Building for the Middle:
Housing Greater Boston's Workforce

Urban Land Institute Boston/New England

Urban Land Institute Terwilliger Center for Housing

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Acknowledgements

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The Urban Land Institute is a nonprofit research and education organization whose mission is to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide. Established in 1936, the Institute today has more than 38,000 members and associates from 82 countries representing the entire spectrum of the land use and development disciplines.

ULI relies heavily on the experience of its members. It is through member involvement and information resources that ULI has been able to set standards of excellence in development practice. The Institute is recognized internationally as one of America's most respected and widely quoted sources of objective information on urban planning, growth, and development.

About the Housing and Economic Development Council

The ULI Boston/New England Housing and Economic Development local product council typically focuses on issues of housing affordability, housing policy, and the creation, development, and financing of urban multifamily housing in all income categories. This multidisciplinary group includes for-profit housing developers, community development corporations, housing investors, public sector leaders, and housing design and construction firms.

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Executive Summary

Greater Boston needs more housing in order to attract and retain the workforce that a growing economy demands. It is well known that the region's housing prices are among the highest in the nation—a situation decades in the making. A variety of physical, political, and regulatory barriers have restricted dense development across much of the region. In turn, homebuyers and renters have bid up the prices of the limited housing available. The high price of housing has become burdensome for many working families, which makes recruitment and retention of workers more difficult for employers. There is growing concern that high housing costs may present a significant impediment to long-term economic growth.

The high price of housing in the region poses particular challenges for middle-income working households—the focus of this study. Middle-income households—defined here as those earning 80 to 120 percent of the area median income—earn too much to qualify for subsidized housing but not enough to have unlimited choices in the housing market. Due to a combination of economic and housing market factors, the number of middle-income working households in the region has declined by 3 percent since 1990 while the number of low- and high-income households has increased substantially. Analysis of the current and future middle-income housing needs identified the following key findings:

- More than a third of middle-income households are housing cost burdened, meaning they devote more than 30 percent of their income to rent, mortgage, or other housing-related payments. Lower middle-income households are particularly burdened: 42 percent regionwide are cost burdened. The burden for middle-income households is greater in Boston and surrounding communities than in the rest of the region. For homeowners, this represents a reversal of patterns that existed 25 years ago, when the homeowner cost burden in Boston and the surrounding communities was lower.

- Rental and ownership opportunities affordable to middle-income households are abundant in regional urban centers such as Brockton, Lowell, and Lynn. Investments in education, public safety, and quality of life could encourage more middle-income households to take advantage of these opportunities and also benefit the existing residents. At the same time, many suburban communities remain exclusive, with most houses, condos, and apartments affordable only to high-income households. In more than three dozen cities and towns in the region, less than 10 percent of sales of single-family homes or condos are at prices affordable to a hypothetical four-person household earning $75,000 (lower middle income). In two dozen communities, for the same household looking to rent, less than 10 percent of rental listings (houses with two or more bedrooms) are affordable.

- High development costs in the region, created by a combination of factors involving land, construction, and permitting, make it difficult to produce units that can be rented or sold at prices affordable to middle-income households. As a result, the private market will have limited ability to provide new housing for middle-income households without some form of intervention related to development density, land acquisition, or construction costs.

- A growing economy in Metro Boston will require more than 800,000 new workers by 2030 who will form nearly 500,000 new working households. The turnover of housing—in particular homes vacated by baby boomers and other householders born before 1970—could meet much of that demand, but 200,000 additional units of housing, at a variety of price points, are needed to prevent an increased housing cost burden and to moderate housing price escalation. At least 21,000 of those 200,000 new units are needed to fill the gap for new middle-income households, and maybe even more will be needed if price escalation of existing units continues. More troubling, the region may see a gap of 108,000 units in the supply of homes afforable to low-income households.

- The enormous and continuing growth in the number of low-income working households suggests that changes in more than housing policy are needed to fully resolve the region's housing crisis. Continued wage polarization, with its disparate negative impacts on the income status of African American and Latino working households, threatens to create a perpetually growing low-income workforce for which there are few sustainable housing solutions, whether those solutions involve production, subsidy, or "filtering" (older units becoming available to lower-income households as the units age). On the other hand, if wage deflation in service and low-skilled jobs is slowed or reversed, it would increase the number of middle-income households with at least some hope of being able to afford market rents. In other words, solving the low-income housing problem may entail increasing the demand for middle-income housing.

These findings offer a variety of strategies and policy approaches:

- Increase housing production for all income levels, in particular in inner-core communities that have been losing middle-income households at a faster rate than the rest of the region.

- Streamline opportunities for low- and middle-income housing in wealthier suburban communities.

- Capitalize on the energy and abundant affordable housing opportunities offered by regional urban centers to build communities of choice for middle-income households.

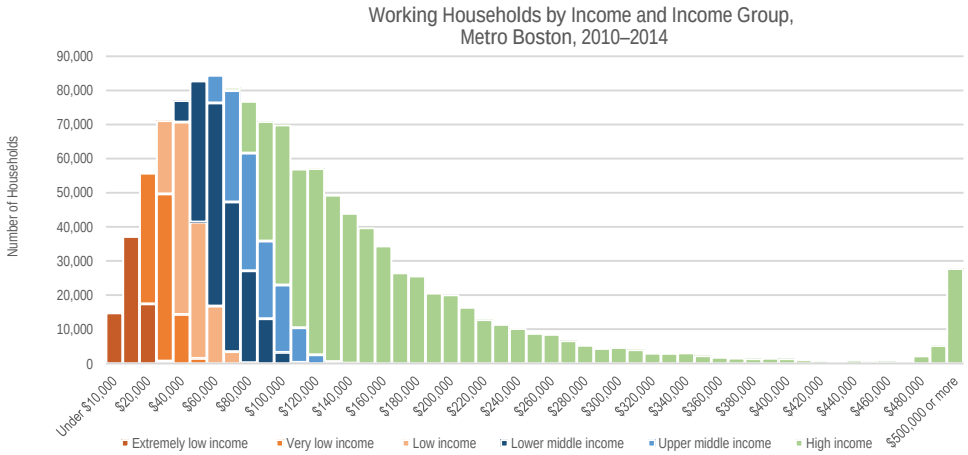

Figure 1 Household income distribution for working households in Metro Boston, 2010–2014. Middle-income households make up 26 percent of these households, with incomes ranging from roughly $50,000 to $130,000, depending on household size. Data source: U.S. Census Bureau Public Use Microdata Sample (PUMS) 2010–2014.

Introduction

Communities in Massachusetts have been facing housing challenges for decades. Public and private partners have implemented a wide variety of strategies to address these challenges and achieved varying degrees of success. Most housing programs are targeted to low-income households—generally those earning no more than 80 percent of the area median income (AMI), and in many cases earning much less than that. In recent years, there has been growing interest in the topic of workforce housing. The term has no formal definition: most users consider it synonymous with middle-income housing, but few agree on how much or how little a family must make to earn the moniker "middle income."

Nevertheless, there is a growing sense that the housing problems that once affected only "poor" people are now affecting a greater number of households at higher and higher incomes. Many people fear that high housing prices are driving middle-income families out of their neighborhoods. At all levels of government, there is a growing sense that something must be done about workforce housing. The question is what workforce housing even is.

To one person, workforce housing could mean the old brick rowhouses in Waltham, built to house factory workers more than a century ago. To another, workforce housing is housing for today's millennial generation—young adults who are driving the innovation economy but who have not yet climbed far enough up the employment ladder to be able to afford housing near their jobs, friends, and entertainment venues. Some think of workforce housing as multifamily subsidized rental units or low-cost, market-rate housing in gateway cities that very low-income workers might be able to rent. Employers might think of workforce housing as the buildings their particular workers call home. Some think of workforce housing as single-family homes in suburbs with high-quality schools—suitable for midlevel managers and their workplace superiors. Yet others use the term to refer to housing that is affordable to moderate-income earners—those who earn too much to qualify for subsidized housing but not enough to have many housing options.

