



UMASS DONAHUE INSTITUTE

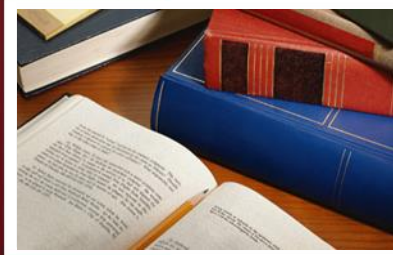


UMass Satellite Center Market Analysis for Boston

Prepared for President Robert L. Caret
University of Massachusetts

University of Massachusetts Donahue Institute

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Executive Summary

At the request of UMass President Robert Caret, the UMass Donahue Institute (UMDI) has conducted market research regarding siting a UMass Satellite Center at One Beacon in Boston. The goal of this research is to examine economic and market data to identify what the Satellite Center could offer to best serve its available market, considering both regional educational consumption and degree requirements for available jobs in the region. This report includes a description of the population, a profile of local industries, a picture of current regional employment trends, and an analysis of educational demand. Appendices delving further into this data accompany the text, including separate appendices providing information focused on the City of Boston (Appendix A) and an analysis of educational trends specific to UMass Boston (Appendix F).

Market Catchment: This report focuses on the “day-long” population of Boston: workers or residents who spend some portion of their day in the city. Individuals that live or work in Boston comprise a potential customer base for educational offerings at One Beacon. The majority of those who work in Boston live within the Greater Boston region. Residents within the Route 128 corridor account for 68% of Boston’s workforce. Overall, the 1.8 million residents within this catchment area are well-educated and relatively affluent, with 46% of residents 25 years of age or older holding at least a bachelor’s degree and nearly a third of households making \$100,000 or more. However, there are significant segments of the local population in greater need. Over a third of residents (35%) possess a high school diploma or less, and nearly a quarter of households earn less than \$25,000 a year. In addition, 15% of the region’s residents live in poverty, compared to 11.4% across the Commonwealth.

Degrees Conferred: A significant demand for degrees in business and health fields at the bachelor’s and master’s degree level are being addressed through area 4-year higher education institutions and community colleges; however, the University has an opportunity to contribute to this important sector through additional education offerings, applied research and innovation. Some of the most commonly conferred degrees are in Business, Management, Marketing, and Related Support Services; Health Professions and Related Programs; and Education, which map well to regional occupational opportunities. Computer Science degrees, while somewhat less commonly conferred, also match promising occupational opportunities in the area.

Occupations of Interest: A combination of indicators related to current occupational opportunities, job projections, and educational demand point to several academic areas for consideration for the Satellite Center at One Beacon. Occupational areas (across several job titles) requiring a bachelor’s degree or more education, projected to have short-term regional job growth, and offering high entry level wages, are concentrated in the fields of: (1) management, (2) computer science, and (3) health. Beyond jobs in these three fields, Market Analysts, Primary and Secondary Teachers, Lawyers, and Construction Managers are additional occupations which require advanced education, are expected to grow in the coming years, and interest students in the region. In light of labor market opportunities and interest from current students in the region, decision makers for One Beacon should consider course offerings and training opportunities in the fields outlined above.

Technical Report

Definition of Approach

In order to focus on a potential market for One Beacon, the approach of this report focuses on the “day-long” population of Boston, individuals that spend some portion of their day in the city. This includes Boston residents, as well as those who commute to the city for work from a surrounding community. The study area for this research includes the municipalities within the Route 128 corridor. The region within Route 128 is a common way of thinking of the Greater Boston area. Over two-thirds of workers in Boston live within the Route 128 corridor. The analysis primarily focuses on the demographic, socio-economic, industry and occupational data within this region, with additional geographies where data is unavailable at a finer level.¹

Region Overview

Route 128 Catchment Map – Market Geography

Using specially tabulated Census data, the analysis of data includes all people traveling into or remaining in Boston for work. This population represents a potential market for a Satellite Center at One Beacon. As noted above, 68% of workers in Boston live within this area. Additionally the analysis includes an examination of income levels and educational status of those residing within this catchment. These data provide some indication of the financial status and education needs of this potential client base for the Satellite Center. See the following catchment map in Figure 1 for a full list of cities and towns within the Route 128 catchment area. See Appendix B for detailed population tables for the catchment area.

¹ Due to data limitations, a few different regions are used to present the Greater Boston area. Primarily, a catchment region is utilized, defined as the municipalities within Route 128. In addition, the Boston-Quincy-Cambridge New England City and Town Area (NECTA) Division is used as the smallest geographic level available for industry and occupation data. Workforce Investment Areas (WIAs) are used to further refine the occupational data with job growth projection information. The area used for projection data combines the Boston, South Shore, North Shore, Metro South/West, and Metro North WIAs. Maps of each of these geographies are available in Appendix G. For those interested in the City of Boston alone, analysis and data are detailed in Appendix A.

Figure 1: Map of Catchment Area



Source: UMDI-created map using ESRI and a Census special tabulation of ACS 2006-2010 work flow data.

Where Boston’s Workers Commute From – Surrounding Communities

Population and detailed worker flow data defines residents in reach of the Center. Table 1 below shows 38% of workers in Boston live in the city. An additional 30% of workers live outside of Boston, but within the Route 128 corridor. These workers represent a potential market for the Satellite Center as these individuals spend at least part of their day in Boston and live either in, or fairly close to, the city, making it reasonable to assume that this population may be willing to spend more time in Boston taking advantage of program offerings at One Beacon.

Table 1: Workforce by Place of Residence: Where Boston's Workforce Lives

Location by City or Region	Cities/Towns included	Percentage Commuting to Boston for work
Boston	Boston residents who work in Boston	38%
Within Route 128	Quincy, Cambridge, Brookline, Somerville, Newton, Revere, Malden, Medford, Everett, Lynn, Chelsea, Watertown, Arlington, Milton, Waltham, Dedham, Winthrop, Melrose, Belmont, Wakefield, Saugus, Winchester, Woburn, Stoneham, Lexington, Nahant	30%
Surrounding (Outer) Metro	Weymouth, Brockton, Randolph, Braintree, Norwood, Framingham, Salem, Needham, and Natick	7%
Rest of MA	All other MA municipalities (all less than .5% each)	22%
Outside of State	Non-MA residents	4%
TOTAL		100%

Source: U.S. Census Bureau, ACS 2006-2010 5yr estimates, Special Tabulation: Residence MCD/County to Workplace MCD/County Flows for the United States and Puerto Rico Sorted by Residence Geography, for total Boston workers 16 years and over. Note: Municipalities are listed in the order of percent of Boston's workforce traveling from that location, by geographic category.

Demographic Composition of Catchment Region

The municipalities within Route 128 are home to nearly 1.8 million people residing in more than almost 715,000 households. (See Table 19, Appendix B). The region appears to be slightly younger than the state average, with higher concentration of teenagers and adults between the ages of 25-34. The region has fewer older residents than is average for Massachusetts as a whole. (See Tables 20 and 21, Appendix B). Nearly 15% of households in the catchment area live below the poverty level. (See Table 24, Appendix B).

The racial makeup of the catchment region contains Boston, but is slightly less diverse than the city considered on its own. 67% of residents of the catchment area identify as white. Many residents, 13%, identify as Hispanic or Latino, which can coincide with any other racial identity.² Residents identifying as black or African American make up nearly 13% of the region, while Asian residents represent nearly 11% of the region's population (See Table 22, Appendix B). English language proficiency can present a barrier. The majority of area residents (67%) speak only English. Nearly 12% of the population speaks Spanish. Most of these Spanish speakers also speak English fluently. Across all languages spoken, 2.2% of catchment area residents do not speak any English. (See Table 23, Appendix B).

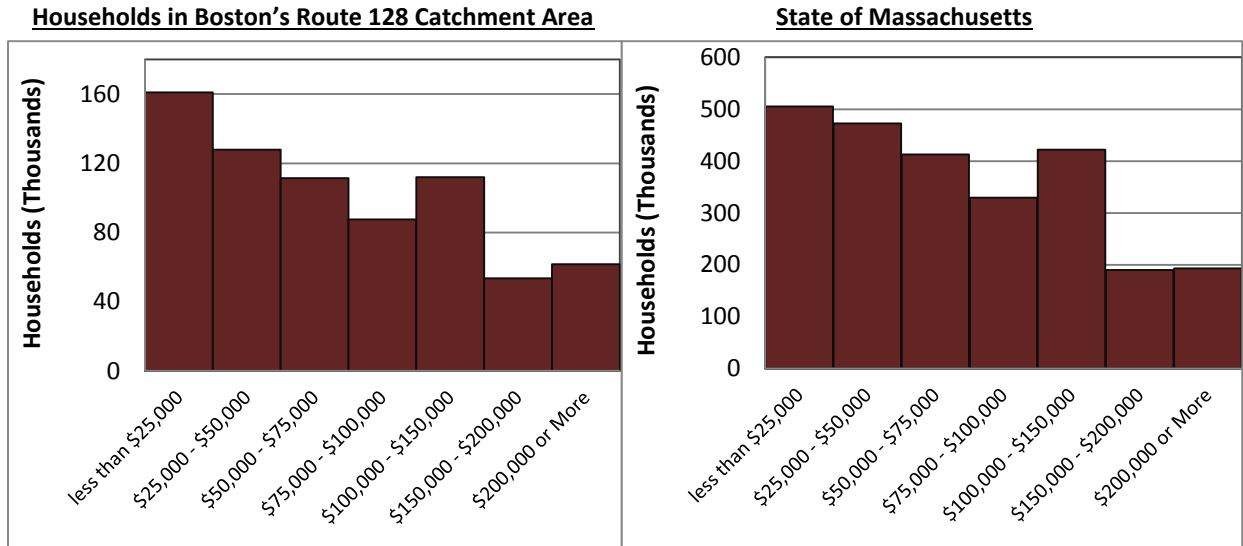
Catchment Area Income and Education Profile

The Route 128 catchment region is home to both well-off and lower-earning households. As shown in Figure 2, below, the most common income category in the area is less than \$25,000 per year, with 23% of households in the region earning at or below this level. More than half

² "Latino or Hispanic" is an ethnic, not a racial group for the U.S. Census Bureau, as people who identify as Hispanic or Latino ethnically could also identify with other racial groups. For the purposes of this analysis, we distinguish Hispanic/Latino as its own racial or ethnic group separate from other groups, by reporting race and Hispanic/Latino ethnicity. Total percentages which include Hispanic/Latino identity therefore add to more than 100% when combined with race identities.

earn less than \$75,000 per year. Some households earn more, with 16% bringing in between \$100,000 and \$150,000 annually. (See charts below and Appendix B, Table 28). Interestingly, the catchment area has proportionately more of both higher-earning and lower-earning households than the state as a whole. Conversely, there are proportionately fewer households in the middle categories.

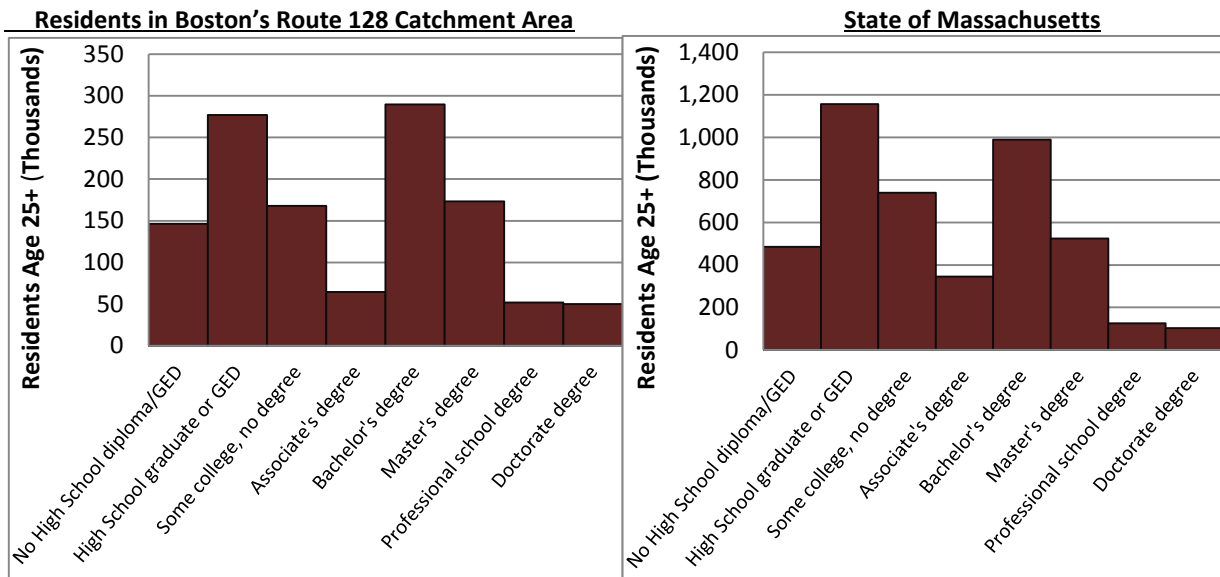
Figure 2: Income of Households Within Catchment Area vs. State of Massachusetts



Source: U.S. Census Bureau, 2008-2012 American Community Survey, Route 128 catchment and MA boundaries.

Figure 3 illustrates that residents in the catchment region are, on average, better-educated than the typical Massachusetts resident. In both the region and the state, educational levels tend to cluster into two groups, one concentrated around high school graduates and the other around the bachelor’s degree level. In fact, the single most common level of educational attainment in the region is a bachelor’s degree, representing nearly a quarter (24%) of those 25 years of age or older living in the area. This is more than the Massachusetts average of 22%. Overall, 46% of residents have a bachelor’s degree or more advanced education. However, there are still many people in the region with less education. More than a third (35%) have a high school diploma or less. (See bar charts on the next page and Appendix B, Table 29).

Figure 3: Educational Attainment of Population Within Catchment Area vs. Massachusetts



Source: U.S. Census Bureau, 2008-2012 American Community Survey, Route 128 catchment and MA boundaries.

Some residents of the catchment area are currently enrolled in post-secondary education programs. Nearly 10% of all people living within the catchment area are currently enrolled in an undergraduate program, and over 4% are enrolled in a graduate program. Most people enrolled in area undergraduate and graduate programs are in private institutions. (See Appendix B, Table 27 for a full picture of public and private school enrollment in the catchment region at the elementary, secondary, and post-secondary levels).

Employment Analysis

In this section, the largest employers in Boston are identified. Employment is then described by industry, including analyses of industrial employment and wage trends. Unemployment patterns are then briefly described. Occupational employment levels and projections follow, with a chart of growth and wages to identify occupations of interest predicted to be fast-growing and higher-paying.

Boston Employment, Largest Employers

Boston, as the hub of economic activity in Massachusetts, hosts some of the area's largest employers. In this section, these employers are identified. In addition, public employees, who may be divided across many functions and governmental levels, contribute significantly to the employment levels in the region. Public employees are enumerated by level.

Largest Establishments in Boston

The largest establishments in the city of Boston have thousands of employees, and a few employ tens of thousands. The City of Boston itself is the largest, with over 20,000 employees in 2013 (including the Boston Public Schools). The two next-largest, both hospitals, employ over 10,000 people apiece. These large employers are consistent with the region's industry strengths in the health, education, financial, and professional/scientific industries. There are over 50 establishments in Boston with 1,000 or more employees. This analysis is based on a 2013 report on private employers from the Boston Redevelopment Authority (BRA)'s Research Division. The

ten largest Boston employers as of 2013 are listed below. This table is extracted from more extensive lists from the BRA of all Boston employers with 1,000 or more employees (see Appendix C, Table 31). The largest public sources of employment have also been added in bold in the table below.

Table 2: Top Ten Largest Employers in Boston, 2013

Company	Employees
*City of Boston	22,469
Massachusetts General Hospital	14,752
Brigham and Women's Hospital	11,229
Boston University	9,783
Children's Hospital, Boston	7,903
State Street Bank & Trust Co	7,800
Beth Israel Deaconess Medical Center	6,695
**MBTA	5,943 (2011)
Fidelity	5,500
Harvard University Graduate Schools	5,132

Source: Boston Redevelopment Authority (BRA) Research Division, The Largest Employers in the City of Boston, November 2013 <http://www.bostonredevelopmentauthority.org/getattachment/7ced9a9e-cb5c-4d6b-a840-2a0042f68ce5/>; *City of Boston, Employee Earnings Report 2013 All City of Boston Employees Earnings, Calendar Year 2013, <https://data.cityofboston.gov/Finance/Employee-Earnings-Report-2013/54s2-yxpg>; **MassDOT, MTBA Efficiencies and Cost Savings, MBTA annual average employment as of 2011 (p. 5) http://www.mbt.com/uploadedfiles/About_the_T/Fare_Proposals_2012/MBTA%20Efficiencies%20and%20Cost%20Savings%20Report%20-%202011.pdf

A broader analysis of Boston public employees shows that many jobs in Boston are offered at the federal, state, and local government level. However, because these jobs are distributed across many departments and functions, only the City of Boston and the MBTA have employment counts above 5,000 within their respective individual organizations. UMass Boston employed nearly 2,800 people in fall 2013.

