



THOMAS M. MENINO, MAYOR
CITY OF BOSTON

Report prepared by
Yolanda Perez
John Avault
Jim Vrabel



Boston Redevelopment Authority
Mark Maloney, *Director*

Clarence J. Jones, *Chairman*
Consuelo Gonzales Thornell, *Treasurer*
Joseph W. Nigro, Jr., *Co-Vice Chairman*
Michael Taylor, *Co-Vice Chairman*
Christopher J. Supple, *Member*
Harry R. Collings, *Secretary*

Maps:
James Alberque

Research Department
Greg Perkins, *Interim Director*

Report # 591
October, 2003

Commercial Land Use In Boston

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Introduction

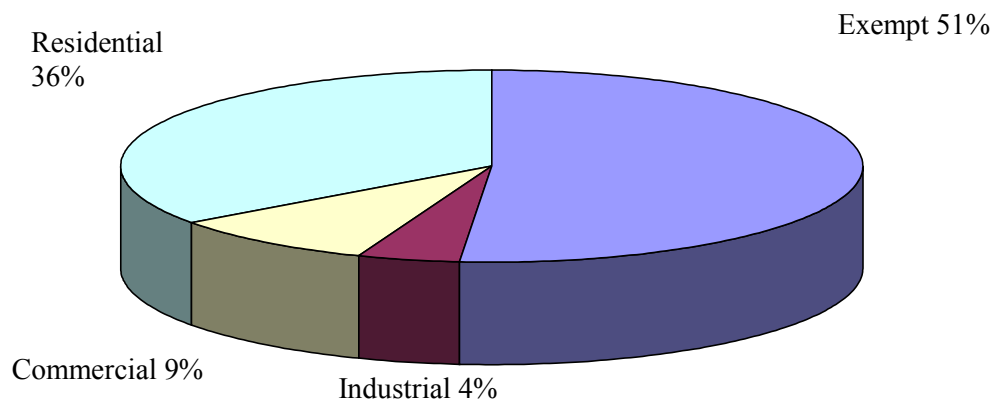
Boston is the largest city in the region and one of the largest in the country in terms of *population*. According to the 2000 census, Boston's *population* of 589,141 makes it the largest city in New England and the 21st largest city in the United States. But Boston is a small city when it comes to *land area*. Encompassing only 48.6 square miles, Boston is the second smallest major city in the country, ranking ahead of only San Francisco. Boston's housing stock and residential land uses reflect both the city's small geographic size and its diversity, and Boston's neighborhoods range from those containing suburban ranch houses to triple-deckers to high-rise apartment buildings.

This is the fourth and final report in a series on land use in Boston. The first dealt with **industrial** land use; the second, land used by **tax-exempt** institutions; the third, **commercial** land use. Each of those categories is important to the economic and social health of the City of Boston. But this report, an analysis of **residential** land use in the city of Boston, deals with perhaps the most important aspect of the city's land use - where and how people live. All of these reports are based on the fiscal year 2000 tax assessor's database.

Land Use in Boston

Land is a scarce commodity in Boston. Figure 1 shows the division of land in Boston by land use category. By far the largest category – comprising more than half (51%) of all city land - is devoted to tax-exempt institutions. Industrial use takes up 4%. Commercial use takes up 9% of the land. Residential use takes up the remainder -36% of the land area in the city.

Figure 1: Boston's Land Use



Residential Land Use – And Population - By Neighborhood

The amount and percentage of residential use land varies greatly among the neighborhoods of Boston and does not always parallel the population figures. Table 1 lists the amount of residential land by neighborhood and the percentage of total residential land in the city by neighborhood. Table 1 also contains the population of each neighborhood and the percentage of the total city population in each neighborhood. It shows that while Dorchester contains 15% of the residential land in Boston and 16% of the city’s population, more suburban West Roxbury contains 15% of the residential land but only 5% of the city’s population. On the other hand, Table 1 shows that more densely populated neighborhoods closest to downtown, such as Central, Back Bay/Beacon Hill, Charlestown, Fenway/Kenmore, and South End - combine to contain only 5% of the residential land in the city yet 22% of the total population.