In the past decade, as substantial national and local research has focused on workforce housing, many common themes have emerged. All signs indicate that Metro Boston is not alone in this crisis. Low- and moderate-income households all across America are burdened by the high cost of housing, and the situation is getting worse.

"Good growth management requires that we accomodate the needs of our young, skilled workforce while making room for existing and new lower-wage workers. It requires our city to find ways to retain and expand our middle class, while also finding ways to care for our seniors."

Housing a Changing City:
Boston 2030, Boston's 2014 Housing Plan

The 2015 America's Rental Housing report by Harvard University's Joint Center for Housing Studies found that the number of U.S. households living in rental housing rose by 9 million from 2005 to 2015, the largest gain in any ten-year period. Demographic trends such as millennials marrying later and having children later than previous generations and the decline in homeownership for baby boomers have been fueling the shift. Moreover, most of the nation's new renters earn less than $25,000 per year, at a time when apartment vacancy rates are at their lowest point since 1985 and rents are rising at the fastest pace in 30 years. From 2003 to 2013, the number of low-income renter households increased by 40 percent, but the number of low-cost rental units increased by only 10 percent. Growth in moderate-income renter households also outpaced production of units they could afford, by a rate of 31 percent to 12 percent. As a result, the number of cost-burdened renters reached a record high in 2015.

In Metro Boston, there is a well-founded and nearly universal consensus that the region is experiencing a supply crisis 25 years in the making. Data make it clear that new construction for low- and moderate-income households has not been keeping up with demand, due in part to high construction costs and regulatory barriers. ULI examined this topic in the 2010 report Priced Out: Persistence of the Workforce Housing Gap in the Boston Metro Area. That report concluded that "the high cost of land, entitlement, and construction makes developing new rental housing for these households challenging, if not impossible." Similarly, The Greater Boston Housing Report Card 2015, published by the Boston Foundation, concluded that "the cost of developing new housing for working and middle-income households has become prohibitive in Massachusetts," adding, "Radical remedies will be needed." The lack of housing production has proved especially dire for the lowest-income households. A 2015 Urban Institute report found that in Suffolk County, Massachusetts, as of 2013, 51 adequate and affordable units were available for every 100 renter households with an income at or below 30 percent of AMI.

While the focus of Massachusetts affordable housing policy is—and should remain—serving the needs of low-income households, there are good reasons to be concerned about housing for middle-income households that may never qualify for a subsidy. With the retirement of the baby boomers, job vacancies will occur at all skill and income levels that need to be filled if the region's economy is to grow. A recent Massachusetts Housing Partnership report compared the Boston region to its economic competitors in innovation industries such as health care research and manufacturing, higher education, technology, scientific research and development, and financial services. The Boston area has a relatively large innovation economy, but other regions are adding innovation workers at faster rates. The report emphasizes, "Not only are we producing less housing than we have historically, we are producing less housing than many of the places with which we compete for jobs and residents."

This ULI Boston/New England report seeks to examine in greater detail the interaction between income and housing availability in the region, looking back to 1990 and forward to 2030. Using individual worker- and household-level census records, it examines the occupations, income distribution, and housing cost burden of households with at least one worker (termed working households). The objective is to build a better understanding of how the needs of working households have changed over the past 25 years and how many housing units might be needed to serve a growing workforce through 2030. This research will set the stage for future ULI and public sector efforts to help craft and implement actions to supply those units.

Glossary and Geographic Scope of the Project

The following terms are used in this report:

Working households. Those in which at least one member is employed, reports wage income, and is not enrolled in school.

Low-income households. Those whose income is less than the U.S. Department of Housing and Urban Development low income limits—nominally 80 percent of household area median income (AMI), but subject to regional adjustments.

Middle-income households. Those earning more than the low-income limit and less than 120 percent of AMI.

Lower middle-income households. Those earning 80 to 100 percent of AMI.

Upper middle-income households. Those earning 100 to 120 percent of AMI.

High-income households. Those earning more than 120 percent of AMI.

Affordable Housing Income Limits, Greater Boston, FY2014

Household size	Extremely low income (30% AMI)	Very low income (50% AMI)	Low income (80% AMI)	Lower middle income (100% AMI)	Upper middle income (120% AMI)
1 persons	$19,800	$32,950	$47,450	$65,900	$79,080
2 persons	$22,600	$37,650	$54,200	$75,300	$90,360
3 persons	$25,450	$42,350	$61,000	$84,700	$101,640
4 persons	$28,250	$47,050	$67,750	$94,100	$112,920
5 persons	$30,550	$50,850	$73,200	$101,700	$122,040

Table 1 Household income limits by number of people living in household. Low-income limits are defined by the U.S. Department of Housing and Urban Development; middle-income limits are calculated by the Metropolitan Area Planning Council. Data sources: U.S. Department of Housing and Urban Development; Metropolitan Area Planning Council (MAPC) analysis.

Note: For historical comparisons, reported household income from the 1990 U.S. census is adjusted for inflation, based on the national Consumer Price Index, and then assigned to income categories based on the 2014 thresholds.

The study area covers most of Eastern Massachusetts. Because of shifting U.S. Census Bureau boundaries over time, subregional analysis of most household data in the report is available for only three geographic areas: the city of Boston; the Inner Ring (Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Milton, Newton, Quincy, Revere, Somerville, and Winthrop); and the rest of the region. While the outer edges of the study area have not remained consistent over time, the population of the areas that have changed is very small in relation to the rest of the region.

