the levels of government support of several decades ago.

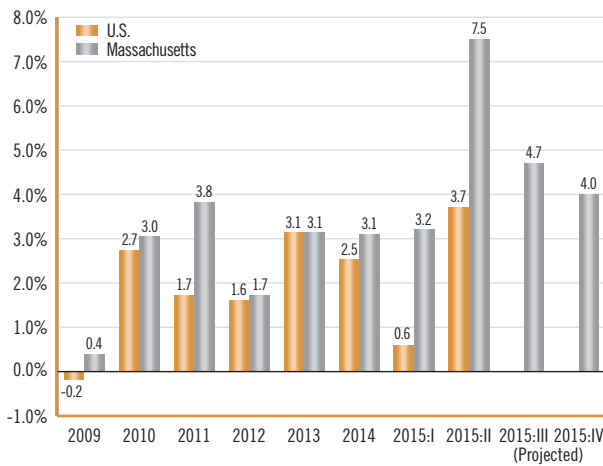
The Massachusetts Economy

At root, the price of housing at any given time is determined by a confluence of many factors on the demand and supply sides of the market. Demand for housing is a function of such factors as population growth, fluctuations in the state of the underlying economy, and changes in the type of housing demanded by consumers. The supply of housing is determined by a range of economic and political factors, including the cost of production and restrictions on development caused by zoning regulations or other constraints imposed by state or local governments.

During the past year, Massachusetts has enjoyed buoyant economic growth and projections for all of 2015 suggest that real output in the state will expand by close to 5 percent, a rate not seen since the late 1990s, when the state's unemployment rate plummeted to less than 3 percent. As **Figure 1.1** reveals, the state's economy expanded at a healthy rate of 3.1 percent during 2014, easily outpacing the 2.5 percent national rate of real output.¹ What is more, despite the difficult winter this year, the Massachusetts economy expanded at a 3.2 percent clip during the first quarter of 2015, more than five times the growth rate of the U.S. economy. In the second quarter, total real output expanded by an explosive 7.5 percent and projections for the rest of the year suggest growth at better than a 5 percent rate for the year as a whole. Such extraordinary growth reflects not only increased productivity,

FIGURE 1.1

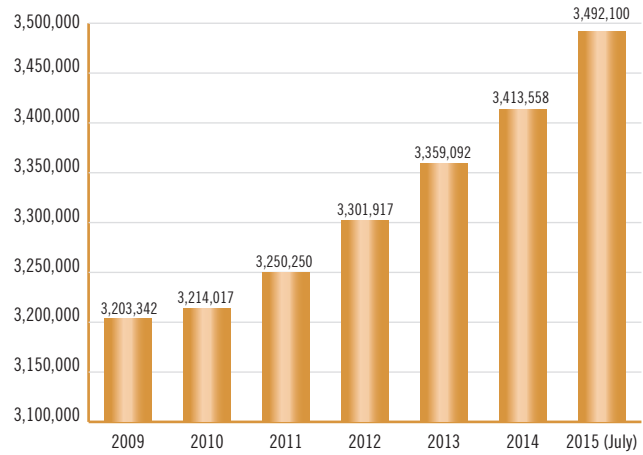
Growth in Real Output Massachusetts vs. U.S. 2009–2015 (Projected)



Source: Mass Benchmarks; World Bank

FIGURE 1.2

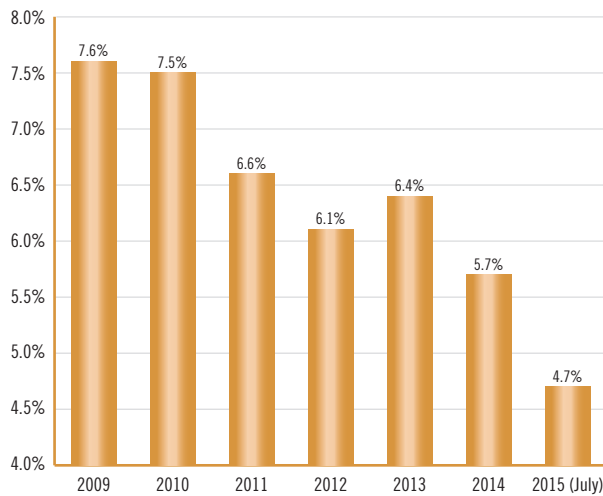
Total Non-Farm Employment: Seasonally Adjusted Massachusetts 2009–2015 (July)



Source: U.S. Bureau of Labor Statistics

FIGURE 1.3

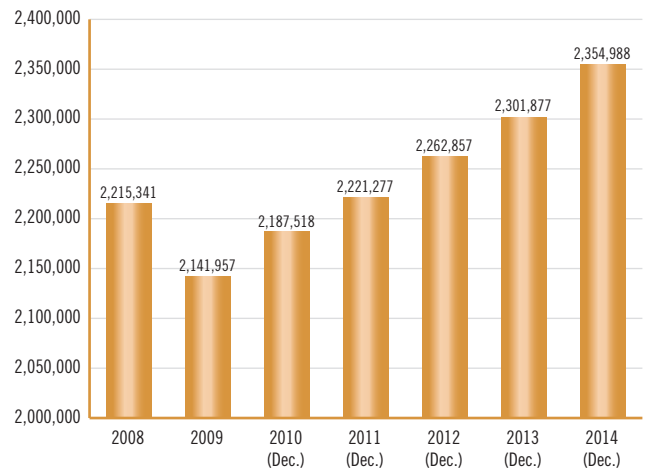
Massachusetts Civilian Unemployment Rate 2009–2015 (July)



Source: U.S. Bureau of Labor Statistics

FIGURE 1.4

Five-County Greater Boston Total Non-Farm Employment 2008–2014 (December)



Source: U.S. Bureau of Labor Statistics

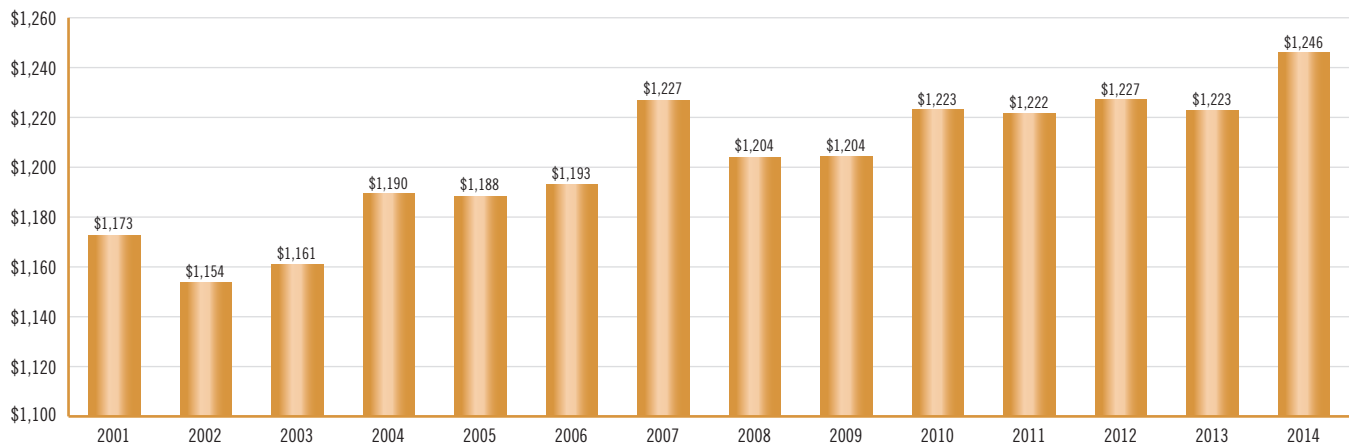
but a solid increase in employment and earnings—each of which normally translates into increased demand for housing.

Figure 1.2 reveals just how fast employment has been growing in the Commonwealth since the end of the Great Recession. The number of total non-farm jobs

in Massachusetts has increased by more than a quarter of a million—289,000—since 2009, an increase of 9 percent. In the past year alone, employment expanded by more than 78,000, the largest one-year increase since at least 2009.² Only one year (2000) has exceeded this record of one-year job growth in the last quarter of a century.

FIGURE 1.5

**Real Average Weekly Wage, Private Industry, Massachusetts
2001–2014 (Real 2014 \$)**



Source: Massachusetts Department of Labor and Workforce Development – ES202 Data

As a result of the strong growth in employment, the state’s unemployment rate in July of this year fell to 4.7 percent, as **Figure 1.3** demonstrates. This was the lowest jobless rate since January 2008.³ Such a strong labor market has attracted people to move to Massachusetts, increasing the demand for housing.

What is true of Massachusetts is especially true of the Greater Boston region comprised of Essex, Middlesex, Norfolk, Plymouth, and Suffolk counties. As **Figure 1.4** reveals, employment in the region has continued to grow each year. Between the end of 2010 and end of 2014, total non-farm employment expanded by nearly 167,500. As such, nearly 80 percent of the growth in total Massachusetts employment over this period occurred in Greater Boston.⁴

Population growth was even more concentrated in Greater Boston between 2010 and 2014, when the five-county region gained 171,900 residents, compared to 197,780 statewide. Nearly 87 percent of the growth in the state’s population occurred within the five counties of Essex, Middlesex, Norfolk, Plymouth, and Suffolk out of the 14 counties in the Commonwealth.⁵

Last year (2014) also saw the first significant increase in real average weekly wages in the Massachusetts private sector since 2010. After controlling for inflation,

weekly wages were up by nearly \$1,200 per year (see **Figure 1.5**). With more money in renters’ and homeowners’ pockets, landlords and developers could demand higher rents and prices and find households willing to pay. Still, it is important to recognize that real wages in 2014 were only 1.5 percent higher than in 2007, a trivial increase relative to the appreciation in housing costs and rents.⁶

Greater Boston Demographic and Economic Profile

As we noted in the previous *Greater Boston Housing Report Card*, “While overall population growth and a strengthening economy will almost inevitably add to the *demand* for housing in the region, demographic shifts may have an even greater impact on the *kind* of housing demanded.” With new data for 2014, we have been able to update Greater Boston’s demographic profile.

Population Growth

The new data we have for 2014 relates to the size of the population, the number of households, and the region’s age profile (see **Table 1.1**). Total population for Greater Boston now stands at just under 4,306,000, an increase of 4.3 percent or 172,000 since 2010. The number of households in 2014 has increased since 2010 by 4.2 percent or nearly 67,000. This population increase has helped fuel the increase in housing demand, home prices and rents.

What is demographically most dramatic is the aging of the existing population. Between 1990 and 2014, the median age of Greater Boston residents increased from 33.4 years to 38.6 years. This trend is driven by a decline in the population aged 44 and younger combined with a continuing expansion of the population over age 45.

Household Size

Changes in household size will also affect the structure of housing demand. During the past several decades, Greater Boston has experienced a decline in household size from 2.61 persons in 1990 to 2.49, according to the U.S. Census Bureau’s latest estimate. Part of this decline is due to the relative growth in the number of single-person households from 26 percent in 1990 to 29 percent, possibly reflecting both the aging of the population as well as the delay of household formation among the younger millennial generation. Regardless of the reason, trends toward smaller households and more people living alone are likely to result in a shift away from large single-family homes toward smaller units either as rentals or condos.

Racial/Ethnic Profile

Greater Boston continues to become demographically diverse. Between 1990 and the Census estimate for 2009–2014, the white share of the population has dropped by nearly 13 percentage points from 88.1 to 75.6 percent. Meanwhile, the percentage of African-Americans grew to 8.4 percent from 6.2 percent while both the Asian and Hispanic populations more than doubled to 7.9 percent and 11 percent, respectively.⁷ The expansion of these minority populations accounted for roughly 45 percent of total population growth in the Greater Boston region and an even greater source of labor force growth. Ensuring that these new households have access to housing throughout the region must be an important goal of public policy.

Household Income

Despite continued job growth since the end of the Great Recession and the spike in real average weekly earnings over the past year or so, median household income has been largely stagnant for more than a decade. Adjusting for inflation, the 2014 Census estimate for real median household income has increased by only 1.4 percent since 2000. This pattern is not confined to Greater Boston. Nationwide, income growth has stagnated as a result of many factors: the continuing shift toward services and away from higher-wage manufacturing, a breakdown in the historic relationship between productivity growth and worker compensation, the decline in unionization and increased global competition. Between 2000 and 2010, homeowners, who tend to be older and have more work experience, have fared better than renters, experiencing a modest increase of 3.3 percent in real median income compared to a *loss* of 16 percent for renters.

Rising Housing Cost Burdens

If stagnant household incomes were offset by falling housing costs, they would be less of a concern. Therefore, it should come as no surprise that stagnant or falling real incomes, combined with rising rents and house prices, have significantly increased the share of households in the Greater Boston area facing substantial housing cost burdens. The severity of that burden has increased as well. During the 1990s,

TABLE 1.1

Demographic Profile of the Five-County Greater Boston Region

	1990	2000	2010	2014	Percent Change		
					1990–2000	2000–2010	2010–2014
Total Population	3,783,817	4,001,752	4,134,036	4,305,935	5.8%	3.3%	4.3%
Age							
Percent 0–24	33.7%	32.5%	32.0%	30.9%	-1.3%	-1.4%	-3.4%
Percent 25–44	34.7%	32.6%	27.7%	27.7%	-2.1%	-14.9%	0.0%
Percent 45–64	18.7%	22.1%	27.1%	27.2%	3.4%	22.4%	0.5%
Percent 65 and Older	12.8%	12.8%	13.2%	14.3%	0.0%	2.9%	8.6%
Median Age ^a	33.4	36.1	38.3	38.6	8.2%	6.1%	0.8%
Household Size							
Number of Households	1,412,190	1,532,549	1,598,451	1,665,400	8.5%	4.3%	4.2%
Average Household Size	2.61	2.54	2.48	2.49	-2.6%	-2.4%	0.4%
Average Household Size, Owner-Occupied Units	2.86	2.75	2.70	2.73	-3.9%	-1.7%	1.0%
Average Household Size, Renter-Occupied Units	2.22	2.16	2.18	2.21	-2.5%	0.7%	1.5%
Percent of Households with One Person	26.4%	28.2%	28.9%	29.1%	1.9%	2.4%	0.6%
Race/Ethnicity							
Percent White	88.1%	82.0%	77.2%	75.6%	-6.1%	-5.8%	-2.1%
Percent Black	6.2%	6.6%	7.9%	8.4%	0.4%	19.9%	6.3%
Percent Asian	3.1%	4.9%	6.9%	7.9%	1.9%	40.2%	14.5%
Percent Hispanic (Any Race)	4.9%	6.9%	9.7%	11.0%	2.0%	40.1%	13.4%
Household Composition							
Percent Owner-Occupied	57.5%	59.8%	60.3%	60.0%	2.3%	0.8%	-0.5%
Percent Renter-Occupied	42.5%	40.2%	39.7%	40.0%	-2.2%	-1.3%	0.8%
Number of Owner-Occupied	812,660	916,659	963,866	964,981	12.8%	5.1%	0.1%
Number of Renter Occupied	599,530	616,160	634,585	627,445	2.8%	3.0%	-1.1%
Household Income							
Median Household Income (Nominal) ^a	\$40,165	\$55,109	\$68,802	\$73,935	37.2%	24.8%	7.5%
Median Household Income (2010 \$) ^a	\$67,010	\$69,784	\$68,802	\$69,206	4.1%	-1.4%	0.6%
Median Homeowner Income (Nominal) ^a	\$51,682	\$71,437	\$93,484	\$99,891	38.2%	30.9%	6.9%
Median Homeowner Income (2010 \$) ^a	\$86,225	\$90,460	\$93,484	\$93,502	4.9%	3.3%	0.0%
Median Renter Income (Nominal) ^a	\$26,245	\$34,204	\$39,208	\$42,075	30.3%	14.6%	7.3%
Median Renter Income (2010 \$) ^a	\$46,979	\$46,723	\$39,208	\$39,384	-0.5%	-16.1%	0.4%

Note (a) These are averages (weighted according to the proper unit of analysis) of the median statistics in Essex, Middlesex, Norfolk, Plymouth and Suffolk counties.

Sources: U.S. Census Bureau, 1990 Census of Housing, General Housing Characteristics, Massachusetts; U.S. Census Bureau, 1990 Census of Population, General Population Characteristics, Massachusetts; U.S. Census Bureau, 1990 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, Massachusetts; U.S. Census Bureau, 1990 Census of Housing, Detailed Housing Characteristics; U.S. Census Bureau, 2000 Profile of General Demographic Characteristics; U.S. Census Bureau, 2010 Profile of General Population and Housing Characteristics; U.S. Census Bureau, 2009–2014 American Community Survey. All data are collected at the county level for Essex, Middlesex, Norfolk, Plymouth and Suffolk counties.

TABLE 1.2

Housing Cost Burden—Greater Boston

	1990	2000	2009–2013
Renter-Occupied Households Paying More than 30% of Income on Rent	41.7%	39.2%	50.6%
Renter-Occupied Households Paying More than 50% of Income on Rent	19.6%	18.4%	26.4%
Owner-Occupied Households with Mortgages Paying More than 30% of Income on Housing	28.3%	26.7%	38.4%

Source: U.S. Census Bureau

the share of renter households that were considered “cost burdened”—spending more than 30 percent of their income on rent—actually declined as household income rose faster than rents. The same was true for homeowners. But since 2000, housing cost burdens in Greater Boston have soared as revealed in **Table 1.2**. Among renter households, 39.2 percent were paying more than 30 percent of their income on rent in 2000. The latest estimate for the period 2009–2013 suggests that *more than half* (50.6 percent) of all renter households in the region are paying more than 30 percent. Even more alarming, at least *a quarter* of all renter households are now paying half or more of their annual income on rent—up from 18.4 percent in 2000. This is largely because renters face a “double-whammy” of both falling incomes and rising rents.

Homeowners also face a mounting affordability issue. However, declining affordability for homeowners stems largely from rising prices rather than falling incomes. Between 2000 and the 2009–2013 *American Community Survey* estimates, the share of owner households considered “cost burdened” rose by nearly 12 percentage points from 26.7 to 38.4 percent. This is despite record-low interest rates that allowed many homeowners to refinance and obtain a lower monthly mortgage payment—if they had sufficient equity.

Summing Up

The two major drivers of housing demand in any region are the rate of its economic growth and the growth rate of its population. In the case of Greater Boston, both have accelerated. During the current year, the growth in real output in Massachusetts will likely end up at close to 5 percent, an increase greater than any single year since 2000.⁸ Much of this growth is concentrated in Greater Boston, where four-fifths of the

increase in total state employment has occurred since 2010. Moreover, real wages are on the rise, increasing faster in 2014 than in any year since 2007. With employment and earnings improving, it is natural for housing demand to increase as well.

A growing population, attracted by a buoyant economy, is also putting stress on the housing market. As we will see later in this report, the growth in housing demand has reduced housing vacancy rates to near all-time lows, producing a “seller’s market” where developers and landlords can raise prices and rents with little fear of leaving their properties vacant.

On its own, the growth in the economy and population is good for Greater Boston. It means that as its population ages, there is a ready supply of younger replacement workers to fill job vacancies. It ultimately means that as the baby boom generation reaches retirement age, there will be younger households to share the tax burden of state and local services.

But if barriers to development keep housing supply from catching up with housing demand, economic and population dynamics will inevitably lead to higher housing prices and rents and to higher housing cost burdens for an increasing number of families and households. The real question for Massachusetts and Greater Boston is whether the good fortune of the economy can be matched by new approaches that will help match housing supply to growing housing demand.

CHAPTER TWO

Home Sales, Housing Production and Foreclosures in Greater Boston

Back in 2004, more than 35,000 single-family homes were sold in the five-county region of Greater Boston (Essex, Middlesex, Norfolk, Plymouth, and Suffolk counties). In each of the four years following that peak sales year, single-family home sales declined. By 2008, the total number of sales in the region had fallen by 36 percent to fewer than 23,000 homes and it would remain near that level through 2011. Only in 2012 did sales begin to perk up again, and in 2013 the sales figure reached nearly 30,000. With continued improvement in the region's economy in terms of jobs and lower unemployment and with population growth, one would *expect* to see increased home sales in 2014 and 2015.

The stronger economy *should* also be leading to more housing production. Anyone who has lately toured the South Boston waterfront or seen the Boston skyline from the air is aware of the proliferation of cranes erecting a brand new set of commercial and housing developments. Housing production appears to be literally on the rise.

The stronger economy, with real wages finally increasing, *should* also portend a decline in foreclosure rates in Greater Boston.

Of these three conjectures about the relationship between a strengthening economy and the Greater Boston housing market, it turns out that only one is correct.

Home Sales Volume

The September 2015 *Warren Group Newsletter* on home sales and prices reported that “The Bay State’s housing boom continued into August with 6,284 single-family home sales, a 16.0 percent year-over-year increase. It [was] the third straight month of double-digit growth.”¹

It would seem that this would have meant a leap in home sales in Greater Boston, but alas this was *not* the case. In the five-county Greater Boston region, single-family home sales increased during this same period by just 7.7 percent . . . only slightly higher than the previous two years. What drove the statewide sales numbers were strong sales gains *outside* of Greater Boston in Hampden County (+19.4%), Hampshire County (+14.0%), and Worcester County (+13.8%), where the median single-family home sale price was \$225,800—compared with \$432,000 in Greater Boston. Even with the strengthening economy, this seems to suggest that homebuyers are seeking out communities beyond Greater Boston where prices are considerably lower.

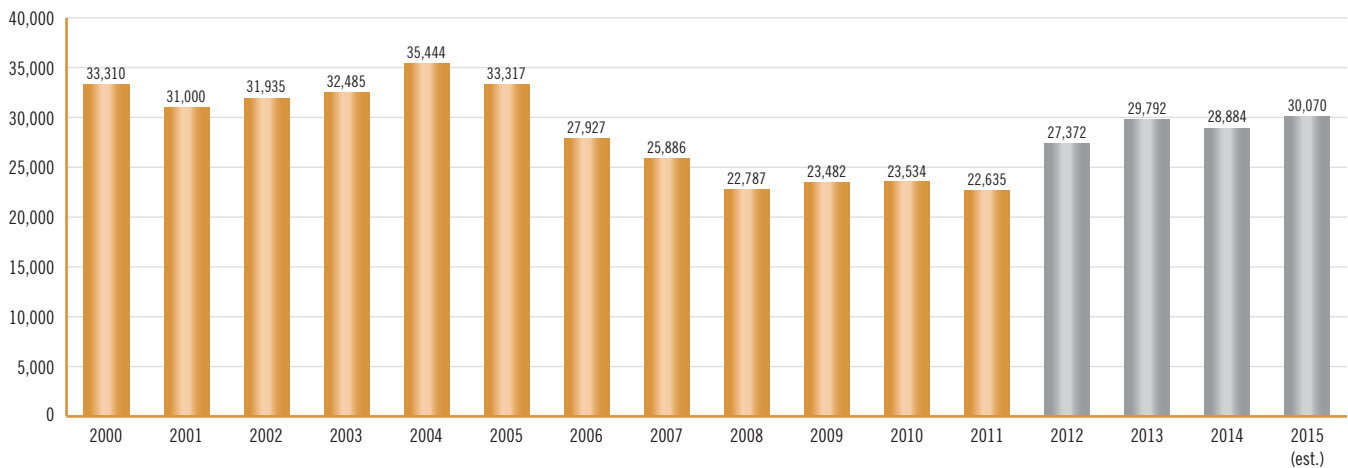
Figure 2.1 provides data on the number of single-family sales in Greater Boston through 2014 with our prediction for 2015. Essentially, annual sales have been relatively flat at around 30,000 for the past three years, despite a strong Massachusetts economy. What we believe is happening is a culmination of three factors leading to stagnant single-family housing sales in the region. One important element is a precipitous decline in the region’s homeownership rate as shown in **Figure 2.2**. As late as 2013, the annual average homeownership rate in the Boston metro area was 66.3 percent. By the first half of 2015, it was down to under 60 percent.

This is likely tied to a second factor concerning the demographic shifts in the region we detailed in the last *Greater Boston Housing Report Card*.² Baby boom empty-nesters are beginning to move away from their single-family homes to condos and rental housing. Similarly, an increase in the number of unmarried millennials, many of whom are highly mobile, has led to fewer young households seeking to own a home, at least until they are much older.

A third factor may be the increased indebtedness of younger households. Saddled with increasing college

FIGURE 2.1

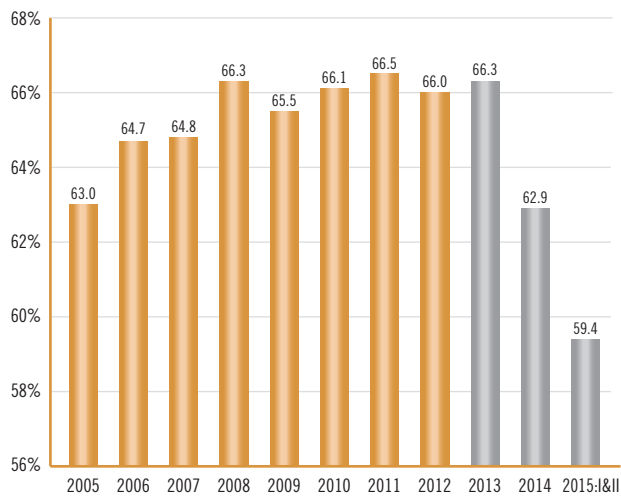
Annual Number of Sales of Single-Family Homes in Five-County Greater Boston Region, 2000–2015



Source: The Warren Group

FIGURE 2.2

Homeownership Rate Boston Metro Area 2005–2015 (Q1 & Q2)



Source: U.S. Census Bureau, “Quarterly Vacancy and Homeownership Rates by State and Region”

debt, it is increasingly difficult for them to afford homeownership and perhaps even to qualify for mortgage financing. If they do seek to buy, it appears they are looking outside the region where home prices are considerably less expensive.

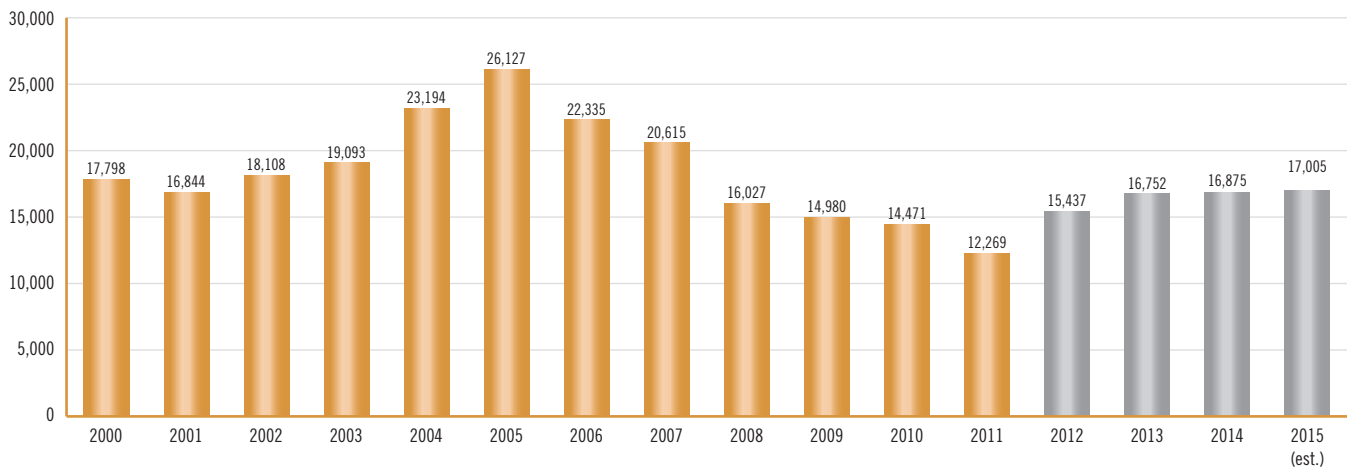
Within the Greater Boston housing market, condominium sales have also been more or less holding steady at between 16,000 and 17,000 per year as shown in **Figure 2.3**. This is consistent with a shift from single-family homeownership to condo ownership, despite the sharp drop in overall homeownership rates.

Sales of two-unit duplexes have declined somewhat over the past three years, but the sales of three-unit “triple deckers,” common in the Greater Boston housing market, have been steadily rising since 2011 (see **Figure 2.4**). For all of 2015, we project that sales of triple-decker units will exceed 1,400, nearly 24 percent higher than in 2011. With a large number of undergraduate students, graduate students, and teaching hospital interns and residents seeking housing with roommates in such units, investors have been buying up this type of housing stock as an investment asset and renting these units at a premium, as we discuss in the next chapter.