Table 3: Public Employees, Boston, 2013

Government Level	Number of Employees
Local	22,469*
State	34,916
Federal	13,750

Source: Massachusetts Office of Labor and Workforce Development, ES-202, 2013. These data are subject to suppression. Therefore where possible, direct sources were used. *Local data from City of Boston, Employee Earnings Report 2013, All City of Boston Employees Earnings, Calendar Year 2013, <https://data.cityofboston.gov/Finance/Employee-Earnings-Report-2013/54s2-yxpg>. UMass-Boston employment data obtained from IPEDS employment reporting at the following website: <http://nces.ed.gov/ipeds/datacenter/InstitutionProfile.aspx?unitId=acb1b1baeb3>

Employment Demand by Industry

Industrial job demand in the Boston-Quincy-Cambridge NECTA division³ was strongest in the Education and Health Services supersector. Professional and Business Services, Information, and Public Administration enjoyed the largest wage growth.⁴ These industry supersectors may therefore be the most promising areas in terms of demand for training employees.

³ The Boston-Quincy-Cambridge NECTA division is a Census geography which includes much of the far eastern part of the state. See Appendix G for maps of geographies referenced in this report.

⁴ All wages are reported in 2013 dollars.

Industry Supersector Detailed Analysis of Employment and Wage Change

The Education and Health Services supersector had the highest employment growth between 2004 and 2013, adding over 85,000 new jobs during that time. This sector's average weekly wage is slightly lower than the average for the region (\$1,169 compared to \$1,388 overall). The Professional and Business Services sector added nearly 47,000 new jobs during the same period, with an average weekly wage of approximately \$1,900. The Leisure and Hospitality supersector added close to 32,000 jobs, but offers an average weekly wage of \$520, much lower than the area average of nearly \$1,400. The Trade, Transportation, and Utilities supersector suffered the largest employment loss during the same time period, losing almost 13,000 jobs. That supersector's wages also saw the largest decrease, dropping from \$1,037 in 2004 to \$965 in 2013. Average wages in the Financial Activities industry are 19% higher than the area average, but the sector lost almost 5,700 jobs and real wages decreased by \$3 since 2004. That said, the Financial Activities industry still offers the highest average weekly wage in the region, of close to \$2,600. (See Appendix C, Table 30 and Figures 6 and 7).

Unemployment

An understanding of unemployment patterns can also help identify workers that may seek re-training for other opportunities and help identify occupations and industries which may be currently oversupplied with applicants. Boston residents filed 9.1% of all new claims in Massachusetts in the month of June, 2013, ranking 4th out of the 16 state Workforce Investment Areas (WIA). This, of course, is due in part to being one of the most populous regions in the state. Compared to other region's welfare claimants, those in Boston were less likely to be white, more likely to be Hispanic, black, or to not have reported their race. Claimants in Boston were more likely to be college-educated than those from other regions in the state, and from lower wage groups than the state average claimant. This trend generally corresponds to the overall demographic profile of Boston. The most commonly occurring claimant attributes for Boston were: white; between 25 and 34 years old; making \$500 - \$799 per week; out of work for five to 14 weeks; and holding a High School diploma. Unemployment rates for other race and ethnic groups, income, age and educational levels also contributed to the unemployment level. Occupationally, the largest numbers of claimants were working in the Food Preparation and Serving and the Office and Administrative Support occupations; 14.4% and 14.2% of claims, respectively, came from those occupations during this period. Perhaps surprisingly, the next most common occupation of claimants was Management (9.5%). By industry, the largest number of claimants were working within the Accommodations and Food Services industry (1,295).

Employment Demand by Occupation

Occupational Employment, Boston NECTA Division, May 2013

Occupational analysis can illustrate what types of jobs are concentrated in the region and how well the occupations pay on average. In Greater Boston,³ the most common aggregated job categories are: Management Occupations, Business and Financial Operations Occupations, and Healthcare Practitioners and Technical Occupations. Each of these occupational groupings have over 124,000 jobs in the region. When compared to the U.S., the region has particularly high concentrations of Life, Physical, and Social Science Occupations; Computer and Mathematical Occupations; Management Occupations; and Business and Financial Operations Occupations, as demonstrated by the location quotients in Table 4, below. Location quotient is a measure of relative concentration, where a value greater than 1.0 represents proportionately more of that type of job in the area as compared to the nation. Industries with particularly higher concentrations are bolded in the table below.

Table 4: Employment Base for the Boston-Quincy-Cambridge NECTA Division

Occupation	Total Employment	Annual Median Wage	Location Quotient
<i>All Occupations</i>	1,748,940	\$48,540	1.00
Management Occupations	137,270	\$114,770	1.59
Business and Financial Operations Occupations	133,930	\$73,900	1.53
Computer and Mathematical Occupations	95,850	\$89,530	1.97
Architecture and Engineering Occupations	40,230	\$82,370	1.28
Life, Physical, and Social Science Occupations	36,810	\$68,210	2.46
Community and Social Service Occupations	32,930	\$46,040	1.31
Legal Occupations	19,240	\$91,520	1.40
Education, Training, and Library Occupations	107,850	\$59,650	0.97
Arts, Design, Entertainment, Sports, and Media Occupations	30,760	\$52,930	1.33
Healthcare Practitioners and Technical Occupations	124,370	\$73,360	1.22
Healthcare Support Occupations	49,810	\$31,370	0.96
Protective Service Occupations	43,730	\$48,310	1.02
Food Preparation and Serving Related Occupations	145,680	\$22,760	0.93
Building and Grounds Cleaning and Maintenance Occupations	55,310	\$31,530	0.98
Personal Care and Service Occupations	51,400	\$26,900	0.98
Sales and Related Occupations	160,810	\$31,560	0.87
Office and Administrative Support Occupations	264,030	\$40,460	0.93
Farming, Fishing, and Forestry Occupations	460	\$27,980	0.08
Construction and Extraction Occupations	45,070	\$59,390	0.67
Installation, Maintenance, and Repair Occupations	42,910	\$50,980	0.63
Production Occupations	62,080	\$36,610	0.54
Transportation and Material Moving Occupations	68,430	\$31,850	0.58

Source: US Bureau of Labor Statistics (BLS), Occupational Employment Statistics (OES), Boston-Quincy-Cambridge NECTA Division, May 2013. http://www.bls.gov/oes/current/oes_71654.htm

Short-Term Occupational Growth Projections, 2013 to 2015

Determining which jobs are growing can help identify which degrees or training may be in demand. Regional job projections from 2013 to 2015, covering the Workforce Investment Areas (WIAs) of Boston, South Shore, North Shore, Metro South/West, and Metro North (which can be thought of as a proxy for Greater Boston), showed a total anticipated annual net gain of over 20,000 jobs. Some job categories will add more positions, while others will lose jobs overall.⁵The top 20 fastest-growing occupational groups over the near term are shown in Table 5 (for the full list, see Appendix C, Table 33).

Table 5: Top 20 Growing Minor Occupational Groups, Short-Term Projections 2013-2015

Occupation Group (SOC 3-digit)	Projected Net Change, 1 year
Construction Trades Workers	1,481
Food and Beverage Serving Workers	1,462
Computer Occupations	1,346
Business Operations Specialists	1,091
Health Diagnosing and Treating Practitioners	967
Retail Sales Workers	819
Other Personal Care and Service Workers	745
Motor Vehicle Operators	622
Secretaries and Administrative Assistants	621

⁵These data are subject to suppression. Data were not available for approximately 3% of jobs in the region. In this report, job losses and growth projections have been annualized from two-year projections provided in the public data, by using a simple average.

Preschool, Primary, Secondary, and Special Education School Teachers	614
Other Management Occupations	595
Counselors, Social Workers, and Other Community and Social Service Specialists	592
Building Cleaning and Pest Control Workers	565
Health Technologists and Technicians	556
Cooks and Food Preparation Workers	553
Nursing, Psychiatric, and Home Health Aides	479
Financial Specialists	446
Information and Record Clerks	425
Top Executives	407
Financial Clerks	381

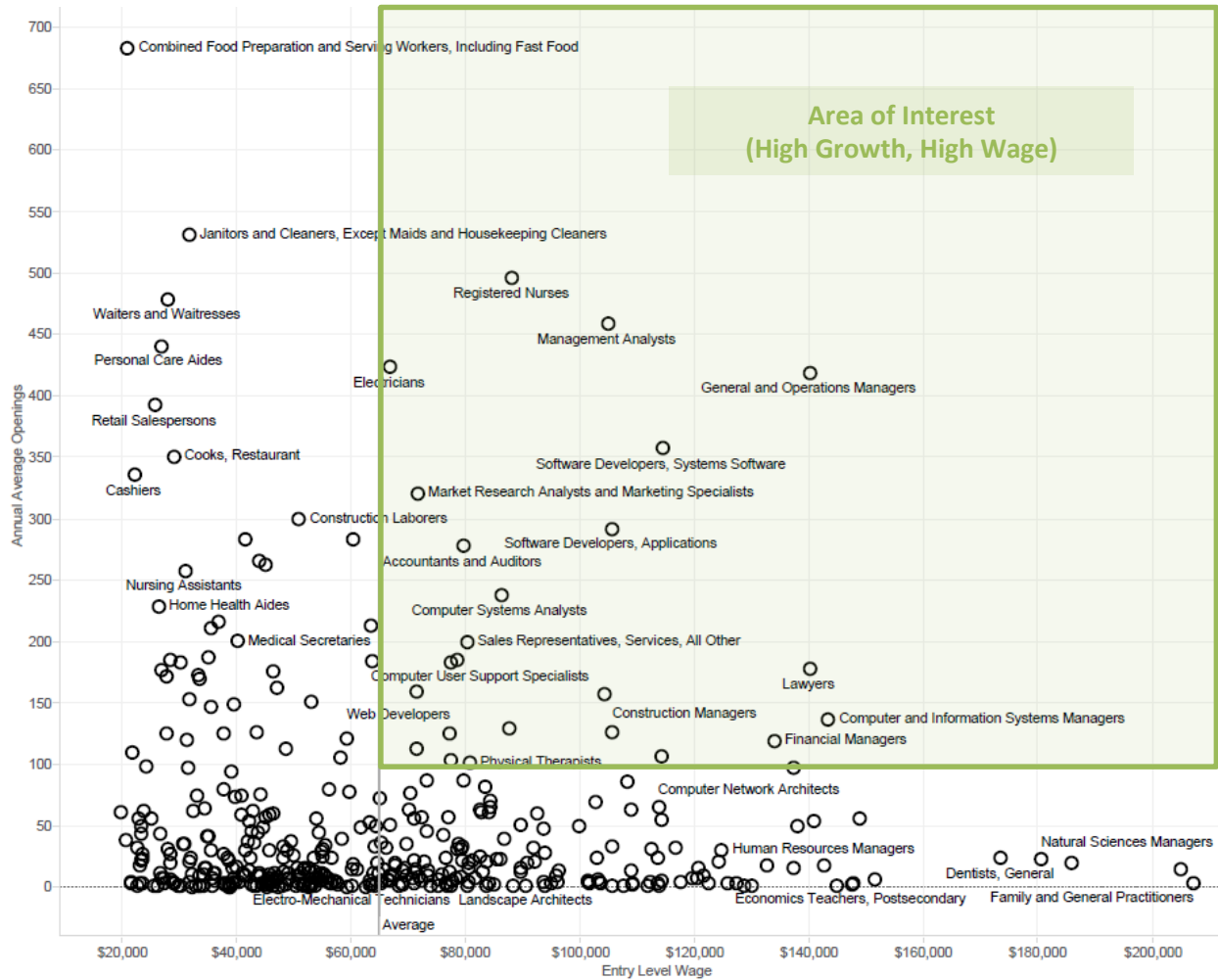
Source: MA Executive Office of Labor and Workforce Development (OLWD), Short Term Occupational Projections, Boston, South Shore, North Shore, Metro South/West, and Metro North WIA 2013-2015. Note: these are aggregated from the detailed suppressed data and reported at the 3-digit SOC level.

The top five growing minor occupational groups in this region of WIAs for Boston, South Shore, North Shore, Metro South/West, and Metro North over the near term are: (1) Construction Trades Workers; (2) Food and Beverage Serving Workers; (3) Computer Occupations; (4) Business Operations Specialists; and (5) Health Diagnosing and Treating Practitioners. (See Table 29 in Appendix D for the full list of occupations). Some of these growing occupations are better paid than others. The next section provides analysis of the fastest-growing highly-paid jobs.

Job Growth vs. Wages

Occupational projections and wage data can be analyzed together to identify high quality job opportunities for potential job training efforts. Several occupations in the region with above-average pay are also projected to have reasonably strong prospects for local job growth, as shown in the upper right-hand quadrant of the following graph. Of the jobs projected to be the fastest-growing, General and Operations Managers and Software Developers (Systems Software) make the highest average entry level wages of \$140,030 and \$114,310, respectively, and are growing well. The wages for Software Developers for Applications and Management Analysts are not far behind, on average offering \$105,570 and \$104,780 to start, respectively, and are also growing well. Registered Nurses earn above-average wages and are projected to have particularly strong job growth. Electricians and Accountants and Auditors are also growing fields. All these jobs, highlighted below in Figure 6, command higher-than-average wages and are among the 20 jobs projected to be fastest-growing in the area. Other fast-growing jobs, such as in food preparation and janitorial occupations, make lower entry-level wages than the average (of \$63,050, indicated in the chart below as a vertical grey line). Higher-paying positions, such as Family and General Practitioners, Dentists, and Natural Sciences Managers, make higher wages but are not predicted to be particularly fast-growing jobs.

Figure 4: Annual Average Openings vs. Entry Level Wage, Area Jobs



Source: MA OLWD Short Term Occupational Projections for Boston, South Shore, North Shore, Metro South/West, and Metro North WIAs 2013-2015, and Occupational Employment and Wage Statistics Annual Data, US BLS OES for Boston-Quincy-Cambridge, MA NECTA Division May 2013 http://www.bls.gov/oes/current/oes_71654.htm. UMDI representation created using Tableau software, Data from: http://lmi2.detma.org/lmi/lmi_oes_a.asp

Occupations of Interest in the Region

Considering projected job growth, starting wages, educational demand, and student interest, we are able to identify several occupations that may be worthy of further consideration to planners of a Satellite Center at One Beacon. The following table includes the fastest-growing occupations with entry-level pay above \$63,050 (the average entry wage of all occupations in the region) which require educational preparation at the bachelor’s level or above. Factoring in high levels of student demand for training in the region, three area’s of work appear to be of particular interest: (1) management occupations (2) computer science occupations (3) health occupations. These categories span several occupational titles:

Management Occupations:

- Management Analysts
- General & Operations Managers
- Business Operations Specialists, All Other
- Financial Analysts
- Financial Managers

Computer Science Occupations:

- Software Developers, Systems Software
- Software Developers, Applications
- Computer Systems Analysts
- Computer User Support Specialists
- Computer and Information Systems Managers

Health Occupations:

- Registered Nurses
- Nurse Practitioners
- Physical Therapists
- Medical and Health Services Managers

In addition to these three fields, there are additional occupations of interest, including:

- Market Analysts
- Primary and Secondary Teachers
- Lawyers
- Construction Managers

All of the occupations listed above require at least a bachelor's degree and are promising in terms of job growth and starting wage potential. In addition, data on degree conferrals show that students in the region are interested in majors related to these jobs. Table 6 below is a summary of the above data. It shows the fastest-growing occupations in the region with above average wages and for which at least a bachelor's degree is required. For the purposes of this analysis, projected occupational growth of more than 250 jobs is characterized as "high" growth and projected growth of between 100-250 jobs is characterized as "high/moderate" growth. In terms of earnings, entry wages of less than \$60,000 (below the average) are excluded, those between \$60,000 and \$80,000 are characterized as "high/moderate", and entry wages of \$80,000 or more are characterized as "high". Occupations have been listed together where a single major would appropriately prepare a student for each job title.

Table 6: Above Average Wage, Growing Occupations of Interest in the Region Which Require Bachelor's Degrees or More Advanced Education

Occupational Category	Projected Annual Job Growth (in Area WIAs)	Projected Annual Net Job Growth (in Area WIAs)	Entry Wage	Wage Level	Degree Conferrals Within Route 128 Per Year	Degree Program	Entry-Level Education	Education to Advance
Management Analysts / General & Operations Managers / Business Operations Specialists, All Other / Financial Analysts / Financial Managers	1,270	High	\$77,400 - 140,130	High (and High/Moderate - Oper. Specialists)	12,301	Business, Management, Marketing	Bachelor's	Master's
Software Developers, Systems Software / Software Developers, Applications / Computer Systems Analysts / Computer User Support Specialists / Computer and Information Systems Managers	1,210	High	\$86,150 - \$114,310	High	1,593	Computer & Information Sciences	Bachelor's	Master's or Experience
Registered Nurses / Nurse Practitioners / Physical Therapists / Medical and Health Services Managers	818	High	\$80,710 - \$88,100	High	5,793	Health Professions	Associate's (RN) / Bachelor's (Health Svcs Mgrs) / Master's (APRN) / Doctorate (DPT)	Bachelor's / Master's / Advanced Board Specialization (PT)
Market Research Analysts & Marketing Specialists	321	High	\$71,520	High/ Moderate	4,816	Social Sciences / Mathematics and Statistics	Bachelor's	Master's
Elementary School Teachers, Except Special Education / Middle School Teachers, Except Special and Career or Technical Education	273	High	\$71,400 - \$71,380	High/ Moderate	4,917	Education	Bachelor's, Certification	Advanced Education and/or Experience
Lawyers	178	High/Moderate	\$140,050	High	451	Legal Professions and Studies	J.D. & Bar Exam	Experience
Construction Managers	127	High/Moderate	\$105,570	High	4,152	Architecture and Related Svcs / Engineering / Engineering Technology	Bachelor's	Certification (CCM, AC, CPC) and/or Master's

Sources: MA OLWD Short Term Projections for Boston, South Shore, North Shore, Metro South/West, and Metro North WIAs 2013-2015; BLS OES for Boston-Quincy-Cambridge NECTA Division May 2013 http://www.bls.gov/oes/current/oes_71654.htm; NCES IPEDS degree conferrals by CIP degree/field data for the 128 region's institutions, BLS Occupational Outlook Handbook, 2014-15. Degree Conferrals include all bachelor's and master's degrees conferred in the major(s) named in the Degree Program column for all higher education institutions within the geography.

