Boston Business Patterns

2016

BOSTON
REDEVELOPMENT
AUTHORITY

THE BOSTON REDEVELOPMENT AUTHORITY RESEARCH DIVISION (BRA)
We strive to understand the current environment of the city to produce quality research and targeted information that will inform and benefit the residents and businesses of Boston. Our Division conducts research on Boston's economy, population, and commercial markets for all departments of the BRA, the City of Boston, and related organizations.

The information provided in this report is the best available at the time of its publication. All or partial use of this report must be cited.

CITATION
Please cite this publication as:
Boston Redevelopment Authority Research Division, May 2016

INFORMATION
For more information about research produced by the Boston Redevelopment Authority, please contact the Research Division at
Research@boston.gov

REQUESTS
Research requests can be made through the BRA Research Division's Research Inquiries **website**.

BOSTON
REDEVELOPMENT
AUTHORITY

Produced by the BRA Research Division

DIRECTOR
Alvaro Lima

DEPUTY DIRECTOR
Jonathan Lee

RESEARCH MANAGER
Christina Kim

SENIOR RESEARCHER/ECONOMIST
Matthew Resseger

SENIOR RESEARCHER/DEMOGRAPHER
Phillip Granberry

RESEARCH ASSOCIATE
Kevin Kang

RESEARCH ASSISTANT
Kevin Wandrei

INTERNS
Xiaoxiao Ma
Zachery Nelson

DESIGNER
Anna Johnson

Follow us on Twitter
twitter.com/BostonRedevelop

Visit our website
BostonRedevelop.org

Table of Contents

Introduction

In the years since the Great Recession of 2008-2009, Boston's economy has made a comeback. The city's unemployment rate continues to fall, and remains below the national average. An unprecedented building boom is underway in Boston, with millions of square feet of new buildings rising each year. Boston's businesses are feeling this resurgence, and it is reflected in strong growth across the city's neighborhoods.

Boston's leading industries continue to be those that are focused on research and knowledge; Professional, Scientific and Technical Services has the largest number of firms citywide, while Healthcare and Social Assistance has the largest number of employees. Finance and Insurance is another leading industry, as the third largest employer in the city.

Each of Boston's neighborhoods has something unique to offer businesses, and this factors into where industries choose to settle. Downtown and Back Bay are financial hubs while East Boston's Logan Airport makes the neighborhood a transportation center. Fenway/Kenmore, is a central location for Healthcare, Education and Arts establishments. Other neighborhoods are primarily residential, with more residents than employees, and these neighborhoods tend to specialize in locally-used services like retail, construction, and food services.

Boston's neighborhoods also differ in the size of their businesses. More residential communities like Mattapan and Hyde Park support small, local, establishments with only a handful of employees. Large firms in Downtown and elsewhere, on the other hand, serve regional, national and even international markets, and rely on hundreds or thousands of employees.

This report will provide insight into Boston's industry and neighborhood trends. It will provide information about industry growth and decline, neighborhood specialization, and differences between areas of the city.

Data, Methodology and Neighborhood Boundaries

Data and Methodology

The main data source for this report is the 2013 ZIP Code Business Patterns (ZCBP), published by the U.S. Census Bureau. Boston neighborhood boundaries in this report are thus based on zip codes; a table listing the zip codes for each neighborhood, as well as a map of the neighborhood boundaries, can be found in the next section.

The ZCBP provides the total private sector employment for each zip code, along with a matrix of the number of establishments, with industry on one axis and size by employment (eg. 1-20 employees, 21-50 employees, etc.) on the other axis. The ZCBP includes private sector payroll jobs only, excluding government and non-payroll (self-employed or family business) employment. Industries are defined by the North American Industrial Classification System (NAICS). Size classes represent ranges of payroll employment count. The actual number of jobs in each industry or size class is not directly stated in the data due to disclosure restrictions.

The ZCBP does not provide employment by industry for each zip code, though it does provide total number of establishments by industry. The Massachusetts Executive Office of Labor and Workforce Development (EOLWD)'s ES-202 dataset on employment and wages provides data on private payroll employment by industry, but only at the city level. The ES-202 is an administrative dataset, not a survey, and it comprehensively covers all employers subject to unemployment compensation laws. As such, the dataset relies on private payroll establishments, making it a comparable source of data to the ZCBP. For citywide employment estimates, this report uses the ES-202. Because the ES-202 cannot be used below the city level, this report does not include employment data by industry at the neighborhood level. At the neighborhood level, this report will primarily discuss establishments.

It is important to note, however, that the ZCBP and the ES-202 datasets differ in a few important respects. The ZCBP excludes several private industries that are partly covered by the ES-202: crop and animal production; rail transportation; insurance and employee benefit funds; trusts, estates, and agency accounts; and private households. These excluded industries, however, are not a major issue in Boston. Another crucial difference is that the ZCBP covers some employees more completely than the ES-202. These include: employees of educational institutions, membership organizations, and small nonprofit organizations in other industries.[1] While the datasets are comparable, they are not identical, and citywide and industry-level totals do not match across these two datasets.

Neighborhood Boundaries

The following chart describes the zip codes used to define each neighborhood. Note that these neighborhood boundaries do not necessarily conform to other neighborhood definitions based on Census Block or Census Tract boundaries. { **TABLE 1** }

Spatially, these zip-code neighborhood boundaries correspond to the map. { **FIGURE 1** }

[1] *Bureau of Economy Analysis. "Alternative Measures of County Employment and Wages." https://www bea.gov/scb/pdf/2013/12%20 December/1213_alternative_measures_box.pdf.*

TABLE 1

NEIGHBORHOODS
by Zip Code
2013

NEIGHBORHOOD	ZIP CODES
Allston/Brighton	02134, 02135, 02163
Back Bay/Beacon Hill	02108, 02116, 02117*, 02199, 02217*, 02133*
Central Boston	02109, 02110, 02111, 02112*, 02113, 02114, 02196*, 02201*, 02203, 02205*, 02211*, 02212*, 02222*, 02241*, 02283*, 02297*
Charlestown	02129
Dorchester	02122, 02124, 02125
East Boston	02128, 02228*
Fenway/Kenmore	02115, 02215, 02123*
Hyde Park	02136, 02137*
Jamaica Plain	02130
Mattapan	02126
Roslindale	02131
Roxbury	02119, 02120, 02121
South Boston	02127, 02210
South End	02118
West Roxbury	02132

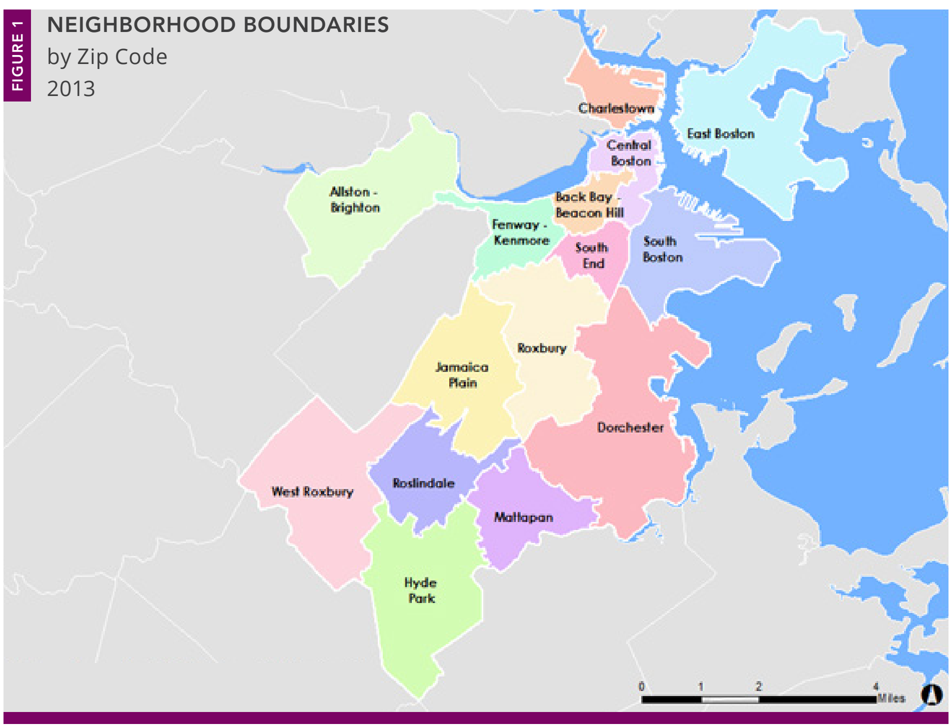
** These zip codes are unique zip codes attached to a single high-volume address.*

*** Zip code 02467 is excluded from this report. The zip code crosses the borders of Newton, Brookline, and Boston. Only a small portion of the zip code is located in Boston, and the ZCBP data does not identify which businesses in 02467 are in Boston.*

**** The following zip codes are located within the city of Boston, but have no businesses: 02204, 02206, 02266, 02284, 02293, and 02298.*

FIGURE 1

NEIGHBORHOOD BOUNDARIES
by Zip Code
2013



Source: US Census Bureau, MassGIS, BRA Research Division Analysis.

