

IV. ECONOMIC DEVELOPMENT

INTRODUCTION

The focus on economic development issues enables local decision-makers and Chelmsford Town Meeting to determine how they wish to target economic growth in the future so as to provide an equitable balance with quality of life issues that attract residents, businesses and visitors to the Town of Chelmsford. Economic growth generates property taxes that provide local public services, creates new contracting opportunities for local businesses, provides local employment and connects the Town of Chelmsford with the national, state and regional economies. The Town can establish its own direction through the targeting of economic growth within the community even though it has limited control over what happens in the Greater Lowell economy. At a time when the nation, state and region are facing the most severe recession since World War II, the Town needs to address how it can retain its existing business community, while attracting other businesses. The Town needs to focus on the many redevelopment opportunities available in the community, as well as the more limited development opportunities. Since the Town's Comprehensive Master Plan was last completed in 1996, there have been significant changes in the overall economy. Do the economic development goals outlined in the 1996 Chelmsford Master Plan still apply? Have these been replaced by the goals in the 2008 Economic Development Plan or should there be new goals established as part of the 2010 Master Plan Update? Should the community work to retain existing businesses and to attract new businesses that reflect the Town's current priorities? Should the Town build upon its economic development efforts during the past two years and actively market the community as a business-friendly community? Finally, does the community see a benefit in working with the private sector to improve the quality of life in Chelmsford?

Goal Statement: *Establish an active economic development program to retain and attract "growth" businesses which enhance the town's tax base and create well-paying jobs, in a manner that balances job creation with the quality of life.*

- *Market the Town of Chelmsford through the Economic Development Commission.*
- *Streamline and improve the Town's development permitting process to encourage targeted commercial redevelopment activities, such as through expedited permitting along Route 129/Billerica Road, the use of the Village Center and Mill Reuse Overlay Districts, as well as the Redevelopment Districts along Route 110/Littleton Road and Chelmsford Street.*
- *Analyze and encourage economic development opportunities in those areas identified in the 2008 Chelmsford Economic Development Plan: Center Village/Vinal Square, the Route 129 Technology Corridor, Drum Hill/Technology Drive, North Chelmsford Mill District, the Routes 3/40 Interchange and Route 110/Littleton Road and Chelmsford Street through incentivized redevelopment bylaws.*
- *Address infrastructure and workforce development issues in order to attract viable businesses.*
- *Focus on "green" technology as a future business cluster for the community.*

The Northern Middlesex Council of Governments (NMCOG) completed the *Greater Lowell Comprehensive Economic Development Strategy (CEDS) for 2004-2008* in 2004 in order to qualify the Greater Lowell region for federal funding from the Economic Development Administration (EDA) of the U.S. Department of Commerce. This initial document provided an overview of the economic conditions and needs of the Greater Lowell region (the City of Lowell and its eight surrounding suburbs – including Chelmsford) and provided updated information from the 2000 U.S. Census, as well as other federal, state, local and private data sources. A Vision Statement, specific Goals and Objectives and a detailed Action Plan were developed as part of the document. The ten goals identified in the document demonstrate that economic development is comprised of many components, including workforce development, transportation systems and technology. This section of the Master Plan has been organized in much the same way and is designed to tie into the broader regional economic development plan. However, the Town of Chelmsford needs to develop consensus on what role it wishes to play in the larger regional economy by determining the specific identity it wishes to develop in order to attract the types of businesses desired by the community. More recently, NMCOG completed its *Annual CEDS for 2008*, which provides an update for the original Five-Year CEDS document.

CHARACTERISTICS OF THE WORKFORCE

Over the past twenty years, the workforce in Chelmsford has become more highly educated and is now employed in higher paying, knowledge-based industries. This section examines trends and changes in the types of industries in which the Chelmsford workforce is employed, the wages they are earning, and trends in employment over the past decade. It also examines layoffs in the region which have affected the local workforce.

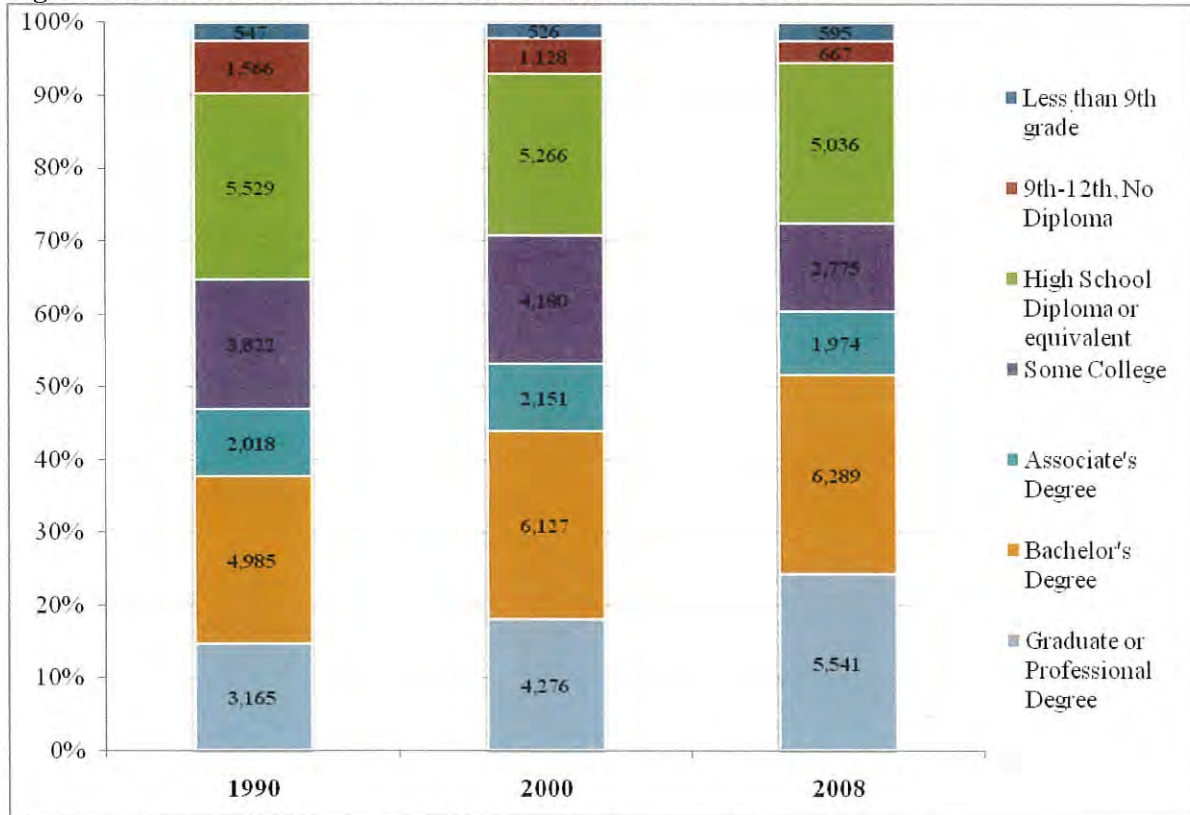
Educational Attainment

Figure 3.1 on the following page compares educational attainment among Chelmsford residents 25 years and older between 1990 and 2008. In 1990, approximately 9.8% (2,113) of adults living in Chelmsford had not earned a high school diploma or its equivalent. In 2000, that rate had decreased to 7% (1,654) and by 2008, it had dropped to 5.5% (1,262). Adults who had earned a high school diploma accounted for 25.5% in 1990, 22.3% in 2000, and 22% in 2008.

For all three time periods, the majority of adults had completed some college. In 1990, Associate's Degree holders comprised 9.3% (2,018) of adults, while those with Bachelor's and Advanced Degrees accounted for 23% (4,985) and 14.6% (3,165) respectively. Over the next two decades, educational attainment among adult residents shifted significantly. In 2008, approximately 8.6% (1,974) of all adults over the age of 25 had earned an Associate's Degree, 27.5% (6,289) of all adults had earned a Bachelor's Degree, and 24.2% (5,541) of all adults had earned an Advanced or Professional Degree. In essence, the changes in the types of positions

workers are employed in—which is to say, higher skilled, more training intensive, and better paying jobs-- is consistent with the changes in both educational attainment and the distribution of incomes among residents that was addressed in the Introductory chapter of this Master Plan.

Figure 3.1: Educational Attainment in Chelmsford: 1990-2008



Source: 1990 and 2000 US Census; 2006-2008 American Community Survey

Employment Sectors for Chelmsford Residents

Chelmsford residents work in virtually every industry, from skilled labor fields such as biotechnology, engineering, manufacturing and construction, to food services and retail, business, law, and public administration. Table 3.1 on the next page shows the primary occupations by industry for Chelmsford residents in 2000 and 2008.

This table illustrates the decline in employment opportunities affecting Chelmsford residents since the onset of the present economic recession, with all but three industry categories experiencing decreases over the past nine years. For the past decade, workers employed in the education, health care, and social services fields have made up the largest portion of working Chelmsford residents, employing 4,272 residents in 2000 and 4,005 residents in 2008. Manufacturing, which employed 3,549 Chelmsford residents in 2000 (the second largest industry employing residents) also declined, although in 2008 it was still the third largest sector

employing Chelmsford residents. The industries that experienced growth include Professional, Scientific, Management, and Administrative and Waste Services (15.2%), Finance, Insurance, and Real Estate (Including leasing) (18.8%), and “Other” services excluding Public Administration (6%).

**TABLE 3.1
PRIMARY EMPLOYMENT INDUSTRIES FOR CHELMSFORD RESIDENTS IN 2000
AND 2008**

Industry	2000	2008	Percent Change, 2000-2008
Agriculture, Forestry, Fishing and Hunting, and Mining	39	22	-43.6
Construction	904	842	-6.9
Manufacturing	3,549	2,709	-23.7
Wholesale Trade	523	408	-22
Retail Trade	1,802	1,693	-6.0
Transportation, Warehousing, and Utilities	546	356	-34.8
Information	990	769	-22.3
Finance, Insurance, and Real Estate (Including leasing)	994	1,181	18.8
Professional, Scientific, Management, and Administrative and Waste Services	2,531	2,915	15.2
Educational Services, Health Care, and Social Assistance	4,272	4,005	-6.3
Arts, Entertainment, Recreation, Accommodation, and Food services	917	868	-5.3
Other services, except Public Administration	510	479	6.0
Public Administration	590	441	-25.3

Source: 2000 US Census, 2006-2008 American Community Survey

Journey to Work and Commuting Patterns

In addition to understanding the industries in which Chelmsford residents are employed, it is important to know how many residents work in town and across the region. It is also important to know how many workers are commuting into Chelmsford for employment. Table 3.2 below shows where Chelmsford residents worked in 2000, while Table 3.3 on the following page illustrates where people who work in Chelmsford commuted from.

**TABLE 3.2
JOURNEY TO WORK DATA FOR CHELMSFORD RESIDENTS IN 2000**

Place	Total Number of Workers
Chelmsford	3,720
NMCOG Region (except Chelmsford)	4,094
New Hampshire	713
Boston	880
Within I-495	4,875
Outside I-495	883
Within Route 128 (Greater Boston)	2,654

Source: 2000 US Census

According to Table 3.2 above, the greatest percentage of Chelmsford residents worked within the I-495 boundary (27.4%). Approximately 3,720 Chelmsford residents (20.9% of the local workforce) worked in town, and another 23% of residents worked in one of the other eight communities in the NMCORG Region. Approximately 4% of residents commuted to jobs in New Hampshire, 4.9% of Chelmsford residents commuted into the City of Boston, and 14.9% of residents worked within the Greater Boston/ Route 128 area. Another 5% of Chelmsford residents commuted outside of I-495 for work.

As Table 3.3 illustrates, the greatest percentage of jobs in Chelmsford in 2000 were filled by residents living within the Greater Lowell Region (7,490 or 36.2% of all residents across the region). The second highest percentage of local jobs were filled by Chelmsford residents (18%), followed by residents of New Hampshire (13.4%), residents of the Greater Boston/ Route 128 region (11.4%), and those residents living within I-495 (11.1%).

**TABLE 3.3
JOURNEY TO WORK DATA FOR WORKERS EMPLOYED IN
CHELMSFORD IN 2000**

Place	Total Number of Workers
Chelmsford	3,720
NMCOG Region (except Chelmsford)	7,490
New Hampshire	2,765
Boston	640
Within I-495	2,291
Outside I-495	1,420
Within Route 128 (Greater Boston)	2,350

Source: 2000 US Census

Using a methodology developed by the U.S. Census Bureau, Chelmsford's daytime population can be calculated using the Journey to Work data provided above. Given that 14,190 Chelmsford residents commute outside of the town for work, but 18,967 people commute into Chelmsford for work, the town's daytime population for 2000 was estimated to be 38,635 people. In other words, Chelmsford's daytime population is 4,777 people greater than its total resident population. Although more recent Journey to Work data is not available for the town, one can assume that recent years have followed similar trends. Updated Journey to Work data will be available from the 2010 U.S. Census when it is released.

In 2007, the vast majority of Chelmsford residents ages 16 and older commuted to work by car, either alone or, less frequently, in carpools. Among those residents driving to work, 78.2% of all residents worked in Middlesex County, another 16.3% of total residents worked in a different county in Massachusetts, and 5.5% of residents worked in a different state. For public transit commuters, 52% of Chelmsford residents worked in the same County, while 48% of residents worked in a different county in Massachusetts. For all residents, regardless of mode of transportation, approximately 39% had a commute time of less than twenty minutes; another 41.4% of residents had commutes between twenty and forty-five minutes, and 19.7% of residents commuted for longer than forty-five minutes.

During the public visioning sessions, a number of residents and local business owners repeatedly articulated their desire to have a commuter rail stop sited in Vinal Square. This idea will also be addressed in the Transportation chapter of this Master Plan. What is notable about this commuting analysis is that a significant portion of people living in Chelmsford appear to be working locally, and as such, contributing to and boosting the local and regional economies.

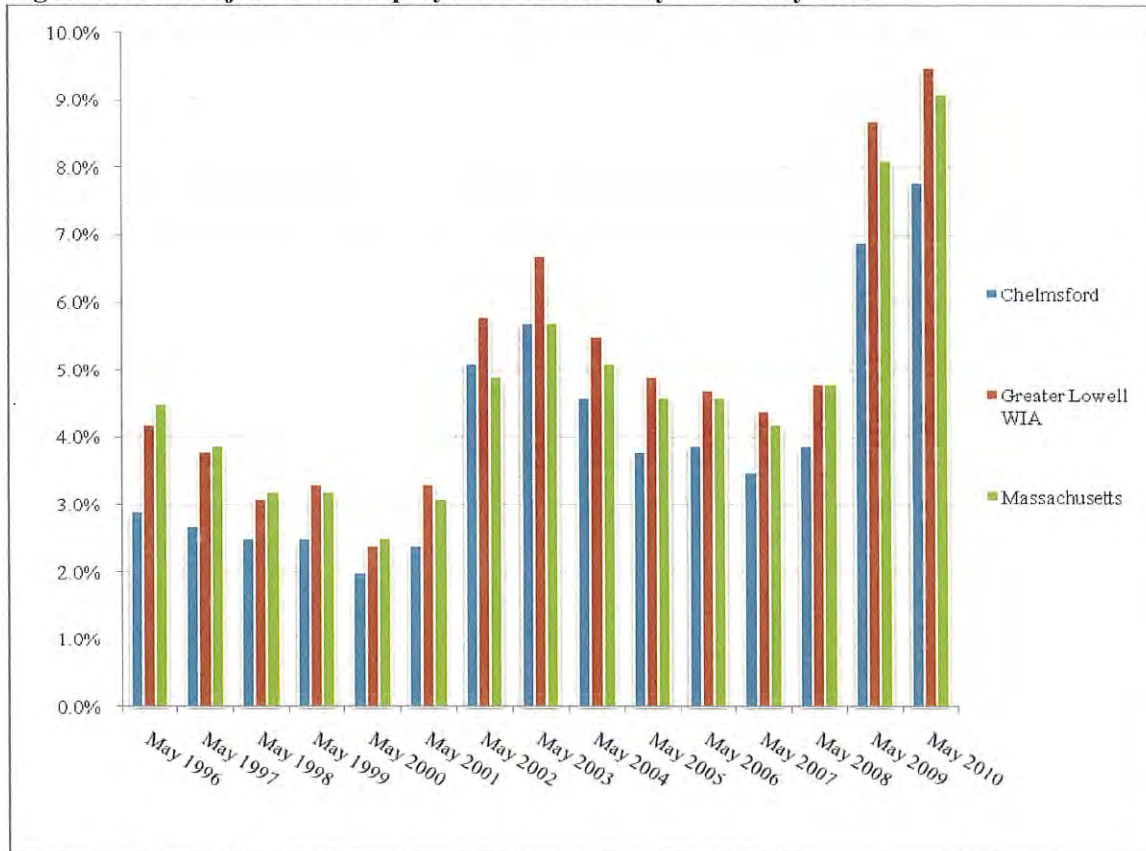
Employment Levels and Unemployment

Since the publication of the town's Master Plan in 1996, and up until December 2007, employment opportunities for the Chelmsford workforce generally remained strong. Employment levels consistently increased between 1996 and 1999, but then declined sharply during the economic recession of the early 2000s. Prior to the current economic recession, the lowest levels of employment in the town occurred between January 2002 and January 2004.

The present economic recession has had a more serious impact on the local labor force than any other economic downturn in the past three decades. Between January and September 2009, employment levels consistently dropped, with the employed and unemployed workforce averaging 17,541 and 1,347 respectively. While the local unemployment rate decreased slightly during the months of October 2009 and November 2009 (7.4% each month, respectively), it increased again in December 2009 (8.0%) and January 2010 (8.6%). Since January 2010, the local unemployment rate has ranged from 7.7% in March to 8.1% in February. As of May 2010, the local unemployment rate stood at 7.8%.

Unemployment rates for similar time periods are represented in Figure 3.2 on the next page. Examining these rates over time reveals that employment levels were extremely high during the second half of the 1990s with unemployment rates averaging less than 3%. In the early 2000s, unemployment levels increased, in part due to the layoffs in the information technology and computer manufacturing fields, but then dropped again during the middle of the decade. Since the beginning of the current economic recession, unemployment in Chelmsford has more than doubled, rising from 3.9% in May 2008 to a peak of 8.6% in January 2010, when 1,589 local workers were unemployed.

Figure 3.2: Unadjusted Unemployment Rates: May 1996-May 2010



Source: Executive Office of Labor and Workforce Development LURR Reports

Given that the majority of the Chelmsford residents work in the region, we can expect that this increase in unemployment is partially due to layoffs occurring across the region. Table 3.4 on the next page shows the scheduled layoffs by community in the region between January 2008 and April 2010. Since January 2008, 2,080 workers in the NMCOC region have been impacted by plant layoffs, 535 of which have been with Chelmsford businesses (the layoff for Henkel Corporation in Billerica is scheduled to begin as of September 30, 2010).