Educational Trends

An examination of the degrees recently conferred inside of Route 128 provides a sense of current market activity and interest in specific majors for those currently pursuing degrees. The Boston region, well-known for education, also produces more degree holders than jobs in some fields. While applicants do move for jobs, large numbers of conferrals in areas where jobs are not plentiful may also denote potential competition of other educated workers available to work within particular fields. For this reason, degree conferral data has also been matched to high-wage; growing occupations (see Table 6, previous page).

Degree Conferrals in the Region

Degrees recently conferred inside of Route 128 provide a broader sense of current market activity for potential commuters and local residents. As shown in Table 7 below, the most commonly completed degrees, as reflected in the most recently available data, are: Business, Management, Marketing, and Related Support Services (master's); Business, Management, Marketing, and Related Support Services (bachelor's); Education (master's); Social Sciences (bachelor's); Health Professions and Related Programs (bachelor's). These completions generally correspond to the profile of jobs in the area, however, in many fields there are not as many jobs projected to be available annually as the number of degrees conferred in the area. This may indicate a very competitive job market that may even lead to more advanced degrees being required for some jobs than would elsewhere be requested. In addition, not all degree holders from Boston-area institutions will take jobs regionally; some of these graduates may ultimately find employment outside of the region. Nevertheless, degree conferrals may still help identify areas of student interest and general educational demand. (See Appendix E, Table 38 for the full list of degree conferrals within the Route 128 region by degree level, and for a full list of the degree-granting higher education institutions within the catchment area.)

Table 7: Top 20 Degrees Conferred by All Educational Institutions Within Route 128, 2013

Number of Degrees by Level	Field of Study	Rank (total count)	Percent Within Degree Level	Percent of Conferrals Across All Degree Levels
Associate's degree				
877	Health Professions and Related Programs	15	28%	1%
Bachelor's degree				
5,524	Business, Management, Marketing, Related Support	2	20%	9%
3,302	Social Sciences	4	12%	5%
2,981	Health Professions and Related Programs	5	11%	5%
2,745	Visual and Performing Arts	7	10%	4%
1,786	Communication, Journalism, and Related Programs	8	6%	3%
1,728	Psychology	9	6%	3%
1,677	Biological and Biomedical Sciences	10	6%	3%
1,438	Engineering	12	5%	2%
872	English Language and Literature/Letters	16	3%	1%
752	Computer and Information Sciences and Support Services	19	3%	1%
Master's degree				
6,777	Business, Management, Marketing, Related Support	1	27%	10%
4,482	Education	3	18%	7%
2,812	Health Professions and Related Programs	6	11%	4%
1,461	Public Administration and Social Service Professions	11	6%	2%
1,431	Engineering	13	6%	2%
1,019	Social Sciences	14	4%	2%
841	Computer and Information Sciences and Support Services	17	3%	1%

763	Biological and Biomedical Sciences	18	3%	1%
712	Visual and Performing Arts	20	3%	1%

Source: National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS) completions data, Route 128 Catchment Area Higher Educational Institutions, 2013. For full table of all majors and degree levels, see Appendix D, Table 38. A list of all the higher education institutions within the Route 128 catchment area is also included in Appendix D, as Table 39.

Summary of Findings

The goal of the current research was to examine economic and market data to identify potential service offerings for a Satellite Center at One Beacon. This report focused on the “day-long” population of Boston, or those individuals that spend some portion of their day in the city, as a potential customer or student base. This includes those individuals who live in the city, as well as those who commute to the city for work from a surrounding community. In addition, the research considered regional educational consumption and degree requirements for available jobs in the local labor market.

The area within the Route 128 corridor was identified as a potential geographic market area for the Satellite Center at One Beacon. First, the Route 128 area serves as a reasonable approximation of the Greater Boston region. In fact, over two-thirds (68%) of workers in Boston live within the Route 128 corridor. The majority of those who work in Boston live within the Route 128 corridor or in Boston itself, accounting for 68% of Boston’s workforce. The region itself is home to 1.8 million people. In general, it is a well-educated and relatively affluent region, with 46% of the resident population 25 years of age or older holding at least a bachelor’s degree and 32% of households earning \$100,000 a year or more. However, there are significant segments of the local population in potential need for educational and training opportunities. Over a third of the region’s population (35%) possesses a high school diploma or less and nearly a quarter of households in the region earn less than \$25,000 a year. In addition, 15% of the region’s residents currently live in poverty, compared to just 11.4% for the Commonwealth.

Examining a number of educational and labor market factors, we identified several occupational groupings to which the Satellite Center at One Beacon may wish to tailor course offering and training opportunities. Occupations of interest were identified as those which typically require a bachelor’s degree or more, are projected to have strong short-term local job growth, and offer high entry level wages. Three fields came to the fore: (1) management (2) computer science and (3) health. In addition to these three main fields, several other types of occupations require a college education, are growing, and pay a good starting salary, including Market Analysts, Primary and Secondary Teachers, Lawyers, and Construction Managers. Degree conferral data shows that these are fields generally popular among current college students in the region. While significant demand for some of the degrees in these fields are being addressed by area 4-year higher education institutions and community colleges, the University has an opportunity to contribute to these important sectors through applied research and innovation. Because of the labor market opportunities and the interest from current students, decision makers for the One Beacon Center should consider course offerings and training opportunities in the general fields of:

- Business, Management, and Marketing
- Computer and Information Sciences
- Health Professions
- Education
- Legal Studies

These are occupations that require advanced education, are expected to grow in the coming years, and have a great deal of appeal to current students in the region. In light of labor market opportunities and interest from current students in the region, decision makers for One Beacon should consider course offerings and training opportunities in the fields outlined above.

Appendix A: Boston Area Demographic Description

Boston is home to nearly 620,000 people residing in more than almost 250,000 households. The city is distributed normally in age, with the distribution differing slightly from the state average in that there are more teenagers, more 25-34 year olds, and fewer older residents than is average for Massachusetts as a whole, though overall the age profile is similar to the state. More than one fifth (21%) of households in Boston live below the poverty level.

Boston is a city with diverse racial and ethnic representation, with 53% of the city identifying as Hispanic, as a person of color, or both. For this reason, Boston is often characterized as a “majority-minority” city. At the same time, the plurality of respondents, 47%, identify as white and non-Hispanic. The next largest identity group is black or African American (25%). Many residents, 17%, also identify as Hispanic or Latino.⁶ Residents identifying as Asian represent 9% of Boston’s population. A large part of Boston’s growing diversity is the growth of the immigrant community, where foreign-born residents represent 27% of the population. English language proficiency can be a barrier for some Bostonians. The majority of Boston residents (64%) speak only English. 15% of the population speaks Spanish. Most of these Spanish speakers also speak English fluently. Across all languages spoken, approximately 11% of Boston residents are not fluent in English. Within this group, 3% of all Boston residents do not speak any English, which can present barriers to employment.

Educational attainment among residents in Boston is higher than in other parts of the state. Currently, 44% of Boston residents have a college degree (24% with a bachelor’s degree and 20% with a graduate degree). At the same time, there are still many city residents with low-to-moderate levels of educational attainment: over 37% of the people in Boston have an educational attainment below high school diploma or a GED. Another 5% hold an associate degree.

Table 8: City of Boston Total Population

Total Population, City of Boston	2008-2012 ACS Estimate
Total Population	619,662
Total Households	248,704
Total Housing Units	272,587

Source: U.S. Census, 2008-2012 American Community Survey (ACS) 5-Year estimates, city of Boston, using ESRI Business Analyst Online (BAO) Boston boundary.

⁶ “Latino or Hispanic” is an ethnic, not a racial group for the U.S. Census Bureau, as people who identify as Hispanic or Latino ethnically could also identify with other racial groups. For the purposes of this analysis, we distinguish Hispanic/Latino as its own racial or ethnic group separate from other groups, by reporting race and Hispanic/Latino ethnicity. Total percentages which include Hispanic/Latino identity therefore add to more than 100% when combined with race identities.

Table 9: Age Distribution, City of Boston

Population by Age, City of Boston	Census 2010	
	Number	Percent
Age 0 - 4	32,352	5%
Age 5 - 9	29,180	5%
Age 10 - 14	26,643	4%
Age 15 - 24	131,312	21%
Age 25 - 34	137,021	22%
Age 35 - 44	79,295	13%
Age 45 - 54	69,145	11%
Age 55 - 64	60,898	10%
Age 65 - 74	38,696	6%
Age 75 - 84	20,299	3%
Age 85+	9,515	2%

Source: U.S. Census 2010, city of Boston, using ESRI BAO Boston boundary.

Table 10: Age Distribution, State of Massachusetts

2010 Population by Age, State of Mass.	Census 2010	
	Number	Percent
Age 0 - 4	352,814	5.3%
Age 5 - 9	379,442	5.7%
Age 10 - 14	406,069	6.1%
Age 15 - 24	951,933	14.3%
Age 25 - 34	878,707	13.2%
Age 35 - 44	825,452	12.4%
Age 45 - 54	978,560	14.7%
Age 55 - 64	878,707	13.2%
Age 65 - 74	559,177	8.4%
Age 75 - 84	299,559	4.5%
Age 85+	159,765	2.4%

Source: U.S. Census 2010, Massachusetts, using ESRI BAO Massachusetts boundary.

Table 11: Detailed Race and Ethnicity, City of Boston

Detailed Race Breakdown by Hispanic or Latino	2008-2012 ACS Estimate		
	Number	Margin of Error	%
Total:	619,662	+/-63	100%
<i>Total of Hispanic and all races besides White alone (52.9%)</i>	328,231	--	53%
Not Hispanic or Latino (82.6% of total):	511,818	+/-1,625	83%
White alone	291,431	+/-1,684	47%
Black or African American alone	143,271	+/-1,456	23%
American Indian and Alaska Native alone	1,013	+/-218	0%
Asian alone	55,836	+/-955	9%
Native Hawaiian and Other Pacific Islander alone	135	+/-73	0%
Some other race alone	7,824	+/-1,085	1%
Two or more races:	12,308	+/-1,026	2%
Two races including Some other race	2,348	+/-552	0.4%
Two races excluding Some other race, and three or more races	9,960	+/-918	2%
Hispanic or Latino (17.4% of total):	107,844	+/-1,619	17%
White alone	42,113	+/-2,075	7%
Black or African American alone	14,124	+/-1,345	2%
American Indian and Alaska Native alone	1,083	+/-408	0.2%
Asian alone	295	+/-144	0.05%
Native Hawaiian and Other Pacific Islander alone	173	+/-152	0.03%
Some other race alone	36,063	+/-2,167	6%
Two or more races:	13,993	+/-1,369	2%
Two races including Some other race	3,640	+/-764	1%
Two races excluding Some other race, and three or more races	10,353	+/-1,205	2%

Source: U.S. Census, 2008-2012 ACS 5-Year estimates, city of Boston.

Table 12: Percent Foreign Born, City of Boston

	Total	Native	Foreign born	Foreign born; Naturalized citizen	Foreign born; Not a U.S. citizen
Percent		73%	27%	45%	55%
Estimate	619,662	454,243	165,419	74,471	90,948
Margin of Error	+/-63	+/-3,028	+/-3,018	+/-1,981	+/-2,774

Source: U.S. Census, 2008-2012 ACS 5-Year estimates, city of Boston.

Table 13: Language Use, City of Boston

Language Use, City of Boston Population (over 5 years of age)	2008-2012 ACS Estimate	Percent
Speak only English	374,609	64%
Speak Spanish	90,618	15%
Speak English "very well" or "well"	64,751	11%
Speak English "not well"	16,538	3%
Speak English "not at all"	9,329	2%
Speak other Indo-European languages	67,932	12%
Speak English "very well" or "well"	54,107	9%
Speak English "not well"	10,138	2%
Speak English "not at all"	3,687	1%
Speak Asian and Pacific Island languages	41,706	7%
Speak English "very well" or "well"	26,330	4%
Speak English "not well"	9,822	2%
Speak English "not at all"	5,554	1%
Speak other languages	11,759	2%
Speak English "very well" or "well"	10,594	2%
Speak English "not well"	990	0%
Speak English "not at all"	175	0%
Total who speak English "not at all"	18,745	3%

Source: U.S. Census, 2008-2012 ACS 5-Year estimates, city of Boston, using ESRI BAO Boston boundary.

Table 14: Poverty Level Estimates, City of Boston

Households by Poverty Status, City of Boston	2008-2012 ACS estimate	Percent
Income in the past 12 months below poverty level	52,999	21%
Income in the past 12 months at or above poverty level	195,705	79%

Source: U.S. Census, 2008-2012 ACS 5-Year estimates, city of Boston, using ESRI BAO Boston boundary.

Table 15: Educational Attainment, City of Boston

Educational Attainment for Residents Aged 25 Years or More, City of Boston	2008-2012 ACS estimate	Percent
Total	398,348	100%
No schooling completed	8,476	2%
Nursery School	82	0%
Kindergarten	105	0%
1-4th Grade	5,794	1%
5-8th Grade	18,102	5%
Some High School	29,181	7%
High School Diploma	77,370	19%
GED	11,289	3%
Some College	56,622	14%
Associate's degree	18,366	5%
Bachelor's degree	95,199	24%
Master's degree	50,347	13%
Professional school degree	16,834	4%
Doctorate degree	10,581	3%

Source: U.S. Census, 2008-2012 ACS 5-Year estimates, city of Boston, using ESRI BAO Boston boundary.

Degree Conferrals Within Boston

Degrees conferred within Boston itself are a focused subset of those conferred across the whole catchment area, providing a more geographically circumscribed look at student interests and the production of degrees. Degrees in Business, Management, Marketing, and Related Support Services and in Health Professions and Related Programs are still the top choices among students when examining degrees strictly within Boston. Higher-level degrees, including doctorates, appear within the top 20 degrees granted when focused specifically on Boston. Visual and Performing Arts become more important among this smaller group, landing within the top five most-granted degrees in 2013. The following degree-granting higher educational institutions are located fully within the City of Boston:

Table 16: Boston Higher Education Institutions

Boston Higher Education Institutions,
New England College of Business and
Boston Baptist College
Bay State College
Berklee College of Music
Boston Architectural College
The Boston Conservatory
Boston University
Bunker Hill Community College
Emerson College
Emmanuel College
Fisher College
Benjamin Franklin Institute of Technology
Sanford-Brown College-Boston
University of Massachusetts-Boston
MCPHS University
Massachusetts College of Art and Design
MGH Institute of Health Professions
School of the Museum of Fine Arts-Boston
The New England Conservatory of Music
New England College of Optometry
New England School of Law
Northeastern University
Roxbury Community College
Saint John's Seminary
Simmons College
Suffolk University
Wentworth Institute of Technology
Wheelock College
Urban College of Boston

Source: National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS) data, higher educational institutions within Boston, 2013. Note: Boston College is located in Chestnut Hill, a village shared between Boston, Newton, and Brookline and crossing three counties. While it could be included in Boston for this reason, it has been included only in the 128 area and not within Boston.

Table 17: Top 20 Degrees Conferred in Boston

Number of Degrees by Level	Field of Study	Rank	Total / Percent Within Degree Level	Percent of Conferrals Over All Degree Levels
Associate's degree				
541	Business, Management, Marketing, and Related	17	25.9%	1.4%
Bachelor's degree				
3,47	Business, Management, Marketing, and Related	1	20.3%	10.0%
2,49	Health Professions and Related Programs	3	13.3%	6.5%
2,15	Visual and Performing Arts	4	11.3%	5.5%
1,54	Social Sciences	6	10.0%	4.9%
1,44	Communication, Journalism, and Related Programs	8	8.4%	4.1%
904	Psychology	11	6.1%	3.0%
867	Biological and Biomedical Sciences	12	5.5%	2.7%
751	Engineering	13	3.9%	1.9%
478	English Language and Literature/Letters	19	3.3%	1.6%
Doctor's degree - professional practice				
1,42	Health Professions and Related Programs	9	50.2%	3.6%
1,36	Legal Professions and Studies	10	48.1%	3.4%
Master's degree				
3,17	Business, Management, Marketing, and Related	2	26.4%	8.0%
1,70	Health Professions and Related Programs	5	14.2%	4.3%
1,50	Education	7	12.5%	3.8%
618	Public Administration and Social Service Professions	14	5.1%	1.6%
570	Engineering	15	4.7%	1.4%
568	Computer and Information Sciences and Support	16	4.7%	1.4%
524	Visual and Performing Arts	18	4.4%	1.3%
476	Communication, Journalism, and Related Programs	20	4.0%	1.2%

Source: National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS) completions data, Boston Higher Educational Institutions, 2013.