Citywide Business Patterns

Establishments and Employment in Boston, 2001 to 2013

Between 2001 and 2013, Boston saw an overall increase in the number of private business establishments in the city, and the number of establishments reached an all-time high in 2013. In 2001, the city was home to 18,919 private business establishments, and that number grew to 21,895 by 2013, an increase of over 15%. The effects of the Great Recession on the total number of establishments were small: establishments grew during the Recession, though there was a very small decrease between 2011 and 2012. { **FIGURE 2** }

Changes in the number of business establishments in Boston, however, is not synonymous with changes in the number of jobs in the city. Between 2001 and 2013, while the number of establishments in the city of Boston grew by 15%, the number of private payroll jobs (those that correspond to private establishments) grew by only 3.1%, from 494,508 to 510,049. { **FIGURE 3** }

Notably, while the Great Recession had little negative impact on the number of establishments in Boston, it did coincide with changes in employment. Private sector payroll jobs fell to 476,800 in 2010, a decline of 3.6% from the pre-recession high of 494,642 in 2008. Private establishments, however, rose 5.8%, from 19,491 in 2008 to 20,631 in 2010. The Great Recession thus resulted in more firms, but less employment, implying that average firm size declined. { **FIGURE 4** }

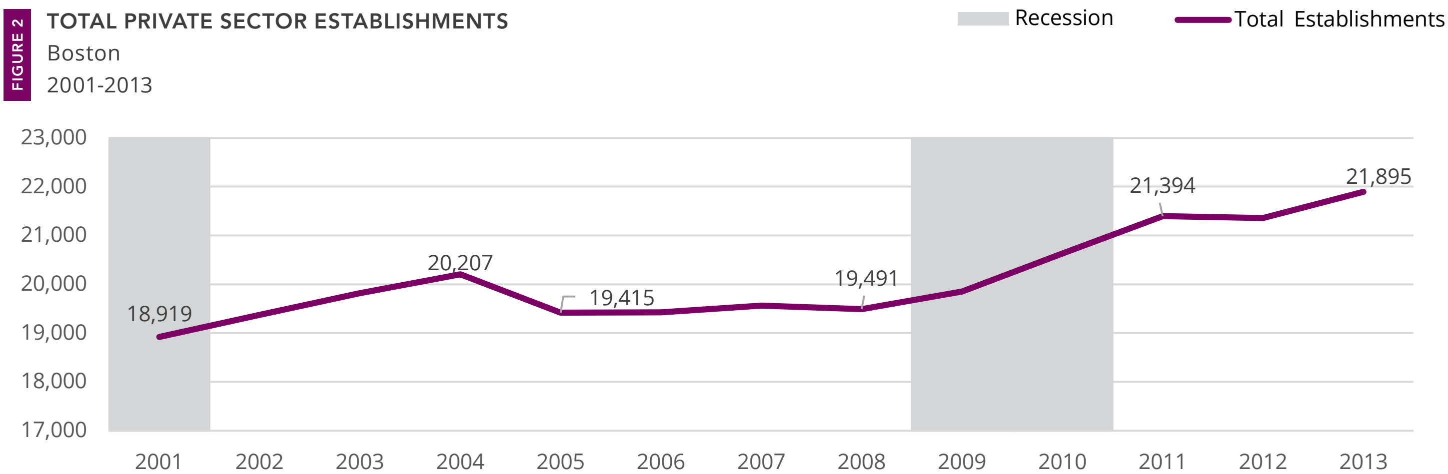
Boston's total employment growth has not kept pace with the rate of establishment growth because of changes in the typical size of a Boston private business establishment. The average employment size of a private Boston establishment fell from 2001 until 2004. Average employment size then rose from 2004 until the Great Recession, at which point average establishment size fell to 23.3 employees in 2013.

The average private Boston establishment employed about 10.7% fewer employees in 2013 than it did in 2001.

Photo by Peter Vanderwarker

FIGURE 2

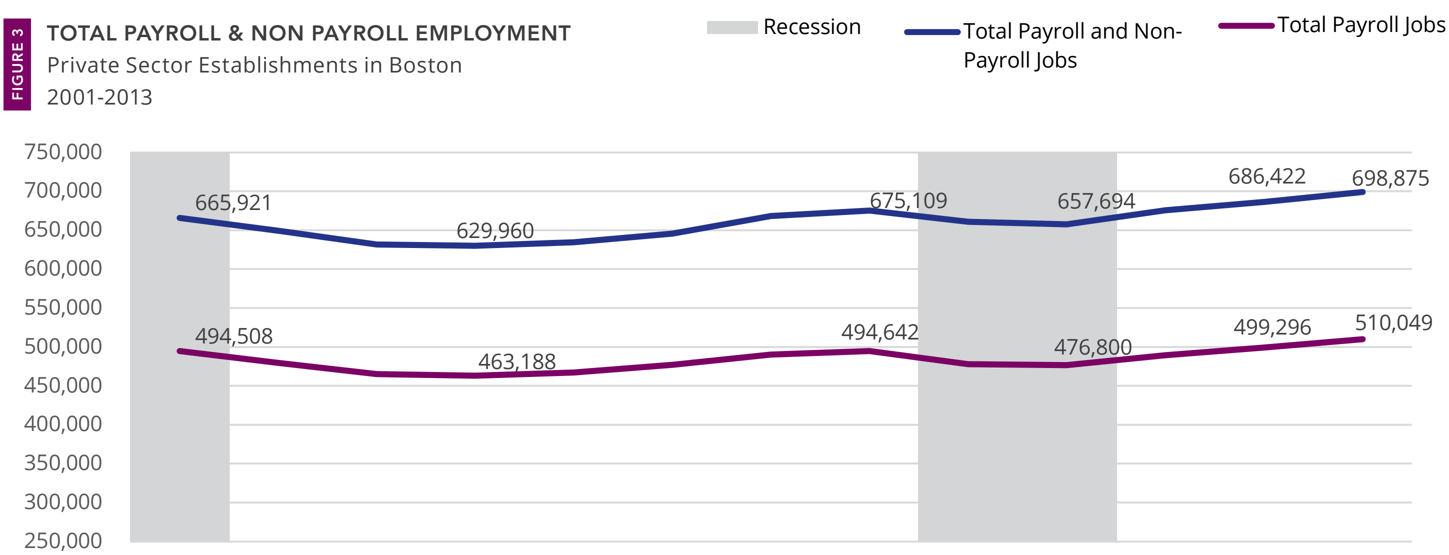
TOTAL PRIVATE SECTOR ESTABLISHMENTS
Boston
2001-2013



Source: Massachusetts Executive Office of Labor and Workforce Development, Employment and Wages (ES-202), BRA Research Division Analysis.

FIGURE 3

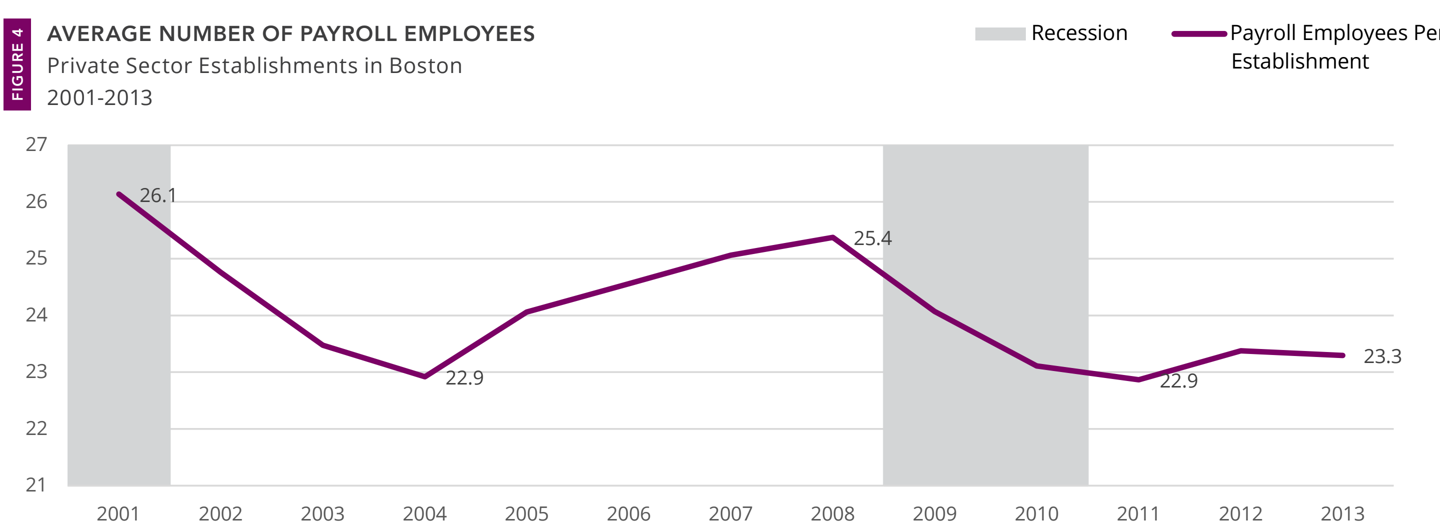
TOTAL PAYROLL & NON PAYROLL EMPLOYMENT
Private Sector Establishments in Boston
2001-2013



Sources: Bureau of Economic Analysis (BEA), Massachusetts Executive Office of Labor and Workforce Development (EOLWD), Employment and Wages (ES-202), BRA Research Division Analysis.

FIGURE 4

AVERAGE NUMBER OF PAYROLL EMPLOYEES
Private Sector Establishments in Boston
2001-2013



Source: Massachusetts Executive Office of Labor and Workforce Development (EOLWD), Employment and Wages (ES-202), BRA Research Division Analysis.

Trends in Boston's Industrial Composition

Growth Rates, 2001 to 2013

Between 2001 and 2013, the rate of growth for Boston's industries varied. The fastest growing industry, by number of new establishments, was the Healthcare and Social Assistance Industry, which saw 189% more firms in Boston in 2013 as compared to 2001. Similarly, by percentage change in the number of employees, Healthcare and Social Assistance was also the fastest-growing industry. The workforce in Boston that is employed in Healthcare and Social Assistance expanded by 37.4% between 2001 and 2013. Other fast-growing industries, by both number of establishments and number of employees, include Educational Services and Accommodations and Food Services. Finance and Insurance was a fast growing industry by number of establishments, but the industry actually declined in number of employees. { **TABLE 2** }

Boston's Industrial Composition in 2013

Citywide, Boston's leading industries by number of establishments are Healthcare and Social Assistance, Professional, Scientific and Technical Services, Other Services, Accommodation and Food Services, and Retail Trade. The top employers by industry are Healthcare and Social Services, Professional, Scientific and Technical Services, and Finance and Insurance.

Some industries with large establishment share have very small employment shares. For example, 9.8% of all businesses in Boston are in Retail Trade, but only 5.6% of all Boston workers are employed in this industry. "Other Services," which could include nail salons, religious organizations, or parking lots, occupy 11.5% of all of Boston's establishments, but because these individual firms tend to be quite small, "Other Services" only employs 4.1% of Boston's workers. In 2013, over 57% of "Other Services" establishments employed only 1 to 4 employees, with only Construction and Real Estate having higher percentages of employees in this employment size range.