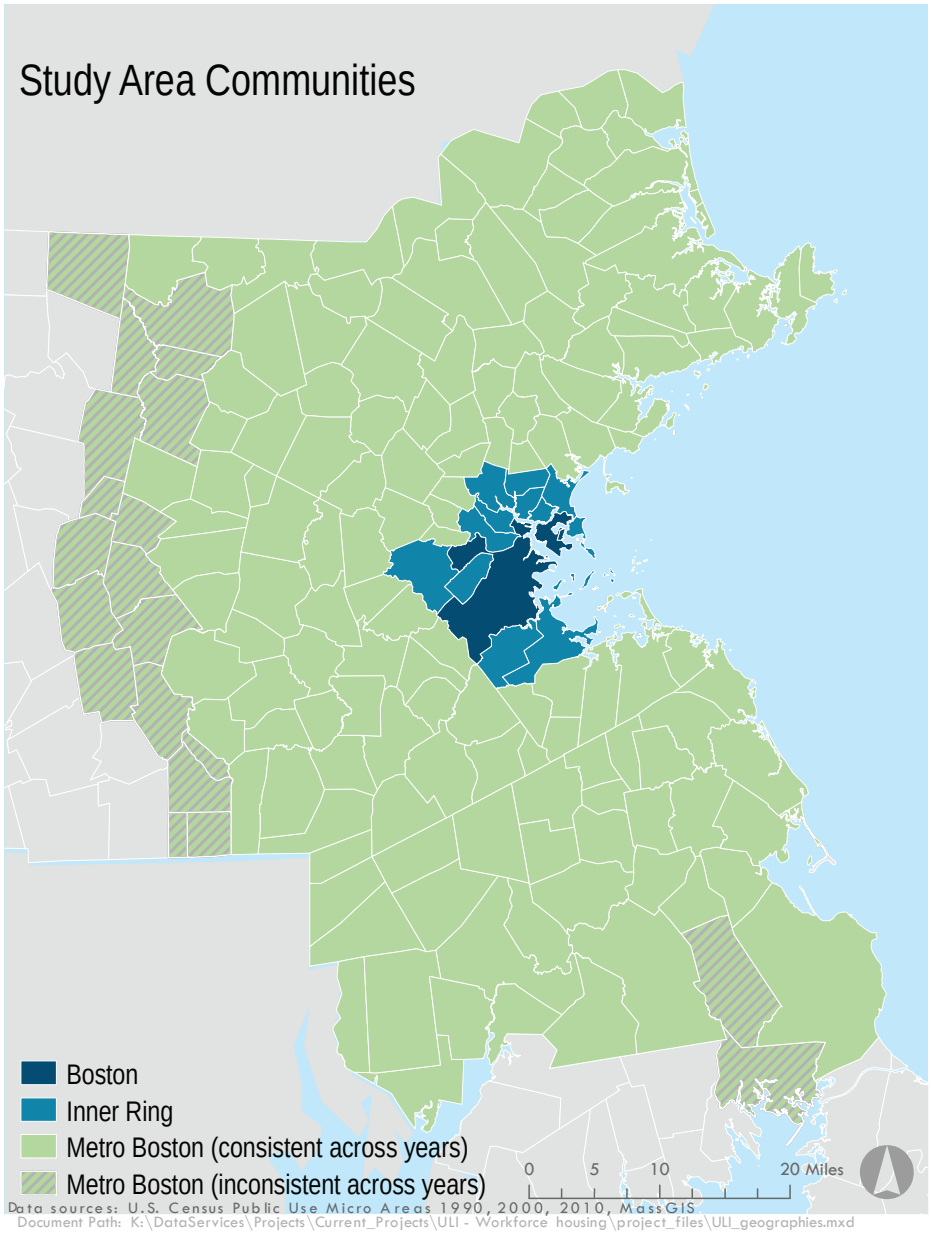

Figure 2 Geographic study areas. Data sources: U.S. Census Bureau Public Use Microdata Areas 1990, 2000, and 2010; the Massachusetts Office of Geographic Information (MassGIS).

Broad Economic and Occupational Trends Are Hollowing Out the Middle Class

In 1990, there were 1,018,000 working households in Metro Boston. Of those households, 45 percent were high income, 33 percent were middle income, and 22 percent were low income. Between 1990 and 2014, the number of working households in the region rose 23 percent to 1,251,000. Yet, over that time, the number of middle-income working households in the region fell 2 percent from 333,000 to 325,000, and their share of working households declined from 33 percent to 26 percent. The number of high-income working households rose 33 percent from 462,000 to 614,000, and their share increased from 45 percent to 49 percent; the number of low-income working households rose 40 percent from 223,000 to 312,000, and their share increased from 22 percent to 25 percent. Almost half the increase in low-income working households came from growth in extremely low-income working households, as defined in table 1 on page 10.

The decline in the number of middle-income working families with children was profound: the number of such families declined by 11 percent regionwide, with losses of 14 percent in Boston and 10 percent in the area outside the Inner Ring. The number of middle-income working households without children also declined by at least 10 percent in Boston and the Inner Ring, while increasing in the rest of the region.

Some of these shifts can be explained by demographic trends. In 1990, baby boomers were between the ages of 25 and 45—prime child-rearing years. Today, they are over 50 years old, and many are now empty nesters while still participating in the labor force. Fewer millennials have reached those prime years. As a result of this demographic lull between two generations—filled by the smaller generation X—there are fewer working-family households with children and relatively more married-couple households without children, workers living alone, and nonfamily households.

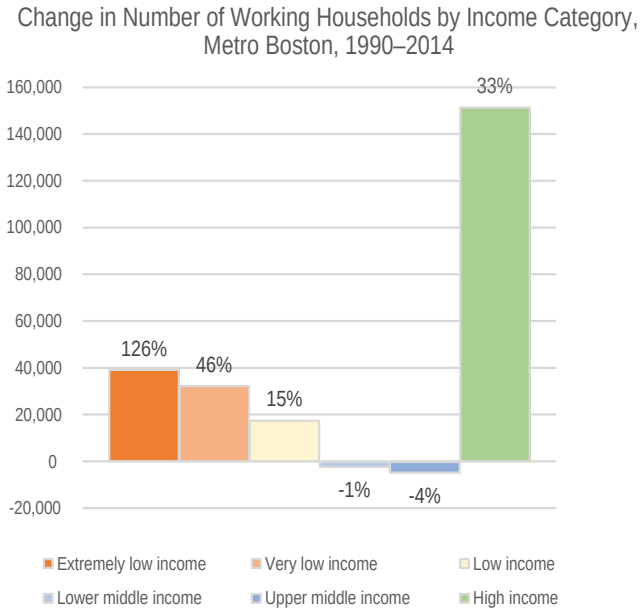

Figure 3 Between 1990 and 2010–2014, the number of middle-income working households fell while the number of low- and high-income households grew. Data sources: U.S. Census Bureau Public Use Microdata Sample (PUMS) 1990 and PUMS 2010–2014.

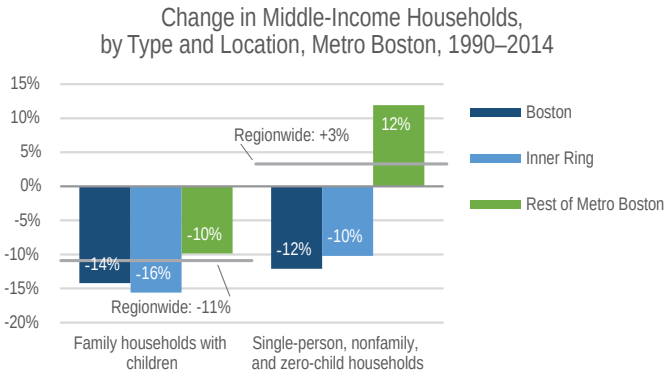

Figure 4 Boston and the Inner Ring lost middle-income families with children faster than did the rest of the region. The only gain in middle-income households was among households without children outside Boston and the Inner Ring. Data source: U.S. Census Bureau Public Use Microdata Sample (PUMS) 1990 and PUMS 2010–2014.

Regardless of household composition, economic shifts in the region have contributed to the net loss of middle-income working households between 1990 and 2014. During that period, the region has seen a decline in predominantly "middle-income occupations," such as office, administrative, and maintenance jobs; a shift to lower-wage work in occupations such as sales and food preparation; and disproportionate growth in high-wage jobs in management, health care, and technology-related occupations.

Four patterns of occupational wage change have contributed to wage polarization over the past 25 years (see figure 5).

The region saw a decline in several "core" middle-income occupations—those most likely to be filled by someone heading a middle-income household. Among workers in all occupations, those in installation, maintenance, and repair jobs have the highest likelihood of being the principal wage earner of a middle-income household. Unfortunately, these occupations also saw the largest 25-year decline in the number of principal earners, resulting in the loss of more than 30,000 middle-income households. Other occupations have seen loss of middle-income jobs coupled with growth in low-income jobs. Troublingly, two of the region's largest occupations—office and administrative support, and sales—follow this trend.

Among growing occupations, there are two categories: those occupations that have seen a disproportionately large growth in low-income jobs, and those that have seen a disproportionately large growth in high-income jobs. Food preparation and serving, one of the fastest-growing occupations in the region, falls in the first group; health care practitioners and technical occupations, which have added the highest number of principal earners in the region since 1990, fall in the latter.

