TOWN OF WATERTOWN, MASSACHUSETTS
STRATEGIC FRAMEWORK FOR ECONOMIC DEVELOPMENT

Appendices

AUGUST 2, 2011

Mt. Auburn Associates | Madden Planning Group | Gamble Associates

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APPENDIX A: ENGAGEMENT

Over the course of a 12-month period, the Economic Development Study has involved multiple public meetings, ongoing coordination with the Town and its elected officials, and outreach to businesses. The Watertown Department of Community Development and Planning managed the process for the Town and has been actively engaged in guiding the work and generating recommendations. A Steering Committee provided oversight by reviewing the work at key milestones. Members of the Steering Committee included the Town Council Economic Development Sub-Committee and the Planning Board. The Town Council was briefed at the outset of the project in January 2010 and Councilors have been present at all the public meetings.

BUSINESS OUTREACH

The initial focus of the study was to define the profile of local businesses. Calls were made to the chief executive officers or financial officers of the 50 largest firms, representing biotech, design and engineering, health care and social services, media and information, and science and technology, and food industries. These 50 firms represent approximately one third of Watertown's workforce (Table A-1).

The inquiry focused on the following questions:

1. What factors led you to locate in or stay in Watertown? What other locations had you considered if any?
2. Did you confront any barriers to locating in Watertown or do you see any that affect your business today or in the future (space, infrastructure, access, workforce, or regulatory)?
3. Do you participate in or take advantage of Federal or State economic development programs?

On April 1, 2010, a breakfast forum for the large employers was held. The discussion centered on Watertown's image and strengths, workforce and transportation issues, amenities, the development process, and the role of local government.

Regarding Watertown's image, business leaders were concerned about attracting a younger workforce that have an urban and transit-oriented focus. The Town's image has improved a lot but still lacks identity with low-density, auto-oriented uses. Improving connectivity and attractiveness was recommended.

Table A-1. Telephone Outreach to Large Employers

PARTICIPATING FIRM AND NO. OF EMPLOYEES		CONTACTED FIRM AND NO. OF EMPLOYEES	
ADVANCED MANUFACTURING/TECHNICAL			
Barclay Water Management Inc	80	A123 Systems Inc	24
Doble Engineering Co	200	Alem-Rmd Joint Venture	89
High Tech Turning Company	23	Exergen Corp	100
Pulpdent Corp	65	Techdevice Corp	47
Therma-Flow Inc	25	United Electric Controls Company	99
BIOTECH/LIFE SCIENCES			
Boston Biomedical Research Institute	125	Asischem Inc	30
Enanta Pharmaceuticals Inc	40	Psivida Inc	26
EnVivo Pharmaceuticals Inc	53	Tetraphase Pharmaceuticals Inc	25
Virogen/Boston Biotechnical Institute	2	Wolfe Laboratories	30
DESIGN/ENGINEERING			
Cadmus Group Inc	70	Allen & Gerritsen Inc	60
Sasaki Associates Inc	260	Bard RAO & Athanas Consulting	130
Souza, True & Partners Inc	25	Corey McPherson Nash	50
Vanasse Hangen Brustlin Inc	350	Reed Hilderbrand Associates	25
INFORMATION/MEDIA			
Athenahealth Inc	554	Charlesbridge Publishing Inc	32
Communispace Corp	206	Harvard Business School Publg	230
Liaison International Inc	50	Iprospect, Inc	109
Pharmetrics Inc	68	Mobile Messenger	130
Software Artisans Inc	30	Molecular Inc	100
Tom Snyder Productions Inc	100	Netage Solutions Inc	65
		New England Sports Network Inc	60
		Pure Imaging Inc	21
HEALTH/SOCIAL			
New England Research Institutes, Inc	220	Bright Horizons Family Soln	550
		Pathfinder International	80
		Tufts Associated Health Plans	1000

Transit was one of the most important issues raised, along with other transportation concerns. Many employees drive to work but would prefer a transit option. There is no direct access to the commuter rail stations in Belmont and Newton. The bicycle trails are attractive to the workforce but are not sufficient by themselves. The #70 bus connects a high tech corridor between Cambridge and Waltham, passing through Watertown. Narrowing Mount Auburn Street is important but this corridor also needs to facilitate better transit. Pedestrian movement in Watertown Square can be treacherous.

On competitive advantages, several businesses mentioned proximity to the airport and the fact that we are close to Boston, but not Boston. Clients find the space at the Arsenal attractive, but there is still a need for more restaurants and “cool” places to go. A good hotel is desperately needed.

Regarding the role of Town government, the participants identified the need for a one-stop “ombudsman” to take a business through necessary steps of locating a business or developing a site. There needs to be more advocacy for business in general. The Arsenal was a successful model because it was pre-planned as a coherent development. Mixed-use development allows for flexibility to respond to the vagaries of the marketplace. The businesses were open to further engagement if there were a defined sense of purpose.

Table A-1. Telephone Outreach to Large Employers (continued)

PARTICIPATING FIRM AND NO. OF EMPLOYEES		CONTACTED FIRM AND NO. OF EMPLOYEES	
BUILDING/SPECIALTY TRADES			
JC Cannistraro LLC	400	Charlie's Contracting Inc	70
		ML McDonald Sales Co Inc	180
FOOD			
A Russo & Sons Inc	120	Canadian Fish Exporters Inc	18
Newly Weds Foods Inc	80	Radlo Foods	25

OUTSIDE ENTITIES

In March 2010, meetings were held with the Mass Office of Business Development and the Mass Biotech Council. The purpose of these sessions was to alert these groups to the economic development study and to hear their perspective on the regional economy and business decision factors.

MassBio identified the competitive advantages that attract biotech firms: speed and timing related to moving, building, or renovating a building; the availability of bio-ready buildings; proximity to transit and regional highways; and a highly educated workforce. Developers who specialize in biotech include Alexandria Real Estate, Biomed Realty, and Cummings Property. Watertown could achieve MassBio Platinum rating if the Health Department were to adopt a set of guidelines generated by the Bio-Safety Board.

Real estate brokers were also contacted via telephone to understand better the local market, types of companies, available properties, rates, trends, and Watertown's position vis-a-vis surrounding towns.

One real estate broker noted that Watertown is a decent market for life science companies looking for a lower price point than Cambridge and willing to be a few miles away from academic institutions. The push back is that it is a little burdensome to access from the highway network. Some would rather be in Cambridge or on Route 128, which are easier for their workforce to access. The East Side/Arsenal Street corridor was identified as the best location, because people have an easier time visualizing how to get there.

Another real estate professional pointed out that Pleasant Street could be nice if the urban amenities were improved. Waltham is perceived as a better address generally, with many venture capitalists located there. The Arsenal does well because it is architecturally interesting and has stable ownership (Harvard University).

"The appeal in Watertown is access to R&D workforce at a significant discount to Cambridge – so smaller earlier stage companies. Interesting funky shops, restaurants, and cafes appeals to this type of workforce; there is some synergy with the Arsenal on the Charles where they have restaurants, a health complex, some curb appeal" (Real estate broker/developer).

Participants at the September community meeting engaged in discussions about future scenarios.

COMMUNITY OUTREACH

Outreach to citizens followed several tracks. The Town website was updated with a new page for economic development with links to maps, presentations, and events. An email list was compiled from a variety of sources, and word of upcoming meetings was sent out via email blasts from the Town. In addition, a Facebook page was created. This site was frequently updated with information about meetings as well as news reports regarding local companies and property transactions.

Three public forums were held during the study, with the following themes:

- May 2010 – Analysis
- September 2010 – Economic Scenarios
- December 2010 – Vision and Implementation

These meetings were well attended by a cross section of residents and some small business owners, as well as members of Town Council, the Planning Board, and Town Administration. The meetings were reported by the Boston Globe, the Watertown Tab, and the Watertown Patch. Presentations were posted on the Town of Watertown's Economic Development website.

The feedback from these meetings helped shape the course of the work and the ultimate strategy. In May 2010, the discussion centered on Watertown's image and position in the Boston metropolitan area, the relation of industries to the workforce, the importance of transit and bicycle paths for making connections, the need for vibrant places that are relevant to a younger work force, and the need for information management and a one-stop point person within the Town to facilitate business and development issues.

At the September 2010 forum, the need for an overall vision was underscored. Participants noted that character and form of development are as important as use categories, and that one objective is to balance commercial and residential uses in the Town. Within five underdeveloped focus area in Town, desired uses identified were green technology, hotels, office and research and development, local shops, some multifamily residential, artist lofts and open space. In these discussions, additional heavy industry, big box retail, and auto-related uses were not deemed appropriate under the assumption that Watertown already contains a large number of these uses relative to the Town's size. Extending transit, creating more pedestrian-friendly districts, and focusing on the Charles River were all suggested as part of the vision.

In response, a draft vision statement was presented at the December forum, with the suggestion that it be tailored more to Watertown. Participants were excited that Watertown was undertaking this process and future planning efforts to shape the future rather than react to outside forces. In response to a set of possible implementation tools, participants expressed significant interest in comprehensive planning, a new zoning strategy, an improved economic development website, and streetscape and transit improvements. Brownfield remediation was also viewed as an activity where the Town could be more proactive.

APPENDIX B: ECONOMIC ACTIVITY

Watertown businesses had approximately 19,000 wage and salary employees in 2009.[1] The number of business establishments totals approximately 1,100, generating total wages of over $1.1 billion in 2009. There are an estimated additional 4,400 workers who are business proprietors or self-employed.[2]

The vast majority of Watertown businesses are small. More than half of business establishments have four or fewer employees. Only about three percent have 100 employees or more. The Town's largest employers are shown in Table B-1.

Data regarding employers and the size of their businesses are constantly in flux, however, some of which became evident in conversations with Watertown businesses leaders during the study. Over the course of the last few years, the national economic turndown has significantly affected some businesses in Town, especially in the construction, manufacturing, and design sectors.

Many businesses make location decisions when the term of their lease is up or due to mergers and acquisitions. Major Watertown employers such as Communispace, A123, and Innosight had outgrown their space at the Arsenal and subsequently made decisions to move to Boston, Waltham, and Cambridge, respectively. Other firms such as Ionics, New Age Publishing, and Vicam, were purchased by national firms and eventually consolidated into headquarters in other locations.

1 The source of wage and salary employment data cited in this report is the U.S. Department of Labor Quarterly Census of Employment and Wage.

