

## Acknowledgements

### PLANNING BOARD MEMBERSHIP

Henry Ellis, Chairman

John Canto

Carl Carlson

Burke Fountain

Marty Newfield

Richard McCarthy, Town Planner

Maureen McKenney, Administrative Assistant

### SELECTMEN

Donald L. McKinnon, Chairman

James B. DuPont,

Gordon Luciano

Town Administrator, Randall A. Buckner

### COMMITTEES

#### **Housing** - Carol Sullivan, Chair

Debbie McClory

Marie Smith

Mary Ellen Rochette

Marie Smith

Lenny Vintro

Clarence Mahoney

Carol Sullivan

#### **Transportation**

Martin Berry

Manuel Rocha

Gerry Houghton

Joyce Rodrigue

Dave Hutchinson

#### **Public Facilities** - Bob Newton, Chair

George Andrews

Arthur Bendinelli

Gregory Czahar

Frank Cabral, Jr.

Peter King

Bill Ward

#### **Open Space** - Steve Silva, Chair

Jim Ross

Martin Berry

Craig & Mary Carol Larzelere

Mark Ennis

James Burns

Tony Caputo

David Donahue

Bob Davis

Mary Ellen Rochette

Rob & Brenna Gimler

David Gould

Diane Baldi

#### **Historic/Cultural** - Dorothy Newton, Chair

Kathleen Roberts

Betsy Esters

Lou Pacheco

Brady Fitts

#### **Economic Development** - John Noblin, Chair

Victor DeSantis

Steve Rogers

Roy Cyr

Beatrice Scannell

David Stone

Carol Sullivan

Marie Smith

### TOWN DEPARTMENTS

**Appeals Board** – Robert D. Newton, Chair

**Assessor**, Maureen Monahan, Assistant

**B./R Regional School District**, R. Gerhard, Supt.

**Building Department**, Dennis Machado

**Cemetery Commission**, Calvin Ellis, Supt.

**Center Water District**, Bill Ward

**Collector of Taxes** – Barbara Gallagher

**Conservation Commission** – Judith Christine

**Council on Aging**, Joyce Rodrigue, Director

**Fire Department**, Chief Andrews

**Police Department**, Chief King

**North Water District**, Arthur Bendinelli

**Tax Collector**, Barbara Gallagher

**Town Clerk** – Helen Lounsbury

**Town Treasurer** – Robert P. Smith

**Highway Department**, Roger Stolte, Supt.

**Library Trustees**, Bob Newton

**Students**, Adam Crossman, Cheryl Cote

**TOWN OF RAYNHAM  
MASTER PLAN 2000  
A FRAMEWORK FOR TOMORROW**

**TABLE OF CONTENTS**

**INTRODUCTION  
EXECUTIVE SUMMARY  
*Concept/Vision Plan***

**PLAN ELEMENTS**

- 1. LAND USE**
- 2. HOUSING**
- 3. ECONOMIC DEVELOPMENT**
- 4. OPEN SPACE, NATURAL AND RECREATION RESOURCES**
- 5. HISTORIC AND CULTURAL RESOURCES**
- 6. PUBLIC FACILITIES AND SERVICES**
- 7. TRANSPORTATION**
- 8. IMPLEMENTATION**

## List of Maps

Executive Summary	Implementation Plan
	Existing Zoning
	Growth Management Strategy
	Economic Development Strategy
	Open Space Planning/Trails and Pathways
Map 1-1	Land Use
Map 1-2	Zoning
Map 1-3	Constraints on Development
Map 1-4	Developable Land by Zoning District
Map 1-5	Proposed Zoning
Map 3-1	Regional Map
Map 3-2	Route 138 Business Cluster/Local Retail
Map 4-1	Geological Features
Map 4-2	Watershed Features
Map 4-3	Surface Water and Groundwater Resources
Map 4-4	Floodplains and Wetlands
Map 4-5	Open Space Features
Map 4-6	Recreation Resources
Map 4-7	State and Local Aquifer Protection Districts
Map 4-8	Environmentally Sensitive Areas
Map 4-9	Priority Protection Zones
Map 4-10	Walking & Jogging Paths
Map 4-11	Bike Path
Map 5-1	Prehistoric sites
Map 5-2	Historic sites
Map 5-3	Cemeteries
Map 5-4	Scenic and Historic Roads
Map 5-5	Cultural/Historic Protection Priorities
Map 6-1	Public Facilities
Map 6-2	Sewer Plan, Sensitive Resource Areas, and Potential Growth
Map 7-0	Proposed Long-Range Transportation Plan
Map 7-1	Project Locations/Focus Areas Highlighted
Figure 7-2	Major Area Roadways
Figure 7-5	Existing Traffic Flows
Figure 7-6	Accidents Spot Map
Map 7-7	Potentially Dangerous Locations
Map 8-1	Proposed Zoning
Map 8-2	Growth Management Strategy
Map 8-3	Economic Development Strategy

# **TOWN OF RAYNHAM MASTER PLAN 2000 A FRAMEWORK FOR TOMORROW**

## **INTRODUCTION**

Raynham's last master plan was completed in 1982. Since that time the Town has experienced substantial growth in population (20%), in the number of new homes (40%), in the development of the Route 44 commercial corridor, and in a 65% increase in the consumption of land. The impacts of this growth upon the town's unique assets and possible loss of identity now necessitate the preparation of a revised Master Plan. A renewed focus by regional and State planning agencies on assisting localities manage growth reinforce the importance and desire to address these concerns.

Over the past 18 months the citizens of Raynham have participated in the preparation of their Master Plan. Six sub-committees were formed to address issues of open space, economic development, public facilities, housing, transportation, and historic resources. Citizens in both committee meetings as well as in open workshops have created the following:

**A Vision Concept Plan** which establishes the goals in shaping Raynham's growth including protecting and enhancing open space, natural and historic resources, facilitating desired residential, commercial and industrial development, and retaining and improving municipal facilities.

**Alternative strategies for managing growth** including the adoption of new zoning, management of an expanded wastewater system, improved enforcement, new organizational structures to pursue capital budgeting and other growth control strategies including land acquisition.

**An Implementation Action Plan** to provide a framework for planning. Phase I, at the Spring 2000 Town Meeting, led to the adoption of three growth control measures. During Phase II an additional series of by-law reforms will be considered in the Fall and at subsequent Town Meetings. These changes will protect the environment, offer a greater variety of housing choices, improve the quality of commercial development, limit traffic congestion, improve public facilities including the development of a new or expanded Town Hall.

By the Planning Board's approval of this Master Plan document, the Vision and Concept Plan will serve as a set of guidelines for the Raynham Planning Board to follow in working with other boards and in reviewing specific development projects. The Action Plan recommendations will guide the on-going work of the Planning Board.

Henry C. Ellis, Chairman  
Raynham Planning Board, July 12, 2000  
P. Burke Fountain, Vice Chairman  
John W. Canto SRPEDD Delegate  
Carl G. Carlson, Clerk  
Martin Newfield

Richard McCarthy, Town Planner  
Maureen McKenney, Administrative Assistant

## EXECUTIVE SUMMARY

### Introduction

The Town of Raynham has recognized that it is at a crossroads. It is beginning to take essential steps to protect its resources and rural character from the uncontrolled growth of residential sub-divisions and strip commercial developments along the major arterials. With the support of residents and high school students who have been participating in a planning process this past year, a the concept plan has been developed based upon vision statements that were generated in a series of public meetings. A two-phase action plan which will guide the work of the Planning Board in executing this Master Plan over the next twenty years. This Implementation Plan and the Boards responsible for its implementation are summarized below and illustrated in a series of graphics which are discussed in detail in the body of the master plan.

### VISION PLAN

A vision for the town's future was established based upon a broad set of community values identified in an initial series of public meetings.

#### *The Town of Raynham envisions itself in the year 2020 as:*

A family-centered, safe, caring community that is growing at a moderate pace and that is recognized for its foresight in well-integrated, cohesive planning. The town will have

- *Neighborhood Centers which preserve historic resources, are of moderate density, are well planned with a mix of land uses, and are connected by internal corridors for public transportation, bike paths and sidewalks*
- *A Town Civic Center which is a focal point of contemporary public facilities and activities*
- *Recreation sites accessible to local residents*
- *A system of trails and fields that preserves the town's important open spaces, farms and natural resources, and limits sprawl development*
- *A school system which is rated one of the best in the state with facilities and resources which meet the needs of all of Raynham's students including those with special needs*
- *A balance of pedestrian friendly residential, commercial/retail and industrial areas*
- *A responsive town government operating out of contemporary facilities with the organization and resources needed to provide a high level of services including fire and public safety*
- *A circulation network of roads which ensure safety with monitored speed limits and sidewalks, bike paths, and bus service to facilitate access in and around town*
- *A system of roads and land uses which minimize traffic congestion and curb cuts, and facilitate easy access*
- *A mix of commercial uses which provide needed tax revenues, services, and quality employment opportunities*
- *A population consisting of families, young adults and the elderly of varying household size, culture, color, and religion, living together in a non-stressful environment.*

# The town's CONCEPT PLAN for the year 2020 will:

Promote retail commercial cluster

Adopt Rt. 138 design guidelines

Protect critical resources

Protect water supply, pond, & streams. Encourage cluster residential development

Retain rural character and protect open space

Reduce Build-Out

Mixed use residential/commercial

Town of Raynham  
Zoning Map

Mixed use residential/commercial

Mixed use residential/commercial










Resource protection

Expanded Town Civic Center

Expand Designated Development District boundary

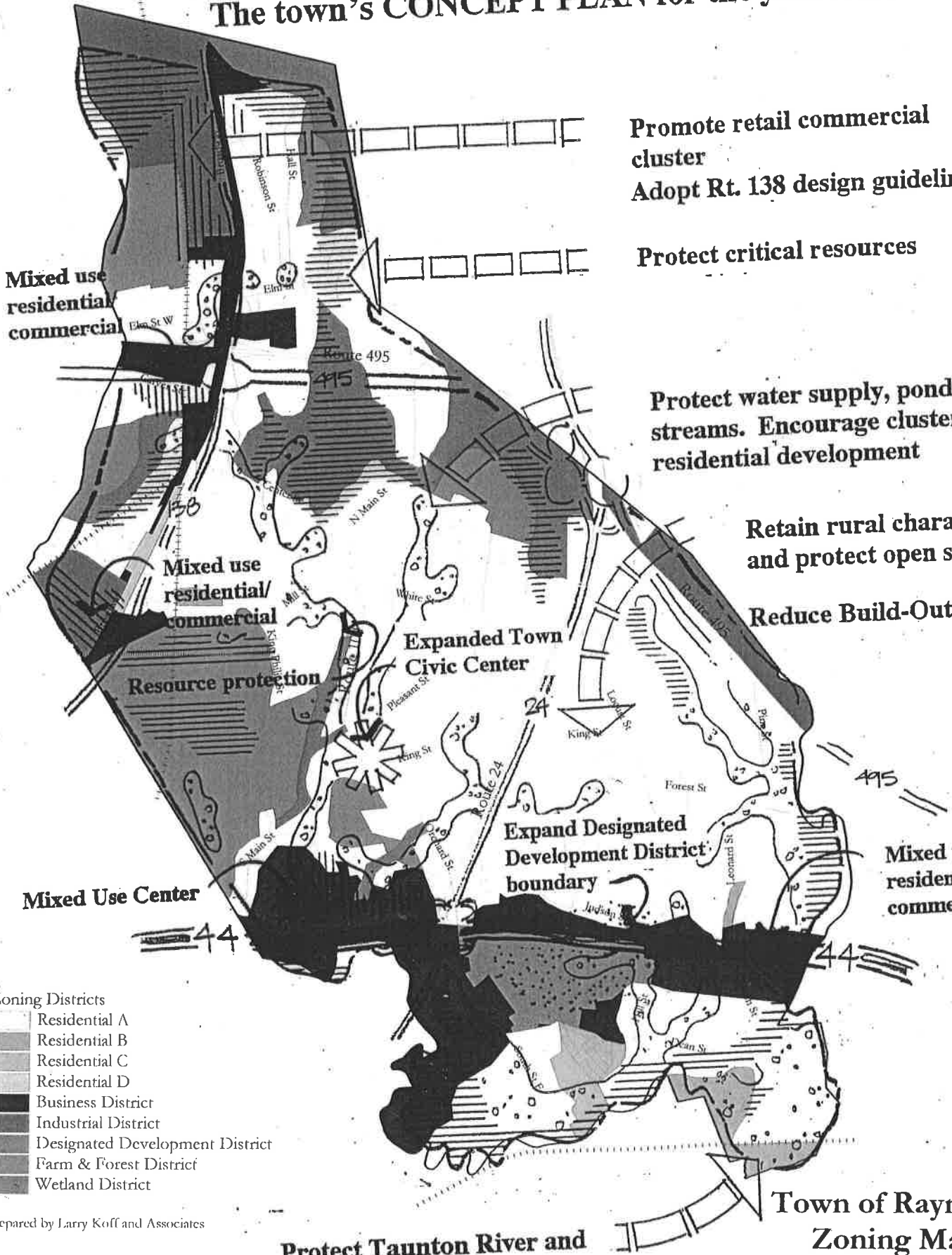
Mixed Use Center

## Zoning Districts

-  Residential A
-  Residential B
-  Residential C
-  Residential D
-  Business District
-  Industrial District
-  Designated Development District
-  Farm & Forest District
-  Wetland District

Prepared by Larry Koff and Associates

Protect Taunton River and its tributaries' natural, historic, & scenic resources



## PHASE I: EARLY ACTION ACTIVITIES

In advance of the spring 2000 Town Meeting, the Selectmen and Planning Board signaled their commitment to Growth Management planning by agreeing to initiate action in two areas:

1. **Appointment of a Zoning Enforcement Officer** with adequate time and staff to ensure the enforcement of the Town's existing zoning by-laws as well as the changes that are being proposed.
2. **Agreement by the Planning Board to review/approve the draft Master Plan and be responsible for its implementation.** The Planning Board acknowledges that it will need to work with other Boards and citizen groups in order to build consensus for seven specific recommendations have been proposed for Phase II of the Master Plan.

## SPRING TOWN MEETING; BY-LAW CHANGES:

The support of two of the following three actions by Spring, Year 2000 Town Meeting started to build support for carrying out the Phase II Action Plan.

1. **Adopt a permanent Phased Growth By-law.** *Adopted.* Residential construction in new subdivisions will be phased over a 15 year period with a maximum of 7 units a year. This restriction can be waived if the developer agrees to set-aside open space, provide for on site waste water disposal, and/or provide low income or age restricted housing.
2. **Form a Capital Budget Committee.** *Approved.* The Committee has been formed and is establishing a town-wide budget process to manage capital expenditures and identify grants. The Committee will also consider the establishment of a Reserve Fund to set aside needed monies for future capital expenditures such as the acquisition of open space.
3. **Limit Residential A lots to 60,000 square feet.** This action, if it had been adopted, would have reduced the number of new single family homes that could potentially have been built from approximately 3,060 to 1,775 homes. The rural area east of Route 24 is particularly vulnerable to development. If the lot size was increased just for this area there would be approximately a 30% reduction from 1,275 to some 885 dwelling units.

## PHASE II - IMPLEMENTING RAYNHAM'S CONCEPT PLAN

Phase II of the Master Plan will be carried out by the Planning Board under the leadership of the Town Planner. The refinement and subsequent approval of the strategies listed below and further described in the Implementation Section will bring the town closer to Raynham's vision/concept plan.

1. **Adopt septic system management strategies to limit secondary growth from sewer extensions to rural areas of town.** Completion of a Sewer Facility Plan for the construction of Phase V is contingent upon adopting secondary growth control measures such as increasing lot sizes, managing the location of sewer extensions, and septic system operations.
2. **Adopt new resource protection mapping and regulations for priority protection zones.**  
A General Wetlands By-law protecting wetlands from harmful development which was under the jurisdiction of the Conservation Commission, would improve the protection of water, natural, and habitat resources along the Taunton River and near Gushee Pond, for example.
  - **A Critical Resource District** should be established under the Zoning By-law that covers all of the areas that have been identified as containing sensitive natural resources. This district, with a minimum lot size of 3 acres, will replace the existing Farm and Forest District and Wetlands District, which would be unlikely to withstand court challenge.
  - **Aquifers, Flood Hazard Areas, and Water Resource Protection Districts** need to be re-mapped in collaboration with appropriate state and federal agencies.

3. **Open space acquisition.** Priority vacant open space parcels should be identified, as well as a means of funding their acquisition.
4. **Modify cluster by-law and site plan review.** These actions will improve the regulatory review process by facilitating the development review of minor projects and providing bonuses for the construction of more affordable housing alternatives and the voluntary protection of open space.
5. **Establish new mixed use districts.** Three new districts are recommended: Center, Business Cluster, and Local Office/Residential. These districts would encourage a range of housing opportunities for the elderly and young couples, for example, higher quality development, a balanced tax base, and provide opportunities for live/work space.
6. **Adopt organizational reforms to manage growth management initiatives.** The Selectmen should appoint the following committees to facilitate growth management: a Housing Committee and a Government Organization Task Force. A Growth Management Task Force (comprised of Town Staff) should also be established in order to brainstorm solutions and foster coordination around issues of sewer extensions, road improvements, and new development. The Planning Board is charged to carry out the Master Plan.
7. **Undertake public education/participation.** Public support for the principle of environmental stewardship needs to be developed by Raynham students and citizens alike. This attitude will lead to the formation of River Watch committees, the use of local educational programs in environmental education, the development of an Open Space Plan, and the support of a broad coalition of residents at Town Meeting for the adoption of necessary by-law changes. Possible teaching resources are included in the appendix.
8. **Promote Economic Development.** Proposed zoning changes, the provision of wastewater infrastructure to Route 138, and marketing of Raynham will attract an improved business mix
9. **Undertake Transportation Improvements.** the initiation of various transportation improvements including intersection upgrades, road widenings in certain limited areas, access management improvements, and the adoption of sidewalk classification standards and a system of trails and pathways will improve access and minimize congestion.

## **GUIDELINES FOR IMPLEMENTATION**

The Implementation Strategy Table which follows identifies activities which will need to be carried out and the Boards and Committees responsible for implementing the work plan. The Town Planner and Planning Board will need to utilize this check list to build consensus around these priorities. While consensus is being developed around the proposed strategies, the Planning Board and Conservation Commission should utilize the Concept Plan 2020 and the Open Space Trails/Pathways diagrams as well as the Guidelines Brochure for Commercial and Residential Development to coordinate their review of specific development projects. These illustrative plans and criteria identify locations for protection, a proposed system of trails and pathways, possible locations for new mixed use districts, and development standards.

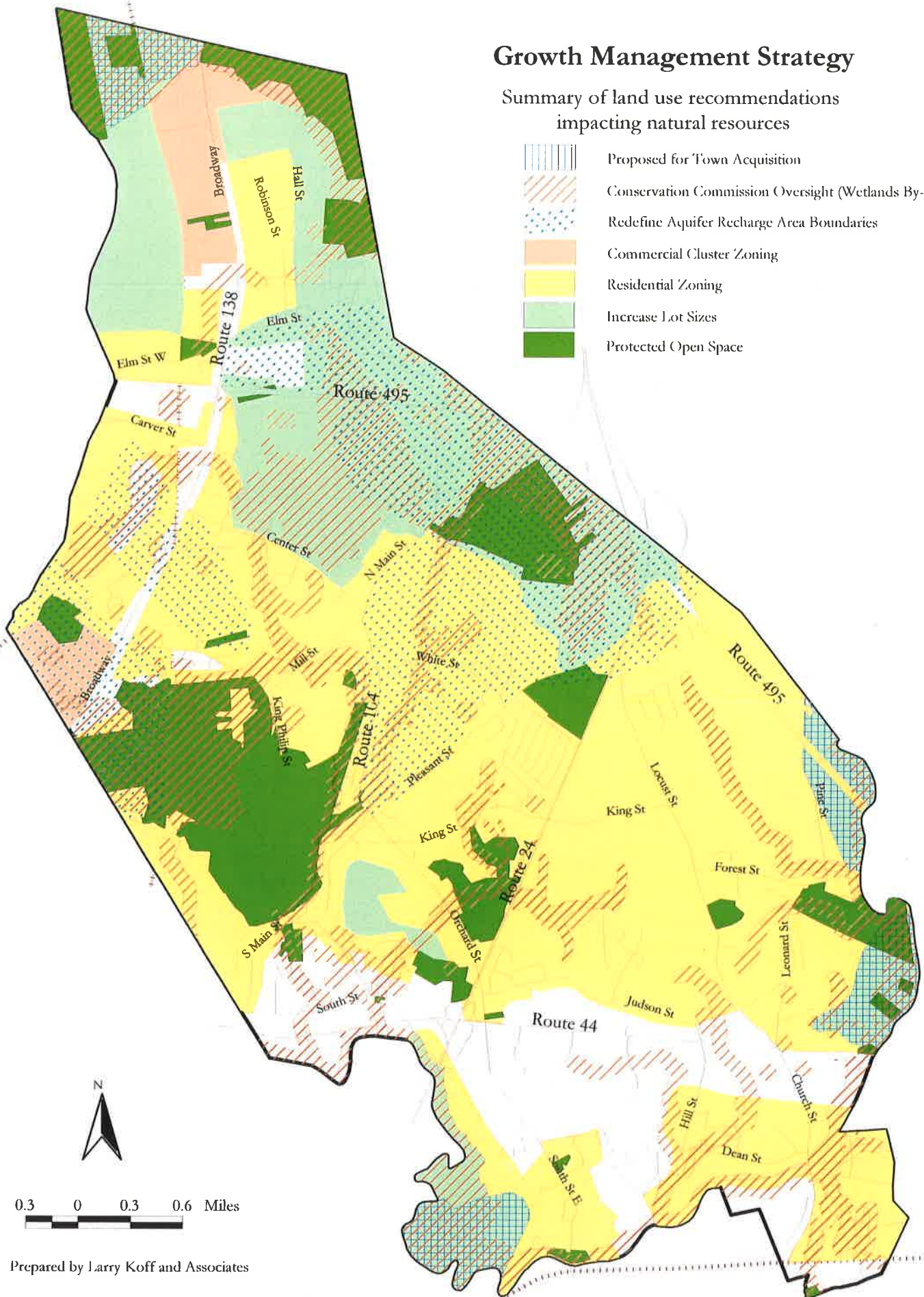
## Implementation Strategy Priorities

Priority Ranking	Master Plan Vision 2020 Committee	Board of Selectmen	Planning Board	Conservation Commission	Sewer Department	Town Administrator	Housing Task Force	Government Organization Task Force
Limit residential A lots to 60,000 s.f.	1	1	1					
Address secondary growth issues due to sewer extensions	2		1		1			
Planning Board to manage Master Plan implementation	1		1					
Selectmen to appoint a Zoning Enforcement Officer	1	1						
Selectmen to appoint a Housing Committee	1	2						
Master Plan Committee to consider regional planning issues	2							
<b><i>Zoning By-law changes:</i></b>								
Modify cluster by-law and site plan review	2		1					
Establish new mixed use districts	2							
<b><i>Organizational Reforms</i></b>								
Government Organization and Growth Management Task Forces	2	3				1		
Prepare Affordable Housing Plan	2	1	1			1		
<b><i>Environmental Protection</i></b>								
Public education/participation	On-going							
Adopt new resource protection mapping and regulations	2	2	2					
Adopt a General Wetland By-law	3	3	3	1				
Open space acquisition	2	2	1					
Establishment of a Raynham Fisheries Commission		1		1				

# Growth Management Strategy

Summary of land use recommendations  
impacting natural resources

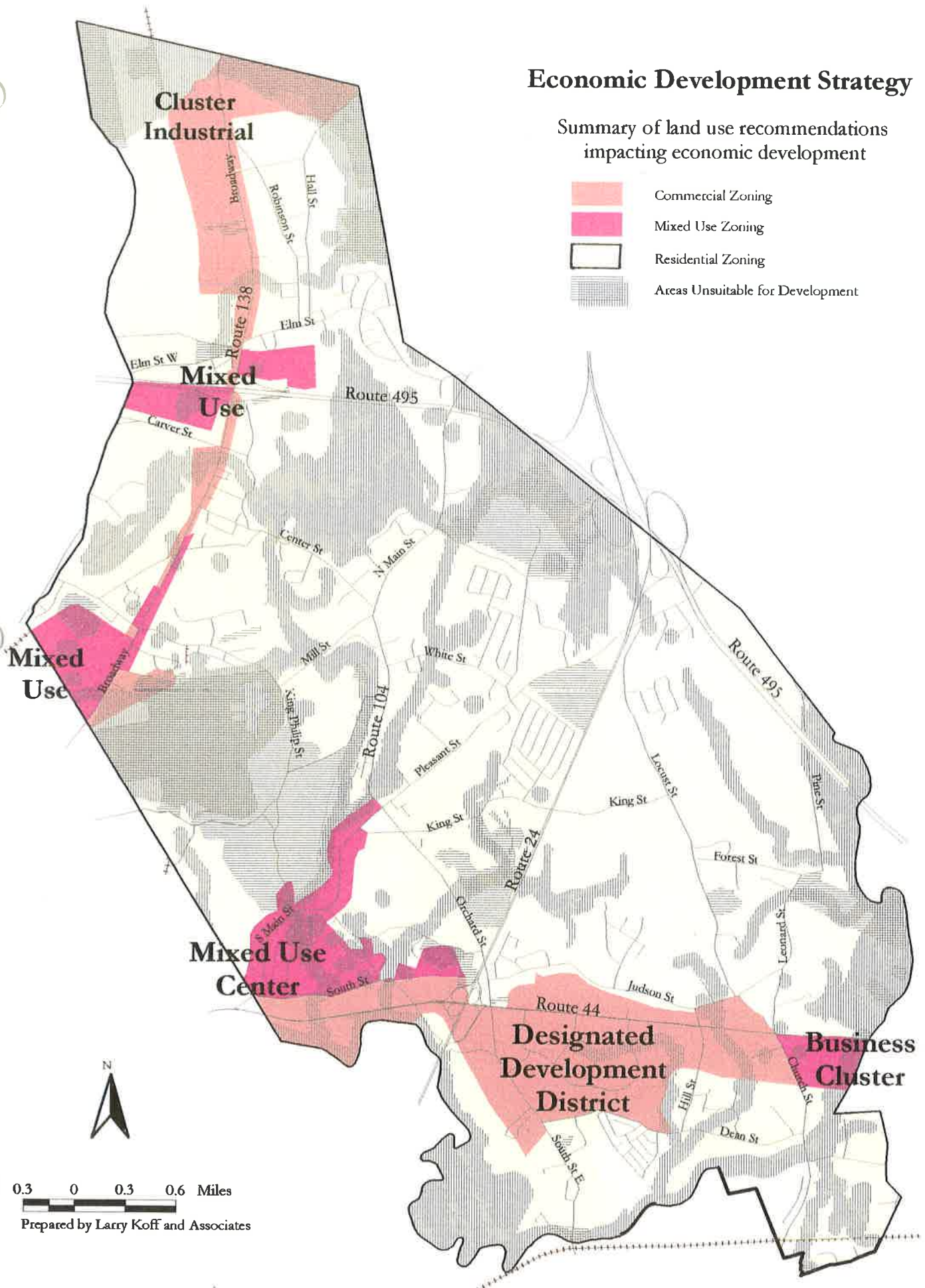
-  Proposed for Town Acquisition
-  Conservation Commission Oversight (Wetlands By-law)
-  Redefine Aquifer Recharge Area Boundaries
-  Commercial Cluster Zoning
-  Residential Zoning
-  Increase Lot Sizes
-  Protected Open Space



# Economic Development Strategy

Summary of land use recommendations  
impacting economic development

- Commercial Zoning
- Mixed Use Zoning
- Residential Zoning
- Areas Unsuitable for Development






# Town of Raynham




## Open Space Planning





### TRAILS/PATHWAYS

#### HIGHEST PRIORITY

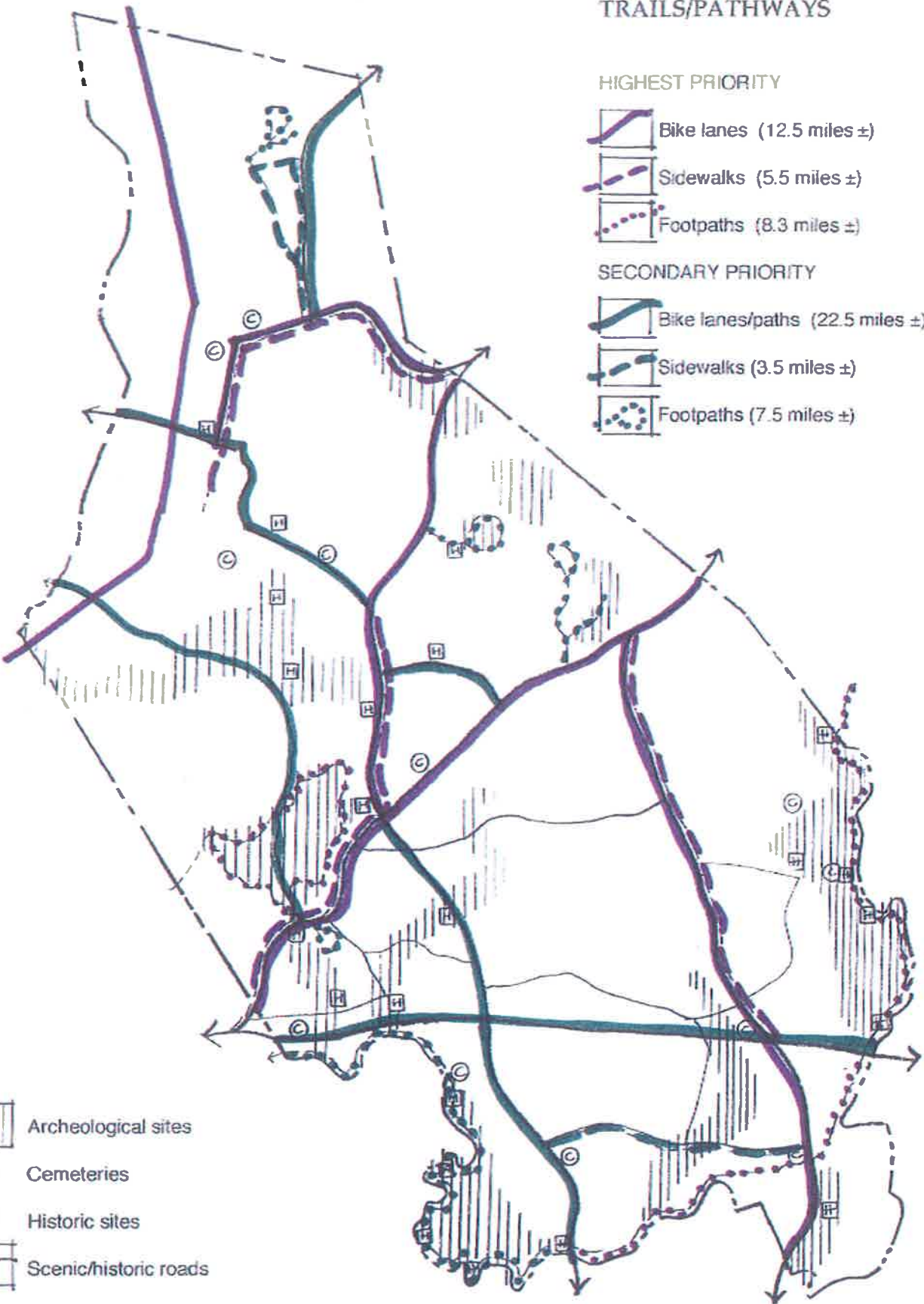
-  Bike lanes (12.5 miles ±)
-  Sidewalks (5.5 miles ±)
-  Footpaths (8.3 miles ±)

#### SECONDARY PRIORITY

-  Bike lanes/paths (22.5 miles ±)
-  Sidewalks (3.5 miles ±)
-  Footpaths (7.5 miles ±)

-  Archeological sites
-  Cemeteries
-  Historic sites
-  Scenic/historic roads

0.7 0 0.7 1.4 Miles

**SECTION I**

**LAND USE**

## **SECTION I LAND USE**

### **Introduction**

#### **1.1 Existing Land Use**

Existing Land Use  
Land Use Changes Since 1971

#### **1.2 Development Capacity Under Existing Zoning**

Buildout Analysis  
Impacts from Development

#### **1.3 Land Use Strategy**

#### **Appendices:**

1-1: Buildout Specifications Under Existing Zoning  
2-2: Detailed Buildout Analysis

## I. LAND USE

### INTRODUCTION

Changes in land use are one of the most visible indicators of the transformations which are taking place in the community. Increased suburbanization and residential sprawl are projected to replace a once rural landscape. Current zoning will provide for a doubling in the number of residential units and a ten-fold increase in commercial/industrial space. This trend, however, is not inevitable. A series of growth management changes are proposed which, if adopted, would enable the Town's Concept Plan of environmental protection, appropriate economic development, housing choices, and a town civic center to be achieved.

### 1.1 EXISTING LAND USE

The Existing Land Use Inventory map shows the distribution of eight types of land uses throughout the Town of Raynham. The map was prepared using 1991 land use coverage from MassGIS and updated to account for recent development. Information about recent development was obtained from aerial photos, Planning Department records, and field surveys. The following table shows the area of land in the town in each land use category. See Figure 1-1.

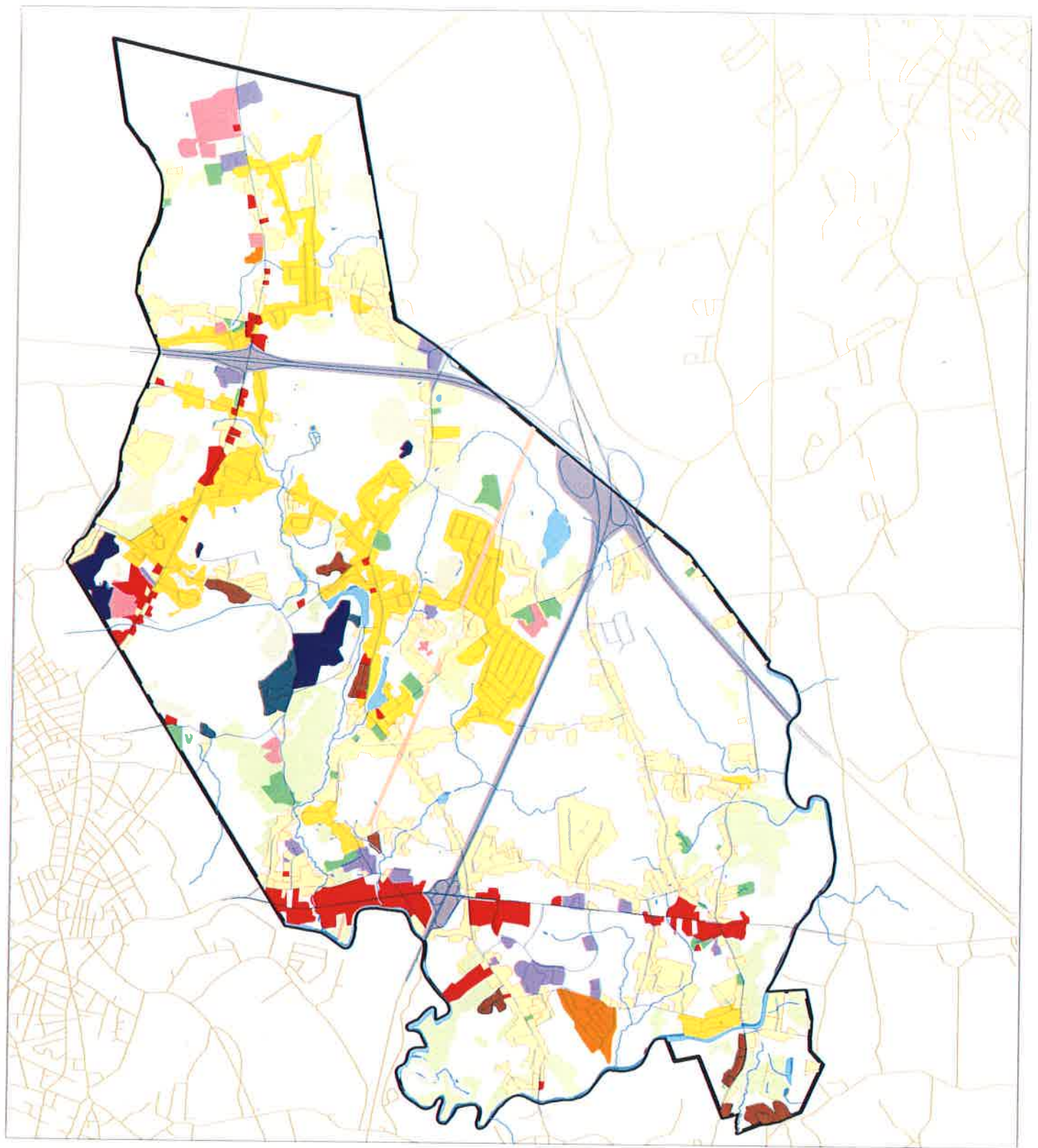
**Table 1-1**  
**Existing Land use**

<u>Land Use Category</u>	<u>Area (Acres)</u>	<u>% of Town Area</u>	<u>% of Developed Area</u>
<b><u>Residential</u></b>	3,060.2	22.9	68.8
(Multifamily)	(98.7)	(0.7)	(2.2)
(Single Family)	(2,961.5)	(22.2)	(66.6)
<b><u>Commercial</u></b>	359.4	2.7	8.1
<b><u>Industrial</u></b>	154.8	1.2	3.5
<b><u>Public/Institutional</u></b>	415.1	3.1	9.3
(Public)	(126.1)	(0.9)	(2.8)
(Recreation)	(289.0)	(2.2)	(6.5)
<b><u>Transp./Utilities</u></b>	456.2	3.4	10.3
(major roads)	(397.6)	(3.0)	(8.9)
(transmission lines)	(58.6)	(0.4)	(1.3)
<b>Total Developed</b>	4,445.7	33.3	100.0
<b><u>Agriculture</u></b>	1,009.6	7.6	
<b><u>Vacant</u></b>	7,740.8	58.0	
<b>Total Undeveloped</b>	8,750.4	65.5	
<b><u>Water</u></b>	154.3	1.2	
<b>Total Town Area</b>	13,350.4	100.0	

Source: MassGIS, Planning Department, 1997 aerial photos, Larry Koff & Associates

Note: Data is preliminary, awaiting information on protected open space and local roads.

There are approximately 13,350 acres in the town of Raynham, of which about 33% are developed. Developed land includes private residential and non-residential uses, as well as public uses and utilities. About 66% of the land in Raynham is undeveloped, although much of this land



**Land Use**

- |                              |                    |
|------------------------------|--------------------|
| Multifamily residential      | Transportation     |
| High density residential     | Mining             |
| Moderate density residential | Waste Disposal     |
| Low density residential      | Water              |
| Commercial                   | Wetland            |
| Industrial                   | Transmission lines |
| Recreation                   | Agriculture        |
| Public/institutional         | Undeveloped Land   |

**Map 1-1**  
**Town of Raynham**  
**Land Use**

2000 0 2000 4000 Feet

Prepared by Larry Koff and Associates

cannot be developed because of wetlands or other constraints. (A summary of development constraints will be provided under the Buildout Analysis which follows.)

#### Private Residential

About 3,062 acres, or 69% of the developed area is in residential use. This includes single family residences as well as multifamily or other types of residences. Most of the residential development is of moderate density, with an average lot size of 1.35 acres per single family home (Town of Raynham Assessor, 1999). Some of the more densely developed areas are concentrated in the central part of the town between Routes 138 and 24. The portion of the town to the east of Route 24 has less single family development, although a mobile home park and several multifamily developments are located in this area.

#### Private Non-Residential

About 514 acres, or 12% of the developed area is in private non-residential use. This includes all commercial and industrial uses. These uses are concentrated mostly along Routes 138 and 44. Commercial development in Raynham is largely in the form of retail "strip" development, especially along Route 44.

#### Public/Semipublic

This category includes land occupied by public facilities, public and private recreation facilities, and lands owned by public agencies. Developed land in this category consists of about 415 acres, or 9% of the developed area in the town. Public facilities include public buildings, storage facilities, cemeteries, and waste disposal facilities. Recreation facilities include parks, playgrounds, ball fields, the dog track, and the skating rink.

#### Transportation/Utilities

About 456 acres of land in the town are occupied by roads and utilities, including Routes 495 and 24 and a utility transmission line bisecting the town to the west of Route 24.

#### Undeveloped Land

Undeveloped land includes forested uplands, wetlands, agricultural land, and other open lands. Although the presence of agriculture has diminished in Raynham over the past several decades, there are still about 1,000 acres of land in active agricultural use in the town. Approximately 66% of the total town area, this open space and agricultural land contributes to the rural character of the town, although most of it is not protected from future development.

#### **Land Use Changes Since 1971**

A significant amount of growth has taken place in Raynham over the past few decades. The 1982 Comprehensive Growth Policy Plan provided a land use inventory showing the amount of land within each land use category in the town for the years 1971 and 1981. The land use inventory for 1991 was obtained from MassGIS. Each of these inventories is taken from the MacConnell land use surveys. As stated previously, the 1998 land use is based on the MacConnell survey for 1991, but is updated using more recent aerial photography and Planning Department records.

The following table shows a summary of land use changes over the time period, highlighting changes in the total amount of developed land, and changes in the amount of land devoted to residential and commercial/industrial use. Over the past several decades, the increase in the amount of developed land has far outstripped population growth, as new residences occupy larger lots, and commercial development accelerates along Routes 44 and 138. Between 1991 and 1998 land was consumed at approximately twice the rate of population growth.

**Table 1-2**  
**Land Use Changes from 1971 to 1998<sup>(1)</sup>**

	<u>1971</u>	<u>1981</u>	<u>% change</u>	<u>1991</u>	<u>% change</u>	<u>1998</u>	<u>% change</u>
Total Developed Area <sup>(2)</sup>	1,663	2,672	60.7	3,757	40.6	4,370	16.3
Residential	1,154	1,634	41.7	2,498	52.9	3,060	22.5
Commercial & Industrial	148	225	52.6	388	72.4	514	32.5
Population <sup>(3)</sup>	6,797	9,035	32.9	9,867	9.2	10,682	8.3

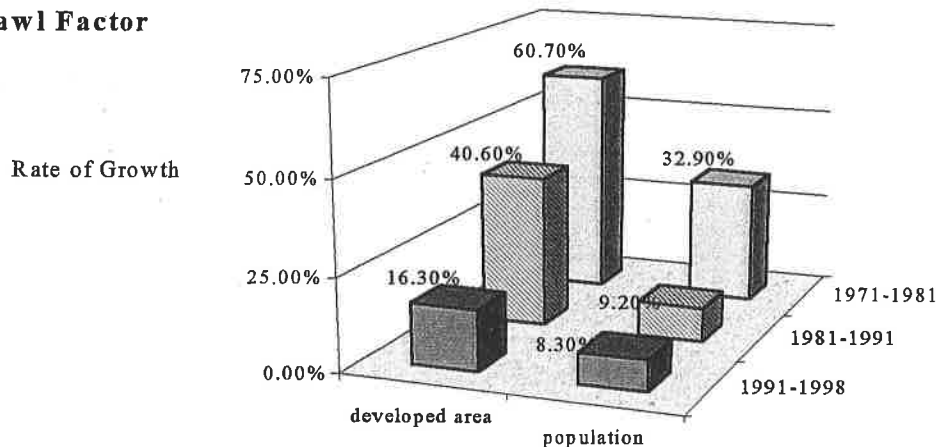
<sup>(1)</sup> Some improvements in measurement techniques took place between the dates of observation. The total town area was computed at 13,118 acres in 1971 and 1981, while it was computed at 10,350 in 1991 and 1998. In order to be comparable with the later data, the acreages reported for 1971 and 1981 are adjusted proportionately.

<sup>(2)</sup> Does not include protected open space or Town Conservation lands.

<sup>(3)</sup> Source: Town Census, 1970, 1980, 1990, 1998.

The rapid consumption of land relative to population growth indicates an increase in suburban sprawl, impacting the rural character of the community. This trend was particularly notable in the decade between 1981 and 1991.

### Sprawl Factor



## 1.2 DEVELOPMENT CAPACITY UNDER EXISTING ZONING

A buildout analysis was prepared for the Town of Raynham using data provided by MassGIS, updated where possible to account for recent development and other changes. Subsequent to the preparation of this study, a buildout analysis was prepared by SRPEDD under the direction of the Executive Office of Environmental Affairs. A similar methodology was applied, and the results were comparable to the present analysis. See Appendix 1-1 for a summary of SRPEDD's buildout analysis.

The area of developable land within each zoning district was determined by subtracting wetlands, protected open space, and land which is already developed<sup>(1)</sup>. Map 1-3 and Table 1-3 illustrate

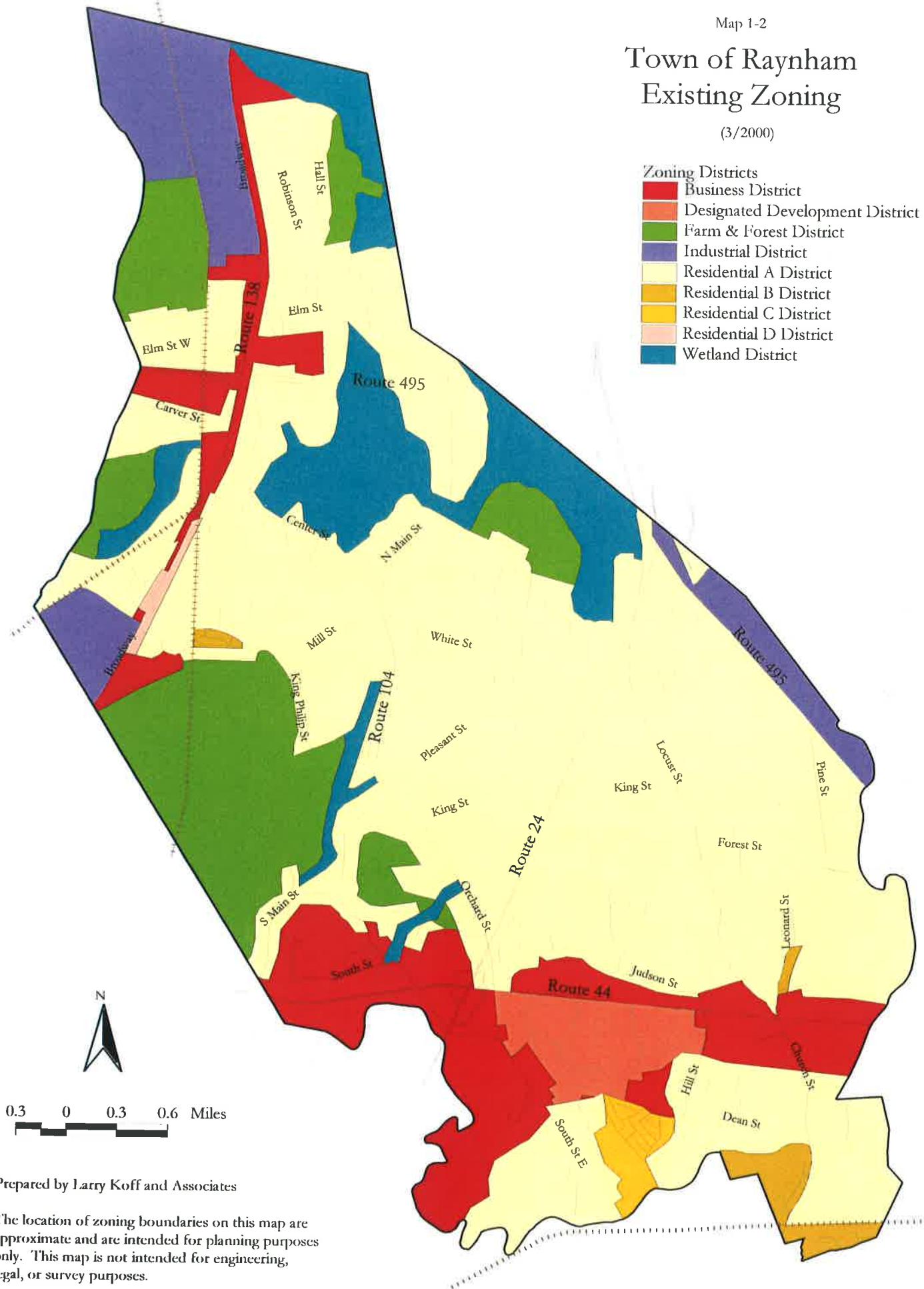
<sup>(1)</sup> In the northern and central sections of the town, flood-prone areas as defined by FEMA closely coincided with wetlands, and were thus assumed to be sufficiently accounted for. In the eastern section of the town there were many flood-prone areas which were not counted as wetlands; these areas, which may have some limited potential for development, were accounted for separately.

# Town of Raynham Existing Zoning

(3/2000)

## Zoning Districts

- Business District
- Designated Development District
- Farm & Forest District
- Industrial District
- Residential A District
- Residential B District
- Residential C District
- Residential D District
- Wetland District



Prepared by Larry Koff and Associates

The location of zoning boundaries on this map are approximate and are intended for planning purposes only. This map is not intended for engineering, legal, or survey purposes.

land in the town that was eliminated from the developable area. Wetlands are provided by MassGIS from USGS coverage. Protected open space was determined on a parcel-by-parcel basis, and is current up to January, 1999. Land that is already developed is taken from the MassGIS 1991 land use layer, and updated to account for recent development using Planning Board records, recent aerial photography, and field research. The following map shows the constraints on development and the remaining developable land.

**Table 1-3**  
**Constraints on Development**

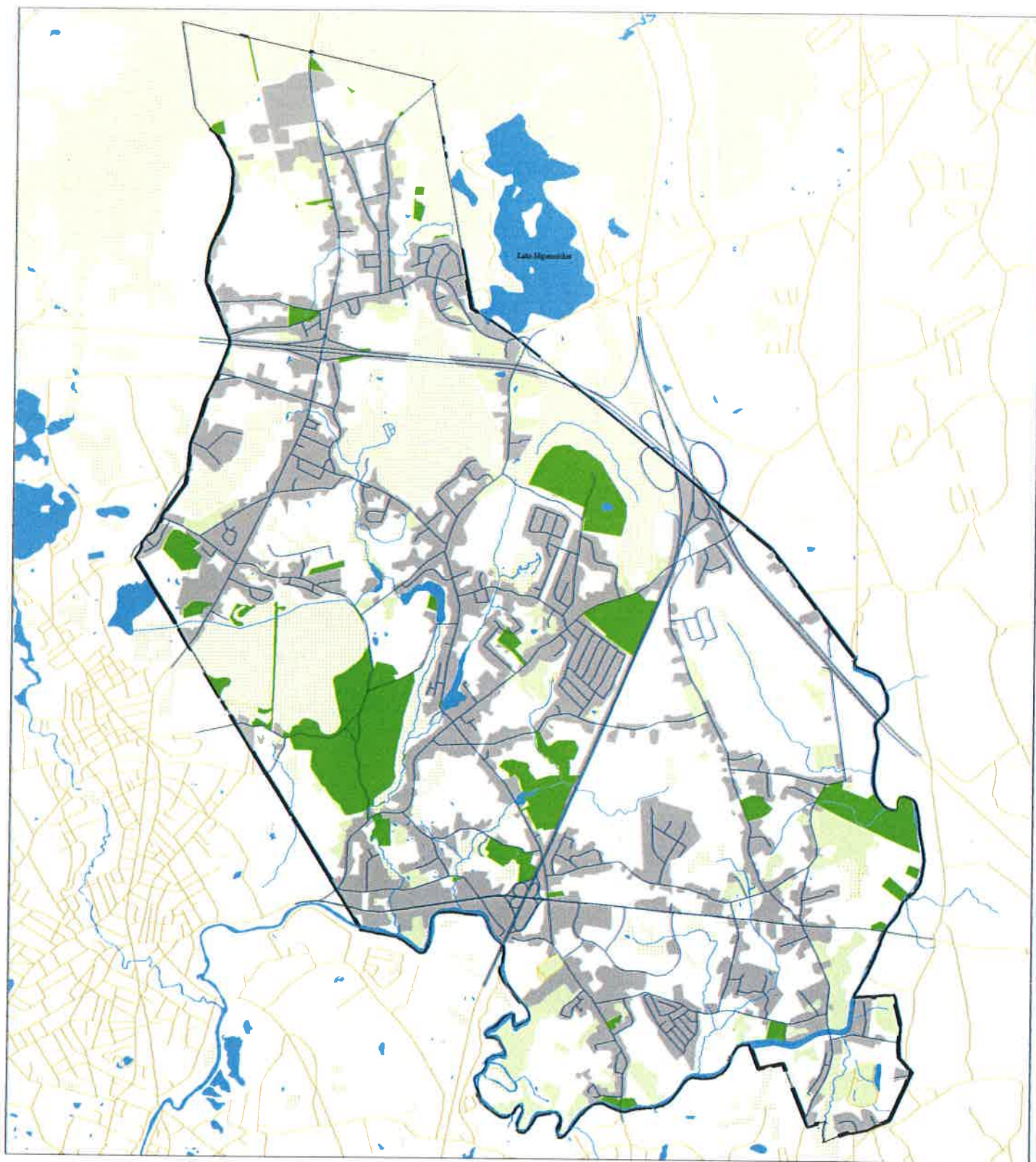
Total Town Area	13,350
Developed Land	4,446
Protected Open Space	1,540
Wetlands (excluding protected lands)	1,054
Developable Area	6,310

The developable area was determined by zoning district, shown in Table 1-4, and density regulations under the Zoning By-law were then applied to determine the development capacity. Appendix 1-2 shows the specifications for development capacity derived from the Zoning By-law, as well as assumptions about the likely mix and density of development given market conditions. Table 1-5 provides an estimate of the town-wide buildout capacity divided into three subareas. Six categories of land use are shown, including three types of residential development and three types of nonresidential development. Other types of uses are assumed to fit within these general categories; for instance, a hotel would be a type of retail/service use.

**Table 1-4**  
**Developable Area by Zoning District**

<u>District</u>	<u>Total Acres</u>	<u>Development Capacity</u>	
Residential A	3,757.3	Single family	3,123 units
Residential B	83.5	Multifamily	900 units
Residential C	53.9	Mobile Homes	176 units
Residential D	5.2	Single family	4 units
Farm & Forest District	522.5	Single family	89 units
Business District	788.1	Single family	97 units
		Retail <sup>(1)</sup>	4,403,400 s.f.
		Office	6,605,100 s.f.
Industrial District	578.7	Retail	2,288,900 s.f.
		Office	1,716,600 s.f.
		Manuf./High Tech	2,861,100 s.f.
Designated Development District	205.6	Retail	240,000 s.f.
		Office	2,200,000 s.f.
Wetland District	314.9	--	--

<sup>(1)</sup> For all commercial zoning districts, the maximum height is assumed to be 1 story for retail and manufacturing use due to market factors which strongly favor the development of single rather than multi-story buildings, even though zoning regulations, allow 3 stories for all buildings. Other assumptions relating to the density of land uses are shown in Appendix 1-2.



**Map 1-3**  
**Town of Raynham**  
**Constraints on Development**



Prepared by Larry Koff & Associates

**Table 1-5  
Summary of Buildout Capacity**

<u>Type of Land Use</u>	<u>Total</u>	<u>Development Capacity</u>		
		<u>North</u>	<u>Central</u>	<u>East</u>
Residential				
Single Family	3,313 dwelling units (d.u.)	377 (d.u.)	1,254 (d.u.)	1,682 (d.u.)
Multifamily	900 (d.u.)	0 (d.u.)	42 (d.u.)	858 (d.u.)
Mobile Home	176 (d.u.)	0 (d.u.)	0 (d.u.)	176 (d.u.)
Nonresidential				
Retail/Service	6,932,200 square feet (s.f.)	1,600,400 (s.f.)	1,326,000 (s.f.)	4,005,800 (s.f.)
Office	10,521,700 (s.f.)	1,834,700 (s.f.)	1,816,800 (s.f.)	6,870,200 (s.f.)
Manufacturing	2,861,100 (s.f.)	943,300 (s.f.)	287,100 (s.f.)	1,630,700 (s.f.)

Note the following limitations to this buildout analysis.

- Market forces will determine the pace at which development takes place. The preceding analysis does not provide a time frame for reaching this level of development.
- It is not possible to determine the potential redevelopment capacity of parcels which are presently developed but under-utilized.
- The preceding analysis assumes that all new office & residential development takes place at maximum density, which may not reflect the actual outcome of future development, thus the development capacity shown above may not be reached if and when all remaining land is developed.

### **Impacts from Development**

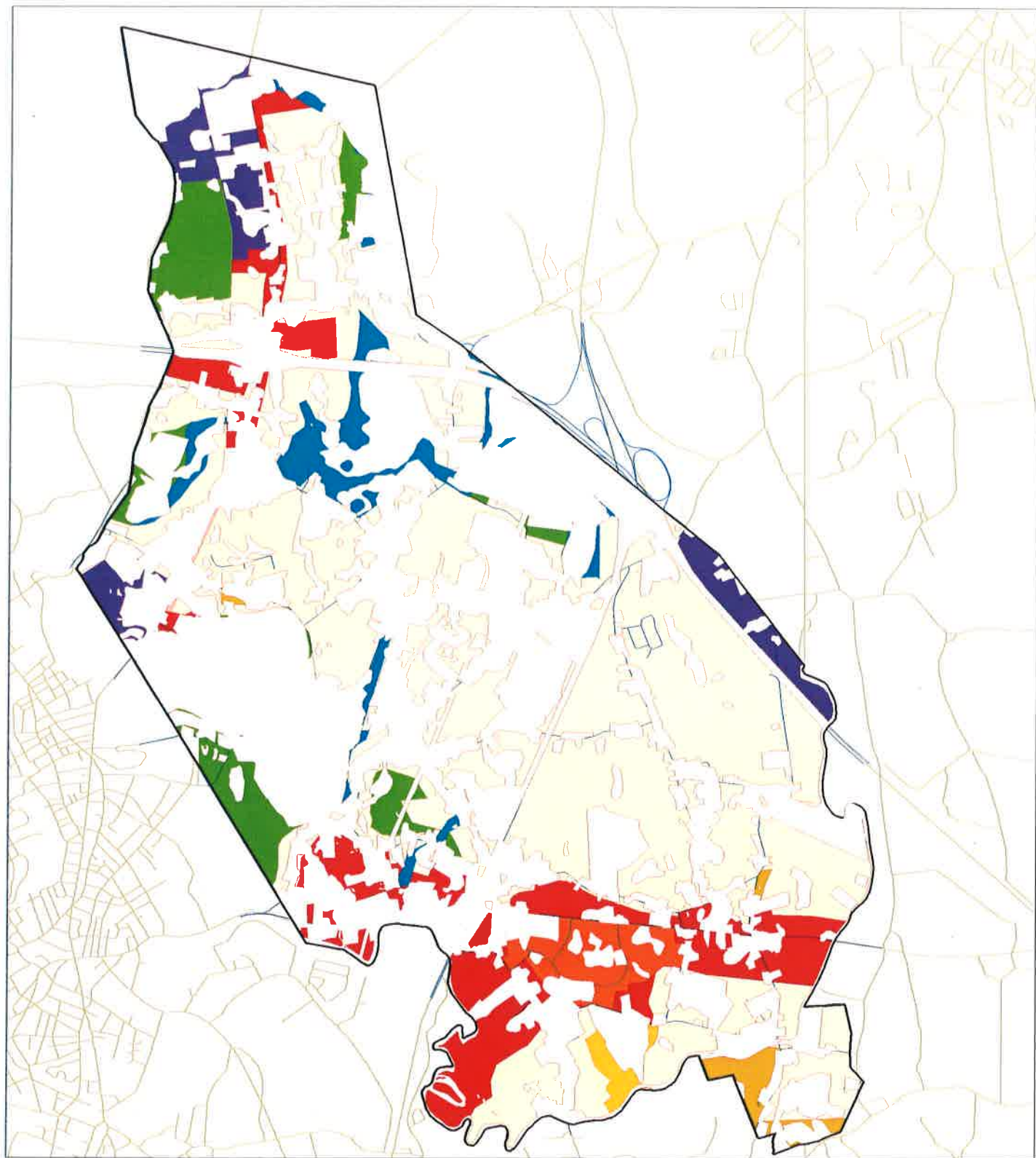
Under full buildout, this development capacity can result in an estimated 13,300 additional residents, or a 130% increase over the existing population of 10,682 persons<sup>(1)</sup>. The number of school children may increase by about 3,000 persons<sup>(2)</sup>.

**Table 1-6  
Residences at Full Buildout**

	<u>Existing</u>	<u>Potential Additional</u>	<u>Total at Full Buildout</u>
Single Family	3,151	3,313	6,464
Multifamily	569	900	1,469
Mobile Homes	295	176	471
Other	15	0	0
Total	4,030	4,389	8,404

<sup>(1)</sup> Assumes a household size of 3.62 persons per household for single family residences, 1.68 persons per household for multifamily residences, and 2.36 persons per household for mobile homes. Based on DHCD estimates.

<sup>(2)</sup> Assumes 0.87 school-children per household for single family residences, 0.17 school-children per household for multifamily residences, and 0.35 school-children per household for mobile homes. Based on DHCD estimates.



- Zoning Districts**
- Business District
  - Designated Development District
  - Farm & Forest District
  - Industrial District
  - Residential A District
  - Residential B District
  - Residential C District
  - Residential D District
  - Wetland District



Map 1-4

## Town of Raynham Developable Land by Zoning District

2000 0 2000 4000 Feet

Prepared by Larry Koff & Associates

**Table 1-7**  
**Commercial Space At Full Buildout**

	<u>Existing Space (1998)</u>	<u>Potential Additional Space</u>	<u>Total At Full Buildout</u>
Retail/Service	1,279,915 square feet	6,932,200 square feet	8,212,100 square feet
Office	210,650	10,521,700	10,732,400
Manufacturing	665,096	2,861,100	3,526,200
Multiple Use	94,775	0	94,800
Total	2,250,436 square feet	20,315,000 square feet	22,565,500 square feet

### 1.3 LAND USE STRATEGY

#### Land Use Alternatives

Three land use schemes were developed for consideration, including "Growth Limiting", "Growth Management", and maintaining the existing zoning. These alternatives represented general schemes to aid in identifying the overall goals of the town in establishing a land use policy. An array of specific policy options was then presented from which a preferred scenario could be developed that reflects Raynham's Vision, goals, and political reality. The recommendations that follow this analysis result from a consensus among planning participants from the Town of Raynham

Option I: Existing Zoning, will continue the current pattern of suburban sub-division. The potential buildout that may result if the existing zoning is continued in the future is documented in the previous section. A doubling in the pattern of commercial development and a possible 10-fold increase in the amount of commercial development could take place. It is unlikely, however, that the existing zoning will always remain unchanged. The need for a greater diversity of housing, higher quality commercial uses, fiscal constraints, and environmental conditions are likely to generate pressure to make incremental changes to the zoning bylaw and map. In addition, two of the zoning districts - the Wetland District and the Farm & Forest District are not properly drafted and mapped. They could potentially be overturned if challenged in court, leading to the loss of environmental protection and a substantial increase in density. Beyond the extent of the existing wetland district, the town has substantial natural resource areas which are not protected under any zoning district. Thus, without a long term plan to adjust the town's zoning to reflect the current vision the town may experience serious fiscal imbalance and the decline of environmental protection.

The present Master Plan provides the opportunity to define a model for future zoning and other land use policy changes to meet the needs of Raynham's residents and property owners.

Option II: The Growth Limiting alternative, focuses on preserving open space, protecting natural resources and reducing buildout. Policy options which fall under this theme include widespread open space acquisition, increase in residential lot sizes, strengthening bylaws that address natural resource protection, and eliminating non-residential zoning in environmentally sensitive areas. (These areas are defined and identified in Section 4, Natural, Open Space, and Recreation Resources. See Map 4-8.) Fully implemented, the potential buildout capacity might be reduced substantially, but with significant cost. First, the financial resources must be identified in order to acquire all of the open space that would be desirable. Secondly, this approach does not provide adequate housing alternatives other than large single-family homes. Lastly, larger single-family lots will tend to increase sprawl (defined as the acreage of developed land per capita), and decrease the accessibility of undeveloped land to the public.

Option III: The Growth Management alternative concentrates new development in areas of the town that have suitable infrastructure and environmental conditions, while reducing the potential density elsewhere. Policy options under this category include the adoption of mixed use zoning districts with small unit (1-2 bedrooms) and/or age restricted housing, "back lot" and other flexible zoning alternatives, the encouragement of cluster development, a moderate increase in residential lot sizes, and acquisition of priority open space parcels. The buildout that would result from Option III is less than Option I, Existing Zoning, while a greater density of housing would result. In addition, a substantial amount of open space can be preserved that is accessible to the public without the cost of Town acquisition.

Option III, the Growth Management approach, will require further analysis and consensus building. Changes which appear to develop urban qualities of density, a mix of uses, and public regulation and review will need to be modified to fit Raynham's special character.

The following table provides a summary of land use options which were considered. The table includes an estimate of impacts on the potential amount of development that can take place at full buildout and the amount of protected open space. It is impossible to summarize the fiscal impacts from each of these policy alternatives because the fiscal outcome depends upon the particular combination of policies used and external circumstances. As demonstrated in Appendix 4-4 of the Master Plan (Natural Resources and Open Space, and Recreation), Fiscal Impacts of Open Space Acquisition, the public cost of acquiring open space may be offset by the savings from preventing new development. The fiscal impacts from new homes constructed depends upon the value of those homes, and the type of housing (i.e., single family, multifamily, age restricted, etc.) The impact on the public facilities that will be needed to support development under each of the scenarios can be inferred from the changes to buildout.

**Table 1-8  
Land Use Policy Options**

<u>Policy</u>	<u>Buildout Impact</u>	<u>Open Space Impact</u>
<b>Growth Limiting</b>		
Acquire open space <sup>(1)</sup>	--	++
Change residential minimum lot size to 80,000 square feet	--	=
Encourage/require cluster residential development	=	+
General Wetlands By-law, protect wetlands, buffers, and critical resource areas through Conservation Commission oversight	-	++
Eliminate commercial development in environmentally sensitive areas (See Map 4-8)	-	+
Create Critical Environmental Resource District with minimum lot size of 120,000 s.f.	--	+
<b>Growth Management</b>		
Mixed use zoning (Village Center, Residential/Commercial, Town Center)	+	=
Bonus/Back Lot/Flexible Zoning	=	+
Encourage/require cluster residential development	=	+
Create Industrial Cluster district	=	+
Increase residential minimum lot size to 60,000 square feet	-	=
Open space acquisition	-	+
<b>Other Options</b>		
Eliminate Wetland District and Farm & Forest District	++	--
Design Guidelines/Performance Standards	=	=
Site Plan: Major and Minor Project	=	=
Inspection Department to enforce zoning		

Key: - Moderate reduction  
 -- Substantial reduction  
 + Moderate increase  
 ++ Substantial increase  
 = No significant impact

### **Land Use Recommendations**

The following land use recommendations are the result of a collaborative planning process. Short term and long term strategies were defined. The recommended policies are a composite from each of the alternative scenarios considered. Map 1-5, Recommended Zoning Changes, illustrates the long term vision for land use policy. In the short term, the town should implement incremental policy changes that contribute to the realization of long term goals.

### Residential Use

The density of new residential construction should be lowered.

- For **Residential District A**, the recommended minimum lot size is 60,000 square feet.

- **The Critical Environmental Resource District (CERD)**, a new zoning district, would have a minimum lot size of 120,000 square feet, and would cover an area that is more extensive than the existing Farm & Forest District (FFD). It is recommended that the FFD eventually be eliminated because it is unlikely to stand if challenged in court. Prior court cases in Massachusetts have established that such low density zoning districts may be acceptable if environmental conditions warrant the severe restrictions on development capacity. While the FFD is not supported by any documented environmental constraints, the CERD is based on State-defined Areas of Critical Environmental Concern, Priority Sites of Rare Habitats, and groundwater resource districts. To date the courts have not accepted zoning districts with minimum lot sizes larger than 3 acres.

Throughout the residential districts, cluster development should be encouraged in order to promote the preservation of natural resources and to provide well designed, attractive subdivisions. Within the CERD district, the Town should consider requiring cluster development or at least requiring the submission of a cluster subdivision plan in addition, to or in place of a traditional subdivision plan.

#### Mixed Use Districts

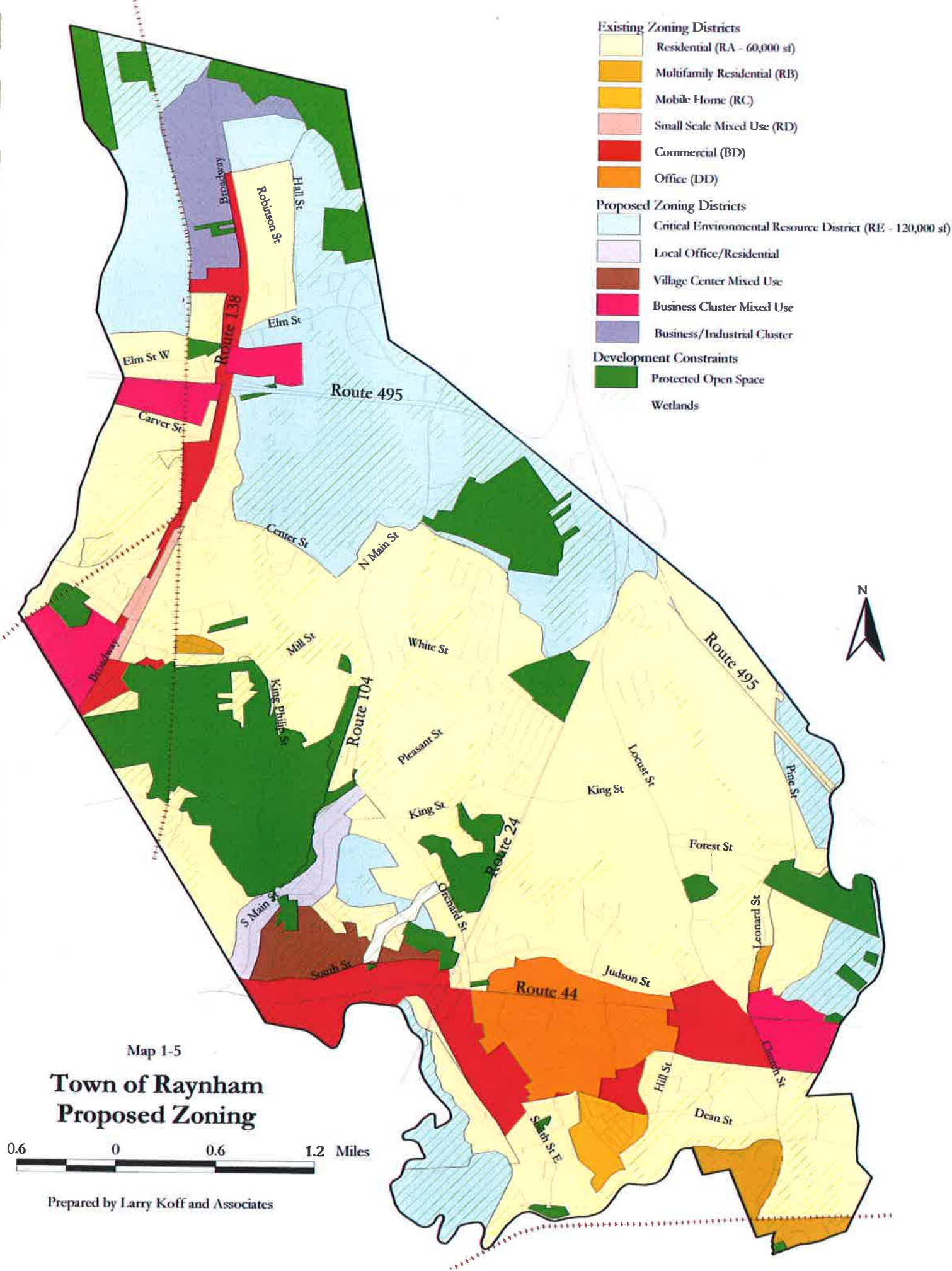
Mixed use districts should be offered in areas of the town where environmental conditions and infrastructure can support them.