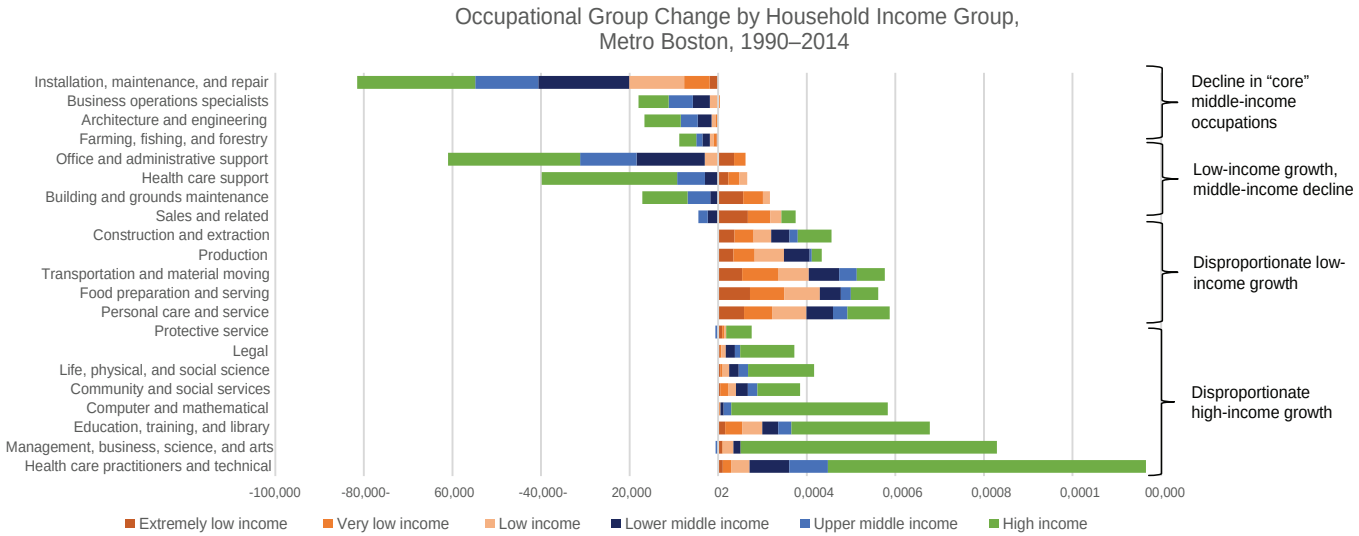

Figure 5 Occupational changes since 1990 show four patterns that have contributed to wage polarization. Data sources: U.S. Census Bureau Public Use Microdata Sample (PUMS) 1990 and PUMS 2010–2014; U.S. Bureau of Labor Statistics.

The impact of these shifts has not been evenly distributed across racial and ethnic groups. More than or nearly half of non-Latino white, multiracial, and Asian working households are high income, compared with only 22 percent of African American and 15 percent of Latino working households. Because half of African American and over 60 percent of Latino working households are low income, the lack of housing affordability for lower-income working households has disproportionate impacts on these households and may contribute to continued racial segregation in the region.

The disparity in working household incomes across racial categories has become more significant over time. The share of middle-income working households among all racial and ethnic categories declined between 1990 and 2014, but with different outcomes: Asian and non-Latino whites were much more likely to lead high-income households, while African American and Latino principal earners were more likely to lead low-income households.

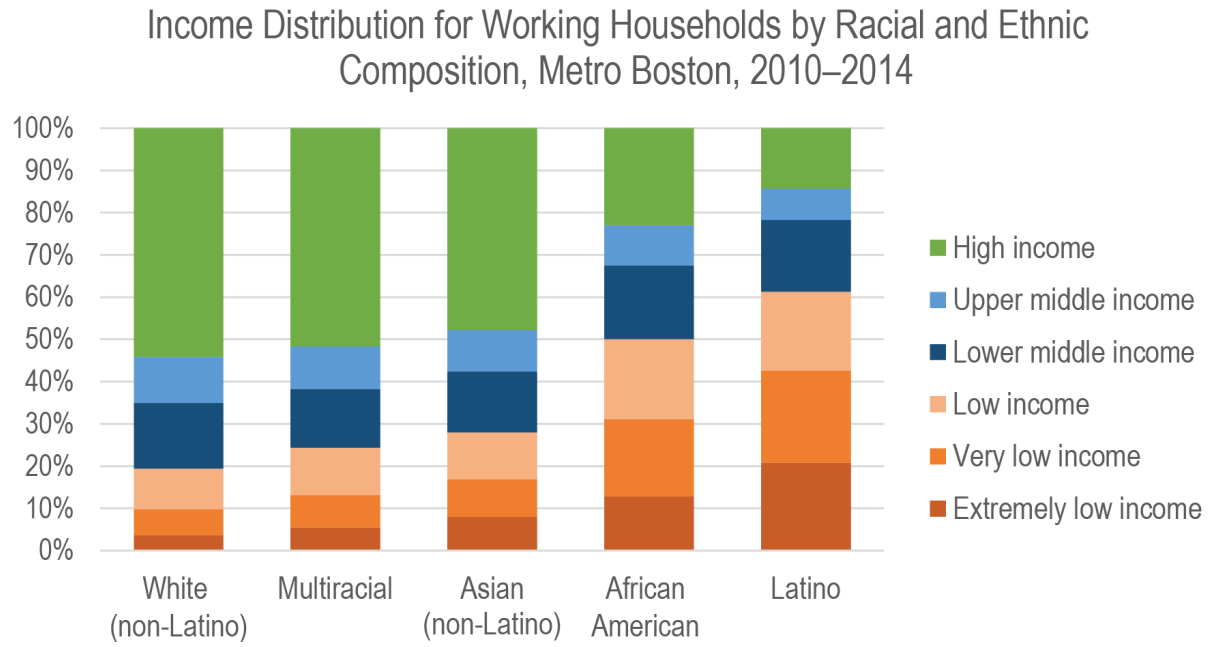

Figure 6 African American and Latino working households constitute a disproportionately high share of lower-income households in Metro Boston. Data source: U.S. Census Bureau Public Use Microdata Sample (PUMS) 2010–2014.

The Middle-Income Cost Burden is Worsening, Especially in the Region's Core

Thirty-six percent of all middle-income households are considered cost burdened: they spend more than 30 percent of their income on housing costs. Renter cost burden is more prevalent in Boston and the Inner Ring than in the rest of the region. Regionwide, cost burden is more common among lower middle-income households, at 42 percent of households, than upper middle-income households, at 27 percent.

Housing cost burden for middle-income homeowners increased dramatically from 1990 to 2014—from 27 percent of households to 43 percent, representing an increase of more than 35,000 cost-burdened homeowners. The increase was the most dramatic for homeowners in Boston and the Inner Ring, where cost-burden rates increased by 27 percentage points since 1990, versus an increase of only 14 percentage points in the rest of the region.

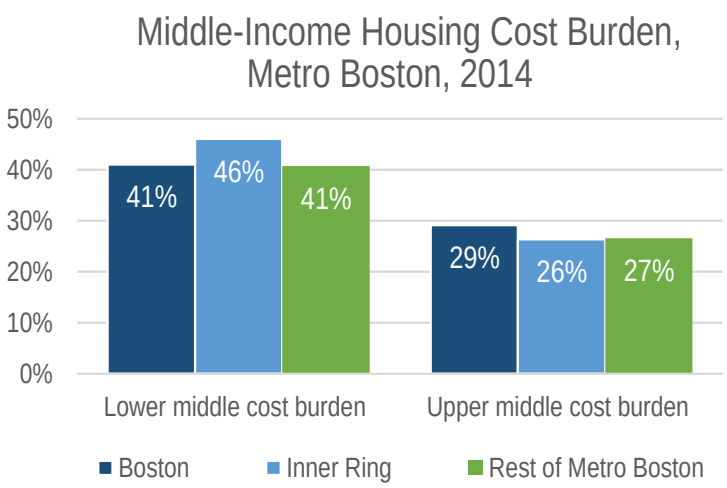

Figure 7 Housing cost burden is more prevalent among lower middle-income households than among upper middle-income households. Data source: U.S. Census Bureau Public Use Microdata Sample 2010–2014.

