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### **Master plan for the city of Manchester, New Hampshire, adopted by the planning board December 10, 2009.**

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# Master Plan

## for the City of Manchester, New Hampshire

Adopted by the Planning Board December 10, 2009

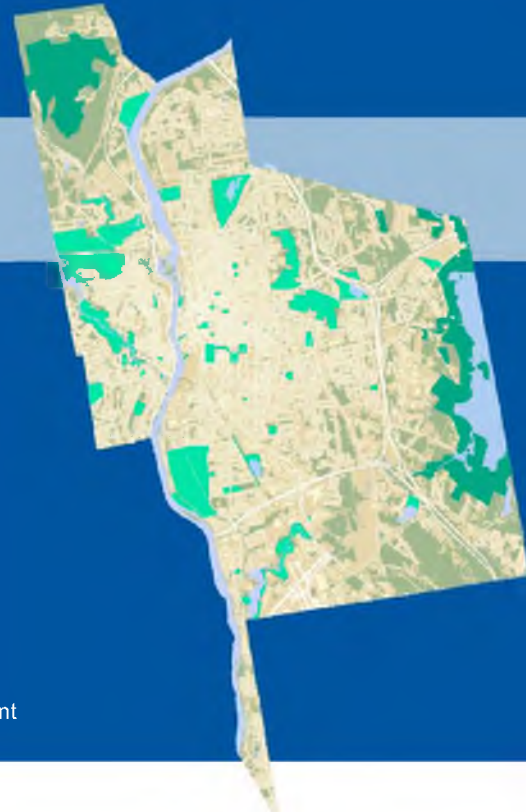
### Introduction

**T**he Master Plan provides a vision for the City of what Manchester could look like in the next ten to fifteen years. It focuses primarily on the physical development of the community - the public facilities and infrastructure as well as the form, type and density of private development. In accordance with State law, the Plan provides a basis for the Zoning Ordinance which is the City's primary tool for regulating the development of private parcels. The next phase following the Master Plan is the development of implementation strategies and projects.

A vibrant and healthy City requires a balance of a number of elements. These include: a diversified and resilient economy; a variety of housing opportunities; consumer goods and other services; good schools and higher education; a sound public infrastructure of roads, utilities, sidewalks and municipal buildings; amenities and strong neighborhoods. This Master Plan discusses each of these and other aspects and tries to bring an appropriate balance or mix for the future City. A community must also be prepared to address major global changes such as climatic change and energy problems. This plan begins to discuss such global issues by discussing ways that Manchester can become more sustainable for future generations.



Photograph by Ralph Langenbach



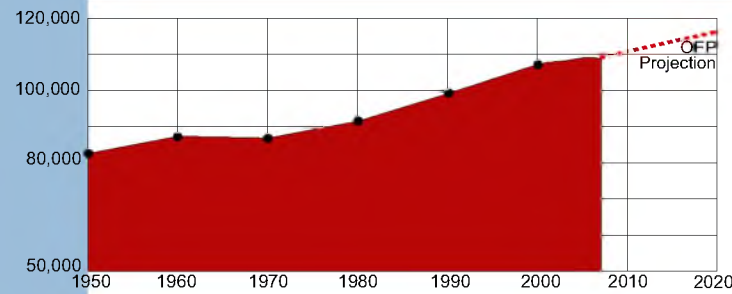
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# Introduction and Table of Contents

## Manchester Master Plan



## Population



### Total Population.

Year	Total	Male	Female
Total 2007	108,354	54,344	54,010
2006	109,497		
2005	109,460		
2004	109,117		
2003	108,725		
2002	108,143		
2001	108,122		
2000	107,219		

Age Group	2000 (%)	2007 (%)
Under 5	6.7	8.3
5-9	6.7	5.6
10-14	6.6	5.5
15-19	6.3	5.1
20-24	6.9	7.4
25-34	16.9	15.6
35-44	16.6	15.5
45-54	12.9	13.9
55-64	7.6	10.6
65-74	6.1	6.1
75-84	5.1	4.5
85 and over	1.7	2.1
Median Age	34.9 years	36.7 years

Population Density 3290 persons per square mile

Race	Count	Percentage
White	97,733	90.2%
Black	3,902	3.6%
Other	5,161	4.8%
Two or more	1,558	1.4%

Latino (of any race) 10,506 9.8%

## Social and Economic Characteristics

- Ancestry (percent of total population)**

French & French Canadian	34.8%
Irish	22.3%
English	9.3%
Italian	8.3%
German	7.3%
Polish	5.3%
Greek	4.3%
Scottish	3.2%
- Foreign born 10,480 9.7%
- School Enrollment**

Nursery/preschool	2,087
Kindergarten	1,533
Elementary/Mid	8,713
High School	4,664
College/Grad	6,135
- Educational Attainment**

Not graduated HS	10,163	13.8%
HS graduate	25,006	33.8%
College degree	17,227	23.4%
Grad degree	5,625	7.6%
- Economic**

In labor force	60,488	69.9%
Percent working outside of City		50.7%
Median Household income	\$50,199	
Per Capita income	\$26,304	
Percent below poverty level		14.0%
- Occupations**

Management/professional	33.9%
Service	17.3%
Sales & office	25.5%
Construction/maintenance	9.3%
Production/transportation	14.0%
- Unemployment rate (NH Employment Security 2008) 4.2%

## Housing

Total Housing Units	Count	Percentage
Total Housing Units	48,905	
Occupied	45,481	93%
Vacant	3,424	7%

Units in Structure	Count	Percentage
Single detached	18,411	37.6%
Single attached	3,635	7.4%
2 units	5,368	11.0%
3-4 units	6,591	13.5%
5 or more	14,841	30.3%
Mobile home	59	.1%



Housing tenure	Count	Percentage
Owner Occupied	22,466	49.4%
Renter	23,015	50.6%

Year built	Percentage
Prior to 1950	43.7%
1950 to 1969	19.7%
1970 to 1989	24.1%
1990 to 2007	12.5%

Housing heating fuel	Count	Percentage
Utility gas	22,888	50.3%
Fuel oil	16,923	37.2%
Electricity	3,784	8.3%
LP gas	1,333	2.9%
Other		1.3%

## Economic

Employment (NHES 2008)	Count	Ave Weekly Wages
Goods Producing	8,762	\$976
Service Producing	58,008	\$934
All plus government	66,770	\$939

Selected Sectors (NHES 2007)	Estab.	Employees
Manufacturing	178	7,330
Wholesale trade	264	2,771
Retail trade	475	8,328
Information	70	2,739
Real Estate	125	1,309
Professional	400	3,984
Administrative	182	3,698
Educational	53	2,355
Health/Social	322	10,115
Arts/Entertainment	46	758
Accommodation/Food	281	5,383
Financial/Insurance	213	3,047
Transportation/Warehouse	75	1,798

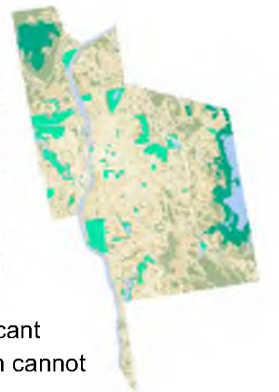
## Land Use

	Acres	Percentage
Land Area	21,089	94.6%
Water Area	1,195	5.4%
Total Area	22,284	

Land Use	Percentage
Residential	43.4%
Commercial	7.1%
Industrial	4.1%
Semi-public	5.4%
Public	15.8%
Streets & Utilities	17.0%
Vacant*	17.0%

(Source: SNHPC)

(\*Note: vacant land includes significant areas in conservation which cannot be developed)

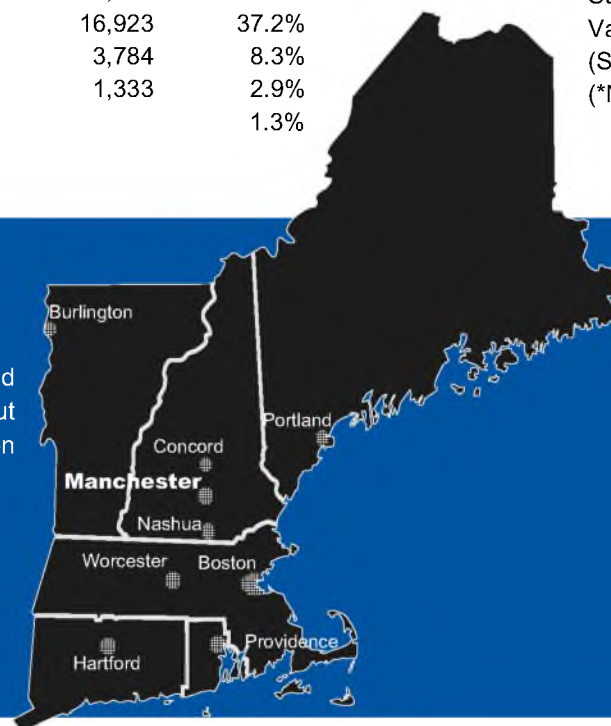


Links for additional information:

- factfinder.census.gov
- snhpc.org
- nnetwork.nhes.state.nh.us/nnetwork
- www.nh.gov/oep/programs/DataCenter
- www.nhhfa.org/rl\_demographic.cfm

NOTE: Data is for the year 2007 unless otherwise noted and is the most recent information as of April 2009

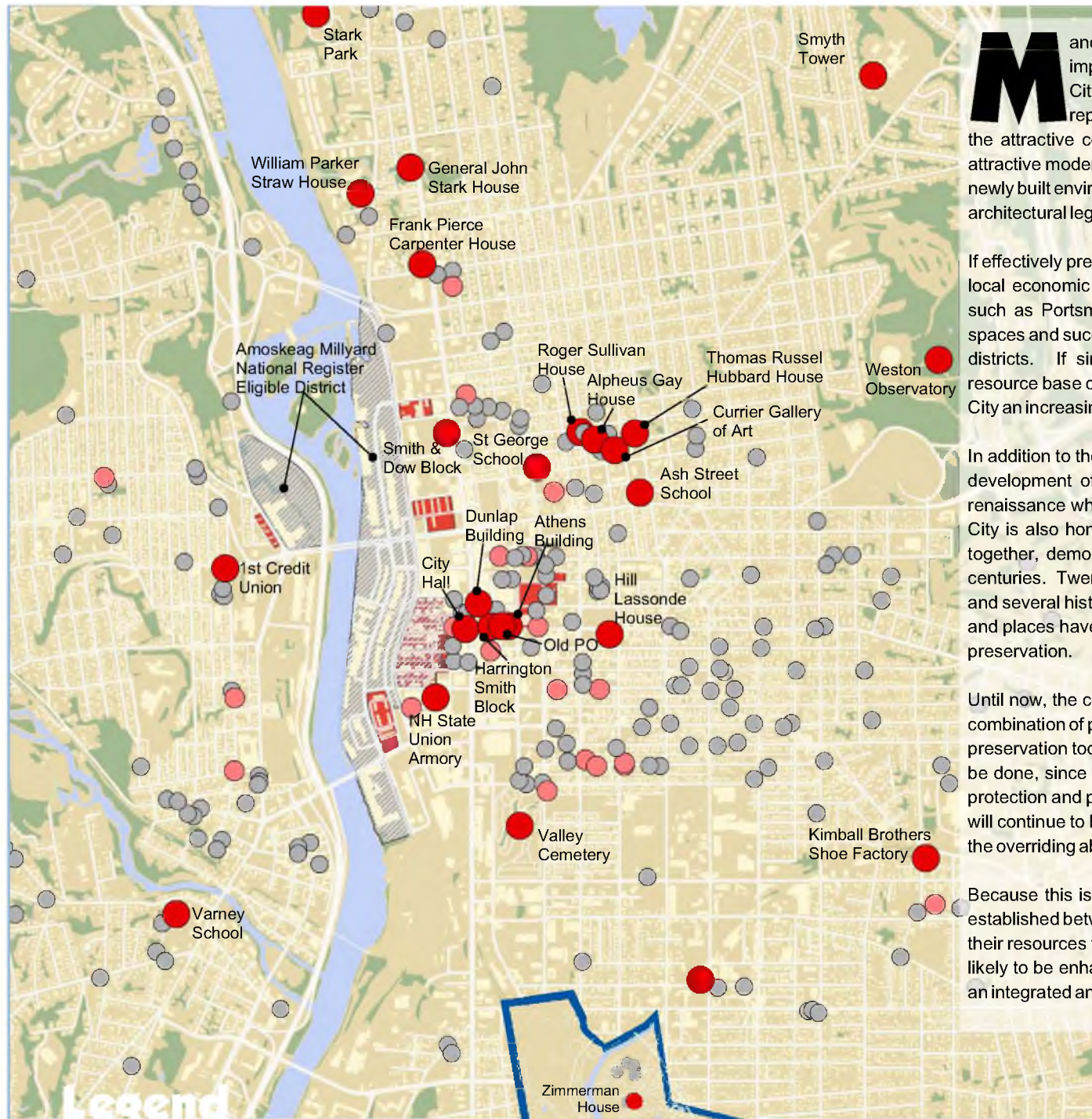
Manchester is centrally located in New England about 50 miles north of Boston



# Community Profile

## Manchester Master Plan





**M**anchester's broad range and rich heritage of historic resources plays an important role in the overall quality of, and in the positive way outsiders view, the City. Because these older structures and places are still present today and represent a link to our common past, we are able to appreciate and learn about the attractive continuity of life which has taken place here over time. And, even though attractive modern structures are continually being designed and constructed, the reality of the newly built environment is that it cannot adequately replace Manchester's valuable historic and architectural legacy after it is lost.

If effectively preserved, the City's historic resources can play a major role in fostering a gainful local economic environment. Many communities with similarly valuable historic reserves, such as Portsmouth, Portland, and Boston, have preserved their most important historic spaces and successfully transformed these areas into prime residential, business and tourism districts. If similar conservation efforts are implemented locally, Manchester's historic resource base could be advantageously used to increase the local quality of life and make the City an increasingly pleasant place in which to live, work, and invest.

In addition to the Amoskeag Millyard, which is well recognized for the key role it played in the development of the American Industrial Revolution of the 19<sup>th</sup> century and in the urban renaissance which Manchester began to experience in the early part of the 21<sup>st</sup> century, the City is also home to numerous other historic sites and structures which, when considered together, demonstrates the continual presence of human habitation going back nearly ten centuries. Twenty eight local buildings and areas are currently listed on the National Register and several historic resource surveys indicate that many dozens of other buildings, structures and places have significant historic value that strongly merit public recognition and long-term preservation.

Until now, the conservation of Manchester's rich historical heritage has been supported by a combination of private and public organizations and individuals who have used a wide range of preservation tools and strategies to carry out their activities. However, much work remains to be done, since every part of the City harbors important historic resources which call out for protection and preservation. While ongoing conservation of historic resources in Manchester will continue to be supported by the efforts of traditional contributors, no one organization has the overriding ability to insure their actual long-term retention.

Because this is the case, and because a successful pattern of alliances has recently been established between historic preservation affinity groups which allowed them to share some of their resources to achieve common goals, the success of future historic preservation efforts is likely to be enhanced by multi-agency, public-private, partnerships which seek to implement an integrated and multidisciplinary approach in carrying out local historic preservation work.

City Hall -  
a National Register  
Property

Weston Observatory -  
a National Register  
Property

Corporation Mill Housing -  
a National Register  
District

Amoskeag Millyard  
Part of a National Register  
Eligible District

- District on the National Register of Historic Places
- National Register Eligible District
- Property on the National Register of Historic Places
- National Register Eligible Property
- Local Importance

## Strategies

- **Citywide Demolition Review.** The Manchester Heritage Commission's power to review proposed demolitions of historic structures is currently restricted to the City's two historic districts in the Amoskeag Millyard and in the nearby Amoskeag Corporation Housing Neighborhood. However, many of the City's historic buildings are situated outside of these two areas and there is no public process for reviewing proposed demolitions to historic structures outside the two historic districts. To remedy this situation, the Commission's mandate to review proposed demolitions of historic structures should be extended citywide.
- **Catalog and Assess Historic City Buildings.** No complete database listing of City-owned buildings currently exists and no resulting inventory or physical assessment of historic City-owned structures is available to guide municipal conservation efforts. The City should develop, and routinely maintain, a complete listing of City-owned buildings and the City should assess the physical condition of all historic structures so that, where appropriate, their long-term viability may be promoted through conservation.
- **Historic Property and Neighborhood Protection.** Previous resource surveys have identified concentrated groupings of historic or architecturally significant structures and places. Such locations may deserve public recognition and merit protection by the adoption of appropriate design guidelines or by their designation as a historic district. Public awareness and appreciation for local historic neighborhoods may also be fostered by educational programs. In addition to the two protected districts, the City should evaluate other areas throughout the City which are rich in historic resources and make recommendations for their long-term security.
- **Educational Interpretative Program for Historic Sites.** The City should increase its efforts to provide interpretive exhibits. Historic surveys should be used as the basis for discovering suitable sites that would merit an interpretative display and the design and installation of the individual exhibits could be funded through the City's neighborhood improvement programs which aim to enhance streetscapes and build neighborhood pride. John Stark was one of the area's historic figures and regional cooperation could be achieved to commemorate this individual.
- **Establish a Historic Preservation Council.** Because ownership and location of the City's historic resources are split between the municipal and private sectors, extraordinary benefits could be gained if the groups and individuals involved in historic preservation in Manchester routinely discuss how they may aptly combine and share their unique historic preservation knowledge, skills and resources. To facilitate this, the City should promote the establishment of a Historic Preservation Council. By operating under principles of mutual understanding, such a Council could efficiently promote the sharing of organizational and financial strengths to carry out generally accepted preservation projects.