Layoffs have occurred for several reasons in Chelmsford. ConMed Endoscopic Technologies, for example, laid off 45 workers after consolidating their companies. Arbor Networks laid off 19 workers due to financial reasons, and Sycamore Networks laid off 46 workers due to foreign competition. Despite these regional layoffs, it's important to note that Chelmsford's unemployment rates have remained consistently lower than the regional and Massachusetts rates, as reflected above in Figure 3.2.

**TABLE 3.4
LAYOFFS IN THE NMCOG REGION: MARCH 2008 – APRIL 2010**

Community	Company	Effective Date	Employees Affected
Chelmsford	Daily Racing Form	5/17/2008	7
	Fidelity National Information	5/22/2008	30
	Kronos Inc.	9/30/2008	87
	Potpourri Group, Inc.	12/24/2008	60
	Brooks Automation, Inc.	3/1/2009	190
	Brooks Automation, Inc.	In Progress	51
	Sycamore Networks, Inc	8/13/2009	46
	ConMed Endoscopic Technologies	10/26/2009	45
	Arbor Networks	11/30/2009	19
Billerica	Jabil Circuit	3/28/2008	30
	GSI Lumonics Trust, Inc.	4/28/2008	8
	Nutcracker Brands	5/1/2008	90
	Tel Epion, Inc.	4/18/2009	18
	Jabil Circuit	10/31/2008	70
	Jabil Circuit	11/25/2008	20
	Jabil Circuit	9/30/2009	315
	Schott Solar, Inc.	12/22/2009	215
	Iron Mountain	12/23/2009	18
	Welch Foods, Inc.	2/1/2010	9
Henkel Corporation	9/30/2010	50	
Lowell	Adden Furniture	2/19/2008	70
	Microsemi Microwave Products	4/11/2008	8
	Adden Furniture	6/1/2008	13
	Adden Furniture	9/3/2008	15
	Doubletree Hotel	8/26/2009	55
	GES US, Inc.	9/15/2009	92
	Cass Information Services	9/8/2009	48
	Classic Floors, Inc.	9/21/2009	2
Tewksbury	DJ Reardon Company	7/14/2008	56
	Avid Technology, Inc.	12/23/2008	73
Westford	Sonus Networks, Inc.	9/1/2009	40
	AECOM	12/22/2009	30
Greater Lowell	Internal Revenue Service	6/1/2009	200

Source: Massachusetts Rapid Response Team

EXISTING ECONOMIC AND BUSINESS CONDITIONS

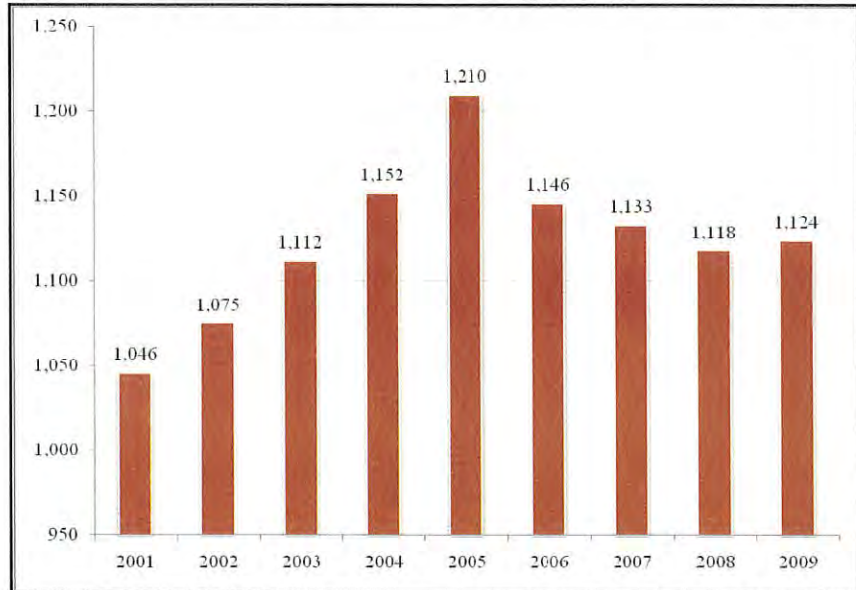
This section examines the existing economic and business conditions in Town over the past seven years. It begins by analyzing business patterns, including changes in the number of establishments, average monthly employment, and wages. An examination of changes in the

industry composition in Town is then provided, followed by a discussion of local major employers and some of the characteristics of Chelmsford businesses.

Business Patterns

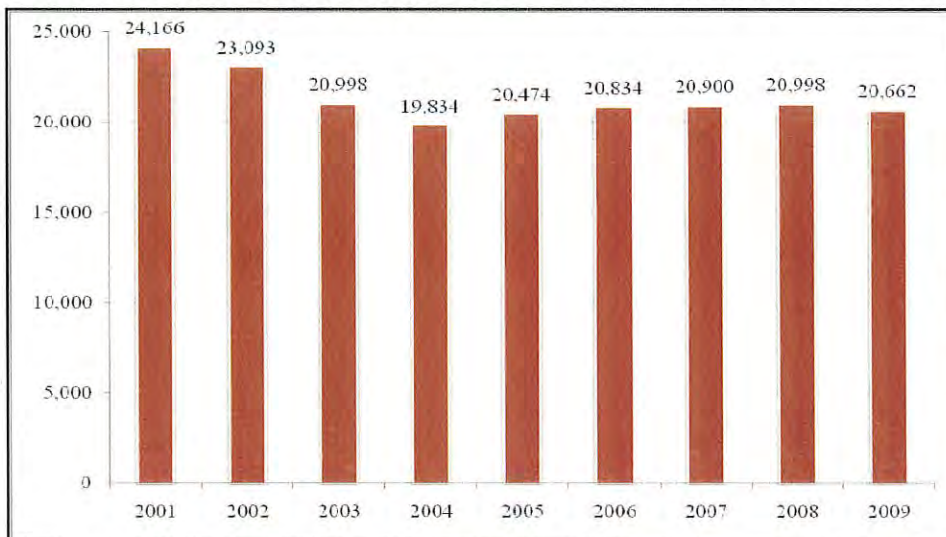
Trends in the Chelmsford workforce are mirrored by the business patterns of establishments operating in Town over the past decade. Figure 3.3 illustrates changes in the total number of establishments between the first quarter of 2001 and the first quarter of 2009, while Figure 3.4 represents the Average Monthly Employment for all industries during the same period of time. As previously discussed, the layoffs in the early 2000s can be seen in the drops in average monthly employment between 2001 and 2003, although notably, the total number of establishments during those years consistently grew.

Figure 3.3: Total Number of Establishment in Chelmsford, 2001-2009 (Q1)



Source: Executive Office of Labor and Workforce Development ES-202 Reports (March 2009)

Figure 3.4: Average Monthly Employment for Chelmsford Establishments, 2001-2009



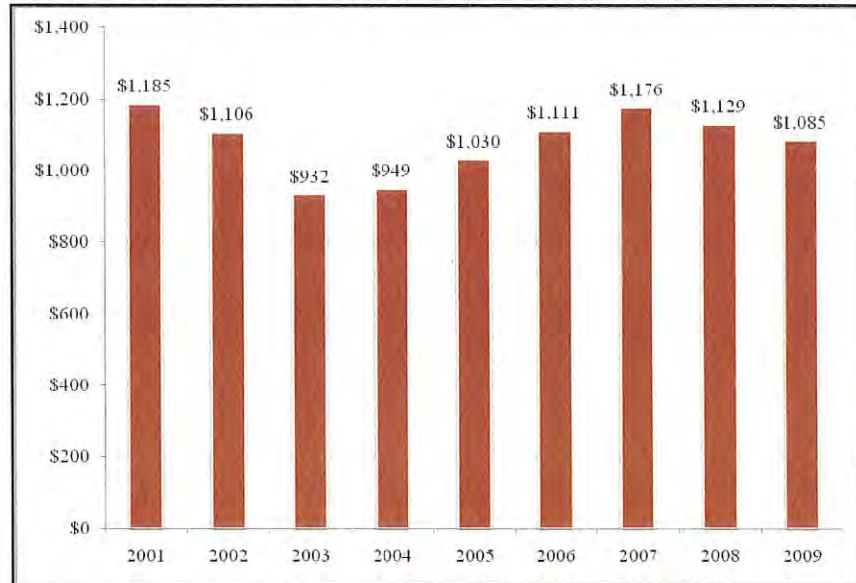
Source: Executive Office of Labor and Workforce Development ES-202 Reports (March 2009)

This trend may indicate a decrease in employment levels at large corporations and growth in the number of small businesses operating in Town. Although the total number of establishments in Town declined every

year between the first quarters of 2004 and 2008, the first quarter of 2009 showed business growth, with 78 more businesses operating than in 2001.

Another indicator of local economic vitality is the average weekly wages paid to workers. Figure 3.5 illustrates changes in average weekly wages (across all industries) paid to workers employed in Chelmsford for the first quarter of each year between 2001 and 2009. Consistent with the economic recession that affected the region in the early 2000s, average weekly wages decreased from \$1,185 in 2001 to \$932 in 2003. Between 2004 and 2007, average weekly wages increased modestly from \$949 to \$1,176, but the 2007 wages were still slightly lower than the 2001 average weekly wage figures.

Figure 3.5: Average Weekly Wages for Chelmsford Workers, 2001-2009 (Q1)



Source: Executive Office of Labor and Workforce Development ES-202 Reports (March 2009)

Since the onset of the current recession, average weekly wages across all industries have consistently dropped, down 4% (\$47/ week) between 2007 and 2008 and an additional 3.9% (\$44/week) between 2008 and 2009. The average weekly wages paid to workers employed in Chelmsford during the first quarter of 2009 were one hundred dollars less than the average weekly wages paid in 2001. This point is of particular concern given the 21% rate of inflation between 2001 and 2009. In other words, one dollar (\$1.00) in 2001 had the same buying power as \$1.21 in 2009.

Industry Composition

The composition of industries in Chelmsford is diverse, ranging from high tech research and development firms to social services; restaurants to boutiques to utilities contractors. Fewer people from town are employed in manufacturing now than twenty years ago, but employment in construction, finance, and information technology has increased. The composition of industries operating in Chelmsford has become more diversified, as reflected in Table 3.5 on the next page.

In terms of the goods-producing domain, durable and nondurable goods manufacturing establishments decreased by -36.6% and -10.5%, respectively, between the first quarter of 2001 and 2009. Construction establishments, however, increased by 30.9%, from 97 establishments in 2001 to 127 in 2009.

Many of the service-providing industries, such as educational services (11.8%), financial and insurance businesses (14.5%), health care services (13.1%), accommodation and food services (14.5%), and “Other Services”, such as Repair and Maintenance services, Personal Care Services, Professional Organizations, and Private Households, increased substantially between the first quarters of 2001 and 2009. Service industries experiencing decline during this time frame included wholesale trade establishments, which declined by nearly a quarter (-22.1%) between 2001 and 2009, as well as Real Estate and Leasing (-9.8%), Arts, Entertainment, and Recreation (-14.3%), and Retail Trade (-4.5%). These trends are consistent with larger issues related to the emergence of a service-oriented economy in the 21st century, a trend which has been impacting the region, state, and nation as a whole for the past twenty years.

TABLE 3.5
CHANGES IN LOCAL INDUSTRY COMPOSITION: 2001 TO 2009 (Q1)

Number of Establishments	2001 (Q1)	2009 (Q1)	Percent Change: 2001-2009
Total, All Industries	1,046	1,124	7.5
Goods-Producing Domain	194	195	0.5
Agriculture, Forestry, Fishing & Hunting	4	4	0
Construction	97	127	30.9
Durable Goods Manufacturing	71	45	-36.6
Non-Durable Goods Manufacturing	19	17	-10.5
Service-Providing Domain	852	929	9.0
Utilities	3	4	33.3
Wholesale Trade	95	74	-22.1
Retail Trade	112	107	-4.5
Information	25	25	0
Finance and Insurance	40	45	12.5
Real Estate and Rental and Leasing	41	37	-9.8
Professional and Technical Services	159	161	1.3
Management of Companies	0	7	100
Administrative and Waste Services	64	70	9.4
Educational Services	16	20	25.0
Health Care and Social Assistance	107	121	13.1
Arts, Entertainment, and Recreation	14	12	-14.3
Accommodation and Food Services	62	71	14.5
Other Services, except Public Administration	84	133	58.3

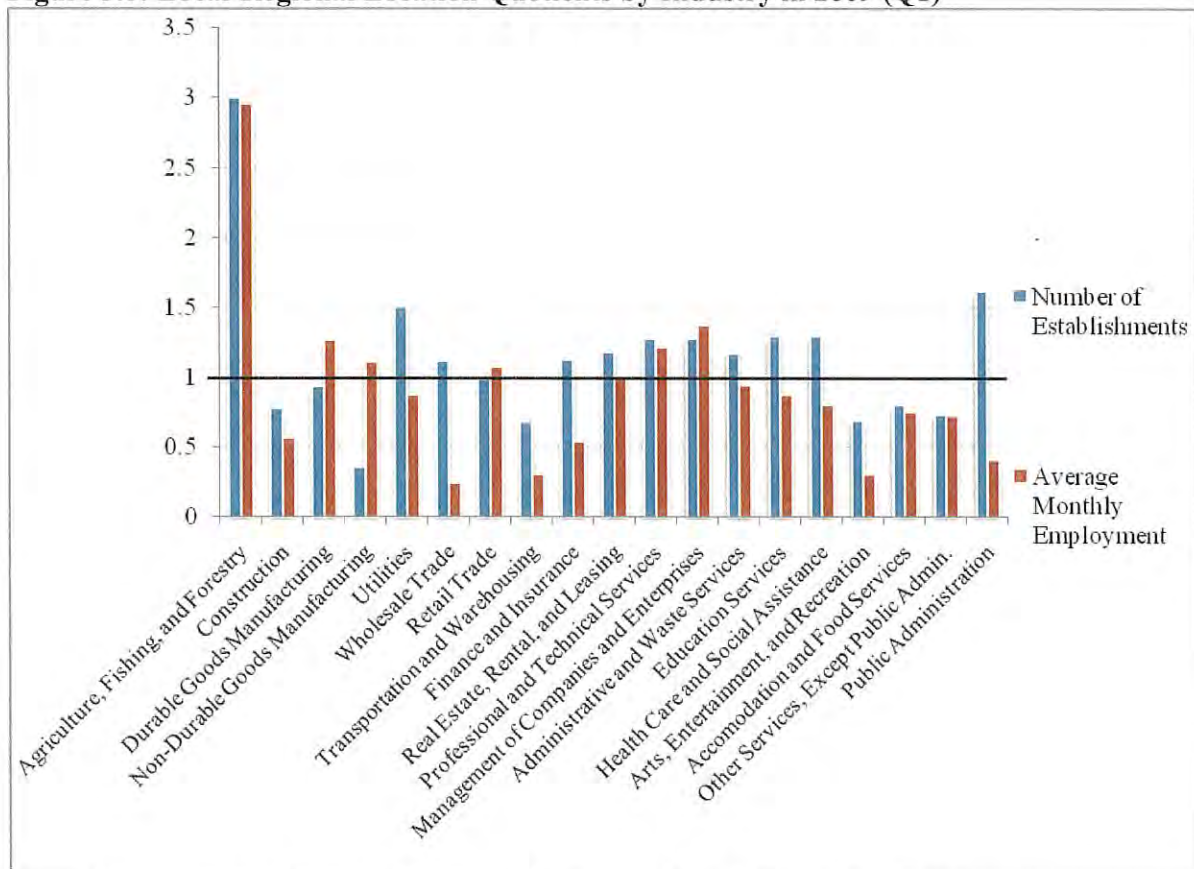
Source: Executive Office of Labor and Workforce Development ES-202 Reports (March 2009)

Location quotients (LQ) are a useful tool for assessing the various industry clusters located in a particular region. Location quotient analyses help us better understand the strengths of a local economy by assessing which industries are concentrated within it, relative to the region or state as a whole. Location quotients-- which are essentially a ratio of the concentration of a particular industry in one area (in this case, Chelmsford) to the concentration of the same industry in a

larger geographic area (Greater Lowell Workforce Investment Area¹¹) - are understood to be significant when they are greater than 1.0.

Using the Greater Lowell Workforce Investment Area as a basis of comparison, location quotients were developed with first quarter 2009 data for each of the industries with a presence in Chelmsford. Quotients were calculated for both the total number of establishments and average monthly employment among each industry sector. Figure 3.6 below illustrates the current location quotients for each of the primary industry sectors operating in town, according to both the total number of establishments and average monthly employment.

Figure 3.6: Local-Regional Location Quotients by Industry in 2009 (Q1)



Source: Executive Office of Labor and Workforce Development ES-202 Reports (March 2009)

According to first quarter 2009 figures, the industry sector with the highest location quotients by far is Agriculture, Fishing, and Forestry, although this figure is somewhat misleading. With only eight (8) establishments and 40 workers employed across the region working in these industries, half of the establishments and 55% of jobs were located in Chelmsford. While these sectors

¹¹ The Greater Lowell Workforce Investment Area includes the communities of Billerica, Chelmsford, Dracut, Dunstable, Lowell, Tewksbury, Tyngsborough, and Westford. It is similar to the NMCOC region except it does not include the Town of Pepperell.

overall represent a small section of the local and regional economies, their concentration in Chelmsford affords the town location quotients of 3.002 for total number of establishments, and 2.953 for average monthly employment.

As evidenced above, many other types of industries are concentrated in Chelmsford relative to the Greater Lowell Workforce Investment Area. Within the goods-producing domain, both durable and non-durable goods manufacturing had significant average monthly employment LQs: 1.267 and 1.108, respectively. An examination of sub-sectors reveals that Chelmsford has high concentrations of the following types of manufacturing businesses: Printing and Related Support (1.557), Plastics and Rubber Manufacturing (2.001), Commercial and Service Industry Machinery (2.001), Computers and Peripheral Equipment (2.252), and Electronic Instrument Manufacturing (1.785). Many of these sectors also had relatively high concentrations of the region's average monthly employment, including Plastics and Rubber Manufacturing (3.919), Machine Shops and Threaded materials (1.105), Computers and Peripheral Equipment (4.436), and Electronic Instrument Manufacturing (2.175). Table 3.6 below provides the location quotients for each of the goods-producing subsectors with a presence in Chelmsford during the first quarter of 2009.