The number of establishments in an industry does not necessarily relate to that industry's employment share. The size of the establishment directly impacts an industry's share of the city's overall employment. { **TABLE 3** }

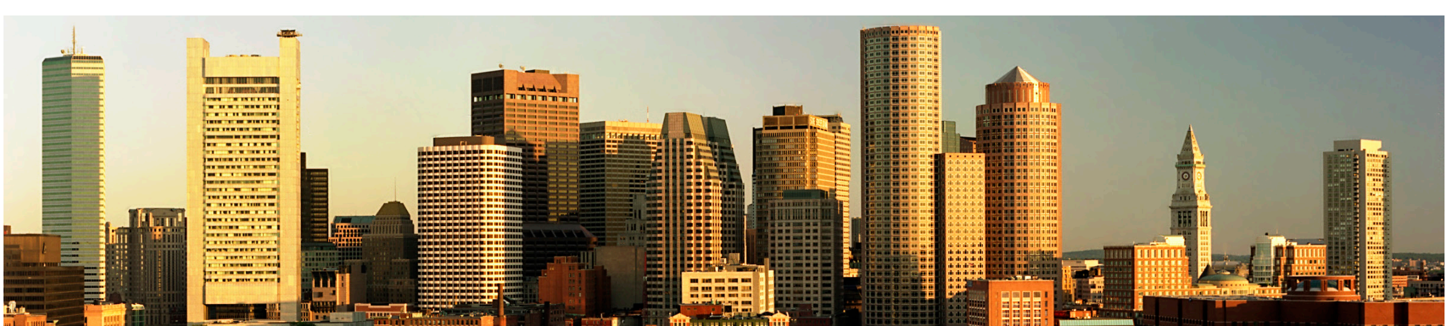


Photo by Peter Vanderwarker

TABLE 2

GROWTH RATES OF SELECTED INDUSTRIES
by Number of Establishments and Employees
2001-2013

INDUSTRY	GROWTH RATE ESTABLISHMENTS	GROWTH RATE EMPLOYMENT
Healthcare and Social Assistance	189.0%	37.4%
Arts, Entertainment, and Recreation	30.6%	27.7%
Educational Services	29.3%	30.4%
Accommodations and Food Services	20.3%	32.9%
Finance and Insurance	10.8%	-16.1%

Source: Massachusetts Executive Office of Labor and Workforce Development (EOLWD), Employment and Wages (ES-202), BRA Research Division Analysis.

TABLE 3

BOSTON'S PRIVATE SECTOR ESTABLISHMENTS AND EMPLOYMENT
by Industry
2013

INDUSTRY	NUMBER OF ESTABLISHMENTS	ESTABLISHMENT SHARE	NUMBER OF EMPLOYEES	EMPLOYMENT SHARE
Healthcare and Social Assistance	4,049	18.5%	123,376	24.2%
Professional and Technical Services	3,818	17.4%	66,747	13.1%
Other Services, Ex. Public Administration	2,515	11.5%	21,108	4.1%
Accommodation and Food Services	2,168	9.9%	55,697	10.9%
Retail Trade	2,148	9.8%	28,810	5.6%
Finance and Insurance	1,716	7.8%	65,660	12.9%
Administrative and Waste Services	990	4.5%	27,587	5.4%
Real Estate and Rental and Leasing	982	4.5%	11,600	2.3%
Wholesale Trade	734	3.4%	7,734	1.5%
Construction	712	3.3%	11,371	2.2%
Information	527	2.4%	13,921	2.7%
Educational Services	388	1.8%	35,683	7.0%
Transportation and Warehousing	351	1.6%	15,133	3.0%
Arts, Entertainment, and Recreation	316	1.4%	9,122	1.8%
Manufacturing	292	1.3%	7,643	1.5%
Management of Companies and Enterprises	164	0.7%	7,386	1.4%
Utilities	19	0.1%	1,444	0.3%
Agriculture, Forestry, Fishing & Hunting	5	0.0%	14	0.0%

Source: Massachusetts Executive Office of Labor and Workforce Development (EOLWD), Employment and Wages (ES-202), BRA Research Division Analysis.

Business Patterns by Neighborhood

Distribution of Establishments and Employment by Neighborhood

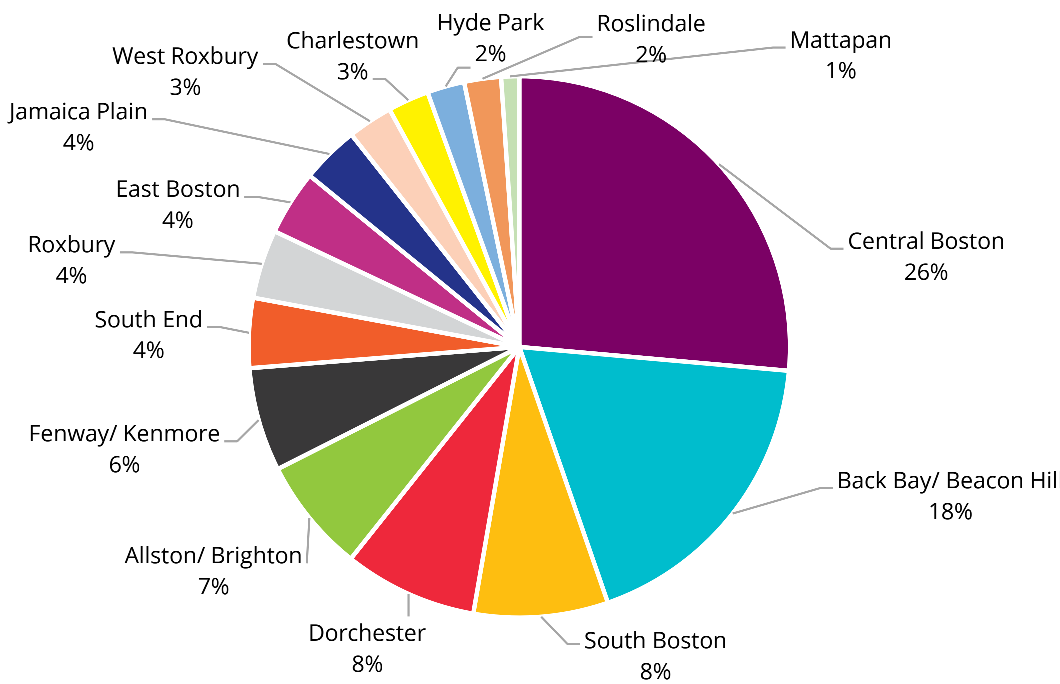
Boston's downtown – including Central Boston and Back Bay/Beacon Hill – is home to nearly half of all business establishments in the city. Other neighborhoods, though geographically larger, are more residential and less commercial, with smaller shares of Boston's business establishments. The four southernmost neighborhoods, Hyde Park, Mattapan, Roslindale, and West Roxbury, make up 31.2% of all of Boston's land area, but account for only 8.2% of the city's establishments. { **FIGURE 5** }

While Central Boston and Back Bay/Beacon Hill dominate Boston in terms of number of establishments, these two neighborhoods are even more dominant in terms of their share of Boston's total employment. While approximately 45% of all businesses are located in Central Boston or Back Bay/Beacon Hill, about 50% of all employees in Boston work in these two neighborhoods. Other neighborhoods are also more prominent in terms of number of employees than in number of establishments. In particular, Fenway/Kenmore is only the sixth largest neighborhood in terms of number establishments, but it is second in terms of number of employees, behind Central Boston. Some neighborhoods barely register in terms of their share of Boston's total employment – Mattapan has less than 0.5% of all employees in Boston, for example. { **FIGURE 6** }

Photo by Peter Vanderwarker

FIGURE 5

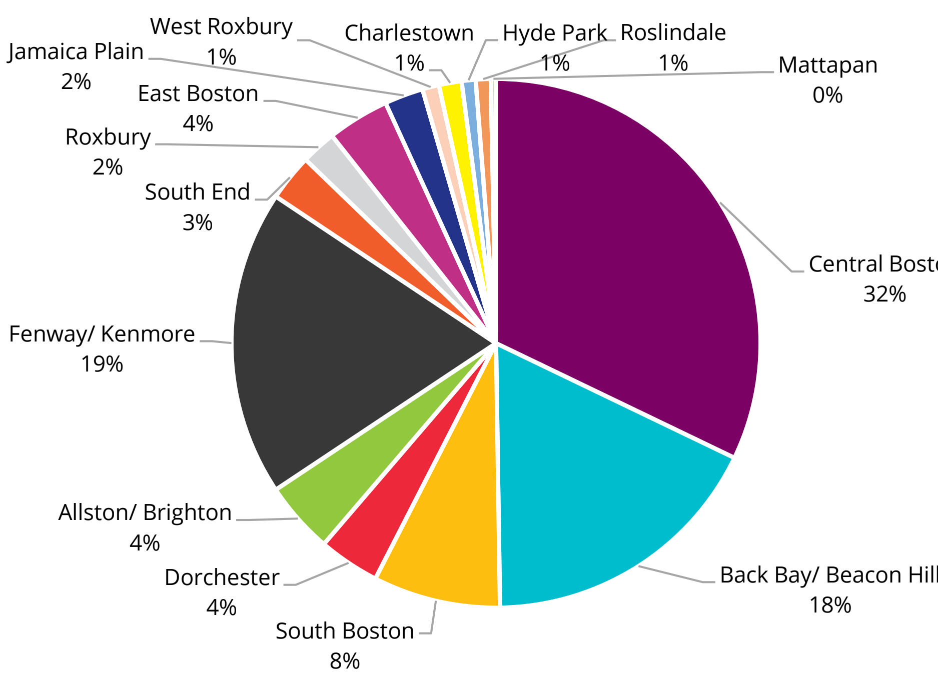
TOTAL ESTABLISHMENTS
by Neighborhood
2013



Source: U.S. Census Bureau, Zip Code Business Patterns 2013, BRA Research Division Analysis.

FIGURE 6

TOTAL EMPLOYMENT
by Neighborhood
2013



Source: U.S. Census Bureau, Zip Code Business Patterns 2013, BRA Research Division Analysis.

Commercial, Industrial, and Residential Land Use

Boston's land use patterns affect business trends in the city's neighborhoods. The map **FIGURE 7** on page 13 shows Boston's current land uses, broken down by residential, commercial, industrial, mixed, and institutional uses. Almost half of the city's land area is devoted to tax-exempt "institutional" purposes, which could include hospitals, schools, universities, government buildings, and parks. Large public infrastructure like Logan Airport are also included in this category.