# Historic Manchester

## Manchester Master Plan



**A** city must have a strong economic base of businesses and jobs in order to grow and prosper. Economic vitality is the ability of a community to respond to change, to retrain itself for emerging business opportunities and to provide an entrepreneurial spirit that builds businesses and jobs. Indeed, Manchester has had to remake itself several times following the collapse of Amoskeag Manufacturing in 1935. With the current financial crisis and recession, the City will again have to respond and create enterprises and jobs of the future.

Since the demise of Amoskeag Manufacturing, Manchester has become a City with an increasingly diverse economy. Health care and social assistance has become the largest category (based on employment) with over 10,000 employees and nearly 21% of the workforce and the third highest weekly wage at \$854 (data based on 2007 information). This is not a surprise given the presence of three major hospitals, with Elliott Hospital the largest single private employer in the City. Manchester has the largest concentration of health care services north of metro Boston. Retail trade is the second largest category with 17% of the workforce, although its average weekly wage



Conceptual Plan for the Northwest Business Park on Hackett Hill

is lower than most categories. While retail activities are spread throughout the City, the highest concentration is the South Willow Street corridor focused around the Mall of New Hampshire. Given the reduction in manufacturing in America, it is somewhat of a surprise that manufacturing is the third largest category with 15% of the workforce. Included in this category are such recognized manufacturers as Velcro and OSRAM Sylvania. The fourth largest category is hospitality and food services with 11% of the workforce. This has been a growth category for the City, spurred by the success of the Verizon Wireless Arena.

Other major contributing sectors of the economy in the City include: wholesale trade; educational services (Manchester has ten colleges); arts, entertainment and recreation; utilities (including Comcast, Public Service Company of NH and Fairpoint Communications); and professional and technical services. This last category has several areas where Manchester is a state leader including law and engineering firms, and finance (including the regional headquarters of most of the banks in the State) along with other financial service firms. The City has several high-tech companies such as DEKA Research, Autodesk and Texas Instruments.

While the local economy is primarily driven by private enterprise, the City can make significant contributions to the success and expansion of these enterprises. These efforts can include transportation and other infrastructure improvements, a business friendly atmosphere with streamlined approval processes and permitting procedures, strong quality of life characteristics, business assistance programs and participation in major public/private redevelopment projects.

## Strategies

- **Education.** Higher education institutions provide significant benefits to the economy of the City in terms of education and training for its residents and the quality of life in the area, and are employment centers creating additional business. The ten area colleges should be supported by the community and their growth encouraged and, in turn, the schools should incorporate internship and community involvement. In addition to the traditional education, the proposed Job Corps Center will provide significant benefits of industry specific training and the City should work closely with the State and Federal governments to insure that the project is initiated and completed as quickly as possible.
- **Small Business Development.** Over 60% of the City's workforce is employed in small businesses (those with less than 10 employees). Small business retention and growth should be supported by the City, including those located in the neighborhood areas. Regular interfacing by the City and ombudsman support should be considered.
- **Quality of Life.** Quality of Life factors play a major role in attracting and retaining businesses and should be enhanced by the City. These include such items as arts and culture, entertainment, the visual quality of the community and the trail system.

## Strategies cont.

- **Goods Producing Industries.** Even though manufacturing has declined at various times in the City's history, it still provides a significant contribution to the economy and creates good paying jobs. The City should retain and enhance existing manufacturing companies and attract additional businesses. The Angelou report identifies five clusters of economic activities which should be targeted for growth in the City, and three of the five involve manufacturing: Defense/Advance Security (such as biometrics); Medical/Life Sciences (such as medical device manufacturing); and Aviation (such as instrumentation manufacturing).
- **Commuter Rail Service.** Transportation investments can spur economic development and commuter rail service is one area where Manchester is at a competitive disadvantage compared to other cities in New England. Bringing rail service to the City will obviously provide improved commuting access to the other areas but will also bring Manchester into the sphere of the Boston Metropolitan area which in turn will open up possibilities for Boston area firms to invest in the City.
- **Airport Expansion.** The Manchester Boston Regional Airport is one of the primary economic catalysts for the region. Enhancing its growth will enhance the economic well being of the community. Additional international service should be a prime goal of the Airport as well as non-stop service to the West Coast. Less recognized is the importance that air freight plays for the businesses in the region, and this service should also be expanded.
- **Northwest Business Park.** This Park on Hackett Hill is the last vacant area in the City where a Business Park can be created. The first and only company in the Park is a laser technologies company with international business and is an example of the type of business to be encouraged. The Park has been slow to develop, and the City should step up efforts to complete the infrastructure improvements needed to attract additional businesses.
- **Marketing Campaign.** The City has initiated its first marketing campaign. In order for it to reach its full potential, the campaign must be enhanced and conducted over a long period of time. The City's campaign can be enhanced through the Metro Center initiative of the Chamber of Commerce and SNHPC which supports regional marketing. While the marketing is focused on the Northeast and Canada, consideration could be given to selective marketing on a global basis.
- **Business Assistance Programs.** The City Economic Development Office offers a number of Business Assistance Programs such as the business revolving loan fund, Enhancement Zone and the Chapter 79-E program for encouraging redevelopment of properties. These programs will have to be expanded particularly during difficult business cycles. Business retention should also be a priority.

Links for Additional Information:

- Angelou Economics Report "Comprehensive Economic Development Strategy" Report



The first company in the Northwest Business Park, JPSA is a laser technology firm with international clients

The Manchester Boston Regional Airport is a keystone of the City's economy



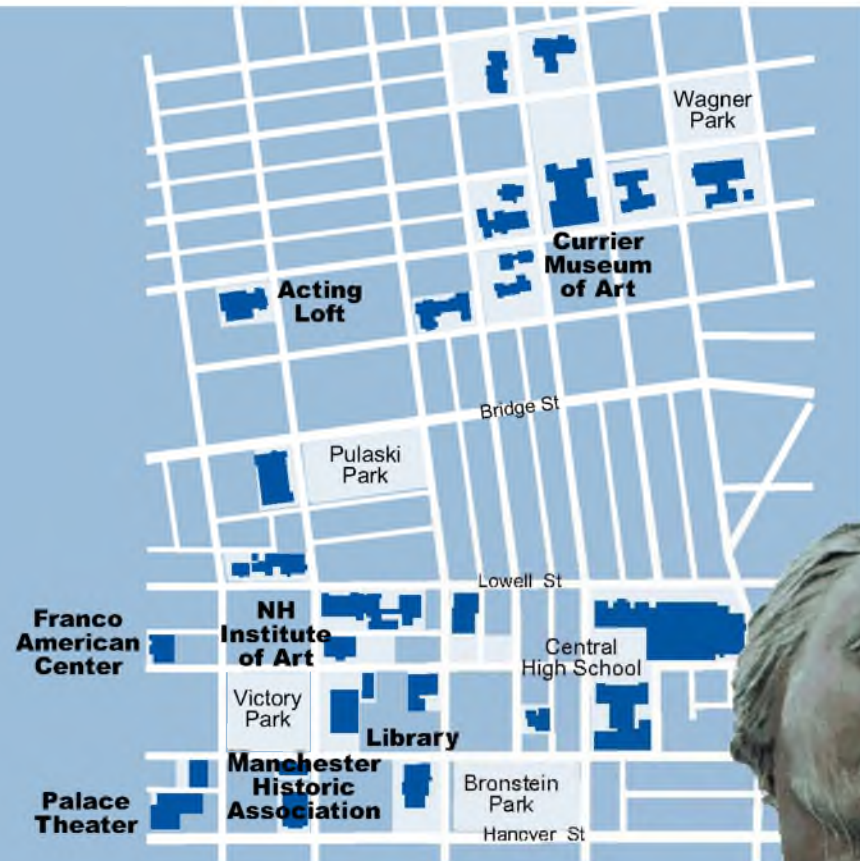
An early rendition of the proposed Elliott at Rivers Edge, the so-called Jac Pac site.



# Economic Vitality

## Manchester Master Plan





## Arts & Cultural District Map



**M**anchester has a wealth of venues, organizations and talent in arts and cultural programs. These assets provide education, quality of life, creative avenues, enhancements to the urban environment, and also significant economic benefits for the City (the NH Council on the Arts reports that 3,184 arts-related businesses employ 11,284 people in NH). The goal of this section of the Master Plan is to develop a community where artistic expression and cultural diversity can flourish and promote an approach that is supported both financially and philosophically by the community.

In terms of the visual arts, the Currier Museum of Art and the New Hampshire Institute of Art have become major destinations for the City. The Currier is one of the leading small art museums in the region and also sponsors community events and an art education program. It also operates the Zimmerman House - designed by Frank Lloyd Wright - as an expression of architectural arts and interior design. The NH Institute of Art has evolved as a four year arts and design college and has seen dramatic growth in recent years. There are a number of other arts organizations and venues including a gallery owned by the City at the Rines Center, the Art in City Hall program, and private galleries such as the East Colony Gallery and artist studios at the Langer Mill. Performing arts, including both music and acting is another component of the arts and culture of Manchester. The Palace Theater is one of the historic venues for performing arts in the City providing professional theatrical productions, opera, orchestral concerts and other performances. The Acting Loft, Manchester Music School and Majestic Theatre are organizations which bring arts to the community. The Verizon Wireless Arena also brings large scale concerts and performances to the area. Literary and film arts are other areas of creative expression.

Manchester is a city of immigrants populated through successive waves of relocation, beginning with the earliest settlers from Europe and Canada who provided manpower to the growing mills to the most recent arrivals from Asia, South America and Africa. These immigrants have provided a rich mix of cultures, religions, food, sports and music. Manchester's early industrial development and immigration history is preserved at the Millyard Museum. A number of other organizations and activities continue the traditions of various cultures ranging from the Franco American Center to the Latino festival and the annual Glendi festival. Continuing to celebrate the diversity of the City helps to unite the community.

### Strategies

- Public Art.** Public art, whether in the form of banners, sculptures or murals, demonstrates the City's commitment to arts and culture, creates a lively and attractive urban streetscape and creates a sense of place that is uniquely Manchester. Public art can become a symbol in a community. Manchester should encourage regular additions to the City's public art, whether in conjunction with a major public facility or through other funding sources. The Art Commission should play an active role in planning and implementing public art placement and should be an advocacy group for incorporating arts and culture in the daily lives of the residents.

### Strategies cont.

- Art and Music Education.** While the New Hampshire Institute of Art, the Currier Museum of Art and the Manchester Community Music School bring education on arts and culture to the community, increasing the role of education in public schools will bring the benefits to a much larger audience. Art education helps build academic skills and increase academic performance, improve self-esteem, and build creative skills that are of increasing importance in the workplace.
- Collaboration and Marketing.** The strength, visibility and impacts of art and cultural programs can be multiplied when various organizations collaborate and share in common marketing to make Manchester a destination for the arts. For example, a visitor to the Currier may also stop at the Millyard Museum or the SEE Center and then go out to dinner at a local restaurant. Such collaboration could transform what is currently a series of separate organizations into a full arts and culture segment of the economy. This process can be accelerated through either an on-going Arts Council or centralized arts center. Collaboration should not be limited to the arts and culture organizations themselves but reach out to local business. For example, businesses could support and feature the work of local artists either during art trolley nights or the annual Taste of Manchester.
- Arts and Cultural Activities.** Fairs and festivals are ideal events to celebrate visual and performing arts and to bring them to a larger audience. Several such events are currently programmed annually including the Latino festival, Arts in the Park, Open Door Trolley Night, Glendi, PeopleFest and the Jazz Festival. The City should support the continuation of these programs and encourage other festivals such as an international film festival or activities highlighting ethnic neighborhoods.
- Arts and Cultural District.** The map on the other side of the page shows the concentration of arts, culture and other institutions on the area east of the downtown. This district should be recognized in the Zoning Ordinance as an arts and culture district and the City should tailor its regulations to support the growth of this area. This would include galleries, museums, cultural centers, other civic facilities and residential uses along with supporting uses such as coffee shops, bed and breakfast, bistros, practice spaces and artists lofts. This district would also be a good location for a future public art placement.
- Performing Arts Center.** A recent study (2008) conducted by the City indicated that there was not currently a market for a mid-sized performing arts center (2,000 to 4,000). The study did indicate, however, that there was local interest in a small venue (approximately 500 seats) that would primarily serve local arts groups along with a 150 seat black box experimental theater.

Links for Additional Information:

- "Cultural Plan for Manchester, New Hampshire" produced by Arts Builds Community!



The Palace Theater on Hanover Street

Public art at City Hall



The former "Stan's Paint" building has been revitalized as part of the NH Institute of Art



# Arts & Culture

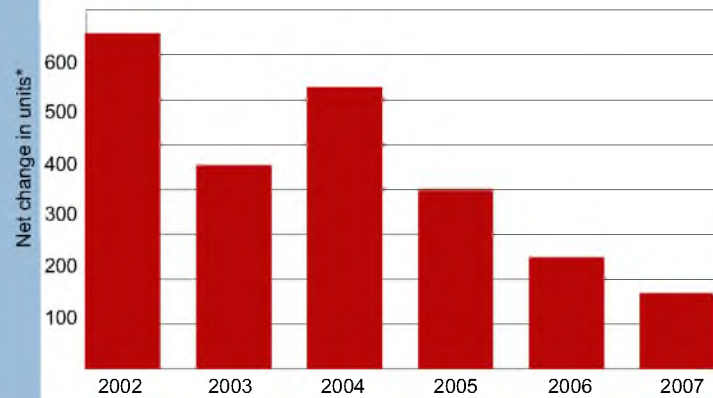
## Manchester Master Plan



**H**ousing is a critical component of a successful community. Having an adequate stock of both owner-occupied housing and rental units is crucial to stable and liveable neighborhoods and for continued economic development. The housing must be healthy, safe, convenient and affordable. Manchester has a rich mix of traditional single-family neighborhoods, townhouses, condominiums and apartment buildings, although the housing stock is aging (44% of the housing stock was built prior to 1950). The City will have to continue to adapt to changes in housing demand through diversity and adaptability of the City's housing stock to better meet increasingly diverse household structures, lifestyle and cultural needs, income levels and life cycle stages of its people.

Manchester and the entire nation have seen a dramatic downturn in the housing market in 2008. A slowdown in housing sales, increasing rental vacancy rates, dramatic drops in home values and a crash in financial markets leading to tighter lending policies have significantly affected the housing market. These have directly impacted Manchester with a loss of family wealth, loss of homes to foreclosures, increasing vacancies and abandoned housing, and a declining economy. As an example, foreclosures in the City jumped from 49 in 2004 to 705 for only a portion of 2008. Another example is the drop in the net change in housing units (according to building permits) as shown in the graph below. These changes can also affect the quality of life and stability of entire neighborhoods and will have to be addressed as part of a strategy to restore the health of housing and neighborhoods in Manchester.

As happened in the last housing bubble collapse (beginning in 1990 and not fully recovering until 1995), the housing market will stabilize in the next few years and then begin another growth cycle. If population projections by the NH Office of Energy and



\*"Net change" in units includes new units minus conversions and demolitions



Planning are accurate, the City will require approximately 300 new dwelling units per year through 2020 (after factoring out absorption of current excess vacancies).

The City's housing stock will also have to adjust to a more environmentally sustainable future. Residential units account for a significant share of natural resource use and solid waste during production/demolition as well as a major share of energy and water use during operation. Good design and code standards can help reduce natural resource depletion and energy and water use, thus providing a more affordable and environmentally friendly City in the long term. With very little vacant land left in the outlying areas, new housing growth will have to occur in appropriate infill areas and redevelopment sites. This approach does have the advantage of being more environmentally sustainable.