TABLE 3.6
ECONOMIC STATISTICS FOR GOODS-PRODUCING INDUSTRIES IN 2009 (Q1)

Industry	Number of Establishments	Average Monthly Employment (AME)	Average Weekly Wages	LQ- # of Est.	LQ- AME
Agriculture, Forestry, Fishing & Hunting	4	22	\$471	3.002	2.953
Water, Sewage and Other Systems	4	45	\$1,121	1.668	1.559
Construction					
Residential Building Construction	26	61	\$756	0.7	0.774
Nonresidential Building Construction	4	34	\$1,332	0.801	0.697
Building Foundation/Exterior Contractors	14	65	\$889	0.824	0.797
Building Equipment Contractors	37	223	\$931	0.69	0.5
Building Finishing Contractors	22	38	\$511	0.887	0.282
Other Specialty Trade Contractors	20	103	\$1,128	1.092	1.433
Manufacturing					
Printing and Related Support Activities	7	103	\$1,157	1.557	0.818
Plastics & Rubber Product Manufacturing	3	403	\$754	2.001	3.919
Plastics Product Manufacturing	3	403	\$754	2.001	
Fabricated Metal Product Manufacturing	9	127	\$826	0.6	0.543
Machine Shops and Threaded Products	8	114	\$831	0.906	1.105
Comm. & Service Industry Machinery	3	29	\$1,434	2.001	0.398
Computer and Electronic Product Mfg	23	2,444	\$1,677	1.469	1.629
Computers and Peripheral Equipment	3	533	\$2,126	2.252	4.436
Semiconductor & Electronic Components	7	383	\$1,406	0.977	0.654
Electronic Instrument Manufacturing	11	1,525	\$1,590	1.785	2.175

Source: Executive Office of Labor and Workforce Development ES-202 Reports (March 2009)

Chelmsford also has high concentrations of service-related businesses and jobs relative to the region. In terms of the total number of establishments, every major service industry category except for Retail Trade, Transportation and Warehousing, Arts, Entertainment, & Recreation, Accommodation and Food Services, and “Other” services had a significant (>1.0) location quotient. Table 3.7 below and on the subsequent three pages illustrates those industries with the most significant presence are among high-tech, professional, knowledge-based services.

With few exceptions, sectors included within Information, Financial Activities, Professional and Business Services, and Education/Health Services had LQs exceeding 1.0. The sectors exceeding a 1.5 LQ for total number of establishments were: Furniture and Furnishing Merchant Wholesalers (3.002), Print & Media Book Publishers (3.002), Real Estate Brokers and Agents (1.638), Non-depository Credit Intermediation (2.402), Legal Services (1.501), Specialized Design Services (1.716), Office Administrative Services (1.601), Employment Services (1.772), Travel Arrangement and Reservation Services (1.827), Elementary and Secondary Schools (1.801), Ambulatory Health Care Services (1.514), Offices of Physicians (1.969), Home Health Care Services (1.501), Community Care facilities for the Elderly (1.848), Professional Organizations (1.681), and Public Administration (1.619).

The average monthly employment LQs for service industries were not quite as high, indicating the presence of many small businesses (employing fewer workers) in Chelmsford. In terms of general industry categories, Retail Trade (1.078), Professional and Technical Services (1.212), and the Management of Companies and Enterprises (1.375) scored above a 1.0. However, upon closer inspection, several service oriented sub-sectors have notable average monthly employment LQs. These sectors include Commercial Goods Wholesale Merchants (1.095), Lawn & Garden Supply stores (1.79), Clothing and Accessory stores (2.596), Jewelry and Luggage stores (2.44), Real Estate Agents and Brokers (1.82), Consumer Goods Rental (1.847), Management and Technical Consulting services (1.719), Employment Services (1.918), Offices of Physicians (2.523), Community Care Facilities for the Elderly (1.926), and Individual and Family Services (1.779).

TABLE 3.7
ECONOMIC STATISTICS FOR SERVICE-PROVIDING INDUSTRIES IN 2009 (Q1)

Industry	Number of Establishments	Average Monthly Employment (AME)	Average Weekly Wages	LQ- # of Est.	LQ- AME
Wholesale Trade					
Merchant Wholesalers, Durable Goods	35	519	\$1,708	1.095	0.845
Furniture & Furnishings Merchant Whsle	3	9	\$1,269	3.002	0.711
Commercial Goods Merchant Wholesale	13	274	\$1,888	1.531	1.57
Electric Goods Merchant Wholesalers	7	138	\$1,885	1.106	0.693
Hardware & Plumbing Wholesalers	3	25	\$1,054	1.201	1.025
Merchant Wholesalers, Nondurable	10	80	\$1,014	1.072	0.361
Electronic Markets & Agents/Brokers	29	124	\$3,003	1.169	0.691

**TABLE 3.7
ECONOMIC STATISTICS FOR SERVICE-PROVIDING INDUSTRIES IN 2009 (Q1)**

Industry	Number of Establishments	Average Monthly Employment (AME)	Average Weekly Wages	LQ- # of Est.	LQ- AME
Retail Trade					
Motor Vehicle and Parts Dealers	8	72	\$633	0.658	0.428
Automobile Dealers	3	5	\$1,028	0.751	0.58
Auto Parts, Accessories, & Tire Stores	3	45	\$489	0.439	0.641
Furniture & Home Furnishings Stores	6	15	\$791	1.242	0.455
Furniture Stores	3	7	\$871	1.638	0.418
Electronics and Appliance Stores	5	26	\$604	1.112	0.956
Bldg Material & Garden Supply Stores	11	79	\$456	1.501	0.661
Lawn & Garden Equip./Supplies	4	15	\$519	2.402	1.79
Food and Beverage Stores	17	585	\$366	0.685	0.832
Grocery Stores	10	534	\$362	0.632	0.814
Beer, Wine, and Liquor Stores	6	50	\$350	0.819	1.405
Health and Personal Care Stores	9	88	\$474	0.983	0.56
Gasoline Stations	12	58	\$389	0.901	0.663
Clothing & Accessories Stores	11	310	\$627	1.376	2.596
Jewelry, Luggage & Leather Goods	3	10	\$767	1.801	2.44
General Merchandise Stores	3	321	\$371	0.901	1.976
Miscellaneous Store Retailers	14	100	\$364	1.236	1.447
Office Supply, Stationery & Gift Stores	6	74	\$370	1.716	2.017
Other Miscellaneous Store Retailers	6	14	\$295	1.441	0.928
Transportation and Warehousing					
Truck Transportation	5	84	\$981	0.417	0.334
Specialized Freight Trucking	4	84	\$981	0.801	0.891
Transit & Ground Passenger Transport	3	80	\$263	0.517	0.6
Support Activities for Transportation	6	24	\$1,008	1.638	0.632
Information					
Information	25	1,355	\$1,285	1.365	1.364
Publishing Industries	13	402	\$2,281	1.859	0.969
Print & Book Media Publishers	5	72	\$1,760	3.002	1.039
Software Publishers	8	330	\$2,394	1.501	0.955
Motion Picture & Sound Recording	3	9	\$1,299	1.801	0.399
Other Information Services	5	66	\$877	2.001	1.435
Financial Activities					
Finance and Insurance	45	266	\$1,348	1.126	0.543
Credit Intermediation & Related Act.	24	174	\$1,217	1.191	0.61
Depository Credit Intermediation	14	136	\$855	0.955	0.601
Nondepository Credit Intermediation	8	37	\$2,573	2.402	1.062
Financial Investment & Related Act.	5	37	\$2,386	1.251	0.747
Insurance Carriers & Related Acts.	16	55	\$1,064	1.056	0.358
Insurance Agencies, Brokerages & Support	15	54	\$1,018	1.072	0.653
Real Estate and Rental and Leasing	37	176	\$974	1.182	1
Lessors of Real Estate	4	32	\$509	0.632	0.792
Real Estate Agents & Brokers	15	40	\$752	1.638	1.82
Activities Related to Real Estate	9	21	\$832	1.103	0.413
Rental and Leasing Services	8	62	\$703	1.092	1.077
Automotive Equip. Rental & Leasing	3	10	\$514	1.287	0.577

TABLE 3.7
ECONOMIC STATISTICS FOR SERVICE-PROVIDING INDUSTRIES IN 2009 (Q1)

Industry	Number of Establishments	Average Monthly Employment (AME)	Average Weekly Wages	LQ- # of Est.	LQ- AME
Consumer Goods Rental	4	43	\$768	1.201	1.847
Professional and Business Services					
Professional and Technical Services	161	2,414	\$1,836	1.279	1.212
Legal Services	36	200	\$1,054	1.501	2.178
Accounting and Bookkeeping Services	19	86	\$672	1.375	0.779
Architectural and Engineering Services	18	168	\$1,445	1.081	0.692
Specialized Design Services	4	9	\$883	1.716	1.342
Computer Systems Design & Rel. Svcs.	42	1,244	\$2,250	1.341	1.342
Management & Tech. Consulting Svc	20	448	\$1,603	0.992	1.719
Scientific Research & Develop. Svc	12	165	\$2,063	1.386	0.581
Advertising and Related Services	4	6	\$837	1.201	0.716
Other Professional & Tech. Services	6	88	\$560	1.06	1.467
Management of Companies & Enterprises	7	564	\$1,687	1.274	1.375
Administrative and Waste Services	70	739	\$660	1.174	0.945
Administrative and Support Services	68	720	\$656	1.208	0.986
Office Administrative Services	4	37	\$717	1.601	0.349
Employment Services	18	452	\$643	1.772	1.918
Business Support Services	4	19	\$344	1.044	0.267
Travel Arrangement & Reservation Services	7	15	\$2,612	1.827	1.202
Services to Buildings and Dwellings	28	186	\$522	0.904	0.982
Other Support Services	4	7	\$1,396	1.848	0.817
Education and Health Services					
Educational Services	20	1,750	\$692	1.291	0.869
Elementary and Secondary Schools	6	1,262	\$851	1.801	0.832
Other Schools and Instruction	10	135	\$248	1.251	2.17
Health Care and Social Assistance	121	2,053	\$779	1.297	0.8
Ambulatory Health Care Services	90	1,127	\$1,023	1.514	1.467
Offices of Physicians	41	753	\$1,175	1.969	2.523
Offices of Dentists	26	208	\$790	1.473	1.336
Offices of Other Health Practitioners	16	64	\$726	1.248	0.881
Home Health Care Services	3	48	\$374	1.501	0.868
Nursing and Residential Care Facilities	10	531	\$571	0.78	0.793
Community Care Facility for Elderly	4	197	\$461	1.848	1.926
Social Assistance	21	395	\$361	1.051	1.104
Individual and Family Services	9	218	\$375	1.422	1.779
Child Day Care Services	12	177	\$344	1.109	0.908
Leisure and Hospitality					
Arts, Entertainment, and Recreation	12	93	\$408	0.693	0.305
Amusement, Gambling & Recreation	10	89	\$386	0.732	0.361
Other Amusement & Rec. Industries	10	89	\$386	0.751	0.363
Accommodation and Food Services	71	1,087	\$310	0.8	0.752
Food Services and Drinking Places	68	909	\$306	0.799	0.701
Full-Service Restaurants	20	465	\$300	0.728	0.746
Limited-Service Eating Places	31	382	\$279	0.716	0.705
Special Food Services	15	55	\$566	1.668	0.592

TABLE 3.7
ECONOMIC STATISTICS FOR SERVICE-PROVIDING INDUSTRIES IN 2009 (Q1)

Industry	Number of Establishments	Average Monthly Employment (AME)	Average Weekly Wages	LQ- # of Est.	LQ- AME
Other Services					
Other Services, Ex. Public Admin	133	567	\$790	0.732	0.728
Repair and Maintenance	24	222	\$1,483	0.629	0.665
Automotive Repair and Maintenance	15	73	\$671	0.515	0.462
Electronic Equip. Repair/Maintenance	7	122	\$1,982	0.004	0.797
Personal and Laundry Services	40	244	\$342	1.049	1.17
Personal Care Services	27	190	\$286	1.026	1.275
Death Care Services	3	19	\$962	1.001	1.159
Drycleaning and Laundry Services	8	33	\$308	1.334	1.143
Membership Orgs & Associations	10	37	\$396	0.78	0.324
Professional and Similar Organizations	7	15	\$779	1.681	0.782
Private Households	59	64	\$319	0.637	0.526
Public Administration	24	290	\$1,261	1.619	0.406

Source: Executive Office of Labor and Workforce Development ES-202 Reports (March 2009)

Professional and Technical Service-related businesses, such as Schafer Engineering Corporation depicted in the photograph below, comprise the second-largest industry sector in Chelmsford.



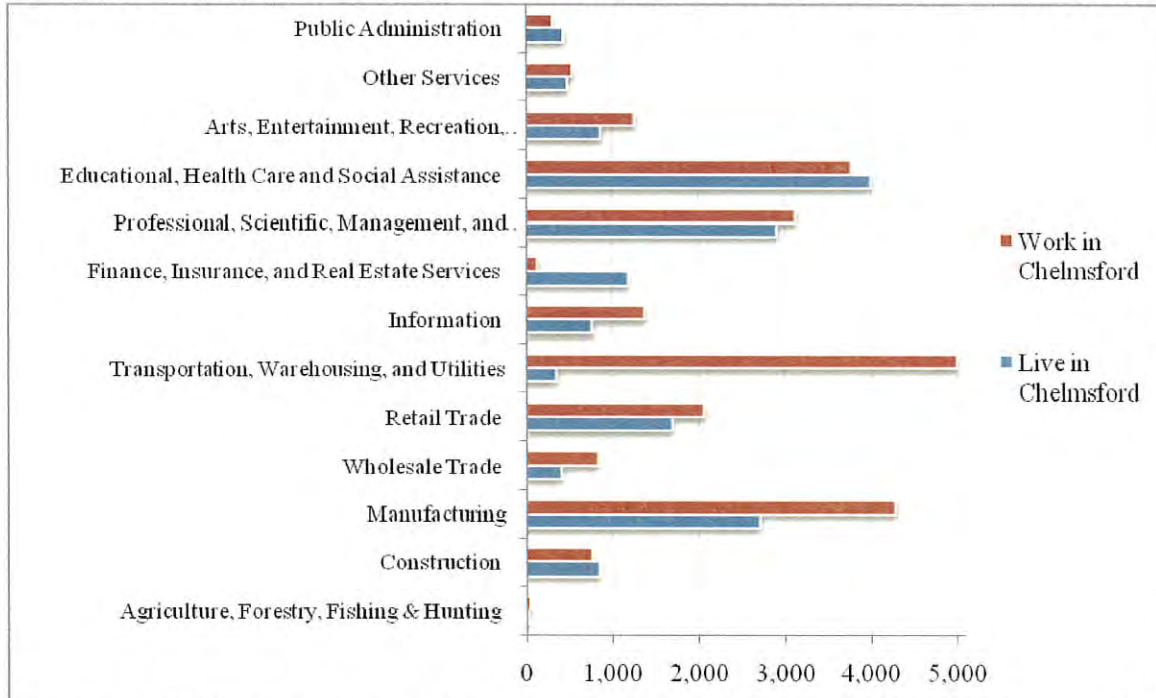
Schafer Corporation, a Subsidiary of Metalmark Capital Holdings, LLC, is a 25-year old Engineering Consulting Service business located at 321 Billerica Road. According to statistics compiled by ReferenceUSA, the company employs 44 workers and grosses between \$50 and \$100 million in sales annually. (Source: Pictometry International, 2008)

In 2008, Chelmsford's Community Development Department produced a series of documents, including an *Economic Development Profile* for the Town. One graph compared the industries in which Chelmsford residents are employed to the composition of jobs, by industry, that are operating in Town. Using 2006-2006 *American Community Survey* and 2008 Annual ES-202 data, NMCOC updated this analysis, which is illustrated in Figure 3.7 on the following page.

Figure 3.7 reveals that there are far more people working in Chelmsford who are employed in transportation, warehousing, and utilities than there are Chelmsford residents working in these

fields. The same is true for information services, retail, and manufacturing, though to a lesser extent than transportation, warehousing, and utilities.

Figure 3.7: Employment in Chelmsford vs. Employment of Chelmsford Residents in 2008



Source: 2006-2008 American Community Survey; Executive Office of Labor and Workforce Development ES-202 Reports (2008 Annual)

Major Employers

Chelmsford is home to a number of major regional employers, including United Parcel Service (UPS) and Harvard Vanguard. Table 3.8 on the next page offers a breakdown of the eight largest employers operating in Town in both 1994 and 2009. Since 1994, United Parcel Service has been the largest employer in Chelmsford, employing 1,550 workers in 2008 (down slightly from 1,600 in 1994).



The United Parcel Service facility located at 90 Brick Kiln Road. (Source: Pictometry International, 2008)

Consumer products manufacturer, Comet Products, has also consistently been included in the list of major employers in Town. Table 3.8 on the following page reveals that for the past 15 years, high tech computer

manufacturing and service providers have been leaders in town in terms of providing jobs to the local and regional workforce.

**TABLE 3.8
MAJOR EMPLOYERS IN CHELMSFORD: 1994 AND 2009**

Company	Employees	Industry	Company	Employees	Industry
1994			2009		
United Parcel Service	1,600	Local & Long distance freight and delivery	United Parcel Service	1,550	Local & Long distance freight and delivery
Town of Chelmsford	878	Local government	Kronos, Inc.	1,251	Computer Hardware and Software
Hewlett Packard	550	Computer hardware	Comcast	714	Telecommunications
Sun Microsystems	350	Computer software and hardware	Natures Jewelry/ Potpourri Group, Inc.	500	Catalog Sales
Harvard Community Health Plan	320	Medical practice	Mercury Computer Systems, Inc.	500	Electronic Computers Manufacturing
Comet Products, Inc.	275	Consumer Products	Harvard Vanguard Medical Assoc.	397	Medical Practice
Optronics, Inc.	215	Computer hardware and software	WNA/ Comet Products	335	Consumer Products
Mercury Computer	165	Computer hardware manufacturing	Cintas, The Uniform People	300	Uniform Supply Service

Source: Town of Chelmsford Community Development Department Economic Development Profile

*Kronos, Incorporated laid off 87 employees in September 2008

Wages

Table 3.9 on the following pages reflects the total wages and average weekly wages earned for all industries operating in Chelmsford during the first quarters of 2001 and 2009. In sum, the total wages paid across all industries declined by \$80,834,431 (-21.7%) between these two quarters, while average weekly wages declined by 8.4% from \$1,185/ week to \$1,085/week. Despite wage growth in several sectors, both the goods producing domain and service providing domain saw decreases in their total and average weekly wages between 2001 and 2009.



Manufacturing businesses provide the highest wages to workers out of any industry in Chelmsford. The Ferrite Components, Inc. facility is located at 10 Kidder Road and employs 29 workers. (Source: Pictometry International, 2008)

Although the number of manufacturing businesses in Chelmsford has declined over the years, manufacturing continues to be the leading source for wages among industries operating in the town. While total wages from manufacturing declined approximately 47.9% between 2001 and 2009, the total wages received through manufacturing during the first quarter of 2009 was \$78,659,736, which was \$2,354,668 more than the total wages earned through Professional and Business Services (the industry sector with the second-highest total wages for the quarter). Moreover, the average weekly wages paid to workers in durable goods manufacturing declined by 7.3%, from \$1,718/week in 2001 to \$1,593/week in 2009. The average weekly wages paid to nondurable goods manufacturing workers, however, increased slightly (5.8%), from \$765/week in 2001 to \$809/week in 2009.

