



Labor Market Developments in Boston:

Massachusetts Regional
Workforce Strategies Initiative

Paul E. Harrington
Center for Labor Market Studies
Northeastern University
Boston, Massachusetts

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Purpose of the Presentation

1. Provide a review of labor market developments in Boston to help thinking through the area's education, training and development strategies
2. Prepared an analysis for Boston around six major topics:

Labor demand context

- Analysis of payroll employment structure and trends; understanding overall demand trends; industry structure of employment
- Analysis of occupational and educational implications of payroll employment growth
- Analysis of unmet labor market needs – identification of potential area of skill shortages




Labor Supply Context

- Analysis of trends in size and composition of population and labor force in Boston
- Post-secondary institutional source of labor supply to occupations in Boston
- Career and technical education institutional labor supply in Boston



Trends in Wage and Salary Employment in the U.S., December 2007 – August 2008

Sector	December 2007	August 2008	Absolute Change	Relative Change
Total	138,078	137,423	-655	-0.5%
Private	115,745	114,909	-836	-0.7%
Goods	21,976	21,367	-609	-2.8%
Services	116,102	116,056	-46	0.0%
Private Services	93,769	93,542	-227	-0.2%




Trends in Wage and Salary Employment in the U.S., December 2007 – August 2008

Sector	2007 December	2008 August	Absolute Change	Relative Change
Construction	7,465	7,153	-312	-4.2%
Manufacturing	13,772	13,426	-346	-2.5%
Durable	8,739	8,482	-257	-2.9%
Wholesale Trade	6,072.9	6,007.1	-65.8	-1.1%
Retail Trade	15,487.8	15,274.7	-213.1	-1.4%
Transportation	4,539.9	4,505.1	-34.8	-0.8%
Utilities	555.5	559.2	3.7	0.7%
Information	3,018	2,978	-40	-1.3%
Finance and Insurance	6,111.2	6,075.1	-36.1	-0.6%
Real Estate	2,140.6	2,121.3	-19.3	-0.9%
Prof, Tech, Services	7,820.5	7,859.5	39	0.5%
Management of Companies	1,847.8	1,832.1	-15.7	-0.8%




Continued

Sector	2007 December	2008 August	Absolute Change	Relative Change
Administrative/Waste Management	8,462.8	8,142.7	-320.1	-3.8%
Employment Services	3,566.9	3,285.8	-281.1	-7.9%
Education	2,984.5	3,126.6	142.1	4.8%
Health	13,109.6	13,363.4	253.8	1.9%
Social Assistance	2,473.6	2,507.4	33.8	1.4%
Leisure & Hospitality	13,635	13,639	4	0.0%
Other Services	5,507	5,526	19	0.3%
Federal	2,735	2,748	13	0.5%
State	5,153	5,210	57	1.1%
State Education	2,332	2,378.8	46.8	2.0%
Local	14,445	14,556	111	0.8%
Local Education	8,016.5	8,058.6	42.1	0.5%




Trends in Wage and Salary Employment in the U.S., August 2008 to November 2008

Sector	August 2008	November 2008	Absolute Change	Relative Change
Total	137,423	136,167	-1,256	-0.9%
Private	114,909	113,623	-1,286	-1.1%
Goods	21,367	20,920	-447	-2.1%
Services	116,056	115,427	-629	-0.5%
Private Services	93,542	92,703	-839	-0.9%



Trends in Wage and Salary Employment in the U.S., August 2008 to November 2008

	August 2008	November 2008	Absolute Change	Relative Change
Construction	7,153	6,952	-201	-2.8%
Manufacturing	13,426	13,168	-258	-1.9%
Durable	8,482	8,287	-195	-2.3%
Wholesale Trade	6,007.1	5,949.9	-57.2	-1.0%
Retail Trade	15,274.7	15,045.6	-229.1	-1.5%
Transportation	4,505.1	4,417.3	-87.8	-1.9%
Utilities	559.2	563.8	4.6	0.8%
Information	2978	2,953	-25	-0.8%
Finance and Insurance	6,075.1	6,023.8	-51.3	-0.8%
Real Estate	2,121.3	2,086.4	-34.9	-1.6%
Prof, Tech, Services	7,859.5	7,855.5	-4	-0.1%
Management of Companies	1,832.1	1,814.8	-17.3	-0.9%



Trends in Wage and Salary
Employment in the U.S., August 2008 to
November 2008

	August 2008	November 2008	Absolute Change	Relative Change
Administrative/Waste Management	8,142.7	7,919.9	-222.8	-2.7%
Employment Services	3,285.8	3,072.3	-213.5	-6.5%
Education	3,126.6	3,082.5	-44.1	-1.4%
Health	13,363.4	13,450.5	87.1	0.7%
Social Assistance	2,507.4	2,540.2	32.8	1.3%
Leisure & Hospitality	13,639	13,486	-153	-1.1%
Other Services	5,526	5,514	-12	-0.2%
Federal	2,748	2,769	21	0.8%
State	5,210	5,215	5	0.1%
State Education	2,378.8	2,382.8	4	0.2%
Local	14,556	14,568	12	0.1%
Local Education	8,058.6	8,058.1	-0.5	0.0%



Trends in Wage and Salary Employment in the
U.S., December 2007 to November 2008

Sector	December 2007	November 2008	Absolute Change	Relative Change
Total	138,078	136,167	-1,911	-1.4%
Private	115,745	113,623	-2122	-1.8%
Goods	21,976	20,920	-1,056	-4.8%
Services	116,102	115,427	-675	-0.6%
Private Services	93,769	92,703	-1,066	-1.1%



Trends in Wage and Salary Employment in the U.S., December 2007 to November 2008

Sector	December 2007	November 2008	Absolute Change	Relative Change
Construction	7,465	6,952	-513	-6.9%
Manufacturing	13,772	13,168	-604	-4.4%
Durable	8,739	8,287	-452	-5.2%
Wholesale Trade	60,72.9	5949.9	-123	-2.0%
Retail Trade	15,487.8	15,045.6	-442.2	-2.9%
Transportation	4,539.9	4,417.3	-122.6	-2.7%
Utilities	5,55.5	563.8	8.3	1.5%
Information	3,018	2953	-65	-2.2%
Finance and Insurance	6,111.2	6,023.8	-87.4	-1.4%
Real Estate	2,140.6	2,086.4	-54.2	-2.5%
Prof, Tech, Services	7,820.5	7,855.5	35	0.4%
Management of Companies	1,847.8	1,814.8	-33	-1.8%
Administrative/Waste Management	8,462.8	7,919.9	-542.9	-6.4%