### Strategies

- Balanced Housing Market.** In general, the City seeks to have a balanced housing market in terms of a variety of housing types and income ranges, in ownership versus rental units, in housing production, and in density. This should include a range of single-family homes, duplexes, townhouses, condominiums, units in mixed use apartments, garden style apartments as well as high rise residential buildings. Manchester has historically had a near 50/50 balance of owner and renter units. Currently, the statistics show close to that balance with 49.4% owner and 50.6% renter. The City should continue to encourage new homeownership opportunities, including the work of one its partners - Neighborworks of Greater Manchester.
- Market Sensitive Housing Policy.** The City should closely monitor trends in the housing market. A healthy rental vacancy rate is approximately 4% with an owner vacancy rate somewhat higher than that. When vacancy rates significantly exceed this number (such as in the current market), the strategy should be to encourage the improvement of current stock rather than new production, while in markets with significantly lower rates, new production should be encouraged.
- Housing Growth Areas.** Most of the vacant residentially zoned land in Manchester has already been developed. Future housing development will therefore have to be in areas of redevelopment, rehabilitation and infill. The City must be careful, however, to insure that infill housing is compatible with stable and liveable residential neighborhoods, and should not allow key business areas to be weakened by excessive housing growth. Infill development that does occur in stable neighborhoods should be built at a scale, density and character consistent with the existing development patterns. The downtown and certain neighborhood core areas are suitable for future housing growth as shown on the attached map. Student housing for the colleges should be supported.

### Strategies cont.

- Encourage Mixed-use Buildings.** These buildings combine residential units with commercial uses. Mixed-use as discussed here includes residential uses with selected retail and office uses but excluding intense uses such as auto-oriented uses and drive-up windows and excluding bars and nightclubs in the neighborhoods. Mixed-use is particularly suitable for downtown and neighborhood center areas. While the Millyard should remain primarily devoted to business, it is appropriate to add housing units within some of the mills, for example. As noted in the Sustainability section, mixed-use projects can reduce parking needs and reduce total vehicular traffic. Encouraging mixed-use within existing structures may require adjustments to building code and fire safety requirements.
- Healthy and Safe Housing.** A significant share of Manchester's housing is older (with 63.4% built prior to 1970). Improving the quality of the older housing with rehabilitation assistance is a key effort for the City. In certain neighborhoods, removal of deteriorated housing units and lowering density can improve the area conditions as part of an overall neighborhood strategy. Despite the higher vacancy rates, overcrowding of units remains an issue in certain situations. Lead paint mitigation, fire safety improvements and ADA accessibility should all be part of this program.
- Energy Efficient and Sustainable Housing.** The City should help facilitate a high standard of environmentally sustainable design features in new and rehabilitated dwelling units and utilize these standards when it is involved directly in housing production. These features should be required when utilizing Federal funding. City codes should be reviewed to allow alternative energy systems.
- Affordable Housing.** The current housing downturn has lowered home values and rents, thus providing some relief on housing costs. It will be some time before the market stabilizes and as such the demand for new affordable housing projects will be limited. Eventually, it is expected that the vacancy rates will come down and more affordable housing will again be required. The City develops affordable projects in conjunction with some of its partners such as the MHRA, Neighborworks and Families in Transition. In addition to Federal and State funding for this purpose, the City has used an Affordable Housing Trust Fund to successfully develop several projects. Since the Fund has nearly been exhausted, it would be appropriate to rebuild the Fund during the coming period of slower new construction.
- Homelessness.** Manchester continues to have a homelessness problem. It is not a simple issue and has a variety of causes ranging from social, emotional, economic, addiction and other causes. Providing housing opportunities for all residents remains a goal of the City including assisting the homeless. Working with the several homeless social service agencies, Manchester has developed a "Ten Year Plan to End Homelessness". The objectives and action strategies contained in this document form the basis for reducing the homeless problem.

Links to additional information:

- Manchester Consolidated Plan
- Report of the Mayor's Task Force on Housing
- Ten Year Plan to End Chronic Homelessness
- Housing Needs Assessment, Southern New Hampshire Planning Commission



Affordable senior housing in the former Gale Home

New single-family development on Hackett Hill



Traditional neighborhood on Prospect Street



New mixed-use development at the corner of Maple and Cilley with housing above commercial space



# Housing Opportunities Manchester Master Plan





**C**urb Appeal. Most homeowners are aware that having a strong “Curb Appeal” can increase the value of their home and increase the likelihood of selling their property quickly. This is done through fostering a strong and positive first impression. The same applies to cities, many of which are making significant strides in upgrading their entrances and the general character of the main boulevards into the community.

The City of Manchester could benefit greatly by upgrading its “Curb Appeal”. A good first impression is important to attract visitors, businesses, investors and can make the residents proud of their community. Creating a positive opinion extends well beyond the Gateways and Corridors, of course. The architecture, arts, cleanliness and attitude of the residents and workers also play a role. The initial impressions at the Gateways and Corridors, however, can play an important first role for a relatively modest investment.

The adjacent map shows a hierarchy of gateways and corridors. The gateways are divided into Major Gateways, Other Highway Gateways and Neighborhood Gateways. There are only four Major Gateways: Granite Street, the Manchester Boston Regional Airport, Amoskeag Rotary and Wellington Road. A variety of improvements can be made at each of the Gateways including such items as banners, flower beds, landscaped areas, Wayfinding signage, routine maintenance, welcome signs or arches.

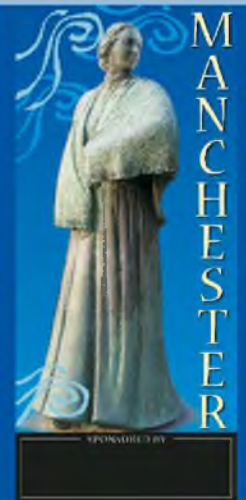
## Strategies

- **Gateways.** As a Gateway, the Manchester Boston Regional Airport excels at giving a good first impression of the City. Many visitors comment on the positive experience. This positive effect must be extended to other locations in the City. Providing Wayfinding Signage, banners, welcome signs, landscaped areas and in some instances art works and sculptures are necessary to improve certain locations. The City will have to determine the appropriate vehicle to accomplish the task of improving these Gateways. Intown Manchester has been working on this for the downtown, but other groups and organizations may be required to participate in outlying locations.
- **Corridors.** Major Corridors can be improved to visually enhance the approaches to various parts of the City. While streetscapes and quality landscaping are important in this regard, key points and parks along the corridor can also enhance the entrance experience. As an example, approaching downtown along Bridge Street has Derryfield Park with its Gazebo, the historic Ash Street School, a glimpse of the victorian Bed & Breakfast on Ash Street and a few small shops such as the restaurant on the corner of Bridge and Union Streets.
- **Wayfinding Signage.** An attractive and well organized Wayfinding signage system can not only make it easier for visitors to find their way around the City, but also can give the impression of a well organized and appealing City. A pilot program is currently underway which should be expanded as funds become available.
- **Streetscape Standards.** Suggested standards for Streetscapes in the City are covered in more detail in another section of the Master Plan. It should be reiterated, however, that having quality streetscapes is particularly important along the Corridors. These should include street trees in green panels between the roadways and sidewalks. Ultimately, underground utilities can have a very positive impact although the high cost of constructing them underground is recognized. This should be set as a long term goal, however, and incremental improvements made as sections of roadway are rebuilt. Anticipated reconstruction of South Elm Street should have all of these improvements.
- **Routine Maintenance.** Although it may go without saying, routine maintenance activities at the Gateways and along the Corridors are critical to successfully completing the mission of a good first impression. Too many weeds along the curbing, unwatered flowers, dirty streets and sidewalks and out of control trees can ruin an otherwise attractive entrance.

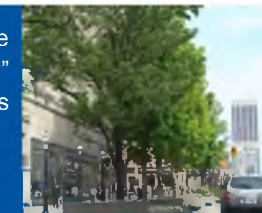
Example of a Gateway Banner



Example of possible Wayfinding signage Gateways, Corridors and other locations in the City

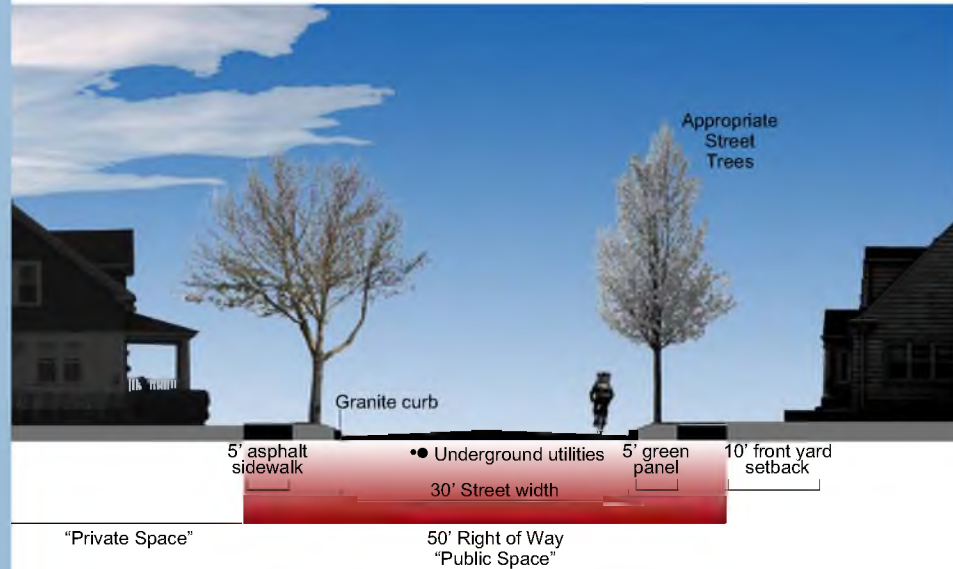


Street trees can provide a true “Boulevard” impression in Cities

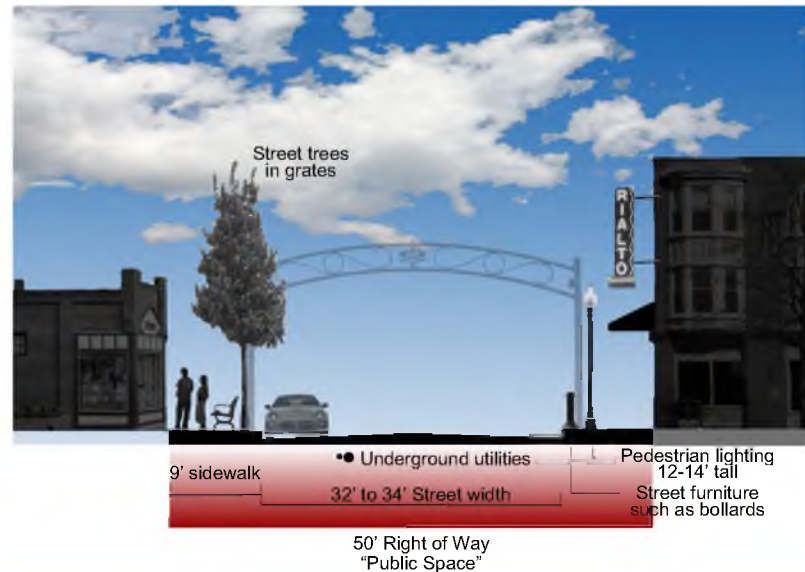




### Sample residential streetscape



### Sample neighborhood commercial streetscape



The majority of public space in Manchester is comprised of the street system and related streetscape. Improving the quality and useability of this streetscape can have a significant impact on both the visual attractiveness of the neighborhoods and community as a whole. It can also, however, improve the pedestrian friendliness and safety of the community, identify the character of the neighborhoods and key areas such as the gateways to the City, provide for an improved ecology through street trees and landscaped areas, and improve the economic competitiveness of businesses adjacent to the street system.

The streetscape includes the primary street, the sidewalks, street trees, the signage system, street parking, utility structures, benches and other street furniture, street and pedestrian lighting, and cross walks. Creating an attractive and inviting streetscape requires a balance of street and sidewalk widths and materials and a consistent quality of street furniture. This section describes generally how to achieve this balance and works in concert with the "Walkability" section of the Master Plan to improve the pedestrian realm and to promote walking and biking as both a recreational activity and a means of transportation.

The goals of an improved streetscape should be to:

- Maximize pedestrian safety, comfort and use while limiting the impacts of automobiles such as at appropriately designed cross walks and by traffic calming in key pedestrian areas;
- Increase the ecological sustainability of the City through the creation of green corridors, control of storm water flows and making it easier to walk, bike and use public transit;
- Create a strong identity for the neighborhoods and the City as a whole in order to promote Manchester as an attractive place to live and work;
- Improve accessibility for all of the City's residents;
- Provide opportunities for social interaction; and
- Improve the quality of streetscapes to increase the business competitiveness and provide an attraction to new businesses. This would also include allowing for spaces for vendors, kiosks, street musicians and street fairs.
- Promote connections and linkages to parks, shopping, trail systems and major entertainment venues such as the Verizon Wireless Arena.

### Strategies

- **Streetscape Standards.** The City should undertake to develop streetscape standards for various types of areas of the City (through a Task Force of the Public Works, Planning and Parks Departments). This section of the Master Plan provides general guidelines while standards would go into detail on sidewalk materials and widths, standards for lighting and streetscape fixtures. Standards should be developed for the downtown, urban residential neighborhoods, neighborhood centers, outlying neighborhoods, commercial strip areas and gateway corridors.
- **Streetscape Lighting.** Lighting can be both street lighting and pedestrian lighting. Good lighting can make both a more attractive and a safer streetscape environment. Standards should be established for both types of lighting and determine when pedestrian lighting is required. The Amoskeag light standard has been used in a number of areas and is an appropriate standard for the downtown and Millyard. Another standard is required for pedestrian lighting in residential neighborhoods and business areas.
- **Underground Utilities.** Underground utilities can markedly improve the visual quality of the streetscape and reduce power outages from ice storms and downed utility poles. The Planning Board currently requires underground utilities in new subdivisions. While replacing current above ground utilities is a very expensive undertaking, it should be considered as part of major redevelopment opportunities and revitalization activities in the downtown and neighborhood centers.
- **Incremental Improvement Over Time.** It is not possible to reconstruct all of the public streetscapes in a short amount of time. With a long term vision and consistent standards, however, incremental change can have significant long term benefits. These changes can be made as roadways are reconstructed, new sidewalks installed and can be implemented by private developers in the public right-of-way when a major development or redevelopment occurs.
- **Neighborhood Identity.** While the standards should be developed on a Citywide basis, they can also be tailored to highlight the identity of each particular neighborhood. This can be accomplished through banner systems, unique gateway arches and even public art pieces.
- **Bicycling.** Bicycling is gaining popularity both as a recreational activity as well as a means of transportation in the City. Streetscape design should encourage this activity through the use of bike lanes and bike racks in key locations.
- **Parking.** On-street parking is to be encouraged especially in neighborhood business areas. In certain locations, diagonal parking can increase parking spaces as well as providing additional buffer between pedestrians and the traffic lanes.

Even small areas that are well done can be attractive



Bringing business onto the sidewalk can make a more vital commercial area

An upgraded streetscape can be both a friendly public gathering place as well as a tool for economic development



Sometimes the small elements can make an inviting streetscape - such as this phone booth near City Hall



# Streetscapes

## Manchester Master Plan





**A** walkable city can have a number of benefits. As indicated in the Recreational Opportunities section of this plan, walking has become the primary form of recreation for Manchester residents. It is also an important part of a healthy lifestyle. As the country has become more dependent on the automobile, physical activity has decreased leading to increases in levels of obesity, heart disease, diabetes and other chronic health problems. A study in Washington State showed that those people living in walkable neighborhoods weighed seven pounds less on average than in auto-oriented sprawl neighborhoods. Improved safety is also a benefit as conflicts between vehicles and pedestrians is reduced.

Increased walking also leads to less auto-dependence with a reduction in noise and air pollution such as greenhouse gases and allowing those who do not drive the ability to get to work and school. Other benefits include more opportunities for social interaction, an increased sense of neighborhood security and improvements for local businesses as a result in increased foot traffic.

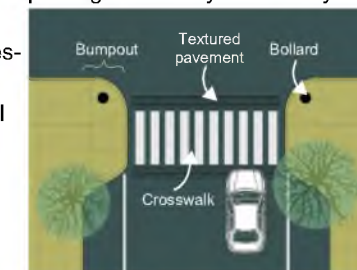
Manchester has a strong foundation for a walkable City. The original compact heart of the City was developed as a walkable area with fine grained, mixed use land use, sidewalks in all areas and public transportation available. There is considerable work to be done, however, to extend walkability to other parts of Manchester. The components of the plan include the following areas: improved sidewalks and crosswalks; an increase in the residential and commercial density; mixed uses within the neighborhoods and more mixed-use projects; making residential areas closer to work and schools; improved site design of projects that recognize the needs of pedestrians; and appropriate control of vehicular speeds.

