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WASHINGTON COUNTY TRANSIT-ORIENTED DEVELOPMENT PLANNING STRATEGY

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Washington County
Transit-Oriented Development
Planning Strategy

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Table of Contents — Page Number

Table of Contents — Page Number

Table of Contents — Page Number

Appendices

Table of Contents

Page Number

List of Figures

List of Tables

Table of Contents

Executive Summary

Washington County Transit-Oriented Development Planning Strategy presents recommendations to assist Washington County, Rhode Island communities in proactively planning for growth and development which may accompany the planned expansion of commuter rail service into the region.

The Rhode Island Department of Transportation (RIDOT) has advanced studies, permitting, and design initiatives toward extending Massachusetts Bay Transportation Authority (MBTA) commuter rail service south from Providence, initially to Wickford Junction in North Kingstown as part of the South County[1] Commuter Rail project. Future extension of the commuter rail service southward to Westerly is under consideration.

To assist the region and its communities in preparing for growth that could accompany commuter rail service introduction, the R.I. Statewide Planning Program (RISPP), the single Metropolitan Planning Organization (MPO) for Rhode Island, entered into a Cooperative Agreement with the Town of North Kingstown on behalf of the Washington County Regional Planning Council to undertake a study of the potential for transit-oriented development at Wickford Junction and other potential stations in the region. The *Washington County Transit-Oriented Development Planning Strategy* was conducted by Pare Engineering Corporation under contact to the Town of North Kingstown, RI. The study was supported by the R.I. Statewide Planning Program with funding provided by the U.S. Department of Transportation, Federal Highway Administration.

Washington County Transit-Oriented Development Planning Strategy provides an overview of proposed commuter rail service, assesses development potential within a critical ten-minute drive time of Wickford Junction Station, addresses transit-oriented and transit supportive development and considers its suitability for Washington County villages adjacent to Amtrak's Northeast Corridor, and presents management strategies that can promote smart growth concepts. The following present highlights of the four sections in this planning study.

Section 1: Assessment of Commuter Rail Advantages

In 1988, RIDOT and the MBTA reinstituted rail service between Providence and Boston through the Pilgrim Partnership Agreement. Subsequent extensions of this agreement will assure MBTA commuter rail service to Rhode Island through 2009. RIDOT has projected that MBTA service from Providence to Warwick and Wickford Junction will be in operation in 2008. The proposed schedule includes weekday service with eight inbound trains to Providence (four to Boston) and six outbound from Boston and Providence. Weekend service is not projected initially. MBTA service is Boston-centric, meaning that schedules meet peak hour commuter

[1] Washington County is also popularly known as "South County" in Rhode Island vernacular.

requirements in Boston. Service to Providence may fall outside of the typical peak hour commute. Wickford Junction is not proposed as a peak hour destination ("reverse commute"). RIDOT estimates that Wickford Junction Station will serve approximately 58 percent of total projected Rhode Island commuter rail ridership.

National commuting patterns have changed over past decades. Although the average household size has declined, both the number of vehicles per household and the number of people driving to work separately has increased. County residents now routinely commute to Providence, metropolitan Boston and southeastern Connecticut, resulting in increased traffic volumes on South County highways. The State of Rhode Island has proceeded with the South County Commuter Rail project to provide an attractive multimodal alternative to the private passenger vehicle, including the single occupant vehicle (SOV). This alternative will become increasingly attractive as gasoline prices approach $3 per gallon.

Section 2: Assessment of Growth Potential

Between 1990 and 2000, Washington County experienced a 12.4 percent population increase, representing almost one-third of the State's net gain in housing units. Washington County is the fastest growing county, statewide, in relative terms. Population projections completed by the Rhode Island Statewide Planning Program reflect the continued popularity of Washington County for residential development. The proposed commuter rail extension will likely add to the popularity of Washington County as a destination for new residents.

The potential for increased development pressure exists, particularly in areas of Exeter and North Kingstown within a 10-minute drive or five-mile radius of the planned Wickford Junction Station. According to buildout analyses conducted by both the Towns of Exeter and North Kingstown, 1,639 additional units are possible within a 10-minute drive of the station. Highest potential in Exeter is north and south of Ten Rod Road while North Kingstown development pressure is likely to be strongest at the south end of town. Factoring in vacant developable property and current zoning within five miles of the station, 639 additional units are possible in Exeter and 1,000 units are possible in North Kingstown. These figures represent maximum growth potential as a significant portion is preserved open space or a use that is not likely to change.

A public workshop was held at the North Kingstown Senior Center on March 3, 2005. An expert panel featured George Johnson, Assistant Chief of the Rhode Island Statewide Planning Program; Sheila Brush, Director of Programs for GrowSmart Rhode Island; Scott Millar of the Exeter Planning Board; Sheila Verdi and Julia Techentin, two local realtors; and John LaPoint, an MBTA Advisory Committee member from Grafton MA.

Highlights of public workshop findings are presented in the text box.

Key Expert Panel Findings

- Growth is already substantially affecting Washington County communities; the availability of commuter rail service will further increase the attractiveness of the region as a place to live, work, and do business, and provide added impetus for growth.
- Commuter rail will serve existing residents and attract others. Future increased travel demand could maximize the capacity of the region's roadways, escalating the need for commuting alternatives. Increased gas costs will also increase the demand for commuter rail service.
- Schedules will provide a high level of service to Boston. Commuter rail service to Providence will be attractive to workers with flexible schedules.
- The price differential between Massachusetts and Rhode Island real estate is narrowing. When local property taxes are considered, relocating from Boston to Washington County may not be as attractive as in past years.
- Single-family homes, condominiums and apartments are all in demand in Exeter and North Kingstown.
- Home values may be expected to increase with commuter rail service as housing demand exceeds supply.
- Washington County communities should have growth management strategies in place prior to the increase in housing demand associated with commuter rail service.

Section 3: Transit-Oriented and Transit Supportive Development

Transit-oriented development (TOD) and transit supportive development (TSD) land use planning utilizes pedestrian-oriented activities, transit, and a mix of land uses (high-density residential, retail, commercial, parking, and open space) to create a desirable development environment around a transit stop or station. TOD, coupled with other land management strategies, can help focus growth within a compact area proximate to transit stops; this helps support transit system ridership while simultaneously reducing growth pressures on other areas less suitable for development. TOD can provide sustainable development that improves the commercial tax base, improves residential property values, reduces traffic volumes, revitalizes neighborhoods, expands housing diversity and provides affordable housing options. Transit supportive development is an attractive alternative for areas around transit service that are not suitable for the densities transit-oriented development typically involves. TSD emphasizes pedestrian accessibility, transportation alternatives and linkages between neighborhoods. Both strategies focus on providing options to reduce the number of daily trips by private vehicle.

Wickford Junction TOD Recommendations

- Amend North Kingstown land development regulations to reduce parking ratios, require reduced setback of commercial buildings with parking to rear, require sidewalks, avoid cul-de sacs, and require pedestrian connections between developments.
- Transfer development rights within the Groundwater Overlay District to increase development density near the station while protecting recharge areas closer to the well.
- Construct ground floor retail in the station parking garage to increase public use and streetscape vibrancy.
- Provide pedestrian and bike path connections to local neighborhoods.
- Encourage construction of senior housing above retail at Wickford Junction Plaza.
- Encourage redevelopment of Ten Rod Road properties in accordance with TOD and TSD.

Station TOD Suitability

Existing use within a half mile of **Wickford Junction** includes the following transit-oriented development features: mixed-use (with low to moderate density residential use), mobility choices (future commuter rail, RIPTA bus, and limited bike access), public spaces, and redevelopment potential Suitability for density required for true transit-oriented development is

limited by location within the North Kingstown Groundwater Recharge and Wellhead Protection Overlay District. Residential development in this overlay district is limited to one dwelling unit per two acres. Additional constraints on TOD-style development at Wickford Junction include lack of municipal sewer service, limited connectivity between neighborhoods and the proposed station, and required high parking ratios. Despite constraints, there are several steps which could improve the functionality of Wickford Junction as a transit development and valuable asset for the community. Recommendations for supporting TOD objectives at Wickford Junction are presented in the text box. Parties responsible for implementation include the Town of North Kingstown, local developers, Wickford Junction Station Plaza developer, the Washington County Regional Planning Council, and RIDOT, among others.

Although commuter service is a somewhat more distant prospect than at Wickford Junction, **Downtown Westerly** currently provides many of the features required for TOD including a relatively high density of development, mixed-use, mobility choice, pedestrian connectivity, reduced parking requirements, and public spaces. The area within a quarter mile of the station is within the Downtown Westerly Historic District, adjacent to Wilcox Park, with Amtrak service currently provided at the station. This section of downtown has been designated by the Westerly Planning Department as a 'growth center,' with hopes to encourage TOD centered on Westerly Station. Recommendations for TOD at Westerly are presented in the text box. Parties responsible for implementation include the Towns of Westerly and Stonington CT, Washington County Regional Planning Council, local developers, and the Rhode Island Economic Development Corporation, among others.

Westerly TOD Recommendations

- Encourage upper level residential use on High Street, Canal Street, and Railroad Avenue in the downtown area.
- Redevelop the Savoy Hotel for mixed use, including residential use.
- Assess mixed-use redevelopment potential of privately owned vacant parcel north of the rail line.
- Redevelop Guild Guitar factory for residential use.
- Construct condominiums along Pawcatuck River in Pawcatuck, CT.

Other potential station locations assessed for TOD suitability include West Davisville, Kinston Station, Shannock/Carolina, and Wood River Junction. These stations and potential stops did not prove highly suitable for TOD development. Historic Kingston Station is within the South Kingstown Groundwater Protection Overlay District. The area currently does not have the density of development or mixed-use to support TOD and is not easily accessible to interstate or limited access highways. The station parking lot is fully utilized by Amtrak commuters and cyclists for the South County Bike Trail. Innovative solutions would be required to not adversely affect the historic character of the station and adjacent neighborhoods with expanded parking. Recommendations for TOD are presented in the text box. Local towns, the Washington County Regional Planning Council, University of Rhode Island, and RIPTA would be responsible for implementation recommendations.

TOD Recommendations for Kingston Station and Rural Villages

- Transfer development rights from agricultural "sending areas" to growth center "receiving areas" to reduce sprawl.
- Support RIPTA service at URI with connection to Kingston Station. Recognize the importance of educating student passengers for current and future transit ridership.

Smart Growth Planning Recommendations

The following recommendations apply to the region generally, and are presented to advance Smart Growth principles via effective planning and land management. Responsible parties include State of Rhode Island (Executive and Legislative Branches), municipal governments (planning departments/boards), Washington County Regional Planning Council, land trusts, and GrowSmart RI.

- Develop a State Growth Centers Program to focus state development investments within locally designated, State-approved growth centers.
- Designate Growth Centers meeting state criteria via the local comprehensive planning process.
- Utilize available land management tools effectively to promote Smart Growth principals and achieve balanced, focused growth and development. Avoid reliance on techniques that only restrict development, create an impetus for sprawl, or conflict with Smart Growth objectives.
- Continue to strengthen regional planning and cooperation on growth issues. Identify areas that could serve as growth centers for the region.
- Foster strategies on the state level to promote Transfer of Development Rights as a smart growth tool to preserve open space and to promote density.
- Encourage communities to consider dense development models that foster mixed use, diversity of housing types, and walkability.
- Conduct training courses for planners and planning boards to advance understanding of smart growth principles and techniques.

The following recommendations are presented for all rail stations. Responsible parties include RIPTA, MBTA, local firms or transportation management associations, chambers of commerce, Washington Country Regional Planning Council, local towns and ferry operators:

- Provide bus service coordinated with train arrivals and departures.
- Co-market MBTA and RIPTA service with joint fares, scheduling and ticketing.
- Provide rail or bus service to TF Green Airport from South County locations.
- Explore opportunities to link stations with ferry terminals at Quonset (Martha's Vineyard) and Galilee (Block Island) via RIPTA or other shuttle service. Consider joint marketing and ticketing for rail, bus, and ferry links.
- Implement Transportation Demand Management (TDM) strategies to provide alternatives to the single occupant vehicle (SOV).
- Encourage commuter rail passenger participation in the AlterNet program for carpool and vanpool matching.
- Designate preferential or free parking for carpools and vanpools at stations.
- Form a Transportation Management Association (TMA) to provide SOV alternatives.

- Encourage MBTA weekend and holiday service to serve South County tourism destinations; explore options for connecting service to Wickford with beaches and other destinations.
- Educate Washington County residents on accessibility to Providence, Boston, and other rail station destinations via rail, bus, or subway.
- Encourage bike path connections to rail stations.

Zoning amendments that facilitate transit-oriented development have been initiated in many states throughout the country. The Town of Westborough, Massachusetts, a suburban community, has approved a zoning amendment to facilitate a Transit-Oriented Village (TOV). This bylaw is presented as an example of what one community has done to protect open space from development while assuring the levels of density necessary for transit-oriented development. The TOV zoning bylaw includes the protection of open space through the Transfer of Development Rights (TDR) and increased density through density bonuses in the Transit-Oriented Village. TOV zoning is one tool which helps enable the town to meet its affordable housing requirements.

Section 4: Smart Growth Techniques

Growth management tools are the methods or policies a community implements to direct or control growth. If used properly, growth management tools can form the basis for a realistic, yet effective smart growth plan. Smart Growth is a well-planned land use strategy that basically guides residential/commercial growth towards areas best suited to accommodate it. All Washington County communities have incorporated some form of growth management into their Comprehensive Plans, Zoning Ordinances and Land Development Regulations. However, not all growth management techniques support smart growth objectives. Unless growth management tools such as large-lot zoning are judiciously applied, they can conflict with smart growth principles and actually encourage sprawl. Key smart growth strategies are presented in the text box.

Smart Growth Strategies
- Focused development in and around existing communities.
- Rehabilitation/ revitalization of existing neighborhoods, housing and commercial areas.
- Mixed land uses and housing types in compact, pedestrian-oriented centers.
- Provision of transportation alternatives/choices.
- Creation of unique places (sense of place).
- Open space preservation.

Designating compact, higher density "centers" to receive growth can be a smart growth technique. Rhode Island communities may designate "growth centers" via the local comprehensive planning process. Growth Centers (Executive Order 02-05) addresses urban sprawl by encouraging growth centers in Rhode Island. Growth centers are… "Planned or existing dynamic and efficient centers for development that have a core of commercial, industrial and community services, residential development, and natural and built landmarks and boundaries that provide a sense of place." Although growth centers have been identified for Washington County towns, none have been approved through the state process.

The following land management concepts and tools, described in further detail in Section 4, can be employed to promote smart growth objectives.

- Traditional Neighborhood Design (TND) includes a New Urbanism emphasis on density, diversity and design with the primary goal of pedestrian and transit connections.
- Transfer of Development Rights (TDRs) is used to direct growth to areas best suited for growth (e.g., having infrastructure such as roads, municipal sewers, water, etc.), and reduce growth in areas better suited for preservation or protection (open space, natural resources, farmland, areas of historical importance). Density bonus provisions may be incorporated as an overlay of the underlying zoning regulations to incentivize the preferred development pattern. Sending and receiving zones must be identified for successful implementation.
- Phased Growth Programs are used to avoid the effects of rapid, unplanned growth on educational, public safety, public works, and other government services by pacing growth so that service demands may be accommodated within existing and planned (enhanced) infrastructure and service capacities.
- Growth/Building Caps, an aspect of Phased Growth Programs, enable communities to legally limit the amount of development which occurs in any given year, based on buildout analyses, trends analysis, and population projections, and plans for addressing public service capacity needs.

Other growth management tools addressed in this report include conservation subdivisions, residential cluster subdivisions, adequate public facilities plans, agricultural zoning, impact fees, and natural resource protection techniques.

Regional Planning Collaboration

The Washington County Regional Planning Council has been instrumental in providing leadership for regional collaboration on adjacent land uses, shared natural resources and transportation system opportunities in South County. The council will continue to advocate for smart growth initiatives and work with communities to protect the quality of life of area towns, especially as commuter rail service increases development pressures. *Washington County Transit-Oriented Development Planning Strategy* builds on the council's past regional planning efforts in greenway and greenspace corridor planning, land trust coordination, and preparation of the *South County Design Manual*. These are just a few examples of how partnerships across a region can successfully guide growth and enable communities to grow efficiently.

Section 1: Assessment of Commuter Rail Extension Advantages

Introduction

The Rhode Island Department of Transportation (RIDOT) has advanced studies, permitting and design initiatives directed toward extending Massachusetts Bay Transportation Authority (MBTA) commuter rail service south from Providence to Wickford Junction in North Kingstown as part of the South County Commuter Rail Service (SCCRS). Washington County, including the towns of North Kingstown, Exeter, and Narragansett, will benefit from improved commuter options. Rail service to this area also has the potential to increase development pressure in these popular communities.

Amtrak currently provides service along the Northeast Corridor (NEC) at Kingston Station in South Kingstown and at the Westerly Station. Figure 1-1 identifies proposed SCCRS along Amtrak's NEC, existing and proposed stations, and Washington County communities.

The following summarizes information on the proposed Wickford Junction Station, the demand for service to the area identified as South County (including Washington County), proposed Wickford Junction train schedule, ridership projections, supporting State and local plans, and prior studies.

Pilgrim Partnership Agreement

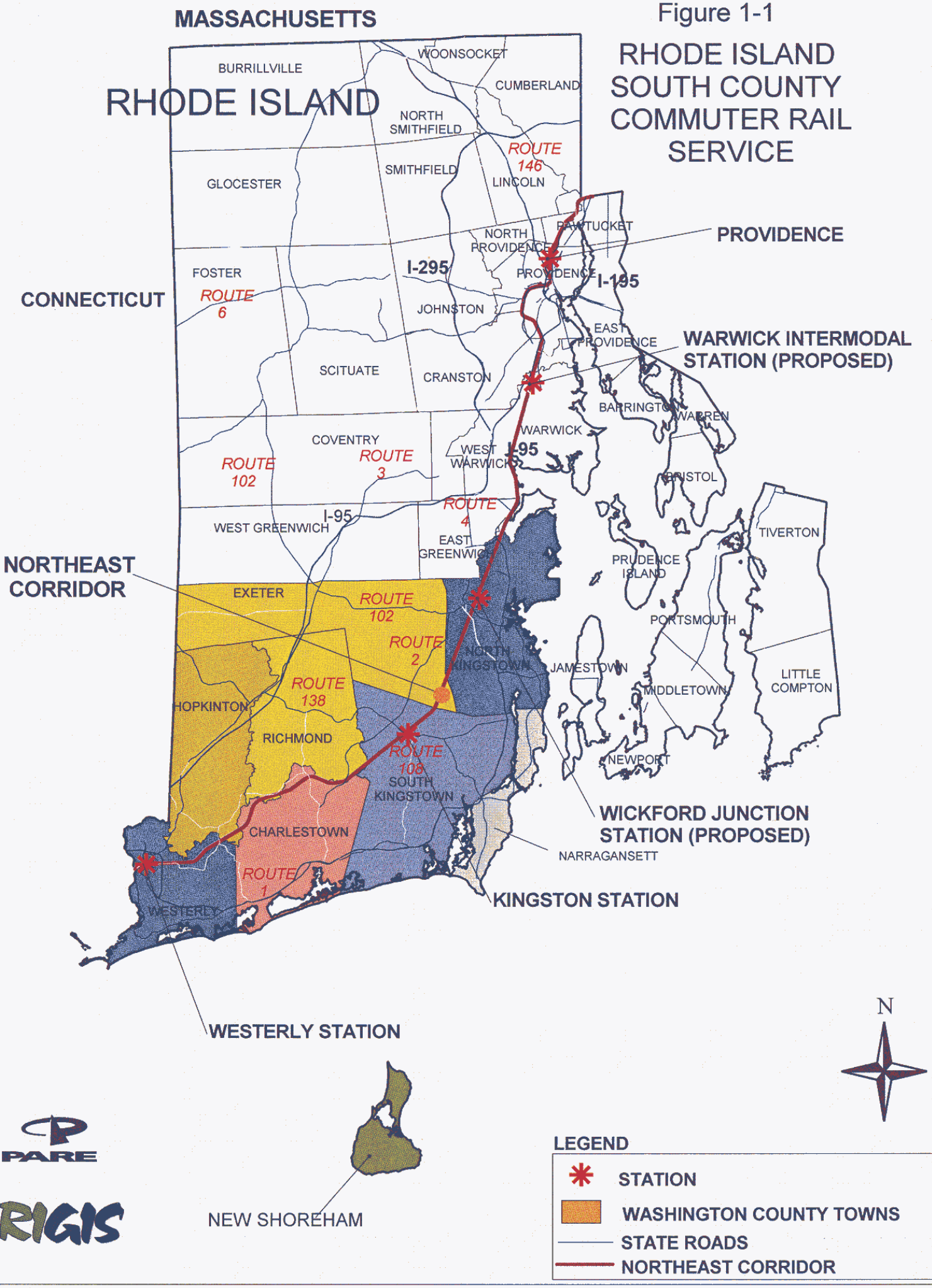
In 1988, based on changing commuting patterns and an increased demand for transportation alternatives from Providence and Boston, RIDOT re-instituted commuter rail service between the two cities through the Pilgrim Partnership Agreement with the MBTA. Additional service was added between Providence and Boston in 1995 when the Pilgrim Partnership Agreement extended the contract term for another ten years. More recently, RIDOT and the MBTA have agreed to a five-year extension through 2009.

Initial talks between RIDOT and the MBTA investigated an incrementally staged SCCRS to extend current MBTA service to future stations at T.F. Green Airport and Wickford Junction as Phase 1. Phase 2 would include service to other South County destinations. The Warwick Station's final disposition is pending final resolution on several outstanding issues regarding the Consolidated Car Rental Facility at T.F. Green Airport.

RIDOT is now proceeding with the extension to Wickford Junction as its highest priority for commuter rail service extension.

Figure 1-1

RHODE ISLAND SOUTH COUNTY COMMUTER RAIL SERVICE



Wickford Junction Station

The proposed Wickford Junction Station is 18 miles south of the Providence Station. This station is a critical piece in the commuter rail service plan, providing 58% of the total projected commuter ridership south of Providence. Located a half mile from Route 4 (a major arterial into the Providence-Warwick Metropolitan area), Wickford Junction Station will anchor commuter service on the proposed SCCRS line.

The preferred site for the Wickford Junction Station is the existing Wickford Junction Plaza, in the northwest quadrant of Route 102 (Ten Rod Road) and the Amtrak Main Line. Access to the station is proposed through infrastructure improvements throughout the plaza. This location presents an opportunity to create a public/private partnership between RIDOT's commuter service and existing/planned commuter-based services in the Plaza. Proposed trackside facilities include partial canopies and a high level platform in accordance with the Americans with Disabilities Act. To meet the parking demand, structured and surface lots for 1,000 cars will be provided. A separate station for ticketing, waiting and public restrooms is not proposed at Wickford Junction. The latest RIDOT projection has MBTA service starting in 2008.

Demand

National commuting patterns have shifted as economic and transportation linkages have grown stronger. Change in households from a traditional nuclear family to more diverse and smaller arrangements adds to the number of people separately traveling to work. The average household size declined from 3.1 to 2.6 from 1970 – 2000. During the same time period, the number of vehicles per household increased from 1.3 to 1.7. The percentage of workers has increased from 38 percent in 1970 to 46 percent in 2000. Vehicle ownership of two or more cars per household has also increased from 35 percent in 1970 to 55 percent in 2000. With more households, more cars, more jobs, and more errands, traffic volumes have increased on national and regional highways.

As traffic congestion has increased on regional highways, commuters have sought alternatives to single-occupancy vehicles (SOV) to decrease stress, reduce pollution, and reduce transportation costs. Commuter rail service to major metropolitan areas such as Providence and Boston is becoming an increasingly attractive high-occupancy vehicle (HOV) alternative for commuters and for those traveling for school, medical appointments and leisure trips.

The metropolitan Boston area and southeastern Connecticut have become primary employment destinations for many Rhode Islanders. Changes in location of population over the last decade have been significant. Washington County experienced a 12.4 percent increase in population from 1990 – 2000 as indicated in Table 1-1. New housing units for the same time

period for Washington County represents almost one-third (7,963) of the State's total (25,265).

Table 1-1: Washington County Demographics 2000

Community	2000 Population	Percent Change 1990-2000	Authorized New Housing Units 1991-2001	Median Household Income 2000
Charlestown	7,859	27.4	784	$ 51,491
Exeter	6,045	10.7	412	$ 64,452
Hopkinton	7,936	14	438	$ 52,181
Narragansett	16,361	9.2	703	$ 50,363
New Shoreham	1,010	20.8	226	$ 44,779
North Kingstown	26,326	10.7	1449	$ 60,027
Richmond	7,222	35	737	$ 59,840
South Kingstown	27,921	13.4	1916	$ 56,325
Westerly	22,966	6.3	1298	$ 44,613
Wash. County	**123,646**	**12.4**	**7,963**	**$ 48,792**
Rhode Island	**1,048,319**	**4.5**	**25,265**	**$ 42,090**

Source; U.S. Census 1990, 2000

Commuting travel times and distances have increased dramatically as the state population has shifted to more rural counties. Large numbers of Washington County residents are commuting both into Providence, and onward into Boston. Studies show that a very large percentage of these commuters drive personal vehicles alone to work, resulting in increased travel times, as well as traffic congestion on our roadways.

Rhode Island Public Transportation Authority (RIPTA) transportation alternatives for Washington County commuters include local bus, express bus, flex service, and Park & Ride carpool lots. Additional transit modes are increasingly becoming necessary in order to move people effectively, not only throughout the state, but also into Massachusetts and Connecticut.

Washington County and adjacent towns are generally referred to as 'South County' municipalities. As indicated in Table 1-2, of Washington County workers, 13.6 percent commute to Providence from North Kingstown, 13.1 percent from Exeter, 10.0 percent from Narragansett and 8.6 percent from South Kingstown. It is approximately 5,070 from Washington County that commute into Providence, and 1,476 people continue further into Massachusetts. Mean travel times for all Washington County municipalities are representative of the state average from 1990 to 2000.

Table 1-2: Washington County Commuting Patterns 1990 - 2000

Community	Number of Workers	Mean Travel Time to Work 1990 (Mins.)	Mean Travel Time to Work 2000 (Mins.)	Change 1990-2000 (Mins.)	Percent	
					Commuting to Providence	Commuting to MA
Charlestown	4,034	23.5	27.4	+3.9	5.1	1.7
Exeter	3,252	23.9	28.2	+4.3	13.1	3.3
Hopkinton	4,169	23.4	25	+1.6	3.1	0.8

Community	Number of Workers	Mean Travel Time to Work 1990 (Mins.)	Mean Travel Time to Work 2000 (Mins.)	Change 1990-2000 (Mins.)	Percent Commuting to Providence	Percent Commuting to MA
Narragansett	8,812	22.4	26.5	+4.1	10.0	2.8
New Shoreham	551	6.8	8.3	+1.5	0.9	0
North Kingstown	13,738	21.6	25.4	+3.8	13.6	4.4
Richmond	3,733	26.5	29.7	+3.2	7.2	1.6
South Kingstown	13,445	19.4	22.8	+3.2	8.6	2.1
Westerly	11,047	19.3	21.6	+2.3	1.2	0.7
Washington County	62,781	20.8	23.9	+3.1	8.1	2.4
Jamestown	2,902	26.5	34.2	+7.7	11.0	6.9
Rhode Island	490,905	19.2	22.5	3.3		

Source: R.I. Commuting Patterns 2000, R.I. Dept. of Labor & Training: R.I. Economic Development; Corporation Community Profiles, U.S. Census 1990, 2000

The number of commuters who drive a personal vehicle alone to work has outpaced the state average for most Washington County residents from 1990 to 2000, as identified in Table 1-3.

Table 1-3: Mode of Transportation: Washington County 1990 - 2000

Community	Mode of Transportation, Percent							
	Drive Alone		Carpool		Public Transp		Other	
	1990	2000	1990	2000	1990	2000	1990	2000
Charlestown	81.7	84.2	12.6	9.2	0.3	0.5	0.4	1.3
Exeter	81.7	86	9.3	7	0.4	1.1	2.2	1
Hopkinton	79	86.7	16.5	9	0.3	0.4	1.3	0.8
Narragansett	82.7	84.1	10.6	8.8	1	1.6	1.4	1
New Shoreham	65.9	77.3	8.8	5.4	0.7	0	4.6	1.6
North Kingstown	84.3	84.8	8.9	8	1.6	1.3	0.5	0.8
Richmond	82.7	89.3	11.9	6	1	0.3	1.7	0.2
South Kingstown	71.1	76	10.4	8	0.9	0.6	1.2	0.6
Westerly	78.6	82.6	16.1	10.1	0.4	3.3	0.5	0.3
Jamestown	84.9	84.4	8.6	6.2	0.6	1.7	0.3	1.0
Rhode Island		80		10.4		2.5		0.9

Source: U.S. Census 1990, 2000

SCCRS Schedule

Weekday commuter service is proposed for Wickford Junction Station as indicated in Table 1-4. No weekend or holiday service is scheduled. A proposed northbound schedule includes eight trains from Wickford, with four departures between 5:45 AM and 7:47 AM, a mid-day departure, and three evening departures between 6:00 PM and 10:00 PM. The proposed southbound schedule includes three arrivals at Wickford Junction Station

between 5:30 AM and 7:37 AM, one mid-day arrival, and five evening arrivals between 6:00 PM and 10:00 PM. This schedule reflects the availability of rail use in coordination with Amtrak's NEC operations, as well as the on-going Freight Rail Improvement Project.

Table 1-4: Proposed South County Commuter Rail Schedule

Inbound: Wickford Junction - Boston

Train #	Leave Wickford Junction	Leave Warwick	Leave Providence (for Boston)	Arrive Boston
802	5:44 AM	5:55 AM	6:07 AM	7:19 AM
804	6:12 AM	6:23 AM	6:35 AM	7:47 AM
806	6:45 AM	6:56 AM	7:08 AM	8:12 AM
810	7:47 AM	7:58 AM	8:10 AM	9:23 AM
816	1:43 PM	1:54 PM	2:06 PM	
822	6:16 PM	6:27 PM	6:39 PM	
824	8:30 PM	8:41 PM	8:53 PM	
826	9:52 PM	10:03 PM	10:15 PM	

Outbound: Boston - Wickford Junction

Train #	Leave Boston	Leave Providence (from Boston)	Leave Warwick	Arrive Wickford Junction
887		5:11 AM	5:23 AM	5:34 AM
801		5:39 AM	5:51 AM	6:02 AM
803		7:14 AM	7:26 AM	7:37 AM
809	12:05 PM	1:10 PM	1:22 PM	1:33 PM
815	4:35 PM	5:43 PM	5:55 PM	6:06 PM
817	5:00 PM	6:06 PM	6:18 PM	6:29 PM
819	5:40 PM	6:42 PM	6:54 PM	7:05 PM
823	6:50 PM	7:57 PM	8:09 PM	8:20 PM
825	8:15 PM	9:19 PM	9:31 PM	9:42 PM

Source: RIDOT, Department of Intermodal Planning, Dec. 2004.

At this point, the proposed schedule does not present an attractive opportunity for a "reverse commute" to Wickford Junction. Wickford Junction would not become a commuter rail destination.

For an 8:00 AM to 5:00 PM workday in Boston, departure from Wickford Junction would be by 6:12 AM with return at 7:05 PM at the earliest. This service would be very attractive for Boston workers, since it represents a considerable savings in travel time, cost and stress compared to a current commute via single occupant vehicle with parking fees in Boston. It also represents a savings in travel time and cost for commuters traveling via highway to commuter rail or transit options in Massachusetts.

Service to Providence is less attractive. Although several trains provide service to Providence with arrivals between 6:07 AM and 8:10 AM, the earliest commuter departure southbound is at 5:43 PM. This would result in

a longer day for many Providence workers. This schedule would not meet the needs of state employees whose workdays typically end at 4:00 PM or earlier.

Ridership Projections

Many studies have been conducted to project ridership along the SCCRS line. These analyses have determined the feasibility of extending commuter rail service into South County. Ridership studies have also been used to project the ability of the commuter service to sustain itself well into the future. Relevant studies have been outlined:

RIDOT completed the *Providence Station Passenger Survey and Analysis of Potential Diversion of Ridership to Proposed Warwick Intermodal Station* - a passenger survey of the Providence Station ridership statistics in June, 2001. A total of 451 surveys were distributed to commuter rail passengers, with 325 returned to RIDOT (77% return rate). Key findings of the briefing paper include:

- Approximately 70% of the ridership is from metropolitan Providence communities
- RIPTA buses and trolleys provide access to the station for 14% of the ridership, while 15% walk to the station
- Travel time to the station for 20% of the ridership exceeds 20 minutes, with 59% (majority) of passengers traveling 15 minutes or less to reach the Providence Station
- 84% of ridership are daily commuters
- 91% of ridership commute for work/business, while 7% commute to school
- Half of the respondents expressed interest in accessing the proposed Warwick Station
- Based on data from this survey and two others (license plate surveys in October 2000 and June 2001 conducted at the Attleboro and South Attleboro Stations) and assuming services, fares and parking are comparable to existing stations, an estimated 358 passengers (51%) out of 708 MBTA Providence passengers may be diverted to the proposed Warwick Station on a daily basis during peak hours.