Continued

Sector	December 2007	November 2008	Absolute Change	Relative Change
Employment Services	3,566.9	3,072.3	-494.6	-13.9%
Education	2,984.5	3,082.5	98	3.3%
Health	13,109.6	13,450.5	340.9	2.6%
Social Assistance	2,473.6	2,540.2	66.6	2.7%
Leisure & Hospitality	13,635	13,486	-149	-1.1%
Other Services	5,507	5,514	7	0.1%
Federal	2,735	2,769	34	1.2%
State	5,153	5,215	62	1.2%
State Education	2,332	2,382.8	50.8	2.2%
Local	1,4445	14,568	123	0.9%
Local Education	8,016.5	8,058.1	41.6	0.5%



A Comparison of National Payroll Employment Losses During Seven Economic Downturns

Downturn	Duration	Peak Employment	Trough Employment	Absolute Loss	Relative Loss
July 1974 to June 1975	11 months	78,634	76,519	(2,115)	-2.7%
March 1980 to July 1980	4 Months	90,991	89,832	(1,159)	-1.3%
August 1981 to December 1982	16 Months	91,594	88,756	(2,838)	-3.1%
July 1990 to November 1991	16 Months	109,817	108,240	(1,577)	-1.4%
February 2001 to August 2003	30 Months	132,530	129,822	(2,708)	-2.0%
December 2007 to Current (November 2008)	11 Months	138,078	136,167	(1,911)	-1.4%



States with the Largest Relative Payroll Employment Losses

Rank		Q4 2007	Sep-Oct Avg. 2008	Absolute Change	Relative Change
1	Rhode Island	490.4	477.2	-13.2	-2.7%
2	Arizona	2,662.1	2,602.5	-59.7	-2.2%
3	Florida	8,033.8	7,889.5	-144.4	-1.8%
4	Idaho	657.9	647.7	-10.2	-1.6%
5	Michigan	4,226.8	4,163.4	-63.4	-1.5%
6	Georgia	4,156.2	4,095.0	-61.2	-1.5%
7	Oregon	1,738.3	1,718.0	-20.4	-1.2%
8	Mississippi	1,154.4	1,142.1	-12.3	-1.1%
9	South Carolina	1,960.0	1,939.4	-20.6	-1.0%
10	Indiana	2,995.5	2,964.9	-30.7	-1.0%
34	Massachusetts	3,285.3	3,287.7	2.4	0.1%



Recent Labor Force Developments in the U.S.

	Average Monthly Estimate (October, November, December 2007)	Average Monthly Estimate (September, October, November 2008)	Absolute Change	Percent Change
Labor Force	153,667,000	154,795,000	1,128,000	0.7%
Employed	146,291,000	144,862,000	-1,429,000	-1.0%
Unemployed	7,376,000	9,963,000	2,587,000	35.1%
Unemployment Rate	4.8%	6.4%		



Recent Labor Force Developments in Massachusetts

	Average Monthly Estimate (October, November, December 2007)	Average Monthly Estimate (August, September, October 2008)	Absolute Change	Percent Change
Labor Force	3,404,000	3,417,000	13,000	0.4%
Employed	3,257,000	3,234,000	-23,000	-0.7%
Unemployed	147,000	183,000	36,000	24.5%
Unemployment Rate	4.3%	5.4%		



Growth in Labor Market Problems

	December 2007	November 2008	Absolute Change	Percent Change
Unemployed	7,376,000	9,963,000	2,587,000	35.1%
Involuntary Part-Time	4,665,000	7,321,000	2,656,000	56.9%
Labor Force Overhang	4,337,000	5,077,000	740,000	17.1%




Involuntary Part-time Employment in the U.S. December 2007 to November 2008

	December 2007	November 2008	Absolute Change	Relative Change
Part-Time Economic Reasons	4,665,000	7,321,000	2,656,000	56.9%
Slack Work	3,174,000	5,426,000	2,252,000	71.0%
Only Part-Time Available	1,236,000	1,572,000	336,000	27.2%
Voluntary Part-Time	19,526,000	18,880,000	-646,000	-3.3%



Trends in the Number of Unemployed

Rank	2007 IV	2008 Aug/Sept/Oct Mean	Absolute Change	Relative Change	
1	Idaho	20,184	37,484	17,300	85.7%
2	Rhode Island	29,957	50,657	20,701	69.1%
3	Hawaii	18,980	29,491	10,511	55.4%
4	Florida	406,745	629,182	222,438	54.7%
5	North Carolina	212,501	317,116	104,615	49.2%
6	Arizona	123,815	183,214	59,399	48.0%
7	Nevada	69,502	102,810	33,308	47.9%
8	Georgia	219,471	321,840	102,369	46.6%
9	Montana	16,018	23,334	7,315	45.7%
10	Delaware	15,592	22,444	6,852	43.9%
11	Indiana	143,446	205,854	62,408	43.5%
12	Alabama	79,784	114,493	34,709	43.5%
13	New Jersey	187,177	268,283	81,105	43.3%
14	Virginia	131,054	183,580	52,526	40.1%
15	Louisiana	75,460	105,680	30,220	40.0%
34	Massachusetts	146,773	182,753	35,980	24.5%



Trends in Job Vacancies and Labor Turnover in the U.S. September, 2007 to September, 2008 (Not Seasonally Adjusted)

	September, 2007	September, 2008	Absolute Change	Relative Change
Job Vacancies	4,240	3,349	-891	-21%
Hires	5,090	4,759	-331	-7%
Separations	4,946	4,465	-481	-10%
Voluntary Quits	2,660	2,266	-394	-15%
Layoffs and Fires	1,981	1,903	-78	-4%
Other Separations	305	296	-9	-3%



Trends in Unemployment Insurance Claims in Massachusetts, By Occupation

	Oct, 2007	Oct, 2008	Absolute Change	Relative Change
Management	6,689	8,965	2,276	34.0%
Business/Fiscal Ops	3,009	3,530	521	17.3%
Computer and Math	1,655	1,910	255	15.4%
Engineering/Arch	1,049	1,555	506	48.2%
Life/Physical/Soc Sci	458	580	122	26.6%
Community/Soc Serv	689	811	122	17.7%
Legal	449	610	161	35.9%
Education/Training	1,667	1,931	264	15.8%
Arts/Entertainment/Media	847	1,601	754	89.0%
Health Prac/Tech	929	1,491	562	60.5%
Health Support	1,825	1,744	-81	-4.4%
Protective Serv	573	718	145	25.3%