Remaining consistent with previous years, Brockton, Newton, Plymouth, Framingham and Quincy

FIGURE 2.3

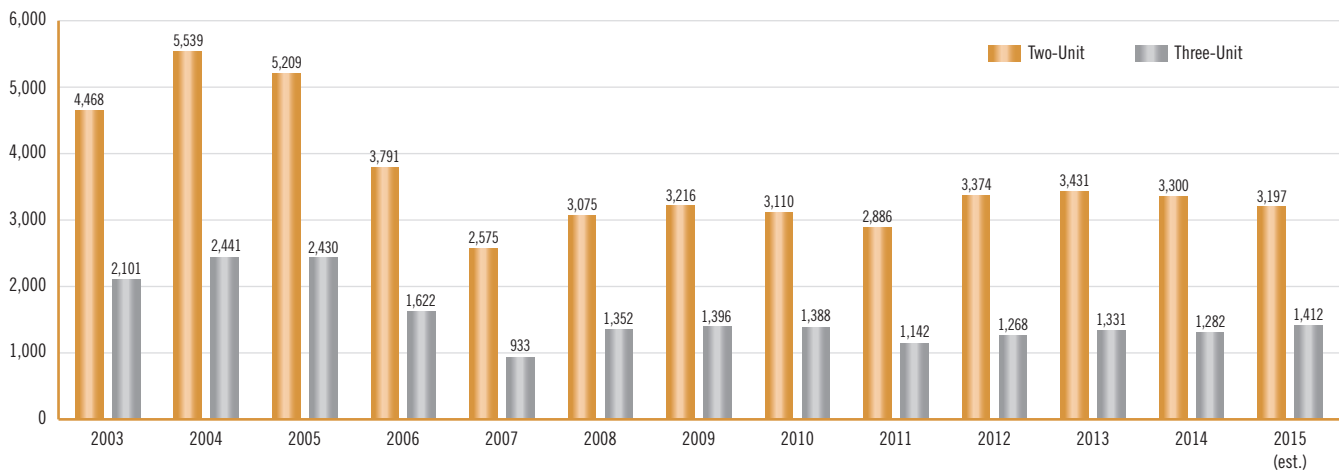
Annual Number of Sales of Condominiums in Five-County Greater Boston Region, 2000–2015



Source: The Warren Group

FIGURE 2.4

Annual Number of Sales of Homes in Two-Unit and Three-Unit Structures in Five-County Greater Boston Region, 2000–2015



Source: The Warren Group

lead Greater Boston in single-family home sales (see **Table 2.1a**). However, despite holding their places at the top of the sales ranking, it is important to note that the number of single-family home sales has been slowing a bit since 2013 in almost all of these communities. Waltham and Needham, which were estimated to be in the top 10 communities with the most single-family home sales last year, have been replaced by New

Bedford and Methuen. New Bedford saw an increase in single-family sales in the second half of 2014, which pushed it up in the rankings to 9th in 2015, but the estimates for this year still show a relative decline in total sales. Methuen, ranked 22nd in the Greater Boston area in 2013, is rising to 10th place this year, although its total number of sales is only predicted to increase from 352 in 2013 to 380 in 2015, eight short of the 388 in

TABLE 2.1A

Municipal Leaders in Single-Home Sales in Greater Boston, 2010–2015 (est.)

	Number of Sales (Ranking in Parentheses)					
	2010	2011	2012	2013	2014	2015 (est.)
Brockton	624 (1)	552 (2)	659 (2)	660 (2)	619 (3)	606 (1)
Newton	578 (2)	582 (1)	671 (1)	691 (1)	634 (1)	582 (2)
Plymouth	501 (3)	512 (3)	582 (3)	617 (4)	624 (2)	554 (3)
Framingham	452 (4)	408 (6)	498 (5)	627 (3)	604 (4)	522 (4)
Quincy	388 (8)	394 (7)	507 (4)	576 (5)	547 (5)	482 (5)
Weymouth	368 (10)	340 (10)	450 (7)	500 (6)	461 (7)	470 (6)
Lynn	434 (5)	356 (9)	394 (11)	418 (9)	473 (6)	468 (7)
Lowell	412 (6)	411 (4)	419 (8)	425 (8)	473 (6)	418 (8)
New Bedford	416 (8)	348 (11)	294 (30)	374 (15)	411 (9)	404 (9)
Methuen	310 (21)	304 (17)	370 (14)	352 (22)	388 (11)	380 (10)

Source: The Warren Group

2014. Overall sales in the Greater Boston area's single-family-home market are decreasing. Given access to other, newer multi-family units and condominiums, this trend may continue for years to come.

Table 2.1b shows Dorchester, Lawrence, New Bedford, East Boston, and Lynn maintaining their places as the top five communities in Greater Boston for sales of triple-decker units. This year, we estimate that while Dorchester will retain its No. 1 position, it will see only 170 sales by the end of 2015, the lowest for that category since before 2010. Other communities, however, are seeing a relative increase. By the end of 2015, we estimate that three-unit home sales in Lawrence will increase by 25 percent; in Roxbury by 35 percent; and in South Boston by 72 percent. These increases are again a response to investors buying up triple-deckers to rent them out to a population desperate for rental housing and willing to cram many roommates—each paying a high monthly fee—into one unit.

As **Table 2.1c** indicates, the highest number of condominium sales in Greater Boston continues to be inside the city and its immediate surrounding neighborhoods. Since 2010, downtown Boston, Cambridge, South Boston and Brookline have logged the most sales. But as is true of single-family homes, condo sales

are weakening a bit in these communities. According to the latest 2015 estimates, downtown Boston will only have 1,520, down 6.9 percent from last year. South Boston sales are expected to drop 14.1 percent from 2014. Somerville, which up until 2015 had been in the top five, has fallen two ranks and is expected to have only 334 total sales in 2015—a 29.1 percent decrease from the previous year.

Housing Permits

In the last *Greater Boston Housing Report Card*, we celebrated the fact that the number of housing permits issued in Greater Boston had more than doubled from a low of 4,714 in 2009 to nearly 10,940 in 2013. By the end of last year, however, the number of permits slipped a bit. What might happen in 2015 was a big question mark.

With data for the first two quarters of 2015, we are now confident that the housing production trend we saw before 2014 will continue at least for another year. As **Figure 2.5** demonstrates, we expect that by the end of this year nearly 12,800 permits will have been issued for new housing development across the five counties of Greater Boston, the highest total since 2005.

TABLE 2.1B

Municipal Leaders in Sales of Homes in Three-Unit Structures in Greater Boston, 2010–2015 (est.)

	Number of Sales (Ranking in Parentheses)					
	2010	2011	2012	2013	2014	2015 (est.)
Dorchester	219 (2)	196 (2)	199 (2)	201 (1)	203 (1)	170 (1)
Lawrence	169 (3)	100 (3)	112 (3)	96 (3)	83 (3)	104 (2)
New Bedford	118 (4)	86 (4)	52 (8)	61 (6)	80 (4)	100 (3)
East Boston	89 (8)	63 (8)	53 (7)	75 (5)	90 (2)	96 (4)
Lynn	112 (6)	77 (5)	59 (6)	79 (4)	79 (5)	80 (5)
Somerville	62 (10)	72 (7)	82 (4)	61 (6)	69 (7)	74 (6)
Brockton	117 (5)	77 (5)	69 (5)	55 (7)	77 (6)	68 (7)
South Boston	28 (18)	42 (10)	46 (11)	43 (12)	36 (11)	62 (8)
Fall River	90 (7)	76 (6)	69 (5)	53 (9)	61 (8)	60 (9)
Roxbury	37 (14)	34 (12)	47 (10)	42 (13)	31 (13)	42 (10)

Source: The Warren Group

TABLE 2.1C

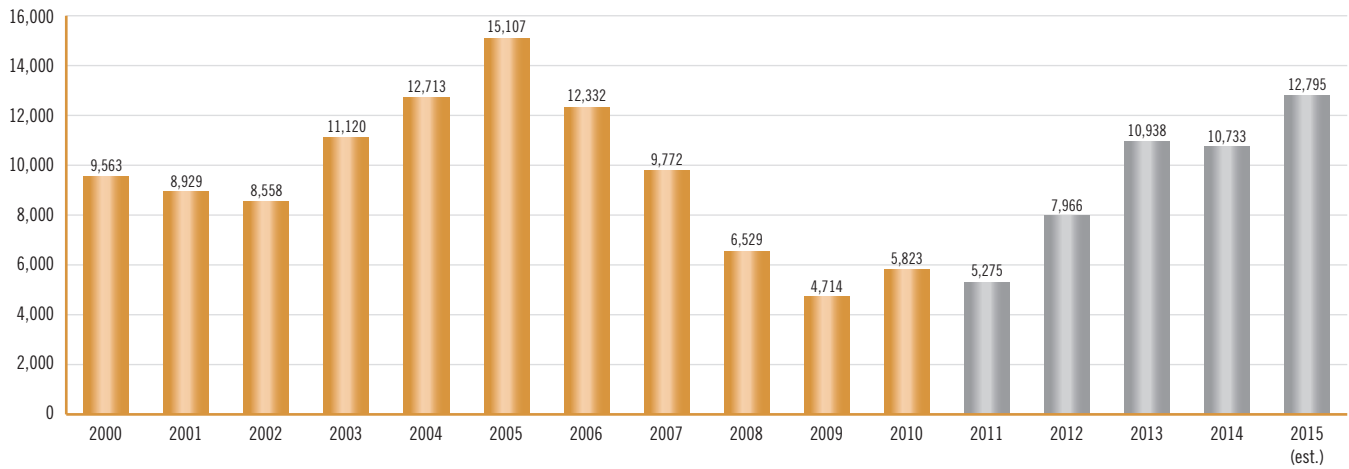
Municipal Leaders in Sales of Condominiums in Greater Boston, 2010–2015 (est.)

	Number of Sales (Ranking in Parentheses)					
	2010	2011	2012	2013	2014	2015 (est.)
Downtown Boston	1,622 (1)	1,575 (1)	1,864 (1)	1,827 (1)	1,632 (1)	1,520 (1)
Cambridge	817 (2)	790 (2)	918 (2)	937 (2)	751 (2)	620 (2)
South Boston	568 (3)	527 (3)	692 (3)	721 (3)	708 (3)	608 (3)
Brookline	561 (4)	476 (4)	635 (4)	540 (4)	483 (4)	490 (4)
Jamaica Plain	364 (7)	302 (7)	368 (6)	411 (6)	401 (7)	360 (5)
Charlestown	253 (14)	246 (9)	332 (9)	403 (8)	282 (15)	352 (6)
Somerville	413 (6)	340 (5)	450 (5)	430 (5)	471 (5)	334 (7)
Lowell	276 (12)	221 (11)	234 (16)	263 (15)	311 (12)	330 (8)
Quincy	300 (9)	198 (16)	340 (8)	328 (11)	327 (9)	320 (9)
Dorchester	515 (5)	340 (5)	352 (7)	374 (10)	447 (6)	314 (10)

Source: The Warren Group

FIGURE 2.5

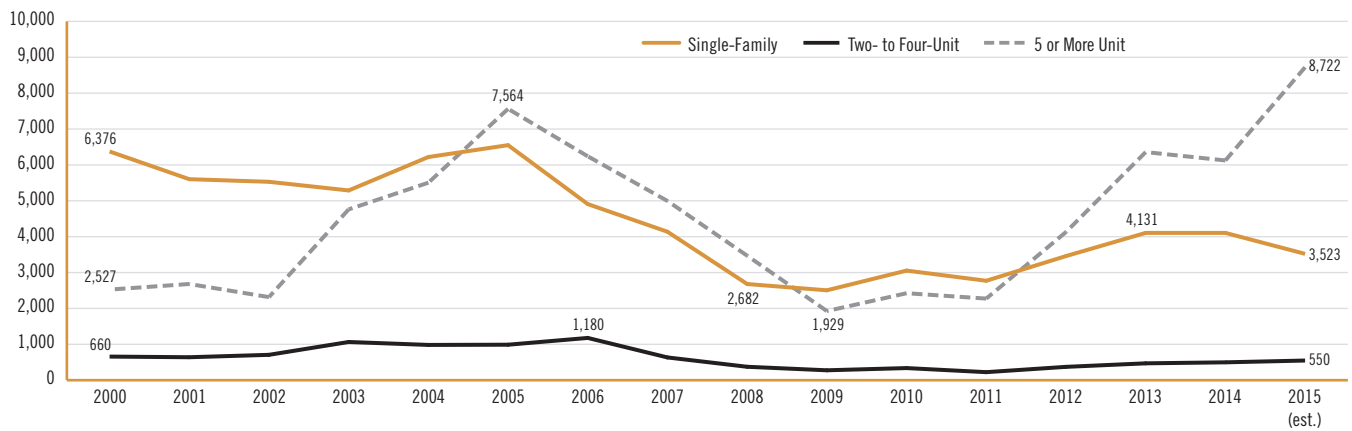
Total Housing Permits Issued in Five-County Greater Boston Region 2000–2015



Source: U.S. Census Bureau, Building Permits Survey for Essex, Middlesex, Norfolk, Plymouth and Suffolk counties.

FIGURE 2.6

Number of Housing Unit Permits in Five-County Greater Boston Region, by Structure Type 2000–2015



Source: U.S. Census Bureau, Building Permits Survey for Essex, Middlesex, Norfolk, Plymouth and Suffolk counties

TABLE 2.2

Single-Family and Multi-Family Building Permits in Greater Boston 2000–2015 (est.)

Year	Total Units	% Change from Prior Year	Units in Single-Family Structures	% Change from Prior Year	Units in 2–4 Unit Structures	% Change from Prior Year	Units in 5+ Unit Structures	% Change from Prior Year
2000	9,563		6,376		660		2,527	
2001	8,929	-6.6%	5,604	-12.1%	642	-2.7%	2,683	6.2%
2002	8,558	-4.2%	5,531	-1.3%	709	10.4%	2,318	-13.6%
2003	11,120	29.9%	5,290	-4.4%	1,067	50.5%	4,763	105.5%
2004	12,713	14.3%	6,222	17.6%	985	-7.7%	5,506	15.6%
2005	15,107	18.8%	6,552	5.3%	991	0.6%	7,564	37.4%
2006	12,332	-18.4%	4,910	-25.1%	1,180	19.1%	6,242	-17.5%
2007	9,772	-20.8%	4,139	-15.7%	636	-46.1%	4,997	-19.9%
2008	6,529	-33.2%	2,682	-35.2%	376	-40.9%	3,471	-30.5%
2009	4,714	-27.8%	2,507	-6.5%	278	-26.1%	1,929	-44.4%
2010	5,823	23.5%	3,057	21.9%	340	22.3%	2,426	25.8%
2011	5,275	-9.4%	2,773	-9.3%	226	-33.5%	2,276	-6.2%
2012	7,966	51.0%	3,461	24.8%	374	65.5%	4,131	81.5%
2013	10,938	37.3%	4,107	18.7%	472	26.2%	6,359	53.9%
2014	10,733	-1.9%	4,107	0.0%	500	5.9%	6,126	-3.7%
2015 (est.)	12,795	19.2%	3,523	-14.2%	550	10.0%	8,722	42.4%
Percentage Change								
2000–2005		58.0%		2.8%		50.2%		199.3%
2005–2009		-68.8%		-61.7%		-71.9%		-74.5%
2009–2010		23.5%		21.9%		22.3%		25.8%
2010–2014		84.3%		34.3%		47.1%		152.5%
2014–2015 (est.)*		19.2%		-14.2%		10.0%		42.4%

Source: U.S. Census Building Permit Survey for Essex, Middlesex, Norfolk, Plymouth and Suffolk counties.

* The annualized estimates of 2015 housing permits were calculated by multiplying the number of permits issued through July by 12/7.

What is of equal or greater interest is the type of housing now under construction. As **Table 2.2** and **Figure 2.6** indicate, the number of permits issued between 2005 and 2009 decreased drastically across all housing types before beginning to rebound. Two- to four-unit structures are a small part of total production, but the number of permits issued for such housing increased by 47 percent between 2010 and 2014, eclipsing the 34 percent rise in single-family production during this same period.

What has really taken off—and this is a strong sign that developers are responding to the demographic changes in the region—is the production

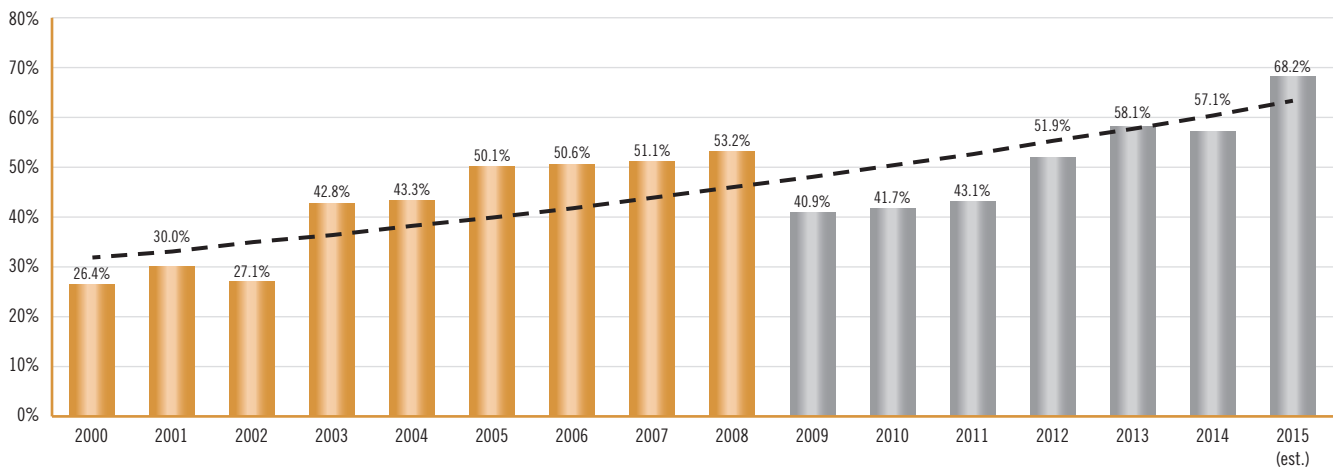
of multi-family structures with five or more units.

In 2009, only 1,929 permits were issued for this type of housing throughout Greater Boston. By 2014, the number had climbed to 6,126, a 218 percent increase over that five-year period. Based on the permits issued during the first six months of 2015, we project that more than 8,700 permits for such large developments will be issued this year. In contrast, we project a 14 percent decline in single-family permits from the previous year.

These recent data underscore the major shift in the Boston housing market away from single-family homes and heading, full speed, toward multi-family units.

FIGURE 2.7

5+ Unit Housing Unit Permits as a Percent of All Housing Permits Greater Boston, 2000–2015



Source: U.S. Census Bureau, Building Permits Survey for Essex, Middlesex, Norfolk, Plymouth and Suffolk counties.

Figure 2.7 demonstrates vividly this shift to buildings with five or more units. In 2000, such development only accounted for a little more than one-quarter (26.4 percent) of all new housing units in Greater Boston. By 2005, these larger multi-unit developments contained half of all the newly constructed housing units in the region. Today, with the sharp increase this year, these developments account for more than two-thirds of all new housing units. In 2012, Governor Deval Patrick called for the production of 10,000 units of multi-family housing per year through 2020.³ The 8,700 units produced this year in Greater Boston alone suggest that, statewide, this goal may have been met for the first time in 2015.

The increasing number of permits and the shift toward larger multi-family units is a welcome trend in Greater Boston. But, unfortunately, new housing supply lags far behind demand even with the improved permit numbers. Note that between 2010 and 2014, the total number of permits issued in the region was 40,735, far below the more than 67,000 new households added to the region during that same period.

However, only 15,000 units of housing were actually built. That means the region must not only see more housing permits, there must be an acceleration in turning those permits into real houses, apartments and condominiums. As we will see in the next chapter, the

only way we accommodated 67,000 new households with only 15,000 new units was through a sharp reduction in the housing vacancy rate, which inevitably led to higher prices and rents. The lack of available units allows sellers and landlords to raise prices without fear of not selling or renting their units.

Housing Production by Type and Location

Where is the most new housing being built and what form does it take? As in past *Greater Boston Housing Report Cards*, we rank the 15 communities that issue the largest number of housing permits annually. Each year, not surprisingly, the City of Boston leads the pack. What is surprising is the huge increase in the estimated number of units permitted in 2015 (see **Table 2.3a**). If our estimate holds, based on data through July, by year's end Boston will have issued nearly 4,400 permits, an increase of 54 percent over 2014 and five times as many as in 2011. Mayor Martin J. Walsh's ambitious plans for producing more housing in his city seem to be bearing fruit, although much of this is luxury housing in locations like the South Boston waterfront.

TABLE 2.3A

Municipalities Adding the Most New Housing Units, 2011–2015

2015 Rank Most Permits	Municipality	2011	2012	2013	2014	2015 (est.)	Change in Total Units 2011–2015	Change in Total Units 2014–2015
1	Boston	785	1,776	2,561	2841	4,375	3,590	1,534
2	Everett	68	108	432	437	957	889	520
3	Chelsea	113	165	332	385	837	724	452
4	Watertown	220	14	468	13	535	315	522
5	Framingham	14	19	27	77	360	346	283
6	Burlington	18	43	49	56	345	327	289
7	Canton	42	73	97	116	254	212	138
8	Quincy	80	91	112	119	250	170	131
9	Arlington	60	89	100	119	223	163	104
10	Plymouth	149	185	241	236	221	72	-15
11	Middleborough	52	87	123	139	214	162	75
12	Concord	167	137	171	117	194	27	77
13	Needham	43	73	104	106	166	123	60
14	Bedford	56	55	40	38	165	109	127
15	Cambridge	34	392	995	285	123	89	-162

Note: 2015 estimates derived by taking permitting numbers through July and multiplying by 12/7.

Source: U.S. Census Bureau, Annual New Privately-owned Residential Building Permits for Places in Massachusetts

The City of Everett, which will likely issue more than 950 permits, ranks 2nd in Greater Boston. More than twice as many permits are expected to be issued in Everett in 2015 as in the previous year and 13 times as many as in 2011. Following Everett are Chelsea, Watertown, and Framingham. In each case, permitting has soared in these communities, as it generally has in the municipalities ranked six through 14. Cambridge falls last in the number of permits that will likely be issued this year, well below the records it set in previous years when developments were proliferating in Kendall Square.

While total permits have increased markedly in many communities, **Table 2.3b** indicates that this is not generally true for single-family homes. Permits for this type of housing have flattened out since 2011 in most municipalities, with the exception of Reading, while other towns are actually issuing fewer permits than in 2014.

Plymouth leads all other Greater Boston communities in issuing permits for single-family homes. But

even here, the number issued in 2015 is expected to be less than in both previous years. The same is true of No. 4 Methuen, No. 9 Acton, and No. 11 Kingston. The one community setting a new record for single-family permits is Reading (No. 7), which issued more permits this year than in the entire period between 2011 and 2014.

Table 2.3c demonstrates the increased interest in multi-family housing development. Boston will likely issue 4,161 multi-family permits in 2015, a 60 percent increase over 2014 and nearly five times as many as in 2011. What is more, communities surrounding Boston also seem to be responding to the rising demand for apartments and condos in larger housing developments. Everett, Chelsea, Watertown, Quincy, and Arlington are not just issuing more multi-family permits, but some are granting that kind of permit for the first time in years. This trend is evident when looking at the total number of municipalities issuing multi-family housing permits in general. Between 2011 and 2014, more than 300 of the Commonwealth's 351

TABLE 2.3B

Municipalities Adding the Most New Single-Family Home Units, 2011–2015

2015 Rank Most Permits	Municipality	2011	2012	2013	2014	2015 (est.)
1	Plymouth	149	185	239	236	221
2	Needham	43	73	104	106	159
3	Hopkinton	33	36	59	104	115
4	Methuen	38	98	122	119	108
5	Lexington	59	97	82	99	91
6	Tewksbury	27	42	42	75	75
7	Reading	10	13	17	12	70
8	Framingham	14	15	23	63	69
9	Acton	62	59	83	87	60
9	Brockton	21	30	45	53	60
10	Duxbury	25	32	25	37	57
10	Wellesley	41	69	66	66	57
11	Kingston	20	35	69	69	51
12	Wrentham	18	31	47	46	50
13	Boston	33	40	34	48	48
14	Norfolk	29	40	59	43	46
15	Wilmington	35	30	43	34	45

TABLE 2.3C

Municipalities Adding the Most New Units in 5+ Structures, 2011–2015

2015 Rank Most Permits	Municipality	2011	2012	2013	2014	2015 (est.)
1	Boston	692	1,571	2,361	2,599	4,161
2	Everett	54	89	413	421	943
3	Chelsea	108	156	332	385	837
4	Watertown	214	0	451	7	516
5	Burlington	0	0	0	0	309
6	Framingham	0	0	0	12	291
7	Canton	38	68	95	115	252
8	Quincy	71	80	100	108	240
9	Arlington	54	81	80	95	199
10	Concord	132	102	129	74	159
11	Bedford	7	0	0	0	153
12	Middleborough	10	40	60	66	141
13	Winthrop	0	0	51	49	105
14	Cambridge	20	359	979	254	81
15	Swampscott	0	0	0	184	60

308 municipalities did not permit any multifamily housing in 2012. 308 municipalities did not permit any multifamily housing in 2013. 301 municipalities did not permit any multifamily housing in 2014. 121 municipalities did not permit any multifamily housing in 2015. 5 municipalities did not permit any housing in 2015.

Source: U.S. Census Bureau, Annual New Privately-owned Residential Building Permits for Places in Massachusetts

TABLE 2.3D

Permitting by Housing Type for Five Greater Boston Counties, 2014–2015

County	Year	Single Family	2–4 Units	5+ Units	Total Units	% Change in Total Units
Essex	2014	736	98	523	1,357	-45.9%
	2015 (est.)	555	62	117	734	
Middlesex	2014	1,610	88	1,543	3,241	33.1%
	2015 (est.)	1,455	146	2,714	4,315	
Norfolk	2014	758	36	800	1,594	-19.4%
	2015 (est.)	646	79	559	1,284	
Plymouth	2014	949	72	197	1,218	-11.9%
	2015 (est.)	811	87	175	1,073	
Suffolk	2014	54	206	3,063	3,323	62.2%
	2015 (est.)	55	177	5,158	5,390	

Source: U.S. Census Bureau, Annual New Privately-owned Residential Building Permits for Places in Massachusetts

towns and cities did not issue *any* multi-family housing permits at all. But by July of 2015, that number was down to 121 communities, five of which did not issue a single housing permit of any kind.

Table 2.3d shows that the increase in building permits is not uniform across the five counties of Greater Boston. Essex, Norfolk, and Plymouth are all expected to issue fewer permits in 2015 than last year. It is in Suffolk and Middlesex counties where the number of permits has increased sharply, driven by a sharp increase in larger developments with five or more units. What is uniform about the shifting market is the decline in permits for single-family homes, largely a response to the changing demographics of the region.

The Role of Chapter 40R in Housing Production

Since the passage of Chapter 40R, the Smart-Growth Overlay Zoning statute, we have been keeping track of the number of Massachusetts communities taking advantage of this new housing law and the number of units permitted and constructed.⁴ As of September of this year, there were 40 Approved Districts in 31 different municipalities with a total of 29 completed, in construction, or active/pending projects. In addition, there are six more communities awaiting site plan approval for 40R projects (see **Table 2.4**).

As of last year, 2,535 40R housing units were either built or were in construction. As of this year, the number is up to 2,905, an increase of 370. Close to half of these units had two or more bedrooms. Of the total, the overwhelming proportion (85 percent) was rental apartments and almost half (45 percent) of these units were affordable by HUD standards. Of those already built, 98 percent are in multi-family developments, taking advantage of the density requirements under the 40R regulations. At the present time, an additional 633 units have been permitted and are awaiting construction. If all of these are built, the total number of 40R units will exceed 3,500.