Passenger origin residences were also identified in this survey. A total of 33 respondents (Washington County residents included) accounted for 11% of the share of total respondents in this survey originating south of the metropolitan Providence area, as shown in Table 1-5.

Table 1-5 Providence Station Passenger Survey: Passenger Origin South of Metropolitan Providence

City or Town	Number of Respondents	Distribution
East Greenwich	11	4.0%
Coventry	6	2.0%
North Kingstown	6	2.0%
Jamestown	2	0.6%
West Warwick	2	0.6%
Narragansett	2	0.6%
Exeter	1	0.3%
West Greenwich	1	0.3%
New London, CT	1	0.3%
North Stonington, CT	1	0.3%

Note: Of the 325 surveys received, 309 responded to the question on trip origin.
Source: RIDOT Providence Station Passenger Survey and Analysis of Potential Diversion of Ridership to Proposed Warwick Intermodal Station: May, 2001, prepared by Edwards and Kelcey, Inc.

RIDOT confirmed ridership projections in 2002 when Vanasse Hangen Brustlin (VHB) reviewed previous projections by Barton-Ashman (1994) and Cambridge Systematics (1995 Freight Rail Improvement Project). Table 1-6 presents ridership projections for the SCCRS for 2000, 2010, and 2020. Bi-directional numbers are roundtrips. As evident in Table 1-6, Wickford Junction represents almost three-fourths the daily boardings projected from 2000 through 2020.

Table 1-6: Bi-Directional Ridership

SCCRS	2000			2010			2020		
	Providence	Boston	Total	Providence	Boston	Total	Providence	Boston	Total
Westerly	247	62	309	258	65	323	267	67	334
Kingstown	1,084	65	1,148	1,130	68	1,198	1,280	79	1,359
Wickford	1,513	276	1,789	1,578	288	1,866	1,768	313	2,081
Warwick	861	650	1,510	897	677	1,574	934	694	1,628
Total	*3,705*	*1,053*	*4,758*	*3,863*	*1,098*	*4,961*	*4,249*	*1,153*	*5,402*

Note:Vanasse Hangen Brustlin did not estimate 2000 ridership therefore their 2000 ridership is based on the growth Cambridge Systematics assumed between 2000 and 2010.
Source: Providence Station Passenger Survey and Analysis of Potential Diversion of Ridership to Proposed Warwick Intermodal Station: May, 2001

Supporting State and Local Plans

Support for commuter rail service to Wickford Junction is demonstrated in the state transportation guide plan and in the Town of Kingstown Comprehensive Plan and Town Council resolution.

Rhode Island Statewide Planning Program – Transportation 2025, State Guide Plan Element 611: August, 2004

Transit oriented or transit supportive development at Wickford Junction is specifically consistent with two strategies outlined in the State Guide Plan Element:

- Achieve more concentrated development patterns including infill and mixed-use development, and higher residential and employment densities near transit stops. It is desirable to have schools, libraries, parks, and other public services within walking distance of residential areas and town centers. LU.3.b.

- Work with affected communities to plan for and mitigate growth impacts accompanying expansion of commuter rail service to South County and Fall River. Investigate Transit Oriented Development and other land management strategies to accommodate growth. LU.3.c.

Town of North Kingstown, Comprehensive Plan Update, final approval June 13, 2002

The proposed commuter rail station at Wickford Junction is consistent with the North Kingstown Comprehensive Plan.

Under Section III – Circulation Element: The Comprehensive Plan addresses the purpose and need for a transit center at Wickford Junction, as well as the encouragement of alternative transit modes:

- "Goal C.2: Improve the availability and utilization of alternative transportation modes";

- "Objective C.2.2: Encourage the development of multi-modal transportation hubs";

- "Action C.2.2.1: Identify areas of Town where multi-modal transportation hubs can provide a range of alternative transportation options for residents and visitors";

- "Action C.2.2.2: Develop transit centers in West Davisville and Wickford Junction";

- "Objective C.2.6: Actively encourage the provision and extension of commuter rail service to North Kingstown, and other areas of South County, consistent with the 1994 Rhode Island Rail Feasibility Study".

North Kingstown Town Council Resolution: October 5, 1999

Whereas, the Town of North Kingstown supports the development of a commuter rail station at Wickford Junction; and

Whereas, the Town of North Kingstown Comprehensive Plan designates such commuter rail for the Wickford Junction commercial plaza; and

Whereas, siting the commuter rail station within the Wickford Junction commercial plaza allows for the integration of compatible uses and provides security that a stand alone commuter rail parking facility would not; and

Whereas, other sites in the Wickford Junction area, including the former Wickford Junction Rail Station, are considered unsuitable due to environmental constraints, traffic conflicts, impacts on historic districts, or impacts on Town recreation and conservation land.

Exeter Comprehensive Plan

No specific mention is made of rail transportation in the Exeter Comprehensive Plan.

Previous Studies

Rhode Island Rail Corridor Feasibility Study: November /1994

The need for a commuter rail system in southern Rhode Island was investigated through RIDOT's 1994 Rhode Island Rail Corridor Feasibility Study. This study addressed the State's need to meet its current and future needs regarding the State transportation system, improve air quality, link transportation with land use, support economic development initiatives as demonstrated by the success of the Pilgrim Partnership service.

This study looked at public transportation alternatives on the Amtrak Shore Line/NEC. Commuter rail was deemed to be the only transit technology appropriate, as neither light rail nor a bus way could coexist on tracks that carry freight service and high-speed Amtrak passenger service. Also, construction of either of these alternatives would require a prohibitively expensive, separate facility parallel to the existing tracks. In conjunction with transportation alternatives, this study also investigated potential station locations. The SCCRS conceptual plan was originally proposed to operate peak-period service from Westerly to Providence. Based on prior determinations, the SCCRS was proposed to serve the following stations along NEC mileposts:

Providence Station: The Providence Station (MP 185.1) facility was considered adequate to support the proposed SCCRS, with the exception of additional signage necessary to inform the public of its existence.

Warwick Station: The Warwick Station (MP 176.6) was proposed to serve T.F. Green Airport – one of the fastest growing airports in the country. This proposed intermodal station was proposed to incorporate platforms, shelters

and canopies for the SCCRS, as well as a station building (ticketing, waiting area, passenger amenities) for Amtrak.

East Greenwich Station: The East Greenwich Station (MP 171.9) was included in this study from an economical planning perspective and was not considered as part of the initial operating plan.

Wickford Junction Station: The Wickford Junction Station (MP 165.8) was projected to generate the highest ridership counts for the SCCRS. Improvements necessary at this location included an interlocking with a siding.

Kingston Station: The Kingstown Station (MP 158.1) and parking facilities were upgraded in 1996 by RIDOT.

Westerly Station: The Westerly Station (MP 141.3) and parking facilities were upgraded in 1998 by RIDOT. Due to this facility being the terminus for the SCCRS, a small passenger yard for overnight storage was also considered.

Final Environmental Impact Statement/ Report Northeast Corridor Improvement Project Electrification – New Haven, CT to Boston, MA (1994) This project looked at the completion of electrification of the NEC to reduce intercity train trip times between New Haven, CT and Boston, MA – the remaining segment of the NEC to utilize diesel locomotives.

South County Commuter Rail Service Executive Summary, Operations Plan July/2001

Three initial alternatives were investigated through RIDOT's *South County Commuter Rail Service Executive Summary, Operations Plan July/2001* for commuter rail service between Boston/ Providence and southern Rhode Island along the NEC. The recommended service alternative included an extension of current MBTA service between Boston and Providence that would provide for peak period trains only to southern Rhode Island, with RIPTA buses providing off-peak service. This service plan proposed to utilize the MBTA's fleet, while supplementing equipment as necessary.

South County Commuter Rail Environmental Assessment: February/ 2003

The *South County Commuter Rail Environmental Assessment* built upon previous environmental studies that addressed / remedied environmental impacts associated with the use of the Northeast Corridor (NEC) in Rhode Island. These studies were conducted in accordance with National Environmental Policy Act (NEPA) regulations for the Federal Highway Administration (FHWA) and the Federal Railroad Administration (FRA):

- **Rhode Island Freight Rail Improvement Project – Final Environmental Impact Statement (1998)** This project proposed track and overhead bridge construction/rehabilitation along a 22-mile section of Amtrak's NEC right of way including sections between Providence and Quonset/Davisville.

- **Warwick Station Environmental Assessment (1999)** As part of the 1998 Federal Transportation Equity Act for the 21ST Century (TEA 21), RIDOT proposed to construct an Amtrak and commuter rail station in Warwick along the NEC.

Based upon review of the above-mentioned Environmental Assessments (EA's) and additional environmental documentation, the Federal Transit Authority (FTA) issued a Finding of No Significant Impact (FONSI) for the SCCRS Project. RIDOT will proceed with design upon completion of a reevaluation of the EA. The reevaluation is currently being conducted to address potential private property acquisition. Potential environmental impacts identified in the SCCRS FONSI included:

- *Noise Findings:* Potential noise impacts were assessed using FTA noise assessment criteria following FTA's Transit Noise and Vibration Impact Assessment (1995). Findings demonstrated that residents of two adjacent homes could be adversely affected by noise from the proposed parking facility – during peak commuting hours.

  Mitigative Measures: Enhanced landscaping and enclosing approximately 100 feet of the northwesterly face of the garage are suggested.

- *Water Quality Findings:* The proposed station is located above the Hunt, Annaquatucket, and Pettaquamsett sole source aquifers with groundwater classified as GAA by the Rhode Island Department of Environmental Management (RIDEM).

  Mitigative Measures: The proposed storm water management system will be a closed system and connected to the existing system servicing the Plaza. Expansion of the existing system will be subject to the review and approval of RIDEM and the Town of North Kingstown. Additionally, given its proximity to a sole source aquifer, and in accordance with the Safe Drinking Water Act, the Environmental Protection Agency (EPA) must review and approve this project.

- *Land Use and Secondary Growth Findings:* The Environmental Assessment recognizes a potential for secondary growth impacts as a result of Wickford Junction Station.

  Mitigative Measures: The majority of the project elements conform to the existing Town of North Kingstown zoning, with compatible surrounding land uses. Given the uncertainty of specific impacts,

RIDOT has assured that it is committed to assisting state and local agencies in establishing effective land use, zoning policies, and regulations.

Section 2:
Assessment of Growth Potential

Introduction

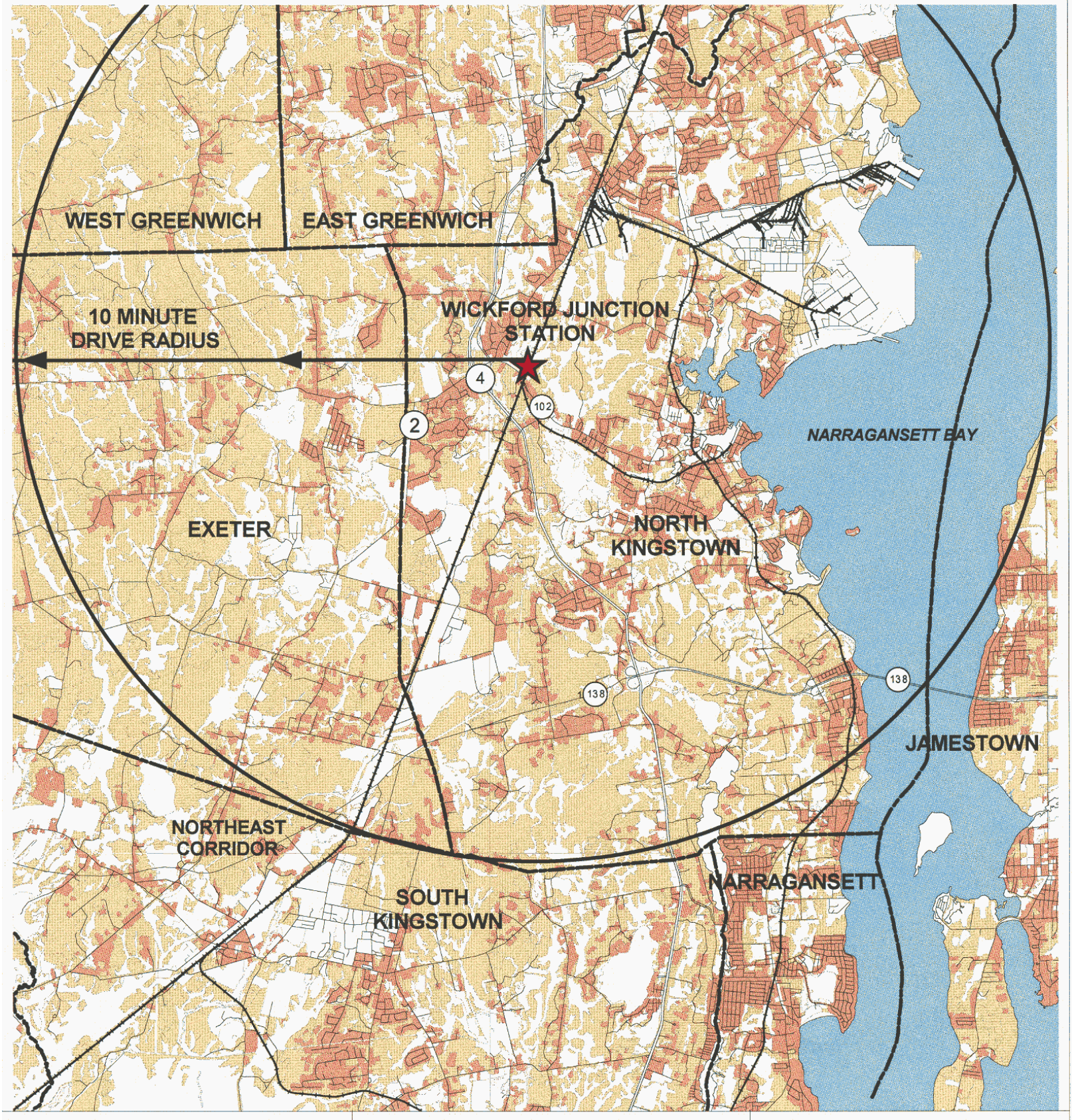
As the Rhode Island Department of Transportation (RIDOT) moves forward with extending MBTA commuter rail service south from Providence to Wickford Junction, there is the potential for increased development pressure within Washington County, particularly in Exeter and North Kingstown. An assessment of potential growth impacts within a 10-minute drive circle is included in this memorandum. This area focuses on sections of Exeter and North Kingstown indicated in Figure 2-1, recognizing that most commuters travel in the same direction as their employment destination to access transit.

This assessment includes a review of Comprehensive Plan updates and current build-out analyses, as well as 2000 Census data for all Washington County communities with projections through 2030 for both Exeter and North Kingstown (in later project stages information will be provided on the impact of commuter rail on population). Growth management strategies implemented to date by the Southeast Regional Planning and Economic Development District for the proposed MBTA Fall River – New Bedford commuter rail extension as well as the MBTA commuter rail extension to Ashland, Southborough, Westborough and Grafton are also identified as part of this memorandum. Information on changes in property value for other transit systems is also included.

Information received at the March 3, 2005 *South County Commuter Rail: An Opportunity to Shape Regional Growth* public workshop, featuring an expert panel and feedback from local planners and residents in attendance, has been used to revise population projections for 2010 with commuter rail service.

Population

The population of Washington County municipalities has increasingly grown over the last fifty years, typical of most Rhode Island communities. As new and improved roadway networks provide easier access to undeveloped areas outside the traditional urban core communities of Providence, residential construction has steadily increased in the suburban and rural areas such as Exeter and North Kingstown. In fact, Washington County is the fastest growing county, statewide. Table 2-1 includes population density information for Washington County communities in 1990 and 2000. Both Exeter and North Kingstown grew at 10.7 percent during this time period, while Washington County overall grew at 12.4 percent.



LEGEND

- Town Line
- Highway/Road
- Rail Line

Land Use

- Potential Developable Land
- Residential Areas

Figure 2-1
10 MINUTE DRIVE RADIUS

WASHINGTON COUNTY TRANSIT-ORIENTED DEVELOPMENT PLANNING STRATEGY

Washington County Regional Planning Council
RI Statewide Planning Program
Town of North Kingstown

N

0.5 0 0.5 1 Miles

RIGIS

PARE ENGINEERING CORPORATION
8 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
401-334-4100

Table 2-1: Washington County Population and Density Changes 1990 - 2000

Community	1990 Population	2000 Population	Percent Change 1990-2000	Land Area Sq. Miles	1990 Population per Sq. Mile	2000 Population per Sq. Mile
Charlestown	6,478	7,859	27.4	36.8	176	213.5
Exeter	5,461	6,045	10.7	57.7	94.6	104.7
Hopkinton	6,873	7,836	14	43.0	159.8	182.2
Narragansett	14,985	16,361	9.2	14.1	1,062.8	1,160.4
New Shoreham	836	1,010	20.8	9.7	86.2	80.8
North Kingstown	23,786	26,326	10.7	43.7	544.3	602.4
Richmond	5,351	7,222	35	40.6	131.8	177.9
South Kingstown	24,631	27,921	13.4	57.1	431.4	489
Westerly	21,605	22,966	6.3	30.1	717.8	725
Washington County	**110,006**	**123,546**	**12.4**	**332.9**	**330.4**	**371.4**
Jamestown	4,999	5,622	12.5	25.1	515.4	225.6
Rhode Island	**1,003,464**	**1,048,319**	**4.5**	**1,045.0**	**960.3**	**1,003.2**

Source: U.S. Census 1990, U.S. Census 2000
R.I. Statewide Planning

Table 2-2 presents population projections for Washington County communities between 2010 and 2030. These projections were developed by Rhode Island Statewide Planning Program and do not necessarily reflect any increased population resulting specifically from commuter rail extension. These projections do however reflect the continued popularity of Washington County for residential development. Washington County will increasingly become a suburb of Providence in future decades.

Table 2-2: Washington County Population Projections 2010-2030

Community	2010	2020	2030	Population Per Sq. Mile 2030
Charlestown	8,642	9,768	10,648	289.4
Exeter	6,452	7,039	7,496	130.0
Hopkinton	8,202	8,729	9,140	212.6
Narragansett	17,454	19,028	20,256	1436.6
New Shoreham	1,110	1,253	1,366	140.8
North Kingstown	27,449	29,065	30,326	694.0
Richmond	8,042	9,222	10,143	249.8
South Kingstown	29,841	32,607	34,765	608.8
Westerly	24,088	25,704	26,964	895.8
Washington County	131,280	142,415	151,104	453.9
Jamestown	6,027	6,609	7,064	281.4
Rhode Island	1,074,199	1,111,464	1,140,543	1091.4

Source: R.I. Statewide Planning Program

Exeter

Exeter remains a rural town with large tracts of undisturbed land and an abundance of natural resources. Under existing conditions and recent growth trends, the Town's open lands will surely be developed further, diminishing its rural character. Exeter's growth rate has exceeded projections by the Statewide Planning Program. Improved access to Interstate 95, state highways and other local roads continue to make Exeter a desirable location to live. According to the *'Town of Exeter Growth Management Report/ July 30, 2001'* Exeter is the ninth fastest growing community in the state at 10.7 percent growth in population (two and one-half times that of the State), as identified in Table 2-1. Projections for 2010 are for 6.7 percent growth from 2000 levels, as indicated in Table 2-2.

North Kingstown

Population trends in North Kingstown from 1990 – 2000 mirror that of Washington County and the region as a whole. Over a 10 percent population change increase is identified in Table 2-1 from 1990 – 2000, two and one-half times that of the state totals over the same time period. Population projections for North Kingstown represent a fairly gradual increase of 10.5 percent from 2010 – 2030, as identified in Table 2-2.

Land Use

Transportation is second only to water supply in the degree of influence it exerts on development in Rhode Island. As society continues to seek to fulfill desires of spacious living in attractive settings, we are now realizing that this sprawl development pattern also has many impacts and costs to a community. These impacts include increased auto dependency, increased travel demands and potential threats to natural resources. Transportation trends that depict Rhode Island land use patterns include(RI Statewide Planning Program, July 1999):

- State population grew only 10 percent from 1970 to 2000 while vehicle miles traveled (VMT) grew by 70 percent in the same time period;
- From 1970 to 1995 residential acreage grew from 89,000 acres to 140,000 acres, a 57 percent increase over the twenty-five year period;
- Between 1940 and 1990, the combined populations of the rural western and southern portions of the State increased by 250 percent.

In general, the trend in Rhode Island can be characterized as one of declining urban population and suburban expansion. People are consuming undeveloped land as they chose to live and work farther away from urban centers. As urban employment centers have decentralized into the suburbs, new housing tracts have followed, moving even deeper into agricultural and forested areas. Between 1960 and 2000 the rates of increase for developed land in Rhode Island increased 147 percent while population increased 17.2 percent (Grow Smart Rhode Island, December 1999). Other significant trends include a decline in agricultural land use and an increase in the protection of undeveloped land.

Exeter

Residential development represents the largest land use category (as well as the fastest growing) covering 2,007 acres (5.4 percent) of land in Exeter. The growth rate for residential development exceeded growth in all other land uses combined. Although there was a net loss of 193 acres of agricultural lands, there was an increase of 290 acres in the Orchards subcategory. State recreational facilities cover approximately 5,000 acres (13 percent) of the Town's acreage. From 1970 – 1990, 4,476 acres of forested/brushland was lost to residential development, constituting 1,124 units of housing and 2,216 new residents (Exeter Comprehensive Plan, 2004).

North Kingstown

North Kingstown is a community that conveys a 'small town feeling' to both residents and tourists. Wickford Village is the cultural center, with government and recreation-based maritime activities concentrated within this area. Other village centers are dispersed throughout the Town's countryside along with preserved farmland and open space, recent residential subdivisions and commercial development. The continued attractiveness of North Kingstown increasingly has residents concerned that future commercial and residential development will consume the rural countryside, and diminish its 'small town feeling'. The Route 102 corridor, as well as Routes 2 and 4 have been the focus of new commercial development in recent years.

Housing

The number of housing units in Washington County has increased over 14 percent between 1990 and 2000, as indicated in Table 2-3. Richmond had the highest percentage increase, an increase of 746 over this period. During this period the median income of county residents continued to outpace the state median income.

Table 2-3: Washington County Housing and Income Changes 1990 - 2000

	Housing Units			Median Income		
Community	**1990**	**2000**	**Percent Change**	**1990**	**2000**	**Percent Change**
Charlestown	4,256	4,797	+12.7	$ 36,040	$ 51,491	+42.9
Exeter	1,919	2,196	+14.4	$ 38,179	$ 64,452	+68.8
Hopkinton	2,662	3,112	+16.9	$ 36,737	$ 52,181	+42
Narragansett	8,206	9,159	+11.6	$ 35,545	$ 50,363	+41.7
New Shoreham	1,264	1,606	+27.1	$ 31,471	$ 44,779	+42.3
North Kingstown	9,348	10,743	+14.9	$ 40,419	$ 60,027	+48.5
Richmond	1,874	2,620	+39.8	$ 40,975	$ 59,840	+46
South Kingstown	9,806	11,291	+15.1	$ 36,481	$ 56,325	+54.4
Westerly	10,521	11,292	+7.3	$ 34,844	$ 44,613	+28
Washington County	**49,856**	**56,913**	**+14.2**	**$ 36,948**	**$ 53,786**	**+45.6**
Rhode Island	**414,572**	**439,837**	**+6.1**	**$ 32,181**	**$ 42,090**	**+30.8**

Source: U.S. Census 1990, U.S. Census 2000
R.I. Statewide Planning Program,
Report 106:Housing Database 2003

The percentage increase for housing units has generally outpaced the percentage increase in population for most Washington County communities in recent years. This higher increase in housing units over population reflects the national trend toward smaller household sizes. According to the Rhode Island Statewide Planning Program, the State has added two units of housing for every one addition in population between 1970 and 1995. Explanations for this include demographic trends, economic trends and more elderly persons living independently for extended periods of time.

Exeter

The majority of residential development in Exeter is characterized as medium density residential. Exeter has a large percent of mobile and manufactured homes in comparison to other South County municipalities. Prior to the inception of zoning regulations, dense residential developments constructed in the areas of Cedar Grove, Boone Lake and the two mobile home parks (Split Rock and Mobile Village) have had the potential to negatively affect the environment. The lack of public water and sewer services requires strict development controls with respect to land use densities, as well as the siting of commercial and industrial uses.

As part of a larger housing market area defined by the State as the 'Western Rhode Island Housing Market Area' (which also includes the communities of Burrillville, Foster, Scituate, Coventry, West Greenwich and Glocester) Exeter is considered the least densely settled area in the housing market area. This housing market includes several small urban areas centered on mill villages, with remaining large areas undeveloped. According to Exeter's *Comprehensive Plan*, the average priced home in Exeter is no longer affordable to the average Exeter resident. The most affordable housing in Exeter has become the mobile home.

As indicated in Table 2-3, the number of housing units increased 14 percent from 1990 to 2000 – more than double the increase statewide for the same period. Identified in Table 2-4, single-family detached homes continue to represent the most common housing unit type (82.8 percent) in Exeter, with mobile homes following (12.8 percent).

Table 2-4: Exeter Housing Stock Distribution 1990 - 2000

	1990	% of 1990	2000	% of 2000
Total # Units	**1,919**	**100%**	**2,196**	**100%**
Single-family Home	1,499	78.10%	1,818	82.80%
1 Unit attached (ex. Condo)	22	1.10%	8	0.36%
2-4 Units	69	3.60%	42	1.90%
5-9 Units	15	0.78%	34	1.50%
10 or More Units	18	0.94%	14	0.64%
Mobile Home	296	15.40%	280	12.80%

Source: U.S. Census 1990, U.S. Census 2000

North Kingstown

The majority of North Kingstown's residential neighborhoods are found in villages, older neighborhoods close to villages and new subdivisions in rural areas. Approximately 72 percent of the Town's housing stock is represented by single-family homes, as seen in Table 2-5. New home construction averaged 155 units per year over the last decade. Since 1990, only 60 units of multi-family housing were built, compared to 1,269 units of single-family housing built within the same period.

According to North Kingstown's *Comprehensive Plan*, despite relatively low numbers of existing and new multi-family units, North Kingstown has the highest percentage of affordable housing of any community in Washington County. Of 10,743 residential units, approximately 846 are permanently affordable to low- to moderate-income families.

From 1990 to 2001, 1,540 permits for new residential units have been issued (RIEDC, Community Profiles). Of these, 94 percent (1,450) were permits for single-family homes. Reflective of one of North Kingstown's smart growth strategies, most lots created since 1990 are located in cluster subdivisions (81 percent or 827 lots) or in residential compounds (19 percent or 196 lots) with common open space. The southwest corner of town has experienced the most intensive residential development since 1990, receiving 40 percent of all new housing. Areas that have experienced over 10 percent of new growth since 1990 include the areas north of Quonset, surrounding Wickford Village and the western portion of town.

Table 2-5: North Kingstown Housing Stock Distribution 1990 - 2000

	1990	% of 1990	2000	% of 2000
Total # Units	**9,348**		**10,743**	
Single-family Home	6,415	68.6%	7,775	72.4%
1 Unit attached (ex. Condo)	515	5.5%	436	4.1%
2-4 Units	1,197	12.8%	1,318	12.3%
5-9 Units	235	2.5%	313	3.0%
10 or More Units	611	6.5%	643	6.0%
Mobile Home	375	4.1%	258	2.2%

Source: U.S. Census 1990, U.S. Census 2000

Build-out Analysis

A build-out analysis is utilized to identify future development capacity based on environmental constraints, existing zoning and recent development trends. The magnitude and rate of growth of any area is generally determined by the regional and local markets, which are influenced by local growth management strategies. Build-out projections are critical to a municipality that is planning for the future. Results of a build-out analysis can be related to the effect growth will have upon a municipality's ability to deliver services while projecting the need for new or

expanded infrastructure. It can also identify potential threats to sensitive, natural systems. Projection of future population trends based upon build-out can assist municipalities in planning and budgeting appropriately based upon future needs. Build-out analyses are not a prediction of growth or of a timeframe for growth; they only represent one assessment of the potential absorption or capacity for growth, given certain parameters and assumptions. Ultimately the magnitude and the pace of growth in any area is determined by the regional and local markets which are influenced by a number of factors, including local measures such as growth caps.

Exeter and North Kingstown exhibit the capacity for future development, similar to other Washington County municipalities. Build-out is reached when every buildable lot is developed in accordance with zoning controls. A buildable lot is any lot not constrained by environmental features such as wetlands, flood plains, community/non-community wellhead protection areas, steep slopes greater than 15 percent, etc. The potential for any municipality reaching total build-out is unlikely, considering that buildable land will remain in agricultural, open-space or other passive recreational uses. Figure 2-1 identifies the available developable land within the 10-minute drive radius. Figure 2-2 identifies the existing constraints relative to Exeter's potential growth areas affected by this study.

Exeter

The Build-out Analysis was conducted as part of the 5 Year Comprehensive Plan Update of 2004. The build-out analysis for Exeter was based upon the following assumptions:

- Lot size was based upon the current zoning:

RE-2 RE-Residential	2 Acres
RU-3 RU- Rural	3 Acres
RU-4	4 Acres
CR-5 - Conservation/ Recreation	5 Acres

- Developable land was reduced by ten percent to account for new roads to serve these areas
- Wetland and hydric soil areas were removed from consideration
- A household size utilized was 2.88 persons/household
- Agricultural land was considered undevelopable land

Land in Exeter is divided into two Planning Districts:

- District I - West of the New London Turnpike.
- District II - East of the New London Turnpike. District II is located within the 10-minute drive radius focus area of the Wickford Junction Station. Sub-areas were used to identify future growth areas. Sub-areas are identified in Figure 2-2, Growth Areas and Constraints. Planning District II, the eastern half of the town, has traditionally experienced the most growth in regards to residential development.

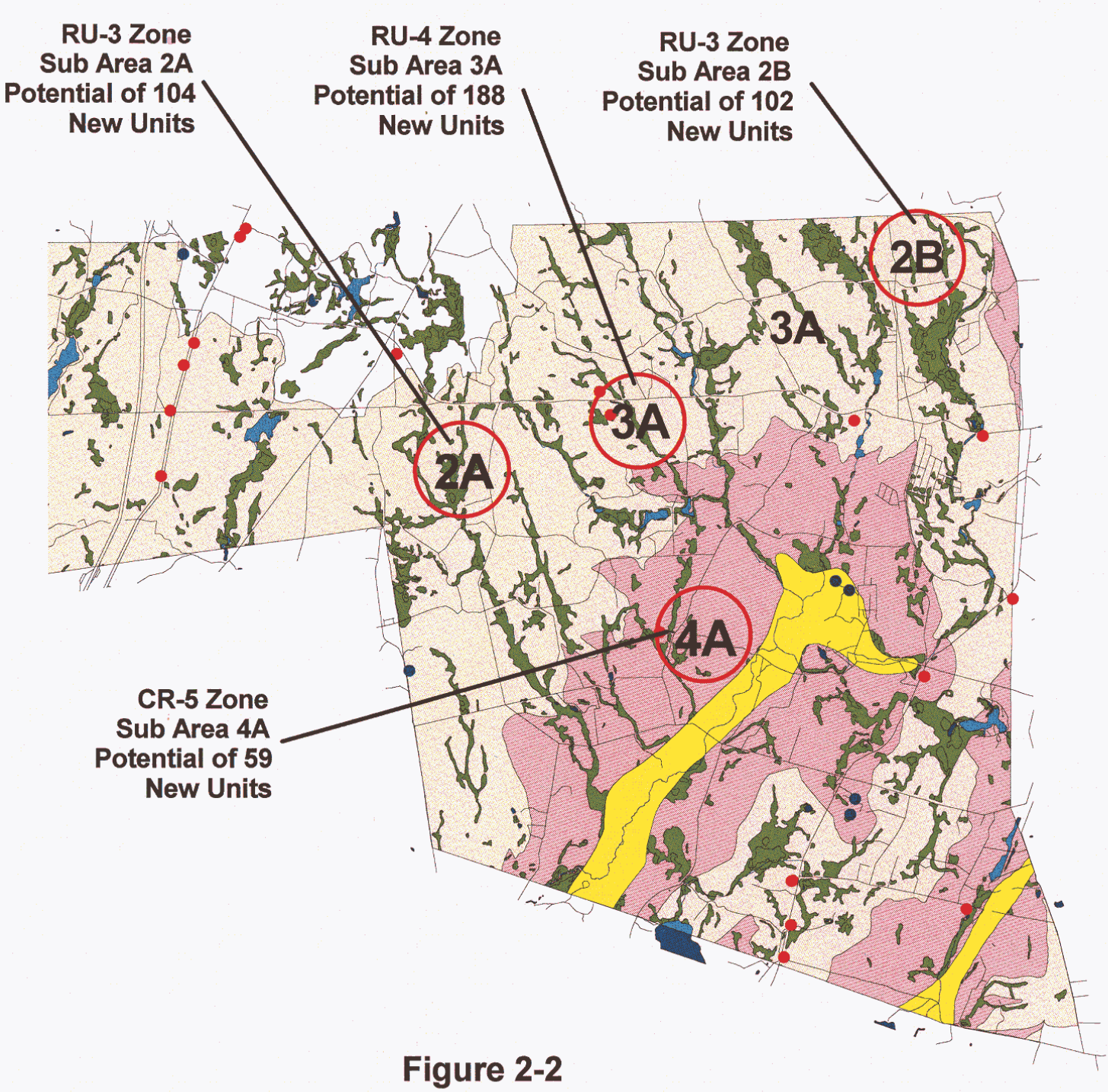


Figure 2-2

Growth Areas & Constraints

EXETER

4000 0 4000 8000 Feet

- Community Well
- Non-Community Well
- Roads
- Rivers
- Groundwater Reservoirs
- Lakes
- Ponds
- Wetlands
- Groundwater Recharge Areas
- Sole Source Aquifer

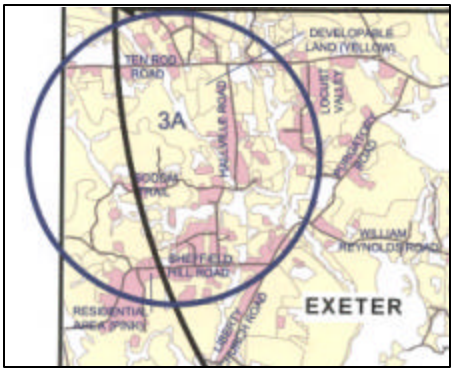
Table 2-6 presents build-out information for the sub-areas within a 10-minute drive of Wickford Junction Station. These numbers represent maximum growth potential and are not predictions of the growth impacts attributable to the planned rail service.