Table 1: Neighborhood Residential Land Use and Population

Neighborhood	Total Residential Land (SF)	% of Total Residential Land	Population	% Total City Population
Allston/Brighton	40,062,212	9%	69,648	12%
Back Bay/Beacon Hill	5,983,232	1%	26,721	5%
Central	3,906,974	1%	25,813	4%
Charlestown	7,250,759	2%	15,195	3%
Dorchester	67,686,958	15%	92,115	16%
East Boston	18,682,671	4%	38,413	7%
Fenway/Kenmore	3,304,550	1%	35,602	6%
Hyde Park	55,311,950	13%	31,598	5%
Jamaica Plain	35,193,954	8%	38,196	6%
Mattapan	33,395,267	8%	37,607	6%
Roslindale	41,136,336	9%	34,618	6%
Roxbury	37,245,558	8%	56,658	10%
South Boston	14,594,438	3%	29,965	5%
South End	7,123,603	2%	28,239	5%
West Roxbury	67,541,585	15%	28,753	5%
Total	438,420,047	100%	589,141	100%

Types of Residential Land Use

This report identifies seven different categories of residential land uses in Boston: single-family dwellings, two-family dwellings, three-family dwellings, condominiums, apartment buildings, vacant residential land, and affordable housing.

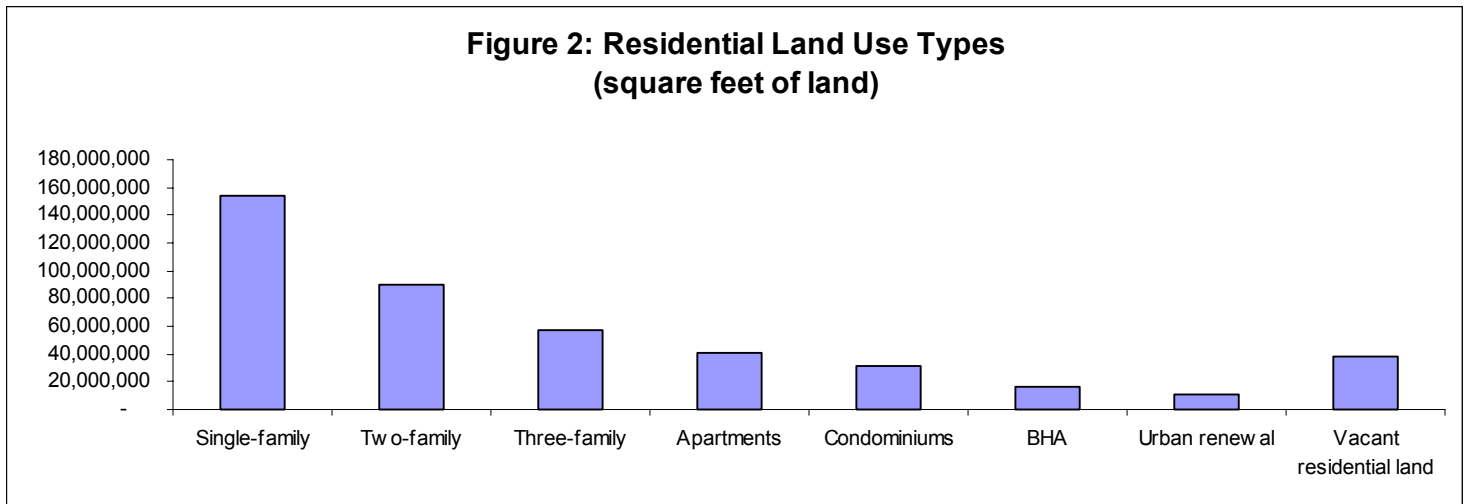
Table 2 lists each of these residential land use categories, along with their total square footage and the percentage they comprise of the city’s total residential land. The largest residential land use type is single-family dwellings, which accounts for 35% of the city’s total residential land. Two-family dwellings account for 21%; 13% of Boston’s residential land is devoted to three-family dwellings, commonly known as triple-deckers. Apartment buildings account for 9% of the city’s residential land, and condominiums for 7% of residential land in Boston. Public housing and urban renewal affordable housing represents the smallest residential land use type, accounting for just 6% of the total residential land in Boston. Boston has other affordable

housing, but it cannot be easily identified with the land use database of tax assessor’s records. Undeveloped residential land represents 9% of all residential land use in the city.

Table 2: Boston’s Residential Land Use Categories

Land Use	Square Feet (SF)	% of Total Residential Land
Single-family	153,637,364	35%
Two-family	90,038,472	21%
Three-family	57,300,968	13%
Apartments	40,807,566	9%
Condominiums	31,302,999	7%
BHA	16,332,242	4%
Urban renewal	10,808,353	2%
Vacant residential land	38,192,083	9%
Total	438,420,047	100%

Figure 2 compares the amount of square feet in each of the various residential land use categories in Boston. It shows clearly that privately-owned taxable single-family, two-family and three-family parcels account for the majority of Boston’s residential land use. All multi-family housing (such as apartments and condominiums) combined total less than half the amount of residential land occupied by single-family homes.