The communities that have produced the most housing units under 40R are:

North Reading	406
Haverhill	362
Reading	253
Lakeville	204
Lynnfield	180
Boston	159
Northampton	145
Brockton	140
Natick	138
Lawrence	137
Lunenburg	131
Chelsea	120
Pittsfield	112
Fitchburg	105

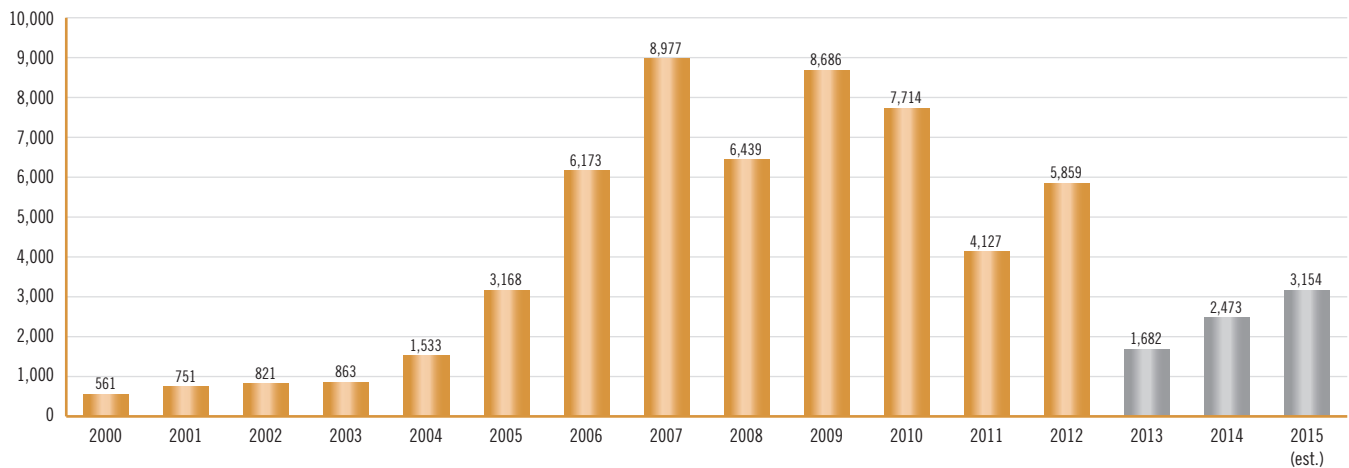
TABLE 2.4

Housing Units Constructed in Chapter 40R Smart-Growth Districts in Massachusetts

City/Town	District Name	Bedrooms					Total Units	Own	Rent	Affordable Units	
		Studio	1 BR	2 BR	3 BR	4 BR				Number Affordable	Percent Affordable
Amesbury	Gateway (Amesbury)										
Belmont	Oakley Neighborhood				15	2	17	17		3	18%
Boston	Olmsted Green		75	68	16	0	159	19	159	159	100%
Bridgewater	Waterford Village										
Brockton	Downtown (Brockton)			2			2		2	2	100%
Brockton	Downtown (Brockton)	5	4	16			25		25	14	56%
Brockton	Downtown (Brockton)		63	45	5		113		113	71	63%
Brockton	Downtown (Brockton)										
Chelsea	Gerrish Ave	53	5	40	20	2	120	26	94	55	46%
Chicopee	Chicopee Center										
Dartmouth	Village @ Lincoln Park										
Easthampton	Downtown (Easthampton)		11	30	9		50		50	50	100%
Easton	Queset Commons	10	26	14			50		50	13	26%
Fitchburg	SGOD (Fitchburg)		21	76	8		105		105	27	26%
Fitchburg	SGOD (Fitchburg)										
Grafton	Fisherville Mill										
Haverhill	Downtown (Haverhill)	193		112			305		305	61	20%
Haverhill	Downtown (Haverhill)		11	46			57		57	33	58%
Haverhill	Downtown (Haverhill)										
Holyoke	Downtown (Holyoke)			5			5	3	2	0	0%
Holyoke	Downtown (Holyoke)	6	24	24			54		54	54	100%
Kingston	1021 Kingston's Place										
Lakeville	Lakeville Station		55	149			204		204	100	49%
Lawrence	Arlington/Malden Mills		17	58			75		75	72	96%
Lawrence	Arlington/Malden Mills						62				
Lowell	Downtown (Lowell)		33	19			52		52	26	50%
Lowell	Downtown (Lowell)	4	13	49	4		70			57	81%
Ludlow	SGOD										
Lunenburg	Tri-Town Landing		21	66	12		99		99	93	94%
Lunenburg	Tri-Town Landing						32				
Lynnfield	SGOD (Lynnfield)		108	72			180		180	45	25%
Marblehead	Pleasant Street										
Marblehead	Vinnin Square										
Natick	Paperboard						138		138	28	20%
North Andover	Osgood Landing										
North Reading	Berry Center		238	168			406		406	102	25%
Northampton	Village Hill/State Hospital		19	25	18		62	22	40	32	52%
Northampton	Village Hill/State Hospital						83		83	43	52%
Norwood	Guild St										
Norwood	St. George Ave.		10	3	2		15	15		3	20%
Pittsfield	SGOD (Pittsfield)		16	51			67		67	67	100%
Pittsfield	SGOD (Pittsfield)		19	20	6		45		45	43	96%
Plymouth	Cordage Park										
Reading	Downtown (Reading)		23	30			53		53	11	21%
Reading	Gateway (Reading)		94	106			200	200		40	20%
Sharon	Sharon Commons										
Swampscott	Vinnin Square										
Westfield	Southwick Rd										
	Totals	271	906	1,294	115	4	2,905	302	2,458	1,304	
	Total (percent)	9%	31%	45%	4%	0.14%	100%	10%	85%	45%	

FIGURE 2.8

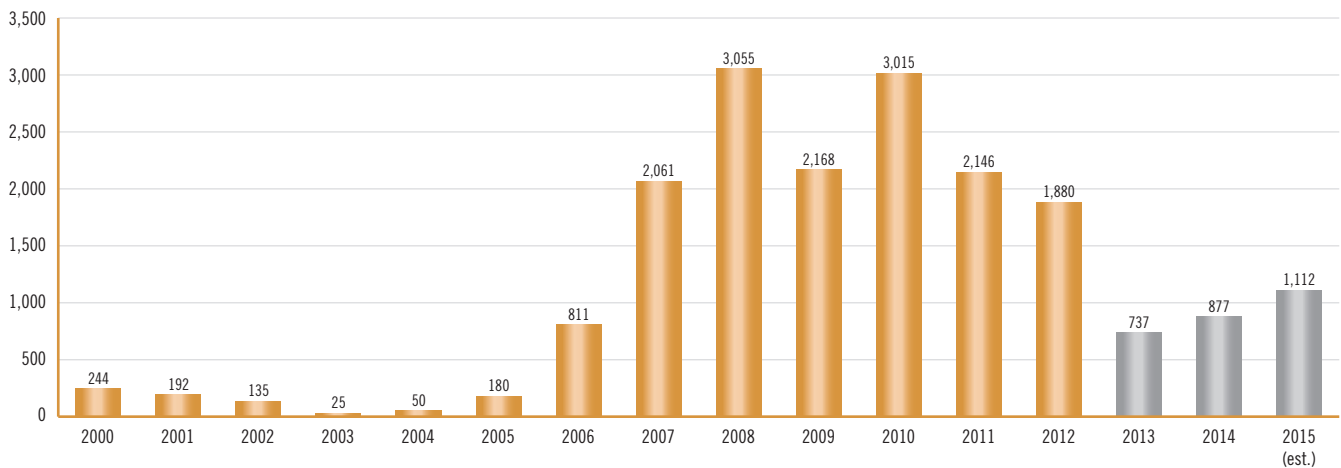
Annual Number of Foreclosure Petitions of Single-Family Homes in Five-County Greater Boston Region, 2000–2015



Source: The Warren Group

FIGURE 2.9

Annual Number of Foreclosure Deeds of Single-Family Homes in Five-County Greater Boston Region, 2000–2015



Source: The Warren Group

Foreclosure Activity in Greater Boston

In our last report, we suggested “we can breathe a tentative sigh of relief over the state of residential foreclosures in Greater Boston.”⁵ We clearly were wrong. Figure 2.8 and Figure 2.9 show a resurgence in foreclosures this year. Between 2000 and 2003, foreclosure petitions increased by 54 percent from 561 to 863,

while foreclosure deeds dropped 90 percent from 244 to just 25 in the same period. Between 2004 and 2007, however, the number of petitions soared by a staggering factor of four from 1,533 to 8,977. During the same period, the number of foreclosure deeds increased by a factor of 40 from just 50 deeds in 2004 to 2,061 in 2007, a span of only three years. Then, in 2008, foreclosure petitions dropped from 8,977 to 6,439 while foreclosure deeds continued to rise from 2,061 to 3,055. The banks

TABLE 2.5A

Municipal Leaders in Foreclosures on Single Home Sales in Greater Boston, 2010–2015 (est.)

	Number of Deeds (Ranking in Parentheses)					
	2010	2011	2012	2013	2014	2015 (est.)
Brockton	234 (3)	154 (3)	158 (3)	83 (2)	60 (1)	90 (1)
New Bedford	136 (4)	69 (8)	19 (33)	6 (28)	39 (2)	58 (2)
Wareham	89 (10)	63 (9)	61 (8)	19 (15)	30 (4)	54 (3)
Weymouth	51 (24)	37 (17)	36 (17)	5 (29)	14 (14)	42 (4)
Lynn	124 (5)	99 (4)	86 (4)	32 (7)	29 (5)	36 (5)
Plymouth	98 (8)	78 (5)	63 (7)	44 (4)	38 (3)	34 (6)

Source: The Warren Group

TABLE 2.5B

Municipal Leaders in Foreclosures on Condominiums in Greater Boston, 2010–2015 (est.)

	Number of Deeds (Ranking in Parentheses)					
	2010	2011	2012	2013	2014	2015 (est.)
Lowell	86 (3)	54 (3)	42 (2)	26 (1)	23 (2)	24 (1)
Dorchester	181 (1)	73 (1)	26 (7)	10 (6)	9 (7)	22 (2)
Haverhill	58 (5)	37 (4)	40 (3)	17 (2)	24 (1)	22 (2)
Lynn	57 (6)	32 (7)	27 (6)	12 (4)	15 (3)	18 (3)
Salem	33 (12)	27 (10)	20 (12)	14 (3)	10 (6)	18 (3)
Plymouth	42 (9)	19 (16)	19 (13)	12 (4)	10 (6)	18 (3)

Source: The Warren Group

had to keep playing a game of catch up between the petitions and the number of completed deeds until 2012, when both deeds and petitions dropped off. It was almost as if the banks put a halt to opening new foreclosures and focused only on clearing their backlog of pending petitions from the housing crisis. The year 2013 marked the lowest number of foreclosure petitions since 2005 and the fewest foreclosure deeds since 2006. It appeared that the foreclosure crisis that began with the housing bubble meltdown and the Great Recession was finally over. Apparently this is not the case.

Since 2013, the number of both foreclosure petitions and deeds has been increasing. Current projections show the number of petitions rising by nearly 90 percent from 1,682 in 2013 to 3,154 by the end of 2015.

We estimate that the number of foreclosure deeds will rise by 50 percent from 737 to 1,112 during the same time span. The disproportionate increases between petitions and deeds indicate that the banks, after taking a breather in 2012, have gotten back into the business of foreclosures, both completing deed actions on earlier petitions and issuing new petitions.

Brockton has been among the top three communities with the most single-family home foreclosures since 2010 (see **Table 2.5a**). Also high on the list are New Bedford, Wareham, Weymouth, Lynn, and Plymouth. Each of these has seen an increase in single-family foreclosure deeds in 2015. New Bedford, which was ranked 33rd in the state for foreclosures on single-family homes in 2012, crept up to 6th in 2013 and then 2nd in 2014 and 2015. Other communities found

themselves in the top rankings in the past two years. Wareham, which was at 15th in 2013, is now being projected to be 3rd in 2015. Weymouth, which had not ever been higher than 17th since 2011, now has the 4th highest number of single-family foreclosure deeds in Greater Boston.

Compared to single-family foreclosure deeds, the number of condominium foreclosures has remained more stable during the past three years (see **Table 2.5b**). In 2015, we expect that Lowell will have the largest number of condo foreclosures, followed closely by Dorchester and Haverhill. In each of the six communities with the most condo foreclosure deeds in 2015, only one (Haverhill) had more in the previous year. Foreclosure activity is once again a problem for a number of the region's municipalities.

Conclusions

In the last edition of the *Greater Boston Housing Report Card*, we said we were “a bit gun-shy about making predictions [about housing production] in such an unstable market” . . . but we did see a trend toward “solid improvement” in housing production and “a real turnaround in the Greater Boston housing market.”⁶

Now with new data for 2015, we are more certain of the trend toward increased production as measured by the number of building permits issued. Particularly encouraging is the shift from single-family home construction to larger multi-family developments that are more in line with changing demand as the number of aging baby boomers grows along with a larger number of younger millennials.

But we must recognize that these statistics reflect permitting activity and not construction per se. To the extent that developments take time to complete, it is likely that the full impact of increased production will have little impact on single-family home and condo prices or rents. Indeed, as the next chapter will show, both home prices and rents are continuing to soar despite more housing construction since 2009. Even with this encouraging trend in permitting, it still appears to be true that the supply of new housing continues to lag far behind demand.

CHAPTER THREE

Home Prices and Rents in Greater Boston

In Chapter One we reported that the Greater Boston economy has been particularly strong over the past three years, with employment opportunities expanding and the unemployment rate falling. Partly as a result of the improved economy, the region's population has been growing. Both factors have contributed to strong housing demand. In Chapter Two, we shared the favorable news that housing production has increased sharply in 2015. We expect that the total number of new permits issued by the end of this year will exceed the number in any year back to 2000 with the exception of 2005.

With demand increasing and new supply on the way, it is of interest to investigate what has happened to home prices and rents. In this chapter we explore this question with the latest price data for single-family homes, condominiums, duplex units and traditional "triple-deckers." We also look at new data on rents in the Greater Boston metro region.

The results of our analysis suggest that despite new construction in the pipeline, demand for housing continues to outstrip supply, leading to higher prices and rents pretty much across the board.

Home Prices in Greater Boston

Greater Boston, like much of the rest of the country, has experienced volatile home prices during the past three decades as depicted in **Figure 3.1**. According to the Case-Shiller Home Price Index (single family), annual changes in prices have ranged from a decline of 8.1 percent in 1991 to an increase of nearly 16 percent in 2001.¹ In the single decade between 1995 and 2005, the median price of single-family homes in Greater Boston increased by a factor of more than 2.5, adding enormous asset value to the fortunate homeowners who purchased homes in the early 1990s. The bursting of the housing bubble at the end of 2005 reduced those values, but by no means as much as the appreciation during the previous ten years. Following the housing meltdown, prices began to rise again in 2010

only to slip in 2011. But since then, prices have been on the increase. They rose 7.2 percent in 2013; another 6 percent in 2014; and according to figures through June of this year, we project they will rise at least 6 percent in 2015.

What is particularly interesting about 2015 is that it marks the year in which the Case-Shiller index reached its previous peak, which was set back in 2005 after continuous annual appreciation from 1993 through 2005. That is, across the entire Greater Metro area, the median single-family home price is finally back to where it was a decade ago, having survived the Great Recession and the housing bubble meltdown. **Figure 3.2** tracks this history for both the current housing price cycle along with the previous cycle that lasted from 1988 through 1997. During the first 10-year cycle, prices fell for 43 months before beginning to recover. Within 39 months, prices were back to 90 percent of their previous high. Within another 24 months, prices had returned to their peak.

The current cycle also took 43 months for prices to reach their nadir. But unlike the earlier cycle, the post-2009 recovery has been erratic and has taken an additional 11 months to return to its previous peak. By this time in the last cycle, single-home prices were 10 percent higher than their previous peak.

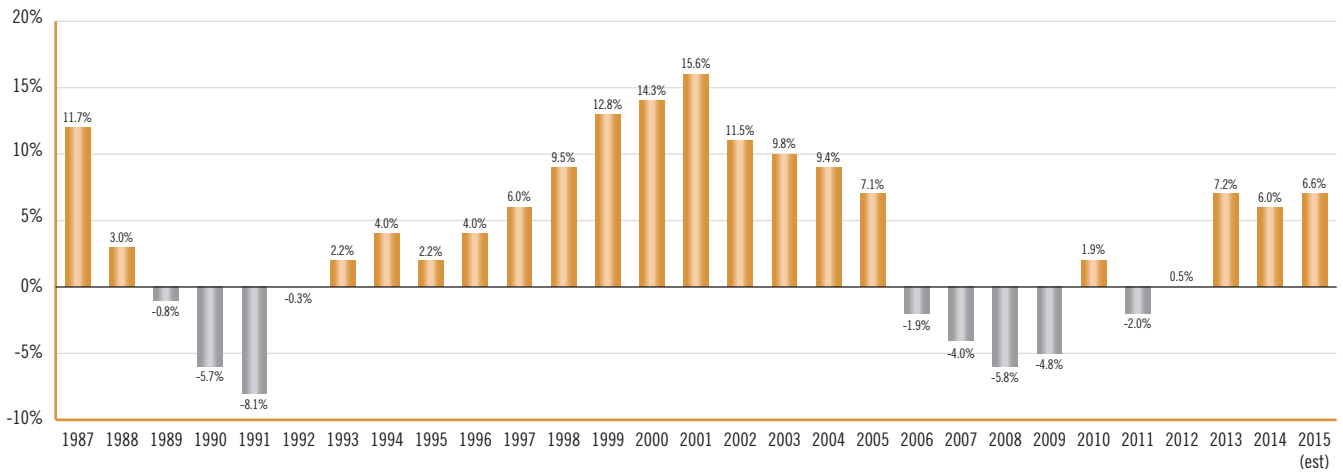
Homeowner Vacancy Rates and Housing Prices

In the previous *Greater Boston Housing Report Card*, we suggested that the slight decline in the Case-Shiller index between 2013 and 2014 (as shown in **Figure 3.1**) might be a harbinger of smaller annual price increases as demand for single-family homes weakened with changing demographic trends. It appears that in 2015 we shall find that prices rose no less than in 2014 and perhaps will approach the rate of increase in 2013.

What is driving this appears to be a continued decline in homeowner vacancy rates. As shown in **Figure 3.3**, the vacancy rate in Greater Boston declined to 0.7 in

FIGURE 3.1

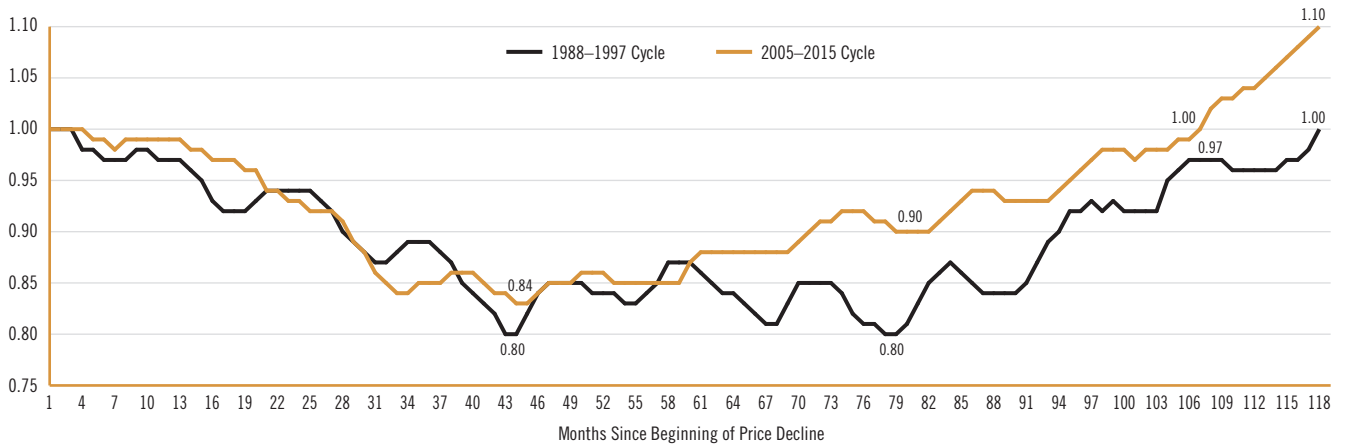
Annual Percent Change in Case-Shiller Home Price Index (Single Family), Greater Boston Metropolitan Area, 1987–2015 (est.)



Source: Case-Shiller Home Price Index

FIGURE 3.2

Greater Boston Housing Cycles 1988–1997 vs. 2005–2015 Case-Shiller Home Price Index (Single Family)



Source: Case-Shiller Home Price Index

June of this year, somewhat down from the previous year and lower than at any time since 2004. It continues to be well below the average vacancy rate for all U.S. metro areas.

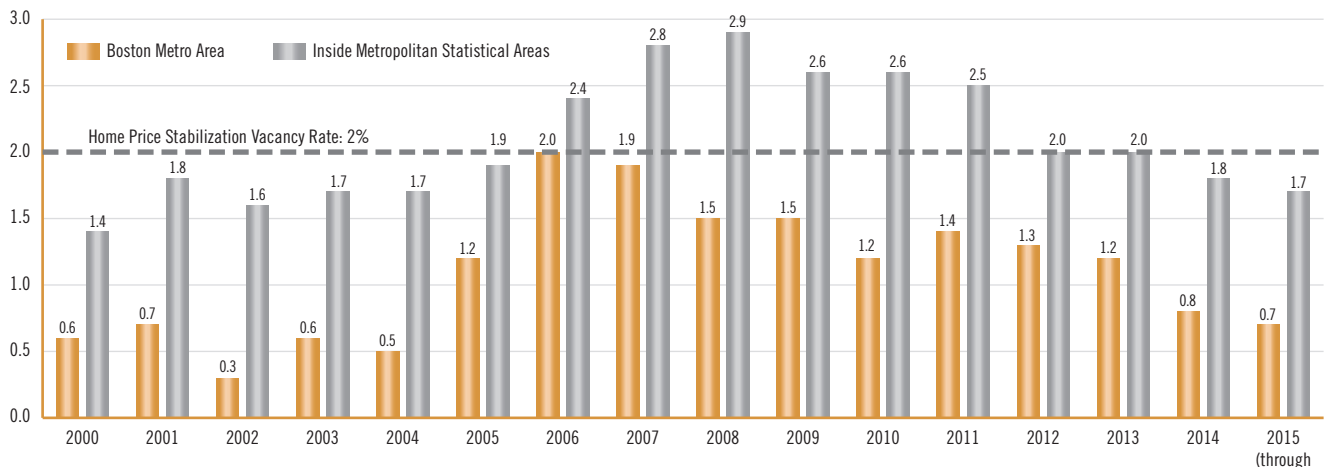
When the vacancy rate is this low, we get a “seller’s market” where there are so few homes for sale that sellers are able to boost their asking prices and often obtain the prices they set. Bidding wars for limited

housing stock can easily lead to an increase in median home prices and this appears to be what has happened over the past year in Greater Boston.²

It is still possible that with the aging of the baby boom generation, there will be forthcoming a larger number of single-family homes on the market and this will lead to higher vacancy rates and a softening of home-price appreciation.

FIGURE 3.3

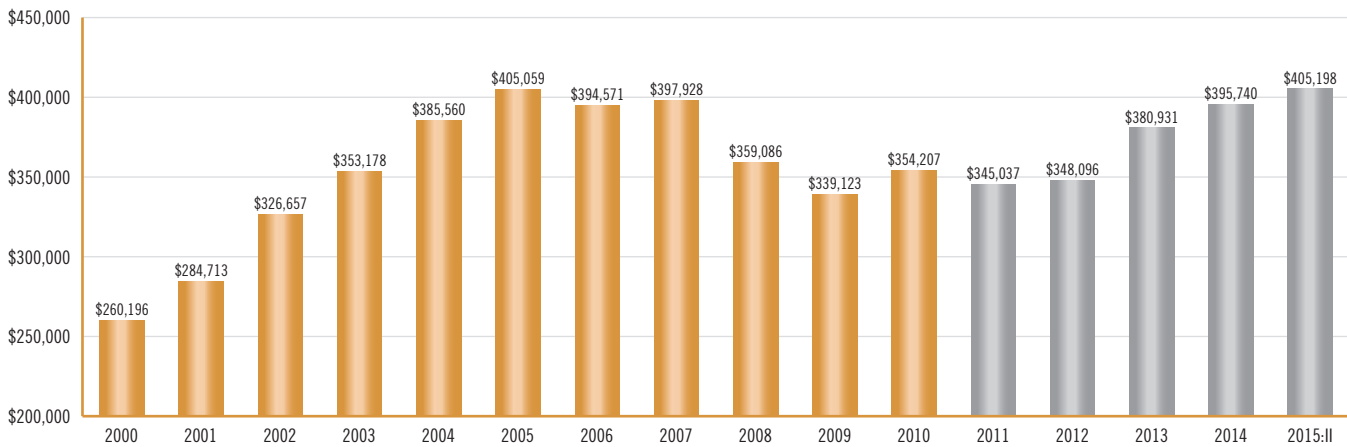
Homeowner Vacancy Rates, Greater Boston vs. U.S. Metro Areas 1990–2015



Source: U.S. Census Bureau, Housing Vacancy Survey

FIGURE 3.4

Annual Median Price of Single-Family Homes in Five-County Greater Boston Region, 2000–2015



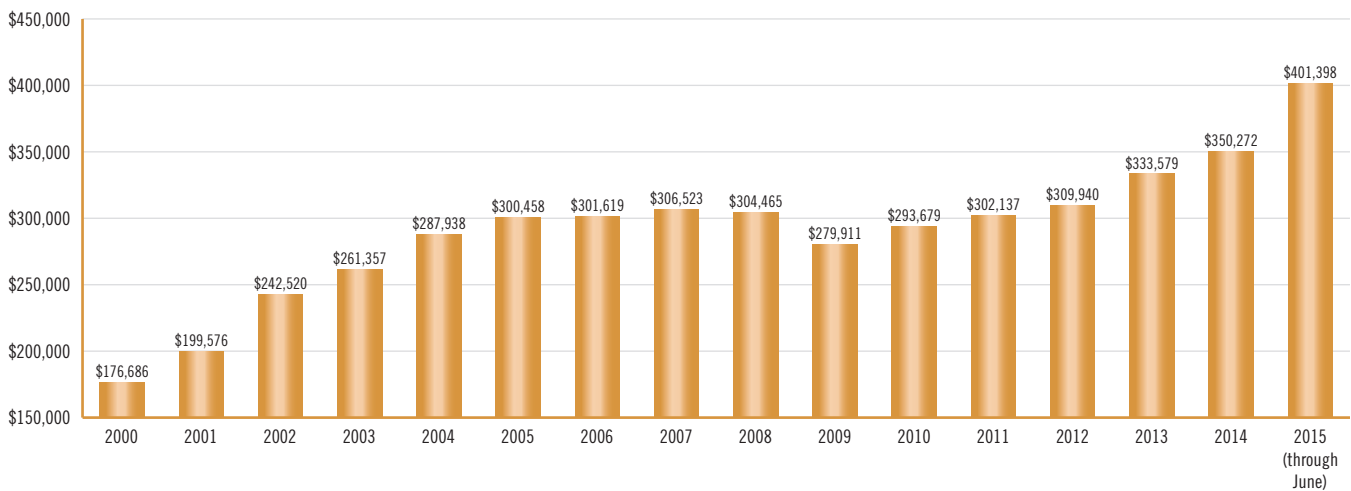
Source: The Warren Group

Data from the Warren Group that tracks housing sales and prices in Greater Boston by simply collecting information on each sale of a home regardless of size is fully consistent with the trend we see in the Case-Shiller index. As **Figure 3.4** demonstrates, the median price of single-family homes in Greater Boston by mid-2015 is already nearly \$9,500 higher than the

median in 2014. Precisely as is true of the Case-Shiller index, this marks the first time in a decade that single-family home prices have reached their previous peak. Just since 2009, the median price of a Greater Boston single-family home has increased by more than 19 percent—rising from roughly \$339,000 to \$405,000.

FIGURE 3.5

Annual Median Price of Condominiums in Five-County Greater Boston Region, 2000–2015



Source: The Warren Group

Diverging Price Appreciation

While, on average, single-family home prices across Greater Boston in the second quarter of 2015 reached their previous 2005 peak, this experience varied widely across the region’s towns and cities. In some communities, as shown in **Table 3.1**, the median selling price in 2015 was still at least 15 percent below the 2005 median. Among these communities were Brockton, Randolph, Lawrence, Lowell, and Bridgewater—all with a large number of working-class families.

A number of towns had come close to returning to peak values, including Acton, Norfolk, Hopkinton, and Norwell—mostly suburban communities. And then there were the real “winners” where home prices in 2015 exceeded the price peak before the Great Recession. They tended to be municipalities with wealthier households, such as Westwood, Milton, Belmont, Wellesley, Concord, Newton, and Brookline. The price of a single-family home in downtown Boston is now 76 percent higher than in 2005 and in Cambridge, it is double what it was 10 years ago.

Essentially, this distribution of price appreciation over the past decade reflects something of the changing pattern of income and wealth distribution in the region and nation. The rich have continued to become richer while working-class and lower-income families continue to fall behind. If you were wealthy enough

to own a home in Cambridge in 2005 and still owned it in 2015, you likely saw your housing asset double in value. If you bought a home in Brockton, Randolph, or Lawrence in 2005 and still owned it this year, you likely have experienced a decline in value of 20 percent or more.