These components must be integrated as a system in order to maximize the effectiveness of a walkable city. Several of these components are discussed in more detail in the strategy section.

This walkability section of the Master Plan works in conjunction with the Streetscape section to set policy that will create a more vibrant City.

## Strategies

- Sidewalk Improvement Policy.** Improved sidewalks in the City are a key part of improving walkability. The attached map provides policy guidance on where sidewalks should be installed. The urban neighborhood area should include sidewalks on both sides of the street and the primary goal is to fill in missing sections of sidewalk and improvement of existing sidewalks that have deteriorated. Outside the urban neighborhoods, certain areas also require sidewalks such as in the areas around schools, connections to the trail system and along major arterials (called Key Streets) that connect neighborhoods. Sidewalks can be installed by the City as part of the CIP program. Sidewalk installation should also be strongly encouraged of developers and such requirements can be strengthened as part of the Subdivision and Site Plan regulations administered by the Planning Board.
- Pedestrian Street Crossings.** Getting pedestrians across busy streets on appropriate crosswalks is also a key part of improving walkability. The City has recently gone to the “piano key” style of crosswalks which improves driver awareness of pedestrian crossings. In certain areas of high pedestrian and vehicular traffic (such as in commercial cores) pedestrian bumpouts make crossing the street significantly easier. An example of a Bumpout is attached also showing bollards or stanchions which add pedestrian safety.
- Neighborhood Mixed Uses.** A mixture of housing types and neighborhood commercial uses within each neighborhood reduces reliance on the automobile and promotes walkability. In addition to individual mixed uses, mixed use project (typically containing retail and office on the first floor and residential above) should also be considered. The Zoning Ordinance should be revised to encourage mixed-use as the B-1 neighborhood business district recently has been amended.
- Encouraging Walking.** Promoting walking tours and maps, participating in Safe Routes to School, supporting bike and walk organizations and enforcing pedestrian laws can all promote a culture of walking in Manchester.
- Safe Routes to School.** Manchester has recently begun to participate in the Safe Routes to School program which encourages students to walk to school and assists in sidewalk improvements in the school areas. The City should continue to participate and increase their involvement in this program.
- Maintenance:** Creating a walkable City requires a commitment to proper maintenance of the sidewalks and trails. Winter maintenance is also an issue. While budgets certainly are a limiting factor in maintenance, there should be a long term goal of increasing the sidewalk areas where there is snow removal.



## Legend

- Urban Neighborhoods
- School Area
- Key Streets
- Trail System



Strolling and biking the Hands Across the Merrimack bridge

Walkability can be enhanced by a simple but effective streetscape. See the Streetscape section of the Master Plan



Strolling Elm Street



# Walkability Manchester Master Plan



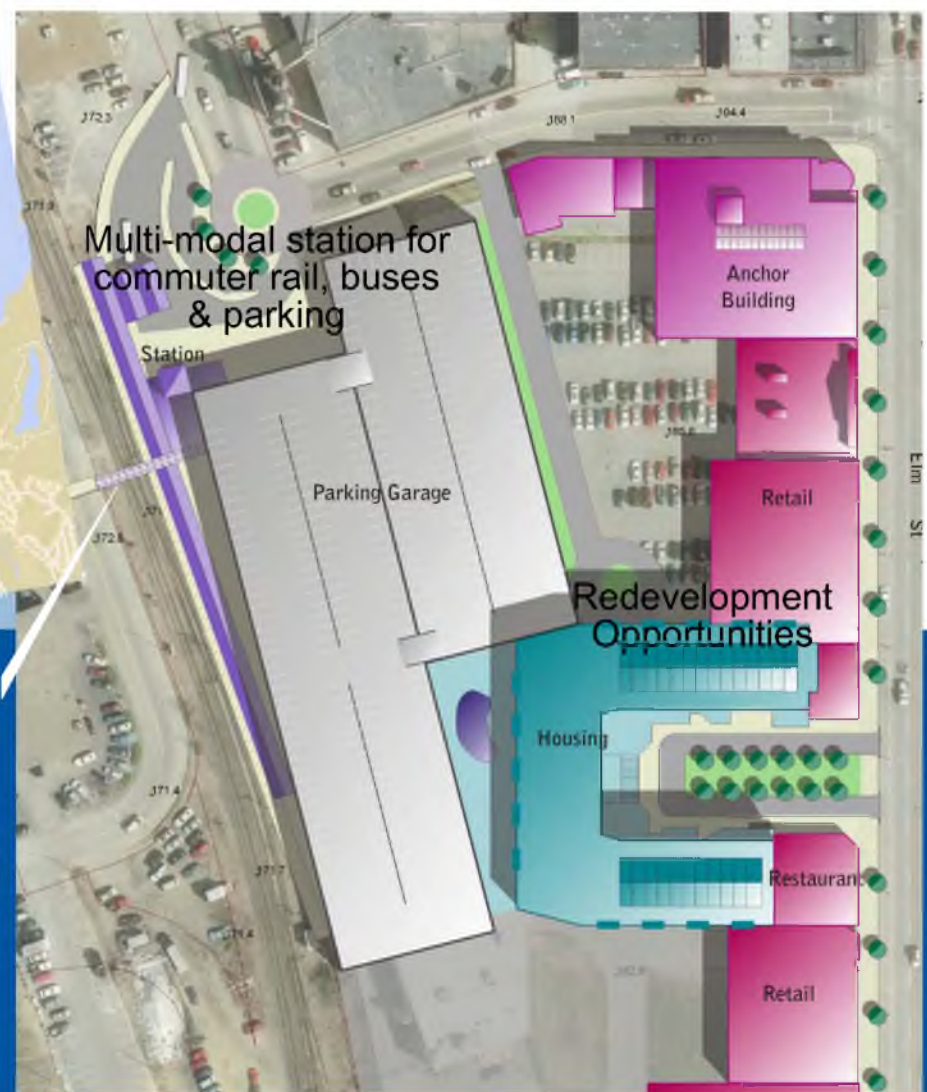


The automobile is the primary choice for trips in the Manchester region. Increasingly, however, alternative transportation systems will be required. With rising gasoline prices, recognition of the auto's impact on global climate change, and traffic congestion, cities with a well integrated alternative transportation system will have a competitive advantage and lower cost alternatives for its residents.

Alternative transportation includes walking, biking, segways, buses, taxis, rail and flying. One of the keys for making this system work in Manchester is the proper integration of the different systems. Is it convenient and timely to walk to a bus stop to catch a flight from Manchester Boston Regional Airport? Integration means being able to use various forms of transportation conveniently and seamlessly.

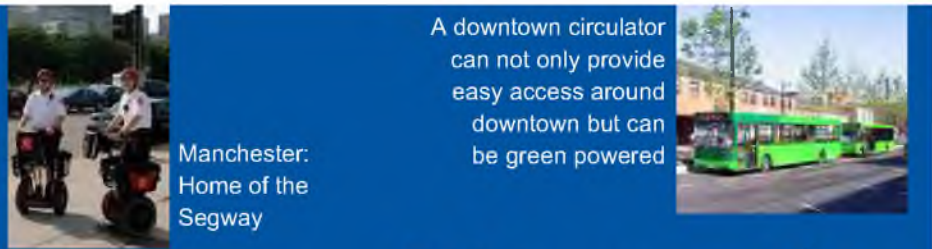
The other long term key will be the introduction of commuter rail service to eastern Massachusetts. The City must also insure that its policies are developed so they encourage rather than discourage a walkable community with reasonable alternative transportation systems.

### Example train station & Redevelopment



### Strategies

- Commuter Rail.** Providing commuter rail service into the MBTA can be both a good alternative to driving into the Boston area as well as a great economic development tool. Much of the new development in portions of New England is now being focused on transit stations. It will take considerable public and political support to institute commuter rail in Manchester. The system for Manchester would include an airport station with shuttle service to the terminal and a downtown station. The downtown station and multi-modal facility should be designed to be easily walkable to major venues such as the arena, stadium and convention center. It should also be multimodal, with access to intra-city bus service, intercity service, parking and access to the trail system.
- Manchester Boston Regional Airport.** The airport plays a major role in both the alternative transportation system as well as being one of the major economic engines of the region. It has become one of the leading airports in New England competing with TF Green in Providence and Bradley serving Hartford and Springfield. Several key improvements are planned or underway. These include a new airport access road which recently began construction, major runway safety improvements which have also begun (safety area extensions on Runways 6 and 24), a Phase III Terminal expansion plan which could add four new gates as demand warrants and a Phase II parking program which is also dependent upon demand.
- Downtown Shuttle.** Planned for 2010, the shuttle will provide convenient access around the downtown and make a variety of parking options more feasible.
- Coordinating bus systems.** There are a number of non-profit and private bus systems that operate in the region. Providing improved coordination between these services and with the Manchester Transit System can improve on the overall effectiveness of transit in the City. Intercity bus service is also important including the potential for connecting service to the seacoast. The reach of transit can be extended by providing buses that can accommodate bicycles.
- Segway Safe.** As the home of the Segway Transporter, Manchester should ensure that its policies support this alternative mode of transportation.
- Trails.** Described in more detail in another section of the Master Plan, trails can play a part in the integration of transportation modes and should be designed as such.
- City Design for Alternative Transportation.** The City's growth ordinances should be developed to encourage design that supports a walkable community such as Transit Oriented Development (TOD).



# Alternative Transportation

## Manchester Master Plan





**T**he City and State have invested considerable resources in certain key highway projects including the interchange and road improvements along Granite Street (near completion), and the airport access road (recently begun). The total costs for these two projects alone will approach \$200 million when completed. With rapidly escalating costs for new highways, significant projects on the scale of these will be out of reach of the resources of both the State and the City to complete. It is fortunate, therefore, that with the completion of these projects, Manchester will have a strong network of highways and local streets to meet the vehicular needs of the City. A long term plan for street maintenance and rebuilding is necessary to insure the long term viability of one of the City's key infrastructure assets.

Future focus should be placed on upgrading of existing streets and meeting demands from increased automotive travel and traffic congestion through the use of intelligent computer-based management systems for the existing roadway structure. Significant improvements can be made through these approaches that will not require the substantial expense of road widenings or new highways. Intelligent transportation systems can also assist the City in another way. These systems can reduce congestion and as a result, reduce energy demands for transportation - thus assisting with another long-term goal of the Master Plan - making the City more sustainable. An added bonus is that the system can also help reduce air pollution by reducing idling emissions - a major contributor to certain types of pollution.

Roadway safety will become increasingly important as alternative means of transportation become more available and the City becomes more walkable. While design can play a significant role in roadway safety, enforcement of the traffic laws will continue to be the primary method of improving safety. Safety also ties in to the need for improving the quality of life in neighborhoods. A consistent and well thought-out traffic calming program can play a role in making all neighborhoods safer.

"Roundabouts", such as the one shown below, can improve traffic flows and reduce energy consumption at the right location

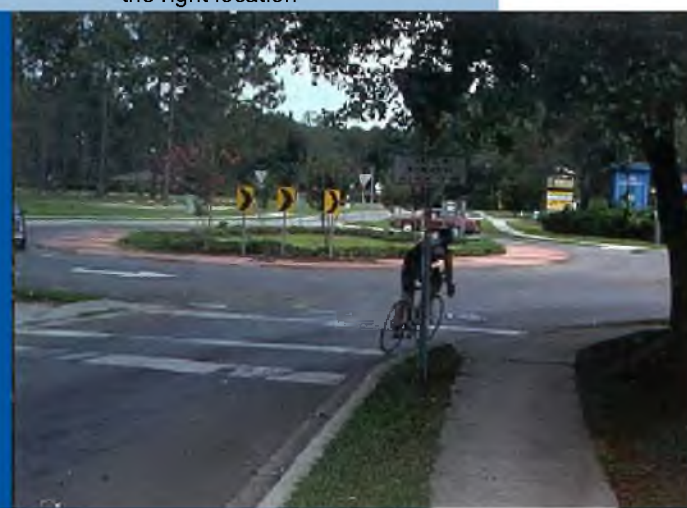
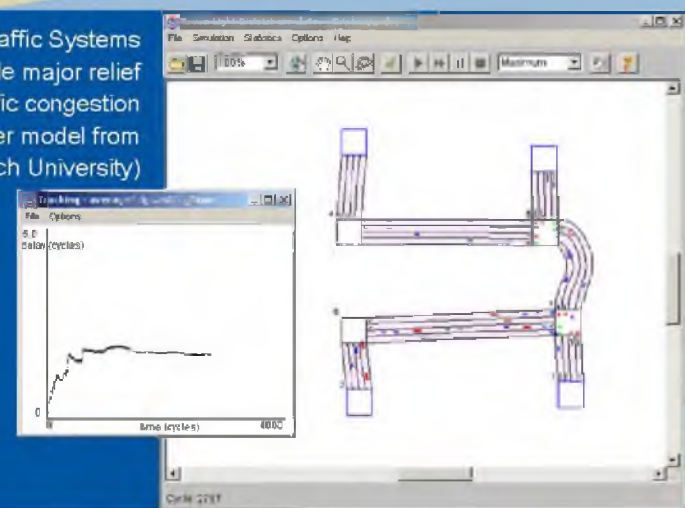
## Strategies

- **Increased maintenance and upgrades of existing streets.** Proper maintenance of the City's existing roadway network will become increasingly important for the nearly 500 miles of streets and roadways within Manchester. This should include preventative maintenance programs, resurfacing programs and, as needed, reconstruction of sections of deteriorating streets. Sidewalks are in even poorer condition in many parts of the City and require improvement.
- **Selected highway improvements.** In limited situations, significant roadway projects will be required. An example is the redevelopment of Exit 7 on I-293 at Front Street. While the improvements are needed to upgrade traffic safety, a major goal of this interchange will be for economic development by providing access to the Northwest Business Park.
- **Intelligent Traffic Management Systems.** Intelligent Traffic Systems (ITS) can provide reduced traffic congestion, less frustration and shorter wait times with less energy usage, all at a cost that is a fraction of the investment required for new, widened or upgraded roadways. This is accomplished through information and monitoring systems tied together by communications systems. In essence, all of the traffic signals in the City (the primary traffic bottleneck locations), can be tied together, and through monitoring feedback such as roadway sensors and/or video streaming at each location, the system can provide the most efficient traffic flows through the City. While ITS has primarily been applied in larger metropolitan areas, the technologies can be useful to Manchester.
- **Innovative traffic controls.** Certain innovative traffic controls should be considered for use in the City. An example is a roundabout which has been extensively used in Europe and is gaining ground in America as well.
- **Neighborhood Traffic Calming.** While the City should be encouraging the efficient flow of traffic on the major streets, managing the traffic to improve the quality of life should be a goal on low level residential streets. Certain traffic calming approaches have been tested in the City, but a more comprehensive approach and strategy will be required.
- **Parking.** The provision of public parking will continue to be important for the economic well-being of the more intensely built up areas of the City such as the downtown. Parking should be designed so that it is ancillary to the building and pedestrian functions rather than the primary visual character of a particular site or block. Areas that are in need of additional parking are the Amoskeag Millyard and the south downtown as additional growth spreads into that area.

## Legend

- Intelligent Traffic Management System
- Highway Access Redevelopment

Intelligent Traffic Systems can provide major relief for traffic congestion (traffic computer model from Utrecht University)



Traffic calming can improve the quality of life in the neighborhoods. Here is a sketch of the traffic calming on Stark Street



# Traffic Management

## Manchester Master Plan





**M**anchester has the ability to develop a significant trail system. This trail can be used both for recreational activities as well as alternative transportation. Residents of the South Beech Street area, for example can jog along the South Manchester Rail Trail to get to a soccer game at Precourt Park or take the Trail to get to a restaurant instead of taking a car. The trail system can also be part of a healthy lifestyle for the residents of the City.

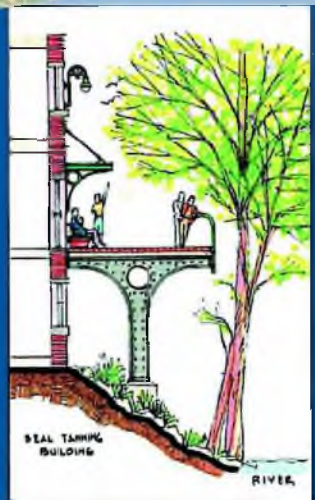
These trails, based to a large extent on previous rail lines, can provide a route for walkers, bikers, joggers and even the occasional Segway without mixing it up with automobile traffic. This system can be an attraction for the City and as such can assist in Manchester's economic development.

