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Louis DeMauro		

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The *Charlton Planning Board* oversaw the Master Plan process:

Daniel Christian	Dan Mahoney	David Aiello
William Hultgren	Dr. Roy Gunter	Thomas Reed
Cynthia Cooper	Diane Doherty	Bruce Keller

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The Master Plan Committee were able to fulfill their assigned task because of the tireless effort and dedication of all who were involved, including the tremendous response of the residents to the 1998 Survey, and the input from all Town Agencies, Commissions, and Boards. Charlton has a Master Plan thanks to all these individuals and groups.

I. Introduction to Charlton and the 2000 Master Plan

A. History: Where Charlton Came From

Native Americans were the early inhabitants of the Charlton area, until the 1670s. These included divisions of the Nipmuc Tribes such as the Dudley and Pegans. Settlers began passing through the area as they traveled west via the Bay Path route, which was a series of trails starting on the Atlantic Coast heading west to the Connecticut River valley and beyond. Land was offered for settlers beginning in 1720.

In 1755, the District of Charlton was established from what was previously the western two thirds of Oxford and an additional 10,000 acres from the County Gore, which was bounded by the present-day Brookfields, Spencer, Sturbridge, Leicester, and Auburn, were added in 1757. In 1792, a portion of Charlton was added by Sturbridge, and in 1816, 3000 acres were taken to form Southbridge. Charlton district officially became a town on August 23, 1775.

The main reason given for forming the Town of Charlton was the difficulty of travel from home to church and school in Oxford Center through the woods or over primitive trails. Therefore one of the first things that the inhabitants did after forming the town was to vote moneys for a school building and a meeting house in a convenient location, which is now Charlton Center.

Charlton is located in South Central Massachusetts in Southern Worcester County. Locally, it is a portion of the tri-community area of Charlton, Southbridge, and Sturbridge. Charlton is bordered by Spencer on the North, Leicester on the Northeast, Oxford on the East, Dudley and Southbridge on the South, Sturbridge on the West, and East Brookfield on the Northwest. Charlton is approximately 15 miles Southwest of Worcester, 52 miles Southwest of Boston, 42 miles East of Springfield, 47 miles Northeast of Hartford, and 167 miles Northeast of New York City.

The Town began with agriculture as the primary means of living. The settlers cleared the wooded and stone laden land to make fields, farm, and grazing land. Some of the earlier stone walls are still intact, especially in the remote woods and along the roadways. Building stone walls served more than one objective, as it not only cleared the land for farming, but also provided fences for animals and served as boundaries between neighbors. The small family farm dominated Charlton until the 1960s. These farms raised livestock, mostly dairy cattle, poultry, fruit orchards and market garden products.

North Charlton, now known as Northside, was situated on the Turnpike between Boston and major population areas to the West, and therefore its location made it attractive to businesses that relied on road transportation and water power. Tanneries, manufacture of hoes, scythes, and similar goods, a gin distillery, malt house and brewery, and pot and pearl ash works were in operation. A tavern provided lodging and meals for travelers and their horses or oxen. From the 1750s to the 1840s, Northside was the major economic, social and religious center of Town. During the 1800s, Charlton Center and the Dresser Hill area became the main business areas. This was in part because the local town government was situated in the Center, but also because there were houses of worship, and manufacturers of furniture, carriages, wagons, and all kinds of

farm equipment as well. Charlton City grew as a village during the 1800s because of the availability of water resources for woolen mills, wire mills, lumber mills, and associated businesses. Charlton Depot village prospered after 1838 with the coming of railroad service. The area grew with a boot and shoe factory, blacksmith shops, and rail transportation of agricultural products. In the late 1880s and until the 1950s, agriculture once again became the town's major industry, as the manufacturing industries relocated closer to major urban sites. Since the 1960s, the small family farms have been declining, and the town has become more of a bedroom community.

Charlton had numerous mills, shops and stores in its early history. Since it was on a main route from Boston to New York, many a traveler stopped in town in the 1700's and 1800's. Charlton provided not only lodging for man and beast, but also provided furniture, flour, lumber, and other materials. There were blacksmith shops, grist mills, shoe factories (on a small scale), woolen mills, and stores of all kinds. Of course the many farms provided dairy products, wool, meat, apples, vegetables, and fodder. The last of the important mills were the woolen mills, Charlton Woolen and Ashworth's Woolen Mills. These were in operation until the 1970's.

The largest employers in the Town were the farms, and agriculture was the main economic base until the late 1950's. As with most New England Towns, a family farm became unprofitable. The rising costs of labor, capital equipment, and production limitations forced farms, especially the dairy farms, to go out of business. That meant that land, and inexpensive land, was available for housing construction. That fact, together with the availability of roads to urban areas, and the advent of the private automobile as the prime means of transportation, all contributed to the rapid housing development in town. Numerous small but influential employers in town are now associated with the construction business, with residential housing the major product.

Many residents of the Town were employed by the American Optical Company in Southbridge during the period 1950-1970. On the closing of the woolen mills in Town, the Cranston Print Works in Webster employed some of the former employees of the Charlton Woolen Mill and Ashworth Mill. This trend of Charlton residents being employed outside of Town, and even outside of Worcester County, was enhanced by the proximity of the Massachusetts Turnpike interchanges in Auburn and Sturbridge, and the family automobile as the primary means of transportation. That trend continues to this day. Through the master planning process, the town can decide to redirect this trend more toward community stability.

Of note is the fact that all of the villages in Town were formed and prospered because the workers could walk to their place of employment.

B. The 1998 - 2000 Master Plan Process

In the Fall of 1997 selectmen Richard T. Kwiatkowski, Tammra A. Russell, and Robert P. Beaudette called a public meeting to discuss the Master Plan issue. Because there was a large turnout of residents, and because the attendees exhibited an active interest in producing a Master Plan, a Master Plan Committee was formed. Approximately 70 residents attended a second meeting of this Committee. Since a Master Plan drawn up by any Committee must be approved by the Town Planning Board, members of the Master Plan Committee went before the Planning

Board and reported on their intentions to prepare a Master Plan for the Town. After some discussions, the Planning Board agreed to form an Ad Hoc Master Plan Committee, and a Charter was drafted and approved. The Master Plan Charter stipulated that the Committee would be comprised of 15 voting members, and a representative of the Planning Board. The Charter gave the Master Plan Committee much freedom in operation, with one restriction: prior to the release of any information, Planning Board approval was required. Further, the Master Plan Committee Chair or representative, was required to make an oral presentation at least on a monthly basis at a regularly scheduled Planning Board meeting, and a written report every three months.

The Master Plan Committee met on a regular basis, at least monthly, but more commonly every two weeks, and called special meetings with consultants from Central Massachusetts Regional Planning Commission, the University of Massachusetts, and other planning experts during the course of Master Plan preparation. Representatives from all Town Board and agencies were invited to regularly scheduled Master Plan Committee meetings to present detailed information and future requirements. The Committee prepared and analyzed residential, business, and Town agency surveys as one method of obtaining information required to draft a meaningful Master Plan. Of the approximately 4,000 resident surveys that were distributed, 1,079 responses were completed and returned. This high response clearly demonstrated that the Town residents were very interested in the Master Plan project.

The Master Plan Committee discussed at length which path to follow in the preparation of a Master Plan. It was voted that the Committee would assume the prime responsibility of preparing a Master Plan, and would utilize outside consultants when appropriate. Appropriations for the expenses of consultants required prior approval of the Planning Board.

After much thought and deliberation the Committee adopted the mission statement “To provide an evolving framework for the future growth, development, and preservation of the Town of Charlton”.

In the Spring of 1999 the Master Plan Committee Chair prepared a preliminary draft of a Master Plan, the purpose of which was for Committee discussions and reference. This draft was based on information that had been gathered to date, and was not intended as a complete Master Plan, but only as a working document for the Committee. In the Fall of 1999 Master Plan subcommittees were formed to prepared the respective elements of the final Master Plan. These elements include: Land Use, Housing, Transportation and Circulation, Economic Base, Cultural and Natural Resources, Open Space and Recreation, Public Facilities and Services, and Goals, Values, and Policies. The Planning Board approved obtaining the services of a Consultant to integrate the elements of the Master Plan and to draw up the Implementation and Strategies element.

Five candidate consultant firms were interviewed, and of those candidates, LandUse, Incorporated, Jeanne H. Armstrong, President, of Hadley, MA was selected to assist the local Master Plan Committee.

A second draft of a Master Plan was produced in accordance with a template provided by the consultant, and a copy distributed to Master Plan Committee members and to the Planning Board. This was the first time that Master Plan members had the opportunity to review the element write-ups other than those they had actually prepared. Revisions to this draft were forwarded to the consultant, and a revised draft was prepared and distributed on May 17, 2000. Further revisions were forwarded to the consultant for inclusion in the refined draft of the Plan.

It was voted by the Master Plan Committee, and approved by the Planning Board, to hold a public forum/fair on Saturday, June 24, 2000 from 9:00 AM until Noon, at the Municipal Office Building, 37 Main Street. A booth-type arrangement was set up, with representative of the Master Plan Committee available to provide information and answers to any questions that the residents might have, and to listen to comments. Approximately 50 residents carefully reviewed the draft goals, summary maps, and draft action strategies. For each element, each participant recorded his or her opinion about the strategies that should be given top priority. This statement of relative priority is reflected in the chart of action strategies that is presented in Section IX, Implementation.

The refined draft of the Master Plan for the Town of Charlton was presented to the Planning Board at their regularly scheduled meeting of July 5, 2000.

As they completed their task, the Master Plan Committee urged the Planning Board to appoint a subcommittee whose tasks would include overseeing action steps laid out in the Implementation element.

The Planning Board reviewed the Master Plan over the next several months, holding public meetings to discuss the plan and to receive comments from other Town departments. The Board voted to adopt the final Master Plan at its regularly scheduled meeting on December 6, 2000.

C. The 1998 Survey: Initial Guidance from the Community

1. Introduction

In the Spring of 1998, the Master Plan Committee of the Charlton Planning Board prepared a survey, the purpose of which was to learn of the concerns of the residents of the Town of Charlton pertaining to the future direction the town should take. The survey was examined by the Central Massachusetts Regional Planning Commission, and suggestions made. In May, the survey, with return postage, was enclosed in the Charlton Gazette for distribution to all residents of the town. Approximately 4,800 surveys were delivered, with 1,070 returned. Twenty-six surveys were completed by two different persons in the same household, for a total of 1,096 replies. This is a return of 22.83%, which is far above the average for this type or any survey. The high return is a clear indication that the residents of the town do have an interest in Charlton's future, and the direction in which it should proceed.

The survey contained twenty-three questions. Two of the questions required written replies, while the remaining twenty-one requested a simple numerical answer, or a Yes, No, or Don't Know (DN) response. All of the data from the latter questions were entered into a database

(67,086 elements). The two questions that had to be answered by written replies were then classified into categories for database retrieval and correlation.

The raw data were presented to the Master Plan Committee and the Planning Board without interpretation. The information has been stored and will be available for future compilations, correlations, and computer searches, and most important, were used in the preparation of the Town Master Plan.

2. Summary of residential survey responses

The principal reason given for living in Charlton was because of its rural character, followed by convenience to work, born in town, low taxes, and school reputation. Affordable housing was listed by less than 2% of the respondents.

Major future concerns included maintaining rural character, slowing down the current residential growth rate, and permanently preserving open space and recreational facilities. Respondents felt that the town should remain mostly residential, with some industry. A majority would like to see a large chain or supermarket and a sit down restaurant in town, but few were in favor of a fast food or convenience store, condos, or apartments.

A clear majority would limit the number of building permits issued per year, and would favor larger house lot sizes in non-sewered areas of town. The residential growth would be tied to the available infrastructure.

As for town government, a majority wished to adopt a town charter, but did not want to change to a town council form of government. An overwhelming majority would like to see more citizens actively involved, were in favor of a town administrator position, and were deadlocked on the question of increasing the number of selectmen (selectpersons).

For detailed resident survey results, see Appendix A.

D. Goals and Policies Statement

Upon careful review of the completed surveys returned by residents, the Master Plan Committee felt directed by townspeople to draft a Master Plan that would accomplish the following:

- a. To maintain the rural character of the Town,
- b. To protect open space and preserve natural resources,
- c. To control the rate of development such that the Town's service capabilities, and facilities will not become overburdened, and
- d. To provide a wide range of housing opportunities.

Subsequent collection and analysis of information broadened the Committee's understanding of the implications of these overarching concerns and expanded the initial list of goals, as described below.

Preserve Rural Character

The most important goal, according to all information gathered was to preserve the open and rural character of the Town. This includes the rural landscapes, scenic vistas, lakes, wetlands, open meadows, and forests. The improvement of Route 20, and the availability of public sewers and water will promote the development of industrial establishments that could degrade the rural character of the Town. Excessive residential housing would also detract from the Town's rural character. Therefore, the potential impact of construction on rural character should be considered during the project approval process.

Protect Open Space and Natural Resources

Open space and natural resources of not only Charlton but of almost all towns and municipalities are dwindling at an alarming rate. Once the open space is gone it cannot be recovered. The Commonwealth is keenly aware of the situation, and steps are being taken to attempt to preserve open space. As with many issues, financial limitations play a major role in preserving open space. Details presented under the Open Space and Recreation element of this Master Plan, if followed, would help to save prime open space in Charlton. Preservation of other natural resources (e.g. historic features, scenic landscapes, geological features, and water resources) is also an important goal, outlined in more detail in the Natural and Cultural Resources element.

Control Rate of Development

Uncontrolled development, both industrial and residential, places an undue burden on Charlton's service capabilities and facilities. Uncontrolled industrial growth can place undue burdens on the infrastructure including; highways, roadways, police, and fire protection services, and usually requires public water and sewer services. Providing these services may in some cases prove more costly to the Town than the new tax revenue, even though expansion of the tax base is one of the major reasons for permitting industry to locate in Town.

Uncontrolled residential growth places a burden on the school facilities, in addition to the other Town services and infrastructure. For each new residential dwelling, with a family of 1 or more children of school age, the taxes of everyone are necessarily increased to cover just school costs. If residential units continue to be constructed at a rate of approximately 100 new units per year, in the not to distant future, only the wealthy will be able to own their own home in Charlton.

Encourage a Range of Business Activity, Focused on Major Roadways

One of the major goals of the Plan is to achieve a range of business activity that offers employment opportunities, convenient sources of goods and services, and tax revenue for the Town. Like many other communities, Charlton is struggling to keep property tax rates low. Increasing the Town's tax base, through new development of commercial and industrial development, is one method to help achieve this goal. As detailed in the Economic Development element, the plan recommends taking steps to increase commercial development, including increasing the amount of land zoned for commercial/industrial development in Town. However, as is described throughout the plan, most commercial development should be limited to the

Town's major roadways, including Route 20 and Route 169, to limit impact on neighborhoods and roads. Route 20, in particular, provides a unique opportunity, and the Town should plan carefully for development in this area.

Carefully Plan for Maintenance and Improvement of Charlton's Roadways

Maintaining and improving Charlton's road system is a major concern. As detailed in the Transportation and Circulation element, a main goal is to strike a balance between roadway maintenance, including safety improvements, and the desire to preserve the rural character of Charlton's scenic roads.

Provide a Wide Range of Housing

Affordable housing is an important issue and is considered in the Housing element of the Charlton Master Plan. As the costs of land and construction escalate, the price of a single-family dwelling may become prohibitive, especially for the elderly on a fixed income, for young people starting out, and for low income families. The Charlton Master Plan details several methods to encourage builders, with incentives, to provide affordable housing.

These are the major goals, values, and policies as determined from the resident, business, and Town surveys, and from information gathered from various sources during the Master Plan process. Further details have been provided under the appropriate element in the Master Plan. All goals are also listed in the Implementation and Strategies element of this Master Plan, along with specific action strategies to achieve the goals.

II. Land Use

A. Introduction

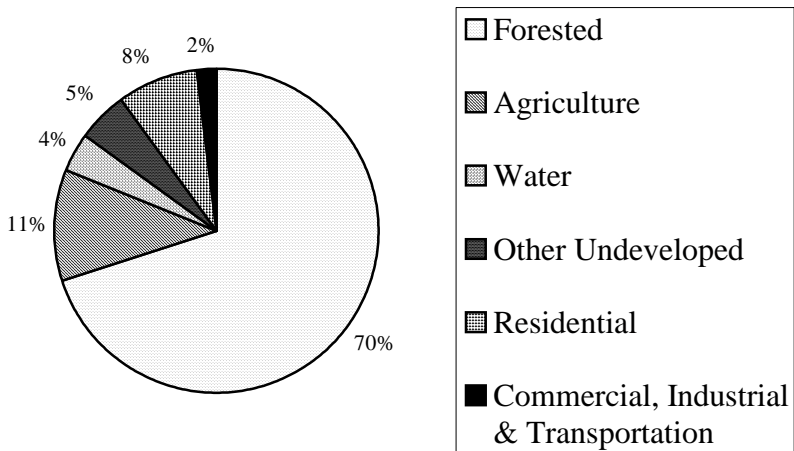
How a community uses its land has a great impact on the many aspects of community life, including town character, the tax base, and quality of life for residents. Historically, Charlton was predominantly an agricultural community. However, Charlton’s growth and change in land use over the last several decades have been dominated by increased residential development throughout the Town. Anticipated future trends include increased commercial activity as a result of infrastructure improvements and potential increases in the amount of industrially-zoned land. This chapter describes current and future trends in Charlton’s land use patterns, identifies challenges facing Charlton, and provides a vision for future land use patterns.

B. Current Conditions & Trends

1. Existing Land Use

The total land area in Charlton is roughly 44 square miles or 28,000 acres. Much of Charlton’s landscape is dominated by undeveloped forest land. Based on a 1985 Land Use Inventory cited in the *Town of Charlton, Massachusetts Rural Preservation Study*, forested land comprised the single largest land use, at 70% of Charlton’s total land area. Charlton also contains hilly forest slopes, agricultural fields, open meadows, ponds, streams, and wetlands. The topography is predominantly gentle to rolling hills and valleys; elevations range from less than 500 feet to 1,070 feet above sea level. Charlton contains over 700 Acres of water, which consists of ponds, reservoirs, and streams.

Figure LU1: 1985 Land Use, Charlton



Source: Town of Charlton, Massachusetts, Rural Preservation Planning Study, Spring 1997. (based on 1985 Land Use Inventory)

Charlton's developed land is primarily single-family residential development. Commercial sites are scattered along Route 20, for the most part, with some isolated commercial sites on Carpenter Hill Road, Route 169, and Route 31. According to the Land Use Inventory mentioned above, developed land in Charlton was roughly 10% of the total land area of the Town in 1985. The largest developed land use was residential development, at 8 percent of the total land area in Charlton. Commercial development, industrial development, and transportation represented the lowest percentage of land use in 1985. While the data from the 1969 Comprehensive Plan prepared by Metcalf and Eddy, Inc. is not directly comparable because they used different land use categories, it is clear that the amount of developed land has increased. The Metcalf & Eddy Plan indicates just under 7 percent of the Town's land was developed, versus roughly 10 percent in 1985.

The Central Massachusetts Regional Planning Commission, in cooperation with the Executive Office of Environmental Affairs has completed a buildout analysis and map for the Town of Charlton that provides current data on land use. Unfortunately, this information is not yet available to the Town.

Data from the Charlton Assessor's office from the Summer of 1999 provide a different perspective on current land use in Charlton. Please note that these numbers are not comparable to the land use data from 1985, described above. Assessors data assign a category to each lot based on its primary use. For example, a lot designated as single family residential could in fact be a very large lot containing significant open space or forested land. These data indicate that 37% of the total assessed land area in Charlton is classified as single-family residential, with another 5% classified as other residential. Relatively little land is assessed for commercial or industrial uses.

Figure LU2: Charlton Land Use by Assessors Classification, mid-1999

Land Use Category	# of Acres	% of Total
Single Family	9,693	36.5%
Other Built Residential Land	1,325	5.0%
Open Residential Land	8,143	30.7%
Built Commercial Land	509	1.9%
Open Commercial Land*	1,062	4.0%
Built Industrial Land	482	1.8%
Open Industrial Land	279	1.1%
Chapter 61A & 61B Land	2,236	8.4%
Public/Non-Profit Owned Land	2,826	10.6%
Total	26,555	100.0%

* includes farm buildings, golf and game clubs, camping, & youth camps

Source: Charlton Board of Assessors

2. Zoning Bylaws & Subdivision Regulations

The Town of Charlton adopted its Zoning Bylaw relatively recently, in April of 1987. Much of Charlton's existing development (especially scattered commercial development and housing on small lots) is "grandfathered" and would not be allowed under the current Zoning Bylaw. The Charlton Zoning Bylaw divides the town into seven main zoning districts, and three overlay districts. The table below describes the intent and purposes of each district.

Zoning District Title	Short Name	District Intents and Purposes
Agriculture	A	To provide for agricultural and lowest density residential sites while at the same time encouraging open space, preserving or enhancing views, protecting the character of the historic rural and agricultural environs, preserving or enhancing visual landscapes, recognizing site and area limitations for on-site waste water disposal systems in terms of drainage, soil suitability, proximity to surface and aquifer and other sub-surface water resources, and slope.
Low Density Residential	R-40	To provide sites for low density residential development with respect to the existing character of the neighboring homes and properties, including compatible related home oriented activities and pursuits in a rural environment.
Residential - Small Enterprise	R-SE	To provide sites for a mixture of medium and low density residential uses and small scale commercial and light industrial uses appropriate to an existing mill village.
Neighborhood Business	NB	To provide sites for small scale business development for local and transient services compatible with low and medium density residential development within village settings which through landscaping and design or through preservation, enhance the natural landscaping and historic environs; at the same time protecting any existing views, minimizing the visibility of parked cars, avoiding the appearance of commercial strips as well as congestion in the abutting streets and ways, and retaining the character and the quality of life in the rural New England village.
Community Business	CB	To provides sites for businesses that serve the entire town and people and traffic passing through the town, and which through proper siting, landscaping and design, create amenities and avoid, to the maximum extent possible, the appearance of commercial strips, and adverse impacts on abutting streets and uses.
Industrial - General	IG	To provide sites for industry which create employment opportunities and capitalizes on the use of Charlton's access and environmental conditions and labor force, while recognizing the limitations of Charlton to handle traffic, water runoff, sewage, and other environmental and neighborhood impacts.
Industrial Park	IP	To provide parcels of land zoned as industrial parks, where "compatible industries" are encouraged to locate in a park-like setting. Such industries shall be "abutter friendly"; that is, they shall impact abutting lands minimally as to sight, sound, odor and traffic. Allowed uses include a mix of manufacturing, research and development, office, distribution, and other compatible uses which offer an opportunity for employment growth and an expansion of the tax base in the Town of Charlton.

Zoning District Title	Short Name	District Intents and Purposes
Flood Plain (overlay)	FP	To insure the minimization of flood damage and to minimize any impediment to the natural flow of flood waters. This applies to all zones.
Adult Entertainment (overlay)	AE	To provide an area where adult entertainment uses are allowed and regulated.
Wireless Telecommunication Facilities (overlay)	WCF	To provide locations where wireless communication facilities are allowed, but regulated to minimize their aesthetic impacts as much as practicable.

As the following table indicates (and as shown on Map LU1), the vast majority of land in Charlton is zoned for residential use. Land in the three residential districts (A, R-40, and R-SE) comprises approximately 95% of the land area in Charlton.

Figure LU3: Distribution of Land Among Zoning Districts

Zoning District	Number of Acres*	Percentage of Total Land Area
A	23,499	83.8%
CB	315	1.1%
IG	657	2.3%
IP	472	1.7%
NB	91	0.3%
R-40	2,768	9.9%
R-SE	245	0.9%
TOTAL	28,047	100.0%

Source: Central Massachusetts Regional Planning Commission (based on zoning map of 7/99)

*acreage calculations are approximate and include water bodies as well as streets

The Agricultural District requires 60,000 square foot lots (roughly 1 1/2 acres), and 175 feet of frontage on a public way. Both the Low Density Residential and Residential Small Enterprise Districts require 40,000 square foot lots (just under 1 acre) and 150 feet of frontage. The primary uses allowed in these districts are obviously agriculture and residential uses, but they also allow some recreational and public uses (such as golf courses, riding stables, nursing homes, community centers, etc.) Most of the non-residential uses require site plan review by the Planning Board. The Residential Small Enterprise District allows retail establishments up to 20,000 square feet and several other business uses (again, most require site plan review, although some are allowed with only a building permit).

All of the residential districts also allow “Flexible Developments” on parcels of 10 acres or more by Special Permit from the Planning Board. Such subdivisions are allowed a greater density of housing and waivers from typical subdivision standards in exchange for the permanently restricted open space equal to 25% of the total land area of the subdivision. For example, in Agricultural districts, the minimum lot size is reduced from 60,000 to 45,000 square feet.

The Town's commercial districts allow a variety of business and industrial uses. As indicated by the purpose and intent, the Neighborhood Business (NB) District allows small-scale commercial businesses. The Commercial Business (CB) District allows a wider range of commercial uses. In both the Neighborhood Business and Commercial Business Districts, only Wireless Communications Facilities require a Special Permit; all other allowed commercial uses require only a building permit or site plan review by the Planning Board. Both industrial districts (IG and IP) do not allow residential uses. In addition to several commercial uses, the IG district allows several industrial and warehouse uses, including light manufacturing, research and development, sawmills, and scrap metal storage yards. The IP District allows a more limited range of light industrial and research uses. Several uses in the two industrial districts require a Special Permit from the Planning Board; however, most uses are allowed either with site plan review or with a building permit only. In addition, uses proposed in IP districts must meet specific development standards in the zoning bylaw related to traffic circulation, landscaping, lighting, etc.

