

CCPATH

Central Connecticut Plan for Alternative Transportation and Health



**Central Connecticut Regional Planning Agency
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PLAN VISION STATEMENT

The vision of the Central Connecticut Plan for Alternative Transportation and Health (CCPATH) is to develop a non-motorized transportation system throughout Berlin, Bristol, Burlington, New Britain, Plainville, Plymouth and Southington that provides improved transportation choice and public health while helping to make the Region more livable, equitable and efficient.

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I. INTRODUCTION

A. About CCPATH

Why should time and effort be dedicated to the creation of a plan to improve non-motorized transportation in the Region?

After all, the personal automobile far outstrips all other modes as a preferred mode of transportation. Nationally, only 3.4 percent of workers walk or bicycle to work according to the 2000 US Census, down from 4.4 percent in the 1990 census.¹

Meanwhile, vehicle hours traveled have continued upward. For example, annual person-hours of highway traffic delay per person in the Harford/Middletown Region increased by 120 percent between 1994 and 2000.² However, the benefits of shifting transportation choices to cycling and walking are well-documented and range from improvements in the natural environment, improved individual and collective physical health, reduced automobile volumes, improved roadway safety, increased park development and improved overall quality of life.

On the face of it, such statistics make the opening question of this introduction reasonable. Despite these benefits, people continue to drive on almost all trips. It seems that the people have spoken on the subject of transportation mode of choice through their actions. Why should anyone suggest bucking the overwhelming trend in the choice of transportation users?

A key term for this discussion is “choice.” Transportation choices do not exist on an equal playing field. Transportation decisions are heavily influenced by the surrounding environment. Although people have free will they must be practical and realistic in their choices.

The physical environment in which we have framed our transportation infrastructure naturally favors choosing an automobile for the vast majority of trips. This choice is typically made subconsciously by instantaneously weighing the pros and cons of each option based on a number of factors, predominately convenience and efficiency. However, for many people in the Region, economic situations eliminate transportation choices, regardless of convenience or efficiency. The economic environment can weigh heavily in constraining choice, and thus must be a consideration in modal “choice” analyses.

This report is about the environments created that enhance or degrade the choice to walk or bicycle in the Central Connecticut Region, and the value of having an interconnected mix of options from which people can choose. Ultimately, the Plan’s purpose is to help capitalize on the Region’s potential to create better opportunities for non-motorized transportation.

Appendix I-1 shows public involvement activities related to this plan.

B. Regional Characteristics and Travel

Population Characteristics

Elderly and disabled populations are in need of reliable and efficient transportation systems because many cannot drive personal automobiles. Just less than 15 percent (14.9%) of the Region’s population is age 65 or over. About one third (32.6%) of the mobility-impaired population is age 65 and over. Just over one third (36.1%) of the entire population is elderly and/or disabled.

¹ <http://www.census.gov>. Figures do not include those who worked at home.

² http://www.bts.gov/publications/national_transportation_statistics/2002/html/table_01_63.html. Accessed 10/8/2004.

Income Characteristics

The median household income for the Region is \$47,610. The area is therefore in fairly good economic health overall, as it is not far behind the statewide median household income of \$53,935.³ However, the Region does have low income areas, most notably in central New Britain.

When evaluating transportation systems, it is important to identify the location of households with lower incomes and those without automobile availability. Households without automobiles are at a tremendous mobility disadvantage. This can reduce opportunities for employment, continuing education and recreation.

Land Use and Housing

The relationship between transportation and land use is often under-recognized. Not only does transportation planning respond to land use, but it can also help to direct how development occurs. The Central Connecticut Region has a mix of land uses and densities. The densest development occurs in New Britain and parts of Bristol. Most areas are not very densely developed.

It is important to understand the Region's land use and housing patterns. Each land use has different transportation needs and affects the transportation system in different ways. Most residential land in the Region is separated from commercial land and located on disconnected road systems, which helps foster automobile dependence.

Commuter Behavior

Table I-1: Means of Transportation to Work

	Drive Alone	Pub Transp	Walk	Bike	Carpool
Berlin	92.2%	0.4%	1.2%	0.2%	5.6%
Bristol	87.1%	0.6%	1.9%	0.2%	9.9%
Burlington	90.5%	0.5%	0.7%	0.0%	8.3%
New Britain	78.2%	3.5%	4.7%	0.2%	12.4%
Plainville	87.7%	0.8%	1.9%	0.3%	9.0%
Plymouth	90.2%	0.3%	1.6%	0.0%	7.6%
Southington	90.6%	0.4%	1.5%	0.1%	6.7%
TOTAL-Region	86.0%	1.4%	2.5%	0.2%	9.4%
STATE	82.6%	4.1%	2.8%	0.2%	9.7%

2000 US Census.

Note: Those who worked at home have been removed. "Drive Alone" does not include motorcycles.

C. Public Health Effects

The modes we choose to transport ourselves affect two key aspects of public health: Air quality and human physical health.

Air Quality

Poor air quality contributes to respiratory problems such as asthma. Transportation dramatically affects air quality. Motor vehicles emit harmful gases into the air, including carbon monoxide (CO) and oxides of nitrogen (NOX). Along with various other hydrocarbons, NOX is a cause for great concern due to its reaction in the presence of sunlight to form photochemical oxidant, otherwise known as "smog". The Hartford Urbanized Area, of which this region is part, is classified as a serious non-attainment area for ozone and is also a non-attainment area for carbon monoxide, which means that according to federal standards, the area is more polluted than it should be.⁴

³ 2000 US Census.

⁴ *Air Quality Conformity Report*. Connecticut Department of Transportation. August 2002.

Motor vehicles are responsible for 72 percent of NOX and 52 percent of reactive hydrocarbon pollution⁵. There are several ways to reduce transportation-related air pollution, such as trip chaining, carpooling, using public transportation, working from home and purchasing fuel-efficient vehicles. One of the best ways to minimize pollution is to walk or ride a bicycle rather than use motorized transportation. Many short trips are made via the automobile. If most trips of less than two miles were made by bicycle or walking, air pollution would be significantly reduced.

Physical Health

A recent study found that sprawl development is linked to obesity, which causes several chronic health ailments.⁶ The link is a result of conventional suburban sprawl development patterns being aimed at serving the automobile, frequently at the expense of sidewalks and bicycle routes. The automobile is served by high-speed roadways of great width, large parking lots, frequent curb cuts and large turning radii. Sprawling development patterns tend to give transportation policymakers the idea that installation of sidewalks is cost prohibitive, particularly in big box retail areas that are so uninviting to pedestrians. Because sprawl development has a few main transportation routes that are fed by unconnected cul-de-sac development, it becomes necessary to drive to nearly every destination, causing people to have limited physical activity during their daily activities. In order to be active, many need to plan time to exercise and may even need to drive to a fitness club to do so.

⁵ <http://bicycleuniverse.info/cars/pollutionpaper.html>. Accessed 10-11-2004.

⁶ <http://www.rand.org/news/press.04/09.27.html>. Accessed 10-11-2004.

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II. WALKING AND BICYCLING ON THE STREET NETWORK

Frequently, policymakers like to serve pedestrians and bicyclists by creating scenic trails that are segregated from the street network. Such trails are valuable community recreation assets and in some instances can serve as a backbone to an alternate transportation network. However, in order to create a truly viable transportation network for non-motorized users, the Region's vast street network must be utilized.

A. Pedestrian and Bicycle Accommodations

Pedestrian Accommodations

The most obvious way to accommodate pedestrians is through the provision and maintenance of Sidewalks. Sidewalks provide a sense of comfort and security for pedestrians walking along the road network. Roadways without sidewalks are often unsafe and uncomfortable for pedestrians. However, pedestrian safety, comfort and mobility are affected by other factors, including:⁷



pedestrian safety, comfort and mobility are affected by other factors, including:⁷

- Sidewalk navigability: Sidewalks must be easy for pedestrians to navigate. The sidewalk shown in Photo II-2 is not very pedestrian friendly. Users in wheelchairs would have to use the street in order to advance beyond the poles.
- Sidewalk width: The sidewalk in Photo II-2 is also very narrow, rendering travel difficult, particularly for disabled users trying to pass each other in opposite directions
- Buffering from the street: Traveling along a sidewalk that provides little separation from speeding traffic causes pedestrian discomfort. Photo II-3 shows trees and benches placed in between the sidewalk and the street. This provides a buffer between pedestrians and automobiles while also providing quality aesthetics and places for gathering. Buffering can also come from sidewalk width, on-street parking or plantings.
- Sidewalk maintenance: Sidewalks in disrepair can be difficult to navigate.
- Curb cuts: Large and numerous driveways on streets cause pedestrian discomfort and danger.
- Traffic calming: Slowing vehicles down provides pedestrians with a heightened sense of safety, improves motorists' ability to react and creates less devastating impact in case of collision.
- Complete sidewalks: Roadways that only have partially-completed sidewalks are not inviting to pedestrians, particularly those that are disabled.