Trends in Unemployment Insurance Claims in Massachusetts, By Occupation (Continued)

	Oct, 2007	Oct, 2008	Absolute Change	Relative Change
Food Prep/Serv	2,564	3,381	817	31.9%
Cleaning/Maint.	1,228	1,781	553	45.0%
Personal Care	1,414	1,578	164	11.6%
Sales and Related	5,362	5,954	592	11.0%
Office/Clerical	9,985	13,345	3,360	33.7%
FFF	646	618	-28	-4.3%
Construction	8,137	11,222	3,085	37.9%
Install/Repair/Mech	2,785	3,155	370	13.3%
Production	6,863	7,891	1,028	15.0%
Trans/ Material Moving	3,027	4,798	1,771	58.5%

Trends in Unemployment Insurance Claims in Massachusetts, By Industry

	Oct, 2007	Oct, 2008	Absolute Change	Relative Change
AFF	495	658	163	32.9%
Mining	81	60	-21	-25.9%
Utilities	63	85	22	34.9%
Construction	7,736	10,337	2,601	33.6%
Manufacturing	7,093	9,271	2,178	30.7%
Wholesale Trade	3,303	4,035	732	22.2%
Retail Trade	5,391	6,844	1,453	27.0%
Trans/ Warehousing	1,285	1,961	676	52.6%
Information	1,411	2,076	665	47.1%
Finance/ Insurance	3,058	3,242	184	6.0%
Real Estate	969	1,155	186	19.2%
Prof/Scientific	4,314	5,227	913	21.2%
Management of Co's	157	239	82	52.2%
Admin and Waste	5,800	8,025	2,225	38.4%
Education	1,031	1,219	188	18.2%
Health and Soc Serv	4,673	5,567	894	19.1%
Arts, Ent, Rec	545	926	381	69.9%
Accommodation/Food	2,929	3,638	709	24.2%
Other Services	2,303	2,832	529	23.0%
Public Admin	1,554	1,829	275	17.7%

Trends in Payroll Employment in Massachusetts. Peak to Current Month (Three Month Moving Average)

	December, 2007	October, 2008	Absolute Change	Relative Change
Total Nonfarm	3,285.3	3,289.7	4.4	0.1%
Construction	137.4	133.4	-4	-2.9%
Manufacturing	293.8	290.2	-3.6	-1.2%
Trade, Transportation, and Utilities	570.6	566.8	-3.8	-0.7%
Wholesale Trade	138.7	139.7	1	0.7%
Retail Trade	347.3	341.8	-5.5	-1.6%
Information	89.7	89.1	-0.6	-0.7%
Financial Activities	224.4	221.9	-2.5	-1.1%
Professional and Business Services	483.7	488.9	5.2	1.1%
Education and Health Services	627.1	639.6	12.5	2.0%
Leisure and Hospitality	302.1	301.8	-0.3	-0.1%
Other Services	119.2	119.4	0.2	0.2%
Government	435.7	437	1.3	0.3%

Trends in Total Non Agricultural Wage and Salary
Employment Levels by Major Industry Sector in
Massachusetts, 4th Quarter, 2003 to First Quarter 2007
(Seasonally Adjusted, in 000s)

Industry	4 th Quarter 2003	1 st Quarter 2007	Absolute Change	Share of Change
All Industries	3,185.0	3,270.4	85.4	2.7%
Construction	136.3	138.4	2.0	1.5%
Manufacturing	316.7	297.6	-19.0	-6.0%
Durable	207.1	196.9	-10.2	-4.9%
Non Durable	109.6	100.7	-8.9	-8.1%
Trade, Transportation, & Utilities	573.4	570.9	-2.5	-0.4%
Wholesale Trade	134.8	137.9	3.1	2.3%
Retail Trade	354.4	348.8	-5.6	-1.6%
Transportation and Utilities	84.2	84.2	0.0	0.0%
Information	89.1	87.4	-1.7	-1.9%
Financial Activities	221.5	225.8	4.3	2.0%
Professional and Business Services	442.0	477.9	35.9	8.1%
Education and Health Services	577.6	618.0	40.4	7.0%
Leisure and Hospitality	289.3	302.7	13.4	4.6%
Other Services	116.8	119.2	2.4	2.0%
Government	420.3	431.2	10.9	2.6%

Trends in Non Agricultural Wage and Salary
Employment in the City of Boston


Industry	2007	2008	Absolute Change	Relative Change
Total	55,2392	56,1293	8901	1.6%
Construction	11,945	11,919	-26	-0.2%
Manufacturing	9,577	9,591	14	0.1%
Utilities	2,585	2,590	5	0.2%
Wholesale Trade	8,757	8,894	137	1.6%
Retail Trade	26,699	27,436	737	2.8%
Transportation and Warehousing	26,028	26,389	361	1.4%
Information	15,555	15,751	196	1.3%
Publishing Industries	7,123	7,160	37	0.5%
Motion Picture & Sound Recording Industry	793	980	187	23.6%
Broadcasting (except Internet)	3,010	2,760	-250	-8.3%
Telecommunications	2,007	2,133	126	6.3%
Finance and Insurance	74,494	74,679	185	0.2%
Credit Intermediation & Related Activity	18,574	19,415	841	4.5%
Financial Investment & Related Activity	36,092	35,670	-422	-1.2%
Insurance Carriers & Related Activities	17,549	17,510	-39	-0.2%

Trends in Non Agricultural Wage and Salary Employment in the City of Boston (Continued)


Industry	2007	2008	Absolute Change	Relative Change
Real Estate and Rental and Leasing	11,041	11,114	73	0.7%
Professional and Technical Services	56,470	58,665	2195	3.9%
Management of Companies and Enterprises	7,241	6,996	-245	-3.4%
Administrative and Waste Services	38,410	38,069	-341	-0.9%
Employment Services	14,608	13,771	-837	-5.7%
Educational Services	45,085	46,339	1254	2.8%
Colleges and Universities	29,059	30,101	1042	3.6%
Health Care and Social Assistance	110,361	111,090	729	0.7%
Ambulatory Health Care Services	15,835	16,045	210	1.3%
Hospitals	77,073	77,458	385	0.5%
Nursing and Residential Care Facilities	6,231	6,017	-214	-3.4%
Social Assistance	11,222	11,570	348	3.1%
Arts, Entertainment, and Recreation	7,789	7,938	149	1.9%
Accommodation and Food Services	42,788	44,974	2186	5.1%
Other Services, Ex. Public Admin	20,573	21,172	599	2.9%
Public Administration	36,974	37,648	674	1.8%