Under Charlton's Zoning Bylaw (as with most other Towns with site plan review), uses that require site plan review are considered allowed uses. The primary purposes of site plan review are to determine compliance with the zoning bylaw and to allow the Planning Board to more closely examine project impacts. For example, the Charlton Bylaw requires the provision of trees in parking lots of over 25 spaces. The site plan would be used to determine whether or not the applicant has included the required number of trees in the parking area. If a project requiring only site plan review is in compliance with zoning, it must be approved. Uses that require a special permit from the Planning Board also require submittal of a site plan, but the Board has more discretion in making its decision to approve or deny a project. In some instances (expansions of non-conforming uses, development in flood plains, etc.) the Zoning Board of Appeals is the special permit granting authority.

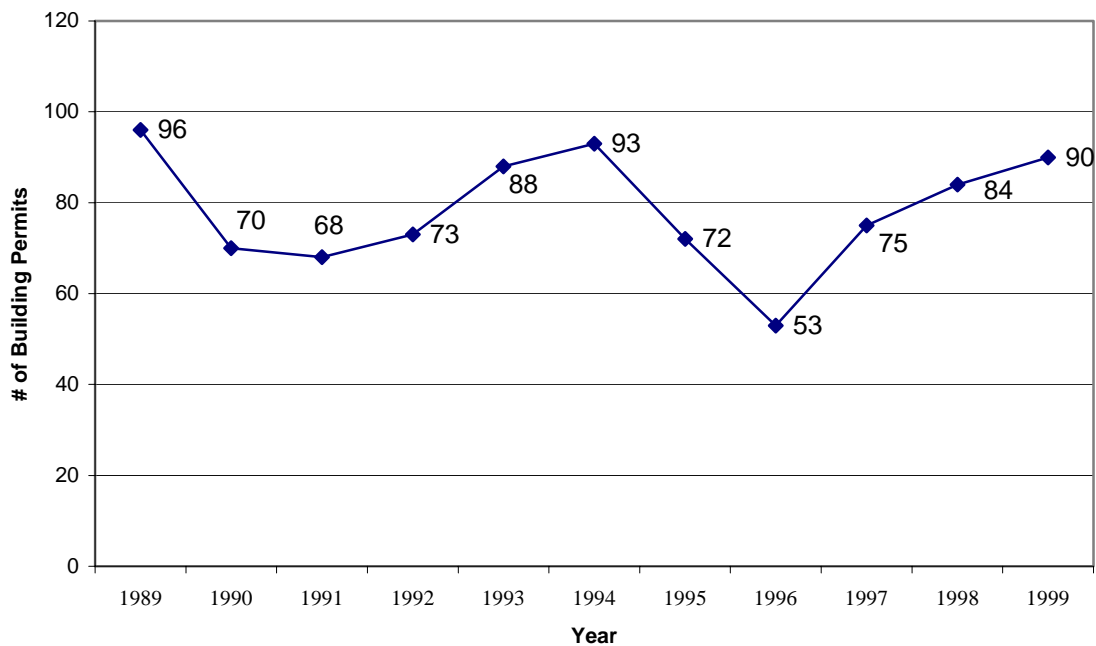
Residential development, particularly subdivisions, is regulated through Charlton's *Rules and Regulations Governing the Subdivision of Land in Charlton, Massachusetts* (the Subdivision Regulations). The current Subdivision Regulations were adopted in December of 1989. The main purpose of Subdivision Regulations is to protect the "health, safety, convenience and welfare of the inhabitants of Charlton" by specifying construction standards for new subdivision roads that ensure safe roads, adequate access to all lots, and provision of utilities within subdivisions. For example, the Subdivision Regulations require streetlights, sidewalks, street trees, and specify pavement widths for each type of subdivision road. These regulations are significant in determining what new residential subdivisions will look like.

Most housing construction in Charlton, however, is not in subdivisions, but on individual house lots along existing public roads. For example, in 1999, out of 135 new house lots approved by the Planning Board, only 45 were in subdivisions. Development of individual house lots requires only the submittal of an "Approval Not Required" (ANR) plan to the Planning Board. As long as the lot(s) shown on the plan have the required frontage on a public way, the plan must be endorsed.

3. Anticipated Future Trends/Buildout Analysis

Between 1989 and 1999, an average of 78 building permits for single and two family residential construction were issued each year (although there was considerable fluctuation between years). It is likely that the current trend of rapid residential development will continue.

Figure LU4: Charlton Building Permits for New One- and Two-Family Dwellings, 1989-1999



Source: Town of Charlton Annual Reports, 1989 - 1999

Based on data provided by the Central Massachusetts Regional Planning Commission, there are approximately 18,538 acres of residentially-zoned land available for construction in the three residential districts. (see Appendix B for complete methodology.) As the table below demonstrates, this translates to 14,206 available house lots.

Figure LU5: Number of Remaining Potential Residential Lots Under Current Zoning

Zoning District	Number of Available Acres*	Minimum Lot Size Required	Number of Potential Lots
Agricultural (A)		60,000 s.f.	
Low Density Residential (R-40)		40,000 s.f.	
Residential-Small Enterprise (R-SE)	677	40,000 s.f.	
TOTAL	18,538	n/a	14,206

*Available land minus land in protected open space categories, land in flood plains, open water, wetlands, rivers and streams, zone 1 of public wells, slopes of greater than 25%, and roads.

Assuming 2.98 persons per household (based on the 1990 U.S. Census), 14,206 new housing units would result in additional 42,334 residents in Charlton if all available land were developed. However, at the average rate of 78 building permits issued per year (between 1989 and 1999), it would take 182 years to reach full build-out. Increasing lot sizes would reduce the total number of potential housing units. For example, if the minimum lot size in the Agricultural District was increased to 80,000 square feet (almost two acres), the number of potential lots in the A district would be reduced from 11,966 to 8,974, resulting in a total additional population of 33,418 (with total buildout occurring in 143 years).

For commercial districts, it is difficult to predict what type of business might move to Charlton, and at what rate growth might occur, given the limited commercial activity in the past. However, the buildout methodology does provide an estimate of the total amount of buildable land in each commercial district, as follows:

Figure LU6: Acres Available for Nonresidential Development Under Current Zoning

Zoning District	Acres Available for Development
Neighborhood Business	422
Industrial Park	331
Community Business	200
Industrial General	369
TOTAL	1,322

It should also be noted that there is the potential for new commercial growth in Charlton due to the expansion of water and sewer in commercial areas and the possible increase in the availability of industrially-zoned land. Currently, the area along Route 20 west of Route 169 lies in several zoning districts, and much of the area is residentially zoned (R-40).

C. Challenges and Opportunities

1. Water & Sewer

New proposals for water and sewer lines in Charlton will have an impact on future land use. For example, Route 20 east of 169 will soon have water, which may lead to increased development in the Commercial Business District along Route 20. Zoning along this area should be evaluated to determine if current regulations sufficiently address new commercial growth. As mentioned above, most commercial uses in this district require only a building permit or site plan review by the Planning Board (very few require a Special Permit). For example, fast food restaurants are allowed in this district with no review by the Planning Board (only a building permit is required). Also, current performance standards (i.e. landscaping and buffering requirements, lighting standards, etc.) are minimal. The Town should consider revising the Zoning Bylaw to encourage commercial development while also providing adequate control.

New sewer lines in the Glen Echo Lake area have the potential to impact residential development in that area. Until now, construction on many small “grandfathered” lots has been constrained by the inability to provide adequate septic systems. With the installation of sewer lines, some of

these lots will be developable. Given the environmental concerns related to development surrounding Glen Echo, the Town should determine the number of potential new homes in the area and decide if any action should be taken to mitigate new development.

2. Road Widths

As mentioned above, Subdivision Regulations help determine what new residential development will look like. One potential area for change is the required paved road width, which for most street types is 35 feet. Although there is a need to have roads wide enough to accommodate traffic and emergency vehicles safely, excessively wide roads are expensive to maintain and are not consistent with Charlton's desire to maintain "rural character."

3. Major Residential Developments and Flexible Developments

Charlton's Zoning Bylaw also contains regulations relating to major residential developments that require applicants for residential developments of five or more dwelling units to submit a traffic study to demonstrate the project's impacts on local roads. However, the Town should consider revising this section since as it is currently written, the extent of control over major residential developments is unclear. For example, the bylaw refers to using the required traffic study to determine if a Special Permit should be granted. However, with the exception of Flexible Developments, residential construction does not require a Special Permit. Major residential developments require only site plan review. Also, as mentioned previously, the majority of house lots created in Charlton are ANR lots. It is unclear how ANR plans showing more than five lots should be regulated under this section. The Town should revise this section to clarify these issues. Also, the Town could consider requiring a special permit for all major residential developments (perhaps allowing Flexible Developments by right to encourage protection of open space).

4. Population Growth/Loss of Open Space

The Planning Board is currently considering growth management techniques because of the rapid population growth in Charlton (See Population and Housing Chapter), loss of open space and rural character, concerns about water quality, and rising property tax rates. Currently, measures being considered are primarily increased lot sizes and some type of phased growth bylaw that would limit the number of building permits issued per year. Increasing lot sizes would reduce the ultimate potential population of Charlton, but complete buildout would occur sooner (as noted above) and would result in housing spread throughout the town, limiting uninterrupted stretches of open space or forests. In addition, studies have shown that "the spreading out of development has contributed to increased spending by state and local governments in three areas – education, roads, and police." (Development Framework, 2020 Growth Strategy for Central Massachusetts) One possibility currently being considered by the Planning Board would be to increase lot sizes only in certain areas (to protect agricultural lands and areas with environmental constraints). Adoption of building permit limitations (either a cap per year and/or phasing permits in large developments) would prevent the Town from experiencing very rapid growth in any given year, helping the Town prepare for the resulting costs (schools, infrastructure maintenance, etc.) The Town should also consider other measures to protect or acquire open

space. Partnerships with local Land Trusts, such as Charlton Heritage Preservation Trust and Opacum Land Trust will help protect and conserve Open Space. The Town should also consider taking advantage of the new Massachusetts Community Preservation Act.

5. Irregular Large Lots

Another zoning issue that has recently become a potential problem is the existence of large lots with little road frontage. Since these lots lack sufficient frontage on a public way, the owners of such lots cannot construct a single-family home, unless a variance is obtained from the Zoning Board of Appeals. However, such lots can often easily be developed as subdivisions with many homes, as long as the owner has 60 feet of frontage so that a new subdivision roadway can be built. The Town should consider adoption of zoning changes to allow construction of one single-family home on lots over a certain size (i.e. 3-5 acres) that lack sufficient frontage. Several other communities (including nearby Brookfield) allow such construction.

6. Zoning Map/Street Map

Charlton currently does not have an accurate, up-to-date zoning map. Over the last two years, the Planning Board has worked to update the zoning map to accurately reflect the more than 20 amendments to zoning district boundaries that have been made since 1987. Completion of this project is a priority of the Planning Board. One of the major problems that has delayed completion is the lack of an accurate street map in Charlton. The Town should consider funding a consultant to assist in the preparation of an updated street map as a separate project from the zoning map. An updated street map would benefit many Town departments, including the Police and Fire Departments. In addition to a need for up-to-date zoning and street maps, the Town needs improved maps of many other resources (i.e., wetlands, open space, etc.). While CMRPC may be providing additional maps in the near future as part of their buildout analysis study, the Town should evaluate its mapping needs and seek funding as necessary to provide the maps needed for future planning.

7. Changing Land Uses

Charlton's Zoning Bylaw may not adequately address several new trends in land use. For example, an increasing number of residents have proposed running businesses out of their homes. While the current zoning bylaw has standards for home occupations, these standards may not sufficiently address the issue and should be reviewed for possible amendments. Also, the zoning Definitions and Use Regulation Schedule sections related to commercial and industrial uses may need to be updated to reflect changes in technology and new types of businesses. In addition, Charlton's current zoning does not fully address the new demands for different housing and care facility choices for the elderly, particularly assisted living facilities. While some types of assisted living facilities can be accommodated under the Zoning Bylaw provisions for nursing homes and other types of assisted living facilities (particularly those with multiple detached units) would not fit well into our existing zoning bylaws. The Town should consider amending the zoning bylaw to better address these uses. A starting point would be to include a definition of Assisted Living Facility and to add this use to the Use Regulation Schedule. Finally, as mentioned above, the Town may soon face increased commercial and

industrial development. The Zoning Bylaw should be reviewed for possible changes to help accommodate this growth and to attract the type of businesses that would most benefit the town of Charlton (i.e. changes to uses allowed, landscaping standards, and size and type of signs allowed).

8. Protection of Existing Cultural, Historical, and Natural Resources

Recognizing the significant cultural, historical, and natural resources, as identified in the Open Space Plan, the Town must work towards protecting and enlarging those areas as well as other state and non-profit lands. Also, when presented the opportunity, the Town should embrace the Open Space parcels set aside in subdivisions.

Note: The issue of *hazardous waste* should be investigated as appropriate in the future.

D. Goals for the Land Use Element

In light of the above discussion, and the desires voiced by the community, the following goal statements will guide the Town's land use-related decisions:

Goal LU1: Continue Charlton's traditional pattern of denser development in and around vibrant villages, separated by open landscapes of natural resource areas and rural scale development.

Goal LU2: Protect Charlton's natural resource base, including water resources, corridors of wildlife habitats, and scenic landscape views.

Goal LU3: Take advantage of regional markets, and public investments in transportation, sewer and water systems, by locating with careful site planning high value industrial and regional office and commercial development along Route 20 and certain areas of Route 169 and certain areas of Route 31.

Goal LU4: Achieve consistent, coordinated planning and administration among Town boards.

Goal LU5: Develop stricter environmental resource protection standards, and assign them a threshold status within the development review process.

Goals LU6: Revise and upgrade zoning bylaws and subdivision regulations to reflect specific recommendations of Master Plan elements.

Implementation strategies for achieving these goals are presented in Element IX, below.

E. Conceptual Land Use Map

Map LU2: *Conceptual Land Use Plan* summarizes the pattern of land use and conservation the Town of Charlton hopes to achieve over time. Map LU2 is intended to provide only a general idea of where different types of land uses are desired; the boundaries are not exact and would need further study before any proposed changes in zoning district boundaries would be proposed. Areas identified as “Village Centers” are located in areas that have historically been areas of more concentrated development, including in some cases small-scale commercial development. In these areas, particularly where water and/or sewer is available, more compact development and limited commercial activity might be allowed. Areas identified as “Greenbelts” are areas that should be protected as corridors for wildlife or general protection of open space and forests. The Map also identifies areas of commercial and industrial activity, focused along Route 20 and Route 169. The remaining land is envisioned as rural scale residential development.

F. References

Charlton Zoning Bylaw, 4/87, as amended through 9/99.

Comprehensive Plan, Charlton Massachusetts, Metcalf & Eddy, Inc., 1969-1970

Current Draft, Development Framework: 2020 Growth Strategy for Central Massachusetts, Central Regional Planning Commission, November, 1999.

Final Open Space and Recreation Plan, Town of Charlton Massachusetts, Prepared by Charlton Open Space Committee, 11/96

Planning Board 1999 Annual Report.

Rules and Regulations Governing the Subdivision of Land in Charlton, Massachusetts, 12/89, as amended through 5/99.

Town of Charlton, Massachusetts, Rural Preservation Planning Study, University of Massachusetts, Department of Landscape Architecture and Regional Planning, Prepared for the Center for Economic Development, Spring 1997.

Town of Charlton Annual Reports, 1988 through 1999.

LU1: Town of Charlton Zoning Map

LU2: Conceptual Land Use Plan

III. Population and Housing

A. Introduction

The Master Plan seeks to reach a sensitive balance among goals that sometimes conflict -- for example between open space preservation and planning for the development of homes and businesses. Charlton has traditionally been an open and heterogeneous community.

B. Current Situation

1. Concentrations of housing

There is a mixed housing base in Charlton, with older homes built in the 1700's to new homes constructed in recent years. Most of the older homes were built in village areas, near workplaces, such as Charlton City, Charlton Center, Charlton Depot, and Northside. These villages were inhabited and grew because of their proximity to workplaces. Most of the remaining homes that were built prior to the 1940's were farmhouses scattered around the town. The areas near Cranberry Meadow, Glen Echo, Pierpoint Meadow, Granite (South Charlton) Reservoir, Buffum Pond, Little Nugget Lake, and Gore Pond, were predominately seasonal villages which have since been converted into year round homes. Public housing for low income and the elderly residents of town is limited to the Charlton Housing Authority Complex on Masonic Home Road and a few other units.

2. Population

Since migration is the dominant population growth factor in the town of Charlton, future residential growth might be projected based on the past decades of growth. According the U.S. Census, Charlton's population grew from 6,719 to 9,576 between 1980 and 1990, or an average increase in population of 286 per year. The 1999 population is 12,689 (Town Census), which shows average growth in population of 346 per year from 1990 to 1999. If the annual increase in population continues at this number, the projected population in the town of Charlton could be 13,035 in the year 2000, 14,765 in 2005, and 16,495 in the year 2010. It is apparent that the town cannot sustain the continued rapid growth rate and yet provide the necessary services and facilities for all of the residents, without undue hardships.

Figure H1: Charlton's Population by Age, 1990

Age	Number of Persons	%
Under 5	867	9.1
5-14	1,581	16.5
15-44	4,904	51.2
45-64	1,445	15.1
65 and over	779	8.1
Total	9,576	100.0

Source: 1990 U.S. Census

The U.S. Census reported that Charlton's average number of persons per household was 2.98.

Figure H2: Change in Number of Households in Charlton, 1980-1990

Year	Number of Households	% Change
1980	2,107	
1990	3,147	+49.4%

Source: 1990 U. S. Census

3. Household Income

The 1990 Census provides information on the 1989 incomes of Charlton residents from the long form that was provided to a sample of the population. This information shows the income for all households, family households, and non-family households. (A household is one or more person occupying a housing unit, while a family is defines as two or more persons who are related by birth, marriage, or adoption, and who live together as a household does.)

Figure H3: Annual Household Incomes in Charlton

Annual Household Income Range	Number of Households	%
Less than \$5,000	136	4.3
\$5,000-\$9,999	117	3.7
\$10,000-\$24,999	537	17.1
\$25,000-\$34,999	392	12.5
\$35,000-\$49,999	730	23.1
\$50,000-\$74,000	891	28.3
\$75,000-\$99,999	234	7.4
\$100,000 or more	122	3.9
Totals	3,159	100.3

Source: 1990 U.S. Census

Figure H4: Comparison of Charlton's Household Incomes With State Averages, 1989

Measurement	Amount	State Rank	% of State Average
Median household Income	\$42,461	142	114.9
Per Capita Income	\$15,128	238	87.8

Source: 1990 U.S. Census

4. Comparison of median income to housing price

The rule of thumb used by Realtors and banks for figuring affordability is that the cost should not be more than 2-1/2 times the family's income, assuming the traditional 20% down payment. Thus to buy the average house sold in Charlton in 1970, a family income of \$15,600 was needed. The average income for Charlton residents in 1970 was \$21,560. By 1986, a family buying a home in Charlton with a traditional 20% down payment would have needed an income of about \$39,000. In 1999 the Worcester Board of Realtors reported that the average sales price for a home in Charlton was \$144,623. A family needed an income of \$57,850 to purchase the average house. Clearly Charlton is becoming less affordable a town in which to buy a home.

**Figure H5: Median Sales Prices of Homes in Charlton, 1990 – 1994
Showing Annual Percentage Changes in Price**

Year	Median Sales Price	% change
1990	\$119,900	+9.0
1991	\$110,000	-8.3
1992	\$95,000	-13.6
1993	\$110,000	+15.8
1994	\$110,000	0.0

Source: Banker and Tradesman

**Figure H6: Number of Home Sales in Charlton, 1990 – 1994
Showing Annual Percentage Changes**

Year	Number of Home Sales	% change
1990	154	-29.7
1991	167	8.4
1992	191	14.0
1993	175	-8.4
1994	210	20.0

Source: Banker and Tradesman

It is not surprising that the current buyers are frequently two-income families; families “trading up” to larger and more expensive homes, and able to make a larger down payment, thus reducing the amount of mortgage on the property; or executives moved to the area by their companies. Many current residents could not afford to purchase their existing home today. Ten households in Charlton are assisted through rental vouchers and fuel assistance by Rural Housing Improvement. Two of South Central Rehabilitative Resources’ homes are in Charlton. In 1998, Charlton had 16 recipients of Aid to Families with Dependent Children. There is no doubt that more affordable housing will have to be provided in town.

5. Characteristics of Housing Stock

Figure H7: Charlton Housing Stock, by Number of Dwelling Units per Structure, 1990

Number of Units in Structure	Total number of Units	% of Total Dwelling Units
Single unit	2,762	80.3
2-4 units	401	11.6
5 or more units	206	6.0
Other	69	2.0

Source: 1990 U.S. Census

Figure H8: Charlton Housing Stock, by Age of Structures, 1990

Year Structure Built	Total number of Units	% of Total Dwelling Units
1989-March 1990	131	3.8
1980-1988	1,138	33.3
1970-1979	749	21.8
1960-1969	468	13.6
1950-1959	320	9.3
1940-1949	179	5.2
1939 or earlier	453	13.2

Source: 1990 U.S. Census

6. Ownership

According to a survey of Charlton residents, business owners, Town Boards and elected officials, conducted in 1998 in preparation for this plan, respondents indicated that 89.7% of the people own their own homes, while fewer than 10% reside in rental property, according to our resident survey. In the same survey, 24.1% have lived in town for over 30 years, 14.2% for 20-30 years, 25.5% for 10-20 years, 17.3% for 5-10 years, and 19% for less than 5 years. These figures indicate the rate at which Charlton has changed and grown over the past few years, as over 50% of the respondents have lived in town less than 20 years, and 36% have lived in town less than 10 years.

C. Future Housing Trends and Choices Facing Charlton

1. Most common type of housing

As a rural, bedroom community to Worcester, Charlton has developed through residential construction along existing roads. More recent residential construction has shifted toward subdivision construction.

Both farmland and land, which was previously considered marginal in terms of buildability, is now attractive for development. With land today bringing in such a high-price, farmers and large landowners are encouraged to sell. Additionally, land holdings that pass to children through an estate are often too large in value to permit one descendant to purchase the interests of the others. When a developer has paid a high price for the land, he is financially compelled to build large and expensive homes on the lots in order to achieve the highest possible return on his investment. In addition, site preparation costs for marginal land are often higher than for more easily developable land, further increasing the sale price of the eventual house.

2. Potential impacts on future demand

Revision of land use regulations is Charlton's primary planning tool for the future. Land use regulations include the Charlton Zoning Bylaw (including site plan requirements and special permit processes) and the Rules and Regulations Governing the Subdivision of Land. The purpose of revisions to these regulations should and must be to control the use and development of private land for the good of the majority of the residents of the town. The regulations should serve to maintain Charlton's rural character and control excessive growth by discouraging strip development and eliminating the current policy of inconsistent/conflicting land uses. Consider the 46 towns in Massachusetts, which limit building permits per year or require larger projects to be phased; most were fast-growing towns like Charlton.

3. Suggested changes to assist in well planned development

The Land Use Element's buildout projections show that Charlton must expect significant additional development. Development can be managed to preserve nature and culture. If several houses are to be built in subdivision, shared sewer and water systems could be evaluated, rather than singular septic systems and private wells. Use the new Board of Health well regulations and Title 5 to direct growth to areas which can sustain drinking water quality/quantity and wastewater assimilation. When reviewing proposed new water users the boards should coordinate efforts to evaluate the impact of sewerage on the water table. Consider Lunenburg, which requires 5-acre lots except in cluster developments. The existing 60,000 square feet agricultural- residential requirement may be appropriate for water quality and character, and the remaining 3.6 acres per home permanently dedicated as conservation land assures the rural character of the town.

Important new thinking on open space housing patterns has been advanced for the New England region by Randall Arendt of the Center for Rural Massachusetts (Amherst) through publication of a study of open space design for the Connecticut River Valley. He has considered both positive and negative impacts that such a traditional development would have on wildlife habitat, informal recreation, and scenic relief (both on the area to be developed as well as on the pastures and fields around it). "More imaginative ways to site and design new construction could help to reduce the negative impacts upon visual character and natural integrity of this threatened landscape".

As a proponent of environmentally and historically sensitive housing developments, he proposes an open space design, where substantial areas of land otherwise consumed by housing are left in their natural state. He also demonstrates how such open space subdivisions could benefit by creating playing fields and village commons, and by blending the entire development into the existing rural character of the village.

4. Need for affordable housing

A factor which influence the character of new construction is what is commonly called in Massachusetts the “Anti-Snob Zoning Law”, which requires each city or town in the State to provide 10% of it’s housing at prices affordable by low to moderate income families. This means that since 10% of Charlton’s housing is not affordable by families with incomes of \$34,800 (or 80% of the Boston SMSA) or less, a developer may get approval to build housing units which override the Town’s local zoning regulations on the condition that a percentage of the units built meet affordable standards.