- A **Business Cluster/Mixed Use District** with age-restricted multifamily housing is recommended to take the place of the Business District and Industrial District in three locations: near the intersection of Routes 495 and 138, along Broadway near the border with Taunton, and along Route 44 near the eastern border of the town (see Map 4-8). Along with residential use, business and professional offices could locate in this district.
- A **Village District** with pedestrian-oriented townhouses is recommended to be located near the municipal center off of South Street west. Although this district would allow a higher density than is currently allowed in the residential districts, it would mainly be comprised of 1-2 bedroom units, which generally do not attract families with children, and thus do not require as great an expenditure for municipal services.
- In a **Local Office/Residential District** along South Main Street, single family residences would be permitted to have professional offices on the premise, providing services to the public, while maintaining the appearance of a primarily residential neighborhood. This district would be similar to the existing Residential D District, but would not allow retail uses.
- A **Civic Center District** located in the area where the Town Hall is currently located would allow public/institutional uses and possibly small-scale businesses to serve the needs of Town employees.

#### Environmental

As discussed above, a new zoning district, CERD, is recommended to take the place of the FFD, as well as the Wetland District (WD). The WD, although based on environmental conditions, is not accurately mapped. The FFD does not include resource areas that should be included. The Town should become proactive in establishing adequate protections for its wetlands and unique environmental resources.

Aside from zoning regulations, it is recommended that the Town pass a By-law that places wetlands and water resources under the oversight of the Conservation Commission. (See Natural, Open Space and Recreational Resources Section for further details.)



The Conservation Commission should identify key parcels for open space acquisition and possible sources of funding. This is explained in further detail in the Natural Resources section.

#### Commercial/Industrial

In order to promote high-value commercial and industrial uses and to serve the needs of entrepreneurial residents, it is recommended that the Town establish more special-purpose commercial districts. Three new mixed-use districts are recommended. As described above, a high-density multifamily/office district is recommended to take the place of the Business District near the intersection of Route 495 and 138, and the Industrial District at the border with Taunton along Broadway (Route 138). In addition the residential/office district would allow home offices that provide services to the public.

It is recommended that the Industrial District be changed to encourage cluster development in which planned industrial parks would locate businesses close to one another, minimizing the extent of infrastructure that would be required to serve them, and creating an open space buffer around them.

The Designated Development District should be extended to the other side of Route 44, in the area that is currently zoned for business use.

#### Public Uses

A Municipal Center district is recommended for the location where the Town Hall currently exists. This district would be sufficient in extent to accommodate the expansion of municipal buildings that will eventually be necessary. The Town should be aware of sales of adjacent properties and consider acquisitions of key parcels which may be needed for future facilities.

## **Appendix 1-1**

### **Comparison with SRPEDD Buildout Analysis**

In June of 2000, SRPEDD completed a buildout analysis for the town of Raynham, as a part of the Community Preservation Initiative under the direction of the Executive Office of Environmental Affairs. The results of the SRPEDD analysis are fairly comparable to the buildout analysis for the Master Plan.

The mapping for the two studies was based on similar data sources, with the exception of updating the land already developed to reflect recent subdivisions. SRPEDD identified the parcels of all subdivisions completed since 1991 and made rough improvements to the land use map using aerial photographs. The present analysis undertook a more detailed update of developed land use using aerial photographs, and only showed as developed those areas which have been constructed or were under construction as of spring, 1999. A difference of 218 acres between the developable land reported in the two studies reflects a margin of error of less than 5%.

SRPEDD's methodology is very similar to the methodology used in preparing the present study, with a principle exception of the treatment of wetlands. The SRPEDD study considers the presence of wetlands to be a partial development constraint, and includes 1/3 of the wetlands as developable land. The Master Plan buildout includes 100% of the wetlands as undevelopable.

A second important difference between the studies is in the interpretation of the zoning and market assumptions regarding types of residential uses. The present study assumes that all of the remaining land in the Residential B and C districts will be developed as multifamily and mobile homes. If single family homes are developed in these areas, the buildout potential would be substantially decreased.

## Appendix 1-2

## Buildout Specifications Under Existing Zoning

The following table shows the parameters that were used to determine the development capacity of vacant land under existing zoning.

<u>District</u>	<u>Formula</u>	<u>Source</u>
Residential A <sup>(1)(2)</sup>	0.87 d.u./acre	Min. lot size 40,000 s.f. (ZB* sec. 5.1)
Residential B <sup>(3)</sup>	Multifamily: N.A.	43,560 s.f. + 4,000 s.f./additional unit (ZB sec. 6.8.3)
Residential C <sup>(4)(5)</sup>	Mobile homes: 3.27 d.u./acre	Min. lot size 10,000 s.f. (Board of Health Rules and Regulations Pertaining to Mobile Homes)
Residential D <sup>(6)</sup>	0.87 d.u./acre	Min. lot size 40,000 s.f. (ZB sec. 5.1)
Business District <sup>(7)(8)(9)(10)</sup>	single family: 1.45 d.u./acre retail: 0.25 FAR office: 0.75 FAR	Min. lot size 30,000 s.f. (ZB sec. 5.1) Max bldg cov. 25% (ZB sec. 5.2), Max height 3 stories (ZB sec. 6.9.10), retail parking 1 sp./250 s.f., office parking 1 sp./300 s.f. (ZB sec. 6.5)
Industrial District <sup>(11)(12)(13)</sup>	retail: 0.25 FAR office: 0.75 FAR manuf./high tech: 0.25 FAR	Max bldg cov. 25% (ZB sec. 5.2), Max height 3 stories (ZB sec. 6.9.10), retail parking 1 sp./250 s.f., office parking 1 sp./300 s.f., industrial parking 3 sp./1,000 s.f. (ZB sec. 6.5)
Designated Development District <sup>(14)</sup>	retail: 0.25 FAR office: 0.86 FAR	Max bldg cov. 25% (ZB sec. 5.2), Max height 6 stories (ZB sec. 6.9.4), retail parking 1 sp./250 s.f., office parking 1 sp./300 s.f. (ZB sec. 6.5)
Farm & Forest District <sup>(15)</sup>	0.17 d.u./Acre	Min. lot size 5 acres (ZB sec. 5.1)
Wetland District	No development	

\*ZB: Zoning Bylaw

(1) In districts RA, RB, RC, and RD, the developable area is reduced by 20% to account for streets and wastage for single family development.

(2) In Eastern subarea, where located in flood-prone area, the density is calculated at 0.17 units per acre.

(3) Although single family homes are also permitted, it is assumed that 100% of the area will be developed for multifamily.

(4) Although single family homes are also permitted, it is assumed that 100% of the area will be developed for mobile homes.

(5) The developable area is reduced by 25% for streets and wastage for mobile home development.

(6) Although small-scale retail/service use is also permitted, it is assumed that 100% of the area will be developed for single family homes.

(7) It is assumed that 5% of the area will be developed for single family, 80% for retail/service use, and 15% for office use.

(8) It is assumed that manufacturing/high tech buildings will only be constructed to 1 story instead of 3 stories as permitted under zoning.

(9) In Eastern subarea, where located in flood-prone area, the density is calculated at 0.29 units per acre for residential, and 0.15 FAR for retail/service and office use.

(10) For all nonresidential uses, parking is estimated at 300 s.f./space to account for parking spaces, landscaping and driving areas.

(11) It is assumed that 40% of the area will be developed for retail/service use, 10% for office use, and 50% for manufacturing/high tech use.

(12) It is assumed that manufacturing/high tech buildings will only be constructed to 1 story instead of 3 stories as permitted under zoning.

(13) In Eastern subarea, where located in flood-prone area, the density is calculated at 0.15 FAR for retail, office, or manufacturing/high tech use.

(14) The buildout analysis cites the square footage that has already been permitted for this area, rather than using these specifications.

(15) In the Farm & Forest District the developable area is reduced by 15% to account for streets and wastage.

# Raynham Buildout Summary Information

*Community Preservation Initiative – Executive Office of Environmental Affairs*

## Current Demographics and Buildout Projections

<u>Population</u>		
	1990	9,867
	1998	10,396
	Buildout	19,745
<u>Students</u>		
	1990	2,015
	1998	1,942
	Buildout	3,760
<u>Households</u>		
	1990	3,352
	1998	3,881
	Buildout	7,138
<u>Water Use (gallons/day)</u>		
	1998	1,007,000
	Buildout	3,433,017

Summary of Buildout Impacts	Totals
Additional Developable Land Area (sq ft)	284,359,680
Additional Developable Area (acres)	6,528
Additional Residential Units	3,257
Additional Residents	9,349
Additional Commercial/Industrial Buildable Floor Area (sq ft)	22,998,296
Additional School Children	1,818
Additional Water Demand (gallons/day)	2,426,017
<i>Additional Residential Water Demand</i>	701,145
<i>Additional Commercial and Industrial Water Demand</i>	1,724,872
Additional Municipal Solid Waste (tons/yr)	4,796
<i>Additional Non-Recyclable Solid Waste (tons)</i>	3,410
<i>Additional Recyclable Solid Waste (tons)</i>	1,386
Additional Roadways (miles)	64
 Estimated Annual Funding for Community Preservation efforts in municipality with passage of the Community Preservation Act. (Figure is based on 3% surcharge of 1999 real property tax levy.)	 \$311,537

### Appendix 1-3 Detailed Buildout Analysis Results

#### Prime Development Parcels

A buildout analysis was performed for the specific parcels in Raynham which are considered to be "prime development parcels". These include parcels of at least 10 acres in size, adjacent parcels under the same ownership which total more than 10 acres, and commercial land located near key intersections in the town. The following results are only an estimate of the development potential on these parcels, as accuracy is limited by the precision of available data.

Approximately 25% of the developable land is located in prime development parcels. The following tables show that a total of 740 single family homes and 128 mobile homes can be developed on the prime development parcels that are zoned for residential use. On commercially zoned prime development parcels, assuming only one story structures are built, a total of 2.0 million square feet of retail space, 2.8 million square feet of office space, and 1.1 million square feet of manufacturing/high tech space would be developed. If, on the other hand, incentives were developed to encourage multi-story development (3 stories), the total commercial square footage could potentially increase by about 60%. Most of the potential commercial space is in the eastern section of the town, which includes the Designated Development District.

The key locations include first, the Route 138 corridor from the Dog Track to the junction of Broadway (Route 138) and Route 495, and second, around the junction of Routes 44 and 24. In the first prime development sub-area along the Route 138 corridor there are approximately 79 acres of developable land in the business district on which a total of 1.1 million square feet of commercial space including 421,700 sq. ft of retail space, 0.6 million square feet of office space, and 22 homes can be developed. Near the second intersection there are 248 acres of developable commercial land, including the designated commercial district and some parcels which are in the business district. At this location a total of 3,122,500 million square feet of commercial space including 513,000 sq. ft of retail space, 2,609,500 million square feet of office space, and 6 homes can be developed.

**Table A1-1  
Development Capacity in Prime Development Parcels**

<u>District</u>	<u>Total Acres</u> (Prime parcels/all developable land)		<u>Development Capacity</u>	
Residential A <sup>(1)</sup>	811	/ 3,757	Single family	700 units
Residential C	39	/ 54	Mobile Homes	128 units
Farm & Forest District	131	/ 523	Single family	22 units
Business District <sup>(2)</sup>	139	/ 788	Single family	18 units
			Retail	912,100 s.f.
			Office	1,368,100 s.f.
Industrial District <sup>(3)</sup>	197	/ 579	Retail	861,000 s.f.
			Office	1,937,200 s.f.
			Manuf./High Tech	1,074,100 s.f.
Designated Development District	206	/ 206	Retail	240,000 s.f.
			Office	2,200,000 s.f.
Wetland District	38	/ 315	--	--

**Table A1-2**  
**Summary of Buildout Capacity for Prime Development Parcels Under Current Zoning**

<u>Type of Land Use</u>	<u>Development Capacity</u>			
	<u>Total</u>	<u>North</u>	<u>Central</u>	<u>East</u>
Residential				
Single Family	740 dwelling units (d.u.)	38 (d.u.)	221 (d.u.)	481 (d.u.)
(% of all developable land)	(22%)	(10%)	(18%)	(29%)
Mobile Home	128 (d.u.)	-	-	128 (d.u.)
	(72%)	-	-	(72%)
Nonresidential				
Retail/Service	2,013,100 square feet (s.f.)	537,300 (s.f.)	169,600 (s.f.)	1,306,200 (s.f.)
	(29%)	(34%)	(13%)	(33%)
Office	5,505,300 (s.f.)	892,800 (s.f.)	318,200 (s.f.)	4,294,300 (s.f.)
	(52%)	(49%)	(18%)	(63%)
Manufacturing	1,074,000 (s.f.)	144,300 (s.f.)	106,200 (s.f.)	823,600 (s.f.)
	(38%)	(15%)	(37%)	(51%)

**Table A1-3**  
**Summary of Buildout Potential at Key Intersections Given Current Market and Zoning**

	<u>Acres</u>	<u>Retail Space</u>	<u>Office Space</u>	<u>Dwelling Units</u>
Route 138 Corridor to Route 495	79	421,700 s.f.	632,500 s.f.	22 units
Junction of Routes 44 and 24	248	513,000 s.f.	2,609,500 s.f.	6 units

**Table A1-4**  
**Commercial Buildout Potential on Prime Development Parcels with Incentives for High Density**

<u>Type of Land Use</u>	<u>Development Capacity</u>			
	<u>Total</u>	<u>North</u>	<u>Central</u>	<u>East</u>
Retail/Service	5,969,300 square feet (s.f.)	1,547,400 (s.f.)	551,600 (s.f.)	3,870,300 (s.f.)
Office	5,505,300 (s.f.)	892,800 (s.f.)	318,200 (s.f.)	4,294,300 (s.f.)
Manufacturing	3,121,900 (s.f.)	375,200 (s.f.)	276,100 (s.f.)	2,470,700 (s.f.)

#### **Residential Development in Eastern Section**

A significant portion of the developable land is located in the eastern section of the town in the triangle formed between Routes 24 and 44. This area includes a total of approximately 1,539 acres of developable land in the Residential A zoning district, which can yield 1,275 single family homes under existing zoning regulations. This represents about 38% of the dwelling units that can potentially be built in the town. If the zoning in this area were changed to require a minimum lot size of 60,000 square feet, the number of homes that can be built in this area would fall to 885.

## **SECTION II**

### **HOUSING**

## **SECTION II HOUSING**

### **Introduction**

#### **2.1 Overview & Inventory**

- Demographic Profile
- Housing Profile
- Residential Zoning
- Projected Buildout

#### **2.2 Needs Assessment**

- Subsidized Housing
- Market Rate Housing

#### **2.3 Vision & Goals**

#### **2.4 Recommendations & Action Plan**

### **Appendix:**

- 2-1: Population Projections

## II. HOUSING

### INTRODUCTION

The Town of Raynham has benefited by a diversity in the type and value of its housing stock. There is a wide range of prices, a variety of housing types including single and multifamily, mobile homes, rental housing, condominiums, and owner occupied housing. An aging population and an increase in housing costs, on the other hand, will require the town to develop and implement a housing plan which meets the needs of the elderly and young families, in particular. One of the greatest challenges of implementing the Master Plan will be to address the concerns identified in the Housing Plan.

### 2.1 OVERVIEW AND INVENTORY

#### Demographic Profile

The population of Raynham in 1999 was 10,787 persons, as reported in the Town Census. Following is a discussion of past and projected population growth trends in Raynham and the surrounding region, as well as other demographic changes that have taken place in recent decades.

#### Population and Household Growth

The Town of Raynham experienced tremendous growth in both home construction and population between the 20-year period of 1960 and 1980 (a population increase of 4,935 persons or 119%, and an increase in households of 1,716 or 146%). Since 1980, however, growth appears to have been tempered by a number of factors, many of which have also become regional and national trends. These include a decrease in the number of persons per household as the number of single-person and single-parent households has increased; an overall increase in life span allowing residents to remain in their homes longer than in the past; and a decrease in the number of children per household. Most forecasters predict that these trends will continue at least for the foreseeable planning period (10-20 years). In addition, a number of changes to Raynham's land use regulations over this period may have contributed to this decrease in growth, as well as a limited amount of land currently available for the construction of multi-family dwellings.

**Table 2-1**  
**Town of Raynham Population and Household Growth 1960 – 2020**

<u>Year</u>	<u>Population</u>	<u>Growth</u>	<u>% Change</u>	<u>Median Age</u>	<u>Number of Households</u>	<u>Persons per Household</u>
1960	4,150	1,724	71.1%	NA	1,172	NA
1970	6,705	2,555	61.6%	26.8	1,880	3.6
1980	9,085	2,380	35.5%	30.1	2,888	3.1
1990	9,867	782	8.6%	34.8	3,515	2.94
2000	11,000	1,133	10.5%	>34.8	4,091*	<2.94
2010	12,150	1,150	10.5%	>34.8	4,681	<2.94
2020	13,654	1,504	12.4%	>34.8	5,271	2.3+/-

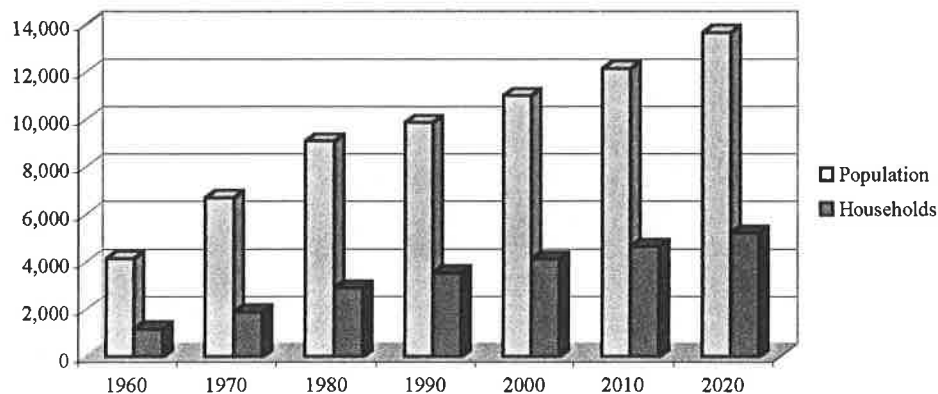
NA = Not Available

\* From 1990-1998 approximately 500 additional households were constructed in Raynham or 59 households on average per year.

Sources: 1960, 1970, 1980, 1990 U.S. Bureau of the Census; Raynham Building Department; 2000, 2010 preliminary population & housing estimates based on recent trends (590 new households per decade); and, 2020 SRPEDD population projections (1996).

See Appendix for a review of other population projections.

**Figure 2-1  
Population and Household Growth**



Raynham's population has increased approximately 17.6% or 1,597 persons since 1980. This is a much lower increase than was projected by Raynham's 1982 Comprehensive Growth Plan (12,500 to 15,950 persons by 1995). This may be in part be due to a substantial increase in Raynham's median age above the age projected in 1982 (34.8 years rather than the projected 30) and the changes in household make-up which have occurred as discussed above. Raynham's increase in population since 1980 has been lower than that of most of its neighbors.

**Table 2-2  
Actual Population Growth: Raynham and its Neighbors, 1980 – 1998**

Municipality	Population			1980-1998	
	1980	1990	1998	Population Increase	% Change
Berkley	2,731	4,100	5,400	2,669	97.7%
Bridgewater	14,756	21,249	23,255	8,499	57.6
Easton	15,424	19,807	22,157	6,733	43.7
Middleborough	16,404	17,867	19,213	2,809	17.1
Norton	12,736	14,265	16,793	4,057	31.9
Raynham	9,085	9,867	10,682	1,597	17.6
Taunton	43,482	49,472	52,000+/-	8,518	19.6
West Bridgewater	6,359	6,389	6,558	199	0.3%

Sources: 1980 and 1990 U.S. Bureau of the Census. 1998 based on Town Census from each community, except Taunton (51,935 estimated by the Census Bureau in 1996).

Will this trend continue? A review of the latest population projections from SRPEDD and Old Colony Planning Council indicate that Raynham would have the second highest percentage of growth of all the surrounding communities. Individuals who are studying growth in Eastern Massachusetts are projecting substantial growth along a corridor that extends from Worcester through Franklin, Attleboro and Taunton. (Municipal trends, October, 1998). The City of

Taunton, was the 7<sup>th</sup> highest community in single family home construction in the 1997-1998 time period. If this growth continues as it has along route 44 in Raynham, it is quite possible that the pace of development in Raynham will accelerate.

**Table 2-3**  
**Projected Population and Housing Growth: Raynham and its Neighbors, 1990– 2020**

<u>Municipality</u>	<u>1990</u>	<u>2020</u>	<u>Population Increase</u>	<u>% Change</u>	<u>Building Permits/Year</u>
Berkley	4,100	8,815	4,715	115%	48
Bridgewater	21,249	27,921	6,672	31	145 (1998)
Easton	19,807	26,756	6,949	35	102 (1998)
Middleborough	17,867	30,136	12,269	41	142
Norton	14,265	22,383	8,118	57	33
Raynham	9,867	13,654	3,787	38	76
Taunton	49,472	62,307	12,835	26	160
West Bridgewater	6,389	7,391	1,002	16%	27 (1998)

Sources: 1990 U.S. Bureau of the Census. Projection to Year 2020 , SRPEDD. Estimates for Bridgewater, West Bridgewater, and Easton, Old Colony Planning Council

#### *Demographic Trends*

Like its neighboring communities, Raynham's median age of 34.8, as reported in the 1990 Census, has been steadily climbing (up 15.6% or 4.7 years since 1980, and up 12.3% or 3.3 years between 1970 and 1980). This increase in median age is in part due to the residents having fewer children than in the past, having them later in life, and remaining in their homes longer after their children have moved; and may also be due in part to residents being older when moving into the community than in the past.

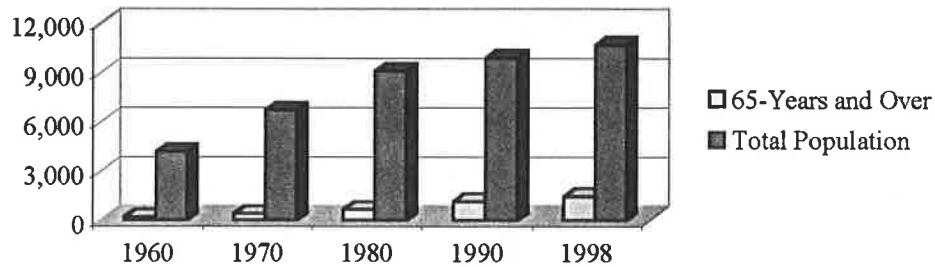
**Table 2-4**  
**Town of Raynham Age Profile 1980-2010**

	<u>1980</u>	<u>1990</u>	<u>%</u>	<u>2000</u>	<u>2010</u>	<u>%</u>	<u>% Change ('90 - '10)</u>
0 – 14 yrs	2,345	2,113	21.4	2,298	2,190	18.2	3.6
15 – 29 yrs	2,070	2,079	21.1	2,003	2,072	17.2	0.0
30 – 44 yrs	2,144	2,518	25.5	2,582	2,441	20.3	-3.1
45 – 59 yrs	1,396	1,547	15.7	2,445	2,531	21.0	63.6
Over 60	<u>1,030</u>	<u>1,610</u>	<u>16.3</u>	<u>1,898</u>	<u>2,812</u>	<u>23.3</u>	<u>74.7</u>
Total	8,985	9,867		11,226	12,046		

It is projected that by 2010 the population over the age of 45 will have grown substantially, while the other age groups will remain at approximately the same level they were in 1990.

In 1960, Raynham's senior population age 65 and over represented 4.7% of the total population. By 1980, those 65 years and over represented 7.2% of the total population, increasing by 1990 to 11.7%, and, according to the 1998 Town Census, currently represent 13.6% of the Town's population.

**Figure 2-2**  
**Raynham - Age 65-Years and Over**



The racial mix is predominantly white, with less than 3% of the population in 1990 identifying themselves with other ethnicities.

The median household income in Raynham in 1989 was \$44,846. This is the latest year for which town-level data is available. Incomes in Bristol County rose by 24% between 1989 and 1995.

### **Housing Profile**

The number of housing units in Raynham as of January 1, 1999 was approximately 4,030. Following is an inventory of existing housing in Raynham. Sources include the 1990 U.S. Census, SRPEDD, and the Town of Raynham Building Inspector.

#### *Inventory*

The greater part of the housing inventory in Raynham is fairly new. Over 50% of the housing units were constructed since 1970. Housing construction peaked during the 1970's and 1980's but has been more moderate over the recent decade.

**Table 2-5**  
**Homes in Raynham by Year Built**

	<u>Number of Units</u>	<u>%</u>
Before 1939	485	12.0
1940 – 1949	148	3.7
1950 – 1959	493	12.2
1960 – 1969	733	18.2
1970 – 1979	850	21.1
1980 – 1989	806	20.0
1990 - 1998	<u>515</u>	12.8
Total	4,030	

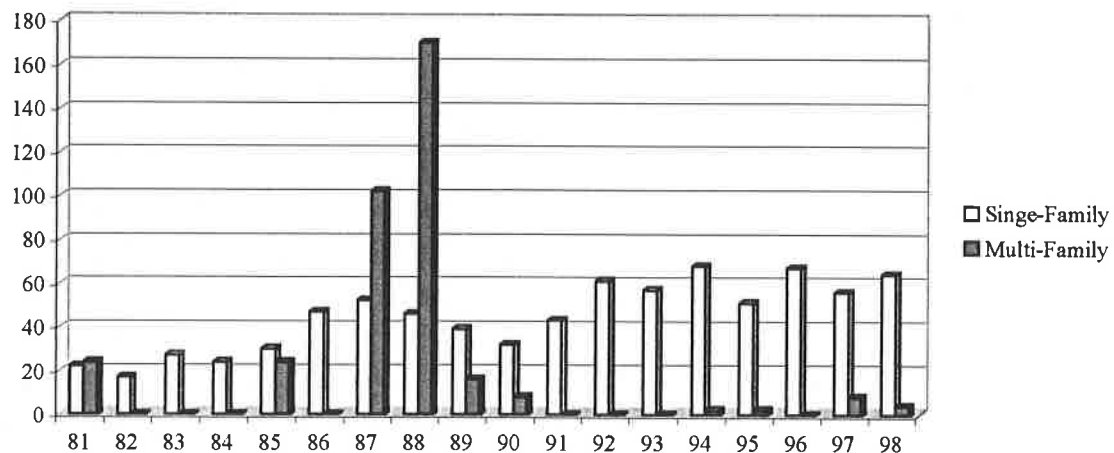
Source: 1990 U.S. Census, Town of Raynham Building Department

#### *Housing Starts*

Approximately one-third (348) of all new housing starts since 1980 (1,086) consisted of multi-family dwellings, the majority of which were constructed in the 1980s. An average of 45 single-

family homes have been constructed annually in Raynham since 1980, and an average of 58 single-family homes per year since 1990. The Town has seen limited multi-family development since 1990 (20 units). The Building Inspector reports that less than 50% of new home construction consists of 4 bedrooms – the rest consists of 3 bedrooms.

**Figure 2-3**  
**Household Starts Since 1980**



#### *Housing Type*

The majority of homes are single family. Approximately 14% of the housing units are in two-family or multifamily structures. Of these, the majority are in apartment buildings with five or more units. There are two mobile home parks in Raynham: Pine Hill Estates, with 295 units, and a smaller park off of Route 138.

**Table 2-6**  
**Homes in Raynham by Housing Type**

	1990	1998	%
Single Family	2,653	3,151	78.2
2-4 Units in Structure	160	-	-
5 or More Units in Structure	393	-	-
Multifamily	-	569	14.1
Mobile Homes	294	295	7.3
Other	15	15	0.4
Total	3,515	4,030	

Source: 1990 U.S. Census, Town of Raynham Building Department

In 1990 there were approximately 510 rental units, or 15% of the total number of housing units. The remaining 85% of housing units were owner-occupied.

The majority of houses are connected to Town water and sewer. Approximately 90% of the homes are connected to public water and sewer. In 1990 approximately 13% of homes had private wells, while 75% had on-site sewage disposal.

#### *Costs and Affordability*

According to the 1990 US Census, Raynham homeowners with mortgages spent an average of about 21% of their income on housing. Renters spent about 22% of their income. More recent figures are not available, although incomes in Massachusetts grew by about 12% between 1990 and 1997 (US Census), while average sales price of homes in Raynham have increased by 36% (Banker & Tradesman). Rents in the region have increased faster than home values or income.

The volume of home sales in Raynham has been increasing steadily in recent years. In 1999 there were 244 sales, including 208 single family residences and 36 condominiums. The average sales price for a single family home was \$165,000, while the average sales price for a condominium was \$69,000. Compared with neighboring communities, housing in Raynham is somewhat more expensive than in Middleborough and Taunton.

The average assessed value for all homes in Raynham was about \$165,000 in FY 2000. Newer homes have tended to be larger. The average assessed value for homes built since 1994 is about \$221,600. New homes typically sell for at least \$230,000. It is estimated that in 1999 one would need a household income of \$70,000 to afford a new single family home in Raynham.

A Housing Certification process was recently announced as part of Executive Order 418. Supporting documentation has provided a benchmark of affordability for all communities in Massachusetts. For purposes of this analysis, Raynham is considered part of the Boston Metropolitan Area which has a median family income of \$65,500. Low/moderate income households would have an income less than or equal to 80% of the median income and affordable ownership units would include less than or equal to 150% of the median income or \$71,550. Using this criteria, affordable rents are set at 30% of median income or a rental maximum of \$1,638 and an affordable purchase price is set at \$297,000. The affordable purchase assumes 10% down, 8.5% loan for 30 years, 33% of income for principal, interest, taxes, and insurance, rounded to the nearest \$1,000.

#### Publicly Assisted Housing

The Housing Authority has constructed a total of 86 apartments (85 1-bedroom, 1 2-bedroom) in two housing developments for the elderly and disabled. They are both located on the same parcel of land on Mill Street, the one at 75 Mill Street, built in 1978, has 62 one-bedroom units, the other at 133 Mill Street (built in 1995) has 24 units. The Housing Authority also administers 37 Section 8 housing certificates. Participants in the Section 8 program use their vouchers to find housing in private developments. Vouchers are used both by families and elderly households.

#### *Special Needs Housing*

Housing for senior and disabled persons in Raynham consists of the two publicly subsidized developments described above (75 Mill Street and 133 Mill Street). Currently 60 of these units are occupied by elderly residents and 6 are occupied by disabled persons. Other housing for persons with special needs is not known to exist in Raynham.

#### **Residential Zoning**

Raynham has five residential zoning districts: Residential A, Residential B, Residential C, Residential D, and the Farm & Forest District. In addition, a limited amount of development is permitted in the Business District. With the exception of the Farm & Forest District, all

residential districts permit single family residences at a moderate suburban density, requiring 30,000 – 40,000 square feet per lot.

The Residential A District, located throughout the town, allows only single family residences at a density of 40,000 square feet per lot.

The Residential B District, located along Church Street in the South East corner of the town and in a small area along Philip Street, allows single family residences, multifamily residences, and cluster multifamily developments. Multifamily residences require 40,000 square feet of lot area for the first unit and 4,000 square feet for each additional dwelling unit. Dimensional requirements include a limit of 12 units or a total of 16 bedrooms in any multifamily structure.

The Residential C District, located south of Hill Street, allows single family residences and mobile home parks. Mobile home parks are regulated under the Board of Health Rules and Regulations rather than the Zoning By-law. The minimum lot size per dwelling unit in a mobile home park is 10,000 square feet, or less if the area is served by town sewage.

The Residential D District allows single family residences and small retail and service businesses. This district is located in a small area along Broadway, south of Center Street.

The Farm & Forest District allows single family residences at a very low density, requiring a minimum lot size of 5 acres. This district is located in various sites in the Northern and Central sections of the town.

The Business District allows single family residences as in Residential A, but only on existing roads. Residential subdivisions are not permitted.

Open Space, or “cluster” development, is permitted in the Residential A and Farm & Forest districts. Zoning requirements allow the construction of single family homes with lot sizes of 20,000 square feet and 40,000 square feet respectively, provided that the total number of residential lots does not exceed the number of lots that would ordinarily be permitted under conventional regulations. Development standards are applied which are intended to ensure the quality of development. At least 40% of the tract should be preserved as open space, of which no more than 30% may be wetlands, and no more than 20% may be man-made impervious surfaces. Several Open Space developments are currently undergoing Planning Board review.

### **Projected Buildout**

An analysis of the projected buildout of residential units given the existing zoning is shown below. In total, the town is zoned to accommodate 3,313 additional single family residential structures, 900 multi-family dwelling units and 176 additional mobile homes. The majority of the growth is projected for the Central and East districts. See Tables 1-4 and 1-5 in Section 1, Land Use for details.

## **2.2 NEEDS ASSESSMENT**

*Is the town zoned to accommodate the type of housing needed and desired by Raynham's residents?*

### **Subsidized Housing**

An assessment of the growth in household types i.e. elderly, young couples, with and without children, as well as income relative to household costs will assist in developing answers to the

preceding question.<sup>1</sup> The following needs were identified using the methodology outlined in the Massachusetts Housing Partnership Fund Housing Needs Workbook.

#### *Publicly Assisted Housing*

According to the standards set by Massachusetts Chapter 40B, Raynham should have 350 subsidized housing units, or 10% of the number of permanent residences counted in the 1990 US Census. Currently there are only 193 units, or 5.5% of the 1990 base. Units are counted towards this total if they receive State or Federal subsidies or are generated as a result of some action by the town or State such as the issuance of a Comprehensive Permit for affordable housing. It is important that the Town take active steps to work towards meeting the 10% requirement.

The following table compares availability of affordable housing in Raynham with neighboring communities:

**Table 2-8**  
**Comparison of Affordable Housing Availability**

	<u>Subsidized Units</u>	<u>Total Units in 1990</u>	<u>% of 1990</u>
Raynham	193	3,501	5.51
Middleborough	280	6,365	4.40
Taunton	1,469	20,253	7.25
Lakeville	217	2,731	0.15
Easton	4	6,698	3.24

#### *Elderly Housing*

Elderly/disabled housing should be a top priority for the Town. The number of persons above age 60 is expected to grow by 23% between 1990 and 2010 (as shown earlier on Table 4), while the number of persons over 85 is expected to grow by 50%. In 1989, 67% of households headed by persons over age 65 had incomes of less than \$25,000, while the median household income in Raynham was \$44,846. (See Table 9.) This is slightly higher than average for the state, where 63% of residents had incomes below \$25,000. Approximately 9% of Raynham residents over the age of 65 were below the poverty level, as compared with 3% of all residents.

**Table 2-9**  
**Household Income of Residents Over the Age of 65 (1990 US Census)**

	<u>Households 65 and Over</u>	<u>% of Elderly Households</u>
Under \$15,000	265	37.5
\$15,000 to \$24,999	206	29.2
\$25,000 to \$49,999	157	22.2
\$50,000 and over	78	11.0
Total	706	

According to the 1990 US Census, there were 230 persons in Raynham over the age of 65 who claimed to have mobility and/or self-care limitations. There were an additional 191 residents under the age of 65 who had such disabilities.

<sup>1</sup> The following assessment is based largely on data from the 1990 US Census. Although this data is clearly outdated, it is unlikely that recent figures, if available, would provide substantially different results. In most cases, special housing needs have grown faster or at pace with the segments of the population they serve.

As described above, there are 86 units of subsidized elderly/disabled housing. In addition there are 13 vouchers applied to elderly/disabled clients. The number of elderly households in 1989 with incomes below \$15,000 was 265. The ratio of elderly households earning less than \$15,000 to the number of subsidized units is about 3:1.

There are presently 91 households on the waiting list for elderly/disabled housing, of which 23 are Raynham residents, and the waiting list is growing. Currently it takes two to three years for a local person to get an available unit. As it currently stands, non-Raynham residents are unlikely to obtain a unit. Turnover is usually around six tenants per year. Clearly, a need for elderly housing is present.

#### *Family Rental Housing*

The US Census reported 509 renter occupied housing units in 1990. Of these, 231 were occupied by young adults between the ages of 25 to 34 years old. Household income of renters in Raynham is fairly evenly distributed. (See Table 10.) The majority of rental housing units are occupied by one or two-person households. Three quarters of the apartments had one or two bedrooms, with the largest number in the \$500-\$749 range. The median gross rent in 1990 was \$704, well above the median for the county of \$424. A total of 95 renters in Raynham, or about 19% of renting households paid more than 35% of their income for rent. This compares to the county average of 29%.

**Table 2-10**  
**Income Distribution of Renters**

	<u>Raynham</u>	<u>%</u>	<u>Bristol County</u>	<u>%</u>
Less than \$10,000	81	16.6	22,766	29.8
\$10,000 - \$19,999	66	13.5	16,202	21.2
\$20,000 - \$34,999	121	24.8	20,121	26.4
\$35,000 - \$49,000	121	24.8	11,017	14.4
\$50,000 or more	<u>99</u>	20.3	<u>6,247</u>	8.2
Total	488		76,353	

The Raynham Housing Authority administers 37 Section 8 housing certificates. Presently 13 of these are provided to elderly persons, leaving 24 vouchers serving low income families. While not as critical as the need to serve the elderly population, there is also a deficit of subsidized housing to serve families in Raynham.

#### **Market Rate Housing**

Even for those seeking housing without public assistance, there may be opportunities for the Town to improve the availability and quality of appropriate housing alternatives.

#### *First Time Homebuyers*

The National Association of Realtors calculates a homebuyer's affordability index each quarter, comparing the median household income and median home price. In 1999, a family earning \$46,000 can afford a home costing \$180,000 with a 20% down payment. Although the index is based on national figures, housing affordability in the region is comparable or worse than elsewhere in the country.

As described earlier, homes in Raynham sell on average in the price range of \$150,000. In 1990, only about 5% of the homes in Raynham were valued at less than \$100,000. An additional 37%

of homes were valued between \$100,000 and \$150,000. The average household income for persons under the age of 35 is about \$50,000.

The greatest barrier to first time homebuyers is saving for a down payment, especially in a region with such high housing costs. Loan programs which have small down payment requirements, such as 3% or 1%, help buyers to overcome this obstacle. However, in a hot housing market such as we have seen in this region recently, buyers with small down payments may be at a disadvantage in the market. Education programs would allow households with lower incomes to take advantage of loan programs and other assistance available to first time homebuyers.

#### *Availability*

According to real estate professionals, there is greater availability for higher-end homes, in the range of \$250,000 and above. Many of these homes are of new construction. There is a high demand for houses in the moderate price range (less than \$200,000), but very few homes on the market in this price range.

#### *Zoning*

The existing zoning currently provides for a limited number of housing choices. Most of the town is zoned for single family. Very few sites remain for the development of higher density housing.

The use of Open Space or "cluster" provisions by private developers would help to increase the variety of attractive housing options in the town, as well as improving the open space amenities available to residential neighborhoods. The Town might wish to seek ways of overcoming the unfamiliarity or lack of interest in this type of development among developers in order to encourage its use.

Bonus-based zoning such as discussed in the subsequent section on Vision/Goals should be incorporated into the zoning by-law to encourage the development of affordable single family housing. Density bonuses would be granted for the provision of duplex housing and mixed use housing as a way to ensure the dedication of critical open spaces and provide housing for the elderly and/or young families in a variety of housing types.

#### *Sites*

The Housing Authority should consider future public housing units adjacent to, as well as away from the existing facilities. Sites for potential housing development should be identified in locations that allow access to other municipally funded activities of great concern, such as the Council on Aging or the Library. Possibly one or more of the old schools (North, South, Sullivan) might be considered for conversion into senior housing.

#### *Services*

There is a need for public transportation to serve the senior population, including the residents of the Mill Street complex. Council on Aging services and/or other activities or appointments away from facilities are impossible for residents to attend without some form of public transportation. The only transportation that is presently available is not reliable and does not reach all those in need of service.

### 2.3 VISION AND GOALS

The Housing sub-Committee has met to discuss what mix of housing, i.e., single family, multi-family, etc., and levels of affordability will meet the future needs of Raynham's residents. They have developed a vision and sets of goals and policies that will address the present and future needs of Raynham's residents.

#### **Vision:**

*Opportunities for local residents, in particular the elderly and young families, to reside in Raynham will be expanded to provide choices in housing affordability, occupancy, tenure, and building type .*

In fulfilling this vision, the Committee updated the goals and policies established in the 1982 Growth Policy Plan:

1. *Encourage the development of a wider choice of affordable housing opportunities for all age and income levels as well as for those with special needs:*
  - a. Priorities include:
    - Affordable single family homes for young families
    - Age restricted mobile homes
    - Age restricted townhouses
    - Elderly public housing
    - In-law apartments
  - b. The Selectmen should establish a Raynham Housing Partnership (RHP) to represent the broad perspectives of the community in pursuing the housing goals established in the master plan. As part of this responsibility the RHP would assist in the review of housing developments seeking approval under the State's Comprehensive Permit Process.
    - Work with the Massachusetts Housing Partnership fund to establish a soft second loan program for first time homebuyers as well as to identify funding sources for other possible projects.
    - Pursue additional funding for the development of additional elderly housing. Work with town boards and committees to promote zoning changes in support of an improved mix of housing.
    - Publicize the need for, and possible solutions to expanding housing options for Raynham residents.
  - c. The town should explore regional solutions to meet the needs of the elderly including the provision of services and public transportation.
    - Work with South Shore Housing on regional solutions to specific housing needs
2. *Support zoning changes that will encourage residential growth in such a manner that environmentally sensitive land is protected and the rural nature of the town is retained*
  - a. Promote strategies such as land acquisition, zoning changes, enforcement, and public education in order to protect sensitive resources.
  - b. Provide additional incentives to encourage the use of cluster zoning and the development of affordable housing.

3. *Manage the growth of housing at a pace consistent with the town's ability to financially support the required infrastructure, town facilities and services.*
  - a. Promote mixed use developments and higher densities near major commercial locations where there is good access
  - b. Concentrate development where existing infrastructure is located
  - c. Consider increasing lot sizes
  - d. Regulate the expansion of sewer infrastructure
4. *Adopt the following Five Year Action Plan with specific goals and activities to provide additional affordable housing so as to meet the State's goal of 10% affordable housing.*
  - Provide an additional 100 units of affordable elderly housing (approximately doubling current number)
  - Encourage the development of an equal number of affordable units through incentive based zoning to meet the housing needs for families

**Town Of Raynham  
Housing Action Plan for Raynham Residents**

**HOUSING NEEDS**

- Affordable Single Family For Young Families
- Age Restricted Mobile Homes
- Age Restricted Townhouses
- In-Law Apartments
- Assisted Living
- First Time Home Buyers

**DIFFERENT OWNERSHIP OPTIONS**

- Private
- Condominium
- Raynham Housing Authority
- Public/Private

**DIFFERENT HOUSING STYLES**

- Single Family Dwelling
- Mobile Home
- In Law Apartment
- Duplex
- Townhouse
- Multifamily

**QUALITY MANAGEMENT**

- Privately Owned
- Raynham Housing Authority
- Non-Profit, i.e.
  - South Shore Housing
  - Town sponsored non-profit

## 2.4 RECOMMENDATIONS AND ACTION PLAN

In carrying out the goals and policies adopted by the Housing Committee, the following represents a recommended action program which should be undertaken with the support of the Town. These activities are identified below.

TASK	TIMING		RESPONSIBILITY
	Short Term 2000-2004	Long Term 2005-	
Establish A Raynham Housing Partnership(RHP) appointed by the Selectmen	X	X	Selectmen
Establish subcommittees of RHP; Project Review, Land Use and Zoning	X		Planning Board
Adopt Guidelines for reviewing affordable housing developments	X		Z.B.A.
Encourage zoning changes to facilitate development of:			P.B. and Master Plan Committee
Affordable Single Family For Young Families	X		
Age Restricted Mobile Homes	X		
Age Restricted Townhouses	X		
Elderly Public Housing	X	X	
Assisted Living			
Initiate first time home buyers program	X		
Encourage zoning amendment to allow by special permit in-law apartments through building addition, allow conversion by right	X		Planning Board

### 1. Establish a Raynham Housing Partnership

The Massachusetts Housing Partnership has prepared a guide Getting Started: Building Local Housing Partnerships, to assist communities develop a housing program which best reflects the local community's needs and goals. The membership of the Master Plan Housing Committee needs to be expanded to include public officials, housing advocates, business and community leaders, clergy, and concerned citizens. This Committee then needs to review the functions of a partnership, establish an agenda, and be formally endorsed by the Selectmen. The tasks of the RHP would include:

- A. Adopt goals and action plan based upon the draft Housing component of the Master Plan
- B. Establish criteria to evaluate affordable housing proposals submitted under Comprehensive Permits.
- C. Make recommendations on the pros and cons of particular housing proposals with particular reference to housing quality, type, and affordable issues.
- D. Review land use regulations and zoning bylaws, support appropriate changes

### 2. Establish Sub-Committees

Two priority issues need to be addressed by a RHP; establishing criteria and a process for reviewing projects submitted under comprehensive Permits and reviewing recommendations for zoning changes which will promote the goals of expanded housing options. Appendix E, Sample

Review Guidelines, and Appendix F, Sample Development Evaluation Checklist are included in the report Getting Started. These should be edited by the RHP and subsequently adopted.

The following criteria should be given priority consideration by the RHP in reviewing proposed affordable housing developments.

1. The project should meet one or more of the town's priority housing needs.
  2. The site should be well located for the population served.
  3. The proposed development should preserve and protect environmental resources and, where appropriate, accommodate the Town's Open Space Plan.
  4. A management plan must be provided to ensure quality maintenance and management.
  5. The developer should work with the town's Housing Committee to ensure that there is adequate coordination in tenant selection, provision of social services, public transportation, and needed infrastructure improvements.
  6. The project should meet all affordable housing program requirements as described in Appendix F: Development Evaluation Checklist.
3. Encourage proposed zoning changes  
(See Implementation section)

**4. Initiate First Time Home Buyers Program**

## Appendix 2-1 Population Projections

Several agencies, including the Southeastern Regional Planning and Economic Development District (SRPEDD), the Massachusetts Institute of Social and Economic Research (MISER) and the U.S. Bureau of Census periodically predict Raynham's population. In addition, the Town of Raynham annually conducts a Town Census in January under the auspices of the Town Clerk. The January 1999 Town Census reported a population of 10,787.

**Table A2-1  
SRPEDD Population Projections**

<u>Year</u>	<u>Projections completed in 1996</u>		<u>Preliminary projections being completed in 1999</u>
	<u>Population</u>	<u>Households</u>	<u>Population</u>
2000	11,976	4,485	12,125
2010	12,676		14,383
2020	13,654		16,641

**Table A2-2  
MISER Population Projections**

<u>Year</u>	<u>Population</u>
2000	11,226
2010	12,046

Projections completed in 1999

**Table A2-3  
U.S. Bureau of the Census  
Estimate made in 1996 \***

<u>Year</u>	<u>Population</u>
1996	10,513

\* The U.S. Bureau of the Census does not make population projections, but rather conducts a decennial census which will next be conducted in the year 2000, and available in mid 2001.

**SECTION III**  
**ECONOMIC DEVELOPMENT**

## **SECTION III ECONOMIC DEVELOPMENT**

### **Introduction**

#### **3.1 Economic Profile**

- Labor Force and Employers
- Employment
- Commercial Space
- Employment Base
- Regional Role
- Tax Base
- Competitive Regional Position

#### **3.2 Needs Assessment**

- Issues
- Build-Out of Commercial Space
- Regional Trends in Commercial Real Estate
- Market Potential
- Indices of Competitiveness for Commercial and Industrial Zoned Land

#### **3.3 Vision/Goals**

- Goals/Policies
- Recommendations

### **Appendices:**

- 3-1: Raynham at a Glance

### III. ECONOMIC DEVELOPMENT

#### INTRODUCTION

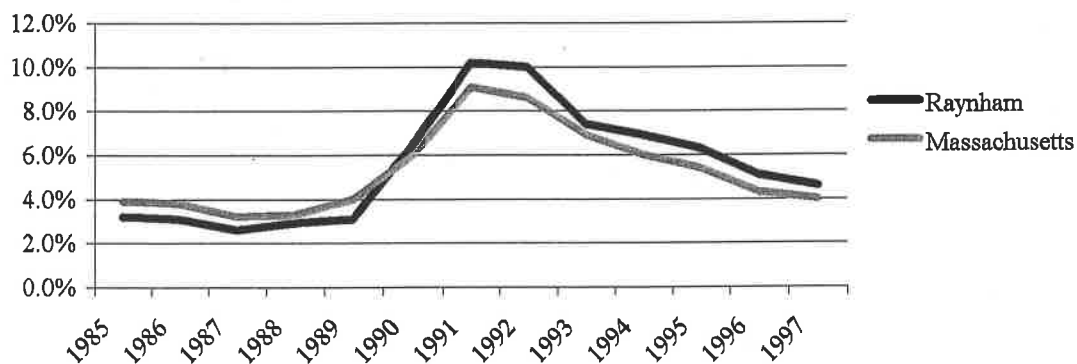
The Town of Raynham is located near the center of southeastern Massachusetts, adjacent to the City of Taunton and at the crossroads of Routes 495, 24, 44 and 138. Raynham, established in 1731, was originally part of Taunton. Known as the site of the first successful ironworks in 1652, the town grew slowly through the 18<sup>th</sup> and 19<sup>th</sup> centuries with the expansion of the mills in New Bedford, Fall River, Taunton and Attleboro. Raynham evolved as a rural, agricultural community with some local industries. This trend was radically altered with the construction of Routes 495 and 24. With improved access to the North and South, Raynham soon found itself located at the crossroads of an important corridor of strip commercial uses located along the East/West corridor of Route 44. This retail corridor has developed into an important sub-center serving the retail needs of the region's growing population. This trend will inevitably continue, and could be accelerated by additional planned infrastructure improvements and regional growth from both Route 495 and Taunton, as well as from communities to the west. Balancing Raynham's role as a suburban residential community with high quality residential living while accommodating continued growth as a regional commercial center represents a major challenge. How Raynham chooses to manage this economic growth will have a major impact upon the nature of this balance.

#### 3.1 ECONOMIC PROFILE

##### Labor Force & Employment

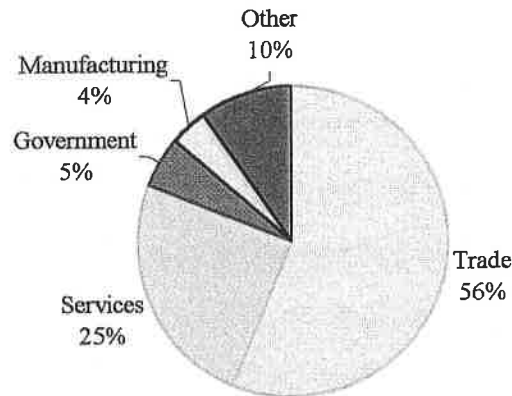
Historically, Raynham's unemployment rate has followed closely with state and national trends, varying only slightly from the state average. Joblessness in Raynham has been slightly higher than the Massachusetts average since the recession at the turn of the decade, but it is still relatively low. In 1998, Raynham's unemployment rate was 3.3%.

**Figure 3-1**  
**Raynham and Massachusetts Unemployment, 1985-1997**



Employment in Raynham is dominated by the trade and service sectors. Together, they account for 81% of all jobs in the town. The great majority of these trade sector jobs are in the relatively low-paying retail industry. In addition, government and manufacturing jobs account for 9% of Raynham's total employment. All other sectors combined make up the last 10%.

**Figure 3-2**  
**Employment in Raynham by Industry, 1997**



### Employers

Unfortunately, the industry sectors that so dominate Raynham's economy—retail and services—also pay relatively low wages. In fact, the retail industry in Raynham employs twice as many people as the next largest sector, but it pays the lowest average wage of any sector.

**Table 3-1**  
**Average Wage by Industry in Raynham, 1997**

<u>Industry</u>	<u>Number of Employees</u>	<u>Average Annual Wage</u>
Retail Trade	2,802	\$16,247
Services	1,425	\$24,309
Wholesale Trade	637	\$63,817
Manufacturing	242	\$30,575
FIRE	220	\$30,120
Construction	187	\$29,788
Transp./Utilities	102	\$36,881
Agriculture	91	\$17,648

Source: Massachusetts Division of Employment and Training (DET)

In the last decade, Raynham has seen steady growth in the number of business establishments. Historic increases in employment have been most dramatic in the service sector of the economy, where the number of jobs has gone up more than 50% in ten years, and in the steadily growing trade sector. Finance, insurance, and real estate jobs have also seen a large percentage increase, though they are only a small part of the overall employment picture. Other sectors have been mixed.

**Table 3-2**  
**Employment by Industry in Raynham, 1987 - 1998**

	Total Establish- ments	Avg. Wage	Trade	Services	Govern- ment	Manu- facturing	Finance/ Insurance/ Real Estate	Construc- tion	Telecom./ Pub. Utilities	Agri- culture
1987	289	\$13,692	2,901	1,075	233	216	79	212	32	96
1988	317	\$15,783	3,021	1,146	263	224	90	197	30	107
1989	347	\$15,729	3,044	1,020	274	203	130	190	141	103
1990	364	\$17,380	2,572	954	250	198	180	137	115	97
1991	353	\$19,019	2,330	946	260	186	189	100	98	98
1992	335	\$19,655	2,386	950	257	158	145	79	75	87
1993	353	\$22,094	2,955	987	254	193	177	94	78	84
1994	391	\$21,095	3,307	959	262	209	157	122	87	101
1995	412	\$23,264	3,324	1,171	290	272	176	154	84	101
1996	431	\$25,971	3,439	1,425	305	242	220	187	102	91
1997	410	\$25,486	3,559	1,576	330	251	236	157	119	94
1998	435	\$25,926	3,257	1,709	340	287	225	190	126	96

Source: Massachusetts Division of Employment and Training (DET)

### Commercial Space

A survey of commercial establishments in Raynham using information from the Assessors Department reflects these employment figures. In total, in 1999 the town had 1,279,915 square feet of retail space, 210,650 square feet of office space, 665,096 square feet of industrial space, and 94,775 square feet of multiple use (residential and commercial in the same building). Of this total square footage, as indicated below, 26% was located along Broadway, and the balance, 74%, was located along the Route 44 corridor.

**Table 3-3**  
**Commercial Space in Raynham (in square feet)**

	<u>Route 138</u>	<u>Route 44</u>	<u>Total</u>
Retail	239,681	1,040,234	1,279,915
Office	60,871	149,779	210,650
Industrial	224,179	440,917	665,096
Multiple Use	65,372	29,403	94,775
TOTAL	590,103	1,660,333	2,250,436

Source: Town of Raynham Assessor

The largest retailer along Route 138 is the Market Basket. The largest industrial users are Ryan Iron Works, Broulette and Fortin, and Trucchi's. Along Route 44 commercial uses also dominate. Retail uses include Shaw's, and Stop and Shop, Ames and Wal-Mart, and two motels, a Days Inn and a Marriott Inn. The major office users are located in the Raynham Industrial Park as well as along Route 44 in the Wynn Wynn office building.

In the table below is a listing based on 1993 data indicating the largest employers.

**Table 3-4**  
**Largest Employers in Raynham, 1993**

<u>Employer</u>	<u>Number of Employees</u>
Raynham-Taunton Dog Track	1,000
Johnson and Johnson Orthopedics	550
Town of Raynham	360
Shaw's Supermarket	250
K-Mart	125

### **Employment Base**

Jobs-to-labor force ratio is an indicator of whether a town is a net importer or exporter of employment. Raynham has emerged over the last decade as a regional commercial center, and thus a net importer of employment. There are now more jobs in Raynham than there are residents to fill the positions, meaning that town's ratio is slightly greater than one. Job growth outpacing population has been a fairly recent shift in Raynham's economic picture. Journey-to-work data from the 1990 U.S. Census showed that at that time the town was a net exporter of labor, i.e., had a ratio of Raynham jobs to Raynham labor force less than one.

**Table 3-5**  
**Jobs to Labor Force Ratio**

	<u>1990</u>	<u>1997</u>
Raynham jobs	4209	6,322
Raynham resident labor force	4965	5,981
Jobs/Labor force ratio	0.85	1.06

The data on journey to work suggests that a large proportion of Raynham's residents are in the higher-income "white collar" professions and work outside the town. This is also supported by the trend favoring the construction of larger, more expensive single-family homes. At the same time, individuals employed in Raynham in lower-paying retail and service occupations are more likely to live in other towns.

**Table 3-6**  
**Place of Work and Place of Residence**

<u>Place of Work of Raynham Residents by Town</u>			<u>Place of Residence of Persons Employed in Raynham by town</u>		
Town	Number	%	Town	Number	%
Raynham	896	18	Taunton	1,295	
Taunton	827		Raynham	896	21
Brockton	464		Middleborough	190	
Boston	280		Bridgewater	127	
Bridgewater	254		Brockton	102	
Easton	167		Easton	93	
West Bridgewater	154		Berkley	81	
Stoughton	141		New Bedford	80	
Middleborough	109		Lakeville	72	
Randolph	78		Freetown	61	
Other	3,370		Other	2,997	
Total	4,965		Total	4,209	

1990 U.S. Census, Journey to Work

### Regional Role

Raynham's economic power within the region is indicated by comparing its retail, service, and manufacturing enterprises relative to those of nine adjacent municipalities. Taunton clearly leads the region in all three sectors, having the greatest number businesses and employees and the highest dollar amount of sales and payroll. Raynham's current strength is in the retail sector, less so in the service business sector, and even less so in manufacturing.

Retail is a significant driver of the local economy: Raynham ranks second in number of stores and third in total volume of retail sales (behind Taunton and West Bridgewater). Raynham's importance in the service sector is slightly less, ranked third in sales and fourth in number of stores behind Taunton, Mansfield, and Middleborough. Raynham's role in manufacturing is well below other neighboring towns. It ranks seventh in the number of firms behind Taunton, Mansfield, Easton, West Bridgewater, Bridgewater, and Middleborough.

**Table 3-7**  
**Retail Activity in Raynham Region, 1992**

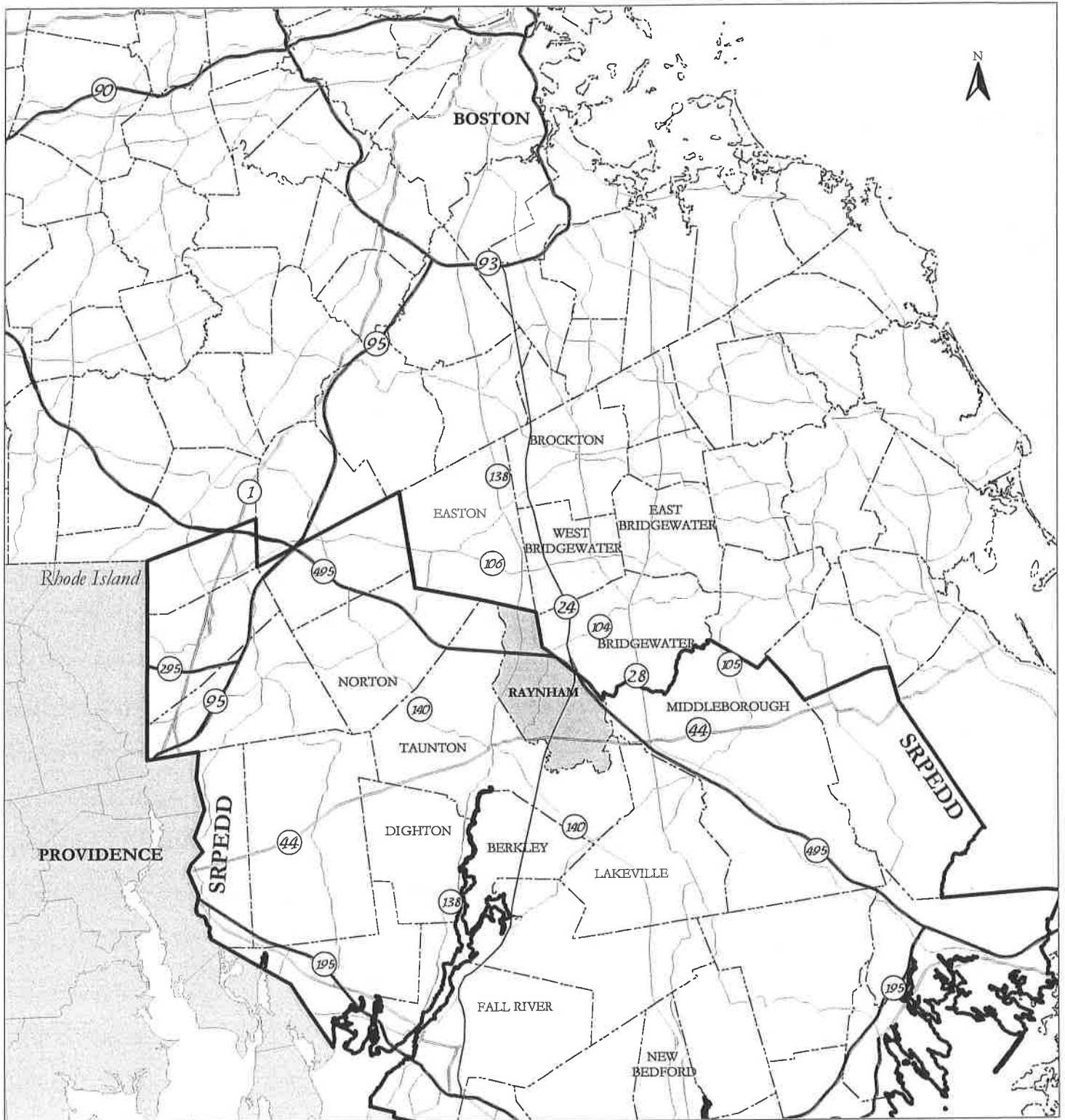
	<u>STORES</u>	<u>RETAIL</u>		
		<u>SALES (000)</u>	<u>PAYROLL (000)</u>	<u>EMPLOYEES</u>
Berkley	7	\$10,067	\$1,260	67
Taunton	294	\$236,670	\$37,640	3,560
Bridgewater	81	\$131,127	\$12,521	839
Easton	53	\$53,999	\$8,494	841
Lakeville	29	\$18,791	\$3,395	299
Mansfield	80	\$70,372	\$8,543	698
Middleborough	103	\$120,946	\$15,537	1,252
Norton	62	\$41,376	\$6,170	628
<b>RAYNHAM</b>	<b>110</b>	<b>\$184,474</b>	<b>\$23,137</b>	<b>2,033</b>
West Bridgewater	68	\$377,274	\$37,484	1,943

**Table 3-8**  
**Service, and Manufacturing Activity in Raynham Region, 1992**

	<u>STORES</u>	<u>SERVICE</u>			<u>MANUFACTURERS</u>
		<u>SALES (000)</u>	<u>PAYROLL (000)</u>	<u>EMPLOYEES</u>	<u>ESTABLISHMENTS</u>
Berkley	10	\$1,760	\$452	30	2
Taunton	275	\$137,948	\$52,242	2297	79
Bridgewater	69	D	D	250	21
Easton	68	\$31,476	\$13,208	827	30
Lakeville	33	\$16,077	\$7,191	321	9
Mansfield	110	\$100,423	\$45,504	3443	44
Middleborough	107	\$49,290	\$23,641	1100	19
Norton	67	\$24,057	\$8,724	513	14
<b>RAYNHAM</b>	<b>86</b>	<b>\$65,144</b>	<b>\$20,041</b>	<b>831</b>	<b>14</b>
West Bridgewater	57	\$22,608	\$10,136	445	26

### Tax Base

The Town of Raynham benefits by maintaining a favorable balance between residential and commercial uses. As indicated below, commercial, industrial, and personal property uses represent 26% of the total assessed valuation.



Prepared by Larry Koff and Associates

Map 3-1

## Town of Raynham Regional Context

**Table 3-9**  
**Raynham Tax Base (FY 1998)**

<u>Tax classification</u>	<u>Assessed Valuation</u>	<u>Percentage of Total Valuation</u>
Residential	\$559,373,600	74%
Commercial	\$147,200,100	19%
Industrial	\$39,207,600	5%
Personal Property	\$11,282,400	1%

Note: Tax-exempt properties including public facilities, religious institutions, and public open space comprise \$30,942,900 in assessed valuation. Chapter 61 lands, included under the commercial classification, are primarily used for agricultural purposes, and are taxed at less than full value; these properties comprise \$1,681,800 in total valuation.

Total tax revenue from commercial/industrial/personal property uses comprises 29% of the tax levy which is raised by local property taxes. Raynham is able to tax its commercial/industrial properties at a higher rate, reducing some of the tax burden for homeowners.

**Table 3-10**  
**Raynham Tax Revenue (FY 1998)**

<u>Tax classification</u>	<u>Tax Rate</u>	<u>Tax Levy</u>	<u>Percentage of Total Tax Levy</u>
Residential	13.42	\$7,506,794	71%
Commercial	15.30	\$2,252,162	21%
Industrial	15.30	\$599,876	6%
Personal Property	15.30	\$172,621	2%

**Competitive Regional Position – Tax Base/Tax Rate**

In 1999, Raynham ranked third highest out of the 10 towns in the region in the percentage of commercial/industrial/property (CIP) valuation. Raynham is one of five neighboring communities which have tax classification i.e. they tax their commercial property at a higher rate than residential. This shift above the residential tax levy rate, i.e. the percentage CIP shift above 1.00 noted below, is the second lowest percentage after Mansfield. Furthermore, Raynham's commercial tax rate of \$14.62 is the third lowest rate in the region.

**Table 3-11**  
**FY99 Valuation, Tax Rates, and Shifts for Commercial, Industrial, and Personal Property (CIP)**

	<u>CIP as % of Total Valuation</u>	<u>Actual CIP Shift</u>	<u>Actual CIP Tax Rate</u>
Taunton	25.44	1.50	22.75
W. Bridgewater	35.28	1.22	20.63
Middleborough	21.54	1.12	19.43
Mansfield	26.76	1.05	18.20
Easton	12.77	1.00	17.02
Norton	13.82	1.00	15.98
Bridgewater	11.71	1.00	14.84
<b>Raynham</b>	<b>26.32</b>	<b>1.09</b>	<b>14.62</b>
Lakeville	16.42	1.00	12.57
Berkley	6.14	1.00	11.85

The table below shows that total tax revenues represent 66% of municipal revenues. Of 9 neighboring towns, Raynham receives the lowest percentage of state aid: 9.7% in contrast to a high of 50% for Berkley and 36.6% for Taunton. Raynham's relatively higher per capita income and equalized valuation per capita account for this variance.

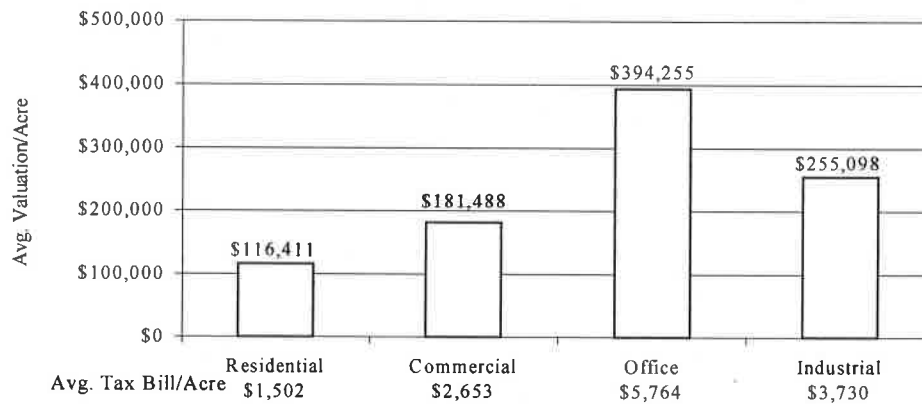
**Table 3-12**  
**Municipal Revenues By Source Fy99**

	<u>Tax Revenue as % of Tax Levy</u>	<u>State Aid</u>	<u>Local Receipts</u>	<u>All Other</u>
Berkley	38.90	50.00	6.70	4.40
Bridgewater	53.30	14.60	22.50	9.70
Easton	55.40	23.00	15.90	5.70
Lakeville	59.90	23.00	12.40	4.70
Mansfield	48.90	20.40	16.90	13.80
Middleborough	40.30	39.20	12.40	8.10
Norton	41.70	32.90	12.30	13.10
<b>Raynham</b>	<b>66.20</b>	<b>9.70</b>	<b>15.20</b>	<b>9.00</b>
Taunton	32.40	36.60	21.00	10.00
<b>State Totals</b>	<b>50.18</b>	<b>27.31</b>	<b>17.52</b>	<b>4.98</b>

Source: Massachusetts Department Of Revenue Division Of Local Services Municipal Data Bank

It is essential that a community maintain a balanced mix of land uses to ensure sufficient tax revenue to cover the expense of municipal services and education. The town of Raynham is generating only \$1,502 on average per acre of residential use in contrast to \$5,764 per acre of office use.

**Figure 3-3**  
**Land Use Tax Revenue Profile (FY 98)**



### 3.2 NEEDS ASSESSMENT

#### Issues

A number of issues were identified in the Massachusetts Growth Policy Report, 1977 and the 1982 Comprehensive Growth Policy Plan for the Town of Raynham, which are still true today.

- Rapid and ill-accommodated growth especially along Route 44
- Environmental degradation along the Taunton River and near water resource areas
- Unattractive or poorly planned commercial development along Routes 138 and 44.
- Large portion of land zoned for industrial and business use that is severely limited for development due to soil conditions especially along the Taunton River and in North Raynham.

Since these prior studies, other issues have emerged including:

- Proposed rail extension and Route 44 expansion
- Agricultural growth, is this good for Raynham?
- Mix of commercial uses: office, light industrial, warehousing, manufacturing, service, retail. What mix is appropriate for employment and tax base growth?
- Incentives: what should the town do to encourage industrial development?
- One stop permitting; can the Town simplify the permitting process ?

In addition, one needs to keep in mind this observation from a local planning study completed 10 years ago during a down turn in the economic cycle.

*"There has been an increase in the percentage of people living below the poverty level. The increase in the percentage of people living below the poverty level is due to a shift in jobs towards the low end of the wage scale including sales, clerical, service, and labor. In response, the town has looked to the opening of I-495 as an area for development which will positively impact the area's economy – including wage level, unemployment, and general job opportunities."*

– SRPEDD, Raynham Conservation and Recreation Plan, August 1989, p. 11

The underlying concerns expressed in 1989 continue to provide a focus to the current and projected efforts at local economic development. The following analysis will provide background to the vision/goals and recommendations that will address these issues.