TABLE 3.9
TOTAL WAGES AND AVERAGE WEEKLY WAGES BY INDUSTRY: 2001 AND 2009

	Total Wages (Q1)		Percent Change	Average Weekly Wages (Q1)		Percent Change
	2001	2009	2001-2009	2001	2009	2001-2009
Total: All Industries	\$372,250,564	\$291,416,133	-21.7	\$1,185	\$1,085	-8.4
Goods-Producing Domain	\$150,424,438	\$85,845,742	-42.9	\$1,565	\$1,412	-9.8
Agriculture	\$126,408	\$134,795	6.6	\$343	\$471	37.3
Construction	\$4,537,279	\$7,033,522	55	\$773	\$989	27.9
Manufacturing	\$144,299,462	\$78,659,736	-45.5	\$1,637	\$1,475	-9.9
• Durable Goods Manufacturing	\$138,580,156	\$72,214,037	-47.9	\$1,718	\$1,593	-7.3
• Non-Durable Goods	\$5,719,306	\$6,445,699	12.7	\$765	\$809	5.8
Service-Providing Domain	\$221,826,125	\$205,570,391	-7.3	\$1,017	\$989	-2.8
Trade, Transportation & Utilities	\$40,929,356	\$47,744,658	16.7	\$631	\$793	25.7
• Utilities	\$258,765	\$655,524	153.3	\$766	\$1,121	46.3
• Wholesale Trade	\$17,627,825	\$17,415,898	-1.2	\$1,464	\$1,853	26.6
• Retail Trade	\$8,046,084	\$12,156,481	51.1	\$359	\$498	38.7
Information	\$24,354,325	\$22,636,170	-7.1	\$1,360	\$1,285	-5.5
Financial Activities	\$6,249,656	\$6,890,564	10.3	\$954	\$1,199	25.7
• Finance and Insurance	\$4,451,166	\$4,661,247	4.7	\$1,010	\$1,348	33.5
• Real Estate and Rental & Leasing	\$1,798,490	\$2,229,316	24	\$838	\$974	16.2
Professional & Business Services	\$116,512,678	\$76,305,068	-34.5	\$1,793	\$1,580	-11.9
• Professional & Technical Services	\$97,238,724	\$57,601,825	-40.8	\$2,626	\$1,836	-30.1
• Management of Companies & Enterprises	\$0	\$12,365,620	100	\$0	\$1,687	100
• Admin. & Waste Services	\$9,637,624	\$6,337,623	-34.2	\$414	\$660	59.4
Education & Health Services	\$23,614,804	\$36,538,212	54.7	\$625	\$739	18.2
• Educational Services	\$11,256,685	\$15,753,281	39.9	\$637	\$692	8.6
• Health Care & Social	\$12,358,118	\$20,784,932	68.2	\$615	\$779	26.7

TABLE 3.9
TOTAL WAGES AND AVERAGE WEEKLY WAGES BY INDUSTRY: 2001 AND 2009

	Total Wages (Q1)		Percent Change	Average Weekly Wages (Q1)		Percent Change
	2001	2009	2001-2009	2001	2009	2001-2009
Assistance						
Leisure & Hospitality	\$5,395,197	\$4,879,720	-9.6	\$305	\$318	4.3
• Arts, Entertainment, & Recreation	\$382,210	\$492,863	29	\$249	\$408	63.9
• Accommodation & Food	\$5,012,987	\$4,386,857	-12.5	\$310	\$310	0
Other Services	\$2,366,272	\$5,820,456	146	\$431	\$790	83.3
• Other Services, Ex. Public Admin	\$2,366,272	\$5,820,456	146	\$431	\$790	83.3
Public Administration	0	\$4,755,544	100	0	\$1,261	100

Source: Executive Office of Labor and Workforce Development ES 202 Reports (March 2009)

Professional and technical services also experienced a decline between the first quarters of 2001 and 2009, with total wages decreasing by 40.8% and average weekly wages declining by 30.1%. Other industries that experienced decreases in total wages between these two periods included: Wholesale trade (-1.2%), Information (-7.1%), Administration and Waste Services (-34.2), and Food and Accommodation (-12.5%). With the exception of Food and Accommodation, which saw zero increase in the average weekly wages paid to workers between these two periods, each of the industries mentioned above also experienced declines in the average weekly wages paid to workers.

With the exception of Information and Professional and Technical Services, every industry within the Service Providing Domain experienced wage growth between the first quarters of 2001 and 2009. The greatest amount of total wage growth occurred within Utilities (153.3%), Other Services (146%), Health Care and Social Assistance (68.2%), and Retail Trade (51.1%). The most significant increases in average weekly wages occurred within Other Services (83.3%), Arts, Entertainment, & Recreation (63.9%), Administrative & Waste Services (59.4%), and Utilities (46.3%).

Additionally, the highest paying industries during the first quarter of 2009 included Wholesale Trade (\$1,853/ week), Professional and Technical Services (\$1,836/ week), Durable Goods Manufacturing (\$1,593/ week), Finance and Insurance (\$1,348/week), and Public Administration (\$1,261/ week).

Local Business Characteristics

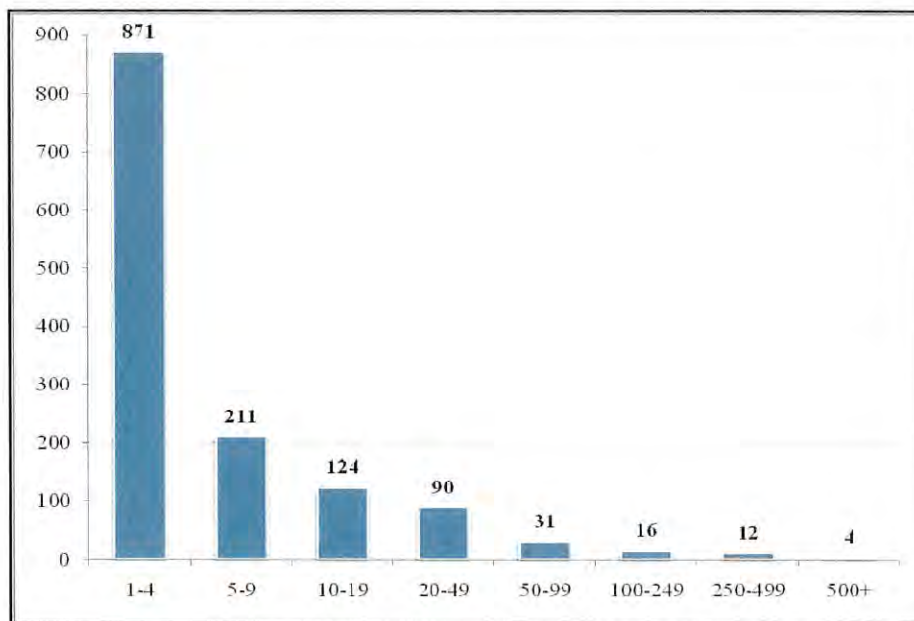
The data collection firm ReferenceUSA¹², which compiles detailed information about local businesses across the United States reported that as of May 2009 there were 1,359 businesses operating in Chelmsford. This number is 235 higher than the data provided by the Executive Office of Labor and Workforce Development *ES-202 Reports*. This difference may be partially attributed to new businesses that have opened up since the State compiled their first quarter (January-March) 2009 data. Additionally, ReferenceUSA's databases include municipal departments, state organizations, and individuals who may work independently for a larger company.

Number of Employees

According to this database, 89% of businesses operating in Chelmsford have less than twenty employees with 64% of all businesses employing between one and four workers (Figure 3.8). The Town does have its fair share of larger businesses, however, hosting approximately 18% of all the businesses in the NMCOG region that employ

100 or more workers. Approximately 85% (1,164 of the total businesses) are independently owned, single location businesses; another 13% (178 of total businesses) are branches, while headquarters and subsidiaries each comprise 1% of the total number of businesses in Chelmsford.

Figure 3.8: Number of Employees for all Chelmsford Businesses in 2009



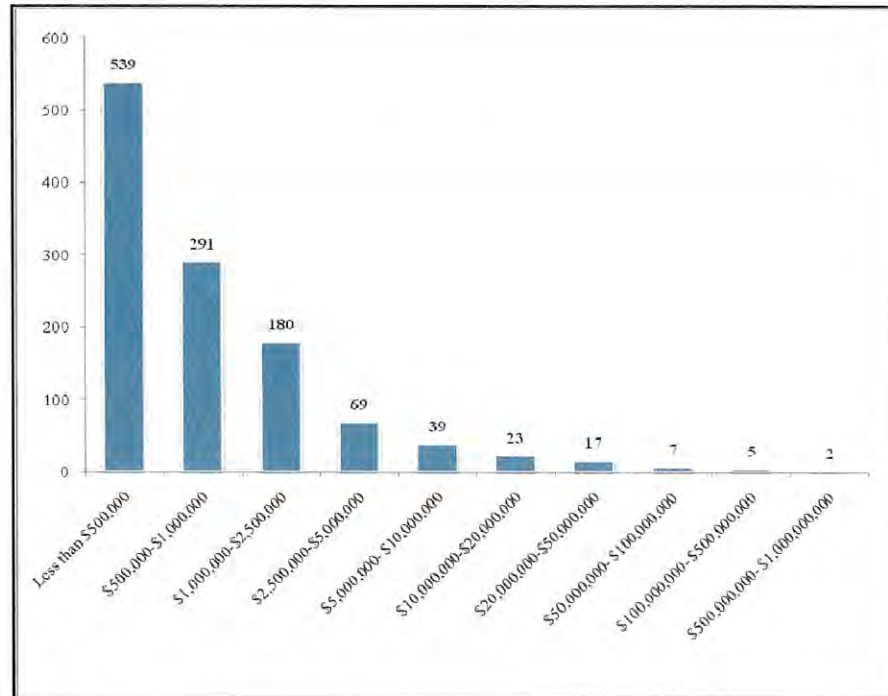
Source: ReferenceUSA (May 2009)

¹² For more information about ReferenceUSA's data collection method, visit: <http://referenceusa.com/Static/DataQuality>

Sales Volumes

Another important business indicator is the sales volumes for establishments operating in Town, as reflected in Figure 3.9. According to ReferenceUSA, slightly fewer than half (46%) of local businesses gross less than \$500,000 annually in sales, while another quarter (24.8%) gross between \$500,000 and \$1 million in sales per year. Only fifty-four (54) businesses, or 4.6% of all businesses, gross more than \$10 million in sales per year.

Figure 3.9: Annual Sales Volumes for all Chelmsford Businesses in 2009



Source: ReferenceUSA (May 2009)

Municipal Taxation and Spending

Compared to communities in the region, Chelmsford has the third highest percentage of commercial and industrially-zoned land of the nine communities in the NMCOG region, after Billerica and Lowell. Additionally, the town has a single-rate tax policy, which many companies consider to be an advantage to locating in the town (CCD Business Survey completed in 2008, *Chelmsford Economic Development Guide*). In Fiscal Year 2010, Chelmsford had the third-highest commercial and industrial property tax rate in the region (\$15.15). However, the relatively low tax rate makes the town an attractive location for businesses and industries looking to locate in the Greater Lowell area. These tax rates for the communities in the Greater Lowell region are illustrated in Table 3.10 on the following page.

TABLE 3.10
CHELMSFORD'S TAX RATES COMPARED TO COMMUNITIES IN THE REGION, FY 2010

Community	Residential	Open Space	Commercial	Industrial	Personal Property
Billerica	\$12.53	-	\$28.47	\$28.47	\$28.47
Chelmsford	\$15.15	-	\$15.15	\$15.15	\$15.15
Dracut	\$11.81	-	\$11.81	\$11.81	\$11.81
Dunstable	\$13.97	-	\$13.97	\$13.97	\$13.97
Lowell	\$13.27	-	\$27.46	\$27.46	\$27.46
Pepperell	\$12.58	-	\$12.58	\$12.58	\$12.58
Tewksbury	\$12.55	-	\$19.77	\$19.77	\$19.77
Tyngsborough	\$13.95	-	\$13.95	\$13.95	\$13.95
Westford	\$14.63	-	\$14.82	\$14.82	\$14.63

Source: MA Department of Revenue Division of Local Services At a Glance Report (January 22, 2010)

According to the Massachusetts Department of Revenue's Division of Local Services, \$73,559,750 in property taxes were levied during Fiscal Year 2010. Approximately 80.6% of these taxes were obtained through residential properties, which had a total assessed value of about \$3.9 million. Commercial and industrial properties yielded approximately \$6 million each, as illustrated in Table 3.11 below. In FY 2010, the Town generated an additional \$2,210,511 in revenue from property taxes, primarily due to the increase in the tax rate (15.15 versus 14.07, respectively). According to the Town's FY 2009 assessor's database, just over 2,317 acres of land were exempt from paying property taxes, due to being either publicly-owned or owned by a nonprofit.

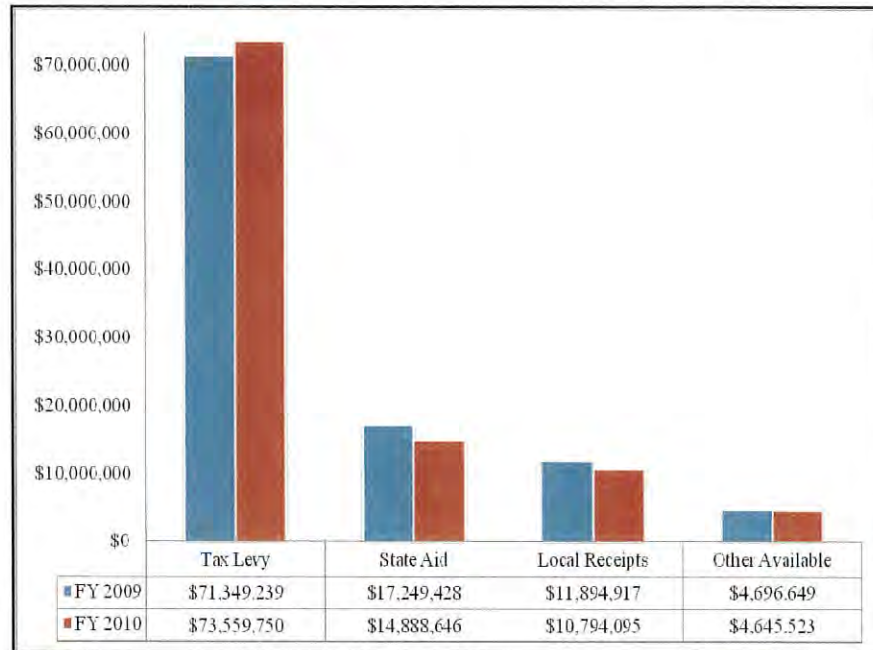
TABLE 3.11
FISCAL YEAR 2010 TAX CLASSIFICATION

Tax Classification	Assessed Values	Tax Levy	Tax Rate
Residential	\$3,913,682,175	\$59,292,285	\$15.15
Open Space	\$0	\$0	0
Commercial	\$399,855,510	\$6,057,811	\$15.15
Industrial	\$391,746,900	\$5,934,966	\$15.15
Personal Property	\$150,144,440	\$2,274,688	\$15.15
Total	\$4,855,429,025	\$73,559,750	\$15.15

Source: MA Department of Revenue Division of Local Services At a Glance Report (January 22, 2010)

Like every municipality in the Commonwealth that depends on state and federal monies to fund local initiatives, Chelmsford has been affected and will continue to feel constraints on their annual operating budgets due to the national economic recession. Figure 3.10 illustrates the breakdown of municipal revenue sources for Fiscal Years 2009 and 2010. In FY 2009, more than two-thirds of the Town's budget (67.8%) came from levied taxes, while 16% of the budget came from State sources. Another 11% of the Town's budget came from local receipts, while 4.4% of the budget came from "other" sources.

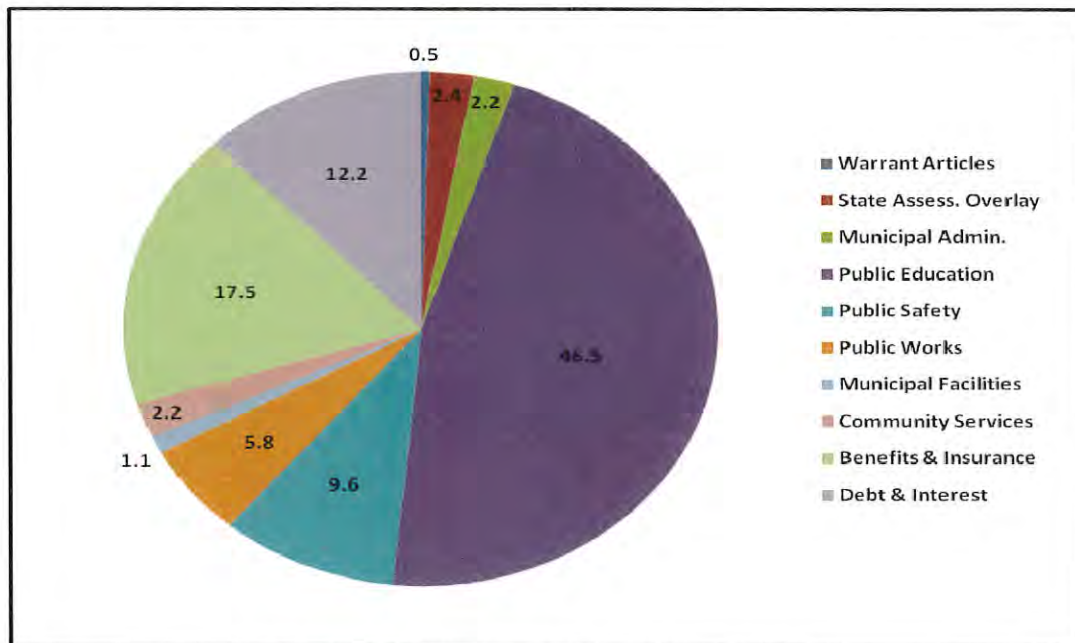
Figure 3.10: Municipal Revenue Sources, Fiscal Year 2010



Source: MA Department of Revenue Division of Local Services. *At a Glance Report* (January 22, 2010)

In FY 2010, approximately 70.8% of municipal revenue came from levied taxes. As previously discussed, this change represents an increase of \$2,210,511 in levied taxes from property owners in town. Due to the constraints on the state budget, State Aid decreased by \$2,360,782, or 13.7%. Local aid and "other" sources of revenue also decreased, by \$1,100,822 (9.3%) and \$51,126 (10.9%), respectively. In total, despite the increase in tax revenue, Chelmsford's municipal revenue sources decreased by \$1,302,219 between FY 2009 and FY 2010.