Chapter 40B created a process whereby a developer may apply for a “comprehensive permit” from the local Zoning Board of Appeals, rather than having to apply to multiple boards with individual jurisdictions. Comprehensive permits allow a developer to override local regulations in order to proceed with the proposal. This allows a developer to build at a greater density than is otherwise permitted in the district where the project is located in order to make the development economically feasible. The Board of Appeals has the authority to modify or reject the application, but its decision is subject to being overturned by the state’s Housing Appeals Committee (HAC) if the Town has not achieved its ten-percent goal of affordable housing units.

Rather than be confronted with a proposal that the Town may consider unacceptable, a proactive position could seek to identify sites where such housing is suitable. Alternatively, the Town could make a parcel of its own land available, and control the type of development that is permitted by defining development goals and soliciting creative proposals from primitive developers. Recent changes to the state’s regulations for Chapter 40B now allow “local initiative units” to be counted toward meeting the Town’s ten percent goal. For example, units constructed for low and moderate income households under a local inclusionary zoning bylaw may qualify as local initiative unit. In short, there are innovative solutions to meeting assisted housing needs that can better respond to community concerns than developments imposed on the Town through a comprehensive permit.

Suggestions for meeting affordability requirement

In lieu of providing affordable lots on site, an applicant could develop or contribute to the Charlton Housing Authority, equivalent off-site lots that possess the capability of supporting the designated number of affordable units. Prior to final review by the authorized board, the applicant must demonstrate that the off-site lots are buildable. In the event that the off-sites prove to be unsuitable for any reason, an acceptable alternative contribution could be required.

All affordable housing contributions should be initiated upon the conveyance of any of the subdivision lots or the issuance of a building permit for any of the lots, whichever occurs first. Affordable housing units shall remain affordable year-round, through deed restrictions or rental

restrictions that require the unit(s) to be affordable for 99 years, or the maximum period allowed by law. Such restrictions shall be made known to the buyer prior to the sale or occupancy of the unit. Affordable housing units within the market rate developments should be integrated with the remaining development and should be compatible with all other units in design, appearance, construction, and quality of materials.

Incentives to maximize the number of affordable housing units shall be considered. Renovation of existing structures may be a means of providing affordable housing. Development in sewered areas of town shall be encouraged as a means of providing affordable housing. Because many lots are grandfathered smaller than allowed by zoning, density can increase without changing zoning.

Another variation on this theme is for a non-profit corporation to fund, develop, and operate mixed income rental housing units, either alone or in cooperation with the Town. This is one additional way to guarantee that once units are built they will remain at affordable prices, and the Town should make every effort to facilitate such generous private efforts.

In the context of this Plan, affordable housing is a term used to encompass all low cost housing alternatives generally, and is not limited just to publicly assisted rental housing for low income families. Realizing that public financial assistance is simply not available to satisfy the statewide need for low and moderate income housing, Massachusetts has encouraged communities to adopt local bylaws to encourage private developers to build affordable housing without financial subsidies. Often termed "inclusionary zoning" bylaws, they require a small percentage of units in each subdivision or multi-family development to be constructed at a lower price, in order to be affordable to those who would otherwise be able to live in the community.

Multi-family housing can be required to be designed in a way that makes it fit into traditional building styles, like connected farmhouse or mill worker housing. Such design requirements would be essential to prevent modern block apartments from changing the character of Charlton's village areas.

5. Elderly housing

There is a significant population of senior citizens in town. As the years progress, some of these people will require smaller, one level homes. That, together with a fixed income, will demand the availability of affordable housing. The Charlton Housing Authority currently provides 35 units for low income, elderly, and handicapped persons. In 1998 there were 59 applicants for housing on the waiting list of the Charlton Housing Authority.

Demand in Charlton for state constructed or assisted housing units is low. The Housing Authority indicates that elders do not prefer Charlton's rural environment because it lacks commercial amenities, requiring transportation outside of the community for ordinary shopping needs such as groceries. The sense of isolation that elders have in such environments might also be felt by the low income, who generally prefer locating in more developed areas.

Because of the differences between the Town's housing goals and the current situation, the Town needs to clearly articulate its policies and then take practical actions to implement them. Specifically, we should develop and implement bold programs, which will reverse the present trend of land being consumed by housing which is not affordable by the majority of our present citizens. We should allocate our resources for program (both public and private) that will reestablish a balanced mix of housing options. There are a number of ways that the Town can control to a limited degree the total cost of housing units built in Charlton. Most of these methods, unfortunately, will cost money.

The Masonic Home hopes to provide more seamless living for seniors, from independent through assisted to nursing, and to open its facilities for more use by the Town.

6. Flexible development

If the Town is serious about retaining its rural character and avoiding suburban housing patterns, open space zoning measures such as the existing flexible development bylaw must be created and improved. Such measures hold the promise of creating greater diversity in housing patterns and cost without compromising quality in design, and enhance the built environment with open space/recreation areas. They can create housing that "fits" into village housing patterns, enhancing village economic vitality and providing the opportunity for preserving the many historic structures located within them. Careful review of the site design is an important element in the approval process. Homes located on common "greens" will have their value enhanced by the value of such proximity, deriving a net benefit to developers and homeowners alike at very little additional cost to developers. The Town could, by this means, create an image that is distinctly "Charltonesque", further enhancing property values generally.

Such measures may grant a "bonus" to the developer by allowing a greater number of housing units than would otherwise be allowed by conventional zoning. Such approaches can be designed with objective rating criteria to assess how well individual projects achieve the goal of integrating affordability. In exchange, the developer acquires a certain number of "bonus points", which relate to the number of additional units to be permitted over that allowed by existing zoning.

7. Other considerations for future residential growth

There are a number of housing issues that must be brought under control in the town. The *tax rate* in Charlton in 1998 was \$12.81 per \$1000 evaluation. The average single-family tax bill was \$1675. With an average of 1.83 children of school age in homes built in the last decade, and the cost per pupil of \$4,900 per year, it can easily be seen that new home construction does not lower real estate taxes, but raises them. This is based only on school costs, which account for approximately 52% of the town budget. The increase in population necessarily demands more town services, such as fire and police protection and additional infrastructure, which causes a further burden on the taxpayers.

There are several areas in town which were intensively developed on *insufficient lot sizes*, inadequate building distances from roads, narrow dirt or paved roads, with unattractive nearby

industries, and lack of public utilities. These areas include Cranberry Meadow, Charlton City, Hammond Hill, and Glen Echo. Only the latter will be serviced by town sewers in the next 5-10 years, which means that any problems now experienced in these areas could become more critical in the future. Therefore, a significant housing problem in Charlton are the homes built on small lots with poor soil conditions for on-site waste disposal and without town sewers. Zoning established in 1987 appears to have dealt with this problem but this may be a good time to revisit lot sizes, contamination problems and environmental conditions.

Another significant housing problem is by *contaminated water* from leaking gasoline tanks, careless disposal of hazardous and toxic materials, salt contamination and naturally occurring contaminants. Houses are built on these sites and wells are drilled into contaminated material, producing contaminated water. The town has not managed this type of problem satisfactorily in the past. Practical methods to alleviate these problems may include identifying areas where contamination is present and: (1) provide town sewers and/or town water, placing the burden on the tax payer, (2) require the developer to install shared water and sewer systems, placing the burden on the developer, or (3) rezone contaminated areas as open space, placing the burden on the land owner.

Charlton has several *lake area residential neighborhoods* that are an important source of tax revenue to the town because of higher property assessments. It is preferable and less costly to maintain our lakes rather than to allow them to deteriorate and then revive them. Houses bordering on swamps do not result in satisfied citizens or yield maximum real estate taxes. A plan should be implemented to fund environmental management of lakes and watershed areas or, alternatively, lake districts should be established to provide the residents of these neighborhoods with the resources necessary to manage and fund required maintenance and improvements. Lake district should include all in watershed. Lake associations have the opportunity, through Town Meeting Action, to acquire funding for weed control and lake management programs.

D. Goals for the Housing Element

In light of the above discussion, and the desires voiced by the community, the following goal statements will guide the Town's housing-related decisions:

Goal H1: Retain Charlton's rural character.

Goal H2: Consider ways to slow residential growth.

Goal H3: Provide a wide range of housing opportunities.

- **rural homes in rural landscape settings**
- **homes for seniors that meet their changing needs & resources**
- **homes for families, singles, young people starting out, and others with varied needs, resources, and preferences**

In all housing development, Charlton will prevent discrimination in housing because of race, color, creed, religion, sex, national origin, age, political affiliation, disability, or any other consideration prohibited by law.

Implementation strategies for achieving these goals are presented in Element IX, below.

E. References

1990 U.S. Census

The Worcester Board of Realtors

Randall Arendt of the Center for Rural Massachusetts (Amherst)

Town Boards and elected officials

Board of Health well regulations

Massachusetts Title 5 regulations

Chapter 40B of the General Laws

The Charlton Housing Authority

The Council on Aging

The Masonic Home

IV. Economic Development

A. Introduction

The following concerns or questions are at issue when considering the economic development element of the Master Plan:

1. What is the “optimal” development that is consistent with our values and available resources?
2. Will the current state recommended ratio guideline of 30:70 business tax base to residential tax base be attainable for Charlton?
3. Do current zoning bylaws curtail future business growth?
4. Will areas impacted by the expansion of water / sewer lines benefit business development?
5. Does the word “industry” have negative connotations?
6. Do the definitions in our bylaws accurately reflect current terminology and modern business practices?
7. Will the strengths of surrounding cities’ infrastructure work to our detriment?
8. Will our deliberate attempts to attract desirable businesses be supported by our permitting process and how can we expedite this process?
9. Will we capitalize on the strong work ethic of our skilled work force?

The full understanding of these issues will promote the harmonious co-existence of business and rural development.

B. Current Situation

Andy Levin of The News, provides the following account of Charlton’s industrial and agricultural history:

A national economic upsurge began in 1900, followed by several years of stagnant production. Across the nation, modernized farming methods and other advances of the Industrial Revolution began paying dividends. By 1900, Charlton was undergoing a transformation from a mill town to a community dependent on agriculture. In the years leading to the Civil War there were more than 50 mills in town. On Cady Brook alone there were 23 mills. Another 21 mills stretched along Trout Brook. None of the mills were as large as the two that merged to become the Charlton Woolen Company. Twelve-hour days and six-day workweeks were common, but because goods could be produced cheaper and better at other locations they were no longer prosperous. A combination of the Depression, natural disasters, and obsolescence led to the demise of most mills. By mid-century, local communities enjoyed the economic fruits that followed our nation’s war victories and by the 60’s fiber optics began to edge out both farming and local mills. By the 80’s even the AO’s presence in Southbridge was running

on borrowed time as fiber optic and laser technologies were enabling the Tri-Community area to be referred to as the fiber optic capital of the world! With the introduction of the new millennium, Charlton's Economic Development Commission was proposing zoning changes to convert several hundred acres along Route 20 West to business/technological uses. (1)

Mr. Herbert Stevens, Charlton vocational agricultural educator and longtime resident, provides a personal account of the history of agriculture for the last 100 years in Charlton. He reports:

Farms were more diversified than today and farmers worked off the farm to make ends meet. It was not unusual to milk a dozen cows, raise some chickens, work for a few neighbors and have a job at a local mill. In the 1880's mills began to spring up around town, but never outpaced the number of farms. Technological advances triggered major advances in refrigeration and the subsequent use of bulk tanks on more progressive dairy farms. With each technological advance came a corresponding change in agriculture. From the 10 to 12 cowherds managed by our diversified predecessors evolved the present two to three hundred cowherds and the multi-acre orchards and gardens that created changes in agriculture in Charlton and the surrounding towns. The advent of electricity yielded countless tons of marketable goods. Charlton's agricultural community went from a society who looked after its neighbors and family to a collection of independently owned and operated agribusinesses. Less visiting and more production became the watchwords of the day. With the advent of tractors and greater mechanization after World War II came the present day economy of scale. Ford tractors replaced fancy teams of horses. Although farm numbers went down, farm sizes grew. (2)

Is the pendulum swinging back and forth from a manufacturing community to an agricultural society, now back to industry? Locally, we have seen the demise of the family farm leaving vacant farmland, fields and meadows scattered throughout our town. Their profitability is trending downward. Trends that may have impacted this transition from agricultural to commercial/residential development include competitive labor markets, cost of utilities, and comprehensive government regulations.

Figure ED1: Projected Changes in Charlton's Population, Labor Force, and Jobs in Town

YEAR	POPULATION	LABOR FORCE	JOBS IN TOWN
2000	14,000	5,500	2,300
2005	15,500	6,100	2,500
2010	17,000	7,000	2,800
2015	18,500	7,900	3,100
2020	21,000	9,000	3,350

Source: *Economic Development Commission Projections, 2000*

¹ Levin, Andy, "Farms to Fiber Optics" *The News*, December 1999, pages 1, 6-11

² Mr. Herbert Stevens, Charlton resident, 1998

Today, only eleven (11%) percent of Charlton's tax base is funded through business ventures. The relatively late acceptance of our zoning bylaws (1987) has conveyed to us a mixed bag of zoning districts. The insufficient numbers of business sites compared to the large amount of open land has stalled Charlton's capacity to be a regional player in attracting new businesses. Narrow commercial zones and the lack of water and sewer along portions of route 20 have not been conducive to inviting the kinds of large, campus-like ventures that would have contributed to our tax base, local employment rate, and maintained our rural charm.

There are traffic constraints along Route 20 due to the installation of jersey barriers with the current reconstruction of Route 20 East. Adequate amounts of land are zoned for new businesses to locate along Routes 20 and 169; however, until public utilities such as water and sewer are established in these areas, choice business development is unlikely.

Employment services are available to Charlton job seekers and employers at the nearby Department of Employment and Training office located on Airport Road in Dudley. There are excellent facilities for vocational and employment retraining opportunities. Bay Path Regional Vocational High School, TechMan International, Center for Advanced Fiber Applications (CAFA), Shepherd Hill Regional High School, Y.O.U. Inc., Adult Evening Programs, and numerous community colleges and universities provide the kind of outreach programs necessary to train Charltonians for the ever-changing job market.

Many builders and contractors make Charlton their home. Plumbers, electricians, renovators, and other tradesmen have thrived because of the building boom brought on by vast amounts of land, excellent schools, low real estate taxes, and our location with respect to Boston, Providence, Springfield, Hartford and Worcester.

Good use has been made of outdated mills as "incubators" of machine, injection molding, and other expanding industries. [These mills include Springbrook Mills, Worthington Box Company, and the former Ashworth Mill sites.]

Transportation services such as Elderbus, Rehabilitation Resources Incorporated, the Charlton Shuttle, or other private livery services have helped to reunite Charlton's disconnected expanses. Charlton City, Charlton Depot, Charlton Center, Northside, Richardson's Corner, and Dodge all constitute village settings more conducive to supporting small neighborhood and community businesses. The Resident Survey indicated a preference to the Village Type of services such as mixed retail/service uses, and sit down restaurants. Despite this survey preference there are only three Neighborhood Business (NB) Zones in place.

As of 1999 the top ten employers in Charlton include [number of employees in brackets]:

- | | |
|------------------------------------|--|
| 1. Masonic Home* [225] | 6. Genzyme Transgenic [65] |
| 2. Karl Storz [200] | 7. L & P Converter [48] |
| 3. Incom [145] | 8. M.C.I. Communications [40] |
| 4. Mass. Pike Service Areas* [132] | 9. Fallon Medical Clinic [21 + 2 physicians] |
| 5. Mainline Power [68] | 10. Howlett Lumber [15] |

* Do not pay property taxes.

C. Choices Confronting Charlton

Close examination of the “Resident Survey Analysis”³ revealed some interesting findings. For instance, “**Some industry/ mostly residential**” edged out “**Residential / agricultural**” as the most desirable description of Charlton in the future. Respondents overwhelmingly indicated that development along Route 20 is an “**incredible opportunity for the Town; we should go slow and carefully plan it**”. Fourteen percent (14%) of respondents indicated support for **nonresidential growth the entire length** of this highway. In addition, the survey indicated that **non-residential development** was occurring “**not fast enough**” since 1990.

There is support for future development that addresses **additional services, safety issues, job opportunities, and an attractive design plan** along Routes 20 and 169. Interpretation is unclear, however, of the kinds of businesses that should be promoted in our town. The prospect of straight “office buildings” was not favored, yet “medical / professional buildings” and “mixed uses” were strongly supported. High tech research and development was very agreeable to respondents while industry, manufacturing and associated warehousing lost to the “no” voters. Certainly the word “industry” was found to have negative connotations among those responding to the survey. Medical facilities and related businesses as well as clean, high-tech “industry” should be encouraged.

With respect to Route 20, traffic and safety issues were prominent concerns in the survey. High tech, campus-like parks would address this problem along our major highways by funneling traffic West to the Sturbridge connectors. There is support in the survey for larger campus-like settings where job opportunities are encouraged.

Charlton should encourage its industry leaders to set the pace regionally by keeping abreast of the newest developments and trends in industry. Fostering co-op ventures and encouraging industrial leaders to share the economies of research and innovation has positive affects for the community as a whole. The criteria for soliciting new commercial ventures should be governed by their benefit to the town, its industries, and the environment.

D. Goals for the Economic Development Element

Goal ED1: Achieve a range of business activity in Charlton that offers a range of benefits to the community, including employment opportunities, convenient sources of goods and services, and net tax revenue for the Town.

Goal ED2: Locate business development where it will serve different market opportunities in ways that maximize benefits while minimizing negative impacts.

Goal ED3: Encourage desired economic development by promoting Charlton as a good place to do business.

³ Master Plan Committee, “Resident Survey Analysis” 1998, pages 2-4

Goal ED4: Increase the business tax base to comprise a greater percentage of Charlton's total tax base.

Implementation strategies for achieving these goals are presented in Element IX, below.

V. Natural and Cultural Resources

A. Introduction

Natural and cultural resources are a fundamental part of a town's character, beauty and environmental well being. Charlton is rich with such resources as water, fish and wildlife, scenic roadways and vistas, historic and archeological features. Of special concern is the rapid development throughout the town especially since Charlton's greatest resource is its amount of undeveloped land.

Current zoning and bylaws need to be improved upon to help ensure that Charlton's resources are not compromised. Preservation methods must be an integral part of Charlton's overall planning. Last minute preservation efforts will not be effective.

B. Current Conditions and Trends

1. Water

Ponds, lakes, streams, brooks, rivers and many wetlands exist in Charlton. Little mapping exists of Charlton's wetland resources other than the areas identified in general on the USGS topographic mapping data.

The eastern slope of Charlton is drained by a series of streams into the Little River upper tributary of the Thames River watershed. McKinstry Brook drains the western section of town. Along its course are numerous waterfalls and rapids. Cady Brook rises in Spencer and flows south emptying into the Quinebaug River. Over 20 mills were located on this stream, two of which remain. Many mill sites and dams can be found in this corridor.

Map NCR1 identifies these water resources. Although aquifer recharge areas exist within town, there are no accurate maps. The town should work with the state to identify these aquifer areas as well as other water resource areas to develop guidelines for their protection.

2. Fish and Wildlife

The town's water resources support diverse and abundant aquatic habitats consisting of cold and warm water streams and ponds. They are home to many fish species, both native and stocked. Warm water habitats include Buffumville Reservoir, Granite Reservoir, Prindle Lake, Glen Echo Lake, and Gore Pond. All have similar fish species including bass, pickerel, perch, sunfish, bullhead, minnows, dace and shiners. Cold water habitats include many brooks in Charlton with excellent native trout species. Eastern brook trout is the prime species. The Department of Fisheries and Wildlife stocks brook and brown trout in Little River, South Fork of the Little River, Potter and McKinstry Brooks.

Diversity and variety of wildlife are the strong points of the environment of Charlton. Wildlife habitat includes upland forested areas, many wetland types, early successional brushy fields, active agricultural fields and suburban backyards. Habitats on private land consist of suburban

backyards and farmlands. Raccoon, whitetail deer, cottontail rabbit, wild turkey, gray and red squirrel, red fox, New England coyote and various species of songbirds are found in this diverse environment. The Division of Fisheries and Wildlife and the US Army Corps of Engineers are major land stewards. Bennett Wildlife Management Area is open to the public for wildlife related recreation. It consists of 281 acres of old fields and forest. Wildlife species benefit from forest habitat management conducted on state and private lands.

Capen Hill Nature Sanctuary, a 72-acre farm was gifted to the town by Ruth Wells in memory of her husband. Since 1977 the sanctuary has served the people of Charlton. Its purpose as outlined in its charter is to protect the wildlife refuge and natural resources, to maintain unspoiled areas for the general public to enjoy, to further the scientific and aesthetic study of birds, plants and all wildlife and to provide environmental education to present and future generations. It has a membership of almost 2000 members and has provided summer nature camp for about 300 children yearly. Capen Hill also operates the only wildlife rehabilitation facility accepting injured and orphaned wildlife with care provided by a state and federally licensed wildlife rehabilitator.

3. Scenic Resources and Unique Environments

There are many scenic resources that are important to Charlton. These include scenic landscapes and major characteristic geological features. Although there is no state designated scenic resources in town, Charlton's Final Open Space and Recreation plan contain a listing of scenic resources worthy of preservation (as well as geological features, fish and wildlife, and other natural resources). Scenic landscapes include scenic roads, agricultural landscapes, geological features, open meadows and fields and stream corridors (see Map NCR2). Much of the visual character of these rural hillsides is provided by private undeveloped land that has little or no long-term protection as open space. Many are coming under pressure for development.

Major characteristic geologic features include Brookfield Farm/Bond Sawmill Rd., an erratic boulder with large concave area used as a rock shelter. McKinstry Farm/Capen Hill wolf den, a jumbled mass of boulders containing many small cavities and was also the location of the last bear sighting in town. Upper/Lower Gorge of Little River are streams cut deeply through ledges forming waterfalls and rapids. Beech Falls is a small stream with a fall in the midst of a deep beech grove off of Northside Road. These features are shown on Map NCR3.

4. Cultural, Archaeological and Historic Features

Charlton includes many historical features including historic cemeteries, schools and homes. The historic district includes five segments of the Northside Historic District containing some of the most historic and architecturally important buildings in town. The center segment, on the National Historic Register of Historic places, contains the core of a transportation oriented village and a former Indian site, known as Indian Hill. The historic areas contain buildings from Colonial to Victorian periods with several buildings listed on the historic register. The Historic Commission oversees the well being of these historic features. The location of these features are shown on Map NCR4. These areas include:

1. Charlton Center – typifies an 18th-19th century lineal village, which was the religious and governmental center of the town.
2. Charlton City – this is a concentrated area of industrial development containing mills, mill housing, stoves and businesses in a densely built area.
3. Charlton Depot - the village of Charlton Depot resulted from the building of a railroad line in 1838. Now mainly residential, it once was the center of activity in town.

Many cemeteries exist within the town of Charlton. Some have historical significance. The Cemetery Commission is made up of three elected officials. They are responsible for maintaining fifteen cemeteries and organizing burials. Burials are still performed in only four of the cemeteries, including Westridge, Baypath, City Union and Northside. Because of the lack of funding and manpower only these four are regularly maintained. The others are mowed only once a year. The Cemetery Commission has hired a Cemetery Superintendent and will take additional steps to hire an additional seasonal employee to help with maintenance.

The Historic Commission's mandate is to preserve and enrich Charlton's historic features. The location of historical features are shown on Map NCR4.

Archaeological Sites include Lelandville, in south Charlton where the remains of an old mill and foundations mark the site of a once prosperous manufacturing village. Adjacent to the Rider Tavern on Stafford Street in north Charlton are the contents of a tannery, saw and grist mill, and scythe shop and militia lot. The Bay Path, an ancient aboriginal trail from the bay to the Connecticut Valley, still remains undeveloped and a prehistoric Mashamuggett and Algonquin Indian site exists at Little River on Old Worcester Road. These features are identified on Map NCR4.

5. Trends

Without some type of growth management rapid development will continue and Charlton's natural and cultural resources could be compromised. Although the Planning Board, Conservation and Historical Commissions and others protect some of the town's resources, others are not under the jurisdiction of any particular governmental body. Often the tools available to these boards are not sufficient to properly protect certain resources. Occasionally citizens act as advocates for preservation in their neighborhoods, but as stated previously, last minute preservation efforts are usually unsuccessful. Without improved protections, growth control and a strategic plan for Charlton's resources, the Town's natural and cultural resources face future degradation and possible loss.

C. Challenges and Opportunities

The residential survey indicated that natural and cultural resources are important to residents in town. A majority of respondents cited Charlton's rural character as the main reason they live in town. Another survey question asked if the town has enough permanently preserved conservation, recreation and open space land. The majority responded "No." The following were identified as the types of land that should be preserved and were ranked as follows:

1. Water supply areas
2. Forest and woodlands
3. Lakefronts, along streams, wetlands and flood plain area
4. Agricultural and farm land
5. Greenbelts or landscaped buffer between developments, subdivisions and major roadways.

Specific areas with these characteristics should be identified for preservation. Acquiring open space and conservation land and cleaning up groundwater and contaminated wells received second and third priority, respectively, for town funded projects.