Trends in Non Agricultural Wage and Salary Employment in the City of Boston, by Major Industry Sector Third Quarter 2004 to Third Quarter 2007

Industry	2004 Third Quarter	2007 Third Quarter	Absolute Change	Relative Change
Total	526,853	555,319	28,466	5.4%
23 - Construction	13,260	13,028	-232	-1.7%
31-33 - Manufacturing	13,115	9,549	-3,566	-27.2%
Durable Goods Manufacturing	6,710	4,272	-2,438	-36.3%
Non-Durable Goods Manufacturing	6,405	5,277	-1,128	-17.6%
22 - Utilities	2,626	2,595	-31	-1.2%
42 - Wholesale Trade	8,334	8,786	452	5.4%
44-45 - Retail Trade	27,410	27,092	-318	-1.2%
48-49 - Transportation and Warehousing	28,024	27,072	-952	-3.4%
51 - Information	15,571	15,751	180	1.2%
52 - Finance and Insurance	69,772	76,042	6,270	9.0%
53 - Real Estate and Rental and Leasing	11,381	11,394	13	0.1%
54 - Professional and Technical Services	54,353	58,301	3,948	7.3%
56 - Administrative and Waste Services	36,890	40,575	3,685	10.0%
61 - Educational Services	38,364	42,112	3,748	9.8%
62 - Health Care and Social Assistance	102,291	109,869	7,578	7.4%
71 - Arts, Entertainment, and Recreation	8,053	8,218	165	2.0%
72 - Accommodation and Food Services	42,269	46,095	3,826	9.1%
81 - Other Services, Ex. Public Admin	18,612	21,282	2,670	14.3%
92 - Public Administration	36,470	37,539	1,069	2.9%



Total Population, Working-Age Population, and the Labor Force of the Boston Workforce Area



Percentage Distribution of the Civilian Labor Force by Gender, Nativity Status, and Race-Ethnicity, 2005-06

	Boston	Massachusetts	New England	U.S.
Total	297,652	3,369,817	7,521,725	148,191,267
<u>Gender</u>				
Male	51.1%	52.0%	52.2%	53.5%
Female	48.9%	48.0%	47.8%	46.5%
<u>Nativity Status</u>				
U.S. born	67.2%	81.3%	85.0%	84.1%
Foreign born	32.8%	18.7%	15.0%	15.9%
Foreign born entered since 2000	8.4%	4.2%	3.3%	3.3%
<u>Race-Ethnicity</u>				
White, non-Hispanic	55.2%	81.2%	83.4%	68.8%
Black, non-Hispanic	19.4%	5.1%	4.9%	11.1%
Hispanic	14.1%	7.0%	6.6%	13.6%
Other, non-Hispanic	11.4%	6.6%	5.1%	6.4%



Percentage Distribution of the Civilian Labor Force by Age, 2005-06

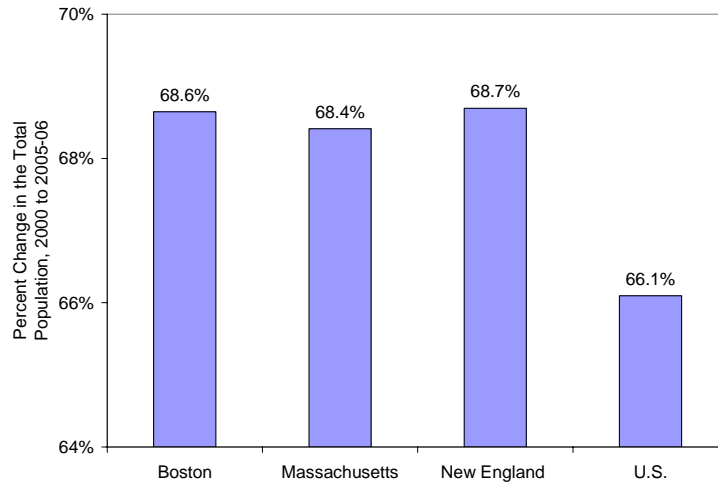
Age	Boston	Mass.	New England	U.S.
16-24	15.6%	13.3%	13.5%	15.0%
25-34	30.8%	20.6%	19.2%	21.5%
35-44	24.6%	24.6%	24.5%	24.1%
45-54	17.3%	23.7%	24.5%	23.1%
55-64	9.4%	14.0%	14.4%	12.9%
65+	2.3%	3.8%	3.9%	3.5%



Percentage Distribution of the Civilian Labor Force by Educational Attainment, 2005-06

Educational Attainment	Boston	Mass.	New England	U.S.
High school student	2.1%	2.5%	2.7%	2.4%
High school dropout	10.1%	7.2%	7.3%	10.6%
High school graduate	21.0%	25.9%	27.9%	28.6%
Some college, no degree	15.2%	17.3%	18.5%	22.0%
Associate's degree	5.3%	8.1%	8.4%	8.1%
Bachelor's degree	26.2%	22.8%	21.3%	18.2%
Master's degree or more	20.0%	16.1%	14.0%	10.0%
With any post-secondary education	66.7%	64.4%	62.1%	58.4%
Bachelor's or higher	46.2%	39.0%	35.3%	28.3%

Labor Force Participation Rates of the Working-Age Population, 2005-06



The Place of Residence of Individuals Employed in Boston and the Place of Work of Employed Boston Residents, 2005-06


	Number	Percent of Total
Total number of persons working in Boston...	510,997	100.0%
...that lived in:		
Boston	179,148	35.1%
Metro North area	103,252	20.2%
Metro South/West area	71,450	14.0%
South Coastal area	57,892	11.3%
Other parts of Massachusetts	78,920	15.4%
Outside Massachusetts	20,335	4.0%
Total Boston residents who were employed...	266,140	100.0%
...that were working in:		
Boston	179,148	67.3%
Metro North area	35,069	13.2%
Metro South/West area	26,687	10.0%
South Coastal area	12,391	4.7%
Other parts of Massachusetts	9,744	3.7%
Outside Massachusetts	3,101	1.2%