Table 2-6: Exeter Build-Out Analysis, Sub-Areas within 10-minute Drive of Wickford Junction Station

Sub-Area	Planning District	Zoning District	Potential New Units	Additional Vehicle Trips per Day
1A	II	RE-2	81.9*	819
1C	II	RE-2	37.7	377
1D	II	RE-2	4.6	46
2A	II	RU-3	104.2*	1042
2B	II	RU-3	102.7*	1027
2C	II	RU-3	40	400
3A	II	RU-4	188.1*	1881
3C	II	RU-4	19.7	197
4A	II	CR-5	59.9	599
Total			638.8	6,388

Source: Exeter Comprehensive Plan 2004
** Top four sub-areas with high potential for growth.*

Approximately 5,508 residential units could be constructed town wide in Exeter with 638.8 of these units potentially constructed within a 10-minute drive of the Wickford Junction Station. Based on these figures, a total town build-out population of 21,326 is projected. Population within these sub-areas could increase by 1,840. Areas with the greatest potential for new residential construction include Sub-areas 3-A, 2-A, 2-B, and 1-A.



The greatest potential for growth exists in Planning District II, in the RU-4 Zone (sub-area 3A, **Figure 2-3**) with 189 potential new units. The majority of development in this sub-area could potentially occur south of Ten Rod Road. Environmentally sensitive resources in sub-area 3A include the Queens River Basin, Sodom Brook and Fisherville Brook. The majority of development could occur south of Ten Rod Road. Ten Rod Road and Sheffield Hill Road serve as the two major east - west connectors. Liberty Church Road, Purgatory Road, Tripps Corner Road, and Halville Road provide the only north-south access south of Ten Rod Road. Widow Sweets Road lacks connecting streets in its northern leg.

Two other areas in Planning District II with high capacities for growth are the RU-3 Zone (sub-area 2A, **Figure 2-4**) with 104 potential new units and the RU-3 Zone (sub-area 2B, **Figure 2-5**) with 103 potential units north of Ten Rod Road. Sub-area 2A is characterized by severe environmental constraints in the southwest corner as indicated in Figure 2-2. Sub-area 2B also has potential environmental constraints in the southern portion.

Figure 2-4: Sub-Area 2A, Exeter

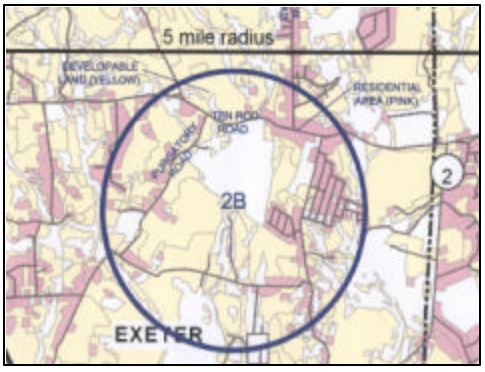


Figure 2-5: Sub-Area 2B, Exeter

Victory Highway and Widow Sweets Road serve as the only maintained roads in Sub-area 2A. Widow Sweets Road is unmaintained at its northern leg. Falcon Ridge Drive, in the northwest corner, connects Widow Sweets Road to the New London Turnpike. Gardner Road and Tripps Corner Road run perpendicular to Ten Rod Road to the south.

Ten Rod Road bisects Sub-Area 2B east to west. South Road and New Road form the western border, running south to north. Stony Lane provides the east - west route in the northern portion. Ten Rod Road divides this area into two equal portions. South County Trail and Exeter Road provide access in the southern portion of this area.

A fourth area of note with significant potential for development includes Sub-Area 4A. This CR-5 Zone (**Figure 2-6**) has 60 potential new units. The Queens River Aquifer poses severe environmental constraints in the middle of this area. The Ladd School and a potential village center is located in the northeast corner. William Reynolds Road provides the northern border, running east - west. Liberty Church Road runs north - south at the western boundary.

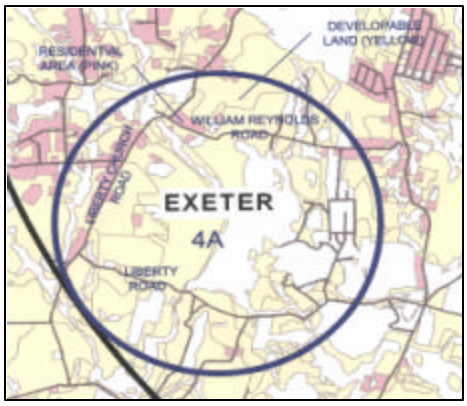


Figure 2-6: Sub-Area 4A, Exeter

North Kingstown

The 2000 Build-out Analysis was conducted as part of the Five Year Comprehensive Plan Update of 2001. This analysis, which addressed the carrying capacity of the soils, identified the potential for 1,410 new lots. This figure represents a 62 percent decrease from the original 1998 estimate which identified 3,629 lots based only on zoning and raw acreage. Figure 2-1 identifies the available developable land within the 10-minute drive radius. Figure 2-7 identifies the existing constraints relative to North Kingstown's potential growth areas affected by this study. The potential growth areas included in the 10-minute drive radius from Wickford Junction are identified in Appendix A. The build-out analysis for North Kingstown was based upon the following assumptions:

- Lot size was based upon current single family (and two-family zoning, as noted):

RR/R80, Rural Residential	80,000 S.F
PP, Pojac Point	5 Acres
NR/R40, Neighborhood Residential	40,000 S.F
VR/R20 Village Residential	
Single family:	20,000 S.F.
Two-family:	40,000 S.F.
VLDR/200, Very Low Density Residential	200,000 S.F.

- LDR/120, Low Density Residential 120,000 S.F.

- Tax records and property classification codes were used to identify parcels on plat maps

- Carrying capacity was factored in the tabulation

- The Town rezoned many parts of town in 1998, resulting in raised minimum zoning requirements, while lowering overall densities

According to the 2001 build-out analysis, over one thousand potential new dwelling units are projected for the area included in the 10-minute drive radius from Wickford Junction. These numbers represent maximum growth potential and are not predictions of the growth impacts attributable to the planned rail service. Of the 140 plat maps represented within the 10 minute drive radius, nine

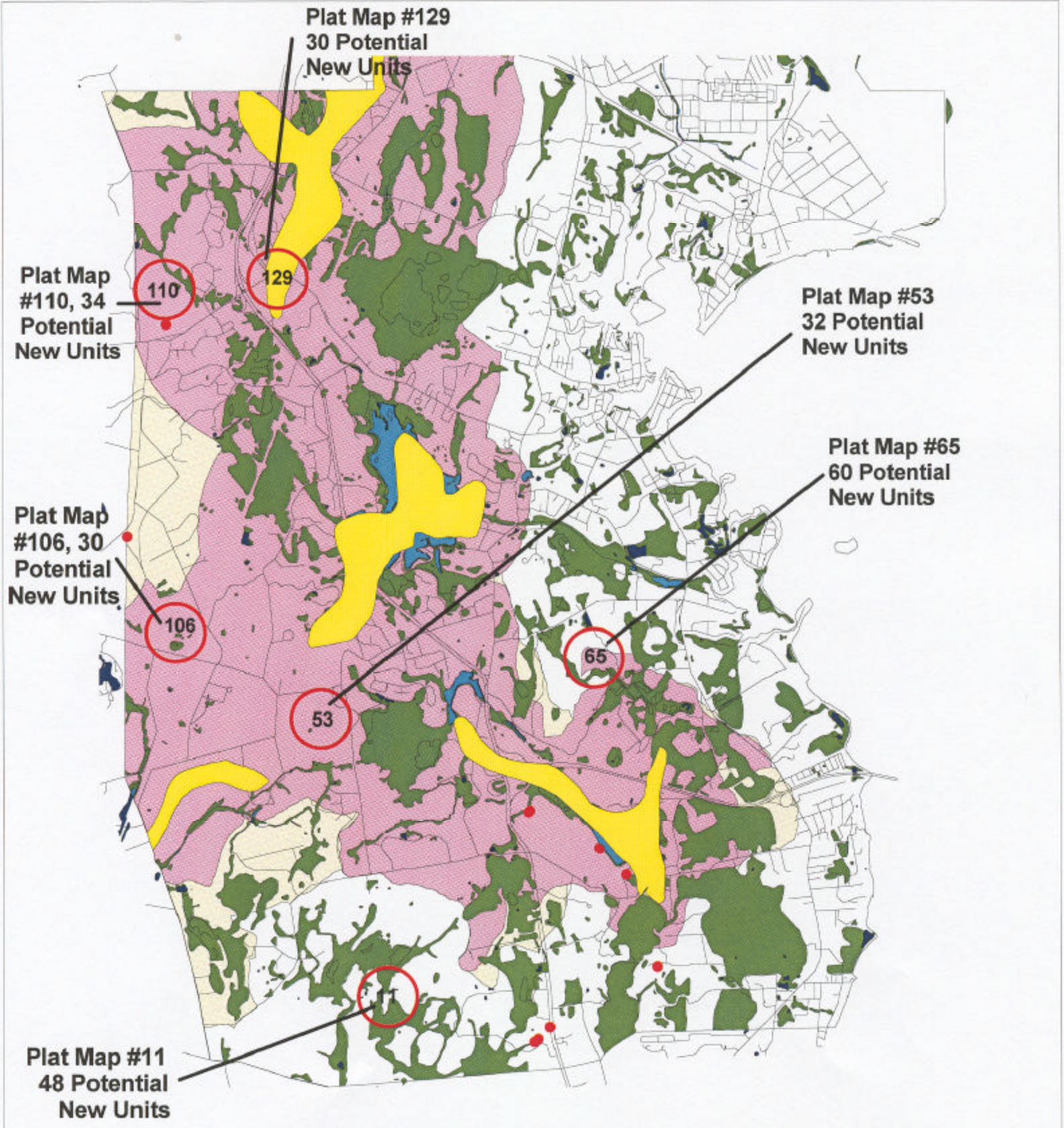


Figure 2-7

Growth Areas & Constraints

NORTH KINGSTOWN

N

6000 0 6000 Feet

- Groundwater Reservoirs
- Lakes
- Rivers
- Community Wells
- Non-Community Wells
- Ponds
- Wetlands
- Town
- Roads
- Groundwater Recharge Areas
- Sole Source Aquifer

with the highest potential growth have been identified in Table 2-7 (information on additional plats is presented in Appendix A). These projected numbers are likely to be reduced, as a significant portion of these properties are designated as preserved open space by the state or local subdivision covenants or are stable uses such as a nursery or golf course. Development in areas with lower projected potential growth is most likely to occur as in-fill development.

Table 2-7: North Kingstown Build-Out Analysis, Sub-Areas within 10-minute Drive of Wickford Junction Station

Plat Map No.	No. of Potential Units	Notes
#65	60	Land locked, no frontage.
#66	15	
#67	20	
#11	48	Portion of land used as a nursery.
#12	15	
#110	34	
#53	32	
#129	30	
#106	30	Portion of land used as a turf farm.
Total	284	

Source:North Kingstown Build-Out, Comprehensive Plan, 2004.

The greatest potential for growth within the 10-minute drive radius from Wickford Junction is located within Plat 65 (60 potential new units) in the south section of town (**Figure 2-8**), south of West Allenton Road and east of Route 1.

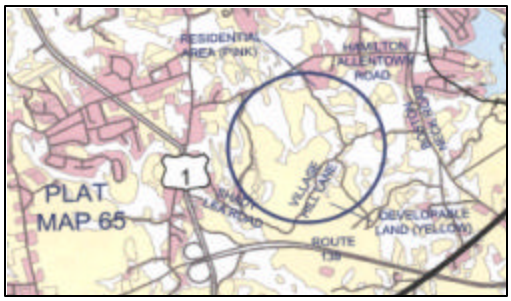


Figure 2-8: Plat 65, North Kingstown

Plat 11 in the southernmost section of town projects 48 potential new units (**Figure 2-9**). A substantial portion of the vacant land in this plat is currently developed as a nursery.

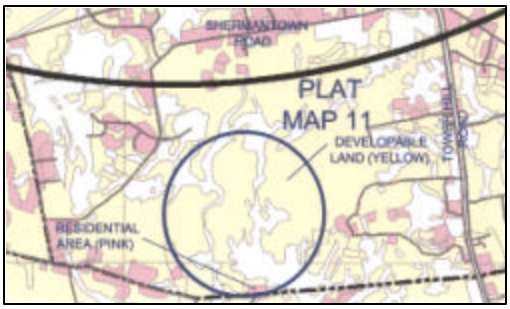


Figure 2-9: Plat 11, North Kingstown

Plat 110 in the northwest section of town projects 34 potential new units (**Figure 2-10**). The majority of this vacant space is currently utilized as a golf course.

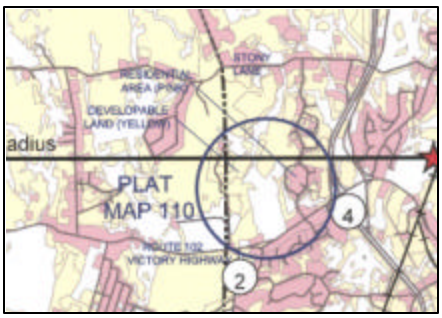


Figure 2-10: Plat 110, North Kingstown

Plat 53 in the southern central section of town projects 32 potential new units (**Figure 2-11**).

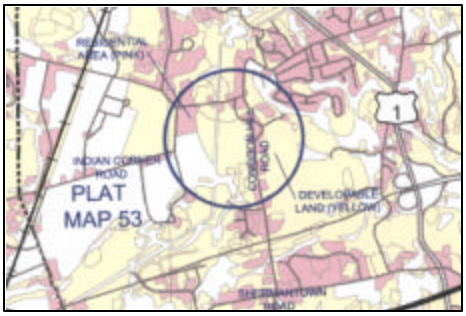


Figure 2-11: Plat 53, North Kingstown

Plat 129 in the northwest section of town (**Figure 2-12**) and Plat 106 in the western section of town (**Figure 2-13**) both project 30 potential new units each.

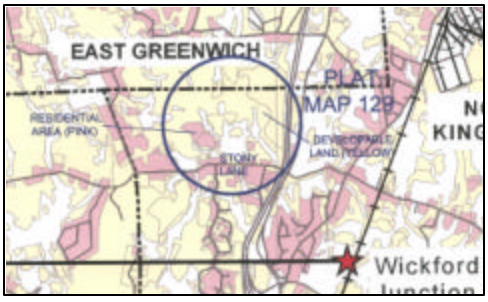


Figure 2-12: Plat 129, North Kingstown

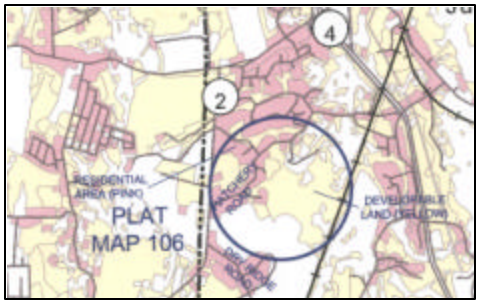


Figure 2-13: Plat 106, North Kingstown

Similar Projects

Information on two similar MBTA commuter rail projects is presented as examples of what service is offered and how communities have prepared for the service.

MBTA New Bedford – Fall River Commuter Rail Extension

The MBTA is proceeding with initiatives to extend Boston commuter rail service south from Stoughton to New Bedford and Fall River, Massachusetts. Environmental permitting has been completed and design and construction are underway. Train service to New Bedford and Fall River is expected to begin by the end of 2005.

The project includes construction of track, bridges, grade crossings, intersection improvements, eight new commuter rail stations, and two new train layover facilities. An example of the new station stop is illustrated in **Figure 2-14**. This service will provide 16 daily roundtrips (eight round trips to New Bedford and eight round trips to Fall River) and serve approximately 4,280 new inbound riders daily. The Stoughton Line alternative was selected because it met the MBTA's Service Delivery Policy Criteria (Span, Frequency, Loading, and Schedule Adherence), and was the most cost effective alternative.

MBTA Commuter Rail Station

Project status to date includes completion to the thirty percent design phase for the area north of Cotley Junction and one hundred percent design phase for the area south of Cotley Junction. The replacement of four bridge superstructures was completed in December 2000. Removal and replacement of three additional bridge superstructures began in spring 2002. Certificates from the Secretary of Environmental Affairs for the Draft Environmental Impact Report (DEIR) and Supplemental Draft Environmental Impact Report (SDEIR) were received November, 1999 and November, 2000 respectively.

The Final Environmental Impact Report (FEIR) was approved in August, 2002. In the scope for the FEIR, the Secretary of Environmental Affairs required the MBTA to establish a Task Force to assist communities with the environmental and growth impacts of the project. The MBTA has worked with the Southeastern Regional Planning and Economic Development District (SRPEDD) and the Old Colony Planning Council (OCPC) in developing the Task Force. SRPEDD plays

a lead role in managing the Task Force. In an effort to advance the project, the MBTA, SRPEDD and OCPC entered into an Interagency Agreement in 2004 to revitalize the Task Force with funding appropriated for assistance from a consulting firm. To date the Task Force has held two meetings.

At the first Task Force meeting held in October 2004, Dennis DiZoglio of MBTA presented 'Lessons Learned' about commuter rail and land use planning. Lessons learned include:

- Transit generates development;
- Communities favor locating stations outside the core (initially);
- Downtown locations use transit as a catalyst for redevelopment.

The second Task Force meeting held in December 2004, featured a presentation on the background and history of the proposed commuter rail project. Items reviewed include:

- Ridership and cost projections;
- Number of trains;
- Proposed station locations based on the FEIR.

The proposed Task Force Work Program was also reviewed. Due to a lack of funding Task 1 – *Regional Impacts via Case Studies,* may be dropped by the MBTA. Task 2 – *Old Colony Line Changes in Land Use and Demand,* impacts on school systems data was requested by the Task Force. Under Task 3 – *General Community and Regional Recommendations*, the Task Force agreed that alternative financing scenarios should be explored as a growth management tool and to create new investment areas around stations. A third meeting was held in February 2005, meeting minutes have not yet been posted.

MBTA Commuter Rail Extension Ashland-Southborough-Westborough-Grafton

Commuter rail service was extended west of Framingham in 1994 with service to Worcester. Service was expanded to Grafton in 2000. The MBTA has since expanded service on this line with three additional commuter rail stations in Ashland, Southborough and Westborough. Initially, the Framingham line served approximately 9,000 passengers daily. With the addition of the four new stations, the MBTA ridership on this line is exceeding 11,100 passengers daily. Commuter service is offered both weekday and weekends. Weekday service includes five inbound trains from Worcester: three AM trains; one mid-day train; and one PM train. Outbound trains from Boston to Worcester include: two AM trains; one mid-day train; and seven PM trains. Weekend service (Saturday and Sunday) includes five inbound and five outbound trains. Parking rates for all four stations averages $2 per day. Fares range from $1.25 to $6, depending on the number of zones traveled.

Historically, rail stations were located in downtown areas of most communities. Due mostly in part to grade crossings and congestion, many stations were

relocated outside of downtown areas. Grafton Station service began in February of 2000. The Grafton Station is located in the MBTA Zone 8, at the intersection of Pine Street and Route 30 (Westborough Road). The site, formally State property, has been redeveloped as an office park. The Grafton Station includes 373 parking spaces for commuters.

Westborough Station service began in June of 2002. The station site is located within an area zoned for industrial use at the intersection of Smithville Parkway and Fisher Street. The station also includes similar amenities as the Southborough Station, with 306 parking spaces for commuters. Westborough is located in MBTA Zone 7.

Southborough Station service began in June of 2002. The Southborough Station is located in MBTA Zone 6 at the intersection of Route 85 and Southville Road in the southern section of town. The station is convenient to Hopkinton, I-495, and the Massachusetts Turnpike. Facilities include 800-foot platforms, canopies; benches, newspaper vending machines, safety systems warning of approaching trains, and 364 parking spaces for commuters.

Ashland Station service began in August of 2002. It is located in the MBTA Zone 6, off Route 135 on Pleasant Street, west of the high school and downtown. There are 678 parking spaces provided for commuters.

Rail Impacts on Housing Values

In general, proximity to rail has indicated positive impacts on property values based on sales prices of single-family homes, apartment rents, and median home value. The relative impact of rail transit can be affected by several factors, and can produce varied results based upon the character of the neighborhood. The relative increase in accessibility facilitated by new transit investment is the primary factor regarding increasing property values. Most studies indicated that the positive effects of rail transit on property values were most felt within a very limited distance from transit stations, generally one-quarter mile to one-half mile. Pedestrian connections and accessibility are important determinants in property value within a half mile of stations (American Public Transportation Association Transit Resource Guide, Number 1-February 2003).

Numerous national studies have been conducted to document the effect of transit availability on property values. The strongest corollary for increased value is related to municipalities where a high commuter cost, congestion, or decreased accessibility is positively affected by new transit service. Washington County does not currently exhibit these conditions (compared to more densely developed and congested urban communities) although congestion conditions are increasing on Routes 1, 4, and I-95. Washington County, especially the Wickford Junction area served by Route 1, Route 4 and I-95, is generally afforded a relatively high level of accessibility to both Providence and Boston via the existing highway network.

Office property has demonstrated an increase in value nationally when transit serves to improve accessibility for workers. The proposed MBTA schedule to Wickford Junction Station will not serve a "reverse commute." The impact on the value of local office property will therefore be negligible.

Retail property adjacent to Wickford Junction Station, including Wickford Junction Plaza and existing and proposed commercial development along Route 102 can expect to increase in value as commuter rail passengers patronize local businesses during the evening commute.

Between 1995 and 2001 and after gaining MBTA service, single family housing prices in Massachusetts increased overall by two-thirds, while nearly doubling in nineteen Massachusetts communities. In Grafton home values increased 76 percent from $161,125 in 1998 to $284,250 in 2003, partly in response to the addition of commuter rail service in 2000 (The Boston Globe, January 12, 2003).

Public Workshop – March 3, 2005

A public workshop was held at the North Kingstown Senior Center on March 3, 2005. Information was presented on the assessment of commuter rail advantages and land use, housing, and build-out for the 10-minute (5-mile) drive circle around Wickford Junction Station. A panel of experts provided information on the state's commitment to rail transportation, smart growth initiatives, Exeter development patterns, real estate demand, and commuter rail experience in Grafton, Massachusetts. The following summarizes key points made by the speakers.

Expert Panel

George Johnson, Assistant Chief – RI Statewide Planning
The State views commuter rail as an important amenity for the region and State as a whole, as an important transportation investment. It is part of the State's long-range plan, with hopes to unify the state. It is an important alternative to single-occupancy vehicle use, and for the future mobility in and around South County. Transportation corridors are nearing capacity: Routes I-95 in Warwick has 175,000 cars per day, and Route 4 has 95,000 cars per day. Route 1 in South County has seen traffic quadruple in the last 40 years. The extension to T.F. Green Airport is an important component of the State's economy.

Enhanced access will surely spur growth. It is important that communities have growth management techniques in place. Rail is an amenity and the reinstitution of commuter rail service will bring growth that is difficult to quantify.

While we are using Transit Oriented Design (TOD) as the name of this study, it may be a misnomer. Wickford Junction is not being looked at for TOD in the sense that the term is understood in other parts of the country. We are **not** looking at 3,000 residential units or high-rise office towers; we **do** want to promote techniques that can help manage growth that may come with the rail. We want to encourage development that will support the investment in the rail service, but

that is a good fit and makes the station an amenity for the community. For example, good pedestrian and bicycle connections to the station can help with traffic. We are disappointed to hear that the Town just voted against continuing planning for a bike path that would connect Wickford to the station.

Rhode Island has invested significantly in rail/infrastructure improvements with construction of the third track, which will facilitate commuter rail, the layover facility in Pawtucket and through studies and design to date.

Sheila Brush, Director of Programs – Grow Smart RI

Smart Growth is well-planned land use that generally guides residential/commercial growth towards 'centers.' It brings with it neighborhood livability, better access to services, walkability/bikability, builds on investments already in place, preserves open space, expands economic opportunities, and lowers costs – both public and private.

Sheila Verdi, Realtor – Post Road Remaxx and
Julia Techentin, Realtor – H. D. Randall Realtors

Washington County is very attractive to new or perspective residents. Quality of life, the bay and ocean, the short commute to Providence is a great attraction. The village concept of Wickford Point is also a selling point. There is a scarcity/unavailability of homes. There are few condos available, and a good market for them.

There is a demand for an upscale condo-type development in the vicinity of Wickford Junction. Any housing type would be welcome, as North Kingstown has so much to offer.

As RI housing prices have increased in recent years, the attraction of the area to Massachusetts workers looking for affordable housing options has slowed. While the sales price may be lower in RI, higher local property taxes in RI may result in similar monthly housing costs

Scott Millar, Exeter Planning Board

The desirability of Exeter is based on its varied assets. Exeter has many acres of 'border land forests' – one of the last and largest unfragmented forest, the Queen's River – a large aquatic ecosystem, and rural character /landscape. People still make a living from farming the land in Exeter (or at least provide a good supplement). People can live in a rural community, yet still commute 25 minutes to Providence for work.

Even with more stable rates of residential and commercial construction this past decade, compared with previous years, the Planning Board continues to be busy. The Exeter Planning Board has had the most and largest development projects under review ever. More recently, a 300,000 square foot strip mall / commercial development project was approved along Routes 2 and 3.

Over the past decade residential and commercial construction has been incremental, not overly dramatic. Agricultural lands have been preserved along the Route 2 corridor, although Bald Hill Nursery may soon be lost to development. Deed restrictions on new development have raised conflicts in values between established and new residents. There has been a noticeable increased demand on services.

Last year the Exeter Planning Board and the former Town Council had discussed a conceptual plan for a compact growth village center outside the former Ladd Center on Route 2. URI is currently completing a groundwater study to determine an appropriate rate or density of development for the area. Newly elected Town Council members aren't as supportive of the growth center or the proposed commuter rail station as the former Town Council was.

The Route 2 corridor could see growth through development, as the agricultural lands are not protected from residential development.

John LaPoint, MBTA Advisory Committee Member – Grafton, MA

The Grafton Station was formerly a State institution covering almost 1,400 acres. The new commuter rail station and was used as an economic development tool for a declining area, along with a new Veterinary School as a $3 million engine for the development of office space/industrial park. Ridership from the Grafton commuter rail station project has exceeded expectations. Home values have increased and local politicians are clamoring for more trains as ridership is near capacity - a rather unique situation, as Millbury and Westborough (towns adjacent to Grafton) fought to keep the commuter rail stations out of their areas. Growth in the area (and west) is considered fueled by access to the Mass Turnpike, I-495, and Boston workers and not necessarily by commuter rail stations. Growth has also been fueled by availability of lower priced property (compared to metro Boston) in areas along these transportation routes. Marlboro, Milford, and Westborough are now considered 'Edge Cities.'

In general, the Commonwealth Development Corporation is looking at Smart Growth, with many TODs planned for MA. Every town on the Worcester rail line is looking at 200 to 400 unit TODs centered on the train stations. MA and RI need to collaborate more to capture tourism opportunities associated with the Blackstone Valley National Heritage Corridor. Economic development in Grafton's Centrex Industrial Park could not have happened without the station. JobCorp and the Tufts Veterinary School have assisted by anchoring the industrial park.

Although many are very supportive of commuter rail service in Grafton, not everyone in town feels that the town has changed for the better since commuter rail service was restored. The average home price went from $350,000 to mid $500,000. Rents for a 2 bedroom apartments went from $650-750 to $1,000-1,200. Lessons learned include – if the train comes and you have available land for development, growth will happen. Grafton, MA is very similar to Wickford,

RI without waterfront, both are classical New England towns. Grafton has received mitigation funding for traffic lights from the MBTA.

Public Comment

Attendees included planners and members of the North Kingstown Planning Commission and Exeter Planning Board and the general public. Attendees raised the following key points:

- Local roads such as Old Baptist Road are already congested. Increased development and use of this road to access the station will increase congestion. Local bus service is needed to provide connections to the station.

- Route 4 was the impetus for growth in South County. Commuter rail will just provide a commuting option for residents who already live here. Rail service will help improve air quality.

- To make TOD work, transit options (including walking, bicycling, and bus service) are needed to reduce vehicle access to the station. Intermodal connections are important; bike paths on arterial roads aren't as good as off-road bike paths for regular use. A regional bus system is needed to bring commuters to the station without their cars.

- Members of the North Kingstown Planning Commission who were present indicated that they do not consider Transfer of Development Rights (TDR's) as a viable tool for managing growth. Only marginal land remains for development or preservation of open space.

- Reverse commute service should be considered to Davisville, to reduce traffic as Quonset Point grows. A station at Davisville would be an economic engine for development. Wickford Junction does not need or want an impetus for more economic development.

- Weekend and evening service should be provided to encourage use of train service for evening events in Providence. Weekend service could provide access to tourists. Connections to the Martha's Vineyard ferry from Quonset or to South County beaches could help reduce traffic on Route 4.

- Wickford Junction should not become the Route 128 station of Rhode Island (a major parking garage for Amtrak and MBTA commuter service on I-95 in Canton, MA).

- Transit Oriented Development is not feasible at Wickford Junction because all developable land is spoken for and the groundwater overlay district restricts density (no municipal sewers are available in this area).

- If all the proposed stations along the Northeast Corridor (NEC) were constructed, collectively, they would alleviate pressures on Wickford Junction. Washington County communities should lobby for commuter rail service the way East Greenwich and Pawtucket are doing.

Conclusions

The following conclusions were reached at the March 3, 2005 public workshop regarding the potential growth impact on local communities from MBTA commuter rail service from Wickford Junction Station to Providence and Boston (service is anticipated in 2007):

- Commuter rail will serve existing residents and attract others. Traffic congestion is not so great at present that people are searching for alternative means of transportation; but increasing travel demands could outstrip the capacity of the region's arteries, causing more commuters to seek other options in the future. The schedule may not be attractive for Providence workers since southbound departures are late in the day.

- Service to Boston will be attractive for current residents. Although this service may be expected to attract Boston workers who are looking for more affordable real estate, the price differential between Massachusetts and Rhode Island is narrowing and with local property tax considerations may not be as attractive as it seemed in the past.

- Both Exeter and North Kingstown are attractive Washington County communities. All types of housing units are in demand, including high-density condominiums and townhouse apartments.

- With the availability of commuter rail service, home values may be expected to increase as the demand for residential units exceeds the available supply. Development pressure will be especially intense in eastern Exeter and southern North Kingstown, areas within a 10-minute drive of the Wickford Junction Station.

- Although most new construction is for single-family homes, there is a demand for all types of housing including higher density condominiums and apartments.

- It is critical for Washington County communities to have growth management strategies implemented before this increase in growth/demand results.

Exeter

- A growth center is proposed by the Town of Exeter outside the Ladd Center on Route 2. URI is completing a study on the appropriate density of development.

- The largest potential growth areas are north and south along Ten Rod Road (Route 102) in Exeter. Hundreds of acres of agricultural lands could also be consumed by residential development, especially along the Route 2 corridor in Exeter.