Charlton is part of the Quinebaug and Shetucket Rivers Valley National Heritage Corridor. This 850 square mile region includes 25 towns in portions of Connecticut, Massachusetts and Rhode Island; being close enough to Hartford, Worcester and Providence but far enough away to avoid the urban sprawl of recent years. It is part of the National Park Services although the Federal Government does not own or manage any of the land as it does in traditional national parks. This region has been called “the last green valley” of the United States northeast corridor, because it has retained its fundamental attributes of lush woodlands, clean streams, ponds, rivers and lakes, authentic sites representing distinct periods of American history and places for people to enjoy a rural, small town lifestyle. Being part of this corridor provides a unique opportunity for Charlton.

D. Goals for the Natural and Cultural Resources Element

Goal NCR1: Protect Charlton's water resources by addressing pollution problems and avoiding new degradation.

Goal NCR2: Preserve critical masses of wildlife habitat, to include greenway corridors.

Goal NCR3: Preserve open land and scenic vistas.

Goal NCR4: Preserve historical features, including buildings, cemeteries, monuments, and archeological sites.

Implementation strategies for achieving these goals are presented in Element IX, below.

E. References:

Charlton 1996 Open Space Plan

Quinebaug and Shetucket Rivers Valley Home Page

Preservation through Bylaws and Ordinances by the Mass Historical Commission

NCR1: Water Resources

NCR2: Scenic Landscapes

NCR3: Geologic Features

NCR4: Cultural & Archeological Features

VI. Open Space and Recreation

A. Introduction

A five-year open space and recreation plan was prepared in August 1996. It was realized that such a plan was necessary, not only to inventory existing open space and recreation resources, but also to recommend actions to improve and expand these areas. This plan was the culmination of over two years of effort, headed by the Open Space Committee, and local citizens. A professional planner was hired to guide the procedure, and assure that the plan would meet State regulations. Further, a Town employee supervised the professional planner, and ascertained that the committee performed the assigned tasks.

B. Current Situation

The landscape of Charlton is dominated by scenic vistas extending over 80 miles. The view from Dresser Hill on Route 31 is one of the most outstanding in Central Massachusetts. Charlton Center and Charlton Depot are reminders of a long ago lifestyle. The numerous ponds and wetlands exhibit the brilliant fall foliage enjoyed by residents as well as travelers.

Existing trails are primarily on private land. The Worcester Chapter of the Appalachian Mountain Club maintains the Midstate Trail, which passes through Charlton on its route from Ashby to Douglas. It enters Charlton east of Wheelock Road, follows scenic Gould, Cemetery, Stafford, and Northside Roads through the historic district, follows a brook, a pipeline, a cart road, and Carroll Hill Road to a culvert under Route 20 near Old Worcester Road Extension, then skirts varied farmland, walls, and old trees to power lines, Richardson Corner Road, Turner Road, and Buffum Road. Short side trails and quiet roads connect Midstate Trail hikers to Bement Camp, cemeteries, art studios, Fay Mountain Farm, Charlton Orchard, and the Corps of Engineers trails at Buffumville Lake. Intersecting utility easements cross town from Buffumville in the east toward the west, passing near a few miles of looping nature trails at Prindle Camp/ Natures Classroom, for neighborhood use, and Capen Hill Nature Sanctuary, for community use. Maps of portions of the Nipmuc Bay Path, crossing southern Charlton, may be available from the Historical Commission or Natures Classroom. Undeveloped, unposted land is often available for passive recreational use, especially where the owners benefit financially from conservation restrictions and utility easements. AMC has helped hikers and cross-country skiers earn the respect of landowners for minimizing impact on recognized trails. Other organizations also attempt to police their members' use of trails, but impacts from mountain biking, hunting, fishing, horse riding and motorized trail use have led to more restrictions for those user groups. Organized hiking events can introduce hikers to the sensitivities of trail stewardship and landowner respect.

The following Figures and Figure LU1 in the Land Use Element inventory open space and recreation land in Charlton. These exhibits and the following description of the town of Charlton landscape as it pertains to open space and recreation were taken from the 1996 Open Space and Recreation Plan, as updated by Assessors' records and MassGIS. Maps NCR1, NCR2, and NCR3 show the ponds, streams, rivers, potential high-yield aquifers, and watershed boundaries. The map of the estimated rare wildlife habitats can be found in the Rural Preservation Planning

Study. The preservation of open space is important for any community for financial and environmental reasons.

Figure OS&R1: Inventory of Open Space in Charlton, 2000

<i>Category of ownership & Name</i>	Owner	Size in acres	Current Use	Permanently Protected?	Access
<i>Federally owned</i>					
Buffumville Reservoir	Corps of Engineers	221	Flood Control, active and passive recreation	Yes	Public
<i>State Owned</i>					
Bennett Meadows	Division of Fisheries & Wildlife	211	Conservation	Yes	Public
Glen Echo Lake	Division of Fisheries & Wildlife	1.05	Recreation/ Conservation	Yes	Public
<i>Municipally Owned</i>					
Charlton Elementary School	Dudley-Charlton Regional School District	6.49	School and Recreation soccer & playground	No	Public
Charlton Center/Memorial Field	Town of Charlton	8	Softball, baseball, tennis, basketball	Yes	Public
Charlton Recreation	Town of Charlton	23	Soccer & football	Yes	Public
Heritage School	Dudley-Charlton Regional School District	89.31	School and Recreation	No	Public
Prindle Pond Recreation Area	Town of Charlton	2.45	Recreation Conservation	Unknown	Public
Stafford Street Conservation	Town of Charlton	40	Develop Nature Trails Senior Little League, basketball, tennis	Yes	Public
Town Common	Town of Charlton	1	Passive Recreation	No	Public
Bay Path Vocational	Southern Worc. County Regional School District	190.75	School and Recreation football, baseball, tennis and basketball	No	Public

<i>Category of ownership & Name</i>	Owner	Size in acres	Current Use	Permanently Protected?	Access
Capen Hill Nature Sanctuary	Town of Charlton	72	Nature Trails, Education, Recreation	Yes	Public
Middle School	Dudley-Charlton Regional School District	48.38	School and Recreation	No	Public
<i>Privately Owned</i>					
Agricultural Preservation Restriction	3 Owners	869	Development Rights Sold to the State	Yes	Private
Camp Foskett	YMCA/ Southbridge	116.46	Recreation	No	Members
Bement Conference Center	Episcopal Diocese of Western, Ma	220.33	Recreation	No	Public
Elliott Joslin Camp	Joslin Diabetes Foundation	102	Recreation	No	Public
St George Greek Camp	St. George Orthodox Greek Church	54.13	Recreation	Unknown	Members
Nature's Classroom	John G. Santos	128.29	Educational Facility/walking trails	Unknown	Private
Prindle Pond Conference Center	John G. Santos	63	Youth Camp	Unknown	Private

Total of privately owned recreational land is approximately 4% of assessed land in Charlton.

Total land in Chapter 61, 61a, or 61b is 2,235 acres. This is not considered to be permanently protected, as these parcels are in private ownership, and owners may choose to develop or sell their land. Should the owner reach this decision, the Town would have a limited period of time in which to exercise an option to buy. The open space committee to be established should seriously review these properties, and the town should be prepared to act to purchase priority parcels should they become available.

C. Choices confronting the Town

Studies have shown that New England towns spent an average of \$1.14 on residential services for every one-dollar of revenue raised. An average of 43 cents was spent to support public services in the commercial sector. This does not take into account all the other costs associated with commercial development, which include increased traffic and noise pollution, increased residential development, and the loss of open space land to filter our water and air and to provide areas of recreation for the public. For every dollar of revenue from open space land, the towns

spent an average of 42 cents on public services. This means that taxable open space land can help to balance the municipal budget.

There was a Rural Preservation Planning Study done in 1997 that addressed six resources to represent the priority ecological, cultural and scenic values within the Town that contribute to the Town's rural character. Agricultural Land, Rare Wildlife Habitats, Aquifers, Floodplains, Wetlands and Scenic Areas were the resources chosen. This would be a good starting point for determining sites for preservation.

If the Town continues to develop at the current rate of growth, these scenic features and open space would be severely impacted. To prevent the loss of these amenities, actions must be taken to preserve and protect these scenic views and open space. Public and non-profit sources, such as the Trust for Public Land, can help us preserve land. The Town has neither a comprehensive management plan, nor an acquisition plan to ensure that Town lands are protected and that budget resources are in place and available to respond to purchase opportunities.

One important criterion for prioritizing open space acquisition is securing open space that is easily accessible to homes throughout Charlton. Assuming that an average person can walk 1/2 mile within 10 minutes, or 3 miles per hour, this Master Plan proposes a "10 minute walks" standard. A parcel proposed for acquisition would be rated higher if it provided residential properties, not then meeting the proposed criteria, with "10 minute access time" on foot to an open space or recreational property.

Although most Town-owned lands are open to the public, most are unmarked. The Town maintains listing of these areas, but does not promote their use. A map, guidebook, and standard signage system would inform townspeople about the resources already available to them, and let them know specifically where to park and how to enter the sites. It is likely that the Town will decide to erect directional signs to only the major recreational land use sites.

Residents wishing to use open space have difficulty accessing these lands and more often than not are unable to travel uninterrupted from one open space to another - requiring residents often to return to the public way and drive to another location. At present Charlton lacks a trail system or other ways to provide residents consistent access to our beautiful open space resources. The rural tradition of landowners allowing such access can no longer be counted on because of the increasing numbers of newcomers arriving in town. Unless there are incentives such as reduced tax levies, landowners will not be willing to give easements for this purpose, and it is unlikely that the Town will have sufficient resources to purchase the linkage properties. It is also important to address the problems of litter, vandalism, and liability that trouble private landowners.

There are new opportunities to fund acquisition of properties and easements. The Town needs to commit resources to adequately plan for the acquisition and development of additional recreational lands. Equal importance of acquisition of open space lands and corridors. Funding should be set aside to ensure that at least \$25,000 is available at the beginning of each fiscal year for Charlton Land trust purchases.

A real estate transfer fee is a means of funding open space acquisition in the face of development pressures. The recently enacted Community Preservation Act provides the statutory authority for municipalities to adopt a real estate transfer fee to be applied to a specified portion of each real estate transfer to fund the development of land for recreation uses and the acquisition of open space, conservation land, land for public drinking water supplies, bicycling and walking trails, and recreational lands. (Communities must set spend at least 10% of funds collected on open space and recreation, 10% on historic preservation, and 10% on affordable housing.) Real estate development has largely been responsible for creating the need for more open space and recreation space; local adoption of a transfer fee would make that same economic force responsible for funding this need.

Another approach to preserving land through the development process is to adopt a transfer of development rights zoning provision. Densities-by-right could be transferred from undeveloped parcels to properties more suitable for development, thereby preserving undeveloped parcels in their natural or existing state. Property owners not actively planning to develop their land are sometimes willing to restrict the use of their land in exchange for some form of compensation. Developers who, for one reason or another, own land which they do not wish to develop, may be willing to forego their right to develop at one location in exchange for the ability to develop at a greater density at another location.

D. Goals for the Open Space and Recreation Element

Goal OS&R1: Protect Charlton's valuable open space resources for passive recreational and preservation purposes.

Goal OS&R2: Protect Charlton's water resources for health and recreational purposes.

Goal OS&R3: Provide adequate active recreational facilities and programs for all residents of Charlton.

Goal OS&R4: Adopt and implement an Open Space & Recreation Acquisition and Management Plan to promote maintenance and use standards for town owned land, set usage goals for parcels with clear open space or recreational value, and strategically target for acquisition parcels, portions of parcels, development rights, and easements .

Goal OS&R 5: Increase public access to and use of open space lands.

Goal OS&R 6: Consider amending the zoning bylaws to create an Open Space Overlay Zoning District that restricts development activities within designated corridors to preserve wildlife habitats, greenway corridors, and other linkage of open space resources and recreational lands.

Goal OS&R 7: Establish a standard signage system, map, and guide book to identify open space and recreation sites and their access points.

Goal OS&R 8: Institute an assertive land acquisition program, seeking out funding sources other than the annual Town budget.

Goal OS&R 9: Consider amending the zoning bylaw to include a provision for the Transfer of Development Rights to conserve open space resources as part of the development process.

Goal OS&R 10: Strive for at least 25% of the Charlton's land base to be permanently protected open space.

Implementation strategies for achieving these goals are presented in Element IX, below.

E. References

Charlton 1996 Open Space Plan

Town of Charlton Rural Preservation Planning Study

Cost of Community Services in Southern New England, commissioned by Southern New England Forest Consortium, Inc., September 1995

Town of Charlton Assessors Report

VII. Transportation and Circulation

A. Introduction

Charlton has experienced a rapid residential growth rate, most notably during the last 30 years. The main reasons for this growth rate are the availability of land, the relatively low cost of house lots, the proximity and easy access to major highways, and the use of private automobiles as the prime mode of transportation. Looking to the future, ever increasing numbers of roadway vehicles will pose a challenge for planners of this town

The major routes in Charlton are Route 20 and The Massachusetts Turnpike, both East-West Highways. Route 169 is a North-South Highway on the westerly side of town and Route 31, a North-South Highway, cuts through the center of town. All other roadways are unnumbered. However, some, such as Stafford Street, Brookfield Road, Oxford Road, and Center Depot Road, are connector roads with heavy commuter traffic (See Map T&C1: Current Roadways of Charlton).

The development along Route 20 is a major concern for the residents of town. Since that road was labeled as a “major opportunity” (See survey results) for the town, all development along Route 20 should be planned carefully, keeping in mind that for the foreseeable future, it will be the only major Highway through the Town with such development opportunities. If Charlton is to maintain its rural character, strip development should be limited and discouraged, as many people will judge Charlton’s character by what they observe as they travel along Route 20.

The majority of Town residents would like to balance vehicular and pedestrian traffic, with safety considerations, and still maintain scenic roadway features (See survey results). This goal will be difficult to reach even with thorough planning and thought.

The future vision of Charlton's transportation infrastructure will depend upon decisions made with regard to other elements contained in this Master Plan. Decisions made regarding purchases of open space, development of commercial and residential sites, and placement of additional water and sewer lines will greatly influence the future of Charlton's transportation system. There should be a long-term schedule for improving and maintaining local roads. New roads and upgrading of existing roads should be done with consideration of long term conditions such as volume forecasts twenty years away.

B. Current Situation

1. Roadways

How we got here

Of note is the fact that all of the villages in Town were formed and prospered because the workers could walk to their place of employment. Prior to the 1940’s, the majority of the residents of the Town worked within walking distance of their homes. As private automobiles became popular and affordable, together with the decline of profitable dairy farming, the vocations of the people of the Town began to change. This trend has continued to the present.

Upon the opening of the Massachusetts Turnpike in 1956, it was the feeling that Route 20 would not be heavily traveled, and industries along Route 20 in Charlton would suffer economically. If that did occur, it was a transient event, as today Route 20 is a main access route. Recently, truck traffic on Route 20 has increased with the new Jevic Transportation facility in nearby Oxford.

Route 20, around Richardson's Corner was updated in 1994 and near St. Joseph's church in 1996. Currently Route 20 is under construction from Richardson's Corner to Route 169. This section of highway will be widened to add shoulders and a Jersey Barrier median strip, as well as straightening out some of the curves and lessening some of the hills. This work is scheduled to be completed sometime in 2001.

Charlton is accessible by both highway and railroad. Although there currently is no freight or passenger rail service in town, it is possible that this could change in the future. Currently, only under special cases, for example USGEN, has the railroad been used for in-town needs.

Despite Charlton's good regional accessibility, most of the developable land is not directly accessible from the major access routes (Routes 20 and 169, and the railroads). The major development of industry will be along the length of Routes 20 and 169, which is consistent with survey results. The center of Charlton is approximately six miles from the nearest Massachusetts Turnpike interchange.

Route 169, which connects Route 20 to Southbridge and points South, is the second major highway in Charlton. Wetlands limit the development along the east boundary, and there exists a mix of residential and industrial properties along this roadway.

Route 31 cuts through the Center of town, from Spencer in the north, to Dudley in the South. The section from Spencer to the Center of town was upgraded in 1997, and repairs to the section from the center of town to Dudley are under consideration. Agriculture, small business, and residential properties abut Route 31.

Stafford Street, Oxford Road, Brookfield Road, and Center Depot Road not only serve local traffic, but are also connector roads and provide mobility between the neighboring towns. Area development along these roads is primarily residential, with some agriculture and small business.

The other town roads serve local traffic, and most have a mix of residential, agricultural, and small business development.

Many of the roadways in Charlton are currently in poor or marginal condition and have out lived the life expectancy of their design. Once a roadway gets to a certain point of deterioration, it will deteriorate at a much faster rate. Some are in serious need of repair, and some are expected to be in need of serious repair soon. However, the Highway Department and CMPRC recognize that the present budget is insufficient to maintain, no less improve, roads in their present marginal condition.

Trends/ Implications for future

With land in many other towns becoming scarce and Charlton having large amounts of land available for housing construction, this town has attracted many home buyers, even those with a long employment commute. Together with Charlton's desirable rural character, the proximity of the Massachusetts Turnpike interchanges in Auburn and Sturbridge, and the continuation of the private automobile as the primary means of transportation, all contributed to the rapid housing development in town.

This trend of Charlton residents being employed outside of Town, and even outside of Worcester County, continues to this day. However, the types of commercial businesses that are developed along Route 20 and 169 may encourage Charlton residents to accept local employment. Routes 20 and 169 were felt by the majority of Master Plan survey respondents to be an extraordinary opportunity.

There are a number of scenic roads in Town, and some have been designated as Scenic Roads under MGL Ch. 40, Sec. 15C to help preserve their scenic beauty. Current Scenic Roads are as follows: Buteau Road, Cemetery Road, Gould Road, Horne Homestead Road, Jones Road, McIntyre Road, North Sturbridge Road, Smith Road, Tucker Road, and Wheelock Road. Trees, stone walls, and pavement widths along such roads are preserved. Alterations to these features must have prior approval of the Planning Board. Proposals for additional Scenic Roads designations at future Town Meetings will help protect the rural character of the Town.

2. Railways/Bus

How we got here

Charlton Depot village prospered after 1838 with the coming of railroad service. Prior to 1950, North Charlton, now known as Northside, was situated on the Worcester & Stafford Turnpike between Boston and major population areas to the West, and therefore its location made it attractive to industries that relied on rail transportation. Freight and passengers relied on the Charlton rail line to travel between Boston and Albany. Passenger railroad service to points East and West terminated in the 1950's.

Prior to bus transportation, public trolleys (and, in the 1700's, stagecoaches) serviced the townspeople. Bus service to Southbridge and Worcester terminated soon after the 1960's.

Trends

Charlton has seen a rise in the number of Shuttle Bus services offered which indicates that there is an obvious need for alternative transportation. The three existing private services include Charlton Shuttle, Rehabilitative Resources, Inc., and South Central Mass Elderbus, Inc. Since 1970, Elderbus has provided transportation for the elderly to get them to and from doctor and hospital visits. They serve 21 communities in South Central and Western Massachusetts.

Although the rail system has not been an economic factor in the latter half of this century, rail freight service could potentially become a factor in the economic development of the Town in the future. Recent use by PG&E to transport huge pieces of equipment for the construction of the new power plant is a good example.

Implications for future

If the existing rail line is utilized, the Town should consider redesignating Center Depot Road as Route 31A to provide direct access from the Depot to Route 20, improving some connector roads, and setting aside land before the potential routes are developed. Charlton is a member of the Worcester Regional Transit Authority. The future use of WRTA services should be considered by the Town. Using commuter/shuttle bus services to transport people into the Worcester train station is a distinct possibility. Worcester currently offers commuter rail services into Boston and towns in between. If predictions of out of town employment come true, Charlton residents' use of this service may increase. The Worcester Regional Airport offers flights of destination to New England and beyond.

3. Walking/Bike Paths

How we got here

The Worcester Chapter of the Appalachian Mountain Club maintains the Midstate Trail, which passes through Charlton on its route from Ashby to Douglas. It enters Charlton east of Wheelock Road, follows scenic Gould, Cemetery, Stafford, and Northside Roads through the historic district, follows a brook, a pipeline, a cart road, and Carroll Hill Road to a culvert under Route 20 near Old Worcester Road Extension, then skirts varied farmland, walls, and old trees to power lines, Putnam Hill Road, Turner Road, and Buffum Road. Short side trails and quiet roads connect Midstate Trail hikers to Bement Camp, cemeteries, art studios, Fay Mountain Farm, Charlton Orchard, and the Army Corps of Engineers trails at Buffumville Lake.

However, there are many roadways in Charlton where you cannot safely take a walk or ride a bike. Many of the roadways are uneven windy back roads that are fairly narrow. These conditions, as well as vehicular speeding on back roads, make walking these roads unsafe. Added traffic without roadway improvements will aggravate this problem. Therefore, traffic calming methods should be considered to protect pedestrians and bikers, as well as motor vehicle drivers.

Trends

Maintaining sidewalks, for example shoveling in the winter, may pose difficulties for seniors or an inconvenience for property owners. However, people like sidewalks because you can take a roadside walk and still feel safe. Charlton has adopted bylaws which require subdivision developers to include sidewalks in their site plans.

Implications for future

Roadways that are scheduled for repair or replacement should be evaluated for expansion to offer additional walking and bike paths where possible.

C. Challenges and Opportunities

1. Major Projects Already Under Way

There are two major projects going that provide Charlton with excellent opportunities. First, the widening of the length of Route 20 that runs from Richardson Corner to Route 31 is designed to

improve visibility and safety, as well as possibly providing that portion of Charlton with sewer and water. Upon completion, that portion of Route 20 will be repaved and relined. Predictably, a well designed, newly paved and relined roadway may also attract additional transient traffic. Decisions made by Town officials regarding what types of businesses allowed on that stretch may greatly effect the amount of traffic Charlton attracts. Therefore, the development of Route 20 may have a great impact on future traffic volume and safety along Route 20, and all issues (including roadway beautification) should be carefully considered.

Second, the Phase II Sewer project will greatly impact the existing roads around Glen Echo Lake. This includes the City Depot Road portion of Route 31, North Sturbridge Road to Osgood Road, Osgood Road to Brookfield Rd., and the length of Brookfield Rd from Osgood Rd. back to City Depot Road (Route 31). It also includes all the roads inside this perimeter. This section of Charlton benefits from this project in several ways. One, all effected roads will be repaved, and when possible, widened. Two, it provides the Town Highway Engineer with the opportunity to take these roads over as public ways. Doing so offers Charlton the opportunity to receive additional Chapter 90 funding which can be used to improve other Charlton roadways.

These two projects will greatly improve Route 20, and portions of Brookfield Road and Route 31, which are all major roadways in Charlton. However, there are many other roadways in Town that contain poor site lines, especially at intersections, because of overgrown vegetation, narrow roadways, hills, etc. These pose potential safety hazards. The Highway Department and CMRPC recognize that the present budget is insufficient to maintain, no less improve, roads in their present marginal condition. Many of these roads are connector roads and Scenic Roads. The Town will have to balance roadway expansion and safety with residents' desire to preserve the rural character of Charlton roadways.

2. National Heritage Corridor Designation

Charlton's acceptance into the National Heritage Corridor may present additional opportunities and challenges. The Town should carefully consider how roadways alterations might impact this project, and the existing scenic roads. As Federal funds become available, grants should be actively pursued to implement the National Heritage Corridor project.

3. Appointment of Emergency Management Director

Charlton's appointment of an Emergency Management Director may also factor into the Town's decisions with regard to prioritizing which roads need to be widened and/or otherwise improved. Identifying roads in Town that need improvement to accommodate emergency vehicles and personnel will be an important goal.

With opportunities for improvement also come additional challenges. The Town needs to consider the following as well.

4. *Alternatives to Automobile Usage*

Traffic along the major highways, especially during commuter rush hours, is a potential serious problem. To avoid this problem, alternatives to automobile traffic must be found. These include shuttle bus service, car pooling, public transportation, telecommuting, and pedestrian and bicycle accessibility. Other continuing demand management measures would be signal timing to optimize traffic lights, turn restrictions, signs, removal of obstructions to safe sight distances, and changes in traffic patterns.

5. *New East-West Roadways*

Because of the North-South topography in town, the construction of East-West roadways is not a simple matter. The Highway Department expects some roads in southern Charlton to become eligible for State funding for improvement if traffic increases, allowing safer East-West travel through the Southern portion of Charlton. On the other hand, expanded or new East-West roadways would disrupt scenic landscape areas and the natural resource greenbelts recommended in the Land Use Element's *Land Use Concept Map*. For this reason, the Master Plan does not recommend the construction or significant widening of East-West roadways.

6. *Prioritizing Roadway Improvements*

As Charlton's population increases, it is logical that traffic on town roadways will also increase. New commercial/industrial business can also be expected to impact traffic patterns around town. Charlton will face two major challenges with regard to managing roadway improvements. The first will be prioritizing roadway improvements. The second will be how recommended improvements will be funded.