This decrease in municipal revenue directly impacts municipal expenditures. Figure 3.11 on the next page shows municipal spending in Chelmsford for FY 2011. Local programs such as education and public works projects, comprise well over half of the total municipal expenditures in FY 2011.

Figure 3.11: Municipal Expenditures FY 2011

Source: "Fiscal Year 2011 Budget Report" prepared by Paul Cohen, Town Manager.

COMMUNITY ASSETS AND LIABILITIES

In assessing the economic development potential of a community, it is important to determine what the assets and liabilities of a community are through the perspective of the business community. The Northern Middlesex Council of Governments (NMCOG) worked with the Master Plan Committee to conduct a Visioning Session specifically for the business community as part of the public outreach process. Through the combined efforts of the Master Plan Committee, NMCOG, the Chelmsford Business Association (CBA) and the Greater Lowell Chamber of Commerce, members of the business community were contacted. The Chelmsford Business Vision Quest 2020 was held on May 6, 2009 at the Chelmsford Police Station and was well attended. The event was also covered by the local cable channel so that other business representatives could submit their comments directly to the Master Plan Committee or the Community Development Department.

The Chelmsford Business Forum was structured to provide an overview of the Chelmsford Master Plan Update process, describe the components of this plan and demonstrate how the economic development section ties in with NMCOG's regional economic development planning process under the Comprehensive Economic Development Strategy (CEDS) established by the Economic Development Administration (EDA) of the U.S. Department of Commerce. The SWOT (Strengths, Weaknesses, Opportunities and Threats) Analysis conducted by NMCOG enabled the representatives of the business community to express their ideas, concerns,

suggestions and recommendations within a structured framework. The strengths and weaknesses outlined below summarize the assets and liabilities of the community.

In response to the following question: “What are the strengths and weaknesses of doing business in Chelmsford?” the business participants initially focused upon the town’s strengths related to its location, workforce, infrastructure and the working relationship with the Town. The major strengths identified are listed below in the text box below.

Strengths

- Proximity to I-495 and Route 3 and availability of sewer
- Chelmsford Business Association
- Location in region and state
- Professional planning staff at town hall
- Improved communication between the Town and business community
- Variety/depth/types of businesses: diversity of industry types
- Educated labor force
- Responsive Building Department for permitting and approvals
- Proximity to UMass Lowell
- Single tax rate
- History of high quality of life/livability
- Representative Town Meeting form of government
- Number of state representatives
- Access to commuter rail service

When focusing upon the weaknesses within the community, the participants identified permitting issues before the Planning Board and Zoning Board of Appeals, transportation issues (public transit, parking, traffic, etc.), redevelopment issues, enforcement standards, taxes (vis-à-vis New Hampshire) and housing. The major weaknesses identified are offered in the text box on the next page.

Weaknesses

- Lack of predictability/uniformity from Planning Board
- Excessive parking requirements for businesses over 10,000 square feet
- Use variances, shifted from ZBA to Town Meeting, can take one year
- Being represented by four state representatives
- Length of permitting approval process and timing of board/commission meetings
- Lack of enforcement of sign bylaw
- Ad hoc signs on utility poles are not removed in a timely manner
- Existing buildings may not meet current needs of businesses; mismatch between what is available for redevelopment and market demand
- Lack of definition of "center of excellence"; strength and character of the community is not well-defined
- Lack of public transit service to the commuter rail station
- Lack of parking in the Town Center
- Lack of an overlay district along Route 110 and Town Center to support redevelopment; need to address what is allowed by special permit vs. variance
- Need to create overlay district with design standards similar to what is in place in Wilmington
- Lack of undeveloped land zoned for industrial use
- Mixed use is not allowed in Town Center
- Need infill housing
- Lack of foot traffic in business areas
- Disadvantage from a tax perspective due to proximity to New Hampshire
- Town does not hold itself to the same standards as the business community

The image displayed below illustrates the limited parking opportunities in the center of Town. Traffic congestion and parking issues were repeatedly articulated as an economic development potential weakness by residents and members of the Master Plan Committee.



Traffic Congestion and limited parking opportunities were identified as overall weaknesses of Chelmsford Town Center. (Source: *Pictometry International, 2008*)

landscaping improvements and networking opportunities through the Chelmsford Business Association and the Greater Lowell Chamber of Commerce. The major opportunities were identified as follows:

The business participants were then asked: What opportunities should Chelmsford take advantage of to stabilize and expand its business community? The business community identified many opportunities for the Town of Chelmsford, including funding, internet/Wi-Fi services, the commuter rail station in Vinal Square, redevelopment of various properties in the Center Village and Vinal Square, one-stop permitting opportunities,

Opportunities

- UMass Lowell spinoffs and incubator model could be tapped for redeveloping existing buildings
- Verizon FIOS service
- Free Wi-Fi in Town Center
- UMass Lowell Center for Sustainability could assist with efforts to redevelop North Chelmsford
- Grant money under the Green Communities Act
- Grants/monies available through the American Recovery and Reinvestment Act (aka the Stimulus Bill)
- Grant person at Town Hall to identify the various funding sources available
- Commuter rail station in North Chelmsford/opportunity for redevelopment of Vinal Square
- Better pedestrian accommodations in Vinal Square
- Apply Village Center concept to additional areas of town
- Engage interns from colleges and universities with training in planning and public administration
- Redevelop mills in North Chelmsford and redevelop portions of the Town Center
- Redevelop UMass Lowell West Campus
- Sites selected for redevelopment need additional trees and landscape improvements
- Additional landscaping and plantings are needed in the Town Center
- Need to define uses for vacant properties and buildings
- A market study should be considered as part of the Master Plan
- Availability of data lacking, particularly information regarding home occupations/self-employed
- Permitting requirements for home businesses should be clarified
- Need one-stop shopping for permitting
- Town-owned property on Wilson Street should be redeveloped under a land lease agreement
- Create a small business center
- Businesses should better utilize networking opportunities through the Chelmsford Business Association and the Greater Lowell Chamber of Commerce

The business participants were then asked: What future threats do you see to the business community in Chelmsford? The major threats identified by the business community were local and state taxes, the cost of health insurance, traffic congestion, limitations on the use of land, limited funding and the lack of definition by the town as to the types of industries it wants to attract. A complete list of the threats identified by the business community is offered in the text box on the following page.

Threats

- Traffic congestion in the town center
- Local property taxes
- Limitations of uses of land, unreasonable landscaping requirements, and limits on density of development
- Chelmsford does not receive its fair share of local, particularly monies received through the state school aid funding formula (Chapter 70)
- Having four state representatives
- State taxes
- Cost of health insurance (for the Town); municipalities should have the same rights as the State to insure their employees through GIC
- Lack of definition of industries desired by the town contributes to conflicts in permitting and zoning
- Health insurance costs for businesses due to a lack of state regulation of the insurance industry in terms of allowed rate increases: perhaps businesses can be allowed to join the GIC

Finally, the business participants were asked: What can the Master Plan do to address your concerns? The two major suggestions were as follows:

- Create stability by focusing on what exists presently, preventing additional urbanization, density and traffic;
- Promote partnerships with the State, such as providing additional tax incentives for job creation and seeking state funding to grow local businesses.

INFRASTRUCTURE ANALYSIS

This section examines the existing sewer, water supply, and utilities infrastructure in town. By understanding the current infrastructure system, we can begin to assess what additional improvements will be necessary to accommodate future economic development activities.

Sewer Capacity and Wastewater Management

The provision of adequate sewer infrastructure greatly enhances the economic development potential of a town. Beginning in 1984, the town embarked on an \$800 million dollar initiative to provide public sewers for residences and businesses. Between 1986 and 2005, twenty-two bond issues totaling \$108,900,000 were issued to cover the cost of design and construction for 36 sewer construction contracts (Phase 1A [Contract 85-1] through Phase 4E [Contract 02-1]). In November 2007, the first ten bonds, totaling approximately \$36,667,000, had been retired. The remaining twelve bonds (totaling \$72,150,000) were to be retired between 2008 and 2025.

Additionally, in 2003 a special town meeting authorized an expenditure of \$5 million from the town's betterment account to fund Contract 02-2. One year later, another special town meeting authorized a \$16.5M expenditure to fund four additional contracts (Phase 4F and 4G). At the April 2007 town meeting, a \$0.50 user charge rate increase was approved in order to fund an \$11M deficit in the 2004 betterment authorization. As of September 2008, approximately 93%

of the Town's sewer program had been completed, through the construction of 170 miles of sewer infrastructure which serves approximately 11,200 properties across town.

Efforts have been focused primarily on residential areas, although the ultimate goal is to provide infrastructure to all sections of Town, especially given the importance of sewer to business development. According to the 2009 Annual Report, 262 new sewer connections had been added. As of 2010, the final phase of approximately 20 miles of sewer line, fronting 865 improved properties, is being installed. The areas being sewered include the Park Road/Cambridge Street and Moore Street/ Ledge Road areas. The estimated price tag for the remaining portion is estimated at \$12.5 million, to be funded through a combination of betterments and a sewer user surcharge.

In its March 2008 Sewer Project Update presentation, the Town reported that the average residential home produces approximately 65,000 gallons of wastewater per year. In Fiscal Year 2008, the residential sewer rate in town was \$3.20/ 1,000 gallons, amounting to an average annual bill of \$208. Compared to the rest of the region, Chelmsford's sewerage costs fell in the middle, with some communities, such as Billerica and Lowell, instituting lower rates (\$2.46/ 1,000 gallons for both municipalities), and others instituting higher rates (Tewksbury charges \$9.35/1,000 gallons while Dracut has a flat fee of \$300 per annum for sewer services). The update called for another raise in the rate for Fiscal Year 2009 in order to help cover capital expenses. The proposed increase was \$.77, or \$3.97/1,000 gallons. This hike would increase the average annual bill to \$258 for an average single-family home.

Sewerage effluent is pumped and treated at the Greater Lowell Wastewater Utility-- a facility that treats waste from Lowell, Tewksbury, Dracut, and Tyngsborough, and Chelmsford. This partnership between the Town and the City of Lowell was enacted through a 30-year contract which began in 1986 and is slated to expire in 2016. The 2008 *Economic Development Plan* for Chelmsford assessed usage rates in order to determine the existing and future capacity of this system. According to the plan, the Town of Chelmsford has purchased 3,010,000 gallons per day of average daily flow sewer capacity from the Greater Lowell Wastewater Utility. The Town has, in turn, sold 350,000 gallons of that capacity to the Town of Tyngsborough. This leaves Chelmsford with a remaining capacity of approximately 2,660,000 gallons per day. The current flow sent to the Greater Lowell plant is approximately 2,450,000 gallons per day (50,000 comes from Tyngsborough). Average and total sewer flow data for 2006 through 2008 is represented in Table 3.12, while Table 3.13 provides data about the plant's capacity relative to the Town's usage.

TABLE 3.12
SEWER FLOW IN CHELMSFORD, 2006-2008

Year	Plant: Inf. Flow (MG)		Plant: Eff. Flow		Daily Plant Inf. Flow		Daily Plant Eff. Flow	
	Average	Total	Average	Total	Average	Total	Average	Total
2006	N/A	N/A	1,021.00	12,250.63	N/A	N/A	33.59	403.1
2007	N/A	N/A	951.00	11,415.20	N/A	N/A	31.25	374.98
2008	1,154.75	13,857.01	1,067.22	12,806.66	38.05	456.66	35.17	421.98

Source: Greater Lowell Regional Water Utility

TABLE 3.13
TOWN AND PLANT FLOWS, 2006-2008

Year	Town Flow		Daily Town Flow	Town Allotment	Percent of Town Allotment	Percent of Plant Flow
	Average	Total	Average	Total	Average	Average
2006	73.1	877.25	2.4 million	3.01 million	79.88	7.38
2007	68.66	823.89	2.3 million	3.01 million	74.99	7.40
2008	75.82	909.78	2.5 million	3.01 million	82.97	7.24

Source: Greater Lowell Regional Water Utility

With approximately 1,000 homes left to connect to the system, the 2008 *Economic Development Plan* determined that Chelmsford is running out of sewer capacity. Presently, the Town is in the process of assessing different strategies for increasing wastewater treatment capacity, including partnering with Billerica, which also has a facility, or creating a sewer “bank,” which involves implementing a variety of water conservation measures with the ultimate goal of reducing demand for the resource. The town will also attempt to work with the Greater Lowell Regional Water Utility to determine what other options are available under the renegotiation of its contract in 2016.

Public Water Supplies

Approximately 95% of the Town is serviced by public water systems through one of three water districts – Chelmsford Water District, North Chelmsford Water District and the East Chelmsford Water District. This section examines the specific characteristics of these three water districts, including usage and capacity issues, fee structures, and environmental profiles.

Water Supply Districts

1. Chelmsford Water District

User Demand and District Capacity

The Chelmsford Water District pumps water from 15 wells, with a combined yield of 5,800 gallons per minute. The District serves approximately 7,900 customers. The Chelmsford Water District also sells 26.7 million gallons of water to the East Chelmsford Water District.

The Chelmsford Water District withdraws approximately 1.42 million gallons of water daily from the Concord River Basin, and an additional 1.53 million gallons daily from the Merrimack River Basin. According to the 2009 Water Management Act Annual Report for the District, the actual withdrawal of water from these two basins is nearly at the capacity permitted to be withdrawn. The most significant constraint on resources that was identified by representatives of the Chelmsford Water District is the potential passing of House Bill 834 (“The Sustainable Water Resources Act”). This bill, which is intended to promote the sustainable consumption of water resources and protect aquatic ecosystems¹³, is seen as a major threat to water district capacity, as its passage will mandate new water withdrawal standards and effectively put a moratorium on new connections within the districts.

Water District Fee Structures

Table 3.14 illustrates water usage rates in 2009 for Chelmsford Water District customers. The District charges a minimum fee of \$33.60 per quarter for up to

**TABLE 3.14
WATER USAGE RATES IN THE CHELMSFORD WATER DISTRICT: 2009**

Level	Usage	Rate
Minimum Charge	0-7,000 gallons	\$33.60
Step 1	7,001 – 25,000 gallons	\$4.80 per 1,000 gallons
Step 2	25,001 – 50,000 gallons	\$5.75 per 1,000 gallons
Step 3	More than 50,000 gallons	\$7.25 per 1,000 gallons

Source: Chelmsford Water District, 2009

7,000 gallons of usage, and charges rates per 1,000 gallons thereafter. Usage between 7,001 and 25,000 gallons is charged at the rate of \$4.80 per 1,000 gallons; 25,001 to 50,000 gallons is charged at the rate of \$5.75 per 1,000 gallons, and anything more than 50,000 gallons is charged at the rate of \$7.25 per 1,000 gallons.

**TABLE 3.15
NEW SERVICE CONNECTION RATES: 2009**

Pipe Size	Fee
Up to 1.5"	\$2,500
Multiple Dwellings	\$2,500 per unit
2"	\$3,500
4"	\$7,500
6"	\$10,000

Source: Chelmsford Water District, 2009

New service connection rates for Chelmsford Water District customers are determined by the size of the pipe being connected to the water supply. One and a half-inch pipes are

¹³ For full text of the proposed legislation, visit: <http://massriversalliance.org/SustainableWaterResources.pdf>

connected for a \$2,500 fee, which also applies to multiple dwellings also, as reflected in Table 3.15. Two, four, and six-inch pipes are connected to the water supply at fees of \$3,500, \$7,500, and \$10,000, respectively.

Debt bond fees are charged by the district on a quarterly basis, and are determined by pipe size. These rates are represented in Table 3.16, and range from \$33 per quarter for 0.75” pipes to \$300 per quarter for 6” pipes.

One of the services provided by the water districts in Chelmsford is a fire protection demand analysis. The fee for this service is determined by the size of the building being constructed, and ranges from \$650 for a building under 20,000 square feet to \$3,900 for a building larger than 100,000 square feet. The fee structure for fire protection demand analyses for new constructions is illustrated in Table 3.17.

Another fire protection-related service provided by the water districts in Town is an annual fire protection sprinkler system service. These charges are listed in Table 3.18. The fees for this service are also determined by the size of the building, and range from \$130 for buildings smaller than 10,000 square feet to \$1,560 for buildings larger than 200,000 square feet.

**TABLE 3.16
DEBT BOND FEE: 2009**

Pipe Size	Per Quarter
.75"	\$33
1"	\$62
1.5"	\$82
2"	\$104
3"	\$150
4"	\$200
6"	\$300

Source: Chelmsford Water District, 2009 Note: Multiple Dwelling Services \$33/ unit

**TABLE 3.17
FIRE PROTECTION DEMAND CHARGES FOR NEW CONSTRUCTION: 2009**

Building Size	Fee
Up to 19,999 sq ft	\$650
20,000 to 39,999 sq ft	\$1,300
40,000 to 59,999 sq ft	\$1,950
60,000 to 79,999 sq ft	\$2,600
80,000 to 99,999 sq ft	\$3,250
More than 100,000 sq ft	\$3,900

Source: Chelmsford Water District, 2009

**TABLE 3.18
ANNUAL FIRE PROTECTION SPRINKLER SYSTEM FEES:
2009**

Area of Building	Chelmsford Water District
Up to 9,999 sq ft	\$130
10,000 to 19,999 sq ft	\$195
20,000 to 29,999 sq ft	\$260
30,000 to 39,999 sq ft	\$325
40,000 to 49,000 sq ft	\$390
50,000 to 59,999 sq ft	\$455
60,000 to 69,999 sq ft	\$520
70,000 to 79,999 sq ft	\$585
80,000 to 89,999 q ft	\$650
90,000 to 99,999 sq ft	\$715
100,000 to 149,999 sq ft	\$1,040
150,000 to 199,999 sq ft	\$1,332
More than 200,000 sq ft	\$1,560

Source: Chelmsford Water District, 2009

Environmental Quality of the District

All fifteen of the wells in this district are located in two separate Zone II water supply protection areas, and each also has a 400-foot Zone I radius. Because of a lack of subsurface hydro-geologic barriers (i.e. clay) which helps prevent contaminant migration, the fifteen wells are considered to be located in an aquifer with a *high* vulnerability of contamination. Presently, two of the wells—both located on Canal Street—are reserved for emergency purposes only; however, it is expected that both will soon be returned to regular productive use.

According to the District’s 2004 *Source Water Assessment and Protection Report*, numerous potentially contaminating land uses are located within the Zone II water supply protection boundaries. These include agricultural activities-- such as fertilizer storage facilities and commercial nurseries; commercial uses, including, but not limited to, a body shop, several gas stations, bus and truck terminals, dry cleaners, and a rail yard; industrial uses, including an asphalt plant, chemical manufacturer and storage center, and an electroplater; and a variety of residential and miscellaneous environmental threats. There are more than 35 underground storage tanks located within the protection boundaries, and five Tier-Classified 21-E (brownfield) sites, including the Silicon Transistor Corporation site, which is classified as a Tier 1A site.¹⁴ The Silicon Transistor Corporation site is located less than 1,000 yards from two separate Chelmsford Water District wells. The road network that traverses these two districts also poses a threat, as roadsides are often where hazardous materials are dumped illegally, and stormwater runoff contains a number of pollutants.