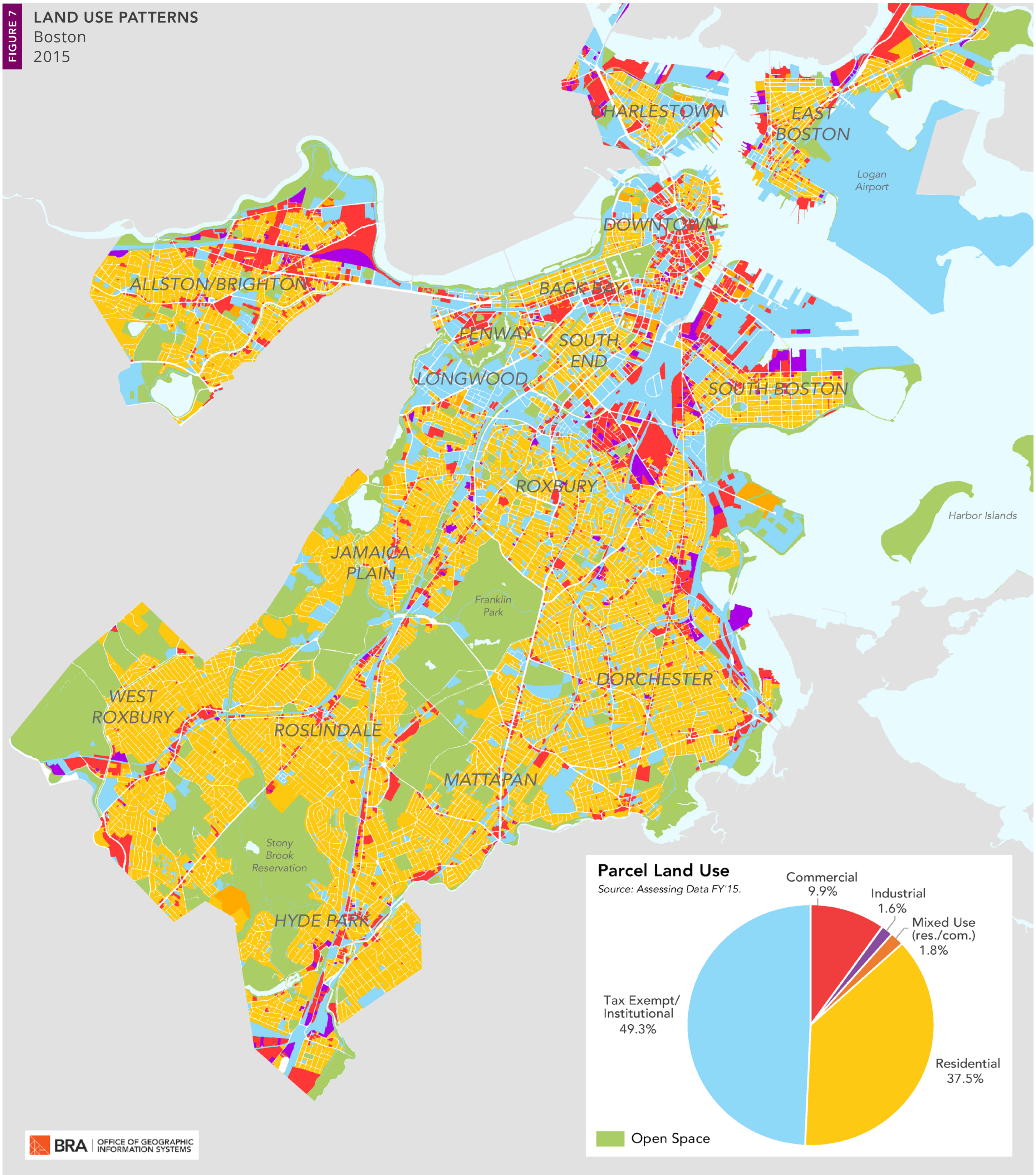
The city's land use patterns vary by neighborhood. Outer parts of the city – West Roxbury, Hyde Park, Roslindale, and Mattapan – are heavily devoted to residential uses. Apart from an essential commercial/industrial roadway in each of these neighborhoods, most of their land area is devoted to residences. This is in contrast to neighborhoods like Downtown, South Boston, Longwood and East Boston, where large portions – perhaps even a majority – of land area is devoted to business uses. { **TABLE 4** }

TABLE 4

BOSTON'S NEIGHBORHOODS
Land Zoned for Business Use
2013

NEIGHBORHOOD	% OF LAND WHERE BUSINESS USE IS ALLOWABLE
East Boston	57.8%
South Boston	42.1%
Charlestown	25.6%
Back Bay/ Beacon Hill	22.3%
Central Boston	22.0%
Dorchester	18.0%
Hyde Park	17.0%
Allston/ Brighton	16.5%
Fenway/ Kenmore	11.8%
West Roxbury	8.5%
South End	8.2%
Jamaica Plain	8.2%
Mattapan	7.9%
Roxbury	5.1%
Roslindale	4.9%

Source: City of Boston Zoning Code.
NOTE: "Land Where Business Use is Allowable" includes all Commercial, Industrial, Mixed Use, and Institutional (non Open Space) land area.



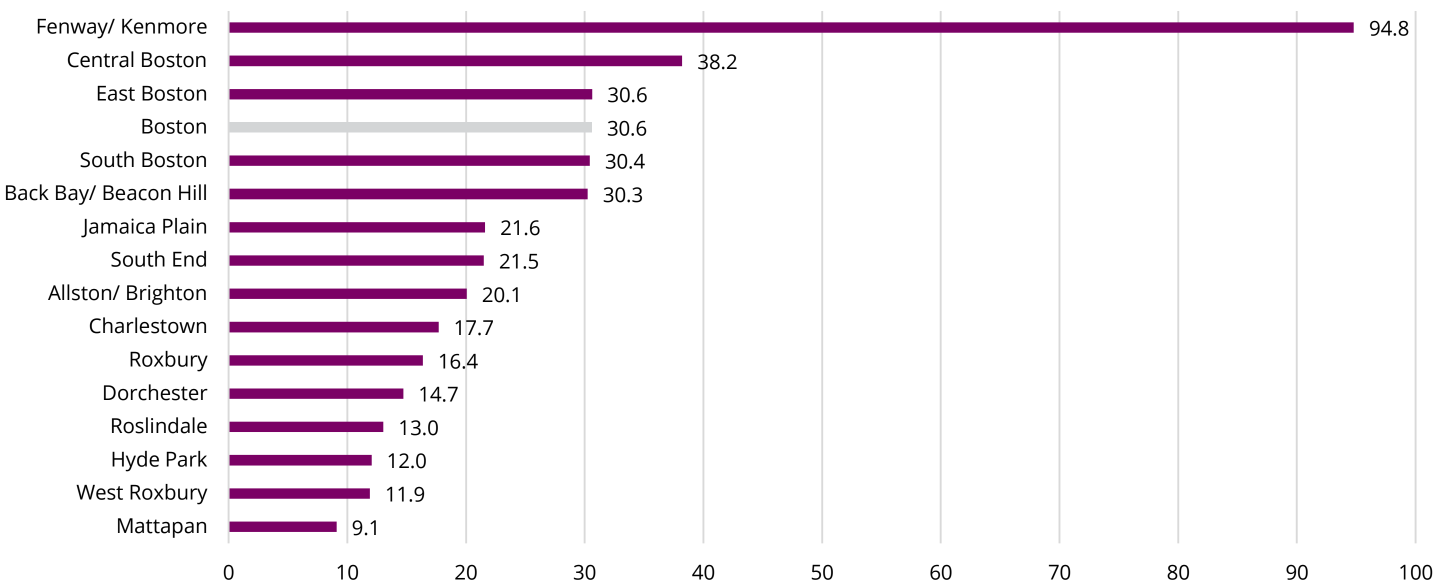
Source: Assessing Data FY'15.

Average Number of Employees per Establishment by Neighborhood

Because of differences in zoning and industrial composition, Boston's neighborhoods vary dramatically in average establishment size. Fenway/ Kenmore, home to the Longwood Medical Area's large hospitals and universities, has an average establishment size of nearly 95 employees. On the other extreme, Mattapan and West Roxbury's small retail and services industries only support a few employees each, resulting in an average establishment size of just 9.1 and 11.9 respectively. Fenway/ Kenmore, Central Boston, and East Boston have more employees per establishment than the citywide average. { **FIGURE 8** }

FIGURE 8

AVERAGE NUMBER OF EMPLOYEES PER ESTABLISHMENT
by Neighborhood
2013



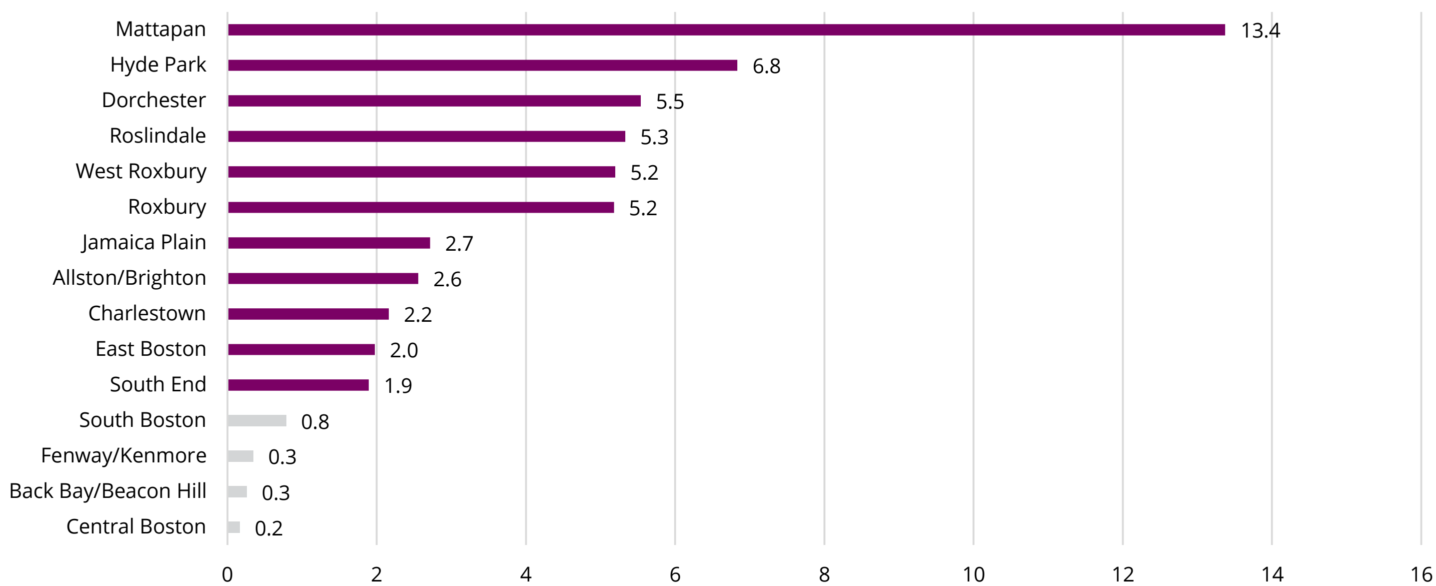
Source: U.S. Census Bureau, Zip Code Business Patterns 2013, BRA Research Division Analysis.