⁷ Some information on these factors from: www.walkinginfo.org. Accessed 10-11-2004.

- **Ease of crossing:** Intersections that are unsafe for pedestrians to cross can deter pedestrian travel. Some intersections may be in need of pedestrian crossing signals. Other ways to help pedestrians feel safe as they cross streets include providing for narrower roadways that shorten the distance needed to walk to cross the street; installing and maintaining crosswalks designated by a different paving material or reflective paint; installing signage indicating that motorists must yield to pedestrians; and minimizing obstacles that obstruct views at intersections. Crossing at intersections without curb ramps can be dangerous for disabled people.
- **Lighting:** Streets with no—or poorly maintained—lighting are not seen as safe places to walk at night.
- **The built environment:** Homes and businesses that are located near the street foster a preferred walking environment. Properties fronted by parking lots are not conducive to walking due to the difficulty of walking to businesses and the lack of place for community gathering.

Bicycle Accommodations

In order for bicycles to be used for urban and suburban transportation, there must be a safe network of bicycle-friendly roads. Depending on traffic volume, traffic speed and many other factors, some routes are in need of striped four-foot wide bicycle lanes while others merely need to have enough width to



accommodate a bicycle alongside an automobile. What type of improvement is needed should be made on a case-by-case basis. All routes should have “Bicycle Route” signage and designation. Other ways to accommodate bicycles include:

- Placement of bicycle racks at high traffic locations.
- Placement of bicycle racks on buses.
- Buffering from traffic: As shown along the right side of Photo II-5, bicycle lanes can be buffered from traffic.
- Traffic calming.
- Lighting.



B. Existing Infrastructure and Deficiencies

Pedestrians

Map II-1 shows some of the Region’s sidewalks. While much of the Region has sidewalks, there are still plenty of roadways that do not. While sidewalks cover much of central Bristol, the rest of the City has only sparse sidewalk coverage. Berlin is covered very sparsely and has few instances of sidewalks along both sides of the street. Much of New Britain has adequate sidewalk

coverage, though coverage is limited on the outer edges of the City. Plainville has very limited coverage. Currently sidewalk data is very limited for Southington, Plymouth and Burlington. Burlington, however, has virtually no sidewalk network.

Some specific sidewalk deficiencies were reported in a 2001 solicitation of information that was sent to school districts, chambers of commerce, town halls, libraries and other interested parties in the Region. The following deficiencies were reported:

- Berlin: Lacking sidewalks on both sides of Burnham Street in Kensington.
- Berlin: Mill Street from 138 Mill Street east to Worthington Ridge is lacking in sidewalks.

- Bristol: North Main Street from School Street to North Street should be targeted.
- New Britain: Lack of sidewalks in state right-of-way. The ConnDOT policy of not installing sidewalks as part of any road construction.
- Plainville: Lacking sidewalks on east side of Route 10, in the area of 460 East Street, south to the Southington town line.
- Burlington: Lacking sidewalks in the center of town.

Shown below are places with limited sidewalk access. These include places of employment, high density residential areas, parks, schools and other places that people may wish to walk to or access via public transportation.

Places with No Sidewalk Access

BERLIN		PLAINVILLE
Canterbury Rd. Town Park	Multifamily Development (Birch St.)	Sunset Rock State Park
Timberlin Park	Peck Park	Tomasso Nature Park
Reservoir Rd. Town Park	Seymour Park	Trumbull Park
E. Berlin Pool/Tennis	Birchwood Manner	Norton Park
Oxyoke Dr. Town Park	BURLINGTON	Hamlin Pond
Senior Center	Fresh Air Camp	Paderewski Park
Four Rod Rd. Town Park	Vineyard Road Open Space	CT Commons
Webster Park	Punch Brook Tennis Club	Wheeler School
Bruce Av Town Park	Nature Conservancy-Taine Mtn.	Plainville Plaza
Seymour Rd Town Park	Little League Field	Manafort Brothers
Fairgrounds	Town Green	GE
Deming Park	Stone Road Open Space	PLYMOUTH
Murray Heights Playground	Hart Tract	Plymouth Center Playground
Beckley Mills Rd Town Pk	Apple Hill Shopping Center	Plymouth Land Trust
Treasure Field	Town Hall	Terryville Post Office
“East Kensington” Post Office	Library	Plymouth Post Office
Webster Square Shopping Ctr	High School/Middle School	Plymouth Library
Brickyard Shopping Center	Lake Garda Elementary School	Plymouth Center School
East Berlin Library	Post Office	SOUTHINGTON
Berlin Library/Town Hall	Foote Road Recreation Area	Panthorn Park
AT&T Broadband	NEW BRITAIN	Pexto Field
Northeast Utilities	Target	Western Little League Park
Moreland Hill School (Private)	Falcons Memorial Field	Post Office-Southern Southington
BRISTOL	Corbins Convenience Center	Post Office—SW Southington
Nature Conservancy-Marsh Rd.	Chili’s/Office Max	Spring Street Private School
Nature Conservancy-Shangri La	Brittany Farms multi-fam area	St. Dominic School
Nature Conservancy-Shrub Rd.	Retail Plaza (Stanwood/Beechwood)	Central Christian Academy
Multifamily Development (Davis Dr.)	Hospital for Special Care	

Places with Very Limited Sidewalk Access

BERLIN	BRISTOL	
East Berlin Post Office	Ballfield (King/5 th /6 th)	Tilcon CT
Lions Mem. Pool	Malone Pd Conservation Land	Grove Hill
Railroad Pond	Birge Pond/Hoppers	Stanley Park/Holmes School
Bicentennial Park	Chippens Hill Middle School	Stanley Quarter Park
Clark’s Grove	Bristol Central HS	EC Goodwin School
Centurelli Field	Page Park	PLYMOUTH
Washington Av. Town Pk	Bristol Adult Education	Veterans Memorial Playground
Percival Ave Pk/Pool	Bristol Farms	Harry S. Fisher School
Hungerford Park	ESPN	Town Hall
Stony Hill Condos	Shoppers Junction	Main St. School
Kensington Post Office	NEW BRITAIN	SOUTHINGTON
	Center for Edu and Fam Arts	Hatton School
		Strong Elementary School

Places with Some/One-Side Sidewalk Access

BERLIN	Mountain View School	Kosciusko Park
Dennehy Field	Stafford School	George Chesley Park
Lower Ln/Fairview Rd. Pk	South Side School	Martha Hart Park
Willard/Columbus Town Pk	Edgewood School	Sandy Brook Apartments
Warner Rd. Town Park	Bristol Eastern HS	Washington Park
Berlin Community Center	Private School (Welch Dr.)	Willow Brook Park
St. Paul School	Forestville Library	PLAINVILLE
“East Kensington” Library	St. Paul Catholic High School	Northwest Village School
Berlin High School	Bristol Hospital	PLYMOUTH
Hubbard School	Brook St. Conservation Land	Terryville HS
BRISTOL	NEW BRITAIN	SOUTHINGTON
Rockwell Park	Chamberlain School	Thalberg School
Knollwood Estates	Roosevelt Middle School	Flanders School
Bristol Indoor Pool	St. Matthews Lutheran School	Kennedy Middle School
Barnes Field/Bonnie Acres	New Brite Plaza	High School
Hubbell School		