Given the susceptibility of the water supply protection areas in Chelmsford, the Massachusetts Department of Environment (DEP) has offered a number of planning strategies which could be employed to help mitigate the risk of groundwater contamination in Town. In terms of transportation corridor issues, the state recommended partnering with neighboring water districts to submit formal requests to the MassDOT and the Town of Chelmsford to have areas of the roadways designated as “Low Salt Areas”. A second strategy articulated was to design stormwater drainage systems along the main corridors, particularly Route 3. Similar to the road network strategies, the state recommended that a best management practices plan be instituted for the rail right-of-ways to address herbicide and pesticides overuse and help mitigate the negative impacts of cargo spills and leaks on the tracks.

In terms of the threat of environmental contamination from businesses operating in the water supply protection areas, Massachusetts DEP recommends that the water district work with local business owners to train them in the proper use, disposal, and emergency response to hazardous materials that they handle in their daily operations. Ultimately, a Best Management Practices

¹⁴ Tier 1A sites pose the highest level of risk, with a release receiving a total score equal to or greater than 550. These sites/releases require a permit and the person undertaking response actions must do so under direct MassDEP supervision.

and Inspection program would be devised to ensure that businesses are properly handling, storing, and disposing of hazardous chemicals and pollutants.

2. East Chelmsford Water District

User Demand and District Capacity

The East Chelmsford Water District owns two wells located on Canal Street with a combined yield of 700 gallons per minute. The District serves approximately 700 customers, including 324 residences and 70 businesses. East Chelmsford is fairly built out, and at this point no capacity constraints are being experienced by the District. There are two residential properties located at 243 and 62 Riverneck Road which could potentially be developed and impact the capacity of the District. There are also two commercial properties, located on Route 129 and Mill Road, which could be developed. The owners of these properties purchased them more than ten years ago, but have not developed them due to the state of the economy. The District expects that once the real estate development rebounds, these properties will be developed and the District will experience an increased demand for services.

Water District Fee Structures

Table 3.19 illustrates quarterly water usage rates in 2008 for East Chelmsford Water District customers. For residential uses, a charge of \$81.02 is levied for up to 12,500 gallons, while \$6.48 is charged per 1,000 gallons for usage exceeding 12,500. Senior citizens pay significantly less for water: \$28.93 for the first 12,500 gallons and \$6.48 per 1,000 gallons beyond that. Light commercial and commercial/industrial users pay \$138.91 and \$231.52 for the first 10,000 gallons used, respectively. Usage beyond 10,000 gallons is billed at \$8.50 per 1,000 gallons.

**TABLE 3.19
QUARTERLY SERVICE RATES: 2008**

Customer Type	Rate
Residential Uses	\$81.02 per 12,500 gallons; \$6.48 per 1,000 gallons over
Senior Citizens	\$28.93 per 12,500 gallons; \$6.48 per 1,000 gallons over
Light Commercial	\$138.91 per 10,000 gallons; \$8.50 per 1,000 gallons over
Commercial/ Industrial	\$ 231.52 per 10,000 gallons; \$8.50 per 1,000 gallons over

Source: East Chelmsford Water District, 2009

**TABLE 3.20
NEW SERVICE FEES: 2008**

Customer Type	Rate
Commercial/ Industrial	\$2,000 for up to 15,000 sq ft; \$100 per additional 1,000 sq ft
Residential	\$2,000 per unit

Source: East Chelmsford Water District, 2009

New service fees are determined by the type of user. For residential users, a \$2,000 fee is charged for structures up to 15,000 square feet, with an additional fee of \$100 per 1,000 square feet above 15,000 square feet. These fees are described in Table 3.20.

Table 3.21 lists the annual fire protection fees, which are determined by the area size of the building.

**TABLE 3.21
ANNUAL FIRE PROTECTION FEES: 2008**

Area of Building	East Chelmsford Water District
10,000 to 19,999 sq ft	\$1,200
20,000 to 29,999 sq ft	\$1,400
30,000 to 39,999 sq ft	\$1,800
40,000 to 49,999 sq ft	\$2,400
50,000 to 59,999 sq ft	\$2,900
60,000 to 69,999 sq ft	\$3,400
70,000 to 79,999 sq ft	\$3,900
80,000 to 89,999 sq ft	\$4,400
90,000 to 99,999 sq ft	\$4,900
100,000 to 109,999 sq ft	\$5,300

Source: East Chelmsford Water District, 2009

Environmental Quality of the District

Like the two other districts operating in town, the East Chelmsford Water District’s wells are considered to be at high risk for contamination, especially from roadway stormwater runoff and from local businesses using hazardous materials in their operations. The recommendations for mitigating these risks are identical to those described with the other two districts: improving stormwater runoff through roadside capture basins and other low-impact design (LID) techniques, formally requesting that some roads be designated for “Low Salt Use,” and partnering with business owners to train them in the proper use, handling, and disposal of chemicals.

3. North Chelmsford Water District

User Demand and District Capacity

The North Chelmsford Water District owns four wells within the Bomil Wellfield off Richardson Road, with a combined yield of approximately 1,450 gallons per minute. The District serves approximately 2,400 customers. In June 2009, the district received the regulatory approval to move forward with constructing a new, 13,000 ft², \$7.8 million dollar water treatment plant intended to improve the quality of drinking water for North Chelmsford residents and reduce the district’s dependence on the City of Lowell for drinking water. The water treatment plant is currently under construction and should be completed within the next year.

The North Chelmsford Water District does not operate with any significant constraints to capacity. However, they have noted that they will need to obtain a permit for their proposed Water Treatment Facility and add an additional two wells in order to continue to operate without constraint in the future.

Water District Fee Structures

Residential properties are allowed 15,000 gallons every six months. Meters are read and customers billed for their usage biannually. The minimum charge for 15,000 gallons is \$65, and an additional \$3.50 per 1,000 gallons is charged in excess of 15,000 gallons. Commercial and industrial properties, on the other hand, have a 20,000 gallon minimum usage per quarter at a rate of \$65.00 per quarter. Excess usage is billed at the rate of \$3.50 per 1,000 gallons in excess of the minimum 20,000 gallon allowance. Buildings containing more than one unit are billed at \$65.00 per unit, per quarter, and allowed 20,000 gallons per unit or actual water usage, whichever is greater.

As reflected in Table 3.22, the North Chelmsford Water District charges a domestic demand charge for customers based on their water pipe charge. These rates range from \$3,000 for a three-quarter inch pipe to \$6,000 for a six inch pipe. Multiple dwellings on a site, whether residential or commercial, are charged a \$3,000 hook-up fee.

Unlike the Chelmsford Water District, which charges the same bond debt fee for residential and commercial customers, the North Chelmsford Water District has configured rates for residential, commercial, and hotel customers. Like the other two districts, these fees are determined by pipe size.

For residential customers, fees range from \$60 biannually for 5/8" or 3/4"-inch pipes to \$175 for 4" pipes. Commercial and hotel rates range from \$50 to \$175 per quarter. These rates are illustrated in Table 3.23.

TABLE 3.22
DEMAND CHARGE BY WATER PIPE SIZE: 2009

Pipe Size	Domestic Demand Charge
0.75"	\$3,000
1"	\$3,000
1.5"	\$4,000
2"	\$4,000
4"	\$4,000
6"	\$4,000
Multi-dwellings (Residential or Commercial, per unit)	\$3,000

Source: North Chelmsford Water District, 2009

TABLE 3.23
BOND DEBT FEES FOR RESIDENTIAL, COMMERCIAL AND HOTEL PROPERTIES: 2009

Pipe Size	Residential	Commercial	Hotel
5/8" or 3/4"	\$60	\$50	\$50
1"	\$75	\$75	\$75
1.5"	\$100	\$100	\$100
2"	\$125	\$175	\$175
3"	\$150	\$175	\$175
4"	\$175	\$175	\$175

Source: North Chelmsford Water District, 2009

The North Chelmsford District provides a Sprinkler Demand service for new constructions similar to the other two districts. The fee for this service is determined by the size of the new construction, and ranges from \$3,000 for a building smaller than 20,000 square feet to \$8,000 for a building larger than 100,000.00 square feet. These rates are listed in Table 3.24.

**TABLE 3.24
SPRINKLER DEMAND CHARGES: 2009**

Building Size	Fee
Up to 19,999 sq ft	\$3,000
20,000 to 39,999 sq ft	\$4,000
40,000 to 59,999 sq ft	\$5,000
60,000 to 79,999 sq ft	\$6,000
80,000 to 99,999 sq ft	\$7,000
More than 100,000 sq ft	\$8,000

Source: North Chelmsford Water District, 2009

The North Chelmsford Water District also offers an Annual Fire Protection Sprinkler System service to its customers, whose fee is based on building size. Fees range from \$200 annually for buildings with an area smaller than 10,000 square feet to \$1,500 annually for buildings larger than 200,000 square feet. Table 3.25 on the next page summarizes the 2009 fee structure for this service.

**TABLE 3.25
ANNUAL FIRE PROTECTION SPRINKLER SYSTEM FEES:
2009**

Area of Building	North Chelmsford Water District
Up to 9,999 sq ft	\$200
10,000 to 19,999 sq ft	\$220
20,000 to 29,999 sq ft	\$240
30,000 to 39,999 sq ft	\$300
40,000 to 49,000 sq ft	\$360
50,000 to 59,999 sq ft	\$420
60,000 to 69,999 sq ft	\$480
70,000 to 79,999 sq ft	\$540
80,000 to 89,999 q ft	\$600
90,000 to 99,999 sq ft	\$660
100,000 to 149,999 sq ft	\$960
150,000 to 199,999 sq ft	\$1,230
More than 200,000 sq ft	\$1,500

Source: North Chelmsford Water District, 2009

In addition to a land use-based bond debt fee (residential, commercial, or hotel), the North Chelmsford Water District charges a sprinkler bond debt fee, based on the area of a building. These fees are billed quarterly and range from \$50 per quarter for buildings smaller than 10,000 square feet to \$1,250 per quarter for buildings larger than 250,000 square feet. The fee structure for this service is provided in Table 3.26.

**TABLE 3.26
SPRINKLER BOND DEBT FEES: 2009**

Area of Building	Fee
Up to 9,999 sq ft	\$50.00
10,000 to 19,999 sq ft	\$100.00
20,000 to 29,999 sq ft	\$150.00
30,000 to 39,999 sq ft	\$200.00
40,000 to 49,000 sq ft	\$250.00
50,000 to 59,999 sq ft	\$300.00
60,000 to 69,999 sq ft	\$350.00
70,000 to 79,999 sq ft	\$400.00
80,000 to 89,999 q ft	\$450.00
90,000 to 99,999 sq ft	\$500.00
100,000 to 149,999 sq ft	\$750.00
150,000 to 199,999 sq ft	\$1,000.00
200,000 to 249,999 sq ft	\$1,125.00
More than 250,000 sq ft	\$1,250.00

Source: North Chelmsford Water District, 2009

Environmental Quality of the District

Similar to the wells operated by the Chelmsford Water District, the North Chelmsford Water District water supply is designated at high risk for contamination because of a lack of hydrogeologic barriers and because of the mix of commercial, industrial, residential, and transportation uses within the Zone II protection area. Many of the key issues and planning strategies identified in the Chelmsford Water District’s *Source Water Assessment and Protection Plan* are applicable for the North Chelmsford Water District, especially in terms of transportation corridors, rail rights-of-way, and local business owners. However, the North Chelmsford report incorporates an action plan for mitigating pollution and runoff caused by improper road salt storage facilities, one of which is located in the wellhead protection areas for the district.

Utilities and Telecommunications

Chelmsford is well serviced in terms of utilities and telecommunications. Gas and electricity are provided by National Grid, while Comcast provides cable and cable internet services to residents and business owners in town. Table 3.27 depicts the pricing scheme for energy delivery services. These service rates are for small commercial and industrial customers with average usage less than 10,000 kWh per month or 200 kW of demand.

Table 3.28 illustrates Demand Service rates designed for commercial and industrial customers with average use exceeding 10,000 kWh

**TABLE 3.27
NATIONAL GRID RATES AND SERVICE DELIVERY**

Type of Charge	Rate
Customer Charge	\$10.00/month
Distribution Charge	
First 2,000 kWh*	3.085¢/kWh
Excess of 2,000 kWh*	4.908¢/kWh
Transmission Charge	1.453¢/kWh
Transition Charge	0.116¢/kWh
Energy Efficiency Charge	0.250¢/kWh
Renewables Charge	0.050¢/kWh

Source: National Grid Rates and Pricing, February 2010

*Includes: Basic Service Adjustment Factor (0.089¢), Residential Assistance Adjustment Factor 0.120¢, Customer Credit (0.007¢), Storm Recovery Adjustment Factor 0.034¢, Pension/PBOP Adjustment Factor 0.152¢, Service Quality Credit (0.393¢), and Standard Offer Adjustment Factor 0.248¢.

**TABLE 3.28
DEMAND SERVICE RATES**

Type of Charge	Rate
Customer Charge	\$16.56/month
Distribution Demand Charge	\$6.00/kW
Distribution Energy Charge*	0.146¢/kWh
Transmission Charge	1.408¢/kWh
Transition Demand Charge	\$0.11/kW
Transition Energy Charge	0.123¢/kWh
Energy Efficiency Charge	0.250¢/kWh
Renewables Charge	0.050¢/kWh

Source: National Grid, February 2010

* Includes: Basic Service Adjustment Factor (0.089¢), Residential Assistance Adjustment Factor 0.120¢, Customer Credit (0.007¢), Storm Recovery Adjustment Factor 0.034¢, Pension/PBOP Adjustment Factor 0.152¢, Service Quality Credit (0.393¢), and Standard Offer Adjustment Factor 0.248¢.

per month and demand not exceeding 200 kW.

For large commercial and industrial customers with demand greater than 200 kW, energy services are charged on the basis of time-of use. The fee structure for time-of-use service is illustrated in Table 3.29 on the following page. Fees differ depending on whether energy is consumed during peak or non-peak times. Between January 1st and March 7th, peak hours run from 8:00AM to 9:00PM, while from March 8th to April 4th, peak hours are from 9:00AM to 10:00PM. Beginning April 5th and ending October 24th, peak hours return to 8:00AM to 9:00PM. For one week (October 25th to the 31st) peak hours are set back to 7:00AM to 8:00PM, and between November 1st and December 31st they return to 8:00AM to 9:00PM.

TABLE 3.29
TIME- OF-USE FEE STRUCTURE

Type of Charge	Rate
Customer Charge	\$200.00/month
Distribution Demand Charge	\$3.92/kW
Distribution Charge	
Peak Hours*	0.839¢/kWh
Off-Peak Hours*	0.065¢/kWh
Transmission Charge	1.192¢/kWh
Transition Demand Charge	\$0.19/kW
Transition Energy Charge	0.061¢/kWh
Energy Efficiency Charge	0.250¢/kWh
Renewables Charge	0.050¢/kW

Source: National Grid Rates and Pricing, February 2010

* Includes: Basic Service Adjustment Factor (0.089¢), Residential Assistance Adjustment Factor 0.120¢, Customer Credit (0.007¢), Storm Recovery Adjustment Factor 0.034¢, Pension/PBOP Adjustment Factor 0.152¢, Service Quality Credit (0.393¢), and Standard Offer Adjustment Factor 0.248¢.

COMMERCIAL AND INDUSTRIAL ACTIVITY

This section examines commercial and industrial permit trends in order to gauge the level of economic development activity in Chelmsford. Following the permit analysis, a summary of some of the economic development incentives that the town promotes are offered.

Commercial Building Permits Issued

The commercial and industrial activity in a town can be partially measured by the number of building permits issued over time. Between 2004 and 2006, six commercial (valued at \$2,635,000) and zero industrial permits were issued in Chelmsford, compared to the one hundred forty-five residential permits (valued at \$27,851,745) for the same time period. Compared to the other communities in the region, Chelmsford issued fewer permits than Billerica, Dracut, Lowell, Tewksbury, and Westford. These figures are listed on the next page in Table 3.30. In 2007 and

2008, the Town of Chelmsford issued three (3) commercial and one industrial (1) industrial permit in each year. In 2009, the town issued four (4) commercial and one (1) industrial building permit. These five permits represented nearly 28% of all building permit activity in 2009.

During the *Master Plan Update* public input sessions, residents articulated a desire to boost the amount of commercial and industrial activity in Chelmsford in order to alleviate some of the tax burden on homeowners. The town is also committed to promoting commercial and industrial development in order to bolster the local tax base and help remedy the deficits in its operating budgets. A number of strategies have been implemented to help promote commercial and industrial development and expansion in town.

**TABLE 3.30
COMMERCIAL AND INDUSTRIAL PERMITS ISSUED IN THE NMCOG REGION:
2004-2006**

Community	Year	Commercial		Industrial	
		Permits	Valuation	Permits	Valuation
Billerica					
	2004	4	\$968,760	11	\$1,391,900
	2005	2	\$1,810,000	0	\$0
	2006	2	\$90,000	0	\$0
	Totals	8	\$2,868,760	11	\$1,391,900
Chelmsford					
	2004	1	\$1,441,000	0	\$0
	2005	5	\$1,194,000	0	\$0
	2006	0	\$0	0	\$0
	Totals	6	\$2,635,000	0	\$0
Dracut					
	2004	2	\$675,000	0	\$0
	2005	2	\$675,000	0	\$0
	2006	4	\$144,000	0	\$0
	Totals	8	\$1,494,000	0	\$0
Dunstable					
	2004	0	\$0	0	\$0
	2005	0	\$0	0	\$0
	2006	0	\$0	0	\$0
	Totals				
Lowell					
	2004	162	\$35,783,802	0	\$0
	2005	170	\$20,524,426	0	\$0
	2006	157	\$25,410,874	0	\$0
	Totals	489	\$81,719,102	0	\$0
Pepperell					
	2004	0	\$0	0	\$0
	2005	1	\$1,000,000	1	\$500,000
	2006	2	\$486,000	0	\$0
	Totals	3	\$1,486,000	1	\$500,000
Tewksbury					
	2004	2	\$1,142,160	0	\$0
	2005	5	\$1,726,300	0	\$0

**TABLE 3.30
COMMERCIAL AND INDUSTRIAL PERMITS ISSUED IN THE NMCOG REGION:
2004-2006**

Community	Year	Commercial		Industrial	
		Permits	Valuation	Permits	Valuation
	2006	9	\$9,561,135	0	\$0
	Totals	16	\$12,429,595	0	\$0
Tyngsborough					
	2004	3	\$1,970,800	1	\$565,000
	2005	2	\$2,152,444	0	\$0
	2006	2	\$3,000,000	0	\$0
	Totals	7	\$7,123,244	1	\$565,000
Westford					
	2004	0	\$0	0	\$0
	2005	1	\$1,330,000	0	\$0
	2006	9	\$6,592,037	0	\$0
	Totals	10	\$7,922,037	0	\$0

Source: City and Town Building Departments

DEVELOPMENT INCENTIVES, TAX INCENTIVES AND EXPEDITED PERMITTING

The Town of Chelmsford is an active participant in the Commonwealth’s *Economic Development Incentive Program* (EDIP), which is a three-way partnership between the Commonwealth of Massachusetts, a municipality located within an Economic Target Area (ETA), and a growing company. The process for this incentive program is as follows: first, a company and the respective municipality agree to a tax exemption schedule on future real property taxes reputed to the added value. The company then obtains state approval for a 5% investment tax credit. This credit takes the form of a state income tax reduction. Thirdly, the company commits to a job growth and private investment schedule. These incentive programs typically continue for five to twenty years. The EDIP program offers



Hittite Microwave Corporation headquarters is one of three companies participating in the Economic Development Incentive Program (EDIP). The company employs 332 workers from across the community and region. (Source: Pictometry International, 2008)

several advantages to growing companies, including reducing the financial burden required to grow a company and providing a flexible framework which can accommodate variable tax exemption structures and agreement durations. The companies that presently are involved with the EDIP program are Arbor Networks (6 Omni Way), Circles (300 Apollo Drive) and Hittite Microwave (20 Alpha Road). In January 2010 the state issued new regulations for the EDIP program, which permit manufacturers to apply directly to the state.