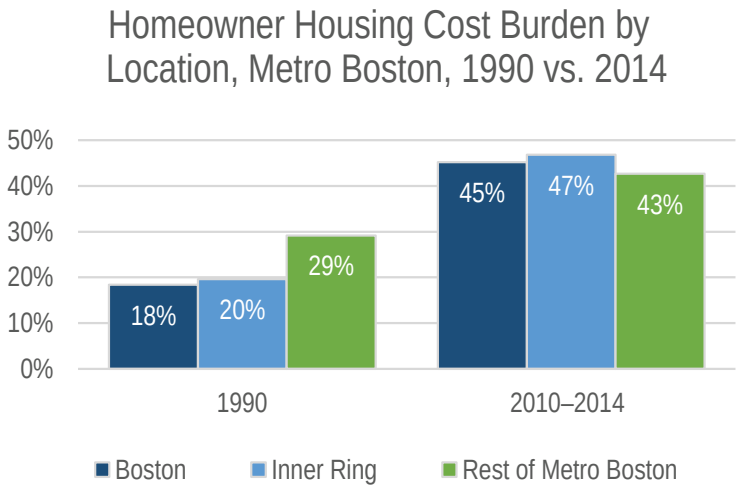

Figure 8 Housing cost burden among homeowners has become more prevalent since 1990. Data sources: U.S. Census Bureau Public Use Microdata Sample (PUMS) 1990 and PUMS 2010–2014.

Housing Affordable to Middle-Income Households is Scarce in Many Communities

Increases in housing cost burden can be explained by the fact that there simply are not enough housing units in the region affordable to middle-income households. According to property sales data for 2014 and 2015 provided by the Warren Group, 22 percent of single-family homes and 39 percent of condos sold in the region are affordable for a hypothetical lower middle-income household with two workers and two children and a household annual income of $75,000. (This analysis accounts for purchase price, financing, property taxes, and transportation costs, and assumes a 45 percent upper limit on combined housing and estimated transportation costs.)

Analysis of 111,000 rental listings from late 2015 to early 2016 indicates that within the Metropolitan Area Planning Council (MAPC) region (smaller than the area used for other analyses in this report), only 12 percent of available rentals with two or more bedrooms are affordable to the hypothetical four-person household. Affordable rentals appear to be more scarce than affordable for-sale units, though student debt and downpayment requirements may present other barriers to homeownership. Affordable units, both for rent and for sale, are more abundant in regional urban centers such as Brockton, Lynn, and Lowell, as well as in many more remote suburban municipalities.

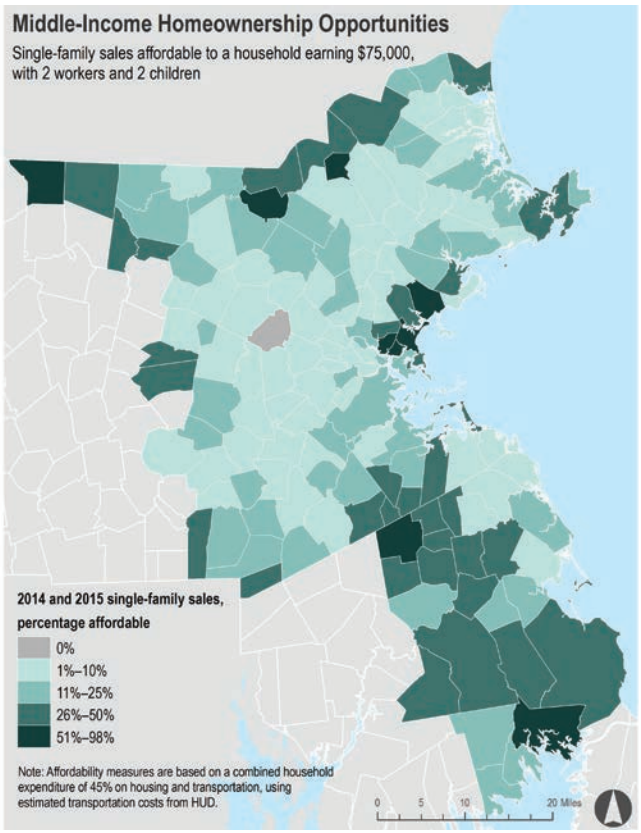

Figure 9

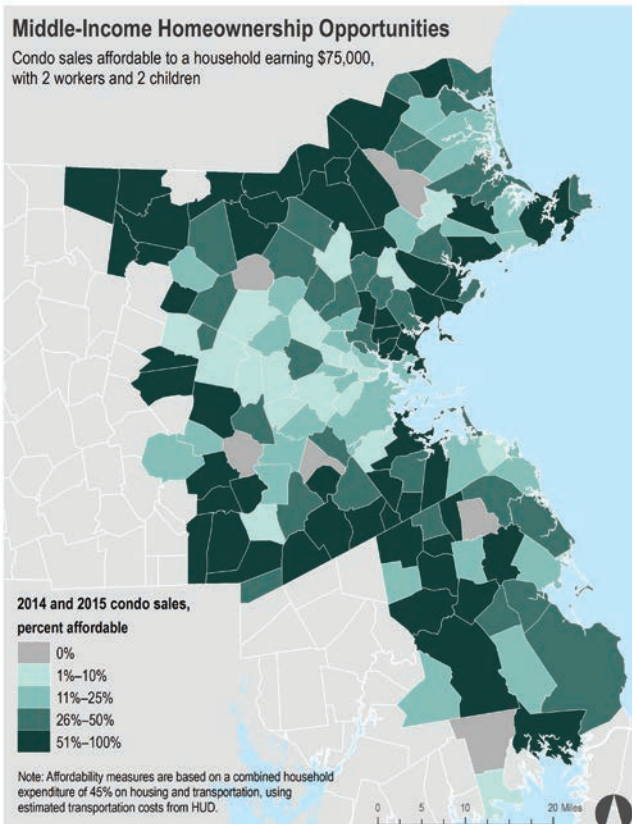

Figure 10

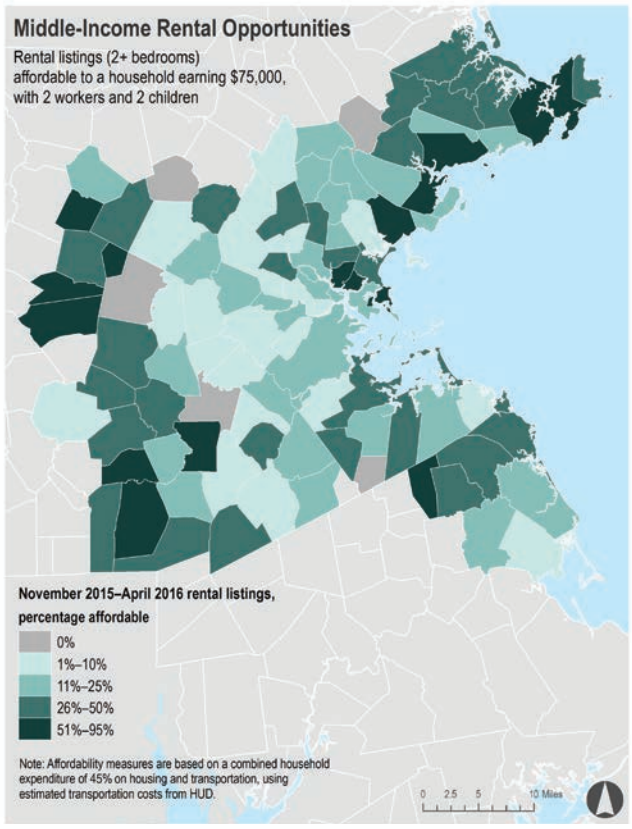

Figure 11

Figures 9–11 Data sources: The Warren Group; U.S. Department of Housing and Urban Development; Metropolitan Area Planning Council (MAPC) analysis.