Population-to-Employment Ratios: Boston's Residential and Commercial Neighborhoods

Land use characteristics and the size of employers within a neighborhood combine to define neighborhoods by their commercial or residential composition. Some neighborhoods are distinctly commercial, with many more businesses than residences. Other neighborhoods have the opposite character, with more residences than businesses or employees. In **FIGURE 9** below, neighborhoods in purple have more residents than employees – these neighborhoods might be described broadly as "residential" neighborhoods. Neighborhoods in gray have more employees than residents; as such, these neighborhoods might be called Boston's "commercial" neighborhoods.

FIGURE 9

RATIO OF POPULATION TO EMPLOYEES
by Neighborhood
2013



Source: U.S. Census Bureau, Zip Code Business Patterns 2013, 2009-2013 American Community Survey, BRA Research Division Analysis.

Conclusion

As a major American city, Boston is home to a wide variety of business establishments. From Central Boston's financial hub to the large hospitals of the Longwood Medical Area to the major research universities in Fenway, Boston's unique neighborhoods help the city as a whole serve a global market. Each neighborhood does its part to make the city of Boston what it is, while each maintains its own respective character. Boston's neighborhoods are not static, however, and have changed with the prevailing trends of the city. South Boston, once an industrial port neighborhood, is fast becoming a high tech center, while Dorchester's residential population is becoming increasingly diverse. As the neighborhoods shift and transform, the city as a whole changes with them.

For a more detailed analysis of business patterns in individual neighborhoods, please see the addendum to this report "Neighborhood Business Patterns 2016."

Photo by Peter Vanderwarker

Appendix A : Employment and Establishments by Neighborhood

TABLE 7

PAID EMPLOYEES AND ESTABLISHMENTS
by Neighborhood
2013

NEIGHBORHOOD	PAID EMPLOYEES	ESTABLISHMENTS
Allston/Brighton	25,524	1,272
Back Bay/Beacon Hill	102,696	3,394
Central Boston	187,257	4,900
Charlestown	8,069	456
Dorchester	21,789	1,480
East Boston	22,064	720
Fenway/Kenmore	109,010	1,150
Hyde Park	4,988	414
Jamaica Plain	13,806	639
Mattapan	1,812	199
Roslindale	5,320	408
Roxbury	12,488	763
South Boston	45,312	1,489
South End	16,625	773
West Roxbury	5,940	499

Source: U.S. Census Bureau, 2013 Zip Code Business Patterns, BRA Research Division Analysis.

NOTE: Because of differences in data sources, the sum of the table above will not equal the Boston citywide totals in this report. Citywide totals use ES-202 data, not the Zip Code Business Patterns.