Business Licensing and Permitting Assistance

The Town's Community Development Department is eager to work with businesses and assist them in the development review process, including helping companies identify appropriate zoning and development permits, filing fees, and anticipated time frames for each permit. The Department also serves as the key point of contact for the Town's land development Boards and Commissions and technical review meetings.

BALANCE BETWEEN ECONOMIC GROWTH AND QUALITY OF LIFE

The Master Plan Committee and NMCOG worked together to focus upon a draft Vision Statement and individual goal statements for each technical area. Based upon the input provided through the SWOT sessions held with the public, the business community and the Master Plan Committee itself, a draft Vision Statement and individual goal statements were established prior to the hosting of the Public Forum sessions. These Public Forums began with the Land Use/Economic Development/Housing Public Forum held at the Chelmsford Senior Center on June 3, 2009, where the public was invited to offer their opinions on the respective topics. Local cable television recorded the proceedings and viewers were encouraged to submit their recommendations and comments.

At the outset of the Public Forum, the draft Vision statement and goal statements for Land Use/Zoning, Economic Development and Housing were presented and the participants were asked for feedback throughout the process. As a result of the input from the Master Plan Committee, the business community and the public, the Economic Development goal statement was established as follows:

Establish an active economic development program to retain and attract "growth" businesses, which enhance the town's tax base and create well-paying jobs for Chelmsford residents in a manner that balances job creation with the quality of life.

This statement incorporated the suggestions made by the business community regarding opportunities and threats and reflected the need to achieve a balance between economic development and the quality of life in the community. The participants at the Public Forum then offered their recommendations for the Economic Development portion of the Master Plan as follows:

- Town should promote commercial development, but in line with character of town.
- Would like to see more industrial and commercial growth.
- Lack of industrial land, industry is critical to increasing tax base.
- Limited sewer capacity limits growth especially residential development and hinders the town's ability to attract businesses. This should be addressed.
- Responsible commercial and residential development, fair and equitable.
- Policies should promote redevelopment and rehabilitation.
 - ◆ Wilson Street – Fire Dept site?
 - ◆ Rte 3 and I-495 down to Chelmsford Center has many vacancies and commercial development opportunities.
 - ◆ Ball fields – relocate to develop 100 year leases for properties.
- Do not develop ball fields.
- Vinal Square has many prime redevelopment districts.
- Inadequate space for children to play.
- Address traffic congestion.
- Reoccupation of vacant buildings on Route 129 should be addressed.
- Redevelop mills and row houses in North Chelmsford.
- Revise zoning regulations if businesses agree to be an anchor tenant.
- Need to analyze demographics to better understand local and regional market.
- Distribution companies should be encouraged to take advantage of location at the junction of Route 3 and I-495.
- Actively engage landlords and property owners rather than through generic mailings.
- PILOT program for nonprofit organizations in town.
- Town needs a grant specialist for economic development initiatives – no money for that position at this time.
- Mixed-use zoning on Route 129 should be allowed to improve traffic in the town center.
- Warehouse space on Brick Kiln Road could be used for distribution business (Best Buy)
- Don't turn Rte 129 into Rte 110.
- Why not preserve ball fields as open space?
- Concentrate on occupancy, not new development, especially on Route 129.
- Promote new technologies and revamp town partnerships; boost economic development commitment.
- Encourage more family-friendly businesses and entertainment, e.g. birthday party center, bowling, etc.
- Work with property owners to support start-up companies through incubator space.
- Need to brand Chelmsford.
- Rte 129 corridor:
 - ◆ Good access and hotel, but a disjointed area
 - ◆ Find a high tech anchor business for that area in hopes that it will attract other high tech businesses.
 - ◆ Need to attract green technology companies.
 - ◆ Green Community: try to site solar facilities on building rooftops to help with the Governor's plan and promote Chelmsford as a renewable community.
 - ◆ Increase height limits allowed.
- Eliminate mixed-use restriction on Rte 129. Need services for employees in that area.

- ◆ New strip mall on the other side of Rte 3 in Billerica provides services for Chelmsford businesses. Need to rectify the disjointed look of the corridor.

ECONOMIC DEVELOPMENT OPPORTUNITIES

In late 2008, the Town's Department of Community Development published an *Economic Development Plan*, which among other things, identified seven areas of town where future development and economic revitalization efforts should be targeted. These areas are Center Village, the Route 129 Technology Corridor, Drum Hill/ Technology Drive, Vinal Square/ North Chelmsford Mill District, the Route 3/ Route 40 Interchange, Route 110/ Littleton Road, and the Route 110/Route 3 Shopping District. The following section summarizes the economic development visions for these areas that were articulated in the town's *Economic Development Plan*-and represent the views of the Community Development Department, not the Master Plan Committee. Number labels included on the flyover images correspond to the numbers attributed to specific sites discussed in the text of this section.

Center Village

Center Village is the historic downtown area of Chelmsford, containing a mix of residential and commercial land uses in addition to churches, open space, and the town's civic institutions (Photo below).



Aerial image of Center Village (Source: Pictometry International, 2008)

The CVS site (1) and Papa Gino's site (2) on Chelmsford Street are both considered to be underutilized. A number of historic properties, such as the Old Town Hall (3) on North Street

and the Odd Fellow’s Building (4) in Central Square, are located in Center Village and have been identified as key opportunities to promote economic redevelopment while preserving the historic integrity of the downtown.

There are also a number of underutilized and vacant properties in Center Village, such as a 217,800 square foot former lumberyard (5) and an 8.45-acre Stop and Shop site (the store announced plans to relocate to the former Chelmsford Cinema site). For both of these properties, the 2008 *Economic Development Plan* suggested the development of additional housing as a way to increase foot traffic in the downtown. The Stop and Shop site has also been identified as a potential candidate for a MGL 40R mixed-use development, which would include multifamily housing and office and retail space.

Additionally, the *Economic Development Plan* recommended that the Town determine the long-term future uses of the properties that it owns in Center Village and reutilize a number of commercial properties along Chelmsford Street (1 and 2). By addressing these objectives, the Town hopes to transform the area into a “lively, mixed-use village district with strong retail, commercial uses, and housing” (Chelmsford Economic Development Plan, 46).

Route 129 Technology Corridor

The technology corridor located along Route 129 is Chelmsford’s largest commercial and industrial business district, with thirteen of the town’s top fifteen employers located there. Past infrastructure improvements to the area have benefitted existing businesses; however, the recent economic recession impacting the region is reflected in the estimated 600,000 square feet of vacant space along the corridor (Chelmsford Economic Development Plan, 47). Additionally, there are many first generation, single story buildings located in the area, as shown in aerial photograph to the right.

Rather than completely redevelop these vacant properties, the Town has chosen a strategy of using Tax Increment Financing (TIF) to attract new businesses to the empty spaces. Additional plans for the corridor include adding some amenities such as restaurants, extended stay facilities and conference space and



Route 129 Technology Corridor (Source: Pictométrie International, 2008)

personal services within a walkable distance to the technology park, clarifying the Town's zoning bylaw with respect to biotechnology and research and development firms so as to promote the area as a welcoming place for these types of industries, and upgrading the first generation buildings, which now serve as affordable space for small and start up businesses. In the long term, as vacant properties fill up, there are two sites (a 10-acre undeveloped site and a 5-acre former mulch processing facility) identified for possible new office or commercial construction. Ultimately, the town hopes to promote the Route 129 Technology Corridor as one of the "premiere corporate destinations in the Merrimack Valley" (Chelmsford Economic Development Plan, 49).

Drum Hill/ Technology Drive

The Drum Hill Technology Park was originally conceived as the future home for high tech businesses in Chelmsford. However, the development of the area has mirrored the ups and downs of the regional real estate market and has ultimately taken on a much more diverse character which includes office buildings, research and development firms, a medical center, and specialized senior housing. In part because of road and infrastructure improvements which have attracted developers to the area, this district is quickly approaching maximum build-out (the Town identified one 3.9 acre undeveloped parcel in the area).

There are a handful of significant redevelopment opportunities, however, including two small underutilized parcels on Jean Avenue and Wesley Street (1 and 2), the environmental remediation and redevelopment of the 30-acre Glenview Sand and Gravel site (3), and a 30-acre site owned by UMass Lowell which is currently being leased as a live-in correctional facility for adolescent girls. The Town envisions this area as "an attractive and convenient shopping and business location...[where] the development of large sites on the periphery of the district serve to strengthen the community tax base and create new centers of activity" (Chelmsford Economic Development Plan, 52). Two of the key steps toward achieving this vision are completing infrastructure projects, particularly road and traffic improvements, as well as developing design guidelines to promote a



Drum Hill/Technology Drive (Source: Pictometry International, 2008)

consistent aesthetic to the area. NMCOG worked with the Town of Chelmsford and the business community in this area to make additional recommendations for Drum Hill. These recommendations from the Community Development Department should be implemented as part of the Master Plan. These opportunity sites are illustrated in the aerial image to the left.

Vinal Square/ North Chelmsford Mill District

The Vinal Square/ Mill District area of North Chelmsford contains a number of significant economic development opportunities, including the revitalization of the former Southwell Combing Company mill (1), the North Chelmsford Town Hall (2), and the historic mills located at 51 and 61 Middlesex Street (3 & 4) and 70 Princeton Street (5). The town is currently working with a consultant to develop a Mill Revitalization Overlay District for the purpose of rehabilitating and reutilizing Chelmsford's historic mill buildings into additional commercial and industrial space, as well as multifamily housing. Opportunity sites are in the Vinal Square/ North Chelmsford Mill District as shown in the image below.



Aerial imagery of Vinal Square and the North Chelmsford Mill District. (Source: Pictometry International, 2008)

Many residents and business owners have also advocated for the construction of a commuter rail stop in this district, should the proposed extension of the Lowell MBTA line into New Hampshire be implemented. Adding a stop would bolster perceptions that the district is an ideal location for commuters to live, and improve the area as a candidate for transit-oriented development funding. This new and lively mixed-use center, while honoring the industrial history of the town, would become a model for compact, mixed-use development in the future.

Route 3/ Route 40 Interchange

This area is primarily composed of undeveloped, industrially zoned land. Many of the parcels are large and have tremendous economic development potential. For instance, a 66.37-acre town-owned parcel located on Oak Hill Road has the potential to be developed into affordable housing, as articulated by the 2008 *Economic Development Plan*. A 22.76-acre undeveloped parcel that was historically part of the Fletcher Granite Company's quarry holdings is another parcel with excellent development potential (See image on the following page).



Image of the Fletcher Granite Company's quarry (Source: Pictometry International, 2008)

The primary constraints to promoting economic development in this district is a lack of infrastructure (i.e. sewer and roads), legal frontage and land assembly issues. As these infrastructure improvements are made over time, the Route 3/Route 40 Interchange will be transformed from a largely undeveloped area into a host for “major new commercial and mixed-use development...[helping to] minimize traffic congestion and maximize growth in the community's commercial tax base” (Chelmsford Economic Development Plan, 59).

Route 110/ Littleton Road

Littleton Road is a main commercial artery in Town, hosting a variety of uses ranging from light industrial businesses to automobile repair; convenience retail to an asphalt plant. It is an area that has seen multiple 40B affordable housing development proposals, and there is a large manufactured housing (mobile home) park across the street from the neighborhood commercial district.

Many of the properties in this area have fallen into disrepair and/or underutilization. There are a handful of larger parcels, for



Route 110 Corridor/Littleton Road (Source: Pictometry International, 2008)

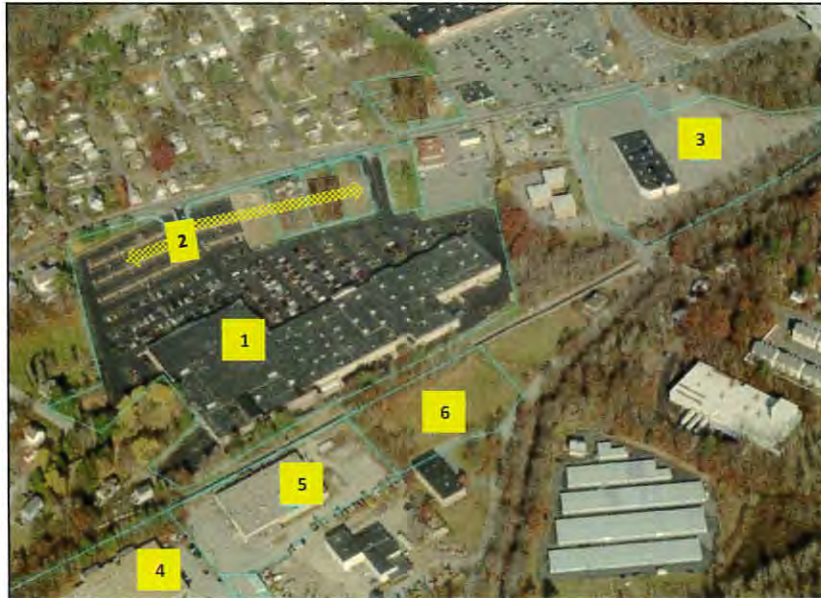
example a 15-acre parcel on Littleton Road that is currently underutilized and an 11-acre parcel on Hunt Road (1), both of which would be ideal mixed-use development sites. The town expects that in the future, many of the smaller underutilized parcels will be assembled into larger sites (2-6). Future growth in the area could include commercial and light industrial uses as well as services for residents living in the manufactured housing park and new multi-family housing.

Route 110/ Route 3 Shopping District

There are many opportunities for economic revitalization and redevelopment within the Route 110/ Route 3 shopping district, as illustrated in image below. Infill development on the underutilized parking lot of the Chelmsford Mall (1) was one strategy articulated in the 2008 *Economic Development Plan*. Vacant properties such as the four commercially zoned parcels and upper parking lots abutting the Chelmsford Mall (2), and the former Chelmsford Cinema (3) are prime candidates for redevelopment. There is superb access to infrastructure, legal frontage, and proximity to thriving residential neighborhoods.

The section of Route 110 (Chelmsford Street) from I-495 to Route 3 has two (2) distinct sides. The even-numbered side of Chelmsford Street is primarily comprised of residential properties and is zoned RB. Whereas, the odd-numbered side is a combination of commercial spaces and is zoned CA, CB, CC and CD. Any future development along the even-numbered side should remain residential.

Furthermore, a Town-owned brownfield property (the former site of the Silicon Transistor Corporation) located at 29 Katrina Road holds great potential, which will be realized once an environmental strategy has been developed and implemented for the site (4-6). The property has been designated as a priority development site (PDS) by the Interagency Permitting Board under Chapter 43D. Town officials envision this area becoming a “premiere local retail district” which is free from environmental contamination and serves to buffer residences from future development.



Route 110/Route 3 Shopping District (Source: Pictometry International, 2008)

ISSUES AND OPPORTUNITIES

The establishment of a public/private partnership through the initiatives of the Town of Chelmsford, the CEDC and the private sector will help fill vacant commercial space and redevelop industrial properties to the benefit of the tax base and local residents. The Town has demonstrated resiliency in redeveloping former restaurants at a time when the economy has been the worst in thirty years. The private market has determined that there is significant value in a Chelmsford location, principally due to its regional consumer market that has ready access through Route 3 and I-495. Over the last six years, the commercial/industrial portion of the Town's tax levy increased from 14.4% in FY2005 to 16.3% in FY 2010. While businesses and industries have increased their share of the tax levy, it has not increased enough to maintain the level of services for local residents. An increase in the commercial/industrial tax base to a level that does not negatively affect the quality of life in town through redevelopment projects will fund the level of services needed to support the community.

The establishment of the Chelmsford Economic Development Commission (CEDC) in 2009 provides a focus on economic development initiatives that did not exist previously. Designed to "assist in the recruitment, retention and expansion of businesses in the Town", the CEDC will provide active support to the Town Manager and Community Development Director in the implementation of the town's economic development policies. As an advocate for businesses and an advisor to the Board of Selectmen and Town Manager on economic development proposals, the CEDC will bring together the public and private sectors in order to create jobs in the community and assist in filling vacancies for commercial and industrial properties. Through its advocacy of expedited permitting processes for retail, commercial and industrial development, the CEDC will ensure that private development proposals are acted upon within 180 days consistent with the State's expedited permitting process guidelines. The CEDC outlined its Chelmsford Brand Strategy in April 2010, which focused on the strengths of the community in order to attract small and medium-sized businesses to the community. The Town has also worked with the communities along Route 3 – Burlington, Bedford, Billerica and Lowell – to identify barriers to the development of priority development sites, as well as to develop a marketing brand for Route 3 that will benefit the region in attracting private investment. The Town needs to maintain and increase its Site Finder Database and update its annual survey of the Chelmsford business community.

The expedited permitting process should be adopted by the Town of Chelmsford to ensure that permitting decisions on industrial, commercial and residential applications are acted upon within the state's 180-day guidelines. Specific procedures and processes for expedited permitting should be adopted by all boards and commissions involved in the land use permitting process to ensure that this timeframe is met. The Community Development Department should develop a Permit Streamlining Guide that summarizes the town's policies and procedures in relation to the Best Practices Guide developed by the Massachusetts Association of Regional Planning

Agencies (MARPA) in 2007 and identify improvements that can be made to expedite the current permitting process. In addition, the Town should develop a Permitting Manual that describes the permitting process to the public, summarizes the roles and responsibilities of each board, commission and department and identifies the local contact people for each board, commission and department. This Permitting Manual can be made available to the public online, as well as in hard copy at the Town Clerk's Office or at the Community Development Office. The adoption of an expedited permitting process will ensure that the private sector recognizes that the Town of Chelmsford is interested in their business. The Master Plan Committee recommends streamlining and improving the Town's development permitting process to encourage targeted commercial redevelopment activities, such as through expedited permitting along Route 129/Billerica Road.