Places with Good but Incomplete Sidewalk Access

BERLIN	NEW BRITAIN	Skinner Park
Willard School	New Britain High School	East St. Busway Station (future)
McGee Middle School	Pulaski MS/Falcons Field	E. Main St. Busway Station (future)
Berlin Train Station	Vance School	PLAINVILLE
BRISTOL	Gaffney School	Toffolon School/Middle School
E. Gordon Stocks Playground	St. Joseph School	Northwest Park
Northeast Middle School	New Britain Public Housing	SOUTHINGTON
Greene-Hills School	Corbin Heights Park	South End School
Heritage Christian School	Franklin Square Park	Kelley School
		DePaolo Middle School

No Data

PLYMOUTH	Plymouth-Judd Road open space	Southington Mem Park
Terryville Country Fair	SOUTHINGTON	Briarwood College
Buttermilk Falls	The Hartford	School (N. Summit St.)
Lake Winfield Recreation Area	Nature Center (Melcon Dr.)	Queen Plaza Shopping Ctr

Other deficiencies, which are difficult to comprehensively locate in the Region, include narrow sidewalks, sidewalks in disrepair, lack of street lighting, lack of pedestrian signals at busy intersections, lack of curb-ramps for wheelchairs and lack of marked crosswalks. The following two deficiencies are common in New Britain:

1. Poorly placed curb ramps. In New Britain, many corners contain single curb ramps right on the corner, as opposed to two ramps aligned with each crosswalk. This creates a situation in which a disabled pedestrian would need to enter the flow of automobile traffic in order to cross the street at an intersection.
2. Poorly angled pedestrian signals. Many signals in New Britain are placed at a 45 degree angle toward the opposite corner of the intersection. This could make it hard for pedestrians to see the signals.

Bicyclists

Map II-2 shows the Region’s sparse bicycle accommodations. Due to the immense lack of bicycle lanes, it would be very difficult for all but the most experienced bicyclist to travel extensively by bicycle.

C. Benefits of Walking and Bicycling for Transportation

Increased opportunities for bicycle and pedestrian movement not only provide benefits to pedestrians and bicyclists, but to the entire community. Benefits include improved cardio-vascular health, improved transportation choice, improved air quality and reduced road congestion. There are also economic benefits. A Minnesota study stated that public savings from reduced pollution, oil importation and congestion costs have been estimated at five to 22 cents for each automobile mile eliminated in favor of bicycling or walking.⁸

Improved Cardio-Vascular Health

Several studies have shown that urban sprawl—which is highlighted by development that is conducive to auto-dependency and unfriendly to non-motorized transportation—leads to sedentary lifestyles, obesity and various obesity-related diseases. Auto-dependency has caused people to lose opportunities for physical activity in their daily lives, which can lead to obesity, cancer, diabetes and high blood pressure.⁹ It therefore stands to reason that if the Central Connecticut Region has better opportunities for people to step out their doors and travel on foot or by bicycle that the Region’s overall health would improve.

Improved Transportation Choice

Currently, many residents feel as if the only way to make a trip, no matter how short, is to get in their car and drive. Pedestrian and bicycle-friendly infrastructure will enable people to make shorter trips without their automobiles.

Improved Air Quality

It is common knowledge that automobiles pollute the air. In 1997, the average car unloaded the following pollutants into the air every time it traveled one mile: particulates (.1 gram), volatile organic compounds (1.9 grams), nitrogen oxides (2.5 grams), carbon monoxide (17.8 grams) and carbon dioxide (413 grams). All of this led to the placement of over 2.6 trillion pounds of pollutants into the air in 1997.¹⁰

Reduced Road Congestion

The Region’s street network continues to become more and more congested. The following table shows actual and projected vehicle miles traveled per year in the Region and compares the Region’s trend to that of the State. Traffic increased by over 15 percent during the 1990s and is projected to increase, though at reduced rates, through 2020.

Table II-1: Traffic Volume

Year	Region		State	
	Volume	% Increase	Volume	% Increase
1990	3,825,395	-	72,072,876	-
2000	4,412,117	15.34%	83,359,933	15.66%
2010	4,929,481	11.73%	92,755,225	11.27%
2020	5,348,436	8.50%	101,344,442	9.26%

Congestion Management System, 9-2004. ConnDOT.

An increased presence of bicycle and pedestrian traffic could reduce some of the Region’s growing congestion.

⁸ *Walking in the United States*. Technology Transfer. November, 2001.

⁹ <http://www.newurbanism.org/pages/532113/>. Accessed 1-25-2004.

¹⁰ *Getting Around Clean and Green*. Northeast Sustainable Energy Association. 2001.

D. Federal Laws and Regulations Related to Non-Motorized Transportation

Title 23, Chapter 2, Section 217 of the United States Code¹¹ makes the following provisions for bicycle and pedestrian transportation:

- In any case where a highway bridge deck being replaced or rehabilitated with Federal financial participation is located on a highway on which bicycles are permitted to operate at each end of such bridge, and the Secretary determines that the safe accommodation of bicycles can be provided at reasonable cost as part of such replacement or rehabilitation, then such bridge shall be so replaced or rehabilitated as to provide such safe accommodations.
- Bicyclists and pedestrians shall be given due consideration in the comprehensive transportation plans developed by each metropolitan planning organization and State in accordance with sections 134 and 135, respectively. Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use are not permitted.
- Transportation plans and projects shall provide due consideration for safety and contiguous routes for bicyclists and pedestrians. Safety considerations shall include the installation, where appropriate, and maintenance of audible traffic signals and audible signs at street crossings.
- No bicycle project may be carried out under this section unless the Secretary has determined that such bicycle project will be principally for transportation, rather than recreation, purposes.

These laws are expanded upon in Title 23, Chapter I, Part 652 of the Code of Federal Regulations:¹²

- The special needs for the elderly and disabled shall be considered in all Federal-aid projects that include pedestrian facilities. Where current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort shall be made to minimize the detrimental effects on all highway users who share the facility. Consultation with local groups of organized bicyclists is to be encouraged in the development of bicycle projects.
- Specific eligibility requirements for Federal-aid participation in independent and nonconstruction projects are:
 - An independent walkway project must be constructed on highway right-of-way or easement, or right-of-way acquired for this purpose. Where an independent walkway project is located away from the Federal-aid highway right-of-way, it must serve pedestrians who would normally desire to use the Federal-aid route.
 - An independent bicycle project may include the acquisition of land needed for the facility, or such projects may be constructed on existing highway right-of-way or easement acquired for this purpose. Independent bicycle projects may include construction of bicycle lanes, paths, shelters, bicycle parking facilities and other roadway and bridge work necessary to accommodate bicyclists.
 - Nonconstruction bicycle projects must be related to the safe use of bicycles for transportation, and may include safety educational material and route maps for safe bicycle transportation purposes.

E. Connecticut Department of Transportation Sidewalk Policy

Below is an excerpt from ConnDOT's Policy on Sidewalks, found in Chapter 1 (pages 7 and 8) of its Bicycle and Pedestrian Transportation Plan.

¹¹ <http://assembler.law.cornell.edu/uscode/>. Accessed 10-27-2004.

¹² <http://www.gpoaccess.gov/cfr/index.html>. Accessed 10-27-2004.

State Roads

- 1. Sidewalk already exists** - If a roadway is to be constructed with State and Federal funds and the project will disturb an existing sidewalk, the reconstruction of the sidewalk, in kind, will be included in the reconstruction project.
- 2. Bridges** - When the State is constructing or reconstructing a bridge in an area where sidewalks exist or are likely to exist, sidewalks will be included in the bridge project.
- 3. Sidewalks Do Not Currently Exist**
 - a. Federal Funds are Involved** - When the State is reconstructing or constructing a State road in an area where the local community can demonstrate, in accordance with generally accepted American Association of State Highway and Transportation Officials (AASHTO) standards, that a sidewalk is warranted, and the community will enter into an agreement with the State to provide funding for the full non-federal share of the cost associated with designing and constructing a sidewalk, including associated rights-of-way and utility costs, and the municipality will enter into an agreement with the State in perpetuity, clearly stating that the municipality is fully responsible for all liability, maintenance, and snow and ice removal, then sidewalks within the limits of the construction project will be included in the project. Under this provision of the policy, no exclusive sidewalk projects will be considered.
 - b. 100% State Funds** - Under the same conditions as Section 3a, sidewalks may be included in State road projects. The only change being that the community would be responsible for 100% of the cost of the sidewalk design and construction, including associated rights-of-way and utility portions of the project.