Residential Land Use Categories by Neighborhood

Table 3 lists the various land use categories by neighborhood. It shows that there are several neighborhoods where single-family dwellings are the predominant residential land use. For example, two-thirds of the residential land in West Roxbury is made up of single-family homes. Hyde Park has over half of its residential land devoted to single-family homes, and Roslindale 44%. Mattapan, Jamaica Plain and Dorchester each have over one-third of their residential land devoted to single-family dwellings.

On the other hand, two-family homes account for 34% of the total residential land area in Allston/Brighton. East Boston, Dorchester, South Boston and Roxbury each have about one-quarter of their total residential land devoted to three-family dwellings. Condominium or apartment buildings account for most of the total residential land use in neighborhoods closest to downtown. Eighty percent of the Boston's Central area is made up of condominiums or apartment buildings. They represent 81% of the Back Bay/Beacon Hill total residential land area and 79% of that in the Fenway. Multi-family housing also makes up 46% of the residential area in South End and 26% in Charlestown. Table 4 shows square feet of residential land by land use type and neighborhood as well as parcel counts for privately-owned properties.

Table 3: Neighborhood Residential Land Composition (in square feet of land)

Neighborhood	Single-family dwellings	Two-family dwellings	Three-family dwellings	Apartment buildings	Condo buildings	Vacant land	Urban renewal	BHA	Total % of neighborhood residential land use
Allston/Brighton	20%	34%	11%	14%	12%	4%	3%	3%	100%
Back Bay/Beacon Hill	11%	3%	3%	33%	48%	0%	2%	0%	100%
Central	1%	1%	3%	16%	64%	2%	11%	1%	100%
Charlestown	19%	12%	8%	7%	19%	5%	12%	17%	100%
Dorchester	30%	27%	25%	7%	3%	7%	1%	1%	100%
East Boston	16%	21%	28%	10%	6%	11%	1%	7%	100%
Fenway/Kenmore	2%	0%	2%	51%	27%	1%	16%	0%	100%
Hyde Park	56%	20%	4%	3%	2%	11%	0%	2%	100%
Jamaica Plain	31%	16%	15%	7%	11%	9%	4%	6%	100%
Mattapan	32%	26%	14%	6%	2%	9%	0%	9%	100%
Roslindale	44%	26%	10%	7%	4%	7%	0%	2%	100%
Roxbury	13%	21%	23%	16%	2%	13%	9%	2%	100%
South Boston	18%	17%	24%	6%	8%	7%	0%	21%	100%
South End	6%	5%	7%	22%	25%	1%	22%	13%	100%
West Roxbury	61%	9%	1%	9%	6%	13%	0%	0%	100%
Total % of city residential land use	35%	21%	13%	9%	7%	9%	2%	4%	100%

Table 4: Residential Land Use Groups (square feet of land and parcel counts)