The Distribution of Business Establishments and
Employment in the City of Boston and Massachusetts,
by Employment Size Class, Third Quarter 2007


Size Group	Boston		Massachusetts	
	Number of Business Establishments	Percent Distribution of Business Establishments	Number of Business Establishments	Percent Distribution of Business Establishments
0 to 19	16,190	81.9%	181,048	86.9%
20 to 99	2,775	14.0%	22,194	10.7%
100 to 499	659	3.3%	4,446	2.1%
500 +	139	0.7%	584	0.3%
Total	19,763	100.0%	208,272	100.0%

Size Group	Boston		Massachusetts	
	Number of Jobs	Percent Distribution of Jobs	Number of Jobs	Percent Distribution of Jobs
0 to 19	71,609	13.0%	724,049	22.8%
20 to 99	116,088	21.0%	888,561	28.0%
100 to 499	130,847	23.7%	840,129	26.5%
500 +	233,440	42.3%	716,437	22.6%
Total	551,984	100.0%	3,169,176	100.0%

Occupational Staffing Patterns of
Industries and Educational Attainment of
Workers by Industries and Occupations in
the Boston Workforce Area



College labor market & high level sales occupations	Service & low level sales occupations
Management occupations	Healthcare support occupations
Business and financial operations occupations	Protective service occupations
Computer & mathematical occupations	Food preparation & serving occupations
Architecture & engineering occupations	Building & grounds cleaning occupations
Life, physical, & social science occupations	Personal care & service occupations
Community & social services occupations	Low-level sales occupations
Legal occupations	High skill blue collar
Education, training, & library occupations	Construction & extraction occupations
Arts, design, entertainment, sports, & media occupations	Installation, maintenance, & repair Occupations
High-level sales occupations	
Healthcare practitioner & technical occupations	Production, transportation & material moving occupations
Office & administrative support occupations	Production occupations
	Transportation & material moving Occupations



Occupational Staffing Patterns of Selected Industries in Boston, 2005-06

Major Occupations	Constr.	Manufacturing	Retail Trade
Total Workers	26,831	18,017	25,093
College labor market & high level sales occupations	16.5%	42.6%	29.7%
Healthcare practitioner & technical	0.0%	0.0%	2.0%
Service and low level sales occupations	0.0%	2.4%	47.2%
Office & administrative support	3.6%	10.7%	9.9%
High skill blue collar occupations	74.0%	3.9%	2.1%
Production, transportation & material moving occupations	6.0%	40.4%	9.0%



Occupational Staffing Patterns of Selected Industries in Boston, 2005-06 (Continued)

Major Occupations	Information	Finance, Ins. & Real Estate	Prof., Scientific & Tech. Services
Total Workers	19,889	74,515	59,815
College labor market & high level sales occupations	69.7%	79.6%	82.4%
Healthcare practitioner & technical	0.0%	0.1%	0.7%
Service and low level sales occupations	4.4%	4.5%	1.0%
Office & administrative support	15.0%	14.4%	15.1%
High skill blue collar occupations	7.6%	0.7%	0.3%
Production, transportation & material moving occupations	3.3%	0.8%	0.6%



Occupational Staffing Patterns of Selected Industries in Boston, 2005-06 (Continued)

Major Occupations	Educ. Services	Healthcare & Social Services	Other Services
Total Workers	46,629	95,095	111,026
College labor market & high level sales occupations	75.0%	26.9%	32.1%
Healthcare practitioner & technical	2.7%	42.0%	1.0%
Service and low level sales occupations	7.6%	17.6%	48.3%
Office & administrative support	12.2%	12.0%	12.4%
High skill blue collar occupations	1.0%	0.8%	2.3%
Production, transportation & material moving occupations	1.4%	0.7%	3.9%



Occupational Staffing Patterns of Selected Industries in Massachusetts, 2005-06

Major Occupations	Constr.	Manufacturing	Retail Trade
Total Workers	220,625	347,648	342,566
College labor market & high level sales occupations	15.6%	42.5%	28.0%
Healthcare practitioner & technical	0.0%	0.2%	2.3%
Service and low level sales occupations	0.6%	1.4%	38.8%
Office & administrative support	4.9%	10.4%	15.8%
High skill blue collar occupations	74.7%	4.1%	4.2%
Production, transportation & material moving occupations	4.2%	41.4%	10.9%



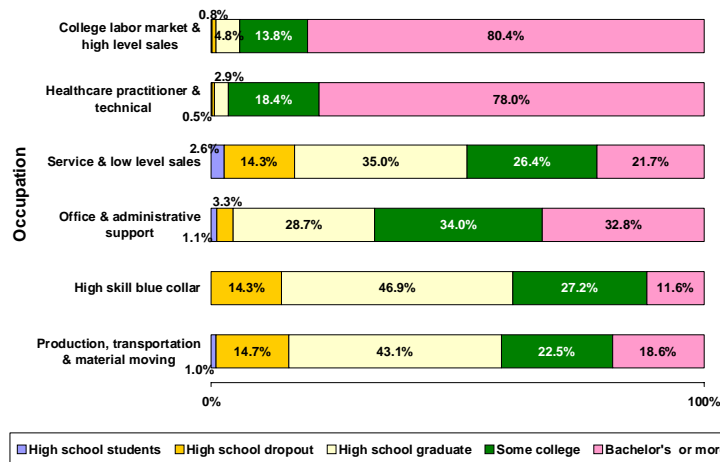
Occupational Staffing Patterns of Selected Industries in Massachusetts, 2005-06 (Continued)

Major Occupations	Information	Finance, Ins. & Real Estate	Prof., Scientific & Tech. Services
Total Workers	91,315	260,107	263,118
College labor market & high level sales occupations	64.7%	66.1%	81.8%
Healthcare practitioner & technical	0.0%	0.5%	1.9%
Service and low level sales occupations	5.1%	7.1%	1.4%
Office & administrative support	16.9%	23.9%	12.6%
High skill blue collar occupations	8.9%	1.5%	0.8%
Production, transportation & material moving occupations	4.3%	0.9%	1.4%