#### **Build-out of commercial space**

Four zoning districts in Raynham allow commercial and industrial uses:

- Business district
- Industrial district
- Designated Development district
- Residential D district (Limitation: 2,000 sq. ft. of service related businesses)

The survey of existing commercial uses has indicated a total of 2,250,436 square feet of space. An analysis of vacant land zoned for commercial uses has identified the potential for an additional 20 million square feet of commercial space. As this density far exceeds both the market demand and the capacity of the road, sewer, and water infrastructure to accommodate this growth, a more realistic assessment of commercial zoning needs to take place.

For purposes of the buildout analysis, the potential commercial uses are simplified to the categories of retail, office, and industrial. These categories represent all types of commercial establishment. Where more than one use is permitted in a zoning district, estimations were made with respect to the proportion of development of each type that would take place. The following insert (excerpted from the Land Use element of the Master Plan) explains how the potential buildout was estimated based on the Zoning Bylaw and market estimations.

Buildout Specifications Under Existing Zoning		
District	Formula	Source
Business District <sup>(6)(7)(8)</sup>	Single family: 1.45 d.u./acre Retail: 0.65 FAR Office: 0.75 FAR	Min. lot size 30,000 s.f. (ZB sec. 5.1) Max bldg cov. 25% (ZB sec. 5.2), Max height 3 stories (ZB sec. 6.9.10), retail parking 1 sp./250 s.f., office parking 1 sp./300 s.f. (ZB sec. 6.5)
Industrial District <sup>(9)(10)</sup>	Retail: 0.65 FAR Office: 0.75 FAR Manuf./high tech: 0.75 FAR	Max bldg cov. 25% (ZB sec. 5.2), Max height 3 stories (ZB sec. 6.9.10), retail parking 1 sp./250 s.f., office parking 1 sp./300 s.f., industrial parking 3 sp./1,000 s.f. (ZB sec. 6.5)
Designated Development District <sup>(11)</sup>	Retail: 0.73 FAR Office: 0.86 FAR	Max bldg cov. 25% (ZB sec. 5.2), Max height 6 stories (ZB sec. 6.9.4), retail parking 1 sp./250 s.f., office parking 1 sp./300 s.f. (ZB sec. 6.5)

\*ZB: Zoning Bylaw

<sup>(6)</sup> It is assumed that 5% of the area will be developed for single family, 80% for retail/service use, and 15% for office use.

<sup>(7)</sup> In Eastern subarea, where located in flood-prone area, the density is calculated at 0.29 units per acre for residential, and 0.15 FAR for retail/service and office use.

<sup>(8)</sup> For all nonresidential uses, parking is estimated at 300 s.f./space to account for parking spaces, landscaping and driving areas.

<sup>(9)</sup> It is assumed that 40% of the area will be developed for retail/service use, 10% for office use, and 50% for manufacturing/high tech use.

<sup>(10)</sup> In Eastern subarea, where located in flood-prone area, the density is calculated at 0.15 FAR for retail, office, or manufacturing/high tech use.

<sup>(11)</sup> It is assumed that 10% of the area will be developed for retail/service use, and 90% for office use.

The following tables show the approximate amount of commercial development that can take place by location and by zoning district.

**Table 3-13**  
**Summary of Buildout Capacity**

Type of Land Use	Development Capacity			
	Total	North*	Central*	East*
Nonresidential				
Retail/Service	18,152,400 square feet (s.f.)	4,161,200 (s.f.)	3,447,700 (s.f.)	10,543,500 (s.f.)
Office	15,252,200 (s.f.)	1,834,700 (s.f.)	1,816,800 (s.f.)	11,600,700 (s.f.)
Manufacturing	8,583,200 (s.f.)	2,829,900 (s.f.)	861,100 (s.f.)	4,892,200 (s.f.)

\* North section (north of Route 495), Central (between Route 495 and Route 24), and East (to the east of Route 24).

**Table 3-14  
Developable Area by Zoning District**

<u>District</u>	<u>Total Acres</u>	<u>Development Capacity</u>	
Business District <sup>(2)</sup>	788.1	Single family	97 units
		Retail	11,524,500 s.f.
		Office	6,605,100 s.f.
Industrial District <sup>(3)</sup>	578.7	Retail	5,974,300 s.f.
		Office	1,716,600 s.f.
		Manuf./High Tech	8,583,200 s.f.
Designated Development District	205.6	Retail	653,600 s.f.
		Office	6,930,500 s.f.

#### **Regional trends in commercial real estate market**

An analysis of regional trends in real estate indicates that The Town of Raynham, with the exception of Raynham Woods and to a lesser extent Ryan Drive, has a comparatively small industrial base. Adjacent towns are more aggressively pursuing additional industrial development through planning, marketing, tax policy, and infrastructure development.

The town of Raynham is located within the Route 495 South Corridor. The major municipalities with commercial space identified in this corridor include Foxborough, Franklin, Mansfield, Middleborough, Norton and Taunton. The Meredith & Grew report (3<sup>rd</sup> Quarter, 1998) identified a total supply of 4,076,980 square feet in this market area and a vacancy rate of 9.1%. The rental rates were quoted as being in the \$8-15 per square foot range for R&D space and in the \$15-\$20/square foot range for office space.

The Massachusetts Alliance for Economic Development has provided a market report by town (See Table 3-15) indicating the supply of flex (warehouse/office or manufacturing), industrial, and office space. This market study identifies only a small percentage of the market as most of the space in these towns is not listed by the major Boston area brokerage services.

An additional regional analysis which follows compares the number and size of industrial parks in Raynham to other locations. It is evident from this regional space analysis that Raynham lags far below all the neighboring towns, with the exception of Berkley, in the number of industrial parks and in the amount of flex, industrial, and office space.

#### **Market Potential**

No market studies have been undertaken to demonstrate the potential absorption of industrial space. Conversations with local realtors have indicated that Raynham is well located for attracting warehouse and flex space. The Raynham Woods Industrial Park has also demonstrated the potential to attract office and lodging space on well located and planned sites.

#### **Indices of Competitiveness for Commercial and Industrial Zoned Land**

The Towns which are developing significant industrial bases include Mansfield, Middleborough, Norton, and Taunton. All these communities offer good access as well as an organizational structure – an Economic Development Industrial Commission, and Tax Increment Financing. In the case of Taunton, the municipality has developed a public industrial park and has undertaken a range of marketing initiatives. While the Town of Raynham does not have the large resources of

vacant land nor the desire to compete at this same level, there are a number of strategies which its Economic Development Committee might want to adopt in order to promote local industrial development.

**Table 3-15**  
**Industrial Parks, Raynham Region<sup>1</sup>**

<u>City/Town</u>	<u>Name &amp; Location</u>	<u>Access Route</u>	<u>Total Acres</u>
Berkley	None		
Bridgewater	Bridgewater Industrial Park	RT. 24	55
	Scotland Industrial Park	RT. 24	105
	Lakeside Corporate Center	RT. 24	140
Easton	Easton Industrial Park	RT. 24	150
	Easton Business Center	RT. 495	40
Lakeville	Great Ponds/Route 79	I-495	190
	Lakeville Corp/Route 105	I-495	79
	Spaceport/ Route 44	I-495	74
	Woodview Com. Ctr./Route 18	I-495	41
Mansfield	Cabot, Cabot & Forbes/Route 140	I-495	492
	CC& F Expansion/Route 140	I-495	288
	Industrial Park/S. Main Street	I-495	254
	Mansfield/Oakland Street	I-95	172
Middleborough	Abby Lane/Route 28	I-495	20
	Campanelli/Bedford Street	I-495	193
	Middleboro Park/Bedford Street	I-495	110
	Southpointe/Route 44	I-495	223
Norton	Comm. Center/Hill & Washington	I-495	245
<b>Raynham</b>	Raynham Woods/Rt. 44	24	288
Taunton	Dighton Ind./Warner Blvd	44	300
	Myles Standish	I-495	437
	Route 140/County Street	24	65

<sup>1</sup> Southeastern Massachusetts Fact Book, Southeastern Regional Planning and Economic Development District, January, 1993, p. H3-H6, and Larry Koff & Associates

**Table 3-16**  
**Raynham Sub Region-Indices of Competitiveness for Commercial and Industrial Zoned Land**

	INFRASTRUCTURE					INCENTIVES					
	Direct Rail Connection	Interstate Highway Connection	Public Water	Public Sewer	Telecom.	Tax Increment Financing	Staff Econ. Dev. Planner	Econ. Dev./ Indust. Commission	Streamlined Permitting	Training/ Labor Retention	Public Industrial Park
Towns											
Berkley	Yes	No	Yes	No	Yes	No	No	Yes	No	No	No
Bridgewater	No	No	Yes	No	No	No	Yes	No	No	No	No
Easton	No	No	Yes	No	No	No	Part-time	No	No	No	No
Lakeville	No	No	Yes	No	Yes	No	No	No	No	No	No
Mansfield	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	No	No
Middleborough	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	No
Norton	?	Yes	Yes	No	No	Yes	No	Yes	No	No	No
Raynham	No	Yes	Yes	Yes	No	No	No	No	No	No	No
Taunton	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
West Bridgewater	No	No	Yes	No	No	No	No	No	No	No	No

Source: Larry Koff & Associates

### 3.3 VISION GOALS

The Economic Development Committee identified a comprehensive vision of economic growth for Raynham. This vision identifies areas for new retail, commercial, and mixed use residential/commercial growth and promotes the following goals and policies:

#### Goals/Policies

1. *Promote planned mixed commercial/residential growth*
  - a. Establish Village Center sub-areas at Route 138/495 and between South Main Street and Route 44 for locating pedestrian orientated residential/commercial growth
  - b. Establish mixed use residential/commercial areas at critical resource areas zoned for industry
2. *Promote planned light industrial and office growth including warehousing and some manufacturing which will not impose undue economic or environmental burdens*
  - a. Create an Industrial Cluster District along Route 138 to facilitate the planned development of adjacent parcels with shared access, parking, and in coordination with the development of frontage along Route 138 (See Map 3-2)
  - b. Expand the Designated Development district to the north side of Route 44.
3. *Undertake various planning and marketing activities to promote new economic development as recommended in the Master Plan*
  - a. Support on behalf of the business community the recommended zoning changes
  - b. Identify subsidies to facilitate needed infrastructure improvements (primarily sewer)
  - c. Undertake a marketing effort utilizing *Raynham At a Glance* materials.
  - d. Encourage business owners on Route 138 to join the Route 44 Business Association
4. *Support by-law changes to improve quality of commercial corridors*
  - a. Review draft design and sign guidelines for Commercial Corridors and Village Center areas; make recommendations re guidelines, responsibility for review authority (i.e. Planning Board or new Design Review Board with participation of local business owners, and suggestions for enforcement).
  - b. Promote shared parking, landscaping, sign control, and pedestrian scale improvements
  - c. Change commercial and industrial zoning to Critical Environmental Resource District designation in two critical natural resource areas along the Taunton River and in the ACEC in North Raynham.
5. *Improve Enforcement*
  - a. Improve enforcement of sign by-law and other zoning requirements
  - b. Establish a Technical Review committee under jurisdiction of the Town Planner for coordinating review of major development projects and for undertaking special planning studies
6. *Promote high-value agriculture as a viable economic activity in Raynham.*
  - a. Encourage owners of agriculture land to seek tax abatements and land use restrictions

## RECOMMENDATIONS

See Implementation Section for additional recommendations under the Action Strategy which address economic development goals. Map 8-3 provides a summary of land use recommendations.

### 1. *Obtain Town Meeting support for Economic Development Vision*

The proposed Economic Development vision identifies areas for new economic development activity that should be submitted to Town Meeting for their review/comment including:

- a. Expansion of the Designated Development District
- b. Establishment of Mixed Use Centers
- c. Changes in zoning of some commercial areas to mixed use
- d. Establishment of an industrial cluster district along Route 138 and a Business cluster at Route 44.
- e. Adoption of design guidelines for commercial areas

### 2. *Obtain Town Meeting support for proposed zoning by-law changes establishing the following new districts:*

- a. Mixed Use Center sub-area between South Main Street and Route 44 for locating residential/commercial growth. Age restricted, assisted living, 1- 2br condo or apartment units would be permitted in a pedestrian setting.
- b. Mixed Use residential/commercial areas at critical resource locations now zoned for only business at Route 495 and 138.
- c. Industrial Cluster District along Route 138 and a Business Cluster along Route 44 at the Middleborough Town line to facilitate the planned development of adjacent parcels with shared access, parking, and in coordination with the development of frontage.

### 3. *Economic Development Committee to undertake following activities to promote new economic development as recommended in the Master Plan*

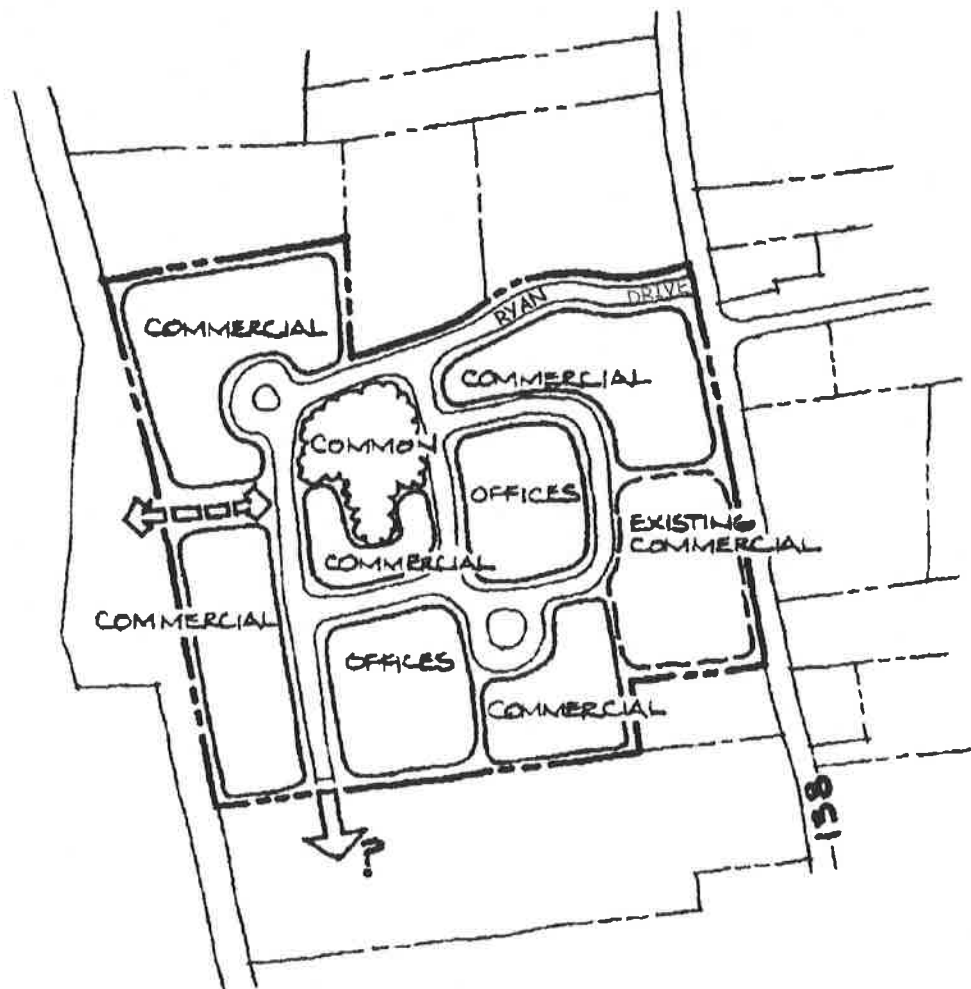
- a. Support on behalf of the business community the recommended zoning district changes.
- b. Become ambassadors for new business growth; undertake a marketing effort utilizing *Raynham At a Glance* materials. Contact Richard Shafer, Chairmen of the Bristol County Convention and Visitors Bureau (508-821-1168) to pursue funding for marketing activities.
- c. Assist new businesses in their initial contacts with Town government; have a Committee representative attend informal regulatory review scoping meeting.
- d. Encourage business owners on Route 138 to join the Route 44 Business Association.
- e. Assist in preparation of design guidelines for commercial corridors and Mixed Use Centers and promote their adoption by the Planning Board.
- f. Promote shared parking, landscaping, sign control, and pedestrian scale improvements
- g. Support reduction of commercial and industrial zoning in critical resource areas along the Taunton River, in the ACEC in North Raynham, and in certain Zone II areas.
- h. Identify subsidies to facilitate needed infrastructure improvements (primarily sewer)
- i. Encourage owners of agriculture land to seek tax abatements and land use restrictions

### 4. *Improve Enforcement*

- a. Improve enforcement of sign by-law and other zoning requirements
- b. Continue function of a Technical Review Committee under jurisdiction of the Town Planner for coordinating review of major development projects and for undertaking special planning studies

Map 3-2

## Route 138 Business Cluster/Local Retail



Planning for several aggregated parcels can create opportunities for campus-like development (e.g. Raynham Woods)

### Appendix 3-1 Raynham at a Glance

Raynham was established in 1731, and was known as the site of the first successful iron works in the country. Originally part of neighboring Taunton, Raynham was a small rural hamlet for hundreds of years. Most dramatically in the last half century, the town has been transformed into a suburban residential community and a regional commercial center. Raynham sits at the crossroads of Routes 24, 44 and 138, and off Interstate 495. It has excellent connections to the region's transportation system, and is close to other centers of activity--only 30 miles from Boston, and 18 miles from Providence.

#### Population

In 1998, the population of Raynham was 10,682. This results in a population density of 512 persons per square mile, or 0.8 persons per acre. Growth is expected to proceed at a steady rate over the next several decades:

Year  
1998  
2000  
2010  
2020

**Table A3-1  
Population**

#### Population

10,682 (actual)  
11,000  
12,125  
13,654

#### Increase over Previous Decade

10.5%  
10.5%  
12.4%

#### Industry

Raynham is a regional commercial center. Within its immediate area, it is second only to Taunton in the number of retail stores and sales volume. Most jobs in Raynham (82%) are currently in wholesale or retail trade or services. Raynham's retail sector has 107 stores that employ 2,802 people, and generates \$185 million in sales. The service sector of Raynham's economy employs 1,425 people and generates \$65 million in sales. Raynham is also home to 14 manufacturing businesses.

**Table A3-2  
Largest Employers in Raynham, 1993**

#### Employer

Raynham-Taunton Dog Track  
Johnson and Johnson Orthopedics  
Town of Raynham  
Shaw's Supermarket  
K-Mart

#### Number of Employees

1,000  
550  
360  
250  
125

#### Labor Force

Unemployment in Raynham has historically been slightly higher than the state average. Job growth in Raynham in the last decade has outpaced population growth. Now, the town is a net importer of jobs. Raynham draws its workers from many surrounding cities and towns in the region.

**Table A3-3  
Unemployment Rates**

Raynham	4.6%
Massachusetts	4.0%

**Table A3-4  
Jobs to Labor Force Ratio**

	1990	1997
Raynham jobs	4,209	6,322
Raynham resident labor force	4,965	5,981
Jobs/Labor force ratio =	0.85	1.06

**Table A3-5**  
**Income in Raynham, 1990**

**Income**

Median household incomes in Raynham are higher than the state average, while per capita income is about equal to the state average.

Median household income:	\$44,846
% of state average	121.4%
Per Capita Income:	\$17,025
% of state average	98.8%

**Table A3-6**  
**Property Tax Rates**

**Property Taxes**

Raynham's tax rate in fiscal 1998 was the third lowest rate in its 10-town region. In addition, Raynham's tax rate split is the second lowest ratio among five towns in the region with split tax rates.

Comm., Ind. and Personal Property	\$14.62/\$1,000
Residential Property	\$12.90/\$1,000
Tax rate shift =	1.09

**Table A3-7**  
**Total Valuation**

*Note:* Tax-exempt properties comprise \$30,942,900 in assessed valuation. Protected Chapter 61 lands, which are taxed at less than full value, comprise \$1,681,800 in total valuation.

<u>Tax classification</u>	<u>Assessed Valuation</u>	<u>% of Total Valuation</u>
Residential	\$559,373,600	74%
Commercial	\$147,200,100	19%
Industrial	\$39,207,600	5%
Personal Property	\$11,282,400	1%

**Educational Facilities**

Several key institutions close to Raynham provide the area's labor force with a rich source of training and learning opportunities. Located within 30 miles of Raynham are:

- Bridgewater State College
- Massasoit Community College
- Stonehill College
- University of Massachusetts, Dartmouth
- Bristol Community College

**Utilities**

**Table A3-8**  
**Utilities in Raynham**

Internet	Various Providers
Cable	Media One
Water	Town system
Sewer	Part of the Taunton sewer system. Planning a major expansion to industrial areas.
Electricity	Taunton Municipal Light
Gas	Bay State Gas
Telecom	Bell Atlantic

**Major Industrial Areas**

Raynham Woods Industrial Park is a significant industrial area within the town.

**Zoning**

Raynham has a special "Designated Development District" for priority commercial development areas, and seeks to expand its use to key adjacent parcels in the town. Raynham has also developed a vision for cluster industrial/local retail uses along Route 138 north of Route 495. The Town is seeking the support of the local business community as well as Town Meeting to adopt new zoning for this area.

**Table A3-9  
Raynham Commercial Development Opportunities**

**Commercial****Near junction of Broadway & 495**

<i>map</i>	<i>lot</i>	<i>location</i>	<i>acres</i>	<i>owner</i>	<i>zoning</i>	<i>sewer</i>
3		376A Loughlin Dr.	46.7	Lane Four Corp.	BD	Phase V
3		39-A Broadway	18	Czahar	BD/RA	Phase V
3		40 Broadway	27	G. Lopes Const.	BD/RA	Phase V
4		143 Broadway	6	Burstyn	BD	Phase IV

**Near junction of Routes 44 and 24**

<i>map</i>	<i>lot</i>	<i>location</i>	<i>acres</i>	<i>owner</i>	<i>zoning</i>	<i>sewer</i>
14		50 Commercial St.	13	Keneally Trust	BD	existing
14		168 Judson St.	10	Glick	BD	existing
14		208 South Street East	32	Paramount Dev.	BD	existing
15		176, etc. Designated Development District		Paramount Dev.	DD	existing

**Other locations**

<i>map</i>	<i>lot</i>	<i>location</i>	<i>acres</i>	<i>owner</i>	<i>zoning</i>	<i>sewer</i>
1		10 Broadway	22	Massasoit	ID	none
1		14 Broadway	19	Kelley	ID	existing
7		16 Broadway	45	Lopes	ID	Phase IV
7		202 Andrew St.	11	Leonard	BD	Phase V
10		9 Pine St.	4	Calnen	ID	none
10		10 Pine St.	4	Unknown	ID	none
10		11 Pine St.	10	Striar	ID	none
10		13 Pine St.	9	Miller	ID	none
10		14 Pine St.	2	Calnen	ID	none
16		38 Route 44	41	Kelleher	BD	none
16		49 Route 44	12	Kelleher	BD	none
16		49-01 Route 44	6	Kelleher	BD	none
16		49-A Route 44	3	Kelleher	BD	none
17		83-02 Meadow Dr.	9	Doug King Builders	BD	existing
17		83-03 Meadow Dr.	11	Doug King Builders	BD	existing

**Table A3-10  
Raynham Vacant Land Inventory**

<b>Map</b>	<b>Lot Number</b>	<b>Location</b>	<b>Acres</b>
1	1	Broadway	68
1	10	Broadway	22
1	14	Broadway	19
3	39-A	Broadway	18
3	40	Broadway	27

3	376-A	Loughlin Dr.	46.7
4	143	Broadway	6
7	12	Broadway	15
7	203	Andrew St.	11
10	6	Pine St.	24
10	7	Pine St.	12
10	9	Pine St.	4
10	10	Pine St.	4
10	11	Pine St.	10
10	13	Pine St.	9
10	14	Pine St.	2
10	16-01A	Pine St.	6
10	19	Pine St.	4
10	20	Pine St.	3
10	21	Pleasant St.	12
14	50	Richmond St.	13
14	168	Judson St.	10
14	227	Route 44	15
15	148-A	Route 44	5
15	148-B	Route 44	36
15	176-01	Route 44	28
15	176-02A	Route 44	2
15	176-02B	Commerce Way	14
15	176-02C	Paramount Dr.	9
15	176-03	Paramount Dr.	88
15	176-04	Route 44	88
15	176-04B	Paramount Dr.	11
15	176-04E	Paramount Dr.	13
16	38	Route 44	41
16	49	Route 44	12
16	49-01	Route 44	6
16	49-A	Route 44	3
17	83-02	Meadow Dr.	9
17	83-03	Meadow Dr.	11

**Table A3-11**  
**Route 44 Commercial Space Inventory**

Use	Street Number	Street	Name	Leasable Gross
13	210	South Street West	garage/dwelling	1120
13	399	South Main	Barber	1474
13	648	South Street East	Pacheco Egg Whse	10218
31	688	Orchard	Dr. Scanlon DDS	996
31	1708	Route 44	Reliable Auto	3700
31	539	South Street East	Process Eng.	4637
31	678	Church St.	T&M Landscaping	7258
301	164	Route 44	Days Inn	26664
313		South Street West	Grossman	19680
314	746	Route 44	Bradford Trailer Sale	1984
316	747	Hill Street	Accurate Auto	5008
316	648	Church St.	D J Moitoza	5634
316	720	Church St.	Camper Inn Whse	9640
316	800	Route 44	MacDonald warehouse	27532
316		Judson Street	Flea Market	51240
320	1250	Route 44	athletic club	28262
322	2	Route 44	Benny's	28717
322	240	Route 44	Ames	56332
322	36	Paramount Drive	Wal-Mart	117048
323	473	South Street West	Village Square Plaza	33112
323	300	Route 44	Shaw's Plaza	110718
323	575	South Street West	Co-Jean Plaza	16504
323	325	New State Hwy	Subway, etc.	20600
323	421	Route 44	Raynham Plaza	41250
323	81	Route 44	Raynham Crossing	58442
323	1470	Route 44	Raynham Mktplace	69324
323	600	South Street West	K-Mart, Staples	149189
325	386	Route 44	Safe-Lite Auto Glass	2400
325	362	Route 44	Chalet Jewel	3200
325	486	Route 44	Signs USA	3223
325	407	Route 44	Dean's Plaza	9000
325	1585	Route 44	JD Furniture	17634
326	406	Route 44	Dunkin Donuts	1894
326	430	Route 44	Papa Gino's	3080
326	266	Route 44	Fashion Bug & Stores	44424
326	1353	Route 44	Dairy Maid	1280
326	1649	Route 44	Le Garlic	1928
326	472	Route 44	vacant restaurant bldg.	2828
326	1455	Route 44	Lobster Pound	2842
326	255	Route 44	Burger King	3056
326	1028	Route 44	Wendy's	3120
326	235	New State Hwy	Bickford's	3766
326	365	Route 44	McDonald's	4282
326	435	Route 44	Friendly's	4786
326	1054	New State Hwy	Humpty Dumpty	5030
326	1550	Route 44	Honey Baked Ham	11464
326	275	New State Hwy	Ponderosa	31153

330	81	Brookside Circle	Vermeer	6000
330	1545	Route 44	Saturn	9995
330	1094	Route 44	S C Highline	11481
330	1440	Route 44	Rodman	14283
330	1651	Route 44	S C Ford	27075
330	191	New State Hwy	Silver City Dodge	38252
331	475	Richmond	Greenleaf	3600
331	398	Route 44	Donle's	7580
331	500	New State Hwy	Auto Palace	10000
332	609	South Street West	Raynham Oil Change	2250
332	469	South Street West	Speedy Muffler	2856
332	679	South Street West	Harry's Auto	3888
332	35	New State Hwy	Jiffy Lube	4358
332	47	Route 44	Midas Muffler	5000
332	98	Brookside Circle	JPT Excavate	6100
332	1555	Route 44	Meineke	9307
334	442	Route 44	Texaco	1404
334	165	Route 44	Fred's Sunoco	2259
334	510	New State Hwy	Raynham Exxon	2300
334	1348	Route 44	Extra Mart	2640
334	1126	Route 44	Superior	2960
338	1619	Route 44	Slips Marine	5020
340	100	New State Hwy	Dr. Rodman	3430
340	106	Route 44	vacant office bldg	5852
340	90	Route 44	Wynn & Wynn	41252
340	770	Route 44	office building	1344
340		Route 44	Silver City Highline	2500
340	15	Bellows Road	Edron Bus	4000
340	534	Route 44	Southgate R.E.	6800
340	31	Bellows Road	Defoe Wait	20000
340	175	Paramount Drive	Raynham Wood Commerce Ctr	25187
340	576	Paramount Drive	Amica Insurance	30000
341	80	New State Hwy	vacant office bldg	4592
341	629	South Street West	Citizens Fed. Credit Union	4822
370	115	New State Hwy	Jockey Club	21428
400	132	South Street West	vacant	3475
400	54	Commercial	Kelco	10000
400	104	Forge River Parkway	Cardaci's	7480
400	450	South Street West	Northern Air	9300
400	475	Paramount Drive	Zatec, etc.	34800
400	350	Richmond	So NE Supply	42760
400	375	Paramount Drive	Zatec, etc.	50184
400	325	Paramount Drive	Johnson & Johnson	244590
401	44	Commercial	Birchwood	12000
401	62	Forge River Parkway	Storage warehouse	6200
401	250	Richmond	Hub Thread	20128
		Use type	Total square feet	
		Multi Use space	29,403	
		Retail	1,040,234	
		Office	149,779	
		Industrial	440,917	

**Table A3-12  
Broadway Commercial Space Inventory**

<b>Building Name</b>	<b>Street Number</b>	<b>Street Name</b>	<b>Use Type</b>	<b>Leasable Gross</b>
office building	1859	Broadway	013	1,092
Lagace Woodworking	1847	Broadway	013	2,100
	1680	Broadway	013	975
	1681	Broadway	013	1,725
Service Garage	1623	Broadway	013	2,934
	1607	Broadway	013	1,117
	1587	Broadway	013	3,413
salon building	1553	Broadway	013	1,498
	1359	Broadway	013	1,170
salon building	1253	Broadway	013	1,164
office building	620	Broadway	013	1,746
Travel Agent	634	Broadway	013	1,900
A F Macedo	646	Broadway	013	2,112
	658	Broadway	013	1,440
	785 (rear)	Broadway	013	1,996
	534	Broadway	013	1,488
office building	1700	Broadway	031	1,848
Barbara's Silk Flowers	568	Broadway	031	5,514
Euro-Tech, Brother's Pizza	768	Broadway	031	5,937
La Casa Mia	826	Broadway	031	4,032
BrCity Animal Clinic	900	Broadway	031	2,935
E-Z Storage Warehouse	266	Broadway	031	17,236
Massive Video,etc.	855	Broadway	323	18,283
Market Basket & stores	240	Broadway	323	92,477
Hillcrest Plaza	302	Broadway	323	15,179
Imagination Station	1746	Broadway	325	4,073
Currie Glass	1443	Broadway	325	2,878
Landy's Market	1417	Broadway	325	2,276
Greyhound Package	676	Broadway	325	1,584
Pat's Flower, Mel's	686	Broadway	325	6,350
Public Works Supply	890	Broadway	325	5,241
Great American Pub	1736	Broadway	326	3,402
Christopher's Honey Dew	1285	Broadway	326	6,707
McDonald's	947	Broadway	326	2,925
China Garden	883	Broadway	326	9,036
The Bottle Restaurant	785	Broadway	326	2,291
McMenamy's	701	Broadway	326	2,793
Raynham House of Pizza	38A	Broadway	326	2,917
B.B. Binks Restaurant	524	Broadway	326	3,849
Escapades Restaurant	77	Broadway	326	4,936
Matteson	755	Broadway	330	1,302
Classic Chrysler	38	Broadway	330	12,284
Vac. Auto Dealer	184	Broadway	330	14,700
John's Auto	211	Broadway	330	2,240
R.M.C. Enterprises	147	Broadway	330	4,680

Emerald Limo	620 (rear)	Broadway	332	2,100
Texaco	769	Broadway	332	2,898
Quality Auto	109	Broadway	332	2,800
Central Oil	728	Broadway	334	3,992
Exxon	1023	Broadway	334	1,886
Raynham Citgo	343	Broadway	334	2,342
Power-Matic	181	Broadway	335	1,260
office building	1568	Broadway	340	1,971
Century 21	1244	Broadway	340	9,500
First Nat'l Rent-A-Car	760	Broadway	340	528
S E Appr. Service	804	Broadway	340	4,314
office building	814	Broadway	340	4,288
Herrmann Insurance	922	Broadway	340	960
office building	825	Broadway	340	2,605
R.L. Merithew	691	Broadway	340	4,242
Raynham Office Building	153	Broadway	340	7,100
Bristol County Savings Bank	942	Broadway	341	2,232
Health Center building	1215	Broadway	342	21,226
Dr. Arcand	114	Broadway	342	1,904
Post Office	681	Broadway	350	2,065
Grandstand & Clubhouse	1958	Broadway	367	2,700
Buckaneer Lounge	160	Broadway	380	4,262
Ryan Iron Works	1830	Broadway	400	45,000
Concrete Plant	2107	Broadway	400	10,816
Broulette & Fortin	770 (rear)	Broadway	400	51,128
Multi Rent	65	Ryan Drive	401	48,000
Trucchi's	1062	Broadway	401	69,235

<u>Category of Use</u>	<u>Total Sq. Feet on Broadway</u>
Multiple Use	65,372
Retail	239,681
Office	60,870
Industrial	224,179

**Table A3-13**  
**Commercial Space Survey, 1999**  
**Raynham Sub-Region**

<u>Towns</u>	<b>FLEX SPACE</b>		<b>INDUSTRIAL SPACE</b>		<b>OFFICE SPACE</b>		<b>TOTAL</b>	
	<u>Existing Rentable Area</u>	<u>% Vacant</u>	<u>Existing Rentable Area</u>	<u>% Vacant</u>	<u>Existing Rentable Area</u>	<u>% Vacant</u>	<u>Existing Rentable Area</u>	<u>% Vacant</u>
Berkley	NA		NA		NA		NA	NA
Bridgewater	850,000		712,535	1.75%	6,400	0	1,568,935	0.55
Easton	27,000	0	771,638	5.6	75,299	0	873,937	0.06
Lakeville	NA		355,123	10.6	23,404	0	378,527	0.53
Mansfield	443,148	12.7	5,048,559	13.1	615,116	2.2	6,106,823	0.17
Middleborough	NA		691,952	0	158,446	14.9	850,398	0.91
Norton	NA		485,032	2.0	31,500	100.00	516,532	0.08
<b>Raynham</b>	<b>64,500</b>	<b>24.0</b>	<b>48,000</b>	<b>6.3</b>	<b>47,300</b>	<b>19.0</b>	<b>159,800</b>	<b>0.57</b>
Taunton	527,000	2.28	4,202,386	5.71	468,296	3.8	5,197,682	0.06
<b>Total</b>	<b>1,911,648</b>		<b>12,315,225</b>		<b>1,425,761</b>		<b>15,652,634</b>	

Report from the Massachusetts Alliance for Economic Development

Vacant space includes the total vacant direct and vacant sublet space divided by the total rentable square footage of all existing space.

**SECTION IV**

**OPEN SPACE, NATURAL RESOURCES AND RECREATION  
RESOURCES**

## **SECTION IV NATURAL, OPEN SPACE, AND RECREATION RESOURCES**

### **Introduction**

#### **4.1 Environmental Inventory**

- Topography and Soils
- Water Resources
- Open Space
- Sensitive Environmental Receptors
- Recreational Resources
- Agricultural Land
- Trails

#### **4.2 Regulatory Framework**

- State Regulations
- Local Regulations

#### **4.3 Issues/Needs Analysis**

- Water Resources Needs
- Open Space Needs

#### **4.4 Vision/Goals**

#### **4.5 Action Recommendations**

- Water Resources and Supply
- Recreation
- Protection of Sensitive Natural Resources
- Agricultural Preservation
- Open Space
- Stormwater Protection

### **Appendices:**

- 4-1: Soil Associations
- 4-2: Wildlife Species
- 4-3: Open Space, Recreation & Chapter 61 Sites
- 4-4: Open Space Inventory Materials
- 4-5: Cost/Benefit Analysis of Open Space Acquisition
- 4-6: Stormwater Report
- 4-7: Implementation Tools

**List of Abbreviations**

<b>Abbreviation</b>	<b>Definition</b>
ACEC	Areas of Critical Environmental Concern
APR	Agricultural Preservation Restriction
DEM	Department of Environmental Management
DEP	Department of Environmental Protection (Massachusetts)
DHCD	Department of Housing and Community Development
EIA	Environmental Impact Assessment
FEMA	Federal Emergency Management Agency
FHPOD	Flood Hazard Protective Overlay District
MCP	Massachusetts Contingency Plan
NPRA	National Parks Recreation and Parks Association
PSRH	Priority Sites of Rare Species Habitats
WRPOD	Water Resource Protection Overlay District
USDA	United States Department of Agriculture
USGS	United States Geographic Survey

## IV. NATURAL, OPEN SPACE, AND RECREATION RESOURCES

### INTRODUCTION

The Town of Raynham is a resource area for the Taunton River watershed with three swamps, substantial wetlands, and groundwater resources. The open space system protects water resources, facilitates access to open space areas, shapes development, and protects historic and cultural resources. Open space preservation is also an economical means to manage growth, keeping down the costs of infrastructure and services. (An example in Appendix 4-4 projects the cost to the town of servicing new development to be 5 times the cost of open space acquisition.) In order to sustain this important resource area and provide recreation opportunities for local residents we are recommending that an open space plan be established, including enhanced programs of public education, recreation, land acquisition, and protection.

The following analysis focuses on key issues that have been identified in Raynham, including the protection of water resources such as streams, ponds, wetlands, and groundwater; agricultural preservation, and the need for additional recreational facilities. The Taunton River is an example of a resource area which offers opportunities for recreational fishing, boating and trails, as well as providing an important wildlife habitat and protection from floods. Strategies for protecting these resources include open space acquisition, development oversight, zoning tools and land use controls, public education, and stormwater protection. The completion of an open space plan will enable the town to qualify for State funds for the purpose of open space acquisition.

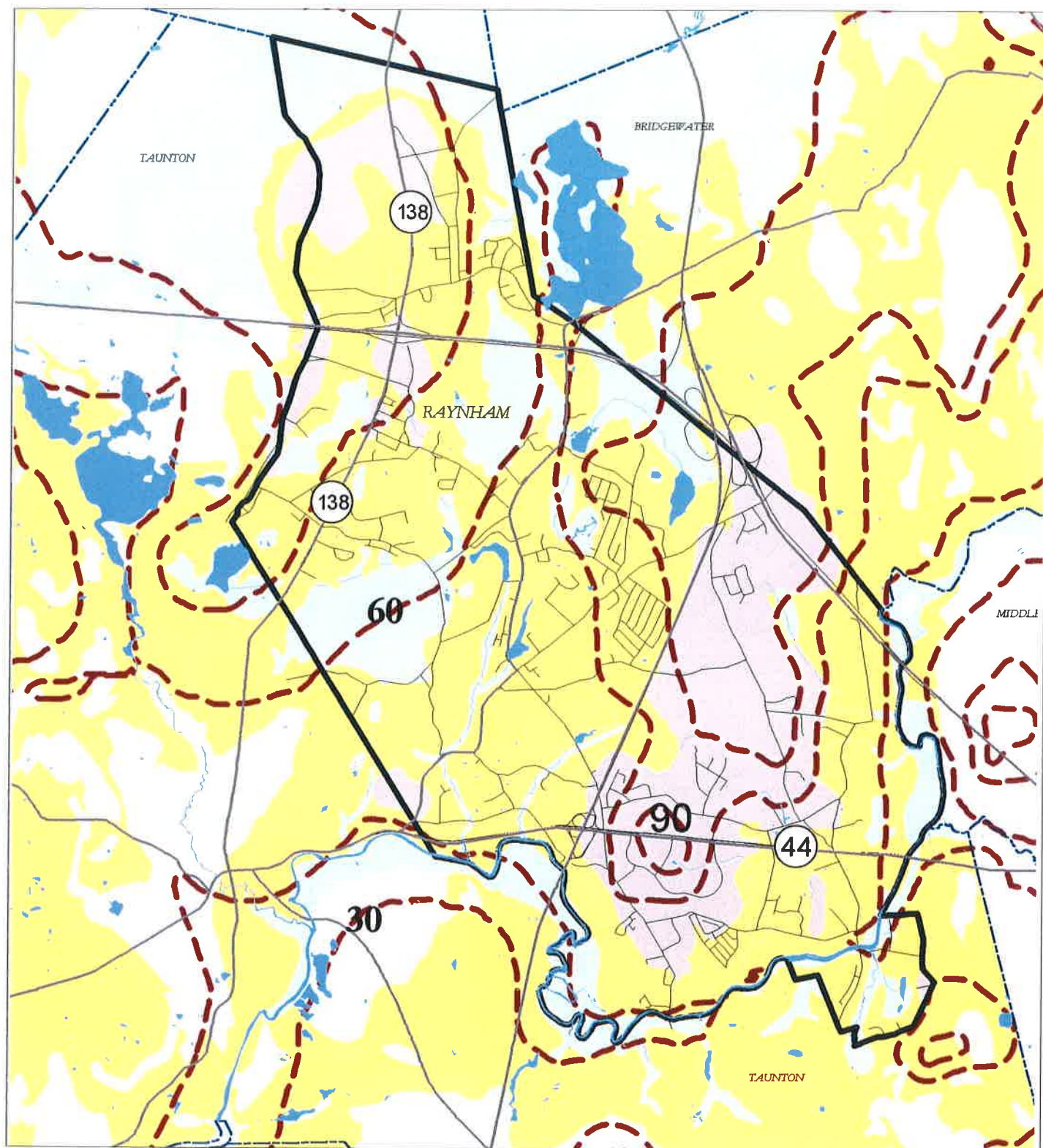
Section 4.1, **Environmental Inventory**, provides a description of the local natural, water, open space, and recreation resources in the town. Section 4.2, **Regulatory Framework**, includes a brief summary of some state and local regulations that protect these natural resources. Section 4.3, **Issues/Needs Analysis** identifies the potential impacts from the projected build-out of residential and commercial growth on these resources and the identification of opportunities for conservation and recreation of the open space resources. Sections 4.4 and 4.5 present **Vision/Goals and Action Recommendations** that can provide a framework for developing both a vision and action plan for preserving and protecting important natural, open space, and recreation resources.







---

### Why Raynham Needs an Open Space Plan

Without a well-thought and conscientious Open Space Plan, many of the amenities which contribute to the quality of life in Raynham may be threatened. These include open vistas, recreational facilities, wildlife, and water quality for drinking and fishing. In addition, the protection of open space is a means of maintaining a favorable tax rate in the long term. Raynham still has the chance to plan ahead to largely preserve its character, even as we are in the midst of inevitable growth. By strongly enforcing existing regulations, creating new by-laws and putting protective measures on current and future open space parcels, we can:

- Ensure that significant open spaces can be set aside to protect scenic views, streams, ponds, rivers, critical wildlife habitats, corridors, and wetlands.
  - Ensure sufficient development of recreational fields so that young and old, rich and poor, and persons with and without disabilities can participate in activities in which we are interested.
  - Plan for the safe coexistence of a large variety of recreational interests.
  - Maintain the high quality of our affordable drinking water supply by protecting recharge areas and wetlands.
  - Set aside enough open space to help keep our taxes down: open space is less costly to taxpayers than developed land.
  - Encourage controlled development that includes affordable housing and open space preservation.
  - Ensure the quality of our waterways for the benefits of the fish and other animals and those of us who enjoy them.
  - Protect against floods by maintaining wetlands
-



-  Contour Lines (250k)  
 Streams  
 Water  
**Soils**  
 Sand & Gravel  
 Till or Bedrock  
 Floodplain Alluvium



Map 4-1  
**Town of Raynham  
 Geological Features**  
 4000 0 4000 8000 Feet  
 Prepared by Larry Koff and Associates

## 4.1 ENVIRONMENTAL INVENTORY

The town's physical features have a major impact on shaping the pattern of open spaces and developed areas. The most distinguishing feature of Raynham's landscape is the presence of a relatively rolling landscape dominated by numerous swamps, rivers and ponds that drain into the Taunton River. The following is an inventory of the town's topography and soils, water resources (both surface and groundwater), vegetation and wildlife, and recreation.

### Topography and Soils

The Town of Raynham's landscape consists of flat lands, gentle slopes, and ridges (shown on Map 4-1). The topography varies in elevation from 150 feet above sea level to 5 feet above sea level, the lowest point being the Taunton River. The areas of highest elevation in Raynham run roughly along Routes 138 and 24. Between the two ridges lay three major swamps: Pine Swamp, Dead Swamp and Titicut Swamp.

The soil types that characterize this region reflect its lowland topography. (See Map 4-1.) The majority of the town is underlain with sandstone and shale and has a few bedrock outcroppings. There is a large outcrop of till/bedrock in the southern subarea, while the central subarea is dominated by sand and gravel deposits. The northern subarea has an even distribution of floodplain alluvium, particularly near the wetland deposits. Glacial till is present at the surface of several large areas in the town, particularly in the northern and southeastern sectors. Varied clays and silt were deposited as part of two glacial lakes in the northern and southern parts of town. A thin blanket of aeolian silt was deposited in depths ranging from one to five feet, which provides a rich agricultural loam for farming. Unconsolidated deposits range in thickness from less than one foot to as much as 150 feet throughout the Town. Organic swamp deposits cover a large part of the town, especially the watershed of the Forge River and the Taunton River flood plain along the southern end of the town.

The US Department of Agriculture identified five major soil associations which can be found in Raynham (See Appendix 4-1). Based on this analysis, most of the soils in Raynham have severe septic limitations, with the exception of the northern section of the town, where soils can more easily accommodate development. The soil type in this area can absorb large amounts of sewage effluent or surface runoff.

### Water Resources

The rolling, relatively flat land formation and porous soils in Raynham serve as an ideal environment for containing water resources including surface water (streams, rivers, ponds, and lakes), groundwater, wetlands, and floodplains. These resources are easily impacted by the actions of homeowners and businesses with serious consequences for public health and safety as well as the physical environment.

**Table 4-1**  
**Water Resource Area**

Water Resource	Acreage
Surface Water	180 acres
Wetlands	1,558
Floodplains	2,626 acres
(areas overlapping)	

Flooding, pollution of drinking water supplies, and destruction of natural habitats, recreation areas, and water bodies can result from inappropriate development and use of the natural environment. It is therefore important to

carefully assess these water resources and the role they play in maintaining a quality of life for the citizens of Raynham as well as those from adjacent towns in the watershed.

#### *Watersheds*

The Town of Raynham is located within the center of the Taunton River Watershed. (See Map 4-2.) All water from within Raynham eventually flows toward the Taunton River, which feeds into the adjacent Mount Hope Bay and Narragansett Bay. The watershed, or basin, is also divided into numerous sub-basins. Between the Town's ridges are the sub-basins, which supply the rivers, streams and adjacent wetlands with water. These sub-basins approximate the three subareas of the town, i.e. south of Route 44, the center section of town (which itself includes three sub-basins), and north of Route 495 extending into Easton. The sub-basins drain towards the Taunton River.

#### *Surface Water*

The town's surface water resources (surface water bodies and wetlands) which comprise the watershed are identified on Map 4-3, along with groundwater resources. The most visible water resources are the brooks, streams and ponds, which function as tributaries of the Taunton River. In total there are 180 acres of surface water in the town, approximately 1% of the town's total land area. This includes nearly eight miles of frontage along the Taunton River. In addition to the Forge River, the main tributary draining into the Taunton River, there are Dam Lot Brook, Bassett Brook and at least three other small tributaries, which flow directly south into the Taunton River. North of Elm Street, water is drained from that area into the Hockomock Swamp and Lake Nippenicket, both of which ultimately drain into the Taunton River. The Town has six smaller ponds which are located in the Forge River Watershed. The ponds include the Gushee, Hewitt, Tracy, Johnson, King's and Wilbur. Although there are no lakes within Raynham, Lake Nippenicket is located just over the border in Bridgewater and is fed by the groundwaters of the Hockomock Swamp.

#### *Groundwater*

These well sites are located next to surface water resources. Rainwater from within the watershed sub basin soaks into the soil and flows downwards until it reaches an impermeable rock or soil layer which in this case are stratified, unconsolidated glacial drift deposits. The groundwater deposits build up over time in a process known as recharging. The water within the aquifer eventually discharges to the surface; the adjacent swamps, rivers, and streams. About 75% of Raynham's population obtains its drinking water from municipal wells. The remaining population utilize private wells.

In addition to these existing water supplies, the approximate location of aquifers within Raynham is shown on Map 4-3. The Massachusetts Department of Environmental Protection identifies these as areas that could potentially be used for potable water, and therefore any remediation of environmental contamination within those areas must meet drinking water standards.

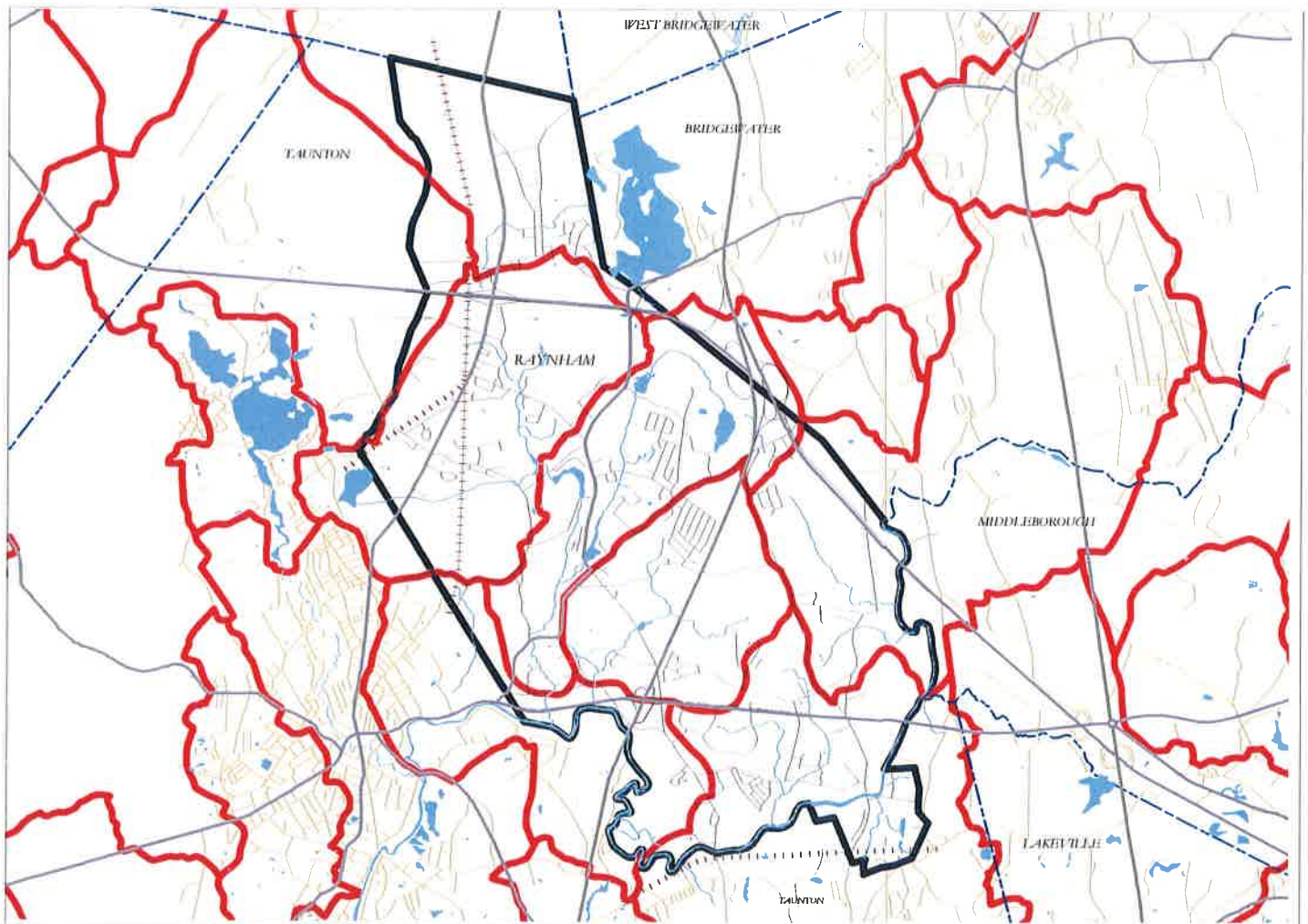
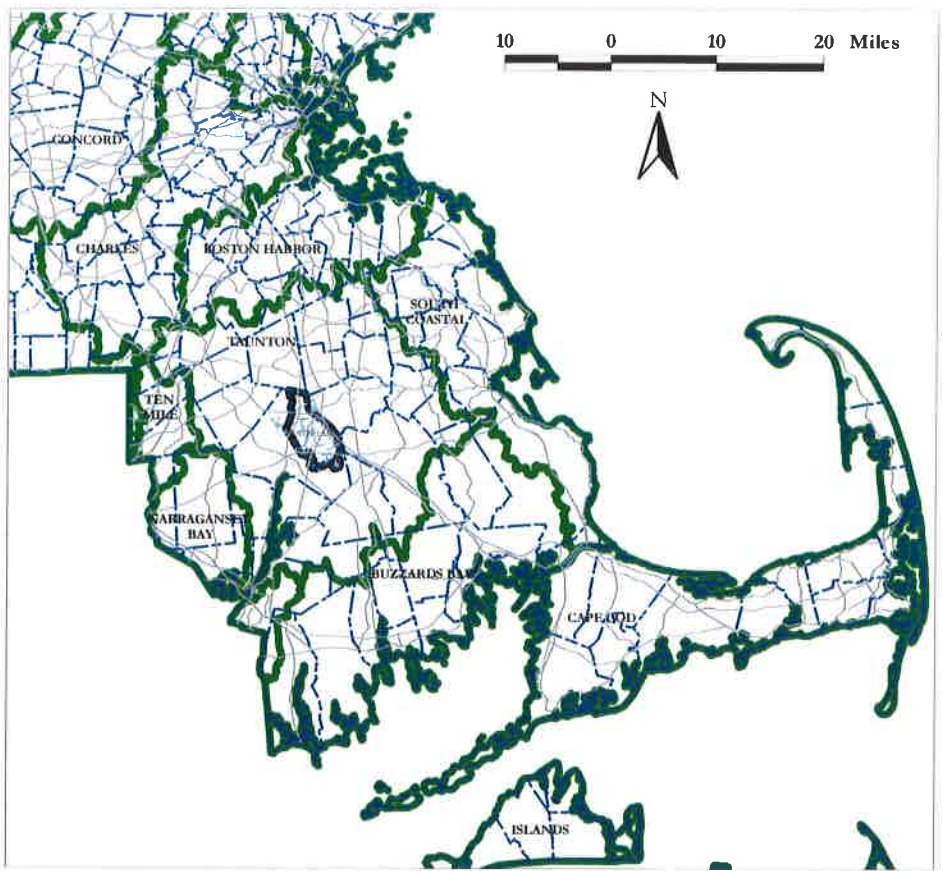
#### *Floodplains*

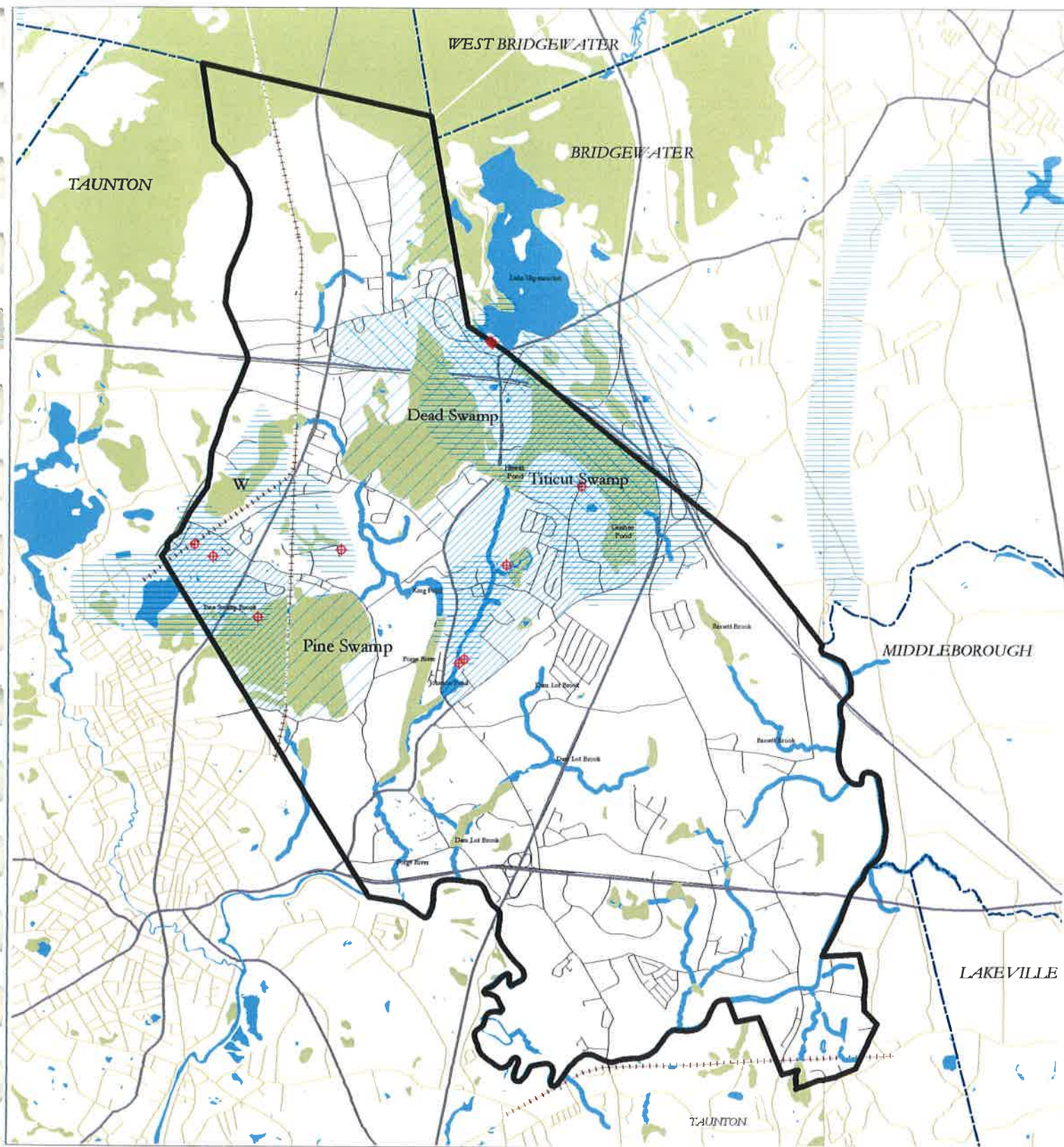
The areas which border streams, rivers, lakes and other water bodies subject to flooding are designated as floodplains. The boundaries have been delineated by the town as shown on Map 4-4. In addition, the Federal Emergency Management Agency (FEMA) has mapped the 100 and 500 year floodplains for the purposes of their Flood Insurance Rate Maps. In most cases the boundaries of these areas approximately coincide. In order to protect the property owner as well as the Town, construction should be restricted within the floodplain areas so as to minimize the impact on water flow and storage capacity.

Map 4-2

# Town of Raynham Watershed Features

-  Major Basin
-  Subbasin





Map 4-3

# **Town of Raynham Surface Water and Groundwater Resources**

2500 0 2500 5000 Feet

Prepared by Larry Koff and Associates

### Wetlands

Wetlands are a dominant feature of Raynham's landscape. Four swamps are identified on Map 4-4: Pine, Titticut, Dead, and the Hockomock. In addition, a number of smaller wetland areas are identified along the streams and brooks located north and south of Route 44, and elsewhere in the town. Each of these wetlands is generally located at the headwaters of local streams and brooks.

Wetlands serve a variety of natural resource and public health needs including storing water during storms of high intensity, releasing water slowly into the ground to recharge the groundwater aquifer, filtering out contaminants from the water stream, providing habitats and breeding places for wildlife, and adding to the diversity of the landscape.

#### The Massachusetts Wetlands Protection Act defines wetlands as:

*Marshes, swamps, bogs, areas where groundwater, flowing or surface water or ice providing a significant part of the substrate for a plant community for at least five months of the year...emergent and submergent plant communities in the inland waters...that portion of any bank which touches an inland water.*

As noted in the 1982 Comprehensive Growth Policy Plan, (Southeastern Regional Planning and Economic Development District), "It is important to identify wetlands and preserve them in their natural state for a number of reasons:

- Wetlands help minimize the adverse impact of heavy rainfall and melting snow by holding water and slowly releasing it into a river system;
- Wetlands act as aquifer recharge areas and help maintain a high groundwater level
- Wetlands provide habitats for wildlife, and
- Wetlands help purify pollutants that enter the watershed or streams."

### Fisheries

The Taunton River Basin is the second largest basin in Massachusetts covering about 1053 square miles<sup>1</sup>. As might be expected because of its size, the fish resources of various portions of the basin have been studied on a number of occasions. The most recent study was completed by Marine Research, Inc.<sup>2</sup> in the tidal, primarily freshwater portion of the River in Taunton in conjunction with the proposed Taunton Energy Center. Almost any of the fish species collected could be found in Raynham in the mainstream Taunton River and in the lower reaches of tributaries as the Forge River. See Appendix 4-2 for the master fish species list.

The Taunton River and its tributaries and ponds in Raynham supports a diverse warmwater resident fish community in addition to anadromous and catadromous fish runs. There has also been reports of wild (native) brook trout in a few of the smaller tributary streams. There has also been reports of wild native brook trout in a few of the smaller tributary streams. The Taunton River currently supports spring anadromous fish runs of river herring (primarily alewife and also blueback herring), American shad, rainbow smelt and white perch as well as the catadromous fish, the American eel (personal communication, Philips Brady, Anadromous Fish Biologist, MA Division of Marine Fisheries, South Shore Field Station, Pocasset, 31 January 2000). The spring river herring spawning run in to the Nemasket River, which passes through Raynham, is one of the largest in the State. The lower forge River, and possibly other tributaries as Dam Lot Brook, currently supports spawning runs of river herring (personal observation). However, the size of the run on the Forge River system is currently limited by dams at Kings Pond, Johnson Pond, Tracy Pond, and Hewitt Pond. Of these, Kings Pond and Johnson Ponds are suitable for alewife

<sup>1</sup> Bickford, W.E. and U.J. Dymon, 1990. An Atlas of Massachusetts River Systems. Environmental Designs for the Future. Published for Massachusetts Department of Fisheries, Wildlife and Environmental Law Enforcement. University of Massachusetts, Amherst. 87p.

<sup>2</sup> MRI (Marine Research Inc.). 1992. Taunton Energy Center Aquatic Ecology Studies July 1990. December 1991. Submitted to HMN Associates, Inc. Concord, MA. 59p + appendices.

spawning and fishways at both of these ponds would provide an additional 20 acres of spawning area<sup>3</sup>.

### **Open Space**

Much of the undeveloped land in Raynham is potentially valuable for water, natural resource and wildlife protection and recreation, as well as contributing to the town's character. This land includes wetlands, open fields, and woodlands. The Town of Raynham contains approximately 1,558 acres of wetlands, 1,264 acres in open fields, and 5,423 acres in woodlands (see Map 4-5). Together, these areas comprise 62% of the town. Out of this open space, only 1,540 acres, or 12% of the total town area is protected from future development.

### *Open Fields*

Open fields that were previously used for farming activity present opportunities for recreation and conservation sites. Many of these open fields have become habitats for local wildlife. These open fields preserve the rural character of Raynham by allowing the passerby an unobstructed view of the greater landscape. One parcel that was cited in the 1989 Raynham Conservation and Recreation Plan as an important site for preservation is the farmland on the eastern side of Church Street along the northern banks of the Taunton River. Preservation of this parcel is important since it affords a view of the river, it protects the quality of the runoff, and it is still an opportunity site for potential agricultural uses.

### *Woodlands*

Woodlands are forested plots of land that help to preserve the quality of the groundwater. They slow down rapid runoff, which could cause pollution and siltation of the streams and ponds in Raynham, they allow water to percolate into the groundwater to replenish it; and they are excellent sites for recreational activities like hiking. Raynham's woodlands are mostly hardwood forests or a combination of hard and softwoods.

### *Protected Open Space*

The Town has approximately 1,540 acres of protected and publicly-owned open space. This includes State-owned land, Town-owned land, and privately-owned land under APR protection. Not all of the publicly-owned open space is permanently protected from development. A comprehensive open space inventory is needed to determine the protection status of all of the town's open space lands. Open space and publicly-owned land is shown on Map 4-5, which is updated as of January, 1999. See Appendix 4-3 for a detailed description of open space lands.

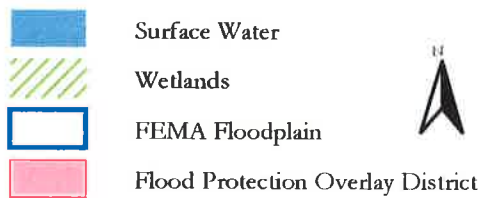
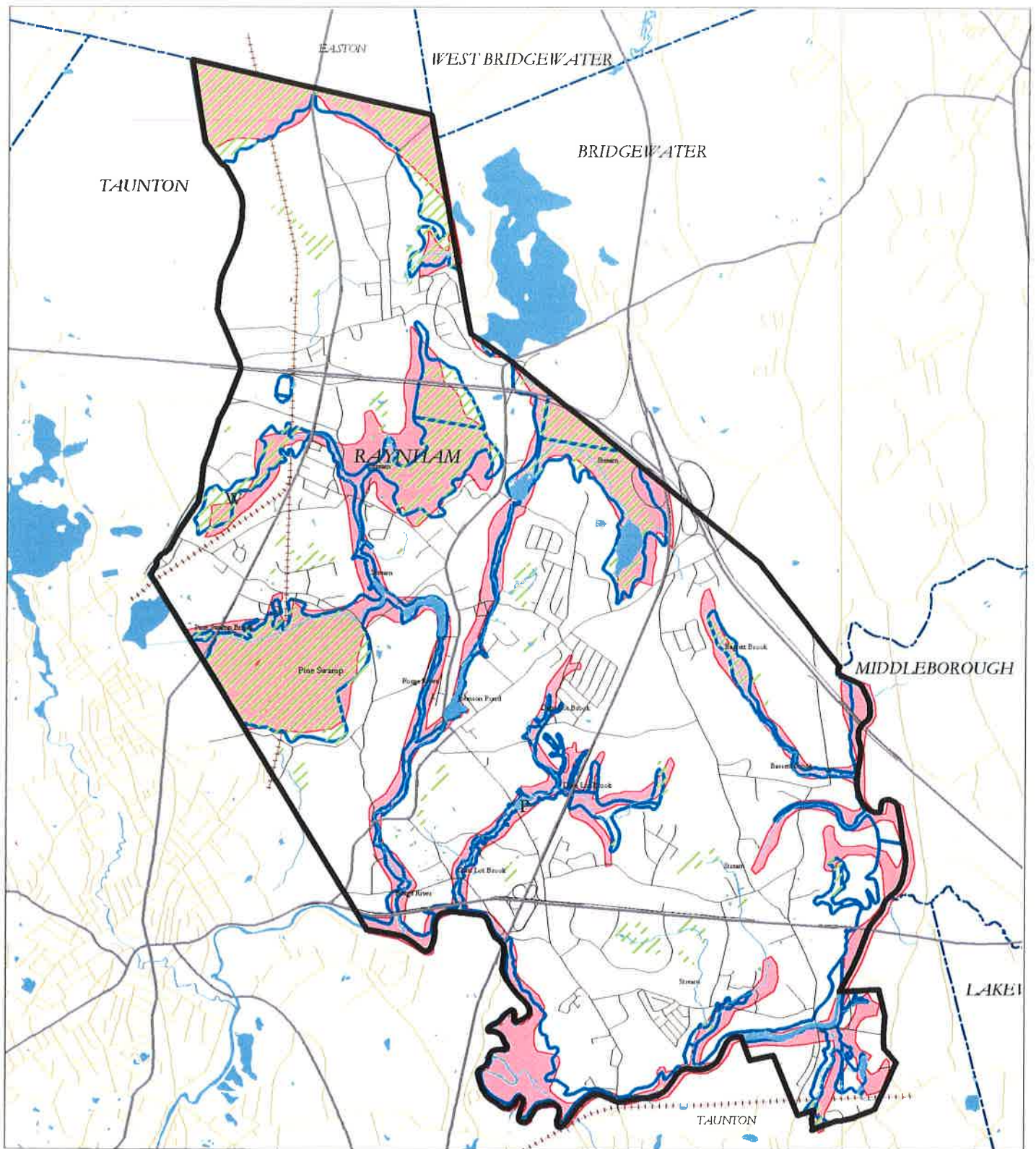
**Table 4-2**  
**Summary of Protected Open Space**

State-owned land	192 acres
Town-owned land	1,255
Privately-owned land	<u>93</u>
Total	1,540 acres

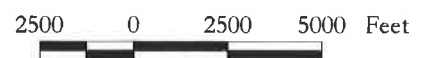
### **Sensitive Environmental Receptors**

Sensitive environmental receptors are those areas whose ecological cycles are easily disrupted by human impacts to the environment. Examples include: areas containing endangered wildlife,

<sup>3</sup> Reback, Kenneth E. and Joseph S. DiCarlo 1970. Final Completion Report, Anadromous Fish Project, Anadromous Fish Investigations. Massachusetts Division of Marine Fisheries, Boston, MA. Publication #6496 (115-50-12-72-CR).



Map 4-4  
**Town of Raynham  
 Floodplains and Wetlands**



Prepared by  
 Larry Koff and Associates

fragile vegetation and state designated Areas of Critical Environmental Concern. Raynham has several such areas (see Map 4-8).

#### *Vegetation and Wildlife*

A study conducted on the Taunton River Greenway in 1989 identifies some endangered, threatened, or species of special concern. (See Appendix 4-2 for a list of species found.) Particular consideration should be given to the habitats of endangered species that are known to reside in Raynham.

#### **Recreational Resources**

The town of Raynham has several recreational resources, including public facilities for passive and active recreation. Several of these sites are identified on Map 4-6. The majority of the recreation sites are located in northern and central subareas of Town. Listed below is a summary of both publicly and privately held recreational lands in the Town. See Appendix 4-3 for a detailed description of open space and recreation lands.

**Table 4-3**  
**Summary Chart of Recreational Land**

Town-owned Land	85 acres
Privately-owned Land	<u>194</u>
Total	279 acres

There are 289 acres of developed land that house public and private recreation facilities in the Town. Recreational facilities include two tennis courts, one golf courses, one driving range, six playfields, two playgrounds, and two swimming pools. In addition, the Town also has a racquetball facility, a dog track, a shooting facility, one trail, two picnic areas, a riding ring, and a boating and fishing facility.

#### **Agricultural Land**

In 1989, the total acreage of privately owned farmland was 885 acres (see Map 4-5). The area of agricultural land in the town has been on the decline in the last three decades. Agricultural land is important not only for its aesthetic value to the town, but also because of its economic potential. Once developed, land cannot be reclaimed for agricultural purposes should economic conditions return that favor locally-grown products and/or high value crops.

