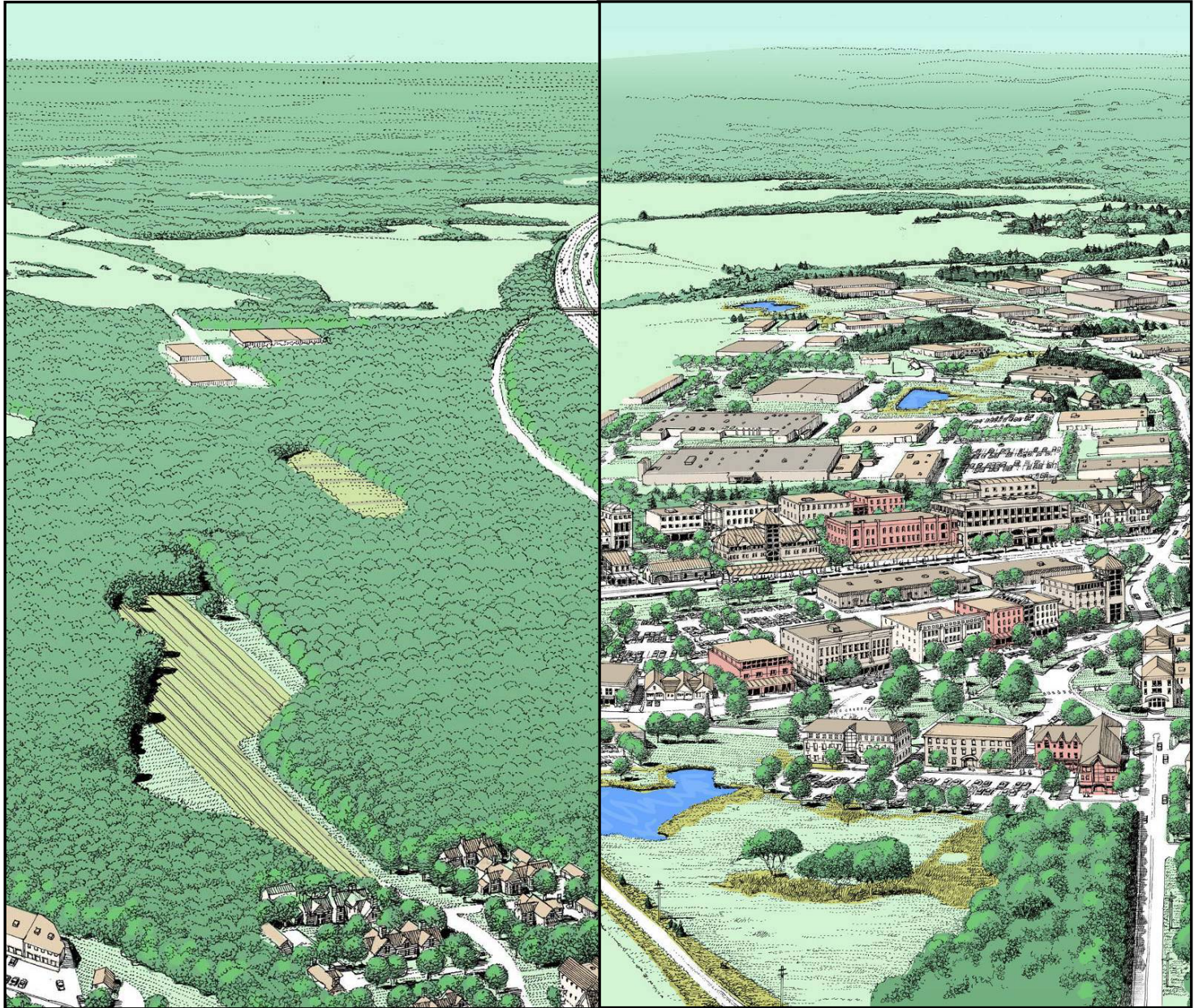


CITY OF NEWBURYPORT
Strategic Land Use Committee



Strategic Land Use Plan

A Strategy for Conservation and Development
June 2004

Strategic Land Use Plan

A Strategy for Conservation and Development

Strategic Land Use Committee

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Introduction

THIS DOCUMENT PRESENTS A NEW VISION AND STRATEGY for an important area within the City of Newburyport. This area, stretching from Interstate 95 to Route 1, includes the City's industrial park, farms, and an open space corridor along the Little River, as well as several residential neighborhoods. With excellent highway and commuter rail access, and with much of its undeveloped land zoned primarily for industrial use, the area has long been valued for its economic opportunities. In recent years, though, its ecological and aesthetic qualities have also become recognized. Competing interests and values have converged in this area, causing residents to revisit long-standing land use policies through a focused and public planning process. This process has resulted in recommendations for policy changes designed to protect significant environmental resources while supporting the City's continued economic vitality.

Overview

DURING 2003-2004 THE CITY OF NEWBURYPORT engaged in a strategic planning process for a 1500-acre area in the southern portion of the City. The planning effort was a priority recommendation of the City's 2001 Master Plan.

The study area encompasses the City's industrial park, several residential neighborhoods, and an open space corridor of woods and farm fields extending into the Town of Newbury. It represents the edge between the densely developed sections of Newburyport to the north and the more sparsely settled areas to

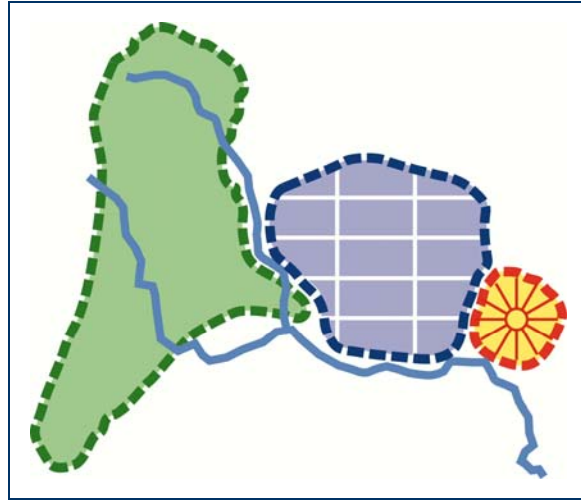


The Strategic Land Use Plan study area includes the existing industrial park, large expanses of open space, and smaller commercial districts and residential neighborhoods.

the south, and is thus an area where competing interests of growth and conservation converge. The planning study was undertaken to identify ways to reconcile these interests and to guide future land use policy in this area of the City.

The plan described in this document sets forth a strategy for redirecting future development within the study area to achieve several complementary goals. The three major elements of this strategy correspond to three distinct areas within the overall study area:

- Common Pasture Greenway: Preservation of a substantial undeveloped corridor in the upper portion of the Little River watershed.
- Industrial Park: Continued development and redevelopment of industrial uses within the City's existing Industrial Park.
- Transit-Oriented Development: Creation of a higher-density node of mixed-use development surrounding the MBTA Commuter Rail station and the Route 1 traffic circle.



The three components of the Strategic Land Use Plan: Greenway, Industrial Park, and Transit-Oriented Center.

In addition to expanding the City's tax base in a manner that is sensitive to local values and environmental sustainability, the economic development portions of the plan (the industrial park and the transit-oriented development) will provide a wide range of additional employment opportunities for low, middle, and moderate income persons. At the same time, the mixed-use transit-oriented development will provide housing opportunities for all income levels: it is anticipated that 20 percent of the new housing units will qualify as affordable housing under Chapter 40B, helping the City to meet its regional affordable housing responsibilities.

Along with the three major elements outlined above, the plan also incorporates several additional features:

- Clustering of future residential development so as to preserve vistas and opportunities for recreational use, particularly near the intersection of Low Street and Crow Lane, and along Hale Street.
- Defining Low Street as a transition zone between industrial and residential districts, and strengthening Low Street's visual quality and image as a major entry corridor into the City.

- Improving pedestrian access between downtown Newburyport and the planned new transit-oriented center.
- Strengthening the natural linkages throughout the study area, including the completion of the Little River Nature Trail from the northwest corner through the industrial park to the rail station area and the Clipper City Rail Trail.
- Reducing the incidence of flooding by improving the stormwater management system.

This plan is presented to the Planning Board for consideration as an amendment to the current City of Newburyport Master Plan. The Planning Board will then be responsible for guiding the implementation of recommendations contained in the amendment.

Background

IN 2000-2001 THE CITY PREPARED A MASTER PLAN with extensive public participation. The Master Plan described planning for the area containing and surrounding the City's industrial park as a "Priority for Action." This area contains significant areas of undeveloped land which provide wildlife habitat, floodplain management, and recreational opportunities as well as potential for commercial, industrial and/or residential development. The Master Plan frames the issues and choices facing the City in this area as follows:

For at least three decades a large undeveloped area bordering Interstate 95 on the west and the Town of Newbury on the south has been designated for industrial use. During the 1990s the City reaffirmed this designation when it created the new Industrial B zoning district.¹ Continued growth in the industrial park area has been encouraged in order to maintain a balance between residential and nonresidential development, to provide jobs for area residents, and to provide a growing source of property tax revenues to support the increasing demands on school, library and other services caused by population growth.

In several community meetings for the Master Plan, some residents urged that the City re-examine this policy. The reasons advanced in support of a policy change include protection of water quality in the Little River (and, by extension, environmental and ecological protection in the Parker River National Wildlife Refuge); preservation of open space for passive recreation; and concern that business expansion cannot be maintained in the face of regional labor shortages. There were also questions about the extent to which existing natural features and current environmental regulations would limit any future development in this area, which is bisected by the Little River and contains numerous areas of wetlands and floodplains.

¹ This excerpt from the Master Plan is not accurate: of the undeveloped land abutting Interstate 95, most of the area between Hale Street and the Newbury town line is zoned "Agriculture and/or Conservation," which permits single-family residences on 3-acre lots. The Industrial B zoning district is on the north side of Hale Street, extending north to the edge of the Russell Terrace neighborhood off Storey Avenue.

Economic development and environmental protection need not be mutually exclusive. With careful planning, this area should be able to support some additional growth without significant adverse impacts on the environment. Areas that currently are protected through the Wetlands Protection Act and other environmental regulations should be mapped and compared to the existing industrial zoning. The trail being developed by the Parker River Clean Water Association, running 3.5 miles along the Little River from Storey Avenue to the MBTA station, can help integrate open space, recreation, and natural resource protection objectives while enhancing the quality and attractiveness of the industrial park.

In this context, development of the remaining vacant parcels that are zoned for industrial use should continue to be examined, with consideration for environmental protection, public safety, and neighborhood impacts. Detailed analyses of buildout capacity should be carried out on a site-specific basis, and buffer areas protecting residential neighborhoods and sensitive natural resources should be carefully delineated. The zoning regulations for the industrial districts should be evaluated and, if necessary, revised to ensure that use and intensity standards are appropriate for future expansion and continued redevelopment of the industrial park. Finally, a physical master plan of the entire area should be created which integrates conservation, recreation, development, and transportation issues.

An important complement to land use and economic development planning in the industrial park area involves providing improved access to this area. ... For a number of years the City has been considering creation of a new access route from Interstate 95 utilizing the former I-95 right-of-way. The purpose of this proposal has been to accommodate traffic to the industrial districts while reducing existing traffic impacts on nearby residential neighborhoods. During the Master Plan public participation process many residents raised objections to this proposal, and advocated leaving the former right-of-way as permanent open space.



The former I-95 roadbed, running from the current northbound exit ramp south to Hale Street (Russell Terrace in foreground, Cabot Stains in distance).

It became clear that consensus to resolve this issue could not be attained within the limited time frame of the Master Planning process. Therefore, the Master Plan does not take a position on the specific means of improving access to the industrial park area; rather, it recommends a strategy for resolving the issue in an open, public process, and recommends that this strategy be a top priority for immediate action upon adoption of the Master Plan.

Because of the importance of these issues, and the lack of consensus concerning the future of the Industrial Park area, the Master Plan identified a strategic planning process for this area as a major priority for implementation. [Meanwhile, in November 2001

Newburyport voters passed a non-binding referendum to preserve the abandoned access road as open space. The land remains City owned and is not subject to any zoning regulations.]

In late 2002, the City Planning Department began developing a scope of work for a planning project to be funded under the Commonwealth of Massachusetts' Executive Order 418 Community Development Planning Program. Due to limited funds, the full planning project as envisioned in the Master Plan could not be carried out, and so the scope of work was created for a first phase to include analysis of existing conditions and issues, visioning and concept planning, and preparation of recommendations for further action. Thus, while this plan provides a vision and conceptual planning framework for the study area, further planning will be needed to develop specific zoning proposals and other implementation measures, as well as to complete more detailed analyses of impacts and identification of measures to mitigate those impacts.

Figure 1: Study Area



Study Area Description

THE STUDY AREA FOR THE STRATEGIC LAND USE PLAN is bounded by Interstate 95 on the west, Storey Avenue (Route 113) on the north, Low Street on the northeast, Route 1 on the east, and the Newbury town line on the south (see Figure 1). The study area also extends east across Route 1 to include parcels surrounding the Route 1 traffic circle and fronting on State Street adjacent to Parker Street.

The study area contains about 1,500 acres (2.3 square miles), of which approximately 1,360 acres (91 percent) are in parcels. The remaining 140 acres includes public streets as well as the city-owned land encompassing the former I-95 right-of-way.

Almost the entire study area lies within the upper watershed of the Little River, a major tributary of the Parker River. From its sources in and near the western edge of the study area, the Little River flows south and east, forming the southerly boundary of both the industrial park and the Commuter Rail station as well as the municipal boundary between Newburyport and Newbury. In addition, the Little River watershed serves important functions as natural habitat for a wide variety of species and as the primary drainage for the residential neighborhoods and commercial and industrial areas.

Much of the study area was historically part of the “Common Pasture,” a large expanse of lowland encompassing parts of Newbury, Newburyport, and West Newbury. Dating from the area’s original settlement in 1635, the Common Pasture was a pasture held and used in common, even by the landless poor who could make a living with livestock. Today, the remaining open fields in the former Common Pasture are valued by residents for their scenic vistas and working landscapes, as noted again and again in public forums. These fields extend from



Farm fields along the east side of Interstate 95 looking from Newbury north (Scotland Road in foreground, Hale Street in the middle distance).

Scotland Road in Newbury to Hale Street in Newburyport, between I-95 and the Little River. The fields continue north of Hale Street along the east branch of the Little River; and there are also scattered farm fields off Low Street. Between Hale Street and Storey Avenue, the open space continues in woods interspersed with fields.

To the north side of Hale Street, between the east branch of the Little River and Low Street, is the Quail Run neighborhood, developed beginning in the 1970s and continuing through the 1990s. Residences continue northwest on Low Street, interspersed with farms and fields.

Newburyport’s industrial park makes up most of the area east of the Little River and south of Hale Street. The industrial park was developed beginning in the 1960s on land assembled by Newburyport Area Industrial Development (NAID), a not-for-profit corporation, and subsequently grew to include additional development by individual developers.



The Industrial Park (Graf Road on left, Opportunity Way on right), with Low Street in the foreground.

Between Hale Street and Route 1, Low Street serves as the northern boundary of the industrial district. Although zoned for industrial use, the south side of Low Street contains few if any industrial uses, and is instead a mix of retail, service, office, and educational uses. The north side of Low Street in this area is zoned for residential use and includes the Middle School, recreational fields, a senior housing facility, a skating rink, and residences.

At the easterly end of the study area is the Route 1 traffic circle. The circle is dominated on the north by the Newburyport District Court and on the south by the Route 1 bridge over the MBTA rail line. The remainder of the circle consists of small retail and service businesses, primarily in stand-alone, single-story buildings. Business owners in this area have recently organized a “Business Circle District” group and are promoting the area with the slogan “The Right Turn.”



The Route 1 Traffic Circle and MBTA Commuter Rail Station (Industrial Park in background).

An existing rail line terminates at the MBTA Commuter Rail station between the industrial park and the Route 1 traffic circle. The rail right of way continues north to the Merrimack River, and north of Parker Street the right of way is currently being developed as a multiuse trail. Studies are ongoing to evaluate the feasibility of restoring rail service along this portion of the right of way, in order to extend commuter rail service into New Hampshire.

The Planning Process

THIS PLAN WAS DEVELOPED BY THE STRATEGIC LAND USE COMMITTEE, with the support and assistance of the Office of Planning and Development and a team of consultants. The SLU Committee was appointed in 2003 by then-Mayor Alan Lavender, and was organized to reflect a cross-section of community perspectives and interests, represented by the following members:

- Commercial/industrial/business:
 - Newburyport Area Industrial Development (NAID)
 - Chamber of Commerce – industrial & commercial interests
- Environmental advocates:
 - Citizens for Environmental Balance
 - Parker River Clean Water Association
 - Newburyport Open Space Committee
- Newburyport regulatory boards:
 - Zoning Board of Appeals
 - Conservation Commission
 - Planning Board
- City Counselors:
 - Subcommittee on Planning and Development (2 members)
- Town of Newbury:
 - Newbury Planning Board (observer)

Three members of the Committee live in the study area.

The Committee's mandate was to search for consensus about this land area that it was not possible to achieve in the context of creating the city Master Plan. To achieve this consensus, the committee was charged to:

- look for innovative solutions to meet the multiple objectives for the diversity of potential land uses;
- explore options to balance commercial, industrial and residential growth with environmental protection;
- consider multiple projects and studies already in process and proposed;
- identify issues, prioritize and create solutions for a short and long range vision plan; and
- look at regulatory and non-regulatory options.

The City selected a consulting team to assist the Committee. The team included Taintor & Associates, Inc., who consulted on the creation of the Master Plan, and Dodson Associates, a planning and landscape architecture firm with a nationwide reputation for innovative visioning and land planning.

The Strategic Land Use Committee met once a month for 13 months to develop the plan. Committee members established ground rules for interaction among themselves and with the wider public for two-way information sharing, and identified the key issues to include in the study. In addition to their regular meetings, the Committee sponsored two interactive design workshops to get direct public involvement in generating planning concepts; and two additional public meetings to gather ideas and input from residents and businesspersons. As the study progressed, Committee members used feedback from these public meetings to improve their interactions with the community and to adapt their recommendations to reflect public input.

The Land Use Scenarios

THE PLANNING PROJECT USED A SCENARIO APPROACH to help guide discussion of the issues. After reviewing the regulatory framework and environmental conditions of the study area, the consultants developed a preliminary “Likely Future Land Use” scenario designed to show how the study area would most likely be developed in today’s market, following current zoning and other regulations. The “Likely” scenario is not intended to depict specific development plans, but to illustrate the amount and type of development that is possible given the environmental characteristics of the area. The preliminary scenario was critiqued in the design workshops and committee meetings, and was significantly revised in response to input from stakeholders and residents.

The “Likely Future Land Use” scenario, presented in section 3 of this report, depicts a study area in which large areas of currently open land north of Hale Street have been converted to industrial and residential development. This development is limited as to specific locations by the presence of wetlands and other natural constraints, so that the absolute amount of dwelling units or building floor area is not as great as the existing zoning might permit. Nevertheless, the scenario illustrates that the City’s zoning regulations would permit this area to be radically transformed by economic growth.

The “Likely Future Land Use” scenario provided a basis for community discussion of values, priorities, and objectives, which then led to the development of an “Alternative Future Land Use” scenario, presented in section 4 of this report. As in the case of the “Likely” scenario, the “Alternative” scenario incorporates available information and assumptions concerning environmental and market conditions and depicts hypothetical locations and typical scales of future development in the study area. The “Alternative” scenario differs from the “Likely” scenario by applying the principles and values revealed in committee discussions and community meetings, in order to preserve significant areas of open space and to concentrate economic development in a more efficient manner.

The “Alternative Future Land Use” scenario recognizes three distinct subareas within the overall study area. On the west, between Interstate 95 and the Little River, is the Common Pasture Greenway (or Green Corridor). Currently, this area is predominantly farms and woods, with the sole exception of the Cabot Stains headquarters on Hale Street; and the scenario is designed to preserve as much of the open space as possible by encouraging clustering of development in smaller areas around the periphery as well as transfer of development rights to other parts of the study area.

The second subarea is the City’s industrial park in the center of the study area. The “Alternative” scenario recommends that this area be preserved for industrial uses. A band of properties along Low Street, currently zoned for industrial use, is proposed to be maintained as a transitional area with its current mix of commercial and institutional uses.

The MBTA Commuter Rail station and the Business Circle District around the Route 1 traffic circle constitute the third subarea defined in the “Alternative” scenario. Complementing the preservation of the Common Pasture Greenway, the scenario depicts a dramatic redevelopment of this area into a dense mixed-use district, creating a new growth center for the community. The district would replace large surface parking lots in several locations with parking garages, making possible a more efficient use of land and capitalizing on the presence of the commuter rail station to achieve a higher value of development for the City.

The “Alternative Future Land Use” scenario thus provides a vision for a change in land use policy in the City, illustrated by development concepts as applied in specific areas. It is followed by a description of regulatory and non-regulatory strategies that would be required to implement the recommendations (section 6 of this report).

This report should be viewed as the first step in a long-term planning process. While it presents important concepts and preliminary implementation strategies, much more work will be needed to move these ideas forward. The final section of the report presents a list of additional research and analysis that should be considered as the planning process continues.



Existing Conditions

THIS SECTION SUMMARIZES THE INFORMATION ON EXISTING environmental and infrastructure conditions upon which the plan is based. Further detail is provided in the Existing Conditions report for the project (revised December 2003).

Natural Environment

WATERSHEDS

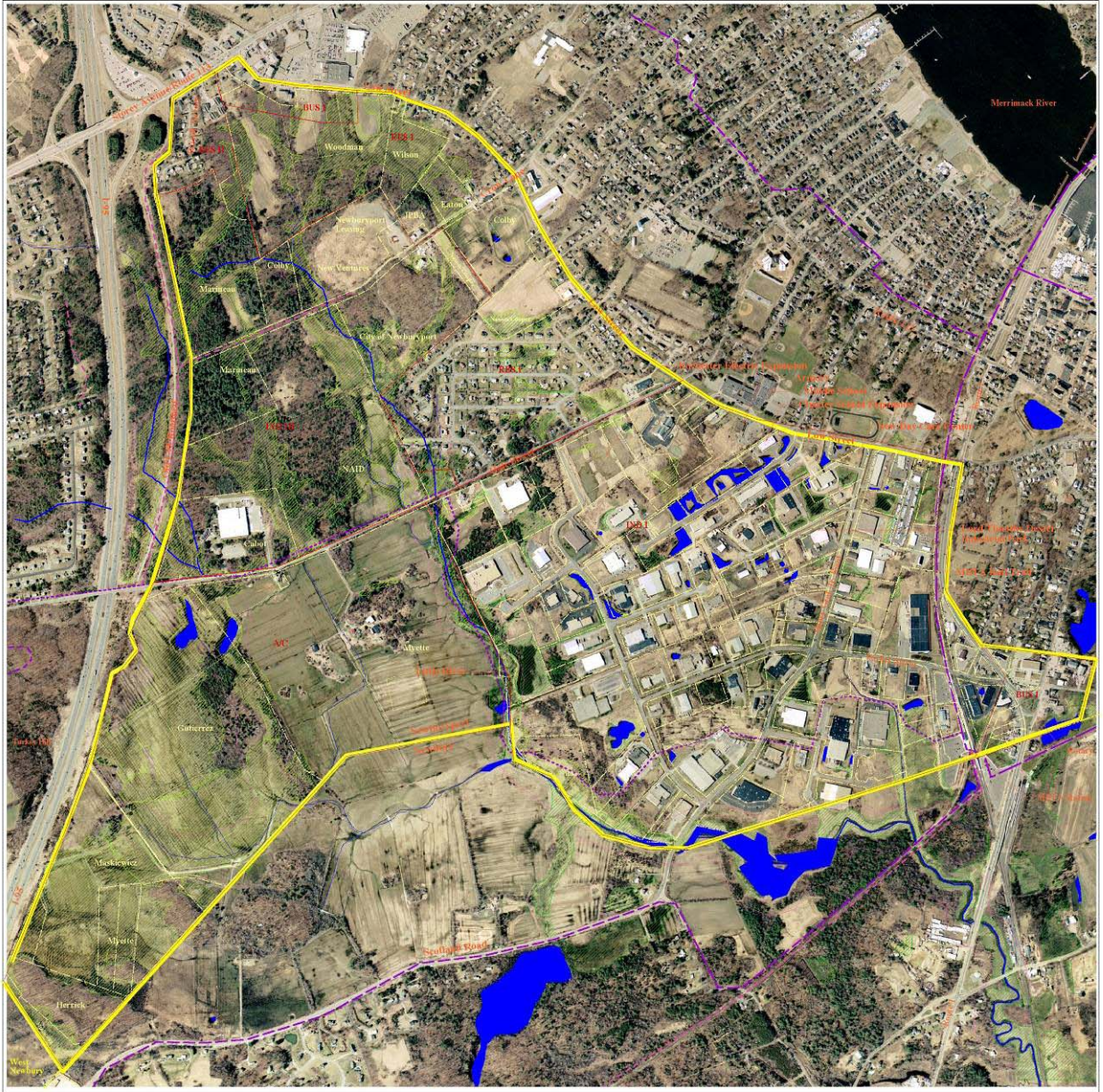
Most of the study area lies within the upper watershed of the Little River, a tributary of the Parker River. The watershed extends west across Interstate 95, north across Route 113, northeast across Low Street almost to High Street, and southeast following the course of the Little River to its outlet at the Parker River in Newbury. An ad hoc Little River Hydrology Team (made up of representatives of the Chamber of Commerce, industrial property owners, the Parker River Clean Water Association, and the City of Newburyport) has developed a scope of work for a detailed hydraulic and hydrologic (H&H) study of the Little River; however, no funding is currently available to implement this important project.