Local Roads

When an improvement is being made to a local roadway with federal aid funds, sidewalk improvements may be included within the limits of the project if they satisfy generally accepted AASHTO standards and warrants, and the local communities will enter into an agreement to provide the financial resources for the full non-federal share of the design and construction, including associated rights-of-way and utility costs of such sidewalk. Where no federal funds are involved, the State will not participate in the construction of such sidewalk.

F. Street Network Design Guidelines

It is important to design bicycle and pedestrian facilities for mobility, comfort, safety and uniformity. The following guidelines are prevalent in facility design.

Pedestrian Guidelines¹³

- **Sidewalks** should be constructed with material that is firm, stable and slip-resistant. They are typically constructed with concrete. Other materials such as asphalt or crushed stone can be used. The Federal Highway Administration (FHWA) and Institute of Transportation Engineers (ITE) agree that a sidewalk should have a minimum width of five feet, which allows two pedestrians to comfortably pass each other, though sidewalks should be wider in areas that have high concentrations of pedestrian traffic. If possible, pedestrians should be separated from auto traffic by a four- to six-foot wide buffer zone. This can be provided by street furniture, plantings, on-street parking or bicycle lanes. Sidewalks should be clear of poles, newspaper vending machines, signs and other obstacles. Street furniture, bicycle racks, trash receptacles and other amenities should be placed so that pedestrian movement is not hindered.
- **Curb ramps** are necessary for wheelchair access to sidewalks and are also helpful to other pedestrians that would have trouble negotiating curbs. Federal law states that ramps must be included at all intersections and mid-block crossing locations. At intersections, separate curb

¹³ www.walkinginfo.org. Accessed 1-12-2005.

ramps should be included at each crosswalk, as opposed to having one ramp at the corner. Ramps must have a maximum slope of 1:12 (a grade of 8.33 percent). Side flairs can have slopes no steeper than 1:10.

- **Crosswalk markings** are installed to help alert pedestrians and motorists to pedestrian right-of-way. While there are no standards for which crossings should be marked, markings tend to occur at higher volume crossings. Markings should be visible at night and should not be slippery or difficult for disabled pedestrians to navigate. One good example of a crosswalk marking material is inlay tape, which is slip-resistant, reflective and durable.
- **Bus stops** should be placed on the far side of intersections. Near side placement tends to hinder the view traffic, while far side placement encourages pedestrians to cross behind the bus.
- **Street lighting** provides a sense of comfort and safety. Lights should be on both sides of arterial streets and the level of lighting should remain constant. Mercury vapor, incandescent and high-pressure sodium lighting are preferred to low-pressure sodium lighting, which distorts color.
- **Pedestrian signals** create a safe street-crossing environment. Fixed-time signals work best for pedestrians. For intersections with minimal pedestrian activity, pushbuttons are acceptable. Exclusive pedestrian phases are best for busy intersections with high-volume turning movements. At other intersections, they tend to provide poor service to pedestrians.

Bicycle Standards¹⁴

- **Paved shoulders**, which are more prevalent in rural areas, should be a minimum of four feet wide in order to be designated as a bicycle facility. There must be four feet of usable width—not including rumble strips or the gutter pan. When there is a curb, guiderail or other barrier, five feet is the minimum recommended width. Widths should increase on roads with high speeds, heavy automobile volumes and a high percentage of large vehicles.
- **Wide Outside/curbside lanes** enable motorists to pass bicycles without leaving the lane. It is recommended that these lanes be 14 feet wide, 15 feet in areas where extra space is needed for maneuvering (i.e., steep grades). However, long stretches of lanes of 15 feet or more in width can encourage motorists to act as if there are two lanes. In these cases it may be best to stripe a four or five foot wide bicycle lane.
- The AASHTO Guide describes **signed shared roadways** as “those that have been identified by signing as preferred bike routes.” The reasons for using signed shared roadways include:
 - Continuity between bicycle lanes, trails or other facilities.
 - Marking a common route for bicyclists through a high demand corridor.
 - Directing cyclists to low volume roads or those with paved shoulders.
 - Directing cyclists to particular destinations.

Care must be taken before creating a signed shared roadway. The route should provide direct through travel and signage should indicate where bicyclists are being directed. The AASHTO Guide recommends signing shared roadways every quarter mile and before and after every turn.

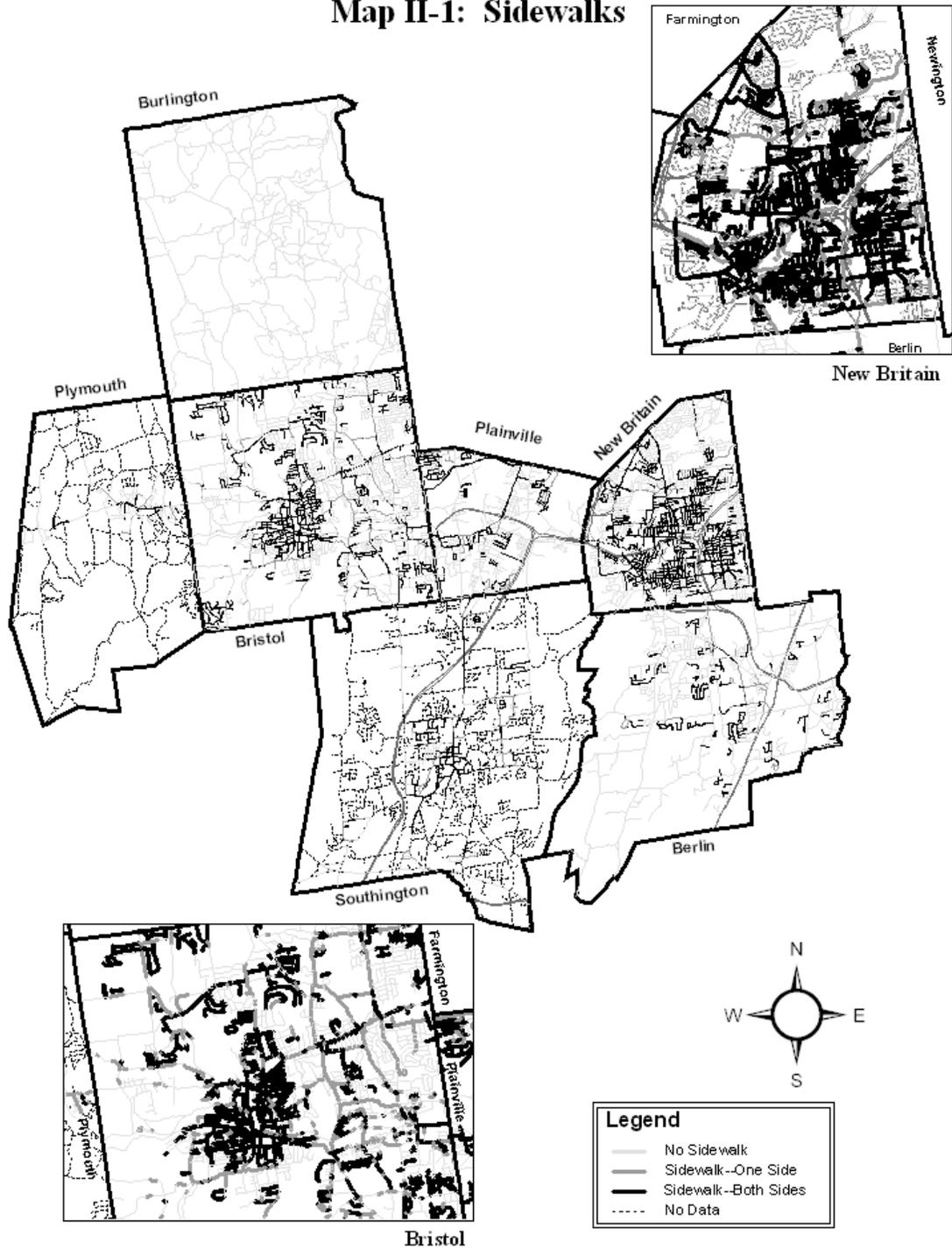
- **Bicycle lanes** are designated by striping, signage and pavement markings. Bicycle lanes are typically one-way, in the same direction as adjacent traffic; on the right side of the roadway; and located between the parking lane (if one exists) and the travel lane. Bicycle lanes should be four feet wide at a minimum—five feet wide with adjacent parking, curbs or guiderails. When bicycle lanes are shared with parking areas, they should be at least 11 feet in width—12 feet when a curb face is present. Stripes separating the bicycle lane from the motor vehicle lane should be six inches in width. It is also an option to place a four-inch wide line between the bicycle lane and the parking lane. This can help encourage motorists to park close to the curb.