The State's Chapter 61A program offers one alternative to farmers who wish to keep their lands in agricultural use<sup>4</sup>. This program allows agricultural land to be taxed at actual use value rather than its development potential. Landowners participate in this program for a fixed period of time, after which it is taxed at the full value. Should the property be developed or sold within that period, the landowner would owe the full amount of taxes that would have been paid up to that time. Also, if the property is to be sold, the town would have the first right of refusal to acquire the property at market value. There are presently 12 properties that are taxed under the provisions of Chapter 61A, totaling 185 acres. See Appendix 4-3 for detailed list of properties.

<sup>4</sup> This program is a corollary to the Chapter 61 program which similarly treats forested land, and the Chapter 61B program which treats recreational land.

### **Trails**

The town's draft Vision Statement suggests an internal system of circulation connecting the various parts of town. Maps 4-10 and 4-11 graphically display a preliminary conceptual plan for trails in the Town. A trail system should be developed to connect various resources and to provide connections to adjacent communities within a regional framework.

## 4.2 REGULATORY FRAMEWORK

The following section summarizes state and local regulations that protect natural resources. Map 4-7 identifies the boundaries of the state and local districts which have been established to regulate development within and adjacent to critical water resources. The Massachusetts Department of Environmental Protection (DEP) has designated districts to protect drinking water aquifers. This designation has been supplemented by the Town's zoning which has established Water Resource Protection Overlay districts. The Town has also established a Flood Hazard Protection Overlay district and a Designated Wetland District. There is substantial variation between local and state boundaries.

### State Regulations

#### *Aquifer Protection*

Aquifers identified by USGS hydrological survey are defined under the Massachusetts Contingency Plan (MCP) as Potential Water Supply Areas. Under DEP regulations, the cleanup of hazardous waste sites must meet drinking water standards. See Appendix Map 4-A1 for the location of these areas in Raynham.

The DEP has established Zones I and II to protect from contamination actual public water supply sites throughout the state. Within these zones are located public water supply points of cities and towns, and the boundaries of the aquifer and recharge areas which supply public water. Zone I is a 400 foot radius around the public water supply well. Zone II is the zone of contribution that directly feeds a public water supply. Uses within these zones are regulated by the state. The uses that are prohibited under 310 CMR 22.21 2 (a) are required to be included in the Town's zoning by-laws. The Town's Zoning By-law contains a Water Resource Protection Overlay District in compliance with the State regulations, however the Town's mapping of these districts differs from the State's. The state has a "Guidelines and Policies for Public Water Systems" that all public water systems must comply with.

Regulation 310 CMR 12.00 governs the protection of groundwater sources of public drinking water supplies from non-point source pesticide contamination. This regulation states that pesticides may not be used within a Zone II without the adoption of an integrated pest management program approved by the DEP.

#### *Rivers Protection Act*

The Rivers Protection Act, effective in August, 1996, protects rivers and streams from inappropriate development. Applicants proposing work in a riverfront area must obtain a permit from the local conservation commission or from the DEP. Projects must meet performance standards which require that there are no significant adverse impacts on the riverfront area and that there are no substantially equivalent economic alternatives to the proposed work with less adverse effects. A riverfront area is defined as the area of land within 200 feet of the river's annual high-water line.

#### *Sensitive Environmental Areas*

Several sensitive environmental areas in Raynham have been designated by the DEP as Areas of Critical Environmental Concern and Priority Sites of Rare Habitats. These areas are identified on Map 4-8.

Areas of Critical Environmental Concern (ACEC) have been designated by the Secretary of Environmental Affairs of Massachusetts. ACECs are those areas within the Commonwealth that have unique clusters of natural resources which are of "critical concern to the Commonwealth," and for which policies concerning acquisition, protection and use must be developed. ACECs are used to protect marine and aquatic productivity, surface and groundwater quality, habitat values, storm damage prevention or flood control, historic and archeological resources, scenic and recreational resources, and other natural resources. ACECs are administered by the Massachusetts Department of Environmental Management (DEM), which coordinates with private citizens, communities, environmental organizations and other state agencies. All federal, state, and local agencies, as well as private parties must submit development plans to the DEM to ensure that activities which would impact the ACEC are carried out as to protect the natural resources.<sup>5</sup> Municipal boards and commissions are encouraged to implement local regulations and actions to protect and sustain ACEC areas.

Within the Town of Raynham, a 2,600 acre area located in the northern and central subsections is designated as part of the Hockomock Swamp Area of Critical Environmental Concern (ACEC).

Priority Sites of Rare Species Habitats (PSRH) represent estimations of the most important natural communities and state-listed rare species habitats in Massachusetts. These habitats are based on rare species population records (maintained by the Natural Heritage & Endangered Species Program's Biological and Conservation Data System database). Program scientists draw estimated habitats by analyzing population records, species habitat requirements, and available information about the landscape. Habitat sites are selected for biodiversity significance. Significance is determined by the global and state rarity of the species or communities present, as well as the quality of those species populations or communities. There are five levels of significance: outstanding, very high, high, moderate, and of general biodiversity interest, of which Raynham has only high significance plots. Priority sites are not afforded any protection by the state government, but the rare species that reside in these habitats are protected by the Massachusetts Endangered Species Act.

## **Local Regulations**

### *Water Resource Protection Overlay District*

Water supply areas in the town have been placed in the Water Resource Protection Overlay District (WRPOD). Within this district is located the town's public water supply points, and the boundaries of the aquifer and recharge areas which supply public water. The boundaries defined by the Town and DEP for Zones I and II should be changed so that they correspond.

Land has been designated within the WPROD district: "to protect the public health of the residents of the town from contamination of existing and potential public groundwater supplies; and to protect, preserve and maintain the aquifers and recharge areas of existing and potential groundwater supplies within the town as sources of public water." (Zoning Bylaw, Section 11.1)

There are three categories of land within the WRPOD district:

- Zone I: the area within a 400 foot radius of an existing public well.
- Zone II: the area that contributes to an aquifer that is used for an existing public well.
- Zone III: the recharge area to an existing or future public well.

<sup>5</sup> Procedures for ACEC designation and the general policies governing the effects of designation are contained in 301 CMR 12.00. For more information on the ACEC datalayer, contact the ACEC program at 617-727-3160 ext. 552 or 554.

All development is prohibited within Zone I. There is an extensive chart of permitted uses within Zones II and III in the Raynham Zoning Bylaws. Residential use is permitted in Zones II and III, and other uses are permitted with special permits. Hazardous or polluting uses are prohibited. There are special requirements for residential lot dimensions, as well as business and industrial lots located within Zone II. Regulations for Zone III areas are more permissive. Many uses which are prohibited in Zone II areas are allowed with special permit (ZBA) under Zone III, and many uses which are allowed by special permit under Zone II are allowed by right under Zone III.

#### *Flood Hazard Protective Overlay District*

The 100-year floodplain zone is regulated under Article 8 of Raynham's zoning by-laws. The purpose of the Flood Hazard Protective Overlay District (FHPOD) is to protect the public health, safety and general welfare; to protect human life and property from the hazards of periodic flooding; to preserve the natural flood control characteristics and flood storage capacity; and to preserve and maintain the groundwater table and water recharge areas within the floodplain. Any uses that are incongruent with these directives are prohibited. A special permit must be obtained for any development within this area.

Permitted uses include agricultural uses; forestry and nursery use; outdoor recreational use; conservation of water, plants, and wildlife; wildlife management area; temporary non-residential uses; creation and maintenance of ponds; installation of utility lines; and for meeting yard requirements. Additional uses are allowed with a special permit.

Prohibited uses include the storage or disposal of any soil, rock, trash, solid waste, debris, etc.; draining, excavation or dredging/removal of any soils or mineral substances; the storage or disposal of materials used for snow and ice control; the storage or disposal of hazardous wastes; and construction of structures or buildings except as allowed under permitted uses or special uses.

#### *Wetland District*

The Town's zoning map delineates an area designated as the Wetland District, within which all development is prohibited (see Zoning Map, Land Use Section). The purpose of the district is to protect the community against unsuitable development in swamps, marshes, wet meadows, and other wetlands, to conserve these areas in their natural conditions, and prevent flood damage, runoff, and disruption of the water table consequent to development. This district prohibits residential or any other type of development which would endanger the natural resources present.

Permitted uses include: agricultural uses forestry and nursery use, outdoor recreational use, conservation of water plants and wildlife, wildlife management areas, temporary non-residential uses, creation and maintenance of ponds, buildings lawfully existing prior to the adoption of these provisions, and for meeting yard requirements.

Apart from the zoning district regulations, the Raynham Conservation Commission must review the filling, dredging or alteration of wetlands. After determining that a parcel is a wetland (not all wetlands are included in the Wetland District), the Conservation Commission must review the proposed impact and either approve, conditionally approve, or disapprove of the intended development.

### 4.3 ISSUES/NEEDS ANALYSIS

Growth management issues characterized the concerns of the Open Space Committee in undertaking the master plan. These concerns supplemented a listing of issues noted below that had been previously identified in the 1982 Comprehensive Growth Policy Plan (Southeastern Regional Planning and Economic development district) as well as in the 1989 Raynham Conservation and Recreation Plan (Southeastern Regional Planning and Economic Development District.) Of critical concern today is how to utilize infrastructure improvements such as sewers and roadway construction as well as cluster and resource zoning to shape growth and protect the town's natural resources. An open space system must be identified and protected as part of a community's growth strategy. This system must be built on an understanding of the following needs:

- recreation and trail systems
- water protection
- community character
- sensitive environmental receptors
- open space
- resource protection
- public access to recreational facilities
- agriculture

#### *Projected Buildout*

A key factor impacting the need for open space is derived from an analysis of the projected buildout. As indicated in the graphs below, the projected build-out will double the amount of commercial and residential land uses. Under this scenario the ratio of protected open space to built area will fall from 1:3 (1,540 to 5,227 acres) to 1:6 (1,540 to 10,802 acres). Meanwhile, almost 5,600 acres of open land that is currently unprotected open space will convert to urbanized use unless steps are taken to preserve some of this land area as open space.

**Table 4-4  
Land Use/Buildout**

	Existing	% of Town Area	Potential Increase	Potential Amount of New Development	Total at Full Buildout	% of Town Area
Residential	3,060 acres	29.6	4,310 acres	3,935 dwelling units	7,370 acres	71.2
Retail	359	3.5	599	17,138,000 s.f.	958	9.2
Office	---	---	522	18,322,200 s.f.	522	5.0
Industrial	155	1.5	144	4,798,800 s.f.	299	2.9
Unbuildable Area	1,060 acres	7.9	---	---	1,060 acres	7.9
Protected Open Space	1,540	12.0	??? acres	---	???	???

#### **Water Resource Needs**

There is a need to protect the Town's surface water, groundwater and wetland resources. Surface waters such as rivers and brooks are important because they provide drainage and flood protection for upland areas, act as habitats for fish and other wildlife, and serve as recreational lands for fishing and boating. They also provide scenic vistas and visual relief to the man-made environment. In addition, lakes and ponds channel and retain storm water, provide important

The 1997 Open Space and Recreation Survey found that 95% of the town's population think open space is "very important" or "important" to meet the town's water supply needs.

scenic and recreational environments, and directly or indirectly serve as sources of municipal water. The town should consider local measures to protect the undeveloped land along the banks of the ponds and lakes and preserve them in their natural character.

Protecting aquifers from contamination is critical to securing the quality of the town's groundwater, given that approximately 75% of the town's residents rely on Town water for drinking and other household uses. Population growth is expected to place additional demand on the groundwater resources. One way to protect water resources is to restrict the types of land use on the land overlying the aquifers. The state and the town have protective zones that restrict uses in the aquifers and their recharge zones.

#### *State/Local Coordination*

The Zone II areas defined by the Town for aquifer protection do not consistently correspond with the areas defined by DEP. It is unclear in some cases where the correct boundaries ought to lie.

There are four areas that are protected within the Zone II boundary of the DEP, several parts of which are not afforded any protection from the town's zoning overlay districts. Those areas designated by the DEP should also be protected areas within the Town's bylaws.

- Area 1 is mostly covered by the Town's Zone II protection overlay district. The northern tip of the DEP boundary lies outside of the Town's Zone II overlay. The correct boundary for this area should be determined. Half of this DEP Zone II area lies within the city of Taunton. Discussion with Taunton over resource protection would help to ensure comprehensive protection of the ground water.
- Area 2 is almost completely outside of the Town's WRPOD boundary. Only a small part of this area is protected by the Town with Zone III designation. Within this zone there are some wetlands and a public water supply point. Protection of this area has been proposed, but it has not been formally accepted by the Town.
- Area 3 is about 70% covered by the Town's Zone II. Since DEP's Zone II designation extends further westward, it might be worthwhile to consider expanding the Town's Zone II boundaries.
- Area 4 encompasses both Zone II and Zone III Town-designated areas. It is questionable whether Zone III is providing adequate protection; this may need to be upgraded to a Zone II designation. Area 4 extends further southeast than the Town's designated areas. Discussion with the neighboring town of Bridgewater concerning comprehensive protection of the water resource should occur.

DEP has recently updated its delineation of this Zone II boundary, as shown on Map 4-7. The change significantly reduces the area covered under Zone II, while extending the designation further west along Route 495. Most of the new boundary is already included in the Town's WRPOD. It is questionable whether the new boundary delineated by DEP provides sufficient protection to the water resources in that area of the town.

An analysis of land uses within the Water Resource Protection District was performed to identify threats to its water resources. Land use concerns in the areas of land that are under DEP Zone II protection are:

- In Area 1, there are gravel pits, a golf course, and residential areas. The golf course is a concern for water quality since pesticides and fertilizers may be used that permeate into

the groundwater and contaminate it. Title V of the DEP code should address the residential sewerage concerns.

- In Areas 2, 3 and 4 there are some areas of residential development. The extension of public sewers to those residences should be considered in order to prevent contamination, making sure that there is not additional "secondary growth" which would have additional impacts.

**Additional areas warranting protection:**

- The aquifer located in the eastern boundary of town, bordering Middleborough, may be used as a supply of future water, and therefore it is important that it be protected from contamination. The area surrounding the potential well site is zoned for industrial activity. Discussion with Middleborough about conservation measures for the aquifer could ensure its protection.
- The aquifer in the central section of town is not adequately protected. The Zone II boundary could be extended further east to protect the town's aquifer.
- Some aquifers in the southern portion of the town classified as potentially productive medium yield aquifers also warrant consideration for protection.
- Part of the DEP Zone II on the Taunton line adjacent to Route 138 (Area 1) is zoned for industry. In order to ensure the protection of this area, the Town might want to consider changing the zoning.

*Flood Prone Areas*

There is some minor encroachment by development in the FHPOD in the central and southern section of Raynham. While land use is restricted within the district, landowners are permitted to include a portion of land designated as flood-prone in the total estimation of lot acreage, thus permitting more development on the fringes of flood-prone areas than may be appropriate.

The delineation of the Town's FHPOD is not consistent with the flood plains defined by the Federal Emergency Management Agency (FEMA). It is unclear in some areas which of the boundaries are accurate. It is recommended that the Town petition FEMA to review their floodplain designations. Following FEMA's review, the FHPOD should be aligned to the revised FEMA designation so as to eliminate any discrepancies.

*Wetlands*

The Town should update its map of the wetland boundaries within the town. There is no protection of the wetlands in the northwestern upper tip of the town. Pine Swamp is one area that merits protection even though it is already designated as open space. There are some wetlands in the southern section of the town, particularly near Basset Brook, which should be designated to protect the stream from the impacts of development.

The wetlands of the Pine Swamp near the Taunton border should be preserved and monitored, since the municipal solid waste disposal site borders this large wetland. This is particularly critical since a well of the North Raynham Water District is located along the northern edge of this wetland.

**Open Space Needs**

Establishing and maintaining adequate open space within a town serves two primary functions: conservation of natural resources and the provision of recreational facilities and activities for residents. Several ways to consider the existing and projected need for open space acreage for

these purposes include the application of national standards and the analysis of the population's needs in terms of service area and/or community values.

### *Conservation*

Conservation of open space is needed to protect water resources, wildlife habitats and other sensitive environmental resources, as well as to shape development and preserve the town's rural character. Open space is also needed for recreation purposes. The amount of land that is needed for open space purposes can be determined by several methods. First, a conservation strategy can be established based upon the acreage of land that would be needed to protect the natural resources in the Town. Using the resource protection methodology for determining need, the Town would set aside land to protect the water resources, ACEC, wetlands, floodplains, and priority sites of rare habitats. Many of these resources overlap.

The town's natural resources can be protected through a combination of regulation and acquisition. The total area of the town that is covered by one or more of these resources is about 6,670 acres or 50% of the total land area. Much of this area is now protected through State and local regulations, however many of these regulations may be insufficient, especially where there is an interest in protecting uplands or continuous trails. Acquisition of some portion of land for conservation purposes is needed. The Open Space Committee will evaluate a list of priority parcels identified in the Appendix and determine how much of this resource be acquired versus protected through improved regulation.

### *Recreation*

In addition to land conservation, the Town should also provide its current and future population with adequate recreational sites and facilities. This includes setting aside park land for passive recreational activities as well as for active recreational facilities.

The Town administered an Open Space and Recreation Survey in early 1997. Some of the major findings of the survey are:

- a. 82% of the Town's population think that it is important for the Town to acquire and preserve conservation areas for natural resources.
- b. 83% of the Town's population does not know where all the conservation areas are in town (this demonstrates the need for public education.)
- c. 84% of the Town's population favor preserving farmland.

Standards have been formulated by national agencies that establish an approximate number of recreational facilities that will provide adequate recreation opportunities for a town's residents. Table 5 compares the National Recreation and Parks Association (NPR A)<sup>6</sup> with the Town's current facilities. Although the national standards do not reveal the need for conservation lands or other passive recreation resources, they do point to the need for additional playfields and other active recreation facilities both to meet the needs of the current population of approximately 11,000 residents, and the projected population of 13, 654 residents by 2020.

<sup>6</sup> National Recreation and Park Association. *Recreation, Park and Open Space Standards and Guidelines*. National Recreation and Park Association, Alexandria, VA: 1983.

**Table 4-5**  
**Recreation Facilities in Raynham and National Outdoor Recreation Standards**

<u>Activity</u>	<u>National Standard</u>	<u>Present Raynham Capacity</u>	<u>Additional facilities needed for Current Pop.</u>	<u>Additional facilities needed for 2020 Pop.</u>
Tennis	1 court per 2,000 residents	2 courts for 10,740	3 courts	6 courts
Golf Course	1 per 50,000 residents	1	0	0
Driving Range	1 per 50,000 residents	1	0	0
Playfield	1 acre/800 residents (between the ages of 13-65) within a 1/2 mile radius	6	7 acres	17 acres
Playground	1-2 acres/1,000 residents (under age 13)	4	0	0
Swimming	1 private & 1 public pool for every 7,500 residents	2	1	1
Fishing	One lake with 3 acres per 20,000 residents within an one hour drive	1	0	0
Ice-skating	1 public and 1 private facility/15,000 res.	1	1	2

Total Park/Recreation Area Standard: 6.25 to 10.5 acres of developed "close-to-home" open space per 1,000 population

<u>Current Pop.</u>	<u>Existing</u>	<u>Standard</u>	<u>Deficit</u>
2020 Pop.	85 acres	67-113 acres 104-174	0-28 acres 19-89 acres

The open space and recreation committee have identified the need for:

- bicycling lanes throughout the town;
- the creation of hiking/cross-country skiing/biking/horseback riding trails;
- the need for additional soccer, baseball and softball fields;
- the development of a swimming area;
- building a skate-board/in-line skate park;
- building more tennis courts and a town track; and
- creating canoe and kayak access to the Taunton River.

In terms of park land, the NRPA sets several guidelines. A local park system should be composed of a "core" system of park lands with a total of 6.25 to 10.5 acres of developed "close-to-home" open space per 1,000 population. The local park system should include mini-parks, neighborhood parks and larger community parks. Based on this standard, Raynham should have between 67 and 113 acres of developed open space set aside for parks and recreation areas to meet current needs. Raynham currently has about 120 acres of publicly-owned recreation land, plus about 30 acres of privately-owned recreation land (excluding the dog track). At full buildout the town will require between 150 and 252 acres, i.e., approximately 65-165 additional acres.

It is important to note that the majority of the recreation facilities are located in the central subarea and to a lesser degree in the northern subarea. The southern subarea has only four parcels of open space and one recreation facility. **There should be more recreational facilities and parks in the southern subarea. Protection of the Taunton River for open space and recreation would serve this purpose.**

**Table 4-6**  
**NRPA standards for Parklands**

<u>Park Type</u>	<u>Land Needed</u>	<u>Service Area</u>
Mini-Park (1 acre or less)	0.25-0.5 acres/1,000 residents	Less than a 1/4 mile radius
Neighborhood park (+15 acres)	1.0-2.0 acres/1,000 residents	1/4 to 1/2 mile radius
Community park (+25 acres)	5.0-8.0 acres/1,000 residents	1-2 mile radius
Regional Metropolitan Park (+200 acres)	5.0-10.0 acres/1,000 residents	1 hour driving time

The quality of public service needs to be maintained at the Town's recreational facilities. For example, it should be determined if the existing facilities are being adequately maintained and staffed, and if sufficient recreational equipment is available.

In addition to meeting local needs, the Town needs to examine **regional natural resource needs**. These include trail maintenance and preservation for users throughout the region, preserving the Taunton River and surrounding areas, and protecting the water supply, sensitive areas and their associated wildlife (e.g. ACEC and priority site of rare habitats.)

Based upon the Open Space and Recreation Survey,

- a. 84% of the Town's population thinks open space is "very important" or "important" to meet the Town's recreation needs.
- b. 58% of the Town's population are satisfied with the places for children and youth to recreate in Town.
- c. The top five recreational facilities requested include: recreation center, biking trails, children's play areas, local neighborhood parks and a little league field.
- d. 63% of the Town's population believes that the town should have an equal emphasis on both maintenance of its current recreational facilities and acquisition of more conservation land.

### Environmentally Sensitive Areas

#### *Hockomock Swamp Area of Critical Environmental concern (ACEC)*

The Hockomock Swamp ACEC is the largest vegetated freshwater wetland system in Massachusetts. The Executive Office of Environmental Affairs designated this 16,800 acre natural and scenic swamp area in 1990. It includes swamps and associated wetlands and water

bodies located in six communities including Bridgewater, Easton, Norton, Raynham, Taunton, and West Bridgewater.

*The Hockomock Swamp is a unique and irreplaceable wildlife habitat. It is also the location of at least thirteen rare and endangered species identified by the Natural Heritage & Endangered Species Program. The archeological sites in the vicinity of this wetland complex are known to span a period of 9,000 years. The Swamp also acts as a huge reservoir for both regional flood storage and water supply for Raynham and West Bridgewater. Located within the ACEC are Lake Nippenicket, Gushee Pond, Hewitts Pond, Nunkets Pond, the Dead and Titicut Swamps.*

- Designation, Executive Office of Environmental Affairs, 2/10/1990

A 2,600 acre area located in the northern and central subsection of Raynham is designated as part of the Hockomock Swamp Area of Critical Environmental Concern (ACEC).

#### *Priority Sites of Rare Species Habitats (PSRH)*

There are four areas of PSRH land within the town of Raynham, one of which warrants special attention. Within this area, a large majority of the land is protected open space, and/or wetlands. There is also a golf course and gravel pits located in this area. The possibility of contamination from the golf course and the gravel pits should be investigated. See Map 4-8.

It is important to examine land uses within the ACEC and the PSRH to ensure that potentially harmful activities are not occurring in those areas. Located within the ACEC in the town of Raynham, there are wetlands, protected open space, forested areas, a flood hazard protective zone, surface water bodies including Hewitt Pond and Gushee Pond, gravel pits, a major highway, and some residential development. Residential development brings the potential for sewage contamination. A sewer system does not presently exist in that area, but an extension of sewers to the area is planned under Phase V of the Town's Sewerage Development Plan. While this will protect the area from contamination from existing development, it is hoped that the availability of sewers does not attract substantial further development. Development in this area should be closely monitored to ensure that habitat areas are protected.

It appears that adequate protection for the PSRHs is being administered by the Town's Conservation Commission.

Besides the ACEC and PSRH, there are two areas along the Taunton River that merit special protection. One is the oxbow, a "u" shaped piece of land on the Taunton River formed by meander of the river over the years. It is ten acres in size and is dominated by old upland hardwood/floodplain forest. It was recommended by an agent of the Department of Fisheries, Wildlife, and Environmental Law Enforcement that the area be protected given its uniqueness and the presence of species of special concern. The second area is the site of a potential well site south of Route 495 along the Nunes APR lands.

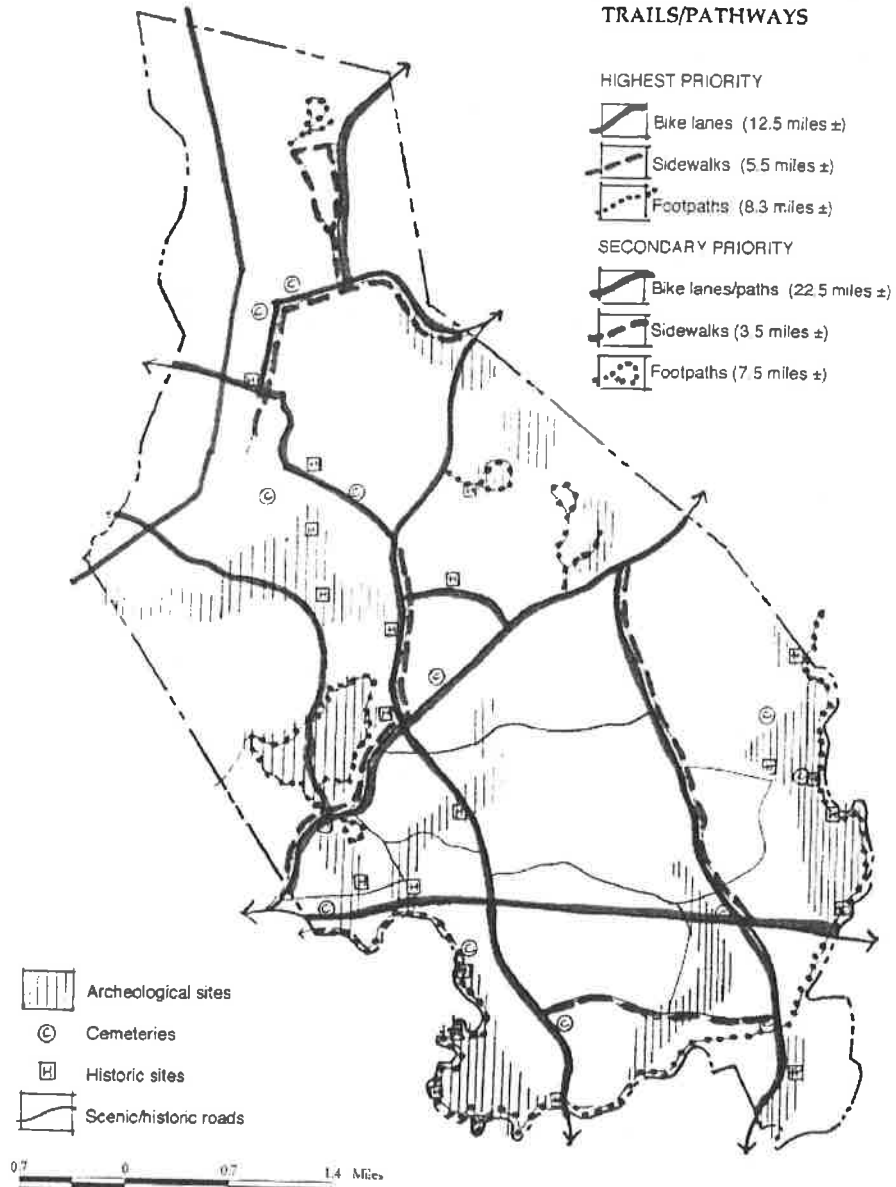
#### 4.4 VISION/GOALS

The needs identified in Section 4.3 have set the framework for the creation of an open space vision and the policy goals and action recommendations to carry it out.

*Raynham will utilize its natural landscape as a framework to foster the development of a cohesive, well integrated town which promotes economic growth without compromising environmental protection. It will provide a system of trails, protect its ponds, rivers, streams, water resources, agriculture lands, views and scenic landscape, historic sites, and maintain recreational facilities that meet the active and passive recreational needs of Raynham's youth and adults.*

This vision portrays a regulatory framework of protected resources as well as a map of trails and priority sites for acquisition.

#### Town of Raynham Open Space Planning TRAILS/PATHWAYS



In fulfilling this vision, the Committee reaffirmed the goals established in the 1989 Raynham Conservation and Recreation Plan Goals, and specified additional preliminary goals for open space protection.

**Table 4-7**  
**Goals For Open Space Recreation And Protection**

<u>Method of Protection</u>	<u>YR 2000 Current Acreage</u>	<u>YR 2020 Proposed Acreage</u>
Recreation	85	
Town	85	
State	16	
Conservation	1,540	
Town	1,255	
State	192	
Permanent conservation and agricultural restrictions	93	
Protected (zoning)	1,148	
Land trust	0	
Water Department	200	

**Policy Goals**

- 1. Expand, preserve and protect Raynham's natural resources** including surface waters, groundwaters, floodplains, wetlands, areas of environmental concerns, and priority sites of rare habitats.
- 2. Preserve and protect the Taunton River and its tributaries** - including wildlife, fisheries and vegetation in and around the River.
- 3. Expand recreational opportunities for all Town residents**, including biking and other recreational trails.
- 4. Increase public access to recreation facilities** through education and other promotional activities.
- 5. Preserve Raynham's character and environment.**
- 6. Use the powers and resources of town government** in an efficient manner for the protection of the town's natural environment.

Raynham Conservation and Recreation Plan Goals, 1989

## 4.5 ACTION RECOMMENDATIONS

Recommendations have been developed by the Open Space and Natural Resource Committee and Larry Koff & Associates which address the Town's stated goals.

### Overview

Five major types of resource need protection: water, open space, sensitive areas, recreation, and agricultural areas. These resources are identified below. Table 4-8 summarizes the existing regulatory framework governing these resource areas. Supplemental protection strategies are suggested. Some recommendations related to natural resources are included in the Implementation Section of the Master Plan. Map 8-2 provides a summary of these.

**Table 4-8**  
**Proposed Natural Resource Protection Strategies**

<u>Natural Resource</u>	<u>Existing Conditions</u>	<u>Supplemental Protection Strategies</u>
<b>Water Resources</b>		
Surface Water	S,M	Acquisition, public access improvements, regulations along pond frontage, General Wetlands Bylaw (GWB)
Groundwater	P,S,M,L	Improved mapping, update regulations for Zones II and III, cluster zoning, performance standards for stormwater runoff, GWB
Wetlands	P,S,M	Improved mapping, performance requirements, GWB
Floodplains	M	Improved mapping, GWB
<b>Open Space</b>		
Open Space	P,L,T,X	Acquisition, cluster zoning, incentives to encourage permanent restriction under private ownership
Fields	T,X	Acquisition, cluster zoning, back lot zoning, incentives to encourage permanent restriction
<b>Sensitive Areas</b>		
ACEC	L,X	Acquisition, cluster zoning, low density zoning, performance requirements under site plan review, incentives to encourage permanent restriction, GWB
PSRH	L,X	Acquisition, cluster zoning, performance requirements under site plan review, incentives to encourage permanent restriction, GWB
<b>Recreational Resources</b>	P,L,T,X	Acquisition, incentives for trail development
<b>Agricultural Areas</b>	P,T,X	Cluster zoning, back lot zoning, encouragement for use of APR restrictions

#### Existing Conditions Key:

- P Permanently protected via public conservation ownership or permanent restriction
- S Protected via state regulation
- M Protected via local regulation
- L Limited protection via state/local regulation or non-conservation public ownership
- T Temporarily Protected (i.e., Chapter 61)
- X Unprotected or Protection Status Unknown

### **Economics of Open Space Preservation**

The most effective way to protect natural resources is through means of ownership. Regulations do not provide sufficient protection in many cases because they may be changed, over turned, or violated if not well enforced. It can also be difficult to target regulations to cover specific parcels which contain valuable natural resources. Hence, an essential element to a natural resources protection plan is the formulation of a strategy to acquire open space.

Such a strategy is not necessarily beyond the means of a community such as Raynham. Recent analyses have demonstrated that open space acquisition may have a positive impact on a town's finances, especially in relation to the alternative development that could take place instead. Certainly in the long run, and even in the short run, the cost of acquiring a parcel is likely to be less than the cost of providing services to new residents of a residential development, depending on the value of the homes that are constructed. Commercial uses, especially retail use, may also require municipal services that balance the cost of acquisition. Besides the direct impact on the Town's budget, the acquisition of open space has additional potential economic benefits. The preservation of open space may have a positive impact on surrounding property values, which would partially or totally offset the loss of the open space parcel from the tax base. The acquisition would also be a cost-effective way to protect the Town's water resources, avoiding or reducing the need for future infrastructure improvements.

An example of a fiscal impact analysis for open space acquisition is shown in Appendix 4-4. After a list on priority parcels for acquisition has been developed, a similar analysis should be undertaken for specific parcels to support a decision by Town Meeting to finance an acquisition. This would be especially valuable to prepare for Chapter 61 parcels, so that the Town can decide and act quickly in the case that one should come on the market. In determining whether open space acquisition represents a net fiscal benefit for the town, consideration should also be given to the possibility of obtaining State funding toward the cost of acquisition.

Aside from acquisition, other options for obtaining permanent protection exist, which can also help to limit the cost to the Town. Land trusts or other nonprofit organizations may also acquire land for conservation purposes, and can work with the Town to identify and support common objectives. Private owners may be persuaded to donate or sell the development rights to their land through Conservation Restrictions or Agricultural Preservation Restrictions (APR), while retaining title to the land, itself. (Such an arrangement currently exists in the Nunes property.) Federal inheritance taxes favor the donation of conservation easements or full title to portions of large properties to minimize the tax obligation owed by beneficiaries. An education campaign could target large landowners who do not intend to develop their properties to plan for the optimal protection of their estates through open space preservation<sup>7</sup>.

### **Water Resources & Supply**

Raynham is a complex drainage basin that requires a comprehensive system of protective measures to ensure an uncontaminated and adequate supply of potable water for present and future populations. The following recommendations should be considered to meet the Town's potable water needs.

**Aquifer Protection:** To maintain protection of the aquifers, the Town's groundwater protection zones need to be evaluated to ensure that they are providing adequate protection for the aquifers and their recharge zones. Town and State groundwater protection zones should be coordinated. The zones may need to be re-delineated to ensure the comprehensive protection of aquifers.

<sup>7</sup> See Preserving Family Lands Book II by Stephen J. Small.

## Town of Raynham

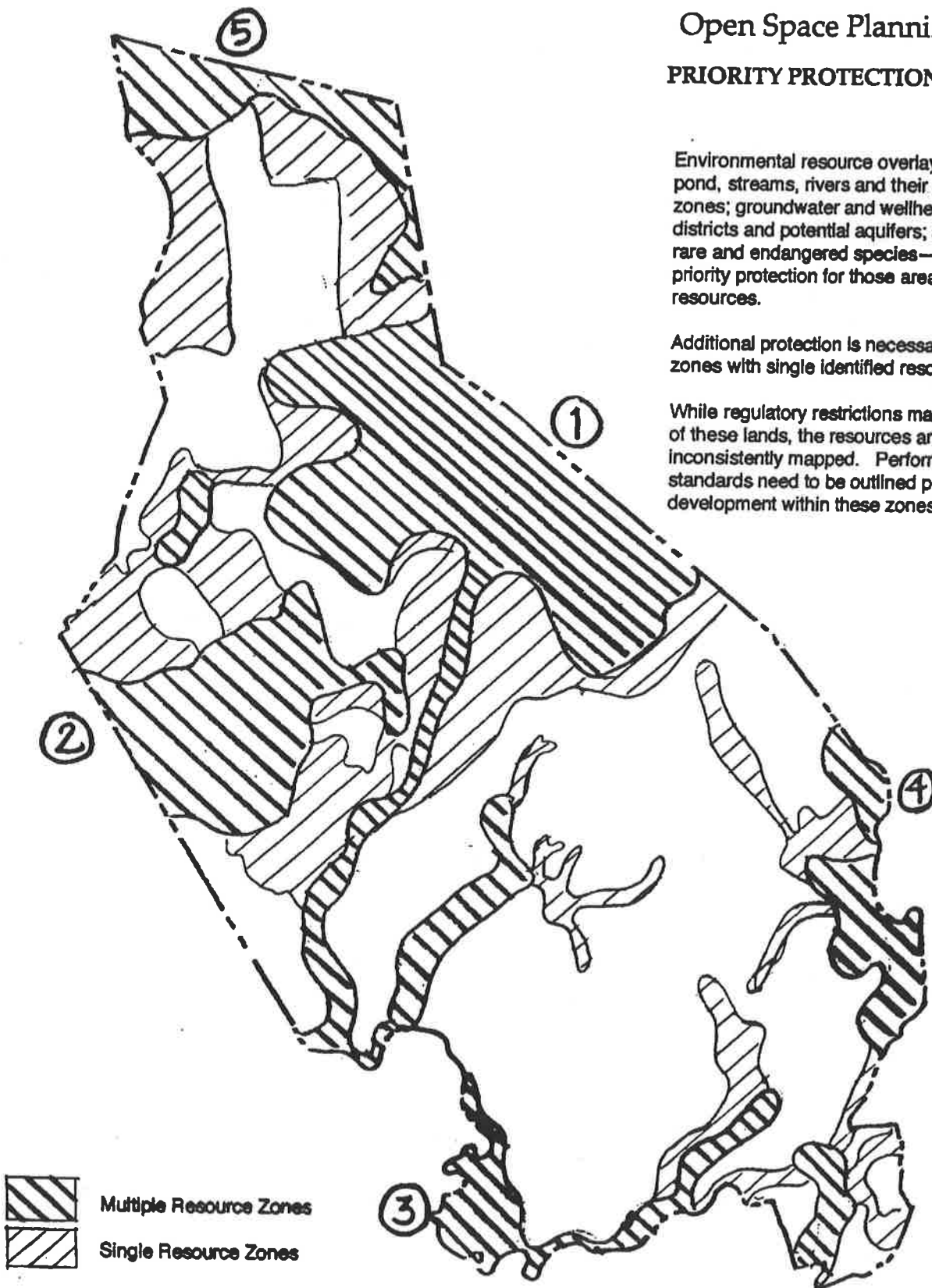
### Open Space Planning

#### PRIORITY PROTECTION ZONES

Environmental resource overlays—including pond, streams, rivers and their associated flood zones; groundwater and wellhead protection districts and potential aquifers; and habitat for rare and endangered species—mandate priority protection for those areas with multiple resources.

Additional protection is necessary for those zones with single identified resources.

While regulatory restrictions may protect some of these lands, the resources are poorly or inconsistently mapped. Performance standards need to be outlined prior to development within these zones.



Environmental contractors can conduct hydrologic re-delineation. Discussion with Taunton, Bridgewater and Middleborough should be initiated in order to coordinate watershed protection strategies where aquifers are transboundary in nature.

**Flood Zones:** The Town should also petition to FEMA to update its delineation of flood prone areas in Raynham. Once the floodplains are re-delineated, the Town's flood hazard protective overlay district should be accordingly updated.

**Development Oversight:** The Town should consider updating its bylaws to reflect the Massachusetts Rivers Protection Act. It is recommended that a bylaw be passed that places development near water resource areas, including streams and wetlands under the oversight of the Conservation Commission. The specific resource areas that would be covered would need to be determined and mapped. The Conservation Commission would review site plans, establish conditions for project approval, and issue permits.

In addition, stormwater and erosion control regulations should be strengthened. (See page 4-24 for specific recommendations pertaining to stormwater runoff.) The current requirements for lot coverage, minimum percent open space and maximum percent impervious surfaces should be reviewed to ensure that important water and natural resources are being adequately protected. The Town may want to consider a more stringent site plan review process to ensure that all water protection regulations are met.

**Land Use:** Land uses overlying and adjacent to the aquifers need to be examined to ensure that contaminating activities are not occurring, and existing local and state regulations aimed at water resource protection need to be strictly enforced.

- Adequate sewerage facilities should be provided to the residences so that sewage does not contaminate the aquifer. However, growth management techniques should be applied to be sure that new sewers do not promote excessive growth, especially around water recharge areas.
- Pesticide applications on agricultural fields and golf courses should be monitored to ensure that they meet state regulations and are not contaminating the aquifers.
- The Town could hold hazardous waste collection days in order to ensure that hazardous waste is properly disposed of, thereby reducing the probability that hazardous waste will reach the aquifers.

**Public Well Sites:** As the population grows, the water districts will be under increased pressure to develop new wells. Well sites should be identified as soon as possible so that they can be protected either through land acquisition or regulation. The two water districts need to coordinate with the Conservation Commission and Planning Board in order to identify and protect potential well sites.

**Surface Water:** The quality of surface water resources should be actively maintained. Forge River and Dam Lot Brook should be cleared of debris, and fish-ladders designed and constructed to aid the annual herring/alewife runs. The Selectmen recently voted to establish a Raynham Fisheries Commission (RFC) pursuant to "Section 94 Petition by City or Town to Control and Regulate Public Fishery Therein: Hearing etc." In order to acquire local control and enact regulations for river herring fishery in Raynham. A Major objective of the RFC is to promote the restoration of river herring by facilitating fish passage via the installation of fish ladders at the critical obstructions. Eventually a Fish Warden position would need to be established to manage the fishery.

**Education:** Public education can be used to build support for regulations and to implement voluntary protection efforts such as water conservation and water-quality monitoring. An education campaign should be carried in neighborhoods and schools to distribute literature and educate homeowners in aquifer protection areas on how their actions can impact the water they drink.

Some additional regulatory tools to aid in the protection of groundwater and surface water resources include the following:

**Large lot zoning:** By reducing the number of buildings and septic systems within a parcel of land, less pollution is released into an aquifer. An increase in the minimum lot size is recommended for Residential District A to 60,000 square feet. As discussed in Section 1, Land Use, a Critical Environmental Resource District would extend the minimum lot sizes to 3 acres within Zones II and III areas.

**Cluster development:** In the Zone II and III areas, the Town may choose to mandate cluster subdivision development.<sup>8</sup> The same number of buildings can be developed, except that the developments will be clustered in suitable areas. Besides preserving open space, this strategy will reduce road impervious surface creating less stormwater pollution and flooding problems and reducing the cost for Town road maintenance.

**Growth controls:** In order to slow down the rate of growth in a region, the Town may choose to adopt growth controls which limit the rate of development. This will allow the town time to assimilate the high cost of providing services to new residential growth, and also help an area maintain its rural character.

**Environmental impact assessments(EIA):** The Town may choose to request that developers within Zone I-III areas prepare EIAs. The EIA would identify potential harmful effects of the proposed development. Town would then review those plans to ensure that the impact to the aquifers is kept to a reasonable level.

### **Protection of Sensitive Natural Resources**

The protection of sensitive natural resources encompasses many of the same issues as the protection of water resources. To preserve and protect unique natural features, the Town needs to engage in both regulatory and non-regulatory protective measures.

**Zoning:** The Town should evaluate zoning, strengthen and enforce current regulations and enroll in preservation protection programs or management agreements. The Town can either create more stringent regulations to ensure greater protection of those areas, or it can conduct case-by-case reviews of development requests under existing regulations. In Section 1 of the Master Plan, Land Use, zoning changes are recommended in order to protect valuable resource areas. These include the establishment of a Critical Environmental Resource District in place of the existing Wetlands District and Farm & Forest District. The new district, based on the location of natural resources identified by state environmental agencies, requires a low density of development and would encourage cluster-type development, but unlike the existing zoning, it is likely to withstand court challenge.

**Linkages:** As described above, the acquisition of open space is an effective means of preserving natural resources. Linkages between open space parcels are important to provide a sufficient area

<sup>8</sup> See A Guide to Wellhead Protection by Jon Witten and Scott Horsley for more information. (page 37)

for wildlife habitats, as well as access for the public. The Town should examine the possibility of acquiring/maintaining wildlife corridors and/or buffers along lakes, ponds, streams, or wetlands. The Taunton River presents a unique opportunity for preserving a waterfront conservation area. Another possibility is along the river between Pine Swamp and Titticut Swamp. An ecologist could perform a wildlife analysis to determine which wildlife corridors would maximize the migration of wildlife.

#### Types of Conservation Buffers

**Filterstrips** are strips of grass or other vegetation used to intercept or trap sediments, organics, pesticides and other potential pollutants before they reach a body of water.

**Riparian forest buffers** are strips of streamside vegetation consisting of trees, shrubs and grasses that can intercept contaminants from both surface water and groundwater before they reach a stream.

Buffers are a good way to protect surfacewater, groundwater, and habitats for wildlife and vegetation from contaminated nonpoint source water. They can also act as valuable wildlife habitats, providing wildlife with shelter, food sources and nesting sites, thus increasing species diversity. Buffer strips can be established along almost any lake, pond, or wetland. Conservation buffers are strips of land permanently maintained in vegetation such as grasses, trees or shrubs, that act as a filter to help landowners protect and improve

their land and water. There are several types of buffers. The United States Department of Agriculture can provide assistance on how to implement conservation buffers<sup>9</sup>.

**Vegetation Inventory:** The Town should conduct an inventory of the vegetation within the Town's natural resources to ensure that non-native species are not the dominant species. The presence of non-native species within the Town's critical natural resource areas can upset the ecological integrity of those places. Non-native species are those vegetative species that have been introduced from somewhere else and therefore the original "home" species that kept the vegetation under control are no longer present in the new environment. This provides non-native species with an advantage over native species, and lets them crowd out the other species. Reducing native species reduces biodiversity.

**Education:** An effort should be made to educate townspeople (including students), departments, developers, and local business owners about existing laws and regulations that provide protection to our natural resources and the reasons that these are so important.

#### **Open Space**

**Open Space Inventory:** A comprehensive Open Space inventory needs to be prepared in order to determine the protection status of the town's publicly and privately owned open space. This inventory should include land with varying levels of protection, and agricultural lands as well as forested open space. Additional protection should be sought for important open space resources, both privately and publicly owned, which are not sufficiently protected from future development. Appendix 4-6 contains data collected in the process of completing the Master Plan which would be useful for developing an open space inventory.

**Acquisition:** As described above, a simple cost/benefit analysis can be prepared to determine the fiscal impact of acquiring a specific open space parcel. A model is provided in Appendix 4-4. Criteria for selecting priority parcels include the protection of surface waters, ground water, and habitats, flood control, preservation of farmland, scenic views, historic and cultural resources, and

<sup>9</sup> For assistance from the United States Department of Agriculture (USDA) in deciding which type of buffer is appropriate or any other questions, contact the local USDA Service Center or call (413) 253-4351.

the provision of land for recreation and trails. Open space may be protected by means of regulation (i.e., cluster zoning or prohibition of development in sensitive areas), acquisition, or donation of development rights by private owners. A matrix for rating priority parcels is included in Appendix 4-6, along with a list of parcels for consideration. A second matrix identifies protection strategies. These should be utilized by the Open Space Committee in the preparation of their Open Space Plan.

An ongoing Open Space Committee should be formed with representatives from all “stakeholder” groups including Park and Recreation, Conservation Commission, Water Districts, etc. The Town should consider establishing an open space acquisition fund that will enable the Town to act in a timely manner to acquire key open space parcels that come on the market. Also state funding programs should be identified that would be applicable to Raynham for the acquisition of land for open space and recreation purposes.

Aside from acquisition, alternative methods for preserving open space are discussed above, including non-profit land trusts and voluntary actions by private landowners. In addition, open space can be protected through cluster development. The Town may wish to encourage developers through regulatory incentives to set aside open space within the context of a predefined open space plan.

Open Space Strategy: Developing an ambitious open space preservation project will help to raise interest in carrying out an open space plan. Some ideas for potential projects have been suggested. One idea is to create a riverfront park, assembling all of the priority parcels along the Taunton River. The park could have upstream and downstream sections for canoe access, and hiking/historical trails along the river. Another idea is to improve fish passage and public access to the Taunton River tributaries in town to stimulate interest in herring runs and environmental stewardship. Similarly, specific plans need to be developed for protecting existing and potential aquifers, for bicycle paths, and other recreational facility needs.

### **Agricultural Preservation**

Agricultural lands in Raynham should be preserved from disappearance both because of their potential economic value and to maintain the rural character of the town. Once agricultural land has been developed, the resource is forever lost to the community. Farmers should be encouraged to participate in the APR program and CH.61A to preserve lands or relieve their farms from development pressures.

Where there are agricultural lands in use, every effort should be made to ensure that best management practices are employed. Pesticides and fertilizers are often used on agricultural lands, which during a precipitation event, run off the land and contaminate the underlying aquifers. Efforts should be made to educate the agricultural workers in Raynham regarding less polluting options, especially those who operate lands above a drinking water aquifer. In particular, the areas in the oxbow by the Taunton River, the APR properties, and the areas by Route 495 should be inspected to ensure that they are not contaminating the underlying aquifers.

### **Recreation**

The Town should provide recreational facilities and programs appropriate to the various age groups of town residents. Based on the needs analysis above, the Town needs to increase and improve its facilities in order to meet the NRPA standards. Specific recommendations for recreational facilities were developed with the assistance of the Open Space and Natural Resource Committee.

**Trails:** A system of trails should be created that link large town open spaces and places of recreational, historical and cultural interest. Trails can be designed appropriately for various modes of recreation, such as hiking, cross-country skiing, biking, and horseback riding. Specific sites which ought to be linked via trails include Massasoit State Park in Taunton, the Taunton River, and the Town Center. All neighborhoods should be connected to the trail system, which may in turn be linked to recreational facilities in neighboring towns and possibly a larger regional greenway project. The trail system can be enhanced by the creation of bicycle lanes on certain existing roads and by utilizing the MBTA railbed. The latter facility can potentially provide a link to a vast regional trails network. Figures 4-10 and 4-11 depict schemes for walking and bicycling trails.

**Taunton River:** An open space plan for the Taunton River could incorporate recreational resources. With a focused campaign, the Town could preserve much of the riverfront as open space with trails, picnic benches, and active recreational facilities where appropriate. Canoe and kayak access along the river could be incorporated into a riverfront park, possibly with Park and Recreation ownership of canoes and kayaks.

**Active recreational facilities:** The Town should ensure that each neighborhood has convenient access to all recreational facilities. The eastern subarea, in particular, is in need of additional facilities. The following are specific recreational facilities needs which have been identified.

- Build more practice and playing fields for soccer, baseball and softball. Ensure that each neighborhood has convenient access to these fields.
- Build a town track (at new Middle School?)
- Develop a swimming area, either a pool or a beach (Gushee Pond?)
- Build a skate-board/in-line skate park.
- Build more tennis courts, perhaps ones that could be flooded for winter ice-skating.
- Move the model airplane flying area to the soon-to-be-capped landfill.
- Consider a site for the Gun and Rifle Club further away from the new Middle School.
- Improve Johnson's Pond and Johnson Park, to create a centrally located, multi-use area. This could be an important element of a Town Center concept. Paddleboats could be provided on Johnson's Pond.

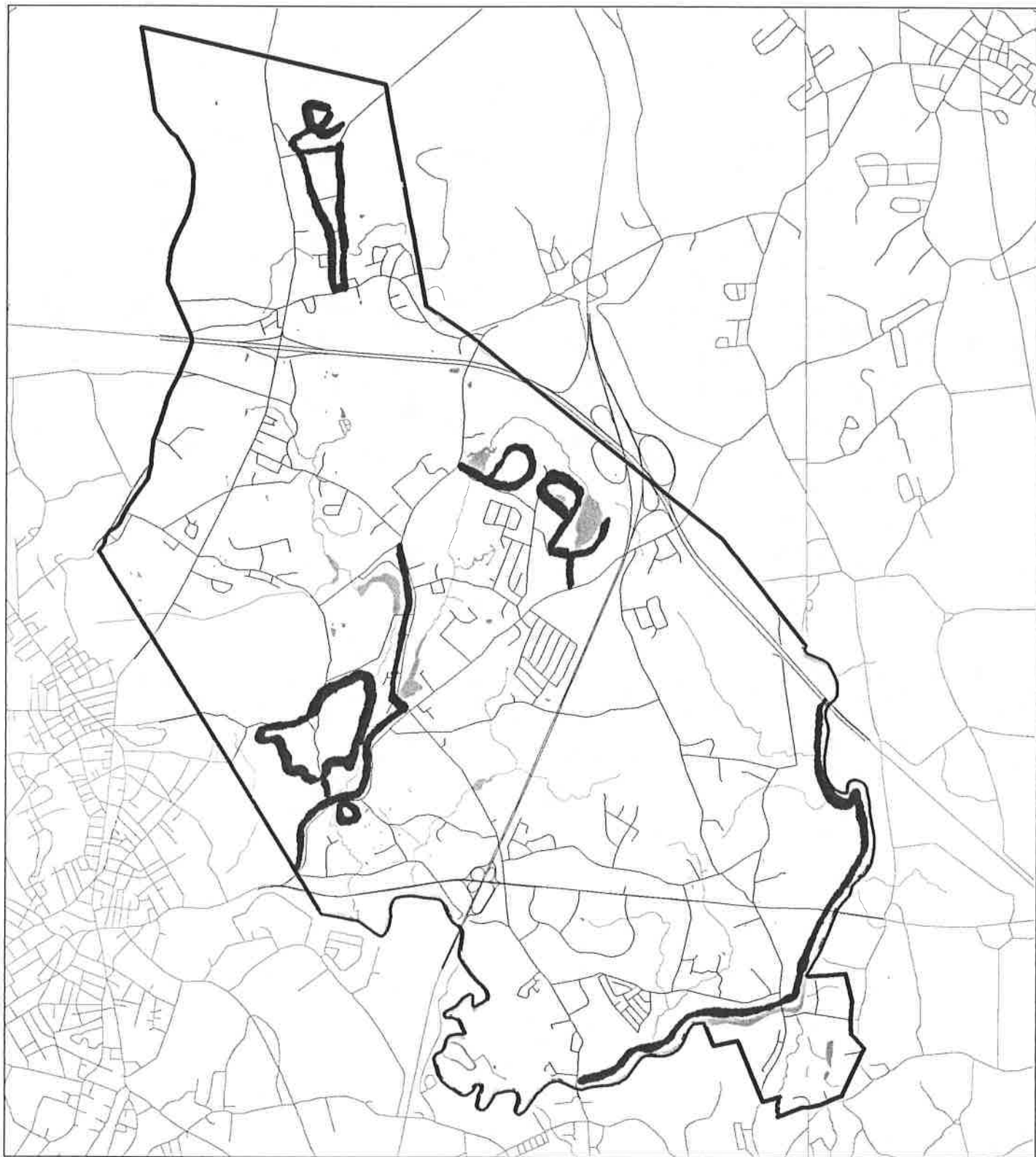
### **Stormwater Protection**

Stormwater needs to be managed in order to maintain the ecological integrity of the Town's natural resources. Appendix 4-6 provides an overview of the importance of stormwater protection and management techniques. It is helpful to first assess the source of contaminants to devise targeted and appropriate strategies. For example, the town could control the storage of runoff water, infiltration of stormwater to groundwater, or treatment of pollutants in stormwater. The DEP has formulated some site planning techniques that will minimize runoff. These include:

- a. **Minimize impervious surfaces** – by allocating some land interspersed within the development to have natural cover or soil, this will allow for a greater volume of the precipitation to reach the groundwater. This can be done by
  - maintaining natural buffers and drainageways;
  - minimizing the creation of steep slopes;
  - minimizing the placement of new structure or roads over porous or erodible soils;
  - reducing frontage and other setbacks;
  - establishing cluster developments so that dense settlements are surrounded by undisturbed open space;

- reducing the horizontal footprint of buildings and parking areas;
  - using shallow grassed roadside swales and parking lot islands with check dams;
  - utilizing “turf pavers,” gravel, or other porous surfaces when possible;
  - maintaining as much of the pre-development vegetation as possible.
- b. Fit the development to the terrain – road patterns should match the landform.
- c. Preserve and utilize natural drainage systems – curbing on streets impairs natural drainage systems, try to preserve natural vegetated drainageways.
- d. Reproduce pre-development hydrologic conditions – plans should seek to maximize infiltration when runoff quality is acceptable and as soil conditions and available space allow. Infiltration of stormwater through the soil will generally remove pollutants and sediments and improve water quality.

The Town should require all development proposals to prepare comprehensive site plans that address the reduction of stormwater runoff. Specific recommendations for updating the Town’s Subdivision Regulation to include performance standards are included in the 1999 report by Daylor Consulting Group, Inc.

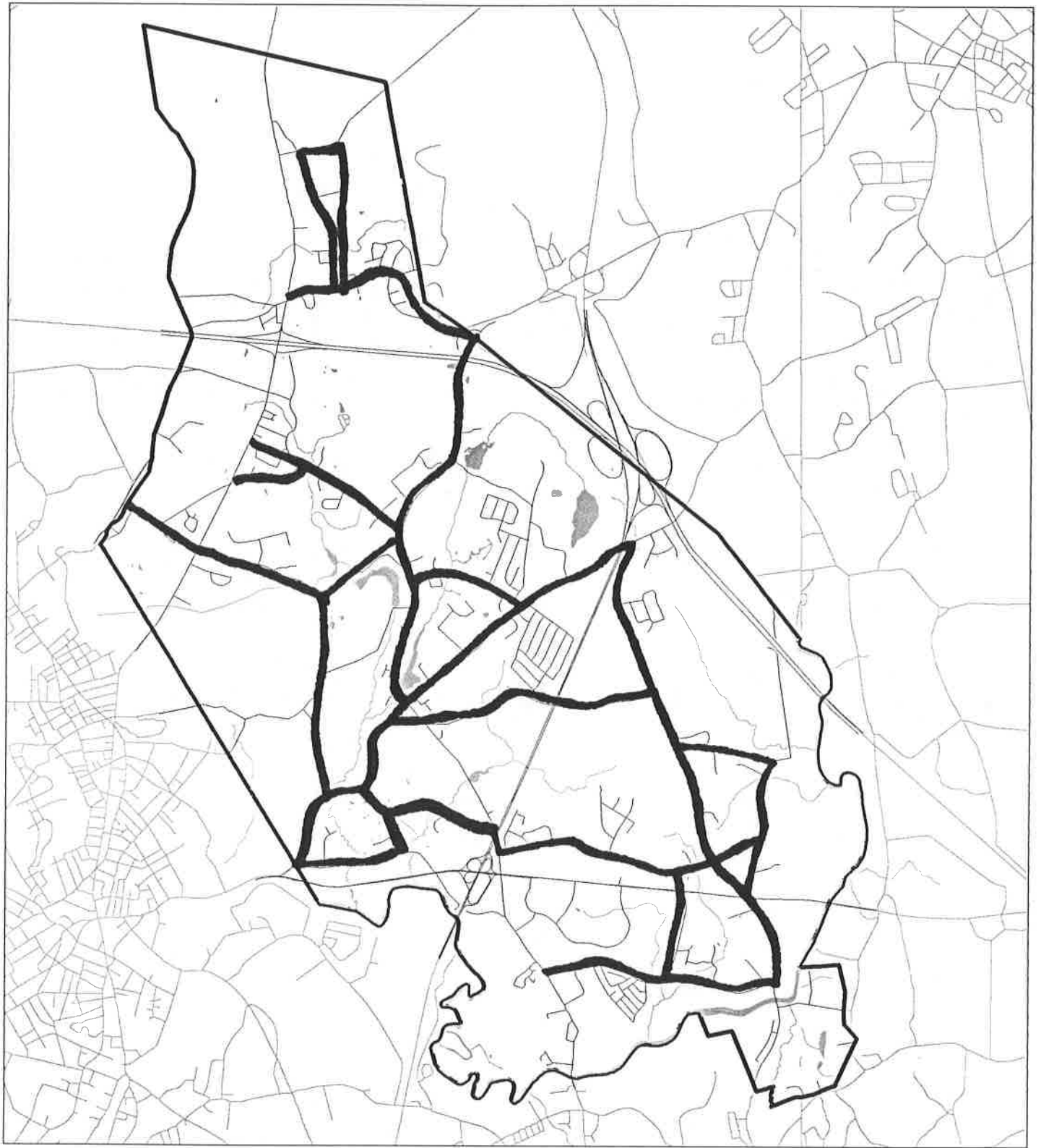


Map 4-10

**Town of Raynham  
Walking & Jogging Paths**



Prepared by  
Larry Koff and Associates

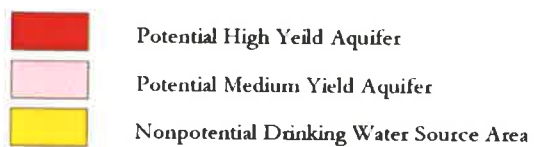
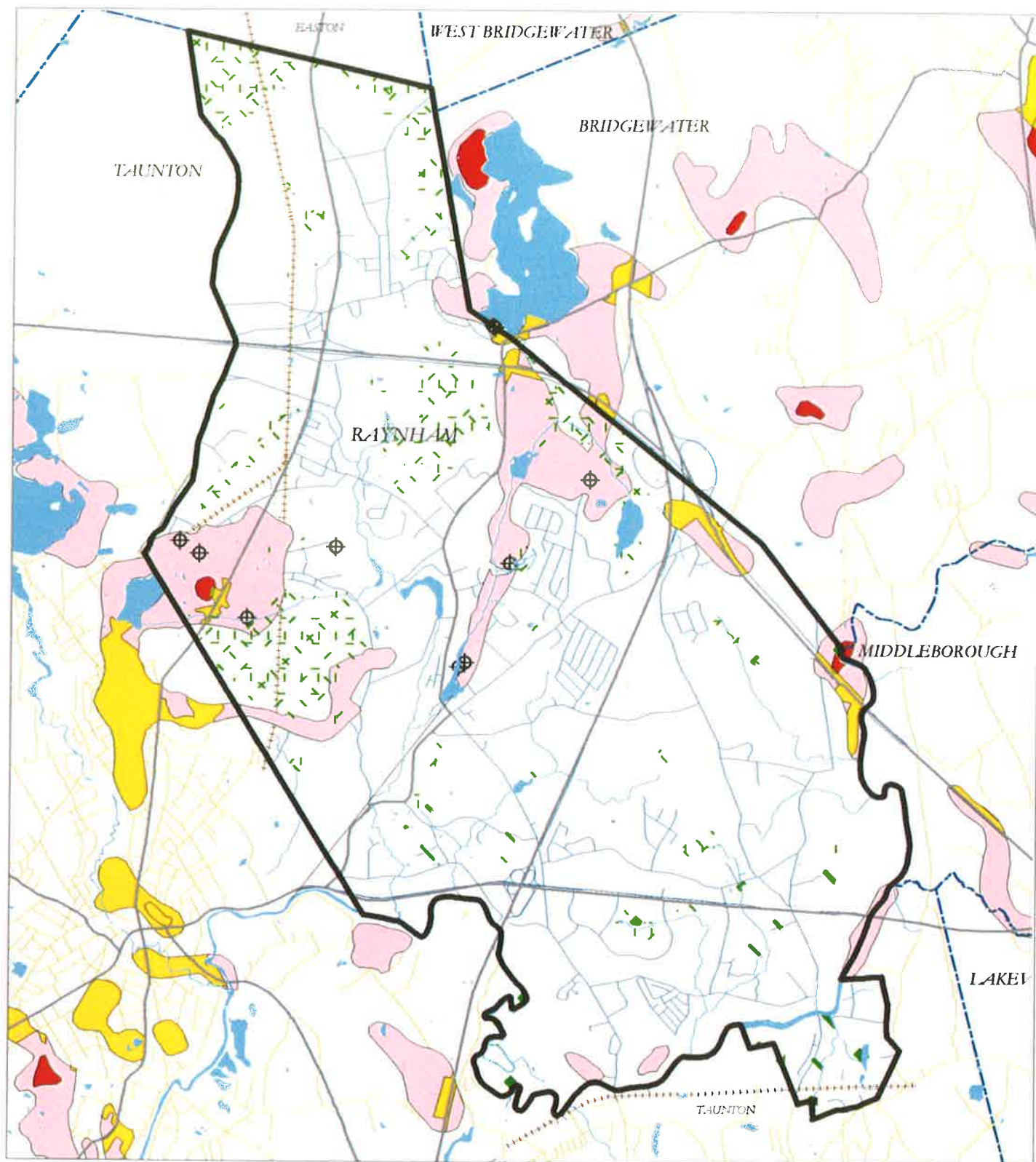


Map 4-11

**Town of Raynham  
Bike Paths**



Prepared by  
Larry Koff and Associates



Potentially Productive Aquifers as delineated by USGS. Cleanup of hazardous waste sites in these areas must meet drinking water standards as defined in the Massachusetts Contingency Plan (310 CMR 40.0000). For more detailed information, contact DEP's Bureau of Waste Site Cleanup at (617) 556-1138.

Appendix Map 1

### Town of Raynham Potentially Productive Aquifers (DEP)



Prepared by  
Larry Koff and Associates

## Appendix 4-1

## Soil Associations

U.S. Department of Agriculture, Soil Conservation Service. Soils and Their Interpretations for Various Land Uses. Raynham, Massachusetts, December, 1973.

Five major soil series or associations are found in Raynham, characterized by its lowland conditions. Four of the soil types are summarized below. (Information about the Belgrade Birdsall-Hartland was not included in the report cited.) As summarized below, four of the five types have severe limitations for the development of urban uses and therefore require municipal sewers or enhanced septic systems. Because of their permeability and saturation, these soils will not readily absorb sewage effluent. Only in the northern two-thirds of town where the Hinkley, Windsor-Deerfield soil is present, is there a soil type that can more easily accommodate development. This soil type can absorb large amounts of sewage effluent or surface runoff. The major soil associations found in town are described below and are shown on the accompanying map.

Table A4-1  
Soil Associations

<u>Soil Association</u>	<u>Location</u>	<u>Approximate Acreage</u>	<u>Percent of Total (%)</u>
Hinkley-Windsor-Deerfield	Northern two-thirds	4,907	37
Paxton-Charlton-Woodbridge	Southern part of town	3,050	23
Scarboro-Whitman-Ridgebury-Birdsall	Throughout town	2,387	18
Peat-Muck Association	Central subarea (swamps)	1,856	14
Belgrade-Birdsall-Hartland	Taunton River	<u>1,061</u>	<u>8</u>
		13,261	100

*Soil Associations*

The Hinkley-Windsor-Deerfield association is a moderately well drained, sandy and gravelly soil on nearly level to steeply sloping terrain. This soil is present in the northern two-thirds of the town. Much of this soil has slight limitations for high density residential, commercial and industrial uses. The soils are rapidly permeable and can absorb large amounts of sewage effluent or surface runoff. The loose, coarse material of these soils provide little filtering action and water in shallow wells can be polluted if a source of contamination is nearby.

The Paxton-Charlton-Woodbridge association is well drained and moderately well drained non-stony, very stony and extremely stony soils formed in firm glacial till on nearly level to moderately steep terrain. This soil is mostly found in the southern part of town. This soil has moderate limitations for urban uses where there is a communal sewer system. Limitations are severe for urban uses requiring on-site sewage disposal. There are few limitations on the use of this area for woodland, wildlife and some recreational areas.

The Scarboro-Whitman-Ridgebury-Birdsall association is poorly and very poorly drained soils on nearly level and depressional sites. This soil is distributed throughout the town. Throughout most of this general soil area, the water table is at or near the surface for nine months or more out of the year. This soil has slight limitations for wetland wildlife. Many tracts provide suitable habitat for wetland wildlife. The area has severe limitations for residential, commercial or industrial uses because of wetness.

The Peat-Muck association is very poorly drained organic soils on nearly level or depressional sites. The water table is at or near the surface for nine months of the year. This association is found in the central subarea of town, particularly near the larger swamps in town. This soil supports stands of red maple, white cedar and other moisture tolerant trees and shrubs. This soil has slight or moderate limitations for wetland wildlife. Many tracts provide suitable habitat for wetland wildlife. The area has severe limitations for residential, commercial or industrial uses because of wetness. Most tracts are difficult to drain.

## Appendix 4-2 Wildlife Species

The following species were identified in the Taunton River Greenway:

### Vegetation

Maple  
White Oak  
Red Oak  
Birch  
Pine  
Ferns  
Hemlock

Beech  
Hickory  
Walnut  
Tupelo  
Pickerelweed  
Skunk Cabbage  
Blue Flag Iris  
Cattail

Red Maple  
Alder  
Sweet Pepperbush  
Phragmites  
Wild Rice  
Arrowhead  
Water Millifol

### Threatened Species

Orchid Species  
Pale Green Orchids  
Climbing Fern  
(Special Concern)

### Wildlife Species

Great blue heron  
Red tailed hawk  
Sparrow hawk  
Kingfisher  
Great horned owl  
Wood duck  
Mallard  
Starling  
Cardinal  
Sparrow  
Bluebird  
Turkey vulture  
Yellow warbler  
Wood thrush  
Northern Oriole  
Sandpiper  
Eastern Screech owl  
Red eyed Vireo  
Osprey

Morning dove,  
Ringnecked pheasant  
Downy woodpecker  
Northern goshawk  
Titmouse,  
Black duck  
Canada goose  
Ruffed grouse  
Crow  
Blue Jay  
Red shouldered hawk  
Rusty Blackbird  
Purple Martin  
Blue winged teal  
Green winged teal  
Fish crow  
Virginia rail  
Solitary vireo  
Ruby-throated hummingbird

### Birds

Red winged blackbird  
Common grackle  
Cowbird  
Tree Sparrow  
Cedar waxwing  
Nuthatch  
Finch  
Robin  
Carolina wren  
Scarlet tanager  
Eastern Meadowlark  
Broadwinged hawk  
Red Crossbill  
Greenwinged teal  
Eastern kingbird  
Flideer  
Cuckoo  
Brown thrasher

### Threatened Species

Cooper's hawk  
Blackpoll warbler  
Sharp skinned hawk  
Long eared owl  
Northern-parula warbler  
Common barn owl

Mice  
Opossum  
Skunk  
Cottontail  
Shrew  
Field Vole  
Little Brown bat

Red Fox  
Raccoon  
Gray squirrel  
Flying squirrel  
White tailed deer  
Woodchuck

### Mammals

Chipmunk  
Red squirrel  
Mole  
Mink  
Weasel  
Big Brown bat

Garter snake  
Ringnecked snake  
Painted turtle

Snapping turtle  
Black racer  
hognosed snake

### Reptiles

Water snake  
Mink snake

Wood turtle  
Spotted turtle  
Eastern box turtle

Brook Trout  
White perch  
Sunfish

Yellow perch  
Pickerel

### Fish

Bass  
Bullhead

Spring peeper  
Leopard frog  
Green frog

Pickerel frog  
Gray tree frog  
Bullfrog

### Amphibians

Toad  
Wood frog  
Red backed salamander

### Appendix 4-X Master Fish Species List

Species		Habitat Description
American eel	<i>Anguilla rostrata</i>	catadromous
Blueback herring	<i>Alosa aestivalis</i>	anadromous
Alewife	<i>A. pseudoharengus</i>	anadromous
American shad	<i>A. sapidissima</i>	anadromous
Atlantic menhaden	<i>Brevoortia tyrannus</i>	marine and estuarine
Bay anchovy	<i>Anchoa mitchilli</i>	marine and estuarine
Common carp	<i>Cyprinus carpio</i>	fresh to brackish
Golden shiner	<i>Notemigonus crysoleucas</i>	fresh to brackish
White sucker	<i>Catostomus commersoni</i>	fresh to brackish
Creek chubsucker	<i>Erimyzon oblongus</i>	freshwater
Brown bullhead	<i>Ameiurus nebulosus</i>	fresh to brackish
Chain pickerel	<i>Esox niger</i>	fresh to brackish
Atlantic tomcod	<i>Microgadus tomcod</i>	marine to fresh
Banded killifish	<i>Fundulus diaphanus</i>	brackish
Mummichog	<i>F. heteroclitus</i>	marine to brackish
Silverside	<i>Menidia sp.</i>	Marine and estuarine
Inland silverside	<i>M. beryllina</i>	marine and estuarine
Fourspine stickleback	<i>Apeltes quadracus</i>	marine to fresh
Threespine stickleback	<i>Gasterosteus aculeatus</i>	marine to fresh
Northern pipefish	<i>Syngnathus fuscus</i>	marine to estuarine
White perch	<i>Morone americana</i>	estuarine to fresh
Striped bass	<i>M. saxatilis</i>	marine to fresh
Pumkinseed	<i>Lepomis gibbosus</i>	brackish to fresh
Bluegill	<i>L. macrochirus</i>	brackish to fresh
Smallmouth bass	<i>Micropterus dolomieu</i>	freshwater
Largemouth bass	<i>M. salmoides</i>	fresh to brackish
Black crapple	<i>Pomoxis nigromaculatus</i>	fresh to brackish
Tessellated darter	<i>Etheostoma olmstedii</i>	freshwater
Yellow perch	<i>Perca flavescens</i>	freshwater to brackish
Bluefish	<i>Pomatomus saltatrix</i>	marine to estuarine
Windowpane	<i>Scophthalmus aquosus</i>	marine to estuarine
Hogchoker	<i>Trinectes maculatus</i>	marine to estuarine

Developed from an 18-month study in the Taunton River in the vicinity of B.F. Clear Flood Power Station (from MRI 1992). A general salinity based habitat description for each species is indicated.