Appendix B: Catchment Demographic and Geographic Definition

Table 18: Workflows — Boston Workforce by Municipality of Origin, 2006-2010

Number	Margin of Error	Place of Residence	Percent of Boston Workers
207,435	3,152	Boston city	38%
18,420	918	Quincy city	3%
16,670	854	Cambridge city	3%
15,596	744	Brookline town	3%
13,348	953	Somerville city	2%
11,814	677	Newton city	2%
9,364	703	Revere city	2%
8,886	727	Malden city	2%
7,183	524	Medford city	1.31%
6,610	582	Weymouth Town city	1.20%
5,853	600	Brockton city	1.06%
5,849	600	Everett city	1%
5,514	499	Lynn city	1%
5,472	641	Randolph town	1.0%
5,153	653	Chelsea city	0.9%
5,003	463	Braintree Town city	0.9%
4,986	506	Watertown Town city	0.9%
4,942	495	Arlington town	0.9%
4,703	430	Milton town	0.9%
3,990	462	Waltham city	0.7%
3,739	352	Dedham town	0.7%
3,563	431	Winthrop Town city	0.6%
3,460	401	Melrose city	0.6%
3,324	428	Norwood town	0.6%
3,152	348	Framingham town	0.6%
3,117	415	Salem city	0.6%
3,054	316	Belmont town	0.6%
3,040	345	Needham town	0.6%
2,799	306	Natick town	0.5%
2,654	285	Hingham town	0.5%
2,624	330	Wakefield town	0.5%
2,503	368	Saugus town	0.5%
2,459	391	Canton town	0.4%
2,444	254	Winchester town	0.4%
2,408	389	Peabody city	0.4%
2,406	336	Stoughton town	0.4%
2,373	382	Woburn city	0.4%
2,342	304	Plymouth town	0.4%
2,193	231	Wellesley town	0.4%
2,186	313	Stoneham town	0.4%
2,101	331	Marshfield town	0.4%
2,081	237	Lexington town	0.4%
2,069	278	Walpole town	0.4%
2,058	259	Sharon town	0.4%
2,028	228	Reading town	0.4%
2,016	289	Beverly city	0.4%
1,851	254	Marblehead town	0.3%
1,848	262	Andover town	0.3%
1,844	301	Billerica town	0.3%
1,835	317	Taunton city	0.3%
1,630	266	Swampscott town	0.3%
1,571	308	Haverhill city	0.3%
1,550	301	Franklin Town city	0.3%
1,512	258	North Andover town	0.3%
1,499	230	Wilmington town	0.3%

1,489	298	Attleboro city	0.3%
1,446	221	Westwood town	0.3%
1,439	314	Lowell city	0.3%
1,438	252	Mansfield town	0.3%
1,416	249	Scituate town	0.3%
1,411	307	Worcester city	0.3%
1,397	239	Easton town	0.3%
1,380	265	Abington town	0.3%
1,364	259	Holbrook town	0.2%
1,301	240	Ashland town	0.2%
1,289	179	Duxbury town	0.2%
1,276	248	Rockland town	0.2%
1,274	232	Medfield town	0.2%
1,263	227	Burlington town	0.2%
1,239	219	Pembroke town	0.2%
1,232	227	Bridgewater town	0.2%
1,225	189	Tewksbury town	0.2%
1,221	303	Lawrence city	0.2%
1,182	210	Wayland town	0.2%
1,119	197	Hanover town	0.2%
1,115	245	Danvers town	0.2%
1,100	205	Norwell town	0.2%
1,058	217	North Attleborough town	0.2%
1,050	170	Weston town	0.2%
1,049	197	Concord town	0.2%
1,045	216	Whitman town	0.2%
1,022	182	Acton town	0.2%
1,015	176	Foxborough town	0.2%
1,011	178	Chelmsford town	0.2%
1,009	242	Hull town	0.2%
959	160	Methuen Town city	0.2%
959	189	Sudbury town	0.2%
949	213	North Reading town	0.2%
911	222	New Bedford city	0.2%
907	222	Marlborough city	0.2%
899	170	Hopkinton town	0.2%
857	292	Cohasset town	0.2%
855	185	Gloucester city	0.2%
839	236	Norton town	0.2%
831	194	Lynnfield town	0.2%
826	175	Norfolk town	0.2%
745	193	Fall River city	0.1%
709	200	Newburyport city	0.1%
683	184	Southborough town	0.1%
657	208	Kingston town	0.1%
630	157	Dover town	0.1%
586	184	Halifax town	0.1%
580	141	Shrewsbury town	0.1%
578	141	Ipswich town	0.1%
572	135	Hanson town	0.1%
571	150	Dracut town	0.1%
558	187	Middleton town	0.1%
557	152	Barnstable Town city	0.1%
545	147	Milford town	0.1%
534	127	Holliston town	0.1%
533	131	Westborough town	0.1%
532	145	Medway town	0.1%
531	124	East Bridgewater town	0.1%
525	154	Lincoln town	0.1%
514	145	Wrentham town	0.1%
501	133	Grafton town	0.1%
494	180	Hamilton town	0.1%
488	149	Bedford town	0.1%
485	154	Manchester-by-the-Sea town	0.1%
481	111	Westford town	0.1%

459	153	Middleborough town	0.1%
449	115	Amesbury Town city	0.1%
444	177	Wareham town	0.1%
431	98	Nahant town	0.1%
421	120	Raynham town	0.1%
420	148	Lakeville town	0.1%
408	145	Millis town	0.1%
389	116	Bourne town	0.1%
384	134	Leominster city	0.1%
375	156	Plainville town	0.1%
371	130	Bellingham town	0.1%
358	126	Sandwich town	0.1%
333	77	Sherborn town	0.1%
325	96	Topsfield town	0.1%
323	109	Boxford town	0.1%
320	124	Rockport town	0.1%
295	121	Carver town	0.1%
290	95	Hudson town	0.1%
289	114	Maynard town	0.1%
289	109	West Bridgewater town	0.1%
282	79	Georgetown town	0.1%
279	105	Dartmouth town	0.1%
20,612	--	Out of State	4%

Source: U.S. Census, Special Tabulation: Number of Workers in Workplace Geography (State-County-MCD-Place) for the Six New England States: 2006-2010. Note: Places contributing less than 1% of Boston's workforce have been omitted.

Table 19: Population within 128 Catchment Area

TOTALS	2008 – 2012 ACS Estimate	Percent
Total Population	1,796,306	100.0%
Total Households	714,979	100.0%
Total Housing Units	768,276	100.0%

Source: U.S. Census Bureau, 2008-2012 American Community Survey, ESRI BAO boundaries of 128 catchment area.

Table 20: Age Distribution, 128 Catchment Area

Population by Age	Census 2010	
	Number	Percent
Age 0 - 4	98,797	6%
Age 5 - 9	87,849	5%
Age 10 – 14	86,056	5%
Age 15 – 24	302,989	17%
Age 25 - 34	329,882	18%
Age 35 - 44	240,240	13%
Age 45 - 54	233,069	13%
Age 55 - 64	190,041	11%
Age 65 - 74	111,156	6%
Age 75 - 84	75,299	4%
Age 85+	35,857	2%

Source: U.S. Census 2010, ESRI BAO boundaries of 128 catchment areas.

Table 21: Age Distribution, State of Massachusetts

2010 Population by Age, State of Massachusetts	Census 2010	
	Number	Percent
Age 0 - 4	352,814	5.3%
Age 5 - 9	379,442	5.7%
Age 10 - 14	406,069	6.1%
Age 15 - 24	951,933	14.3%
Age 25 - 34	878,707	13.2%
Age 35 - 44	825,452	12.4%
Age 45 - 54	978,560	14.7%
Age 55 - 64	878,707	13.2%
Age 65 - 74	559,177	8.4%
Age 75 - 84	299,559	4.5%
Age 85+	159,765	2.4%

Source: U.S. Census 2010, Massachusetts, using ESRI BAO Massachusetts boundary.

Table 22: Race and Ethnicity, 128 Catchment Area

Race and Ethnicity	Census 2010	
	Number	Percent
Ethnicity:		
Hispanic Origin (Any Race)	234,862	13.1%
Race:		
White Alone	1,206,579	67.3%
Black Alone	229,483	12.8%
American Indian Alone	5,389	0.3%
Asian Alone	177,491	9.9%
Pacific Islander Alone	-	0.0%
Some Other Race Alone	114,742	6.4%
Two or More Races	59,164	3.3%

Source: U.S. Census 2010, ESRI BAO boundaries of 128 catchment areas.

Table 23: Language Use, 128 Catchment Area

Language Use, 128 Catchment Population (over 5 years of age)	2008-2012 ACS Estimate	Percent
Speak only English	1,133,760	67%
Speak Spanish	194,973	11%
Speak English "very well" or "well"	142,206	8%
Speak English "not well"	33,249	2%
Speak English "not at all"	19,518	1%
Speak other Indo-European languages	208,318	12%
Speak English "very well" or "well"	174,693	10%
Speak English "not well"	25,414	1%
Speak English "not at all"	8,211	0%
Speak Asian and Pacific Island languages	126,346	7%
Speak English "very well" or "well"	89,977	5%
Speak English "not well"	24,137	1%
Speak English "not at all"	12,232	1%
Speak other languages	33,237	2%
Speak English "very well" or "well"	29,619	2%
Speak English "not well"	2,812	0%
Speak English "not at all"	806	0%
Total who speak English "not at all"	40,767	2%

Source: U.S. Census, 2008-2012 ACS 5-Year estimates ESRI BAO boundaries of 128 catchment areas.

Table 24: Poverty Level Estimates, 128 Catchment Area

Households by Poverty Status, 128 Catchment Region	2008-2012 ACS estimate	Percent
Income in the past 12 months below poverty level	105,750	14.8%
Income in the past 12 months at or above poverty level	609,229	85.2%

Source: U.S. Census, 2008-2012 ACS 5-Year estimates, ESRI BAO boundaries of 128 catchment areas.

Table 25: Educational Attainment, 128 Catchment Area

Educational Attainment for Residents Aged 25 Years or More, 128 Catchment Region	2008-2012 ACS estimate	Percent
Total	1,220,901	100%
No schooling completed	22,054	2%
Nursery School	218	0%
Kindergarten	291	0%
1-4th Grade	12,832	1%
5-8th Grade	41,092	3%
Some High School	69,953	6%
High School Diploma	248,002	20%
GED	28,997	2%
Some College	167,994	14%
Associate's degree	64,788	5%
Bachelor's degree	289,567	24%
Master's degree	173,096	14%
Professional school degree	51,938	4%
Doctorate degree	50,079	4%

Source: U.S. Census, 2008-2012 ACS 5-Year estimates ESRI BAO boundaries of 128 catchment areas.

Table 26: Catchment Commute Times, in Minutes

Workers Age 16+ Years (Who Did Not Work From Home) By Travel Time to Work		
Total	257,180	100.0%
Less than 5 minutes	8,558	3.3%
5 to 9 minutes	32,175	12.5%
10 to 14 minutes	44,177	17.2%
15 to 19 minutes	48,123	18.7%
20 to 24 minutes	45,354	17.6%
25 to 29 minutes	17,866	6.9%
30 to 34 minutes	28,984	11.3%
35 to 39 minutes	4,859	1.9%
40 to 44 minutes	5,661	2.2%
45 to 59 minutes	10,734	4.2%
60 to 89 minutes	6,678	2.6%
90 or more minutes	4,012	1.6%

Source: U.S. Census Bureau, 2008-2012 American Community Survey, ESRI BAO boundaries of 128 catchment areas.

Table 27: School Enrollment

Population Age 3+ Years by School Enrollment	2008 – 2012 ACS Estimate	Percent
Total	1,735,553	100.0%
Enrolled in school	503,129	29.0%
Enrolled in nursery school, preschool	28,110	1.6%
Public school	11,798	0.7%
Private school	16,312	0.9%
Enrolled in kindergarten	22,567	1.3%
Public school	18,656	1.1%
Private school	3,911	0.2%
Enrolled in grade 1 to grade 4	68,790	4.0%
Public school	60,323	3.5%
Private school	8,467	0.5%
Enrolled in grade 5 to grade 8	68,786	4.0%
Public school	58,368	3.4%
Private school	10,418	0.6%
Enrolled in grade 9 to grade 12	75,232	4.3%
Public school	63,613	3.7%
Private school	11,619	0.7%
Enrolled in college undergraduate years	165,865	9.6%
Public school	54,490	3.1%
Private school	111,375	6.4%
Enrolled in graduate or professional school	73,779	4.3%
Public school	12,670	0.7%
Private school	61,109	3.5%
Not enrolled in school	1,232,424	71.0%

Source: U.S. Census Bureau, 2008-2012 American Community Survey, UMDI ESRI BAO boundaries of 128 catchment areas.

Table 28: Table of Income of Households within Catchment Area

Households by Income	2008 – 2012 ACS Estimate	Percent
Total	\$714,979	100%
Less than \$25,000	\$160,931	23%
\$25,000 to \$50,000	\$127,815	18%
\$50,000 to \$75,000	\$111,380	16%
\$75,000 to 100,000	\$87,597	12%
\$100,000 to \$150,000	\$112,018	16%
\$150,000 to \$200,000	\$53,600	7%
\$200,000 or more	\$61,638	9%

Source: U.S. Census Bureau, 2008-2012 American Community Survey, ESRI BAO boundaries of 128 catchment areas.

Table 29: Educational Attainment of Population Within 128 Catchment Area vs. State of Massachusetts

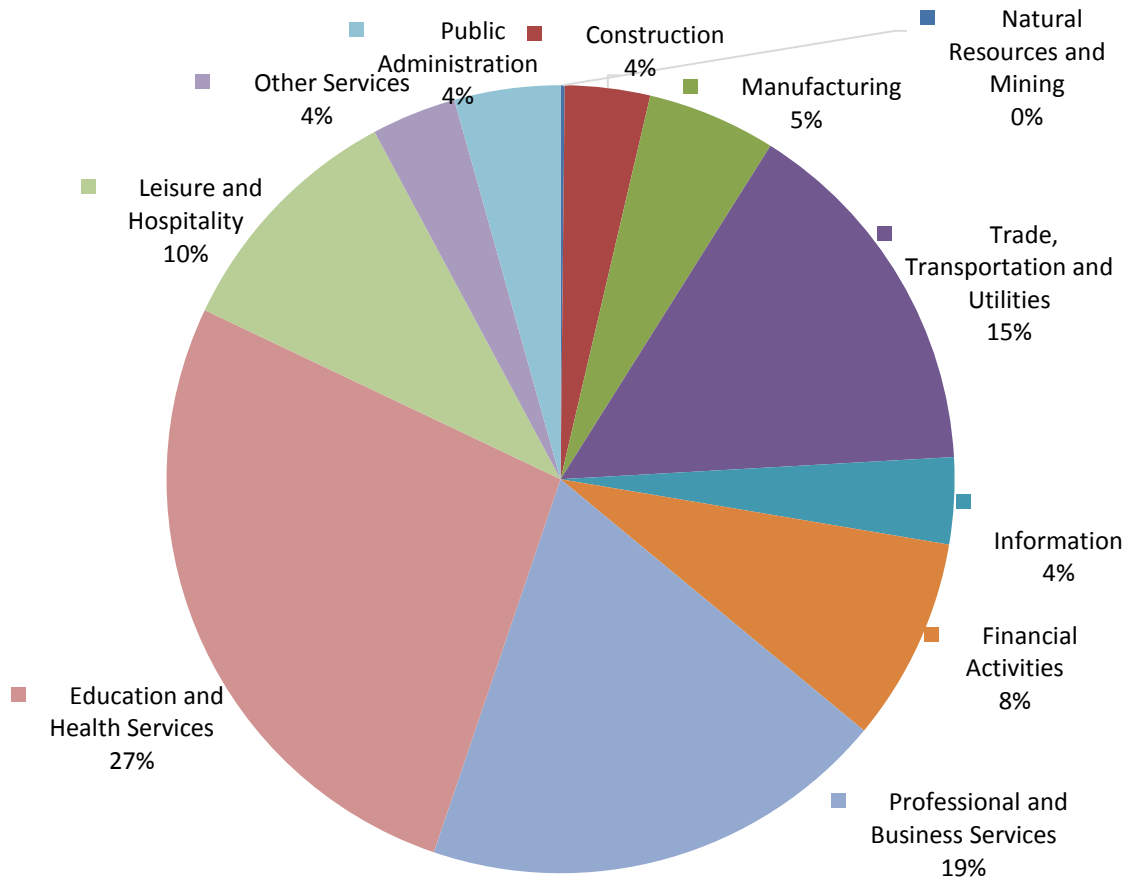
Educational Attainment, Age 25+ Years, 128 Catchment		
Total	1,220,901	100%
No High School diploma or GED	146,440	12%
High school graduate, GED, or alternative	276,999	23%
Some college, no degree	167,994	14%
Associate's degree	64,788	5%
Bachelor's degree	289,567	24%
Master's degree	173,096	14%
Professional school degree	51,938	4%
Doctorate degree	50,079	4%

Educational Attainment, Age 25+ Years, Massachusetts		
Total	4,465,898	100%
No High School diploma or GED	484,887	11%
High school graduate, GED, or alternative	1,156,650	26%
Some college, no degree	739,171	17%
Associate's degree	344,724	8%
Bachelor's degree	989,299	22%
Master's degree	523,662	12%
Professional school degree	125,268	3%
Doctorate degree	102,237	2%

Source: U.S. Census Bureau, 2008-2012 ACS, MA and 128 catchment boundaries.