The very southwestern corner of the study area, adjacent to Interstate 95 and the towns of Newbury and West Newbury, is within the Artichoke River watershed (most of this area is mapped as wetlands).

TOPOGRAPHY

The entire study area is characterized by low relief, with elevations ranging from about 4 meters above sea level (at the Parker Street crossing of the Little River) to about 15 meters (along Low Street north of Crow Lane, and to the south of Russell Terrace. Higher elevations exist at the former landfill on Crow Lane, in the Russell Terrace neighborhood, and along Low Street north of the Port Plaza entrance.

Figure 2: Existing Conditions



Newburyport Strategic Land Use Plan Existing Conditions

Scale: 1" = 300'
Date: February 12, 2004



City of Newburyport, Taintor & Associates, Dodson Associates

Key:

Wetlands (Mass GIS & Field Delineations)	Possible On Road Trails
Ponds	Existing Foot Trails
Property Lines, Ownership	Proposed Foot Trails
Rivers Protection Act 200' Jurisdiction	Study Area Boundary
Perennial Streams	Municipal Boundaries
Intermittent Streams	Zoning Districts
Existing Rail Trails	
Proposed Rail Trails	



 SOILS

Soils in the study area are predominantly in the Scantic-Maybid-Buxton association, consisting of “deep, nearly level to moderately sloping, very poorly drained to moderately well drained, loamy soils.”² Within this association, the three largest soil groups are Maybid silt loam; Scantic silt loam, 0 to 3 percent slopes; and the Rock outcrop-Charlton-Hollis complex, 3 to 15 percent slopes.

The Scantic soils cover the majority of the study area, particularly to the south of Hale Street. The existing industrial park is mostly underlain by Scantic soils, as is the Myette farm. To the north of Hale Street, much of the Quail Run neighborhood is built on Scantic soils, which also follow the branch of the Little River that separates this neighborhood from the NAID property. Scantic soils consist of deep, nearly level, poorly drained soil, with a substratum of very firm clay to depths of 60 inches or more. The group is characterized by slow or very slow permeability, and tends to have a seasonal (October to June) high water table. Scantic soils’ habitat potential is rated as “fair” for open land, woodland, and wetland wildlife. Soils in this group have severe limitations for building site development due to wetness.³

The Maybid soils follow the main stem of the Little River and also dominate the southwestern portion of the study area, as well as underlying a large portion of the Quail Run neighborhood and a portion of the developed industrial park area. The Maybid group consists of deep, nearly level, poorly drained soils, with a substratum of silty clay to depths of 60 inches or more. As with the Scantic group, permeability is slow or very slow, and there is a seasonal (November to August) high water table. This group has severe limitations for building site development due to wetness and low soil strength, and has poor habitat potential for openland and woodland wildlife. It has good potential for wetland wildlife habitat.

The slow or very slow permeability and seasonal high water tables of the Scantic and Maybid soils limit their capacity for absorbing stormwater. On the other hand, the seasonal high water tables in these soils (typically less than one foot) present serious constraints for development, particularly for residential development and septic systems. However, these constraints will not prevent development: as evidence of this, much of the Quail Run neighborhood and the existing industrial park (neither of which existed

² *Soil Survey of Essex County, Massachusetts: Northern Part*, February 1981, U. S. Department of Agriculture, Soil Conservation Service, in cooperation with the Massachusetts Agricultural Experiment Station.

³ The soil survey report explains the categorization of limitations for building site development as follows: “A *moderate* limitation indicates that soil properties and site features are unfavorable for the specified use, but the limitations can be overcome or minimized by special planning and design. A *severe* limitation indicates that one or more soil properties or site features are so unfavorable or difficult to overcome that a major increase in construction effort, special design, or intensive maintenance is required.” Such classifications do not indicate that development will be prevented, as evidenced by the extensive industrial and residential development that has already taken place on Scantic and Maybid soils in the study area.

when the aerial photographs in the Essex County soil survey were taken) have been developed on Scantic and Maybid soils.

The Rock outcrop-Charlton-Hollis complex is a mix of exposed bedrock; well-drained deep Charlton soils; and excessively drained shallow Hollis soils. They present good habitat potential for openland and woodland wildlife, but very poor potential for wetland wildlife habitat. Soils in this group have moderate to severe limitations for building site development, due to slope, large stones, and/or depth to rock.

WETLANDS

Much of the study area is characterized by high ground water tables and wetlands. In addition to wetland corridors following the course of the Little

River and its tributaries, large expanses of wetlands exist in the southwest portion of the study area (south of Hale Street and west of the Myette farm), as well as near Low Street in the northeast portion of the study area.

According to data in the City of Newburyport's GIS, wetlands comprise approximately 20 percent of the area in parcels. This ranges widely across the study area: about 50 percent of the land west of the Little River and south of Hale Street is shown as wetlands; compared to about 10 percent of the land north of Hale Street and about 9 percent of the developed industrial park area (bounded by the Little River, Hale Street, Low Street, the MBTA railroad line, and the Newbury town line).



A wet meadow on the south side of Crow Lane.

Site-specific field studies of the NAID tract between Hale Street and Crow Lane and the Woodman farm on Low Street have found the percentage of wetlands in the area north of Hale Street to be higher than indicated in the City's wetlands data layer. It is apparent that the amount of developable land in this area is substantially less than would be suggested by reference to the GIS data alone.

In addition, the low topographic relief in the study area suggests that depth to groundwater is probably very shallow on land that is not actually wetlands, and that some existing developed land may even have originally been wetlands. This is reflected by the

extensive system of drainage swales, ditches and basins throughout the industrial area, residential subdivisions, and farmland. Thus, the relatively low percentages of wetlands in these areas identified in the City's GIS data may be misleading with respect to the actual extent of natural wetland systems and related water table constraints.

FLOODPLAINS

The Federal Emergency Management Agency (FEMA) is responsible for mapping flood hazard areas, including stream and river floodways, 100-year floodplains, and 500-year floodplains. FEMA's Flood Insurance Rate Map (FIRM) for this area indicates that only a very small section at the southeast corner of the study area, along the Little River, falls into the 100-year floodplain. Most of this floodplain area is either undeveloped or in agricultural use. However,



The Little River flooding at Bixby International, April 2004
(photo: Bob McLellan, Bixby International).

recent storm events illustrate that the floodplain is more extensive than shown on the FIRM maps, and in fact extends north into the industrial park between the Bixby International property on Preble Road and the MBTA Commuter Rail station on Boston Way. In this area storm flooding can be exacerbated by the effects of high tides and coastal storms.

NATURAL HABITATS

In 2003 the Massachusetts Natural Heritage and Endangered Species Program (NHESP) extended its delineation of land in Newburyport designated as Priority Habitats for rare and endangered species (this designation is for use with regulations under the state's Wetlands Protection Act and Endangered Species Act). The current delineation includes all the undeveloped and open land in the study area, as well as the entire Quail Run neighborhood and a portion of the developed industrial park adjacent to the Little River. Outside of the study area, the delineated Priority Habitat extends southwest to the I-95/Scotland Road interchange and south and southeast to Route 1 in Newbury.

The following rare species have been documented in the study area:

- Endangered: upland sandpiper, American bittern;
- Threatened: northern harrier, Long's bulrush;
- Special concern: spotted turtle, barn owl, blue-spotted salamander.

Three state-certified vernal pools are found in the study area along Crow Lane, and other potential sites also exist.

In addition to providing habitat for the rare, state-listed species above, the study area also supports a wide variety of both wetland and grasslands plants and animals. The region encompassed by Hale Street and Scotland Road is part of the area historically known as the Newburyport Common Pasture. For many years this was the premiere location in Essex County (if not in all of eastern Massachusetts) for grassland birds and others requiring extensive, moist open space.

While it is true that much of the Common Pasture has gradually been converted to industrial parks and private dwellings, it is also true that the sector bordering I-95, Hale Street, and Scotland Road contains some of the finest moist grassland remaining in eastern Massachusetts. In early spring, extensive flooding of these pastures provides outstanding habitat for waterfowl of various species, most notably American Wigeon, American Black Duck, Mallard, Northern Pintail, and Green-winged Teal. In addition, under proper rainy conditions, large numbers of Wilson's Snipe, that historically nested, forage in the wet pastures, along with lesser numbers of Greater Yellowlegs and Pectoral Sandpipers. Though inconspicuous, the state-threatened American Bittern may still nest, along with several other uncommon wetland species (e.g., Virginia Rail, Sora). By early summer Bobolinks are regular nesters in the grassy portions of the sector.⁴

Given the ecological scarcity of the ecotype represented by this historically pristine area, it is important to ensure that as large a portion as possible be preserved.

Infrastructure

Transportation and Circulation

The study area has excellent access to the regional transportation system, with direct connections to Interstate 95 and US Route 1, as well as a commuter rail station. The developed industrial park has a good internal street network with capacity for growth; however, the local road network outside the park has some limitations that result in congestion at peak hours and conflicts between commercial and noncommercial traffic.

ROADWAY NETWORK

The study area has access to the regional highway system by way of two interchanges on Interstate 95. Exit 56 provides access approximately 2.1 miles outside the study area at Scotland Road in Newbury, which continues as Parker Street in Newburyport and is the most direct connection to the existing industrial park from points south via I-95. Exit 57 connects to Storey Avenue (Route 113) at the northwest corner of the study area, and thus provides direct access to the northern portion of the study area (Storey Avenue and Russell Terrace). Exit 57 provides the most convenient access to the Interstate for land in the northerly portion of the study area, including Low Street, Crow Lane, and Hale Street. Most vehicles using this interchange to get to the study area travel

⁴ Source: Wayne Peterson, Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife (formerly chief ornithologist for the Massachusetts Audubon Society).

east on Storey Avenue, and then southeast on Low Street. A smaller but undetermined portion of this traffic exits from I-95 onto Storey Avenue west, turning south on Turkey Hill Road and east on Hale Street. This alternate route doubles the distance from the interchange to the Low St./Hale St. intersection (approximately 3.2 miles vs. 1.5 miles), but it may be preferred at high traffic volume periods because it avoids the left turn from the I-95 ramp onto Storey Avenue east and the subsequent series of traffic signals leading up to Low Street.

At the easterly side of the study area, Route 1 is a regional highway providing connections to the north (Newburyport waterfront and central business district, Salisbury, and New Hampshire) and south. Average daily traffic on Route 1 at the Newbury town line was approximately 12,500 vehicles per day in 2002.

The study area is served by two major arterials and a system of minor arterials and collectors. Along the northerly boundary of the study area, Low Street is an urban minor arterial road providing a connection between Storey Avenue (Route 113), Route 1, and (via Pond Street) High Street (Route 1A). Low Street serves as an important alternative to High Street for traffic between downtown Newburyport and the Storey Avenue shopping centers and I-95 north. Destinations along Low Street include the industrial areas in the study area on the southerly side of the street (accessed primarily at Hale Street and Graf Road), residential neighborhoods on both sides of the street, the Rupert Nock Middle School, Anna Jaques Hospital, and the recreation fields opposite Graf Road. Traffic along Low Street is thus a mix of local and through trips.

Parker Street and Graf Road combine the function of collectors serving the industrial park area as well as arterials providing access to Interstate 95. From the Parker/Graf intersection, Parker Street turns eastward to provide a connection to Route 1 just north of the traffic circle. In addition to its through traffic role, this section of Parker Street provides access to the MBTA Commuter Rail station and several industrial properties.

Hale Street is a collector for both residential and commercial traffic. Traffic volumes on Hale Street near Low Street were approximately 3,500 vehicles per day in 1998, and had been increasing at a rate of 3.1 percent per year during the previous decade. The intersection of Low Street and Hale Street has been identified as a problem location due to the geometry of the intersection (trucks turning right from Low Street onto Hale Street must negotiate a sharp turn with limited lane width), and roadway width on Hale Street has also been identified as a limitation for heavy truck traffic. Neighborhood residents have expressed a desire for provision of a sidewalk along the length of Hale Street; however, the proximity of wetlands along the edge of the roadway would make it extremely difficult and costly to widen the road to accommodate a sidewalk.

TRAFFIC VOLUMES

Table 1 presents the most recent daily traffic counts available for roadways in and adjacent to the study area, and annual growth rates for available periods of time. Traffic volumes on many area roadways are increasing at about 3 to 4 percent per

year. (In contrast, volumes on High Street increased by only 0.4% per year between 1991 and 2002, so the higher rate of increase on Low Street may represent diversion of downtown-oriented traffic due to increasing congestion on High Street.)

Table 1: Study Area Traffic Volumes

Location	Year of Recent Count	Average Daily Traffic (vpd)
Route 1, Newbury town line	2002	12,518
Graf Road, near Low St.	1999	8,248
Hale Street, near Low St.	1998	3,538
Low Street, near Storey Ave.	2001	11,885
Low Street, near Rte. 1	1992	11,227
I-95, Amesbury town line	1997	58,800
Turkey Hill Road, near 113	2001	3,445
I-95, south of Scotland Rd.	1997	49,400
Scotland Road, east of I-95	1998	6,500

In its 2000 Regional Transportation Plan, the Merrimack Valley Planning Commission identified Low Street and Graf Road as two of the region’s nine “high growth” roadways based on modeled 1990-2020 growth and projected growth to 2025. MVPC projected the increase in volumes on Graf Road would be 46% for the 35-year period, or an average of 1.1% per year. Estimated traffic growth on Low Street near Route 113 would be 35% over the same period, representing an annual growth rate of 0.9%.

THE ACCESS ROAD

In 1974, Interstate 95 was realigned to the west, resulting in the abandonment of a section of the northbound roadway in Newburyport at the western edge of the study area. At the time of the 1974 alteration, the roadbed was left intact for future use as a new access into the City’s industrial park area. Beginning in 1983, in the face of increasing traffic congestion on roadways in and adjacent to the study area, the City carried out studies and developed plans for this new access road.

A Draft Environment Impact Report (DEIR) for the proposed industrial access road prepared in 1993⁵ found that “the existing roadway infrastructure would provide adequate access to the remaining land parcels [i.e., in the Hale Street/Crow Lane portion of the study area] for their ultimate development with only the timing of that development being affected by not implementing the new access roadway” (p. 11). In other words, although the roads and intersections were experiencing, and would continue to experience, increasing congestion, the existing road network met the legal definition of “adequate access” for allowing land served by these roads to be developed.

⁵ *Draft Environmental Impact Report: I-95 Industrial Access Corridor*, City of Newburyport, December 1993.

The DEIR examined the traffic impacts of this “no build” scenario (that is, not building the proposed access road) and presented the following findings:

- Traffic volumes on Storey Avenue and Low Street at build-out would be 3 times the 1990 levels.
- Under the “no build” scenario, the Storey Ave./Low St. intersection would be incapable of handling the projected left turn movements, and drivers trying to get to Interstate 95 would be forced to seek alternate routes. The two alternatives would be (1) Scotland Road to I-95, and (2) Hale Street to Turkey Hill Road to Storey Avenue to I- 95.
- The proposed access road would have a significant impact on congestion at Low Street intersections with Storey Avenue, Hale Street, and Graf Road.
- Under buildout conditions, with or without the access roadway, major level of service impacts will be felt at all major intersections within the study area as drivers seek to find more acceptable alternative routes.

Planning continued in the 1990s, but the 2001 Master Plan’s public participation process reopened the issue and focused concerns about the impact of the access road on the natural resources. These concerns, and related questions about the future of the industrial park, resulted in the Master Plan’s recommendation for this study. Subsequently, a majority of residents expressed their opposition to the access road in a referendum.

PUBLIC
TRANSPORTATION

The Massachusetts Bay Transportation Authority (MBTA) provides Commuter Rail service terminating in Newburyport with a station at the easterly edge of the study area, adjacent to the Route 1 traffic circle.

Currently, there are 13 weekday trips in each direction, and 6 round trips on weekends. Travel time between Newburyport and Boston’s North Station is approximately 65 minutes. Commuter parking lots are provided on both the easterly side of the railroad tracks (accessed from Route 1) and the westerly side (accessed from Parker Street), with a total of 801 spaces. Average weekday ridership was 838 in 1999 (the first full year of service) and 719 in 2000.

An inactive section of railroad right-of-way continues northerly from Parker Street to the Merrimac River. This corridor is currently being planned for development as a rail trail for bicycle and pedestrian use.⁶

⁶ A proposal is under consideration to reactivate the railroad line along this corridor in order to extend the commuter rail service to Portsmouth, New Hampshire; and an “alternatives analysis” is expected to get underway during the summer of 2004. However, it is expected that the analysis will determine that other alternatives, such as expanded bus service or increased use of Amtrak’s Downeaster service, will turn out to be more feasible and cost-efficient than the Hampton Branch extension.

No bus service is currently provided to the study area.

Water and Sewer

The study area is served by municipal water supply and wastewater collection systems.

PUBLIC WATER SUPPLY⁷ Newburyport's water supply system has a current safe yield of 2.91 million gallons per day (MGD), which was adequate to supply the 2000 average day demand of 2.27 MGD but insufficient to supply the projected 2020 average day demand of 3.17 MGD (which includes the extension of service to Plum Island). Additional yield is available from existing supply sources, which could increase the firm yield to 3.48 MGD, providing a margin of safety and extending the adequacy of the supply system beyond 2020.

The City's water treatment plant has a rated capacity of 4.30 MGD. Even with increased demands that would result from extending service to Plum Island, the treatment plant will be capable of providing acceptable water quality.

Although the total available supply is adequate to meet projected demands, other elements in the system have limitations that require improvements:

Pumping equipment must be able to meet maximum day demands with the largest pump removed from service. The projected 2020 maximum day demand is 6.05 MGD, and the pumping capacity with the Spring Land Pumping Station out of service is 3.89 MGD.

The system is deficient in some areas in terms of meeting fire flow requirements; however, none of these deficiencies are in the study area.

The entire study area is served by the City of Newburyport's public water distribution system. The existing water mains provide adequate capacity and pressure, with one exception.

The greatest capacity exists in the developed industrial park, with 12-inch mains along the length of Hale Street, Captain's Way, New Pasture Road, Opportunity Way, Stanley Tucker Drive and Boston Way; and along Low Street from Hillside Avenue to Johnson Street, Graf Road from Low Street to Parker Street, Parker Street from Graf Road to the Newbury town line, Malcolm Hoyt Road from Hale Street to Mulliken Way, and State Street from Market Square to Parker Street.

⁷ Information on the public water supply and distribution system is drawn from the City's *Water Works Master Plan*, November 2002, prepared by Fay, Spofford & Thorndike.

8-inch pipes run along the remaining segments of Low Street, Parker Street, Malcolm Hoyt Road, and State Street, as well as the length of Crow Lane and Mulliken Way; and serve most of the Quail Run neighborhood.

The only segment of the distribution system needing improvement is along Russell Terrace and Russell Terrace Extension, where the existing 6-inch main is recommended for replacement with a new 8-inch main.

The 2002 Water Supply Master Plan presents a program of improvements which will provide adequate supply and distribution facilities for Newburyport through the year 2020. Within the study area, the existing distribution system supports current levels of development and provides room for growth.

WASTEWATER⁸

The study area is fully served by the City of Newburyport's wastewater collection system. The system is currently constrained by capacity in the Low Street main, but the Sewer Department is planning an improvement project to address these constraints, which affect surrounding areas as well as the study area.

The Low Street sewer is comprised of 8-inch and 10-inch sewer pipe that is more than 50 years old and suffers from existing structural and capacity constraints. To address these constraints, the Sewer Commission proposed constructing a new sewer main along the former Interstate 95 roadbed along the western edge of the study area, connecting to the existing wastewater collection system at the Hale Street Pump Station (the "Low Street Sewer Relief Project"). As the result of review of an Environmental Notification Form for this project under the Massachusetts Environmental Policy Act (MEPA), the Secretary of Environmental Affairs ruled in July 2003 that this project requires submission of a full Environmental Impact Report. Further, because the sewer relief project has in the past been linked to the proposal to provide access to the industrial park along the I-95 roadbed, the EIR must address the full buildout of the industrially-zoned land north of Hale Street, including impacts related to land alteration, impervious surfaces, wetlands, wastewater, and possibly traffic. Following this decision, the Sewer Commission voted to abandon the improvement project along the I-95 roadbed and instead to place a new sewer line along Low Street.

Stormwater Management

Flooding is common in many locations throughout the study area, for a variety of reasons. First, much of the study area has very little topographic relief and shallow depth to groundwater. Second, extensive development in several parts of the Little River watershed—the shopping centers on Storey Avenue and Low Street, the Quail Run neighborhood, and the industrial park—has added significant amounts of impervious

⁸ Information on the wastewater collection system is drawn from files in the Office of Planning and Development relating to the Low Street Sewer Relief Project.

surface, reducing stormwater infiltration into the ground and increasing runoff. Much of this development took place without today's knowledge (and regulations) about stormwater and drainage. Finally, below Parker Street the Little River is tidal, which compounds the flooding problems for low-lying properties. As a result of all these factors, managing the flow of stormwater is an important challenge for the City and property owners in the study area.

The existing flooding problems above Hale Street were caused by the development of the residential subdivisions at Quail Run and Squires Glen beginning in the late 1970s, compounded by the earlier development of the shopping centers on Storey Avenue and Low Street which covered over a large area of open land underlain by permeable sandy soils. These two actions created large amounts of impervious surfaces in the upper watershed of the Little River, without providing compensating storage areas for stormwater. Efforts should be made to ameliorate the stormwater problem upstream of Hale Street, and especially to ensure that future development does not increase the rate of runoff from any site.

Extensive areas of wetlands and floodplains to the west of the subdivisions, and extending north to Russell Terrace and Low Street, help absorb floodwaters; but the soils in this area are relatively impervious and do not retain stormwater well. There is concern that creation of additional impervious surface in this area will aggravate existing flooding problems both in the Hale Street area and further downstream.

Below Hale Street, stormwater in the industrial park is managed by a system of swales and channels, created to collect stormwater and move it to the Little River. This system seems to have worked well in most conditions, but lack of maintenance can detract from its effectiveness. In addition, there are areas of the industrial park that are in or immediately adjacent to the Little River's floodplain, and these areas cannot benefit from the swales. For example, the Bixby International property at the end of Preble Road is particularly subject to flooding during storm events and high tides.

Existing Land Use and Development

The Existing Landscape

Figure 3 and Figure 4 present aerial perspective views of existing conditions in the study area, based closely on aerial photography. These drawings show the same information as the map views in Figure 2, but help convey the character of existing land use patterns more clearly than the map view. They also make it easier to compare the impacts of the Likely and Alternative Future Land Use scenarios, which are illustrated similarly in Figure 11 (Likely – Common Pasture/Little River, page 44), Figure 17 (Alternative – Greenway, page 58), and Figure 18 (Alternative – Station/Circle, page 59).

Figure 3 shows the study area as seen from over Storey Avenue, looking south across the Port Plaza shopping center and the Merrimack Place senior housing facility. Several farm

fields are in the foreground, on the south side of Low Street. The former landfill is in the center middle distance, with the former Interstate 95 roadbed paralleling the current I-95 at the right side of the view. Hale Street crosses from left to right in the distance, with the Cabot Stains headquarters on the near (north) side of the street (near I-95) and the Myette farm on the far (south) side. The Quail Run neighborhood is just visible in front of the industrial park in the distance.

Figure 3: Existing Land Use: Common Pasture



This drawing clearly shows the continuous swath of woods and fields that extends from Russell Terrace and Merrimack Place across Hale Street and south into Newbury.