2 Extrapolation of Middlesex County proprietor employment data from the U.S. Bureau of Economic Analysis Regional Economic Accounts

Table B-1. Largest Employers in Watertown (as of 2009)

FIRM	NO. OF EMPLOYEES WATERTOWN	INDUSTRY
Tufts Associated Health	1,000	Health/Insurance
Perkins School for the Blind	700	Education
Athenahealth	554	Health/Admin Services
Bright Horizons Family Solutions	550	Social
Vanasse Hangen Brustlin	350	Design/Engineering
Sasaki Associates	260	Design/Engineering
Communispace	250	Information
Harvard Business School Publishing	230	Information
Doble Engineering	200	Advanced Engineering
REIT Management & Research	200	Real Estate
Target Corporation	200	Retail

Source: Data compiled from the Commonwealth and Dun & Bradstreet and field checked for the Watertown Economic Development Study

Table B-2. Watertown Employment by Industry (2009)

INDUSTRY	AVERAGE EMPLOY-MENT	NO. OF ESTABLISH-MENTS	AVERAGE WEEKLY WAGE
Retail Trade	2,645	150	$617
Professional and Technical Services	2,615	151	$1,757
Information	2,013	59	$1,833
Finance and Insurance	1,850	40	$1,391
Health Care and Social Assistance	1,503	89	$724
Educational Services	1,501	28	$901
Manufacturing	1,111	42	$1,307
Construction	1,025	106	$1,430
Other	4,245	401	$829
TOTAL	18,812	1,091	$1,158

Source: Massachusetts Executive Office of Labor and Workforce Development, 2009

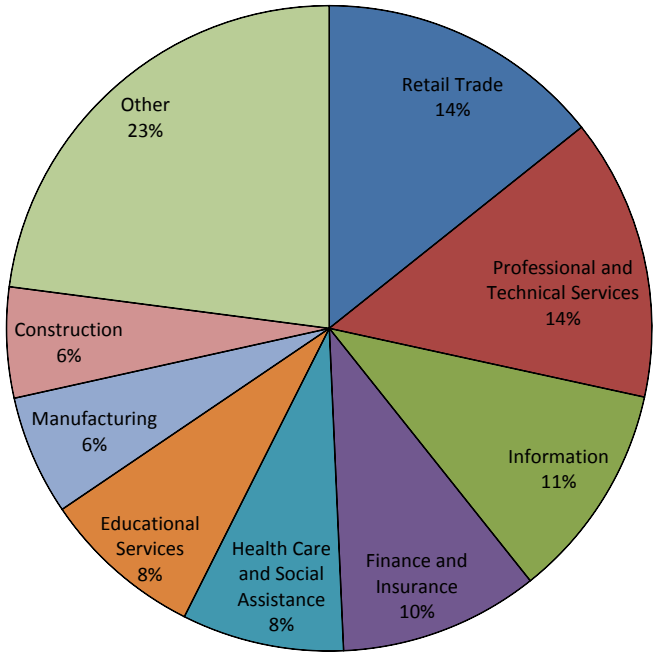


Figure B-1. Watertown Employment by Industry (2009)

The professional and technical services sector broadly includes legal, accounting, specialized design, computer systems design, architectural and engineering, scientific research and development, management and technical consulting, and advertising services. The information sector includes print and software publishing, media, and telecommunications

Other industries, which each have under 1,000 employees include management, food services, wholesale trade, other services, waste services, arts/entertainment/recreation, transportation and warehousing, and real estate and leasing.

INNOVATION

Knowledge-based industries are dominant players in the Watertown economy. Of the Town's six largest primary industry sectors, five can be considered knowledge industries accounting for approximately half of all jobs in Watertown. Even in the still prominent manufacturing sector, six in ten jobs are in knowledge-related areas such as computer and electronic products. Retail and professional and technical services are the two largest primary industry sectors, (Figure B-1 and Table B-2).

In 2006, $137 million in venture capital was invested in Watertown (Grow Think Research). Over the last ten years, businesses in Watertown have been granted 294 patents ranging from infrared thermometers to biomolecule crystallization (Figure B-2). Watertown ranks slightly above the statewide average in patents, but considerably below Cambridge and Waltham (Table B-3).

Table B-3. U.S. Patents (2005-2007)

LOCATION	PATENTS PER 1,000 EMPLOYEES
United States	0.7
Massachusetts	1.2
Cambridge	5.7
Waltham	4.9
Watertown	1.5

Source: Kaufman Foundation

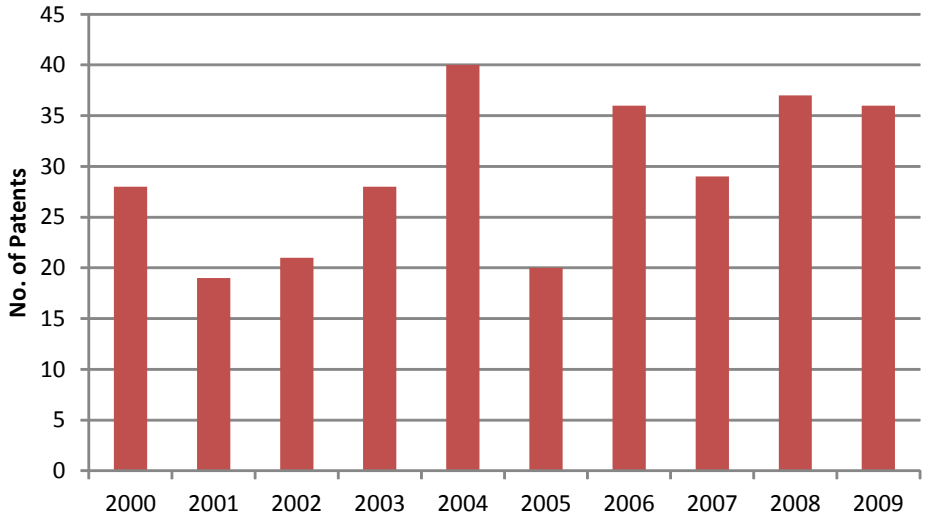


Figure B-2. Patents issued in Watertown (source: U.S. Patent and Trademark Office)

EMPLOYMENT GROWTH

Not only do knowledge industries dominate Watertown's economy, they have also experienced the strongest growth. Employment in the information sector increased by 771, or 62 percent, between 2001 and 2009, and in professional and technical services sector by 589, or 29 percent, even as total employment dropped by 1,569. Employment in the finance and insurance and educational services sectors also increased but by much smaller margins, 97 and 78 respectively. The other significant growth sector was retail trade, with an increase of 278.

While knowledge industries have emerged as the Town's economic drivers, its traditional manufacturing base has eroded dramatically. Manufacturing jobs declined by 2,580, or 70 percent, between 2001 and 2009. Construction industry jobs, also a traditional source of employment, dropped by 381, or 26 percent, during this period, the second largest numerical drop. Smaller declines occurred in six other sectors.

Employment trends in Watertown have been somewhat less favorable than in immediately adjacent communities and the larger metropolitan region. Between 2001 and 2009, wage and salary employment in Watertown declined by 1,569, or 7.7, percent (Figure B-4). Employment in the four communities surrounding Watertown – Cambridge, Newton, Belmont, and Waltham[3] – declined by an

3 These four towns were selected for comparison because of their proximity, making them subject to similar economic forces. Boston was excluded from this "peer group" because of its much larger and more diverse economy and its unique position as the central city within the metropolitan region.

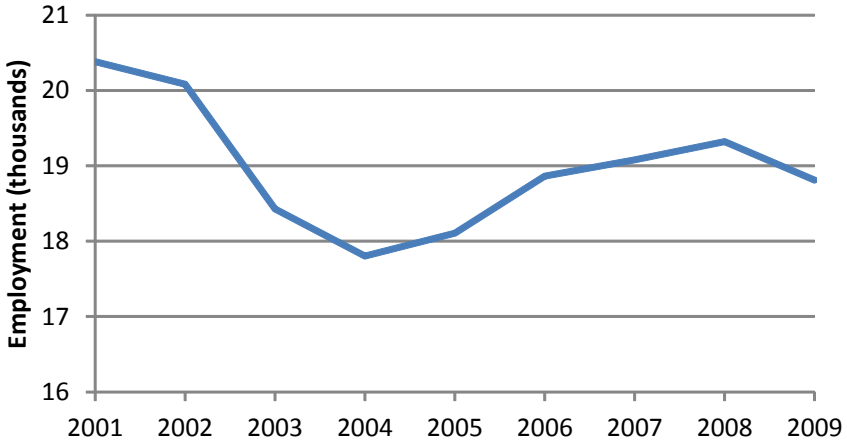


Figure B-4. Watertown Employment Trend 2001 to 2009 (Massachusetts Executive Office of Labor and Workforce Development, 2009)

average of 6.2 percent during this period, while employment in the entire Boston Metropolitan Statistical Area (MSA) declined by only 4.5 percent. Within the decade, local employment reached a low point in 2004, and then increased through 2008 before declining again in 2009.

WAGES

Wages vary considerably by industry. Average weekly wages in the knowledge industries were approximately $1,300, while in the retail industry averaged less than half that at about $600. In addition to being the Town's highest-growth and among its largest industry sectors, information and professional and technical services also pay the highest wages, $1,833 and $1,757 weekly respectively in 2009. Among the other large employment sectors in Town, the traditional industries of construction and manufacturing continue to pay well with above-average wages ($1,300 to $1,400 per week), while health care/ social assistance and educational services fall below the average ($700 to $900).

The average wage paid by Watertown employers is on par with the metropolitan region, but below the norm when compared to adjacent communities. The Town's average weekly wage in 2009 was $1,158, essentially equivalent to the average of $1,164 for the Boston MSA. The surrounding towns, however, average about 20 percent above the average wage in Watertown. Cambridge and Waltham in particular have higher average wages, a reflection of the extent of the knowledge sector economy in those cities.

WATERTOWN'S POSITION IN THE REGIONAL ECONOMY

When compared to surrounding communities, Watertown is highly competitive as a location for firms in a number of industry sectors. In these industries, the employment data reflect a high concentration in Watertown as a proportion of total employment in comparison to the area encompassing Cambridge, Newton, Belmont, Waltham, and Watertown (location quotient).

The Town's highest location quotients are in finance and insurance and in information. Tufts Health Plan, with approximately 1,000 employees, dominates the finance and insurance sector in the local area. The strength in the information sector is particularly significant because the adjacent communities already have a high location quotient in this sector relative to the entire Boston MSA, thus indicating a particularly strong competitive position for Watertown. Watertown also has a high location quotient in the retail sector since it serves as a retail center for the surrounding area. Other industry strengths for Watertown lie in construction, management of companies and enterprises (i.e., corporate headquarters), and arts, entertainment, and recreation.

The Town's professional and technical services sector, in contrast, has a low location quotient relative to surrounding communities. Given that this sector has experienced strong local employment growth during the past decade, its low location quotient suggests that it has considerable room for further growth, particularly since

surrounding communities are highly competitive in this sector relative to the entire Boston MSA. In addition, statewide employment in this sector is projected to grow at the highest rate of any primary industry sector during the next five years.[4]

Figure B-5 combines data on industry size, growth, and location quotient. The industries in the upper right quadrant, notably information and retail, are the Town's strongest industries, showing both a high location quotient relative to adjacent communities and recent employment growth. The industries in the lower right quadrant, notably professional and technical services, but also educational services and accommodation and food services, can be considered areas of opportunity, showing recent employment growth but location quotients below that of adjacent communities.

4 Massachusetts Executive Office of Workforce Development, Commonwealth of Massachusetts Employment Projections 2006-2016

A ***LOCATION QUOTIENT*** of greater than one indicates that Watertown has a higher percentage of industry employment relative to total employment than in area to which it is being compared, in this case the surrounding four communities Cambridge, Newton, Belmont, and Waltham.