Appendix C: Industrial Employment

Figure 5: Proportions of Average Employment by Industry Supersector, 2013



Source: MA Office of Labor and Workforce Development (OLWD) Labor Market Information (LMI), ES-202, Boston-Quincy-Cambridge Metropolitan NECTA division, 2013, All Ownership Types. http://lmi2.detma.org/lmi/lmi_es_a.asp#IND_LOCATION.

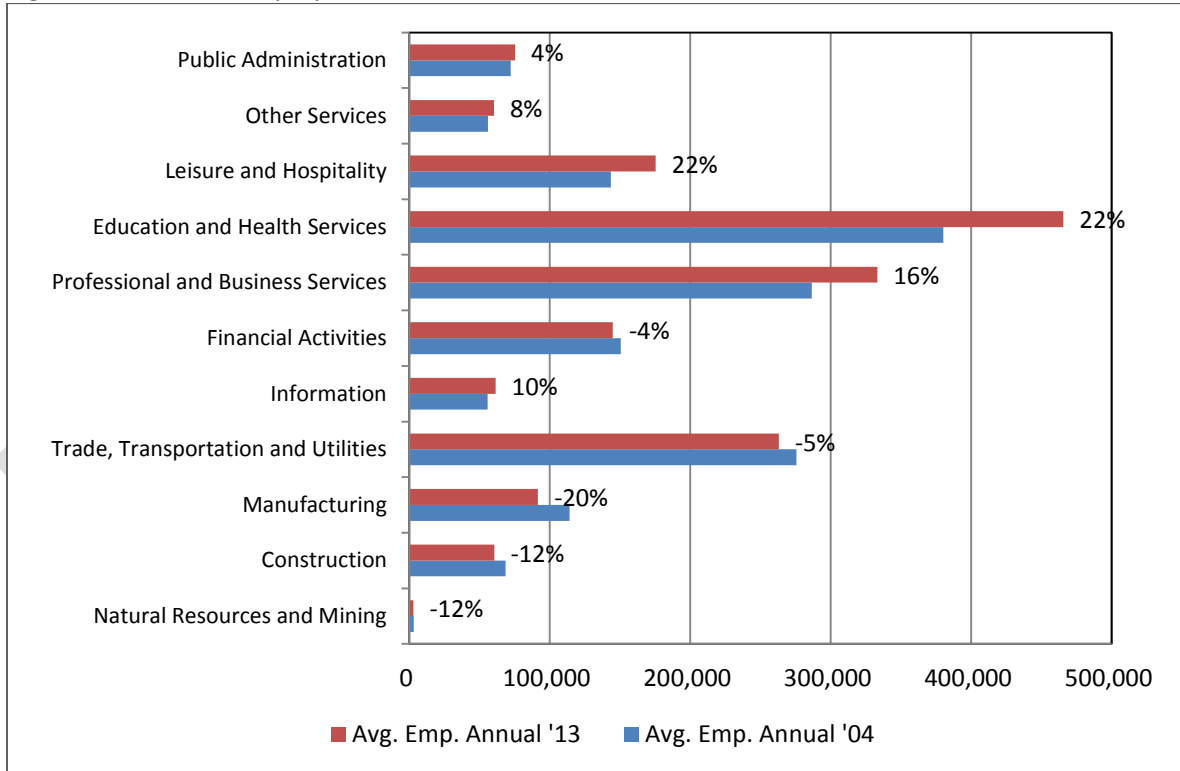
Table 30: Table of Firms, Wages, and Employment, Boston-Quincy-Cambridge NECTA Division, 2004 to 2013

Description	No. of Firms Annual '04	No. of Firms Annual '13	04 - '13	Total Wages - Annual '04	Total Wages - Annual '13	04 - '13	Avg. Emp. Annual '04	Avg. Emp. Annual '13	04 - '13	Percent Change	Avg Weekly Wages Annual '04	Avg Weekly Wages Annual '13	04 - '13
Total	94,078	97,831	3,753	\$112,240,432,085	\$125,218,314,299	\$12,977,882,214	1,606,902	1,734,844	127,942	8%	\$1,343	\$1,388	\$45
Goods-Producing Industries	12,033	9,906	(2,127)	\$14,763,043,910	\$12,817,847,172	(\$1,945,196,738)	185,886	155,090	(30,796)	-17%	\$1,527	\$1,589	\$62
Natural Resources and Mining	337	298	(39)	\$174,268,874	\$168,122,367	(\$6,146,507)	3,267	2,866	(401)	-12%	\$1,026	\$1,128	\$102
Construction	8,358	7,044	(1,314)	\$4,852,242,518	\$4,533,019,592	(\$319,222,926)	68,482	60,571	(7,911)	-12%	\$1,363	\$1,439	\$76
Manufacturing	3,338	2,564	(774)	\$9,736,532,519	\$8,116,705,212	(\$1,619,827,307)	114,137	91,653	(22,484)	-20%	\$1,640	\$1,703	\$63
Service-Providing Industries	82,045	87,925	5,880	\$97,477,388,175	\$112,400,467,127	\$14,923,078,952	1,421,016	1,579,755	158,739	11%	\$1,320	\$1,368	\$48
Trade, Transportation and Utilities	18,374	16,662	(1,712)	\$14,869,976,550	\$13,206,382,654	(\$1,663,593,896)	275,745	263,074	(12,671)	-5%	\$1,037	\$965	(\$72)
Information	2,521	2,314	(207)	\$5,198,033,456	\$6,290,462,973	\$1,092,429,517	55,815	61,601	5,786	10%	\$1,791	\$1,964	\$173
Financial Activities	8,854	8,612	(242)	\$20,180,735,872	\$19,390,804,900	(\$789,930,972)	150,693	144,999	(5,694)	-4%	\$2,575	\$2,572	(\$3)
Professional and Business services	21,010	21,274	264	\$24,313,490,642	\$32,960,348,864	\$8,646,858,222	286,598	333,187	46,589	16%	\$1,632	\$1,902	\$270
Education and Health Services	9,034	17,532	8,498	\$21,993,076,670	\$28,315,020,212	\$6,321,943,542	380,322	465,652	85,330	22%	\$1,112	\$1,169	\$57
Leisure and Hospitality	8,182	8,973	791	\$4,077,514,336	\$4,743,527,018	\$666,012,682	143,496	175,439	31,943	22%	\$546	\$520	(\$26)
Other Services	12,937	11,030	(1,907)	\$2,014,601,672	\$2,156,273,537	\$141,671,865	56,156	60,384	4,228	8%	\$689	\$687	(\$2)
Public Administration	1,133	1,528	395	\$4,829,958,978	\$5,337,646,968	\$507,687,990	72,193	75,418	3,225	4%	\$1,286	\$1,361	\$75

Source: MA OWLD, Boston-Quincy-Cambridge Metropolitan NECTA Division, 2004 and 2013, 2013 dollars, with UMDI calculation of % change based on this data.

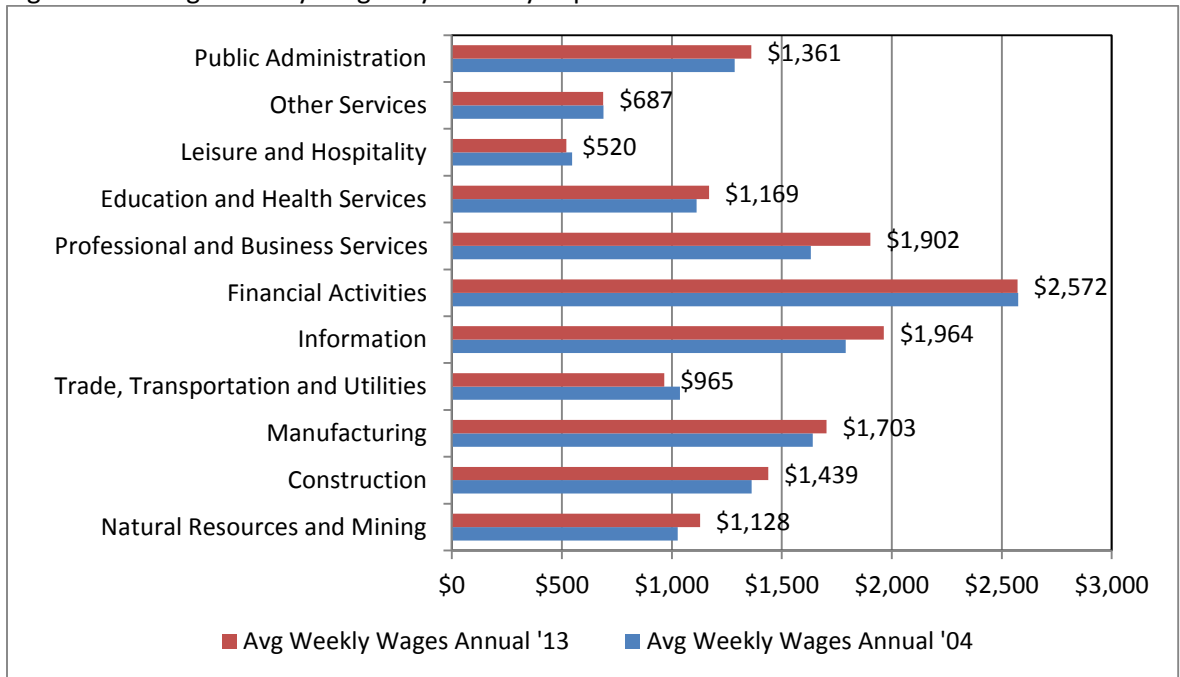
Industrial Employment, Continued

Figure 6: Industrial Employment Growth, 2004 to 2013



Source: MA OLWD LMI ES-202, Boston-Quincy-Cambridge Metropolitan NECTA Division, 2004 and 2013, All Ownership Types. UMDI calculation of % change based on this data. http://lmi2.detma.org/lmi/lmi_es_a.asp#IND_LOCATION.

Figure 7: Average Weekly Wages by Industry Supersector



Source: MA OLWD LMI ES-202, Boston-Quincy-Cambridge NECTA Division, 2004 and 2013, 2013 dollars, All Ownership Types. http://lmi2.detma.org/lmi/lmi_es_a.asp#IND_LOCATION. Dollar amounts displayed reflect 2013 levels.

Table 31: Largest Private Employers in Boston, Nov. 2013

Private Boston Companies with 1,000+ Employees	
Company	Employees
Massachusetts General Hospital	14,752
Brigham and Women's Hospital	11,229
Boston University	9,783
Children's Hospital, Boston	7,903
State Street Bank & Trust Co	7,800
Beth Israel Deaconess Medical Center	6,695
Fidelity	5,500
Harvard University Graduate Schools	5,132
Northeastern University	4,484
Boston Medical Center	4,217
Boston College	4,122
Tufts Medical Center	3,692
Dana Farber Cancer Institute	3,607
John Hancock	3,430
Liberty Mutual	3,182
Blue Cross Blue Shield of Massachusetts	2,600
ARAMARK	2,476
St. Elizabeth's Medical Center	2,229
Brown Brothers Harriman & Co	2,082
Boston Globe Media Partners	2,001
BNY Mellon	1,980
Pearson	1,950
Verizon Massachusetts	1,800
New England Financial/Met Life	1,750
American Cleaning Co	1,700
Putnam Investments	1,700
Tufts University Graduate Schools	1,642
Suffolk University	1,528
Massachusetts Eye and Ear Infirmary	1,501
Wellington Management Co	1,450
CBS	1,422
Thomson Reuters	1,400
Gillette	1,385
Hebrew Rehabilitation Center	1,317
NSTAR Electric	1,300
Christian Science Publishing Society	1,300
Shaw's	1,295
Dunkin' Donuts	1,263
Allen & Gerritsen	1,236
LPL Financial Corp	1,200
Deloitte	1,200
MFS Investment Management	1,190
Ernst & Young	1,166
Berklee College of Music	1,159
Ropes & Gray	1,126
Cambridge Associates	1,125
Partners HealthCare	1,125
Faulkner Hospital	1,117
Stop & Shop	1,067
Simmons College	1,041
New England Baptist Hospital	1,009
Pioneer Investment Management	1,000
American International Group	1,000

Source: Boston Redevelopment Authority (BRA) Research Division, The Largest Employers in the City of Boston, November 2013 <http://www.bostonredevelopmentauthority.org/getattachment/7ced9a9e-cb5c-4d6b-a840-2a0042f68ce5/>. Data sources used by the BRA included: InfoUSA, 2012; ReferenceUSA, 2012; Dun&Bradstreet, 2013; Boston Business Journal Book of Lists, 2013; American Hospital Association, 2011; Integrated Postsecondary Education Data System (IPEDS); and direct employer contact by Boston Redevelopment Authority Research Division, 2013.

Table 32: Private Boston Companies, 500-1,000 Employees

Company	Employees
Federal Reserve Bank of Boston	988
Westin	950
Emerson College	915
Eaton Vance Management	902
Accenture	900
PricewaterhouseCoopers	900
McDonald's	878
Goodwin Procter	876
Citizens Bank	861
Carney Hospital	851
The MENTOR Network	851
TD Garden	850
Spaulding Rehabilitation Hospital	847
CVS Pharmacy	835
Herald Media	830
Harvard Pilgrim Health Care	800
First Marblehead Co	800
Beacon Communities	784
Starbucks	763
WGBH	740
Museum of Fine Arts	736
Au Bon Pain	726
Ultimate Parking	712
Wayfair.com	700
Bank of America	698
Home for Little Wanderers	694
KPMG	692
Santander Bank (fmr). Sovereign Bank)	661
Bain & Co	650
Digitas	640
WilmerHale	637
UNO Restaurants	636
Wentworth Institute of Technology	635
Marriott	625
Arnold Worldwide	620
Bingham McCutchen	605
Boston Park Plaza Hotel & Towers	600
Seaport Hotel & World Trade Center	600
Joslin Diabetes Center	600
Whole Foods Market	600
Wells-Fargo (fmr). Evergreen Investments)	600
Suburban Home Healthcare	600
Pier Five Services (Sebastian's Catering)	600
Mintz, Levin, Cohn, Ferris, Glovsky & Popeo	597
Hilton	585
Bechtel/Parsons Brinckerhoff	575
Sheraton	550
Home Depot	550
Sapient	550
Walgreens	542
Dimock Center	540
Visiting Nurse Association of Boston	533
American Student Assistance	525
Plymouth Rock Assurance	521
Four Seasons	520
McGladrey	508
Suffolk Construction	501
Iron Mountain	501
Pine Street Inn	500
Ameriprise Financial (Columbia Management)	500
Deutsche Bank Americas	500
Cengage Learning	500
Bain Capital	500

Source: Boston Redevelopment Authority (BRA) Research Division, The Largest Employers in the City of Boston, November 2013 <http://www.bostonredevelopmentauthority.org/getattachment/7ced9a9e-cb5c-4d6b-a840-2a0042f68ce5/>. Data sources used by the BRA included: InfoUSA, 2012; ReferenceUSA, 2012; Dun&Bradstreet, 2013; Boston Business Journal Book of Lists, 2013; American Hospital Association, 2011; Integrated Postsecondary Education Data System (IPEDS); and direct employer contact by Boston Redevelopment Authority Research Division, 2013.