Condominium Prices

As we noted in the last edition of the *Greater Boston Housing Report Card*, condominium and multi-unit housing prices weathered the recession and recovery far better than did single-family homes. As **Figure 3.5** shows, even before the housing bust, median condo prices were rising rapidly: between 2000 and 2005, they soared by 70 percent, from just under \$177,000 to more than \$300,000, compared with a 56 percent rise in single-family home prices during the same period. Condo prices outperformed during the crash as well, declining 8.7 percent between 2007 and 2009, in contrast with a 14.7 plunge in home prices. Following the 2008 recession, condo prices hit a brief low of \$280,000 in 2009 and promptly rose by 22 percent to more than \$350,000 by 2014. And then condo prices exploded. By June 2015, the median price of condominiums in Greater Boston had soared to more than \$401,000, a leap of nearly 15 percent over the median price a year earlier.

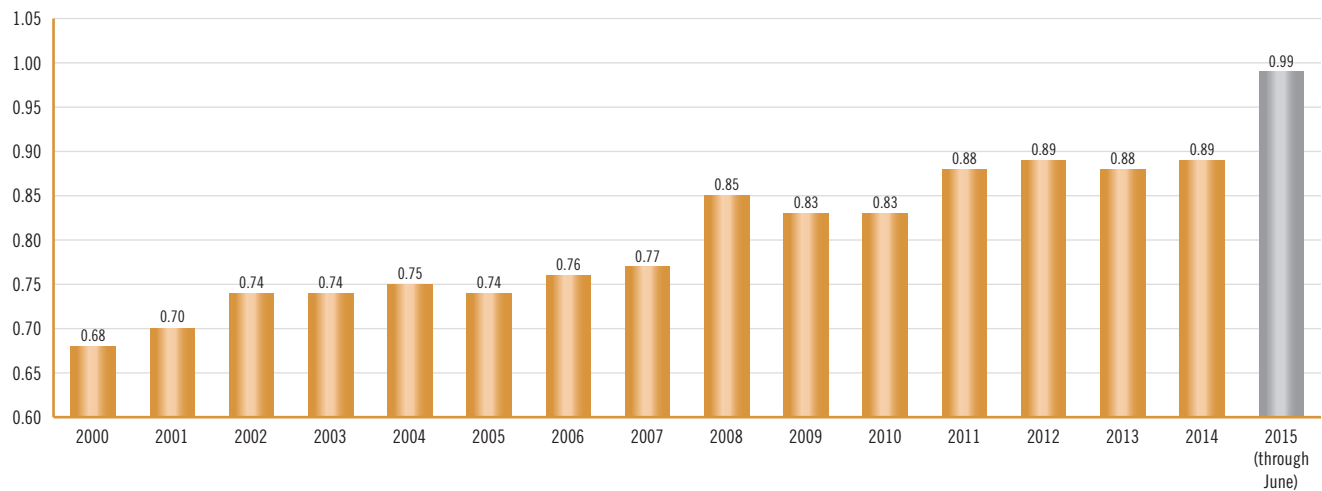
TABLE 3.1

Ratio of Single-Family Home Prices 2015: Q2 vs. 2005

0.75 to 0.85	0.75	Brockton	0.90	Kingston	1.01 to 1.09	1.01	Scituate	
	0.76	Randolph	0.90	Norton		1.01	Waltham	
	0.79	Lawrence	0.90	Raynham		1.03	Woburn	
	0.79	Whitman	0.91 to 0.95	0.91		Canton	1.03	Quincy
	0.80	Taunton		0.91		Plymouth	1.04	Medfield
	0.81	Stoughton		0.91		Maynard	1.04	Wakefield
	0.81	Holbrook		0.92		Framingham	1.05	Burlington
	0.81	Middleborough		0.92		Amesbury	1.05	Wilmington
	0.81	Hanson		0.92		Marshfield	1.07	Weston
	0.82	North Andover		0.93		Peabody	1.07	Hingham
	0.82	Ipswich		0.93	Tewksbury	1.07	Newburyport	
	0.82	Wareham		0.94	Danvers	1.08	Stoneham	
	0.83	Methuen		0.94	Foxborough	1.08	Natick	
	0.83	Bellingham	0.94	Easton	1.09	Sharon		
	0.83	Swampscott	0.94	Weymouth	1.09	Walpole		
	0.83	Medway	0.94	Andover	1.09	Wayland		
	0.83	Marlborough	0.94	Pembroke	Over 1.10	1.11	Westwood	
	0.83	Lowell	0.95	North Reading		1.13	Reading	
	0.84	Haverhill	0.96 to 1.00	0.96		Boxboro	1.14	Melrose
	0.84	Rockland		0.96		Topsfield	1.14	Medford
0.85	Bridgewater	0.96		Hudson		1.14	Wrentham	
0.85	Revere	0.96		Billerica		1.18	Milton	
0.85	Boxford	0.96		Acton		1.18	Belmont	
0.85	Mansfield	0.96		Salem		1.22	Bedford	
0.86 to .90	0.86	Duxbury		0.96		Malden	1.24	Wellesley
	0.86	Hull		0.96		Norfolk	1.24	Winchester
	0.86	East Bridgewater		0.97	Beverly	1.24	Watertown	
	0.86	Abington		0.97	Braintree	1.27	Concord	
	0.87	Gloucester	0.98	Dedham	1.28	Needham		
	0.87	Franklin	0.98	Marblehead	1.32	Lexington		
	0.87	Chelsea	0.99	Holliston	1.35	Arlington		
	0.87	Westford	0.99	Hopkinton	1.47	Newton		
	0.87	Saugus	0.99	Hanover	1.52	Brookline		
	0.88	Dracut	0.99	Norwood	1.76	Ashland		
0.88	Everett	0.99	Lynnfield	1.76	Boston (Downtown)			
0.88	Lynn	0.99	Chelmsford	2.01	Cambridge			
0.89	Sudbury	1.00	Norwell					
0.90	Pepperell							

FIGURE 3.6

Ratio of Condominium to Single-Family Home Prices in Five-County Greater Boston Region, 2000–2015



Source: The Warren Group

Another way of capturing the rising relative value of condominiums is by examining price ratios. **Figure 3.6** shows that the ratio of condominium to single-family home prices has marched upward steadily since 2000, with only a few insignificant drops, rising from 0.68 to 0.89 by 2014—an almost 30 percent increase.

Today, in 2015, the median price of a Greater Boston condo is essentially the same as the median price of a single-family home in the region. This is a startling change in the housing market suggesting just how much demand has changed from single-family homes to condominiums as baby boom empty nesters seek out smaller housing units and young millennials without children who can afford to buy are purchasing condos rather than single-family homes.

Duplex and Triple-Decker Prices

The extraordinary demand for condominium units, leading to huge price increases for such housing, is also found in the market for duplex units and units in the region’s traditional triple-deckers. As **Figure 3.7** demonstrates, the price of both has skyrocketed in Greater Boston since 2009. Back then, the median price of a duplex unit was \$268,000 while that of a

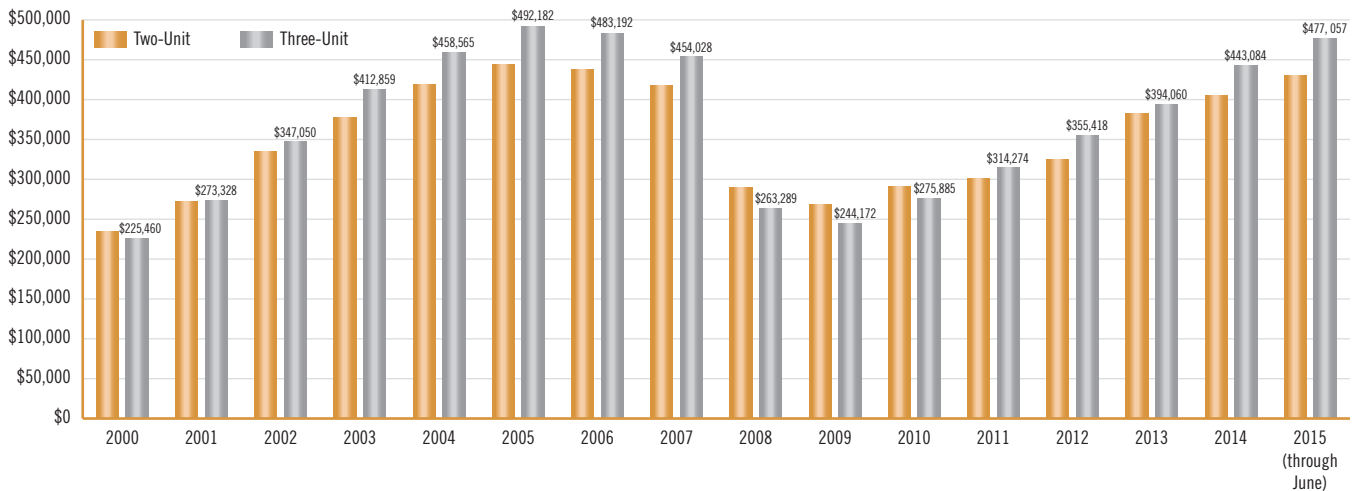
triple-decker was slightly less at around \$244,000. Since then the price of triple-deckers has eclipsed duplex units. By the first half of 2015, the median price of a triple-decker stood at \$477,000, significantly more than the median price of all condominiums in the region. Essentially, the price of a single triple-decker unit has nearly doubled in the span of just six years—up by 95 percent since 2009 and by nearly 8 percent in the last year alone.

What is driving these extraordinary price increases for duplexes and triple-deckers is the demographic shift toward smaller households and the fact that large and small investors have found purchases of these units—at least until recently—an excellent investment opportunity. With a seller’s market in this type of housing, investors can continue to increase the rents they charge their tenants for such units, generating a generous return on their investments.

With a large number of undergraduates, graduate students, medical interns and residents, and other young professionals doubling, tripling, and quadrupling up to rent such housing, the rents landlords can now charge far exceeds what the working families that once rented these units can afford.

FIGURE 3.7

Annual Median Price of Homes in Two-Unit and Three-Unit Structures in Five-County Greater Boston Region, 2000–2015



Source: The Warren Group

The Rental Market in Greater Boston

What has been happening to the rents in duplexes and triple-deckers is endemic to the entire rental market in Greater Boston as the rental vacancy rate dropped in the first half of 2015 to one of its lowest levels in years. As **Figure 3.8** reveals, the vacancy rate in the second quarter of 2015 fell to 2.6 percent, the lowest since 2001 and less than half the 5.5 percent vacancy rate that has normally been associated in Greater Boston with relatively stable rents. With the market for rental units so strong in the region, renters find few units on the market and landlords can jack up rents and still fill their units.

The consequent increase in rents is depicted in **Figure 3.9**. Beginning at the end of 2009, rents for 2-bedroom apartments in the Boston metro area rose sharply, rising by more than 31 percent in just three years. Rents more or less stabilized between 2012 and 2013, in line with the increase in rental vacancies shown in the previous figure. With rental demand extremely strong and vacancy rates plunging beginning in the second quarter of 2014, rents have once again been rising rapidly. Between the fourth quarter

of 2014 and the second quarter of 2015, rents grew by another 7 percent. This represents an average increase of \$166 per month or nearly \$2,000 per year. Not surprisingly, this has led to the sharp increases in rental housing burdens we noted earlier.

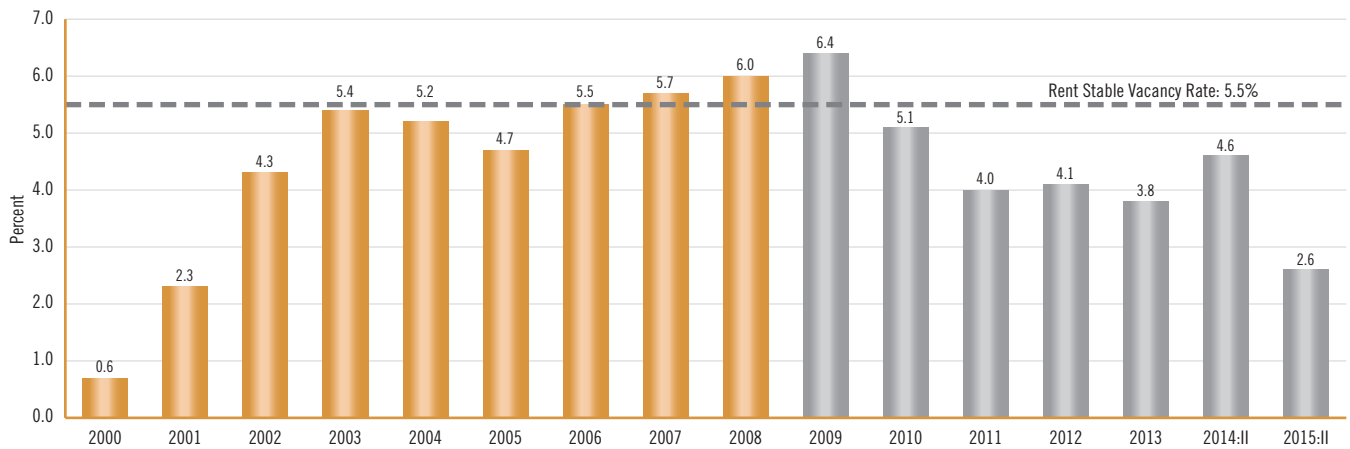
What Does the Future Hold for Home Prices and Rents?

The factors that contribute to home price appreciation and changes in rents can be reduced to a series of supply and demand factors. On the demand side are the following:

- The strength of the economy in terms of regional output growth and the amount of job opportunity as measured by employment growth and unemployment
- The growth in population due to natural increase, domestic in-migration from other regions of the state and other states, and immigration from other countries
- The changing demographic profile of the region in terms of the age and size of households

FIGURE 3.8

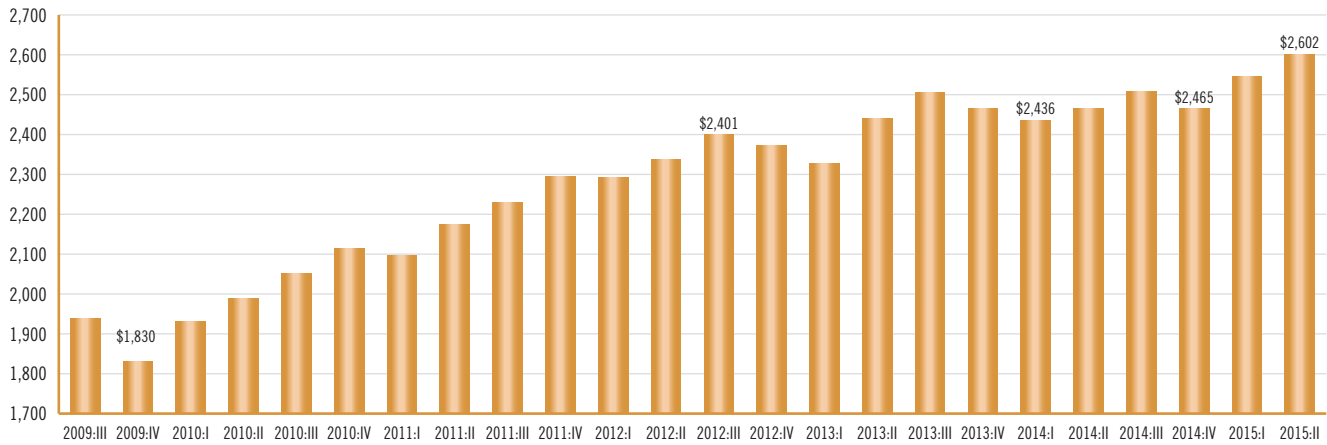
Boston Metro Area Rental Vacancy Rates 2000–2015: Q2



Source: U.S. Housing Vacancy Survey Historical Data

FIGURE 3.9

Monthly Rent for Boston Area Apartments 2-Bedroom Units 2009: Q3–2015: Q2



Source: Rental Jungle

On the supply side, the key factors are:

- The housing vacancy rate, which reflects whether renters face a “seller’s market” or a “buyer’s market”
- The rate of new housing production
- Competition between demographic groups for the same housing stock

Based on these demand and supply factors, we can better understand why housing prices in Greater Boston continue to rise at modest rates, why condominium prices have exploded to near that of single-family homes, and why rents continue to rise sharply.

The economy of Greater Boston as noted in Chapter One has become extraordinarily strong with powerful employment creation and low unemployment. This has led to an influx of new residents to take advantage

of better job opportunities than exist in many other parts of the nation. The growth in population has naturally led to a formidable increase in demand for housing. Moreover, the changing demographic structure of the region toward aging baby boomers and young millennials has led to a shift in demand from single-family homes to condominiums and rental units.

On the supply side, if housing construction kept up with demand, vacancy rates would remain at normal levels and prices would stabilize. But even with the substantial increase in building permits in 2015 and the shift toward the production of multi-family housing units, much of this supply of new housing stock is still in the pipeline and not yet ready for occupancy. Even then, the supply continues to lag demand given the economic and demographic factors we have discussed here.

As such, it is not surprising that the prices of condominiums, duplexes, triple-deckers and rental apartments have continued to increase—in many cases sharply. Demographic shifts help explain why condo prices have nearly matched single-family home prices.

What could this mean for the future of Greater Boston? If supply does not catch up with demand and prices continue to rise, it is possible that once the economy slows down, the region will no longer be a magnet for workers and their families. This could lead to a slowdown in price and rent appreciation, but may also compromise the region's long-run ability to attract the talent it needs to fuel future economic growth.

The alternative, as we have said in many previous report cards, is to find ways to build more housing of the types most in demand. As the next chapter will demonstrate, this may be quite difficult to do because the high cost of development in the region makes it almost impossible to build housing that is affordable to working families and other middle-income households.

CHAPTER FOUR

The Cost of Housing Development

In most markets, when prices rise in response to demand outstripping supply, firms respond by producing more of the product that consumers want. Clearly, for most of the past decade or two, this has not been the case for housing in Greater Boston. For the region as a whole, home prices and rents have increased well beyond normal inflation rates as the supply of new housing continually lags behind demand. As such, and as we described in the last chapter, the prices of housing and rents have reached a point where a large number of working and middle-income families cannot afford housing without putting an enormous strain on their finances.

As this chapter will demonstrate, the two interrelated reasons for this mismatch between demand and supply are (1) the extremely high cost of producing new housing stock and (2) the acceleration in prices due to the resulting lack of supply. Essentially, the expense of developing new apartments, condominiums and single-family homes in the region results in prices and rents beyond what most working households and middle-income families can afford. *In this case, developers simply cannot build new housing in Greater Boston to meet supply at reasonable price points.* They can build luxury housing for wealthier households, and the increase in building permits over the past five years suggests that they are. Some developers do build housing for some low-income families if they can obtain sufficient subsidies to make the numbers work or to comply with inclusionary zoning requirements.

Based on a brand new analysis of cost data associated with more than 100 housing developments in Massachusetts and elsewhere, we have been able to track the rising cost of development over the past decade. We have also been able to drill down into the components—such as land, financing, and construction costs—that have increased the most over this period, comparing development costs in and outside the Commonwealth. The results illuminate the problems developers have in producing affordable housing stock for the Greater Boston market.

There are only a few levers that can be pulled to make housing more affordable:

- Reduce the basic cost of producing housing—the actual dollars that must be spent, including all development and construction costs
- Increase public subsidies for affordable housing
- Lower the cost-per-square-foot of housing by changing zoning codes to allow the construction of more units per acre of land
- Increase the amount of income available to low- and moderate-income households so that they can pay the rents necessary to support housing costs or afford a conventional mortgage on a market-priced home

Understanding *what* it costs to produce housing—and *why*—is central to establishing public policy around this issue.

The Problem

However successful Massachusetts and its developers have been in implementing existing subsidy programs to build affordable housing for low-income households, the Commonwealth has lagged well behind in the production of multi-family housing for working families, due in part to a combination of the high cost of land, the expense involved in preparing sites for construction, the cost of construction itself, and severely restrictive local zoning. *The net effect has been a serious gap between what a large share of Greater Boston households can afford to pay to buy or rent a home and the costs of developing it.* The federal government suggests that households should pay no more than 30 percent of their gross income for rent.¹ As we have shown, in Massachusetts more than 25 percent of households pay more than 50 percent of their income for rent, leaving precious little for other household and family expenses. In Greater Boston, more than half of renters are spending more than 30 percent of their income for rent, and those households are disproportionately

people of color and elderly women.² A recent report on rents in Boston concluded, “a single person [or household] in Boston would need a job paying \$50 a hour, or about \$100,000 a year, to afford the median rent of \$2,497 a month.”³ This is in a city where the median household income is \$58,325. Homeowners, in general, are not in any better shape when it comes to affordable housing, as more than 40 percent of homeowners with mortgages in Greater Boston pay more than 30 percent of their gross income for housing.⁴

It is also important both to place this problem in a broader economic perspective and to see it from the viewpoint of on-the-ground human concerns. In terms of the Massachusetts economy, high housing costs could once again make the Commonwealth a less attractive destination for businesses as they try to encourage employees to stay here (as opposed to moving somewhere much cheaper) or—even more difficult—recruit new talent from other states with much lower costs of living. On the human level, we are making it especially difficult for our children and our parents—many on fixed incomes—to find affordable housing in the communities where they have lived most of their lives. When housing costs consume so much of a family’s income, there is not only little left over for necessities, but there is significant stress on the family unit.

Finding ways to reduce the costs of production will be necessary to build an ample supply of housing that will ultimately lower the level of home prices and rents or at least keep them from rising as steeply as they have over the past few years.

Introduction to the Cost Study

Current information about housing costs is more anecdotal than anything else. “Everybody knows” that the components of housing production in Massachusetts cost too much, but finding organized hard data is very difficult. Although we cannot pretend that this is a rigorous scientific study, we believe that the information we have been able to aggregate takes this study far beyond the anecdotal, and is intended to *begin the conversation* and hopefully lead to a more comprehensive review.

As will be explained in the next section, we acquired data from both public and quasi-public agencies and from developers willing to share information on a confidential basis. In order to compare “apples to apples,” we limited projects to new construction rental complexes in Massachusetts and in 13 other states plus Washington, D.C., in 2004–2008 and 2011–2015, and we identify projects only by type and general location. Virtually all of the developments where we have full sets of data are low- or mid-rise construction, meaning buildings of five or fewer stories. Since only a small percentage of housing produced in Greater Boston during the periods we studied consisted of high-rises—and these were almost exclusively luxury developments—we have focused on the predominant building types. We are very grateful to those agencies and developers who shared both data and their thoughts about this critically important topic.

Acquiring and Analyzing Housing Cost Data

In order to obtain the broadest picture of housing cost structures, we approached a variety of Boston-based developers, some of whom also build projects outside of Massachusetts. They are both nonprofit and for-profit, with a range of project locations, construction types, number of units, and ratios of market-to-affordable units.⁵

Developments were limited to new construction in urban/suburban areas with a focus in Massachusetts on Gateway Cities as defined by the Commonwealth. We requested cost information on projects funded in 2004–2008 (to provide baseline data prior to the economic recession) and current data on projects funded in 2011–2015.

Data were obtained both from developers and from the Massachusetts Department of Housing and Community Development (DHCD), MassHousing and the Massachusetts Housing Partnership. Again, to maintain consistency, data were reported in all cases in a format as close as possible to the Massachusetts OneStop application for housing subsidy programs, even for those projects developed in other states. The data we present represent the average per-square-foot costs for (1) each cost component and (2) for total

TABLE 4.1

Dukakis Cost Analysis Communities

Massachusetts Urban	Massachusetts Suburban	Out-of-State Urban	Out-of-State Suburban
Allston	Acton	Chicago, Illinois	Westhampton, New York
Chelsea	Amherst	Durham, North Carolina	Elkton, Maryland
Dorchester	Attleboro	Indianapolis, Indiana	
Framingham	Bedford	Norfolk, Virginia	
Lowell	Belmont	Pittsburgh, Pennsylvania	
Lynn	Berkeley	Washington, D.C.	
Quincy	Bourne		
Revere	Carlisle	Additional Projects in Municipalities Within:	
Roxbury	Chatham	California (4)	California (4)
Salem	Chelmsford	Connecticut (2)	Connecticut (5)
Somerville	Danvers	Maryland (2)	Maryland (1)
Worcester	Dennis	New Jersey (5)	New Jersey (2)
	Falmouth	New York (2)	New York (6)
	Groton	Texas (2)	Washington State (1)
	Harwich	Virginia (3)	
	Harwich	Washington State (4)	
	Lakeville		
	Lunenburg		
	Marshfield		
	Northampton		
	Paxton		
	Plainville		
	Provincetown		
	Stoughton		
	Sudbury		
	Tyngsborough		
	Westford		

Source: Dukakis Center Housing Cost Analysis

development costs. Separate estimates have been prepared for urban projects in Massachusetts, suburban projects in Massachusetts, and for out-of-state projects.

The authors of this report interviewed developers and contractors to get their candid perspectives on the drivers of costs. The authors alone are responsible for the conclusions and recommendations at the end of this report.

Table 4.1 provides information on the location of the 115 housing developments for which we obtained cost data. One of our sources with the largest number of out-of-state developments provided us with the state in which the development was located and whether it was urban or suburban, but not the name of the municipality.

The Cost of Developing Housing in Greater Boston

Based on the data we collected, we have been able to calculate the average total development cost for producing new housing including:

- *Land acquisition*
- *Site preparation*, including needed infrastructure
- *Construction* (labor and material)
- *Soft costs*, including legal, architectural, and accounting fees
- *Financing*
- *Developer fees*

Figure 4.1 provides data on the total development costs per square foot for housing for the four regions in our study. The data refer to the “early period” (2004–2008) and the “current period” (2011 through 2015). According to these data, a typical urban housing project in an urban area of Massachusetts cost nearly \$242 per square foot to develop in 2004–2008. Today, that cost is nearly \$274 per square foot. Suburban costs in Massachusetts were substantially lower in the early

period at \$202 per square foot. But by 2011–2015, they had ballooned to nearly the cost of urban projects.

Back in 2004–2008, urban projects elsewhere in the United States were much cheaper to develop than in Massachusetts (\$152/sq. ft. vs. \$242/sq. ft.), but since then the cost of out-of-state urban projects has skyrocketed nearly as high as those in Massachusetts (\$268/sq. ft. vs. \$274/sq. ft.). On the other hand, out-of-state suburban projects have remained significantly less expensive. During the early period, these developments were 14 percent less expensive to build than similar Massachusetts projects, but since then the in-state suburban project costs have exploded, placing the differential between in-state and out-of-state suburban construction at an eye-popping 21 percent.

The Ted Williams Example

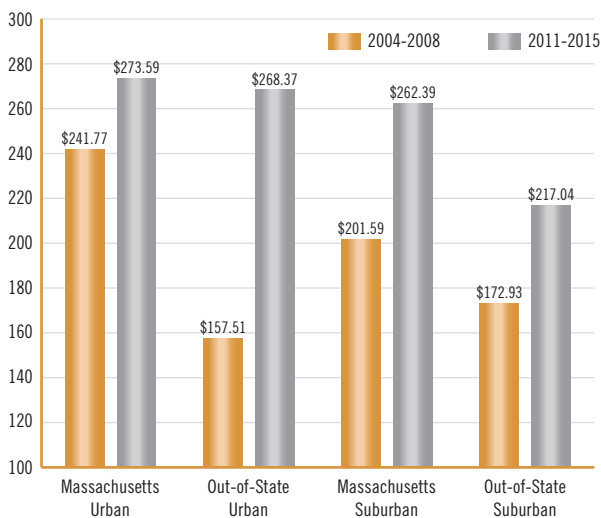
Consider what it would cost to build a new triple-decker today. Ted Williams, the great Red Sox slugger, lived in just such a unit at 39 Foster St. in Brighton during the 1940s with two of his teammates. That building contains 3,721 square feet with two bedrooms and a single bathroom on two floors and three bedrooms and a bathroom on another. It would cost more than \$1 million today—\$1,018,028 to be exact—to build that structure, or slightly less than \$340,000 per unit. If a median-income household (owners and renters combined) with income of \$73,935 were to buy one of these units for the amount it cost to build, it would need to spend \$2,000 a month on mortgage payments including principal, interest, and property taxes. This represents 32 percent of that family’s income. Adding in normal operating costs including utilities, insurance, and maintenance brings the total monthly housing cost for this unit to about \$2,540 and adds up to 41 percent of the household’s income.⁶

As is, a single unit in Ted Williams’s old house is now renting for \$2,166 per month—a whopping 62 percent of the median Boston *renter* household’s annual income of roughly \$42,000 a year! The building itself sold for \$1.15 million in January 2015.