Figure 4 is a view of the opposite end of the study area, looking from Parker Street in Newbury west across State Street and Route 1. The Route 1 traffic circle and the Newburyport District Court are in the center foreground of this view. The MBTA Commuter Rail station is behind the traffic circle, with the large Owens Illinois industrial building behind the courthouse. The industrial park is in the middle distance, with the Myette farm behind (the farm and industrial park are in the background of both drawings and can thus be used to visualize how the two views relate to each other).

One feature of the rail station/traffic circle area that stands out from this drawing is the amount of land that is currently being used for surface parking lots, both in the station area itself and along the street frontage of lots on Route 1 and State Street. This graphically illustrates the potential for more efficient and effective development patterns that could enhance the appearance of this area as well as make it more valuable and more accommodating to pedestrians.

Figure 4: Existing Land Use: Business Circle District & Commuter Rail Station



Current Land Uses

Table 2 summarizes the land use data from the City’s database for the study area as a whole. This information is parcel-based and classifies land uses according to standard Massachusetts Department of Revenue land use codes.

The largest class of actively used land in the study area is agriculture, encompassing about 330 acres, or 24 percent of the total area in parcels. Most of this area is classified as tillable forage cropland, with small amounts identified as field crops or pasture. The parcels classified as agricultural in the Assessors database are assessed at their current use value under the State’s Chapter 61A program. In exchange for receiving a lower assessment, the owners of these parcels give the City the right of first refusal to purchase the property should they be offered for sale.

Table 2: Current Land Use Profile, by State Class Code

Code	Land Use Classification	Parcels	Acres	% of total
1010	Single Family	189	101.75	7.46%
1021	Condominium	6	4.40	0.32%
1040	Two Family	4	1.63	0.12%
1060	Outbuilding	1	0.15	0.01%
1090	Multiple Housing on One Parcel	1	1.20	0.09%
1110	Apartments, 4-8 units	1	0.51	0.04%
1300	Developable Residential Land	9	4.43	0.32%
1310	Potentially Developable Residential Land	16	147.38	10.81%
1320	Undevelopable Residential Land	4	12.32	0.90%
2020	Open Wetlands in Residential Area	1	16.27	1.19%
3130	Lumber Yard	1	2.09	0.15%
3160	Storage, Warehouses	4	1.58	0.12%
3210	Hardware	2	1.12	0.08%
3220	Discount Stores	8	6.74	0.49%
3260	Eating & Drinking Establishments	3	2.50	0.18%
3320	Auto Repair	1	1.34	0.10%
3340	Service Stations	1	0.57	0.04%
3400	General Office Building	2	2.61	0.19%
3401	General Office Building	1	1.35	0.10%
3420	Professional Office Building	1	0.43	0.03%
3520	Day Care Center	1	0.97	0.07%
3530	Fraternal Organizations	1	0.91	0.07%
3900	Developable Commercial Land	1	2.23	0.16%
4000	Buildings for Manufacturing	40	212.94	15.62%
4010	Industrial Warehouses	12	40.33	2.96%
4020	Industrial Office Buildings	5	25.16	1.84%
4021	Industrial Office Buildings	4	16.61	1.22%
4030	Accessory Land	4	11.82	0.87%
4040	Research & Development Facilities	1	3.98	0.29%
4300	Telephone Exchange Stations	1	3.62	0.27%
4400	Industrial Developable Land	25	257.71	18.90%
4410	Potentially Developable Industrial Land	12	42.07	3.08%
4420	Undevelopable Industrial Land	2	5.14	0.38%
7130	Field Crops (hay, wheat, etc.)	2	36.73	2.69%
7160	Tillable Forage Cropland	15	276.92	20.31%
7180	Pasture	4	12.37	0.91%
7200	Necessary Ag Related Land (roads, ponds)	1	3.67	0.27%
9000	United States Properties	1	5.39	0.40%
9010	State	6	22.91	1.68%
9030	Municipalities	4	44.13	3.24%
9050	Charitable Organizations	3	3.82	0.28%
9100	Housing Authority	1	2.70	0.20%

Source: City of Newburyport, Office of Planning and Development

Industrial uses comprise 314 acres, or 23 percent of the total. Almost all of this land is in the industrial park area south of Hale Street and east of the Little River.

Commercial uses (e.g., retail, services, offices) total 22 acres (2 percent). The Route 1 traffic circle area accounts for approximately half of the commercially-used land, with the remainder split about evenly between the industrial park area and Low Street near Storey Avenue.

Residential uses account for 110 acres (8 percent). Most of this is in single-family development, concentrated in the Quail Run and Russell Terrace neighborhoods with additional homes fronting on Low Street between Hale Street and Storey Avenue.

In addition to the agricultural land described above, a significant portion of the study area remains open, and is classified for assessing purposes as indicated in Table 3. Vacant developable land constitutes about 19 percent of the total land area (264 acres), 14 percent is considered “potentially developable” (189 acres), and less than 2 percent is classified as undevelopable. It should be noted that the classifications “developable” or “potentially developable” are applied to each parcel as a whole and do not necessarily apply to every portion of the parcel: in other words, a parcel may be “developable” even if part of it is undevelopable due to wetlands or other features.

Table 3: Existing Vacant Land

Code	Land Use Classification	Parcels	Acres	% of total
RESIDENTIAL				
1300	Developable Residential Land	9	4.43	0.32%
1310	Potentially Developable Residential Land	16	147.38	10.81%
1320	Undevelopable Residential Land	4	12.32	0.90%
	<i>Subtotal</i>		<i>164.13</i>	<i>12.03%</i>
COMMERCIAL				
3900	Developable Commercial Land	1	2.23	0.16%
INDUSTRIAL				
4400	Industrial Developable Land	25	257.71	18.90%
4410	Potentially Developable Industrial Land	12	42.07	3.08%
4420	Undevelopable Industrial Land	2	5.14	0.38%
	<i>Subtotal</i>		<i>304.92</i>	<i>22.36%</i>
TOTAL			471.28	34.55%

Existing Development Intensity

DEVELOPED FLOOR AREA

Total building floor area and impervious surface coverage in the study area were estimated using information from the City’s Assessing database, and then subtotaled for the following four subareas:

- Northwest: North of Hale Street (Russell Terrace, Cabot, Quail Run, NAID parcel, landfill, Crow Lane, etc.)
- Southwest: South of Hale Street and west of the east branch of the Little River (Myette Farm, open land near I-95)
- SouthCentral: South of Hale Street and east of the Little River, to Graf Road (industrial park, Armory, Charter School, DPW facility, etc.)
- Southeast: South and east of Graf Road (industrial park, Commuter Rail station, Route 1 traffic circle)

Table 4 presents the estimated total land area and existing gross building floor area for each subarea. As this table indicates, the estimated overall ratio of floor area to total land area is approximately 0.05 in the study area as a whole, and 0.10 in the industrial park subareas.

Table 4: Existing Development Intensity – Building Floor Area

Subarea	Total Land Area (square feet)	Gross Floor Area (square feet)	Average Floor Area Ratio
Northwest	20,963,283	930,243	0.04
Southwest	16,144,357	6,945	0.0004
SouthCentral	16,292,523	1,565,115	0.10
Southeast	7,068,714	758,951	0.11
Total	60,468,878	3,261,254	0.05

IMPERVIOUS SURFACE COVERAGE

The term “impervious surface” refers to land that is covered by structures and paved areas such as streets, sidewalks, and parking areas, as well as other types of surfaces that block the infiltration of rain water into the ground. To estimate the amount of existing impervious surface on each lot in the study area, the listed building footprint was added to an estimate of additional impervious surface for driveways, swimming pools, parking areas, etc. These parcel estimates were subtotaled and added to estimates of impervious coverage by public streets to derive estimates of total impervious coverage.

Table 5 presents the estimated total land area (including streets) and existing impervious surface coverage for each subarea. As this table indicates, the estimated overall impervious coverage in the study area is approximately 12 percent, ranging from a low of

0.4% in the farms and woodlands of the southwest to a high of 27% to the east of Graf Road (including the Route 1 traffic circle area).

Table 5: Existing Development Intensity – Impervious Coverage

Subarea	Total Land Area (square feet)	Total Impervious Surface Coverage	Impervious Percent of Land Area
Northwest	20,963,283	1,380,655	6.6%
Southwest	16,144,357	62,987	0.4%
SouthCentral	16,292,523	3,869,816	23.8%
Southeast	7,068,714	1,902,657	26.9%
Total	60,468,878	7,216,115	11.9%

It should also be noted that the Northwest subarea contains the Quail Run and Russell Terrace residential neighborhoods as well as large expanses of undeveloped land between Low Street and I-95. It is estimated that total impervious coverage is about 16% of total land area in the Quail Run neighborhood, and about 19% in the Russell Terrace neighborhood. The remaining land in the Northwest subarea (which includes Cabot Stains, and scattered residential and commercial development along Low Street, as well as large undeveloped tracts) has an estimated overall impervious coverage ratio of about 4%.

As will be discussed later (see pages 33 ff.), coverage by impervious surfaces impacts natural systems through increased runoff, erosion, and sedimentation; and impervious coverages of 10 to 15 percent have been found to be associated with degraded stream quality. Thus, the study area portion of the Little River watershed is close to the threshold of environmental sustainability, and further development must therefore be undertaken with special care for stormwater impacts.⁹

Assessed Valuation

Properties in the study area have a combined assessed valuation of approximately \$187 million (see Table 6), representing 8 percent of the City’s total assessed valuation. Developed industrial uses comprise about 45 percent of the total valuation in the study area, and developed residential uses account for 31 percent of the total.

Table 7 summarizes the current parcel land values in the study area, averaged per acre. For taxable developed land (i.e., excluding public land uses), the ratio of the value of improvements to the land value is highest for industrial uses, followed by public and then commercial uses. However, residential uses have the highest total value per acre. In other words, land currently has the highest value for residential uses, but commercial development adds more to the total value of a parcel than does residential development.

⁹ Also see pages 45 and 62 for the impervious coverage impacts of the Likely and Alternative Future Land Use scenarios.

Table 6: Study Area Land Values (as of 1/1/03)

Current Land Use	Parcels	Total Area (Acres)	Total Assessed Valuation		
			Land	Buildings	Land + Buildings
Developed Parcels					
Residential	197	99.00	\$28,676,800	\$28,542,400	\$57,219,200
Commercial	25	34.12	\$5,385,400	\$13,310,100	\$18,695,500
Industrial	65	270.68	\$15,222,400	\$68,043,200	\$83,265,600
Public	17	92.85	\$3,797,900	\$18,770,900	\$22,568,800
All Developed Land	304	496.66	\$53,082,500	\$128,666,600	\$181,749,100
Undeveloped & Open Land					
Undeveloped Residential	30	164.21	\$1,503,700	\$0	\$1,503,700
Undeveloped Commercial	3	3.42	\$177,900	\$0	\$177,900
Undeveloped Industrial	24	243.68	\$3,314,100	\$30,000	\$3,344,100
Agricultural Land	18	335.24	\$99,700	\$0	\$99,700
Open Wetlands	1	8.00	\$10,000	\$0	\$10,000
All Open Land	76	754.55	\$5,105,400	\$30,000	\$5,135,400
All Study Area Parcels	380	1,251.20	\$58,187,900	\$128,696,600	\$186,884,500

Table 7: Average Assessed Land Values in Study Area

Current Land Use	Average Assessed Value per Acre			
	Land Value	Building Value	Land + Buildings	Bldg. Value: Land Value
Developed Parcels				
Residential	\$289,654	\$288,297	\$577,951	1.0:1
Commercial	\$157,814	\$390,041	\$547,855	2.5:1
Industrial	\$56,238	\$251,379	\$307,616	4.5:1
Public	\$40,904	\$202,167	\$243,071	4.9:1
All Developed Land	\$106,880	\$259,065	\$365,945	2.4:1
Undeveloped & Open Land				
Undeveloped Residential	\$9,157		\$9,157	
Undeveloped Commercial	\$52,004		\$52,004	
Undeveloped Industrial	\$13,600		\$13,723	
Agricultural Land	\$297		\$297	
Open Wetlands	\$1,250		\$1,250	
All Open Land	\$6,766		\$6,806	
All Study Area Parcels	\$46,506		\$149,364	2.2:1

The data for undeveloped and open land in Table 7 combine land that the Assessors office has determined to be “developable” or “potentially developable” with land that is classified as “undevelopable,” primarily because of environmental conditions. Therefore, Table 8 presents the average assessed land values for parcels that are classified as “developable” in the assessing database. The data are presented on both a per-parcel and a per-acre basis.

Table 8: Average Assessed Value of Vacant Developable Land

Current Land Use	Average Assessed Land Value, Per Parcel	Average Assessed Land Value, Per Acre
Developable Residential Land	\$114,650	\$257,978
Developable Commercial Land	\$59,300	\$52,004
Industrial Developable Land	\$170,707	\$11,955

The average values shown in Table 7 and Table 8 can be used to generate rough estimates of the additional taxable value created by new development. For example, developed industrial parcels average \$295,661 per acre more in value than vacant, developable industrial land (\$307,616 minus \$11,955). These developed parcels have an average floor area ratio (FAR) of about 0.16 (i.e., approximately 6,970 square feet of building area per acre of land). Thus, the increased taxable value created by the existing industrial development in the study area is about \$42 per square foot of building floor area (\$295,661 divided by 6,970). The same methodology yields increases of about \$46 per square foot for residential development and \$63 per square foot for commercial development. Table 9 presents the source numbers used in arriving at these estimates.

Table 9: Estimated Assessed Value of Development Compared to Undeveloped Land

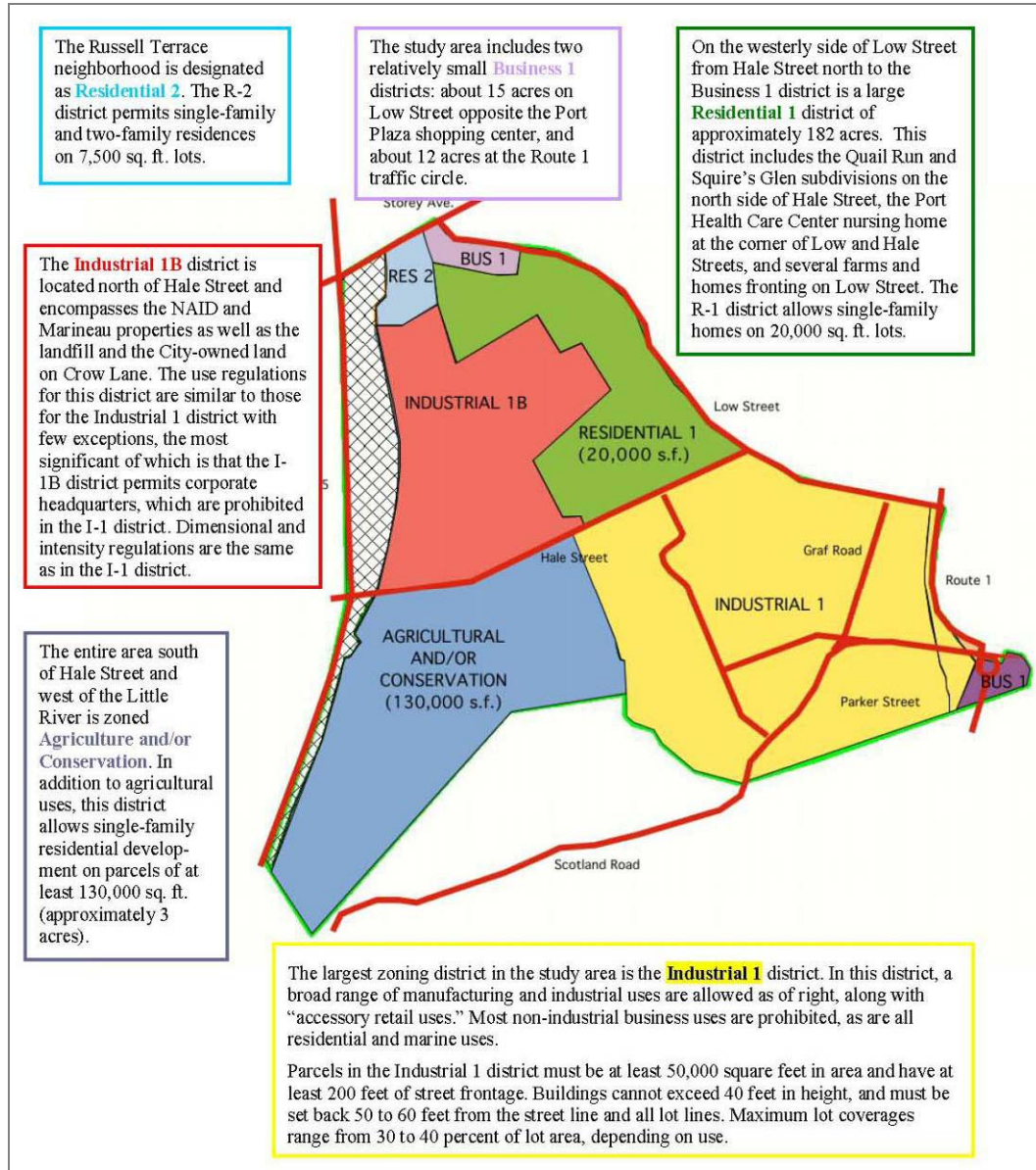
	Residential	Commercial	Industrial
Value per acre - developed	\$577,951	\$547,855	\$307,616
Value per acre - developable	\$257,978	\$52,004	\$11,955
Increment per acre from development	\$319,973	\$495,851	\$295,661
Typical floor area ratio	0.16	0.18	0.16
Typical floor area per acre	6,970	7,841	6,970
Value per square foot of development	\$45.91	\$63.24	\$42.42

These are rough estimates based on existing development types and densities, but can be used to compare the fiscal impacts of alternative land use strategies.

Regulatory Framework

The existing zoning for the study area is depicted in Figure 5, and the zoning districts and their approximate extents within the study area are listed in Table 10.

Figure 5: Study Area Zoning



The largest zoning district in the study area is the Industrial 1 district. In this district, a broad range of manufacturing and industrial uses are allowed as of right, along with "accessory retail uses." However, most non-industrial business uses are prohibited, as are all residential and marine uses. Parcels in the Industrial 1 district must be at least 50,000

square feet in area and have at least 200 feet of street frontage. Buildings cannot exceed 40 feet in height, and must be set back 50 to 60 feet from the street line and all lot lines. Maximum lot coverage ranges from 30 to 40 percent of lot area depending on use.

Table 10: Study Area Zoning Summary

Zoning District	Acres	% of Total
Industrial 1 (I-1)	493	36%
Industrial 1B (I-1B)	255	19%
Business 1 (B1)	11	1%
Residential 1 (R1)	208	15%
Residential 2 (R2)	10	1%
Residential 3 (R3)	10	1%
Agriculture and/or Conservation (AC)	366	27%
Grand Total	1,354	100%

The Industrial 1B district is located north of Hale Street and encompasses the NAID and Marineau properties as well as the landfill and the City-owned land on Crow Lane. The use regulations for this district are similar to those for the Industrial 1 district with few exceptions, the most significant of which is that the I-1B district permits corporate headquarters, which are prohibited in the I-1 district. Dimensional and intensity regulations are the same as in the I-1 district.

Newburyport's zoning ordinance does not directly regulate the amount of floor area that can be developed on a site, but the combination of building height, setback, open space, lot coverage, and off-street parking regulations can be used to determine an implied floor area ratio (FAR) for each district. The FAR is the maximum ratio of building floor area to total parcel area that is allowed under zoning. For Newburyport's I-1 and I-1B districts, the maximum implied FAR is approximately 0.24: in other words, for every acre (43,560 square feet) of parcel area, the zoning allows about 10,450 square feet of building area, assuming that all required off-street parking spaces will be provided in surface parking lots. (If parking structures are used, the FAR increases dramatically to as much as 0.90.)

Two Residential districts exist in the study area. On the westerly side of Low Street from Hale Street north to the Business 1 district is a large Residential 1 district of approximately 182 acres. This district includes the Quail Run neighborhood on the north side of Hale Street, the Port Health Care Center nursing home at the corner of Low and Hale Streets, and several farms and homes fronting on Low Street. The R-1 district allows single-family homes on 20,000 sq. ft. lots.

The second residential district is the small Residential 2 district encompassing the Russell Terrace neighborhood. This district is bounded by I-95 on the west, Industrial 1B district on the south, and Business 1 district on the east and north. The R-2 district permits

single-family and two-family residences on 7,500 sq. ft. lots. The City's assessing data shows only one vacant parcel in the Russell Terrace neighborhood.

The study area includes two relatively small Business 1 districts: about 15 acres on Low Street opposite the Port Plaza shopping center, and about 12 acres at the Route 1 traffic circle.

Finally, the entire area south of Hale Street and west of the Little River is zoned Agriculture/Conservation. In addition to agricultural uses, this district allows single-family residential development on parcels of at least 130,000 square feet (approximately 3 acres).

Impervious Surface Coverage

Impervious surface coverage is a land development issue because of its impacts on flooding and water quality. Impervious surfaces increase the amount of runoff from a site. Excessive coverage by impervious surfaces leads to increased stormwater runoff, which in turn impacts natural groundwater and surface water systems, community stormwater collection systems, soil erosion, street conditions, etc. Studies have shown that impervious surface coverages of between 10 and 15 percent are associated with degraded stream quality.¹⁰

Because of these interrelated impacts, controlling the amount or percentage of impervious coverage is a valid and valuable role for land use and development regulations. Less impervious cover translates directly into less stormwater runoff.

Newburyport's zoning ordinance is very permissive with respect to impervious coverage. As noted earlier, the Industrial district limits coverage by buildings to 30 to 40 percent of the lot area, depending on use; however, it does not impose any restrictions on the total amount of impervious coverage. Paved surfaces for parking areas, driveways, sidewalks,

¹⁰ *Impervious Surface Reduction Study: Executive Summary*, City of Olympia, WA, Public Works Department, Water Resources Program, January 1996. "A growing body of scientific evidence indicates that there is a direct link between impervious surface coverage and degradation of streams. Even relatively low levels of impervious surface coverage (10 to 15 percent of the total land area) in a watershed or drainage basin can make it difficult to maintain stream quality. Greater impervious surface coverage (15 to 20 percent of total land area in a watershed) has been linked to dramatic changes in the shape of streams, water quality, water temperature, and the health of insects, amphibians, and fish that live in these streams" (p. 1).

Also: "A review of the literature suggests that a watershed becomes badly degraded after a mere ten percent is covered by the various impervious surfaces that come with development." *Paving Our Way to Water Shortages: How Sprawl Aggravates the Effects of Drought*, by American Rivers, the Natural Resources Defense Council and Smart Growth America, 2002. page 12 (citing Beach, D., *Coastal Sprawl: The Effects of Urban Design on Aquatic Ecosystems in the United States*, 2002).

etc., can easily equal the footprint area of a building; thus, the actual impervious surface for a parcel in the industrial district could exceed 60 percent of lot area.¹¹

The situation in Newburyport is not uncommon among municipalities. Many communities do not regulate impervious surface coverage directly, and many of those that do allow ratios that are significantly higher than the 15% threshold for stream quality degradation. Typically, older communities with smaller minimum lot areas allow impervious surface coverage of 40% to 70%, and these ratios do not take into account the additional impervious coverage by streets and sidewalks.

As compared with conventional residential subdivisions, cluster developments provide significant environmental benefits in terms of open space protection and stormwater management. Open space (cluster) development results in lower impervious cover ratios,¹² which again translates into less runoff. Clustering of development is thus generally desirable from an environmental perspective, not only because it can minimize the overall amount of land disturbance but also because it preserves the natural functioning of the land for stormwater management and erosion control.

Development Potential

Based on the location of mapped wetlands, there appear to be three significant areas of developable vacant land in the study area. It should be noted, however, that for much of the study area this determination is based solely on the City's wetlands data layer, which is determined from aerial photography interpretation. In the two instances where field delineations were available for review (the NAID parcel between Hale Street and Crow Lane, and the Woodman farm parcel on Low Street proposed for an affordable housing development), the field-delineated wetlands are much more extensive than the areas in the City's data layer. Field delineation of wetlands would be needed to refine the estimates of developable areas.