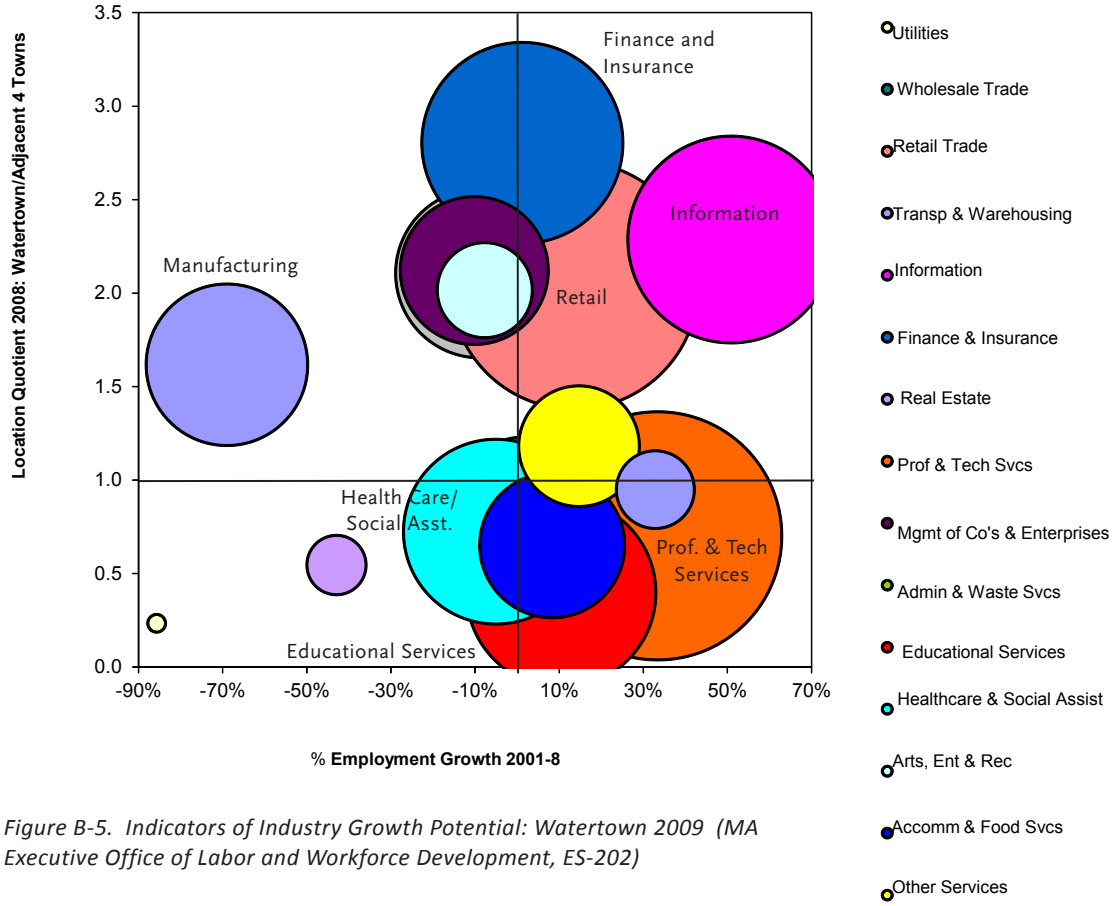


Figure B-5. Indicators of Industry Growth Potential: Watertown 2009 (MA Executive Office of Labor and Workforce Development, ES-202)

WORKFORCE AND EMPLOYMENT

The creation of employment opportunities for local residents is an important factor to consider as part of economic development efforts. While local workers look for jobs in a regional labor market, providing local employment opportunities matched to resident skills and career aspirations increases access to jobs while reducing commute times and relieving traffic congestion.

The targeted clusters, while providing jobs in a wide variety of occupations, tend to provide a high proportion of positions in high-skill occupations well matched to Watertown's workforce (Figures B-6 to B-9).

Watertown's labor force has relatively high skill levels. Fifty-two percent of residents 18 years and older have at least an associate's degree, and 19 percent have a graduate of professional degree. This compares to 42 percent and 14% statewide. The Town's younger age groups are particularly well educated. Among residents, 25-34, fully 80 percent have an associate's degree or higher, and 31 percent have a graduate or professional degree (Figure B-10.[5]

Watertown workers also tend to be employed in high-skill occupations. Fifty-six percent are employed in professional, management, and business and financial occupations compared to 42 percent statewide.

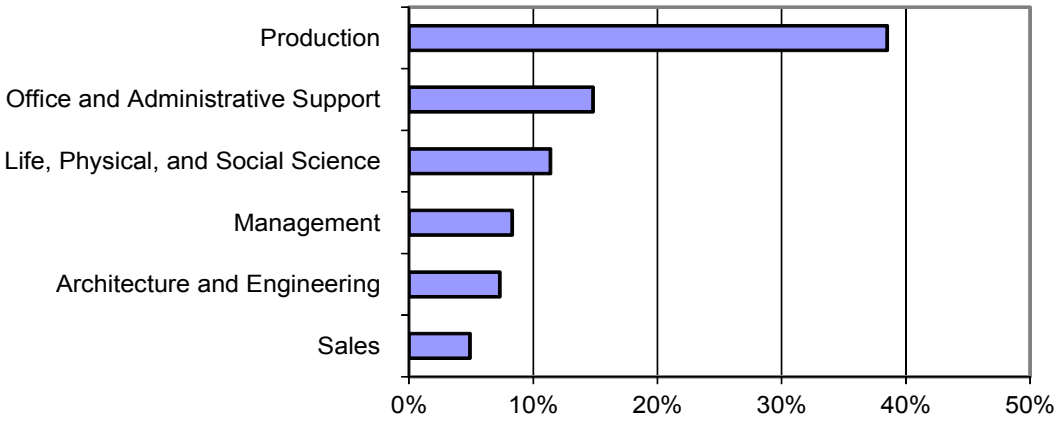


Figure B-6. Workforce Profile of Life Sciences (Pharmaceuticals and Medical Device Manufacturing Industries)

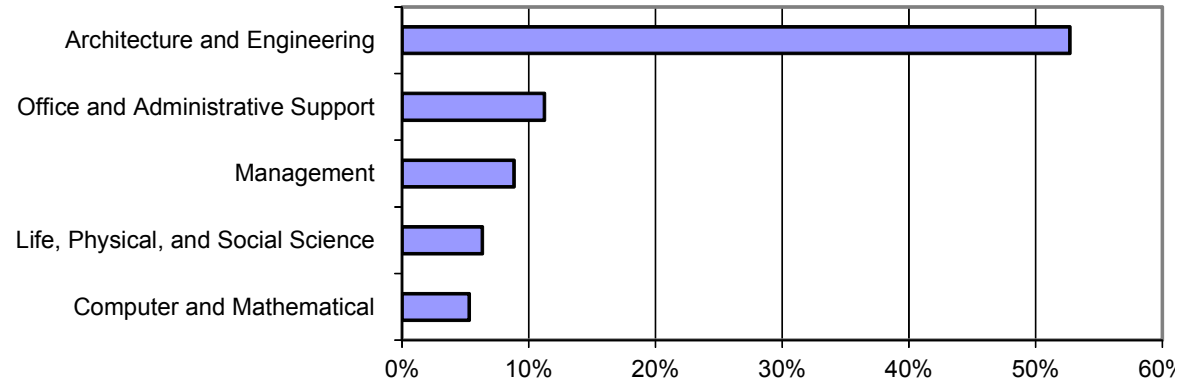


Figure B-7. Workforce Profile of Architecture and Engineering Industry

Source: Massachusetts Executive Office of Labor & Workforce Development, Massachusetts Industry-Occupational Matrix, 2006

5 U.S. Census Bureau, American Community Survey, 2006-8

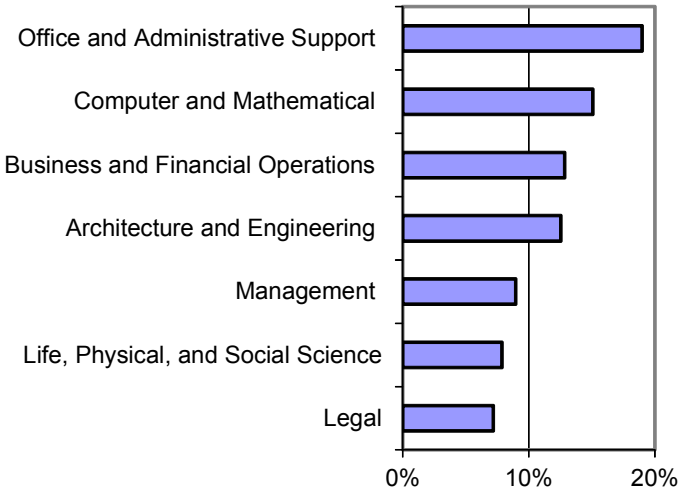


Figure B-8. Workforce Profile of Information Industry

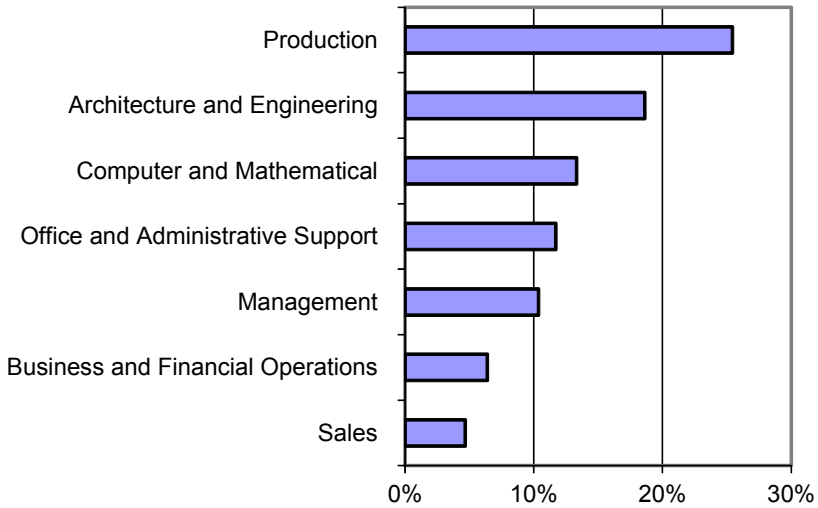


Figure B-9. Workforce Profile of Advanced Manufacturing Industry

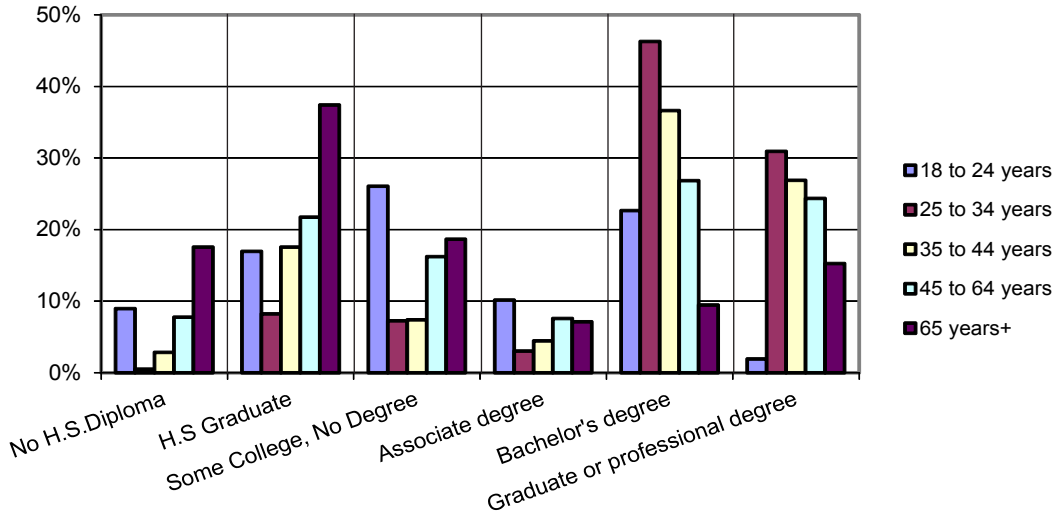


Figure B-10. Educational Attainment of Watertown Residents 18+, By Age Group, 2006-2008 (U.S. Census Bureau, American Community Survey)

Watertown is close to downtown Boston and the many universities and medical centers there and in Cambridge.