¹⁴ www.bicyclinginfo.org. Accessed 1-12-2005.

- **Urban roadway width** can be as little as 44 feet. Bicycle lanes have been placed on such roadways in Chicago—two five-foot bike lanes, two seven-foot parking lanes and two 10-foot motor vehicle lanes.¹⁵

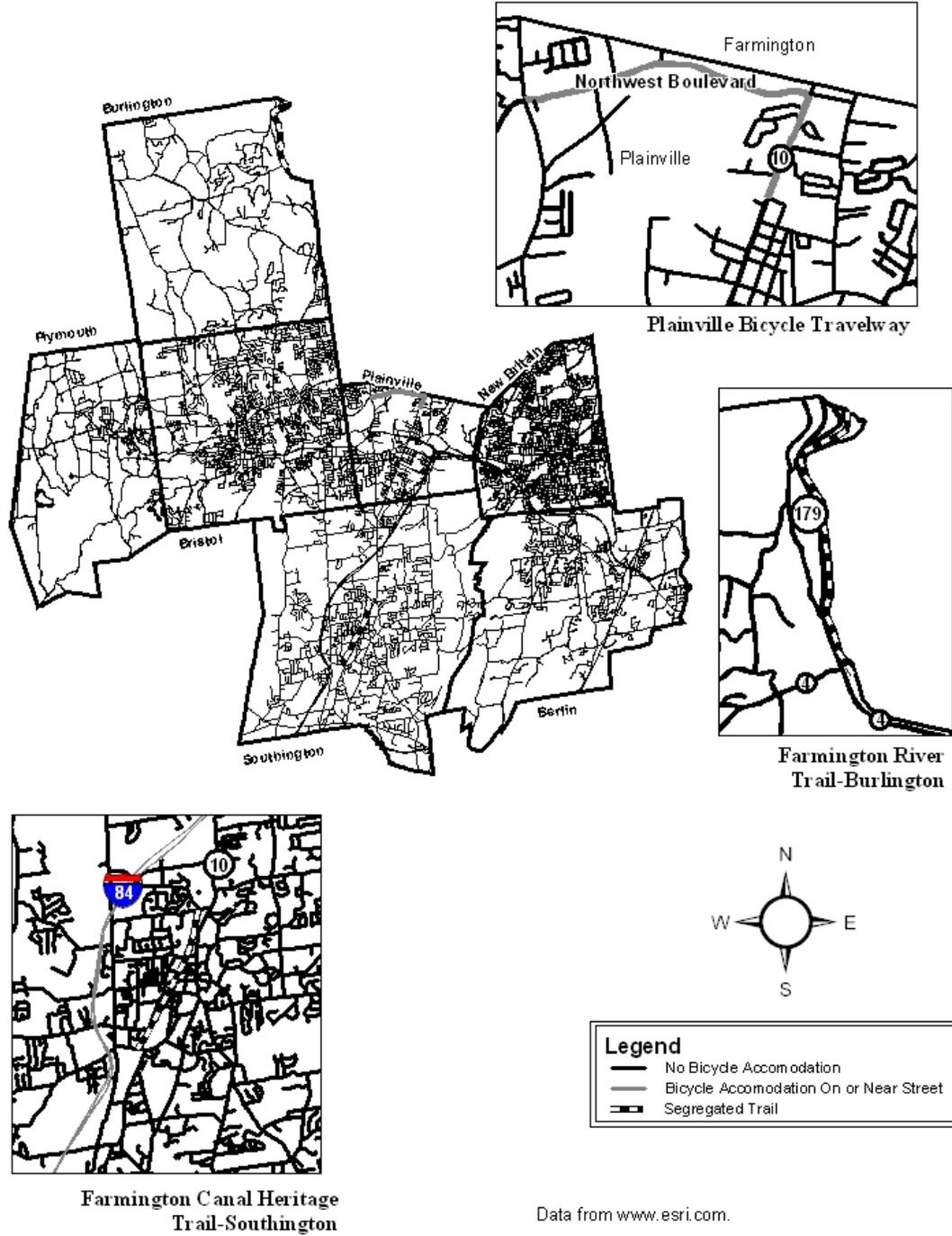
¹⁵ *Bike Lane Design Guide*. Bicycle Information Center, City of Chicago, Chicagoland Bicycle Federation.

Map II-1: Sidewalks



Data from www.esri.com.

Map II-2: Bicycle Accomodations



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III. RECREATIONAL TRAILS

As with sidewalks and bicycle lanes, recreational trails can provide transportation and the opportunity for cardio-vascular exercise. As discussed in Chapter II, recreational trails cannot make up an entire non-motorized transportation network. However, trails can act as a backbone for the street network to feed into. This is particularly the case for linear trails of significant length. For example, the Farmington Canal Heritage Trail is planned to run from the southern boarder of Southington to the northern border of Plainville and beyond (New Haven to Northampton, MA). This would provide a 9.6-mile linear bicycle and pedestrian route in the Region that would be able to serve many residential and commercial areas.

A. Benefits of Trails

Linear trails provide many benefits to communities. Trails can lead to:¹⁶

- Increased transportation choice. According to the 1995 National Personal Transportation Survey, 43 percent of bicycling trips are made for reasons other than recreation, such as work, shopping, school and personal business. Long linear bicycle and pedestrian trails, in concert with a bicycle- and pedestrian-friendly street network, allow bicyclists and pedestrians to access a variety of destinations from their homes. This additional transportation choice is vital to those without access to reliable automobiles, along with those that for any number of reasons—the cost of gasoline, desire for exercise, the cost of parking, desire to travel closer to nature, desire to avoid congestion, desire to avoid contributing to pollution—would prefer to travel by bicycle or on foot for trips of certain lengths or to certain destinations.
- Increased property values, which lead to increased tax revenues.
- New commercial activities related to recreation. Examples include bicycle shops and restaurants. A 1998 study showed that the Great Allegheny Passage—half finished at the time—had an economic impact in excess of \$14 million per year. The average visitor to Little Miami Scenic Trail in Ohio was found to have spent \$13.54 per visit on food, beverages and transportation to the trail in a 1999 study.¹⁷
- Tourism. Trails attract people from out of town, many of whom will spend money while visiting.
- Improved quality of life, an important factor in corporate relocation decisions. For example, Ruby Tuesday, Inc. moved its Restaurant Support Center—with over 300 employees—to land adjacent to the Greenway Trail in Maryville, TN, citing the trail as part of the reason.¹⁸
- Improved access to recreation, which can improve cardio-vascular health. As discussed in Chapter I, access to walking and bicycling facilities can lead to increased physical activity, which diminishes the chance for a variety of illnesses. Trails can connect a region's parks and other recreational areas.
- Environmental enhancements. Trails are frequently surrounded by natural lands that are subject to limited intrusion by humans.

B. Existing Trails

Map III-1 shows the multi-use trails currently located in the Region. Only three such trails are located in the Region: The Farmington River Trail along the Farmington River in northeastern Burlington, the Farmington Canal Heritage Trail in Southington and the Plainville Bicycle Travelway.