The largest tract of potentially developable land comprises about 140 acres between Hale Street on the south and Storey Avenue and Low Street on the north, currently zoned Industrial B and Residential 1. This area includes portions of the industrially-zoned NAID and Marineau properties, and residentially-zoned elements of the Colby and Woodman farms, as well as smaller parcels on Crow Lane and Low Street. Not included in this tract, but also theoretically developable, is the 35-acre City-owned land that is the site of the

¹¹ The City's new site plan review regulations (Section XV of the Zoning Ordinance) now require that at least 5% of the interior area of surface parking lots with more than 20 spaces be landscaped, but this would still allow 97% or more of the total lot area to be impervious.

¹² Studies of nine residential subdivisions found that the cluster designs resulted in 20% to 58% less impervious cover for 8 of the subdivisions, with the greatest reductions in developments zoned for the largest lot sizes. (The ninth subdivision, for which the open space design led to an impervious cover reduction of only 7%, was zoned for one-eighth-acre lots.) *Better Site Design: A Handbook for Changing Development Rules in Your Community*, Center for Watershed Protection, August 1998; pages 94-95.

recycling center and brush dump (about 5 acres of this parcel is indicated as wetlands on the City's GIS data layer).

The second major area of potential developable land consists of the Myette farm on the south side of Hale Street. Given the available wetlands information, the developable area is estimated to be about 100 acres. The land is currently zoned "Agricultural/Conservation" (Ag/C), which permits single-family residential development with a minimum lot area of 130,000 square feet (about 3 acres), agriculture, country clubs, parks and playgrounds, public and private educational uses, and certain governmental uses. A residential buildout of the developable area might result in 25 to 30 house lots.

The final significant developable area consists of about 13 acres on the south side of Hale Street at the intersection of Malcolm Hoyt Drive.

In addition to these large tracts of vacant developable land, growth can also occur through redevelopment of existing properties. For example, the dimensional and intensity regulations for the Industrial zoning district imply a maximum floor area ratio (FAR) of around 0.24 with surface parking lots (which could increase up to 0.90 with the use of parking structures), while the existing FAR for all developed industrial parcels in the industrial park is 0.15. (Note, however, that for many properties, NAID covenants apply which restrict development further than the City's zoning regulations.)

Issues and Opportunities

This overview of existing conditions, and public input received during public forums and workshops, reveal several issues and opportunities regarding future land use in the study area:

1. Most of the undeveloped land in the study area is privately owned and is zoned for industrial use or "Agriculture and/or Conservation," which permits low-density residential development. Residents value the existing open space and would like to see it remain undeveloped, while property owners wish to retain their current rights to develop under the existing zoning.
2. Much of the remaining open land in the study area has been identified as important wildlife habitat, the value of which would be reduced by fragmentation of the open space.
3. Significant amounts of the remaining open land are limited in their development potential by wetlands and/or high water tables.
4. Existing development in residential subdivisions and commercial developments has not adequately addressed stormwater management issues, and has created flooding problems in the Hale Street area. Further development north of Hale Street can be expected to increase stormwater runoff.

5. Below Hale Street, high water tables and tidal flows cause flooding problems which the system of drainage swales and channels are inadequate to address.
6. The industrial park is an important contributor to the City's tax base and provides diversification within the local economy. The industrial base should be protected, and opportunities for expansion within the existing park should be preserved.
7. While the study area has good access to the regional highway system, the local road system does not adequately separate commercial traffic from residential neighborhoods, and congestion at key locations (such as Storey Avenue/Low Street) will increase as growth continues.
8. The MBTA Commuter Rail station provides an opportunity for increased development with minimal impact on impervious surfaces, because so much of this area is already paved. Combined with the Route 1 traffic circle, this area could be developed as a new community center, complementing the downtown area.

3

Likely Future Land Use

THE LIKELY FUTURE LAND USE SCENARIO provides a basis for assessing the extent to which current land use policies support community values, and for suggesting areas where these policies should be altered.

What is the “Likely Future Land Use” scenario? It is simply an illustration of how land development might occur under existing zoning regulations, taking into account the environmental characteristics of the land, available infrastructure, current land ownership patterns, and anticipated market conditions. The Likely Future Land Use scenario is not a prediction that a specific parcel will be developed in a specific manner or at a specific point in time. Many parcels can be developed in a variety of ways under a given set of regulations, and the timing of development will depend on external market factors as well as the goals of the current and future owners of the land. Rather, this scenario depicts hypothetical layouts of buildings, roads, driveways, parking areas, etc., in order to illustrate the potential implications of current land use policies.

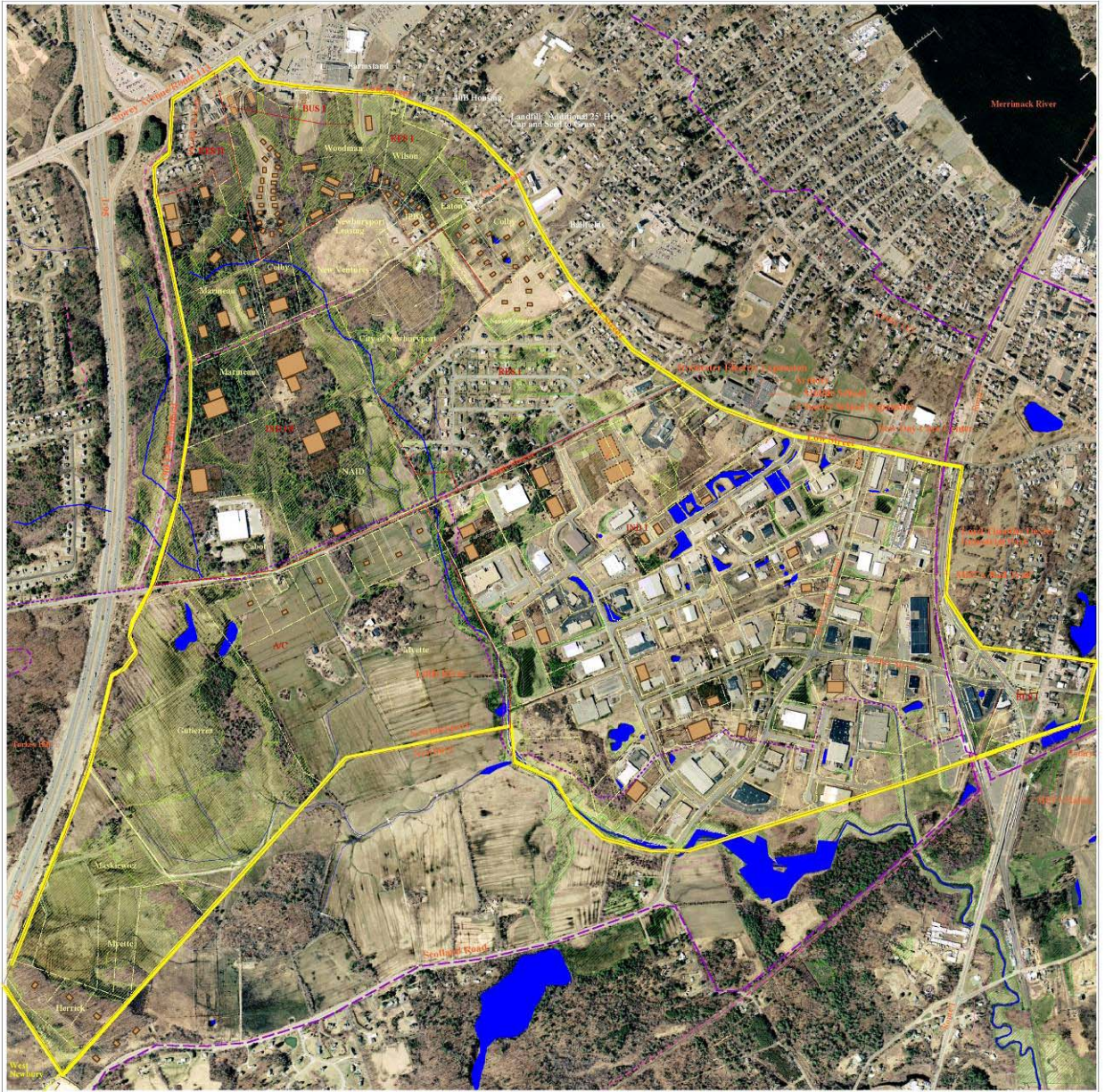
Assumptions

The Likely Future Land Use scenario was created on the basis of several assumptions.

1. Land will be developed as permitted by the existing zoning, subject to environmental limitations and economic considerations. The Likely Future Land Use scenario does not necessarily assume development to the absolute maximum allowed by zoning, but is intended to represent a level of intensity that is reasonable considering the costs of development and surrounding land uses.
2. Crow Lane is a public way (it has not been abandoned by the City). Landowners with frontage on Crow Lane may have a reasonable expectation, based on access and zoning, that their land will be developable in the future, although the intensity of development will be limited by wetlands, rare species habitat, and other environmental considerations.

3. Access will not be developed along the former Interstate 95 right-of-way (the “Access Road”) because of community opposition. Providing access along this route would not significantly increase the maximum development potential of land in this area (and might even reduce the amount of new impervious surface resulting from construction of new roadways); but it would make such development easier and more attractive because there would be fewer environmental and traffic impacts associated with the provision of access to the undeveloped land. Without the availability of the I-95 roadbed, access to industrially-zoned sites adjacent to and north of Crow Lane would need to be provided from Crow Lane.
4. Wetlands areas will not be developed, but limited wetlands crossings will be permitted in order to provide access to upland areas.

Figure 6: Likely Future Land Use



Newburyport Strategic Land Use Plan Likely Future Land Use

Scale: 1" = 300'
Date: February 12, 2004
City of Newburyport, Taintor & Associates, Dodson Associates

- Key:
- Wetlands (Mass GIS & Field Delineations)
 - Ponds
 - Property Lines, Ownership
 - Possible One-Road Trails
 - Rivers, Waterlines, Act 250 Jurisdiction
 - Existing Foot Trails
 - Potential Streams
 - Proposed Foot Trails
 - Intermittent Streams
 - Study Area Boundary
 - Existing Ball Trails
 - Municipal Boundaries
 - Proposed Rail Trails
 - Zoning Districts
 - Currently Proposed Future Buildings
 - Likely Future Buildings
 - Likely Future Parking Lots
 - Likely Future Roads



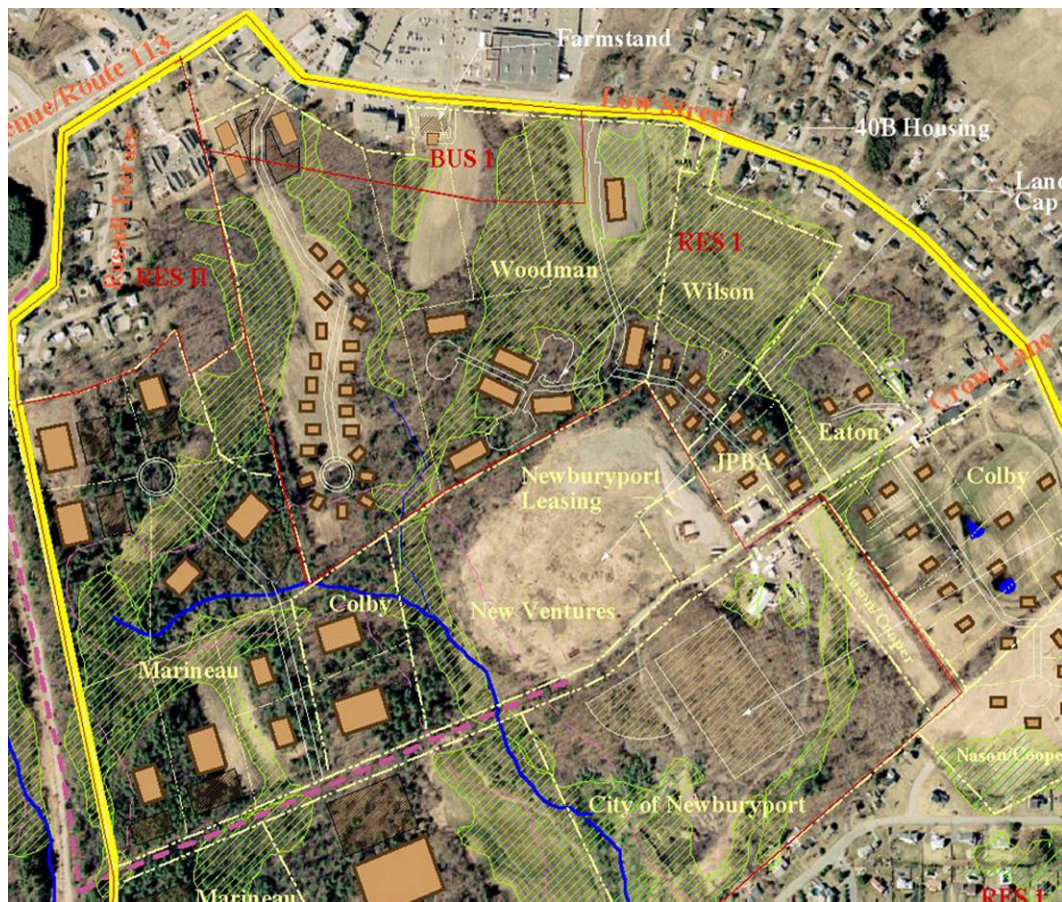
The “Likely Future Land Use Scenario” is an illustration of how land development might occur under existing zoning. It is not a prediction that specific parcels will be developed in specific ways or at specific points in time.

Description

NORTH OF CROW LANE

North of Crow Lane (see Figure 7), the Likely Future Land Use scenario shows full development in line with existing zoning with two exceptions: the former landfill would remain undeveloped, and the easterly Woodman parcel (adjacent to the landfill and fronting on Low Street) would become a sizable multifamily housing development as currently proposed in an application for a Chapter 40B comprehensive permit. The remaining residentially-zoned land would be developed as single-family subdivisions served by new access roadways from Low Street and Crow Lane.

Figure 7: Likely Future Land Use – North of Crow Lane



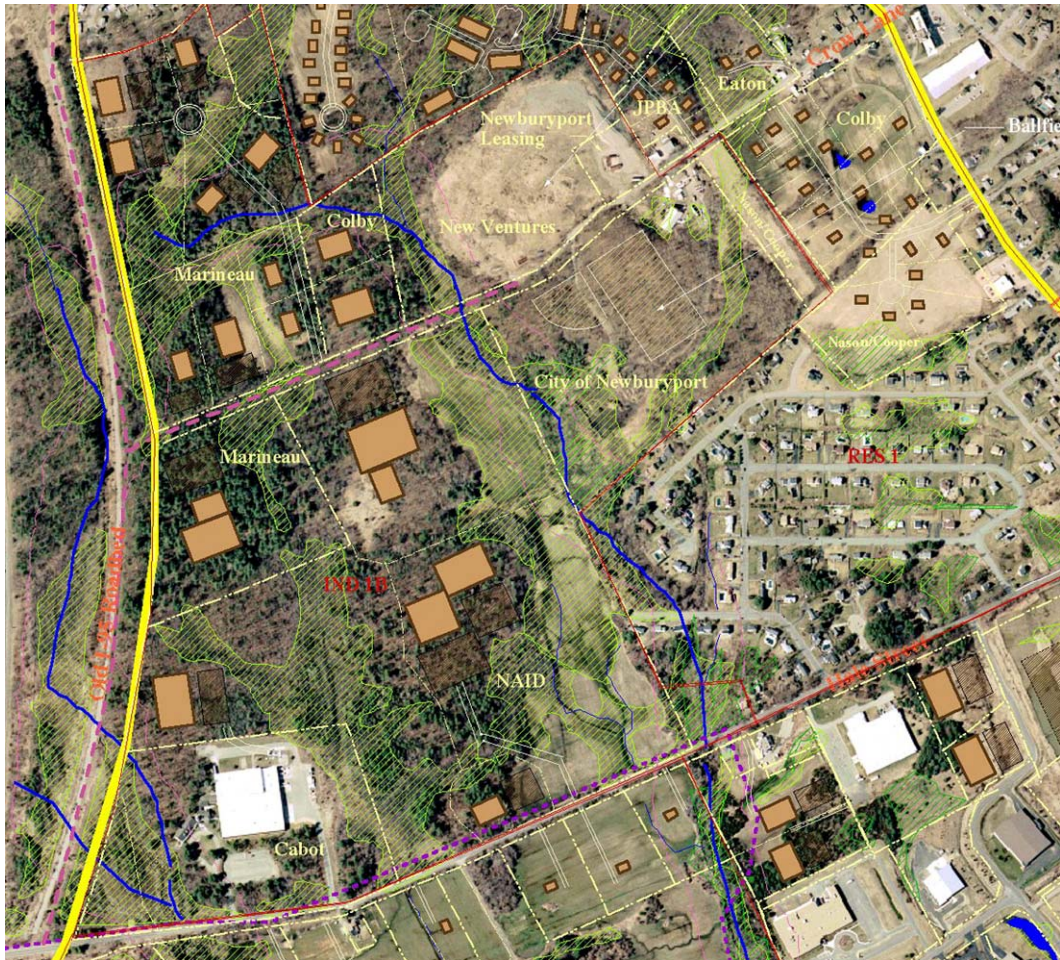
The area to the west of the landfill and farm parcels is zoned for industry (I-1B), and it is projected that development in this area will occur at a similar scale to the existing industrial park properties, with access from Crow Lane. Overall densities for both the residential and industrial areas will be limited due to the extensive wetland systems; and development may not take place for a number of years, until the expected returns to the landowners or developers exceed the costs of overcoming the environmental constraints and access difficulties. Nevertheless, there do not appear to be any insurmountable

obstacles to eventual development at the general scale and density depicted in the “Likely” scenario.

CROW LANE TO HALE STREET

Between Crow Lane and Hale Street, a moderate amount of industrial or corporate office development can occur. The “Likely Future Land Use” scenario shows five new buildings: one on the Marineau property to the north of Cabot Stains, and four on the NAID property (based on a four-lot subdivision plan submitted by NAID to the Planning Board in 2002).

Figure 8: Likely Future Land Use – North of Hale Street



GRAF ROAD TO TRAFFIC
CIRCLE

The Likely Future Land Use scenario envisions very little new development between Graf Road and the Route 1 traffic circle (see Figure 9 and Figure 10). One new building is shown near the intersection of

Graf and Parker Street, as well as a few small commercial structures on the traffic circle at the scale of recent developments.

Figure 10: Likely Future Land Use – MBTA & Traffic Circle



The Likely Future Landscape

Figure 11 presents a bird's-eye view of the Likely Future Land Use scenario for the northerly portion of the study area, as presented in map form in Figure 6 through Figure 8. As in the drawing of the existing conditions (Figure 3, page 23), the view is looking south across Port Plaza, Low Street, and Merrimack Place toward Hale Street and the industrial park. In this conceptual view, Crow Lane has been extended west (i.e., to the right), past the former landfill, to create access for industrial park expansion parallel to the

former Interstate 95 roadbed. This development extends north toward the Russell Terrace neighborhood and south to Hale Street (the area between Crow Lane and Hale Street is the tract currently owned by NAID).

Figure 11: Likely Future Land Use – Common Pasture / Little River



Several new residential developments are shown along the south side of Low Street,, including a new cul-de-sac near Merrimack Place, the large proposed mixed-income development opposite the Port Plaza service driveway, and a series of small subdivisions off Crow Lane. In the distance, several house lots have been created on the south side of Hale Street on former farm land.

It is important to emphasize that the land use patterns shown in Figure 11 are conceptual and generally do not represent actual plans or proposals for any parcels.¹³ In addition, it is likely that site-specific conditions could limit the total amount of future development to a level below what is illustrated in the drawing (this is already happening, for example, on the proposed mixed-income development opposite K-Mart, where more accurate wetlands delineations have resulted in a significantly reduced estimate of the amount of developable land on the site). What is important to note about this scenario is less the precise amount of development but rather the degree to which existing open space could be developed and fragmented under existing zoning.

¹³ Exceptions are the mixed-income development on Low Street and the development of the NAID property, which is based on a plan submitted to the Planning Board showing division of the tract into four building lots.

Impacts

The “Likely Future Land Use” scenario results in a 46 percent increase in total building floor area and a 37% increase in coverage by impervious surfaces (see Table 11 and Table 12). More than 60 percent of the increase in building floor area will occur in the portion of the study area north of Hale Street, where total floor area will double. About 28 percent of the projected total increase in floor area will occur through infill on vacant and underutilized parcels in the existing industrial park between Parker Street/Graf Road and Hale Street.

Table 11: Total Building Floor Area Under “Likely” Scenario

	Existing (sq. ft.)	Likely (sq. ft.)	Increase	
			Sq. Ft.	Percent
North of Hale Street	930,243	1,857,129	926,886	100%
South of Hale Street, West of Little River	6,945	118,305	111,360	1603%
South of Hale Street, East of Little River to Parker St/Graf Road	1,565,115	1,989,988	424,873	27%
East of Parker St/Graf Road	758,951	789,203	30,252	4%
Total Study Area	3,261,254	4,754,625	1,493,371	46%

Table 12: Impervious Coverage Under “Likely” Scenario

	Total Land Area (square feet)	Percent of Total Study Area	Impervious Coverage	
			Existing	Likely Future
North of Hale Street	20,963,283	34.7%	6.6%	14.5%
South of Hale Street, West of Little River	16,144,357	26.7%	0.4%	1.2%
South of Hale Street, East of Little River to Parker St/Graf Road	16,292,523	26.9%	23.8%	29.0%
East of Parker St/Graf Road	7,068,714	11.7%	26.9%	27.7%
Total Study Area	60,468,878		11.9%	16.4%



Alternative Future Land Use

THE ALTERNATIVE FUTURE LAND USE SCENARIO provides a basis for assessing the extent to which current land use policies support community values, and for suggesting areas where these policies should be altered.

Like the Likely Future Land Use scenario, the Alternative Future Land Use scenario is an illustration of how land development might occur, taking into account the environmental characteristics of the land, available infrastructure, current land ownership patterns, and anticipated market conditions. Unlike the Likely scenario, however, the Alternative scenario is not restricted by current land use regulations, and it also incorporates potential non-regulatory strategies to guide future development and manage growth.

The Alternative Future Land Use scenario is not a prediction that a specific parcel will be developed in a specific manner or at a specific point in time, and it does not represent an official development proposal for any parcel. Rather, this scenario is meant to illustrate alternative land use policies by depicting hypothetical layouts of buildings, roads, driveways, parking areas, etc.

Principles

The Alternative Future Land Use scenario is based on the same assumptions as the Likely scenario (except for the assumption of development under existing zoning), and in addition on several principles suggested by input at meetings of the Strategic Land Use Committee and at public forums and workshops. These principles include:

1. Maintain a continuous green corridor along the western portion of the study area in order to protect habitat, preserve vistas, and manage stormwater flow. To do this, preserve as much as possible of the remaining open space in the upper watershed above Hale Street. Any industrial or commercial development in this area should be designed with extreme sensitivity to the natural and visual environment, building on the positive example provided by the Cabot Stains facility on Hale Street.
-
- The Cabot Stains headquarters and manufacturing facility is surrounded by woods and set back from Hale Street. It is a model for any future development within the upper watershed north of Hale Street.**
2. Minimize impacts of development on wetlands and riparian corridors. Where development occurs, promote clustering to reduce environmental impacts such as new impervious surfaces from construction of new roadways.
 3. Minimize increases in impervious surface coverage in the study area. Specifically, attempt to maintain overall impervious coverage at or below 15% of total land area, averaged across all sections of the study area.
 4. Incorporate the impacts of new development on scenic vistas in site design. This objective will be furthered by clustering of development. However, priority should be given to preserving an uninterrupted natural corridor for ecological reasons; therefore, new development in the northern section of the study area should generally be placed close to streets rather than in the interior, and this will alter some existing vistas.
 5. To the extent possible, achieve the open space preservation goals without creating a financial impact on current property owners. Use a combination of mechanisms to do this: purchase of land or conservation restrictions (by the City, by interested nonprofit land conservation agencies); clustering of development around the perimeter of the green corridor; and transfer of development rights from the green corridor to other portions of the study area.