Appendix D: Occupational Employment

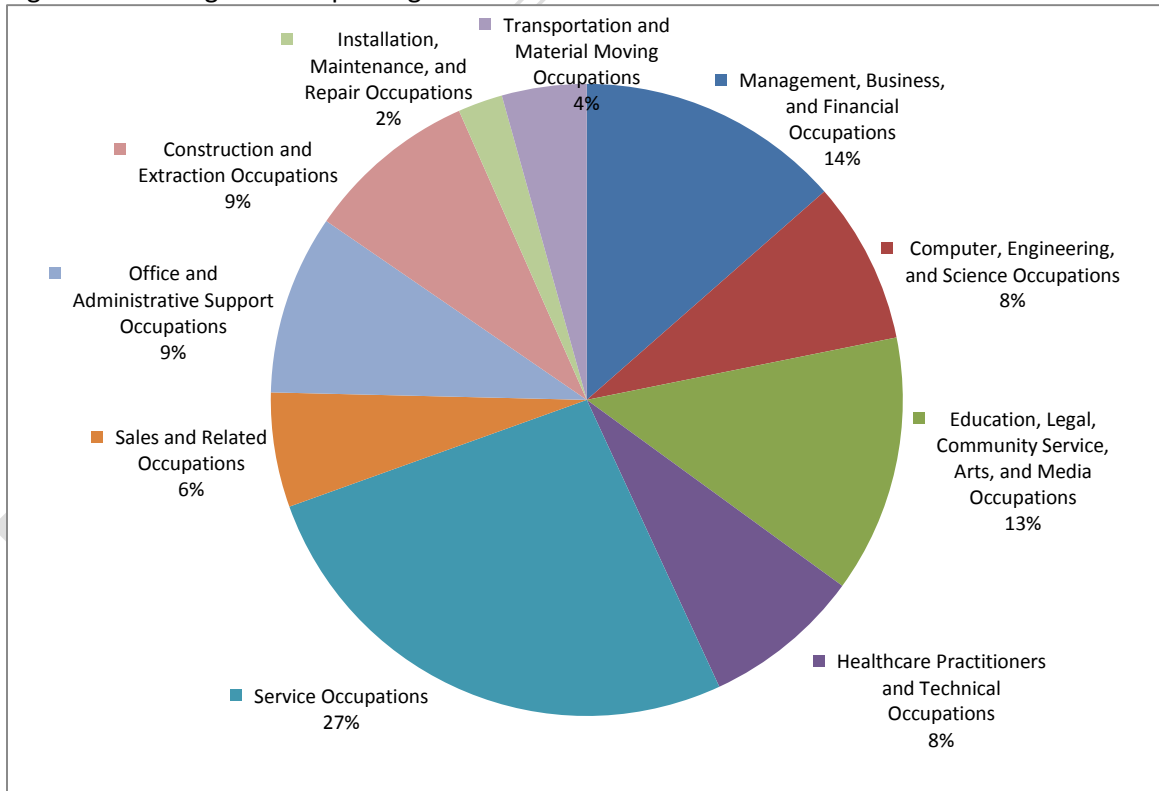
Table 33: Minor Occupational Groups, Annualized Short-Term Projections, 2013-2015 (multiple WIAs)

Occupation (SOC 3-digit)	Projected Net Change, 1 Year
Construction Trades Workers	1,481
Food and Beverage Serving Workers	1,462
Computer Occupations	1,346
Business Operations Specialists	1,091
Health Diagnosing and Treating Practitioners	967
Retail Sales Workers	819
Other Personal Care and Service Workers	745
Motor Vehicle Operators	622
Secretaries and Administrative Assistants	621
Preschool, Primary, Secondary, and Special Education School Teachers	614
Other Management Occupations	595
Counselors, Social Workers, and Other Community and Social Service Specialists	592
Building Cleaning and Pest Control Workers	565
Health Technologists and Technicians	556
Cooks and Food Preparation Workers	553
Nursing, Psychiatric, and Home Health Aides	479
Financial Specialists	446
Information and Record Clerks	425
Top Executives	407
Financial Clerks	381
Operations Specialties Managers	339
Other Installation, Maintenance, and Repair Occupations	335
Other Healthcare Support Occupations	309
Other Office and Administrative Support Workers	291
Other Food Preparation and Serving Related Workers	249
Sales Representatives, Services	247
Other Education, Training, and Library Occupations	234
Supervisors of Food Preparation and Serving Workers	234
Postsecondary Teachers	231
Supervisors of Office and Administrative Support Workers	218
Material Moving Workers	218
Lawyers, Judges, and Related Workers	205
Personal Appearance Workers	200
Grounds Maintenance Workers	187
Supervisors of Construction and Extraction Workers	172
Other Teachers and Instructors	162
Other Protective Service Workers	156
Engineers	147
Advertising, Marketing, Promotions, Public Relations, and Sales Managers	133
Life Scientists	112
Other Sales and Related Workers	102

Material Recording, Scheduling, Dispatching, and Distributing Workers	100
Life, Physical, and Social Science Technicians	99
Media and Communication Workers	99
Sales Representatives, Wholesale and Manufacturing	96
Entertainers and Performers, Sports and Related Workers	96
Supervisors of Building and Grounds Cleaning and Maintenance Workers	91
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	81
Mathematical Science Occupations	80
Legal Support Workers	79
Social Scientists and Related Workers	69
Architects, Surveyors, and Cartographers	60
Supervisors of Sales Workers	59
Food Processing Workers	57
Other Transportation Workers	51
Other Production Occupations	51
Art and Design Workers	49
Entertainment Attendants and Related Workers	48
Supervisors of Installation, Maintenance, and Repair Workers	45
Physical Scientists	43
Occupational Therapy and Physical Therapist Assistants and Aides	42
Librarians, Curators, and Archivists	40
Supervisors of Personal Care and Service Workers	38
Textile, Apparel, and Furnishings Workers	34
Supervisors of Transportation and Material Moving Workers	30
Helpers, Construction Trades	29
Media and Communication Equipment Workers	25
Baggage Porters, Bellhops, and Concierges	22
Other Construction and Related Workers	11
Other Healthcare Practitioners and Technical Occupations	10
Plant and System Operators	8
Supervisors of Protective Service Workers	4
Water Transportation Workers	1
Woodworkers	-2
Law Enforcement Workers	-5
Fire Fighting and Prevention Workers	-7
Electrical and Electronic Equipment Mechanics, Installers, and Repairers	-9
Air Transportation Workers	-15
Communications Equipment Operators	-18
Printing Workers	-21
Supervisors of Production Workers	-25
Drafters, Engineering Technicians, and Mapping Technicians	-54
Metal Workers and Plastic Workers	-64
Assemblers and Fabricators	-76
Total Projected Job Growth (Annual)	20,585

Source: MA OWLD Short Term Occupational Projections, Boston, South Shore, North Shore, Metro South/West, and Metro North WIA 2013-2015, aggregated to 3-digit SOC categories using 2010 SOC.

Figure 8: Growing Job Group Categories



Source: MA OLWD Short Term Occupational Projections, 2013-2015, Boston area WIAs (Boston, South Shore, North Shore, Metro South/West, and Metro North WIAs) UMDI aggregations using SOC 2010 User Guide Intermediate Aggregation Groups. <http://lmi2.detma.org/lmi/projections.asp>.

Table 34: Table for Growing Aggregated Job Group Categories

Aggregated Occupational Category	2-Year Projected Net Change	Annual (growth only)
Service Occupations	12,188	18,557
Management, Business, and Financial Occupations	6,250	9,216
Education, Legal, Community Service, Arts, and Media Occupations	6,084	7,865
Office and Administrative Support Occupations	4,246	8,227
Construction and Extraction Occupations	4,062	3,126
Computer, Engineering, and Science Occupations	3,829	5,599
Healthcare Practitioners and Technical Occupations	3,739	4,267
Sales and Related Occupations	2,707	7,641
Transportation and Material Moving Occupations	2,001	2,790
Installation, Maintenance, and Repair Occupations	1,057	1,806
Farming, Fishing, and Forestry Occupations	4	5
Production Occupations	-119	1,698

Source: MA OLWD Short Term Occupational Projections, 2013-2015, Boston area WIAs (Boston, South Shore, North Shore, Metro South/West, and Metro North WIAs) UMDI aggregations using SOC 2010 User Guide Intermediate Aggregation Groups. <http://lmi2.detma.org/lmi/projections.asp>. Note: Two-year projected net change can be divided in half to provide an annual estimate of projected growth. The “annual (growth only)” column does not account for job destruction. Employment levels, provided in Table 4 in the report, help modify the view of occupations by showing the current job levels and their relative sizes, since projections are only an estimate of possible change from those levels.

Table 35: Top 25 Jobs, by 2-Year Net Change

Occupation (SOC 6-digit)	2-Year Projected Net Change	Annual (growth only)
Construction Trades Workers	3,454	2,639
Food and Beverage Serving Workers	2,944	6,282
Computer Occupations	2,722	2,935
Health Diagnosing and Treating Practitioners	2,300	2,705
Business Operations Specialists	2,205	2,573
Retail Sales Workers	1,638	5,207
Other Personal Care and Service Workers	1,576	1,451
Nursing, Psychiatric, and Home Health Aides	1,500	1,429
Preschool, Primary, Secondary, and Special Education School Teachers	1,441	1,966
Health Technologists and Technicians	1,409	1,518
Secretaries and Administrative Assistants	1,409	1,271
Building Cleaning and Pest Control Workers	1,323	1,482
Counselors, Social Workers, and Other Community and Social Service Specialists	1,297	1,507
Combined Food Preparation and Serving Workers, Including Fast Food	1,289	2,198
Motor Vehicle Operators	1,288	1,214
Other Management Occupations	1,233	1,803
Cooks and Food Preparation Workers	1,221	1,515
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	1,063	995
Waiters and Waitresses	1,024	2,332
Postsecondary Teachers	979	971
Registered Nurses	973	1,263
Top Executives	965	1,262
Financial Specialists	894	2,071
Information and Record Clerks	846	2,126
Electricians	830	573

Source: MA EOWLD Short Term Occupational Projections, Greater Boston area WIAs (Boston, South Shore, North Shore, Metro South/West, and Metro North WIAs) 2013-2015 <http://lmi2.detma.org/lmi/projections.asp>. Note: Two-year projected net change can be divided in half to provide an annual estimate of projected growth. The "annual (growth only)" column does not account for job destruction. Employment levels, provided in Tables 5 and 31, help modify the view of occupations by showing the current job levels and their relative sizes, since projections are only an estimate of possible change from those levels.

Table 36: Growing Jobs by Wage for Annual Average Openings vs. Entry Level Wage, Area Jobs

Boston, North Shore, Metro North, Metro South/West, South Shore WIAs: Occupation	Annual Average Openings	Entry Level Wage
Combined Food Preparation and Serving Workers, Including Fast Food	683	\$20,970
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	531	\$31,720
Registered Nurses	496	\$88,100
Waiters and Waitresses	479	\$28,070
Management Analysts	459	\$104,780
Personal Care Aides	441	\$26,760
Electricians	424	\$66,780
General and Operations Managers	419	\$140,030
Retail Salespersons	393	\$25,760
Software Developers, Systems Software	358	\$114,310
Cooks, Restaurant	351	\$28,990
Cashiers	336	\$22,110
Market Research Analysts and Marketing Specialists	321	\$71,520
Construction Laborers	300	\$50,860
Software Developers, Applications	292	\$105,570
Customer Service Representatives	284	\$41,530
Carpenters	284	\$60,300
Accountants and Auditors	278	\$79,630
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	266	\$44,000
Bookkeeping, Accounting, and Auditing Clerks	263	\$45,050
Nursing Assistants	258	\$31,110
Computer Systems Analysts	238	\$86,150
Home Health Aides	229	\$26,410
First-Line Supervisors of Food Preparation and Serving Workers	217	\$36,800

First-Line Supervisors of Office and Administrative Support Workers	213	\$63,510
Office Clerks, General	211	\$35,600
Medical Secretaries	201	\$40,090
Sales Representatives, Services, All Other	200	\$80,230
Landscaping and Groundskeeping Workers	188	\$35,150
Bartenders	186	\$28,350
Plumbers, Pipefitters, and Steamfitters	186	\$78,570
Computer User Support Specialists	185	\$63,610
Teacher Assistants	184	\$30,090
First-Line Supervisors of Construction Trades and Extraction Workers	184	\$77,420
Lawyers	178	\$140,050
Childcare Workers	177	\$26,830
Maintenance and Repair Workers, General	176	\$46,310
Hairdressers, Hairstylists, and Cosmetologists	173	\$33,190
Taxi Drivers and Chauffeurs	172	\$27,770
Bus Drivers, School or Special Client	170	\$33,410
Painters, Construction and Maintenance	163	\$47,110
Elementary School Teachers, Except Special Education	160	\$71,380
Financial Analysts	158	\$104,200
Laborers and Freight, Stock, and Material Movers, Hand	154	\$31,810
Licensed Practical and Licensed Vocational Nurses	151	\$53,020
Medical Assistants	149	\$39,570
Preschool Teachers, Except Special Education	147	\$35,460
Computer and Information Systems Managers	137	\$143,280
Property, Real Estate, and Community Association Managers	130	\$87,590
Construction Managers	127	\$105,570
Fitness Trainers and Aerobics Instructors	127	\$43,570
Web Developers	126	\$77,140
Social and Human Service Assistants	126	\$37,760
Stock Clerks and Order Fillers	126	\$27,760
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	122	\$59,270
Security Guards	121	\$31,320
Financial Managers	120	\$133,930
Middle School Teachers, Except Special and Career/Technical Education	113	\$71,400
Heavy and Tractor-Trailer Truck Drivers	113	\$48,690
Dishwashers	110	\$21,740
Medical and Health Services Managers	107	\$114,250
Child, Family, and School Social Workers	106	\$58,190
Business Operations Specialists, All Other	104	\$77,400
Physical Therapists	102	\$80,710
Food Preparation Workers	99	\$24,300
Personal Financial Advisors	98	\$137,140
Receptionists and Information Clerks	98	\$31,420
Mental Health Counselors	95	\$39,040
Cost Estimators	88	\$79,610
Secondary School Teachers, Except Special and Career/Technical Education	88	\$73,090
Education Administrators, Postsecondary	86	\$108,280
Network and Computer Systems Administrators	82	\$83,390
Paralegals and Legal Assistants	80	\$56,130
Light Truck or Delivery Services Drivers	80	\$37,800
Healthcare Social Workers	78	\$59,590
Human Resources Specialists	77	\$70,250
Coaches and Scouts	76	\$44,140
Self-Enrichment Education Teachers	75	\$40,800
Cooks, Institution and Cafeteria	75	\$33,010
Emergency Medical Technicians and Paramedics	74	\$39,690
Public Relations Specialists	73	\$64,930
Civil Engineers	71	\$84,260
Administrative Services Managers	70	\$102,610
Computer Network Architects	66	\$113,730
Art, Drama, and Music Teachers, Postsecondary	66	\$84,270
Counter and Rental Clerks	65	\$34,480
Social and Community Service Managers	64	\$70,000
Architects, Except Landscape and Naval	64	\$82,430
Nurse Practitioners	64	\$108,830
Dental Assistants	63	\$42,880
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	63	\$23,750
Driver/Sales Workers	63	\$32,440

Database Administrators	62	\$84,040
Dental Hygienists	62	\$82,700
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	62	\$19,720
First-Line Supervisors of Retail Sales Workers	61	\$46,260
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	61	\$92,500
Biological Technicians	60	\$45,810
Billing and Posting Clerks	60	\$40,750
Occupational Therapists	58	\$77,040
Real Estate Sales Agents	58	\$72,340
Automotive Service Technicians and Mechanics	58	\$45,080
Operations Research Analysts	57	\$70,930
Packers and Packagers, Hand	57	\$22,860
Sales Managers	56	\$148,860
Dining Room and Cafeteria Attendants and Bartender Helpers	56	\$25,160
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	56	\$53,980
Managers, All Other	55	\$114,280
Marketing Managers	54	\$140,860
Medical and Clinical Laboratory Technicians	54	\$42,120
Educational, Guidance, School, and Vocational Counselors	53	\$63,260
Interpreters and Translators	51	\$66,840
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific	51	\$89,650
Medical Scientists, Except Epidemiologists	50	\$99,680
Physicians and Surgeons, All Other	50	\$137,820
Food Servers, Nonrestaurant	50	\$23,420
Operating Engineers and Other Construction Equipment Operators	50	\$64,360
Meeting, Convention, and Event Planners	49	\$61,710
Substance Abuse and Behavioral Disorder Counselors	49	\$44,650
Information Security Analysts	48	\$93,620
Training and Development Specialists	46	\$73,120
Bill and Account Collectors	46	\$42,600
Teachers and Instructors, All Other	45	\$54,450
Medical Records and Health Information Technicians	45	\$43,730
Amusement and Recreation Attendants	44	\$23,370
Recreation Workers	44	\$26,570
First-Line Supervisors of Mechanics, Installers, and Repairers	43	\$76,160
Substitute Teachers	42	\$35,030
Pharmacy Technicians	42	\$34,730
Food Service Managers	40	\$58,400
Clinical, Counseling, and School Psychologists	40	\$86,590
Cooks, Fast Food	39	\$20,630
First-Line Supervisors of Housekeeping and Janitorial Workers	38	\$49,440
Dispatchers, Except Police, Fire, and Ambulance	38	\$41,910
Fundraisers	37	\$65,220
First-Line Supervisors of Personal Service Workers	37	\$43,080
Speech-Language Pathologists	36	\$78,650
Sheet Metal Workers	36	\$69,740
Team Assemblers	36	\$30,720
Bakers	36	\$30,820
Roofers	35	\$55,400
Compliance Officers	34	\$79,470
Biochemists and Biophysicists	34	\$105,550
Instructional Coordinators	34	\$64,020
Massage Therapists	34	\$48,120
Statisticians	33	\$91,740
Biological Science Teachers, Postsecondary	33	\$116,530
Special Education Teachers, Kindergarten and Elementary School	33	\$65,980
Parking Lot Attendants	33	\$22,570
Logisticians	32	\$79,240
Computer Network Support Specialists	32	\$78,540
Pharmacists	32	\$112,380
Chefs and Head Cooks	32	\$55,000
Tellers	32	\$27,910
Human Resources Managers	31	\$124,650
Skincare Specialists	31	\$41,390
Telemarketers	31	\$35,530
Payroll and Timekeeping Clerks	31	\$48,750
Installation, Maintenance, and Repair Workers, All Other	31	\$45,660
Graphic Designers	30	\$54,880