Appendix B : Establishments in Boston by Size and Industry Sector

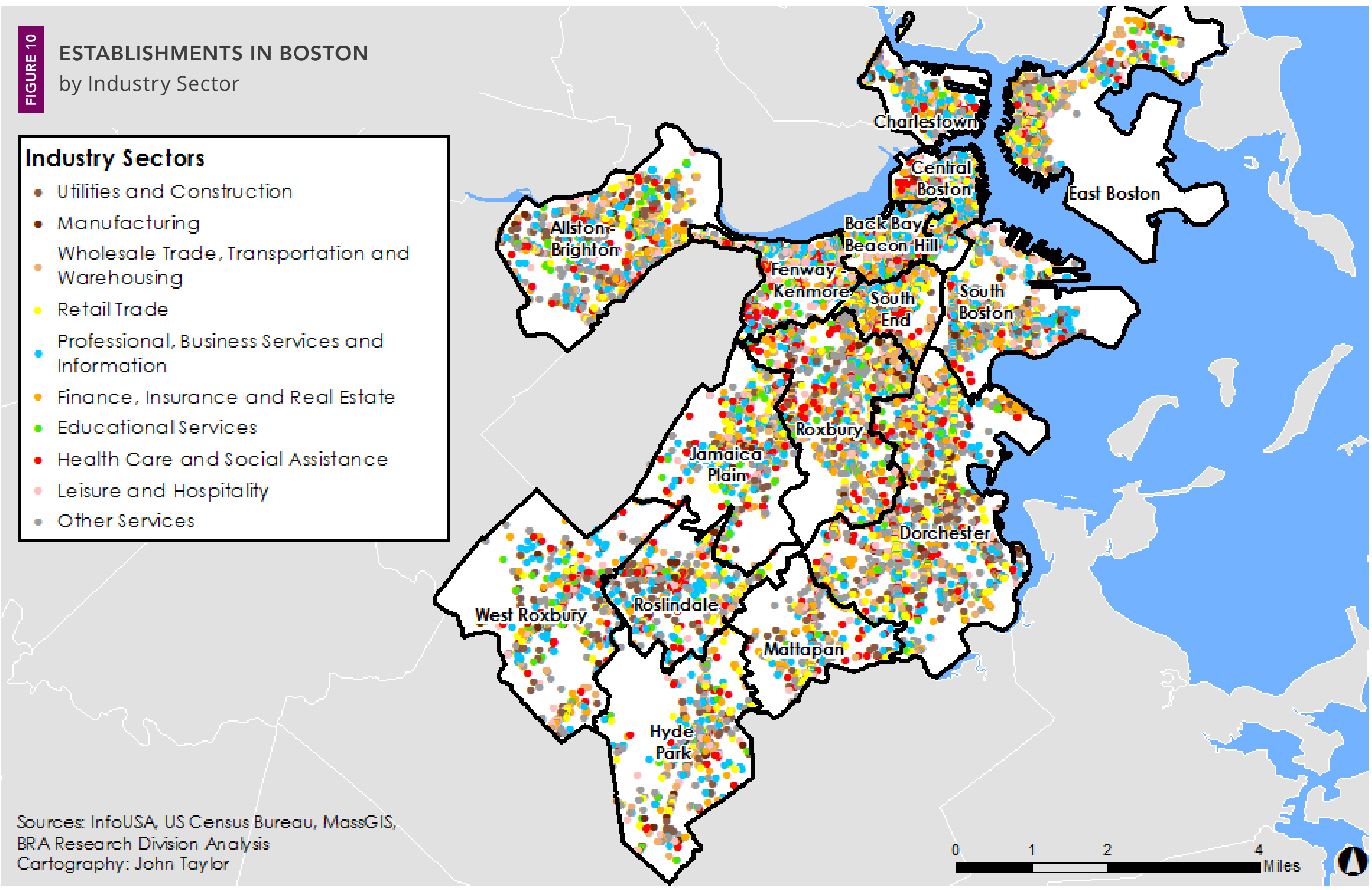


FIGURE 11

EDUCATIONAL SERVICES

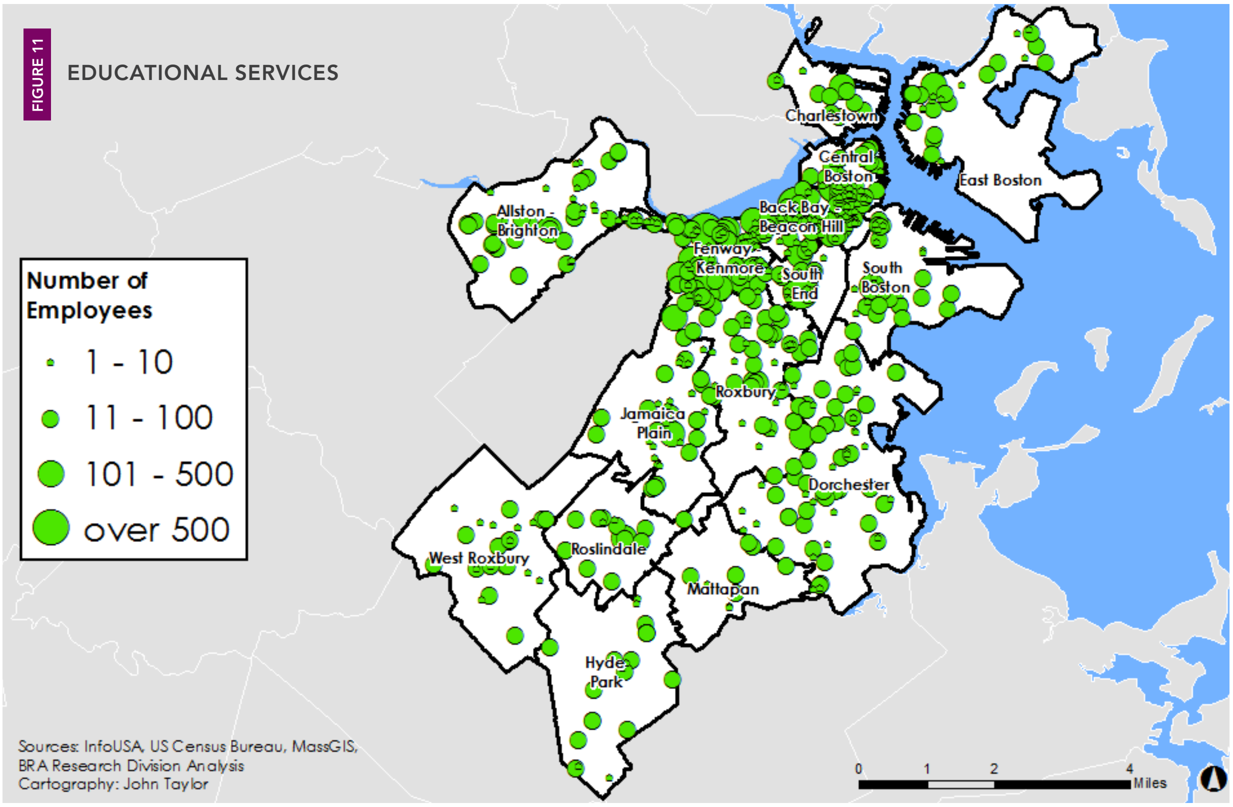


FIGURE 12

FINANCE, INSURANCE AND REAL ESTATE

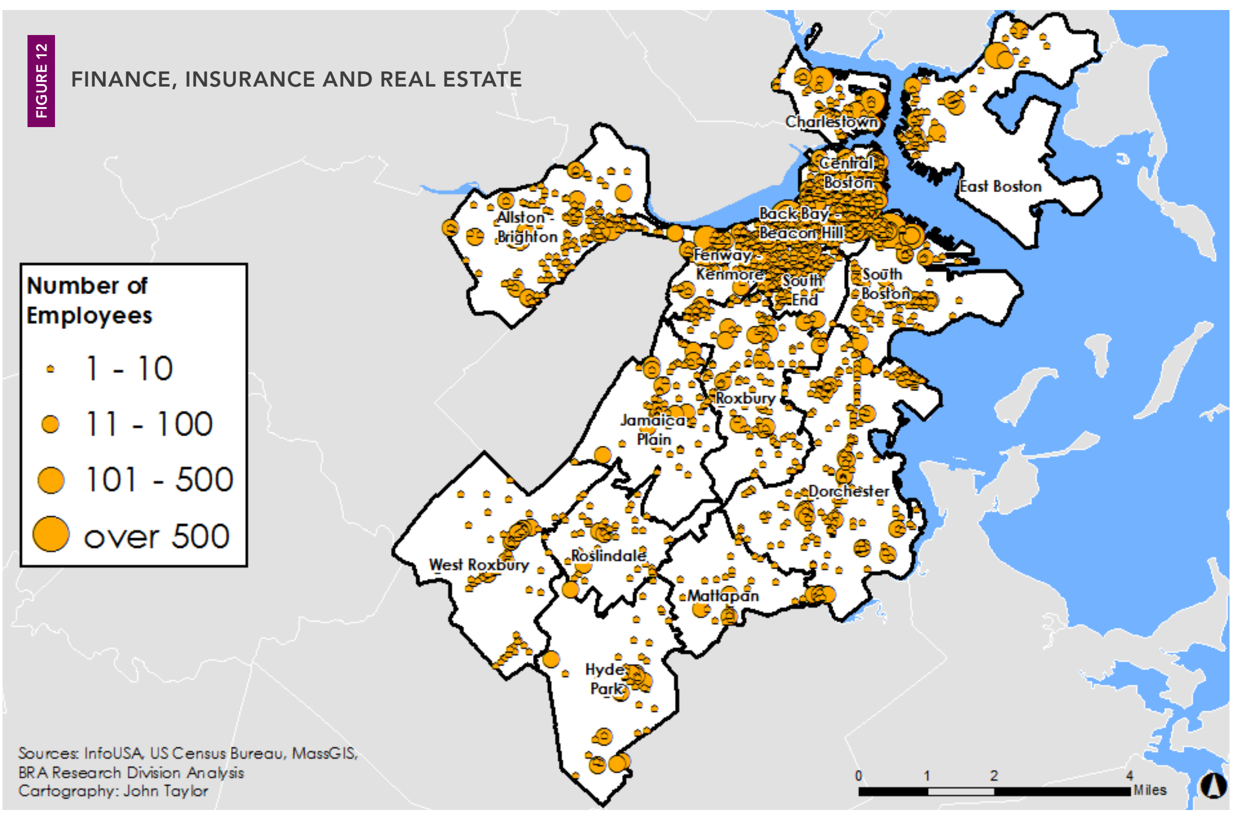


FIGURE 13

HEALTH CARE AND SOCIAL ASSISTANCE

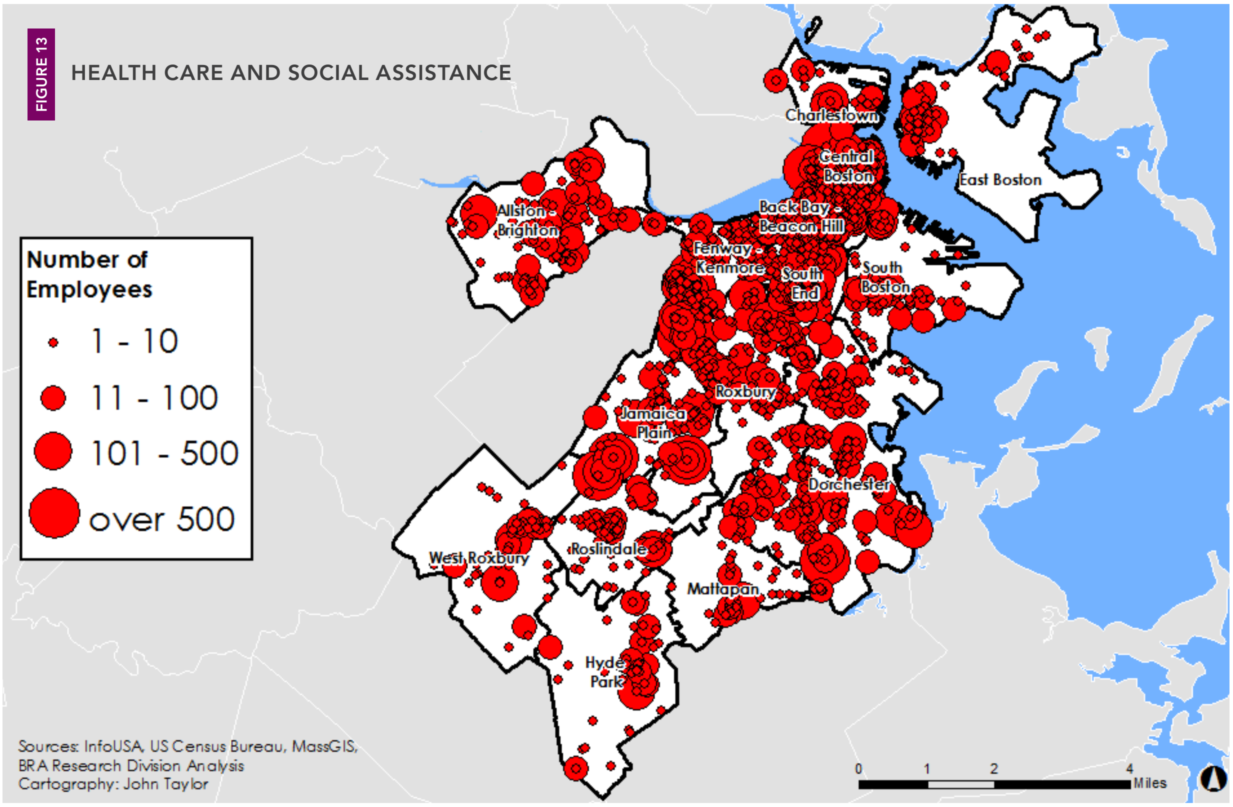


FIGURE 14

LEISURE AND HOSPITALITY

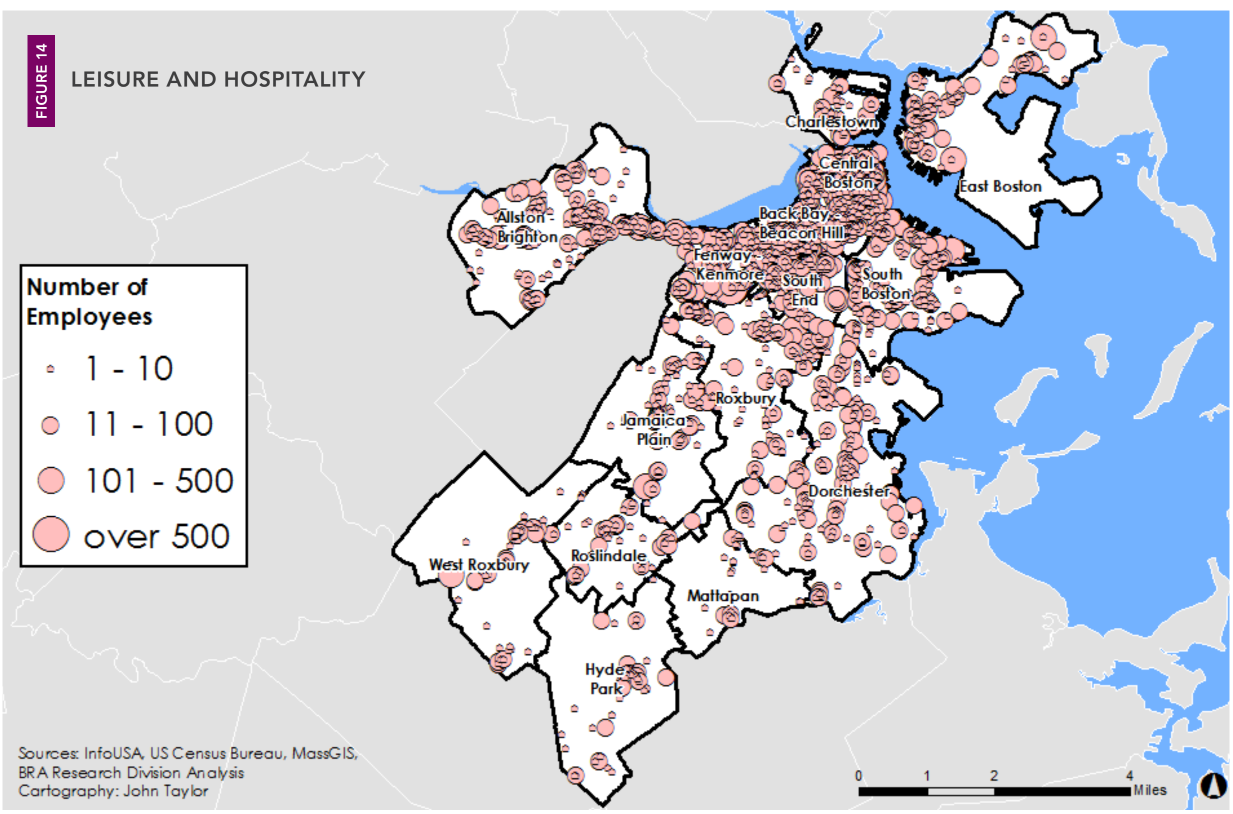


FIGURE 15

MANUFACTURING

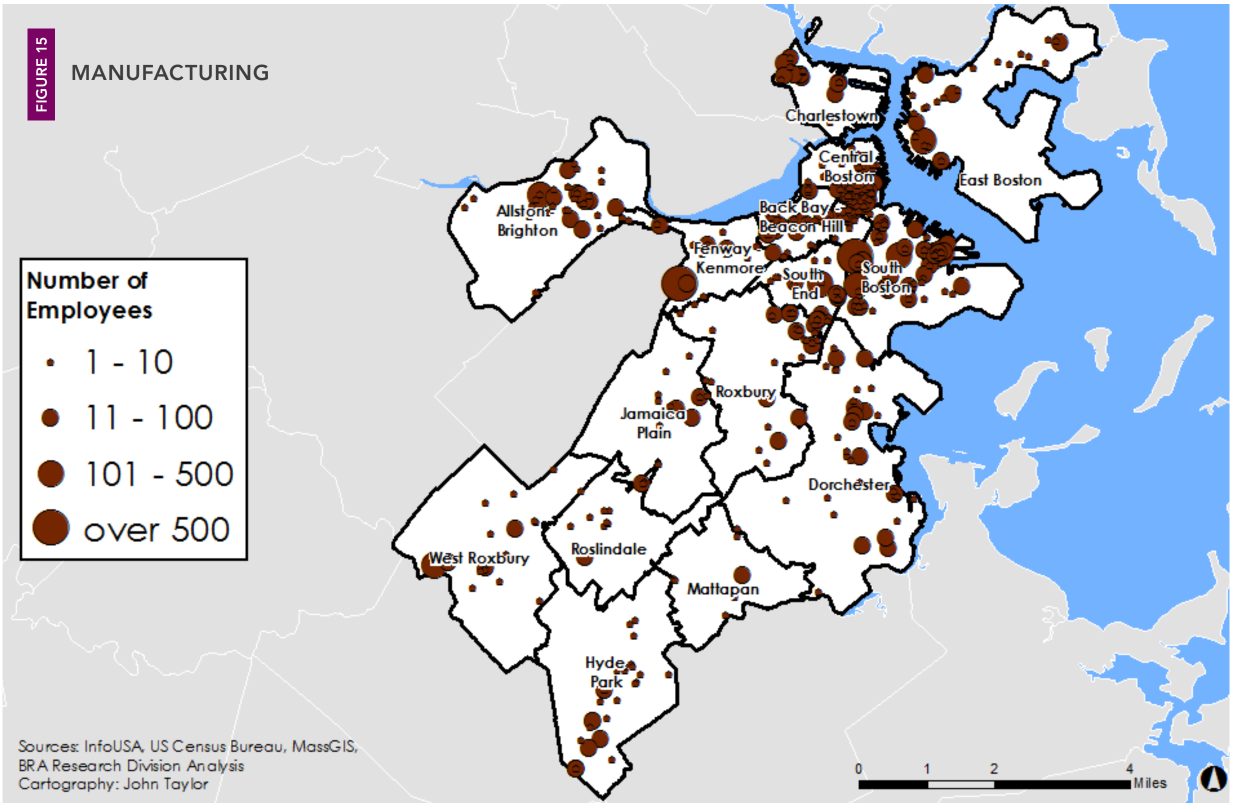