APPENDIX C: LOCATION AND REAL ESTATE

Companies in metropolitan Boston have many choices when it comes to location. They weigh the cost and availability of space against operational requirements such as basic sewer and water and a robust telecommunications network. Access needs vary by company with different weights placed on physical relationship to customers, employees, suppliers, financial backers, and others. While perhaps the least tangible, the real estate "address" is nevertheless vital, bundling together image, reputation, and amenities associated with a place.

Besides cost and availability, businesses also look for a match in terms of building type. The size and configuration of the footprint, total floor area, and number of stories are all considerations closely tied to the operation. Other factors range from loading docks to well-designed lobbies. Historic buildings may be desirable for some, while others seek new space or flexible space that is easy to retrofit.

Although the internet has shifted business models, face to face communication remains important for many firms. The ability to meet with customers, clients, funders, and/or institutional partners is a factor that influences location, whether it is physical proximity or the image projected when receiving these visitors at the place of business. For some, proximity to airports is heavily weighted; for others, ease of access to regional highways is more important for shipping.

The relationship of business location to employee residence is not insignificant, especially for entrepreneurs. Starting a business close to home makes sense, all other factors being equal, and once a firm is in place, employees form a constellation around it. When owners relocate their companies, they frequently cite employee access as a consideration. Availability of parking may be balanced with proximity to public transit or even bicycle trails as alternative modes to attract employees.

Space, infrastructure, and access are all factors that can be measured and analyzed with some degree of consistency. When businesses locate, however, they also consider the "address", which may relate to a community overall or to a specific place within a community or even to a specific street or building. Some firms create an address through their own success and others seek one out. A positive, distinctive character integrates many factors, some of which are subjective, such as aesthetics, diversity of uses, amenities, maintenance, and name recognition.

Watertown Arsenal

The value of location attributes change over time. The Watertown Arsenal was originally sited because of its proximity to water transportation at a defensible inland position. On this vast tract of land, production facilities grew in size to match changing technology for manufacturing armaments. By the mid-20th century, the facility was rendered obsolete and closed, becoming an eyesore that affected Watertown's reputation. After years of planning and public investment in hazardous waste remediation, the property was redeveloped in accordance with its historic status on the National Register. The historic buildings are now highly desirable real estate, and the coherent campus environment has established an "address" that is in great demand by innovative companies.

REGIONAL CONTEXT

The scale and development patterns of metropolitan Boston are such that an entrepreneur has many choices for locating a small business close to downtown Boston, universities, the airport, and regional highways, and close to great residential neighborhoods and natural amenities. From a central location in Boston's Metro-West area, a company has access to a workforce of over 1.5 million within a 30 minute drive (Mappoint, 2006). Building types range from historic mills to cutting-edge lab facilities, with many flexible spaces in between.

Among metropolitan areas, one of Boston's greatest advantages is the number of universities and medical centers, including several major research institutions. The Massachusetts Institute of Technology, Harvard University, and Boston University are ranked in the top 100 research institutions nationally and together represented $1.3 billion in total research dollars in 2006 (Table C-1). Many of the top hospitals in the area are teaching hospitals for these academic institutions.

Academic and medical institutions drive the metropolitan Boston economy at many levels, including direct employment as well spin-off research, the concentration of venture capital, and a trained and well-educated workforce. New business ideas often arise out of academic labs. Firms remain within close proximity to universities as they launch, in part because of dual teaching and research responsibilities and the attraction of

talented staff. Some universities may sponsor or support incubator space to help translate theory into practical applications.

As ideas move from academic research into research and development, venture capital is the accelerant that allows entrepreneurs to explore potential applications. Nationally, venture capital investment tracks fairly closely with high profile research institutions, which further enhances Boston's competitive advantages. These relationships require face to face interactions, another factor that suggests proximity to the center during the startup phase.

Transportation remains a motivating factor in regional geography. Many firms that originate in Cambridge move west along the I-90 corridor as they expand and mature. Ease of access to the airport along this corridor is not insignificant for firms that have national or international connections. To the west and north, Route 128 and Route 3 - once centers for electronics innovation - remain a desirable destination for some companies, in part because of the availability of larger footprint facilities and lower rents.

With no tradition of regional government, an entrepreneur could be comparing 25 to 30 distinct municipalities that meet basic criteria (Figure C-1). The historic pattern of New England towns ensures a multitude of choices for old mill space and vacant industrial land, often close to riverfront amenities, village centers, and compact neighborhoods. Watertown is one of many choices for locating a business, and because of its small size and lack of a consistent identity, may not attract much attention.

Table C-1. Boston Research Institutions

INSTITUTION	2006 TOTAL RESEARCH ($ MILLIONS)	2006 NATIONAL RANK
Massachusetts Institute of Technology	$601,000	12
Harvard University*	$453,000	27
Boston University*	$256,000	63
Tufts University*	$129,000	110
Northeastern University	$66,000	157
Brandeis University	$57,000	167
Boston College	$36,000	195

** Associated with medical centers and teaching hospitals*

Source: The Center for Measuring University Performance http://mup.asu.edu/index.html

Figure C-1. Twenty-minute drive zone from the center of Boston/Cambridge

MARKET TRENDS

While Watertown has unique attributes that shape local supply of, and demand for, commercial and industrial real estate, the local market is heavily influenced by broader regional trends. Watertown's position at the edge of the region's urban core places it at a transition point between the urban markets of Boston and Cambridge, and suburban markets, particularly along the western and northwestern segments of Route 128.

Real estate brokers divide the metropolitan market into submarkets, with each broker devising a slightly different geography depending on their products and interests. Typically downtown Boston and Cambridge each stand by themselves as distinct markets. The rest of the region is divided into various suburban markets. Watertown is often included in the "128/MassPike" or "128 West" category, which typically includes Waltham, Newton, Weston, Wellesley, and Needham among others (Figure C-2). The designation of a "Northwest Market" captures the strength of the Lexington, Burlington, Bedford market along Route 128.

Boston and Cambridge are the center of the technology and professional services industries that have a strong presence in Watertown. As firms in these industries mature and grow or seek space more suitable to their needs (e.g., more space, lower rents, greater accessibility for clients

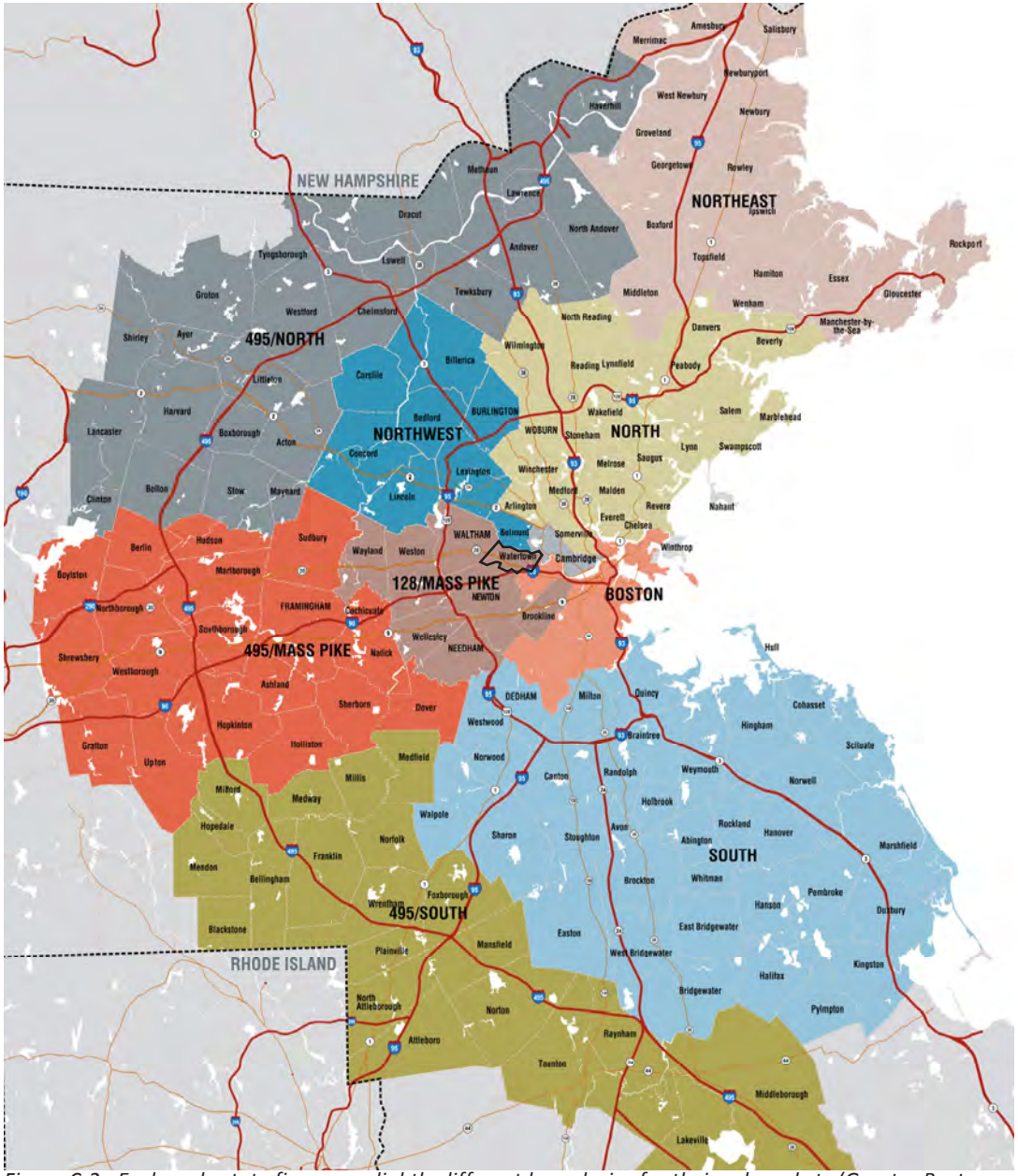


Figure C-2. Each real estate firm uses slightly different boundaries for their submarkets (Greater Boston Submarket Map, Jones Lang LaSalle).

or employees), some move into adjacent suburban markets, with the 128/Mass Pike and Northwest markets foremost among them.