The Central Massachusetts Regional Planning Commission released a "Preliminary Local Pavement Management Study for the Town of Charlton, Massachusetts" in January, 1999. [This document can be reviewed in its entirety at the Library or the Highway Department Office.] According to the study, "the states have been required to develop a series of management systems to serve as an aid to the transportation planning process." "In general, a successful PMS program defines a roadway network, identifies the condition of each segment of the network, develops a list of needed improvements, and balances those needs with the available resources of the party responsible for maintaining the defined roadway network." (CMRPC/PMS, p.1) As stated, this document identifies each roadway and assigns it a Benefit Value (BV). The BV is calculated using the Pavement Condition Index (PCI), the unit cost of repair, estimated life of repair, and the Average Daily Traffic (ADT) volume. (CMRPC/PMS, p.3). Basically, the higher the assigned Benefit Value, the higher the priority for improvement. The CMRPC's PMS stresses the need for a "maintenance first" strategy as opposed to a "worse first" strategy for road management. Table 4.1, page 23-25 prioritizes Charlton's roadways by Benefit Value which ranges from 143 to 29. This prioritization does not, however, take other factors into account, such as public perception or decisions of the Board of Selectmen related to which roads should receive priority funding for improvement.

The Master Plan, using information from the Highway Department, has identified three types of roads in town that handle the greatest volume of traffic: major roads, connector roads, and scenic roads, as shown below:

Major Roads

Massachusetts Turnpike
Route 20
Brookfield Road
Dudley/Dresser Hill Road
Masonic Home Road
New Spencer Road
S. Sturbridge Road
City Depot Road
Route 169

Connector Roads

Stafford Street
Oxford Road
Center Depot Road/Depot Road
Hammond Hill Road
Muggett Hill Road
Richardson Corner Road
North Main Street
Oxbow Road

Scenic Roads

Buteau Road
Cemetery Road
Gould Road
Horne Homestead Road
Jones Road
McIntyre Road
North Sturbridge Road
Smith Road
Tucker Road
Wheelock Road

The Master Plan Committee extracted the Benefit Value and several other pieces of data from CMRPC's Pavement Management Study to create a table called "Charlton Roadway Management Study Data" [Attached as Appendix C]. This was to prioritize the major roads, minor roads and scenic roads. Based on this information, roads would be prioritized in the following order:

Figure T&C1: Suggested Prioritization of Roadways for Maintenance & Improvements

Road Name	Road Type	Benefit Value
1. Hammond Hill Road	Connector	143
2. Richardson Corner Road	Connector	135
3. North Main Street	Connector	101
4. Stafford Street	Connector	97-100
5. Muggett Hill Road	Connector	75-106
6. Oxford Road	Connector	57-95
7. Brookfield Road (partial)	Major	75
8. Center Depot/Depot Road	Connector	63
9. Cemetery Road	Scenic	63
10. Buteau Road	Scenic	61
11. OxBow Road	Connector	60
12. Jones Road	Scenic	56-74
13. North Sturbridge Road	Scenic	58
14. McIntyre Road	Scenic	55-56
15. Gould Road	Scenic	0-67
16. Horne Homestead Road	Scenic	46
17. Dudley/Dresser Hill Road	Major	37-58
18. S. Sturbridge Road	Major	55
19. Tucker Road	Scenic	33
<i>Table continued on following page</i>		

Road Name	Road Type	Benefit Value
20. Wheelock Road	Scenic	33
21. City Depot Road	Major	32
22. Masonic Home Road	Major	0
23. New Spencer Road	Major	0
24. Smith Road	Scenic	0

Source: Central Massachusetts Regional Planning Commission, Pavement Management Study, January 1999.

Note: Mass Pike, Route 20, and Route 169 (all major roads) were not included in the CMRPC study.

Since these are the roads determined to be most traveled, Charlton may decide to consider these roads priorities for funding even though they are not in this order of priority in CMRPC's Pavement Management Study.

Map T&C2 shows Charlton's major, connector, and scenic roadways in relation to the Master Plan's Conceptual Land Use Plan.

D. Goals for the Transportation and Circulation Element

Goal T&C1: Strike a balance between roadway maintenance and improvements for safety, and scenic rural roadway character.

Goal T&C2: Cluster heavy traffic generators where they can be served by existing major roadways.

Goal T&C3: Increase townspeople's opportunities to walk and bicycle safely about Charlton.

Goal T&C4: Periodically review which roads in Charlton should be priorities for repaving, repairing, and maintaining, following the recommendations of the Central Massachusetts Regional Planning Commission's Preliminary Local Pavement Management Study for the Town of Charlton, Massachusetts, January 1999.

Implementation strategies for achieving these goals are presented in Element IX, below.

E. References

Scenic Roads list: Planning Board Office

CMRPC Report

Massachusetts Highway Department

Charlton Police Department Accident Data

Conversations with Bill Bombard

Elderbus information from Elderbus brochure

T&C1: Current Roadways of Charlton

T&C2: Conceptual Land Use Plan with Current Major, Connector & Scenic Roads

VIII. Town Services and Facilities

A. Introduction

The quality of life in a community is dependent upon the quality of the Town's public safety, infrastructure, and general public services. The residents of Charlton are dependent upon Public Safety Departments to provide police, fire, and emergency management services. Highway, water, and sewer/wastewater treatment comprise Charlton's existing infrastructure services. Charlton also provides its residents with general public services that include schools, elderly services, the library, Animal Control Services, and Town Administration.

As Charlton prepares for future increases in population, it is imperative that we not only plan to maintain our town services and facilities but also that we continue to evaluate the need to expand them. In this chapter, we have defined our current Town services and facilities, detailed expansions and improvements that are already in progress and identified possible future needs. Specific goals and objectives are outlined at the conclusion of this chapter. Town Facilities are shown on MapTS&F1: Town Facilities.

B. Current Situation

The Town of Charlton's services and facilities have not kept pace with the requirements of a growing population. This is because of financial constraints caused in large part by the Town's share of costs of the educational systems, especially with the Education Reform Act. Thus, the construction of new roads, sidewalks, and expansion of water and sewer systems have been delayed. Renovation of Town buildings and existing highways and facilities have also been postponed until drastic measures demanded action. This has been due in part to the lack of adequate planning and prioritization. Therefore, it is imperative that a Capital improvement plan (that includes funding mechanisms) be adopted. Charlton should also consider a Capital Expenditures line in the annual budget. A set amount of money could be placed into this account for use by all municipal departments for the purchase of new equipment. Funds not expended one year could be carried over into the next to increase the following year's budget.

1. Public Safety

a. Police

The Charlton Police Department currently consists of 17 officers, counting the Chief of Police. According to the Chief, a police department must have between 1.5 and 2 officers per 1000 people. Assuming a 1999 population of approximately 13,000, Charlton should employ a minimum of 21 officers and a maximum of 26 officers. The cost of adding one officer is approximately \$42,850, not including benefits, educational incentives, overtime, shift differential, or the costs of a weapon, holster, protective vest and other required equipment.

The department currently has 5 marked cruisers, and 1 K-9 unit. In 5 years, the Chief expects to need a total of 8 marked units and 1 K-9 unit. Some officers will be partnered in the vehicle.

TS&F1: Town Facilities

The existing station, located on Masonic Home Road, was recently upgraded and can support its existing staff. It has sufficient room in the basement of the building to add office space to accommodate additional officers over the next five years. The Police Dept. also has approximately \$20,000 available for remodeling/construction from the original upgrade to the building. The Chief estimates that remodeling the basement to would cost between \$8,000 and \$10,000 per additional office. This figure includes new interior remodeling and office equipment. There are technology grant funds available to offset the cost of an upgrade. The Charlton PD just received a grant of \$39,000 for computers to be used as part of the Anti-Drug and Tobacco Program. This equipment is theirs to keep and use as they see fit as long as its initial use is for the program. The Chief looks into grants on a regular basis to offset costs to the taxpayers of Charlton and will continue to do so.

The Charlton Police Department would like to refurbish their dispatch center. This will cost upwards of \$67,000. It is considered a capital expenditure. The Chief is awaiting word from the Massachusetts Turnpike Authority and Tourism Board to see if they were awarded grant money for this. The Department would also like to purchase an Electronic Fingerprint Scanner. This piece of equipment registers the fingerprints of people in Federal and State databases for comparison and other purposes. This Scanner currently costs \$50,008.

Currently, the Charlton Police Chief is on the Telecommunications Committee. This committee is working to link the Town hall, Police Dept., and Fire Dept. communications systems. They also hope to link the Library and Highway Department. The committee estimates that this will cost approximately \$125,000. The Chief works with Charlton's Emergency Management Director to create a plan to accommodate large groups of people in a town wide emergency. Implementing an emergency plan such as this would require cots, blankets, food, storage space, and a building to use as a shelter to accommodate a large group of people.

We can learn lessons from the Police Department's successful service and its building construction problems. The Police Chief supports development fees, encourages public input, and recommends multi-town procurement of supplies.

b. Fire and Ambulance

In 1911 a small fraternity of men formed to fight fires in Charlton using the soda and acid fire extinguishers located in eleven sites throughout the town. The all-volunteer department became a town entity in 1925 under the leadership of Patrick Daley. The Charlton Fire Department continued to grow over the years and at a Special Town Meeting in 1998, a full time Fire Chief, Ralph Harris, was appointed. In 1999, the Ambulance Service was joined with the Fire Department.

Currently, the department consists of 9 full time Firefighter/EMTs, including the Chief, and 22 call (part-time) firefighters. Manpower recommendations are 1 Firefighter/EMT per 1,000 residents. Our 1999 population of approximately 13,000 would require 13 full time Firefighters to adequately cover the residents of Charlton. In the winter of 2000, 4 additional full time Firefighter/EMTs were added to the Department to bring the total to 9. Equipment as of March

2000, includes 4 engines (one from 1972), 2 tankers, 2 forestry vehicles, 1 rescue truck (a 1972 converted delivery truck donated by Pepsi) and 2 ambulances.

There are two fire stations in Charlton. The primary station, on Power Station Road, was constructed in the 1950's. When built, this station was projected to last approximately 30 years. The other building, on North Main Street, is without running water and serves mainly as a garage for fire vehicles. Both facilities are clearly out of date and unable to meet even the present needs of Charlton's expanding Fire Department. An immediate need for a new, larger, more centrally located station has been recognized for some time. (The Fire Station Study Committee was formed in May 1995.) The physical plans for this new station are drawn up and ready to be implemented as soon as an adequate site of approximately 3 to 5 centrally located acres, is located and purchased. An auxiliary station to serve the southern part of Town (as an adjunct to the main Fire Station) has also been considered.

This project remains a top priority for Charlton. (\$250,000 was approved for the purchase of land for the station at the 1999 Annual Town Meeting. Unfortunately, the site selected proved to have too many costly conservation and related construction issues and was ultimately found to be unsuitable for the new fire station.)

In addition to the new central station, the need for an additional manned substation in the Richardson Corner Road and Oxford Road area is anticipated within the next 5 to 10 years. Land for this purpose should be located and purchased as soon as possible. It is anticipated that the Engine and Rescue vehicles that are approaching the end of their useful lives will be replaced in the near future.

The addition of municipal water, presently occurring along the eastern portion of Route 20, will add to the effectiveness of the Charlton Fire Department with the addition of fire hydrants.

c. Emergency Management Services

The Board of Selectmen appoints an Emergency Management Director to head up the new Charlton Emergency Management Agency (C.E.M.A.). The Director is responsible for working with several Town Departments (Police, Fire, and Highway Departments, the Town Highway Engineer, and the Hazardous Waste Committee Chairman) and volunteers to establish an effective emergency response team. The Town should consider networking these entities using various telecommunications technology. A Telecommunications Committee has already been formed to evaluate this possibility. The new role of C.E.M.A. should be considered when choosing sites for the new Fire and Highway Departments.

d. References:

Conversation with Police Chief James Pervier, January 19, 2000

Fire Station Building Study Committee – Letter to Selectmen 11-96.

Presentation to the Master Plan Committee by the Fire Station Study Committee, including Chief Harris, 10-15-98.

Conversations with Ralph W. Harris, Jr., Charlton Fire Dept historian, and Captain Stephen M. Coleman, Jr. on 3-14-00.

C.E.M.A. Director's 1999 Annual Report

2. *Infrastructure Services*

a. Highway

The Charlton Highway Department is currently located on Flint Road and North Main Street in Charlton. They have two barns which are used for salt and sand storage, and some equipment storage. Charlton's Town Engineer supervises a staff of eleven people: 1 Working Forman, 2 Heavy Equipment Operators, 2 Medium Equipment Operators, 5 Light Equipment Operators, and 1 Mechanic. In addition to maintaining Highway Department equipment, the mechanic services the Fire and Cemetery Departments equipment. The Highway Department responsibilities include maintaining and repairing town roads, sanding and snow plowing roads and parking areas, and street sweeping.

Recently, voters appropriated approximately \$100,000 for the purchase of a new street sweeper. The Highway Department also received \$200,000 from the P.G.&E. (US Gen) project; the Town Engineer has projected that an additional \$500,000 will be needed to construct a new Highway Barn. These funds could come from line item requests or grants. State Chapter 90 funds are also available each year for roadwork. The amount of funding received is based on the number of public roads, number of residents, and number of employees who work in Charlton; higher numbers mean more money. A site plan for the new Highway Barn has been approved by Charlton's Board of Selectmen, Planning Board, and the Zoning Board of Appeals. The new facility is to be located at the former land fill site on Flint Road, and calls for a 25,000 square foot building with offices for employees, buildings to store equipment, and a service station area.

Choices.

b. Water

Charlton's water needs are primarily served by private wells. There are 20 registered public water supplies and 45 registered non - community public water supplies. There is an existing water distribution system located in Charlton City constructed in the late 1800s by the Charlton Woolen Company consisting of about 1 mile of 6" main along parts of Stafford Street, Maple Street, Power Station Road, Sturbridge Road and Brookfield Road. Some portions along Stafford Street were replaced in 1955. This is currently available for fire protection only.

The Town of Southbridge owns and operates distribution lines originating in Southbridge, running up Route 169, and ending at Route 20 in Charlton. They then extend up Route 20 between Route 169 and the Mass Turnpike Authority service facility 5E and the Mass State Police barracks on Route 20. Another line runs on Stafford Street between Route 20 to J. Hammond Road and on J. Hammond Road between Stafford St. and the Mass Turnpike Authority service area 6 West. These lines service the Mass State Police Barracks, Turnpike service areas and several residences with contaminated wells (Timber Valley Subdivision and adjoining properties).

A vote of the March 1, 1999 Special Town Meeting established a water enterprise fund and authorized the Water Commissioners or Board of Selectmen acting as water commissioners to obtain funding and to enter into contracts for the purposes of establishing a water system. The

system design includes the installation of 12" pipe along Route 20 from the Oxford line to the intersection of Route 169, various, fire hydrants, 8" pipe crossings for roads and hydrants, 750,000 gallon stand pipe, and pump station. Service to the Charlton City area is also being installed. The Water Commission has recently submitted a request for proposal for a source of water supply, contract operations, maintenance and management of the town's water distribution system. Installation of the system along Route 20 has been started and will follow the schedule for the state reconstruction of Route 20. The water system is expected to reach full operation by December 2001. Estimated cost is \$3.9 million. The Charlton City portion of the project was put out for bid in March 2000 and is expected to be completed in the fall of 2000. A source of temporary water for this section is being investigated. A pumping station and water storage tank are being designed and will be out for bid by the end of the summer of 2000.s

Trends and implications for the future

There is evidence of ground water contamination in several areas of town. Road salt contamination has been found in wells along the Route 20 and Mass Turnpike corridors, and naturally occurring arsenic has been detected in eastern and southeastern parts of town.

Several wells in the Charlton City area have shown levels of trichloroethylene (an industrial solvent) in excess of regulatory levels. The source of this contamination is not known. Benzene, a gasoline additive, has been detected in some wells in the vicinities of the Mass Turnpike 6W and 5E service facilities. Several houses near the 6W facility have received water from the Southbridge lines but the homes near the 5E facility have not. The Mass Turnpike and several oil companies have been identified by the DEP as potentially responsible parties. According to the DEP the benzene plume seems to be moving in a southeasterly direction. Relief from this contamination is necessary.

The Economic Development Commission and the Water Study Committee have stated that water along the Route 20 corridor will facilitate development of the industrial and commercially zoned areas along that highway. The Fire Department has also expressed a great need for municipal water for fire protection purposes. Continued expansion of water lines should be strongly encouraged.

Choices confronting the town.

In light of a recent proposal by the Economic Development Commission to rezone the majority of the westerly side of Route 20 to industrial general, it can be expected that there will be a desire to extend the water lines from Route 169 to the Sturbridge line to service new industrial development. Prism Environmental, the engineering firm hired by the Water Commission to design Charlton's water system, has estimated maximum daily industrial / commercial use along Rtes. 20 and 169 in the year 2010 will be 661,500 GPD and residential demand will be 378,000 GPD. Of 95 responses to the Business Survey conducted by the Master Plan Committee, 22 listed water expansion as a priority. This ranked third after sewer expansion and improved roadways.

As stated previously, some residences affected by contamination have received some relief but most have not. The Charlton City area will have access to municipal water once the current project is complete but as new areas are found to be contaminated, as predicted, a long-term

solution for supplying clean, safe water for residents is necessary. The Board of Health adopted well regulations in January, 1999 requiring new wells to meet Safe Drinking Water Act standards for volatile organic compounds, arsenic and radon. This testing will likely identify more contaminated areas of town.

139 respondents to the residential survey indicated that cleaning up groundwater and contaminated wells should receive priority in town funded projects. Overall, this ranked third as most important after building additions to schools and acquiring open space and conservation land. Another question on the survey asked residents to rank the types of land that should be preserved from first to third priority and water supply areas received the highest number of first priority responses.

According to Selectman Robert Beaudette there has been discussion over using Buffum Reservoir as a possible future supply to develop a regional water system with the surrounding towns of Dudley, Leister and Sturbridge in cooperation with Mass American Water Company. SEA Consultants, Inc. was hired by the town to conduct a feasibility study for the future development of potable water infrastructure for commercial and industrial development along the corridors of Rtes. 20 and 169. Their 1997 report identifies this area as well as others for possible surface and groundwater supplies. These areas should be protected now.

c. Sewer

A portion of the Town is currently sewered consisting primarily of Charlton City with sewer extensions to the two MA Turnpike Service areas. The Board of Sewer Commissioners is responsible for the oversight of the operation and maintenance of the wastewater facilities. There are several privately operated wastewater treatment facilities in Town including one at Bay Path Regional Vocational School and one at the Masonic Home.

In 1989, Charlton received an Administrative Order from the Environmental Protection Agency that required that the wastewater facilities be designed and constructed to comply with effluent limits in the NPDES permit.

By 1994 Charlton completed a Final Supplemental Facilities Plan, based on the 1992 draft 201 Wastewater Facilities Plan Update, prepared by Cullinan Engineering Company, and the Town moved forward with design construction of the Phase I wastewater facilities. Three Phases of sewer extensions and wastewater treatment plant expansions were presented in this Plan. This Comprehensive Wastewater Management Plan is intended to update areas of need in response to changes made in March of 1995 to Title 5. These changes were made to update wastewater flow projections based on the Town's recent growth and to develop wastewater facilities to accommodate potential future commercial and industrial growth along Route 20.

TS&F2: Sewer System

The Phase 1 wastewater facilities plan included the replacement of original sewers in the center of Town, extension of sewers to two Massachusetts Turnpike Authority service areas, and construction of a new advanced wastewater treatment plant. The Phase 1 project included sewers on Route 20, Carpenter Hill Road, Power Station Road, Brookfield Road, Maple Street, Spencer Street, J. Hammond Road, and Stafford Street. The Phase 1 sewer system also included three pumping stations, one on J. Hammond Road, one on Route 20 and one off of Route 20.

The cost for sewers extended to the two MTA Service Areas was borne by the Massachusetts Turnpike Authority. The cost of replacing the old, deteriorated sewers in Charlton City was borne by the Town. The Town conducted an evaluation of Town versus contract-operations for the wastewater treatment plant and decided that it was more cost effective to staff with Town personnel. Charlton's NPDES permit was issued on September 30, 1996 with an effective date of February 15, 1997. It will expire four years from the effective date or February 15, 2001.

The treatment facility has a design capacity of 150,000 gpd with discharge to Cady Brook. Expense of the new facility was shared – 40% Town of Charlton/60% MTA. The wastewater treatment plant was completed in March 1997 with full start up in September 1997.

There were some effluent problems at the WWTP, but these were corrected by late 1998. Possible explanations for these problems included design flaws, variable Turnpike loadings with excessive ammonia, questionable EPA limits for some pollutants and operator error.

In November 1996, the Board of Sewer Commissioners, in response to numerous requests from homeowners and the area's Charlton Center, decided to move forward with the design and construction of **the Phase 2** project including the Glen Echo Lake and Charlton Center areas sewers and expansion of the existing treatment plant to 450,000 gpd. The design was fast-tracked in order to enable the Town to be in the best possible situation to receive a zero interest SRF loan from the DEP. The design was submitted to the DEP in May 1997. In addition, a SRF application was submitted for a construction loan for Phase 2 project. At the Town's annual meeting in May 1997, the Phase 2 project failed to obtain the necessary 2/3 vote from approximately 500 attendees. The Town re-evaluated Phase 2 of the sewer project and it was approved by a town vote on March 10, 1998. Phase 2 Areas to be Sewered are Glen Echo Lake & Charlton Center (Route 20, North Main, Old Worcester, Mugget Hill, Burlingame), New Middle School, Heritage School, Burlingame School, Masonic Home, Bay Path Vocational High School.

The following are changes made to Phase 2 since the May 1997 Town Meeting:

- The pipeline has been rerouted in the vicinity of Freighthouse Road.
- The pipeline has been extended in Burlingame Road and Old Southbridge Road.
- Capital costs will be recovered through Sewer Assessments instead of Betterment Assessments.
- Each vacant lot (property) that abuts the sewer will be assessed one equivalent dwelling unit (EDU) regardless of its size.
- Deferment plan available for the elderly

Many alternatives were considered and these along with cost comparisons can be found in Appendix D.

Phase 2 would expand the Wastewater Treatment Plant from 150,000 to 450,000 gpd, add 8 pumping stations and extend sewer 90,000 feet. The total project cost for Phase 2 is \$14 million. The funding sources available to the Town are:

- Department of Environmental Protection (DEP), State Revolving Fund (SRF) 0% interest loans
- U.S. Generating Co. Pilot Funding- \$8 million
- Town taxpayers
- Sewer system abutters

Phase 2 began November 1999 with excavation for sewer line extension at Muggett Hill Road and onto Morton Station Road. The projected completion time for Phase 2 is 400 days, which is approximately, December 2000.

Wastewater disposal problems beyond the Phase 2 area have been identified. However, as of January 2000 there is no projected date for the beginning of **Phase 3**, primarily due to the cost of \$33,886,000.

Phase 3 project consists of sewers to service a number of needs areas including South Charlton Reservoir, Little Nugget Lake, Prindle Pond, Little River, Cranberry Meadow and miscellaneous streets in the Charlton City area. It also includes the extension of sewers eastward on Route 20 to the intersection with Hammond Hill Road. The Route 20 sewer is included in Phase 3 should the Town decide to construct it to accommodate future commercial/industrial development. The Phase 3 areas are not prioritized relative to each other; the Town may choose to implement one, several or all of these areas subsequent to the completion of Phase 2. The intent in splitting Phase 3 into multiple areas is to allow the Town the flexibility to choose when and where they will construct sewers in the future. The timing of the construction of sewers along Route 20 will be dependent on the restrictions associated with the roadway reconstruction project and available funding.

Wastewater management alternatives along with estimated costs are outlined in the appendix.

On a present worth basis, the most cost effective alternative is conveying all of the flow from the Phase 3 areas to a central wastewater treatment plant with a discharge to Cady Brook. The Cady Brook wasteload allocation evaluation conducted during the Comprehensive Wastewater Management Planning indicates that it is technically viable to discharge 900,000 gpd from the Central WWTP. There is also adequate land area at the Central WWTP that could be acquired by the Town to accommodate the facility's expansion. The implementation of this alternative is dependent on gaining DEP/EPA approval to modify the Town's NPDES permit. Should DEP/EPA approval not be acquired for the permit modification, it is recommended that the Town initiate negotiations with neighboring communities of Dudley and Oxford to update the

buy-in and user costs and to determine if Intermunicipal connections are viable. The construction of satellite wastewater treatment plants is the least favorable of the wastewater management alternatives based on cost, citing issues, and permitting. It should be considered only in the event that the central wastewater treatment plant and Intermunicipal connection options are not implementable.

Cady Brook drains an area of 13.04 square miles and originates at the outlet of Glen Echo Lake in Charlton, MA. The brook then flows in a southerly direction for approximately 5.7 miles until it confluences with the Quinebaug River in Southbridge, MA. The well-defined channel of this brook has a streambed consisting primarily of sand and gravel, which combined with an elevation drop of 330 feet from its headwaters to the confluence with the Quinebaug River, contributes a high degree of aeration.

The NPDES permit issued in September 1996 permitted a monthly average daily discharge of 320,000 gpd and specified effluent concentrations for contaminants such as BOD, TSS, phosphorus and ammonia. With the addition of Phase III flows, the projected required plant capacity will increase to 640,000 gpd. The Town conducted a wasteload allocation study for Cady Brook and determined that water quality standards in the Brook could be maintained with increased treatment plant discharge provided that the mass loading rates specified in the NPDES permit be preserved

Future

The wastewater facilities plan recommends further phases of sewerage, but review of its cost data shows that many of the areas recommended for sewerage are not cost-effective. The Sewer Commission, the Board of Health, and the Town must focus on affordable solutions for wastewater problems at existing and approved structures. Title 5 is complex, but allows a range of options for repairs, including composting toilets, gray water systems, and sand filters. Charlton's overwhelming preference to control growth, as indicated by Planning Board surveys, is consistent with the limited assimilative capacity for treated wastewater by the Town's soils and streams. The sewer commission focuses on the funded phases, postponing further phases.