- Residential zoning requires a 2-acre to 5-acre lot in Exeter. No municipal sewer or water service is provided in town. No conservation or cluster zoning is provided for increased lot density.

- Environmental constraints such as the Queen's River Aquifer, Sodom Brook, and Fisherville Brook as well as limited connecting/maintained roadways will likely concentrate growth in specific areas in Exeter.

North Kingstown

- A growth center is proposed in North Kingstown on Post Road. Neither the Exeter nor North Kingstown growth centers are in walking distance of the station.

- Wickford Junction Station is located in the groundwater recharge and wellhead protection overlay district. Average residential density shall not exceed one dwelling unit per two acres. Typical high-density transit oriented development will therefore not be appropriate for Wickford Junction.

- Growth may be anticipated in the top seven areas identified in the build out analysis, concentrated in the southern and north-northwest sections of town.

- Without building caps in North Kingstown, new residential development will likely continue to meet residential demands.

2010 Population Projections With Commuter Rail

Based on information presented at the March 3, 2005 public workshop, it is anticipated that Washington County will continue to be the fastest growing in Rhode Island. The county is popular for a host of reasons, only one of which would be the potential for commuter rail service to Providence and Boston.

Rhode Island Statewide Planning Program population projections are presented on page 3 for 2010, 2020 and 2030 for Washington County communities. By 2010 it is anticipated that growth above Statewide Planning Program's projections would not be significant, based on the following:

- Service is not anticipated to begin before 2007 (according to information received from RIDOT in December 2004). Initially the demand for housing would be met by the existing real estate market. As the supply of housing diminishes, the cost of housing could increase.

- There generally has to be a major incentive to lure commuters out of single occupant vehicles. The incentive may be cost (to avoid a toll), avoidance of congestion, or increased free time during the commute. Although congestion on Route 4 and I-95 in Rhode Island is increasing by local standards, it is not as congested as I-93 and I-95 in metropolitan Boston.

Although there is an incentive to avoid the Boston commute by single occupant vehicle, there is not as great an incentive to find an option to the Providence commute.

- The lack of flexibility in the proposed schedule to Providence may limit this attraction for Providence workers. The schedule may be more attractive for Boston workers, despite the 1½-hour commute (3-hour daily total).

- Adequate seamless mass transit must be available at Union Station in Providence to provide access to major employment destinations. MBTA commuter rail service to Boston, together with the extensive subway, bus, and bus rapid transit network serving both South and Back Bay Stations in Boston, provides the necessary seamless connections that improve the incentive to use commuter rail.

- With the increase in housing costs in Washington County over the past several years, this area is less attractive to metropolitan Boston workers than it may have been in the past. Actual monthly costs may not be lower in Rhode Island with local property taxes that exceed the tax rate in many Massachusetts communities. With added transportation costs for commuter rail, the cost incentive for Boston workers to relocate to Washington County may be diminished.

RI Statewide Planning Program projections for 2010 were analyzed for both Exeter and North Kingstown in light of recent trends in residential construction. The state projections were developed using cohort survival and have been vetted with the communities. In accordance with the scope of work, PARE has prepared a "more likely" population projection for 2010 utilizing Exeter and North Kingstown build-out information, the average number of residential building permits issued for the past five years, and the average number of persons per household for single and multifamily residential units (based on the 2000 Census),. This number would reflect the continued popularity of both communities for new residential construction, due only in small part to the availability of commuter rail service.

While developed from a single, short-term induce, 2010 projections based upon local building permit trends are provided in Table 2-8 to offer an indication of additional growth (above the State's official projection) that could occur with the implementation of commuter rail service to Wickford Junction. These building permit trend-based projections are 5 percent above those developed by the State for Exeter and 6.2 percent above those developed by the State for North Kingstown. If growth continues at pace with the last five years, and, with the additional desirability afforded by commuter rail service, these higher projections are presented as more likely predictors of short-term (through 2010) growth than the State projections, which reflect longer trend lines and do not explicitly include the effect of commuter rail service.

Table 2-8 presents Exeter and North Kingstown information for the 2000 Census, average number of building permits issued for the period 2000 to 2004, average

number of persons per all households, number of persons per family households (to reflect construction of larger multi-bedroom homes in recently constructed subdivisions), and percentage distribution of family households. This information was used to determine the potential lots developed between 2000 and 2010, and total projected population for 2010 (based on a continuation of 2000 family and non-family household distribution and persons per family and non-family households). Figures presented in Table 2-8 provide a high range alternative in contrast to the official published State figures, which are lower. It is recognized that short term building permit trend data are not generally a highly reliable source of forecasts, and that the trend towards construction of larger, multi-bedroom homes (absent other substantiating data such as school enrollments, etc.) should not necessarily be seen as justifying the conclusion that there is a corresponding trend towards larger households or higher population.

Table 2-8: 2000 Population, and 2010 Projected Population Ranges, Exeter and North Kingstown

	Exeter	North Kingstown
2000 Population	5,461	26,326
Residential building permits, average per year 2000 to 2004	22 units (growth cap)	97 units
Average persons per household	2.77	2.57
Average persons per family household	3.15	3.03
Family households as percentage of all households	76.4 percent	72.0 percent
2010 Population Projections - Building Permit Trends		
Residential lots developed between 2000 and 2010	220	970
Population based on building permit trends and household size	6,774	29,139
2010 Population Projections - RI Statewide Planning Program	6,452	27,449

Based on the build-out analyses conducted in Exeter and North Kingstown as part of each community's comprehensive planning process in 2000, a total of 992 additional lots could be developed for residential use in Exeter and 1,410 additional lots could be developed for residential use in North Kingstown. Assuming a continuation of building permit trends (and assuming that the Exeter-West Greenwich growth cap which is tied to school district capacity remains in effect), build-out will be reached in Exeter in 2043 and in North Kingstown in 2013.

2010 projections based on building permit trends offer a more likely projection of population than those developed by the RI Statewide Planning Program, one which is reflective of potential population with implementation of commuter rail service. Projections based on building permit trends are 5 percent above those developed by the state for Exeter and 6.2 percent above those developed for North Kingstown.

Conclusion

As RIDOT moves forward with extending MBTA commuter rail service south from Providence to Wickford Junction, there is the potential for continued development pressure within Washington County, particularly in Exeter and North Kingstown. Development pressures will be especially strong in the area within a 10-minute drive circle of Wickford Junction Station in eastern Exeter and southern North Kingstown.

Currently 1,638 buildable lots are located within the 10-minute commute of Wickford Junction Station, including 638 lots in Exeter and 1,000 lots in North Kingstown. Based on a continuation of building trends in these two communities, the following population may be anticipated in 2010:

- Exeter - 6,774 (a 24.0 percent increase in 2000 Census population)
- North Kingstown - 29,139 (a 22.5 percent increase in 2000 Census population)

Although the impact of the availability of commuter rail service will be minor through 2010 (with service anticipated to begin in 2007 at the earliest), it is important that Washington County communities take initiatives to guide this growth and limit future development in accordance with the comprehensive planning process.

Section 3:
Transit-Oriented and Transit Supportive Development

Introduction

The second component of the transit-oriented development planning strategy for Washington County includes two sections. The first presents definitions of transit-oriented and transit supportive development, and assesses its application to Wickford Junction and other Washington County towns including Westerly. Transit supportive development is outlined for areas not appropriate for transit-oriented development. An example of zoning for transit-oriented development is also presented.

A range of growth management strategies is presented in the second section. Strategies are outlined that would be suitable for implementation by Washington County communities concerned with the potential for growth resulting from commuter rail service.

Transit-Oriented Development

Transit-oriented development (TOD) and transit supportive development (TSD) land use planning creates an environment around a transit stop or station that supports pedestrian activities and transit use by providing for a mix of land uses (e.g., residential, retail, commercial, parking, etc.) in a safe, clean vibrant and active place. This density of development encourages local residents to decrease their dependence on driving by increasing walking, combining trips, and increasing use of commuter rail and Rhode Island Public Transit Authority (RIPTA) bus service.

Transit-Oriented Development Benefits

Transit-oriented development offers numerous benefits:

TOD is sustainable development. With concern for protecting resources not just for us but also for future generations, transit-oriented development offers an important tool to maximize development in already developed areas while protecting greenfields.

TOD improves the commercial tax base and generates customers and development opportunities. Local retailers and other businesses benefit from a density of development where customers live within walking distance. With increased visibility from transit service, local retailers benefit as transit passengers either stop on the return home or return later.

TOD improves residential property values. Residents may be willing to pay higher housing costs to avoid the inconvenience and expense of single occupant

Access to rail improves property values.

vehicle (SOV) commutes. Residents will also have improved access to Providence and Boston for school, medical, entertainment and other non-work trips.

TOD reduces traffic volumes on local streets and highways. By diverting SOV traffic to transit, congestion is reduced and air quality is improved on I-95, Route 4, and other routes.

TOD revitalizes neighborhoods. Increased pedestrian traffic, mixed development, and open space create dynamic human scale neighborhoods. Properties that are ripe for redevelopment or are underutilized, especially along former rail yards, present revitalization opportunities.

TOD expands housing diversity and affordability. Higher densities typical of TOD provide opportunities for a mixture of housing unit sizes and types, thereby enabling the production of more diverse and affordable housing.

Transit-Oriented Development Key Features

The following eight features typically define transit-oriented development. A transit-oriented district is generally accepted as the area within a half-mile walk of a transit station such as the proposed MBTA station at Wickford Junction or the Amtrak stations in Kingston and Westerly.

Mixed Use

Historic Westerly Station reflects community character

Commuter-oriented convenience is at the heart of the TOD mixed-use feature. By combining residential use, access to goods and services, and entertainment options, residents will be encouraged to leave their cars behind. Joint use of residential and commercial parking helps reduce the need for expansive parking lots. Buildings frequently combine first level retail shops with upper level residential use to provide a vibrant community both during the day and into the evening. Businesses such as cafes, banks, post offices, dry cleaners, bookshops, bike shops, convenience stores, florists, hair dressers/barber shops, and day care centers are some of the many uses that contribute to a vibrant village center. Municipal departments and government offices also contribute to

the services offered. All local employees are offered the convenience of using improved transit as a commuting alternative.

Moderate to High Density Development

It is important to have moderate to high residential density, together with appropriate mixed use as outlined above, to support transit alternatives. Dense residential development close to transit is generally surrounded by lower density neighborhoods that are connected to the station or transit hub with sidewalks and bike paths. Table 3-1 outlines a range of densities required to support transportation alternatives in the metropolitan Boston area.

High Density Housing – Berkeley Commons

Multifamily developments including apartments and condominiums and more traditional two- and three-family homes in in-town locations offer the density required to support rail. Small lot residential development, represented by neighborhood and village zoning in North Kingstown, would be appropriate in the outlying areas of the transit district (a quarter to half mile from the station). Generally density of residential development recommended for transit-oriented development requires municipal sewer and water service. Areas that are served by individual sewage disposal systems (ISDS) or are located in a groundwater protection zone are generally not suitable for transit-oriented development.

Table 3-1: Density of Use and Transportation Compatibility

Residential Use	Commercial Use	Transportation Compatibility
1 to 6 units per acre	2+ employees per acre	Supports cars, carpools, vanpools, and bike paths
7+ units per acre	40+ employees per acre	Supports local bus service
15 to 24+ units per acre	150+ employees per acre	Rail

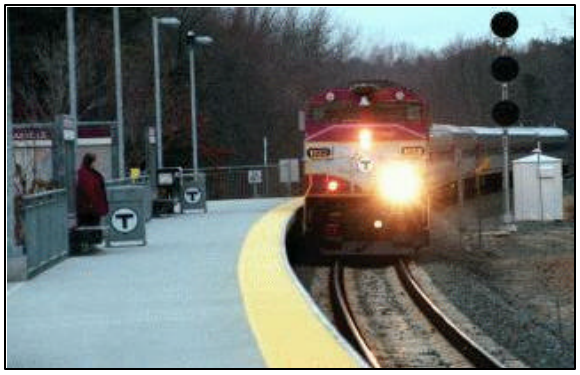
Source: Metropolitan Area Planning Council, Creating Transit – Friendly Communities

Mobility Choice

Transit oriented development provides broadly interpreted transportation options ranging from walking and bicycling to carpool/vanpools, bus and rail. Seamless connections are important to encourage people to combine walking or cycling with other modes.

Road and Highway Connections. Road connections are important for access to train stations, bus service, and for use by carpool/vanpools.

Rail and Bus Connections. Access to reliable, affordable, and convenient rail and bus service is a key requirement of transit-oriented design. In order for transit to be used by local residents, schedules and destinations must reflect the demand. Bus shelters and canopies on the station platforms help make the wait more pleasant especially in inclement weather.



MBTA Commuter Rail Station

Bicycle Connections. Bicycle paths, share the road bike lanes, and signed shared roadways should provide connections between the station/transit and neighborhoods. Although pedestrians are generally not interested in walking more than a half-mile to a station, a cyclist may be willing to ride a mile or more to a station. Bike racks in protected locations such as parking garages or bike lockers are important amenities to encourage use.

Pedestrian Oriented Connectivity

To encourage pedestrian connections, continuous sidewalks are required between residential areas, commercial development, and transit stations. Sidewalks must meet accessibility requirements of the Americans with Disabilities Act (ADA) and must be shoveled in the winter to assure that the sidewalks are clear of snow and ice, especially for early morning commuters. Adequate street lighting is important for safety, especially in the winter when all walking to or from the station would be before or after dark.

Westerly pedestrians cross safely at crosswalk

The walk from residences to the station must be as appealing as possible. Varying storefront windows, views of open space, and unique residential areas make walking more interesting. Pedestrian pathways should minimize crossing wide-open areas that might be exposed to strong winds. Pedestrian ways through parking lots should be landscaped or otherwise demarcated on the pavement to improve safety.

Crosswalks should be placed at signalized intersections or at locations with adequate sight distance. Neckdowns and pedestrian refuges or median islands should be considered to reduce the expanse of pavement to be crossed. Street furniture including sidewalk benches makes the walk more comfortable for many.

Reduced Parking Ratios

The demand for parking spaces is reduced with commercial and residential density and the opportunity for joint use of parking. Rail passengers can walk home, thereby reducing the need for station parking. Retail shops need less parking spaces with their customer base within walking distance. Rail passengers may walk to local shops for errands in the evening without parking twice. Restaurants and other late night venues may use spaces used during the day in a commuter rail parking lot. Churches may utilize rail station parking on weekends when ridership is low. In recognition of this, TOD overlay zones can be implemented with reduced parking ratios and maximum parking requirements. Smaller parking lots reduce development costs, reduce asphalt expanses in parking "fields," minimize stormwater runoff, and reduce potential impacts of global warming from radiated heat.

High Quality Design

Enhanced aesthetics will make the TOD area an attractive destination. Ground floor retail with buildings of varied heights, textures and facades will create a pleasant pedestrian experience. Local site and building design standards or strong planning board/commission review are important to assure that commercial, residential and mixed use development reflects the image by which the local community wants to be portrayed. High quality design is very important with mixed use that generally includes retail/office use on the ground floor with residential use above. The mixture of uses must be carefully designed to assure residential privacy, safety, and minimum inconvenience from noise and other distractions from the commercial area. Parking structures should include lower level commercial, office space or day care facilities to provide a lively exterior and reduce the scale of multi-level structures.

Site planning should emphasize reduced building setback on the roadway with parking placed to the rear or side of the building. Storefront windows should face traffic and sidewalks with reduced fenestration on the side of parking lots. Pedestrians will be more comfortable walking along storefronts if awnings or overhangs provide protection from sun and rain. Landscaping, street furniture, and pedestrian scale street and path lighting will encourage people to walk between shops and not to drive. Street kiosks can provide important way-finding information, transit schedules, and community information. Site plans must include sidewalks, bike paths, bike lockers or racks, and transit stops in the design.

Residential and commercial development should be laid out on a grid pattern to avoid *cul de sacs* and dead end streets. Continuous street alignments reduce utility costs, encourage pedestrian connections, and facilitate emergency response.

Public Spaces

Provision of common areas as public spaces is an important facet of transit-oriented development. These pedestrian scale greenspaces may include a park, landscaped pedestrian corridor, wetland trails, or more formal gathering place with a monument, statue or gazebo as a focal point. Public spaces should be adjacent to transit so that waiting passengers have pleasant and attractive surroundings as they wait for the bus or train. Public spaces may be used for art fairs, farmers' markets, rallies and political speakers, and patriotic ceremonies. Grade changes on the site may be incorporated into seating walls or amphitheater design to encourage people to use the area as a "gathering space." Public spaces near residential areas are especially important. These spaces may include playgrounds, "victory gardens," or more intimate landscaped seating areas.

Preserved Open Space

Open Space

It is important to balance increased density with the preservation of open space. To avoid sprawl, transit-oriented development is most appropriate in areas that have been developed in the past. This development may occur in former rail yards, at former station locations, in locally designated "growth centers," at areas slated for redevelopment, or may be infill within the existing fabric of the community. To achieve the needed density of development, however, it is important to preserve open space as compensation. By linking both transit-oriented development and open space preservation, a win/win is achieved for the community. Through the transfer of development rights from open space to areas more suitable for dense development near transit, smart growth is achieved and sprawl is avoided. Property to be preserved for open space does not have to be contiguous with transit-oriented development. Land may meet the community's existing open space criteria or be preserved for groundwater protection.

Transit Supportive Development Tool Kit

TSD may be an attractive alternative for areas around transit service that are not suitable for the densities of development appropriate for transit-oriented design. TOD densities may not be appropriate for areas not served by municipal sewers. The potential for TOD may be reduced by low-density development requirements above sole source aquifers, private or community wells or groundwater recharge areas.

Transit supportive planning can be a community's most effective tool in achieving a balance of land use, transportation and open space interests in an environmentally sensitive manner, while managing growth and change. TSD offers Washington County towns an important opportunity to proactively plan for future improved transit service. The following addresses transit support initiatives for community development.

Transportation Alternatives

TSD focuses on providing land use that balances opportunities for walking, cycling, and transit ridership with the private automobile. Transit supportive development encourages transportation alternatives and encourages residents and customers to convert at least one trip daily to a mode other than private automobile. As more and more trips are converted to alternative modes, land use becomes more sustainable.

Bike path crossing, East Bay Bike Path

While many of the same criteria described above for transit-oriented development apply, TSD instead works with existing density of development and focuses on encouraging pedestrian accessibility between neighborhoods, local destinations, bus stops and rail stations. Sidewalks and trails through parks may be considered as viable connections that not only get us out of our cars but also motivate us to instill healthy lifestyles through walking. Walking contributes to a sustainable environment and is good for our health in this age of chronic obesity and inactivity, especially among school-aged children. Simple paths between neighborhoods and direct, safe and attractive routes through parking lots can motivate us to leave our cars behind.

Bicycling is encouraged with on-road bike lanes, "share the road," and signed shared roadways. Bike lanes and "share the road" bike routes must meet Rhode Island Department of Transportation's (RIDOT's) Design Policy Memo 920.06 to assure safety for both cyclists and motorists.

Work with State Agencies to Improve Transit Service

Both the RIPTA and the RIDOT are responsible for transit service in the state. Coordination with RIPTA is required to request a change in bus schedule, stop or other service. RIPTA service to Washington County is outlined below, followed with discussion of a range of transportation demand management services to attract bus passengers. As indicated, RIPTA and Amtrak currently serve the Kingston and Westerly Stations. RIPTA also provides service to the Park 'n Ride lot in Wickford Junction.

RIPTA Bus Service

RIPTA's #64 provides service between South Kingstown and Newport. RIPTA provides regular service on Route #66 to Kennedy Plaza from stops at Kingston Station in South Kingstown, University of Rhode Island, and the Park 'n Ride on Routes 102 and 2 in Wickford Junction.

RIPTA #66 provides service from Wickford Junction to Providence.

Express bus service (#90) to Providence is provided from the Westerly Train Station, and Park n' Ride on Routes 3 and I-95 in Hopkinton and Route 138 and I–95 in Richmond.

RIPTA provides Flex Zone Service in Narragansett, Westerly, and Kingston.

Rail Service

RIDOT is working with the MBTA to extend commuter rail south to first Wickford Junction and then to points south, as discussed in Section 1 of this report. Regional Amtrak service is provided to Westerly and Kingston Stations.

Transportation Demand Management Strategies

Local communities should encourage participation in transportation demand management (TDM) strategies to reduce dependence on private automobiles. TDM strategies may include the following RIPTA programs:

Express Traveler Program. This program reduces transportation costs for those who choose to use transit to commute to work at least six times per month (or 11 one-way trips). RIPTA accepts commuting options via organized carpool / HOV, RIPTA bus, Park n' Ride, vanpool, rail, biking or walking within the program. To remove the fear of being unable to leave work in case of an emergency, RIPTA offers a guaranteed ride home twice a year for commuters who use some form of transit (this could be a taxi from door to door).

AlterNet Ridership Program. RIPTA matches carpool or vanpool participants with destinations. Currently no Washington County firms or destinations are listed in this program. RIPTA should be encouraged to further market this program to county employers.

Commuter Check Program. Employers can offer up to $100 a month in tax-free benefits to employees who commute to work by public transit or vanpool.

Employers can purchase Commuter Check vouchers for employees who can then apply the value toward the purchase of RIPTIKS, monthly passes or vanpool fares. Or, employers may set aside pre-tax dollars for the purchase of Commuter Check vouchers. Commuter Checks qualify as tax deductible business expenses and are free of payroll taxes.

Transportation Management Associations

Local communities should be encouraged to amend land development regulations to require that developers or large employment centers (50 or more employees) participate in or form a Transportation Management Association (TMA) as an incentive to reducing the mandated parking requirement. TMAs are private non-profit organizations that have been successful not only in urban areas but in suburban settings in facilitating mode split options from the private single occupant vehicle (SOV). A TMA would be instrumental in carpool matching, facilitating purchased or leased services from vanpool providers, advocating for flex time or telecommuting, or other high occupant vehicle strategies.

Community Tools to Support Transit

Improved use of transit is critical to improving air quality, reducing congestion, and reducing commuter costs as gas prices continue to increase. Communities can take several steps to become more transit-friendly. The Metropolitan Area Planning Council (MAPC) has prepared a draft checklist for member communities in metropolitan Boston to determine if they support transit. If a community answers *No* to any of the questions, action can be taken to proactively prepare for transit. The MAPC checklist has been modified for Washington County communities.

Parking

- Are parking requirements reduced or shared parking facilities provided for uses close to transit?
- Is structured parking encouraged in higher-density areas?
- Are surface parking lots encouraged to be located off main streets and away from front lot lines?

Density

- Are relatively higher densities encouraged in activity centers or near transit facilities, with a gradual decrease in density away from these centers?
- Do the densities required/allowed near activity centers or transit facilities support transit use (see Table 1)?
- Are new developments located within already established area as opposed to less dense greenfield areas?

Land Use

- Are active pedestrian-generating land uses encouraged to concentrate in activity centers or within walking distance of transit facilities?
- Are active pedestrian-generating land uses accessible to the physically challenged?
- Is a balanced and compatible mix of land uses encouraged within walking distance of activity centers or transit facilities? Mixed use may take the form of first-floor retail with office and residential above, or it may involve the integration of a variety of uses over a larger area.
- Are large areas of single use zones discouraged, and are adjacent land uses compatible?

Pedestrian-Oriented Site Planning and Design

- Are continuous sidewalks and/or pathways radiating from your community's center to outlying districts required?
- Can bicyclists travel and park their bicycles safely and conveniently at the site?
- Are site designs with buildings clustered near activity centers or transit facilities encouraged, and are there incentives to promote this type of development?
- In non-centers, are site designs that encourage buildings to cluster in centralized groupings, with parking to the back and the sides, encouraged?
- In centers, are buildings encouraged to be located at the street line, thus defining and enclosing primary pedestrian paths and increasing ease of access to transit?
- Are larger developments or redevelopments encouraged to conform to existing block patterns and provide multiple access points for pedestrians and bicyclists?
- Are subdivisions encouraged to conform to either grid patterns without *cul-de-sacs* or dead ends, or cluster-style developments?
- Are potential developers provided with a transit checklist regarding their proposals, and are transit-based reviews of site plans and development proposals conducted? Although this might not apply to Washington County communities at the present, developers should be encouraged to consider future demand for transit.

Institutional Tools

- Does your comprehensive plan's land use and transportation sections support transit-oriented development and transit?
- Are special districts or overlay zones that support transit included in your zoning ordinance?
- Are incentives (such as bonus densities or parking reduction) included in your zoning ordinance and land development regulations?

Joint Development

- Are key developments sites adjacent to a planned or existing transit facility designated for transit compatible uses, densities, and design?

Washington County Transit-Oriented Development Potential

Amtrak's Northeast Corridor traverses Washington County towns of North Kingstown, a small-undeveloped section of southwestern Exeter, northwestern South Kingstown, the Charlestown-Richmond line, a small-undeveloped section of southeastern Hopkinton, and Westerly, as indicted in Figure 3-2. Transit oriented design requirements have been considered for several Washington County locations including Wickford Junction, West Davisville, Kingston Station, Shannock, Carolina, Wood River Junction and Westerly Station. Shannock and Wood River are considered as models of more dense village development and not necessarily as station stops for MBTA service based on limited regional highway access. The focus of analysis is within a half-mile walk of current or likely stations.

Table 3-3 addresses key TOD features for each of the six station locations under current conditions. Primary limitations are the provisions of municipal sewer and water service that restrict potential density of development. This density is critical to encouraging a walkable community that lowers the dependence on the private automobile. It is recognized that zoning changes would likely be required to facilitate new transit-oriented development and that increased transit service and sidewalks would be required. The following summarizes findings for potential station locations and assesses each to accommodate the density of development required for TOD and commuter rail service. The second section of the table presents recommendation to facilitate Transit Supportive Development.

Wickford Junction

Existing Conditions

The proposed Wickford Junction station is located within Wickford Junction Plaza. Wickford Junction Plaza includes Wal-Mart to the rear (north end) of the site, a plaza-type commercial development of small offices and shops to the west, and Staples located along Route 102 (Ten Rod Road) to the south. Design and permitting for this commercial area have included an area for the station and station parking. Although various phases have been presented for permitting, the station and parking area have not been presented to date. Future phased commercial development includes additional plaza-type construction. Amtrak's Northeast Corridor forms the eastern parcel boundary. Wetlands associated with Cocumcussoc Brook surround the site

Figure 3-1

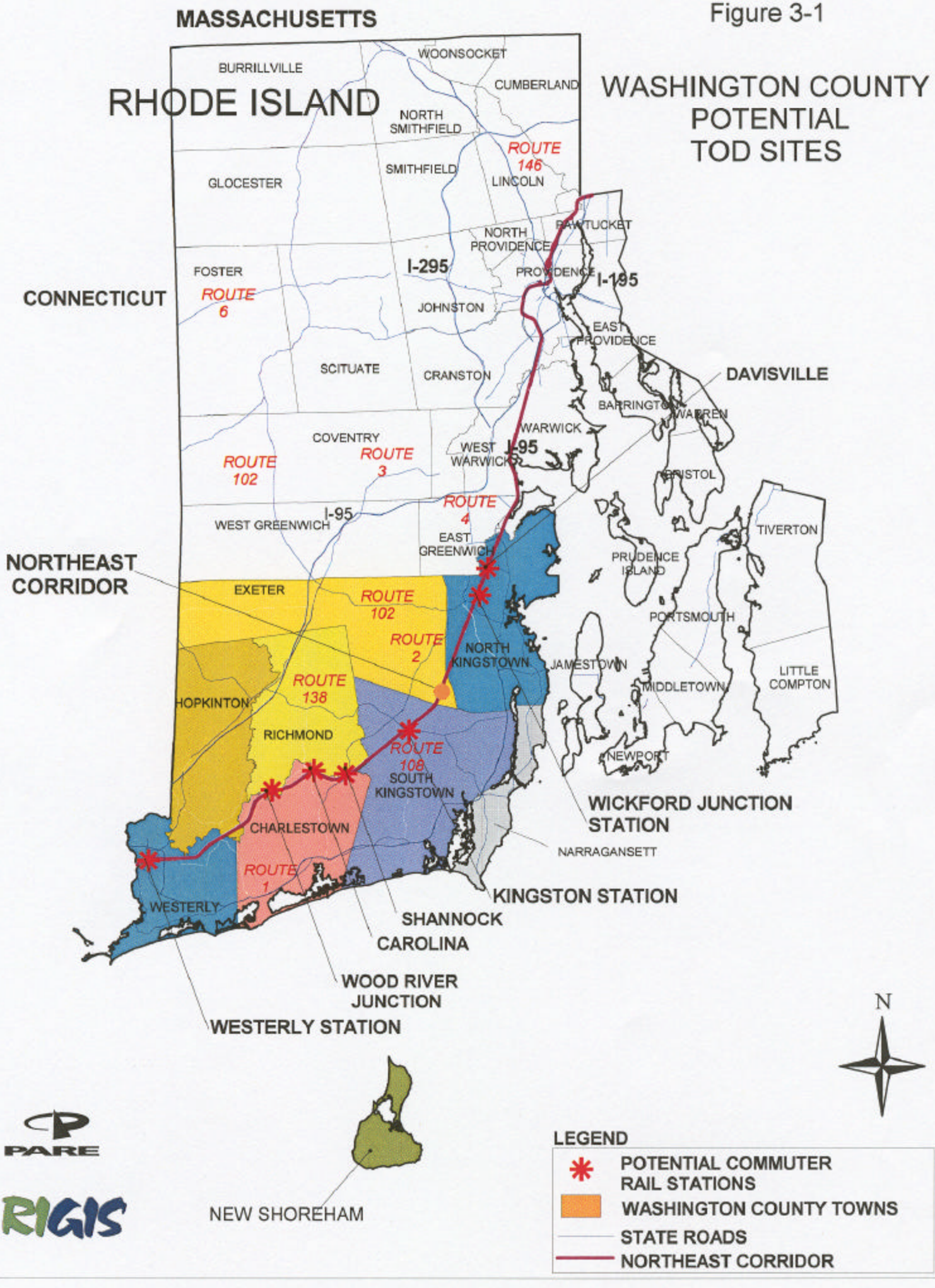

MASSACHUSETTS
RHODE ISLAND
CONNECTICUT
WASHINGTON COUNTY
POTENTIAL
TOD SITES
BURRILLVILLE
WOONSOCKET
CUMBERLAND
NORTH
SMITHFIELD
SMITHFIELD
GLOCESTER
FOSTER
ROUTE
146
LINCOLN
NORTH
PROVIDENCE
PAWTUCKET
I-295
PROVIDENCE
I-195
ROUTE
6
JOHNSTON
EAST
PROVIDENCE
SCITUATE
CRANSTON
DAVISVILLE
BARRINGTON
WARREN
COVENTRY
WARWICK
WEST
WARWICK
I-95
ROUTE
102
ROUTE
3
BRISTOL
ROUTE
4
I-95
WEST GREENWICH
EAST
GREENWICH
TIVERTON
NORTHEAST
CORRIDOR
PRUDENCE
ISLAND
EXETER
ROUTE
102
PORTSMOUTH
ROUTE
2
NORTH
KINGSTOWN
JAMESTOWN
ROUTE
138
MIDDLETOWN
LITTLE
COMPTON
HOPKINTON
RICHMOND
ROUTE
108
NEWPORT
SOUTH
KINGSTOWN
WICKFORD JUNCTION
STATION
CHARLESTOWN
NARRAGANSETT
ROUTE
1
KINGSTON STATION
WESTERLY
SHANNOCK
CAROLINA
WOOD RIVER
JUNCTION
WESTERLY STATION
N
NEW SHOREHAM
PARE
RIGIS
LEGEND
POTENTIAL COMMUTER
RAIL STATIONS
WASHINGTON COUNTY TOWNS
STATE ROADS
NORTHEAST CORRIDOR

Table 3-2:
Washington County Suitability for Transit-Oriented Development

Key Features of TOD	Wickford Junction Station	West Davisville	Kingston Station	Shannock/ Carolina/ Wood River Junction	Westerly Station
Current Mixed Use	Yes	No	Limited (residential, lumber and industrial condominium)	Limited (post office, some shops)	Yes
Moderate to High Residential Density	No – groundwater overlay district limitations	Not currently (Quonset/ Davisville Port and Commerce Park, Groundwater Overlay District)	Abuts small lot single family residential neighborhood, Groundwater Overlay Protection District	Residential development ranges from large lots at Wood River Junction to older multi-family buildings in Shannock	Yes
Municipal Sewer and Water Service	Sewer – No Water – Yes	Sewer – Yes Water – Yes	Sewer – Yes Water – Yes	Sewer – No Water – No	Sewer – Yes Water – Yes
Mobility Choice **Road / Highway**	Excellent – Routes 4, 2 and 102	Excellent – new Route 403 from Route 4	Good – Route 138	Fair – local roads	Good – local roads in Westerly and Pawcatuck
Rail	Excellent – Phase 1 MBTA service proposed	Possible later phase MBTA service	Current Amtrak, possible future MBTA service	Possible long term MBTA service	Current Amtrak, possible future MBTA or Shoreline East service
Bike	Limited to future Shared Roadway on-road connections on Route 102 (Wickford to Wickford Junction)	No current plans for bike routes in this area	Excellent connections via South County Bike Path to Peace Dale and Wakefield. URI bike path proposed	Local roads are *most suitable* for "share the road" cycling according to RIDOT	Local roads are *suitable* for "share the road" cycling according to RIDOT
Bus	Yes – RIPTA #60, #66 Park n' Ride to URI/Providence	No current service	Yes – RIPTA # 64, #66 to RI/Newport/ Providence, Flex Service	No	Yes – RIPTA #90 Express Service to Providence, Flex Service
Pedestrian-Oriented Connectivity	Sidewalks in Wickford Junction Plaza but only limited sidewalks on Route 102. No current connections between local neighborhoods and the station	School Street has sidewalks but access to a station would be circuitous and would not be interesting	Limited sidewalks, Route 138 reconstruction includes pedestrian improvements	Rural, no sidewalks	Excellent sidewalk network in Westerly and Pawcatuck

Table 3-2:
Washington County Suitability for Transit-Oriented Development

Key Features of TOD	Wickford Junction Station	West Davisville	Kingston Station	Shannock/ Carolina/ Wood River Junction	Westerly Station
Reduced Parking Ratios	Not currently	Not currently	Not currently	Not currently	Not currently
High Quality Design	Yes - South County Design Standards	Yes – Quonset Davisville Port and Commerce Park	Historic station, South Kingstown Design Standards	Shannock Historic District, South County Design Standards	Westerly Historic District, South County Design Standards
Public Spaces	Wickford Junction Plaza – Amphitheater	No	South County Bike Path	Shannock Enhancements	Wilcox Park
Preserved Open Space	Cocumcussoc State Park, Ryan & Fuerer Park	No Groundwater Overlay Zone	Not tied to station density	Not tied to station density	Not currently

to the north and to the east of the tracks. Future phased development includes additional plaza plaza-type construction.