Neighborhood	Single-family dwellings	Two-family dwellings	Three-family dwellings	Apartment buildings	Condo buildings	Vacant land	Urban renewal	BHA	Total
Allston/Brighton	7,921,833	13,676,168	4,233,216	5,547,023	4,882,683	1,706,553	1,025,680	1,069,056	40,062,212
Back Bay/Beacon Hill	648,746	197,688	159,668	1,968,374	2,892,494	19,823	96,439	-	5,983,232
Central	56,804	53,678	130,334	635,018	2,509,740	62,203	433,446	25,751	3,906,974
Charlestown	1,409,963	851,164	613,637	476,747	1,373,601	374,732	901,432	1,249,483	7,250,759
Dorchester	20,291,551	17,947,783	16,967,808	4,905,237	2,159,642	4,407,431	586,327	421,179	67,686,958
East Boston	3,032,983	3,985,472	5,208,729	1,830,346	1,155,594	2,119,194	95,140	1,255,213	18,682,671
Fenway/Kenmore	81,454	10,616	50,225	1,693,330	902,673	19,921	543,881	2,450	3,304,550
Hyde Park	31,228,651	11,233,434	2,286,796	1,694,968	1,326,203	6,200,122	215,928	1,125,848	55,311,950
Jamaica Plain	11,078,904	5,765,724	5,372,246	2,391,235	3,930,880	3,039,709	1,410,289	2,204,967	35,193,954
Mattapan	10,702,308	8,747,451	4,816,876	2,130,746	659,645	3,160,946	139,056	3,038,239	33,395,267
Roslindale	18,227,025	10,631,106	4,160,590	2,784,260	1,560,067	2,740,627	124,274	908,387	41,136,336
Roxbury	4,957,415	7,806,103	8,626,461	6,095,752	793,619	4,701,090	3,457,530	807,588	37,245,558
South Boston	2,562,103	2,456,125	3,434,944	832,943	1,176,946	1,007,863	-	3,123,514	14,594,438
South End	432,814	378,540	465,606	1,545,927	1,748,532	86,622	1,551,799	913,763	7,123,603
West Roxbury	41,004,810	6,297,420	773,832	6,275,660	4,230,680	8,545,247	227,132	186,804	67,541,585
Total square feet of land	153,637,364	90,038,472	57,300,968	40,807,566	31,302,999	38,192,083	10,808,353	16,332,242	438,420,047
Allston/Brighton	1,631	2,596	884	636	6,980	366	20	N/A	13,113
Back Bay/Beacon Hill	440	125	82	747	7,516	29	7	N/A	8,946
Central	62	57	139	465	4,699	29	18	N/A	5,469
Charlestown	967	484	353	77	1,803	258	11	N/A	3,953
Dorchester	4,181	3,633	4,315	383	1,315	1,234	24	N/A	15,085
East Boston	981	1,256	2,183	276	584	597	11	N/A	5,888
Fenway/Kenmore	42	5	27	395	2,583	8	34	N/A	3,094
Hyde Park	4,856	1,646	330	130	383	792	2	N/A	8,139
Jamaica Plain	1,544	1,107	1,346	238	2,150	600	47	N/A	7,032
Mattapan	2,089	1,600	1,036	185	316	708	15	N/A	5,949
Roslindale	3,349	1,916	824	104	781	560	5	N/A	7,539
Roxbury	1,183	1,654	2,259	743	517	1,296	364	N/A	8,016
South Boston	1,505	1,090	1,636	168	1,568	650	-	N/A	6,617
South End	357	265	298	675	3,573	67	110	N/A	5,345
West Roxbury	6,473	1,024	89	54	1,502	1,201	1	N/A	10,344
Total parcel count	29,660	18,458	15,801	5,276	36,270	8,395	669	N/A	114,529

Median Residential Lot Sizes

The size of lots for the various categories of residential land use also varies by neighborhood. Table 5 lists the median square footage for single-family, two-family, three-family, and condominium lots for each neighborhood. (The median is not the average, but the midpoint – and more useful for identifying typical lots in a city like Boston where the size of lots varies greatly by neighborhood.)

The city’s median square footage for different housing types is: 4,899 square feet for single-family homes; 4,635 square feet for two-family homes; and 3,243 square feet for three-family homes. (Three-family dwellings tend to have smaller lot sizes, since they typically include either smaller yards or no yards at all.) The median square footage for condominium properties is 798 square feet of land per unit.

In comparison to the city’s median lot size for single-family homes of 4,899 square feet, the neighborhoods with the largest lot sizes are Jamaica Plain (6,000 square feet), Hyde Park (5,706 square feet) and West Roxbury (5,663 square feet).

Table 5: Median Lot Size By Type and Neighborhood

Neighborhood	Single-Family Dwelling	Two-Family Dwelling	Three-Family Dwelling	Condo Unit
City Median	4,899	4,635	3,243	798
Allston/Brighton	4,227	4,989	4,206	703
Back Bay/Beacon Hill	1,363	1,536	1,577	785
Central	909	820	906	862
Charlestown	1,190	1,477	1,506	988
Dorchester	4,320	4,444	3,519	835
East Boston	2,500	2,500	2,187	845
Fenway/Kenmore	1,805	N/A	1,854	595
Hyde Park	5,706	6,000	5,963	822
Jamaica Plain	6,000	4,382	3,440	1,035
Mattapan	4,800	5,065	4,256	1,066
Roslindale	5,000	5,000	4,608	980
Roxbury	3,600	4,381	3,528	1,036
South Boston	1,389	1,839	1,846	873
South End	1,095	1,379	1,553	818
West Roxbury	5,663	5,500	5,056	780

The largest median two-family lots are found in Hyde Park (6,000 square feet), West Roxbury (5,500 square feet) and Mattapan (5,065 square feet). The city’s median lot size is 3,243 square feet for two-family parcels. The top-ranking neighborhoods in terms of median lot size for three-family parcels are Hyde Park (5,963 square feet), West Roxbury (5,056 square feet), and Roslindale (4,608 square feet) - compared to the city’s median lot size of 3,243 square feet.