Figure 12 shows the number of affordable single-family houses and condos sold in four types of communities: inner core, regional urban centers, maturing suburbs, and developing suburbs. Regional urban centers such as Brockton, Framingham, Lowell, Lynn, and Salem provide almost half the region's supply of affordable single-family homes and more than half the region's supply of affordable condos, with combined affordable condo and single-family home sales totaling nearly 11,000 over two years.

Meanwhile, maturing suburbs such as those west of Route 128 and along the North and South Shores saw the most sales overall, but less than 20 percent were affordable to middle-income households, and relatively few sales at any price were of condos. In 24 municipalities, less than 10 percent of transactions (and in some cases none) would have been affordable. Suburban communities in general have a smaller supply of condos to begin with, in part because land use regulations discourage production of multifamily housing, even as condos become more popular among both older and younger householders.

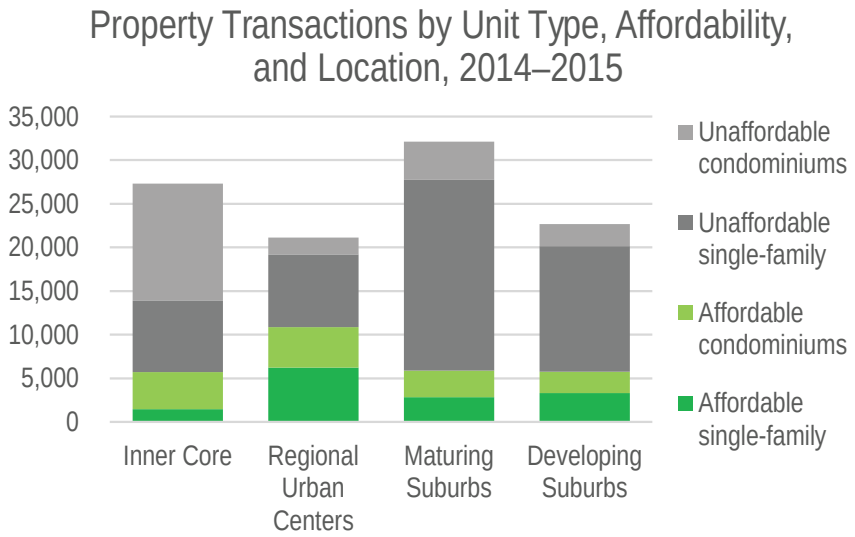

Figure 12 Regional urban centers have the largest number and share of condo and single-family home sales that would be affordable to a four-person household with an income of $75,000. Data sources: the Warren Group; U.S. Department of Housing and Urban Development; MAPC Community Types; Metropolitan Area Planning Council (MAPC) analysis.

DEVELOPMENT COSTS AND MIDDLE-INCOME HOUSING

ULI Boston/New England and the Metropolitan Area Planning Council surveyed nonluxury developers in Metro Boston to better understand the underlying constraints on the delivery of housing affordable to middle-income households.

Though time constraints and confidentiality concerns did not allow a comprehensive or extremely detailed survey effort, the results help indicate how difficult it is to build new housing that can be rented at moderate rates.

Analysis of proposed rents suggests that a total development cost of $200 to $250 per square foot is the maximum at which units could be profitably rented at rates affordable to a household earning $75,000 annually. Yet even outside the red-hot market of Boston itself, it is difficult to deliver units at this price point.

Judged by the small sample, it seems no one factor is to blame for the difficulty of building affordable housing. Rather, it is the combination of higher land acquisition costs, hard construction costs, and soft financing costs that together push up final prices. And though high rents for new development are often blamed on developer desire for profits, return on investment accounts for only 5 to 7 percent of the total development cost and is, in fact, highest in the lowest-cost, suburban developments with the cheapest land, labor, and soft costs.

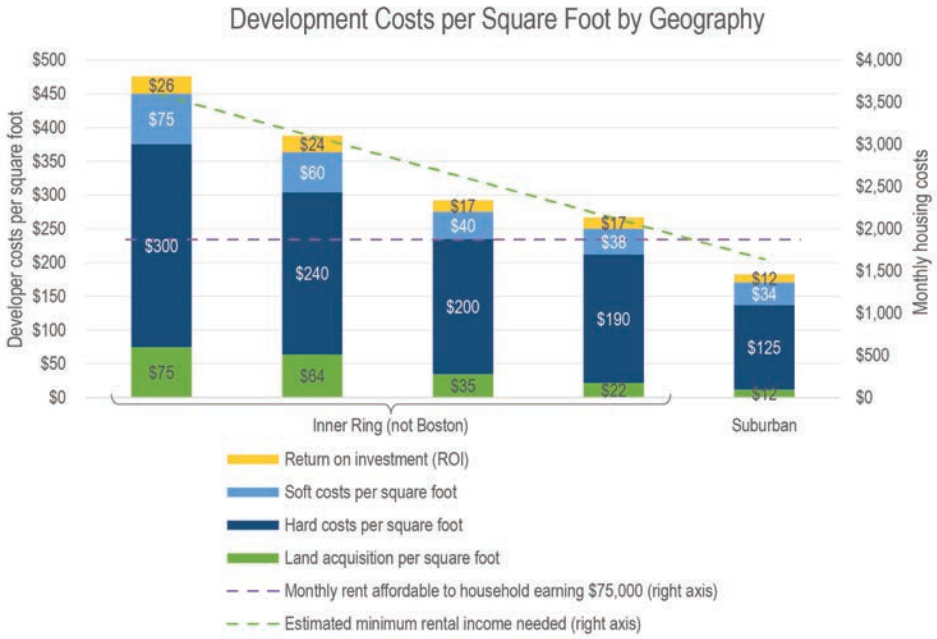

Figure 13 Approximate monthly housing costs related to developer costs per square foot. Data sources: ULI survey of Metro Boston developers; Metropolitan Area Planning Council (MAPC) analysis.

Substantial New Production is Needed to House the Future Workforce

As troubling as the current state of workforce housing is in Metro Boston, indications are that the challenge may become even greater in the years ahead.

The region is now undergoing the first wave of baby boomer retirement, which will affect nearly half the region's labor force in the next 15 years. Current MAPC projections indicate that 717,000 workers born before 1970 will leave the region's labor force between 2015 and 2030 due to retirement, migration, or mortality. As a result, the region will need 826,000 new entrants to the labor force by 2030 to fill vacant positions and support even modest growth (four percent) in jobs.

Using occupational vacancy projections published by the Massachusetts Executive Office of Labor and Workforce Development and analyzed by the Dukakis Center for Urban and Regional Policy at Northeastern University, it can be estimated that the largest number of openings are likely to occur in office and administrative services, food preparation, and sales—three occupations that have seen a declining proportion of middle-income jobs and a growing proportion of low-income jobs. The next four categories in number of job openings—business operations specialists, health care practitioners and technical occupations, management, and computer and mathematical occupations—have seen disproportionate increases in high-income households. This pattern of vacancies, compounded by continued within-occupation wage shifts, is likely to drive continued wage polarization in the region.