As of late 2010, the regional commercial and industrial real estate market, like the broader regional economy, was continuing to recover slowly from the deep recession of 2008-9. At the onset of the downturn, prices and occupancy levels declined significantly and development activity came to a virtual standstill. A slow but steady recovery began in 2010 with occupancy levels beginning to creep up, prices stabilizing, and plans for modest levels of new development materializing (Table C-2).

While the regional real estate market has weakened over the past two years, declines in demand have not been uniform across industries. In fact, demand from technology sectors have held up reasonably well. A report prepared for Jones Lang LaSalle, a national real estate services firm, notes that the downturn in Cambridge was relatively mild because its industry makeup is heavily concentrated in life sciences, computer software, and professional services, which have experienced relatively small employment declines. The Cambridge sub-market is expected to be one of the first to strengthen because of projected growth in these industries and the small number of new development projects in the pipeline. The report predicts that, "growth will be led by the professional services and information industries, both forecast to surpass pre-recession peaks by 2012. Cambridge and the tech-heavy suburban markets west and north along route 128 should benefit most from this trend." [1]

1 Jones Lang Lasalle, on point: Boston Office Outlook, Q1 and Q3 2010

Table C-2. Greater Boston Office Statistics (Q4, 2010, Jones Lang LaSalle)

	Inventory (million sf)	Total Vacancy	Aver. Asking Rent ($/sf)	YTD Total Net Absorption (million sf)
Boston	60.3	17.8%	$39.90	0.18,
Cambridge	10.6	15.6%	$34.33	0.28
128/ MassPike	21.3	20.5%	$25.54	0.98
Northwest	13.6	20.7%	$22.78	0.16,

While longer-run trends are difficult to predict, they are likely to be driven by broader trends in the regional economy. If life sciences, computer technology, and professional services continue to grow as projected, they are likely to drive demand for real estate and shape the scale and type of new development that occurs. If Watertown continues to show strength in these industries, it will benefit from these trends.

WATERTOWN'S POSITION IN THE REGIONAL MARKET

"Location is everything" is the tagline for MassEcon, a public-private partnership that promotes Massachusetts as a place to do business. Among the 25 to 30 communities within the immediate Boston/Cambridge area, the Town of Watertown has a number of inherent strengths, especially in light of the current economic geography of the region, as well as some limitations that must be recognized. Review of lease data and interviews with local firms and real estate professionals provide a detailed picture of the types of employers Watertown is best positioned to attract.

Positioned between the two technology hubs of Cambridge and the Route 128 west corridor, Watertown can be viewed to some extent as a transitional market. To the east, Cambridge offers direct access to research institutions that are most important to startup technology firms and research labs established by pharmaceutical giants that depend heavily on direct interaction with top researchers. These companies are prepared to pay premium prices for this access, with asking rents for lab space in late 2010 an average $51/sf gross and office space an average of $34/sf, $38/sf in East Cambridge. In Watertown, the cost of lab and office space is at least 30 percent lower than in Cambridge, based on property listings and information provided by real estate professionals.

To the west along the Route 128 corridor in communities like Waltham and Lexington, lease rates tend to be somewhat higher than in Watertown, but by a lower margin than Cambridge (approximately 20 percent). The distinction is less in the rent differential than in the types of space available. Commercial space along Route 128 tends to be in business parks with large blocks of space or large stand-alone corporate campuses. The sale or lease of space of 100,000 sf or greater is common. The Route 128 corridor is also viewed as highly accessible to professional and technical workers who reside in suburban communities.

Watertown's position between these two markets as well as the characteristics of its building stock and other community attributes shape the profile of firms that find Watertown a good fit. Within technology and professional sectors, they tend to be early stage and some established firms that value proximity to Boston and Cambridge but are seeking a lower property price point.

For example, as biomedical firms move from product development to commercialization, immediate access to research institutions may not be important enough to merit the price premium paid for a Cambridge location. A Watertown location provides them with reasonably close proximity to the research infrastructure of Cambridge and Boston as well as the young professional and technology workforce that tends to live in the urban core, with significantly lower property costs. While there currently remains a significant inventory in Cambridge as a result of the weak economy, technology sectors are expected to rebound within the next two years, resulting in tightened inventory, increased lease rates, and a rise in demand in adjacent communities including Watertown.

The size of commercial and industrial spaces found in Watertown make it a good location for small growth firms, but less desirable for firms seeking large blocks of space in modern, efficiently designed business parks or corporate campuses. Most firms locating in Watertown are small. According to federal data, 92 percent of Watertown businesses have 50 or fewer employees.[2] In the important

2 Bureau of the Census, ZIP Code Business Patterns, 2008

REAL ESTATE DEMAND FOR TARGET INDUSTRIES

Life Sciences

R&D and smaller pharmaceutical and medicine manufacturing companies typically look for 20,000 sf or less in multi-tenant buildings. Modern buildings with flexible floor plans are desirable, especially with wet lab space and potential to expand to small batch manufacturing. Access to restaurants and shops and other employee amenities are a plus. Businesses that manufacture medical equipment and supplies are often looking for 10,000 sf or less in multi-tenant buildings, with a preference for lower cost space.

Information Technology

Information technology companies typically look for 10,000 sf of space in multi-tenant properties. Telecommunication and software firms look for Class A space with employee amenities, while film and video production companies more often look for lower cost space in either Class B or industrial loft buildings.

Design

Architecture firms often seek out buildings with interesting character such as converted mill space, while engineering firms are drawn to basic structures that are easy to reconfigure. Both types of firms are interested in relatively low cost space, although convenient parking is a priority to minimize travel time to frequent off-site meetings.

Advanced Manufacturing

Start-up firms in advanced manufacturing typically look for small increments of space (10,000 sf or less) in low cost industrial buildings. Second stage firms might need 15,0000 sf to 50,0000 sf, but as they grow, demands for space over 100,000 sf becomes hard to satisfy in Watertown.

growth sectors of information technology and professional, technical and scientific services, the percentage is slightly lower at 88 percent. These firms typically look for space of 25,000 sf or less, which is typical of the size of spaces leased in Watertown.

The Town has a limited number of blocks of space that can accommodate 100 or more employees. A few current examples are the two former GE Ionics plants, with 129,000 sf and 137,000 sf. The former Boston Scientific properties (with 220,000 sf, including the Aetna Mills), were recently purchased at auction and are being considered for reuse as a multi-tenant facility. The GE Ionics facilities could be suitable for small-scale pharmaceutical or medical device manufacturing, two of the only manufacturing industries in the state with growth potential, but these plants, when they do locate in Massachusetts, tend to locate in more remote greenfield locations.

While viewed as an attractive location for small and early-stage technology and professional firms, Watertown suffers from a few significant disadvantages. Foremost among these is accessibility. Local businesses and real estate professionals note that, while near the Mass Pike, the Town is less accessible from Route 128 and other major arterial roadways, and lacks a mass transit line. This poses inconveniences for employees, both suburban auto commuters and urban transit users. A less tangible but still significant disadvantage is the Town's indistinct image. Both Cambridge and Route 128 have an international reputation as desirable locations for

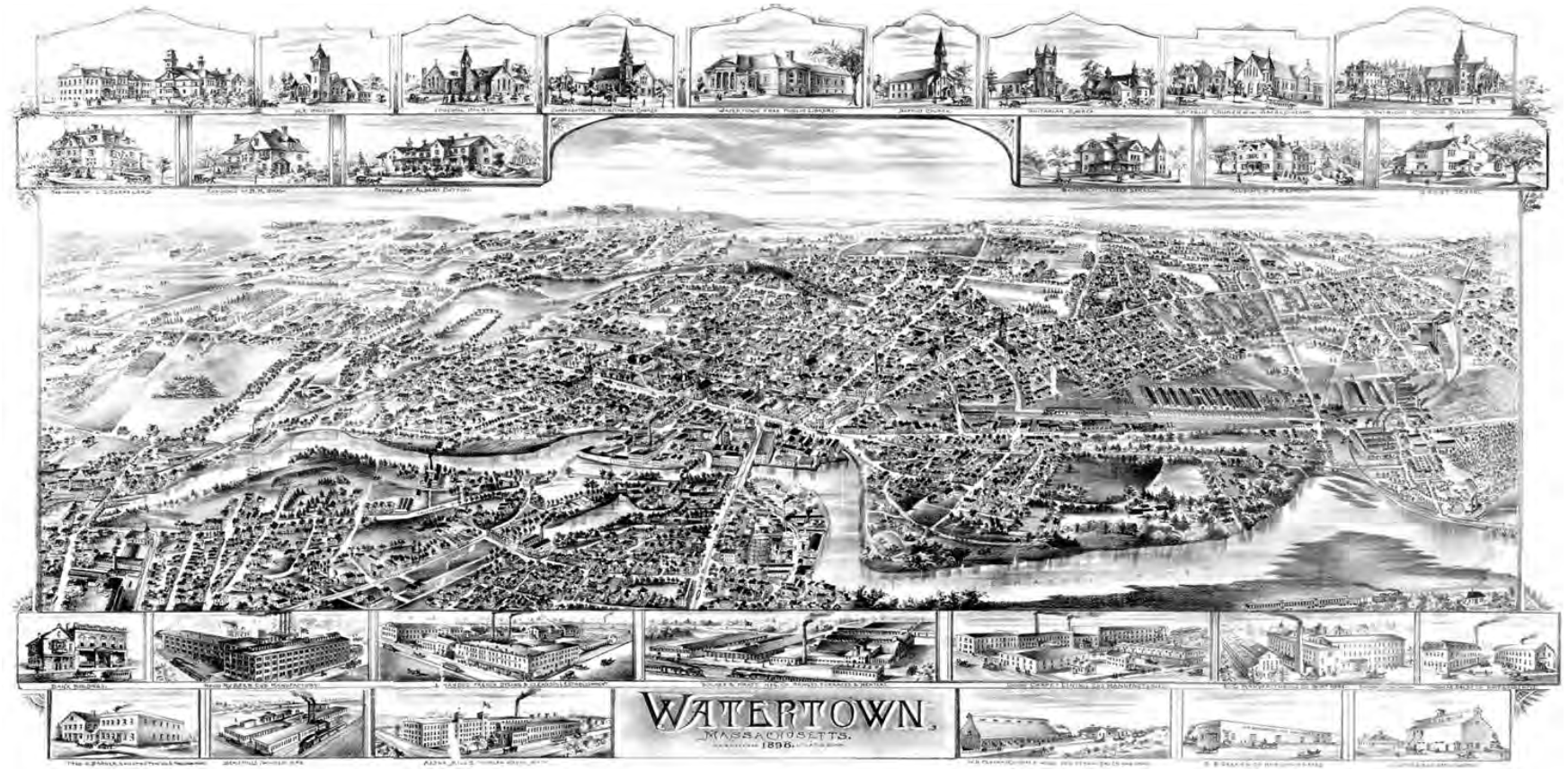


Figure C-3. Bird's eye view of Watertown, 1898, showing the patterns of industrial and residential development

technology firms. While real estate professionals and businesses already located in Watertown see it as a desirable location for certain types of technology firms, it lacks a well-defined image that could generate more attention among firms seeking new locations.