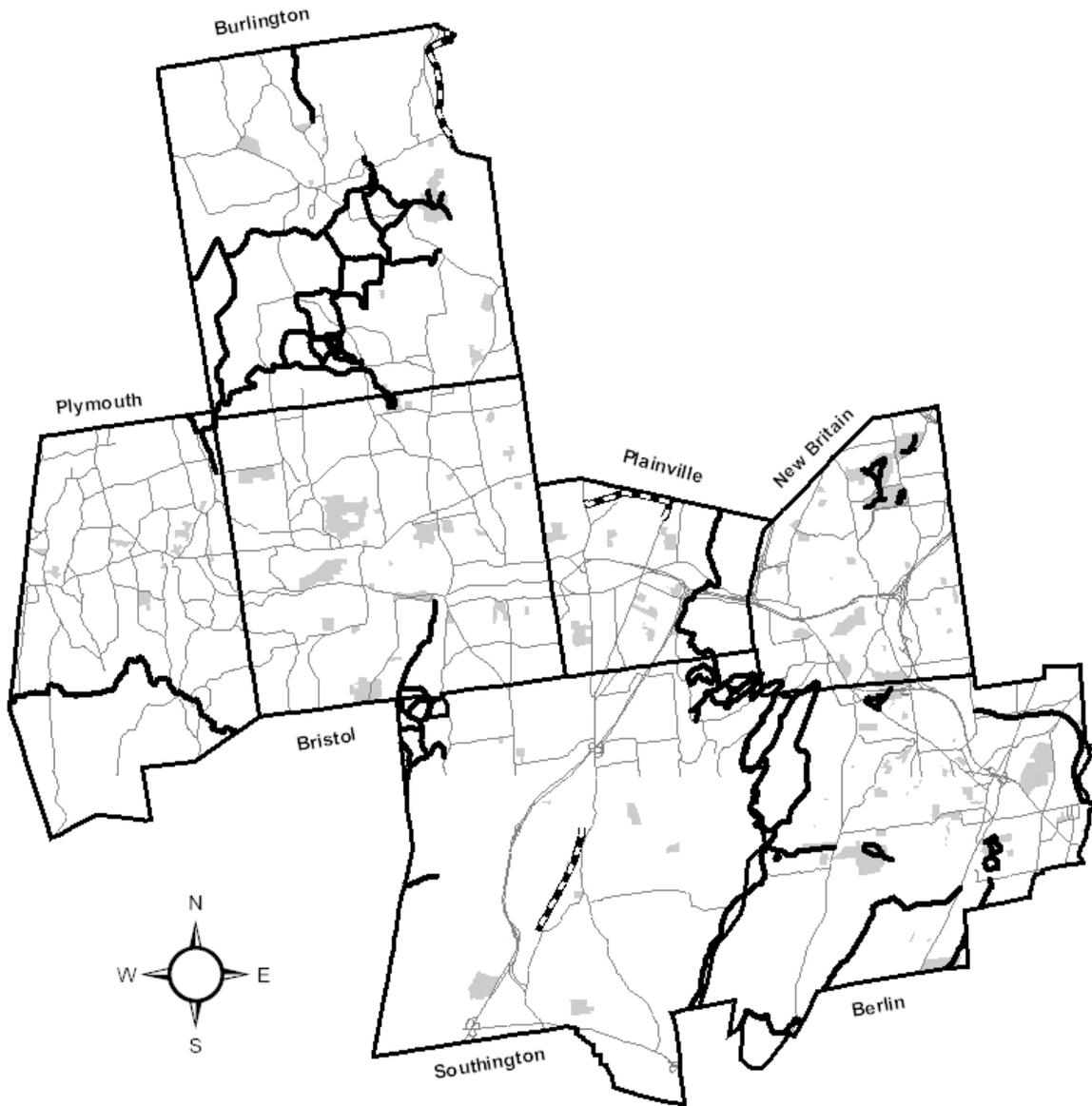
¹⁶ *Greenways and Trails Plan for Peoria and Tazewell Counties*. Tri-County Regional Planning Commission, Peoria, IL. 2001. And the Rails-to-Trails Conservancy, www.railtrails.org, accessed 10-29-2004.

¹⁷ http://www.trailsandgreenways.org/resources/benefits/topics/tgc_economic.pdf. Accessed 1/14/2005.

¹⁸ http://www.trailsandgreenways.org/resources/benefits/topics/tgc_economic.pdf. Accessed 1/14/2005.

There are many walking and hiking paths in the Region. Berlin is home to several miles of hiking trail including circuitous trails in parks and long linear hiking trails. The Mattabesett Trail comes from the south into southeastern Berlin while the Metacomet trail runs through southern Berlin and near the border of Berlin and Southington through Plainville. In northwestern Berlin is the Ragged Mountain trail, which detours off of the Metacomet Trail to circle Ragged Mountain. Along with the Metacomet Trail, Southington is home to part of the Tunxis Trail, which begins in the northwestern part of town, enters Wolcott and re-enters Southington on its way to Bristol, where it connects with various other trails. The Tunxis Trail reappears in northeastern Plymouth and heads into Burlington where the main line and several secondary lines cover a significant portion of the Town. The Mattatuck Trail traverses southern Plymouth, running from Wolcott to Thomaston. While some of the linear trails sneak into southwestern New Britain, the City does not have a strong linear hiking trail presence. Walking trails exist at several parks in the Region.

Map III-1: Recreational Trails



Legend

-  Walking/Hiking Trails
-  Bicycle/Pedestrian Trails
-  Parks

Data from www.esri.com, CT Forreast and Park Association, Town of Berlin, and DT Department of Environmental Protection.

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IV. LAND USE AND THE BUILT ENVIRONMENT

A. Population Growth vs. Land Development

From 1970 to 2000, the population of Connecticut increased by 12 percent. During that same time period, the amount of residential land more than doubled.¹⁹ This indicates that the average Connecticut resident occupies significantly more land today than in 1970. It also indicates that development over that period of time has almost exclusively been very low in density, which tends to lend itself to larger areas of land separating residences, businesses and schools.

B. The Built Environment's Effect on Bicycling and Walking

Over the last several decades, development has had a tendency toward low-density “urban sprawl,” which is defined by the Sierra Club as “low-density development beyond the edge of service and employment, which separates where people live from where they shop, work, recreate, and educate - thus requiring cars to move between zones.”²⁰ Expanding suburban landscapes create long trips to work, recreation and shopping, which leads to roads being designed for faster speeds, creating an unsafe and intimidating environment for bicyclists and pedestrians.²¹ Sprawl has created nearly universal automobile dependency, which leads to congestion. High traffic volumes are not conducive to non-motorized transportation, as evidenced by the shrinking number of children walking to school—and the growing number being driven to school by their parents.²² Conventional development patterns have also caused separated uses, wide streets, wide corner radii, frequent curb-cuts with large widths, domination of parking lots on the landscape, unconnected streets and lacking sidewalks, all of which are detrimental to non-motorized travel.²³ Children are victims of the culture of sprawl. State and federal recommendations and policies call for schools to take up enormous amounts of land (federal guidelines call for 10 acres of land, plus 1 acre per 100 students for an elementary school; an additional 20 acres for a high school), which typically causes schools to be located in very remote locations, rendering them unwalkable by all but a very few students.²⁴

While trends have dictated auto-dependency, people want to be able to walk. In a Better Homes and Gardens survey, 88 percent of respondents said they would like to live in “a neighborhood that’s walkable.”²⁵

Land use practices that are conducive to bicycle and pedestrian use include:

- Mixing of uses: Placing residential development in proximity to shops, restaurants, medical offices and other places of business and employment gives people the ability to have reduced trip lengths, which leads to an increased likelihood of making a non-motorized trip.
- Narrowing of streets: Wide streets lead to faster automobile speeds and are intimidating for pedestrians to cross.
- Traffic-calming: Tree-lined medians, speeds humps, raised crosswalks, landscaping, serpentine road design, and curb extensions are just a few traffic calming devices that can help slow down motor vehicles and raise the comfort level for those bicycling and walking.²⁶

¹⁹ *Connecticut Metropatterns*. Myron Orfield and Thomas Luce, Ameregis. March 2003.

²⁰ *Sprawl: The Dark Side of the American Dream*. Sierra Club. 1998. <http://www.sierraclub.org>.

²¹ *Urban Sprawl Causes Waistline Sprawl*. Bill Wilkinson. 10/2/2003.

²² *Transportation Prescription for Healthy Cities*. Ian M. Lockwood, P.E. February 6, 2004.

²³ *Ibid*.

²⁴ Constance E. Beaumont and Elizabeth G. Pianca. National Trust for Historic Preservation. *Why Johnny Can't Walk to School*. 2nd Edition. October, 2002. <http://www.nationaltrust.org/issues/schoolsRpt.pdf>.