Projected New Working Households by Occupation and Income Group, 2015–2030

Occupational group	Extremely low income	Very low income	Low income	Lower middle income	Upper middle income	High income
Architecture and engineering occupations	160	180	480	1,300	1,280	10,200
Arts, design, entertainment, sports, and media occupations	650	530	890	1,370	1,000	3,640
Building and grounds cleaning and maintenance occupations	3,120	3,440	3,150	2,450	310	720
Business operations specialists	740	1,460	2,220	4,740	3,220	26,130
Community and social services occupations	480	1,430	1,680	2,300	1,430	3,380
Computer and mathematical occupations	320	270	660	2,180	2,940	27,080
Construction and extraction occupations	1,790	2,420	3,060	3,900	2,100	5,680
Education, training, and library occupations	970	1,970	2,370	3,210	2,550	11,760
Food preparation and serving occupations	11,710	12,590	10,120	5,560	2,170	2,870
Health care practitioners and technical occupations	560	980	2,180	4,260	3,760	27,290
Health care support occupations	3,180	4,150	4,240	3,190	910	—
Installation, maintenance, and repair workers	450	1,240	2,260	3,210	1,970	6,270
Legal occupations	100	120	280	550	340	3,600
Life, physical, and social science occupations	260	340	930	1,460	1,190	6,490
Management, business, science, and arts occupations	470	750	1,900	3,770	2,730	30,770
Office and administrative support occupations	3,570	6,740	9,810	10,820	6,160	13,890
Personal care and service occupations	3,760	3,730	3,640	2,120	960	1,530
Production occupations	930	1,690	2,290	2,460	840	2,090
Protective service occupations	660	690	960	1,930	1,320	7,460
Sales and related occupations	5,220	5,430	5,510	6,940	5,020	26,380
Transportation and material moving occupations	2,870	4,250	3,860	3,900	2,030	2,660

Table 2 Data sources: Metropolitan Area Planning Council (MAPC) population and household projections; U.S. Census Bureau Public Use Microdata Sample (PUMS) 1990 and PUMS 2010–2014; Massachusetts Executive Office of Labor and Workforce Development; Dukakis Center for Urban and Regional Policy.

If current headship rates continue into the future, MAPC projects that new workers will form about 493,000 new households by 2030. If current wage patterns continue, about 129,000 (26 percent) will be middle-income households; if the wage polarization observed since 1990 continues, the gain may only be 115,500, 23 percent of the total.

Nearly one-third of all new working households—nearly 160,000 by 2030—are projected to be low income; 45 percent are projected to be high income, equivalent to 220,000 households.

Based on current occupancy patterns, new working households are projected to demand 279,000 units of multifamily housing (rental or ownership) and 214,000 single-family homes. Some of this demand will be met by existing units: mortality, migration, and downsizing may return about 155,000 single-family homes and 136,000 multifamily units to the market before 2030. Even if the current distribution of rent and sales prices holds constant, about 46,000 units are projected to be affordable only to upper middle-income households, 62,000 to lower middle-income households, and 36,000 to low-income households.

In other words, if continued rapid escalation of housing prices can be averted (and if location within the region is not an issue), existing units might serve 25 percent of future low-income housing demand, 80 percent of lower middle-income housing demand, 90 percent of upper middle-income demand, and about 66 percent of high-income demand. If, on the other hand, housing prices continue to rise rapidly, fewer of the existing units will be accessible to low- and middle-income households. Similarly, if not enough high-end production occurs, high-income households will occupy housing that would otherwise have been affordable to middle-income households, and some middle-income households will occupy housing that would have been available to low-income households.

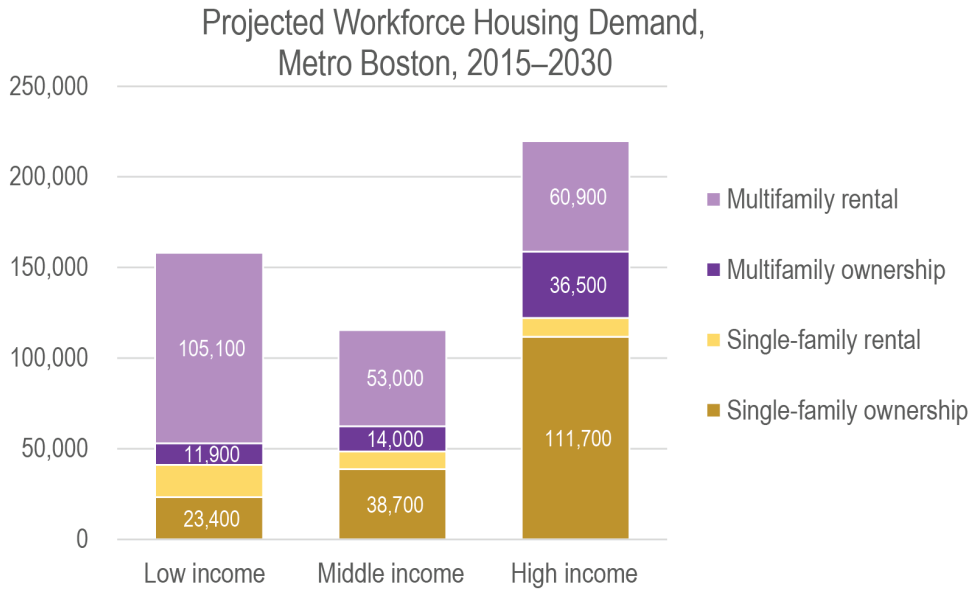

Figure 15 New working households are estimated to require 493,000 housing units by 2030. Data sources: U.S. Census Bureau Public Use Microdata Sample (PUMS) 2010–2014; Metropolitan Area Planning Council (MAPC) analysis.

After housing likely to come back on the market is accounted for, the region will need 200,000 additional units of housing by 2030 to accommodate new working households and to prevent increases in the housing cost burden for the region's residents. In the absence of rapid price increases or declines, about 21,000 new units are needed at rates affordable to middle-income households, while 108,000 units are needed for low-income households and 74,000 for high-income households. Underproduction at the higher-income levels relative to demand may put upward pressure on the prices of less-expensive units, thereby reducing affordability down the line. Conversely, it is possible that robust production at higher price points may have a "filtering" effect by reducing the pressure on less-desirable units,

CAN FILTERING BE PART OF THE SOLUTION?

Many researchers and policy makers have been examining the question of whether a process called "filtering" can help provide sufficient housing for middle- and low-income households. Filtering occurs when older, less-desirable units experience slower rent appreciation as the units age and become available to lower-income households.

A recent California Legislative Analyst's Office report found that housing units built between 1980 and 1985 were relatively expensive in 1985, but by 2011, the rents were near the median of all rents. When newly constructed housing becomes available, middle-income households will often upgrade to the new units, making the older ones available for lower-income households. When new units are scarce, middle-income households will stay in the older units longer, and perhaps renovate them. In scenarios with limited new construction, modest housing over time gets upgraded, and less housing will be available at prices affordable to low-income households.

According to a national report from Harvard University's Joint Center for Housing Studies, new construction from 2003 to 2013 increased by 5 percent the stock of housing affordable to the lowest-income households. Meanwhile, downward filtering of units that became more affordable over time added another 11 percent. Unfortunately, 11 percent of the affordable stock available in 2003 was lost to deterioration and demolition over the following decade.

Economist Stuart Rosenthal at Syracuse University found that housing stock filters down roughly one-half percentage point slower in the Northeast and West, where housing development is constrained and house price inflation is high, than in the rest of the country. He concludes in a 2014 paper that filtering is an important long-run source of lower-income housing across the country. Filtering rates have been much higher in rental housing than in homeownership units. Eighty percent of new homes built are owner occupied, but filtering is faster for the 20 percent that are rented. "[T]he real income of an arriving occupant in a 50-year-old home would be 60 percent less than the income of an occupant of a newly built home," he wrote.

The California Legislative Analyst's Office analyzed displacement potential, housing costs, and demographic change around the San Francisco Bay area and Los Angeles and concluded that "considerable evidence suggests that construction of market-rate housing reduces housing costs for low-income households and, consequently, helps to mitigate displacement in many cases."

However, filtering is less effective at solving the affordability needs of the lowest-income households, and changing preferences may reduce its impact in the future. The Joint Center for Housing Studies report notes that "while filtering of housing to lower rent levels is an important mechanism for expanding the supply, it has not made up for the losses of low-cost rentals or matched the strong growth in low- and moderate-income renters. Moreover, strong rental demand among higher-income households is likely to slow the net filtering of units to lower rent levels."