A brand new unit of 1,600 square feet in a small development would be even more expensive to rent. To cover the cost of the mortgage and principal, interest, taxes and operating costs, the monthly rent would be

FIGURE 4.1

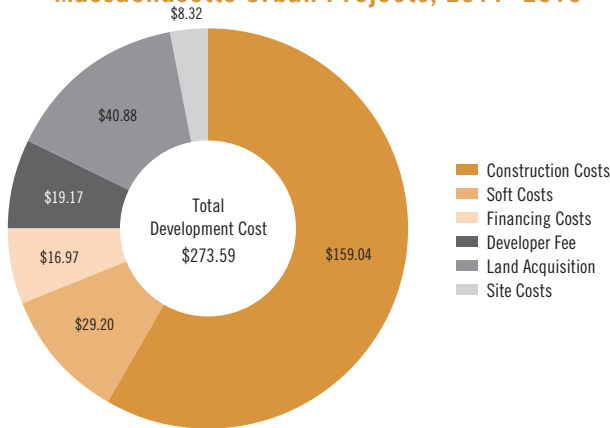
Total Housing Development Costs per Square Foot Massachusetts vs. Out-of-State Urban vs. Suburban Projects, 2004–2008 vs. 2011–2015



Source: Dukakis Center Housing Cost Analysis

FIGURE 4.2

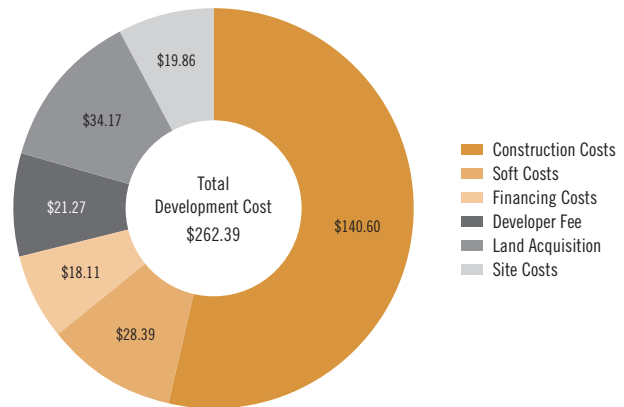
Total Housing Development Costs Per Square Foot by Cost Component, Massachusetts Urban Projects, 2011–2015



Source: Dukakis Center Housing Cost Analysis

FIGURE 4.3

Total Housing Development Costs Per Square Foot by Cost Component, Massachusetts Suburban Projects, 2011–2015



Source: Dukakis Center Housing Cost Analysis

more like \$3,215 in Boston—or 52 percent of the gross income of the median-income household.⁷

Large multi-family developments, as we will suggest later in this chapter, are somewhat less expensive to build on a square-foot basis as a result of economies of scale. The same is true of larger units with three or more bedrooms because the most expensive elements of a unit are the kitchen and bathroom. But even taking into account somewhat lower development costs per square foot, today’s cost of development renders home prices and rents for new housing well outside the feasible range for most working and middle-income households in Greater Boston.

The Cost Components of New Housing

The data we obtained for this analysis provides information on the average costs for each major component of housing development. For urban projects in Massachusetts, this information is found in **Figure 4.2**. Of the total \$273.59 development cost per square foot, land acquisition runs about \$41 per square foot, or about 15 percent of the total. Site preparation costs are another \$8.32 a square foot, or about 3 percent of the total. Construction costs, including labor and materials, account for just over half (58 percent) of total development costs—\$159 per square foot. The remaining

soft costs, financial costs, and developer fees are each under \$30 per square foot and together account for 24 percent of total development costs.

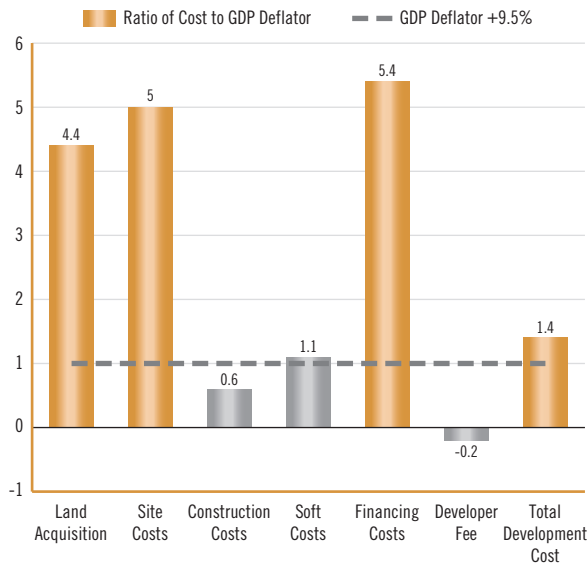
The costs of developing suburban projects in Massachusetts are shown in **Figure 4.3**. Note that suburban land-acquisition costs are about 85 percent of the cost of land for urban projects, but site preparation costs are more than double. This is because the cost of developing infrastructure, including water connections and sanitation, is higher in many suburbs. In urban areas, the infrastructure is already in place and publicly supplied. At \$141/sq. ft., construction costs in the suburbs are catching up with those in the cities. Soft costs, financial costs, and developer fees are on par as well. Overall, it costs a bit less to build in the suburbs, but only because the land is somewhat less expensive.

Changes over Time

There is a general agreement that housing has become more expensive in the past decade and our data bear that out. From the period covering 2004–2008 to the period covering 2011–2015, Total Development Costs (TDC) for Massachusetts projects increased by \$31.82 per square foot (13.2 percent) for urban projects and by \$60.80 per square foot (30.2 percent) for suburban ones. This came at a time of modest overall inflation of 9.5 percent as measured by the nation’s GDP deflator.

FIGURE 4.4

Development Costs vs. GDP Deflator Massachusetts Urban Housing Projects 2004–2008 vs. 2011–2015



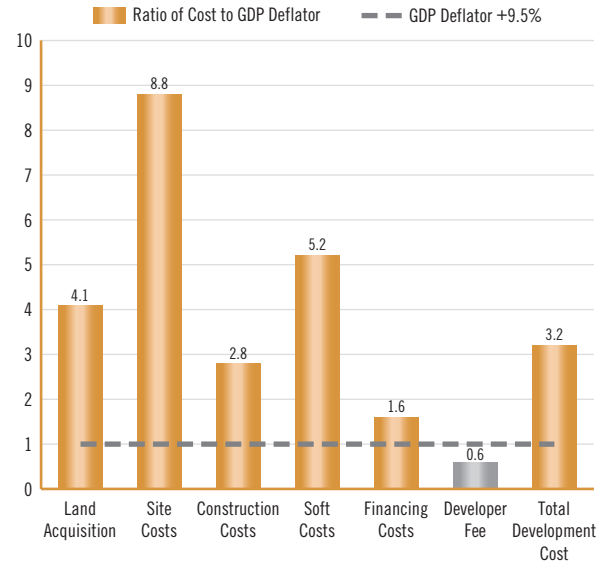
Source: Dukakis Center Housing Cost Analysis

As such, the cost of developing urban projects in the Commonwealth increased by nearly 40 percent more than overall inflation, while the cost of developing housing in the suburbs skyrocketed more than three times as fast.

The relative contribution of specific components to these increased costs was something of a surprise. As **Figure 4.4** reveals, for Massachusetts urban projects, soft costs including legal fees and other costs associated with the purchase of land and complying with local and state regulations rose only slightly faster than inflation, while construction costs for labor and materials increased only three-fifths as fast as the rate of overall economic inflation. Construction costs were high back in the early period and they have remained high today, but have not accelerated further. As for developers' fees, the average fee per square foot was actually lower for these projects between 2011 and 2015 than it was in 2004–2008. What exploded in cost was land acquisition, which rose 4.4 times faster than inflation, site costs for land remediation and infrastructure that spiraled up 5 times faster, and financing costs that soared 5.4 times faster than inflation.

FIGURE 4.5

Development Costs vs. GDP Deflator Massachusetts Suburban Housing Projects 2004–2008 vs. 2011–2015



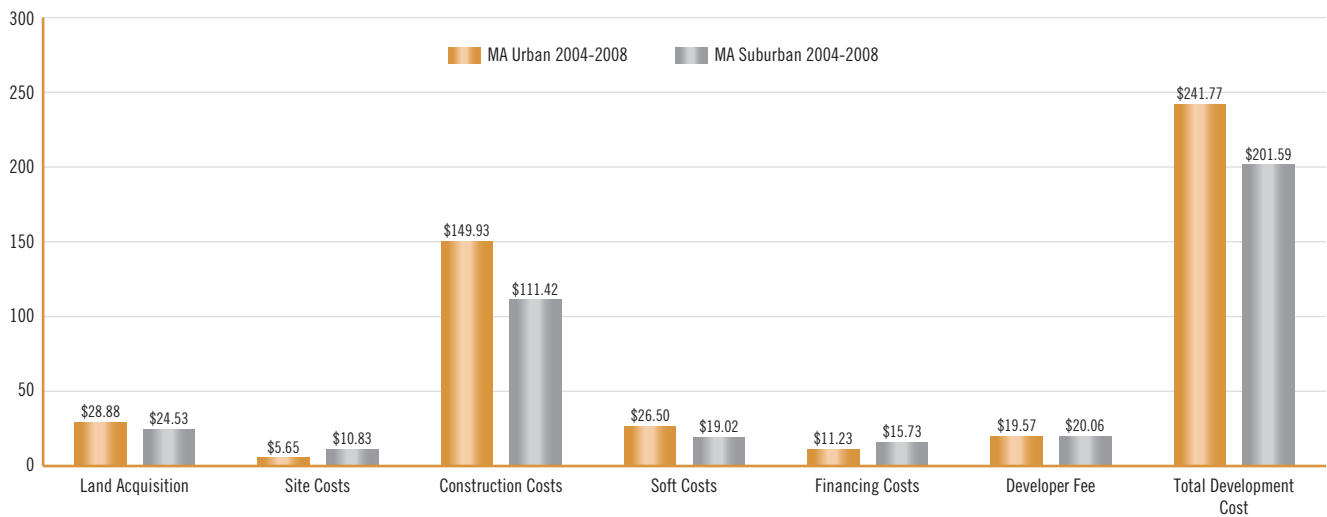
Source: Dukakis Center Housing Cost Analysis

For urban projects, the major drivers of this increase were land acquisition and construction. The former increased by \$12/sq. ft. (41.6 percent) while the latter increased by \$9.11/sq. ft. (6.1 percent). It is the land acquisition cost that stands out here, with a more than 40 percent increase over the course of less than a decade. Driven by competitive demand, urban (primarily Boston) land prices have grown at a rate far in excess of almost anything else. Construction costs, on the other hand, have risen at a rate no faster and perhaps even a little slower than overall inflation. However, because construction costs represent such a large part of total development costs, even that nominal increase represents a large part of the dollar increase in TDC, but it is certainly not as great as many believed or as represented anecdotally over the years.

As **Figure 4.5** reveals, suburban cost increases have been much higher than urban cost increases and are dominated more by construction costs. Starting from a lower base, these rose by \$29.19/sq. ft. (26.2 percent) or half the total increase in TDC between the two periods and nearly three times faster than general inflation. There is insufficient data to determine why this has

FIGURE 4.6

Development Costs for Massachusetts Urban and Suburban Housing Projects 2004–2008



Source: Dukakis Center Housing Cost Analysis

happened, but many have suggested that changes in the Commonwealth’s building codes have contributed to that increase. Land acquisition and site costs in Massachusetts suburban locations have spiraled upward, particularly on a percentage basis. Land costs have risen by 39 percent, more than four times faster than inflation, while site costs have gone up by 83 percent, nearly nine times faster than inflation. Presumably, the need to add private infrastructure for large housing projects where public sewers are not available is responsible for this substantial boost in site costs. While the increases in both cases are about \$9/sq. ft., they contribute to the fact that suburban development costs have increased two and one half times as fast as urban costs. It is also interesting to note that developer fees have either decreased or increased very slightly and therefore do not seem to be contributing much, if anything, to increased costs overall in suburban projects or urban projects.

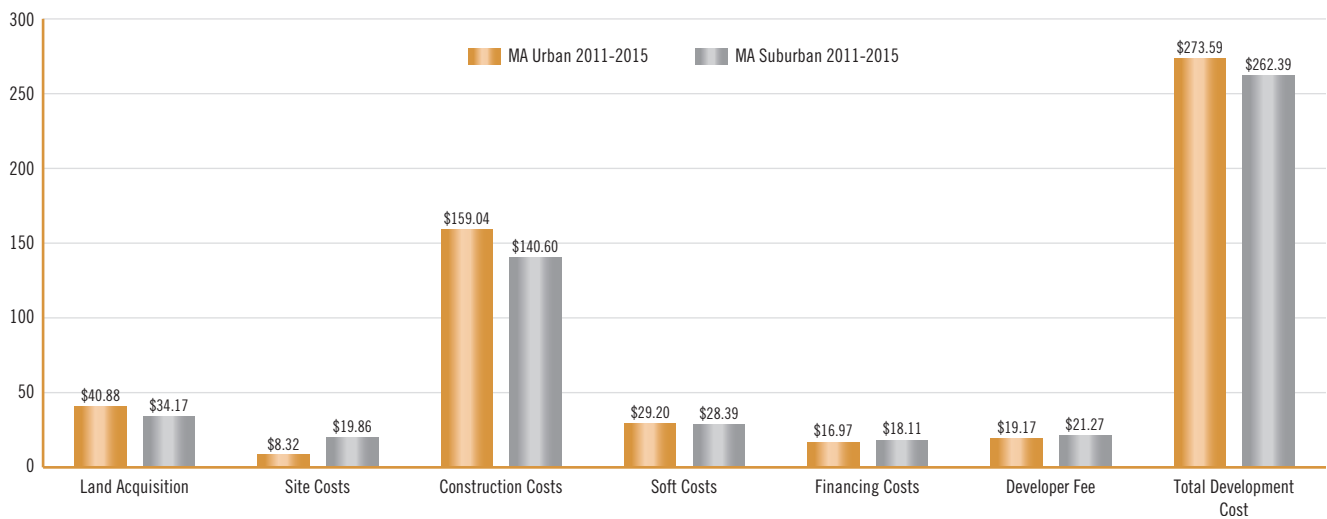
Urban vs. Suburban Costs in Massachusetts over Time

This urban/suburban cost dynamic is summarized in **Figure 4.6**. In the period from 2004 to 2008, the Total Development Cost (TDC) of *urban projects* in our Massachusetts sample was \$241.77/sq. ft., 20 percent higher than the average *suburban cost* of \$201.59/sq. ft. Driving this difference were construction costs that were, on average, 35 percent higher in urban areas. Land acquisition costs were slightly higher, as were soft costs. Developers of suburban projects in the Commonwealth had to spend somewhat more on site costs and financing costs and their developer fees were slightly higher as well.

By 2011–2015, urban costs had risen to \$273.59/sq. ft., but now they were only 5 percent higher than the \$263.39 per-square-foot cost of suburban buildings (see **Figure 4.7**). The urban/suburban construction cost differential, which had been 35 percent, had shrunk to just 13 percent. Anecdotally it has often been assumed that Boston and the suburbs were two different construction markets. That no longer seems to be the case, particularly at the subcontractor level.

FIGURE 4.7

Development Costs for Massachusetts Urban and Suburban Housing Projects 2011–2015



Source: Dukakis Center Housing Cost Analysis

Land acquisition costs in the suburbs have increased by about the same amount as urban projects (40 percent), but site development costs in suburban projects rose by 83 percent while those in urban projects came in at about half that at 47 percent. The soft costs of suburban projects have nearly caught up with those for urban projects while financing costs remain higher. Demand seems to have driven up suburban construction costs at a very rapid pace, while urban infrastructure is largely in place already, reducing the need for the high site development spending we see in the suburbs.

while this is offset to some extent by higher site costs for for-profits. Financing costs are about equal for nonprofits and for-profits alike. Nonprofit developer fees, however, appear to be almost double those for for-profit projects on a per-square-foot basis, though the numbers represent a small amount of the total cost. But what may explain much of the cost differential is that nonprofit projects are usually much smaller in terms of total units, which adds to construction cost, and the possibility that nonprofits may be developing housing on more challenging sites.

For Profit vs. Nonprofit

One surprising result of the survey is the finding that projects developed by nonprofit developers are substantially more expensive than those built by their for-profit peers. As **Figure 4.8** suggests, the average Total Development Cost of nonprofit projects in Massachusetts between 2011 and 2015 was \$255.37 per square foot, while that of for-profit projects was \$219.12.

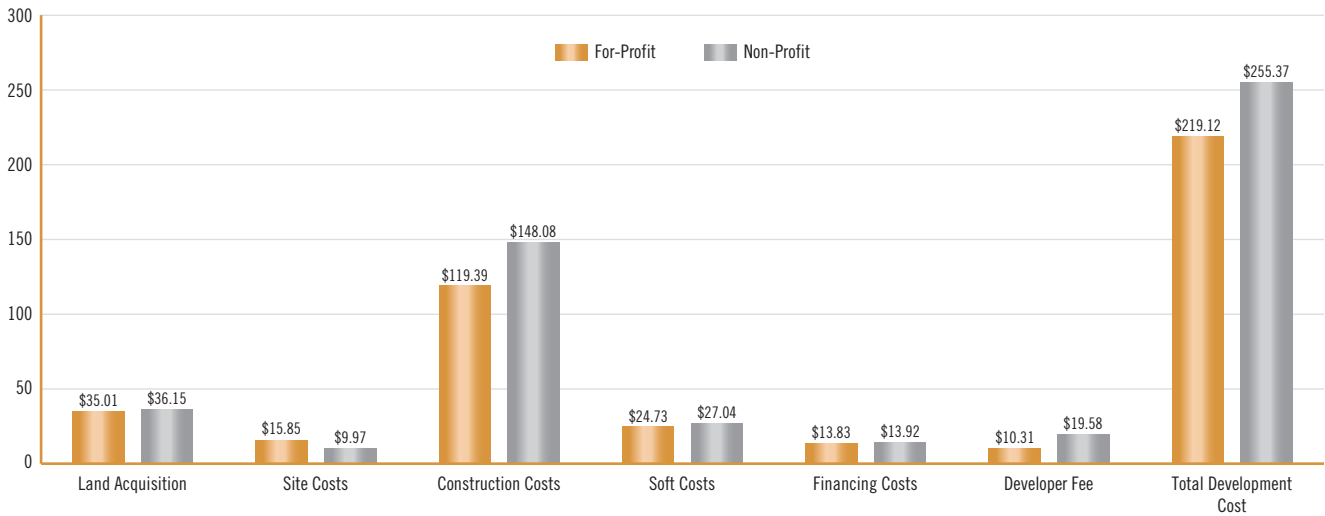
Most of the difference is in construction costs. Nonprofit projects averaged \$148.08/sq. ft. while for-profits averaged \$119.39. Land-acquisition costs and soft costs appear to be higher for nonprofits as well,

Size of Project

Figure 4.9 demonstrates the cost difference between larger and smaller projects. Analysis of the data demonstrates a direct relationship between project size and cost, with projects smaller than about 30 units being significantly more expensive on a per-square-foot basis than those with more units. Given economies of scale, this finding is not surprising. However, larger scale is often at odds with the wishes of local communities, which often insist that housing projects be limited in size in exchange for final approval from municipal authorities.

FIGURE 4.8

Per Square Foot Breakdown by Ownership Type Massachusetts, 2011–2015



Source: Dukakis Center Housing Cost Analysis

If municipalities were to allow larger projects with more than 150 units, the cost for developing a new 1,600-square-foot unit would decline to less than \$263,000. At this cost, the rent on such a unit would be about \$2,190 per month (including operating expenses)—more than \$1,000 less than the higher cost, smaller development triple-decker unit. In a large multi-family development, total housing costs would take “only” 35 percent of the gross income of the median income household in Boston, down from 52 percent. For the typical Boston-area renter with an income of \$42,075, this new apartment in a large project would still absorb 62 percent of his or her income in rent, utilities, and management fees.⁸

Massachusetts vs. Other States

It is generally assumed that Massachusetts is a more expensive place to develop housing than other parts of the country. This was certainly true during the middle of the last decade, but it is far less so for urban projects today. As **Figure 4.10a** shows, during the 2004–2008 period, out-of-state *suburban* projects cost \$172.93/sq. ft. while comparable Massachusetts projects cost \$201.59/sq. ft. Most of the difference was in higher construction costs. By the 2011–2015

FIGURE 4.9

Average Total Development Costs per Square Foot by Number of Units in a Housing Development in Massachusetts

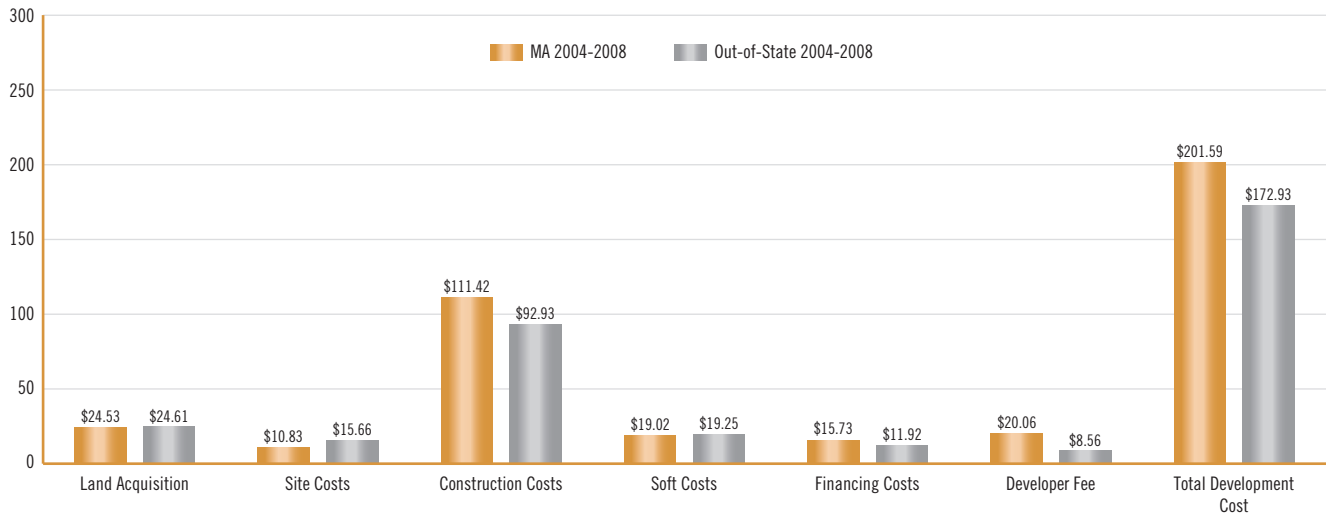


Source: Dukakis Center Housing Cost Analysis

period, the gap had actually grown a little as depicted in **Figure 4.10b**, with out-of-state suburban costs at \$217.04/sq. ft. while suburban costs in Massachusetts swelled to \$262.39. Again, most of the difference was in construction costs.

FIGURE 4.10A

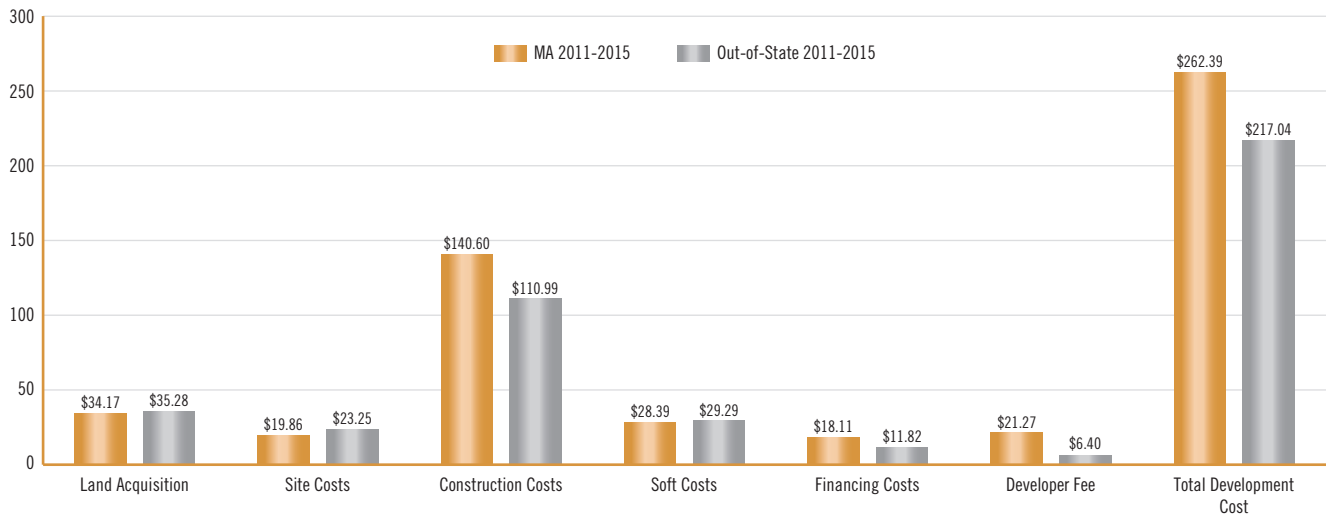
Housing Development Costs Suburban Projects Massachusetts vs. Out-of-State, 2004–2008



Source: Dukakis Center Housing Cost Analysis

FIGURE 4.10B

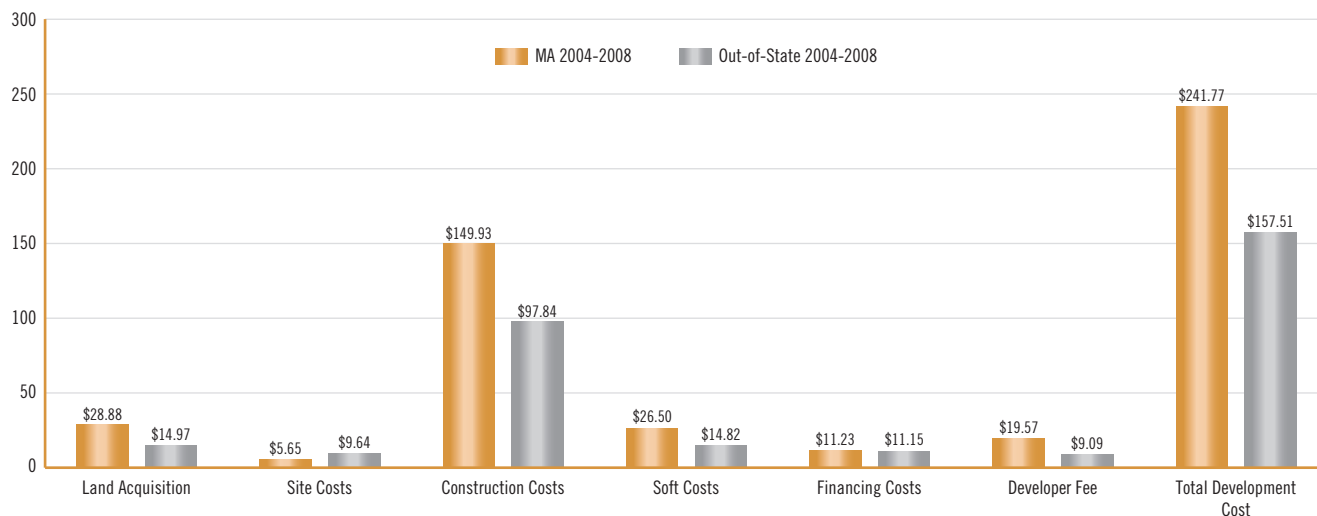
Housing Development Costs Suburban Projects Massachusetts vs. Out-of-State, 2011–2015



Source: Dukakis Center Housing Cost Analysis

FIGURE 4.10C

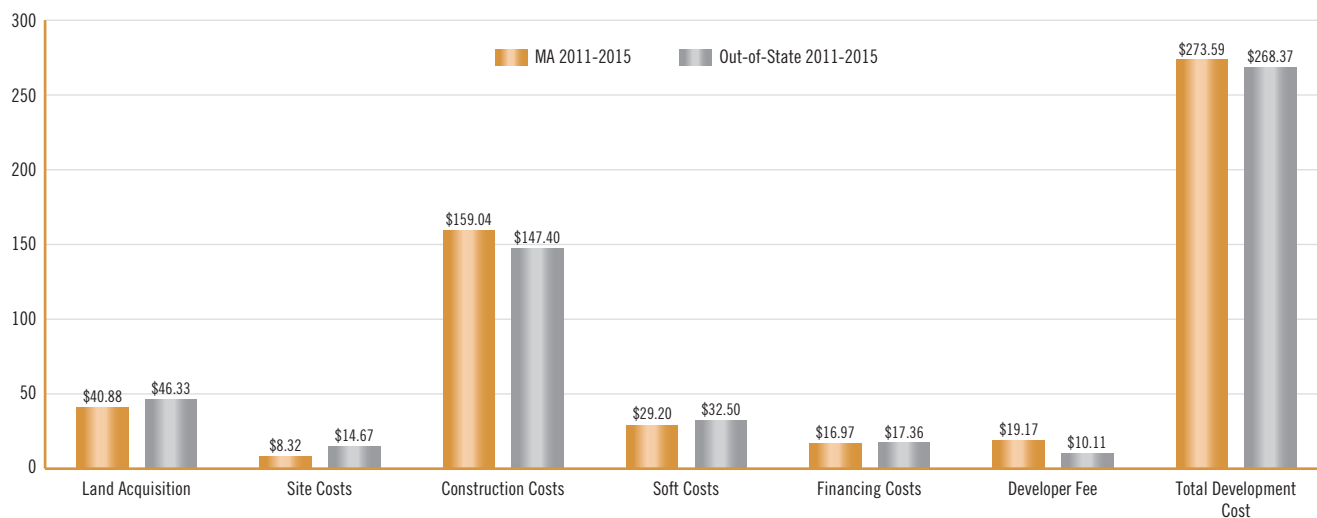
Housing Development Costs Urban Projects, Massachusetts vs. Out-of-State, 2004–2008



Source: Dukakis Center Housing Cost Analysis

FIGURE 4.10D

Housing Development Costs Urban Projects, Massachusetts vs. Out-of-State, 2011–2015



Source: Dukakis Center Housing Cost Analysis

The opposite was true of urban projects. During the 2004–2008 period, our data indicate that the TDC for out-of-state urban projects was \$151.51/sq. ft., substantially lower than the \$241.77/sq. ft., cost of urban Massachusetts projects (see **Figure 4.10c**). Most of the difference was due to 50 percent higher construction costs in Massachusetts, although land acquisition was also more expensive. However, unlike suburban projects, the gap for urban projects almost disappeared entirely by the 2011–2015 period, with Massachusetts costs at \$273.50/sq. ft. and out-of-state costs at \$268.37/sq. ft. (see **Figure 4.10d**). Construction costs, while higher, are now less than \$12/sq. ft. greater in urban Massachusetts than in cities in other states. This is not particularly good news for Massachusetts, but certainly unwelcome news for out-of-state locations that have essentially caught up with Massachusetts' high construction costs.