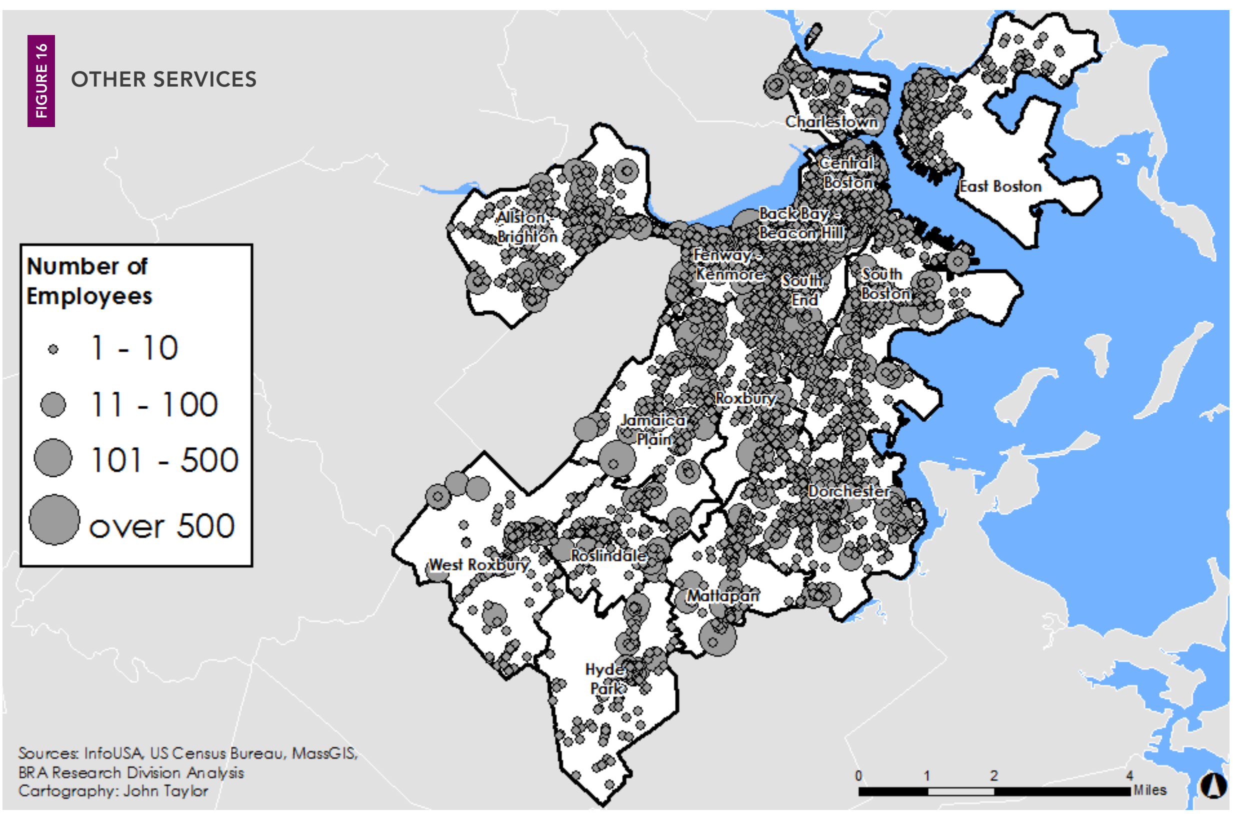


FIGURE 16

OTHER SERVICES



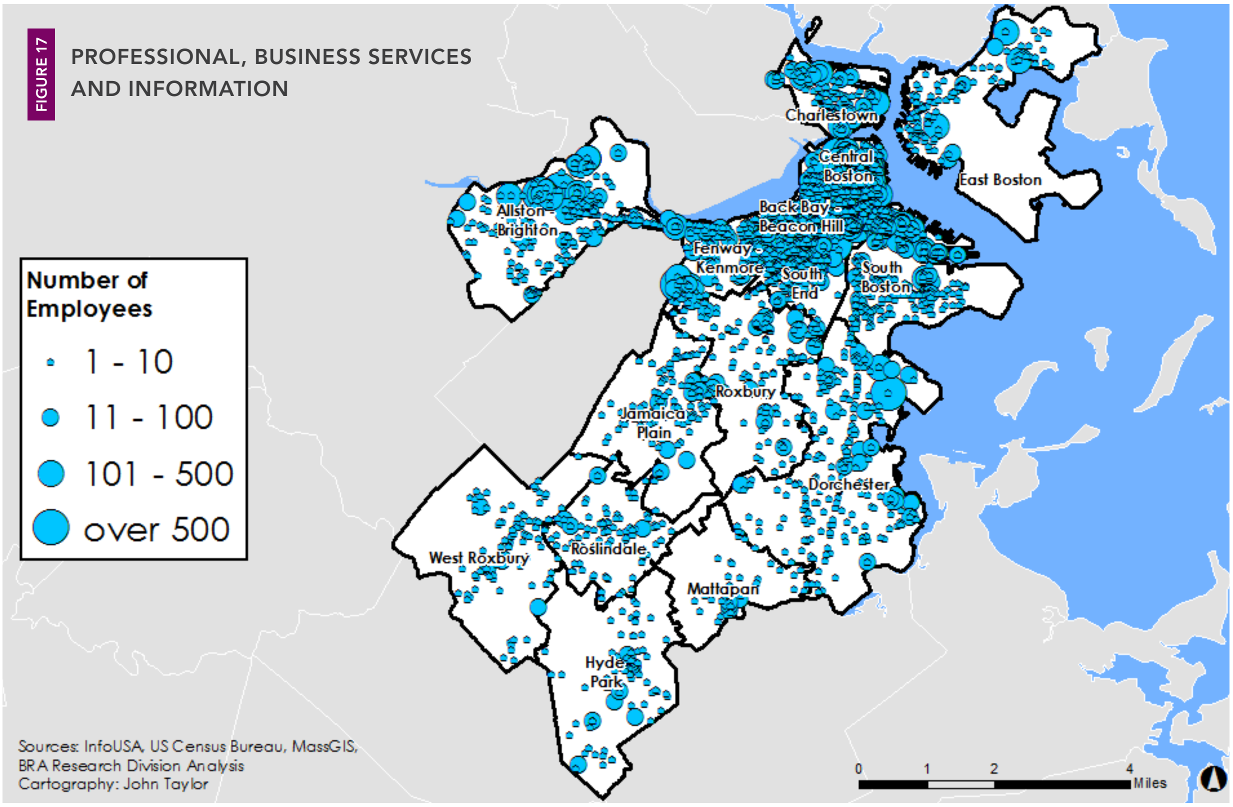


FIGURE 17
PROFESSIONAL, BUSINESS SERVICES AND INFORMATION
Number of Employees
1 - 10
11 - 100
101 - 500
over 500
Charlestown
Central Boston
East Boston
Back Bay - Beacon Hill
Allston - Brighton
Fenway - Kenmore
South End
South Boston
Roxbury
Jamaica Plain
Dorchester
West Roxbury
Roslindale
Mattapan
Hyde Park
Sources: InfoUSA, US Census Bureau, MassGIS, BRA Research Division Analysis
Cartography: John Taylor
0 1 2 4 Miles