The trails can connect various neighborhoods in the City with each other and major destinations such as Lake Massabesic, the Millyard, Piscataquog River and MerchantsAuto.com Stadium. The trails can connect more than just neighborhoods, however. The Rockingham Trail connects easterly all the way to Great Bay on the Seacoast; the Heritage trail will connect north and south from Massachusetts to the Canadian border; the Piscataquog Trail will connect out to Goffstown and New Boston; and the South Manchester Rail Trail may connect to Salem at some point.

While it may take years to fully complete the system, having a common vision along with the support of neighborhood groups and individuals can make the Trails a reality. The trails can provide exercise, transportation and are another step towards making the City more sustainable.

Connecting into neighborhoods will be important for the trail system. Below, the Rimmon Heights plan identifies connections to the Piscataquog Trail with a bike lane on Bremer Street and pedestrian connection from Kelley Street.

Section of the Piscataquog Trail crossing Third Street



Providing readily available bike racks at a number of locations can encourage the use of bicycles



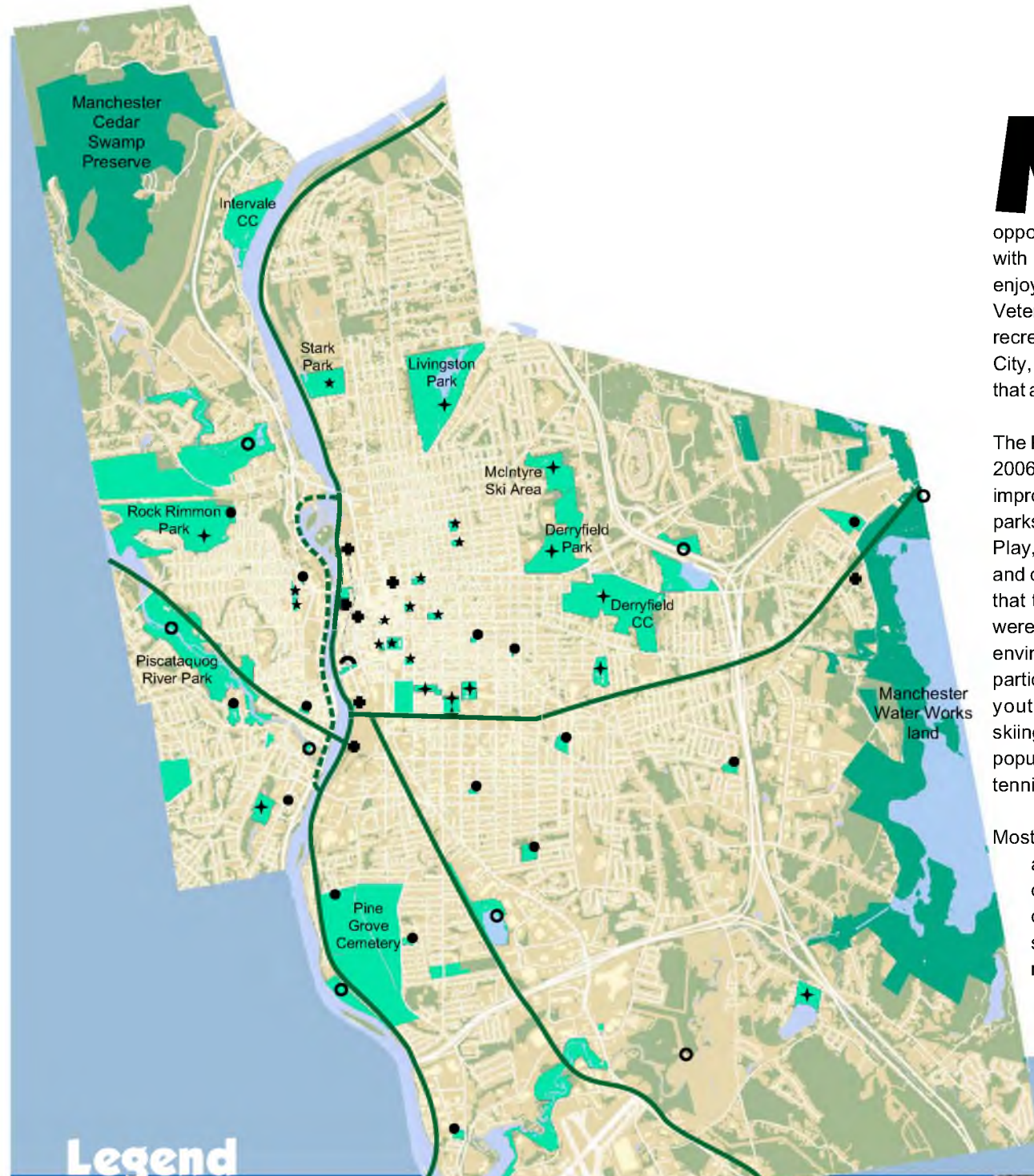
## Strategies

- Riverwalk.** The Riverwalk is the downtown portion of the Trail system and is also part of the Heritage Trail extending up central New Hampshire. Extending from Sundial Avenue on the south to West Brook Street on the north, it will run directly along the east side of the Merrimack River. Encouraged along this section are shops and restaurants located within the mills that will bring people down to the River and stay a while. Completing the Riverwalk would help to make the Merrimack River the focal point of the City. Two sections of the Riverwalk are complete but several others remain to be developed including: from Langer Mill to Arms Park and along the Jefferson Mill. These will be the most expensive sections of the Trail system and will likely require creative financing to complete. There is also the option to extend the Riverwalk along the west bank of the River running parallel to the Everett Turnpike which would create a Riverwalk loop.



- Piscataquog Trail.** Running from the Riverwalk near MerchantsAuto.com Stadium westerly to Goffstown, this trail connects to the Piscataquog Park and runs near Bass Island Park. The Hands Across the Merrimack Bridge will be the landmark of this section of trail and has recently been completed. Legal issues on two sections of the rail trail right-of-way along South Main Street have recently been resolved which has allowed the continuation of construction of the system.
- Rockingham Trail.** This trail already exists from Lake Massabesic to Newfields on the seacoast. Extending it into the City will require construction of pavement from Lake Massabesic inward and will require working in dense portions of the City where buildings and development are closely packed.
- South Manchester Rail Trail.** This trail currently extends from South Beech Street to Gold Street. Future extension can occur to the south where it could connect into a proposed "I-93" trail being planned by the NH DOT. A critical link in this portion would be the former rail trestle crossing of Cohas Brook. The trail should be extended northerly from South Beech Street to connect into the overall trail system. Special care will have to be taken at the crossing of Queen City Avenue.





**M**anchester contains an extensive variety of parks and open spaces for both active - such as soccer, baseball and tennis - and passive activities. In addition to the parks, there are a number of school playgrounds, golf courses and conservation areas that add to the City's recreational opportunities. Parks played an important role in the early development of the City, with the Amoskeag Manufacturing Company layout of several urban parks for the enjoyment of its millworkers. Much of these historic parks remain intact including Veteran's, Victory, Bronstein and Pulaski Parks. The parks provide more than just recreational opportunities - they provide valuable green space in a densely developed City, a sense of neighborhood identity and are an important part of the quality of life that attracts businesses and residents.

The Parks, Recreation and Cemeteries Department completed a parks master plan in 2006. This report provides an analysis of the parks, recommendations on improvements with an improvement schedule, and a management programs for parks. The report classifies the parks into: Heritage, Conservation, Entertainment, Play, Linkage and Gateway. The report included a public survey of both park needs and of public participation in various types of recreation. In general, the survey found that the respondents felt there was sufficient neighborhood and city-wide parks but were in favor of certain enhancements including access to the waterfront, protection of environmentally sensitive areas and development of recreational trails. In terms of participation, walking was by far the most popular with both youth and adults. For youth, other favored activities included baseball, swimming, soccer, skiing/snowboarding, and track (in order of participation rates). For adults, the most popular activities other than walking were parades, running, swimming, festivals and tennis.

Most of the recreational programs are carried out by private non-profit organizations and the school system. Schools have a wide variety of sports programs carried out at the schools or on the park system. The private organizations run a number of sports programs for both youth and adults, including such activities as soccer, football, baseball, lacrosse, hockey, softball, rugby, basketball, rowing, tennis and swimming. In many cases, these programs manage and maintain the park facilities that they utilize.

## Strategies

- **Maintenance and management.** With an extensive network of parks as well as school playgrounds, the Parks, Recreation and Cemeteries Department has very limited resources in order to provide a high quality of maintenance. Until such time as the department's resources can be increased or supplemented, the acquisition of new park space should be limited. The 2006 Parks Master Plan has management recommendations, standards, and priorities for improvements to existing parks that should be followed. A Task Force review may be required in order to develop innovative methods of maintenance and management that involve private participation in order to improve the parks.
- **Trails.** Trails provide both recreational activity as well as connections from neighborhoods to parks and open spaces. Trails are discussed in more detail in the Trails section of this Master Plan.
- **System Plan and Networking of Parks.** The Parks Master Plan identifies the need to develop the park facilities as a system and to link the parks as an integrated network. Connections can be made through reclassifying certain streets as parkways, connecting with trails and with linear park systems.
- **Future initiatives.** Recommendations on future park initiatives including:
  - A possible Environmental Education Center at the landfill site (or with the Preserve on Hackett Hill)
  - Downtown gateways and developments such as the Cultural District near the City Library and a Historical Museum Campus near Wagner Park and the Currier
  - Consolidation of the Derryfield Park, McIntyre Ski Area and the Derryfield Country Club into one complex
  - A possible regional sports complex in the Southern end of the City that could accommodate the current deficit in several types of athletic fields
  - Development of the areas along the Merrimack River as a Riverfront parks corridor
  - Provision of additional natural swimming areas and boating access to water bodies
  - A Dog Park
  - Urban Totlots/Playgrounds
- **Park Classification and Standards.** As mentioned previously, the report recommends a new classification of parks for the City. It also provides standards for those parks as shown here for a Play Park Design.
- **Capital Program:** The Parks Master Plan also provides a detailed prioritized list of improvements to both the Parks and the School grounds that are Maintained by the Department.



## Legend

- Parks, cemeteries and golf courses
- ★ Heritage Park
- Conservation Park
- ✚ Entertainment Park
- Play Park
- ◆ Linkage Park
- ▲ Gateway Park
- Forested conservation areas
- Other wooded areas
- Trail system

Play space at Livingston Park

Stark Park: The neighborhood has adopted the park to make future improvements



The car show at Veterans Park

A natural stand of trees in Derryfield Park provides green space for the City



# Recreational Opportunities

## Manchester Master Plan





**F**orests and even individual trees can provide a number of benefits to the City. Trees provide summer shade and cooling which can mitigate the “heat sink” effect of urban areas thereby making the summer periods more comfortable as well as saving on energy required for air conditioning. This will be particularly important as average temperatures increase with global climate change. Trees also generate oxygen while at the same time absorbing carbon dioxide. Treed streets also increase the attractiveness of neighborhoods, and when placed within a green strip between the street and the sidewalk, can provide a buffer for pedestrians. Forested tracts and wetlands in the City provide calming respite from the whirl of the City; allow areas for groundwater recharge and flood mitigation as well as providing habitats for wildlife and help sustain a natural ecosystem.

The City of Manchester currently has a larger forested area than it did in the 1870’s when industrialization and significant agricultural production had removed many of the wooded areas of the City. Since that time, forests have grown back. In the last three decades, however, the amount of woodlands has begun to decline again. Reaching a balance of urbanized area and wooded areas should be one of the goals of the community.

The City should continue to promote green areas for the health and welfare of the residents. This includes the planting of additional street trees, preservation of certain natural areas such as along key green corridors and providing smaller green spaces such as flowered nodes at the gateways to the City, green pocket parks and community gardens.

## Strategies

- **Greenstreets.** The City should increase its efforts to provide street trees throughout the City. This may also require changes to street and sidewalk design standards in order to provide an adequate green strip between the street and the sidewalk to allow the trees room to grow. The Planning Board should also require street trees consistent with these revised standards, as part of new subdivisions and site plans. The map shows urban portions of the City that are in particular need of additional street trees although there are areas scattered throughout the City that require additional plantings. Attention should also be paid to the main gateway corridors which should be treed and landscaped. ①
- **Green Corridors.** The City should establish three green corridors within the City including the Piscataquog, Black Brook and Cohas. The Cohas Green Corridor would include two specific areas of interest - the Great Cohas Swamp and the Crystal Lake watershed. The green corridors would provide green space for adjacent neighborhoods, access to rivers and habitat corridors for various flora and fauna. The Great Cohas Swamp is a unique natural wetland area south of I-293 that provides both protection for natural systems (such as water quality) as well as protection for human systems (this green area buffers the airport takeoff for runway 6/24 from adjacent residential areas). With respect to Crystal Lake, additional forest protection within the watershed will assist in the preservation of water quality which has been threatened by development in the area. ②
- **Active vs. Passive Parks.** Within several of the larger parks there are conflicts between the need to preserve forested areas within the park and the need to remove trees to provide additional active recreational fields. For these large parks, including Piscataquog, Livingston, Derryfield, Rock Rimmon and Stark Parks, guidelines should be established to strike a balance between active and passive and thereby ensure adequate forested areas.
- **Lake Massabesic Watershed.** The watershed area protects the water source of Lake Massabesic - the City’s water supply. Keeping forested areas within the watershed will insure the future water quality of the Lake. While much of the land in the watershed is owned by the Manchester Water Works, portions are in private ownership and can be developed. While the City recently passed a modified ordinance to protect the watershed, the water quality will have to be monitored to determine whether additional steps may be required.



**P**owerful global forces are beginning to significantly alter the way we plan and build towns and cities. Climate change, the approach of peak oil production with its increasing energy costs, and globalization of the economy, are some of the primary forces in shaping our communities.

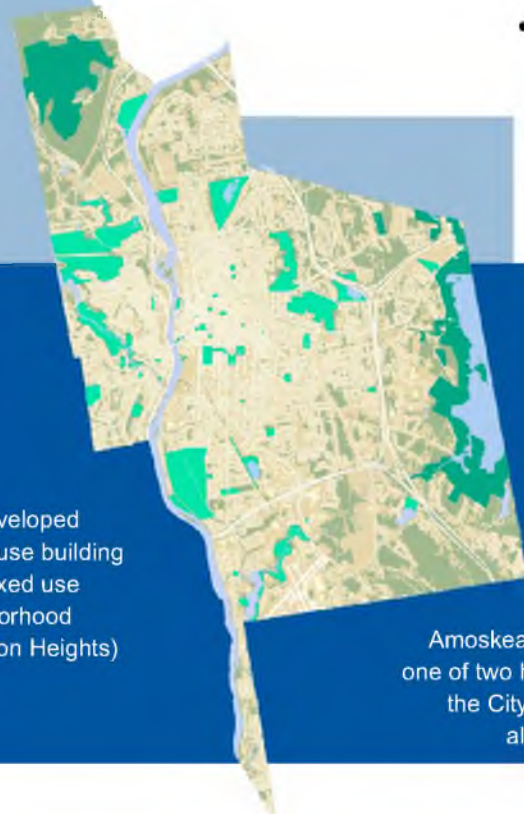
Certainly the global greenhouse effect has been in the news consistently. Increasing temperatures in most parts of the world are now linked more closely to the man-made production of greenhouse gases such as carbon dioxide. The changes are still being debated, but rising ocean levels, increased frequency and intensity of storms, changes in water supplies, the ebb and flow of native species, the potential for heretofore tropical disease spreading into new areas, major changes to our agricultural production and loss of glaciers are all likely changes. Will Manchester have the climate of Washington DC in a few decades? Will we be able to ski at McIntyre? Will we need air conditioning systems more than heating systems?

Oil is both a contributor to global warming and a critical part of our auto oriented society. Oil is a finite resource and although experts disagree when our demand for oil will exceed production, this time will be coming. Having alternatives to how we heat our homes and power our cars will be important to whether our cities can adapt to the changes.

Globalization of the economy will also have an impact on our City. With the rise of manufacturing of China (which has recently passed Japan in economic output and will likely exceed America's in the next decade), the growth in information technologies in India and competition on many fronts around the world, Manchester's economy will be on an entirely new playing field in the decades to come.

These changes will force us to change the ways we build our homes, operate our businesses, get to work and build our schools. Addressing many of these changes fall under the concept of "Sustainability" and addressing these changes will be critical because only those communities that successfully adapt will be those that remain competitive.

It should be noted that, while this chapter is focused on sustainability, the majority of this Master Plan contain strategies that will assist in making Manchester a more sustainable City.