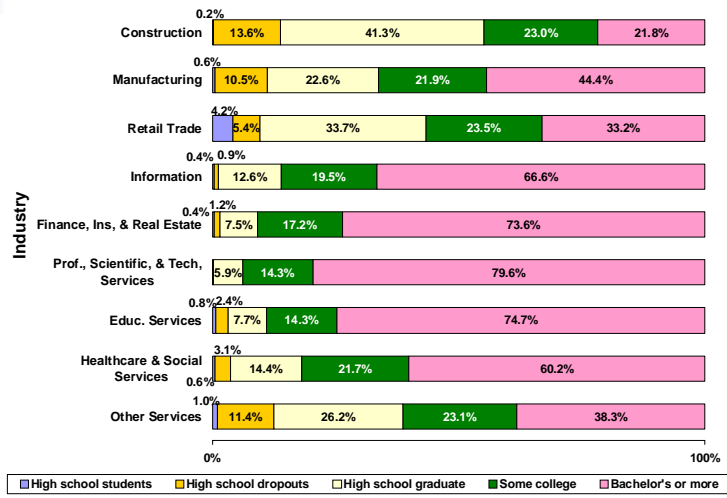
Occupational Staffing Patterns of Selected Industries in Massachusetts, 2005-06 (Continued)

Major Occupations	Educ. Services	Healthcare & Social Services	Other Services
Total Workers	304,449	460,001	620,202
College labor market & high level sales occupations	75.8%	23.7%	25.1%
Healthcare practitioner & technical	2.8%	34.9%	1.0%
Service and low level sales occupations	10.9%	26.2%	52.4%
Office & administrative support	8.6%	13.3%	11.3%
High skill blue collar occupations	1.3%	0.6%	4.7%
Production, transportation & material moving occupations	0.6%	1.3%	5.5%

Percentage Distribution by Educational Attainment of Employed Individuals Who Worked in Boston by Major Occupational Group, 2005-06



Percentage Distribution by Educational Attainment of Employed Individuals Who Worked in Boston by Major Industry, 2005-06



Associate's Degrees, Bachelor's Degrees and Undergraduate Non Degree Certificates in the Boston Workforce Area

Trends in the Number of Associate's Degrees
Conferred in the U.S., New England,
Massachusetts and Boston, 1996 to 2007

Area	1996	2007	Absolute Change	Relative Change
U.S.	557,858	748,214	190,356	34%
New England	28,440	26,666	-1,774	-6%
Massachusetts	12,682	10,691	-1,991	-16%
Boston	2,388	1,724	-664	-28%

Trends in the Number of Associate's Degrees
Awarded in the U.S., New England, Massachusetts and
Boston, by Higher Education Sector, 1996 to 2007

Sector	1996	2007	Absolute Change	Relative Change
U.S.				
Public	454,452	583,693	129,241	28%
Private	103,406	164,521	61,115	59%
New England				
Public	17,746	18,194	448	3%
Private	10,694	8,472	-2,222	-21%
Massachusetts				
Public	8213	8494	281	3%
Private	4469	2197	-2,272	-51%
Boston				
Public	619	908	289	47%
Private	1769	816	-953	-54%

Trends in Associate's Degrees
Awarded by Boston Colleges, by Broad
Major Field of Study, 1996 to 2007

Major Field of Study	1996	2007	Absolute Change	Relative Change
Criminal Justice	73	67	-6	-8%
Health Sciences	665	419	-246	-37%
Business	734	443	-291	-40%
Engineering & Computer Science	401	243	-158	-39%
Education	85	157	72	85%
Law	116	18	-98	-84%
Arts & Humanities	262	304	42	16%
Sciences	4	57	53	1325%
Personal Services	48	13	-35	-73%
Total	2388	1724	-664	-28%

Trends in Public Associate's Degrees
Awarded by Boston Colleges, by Broad
Major Field of Study, 1996 to 2007

Public	1996	2007	Absolute Change	Relative Change
Criminal Justice	36	49	13	36%
Health Sciences	134	241	107	80%
Business	120	207	87	73%
Engineering & Computer Science	114	135	21	18%
Education	0	52	52	-
Law	0	0	0	-
Arts & Humanities	173	160	-13	-8%
Sciences	2	56	54	2700%
Personal Services	40	5	-35	-88%
Total	619	908	289	47%

Trends in Private Associate's Degrees
Awarded by Boston Colleges, by Broad
Major Field of Study, 1996 to 2007

Private	1996	2007	Absolute Change	Relative Change
Criminal Justice	37	18	-19	-51%
Health Sciences	531	178	-353	-66%
Business	614	236	-378	-62%
Engineering & Computer Science	287	108	-179	-62%
Education	85	105	20	24%
Law	116	18	-98	-84%
Arts & Humanities	89	144	55	62%
Sciences	2	1	-1	-50%
Personal Services	8	8	0	0%
Total	1769	816	-953	-54%

Distribution of Associate's Degrees Conferred
by Broad Major Fields of Study in Boston,
Massachusetts, New England and the U.S., 2007

Major Field of Study	Boston	Massachusetts	New England	U.S.
Criminal Justice	4%	7%	6%	4%
Health Sciences	24%	23%	22%	20%
Business	26%	19%	20%	14%
Engineering & Computer Science	14%	12%	13%	12%
Education	9%	4%	3%	2%
Law	1%	1%	1%	1%
Arts & Humanities	18%	30%	27%	41%
Sciences	3%	1%	1%	1%
Personal Services	1%	2%	6%	3%
Undesignated Field of Study	0%	0%	0%	0%
Total	100%	100%	100%	100%

Trends in the Number of Bachelor's Degrees
Conferred in the U.S., New England,
Massachusetts and Boston, 1996 to 2007

Area	1996	2007	Absolute Change	Relative Change
U.S.	1,166,963	1,528,462	361,499	31%
New England	81,057	96,698	15,641	19%
Massachusetts	40,725	47,885	7,160	18%
Boston	10,956	13,220	2,264	21%

Trends in the Number of Bachelor's Degrees
Awarded in the U.S., New England, Massachusetts and
Boston, by Higher Education Sector, 1996 to 2007

Sector	1996	2007	Absolute Change	Relative Change
U.S.				
Public	774,264	975,513	201,249	26%
Private	392,699	552,949	160,250	41%
New England				
Public	32,224	38,607	6,383	20%
Private	48,833	58,091	9,258	19%
Massachusetts				
Public	12,312	14,401	2,089	17%
Private	28,413	33,484	5,071	18%
Boston				
Public	1672	1698	26	2%
Private	9284	11,522	2,238	24%

Trends in Bachelor's Degrees
Awarded by Boston Colleges, by Broad
Major Field of Study, 1996 to 2007