### Appendix 4-3 Open Space, Recreation, and Chapter 61 Sites

#### State-owned Open Space

<u>Site</u>	<u>Status</u>	<u>Area</u>
Hockomock Swamp Wildlife Mgmt. Area	EOEA and MDF&W mgmt.	103 acres
MBTA	Land banked for possible future regional train service	36
Titicut Swamp	Surplus State land offered to town	31
State Forest (off Locust St.)	Managed by Town Con Comm.	16
MBTA	Vacant land adjacent to railroad right of way	5
Taunton River Access	Undeveloped state-owned river access	1
<b>Total</b>		<b>193 acres</b>

#### Town-owned Open Space<sup>1</sup>

<u>Site</u>	<u>Area</u>
Pine Swamp	432 acres
Borden Colony	248
Miscellaneous Open Space Parcels (conservation sites, other Town departments)	575
<b>Total</b>	<b>1,255 acres</b>

#### Privately-owned Protected Open Space

<u>Site</u>	<u>Resources Available</u>	<u>Area</u>
Nunes		65 acres
<b>Total</b>		<b>65 acres</b>

#### Town-owned Recreation Sites

<u>Site</u>	<u>Resources Available</u>	<u>Area</u>
New Middle School	Ballfields, tennis courts, basketball courts	x
Borden Colony Recreation Area	Ballfields, courts, trails, picnic area, riding ring	31.0 acres
Merrill La Liberte School	Playfields, courts, playground	29.6
Reid Field	Adult softball field	9.6
South Street School	Baseball/softball field, playground	3.1
North School	Playfields, playground	1.0
Johnson' Pond Park	Picnic area, boating and fishing	1.0
Sullivan School	Playground	0.5
<b>Total</b>		<b>xx acres</b>

#### Privately-owned recreation sites

<u>Site</u>	<u>Resources Available</u>	<u>Area</u>
Raynham Dog Track	Dog Track	162.5 acres
Taunton Rifle & Pistol Club	Shooting	15.0
Edgewood Club	Tennis, swimming	9.8
Facilities off Rt. 138	Par 3 Golf Course	9.3
Pinewood Acres, Inc.	Ballfield, pool and clubhouse	4.8
Professional Fitness Center	Racquetball, aerobics and Nautilus	2.3
<b>Total</b>		<b>192.9 acres</b>

<sup>1</sup> Estimate based on updated GIS mapping as of 1/99. Actual acreage unavailable at this time.

**Chapter 61, 61A and 61B Recreational Lands**

<u>Site Location</u>	<u>Area</u>
River Street	31.00
513 Church Street	28.00
590 South Street East	27.10
Richmond Street	25.39
Church Street	14.28
381 Pleasant Street	13.52
1048 Locust Street	12.43
49 Prospect Hill Street	8.50 acres
266 Pleasant Street	9.84
Church Street	7.00
684 Judson Street	5.39
1259 Hill Street	3.00
Romani, Pleasant Street	60.00
<b>Total</b>	<b>245.5 acres</b>

### Appendix 4-4 Cost/Benefit Analysis of Open Space Acquisition

The following analysis was prepared by Larry Koff and Associates based upon budget and tax revenue data provided by the Town of Raynham for FY1999. It provides an example of how open space acquisition may be less costly to taxpayers than development.

Hypothetically, a 100 acre parcel in the Residential A zoning district is considered for acquisition for open space conservation. The following analysis shows what the fiscal cost is to the town a) if the land is developed for single-family residential use; or b) if the land is acquired for open space. The fiscal cost for land that is developed includes the cost of added services that will need to be provided to the new households less the increase in tax revenues that results from the development. The fiscal costs for acquiring land include the cost of financing the purchase and the loss in tax revenue. The cost of acquiring the land is computed for land taxed at its full assessed value as well as for Chapter 61A land for comparison. (Although actual cost of acquisition will depend upon market conditions at the time.) The following table shows how the tax rate would increase as a consequence of development or Town acquisition of the same parcel of land. The result is a higher tax increase from development than if the land is acquired.

#### Comparison of the Tax Rate Impacts After Development/Acquisition of Land

Land Use Scenario	Tax Rate Increase	Annual Tax Increase for Average Homeowner
<u>Development of 100-acre parcel</u>	\$0.137/1000 <sup>(1)</sup>	\$22.08
<u>Acquisition for open space of 100-acre parcel under Chapter 61A land</u>	\$0.028/1000 <sup>(1)(2)</sup>	\$4.50
<u>Acquisition for open space of 100-acre parcel taxed at full assessed value</u>	\$0.028/1000 <sup>(2)</sup>	\$4.50

#### Inputs:

a) 1998-99 school enrollment (School Dept.)	1,942	
b) Total number of homes in 1997 (assessor)	2,950	
c) School children per unit (1990 U.S. Census)	0.8738	
d) Average assessment of new homes	221,600	
(From FY99 Town Budget)	\$	
A) Total Budget Appropriation	12,343,790	
B) Tax Levy	10,558,011	
C) Total Valuation of Property	758,745,500	
D) School portion of appropriation	6,630,736	
E) Tax Rate	13.42/1000	
F) School portion of tax rate	7.21/1000	[(D/A) * E]
G) Non-school portion of tax rate	6.21/1000	(E - F)
H) School portion of tax levy	5,469,679	(C * F)
J) Non-school portion of tax levy	4,712,685	(C * G)
K) School tax per student	2,817	(H / a)
L) Non-school services cost per household	1,598	(J / b)
M) Average single-family assessment	161,152	

<sup>(1)</sup> This does not include the fiscal impact of the repayment of back taxes in the case of the sale of Chapter 61 land.

<sup>(2)</sup> The fiscal impacts from the purchase of open space vary dramatically with the sale value of the land being purchased and the terms of a bond used to finance the purchase. See Part 2 for details.

Part 1 – Cost of Development

If the land were developed, it could accommodate up to 87 single-family homes, yielding 76 additional school children.

- I. The total assessed value of new homes is \$19,279,200 ( $d * 87$ ).
- II. The annual school cost for the development is \$214,092 ( $K * 128$ ).
- III. The school portion of the tax rate increases by \$0.095 ( $IIIa - F$ ).
- IIIa. New school portion of tax rate = \$7.305  $[(II + H) / (I + C)]$
- IV. The annual school revenue generated by development is \$140,842 ( $I * IIIa$ ).
- V. The net annual school cost from development is \$73,250. ( $II - IV$ ).
- VI. The non-school services cost of development is \$121,448 ( $L * 87$ ).
- VII. The non-school services portion of the tax rate increases by \$0.13 ( $VIIa - G$ ).
- VIIa. New non-school portion of tax rate = \$6.08  $[(VI + J) / (I + C)]$
- VIII. The annual non-school revenue generated by development is \$117,310 ( $I * VIIa$ ).
- IX. The net annual non-school cost from development is \$4138 ( $VI - VIII$ ).
- X. The net tax rate impact from the new development is \$0.137 ( $III + VII$ ).
- Xa. New tax rate = \$13.557 ( $E + X$ )
- XI. The average homeowner's taxes will increase by \$22.08 ( $M * X$ ).

Part 2 – Cost of Acquisition

Assume the assessed value for the undeveloped land is \$392,000 (*will check with assessor on this figure*). Assume that if the land is protected under Chapter 61A the taxable value is \$21,500. Assume the cost to purchase the land is \$1,000,000.

- Ia. At full assessed value, the increase in the tax rate due to the loss in tax revenue would be \$0.014  $[B / (C - \$392,000)]$ .
- Ib. For Chapter 61 land, the increase in the tax rate due to the loss in tax revenue would be \$0.014  $[B / (C - \$21,500)]$ .
- II. The annual payment for the land purchase over 20 years would be \$93,036 (1,000,000 raised by 20 year bond at 7% interest).
- III. The new tax levy including the appropriation for land payment is \$10,651,047 ( $B + II$ ).
- IVa. At full assessed value, the cost of payment for the acquisition would raise the tax rate by \$ 0.014  $[III / (C - \$750,000)]$ .
- IVb. For Chapter 61 land, the cost of payment for acquisition would raise the tax rate by \$0.014  $[III / (C - \$40,000)]$ .
- Va. At full assessed value, the new tax rate after the acquisition would be \$0.028 ( $Ia + IVa$ ).
- Vb. For Chapter 61 land, the new tax rate after the acquisition would be \$0.028 ( $Ib + IVb$ ).
- VI. The average homeowner's taxes would increase by \$4.50 if the land is taxed at full assessed value, while the increase would be \$4.50 if the land is protected under Chapter 61.

## Appendix 4-5

**Table A4-3  
Land Protection Priorities**

Comparing Open Space Values	Priority Open Space Parcels						
<b>Protect/Enhance Town Character</b>							
Historically significant							
Enhance Scenic Vistas on streets or trails							
Protect familiar, valued open parcels							
Provide active/passive recreation							
<b>Protect Natural Resources</b>							
River, Lake or stream frontage							
Well site recharge areas; Zone II							
Unique ecosystem (ACEC, or PSRH)							
Multiple use areas							
<b>Connect New and Existing Open Space</b>							
Links to existing and future Open Space							
Improve public access to existing open space							
Make regional trail connections							
Make local trail /sidewalk connections							
<b>Economic Impact</b>							
High Risk Liability or contamination							
High build-out potential							

Priority parcels:

1. Taunton River shoreline off of South Street
2. The pine grove on high land along the Taunton River off of Pine Street
3. Large open area between Pine Street and the Taunton River north of Basset Brook
4. Taunton Riverfront land near Dean Street and the Dean/Hill Street Brook.
5. The marshland and wet meadow between the MBTA owned railroad bed and Prospect Hill Street, north of Bridge Street.
6. A large wooded area along Bassett Brook.
7. Land in the Titicut Swamp
8. Easterly side of Gushee Pond adjacent to Interstate 495
9. Wilbur Pond
10. King's Pond
11. Town Landfill
12. Finch Farm
13. Oxbow on Taunton River

**Open Space Inventory Materials**

The following materials have been provided which may be used in preparation of a comprehensive open space inventory.

- 1) Partial updated list of parcels included in Map 4-5, Open Space Features
- 2) List of priority acquisition parcels prepared by Open Space Committee

Boyer  
17-1  
17-2  
17-148

Town of Raynham  
MassGIS 1998 Land Use

CORRECTIONS:

- ✓ 1. include as OS: Public Access Board parcel, north side of Route 44, adjacent to the Taunton River, Assessors' Map 16, Lot 49B\*
- ✓ 2. include as OS: Elman property, Assessors' Map 16, Lot 1 and Boyar properties, Assessors' Map 16, Lots 2 and 148, South Street East at the Taunton River
- ✓ 3. depicted incorrectly: Forge River Conservation Area, <sup>east and west side</sup> South Main Street, Assessors' Map 14, Lot 75
- ✓ 5. include as OS: two town-owned parcels located <sup>on the Taunton River</sup> in amongst the Nunes APR, Assessors' Map 16, Lots 34 and 36 # <sup>and the Finch farm</sup>
6. depicted incorrectly: Borden Colony APR, <sup>east to west side of King Philip St.</sup> should be designated as agriculturally used land and the Park and Recreation portion <sup>located on the west side of King Philip St.</sup> dedicated to recreational use is not depicted correctly
- ✓ 7. include as OS: recent donation, Burystn property, west side of Route 138/Broadway, Assessors' Map 3, Lots 53 and 58
- ✓ 8. include as OS: town-owned property located on Furnace Brook, north of Middleboro Avenue, Assessors' Map 18, Lot 48
- ✓ 9. include as OS: recent donation, Littleton property, east side of North Main Street, adjacent to the Forge River, Assessors' Map 14, Lot 76
- ✓ 10. include as OS: recent donation, Wilbur property, Assessors' Map 7, Lot 205 <sup>25</sup> (located in the middle of Pine Swamp and between Route 138/Broadway and the abandoned railroad right-of-way)
- ✓ 11. include as OS: land located on the south side of South Street West at the end of Richmond Street, Assessors' Map 14, Lot 22 \*
- ✓ 12. include as OS:
  - ✓ a. Andrews donation, east side of Orchard Street, Assessors' Map 14, Lot 241 ✓
  - ✓ b. Francis donation, south side of King Street, Assessors' Map 12, Lot 262B \*
  - ✓ c. Mandigo donation, east side of Orchard Street, Assessors' Map 11, Lots 101 and 128A and Assessors' Map 12, Lots 261, 251B, 251C, 251D ✓
- ✓ 4. Nunes APR depicted incorrectly: Nunes APR, located between the east side of Leonard Street and the Taunton River, Assessors' Map 13, Lots 79, 76, 73, 74, 75, 75A <sup>shown as OS,</sup> but is agriculture ~ or should Land Use index include a separate code for APR?
- ✓ 13. what are recreation designated areas across the street from the Dog Track and to the east of Hall St. between Robinson Street and Laurel Avenue
- ✓ 14. depicted incorrectly, <sup>horse riding rink? (if it is, it's privately owned and not open to the public)</sup> low density residential areas ~~on the east~~ and west side of King Philip St. between Throasher St. and the no-name street
- ✓ 15. <sup>depicted incorrectly</sup> subdivision roadway layout for King Philip Estates between King Philip St. and Trifton St.
- ✓ 16. <sup>depicted incorrectly</sup> King Philip St. & Gardner St. - mining area should only include only Simone property. area on west side of King Philip St. should be designated as waste disposal for land fill area; also King Philip St. layout in this area is incorrect

- ✓ 11. why is part of Raynham Woods Commerce Center designated as public/institutional? (east of Wal. Mart)
- ✓ 18. recreational area located south of Day St. between Suzanne Dr. and Captain's Landing is no longer a horse training rink; it's now all residential homes
- 19. north of Middleboro Ave. in the vicinity of Gatsby Drive, what is public/institutional land use? check aerial
- ✓ 20. <sup>area</sup> south of Rt. 44, behind Burger King/Bickford's Pancake House is not agriculture land (too) use
- ✓ 21. northwest corner of Carver St. and Broadway, Gilmore Hall, is not commercial; should be public/institutional

Location	Access	Development Pressure	Potential Use	Wetlands	Utilities	Size
Map 13 lot 410 Kelleher	locust Street very good	approved subdivision	open space	some	sewer no water	± 100 acres
Map 11 lot 50 Korman	Plainsuit Street very good	moderate	possible school site, open space ballfield, park	some	sewer center-water	64 acres
Map 11 lot 190A * Condon	Warren Street	low	open space	extensive	sewer center-water	62 acres
Map 12 lot 233A, 233B, 242A, 248 244A, 244	King Street	low land locked	open space CR	some	sewer, once it is extended over Rte 244 center-water	91 acres
Map 13 lot 55, 59 Carnegie	Pine Street	low	open space trails hiking biking	some	no sewer center-water	69 acres
Map 13 lot 62, 63 68, 65, 67 Carnegie	Pine Street	low	river frontage CR trails, park	some	no sewer lot 67 - center-water	95 acres
Map 15 lot 103A Melides	Subson Street	low	CR, open space	extensive	no sewer no water	16 acres

Location	Access	Development Pressure	Potential Use-	Wetlands	Utilities	Size
Map 4 101 263A	Oak Street	high	open space CR	wetlands	Sewer next Phase finish-water	11 acres
Map 5 Lot 26, 27, 3A Rogers	North Main Street	moderate	trails shrubs Dead Swamp	some	Sewer Phase 5 Center-water	95 acres
Map 5 Lot 42 Rogers	North Main Street	moderate	Farming open space APR Forest	some	sewer phase 5 Center-water	41 acres
Map 5 lot 45 Fossil Ln	North Main Street	moderate	Farming APR Forest	some	sewer phase 5 Center-water	13 acres
Map 6A lot 9 Stalbach	South Main Street	low	Farming shrubs Borden Colony APR open space	some	sewer Center-water	104 acres
Map 9 lot 181, 181A, 184 Dwyer	Pleasant Street	moderate	open space, access to Goshue Pond	-	Sewer Center-water	35.7 acres
Map 7 lot 173 Edwards	Darlington Drive	low	backing canoe, picnic, fishing		sewer Center-water	19 acres

Location	Access	Development Pressure	Potential Use	Wetlands	Utilities/Features	Size
Map 1 Lot 109B Lot 109 Chapel	Hall Street	low	open space CR		woodlands	9.80 acres 13.95 acres
Flaherty/ Map 3 Lot 25	Prospect Hill Street very good access	moderate	open space bike/walking trail CR	wetlands restoration	possible woodlands	17.3 acres
Prospect Hill Industrial Park Map 2 Lot 13	Prospect Hill Street very good access	moderate	open space abuts 7 acre town parcel CR	wetlands	possible woodlands	32.34 acres
Map 3 Lot 16 Tribut	Prospect Hill Street land locked	moderate	open space abuts 7 acre town parcel CR	wetlands	possible woodlands	5.0 acres
Map 4 Lot 23 Keweenaw	Bethon Street very good access	moderate	abuts Mansfield Estates abandoned rail bed trails CR	wetlands	sewer next phase	35 acres
Map 4 Lots 55-80 Keweenaw	Cass Street	moderate	abuts Mansfield Estates ballfield hiking/biking	some wetlands	sewer next phase	33 acres
* Map 4 Lot 180A 189A, 189C	Oak Street	high	abuts Dead Swamp park, hiking/biking multi-use	wetlands	sewer next phase ridge	

Location	Access	Development Pressure	Potential Use	Wetlands	Utilities	Size
Map 16 lot 32 + 33 Finch	Leonard Street	moderate	Farming APR	Some	no water, no sewer	102 acres
Map 11 lot 38 + 44 Kellher	Rte 44 Leonard	moderate	Farming, park River access	Some	no water, no sewer	97 acres
Map 17 lot 74 Buins	South Street East	low	river access Farming CR	Some	no water, no sewer	50 acres
Map 17 lot 113 H slides	Dean Street	low	river access CR	Some	water - center	55 acres
Map 18 lot 32 Helides	River Street	low	adjacent Furnace Brook	Some	no water	12 acres
Map 12 lot 214 234-15 Carey	King Street	moderate	open space CR		water - center	30 acres

## Appendix 4-6 Stormwater Report

Stormwater runoff is the water from rain and snow melts that flow across the land.<sup>10</sup> Pollutants that have been deposited on land are carried by runoff into nearby rivers, streams, lakes and groundwater. Sources of contaminants can include fluids that have leaked from vehicles, pesticides/fertilizer field applications, and minerals used to de-ice roads. This contaminated runoff degrades water quality and aquatic habitat.

It is important to understand the hydrologic cycle to better understand the movement of stormwater runoff and potential control techniques. In the hydrologic cycle, rain or snow from clouds falls to the ground, and as water or snow melt, the precipitation travels in either one of three routes:

- (a) infiltration into the ground (also known as percolation);
- (b) being taken up by the trees and vegetation, and returned to the atmosphere through transpiration;
- (c) or running over the ground surface.

Water that takes route (a) will seep into the ground and travel until it reaches a groundwater table or surface waters such as a lake, stream, or the ocean. This process is called groundwater recharge, and helps maintain water flow in streams and wetlands. Sites with natural ground cover, such as forest, meadow, or shrubs, typically have greater recharge rates, less runoff, and higher transpiration than sites with pavements and buildings.

The water that runs off the ground's surface is runoff. Through evaporation from surface waters, water is returned to the atmosphere, new clouds form, and the hydrologic cycle begins again. The volume and speed of runoff depends on the size of the storm and the land features at the site. The size of the contributing drainage area, the slope of the land, the types of soils, and the surface conditions affect water movement. The contributing drainage area established the boundary limits for the movement of runoff - from the highest elevations to the lowest point.

In a natural, undeveloped setting, the ground's surface often is pervious, meaning water can percolate down into the soil. In developed areas, this percolation is impeded by ground surfaces like asphalt and concrete.

Stormwater runoff that flows into and is discharged through a pipe, ditch or channel is considered point source discharge. Contaminated stormwater runoff that flows over land and is not directed into a defined channel is considered nonpoint source pollution. Both point and nonpoint source pollution significantly degrade water quality and aquatic habitat.

Development - the construction of homes and other buildings, streets, parking lots, etc. - can alter the hydrology of the landscape and adversely affect water quality. This is because water that should be seeping in the ground is flowing off. For example, a business district is typically 95-100% impervious to the seepage of precipitation, and medium residential areas average around 34-45% impervious coverage. Open areas often only have 0-10% impervious cover. Stormwater runoff can cause erosion and flooding. Development can change water flow and the percolation of water into the soil, which affects how much water can infiltrate into the ground to maintain water levels in streams, wetlands, and groundwater aquifers. Disturbing the hydrologic cycle by covering much of an area with development can impact the hydraulic and biological systems

<sup>10</sup> Excerpted from the guidebooks **Stormwater Management: Volume One and Two** published by the M.A. Department of Environmental Protection, March 1997.

within a watershed. Studies have shown that when 10 to 20 percent of a watershed has impervious surfaces, hydraulic and biological changes will occur within the watershed. Further, efforts to restore stream flow and water quality to pre-development conditions appear to be less successful when levels of impervious cover exceed 30 percent.

Some of the possible impacts of development on hydrology include:

- increased volume of runoff following a storm;
- increased frequency and severity of offsite downstream flooding;
- loss of wetlands and aquatic habitats due to lower water table levels during dry weather; and
- greater runoff velocity during storms.

All land uses can affect water quality; in undeveloped areas natural processes can lessen the impacts of contaminants or even remove contaminants from runoff through infiltration and evaporation. Impervious areas reduce the opportunity for natural processes to treat stormwater. Therefore, stormwater runoff must be adequately controlled and treated to reduce pollutants before it is discharged to surface water, groundwater or wetlands.

Ways to reduce stormwater pollution include:

- Minimize impervious surfaces such as roads through compact or cluster development;
- As much as possible, manage stormwater on site through infiltration (easier if development includes open space land);
- Require stormwater management plans as part of development site plans.

**SECTION V**  
**HISTORIC AND CULTURAL RESOURCES**

## **SECTION V HISTORICAL AND CULTURAL RESOURCES**

### **INTRODUCTION**

- 5.1 Historical Context**
  - Raynham Timeline
- 5.2 Historical Resources**
  - Architecture
  - Historic Sites
  - Cemeteries
  - Prehistoric Sites
  - Scenic/Historic Roads
- 5.3 Opportunities/Analysis**
  - Clarify Role/Responsibility of Historic Commission
- 5.4 Goals/Policies**
  - Policies
- 5.5 Recommendations**
  - Clarify Priorities/Roles/Responsibilities of Historic Commission

### **Appendices:**

- 5-1 Resources for Preservation

## V. HISTORICAL AND CULTURAL RESOURCES

### INTRODUCTION

Historical and cultural resources are an important element in the town's fabric. These resources include structures, archeological sites, historic sites, cemeteries, and scenic roads. These resources provide a framework, a hedge against rapid change, so as to preserve the town's quality of life. In most cases, on the other hand, these resources are hidden from the public. The citizens of Raynham need to support a public effort to protect and enhance their historic and cultural resources. A number of simple actions identified in the recommendations would leverage substantial benefits to the town.

### 5.1 HISTORICAL CONTEXT

Until 1620, the area of present day Raynham was inhabited by a modest number of native people, who subsisted by fishing from the Taunton River, Lake Nipenickett and Fowling Pond, hunting from the extensive marsh and swamp lands, and farming on the prime land near to the river.

Minor pathways may have gone through Raynham to access Lake Nipenickett on the Raynham/Bridgewater line. The Titicut settlement there and in North Middleborough were likely the main affiliation of native people in Raynham. A major native route, later dubbed Massachusetts Bay Path by the European settlers, passed just to the west, through Taunton. Another pathway used was along Fowling Pond following the present day King Philip Street.

The first European settlement in the section of Taunton which would later separate and be called Raynham took place around 1652 near the junction of South Main Street and the Forge River. Three Welsh iron workers, James and Henry Leonard and Ralph Russel, established Leonard Ironworks in the vicinity of South Main and King Philip Streets. Local bogs provided abundant iron ore, and the Taunton River provided access to potential markets in Middleborough, Taunton, and Naragansett Bay. The ironworks was the longest continuously operating one of its kind in America. It became a mainstay of the local economy and started an iron producing region which, by the mid 1700s, included Taunton, Norton, Easton, and Mansfield. The anchor of the USS Monitor might have been forged in Raynham.

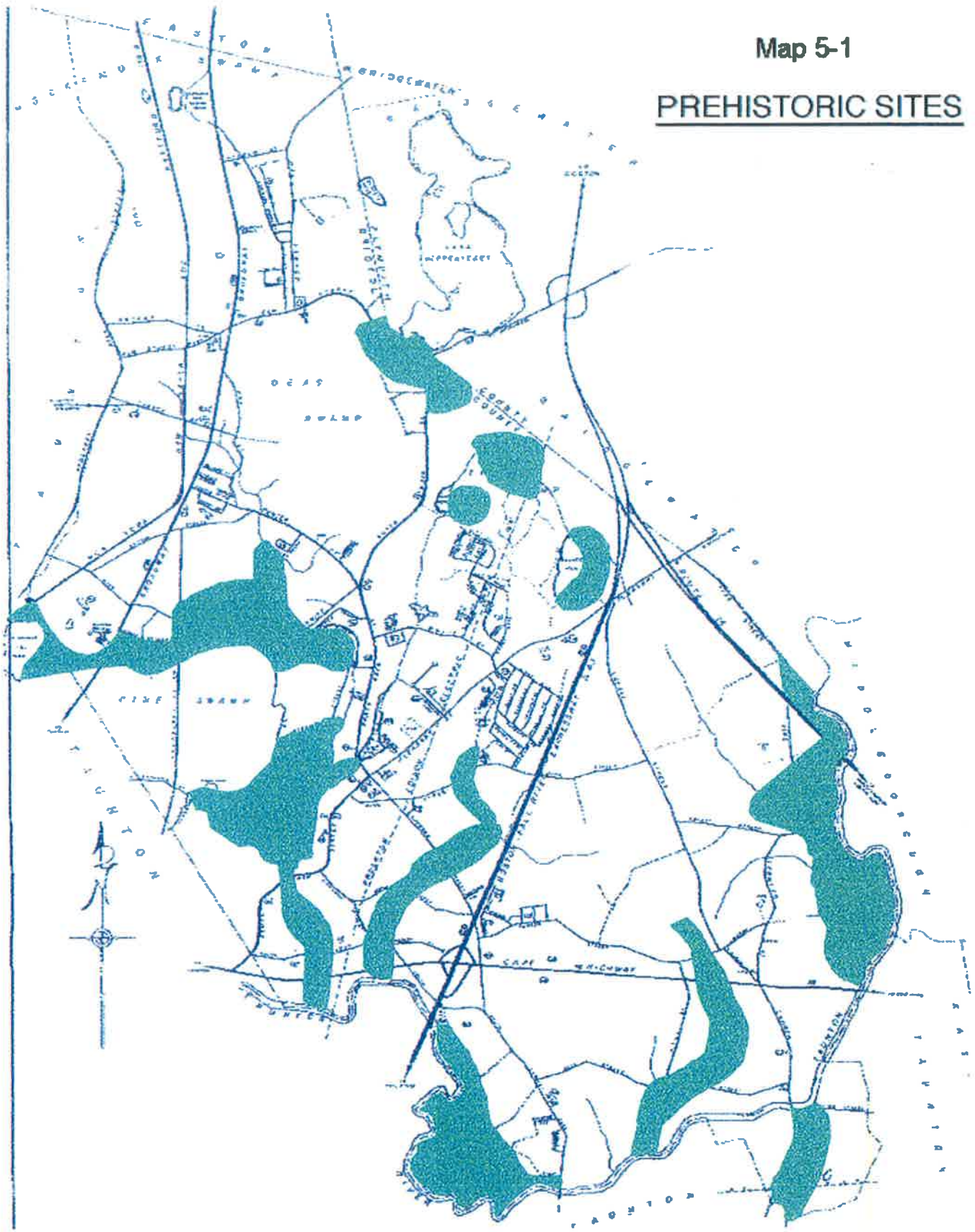
Houses sprouted up near the center, and the new residents carried out fishing, and agriculture much like their native neighbors. The native people maintained their traditional subsistence patterns, but at the same time increased trade with the European settlers to the economic benefit of both groups. The area known as Raynham was a part of the larger community of Taunton. The residents would travel there for church services, town meeting and supplies.

In 1731, Raynham had a population of 30 families, enough to found a meeting house and to set off from Taunton and incorporate as a separate township. The new town was named for Lord Townsend, whose seat of power was Raynham, England. The township's first church, a Congregational, was erected near the forge in 1731. Eleven years later, records show that the town began paying a schoolmaster to educate the children of local families.

By the time the Revolutionary War began, Raynham's population had increased to 940 residents, and commercial production had become a primary economic engine. By 1771, Raynham could boast tanneries and slaughterhouses, grain mills, and iron works and furnaces. Nonetheless, the town was still heavily dependent on the iron industry for its economic growth. Iron bars were frequently used as a monetary exchange.

Map 5-1

PREHISTORIC SITES



The town grew slowly over the next 75 years, as residential development and agricultural uses cleared what had been native pine, oak and cedar forests. New manufacturing industries such as shoe and soap, production also came to Raynham, including a large shoe-making operation on Broadway. The Boston to New Bedford railroad, which included a stop at a station in north Raynham, opened in 1840 and brought some new activity. A Baptist church was established in the late 1800s, and at least four schools were indicated on a 1830 town map.

In the last decades of the 19<sup>th</sup> and the first decades of the 20<sup>th</sup> centuries, manufacturing uses gradually declined in Raynham. The focus of large-scale activity moved to bigger, more accessible towns like Fall River, New Bedford, and Taunton. Some of the land formerly used for industry reverted to agriculture. The iron works, the founding business of the town, closed in 1883 after operating continuously for more than 230 years. Residential growth continued its steady climb, which included the arrival of more foreign-born residents, including Portuguese and Russian. Overall population increased very slowly, to about 1,500 at the turn of the century.

The mid- to late twentieth century began a development pattern that transformed Raynham into the suburban community it is today. New transportation connections to roads in the area, such as State Route 138 (completed in 1930), made the area more accessible and more attractive as a place to live. Construction or improvements to Routes 24 and 44 also encouraged a different kind of commercial activity for Raynham, mostly retail businesses that would take advantage of the town's central location in the region. All these factors drove an increase in housing, especially after 1945 when government policies favored the construction of new, single-family homes. In the 30 years from 1950 to 1980, the population of the town nearly quadrupled, from 2,476 to 9,076. Completion of Interstate 495 through Raynham in 1982 further established the town as a key player in the regional transportation system and its economy.

New residents are increasingly drawn to Raynham, attracted by its suburban location in addition to its rural and small town character. Retail and service businesses have replaced agriculture that had dominated the landscape and economic base for the past 300 years. Infrastructure investments including Route 495, a town-wide water and sewer system, and possibly the re-institution of regional train service, will continue to accelerate the pattern of residential and commercial growth. The current population of nearly 11,000 residents is increasing at a rate of about 10% each decade. Recognizing the importance of historic and cultural resources can have an impact on shaping this projected pattern of growth.

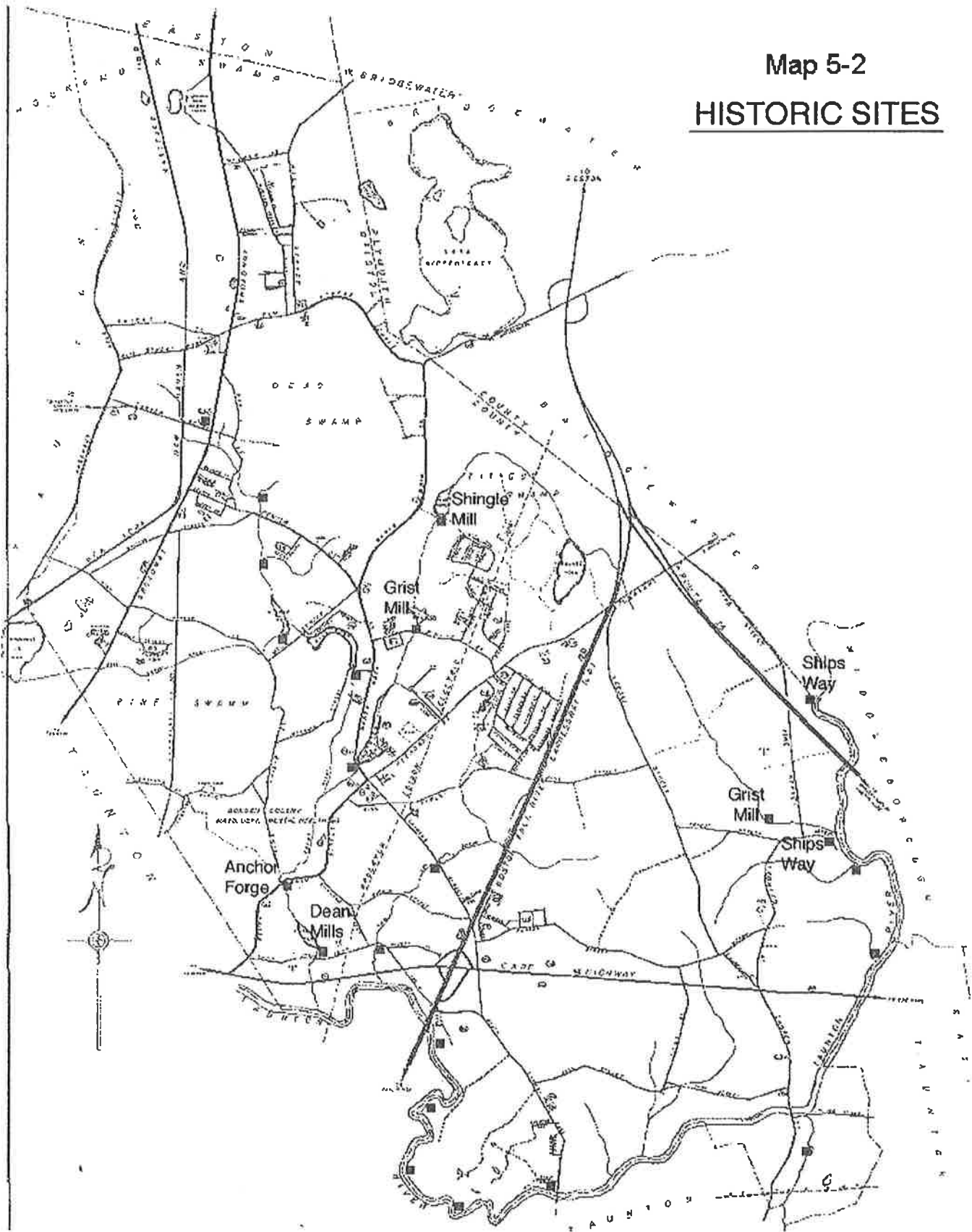
### Raynham Timeline

---

From prehistoric time to 1620	Settlements of native people supported by fishing, hunting, agriculture
1654	First white settlement established near South Main Street and Forge River
1656	Leonard Ironworks, built by three ironworkers, begins operations
1676	King Philip's War, garrison built in Raynham on Pleasant Street
1731	Raynham set off from Taunton as a separate township; takes name from Raynham, England
1731	Town's first church, a Congregational, founded on Richmond Street
1742	Raynham hires a school teacher to educate local children
1773	Second meeting house built on South Main Street
1806	Taunton-South Boston Turnpike opens (present-day Route 138)
1811	Baptist church founded
1828	Unitarian church founded
1820	Nail factory established on Taunton River, spawns others, including Old Colony Iron works
1840	Boston to New Bedford railroad line completed, includes stop in North Raynham
1857	C. and H. T. Gilmore build major shoe manufacturing facility along the Taunton Turnpike
1880s	Trolley lines established along North and South Main Streets
1883	Leonard Ironworks destroyed
1900	Raynham population surpasses 1,500 residents.
1925-1927	Route 138 constructed
1933	Route 44 constructed
1957	Route 24 construction initiated
1982	I-495 completed through Raynham

---

Map 5-2  
HISTORIC SITES



## 5.2 HISTORIC RESOURCES

### Architecture

Raynham boasts a wide variety of architectural styles, especially for residential use. Only a few houses remain from the Colonial period, near to the historic center on Pleasant, Locust, Orchard, and North and South Main Streets. These early houses are distinguished by center-chimney plan structures with five-bay symmetrical façades. One of the earliest and most famous houses in the area was the Leonard House (c.1670), home to the founders of the iron works. Illustrated in several architecture books, this two and a half story frame house had façade gables and a projecting two-story porch. The Leonard House was demolished around 1850.

More houses from the Federal period (1775-1830) still stand, these with both center-chimney and end-chimney designs. Cottages, as the smaller houses are known, have less variety in floor plans than the larger houses. Concentrations of this style of residence stand at Prattville, Raynham Center, and Squawbetty.

The town saw a minor building boom in the Industrial period (1830-1870), when the prevailing style was Greek Revival and Italianate. More cottages than houses were built during this period, many of them embellished with façade gables or front door entrance surrounds. Probably in response to the well-developed Italianate houses just across the river in Taunton, two fully developed villas were built in Squawbetty out of brick with four-square plans, very wide overhanging eaves, and low pyramidal hip roofs.

The Late Industrial period (1870-1915) resulted in the construction of a number of Italianate and Queen Anne style cottages and story-and-a-half plus attic houses. After the turn of the century, two new styles appeared: Colonial Revival and Craftsman-style cottages, with their hip roofs, exposed rafters, and porches. The institutional architecture from this period is also important to present-day Raynham, for example the construction of the North Raynham Congregational Church. Even more significant to the town was the development of the Borden Colony of the Taunton State Hospital. The campus of the hospital included buildings with a variety of styles, from Georgian Revival to Italianate to Craftsman/Colonial Revival to Greek Revival, none of which remain today.

### Cemeteries

There are 12 historic cemeteries that have been located in the Town of Raynham. Eight of these cemeteries are maintained by the town, 4 are located on private property. The oldest cemetery is located on Pleasant Street and dates back to the 1700's. Most of the cemeteries were established in the 1800's. A relatively small number of cemeteries results from the practice of many of the townspeople to be interned in Taunton cemeteries. See Map 5-3.

### Prehistoric Sites

Dating back as far as 10,000 years to the Archaic Period, Raynham's unique natural environment of rivers, streams and wetlands attracted some of the earliest nomadic peoples in this region. The Taunton river, small streams and Lake Nippenicket attracted these nomadic peoples during the spring and fall seasons on their travels to and from Plymouth, the Cape and Rhode Island.

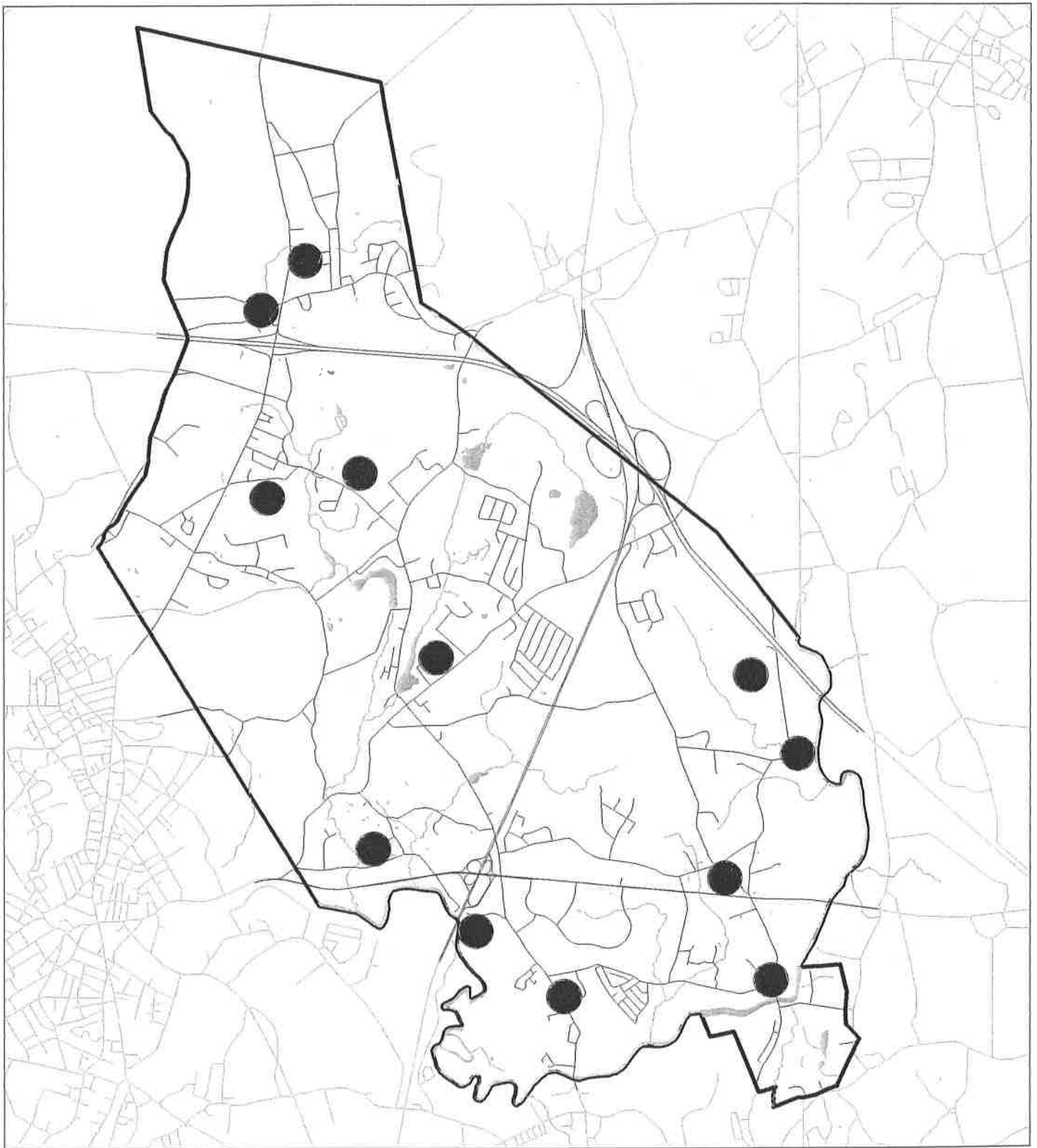
### Historic Sites

Early historic sites include the various mills, forges, and ship building yards which were established in the area, primarily during the 17<sup>th</sup> and 18<sup>th</sup> century. Map5-2 locates a Ships Way on the Taunton River, a shingle mill, an anchor forge and two grist mills. A number of additional historic sites have also been

located. More research needs to be undertaken to determine the nature of the activity that was pursued at these locations.

### **Scenic/Historic Roads**

Scenic and historic roads are identified on Map 5-4. The earliest road is Pleasant Street which traverses the town in an east west direction leading to Taunton and Bridgewater. Church and Orchard Street also generally traverse in the north/south direction and were also some of the earliest roads. Some of the more scenic roads are those with water views, Elm Street, near Lake Nippenicket, Hill and South Street with views of the Taunton River, and Swamp Brook Street, near Pine Swamp. A number of other older roads have stone walls such as Judson Street.

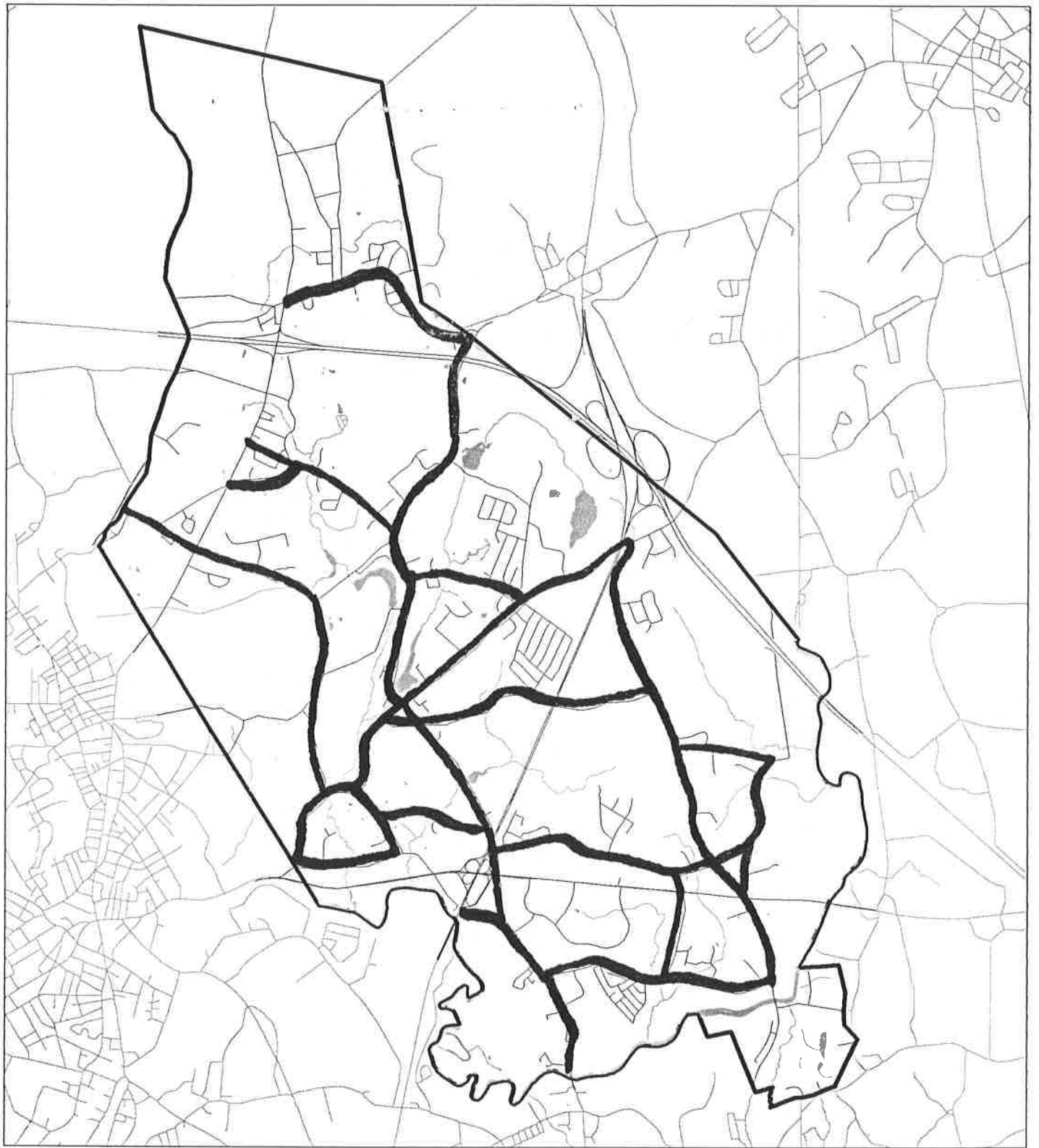


Map 5-3

**Town of Raynham  
Cemeteries**



Prepared by  
Larry Koff and Associates



Map 5-4

**Town of Raynham  
Scenic and Historic Roads**



Prepared by  
Larry Koff and Associates

### 5.3 OPPORTUNITIES/ANALYSIS

#### **Clarify Role/Responsibilities of Historic Commission**

Chapter 40, Section 8d defines two broad areas of activity for local historical commissions: tasks that are required of all commissions, and tasks left to the discretion of each commission. The mandated and optional responsibilities are summarized below. The Raynham Historical Commission needs to review these responsibilities and identify a strategy appropriate to the needs and resources in their community. Staff of the Massachusetts Historical Commission (MHC) are prepared to meet with and discuss how to best pursue a local work program.

#### *Mandated Responsibilities:*

##### Conduct research on places of historical or architectural value

Historical Commissions are expected to compile and maintain the inventory of the Community's historic assets. Utilizing survey forms and methodology prepared by the Massachusetts Historical Commission, inventories should locate the property, documenting its historical, architectural, and/or archaeological significance.

##### Cooperate with the State Archaeologist to conduct surveys and report on sites

Prehistoric and Historic archaeological sites should be included in a local inventory. These sites should be kept confidential.

##### Coordinate with other preservation organizations

Local commissions should serve as the liaison between the Massachusetts Historical Commission and local historical or preservation organizations. The MHC will keep local commissions informed of important issues.

##### Keep accurate records of its actions and file an annual report

Historic commissions need to establish rules and regulations under which they operate. The commission has sole responsibility for adoption or amendment to its rules and regulations unless clearly stated otherwise in local laws. The rules and regulations may establish the size, format, contents, style, specifications, number of copies and submission procedures. The regulations cannot be inconsistent with existing state and local laws and a copy shall be provided to the town clerk.

The process of amending rules and regulations is relatively easy. The Historic Commission needs to publish a public hearing notice in a local newspaper once in each of two successive weeks. The first published date of notice must be fourteen days prior to the date of the public hearing. The notice should contain the time and place of the public hearing as well as information on the subject matter. The Historic Commission, after the public hearing, may vote, by simple majority: to approve as prepared; to amend due to comments received from the public hearing; to take the matter under study; or to disapprove the proposed regulation.

In addition to following the standard open meeting and conflict of interest requirements (local historical commission members are considered special municipal employees and are therefore subject to the statute's provisions), local commissions should consider adopting a standard meeting agenda and format for minutes. The Open Meeting Law requires that commissions and committees hold open meetings, the dates of which must be announced at least 24 hours in advance. Commission meetings should be held at regular intervals, at least four times per year and should utilize Robert's Rules of Order. Any concerns with possible conflict of interest should be discussed with town counsel or the State Ethics Commission.

The effectiveness of the commission will be improved if individual members are assigned specific responsibilities for program areas. Furthermore, in order to ensure a broad base of support, the commission should identify citizens who have a background in a related field to become commission members. Appropriate fields of interest and experience include landscape architecture, law, history, archaeology, conservation, planning, and architecture.

The MHC has materials to assist local Commissions as they get established.

Maintain a membership of not less than three nor more than seven members, duly appointed by the appropriate municipal official

An annual report should be presented to the selectmen. The report gives the commission an opportunity to publicize its activities and reflect on past and future activities. As a public agency, the commission should have a location in Town Hall where it can store important files, meeting records, and actions by the commission.

*Optional Responsibilities*

Such responsibilities include any number of activities for the purpose of preserving, protecting, and developing the historic and archaeological assets of the community. Activities currently being contemplated by the Commission and discussed below would fall within the scope of responsibilities. Beyond these activities, the Commission could hire staff, accept gifts, enter into contracts, and hold public hearings. As an advisory body within local government, the commission should consider a role in:

Commenting on major demolitions or development proposals that affect historic properties

Appointing a historic district study committee

Acquiring real estate and personal property with historic or architectural significance in the name of the town.

## 5.4 GOALS AND POLICIES

*Promote awareness of Raynham's historical character; identify and protect historical places and scenic areas; and, utilize historic resources as a tool for natural resource preservation and economic development.*

### **Policies:**

- A. Undertake a survey to identify sites and historic preservation districts worthy of designation.
- B. Coordinate open space and historic preservation strategies with other town boards and communities.
- C. Work with planning board to assist in the review of activities which would impact landmarks, scenic roads and areas, prehistoric sites, and natural features.
- D. Promote Raynham's industrial heritage.
- E. Incorporate historical/cultural resource education into the public schools and Town Boards.
- F. Coordinate with regional historic commissions.

## 5.5 RECOMMENDATIONS

### Clarify Priorities/Roles/Responsibilities of Historic Commission:

1. Obtain Town Meeting support for acquiring matching funding for survey and planning grant from Massachusetts Historical Commission. This grant will be used to document existing historical and archaeological resources.

2. List historic properties and identify historic sites for nomination.

The Raynham Historical Commission should undertake a survey for the purposes of documenting historic sites and areas and clarifying appropriate regulatory strategies. The Massachusetts Historical Commission's Survey and Planning Grant Program and the Massachusetts Cultural Council can provide financial assistance to prepare these surveys.

Properties owned by public or non-profit entities that are listed on the National Register are eligible to receive assistance from the Massachusetts Preservation Projects Fund for rehabilitation or restoration work.

In addition to publicly owned buildings, the Commission should prepare a list of privately owned buildings and important archaeological sites. The Planning Board can be notified of these properties.

Consider designation of town center area as "Historic Raynham Center".

Identify and commemorate Leonard Iron Works site with historic marker.

Establish a historic marker program sponsored by the local business community.

3. Formalize role of Historic Commission in review of impacts on local historic resources:

Amendments to the subdivision regulations (Planning Board) and special permit regulations (Planning Board and Zoning Board of Appeals) should be adopted which require that the location of all properties listed on the Raynham historic resources survey be shown on a site plan. In addition, notice of all subdivisions, site plans and special permits should be sent to the Historical Commission so they will be able to comment on development in areas or sites of historic importance.

4. Establish zoning by-law amendments:

#### *A. Establish Demolition By-law*

Raynham could adopt a demolition delay by-law that would give the Commission the opportunity to discuss alternatives to demolition with property owners. Alternatives could include public acquisition through a local land trust or finding buyers who would preserve historic structures.

Demolition delay by-laws, which are general by-laws, have been adopted by a number of cities and towns. To be adopted, a general by-law must simply be placed on a town meeting warrant, either by the selectmen or by 20 registered voters. Approval of a general by-law is by simple majority. It should be noted that general by-laws must still be reviewed and approved by the Attorney General.

#### *B. Protection of scenic roads, views, natural features, historical and archeological sites*

A zoning by-law could be prepared which requires a special permit for development that impacts historic resources. This could occur through amending the site plan review bylaw or by establishing historic/scenic overlay districts.

# Town of Raynham

## Open Space Planning

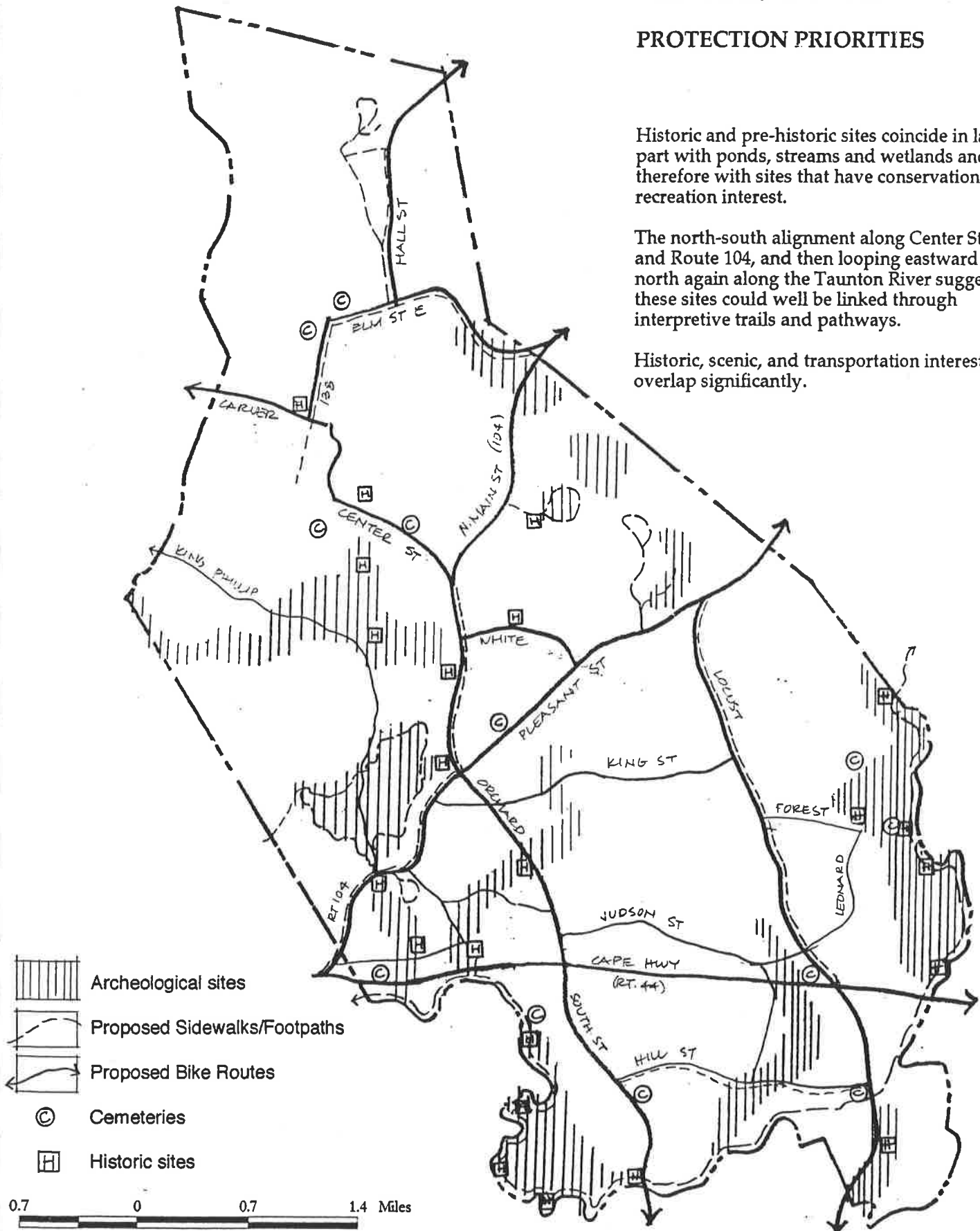
### CULTURAL/HISTORIC

### PROTECTION PRIORITIES

Historic and pre-historic sites coincide in large part with ponds, streams and wetlands and therefore with sites that have conservation and recreation interest.

The north-south alignment along Center Street and Route 104, and then looping eastward and north again along the Taunton River suggests these sites could well be linked through interpretive trails and pathways.

Historic, scenic, and transportation interests overlap significantly.



5. Adopt an educational program

- Identify historic styles which might be incorporated into a town sign by-law and site plan review guidelines
- Establish a Town History Day to promote awareness and preservation activities

6. Establish a non-profit trust to seek funds to carry out various studies

**Appendix 5-1****Resources for Preservation****Historic District Designation**

The Raynham Historical Commission has at its disposal a number of tools to protect its historic resources. The principal tool is the creation of a local historic district. Local historic districts are authorized by the Massachusetts General Laws, Chap. 40C. A local historic district would regulate renovations, additions and new construction without compromising the integrity of imagery of the district. Among the aspects of construction that could be regulated are materials, design, pattern, massing and siting. Since each building, structure or place contributes to the district's overall historic character, changes made to the exterior of any property, as well as new construction, should be reviewed for the impact on the district as a whole. The intent is to prevent the intrusion of incongruous elements that might detract from the aesthetic and historic values of the district. In spite of its broad power, an historic district commission can only review changes to exterior architectural features that are visible from a public way.

It is important to note that each local historic district is unique and should have its own design guidelines. The success of an historic district depends on the care that is taken in developing the design guidelines and how well those guidelines are implemented. It is a time consuming process to establish a local historic district. Because of this, it is recommended that the list of potential districts be arranged in priority, with each district addressed during a separate year.

The establishment of a local historic district requires a number of procedural steps. First, an historic district study committee must be established by vote of the Board of Selectmen. It is recommended that the study committee include representatives from the local historic society, the American Institute of Architects and the local board of realtors. Next, an investigation of the buildings, structures, sites, and areas of architectural and historical significance must be made. The town of Raynham Historic Resources Survey, which would be undertaken by a Massachusetts Historic Commission town-funded survey and planning grant, is the basis for this investigation. A public education program, including a poll of the district's residents, should also be undertaken. It is important to know early on if the residents of the proposed district are opposed to its creation.

A major part of the work of the historic district study committee is to issue a preliminary report which describes the purpose of the proposed district, explains what local historic is, and describes the district itself. The description would explain the district's architectural and historic significance, justify the proposed boundaries and present a proposed by-law. The report should be accompanied by supporting maps, photographs and inventory forms.

The report must be reviewed by the Planning Board, the Massachusetts Historic Commission, and local residents at a public hearing. Following the review process a final report must be prepared for Town Meeting action (two-thirds vote required for approval). The final report must include a by-law and district boundary map. The report must also be approved by the Attorney General and the map must be filed with the town clerk and Registry of Deeds. Finally, the Board of Selectmen must appoint a 3 to 7 member historic district commission.

A National Register Historic District is a district listed in the National Register of Historic Places. Established by the National Historic Preservation Act of 1966 and maintained by the United States Department of the Interior, the National Register is the official list of the nation's historical resources "worthy of preservation." Districts, individual structures and sites which are of local, state or national significance in terms of history, architecture, engineering, archaeology or culture are eligible for listing.

Anyone may nominate property to the National Register of Historic Places. Nomination forms and instructions are available from the Massachusetts Historical Commission. The application is reviewed by the Massachusetts Historical Commission acting as the State Review Board and forwarded by the State Preservation Officer to the National Park Service for final review.

Listing in the National Register recognizes that the area is important to the history of the community, state, or nation. It also allows the owners of income-producing properties to obtain certain federal tax incentives for renovation and provides limited protection from the adverse effects of federally funded, licensed or assisted projects.

Listing in the National Register in no way limits the owner's use of the property unless public funding is used. A district cannot be listed if a majority of property owners submit notarized objections.

Properties within Local Historic Districts and National Register Districts are automatically included in the State Register of Historical Places.

Listing in the State Register provides limited protection from the adverse effects of state funded, licensed, or assisted projects. It also provides owners of municipal or private non-profit properties the opportunity to apply for 50% matching state grants through the Massachusetts Preservation Projects Fund.

The procedures which apply to the listing of historic districts also apply to the listing of individual buildings. At the present time, 7 buildings or sites in Raynham are listed in the State Register of Historic Places.

### **Grant Funding**

The Survey and Planning Grants Program of the Massachusetts Historical Commission provides federal pass-through funding for communities to undertake three planning activities. The first consists of survey and inventory of the built, archaeological and landscaped historic resources within a community. Second, based upon such a survey, a community can use Survey and Planning Grants to nominate structures to the National Register. Third, a community can obtain funding for the development of a preservation plan. For the past several years, the completion of community wide inventories and preparation of nominations to the National Register of Historic Places have been the primary emphasis of the program.

Eligible applicants are municipal governments, local historical commissions, local historic district commissions, Certified Local Governments, local and state agencies, educational institutions, and private non-profit organizations.

The grants are awarded on an annual funding cycle. Following the submittal of preliminary applications, the Massachusetts Historical Commission will invite certain communities to submit full applications. Grants average \$5,000 to \$6,000 with a 50% local match required.

The Massachusetts Preservation Projects Fund is a state-funded matching grant program established in 1984 to support the preservation and maintenance of properties and sites listed in the State Register of Historic Places. Historic structures in public and non-profit use frequently suffer from deferred maintenance, incompatible use, or are threatened by demolition. By providing assistance to historic properties owned by non-profit or public entities, the Massachusetts Historical Commission hopes to ensure the continued use and integrity of such structures.

Eligible projects are research projects (the preparation of historic structure reports, investigation of innovative preservation techniques, field investigation of endangered archaeological sites), development projects (construction activities including stabilization, protection, rehabilitation, and restoration), and acquisition projects specifically allocated for endangered State Register properties.

Grants are awarded on an annual funding cycle. Research grants can range from \$2,500 to \$30,000; development or acquisition projects can range from \$5,000 to \$100,000. A unique feature of the program allows applicants to request up to 75% of total construction costs if there is a commitment to establish a historic properties maintenance fund by setting aside an additional 25% over their matching share in a restricted endowment fund.

Application to the Massachusetts Preservation Projects Fund may be made by municipalities and non-profit organizations. Interested candidates are encouraged to submit a preliminary pre-application form; full applications will be selected from qualified pre-applicants.

A preservation restriction is a legal agreement between a property owner and another party, usually a non-profit organization or government body. Such an agreement "runs with the land," governing the use of the property by the current and future owners. It is a vehicle for preserving the architectural integrity of a property by requiring maintenance of the property and preventing alterations which would compromise the property's historic character. (See Massachusetts General Laws, Chapter 184, Section 31.)

The grant of a preservation restriction may qualify the owner for certain federal tax benefits, including a charitable deduction and a reduction in estate taxes. Local property taxes may also be reduced.

A structure or site that has historical significance because of its architecture, archeology, or associations is eligible for a preservation restriction. Any property listed in the state register of historic places will qualify.

Any government body, including the Massachusetts Historical Commission, a local historic commission, or a charitable corporation or trust which has the power to acquire land can accept a preservation restriction. A preservation restriction under Chapter 184 must be approved by the Massachusetts Historical Commission or a local government agency.

#### **Open Space Acquisition/Preservation Programs**

The Division of Conservation Services in the Executive Office of Environmental Affairs administers programs which assist Massachusetts municipalities in acquiring and/or developing recreation and conservation areas and facilities.

The Massachusetts Self Help Program, established by Massachusetts General Laws, Chapter 132A, Section 11, provides up to 80% reimbursement to communities with conservation commissions duly established under MGL, Chapter 40, Section 8C, for the acquisition of conservation lands. To be eligible for the Self Help Program, municipalities must have an open space plan approved by the Division of Conservation Services. The town of Raynham needs to prepare an approved open space plan.

The first priority of the Self Help program is to protect areas that contain unique natural, historical or cultural features or extensive water resources. The funds for this program may be used only for the acquisition of land for conservation or passive recreation purposes. The cost of any development which occurs on these lands must be absorbed by the municipality.

Grants are awarded annually. A complete application, including professional appraisals, must be submitted to the Division of Conservation Services before the lands are purchased.

A Community Land Trust (CLT) is an organization created to hold land for the benefit of the community and of individuals within the community. The Trust is a democratically structured, non-profit corporation with an open membership and a board of trustees elected by the members. The board generally consists of residents of trust-owned land, community residents, and public interest representatives. The board members are elected for terms, so the community retains ultimate control over the organization and the land it owns.

A land trust acquires land or properties through purchase or donation with intention to retain the title in perpetuity - removing property from the speculative market. Appropriate uses are determined by members, then the land is leased for public purposes. The leaseholder must use the land in an environmentally and socially responsible manner. Leaseholders pay a lease-based use value price and not full market value, making this an attractive alternative to ownership.

Land trusts may be financed by public and private grants from foundations, churches, individuals and government agencies. Gifts of time and labor from colleges, professional associations and other interested parties can also contribute to a land trust's success. Local sources of funding (except for government grants) are usually recommended since these sources are more likely to have an interest in the community and its future. Loans from conventional and non-conventional sources can help fund the Trust. Non-conventional sources include various community investment funds or inheritances left for community purposes. Also, community bankers may be interested in retaining the community's character, and might provide low-cost loans to the town. Internally generated monies are also an important source of funding. For instance, funds from the collection of lease fees can be used to acquire more lands.

**SECTION VII**  
**TRANSPORTATION**

## **SECTION VII TRANSPORTATION**

### **Transportation Executive Summary**

#### **Introduction**

##### **7.1 Transportation System Conditions**

- Major Roadways
- Public Transit
- Pedestrians & Bicyclists
- Other Issues

##### **7.2 Projected Buildout & Implications Of Buildout**

- Trip Generation
- Trip Distribution & Assignment
- Implication of Growth

##### **7.3 Goals And Objectives/Issues**

##### **7.4 The Recommended Plan**

- Introduction
- Transportation Demand Management Elements
- Transportation Safety Management Elements
- Major Network Improvements

#### **Appendix**

- Traffic Volume Data
- Model Zoning By-laws

## VII TRANSPORTATION

### TRANSPORTATION EXECUTIVE SUMMARY

The Raynham townwide transportation study was initiated as part of the Town's Master Plan process. The entire study is comprised of four core sections: transportation system conditions, projected buildout and implications of buildout, goals and objectives, and the recommended plan.

#### Transportation System Conditions

Existing roadway conditions were assessed based on traffic volumes, accident history, discussions with town agency personnel, and field observations. In addition, public transit services, pedestrian and bicycle facilities, and other issues related to transportation were examined. Some roadways currently have congestion problems, including Routes 138 and 44. Several intersections with geometric deficiencies or a high number of accidents were noted as poorly designed and in need of redesign for safety. The only public transit service currently offered is a Dial-A-Ride service for elderly and physically-challenged residents. Pedestrian and bicycle facilities are limited and lacking connectivity since few roadways have sidewalks. There is an inadequate treatment of transportation issues in the Zoning By-laws.

#### Projected Buildout And Implications Of Buildout

The current roadway system cannot fully meet the projected growth in traffic if the current zoning is continued. The lack of facilities for alternate modes such as transit, bicycles, and pedestrians further limits the capacity of the overall transportation system.

#### Goals And Objectives

The overall goal from the 1982 comprehensive plan by SRPEDD was used as a basis to develop more specific goals tailored to Raynham's current needs. Five goals and their associated objectives were outlined.