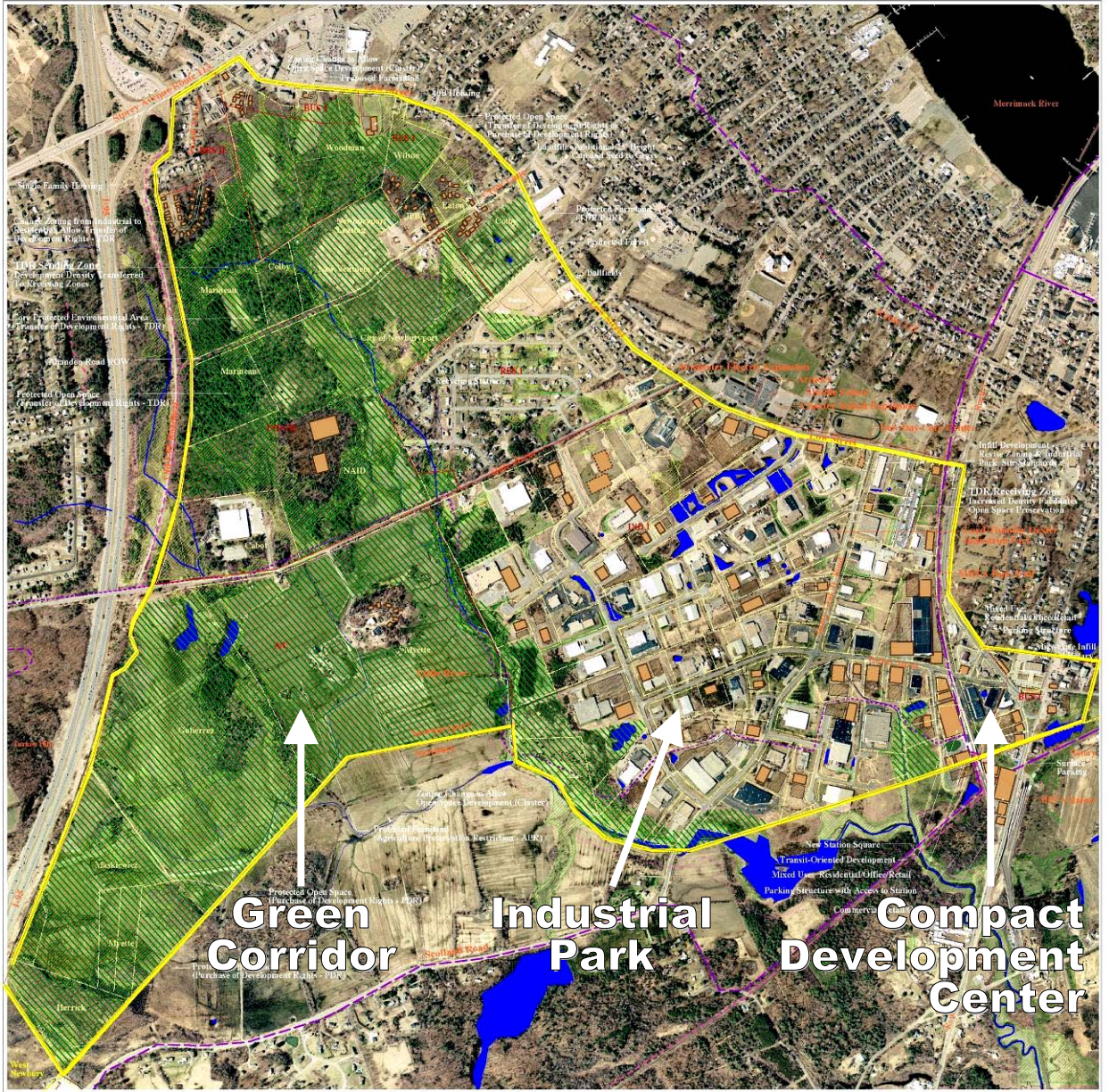
6. Encourage infill development within the existing industrial park to use this developed area more efficiently, taking advantage of existing infrastructure (streets, water, sewer, etc.).
7. Promote redevelopment around the MBTA Commuter Rail station to achieve higher density, mixed-use, transit-oriented, pedestrian-friendly environment. Attain higher density through the use of multi-story buildings with structured parking.
8. Promote redevelopment around the Route 1 traffic circle to promote a more walkable community center with an increased amount of economic activity and a greater mix of uses.
9. Use the redevelopment of the transit area and traffic circle to create a sense of place at this gateway to the City. Promote the development of the area as a complement to downtown, not a competing center.
10. Promote better pedestrian links from the transit/circle area to the industrial park and to downtown Newburyport. Build on the existing plans for bicycle and multiuse trails, including the Little River Nature Trail and the Clipper City Rail Trail.

Description

The plan that has resulted from this process recognizes three major components of the study area: a green corridor along the westerly side, the existing industrial park area in the center, and a compact development node around the commuter rail station and traffic circle at the east end of the study area. The full plan is depicted in Figure 12, and the components are described in the following pages.

Under this plan, the preservation of open space in the proposed green corridor and the increase in development intensity around the rail station and traffic circle are explicitly linked together. In other words, the total amount of development in the entire study area under the Alternative Future Land Use scenario should be comparable to the amount of development under the Likely Future Land Use scenario. The principal mechanism for making this connection is a “Transfer of Development Rights” (TDR) program, under which each increase in the allowable development on one parcel is balanced by a specific reduction in development potential on another parcel.

Figure 12: Alternative Future Land Use



Newburyport Strategic Land Use Plan
Alternative Future Land Use
 With Regulatory Changes and Limited Acquisition

Scale: 1" = 300'
 Date: February 12, 2004



City of Newburyport, Taintor & Associates, Dodson Associates

Key:

Wetlands (Over GIS & Field Delimitation)	Possible On-Road Trails	Currently Proposed Buildings
Fresh Water	Existing Foot Trails	Alternative Future Buildings
Property Lines, Ownership	Proposed Foot Trails	Alternative Future Parking Lots
Rivers, Protection Act 200' Jurisdiction	Study Area Boundary	Alternative Future Roads
Perennial Streams	Municipal Boundaries	Proposed Conservation Areas (Acquisition, Conservation Easements, TDR)
Intermittent Streams	Zoning Districts	
Existing Rail Trails		
Proposed Rail Trails		



The "Alternative Future Land Use" scenario is an illustration of how land development might occur with certain changes in land use policies. It is not a prediction that specific parcels will be developed in specific ways or at specific points in time; and it does not represent an official development proposal for any parcel.

Common Pasture Greenway

The Common Pasture Greenway is the largest individual component of the plan. The area west of the industrial park and extending north to include the NAID property and parcels north of Crow Lane represents about 45 percent of the total study area. Development within this corridor is proposed to be strictly limited and, wherever possible, clustered along the perimeter rather than dispersed.

NORTH OF CROW LANE

In the most northerly portion of the corridor, north of Crow Lane, the Alternative scenario envisions preservation of the great majority of the existing open space (see Figure 13). Rather than the typical industrial park development allowed by the current zoning and depicted in the “Likely” scenario, this scenario suggests small-scale residential clusters adjacent to the Russell Terrace neighborhood and Merrimac Place, as well as on both sides of Crow Lane near Low Street (parcels currently owned by Wilson, Eaton, JPB, and Colby).

Figure 13: Alternative Future Land Use – North of Crow Lane



The underlying rationale for the small residential component adjacent to Russell Terrace in the Alternative scenario is to provide a mechanism for preserving the majority of the industrially-zoned open space north of Crow Lane, if full preservation cannot be achieved through other means (such as transfer of development rights). As noted in the Existing Conditions section, the value of land for residential development in the study area is much higher than for commercial or industrial development (see Table 8, page 30). The addition of a residential development option for the land near Russell Terrace would thus represent a significant financial benefit for the property owner, which in turn would create an opportunity for the City to protect a significant amount of open space between any residential development and Crow Lane. The land use regulations to implement this strategy should be drafted accordingly to ensure that the community and environmental benefits of open space preservation are made a condition of any residential development.

Although the “Alternative” scenario suggests expansion of the Russell Terrace residential neighborhood as an alternative to industrial development north of Crow Lane, the Strategic Land Use Committee recognized that access to this area is less than optimal because of the existing traffic congestion on Storey Avenue. The completion of the Maritime Landing residential development combined with continuing regional growth will worsen the existing traffic problems, and a solution to these problems will need to be found, with or without additional traffic from Russell Terrace. City officials and area residents will need to evaluate whether the impacts of increased traffic outweigh the benefits of open space preservation in this area.

HALE STREET TO
CROW LANE

The “Alternative” scenario for the NAID tract (see Figure 14) is based on the stated intentions of NAID to create only two development sites on their tract. It is important to note that this is not the maximum development potential, and in fact NAID has resisted suggestions during the study process that future development be restricted.

Figure 14: Alternative Future Land Use – North of Hale Street



The scenario shows two buildings, set well back from Hale Street in a significant upland area of the tract and accessed by a driveway that begins at the edge between woods and open meadow and requires the minimum of alteration to wetlands. The two buildings are clustered together, preserving broad green corridors to the east. Preservation of the northerly and westerly arms of the tract, constituting nearly half of the total area, combined with the abutting Marineau and Colby properties, results in the establishment of a permanent green “core” for the upper watershed, which includes at least three vernal pools and other sensitive wildlife habitat.

The NAID “Alternative” scenario depicts building footprints of about 100,000 square feet plus about 132,850 square feet of roads and parking areas, for a total of 233,650 square feet (5.4 acres) of impervious surface or about 5.5 percent of total tract area of approximately 100 acres. Given the extent of wetlands in the tract as well as the goal that total impervious surface in the study area should not exceed 15 percent, it is recommended that impervious coverage should not exceed this level of approximately 5.5 acres on this tract combined with adjacent tracts (Marineau south of Crow Lane; Marineau north of Crow Lane excluding the residential component; and Colby north of Crow Lane).

In the area around the easterly end of Crow Lane (near Low Street), clustering of residential development would make possible the preservation of the existing fields on Low Street. The scenario depicts a new municipal recreation area on the Nason/Cooper parcel, between Low Street and the Quail Run neighborhood, which could include playing fields and tennis courts. The concept would be for the land to be acquired by the City in conjunction with cluster development of the Nason/Cooper and Colby land close to Crow Lane.

Industrial Park

The “Alternative Future Land Use” scenario calls for incremental growth of industrial uses within the industrial park, through development on scattered vacant parcels as well as expansion of existing buildings where possible given environmental conditions, zoning, and NAID covenants (where applicable).¹⁴

In the area to the west of Graf Road, the Alternative scenario is similar to the Likely scenario in terms of the total amount of development. The key differences are in the details of site planning: whereas the Likely scenario shows street frontage dominated by parking lots, the Alternative scenario depicts buildings closer to the street line with parking areas set back. The Alternative scenario also suggests more use of expansions on

GREENWAY GOAL: MAXIMUM PRESERVATION

The Alternative Future Land Use scenario presents strategies for limiting the impact of new development on the natural environment in the Common Pasture Greenway. These strategies are illustrated by examples such as clustered residential development adjacent to Russell Terrace (as an alternative to industrial development under current zoning) and industrial development on the NAID parcel with strictly limited impervious surface coverage (as an alternative to full-scale development in accordance with a previously submitted plan).

However, as the study progressed, the Strategic Land Use Committee determined that it would be preferable to have no further development within the Common Pasture Greenway. Thus, the illustrations for the Alternative Future Land Use scenario (map and perspective drawing) should be interpreted as the maximum level of development that should be allowed if full preservation cannot be achieved through means such as Transfer of Development Rights or acquisition of conservation restrictions.

¹⁴ Many, but not all, parcels in the industrial park are subject to “Protective Covenants” with dimensional, parking, use, and landscaping regulations that in some cases are more stringent than the City’s zoning regulations.

existing developed parcels, compared to the Likely scenario in which most development is of new buildings on currently vacant parcels.

East of Graf Road, the Alternative scenario suggests a significantly higher density of development, achieved through redevelopment of existing parcels, primarily along Parker Street between Graf Road and Route 1. The Alternative scenario also shows major expansion on the Owens Illinois site, whereas the Likely scenario assumes continuation of the existing amount of floor area on the parcel.

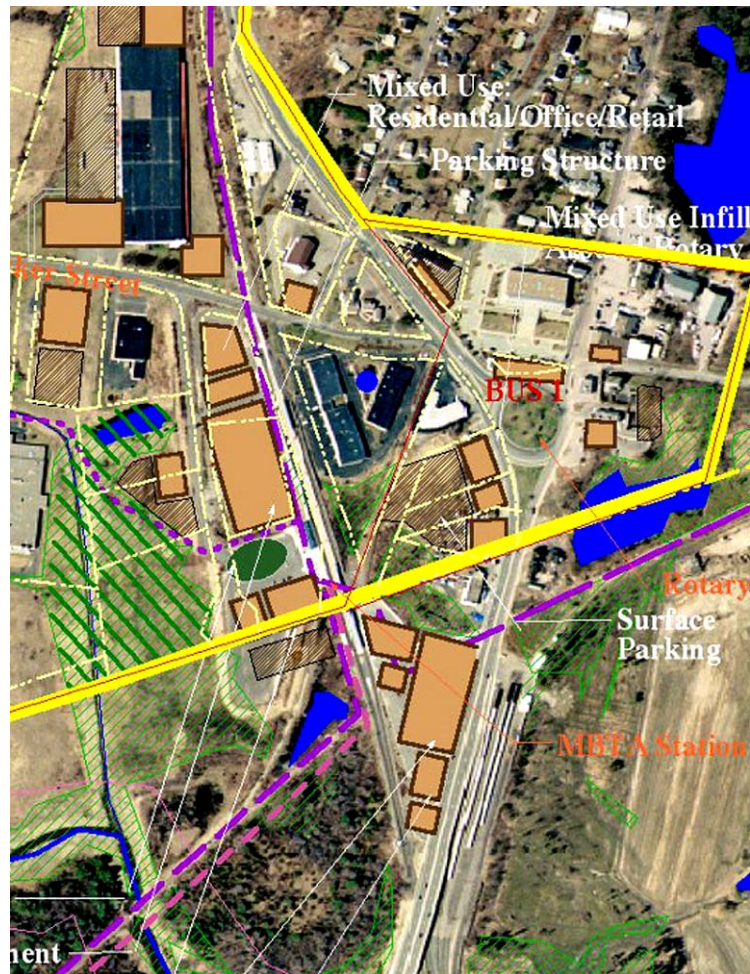
Figure 15: Alternative Future Land Use – Industrial Park



Rail Station/Traffic Circle

The “Alternative” scenario proposes a significant change in the area around the MBTA Commuter Rail station and the Route 1 Traffic Circle. Rather than a continuation of the low-density pattern of development that exists today, with primarily one-story and single-use buildings, the scenario envisions an area of multistory, mixed-use buildings with a much greater total floor area. Uses in this area would include retail, office, and residential, and would be supported by parking facilities in shared lots and integrated parking structures. The area around the train station would be designed to promote pedestrian circulation: ground-floor uses would be oriented to convenience and retail services, and provisions for crossing the railroad tracks and Route 1 would be improved.

Figure 16: Alternative Future Land Use – MBTA & Traffic Circle



This new transit-oriented development will create a new sense of place in an important area that currently is somewhat empty and unwelcoming. It will create a dramatic new gateway to Newburyport for those arriving in the City via train or Route 1. It will also provide an opportunity for expansion of office uses in Newburyport, relieving any

pressure to insert such uses into the industrial park, which could result in the displacement of industrial uses and the loss of industrial space.

Building on the density and design precedents in downtown Newburyport, the new station/circle district must be established to complement, rather than compete with, the existing downtown businesses. Therefore, while retail and service uses will be essential components of the district, they will have a secondary supporting role.

This area includes adjacent land in the town of Newbury, and therefore it will be important to engage in a coordinated planning process with that town’s planning officials. Ideally, both communities should adopt consistent zoning regulations to govern development.



Merrimac Landing in downtown Newburyport is a context-sensitive, mixed-use building that could be a model for development at the Commuter Rail station and Route 1 Traffic Circle. This four-story structure includes retail, office, and residential uses, with parking below ground.

Low Street

Along the northerly edge of the study area, Low Street is a transitional zone between the industrial district to the south and residential and institutional uses to the north. During the planning process it was recognized that this area needed to be considered separately from the industrial park. Although the south side of Low Street between Hale Street and Route 1 is zoned for industry, few of the uses in this area conform to that zoning; and there was consensus that a shift to manufacturing was neither desirable nor likely.

Rather than continuing the existing industrial zoning for the south side of Low Street, the Alternative scenario envisions this strip remaining a transitional area between the industrial park to the south and the educational, recreational, residential and institutional uses to the north (this would be accomplished through the creation of a new zoning district, as described in the Implementation chapter). The Alternative development scenario depicts a possible redevelopment approach for the Armory site, as well as some smaller infill commercial development.

The Alternative Future Landscape

Figure 17 and Figure 18 illustrate how the concepts presented in the Alternative Future Land Use scenario might be implemented. These drawings should be compared with the existing conditions drawings (Figure 3, page 23, and Figure 4, page 24) and the drawing of the Likely scenario for the northern portion of the study area (Figure 11, page 44).

Figure 17 shows the landscape looking south from Storey Avenue. Residential neighborhoods are clustered around the perimeter of the study area, including groups of homes next to Russell Terrace and the Merrimac Place senior housing development, a small mixed-income development opposite K-Mart, and small clusters close to Crow Lane. Further south, the scale of the development on the NAID tract has been reduced to two buildings with minimal intrusion into the existing woods, and residential development on the farmland beyond is clustered around the existing farm house rather than spread out along the roadside.

Figure 17: Alternative Future Land Use Scenario – Common Pasture Greenway



In this scenario the great majority of the existing open space has been preserved as the Common Pasture Greenway. In addition to clustering of development around the periphery of the study area, it is intended that the open space preservation will be accomplished by transfer of development rights from the greenway to other areas – in particular, the area surrounding the rail station and traffic circle.

It should be emphasized once again that preservation of all the remaining undeveloped land in this area is the primary goal of this plan, and should be pursued through tools such as transfer of development rights and acquisition of conservation restrictions to the extent possible. Even the limited developments shown adjacent to Russell Terrace and Merrimac Place and on the NAID tract are considered to be less than optimal in this context. However, it is recognized that full preservation may not be possible without some limited development to pay for it, and thus the scenario presents concepts for how such limited development might take place in specific situations.

Figure 18 depicts the Alternative Future Land Use scenario for the Business Circle District and Commuter Rail station area. Increased development in this part of the study area provides the complement to intensive preservation in the Common Pasture Greenway, and also creates the opportunity for the City to achieve a variety of goals, including expansion of the commercial tax base and upgrading of a neglected commercial district; provision of affordable housing in an area with transportation access and supporting services; and creation of pedestrian and bicycle links from the rail station toward the downtown area.

Figure 18: Alternative Future Land Use – Business Circle District / Commuter Rail



Figure 18 presents a vision for this area that is dramatically different from its current scale and appearance, but based on historic development patterns within the City. As in downtown Newburyport, this new district is characterized by three- to four-story buildings placed close to the street edge, with a mix of retail, office, and residential uses. Parking is provided in some shared lots behind the buildings, but most of the surface parking at the rail station and adjacent to the courthouse has been replaced by parking garages. The entire area has a density that supports both transit use and pedestrian circulation.

It is important once again to emphasize the conceptual nature of the scenario and this illustration: this does not represent a specific plan for any parcel, and much further work is needed to define the densities and development standards that should apply in this location. Furthermore, not all the floor area shown in this illustration will be built, because detailed analysis of environmental constraints and other factors will undoubtedly preclude

development of some of the sites depicted here. In addition, the difficulty of implementing this concept must not be underestimated: achieving this vision will require significant changes to zoning regulations, upgrading of roadways and other infrastructure, and complex public-private partnerships.

Nevertheless, the concepts presented in the scenario for the traffic circle and rail station area – increased density, mixing of uses (including affordable and market-rate housing), shared and structured parking facilities, and a generally urban development pattern – are necessary to support the preservation of the green corridor along the western edge of the study area, and can result in the emergence of a new business area building on the availability of public transportation and providing jobs, housing opportunities, and tax base growth to complement the City’s historic core.

Comparison to Likely Scenario

Table 13 summarizes the differences between the two scenarios in terms of impervious surface coverage and gross floor area. The Alternative Future Land Use scenario will permit a greater total amount of commercial and industrial development than the Likely scenario, and would result in almost the same amount of land coverage by impervious surfaces (buildings, parking lots, driveways, roads, etc.). However, these impacts will generally occur in less sensitive locations under the Alternative scenario than under the Likely scenario.

In the Alternative scenario, growth will be directed toward the existing industrial park and especially to the area surrounding the commuter rail station and the Route 1 traffic circle.¹⁵ These locations are already substantially developed, and growth can occur through expansion of existing buildings, infill on empty or undeveloped lots between existing

For the area south of Hale Street and east of the east branch of the Little River to Graf Road, which includes much of the existing industrial park, Table 13 shows impervious surface coverage increasing by 25 percent and gross floor area increasing by 61 percent in the “Alternative” scenario compared to the “Likely” scenario. These estimates were based on an earlier iteration of the scenario which assumed that some parcels would convert to office uses and multistory structures.

Subsequently, the Strategic Land Use Committee reaffirmed support for continuing industrial use in the industrial park, which would limit the likelihood of moving to multistory buildings. Consequently, the final plan will result in a lower total buildout than indicated in this table, and the Alternative buildout in this area will be close to the Likely buildout.

This also means that the total buildout for the entire study area under the Alternative Future Land Use scenario would be lower than indicated in Table 13 (and Table 14).

¹⁵ Note that the projected increases in the impervious surface and floor area in the area around the Commuter Rail station and Route 1 traffic circle include some parcels in the Town of Newbury (which currently contain no buildings). Thus, the percentage increases shown in Table 13, Table 14, and Table 15 actually overstate the amount of growth within the City of Newburyport. Further study will be required to refine the estimates to reflect the distribution of growth on both sides of the municipal boundary, as well as the policy change in the existing industrial park described in the sidebar above.

buildings, and redevelopment at higher densities (for example, by using multistory buildings and parking structures rather than single-story buildings and surface parking lots). By concentrating development in this way, more efficient use can be made of infrastructure (roads, water, sewer, stormwater management) and impacts on the environment can be minimized.

In contrast, the Alternative scenario will promote open space preservation in a substantial portion of the upper Little River watershed, which could be developed under the Likely scenario.

Table 13: Summary of New Development Under Both Scenarios

	New Buildings – Coverage	New Parking Areas & Private Drives	New Roads (Public & Private)	Total New Impervious Coverage	New Buildings – Gross Floor Area
North of Hale Street					
Likely Future	799,286	539,007	316,664	1,654,957	926,886
Alternative Future	260,075	123,078	145,204	528,357	395,579
South of Hale Street, West of Little River					
Likely Future	55,680	27,680	49,315	132,675	111,360
Alternative Future	18,560	0	63,180	81,740	37,120
South of Hale Street, East of Little River to Graf Road					
Likely Future	424,873	403,205	19,992	848,070	424,873
Alternative Future	466,079	578,531	6,956	1,051,566	683,037
South/East of Graf Road					
Likely Future	30,252	23,809	0	54,061	30,252
Alternative Future	611,262	374,025	0	985,287	1,494,051
Total					
Likely Future	1,310,091	993,701	385,971	2,689,763	1,493,371
Alternative Future	1,355,976	1,075,634	215,340	2,646,950	2,609,787
Change	45,885	81,933	-170,631	-42,813	1,116,416
Change %	4%	8%	-44%	-2%	75%
Total Excluding South/East of Graf Road					
Likely Future	1,279,839	969,892	385,971	2,635,702	1,463,119
Alternative Future	744,714	701,609	215,340	1,661,663	1,115,736
Change	-535,125	-268,283	-170,631	-974,039	-347,383
Change %	-42%	-28%	-44%	-37%	-24%

Total Development

Compared to the “Likely Future Land Use” scenario, total development (gross floor area of buildings) will be 17 percent greater (see Table 14). This is accompanied by a shift in the location of development from north of Hale Street, which is now largely undeveloped, to the existing developed areas south of Hale Street and east of the Little River. The net increase of approximately 945,000 square feet of building floor area includes a

reduction of 531,000 square feet in the area north of Hale Street, and increases of 493,000 square feet between Hale Street and Graf Road, and 1.1 million square feet between Graf Road and the Route 1 traffic circle.

Table 14: Total Building Floor Area Under “Likely” and “Alternative” Scenarios

	Likely (sq. ft.)	Alternative (sq. ft.)	Difference	
			Sq. Ft.	Percent
North of Hale Street	1,857,129	1,325,822	(531,307)	-40%
South of Hale Street, West of Little River	118,305	44,065	(74,240)	-168%
South of Hale Street, East of Little River to Parker St/Graf Road	1,989,988	2,483,152	493,164	20%
East of Parker St/Graf Road	789,203	1,846,860	1,057,657	57%
Total Study Area	4,754,625	5,699,899	945,274	17%

Note: The projected floor area in the existing Industrial Park under the Alternative scenario is overstated in this table as described in the sidebar on page 60. In the next phase of planning these projections must be refined in order to calibrate zoning regulations and transferable development rights appropriately.