Biomedical Engineers	29	\$93,720
Phlebotomists	28	\$37,620
Maids and Housekeeping Cleaners	28	\$28,420
Laundry and Dry-Cleaning Workers	28	\$23,450
Mental Health and Substance Abuse Social Workers	27	\$49,940
Insurance Sales Agents	26	\$82,530
Industrial Machinery Mechanics	26	\$54,970
Education Administrators, Elementary and Secondary School	25	\$102,960
Electronics Engineers, Except Computer	25	\$113,520
Social Science Research Assistants	25	\$53,420
Health Technologists and Technicians, All Other	25	\$48,070
Physical Therapist Assistants	25	\$56,560
Concierges	25	\$31,980
Compensation, Benefits, and Job Analysis Specialists	24	\$76,500
Rehabilitation Counselors	24	\$42,320
Dentists, General	24	\$173,380
Transportation Security Screeners	24	\$38,310
Natural Sciences Managers	23	\$180,510
Loan Officers	23	\$85,960
Physician Assistants	23	\$85,380
Cleaners of Vehicles and Equipment	23	\$23,570
Environmental Engineers	22	\$81,070
Chemists	22	\$79,390
Radiologic Technologists	22	\$70,890
Manicurists and Pedicurists	22	\$23,270
Library Assistants, Clerical	22	\$38,590
Public Relations and Fundraising Managers	21	\$124,180
Computer Programmers	21	\$83,550
Computer Occupations, All Other	21	\$92,010
Librarians	21	\$72,750
Bus Drivers, Transit and Intercity	21	\$31,670
Education Administrators, Preschool and Childcare Center/Program	20	\$64,570
Mechanical Engineers	20	\$90,730
Kindergarten Teachers, Except Special Education	20	\$67,640
Pediatricians, General	20	\$185,860
Brickmasons and Blockmasons	20	\$80,530
Helpers--Production Workers	20	\$28,400
First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle	19	\$60,370
Architectural and Engineering Managers	18	\$142,560
Producers and Directors	18	\$67,600
Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	18	\$23,120
Real Estate Brokers	18	\$132,570
Veterinary Technologists and Technicians	17	\$39,940
Credit Analysts	16	\$80,440
Actuaries	16	\$120,710
Chemical Technicians	16	\$52,460
Business Teachers, Postsecondary	16	\$137,290
Nursing Instructors and Teachers, Postsecondary	16	\$89,620
Audio and Video Equipment Technicians	16	\$51,930
Medical and Clinical Laboratory Technologists	16	\$69,380
Surgical Technologists	16	\$50,530
Veterinary Assistants and Laboratory Animal Caretakers	16	\$34,650
Parts Salespersons	16	\$39,340
Packaging and Filling Machine Operators and Tenders	16	\$34,400
Education Administrators, All Other	15	\$71,180
Vocational Education Teachers, Postsecondary	15	\$60,950
Special Education Teachers, Middle School	15	\$65,730
Dietitians and Nutritionists	15	\$60,200
Internists, General	15	\$204,800
Production, Planning, and Expediting Clerks	15	\$51,690

Source: MA EOLWD Short Term Projections, 2013-2015 for Boston, North Shore, Metro North, Metro South/West, and South Shore WIAs; US BLS OES for Boston-Quincy-Cambridge NECTA Division May 2013 http://www.bls.gov/oes/current/oes_71654.htm Note: Jobs projected to grow by less than 15 positions have been omitted.

Appendix E: Catchment Area Degree Conferrals

Table 37: All Degree-Granting Higher Educational Institutions Within Route 128 Catchment Area

Institutions Within the Route 128 Catchment Area
Andover Newton Theological School
Bay State College
Benjamin Franklin Institute of Technology
Bentley University
Berklee College of Music
Boston Architectural College
Boston Baptist College
Boston College
Boston Graduate School of Psychoanalysis Inc
Boston University
Brandeis University
Bunker Hill Community College
Cambridge College
Curry College
Eastern Nazarene College
Emerson College
Emmanuel College
Episcopal Divinity School
Fisher College
Harvard University
Hebrew College
Hellenic College-Holy Cross Greek Orthodox School of
Hult International Business School
Laboure College
Lasell College
Lawrence Memorial Hospital School of Nursing
Le Cordon Bleu College of Culinary Arts-Cambridge
Lesley University
Longy School of Music of Bard College
Massachusetts College of Art and Design
Massachusetts Institute of Technology
Massachusetts School of Professional Psychology
MCPHS University
MGH Institute of Health Professions
Mount Ida College
New England College of Business and Finance
New England College of Optometry
New England School of Acupuncture
New England School of Law
Newbury College
Northeastern University
Pine Manor College
Quincy College
Roxbury Community College
Saint John's Seminary
Sanford-Brown College-Boston
School of the Museum of Fine Arts-Boston
Simmons College
Suffolk University
The Boston Conservatory
The New England Conservatory of Music
The New England Institute of Art
Tufts University
University of Massachusetts-Boston
Urban College of Boston
Wentworth Institute of Technology
Wheelock College

Source: National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS) data, 128 catchment area higher educational institutions only, 2013.

Table 38: Degree Conferrals by Major, Catchment Area Institutions (all conferrals within Route 128 area)

Degree Type	Field of Study	Number of Conferrals	Total / Percent Within Degree Level	Percent of Conferrals Over All Degree Levels
Associate's degree		3,093		5%
	Health Professions and Related Programs	877	28%	1%
	Business, Management, Marketing, and Related Support Services	632	20%	1%
	Liberal Arts and Sciences, General Studies and Humanities	507	16%	1%
	Education	151	5%	0.2%
	Homeland Security, Law Enforcement, Firefighting, and Related Protective Service	151	5%	0.2%
	Personal and Culinary Services	149	5%	0.2%
	Computer and Information Sciences and Support Services	93	3%	0.1%
	Visual and Performing Arts	65	2%	0.1%
	Engineering Technologies and Engineering-related Fields	61	2%	0.1%
	Communications Technologies/Technicians and Support Services	60	2%	0.1%
	Biological and Biomedical Sciences	58	2%	0.1%
	Psychology	52	2%	0.1%
	Public Administration and Social Service Professions	52	2%	0.1%
	Mechanic and Repair Technologies/Technicians	51	2%	0.1%
	Legal Professions and Studies	31	1%	0.05%
	Communication, Journalism, and Related Programs	28	1%	0.04%
	Construction Trades	21	1%	0.03%
	Engineering	12	0.4%	0.02%
	History	12	0.4%	0.02%
	English Language and Literature/Letters	7	0.2%	0.01%
	Social Sciences	7	0.2%	0.01%
	Science Technologies/Technicians	6	0.2%	0.01%
	Foreign Languages, Literatures, and Linguistics	5	0.2%	0.01%
	Mathematics and Statistics	3	0.1%	0.005%
	Physical Sciences	2	0.1%	0.003%
Bachelor's degree		28,132		43%
	Business, Management, Marketing, and Related Support Services	5,524	20%	9%
	Social Sciences	3,302	12%	5%
	Health Professions and Related Programs	2,981	11%	5%
	Visual and Performing Arts	2,745	10%	4%
	Communication, Journalism, and Related Programs	1,786	6%	3%
	Psychology	1,728	6%	3%
	Biological and Biomedical Sciences	1,677	6%	3%
	Engineering	1,438	5%	2%
	English Language and Literature/Letters	872	3%	1%
	Computer and Information Sciences and Support Services	752	3%	1%
	History	559	2%	1%
	Multi/Interdisciplinary Studies	552	2%	1%
	Physical Sciences	449	2%	1%
	Homeland Security, Law Enforcement, Firefighting, and Related	448	2%	1%
	Education	435	2%	1%
	Mathematics and Statistics	380	1%	1%
	Architecture and Related Services	319	1%	0.5%
	Foreign Languages, Literatures, and Linguistics	250	1%	0.4%
	Public Administration and Social Service Professions	249	1%	0.4%
	Engineering Technologies and Engineering-related Fields	228	1%	0.4%
	Philosophy and Religious Studies	227	1%	0.4%
	Area, Ethnic, Cultural, Gender, and Group Studies	209	1%	0.3%
	Communications Technologies/Technicians and Support Services	206	1%	0.3%
	Parks, Recreation, Leisure and Fitness Studies	204	1%	0.3%
	Liberal Arts and Sciences, General Studies and Humanities	200	1%	0.3%
	Natural Resources and Conservation	180	1%	0.3%

	Family and Consumer Sciences/Human Sciences	115	0.4%	0.2%
	Theology and Religious Vocations	44	0.2%	0.1%
	Legal Professions and Studies	43	0.2%	0.1%
	Personal and Culinary Services	22	0.1%	0.03%
	Agriculture, Agriculture Operations and Related Sciences	4	0.01%	0.01%
	Mechanic and Repair Technologies/Technicians	4	0.01%	0.01%
Master's degree		25,453		39%
	Business, Management, Marketing, and Related Support Services	6,777	27%	10%
	Education	4,482	18%	7%
	Health Professions and Related Programs	2,812	11%	4%
	Public Administration and Social Service Professions	1,461	6%	2%
	Engineering	1,431	6%	2%
	Social Sciences	1,019	4%	2%
	Computer and Information Sciences and Support Services	841	3%	1%
	Biological and Biomedical Sciences	763	3%	1%
	Visual and Performing Arts	712	3%	1%
	Architecture and Related Services	670	3%	1%
	Psychology	597	2%	1%
	Communication, Journalism, and Related Programs	575	2%	1%
	Multi/Interdisciplinary Studies	485	2%	1%
	Legal Professions and Studies	408	2%	1%
	Theology and Religious Vocations	381	1%	1%
	Homeland Security, Law Enforcement, Firefighting, and Related Protective Service	327	1%	1%
	English Language and Literature/Letters	305	1%	0.5%
	Library Science	215	1%	0.3%
	Physical Sciences	195	1%	0.3%
	History	175	1%	0.3%
	Foreign Languages, Literatures, and Linguistics	140	1%	0.2%
	Area, Ethnic, Cultural, Gender, and Group Studies	127	0.5%	0.2%
	Mathematics and Statistics	115	0.5%	0.2%
	Family and Consumer Sciences/Human Sciences	100	0.4%	0.2%
	Philosophy and Religious Studies	88	0.3%	0.1%
	Natural Resources and Conservation	74	0.3%	0.1%
	Parks, Recreation, Leisure and Fitness Studies	70	0.3%	0.1%
	Engineering Technologies and Engineering-related Fields	66	0.3%	0.1%
	Personal and Culinary Services	40	0.2%	0.1%
	Liberal Arts and Sciences, General Studies and Humanities	2	0.01%	0.003%
Doctor's degree - other		201		0.3%
	Health Professions and Related Programs	106	0.4%	0.2%
	Education	76	0.3%	0.1%
	Legal Professions and Studies	11	0.04%	0.02%
	Theology and Religious Vocations	8	0.03%	0.01%
Doctor's degree - professional practice		4,404		7%
	Legal Professions and Studies	2,193	8%	3%
	Health Professions and Related Programs	2,103	7%	3%
	Psychology	59	0.2%	0.1%
	Theology and Religious Vocations	39	0.1%	0.1%
	Education	8	0.03%	0.01%
	Public Administration and Social Service Professions	2	0.01%	0.003%
Doctor's degree - research/scholarship		2,394		4%
	Engineering	477	20%	1%
	Biological and Biomedical Sciences	324	14%	1%
	Physical Sciences	283	12%	0.4%
	Health Professions and Related Programs	203	8%	0.3%
	Social Sciences	199	8%	0.3%
	Education	130	5%	0.2%
	Psychology	99	4%	0.2%
	Visual and Performing Arts	70	3%	0.1%
	Computer and Information Sciences and Support Services	66	3%	0.1%

Mathematics and Statistics	66	3%	0.1%
Public Administration and Social Service Professions	60	3%	0.1%
Business, Management, Marketing, and Related Support Services	54	2%	0.1%
Foreign Languages, Literatures, and Linguistics	49	2%	0.1%
History	48	2%	0.1%
English Language and Literature/Letters	40	2%	0.1%
Area, Ethnic, Cultural, Gender, and Group Studies	39	2%	0.1%
Philosophy and Religious Studies	38	2%	0.1%
Multi/Interdisciplinary Studies	37	2%	0.1%
Architecture and Related Services	31	1%	0.05%
Legal Professions and Studies	23	1%	0.04%
Communication, Journalism, and Related Programs	16	1%	0.02%
Family and Consumer Sciences/Human Sciences	16	1%	0.02%
Theology and Religious Vocations	15	1%	0.02%
Homeland Security, Law Enforcement, Firefighting, and Related Protective Service	8	0.3%	0.01%
Library Science	3	0.1%	0.005%
Postbaccalaureate certificate	635		1%
Health Professions and Related Programs	186	29%	0.3%
Visual and Performing Arts	123	19%	0.2%
Business, Management, Marketing, Related Support Svcs	112	18%	0.2%
Education	87	14%	0.1%
Multi/Interdisciplinary Studies	39	6%	0.1%
Legal Professions and Studies	18	3%	0.03%
Social Sciences	17	3%	0.03%
Family and Consumer Sciences/Human Sciences	14	2%	0.02%
Psychology	11	2%	0.02%
Theology and Religious Vocations	8	1%	0.01%
Public Administration and Social Service Professions	5	1%	0.01%
Science Technologies/Technicians	4	1%	0.01%
Biological and Biomedical Sciences	3	0.5%	0.005%
Computer and Information Sciences and Support Services	2	0.3%	0.003%
Mathematics and Statistics	2	0.3%	0.003%
Natural Resources and Conservation	2	0.3%	0.003%
Communication, Journalism, and Related Programs	1	0.2%	0.002%
Engineering	1	0.2%	0.002%
Post-master's certificate	458		0.7%
Education	222	48%	0.3%
Health Professions and Related Programs	160	35%	0.2%
Psychology	31	7%	0.05%
Visual and Performing Arts	26	6%	0.04%
Library Science	14	3%	0.02%
Engineering	3	0.7%	0.005%
Business, Management, Marketing, Related Support Svcs	2	0.4%	0.003%
Grand Total	64,770		

Source: National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS) completions data, 128 catchment area higher educational institutions only, 2013. Note: Pre-baccalaureate certificates are excluded from this list.

Appendix F: UMass Boston Degree Conferrals and Transfer Patterns

Degree Conferrals at UMass Boston

Degrees recently conferred at UMass Boston illustrate the fields current students are interested in as local UMass attendees. UMass Boston students may have interests in common with the potential market. Data are broken out by major and degree level in order to identify interest across different types of programs. Top bachelor's-level majors at UMass Boston are Business, Management, Marketing, and Related Support Services; and Health Professions and Related Programs. Particularly popular fields at the master's level include Education and the Business, Management, Marketing, and Related Support Services major. Health Professions and Related Programs and Education degrees were also relatively popular in the Post-Baccalaureate Certificate program. (See table below).

Table 39: UMass Boston Degree Conferrals by Popularity of Major, Degree Level, 2013

Major by Level	Number	% of Level	% of All
Bachelor's degree	2,275	Pct. Lvl	Pct. All
Business, Management, Marketing, and Related Support Services	452	20%	13%
Health Professions and Related Programs	417	18%	12%
Psychology	267	12%	8%
Social Sciences	263	12%	7%
Biological and Biomedical Sciences	161	7%	5%
Homeland Security, Law Enforcement, Firefighting, Related Protective Svc	154	7%	4%
Parks, Recreation, Leisure and Fitness Studies	126	6%	4%
English Language and Literature/Letters	97	4%	3%
Computer and Information Sciences and Support Services	66	3%	2%
Visual and Performing Arts	55	2%	2%
Natural Resources and Conservation	40	2%	1%
History	36	2%	1%
Foreign Languages, Literatures, and Linguistics	30	1%	1%
Philosophy and Religious Studies	27	1%	1%
Area, Ethnic, Cultural, Gender, and Group Studies	24	1%	1%
Public Administration and Social Service Professions	24	1%	1%
Physical Sciences	18	1%	1%
Mathematics and Statistics	6	0.3%	0.2%
Education	5	0.2%	0.1%
Multi/Interdisciplinary Studies	5	0.2%	0.1%
Legal Professions and Studies	2	0.1%	0.1%
Master's degree	1,017	Pct. Lvl	Pct. All
Education	371	36%	11%
Business, Management, Marketing, and Related Support Services	233	23%	7%
Health Professions and Related Programs	102	10%	3%
Multi/Interdisciplinary Studies	61	6%	2%
Foreign Languages, Literatures, and Linguistics	60	6%	2%
English Language and Literature/Letters	49	5%	1%
Public Administration and Social Service Professions	43	4%	1%

Psychology	20	2%	1%
Social Sciences	19	2%	1%
Computer and Information Sciences and Support Services	17	2%	0.5%
History	11	1%	0.3%
Area, Ethnic, Cultural, Gender, and Group Studies	10	1%	0.3%
Physical Sciences	10	1%	0.3%
Visual and Performing Arts	6	1%	0.2%
Biological and Biomedical Sciences	5	0.5%	0.1%
Postbaccalaureate certificate	178	Pct. Lvl	Pct. All
Health Professions and Related Programs	81	46%	2%
Education	57	32%	2%
Multi/Interdisciplinary Studies	21	12%	1%
Social Sciences	14	8%	0.4%
Science Technologies/Technicians	4	2%	0.1%
Computer and Information Sciences and Support Services	1	1%	0.03%
Post-master's certificate	16	Pct. Lvl	Pct. All
Psychology	10	63%	0.3%
Education	6	38%	0.2%
Doctor's degree - professional practice	6	Pct. Lvl	Pct. All
Health Professions and Related Programs	6	100%	0.2%
Doctor's degree - research/scholarship	31	Pct. Lvl	Pct. All
Education	10	32%	0.3%
Psychology	6	19%	0.2%
Computer and Information Sciences and Support Services	4	13%	0.1%
Multi/Interdisciplinary Studies	4	13%	0.1%
Health Professions and Related Programs	3	10%	0.1%
Public Administration and Social Service Professions	2	6%	0.1%
Biological and Biomedical Sciences	1	3%	0.03%
Physical Sciences	1	3%	0.03%
Total	3,523		

Source: National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS) completions data, UMass Boston, 2013.