Challenges and Opportunities

1. Because of the cost of Phase 3, more affordable wastewater solutions should be considered by the Sewer Commission and the Town as well as funding solutions for this Phase.
2. Water quality at Cady Brook should be a priority. Phase 3 would double the discharge into Cady Brook. The DEP determined that the increased flow would be permissible if effluent concentrations were reduced proportionally. However, the feasibility of meeting such concentrations has not been proven. This needs further study by the Sewer Commission.
3. Where sewers are built, development will follow. Coordination is needed between the Sewer Commission and the Town on implementing Phase 3.

d. References:

March 8, 2000 phone conversation with Bill Bombard, Town Engineer

1997 Water Study Report by SEA Consultants, Inc.

January, 1999 Charlton Water Study Committee Report to the Board of Selectmen

Document entitled "Water System Program, Public Hearing, Feb. 1999" by the Charlton Water Study Committee

Minutes of the January 29, 2000 Master Plan Committee, attended by Selectman Robert Beaudette

Charlton Planning Board Survey, 1998

Comprehensive Wastewater Management Plan – Draft, Town of Charlton, MA, Board of Sewer Commissioners. August 1997, S E A Consultants, Inc., Cambridge, MA.

Phase 2 Sewer Project, Project Fact Sheet. Sewer Commission, Town of Charlton, MA.

Town of Charlton, Wastewater Management Plan, Informational Session Part 1 of 3, Project Background, Existing Phase 1 and Proposed Phase 2 Facilities.

Town of Charlton Wastewater Management Plan, Information Session Part 2 of 3, Alternatives Considered, Proposed Phase 2 Facilities.

Town of Charlton Wastewater Management Plan, Informational Session Part 3 of 3, Project Financing, Proposed Phase 2 Facilities.

3. General Public Services

a. Schools

The Dudley- Charlton Regional School District has earned media awards as well as average test scores and college acceptance rates. In 1999 Shepherd Hill Regional High School was cited by the U.S. News and World Reports magazine as one of the 96 best high schools in the United States. MCAS results from May 1998 testing placed Dudley-Charlton 95th out of 208 districts statewide. Of the 175 students who graduated in 1999 from Shepherd Hill Regional High School, 78% were continuing their education.

Charlton enrollment held in the 1400 range through 1985, then climbed to 2181 in 1998 and 2258 in 1999, not including prekindergarten and special needs classes. This is a 4.8% increase between October 1, 1998 and October 1, 1999.

In 1996, the Towns approved new school construction and renovation projects, which rated well on the State funding list. This included a new Charlton Middle School, located on Oxford Road, which will open for the 2000-2001 school year. Grade configuration will change in the Charlton Elementary and Heritage schools due to grades 5-8 moving to the new Middle School. The following table shows the new distribution of grade levels in the Dudley-Charlton Regional School District.

**Figure TS&F1: Distribution of Grade Levels
Dudley-Charlton Regional School District, 1999-2000**

<i>Dudley</i>		<i>Charlton</i>	
<i>School</i>	<i>Grades</i>	<i>School</i>	<i>Grades</i>
Mason Road	Pre-K, K, 1	Charlton Elementary	Pre-K, K, 1
Dudley Intermediate	2, 3, 4	Heritage School	2, 3, 4
Middle School	5, 6, 7, 8	Middle School	5, 6, 7, 8
Shepherd Hill Regional High School 9, 10, 11, 12			

The budget, approved by the Dudley-Charlton Regional School committee for the 2000-2001 school year is \$30M. The following table shows current 1999-2000 enrollment and capacity rates for each of the schools.

Figure TS&F2: Enrollment and Capacity Rates for Schools, 1999-2000

Building	Current Enrollment 10/1/99	Current Rated Capacity	Capacity After Construction
Shepherd Hill Regional	1587	1302	1302
Charlton Elementary	565	495	495
Heritage School	776	675	675
Charlton Middle School	0	0	930
TOTALS	2928	2472	3402

It is quite clear from the enrollment/capacity table, that each of the schools is overcrowded and that change is essential to accommodate increased enrollments. As we attempt to project our needs for the next 10 years, a major consideration will be the continued rise in student enrollment. In 10 years, if not sooner, we could again reach maximum capacity levels in all of our schools.

Our future needs could include:

- Building a High School in Charlton
- Renovation and expansion of existing schools
- Staff increases
- Additional technical equipment for the schools
- Expanding sports facilities

Charlton's schools are interconnected with the Town's infrastructure, as well as, other elements of the Master Plan. For example, sewer and water for schools; road improvements for busing; population and housing; and open space. As indicated by the Charlton Planning Board survey, a large number of residents (41%) favored funding school additions or new schools. We are fortunate to have this community support for our schools. However, the reality is that our tax base must be able to support our schools. What can we do now to facilitate the potential growth in enrollment? Some solutions to consider are:

- Preserve a site now for future school building.
- Increase industry and business in Charlton, thus increasing tax base without increasing student enrollment.
- Increase open space as a means of controlling development.
- Limit residential growth by increasing lot size and restricting the number of residential building permits issued per year.

The Dudley-Charlton Regional School District has an Adult Continuing Education Program that was reintroduced in the fall of 1998. Eleven courses are offered including computer instruction, conversational Spanish and GED preparation. The school district should continue to pursue partnerships with business and industry in Charlton, in order to offer job training courses.

Charlton is also a member of the Southern Worcester County Regional Vocational School District along with five other towns. Bay Path Regional Vocational Technical High School is located in Charlton. One hundred ninety three students graduated in June 1999, 32 students of these students were from Charlton. This is an increase from June 1998 when 26 Charlton students graduated. Currently 152 students from Charlton are enrolled in one of the 22 vocational areas. Twenty-two students from Charlton are receiving extra services from the Special Education Department. The assessment cost per student for the Town of Charlton is \$4559. Towns who do not belong to the District pay \$8375 per student in tuition. The acceptance of out of district students to fill available vocational space allows lower assessments for member towns. Out of District towns also pay all transportation costs for their students.

It is the practice of Bay Path Regional Vocational High School to utilize the occupational programs to complete projects for the town. In the 1999-2000 school year, 120 projects were completed for the Town of Charlton and its residents. These projects must be of educational value to the students.

In the 1999-2000 school year, Bay Path received \$356,949 in Federal and State grants. These grants help to lower the tuition costs to District towns, but come with stringent requirements and reporting responsibilities.

The Bay Path Adult Evening School had a 450% increase in participation in 1999-2000. Total enrollment for the Fall and Spring sessions was 2272 compared to 412 participants in 1998-1999. The programs ranged from Automotive Repair and AUTOCAD to Word Processing. A future consideration would be to partner with business and industry in Charlton and offer job training courses through the Adult Evening School.

Future

The proposed budget for the 2000-2001 school year is \$11 million. This is a 5.8% increase and includes loan repayments and operating cost increases. Borrowing costs for the District increased significantly due to possible misappropriation of funds by the Assistant Superintendent for Business. To offset budget increases the school cut \$405,000 from its budget and reduced its operating budget by 1.45%. The school obtained special legislation to allow it to take a \$5 million long-term loan.

Assessment figures for Charlton increased to \$889,748 for the 2000-2001 school year which is a 5.8% increase.

Rutland will join the District beginning with the 2000-2001 school year. Spencer and Leicester have also shown an interest in joining.

Steven Mondor, Superintendent of Bay Path Regional School, noted three major needs at the school.

1. Hook up to the Town's sewer system when it is brought down Old Worcester Road. The school currently spends \$30,000/ year to operate the current sewer system. He estimated that it will cost about \$250,000 to run the necessary pipes from the building to Old Worcester Road. The cost and the annual fees would be divided between the town members of the District.
2. Building expansion. The building was constructed in 1972 and is now at full utilization. New programs are being introduced (currently 22) and the night program's rapidly expanding. Additional parking may be needed for the night program.
3. The sport facilities are in need of expansion and repair. The current field is inadequate and the tennis courts need repairs and have been out of use for 7 years.

Bay Path Regional Vocational Technical High School is facing financial challenges, which will impact future budgets. However, the school is committed to serve Charlton with the finest vocational education program available for high school students and adults and will use its skills and facilities to further town projects as they add to the students' education.

b. Services for the Elderly

Most programs for elderly services in Charlton are under the auspices of the Council on Aging. The Senior Center, located in the Town Hall Annex, is open five days a week. It serves the Senior population as a resource for information, and offers educational programs, social activities and a lunch program five days a week. A computer system was installed in 1998 and a monthly newsletter is sent out to all Seniors. The Council on Aging budget has increased from \$10,000 in 1996 to \$37,000 in 1999. There are approximately 1200 seniors residing in Charlton.

In 1999 many improvements were made to the physical appearance of the Senior Center including a new back entrance and back doors and interior painting. New ceilings were also installed with the help of students from Bay Path Vocational High School. Financial support for these projects was provided by the Golden Age Club and a donation from US Gen. Office space and a computer has been added for the Outreach Worker.

An Outreach Worker (part-time) has been hired to assess the needs of the elderly within the Charlton community. An Incentive Grant from the Executive Office of Elder Affairs and the Town budget currently funds this position. The Outreach Worker visits seniors in the community, by appointment, and informs them of available services. The Outreach Worker coordinates with the Fire and Police Departments, as well as, churches, hospitals, nursing homes and Tri-Valley to make sure that Charlton's elderly population is well cared for. The formation of this position fulfills a primary goal of the Council on Aging to expand and improve its outreach program to better serve the senior population of Charlton.

Future Needs

The Council on Aging has outlined several future needs.

- Extend Outreach Worker position to full-time and supported by the Town Budget.
- Improve coordination between the Council on Aging, the Housing Authority, Masonic Home and other resources.
- Install RUOK Communication System, housed in the Police Department, to check on elderly who are living alone and are at risk. Grant funding.
- Add Volunteer Coordinator as part-time position, funded initially by an Incentive Grant from the Executive Office of Elder Affairs.
- Transportation for seniors is currently provided by SCM Elderbus, Inc. A long-term goal of the Council on Aging would be to also provide elder bus service, perhaps in coordination with the Masonic Home.

c. Library

In 1905 William Henry Dexter of Charlton presented a Memorial Hall to the community, which included a library room and space for all town offices. Charlton's population then was approximately 2000 residents. This historic building served the Town for almost 100 years in those capacities.

In 1998 a Town Meeting vote transferred the control of the Dexter Memorial Hall to the Trustees of the Trustees of the Charlton Public Library, an elected six-member board. This action began the migration of Charlton Town offices across the street and enabled the Library to apply for state aid for a renovation project.

A dedicated group of volunteers has been working and planning the library renovation for several years. Blue prints have been drawn detailing the preliminary plans, which meet the size, technological and operational needs of a growing library, while maintaining the character and

majesty of this historic town building. Once funding is in place, the project is expected to take three years to complete.

An increase in size from the present 1,100 sq. ft to the proposed 23,300 sq. ft, should meet the community needs for the next 20 years. According to the standards of the American Library Association, which measure library size versus town population, our current library is appropriate for a community of 1,500 people. Charlton's population is presently almost 10 times this number. This increase in size will enable Charlton to pursue State grants needed to fund this five million-dollar project.

The renovation will correct the many basic problems associated with a century old building such as electricity, plumbing, water and the handling of hazardous building materials. It will also allow access of both lower and upper floors to all and provide floors capable of supporting the 150 lbs. per sq. ft needed for stacks of books. The second floor meeting hall, once used for dances, theater and recreation activities will be restored for community use.

Funding is projected from a number of sources. Approximately one third of the 5 million could be obtained through State grants. Another source is through direct fundraising, from which the committee hopes to raise approximately \$1/2 million dollars. The remaining funds will come from an appropriation from the Town of Charlton. The amount requested at town meeting will depend upon the amounts raised from the private and State sources.

d. Animal Control

Charlton currently employs an Animal Inspector who is responsible for inspecting barns and livestock, and handling all calls related to rabies. The Town also has three part time dogs officers (and are budgeted for a fourth) who have a variety of responsibilities which include, handling dog complaints, managing the kennel, dealing with stray, abandoned or neglected dogs, and taking care of dogs injured or killed in roadway accidents. They also work very hard to find permanent homes for the dogs once they are available for adoption. Neither of these positions include the handling of domestic cats or wild animals. In fact, local shelters frequently respond to cat-related calls without receiving town funding.

An increase in population will result in an increase in the number of domestic animals that reside in Charlton. Also, continued residential and commercial/industrial development in existing wildlife habitats will force wildlife into other areas. This could result in more contact between people and these wild animals. Charlton needs to consider funding a position for an Animal Control Officer. This person can be responsible for handling dogs, cats, and wildlife. However, it is not unusual for towns to employ an Animal Control Officer and a Dog Officer. The addition of this position would greatly reduce the current problem we have with feral, stray, lost, and found cats. It would also cover wildlife control. These issues can be addressed through changes in the by-laws.

e. Town Administration

The Town of Charlton currently utilizes the Town Meeting form of government. Its structure is made up of elected and appointed officials. The Board of Selectmen appoints a Town Administrator to run basic day to day activities. The Annual Meeting of 1999 voted to increase the Board of Selectmen from 3 to 5 members. This change went into effect in May, 2000.

The Town Administrator proposes modern, efficient improvements such as interdepartmental coordination and financial planning, voice mail, computer mapping, and a town web site which would greatly improve town-wide communications. It is imperative that the responsibilities of these town employees be clearly defined in relation to each other and to other departments and boards.

If the town continues to grow it could choose to change its form of government. A question on the residential survey asked respondents to indicate what things could help improve town government. The answers indicated that there could be a desire for change but it was not clear what kind of change was desired. Two of the suggestions (appointing a town administrator and increasing the board of Selectmen to five members) were both accomplished at the 1999 annual Town Meeting. A very large majority of respondents felt that finding more ways to involve more citizens in town government would improve it. The Town should consider forming a Welcoming Committee. This group could visit new townspeople with a package of information including a mail in voter registration form to help increase voters. And a majority felt the town should adopt a charter, but a majority was not in favor of a town council form of government.

f. References:

Town of Charlton Annual Report, 1998, Dudley-Charlton Regional School District, Report of the Superintendent.

Town of Charlton Annual Report, 1999. Dudley-Charlton Regional School District, Report of the Superintendent.

Town of Charlton Annual Report, 1998. Bay Path Regional Vocational Technical High School. Charlton 1998 Annual Report by Steven Mondor, Superintendent-Director.

Town of Charlton Annual Report, 1999. Bay Path Regional Vocational Technical High School. Charlton 1999 Annual Report by Steven Mondor, Superintendent-Director.

Telegram and Gazette. "Dudley-Charlton Oks \$30M Budget" by John Dignam, March 24, 2000, pp. 1B and 2B.

Town of Charlton Annual Report, 1998, Council on Aging.

Town of Charlton Annual Report, 1999, Council on Aging.

Report by Council on Aging to Master Plan Committee on June 24, 1999 as presented by Arlene Kingston, Director of the Council on Aging and Elinor Beaudry, Chairman of the Council.

Interview with Arlene Kingston, Director of the Council on Aging, March 28, 2000.

Blue prints by Strelakovsky & Hoit, Inc. – Hingham, MA

Presentation of proposed Library plans to Master Plan Committee 3-25-99.

1998 Charlton Town Survey.

4. Other Challenges and Opportunities

a. Gas

In a Town with several natural gas transmission lines, the ease of distribution, lower combustion emissions, and lesser impacts of spills and leaks would seem to favor gas service over continued reliance on fuel oil. Negotiation and implementation must respect safety and environmental requirements, interrupt-ability and peak usage pricing, and demand issues related to the ongoing development of fuel cell technology for various fuels and power unit sizes.

b. Electricity

With ongoing deregulation and vendor selection, it is unclear to what extent the community will benefit from local generation of power. In any case, decisions should be based on total impacts and benefits. Presumptions of reduced power costs may be short-sighted.

An Aggregation Committee is being formed to investigate the feasibility of purchasing and using electricity from PG&E at discounted cost.

c. Bridges and Dams

Repairs are planned at Little Nugget Lake, South Charlton reservoir, and Glen Echo Lake using state grant assistance. Several dams are on the Department of Environmental Management's list of hi-risk dams. Owners are bound to implement repairs required by State inspectors. Developers and Boards also must prove that projects would not jeopardize dams and bridges by increasing storm flows.

d. Solid Waste/Recycling

The Board of Health is currently negotiating with AMREC to restore recycling which lapsed in 1992 when the landfill was closed. The capping of this landfill is required by the DEP and will be a major expense for the Town.

Currently there are many private solid waste/recycling companies that service Charlton. The Town should consider hiring one company for waste removal and recycling. Some of the advantages include monetary savings on volume discount, preserving roadways, safety, and decreased traffic.

e. Hazardous Waste

The Town held a very successful Hazardous Waste Day in the Fall of 1999 at the old land fill site on Flint Road. It cost around \$8,000. This item has since been cut from Town budget. The Town needs to reconsider this expenditure

C. Goals for the Town Services and Facilities Element

- Goal TS&F1: Maintain, expand and improve Town Buildings so as to provide quality services in accessible, safe, efficient, and well-maintained facilities.**
- Goal TS&F2: Improve and expand Town services and government to keep pace with Charlton's growing population.**
- Goal TS&F3 Continue to improve and expand sewer and water systems in ways that support the goals and strategies of other elements of the Master Plan.**
- Goal TS&F4: Provide communication links throughout Town Departments including: Police, Fire, Town Hall, Highway, Library, Elderly Services, and Emergency Management Services.**
- Goal TS&F5: Maintain Charlton's high standards for education. Provide Adult Education courses to meet future employment requirements.**

Implementation strategies for achieving these goals are presented in Element IX, below.

IX. Implementation

A. Introduction

The Implementation Element will outline strategies and action steps toward the goals established by the community through the 1999-2000 planning effort. Goals, strategies, and action steps are sorted by element for the sake of clarity, but please note that there is overlap among the elements' implementation items, since they all fit together to form Charlton's plan for the future.

As a small town with a citizen volunteer form of government, Charlton's implementation element needs to take into account:

- moving forward in steps that can be accomplished
- working in a coordinated and collaborative fashion among Town boards, and also with community groups
- the Town's limited resources of volunteers' time and energy, personnel, and money.

The recommended strategies were selected because they will achieve the most benefits for the amount of effort they will require. This "short list" of most promising strategies assumes that Charlton wants to move assertively and proactively to shape the community's future.

B. Land Use

Goal LU1: Continue Charlton's traditional pattern of denser development in and around vibrant villages, separated by open landscapes of natural resource areas and rural scale development.

Housing strategies A [flexible development] & B [village residential]
Economic Development strategy B [business in villages]
Natural & Cultural Resources strategies
Open Space & Recreation strategies

Goal LU2: Protect Charlton's natural resource base, including water resources, corridors of wildlife habitats, and scenic landscape views.

Natural & Cultural Resources strategies
Open Space & Recreation strategies
Transportation & Circulation strategies
Town Facilities strategies C & D [water & sewer policies]

Additional strategy to achieve this goal:

Strategy A: Investigate options to protect the Town's lakes from potential environmental problems associated with increased development.

Goal LU3: Take advantage of regional markets and public investments in transportation, sewer and water systems by locating with careful site planning high value industrial and regional office and commercial development along Route 20 and certain areas of Route 169 and Route 31.

Economic Development strategy A
Transportation & Circulation strategy A

Additional strategy to achieve this goal:

Strategy B: Review the Zoning Bylaw's definitions, allowed uses, review processes, and district boundaries to better accommodate commercial and industrial development while protecting the interests of the Town of Charlton.

Goal LU4: Achieve consistent, coordinated planning and administration among Town boards.

Strategy C: Convene an All-Boards meeting twice a year to consider policy and coordination issues, and to discuss anticipated development applications. Include in these discussions consideration of the Master Plan's policy guidance.

Strategy D: Generate and update as necessary a Development Review Manual that outlines the Town's procedures for reviewing and acting on applications for development-related permits.

Strategy E: Compile and continuously update a system of overlay maps that make available to Town decision-makers the most complete and accurate information regarding natural and cultural resources (including wetlands, aquifer recharge areas, and critical wildlife habitats), soils, topography, property boundaries, infrastructure, location and use of buildings, and other data that will provide the information needed to make good decisions.

Strategy F: Work to coordinate Charlton's land use with neighboring towns.

Options include:

1. Exchange copies of each other's Master Plans, Open Space & Recreation Plans, zoning bylaws and other land use documents. Compare these, and discuss at an All-Boards meeting the ways that neighbors' land use policies and regulations are similar to and different from Charlton's.
2. Consider meeting jointly with boards of neighboring towns to discuss mutual problems and opportunities, including the results of the above comparison of documents.

Strategy G: Urge all members of review & permitting boards to attend training sessions on matters applicable to the Board (i.e. variances), perhaps through the Citizen Planner Training Collaborative program.

Strategy H: Keep permit fees current (up-to-date) to offset administrative costs.

Strategy I: Encourage greater use of consultant review fees to provide for the assessment of environmental issues.

Goal LU5: Develop stricter environmental resource protection standards, and assign them a threshold status within the development review process.

Strategy J: Consider enacting a wetlands bylaw to be more restrictive and protective than the state's wetlands and rivers protection statutes.

Strategy K: Consider appropriate environmental restrictions and protections within aquifer recharge areas.

Strategy L: Consider including local environmental impact assessments as part of a Special Permit process for large-scale developments.

Goal LU6: Revise and upgrade zoning and subdivision bylaws to reflect specific recommendations of Master Plan elements.

Strategy M: Consider amendments to the Subdivision Regulations to reduce the required paved width of new roads to reduce maintenance costs and to protect rural character.

Strategy N: Improve regulation of "major residential developments" through a more complete review and permitting process, for example to include the environmental impact assessment recommended by Strategy K, above.

Strategy O: To help lessen the impact of growth, consider adopting an annual limit on the number of building permits issued, and/or a phased growth bylaw -- perhaps in conjunction with a point system that encourages flexible, sensitive site plans and other desirable types of development.

Strategy P: Consider increased minimum lot sizes in areas with environmental constraints or in special resource areas.

Strategy Q: Support state legislation that would assist local communities in dealing with growth, for example impact fee legislation, changes to ANR regulations, and options for land bank funding of cultural and natural resource preservation. When such state legislation is enacted, act promptly to consider how to upgrade local land use regulations to take advantage of new options.

Strategy R: Consider zoning amendments to allow development of a single house on large lots with little frontage.

Strategy S: Amend the Zoning Bylaw to address changing trends in land uses, for example to accommodate home occupations, assisted living facilities, e-commerce, changes and potential increases in commercial and industrial development.

C. Population and Housing

Goal H1: Retain Charlton's rural character.

Goal H2: Consider ways to slow residential growth.

Goal H3: Provide a wide range of housing opportunities.

Strategies to achieve these goals:

Strategy A: Consider amending Flexible Development zoning provisions to require or encourage flexible subdivision site plans that conserve usable open space and natural resource areas as part of the residential development process.

Options include:

1. Maintain and improve "density bonuses" [additional units] for clustered site plans (Flexible Developments) that conserve usable open space and other resources in ways that meet specified criteria [for example, conserved open spaces are not wetland or other areas that couldn't be built on; conserved open spaces contribute to wildlife corridors and help create critical masses of habitat preservation; trails through open spaces link into a town-wide system; ownership of and public access to conserved spaces are satisfactory to Town]. Investigate the possibility of allowing Flexible Developments by right.
2. Mandate flexible development patterns in certain areas that have documented special landscape and/or natural resource value. [Note: need to establish strong environmental or other case for such mandatory variation on the usual rules of subdivisions]
3. Density transfer that allows, for example, the development of extra building square footage on a site in a business district if the developer purchases "development rights" from a property located in an area of special conservation concern.
4. Strong deed covenants for homeowners associations to clarify and enforce the nature of public access to conserved open space, who owns the space, and who is responsible for its maintenance.

Strategy B: Manage development and redevelopment in the villages in a manner that contributes to their vitality, increases the range of housing choice they offer, and improves the daily quality of life in the villages.

Options include:

1. Consider refinements of zoning districts in and near Charlton's villages to encourage the focus of residential development in and near these traditional hearts of town life. Pay special attention to incentives and requirements that will increase Charlton's range of

housing choices to match a wide variety of individuals' and families' needs, resources, and preferences. Consider careful expansion of the village district boundaries in conjunction with strategies to decrease potential development in outlying, more rural areas.

2. Through discussions among business people and other village members, consider whether and how to adjust the boundaries and regulations of Neighborhood Business Districts to increase their contribution to village life and viability.
3. Plan and carry out sidewalk improvements and extensions, tree planting, other improvements to the streetscape and pedestrian system in the villages.
4. Site indoor and outdoor recreation facilities in villages, along with other centers of civic and social life.

Strategy C: Activate a Charlton Housing Commission with a local mandate to work over time for at least 5% of Charlton's housing units to be protected from market inflation. Include in the Housing Commission's mandate also to increase the variety of market rate housing so as to meet a broader range of needs and preferences.