The Town of Chelmsford must remain competitive with other communities in Massachusetts and New Hampshire in attracting and retaining businesses. In order to remain competitive, the Town needs to have as many economic development tools available as possible. Currently, a portion of the Town falls within the City of Lowell's Economic Target Area (ETA) and tax incentives are available to businesses locating in this specific area. However, businesses located outside this area aren't offered similar incentives. In order to level the playing field, the ETA should be extended to include the entire community. Due to the limited economic distress criteria associated with the community, the Town should consider establishing a Regional Technology Center under subsection (j) of the Economic Development Incentive Program (EDIP). Designation of the entire community as an ETA would make these businesses eligible for Recovery Zone Bonds (RZBs) as well. Recently, the Town of Billerica received the first RZB in the Commonwealth of Massachusetts in attracting Pharmalucence, a biotech company, to the community.

The future economic development opportunities within the community, based upon the build-out study completed by NMCOCG, will be principally redevelopment opportunities. Consistent with the Land Use and Zoning section, the town's zoning bylaw will need to be modified and strengthened to manage, guide and incentivize redevelopment activities. The Master Plan Committee has identified the following areas as being suitable for redevelopment: Route 129 corridor (from Riverneck Road to the Billerica town line), Vinal Square, Center Village, the Route 110 corridor between the town center and I-495 and the Drum Hill area in the vicinity of Glenview Sand and Gravel and Drum Hill Road. The Master Plan Committee recommends the establishment of a mixed-use Redevelopment District along Route 110, from the Westford side of Hunt Road to Chamberlain Road. Other areas suitable for mixed-use redevelopment projects include Chelmsford Street from the Town Center to the Center side of Fletcher Street, Technology Drive and the mill complexes of North Chelmsford. The concept of a Mill Reuse Overlay District in North Chelmsford is consistent with the balanced growth philosophy of the Master Plan Committee.

The Board of Selectmen currently sets the tax rates annually to determine the proper balance in tax rates and tax burdens. Currently, the town has a flat tax rate that treats each tax classification equally.

Manufacturing continues to play a major role in the Greater Lowell region even though the number of businesses and employees has declined over the past few years. Yet, manufacturing still is a major contributor to wealth generation in northeastern Massachusetts and southern New Hampshire due its concentration of 1.5 to 2 times the manufacturing composition generally found in Massachusetts, New Hampshire and the United States. A large portion of the manufacturers in the region utilize sophisticated technologies in the areas of nanotechnology, robotics, sensors, biometrics, electro-optics and lasers according to the Asset Map for the Manufacturing Sector developed by Mt. Auburn Associates on behalf of the Greater Lowell and Merrimack Valley Workforce Investment Boards and the New Hampshire Office of Workforce Opportunity. The Town of Chelmsford should work with the Greater Lowell Workforce Investment Boards to focus on the employment needs of those sophisticated manufacturing firms that represent the region's economic future. The three emerging technologies identified in this report are nanotechnology, robotics and clean energy.

In assessing the infrastructure system related to sewer, water and telecommunications, the completion of the town-wide sewer system, the availability of water through the three water districts and the telecommunication options in the community place the town at a high level of infrastructure compared to other communities in the region. The major issue facing the community remains the sewer capacity issue and, to a lesser extent, the water capacity issue. Additional sewer capacity needs to be obtained through the renegotiation of the contract with the Lowell Regional Wastewater Utility or through an agreement with the Town of Billerica. The town has begun to explore the use of a "sewer bank" to promote more efficient use of the limited sewer and water resources. The water districts believe that there will be sufficient water resources in the future, but conservation initiatives have been started to ensure that the resources will be there. The town will need to work with NMCOG and the other communities in the region to address the need for additional sewer and water capacity on a regional basis.

In continuing to redevelop the Center Village and Vinal Square, the Town should actively pursue state and federal funding to implement critical projects in these areas. As a first step to applying for these funds, the Town needs to meet with the business owners and residents to discuss their vision for these town centers and to educate them on what other communities have done to increase economic activity, encourage redevelopment projects and maintained the historic nature of the two centers. Would a Business Improvement District (BID), which is designed to help the local businesses establish special assessments for supplemental services, work in either location? Should the Town apply for financing under the District Improvement Financing (DIF) program to fund public works, infrastructure and development projects through incremental tax revenues from the affected businesses? Should the Town apply for funds under the Community Development Action Grant (CDAG) program to improve the physical conditions in these two

village centers or Community Development Block Grant (CDBG) funds to address a number of design issues in these areas? These are the types of discussions the Town should have with the business owners and residents to plan the future for these village centers.

In redeveloping its commercial centers, the Town should identify the types of businesses that would address a real need in the community. Working with the Economic Development Commission, the Chelmsford Business Association and the Greater Lowell Chamber of Commerce, the Town could develop a survey for its residents and employees at local businesses to assess what the commercial needs are for the community. Once the survey results have been tabulated, the Economic Development Commission could then work with MassDevelopment and the Massachusetts Alliance for Economic Development (MassEcon) to identify the specific businesses that would address these unmet needs. After these businesses are identified, the Economic Development Commission could utilize the Site Finder Database to recommend specific locations in Chelmsford that would meet the property needs of these businesses.

The Chelmsford 2008 Economic Development Plan identified seven principal commercial and industrial development areas: Center Village/Chelmsford Street, the Route 129 Technology Corridor, Drum Hill/Technology Drive, Vinal Square/North Chelmsford Mill District, Route 3/Route 40 Interchange, Route 110/Littleton Road and Route 110/Route 3 Shopping District. The Master Plan Committee has identified the following general areas as being suitable for redevelopment: Route 129 corridor (from Riverneck Road to the Billerica town line), Vinal Square, Center Village, the Route 110 corridor between Village Center and I-495, and the Drum Hill area in the vicinity of Glenview Sand and Gravel. The Master Plan Committee recommends the establishment of a mixed-use Redevelopment District along Route 110 (the Westford side of Hunt Road to Chamberlain Road) and identifies the Center Village, Route 110 from the Center Village to the Center Village side of Fletcher Street, Technology Drive, Vinal Square and the mill complexes of North Chelmsford as appropriate areas for mixed-use development. These issues are discussed at greater length in the Land Use and Zoning section.

The Center Village/Chelmsford Street area provides extensive redevelopment and mixed-use opportunities. The future development of the Stop & Shop site for mixed-use development would have an impact upon the economic vitality of the Center Village. The re-use of Old Town Hall will add to the activity in the Center Village, as would the redevelopment of 11 Cushing Place for housing. The re-use of the Odd Fellow's Building at 44 Central Square for housing would maintain the historic nature of the building, address the housing needs in the community and fill a vacant building with activity and the town should actively encourage this to occur.

The Route 129 Technology Corridor offers the best opportunity for industrial development through the redevelopment of existing complexes. The Master Plan Committee recommends that the height limits for buildings along Billerica Road from the Billerica town line to Alpha Road Route 3 be raised to allow structures of four to six stories. This area backs onto the heavily trafficked Routes 3 and 495 which are major transit routes to Boston, New Hampshire, Maine

and Southern New England. The additional height will make these buildings visible from both Routes 3 and 495. This visibility, combined with the excellent access to Route 3, Interstate 495 and the Lowell Connector, make this a prime site for emerging medium-sized companies, consortia, industry groups and coalitions of technology-based research, development and manufacturing concerns that routinely emerge from efforts like the Commonwealth's investment in bio- and nano-technologies. Keeping to the MPC's goal of managed growth through redevelopment, a portion of the increase in useable floor space derived from the additional height will be offset by gaining a significant increase in open space exceeding our existing requirements. The resulting park-like complex has the potential to anchor a prestigious development that can generate higher tax revenues and in its success, could spawn secondary redevelopment in the neighboring office parks along Mill and Apollo Roads, which, though lacking visibility, have excellent highway access. These neighboring office complexes would be excellent locations for start-up and spin-offs to begin operations. As a part of ensuring that vital commercial support services are available for businesses and employees while managing growth, the MPC recommends that ancillary support services be permitted from the Billerica town line to Riverneck Road. The development of an extended stay residence at Mill Road and Billerica Road would complement the business activities in the area.

The availability of TIF Agreements for these properties, as well as the development of a branding strategy for the Billerica Road area, will help encourage private investment in this area. This area could be designated as the Regional Technology Center under subsection (j) of the EDIP legislation that would ensure that the entire community is located within an Economic Target Area (ETA). The Master Plan Committee recommends that expedited permitting procedures be established for this area to convince private industry that the Town is serious about development. There are also some development parcels in this area that should be considered as well.

The Drum Hill/Technology Drive area is one of the major retail corridors in Chelmsford. The Town should begin by implementing the recommendations outlined in the Drum Hill Study conducted by NMCOG in 2008 to address traffic, design guidelines and streetscape issues. This area consists of the major retail operations at Drum Hill and the office/R & D buildings, medical center and specialized housing at Drum Hill Technology Park. Its close proximity to the UMass Lowell West Campus could provide additional development opportunities in the area depending on the future redevelopment of the campus site. The Master Plan Committee recommends that a redevelopment master plan be prepared for the overall Lowell West Campus. The 30-acre Glenview Sand and Gravel site at 152 Steadman Street offers a future development opportunity once the contamination issues are addressed with the assistance of the Massachusetts Department of Environmental Protection. Development and redevelopment opportunities at 10 Technology Drive and Jean Avenue/Wesley Street were also identified in the Chelmsford 2008 Economic Development Plan.

The Vinal Square/North Chelmsford Mill District represents a mixed-use development area with tremendous potential. The Master Plan Committee is supportive of the extension of commuter rail service from Lowell to Nashua and Manchester and the Town has expressed an interest in establishing a commuter rail station within North Chelmsford, providing that there is proper community input and that adequate traffic mitigation is provided in North Chelmsford and elsewhere. The establishment of a Mill Reuse Overlay District in North Chelmsford is worth pursuing since it would protect the neighborhood from the loss of historic buildings, encourage the reuse of these buildings should a vacancy occur and add value to the properties. The re-use of North Chelmsford Town Hall will add economic vitality to Vinal Square. A District Revitalization program should be considered as part of the revitalization efforts.

The Route 3/Route 40 Interchange area has undeveloped, industrially zoned land adjacent to the Westford border north of Groton Road (Route 40) and adjacent to the Route 3/Route 40 interchange. Within the Land Use and Zoning section, the zoning and land use conflicts along the Route 40 corridor between Route 3 and the Westford town line are identified. It is recommended that the town revise the zoning in the area and use transitional zoning as a means to reduce these conflicts. Within the Housing section, the town-owned 66-acre Oak Hill Road parcel, the North Chelmsford Congregational Church parcel and the 19 acre Oak Hill Road parcel were recommended for housing and open space uses. There are additional properties in the area, such as 540 Groton Road, that could be developed for industrial purposes.

The Route 110/Littleton Road area extends from the Center Village to the Westford line. The Master Plan Committee recommends that the establishment of a mixed-use Redevelopment District along Route 110, from the Westford side of Hunt Road to Chamberlain Road, be further explored. This Redevelopment District would incorporate commercial and residential properties and ensure that land use or zoning conflicts created by industrial properties are minimized with the abutting residential areas. The Master Plan Committee recommends that the properties on Littleton Road from- Hunt Road to Chamberlain Road be addressed as part of the Redevelopment District.

The Route 110/Route 3 Shopping District has benefited from the Route 3 widening project. Due to its access to both Route 3 and I-495, this area has the potential to attract additional private investment. With the development of the Stop & Shop project at the former Chelmsford Cinema site, there will be increased incentive for businesses to locate in this area. The redevelopment of the town's only Chapter 43D site at 25-29 Katrina Road will help clean up the former Silicon Transistor Corporation property, generate property taxes for the Town and create new employment opportunities for Chelmsford residents. The Master Plan Committee recommends that the upper parking lots and four commercially zoned parcels in front of the Chelmsford Mall be rezoned neighborhood commercial type uses with strict design guidelines, thereby creating transitional zoning, which would provide additional buffering and screening for abutters and protect the neighborhood character. Redevelopment opportunities in this area are likely to

develop as the economy improves and major private investments are made. The Town should take advantage of these emerging opportunities.

In identifying potential economic redevelopment/development sites, the Chelmsford Master Plan Committee focused upon a handful of parcels – 29 Katrina Road, the Glenview Sand and Gravel site, the Stop & Shop Plaza on Boston Road and the former Route 3 Cinema site – and three redevelopment corridors – Route 129 (Riverneck Road to the Billerica town line), Route 110 (Center Village to Route 495), and Littleton Road (the Westford side of Hunt Road to Chamberlain Road). These potential economic redevelopment/development sites offer real opportunities to create jobs in the future. These sites are depicted on Map 6 on the following page.

RECOMMENDATIONS

- Support the efforts of the Chelmsford Economic Development Commission (CEDC) in recruiting, retaining and expanding businesses for the community. Tie together the efforts of the CEDC with the Community Development Department to update and maintain the Site Finder Database and update the annual survey of the Chelmsford business community.
- Build upon the Chelmsford Brand Strategy developed by the CEDC in April 2010 by incorporating it within the regional “brand strategy” being developed for the Route 3 corridor from Route 128 to I-495. Work with the state economic development agencies to promote the adopted brand strategy for Route 3.
- Adopt the specific procedures and processes for expedited permitting to ensure that permitting decisions for industrial, commercial and mixed-use applications are acted upon within the state’s 180-day guidelines. The Community Development Department should develop a Permit Streamlining Guide and a Permitting Manual, as recommended in the Chelmsford 2008 Economic Development Plan. The Permitting Manual should be made available on line and through the Town Clerk’s Office and the Community Development Department. Initially establish expedited permitting for projects within the Route 129 corridor but look at other areas in town where this may be appropriate.
- Extend the benefits of the EDIP program to the entire community by expanding the current Economic Target Area (ETA) through the establishment of a Regional Technology Center. Work with local businesses to apply for Recovery Zone Bonds (RZB) from the Commonwealth.
- Prioritize redevelopment initiatives along the Route 129 corridor (from Riverneck Road to the Billerica Town line), in the Center Village and Vinal Square, in the Drum Hill area on Drum Hill Road and in the vicinity of Glenview Sand and Gravel and along the Chelmsford/Route 110 corridor between the Center Village and I-495. Explore the establishment of a mixed-use Redevelopment District along Route 110 from the Westford side of Hunt Road to Chamberlain Road. Promote mixed-use redevelopment projects on Chelmsford Street/Route 110 from the Town Center to the Town Center side of Fletcher Street, along Technology Drive and at the mill complexes of North Chelmsford (Mill Reuse Overlay District).
- The Board of Selectmen should continue to review tax policy on an annual basis as a means to determine the proper balance in terms of tax rates and tax burdens.

- Work with the Greater Lowell Workforce Investment Board (GLWIB) to focus on the employment needs of those manufacturing industries with sophisticated technologies in the areas of nanotechnology, robotics, sensors, biometrics, electro-optics, lasers and clean energy.
- Expand the public/private partnership initiated by the CEDC by working with the private sector to fill vacant commercial space and redevelop industrial properties. Through the utilization of the Site Finder Database, the Town can provide updated property information for prospective tenants and businesses.
- Develop strategies to increase the capacity of the sewer and water systems to meet the growing demands of the business community and local residents. Renegotiate the contract with the Lowell Regional Wastewater Utility and/or develop an agreement with the Town of Billerica to increase sewer capacity for the future. Work with NMCOG and the other communities in the region to address infrastructure issues that impact future economic development initiatives.
- Direct the CEDC to host regular sessions for the residents and business owners in Center Village and Vinal Square to hear their vision for these town centers and to educate them on what other communities have done to revitalize their town centers. Explore funding opportunities under the Business Improvement District (BID), District Improvement Financing (DIF), Community Development Action Grants (CDAG) and Community Development Block Grant (CDBG) programs in order to assist in the revitalization of these town centers.
- Working with the CEDC, the Chelmsford Business Association and the Greater Lowell Chamber of Commerce, the Town should develop a survey for its residents and employees at local businesses to assess what the commercial needs are for the community. The CEDC and Community Development Director could then work with MassDevelopment and the Massachusetts Alliance for Economic Development (MassEcon) to identify specific businesses that would address these needs.
- Focus on the extensive redevelopment and mixed-use opportunities in the Center Village/Chelmsford Street area. The area between the Center Village and I-495 should be the focus of redevelopment activities, while mixed-use development should be targeted for the area from Center Village –to the Center Village side of Fletcher Street.
- Encourage industrial development in the Route 129 Technology Corridor through the redevelopment of existing buildings and zoning changes related to the maximum building height and commercial support services such as cleaners, financial businesses, day care

support, extended stay and conference facilities and restaurants. Utilize expedited permitting procedures for economic development projects in this area.

- Implement the recommendations in the Drum Hill Study conducted by NMCOG in 2008 to address traffic, design guidelines and streetscape issues. In cooperation with UMass Lowell, develop a redevelopment master plan for the UMass Lowell West Campus. Identify development opportunities related to the Glenview Sand and Gravel site. Implement development and redevelopment opportunities at 10 Technology Drive and Jean Avenue/Wesley Street.
- Support the extension of commuter rail service from Lowell to Nashua and Manchester and establish a commuter rail station with North Chelmsford, providing that there is proper community input and that adequate traffic mitigation is provided in North Chelmsford and elsewhere. Establish a Mill Reuse Overlay District in North Chelmsford and implement a District Revitalization program as part of the overall revitalization efforts in Vinal Square.
- Address zoning and land use conflicts in the Route 3/Route 40 Interchange area so as to encourage a balance between industrial development, commercial redevelopment and housing initiatives. Utilize transitional zoning as a means to reduce these conflicts and to protect the residential neighborhoods adjacent to this corridor.
- Explore the establishment of a mixed-use Redevelopment District along Route 110 from the Westford side of Hunt Road to Chamberlain Road. Address the properties on Littleton Road and at 50 Hunt Road as part of the Redevelopment District.
- Build upon the redevelopment opportunities in the Chelmsford Street/Route 110/Route 3 Shopping District principally through the Stop & Shop project at the former Chelmsford Cinema site and the Chapter 43D site at 29 Katrina Road. These development projects will attract additional private investment to this area. Rezone the upper parking lots and four commercially zoned parcels in front of the Chelmsford Mall as neighborhood commercial type uses with strict design guidelines, thereby creating transitional zoning, which would provide additional buffering and screening for abutters and to protect the neighborhood character.
- Prioritize the Potential Economic Development Sites for the CEDC and Community Development Department to implement.