#### The Recommended Transportation Plan

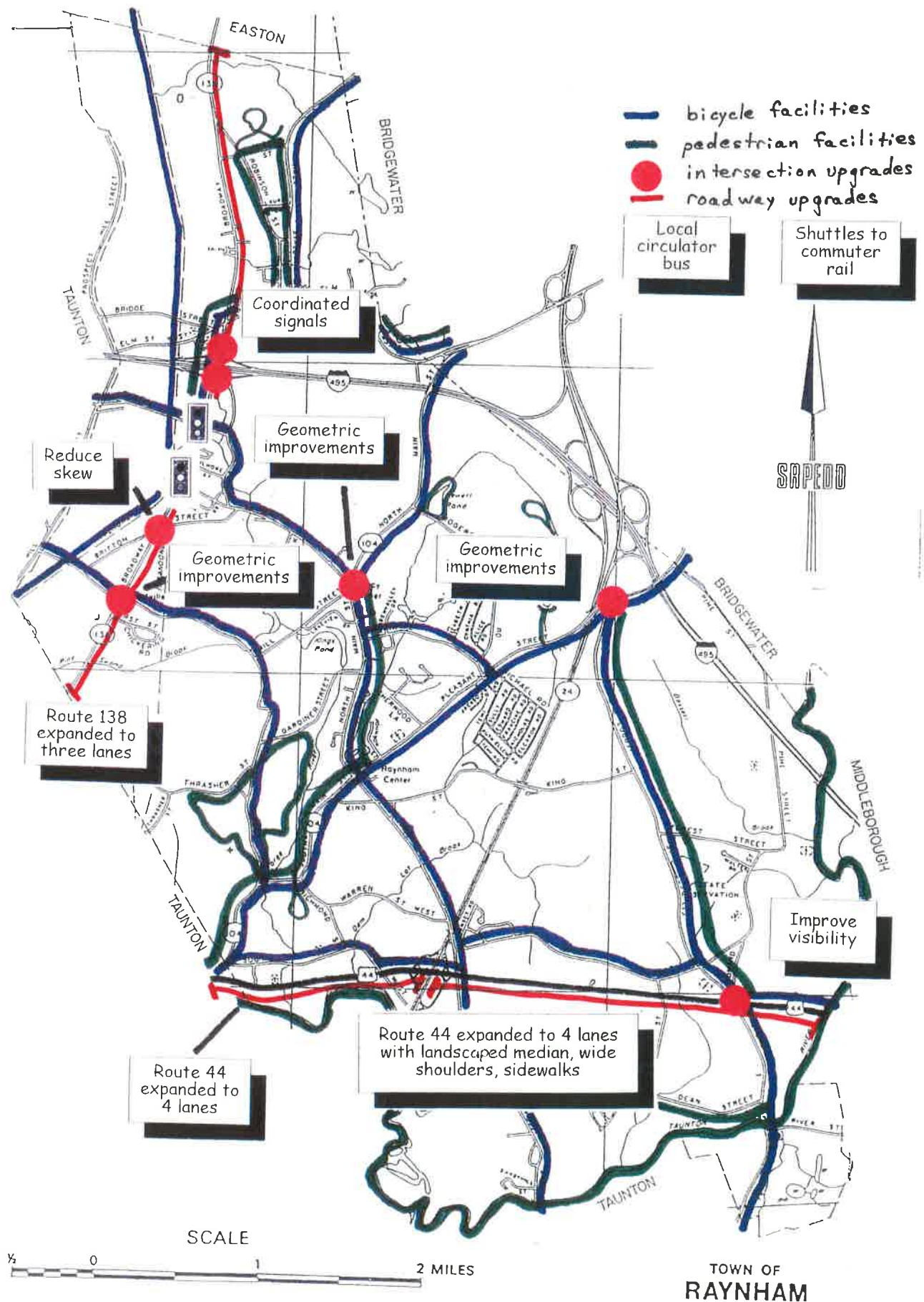
The long range needs were identified as a result of technical analyses and public workshops. The transportation planning effort was an element of the overall Master Plan. The improvement alternatives included location specific actions and areawide type of improvements. They are comprised of actions that can be implemented at various times in both the short and long term. Alternatives included not only roadway capacity improvements, but also pedestrian/bicyclist and transit actions. The ultimate plan was a combination of all strategies. Table 7-1 lists the recommended actions designed to alleviate the existing traffic flow constraints as well as better accommodate future travel conditions. The following map graphically summarizes the major recommended improvement actions.

As can be seen in Table 7-1, each of the long range plan elements has been summarized in terms of proposed action, implementation timeframe, cost estimate, and implementation start-up. The proposed actions are to be implemented primarily over the long term with the notable exception of the *Transportation Safety Management* improvements which can be implemented in a shorter timeframe. Although some of the long term actions can be divided into separate phases, the whole plan is expected to be implemented within the long term (20 years). Costs were estimated as *Low* (less than \$10,000), *Medium* (\$10,000 to \$50,000), and *High* (greater than \$50,000). Costs for local and regional transit plans are difficult to estimate, yet these items may be fundable through a local Transportation Management Association (TMA), the MBTA, and other private employer programs.

**TABLE 1**  
**SUMMARY OF RECOMMENDED PLAN**

Recommended Action	Implementation Time Frame	Cost Estimate	First Step Towards Implementation
TRANSPORTATION DEMAND MANAGEMENT			
Concentrated Development			
Promote campus-style clusters	Long Term	Low	Zoning By-law Change
Promote mixed-use developments	Long Term	Low	Zoning By-law Change
Local and Regional Transit Plan			
Proposed local circulator bus	Long Term	Varies	Feasibility Study
Proposed shuttles to rail stations	Short Term		Local Coordination
Improved Dial-a-Ride service for the elderly and physically-challenged	Short Term		
Network of Bikeways/Walkways Throughout Town			
Recreational/Commuter Network in Agreement with Local Plans	Long Term	Medium	Local Approvals Preliminary Engineering
TRANSPORTATION SAFETY MANAGEMENT			
Isolated Intersections			
Upgrade safety	Short Term	Med. – High	Coordination of Agencies
Improve traffic flow	Short Term	Med. – High	Preliminary Engineering
Access Management			
Curb-cut guidelines	Short Term	Low	Zoning By-law Change
Roadway design guidelines	Short Term	Low	Zoning By-law Change
Subdivision traffic studies	Short Term	Varies	Zoning By-law Change
MAJOR NETWORK IMPROVEMENTS			
Route 138 Corridor			
Three lanes with wide shoulders, and sidewalks	Long Term	MHD	Coordination of Agencies Preliminary Engineering
Traffic circulation and control improvements	Long Term	MHD	Coordination of Agencies Preliminary Engineering
Route 44 Corridor			
From Route 104 to Route 24 Four lanes (Summer 1999 bid)	Short Term	MHD	Design in Progress
From Route 24 to easterly town line Four lanes with landscaped median, wide shoulders, and sidewalks	Short Term	MHD	Design in Progress

# SUMMARY OF PROPOSED LONG RANGE PLAN



## INTRODUCTION

This transportation component encompasses the evaluation of long range alternatives and the recommended transportation plan for the community. The primary focus of this effort was to evaluate the existing transportation system, develop goals and objectives, evaluate the potential solutions for each particular problem area, and to develop a recommended transportation plan.

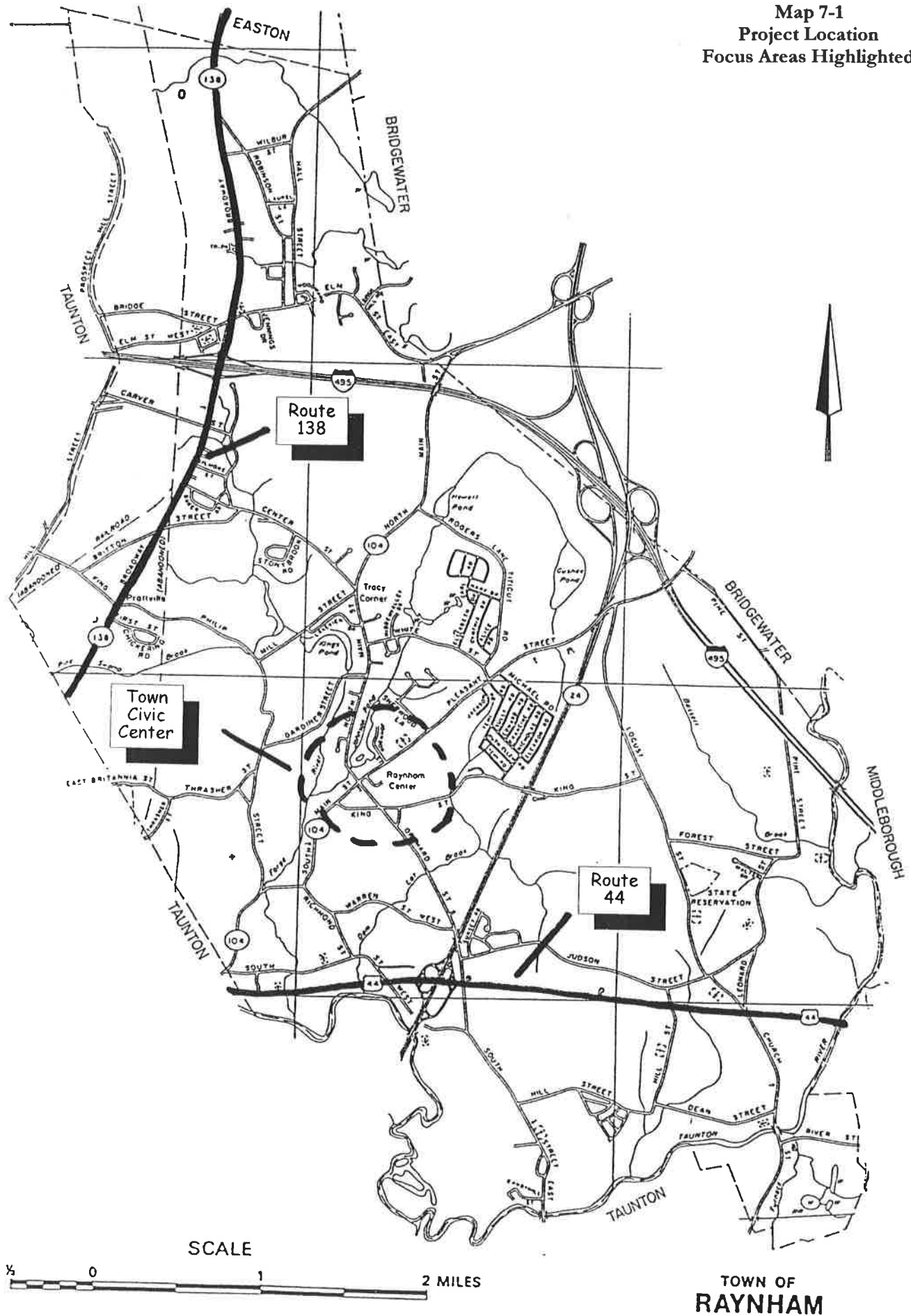
An assessment of existing conditions was prepared through background research, data collection and analysis, as well as contributions from committee meetings and public workshops. These earlier phases have shaped the objectives of this long range plan and have better defined the key problem areas to be studied. The long range focus areas identified for attention are shown graphically on map 7-1 and are listed below:

- Defining a Route 138 cross-section and plan
- Defining a Route 44 cross-section and plan
- Developing a town civic center
- Creating a network of bikeways and walkways for both local and regional access
- Developing local and regional transit plans

In addition to the above long range plan elements, a number of isolated intersections were identified for short term improvements.

The first phase of work was background research including a review of the Town's Zoning By-laws, the master plan developed by SRPEDD for the Town, and the MBTA's reports on commuter rail options for the region. In addition, discussions by the master planning team were held with several entities including the Police and Public Works Departments, director of Raynham's Senior Center, the staff of the Southeastern Regional Planning and Economic Development District (SRPEDD), and the Massachusetts Highway Department (MHD). The second phase was data collection and analysis. Accident data and detailed roadway information was obtained from MHD. Traffic volume and census data was obtained from SRPEDD. Site reconnaissance, including evaluations of pavement conditions, intersection operations, and roadway safety, was performed by MS Transportation Systems, Inc. Key issues were identified and goals developed with the aid of public meetings, transportation subcommittee meetings, and the data collection process. Land use projections, based on current Town zoning practices, were developed by the team and then converted to traffic volume projections for both the year 2020 and the full buildout of Raynham. These volumes were added to the existing traffic on the network and then the roadways were evaluated for both safety and operational constraints. In addition, the needs of pedestrians and bicyclists were examined in terms of facilities required for their use. Finally, with the goals and objectives as a guide, a recommended plan was developed for the Town of Raynham. This study document consists of four core sections: transportation system conditions, projected buildout and implications of buildout, goals and objectives, and the recommended plan.

Map 7-1  
Project Location  
Focus Areas Highlighted



## 7.1 TRANSPORTATION SYSTEM CONDITIONS

### Major Roadways

Effective evaluation of the transportation impacts associated with Raynham's potential development first requires a thorough understanding of the existing transportation system in the town. Significant research and field visits to Raynham have been conducted to assess the primary routes.

### Local circulation

The following is a description of the study area roadways. Table 7-1 summarizes characteristics of the roadways serving the town while Figure 7-2 illustrates the locations of the major roadways and intersections. The roadways examined were either selected due to function or were identified by the subcommittee members as issues of local concern.

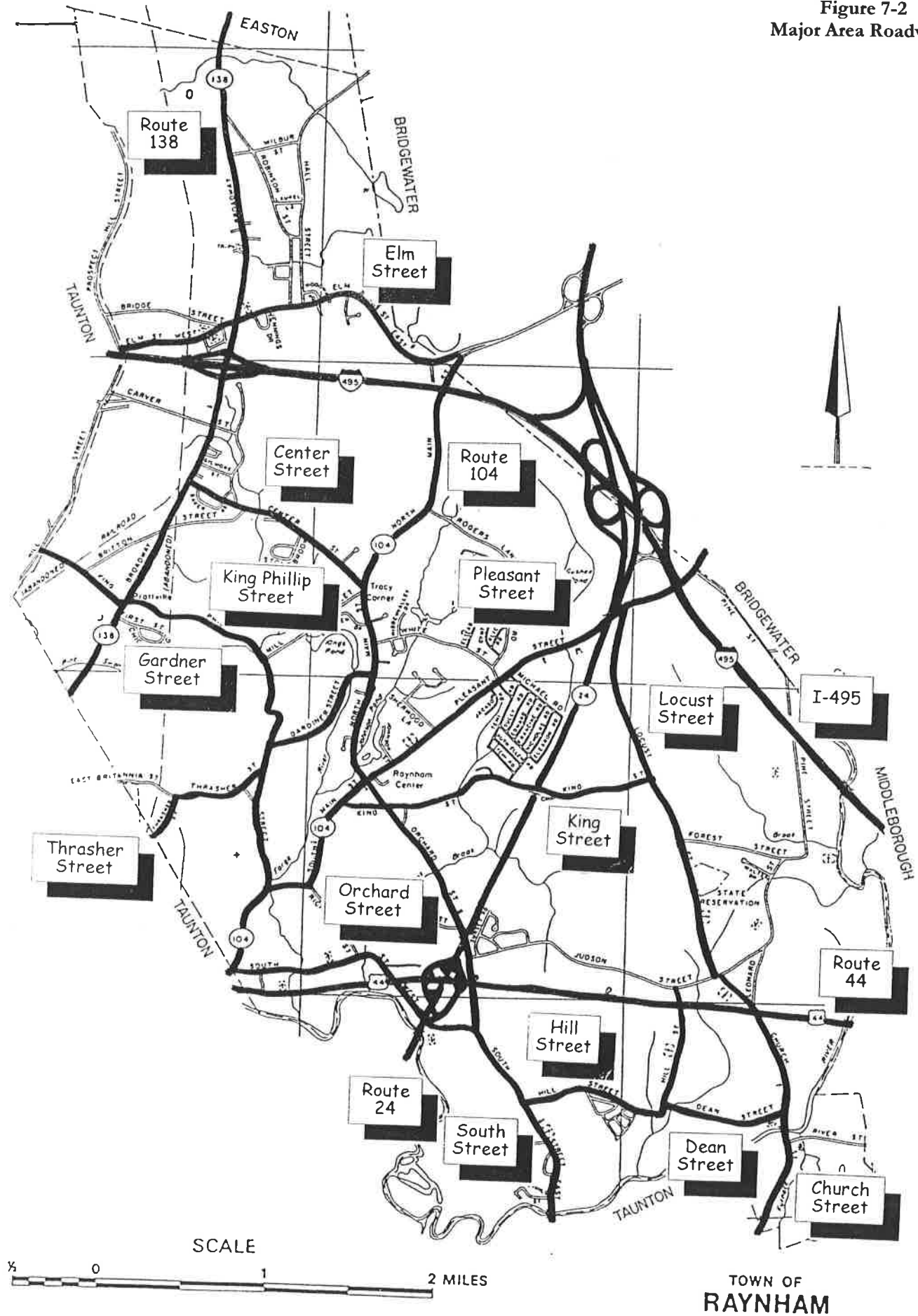
**Table 7-1**  
**General Characteristics Of Major Town Roadways**

Roadway	Jurisdiction	Functional Class	R.O.W.	Paved Width	# of Lanes	Swlks	Struct Cond.
Interstate 495	MHD	Interstate	70'-400'	56'-100'	4 - 6	No	Good
Route 24	MHD	RPA&UE	99'	80'-112'	6	No	Good
Route 138	MHD	UMA/RMC	50'	28'-40'	2	Some	Fair
Route 44	MHD	RPA&UE	60'-100'	38'-94'	2 - 4	No	Good
Route 104	Town	UMA/RMC	40'	28'-40'	2	Some	Good/Fair
Center Street	Town	UMA/RMC	40'	29'	2	No	Fair
Church Street	Town/MHD	Local	40'	20'	2	No	Fair
Dean Street	Town	Local	30'-40'	22'-26'	2	No	Fair/Deficient
Elm Street	Town	UC/RMC & Local	30'-40'	20'-27'	2	No	Fair
Gardner Street	Town	Local	30'	22'	2	No	Fair
Hill Street	Town	Local	40'	22'	2	No	Fair
King Street	Town	Local	30'	20'-24'	2	No	Good/Fair
King Phillip Street	Town	Local	30'-50'	22'-26'	2	No	Good/Fair
Locust Street	Town	Local	30'-40'	20'-28'	2	No	Fair
Orchard Street	Town	UMA/RMC & UC/RMC	40'	20'-28'	2	No	Good/Fair
Pleasant Street	Town	UC/RMC	40'	24'-32'	2	Some	Good
South Street	Town	UC/RMC & Local	30'-40'	20'-26'	2	No	Fair
Thrasher Street	Town	Local	40'	22'-26'	2	No	Fair

#### Functional Class Abbreviations:

RPA&UE – Rural Principal Arterial and Urban Extensions  
 RMA&UE – Rural Minor Arterial and Urban Extensions  
 OUPA – Other Urban Principal Arterial  
 UMA/RMC – Urban Minor Arterial / Rural Major Collector  
 UC/RMC – Urban Collector / Rural Minor Collector

Figure 7-2  
Major Area Roadways



◆ **Interstate 495 & Route 24**

In general, the Town of Raynham is provided a high level of regional access with Interstate 495 (I-495) and Route 24 serving the town with direct access. Route 44 and Route 138, provide local connections between the regional highway system and the Town. Most of the Town's commercial and industrial land uses are located on the two arterials. The two major arterials serving the Town are described within the following pages as a focus area.

◆ **Route 138 (Broadway)**

Broadway Street is State Highway Route 138, following a north-south alignment from the Easton town line to the Taunton town line. Route 138 provides access to I-495 via two stop-controlled intersections. Route 138 widens for the I-495 interchange from one to two lanes in each direction and narrows back down to the north and south of I-495. Figure 7-3 shows two views of Route 138.

Route 138 generally has 10- to 13-foot wide travel lanes. Horizontal and vertical alignments generally contain mild curves and gentle grades. No weight restrictions are posted along Route 138 and no lateral or vertical clearances were noted that would impede traffic significantly. Pavement conditions were observed to be fair to good. Sidewalks traverse one or both sides of roadway for some sections. The primary land use along Route 138 in Raynham is commercial.

Route 138 is expected to be heavily impacted from potential development.

**Figure 7-3**  
**Route 138**



**South of Interstate 495**



**North of I-495 Near Interchange**

◆ **Route 44**

Route 44 is a bi-directional roadway following an east-west alignment that continues from the Middleborough town line to the Taunton town line just prior to its intersection with Route 104. Route 44 connects with Route 138 further to the west of Route 104. It ranges between one and two lanes per direction in 60 to 100 feet of right-of-way, depending on location. In the vicinity of the Route 24 ramps, Route 44 is 4 lanes across with a median. East of Route 24, Route 44 narrows to one lane in each direction with no median, as shown in Figure 7-4. There are no sidewalks along the roadway. Horizontal and vertical alignments generally consist of gentle curves and slight inclines. The pavement was observed to be in good condition. Along Route 44 in Raynham is a major commercial area, which includes the Raynham Woods development east of Route 24.

Route 44 is a major highway, under the jurisdiction of the Massachusetts Highway Department. Improvements by MHD are planned for one section of Route 44 in Raynham. The section from the Middleborough town line up to and including the Route 24 interchange is proposed to be widened to 4 lanes across. Traffic signals are proposed along the corridor, including at the interchange and the following four intersections: Orchard Street, Paramount Drive, Hill Street, and Church Street. As of November 1999, the roadway's cross-section is proposed to include two 12-foot wide travel lanes per direction, 10-foot wide outside shoulders, 4-foot wide inside shoulders and a concrete median for separation of directions of travel for a total cross-section width of approximately 89 feet.

The approximate timeline of the project is filing with MEPA in early 2000 and 2001, completing the design and advertising the first contract in early 2003, and commencing construction in late 2003. The estimated cost of construction for the Route 24 interchange and construction to Church Street is 16.2 million dollars.

**FIGURE 7-4**



**ROUTE 44 APPROACHING ROUTE 24 FROM THE EAST**

◆ **Other Roadways**

In general, the other roadways included in the analysis are two-lane bi-directional roadways and either function as minor arterials or collector roadways. There is limited traffic control along most of these roadways. While capacity constraints are minimal, there are geometric or safety related issues in some instances.

Traffic volumes

In developing the traffic flow networks for analysis, existing traffic volumes were obtained from SRPEDD for the Town of Raynham, as well as other recent studies. These counts were completed during 1995, 1996, and 1997. Average daily traffic counts were available for 22 locations. The average daily traffic flows, adjusted to year 1999 using a 1 percent per year growth rate, are illustrated in Figure 7-5 and summarized in Table 7-2.

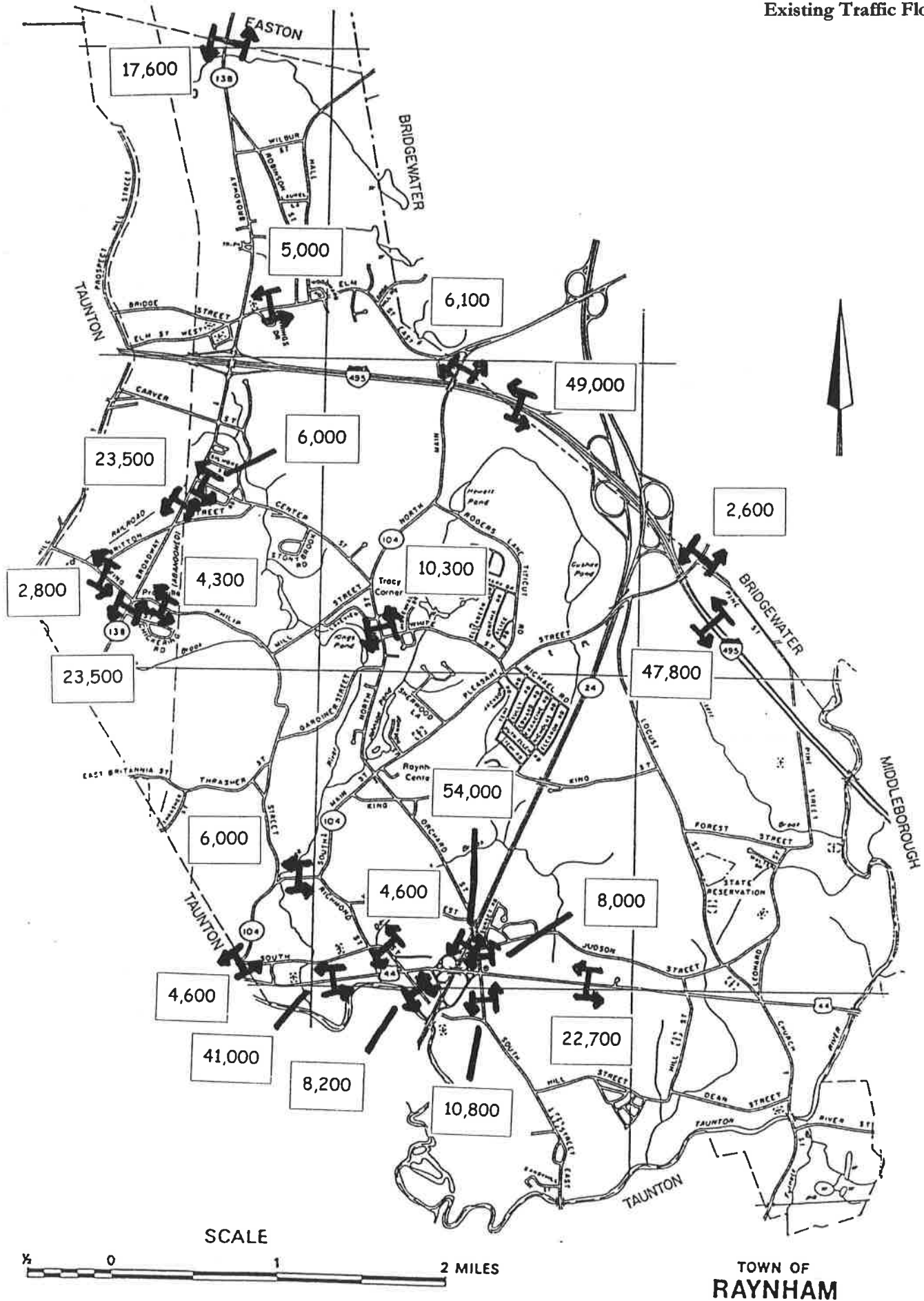
**Table 7-2**  
**Average Daily Traffic Volumes**

LOCATION	VEHICLES PER DAY*			
	Year 1999*	Year 1997	Year 1996	Year 1995
<b><u>Interstate 495</u></b>				
south of Route 24	47,753		46,812	
north of Route 24	49,038		48,072	
<b><u>Route 138</u></b>				
at the Easton town line	17,557	17,383		
south of Center Street	23,462		23,000	
south of King Phillip Street	23,462		23,000	
<b><u>Center Street</u></b>				
east of Route 138	6,018		5,900	
<b><u>Elm Street</u></b>				
east of Route 138	5,048			4,900
<b><u>King Phillip Street</u></b>				
east of Route 138	4,284		4,200	
west of Route 138	2,754		2,700	
<b><u>Route 104</u></b>				
(North Main Street)	10,303			10,000
between White Street and Lakeview Drive				
(North Main Street)	6,079			5,900
at the Bridgewater town line				
(South Main Street) south of Richmond Street	5,976			5,800
(South Main Street) at the Taunton town line	4,636			4,500
<b><u>Orchard Street</u></b>				
north of Route 44	7,965	7,886		
south of Route 44	10,768	10,661		
<b><u>Pleasant Street</u></b>				
at the Bridgewater town line	2,576			2,500
<b><u>Route 24</u></b>				
north of Route 44	54,012		52,948	
<b><u>Route 44</u></b>				
west of Commerce Way	22,743			22,074
east of Shaw's Plaza entrance	27,645		27,100	
west of South Street	41,008		40,200	
<b><u>South Street</u></b>				
north of Route 44	4,590		4,500	
south of Route 44	8,161		8,000	

\* Data is shown for the most recent year available except for 1999 which was estimated using a 1% growth rate.

Source: SRPEDD, Raynham Town File

**Figure 7-5**  
**Existing Traffic Flows**



*Safety analyses*

In addition to the capacity analysis, safety considerations were also investigated. This was accomplished by reviewing accident history and driving each study roadway to conduct a general review of geometry and sight distances.

Accident incidence

A review of recent accident history along study area roadways was researched through the records of the Massachusetts Highway Department (MHD) for the calendar years 1995 through 1997. The data collected indicated the number of accidents, location, time, weather conditions, type of accident, severity and type of vehicle involved. An accident spot map was created from the data obtained from MHD and is shown in Figure 7-6. In Table 7-3 the data is summarized as well.

As can be seen from the data in the table, a total of 360 accidents were reported at the key intersections within Raynham during the three-year period, 1995-1997. The location with the highest accident experience (81 accidents) is the Route 24/Route 44 signalized intersection. The location with the second highest accident experience (45 accidents) is the Interstate 495/Route 138 interchange. The average accidents per year at these locations are 27.0 and 15.0, respectively. The high average accident rate does not necessarily indicate safety problems within the intersection. It should be noted, however, that 58% of the accidents at Route 24/Route 44 intersection, and 69% of the accidents at the I-495/Route 138 interchange are cross-movement, or angle type accidents, which generally indicate a high proportion of turning volumes at the intersection. Coming in a close third for the highest number of accidents, the signalized intersection of Route 44/Orchard Street, had similar types, but fewer accidents reported. At this location, there were 40 accidents equating to an average of 13.3 accidents per year with 43% of those being cross-movement accidents.

Dangerous locations

Tables 7-4, 7-5, and 7-6 also provide historical information and observations by various local and regional agencies/departments. Figure 7-7 shows the dangerous locations. The following intersections are of particular concern:

Interstate 495/Route 138 Interchange

- Approximately 15 accidents per year occurring at this location.
- The interchange consists of two STOP-controlled intersections.
- The overpass is steeply graded, potentially limiting sight distances.
- Route 138 is 4 lanes wide in this section and has shoulders.

Route 44/Church Street

- Side streets currently experience long delays to turn onto Route 44 or cross it.
- Future developments will add significant traffic to this intersection exacerbating existing problems.
- Intense signage and numerous driveways make it hard to distinguish the intersection location.

Route 138/Carver Street

- High accident location (34 accidents from 1994 through 1996).
- Drivers attempting to "beat" the traffic light to cross Route 138.
- Drivers are also cutting through a residential neighborhood (via Oak and Wayne Streets) to reach the Route 138/Center Street intersection.

**Route 138/Britton Street**

- Britton Street intersects Route 138 at a severe skew.
- Poor visibility.

**Route 138/King Phillip Street**

- Major cross street from Taunton.
- High accident location.
- Poor sight lines.
- Two-way traffic flow on both sides of a traffic island.

**Route 104/Center Street/Mill Street**

- Wide, two-way STOP-controlled intersection.
- Problematic skew and open design.

**Pleasant Street/Locust Street**

- Anticipated to have a flow deficiency in the future because of the proposed residential development occurring along Locust Street.

**Route 138/Center Street**

- Intersection is generating 5 accidents per year.
- Poor visibility and its use as a cut-through route by drivers trying to avoid the Route 138/Carver Street light.
- Intersection has back-ups on Center Street far past Oak Street (over 1 mile on some days).
- Intersection does satisfy signal warrant criteria.

In conclusion, the Town of Raynham's roadways have some safety deficiencies which should be addressed. Key intersections currently have high numbers of accidents which would potentially worsen as growth in the town continues. In addition, several intersections also have geometric and/or traffic control problems which also should be addressed to improve the safety of the Town's transportation system.

*Operational problems*

Based on observations and a review of the available data/previous studies, there are locations of difficult or poor operations. These include:

**Route 44 interchange with Route 24**

- High accident location.

**Route 44 / Orchard Street**

- High accident location.
- Problematic operation because of short distance from Route 24 ramps.

**Route 138 between I-495 and the Taunton town line**

- Frequent curb-cuts (driveways) hinder traffic flow.

**Route 44 between Route 24 and Middleborough town line**

- Left-turns into businesses on the south-side of road difficult to accomplish.

**Table 7-3  
Major Intersecting Ways**

<b>Intersection</b>	<b>Traffic Control</b>	<b>Accidents/ Year</b>	<b>Potential Safety Deficiency</b>	<b>Potential Flow Deficiency</b>
Interstate 495 & Route 24	Interchange	9.0		
Interstate 495 & Route 138	U / U	15.0	✓	
Route 24 & Route 44	S	27.0	✓	
Route 44 & Church St. & Leonard St.	U	2.3		
Route 44 & Hill St.	U	3.0		
Route 44 & Orchard St.	S	13.3	✓	
Route 44 & South St.	S	11.7	✓	
Route 138 & Elm St.		4.0		
Route 138 & Carver St.	S	8.0	✓	
Route 138 & Center St.	U	5.0	✓	✓
Route 138 & King Phillip St.	U	7.3	✓	
Route 138 & Dog Track	U	1.0		
Route 104 (N. Main St.) & Elm St.		0.7		
Route 104 (N. Main St.) & Center St.	U	3.7		
Route 104 (N. Main St.) & Gardner St.	U	1.0		
Route 104 (N. & S. Main St.) & Pleasant St. & Orchard St.	U	1.3		
Route 104 (S. Main St.) & King St.	U	0.7		
Route 104 (S. Main St.) & King Phillip St.	U	2.3		
Route 104 (S. Main St.) & South St.	U	0.0		
Church St. & Dean St.	U	0.0		
Dean St. & Hill St.	U	0.0		
Gardner St. & King Phillip St.	U	0.0		
Hill St. & South St.	U	0.3		
King St. & Locust St.	U	0.0		
King St. & Orchard St.	U	1.7		
King Phillip St. & Thrasher St.	U	0.3		
Locust St. & Pleasant St.	U	0.7		✓

U = Unsignalized intersection

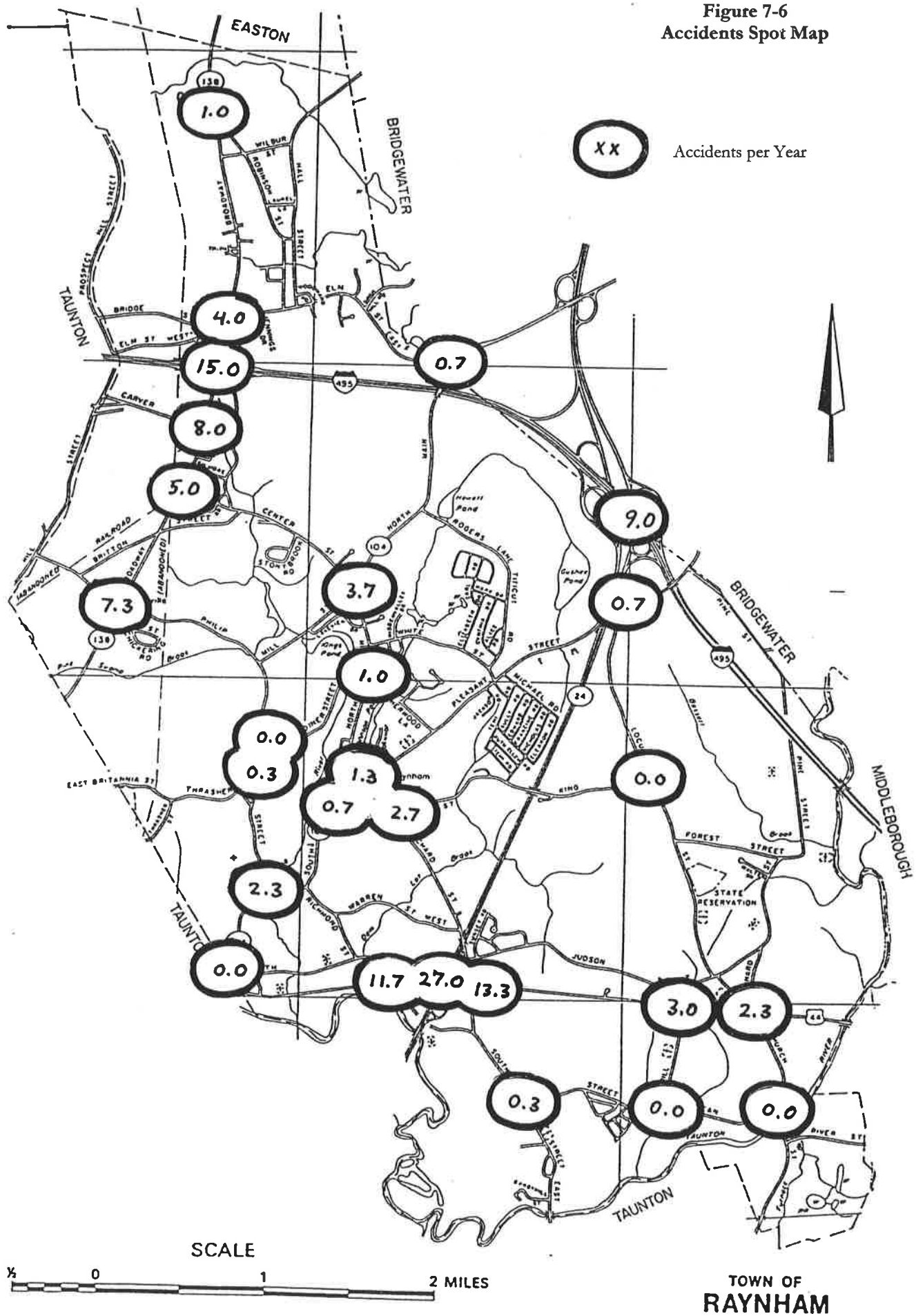
S = Signalized intersection

Accidents/year – based upon reported accidents for 1995 to 1997 from the MassHighway accident database. Zero fatalities, one accident involving a pedestrian, and one accident involving a bicyclist were reported.

Potential Safety Deficiency – greater than 5 accidents per year

Potential Flow Deficiency – as observed by the Raynham Police Department

Figure 7-6  
Accidents Spot Map



**Table 7-4**  
**Regional Traffic Accidents 1994-1996 (SRPEDD)**

<b>INTERSECTIONS</b>	<b>3 YR TOTAL</b>	<b>EPDO*</b>	<b>STATUS</b>
Route 44 at Orchard St.	73	48.33	Major Investment Study underway Signalized in 1996
Route 138/Broadway at Carver St.	38	34.00	
Route 138/Broadway at King Phillip St.	25	20.33	
<b>ROADWAYS</b>	<b>3 YR TOTAL</b>	<b>ACCS/MVM*</b>	<b>STATUS</b>
Route 44/New Cape Highway	580	--	FY98 Reconstruction
South Street West	34	11.76	
Route 138/Broadway	2 Fatal		

EDPO = Equivalent Property Damage Only – rating system that weighs crash data based on severity.

Point system: Property Damage Only = 1, Personal Injuries = 5, Fatality = 10

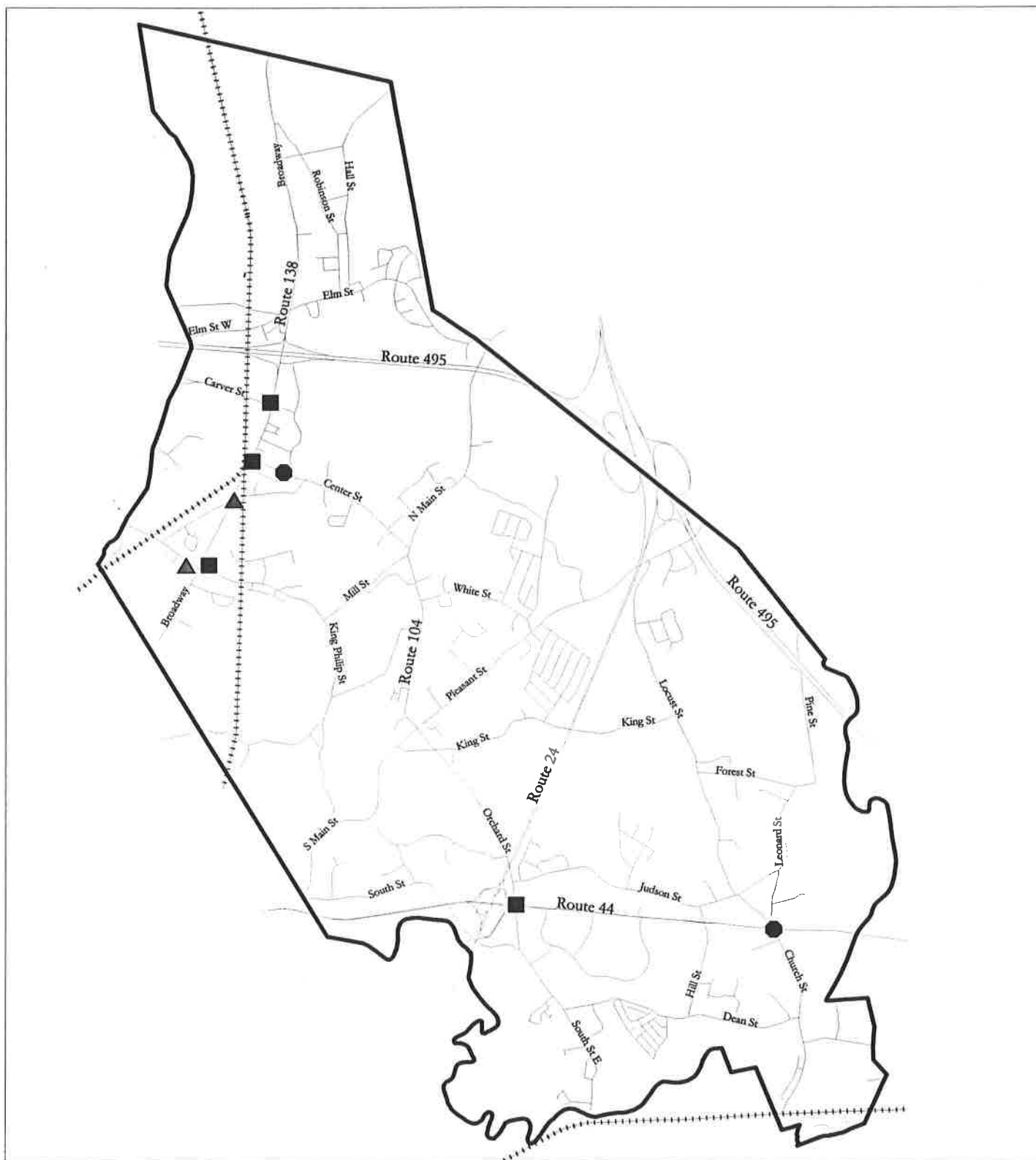
ACCS/MVM = Accidents per Million Vehicle Miles

**Table 7-5**  
**Raynham Police Department Observations**

<b>LOCATIONS</b>	<b>OBSERVATIONS</b>
Route 44 at Leonard & Church Streets.	High levels of traffic a concern. Traffic to increase with new industrial park at old drive-in in Middleboro.
Route 138/Broadway at Carver St.	Accidents caused by persons attempting to beat traffic light.
Route 138/Broadway at King Phillip St.	Poor sight lines/visibility. Major cross street from Taunton. Poor design. Town/state considering a traffic light.
Center Street	Backs up past Oak St. – can back up for over 1 mile. Cut-thru traffic using Oak St. to avoid light at Carver St.
Library Parking Lot	Busy when children's story hour occurs.
99 Restaurant	Gridlock at lights.
Judge Owens Parkway	Backs up to Stop & Shop because of light.

**Table 7-6**  
**Raynham Highway Department Observations**

<b>LOCATIONS</b>	<b>OBSERVATIONS</b>
Locust St., King St.	Poorly designed. Most roads in town have poor drainage.
Route 138/Broadway at Britton St.	Problem intersection / Poorly designed.
Route 138/Broadway at King Phillip St.	Problem intersection / Poorly designed.
Route 44 south side	Taking a left to get into the businesses problematic – to be redesigned with median strip.
Route 44 at Orchard St.	Problematic with Route 24 exit ramp.



Map 7-7

# **Town of Raynham** **Potentially Dangerous Locations**

- High Accident Location
- Congestion
- ▲ Poorly Designed



Prepared by Larry Koff and Associates

### **Public Transit**

Currently the town has limited local transit facilities or service in place. The following summarizes the existing transit service:

- Commuter bus service to Boston and Taunton is provided by H.L. Bloom Bus Company of Taunton; this is a private transit service which stops at the Raynham Dog Track for pick-ups and drop-offs.
- Dial-A-Ride service is provided by the Greater Attleboro-Taunton Regional Authority (GATRA) for the elderly and physically challenged. The person in need of transit must call ahead of time to schedule a pick-up. Persons with medical appointments/needs take priority for service. In discussions with Raynham's Council on Aging, it was identified that seniors are having a difficult time gaining transportation to the Town's Senior Center. The Director of the center reported that many seniors are not able to call ahead of time and/or the Dial-A-Ride service is not able to meet some seniors' needs.
- No commuter rail service is currently operating or planning to operate with a stop or station in Raynham. The MBTA recently decided in November 1999 to pursue the Attleboro option for commuter rail service between Boston and the Fall River/New Bedford area. This option provides stops near Raynham, but without a station in the town.

### **Pedestrians & Bicyclists**

The most noticeable issue in terms of pedestrians and bicyclists is the need for developing a system of continuous facilities including different types of walking facilities or bicycle facilities. An inventory of the town's sidewalks indicated several locations where gaps in the system exist. Along certain roadways, sidewalks are simply non-existent. At this time, there are virtually no bicycle facilities or emphasis on bicycle travel in the community.

### **Other Issues**

The Zoning By-laws for the Town of Raynham, Massachusetts were reviewed for transportation-related issues. In addition, current building practices and land development patterns for the area were considered. Characteristics or current regulations indicate the following other issues related to transportation:

- No growth management controls
- Minimal or no roadway design standards
- Lack of concentrated development areas that would support transportation demand management or transit
- No access guidelines provided by the Town
- Inadequate definition of desirable traffic operation conditions
- No requirement to conduct traffic studies for single-family house subdivisions

## PROJECTED BUILDOUT & IMPLICATIONS OF BUILDOUT

In analyzing the transportation impacts of potential development in Raynham, it was necessary to estimate the amount of traffic that various land uses can be expected to generate. If developed to its full potential under current zoning, the town of Raynham is expected to grow by 3,313 dwelling units, 6,932,200 square feet of gross leasable retail space, and 2,861,100 square feet of gross floor area for office and manufacturing uses. The following sections summarize the procedures used in estimating the traffic to be generated by the potential development of Raynham and the expected distribution of this traffic on study area roadways.

### Trip Generation

Traffic generated by the various land uses normally follows well-established patterns with respect to magnitude, duration, and temporal distribution. Measurements of numerous such developments conducted by various organizations including the Institute of Transportation Engineers (ITE) have established trip generation rates which have been compiled and used for guidelines for transportation analysis. For many land uses, measurements have been conducted by ITE which have been compiled for analysis purposes and provide analysts with guidelines in forecasting travel associated with new land uses. The daily and peak hour trip generation forecasts for Raynham's potential increases in development were based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual*<sup>1</sup>. Under the full development case, Raynham's growth will consist of the land uses as listed in Table 7-8, categorized by town section. Forecasts were completed for average season conditions for both year 2020 and full development cases.

The forecasted traffic is the total number of trips that could be added to Raynham's transportation network over and above the current traffic levels. Although these numbers may seem quite high, it should be stressed that they represent the worst case scenario of developing all currently developable land to the highest degree possible according to the current zoning regulations within the 20-year Master Plan timeframe. Several factors may reduce these traffic projections:

- Full buildout may not occur within 20 years.
- The developable land may be developed at lower densities than the maximum allowable by the current zoning regulations.
- The current zoning regulations may be substantially changed.
- Several types of development such as fast food establishments and gas stations gain most of their customers from traffic already on the roads and happening to pass-by the facilities. Hence, the more pass-by trips, the less new trips.
- Alternative modes of travel will potentially be increased by the addition of bus service, bikeways, and walkways, thereby reducing driving trips.
- An increase in the employment base of Raynham, linked with development of appropriate housing types can reduce the amount and length of several work trips by increasing the number of people who both live and work in town.

<sup>1</sup> Institute of Transportation Engineers, *Trip Generation Manual*, 6<sup>th</sup> Edition, Washington, D.C., 1997.

**Table 7-8**  
**Raynham's Potential Development**

Land Use	Year 2020			Full Buildout		
	Potential Development	Average Daily vpd	Pm Peak Hour vph	Potential Development	Average Daily vpd	Pm Peak Hour vph
<b>North Section</b>						
Single Family Detached Housing	204 DU	1,948	206	377 DU	3,608	381
Shopping Centers	315.0 ksf GLA	13,526	1,179	1,600.4 ksf GLA	68,690	5,985
General Office Buildings	361.3 ksf GFA	3,978	538	1,834.7 ksf GFA	20,200	2,734
Manufacturing	185.7 ksf GFA	710	137	943.3 ksf GFA	3,604	698
<b>North Section Subtotals:</b>		<b>20,162</b>	<b>2,060</b>		<b>96,102</b>	<b>9,798</b>
<b>Central Section</b>						
Single Family Detached Housing	677 DU	6,480	684	1,254 DU	12,002	1,267
Residential	23 DU	134	12	42 DU	246	23
Condominium/Townhouse						
Shopping Centers	261.0 ksf GLA	11,206	976	1,326.0 ksf GLA	56,912	4,959
General Office Buildings	357.7 ksf GFA	3,940	533	1,816.8 ksf GFA	20,004	2,707
Manufacturing	56.5 ksf GFA	216	42	287.1 ksf GFA	1,098	212
<b>Central Section Subtotals:</b>		<b>21,976</b>	<b>2,247</b>		<b>90,262</b>	<b>9,168</b>
<b>East Section</b>						
Single Family Detached Housing	908 DU	8,692	917	1,682 DU	16,098	1,699
Residential	463 DU	2,716	255	858 DU	5,028	472
Condominium/Townhouse						
Mobile Homes	95 DU	458	53	176 DU	848	99
Shopping Centers	789.0 ksf GLA	33,854	2,950	4,005.8 ksf GLA	171,930	14,982
General Office Buildings	1,352.7 ksf GFA	14,894	2,016	6,870.2 ksf GFA	75,642	10,237
Manufacturing	321.1 ksf GFA	1,228	238	1,630.7 ksf GFA	6,230	1,207
<b>East Section Subtotals:</b>		<b>61,842</b>	<b>6,429</b>		<b>275,776</b>	<b>28,696</b>
<b>TOWN TOTALS:</b>		<b>103,980</b>	<b>10,736</b>		<b>462,140</b>	<b>47,662</b>

DU = Dwelling Unit,  
GLA = Gross Leasable Area  
GFA = Gross Floor Area

ksf = Thousand square feet  
vpd = vehicles per day  
vph = vehicles per hour

If Raynham is developed to its full potential, then approximately 462,000 new trips per day and 48,000 new trips in the weekday evening peak hour could occur. Within a 20-year timeframe, it is projected that approximately 20 percent of this development would occur, resulting in approximately 104,000 new trips per day and 11,000 new trips in the weekday evening peak hour. If this development occurs at a constant rate over the 20 years (5% per year), then approximately 5,200 trips per day and 550 trips in the peak hour would be added to the network each year.

### **Trip Distribution & Assignment**

Directional distribution of generated trips to and from the developable sites typically are expected to follow existing traffic patterns which, in turn, are a function of population densities, shopping opportunities, areas of employment, and recreational activities. By the very nature of this analysis, projecting Raynham's year 2020 and buildout transportation needs, there would be a significant increase in newly developed virgin land (which is zoned for various levels of development) resulting in new traffic patterns, unlike traditional traffic impact analysis studies. To develop the traffic patterns of new trips, the Town of Raynham was divided into three broad sections – the

North, Central, and East sections. Traffic projections for each section were located at the centroid of the land development for each section and then applied to the current traffic system based upon a gravity model for distribution.

### **Implication of Growth**

From the above analysis, we would find the following problems:

- Projected growth is anticipated to exacerbate accident levels at already dangerous locations.
- Route 138 would be severely congested and could not handle all of the projected traffic without improvements. The numerous driveways would impede through traffic.
- Delays and queues would lengthen at Route 138/Center Street and further traffic would divert through a residential neighborhood to the Carver Street traffic signal.
- Delays and queues would lengthen at the Route 138/I-495 interchange warranting signal installations.
- Increases in both commercial and residential traffic are expected on Route 44, constraining the section east of Route 24.
- Locust Street, as an example of a local roadway, is expected to handle residential traffic projected for the Central Section of the Town. However, its current drainage problems could potentially hinder its operation, thereby limiting neighborhood accessibility.

## **7.3 GOALS AND OBJECTIVES/ISSUES**

The goals and objectives of the long range transportation component of the Raynham Master Plan were developed in collaboration with the Raynham Planning Department and the Transportation Subcommittee, with input from the general public, and following the development of an understanding of the transportation needs identified in the master planning process.

Ultimately, the goals are used to guide the Town in meeting its transportation needs and also, allow the Community to measure the achievement of the plan. In 1982, a comprehensive growth policy plan was prepared for the Town of Raynham by the Southeastern Regional Planning and Economic Development District (SRPEDD). The goal for transportation was as follows:

Improvement of traffic congestion and safety conditions on Raynham's thoroughfares (particularly Routes 44 and 138), and improvement in transportation access through a wider variety of convenient and energy efficient transportation modes.

This overall goal is still valid and was used as a basis for development of more specific goals tailored to Raynham's current needs. The following lists the set of transportation goals and objectives as developed for the current Master Plan.

***Promote a transportation system that is intermodal, encourages safe, effective alternatives for travel and maximizes the integration of all modes.***

- Establish Town Civic Center
- Enhance the integration and coordination of various modes of travel including walking, bicycling, driving, and transit.

- Introduce service of public transit through coverage areas, frequencies, amenities, and equipment.
- Seek improvements to regional transportation networks to alleviate local congestion, promote efficiency, and strengthen alternative modes.
- Provide continuous, adequate sidewalks along all major arterials and collectors and ensure that safe crossing areas are appropriately highlighted at the major demand locations, particularly for the safety of school children.
- Create a safe, visible bicycle network between neighborhoods, schools, parks, community centers, and employment centers; provide adequate storage facilities in key public areas and work locations.
- Incorporate bicycle design and walkway features in all infrastructure projects in a manner that is consistent with the "Open Space" and "Historical/Cultural" components of the Master Plan.
- Work with the business community to structure an appropriate method of participation in the transportation planning process and in managing vehicular demand.
- Provide information on the transportation system changes to the general population.

*Develop a transportation plan in concert with the community's economic development, land use plan, and open space plans, which is compatible with the state implementation plan, the Southeastern Mass: Vision 2020 report, and plans of neighboring communities.*

- Implement traffic circulation and control improvements in support of access and parking for local businesses along the Route 138 corridor and in the proposed Town Civic Center.
- Assure multi-modal access to the community's park, open space, and recreation areas. Establish bikeways, greenways, and walkways which link together neighborhoods and open spaces.

*Create a transportation system that provides safe and efficient arterials to accommodate through movements and movement to major commercial and business centers while minimizing unnecessary traffic through neighborhoods.*

- Implement improvements at intersections that have been recently identified as major problem areas through discussions with the Town's Safety Officer and as a result of the Transportation Subcommittee meetings.
- Implement improvements along Routes 44 and 138 to alleviate congestion and improve safety.
- Reduce excessive pavement areas for better traffic definition and public landscaping.
- Reduce traffic diversion through neighborhoods.

*Develop a transportation system that is cost-effective and affordable, maximizing the use of federal and state transportation funds, equitably incorporating private financing, and minimizing Town expenditures.*

- Identify and pursue federal and state funding programs to support roadway and transit actions.
- Develop local funding mechanism for local public and private contributions to implement improvement plan.

*Implement actions that minimize the negative impact and enhance positive features related to the environment and Town resources.*

- Avoid significant impacts on the Town's water resources and wetland areas.
- Incorporate streetscaping and landscaping plans in all roadway improvement projects.
- Minimize the loss of public open space such as parks and recreation areas.

## 7.4 THE RECOMMENDED PLAN

### Introduction

The Recommended Plan has been divided into three primary sections for discussion. In the first section Transportation Demand Management (TDM) elements are discussed. TDM describes a system of actions whose purpose it is to alleviate traffic problems through improved management of vehicle trip demand. The purpose of TDM is to maximize the mobility of people, not simply vehicles. In the second section Transportation Safety Management (TSM) elements are discussed. TSM elements are primarily traffic engineering methods, such as efficient signal operations and coordination, providing turn lanes or modifying circulation patterns, used to improve the safety and operation of the roadway system. The third and final section details Major Network Improvements. Both Routes 138 and 44 are discussed.

### Transportation Demand Management Elements

#### *Encourage concentrated development in centers*

It is recommended that new development be concentrated in centers to heighten the potential for alternate mode usage. Allowing mixed-use development in a single area or zone enables people to live, work, and shop in that zone. Trip lengths are diminished. As trips shorten, the likelihood of switching to a mode other than a single occupant vehicle is increased – more people begin to walk and bicycle to satisfy their travel needs. Concentrated development is also encouraged to sustain a transit system as well as to promote less consumption of open land than under current zoning regulations.

#### *Local and regional transit plan*

The focus of this section is the development of transit alternatives that would enhance the use of mass transit and reduce vehicular dependency and travel. Three transit alternatives may be appropriate in the Town of Raynham

- a local circulator bus that serves the residents and makes it more desirable to leave the car at home,
- a shuttle bus to nearby MBTA commuter rail stations, and
- an improved Dial-A-Ride service for the elderly and physically challenged.

To be successful, a local circulator bus and shuttle system should limit walking distance for any resident to less than a quarter of a mile and should connect to both the Bloom

#### Community Land Uses:

- |                             |                              |
|-----------------------------|------------------------------|
| 1. Town Hall/Police Station | 6. Senior Center             |
| 2. Fire Station             | 7. Schools                   |
| 3. Library                  | 8. Parks                     |
| 4. Public Works Department  | 9. Major apartment complexes |
| 5. Other Town facilities    | 10. Health centers           |

Transit Depot in Taunton and nearby MBTA commuter rail stations. A local circulator can reasonably cover the Town of Raynham with one route that travels on some of the major roadways but is also within the quarter mile maximum for most potential passengers. The local circulator could be subsidized by participating local employers whose employees would benefit from this service; this would work well with the Housing Committee's goal of creating more housing in Raynham for people working in the town. Several key land uses within the town that ought to be considered for servicing by the proposed route are defined as "Community Land Uses". In addition to the locations suggested for servicing, major employers and major shopping areas should be accessible by the route.

#### *Network of bikeways and walkways*

The most noticeable need in terms of pedestrians and bicyclists is the need for developing a system of continuous facilities, whether it is different types of walking facilities or bicycle facilities.

Pedestrian Facilities: Actions to improve conditions would be to close the gaps, and provide sidewalks (one or two sides) along all major roadways in the community. Footpaths, trails, or other walking facilities should be provided as a further action to access the recreation and conservation areas in town. In addition, walking facilities are recommended along roadways which pass historic sites. A potential priority system for addressing the sidewalk deficiencies in Raynham is presented in Table 7-9.

**Table 7-9**  
**Construction Priority Of New Sidewalks\***

GAPS WITHIN ONE HALF MILE	ROADWAY CLASSIFICATION		
	<u>Arterial</u>	<u>Collector</u>	<u>Local</u>
Schools	1	2	3
Churches	1	2	3
Parks/Recreation Areas	2	3	4
Shopping	3	4	5

\* Priority ratings range from 1 for the highest and 5 for the lowest.

The above priority plan can be used to assist in scheduling the construction of new sidewalks as funds become available, while the following recommended guidelines provide some design specification and standards to be followed during construction.

The recommended guidelines for replacement and installation of sidewalks were developed with the aid of two research publications<sup>2,3</sup>. Table 7-10 provides a set of guidelines that can be followed when new sidewalks are to be constructed or existing sidewalks are replaced. The information in the table may be used to determine where sidewalks should be provided based on the roadway classification and whether or not the sidewalk is being considered along an existing or new road.

<sup>2</sup> Transportation Research Board, National Cooperative Highway Research Program No. 139, *Pedestrian and Traffic-Control Measures*, Washington, DC, November 1988.

<sup>3</sup> Department of Transportation, Federal Highway Administration, *A Manual for Planning Pedestrian Facilities*, Washington DC, June 1974.

**Table 7-10**  
**Recommended Guidelines For Sidewalk Installation**

<b>Land Use / Roadway Classification</b>	<b>New Urban &amp; Suburban Streets</b>	<b>Existing Urban &amp; Suburban</b>
Commercial & Industrial / All Streets	Both sides	Both sides. Every effort should be made to add sidewalks where they do not exist.
Residential / Major Arterials	Both sides	Same as above.
Residential / Collectors	Both sides	Multi-family – both sides. Single family dwellings – prefer both sides, require at least one side.
Residential / Local Streets – More than 4 units/acre	Both sides	Prefer both sides, require at least one side.
1 to 4 units/acre	Prefer both sides; require at least one side.	One side preferred.
Less than 1 unit/acre	One side preferred; require shoulder both sides.	Require at least 4 foot shoulder on both sides.

**Source:** Transportation Research Board, NCHRP 139, *Pedestrian and Traffic Control Measures*.

To supplement the information in the table, the following set of standards has been developed to assist in the decision making process and provide some general design guidelines to be followed during construction:

1. Any local street within two blocks of a school site that would be on a walking route to school should have a sidewalk on at least one side.
2. Sidewalks may be omitted on one side of new streets where that side clearly cannot be developed and where there are no existing or anticipated uses that would generate pedestrian trips on that side.
3. Where there are service roads, the sidewalk adjacent to the main road may be eliminated and replaced by a sidewalk adjacent to the service road on the side away from the main road.
4. All new sidewalks should be at least five feet wide and must comply with the access requirements/standards detailed in the Americans with Disabilities Act and Amendments.
5. Where the right-of-way exists, there should be a buffer of at least three or four feet between the edge of roadway and the edge of the sidewalk.
6. Vertical granite curbs are desired to provide a barrier between motor vehicles and pedestrians when the sidewalk is within ten feet of the traveled way.

#### Bicycle Facilities

Alternatives for improving bicycle facilities in Raynham include designating bicycle routes, designing bicycle paths, installing bicycle storage facilities in key locations (i.e. employment and shopping centers, Town buildings, transit stops), and disseminating the information to the community through mapping and signage.

A proposed townwide bicycle network was developed for both recreational and commuter type travel. See Map 4-11 for an illustration of this potential network. The network was also developed in conjunction with the Historical and the Open Space Committees of the Master Plan. For commuters, direct connections and level bikeways are the key. For the recreational bicyclists, varied terrain, points of interest, and scenic views are of importance. It is important that commuter routes and routes leading to the schools be enhanced through widening, striping, or both. Signing along these routes can also serve to make motorists more aware and possibly reduce travel speeds. Key routes to the Town's major recreation areas are also vital. Key destinations such as the Town Hall, the library, and the Route 138 and Route 44 business districts must also provide adequate storage facilities.

### **Transportation Safety Management Elements**

The transportation system in Raynham will experience significant increases in traffic flows over the next twenty years. To accommodate these higher flows it is crucial that the road system be safe. Addressing this issue, we have suggested safety improvements for several major intersections throughout the town and outlined potential access management criteria.

#### *Isolated Intersection Upgrades*

In addition to the overall long term plan elements that needed to be addressed, one interchange and seven specific isolated intersections were identified for further attention. All of these locations can have improvements developed and implemented in a relatively short time frame. The intersections included are currently experiencing congestion deficiencies, high accident experience, or have geometric-related characteristics that could be improved. Each location is briefly discussed.

- Interstate 495/Route 138 Interchange - The proposed improvement at this location is coordinated signalization of the two intersections.
- Route 44/Church Street - Improve visibility.
- Route 138/Carver Street - To begin addressing the problem, it is recommended that the signal timing of the intersection be reviewed and adjusted to better serve the traffic flows. Additionally, a traffic signal should be considered for Route 138/Center Street.
- Route 138/Center Street - It is suggested that this intersection be signalized to better accommodate the traffic flows.
- Route 138/Britton Street - A redesign of this intersection to reduce the skew is recommended.
- Route 138/King Phillip Street - It would be beneficial to redesign this intersection by either removing the island or modifying the approach so there is only one direction of traffic on each side of the island.
- Route 104/Center Street/Mill Street - It is recommended that the intersection be redesigned to tighten it up and reduce the skew.
- Pleasant Street/Locust Street - Redesign to accommodate turn lanes on Pleasant Street and/or a two-lane approach for Locust Street is suggested.

#### Access Management

In addition to improving the safety at several existing intersections, safety should also be managed on a system-wide basis. To this end, the following recommendations are made to manage access to the roadway network and provide for an adequate network while allowing new development.

- Develop specific curb-cut design and management guidelines to limit the number and frequency of curb-cuts along different types of roads.
- Improve road surfaces, especially drainage design. Guidelines for proposed roadways should be adjusted to alleviate the drainage problems which currently occur.
- Improve roadway and walkway lighting. Classification of proposed future roads is recommended to determine the level of lighting required by the town to be installed by the developer.
- Adopt roadway design standards to include pedestrian and bicycle facilities within larger rights-of-way.
- Incorporate site plan review and traffic study requirements for all proposed subdivisions in the Zoning By-laws.

### **Major Network Improvements**

Both Routes 138 and 44 serve as the Town's commercial corridors as well as the primary interregional roadways. With a significant increase in development, each of these roadways will need to accommodate more traffic while offering access to all of the current and future corridor developments. Therefore, it is essential that each corridor be carefully planned to address these needs. In the following two sections recommendations are made for each corridor. See figures 7-8 through 7-10.

#### Route 138 cross-section and plan

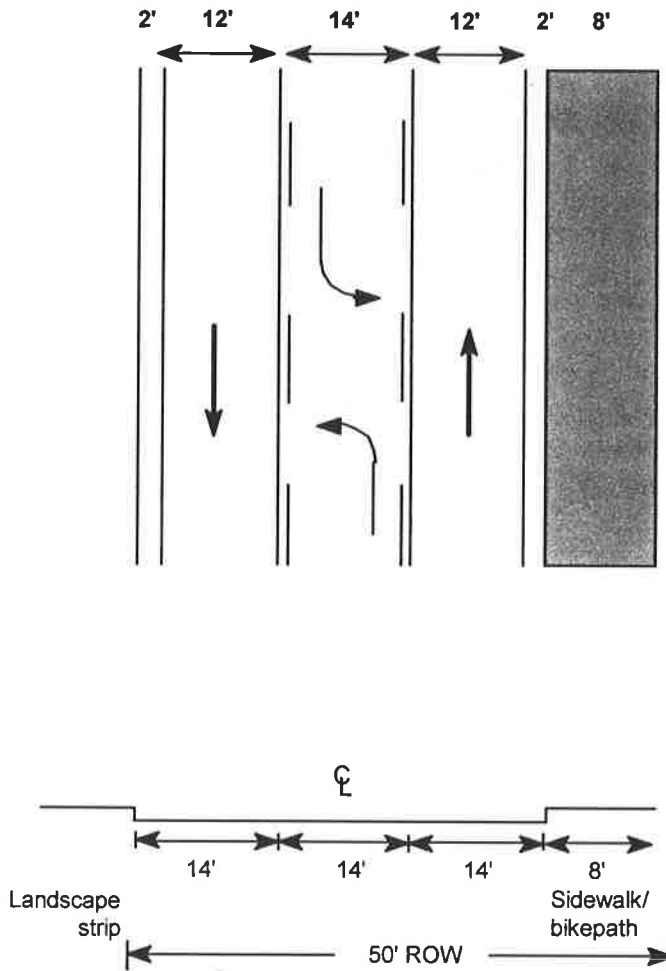
- Expand Route 138 south of I-495 to a three-lane cross-section.
- Install coordinated signals at the I-495 interchange.
- Provide pedestrian and bicycle facilities.
- Limit curb-cuts or require access be provided from a parallel facility.
- Signalize key intersections.
- Acquire right-of-way north of I-495 for potential widening.

#### Route 44 cross-section and plan

- Continue moving forward and working with the Mass Highway plans.
- Expand Route 44 to a four-lane cross-section.
- Provide pedestrian and bicycle facilities either on Route 44 or on a parallel facility.
- Limit curb-cuts or require access be provided from a parallel facility.
- Redesign Route 24 interchange.

Figure 7-8

**Two Lane Cross-section with Center  
Two-way Left Turn Lane**



**Summary**

Can accommodate up to 20,000 to 26,000 vpd prior to congestion.

**Advantages:**

Reduces delay to through vehicles from left movement.

Reduces frequency of rear-end and angle type collisions.

Provides spatial separation between opposing directions.

Cross-section may be accommodated in existing right-of-way.

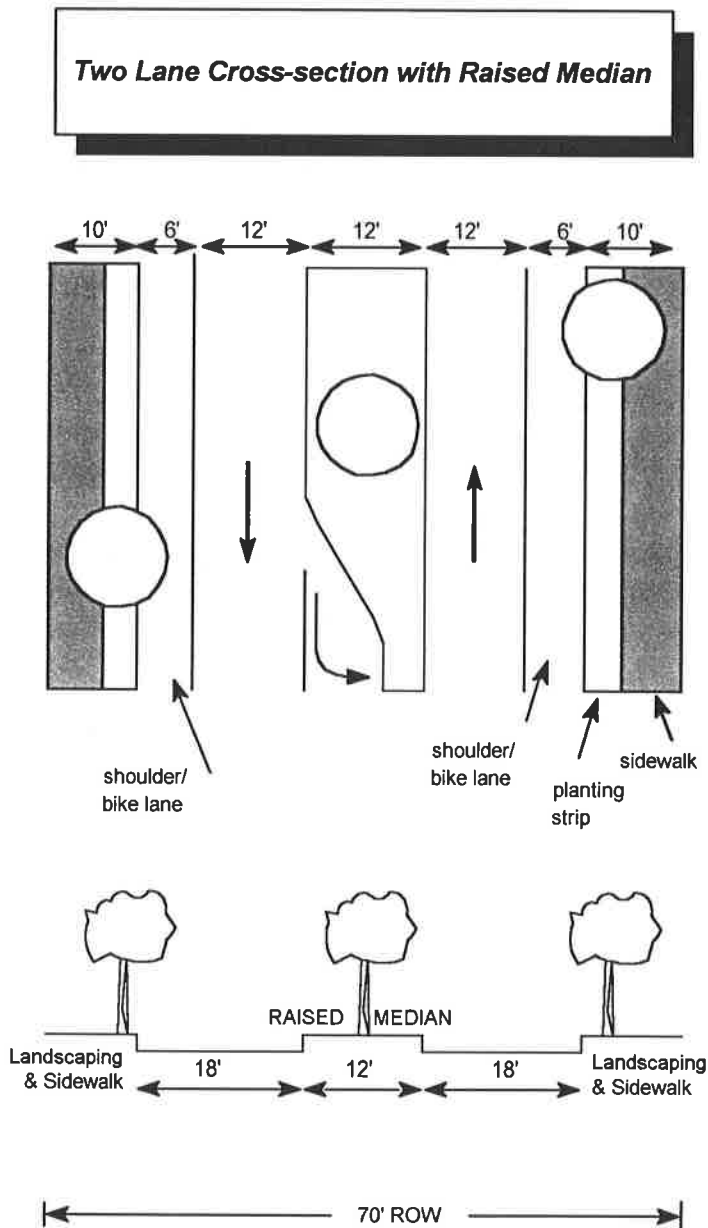
**Disadvantages:**

No refuge in median for pedestrians.

May encourage strip commercial development.

Pedestrians and bicyclists only have access to one side of street and must share facility.

Figure 7-9

**Summary**

Can accommodate up to 20,000 to 22,000 vpd prior to congestion.

**Advantages:**

Reduces frequency of rear-end and angle type collisions.

Provides spatial separation between opposing directions.

Provides a median refuge area for pedestrians.

Pedestrians and bicyclists have separate facilities.

**Disadvantages:**

Requires wider pavement and shoulders.