²⁵ *San Francisco Chronicle*. January 15, 2005.

²⁶ <http://www.walkinginfo.org>. Accessed 11-01-04.

- Alleys: Use of Alleys behind buildings reduces curb cuts, which cause vehicles to drive across sidewalks.
- Grid street network. Typically, in conventional, unconnected street networks, single family houses are located on culs-de-sac and to access parks, schools or businesses, one must utilize a busy, wide, fast-moving street. This creates a dependency on the automobile and makes children reliant on parents to drive them nearly any place they may want to go. A grid street network allows non-motorized travel to be made primarily on low-traffic streets, with little interaction with intimidating streets. Children are much more likely to be able to walk or ride their bicycles to parks, school and friends' homes.
- Buildings near the street: In the retail areas of sprawling environments are large stores sitting behind large parking lots. This creates large distances between the storefronts, making shopping without an automobile seem daunting. Locating stores and restaurants close to each other and adjacent to public sidewalks creates an environment where people can walk from place to place and a pedestrian-oriented community can flourish.

C. The Expense of Auto-Dependency

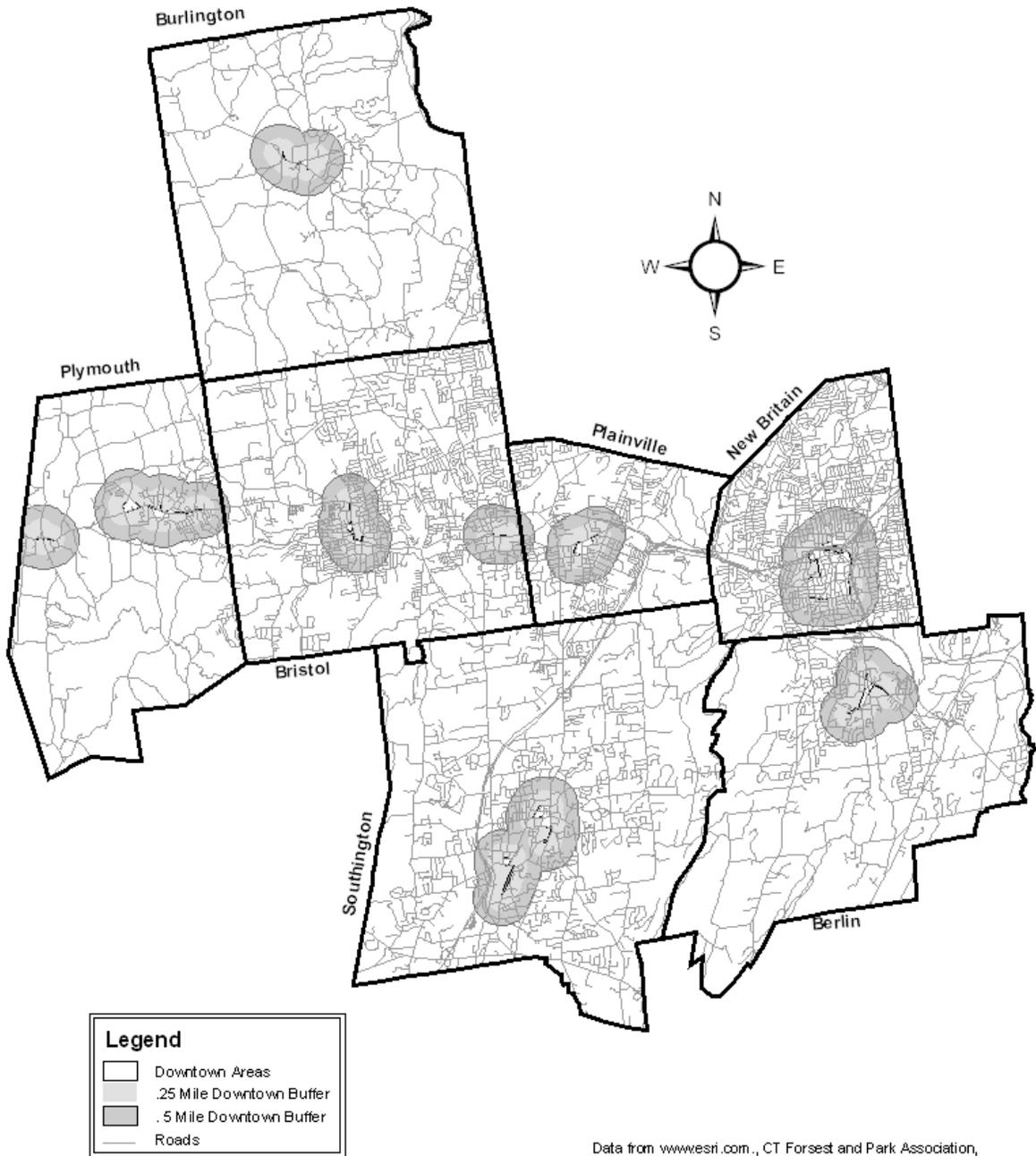
According to a study by the Surface Transportation Policy Project, sprawling development makes transportation very expensive, due to purchase and maintenance of automobiles. Comparatively, gasoline tax, gasoline prices and the cost of auto insurance have a much less significant affect on transportation expense, despite the heightened public attention they receive. The study shows that 48.2 percent of the variation in transportation costs in large metropolitan areas is due to sprawl.²⁷

D. The Region's Land Use

Map IV-1 shows the Region's street network as it relates to the downtown areas that are highlighted by land use that is conducive to pedestrian and, in some areas, bicycle activity. The areas within a quarter mile and a half mile of these downtowns are shown. Making these areas pedestrian and bicycle friendly is important due to their proximity to community centers. As Map IV-1 shows, most of the Region is covered by a disconnected street network highlighted by a number of roads that connect only to main thoroughfares. There are some areas of exception in Bristol, Plainville and a significant portion of New Britain. In general, the Region is not densely populated with the primary exceptions of New Britain and parts of Bristol.

²⁷ Surface Transportation Policy Project. Driven to Spend. 2000. <http://www.transact.org/report.asp?id=43>.

Map IV-1: Downtowns



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V. SAFETY

A. Bicycle and Pedestrian Interaction with Motor Vehicles

Given the size and speed of automobiles, it stands to reason that bicyclists and pedestrians would be wary of their safety as they intermingle with vehicular traffic. The perception of danger can keep would-be bicyclists and pedestrians in their cars.

According to the Connecticut Bicycle Coalition, pedestrians account for roughly 16 percent of traffic fatalities in Connecticut—50 to 60 deaths per year. However, between 1998 and mid-2001, less than 1.8 percent of transportation spending was spent on pedestrian safety. In 1998 and 1999, ConnDOT spent approximately \$3,800 on safety per pedestrian fatality, while spending over \$39,000 per vehicle driver and passenger fatality and over \$1 million per fatality at a rail/highway crossing. Much safety money is distributed by ConnDOT to a list of high accident rate locations shown on its Suggested List of Surveillance Study Sites (SLOSSS). Sites on this list have high rates of accidents. However, the list only counts accidents and does not address serious injuries or fatalities. Therefore areas with frequent occurrences of bicycle or pedestrian (or motorist) injuries and fatalities could be ignored in favor of roadways with high occurrences of property damage.²⁸

There are several ways to reduce the chance of injuries or fatalities to pedestrians and bicyclists. Some of these include:²⁹

- Improve street lighting.
- Ensure that pedestrian signals are adequate. Make sure signals are visible, timing is appropriate and push-buttons are accessible. Pedestrian-only phasing can also be considered in areas with significant pedestrian traffic.
- Make sure crosswalks and stop lines are in good condition and are adequately-painted. Ladder patterns, lights embedded into the roadway pavement and signage can make crosswalks more visible.
- Limit the dangers associated with allowing right turn on red. Prohibition of right turn on red provides safety to pedestrians at intersections. Where right turn on red is allowed, off set stop bars can mitigate risks, as can signs stating “No Turn on Red When Pedestrians are Present.”³⁰

One of the best ways to enhance bicycle and pedestrian safety is to slow down vehicular traffic. The likelihood that a pedestrian is killed rapidly increases as automobile speed increases. At 40 miles per hour, there is an 85 percent chance of a fatal injury to a pedestrian, as opposed to a five percent chance at 20 miles per hour.³¹ Not only is the impact more deadly at high speeds, but drivers have much less time to react, making a collision more likely. Simply posting lower speed limits is not an adequate way to slow motorists down. The *design speed* must be reduced. Few motorists follow the posted speed limit. They typically travel at the highest speed they can while feeling comfortable.³² Therefore, in order to slow traffic down, other measures must be utilized. For example, reducing curb radii at corners will reduce the speeds at which automobiles are able to take right turns.³³ This is important because collisions with pedestrians occur more often with turning vehicles than with vehicles moving straight.³⁴ Other measures, known as traffic calming, can be taken to reduce automobile speed and in some cases add aesthetic enhancement to an area. Measures that can be taken to slow vehicles down include landscaped

²⁸ *Deadly by Design*. David Hiller and Francisco Gomes. Connecticut Bicycle Coalition. October, 2001.