The following description of zoning and land use is provided to determine if medium or high density mixed use exists or if there is a potential for future medium to high-density development or redevelopment within the TOD planning area, within a half-mile of the station. The TOD planning area is presented in Figure 3-9. The Town's Comprehensive Plan has identified this as an area for a transit center.

Zoning. Property within the half-mile radius planning area is zoned for residential and business use. All parcels within a half-mile of Wickford Junction Station are within a groundwater overlay zone. Development of the density generally required for Transit-Oriented Development would be significantly limited by the requirements outlined in Sec. 21-186 of the North Kingstown Zoning Ordinance, Groundwater recharge and wellhead protection overlay district:

(1) The average density of any residential development ***shall not exceed one dwelling unit per two acres*** *and the use is not prohibited in table 1 in subsection (h) of this section.* ***No density bonuses shall be granted in groundwater protection areas.***

(2) All new commercial and industrial development must show that the nitrate loading standard of five mg/l as set forth in article VI of chapter 8 of this Code, pertaining to groundwater reservoirs and recharge areas, can be met on site using a conventional individual sewage disposal system.

(3) On residential lots that are nonconforming by area (square footage) and where municipal sewers are not available, for all new construction, alteration, additions, expansions, enlargements or intensifications for which the state department of environmental management determines that an upgrade to the individual sewage disposal system is required, the upgraded system must include the installation of a nitrogen reducing septic disposal system for on-site treatment of wastewater approved by the state department of environmental management.

The Wickford Junction planning area includes the following underlying zoning districts:

- Planned Business Development. This zoning district encompasses both Wickford Junction Plaza and the Meadows Office Complex across Route 102 (Ten Rod Road). The planning commission considers its approval upon the following criteria: 1) the approximate location, size and number of business structures, 2) the mix of business uses, 3) the compatibility of the proposed development with adjacent land uses, 4) the proposed use can be adequately served by town and state utilities and services, 5) the design of the development including location of parking areas, open space, pedestrian and vehicular circulation within and adjacent to the site, and 6) consistency with

the comprehensive plan and the purpose and intent of this district. Residential development is now permitted in this zone, making it suitable for mixed use.

- General Business. Relatively few parcels within the planning area are zoned for General Business. A family-owned florist shop across the tracks from the proposed station, a bank, Home Depot, proposed Dunkin Donuts, and Fiddlesticks are located within General Business districts.

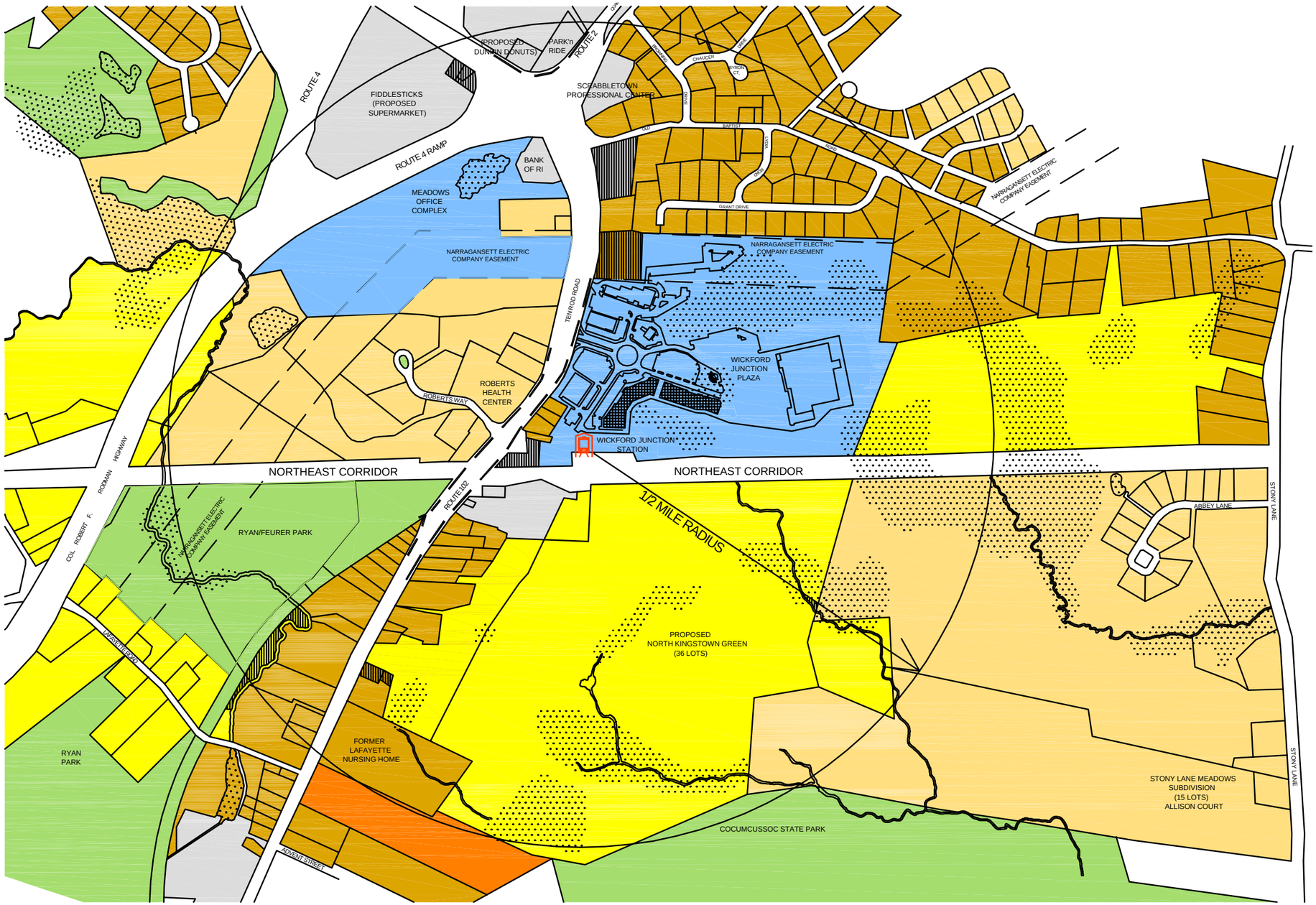
- Village Residential. The village residential district is established to protect and promote the convenience and character of compact village settlements, designed to complement the natural features of the land. The village residential district is also intended for areas that have town water service, that are generally located close to major circulation facilities and commercial and/or industrial uses and that have direct access to town services and facilities. Parcels fronting Ten Rod Road east of Wickford Junction are zoned Village Residential. Neighborhoods off Old Baptist Road on Lydia Road and Grant Drive on the east and Browning Drive and Chaucer Drive on the west are also zoned Village Residential. A vacant nursing home located at the half-mile limit east on Ten Rod Road is zoned Village Residential. A nursing home or other multi-family use of this site is legally non-conforming based on the groundwater overlay district density requirements.

- Neighborhood Residential. The neighborhood residential district is established to promote moderate density residential growth in areas with natural limitations for development or which have town water service but no public sanitary sewers. North Kingstown Green, a 36-lot single-family development proposed on approximately 150 acres across the tracks from the station to the rear of existing homes on the north side of Ten Rod Road, is currently under review by the North Kingstown Planning Commission. Cocumcussoc State Park abuts the parcel.

- Rural Residential. The rural residential district is intended for low-density residential development in sensitive environmental areas of the town such as groundwater overlay districts and areas that rely on individual septic disposal systems for sewerage disposal. Roberts Way, a six home subdivision, is now under construction to the rear of Roberts Health Center, across Ten Rod Road from the station.

Land Use. Land use within the half mile generally reflects zoning and natural resource features. Wetlands associated with Cocumcussoc Brook dominate the area north along both sides of the tracks. Wickford Junction Plaza has been developed in a former gravel mining area that abuts these wetlands. Property south of Ten Rod Road is generally at a higher elevation and wooded with a brook that feeds Belleville Pond at the south end of the planning area.

Narragansett Electric Company parcels and easements extend along a corridor south and west of the station. This undeveloped area provides a buffer between Wickford



LEGEND

ZONING

- RURAL RESIDENTIAL
- PLANNED BUSINESS DEVELOPMENT
- GENERAL BUSINESS
- NEIGHBORHOOD RESIDENTIAL
- VILLAGE RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- OPEN SPACE/PUBLIC LAND

EXISTING CONDITIONS

- EXISTING SIDEWALKS
- WETLANDS

NOTES:
1. ENTIRE PLANNING AREA IS WITHIN THE GROUNDWATER OVERLAY DISTRICT.

REFERENCES:
1. LOTS TAKEN FROM ASSESSOR'S PLANS 27,100,101,102,104A,111, 1123, 113, 122, 123, 124.
2. WICKFORD JUNCTION LAYOUT TAKEN FROM 'MODIFIED LAND DEVELOPMENT PLANS OF WICKFORD JUNCTION ON TEN ROD ROAD', DAVID D. GARDNER & ASSOCIATES: 2004.
3. TOWN OF NORTH KINGSTOWN ZONING ORDINANCE; 1995.
4. HELEN'S KNOLLS SUBDIVISION TAKEN FROM 'PRELIMINARY SUBDIVISION PLAN HELENS KNOLLS ON TEN ROD ROAD (ROUTE 102)', DAVID D. GARDNER & ASSOCIATES: 2003.
5. STONY LANE MEADOWS SUBDIVISION TAKEN FROM "STONY LANE MEADOWS OVERALL PLAN', DIPRETE ENGINEERING ASSOCIATES,INC.: 2001.

RHODE ISLAND STATEWIDE PLANNING PROGRAM
WASHINGTON COUNTY REGIONAL PLANNING COUNCIL
TOWN OF NORTH KINGSTOWN

WICKFORD JUNCTION ZONING

WASHINGTON COUNTY
TRANSIT-ORIENTED DEVELOPMENT
PLANNING STRATEGY

FIGURE 3-2

SCALE: 1"=700'

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Junction Plaza and residential areas to the west. Open space associated with Ryan Park dominates the area south and east of the station, protecting this area from development.

Developable Parcels. Future development is limited by the groundwater overlay zone and extensive wetland areas along the tracks north of the station. With the recently proposed development of North Kingstown Green, anticipated build-out of Wickford Junction Plaza, and completion of the Roberts Way subdivision, further development within the planning area is limited (see Figure 3-9, undeveloped land).

Applications have been submitted to the North Kingstown Planning Commission for several subdivisions along Stony Lane, north of and more than a half mile from the station. Allison Court includes 15 single-family homes and Abby Lane includes 18 lots. Although Abby Lane is proposed adjacent to the rail line and 0.8-miles north of the station, there is no pedestrian connection between Stony Lane and the station. Access is via local roads to Old Baptist Road and Ten Rod Road, a circuitous 1.4-mile route.

Redevelopment Potential. Several parcels have the potential for redevelopment within the planning area. Lafayette Nursing Home, located a half-mile east of the station on Ten Rod Road, has been vacant for several years. A nursing home is a legally nonconforming use in the groundwater overlay district due to residential density requirements. The florist located immediately east of the station on Ten Rod Road is zoned for General Business. This parcel has recently been sold. Several parcels zoned Village Residential that front Ten Rod Road west of the tracks may be redeveloped in the future. Small lot single-family homes located immediately adjacent to the station site could be combined in the future for changed use. An antique shop located in a former single-family home west of Wickford Junction Plaza also has the potential for redevelopment in the future. Redevelopment options for a supermarket are currently under consideration for Fiddlesticks, a sports complex. Dunkin Donuts is to be built at the site of a single-family home in front of Home Depot.

Redevelopment anticipated as Dunkin Donuts

TOD Principals Applicability to Wickford Junction

The largest constraint to consideration of Wickford Junction for Transit-Oriented Development is its location within the groundwater overlay district. Overriding concerns for groundwater protection limit development of the 15 to 24 residential units per acre generally considered for TOD. With zoning limitations of one residential unit per two acres for new development, future construction would never create a true transit-oriented development.

The following addresses general TOD principals and how they apply (or don't apply) to Wickford Junction:

Mixed Use. As indicated in Table 3-3, Wickford Junction does support current mixed-use development. Land use within the half-mile radius planning area includes banks, small restaurants, medical and general offices, a proposed supermarket, and other large retail stores such as Wal-Mart and Home Depot. Approximately 65 residential units are located within the planning area, primarily in residential neighborhoods east along Ten Rod Road and west along Old Baptist Road and adjacent neighborhoods.

Wickford Junction Plaza Entrance

Moderate to High Density. Current development is generally low density with one or two story construction. With proposed construction of 36 units at North Kingstown Green and full build out of six homes on Roberts Way, nearly 100 residential units will be located within a half-mile radius of the station. All units are single-family homes on lots ranging from 5,000 square feet to over an acre.

Overall residential density in the planning area is 128 units per square mile or 0.2 units per acre. As indicated in Table 3-1 this is below the density to support bus or rail service and is also below the density to support other transit options. As indicated, density of development is severely constrained by location within the groundwater overlay zone.

Mobility Choice. Wickford Junction Station has excellent connections to Route 4, Route 102 (Ten Rod Road), and Route 2 (Quaker Lane) in the immediate area. Excellent highway access is one of the primary reasons that Wickford Junction has been selected by RIDOT for commuter rail service. This station will serve not only residents within a half mile of the station but will attract ridership from a much wider area, including the five-mile radius considered in Section 2, Assessment of Growth Potential.

With the start of MBTA *commuter rail service*, Wickford will be well served during peak weekday hours. No service is proposed for late evenings or weekends as indicated in Section 1, Assessment of Commuter Rail Extension Advantages. No Amtrak service is proposed. Although MBTA rail service will meet the needs of local residents commuting to Providence and Boston, it will not serve the needs of local employees who live in these cities, as the schedule is not conducive to a "reverse commute".

Bicycle connections to Wickford Junction are limited to a future Shared Roadway on Route 102 between Wickford and Wickford Junction. North Kingstown Town Council did not approve the concept addressed in a RIDOT feasibility study to construct an off-road bike path along a former rail bed between Wickford and Wickford Junction along a former rail right of way that is now privately held.

Bus service to Wickford Junction is currently limited to RIPTA #60 and #66 service to the Route 2/Route 102 Park 'n Ride. RIPTA has indicated in the past that it would provide connector service to the station when the station is operational. RIPTA budgetary constraints must be considered for any additional service.

Park n' Ride Bus Shelter

Pedestrian-Oriented Connectivity. Currently 15 homes and three commercial buildings in Wickford Junction Plaza have sidewalks to the station area. Although Wickford Junction Plaza is well served with pedestrian connections, sidewalks are limited along Ten Rod Road to the immediate vicinity of the plaza and immediately east of the rail underpass. There are currently no sidewalk connections between Old Baptist Road neighborhoods and the station.

Stores such as Wal-Mart and Home Depot are generally not conducive to pedestrian access since purchases may be too heavy to carry a distance.

Reduced Parking Ratios. North Kingstown zoning codes require 5 spaces per 1,000 square feet of commercial development and 1.5 spaces per unit of multifamily residential use. Parking and circulation at Wickford Junction Plaza discourages "park once," even for multiple destinations within the plaza. It is not likely that someone would park near Wal-Mart and, after completing shopping at that store, would walk to the restaurant at the other plaza or to Staples. Although a gazebo and detention basins break up the expanse of pavement, the walk would not be attractive or particularly interesting.

High Quality Design. The Town of North Kingstown Planning Commission has been very successful in encouraging developers to propose high quality design. Recent construction in Wickford Junction does not reflect current planning practice which encourages storefronts and pedestrian connections along the street with parking to the rear.

Public Spaces and Preserve Natural Resources. The gazebo at Wickford Junction Plaza provides a central public meeting space. Increased pedestrian traffic would encourage use of the area. Additional public parcels such as Ryan Park and Cocumcussoc State Park are not directly contiguous to the station. These open

space parcels provide a contrast to intense use along Ten Rod Road and the immediate station area.

Wickford Junction Gazebo and Amphitheater public meeting space

Transit Supportive Development Opportunities for Wickford Junction

Although Wickford Junction does not have the density of development required for transit-oriented development, several changes can be made to support pedestrian-oriented development that reduces automobile trips. The following transit supportive development recommendations are proposed based on existing conditions, groundwater constraints, and potential zoning and redevelopment opportunities. Similar recommendations may be considered for Kingston and Westerly stations and other future MBTA stations.

Transportation Alternatives. It is important to offer a range of mode options for travel to the Wickford Junction Station to reduce the traffic impact of local streets and to reduce the need for on-site parking spaces. RIPTA bus service represents one important transportation options. If RIPTA buses are routed to Wickford Junction Plaza, adequate bus shelters and benches should be considered to make bus travel more appealing. RIPTA bus schedules should be posted at the station. Any retail outlet designated to sell MBTA commuter rail tickets should also sell RIPTA bus passes. Information on both services should be equally accessible.

Consideration should be given to providing RIPTA connections from Wickford Junction Station to popular destinations such as the Martha's Vineyard Ferry from Quonset and the Block Island ferry from Galilee. By providing a seamless connection to these transportation options, both parking lot capacity at the ferries and highway congestion may be reduced.

Shuttle bus or vanpool connections from villages and other area with high residential development could be considered. RIPTA and other service providers should consider connections to Wickford Junction and proposed Growth Centers on Post Road in North Kingstown and outside the Ladd School on Route 2 in Exeter as service is warranted. This would reduce traffic volumes on local roads.

Transportation Demand Management (TDM) Strategies and Transportation Management Associations (TMA). TDM strategies such as ride share matching are generally used to provide connections between stations and employment although they can be considered to provide alternative means of travel from home to the station as well. Wickford Junction Station is not a destination stop, as indicated in Section 1; reverse commute opportunities are minimal because service is oriented to providing access to Providence and Boston.

TDM strategies may be implemented by RIPTA, local firms, or by transportation management associations. RIPTA should provide outreach to commuter rail passengers to encourage participation in the AlterNet program of carpool and vanpool matching. Commuter rail passengers would therefore be encouraged to reduce vehicle trips to the station. Preferential or free parking for carpools and vanpools could provide an attractive incentive for participation. Enforcement issues would have to be addressed for implementation.

Formation of a Transportation Management Association could be considered by the North Kingstown Chamber of Commerce or other business organization. A TMA would provide information and encouragement for employees to seek alternative modes of transportation. Targeted employment at Wickford Junction could include companies at Wickford Junction Plaza, Meadows Office Park, Roberts Health Care Center, Home Depot and Fiddlesticks. With the variety of employee schedules and low density residential development in South County, it is likely that ride sharing through carpooling would be the most likely outcome of a TMA. Funding for TMA formation and initial operation may be requested as a congestion mitigation/air quality project under the transportation improvement program.

Community Tools to Support Transit. Implementation of the following would require amendment of local zoning and land development ordinances, and comprehensive plans, State support, and a change in how developers and management companies use and market property. It is recognized that construction of public train station facilities by RIDOT is not subject to local zoning regulations although the State must demonstrate consistency with the local comprehensive plan prior to project funding.

- **Parking.** Incentives should be considered in the land development regulations to reduce parking requirements for joint use of parking. The Town of North Kingstown Planning Commission should consider shared use of retail and transit parking to reduce the total number of spaces required for the station. Consideration should be given to what time of day and what day of the week parking is demanded for various uses. A parking structure for commuter rail passengers would be less utilized on weekends and evenings. Parking requirements should also be reduced with implementation of TDM strategies such as carpool / vanpooling or increased RIPTA bus service.

  Surface parking lots should be located to the rear of buildings to encourage pedestrian-oriented development.

- **Density.** Any option to increase density at Wickford Junction must not adversely affect the quality or quantity of groundwater of the underlying sole-source aquifer. Wickford Junction is located at the southern end of the recharge area for Hunt – Well #6.

  One potential to modestly increase density at Wickford Junction would be to orchestrate an intra-groundwater recharge area transfer of development rights. By protecting land from development located closer to the wellhead with the

transfer of development rights to Wickford Junction, water quality would be further protected by preserving land closer to the wellhead as open space. Revision of Section 21-186 of the Zoning Ordinance would be required.

Transfer of development rights from Stony Lane properties, north of the station and south of the well, would preserve the remaining rural character of this local road, preserve a farm and/or recreation area, and protect groundwater quality. A maximum of 50 residential units could be constructed on a Stony Lane 49.5-acre farm and a 51-acre soccer school, assuming all land is developable (wetlands would limit the total development of these properties) at the groundwater overlay density of one residential unit per two acres. Transfer of development from Stony Lane properties to those within walking distance to the station, located immediately east of the tracks from the station (site of proposed North Kingstown Green subdivision), would help generate the residential density needed to support transit-oriented development. By transferring a hypothetical 30 units to North Kingstown Green, development potential would be between 66 and 69 units for this 151-acre property. This is based on the 36 to 39 lots buildable lots presented under cluster and conventional subdivision layouts in the Pre-application Submission, received by the North Kingstown Planning Department on April 8, 2005. Further analysis would be required to determine financial implications for property owners in the TDR transfer.

A range of residential densities at North Kingstown Green, including both single-family homes and multi-unit condominiums, would provide a variety of housing types and a diverse residential mix. More convenient pedestrian access would be required to provide access to the station and to commercial development at Wickford Junction Plaza. Although North Kingstown Green is adjacent to the rail line, access from Ten Rod Road 600 feet is east of the rail line[1].

The Town of North Kingstown requires advanced wastewater treatment (denitrofication) in the groundwater overlay zone. At least one single-family cluster subdivision in town has had a shared system or common package plant. Generally, however, a condominium association is more reliable in maintaining a package plant than a homeowners association. By constructing a package plant for 30 additional condominium units, groundwater could further be protected. Additional site analysis is required to determine if North Kingstown Green could be reconfigured to meet the goals of residential density and access required for transit-oriented development.

Planned Business Development regulations have been amended in North Kingstown to enable residential development. Future phased development of Wickford Junction Plaza should consider possible upper level residential construction. Limited housing, perhaps with a percentage of units available to seniors, could be considered. The potential benefits to seniors (and others) could include: walking distance to rail, transit, shops, medical offices, and other

[1] Rail platforms are located on the west side of the tracks. Both departing and arriving passengers will disembark on the station side of the tracks on the siding. No "Up and Over" structure such as the one at Kingston Station is necessary.

services; a sense of mobility and independence without use of an automobile; and a diversified residential population.

Based on the March 3, 2005 Expert Panel public workshop, there is a demand for condominium development throughout Washington County. Condos within walking distance of Wickford Junction would be especially attractive.

- **Land Use and Pedestrian/Bikeway Connectivity.** Direct and well-maintained *sidewalk connections* are one of the primary requirements for transit supportive design. Implementation of the following recommendations, indicated in Figure 3-14, will enhance Wickford Junction as a transit supportive development.

  Adequate *bike racks and / or lockers* should be included in the site design for the station to supplement racks at existing and proposed buildings within Wickford Junction Plaza. To increase the safety of bikes, racks should be placed in visible area, preferably protected from rain.

  The *first floor of the station's parking garage should include retail use and restaurants* to provide bustling land use. A dynamic street level would encourage pedestrian traffic and broaden out the use of the structure beyond commuting hours. A restaurant, day care, or shops oriented to the needs of commuters would provide a more vibrant land use for a parking garage. Shops oriented to transit passengers could include a coffee shop, dry cleaner, ATM, florist shop, or liquor store among other options. These services would also attract customers throughout the day.

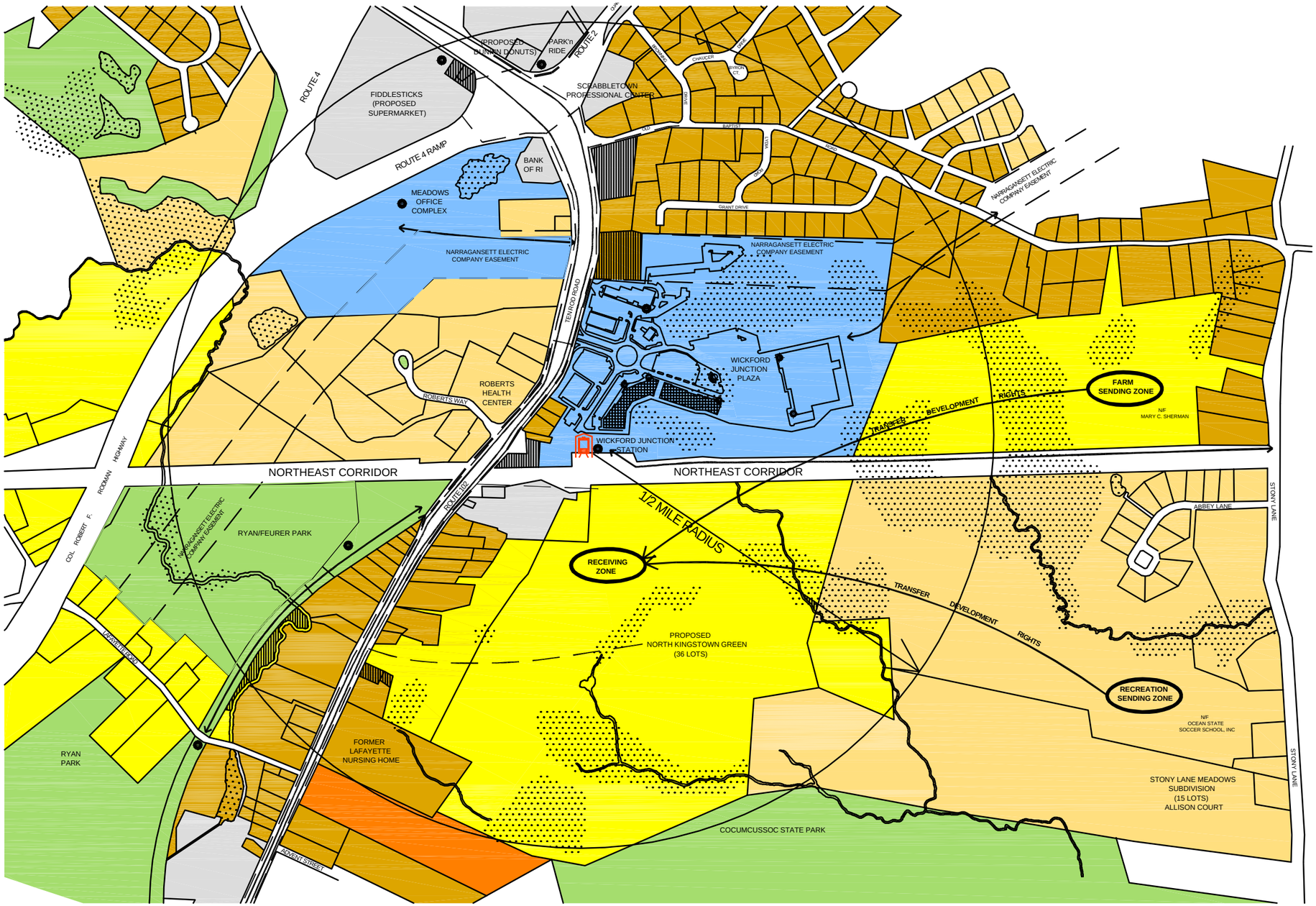
  Although Wickford Junction Plaza includes sidewalks and pedestrian routes are demarcated in parking lots, customers are not encouraged to "park once" for multiple errands. A vibrant streetscape, interesting storefronts or landscape, and protection from the elements are required to entice pedestrians to walk between stores. As Wickford Junction Plaza reaches build-out with phased construction, *pedestrian connections should be encouraged with appropriate streetscaping* including benches, attractive pedestrian scale landscaping and lighting.

  A *shared use path connection from Ten Rod Road*, west of the rail line would provide a "short cut" for those walking or cycling from the east along Ten Rod Road. This property, located adjacent to the rail bridge, is owned by the state. This short cut would provide safe access from the sidewalk along the north side of Ten Rod Road or for westbound cyclists. Pedestrians using the south sidewalk and eastbound cyclists should cross at the signalized intersection at the entrance to Wickford Junction Plaza.

  Extension of sidewalks along Ten Rod Road is also critical to providing pedestrian connectivity. Sidewalks are especially important from Lafayette Road on the east to the supermarket proposed at Fiddlesticks on the west. Sidewalks would provide connections from residential areas along these roads, from the proposed North Kingstown Green, and from neighborhoods along Old Baptist Road.

Bike paths or other shared use paths should be considered on the Narragansett Electric Company easement between Old Baptist Road and Wickford Junction Plaza. This quarter-mile path would provide a convenient alternative for local residents to drive to the station or to Wickford Junction Plaza.

Construction of a half-mile bike path between the former station (south of Ten Rod Road and east of the rail line) and Lafayette Road should be considered. This would provide a convenient connection for Lafayette Road residents (and Hatchery Road and Beacon Drive residents west of Route 4) to Wickford Junction Plaza and the station. This former rail alignment is currently zoned Open Space and is owned by the Town of North Kingstown as part of Ryan / Fuerer Park. It is recognized that this segment was considered by RIDOT as part of the Wickford to Wickford Junction bike path and not supported by the North Kingstown Town Council because of right of way issues in sections to the east. This more limited bike path connection, however, would provide an alternative transportation option for local access. Town support of a more limited bikepath to provide this access to Wickford Junction would be required.



LEGEND

OPPORTUNITIES
- UNDEVELOPED LAND
- BIKE PATH/LANE
- BIKE RACK
- SIDEWALKS
- PEDESTRIAN CONNECTION
- RESIDENTIAL (SECOND FLOOR)

ZONING
- RURAL RESIDENTIAL
- PLANNED BUSINESS DEVELOPMENT
- GENERAL BUSINESS
- NEIGHBORHOOD RESIDENTIAL
- VILLAGE RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- OPEN SPACE/PUBLIC LAND

CONSTRAINTS
- WETLANDS

NOTES:
1. ENTIRE PLANNING AREA IS WITHIN THE GROUNDWATER OVERLAY DISTRICT.

REFERENCES:
1. LOTS TAKEN FROM ASSESSOR'S PLANS 27,100,101,102,104A,111, 1123, 113, 122, 123, 124.
2. WICKFORD JUNCTION LAYOUT TAKEN FROM 'MODIFIED LAND DEVELOPMENT PLANS OF WICKFORD JUNCTION ON TEN ROD ROAD', DAVID D. GARDNER & ASSOCIATES: 2004.
3. TOWN OF NORTH KINGSTOWN ZONING ORDINANCE; 1995.
4. HELEN'S KNOLLS SUBDIVISION TAKEN FROM 'PRELIMINARY SUBDIVISION PLAN HELENS KNOLLS ON TEN ROD ROAD (ROUTE 102)', DAVID D. GARDNER & ASSOCIATES: 2003.
5. STONY LANE MEADOWS SUBDIVISION TAKEN FROM "STONY LANE MEADOWS OVERALL PLAN', DIPRETE ENGINEERING ASSOCIATES,INC.: 2001.