Competing Priorities That Work Against Lower Costs

We have seen how costs to produce multi-family rental housing have increased over time. But in many cases, there are good and defensible reasons for costs being as high as they are in Massachusetts, and a fair analysis of this issue must acknowledge these.

Land costs are very high in desirable places to live and work

As the experts say, real estate value is related to three things: location, location, location.⁹ Land costs of course vary considerably throughout the Commonwealth of Massachusetts, but do reflect what most residents love about the state: a generally good climate, relatively few threats from natural disasters, great natural beauty, access to both the ocean and the mountains, generally safe communities, public schools, universities, medical centers, and a high-tech/biotech sector that are the envy of most of the country. People pay a premium to live and work in desirable places, and the land prices in Boston and Massachusetts more generally reflect that, as do such prices in New York City, Washington, D.C., San Francisco, Seattle, and other magnet U.S. cities.¹⁰

This is compounded by the fact that Massachusetts, especially the eastern part of the state, is heavily

built out. Although there is a lot of vacant land, most vacant sites are not zoned for multi-family residential development. In fact, in a review carried out in 2004, *no community* in Massachusetts had land zoned “as of right” for multi-family housing development. The process and ability to modify current zoning to permit the construction of multi-family housing is severely limited. The passage of the Chapter 40R Smart Growth Zoning and Housing Production program in 2004 was largely a response to this issue.

Land values within and close to Boston are rising rapidly, as are land costs near new centers of employment, but Massachusetts as a whole is at the high end of land value throughout the country, and as we have shown, the cost of land acquisition has been a major driver of high total development costs in the state.

Few want to reduce the quality of the housing units produced

Many seasoned practitioners in the multi-family rental industry (developers, public and private lenders, and advocates) remember when “cost containment” was the slogan of the hour for publicly assisted housing. Under this banner, particularly as applied in the 1970s and '80s, doors were removed from closets in low-income public housing, units for the elderly shrank so dramatically that some residents referred to their homes as “coffins,” bedrooms in family housing were so tiny they could barely accommodate twin beds, and carpeting was forbidden. The result was inhumane living conditions that over time even the poorest of the poor refused to tolerate. Certainly no one wants to repeat those mistakes.

The pendulum must not only find a happy medium, but the public must realize that we cannot have our cake (low costs of producing housing) and eat it too (have the highest quality housing units). The challenge, of course, is to reduce costs that have little negative impact on design or livability.

Similarly, although the subject of operating costs is beyond the scope of this study, we should point out that over time, there have been some improvements in multi-family affordable housing. Owners have increased the level of security (both hardware and security personnel), resident services, job training, computer labs, etc. they provide in their affordable rental complexes. Not only do these result in a

higher quality of life for tenants, they also tend to result in more stable tenancy (and thus lower turn-over costs), and have been shown to reduce the costs of vandalism, tenant dissatisfaction, and the like. The award-winning, decades-old Tenant Assistance Program created and administered by MassHousing in its mixed-income housing is a preeminent example of the value of these enhanced services. Nonetheless, all of this adds to rents regardless of original construction costs.

In Massachusetts, we have a strong focus on preserving community character

Massachusetts developers and agencies are justifiably proud of the fact that most publicly assisted housing built since the 1980s is virtually indistinguishable from market-rate housing in the community. This has helped to generate more public support for affordable housing and has certainly resulted in better aesthetics. Affordable, multi-family rental housing need not be ugly housing, and that has been proven throughout the Commonwealth.

But highly restrictive zoning, present in virtually every one of the state's 351 municipalities, creates an artificially high barrier to development. It pushes developers to propose smaller projects (i.e., fewer units) and smaller units (i.e., fewer bedrooms per unit) in order to reduce the perceived impact on the neighborhoods and—in the case of larger units attractive to families with school-age children—the perceived impact on the town or city's education budget. The complexity of getting zoning changes approved dramatically extends the development period and increases carrying and soft costs. The cumulative effect drives up both the cost of development (seen in the high level of site costs, financing, and soft costs) and rents.

Thus, significant resistance to any change in the local community ambience has also meant that local support has heavily favored low-density, smaller projects, both of which are far more expensive to produce. Higher-density housing maximizes the efficiency of land use, and larger projects create economies of scale in development and construction. Massachusetts residents opposed to zoning for multi-family housing at 20 units per acre are astounded to learn that the city of Paris—a pretty nice place to live with undeniable “character”—has a density of approximately 120 units per acre! When developers are given permission only

to build projects of very low density, they will do so. As a result, the housing that is built will be expensive and affordable only for the very well-to-do or, if public subsidies are involved, to people with very low incomes. Working and moderate-income families will not be able to afford these units. This state of affairs, of course, causes the average cost of producing multi-family housing in the Commonwealth to increase.

Massachusetts values strong government protections for tenants, those with low incomes, the elderly, and the disabled

Many in Massachusetts are proud of the value placed on protecting the most vulnerable in the society. This is reflected in very strong pro-tenant laws, as well as multiple public agencies and nonprofit institutions focused on the welfare of low-income, elderly, and disabled people. In the housing arena, this value plays out in a wide range of government institutions at the local and state level carefully managing subsidy competitions, issuing and enforcing regulations, requiring detailed reporting of operations, and carrying out inspections of housing units—especially those that have received the benefit of public subsidies.

Whatever one feels about this regulatory apparatus, it does carry with it additional costs at the planning, permitting, construction, and management phases of a housing development.

Massachusetts has been innovative in its attempts to ameliorate the burden of these regulations, and more than 20 years ago state housing agencies developed the OneStop application. OneStop—like the single application for college admission—standardizes the application process for housing subsidies across agencies, a huge step forward. It is the use of the OneStop that has allowed us to aggregate data for this cost study in an efficient, consistent, and useful way. Over time, OneStop has gone digital and now developers can file most of their documents online, instead of following the old labor-intensive practice of submitting many hard-copy “books” at the time of application. The legal staff of the housing agencies also developed the MassDocs system, providing a common set of loan documents for projects using a variety of state and local funds. This is no small feat, especially when it is not uncommon for one subsidized housing development to have as many as fifteen sources of funds

and financing. MassDocs has served to moderate the increase of legal fees substantially.

Navigating the complicated development process with its attendant regulations involves site selection, architectural and engineering design, environmental reviews, local planning reviews, permitting, coordinating with abutters and others, developing a feasible pro forma of project costs/sources/uses, securing financing commitments, applying for public subsidies, obtaining sources of equity financing through various lenders and equity investors, and coordinating the closing of the mortgage loan. The largest and most experienced developers can maintain this level of expertise—at significant cost—within their companies. The smaller developers often need to hire outside experts. In either case, costs are added to the project. In addition, this process can literally take years, during which time other project costs are inflating and the carrying costs for site control keep adding up.

Strong public sector support for “green” and handicapped requirements and public amenities

It is probably fair to say that few developers today would want to return to the days of building multi-family housing without consideration of environmental impacts and energy efficiency, and without a provision for handicapped and disabled residents to live comfortably. Even enlightened self-interest recognizes that “green,” energy-efficient components result in lower utility bills and more livable units over time, and that handicapped accessibility is not only humane but expands the market for the units to be rented.

Further, developers report that many communities in Massachusetts will approve multi-family housing only if it comes with assurances that the developer will provide infrastructure, including recreational and traffic improvements that go far beyond what is actually required for safe development and management of the housing.

Developers also point out that these components inevitably have cost implications, especially at the front end. Perhaps the very highest standard of energy efficiency that is easily achievable in commercial construction is too high a standard when we are struggling to maintain affordability in the residential housing market. And thought should be given to covering the costs of infrastructure and other public improvements

outside of the budgets of financially struggling housing developments.

Massachusetts has high environmental standards and local communities have a lot of power over this issue. Given the long history of disregarding environmental impacts, it is reasonable for the Commonwealth and individual communities to be concerned about preserving environmental quality and protecting local species of plants and animals. It is also laudable to want to maintain a reasonable amount of open space.

Unfortunately, these worthy goals are addressed in Massachusetts through a confusing, time-consuming and expensive regulatory process that may or may not address the actual issues and may often have unintended consequences, including cost implications. Unlike most states, Massachusetts allows individual cities and towns to review projects for environmental impact and to impose their own conditions or mitigation requirements *in excess of those* required by the Commonwealth.

In addition, these powers are often used at the local level as a tool to stop multi-family development, both constraining supply and concentrating this type of housing in communities that do allow it. We would welcome an analysis of the feasibility of a statewide environmental regulatory structure that would protect the environment and, at the same time, make requirements predictable, reasonable, and consistent throughout the Commonwealth.

Few would recommend abandoning or weakening handicapped requirements which, among other benefits, permit disabled residents to live in multi-family housing in the community instead of in much more expensive taxpayer-supported medical, nursing-home, or assisted-living facilities. We would, however, recommend careful analysis of how many handicapped-accessible housing units are needed and what disabilities they must accommodate. It may be that so-called “universal design,” which allows units to be modified easily as needed for specific residents, may reduce the cost of some handicapped-accessible units.¹¹

But as with all the other priorities mentioned in this section, there is no obvious conclusion that wanting to fulfill these priorities is a bad thing—often, quite the opposite. The ultimate question is whether as a society we can afford them. Or are there things that we can do

to mitigate cost increases and at the same time increase the supply of excellent multi-family rental housing?

What Happens if the Cost of Producing Housing Goes Down?

Although it would seem counterintuitive, reducing the cost of producing housing does not automatically reduce the price of housing or the rent charged to the tenant. A developer will in most cases charge the highest rent obtainable in the marketplace or—in the case of affordable housing—allowable by public regulations, regardless of the cost of production.

In the case of market-rate housing, higher rents (as long as the developer can keep the units rented) translate into higher returns (profit) to the developer. In the case of affordable housing, rent paid by the tenants is a function of their income, so public subsidy picks up any slack or, conversely, benefits from any savings. Further, in the case of affordable housing, the amount of profit to the developer is strictly regulated. Thus, in the world of subsidized housing, lower costs means less debt and/or subsidy required to support capital costs. That means more units can be produced for the same number of public dollars. This is a powerful effect in a situation such as we have in Massachusetts, where the demand for affordable housing far outstrips the supply, and is reason enough to try to reduce costs. The challenge is to maintain quality and marketability while attempting to reduce the capital cost of production.

Conclusions

Starting at a higher base than suburban projects in 2004, the cost increase for urban projects in Massachusetts has been a few percent per year. Suburban development costs, on the other hand, have increased so rapidly they are now close to urban costs for similar products. The same is true for urban costs outside Massachusetts. Costs in major cities outside Massachusetts seem to have caught up with cities in the Commonwealth. While suburban out-of-state costs remain lower than those in Massachusetts, both have increased substantially.

Running through the data is this significant fact: urban and suburban development costs have been high in Massachusetts for some time and have increased significantly over the past decade. This inevitably translates into higher costs for tenants and buyers in the private marketplace and into the need for higher public subsidies for affordable housing. The increase in total development costs alone since the early part of the last decade has added roughly \$210/month to the rent of a 1,000-square-foot apartment in Boston. In the suburbs, the impact is even greater with an increase of more than \$400/month. Added to rents that were already high in Greater Boston, this has compounded the existing affordability problem in Massachusetts.

But the fundamental problem of affordability is not the hard cost of producing housing, *per se*. Rents are substantially higher than what is required to amortize costs because of the constraints against increasing supply, which keeps vacancy rates at extraordinarily low levels. As we have shown, there is virtually no zoning for multi-family housing in Massachusetts except that accomplished under Chapter 40R or by invoking Chapter 40B, thus artificially and severely constraining the ability to produce housing that is affordable for working and middle-income households. If those constraints were lifted, land costs would ultimately moderate, improving the chances of lowering development costs. If suburbs found a way to help underwrite infrastructure costs, this could also reduce the cost of housing. And if new techniques could be developed to lower construction costs, the chances of increasing housing supply in Greater Boston would finally improve. You will read our recommendations for the path forward in Chapter Six.

Without lifting constraints on development, we will continue to experience housing supply that does not—and *cannot*—catch up with housing demand in Greater Boston. This is leading to a vicious cycle where the lack of sufficient development in the face of increasing demand leads to rising home prices and rents, making housing more unaffordable in the region year after year. This vicious cycle could have quite unfortunate consequences for the long-term economic health of the region.

CHAPTER FIVE

Public Policy and Public Spending on Housing in the Commonwealth

The Commonwealth of Massachusetts has been a leader in the initiation of public programs to encourage the production of affordable housing. Massachusetts was the first state in the country to participate in the federal public housing program in the 1940s; one of the first states (and one of only four nationwide) to initiate and fund a state public housing program in 1948; one of the first to charter a housing finance agency in the 1960s; and the state that invented the concept of the local and statewide Housing Partnership in the 1980s. Massachusetts has also taken full advantage of all available federal housing programs in the decades both before and since.

Massachusetts has one of the very few programs of state-aided public housing in the country, administered through a wide network of local public housing authorities, and has recently authorized a new Community Investment Tax Credit to encourage investment in housing developed by community development corporations. Through the Massachusetts Department of Housing and Community Development and the quasi-public MassHousing, the Commonwealth manages state-aided programs that are analogues of the Federal Section 236 interest subsidy program (MA Chapter 13A); Section 8 rental assistance programs (the Massachusetts Rental Voucher programs); the Low-Income Housing Tax Credit (LIHTC); and the Historic Tax Credit. Other important programs are administered by the quasi-public Massachusetts Housing Partnership (MHP); the Community Economic Development Assistance Corporation (CEDAC); and Mass Development. And Massachusetts was the initiator of the Comprehensive Permit program (Chapter 40B) and the Smart Growth Zoning and Housing Production Program (Chapter 40R), both nationally recognized as methods of creating zoning for higher density multi-family housing.

Further, Massachusetts has been blessed for decades with a sophisticated and robust housing development industry, both in the nonprofit and for-profit sectors.

These developers have worked in close collaboration with state and federal agencies to successfully cobble together funding sources and create tens of thousands of well-designed and high-quality housing units. More often than not, this has been accomplished in the face of daunting challenges posed by restrictive zoning, NIMBYism¹, and confusing or conflicting regulatory requirements. In most cases, an ongoing scarcity of public funding has made financial feasibility very difficult to achieve.

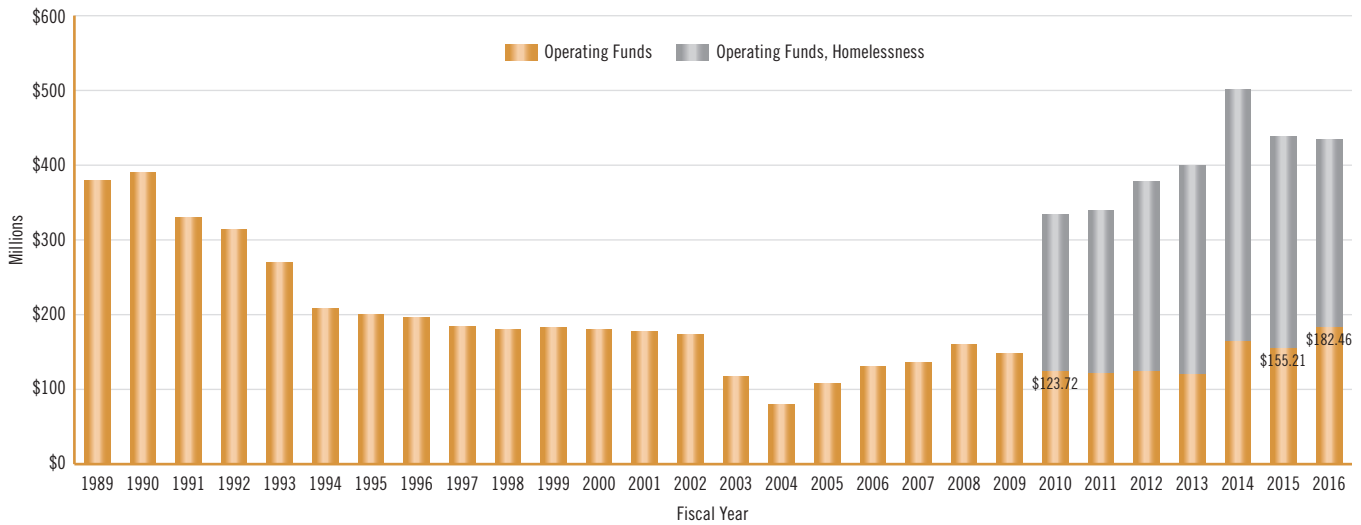
Public Spending on Housing

The Commonwealth has two sources of funds to assist homeowners, renters, and developers of housing. One is its own revenue, the other is the federal government. A large portion of the state funds used for housing are annual operating funds; the remainder is capital or trust funds used for investment in public housing and to subsidize affordable housing construction. All of these funds are processed through the state's Department of Housing and Community Development (DHCD). Traditionally, DHCD operating funds largely have been used to provide rental assistance and public housing subsidies and to pay for the administration of the agency. Since FY2010, operating funds for homelessness programs have also been administered by DHCD. As a result, efforts to address homelessness and the overall need for affordable housing are increasingly integrated. DHCD also manages capital funds that preserve and create new affordable housing. These funds are authorized every five years through passage of a housing bond bill. The most recent, for \$1.4 billion, was passed in late 2013.

Federal funds for housing are made available directly to a number of local agencies, such as Massachusetts' larger cities and local public housing authorities, but DHCD also receives federal funds for a number of programs including the Section 8 rental voucher program, and for new housing development and

FIGURE 5.1

DHCD Real Operating Funds (FY2015 \$), FY1989–FY2016



Source: Massachusetts/DHCD budget documents, the Massachusetts Budget Dashboard, and the Massachusetts Budget and Policy Center.

rehabilitation, for energy assistance, and for various neighborhood stabilization programs. While DHCD received a temporary increase in funds from the 2009 American Recovery and Reinvestment Act (ARRA), the Budget Control Act of 2011 (“sequestration”) has made it difficult in recent years for HUD to increase funding. Through all of these funding sources, DHCD had \$1.15 billion in resources in FY2015, and potentially \$1.14 billion in FY2016.

DHCD Operating Funds

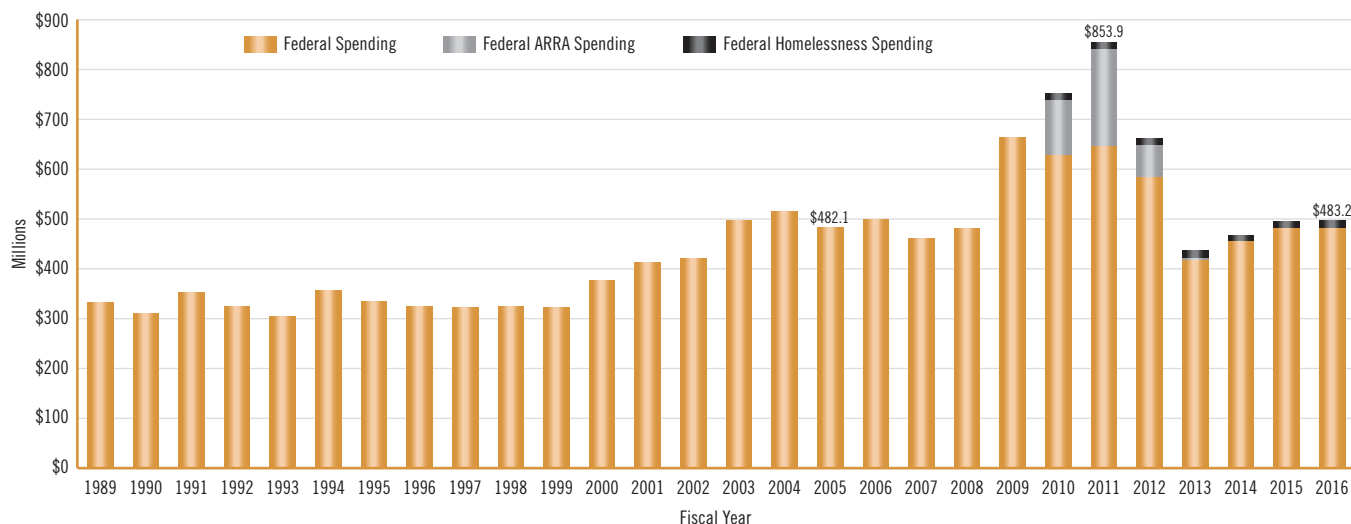
In FY1990, DHCD operating funds peaked at \$390 million (in FY2015 dollars), followed by declines each year through FY2004, with the exception of FY1999. While dollars for some programs, such as the Housing Innovations Fund, were shifted from the operating account to the capital account during this period, on balance, funding for affordable housing fell. By FY2004, the agency’s operating funds had declined to \$80 million, an 80 percent drop in real dollars since FY1990. Operating funds increased each year from FY2005 to FY2008 before being slashed again in the wake of the Great Recession in FY2009 (see **Figure 5.1**).

In FY2010, state homeless programs were shifted from the Department of Transitional Assistance to DHCD, more than doubling DHCD’s operating funds. Bringing housing and homelessness programs under one agency has provided an opportunity for integration of the two efforts, and has been crucial as the state attempts to respond to increased demand by families for its largest homelessness program, Emergency Assistance (EA). From July 2010 to October 2014, the number of families accessing EA increased 82 percent,² forcing the state to use scarce resources on shelters and motel rooms, including a \$51.5 million supplemental appropriation during FY2015.

Since it integrated homelessness and housing programs within one agency, the state has attempted to shift toward a “Housing First” model, where preserving existing tenancies with short-term aid or the provision of rental assistance is considered more cost effective than shelters or motels. Such a shift has been difficult given that demand increased and state funds were short during the Great Recession, and as the economy recovered, low-income families have not shared in that recovery, leaving more families eligible for EA.³

FIGURE 5.2

Total Real Federal Spending (FY2015 \$), FY1989–FY2016



Source: Massachusetts/DHCD budget documents, and the Massachusetts Budget Dashboard

DHCD’s integrated approach is beginning to bear some fruit. Though the number of families accessing EA only declined six percent from the peak in October 2014 to June 2015, the number of families living in motels has fallen 41 percent from a high of 2,134 families in December 2013 to 1,250 families in mid-August 2015.⁴ DHCD has reduced the reliance on motels by increasing the availability of shelter spaces and congregate housing, including a push during 2013 and 2014 to bring more than 1,000 new units on line.⁵ In another attempt to reduce the need for EA, DHCD also has committed new resources to the Massachusetts Rental Voucher Program (MRVP), with substantial increases in FY2014, FY2015, and FY2016. For FY2016, MRVP funding will be \$90.9 million, a 31 percent increase from FY2015. Funding for two other programs meant to prevent or address homelessness, HomeBASE and Residential Assistance for Families in Transition (RAFT), will increase in FY2016 (eight percent and 14 percent, respectively). Each year, DHCD has hoped that its Housing First efforts would lead to a reduced need for EA, but supplemental appropriations have been needed annually. FY2016 is no exception, as the state is cutting EA funding 19 percent from FY2015 spending. Only time will tell if the state’s forecast is correct and a supplemental appropriation for EA can be avoided during FY2016.

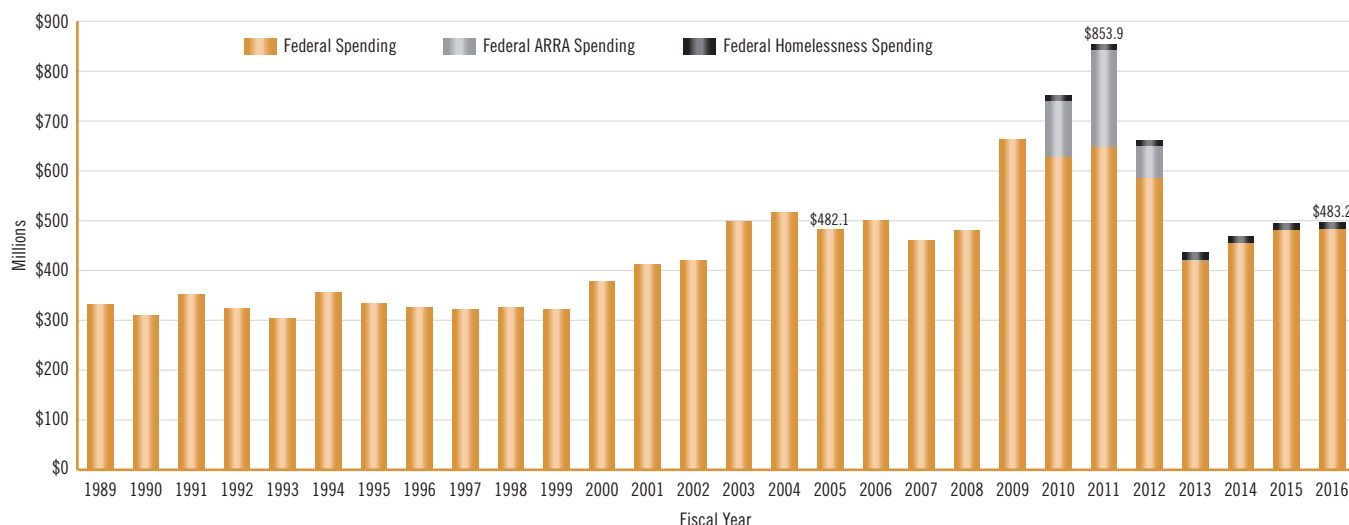
Federal Spending through DHCD

Through the 1990s, inflation-adjusted Federal spending through DHCD was relatively stable, averaging \$328 million a year in FY2015 dollars (see Figure 5.2).

From FY2000 to FY2009, federal spending increased every year, with the exception of FY2005 and FY2007. As a result of these increases, federal funds to DHCD peaked in FY2009, at \$664 million. American Recovery and Reinvestment Act (ARRA) funds contributed to a further expansion of the state’s housing efforts, with \$111 million in FY2010 and \$195 million in FY2011. As a result, total federal funding to DHCD for housing peaked at \$854 million in FY2011. With ARRA funds depleted and the implementation of “sequestration,” federal transfers to DHCD declined to \$437 million in FY2013. Federal funding recovered 7.1 percent from FY2013 to FY2014, but there was only a 3.4 percent increase for FY2015, and given that the allocations for FY2016 are not yet known, DHCD is planning no increases this year. As of this writing, current federal budget proposals indicate that there may be increases in tenant-based rental assistance (3 percent) and the Project-Based Section 8 program (8 percent), no change in funding for many other HUD programs,

FIGURE 5.3

**Total Real DHCD Spending (FY2015 \$),
Including Federal Share and ARRA, FY1989–FY2016
(excluding homeless program funds)**



Source: Massachusetts/DHCD budget documents, the Massachusetts Budget Dashboard, and the Massachusetts Budget and Policy Center.

and potential, substantial cuts for HOME Investment Partnerships and the Choice Neighborhoods Initiative, though there are substantial differences between the House and Senate on funding for these two programs.⁶

Finally, **Figure 5.3** shows changes in total DHCD spending (federal, as well as state operating, trust, and capital funds), excluding homelessness funding, from FY1989 to FY2016 (in FY2015 dollars). From FY1989 to FY1997, total funds declined 45 percent, from \$1.13 billion to \$621 million. While there was some recovery in total spending from FY1998 to FY2008, federal cash infusions in FY2010 and FY2011 pushed total funding back over the \$1 billion threshold before falling back due to the expiration of ARRA funds and other federal cuts. There were small increases in FY2014 (4.5 percent), and FY2015 (3.1 percent), and though federal funds for FY2016 are not fully known at this time, total resources should increase just 2.5 percent in FY2016, to \$875 million.