The City has already begun to take small steps towards making Manchester a more sustainable community. These include:

- 1 In the fall of 2005, the City signed on to the Mayor's Climate Protection Agreement with input from the Sierra Club's Cool Cities program.
- 2 The City instituted the Noresco Program which made significant energy efficiency improvements in the 22 public school buildings. These included upgrade of lighting, HVAC systems, heating controls and energy management systems.
- 3 An upgrade program to all of the traffic signals in the City has replaced traditional lights with LED signals for a significant improvement in energy efficiency.
- 4 The City instituted an energy efficiency program for private low and moderate income residences. Funded with Federal grants, this program provides heating system tune-ups and replacement of out-dated systems if necessary.
- 5 The Board of Mayor and Aldermen have approved the conversion of a portion of the City Hall roof into a Green Roof.

## Strategies

- **Encourage new buildings to be Green.** Buildings are one of the largest consumers of energy from fossil fuels, the major contributor of greenhouse gases. Energy used in buildings include heating and cooling, lighting and appliances as well as the energy used in the creation of the building materials. Highly energy efficient buildings such as LEED (Leadership in Energy and Environmental Design) certified consume considerably less energy and are typically healthier to live and work in. Encouraging new private buildings and requiring public buildings to be designed and built in an energy conscious manner can save operational funds and reduce greenhouse gases. This approach could be included in certain of the City's regulations. While LEED certification is the most recognized of standards, some cities such as Austin Texas have developed their own standards for green buildings.
- **Retrofit of existing buildings.** Manchester is relatively well developed and as such the existing building stock will continue on for many years. Existing buildings, however can also be made more energy efficient, and rehabbing existing buildings rather than building new can save considerable amounts of energy in avoiding the need for new raw materials. Expanding the current low and moderate income housing retrofit to other residential and commercial buildings can be a cost effective way of increasing the energy efficiency of the existing building stock.

## Strategies cont.

- **Encourage mixed-use buildings.** These buildings combine residential units with retail and office uses. Historically, Manchester has had a number of mixed use buildings. Mixed-Use buildings can reduce parking needs and can reduce total vehicular traffic.
- **Create mixed-use neighborhoods.** Mixed use neighborhoods reduce the demand for vehicle travel by providing walkable neighborhoods where it is possible to walk or ride a bicycle to a corner store, barber, school or to work.
- **Increase the tree canopy in the urban portion of the City.** See the Greening Manchester section of the Master Plan.
- **Minimize pollution of natural resources.** Minimizing pollution of land, air and water is a key component of long term sustainability. The largest issue facing the City in this regard is separating the storm drains from the sewer system - the CSO program. Increasing recycling can also reduce pollution. Other innovative approaches include using pervious pavement in parking lots.
- **Street lighting.** Energy efficient street lighting could reduce energy demand.
- **Community gardens.** Public gardens cans provide a connection for urban residents to nature and provide fresh and healthy produce. Besides the garden on Pine Street, a major community garden program is planned for the YDC site.
- **Provide for alternatives to automobile travel.** As discussed in more detail in the Alternative Transportation section, providing alternatives such as integrated public transit systems, bikeways and walkways can reduce per capita vehicle miles traveled.
- **Vehicle fuel economy.** According to the USDOE, transportation accounted for 32 percent of all US Carbon Dioxide emissions in 2002 - the largest share. Increasing vehicle fuel economy and reducing per capita miles traveled will be necessary to significantly reduce greenhouse gases. While private vehicle fuel economy is regulated by the Federal government, the City's fleet of vehicles should be reviewed to look at hybrids and other technologies and fuels to reduce emissions.
- **Sustainability Council.** Because building a sustainable community requires many players, it is suggested that a Sustainability Council be created to include the City, businesses, Public Service Company, builders and colleges.



A redeveloped mixed use building in a mixed use neighborhood (Rimmon Heights)

Amoskeag Hydro station, one of two hydro facilities in the City providing clean alternative energy



Community garden at Sheridan Emmett Park on Pine Street





## Public Water Supply System

**W**ater supply for drinking water and fire protection for the City is provided by the Manchester Water Works (MWW). Although an enterprise department of the City, the MWW also provides service for all or a portion of the surrounding towns of Auburn, Bedford, Goffstown, Hooksett, Londonderry and Derry.

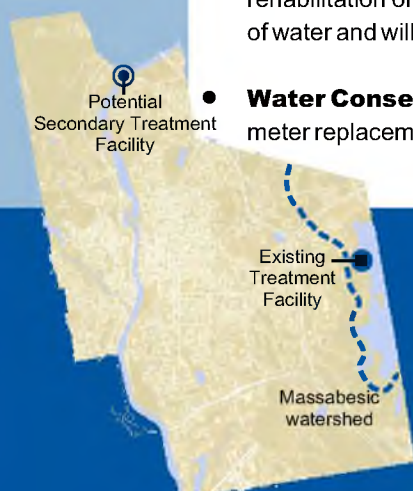
The water supply source for the system is Lake Massabesic (and its smaller tributary Tower Hill Pond). The Lake has a surface area of 2,500 acres and a gross storage capacity of 15 billion gallons. The watershed is approximately 42 square miles both in Manchester and in the surrounding towns, of which 12.5 square miles are the watershed of Tower Hill Pond. The MWW controls approximately 8,000 acres of the watershed. The control of much of the watershed insures protection of the water quality, and the MWW monitors activity within the area and enforces regulations to protect the Lake and the watershed.

Water is treated at a treatment facility on the shores of Lake Massabesic off Lake Shore Road (with a hydraulic capacity of 50 million gallons per day). The facility was completed in 1974 and had a major upgrade in 2005. The facility employs rapid mixing, coagulation, flocculation, sedimentation, intermediate ozone disinfection, deep-bed anthracite and granular activated carbon filtration, and residual disinfection processes.

Water is distributed via a series of pump stations and storage facilities to a water main system that encompasses 492 miles of piping providing service to 159,000 customers in Manchester and the surrounding towns. The average daily amount of water supplied is just under 17 million gallons per day.

### Strategies

- **Additional Water Source.** Projections indicate the need for a supplemental water source within a 10 year time frame. The MWW is preparing for a secondary source and treatment facility on the Merrimack River in Hooksett. This secondary source would provide an adequate supply of water for the foreseeable future.
- **Water Main Replacement.** The central portion of Manchester contains water mains that were installed during the 1800's. Ongoing replacement and rehabilitation of these water mains will be necessary to insure an adequate supply of water and will help reduce the loss of water supply through leakage in mains.
- **Water Conservation.** Aggressive conservation measures are planned through meter replacements, leak detection, and public education.



Lake Massabesic - the primary water source for the City



## Wastewater Systems

**M**anchester's wastewater systems includes both the management of domestic and industrial sewage and management of stormwater runoff from streets, parking lots and buildings. The City's early development was characterized by a combined sewer and storm drainage system. Although all sewage and stormwater are processed at the Waster Water Treatment Facility (WWTF), there are certain periods when heavy rains force wasterwater to overflow into rivers. Under a CSO program, the City has separated sewage and stormwater systems on the West Side. Federal and State regulations will require similar separation on the East Side.

Sewage is collected through a system of 360 miles of sewer mains (a majority of which are vitrified clay pipes) and 12 pump stations. Much of the system is older, with over a quarter of the mains over 100 years old. There are also several private development systems with their own sewer main systems and pump stations that pump into the public mains. A sewer interceptor system has been developed, with only the far east side requiring additional interceptor extensions. In addition to the sewer mains and interceptors, there are 170 miles of stormwater drainage pipes. Wasterwater is treated at the WWTF located behind the Brown Avenue Industrial Park. The 34 million gallon per day facility came on line in 1975. Much of the equipment is original and of an older technology, which will make it difficult to meet increasingly strict Federal and State requirements. While the majority of the flows come from Manchester (88%), the facility also treats flows from Londonderry, Goffstown and Bedford.

### Strategies

- **CSO program.** Probably the largest single infrastructure cost for the City will be to complete the separation of stormwater and sewage systems as mandated by the Federal and State agencies (on the order of \$150,000,000). This program will take several years of planning and negotiations with the agencies and several more years to complete.
- **Stormwater Requirements.** In addition to the CSO requirements, there are stricter requirements for the management of surface stormwater runoff in order to maintain surface water quality. Meeting these mandates will require both policy and procedure changes as well as structural changes.
- **WWTF Upgrade.** The WWTF will require significant upgrading in order to meet new standards as well as additional future flows. The cost will be about \$50M. There is also a potential to reduce future costs through energy efficiency upgrades.
- **Sewer Main and Pump Station Replacement.** The aging infrastructure will require significant repair and replacement programs to meet future needs.



## Solid Waste Disposal

**T**he City operates several programs for the disposal or reuse of solid waster including: traditional solid waste, recycling materials, yard waste and hazardous material disposal. For much of the City, curbside pickup of normal solid waste is provided every week (and more frequently in certain areas). A drop-off facility is located on Dunbarton Road for other than regular curb side pickup. The waste is transported to a solid waste facility outside of the City. The former landfill site on Dunbarton Road has been capped in accordance with State requirements and is currently under a long-term management plan.

Yard waste, which can amount to as much as 20% to 30% of the total amount of waste, is collected at curbside beginning in the spring of each year and running through late fall. Yard waste is composted and reused for other projects.

Household hazardous wastes are collected twice per year at the drop-off facility. These are limited to 10 gallons or 20 pounds.

The City provides curbside collection of recyclable materials on a schedule with regular solid waste collection. The system requires only a two sort process for the consumer - paper products and all other recyclable materials. Currently, approximately 21% of all solid waste is now recovered as part of the recycling process. Collection and recycling is performed under contract with private contractors. Recyclable materials are also accepted at the drop-off facility on Dunbarton Road. There are other private recycling companies that accept materials not normally accepted by the City.

### Strategies

- **Recycling Processing Facility.** A private recycling contractor is proposing the development of an indoor recycling and processing center in the City. This facility will provide full service recycling within the City limits.
- **Rate of Recycling.** The rate of recycling in the City currently stands at 21%. The goal should be to recycle at least 50% of solid waste. Recycling can reduce the environmental impact of land filling, the costs of solid waste transportation and land filling, and provide raw materials for production of other products. Increasing the rate of recycling and providing the service to all property owners (including businesses) must be a goal for furthering sustainability for the City. This can be increased through education, incentives and in some cases programs such as Pay As You Throw (PAYT). Education should include information on both the benefits of recycling and the process to do it. Additional education is also required for businesses.



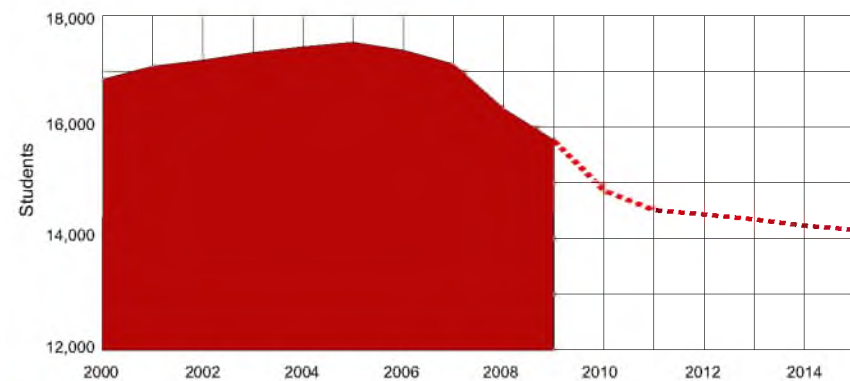
The Wastewater Treatment Facility on Gay Street



## Public School System

The Manchester School District provides pre-school through high school education for Manchester students, and provides on a tuition basis, education for high school students from certain surrounding towns. The District owns and operates 22 schools and leases space for a pre-school program and the School Administration. The schools include 14 elementary schools (Bakersville, Beech, Gossler, Green Acres, Hallsville, Highland Goffs Falls, Jewett, McDonough, Northwest, Parker Varney, Smyth Road, Webster, Weston and Wilson), 4 middle schools (Hillside, McLaughlin, Parkside and Southside), three high schools (Central, Memorial and West), and a vocational/technical school (Manchester School of Technology).

School enrollment peaked in the 2004-2005 school year with just over 17,500 students in K-12 (January 2005 data). The following graph shows the enrollment trends (as of January of each year) with projections based upon NESDEC data. Some of the recent



declines can be attributed to the transfer of Bedford students out of West High, although this does not account for all of the decline. The net effect will be a decline from its peak in 2005 through 2015 of over 3,000 students in the public school system. NESDEC projections indicate that the decline should level off by the 2017-2018 school year. Recent declines have led to smaller class sizes, with averages of 20 students or less in a number of the grade 1-3 classes in the elementary schools.

Earlier in the decade, there was a comprehensive program of improvements to all of the schools except for the School of Technology (MST). In addition, certain of the schools received additions to boost capacity. MST is now scheduled for a

Comprehensive upgrade. Two facilities are currently being leased. These include space for the pre-school program at the Easter Seals facility on Auburn Street, and space in the Millyard for the school administration.

### Strategies

- Leased Space.** Ultimately, the programs in leased spaces should be placed in City owned facilities. While reduced enrollments may allow placement of the pre-school program and school administration within existing school buildings, a new facility housing both programs can also be considered.
- Excess Capacity.** The decline of over 3,000 students between 2005 and 2015 will provide both opportunities and challenges. The reduction will allow schools to come closer to the ideal capacity identified by NESDEC, allow the provision of dedicated art and music rooms where they are currently not provided, and allow for the removal of portable classrooms. The reduced enrollments will not be felt uniformly across the schools, however, and will require decisions on how to “balance” the space. Potential also exists for other community uses such as senior and child day care programs.
- Improvement Program.** Adherence to regular and preventative maintenance programs, and incremental improvements will insure that the comprehensive upgrades recently completed will be maintained. In addition, continued energy efficiency improvements will help stabilize energy costs and allow the facilities to become more sustainable.

## Libraries

There are two public library facilities in Manchester. The Carpenter Library is the main library located on Pine Street near the Downtown. This building has received various improvements over the last several years. The City owns a property behind the Library should future expansion be required. The West Side Library is housed in the West Side Community Center with the Senior Center. With the construction of the new Senior Center wing, the library has expanded from the basement to include additional floors. Both facilities can be considered historic buildings.

### Strategy

- West Side Library.** The West Side Library has expanded into additional floors of the former fire station. While certain improvements were made, there is a need for additional energy efficiency improvements.

## Other Municipal Facilities

In addition to the buildings and facilities identified in other areas of this section, there are several general purpose buildings that provide for City functions. City Hall includes the original and historic Hall and is attached to the West Wing (former court building). There are nine City departments in the complex and houses the Mayor’s Office, Aldermanic spaces and the Aldermanic Chambers.

The Rines Center houses the Health and the Welfare Departments along with the McInnch Gallery. The Senior Center is part of the West Side Community Center housed with the West Side Library. The Transit Center at the corner of Granite and Canal Streets is leased to a bus company in order to promote intercity bus service. There are several public buildings at the Manchester Boston Regional Airport which are operated by the Airport as an enterprise department.

The Victory Parking Garage is the primary public garage in the City and houses the Parking Division. The Community Resource Center on Lake Avenue is a public building which is leased to MCRC to provide job readiness programs for inner city residents. The Public Works Garage complex is located on Hayward Street and includes three buildings. The complex houses the Highway Department and the Traffic Division.



### Strategies

- Public Works Garage.** Of the various city buildings, the public works complex is most in need of improvement. A phased rebuilding of the complex can improve work and safety conditions, provide greater energy efficiency, improve site circulation and improve overall work efficiency of the department. While new sites for a garage have been looked at, the current location is centrally located within the City and reusing it can reduce overall project costs.
- Building Improvement Program.** As with the school facilities, a regular preventative maintenance program and ongoing energy efficiency improvements can protect the physical plant assets and make the City more sustainable.



The McLaughlin Middle School serves the southeastern portion of the City

The West Side Community Center houses both the Senior Center and the West Side Library



**Public Facilities**  
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**Manchester Master Plan**



## Fire Facilities

The Manchester Fire Department operates ten fire stations. The Central Station, opened in 1971, houses the fire station for the downtown area and also is the Fire Department headquarters.

Two of the stations are relatively new - Station 5 (Webster Street) and Station 8 (Cohas Brook). Two of the stations are older but have recently been renovated and updated - Station 2 (South Main Street) and Station 7 (Somerville Street included an addition). Three of the stations will require updating or replacement - Station 3 (South Willow Street, 1979), Station 9 (Calef Road, 1963), and Station 10 (Mammoth Road, 1982).

Station 6 (Amory Street) is a relatively new station built in 1989, but is not of the level of quality and durability as other stations in the City. Station 4 (Hackett Hill Road) was a temporary station installed when the northwest portion of the City was rapidly developing. It consists of a prefabricated metal building for apparatus with an attached modular building for offices and living quarters. Although considered a temporary station, it has now been in service for over 20 years.