RHODE ISLAND STATEWIDE PLANNING PROGRAM
WASHINGTON COUNTY REGIONAL PLANNING COUNCIL
TOWN OF NORTH KINGSTOWN

TRANSIT SUPPORTIVE DESIGN RECOMMENDATIONS

WICKFORD JUNCTION STATION

WASHINGTON COUNTY
TRANSIT-ORIENTED DEVELOPMENT
PLANNING STRATEGY

FIGURE 3-3

SCALE: 1"=700'

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Alternative sidewalk and path connections should also be considered off-road. A *pedestrian connection from the end of Grant Drive*, through or around the Wickford Junction Plaza on-site wastewater treatment facility would provide safe off-road access from this neighborhood and the Browning Road and Cole Drive neighborhoods west of Old Baptist Road. This path would avoid traffic and congestion encountered with a route along Old Baptist Road and Ten Rod Road. A modification to the Wickford Junction Plaza approved site plan would be required as a "10-foot undisturbed buffer area," located at the end of Grant Drive, provides separation between adjacent residential lots and the plaza. A five-foot wide stone dust path or 10-foot wide paved bike path could provide a convenient route for local residents that would not adversely affect privacy of abutters.

A pedestrian connection from the end of Grant Drive would provide alternate access to Wickford Junction Plaza.

A *pedestrian connection along the rail line from Stony Lane* south to the station would shorten the connection for pedestrians and cyclists. Construction of a 10-foot paved shared use bike path could be considered west of and adjacent to the rail siding to be constructed between Stony Lane and Wickford Station. Several issues must be considered for such a connection. Adequate clearance must be maintained between an active rail siding and a bike path. By fencing the bike path and constructing it at a lower grade than the rail line, an adequate separation could be achieved. This however, could require additional wetland alteration. Location of a path on private property or on the Amtrak right-of-way would have to be resolved. Constructing this shared use path during siding construction could mitigate project impacts.

A *connection from the proposed North Kingstown Green* to the east side of the tracks, with a pedestrian path south along the tracks to Ten Rod Road would facilitate pedestrian access from this development. Location of a path on private property or on the Amtrak right-of-way would have to be resolved. If located on the rail right-of-way, adequate separation must be assured between the path and the high-speed Acela.

All sidewalks and shared use paths should be accessible for the physically challenged and cleared of ice and snow, as necessary.

- **Site Planning, Design and Institutional Tools.**
  A continuous street grid should be encouraged for subdivision roadway construction. When roadway connections cannot be made to adjacent subdivisions, pedestrian paths should be accommodated. Rights of way for logical pedestrian connections to adjacent properties should be considered in all land development projects, especially if adjacent property is undeveloped but buildable. An integrated network of these connections would encourage walking as a healthy habit and would reduce vehicle miles traveled.

To encourage pedestrian circulation, future commercial buildings along Ten Rod Road should be located at or near the street line with parking to the rear. Street fronts should be required to have an ample minimum size store window and overhangs or awnings to protect pedestrians from rain and snow. This will reduce the dominance of private vehicles and provide a safe and welcoming pedestrian path. As pedestrian usage of Ten Rod Road increases, vehicle speeds will diminish.

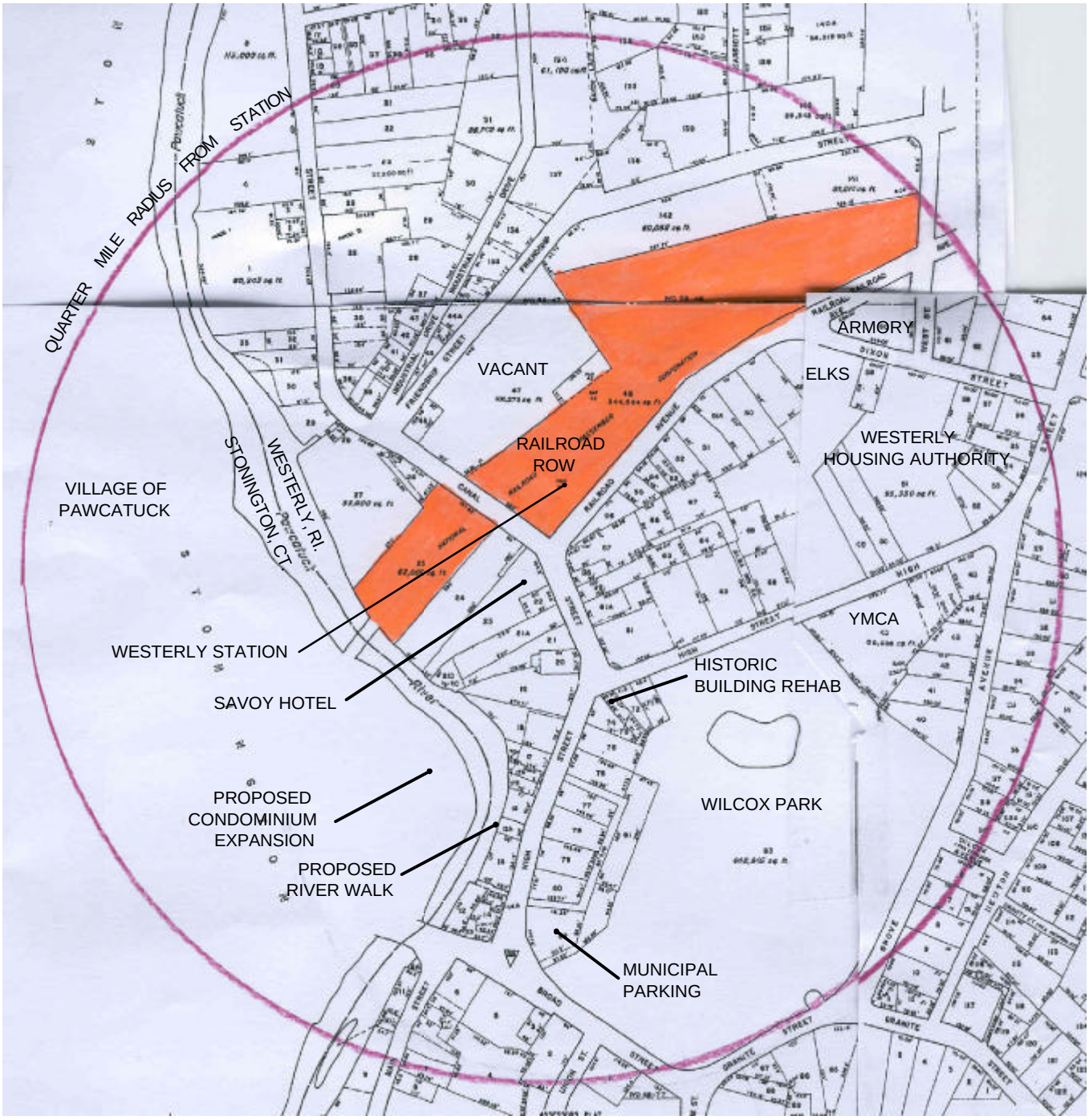
The North Kingstown comprehensive plan should continue to support diverse transportation alternatives to the private automobile. By supporting rail, bus, bicycle, and pedestrian circulation, traffic congestion may be reduced and more healthful lifestyles may be encouraged.

- **Joint Development.** The Town of North Kingstown and RIDOT should continue to work with the owner of Wickford Junction Plaza to assure that station development is integrated into the design and operation of the plaza. The plaza owner is recognized for his vision in integrating a commuter rail station as part of commercial development at this former gravel mine area. Maintenance of the station's planned parking garage, and adjacent plaza will be important in assuring the success of Wickford Junction as a transit supportive development.

Westerly Station

Existing Land Use and Zoning

The area within a quarter mile of the historic Westerly Station on Railroad Avenue includes downtown Westerly and a portion of Pawcatuck west of the Pawcatuck River in Connecticut. A quarter mile has been selected for Transit-Oriented Development based on current density in this downtown area (See Figure 3-16). Downtown Westerly provides many of the key features required for Transit-Oriented Development including density of development, mixed use, mobility choice, pedestrian connectivity, reduced parking requirements, and public spaces as outlined in Table 3-3. The area is within the Downtown Westerly Historic District. The historic Westerly Station was renovated in the 1990s. Amtrak service is provided at this station.



WESTERLY STATION
1/4 MILE RADIUS
WASHINGTON COUNTY TRANSIT-ORIENTED DEVELOPMENT PLANNING STRATEGY

FIGURE 3-4

SCALE: NTS

RHODE ISLAND STATEWIDE PLANNING PROGRAM
WASHINGTON COUNTY REGIONAL PLANNING COUNCIL
TOWN OF NORTH KINGSTOWN

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Lower High Street is dominated by two- or more story buildings with first floor retail and limited use of upper floors for offices and storage. This vibrant commercial district includes interesting storefront windows, restored historic structures, and streetscape improvements. Parking is provided on-street or in a municipal lot adjacent to Wilcox Park. Long-term employee parking is available in a controlled lot to the rear of buildings on the east side of High Street. Wilcox Park, also within a quarter mile of the station, provides a backdrop for downtown development and civic buildings. The park also offers the public space so important to balance the density of development required for Transit-Oriented Development.

Vacant Savoy Hotel

A riverwalk with a pedestrian bridge and amphitheater gathering area are currently under design between Broad Street and the Savoy Hotel. The entrance to the riverwalk will be enhanced with connections to Broad Street, Wilcox Park, and the train station. Architectural gateways, lighting, and landscaping will enhance the existing cantilevered timber section and proposed pile supported timber boardwalks. A single span timber bridge will connect the Westerly riverwalk with existing and proposed condominium development on the Pawcatuck side of the river.

Lower Canal Street includes a similar building form to High Street but has a higher vacancy rate with large paved areas extending to the Pawcatuck River. The vacant Savoy Hotel dominates Canal Street. This five-story building is located adjacent to six small or pie-shaped paved/vacant lots that extend to the river. This former 19th century railroad hotel has recently changed hands. Voluntary consolidation of the lots has been a difficult issue for redevelopment of this landmark building. Lower elevations are within the flood zone of the river. A vacant former car dealership building located between the hotel and the rail line is for sale.

Renovations are underway at this Railroad Avenue building located across from the Westerly Station.

Railroad Avenue is dominated by the historic train station on the north side of the road and two-story commercial buildings on the south side. Although recently renovated, the upper floor appears vacant or under-utilized.

North of the rail line Friendship Street is dominated by a 2.3-acre vacant privately owned parcel, Amtrak rail yards (with track removed), feed and grain store and various brick commercial or industrial buildings. Parcels along Industrial Drive

Alley between condominiums and a Broad Street storefront building provides access to a timber walkway along the river in Pawcatuck, CT.

generally include industrial land use and include the vacant Guild Guitar factory building has been identified by the Town of Westerly for adaptive reuse and affordable housing.

Although most residential land use on the Westerly side is generally located from a quarter mile to half mile from the rail station, the Westerly Housing Authority building on High and Dixon Streets is less than two blocks from the station. Residential neighborhoods are located northeast of the station.

Areas within a quarter mile walk of the Westerly station also include Broad Street and Coggeshall Street in Pawcatuck. A vibrant mixture of small shops continues on Broad Street on both sides of the river. An apartment building that backs on the river provides affordable housing on the south side of Broad Street in Pawcatuck. Condominiums on Coggeshall Street, north of Broad Street are more upscale. Additional high-density condominium development has been proposed along the river in an area currently used as paved parking. Streetscape and drainage improvements are currently under construction. The proposed pedestrian bridge over the river will connect with both existing and proposed redevelopment in this area. . A former grain elevator/mill has been designated as an Industrial Heritage Reuse District by the Town of Stonington, Connecticut. This floating district was approved last year to facilitate adaptive reuse of former mill and industrial structures. The Higgins building on the corner of Broad and Lincoln Streets is also currently vacant.

Westerly zoning south of the rail line is DC-1, Downtown Commercial. Key aspects of this zone are 0-foot building setback, 50-foot maximum height, and no residential use at or below the first floor level. One parking space is required per residential unit. Zoning north of the rail line is DC-II, high density mixed use and residential development. Pawcatuck zoning (a village in Stonington) in the TOD area is similar to DC-II in Westerly. Zoning is therefore compatible with and supportive of transit-oriented development in both communities.

TOD Potential

The Westerly Planning Department has identified that the Westerly portion of the TOD area be designated an official "growth center," with an eye towards encouraging transit-oriented development centered on the railroad station. Westerly's future land use planning envisions this location for TOD. The Westerly Planner has indicated that the area surrounding the railroad station has been and will continue to be the principal recipient of Westerly's Community Development Block Grant funds and TEA-21 Enhancement funds.

Westerly and Pawcatuck have excellent potential for transit-oriented development. Amtrak service and RIPTA's #90 express bus service provide the transit connection. The station has long term potential for either MBTA commuter rail service or Shoreline East service from Connecticut. Although RIPTA provides Flex service to Westerly, there is no regularly scheduled service other than the express bus to Providence.

Additional residential use in downtown Westerly and Pawcatuck would help broaden current mixed use and reduce dependence on the private automobile. A loaf of bread, a prescription, hammer and nails are all available within walking distance. Several areas are recommended for residential use:

- Upper floors of High Street, Canal Street and Railroad Avenue buildings should be considered for residential use. Parking decks to the rear of buildings could be considered to maximize parking for both residential and commercial use. Joint use of parking (such as that demonstrated in the condominium parking lot on Coggeshall Street) would decrease the need for parking in Pawcatuck.

- The Savoy Hotel could be renovated as housing. A terraced and landscaped parking lot or structure could help connect the hotel to the riverfront and the riverwalk. Renovation of this historic railroad hotel could accommodate a range of housing types from single room occupancy (SRO) to one and two bedroom units both at market rates and with subsidies of affordable housing.

- A vacant 2.3-acre parcel immediately north of the rail line with frontage on both Canal and Friendship Streets should be redeveloped with commercial use on the ground level and apartments or condominiums above. Site remediation of this former rail yard would be required prior to consideration of this property for residential use. Development of this site for mixed residential use would both contribute to the diversity of housing stock and restore a vacant lot, creating a positive image for the community.

- Adaptive reuse of the former Guild Guitar factory should be considered as affordable housing.

- On the Pawcatuck side of the river residential development, open space, and adaptive reuse of the former grain elevator should be considered.

Additional Washington County Station Locations

As indicated in Table 3-3, additional station locations were considered for transit-oriented development in Washington County.

West Davisville

West Davisville was mentioned at the March 3, 2005 public workshop as an option to Wickford Junction, for a commuter rail station. This site, on relocated Route 403 in North Kingstown, is part of the Quonset Davisville Port and Commerce Park. A station is also considered at this location in EDC's *Quonset Davisville Master Plan*. Development of a station at Davisville may be considered

by RIDOT to connect to the Quonset Point/Davisville internal rail network after implementation of service to Wickford Junction. Limitations include close proximity to Wickford Junction Station and the fact that the proposed schedule would not meet the needs of those commuting to Quonset Davisville. Rail service within the Park is provided by Seaview Transportation Co., Inc. and consists of approximately 14 miles of track in two branches. The Freight Rail Improvement Project (FRIP) provides freight access to West Davisville. Development of the West Davisville site for commuter rail would be subject to Quonset Development Corporation approval.

Realignment of Route 403 creates circuitous access to the station location from Old Baptist Road and School Street neighborhoods. It is not likely that this station location would be suitable for the mixed use and medium to high residential development required for TOD.

Kingston Station

Kingston Station in South Kingstown serves as an Amtrak station and trailhead for the South County Bike Trail. This historic station is located in a rural residential area with an adjacent neighborhood lumberyard across the tracks, and industrial uses and turf farms within the local vicinity. Municipal water and sewer service is available. The area is within the Town of South Kingstown Groundwater Protection Overlay District. Kingston Station does not currently have the density of development or mixed use to support TOD. The station parking lot is well used by cyclists and by those traveling on Amtrak. Parking expansion would be required for use of this station for commuter rail. Innovative solutions would be required to not adversely affect the historic character of the station or adjacent neighborhoods.

Historic Kingston Amtrak Station and South County Bike Trail parking lot

Although the area is served by Amtrak, the South County Bike Trail and RIPTA #64, limited sidewalks, and Route 138, the station is not easily accessible to an interstate or limited access highways. The current station is an asset to the community, including the University of Rhode Island. Any increase in density required for a transit-oriented development would have to be carefully planned to protect groundwater quality, agricultural uses, and the integrity of the adjacent residential neighborhood.

RIDOT's proposed reconstruction of Route 138 will make this roadway more pedestrian friendly. A bike path connection from Kinston Station to the University of Rhode Island is in the early planning stages. Both projects will improve connections to the station and provide alternatives to private vehicles

Industrial and commercial land use is critical to providing a balanced tax base in South Kingstown. Any future redevelopment of the adjacent lumberyard or commercial condominiums should consider tax base implications to the community.

Shannock, Carolina, and Wood River Junction

Station stops were historically located in Shannock, Carolina and Wood River Junction. With the cessation of service and changes in manufacturing, the small mill villages that had developed, continued to grow but very slowly. Today local post offices, smaller residential lots than outlying rural areas, and a few shops mark these villages. These Wood River villages straddle municipal boundaries. Designation of these villages as growth centers would require cooperation and coordinated planning of two communities.

- Shannock contains a mix of uses and densities in this historic village. Development on fields adjacent to the rail would be produced by location within a historic district. Station area landscaping has recently been completed under an enhancement grant.
- Carolina has reached build out and has been designated as an historic district.
- The Town of Charlestown has had discussions about the potential to develop the former UNC site at Wood River Junction for senior assisted living/affordable housing/and a train station.

These villages are not served by RIPTA bus service. Limited areas of sidewalks were observed. RIDOT has designated Alton Carolina Road and Alton Back Road as "most suitable" for cycling. Steep grades on Shannock Road make this road "suitable" for cycling.

None of these villages has adequate highway connections for development of MBTA Commuter Rail Stations. Although small lots and some multi-family housing are located in these villages, they do not support the density of development required for TOD. Future sidewalk connections should be provided to facilitate walking as well as cycling as alternative modes of transportation. Ridership and carpools could also be considered to reduce dependency on single occupant vehicles for commuting.

Smart Growth Planning Recommendations

Table 3-3 presents general recommendations for TOD and TSD and other smart growth implementation strategies for Washington County communities. Parties responsible for implementation include State agencies, the Washington County Regional Planning Council, municipalities, and private businesses, among others.

Table 3-3:
Smart Growth Implementation

Station	Recommendations	Responsible Party
General –Promote Smart Growth via Effective Planning and Land Management		
1	Develop a State Growth Centers Program to focus state development investments within locally-designated, State-approved growth centers.	State of RI, Executive and Legislative Branch
2	Designate Growth Centers meeting state criteria via the local comprehensive planning process.	Municipal governments, Planning Departments/Boards
3.	Utilize available land management tools effectively to promote Smart Growth principals and achieve balanced, focused growth and development. Avoid reliance on techniques that only restrict development, create an impetus for sprawl, or conflict with Smart Growth objectives.	Municipal governments, Planning Departments/Boards
4.	Continue to strengthen regional planning and cooperation on growth issues. Identify areas which could serve as growth centers for the region.	Municipalities, Washington County Regional Planning Council
5.	Foster strategies on the state level to promote Transfer of Development Rights as a smart growth tool to preserve open space and to promote density.	State of RI; municipal governments land trusts; SmartGrowth RI
6.	Encourage communities to consider dense development models that foster mixed use, diversity of housing types, walkability.	State of RI; municipal governments; Washington County Regional Planning Council; GrowSmart RI
7.	Conduct smart growth training courses for planners and planning boards.	State of RI; municipal governments; Washington County Regional Planning Council; Grow Smart RI
Wickford Junction		
1	Reduce parking ratios; amend land development regulations to accommodate shared use of parking.	North Kingstown Planning Commission; Planning Department
2	Amend land development regulations to require parking to rear of commercial development to create more vibrant pedestrian streetscape.	North Kingstown Planning Commission; Planning Department
3.	Transfer development rights within the Well #6 groundwater protection district. Consider potential TDR from Stony Lane farm and soccer school to North Kingstown Green.	North Kingstown Green developer, Stony Lane Farm and Soccer School, North Kingstown Planning Commission; Planning Department
4.	Install bike racks and lockers at station and shops at Wickford Junction Plaza.	Station developer; RIDOT; Wickford Junction Plaza
5.	Construct first floor retail at station parking garage to increase public use and streetscape vibrancy.	Station developer; RIDOT

Station	Recommendations	Responsible Party
6.	Construct pedestrian connections within Wickford Junction Plaza. Provide appropriate streetscaping: benches, landscaping, attractive pedestrian scale lighting.	Wickford Junction Plaza
7.	Construct a 600-foot shared use path connection from Ten Rod Road to the station west of the rail line.	RIDOT
8.	Extend sidewalks along Ten Rod Road.	Town of North Kingstown; RIDOT
9.	Construct a 250-foot pedestrian connection from the end of Grant Drive to Wickford Junction Plaza.	North Kingstown Planning Commission as a possible permitting requirement for station construction
10.	Construct a three-quarter mile shared use path from Stony Lane to the station, west of rail.	RIDOT, as part of siding construction
11.	Construct pedestrian connection from the proposed North Kingstown Green to the station.	North Kingstown Planning Commission as a possible permitting requirement for North Kingstown Green development
12.	Construct a quarter-mile shared use path from Old Baptist Road to Wickford Junction Plaza via the New England Electric easement.	Town of North Kingstown Planning Department; Town Council; Narragansett Electric Co.
13.	Construct a half-mile shared use path from Lafayette Road to the former station via an abandoned rail alignment.	Town of North Kingstown Planning Department; Town Council; RIDOT; Washington County Regional Planning Council
14.	Amend Town of North Kingstown land development regulations to require construction of adequate sidewalks within proposed development with extension to logical destinations or crossroads.	North Kingstown Planning Department; Planning Commission; Town Council
15.	Amend Town of North Kingstown land development regulations to require a continuous street grid for subdivision roadway construction; require pedestrian connections between abutting subdivisions.	North Kingstown Planning Department; Planning Commission; Town Council
16.	Construct senior housing or other residential use above future phased development at Wickford Junction Plaza.	Wickford Junction Plaza; North Kingstown Planning Department; Planning Commission
17.	Encourage transit oriented or transit supportive redevelopment of parcels along Ten Rod Road.	North Kingstown Planning Department; Planning Commission
18.	Provide ferry service shuttle connections from Wickford Junction and Kingston Stations.	Block Island and Martha's Vineyard ferries from Galilee and Quonset; RIPTA
Westerly		
1.	Encourage upper level residential use on High Street, Canal Street, and Railroad Avenue.	Westerly Planning Department; Building Official; Town Council
2.	Redevelop Savoy Hotel for mixed use, including residential use.	Westerly Town Council; Planning Department; Building Official
3.	Assess mixed-use redevelopment potential of privately owned vacant	Westerly Town Council; Planning Department; Washington County

Station	Recommendations	Responsible Party
	parcel north of the rail line.	Regional Planning Council; RIEDC
4.	Redevelop Guild Guitar factory for residential use.	Westerly Town Council; Planning Department; Housing Authority
5.	Construct riverwalk along Pawcatuck River; construct pedestrian bridge across the Pawcatuck River.	RIDOT; Town of Westerly; Town of Stonington CT
6.	Construct condominiums along Pawcatuck River in Pawcatuck.	Town of Stonington CT; developer
Kingston and other Rural Village Stations		
1.	Transfer development rights from agricultural "sending areas" to growth center "receiving areas" to reduce sprawl.	Local planning departments; town councils
2.	Support RIPTA service at URI with connection to Kingston Station. Recognize the importance of educating student passengers for current and future transit ridership.	RIPTA; URI; Washington County Regional Planning Council; Town of South Kingstown
All rail stations		
1.	Provide bus service coordinated with train arrivals and departures.	RIPTA
2.	Co-market MBTA and RIPTA service with joint fares, scheduling and ticketing.	RIPTA; MBTA
3.	Provide rail or bus service to TF Green Airport from South County locations.	MBTA; RIPTA
4.	Implement Transportation Demand Management (TDM) strategies to provide alternatives to the single occupant vehicle (SOV).	RIPTA, local firms, or by transportation management associations
5.	Encourage commuter rail passenger participation in the AlterNet program for carpool and vanpool matching.	RIPTA
6.	Designate preferential or free parking for carpools and vanpools at station.	Parking lot/structure operator
7.	Form a Transportation Management Association (TMA) to provide SOV alternatives.	Chambers of Commerce or other business organization. Potential Congestion Mitigation/Air Quality (CMAQ) funding
8.	Explore opportunities to link stations with ferry terminals at Quonset (Martha's Vineyard) and Galilee (Block Island) via RIPTA or other shuttle service. Consider joint marketing and ticketing for rail, bus, and ferry links.	Washington County Regional Planning Council; Towns of North Kingstown, South Kingstown, and New Shoreham; ferry operators; MBTA; RIPTA
9.	Encourage MBTA weekend and holiday service to serve South County tourism destinations; explore options for connecting service to Wickford, beaches, and other destinations.	RIDOT; MBTA; Washington County Regional Planning Council; South County Tourism Council
10.	Educate Washington County residents on accessibility to Providence,	RIDOT; RIPTA; Washington County Regional Planning Council

Station	Recommendations	Responsible Party
	Boston, and other rail station destinations via rail, bus, or subway.	
11.	Encourage bike path connections to rail stations.	RIDOT; Washington County Regional Planning Council

Transit-oriented design zoning has been researched for potential applicability to Washington County communities including the proposed station at Wickford Junction. This zoning might also be suitable for existing Amtrak stations in Westerly and Kingston. Communities in many states have initiated zoning for TOD, especially in California and Virginia. The Commonwealth of Massachusetts has had much experience with transit-oriented development, especially in urban locations. These models, however, are not necessarily applicable to any other Washington County potential TOD stations since the recommended densities of residential and commercial development are not appropriate for more suburban and rural locations.

The Town of Westborough, located on the recently extended Framingham to Worcester commuter rail line in Massachusetts, has recently approved a zoning amendment to facilitate a Transit-Oriented Village (TOV). Information provided by the Westborough planner is presented in Appendix B. This zoning amendment is presented as an example of transit-oriented development zoning and is not to be construed as a model. The ordinance language should not be adopted directly since Massachusetts and Rhode Island land use enabling statutes differ significantly. It is presented solely as an example of what one suburban community did to protect open space from development while assuring that an appropriate density of development is permitted for transit-oriented development and that affordable housing requirements are met.

The Town of Westborough, 2000 population of 18,000, is a formerly rural and now suburban community strategically located in the Metro West area on the Massachusetts Turnpike, I-495 and Route 9. The station is located in an industrial zone outside the traditional downtown area. A developer is currently working with the Town for a TOV development. The project is currently under Planning Board review for the required Special Permit.

Purposes of the Westborough TOV include the following:

- Encourage the development of new 'village oriented' transit development on appropriate properties, now zoned for industrial use, proximate to commercial areas, service and/or public transportation.

- Foster the development of smaller living units, which by virtue of their size will be more affordable than larger single-family homes.

- Provide additional housing units which meet the official State definition of affordability.

- Contribute to the Town's efforts to preserve Open Space.

- Create realistic incentives that will bring about the redevelopment of properties that are currently underutilized or on which there are outdated or unattractive non-residential structures.

TOV is allowed by a Special Permit from the Westborough Planning Board in the Industrial C (Mixed Use Industrial) zone. The TOV becomes a floating zone subject to the underlying site requirements. The planning board is afforded broad discretion in determining which mixture of uses are compatible and the degree to which various non-residential uses may be mixed with multi-family housing on a particular site. Projects are subject to both Design Review and Site Plan Review. The Design Review Board has developed its own TOV review standards. Two key components of the Westborough TOV zoning by-law are the protection of Open Space and increased density in the TOV as outlined below.

Preservation of Open Space. Transfer development rights (TDR) are used to protect "sending" parcels from development while encouraging higher density in the "receiving" or TOV zone. To qualify, the Planning Board must make a finding that a Sending Parcel 1) has unique and/or valuable natural or physical attributes, or 2) that there exists a valid planning reason to preserve the land as Open Space, or 3) that the land is substantially developable and that the Town would benefit more from the land's permanent preservation as Open Space than from its development.

Density Bonus. "For every acre of preserved land in a Sending Parcel that is in a Single Residence Zone, the Special Permit applicant shall be entitled to a bonus of 10 additional units in the multi-family project. For every acre of preserved land in a Sending Parcel that is zoned other than Single Residence Zone, the Special Use Permit applicant shall be entitled to a bonus of 5 additional units in the multi-family project." The following example is given in the bylaw: "If a parcel in the Industrial C zone that is subject of an application under this Transit-Oriented Village Bylaw meets all requirements for a total of 40 units (4 base units per acre on a 10-acre parcel) and the applicant is preserving 10 acres of acceptable land in the Single Residence Zone, the total possible units in the multi-family housing project would be 140 units (40 base units, 100 bonus units). This assumes that the 140-unit project still meets all requirements of the bylaw, including those which are discretionary on the part of the Planning Board." The Planning Board has the power and authority to condition the Special Permit on the fulfillment of reasonable improvements to or near the Sending Parcel (e.g., parking for an open space parcel)." *(excerpts from the Westborough Zoning By-law Section 500. Transit-Oriented Village by Special Permit in Industrial C Zone).*

Section 4:
Smart Growth Techniques

Introduction

Although Smart Growth and Growth Management may sound one in the same, many growth management techniques actually promote sprawl, the antithesis of smart growth. Smart growth is dependent upon the type(s) of growth management tool(s) utilized, and its success is determined by how the growth management tools are applied. If used correctly, growth management tools can form the basis for an effective and realistic smart growth plan.

Sustained growth pressures may be anticipated in Washington County as the region experiences continuing popularity, and as commuter rail service begins in 2008. The challenge for local communities is not to restrict development but to channel growth in appropriate areas using smart growth tools.

Existing Growth Management Strategies in Washington County

Growth management tools are the methods or policies a community implements to direct or control growth. While inspired by real needs to constrain growth in municipal service demands and expenditures, many of the techniques employed by Washington County communities to date have had the major objective of reducing or metering residential demand and/or preserving open space, and have not greatly affected the location or character (in terms of diversity, density, or design) of development. Growth management strategies that focus solely on low-density development or growth caps as a means of limiting growth are actually contradictory to smart growth initiatives that encourage a higher density of development in the right places as a more efficient model. Such tools, unless judiciously applied, may conflict with smart growth goals and principles.

All Washington County communities have incorporated some form of growth management into their comprehensive plans and zoning/land development regulations. The size, location and character of a community generally dictate which growth management strategies are appropriate to consider. The community's capacity to implement growth management may also determine which tools are used. Administrative and planning staffing/support are generally limited, and vary across Washington County municipalities. Some communities surpass others in realizing the benefits of growth management tools.

The following outlines existing growth management tools currently in use in Washington County communities. This section is followed by a description of additional smart growth tools that could be considered to direct and manage growth potentially anticipated with the extension of commuter rail to South County.

Exeter

Exeter, like all Washington County communities, has the potential for increased development. This pressure will be especially strong in the eastern portion of town, within a ten-minute drive of the proposed Wickford Junction Station. Located in the central part of the state, Exeter still has large tracts of undisturbed land, natural resources, and prime agricultural lands, as outlined in Section 1. Exeter's growth rate has exceeded the Statewide Planning Program's projections, and the demand for new housing is expected to remain strong, if not increase.

Exeter's current growth management strategies include large lot zoning, growth caps, impact fees, and Conservation Development Zoning. Exeter's strong Zoning/Subdivision Regulations control the density of new development with two- to five-acre minimum lot sizes. Large-lot zoning, while limiting overall residential buildout potential, is not, in and of itself, a smart growth technique. Used indiscriminately, large-lot zoning generally only contributes to sprawl.

Based on a 2001 growth management study, Exeter has implemented several growth management recommendations appropriate to the community. The rate of growth program, or growth cap, is based primarily on school impacts – administered jointly by the towns of Exeter and West Greenwich, as they share a school district. The growth cap is 22 new residential units per year, determined as the average over the past three to five years. A waiting list for new residential development applications is generated once the cap of 22 is achieved. Impact fees for new residential use only have also been incorporated into Exeter's Comprehensive Plan/Zoning and Subdivision Regulations. Impact fees compensate the Town in providing municipal services, most notably schools and are assessed on the developers. No fee is assessed for affordable housing.

The area along Route 2 is ripe for residential development, as indicated in Section 1. Located over the Queen's River Aquifer, a critical natural resource, this area is currently used for agricultural purposes and is not protected by zoning from residential development.

Village Center Concept Plan

The area along Route 2 at the entrance to the Ladd School has been previously identified during a charrette sponsored by the Town of Exeter as a Village Center. This potential growth center is outside the town's aquifer overlay zone. Mixed use, economic development, and small-scale public use are potential development. Transfer development rights could be used to increase the density of development in this village center while preserving local agricultural land. By concentrating residential development with a requisite mix of goods and services, this area could be very attractive for those who might be attracted to Exeter because of ease of commuter access via train to Boston or Providence. If a sufficient array of goods and services were offered at the Village Center, dependence on the private automobile would be reduced. Carpools or shuttle service could be provided to Wickford Junction Station. By providing a mixture of housing types, both affordable and market rate housing could be offered. A zoning amendment would

be required to allow a diversity of housing types and mixed use. Information obtained from a Nonpoint Education for Municipal Officials (NEMO) water management model is critical in determining if the density of development proposed at the Village Center would be appropriate, based on nitrogen loading from individual sewage disposal systems (ISDS), agriculture and lawns.