Impervious Cover

The “Alternative” scenario results in an overall level of impervious coverage in the study area that is almost identical to the “Likely” scenario. However, the distribution of this coverage is significantly different. Impervious coverage is 35 percent less than in the “Likely” scenario in the upper watershed (north of Crow Lane), but 48 percent more in the area east of Graf Road/Parker Street (including the train station and traffic circle).

Table 15: Impervious Coverage Under “Likely” and “Alternative” Scenarios

	Total Land Area (square feet)	Percent of Total Study Area	Impervious Coverage	
			Likely Future	Alternative Future
North of Hale Street	20,963,283	34.7%	14.5%	9.1%
South of Hale Street, West of Little River	16,144,357	26.7%	1.2%	0.9%
South of Hale Street, East of Little River to Parker St/Graf Road	16,292,523	26.9%	29.0%	31.7%
East of Parker St/Graf Road	7,068,714	11.7%	27.7%	40.9%
Total	60,468,878		16.4%	16.7%

Several points should be noted in connection with the impervious coverage comparison presented in Table 15:

1. First, the 17% increase in total floor area under the Alternative scenario as compared with the Likely scenario has almost no impact on impervious coverage. This is because the Alternative scenario envisions the use of multistory buildings and parking structures, both of which reduce the amount of impervious surface required for a given amount of building floor area.
2. The increases in impervious coverage south of Hale Street are balanced by reductions north of Hale Street. In other words, within the context of the goal to minimize increases in impervious coverage, the preservation of the “green corridor” in the western portion of the study area makes possible the creation of a new center around the train station and traffic circle. Conversely, should the level of development north of Hale Street increase beyond what is presented in the Alternative scenario, the potential for creating a new, vibrant community center would be diminished.
3. The ultimate amount of impervious surface coverage in both the Likely and Alternative scenarios slightly exceeds the 15% benchmark level beyond which stream quality tends to be degraded. This highlights the need for further work both to reduce impervious surface coverage and to improve stormwater management in the study area.

Increased Valuation

Currently, parcels in the study area have a total assessed valuation of \$187 million, equal to 8 percent of the City’s total valuation of \$2.33 billion.¹⁶ Industrial uses represent 45 percent of the study area assessed valuation, with residential uses accounting for another 31 percent and commercial uses 10 percent. Public and charitable uses (tax-exempt) make up 12 percent of the assessed valuation of study area parcels, and open land (including farmland as well as vacant land) accounts for about 3 percent of the total.

The Alternative Future Land Use scenario has the potential to generate significantly higher property values – and thus higher municipal tax revenues – than those resulting from the Likely scenario. This is in part because the Alternative scenario has a higher buildout in terms of total building gross floor area (2.6 million square feet compared to 1.5 million square feet), but is also due to a differing mix of uses, with more commercial and residential uses in the Alternative scenario and more industrial uses in the Likely scenario.

As indicated in the Existing Conditions chapter (see page 30), existing development in the study area represents an estimated incremental value of about \$46 per square foot of building floor area for residential use, \$42 per square foot for industrial use, and \$63 per square foot for commercial use. It is estimated that industrial development would account for about 80 percent of the future growth (measured in terms of building floor area)

¹⁶ Data provided by the City Assessor’s office in January 2004, based on values as of January 1, 2003.

under the “Likely” scenario but only about 53 percent under the “Alternative” scenario. At the same time, commercial development would constitute more than 25 percent of future growth under the Alternative scenario compared to less than 1 percent under the Likely scenario.

Table 16 presents a summary of the calculations used to estimate the increase in real estate valuation that would result from development under each scenario, based on the above calculations and assumptions. As this table indicates, the increased valuation under the Alternative Future Land Use scenario is 22 percent higher than under the Likely scenario – a difference of \$54 million.

Table 16: Estimated Growth in Assessed Valuation Under Likely and Alternative Future Land Use Scenarios

	Likely		Alternative	
Gross Floor Area				
- Existing	3,261,254		3,261,254	
- Estimated Increase	1,493,371		2,438,645	
- Estimated Total at Buildout	4,754,625		5,699,899	
Increased Floor Area by Use				
- Residential	296,737	20%	482,166	20%
- Commercial	1,513	0%	652,745	27%
- Industrial	1,195,121	80%	1,303,733	53%
Increased Value by Use				
- Residential @ \$45.91	\$13,623,200	21%	\$22,136,200	19%
- Commercial @ \$63.24	\$95,700	0%	\$41,279,600	35%
- Industrial @ \$42.42	\$50,697,000	79%	\$55,304,400	47%
Total Increased Value	\$64,415,900		\$118,720,200	
Existing Value	\$187,016,500		\$187,016,500	
Total Valuation at Buildout	\$251,432,400		\$305,736,700	
Percent Increase in Valuation	34%		63%	

Looked at in the context of the City’s overall property tax base, estimated tax base growth under the “Alternative” scenario represents a 5 percent increase in taxable valuation, compared to a 2.8 percent increase under the “Likely” scenario. At current tax rates, the increased valuation would represent an increase in available annual municipal revenues of \$880,000 per year under the “Likely” scenario and \$1.6 million per year under the “Alternative” scenario.¹⁷

¹⁷ As discussed on page 60, the ultimate level of development in the existing industrial park will be somewhat lower than indicated in the Alternative scenario; consequently, the tax revenue impacts will also be somewhat less than indicated here. Also note that the City of Newburyport will not receive all the benefit from the projected growth in taxable valuation because the floor area totals in Table 16 include some land in the Town of Newbury.



Issues

SEVERAL IMPORTANT ISSUES REMAIN TO BE ADDRESSED before the vision outlined in the “Alternative Future Land Use” scenario can be implemented. These relate to managing the stormwater and traffic impacts of increased development, establishing appropriate design standards for the more intensive development proposed around the train station and traffic circle, evaluating the fiscal impacts of the Alternative scenario relative to the Likely scenario, and determining the appropriate phasing of private development and public infrastructure.

Stormwater Management

As described earlier in this report, the study area’s existing residential neighborhoods and industrial park are already subject to flooding. Without significant stormwater management improvements, increases in impervious surface can be expected to aggravate these existing problems. These impacts will be further compounded by rising sea level, which will not only submerge existing upland areas¹⁸ but also extend further inland the areas prone to flooding. Thus, regardless of the land use policies adopted for the study area, the City of Newburyport will eventually have to find solutions to accommodate stormwater flows in order to protect private property and public infrastructure. No action should be taken which aggravates existing flooding problems.

Both the Likely and Alternative scenarios result in comparable increases in impervious coverage in the study area: in other words, if the City takes no action with respect to land use policy, future development will add to the amount of impervious surface, which in turn increases runoff and adds to the flooding problem. The major difference between the two scenarios is the location of the additional impervious coverage within the

¹⁸ “At Boston, sea level already is rising by 11 inches per century, and it is likely to rise another 22 inches by 2100. Rising sea levels are taking a toll on Massachusetts’ coastal upland. Each year, an average of 65 acres of upland is submerged by a combination of rising seas and subsiding land.” *Climate Change and Massachusetts*, U.S. Environmental Protection Agency, September 1997.

watershed: whereas the Likely scenario allows significantly more impervious surface in the upper watershed, which is only lightly developed at present, the Alternative scenario concentrates the introduction of new impervious surfaces in the existing industrial park and around the MBTA rail station and the Route 1 traffic circle.

Property owners in the industrial park, residents of the Quail Run neighborhood, and City officials are concerned about the effects of additional development on existing flooding problems in the Little River watershed. A scope of work has been developed for a Hydrologic and Hydraulic Study of the Little River. Implementation of this study is a priority, and should evaluate alternative land use scenarios as presented in this plan.

Traffic and Circulation

Residents have expressed concern about existing traffic volumes on local roads and congestion at key intersections. By moving future development further away from residential neighborhoods, and further away from Storey Avenue, the Alternative scenario should be an improvement over the Likely scenario from the perspective of neighborhood impacts and traffic congestion.

However, the Alternative scenario proposes a use of the small area of land around the railroad station and the traffic circle that is much more intensive in terms of both the amount of development (square feet of building area) and the types of uses. For example, office uses have a higher number of employees per square foot than manufacturing uses do, so the traffic impact at peak commuting times is correspondingly greater. On the other hand, residential uses (which are proposed to be mixed with office and retail uses in the new transit-oriented center) have less impact on the peak hour because their trips are distributed more evenly throughout the day. In addition, locating residential uses within easy walking distance of the commuter rail station should help to mitigate the traffic impacts of the new development.

A number of factors are thus involved, and further study is clearly needed to understand not only the traffic impacts of the Alternative scenario, but also the transportation infrastructure and system improvements that will be needed if no policy changes are made (i.e., if the City decides to pursue the Likely scenario).

Design Standards and Controls

The Alternative scenario proposes a higher density of development than currently exists anywhere in the City outside of the central business district. In fact, Newburyport's historic downtown is considered to be a model for the future transit-oriented development not only in terms of development density but also in terms of the quality of architecture and urban design.

The redevelopment of downtown Newburyport differed from development in other parts of the City in that it took place under a detailed redevelopment plan and with the

careful stewardship of the Newburyport Redevelopment Authority and other groups. Rather than taking a laissez-faire approach, the City was proactive in determining the form and content of new development and redevelopment in the historic downtown area.

In a similar fashion, it will be important to establish clear design standards and controls as part of any new land use regulations created to authorize a higher intensity of development than is now permitted. At the same time, care must be taken to ensure that such standards are reasonable and do not discourage desirable investment in this area.

Fiscal Impacts and Costs

The Existing Conditions section presented a broad-brush analysis of the relative tax base impacts of various land uses in the study area; but no analysis has yet been undertaken to determine the relative costs imposed by these various uses on the City.

It is well understood that nonresidential properties pay for many municipal services that they do not directly utilize – especially schools, which represent more than half of all general fund expenditures. As a consequence, communities try to “broaden the tax base” by increasing nonresidential uses in order to provide tax relief to homeowners and other residential taxpayers.

However, it is not clear how other service costs might vary among alternative land use types in the study area. Preserving large tracts of open space will lower the requirements in that part of the study area for public infrastructure (roads, water supply, wastewater collection, stormwater management) as well as private utilities. On the other hand, the compact, mixed-use development that is proposed as an alternative to continuing low-density industrial growth will generate increased infrastructure demands in the area around the rail station and traffic circle. The City should evaluate the implications of the Alternative Future Land Use scenario for public service and infrastructure costs in order to understand the net fiscal impacts (new tax revenues vs. municipal expenditures) compared to the Likely scenario.

Phasing and Linkages

Because of the scale and complexity of the proposed development in the area around the rail station and the traffic circle, it will be necessary to ensure that required infrastructure improvements (for example, roads, stormwater management facilities, etc.) will be undertaken prior to or concurrent with the development that they support. This will undoubtedly require partnerships and agreements between the public sector (City and state) and private developers. Detailed planning will be needed to identify the level of infrastructure required and the proper sequencing of events.



Implementation

TO IMPLEMENT THE ALTERNATIVE FUTURE LAND USE SCENARIO will require a range of regulatory and non-regulatory actions, as described below. These actions are closely interwoven, and thus should be further developed as a package over the coming years.

Regulatory Actions

Zoning Districts

UPPER WATERSHED –
SPECIAL PERMIT
RESIDENTIAL

North of Crow Lane, the Alternative Future Land Use scenario shows a small residential development consistent in scale and intensity with the adjoining Russell Terrace neighborhood (Residential 2 zoning district), and preservation of the remaining land owned by Marineau and Colby as open space. In order to achieve this, it is recommended that the City create an overlay zoning district for the upper watershed that would allow residential development by special permit contingent on open space preservation consistent with this scenario. In conjunction with implementation of a transfer of development rights (TDR) program, this zoning change will help re-orient future development toward the north, in order to reduce pressure on Crow Lane and preserve a larger contiguous area of open space in the upper reach of the watershed/greenway.

This recommendation for a residential alternative to the current industrial zoning should be considered a fallback strategy to be employed if the open space in this area cannot be preserved through other means, such as transfer of development rights or purchase of conservation restrictions. In other words, the goal of this proposed strategy is not to promote additional residential growth, but to accomplish the preservation of significant tracts of open space with limited residential development as the financial mechanism to make that possible.

OLD I-95 ROADBED –
AGRICULTURE AND/OR
CONSERVATION

The former I-95 roadbed is not included in any zoning district and thus has no zoning protection. For many years this made sense because the land was transferred to the City for transportation or open space purposes, and specifically for providing a new access road into the industrial park. However, the access road option has been taken off the table for the foreseeable future, and the land is now seen as part of an open space corridor. As long as the former roadbed and right of way remain in City ownership the zoning should not present a practical concern. Nevertheless, it would be appropriate to zone this area for its intended use as open space. Therefore, it is recommended that the area be rezoned to Agriculture and/or Conservation (A/C), which is the lowest-intensity zoning district in the City’s zoning ordinance.

LOW STREET –
NEW TRANSITIONAL
DISTRICT

The south side of Low Street between Hale Street and Route 1 is currently zoned for industrial uses, but existing uses along the Low Street frontage are primarily commercial rather than industrial and are inconsistent with the industrial zoning. The existing uses include several residences, the National Guard armory, the River Valley Charter School, Bright Horizons Day Care center, the Banknorth branch bank, the Elks Lodge, and a multitenant building at 3 Graf Road (at the corner of Low Street), housing a wide range of businesses including building contracting, consulting, art supplies, and furniture. The opposite (north) side of Low Street in this area is zoned Residential 2, and uses include the Middle School, recreation facilities, senior housing, and residential neighborhoods.

It is recommended that the City rezone on the southerly side of Low Street, between Hale Street and Route 1, from Industrial to a new zoning district. A new zoning district for this area should create a transition zone between the industrial park to the south and the school, recreation facilities, and residential neighborhood on the north side of Low Street. Permitted uses in the district would include offices, schools, and services with low traffic impacts, but not industrial or high-volume retail businesses. In defining the new zoning district, consideration should be given to potential reuse opportunities for the Armory, and to the future reuse potential for the entire Day’s Landscaping property if the Charter School (currently a tenant) eventually needs to expand to a new location.

It should be emphasized that this recommendation is not intended to zone out any existing industrial uses, or to become a precedent for reducing the size of the existing Industrial district. Rather, it is meant to recognize the existing character of Low Street as well as to provide a separation between the industrial park on the south and the residential and institutional uses on the north.

Use Regulations

Although there has been some interest in allowing office development in the industrial park, the Strategic Land Use Committee determined that is important to preserve this

area of the City for continued industrial operations. Therefore, this plan should be interpreted as restating support for the long-standing industrial zoning in the industrial park, and no additional uses are proposed beyond those already listed in the zoning ordinance.

However, the restrictiveness of the zoning ordinance with respect to multi-tenant uses has been raised during the study process as an issue that needs to be addressed. The ordinance does not specifically permit more than one principal use to be established on a lot in the Industrial district, and this has been interpreted as a prohibition on multiple or mixed uses.¹⁹ This prohibition effectively prevents multi-tenant uses such as industrial incubators and R&D facilities.²⁰

Intensity Regulations

No changes are proposed to the regulations in the Industrial 1 district regarding building heights or setbacks from street and property lines. It is recognized that the NAID covenants, which apply to a substantial number of parcels throughout the industrial park (but not all), are more stringent than the City's zoning and that these cannot be changed without approval of all participants; therefore, any move by the City to allow more intensive development would be of limited effect.

However, it is recommended that the City review its regulations regarding impervious surface coverage and consider policy and regulatory changes to ensure that total impervious coverage in the study area as a whole does not exceed 15 percent. This would be implemented through the establishment of several overlay districts with varying limits on impervious coverage as envisioned in the Alternative Future Land Use scenario (see Table 15: Impervious Coverage Under "Likely" and "Alternative" Scenario).²¹ The regulations for the overlay districts could be structured to allow the total amount of impervious surface coverage within a given portion of the study area to be allocated among individual parcels through a mechanism such as transfer of development rights (see below), voluntary conservation restrictions, or public open space acquisition.

¹⁹ The same prohibition applies to the Central Business District (except for parcels with a single business use on the ground floor and residential dwelling units on upper floors, which are specifically permitted as "mixed uses"), and in other business districts. Multi-tenant "shopping centers" and "specialty shopping centers" are allowed in business districts but are defined as individual principal uses rather than being considered multiple principal uses.

²⁰ Several multi-tenant buildings exist in the industrial park, but the legal status of these properties has not been reviewed.

²¹ As noted previously, the estimated buildout shown in Table 15 and elsewhere in this report is aggressive and very probably overstates the potential growth by some unknown factor. More study will be needed to refine these estimates, but for the time being it can be assumed that the projection of approximately 17% impervious coverage in Table 15 is too high, and that a more realistic ceiling will be 15% or less.

Transfer of Development Rights

Transfer of Development Rights, or *TDR*, is a land use regulatory tool under which development rights can be severed from a tract of land and sold in a market transaction. The parcel from which the rights are transferred is then permanently restricted as to future development, and the purchaser of the rights may assign them to a different parcel to gain additional density—for example, more residential units or more commercial floor area than would be allowed without the transferred rights. Usually, TDR programs designate *sending areas* from which rights may be transferred, and *receiving areas* to which the rights may be sent.

Under a Transfer of Development Rights program, land that is designated as a receiving area will increase in value because of its enhanced development potential. However, in order to fully realize the potential benefits, a property owner in the receiving area must first acquire development rights from land in a sending area. In this way the owners of property in the sending area are compensated for the reduction in the development potential of their parcels. The TDR system thus allows the community to implement a desired change in land use policies without creating either financial windfalls for property owners in the receiving area or economic burdens on owners of property in the sending areas.

The recommended strategy for implementing a Transfer of Development Rights program in the Strategic Land Use Study Area consists of the following elements:

- First, sending and receiving areas must be delineated. The entire “Green Corridor” should be designated as the sending area, and the area around the MBTA Commuter Rail Station and the Route 1 Traffic Circle should be designated as a receiving area. (Including the existing industrial park within the receiving area would not be useful, given that the plan does not propose any increase in future development intensity above what would be allowed by existing zoning and NAID covenants.)²²
- Establish maximum allowable densities and development credits for sending area parcels.
- Establish maximum allowable densities for receiving area parcels, without and with transfer of development credits.
- Establish appropriate transfer ratios (industrial to residential; industrial to commercial; industrial to industrial).
- Codify all of the above in an amendment to the zoning ordinance.

²² Although not included within the study area for this project, the commuter parking lot at the bus terminal on Storey Avenue could also be considered as a future receiving area and site for transit-oriented development.

In its simplest form, Transfer of Development Rights is established as a local zoning regulation, within the zoning ordinance. However, in this case the receiving area also includes land within the Town of Newbury; therefore, the City and Town should investigate the possibility of creating a two-town TDR program.

More background and explanation of Transfer of Development Rights are provided in the Appendix (see pages 97 ff.).

Planned Development Districts

The most complex regulatory strategy recommended to implement the Alternative Future Land Use scenario is to create two new “Planned Development” overlay districts around the MBTA Commuter Rail station and the Route 1 traffic circle, in order to encourage compact, mixed-use development. In these districts the uses currently allowed in the underlying zoning districts (Business 1 and Industrial 1) would continue to be permitted, but property owners would also have the option to develop under a different set of regulations in accordance with a specific plan established by the City and subject to clear site and building design standards.

TRANSIT-ORIENTED DEVELOPMENT

The Planned Development District 1 (PDD 1) would promote the Transit-Oriented Development around the MBTA Commuter Rail station on Boston Way. The district would be bounded on the north by Parker Street, on the south by the Little River, and on the west by the drainage tributary between Boston Way and Bixby International. The easterly boundary would be determined after further study.



Orenco Station, in Hillsboro, Oregon, is a mixed-use, transit-oriented development on Portland’s Westside light rail line. (photo: Fregonese Calthorpe & Associates)

For developments that opt to develop under the PDD provisions, development intensity provisions would be relaxed. For example,

- maximum building height could be increased from the current 40 feet to 60 feet or 4 stories;
- maximum lot coverage could be increased from the current 40% (Industrial district) or 70% (B-2 district) to 100%;
- required yards (i.e., building setbacks from street lines or property lines) could be reduced or eliminated altogether.

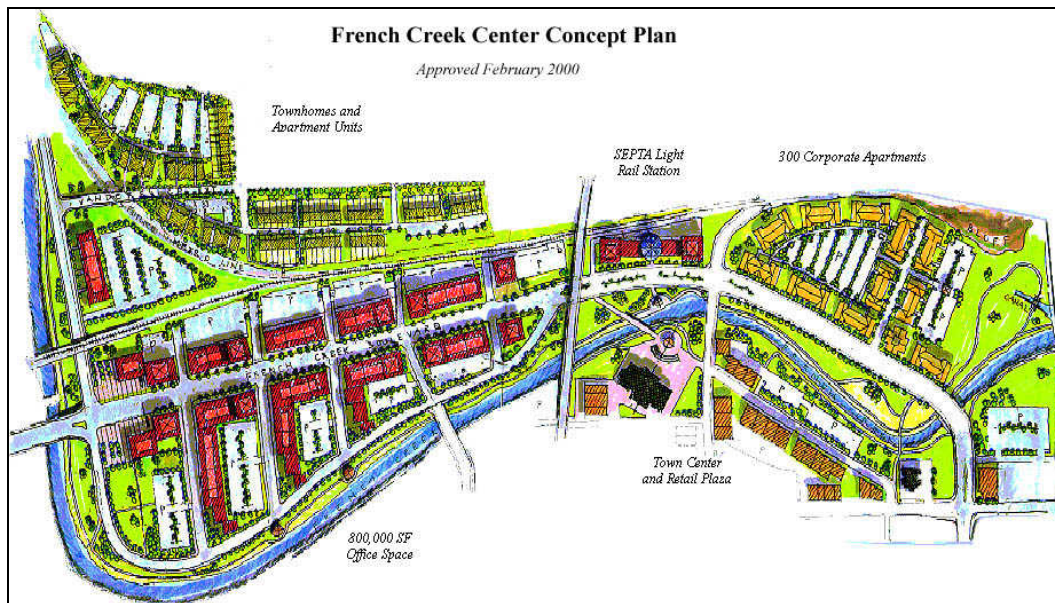


The Village at Overlake Station, a transit-oriented development in Redmond, Washington, includes two levels of covered parking with 536 parking stalls and 308 rental housing units affordable to households earning 60 percent of the area's median income. The garage provides shared parking for use by both residents and park-and-ride users. The site continues to operate as a park-and-ride lot and a major transit facility in the King County Metro Transit system.

(The above examples are not definitive recommendations; the actual zoning regulations would need to be defined through detailed analysis of the parcels and desired uses.)

The PDD district would require a mix of uses, including residential, office, retail, and services, conforming to a detailed area plan. Special permit procedures established for the district would create a phased review and approval process, including a detailed master site plan that would be implemented through individual phasing plans.

A development within the PDD district would be required to conform to an overall concept plan prepared by the City in advance, and to participate in the cost of public improvements needed to support the development.



A concept plan for a transit-oriented development in Phoenixville, Pennsylvania.

BUSINESS CIRCLE DISTRICT

The Planned Development District 2 (PDD 2) would promote redevelopment and infill in the Business Circle District around the Route 1 traffic circle. (Members of the Business Circle District group have expressed an interest in extending this Planning Development District north to include some existing businesses along State Street.)

Like the PDD 1 district, the PDD 2 would incorporate relaxed dimensional regulations and changed use regulations. However, these regulations would be designed to be consistent with the particular conditions in the traffic circle area, where lot sizes are smaller and traffic management issues are different.

INTERMUNICIPAL COORDINATION

As noted earlier, the transit/traffic circle center crosses the municipal boundary into Newbury. Therefore, it will be important to work with the Town of Newbury on consistency in zoning and coordinated infrastructure development. In addition, consideration should be given to broadening the Transfer of Development Rights system to include sending and receiving areas in Newbury.

Stormwater Management

IMPROVED MANAGEMENT OF STORMWATER IS ESSENTIAL to the economic viability and ecologic integrity of the study area. Currently, stormwater in the industrial park is managed through a network of swales and ditches. This system is adequate to handle runoff and channel it to the Little River under typical conditions, but large storms result in flooding conditions in some portions of the park. Upstream from the industrial park, an undersized culvert under Hale Street holds back storm flows in the Little River, resulting in flooding at the western edge of the Quail Run neighborhood. Downstream, properties such as Bixby International on Preble Road are subject to flooding during major storms, especially when they coincide with high tides.