Major Field of Study	1996	2007	Absolute Change	Relative Change
Criminal Justice	264	304	40	15%
Health Sciences	1300	1050	-250	-19%
Business	1979	2613	634	32%
Engineering & Computer Science	1167	1317	150	13%
Education	419	226	-193	-46%
Law	54	34	-20	-37%
Arts & Humanities	5235	6695	1460	28%
Sciences	531	684	153	29%
Personal Services	7	70	63	900%
Total	10,956	13,220	2264	21%

Trends in Public Bachelor's Degrees
Awarded by Boston Colleges, by Broad
Major Field of Study, 1996 to 2007

Public	1996	2007	Absolute Change	Relative Change
Criminal Justice	22	79	57	259%
Health Sciences	214	167	-47	-22%
Business	272	312	40	15%
Engineering & Computer Science	20	20	0	0%
Education	56	60	4	7%
Law	21	16	-5	-24%
Arts & Humanities	981	894	-87	-9%
Sciences	86	113	27	31%
Personal Services	0	0	0	-
Total	1672	1698	26	2%

Trends in Private Bachelor's Degrees
Awarded by Boston Colleges, by Broad
Major Field of Study, 1996 to 2007

Private	1996	2007	Absolute Change	Relative Change
Criminal Justice	242	225	-17	-7%
Health Sciences	1086	883	-203	-19%
Business	1707	2301	594	35%
Engineering & Computer Science	1147	1297	150	13%
Education	363	166	-197	-54%
Law	33	18	-15	-45%
Arts & Humanities	4254	5801	1547	36%
Sciences	445	571	126	28%
Personal Services	7	70	63	900%
Total	9284	11522	2238	24%

Distribution of Bachelor's Degrees Conferred by
Broad Major Fields of Study in Boston,
Massachusetts, New England and the U.S., 2007

Major Field of Study	Boston	Massachusetts	New England	U.S.
Criminal Justice	2%	3%	3%	3%
Health Sciences	8%	7%	7%	8%
Business	20%	19%	19%	22%
Engineering & Computer Science	10%	9%	7%	9%
Education	2%	3%	5%	7%
Law	0%	0%	0%	0%
Arts & Humanities	51%	48%	46%	39%
Sciences	5%	8%	8%	8%
Personal Services	1%	0%	1%	1%
Undesignated Field of Study	2%	3%	3%	2%
Total	100%	100%	100%	100%

Trends in the Number of Undergraduate Non Degree Certificates Conferred in the U.S., New England, Massachusetts and Boston, 1996 to 2007

Area	1996	2007	Absolute Change	Relative Change
U.S.	620,669	734,199	113,530	18%
New England	21,904	23,320	1,416	6%
Massachusetts	9,828	10,516	688	7%
Boston	2,273	1,701	-572	-25%

Trends in the Number of Undergraduate Non Degree Certificates Awarded in the U.S., New England, Massachusetts and Boston, by Higher Education Sector, 1996 to 2007

Sector	1996	2007	Absolute Change	Relative Change
U.S.				
Public	307,358	392,826	85,468	28%
Private	313,311	341,373	28,062	9%
New England				
Public	4451	4870	419	9%
Private	17,453	18,450	997	6%
Massachusetts				
Public	2463	2883	420	17%
Private	7365	7633	268	4%
Boston				
Public	212	314	102	48%
Private	2061	1387	-674	-33%

Trends in Undergraduate Non Degree
Certificates Awarded by Boston Colleges, by
Broad Major Field of Study, 1996 to 2007

Major Field of Study	1996	2007	Absolute Change	Relative Change
Criminal Justice	2	15	13	650%
Health Sciences	422	590	168	40%
Business	458	22	-436	-95%
Engineering & Computer Science	479	441	-38	-8%
Education	34	60	26	76%
Law	48	29	-19	-40%
Arts & Humanities	432	327	-105	-24%
Sciences	0	7	7	-
Personal Services	378	210	-168	-44%
Total	2273	1701	-572	-25%

Trends in Public Undergraduate Non Degree
Certificates Awarded by Boston Colleges, by
Broad Major Field of Study, 1996 to 2007

Public	1996	2007	Absolute Change	Relative Change
Criminal Justice	0	15	15	-
Health Sciences	85	141	56	66%
Business	26	16	-10	-38%
Engineering & Computer Science	16	50	34	213%
Education	0	6	6	-
Law	6	12	6	100%
Arts & Humanities	71	66	-5	-7%
Sciences	0	7	7	-
Personal Services	8	1	-7	-88%
Total	212	314	102	48%

Trends in Private Undergraduate Non Degree
Certificates Awarded by Boston Colleges, by
Broad Major Field of Study, 1996 to 2007

Private	1996	2007	Absolute Change	Relative Change
Criminal Justice	2	0	-2	-100%
Health Sciences	337	449	112	33%
Business	432	6	-426	-99%
Engineering & Computer Science	463	391	-72	-16%
Education	34	54	20	59%
Law	42	17	-25	-60%
Arts & Humanities	361	261	-100	-28%
Sciences	0	0	0	-
Personal Services	370	209	-161	-44%
Total	2061	1387	-674	-33%

Distribution of Undergraduate Non Degree Certificates
Conferred by Broad Major Fields of Study in Boston,
Massachusetts, New England and the U.S., 2007

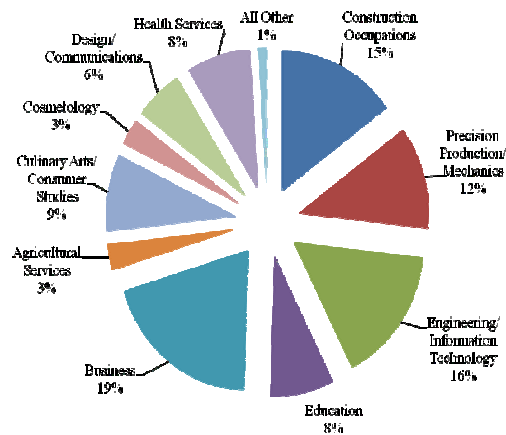
Major Field of Study	Boston	Massachusetts	New England	U.S.
Criminal Justice	1%	0%	1%	4%
Health Sciences	35%	41%	43%	43%
Business	1%	2%	4%	9%
Engineering & Computer Science	26%	2%	24%	23%
Education	4%	1%	1%	1%
Law	2%	2%	2%	1%
Arts & Humanities	19%	4%	4%	4%
Sciences	0%	0%	0%	0%
Personal Services	12%	21%	21%	14%
Undesignated Field of Study	0%	0%	0%	0%
Total	100%	100%	100%	100%