North Kingstown

North Kingstown has taken a progressive position in incorporating growth management strategies into their Comprehensive Plan, Zoning Ordinance and Subdivision Regulations. Since the Comprehensive Plan was adopted in 1992, North Kingstown has implemented strategies and actions outlined as part of the Growth Management Program.

One way of controlling growth is through the preservation/protection of farmland and open space. North Kingstown has aggressively pursued this avenue with the acquisition of development rights and outright purchase of farm/open space lands:

- Purchase of 114 acres on the west side of Belleville Pond, now part of Ryan Park.
- Purchase of development rights of 58 acres of Phillips Farm on Davisville Road.
- Purchase of development rights to 91 acres of Schartner Farm on Indian Corner Road.
- Purchase of development rights to 100 acres of land near Kettle Hole Pond; and outright purchase to an adjacent 36 acres of land.
- Purchase of development rights to 465 acres known as Tucker Farm at Indian Corner Road.
- Purchase of development rights to two Viall farms totaling 270 acres.

Amendments to the Zoning Ordinance in 1998 included decreased residential densities in new zoning districts, and consideration of the carrying capacity of land with new overlay districts. Very Low Density Rural (VLDR) and Low Density Rural (LDR) zones were added to the zoning ordinance. New overlay districts include Very Severe Limitations, Severe Limitations, and Steep Slope Districts. These new zones consider the environmental sensitivity of the remaining developable areas within North Kingstown.

Cluster developments and residential compounds have dominated new construction over the past decade. In addition to managing growth, the Town of North Kingstown supports/encourages a diversity in its population growth, evident through accomplishments in providing the highest percentage of affordable housing and protection/rehabilitation of subsidized units. Performance standards and development plan review also guide growth in North Kingstown.

North Kingstown has implemented adequate public facilities standards by establishing a Water Service Area (WSA) to handle growth. The WSA adopted in 1998, permits water hookups only to existing and previously approved water mains, concentrating growth within developed/established areas.

North Kingstown utilizes impact fees to offset the provision of municipal services to its residents. Currently, school impact fees are not collected as the Town has completed all improvements to schools anticipated.

The Town has proposed a growth center on Post Road, north of Wickford Junction. The impact of commuter rail on this growth center would be anticipated to be minimal since rail passengers typically do not travel south to a station to then travel north again to reach a destination. Carpooling could be considered between this development and the station if more rail commuters live here in the future.

Narragansett

Narragansett is somewhat unique in that the Town is quite close to buildout (90%), has the highest development density, and has less large-tract developable land then other Washington County communities. Narragansett relies on land use, zoning, and public facilities plans to influence remaining potential growth. Redevelopment and consolidation of substandard lots will be a focus of concern in the future.

Review of the 1999 Narragansett Comprehensive Plan identified several recommended growth management strategies that could be evaluated in the future, including:

- Building Caps
- Adequate Facilities Plan
- Growth Management Thresholds
- Phased Development (20 Units or greater)
- Impact Fees

South Kingstown

South Kingstown has made many impressive strides in implementing growth management mandates initially outlined in their 1992 Comprehensive Community Plan including:

- Development Pacing and Phasing
- Core/Periphery Concept to focus growth in Wakefield and Peace Dale
- Flexible Design Standards
- Fair Share Development Fees
- Open Space Acquisition

Development Pacing and Phasing has regulated the number of building permits issued annually to not exceed the assessed capacity of the school system. With construction of the middle school, building permits issuance is no longer limited by Pacing and Phasing. Fair Share Development Fees are established on an annual basis through the Capital Improvement Program in conjunction with Zoning Ordinance/Subdivision Regulations to fund educational facilities and the acquisition/creation of open space, conservation, park, and recreational land. Flexible Design Standards provide for residential density incentives for non-conventional subdivision design. The Town has worked collaboratively with

numerous federal, state and non-profit agencies to protect open space from development.

Charlestown

The Town Council adopted Charlestown's comprehensive Growth Management Plan in June 2000. This Growth Management Ordinance is divided into three phases:

- Phase I: Residential Building Permits. Building caps on residential development based on a percentage of currently available seats within the Chariho Regional School District, and a percentage of projected increase of seats (60 permits per year).

- Phase II: Impact Fees. An Impact Fee Ordinance initially collected for schools, and later through the Capital Improvement Program for open space/conservation areas, recreation facilities, public works, and public safety.

- Phase III: Revisions, Zoning Ordinance, Subdivision and Land Development Regulations. Provisions for mandatory residential cluster subdivisions (6 or more), residential compounds (up to 5), rear lot subdivisions (up to 2), phasing of subdivisions, and agricultural zoning.

Richmond

Growth management strategies in place include a Growth Rate Cap of 36 building permits per year (as described above for the Chariho School District) and Development Impact Fees on new residential development for the benefit of schools and open space/recreation acquisition. Goals identified in their 2004 Comprehensive Plan include:

- Core/Periphery Concept
- Open Space dedications for Cluster Developments, Residential Compounds, and Planned Unit Developments
- Agricultural Overlay District

Hopkinton

Hopkinton has implemented several growth management strategies: Open space dedications for Cluster Developments, Residential Compounds, and Planned Unit Developments; Planned Unit development Ordinance; and Site Plan Review ordinance. Goals identified in their 2004 Comprehensive Plan include:

- Core/Periphery Concept
- Open Space Acquisition

Westerly

Review of the 1995 Westerly Comprehensive Plan identified several recommended growth management strategies that could be evaluated in the future, including:

- Building Caps
- Adequate Facilities Plan
- Development Pacing and Phasing

New Shoreham

Review of the 2002 New Shoreham Comprehensive Plan identified several recommended growth management strategies that could be evaluated in the future, including:

- Transfer of Development Rights
- Adequate Facilities Plan
- Core/Periphery Concept
- Open Space Acquisition

In summary, the region's communities have adopted a number of innovative measures to limit and manage growth within the region. Many of the measures implemented are inspired by the need to moderate the rate of growth to temper demands (and municipal expenditures) for facilities and services such as schools. With some exceptions, most communities in the region have not yet taken the steps to the next level of growth management – moving towards Smart Growth goals by channeling growth geographically to areas best suited for it, and orienting the character, density, and design of growth to minimize land consumption, protect resources, and increase diversity.

Moving forward, the questions the communities in the region should address are: are the growth management tools currently in place sufficient to produce the overall *pattern* of land use that the region and its communities require; and could the application of other techniques, such as transit-oriented development, growth centers, and transfer of development rights, help to better focus growth geographically?

Smart Growth Techniques

Smart Growth is a well-planned land use strategy that generally guides residential/commercial growth towards higher density "centers" – having good capability and services to support development. At the same time, growth is limited or diverted from sensitive resource lands or areas lacking services. Public investment policies are used as a tool to encourage concentrated growth within the designated areas and centers.

Smart growth may include the following strategies:

- **Focus development in and around existing communities.** From local parks to schools to transportation systems, public investments should capitalize on a community's existing assets. Infill and redevelopment should be considered before consuming undeveloped, open land. Development decisions should be predictable, fair and cost-effective, possibly offering incentives for smart growth-oriented plans.

- **Rehabilitate by revitalizing and restoring existing neighborhoods, housing and commercial areas.** Through the re-use of vacant/abandoned buildings, a variety of housing types to meet the needs of an economically diverse community can be achieved.

- **Mix land uses and housing types in compact, pedestrian-oriented neighborhoods.** Single-use areas increase automobile dependence, which, in turn, increase the time we spend outside the home. Clustered development with a mix of stores, employment and homes offers a use pattern conducive to saving time, money and resources. In addition, compact, mixed-use neighborhoods are geared toward pedestrian mobility and foster a sense of community.

- **Provide neighborhoods with transportation alternatives/choices that include walking, biking and transit.** In order for people to leave their automobiles behind, they need alternative transit modes, as well as incentives to make it attractive.

- **Foster unique, attractive places with a strong sense of place.** Every community has distinctive buildings or areas that are unique to them. These should be rehabilitated/preserved and celebrated.

- **Preserve open space.** People are drawn to nature. Most are willing to take action to preserve open space.

Land Development Amendments

Smart growth strategies can be used by local communities to foster growth near train stations or other designated growth centers, or to discourage growth in areas not well suited for the required density for transit-oriented development. With the exception of downtown Westerly, located in a classic downtown, potential station locations along the Northeast Corridor in Rhode Island are not suitable for the medium to high density of development required for true transit-oriented development. Transit supportive development techniques, outlined in the Development Model section of this report, would be most appropriate for these stations to reduce dependence on the private automobile. Provision of MBTA commuter rail service, however, will likely result in increased development pressure, especially within a 10-minute drive of the station.

Transit-Oriented Design (TOD) and transit supportive design (TSD) are two key means of smart growth planning for Washington County (and other Rhode Island communities) to accommodate the potential for increased growth. These smart growth measures are described in detail in the Development Model section of this report. The following describes additional smart growth tools in more detail.

Traditional Neighborhood Development

Andres Duany & Elizabeth Plater-Zyberk Architects, Inc. have identified thirteen points of Traditional Neighborhood Development (TND) as part of New Urbanism. Many of these points are similar to Transit Oriented Development, Transit Supportive Development, and growth center/village developments as all emphasize the importance of density, diversity and design and stress the importance of pedestrian and transit connections. Although this zoning and land development model would be most applicable to large-scale development, elements may be incorporated in infill, redevelopment, or expansion of existing village centers or neighborhoods.

The social and environmental benefits of TND result from certain physical and organizational characteristics. An authentic Neighborhood includes most of the following, as outlined by Duany and Plater-Zyberk:

1. The Neighborhood has a discernible center. This is often a square or green, and sometimes a busy or memorable street intersection. A transit stop would be located at this center.

2. Most of the dwellings are within a five-minute walk of the center. This distance averages one-quarter of a mile.

3. There are a variety of dwelling types within the Neighborhood. These usually take the form of houses, row houses, and apartments, such that younger and older people, singles and families, the poor and the wealthy, may find places to live.

4. There are shops and offices at the edge of the Neighborhood. The shops should be sufficiently varied to supply the weekly needs of a household. A convenience store is the most important among them.

5. A small ancillary building is permitted within the backyard of each house. It may be used as one rental unit, or as a place to work.

6. There is an elementary school close enough so that most children can walk from their dwelling. This distance should not be more than one mile.

7. There are small playgrounds quite near every dwelling. This distance should not be more than one-eighth of a mile.

8. The streets within the Neighborhood are a connected network. This provides a variety of itineraries and disperses traffic congestion.

9. The streets are relatively narrow and shaded by rows of trees. This slows down the traffic, creating an environment for the pedestrian and the bicycle.

10. Buildings at the Neighborhood center are placed close to the street. This creates a strong sense of place.

11. Parking lots and garage doors rarely front the streets. Parking is relegated to the rear of the buildings, usually accessed by alleys.

12. Certain prominent sites are reserved for civic buildings. Buildings for meeting, education, religion, or culture are located at the termination of the street vistas or at the Neighborhood center.

13. The Neighborhood is organized to be self-governing. A formal association debates and decides on matters of maintenance, security and physical change.

Growth Centers

In October 2002, Governor Lincoln Almond signed Executive Order 02-05 that addressed suburban sprawl by encouraging the promotion of growth centers in Rhode Island. This executive order enables planning processes to tap into state and federal resources in promoting efficient centers for development. The executive order defines growth centers as "Planned or existing dynamic and efficient centers for development that have a core of commercial, industrial and community services, residential development, and natural and built landmarks and boundaries that provide a sense of place."

By designating growth centers, communities have an opportunity to plan for the future by identifying where they want growth to occur and what it should look like. Other parts of the community can be preserved, and communities can reduce costs for constructing and maintaining the infrastructure necessary to support additional residential, commercial, and industrial growth. Growth centers should foster a mix of land uses with a diversity of housing options for a range of income levels. The core layout, design, and density of growth centers should encourage public transportation, walking, and biking to minimize the use of personal vehicles for local trips.

Growth center programs are most effective when they are accompanied by public policies that focus development-supportive investments within the designated centers. The concept is that limited public funds for transportation, utility, and other community development investments, which support development, should be focused within the geographic areas, which have been designated as most suitable for growth through a public process.

The State Planning Council has adopted criteria for local designation and state approval of growth centers via the local comprehensive planning process.

Although possible growth center areas have been identified for Washington County towns (e.g., the Westerly Station area has been identified by the Westerly Planning Department as a possible growth center), these areas have not been submitted for approval through the state process. This is understandable in that while the State has created a designation process, it has not offered any substantial incentives – via priority for growth centers in state investment programs, or targeted funding – for

communities that go through that process and obtain a State-approved growth center. A "Jump-Start Program" initiative that would offer low-interest state development loans to private developers within State-approved Growth Centers was proposed within the past year by the Economic Development Corporation, but was not enacted, possibly due to concerns whether the initiative struck the right balance between support for new centers versus the revitalization of existing centers. Whether by a revised version of this initiative or via some other proposal, the State (Executive and Legislative branches) should follow through, as recommended in the Growth Planning Council's report, by developing a program that targets state development support investments to locally designated, State-approved growth centers that meet the criteria. Statewide Planning and the towns in the region should consult on the possible formal designation of Growth Centers, building on the recommendations for growth areas identified in their Comprehensive Plans. The Washington County Regional Planning Council could also provide a forum for discussion of possible designations of centers (such as villages which straddle town lines) which could serve a multi-community centers.

Conservation Subdivisions

A conservation subdivision does not necessarily manage growth in terms of new dwelling units or population growth, but it does encourage/promote compact development patterns that ultimately reduce impacts on natural resources, service and infrastructure needs, and the amount of land consumed by new development.

A conservation subdivision generally designates an established portion of buildable land area as undeveloped, permanent open space. Both the developer and the community may realize cost savings. The planning board review process may be smoother for the developer as environmentally sensitive areas are considered early. Engineering, permitting and construction costs may be reduced, as development is limited to only a portion of the site. Conservation subdivisions are very marketable because they are based on environmentally oriented development patterns. Reduced road maintenance, school transportation and demand for public recreation/park space may result in lower community services costs.

Conservation subdivisions have several environmental or ecological advantages. Areas of critical concern such as wetlands, streams, and groundwater aquifers are protected from development. Habitat and travel corridors for wildlife are preserved or protected and greenspace corridors are not fragmented. The extent of impervious surfaces is reduced, thereby minimizing stormwater runoff and drainage infrastructure.

Conservation subdivisions offer a number of social and recreational advantages. Each subdivision provides its own public spaces/recreational areas, thereby reducing the need for additional public expenditures. Reserving scenic views and other natural features retains the aesthetics of the property. Conservation subdivisions support a sense of community and help maintain rural character.

Municipal land development regulations must be amended to include conservation subdivisions. As several communities in the region are now mandating

conservation developments – communities should be planning towards green belts, larger blocks of protected land, and protection of critical habitats.

Residential Cluster Subdivisions

The purpose of a residential cluster subdivision is to create a land development pattern that will promote cost-effective and resource-efficient subdivision layouts through reduced roadway construction. Physical qualities of the land must be considered to protect/preserve sensitive ecological, historical or archeological features; preserve open space while providing recreational areas; and maintain a quality of life representative of rural living conditions.

Cluster development can be the preferred form of development, or only allowed if proven as a better alternative to conventional subdivision design. Cluster development generally includes the dedication of open space and density bonuses. Cluster development alone does not result in lower density housing compared to conventional subdivisions. Most communities with mandatory cluster developments are noted to have also adopted regulations for residential compounds.

Transfer of Development Rights (TDR)

Transfer of development rights is a tool to manage growth and protect natural resources in "sending" zones by guiding development to appropriate "receiving" areas. The receiving area could benefit from designation as affordable housing, transit-oriented or transit supportive development, or implementation of growth centers. The sending area could be protected from development to preserve natural resources or current use. As indicated in the Development Model section of this report, TDR could be considered to increase the density of the proposed North Kingstown Green project, located east of the tracks at the Wickford Junction Station, while protecting land closer to the Hunt Well #6 on Stony Lane from development. TDRs are also integral to the example of transit-oriented village zoning presented for Westborough, Massachusetts.

Essentially, a TDR is a conservation easement on a sending property in agricultural (or other highly valued) use, while increased development densities or bonuses are allowed in more suitable receiving areas. Historically, TDRs have been used for the preservation/protection of open space, natural resources, farmland, and urban areas of historical significance. TDRs are used to direct growth to areas currently served by roads, municipal sewer, water and other infrastructure to deter sprawl and large lot development from rural areas or areas of sensitive resources including groundwater protection zones.

Development rights of land are independent from ownership of land. A property owner's rights to develop are removed/severed from the parcel, maintaining the low density or open space desired by the community. The development rights are then transferred to another parcel, where higher density development is desired (such as a train station or other growth area). The owner of the sending parcel is compensated by a public or non-profit entity (such as a land trust or municipal government) or a private enterprise such as a developer. The development right can be shifted from

one area to another, has economic value, and becomes a separate entity of private property. Independent appraisals may be sought to determine the value of development both lost by the sending area and gained by the receiving zone to determine appropriate compensation. The TDR is recorded with the deeds for both the sending and receiving properties and continues in perpetuity.

An alternative method to conventional transfer of development rights is for a local government to establish a TDR bank to transfer development rights. Under this process, developers interested in constructing at higher densities than currently allowed, would purchase development rights directly from the local government. The incentive for the developer is the higher density and therefore higher profit.

The South County Watersheds Technical Planning Assistance Project prepared the *South County Transfer of Development Rights Report* in April 2001. This report researched national literature and addressed issues of suitability for using TDR to reduce development pressures in South County. The report, prepared by a team of consultants directed by Dodson Associates, Ltd., was produced under the direction of the RIDEM Office of Strategic Planning and Policy with funding from the US Environmental Protection Agency (USEPA), RIDEM, Washington County Regional Planning Council (WCRPC), the Rural Lands Coalition, South County Watersheds Partnership, and the University of Rhode Island (URI). The *South County Design Manual* was also prepared as part of this work effort. The *South County Transfer of Development Rights Report* identified the issues outlined below for preservation of private property as agriculture or open space.

A purely voluntary TDR program is a weak tool for implementation of land use policies. A strong incentive program must be incorporated to override the underlying zoning as the preferred development pattern. Bonus development incentives are generally required as an incentive.

For success, both sending and receiving zones must be identified. The focus of the *South County Transfer of Development Rights Report* was the preservation of open space and agriculture. As such, sending zones were more readily identified than receiving zones. The focus of this *Transit-Oriented Development Planning Strategy for Washington County*, however, is on the need for medium to high-density development in areas served by transit to reduce dependence on private automobiles. By integrating the objectives of both reports, implementation of a TDR program may be more successful. A "win" may be achieved for preservation of open space and a "win" may be achieved for transit supportive or transit-oriented development (which also facilitates affordable housing and growth center objectives).

The *South County Transfer of Development Rights Report* indicated that implementation of a TDR strategy could be accomplished by establishing an overlay zone for the sending parcels. State overlay district legislation enables more restrictive development within an overlay zone (i.e., lower density development within a sending overlay district) and therefore could not be used to facilitate less restrictive zoning or higher densities within a receiving or TOD district. State

legislation enables the use of special management districts to permit less restrictive development (i.e., mixed use development within a receiving zone).

The *South County Transfer of Development Rights Report* indicated that a TDR program must encompass a significant potion of an active real estate market if it is to have a meaningful influence on development patterns. Although the South County market is active, the volume of property transfers is not necessarily sufficient within each town and there are no incentives in place to entice developers to participate. Development restrictions in one town may cause increased development pressures in adjacent towns. It is therefore important that a TDR program be implemented region-wide. This would require several important steps:

- Each community's Comprehensive Plan must be revised to stipulate TDR as a growth management strategy.

- Each community's Zoning Ordinance must be revised to designate sending and receiving zones, through either the underlying zoning, through overlay zones (sending zones) or special management districts (receiving zones). The ordinance must also be revised to provide bonus densities for successful TDR implementation. If state legislation cannot be accomplished to increase density in a receiving zone, one way to effectively increase density would be to decrease the potential density in the sending zone with transfer of the full development potential to the receiving zone.

- Regional TDR banks should be initiated to facilitate TDR transfers on either a regional or municipal basis.

Adequate Public Facility Standards

This smart growth technique allows growth only in areas that currently have adequate public facilities to handle growth. By developing an adequate public facilities ordinance, a community establishes minimum levels of service that must be available for proposed development prior to issuance of building permits. This technique conditions development based upon existing conditions.

Municipal water or sewer service areas may be established to manage growth by limiting hookups only to existing and previously approved water or sewer mains, thereby concentrating growth within developed/established areas. As a community expands, its public service area will expand. Similar to phased subdivisions, this method allows public facility service areas to expand in response to additional development permitted by the community.

Agricultural Zoning

The purpose of agricultural zoning is to preserve existing farmlands and agricultural uses from encroaching new development and other nonfarm/agricultural uses. A secondary purpose of agricultural zoning is to promote/encourage very low density residential development where farm/agricultural uses can coexist with single-family homes on large lots.

One form of agricultural zoning calls for the exclusive use of agricultural activities, while prohibiting all other land uses. A second form of agricultural zoning is a nonexclusive type zone that allows agricultural activities in a very low-density residential zone (large-lot zoning). However, when agricultural zoning is used as a guise for low-density residential development it actually promotes sprawl and not smart growth. Variations to both include nonfarm dimensions by special use permit in the exclusive agricultural zone, transfer of development rights (TDR) which provides for nonfarm development rights on a piece of property preferred by the Town (see Transfer of Development Rights), and allowing one nonfarm dwelling for a certain number of acres devoted to active farming on a single lot. One variation excludes zoning completely and includes tax incentives to preserve farmlands, such as the Farm, Forest and Open Space Act (see Natural Resources Protection, below).

Residential Impact Fees

New development can be costly to a town. Residents of new subdivisions frequently include families with children who must be educated. New residents also require municipal services such as police and fire emergency response, libraries, and recreational facilities. New developments also require new or upgraded roads and drainage systems. As a community grows, and land and resources are consumed, the need to conserve open space and natural resources becomes apparent. Requiring development impact fees helps distribute the costs associated with growth.

Historically, every homeowner is required to pay property taxes that in turn are used to pay for education, public safety, public works, and local government expenses. Unfortunately, the municipal cost of services generally outweighs the revenue generated by single-family property taxes. Most communities encourage commercial and industrial land uses in an attempt to balance their tax base and offset the cost of providing municipal services.

General objectives for impact fees include shifting capital financial burden onto new development, aligning/pacing new development with new facilities, imposing economic considerations on developers by making it a customary part of business, utilizing impact fees to improve the quality of life for existing and future residents, and slowing the overall rate of growth.

Impact fees raise the cost of doing business, and in turn, developers pass these fees onto future homebuyers. A strong and growing housing market can minimize the extra cost of impact fees as property values appreciate and existing residents are not burdened to pay for new facilities due to growth. With a weak and declining

housing market, it may take longer to recover the burden of impact fees. A community must be fair in applying the fee and flexible, to adjust the formula based on economic cycles. Impact fees may be waived for affordable housing as an incentive to development and to lower the cost of these units.

Establishing a formal and organized capital improvements program is critical to implementing an impact fee system. A Capital Improvement Program (CIP) includes is the short-term scheduling of capital improvements over a period of several years and includes new/expanded facilities that are large in scale and costly (schools, public safety, complexes, roads, and park/recreation facilities). Many Washington County communities have successfully used the CIP as a means to track the costs of municipal services associated with new construction. Impact fees must be directly tied to providing funding for a specific municipal purpose.

Unless communities have other measures in place to promote housing diversity and affordability, impact fees, as they are passed on to homebuyers, can exacerbate housing cost inflation and decrease the housing and economic diversity of communities. To reduce these effects, communities may exempt affordable housing units or developments that include affordable units from payment of impact fees.

Phased Growth Programs

A residential build-out study can provide a community with a projected estimate of annual growth to adequately plan for increased educational, public safety, public works, and government expenses. At the same time, allocating a limited number of building permits over time can minimize the burden on existing facilities and resources, allowing for controlled growth in relation to existing and future capacities of a community's facilities. Controlling the rate of growth of a community annually, in conjunction with a Capital Improvement Program, can allow growth to occur at a pace that is relative to existing and future capacities.

Although growth/building caps and pacing/phasing programs may meter growth, used alone, they do not address the location of growth or foster smart growth initiatives for diversity, density or design. However, coupled with policies that provide a geographic focus to growth by targeting new permits to growth centers and giving priority to projects which meet diversity or design objectives; growth phasing programs can be aligned with a community's Smart Growth goals.

Growth/Building Caps

Building caps limit the total amount of development in any given year by controlling the number of building permits issued. Annual caps are generally imposed in response to existing conditions and a community's ability to handle such growth based on existing infrastructure.

Growth caps are generally a direct result of a community's build out analysis. Tracking development trends over a period of time reveals the number of new dwelling units constructed. When combined with US Census data on average persons per household, average family size, and population densities, population

may be projected. This information can then be used to assess the demand for municipal infrastructure. By imposing annual growth caps on development, a community can assure that new development occurs in a planned, strategic manner that does not exceed a community's infrastructure capacity.

Rate of Growth/Pacing and Phasing

While the community develops its plan to build new facilities, most of the land is zoned for very low density. As facilities are built and the capacity for growth increases, the community would amend its zoning map to higher densities.

A basis for a Pacing and Phasing program needs to be incorporated into the Comprehensive Plan prior to implementation (via an ordinance) requiring a community to establish and adopt a developed community facility plan that commits the community to installing municipal facilities such as stormwater systems, public water supply, sanitary sewers, school facilities and other infrastructure to meet current or projected demand. The community facility plan should be closely connected to a community's CIP and be based on studies of past impacts of growth and the community's ability to absorb such growth.

Natural Resource Protection

In protecting/preserving the natural features and physical qualities of the land, communities should not only manage the rate and timing of growth, but the location as well, to assure it is compatible with the natural carrying capacity of the land. In doing so, consideration should be given to soil suitability, drainage conditions, wetlands/flood hazards, coastal features, ground water supply basins, and other environmentally sensitive features.

Areas of critical concern may be best protected through a combination of acquisition programs, and regulatory measures such as overlay districts. Protection begins with comprehensive planning to identify high resources and areas at greatest risk. Programs that set clear priorities and objectives, build community support through consensus, and respect the interests and needs of landowners are most successful.

The following methods are commonly relied upon to protect critical natural resource areas:

Purchase of Development Rights

Purchase of development rights (PDR) programs require that a land trust or governmental entity purchase the development rights to a particular parcel. The value of the PDR or development easement is the difference between the parcel's value as open space or agricultural use, and its value should it be developed. Ultimately, market forces generally determine the value of the development right. Through the process of a deed restrictions, the development rights on the parcel are considered "retired." See also Transfer Development Rights discussion under Guided Development, below.

Overlay Districts

In an effort to encourage land-conserving subdivision design, a growing number of communities have adopted zoning provisions that set forth basic requirements for "overlay districts" or "overlay zones" (as well as development impact fees). Many natural resource areas and areas of critical concerns (underground aquifers, wetland complexes) are interconnected in ways that are both obvious and subtle at the same time. Both North Kingstown and Exeter have utilized overlay districts to protect groundwater. South Kingstown has designated on-site wastewater districts to protect groundwater resources and salt ponds from ISDS effluent. Delineation of an overlay zone should be based on identifiable boundaries to avoid enforcement issues.

Open Space Acquisition and Deed Restrictions

Purchase of parcels by the federal, state or local government with deeded restrictions on use is one of the best methods for preserving open space and farmland. Depending on the circumstances, purchasing development rights, property options, or easements can be a more cost effect means of protecting open space than with fee simple purchase of land. Development impact fees and land dedications are also useful, yet not well suited on a stand-alone basis for long-range acquisitions.

Lease purchasing (a loan) is another method for acquiring open space. A community seeks a bank, leasing company, or nonprofit organization interested in purchasing the targeted property. The land in turn is leased to the community, which is required to make regular appropriations for rent consisting of principle and interest payments. At the term of the lease, the community owns the property with minimal up front costs incurred.

The following three levels of land conservation may be considered:

- **Land Conserved with Perpetual Conservation Restriction** –Land that has a Conservation Easement or Deed to Development Rights on it held by an entity, besides the landowner, that is recognized as a qualified organization under s. 170 (h) of the Internal Revenue Code*.

- **Land Conserved with a Deed Restriction** - Land encumbered by permanent conservation deed covenants and owned by a qualified organization, as recognized under s. 170 (h) of the Internal Revenue Code*, for conservation purposes, but land lacks a perpetual conservation restriction.

- **Land held with Conservation Intent Alone** - land owned by a qualified organization, as recognized under s. 170 (h) of the Internal Revenue Code*, for conservation purposes, but land lacks permanent conservation deed covenants and a perpetual conservation restriction.

The latter two categories could be further conserved and secured with a Conservation Restriction such as a Conservation Easement. Land in the "Conservation Intent Alone" category could be easily converted to non-conservation uses. Most Land Trusts (see below) are constituted to qualify as "qualified organizations" under the IRS Code.

* s. 170(h) of the Internal Revenue Code defines a "qualified conservation contribution" for tax purposes.

Land Trusts

Land Trusts are either governmental, or nonprofit (501c.3) conservation organizations that purchase/buy conservation easements and negotiations with local governments, developers, and landowners and manage/maintain natural areas – in an effort to preserve/protect natural and cultural resources in perpetuity. Land trusts have played an increasingly important role in acquiring lands strategically to meet federal, state, and local land conservation goals.

A growing land conservation movement, facilitated by desire to save open lands that make each community unique, has resulted in growth of local and regional land trusts. The Land Trust Alliance (LTA), founded in 1982, promotes voluntary land conservation and provides leadership, information, signs, and resources critical to land trusts. LTA members active in Washington County include Land Conservancy of North Kingstown, Narrow River Land Trust, Inc., Prudence Conservancy, South County Conservancy, South Kingstown Land Trust, The Watch Hill Conservancy, Westerly Land Trust, and Westerly Municipal Land Trust. Land trusts and government land conservation programs utilize a number of tools to conserve and protect lands: program design; procedures for acquiring land and development rights; collaborative efforts for conservation and development; greenway/corridor design; protection of the working landscape; and stewardship of private land.

Current Use Valuation of Farm, Forest and Open Space Land

The Farm, Forest and Open Space Act (FFOS) is a property tax program available to certified property owners who can have their land assessed/taxed at current use values. The Rhode Island Department of Environmental Management (RIDEM) Division of Forestry and Agriculture is responsible for certifying farms and woodlands under the FFOS program. FFOS program regulations provide definitions, application procedures, and the legal criteria for cancellation, reclassification, and change of ownership.

Communities also play a role under this program: Municipal Tax Assessors, rather than State agencies, make determinations of the eligibility for properties of five or more acres seeking designation under the "open space" category of the program. The current use valuation restriction runs for 15 years under this Program, and a sliding-scale penalty is applied to properties that are converted out of their classification by development short of the 15-year enrollment period. The program provides a relatively low-cost means for municipalities to provide interim protection of important open lands, and to encourage conservation-minded owners to retain their properties in productive open space uses.

Regional Planning Collaboration

Regional collaboration on adjacent land uses, shared natural resources and transportation system opportunities should be considered when planning for a community and the region as a whole. The Washington County Regional Planning Council has been instrumental in providing the leadership for regional collaborative planning issues in South County.

Greenways/Greenspace Corridors

Federal and state agencies as well as local communities have a growing awareness of the many benefits of linear greenways along rivers and streams. Because these rivers may form state boundaries (as in the case of the Pawcatuck River) or municipal boundaries (along the Wood River), effective planning may transcend local efforts. Greenways may be planned, designed, and developed as natural corridors for passive / active recreation, wildlife and habitat and movement, and flood damage mitigation. Greenways may be combined with bicycle paths to create continuous open space / recreational corridors. Greenway corridor planning should continue with the support of USEPA, RIDEM, RIDOT, the WCRPC, greenway alliances, and local communities.

South County Design Manual

The *South County Design Manual*, presented in May 2001, was a collaborative effort produced under the direction of the RIDEM Office of Strategic Planning and Policy to regionally develop creative land use techniques to accommodate growth while minimizing environmental and "sense of place" impacts.

Land use techniques addressed include creating new growth centers to avoid sprawl, encouraging village revitalization through infill development, transferring development rights, preserving/protecting open space, and preventing the encroachment of strip commercial development. Additional techniques addressed strategies for the continuation of agriculture and forestry and ways to more effectively evaluate the environmental impacts of development.