This plan envisions that further development will occur in all three subareas of the study area, ranging from very modest growth in the upper watershed, to infill in the industrial park, to extensive redevelopment around the Commuter Rail station. Although the total amount of new impervious surface under the plan will be no greater than what could be created under existing zoning, it will be important not only to minimize additional impacts on the Little River but also to improve upon existing conditions.

In the short term, the most important action to address flooding problems is to ensure proper maintenance of the existing system of drainage swales and channels. This means adhering to prescribed schedules and methods for cleaning, and will require cooperative efforts by private property owners and the City.

Another important step is to fund and implement the proposed hydrologic and hydraulic study for the Little River watershed. This study will help local officials, residents, and property owners understand how the watershed's drainage systems operate, how existing problems can be addressed, and how additional development will impact on these problems. Most importantly, the H&H study will provide the baseline information that is necessary to guide effective stormwater management efforts.

In addition, it is recommended that the City consider establishing a stormwater utility as a formal mechanism to finance and implement the stormwater management system for the Little River watershed. A stormwater utility is similar to other municipal utilities, such as the Newburyport Water Department or Sewer Department. It assesses fees to properties within the utility district, and uses the revenues to plan, construct, maintain, and operate facilities for collecting, treating, and discharging stormwater. In the case of the Little River watershed, these facilities would include the current system of swales, ditches and culverts; the Little River itself; catch basins and drains; and any future improvements such as retention ponds, constructed wetlands, or treatment facilities. Some of these facilities are currently private, and implementation of the utility approach would involve shifting responsibility for maintenance from private landowners to the public.²³

Ideally, the stormwater management district would be delineated to include the entire Little River watershed within the City of Newburyport. In addition to the Strategic Land Use study area, the watershed includes:

- residential neighborhoods to the west of Interstate 95,
- the commercial development along both sides of Storey Avenue between I-95 and High Street,
- most of the neighborhoods between Low Street and High Street, and
- areas east of Route 1 and south of High Street, extending to the Newbury town line.

Downstream of Scotland Road, the watershed crosses into the Town of Newbury. The City should consider working with Newbury to create a stormwater management district that includes land in the watershed in both communities, in order to address water quality and flooding issues on a system-wide basis.

²³ The stormwater utility is a user fee approach to financing needed public infrastructure: fees are based on the relative impact of a property on the district's stormwater facilities. Typically, this is determined by the total amount of impervious surface (buildings, parking areas, etc.), because increases in stormwater runoff over undeveloped conditions are directly related to impervious surface coverage.

An example of a Stormwater Management Utility Ordinance is included in the Appendix. A guide to creating a stormwater management utility in Massachusetts is available from the Pioneer Valley Planning Commission (http://www.pvpc.org/docs/landuse/pubs/storm_util.pdf).

Acquisition

THE ALTERNATIVE FUTURE LAND USE SCENARIO attempts to preserve open space through transfer of development rights and clustering of development as much as possible. However, it recognizes that it may be necessary to preserve land also through acquisition – either through outright purchase or through acquisition of conservation restrictions. Acquisition of open space can be undertaken by the City on its own or in partnership with local or regional nonprofit land stewardship organizations. Revenues received under the Community Preservation Act real estate tax surcharge may be used to purchase open space, and funding may also be available from state sources for a portion of the land cost.

A less costly alternative to acquisition of fee interests in parcels is purchase of development rights, which creates a partial interest in the land. An agricultural preservation restriction (APR) is one form of easement.

Development Rights Banking

A feature common to successful Transfer of Development Rights programs is the establishment of a publicly-funded development rights “bank” in order to solve the problem of mismatches in timing between sales and purchases of development rights. Particularly in a small land market such as Newburyport’s, it is likely that property owners in areas slated for preservation or limited development will wish to sell their assigned development rights before land in the receiving areas is ready for more intensive development. The development rights bank provides a source of funds to secure the development rights on a parcel, thus limiting its future development potential. When a property owner in a receiving area wished to purchase the development rights, the bank would be replenished and the funds would become available for future purchases.

Initial funding for a development rights bank might be provided with revenues from the Community Preservation Act property tax surcharge. This approach could work as follows:

- The City would use CPA funds to acquire transferable development rights on a parcel of land targeted for open space protection (i.e., in the sending area for the TDR program). The result would be to permanently preserve the parcel from development.
- Subsequently, the transferable development rights could be re-sold to allow a parcel in the receiving area to be developed at a higher density than would otherwise be permitted.
- The proceeds from the sale of development rights to the receiving area parcel would then be deposited in an open space fund or used for other CPA-eligible purposes.

In this scenario, the original parcel of land would be permanently preserved through a deed restriction, and any proceeds from future resale of the development rights would also be used for open space preservation or other CPA purposes. To date, CPA funds have not been used in this manner, but initial discussions with state officials in April 2004 indicated that this might be an innovative way to “recycle” this funding source.

Access Planning and Management

CROW LANE

As noted with respect to the Likely Future Land Use scenario, Crow Lane exists as a public right of way from Low Street to the former Interstate 95 roadbed (and in fact continues on the west side of I-95). The portion of the road between the former landfill and the former I-95 roadbed is unimproved and crosses wetlands (and at least one vernal pool), but abutting property owners have legal frontage on the public way which gives them certain rights and opportunities under zoning and subdivision laws. In particular, lots could be created along the public way through the “approval not required” process authorized under Chapter 41, Section 81-P, of the Massachusetts General Laws. This process lets the property owner subdivide a tract of land without having to construct roads and other infrastructure that would be required in the case of a subdivision.

A primary goal of this plan is to preserve as much as possible of the Common Pasture Greenway and therefore to discourage additional development in the area bisected by the unimproved portion of Crow Lane. Therefore, the City Council should evaluate the possibility and ramifications of discontinuing the unimproved portion of Crow Lane. This action would help to control growth by requiring any development in the area currently crossed by the unimproved right of way to comply with the City’s subdivision rules and regulations (including maximum limits on the length of cul-de-sacs). Discontinuing a public way requires a public hearing and a finding by the City Council that the road “has become abandoned and unused for ordinary travel and that the common convenience and necessity no longer requires said ... public way to be maintained in a condition reasonably safe and convenient for travel” (M.G.L Chapter 82, section 32A).

Although there is no interest in improving Crow Lane for vehicular access, there is interest in retaining the option for public walking trails into this area, including a connection to the Little River Nature Trail. Assuming that the City owns the right of way as an easement rather than in fee, the way would revert to the abutting landowners upon discontinuance; that is, the abutting parcels would extend to the centerline of the former right of way. Therefore, the City should consider the impact on pedestrian access before moving forward to discontinue the public way.

 INDUSTRIAL PARK
 ACCESS ROAD

The Merrimack Valley Metropolitan Planning Organization's *FY 2004-2008 Transportation Improvement Program (TIP)* lists "Provide access from I-95 to Hale Street" as a "Regionally Significant Project" for fiscal years 2005-2008.²⁴ Given the current opposition to the access road proposal, the City should consider requesting that the funds currently allocated for this project in the TIP project list be reprogrammed for transportation-related improvements to support the recommended development around the Commuter Rail station and the Route 1 traffic circle.

Next Steps

This report presents recommended policies and concepts for the Strategic Land Use Plan study area, but a substantial amount of effort is needed to bring these policies to the next stage. The City should move expeditiously to begin drafting the necessary zoning ordinances and supporting regulations and standards, and to carry out further studies as described in this section. First priority should be given to crafting the zoning regulations for the Planned Development Districts and the Transfer of Development Rights program, and developing the design standards for new development in the Planned Development Districts. Studies of development impacts, such as traffic and stormwater, would ideally also be carried out in advance but could, if necessary, be required as specific development proposals are formulated and presented to City and State agencies for review and approval.

Immediately following acceptance of this report by the Planning Board, the Mayor and Planning Director should communicate with appropriate state agencies about follow-up funding under the Commonwealth Capital technical assistance program. When the Request for Proposals for this program is issued (anticipated in July 2004), the City should apply for funding for development of the zoning ordinances (Planned Development overlay districts, Transfer of Development Rights).

Contact should also be made with the MBTA to determine if additional funding can be made available for planning relating to the Commuter Rail station.

Organizing for Project Coordination and Management

The Mayor and City Council should establish a formal Circle/Station Task Force to coordinate implementation of the recommendations for this area and the associated transfer of development rights program. If the position of Economic Development Coordinator position is created as currently proposed, this person should serve as staff to this group.

²⁴ Merrimack Valley Metropolitan Planning Organization, *FY 2004-2008 Transportation Improvement Program*, Final Report, September 2003, Appendix B, page 73 (also in text of report on page 39).

In addition to the local task force, the Mayor should invite state, regional, and local government representatives to participate in an intergovernmental coordinating committee to support implementation and ongoing communication about the Circle/ Station project. Realization of the concepts in the Alternative Future Land Use scenario of this area will require the cooperation and coordination of agencies responsible for highway and transit planning, environmental protection, housing development, economic development, and infrastructure construction. Participants in this committee should include:

- Massachusetts Office for Commonwealth Development (OCD)
- Executive Office of Transportation and Construction
 - MBTA – Real Estate Department and Transit Realty Associates, LLC
 - MBTA – Operations
 - Massachusetts Highway Department (Route 1 improvements)
- Executive Office of Environmental Affairs
- Department of Housing and Community Development
- Newburyport Planning Board
- Newbury Planning Board

The Newburyport and Newbury Conservation Commissions will also need to be consulted at certain points in the planning process, although not on as continual a basis as the above agencies.

Finally, there are other organizations, without regulatory or funding responsibilities, that nevertheless have interests in the project. These include the Greater Newburyport Chamber of Commerce and Industry (representing the interests of its members in the Business Circle District, the Industrial Park, and downtown Newburyport), the Parker River Clean Water Association, and the Merrimack Valley Planning Commission.

INTERMUNICIPAL COORDINATION

The Town of Newbury is completing its own planning process, which recommends both protection of the area north of Scotland Road and development in the area near the Route 1 traffic circle, including the MBTA Commuter Rail station. Newbury's planning thus complements the recommendations contained in this report. It will be essential to pursue ongoing coordination between Newburyport and Newbury to carry out the recommendations contained herein, including adoption of joint implementation measures such as overlay zoning districts, transfer of development rights, and stormwater management districts.

Planning for Financing Improvements

The Task Force and Office of Planning and Development should review the range of mechanisms available to the City to finance infrastructure improvements, and determine which if any are appropriate for different areas of the study area plan. Options include:

- District Improvement Financing (DIF)
- Stormwater Management Utility
- Business Improvement District (BID)

Zoning Changes

The Planning Board and Office of Planning and Development should proceed with development of discrete zoning regulations to complement the more complex Planned Development District and Transfer of Development Rights ordinances. These include:

- a new transitional zoning district along the south side of Low Street between Hale Street and Route 1,
- revisions to accommodate multi-tenant buildings and multiple principal uses in the Industrial district (as well as the Central Business District),
- a residential cluster overlay district for the area north of Crow Lane currently zoned Industrial B,
- application of the Agricultural and/or Conservation district to the unzoned land adjacent to Interstate 95,
- modifications to the Agricultural and/or Conservation district to discourage conventional subdivisions in favor of cluster development, and
- creation of a Little River Watershed overlay district establishing area-specific limitations on impervious surface coverage.



Further Study

DURING THE COURSE OF THIS PLANNING PROCESS, several areas were identified where further analysis is needed to understand more fully the implications of the Likely and Alternative scenarios.

Little River Watershed Hydrologic & Hydraulic Study

This study is necessary for addressing ongoing flooding issues in the Little River watershed and understanding how future development should be managed to mitigate flooding problems. A scope of work for the study has been developed.

Analysis of Economics and Preferred Uses

The Alternative scenario proposes a mix of uses at a comparatively high density for the area around the rail station and traffic circle, but so far the policies have been developed with concern for environmental quality and community character. A market analysis is needed to determine whether certain uses or densities are feasible. This analysis could be undertaken on behalf of the City, prior to making changes in zoning; or it could wait until after the basic framework has been established. In the latter case, a prospective developer would carry out the market analysis and the results might have implications for the adopted policies and regulations.

Potential Water Supply Source Protection

The City of Newburyport and Town of Newbury are investigating various potential sources for expansion of the public water supply, and one of these sites is off Parker Street a short distance to the east of the Route 1 traffic circle. If this site appears viable, the communities would need to put in place land use restrictions in an area at least one-quarter mile in radius around the prospective wellhead, and this protective area could overlap the traffic circle area. If this occurred, it would limit the growth potential in the traffic circle and possibly around the railroad station.

Traffic and Circulation Plan

As noted earlier, the Alternative scenario proposes not only a shift in the location of future development as compared with the Likely scenario, but also a change in the mix of uses, with a greater emphasis on commercial and residential uses. The traffic generation characteristics of these uses differ from those of industrial uses, and the proximity to the Route 1 traffic circle could also complicate circulation planning. Any development proposal would need to provide its own traffic and circulation plan, and a large development would be expected to participate in the costs of significant infrastructure upgrades to accommodate its traffic impacts. However, some advance analysis of the traffic issues should accompany the implementation of the recommendations in this plan.

Continued Refinement of Existing Conditions Data

This report contains the most up to date information available to the consultant as of August 2003, but is not represented as being comprehensive of all matters that might potentially affect the study area. In particular, this document is based on existing published materials, and no primary research has been conducted as part of the study. Members of the SLU Committee have identified a number of issues for which they would like further information, including the following:

Streams, Wetlands and Floodplains:

- Information to be developed in a proposed hydraulic and hydrologic (H&H) study of the Little River Watershed
- Updated/corrected information on extent of floodplains, and comparison to areas flooded in October 1996
- More detailed information on development capability of undeveloped land in the study area, particularly with respect to possibly incomplete mapping of wetlands, and high water table constraints in upland areas

Endangered Species Habitat:

- More specific information on endangered species locations and habitats (especially because the expansion of the “estimated rare species habitat” in 2003 encompasses essentially all the undeveloped land in the study area)
- Information on planning considerations with respect to endangered species habitat

Land Use and Buildout Potential:

- Buildout potential of undeveloped land in the study area, and of developed properties in the industrial park compared to existing development levels

Traffic and Transportation

- More detailed information on traffic volumes: seasonal variation, analysis of apparent growth trends, etc.
- Information on public transportation ridership as it affects private vehicle use in the study area
- Commuting trends, particularly as they affect traffic volumes on the major connectors to Interstate 95; and potential traffic mitigation impacts of matching new job growth to occupations of Newburyport residents
- Traffic generation impacts of buildout, by potential use

These types of information are important to gather and analyze in order to provide a comprehensive picture of all conditions relating to this study area, but gathering and analyzing this information is beyond the limited scope of the existing conditions analysis for this project. However, the City cannot put its land use and growth management responsibilities on hold until all data are complete. Rather, it is necessary to move forward with the best available information, recognizing the gaps in the data and qualifying the results of the planning process accordingly.

Appendix:

Implementation Examples

THE FOLLOWING SECTIONS PRESENT EXAMPLES TO ILLUSTRATE the manner in which some of the strategies recommended in this plan may be implemented. The examples are not meant to be applied directly to Newburyport, but simply to suggest the level of complexity involved and the types of issues that need to be considered.

Transit Oriented Development

A TRANSIT ORIENTED DEVELOPMENT (TOD) is a high-density, mixed-use development surrounding a transit station or stop:

TODs mix residential, retail, office, open space, and public uses in a walkable environment, making it convenient for residents and employees to travel by transit, bicycle, foot, or car. TODs offer an alternative to traditional development patterns by providing housing, services, and employment opportunities for a diverse population in a configuration that facilitates pedestrian and transit access.²⁵

Although prevalent in some other areas of the country (including California, Washington State, and metropolitan Washington, DC), transit oriented development is just beginning to appear in New England. This is probably due in large part to the fact that this area of the country is not seeing amounts of outward growth and investment in new transit infrastructure that are comparable to other large metropolitan areas. Consequently, there are few local examples of suburban transit oriented development.

The MBTA is promoting the concept in four pilot communities (Belmont, Malden, Revere, and Woburn), but none of these have yet been implemented through zoning. In addition, the Transportation Bond Bill filed by Governor Romney in February sets aside \$54 million in a Transit Oriented Development fund to encourage residential and economic development around MBTA stations.

Zoning to support transit oriented development have been implemented by two communities in the metropolitan Boston area. The City of Cambridge has adopted planned development districts to encourage mixed use development near transit stations in Kendall Square and Alewife; and the Town of Framingham has created regulations allowing mixed use development in the downtown area, near a commuter rail station. The

²⁵ Peter Calthorpe, *The Next American Metropolis: Ecology, Community, and the American Dream* (New York, Princetown Architectural Press, 1993), p. 56.

following sections present excerpts from these zoning regulations and summarize experience with them to date.

CAMBRIDGE

The City of Cambridge has established a number of Planned Unit Development Districts to address special conditions in designated areas throughout the community. Most of these PUDs are specifically intended to provide for a mix of uses in proximity to a transit station.

The majority of Cambridge’s PUDs were put in place in the early 1980s, and the city has had varying degrees of success with them. One of the more successful to date has been the East Cambridge PUD. According to the Cambridge Community Development department, the success or failure of specific PUDs is largely dependant on the desirability of the location for development and market demand. Without sufficient demand, the incentives provided in the PUD regulations (such as waivers on dimensional or density requirements) will not be enough to attract development. Other factors may influence the success of one PUD over another, such as the ability to secure public funding for infrastructure improvements. In the case of the East Cambridge PUD, the City received funding from a Federal Housing and Urban Development program to leverage private funds.

Another key to success is to craft the PUD regulations in a clear and straightforward manner so that the developer is clear what approval steps will be necessary throughout the development process. In addition to having clear zoning regulations, it is also important to have a strong planning base that lays out the objectives of the PUD and serves as the visioning document for the types of development desired. In East Cambridge, an articulate plan was developed for the area in 1978 that has helped to promote and market the area and provided developers with a strong base to work from in formulating their development plans.

In contrast to the East Cambridge PUD, the Alewife PUD has not been very successful due to a number of factors. The primary problem is location: the area simply does not attract the same level of development interest that other PUDs in Cambridge have attracted. Certain flaws in the regulations may also be to blame, such as requiring that the developer construct all of the parking and garages before any other development can occur, and the minimum lot size is too big. The City is currently undertaking a focused planning study of the area to determine how the PUD might be adjusted to have more success.

Other PUD projects that are underway may serve as examples in the future. Redevelopment of a 10-acre brownfields site at Kendall Square is underway. This project has put all the parking underground and has an ambitious landscape plan including a public ice skating rink. The primary incentive offered in this particular PUD is alleviation of height restrictions, whereas in the East Cambridge PUD the incentive was the ability to double the floor area ratio (FAR). A longer term project for a 60-acre site has not passed

the conceptual phase. The City prepared a conceptual study for the North Point PUD and the developer is preparing a more detailed plan for the site. Again, market demand has enabled the City to make significant requirements of the developer including rebuilding the Lechmere T stop and providing all necessary infrastructure.

All of these PUDs have had a combination of uses including residential (some hotel), commercial, office and R&D, and public spaces. Cambridge has been well positioned to take advantage of market trends, attracting new development to these areas primarily because of the desirability of the location.

Excerpts from the Cambridge Zoning Ordinance relating to the Kendall Square and Alewife PUDs are presented below as examples of the City's approach.

Excerpts from Cambridge Zoning Ordinance

PUD AT KENDALL SQUARE: DEVELOPMENT CONTROLS

Purpose. The PUD-KS district is intended to provide for the creation of a mixed-use district of high quality general and technical office and retail activity, with a significant component of residential use. The creation of a large public park is desired. The PUD-KS district permits larger scale development and supporting commercial activities close to Kendall Square and the major public transit services located there. It encourages strong linkages between new development at Kendall Square, the East Cambridge riverfront, and the PUD-KS area and the neighborhoods of eastern Cambridge, facilitated in part by a strong retail presence along Third Street. Development in the PUD-KS district should be generally consistent with the policy objectives set forth in the Eastern Cambridge Plan and the guidance provided in the Eastern Cambridge Design Guidelines.

Uses Allowed in a PUD-KS District. The uses listed in this Section, alone or in combination with each other, shall be allowed upon permission of the Planning Board. The amount and extent of uses may be further regulated and limited as set forth elsewhere in this Section.

- Residential Uses
 - Townhouse Development.
 - Multifamily dwellings.
- Transient Residential Uses
 - Hotels or motels
- Transportation, Communication, Utility and Institutional Uses.
 - All uses which are allowed or conditionally allowed in the base zoning district.
- Office and Laboratory Uses.
- Retail Business and Consumer Service Establishments. The following retail uses shall be permitted, provided that the total amount of retail GFA in the District does not exceed 70,000 square feet and no individual establishment exceeds ten thousand (10,000) square feet of Gross Floor Area
 - Stationery and office supply store.
 - Printing and reproduction service establishment, photography studio.

- Other store for retail sale of merchandise located in a structure primarily containing non-retail use provided no manufacturing, assembly or packaging occur on the premises.
 - Barber shop, beauty shop, laundry and dry-cleaning pick-up agency, shoe repair, self-service laundry or other similar establishments.
 - Restaurants or other eating and drinking establishments
 - Theater or hall for public gatherings.
- Institutional Uses.
 - Other Uses. Any use not listed in subsections, otherwise allowed in a Business B District may be allowed by the Planning Board only upon written determination by the Board that such use is consistent with the objectives of the PUD-KS district.

District Dimensional Regulations.

Permitted FAR.

In the PUD-KS District the maximum ratio of floor area to Development Parcel shall be 3.0, subject to the further use limitations set forth below.

Limitations on Non-Residential Development.

In the PUD-KS District all nonresidential uses shall be further limited as set forth below. Where the amount of non-residential Gross Floor Area (GFA) is limited to a percentage of the total GFA authorized, the calculation shall be based on GFA authorized exclusive of any GFA that may be constructed as a result of the application of the FAR bonuses permitted [elsewhere in this ordinance] or any GFA devoted exclusively to structured parking.

- (1) For any lot or combination of lots held in common ownership as of June 1, 2001 having in total an area of less than five acres, the total GFA devoted to nonresidential uses shall not exceed ten (10) percent of the total GFA authorized in a PUD for that portion of a PUD Development Parcel containing such lot or lots, or any portion thereof. This limitation shall apply to each Development Parcel individually. This limitation shall not apply to any individual lot created subsequent to the Planning Board approval of the PUD Final Development Plan. Notwithstanding the above limitations, additional non-residential GFA shall be permitted as set forth below.
- (2) For any lot or combination of lots held in common ownership as of June 1, 2001 having in total an area of more than five (5) acres, the total GFA devoted to nonresidential uses shall not exceed sixty (60) percent of total GFA authorized, inclusive of any GFA otherwise exempt from the provisions of the Cambridge Zoning Ordinance in a PUD for that portion of a PUD Development Parcel containing such lot or lots, or any portion thereof. This limitation shall not apply to any individual lot created subsequent to the Planning Board approval of the PUD Final Development Plan. Notwithstanding the above limitations, additional non-residential GFA shall be permitted as set forth below. At least ninety-five (95) percent of the authorized non-residential GFA must be located on the portion of said lot or lots having an Office 2 base district designation. However, where circumstances related to the transfer of property from the federal government to other governmental or private entities (for the purpose of private development on a portion or all of the land in the control of the federal government) the Planning

Board may in its discretion approve a Final Development Plan providing GFA in excess of sixty (60) percent of the authorized GFA in the PUD provided it is conclusively demonstrated to the Planning Board that all residential GFA required to be developed on such lot or lots in their entirety, by this Paragraph, has already been constructed.

- (3) For the entire PUD-KS district, the first 50,000 square feet of retail and customer service uses authorized in total in all approved PUDs shall not be counted toward the non-residential GFA limitations above provided the GFA is located on the ground floor of a multistory building, fronts on and has a public entrance onto Third Street, Broadway, or a public park, and for each individual establishment the GFA does not exceed 10,000 square feet.

Minimum Development Parcel Size.

The minimum size of a Development Parcel within the PUD-KS shall be the greater of (1) 40,000 square feet or (2) seventy-five percent of the area of a lot or combination of lots (a) in existence as of June 1, 2001 and (b) held in common ownership where it is proposed to incorporate any portion of such lot or lots within the Development Parcel. A Development Parcel within the PUD-KS may contain noncontiguous lots elsewhere in the PUD-KS district or within a contiguous PUD district. There shall be no specified minimum lot size for lots located within a Development Parcel. However, where circumstances related to the transfer of property from the federal government to other governmental or private entities (for the purpose of private development on a portion or all of the land in the control of the federal government) limit the feasibility of creating a Development Parcel meeting the size requirements of this Section, the Planning Board may in its discretion approve a PUD application having a smaller Development Parcel size.