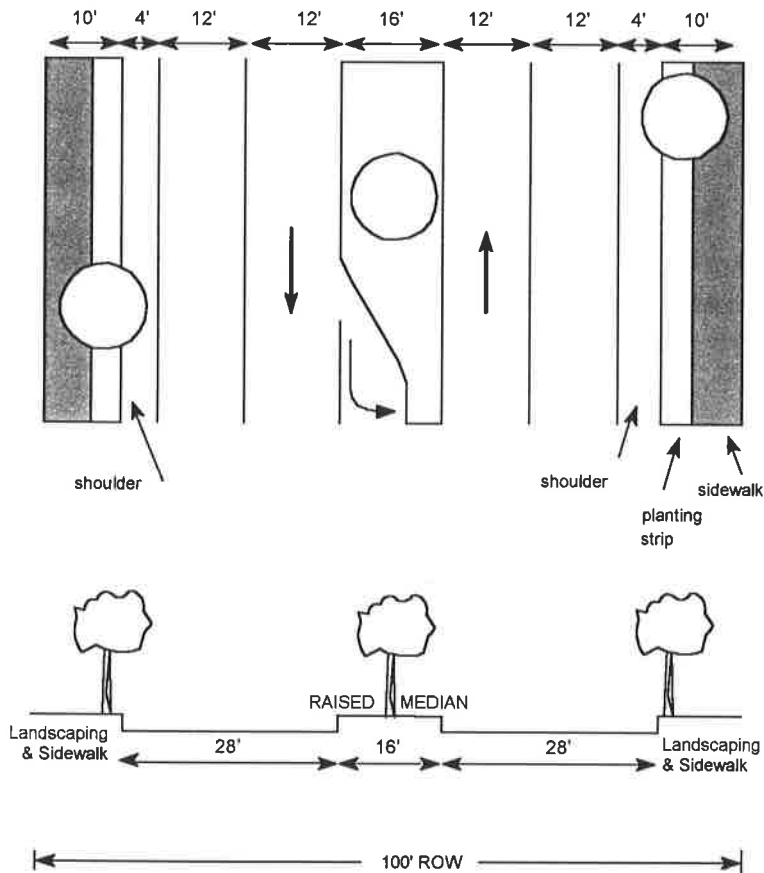
Increased delay to left-turning vehicles - need to accommodate u-turns.

Will require additional right-of-way.

Indirect routing for large trucks.

Figure 7-10

**Four Lane Cross-section with Raised Median**



**Summary**

Can accommodate  
40,000+ vpd

**Advantages:**

Left turn lanes reduce frequency of  
rear-end and angle type collisions.

Significant increase in capacity.

Provides spatial separation between  
opposing directions.

Provides a median refuge area for  
pedestrians.

Discourages strip development  
pattern.

**Disadvantages:**

Requires wider pavement, shoulders,  
and right-of-way.

Increases delay to left-turning  
vehicles - need to accommodate  
u-turns.

Indirect routing for large trucks.

**Appendix 7-1  
Traffic Volume Data**

**Appendix 7-2  
Model Zoning By-laws**

	LINE	LOCATION	SECT.	SQ. FT.	AREA	CUBIC YD.	ESTIMATED COST	ACTUAL COST	VARIANCE	DATE OF ESTIMATE	DATE OF ACTUALS	PERCENTAGE DIFFERENCE
6330	U-1	I-495	495	RTE. 138 (S)	0	0	0	0	0	37250	0	0
725	U-1	I-495	495	RTE. 24 (S) (.4KM)	0	46812	45369	44922	41145	39850	39175	39415
	U-1	I-495	495	RTE. 24 (N)	0	48072	45400	42000	0	43000	41000	0
	U-5	BROADWAY	138	I-495 (N)	0	0	0	23000	0	0	0	0
	U-5	BROADWAY	138	CARVER ST. (S)	0	0	0	0	0	0	0	0
	U-5	BROADWAY	138	@ EASTON LINE	17383	0	17000	0	0	0	14000	0
	U-5	BROADWAY	138	@ TAUNTON LINE	0	0	0	18000	0	0	0	0
	U-5	BROADWAY	138	I-495 (S)	0	0	0	27000	0	0	0	0
	U-5	BROADWAY	138	CENTRE ST. (S)	0	23000	0	0	0	0	0	0
	U-5	BROADWAY	138	KING PHILIP ST. (S)	0	23000	0	0	0	0	0	0
	U-5	CENTER ST.	0	RTE. 138 (E)	0	5900	0	0	0	0	0	0
	U-6	CHURCH ST.	0	RTE. 44 (S)	0	0	0	0	0	0	0	0
	U-6	ELM ST.	0	RTE. 138 (E)	0	0	4900	0	0	0	0	1175
	0	KING PHILIP ST.	0	RTE. 138 (E)	0	4200	0	0	0	0	0	0
	0	KING PHILIP ST.	0	RTE. 138 (W)	0	2700	0	0	0	0	0	0
	0	LOCUST ST.	0	PLEASANT ST. (S)	0	0	0	0	878	0	0	0
	0	N.MAIN ST.	104	ELM ST. (S)	0	0	0	0	0	4320	0	4450
	U-5	N.MAIN ST.	104	BTWN. WHITE ST. & LAKEVIEW DR.	0	10000	0	0	0	0	0	0
	U-5	N.MAIN ST.	104	@ BRIDGEWATER LINE	0	5900	0	0	0	4300	0	4764
	U-5	ORCHARD ST.	0	RTE. 44 (N)	7886	0	0	0	0	0	0	0
	U-6	ORCHARD ST.	0	RTE. 44 (S)	10661	0	0	8400	0	8300	0	6590
	0	PLEASANT ST.	0	@ BRIDGEWATER LINE	0	2500	0	0	0	0	1694	0
	U-6	PLEASANT ST.	24	RTE. 44 (N)	0	52948	50901	19000	0	47549	45543	42275
	U-2	RTE. 44	44	COMMERCE WAY (E)	0	0	0	0	0	0	0	2380
	U-2	RTE. 44	44	COMMERCE WAY (W)	0	0	0	0	0	0	0	0
	U-2	RTE. 44	44	@ TAUNTON LINE	0	22074	0	19000	0	0	0	0
	U-2	RTE. 44	44	ORCHARD ST. (E)	0	0	0	29000	0	30000	0	29500
	U-2	RTE. 44	44	@ RAYNHAM CROSSING	0	0	0	19000	0	0	18670	0
	U-2	RTE. 44	44	RTE. 104 (E)	0	0	24016	0	0	0	0	0
	U-2	RTE. 44	44	SHAW'S PLAZA ST. (E)	0	27100	0	0	0	0	0	22150
	U-2	RTE. 44	44	SOUTH ST. (W)	0	40200	0	0	0	0	0	0
	U-6	SOUTH ST. (E)	0	RTE. 44 (N)	0	4500	0	0	0	0	0	0
	U-6	SOUTH ST. (E)	0	RTE. 44 (S)	0	8000	0	0	0	0	0	0
	0	SOUTH ST.	0	RTE. 104 (E)	0	0	0	1900	0	0	0	0
	U-5	SOUTH ST. (E)	0	ORCHARD ST. (S)	0	0	0	0	0	0	0	1700
	U-5	S. MAIN ST.	104	RICHMOND ST. (S)	0	5800	0	8400	0	0	0	0
	U-5	S. MAIN ST.	104	@ TAUNTON LINE	0	4500	0	0	0	4700	0	4850

**Cape Cod Commission Model Bylaws and Regulations****Model Access Management Regulation****Background**

Roads are classified by the Metropolitan Planning Organization (a regional committee defined in Section 02.4, below) in coordination with the Commonwealth of Massachusetts and the Federal Highway Commission according to their role in the regional roadway system. The higher the classification of the road, the more the road is intended for through travel instead of access. At the highest level are limited access highways. At the lowest level, are roads considered as "local," providing access to limited commercial and residential districts. In order to allow the roadway system to function as intended, driveways and new access points should be minimized on higher class roads. If these access points are deemed necessary, they must nevertheless be spaced sufficiently apart.

This regulation is intended to strengthen Cape town's general bylaws and subdivision rules and regulations with respect to access from new land divisions onto public, and in some cases, private ways. As a general bylaw or ordinance, this model must be adopted by Town Meeting or Town Council in accordance with G.L. c. 43B §13. As a subdivision regulation, this model must be adopted by a planning board in accordance with G.L. c. 41 §81-Q.

**01.0 Purpose:** The purpose of this access management regulation is to provide reasonable access to development which is consistent with the intended function of the adjacent roadway system. This reasonable access is achieved through location and spacing criteria for driveways and subdivision road access points along town roadways, minimizing the number of driveways, consolidating existing driveways, encouraging driveways on collectors versus arterials for corner lots, encouraging shared driveways, controlling the geometric design of driveways, and locating driveways as far away from roadway intersections as possible.

**02.0 Definitions:** As used in this bylaw, the following words and terms shall have the meanings specified herein:

02.1 Driveway/Curb Cut: Any access point onto a roadway. This may include, but is not limited to, an entrance to a parcel, or an intersection with another roadway.

02.2 Driveway Interconnection: A private driveway connection between two lots that does not require traveling on the roadway system.

02.3 Functional Classification: The category of a road according to its intended purpose. At the highest end are roads designed to provide mobility, and at the lowest end are roads designed to provide access to land development. The Metropolitan Planning Organization (MPO) classifies roads as one of nine different classifications or as "unaccepted." For the purposes of this bylaw, these classifications have been consolidated into four types:

02.3.1 Arterial: Provides the greatest mobility at the greatest vehicle speed for the longest uninterrupted distance. Includes functional road classifications of "rural principal arterial," "urban extension of rural principal arterial," "rural minor arterial," "urban extension of rural minor arterial," and "urban minor arterial," with the exception of limited access roads.

02.3.2 Collector: Provides balance of mobility and land access, collects and distributes traffic between local and arterial roadways. Includes functional road classifications of "rural major collector," "urban collector" and "rural minor collector."

02.3.3 Local: Provides greatest land access and little or no through movement. Includes functional road classification of "local."

02.3.4 Unclassified: Private or unmaintained public roads that function like local roads. Includes functional road classifications of "unaccepted" and "unclassified."

When references are made in this bylaw to "higher" or "lower" functional class, the ranking of these classifications from high to low is arterial, highest, followed by collector and then local, lowest.

*Commentary:* The MPO/state method of classifying roads is useful for some purposes but too detailed for the needs of this bylaw. That is why they are grouped into three basic types (which are the types commonly used by transportation engineers). Limited access roads such as Route 6 before the Orleans/Eastham Rotary and Route 28 south of the Otis Rotary cannot have additional driveways or access points without extensive state review and approval and are thus not considered under this bylaw.

02.4 Metropolitan Planning Organization (MPO): A regional planning committee that consists of representatives of the Massachusetts Highway Department (MHD), Executive Office of Transportation and Construction (EOTC), the Cape Cod Regional Transit Authority (CCRTA) and the Cape Cod Commission (CCC). In consultation with its advisory group, the Cape Cod Joint Transportation Committee, the MPO is responsible for making decisions regarding transportation planning and development in Barnstable County, including classifying roads by their functional types.

02.5 Regional Roadways in Regional Policy Plan: All roads on Cape Cod that are not classified "local" or "unclassified."

**03.0 Authorization:** Pursuant to G.L. c. 43B §13 and G.L. c. 41 §81-Q, the Town of adopts a roadway classification program to protect the public health, safety and welfare. The roadway classification system is based on the roadway classification system adopted by the Metropolitan Planning Organization (MPO). The functional classification of town roads is shown in Figure 1.

*Commentary:* Each town should include in its bylaw a Figure listing the functional classification of town roads. The Cape Cod Commission can provide this information.

**04.0 Classification of Future Roads:** It shall be the responsibility of the planning board, at the time of the subdivision of land, to issue a determination as to the recommended classification of all roads to be created by said subdivision. Failure to designate a road classification shall mean that the roads are to be designated as local roads. These decisions will be passed on by the Town Planner to the MPO for approval in their functional classification.

**05.0 Changes to Roadway Classification:** The planning board, with the approval of the Town governing body, may recommend changes to town road classifications with the intent to enhance the protection of the general health, safety and welfare. These decisions will be passed on by the Town Planner to the MPO for approval in their functional classification.

*Commentary:* The above section is designed to provide the town with a method for choosing the

functional classification they want for any new roads, or to decide to change them for existing roads. These changes are subject to MPO approval before becoming part of the state's functional classification but may be used by the town regardless. Towns may wish to include a provision for a public hearing as part of this process.

**06.0 Curb Cuts:** All driveways and changes to driveways shall:

06.1 be approved by the Town Department of Public Works and be issued an Access Permit by the Superintendent/Director of Public Works.

06.2 be located according to Figures 2a-2f. These distances are measured from the nearest side of the driveway to the nearest side of any other driveways. In cases where a specific distance cannot be determined from these Figures, the Superintendent/Director of Public Works shall make a determination as to the applicable distance based on extrapolation from the values in these Figures.

*Commentary:* While Figures 2a-2f are likely to apply all Cape towns, each municipality should review the guidelines established by these Figures to ensure reflection of local ingress/egress and road spacing criteria.

06.3 be consolidated into a single driveway where possible. All development and redevelopment shall provide the minimum number of driveways for the size and type of land use proposed and provide a maximum of one driveway for up to 50 feet of frontage, two driveways for 51 to 150 feet of frontage and three driveways for 151 to 500 feet of frontage.

06.4 be located and designed to provide safe sight distances at the driveway in accordance with American Association of State Highway Transportation Officials (AASHTO) guidelines for stopping sight distances under wet pavement conditions.

06.5 be in compliance with standard Massachusetts Highway Department design criteria.

06.6 operate at Level of Service C or better (Level of Service D or better in certified growth/activity centers) during the PM peak hour for a minimum of five years into the future from issuance of an Access Permit, as assessed by the project applicant and reviewed and approved by the town DPW Superintendent/Director.

06.7 provide appropriate traffic control devices in accordance with the Manual on Uniform Traffic Control Devices. Where traffic signals are proposed and warranted, traffic signals must be placed at uniform intervals as allowed by the road system, and must not be located less than 1/4 mile (1,320 feet) away from an existing or planned traffic signal. Proposed signals must also be consistent with all other town policies and regulations governing traffic signals.

06.8 prohibit turn movements that cause safety concerns through driveway geometry and signage, or for consistency with future roadway plans described in the Local Comprehensive Plan.

06.9 not intersect the storage, deceleration and transition taper areas of a proposed right-turn lane. Existing driveways shall be relocated outside this area consistent with the appropriate spacing requirements above as approved by the Superintendent/Director of Public Works. The relocation of existing driveways needing to be moved shall be provided by the proponent of the turning lane.

06.10 not intersect the storage, deceleration, and transition taper areas of a proposed left-turn lane. Existing driveways on either side of the road shall prohibit left-turn movements through geometric changes in the driveway design or be relocated outside this area consistent with the appropriate space requirements above as approved by the Superintendent/Director of Public Works. The relocation of existing driveways needing to be moved shall be provided by the proponent of the turning lane.

06.11 for corner lots where collector and arterial roads meet, be located on the collector road if possible.

*Commentary:* This requirement is designed to keep driveways off arterial roads if possible. Additional driveways on local roads within residential neighborhoods are not always encouraged, so this requirement only gives preference to collector over arterial roads. Note also that this portion of the bylaw grants review authority over new curb cuts to the Director of Public Works or his/her designee. Towns may wish to have another town agency responsible for issuing these permits such as the Planning Board.

**07.0 Additional Requirements:** All applicants for the division of land subject to the Subdivision Control Law and/or the Town of \_\_\_\_'s subdivision rules and regulations shall:

07.1 be responsible for the cost to provide access. Project applicant(s) may be required by the Town to install and pay for standard traffic control devices, pavement markings, channelization, or other access related improvements to facilitate safe and efficient traffic flow, or such improvements may be installed by the Town and up to one hundred per cent of the cost of such improvements may be assessed upon the applicant.

07.2 not consolidate traffic from existing development to justify signaling a driveway, unless the location is at least 1/4 mile (1,320 feet) from any other existing or planned traffic signal.

*Commentary:* Although combining driveways is often to be encouraged, if such combination requires that a traffic signal be installed at the resulting access point, that signal can cause more problems than the original driveway arrangement unless sufficient space is provided between signals.

07.3 consult the town Director/Superintendent of Public Works regarding access on State Highway roadways prior to seeking a curb-cut permit from the Massachusetts Highway Department, and work with the Town and other authorizing agencies such as the MHD to agree on an overall access plan for the site prior to site approval.

07.4 provide shared access with adjacent development where feasible. Providing shared access can be used to satisfy a portion of trip reduction requirements in cases where a project is a Development of Regional Impact or requires trip reduction under the Local Comprehensive Plan.

07.5 provide a driveway interconnection between adjacent parcels to avoid short trips and conflicts on the main road. Providing a driveway interconnection can be used to satisfy a portion of trip reduction requirements in the case where a project is a Development of Regional Impact or requires trip reduction under the Local Comprehensive Plan.

07.6 consolidate existing driveways located adjacent to the desired driveway location where driveways cannot meet the spacing and location criteria.

07.7 be in conformance with the driveway spacing and location criteria as soon as practicable after a road is reclassified to a higher functional classification.

In any case where the requirements of this section cannot all be met due to space limitations, the Superintendent/Director of Public Works shall consult with the Planning Board and determine the most appropriate location(s) and number of driveways permitted for the site.

## **08.0 Subdivision Street Continuity**

08.1 Proposed roads shall be in accordance with existing and proposed arterial, collector and local roads, based on the town's functional class map shown in Figure 1 and shall be designed to afford safe access to abutting lots.

08.2 Road alignment shall give due consideration to land contours and natural features.

08.3 Where required by the Planning Board provision shall be made for the extension of the road to abutting property. The plan of any proposed subdivision shall show all work required to connect and complete the improvements between the proposed road pattern and any connecting road in an existing subdivision.

08.4 Location of any proposed subdivision road shall require an Access Permit as required in the town bylaws; and shall conform to all other town bylaws regarding access management.

08.5 In order to provide safe access and egress for all subdivisions, no temporary or permanent gate, fence or other obstruction may be erected on any portion of the traveling surface of the road unless permitted by the Director/Superintendent of Public Works in consultation with the Planning Board.

*Commentary:* The above-noted provisions should help strengthen the town's subdivision regulations with respect to road layouts and new road access. Towns should note that some of these provisions may be included within existing subdivision rules and regulations. In addition, note that if the text of this model regulation is adopted as a general town bylaw, the provisions of Section 08.0 above may nevertheless need to be adopted by the Planning Board as revisions to the Town subdivision rules and regulations.

## **09.0 Severability:**

09.1 If any provision of this bylaw/regulation is held invalid by a court of competent jurisdiction, the remainder of the bylaw shall not be affected thereby. The invalidity of any section or sections or parts of any section or sections of this bylaw/regulation shall not affect the validity of the remainder of the [town]'s general bylaws/regulations.

*Commentary:* This Section is a generic severability clause. Severability clauses are intended to allow a court to strike or delete portions of a regulation that it determines to violate state or federal law. In addition, the severability clause provides limited insurance that a court will not strike down the entire bylaw should it find one or two offending sections.

---

Go to the Cape Cod Commission's  
**Model Bylaws and Regulations** Page

# **SITE TRIANGLE AMENDMENTS:**

## **Example A. Zoning By-Law or General By-Law/Ordinance:**

### **1. Amend Definition Section:**

Sight Triangle: A triangular-shaped portion of land established at street intersections in which there are restrictions on things erected, placed or planted which would limit or obstruct the sight distance of motorists entering or leaving the intersection.

### **2. Amend Dimensional and Density Regulations:**

Subsection \_\_\_\_ Sight Triangle:

At no street intersection in any district shall an obstruction to vision exceeding two and one-half (2-1/2') feet in height above the street grade be placed or permitted to grow on any lot within the triangle formed by the right of way lines abutting the intersection and a line connecting points on these street lot lines at a distance of thirty-five (35') \* feet from the point of intersection of each right of way line.

\* This number may differ based on roadway type/classification or local preferences.

## **Example B. Subdivision Regulations:**

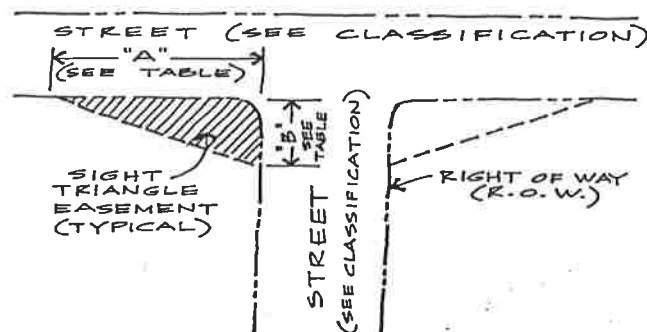
### **1. Amend Definition Section:**

Sight Triangle: A triangular-shaped portion of land established at street intersections in which there are restrictions on things erected, placed or planted which would limit or obstruct the sight distance of motorists entering or leaving the intersection.

### **2. Amend Roadway Design Standards:**

#### ***Option 1 Easement:***

At street intersections the applicant shall provide a sight triangle easement on each corner. The applicant shall provide a restrictive covenant on each lot which requires a sight triangle easement. Each covenant shall include specific language granting public right of entry and maintenance for the purpose of removing any object, material or otherwise, that obstructs the clear sight. The following Graphic \_ shall be used to determine the distance (as measured along each right of way line) required on sides "A" and "B" of the triangle

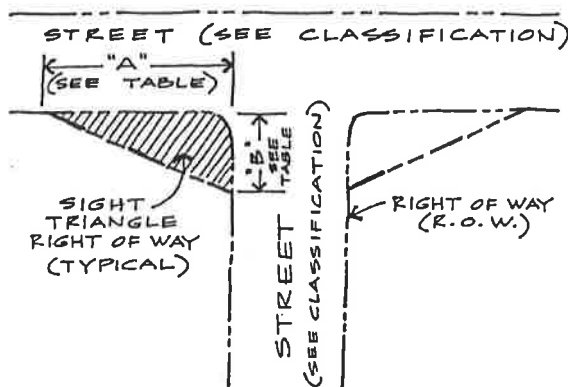


REQUIREMENT BY STREET CLASSIFICATION (MEASURED ALONG R.O.W.)		"B"(DISTANCE IN FEET)		
		LOCAL STREET	COLLECTOR STREET	ARTERIAL STREET
"A" (DISTANCE IN FEET)				
30	LOCAL STREET	30	100	130-150
100	COLLECTOR STREET	30	100	130-150
130-150	ARTERIAL STREET	30	100	130-150

### Option 2 Additional Right of Way:

At street intersections the applicant shall provide, as part of the right of way, a sight triangle on each corner. The following Graphic \_ shall be used to determine the distance (as measured along the right of way line of each roadway) required on sides "A" and "B" of the triangle.

### Graphic \_ Sight Triangle Requirements by Street Type



REQUIREMENT BY STREET CLASSIFICATION (MEASURED ALONG R.O.W.)		"B"(DISTANCE IN FEET)		
		LOCAL STREET	COLLECTOR STREET	ARTERIAL STREET
"A" (DISTANCE IN FEET)				
30	LOCAL STREET	30	100	130-150
100	COLLECTOR STREET	30	100	130-150
130-150	ARTERIAL STREET	30	100	130-150

BACK TO BY-LAW LIBRARY

**SECTION VIII**  
**IMPLEMENTATION**

## IMPLEMENTATION: A Framework for Tomorrow

The Implementation Plan focuses on recommendations that present a unified strategy to prepare Raynham for the current and future challenges. Each of the prior master plan elements has included its own section on implementation. The purpose of this section is to summarize the major recommendations of the Master Plan and to present a comprehensive strategy for proceeding with the changes that have been proposed.

### Early Action Activities

In advance of the Spring 2000 Town Meeting, the Selectmen and Planning Board signaled their commitment to Growth Management planning by initiating action in two areas described below.

1. **Appointment of a Zoning Enforcement Officer.** A Zoning Enforcement officer with adequate time and staff will be appointed to ensure the enforcement of the Town's existing zoning by-laws as well as the changes that are being proposed.
2. **Appointment of a Master Plan Committee.** The Selectmen, working with the Planning Board, have agreed that a Master Plan Committee should be appointed by the Planning Board to carry out the Implementation Plan. The responsibilities of a Master Plan Committee will be to build consensus around Phase II strategies for protecting the environment, improving the regulatory process, promoting economic development, and increasing housing choices. A member of each of the six sub-committees (Open space, Economic Development, Housing, Public Facilities, Historic/Cultural, Transportation) would be on this Committee which would be chaired by a representative of the Planning Board.

### Phases

A two-phase strategy has been proposed to carry out the recommendations of the implementation plan. The first phase addresses issues which are of the most immediate concern, and which lay the essential groundwork for protecting the town's resources and managing future growth. The second phase presents a set of steps that will bring the town closer to Raynham's plan shown at the beginning of this Master Plan. Phase II includes measures to affect environmental protection, economic development, housing needs, public facilities, and maintaining the community's rural character.

### Phase I - Getting to Implementation

Phase I calls for immediate action. Warrants have been prepared for three priority activities which will be presented to the Spring Town Meeting in May of 2000. The urgency of moving forward with Phase I of the Master Plan implementation is driven by the planned sewer expansion which will potentially have a significant impact on the rate of development, and the approaching expiration of the development moratorium which currently exists. Three by-law changes are identified below.

1. **Limit Residential A lots to 60,000 square feet.** This action will reduce the number new single family homes that can potentially be built by 40%, from approximately 3,061 to 1,775 homes. This will result in annual savings for tax payers due to educational costs which exceed tax revenue by about \$1,400 for each house which is not built.
2. **Adopt a permanent Phased Growth By-law.** Approved. Residential construction in new sub-divisions would be phased over a 15 year period with a maximum of 7 units allowed per year. This restriction can be waived if the developer agrees to set-aside open space, provide for on site wastewater disposal, and/or provide low income or age restricted housing. With this by-law, impacts of growth such as the need for new schools, infrastructure, and public

facilities would be spread out and an incentive has been provided for developers to address a range of resource protection and affordable housing needs.

3. **Form a Capital Budget Committee to manage capital expenditures.** Approved. This Committee has been established and has begun the process of instituting a town-wide budget process to manage capital expenditures and identify grants. The Committee will also be considering the establishment of a Reserve Fund to set aside needed monies for future capital expenditures.

### **Phase II - Building Consensus on Implementing Raynham's Vision/Goals**

Implementation of Phase II will take place in increments over the next few years. It is recommended that, at a minimum, some of the essential sewer extension, environmental protection, and economic development actions be undertaken at the Fall Town meeting. The Planning Board has agreed to review and establish priorities for the Fall Town Meeting after The Master Plan is approved in July.

1. **Open space acquisition.** Priority vacant open space parcels should be identified, as well as a means of funding their acquisition. As described in Section 4, Natural Resources (page 4-20), the acquisition of open space can easily be less expensive to taxpayers than allowing development to take place. In addition, the preservation of open space will protect valuable natural resources and potentially provide facilities for recreation.
2. **Reduce costs and impacts of Phase V waste water system extensions.** Availability of "Zero" percent interest State funding for Phase V of the sewer construction plan is contingent upon adoption of secondary growth control measures. Residential development could accelerate substantially with uncontrolled expansion of the waste water system. Experience to date has shown that about 40% of the sub-divisions that have taken place in the last 10 years would have substantially fewer homes without the sewers. Limiting sewer extensions to rural areas, increasing lot sizes in critical resource areas, managing septic systems in areas that do not require a sewer system are some of the wastewater management strategies to be considered in the town's Facility Plan.
3. **Modify cluster by-law and site plan review.** These actions will improve the regulatory review process and the quality of new development. The site plan review process should be changed to establish two categories of projects: minor and major. Minor projects would be provided an expedited process for review.

An improved cluster by-law would provide a density bonus for developing two-bedroom units. The benefits to the town would be the construction of more affordable housing alternatives and the voluntary protection of open space

4. **Establish new mixed use Districts.** Four new districts are recommended: Village Center, Business Cluster, Local Office/Residential, and Town Civic Center. These districts are described in detail in Section 1, Land Use (page 1-10) and are located on Maps 8-1 and 8-3. These districts would encourage residential and commercial development to maintain a balanced tax base and provide opportunities for small businesses and a wider range of housing choices. In addition, the establishment of a Civic Center District would help to ensure the availability of a suitable location for the future expansion of Town facilities.
5. **Organizational Reforms.** It is recommended that the Selectmen appoint two new committees to facilitate growth management. These would include a Housing Committee and a Government Organization Study Committee. A Growth Management Committee (comprised of Town Staff) would be set up to brain-storm solutions and foster coordination on infrastructure and development issues.

6. **Public education/participation.** Public support for the principle of environmental stewardship needs to be developed by Raynham students and citizens alike. This attitude will lead to the formation of River Watch committees, the use of local educational programs in environmental education, the development of an Open Space Plan, and the support of a broad coalition of residents at Town Meeting for the adoption of necessary by-law changes. Possible teaching resources are included in Appendix 8-1.
7. **Adopt new resource protection mapping and regulations.** The protection of natural resources is not only an environmental concern, but is also important for growth management purposes and to protect the water supply. Three important recommendations are highlighted in the implementation plan (see Map 8-2):
  - **A General Wetlands by-law** protecting wetlands from harmful development should be adopted. This provision would protect water, natural resources and habitat resources along the Taunton River and near Gushee Pond, for example, which are not protected and which will be impacted by new growth.
  - **A Critical Resource District** should be established under the Zoning By-law that covers all of the areas which have been identified as containing sensitive natural resources. This district, with a minimum lot size of 3 acres, will replace the existing Farm and Forest District and Wetlands District, which would be unlikely to withstand court challenge.
  - **Aquifers, Flood Hazard Areas, and Water Resource Protection Districts** need to be re-mapped in collaboration with appropriate state and federal agencies.
8. **Promote Economic Development.** The Town is concerned with the mix and quality of economic development in town. A number of strategies have been suggested as highlighted below and shown on Maps 8-1 and 8-3:
  - **Provide Sewer extensions to the Route 138 corridor and modify the zoning to foster the development of cluster commercial/retail development.** The Route 138 corridor has the potential to develop into a quality commercial district similar to Raynham Woods. Zoning and infrastructure improvements are needed.
  - **Undertake a marketing program to attract the right mix of commercial uses.** Various marketing materials have been prepared to assist the Town launch its own marketing program. These need to be assembled into a suitable format for publication.
  - **Establish Mixed Use districts, Expand the Designated Development District**
9. **Undertake Transportation Improvements.** Improved access is important for the town to maintain its quality of life as a commercial center and residential community. Several activities have been suggested including:
  - The widening of Route 44 to four lanes with a median east of Route 24, and the planning for a possible widening of Route 138 have been discussed.
  - Adoption of standards for the construction of sidewalks and the development of bike lanes could lead to the implantation of a proposed system of trails and pathways as shown on the following diagram.
  - Undertaking isolated intersection upgrades and access management improvements detailed in the Transportation section of the Master Plan.

**Table 8-1  
Implementation Strategy Priorities**

Priority Ranking	Master Plan Vision 2020 Committee	Board of Selectmen	Planning Board	Conservation Commission	Sewer Department	Town Administrator	Housing Task Force	Government Organization Task Force
Limit residential A lots to 60,000 s.f.	1	1	1					
Address secondary growth issues due to sewer extensions	2		1		1			
Planning Board to manage Master Plan implementation	1		1					
Selectmen to appoint a Zoning Enforcement Officer	1	1						
Selectmen to appoint a Housing Committee	1	2						
Master Plan Committee to consider regional planning issues	2							
<b>Zoning Review:</b> Modify cluster by-law and site plan review	2		1					
Establish new mixed use districts	2							
<b>Organizational Reforms</b>								
Government Organization and Growth Management Task Forces	2	3				1		
Prepare Affordable Housing Plan	2	1	1			1		
<b>Environmental Protection</b>								
Public education/participation	On-going							
Adopt new resource protection mapping and regulations	2	2	2					
Adopt a General Wetland By-law	3	3	3	1				
Open space acquisition	2	2	1					
Establishment of a Raynham Fisheries Commission		1		1				

# Existing Zoning Districts

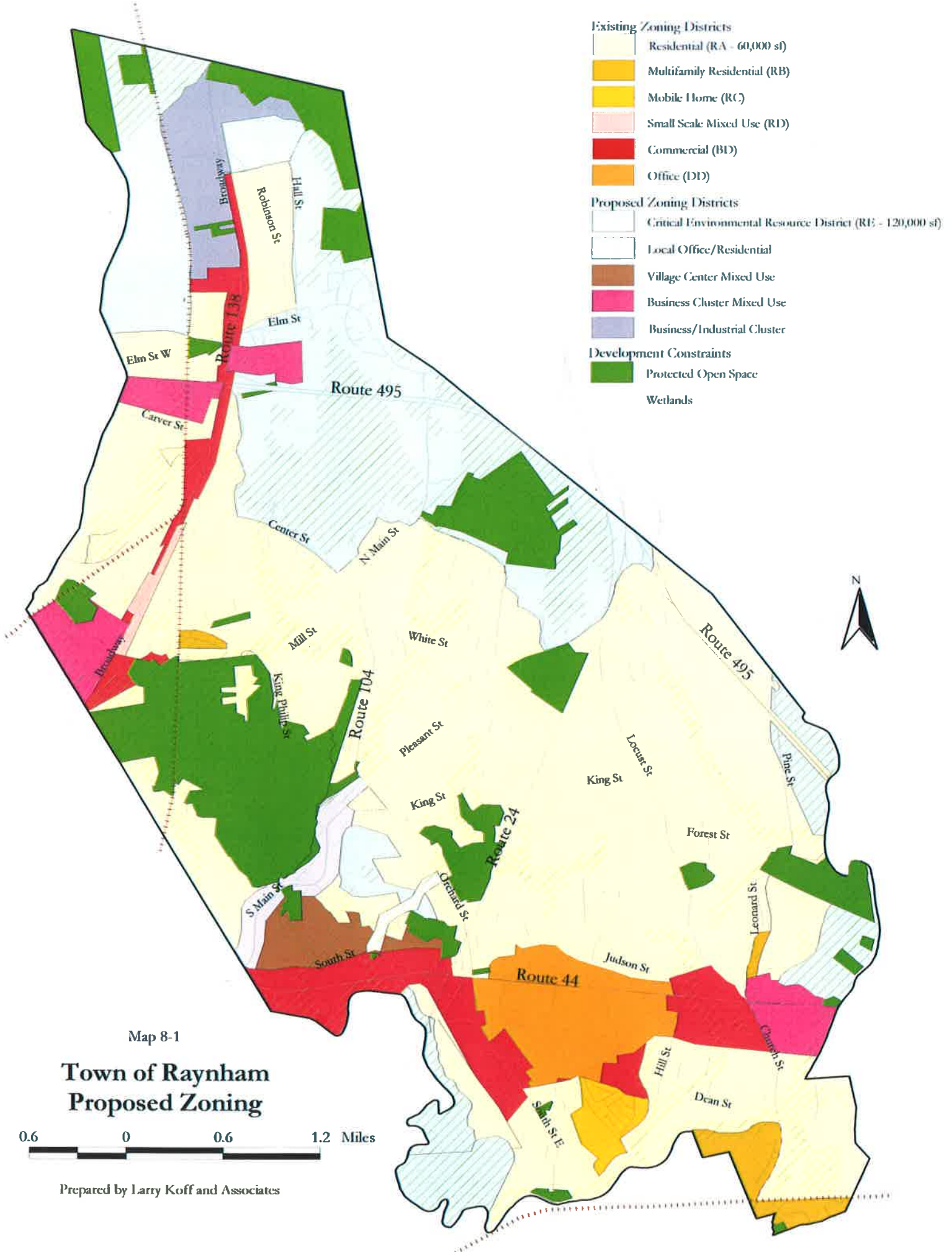
- Residential (RA - 60,000 sf)
- Multifamily Residential (RB)
- Mobile Home (RC)
- Small Scale Mixed Use (RD)
- Commercial (BD)
- Office (DD)

# Proposed Zoning Districts

- Critical Environmental Resource District (RE - 120,000 sf)
- Local Office/Residential
- Village Center Mixed Use
- Business Cluster Mixed Use
- Business/Industrial Cluster

# Development Constraints

- Protected Open Space
- Wetlands

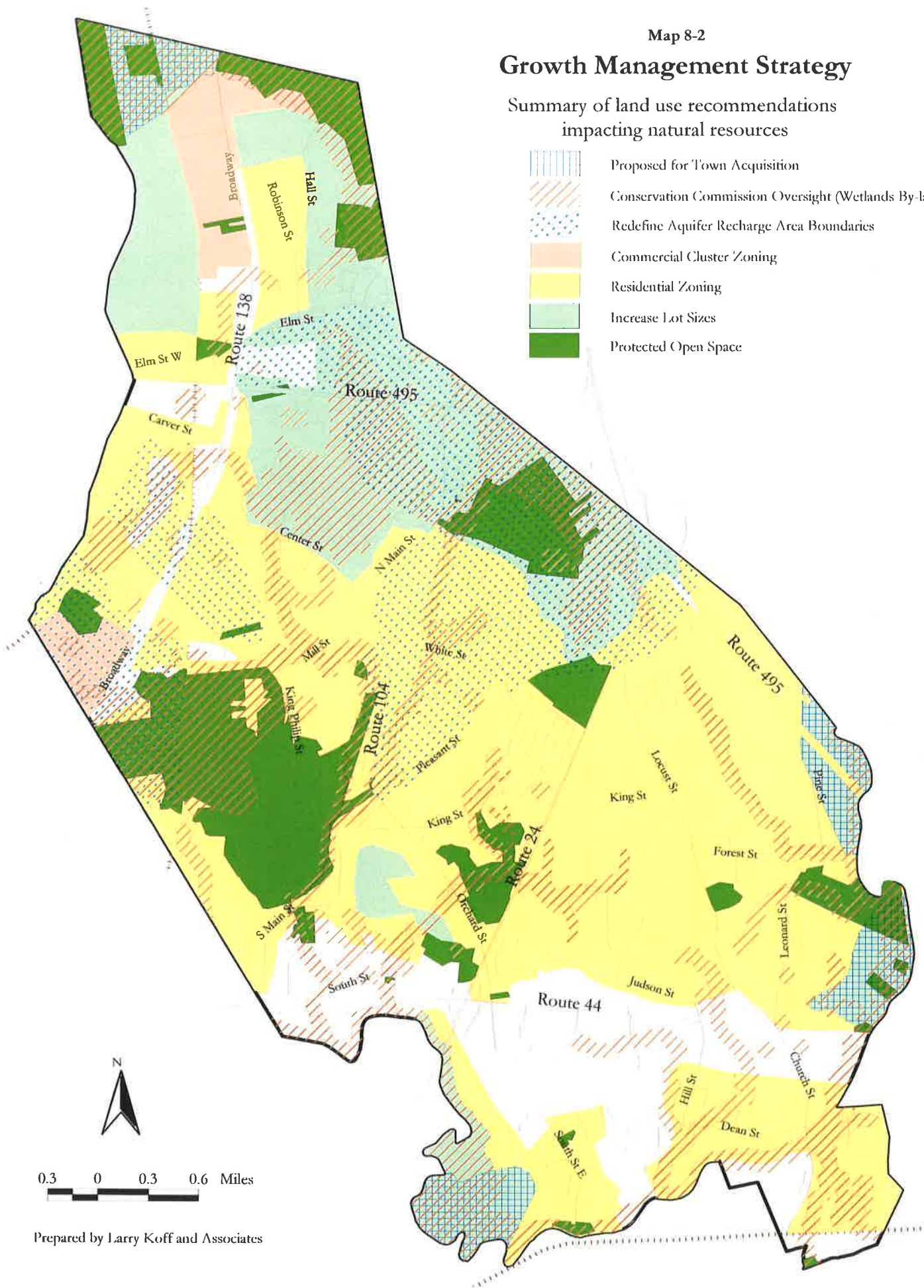


Map 8-2

# Growth Management Strategy

Summary of land use recommendations  
impacting natural resources

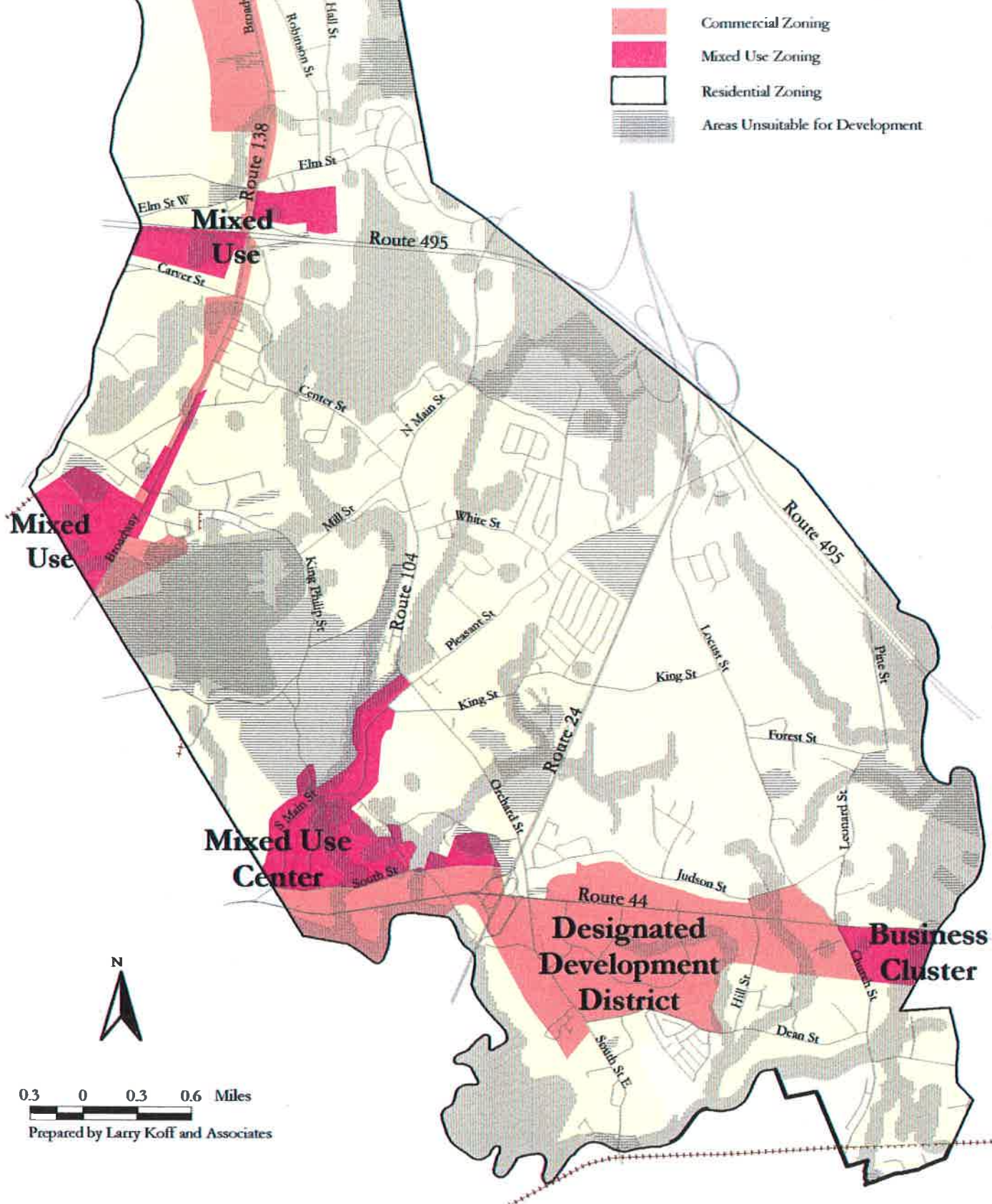
- Proposed for Town Acquisition
- Conservation Commission Oversight (Wetlands By-law)
- Redefine Aquifer Recharge Area Boundaries
- Commercial Cluster Zoning
- Residential Zoning
- Increase Lot Sizes
- Protected Open Space



Map 8-3

## Economic Development Strategy

Summary of land use recommendations  
impacting economic development





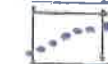
**Map 8-4**

Town of Raynham




Open Space Planning





TRAILS/PATHWAYS

HIGHEST PRIORITY

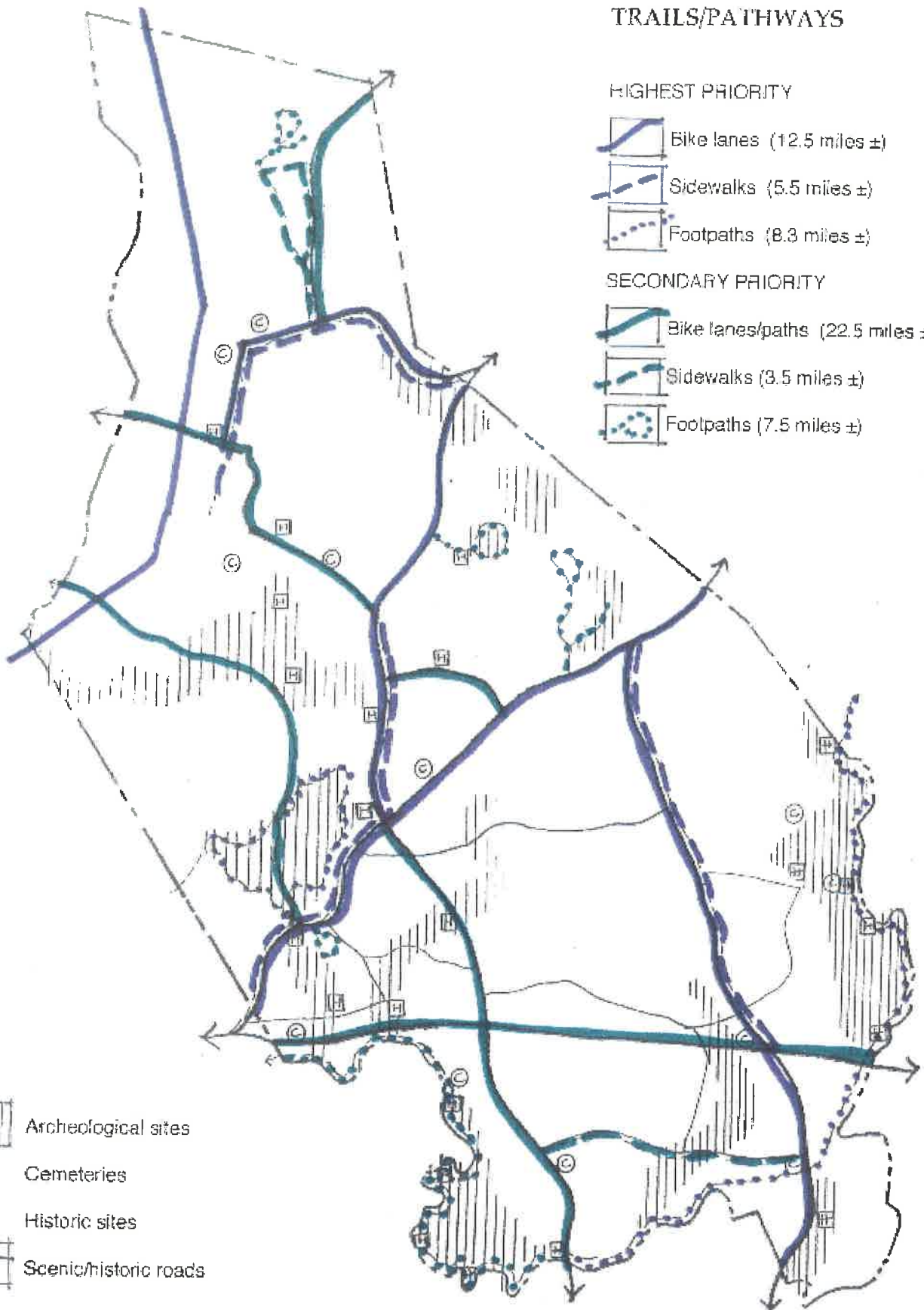
-  Bike lanes (12.5 miles  $\pm$ )
-  Sidewalks (5.5 miles  $\pm$ )
-  Footpaths (8.3 miles  $\pm$ )

SECONDARY PRIORITY

-  Bike lanes/paths (22.5 miles  $\pm$ )
-  Sidewalks (3.5 miles  $\pm$ )
-  Footpaths (7.5 miles  $\pm$ )

-  Archeological sites
-  Cemeteries
-  Historic sites
-  Scenic/historic roads

0.7 0 0.7 1.4 Miles



**Appendix 8-1**  
**Educational Curriculum**

## **Table of Contents**

<b>Citizen Action Skills</b> . . . . .	<b>3-1</b>
<b>Instructional Outcomes</b> . . . . .	<b>3-4</b>
 <b>SECTION I: Involving Student, Family, and Community in the Pollution Prevention Process</b> . . . . .	
Activity 1: What's in My Backyard and Home? . . . . .	3-7
Activity 2: Safer Alternatives for Hazardous Household Cleaners . . . . .	3-19
Activity 3: Effective Communication - A Citizen Action Skill . .	3-27
 <b>SECTION II: Using the Political System to Prevent Pollution</b> .	
Activity 4: Knowing Your Community's "Cast of Characters" and Their Tools of Power . . . . .	3-43
Activity 5: Using Your Knowledge for Problem Solving & Taking Action . . . . .	3-52
Activity 6: Create an Action Project To Reduce Pollution . . .	3-61
 <b>SECTION III: The Role of Planning and Management in Protecting Watersheds and River Systems</b> . . .	
Activity 7: The River in One Hundred Years . . . . .	3-71
Activity 8: Prepare a Preliminary "Build-out" . . . . .	3-78

## SECTION I

### **Involving Student, Family, and Community in the Pollution Prevention Process**

*First students investigate ways that they contribute to the degradation of our surface and ground water sources. The students are then challenged to work together to explore ways that their collective actions can reduce the travel of pollutants to local waterways. Stewardship of our natural resources grows with the knowledge base and skills necessary to bring about an effective action plan to improve the water quality in our surface waters.*

*Activity 1: What's in My Backyard* provides an example of a way to assess family contributions to a nutrient or toxic problem in the community's surface and/or ground water. This activity provides a mechanism for student action to follow up on a pollution problem—the effect of eutrophication caused by excessive or cumulative impact of nutrients to a water body—established in Module I, Activity 9.

*Activity 2: Safer Alternatives to Hazardous Household Cleaners* provides a method for changing family behavior to reduce toxic use and waste solutions from entering the groundwater or becoming part of the runoff to surface water bodies in the Taunton River basin.

*Activity 3: Educating the Community - A Citizen Action* provides students with skills to translate information into action. The brochure at the end of Activity 3 provides a "Guide to Effective Activism" from the 20/20 Vision National Project which illustrates ways to create more effective letters, editorials, and phone calls to citizens, policy makers and the media. Another reading included is Fact Sheet #8: "Functions of Riparian Areas for Pollution Prevention".

## REPORTING GUIDE FOR EFFECTIVE RIVER WATCHING

Members of the various watershed associations and Adopt-A-Stream Groups can be effective protectors of the many streams and rivers in our state.

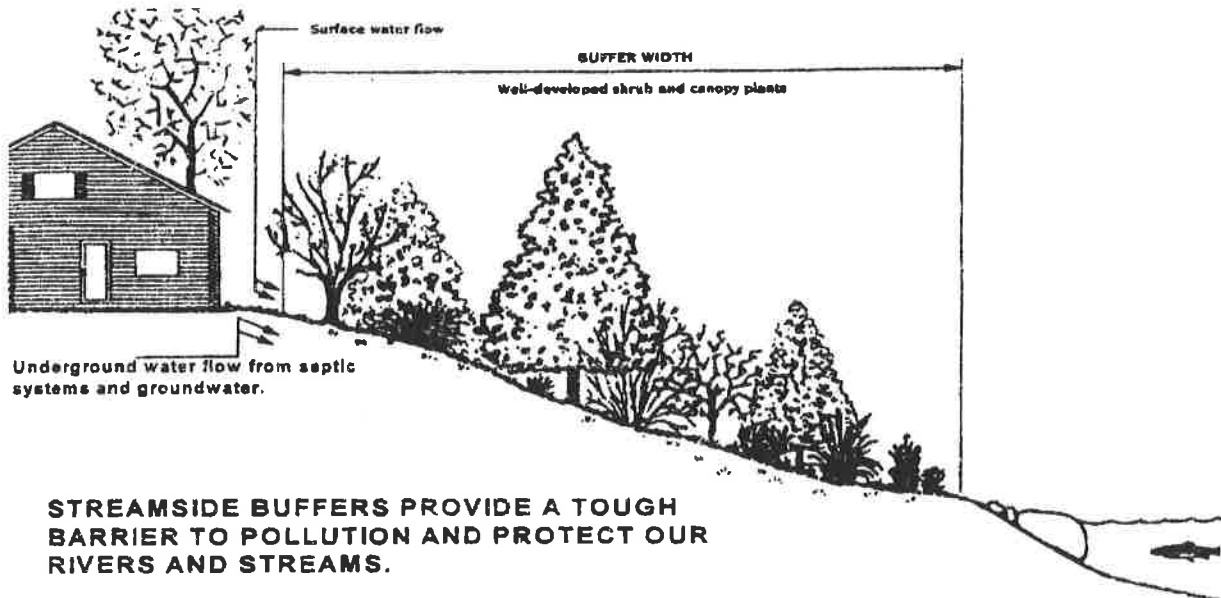
Observation	Problem	Action
Crashed tanker truck leaking fluids into a stream	May be toxic materials	Call State Police (look for chemical number red diamond on truck). Call Hazardous Waste Hotline (1-800-424-8802).
New fill material on stream bank or wetland	Destruction of habitat	Call local Conservation Commission
Newly cleared land near stream or wetland	Destruction of habitat, runoff and sedimentation into stream	Call local Conservation Commission
Many (> 10) dead fish	Kill from toxics or changes in natural conditions.	Investigate extent, number and species of kill. Are fish dying or decaying? Call Fisheries & Wildlife at Westboro (508-792-7270) and District Offices.
Oil Slick	Water pollution	Call Hazardous Waste Hotline at 1-800-424-8802, Coast Guard, or local fire department or Board of Health.
Blockage in fishway or stream, low or no water in fish ladder	Barrier to migrating fish	If marine species, call Division of Marine Fisheries (508-888-3590 on South Shore; 508-745-3107 on North Shore). If inland fisheries, call Fisheries & Wildlife, (508-792-7270).
Sediment Bars or Silt deposits	Degradation of Habitat	Investigate possible source of pollution. Call local Conservation Commission or work with local DPW. If from a state road, call MA Highway Department (617-973-7002)
Milky water/solvent odor	Sewage pollution	Call local Board of Health or Department of Environmental Protection (617-292-5500) to get regional office numbers.
Trash or litter	Illegal dumping	Organize River cleanup. If witness dumping, call Environmental Law Enforcement hotline (1-800-632-8075).
Large areas of green algae	Nutrient overload	Investigate extent. Call local Conservation Commission.
Eroded Stream banks	Lack of buffer strip; excessive development in watershed.	Investigate extent. Call local Conservation Commission.

## SECTION III

### Now What! Do We Clean Up, Reduce or Use Best Management Practices?

*The difficulty in, and cost of, cleaning up contaminants once they have dispersed to lakes, rivers, and estuary bottoms is the issue for citizens and communities. Management practices can limit the amount of contaminant available, limit the possibility for the contaminants to be mobilized, and provide methods for intercepting contaminants before they are dispersed in the environment. Such techniques used to combat nonpoint source pollution are called best management practices (BMPs).*

*BMPs solves the nonpoint source problems from any given location. BMPs should be orchestrated into the best management possible. Combining techniques to limit the use of contaminants in a watershed limits their mobility, maximizes the opportunities to trap and disposes of mobilized contaminants and reduces BMP maintenance costs. This all makes sound economic sense. How do we select a best management practice? The activities in this section look at BMPs and some of the options available.*



*This diagram is used with the permission of Land-Tech Consultants, Inc.*

The Importance of Streamside Buffers, Rivers Alliance of Connecticut

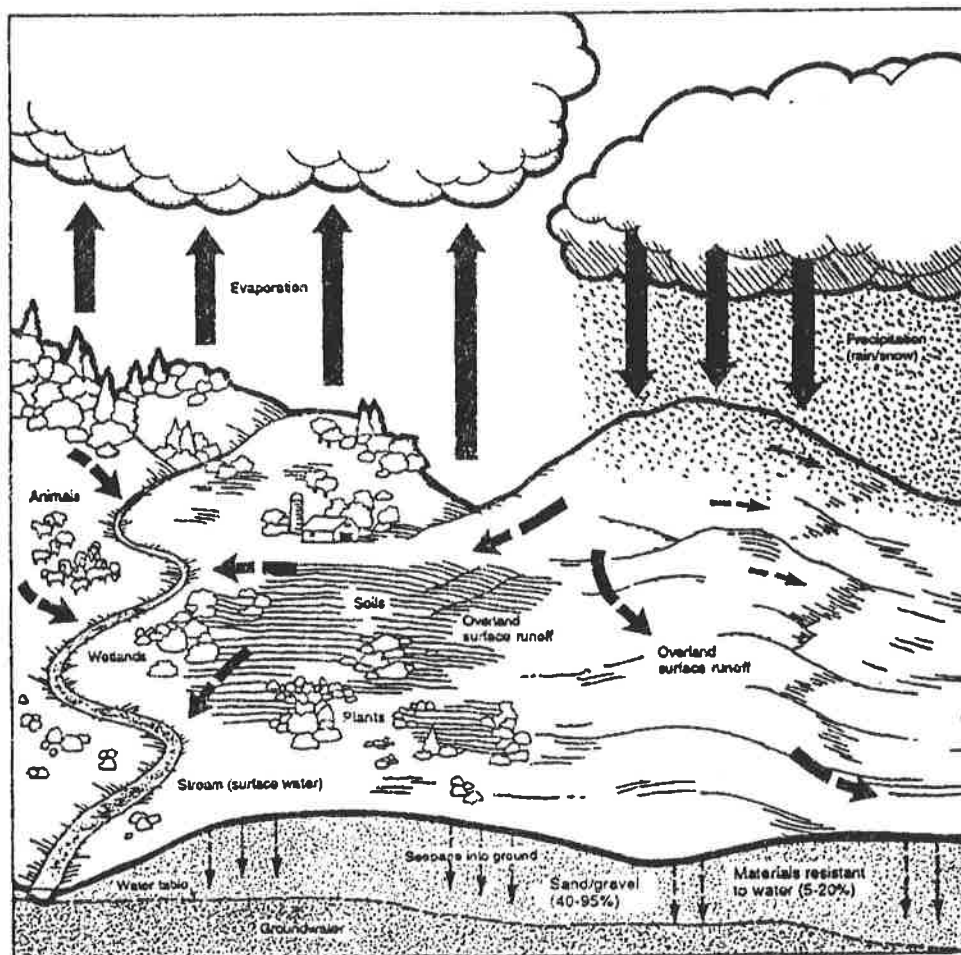
## SECTION II

### Where is the Pollution Coming From?

*The kind of nonpoint pollution released to water bodies stems directly from how we use the land, and usually increases with the amount of human activity. We can roughly estimate the cumulative impact through loading estimates.*

*"We need to have a basic understanding of non point source pollution so that we can make informed choices on the priority issues surrounding taking responsibility for non point pollution prevention and watershed management." [Air & Waste Management Association, Environmental Resources Guide, Grades 9-12, p.1]*

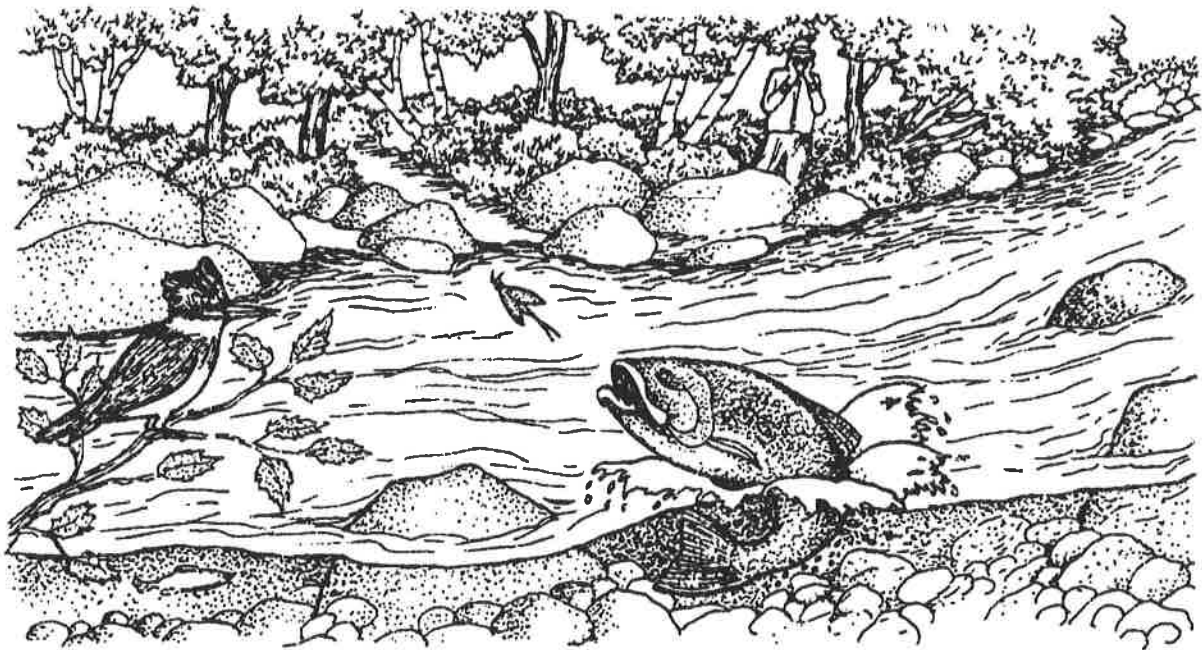
*The major types of pollution in agricultural, residential, and urban areas are sediment nutrients, pathogens and toxins.*



## SECTION III

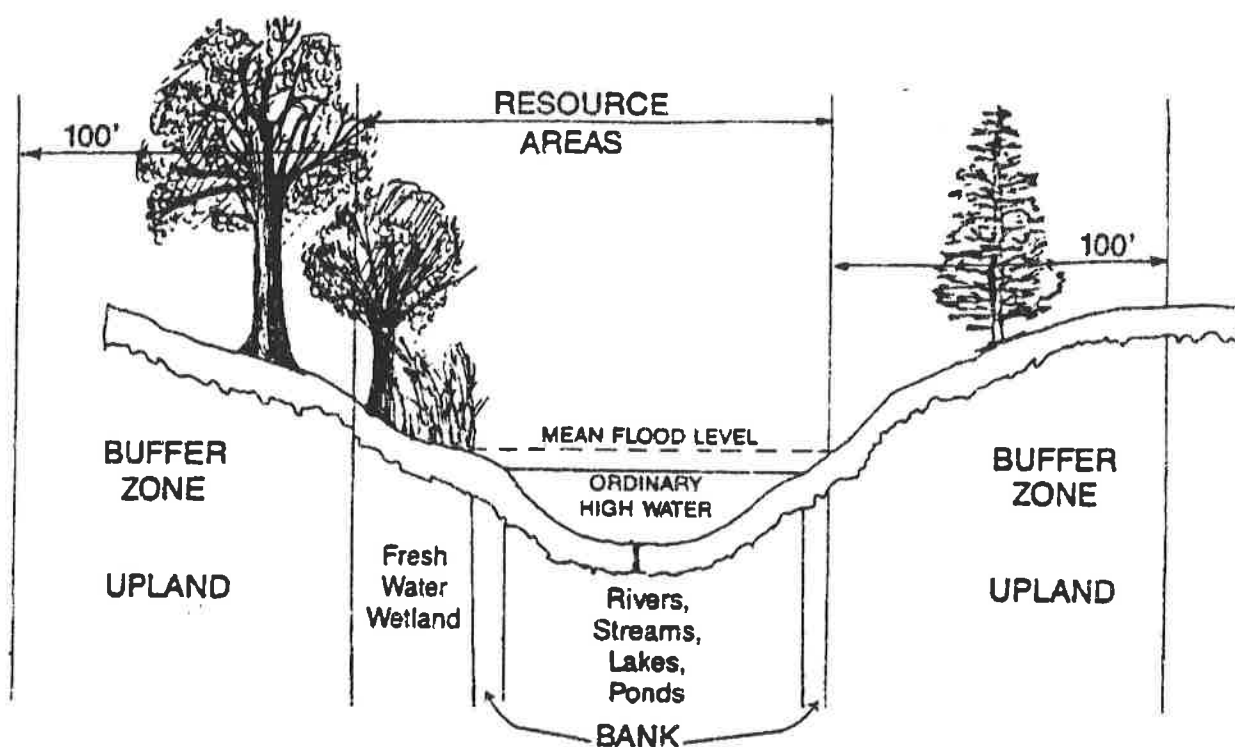
### **Watch, Communicate and Act on the Health of the River Ecosystems: Defining a River Steward**

*Students who have the critical thinking skills to interpret the ecosystem of the river and the tools to measure changes will be excellent community stewards of the river system. They can analyze change and tell us where we need to focus our help. The following Activities summarize three opportunities for surveying and monitoring health of river ecosystems.*



## Discussion/Assessment

1. Discuss seasonal and historical changes in the river. Discuss how the plants in the riparian corridor change seasonally and how this might affect the river.
2. Develop a question to investigate something you have seen or experienced in riparian corridors and wetlands.
3. Predict areas in the riparian corridor that need help to comply with 1996 MA River's Protection Act protection. [Social Studies, Level II]



## SECTION I

### Rivers Are a Dynamic Interconnected System - Connecting to the River

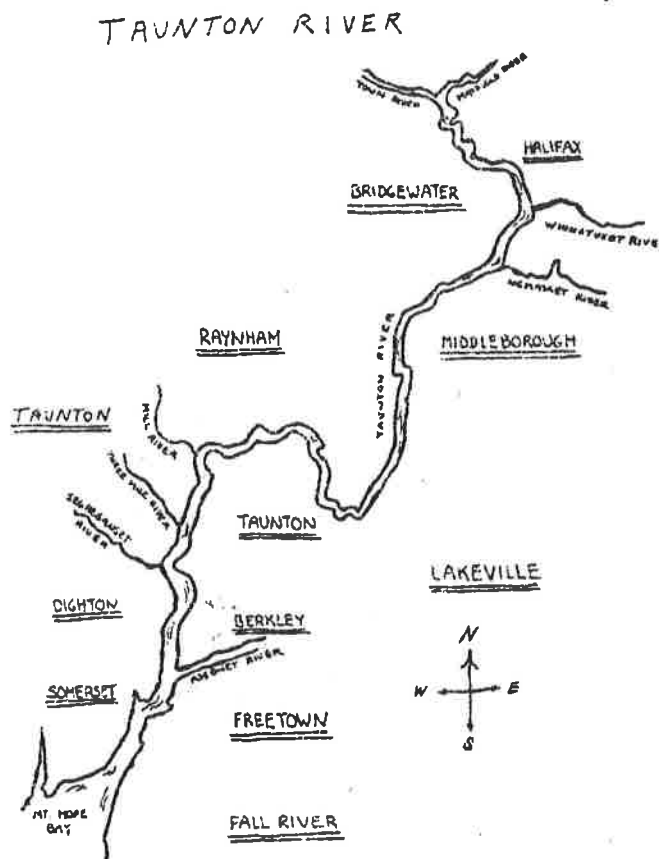
*Small pockets of ice extend frozen fingers from the shore, and where the river runs more quickly long wisps of grass undulate beneath the current. Kuttetequat. The Native People's name for the Taunton River rolls off my tongue smoothly as the water passing before me . . .*

*I can't wait for spring to slip my canoe into the current and let it carry me to adventure. Almost fifty miles of water await discovery . . .*

*The river is like a book I've been waiting to read, its binder uncracked. What mysteries will it reveal? What new friends will I make on the water?*

*Come with me on my trip, then partner with the river and let it carry you on a voyage of your own.*

Author Michael Tougias, contemplating the task  
of writing about his Taunton River journey.



**SECTION VI**  
**PUBLIC FACILITIES AND SERVICES**

**SECTION VI**  
**PUBLIC FACILITIES AND SERVICES**

## **SECTION VI PUBLIC FACILITIES AND SERVICES**

- 6.1 Government Overview and Inventory of Existing Public Facilities**
  - Government Structure
  - Regional Organizations
- 6.2 Public Facilities Needs/Issues**
  - Issues Summary
- 6.3 Vision & Goals**
  - Goals/Policies
- 6.4 Recommendations**
  - Establish a Process to Achieve Capital Investment and Facility Maintenance Planning
  - Undertake Fiscal Planning
  - Initiate Infrastructure Growth Management Planning Activities
  - Invest in Information Systems Improvements

**Appendices:**

- 6-1: Department Inventory
- 6-2: Previous Reports
- 6-3: Department Needs Assessment
- 5-4: Raynham Related Massachusetts Acts and Resolves of the General Court

## **VI. PUBLIC FACILITIES AND SERVICES**

### **INTRODUCTION**

The Town of Raynham prides itself on the quality of its public services. As the town has grown, departments have been added or expanded to meet present needs. Planning for future growth, on the other hand, has been limited by both resources and the lack of a vision for the future.

The purpose of the Public Facilities section is to identify a vision and action plan for meeting the facility, organization, and management needs of a government that must respond to the town's continued growth. This section provides:

- 1) Inventory of current Town departments
- 2) Assessment of needs for future organization, management, and facilities given projected growth
- 3) Vision and Goal statement to address current concerns with growth management planning
- 4) Recommended strategies and funding sources to facilitate improvements in the financing and management of municipal services in response to growth pressures.

The vision that has been adopted is of a town which is recognized for its foresight in managing its growth, improving its facilities, and providing a high level of quality municipal services.

### **6.1 GOVERNMENT OVERVIEW AND INVENTORY OF EXISTING PUBLIC FACILITIES**

#### **Government Structure**

The Town of Raynham is evolving from a voluntary structure with numerous elected positions to a more management-oriented government under the direction of a Town Administrator reporting to a Board of Selectmen. The government structure of the Town of Raynham is a blend of these two philosophies as shown on the following table. The recent change in title of the Executive Secretary to Town Administrator signals the need for more centralized management. To date, the organizational structure remains decentralized and outside the management control of the Town Administrator.