In comparison to the city’s median lot size for condominiums of 798 square feet, the neighborhoods with the greatest median condo lot size are: Mattapan (1,066 square feet), Roxbury (1,036 square feet) and Jamaica Plain (1,035 square feet).

Median lot sizes illustrate the general character of the housing stock in each neighborhood. Areas closest to downtown generally have dense, compact development. The neighborhoods closest to downtown, Back Bay/Beacon Hill, Central, Charlestown, Fenway/Kenmore, South Boston and South End all have single-family lot sizes smaller than 2,000 square feet. Another example is the Central district where the median lot sizes of all housing types are roughly the same. The opposite case is true in neighborhoods like Jamaica Plain, however, where condominium lot sizes are 1,000 square feet; single-family lots are 6,000 square feet; two-family parcels are 4,400 square feet; and three-family lots are 3,400 square feet.

Vacant Residential Land

Vacant residential land in Boston is rare. Developable vacant residential land is rarer still. The Boston Assessing Department classifies vacant residential land as either “Primary” (unimproved land which has the potential for development) or “Secondary” (unimproved land which possesses obstacles for development, such as inadequate road access, irregular shape or poor topography). Table 6 shows the amount of vacant land – both primary and secondary – by neighborhood. It shows that barely half (52%) of this vacant land is suitable for development. Table 6 shows that while West Roxbury, Hyde Park and Roxbury appear to have large amounts of undeveloped land, others (including Back Bay/Beacon Hill, Central, Fenway/Kenmore, and the South End) have less than an acre of land (an acre is almost 43,560 square feet).

Table 6: Vacant Residential Land

Neighborhood	Total undeveloped residential land	Secondary land (SF)	Prime undeveloped residential land (SF)	% of developable vacant land
Allston/Brighton	1,706,553	1,009,404	697,149	41%
Back Bay/Beacon Hill	19,823	17,621	2,202	11%
Central	62,203	58,698	3,505	6%
Charlestown	374,732	297,279	77,453	21%
Dorchester	4,407,431	2,292,467	2,114,964	48%
East Boston	2,119,194	1,654,941	464,253	22%
Fenway/Kenmore	19,921	4,428	15,493	78%
Hyde Park	6,200,122	2,209,820	3,990,302	64%
Jamaica Plain	3,039,709	1,052,194	1,987,515	65%
Mattapan	3,160,946	1,531,710	1,629,236	52%
Roslindale	2,740,627	1,773,790	966,837	35%
Roxbury	4,701,090	1,576,876	3,124,214	66%
South Boston	1,007,863	753,674	254,189	25%
South End	86,622	55,400	31,222	36%
West Roxbury	8,545,247	4,224,022	4,321,225	51%
Total	38,192,083	18,512,324	19,679,759	52%

Mixed-Use Land by Neighborhood

Residential uses occur in mixed-use properties, which include commercial uses such as ground level retail stores. In fact, throughout the city, mixed-use properties devote 70% of their total building area to residential uses. Across the city, these properties account for a total of 17 million square feet of residential building space and 13 million square feet of land area.

Neighborhoods with the most mixed-use residential building area are primarily those closest to downtown Boston. They include: Central (23%), South End (13%), Allston/Brighton (10%), Roxbury and Fenway/Kenmore each with 9% and Back Bay/Beacon Hill with 8%.

Table 7: Mixed-Use By Neighborhood*

Neighborhood	Lot Area (SF)	Residential Building Area (SF)	Commercial Building Area (SF)	Total Building Area (SF)
Allston/Brighton	2,259,723	1,678,537	667,184	2,345,721
Back Bay/Beacon Hill	691,213	1,405,899	930,587	2,336,486
Central	1,305,183	3,914,917	1,693,333	5,608,250
Charlestown	522,285	846,765	114,643	961,408
Dorchester	1,222,949	837,893	573,955	1,411,848
East Boston	1,094,948	757,751	428,524	1,186,275
Fenway/Kenmore	639,326	1,537,951	643,526	2,181,477
Hyde Park	359,075	105,261	149,386	254,647
Jamaica Plain	639,236	481,692	248,371	730,063
Mattapan	477,181	674,054	58,350	732,404
Roslindale	381,545	123,579	128,448	252,027
Roxbury	1,310,721	1,599,749	373,790	1,973,539
South Boston	729,240	795,135	382,560	1,177,695
South End	1,269,760	2,226,625	702,949	2,929,574
West Roxbury	214,657	61,114	62,869	123,983
Total	13,117,042	17,046,921	7,158,476	24,205,397

The proportion of residential/commercial building area is based on assessed property value proportions.