Conclusions

Beginning with the Menino administration in the City of Boston and the Patrick administration in the Commonwealth, there have been ambitious plans for adding to the regional and state housing supply in order to meet demand at more affordable prices. The use of Chapter 40B (since the late 1960s) and Chapter 40R (since 2005), the newer Compact Neighborhoods program based on the “carrot” approach of 40R, and recent plans to aid the state’s Gateway Cities all point in the right direction.

But as the last chapter demonstrates, more funding alone will not meet our housing requirements. We will need fundamental changes in zoning regulations to make more land available for large developments. We will need new techniques that can reduce construction costs and more public funding for needed infrastructure to reduce the site costs associated with new developments, particularly outside of central cities.

Without more funding, it is hard to imagine how sufficient housing can be built at affordable prices and rents and how public subsidies to both developers

and low-income families can be large enough to cover the gap between the cost of housing and the rents that households can afford.

With the Commonwealth's budget strapped for revenue and the federal government in gridlock, we will need to find new ways to produce affordable housing that relies no less on public funds per se, but equally on reducing non-financial barriers to housing production. We will need to find ways for private entities such as universities and teaching hospitals to work with housing developers to bring housing supply into line with housing demand.

CHAPTER SIX

Toward New Housing Policy

The Commonwealth has done much to encourage the development of affordable housing for low-income households and working families through a battery of agencies, programs, and funding sources. What it needs to turn its attention to now is how to reduce the cost of building new housing so that both for-profit and nonprofit developers can produce more of it at lower cost and freer from regulations that drive up prices and rents.

Here we present a set of eight policies that we hope will be considered given our analysis of the Massachusetts housing market and the results of the cost study we carried out for this edition of *The Greater Boston Housing Report Card*.

1. Encourage larger projects with more units, since unit costs decline with the number of units in a development.

Some believe that creating paths for the construction of small rental developments with 25 units or less will assist in overcoming NIMBY¹ thinking. We challenge this approach. After decades of experience producing multi-family housing, most developers in Massachusetts would agree that even the attempt to build as few as 10 units on land that was previously zoned for single-family homes can unleash a firestorm of NIMBY opposition. Small projects involve enormous costs both per unit and per square foot because they must absorb high land, site preparation, and soft costs. In economic parlance, there are economies of scale in larger projects. Generally speaking, it is very difficult to make the numbers work for new construction of fewer than 50 units except for luxury housing.

Admittedly, some types of housing require small numbers of units—group homes for the disabled are one example—and should be treated differently. But for the majority of multi-family rental and condo units, encouraging more units per project would result in lower costs overall.

2. Encourage zoning for multi-family housing and at higher density.

Massachusetts has been a leader in this arena, particularly with the passage of Chapter 40B Comprehensive Zoning in the 1960s and the Chapter 40R Smart Growth Zoning and Housing Production Act in 2004. Zoning for multi-family housing at densities of up to 20 units per acre on land that previously allowed much lower density greatly reduces the cost of land per square foot, allows the construction of more cost-efficient buildings, reduces sprawl, increases open space, and facilitates the creation of walkable communities.

Further, as we have seen in the case of Chapter 40R districts and in other mixed-use urban areas across the state, the market is hungry for easily maintained housing with attendant amenities near public transportation. In its *Mixed Use Zoning: A Planners' Guide*, the Metropolitan Area Planning Council in Boston lists almost 20 reasons why communities might want to zone for mixed use involving housing plus space for recreation and commercial activities.²

3. Create incentives for communities, housing authorities, nonprofit organizations and businesses to donate land for affordable and mixed-income housing.

As a further method to reduce the cost per square foot for land, the Commonwealth should provide incentives for the donation of underutilized land for the construction of multi-family housing. Although most such programs are focused on the donation of land for open space and conservation, expanding the concept to include the development of multi-family housing should be explored. These incentives could include tax breaks, density bonuses for boosting the number of housing units per acre, and relaxation of height restrictions so that more stories can be added to existing low-rise apartment or commercial buildings. Proposals are currently pending to require that all surplus state land be reviewed first by the Massachusetts Department of

Housing and Community Development to determine its suitability for housing production. Such initiatives could also contribute to reducing the cost of housing development.

4. Reform zoning rules.

In our 2013 *Greater Boston Housing Report Card*, we focused on the types of zoning that communities have used to increase the amount of multi-unit housing production. Zoning that sets aside large tracts of land for larger housing development was shown to increase production. “Cluster” zoning that provides for dense housing development surrounded by open space has also proved useful toward this end, as has the use of “inclusionary zoning” that allows developers to construct more units of housing on a given parcel than zoning would normally permit as long as the developer sets aside some of the units as affordable for low- and moderate-income households.³ Chapter 40R was also shown to be a tool used by dozens of communities to increase the amount of transit-oriented affordable housing. The Commonwealth should work with municipalities to help them use these zoning tools to help meet housing demand in ways that other communities have found acceptable.

We should note, however, that incentives alone may not provide enough impetus for the scale of housing production needed in Massachusetts at this time. Some have therefore suggested that new legislation should be enacted to strengthen and mandate zoning requirements. One variant of such legislation would require that a certain percentage of the land area in a community must be zoned for multi-family housing. Another possibility would be to reform Chapter 40B’s calculation by which communities meet the state’s 10 percent goal for affordability. Currently, if a project sets aside 25 percent of the units in a development as affordable, all the units in the project can be counted toward the municipality’s 10 percent affordability goal that excuses it from further 40B developments. Instead of setting aside 25 percent of units as affordable, one might consider a minimum of 35 percent or even 50 percent if a municipality wishes to count the market-rate units in meeting the 40B goal.

Such “sticks” should be tied to greater incentives in order to counter the great suspicion in many quarters

toward such zoning reform. Legislators should take care in promoting such reform so as not to cause a powerful local reaction that could prove to be counterproductive.⁴

5. Encourage innovation in the design of more efficient housing units and buildings.

No one wants to return to the days of extreme cost containment in the construction of publicly assisted housing, which resulted in units so stripped down that even the poorest of the poor refused to live in them. But finding ways to build units more efficiently needs to be considered. New design approaches and technologies may well lead the way to a more efficient use of space within both individual units and multi-family buildings. With per-square-foot costs as high as we have seen, every reduction in total square feet can make a significant difference in overall costs. One such idea—the so-called “Millennial Village”—has been suggested to produce housing that would be marketed to renters in their 20s and 30s. Such buildings would contain a range of units, including “micro units,” with many shared common spaces and amenities. It would be interesting to see the Commonwealth partner with the excellent graduate architectural and design programs at Massachusetts universities to host a competition aimed at reducing total square footage in multi-family housing *while maintaining livability for all types of households*.

The needs and desires of the marketplace will always, in the end, determine what is built and operated successfully. Simple micro units, for example, may be quite appropriate for the growing number of millennials who would prefer their own small apartment to sharing a triple-decker unit with roommates. Empty nesters in the baby boom generation may also like smaller units, but likely with more amenities and more luxurious fittings. Families need larger units to accommodate both parents and kids. As such, we need to explore many types of housing given the growing demographic diversity of Greater Boston—but in all of them it will be important to find ways to reduce square-foot costs.

6. Create incentives for the production of modular housing.

Massachusetts does not presently have factories to produce the components of modular multi-family housing, although there have been attempts to set them up in past years. Considerable cost savings can be achieved when standardized components are manufactured in a factory and assembled at the building site. These cost savings are realized through efficiencies in production and by the resulting time saved on site during construction. The national developer AvalonBay, writing about a development it built in Natick in 2013, stated that “Using modular construction, the traditional one-year construction time [for apartment construction] is condensed into just a few months.”⁵ Further, *Multifamily Executive*, a periodical geared to leaders in the multi-family rental development industry, cites similar savings in construction time through the use of modular construction: “While popular in Europe, modular construction is still in its infancy in the U.S. multi-family [housing industry] and barely registers as a blip on the data screens of most apartment tracking firms. But that may be about the change.”⁶

Because there is currently no modular factory in-state, transportation costs have essentially canceled out the construction/time portion of the cost savings. A byproduct of having a factory in Massachusetts, of course, would be the creation of new jobs for Massachusetts residents.

7. Encourage labor agreements for affordable and mixed-income housing.

Organized labor has historically been supportive of efforts to create more housing for low- and moderate-income households. We can point specifically to the significant contribution of the AFL-CIO Housing Investment Trust in investing in multi-family housing in Massachusetts and across the country. Further, members of organized labor are often in the very income demographic that can benefit substantially from a supply of well-designed, well-located rental housing as they are starting out and, later, as they are moving into retirement.

We believe that there are opportunities to harness the power of organized labor to craft agreements that

would offset high labor costs, especially where they are caused by a commercial construction boom such as we are currently experiencing in the Commonwealth. As we have seen, current high labor costs are partially a function of the construction trades being in such high demand for commercial and luxury construction, particularly in the major cities. It is not unusual for only one subcontractor to bid on a particular job and there are even cases where subcontractors pull out just before a job starts for a more lucrative contract elsewhere. When the construction market is so busy that demand for subcontractors exceeds the supply, labor agreements alone will not control costs. Wage rates are not the driver of high labor costs in today’s market; rather, the culprit is the very high demand for a limited supply of subcontractors, leading to the charging of premiums by those bidding on housing contracts.

At the same time, there are few if any union or open shop minority- or women-owned subcontractors. There needs to be stronger efforts to encourage, mentor, and finance such companies so that there is a greater supply and availability of experienced subcontractors, which over time will tend to slow the acceleration of labor costs.

8. Encourage the appropriation of more public funding for affordable housing developments.

There is no getting around the fact that new construction of quality multi-family housing is an expensive undertaking. The truth is that in practice there is no such thing as *low-cost* housing. We can be justifiably proud of the work of our public and private sectors in producing very high-quality housing against great odds. As we have seen, with high land costs, restrictive zoning, and intensive regulation, costs can only be reduced so far, but not so far that most Massachusetts residents can afford to pay the full price or market rent to support those costs.

In every funding cycle there are many more excellent proposals submitted to the Commonwealth for state funding than can be supported with available appropriations. Proposed developments must usually wait for two or three years before they can be financed, with the result that the production of affordable and mixed-income housing is delayed at a time of serious need. Such delays add to the cost of producing needed

housing. More funding would enable DHCD to fund a larger percentage of projects and jump start the construction pipeline.

Accordingly, we call for a renewed government commitment for the appropriation of funds for those housing programs that have been proven to be successful so that the rents needed to support the final costs (after subsidies are applied) are within reach of more residents of the Commonwealth.

In that vein, we were pleased to see increased appropriations for FY2016 (over FY2015 levels) for several housing programs, including subsidies for state-aided public housing (a small increase) and a substantial increase for the Massachusetts Rental Voucher Programs (MRVP). Both programs are vital to increasing affordability. Public housing serves the lowest-income households in Massachusetts, while MRVP allocates rental-assistance vouchers to enable households of low and moderate income and the disabled to rent housing units in the private market.⁷

In conclusion, Massachusetts has long been a national leader in housing support and innovation. Now is the time for our elected officials to step up and again lead on this issue. We need to provide affordable housing for more of our residents and we need help to reduce the cost of producing it. We urge the private sector, the legislature and the governor to consider these policy suggestions carefully and implement the best of them in a timely manner.

Endnote

Chapter 1

1. Data on Massachusetts and U.S. Gross Domestic Product are from Alan Clayton-Matthews, "Massachusetts Current and Leading Economic Indices," MassBenchmarks, August 2015.
2. Data on Massachusetts employment has been compiled from the U.S. Bureau of Labor Statistics and the Massachusetts Department of Labor and Workforce Development.
3. See U.S. Bureau of Labor Statistics.
4. Between December 2010 and December 2014, employment in the 5-county Greater Boston region increased by 167,470 according to the U.S. Bureau of Labor Statistics. During the same period, employment in the Commonwealth increased by 215,100. As such, Greater Boston accounted for 77.9 percent of total state employment growth.
5. Data on county and state population were calculated on the basis of the 2010 U.S. Census estimates and the 2014 population estimate from the American Community Survey (ACS). See American Factfinder <http://factfinder.census.gov>.
6. Data on Massachusetts real wages were calculated on the basis of nominal wages as reported in the ES-202 files of the Massachusetts Department of Labor and Workforce Development using the U.S. Consumer Price Index (CPI) for cities for all items to account for annual inflation.
7. See U.S. Census Bureau's American FactFinder for the racial and ethnic distribution in Greater Boston's five counties. www.factfinder.census.gov.
8. See U.S. Bureau of Economic Analysis for Massachusetts GDP data for 2000 through 2014.

Chapter 2

1. The Warren Group, "Mass. Home Sales Maintain Torrid Pace, Gain 16 Percent in August," September 29, 2015.
2. Barry Bluestone, Catherine Tumber, Nancy Lee, Alicia Sasser-Modestino, Lauren Costello, and Tim Davis, *The Greater Boston Housing Report Card 2014-2015: Fixing an Out-of-Sync Housing Market* (Boston: The Boston Foundation, March 2015), Chapter 2, "Greater Boston's Demographic Revolution." Pp. 19-28.

3. See Jennifer McKim, "Governor Patrick Details Multifamily Housing Plan," *The Boston Globe*, November 14, 2012.
4. Our thanks to William Reyelt of the Massachusetts Department of Housing and Community Development (DHCD) for assembling these Chapter 40R statistics.
5. Barry Bluestone et al, *The Greater Boston Housing Report Card 2014-2015: Fixing an Out-of-Sync Housing Market* (Boston: The Boston Foundation, March 2015), p. 40.
6. *Ibid*, p. 42.

Chapter 3

1. The Case-Shiller Home Price Indices provided by *Standard and Poor* are considered the best measures of U.S. residential real estate prices, tracking changes in the value of residential real estate both nationally as well as in 20 metropolitan regions. By tracking changes in the prices of the same homes, the index avoids the problem of other measures that can conflate changes in prices with changes in the types and sizes of homes being sold in a given housing market. However, the Case-Shiller Index is only available for entire metro areas and therefore cannot be used to track prices in individual municipalities. See <http://us.spindices.com/index-family/real-estate/sp-case-shiller>.
2. For a discussion of the relationship between vacancy rates and home prices and rents, see Barry Bluestone, Mary Huff Stevenson, and Russell Williams, *The Urban Experience: Economics, Society, and Public Policy* (New York: Oxford University Press, 2008), pp. 417-421.
3. Table 3.1 includes all of the municipalities in the five-county Greater Boston region that had 50 or more sales of single-family homes in the first half of 2015. We restricted the sample to exclude communities where the number of sales might be too low to provide equivalent measures of average sales prices given potential differences in the types of homes sold in 2005 and 2015.

Chapter 4

1. See U.S. Department of Housing and Urban Development, “Affordable Housing,” http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing/
2. “Want to rent in Boston? Get a \$50-an-hour job” by Katie Johnson, *Boston Globe* 12/25/14, quoting Professor Michael Stone, University of Massachusetts/Boston.
3. Ibid.
4. U.S. Census Bureau, American Factfinder, 2011 American Community Survey.
5. For the purposes of this study, “market” means units with no income limitations on renters; “affordable” have income limitations and benefit from some type of public subsidy or incentive; “mixed” are developments with both market and affordable units. Most of the developments in this study are either affordable or mixed-income because during the periods covered by the study, most production of low- and mid-rise rental new construction happened as the result of various inclusionary zoning laws that required a varying number of affordable housing units.
6. Operating expenses include insurance, heat, water, electricity, and normal maintenance fees. We estimate that insurance on such a unit amounts to \$1,500 per year; utilities about \$2,500 per year, and maintenance about the same, \$2,500 per year. As such, total operating expenses run about \$6,500 per year over and above principal, interest, and taxes.
7. This total is made up of \$2,675 per month to cover the landlord’s mortgage including principal, interest, and taxes along with \$540 in operating expenses for utilities, insurance, and maintenance.
8. This total is made up of \$1,604 per month to cover development costs, \$125 in insurance, \$208 for utilities, \$208 for maintenance costs, and \$42 for management fees.
9. See Richard Florida, “The Real Role of Land Values in the United States”, Citilab, April 10, 2015, at <http://www.citylab.com/housing/2015/04/the-real-role-of-land-values-in-the-united-states/389862/>.
10. For a truly staggering graphic representation of this disparity of land value by location, see Kriston Capps, “Mapping the U.S. by Property Value Instead of Land Area,” Citilab, July 7, 2015, at <http://www.citylab.com/housing/2015/07/mapping-the-us-by-property-value-instead-of-land-area/397841/>.

11. “What is Universal Design?” from UniversalDesign.com. See <http://www.universaldesign.com/about-universal-design.html> for the following text:

“Universal Design makes things safer, easier and more convenient for everyone.

Universal Design involves designing products and spaces so that they can be used by the widest range of people possible. Universal Design evolved from Accessible Design, a design process that addresses the needs of people with disabilities. Universal Design goes further by recognizing that there is a wide spectrum of human abilities. Everyone, even the most able-bodied person, passes through childhood, periods of temporary illness, injury and old age. By designing for this human diversity, we can create things that will be easier for all people to use.

Who Does Universal Design Benefit? Everyone.

Universal Design takes into account the full range of human diversity, including physical, perceptual and cognitive abilities, as well as different body sizes and shapes. By designing for this diversity, we can create things that are more functional and more user-friendly for everyone. For instance, curb cuts at sidewalks were initially designed for people who use wheelchairs, but they are now also used by pedestrians with strollers or rolling luggage. Curb cuts have added functionality to sidewalks that we can all benefit from.”

Chapter 5

1. NIMBY stands for Not In My Back Yard and is the recognized shorthand for opposition to proposed housing development based solely on not wanting any new construction in the neighborhood or the community.
2. Massachusetts Department of Housing and Community Development homeless family case data (<http://www.mass.gov/hed/docs/dhcd/hs/ea/homelessnumberchart.pdf>).
3. For an outline of data related to this topic, see Haig Friedman, Donna, et al (2014). “Research for the *On Solid Ground: Building Opportunity, Preventing Homelessness Report*,” UMass-Boston Center for Social Policy. Accessed August 19, 2015 at https://www.umb.edu/editor_uploads/images/centers_institutes/center_social_policy/Research_for_on_solid_ground_report_updated_8.17.15.pdf.
4. Massachusetts Department of Housing and Community Development homeless family case data, as of August 19, 2015.

5. Massachusetts Department of Housing and Community Development (2014). "Building on Success: State Action Plan for Creating 1,000 New Units of Supportive Housing in Massachusetts." Accessed August 19, 2015 at <http://www.mass.gov/hed/docs/dhcd/news-updates/s-111-buildingonsuccess-stateactinplan.pdf>.
6. National Low Income Housing Coalition, "FY16 Budget Chart for Selected HUD and USDA Programs." http://nlihc.org/sites/default/files/FY16HUD-USDA_Budget-Chart.pdf, accessed on 8/19/2015.
3. See Barry Bluestone, Eleanor White, Noah Hodgetts, Michael Gleba, Nancy Lee, Monika Kondura, and Tim Davis, *The Greater Boston Housing Report Card 2013 – What Follows the Housing Recovery*, Chapter 4 "Zoning and Housing Production," pp. 49-60.
4. For a timely discussion of one local reaction to a proposal under Chapter 40B, refer to Scott Van Voorhis, "The Affordable Housing Debate Rages On" in *Banker and Tradesman*, Sept 16, 2015.
5. Joseph Coupal, "Modular Apartment Homes Let Property Owners Rent Homes Faster," August 2, 2013, Avalon Building Systems website, at http://www.avalonbuildingsystems.com/_blog/Avalon_Building_Systems_Blog/post/modular-apartment-homes-let-property-owners-rent-homes-faster-natick-ma/.
6. Joe Bousquin, "Modular's Moment," *Multifamily Executive*, 20:10, September, 2015 or at www.multifamilyexecutive.com.
7. For summaries of the DHCD final budgets for FY2015 and FY2016, go to www.mass.gov/bb/gaa/fy2015/app_15/dpt_15/hocd.htm and www.mass.gov/bb/gaa/fy2016/app_16/dpt_16/hocd.htm.

Chapter 6

1. NIMBY is an acronym for Not in My Back Yard, a generally reflexive opposition to the development of anything new, especially as it applies to multi-family housing.
2. Mixed-Use Zoning, A Planners' Guide", Metropolitan Area Planning Council, access at http://www.mapc.org/sites/default/files/Mixed_Use_Planners_Toolkit.pdf, pages 2-3:

"What are the Benefits of Mixed Use Development? Different communities choose mixed use for different reasons. Some see it as an excellent way to incorporate a mix of housing types on a small scale while enhancing traditional town character. Others see it primarily as a vehicle for revitalizing struggling areas and spurring economic development. Still others use it to create or enhance village centers. Listed below are some of the many benefits of mixed use development:

- Spurs revitalization
- Encourages high quality design by providing both greater flexibility and more control
- Preserves and enhances traditional village centers
- Promotes a village-style mix of retail, restaurants, offices, civic uses, and multi-family housing
- Provides more housing opportunities and choices
- May increase affordable housing opportunities
- Enhances an area's unique identity and development potential (e.g., village centers, locations near bike paths, or "gateway" areas that announce a community's strengths)
- Promotes pedestrian & bicycle travel
- Reduces auto dependency, roadway congestion, and air pollution by co-locating multiple destinations
- Promotes a sense of community
- Promotes a sense of place
- Encourages economic investment
- Promotes efficient use of land and infrastructure
- Guides development toward established areas, protecting outlying rural areas and environmentally sensitive resources
- Enhances vitality
- Improves a municipality's Commonwealth Capital score
- Embodies "Smart Growth"
- Increases revenues"

Appendix A Municipal Scorecard

Municipality	Production and Sales								
	Total Housing Units (2010 Census)	Units Permitted in 2014	Units Permitted 2015 (Estimate)	% Change 2014 to 2015 (Estimate)	Number of Single Family Home Sales 2014	Number of Single Family Home Sales 2015 (Estimate)	Percent Change in Number of Single Family Sales, 2014-2015 (Estimate)	Median Single Family Home Selling Price 2005	Median Single Family Home Selling Price 2014
Abington	6,377	15	21	37.1%	124	130	4.8%	\$349,900	\$303,750
Acton	8,530	87	63	-27.1%	207	174	-15.9%	\$542,000	\$525,000
Amesbury	7,110	19	9	-54.9%	153	136	-11.1%	\$350,000	\$295,000
Andover	12,423	65	39	-39.3%	349	280	-19.8%	\$588,750	\$579,900
Arlington	19,974	119	223	87.3%	317	276	-12.9%	\$501,000	\$612,000
Ashby	1,191	1	2	100.0%	34	22	-35.3%	\$275,000	\$210,000
Ashland	6,609	79	17	-78.3%	153	88	-42.5%	\$416,250	\$387,000
Avon	1,769	2	12	500.0%	49	48	-2.0%	\$320,000	\$264,000
Ayer	3,462	32	43	33.9%	66	70	6.1%	\$335,000	\$286,250
Bedford	5,368	38	165	333.1%	155	142	-8.4%	\$520,000	\$580,000
Bellingham	6,365	44	29	-33.8%	167	158	-5.4%	\$320,000	\$261,000
Belmont	10,184	13	10	-20.9%	168	126	-25.0%	\$720,000	\$899,000
Beverly	16,641	9	9	-4.8%	343	264	-23.0%	\$386,500	\$370,000
Billerica	14,481	48	38	-21.4%	383	308	-19.6%	\$372,500	\$346,000
Boston	272,481	2841	4375	54.0%	1061	904	-14.8%	\$657,115	\$1,349,473
Boxboro	2,073	4	7	71.4%	34	54	58.8%	\$585,950	\$641,333
Boxford	2,757	7	2	-75.5%	116	76	-34.5%	\$650,000	\$572,500
Braintree	14,302	55	0	-100.0%	304	260	-14.5%	\$385,000	\$365,000
Bridgewater	8,336	28	27	-2.0%	171	152	-11.1%	\$387,500	\$310,000
Brockton	35,552	175	70	-59.8%	619	606	-2.1%	\$275,000	\$204,000
Brookline	26,448	13	7	-47.3%	181	158	-12.7%	\$1,120,000	\$1,485,000
Burlington	9,668	56	345	515.3%	208	170	-18.3%	\$412,500	\$428,500
Cambridge	47,291	285	123	-56.7%	117	100	-14.5%	\$667,500	\$1,200,000
Canton	8,762	116	254	118.7%	186	180	-3.2%	\$511,250	\$478,850
Carlisle	1,758	40	12	-70.0%	65	46	-29.2%	\$876,563	\$775,000
Carver	4,600	20	10	-48.6%	108	90	-16.7%	\$340,000	\$275,000
Chelmsford	13,807	11	51	367.5%	309	252	-18.4%	\$373,700	\$369,000
Chelsea	12,621	385	837	117.3%	26	24	-7.7%	\$323,250	\$257,500
Cohasset	2,980	25	33	30.3%	131	92	-29.8%	\$765,500	\$775,000
Concord	6,947	117	194	65.6%	199	164	-17.6%	\$725,000	\$914,000
Danvers	11,135	28	19	-32.7%	210	234	11.4%	\$405,000	\$363,000
Dedham	10,191	12	10	-14.3%	278	234	-15.8%	\$404,500	\$390,000
Dover	1,969	28	14	-51.0%	74	62	-16.2%	\$1,057,500	\$853,000
Dracut	11,351	49	45	-9.0%	262	198	-24.4%	\$314,000	\$262,500
Dunstable	1,098	12	14	14.3%	33	36	9.1%	\$570,000	\$410,000
Duxbury	5,875	37	57	52.9%	206	148	-28.2%	\$615,500	\$560,000
East Bridgewater	4,906	28	41	46.9%	131	102	-22.1%	\$328,400	\$276,000

Appendix A Municipal Scorecard, continued

Municipality	Production and Sales (cont.)			Foreclosure Activity					
	Median Single Family Home Selling Price Through June 2015	Percent Change in Median Single Family Sales Price, 2005-June 2015	Percent Change in Median Single Family Sales Price, 2014-June 2015	Petitions to Foreclose, 2014	Petitions to Foreclose, 2015 (Estimate)	Foreclosure Deeds 2014	Foreclosure Deeds 2015 (Estimate)	Percent Change in Petitions to Foreclose, 2014-2015 (Estimate)	Percent Change in Foreclosure Deeds, 2014-2015 (Estimate)
Abington	\$301,000	-14.0%	-0.9%	64	94	10	14	46.9%	40.0%
Acton	\$520,000	-4.1%	-1.0%	24	30	16	16	25.0%	0.0%
Amesbury	\$321,500	-8.1%	9.0%	53	90	20	42	69.8%	110.0%
Andover	\$555,000	-5.7%	-4.3%	43	30	19	24	-30.2%	26.3%
Arlington	\$677,500	35.2%	10.7%	16	16	16	4	0.0%	-75.0%
Ashby	\$170,000	-38.2%	-19.0%	7	6	6	4	-14.3%	-33.3%
Ashland	\$367,500	-11.7%	-5.0%	36	22	10	28	-38.9%	180.0%
Avon	\$266,250	-16.8%	0.9%	14	16	5	4	14.3%	-20.0%
Ayer	\$310,000	-7.5%	8.3%	25	24	11	8	-4.0%	-27.3%
Bedford	\$635,000	22.1%	9.5%	16	8	2	4	-50.0%	100.0%
Bellingham	\$265,000	-17.2%	1.5%	70	80	22	40	14.3%	81.8%
Belmont	\$851,000	18.2%	-5.3%	12	4	2	0	-66.7%	-100.0%
Beverly	\$375,000	-3.0%	1.4%	48	80	15	28	66.7%	86.7%
Billerica	\$357,250	-4.1%	3.3%	103	146	28	54	41.7%	92.9%
Boston	\$1,138,690	73.3%	-15.6%	630	850	194	256	34.9%	32.0%
Boxboro	\$560,000	-4.4%	-12.7%	2	22	8	4	1000.0%	-50.0%
Boxford	\$554,500	-14.7%	-3.1%	8	8	2	0	0.0%	-100.0%
Braintree	\$375,000	-2.6%	2.7%	54	60	20	20	11.1%	0.0%
Bridgewater	\$328,750	-15.2%	6.0%	54	88	25	36	63.0%	44.0%
Brockton	\$206,500	-24.9%	1.2%	471	648	173	246	37.6%	42.2%
Brookline	\$1,700,000	51.8%	14.5%	29	20	4	4	-31.0%	0.0%
Burlington	\$432,000	4.7%	0.8%	31	32	10	6	3.2%	-40.0%
Cambridge	\$1,343,050	101.2%	11.9%	23	26	10	0	13.0%	-100.0%
Canton	\$464,000	-9.2%	-3.1%	32	30	23	12	-6.3%	-47.8%
Carlisle	\$825,000	-5.9%	6.5%	2	4	0	0	100.0%	0.0%
Carver	\$297,000	-12.6%	8.0%	56	100	23	32	78.6%	39.1%
Chelmsford	\$370,875	-0.8%	0.5%	70	82	15	28	17.1%	86.7%
Chelsea	\$281,250	-13.0%	9.2%	61	70	36	16	14.8%	-55.6%
Cohasset	\$742,500	-3.0%	-4.2%	14	8	4	12	-42.9%	200.0%
Concord	\$920,000	26.9%	0.7%	10	4	3	0	-60.0%	-100.0%
Danvers	\$380,000	-6.2%	4.7%	76	24	11	28	-68.4%	154.5%
Dedham	\$395,000	-2.3%	1.3%	36	64	22	16	77.8%	-27.3%
Dover	\$929,000	-12.2%	8.9%	6	4	2	0	-33.3%	-100.0%
Dracut	\$275,000	-12.4%	4.8%	93	180	44	50	93.5%	13.6%
Dunstable	\$492,500	-13.6%	20.1%	4	4	4	0	0.0%	-100.0%
Duxbury	\$527,500	-14.3%	-5.8%	26	24	8	8	-7.7%	0.0%
East Bridgewater	\$281,750	-14.2%	2.1%	45	70	20	18	55.6%	-10.0%