UMass Boston Transfer Patterns

Data on in-state transfers in to UMass Boston were examined for the most recently completed school year, 2014. The preferences and characteristics of transfer applicants to UMass Boston from the immediate region are of particular interest, because students who are interested in completing their educations with UMass Boston may be similar to at least a portion of the potential market.

Public vs. Private Institutions of Origin

The majority of transfer applicants to UMass Boston are from public institutions. 80% of in-state applications last year were from students at public institutions. The proportion is lower among out-of-state applicants, where 61% of applicants were from public institutions.

Community Colleges

Massachusetts community colleges play an important role in the educational careers of UMass Boston transfer applicants. In-state applicants from two-year institutions apply at a slightly higher

rate of in-state applicants from four-year institutions, with two-year institutions accounting for 65% of applicants. Enrollments from in-state two-year institutions are also strong, with 67% of in-state transfer enrollees originating from two-year institutions. There are fewer applications from out-of-state two-year institutions, with only 30% of out-of-state transfer applications, and 32% of enrollments from out-of-state two-year institutions.

Community colleges within the region are the most likely places of origin for transfer applicants from two-year colleges. Bunker Hill, Massasoit and Roxbury Community Colleges together provided nearly half of all applicants from two-year institutions, and over 32% of all transfer applicants to UMass Boston, regardless of type of institution of origin. A total of 1,332 students transferred to UMass Boston from these three institutions last year; close to 800 were from Bunker Hill Community College, just under 300 from Massasoit Community College, and nearly 240 from Roxbury Community College. (See Table 44).

Popular Majors for Transfers by Institution of Origin

Much like the overall pool of students, a Management-related degree was the most popular major for transfers on the UMass Boston campus. Health and body science-related majors, including Nursing & Health Sciences, Biology, Psychology and Exercise and Health Sciences, also consistently ranked very high among transfer students. These students' interests are consistent with the majors popular in all the institutions in the region.

Table 40: Top 10 Transfer Enrollee Choice of Major by Institutional Type, UMass Boston

Major	2-Year	4-Year	Other	Grand Total	Percentage
Management	190	72	1	263	13%
Nursing & Health Sciences	142	31	3	250	13%
Biology	90	51	1	142	7%
Criminal Justice	91	38	-	129	7%
Psychology	78	37	-	115	6%
Exercise and Health Sciences	75	38	-	113	6%
Communication	41	24	-	65	3%
Science & Mathematics	30	35	-	65	3%
Early Education & Care in Inclusive Settings	41	17	1	59	3%
Human Services	40	13	-	53	3%

Source: UMass Boston Office of Institutional Research and Policy Studies, 2014, UMDI analysis.

Table 41: UMass Boston Transfer Applications and Enrollment Summary

	2 year	4 year	Int'l	Unknown	Grand Total	% 2 Year
<i>In-State Institutions</i>						
Number of Applicants	2,745	1,421	-	38	4,204	65%
Offered Admission - Yes	1,954	851	-	24	2,829	69%
Enrolled - Yes	1,307	635	-	16	1,958	67%
<i>Out-of-State Institutions</i>						
Number of Applicants	618	1,028	279	146	2,071	30%
Offered Admission - Yes	394	561	133	38	1,126	35%
Enrolled - Yes	191	305	74	24	594	32%
Grand Total Applicants	3,363	2,449	279	184	6,275	54%
Grand Total Enrolled	1498	940	74	40	2,552	59%
Grand Total Enrolled from In-State Only	1,307	635		16	1,958	67%

Source: UMass Boston Office of Institutional Research and Policy Studies, 2014, UMDI analysis.

Table 42: UMass Boston Transfer Applications by Public or Private Institution

	Private	Public	Other	Grand Total	% Public Institution
Massachusetts Institutions					
2 year	161	2,584		2,745	94%
4 year	641	769		1,410	55%
Unknown	8	30	11	49	61%
Sub-total	810	3,383	11	4,204	80%
Out-of-State Institutions					
2 year	66	550	2	618	89%
4 year	512	510	6	1,028	50%
International	16	193	70	279	69%
Unknown	11	14	121	146	10%
Sub-total	605	1,267	199	2,071	61%
Grand Total	1,415	4,650	210	6,275	74%

Source: UMass Boston Office of Institutional Research and Policy Studies, 2014, UMDI analysis.

Table 43: UMass Boston Transfer Applications from Massachusetts Two-Year Colleges

College/University	Students	Percentage
Private	161	5.9%
Art Institute of Boston	3	0.1%
Bay Path College	2	0.1%
Bay State College	23	0.8%
Benjamin Franklin Inst of Tech	15	0.5%
Dean College	33	1.2%
Endicott College	3	0.1%
Fisher College	43	1.6%
ITT Tech. Inst. Boston (North)	1	0.0%
Laboure College	27	1.0%
New England College of Finance	3	0.1%
New England Institute of Art	8	0.3%
Public	2,584	94.1%
Berkshire Community College	13	0.5%
Boston Career Institute	1	0.0%
Bristol Community College	76	2.8%
Bunker Hill Community College	796	29.0%
Cape Cod Community College	115	4.2%
Greenfield Community College	5	0.2%
Holyoke Community College	31	1.1%
Marian Court College	1	0.0%
Massachusetts Bay Comm. Coll.	256	9.3%
Massasoit Community College	299	10.9%
Middlesex Community College	166	6.0%
Mount Wachusett Comm. College	19	0.7%
North Shore Community College	152	5.5%
Northern Essex Comm. College	57	2.1%
Quincy College	291	10.6%
Quinsigamond Community College	51	1.9%
Roxbury Community College	237	8.6%
Springfield Tech. Comm. Coll.	18	0.7%
Grand Total	2,745	100.0%

Source: UMass Boston Office of Institutional Research and Policy Studies, 2014, UMDI analysis.

Table 44: UMass Boston Transfer Applications from Boston Area Colleges

College/University	2-Year	4-year	Grand Total	Percentage
American International College		5	5	0.1%
Amherst College		1	1	0.0%
Anna Maria College		8	8	0.2%
Art Institute of Boston	3		3	0.1%
Assumption College		11	11	0.3%
Atlantic Union College		5	5	0.1%
Bay Path College	2		2	0.0%
Bay State College	23		23	0.6%
Becker College Worcester		10	10	0.2%
Benjamin Franklin Inst of Tech	15		15	0.4%
Bentley University		7	7	0.2%
Berklee College of Music		6	6	0.1%
Berkshire Community College	13		13	0.3%
Blue Hills Reg. Tech. Inst.		1	1	0.0%
Boston Career Institute	1		1	0.0%
Boston College		14	14	0.3%
Boston Conservatory		1	1	0.0%
Boston State College		2	2	0.0%
Boston University		42	42	1.0%
Brandeis University		1	1	0.0%
Bridgewater State University		70	70	1.7%
Bristol Community College	76		76	1.8%
Bunker Hill Community College	796		796	19.1%
Cape Cod Community College	115		115	2.8%
Clark University		12	12	0.3%
College of the Holy Cross		2	2	0.0%
Cordon Bleu Coll. of Cul. Arts		1	1	0.0%
Curry College		40	40	1.0%
Dean College	33		33	0.8%
Eastern Nazarene College		10	10	0.2%
Elms College		1	1	0.0%
Emerson College		10	10	0.2%
Emmanuel College		17	17	0.4%
Endicott College	3		3	0.1%
Fisher College	43		43	1.0%
Fitchburg State University		26	26	0.6%
Framingham State University		42	42	1.0%
Gordon College MA		5	5	0.1%
Greenfield Community College	5		5	0.1%
Hampshire College		2	2	0.0%
Harvard Extension School		16	16	0.4%
Harvard-Radcliffe Colleges		1	1	0.0%
Holyoke Community College	31		31	0.7%
ITT Tech. Inst. Boston (North)	1		1	0.0%
Laboure College	27		27	0.6%
Lasell College		27	27	0.6%
Lesley University		12	12	0.3%
Marian Court College	1		1	0.0%
Mass College Liberal Arts		9	9	0.2%
Mass. Inst. of Technology		2	2	0.0%
Massachusetts Bay Comm. Coll.	256		256	6.1%
Massachusetts Coll. of Pharm.		40	40	1.0%
Massachusetts College of Art		6	6	0.1%
Massachusetts Maritime Academy		1	1	0.0%
Massasoit Community College	299		299	7.2%
Merrimack College		18	18	0.4%
MGH Inst of Health Professions		2	2	0.0%
Middlesex Community College MA	166		166	4.0%
Montserrat College of Art		1	1	0.0%
Mount Holyoke College		1	1	0.0%
Mount Ida College		10	10	0.2%
Mount Wachusett Comm. College	19		19	0.5%
New England College of Finance	3		3	0.1%
New England College of Optometry		1	1	0.0%
New England Conserv. of Music		1	1	0.0%

New England Deaconess Hospital		1	1	0.0%
New England Inst of Art & Comm		1	1	0.0%
New England Institute of Art	8	8	8	0.2%
Newbury College		25	25	0.6%
Nichols College		9	9	0.2%
North Shore Community College	152	152	152	3.6%
Northeastern University		82	82	2.0%
Northern Essex Comm. College	57	57	57	1.4%
Pine Manor College		25	25	0.6%
Quincy College	291	291	291	7.0%
Quinsigamond Community College	51	51	51	1.2%
Regis College		34	34	0.8%
Roxbury Community College	237	237	237	5.7%
Salem State University		65	65	1.6%
Simmons College		10	10	0.2%
Smith College		2	2	0.0%
Springfield College MA		3	3	0.1%
Springfield Tech. Comm. Coll.	18	18	18	0.4%
Stonehill College		14	14	0.3%
Suffolk University		55	55	1.3%
Tufts University		3	3	0.1%
UMass Amherst		119	119	2.9%
UMass Boston		190	190	4.6%
UMass Dartmouth		115	115	2.8%
UMass Lowell		78	78	1.9%
Wentworth Inst. of Technology		23	23	0.6%
Western New England University		7	7	0.2%
Westfield State University		22	22	0.5%
Wheaton College MA		2	2	0.0%
Whelock College		11	11	0.3%
Williams College		1	1	0.0%
Worcester Polytechnic Inst.		3	3	0.1%
Worcester State University		21	21	0.5%
Grand Total	2,745	1,421	4,166	100.0%

Source: UMass Boston Office of Institutional Research and Policy Studies, 2014, UMDI analysis.

Table 45: UMass Boston Transfer Enrollee Choice of College by Institutional Type (Applications from Massachusetts Institutions)

College	2-Year	4-Year	Other	Grand Total	Percentage
College of Public & Community Service	42	14		56	3%
College of Education & Human Development	41	17	1	59	3%
College of Liberal Arts	479	288	3	770	39%
College of Management	209	79	3	291	15%
College of Nursing & Health Sciences	293	88	3	384	20%
College of Science & Mathematics	243	149	6	398	20%
Grand Total	1,307	635	16	1,958	100%

Source: UMass Boston Office of Institutional Research and Policy Studies, 2014, UMDI analysis.

Table 46: Top 10 UMass Boston Transfer Enrollee Choice of Major by Institutional Type (Enrollees from Massachusetts Institutions)

Major	2-Year	4-Year	Other	Grand Total	Percentage
Management	190	72	1	263	13%
Nursing & Health Sciences	202	45	3	250	13%
Biology	90	51	1	142	7%
Criminal Justice	91	38		129	7%
Psychology	78	37		115	6%
Exercise and Health Sciences	75	38		113	6%
Communication	41	24		65	3%
Science & Mathematics	30	35		65	3%
Early Education & Care in Inclusive Settings	41	17	1	59	3%
Human Services	40	13		53	3%

Source: UMass Boston Office of Institutional Research and Policy Studies, 2014, UMDI analysis.

Table 47: UMass Boston Transfer Enrollees from Boston Area Institutions, Most Popular Chosen Major

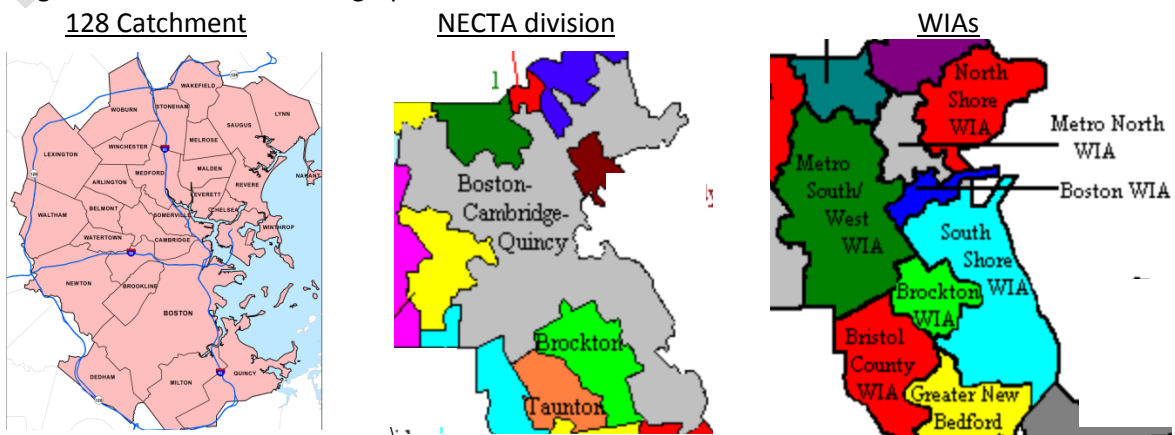
Majors of Transfer Enrollees from Boston Area Institutions (Within Route 128)					
Major	2-year	4-year	Unknown	Total	Percent
Management	119	41	1	161	15%
Nursing (BS, RN-BSN, Accelerated BS)	97	12	6	115	11%
Undecided (all)	66	43	0	109	10%
Psychology (BA, BS)	56	27	0	83	8%
Biology	54	30	1	85	8%
Criminal Justice	50	17	0	67	6%
Exercise and Health Sciences	40	15	0	55	5%
Computer Science (BA, BS)	25	13	2	40	4%
Early Education and Care in Inclusive Setting	24	12	1	37	3%
Communications	24	12	0	36	3%
Information Technology	23	8	5	36	3%
Human Services	29	6	0	35	3%
Economics	19	10	1	30	3%
English	21	9	0	30	3%
Social Psychology	18	7	0	25	2%
Political Science	11	10	0	21	2%
Biological Chemistry	11	7	0	18	2%
History	9	6	0	15	1%
Sociology	11	3	0	14	1%
Math (BA, BS)	10	2	0	12	1%
Chemistry	5	6	0	11	1%
Art	2	5	1	8	1%
Physics (BA, BS)	3	5	0	8	1%
Music	3	4	0	7	1%
Environmental Science (BA, BS)	1	4	0	5	0%
Electrical Engineering	5	0	0	5	0.5%
Theater Arts	3	0	1	4	0.4%
Spanish	2	2	0	4	0.4%
Anthropology	2	1	0	3	0.3%
Engineering	1	1	0	2	0%
Asian Studies	1	1	0	2	0.2%
American Studies	0	2	0	2	0.2%
Philosophy	0	2	0	2	0.2%
Classical Studies	1	1	0	2	0.2%
Ethics Social and Political Philosophy	1	0	0	1	0.1%
Archeology and History	1	0	0	1	0.1%

Source: UMass Boston Office of Institutional Research and Policy Studies, 2014, UMDI analysis.

Appendix G: Geographies Used for Data on the Greater Boston Region

A map of the catchment region was created, bounded by Route 128, and data collected for all residents within this boundary. In addition, relevant industry data is available at the level of the Boston-Quincy-Cambridge NECTA division. Occupational projection data was also analyzed, available at the WIA level (Workforce Investment Areas). The WIAs used are a combination of the Boston, South Shore, North Shore, Metro South/West, and Metro North WIAs. A thumbnail of the catchment area contrasted with WIA and NECTA division maps are shown below. The WIA and NECTA geographies remain relevant despite covering more area as they include the majority of Boston’s workers. The use of each geography is noted in each source and referenced in the text.

Figure 9: Thumbnails of Geographies Used



Source: MA Office of Labor and Workforce Development, http://lmi2.detma.org/lmi/Images/E_AAlabor1.bmp, http://lmi2.detma.org/lmi/Images/MA_WIA.gif