The purpose of the *South County Design Manual* was to develop better growth management planning options, and to illustrate how proactive planning combined with flexible land use technique and environmentally sensitive site design can not only preserve the environment, but also the quality of life so many Rhode Islanders enjoy. This project is just one example of how partnerships with valued stakeholders across a region can successfully guide growth as well as grow efficiently. Implementation of strategies recommended would enable Washington County communities to proactively plan for anticipated growth with the start of commuter rail service.

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Appendix A

North Kingstown, Rhode Island
Build-Out Analysis

North Kingstown - Build-out Analysis

Property Classifications (acres)											Potential Dwelling Units
Plat No.	Single Family	Multi-Family	Apart.	Comb.	Seas.	Vacant (Resid.)	Comm./ Indust.	Other	FFOSL	Residential Condo	
1	61.69	7.18	0	2.47	7.3	10.3	0	0	0	0	6
2	32.61	3.23	0	0	0	2	0	107.5	0	0	2
3	20.2	0	0	0	0	79.1	0	0	0	0	0
4	5.5	0	0	0	0	20.29	0	0	108.16	0	33
5	93.87	0	0	0	0	119.8	0	0	0	0	17
6	7.7	0	0	0	0	4	0	87.5	0	0	23
7	37.82	2.59	0	0	0	0	0	14.35	0	0.45	4
8	13.83	0	0	0	0	4.5	0	32	99.6	0	12
9	49.05	6.58	0	0	0	8.3	0	73.3	4.41	0	12
10	53.33	0	0	0	0	14.2	0	0	31.54	0	0
11	0	0	0	0	0	0	0	151.76	0	0	48
12	0	0	0	0	0	0	0	227.73	0	0	15
14	181.7	0	0	0	0.88	0	0	0	0	0	10
15	2.27	0	0	0	0	1.2	0	0	60.1	0	4
16	0	0	0	0	0	0	0	0	95.7	0	0
17	0	0	0	0	0	0	0	0	99.8	0	0
18	0	0	0	0	0	0	0	0	120.3	0	0
19	98.5	1.1	0	0	0	45.88	0	0	7.7	0	12
20	61.28	1.3	0	0	0	45.89	0	0	26.13	0	15
21	11.36	0	0	0	0	6.4	0	0	158.65	0	20
22	88.69	0	0	0	0	11.01	0	0	0	0	12
23	56.1	9.44	0	0	0	36.07	0	0	36.07	0	10
24	10.24	0	0	0	0	1.025	0	0	90.47	0	7
25	25.98	0	0	0	0	10.06	0	14.65	107.78	0	10
26	22.35	7.54	0	0	0	6.8	0	0	0	6.23	0
27	16.68	6.19	0.7	0.2	0	1.83	2.82	0	59.53	0	1
28	27.09	0	0	0	0	13.57	0	110.46	0	0	10
29	50.7	0	0	7.52	0	148.15	0	0	45.43	0	25
30	10.9	0	5.69	10	0	45.98	0	0	125.33	0	35
31	4.53	0	0	0	0	0	0	0	0	0	10
33	150.96	12.35	0	0	0	16.72	0	0	0	0	7

North Kingstown - Build-out Analysis

Property Classifications (acres)											Potential Dwelling Units
Plat No.	Single Family	Multi-Family	Apart.	Comb.	Seas.	Vacant (Resid.)	Comm./ Indust.	Other	FFOSL	Residential Condo	
34	117.25	0	0	0	0	68.92	0	0	0	0	0
35	6.62	8.85	0	0	0	9.38	0	0	44.88	0	10
36	65.91	4.07	0	0	0	17.96	0	0	0	0	16
37	66.66	0	0	0	0	14.63	0	0	0	0	4
38	36.6	0.539	0	0	0	5.43	0	0	0	0	28
39	53.4	3.1	37.21	0	0	0	0	10.35	71.78	0	15
40	33.55	0	12.9	0	0	10.79	0	34	0	0	7
41	69.06	0	0	0	10.7	22.85	0.43	0	0	0	12
42	50	0	0	0	23	54.52	0	18.18	29	0	10
43	28.34	0	0	0	0	22.81	0	2	13.11	0	9
44	2	0	0	0	0	84.91	0	0	0	0	50
45	40.81	24.27	0	0.42	0	6.19	0	0	0	14.11	0
46	7.98	0	0	0	0	0	0	0	89.71	0	0
47	0	0	0	0	22.6	0	0	0	74.15	0	5
48	0	0	0	0	0	0	0	0	30.65	0	0
49	16.6	25.83	3.19	0	0	4.23	0	2.44	0	0	4
51	89	0	0	0	0	0	0	58.65	0	0	8
52	41.18	0	0	0	0	10.17	0	20.4	3.47	0	3
53	30.57	0	0	0	0	4.85	0	3.71	80.69	0	32
54	44.31	0	0	0	0	15.51	0	32.12	187.35	0	15
56	7.19	0.349	0	0	0	2.32	0	0	199.6	0	0
57	4.13	1.77	0	0.474	0	0	2.08	0	57.89	0	7
58	30.02	8.17	0	0	0	2.28	0	2.15	0	0	19
59	0	0	0	0	0	0	95.59	0	119.05	0	2
60	55.86	0.635	0	0	0	0	0	27.5	0	0	1
61	26.37	0	0	0	0	32.7	0	0	21.81	0	0
62	13.23	6.08	0	0	0	4.82	0	0	0	0	15
63	9.34	2.02	0	0	0	25.6	0	26.45	0	0	2
64	25.82	0	0	0	0	18.21	0	0	47.65	0	4

North Kingstown - Build-out Analysis

Property Classifications (acres)											Potential Dwelling Units
Plat No.	Single Family	Multi-Family	Apart.	Comb.	Seas.	Vacant (Resid.)	Comm./ Indust.	Other	FFOSL	Residential Condo	
65	0	0	0	0	0	0	0	0	159.51	0	60
66	0	0	0	0	0	0	0	0	159.83	0	15
67	29.37	2.82	0	0	0	17.51	0	0	78.37	0	20
68	56.99	1.7	0	0	1.29	2.91	0	0	0	0	0
69	45.44	0	0	0	0	9.77	0	0	0	0	3
70	12.27	0	0	0	0	7.6	0	0	0	0	0
71	4.52	0.86	0	0	0	0.64	0	0	0	0	5
72	69.37	2.68	0	0	0	12.28	0	0	23.12	0	3
73	9.26	8.81	2.28	1	0	1.46	0	0	0	0	3
74	24.41	0	0	0	0.09	9.17	0	0	0	0	0
75	5.12	0	0	0	0	0	0	0	0	1.13	0
76	116.32	10.23	0	0	0	4.16	0	7.42	0	7.09	10
77	78.49	4.49	0	0	0	2.38	0	0	0	0	0
78	21.05	0	0	0	0	27.77	0	20.3	26.85	0	10
79	24.14	12.09	0	0	0	10.01	61.02	0	43.05	0	20
80	4.92	0	0	0	0	0	0	0	0	0	0
81	8.84	3.17	0	0	0	0.39	0	0	0	0	0
82	32.51	0	0	0	0	11.57	6.22	35.79	0	0	1
83	45.83	0	0	0	0	0	0	0	0	0	20
85	46.18	8.56	0	1.44	0	0	0	0	0	0	5
86	36.44	3.34	0	0	0	0	0	0	0	1.78	0
87	86.06	1	0	0	0	40.07	0	0	0	0	3

North Kingstown - Build-out Analysis

Property Classifications (acres)											Potential Dwelling Units
Plat No.	Single Family	Multi-Family	Apart.	Comb.	Seas.	Vacant (Resid.)	Comm./ Indust.	Other	FFOSL	Residential Condo	
88	22.15	13.47	0	0	0	2.4	0	0	0	14.04	0
89	30.35	0.28	0	0	4.72	9.29	0	0	0	0	2
90	31.92	18.7	2.3	0	0	13.79	0.82	0	0	0	4
91	24.02	3.15	0.52	0	0	1.33	0.05	0	0	0	0
92	65.79	8.78	1.49	0.4	0	19.71	0	0	0	0	6
93	86.9	22.1	0	0	0	7.023	0	0	0	0	0
94	25.58	3.07	0	0.3	0	2.12	0	0	0	0	0
95	3.22	0	0	0	0	0	18.02	0	0	0	0
96	12.75	0	0	0	0	0.23	0	0	0	0	0
97	42.33	4.45	0	0	0	5.12	0	0	12.99	0	10
98	14.07	13.51	0	0	0	4.72	0	58.42	0	0	7
99	42.74	2.25	0	0	0	5.25	0	0	0	0	3
100	15.11	7.88	0.721	0.704	0	1.05	0	0	0	0	0
101	19.51	0	0	0	0	30.3	1.82	0	0	0	5
102	76.44	0	0	0	0	37.49	0.67	22.57	3.87	0	5
103	119.79	5.44	0	0	0	11.86	0	0	12.55	0	20
104	47.39	0	0	0	0	5.31	0	27.54	0	0	5
105	0	0	0	0	0	0	0	181.02	0	0	10
106	58.19	7.84	0	0	0	0	0	0	100.07	0	30
107	12.56	0	0	0	3.98	11.22	0	0.67	0	0	0
108	41.38	1.2	8.71	0.5	0	8.1	0	0	19	0	8
110	8.52	0	0	0	0	1.24	0	0	4.36	0	34
111	32.21	2.09	0	0	0	15.97	13.92	0	0	0	0
112	43.73	12.18	1.12	1.04	0	2.13	5.5	63.36	0	0	0
113	23.83	7.29	0	0	0	9.8	0	56.95	42.4	10.66	11
114	16.74	6.67	2	0.1	0	11.83	0	32	0	0	4
115	57.95	4.7	0	0	0	4.03	0	0	0	0	3
116	48.85	13.73	2.45	3.36	0	23.89	1.61	2.9	0	0	3
117	35.39	7.5	0.76	0.03	0.46	2.02	1.07	0	0	0.38	1

North Kingstown - Build-out Analysis

Property Classifications (acres)											Potential Dwelling Units
Plat No.	Single Family	Multi-Family	Apart.	Comb.	Seas.	Vacant (Resid.)	Comm./ Indust.	Other	FFOSL	Resid. Condo	
118	5.11	2.2	15.5	0.9	0	11.1	0	0	0	0	0
119	51.56	0	1.23	0.65	0	23.5	0	0	0	0	4
120	31.14	6.41	0	0	0	1.88	0	43.3	0	0	2
121	0	0	0	0	0	0	0	0	94.31	0	0
122	16.56	5.91	2.55	0	0	0	0	0	0	0	0
123	4.7	0	0	0	0	2.94	0	0	49.5	0	25
124	58.82	0	0	0	0	1.8	0	0	49.5	0	10
125	89.45	0	0	0	0	5.32	0.07	0	7.65	0	3
126	20.06	0	0	0	0	70.47	0	107.46	0	0	50
127	65.03	11.98	0	0	0	11.68	0	28.48	32.88	0	10
128	31.57	4.1	0	0	0	11.51	0	50.04	0	0	3
129	17.69	0	0	0	0	4.25	16.58	81.8	0	0	30
130	36.89	1.6	0	2.4	0	16.83	0	0	0	0	0
131	5.3	0	0	0	0	0	0	132.28	0	0	1
132	22.12	3.5	0	0	0	2.72	0	0	9.48	0	3
133	16.12	2.8	0	0	0	93.97	0	0	0	0	6
134	23.5	0	0	0	0	0	0	0	40.02	0	0
135	33.58	2.03	0	0	0	44.29	2.06	25.2	0	0	9
136	28.52	0	0	1.34	0	1.33	0	11.45	14.23	0	5
137	1.41	0	0	0	0	2.04	0	48.2	0	0	0
138	63.09	4.84	0	0	0	18.66	18.83	0	0	0	5
139	16.22	7.77	0	0	0	0	0	0	54.01	0	20
140	11.56	0	0	0	0	25.81	0	0	0	0	0
141	56.12	4.52	2.37	0	0	0.58	0	1.08	0	0	3
178	0	0	33.3	0	0	0	0	13.3	0	0	0
179	0	0	0	0	0	0	0	0	0	0	QP
180	0	0	0	0	0	0	0	0	0	0	QP
181	0	0	0	0	0	0	0	0	0	0	QP
185	0	0	0	0	0	0	0.98	0	0	0	QP
Total	**4,490.60**	**406.9**	**134.5**	**35.55**	**75.02**	**2,746.97**	**250.16**	**2,108.73**	**3,017.01**	**55.87**	**1176**

Appendix B

Westborough, Massachusetts
Transit-Oriented Village Zoning

To Wit:

To see if the Town will vote to amend the Zoning Bylaws of the Town of Westborough by amending Article 2, District Regulations, Sections 2100, Establishment of Districts, subsection 2110 by adding a new Zoning District under the "Industrial" subsection as follows:

> "Mixed Use Industrial……IC (5)"
> and by adding a new footnote (5) for this section as follows:
>
> "(5) In accordance with Section 5000, Transit Oriented Village by Special Permit in Industrial C Zone shall be issued by the Planning Board".

and by amending Section 2300, Use Regulation Schedule, by adding a new District Column, Mixed Use Industrial (IC) as shown on the following three pages:

2300. USE REGULATION SCHEDULE

	DISTRICT												
		C	R	AA AB	BA	BB	IA	IB	IC	M	AE	M-1	ALL OTHERS	DPOD
RESIDENTIAL USES														
Single Family Dwelling:	N	Y	Y	SP	Y	N	Y	**Y**	N	SP	N	Y	SP	
Two-family dwelling:	N	S	Y	SP	Y	N	Y	**Y**	N	SP	N	S	SP	
Conversion of existing structure to more than two-family dwellings:		N	N	S	SP	S	N	S	**SP**	N	SP	N	N	SP
Boardinghouse:	N	S	S	SP	S	N	S	**SP**	N	SP	N	S	SP	
Multi-family dwelling (See Section 4200):	N	N	Y	N	N	N	N	**N**	N	N	N	N	SP	
Open Space Communities (See Section 4300):		N	SP	N	N	N	N	N	**N**	N	N	N	N	SP
Mobile Home:	N	N	N	N	N	N	N	**N**	N	N	N	N	N	
Campground, mobile home park:	N	N	N	N	N	N	N	**N**	N	N	N	N	N	
Mixed Use Residential/Commercial with Industrial Components (see Section 5000)	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**SP**	**N**	**N**	**N**	**N**	N	
OPEN USES														
Farm: With pigs, animals raised for pelts: (2)		N	N	S	SP	S	N	S	**S**	N	SP	N	N	N
Other:		S	Y	Y	Y	Y	N	Y	**Y**	N	Y	N	Y	N
Nursery, greenhouses (commercial):		S	N	Y	SP	Y	N	Y	**Y**	N	SP	N	N	SP
Supervised camping:		S	N	N	SP	Y	N	S	**S**	N	SP	N	N	N
Cemetery:		N	Y	Y	Y	Y	N	Y	**Y**	N	Y	N	Y	N
Drive-in theater, amusement park, race track or similar commercial outdoor recreation: (3)	N	N	N	N	N	N	N	**N**	N	N	N	N	N	
Outdoor recreation other than the above operated by a governmental agency:	S	Y	Y	Y	Y	N	Y	**Y**	N	Y	N	Y	Y	
Other:		S	S	S	SP	S	N	S	**S**	N	SP	N	S	SP
Sale of Christmas Trees:	S	Y	Y	Y	Y	N	Y	**Y**	N	Y	N	Y	Y	

(1) Animal keeping may be subject to permit from the Board of Health.

(2) But no animals kept closer than 500 feet to any lot line.

(3) Temporary carnival sponsored by a non-profit organization permitted upon approval by the Board of Selectmen.

	DISTRICT													
		C	R	AA AB	BA	BB	IA	IB	IC	M	AE	M-1	ALL OTHERS	DPOD
INSTITUTIONAL USES														
Religious, sectarian, denominational; or public educational uses, religious purposes:		Y	Y	Y	Y	Y	Y	Y	**Y**	Y	Y	Y	Y	Y
Other education uses:		S	N	N	Y	S	N	S	**S**	Y	Y	Y	N	SP
Municipal use voted at Town Meeting (not more specifically cited in Section 2300):	S	Y	Y	Y	Y	Y	Y	**Y**	Y	Y	Y	Y	Y	
Hospital, sanitarium, convalescent, nursing or rest home, congregate housing:		N	S	Y	SP	S	N	S	**Y**	Y	SP	Y	S	SP
Patriotic, fraternal or social clubs, if not conducted for profit; other philanthropic institution or club:	N	N	S	SP	S	N	S	**S**	Y	SP	Y	N	SP	
COMMERCIAL USES														
Motor vehicle service station (See Section 3300):	N	N	N	S(1)	S(1)	N	S(1)	**S**	N	S(1)	N	N	N	
Animal kennel or hospital as Licensed under Chapter 140, Section 137a. Gen. Laws:	N	N	S	SP	Y	N	Y	**N**	N	SP	N	N	N	
Indoor Recreation:		N	N	N	SP	Y	N	Y	**SP**	N	SP	N	N	SP
Banks, office space:		N	N	N	SP	Y	Y	Y	**SP**	N	SP	N	N	SP
Restaurants:		N	N	N	SP	Y (2)	N	Y (2)	**SP**	N	SP	N	N	SP
Hotel, motel, motor court:	N	N	N	SP	Y	N	Y	**SP**	N	SP	N	N	SP	
Other retail sales & services:		N	N	N	SP	Y	N	Y	**SP**	N	SP	N	N	SP
Display & sale of natural products, a portion of which are raised by the proprietor in Westborough:		N	S	S	Y	Y	Y	Y	**SP**	N	Y	N	S	SP

(1) Special Permits to be issued by Selectmen rather than the Board of Appeals. **(2)** Except "S", if food is to be consumed on premises outside of a building, or to be sold packaged for take-out is incidental to service for on-premises consumption. **(3)** Shall not apply to land or structures for religious or educational purposes on land owned or leased by Commonwealth or any of its agencies subdivisions or bodies, politic or by a religious sect of denomination or by a non-profit educational corporation.

		DISTRICT												
		C	**R**	**AA AB**	**BA**	**BB**	**IA**	**IB**	**IC**	**M**	**AE**	**M-1**	**ALL OTHERS**	**DPOD**
INDUSTRIAL UTILITY USES														
Airport, heliport:	N	N	N	N	N	S	S	**S**	N	N	N	N	N	
Public utility with outside equipment or storage:		S	N	N	Y	Y	Y	Y	**Y**	N	Y	N	N	N
With none of above:		S	S	S	Y	Y	Y	Y	**Y**	N	Y	N	S	SP
Earth Removal (See S. 4100) (1):	S	S	S	`S	S	S	S	**SP**	N	S	N	S	SP	
Trucking terminal, bulk storage, Contractor's yard:		N	N	N	N	N	Y	Y	**SP**	N	N	N	N	Y
Manufacturing, Processing and Warehouse:		N	N	N	SP	N	Y	Y	**Y**	N	SP	N	N	N
ADULT ENTERTAINMENT USES		N	N	N	SP	N	N	N	**N**	N	SP	N	N	N
OTHER PRINCIPAL USES														
Other use having externally observable attributes similar to one of above:				--- as regulated above ---										
All other uses:	N	N	N	N	N	N		**N**		N	N	N	N	
ACCESSORY USES														
Home occupations:		N	Y	Y	Y	Y	S	Y	**Y**	N	Y	N	Y	SP
customary accessory uses & structures (See Sec. 4400):		Shall incur the same regulations as the principal use listed in this Section.												
Agriculture, Horticulture														

Or Floriculture: Insofar as it can be established that the primary purpose of the use the land falls within the above mentioned categories, the regulations herein shall not apply, if same is deemed unreasonable, nor shall such use require a Special Permit. Expansion or reconstruction of existing structures up land primarily being used for agriculture, horticulture or floriculture, shall not be prohibited or unreasonably regulated except that all such activities may be limited to parcels of more than five (5) acres in areas not zoned for agriculture, horticulture, or floriculture. Land divided by a public or private way or a waterway shall be construed as one parcel.

(1) Special Permits to be issued by **Planning Board** rather than the Board of Appeals.

and by amending Section 2620, Non-Residential Buildings in Non-Residential Districts (BA, BB, IA, IB, DPOD) by adding a new District **IC** as shown in a new **Section 5000.**

5000. Transit Oriented Village by Special Permit in Industrial C Zone

5010. Purpose. The purpose of this Transit-Oriented Village (T-OV) by Special Permit By-law is to:

a. encourage the development of new "village oriented" transit development on appropriate properties, now zoned for industrial use, proximate to commercial areas, services and/or public transportation,
b. foster the development of smaller living units, which by virtue of their size will be more affordable than larger single-family homes.
c. provide additional housing units which meet the official State definition of affordability.
d. contribute to the Town's efforts to preserve Open Space.
e. create realistic incentives that will bring about the re-development of properties that are currently underutilized or on which there are outdated or unattractive non-residential structures.

5020. Applicability. In any zoning district in which Transit-Oriented Village ("T-OV") is allowed, such use shall be by way of Special Permit issued by the Planning Board and subject to the requirements of this Section 5000. TOV shall be allowed by Special Permit from the Planning Board in the following zones:

Industrial C (Mixed Use Industrial)

5030. Mixed Uses. Development under this By-law may include a mixture of uses, combining those already allowed in the zone and those multi-family housing uses allowed by Special Permit pursuant to this By-law. The Planning Board shall have broad discretion in determining which uses are compatible and the degree to which various non-residential uses may be mixed with the multi-family housing proposed for a particular site. However, no building shall have industrial uses in the same building as residential uses.

5040. Review Requirements. All applications for a Special Permit under this T-OV regulation shall be subject to design review by the Design Review Board in accordance with Section 1200 of these By-laws, and Site Plan Review, as prescribed in Section 1200 of these By-laws. These hearings may be combined at the option of the reviewing boards.

5050. General Standards. All applications must meet all applicable dimensional, density, design, drainage, safety, parking, signage, lighting, and other land use standards and regulations set forth in these By-laws for the underlined zone, except for those standards that are specifically modified by the Planning Board in its review of the Special Permit application. In taking action on a T-OV Special Permit application, the Planning Board may wave and or modify such standards, including dimensional standards, upon a finding that to do so will further the purposes listed above without having a detrimental effect on the health, safety and general welfare of the Town's residents and the public. The Planning Board shall enjoy broad discretion to deny applications, to the extent that the proposed development is found to contain negative attributes which the Planning Board concludes outweigh the positive contribution to the purposes outlined above. The Planning Board may also approve a Special Permit application under this By-law with reasonable conditions, in keeping with its Special Permit powers.

5060. Dimensional Requirements. Except to the extent specifically modified below, all dimensional requirements of the zone shall apply to any T-OV development. However, the Planning Board may, in accordance with the above paragraph on General Standards 5050, modify the dimensional requirements of the zone or the following special dimensional requirements upon a finding that such modification furthers the purposes of this By-law without detrimental effect.

A. Special Dimensional Requirements of T-OV:

1.	Min. lot area (sf)	10,000
2.	Min. lot frontage (ft)	90
3.	Min. front yard (ft)	25 [4]
4.	Min. side yard (ft)	15 [1] [4]
5.	Min. rear yard (ft)	25 [4]
6.	Max. bldg height (ft)/stories	60/4* [2]
7.	Max. lot coverage (%)	60
8.	Max. floor area ratio (FAR) (both res. and non-res.)	1.2
9.	Max. building size (sf)	20,000
10.	Min. separation of buildings on same lot	20
11.	Min. open space (%)	40
12.	Base living units per acre	4 [6]
13.	Maximum units per acre	14
14.	Min. habitable floor area per d.u. (sf)	600 (studio) 750 (1-bdrm) 900 (2-3 bdrm)
15.	Max. number of units with more than 2 bedrooms (%)	20
16.	Min. number of affordable units (%)	20 [3]
17.	In mixed use structures, maximum non-residential floor area ratio	0.3

* except only 2.5 stories and 35 feet within 100 feet of a recognized watercourse (pond, reservoir, river, etc.), or within 2,500 feet of the rotary in the center of Town or where property under consideration is adjacent to a residential district.

B. Notes to Dimensional Requirements

1. It is specifically noted that side yard setbacks may be reduced to zero in cases where the Planning Board determines that joined buildings add to the "village center" atmosphere that is envisioned by this By-law.
2. Where the Planning Board finds merit, it may allow taller structures where lot coverage on the development parcel is correspondingly reduced. For example, assuming all others features and characteristics of a Special Permit application comply with this regulation, a four story structure would be allowed with a maximum coverage of 60%. The proponent might suggest an 8-story building with a coverage of 30% (50% increase in allowed height and 50% decrease in coverage).
3. The minimum of 20% of the units that are to be designated affordable must comply with the requirements of the Massachusetts Department of Housing and Community Development or a successor agency. Such units shall have deed restrictions regarding affordability which will continue in perpetuity and will allow the units to "count" as State recognized affordable units. All such affordable units shall be priced at levels affordable to individuals or families earning no more than 80% of Area Median Income (AMI) as published by the State/US Department of Housing and Urban Development (HUD).
4. A 75-foot buffer strip shall be maintained where abutting a Residential District; thirty feet of this to remain undisturbed, except for the planting of additional natural vegetative screening.
5. No floor of a dwelling unit, except for unoccupied basements, shall be below grade of the adjoining ground at any place on its perimeter.
6. See Section 9 F below, Density Bonus for Preservation for Open Space by the use of Transfer of Development Rights.

5070. Application. An application for a Special Permit for T-OV shall be submitted to the Planning Board on forms furnished by the Planning Board, accompanied by the filing fee and the

information, data and plans required in the Administration and Procedure Section of these By-Laws for other Special Permit applications, or as otherwise determined by the Planning Board. The Planning Board shall promulgate its own application requirements for the T-OV Special Permits.

5080. Action on Application. The Planning Board, the Design Review Board, and other governmental agencies which are, by these By-laws, given review jurisdiction over applications under this V-OTD By-law, shall process and take action on such applications as prescribed for each review board by zoning, other local by-laws or regulations, state statute or regulation. The Design Review Board shall promulgate its own review standards for T-OV which shall be stated in the Design Review Board Guidelines.

5090. Density Bonus for the Preservation of Open Space. Recognizing that one of the purposes of this By-law is the preservation of open space, the transfer of development rights ("TDR") to parcels that are the subject of a Special Permit application under this By-law is allowed as follows:

A. The parcel or parcels to be preserved as Open Space through a TDR shall be referred to as the "Sending Parcel(s)", while the parcel(s) on which the Transit-Oriented Village is proposed under this By-law shall be referred to as the "Receiving Parcel(s)".
B. Sending and Receiving Parcels do not have to be contiguous or under common ownership, so long as each Sending Parcel is made part of an application for a Special Permit under this By-law.
C. The Sending Parcel(s) shall provide a legal description (deed) and the Town's GIS description of the property. Such description shall show property boundaries, area in acres or square feet, wetlands and wetlands setback lines, rivers protection set backs, flood plain areas, topographical lines and other features and conditions normally included in an existing conditions survey. The applicant need not show that the land is capable of sustaining septic systems, or provide any geological or soils data. Once the sending parcel is accepted by the Planning Board, the applicant shall provide a field survey of the parcel by a licensed surveyor.
D. In order to qualify as a Sending Parcel, the Planning Board must make a finding that the land to be preserved as Open Space: (1) has unique and/or valuable natural or physical attributes, or (2) that there exists a valid planning reason to preserve the land as Open Space, or (3) that the land is substantially developable, and that the Town would benefit more from the land's permanent preservation as Open Space than from its development.
E. The applicant must present a plan to treat the sending parcel as preserved Open Space in one of the manners prescribed in Article 4350 of these By-laws, entitled: "Common Open Space Ownership and Management". Upon approval of a T-OV Special Permit, the ownership and management plan for the Open Space must be implemented, and the deed to the property sufficiently restricted, to accomplish the complete and permanent severance of development rights therefrom.
F. For every acre of preserved land in a Sending Parcel that is in the Single Residence Zone, the Special Permit applicant shall be entitled to a bonus of 10 additional units in the multi-family project. For every acre of preserved land in a Sending Parcel that is in a zone other than the Single Residence Zone, the Special Permit applicant shall be entitled to a bonus of 5 additional units in the multi-family project. However, such density bonuses are usable only to the extent that the proposed project, with the added units, in the discretion of the Planning Board, continues to meet all other requirements of these By-laws including satisfying the goals stated in the Purpose Section herein.
G. For example, if a parcel in the Industrial C Zone that is the subject of an application under this Transit-Oriented Village By-law meets all requirement for a total of 40 units (4 base units per acre on a 10-acre parcel) and the applicant is preserving 10 acres of acceptable land in the Single Residence Zone, the total possible units in the multi-family housing project would be 140 units (40 base units, 100 bonus units). This assumes that

the 140-unit project still meets all requirements of this By-law, including those which are discretionary on the part of the Planning Board.

H. In the event that a transfer of a partial acre of land from a Sending Parcel, or any other calculation, results in a number of bonus units, or total units per acre, which is a fraction, the total shall be rounded down to the previous whole number.

I. In approving a TDR, the Planning Board shall have the power and authority to condition the Special Permit on the fulfillment of reasonable improvements to or near the Sending Parcel, as well as its traditional authority to impose conditions on and near the site to be developed. For example, the Planning Board might condition a T-OV Special Permit on the installation of a certain number of parking spaces on the Sending Parcel to facilitate the Town's use and enjoyment of the preserved land.

5091. Specific Site and Construction Standards.

Unless modified in accordance with the above paragraph on General Standards, the following specific site and construction standards shall be observed in the development of a T-OV project as stated in the T-OV Architectural Guidelines applied by the Design Review Board.

A. Architectural Standards:

Design characteristics shall be stated in the Special Permit application and shall include, but shall not be limited to: architectural design, building materials, massing, scale, color, roofline, street furniture, site and building landscaping, lighting and signage as stated in the Architectural Guidelines available from and administered by the Design Review Board.

B. Roadways/Pedestrian Access

Where intended for dedication and acceptance by the Town, the principal roadway(s) serving the site shall be designed to conform to the standards of the Subdivision Regulations and any other relevant standards of the Town unless otherwise required by the Planning Board Private ways shall be adequate for intended vehicular, including public safety vehicle access, and pedestrian traffic and shall be maintained by an association of unit owners or by the applicant. It is intended that a sidewalk network will be provided throughout the T-OV area that interconnects all dwelling units with other dwelling units, non-residential uses, common open spaces, parking areas, transportation centers and major activity areas adjacent to the zone in which T-OV is permitted. The Planning Board may require construction of on-site or off-site sidewalks, footpaths or bicycle paths. Access to off-site areas is required, particularly to permit safe and convenient pedestrian and/or bicycle access to nearby amenities.

5092. Area Concept Plan Requirement

A. Each Special Permit application filed under this By-law, shall be accompanied by an updated Area Concept Plan ("ACP") covering all properties which are partially or completely within 300 feet of any property line of the site on which the applicant proposes to place a T-OV project. The ACP does not need to include any land outside the underlying zone in which T-OV is allowed by Special Permit.

B. The Area Concept Plan (ACP) is not binding on any party, and does not need to meet the technical requirements of a Special Permit application. The ACP shall show a plan in scale

of all existing buildings, as well as all parking lots, streets, sidewalks, bike paths, and other existing conditions in the area covered by the ACP.

C. The applicant shall show on the Area Concept Plan (ACP) any changes to surrounding properties that it suggests might be made in the future so as to best integrate the applicant's proposed T-OV into the area around the site. For example, if the applicant's site is within walking distance of, but not adjacent to, an amenity, such as a park, parking lot, watercourse, transportation hub, or local shops, and if the goals of this By-law would be furthered by connecting pathways, streets or other alterations to nearby properties, these should be shown on the ACP. The applicant need not have the permission of the owner of such nearby property to complete the ACP. However, if the Planning Board, in the course of its review and action on a Special Permit application hereunder, determines that such alteration on a nearby property would greatly enhance the application and further the goals of this By-law, the Planning Board may require that the applicant make a good faith effort to procure such permission. A failure to obtain permission from such neighboring property owner shall not, however, be the sole basis of denying the application.

D. If the applicant suggests changes to neighboring properties, it shall also provide renderings or elevations showing the modifications and the "tie-ins" to the applicant's site.

E. The applicant shall take into consideration any Area Concept Plans (ACP) that has been done by a previous applicant which covers all or part of the area to be covered by the new ACP.

F. The purpose of the Area Concept Plan (ACP) requirement of this By-law is to encourage the greatest possible integration of the proposed new T-OV project into the surrounding area, recognizing the "village" character that is the objective of this By-law.

And by amending the Town's Zoning Map by changing the zoning of that portion currently zoned General Industrial (IB) of Assessors Map 19, Parcels 96, 96B and 96C to Mixed Use Industrial/Residential (IC); and
that portion currently zoned General Industrial (IB) of Assessors Map 18, Parcels 49, 50, 11, 51, 10, 9, 4, 5, 6, 24 and 3 as shown on the attached Transit-Oriented Village IC District Location Map to Mixed Use Industrial/Residential (IC);

or take any action thereon.

WESTBOROUGH PLANNING BOARD

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