The Fire Department operates with 19 major apparatus which include fire engines and ladder trucks and other equipment such as boats and forestry trucks. The Department runs the City's Emergency Management operation which coordinates responses to hazardous material accidents, natural disasters and other emergencies. The department's Communication Division provides services to other department's in addition to providing internal communications.

### Strategies

- **Fire Training Facility.** The department currently sends recruits out of the City for training. A City fire training facility could improve local training of both new recruits and on-going training of the force. This facility could also be utilized by fire departments and surrounding communities.
- **Station 4.** The Hackett Hill station was created as a temporary facility and should be replaced by a permanent building, perhaps in conjunction with a fire training facility. The area could also be suitable for a cooperative station with Hooksett as would Station 3 with Londonderry.
- **Fire Vehicle Replacement.** The major fire apparatus are complex and expensive pieces of equipment that should be put on a regular maintenance and replacement schedule.

## Police Facilities

Police operations are currently carried out primarily in the headquarters building located at Chestnut and Merrimack Streets. The facility began construction in 1975 and occupied in 1977. The two story building has approximately 46,000 square feet of space and includes a vehicle maintenance facility in the basement. The Department also operates several small sub-stations in various neighborhoods of Manchester.

The Animal Control Officers utilize the Manchester Animal Shelter on Dunbarton Road. The Mounted Police use a portion of the Youth Development Center as the stable for the horses. The Manchester Police Athletic League operates out of the former St. Cecilia's Hall on Lake Avenue. The Manchester Police Department is a fully accredited police organization.

The existing headquarters building is no longer adequate to serve the needs of the Department. Increasing staffing and services have outgrown the facility and have required the conversion of basement spaces and closets into operating offices. There is a need for increased office space in general and for several specialized functions such as records storage and retrieval and camera monitoring operations. The Police Department garage in the basement is not adequate to house storage for vehicles, evidence processing, and maintenance operations. Space for the storage of evidence is particularly acute.

While a new police headquarters was considered at one point, it did not proceed.

### Strategies

- **New or Expanded Police Headquarters.** As indicated above, the existing facility is inadequate for current and future operations of the Department. While a new station has been considered, there is also potential for expansion of the existing building. This could be accomplished by expanding to the north of the current facility. In any event, the expanded requirements for space will require either an expansion or a new station.
- **Equipment Replacement.** In addition to police cruisers and other department vehicles, there are a number of other equipment needs such as laptops, radios, bullet proof vests and shields that require replacement. A regular replacement schedule would obviate the need to replace equipment in large batches which can be financially unpredictable.

## Telecommunications

The City operates increasingly sophisticated communication and information systems. Radio systems for all departments is handled through an 800 Mhz trunking system. The eleven channels serve radio needs for the following departments: Building Regulation Division, Fire, Health, Highway, Parks Recreation & Cemetery, Facilities Division, Police, Traffic and Manchester Water Works. Also on the same system are the Manchester Transit Authority, Airport, Manchester Housing and Redevelopment Authority and the Environmental Protection Division. The Communications Division of the Fire Department operates the overall system. This Division also handles a system of fireboxes on streets and fire alarm panels in buildings (700 fireboxes and 300 miles of wire). Although having a common radio system, various departments operate separate communication and dispatch centers.

The Information Systems Department (located in the Central Fire Station) operates the main computer systems for City Government and provides support for hardware and software systems within most of the City Departments. The Departments are interconnected through a fiber optic system. Several sophisticated systems are now in place including the Geographic Information System, web hosting and connections to other systems (State and Federal government). While there is an off-site hardware/software backup system, there are limited re-routing systems to provide redundant connections. The City is also exploring options for developing a WIFI network.

There are three local access television stations in the City (PEG Access - Public, Education and Government). Channels 16 (Education) and 22 (Government) are operated by MCTV. Channel 23 (Public) is operated by MCAM.

### Strategies

- **800mhz System.** A recent evaluation of the base communication system indicates the need to update the network from an EDACS to a P25 IP network. This could be accomplished in a four phase conversion.
- **Communications and Dispatch.** While there is a unified radio communication system, departmental communications and dispatch are separated. Consideration should be given to creating a combined Police and Fire dispatch function, potentially to include other departments.
- **Backup.** With the increasing sophistication of and operational reliance on telecommunication and information systems in the City, backup and redundancy of connections becomes more critical for reliable operation of City government.



Fire Station 5 on Webster Street



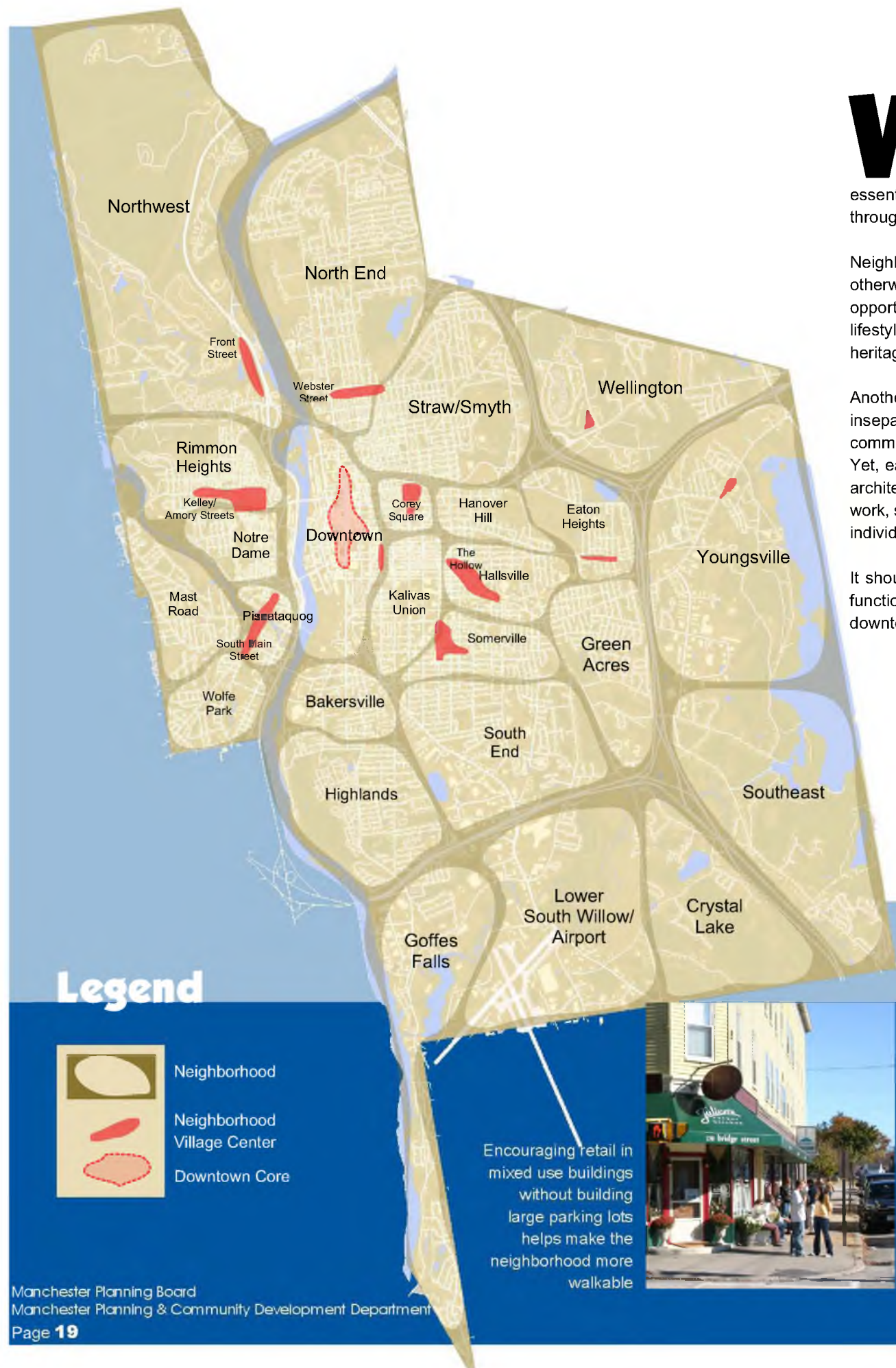
The renovated Station 7 on Somerville Street includes a new addition

Mounted Police at Veterans Park



**Public Facilities**  
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**Manchester Master Plan**





**W**ith the revitalization of the downtown and the Millyard area over the last twenty years, now is the perfect time for the City to assess and plan for its neighborhoods. While many people see the face of the City through the downtown, the neighborhoods are the City's backbone. As such, it is essential for the City to keep the infrastructure of its neighborhoods healthy and vital through investment.

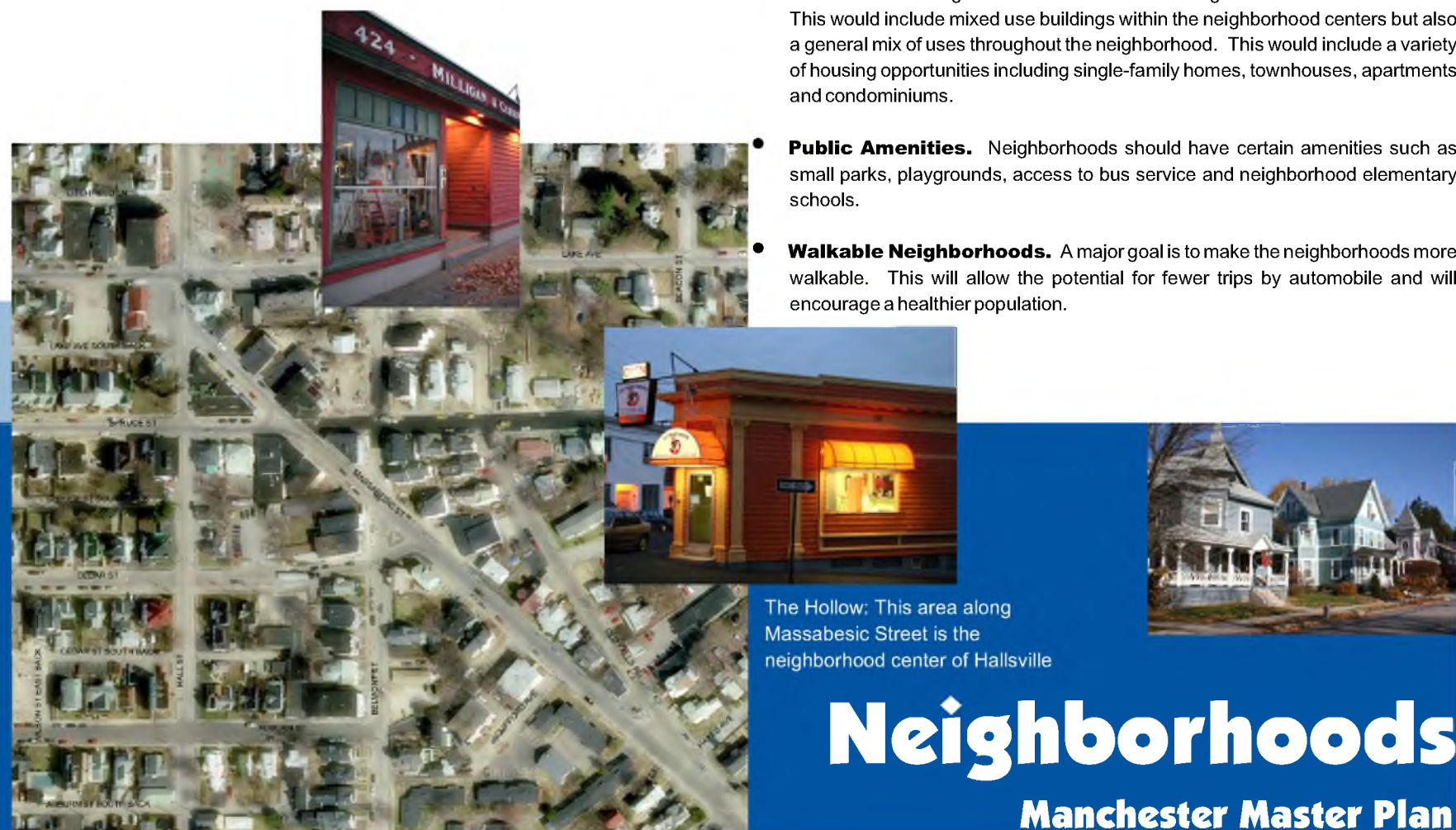
Neighborhood development provides us with some unique opportunities not otherwise offered through suburban development patterns. Some of these opportunities are: diversity through a variety of cultures, classes, age variations, lifestyles and economic opportunities; and a willingness to sustain a neighborhood's heritage through preservation, while welcoming new ideas and opportunities.

Another advantage shared by City neighborhoods is that they are organized around inseparable systems that interact with each other. Housing, parks, transit availability, commercial uses and infrastructure are all essential parts of individual neighborhoods. Yet, each neighborhood is also based on specific, innate strengths, characters and architectural styles. These distinctive qualities are defined by the people who live, work, shop and play there. They are the best experts who can speak to the values of individual neighborhoods because they experience them every day.

It should be noted that while the downtown core in certain ways serves statewide functions, it also serves as the neighborhood core for downtown residents. The downtown is covered in more detail in another section of the Master Plan.

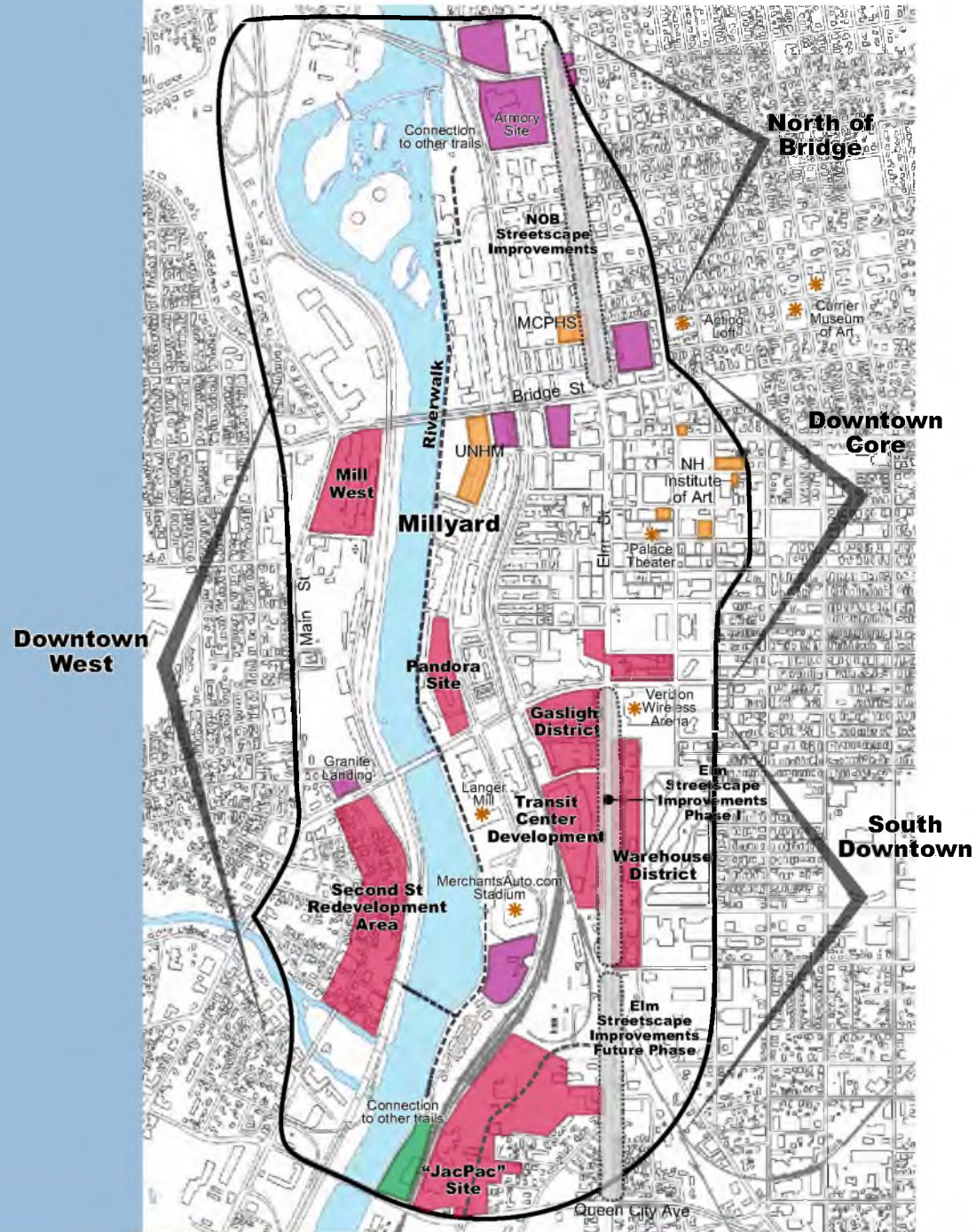
## Strategies

- Strategic Neighborhood Plans.** Develop plans for each neighborhood beginning with the older areas that may be in particular need of revitalization. A Plan has been developed for the Rimmon Heights Neighborhood and can serve as a format for other areas. Each plan should attempt to develop a neighborhood identity, a vision for the area and, where appropriate, a brand. Neighborhood associations could also help support revitalization efforts
- Neighborhood Business Centers.** These Centers provide services, jobs and a sense of community for the neighborhood. These centers should be strengthened through redevelopment, development of more mixed uses and a design framework that encourages a walkable area. The facade improvement program has proven to be one of the most cost effective methods for improving the areas and strengthening the businesses. The allowable zoning should also be continually reviewed to insure that it encourages the visions for the center. For the purposes of RSA 79-E, which allows the City to offer tax abatements for redevelopment of buildings, these centers are to be considered "neighborhood village centers".
- Urban Design.** Improving the urban design of the neighborhoods will make them not only more attractive for the residents but also more attractive for investment. Improved design includes: streetscapes such as sidewalks and lighting, protecting historic buildings and districts, and improving the design of the neighborhood businesses through programs such as the facade improvement program.
- Mixed Uses.** Neighborhoods should be encouraged to have more mixed uses. This would include mixed use buildings within the neighborhood centers but also a general mix of uses throughout the neighborhood. This would include a variety of housing opportunities including single-family homes, townhouses, apartments and condominiums.
- Public Amenities.** Neighborhoods should have certain amenities such as small parks, playgrounds, access to bus service and neighborhood elementary schools.
- Walkable Neighborhoods.** A major goal is to make the neighborhoods more walkable. This will allow the potential for fewer trips by automobile and will encourage a healthier population.