Appendix A Municipal Scorecard, continued

Municipality	Production and Sales								
	Total Housing Units (2010 Census)	Units Permitted in 2014	Units Permitted 2015 (Estimate)	% Change 2014 to 2015 (Estimate)	Number of Single Family Home Sales 2014	Number of Single Family Home Sales 2015 (Estimate)	Percent Change in Number of Single Family Sales, 2014-2015 (Estimate)	Median Single Family Home Selling Price 2005	Median Single Family Home Selling Price 2014
Essex	1,600	9	10	14.3%	29	36	24.1%	\$485,000	\$460,000
Everett	16,715	437	957	118.9%	99	90	-9.1%	\$350,000	\$282,000
Foxborough	6,895	31	41	32.7%	149	148	-0.7%	\$399,900	\$375,000
Framingham	27,529	77	360	367.5%	604	522	-13.6%	\$384,000	\$336,000
Franklin	11,394	47	36	-23.4%	253	220	-13.0%	\$433,455	\$398,000
Georgetown	3,044	15	14	-8.6%	84	98	16.7%	\$450,000	\$401,972
Gloucester	14,557	65	26	-60.4%	169	138	-18.3%	\$389,000	\$362,000
Groton	3,989	14	21	46.9%	123	114	-7.3%	\$472,000	\$412,000
Groveland	2,439	15	14	-8.6%	66	48	-27.3%	\$386,750	\$335,500
Halifax	3,014	16	21	28.6%	73	98	34.2%	\$330,000	\$260,000
Hamilton	2,880	5	2	-65.7%	80	96	20.0%	\$525,000	\$462,500
Hanover	4,852	12	9	-28.6%	148	130	-12.2%	\$450,000	\$445,000
Hanson	3,589	65	46	-28.8%	119	84	-29.4%	\$362,450	\$300,000
Haverhill	25,657	101	51	-49.1%	352	346	-1.7%	\$320,000	\$265,000
Hingham	8,953	72	27	-61.9%	288	212	-26.4%	\$665,000	\$655,000
Holbrook	4,274	10	3	-65.7%	131	84	-35.9%	\$324,450	\$248,000
Holliston	5,087	34	27	-19.3%	150	168	12.0%	\$447,500	\$423,700
Hopkinton	5,128	104	115	10.4%	201	140	-30.3%	\$559,000	\$549,100
Hudson	7,998	24	22	-7.1%	169	154	-8.9%	\$356,000	\$300,000
Hull	5,762	7	10	46.9%	127	98	-22.8%	\$379,000	\$345,000
Ipswich	6,007	30	26	-14.3%	132	114	-13.6%	\$517,500	\$430,750
Kingston	5,010	69	51	-25.5%	152	140	-7.9%	\$383,900	\$339,950
Lakeville	4,177	23	15	-32.9%	112	90	-19.6%	\$359,500	\$297,500
Lawrence	27,137	33	33	-1.3%	182	184	1.1%	\$247,000	\$188,500
Lexington	12,019	99	91	-8.2%	419	336	-19.8%	\$705,000	\$950,000
Lincoln	2,617	73	9	-88.3%	67	54	-19.4%	\$1,155,000	\$1,045,000
Littleton	3,477	187	43	-77.1%	104	98	-5.8%	\$452,500	\$412,450
Lowell	41,431	101	45	-55.9%	473	418	-11.6%	\$274,900	\$227,000
Lynn	35,776	59	21	-65.1%	473	468	-1.1%	\$290,000	\$240,000

Appendix A Municipal Scorecard, continued

Municipality	Production and Sales (cont.)			Foreclosure Activity					
	Median Single Family Home Selling Price Through June 2015	Percent Change in Median Single Family Sales Price, 2005-June 2015	Percent Change in Median Single Family Sales Price, 2014-June 2015	Petitions to Foreclose, 2014	Petitions to Foreclose, 2015 (Estimate)	Foreclosure Deeds 2014	Foreclosure Deeds 2015 (Estimate)	Percent Change in Petitions to Foreclose, 2014-2015 (Estimate)	Percent Change in Foreclosure Deeds, 2014-2015 (Estimate)
Essex	\$450,000	-7.2%	-2.2%	2	88	2	22	4300.0%	1000.0%
Everett	\$307,000	-12.3%	8.9%	72	102	16	42	41.7%	162.5%
Foxborough	\$375,500	-6.1%	0.1%	34	36	9	20	5.9%	122.2%
Framingham	\$352,000	-8.3%	4.8%	126	118	74	52	-6.3%	-29.7%
Franklin	\$376,500	-13.1%	-5.4%	63	62	22	22	-1.6%	0.0%
Georgetown	\$399,000	-11.3%	-0.7%	13	28	6	14	115.4%	133.3%
Gloucester	\$337,500	-13.2%	-6.8%	44	46	21	20	4.5%	-4.8%
Groton	\$426,500	-9.6%	3.5%	14	44	10	8	214.3%	-20.0%
Groveland	\$357,450	-7.6%	6.5%	20	54	11	28	170.0%	154.5%
Halifax	\$255,385	-22.6%	-1.8%	37	22	18	26	-40.5%	44.4%
Hamilton	\$471,750	-10.1%	2.0%	6	40	2	34	566.7%	1600.0%
Hanover	\$445,000	-1.1%	0.0%	28	30	21	4	7.1%	-81.0%
Hanson	\$295,000	-18.6%	-1.7%	47	34	19	24	-27.7%	26.3%
Haverhill	\$269,000	-15.9%	1.5%	222	154	94	66	-30.6%	-29.8%
Hingham	\$710,000	6.8%	8.4%	15	64	6	8	326.7%	33.3%
Holbrook	\$262,450	-19.1%	5.8%	57	46	16	58	-19.3%	262.5%
Holliston	\$441,500	-1.3%	4.2%	21	28	7	8	33.3%	14.3%
Hopkinton	\$551,800	-1.3%	0.5%	32	16	6	8	-50.0%	33.3%
Hudson	\$341,000	-4.2%	13.7%	37	74	23	22	100.0%	-4.3%
Hull	\$325,000	-14.2%	-5.8%	38	68	16	24	78.9%	50.0%
Ipswich	\$424,000	-18.1%	-1.6%	28	62	6	26	121.4%	333.3%
Kingston	\$345,500	-10.0%	1.6%	37	36	12	8	-2.7%	-33.3%
Lakeville	\$300,000	-16.6%	0.8%	35	34	10	24	-2.9%	140.0%
Lawrence	\$194,600	-21.2%	3.2%	135	158	81	52	17.0%	-35.8%
Lexington	\$932,500	32.3%	-1.8%	6	20	2	4	233.3%	100.0%
Lincoln	\$1,171,500	1.4%	12.1%	4	4	0	0	0.0%	0.0%
Littleton	\$435,000	-3.9%	5.5%	18	42	6	12	133.3%	100.0%
Lowell	\$229,500	-16.5%	1.1%	249	378	159	140	51.8%	-11.9%
Lynn	\$255,000	-12.1%	6.3%	208	192	111	82	-7.7%	-26.1%

Appendix A Municipal Scorecard, continued

Municipality	Production and Sales								
	Total Housing Units (2010 Census)	Units Permitted in 2014	Units Permitted 2015 (Estimate)	% Change 2014 to 2015 (Estimate)	Number of Single Family Home Sales 2014	Number of Single Family Home Sales 2015 (Estimate)	Percent Change in Number of Single Family Sales, 2014-2015 (Estimate)	Median Single Family Home Selling Price 2005	Median Single Family Home Selling Price 2014
Lynnfield	4,354	26	38	45.1%	141	124	-12.1%	\$560,000	\$525,000
Malden	25,161	12	9	-28.6%	246	212	-13.8%	\$365,000	\$325,000
Manchester	2,394	11	17	55.8%	65	48	-26.2%	\$725,000	\$750,000
Marblehead	8,838	16	5	-67.9%	234	56	-76.1%	\$581,500	\$585,600
Marion	2,445	9	19	111.1%	75	56	-25.3%	\$445,000	\$365,000
Marlborough	16,416	29	27	-6.9%	257	214	-16.7%	\$359,950	\$310,000
Marshfield	10,940	26	29	11.5%	286	248	-13.3%	\$432,000	\$362,750
Mattapoissett	3,262	24	19	-20.8%	63	66	4.8%	\$390,000	\$365,000
Maynard	4,447	36	21	-42.9%	122	106	-13.1%	\$357,450	\$317,000
Medfield	4,237	111	24	-78.4%	150	170	13.3%	\$617,500	\$568,250
Medford	24,046	8	2	-78.6%	310	278	-10.3%	\$399,900	\$420,000
Medway	4,613	26	24	-7.7%	142	100	-29.6%	\$436,570	\$383,750
Melrose	11,751	3	62	1957.1%	276	182	-34.1%	\$428,950	\$475,500
Merrimac	2,555	27	26	-4.8%	60	66	10.0%	\$372,500	\$348,950
Methuen	18,340	123	108	-12.2%	388	380	-2.1%	\$328,000	\$268,000
Middleborough	9,023	139	214	54.2%	191	138	-27.7%	\$339,900	\$272,500
Middleton	3,045	32	24	-25.0%	73	60	-17.8%	\$582,500	\$635,000
Millis	3,158	27	5	-81.0%	67	64	-4.5%	\$386,500	\$379,000
Milton	9,700	10	2	-82.9%	283	262	-7.4%	\$475,000	\$525,000
Nahant	1,677	0	0	0.0%	23	30	30.4%	\$557,750	\$450,000
Natick	14,121	206	63	-69.2%	369	310	-16.0%	\$459,450	\$477,000
Needham	11,122	106	166	56.9%	378	364	-3.7%	\$663,750	\$805,000
Newbury	2,936	16	21	28.6%	72	76	5.6%	\$452,500	\$427,000
Newburyport	8,264	12	14	14.3%	198	160	-19.2%	\$456,175	\$490,000
Newton	32,648	67	26	-61.6%	634	582	-8.2%	\$760,000	\$941,000
Norfolk	3,121	43	46	7.6%	121	110	-9.1%	\$505,000	\$440,000
North Andover	10,964	46	34	-25.5%	263	244	-7.2%	\$581,250	\$480,000
North Reading	5,633	29	17	-40.9%	173	162	-6.4%	\$480,000	\$456,020
Norwell	3,675	37	17	-53.7%	142	128	-9.9%	\$548,000	\$506,750

Appendix A Municipal Scorecard, continued

Municipality	Production and Sales (cont.)			Foreclosure Activity					
	Median Single Family Home Selling Price Through June 2015	Percent Change in Median Single Family Sales Price, 2005-June 2015	Percent Change in Median Single Family Sales Price, 2014-June 2015	Petitions to Foreclose, 2014	Petitions to Foreclose, 2015 (Estimate)	Foreclosure Deeds 2014	Foreclosure Deeds 2015 (Estimate)	Percent Change in Petitions to Foreclose, 2014-2015 (Estimate)	Percent Change in Foreclosure Deeds, 2014-2015 (Estimate)
Lynnfield	\$555,000	-0.9%	5.7%	10	30	6	12	200.0%	100.0%
Malden	\$351,500	-3.7%	8.2%	75	78	29	28	4.0%	-3.4%
Manchester	\$710,000	-2.1%	-5.3%	5	14	7	6	180.0%	-14.3%
Marblehead	\$570,000	-2.0%	-2.7%	20	22	5	8	10.0%	60.0%
Marion	\$384,500	-13.6%	5.3%	13	8	8	4	-38.5%	-50.0%
Marlborough	\$300,000	-16.7%	-3.2%	64	144	32	46	125.0%	43.8%
Marshfield	\$399,300	-7.6%	10.1%	67	70	28	32	4.5%	14.3%
Mattapoissett	\$375,000	-3.8%	2.7%	9	12	3	4	33.3%	33.3%
Maynard	\$325,900	-8.8%	2.8%	15	40	6	20	166.7%	233.3%
Medfield	\$640,000	3.6%	12.6%	12	8	4	12	-33.3%	200.0%
Medford	\$455,000	13.8%	8.3%	63	98	20	18	55.6%	-10.0%
Medway	\$362,500	-17.0%	-5.5%	39	18	9	24	-53.8%	166.7%
Melrose	\$487,000	13.5%	2.4%	42	18	24	2	-57.1%	-91.7%
Merrimac	\$330,000	-11.4%	-5.4%	25	42	8	22	68.0%	175.0%
Methuen	\$270,900	-17.4%	1.1%	146	198	55	76	35.6%	38.2%
Middleborough	\$275,000	-19.1%	0.9%	80	118	27	58	47.5%	114.8%
Middleton	\$628,150	7.8%	-1.1%	18	34	8	16	88.9%	100.0%
Millis	\$345,500	-10.6%	-8.8%	21	24	7	16	14.3%	128.6%
Milton	\$559,900	17.9%	6.6%	42	62	18	8	47.6%	-55.6%
Nahant	\$530,000	-5.0%	17.8%	10	32	5	28	220.0%	460.0%
Natick	\$497,500	8.3%	4.3%	45	42	14	20	-6.7%	42.9%
Needham	\$849,000	27.9%	5.5%	18	16	5	8	-11.1%	60.0%
Newbury	\$452,500	0.0%	6.0%	6	10	2	10	66.7%	400.0%
Newburyport	\$490,000	7.4%	0.0%	25	24	15	18	-4.0%	20.0%
Newton	\$1,120,000	47.4%	19.0%	39	48	14	20	23.1%	42.9%
Norfolk	\$487,500	-3.5%	10.8%	8	20	10	8	150.0%	-20.0%
North Andover	\$475,500	-18.2%	-0.9%	39	42	16	32	7.7%	100.0%
North Reading	\$456,000	-5.0%	0.0%	28	38	12	2	35.7%	-83.3%
Norwell	\$550,011	0.4%	8.5%	17	30	0	8	76.5%	0.0%

Appendix A Municipal Scorecard, continued

Municipality	Production and Sales								
	Total Housing Units (2010 Census)	Units Permitted in 2014	Units Permitted 2015 (Estimate)	% Change 2014 to 2015 (Estimate)	Number of Single Family Home Sales 2014	Number of Single Family Home Sales 2015 (Estimate)	Percent Change in Number of Single Family Sales, 2014-2015 (Estimate)	Median Single Family Home Selling Price 2005	Median Single Family Home Selling Price 2014
Norwood	12,479	9	3	-61.9%	220	214	-2.7%	\$404,000	\$381,250
Peabody	22,220	25	27	9.7%	360	304	-15.6%	\$385,000	\$341,000
Pembroke	6,552	24	17	-28.6%	193	182	-5.7%	\$350,050	\$309,900
Pepperell	4,348	13	7	-47.3%	106	80	-24.5%	\$365,000	\$300,000
Plainville	3,482	46	63	37.9%	68	76	11.8%	\$379,000	\$351,000
Plymouth	24,800	236	221	-6.3%	624	554	-11.2%	\$350,000	\$309,900
Plympton	1,043	6	2	-71.4%	43	38	-11.6%	\$400,000	\$295,000
Quincy	42,838	119	250	110.3%	547	482	-11.9%	\$375,000	\$375,000
Randolph	12,008	23	10	-55.3%	268	234	-12.7%	\$350,000	\$255,000
Reading	9,617	62	70	13.4%	258	232	-10.1%	\$438,000	\$475,000
Revere	22,100	48	74	53.6%	177	150	-15.3%	\$340,000	\$284,000
Rochester	1,885	17	10	-41.2%	48	44	-8.3%	\$422,500	\$340,500
Rockland	7,051	31	21	-33.6%	135	126	-6.7%	\$320,000	\$268,000
Rockport	4,223	8	9	7.1%	68	58	-14.7%	\$445,000	\$425,000
Rowley	2,253	28	0	-100.0%	47	42	-10.6%	\$466,250	\$400,000
Salem	19,130	6	0	-100.0%	186	168	-9.7%	\$353,500	\$327,500
Salisbury	4,550	285	17	-94.0%	56	50	-10.7%	\$335,000	\$299,500
Saugus	10,775	15	14	-8.6%	209	224	7.2%	\$375,000	\$321,000
Scituate	8,035	29	43	47.8%	254	214	-15.7%	\$525,000	\$490,500
Sharon	6,456	16	7	-57.1%	214	150	-29.9%	\$455,000	\$488,425
Sherborn	1,495	3	2	-42.9%	53	62	17.0%	\$750,000	\$745,000
Shirley	2,427	17	14	-19.3%	43	50	16.3%	\$340,000	\$330,000
Somerville	33,720	0	0	0.0%	93	82	-11.8%	\$428,500	\$545,000
Stoneham	9,458	22	17	-22.1%	190	156	-17.9%	\$420,000	\$415,000
Stoughton	10,787	40	24	-40.0%	226	170	-24.8%	\$353,750	\$305,000
Stow	2,526	2	5	157.1%	92	50	-45.7%	\$493,750	\$446,000
Sudbury	5,951	25	34	37.1%	247	210	-15.0%	\$737,000	\$685,000
Swampscott	5,888	195	69	-64.8%	145	170	17.2%	\$516,150	\$439,000
Tewksbury	10,848	201	75	-62.5%	283	244	-13.8%	\$380,000	\$342,000

Appendix A Municipal Scorecard, continued

Municipality	Production and Sales (cont.)			Foreclosure Activity					
	Median Single Family Home Selling Price Through June 2015	Percent Change in Median Single Family Sales Price, 2005-June 2015	Percent Change in Median Single Family Sales Price, 2014-June 2015	Petitions to Foreclose, 2014	Petitions to Foreclose, 2015 (Estimate)	Foreclosure Deeds 2014	Foreclosure Deeds 2015 (Estimate)	Percent Change in Petitions to Foreclose, 2014-2015 (Estimate)	Percent Change in Foreclosure Deeds, 2014-2015 (Estimate)
Norwood	\$400,000	-1.0%	4.9%	45	54	8	8	20.0%	0.0%
Peabody	\$356,750	-7.3%	4.6%	92	154	43	62	67.4%	44.2%
Pembroke	\$330,000	-5.7%	6.5%	53	106	38	42	100.0%	10.5%
Pepperell	\$327,000	-10.4%	9.0%	25	46	14	16	84.0%	14.3%
Plainville	\$355,000	-6.3%	1.1%	23	12	4	8	-47.8%	100.0%
Plymouth	\$319,000	-8.9%	2.9%	263	356	100	118	35.4%	18.0%
Plympton	\$399,900	0.0%	35.6%	16	4	4	4	-75.0%	0.0%
Quincy	\$385,000	2.7%	2.7%	109	168	62	58	54.1%	-6.5%
Randolph	\$265,000	-24.3%	3.9%	135	168	50	60	24.4%	20.0%
Reading	\$493,500	12.7%	3.9%	28	26	3	10	-7.1%	233.3%
Revere	\$290,000	-14.7%	2.1%	120	182	37	60	51.7%	62.2%
Rochester	\$355,000	-16.0%	4.3%	14	16	8	8	14.3%	0.0%
Rockland	\$270,000	-15.6%	0.7%	58	74	22	38	27.6%	72.7%
Rockport	\$440,000	-1.1%	3.5%	9	72	0	12	700.0%	0.0%
Rowley	\$475,000	1.9%	18.8%	7	74	6	32	957.1%	433.3%
Salem	\$340,000	-3.8%	3.8%	105	70	38	46	-33.3%	21.1%
Salisbury	\$310,000	-7.5%	3.5%	25	32	23	6	28.0%	-73.9%
Saugus	\$327,950	-12.5%	2.2%	64	84	18	12	31.3%	-33.3%
Scituate	\$530,000	1.0%	8.1%	35	42	4	12	20.0%	200.0%
Sharon	\$495,000	8.8%	1.3%	16	10	10	0	-37.5%	-100.0%
Sherborn	\$720,000	-4.0%	-3.4%	5	10	4	6	100.0%	50.0%
Shirley	\$310,000	-8.8%	-6.1%	16	24	11	14	50.0%	27.3%
Somerville	\$577,000	34.7%	5.9%	36	100	17	10	177.8%	-41.2%
Stoneham	\$453,250	7.9%	9.2%	25	44	16	10	76.0%	-37.5%
Stoughton	\$285,000	-19.4%	-6.6%	75	66	17	18	-12.0%	5.9%
Stow	\$485,000	-1.8%	8.7%	4	6	0	4	50.0%	0.0%
Sudbury	\$654,000	-11.3%	-4.5%	14	10	6	6	-28.6%	0.0%
Swampscott	\$427,500	-17.2%	-2.6%	28	26	17	18	-7.1%	5.9%
Tewksbury	\$353,250	-7.0%	3.3%	72	32	22	10	-55.6%	-54.5%

Appendix A Municipal Scorecard, continued

Municipality	Production and Sales								
	Total Housing Units (2010 Census)	Units Permitted in 2014	Units Permitted 2015 (Estimate)	% Change 2014 to 2015 (Estimate)	Number of Single Family Home Sales 2014	Number of Single Family Home Sales 2015 (Estimate)	Percent Change in Number of Single Family Sales, 2014-2015 (Estimate)	Median Single Family Home Selling Price 2005	Median Single Family Home Selling Price 2014
Topsfield	2,175	6	10	71.4%	68	56	-17.6%	\$531,240	\$559,500
Townsend	3,385	24	17	-28.6%	97	128	32.0%	\$288,950	\$226,800
Tyngsborough	4,206	27	24	-11.1%	96	86	-10.4%	\$384,950	\$384,225
Wakefield	10,500	19	10	-45.9%	256	188	-26.6%	\$430,000	\$427,750
Walpole	9,040	61	31	-49.4%	256	186	-27.3%	\$462,500	\$434,500
Waltham	24,926	51	46	-9.2%	396	324	-18.2%	\$437,000	\$449,450
Wareham	12,256	31	26	-17.1%	310	282	-9.0%	\$270,000	\$199,450
Watertown	15,584	13	535	4014.3%	104	92	-11.5%	\$465,000	\$528,000
Wayland	5,021	39	22	-42.9%	146	170	16.4%	\$600,000	\$624,120
Wellesley	9,189	66	57	-14.3%	357	338	-5.3%	\$971,250	\$1,180,000
Wenham	1,430	6	7	14.3%	31	50	61.3%	\$521,950	\$571,000
West Bridgewater	2,669	17	10	-39.5%	69	36	-47.8%	\$350,000	\$270,000
West Newbury	1,580	14	22	59.2%	49	56	14.3%	\$480,000	\$483,000
Westford	7,876	25	43	71.4%	210	154	-26.7%	\$515,000	\$492,500
Weston	4,008	31	14	-55.8%	156	130	-16.7%	\$1,200,000	\$1,349,000
Westwood	5,431	387	19	-95.1%	184	172	-6.5%	\$608,000	\$608,600
Weymouth	23,480	75	60	-20.0%	461	470	2.0%	\$345,000	\$317,000
Whitman	5,522	25	19	-24.6%	127	82	-35.4%	\$315,450	\$264,000
Wilmington	7,808	34	45	31.1%	263	162	-38.4%	\$385,000	\$375,000
Winchester	7,986	35	36	2.9%	231	210	-9.1%	\$735,500	\$905,000
Winthrop	8,320	49	105	113.4%	80	78	-2.5%	\$380,000	\$329,000
Woburn	16,309	67	33	-51.4%	264	280	6.1%	\$390,000	\$374,950
Wrentham	3,869	46	53	15.5%	136	128	-5.9%	\$406,000	\$412,500

Sources:

Data on the number of sales and median sales prices, along with data on foreclosure petitions, auctions, and deeds, were provided by the Warren Group.

Foreclosure data represent the number of foreclosures on single-family, 2-family, 3-family, 4 or more family, and condominium properties.

Data on building permits are taken from the U.S. Census Building Permit Survey.

2015 estimates for home sales were calculated based on number of sales through the end of the second quarter of 2015 multiplied by 2.

2015 estimates for permit data were calculated based on the sum of all permits in a given town through July multiplied by 12/7.

Appendix A Municipal Scorecard, continued

Municipality	Production and Sales (cont.)			Foreclosure Activity					
	Median Single Family Home Selling Price Through June 2015	Percent Change in Median Single Family Sales Price, 2005-June 2015	Percent Change in Median Single Family Sales Price, 2014-June 2015	Petitions to Foreclose, 2014	Petitions to Foreclose, 2015 (Estimate)	Foreclosure Deeds 2014	Foreclosure Deeds 2015 (Estimate)	Percent Change in Petitions to Foreclose, 2014-2015 (Estimate)	Percent Change in Foreclosure Deeds, 2014-2015 (Estimate)
Topsfield	\$508,125	-4.4%	-9.2%	16	22	2	4	37.5%	100.0%
Townsend	\$252,000	-12.8%	11.1%	43	28	12	14	-34.9%	16.7%
Tyngsborough	\$335,000	-13.0%	-12.8%	28	24	9	8	-14.3%	-11.1%
Wakefield	\$447,500	4.1%	4.6%	26	26	11	8	0.0%	-27.3%
Walpole	\$504,500	9.1%	16.1%	32	38	12	14	18.8%	16.7%
Waltham	\$443,450	1.5%	-1.3%	28	214	16	90	664.3%	462.5%
Wareham	\$222,000	-17.8%	11.3%	160	204	70	126	27.5%	80.0%
Watertown	\$578,250	24.4%	9.5%	25	20	6	4	-20.0%	-33.3%
Wayland	\$655,550	9.3%	5.0%	19	20	4	6	5.3%	50.0%
Wellesley	\$1,200,000	23.6%	1.7%	10	14	1	0	40.0%	-100.0%
Wenham	\$565,000	8.2%	-1.1%	4	28	4	10	600.0%	150.0%
West Bridgewater	\$319,500	-8.7%	18.3%	26	20	10	4	-23.1%	-60.0%
West Newbury	\$533,000	11.0%	10.4%	8	34	0	22	325.0%	0.0%
Westford	\$450,000	-12.6%	-8.6%	20	20	12	2	0.0%	-83.3%
Weston	\$1,280,000	6.7%	-5.1%	8	12	0	8	50.0%	0.0%
Westwood	\$677,500	11.4%	11.3%	4	40	2	22	900.0%	1000.0%
Weymouth	\$325,000	-5.8%	2.5%	149	126	58	70	-15.4%	20.7%
Whitman	\$250,000	-20.7%	-5.3%	58	52	18	6	-10.3%	-66.7%
Wilmington	\$403,900	4.9%	7.7%	57	32	8	8	-43.9%	0.0%
Winchester	\$910,000	23.7%	0.6%	13	84	4	24	546.2%	500.0%
Winthrop	\$390,000	2.6%	18.5%	53	44	20	12	-17.0%	-40.0%
Woburn	\$400,000	2.6%	6.7%	48	44	31	8	-8.3%	-74.2%
Wrentham	\$462,500	13.9%	12.1%	22	548	4	342	2390.9%	8450.0%

NOTES