Affordable Housing

There are two types of affordable housing in Boston that our land use databases can identify – public affordable housing and privately-owned “urban renewal” affordable housing. The total amount of affordable housing land is 27.1 million square feet. About two-thirds (16.3 million square feet) of it is public-owned, and the remainder (10.8 million square feet) is privately-owned. The city’s public housing is owned by the Boston Housing Authority (BHA). Public affordable housing was built primarily between 1938 and 1954 in Boston. Since that time, the BHA has expanded through smaller privately built “turn key” developments and by leasing units in privately-owned developments. Public housing owned by the Boston Housing Authority was also included in the tax-exempt property land use report, because the property is exempt from property tax. BHA housing falls into two land use categories based on its use and nature: tax-exempt and also residential.

The city’s privately-owned affordable housing was built as part of various urban renewal projects mostly between 1960 and 1985, using the urban renewal tax incentive called “121A”. Although some of this 121A housing is market rate or mixed income projects, most of it is subsidized and means-tested and all of it is rental.

Table 8: Boston’s Affordable Housing Land Area

Neighborhood	Public Housing	Urban Renewal Housing	Total Affordable Housing	% of Boston’s Affordable Housing
Allston/Brighton	1,069,056	1,025,680	2,094,736	8%
Back Bay/Beacon Hill	-	96,439	96,439	0.4%
Central	25,751	433,446	459,197	2%
Charlestown	1,249,483	901,432	2,150,915	8%
Dorchester	421,179	586,327	1,007,506	4%
East Boston	1,255,213	95,140	1,350,353	5%
Fenway/Kenmore	2,450	543,881	546,331	2%
Hyde Park	1,125,848	215,928	1,341,776	5%
Jamaica Plain	2,204,967	1,410,289	3,615,256	13%
Mattapan	3,038,239	139,056	3,177,295	12%
Roslindale	908,387	124,274	1,032,661	4%
Roxbury	807,588	3,457,530	4,265,118	16%
South Boston	3,123,514	0	3,123,514	12%
South End	913,763	1,551,799	2,465,562	9%
West Roxbury	186,804	227,132	413,936	2%
Total	16,332,242	10,808,353	27,140,595	100%

Conclusion

The purpose of this report was to analyze the existing residential land use patterns in Boston. The data allow the following conclusions to be drawn:

- ❑ Boston’s land is very much dedicated to homeownership. Just over one-third of the total land in the city is devoted to residential uses, and 71% of the more than 400,000 square feet of residential land is dedicated to single-family, two-family, or three-family homes. But because Boston’s apartment properties add so much housing on so little land, 68% of the city’s 252,000 housing units are rental.¹
- ❑ While Boston’s *population* is spread fairly evenly throughout its neighborhoods (with Dorchester, Allston/Brighton and Roxbury obviously the most populous), the amount of *land* devoted to residential use varies greatly, with the more suburban southwestern neighborhoods utilizing a much higher percentage of land for residential use than the more densely populated neighborhoods in the center of the city and to the north and west of downtown Boston.
- ❑ There is very little vacant developable residential land remaining in the city, with the majority of it occurring in the more suburban neighborhoods in the southwest part of the city where average lot sizes are higher than the rest of the city.

Boston is not only a very residential city, it is a very popular city in which to live. The city’s high housing prices and rental rates reflect this fact.

While increasing the supply of housing is obviously an important remedy to alleviating the demand for housing in Boston – especially for affordable housing, the construction of new

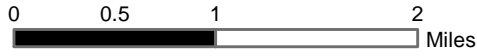
¹ Housing unit data source from the U.S. Census, 2000.

housing has to take into account the diversity of the city and its housing stock, land use patterns, and the dearth of developable land in Boston.

Residential Land

Residential Category

- | | |
|---|---|
|  Apartment |  Two-family |
|  Condominium |  Three-family |
|  Public Housing |  Urban Renewal |
|  Single-family |  Vacant Land |



This map is intended for planning purposes only, the location of features is approximate. Commercial area figures compiled from City of Boston Assessor's data. Assessor's data reflects January 1, 2000.