## Central Business District Map



The downtown is the heart of the City, its central gathering spot and the most visible representation of the community to people outside of the region. With virtually no vacant, developable land remaining in the City, the Downtown offers an opportunity to continue commercial and residential development opportunities, but in a denser and more sustainable fashion. The downtown is also considered the Central Business District. The District is actually composed of various sub-components. These include the Downtown Core (from Bridge Street to Granite Street and from the Milliard to Union Street); the Milliard (primarily on the east side of the River although also including certain Mills on the West Side); North of Bridge (NOB); South Downtown (from Granite Street to Queen City Avenue); and Downtown West (on the west side of the River extending to Main Street). The latter two areas were recommended to be included in the downtown as part of the Hillier Study.

The defined Central Business District has a population of 9,568 persons in 4,262 dwelling units. It has the highest concentration of businesses in the City and the types of businesses are well diversified. The leading sector with 20% of the total businesses is professional, scientific and technical services. This includes the high concentration of the legal profession in the downtown as well as several of the hi-tech companies in the Milliard. Finance and insurance, accommodations and food services, retail trade and health care are also leading sectors. The downtown has an "improvement district" which is focused on quality services in the area which is run by Intown Manchester.

Additional information on the Downtown, including detail on possible development projects can be found in the "Downtown Strategic Development Plan" prepared for the City by Hillier Architecture in 2006. The basic goals as set forth in this plan are: a focus on residential growth to fill the gaps; continue expanding cultural and visitor amenities; increase downtown's "pull" by augmenting existing assets; create stronger regional transit links; and preserve opportunities for commercial growth in the downtown.

## Strategies

- Regulatory Changes.** In order to support the growth of the downtown and an increase in the geographic area, certain changes will be required. These include such items as expanding the CBD zoning district into the South Downtown and Downtown West, and revising certain building codes to encourage reuse of upper stories for residential use and mixed use projects in general.
- Transportation.** The focus of transportation in the downtown should be on transit and walkability. Transit will improve significantly with the proposed "downtown circulator" and commuter rail station tied into existing city bus routes.
- North of Bridge.** The north end of the downtown could be improved with streetscape improvements similar to those in the core. In addition, the Armory site could serve as a major downtown anchor if it were redeveloped.

## Strategies cont.

- Residential Development.** Encouraging residential development in the downtown can provide additional urban living opportunities and make the downtown a vibrant center 24 hours a day. Additional residents can also encourage added downtown amenities such as retail shops, downtown grocery store and movie theater.
- Attractiveness.** Improving the attractiveness of Downtown Manchester can pay dividends in terms of an improved image, increased visitors and economic development. The attractiveness can be improved through such things as: relocation of overhead utilities underground, design guidelines, facade improvement programs and improvements to wayfinding signage. Making the downtown more pedestrian friendly, through improved sidewalks, crosswalks, connections to transit and streetscape design can also improve the area's attractiveness.
- Arts, Entertainment & Education.** These three activities will play an increasingly important role in the downtown and should be supported. Visitor and entertainment activity can be strengthened through either the expansion of the Center of New Hampshire convention facility or the development of a new facility (recent studies have shown that there is a demand for such a facility). A number of visual and performing art venues exist in and around the downtown ranging from the Palace Theater to the artist colony at Langer Mill. The downtown area contains five colleges with another college - Hesser, just to the south of the downtown. The planned expansion of UNH Manchester, Massachusetts College of Pharmacy and the NH Institute of Art offer significant improvements to the education, quality of life and business development of the Central Business District.
- Millyard.** The Milliard remains one of the region's most important business catalysts. The redevelopment of the Pandora Building will mark the reuse of the last vacant building in the Milliard. Improvements should include the provision of additional private parking capacity, greening of the area and the completion of the Riverwalk.
- South Downtown.** With the development of Elliot at Rivers Edge (so-called "Jac Pac" site) underway, the South Downtown is poised for significant expansion of the downtown. A future street connection from the site to Elm Street will also assist in the redevelopment of adjacent parcels. A commuter rail station and multi-modal facility can catalyze development in the immediate area, the Gaslight and Warehouse districts and the City as a whole. Streetscape improvements will be required on this section of Elm Street and in the Gaslight District.
- Downtown West.** The west side of the Merrimack River offers opportunities for expansion of the downtown with higher densities of residential and commercial development. The recently completed improvements to Exit 5 and Granite Street will allow redevelopment in the Granite Street and Second Street corridors.

Links for Additional Information:

- [Downtown Strategic Development Plan, Hillier](#)
- [Riverfront Development Plan, LDR](#)
- [Civic Center Area and Gateway Corridor Plan, Planning Dept.](#)

## Legend

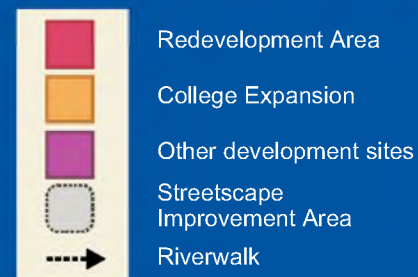


Photo: stuckincustoms.com

City Hall is in the very heart of Downtown

A riverwalk such as here in San Antonio brings people to the waterfront and spurs economic growth



The Downtown can be a center of events such as the car show shown here





## Existing Land Use Map

Prepared by  
SNHPC for the  
CTAP Program

- Commercial
- Education/Institutional
- Industrial
- Multi-family
- Single-family
- Forest Land
- Wetlands
- Cemeteries

The land use section of the Master Plan provides the future goal of uses within different areas of the City in order to reflect and implement the vision, principles, goals and policies of this Plan. It does so by establishing a variety of zones in Manchester that depict the general future development goals of each area as shown on the attached map. The Land Use Map forms the basis for the City's Zoning Ordinance which provides the detailed rules that implement the policies of the Plan. The overall goal of the Land Use Plan is to foster a mix of uses in the City that will meet housing and shopping needs, business and job retention and growth, the health, arts and culture of the community and the need to move towards a more sustainable community through the incorporation of natural areas in Manchester. As part of the goal it is recognized that the City must preserve certain residential and commercial areas that are stable and working well, while promoting areas of redevelopment and infill to meet future needs.

This page of the Land Use section illustrates the existing land use in Manchester along with the general strategies for the development of the future land use of the City. The second page shows the proposed land use with an explanation of each of the land use categories.

## Strategies

- Evolution of the Land Use Plan.** The patterns and types of land use in the City have continued to change since land use plans were prepared in 1963 and again in 1993. This Plan represents an evolution of these earlier plans. Major changes in this Plan include: geographic expansion of the Central Business District; identification of additional conservation land; recognition that heavy industrial parks have evolved into production and technology zones in the new economy; identification of neighborhood business centers; elimination of the lowest density zone (R-S) which had been labeled as a "holding zone" in previous plans; defining the future of the Hackett Hill area; defining the future of the previous RDV - redevelopment area; and encouraging mixed use in the general business areas.

## Strategies cont.

- Zoning Ordinance.** The Zoning Ordinance provides the detailed regulations that implement the Land Use Plan. It regulates such features as uses, height, area, bulk, setback, parking, signage and other requirements. Changes are recommended to the Ordinance to comply with the intent of this Master Plan generally and this Land Use Section specifically. This will include both changes to the zoning map as a result of revisions to the types of districts and the geographic extent of the changes. Much of the Zoning Ordinance is based upon traditional zoning characteristics where specific zones are identified and only one or a limited number of uses are allowed in each district. In order to revise the ordinance to include such features as mixed-use at higher densities, walkability, greening and sustainable development, other types of land use regulations should be explored including approaches such as performance zoning. The regulation of signage in both the Zoning Ordinance and the Design Guidelines (discussed below) should be upgraded to provide harmonious and attractive business areas of the City.
- Subdivision and Site Plan Review Regulations.** While the Zoning Ordinance is the primary tool for regulating the uses, height, area and bulk of private developments, other regulations also impact on the form and design of projects. This includes the Subdivision and Site Plan Review Regulations administered by the Planning Board. These regulations should be reviewed to update them according to the recommendations of this plan. Such items as site design to encourage walkability, increased trees and other vegetation, and sustainable site design such as underground surface water treatment and xeriscaping can be encouraged in these regulations. It should be noted, however, that not all projects go through site plan review.
- Building Codes.** The City's building codes should be revised to encourage energy efficient and sustainable building development and rehabilitation.
- Urban Design.** While the Zoning Ordinance is designed to regulate uses that might not be compatible and regulate the size and setback of buildings, it is not as good at encouraging quality design. One way to support improved design is through the support of facade programs using CIP funds; this has proven useful in the downtown and early neighborhood revitalization efforts. Another system is to implement a design review process. Certain small areas of the City currently have some design review such as in historic districts (by the Heritage Commission), in the Millyard (by the Millyard Design Review Committee) and in the Arena area (by the Planning Department). Other key areas of the City could be included in a design review district in order to improve the quality and character of the development.



Renovation of historic high school building with addition by NHIA

West side neighborhood from Rock Rimmon (photo courtesy of SNHPC)



Straw Mansion affordable housing project

CMC's expansion with bridge over McGregor Street



Photo courtesy of SNHPC





**Central Business District**

The CBD is the portion of the City that should have the broadest mix of high density residential, commercial, entertainment and production. While it is preferable to have vertical mixed use, there are situations where single use is appropriate. It should be designed to be fully walkable. Additional information is provided in the Downtown section.



**General Business**

This zone includes primary retail and office areas such as South Willow Street, Hooksett Road and Second Street. While mainly commercial, mixed use with residential is also encouraged in these areas.



**Neighborhood Center**

These are medium density areas with a mix of retail, other commercial and residential uses that are designed to provide neighborhood services in a walkable distance from surrounding residential areas. See the Neighborhood section of the Plan for additional information.



**Technology and Production Zones**

These areas are designed for production, manufacturing, research, technology development and corporate facilities. Small scale retail, services and restaurants can be provided but are limited to those that primarily cater to the employees of the Zone.



**Civic Zones**

Includes areas of major institutions including districts for health care and for arts and culture.



**Conservation Zones**

These are areas that are primarily intended to remain in a natural state for use as vegetation, wildlife, and open space sections of the City, with some limited recreational uses of the area. See the Greening Manchester section of this Plan.



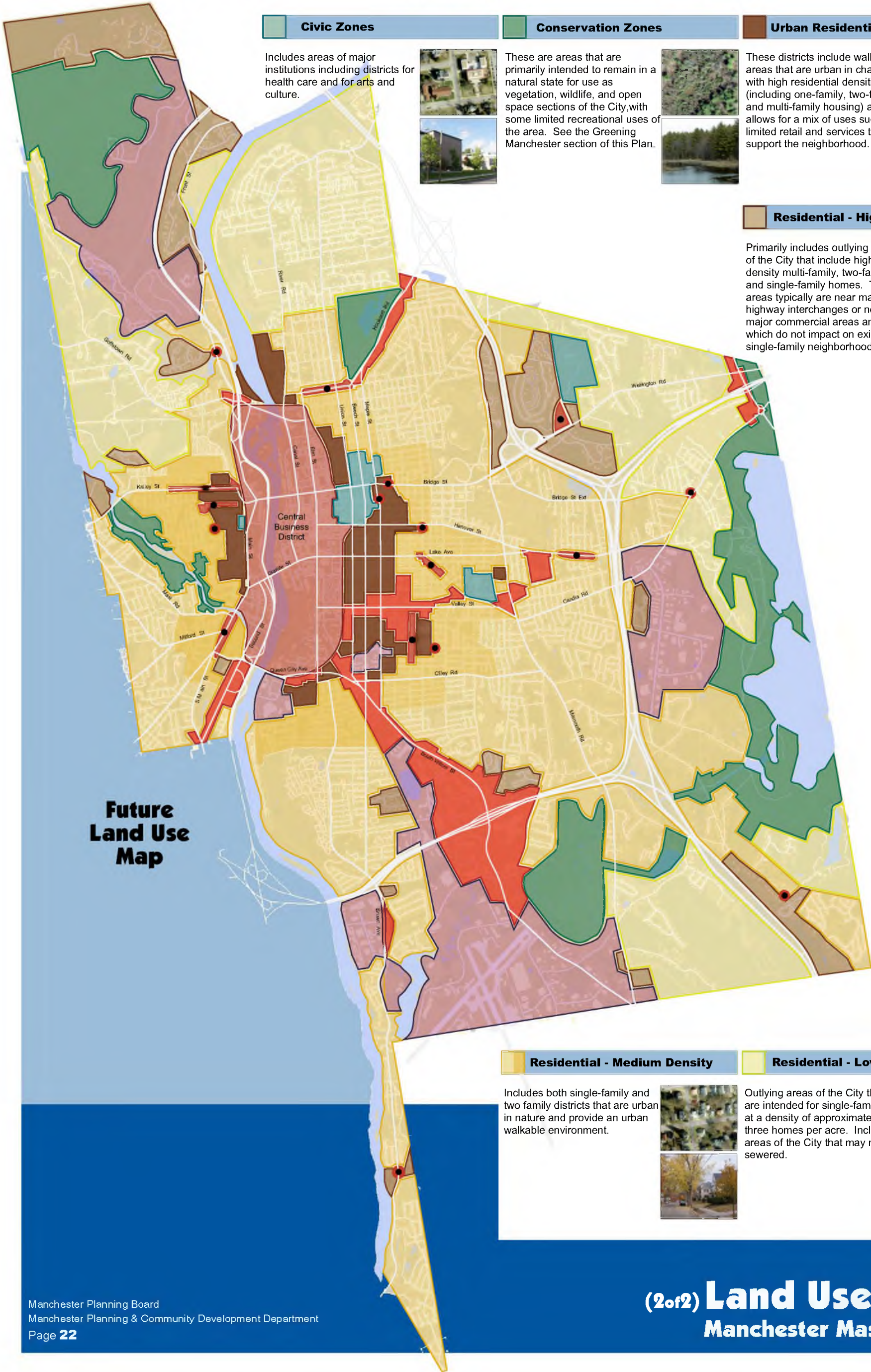
**Urban Residential - High Density**

These districts include walkable areas that are urban in character with high residential densities (including one-family, two-family and multi-family housing) and allows for a mix of uses such as limited retail and services that support the neighborhood.



**Residential - High Density**

Primarily includes outlying areas of the City that include higher density multi-family, two-family and single-family homes. These areas typically are near major highway interchanges or near major commercial areas and which do not impact on existing single-family neighborhoods



**Residential - Medium Density**

Includes both single-family and two family districts that are urban in nature and provide an urban walkable environment.



**Residential - Low Density**

Outlying areas of the City that are intended for single-family lots at a density of approximately three homes per acre. Includes areas of the City that may not be sewered.