**Table 6-1  
Government Structure**

<u>Board, Commission, Authority</u>	<u>Number Of Members</u>	<u>Term</u>	<u>Elected (E) Or Appointed (A)</u>	<u>Appointing Authority</u>
EXECUTIVE- Board of Selectmen			E	
CHIEF ADMINISTRATIVE OFFICER			A	Selectmen
Town Administrator				Selectmen
LEGISLATIVE BODY: Open Town Meeting				Elected
Town Clerk	1	3 Yrs	E	
Town Moderator	1	3 Yrs	E	
Personnel Board	None			
Treasurer	1	3 Yrs	E	
Collector	1	3 Yrs	E	
Accounting Officer	1	1 Yr	A	Selectmen
Assessing Officer	3	3 Yrs	E	
Finance Committee	7	3	A	Selectmen
PUBLIC HEALTH:				
Health Agent	1	1Yr	A	Selectmen
Police Chief	1		A	Selectmen
Fire Chief	1		A	Selectmen
INSPECTIONAL SERVICES:				
Assistant Building Inspector	1(part time)	1 Yr	A	Selectmen
Building Inspector	1	1 Yr	A	Selectmen
Electrical/wire	1(part time)	1 Yr	A	Selectmen
Plumbing/gas	1(part time)	1Yr	A	Selectmen
COMMISSION/BOARDS				
Planning Board	5	5	E	
Water District Commissions (2 Boards)	3	3 Yrs	E	
Sewer Commission	3	3 Yrs	E	
Appeals	3	3 Yrs	A	Selectmen
Conservation Commission	7	3Yrs	A	Selectmen
Housing Authority	5	5 Yrs	4 (E) 1 (A)	Governor
Council on Aging	7	3 Yrs	A	Selectmen
Park and Recreation Commission	3	3 Yrs	E	
Veterans Agent	1	1 Yr	A	Selectmen
REGIONAL SCHOOL COMMITTEE	4	3 Yrs	E	
Bristol-Plymouth Vocational	6		E	
BOARD OF REGISTRARS	4	3 Yrs		

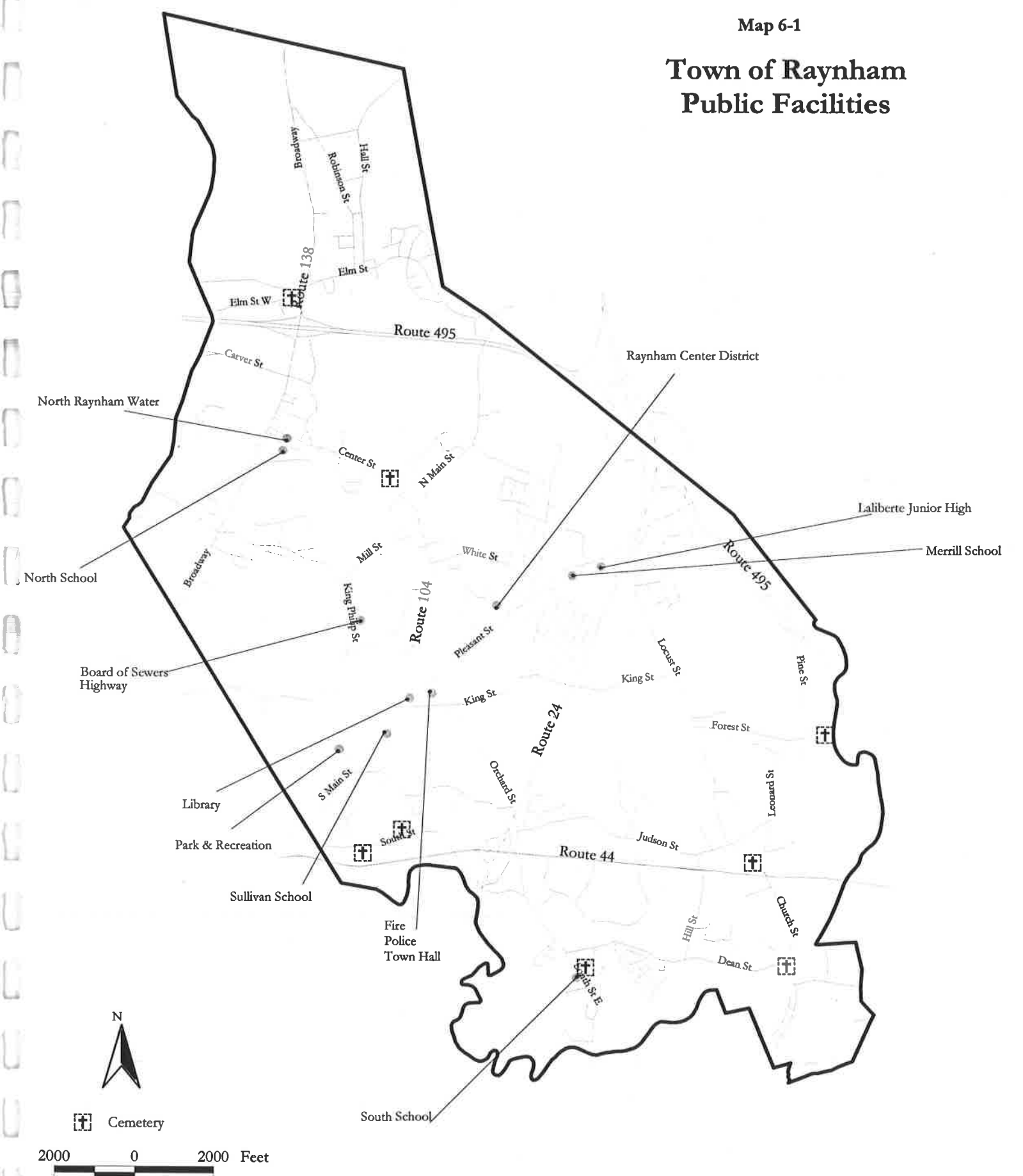
The Town's fiscal operation relies primarily upon the Massachusetts General Laws MGL for guidance. The MGL sets forth certain requirements, defines several prohibited activities, and hints at permitted practices. Raynham and about half of the towns in the Commonwealth operate their local governments directly from the MGL without town charters. Raynham has not sought assistance from the General Court to address its organizational needs. A listing of "Special Acts" involving Raynham passed between 1900 and 1999 is included in Appendix 6-4.

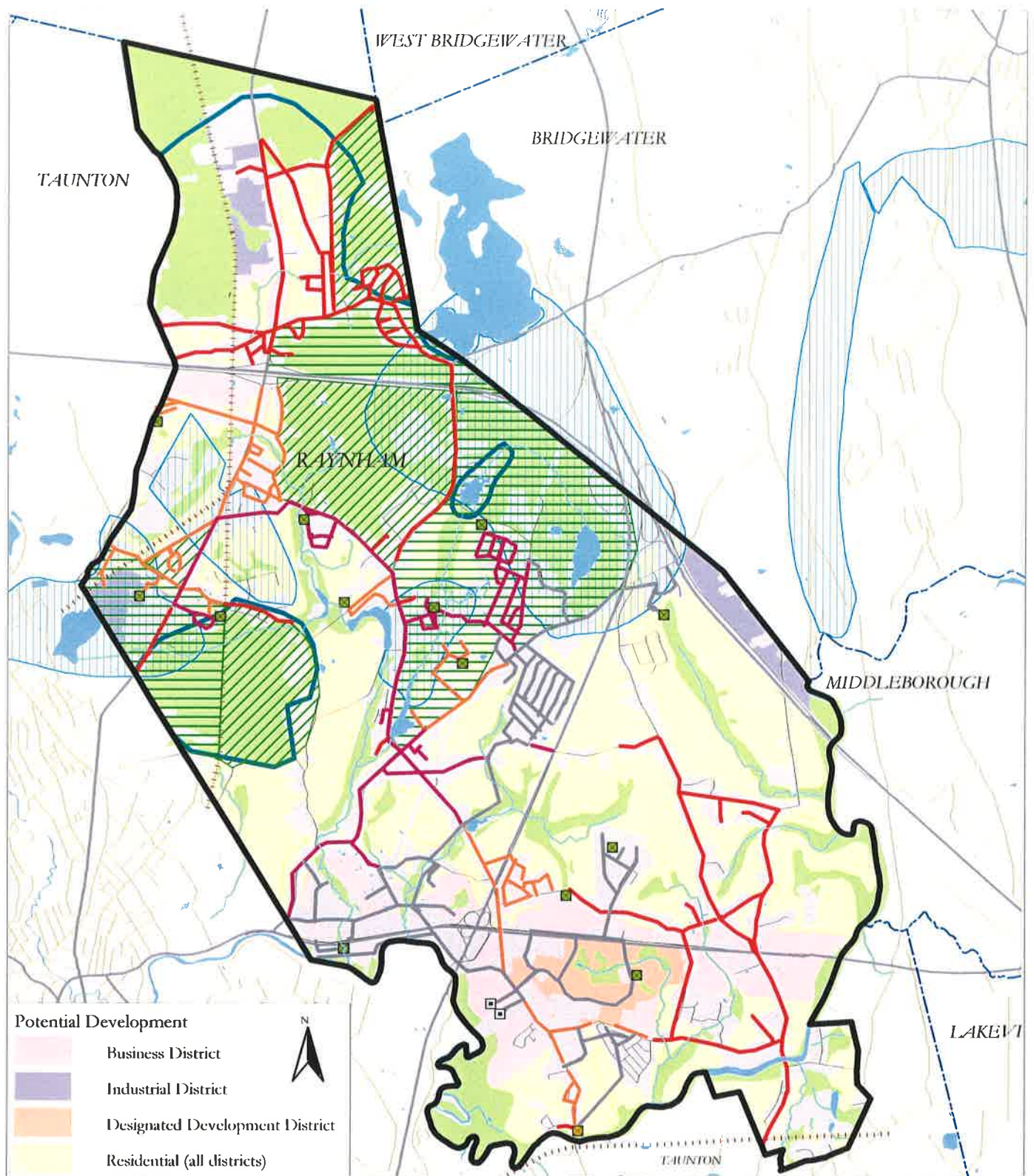
The Town of Raynham General By-Laws defines the role of the Finance Committee and the Town Meeting process. A Capital Budget Committee is mentioned and is not defined. Using this framework as a guide, Raynham has relied upon its boards, committees and professional staff to produce an annual budget, put forward capital warrant articles and pass a balanced budget year after year.

The Town has a number of facilities that it must maintain in order to carry out a wide range of services provided by its departments and boards. These facilities are listed below in Table 6-2 and are identified on Map 6-1. An inventory and discussion of the role of these departments is included in Appendix 6-1. Recreation, open space, and historic facilities are identified and discussed in detail in the Master Plan Open Space and Natural Resources Element.

Map 6-1

# Town of Raynham Public Facilities





Map 6-2

# Town of Raynham Sewer Plan, Sensitive Resource Areas, and Potential Growth

2500 0 2500 5000 Feet

Prepared by Larry Koff and Associates

**Table 6-2  
Public Facilities**

<u>Town Facilities</u>	<u>Location</u>	<u>Services</u>
Town Hall	Orchard Street	Contains 15,732 sq. ft (incl, police/Fire), offices for 18 government staff, 1 meeting room.
Police Department	Orchard Street	24-fulltime officers, 25 on-call officers, 5 dispatch, 1 clerical, and 13 cruisers.
Fire Department	Orchard Street	3 engine companies consisting of 20 firefighters and 12 on-call staff, with 3 engines, 1 ladder, 1 tanker, 1 breaker, 1 forestry, 1 boat, 2 cars, and 2 ambulances.
Education: Bridgewater-Raynham Regional School District	North School (1925) K-2 Sullivan/Center School (1930) K-2 South School (1924) K-2 Lillie B. Merrill School (1952) 2-5 Middle/Junior High School (1964/1978) 5-8 New Middle School (in planning)	5 schools (K-8). 15% attended Bristol-Plymouth Reg. Tech, 85% attended Bridgewater-Raynham Reg. High. K-8 student population remained consistent (approx. 1,600 students) since 1971
Highway Department	Town Garage	Maintenance of Town roads
Water Districts Boards <u>Raynham Center District</u> Established in (1947 by Act of General Court to cover 65% of town) <u>North Raynham District</u> Established in (1949)	(5 wells), Water Filtration plant, 2 standpipes  (3 wells), water treatment plant, standpipe	2 water districts provide service to 93% of residents. Locations without water in eastern section of town including portions of Pine, Church, Leonard Streets
Board of Sewer Commissioners (1976)	Sewer Department located at Highway Department	Phase III and IV are under construction, Phase V proposed Phases I-IV will cover 53% of roads; 47% of residential and 78% of commercial customers
Library	South Main Street	23,000 volumes (1/3 children's)..
Park and Recreation Commission	Offices at Borden Colony	16 athletic fields Johnson Pond
Housing Authority	Weonit Woods Pinewood Terrace	86 Elderly Units at 75 Mill Street
Council on Aging	Gilmore Hall Broadway (Rt. 158)	Council on Aging
Cemetery Commission	Cemeteries (See Map 1)	23 cemeteries/40 acres

Public facilities are identified on Map 6-1.

The Town of Raynham has a number of public and non-profit service organizations to address a range of social, employment, and health care issues as noted in Table 6-3 below. In addition, a number of other regional service providers are located nearby in the City of Taunton. A recent survey by the United Way sought to identify the major social service needs of Raynham's population. The issues that were noted with greatest frequency were:

- housing affordability, especially for the elderly and first time home buyers,
- the need for improved educational facilities,
- fear of crime, safety, and violence,
- lack of programs for the youth due to the prevalence of two working parents and no public transportation
- high costs and inaccessible health care
- insensitivity to cultural diversity
- lack of public transportation

**Table 6-3  
Town Planning/Service Organizations**

<u>Name</u>	<u>Service</u>	<u>Type</u> Public (P) Or Non Profit (NP)
Council on Aging	Develop, implement, and coordinate programs and services to meet the needs of Raynham Elders, age 60 and over	Public
Veterans Services	Provision of veterans services	Public
Self Help Inc.	Provision of employment and social services to low income individuals and families	Public
Cultural Council	Review/recommend grant applications for M.C.C. funding	Public
Economic and Business Development Commission	Promote business in Raynham	Public
Recycling Committee	Promote Recycling in Town	Public
Permanent School Planning and Building Committee	School Public Facility Planning	Public

### **Regional organizations**

Regional organizations provide key services in the areas of education and wastewater treatment and supplement the work of the Town's line departments and associated boards in other areas. The Bridgewater-Raynham Regional School District is the most visible symbol of regional cooperation. The high school and Superintendent's office manage the town's schools. The Taunton Sewer District which includes Taunton, Raynham, Dighton, and Berkley is likewise an important regional entity upon which the Town depends for its growth. Additional entities provide important services on a regional basis including transportation, mosquito control, joint purchasing, vocational education, and planning.

**Table 6-4  
Regional Service Groups**

<u>Name</u>	<u>Services</u>	<u>Members</u>
Southeast Regional Services Group (SRSB)	Joint purchasing, training, problem solving by municipal administrators, highway superintendents, others	16 cities and towns Abington, Avon, Bridgewater, Canton, East Bridgewater, Easton, Foxborough, Mansfield, Norfolk, Plainville, Raynham, Sharon, Stoughton, Taunton, West Bridgewater, Wrentham
Southeastern Massachusetts Health Group (SMHG)	Joint purchase of health insurance coverage for municipal employees	18 entities Acushnet, Berkley, Dighton, Dighton-Rehoboth RSD, East Bridgewater, Easton, Freetown, Freetown-Lakeville RSD, Mansfield, Middleboro, North Attleboro, Norton, Plainville, Project SPOKE, Raynham, Rehoboth, Southcoast Collaborative, Westport
Mutual Aid Agreements	Fire/public safety	Taunton, Bridgewater, Norton, Easton, West Bridgewater, Middleboro, Berkley, Lakeville
Regional School Committee	K - High School	Bridgewater/Raynham
Bristol-Plymouth Vocational	Vocational education	Taunton, Raynham, Berkley, Bridgewater, Middleboro
Southeastern Regional Planning And Economic Development District (SRPEDD)	Land use, transportation, economic development, open space planning, environmental protection, business retention and expansion, grant application, regional information systems	27 cities and towns Raynham on the North, Wareham on the East, New Bedford on the South, Rhode Island boundary on the West
GATRA Greater Attleboro Taunton Regional Transit Authority	Regional transportation agency operates Handicap Van/Dial-A-Ride	Regional transit authority serves Taunton-Attleboro area
Bristol County Mosquito Control Project	Management of a range of mosquito control programs	Bristol County
Southeast Regional Tobacco Control Group	Develops tobacco control programs, enforces state and local regulations	5 cities and towns Raynham, Easton, Stoughton, East Bridgewater, Taunton
Plymouth County Wildlands Trust	Assists CC with land acquisition	Plymouth/Bristol Counties

## 6.2 PUBLIC FACILITIES NEEDS/ISSUES

The following is a summary of general needs and issues concerning public facilities and growth management. An inventory of specific needs and issues relating to each Town department is provided in Appendix 6-3. Appendix 6-2 reviews the needs identified in previous public facilities studies.

### Projected Impacts from Future Residential Growth

The following table shows the projected need for various municipal services by 2020 and at full buildout. The population, as estimated by SRPEDD to account for regional infrastructure improvements, is expected **by the year 2020** to increase by 6,000 persons, to **a total of 16,600 residents**. As shown in Section 1, Land Use, the population **at full buildout** is expected to increase by 13,300 persons to **a total of 24,000 residents** including an estimated 3,000 additional school children (K-8). The number of households is expected to increase by 2,400 by 2020, to a total of 6,400. At full buildout the number of households is expected to increase by 4,400 to a total of 8,400.

As indicated below, population growth will increase the demand for facilities and services provided by the Town. Table 5 has been prepared by Larry Koff & Associates in consultation with relevant town departments.

**Table 6-5**  
**Projected Growth Impacts<sup>(1)</sup>**

	Existing Level of Service (1998)	Projected Additional Demand		Existing Capacity	New Facilities Needed?	
		(2020)	Full Buildout		(2020)	Full Buildout
Water	2.5	4.0 mgd	8.0	3.1	yes	yes
Sewer <sup>(2)</sup>	0.25 mgd	1.2 mgd	?	0.5 mgd	yes	yes
Police <sup>(3)</sup>	24 officers (2.2 off./1,000 pop)	13	29	16	yes	yes
Fire	20 permanent staff (5 persons/1,000 homes)	12 pers.	22 pers.	20 pers.	yes	yes
Library	3.59 books/pop			38,700 books	yes	yes
School	1,455 students	1,000	3,000	1,761 <sup>(4)</sup>	yes	yes
Roads	moderately congested	Rte 138	intersection		yes	yes

**Notes:**

<sup>(1)</sup> Existing Population (1998) = 10,682, Existing Households (1998) = 4,030

<sup>(2)</sup> Sewers presently serve about 75% of existing single family development. Projections include additional growth as well as connecting existing development. Needed capacity at full build will depend upon adoption of Sewer Facility Plan by the Town.

<sup>(3)</sup> Minimum standard Police Officers per population (Massachusetts) = 1.8 officers/1,000 pop.

<sup>(4)</sup> After currently planned improvements

**Issues Summary**

Table 6-7 highlights the concerns of individual town departments. Most of these issues have been identified by prior master plans and will be further stressed by the demands of projected additional development. They are organized into four major areas of concern:

- I. Information systems reform in order to improve efficiency of government*
- II. Coordination between departments in order to address growth management, i.e., resource protection, planning, roads, water and sewer extensions, building and zoning enforcement*
- III. Fiscal and capital budget planning to address Town's facility expansion and maintenance needs*
- IV. Need for a new Town Hall/Police/Fire Dept.*

**I. Information Systems Reforms**

Discussions with various departments indicated the need to establish through the Town Administrator a joint base of information for billing, reporting on enforcement issues, and facilitating inter-department communication. Resources are lacking to permit the departments to share data in a geographic computer network and to adopt uniform procedures for billing and other tasks. The Board of Health quite often must coordinate with Assessors, Building, and Conservation Commission. The need to establish a capital budget planning process is also important.

**II. Growth Management Planning: the Hidden Problem**

While the Town's finances are well managed, various growth trends, if allowed to continue, would undermine the current financial balance. For the past five years the Town has maintained a favorable split between residential and commercial valuations with the commercial base providing over 26% of the total valuations. With the benefit of tax classification, commercial properties provide 29% of tax revenues. This balance is aided by the favorable Bond rating of A-2. In addition, Raynham's residential tax rate in FY 1998 (\$13.42) was the fourth lowest of 10 adjacent towns, within \$1 of the lowest tax rates in Berkley, Lakeville, and Taunton. (Department of Revenue, Division of Local Services, Municipal Data Bank). Furthermore, the Town's debt service costs have now increased from 1% to 5% of expenditures in contrast to the 6% state-wide average for municipalities.

As shown by the table below, the percentage of debt service is still generally below that of its neighbors who are averaging closer to 7% of debt service.

**Table 6-6**  
**Fy '98 General Fund Expenditures (Excluding Capital Outlay)**

<u>Municipality</u>	<u>Debt Service</u>	<u>% Of Debt Service</u>	<u>Total Expenditures</u>
Berkley	707,731	9	7,527,597
Bridgewater	1,634,742	7	22,123,294
Easton	2,241,540	7	32,128,598
Lakeville	750,655	7	10,835,885
Mansfield	3,154,294	9	35,812,970
Middleborough	2,320,741	7	31,128,750
Norton	967,788	4	22,831,143
<b>Raynham</b>	<b>71,245</b>	<b>1</b>	<b>12,463,630</b>
Taunton	3,519,013	4	82,856,241
Statewide Averages		6.3	

**Table 6-7**  
**Information, Facility, and Capital Needs Planning Concerns of Town Departments**

TOWN DEPARTMENTS	DEPARTMENTAL CONCERNS			
	(1)	(2)	(3) (4)	
	Information Systems/Coordination	Growth Management/ Organization/staffing	Facilities and Equipment	
			Need More Space, Larger Facility	Inadequate Facility/Vehicle Maintenance
Town Hall	Geographic Information System needed		Need New Town Hall	X
Police Department			X	X
Fire Department		Facility Planning	X	X
Regional School District and Permanent Building Committee		Introduce resource protection issues into curriculum, public education	Identify re-use of School buildings	X
Highway Department	Need Pavement Management Plan	Coordination with other departments re. Sewer, Planning, Water	X	X
Water Districts Boards Raynham Center District North Raynham District Established in (1947,1949)	Joint billing,	Coordination needed between Boards, Sewer Department, Planning Department and Town		
Board of Sewer Commissioners (1976)	Joint billing	Coordination between boards/Town needed to Manage future growth		X
Library			X	
Park and Recreation Commission	Need more staff	Need recreation Master Plan and Capital Plan		
Housing Authority		Need Facility expansion plan		
Cemeteries			X	X
Treasurer/Tax Collector	Capital Budget	Coordination with other departments	X	
Assessing Department	Additional Staff and new computer systems		X	
Conservation Commission	Interdepartmental communication	Coordination with other departments	X	
Council on Aging		Need outreach services	In planning	
Planning Board	Enforcement and Information Systems	Coordination with other departments	X	
Zoning Board of Appeals	Enforcement and information systems		X	
Building Department	Inter-departmental communication	Inadequate enforcement	X	
Board of Health	Information System and additional staff needed	Inadequate enforcement & coordination with other department re: Sewer, Building Inspection	X	

In order to maintain this strong fiscal position, the town will need to address four land use and financing policy options .

- *Policy 1: Establish priorities for residential and commercial growth:*

Residential growth, in particular single family homes, generates a negative cash flow balance for the town. The per-pupil costs of education are \$4,510 and the average taxes generated by a new house in 1998 were \$2,526. Assuming the average 4 bedroom house generates 0.87 students, and that the tax revenue from this use is allocated totally to education, the town will be losing some \$1,414 with every single family house which is constructed.<sup>1</sup>

Table 6-8 ranks as positive or negative the cost/revenue impact of particular types of development on the Town's need to provide the cost of General Government Services and Education. The first grouping of uses generates more tax revenue than the cost of both general government and education. The second group of uses costs more in general government services but still brings in more revenues than the costs of education. The third group costs more for both general government and education than the returns to the community from the property taxes generated by these uses.

**Table 6-8**  
**Fiscal Impacts of Development**

Type of Development	Revenue/General Govt.	Revenue/Education
<b>Positive Revenue Benefits</b>		
<i>Research Office Parks</i>	+	+
<i>Office Parks</i>	+	+
<i>Industrial Development</i>	+	+
<i>High-Rise Garden Apartments (Studio/1BR)</i>	+	+
<i>Age-restricted Housing</i>	+	+
<i>Garden Condominiums (One/Two BR)</i>	+	+
<i>Open Space</i>	+	+
<b>Neutral Revenue Benefits</b>		
Retail Facilities	-	+
Townhouses (2/3 Bedrooms)	-	+
Expensive Single-Family Homes (3-4 BR)	-	+
<b>Negative Revenue Benefits</b>		
Townhouses (3-4 BR)	-	-
Inexpensive Single-Family (3-4 BR)	-	-
Garden Apartments (3+ BR)	-	-
Mobile Homes (Unrestricted Occupancy)	-	-

Source: The Growth Impact Handbook, DHCD, p.10

Current zoning in the town allows some housing development for trailer parks and multi-family units, but generally limits development to that of expensive single family

<sup>1</sup> The Growth Impact Handbook, Massachusetts Department of Housing and Community Development (DHCD), p.57

dwelling. A broader range of housing types as well as commercial development needs to be encouraged. The Board of Selectmen and the Planning board need to develop zoning tools which will encourage appropriate housing and commercial development.

- *Policy 2: Adopt strategies which will minimize secondary growth from sewer extensions in rural areas.*

The Current policy is for the Town to subsidize 75% of the capital costs for installing new sewers with the balance being paid by the property owner through a betterment charge. The assumption was that the entire town was to be sewered. This was a reasonable policy to adopt in order to assist residents and businesses resolve existing problems, i.e, houses or businesses built on small lots which were impacting critical resources. In actuality, 15% of the 1,020 homes which have been sewered are new homes which have tied into the sewer system. (Map 6-2 shows the developed and undeveloped areas impacted by the sewer plan.) Subdivision developers have been asked to fund 100% the cost of improvements.

It appears, therefore, that the Town's subsidy of betterment costs has encouraged some secondary growth. Since these houses may cost more in educational expenditures than they generate in revenue as well as result in impacts to critical water and habitat resource areas, the Town needs to adopt various growth control measures to minimize the impacts of sewer extensions. Increases in lot sizes, the management of sewer extensions and septic systems will need to be considered.

- *Policy 3: Capital Budget Financing Plan for meeting critical needs such as acquisition of open space, construction of Town Hall, equipment purchase*

The town has under-funded the annual capital budget and has addressed each year's operating budget as an ad hoc issue. As the town is currently in a strong fiscal position, this is an appropriate time to identify a schedule for funding critical facility and maintenance needs.

- *Policy 4: Establish Growth Management Task Force*

As the Town continues to grow, there is an increasing need for coordination between the separate authorities and various departments. The Water, Sewer, and Highway Departments, the Planning Board, Conservation Commission, and Board of Health must all work together to ensure that a consistent set of strategies are fostering the kind and rate of growth desired by Raynham residents. Department managers currently work together on a broad range of project specific issues. What is lacking is a brainstorming forum for developing a consistent growth planning strategy to address issues such as protecting essential natural resources, setting aside open spaces for particular uses, and investing in sewer and water infrastructure that will manage the town's long term growth. Solutions to these planning decisions should be under the leadership of the Planning Director and/or the Town Administrator.

### III. Need for improved capital budget and fiscal planning

A growing list of municipal projects waiting to be funded is identified in Table 6-7. The impacts of growth and changes in technology are increasing the demands upon the Town leadership to respond by investing large sums in a wide variety of projects. Elected leaders and the professional staff are well aware of the complex nature of effective capital improvement planning and the limited ability of municipal governments to match these demands with actual fiscal resources. Raynham has taken several important steps in developing an effective Capital Improvement Plan (CIP). First they retained the services of HCI Systems, a capital asset

consultant, to verify the Town's existing asset inventory. The lack of an effective capital budgeting process is indicated by several problems including

- No one agency is in charge of capital assets;
- the "owners" and the "directors" of these assets are different, limiting the interest and ability to seek common goals and objectives;
- many Town agencies duplicate efforts used to maintain facilities, equipment, and support services;
- currently, each agency has its own agenda and standards for acquisition, maintenance and replacement of its assets;
- capital asset planning is not linked to the annual budget cycle;
- each separate agency is limited in its ability to fund necessary projects; and
- grants are not sought to acquire, improve, or replace capital assets.

Secondly, after receiving a State grant, the Town retained the services of a consultant to establish a uniform capital budget process for all Town departments. Town Meeting approved the formation of a Capital Budget Committee. A long range needs forecast, the Capital Improvement Plan (CIP), with its annual action program, the Capital Budget, will now be prepared

#### IV. New Town Hall

The existing Town Hall (including the Police and Fire Station) contains 15,732 sq. ft. and provides offices for 18 employees. This facility is also the location for major public meetings although the space is totally inadequate in both size and access. The Town Hall lacks sufficient space to house the existing staff. The recently hired Health Agent is sharing an office with the Town Administrator. Many of the department heads reported that they had to keep copies of old files at home as they lacked sufficient storage space. Furthermore, many of the issues that the employees need to address are confidential in nature but there is inadequate space for maintaining privacy.

Three development options for a new town hall were presented to the residents

- A. Expand on the current site. This would necessitate acquiring adjacent properties.
- B. Develop a new Town Hall and Library on the Borden Colony property, library to be located on a parcel not dedicated for agricultural use
- C. Build a town center off South Main Street to support a Town Hall, Library, Post Office and a mix of higher density housing to serve young couples and the elderly. Town would have to acquire a parcel and facilities for large-scale, mixed-use development.

Public support for Option A, expanding Town Hall at the current location in a separate building, continues to be the favored alternative. The residents like the "feel" of a town civic center without the presence of and congestion associated with a more urban, mixed use center. Further, this option appears to have the virtue of being addressable in an incremental fashion. Limited resources prevent the planning of a new town center off South Main Street and the residents prefer to retain a rural character at the Borden Colony site.

### 6.3 VISION AND GOALS

A vision and set of goals has been established for the town's public facilities. The following are elements of the Vision outlined at the beginning of this document which pertain specifically to public facilities.

*The Town of Raynham envisions itself in the year 2020 as having:*

- *A Town Civic Center which is a focal point of contemporary public facilities and activities*
- *A school system which is rated one of the best in the state with facilities and resources which meet the needs of all of Raynham's students including those with special needs*
- *A responsive town government operating out of contemporary facilities with the organization and resources needed to provide a high level of services including fire and public safety*

#### **Goals/Policies**

The following goals and policies have been adopted in order to achieve this vision,

1. Establish a capital budget/fiscal planning process:
  - Schedule the funding of needed capital facility and maintenance improvements
  - Ensure consistent Finance Committee review process
2. Establish priorities for residential/commercial growth:
  - Maintain favorable 25/75 split between commercial/residential tax base
  - Provide more opportunities for appropriate residential and commercial growth
3. Adopt infrastructure planning/growth management activities:
  - Limit new growth in rural, critical resource areas
  - Coordinate water and sewer expansion with Town Meeting vision growth map
  - Regulate pace of growth
  - Protect surface and ground water quality through appropriate regulation and enforcement
4. Improve department organization:
  - Interdepartmental coordination
  - Adoption of growth management reforms
  - Charter Reform
5. Undertake information systems improvements:
  - Adoption of GIS by relevant departments
  - Networking

## 6.4 RECOMMENDATIONS

How can the Town of Raynham best manage its growth to achieve its vision for the future? The following recommendations have been proposed as strategies for consideration by the town. They are organized under four key headings concerned with 1) capital budgeting, 2) fiscal planning, 3) growth management, and 4) interdepartmental coordination.

### **Establish a Process to Achieve Capital Improvement and Facility Maintenance Planning**

*Establish a process that includes capital planning as part of the annual fiscal planning cycle.*

The Town Planner, Town Administrator, the Public Facility Sub-Committee, Finance Committee and the Board of Selectmen have agreed to:

- Establish a Capital Budget Committee to utilize boards, departments, and professional staff in planning future capital needs;
- Prepare an annual capital plan in coordination with Finance Committee, and Selectmen according to unified standards and process;
- Implement a Capital Facility Plan recommended by this process;
- Make recommendations for new facilities, reuse of facilities, and facility and equipment maintenance; and
- Obtain grants to carry out studies and/or develop facilities.

### **Undertake Fiscal Planning**

*Establish a total percentage of debt service that Town can reasonably afford as part of instituting a Capital Improvement Plan (CIP).*

This debt service could be allocated by percentages for new facilities and equipment, maintenance, and open space acquisition. At present the town has no Reserve Fund for these activities. Purchasing open space parcels when available or acquiring priority parcels needed for the development of the town center cannot be effectively carried out without the town having established a uniform policy and a Reserve Fund.

The Town might want to consider adoption of goal of 2% of its budget, within the 2½ % cap, for a dedicated growth management stabilization account. This would provide an additional \$300,000 annually which might be allocated as follows:

\$150,000, 50%-----Capital facilities

\$150,000, 50%-----Open Space Acquisition

Current expenditures for debt service amount to \$45,000 annually and are less than 1% of the budget, excluding those amounts not subject to the 2½ % cap.

If the town adopted this strategy, they would purchase outright needed equipment below a certain dollar value, bond larger capital items, and if there was a balance left, transfer these funds to the stabilization account for future purchases.

*Adopt guidelines for maintaining commercial/residential split of 25/75*

In order to minimize increases in the residential tax rate, the Finance Committee should annually monitor changes in the total value of residential and commercial growth. Various strategies have been suggested for ensuring that the town retains the present proportionate value of these land uses; 25% commercial and 75% residential. Furthermore, residential uses such as garden condominiums and age-restricted housing, which bring in a higher proportion of tax revenue to the costs of servicing should be encouraged over uses such as 3-4 bedroom homes and townhouse

units. These strategies include managing sewer extensions, adopting new zoning, and purchasing vacant land.

#### *New Town Hall*

The Town should continue to pursue various options for developing a Town Hall. It appears that of the three options considered, the town would like to develop a new Town Hall adjacent to or nearby the existing facility within an area considered to be town civic district, i.e. near the police/fire departments, library, and other municipal services and facilities. Cost and availability of property are always considerations which will impact the recommended location.

### **Initiate Infrastructure/Growth Management Planning Activities**

The protection of future water supplies should be part of the Town's land use planning program. As the Town is contemplating adjustments in their zoning to accommodate future growth, the Town should be careful to protect those areas that will serve as current or future sources of water supply.

#### *Adopt strategies to manage secondary growth*

An effective strategy for the Town to manage growth is to regulate sewer extensions according to an overall plan. A draft concept plan has been considered by the Sewer Commissioners which recommends sewerage in certain limited areas in order to correct existing problems. An alternative strategy would be to increase lot sizes and/or adopt a program of septic system management. A warrant article has been prepared for Town Meeting adoption showing areas that can receive water extensions and tie-ins. All changes in service areas would be regulated by a vote of the Selectmen.

#### *Update mapping of water resource zones*

(See Natural, Open Space and Recreation Resources section.)

#### *Adoption of an enforcement and conservation program*

Potentially hazardous land uses near water resource areas should be monitored for conformance to the Zoning By-law. This program should be undertaken by the Water Districts as the Town currently does not have staff for such a monitoring program.

1. Hazardous land use: The Town must craft a plan with a zoning enforcement officer, including the Board of Health, to regulate floor drains and hazardous land use.
2. Regulation of private wells: The Town and the Water Districts should adopt regulations and a Board of Health monitoring program.
3. Water Conservation: The Water Districts need to adopt water conservation programs. They should participate in financing and enforcement programs.

#### *Increase Water supplies*

The North Water District needs a new water source. Planning is underway to construct a water standpipe as well as to identify viable new well locations. While the Center Water district currently has a surplus of water, the construction of new homes will require additional capacity.

#### *Water Districts to purchase critical water resource areas*

The Water Districts should establish a capital budget item to make land purchases to protect new water supplies.

### **Improve Interdepartmental Coordination on Growth Management Issues**

#### *Establish a Raynham Growth Management Task Force (RGM)*

A Task force should be established to brainstorm solutions around growth related issues such as the planning/construction of sewer line extensions, the planning for new water resources, and the adoption of water resource protection strategies with the Sewer Commission, the Highway Department, the Planning Department, Board of Health and Planning Board.

*Adopt a public education program to promote resource protection and growth management*  
(See Natural, Open Space and Recreation Resources section.)

#### *Establish a committee on organization to explore issues of charter reform*

Which positions should continue to be elected vs. appointed, which departments should report to Selectmen vs. town administrator.

### **Undertake Networking Information Systems Improvements**

Town has already funded the installation through the Taunton Municipal Light Plant (TMLP) of a fiber optic network to connect all departments.

*Seek funds to prepare a plan which will guide information technology development.*

*Seek funds to purchase and install a computer system for networking all Town departments, adoption of a uniform billing system, and use of GIS.*

## Appendix 6-1 Department Inventory

This inventory was prepared by the firm of Larry Koff & Associates based upon interviews with the heads of Town departments.

### Police Department

The Police Department recently updated its Mission Statement as follows:

*The Mission of the Raynham Police Department is to enforce the law and protect the life and property of the people by establishing a proactive problem solving partnership with our citizens. To decrease both crime and the fear of crime while reducing social disorder and establishing an environment which promotes a better quality of life for every citizen of Raynham.*

Raynham's Police Department has been housed in the Police Station at 53 Orchard Street between the Fire Station and Town Hall since 1978 (see photo). Prior to that time, the facility was used for the Highway Department. Two additions have recently been added to the Police Station (1994 and 1997). In 1994, 2 lock-up facilities were constructed, as was a booking room, and space for officers. The addition was designed so as to easily allow for 2 additional lock-ups. (When lock-ups become full, the Department uses a regional lock-up facility in New Bedford.) In 1997, a training room for the detectives was added. A mobile trailer annex exists in the rear parking lot of the Police Station that previously housed police records. According to the Chief, this annex will shortly be removed/eliminated.

The Department currently has 24 full-time officers, 25 on-call officers, 5 full-time dispatch personnel, 1 full-time clerical staff, 13 police cruisers, 1 motorcycle, and bicycles. The Department utilizes its own off-site mechanics for its vehicles. The Chief reports that officer levels are currently adequate, and should remain so for the projected increase in population (3,000+/- persons) over this planning period, barring any significant changes in land use/departamental needs. The Department has a K-9 unit, works with R.A.V.E. fingerprinting children, and, utilizes a D.A.R.E. officer to facilitate drug education at the schools and community policing services.

### Fire Department

The Fire Station is located on Orchard Street adjacent to the Police Station and Town Hall.

*The mission of the Raynham Fire Department is to serve and protect the life and properties of the town of Raynham and all its inhabitants.*

*It is the duty of the Department to oversee that all residential and commercial properties and personal life receive the highest quality level of services that it can offer for the safety of all concerned to our citizens and community.*

The Fire Department contains 20 permanent firefighters, plus the Chief, a secretary, and 12 on-call staff members. Apparatus includes 3 engines, 1 tanker, 1 75' ladder truck (circa 1957), 1 brush breaker, 1 forestry truck, 1 pick-up/4wd, 2 utility vehicles SUV 4 w, 2 ambulances, and 1 boat. The Department utilizes its own off-site mechanics. A second fire station, which was housed in rented quarters in North Raynham, was eliminated in 1981. The Chief would like to reestablish a station in North Raynham adjacent to the former station on Town land that has been set aside for these purposes on Route 138. According to the Chief, the response time to the

northernmost sector of Raynham (near the dog track) can run between 6 and 8 minutes, and the construction of a second station would not require the Town to purchase additional apparatus.

The existing fire station has had several additions to it, including a recent addition that provides living quarters for the staff. Storage space for apparatus is at or over capacity, and the Department must house some equipment off-site. The facility is not in compliance with the ADA. The Town has a mutual-aid agreement with surrounding communities, and at present, the Department has no plans for additional personnel or equipment.

### School Department

The Bridgewater-Raynham Regional School District is responsible for running Bridgewater's and Raynham's Public Schools. Raynham's public schools include 4 elementary schools (North, South, Sullivan/Center, and the Lillie B. Merrill School), the Middle/Junior High School, and the Bridgewater-Raynham Regional High School.

**Table A6-1**  
**1998 School Enrollments**

<u>Name</u>	<u>Year Built</u>	<u>Grades</u>	<u>Students</u>
North School	1925	K-2	88
Sullivan/Center School	1930	K-2	182
South School	1924	K-2	206
Lillie B. Merrill School	1952	3-5	484
LaLiberte Junior High School	1964/1978	6-8	495
<b>Total</b>			<b>1,455</b>

Source: Superintendent of Schools Office

**TableA6-2**  
**Selected School System Statistics**

	<u>Raynham</u>	<u>State</u>
Students per Computer 1997-8	9.6	7.2
Percent of Classrooms with Internet Access 1997-8	11.5	40.4
Number of Students per Teacher 1997-8	21.3	18.1
Percent of Drop-out Rate 1994-5	1.9	3.4
Average 1998 SAT Scores	1,012	1,004

Source: Bridgewater-Raynham School District Profile, 1997-1998

The *1996 Long-Range Planning for School Facilities* study conducted by New England School Development Council for the Town of Raynham identified a projected space shortage of 401 K-8 pupil stations over the next 10 years. It further labeled the 3 K-2 elementary schools as outmoded/ unsatisfactory for modern-day educational purposes and recommended their abandonment, and suggested that the Merrill and LaLiberte Junior High Schools be renovated/upgraded.

In November 1998, the Town of Raynham voted for a 20-year debt exclusion to build a new middle school and to renovate the Merrill and LaLiberte Schools. Once complete, the new

middle school will have a capacity of approximately 1,000 5<sup>th</sup> through 8<sup>th</sup> grade students, the Merrill School will house kindergarten and first graders, and the LaLiberte School will house grades 2 through 4.

### **Highway Department**

The Highway Superintendent/Surveyor was an elected position prior to 1997. The Highway facility/garage is located at 1555 King Phillip Street (see photo), the offices of which are shared with the Sewer Department. The facility was built circa 1976, and has had no additions to it. The Department is responsible for the maintenance of 100 miles of roads (Chapter 90), although they also maintain a number of roads in developments that have not been accepted by the Town. The Highway Department is in the process of updating its roads inventory. Only Routes 24, 44, 138, I-495, and highway exits are plowed and maintained by the State. The Department does not maintain a Pavement Management Plan.

The Highway Department is also responsible for solid waste, and is in the process of creating a transfer station to be run in-house or by an outside contractor. The existing landfill, located adjacent to the Highway facility, will be closed in December 1999, and the Town will have 1 year in which to have it capped. The Second Annual Recycling Report Card issued by the Executive Office of Environmental Affairs in 1996, gave Raynham a grade A, with a 35% recycling rate.

The Department has 11 full-time staff, including the Superintendent, Office Manager, Foreman, Mechanic, 5-highway maintenance and 2 solid-waste employees, and utilizes 18 vehicles. In addition, the Department employs 2 part-time workers at the landfill and 4 summertime college students for street and tree-pruning maintenance. The Superintendent shares his offices with the Foreman, and little space is available for private conversations and/or for the review of drawings. The highway garage has 2 bay doors (in and out), and does not provide enough space to house all of the highway vehicles. A temporary shelter provides cover for some of the remaining vehicles, and several are left outside.

### **Water and Sewer**

Large sections of Raynham are served by water services while sewer services are limited to the commercial districts and some residential sections.

Water and wastewater systems in Raynham have evolved over a period of years. The sale of water to Raynham was authorized in 1931 by Mass. Acts 232 Sections 5 & 6 and later amended by 1971 Mass. Acts 336. The South Easton & Eastondale Fire and Water District paved the way for the establishment of the Center Water District by 1947 Mass. Acts 222. Shortly thereafter, the North Raynham Water District was authorized by 1949 Mass. Acts 483. A series of Special Acts of the General Court, Town Meeting, and district votes have enabled the organizations to evolve into the forms that they are today.

Most of the homes in Raynham are served by Town water through one of the two water districts. In the North Raynham Water District, which has a capacity of 0.75 mgd (million gallons per day), there is a maximum daily demand of about 0.9 mgd. In the Center Raynham Water district the maximum daily demand is 1.6 mgd, while the capacity is 2.3 mgd. Both of the water districts are seeking new well sites to expand their existing capacity.

Wastewater was addressed by 1976, when the Board of Sewer Commissioners were authorized to act as Town officials. Currently, the sewer service is extending its lines for a new phase of service. The Sewer Commissioners and the two Water District Boards have proceeded to expand and develop their respective systems as the years have passed.

The plan for extension of sewer service to Raynham consists of five phases and has been built out starting in 1970 with the completion of Phase I in 1977 and Phase II and III in 1998. Phase IV was recently completed. Taken together these projects now serve a total of 1505 homes or 52% of the existing single family residences as well as an additional 59 commercial customers. The system has the capacity to serve an additional 456 existing homes which have yet to be connected. Phase V is currently under review; a Facility Plan has recently been completed. This phase could add an additional 770 existing homes or 27% of the town's residences. Additional development will also be likely to connect to the sewers when the service becomes available.

The Town of Raynham has an agreement with the City of Taunton for its sewage treatment. The capacity allotted to Raynham is 0.5 mgd. Section 11 of this agreement entitles Raynham to any unused capacity at the wastewater treatment facility. The current flow from the households and businesses that are connected to the system is estimated at approximately 0.30 mgd. The ultimate flow is identified in the Board of Sewer Commissioners Facility Plan of July, 2000 as 1.2 mgd in the year 2020. The City of Taunton has been notified of the Town of Raynham's utilization of 1.2 mgd in the year 2020 for planning purposes. If all of the existing development that can be served through Phases I - V were to be connected along with a modest amount of additional new residential and commercial development, the capacity limit under the agreement would be reached.

### **Library Society**

The Raynham Public Library is located at 760 South Main Street and near the Town Hall, Police and Fire Stations. Constructed in the late 1940's, the facility has been added on to both in 1974 and 1992. The Raynham Library Society (1888) owns and operates the facility, with assistance from the State and the Town. The Library provides 15-20 parking spaces on its relatively small site. Because of the size of the site and its proximity to a river, little opportunity for facility or parking expansion is provided.

The Library contains approximately 39,000 holdings, for an average of approximately 3.6 volumes per capita, below the State average of library holdings of 5 volumes per capita<sup>2</sup>. About ½ of these holdings are devoted to children. In 1999, 38,693 items or 3.59 items per capita were borrowed from the Library, an average lower than the State average of 7.49 items per capita for library usage in 1996. There are approximately 4,929 registered library borrows, and according to the Director, primarily children and seniors utilize the Library. Library staff run two children's reading hours on Wednesdays which are heavily attended. The Library is networked with 24 libraries in the region, and is currently open 40 hours per week (the State required minimum). The Library is closed on Sundays. It is computerized, however it maintains only one computer for its patrons. The Library appears to be in compliance with the ADA.

The Library has 8 part-time employees, including a part-time Director.

### **Recreation Department**

Park and Recreation Department services are two fold: recreation programming for youth and the community and second, recreational facility management. An elected commission sets policy for the Director and staff. The department offers a variety of programs, including women's self defense courses, a summer basketball league, and youth golf lessons. The maintenance of all the facilities of the Commission and the School Committee are overseen by the Commission staff. In addition to the Department's operating budget appropriated at the Annual Town Meeting, three

<sup>2</sup> Massachusetts Public Library Data, Summary Table, 1996 Data, Massachusetts Board of Library Commissioners.

revolving funds are utilized to meet community demands for recreation services. These core services are provided by a Director of Park and Recreation, a part-time secretary, and two full time maintenance employees. Additional personnel are contracted for and paid by the receipts in the revolving funds.

The Commission has converted a single family home on the Borden Colony to provide office space and meeting rooms at 2254 King Philip Street. Across the street an out building of the former Borden Colony has been converted to provide garage and work space for the maintenance staff. The principal assets requiring active management and monitoring by Park and Recreation Commission are the Borden Colony's large parcels of farmland, forest, and wetland. These parcels include the 248 acre Borden Colony, being municipal lands under an Agricultural Preservation Restriction APR. An annual contract to farm the tract is bid by the Park and Recreation Commission. Recreation activities are focused on 31 acres (not protected by the APR) where most of the Borden Colony's remaining facilities stand. In addition to these parcels, the Commission maintains all recreational assets located at school facilities, a baseball diamond located on land controlled by the Cemetery Commission and a few other isolated facilities located through out the Town. Over seven sites are maintained. During the mowing season, one employee could always be mowing.

### **Cemetery Commission**

Cemetery Department services include the sale of lots, facilitating the burials, and maintaining 21 cemeteries. An elected commission sets policy for the Superintendent and one part time maintenance worker. The maintenance of all the facilities of the Commission is overseen by the Commission staff. In addition to the Department's operating budget appropriated at the Annual Town Meeting, two revolving funds are utilized to meet the department's service needs. These core services are provided by a superintendent and one part time maintenance employee. As needed and by the project, additional personnel are contracted for and paid by the receipts in the revolving funds.

The Commission has a garage and work space at the Pleasant Street Cemetery for the maintenance staff. The principal assets requiring active management and monitoring by the Cemetery Commission are at the Pleasant Street Cemetery as noted. Only the Pleasant Street Cemetery has water piped underground to maintain its limited landscaping. Improvements in the other 20 cemeteries are very limited.

Many years ago several neighborhood cemeteries were transferred to the Town from local control. At the North Cemetery, the Commissioners added 14 acres several years ago to provide room to expand when the need developed. Presently, the women's softball field is located on the otherwise vacant site. Land acquisition appears necessary to expand the Pleasant Street Cemetery, which would make it the only cemetery in the center of the Town with available lots.

### **Conservation Commission**

Conservation Commission services are two fold, i.e., enforcement and open space management.

- 1) Enforcement of the State's Wetlands Protection Act is overseen by the Raynham Conservation Commission. Signed into law in 1973, the law enables the community to protect certain wetlands for the public good. Developers give notice of their intent to develop and the Commission determines its jurisdiction and may issue an order of conditions to guide the developer's activities. The Raynham Conservation Commission has significant authority to enforce the law and is supported by a full time Director and appointed agents.

- 2) Management of open space parcels placed in the care of the Commission seeks to protect the assets for the community and to encourage several forms of passive activities at various sites. Those assets are noted in detail in the Natural, Open Space and Recreation Resources section.

The Commission has office space and its related code enforcement and land use records at the Municipal Building at 53 Orchard Street. The principal assets requiring active management and monitoring by the Conservation Commission are large parcels of upland and wetland. The parcels include the Borden Colony, 248 acres of municipal lands mostly under APR; two parcels of Conservation lands which are protected by Ch. 40C, Section 8 MGL, i.e., Hewitt's Pond, 38.8 acres (acquired in 1978 with state "Self Help" funding); and the Forge River Conservation Area, 9.5 acres. The Commission is also assigned to manage and protect the Commonwealth's State Forest in Raynham, 16.0 acres. In addition to these four parcels, the Town owns 22 other parcels used in total or in part for open space or recreational use.

### **Council on Aging**

The Council on Aging develops, implements and coordinates programs and services for Raynham's residents age 60 and over (1,839 as of the January 1998 Town Census). They have been located since 1972 in the Senior Center (Gilmore Hall) at 964 Broadway (Route 138), an older (1880's) two-story meeting hall. The Senior Center occupies only the first floor and contains a multi-purpose room, a kitchen and office and lavatories. The Council on Aging facilities are not in compliance with the ADA.

The Director reports an inability for many seniors to gain transportation to the Senior Center facility. For those who cannot drive, the Greater Attleboro-Taunton Regional Transportation Authority operates *Dial-A-Ride* which is available to take seniors to appointments, with medical heading the priority. The Director reports that many seniors unfortunately are not able to call ahead of time and/or the *Dial-A-Ride* service is not able to meet some seniors' needs. In addition, the Director reports that because there are no spaces for private conversation to take place at the Senior Center, some seniors stay away from programs such as fuel assistance, health clinics, counseling services, etc.

The Council on Aging operates with a Director, Nutrition Program Coordinator, Outreach Worker, and 1 Senior Aide. The COA provides upwards of 7,000 meals to Raynham's seniors each year, as well as health clinics related to blood pressure, the flu, pneumococcal, tetanus, and podiatry. In addition, the COA provides exercise classes, walking groups, line dancing, Tai Chi, movies, game playing (cards, bingo, bridge), basket weaving, computer learning, organizes trips, and the Children-and-Seniors-Together (C.A.S.T.) program which provides an opportunity for Raynham's seniors and children to interact in the public school setting.

### **Building Department**

The Building Inspector is a full-time position. The electrical and plumbing inspectors' positions are both part-time (20 hours each), and there is a full-time secretary. All are housed in a small (14' square) front office located in Town Hall. The Building Inspector reports that almost all of his time is devoted to the review of plans and conducting site inspections. Zoning enforcement issues are dealt with only on a case-by-case basis when brought to the Department's attention by others.

### **Health Department/Board of Health**

The Board of Health Agent enforces state and local public health laws, rules and regulations, investigates and reports cases of disease dangerous to public health and confers with the

Conservation Commission, Board of Health, Building Inspector, Town Planner, other town departments and state public/environmental health agencies. The agent works under the policy direction of the Board of Health when making contact with said agencies, operators, and managers of establishments handling food products, septic system construction contractors, well drillers, landlords and tenants, farm owners, business community and the general public. Proper judgement in the interpretation and application of law and local regulations to frequently changing conditions and problems related to public/environmental health is required.

**Appendix 6-2**  
**Previous Reports**

**1982 Municipal Service Needs Study**

In 1982 the regional planning agency ,SRPEDD, prepared a comprehensive Growth Policy Plan for the Town of Raynham. As part of that effort, residents were asked to take part in a town-wide survey concerning the need to increase various town services. The survey results are noted below as are the recommendations for town Departments.

- The 1982 survey (196 returns) indicated that respondents believed that with the exception of the Water Supply and Zoning Enforcement, all other Town Services were adequate and did not need to be increased, as shown below.
- Respondents were split over the need to provide more restrictive zoning (45% more restrictive, 43% stay the same, and 13% less restrictive). Of those desiring more restrictive zoning, 69% believed that a larger residential lot size was the way to go.

**Table A6-3**  
**Survey Responses**

Service	Percent desiring to		
	<u>"leave as it is"</u>	<u>"increase"</u>	<u>"reduce"</u>
Fire Protection	78%	19%	2%
Police Protection	69	28	3
Recreation & Playground	66	23	12
Library Services	74	17	9
Schools	66	12	21
Street Maintenance	79	19	2
<b>Sewerage</b>	56	36	8
Septic System Maintenance	71	23	6
Civic Appearance	78	18	3
Purchase of Vacant Land	53	33	13
Street Lighting	64	30	7
<b>Public Transit</b>	55	40	5
Medical Services	66	28	5
Services for the Elderly	58	37	6
Social Services & Activities	66	26	8
<b>Water Supply</b>	41	58	2
<b>Zoning Enforcement</b>	52%	44%	4%

**Table A6-4**  
**Recommendations from 1982 Comprehensive Growth Policy Plan**

<u>Town Facilities/ Services</u>	<u>Status 1982</u>	<u>Recommendations</u>
Police Department	13-fulltime officers, 25 on-call officers, 4 dispatch, 1 clerical, and 6 cruisers.	Increase by 3 full-time officers (16 total), to be in line with national standards.
Fire Department	2 engine companies consisting of 10 firefighters and 26 on-call staff, with 4 engines, 1 car, 2 rescue, 1 boat, 1 ambulance, 1 pick-up, 1 breaker.	Increase by 4 firefighters (14 total). Establish station in North Raynham. Add forest fire-fighting engine.
Water	2 water districts, enough water to supply 16,000+ persons.	Combine into 1 water district. Increase water storage in N. District
Sewer	Limited to commercial district on Route 44 west of Route 24 and the Pine Hill Estates.	Limit expansion to Raynham Center and Route 44 to the east of Rte. 24. Adopt septic system inspection and maintenance program.
Education	5 schools (K-8). 15% attended Bristol-Plymouth Reg. Tech, 85% attended Bridgewater-Raynham Reg. High. K-8 student population remained consistent (approx. 1,600 students) over previous 10 years (since 1971), while grades 9-12 increased from 568 to 651).	If K-8 exceeds 1,700 students, consider new school. [10 acres on Merrill and Junior High site designated for this use.]
Library	23,000 volumes (1/3 children's). Adequately served/funded/housed.	Continue providing at current level.
Social Services	Fastest growing segment of population 5-14, 15-24, and 65+.	Provide additional services for these segments of the population.
Cemeteries	23 cemeteries/40 acres.	Prohibit the sale of cemetery plots to non-Raynham residents.
Finances	60% education, 33% town services	Conduct capital improvement program.
Town Hall	No mention of facility.	Prepare for building new town hall.
Citizen Involvement	½ of survey respondents attend TM.	Prepare fliers/press releases.
Town Center	58% of the survey respondents were not in favor of a "distinct town center in Raynham with business and public buildings".	Expand facilities at current location

### **1996 Long-Range Planning for School Facilities**

The following issues and recommendations are taken directly from the *1996 Long-Range Planning for School Facilities* study conducted by NESDC for the Town of Raynham.

1. A projected space shortage of 401 K-8 pupil stations (277 at K-5 and 126 at 6-8) over the next ten years.
2. The South, Sullivan (center) and North buildings are outmoded and unsatisfactory to house a modern-day educational program. These facilities should be abandoned, which would create a need for approximately 350 additional pupil stations.
3. The Merrill and LaLiberte Junior High facilities should be renovated/upgraded.

### Appendix 6-3 Department Needs Assessment

The following needs assessment was based upon department interviews undertaken by Larry Koff & Associates in 1999. The specific focus of these interviews was to highlight growth management issues.

#### Police Department

Both the Deputy and Chief identified the need for increased/adequate space as the number one challenge facing the department. They reported a need to provide a facility where suspects and all others can be adequately separated, and that without this ability little privacy exists for those who report a crime versus the suspect. The communications station currently has room for only 1 dispatcher. The Deputy heads an in-house Planning Committee that had been looking into options to better facilitate the joint resources of the police and fire departments, including communications/dispatch issues (see 1/9/99 RPD Memorandum). The Committee has recently recommended expanding the police station on its front to be in line with the existing Town Hall (approximately 25' x 40') to facilitate an increased dispatch area, new front entry, and additional police department space. They have proposed requesting estimates for a July 1999 construction date. The Station does not currently appear to comply with the American with Disabilities Act (ADA).

The Deputy and Chief believe that only with the removal of Town offices from the adjacent facility, can the Fire and Police Departments adequately expand at their present location. They are satisfied with the development review process in Town.

The following are additional Police Department issues to be examined:

- Will a third addition within 7 years to the Police Station adequately address long-term space needs?
- Is the currently proposed expansion of the Police Station appropriate/necessary if the Town offices were to become vacant?
- Should the Town consider coordinating vehicle maintenance with its various departments (i.e., Police, Fire, Highway, Parks & Recreation, Cemetery, etc.)?

#### Fire Department

The existing Fire Station does not appear large enough to house the existing amount of fire/ambulance apparatus, let alone increased levels. According to the Chief, the 1957 ladder truck is in need of refurbishing or replacement, and because of recent and proposed multi-story development in Town (especially along Route 44) it will be called upon with much greater frequency.

The following are additional Fire Department issues to be examined:

- Does Raynham need a second fire station, or better roads/intersections to facilitate vehicle movement? A list of incident/call volumes since 1980 for documentation was requested from the Chief.
- If the Town offices were relocated and the additional space was appropriated to the Police and Fire Departments, would the need for an additional station be necessary?

#### Schools

Currently there are 1,455 children enrolled in Raynham's schools, averaging 0.38 school children (grades K-8) per household. Estimates for the future number of children per household range

from 0.34 to 0.39 (SRPEDD). Projecting an increase of 1,240 additional households by 2020, there would be an estimated 484 additional school children. The proposed improvements will provide capacity for 1,761 students, which falls 178 short of the capacity that will be needed by 2020. The number of additional students projected at full build-out will require a doubling of the existing school facilities

The Superintendent of Schools reports that with the construction of the new middle school, the 3 existing elementary schools will no longer be needed for school use, and that the school facilities should be adequate to house the projected student-age population for the next 10-20 year planning period.

The following are additional School Department issues to be examined:

- Discussions with the Permanent School Building Committee should ensue to determine appropriate uses for the 3 elementary schools (North, South, Sullivan)

#### Highway Department

The existing highway facility is inadequate in terms of providing shelter for its multiple/expensive apparatus. The Superintendent is contracting for an office addition to be designed (roughly 34' x 30') adjacent to the existing offices. This space would also house a newly proposed Town Engineer position that would coordinate roadway efforts, including the review of drawings and roadway design standards. The Superintendent would like to see a GIS system utilized by his department under the auspices of a Town Engineer.

The following are additional issues to be examined relating to the Highway Department:

- Should the Town consider establishing a DPW or other organization to coordinate the various "public works" departments, facilities, and assets?
- Should the Town consider coordinating vehicle maintenance with its various departments (i.e., Police, Fire, Highway, Parks & Recreation, Cemetery, etc.)?
- If a GIS system were introduced in Town, under which department should it be operated, and where should it be located?
- Will the proposed Highway Department office expansion meet the needs of the Department for the next 20 years?
- Can funds be obtained for assisting the Highway Department in preparing a Pavement Management Plan to better coordinate roadway maintenance.
- The Highway Department should consider constructing an open garage to provide shelter for Town vehicles.
- The Sewer and Highway Departments might be able to share equipment and office space. Is a joint space needs study possible?

#### Water Districts

On the basis of the projected buildout figures for residential and commercial growth, it is apparent that the town will need to increase by more than 2.5 times its water supplies from a current capacity of 3.1 MGD to 8 MGD.

Due to a new well which is coming on line, the Raynham Center Water District currently has sufficient capacity to accommodate future growth. The North Raynham Water District only has sufficient capacity for its current needs assuming the continued adoption of a water restriction. In addition its storage capacity is deficient. Recognizing these problems the NRWD is in the process of testing a number of Deep Bore well sites as sources for additional supply. The NRWD

is also contemplating the construction of an additional storage tank. The cost of these improvements may be in excess of \$3 million.

**Table A6-5**  
**Existing and Projected Water District Supply/Demand:**

Year	Center (70% total)		North (30% total)		Total	
	Demand	Supply	Demand	Supply	Demand	Supply
2000	1.6	2.279	0.9	0.75	2.5	3.1
2020	3.0		1.0		4.0	
**Max build-Out	5.8		2.8		8.4	

Source: Center and NRWD, 1999

In 1999 there were 4,140 residential properties and 464 industrial properties (Phase V Sewer Expansion Study). Average household daily usage is estimated to be 400 gallons/day, while daily consumption by retail land uses is estimated to be 35 gallons/1000 sq. ft. and office/manufacturing customers use about 60 gallons/1000 sq. ft.

It is apparent that if the Town is going to be able to continue to sustain itself and grow to accommodate future needs, the protection and provision of adequate supplies of water is one of its primary concerns. Achieving this goal will require the support of the citizens and other Town departments.

Adequate regulations and enforcement must protect existing supplies. Funding and staffing must provide for the development of new resources. If the past is any guide, the town will need to ensure improved cooperation to protect existing resources, finance, and develop new sources of water supply.

Three issues will need to be addressed:

*1. Public awareness of the need to protect existing supplies*

Both water districts have experienced problems with the contamination of well sites and they have each installed filtration systems. The most significant well contamination problem occurred in 1985 when gasoline leaked from an adjacent land use to the well sites in the Nippenicket. The Town had to borrow water from Bridgewater until this problem was corrected.

A public education and enforcement program is needed. The Building Department should periodically inspect and enforce the existing regulations to ensure that adjacent land uses are not carrying out activities which will impact the well sites. An opportunity to educate the general public will exist when the New Middle School is built. This site is located near well sites in the Central District. The Rayham School Department has an opportunity to incorporate an education program around the issue of water supply protection.

*2. Managing growth*

The protection of future water supplies and limiting secondary growth in rural areas should be part of the Town's land use planning program.

As the Town is contemplating adjustments in their zoning to accommodate future growth, the Town should be careful to protect those areas that will serve as current or future sources of water supply. The boundaries and regulations of the current Aquifer Protection District do not correspond with the DEP zones. Furthermore the town might want to consider changes in the By-law which would foster larger lots and encourage clustering within the Zone II and III areas in order to ensure water resource protection. In addition, new organizational arrangements need to be considered to provide adequate communication between the Town and its two water districts. On the basis of the previous analysis, a number of goals and recommendations are suggested.

The Town also needs to manage the location of sewer extensions to prevent growth in rural areas of town. Additional sub-divisions in these areas will require additional capacity in the Taunton wastewater treatment facility which is not currently available. In addition, it is important that the town not, through sewerage, inadvertently restrict the amount of recharging of the aquifer so as to reduce the available public water supply.

#### Library Society

The Raynham Library Society has increased funding levels so that the Library hours now include Fridays, but would still like to see additional personnel and services provided. According to the Library's Director, the facility and its site, is at capacity. The Library Society would like to see the Town acquire a new site and construct an expanded public library facility.

The following are additional issues to be examined regarding the Library.

- Raynham's Library Society and the Town of Raynham should consider relocating the public library to a larger site, ideally adjacent senior housing, the senior center, and/or other public facilities such as playing fields which would concentrate the accessibility of those who utilize the Library the most.
- Determine State Library funding possibilities.

#### Recreation Department

The Town holds many different recreational facilities. Several of these facilities were transferred to the Town from the Commonwealth as the Borden Colony facility was closed by the state. The Town has attempted to operate these facilities with limited planning or investment in needed renovations. The effective use of these assets may be achieved by resolving certain issues or taking certain actions:

- A Recreation Master Plan is needed to implement the Community's desire for services.
- Using Recreation Master Plan as a guide, a multi-year capital plan could determine which of the key facilities are needed to serve the community and should be renovated and kept in good repair.
- Responsibility for maintenance of all Town-owned facilities should be unified and suitable appropriations granted regularly to maintain them at a uniform standard of repair.

#### Cemetery Commission

The cemetery needs of the community and society are constantly changing. Throughout the region cemetery design has changed. However, for most sites and in most details, Raynham has maintained a traditional approach to design, improvements, and maintenance. The Town has been operating all of its facilities with limited renovations, although the Pleasant Street Cemetery is moderately improved over the other 20 sites. A suitable level of design and maintenance may be achieved by resolving certain issues or taking certain actions:

- Using a multi year capital plan, the key facilities needed to serve the community should be renovated and kept in good repair;
- Responsibility for maintenance of all Town-owned facilities should be unified and suitable appropriations granted to maintain them at a uniform standard of repair.
- The adverse impacts of growth should be controlled and limited by developing additional cemetery burial spaces as the community grows

#### Conservation Commission

Utilization of existing assets may enable the public to benefit from the many unique holdings currently in the Town Land Inventory. Effective use of these assets may be achieved by resolving certain issues:

- Management Responsibility of all Town lands including "Open Space Land" is not clear and is fractured among several Town Boards and commissions;
- Town-owned open space lands are not clearly marked and bounded; and
- Parking, access and other minor amenities should be made available at most "Open Space" sites to enable access by the public.

#### Council on Aging

The construction of a new Senior Center has been identified as one of the Town's highest priorities over the past several years. The existing facility and site are not large enough to house the many services currently provided by the COA, let alone expanded ones. In FY 1997 and 1998 the Town applied for a CDBG to construct a new facility on King Phillip Street, but was narrowly denied each time. The Director reports that finding a new facility, providing transportation, and expanding outreach services, including respite care are the main issues facing the COA. Retaining a Town Visiting Nurse, she believes, would help to alleviate many health-care issues facing Raynham's seniors.

The following are additional issues to be considered regarding the Council on Aging:

- Can any of the old schools (North, South, and Sullivan) be utilized for Council on Aging services?
- Should a new senior center facility be located adjacent to other municipal services such as senior housing and/or the Library?

#### Building Department

The existing space provides inadequate room for document storage and the performance of various duties of the Building Department, e.g., desks for the staff, tables to review drawings, and/or possibilities for private conversations to take place. Where the space provides adequate room for one workstation, several workstations/desks exist. The Inspector reports no capabilities for communication between the office and the inspectors via portable telephone/radio, and a lack of a coordinated computer system with the Assessors, who currently have to separately input Building Department data. Due to time constraints currently on his position, the Inspector believes that a full-time Assistant Building Inspector position should be created which would specifically serve as the Zoning Inspector, reviewing all proposed developments and regulations, and other zoning enforcement needs.

The following are additional Building Department issues to be examined:

- Consider a single town-wide database/system to eliminate duplicative processing with the Assessors and others.
- Provide adequate space for the Building Department to include 4 workstations and an area for private conversations and the review of drawings to take place.

- Determine staffing and management needed to carry out zoning enforcement. Is the Assistant Building Inspector able to address this concern?
- Monitor annual data on trends in residential and nonresidential development.

Health Department/Board of Health

The Health Agent shares office space with the Town Administrator. More space for the housing of septic plans, food service inspection forms and files, housing records, well locations, complaint forms, volumes of rules and regulations and general correspondence needed. No space for citizens seeking to speak privately with health agent. Adequate furniture, i.e, desks, files, and equipment needed. Town is growing, so this office will grow in relation to the population of residents and businesses. It is foreseen that additional staffing will be needed. A clerk (at least on a part-time basis) is foreseen to be needed in the near future.

Appendix 6-4Raynham Related Massachusetts Acts and Resolves of the General Court

## Police

1959 Mass. Acts 379

Chief Russell Reid granted life tenure

1962 Mass. Acts 24

Chief George R. O'Brien granted life tenure

## Public Works Department (Commonwealth of Mass.)

1957 Mass. Acts 586

Location/Construction of District Office authorized in Raynham or Taunton

## Schools (Regional School District)

1965 Mass. Acts 751

Bridgewater - Raynham District established

1966 Mass. Acts 392

Dissolution of Union authorized

1977 Mass. Acts 536

Regional School District amended

## Town Meeting

1986 Mass. Acts 711

All actions of the March 3, 1986 Town Meeting validated

## Transportation

1920 Mass. Acts 622

Raynham &amp; Bridgewater Transportation District established and a deficiency in municipal finance resolved with the Eastern Mass. Street Railway Company

## Water

1924 Mass. Acts 400 sec. 5 &amp; 18 Supply and sale of water to Raynham authorized

1931 Mass. Acts 232 sec. 5 &amp; 6 South Easton and Eastondale Fire and Water District established

## Center Water District

1947 Mass. Acts 222

Center Water District established

1948 Mass. Acts 193

Borrowing Authority increased

1949 Mass. Acts 121

Borrowing Authority increased

1963 Mass. Acts 336

Authorized to construct and maintain wells on land in Bridgewater and to sell water

1971 Mass. Acts 336

Sale of water authorized

## North Raynham Water District

1949 Mass. Acts 483

North Raynham Water District established

1952 Mass. Acts 230

Refunding of loan authorized

1990 Mass. Acts 359

Water System Development Fund authorized

## State House Library Document numbers:

0076801

Term of office of Clerk and Treasurer amended

0076808 &amp; 0084496

Calling a meeting of the District authorized

## General Government -- Memorials Named

1961 Mass. Acts 270	Mass. State Guards Veterans, Route 25 in Raynham
1965 Mass. Acts 36	Mass. State Guards Veterans, more of Route 25 in Raynham
1979 Mass. Acts 53	James Brian McGarry, a bridge
1979 Mass. Acts 142	Lance Corporal Lawrence K. Dowd, an interchange at I-495
1986 Mass. Acts 34	Augustus Clayton Oliver, Jr., a bridge
1991 Mass. Acts 254	Albert F. Porter, a bridge

## Elections, Recall

1989 Mass. Acts 473	Special provisions of recall elections providing for Raynham
---------------------	--

## Fish and Fisheries

1926 Mass. Acts 68	Alewives and Shad, artificial propagation and taking
1927 Mass. Acts 174	in / from the Taunton Great River

## Gas and Light

1907 Mass. Acts 126	Taunton Gas and Light Corp., may furnish gas in Raynham and Dighton
1914 Mass. Acts 189	Taunton, electricity may be furnished by Taunton

## Lands of the Commonwealth Transfer

1972 Mass. Acts 700	Taunton State Hospital parcel conveyed to Town of Raynham
1975 Mass. Acts 783	Division of C.P. & O. parcel conveyed to Town of Raynham
1981 Mass. Acts 586	Taunton State Hospital parcel conveyed to Town of Raynham
1982 Mass. Acts 315	Taunton State Hospital parcel conveyed to Town of Raynham

## License -- Alcoholic Beverages

1981 Mass. Acts 739	Town of Raynham may transfer license to Paul M. Morrison
---------------------	--

## Mobile Home Parks

1993 Mass. Acts 8	Town of Raynham may discontinue permits
-------------------	---

## Natural Resources

1961 Mass. Acts 88	Div. of Fisheries and Game, acquisition of land in Raynham
--------------------	--

## Payment of Money

1970 Mass. Acts 373	Town of Raynham authorized to pay James Moura
---------------------	---

## Pension

1925 Mass. Acts 56	Town of Raynham authorized to pay Walter A. Harlow
--------------------	--