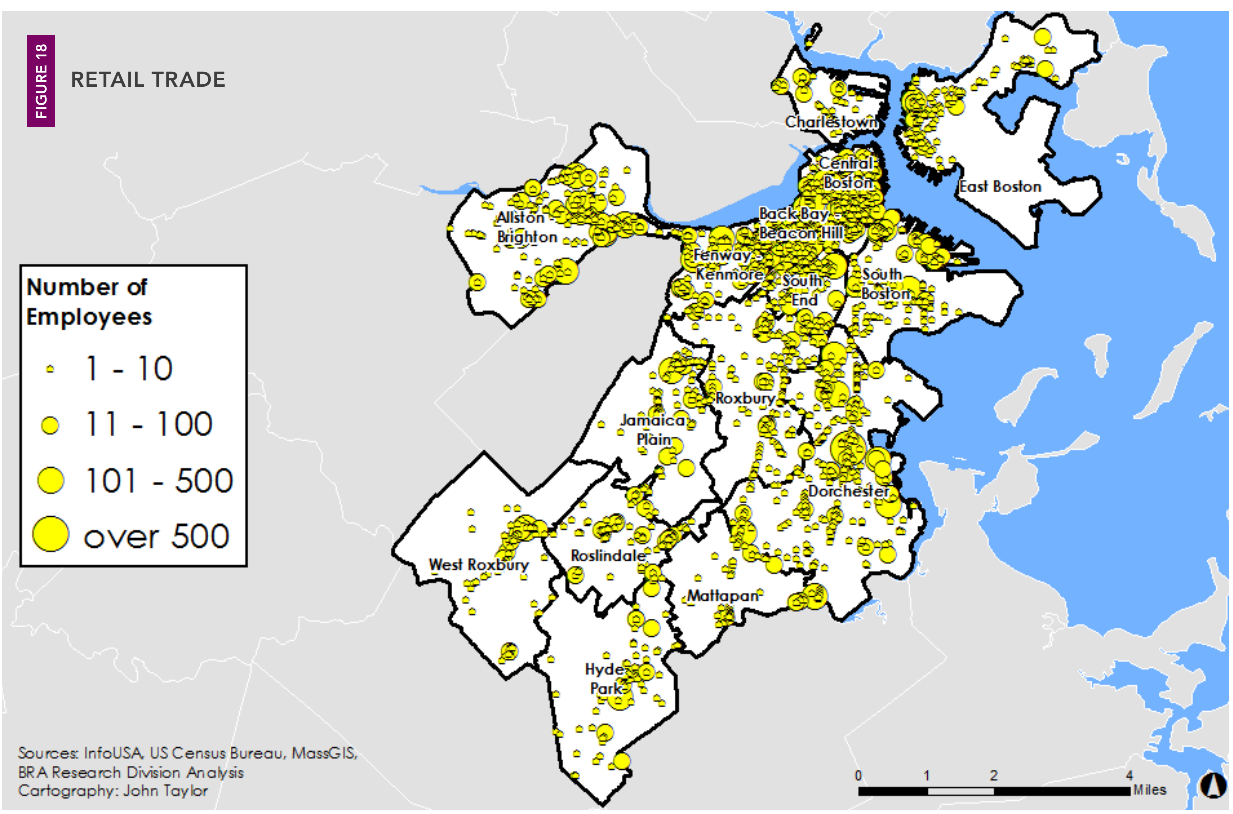


FIGURE 18
RETAIL TRADE
Number of Employees
1 - 10
11 - 100
101 - 500
over 500
Charlestown
Central Boston
East Boston
Back Bay - Beacon Hill
Allston - Brighton
Fenway - Kenmore
South End
South Boston
Roxbury
Jamaica Plain
Dorchester
West Roxbury
Roslindale
Mattapan
Hyde Park
Sources: InfoUSA, US Census Bureau, MassGIS, BRA Research Division Analysis
Cartography: John Taylor
0 1 2 4 Miles

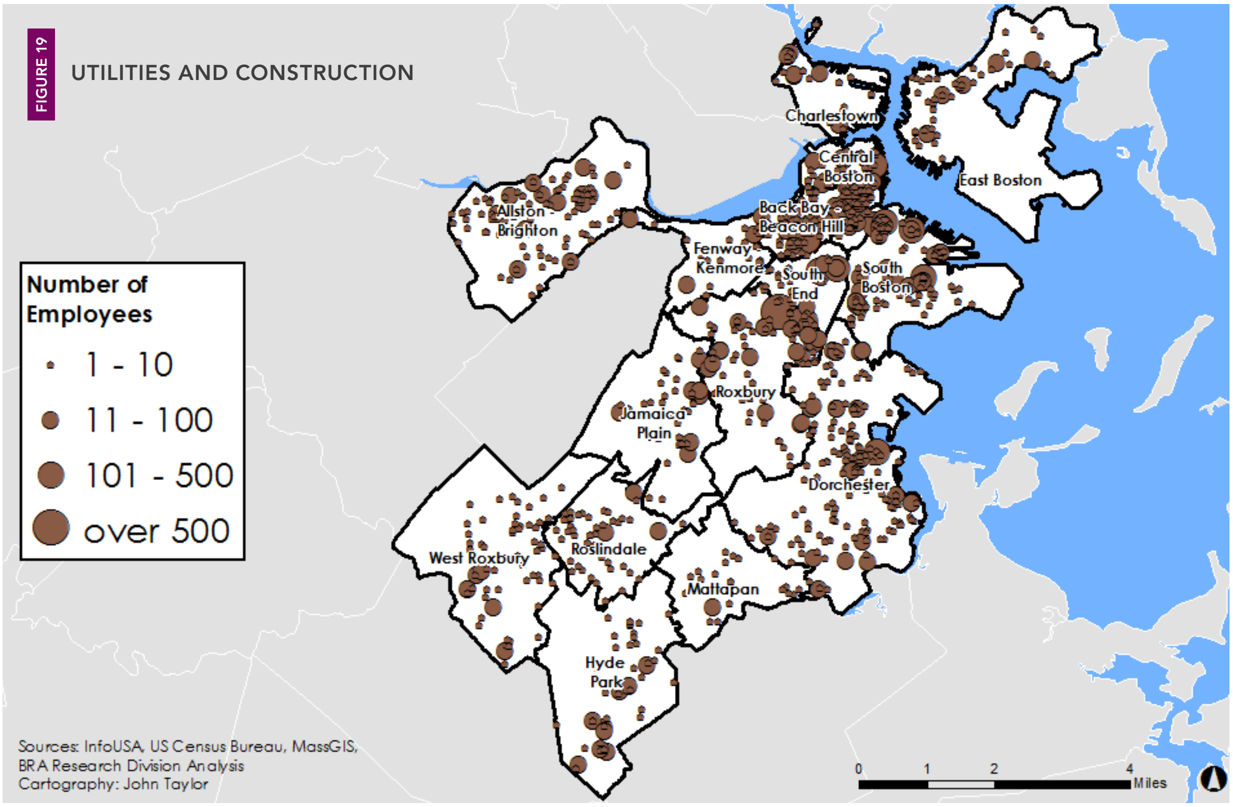


FIGURE 19
UTILITIES AND CONSTRUCTION
Number of Employees
1 - 10
11 - 100
101 - 500
over 500
Charlestown
Central Boston
East Boston
Back Bay-Beacon Hill
Allston-Brighton
Fenway-Kenmore
South End
South Boston
Roxbury
Jamaica Plain
Dorchester
West Roxbury
Roslindale
Mattapan
Hyde Park
Sources: InfoUSA, US Census Bureau, MassGIS, BRA Research Division Analysis
Cartography: John Taylor
0 1 2 4 Miles

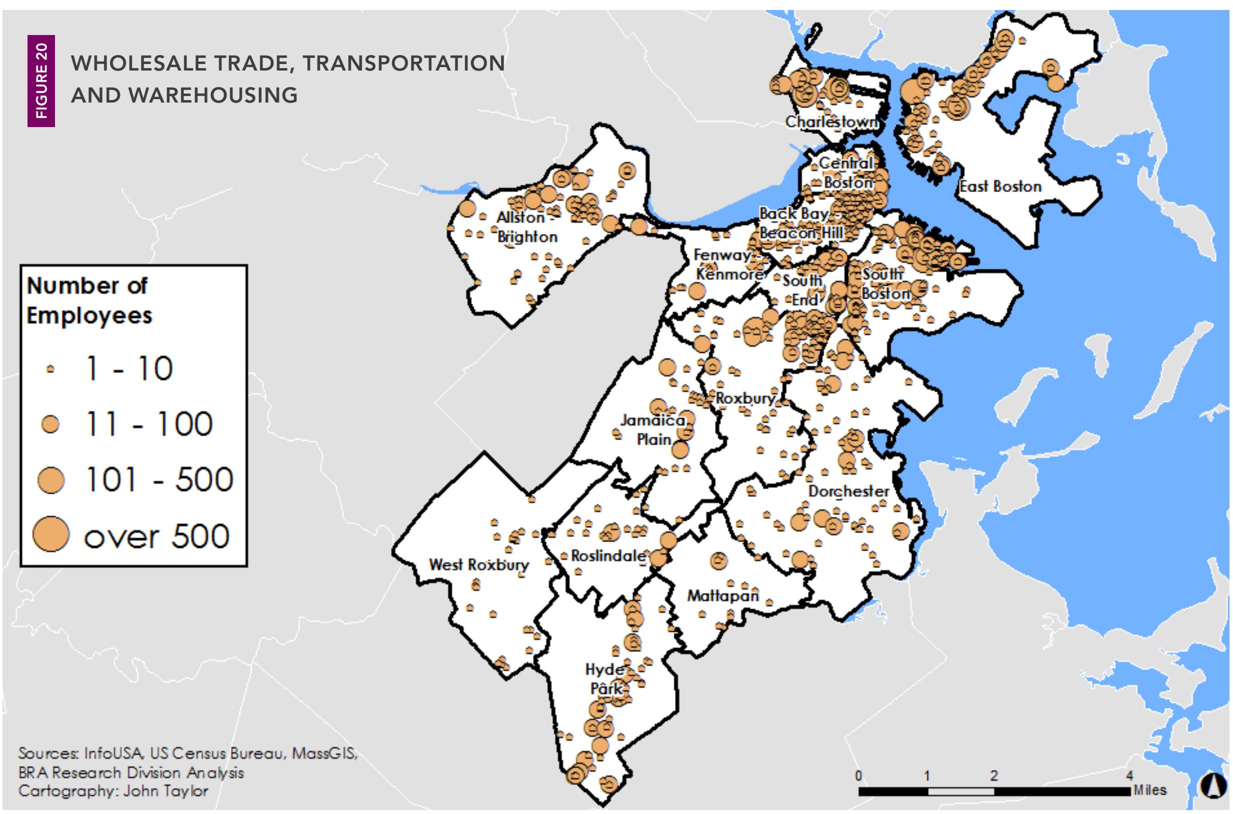


FIGURE 20
WHOLESALE TRADE, TRANSPORTATION AND WAREHOUSING
Number of Employees
1 - 10
11 - 100
101 - 500
over 500
Charlestown
Central Boston
East Boston
Back Bay-Beacon Hill
Allston-Brighton
Fenway-Kenmore
South End
South Boston
Roxbury
Jamaica Plain
Dorchester
West Roxbury
Roslindale
Mattapan
Hyde Park
Sources: InfoUSA, US Census Bureau, MassGIS, BRA Research Division Analysis
Cartography: John Taylor
0 1 2 4 Miles