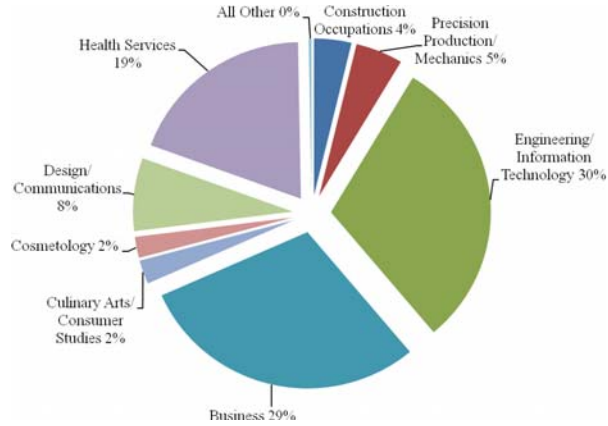
Secondary Career and Technical Education Program Completions in the Boston Workforce Area



The Percent Distribution of Class of 2007 Career and Technical Education Secondary Graduates in Massachusetts, by Major Occupational Field of Study



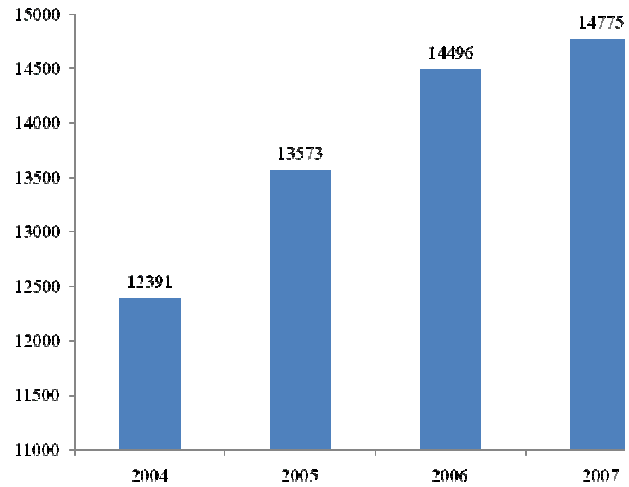
The Percent Distribution of Class of 2007 Career and Technical Education Secondary Graduates in Boston, by Major Occupational Field of Study



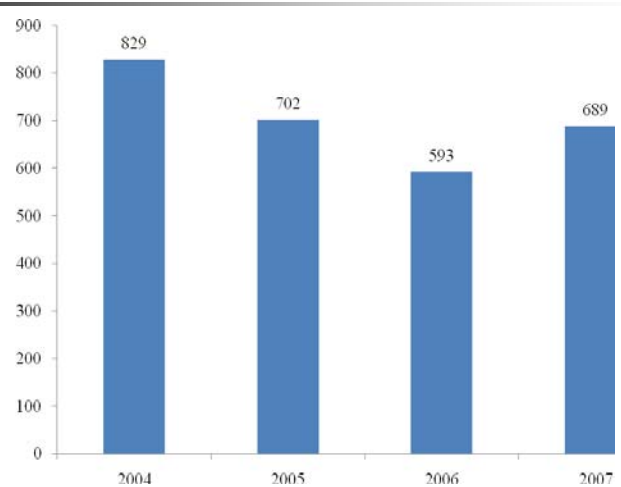
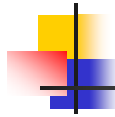
The Percent Distribution of Class of 2007 Career and Technical Education Secondary Graduates in Massachusetts and Boston, by Occupational Field of Study

Aggregate Programs	Massachusetts	Boston
Construction Occupations	15%	4%
Precision Production/Mechanics	12%	5%
Engineering/Information Technology	16%	30%
Education	8%	0%
Business	19%	29%
Agricultural Services	3%	0%
Culinary Arts/Consumer Studies	9%	2%
Cosmetology	3%	2%
Design/Communications	6%	8%
Health Services	8%	19%
All Other	1%	0%
Total	100%	100%

Trends in the Total Number of Secondary Career and Technical Education Graduates in Massachusetts, 2004 to 2007



Trends in the Total Number of Secondary Career and Technical Education Graduates in Boston, 2004 to 2007



Trends in the Number of Secondary Career and
Technical Education Graduates in Massachusetts, by
Major Occupational Field of Study, 2004 to 2007

	2004	2005	2006	2007	Absolute Change	Relative Change
Construction Occupations	1,782	1,880	2,024	2,156	374	21%
Precision Production/Mechanics	1,411	1,589	1,680	1,753	342	24%
Engineering/Information Technology	2,193	2,262	2,344	2,320	127	6%
Education	399	548	600	649	250	63%
Business	2,723	2,907	3,144	2,915	192	7%
Agricultural Services	421	418	419	464	43	10%
Culinary Arts/Consumer Studies	1003	974	1,246	1,292	289	29%
Cosmetology	409	461	462	499	90	22%
Design/Communications	694	724	724	875	181	26%
Health Services	930	1,176	1,224	1,221	291	31%
Technology Education	248	404	459	468	220	89%
All Other	178	230	170	163	-15	-8%
Total	12,391	13,573	14,496	14,775	2,384	19%

Trends in the Number of Secondary Career and
Technical Education Graduates in Boston, by
Major Occupational Field of Study, 2004 to 2007

Aggregate Programs	2004	2005	2006	2007	Absolute Change	Relative Change
Construction Occupations	24	40	47	26	2	8%
Precision Production/Mechanics	37	26	34	33	-4	-11%
Engineering/Information Technology	134	121	161	209	75	56%
Education	3	0	0	0	-3	-100%
Business	372	255	173	203	-169	-45%
Agricultural Services	9	0	0	0	-9	-100%
Culinary Arts/Consumer Studies	13	22	17	17	4	31%
Cosmetology	22	10	14	15	-7	-32%
Design/Communications	44	47	14	52	8	18%
Health Services	162	181	125	132	-30	-19%
All Other	9	0	8	2	-7	-78%
Total	829	702	593	689	-140	-17%

Rate of Change in the Number of Secondary
Career and Technical Education Graduates in
Boston and Massachusetts, by Major Occupational
Field of Study, 2004 to 2007