COMMERCIAL / INDUSTRIAL LAND USE PATTERNS

Land use patterns in Watertown are a tightly knit mosaic created by its historic development as a mill town and a streetcar suburb of Boston. The technologies and transportation of each era contributed to the overall patterns of use, while many anomalies today make sense only in light of features that no longer exist.

The Charles River was the original corridor for industrial uses, with the Arsenal strategically sited on navigable waters upstream from Boston (Figure C-3). Clusters of mills at Bridge Street and Watertown Square took advantage of the water power created by dams, with sluiceways that extended power downstream on both sides of the Square. Other mills along Pleasant Street took advantage of the river for disposing of effluents. The Fitchburg railroad, which opened in 1851,

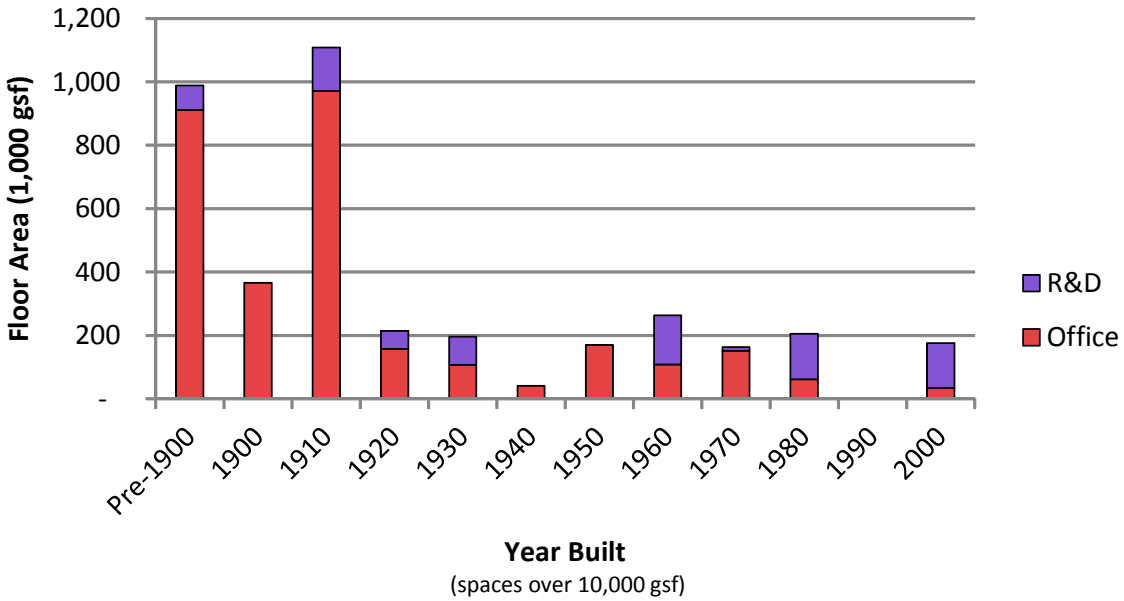


Figure C-4. Distribution of Office and Research & Development Space by Age of Building

connected Waltham to the main line in Cambridge serving both passengers and freight. This corridor opened up additional industrial opportunities along its length from Fresh Pond to the Arsenal and west through the Square and parallel to Pleasant Street. Over the years, factories along both the railroad and the river have been steadily replaced by commercial office, lab, retail, and auto-related uses, either through adaptive reuse or building replacement.

Generally residential neighborhoods occupy the hills and upland areas in Town. These neighborhoods of mostly one and two-family homes developed in close proximity to the streetcar lines on Mount Auburn Street, Belmont Street, and formerly on Galen Street. By the mid-20th century, housing demand and the growing prevalence of automobiles expanded housing developments on the west side of Town, replacing the last of the farmland. Higher density apartments and condominiums have been built in or near former industrial lands, including complexes on Coolidge Avenue, Arsenal Street, Watertown Street, and Pleasant Street.

Located at the original crossing of the Charles River, Watertown Square has always been a crossroads with commercial activity on both sides of the river. The Square remains the center for government and supports restaurants, shops, and services patronized by surrounding offices as well as residents and visitors. Coolidge Square is the commercial center for East Watertown, with specialty foods, banking, small shops, and restaurants. The west side lacks a strong commercial district, although local residents and nearby employees take advantage of the shops and restaurants on West Main near the intersection with Lexington Street. Other smaller centers exist in the neighborhoods, including those at the corners of Belmont and Sycamore, Belmont and Mount Auburn, Orchard and Waverly, Mt. Auburn and Common, School and Walnut, and many other smaller corners.

The redevelopment of former industrial lands has positioned Watertown as a regional center for big box retail with a total of almost one million square feet. This activity is largely concentrated on the East Side along Arsenal Street but also occurs on the South Side with the shopping center on the border between Newton and Watertown. These big box centers serve local residents and also draw customers from Brighton, Cambridge, and other communities in the Boston area.

BUILDING STOCK AND VALUATION

Watertown has a total of approximately 10 million square feet of commercial/industrial floor area sited on a little over 500 acres. These properties include a wide range of building types, but many are one-story industrial properties and some sites are vacant, bringing the average density to less than 0.44 FAR. For firms looking to locate in Watertown, the following building types might be considered:

- Office/flex space in historic buildings: A total of 2.4 million square feet of office space exists in structures built before 1920, including the Arsenal on the Charles, the Watertown Square mill complexes, and the Tufts Health Plan building. These older warehouse and mill buildings offer distinctive environments that are easily adapted for a wide variety of information and design firms and other office users. At the lower end of the rent structure, the Hunt Street mill building has been adapted for many media firms.
- Office/flex space in newer buildings: Watertown has relatively little Class A space in new buildings. In the last 25 years the only new office space has been the infill conversion of the Arsenal structure at the corner of Arsenal Street and Greenough Boulevard, which has little presence and is only 34,000 sf (see Figure C-4).
- Lab/R&D: Lab and R&D buildings range from relatively new buildings tailored to life sciences, such as the Alexandria complex (142,000 sf, built in 2002) to other mid-20th century structures that are being used for engineering research (Doble) as well as life sciences (304 and 396 Pleasant Street and the Wolfe Laboratories building).
- Flexible/Incubator space: A number of buildings serve a vital function as incubator start-up space. The building type is similar to other lab/R&D structures but the ownership arrangement is such that relatively small amounts of space can be leased affordably, which is ideal for start-up companies. Exergen

Flexible/Incubator - 70 Coolidge Hill Road

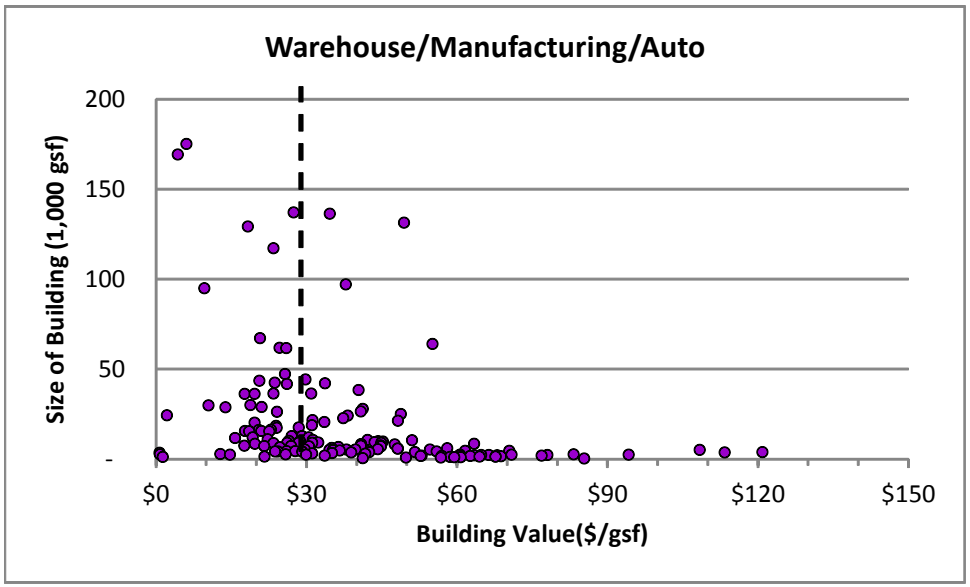
Office/Flexible (Renovated) - Arsenal on Charles

Lab/Research & Development - 313 Pleasant

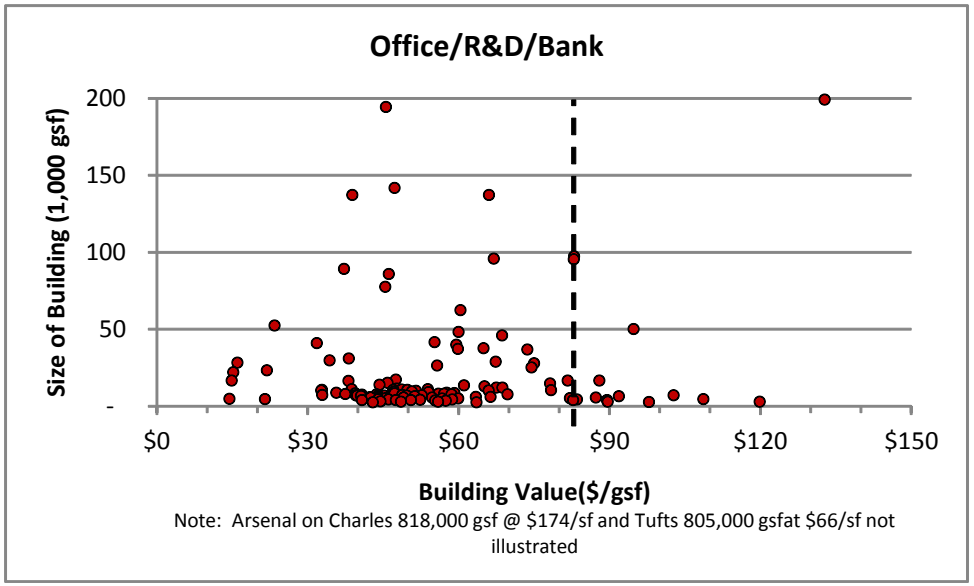
High Tech/Manufacturing - 396 Pleasant Street

Warehouse/Manufacturing - 594 Pleasant Street

Vacant - Haartz Mason (soon to be redeveloped)



Figures C-5. Scatter Plot of Building Values: Warehouse, Manufacturing, and Auto-related Uses



Figures C-6. Scatter Plot of Building Values: Office, Research & Development and Financial Uses

originated in the 313 Pleasant Street building (Cannistraro) before moving across the street; and WiTricity and a number of firms at the Arsenal originated in the 70 Coolidge Hill Road building (Eastern Clothing).