Options for the Commission include:

1. Cooperate with the Housing Authority so Charlton can tap the full range of external resources available to help meet local housing needs. In some cases the Housing Authority might be the appropriate long term manager of units achieved by the Housing Commission.
2. Serve as the Town's point of contact and collaborative advocate for such opportunities as the Masonic Home's plan for additional development to serve the needs of the community.
3. Spearhead a first "LIP" ["Locally Initiated Project"] to create affordable housing that meets local needs in a manner that fits into Charlton's community character. A LIP can qualify for state assistance programs in the planning and construction of the project, and "LIP" units count toward the State's target of 10% affordable units. Roll the proceeds over into a next effort.
4. Consider a "friendly Comprehensive Permit" whereby the locally spearheaded project gains a waiver of certain zoning requirements. [The advantage of a friendly Comprehensive Permit is that the Town gains flexibility to suit the purposes of the LIP, without opening the door to other developers through a zoning amendment.]
5. Consider adding provision of affordable homes to the list of public benefits that merit density bonuses. [This would be incorporated into the zoning provisions related to open space residential development, see above.] The Commission could provide long range Town oversight to insure that the affordable units continue to serve their designated purpose.
6. Through bonding and other financing strategies, purchase and renovate existing structures to meet local housing needs, lease or sell them with protections against market inflation, and roll the proceeds over into a next effort.

7. Work cooperatively with Charlton residents to increase residential options, for example helping seniors who live alone to find housemates or tenants.
8. Prompt community consideration of whether and how to gain funding for Charlton's housing efforts through a portion of proceeds from a real estate transfer tax and/or surcharge on property taxes. [See also OS&R strategy G.]

Strategy D: Consider limiting the number of new housing permits per calendar year.

Strategy E: Identify water resource watershed areas and consider ways to exclude or minimize development in those areas.

Strategy F: Consider incentives for age over 55 subdivisions. Reduce real estate taxes for qualified owner-occupied residential property at owner age 65 or over .

Strategy G: Identify and consider adopting ways to require developers to bear some of the costs associated with their development, such as improved roads that lead to the development.

Strategy H: Reconsider subdivision requirements to make them realistic, and then strictly enforce them.

D. Economic Development

Goal ED1: Achieve a range of business activity in Charlton that offers a range of benefits to the community, including employment opportunities, convenient sources of goods and services, and net tax revenue for the Town.

Goal ED2: Locate business development where it will serve different market opportunities in ways that maximize benefits while minimizing negative impacts.

Goal ED3: Encourage desired economic development by promoting Charlton as a good place to do business.

Goal ED4: Increase the business tax base to comprise a greater percentage of Charlton's total tax base.

Strategies to achieve these goals:

Strategy A: Locate business aimed at a regional market along Route 20 and -- to a more limited extent -- along Route 169. Wherever possible serve these larger scale, higher assessed value developments with public sewer and water systems.

Options include:

1. Consider rezoning the western portion of Route 20 to allow for location of Industry/Business along this major access highway.

2. Continue to upgrade infrastructure as needed to support desired business development and also to address contamination issues.
3. Create an inventory of available sites for future business development.
4. Monitor commercial growth to anticipate corresponding loads on the environment, water supply, sewer availability, gas power and road designs.

Strategy B: Locate small scale neighborhood businesses where they are convenient to -- and contribute vitality to -- the village centers.

Options include:

1. Consider increasing the number of “neighborhood business zones” in connection with existing villages.

Strategy C: Work with the business community to identify ways that Town regulations and administration can be more effective in permitting desirable business development while avoiding negative development impacts.

Options include:

1. Consider refining ‘Allowed Uses’ section in Industrial Park (IP) Zoning Bylaws to reflect more contemporary and acceptable uses.
2. Consider refining the Definitions section of our Zoning Bylaws to reflect current terminology and practices.
3. Evaluate zoning violations to monitor occurrence of procedural weaknesses.

Strategy D: Consider ways to increase Charlton's capacity to carry out a locally-led economic development program.

Options include:

1. Consider establishing an Economic Development Corporation.
2. Consider creating a town-owned Business Incubator Park.

Strategy E: Increase the impact of Charlton's economic development efforts through active engagement with the economic development community.

Options include:

1. Institute a cooperative effort by the Economic Development Director, Planning Director, and Town Administrator to promote Charlton as a regional player in technological / commercial development.
 - a. Capitalize on strengths of our work force.
 - b. Emphasize our convenience to major highways, cities and multiple airports.

2. Maintain close working relationship with major industries in town to track developments in industry.
 - a. Periodically survey owner / CEO's of ten leading industries e.g. Karl Storz, Masonic Home, U.S. Gen, L& P Converter, Fallon Medical Clinic, Town of Charlton, Genzyme Transgenics, Incom, M.C.I., Massachusetts Turnpike Authority Service Areas.
 - b. Regular participation of EDC Director and town administrators at C.A.F.A., Tri-Community Chamber of Commerce, and Mass. Office of Business Development seminars and meetings.
 - c. Gain membership in state / local / regional business organizations.

E. Natural & Cultural Resources

Goal NCR1: Protect Charlton's water resources by addressing pollution problems and avoiding new degradation.

Goal NCR2: Preserve critical masses of wildlife habitat, to include greenway corridors.

Goal NCR3: Preserve open land and scenic vistas.

Goal NCR4: Preserve historical features, including buildings, cemeteries, monuments, and archeological sites.

Strategies to achieve these goals:

Strategy A: Authorize the Land Trust to spearhead land acquisition and preservation on behalf of the Town, and provide local support for their efforts.

Options for the Land Trust include:

1. Cooperate with the Conservation Commission to gain information and technical assistance so that the Town can conserve as many resource areas as possible through state and local regulatory processes.
2. Work with the regional and state land trust community to gain information, technical assistance, and financial resources for Charlton's local land preservation efforts.
3. Initiate conversations with owners of parcels in resource areas regarding alternatives open to them other than sale of their property in the real estate market. Make sure landowners are aware of the tax advantages and other benefits of land conservation, limited development, estate planning, and related matters.
4. Gather and make available to officials and other townspeople information regarding land preservation options. Begin by explaining Chapter 61 and the mechanics of exercising the Town's time-limited option to buy when the landowner chooses to leave the Chapter 61 program and offer the land for sale. Assist the Town to prepare for this contingency.

5. Serve as a long term custodian of lands conserved through Town efforts, for example dedicated open space from open space residential developments.
6. Establish better cataloging of resources, identification and monitoring of resources.
7. Spearhead the drafting and implementation of a preservation plan. Using federal funds the Mass Historical Commission provides funds for a wide range of preservation activities.

Strategy B: Compare the information gained through new and updated resource maps [see Land Use Strategy E] with the Town's current regulations and land uses. Consider whether and how Town regulations and their administration need to be improved so as achieve better protection of natural and cultural resources.

Strategy C: Consider adopting a Town Wetlands Bylaw to protect resources and avoid problems not sufficiently addressed through state regulations.

Strategy D: Consider ridge line or elevation protection through restricting development above a certain elevation.

Strategy E: Begin discussions in each of the 5 villages regarding the characteristics that each village's residents, businesses, and property owners value about their village. Also discuss improvements that each village would like to see. Consider whether and how sidewalk and streetscape improvements, a local historic district, new development and redevelopment, and other changes might help achieve the future desired by residents, businesses, and property owners.

Strategy F: Support an on-going regional planning effort with nearby towns to determine whether and how to protect potential water supplies such as Buffum Reservoir as possible future supply for a regional water system.

Strategy G: Increase public awareness of local scenic and historic resources by creating a plaque program and publishing a brochure identifying the town's special resources.

Strategy H: Establish a part-time Community preservation position to aid in the above, work with all relevant boards such as the Land Trust Committee, and to seek state and federal funding for resource protection. Such a position would provide balance in the future development of Charlton.

F. Open Space & Recreation

Goal OS&R1: Protect Charlton's valuable open space resources for passive recreational and preservation purposes.

Goal OS&R2: Protect Charlton's water resources for health and recreational purposes.

Goal OS&R3: Provide adequate active recreational facilities and programs for all residents of Charlton.

Housing strategy B.3 & 4
Transportation & Circulation strategy H
[Town-wide sidewalk/trail/path system]
Natural & Cultural Resources strategy A [Land Trust]

Goal OS&R4: Adopt and implement an Open Space & Recreation Acquisition and Management Plan to promote maintenance and use standards for town owned land, set usage goals for parcels with clear open space or recreational value, and strategically target for acquisition parcels, portions of parcels, development rights, and easements.

Goal OS&R 5: Increase public access to and use of open space lands.

Goal OS&R 6: Consider amending the zoning bylaws to create an Open Space Overlay Zoning District that restricts development activities within designated corridors to preserve wildlife habitats, greenway corridors, and other linkage of open space resources and recreational lands.

Goal OS&R 7: Establish a standard signage system, map, and guide book to identify open space and recreation sites and their access points.

Goal OS&R 8: Institute an assertive land acquisition program, seeking out funding sources other than the annual Town budget.

Goal OS&R 9: Consider amending the zoning bylaw to include a provision for the Transfer of Development Rights to conserve open space resources as part of the development process.

Goal OS&R 10: Strive for at least 25% of the Charlton's land base to be permanently protected open space.

Strategies to achieve these goals:

Strategy A: Commission a Land Trust Committee that will:

1. Evaluate each parcel of Town owned property / tax title property, and advise the appropriate Town board whether the property meets certain criteria, such as open space, corridor, recreation, aquifer, or wetland.
2. Only after review of this LTC could any parcel be put up for sale/auction.
3. All proceeds from land sale auctions should be placed into the Land Trust Fund, for use only to purchase other target parcels of land.

4. Encourage and promote residents or land owners to donate scenic, conservation, and/or access easements or parcels to the Land Trust.
5. Establish a ten minute walk from any residential property to open space as a criteria for selecting sites for acquisition.
6. Locate and acquire parcels of land for recreational development in areas of Town that are underserved.
7. Seek adequate funding from the Town and other sources for site evaluation and design for recreational uses.
9. Make recommendations to the Board of Selectmen when Chapter 61 land is offered for sale.

Strategy B: Introduce a signage program and acquire easements and right-of-ways to increase the public's opportunity to access and use publicly available open space and recreation lands. Create incentives for private landowners to grant access to or through their land to assist the Town to create a network of trails and access routes linking open space and recreational lands. Work to alleviate the problems of litter, vandalism, and liability that trouble landowners.

Strategy C: Pursue Agricultural Preservation Restriction ["APR"] measures to preserve high priority agricultural land.

Strategy D: Integrate open space priorities with other issues through coordination of the Master Plan and the Open Space and Recreation Plan.

Strategy E: Through sewer extensions and/or alternative treatment technologies mitigate septic pollution of water bodies.

Strategy F: Work with all Town study and building committees to gain additional recreational facilities wherever possible as part of the development or renovation of Town facilities.

Strategy G: Consider adopting a local real estate transfer sales tax and/or property tax surcharge to fund open space acquisition and preservation (including the development of land for recreational use and to acquire open space, recreational land, conservation land, land for public drinking water supplies, bicycling and walking trails). [See also Housing strategy C.8.]

Strategy H: Carry out discussions among the business community, conservation and recreation advocates, and landowners regarding how a Transfer of Development Rights zoning provision might be designed to increase the attractiveness of investing in development in areas where it is desired by the town, while at the same time removing pressures to develop areas that are desirable for conservation and recreation.

G. Transportation & Circulation

Goal T&C1: Strike a balance between roadway maintenance and improvements for safety, and scenic rural roadway character.

Goal T&C2: Cluster heavy traffic generators where they can be served by existing major roadways.

Goal T&C3: Increase townspeople's opportunities to walk and bicycle safely about Charlton.

Goal T&C4: Periodically review which roads in Charlton should be priorities for repaving, repairing, and maintaining, following the recommendations of the Central Massachusetts Regional Planning Commission's Preliminary Local Pavement Management Study for the Town of Charlton, Massachusetts, January 1999.

Strategies to achieve these goals:

Strategy A: As part of Economic Development strategy A [regional business along Route 20 and some areas of Routes 169 and 31], require landscape buffering between roadways and major economic development.

Strategy B: Consider increasing the required distance separating driveways on state roads, allowing increased flexibility in mixed use zones.

Strategy C: Consider how to improve the Town's regulations and administration relating to parking so as to minimize curb cuts and paved surfaces while improving the safety, appearance, and viability of roadways and villages.

Options include:

1. Require that on-site parking for new development be placed to the sides or rear.
2. Encourage adjacent uses to share parking facilities.
3. Require bicycle parking.
4. Lower or eliminate the number of required parking spaces in self-sufficient mixed uses areas such as villages.

Strategy D: Renovate roadways to address both pedestrian and vehicular safety concerns, while still respecting Charlton's scenic roadway features. Construct new highways or widen existing roads only where all other alternatives have been demonstrated to be ineffective or unfeasible.

Strategy E: Maintain and repair secondary roads and local roads taking into account drainage and subgrading in compliance with State/ EPA wetlands/stormwater policies.

Options include:

1. Consider following the guidelines outlined in the Central Massachusetts Regional Planning Commission's Preliminary Local Pavement Management Study for the Town of Charlton, Massachusetts, January 1999.

2. Consider prioritizing roadway management based on roads that are in existing villages, proposed greenbelts (open space), and proposed commercial areas, using rating in CMRPC's Pavement Management Study as a guide.

Strategy F: Install appropriate warning and right of way signs to mitigate the safety hazards of local roadways' poor visibility, terrain, and angles of approach.

Strategy G: Consider requiring a driveway permit for all construction. This allows the permitting authority [often the Board of Selectmen] to examine whether the least damage necessary will occur to trees, stone walls, and other scenic features.

Strategy H: Incorporate a town-wide sidewalk/path/trail system into open space and recreation plans and acquisitions.

Strategy I: To facilitate use of the existing rail line, consider redesignating Center Depot Road as Route 31A to provide direct access from the Depot to Route 20. This will likely involve improving some connector roads, with the need to set aside land before the potential routes are developed.

Strategy J: Work with the Worcester Regional Transit Authority to consider establishing a cost-effective commuter/shuttle bus service to transport Charlton residents to Worcester.

Strategy K: Carefully consider the advantages and drawbacks of creating an east/west connector in the southern portion of town, taking into account the Land Use Concept Map.

Strategy L: Include a traffic impact assessment and proposed mitigation measures as part of the information required of an applicant for permits relating to a large scale development.

H. Town Services and Facilities

Goal TS&F1: Maintain, expand and improve Town Buildings so as to provide quality services in accessible, safe, efficient, and well-maintained facilities.

Goal TS&F2: Improve and expand Town services and government to keep pace with Charlton's growing population.

Goal TS&F3 Continue to improve and expand sewer and water systems in ways that support the goals and strategies of other elements of the Master Plan.

Goal TS&F4: Provide communication links throughout Town Departments including: Police, Fire, Town Hall, Highway, Library, Elderly Services, and Emergency Management Services.

Goal TS&F5: Maintain Charlton's high standards for education. Provide Adult Education courses to meet future employment requirements.

Strategies to achieve these goals:

Strategy A: Inventory and map all Town-owned properties, including both parcels with buildings and other facilities, and undeveloped land.

Strategy B: Maintain an on-going capital improvement planning process to upgrade Town facilities in a timely, budgeted fashion. Include the identification and acquisition of parcels needed for new facilities. Consider funding this at least in part through a Capital Expenditures line item in the annual budget.

Strategy C: Plan and implement extensions of water and sewer systems so as to support desired development and mitigate current pollution problems, while avoiding encouragement of undesired development. Continue to identify and monitor specific contaminants and seek solutions through local and Federal grants. Encourage the preservation of Water Supply Areas and aquifers.

Strategy D: Monitor evolving technologies and state regulations relating to alternative sewage treatment technologies. Make use of these as appropriate to mitigate impacts on natural resources.

Strategy E: Consider forming a consolidated Department of Public Works to achieve greater efficiency and economies of scale.

Strategy F: Consider a town-wide single hauler garbage collection system.

Strategy G: Consider funding a position for an Animal Control Officer.

Strategy H: Continue to support elderly services through the Council on Aging.

Strategy I: Consider encouraging the Charlton business community to form a Charlton Welcoming Committee.

Strategy J: Assure completion of capping the Landfill, as required by the DEP.

Strategy K: Inventory energy sources that are potentially available to Charlton, and assess the options for increasing local use of lower cost, environmentally friendly energy.

Strategy L: Continue Hazardous Waste Days on a regular basis.

The table starting on the following page (Action Chart) identifies responsibility and assigns relative priority for all strategies.

I. Action Chart: Implementing Our Strategies

[showing relative priority assigned by participants in the June 24, 2000, Forum]

Each entity (Board, Commission, etc.) listed to initiate and monitor progress should report their progress to the Town on an annual basis.

ID#	Strategy	Who Initiate & Monitor Progress?	Who Else Involved?	Relative Priority
LU. A	Investigate options to protect the Town's lakes from potential environmental problems associated with increased development.	Planning Board	Conservation Commission Board of Health	
LU. B	Review the Zoning Bylaw's definitions, allowed uses, review processes, and district boundaries to better accommodate commercial and industrial development while protecting the interests of the Town of Charlton.	Planning Board	Economic Devel. Commission Business Community	Highest Priority
LU. C	Convene an All-Boards meeting twice a year to consider policy and coordination issues, and to discuss anticipated development applications. Include in these discussions consideration of the Master Plan's policy guidance.	Board of Selectmen	Planning Board Other Town Boards	
LU. D	Generate and update as necessary a Development Review Manual that outlines the Town's procedures for reviewing and acting on applications for development-related permits.	Planning Board	Other review & permitting boards Economic Devel. Commission Business Community	
LU. E	Compile and continuously update a system of overlay maps that make available to Town decision-makers the most complete and accurate information regarding natural and cultural resources (including wetlands, aquifer recharge areas, and critical wildlife habitats), soils, topography, property boundaries, infrastructure, location and use of buildings, and other data that will provide the information needed to make good decisions.	Planning Board	Board of Selectmen Conservation Commission	

ID#	Strategy	Who Initiate & Monitor Progress?	Who Else Involved?	Relative Priority
LU. F	Work to coordinate Charlton's land use with neighboring towns.	Planning Board	Board of Selectmen	
LU. G	Urge all members of review & permitting boards to attend training sessions on matters applicable to the Board (i.e. variances), perhaps through the Citizen Planner Training Collaborative program.	Board of Selectmen	All Town boards	
LU. H	Keep permit fees current (up-to-date) to offset administrative costs.	Planning Board	Board of Selectmen	
LU. I	Encourage greater use of consultant review fees to provide for the assessment of environmental issues.	Planning Board		
LU. J	Consider enacting a wetlands bylaw to be more restrictive and protective than the state's wetlands and rivers protection statutes.	Conservation Comm.	Planning Board	High Priority
LU. K	Consider appropriate environmental restrictions and protections within aquifer recharge areas.	Planning Board Conservation Commission		
LU. L	Consider including local environmental impact assessments as part of a Special Permit process for large-scale developments.	Planning Board	Economic Devel. Commission Business Community	
LU. M	Consider amendments to the Subdivision Regulations to reduce the required paved width of new roads to reduce maintenance costs and to protect rural character.	Planning Board	Town/Highway Engineer Economic Devel. Commission Business Community	
LU. N	Improve regulation of "major residential developments" through a more complete review and permitting process, for example to include the environmental impact assessment recommended by <u>Strategy K</u> , above.	Planning Board	Economic Devel. Commission Business Community	Priority

ID#	Strategy	Who Initiate & Monitor Progress?	Who Else Involved?	Relative Priority
LU. O	To help lessen the impact of growth, consider adopting an annual limit on the number of building permits issued, and/or a phased growth bylaw -- perhaps in conjunction with a point system that encourages flexible, sensitive site plans and other desirable types of development.	Planning Board	Economic Devel. Commission Business Community	Highest Priority
LU. P	Consider increased minimum lot sizes in areas with environmental constraints or in special resource areas.	Planning Board	Conservation Commission	High Priority
LU. Q	Support state legislation that would assist local communities in dealing with growth, for example impact fee legislation, changes to ANR regulations, and options for land bank funding of cultural and natural resource preservation. When such state legislation is enacted, act promptly to consider how to upgrade local land use regulations to take advantage of new options.	Board of Selectmen	Planning Board	
LU. R	Consider zoning amendments to allow development of a single house on large lots with little frontage.	Planning Board	Zoning Board of Appeals	Priority
LU. S	Amend the Zoning Bylaw to address changing trends in land uses, for example to accommodate home occupations, assisted living facilities, e-commerce, changes and potential increases in commercial and industrial development.	Planning Board	Economic Devel. Commission Business Community	
H. A	Consider amending Flexible Development zoning provisions to require or encourage flexible subdivision site plans that conserve usable open space and natural resource areas as part of the residential development process.	Planning Board	Conservation Commission Economic Devel. Commission Business Community	Priority
H. B	Manage development and redevelopment in the villages in a manner that contributes to their vitality, increases the range of housing choice they offer, and improves the daily quality of life in the villages.	Planning Board	Conservation Commission new Housing Commission [see H-C]	

ID#	Strategy	Who Initiate & Monitor Progress?	Who Else Involved?	Relative Priority
H. C	Activate a Charlton Housing Commission with a local mandate to work over time for at least 5% of Charlton's housing units to be protected from market inflation. Include in the Housing Commission's mandate also to increase the variety of market rate housing so as to meet a broader range of needs and preferences.	Board of Selectmen	Planning Board	
H. D	Consider limiting the number of new housing permits per calendar year.	Planning Board	Building Inspector	Highest Priority
H. E	Identify water resource watershed areas and consider ways to exclude or minimize development in those areas.	Planning Board	Conservation Commission	
H. F	Consider incentives for age over 55 subdivisions. Reduce real estate taxes for qualified owner-occupied residential property at owner age 65 or over.	Planning Board	Board of Assessors	High Priority
H. G	Identify and consider adopting ways to require developers to bear some of the costs associated with their development, such as improved roads that lead to the development.	Planning Board	Economic Devel. Commission Business Community	
H. H	Reconsider subdivision requirements to make them realistic, and then strictly enforce them.	Planning Board	Town/Highway Engineer Economic Devel. Commission Business Community	Priority
ED. A	Locate business aimed at a regional market along Route 20 and -- to a more limited extent -- along Route 169. Wherever possible serve these larger scale, higher assessed value developments with public sewer and water systems.	Planning Board	Economic Devel. Commission Business Community	Highest Priority
ED. B	Locate small scale neighborhood businesses where they are convenient to -- and contribute vitality to -- the village centers.	Planning Board	Economic Devel. Commission Business Community	Priority

ID#	Strategy	Who Initiate & Monitor Progress?	Who Else Involved?	Relative Priority
ED. C	Work with the business community to identify ways that Town regulations and administration can be more effective in permitting desirable business development while avoiding negative development impacts.	Planning Board	Economic Devel. Commission Business Community	High Priority
ED. D	Consider ways to increase Charlton's capacity to carry out a locally-led economic development program.	Board of Selectmen	Economic Devel. Commission Business Community	
ED. E	Increase the impact of Charlton's economic development efforts through active engagement with the economic development community.	Board of Selectmen	Economic Devel. Commission Business Community	Priority
NCR. A	Authorize the Land Trust to spearhead land acquisition and preservation on behalf of the Town, and provide local support for their efforts.	Board of Selectmen	Planning Board Conservation Commission	Highest Priority
NCR. B	Compare the information gained through new & updated resource maps [see LU-E] with the Town's current regulations and land uses. Consider whether and how Town regulations and their administration need to be improved so as achieve better protection of natural and cultural resources.	Planning Board Conservation Commission	Board of Health Historical Commission . Board of Selectmen	
NCR. C	Consider adopting a Town Wetlands Bylaw to protect resources and avoid problems not sufficiently addressed through state regulations.	Conservation Commission	Planning Board	High Priority
NCR. D	Consider ridge line or elevation protection through restricting development above a certain elevation.	Planning Board	Historical Commission Building Commissioner	

ID#	Strategy	Who Initiate & Monitor Progress?	Who Else Involved?	Relative Priority
NCR. E	Begin discussions in each of the 5 villages regarding the characteristics that each village's residents, businesses, and property owners value about their village. Also discuss improvements that each village would like to see. Consider whether and how sidewalk and streetscape improvements, a local historic district, new development and redevelopment, and other changes might help achieve the future desired by residents, businesses, and property owners.	Planning Board	Neighborhood Communities Town/Highway Engineer Historical Society Charlton Garden Club	Priority
NCR. F	Support an on-going regional planning effort with nearby towns to determine whether and how to protect potential water supplies such as Buffum Reservoir as possible future supplies for a regional water system.	Planning Board	Board of Selectmen	
NCR. G	Increase public awareness of local scenic and historic resources by creating a plaque program and publishing a brochure identifying the town's special resources.	Historical Commission	Historical Society	
NCR. H	Establish a part-time Community preservation position to aid in the above, work with all relevant boards such as the Land Trust Committee, and to seek state and federal funding for resource protection. Such a position would provide balance in the future development of Charlton.	Board of Selectmen	Conservation Commission Planning Board Land Trust Committee	
OSR. A	Commission a Land Trust Committee.	Board of Selectmen	Conservation Commission Planning Board	Highest Priority