A Call to Action for Local and State Policy Makers

Increasing the density of settlement in Metro Boston has proved difficult in recent decades, but doing so is certainly possible, and critical if the region is to meet its coming workforce housing needs. In response to significant advocacy, especially by proponents of smart growth who support development near transit nodes, shops, and other amenities, city and town governments have been permitting new developments across the region. These recent approvals of so many residential projects indicate that the tide of public opinion about residential construction is starting to shift. The region needs more housing to accommodate the growing workforce, as well as for the sake of equality and economic opportunity. Good housing policy can help sustain the middle class.

Aerial photo credit: Tony Cammarata

Methodology

The following data sources and practices were used in the creation of this report.

Working Households and Principal Wage Earners

Data sources: U.S. Census Bureau Public Use Microdata Sample (PUMS), 1990 and 2010–2014. Working households are defined for this analysis as households with at least one nonstudent occupant who is employed and earns a wage income. To define these households, attributes from PUMS household records were joined to PUMS person records based on serial number. The joined records were filtered to remove individuals enrolled in school, individuals who are either unemployed or not in the labor force, and individuals without an income from an employer or self-employment.

The principal wage earner for a household is defined as the person in each household who has the highest wage income from combined employer and self-employment income.

The 1990 PUMS data are based on weighted individual records from the 1990 census; the 2010–2014 PUMS data are based on weighted individual records from the 2010–2014 American Community Survey.

For more information on PUMS data, see https://www.census.gov/programs-surveys/acs/technical-documentation/pums/documentation.html.

Regional Adjustments

The income groups referenced throughout the report are defined according to the U.S. Department of Housing and Urban Development (HUD) fiscal 2014 income limits for the Boston-Cambridge-Quincy, Massachusetts–New Hampshire, HUD metro fair market rents (FMR) area. While the limits for the three low-income limit groups are nominally based on a percentage of area median income (AMI) for a given household size, there is an exception for the low-income group (80 percent of AMI) due to HUD methodology.

Because Metro Boston qualifies as a high-housing-cost area according to HUD methods—meaning 85 percent of the annual regional two-bedroom FMR is higher than 35 percent of the U.S. median income—the four-person low-income limit is adjusted to be equal to the annual regional two-bedroom FMR value times 1.6 times 85 percent divided by 35 percent. For detailed methodology for the 2014 low-income limits, see https://www.huduser.gov/portal/datasets/il/il2014/2014ILCalc3080.odn.

Inflation

All 1990 wages are adjusted to 2014 dollars using a national inflation adjustment factor from the U.S. Bureau of Labor Statistics Division of Consumer Prices and Price Index.

Working Household Demand Projections

Data sources: Metropolitan Area Planning Council (MAPC) population and household projections, PUMS 2010–2014, PUMS 1990, Dukakis Center for Urban and Regional Policy (Meeting the Commonwealth's Workforce Needs: Occupational Projections and Vocational Education, 2015), Massachusetts Executive Office of Labor and Workforce Development occupational data.

The "Stronger Region" scenario in MAPC's population projections was used to develop future labor force and employed workforce estimates by age. The pattern of baby boomer retirement (728,900 leave the workforce) and those jobs being filled by younger workers (826,000 new entrants) leads to a net increase of 97,000 new employed workers from 2015 to 2030. The occupational share for the new employed workers was estimated using the Dukakis Center report on occupational projections for the state and the region's location coefficient relative to the state. In line with occupational changes projected for the state, almost a quarter of the region's occupational vacancies will be in food preparation and administrative occupations, which previous research has showed are mostly low to middle income.

MAPC then estimated the number of new working households that might form by applying occupation-specific headship rates based on 2010–2014 PUMS data. The 826,000 new workers are estimated to form almost 495,000 new households. PUMS data for income distribution for householders in each occupation were used to create an income profile of the new working households for 2030 in order to understand their housing needs. MAPC further used the housing type and tenure splits from PUMS to estimate the housing-unit demand by income/affordability.

For the supply side, while almost 729,000 workers will retire from the labor force by 2030, not all will likely vacate their homes. MAPC used data from the regional housing projections to account for vacancies created in the region. The affordability of these returned units, by unit type, was estimated by assuming that the cost/rent distribution by type (single family, condo, rental) would remain consistent with current patterns of transactions and rental listings. The net demand for each income level was estimated as the difference between the increase in the number of working households at each income level and the number of units expected to come back on the market at that level of affordability.

Trends for Wage Polarization

Data sources: PUMS 1990, PUMS 2010–2014.
Using the inflation-adjusted income for households by principal earner occupation, MAPC calculated the shift in household income associated with each occupation from 1990 to 2014. Using a shift-share method, MAPC forecast continuation of these shifts out to 2030 and applied the modified income distribution to the estimated number of households associated with each occupation. This accounts for both changes in occupations as well as the shifting income distribution within each occupation.

Affordable Housing Costs

Data sources: HUD Location Affordability Index, MAPC rental listing database, the Warren Group. Housing-cost affordability was derived from detailed information about current sale and rental prices as well as estimated household transportation costs from HUD's Location Affordability Index. To approximate the situation a middle-income working household might face, the analysis was based on HUD's median-income household, with a household size of four that includes two commuters and a 2012 household income of $72,769, adjusted to $74,958 in 2014 dollars to be consistent with the PUMS data vintage used elsewhere in the analysis. The analysis considered the cost of transportation by municipality from the HUD data (based on a household-weighted average of census tract values within each municipality) and calculated the corresponding cost of housing that would bring the household to a monthly combined housing plus transportation cost of 45 percent of household income, HUD's recommended threshold for combined housing and transportation affordability. The affordability of housing to renters and owners for this reference household in a given municipality was evaluated using market rental listings and home purchase transactions.

Renters. To approximate the type of housing a four-person, two-commuter household might seek, rental listings from MAPC's rental listing database were filtered to include only those with two or more bedrooms. The monthly asking price was then compared to the calculated housing expenditure allotment, described above, that would bring the household to a combined housing and transportation cost of 45 percent of $74,958. If the asking price for a given listing was less than or equal to that monthly dollar value, the listing was coded with "1" for affordable; if it was greater than that value, it was coded with "0" for not affordable. The listings were then aggregated by municipality, and the count of affordable rental listings was compared to the total number of listings, yielding a municipal rate of affordability.

MAPC's market rental listing database is a new data set composed of apartment rental listings scraped weekly from Padmapper.com and other online rental listing services. Listings duplicated between sources are removed, as are listings with identical listing titles. This process does not catch some listings duplicated with slight variations in the title; however, the distribution of these types of duplicates is consistent across listing locations, price points, and unit types, so their impact on medians, percentages, and relative municipal comparisons is minimal. These duplicates will overestimate counts of listings, however.

Homeowners. To approximate the municipal affordability rate for homeowners, the calculated monthly housing expenditure allotment described above was translated into a corresponding purchase price. The ownership cost was estimated using the following formula and included a mortgage payment estimate, a 10 percent downpayment, homeowners insurance, and the 2014 municipal property tax rate for each municipality.

where:
d = 10 percent downpayment
p = private mortgage insurance factor of 0.075
h = monthly housing expenditure to reach 45 percent housing and transportation cost
s = monthly homeowners insurance of $83 ($1,000 a year)
t = monthly property tax
i = monthly interest rate
n = number of payments, assuming a 30-year loan (360)

Home-purchase transaction listings from the Warren Group were filtered to include only single-family homes and condos. Then, similar to the rental affordability analysis, the calculated purchase price was compared to that which would bring the household to a combined housing and transportation cost of 45 percent of $74,958. If the transaction price for a given listing was less than or equal to that monthly dollar value, the listing was coded with "1" for affordable; if it was greater than that value, it was coded with "0" for not affordable. The listings were then aggregated by municipality, and the count of affordable transaction listings was compared to the total number of listings, yielding a municipal rate of affordability.

This analysis was conducted for combined condo and single-family home transactions from 2014 and 2015, as well as for single-family homes and condos separately.

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