- Manufacturing: there are two key types of manufacturing buildings that remain in use. The first are the large footprint structures, such as United Electric Control and Newlywed Foods, with approximately 100,000 to 200,000 sf. The second are incubator complexes offering spaces of 10,000 sf or less for small businesses, notably the white buildings at the corner of Bridge Street and Waltham Street and the brick buildings at Acton Street and Rosedale Street.
- Warehouse: The largest warehouse structures are found on the East Side (UPS, Verizon, Urell, as well as smaller buildings) occupying a total of approximately 800,000 sf. Another 145,000 sf of warehouse space is found in the Pleasant Street area in buildings ranging from 2,000 to 45,000 sf.
- Vacant: At the time of the writing of this report, a number of significant structures in Town have been vacant for a number of years including Haartz Mason (86,000 sf), GE Ionics (266,000 sf total at Grove Street and Irving Street), Aetna Mills (220,000 sf), and Fluid Management (169,000 sf), each varying in suitability for reuse and status of development process.

Approximately 900,000 sf of additional building space is occupied by automotive uses, parking, storage yards, and trucking terminals. These properties account for 70 acres, representing relatively low densities of 0.31 FAR. The assessed building values for warehouse, manufacturing and auto-related uses averages $29/sf, while the assessed building value for office, research & development, and bank uses averages $83/sf (Figures C-5 and C-6).

Another 1.8 million sf is dedicated to retail space ranging from a small shop with under 1,000 sf to the big box centers that include the Arsenal Mall (478,000 sf), the Watertown Mall (257,000 sf), and the Watertown Street shopping center (225,000 sf). The large big box retail centers have average total property values because the building assessments are offset by the low densities (0.3 FAR). The small retail in Town functions just the opposite: the total property values are higher because of the density (Table C-3).

Table C-3. Comparison of Small Retail, Big Box Retail, and Office Uses in Watertown (2009)

	SMALL RETAIL	BIG BOX RETAIL	OFFICE
Average Density (FAR)	1.3	0.3	0.9
Average Building Assessment ($/sf)	$46	$73	$59
Assess Value/Land Area ($/sf)	$104	$51	$85

Table C-4. Summary of Property Density and Valuation (2009)

	FOCUS AREAS	TOTAL IND/ COMMERCIAL	TOTAL TOWN
Land Area (ac)	173	519	1,603
Building Area (sf)	2,080,000	10,053,000	43,000,000
Average Density (FAR)	0.28	0.44	0.60
Total Assessed Value ($)	$148 million	$972 million	$5,400 million
Assessed Value/Land Area ($/sf)	$20	$43	$70

The property valuations also reflect the mixed levels of condition and investment. While the commercial/industrial land occupies a third of the developable land area in the Town, it represents only about a fifth of the assessed value because of generally lower levels of investment.

Key areas in the Town are particularly underdeveloped, notably parts of the former industrial lands in the East Side, Arsenal North, Union Market, South Side, and the West Side. These areas of focus are defined by the generally low value of the property assessment in relation to the land area, capturing the fact that these tend to be low density, low value buildings or vacant land, in some cases marked by disinvestment.

The lowest performing properties (lowest quartile in terms of value) have approximately half the density and half the value of the average commercial/industrial property. In some cases, businesses within the focus areas are viable retail or manufacturing enterprises that will remain in place. The focus areas, which account for a third of industrial/commercial land in Town, represent tremendous potential for the future of Watertown (Table C-4).

The Arsenal Park offers a variety of playing fields as well as quiet relaxation in an arboretum setting.

Specialty foods make Watertown a unique destination

Watertown is well served by two trolley bus lines and express buses to downtown Boston

The first phase of the Community Path under construction

The Charles River is a recreational resource for boating, running, and bicycling.

Fresh food and plants draw residents from all around the region to Watertown's west end.

APPENDIX D: INFRASTRUCTURE AND THE CIVIC REALM

Businesses make location decisions by taking into account a host of favorable attributes ranging from the very tangible infrastructure networks to the more intangible elements of character related to the physical resources in the area. These factors also influence a company's ability to recruit and retain employees.

Traditionally, infrastructure concerns focus on transportation and basic utilities, but today telecommunications and in particular broadband have become equally important. Transportation considerations are multi-faceted, involving roadways, truck routes, public transit, bicycles, and access to highways, all of which must be correlated with where employees live and origins and destinations for goods and services.

A positive sense of "address" derives from more abstract characteristics, but can influence business location decisions nevertheless. Well-designed streetscapes and parklands define a civic framework for private development. These can be further enhanced with public art and distinctive signage. The quality of the building stock and appealing architecture impart character as well. Historic buildings and natural resources, such as the river, create unique and authentic identity. A place is also defined by the activities within the buildings, especially if there are unique destinations, a variety of stores and restaurants, and a well-balanced mix of uses.

Ongoing investment is necessary to maintain infrastructure and positive character. For municipalities, an ongoing commitment to maintain and improve the public realm of parks, streets, and utilities has to be balanced with a set of priorities that recognizes the annual budget realities. A set of priorities focuses resources where needed most and but also can strategically leverage private investment. The condition of the public realm sets the stage for private companies to maintain their properties and makes it easier to recruit new businesses to fill vacancies as soon as they arise.

Within the public realm, private utilities and state entities are responsible for a network of services that must be managed to the Town's advantage. The availability and service of private utilities, such as electricity, gas, and telecommunications, are key determinants for business location decisions. The

The Charles River is close to most of the employment centers in Watertown.

maintenance of private street poles and overhead wires affects service as well as aesthetics, an issue that the Town has been facing in recent years with the utility companies. Improving transit service in Watertown may be realized in a longer time frame, but the advocacy for such changes should begin as soon as possible given the critical nature of this issue to businesses.

AMENITIES: NATURE, CULTURE, AND RECREATION

Parks are well known as catalysts for redevelopment and contributors to quality of place for residents and employees (Figure D-1). While exact measurement of the effect on business recruitment and retention is not possible, investment in parks helps establish memorable images for communities. Well-designed open spaces also can minimize storm water runoff and improve the quality of the runoff reaching the Charles River.

The bike trail through the town is just emerging after decades of planning and hard work. This infrastructure investment needs to connect to a broader network of walkable streets and bicycle routes. Reinvestment in adjacent properties can reorient them to face toward this new open space amenity.

Entrepreneurs and employees involved in the innovation economy typically place a higher degree of importance on access to running and bicycling trails, both as alternative transportation modes and for fitness. The Arsenal on the Charles is a highly sought after address for such companies in part because of its well-maintained cohesive campus environment, where buildings, streets, and open space are well integrated, and trails lead directly to the river.

Watertown's position on the banks of the Charles River – not to mention the Town name - creates a powerful identity. The Arsenal Park, Mount Auburn Cemetery, the Gore Estate, and the grounds of the Perkins School are all unique features. The Arsenal Center for the Arts has become a regional destination with a repertory theater company, children's theater, artists in residence, and a wide range of musical and black box theater events.

The targeted focus areas are notable for the absence of parks and lack of identity. These areas could benefit from new streets and open space that would create a positive real estate address. New trails and street improvements could connect them to nearby assets such as the river, the new bike trail, and retail districts.

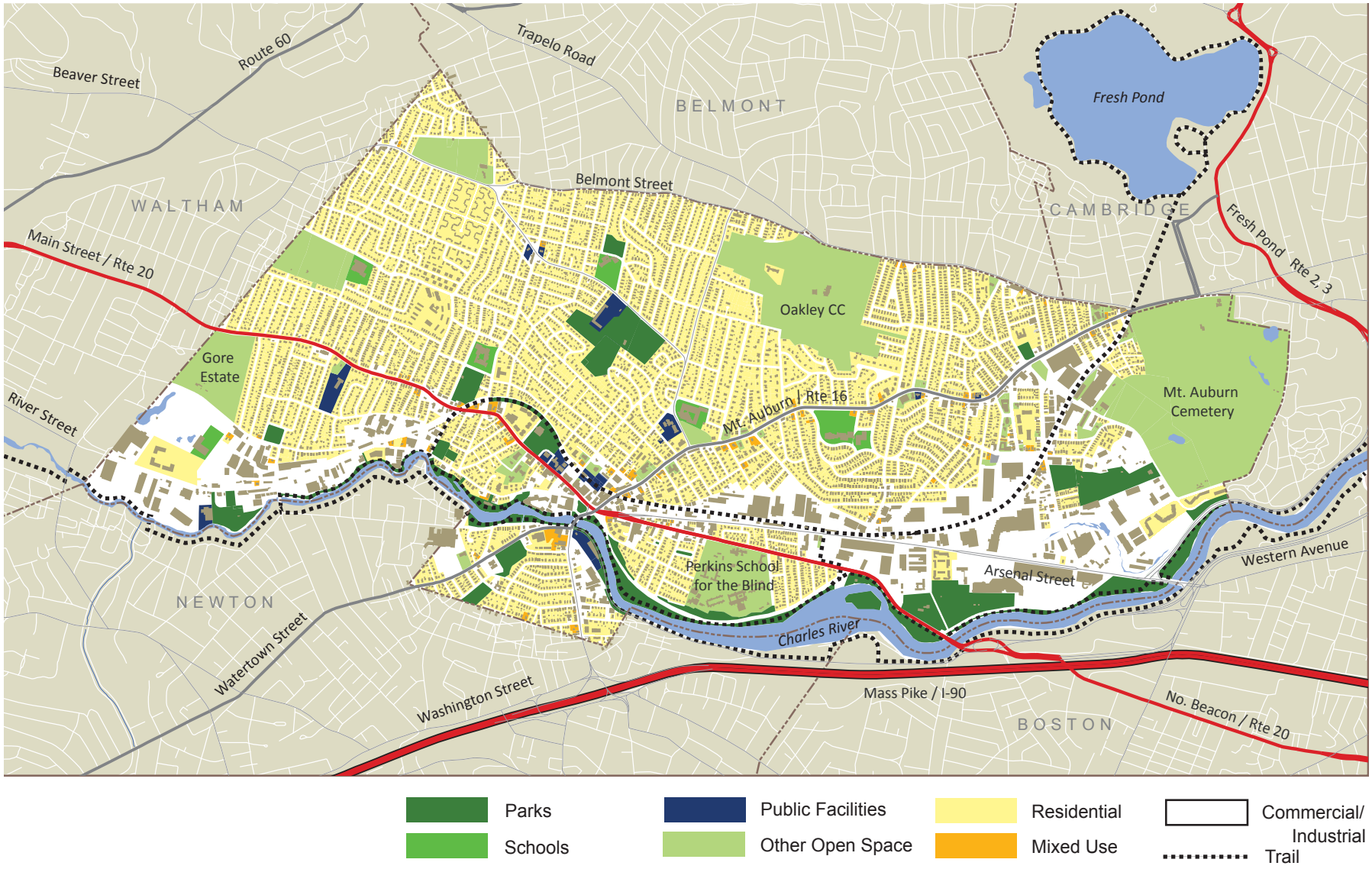


Figure D-1. Parks, Open Space, and Recreational Trails in Watertown

Coolidge Square is renowned for its specialty foods and local restaurants.