ID#	Strategy	Who Initiate & Monitor Progress?	Who Else Involved?	Relative Priority
OSR. B	Introduce a signage program and acquire easements and right-of-ways to increase the public's opportunity to access and use publicly available open space and recreation lands. Create incentives for private landowners to grant access to or through their land to assist the Town to create a network of trails and access routes linking open space and recreational lands. Work to alleviate the problems of litter, vandalism, and liability that trouble landowners.	Conservation Commission	Board of Selectmen Planning Board Town/Highway Engineer Recreation Commission	
OSR. C	Pursue Agricultural Preservation Restriction ["APR"] measures to preserve high priority agricultural land.	Board of Selectmen	Planning Board	High Priority
OSR. D	Integrate open space priorities with other issues through coordination of the Master Plan and the Open Space and Recreation Plan.	Planning Board	Other Town Boards Recreation Commission Conservation Commission	Priority
OSR. E	Through sewer extensions and/or alternative treatment technologies mitigate septic pollution of water bodies.	Board of Selectmen	Board of Health Sewer Commission Water Commission	
OSR. F	Work with all Town study and building committees to gain additional recreational facilities wherever possible as part of the development or renovation of Town facilities.	Board of Selectmen	Planning Board Recreation Commission	
OSR. G	Consider adopting a local real estate transfer sales tax and/or property tax surcharge to fund open space acquisition and preservation (including the development of land for recreational use and to acquire open space, recreational land, conservation land, land for public drinking water supplies, bicycling and walking trails). [See also Housing strategy C.8.]	Board of Selectmen	Finance Committee Planning Board Conservation Commission Board of Assessors	Highest Priority

ID#	Strategy	Who Initiate & Monitor Progress?	Who Else Involved?	Relative Priority
OSR. H	Carry out discussions among the business community, conservation and recreation advocates, and landowners regarding how a Transfer of Development Rights zoning provision might be designed to increase the attractiveness of investing in development in areas where it is desired by the town, while at the same time removing pressures to develop areas that are desirable for conservation and recreation.	Planning Board	Economic Devel. Commission Business Community Conservation Commission Recreation Commission Recreation and conservation advocates	High Priority
T&C. A	As part of Economic Development strategy A [regional business along Route 20 and some areas of Routes 169 and 31], require landscape buffering between roadways and major economic development.	Planning Board	Economic Devel Commission Business Community	High Priority
T&C. B	Consider increasing the required distance separating driveways on state roads, allowing increased flexibility in mixed use zones.	Planning Board	Town/Highway Engineer Police Chief	
T&C. C	Consider how to improve the Town's regulations and administration relating to parking so as to minimize curb cuts and paved surfaces while improving the safety, appearance, and viability of roadways and villages.	Planning Board	Police Chief Town/Highway Engineer	
T&C. D	Renovate roadways to address both pedestrian and vehicular safety concerns, while still respecting Charlton's scenic roadway features. Construct new highways or widen existing roads only where all other alternatives have been demonstrated to be ineffective or unfeasible.	Board of Selectmen	Town/Highway Engineer Planning Board	Priority
T&C. E	Maintain and repair secondary roads and local roads taking into account drainage and subgrading in compliance with State/EPA wetlands/stormwater policies.	Town/ Highway Eng	Planning Board Board of Selectmen	Highest Priority

ID#	Strategy	Who Initiate & Monitor Progress?	Who Else Involved?	Relative Priority
T&C. F	Install appropriate warning and right of way signs to mitigate the safety hazards of local roadways' poor visibility, terrain, and angles of approach.	Town/ Highway Eng		
T&C. G	Consider updating current driveway bylaws & permit regulations to require a driveway permit for all construction. This would allow the permitting authority [the Board of Selectmen] to examine whether the least damage necessary will occur to trees, stone walls, and other scenic features.	Board of Selectmen	Planning Board Historic Commission Town/Highway Engineer	
T&C. H	Incorporate a town-wide sidewalk/path/trail system into open space and recreation plans and acquisitions.	Conservation Commission	Planning Board Board of Selectmen Town/Highway Engineer	Priority
T&C. I	To facilitate use of the existing rail line, consider redesignating Center Depot Road as Route 31A to provide direct access from the Depot to Route 20. This will likely involve improving some connector roads, with the need to set aside land before the potential routes are developed.	Board of Selectmen	Mass. Highway Department Planning Board Town/Highway Engineer	
T&C. J	Work with the Worcester Regional Transit Authority to consider establishing commuter/shuttle bus service to transport Charlton residents to Worcester.	Board of Selectmen	Business Community WRTA	High Priority
T&C. K	Carefully consider the advantages and drawbacks of creating an east/west connector in the southern portion of town, taking into account the Land Use Concept Map.	Planning Board	Town/Highway Engineer Board of Selectmen	
T&C. L	Include a traffic impact assessment and proposed mitigation measures as part of the information required of an applicant for permits relating to a large scale development.	Planning Board	Economic Devel. Commission Business Community Town/Highway Engineer Mass. Highway Department	

ID#	Strategy	Who Initiate & Monitor Progress?	Who Else Involved?	Relative Priority
TS &F. A	Inventory and map all Town-owned properties, including both parcels with buildings and other facilities, and undeveloped land.	Board of Selectmen	Board of Assessors Other Town Boards	
TS &F. B	Maintain an on-going capital improvement planning process to upgrade Town facilities in a timely, budgeted fashion. Include the identification and acquisition of parcels needed for new facilities. Consider funding this at least in part through a Capital Expenditures line item in the annual budget.	Board of Selectmen	Finance Committee All Town Boards with capital needs	Highest Priority
TS &F. C	Plan and implement extensions of water and sewer systems so as to support desired development and mitigate current pollution problems, while avoiding encouragement of undesired development. Continue to identify and monitor specific contaminants and seek solutions through local and Federal grants. Encourage the preservation of Water Supply Areas and aquifers.	Board of Selectmen	Planning Board Conservation Commission Water Commission Sewer Commission Board of Health	Highest Priority
TS &F. D	Monitor evolving technologies and state regulations relating to alternative sewage treatment technologies. Make use of these as appropriate to mitigate impacts on natural resources.	Board of Health	Planning Board Conservation Commission	
TS &F. E	Consider forming a consolidated Department of Public Works to achieve greater efficiency and economies of scale.	Board of Selectmen	Town/Highway Engineer Recreation Commission Cemetery Commission	
TS &F. F	Consider a town-wide single hauler garbage collection system.	Board of Selectmen	Board of Health Hazardous Waste Comm	High Priority
TS &F. G	Consider funding a position for an Animal Control Officer.	Board of Selectmen	Board of Health Chief of Police	
TS &F. H	Continue to support elderly services through the Council on Aging.	Board of Selectmen	Council on Aging	

ID#	Strategy	Who Initiate & Monitor Progress?	Who Else Involved?	Relative Priority
TS &F. I	Consider encouraging the Charlton business community to form a Charlton Welcoming Committee.	Board of Selectmen	Neighborhood Groups Town Boards or Departments with info. to share	
TS &F. J	Assure completion of capping the Landfill, as required by the DEP.	Board of Selectmen	Board of Health Town/Highway Engineer	Priority
TS &F. K	Inventory energy sources that are potentially available to Charlton, and assess the options for increasing local use of lower cost, environmentally friendly energy.	Board of Selectmen	Conservation Commission Board of Health	
TS &F. L	Continue Hazardous Waste Days on a regular basis.	Board of Selectmen	Hazardous Waste Comm Town/Highway Engineer	

J. Concluding Statement

This Master Plan for the Town of Charlton is intended to be a living document, and should be updated and revised as time elapses and as the situations demand (with a goal of updating at least every five years). The Plan is advisory in nature and was prepared based on the most up-to-date data available at the time it was written. This Master Plan will only be a success if the implementation and strategies are carried out according to the priorities and schedule presented. The Master Plan Committee, as a final recommendation, urges the Charlton Planning Board to appoint a subcommittee given the responsibility to oversee the Implementation process.

Appendices

Appendix A: Resident Survey Data Analysis

Appendix B: Buildout Methodology

Appendix C: Sewer Extension Details

Appendix D. Charlton Roadway Management Study Data

Appendix A: Resident Survey Data Analysis

1. Why do you live in Charlton?

Rural character	39.5%
Low taxes	17%
Convenience to work	14.7%
School reputation	13.96%
Other (born here, etc.)	12.8%
Affordable housing	1.9%.

2. Do you own or rent your home?

Own	89.7%
Rent	7.4%
Other	2.9%

3. How many people are in your home?

1	2	3	4	5	6	7	8	9
11.9%	5.2%	29.8%	36.7%	12.9%	2.5%	0.8%	0.0%	0.1%

also:

	Yes	No
Are there children under 18?	51.2%	48.8%
Are there persons over 60?	70.8%	29.2%

4. In which communities do members of your household work?

Charlton	22.7%
Worcester	31.3%
Other	45.4%

(48.7% of a household work in the same city, 46.1% of the same household work in 2 different cities, 5.3% work in 3 different cities).

5. How long have you lived in town?

Less than five years	19%
Five to ten years	17.3%
Between ten and twenty years	25.5%
Between twenty and thirty years	14.2%
Over thirty years	24.1%

6. How old are you?

Less than 18 years old	0.1%
Between 18 and 30 years old	7.2%
Between 30 and 45	46.3%
Between 45 and 60	27.5%
Over 60 years of age	18.9%

7. Do you think the Town of Charlton should:

Have some industrial and commercial development, but be mostly residential	35.1%
Become a major retail and commercial center, mostly along Route 20	12.3%
Have a substantial industrial and manufacturing component	7.9%
Be mostly residential, a “bedroom community	11.4%
Residential and agricultural, with commercial areas serving local needs	33.3%

8. Since 1990, about 80 building permits have been issued the Town each year. Do you think the rate (or number of houses built each year) of residential growth has been:

Too fast	65%
About right	25.6%
Not fast enough	1.6%
Undecided	7.8%

9. Would you support any of the following to control residential growth?

Actions to Control Residential Growth	Yes	No	Don't Know
Tie residential growth to available infrastructure and services	69.5%	14.8%	15.7%
Specify how fast each subdivision can be built	58%	28.6%	15.2%
Limit the number of building permits per year	73.3%	17.8%	8.9%
Require larger house lots in unsewered areas	75.3%	14.9%	9.8%

10. What kind of housing does the Town need more of?

Type of Housing*	Yes	No	Don't Know
Affordable Single Family Houses?	59.8%	27.7%	12.4%
Elderly Housing?	54.9%	24.9%	20.2%
Affordable or Subsidized Elderly Housing?	54.2%	25.9%	19.9%
Apartments?	14.4%	75.8%	9.8%
In-Law Units in Existing Homes?	41.4%	33.6%	25%
Condos?	15%	75.2%	10.8%

*10% something other than the above

**11. Since 1990, has the rate of non-residential (other than homes) development been:
(check 1)**

About Right	Too Fast	Not Fast Enough	Don't Know
23.4%	22.2%	32.8%	21.6%

12. How do you think development along Rte 20 should occur in the future? (check 1)

It should be all non-residential and along the length of the road	13.6%
It should be non-residential and concentrated at intersections with larger Town roads	8.4%
It should be at intersections, but both residential and non-residential	2.5%
It doesn't matter what it looks like; we need all the nonresidential development we can get	3.2%
Route 20 is an incredible opportunity for the community; we should go slow and carefully plan it	69.4%
Don't know	3.0%

13. Future development along Rtes 20 and 169 (Check all that apply).

Development should provide services, shopping, and entertainment for area residents	21.4%
Traffic and safety issues should be primary consideration	26.9%
Development can (and should) Provide job opportunities for Charlton residents	20.4%
Development should be attractive and consistent with Charlton's character	28.3%
Provided we get substantial property tax revenue, the other issues don't matter	2.9%

14. What kind of businesses and services does the Town need or need more of?

Type of Business	Yes	No	Don't Know
a. Office buildings?	40.9%	43.0%	21.5%
b. A shopping center or Mall?	39.2%	54.9%	5.9%
c. A large chain grocery store or supermarket?	70.5%	24.9%	4.6%
d. Movie Theater?	42.7%	47.5%	9.9%
e. Mixed use areas (shopping, offices, etc.)	61.5%	28.1%	10.5%
f. Buildings or places for small businesses?	67.5%	19.7%	10.5%
g. Fast-food outlets?	24.3%	70.8%	4.9%
h. "Sit-down" restaurants?	63.4%	26 0%	10.6%
i. Research and development ("high tech")	63.4%	24.5%	12.1%
j. Industry/ manufacturing/associated warehousing?	40.2%	47.3%	12.6%
k. Convenience stores ("Cumberland Farms")	27.7%	67.3%	5.0%
l. Medical/ professional buildings?	59.4%	25.1%	15.5%
m. Other	9.1%		

15. Does the Town have enough permanently preserved conservation, recreation , and open space?

Yes	No	Don't Know
20.1%	51.1%	28.8%.

16. What kinds of land should be preserved (rank top three choices).

Type of Land	1st Choice	2nd Choice	3rd Choice
Agricultural and farm land	19.2%	18.4%	17.9%
Forest and woodlands	21.9%	28.0%	24.7%
Greenbelts or landscaped buffer between developments, subdivisions, and major roads	12.3%	15.4%	20.5%
Lakefronts areas, land along streams, wetlands, and flood plain areas	21.4%	24.5%	22.3%
Water supply areas	25.5%	13.5%	12.7%
Other	0.7%	0.2%	0.2%

17. What open space preservation techniques should be used? (rank top three in order of preference).

Preservation Technique	1st Choice	2nd Choice	3rd Choice
Create an annual appropriation for land acquisition fund	26.4%	17.0%	17.5%
Establish a town real estate transfer tax (1% over \$100,000, paid by seller) to buy land	10.3%	12.7%	9.6%
Establish a town transfer of development rights system to preserve more sensitive areas	14.3%	19.2%	19.8%
Improve the Town's Flexible Development (cluster) bylaw so that it's used more often	10.7%	12.1%	14.9%
Buy land in partnership with conservation groups	26.0%	22.8%	21.4%
Require permanent open space in new subdivisions	12.4%	14.4%	16.7%

18. What should be the priority of the Town's road program?

Improve roads to increase vehicular and traffic safety	31.6%
Improve roads to increase pedestrian safety along roads	7.2%
Minimize road maintenance costs	0.5%
Preserving streetscapes and maximizing scenic features	12.4%
Trying to balance vehicular traffic, pedestrian safety, maintenance costs, and appearance	46.6%
Provide additional connector roads for greater access (such as Stafford St. or Oxford Rd.)	1.6%

19. Indicate your priority in funding the following projects. (1 = first priority up to 9 = least priority).

Project	PRIORITY								
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth
Acquire open space and conservation land	18.4%	11.9%	9.9%	11.5%	13.6%	12.0%	10.0%	11.6%	13.1%
Build a new fire station or build substations	8.1%	11.6%	13.2%	11.5%	13.5%	12.0%	13.9%	7.9%	8.1%
Build additions to schools or new schools	22.1%	9.2%	9.7%	9.1%	11.8%	8.1%	5.6%	8.4%	8.6%
Clean-up groundwater and contaminated wells	13.4%	16.4%	16.6%	16.2%	12.3%	9.2%	9.1%	6.2%	2.3%
Close and cap landfill	4.5%	8.3%	10.1%	11.6%	14.1%	13.0%	14.8%	13.9%	14.3%
Develop a municipal water system	9.8%	12.3%	8.1%	8.3%	12.1%	8.2%	12.9%	15.5%	11.2%
Develop additional recreation facilities	3.3%	7.3%	9.4%	13.2%	14.1%	15.6%	17.2%	13.2%	11.7%
Expand sewer system (beyond phase II)	12.5%	12.3%	9.5%	8.1%	8.4%	15.6%	5.6%	12.4%	17.6%
Expand the library	7.9%	10.7%	13.4%	12.9%	13.8%	13.6%	10.8%	10.9%	13.0%

20. What improvements or facilities should the town consider *other than* those listed above?

(384 responses)

21. Do you think the following would improve town government?

Type of Change/Improvement	Yes	No	Don't Know
Change to Town council form of government	22.8%	40.8%	36.3%
Change voting procedures in town meetings	30.7%	35.2%	34.0%
Create town administrator position and hire one	49.1%	27.4%	23.6%
Develop and adopt a town charter	41.4%	20.4%	38.2%
Find ways to involve more citizens in town government	77.8%	7.7%	14.5%
Increase the number of selectmen (selectpersons)	40.5%	40.5%	19.0%

22. How do you obtain information about what is going on in Charlton?

Attend meetings	8.8%
Charlton Gazette	22.7%
Southbridge News	11.8%
Telegram and Gazette	18.6%
Town cable channels 8 and 9	15.7%
Word of Mouth	20.6%
Other	1.8%

Appendix B: Buildout Methodology

The Central Massachusetts Regional Planning Commission (CMRPC) provided the first part of the buildout analysis data, and they used the following methodology:

Step 1: Update the 1985 land use coverage from a 1992 satellite image. Remove land already developed so that only vacant land is further analyzed.

Step 2: Remove land in protected open space categories.

Step 3: Remove land in flood plains, open water, wetlands, rivers and streams, and zone 1 of public wells. This yields raw land available for development.

Step 4: Create a slope coverage with the following slope classes:

- | | |
|----------|-----------|
| 1. 0-3% | 4. 12-25% |
| 2. 3-8% | 5. >25% |
| 3. 8-12% | |

Step 5: Determine the amount of vacant land available for development in each zoning district in each slope class. This data is shown in the table below:

District	Slope 1 (0 - 3%)	Slope 2 (3 - 8%)	Slope 3 (8 - 12%)	Slope 4 (12 - 25%)	Slope 5 (>25%)	Total
Agriculture	3,565	4,382	2,794	6,608	2,877	20,226
Neighborhood Business	1	405	20	18	-	444
Residential - Small Enterprise	2	605	20	86	13	726
Low Density Residential	439	9	265	739	287	1,739
Industrial Park	82	5	70	181	9	357
Community Business	30	48	53	79	15	225
Industrial General	147	81	31	129	167	555
TOTAL	4,266	5,545	3,253	7,840	3,368	24,272

[CMRPC buildouts]

From the data provided by CMRPC, the following assumptions were used to complete the build-out analysis:

- Only land with slopes greater than 25% would be considered unbuildable.
- An additional 5% of the remaining buildable land was subtracted to account for roads and their right-of-ways.

Using these assumptions, remaining buildable acres per district were calculated. Finally, using the required lot size for the applicable district, the number of house lots that could be created was calculated for residential districts. For commercial districts, only the total number of available acres was calculated. Please note that this methodology assumes that land in excess of zoning requirements on currently developed residential lots would eventually be developed.

Appendix C: Charlton Roadway Management Study Data

Road Name/ Route #	Functional Classification (FC)	Surface Type (SfTy)	Eligible for Federal Funds?	Pipeline Project?	Type of Repair	Benefit Value
Major Roads						
Mass Pike	Interstate	Bituminous concrete road	N/A	N/A	N/A	N/A
Route 20 - Sturbridge Road	Rural principal arterial and Urban extensions	Bituminous concrete road	N/A	N/A	N/A	N/A
Route 31 - Brookfield Road	Urban Minor arterial or Rural major collector	Surface-treated road	Yes	Yes (locally funded)	Reconstruct (partial)	75
Route 31 - Dudley Road/ Dresser Hill Road	Urban Minor arterial or Rural major collector	Bituminous concrete road	Yes	Yes (federally funded)	Mixed	37-58
Route 31 - Masonic Home Road	Urban Minor arterial or Rural major collector	Surface-treated road			None	0
Route 31 - New Spencer Road	Urban Minor arterial or Rural major collector	Surface-treated road			None	0
Route 31 - S. Sturbridge Road	Urban Minor arterial or Rural major collector	Surface-treated road		Yes (locally funded)	Reconstruction	55
Route 31 - City Depot Road	Urban Minor arterial or Rural major collector	Bituminous concrete road	Yes		Mostly Preventive	32
Route 169 - Southbridge Road	Rural principal arterial and Urban extensions	Bituminous concrete road	N/A.		N/A	N/A
Connector Roads						
Stafford Street	Urban Minor arterial or Rural major collector	Surface-treated road	Yes		Mostly Reconstruction	97-100
Oxford Road	Urban Minor arterial or Rural major collector	Surface-treated road	Yes		Mixed	57-95
Center Depot Road/ Depot Road	Urban Minor arterial or Rural major collector	Surface-treated road	Yes		Rehabilitation	63
Hammond Hill Road	Urban Collector or Rural Minor Collector	Bituminous concrete road			Reconstruction	143
Muggett Hill Road	Urban Minor arterial or Rural major collector	Surface- treated/ Bituminous Concrete	Yes	Yes (locally funded)	Reconstruction & Rehabilitation	75-106
Richardson Corner Road	Urban Collector or Rural Minor Collector	Surface-treated road			Routine	135
North Main Street	Urban Minor arterial or Rural major collector	Surface-treated road	Yes	Yes (locally funded)	Reconstruction	101

Road Name/ Route #	Functional Classification (FC)	Surface Type (SfTy)	Eligible for Federal Funds?	Pipeline Project?	Type of Repair	Benefit Value
Oxbow Road	Urban Collector or Rural Minor Collector/ Local	Surface-treated road			Reconstruction	60
Scenic Roads						
Buteau Road	Local	Surface-treated road			Rehabilitation	61
Cemetery Road	Local	Surface-treated road			Reconstruction	63
Gould Road	Local	Gravel or stone road			Mixed	0-67
Horne Homestead Rd	Local	Surface-treated road			Reconstruction	46
Jones Road	Local	Surface-treated road			Reconstruction	56-74
McIntyre Road	Local	Surface-treated road			Rehabilitation	55-56
North Sturbridge Rd	Local	Surface-treated road		Yes (locally funded)	Reconstruction (partial)	58
Smith Road	Local	Surface-treated road			None	0
Tucker Road	Local	Surface-treated road			Preventive	33
Wheelock Road	Local	Gravel or stone road			Regravel	33
Reference: Central Massachusetts Regional Planning Commission Pavement Management Study, January 1999			<u>Table 6.1 (p. 21)</u>	<u>Tables 3.1, 3.2 (p. 13)</u>	<u>Table 4.1 (p. 15-19)</u>	<u>Table 4.1 (p.15- 19)</u>

Appendix D: Sewer Extension Details

Phase 1 Cost Summary

- Total Project Cost --- \$9.2 million
 - MTA Share --- \$4.9 million
 - RECD Grant --- \$1.4 million
 - Town Share --- \$2.9 million

- Estimated Sewer Assessment Cost --- \$1,530 per EDU Lump Sum

- Annual Estimated Sewer User O&M Cost --- \$300

- Estimated Average Cost Per Service Connection --- \$15-\$20 per linear foot

- Estimated Tax Rate Impact --- \$0.39/\$1,000 A.V. (approx)

1994 & 1998 Phase 1 Cost Projections:

	<u>1994</u>	<u>1998</u>
Town's Share of Phase 1	\$2.82 million	\$2.9 million
MTA Share of Phase 1	\$4.18 million	\$4.98 million
Tax Rate Impact	\$0.06- \$0.50/\$1,000 A.V.	\$0.39/\$1,000 A.V.
Annual Cost of Betterment Assessment	\$231 - \$1,760	\$120

Phase 1 Survey

- Properties Visited 161
- Responses Received 99
- Satisfied with Construction 89%
- Most Common Problems Construction Inconveniences
- Lesson Learned Improve Communication

Results of Phase 2 Survey:

Most Frequent Responses in Favor

- Increases property value
- Allows for home sale/expansion
- Septic System may fail Title 5
- Protection of Watershed and Lake
- Minimizes Adverse health impacts
- Includes schools

Most Frequent Responses Against

- Onsite system passed Title 5, no need for sewers
- Financial Impacts are ambiguous
- Betterment fees, especially for large landowners not addressed
- Project scope is too big

What alternatives were considered?

- No action – do nothing
- Rehabilitation of on-site (septic) systems, including the use of innovative/alternative technologies
- Compost toilets with greywater systems
- Community septic/treatment systems
- Municipal sewers – both conventional and low pressure

How do the Phase 2 costs compare with other options?

- Phase 2 sewers: \$5,650
- Innovative/alternative systems: \$15,000 - \$30,000
- Compost toilet with greywater system: \$20,000 - \$25,000
- Septic system rehabilitation: \$3,000 - \$20,000

(Alternative systems = Any treatment or disposal system or component not contained in a conventional septic system)

What will Phase 2 cost?

- Total project cost = \$14 million
- Sewer assessment
- \$5,650 per EDU (if paid in one lump sum payment)
- \$280 per year (if financed with the Town over 20 years), or \$23 per month
- Tax increase
- \$0 if \$8 million of funding is used from power plant funds
- \$0.76/\$1,000 of assessed valuation if no power plant funds are used
- Cost of connecting your home/business to the sewer at your property line, approximately \$15-\$20/linear foot, unless ledge is encountered
- Annual user cost = \$300

What funding sources are available to the Town?

- Department of Environmental Protection (DEP), State Revolving Fund (SRF) 0% interest loans
- U.S. Generating Co. Funding- \$8 million
- Town taxpayers
- Sewer system abutters

Phase 2 – Wastewater Facilities

Sewer Length	90,000 ft
• No. of Pumping Stations	8
• No. of EDUs	933
• Total Project Cost	\$14 Million
• WWTP Expansion	150,000 to 450,000 gpd
• Equivalent Dwelling Unit (EDU)	200 gallons per day (3.2 persons/house x 65 gallons per person per day)

The estimated costs for wastewater treatment plant alternatives are presented in the following figure.