Residential Density.

For the purpose of computing residential density, the minimum lot size for each dwelling unit shall be three hundred (300) square feet. Residential density shall be computed based on the entire development parcel.

Maximum Building Height.

The maximum height permitted in the district shall be sixty-five (65) feet except as it may be further limited or permitted [elsewhere in this ordinance]. The permitted heights are further illustrated on the Building Height Regulation Map for the PUD-KS.

Other Dimensional Requirements.

There shall be no minimum width for the development parcel and no minimum width for lots located within the development parcel. There shall be no minimum required front, rear and side yard requirements for a development parcel or for lots located within a development parcel. The Planning Board shall approve all such lot sizes and building setbacks.

Perimeter and transition. Any part of the perimeter of a PUD-KS which fronts on an existing street or public open space should be so designed as to complement and harmonize with adjacent land uses with respect to scale, density, setback, bulk, height, landscaping, and screening. Developments in the PUD-KS district should provide integrated pedestrian circulation systems, with particularly strong linkages among the riverfront, Kendall Square, and the Eastern Cambridge neighborhoods.

Parking and Loading Requirements. Development the PUD-KS District shall conform to the off street Parking and Loading Requirements set forth [elsewhere in this ordinance], and in the Schedule of

Parking and Loading Requirements applicable to the Residence C-3, Office 3, Business B and Industry B districts, except as modified by this Section.

Off street parking facilities shall be provided as follows:

- Residence: 1 space per unit minimum, 1.5 spaces per unit maximum.
- Public Assembly: Number of seats requiring one space: 15.
- Institutional: 1 space per 1,800 square feet.
- Retail (except as noted below) and Office:
 - Ground floor: 1,125 square feet
 - Other level: 1,800 square feet

Ground Floor Retail and Customer Service Uses.

Retail and customer service uses fronting on and having a public entrance onto a public street or a public open space, located at the first floor level of a multistory building, and not exceeding 10,000 square feet for each separately leased establishment shall not be required to provide any accessory parking. Where parking is provided it shall be subject to [the] Section above.

Traffic Mitigation Measures.

In reviewing a development proposal under the provisions of this Section, the Planning Board shall determine that the proponent has demonstrated, at the time of Final Development Plan approval, a commitment to a Transportation Demand Management Program consistent with the reduce parking mandated in this PUD. The measures to be taken in this program must address:

- The amount of parking provided,
- The scale of development and the mix of uses proposed, and
- The assumptions employed with regard to the proportion of automobile use for those traveling to the site.

For examples of such Measures, the Planning Board shall refer to the Eastern Cambridge Plan, and the requirements of [this ordinance] in establishing Transportation Demand Management measures applicable to any approved PUD.

Relationship to MBTA Urban Ring Transportation Planning Project. In all PUD application documents, the applicant shall indicate how the proposed PUD development relates physically to the most current plans developed by the MBTA for implementation of the Urban Ring transportation project.

PUD-5 DISTRICT CONTROLS

Purpose. The PUD-5 district is intended to encourage the creation of a highly active urban environment around the planned Alewife transit station and to promote mixed use development with an emphasis on residential uses in association with office and research facilities and supporting retail activities.

Uses Allowed in a PUD-5 District. The following uses alone or in combination with each other shall be allowed upon permission of the Planning Board subject to the limitations of this subsection.

- Residential Uses.
- Office and Laboratory Uses.

- Retail, Business and consumer Service Establishments. All uses listed in [this ordinance] provided that they are located in a building with other permitted uses, are located on the first floor or the basement of the building, and do not exceed twenty five (25) percent of the total Gross Floor Area of the building in which they are located. No individual establishment may exceed two thousand and five hundred (2,500) gross square feet in area unless the Planning Board specifically grants a waiver from this limitation.

- Telephone exchange (including switching, relay, and transmission facilitates serving mobile communications systems) and any towers and antennas accessory thereto, transformer station, substation, gas regulating station, or pumping station subject to the provisions [listed elsewhere in this ordinance]. However, any Telephone exchange use as set forth in [the reference section] proposed with any facility having a floor area greater than four hundred (400) square feet shall only be permitted in a building in existence as of September 15, 2000 that, if vacant, has not been occupied by a residential use in the five years immediately preceding the time of application for a Certificate Of Occupancy for the proposed office use, or if occupied, the current use is any office and laboratory use; any retail business and consumer service establishment, any light industry, wholesale business or storage use, or any heavy industry use.

District Dimensional Regulations.

The minimum size of the development parcel for PUD-5 shall be twenty-five thousand (25,000) square feet.

The maximum ratio of gross floor area of all structures in the planned unit development to the total area of the development parcel shall be 1.75 for permitted nonresidential uses and 2.0 for permitted residential uses.

There shall be no minimum width for the development parcel and no minimum width for lots located within the development parcel. No building shall be located closer to a designated Open Space district than twenty-five (25) feet. It is intended, however, that buildings in the district should be uniformly set back from any major arterial roadways and from any public open space. There shall be no minimum required front, rear, and side yards for a development parcel. The Planning board shall approve all such building setbacks

The maximum allowable height of any building in the planned unit development shall be eighty-five (85) feet.

The requirements of the Parkway Overlay District shall apply in the PUD-5 District.

Open Space Requirements. At least fifteen (15) percent of the Development parcel shall consist of Useable Open Space or Green Area Open space as defined [elsewhere in this ordinance].

Parking and Loading Requirements. A Planned Unit Development in a PUD-5 district shall conform to the off street parking and loading requirements set forth [elsewhere in this ordinance].

Minimum off street parking shall be provided as required for the residential, office and retail uses in Residence C-3, Office 3, and Business B zoning districts.

The parking requirement specified in Section 13.64.1 may be satisfied in total or in part by a lease agreement between the developer and the City, other public entity, or private consortium for use of parking spaces in a public or pooled private parking facility. Such facility may be located outside the development parcel but shall be located within the PUD-5 District.

Development Guidelines. In evaluating a Development Proposal in the PUD-5 district, the Planning Board shall give consideration to the following guidelines in addition to those specified for the Alewife Station and Boulevard districts in the 1979 Cambridge Community Development Department report entitled *Alewife Revitalization* and the Urban Design Objectives set forth [elsewhere in this ordinance].

- a. *Perimeter and Transition.* Any part of the perimeter of a planned unit development which fronts on an existing street or public open space shall be so designed as to complement or to enhance adjacent land uses with respect to scale, density, setback, bulk, height, landscaping and screening.
- b. *Pedestrian Linkages.* All developments in the PUD-5 district should provide integrated pedestrian circulation systems, particularly strong linkages between the transit station and the commercial activities.
- c. *Retail Uses.* Retail uses in the district should be concentrated as ground floor uses in buildings principally containing other activities. They should be oriented toward public streets, plazas or other active urban open spaces.
- d. *Building Height.* Lower buildings or building elements are encouraged close to principal arterial roadways and existing and planned open spaces.
- e. *Parking Orientation.* Ground level parking located within structures should not abut plazas or major pedestrian ways.
- f. *Open Space.* Development of small scale plazas for outdoor cafes, street vending, retail marketing, and outdoor exhibitions should be located and designed to complement and to be connected with existing and planned public open space in the district.

FRAMINGHAM

The Town of Framingham has implemented zoning regulations for mixed use development. As of spring of 2004, three projects had been approved. These are located in the downtown area within a few blocks of the train station.

- **ARCADE PROJECT:** Consists of four buildings equaling one city block. The buildings are six stories, and the project will construct 260 one and two bedroom units and 50,000 square feet of retail, restaurant, and office space. This particular project also has an historic easement on all street sides of the properties.
- **DENNISON PROJECT:** This project will be a conversion of an old mill consisting of a mixture of housing and office.

- **KENDALL BUILDING PROJECT:** This consists of a conversion of retail and vacant upper story offices to a mix of retail and 25 units of upper story housing.

Excerpts from the Framingham Mixed Use Zoning Regulations

Purpose and Intent

The purpose and intent of these Mixed Use Regulations is to provide an opportunity for Mixed Use development with a residential component within a livable urban environment which supports the commercial revitalization of the Town’s commercial areas and encourages the adaptive reuse of existing buildings.

Applicability

These regulations shall apply to the development or redevelopment of properties for Mixed Use or for Mixed Use Complex, as defined herein, which shall collectively be referred to as Mixed Use development.

Mixed Use Development Standards

Mixed Use development shall be designed in accordance with the following standards:

Conforming Lot and Structure

The lot and structure shall conform to the dimensional regulations for Mixed Use development applicable to the zoning district.

Parking Requirements

Off-street parking shall be provided in accordance with the requirements set forth in [this ordinance]. Special Provisions for parking relief may be considered, including exemptions from required number of parking spaces and proximity requirements, as applicable, but the requirement for number of parking spaces assigned to residential uses may not be reduced below 1.25 parking spaces per residential unit. The applicant shall demonstrate that the parking to be provided shall be adequate for the uses proposed. Conditions for Approval of a Special Permit for a reduction to the required number of parking spaces, may include, at the discretion of the Planning Board, a contribution to a municipal parking program and/or support for public transportation or other transportation demand management programs. Such contribution shall be directly related to the reduction requested, and shall not exceed 2 percent of the development costs attributed to the residential portion of the proposed development. Such contribution shall be credited to the development under a Site Plan Review approval.

Open Space and Recreation Enhancement

A minimum of 200 square feet of usable on-site outdoor open space or dedicated and usable common indoor recreation space for use by unit residents shall be provided for each dwelling unit proposed within a Mixed Use development project. An applicant contribution to a program of off-site public improvements in the area of the proposed development, as set forth below, may be considered by the SPGA in partial satisfaction of this requirement. An applicant may contribute up to 1.5 percent of the development costs attributed to the residential portion of the proposed development to a program of off-site public open space, pedestrian improvements, public amenities, or community and cultural enhancements, in order to enhance the quality of life for residents of the proposed development and the general public. Such contribution for off-site improvements shall be at the discretion of the Planning Board and shall be credited to the development under a Site Plan Review approval.

Residential Composition

Residential composition in a proposed Mixed Use development shall be comprised of studios, one-bedroom units and two-bedroom units only. In no case may other rooms in a unit be converted to additional bedrooms. Dwelling units within a Mixed Use development may measure no less than 600 square feet. No more than twenty percent (20%) of the units in a Mixed Use development proposal may consist of studio units. No more than three individuals unrelated by birth, marriage or adoption may occupy a dwelling unit in a Mixed Use development. The Planning Board may require a stipulation of said limit on unrelated individuals be included within all leases, condominium documents, protective covenants and other related documents.

Separation between Residential Uses and Non-Residential Uses

Residential uses and non-residential uses in a Mixed-Use development shall be physically separated. Residential uses shall have separate and distinct entrances from non-residential uses.

Community Impact

A Community Impact Assessment shall be required of all proposed developments under this Special Permit, regardless of project size, and the SPGA shall consider such Assessment in its review of a proposed Mixed Use development.

Building Permit Limitations

Following Special Permit for Use, Site Plan Review and other regulatory processes, and in accordance with an SPGA Decision, the Building Commissioner may issue building permits for Mixed Use development for a maximum of 300 residential units for Mixed Use development per calendar year (with no rollover from a previous year). Of these 300 permitted residential units per year, no more than 250 residential units may be permitted for a specific development application in a given year. The Building Commissioner may not issue Building Permits for additional residential units in Mixed Use development once the number of such units for which building permits have previously been issued reaches three percent (3%) of the total number of dwelling units in the Town of Framingham. Any changes to the Building Permit Limitations, as set forth herein, shall require approval by Town Meeting. Building Permits for Mixed Use development shall be issued in accordance with [the] Mixed Use Building Permit Limitation.

Planning Board Mixed Use Development Waivers by Special Permit

The Planning Board may, by Special Permit, grant waivers to the Mixed Use Development Standards and the Dimensional Regulations for Mixed Use development for Mixed-Use development. Such Special Permit for Mixed Use Development Waivers shall be granted only if the Planning Board makes the specific required Findings, in writing, as set forth under Conditions of Approval of Special Permit, as well as the following Finding. The Planning Board must also find that the proposed project with the waived requirement shall not be substantially more detrimental to the neighborhood than the project without the waiver. As a basis for its decision, the Planning Board shall consider factors which shall include, but not be limited to, the impact of the waiver on traffic and parking; municipal services and facilities; and the character of the neighborhood including environmental and visual features.

Transfer of Development Rights

TRANSFER OF DEVELOPMENT RIGHTS, or *TDR*, is a land use regulatory tool under which development rights can be severed from a tract of land and sold in a market transaction. The parcel from which the rights are transferred is then permanently restricted as to future development, and the purchaser of the rights may assign them to a different parcel to gain additional density—for example, more residential units or more commercial floor area than would be allowed without the transferred rights. Usually, TDR programs designate *sending areas* from which rights may be transferred, and *receiving areas* to which the rights may be sent.

Although TDR is a growth management tool that is relatively new and unfamiliar to most communities, it is related to several well-established aspects of land ownership and transfer. First, TDR is often described in relation to a “bundle of rights” that makes up land ownership. Among these rights is the right to develop the land subject to applicable regulatory controls. Establishment of a transferable development rights program allows this right to develop to be separated from the land and attached to a different piece of property.

Second, TDR is related to commonly-used tools such as conservation restrictions and agricultural preservation restrictions. In these more familiar measures, a transaction occurs between the landowner and a governmental or nonprofit entity in which the landowner voluntarily restricts the future use of the land in exchange for a payment. In effect, the entity that makes the payment acquires from the landowner some of the rights to use the land in order to extinguish those rights. Under TDR, a similar transaction occurs, but with two crucial differences: the purchaser is a private landowner, and the development rights are transferred to the purchaser’s property rather than being transferred to a state agency.

Third, TDR may also be thought of as an extension of the concept of cluster development (also called open space residential development or conservation subdivision design). Under the cluster approach, dwellings are grouped on a small area of a tract of land rather than being dispersed over the entire tract, with the remaining land being restricted from future development; thus, the right to develop the preserved open space may be considered to have been “transferred” from one portion of the tract to another. TDR takes the cluster development approach a step further by allowing this transfer of development rights not just within a single tract but between separate tracts that may be widely separated in space.

Although TDR regulations vary from community to community, the process generally involves a combination of some or all of the following components:

- A TDR process is intended to shift development from one area to another, rather than to restrict or define the type of development.

- TDR can help preserve opportunity for economic gain for property owners situated in an area that the community at large may want to protect from development (the sending area).
- TDR is usually set up to discourage or restrict development in the sending area that is considered significant as open space for protection of natural, scenic, or agricultural qualities or sites of special historic, cultural, or aesthetic character.
- TDR can also help to concentrate development in areas where compatible development already exists and that are better served by existing infrastructure (such as utilities and roadways).
- TDR programs usually establish a method for determining the value of the development rights to be transferred that is based on market trends and is designed to facilitate private transactions.

There appear to be three categories of criteria that affect the success of a TDR program: these relate to (1) the real estate market in the area encompassed by the TDR program; (2) the regulatory structure underlying the TDR program; and (3) the capacity of the receiving areas to accommodate the increased intensity of development.

Market Characteristics

TDR programs are difficult to operate on a small scale.

Underlying Regulations

It must be emphasized that a purely voluntary TDR program is a weak tool for implementing land use policies. With a voluntary program, the underlying zoning continues to express the “official” land use plan of the community, and achieving the preferred development pattern (for example, shifting development from farmland to villages) requires either a significant incentive package or landowners and developers who are exceptionally receptive to the concepts and objectives of the program. TDR is much more effective when it is established as a complement to a mandatory rezoning strategy than as a completely voluntary option to existing zoning.

Capacity of Receiving Area

While it is often easy to identify areas that are desirable to protect by limiting the amount of future development, it tends to be more difficult to identify areas where additional development may be accommodated.

According to a report produced by the Massachusetts Executive Office of Environmental Affairs and the Department of Housing and Community Development, at least fourteen communities in the Commonwealth have adopted some version of a TDR process. Samples of some of the TDR regulations in Massachusetts are included below.

NORTHAMPTON

Northampton’s TDR program permits the transfer of residential development rights from the Town’s *Farms, Forests, and Rivers Overlay District (FFR)* to the *Planned Village District (PV)* or other permitted receiving parcels.

Excerpt from the Northampton TDR Regulations (Section 19.3 of Zoning Regulations)

The Planning Board (PB) shall grant an owner of land in the FFR district a Special Permit to transfer the right to develop residential units from the FFR district to the Planned Village District (PV) or other receiving parcels as allowed by this Zoning Ordinance in accordance with the criteria below. The PB shall base their decision on the criteria in this section and the requirements for Site Plan Review for the Sending Zone, not the Receiving Zone.

The maximum number of dwelling unit development rights that can be transferred is the greater of the following:

- The number of dwelling units allowed by a current valid Definitive Subdivision Approval or Open Space Residential Development or Planned Unit Development Special Permit issued for the sending parcel; or
- Sixty percent of the number of dwelling units that could potentially be developed based on the maximum number of dwelling units allowed in an Open Space Residential Development and including deductions for wetlands but excluding deductions for roadways.

Development rights may not be transferred from land which may not be otherwise be developed for a residential subdivision because of ownership status, deed restrictions, easements, or prior transfer of development rights.

TDR is contingent on placing a permanent Conservation Restriction or Agricultural Preservation Restriction, in accordance with Massachusetts General Laws, on the land from which the development rights were transferred and restricting the use of the land to agriculture, forestry, or undeveloped open space open for passive recreation only, or deeding the land to the City as permanent park or conservation land with no acquisition cost (but only with the consent of the City Council and the Conservation or Recreation Commission, as appropriate).

Development rights may be transferred from a sending parcel and held indefinitely before being assigned to a “receiving parcel.” Development rights may be transferred by sale or other means and may subsequently be transferred to any owner of receiving parcels allowed by this Ordinance.

WESTFIELD

Westfield’s TDR regulations set up a process for transferring development rights, but broadly define the sending and receiving areas rather than delineating specific areas. The sending area is defined in general as any land located within a Residential District and all land within a 400 foot radius of a public drinking water wellhead. The receiving area is defined generally as parcels of land located within Business and Industrial Districts which have been determined to be suitable by the Planning Board. The regulations also outline the dimensional and density regulations allowed in the receiving area. These regulations include an option for an applicant in the receiving area

to a cash contribution to the Town in lieu of transfer of development rights for the purpose of purchasing development restrictions.

Excerpt from the Westfield TDR Regulations (Article 5, Section 5-90 of the Zoning Ordinance)

Process for Transfer of Development Rights

The applicant proposing to develop specified land in the Receiving Area at a density allowed by this ordinance with transfer of development rights shall make an application to the Planning Board for a Special Permit. The application shall clearly illustrate a land parcel or parcels in the Sending Area and a parcel or parcels in the Receiving Area proposed for transfer of development rights, and the number of development rights proposed for transfer.

The applicant shall also file with the Planning Board a Site Plan for the parcel in the Receiving Area, illustrating lots created using the transferred development rights, and illustrating all wetland and floodplain areas as certified by the Conservation Commission.

The number of lots eligible for transfer from the parcel in the Sending Area, shall be determined using the following process:

- subtract 50% of all acreage which is identified and certified by the Conservation Commission as wetlands;
- subtract 5% of the total remaining parcel acreage, to account for land which would be used for roads if the parcel had been developed.
- after determining the remaining land area, divide by the minimum lot size in that District to determine the number of lots allowable in the Sending Area;

Prior to the Planning Board’s final approval of a Special Permit, the applicant shall tender to the Board, a valid instrument granting to the City a permanent Conservation Restriction/Agricultural Preservation Restriction for eligible land in the Sending Area. The Conservation Restriction/Agricultural Preservation Restriction may be held by the Westfield Conservation Commission, an appropriate state agency, or a designated non-profit land trust. The applicant shall furnish to the Planning Board a certificate of title by a duly licensed attorney and such other evidence or assurance of title as may be satisfactory to the Planning Board.

Receiving Area Regulations

The Planning Board shall not approve a Special Permit for Transfer of Development Rights for a project which is not currently served by public sewer and water lines in the Receiving Area.

Dimensional and Density Regulations Allowed By the Transfer of Development Rights

Table 1. TABLE OF EXCHANGE STANDARDS FOR TRANSFER OF DEVELOPMENT RIGHTS

Sending Area	Receiving Area
1 residential building lot equals	2000 s.f. of additional commercial or industrial floor area, plus a commensurate increase in lot coverage or height requirements, or a decrease in front setback requirements, for a single commercial or industrial lot.

When a landowner wishes to sell less than the total number of development rights available to a tax parcel, the landowner may do so provided that:

- The tax parcel is subdivided;
- The subdivision plan shall specify the agricultural class of all the soils on the site;
- The landowner must sell the development rights from the best agricultural soils first.

Table 2. TDR Dimensional Standards for Receiving Areas

Underlying Zoning District	Existing Dimensional Requirements	Dimensional requirements with Transfer of Development Rights
BA District	Building Coverage: 25% max. Height: 30 feet max. Front Setback: 30 feet min.	Building Coverage: 50% max. Height: 45 feet max. Front Setback: 10 feet min.
BB District	Building Coverage: 80% max. Height: 30 feet max. Front Setback: 30 feet min.	Building Coverage: 80% max. Height: 60 feet max. Front Setback: 10 feet min.
IA District	Building Coverage: 50% max. Height: 35 feet max. Front Setback: 30 feet min.	Building Coverage: 60% max. Height: 60 feet max. Front Setback: 30 feet min.
IP District	Building Coverage: 40% max. Height: 50 feet max. Front Setback: 20 feet min.	Building Coverage: 60% max. Height: 75 feet max. Front Setback: 20 feet min.

Alternate Method for TDR Transactions

The Westfield Department of Community Development and Planning shall keep a voluntary registry of property owners of land in the Sending Area who are interested in participating in this program.

Should an interested applicant in the Receiving Area not be able to reach an accord with any of the persons listed in the above referenced registry then, in lieu of transferring development rights using the process described above, an applicant for a Special Permit may request the Planning Board that he/she/they be permitted to make a cash contribution to the City of Westfield to be used for the purpose of purchasing development restrictions. Such request shall include detailed documentation as to the efforts made to reach an accord, and the reasons for the failure to reach an accord. The contribution shall be of a value equal to the value of the required development rights, as determined in the Table of Exchange Standards for Transfer of Development Rights. This value shall be determined by multiplying the number of acres of developable land required by the average cost of development restrictions in the City of Westfield over the past three years, as determined by the Conservation Commission. The Planning Board reserves the right to refuse a payment in lieu of transferring development rights request and require that actual development rights be transferred.

All funds collected under this section shall be placed in a special revenue account administered by the Conservation Commission, and may only be expended with the authorization of the Conservation Commission, for the purpose of preserving open space.

 FALMOUTH

Falmouth's TDR regulations do not delineate specific sending and receiving areas. The donor areas consist of any existing building lot, contiguous parcels of at least five acres, and all land within the Water Resource Protection and Coastal Pond Overlay Districts. Receiving areas are defined generally by zoning district and include residential as well as business and industrial, but require that the lots be a minimum of two, five or ten acres according to the type of zoning district. Town-owned land is also eligible to be a receiving district.

The number of lots allowed in the receiving area is determined according to a system of credits ranging from 1.2 to 1.4 times the number of allowable lots. For example, 10 lots within a donor district are transferred to another parcel within a receiving district. The receiver parcel has suitable acreage for 20 lots. According to the credit system, a transfer of 10 lots from the donor parcel to the receiver parcel entitles the receiver land owner to a 4-lot bonus ($1.4 \times 10 = 14$). Thus, the total number of lots possible in the receiving district is 34 (14 from donor district + 20 allowed under current zoning = 34).

Stormwater Utilities

Stormwater management is an increasingly important function of local government. Like other local utilities such as municipal water and sewer departments (or private electric and telephone companies), a stormwater utility is an entity that generates revenues to pay for services. Property owners are assessed fees based on their impact on stormwater flows (typically computed in terms of impervious surface coverage). Stormwater utilities can be established on a city-wide or watershed scale.

The Pioneer Valley Planning Commission (PVPC) carried out a Stormwater Utility Feasibility Study in 1998-1999, with the City of Chicopee and Town of South Hadley as a pilot project. PVPC has published a compilation of materials from the study in a kit titled "How to Create a Stormwater Utility (or Stormwater Management Program), including research on stormwater utilities in other areas of the country and a step by step process for developing a stormwater utility. The project resulted in a Model Stormwater Utility Ordinance, which is reproduced on the following pages.