RETAIL CENTERS

The innovation economy thrives on interaction and exchange of ideas. Proximity to restaurants, coffee shops, and an interesting mix of small retail stores creates a sense of urbanity that benefits both employees and residents. Ideally, retail activity is embedded in a walkable business district or is within an easy walking distance for employees.

In Watertown, Coolidge Square, Watertown Square, and to a lesser degree the shops on West Main begin to offer this kind of ambiance. A more concerted effort on the part of the Town and the shop owners is needed, however, to bolster the image, environment, and services in these areas.

In addition, the pedestrian connections between the retail centers and the large employment centers need to be strengthened, especially between Coolidge Square and the large employers along Arsenal Street and between West Main and the Pleasant Street corridor.

Coolidge Square and the East Side

Coolidge Square is transit and pedestrian-oriented and has the advantage of visible retail on both sides of the street. The district has an enviable and unique blend of destination shops and restaurants. Approximately 60 percent of the frontage remains dedicated to active retail, including specialty foods, shoppers' goods, convenience retail, and eating and drinking. The remainder of the frontage is professional office, public and personal service, automotive and vacant. The shopkeepers by and large have put considerable effort into storefront displays and well-designed signage. The Square's public realm, however, shows signs of wear and tear and has an undistinguished character, with relatively narrow sidewalks, old street lights, uneven landscape, and no signage or street furniture to complement the private investment.

For employees in the Arsenal Street corridor, destinations for lunch are limited mostly to the Arsenal on the Charles plaza and to the cluster of restaurants on School Street. Coolidge Square, which once had a direct connection to the factory gate at the end of Bigelow Street, is now cut off by fenced utility yards and is further disconnected by uninviting streetscapes on Nichols, Arlington, and Grove Streets. While the Community Path will begin to improve these connections, strategic investment in nearby streetscapes is needed. In the long term, redevelopment of key properties would provide a tremendous opportunity to create a network of connections between Coolidge Square and Arsenal Street.

Watertown Square and the Center

Despite the complicated road and transit systems that converge on Watertown Square, recent streetscape improvements have made a significant difference in upgrading the Square's image. In the center, the restaurants and shops have engaging signage and storefronts, complemented by new sidewalks, historic lamps, and coherent landscape

plantings. The Square is a destination for dining and government services and also offers banking, convenience retail, and cultural attractions. Rear parking is convenient but often oversubscribed. In the long run, the Town is considering a parking garage to increase parking and free up space for additional development.

The edges of Watertown Square, especially on Arsenal Street and North Beacon Street, lack streetscape character and have a mix of vacant and inappropriate uses and blank walls that discourage pedestrian activity. These connections are particularly important since they serve as gateways and also help to close the gap between the Arsenal and the Square. On the south, the pedestrian environment between the Square and the South Side businesses on Water Street and Hunt Street is challenging.

West Main and the West Side

West Main could be thought of as merely an extension of Watertown Square or a crossroads, but actually has the potential to serve as the retail center for West Watertown employees and residents. Between Lexington Street and Waverly Avenue, the cluster of small restaurants, shops, and services begins to serve this role, but at present lacks a coherent character and critical mass of activity. Recent developments that have been set back away from the street edge further break down the sense of character, making large parking lots prominent at this gateway location. Many of the stores have not benefited from any recent investment, and the streetscape lacks any distinguishing character.

Watertown Square has a pedestrian--friendly character despite the busy roads.

West Main serves many needs In the West End but lacks a cohesive character.

Arsenal Street links employment centers in East Watertown and Watertown Square, yet the streetscape lacks consistent street trees, well-designed light poles, district signage, bicycle lanes, and pedestrian-friendly sidewalks.

West Main would benefit from better pedestrian connections to the businesses on the eastern end of the Pleasant Street corridor. The proposed Community Path, which passes through this area, will strengthen the connection but Howard Street is also important. The only other potential for retail services on the West Side is around Russo's in the Pleasant Street corridor, an opportunity that is described in more detail in the Development Opportunities chapter.

TRANSPORTATION AND ACCESS

Watertown is close enough to the center of Boston and Cambridge to be well connected through a variety of transportation networks from airports to bicycles. Most areas of town have a well-developed street network, which alleviates heavy traffic congestion, although Watertown Square will always be a complex intersection. Bicycles have easy access along the street network as well as a number of existing and new regional off-road paths. Walking is quite possible between many destinations, especially in light of the overall scale of the Town, which is approximately one mile by three miles in dimension.

Road Connections and Streetscape

Watertown's street network provides access for businesses to connect to regional highways, the airport, workers, clients, and transit centers in Cambridge, Belmont, and Newton. Streets need to accommodate not only cars, but also truck and bus routes, bicycles, and pedestrians. Image and identity is not insignificant for business decisions, since clients, funders, and recruited employees form an impression about the success of a business enterprise based on their sequence of arrival. The return on investment is difficult to measure in economic terms, but street improvements do benefit residents and employees, as well as the businesses themselves.

Watertown has a fine grained network of streets, but the arterial and connector streets form the backbone of the system, with the highest traffic volumes and the most direct access to most businesses. This hierarchy of streets should inform streetscape guidelines as well as investment decisions. A few key arterials in Town have been reconstructed but ongoing work is necessary to improve the design character of these corridors.

The major arterials – Arsenal Street, Pleasant Street, Main Street, Mount Auburn Street, Galen Street, and Watertown Street – should feature high quality and consistent design elements such as

generous sidewalks, granite curbs, street trees, and where possible, underground utilities. These are urban streets, not highways. Streetscape design should balance automobile and alternative transit modes by narrowing travel lanes, expediting buses, and allowing for on-street parking and/or bicycle lanes where possible to calm traffic.

A second priority for streetscape investment is to focus on primary addresses within the businesses districts, especially those that have become dilapidated. In particular, Coolidge Avenue, Arlington Street, and Grove Street should feature a more pedestrian and landscaped character. A third tier of investment should be targeted to the lattice work of north south streets, which serve as gateways into Town for many: Lexington Street, Waverly Street, Common Street, Irving Street, and School Street.

The coordination of public streetscape and appropriate private development is needed at key gateways and points of arrival. Notable examples are Arsenal Street at the Charles River, Galen Street from the MassPike, Pleasant Street from Waltham, West Main, and Coolidge Square.

Public Transit

Businesses in Watertown depend in considerable measure on the quality of the MBTA service, particularly the Route 70/70A buses, the express buses that stop at either end of Galen Street, and the Route 71 Bus. Improved transit service in Watertown will benefit businesses, their employees, and local residents. With greater reliance on transit, automobile demand decreases resulting in less congestion and a reduction of land set aside for parking.

The vast majority of Watertown's employment occurs within a quarter mile of the Route 70/70A bus. The route originates in Cambridge's Central Square (with connection to the Red Line subway), links to Harvard's future science center, and follows Arsenal Street to Main Street, continuing on to downtown Waltham and the Route 128 business parks and commuter rail station. A consistent concern expressed by employers is the difficult commute for employees living in downtown Boston and Cambridge travelling to jobs in Watertown, basically a reverse commute.

Bus Rapid Transit (BRT) along a portion of or the entire Route 70 bus route would upgrade this service considerably. BRT varies widely in its elements, but typically includes newer vehicles, consistent headways, expedited traffic signals, improved shelters, dedicated lanes where possible, and state-of-the-art information for riders.

Currently, headways on the combined Route 70/70A average 15 minutes, ranging from 7 to 50 minutes and weighted toward serving a traditional bedroom community trip to downtown. Even during peak hours, the service is inconsistent with wait times of 10 minutes for one bus and 20 minutes for the next. After 8 pm, a rider must wait 35 minutes to 50 minutes. The comparison between the bus routes is shown in Table D-1.

Table D-1. MBTA Bus Service in Watertown

WEEKDAY ROUTES	PEAK HOUR HEADWAY (MINUTES)	AVERAGE DAILY HEADWAY (MINUTES)	HEADWAY MIN AND MAX (MINUTES)
#70/70A ARSENAL STREET	11	15	7 – 50
#71 MOUNT AUBURN STREET	7	10	4 - 20
#73 BELMONT STREET	5	9	1 - 46

The Pleasant Street corridor is not well served by public transit. In the western section, the Route #70/70A bus on Main Street is at least a ten minute walk, and the lack of a consistent north/south street network makes this walk difficult. The Express Route #558 travels along Pleasant Street between Seyon Street and Bridge Street and stops in several locations before going directly downtown. This bus is only scheduled for two trips during peak hours, however.

Watertown businesses are not well served by the commuter rail system. The closest stations are Belmont Waverly and Newtonville, and bus connections from these locations to Watertown jobs are so inconvenient as to be impractical. There are several express buses that leave from the MBTA bus terminal on the South Side, but they tend to serve the peak hours and are less useful for employees who work unconventional hours.

Bicycles are not just recreational, but also serve as an important form of commuter transportation

Bicycles

For those looking for alternative transportation modes, Watertown has excellent bicycle paths along the Charles River and is in the process of building a new Community Bicycle Path. The riverfront trails extend the length of the Town and pass close to most major employers, making commuting between Watertown and Boston and Cambridge relatively easy.

The new Community Bicycle Path follows the old railroad line from Fresh Pond to the Star Market on Belmont Street, south to the Arsenal and west to Watertown Square and the Pleasant Street corridor (refer to Figure D-1). Because of the Town's industrial heritage, most of today's businesses line this route. The path is being built in phases, but ultimately will connect Cambridge residents and commuter rail and subway lines at Alewife with Watertown jobs.

Signage and Wayfinding

Signage and wayfinding are relatively easy techniques to establish a clear identity, while facilitating movement around Town. A well designed graphic system delivers coherent information depending on where you are in your journey, moving from the regional highways to key gateways to local districts and finally to parking and the pedestrian experience. In this way, key destinations in Town can be highlighted – Watertown Square, Coolidge Square, Mount Auburn Cemetery, Perkins School for the Blind, Gore Estate, Charles River, the Community Bike Path – and districts can be reinforced as a way of understanding business addresses – such as East Side, North Arsenal, Arsenal, Union Market District, South Side, and West Side. The graphics should reinforce Watertown's identity, which might include an aspect of the past but should really project a positive image of the future.

PUBLIC AND PRIVATE UTILITIES

In urban areas such as Watertown, businesses rely on basic sewer, water, and storm sewers, all of which require ongoing maintenance and upgrades by the Town. Watertown has the advantage of a robust telecommunications network with several choices for broadband. From an aesthetic point of view, overhead wires and poles must be better managed, and ultimately, investment in underground conduit would be more in character with urban business districts.