²⁹ Pedestrian Safety at Intersections. Tamara Redmon. Technology Transfer. July, 2004.

³⁰ *Regional Pedestrian Plan*. Capital Region Council of Governments. 2005.

³¹ www.walkinginfo.org. Accessed 12-2-2004.

³² *Deadly by Design*. David Hiller and Francisco Gomes. Connecticut Bicycle Coalition. October, 2001.

³³ *Deadly by Design*. David Hiller and Francisco Gomes. Connecticut Bicycle Coalition. October, 2001.

³⁴ Pedestrian Safety at Intersections. Tamara Redmon. Technology Transfer. July, 2004.

raised road medians, speed humps, curb extensions, raised intersections, street trees, narrowed traffic lanes, raised pedestrian crossings, serpentine roadway design (curving roads) and on-street parking.³⁵

Some of the following measures can be taken to calm traffic and alert motorists to the presence of bicycles and pedestrians:³⁶

- Crosswalk safety measures such as **painted crosswalks**, **pedestrian signals** at signalized intersections and intersection **curb ramps**. It is important to note that marking crosswalks is not adequate for reducing crashes. On two-lane roadways, markings are not associated with a change in crash rate. On multi-lane roadways with average daily vehicle volumes of over 12,000, provision of marked crosswalks alone is associated with higher pedestrian crash rates versus unmarked crosswalks. The addition of signals or lights that alert motorists that pedestrians are crossing can help improve safety. Intersections with pedestrian signals should have short traffic cycle lengths (less than 90 seconds).³⁷
- **Curb extensions** extend the sidewalk or curb line into the parking lane at intersections. This prevents parking near or at a crosswalk, reduces roadway width crossing and can slow traffic. A variation of a curb extension is a **choker**. Chokers are points of widened sidewalks or planting strips and can occur mid-block or at an intersection.
- **Crossing Islands**—also known as center islands, refuge islands, median slow points or pedestrian islands—are raised islands placed in the center of the street as a refuge for pedestrians trying to cross the street. Crossing islands allow pedestrians to interact with automobiles coming from only one direction at a time. They also reduce pedestrian exposure time. Illumination can make crossing islands safer.³⁸
- **Chicanes** cause shifts in travel lanes that can slow traffic down. These shifts can be created by alternating on-street parking from one side of a road to the other or by building landscaped islands.
- **Mini-circles** are raised circular islands placed in the middle of intersections. By forcing motorists to maneuver around them, they slow traffic. In order to proceed straight through an intersection or to make a left turn, a motorist must proceed around the circle, which reduces speed through the intersection. However, right turning movements are not restricted so it is important to have tight curb radii at these locations so as not to encourage fast right turn movements. Similarly **Roundabouts** reduce speed through an intersection and shorten crossing distance for pedestrians.
- **Speed Humps** are typically three to four inches high at their center and extend the width of the roadway. The height is typically reduced near the curb to allow for bicycle movement. A variation of a speed hump is a **speed table**. Speed tables are long, broad, flat speed humps that sometimes provide pedestrian crossings. Humps and tables can have design speeds of 15 to 30 miles per hour. A **raised intersection** acts as a speed table for an entire intersection, which is elevated to the level of the sidewalk. **Raised pedestrian crossings** are similar to raised intersections, except that only the crosswalk is raised.
- **Gateways** are landmarks that indicate a change from faster to slower speeds. Street narrowing, medians, signing, archways and roundabouts are some potential features of gateways.
- **Landscaping** is used to create a buffer between motorists and pedestrians. It can also make streets appear narrow, which can calm traffic. Trees, bushes and flowerpots can be used.

³⁵ www.walkinginfo.org. Accessed 10-11-2004.

³⁶ Pedestrian and Bicycle Information Center. <http://www.walkinginfo.org>. Accessed 11-29-2004.

³⁷ *Regional Pedestrian Plan*. Capital Region Council of Governments. 2005.

³⁸ *Regional Pedestrian Plan*. Capital Region Council of Governments. 2005.

- **Paving treatments** not only provide aesthetic improvement but can act as traffic calming devices. Materials used should be friendly to bicycles and pedestrians—smooth, planar, slip-resistant and firm. Cobblestone is an example of a material that should not be used in bicycle and pedestrian intensive areas. Colored paving can alert motorists to the presence of bicycles and pedestrians and can create a narrower roadway appearance.
- **Serpentine roadway design** refers to the use of a winding pattern. This slows traffic down.
- **“Woonerf”** is a Dutch term that means “street for living.” Woonerf refers to common space for bicyclists, pedestrians and slow-moving—primarily local—motor vehicles. Typically, streets are narrow and cluttered with obstacles such as trees, which lead motorists to travel at speeds below 10 miles per hour.

Provision of on-road bicycle lanes can enhance safety as well. For children, riding on the sidewalk creates a risk of collision with an automobile that is 2.5 times greater than that of riding on the street.³⁹ Bicycle lanes also create a safer environment for pedestrians due to the reduced likelihood of infringement from bicyclists on sidewalks.

B. Education

Not only must pedestrians and bicyclists be aware of automobiles, but motorists must be aware of bicycles and pedestrians.

C. Collision History

Traffic collisions involving pedestrians decreased by 12.8 percent from 1994 to 2003. However, that can most likely be attributed to a decrease in walking as transportation—down 24.9 percent from 1990 to 2000.⁴⁰

In the Region, collisions involving bicycles and pedestrians with automobiles are not very frequent. However, that could be attributable to the fact that very few people walk or bicycle for transportation.

Table V-1: Bicycle/Pedestrian Collisions—A Three-Year Snapshot

Town	Bike, 2001	Bike, 2002	Bike, 2003	Ped, 2001	Ped, 2002	Ped, 2003
Berlin	3	2	3	4	4	4
Bristol	11	13	16	20	19	19
Burlington	0	0	2	5	0	0
New Britain	18	26	23	24	38	37
Plainville	3	4	3	4	4	0
Plymouth	2	5	2	1	2	3
Southington	9	4	6	5	10	9
Total Region	46	54	55	63	77	72
Total State	860	744	707	1,372	1,188	1,185

Connecticut Department of Transportation.

³⁹ *Guidelines for Choosing a Safe Bicycle Route to School*. Kevin Karplus. July 13, 2000.

⁴⁰ *Mean Streets 2004*. Surface Transportation Policy Project. November, 2004.

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VI. Goals and Objectives

Goal: Create a Central Connecticut Region that is navigable by walking and bicycling for all citizens with projects that are good for the social, economic and environmental improvement of the Region.

- Objective: Create a land use environment that is more conducive to making short trips via non-motorized transportation.
- Objective: Ensure that the needs of bicyclists and pedestrians are considered in all non-freeway-related road construction projects. Sidewalks and bicycle lanes should be placed on all roads unless placement is not feasible.
- Objective: Continuously evaluate the local road network for bicycle and pedestrian navigability.
- Objective: Assure that bicycle and pedestrian access exists for all residents.
- Objective: Create uniform bicycle route signage throughout the Region. If possible, coordinate signage with bicycle systems outside of the Region.
- Objective: Encourage placement of bicycle racks throughout the community.
- Objective: Reduce the amount of roadside debris through increased maintenance.
- Objective: Provide a quality road surface for bicycle travel.
- Objective: Encourage large employers to supply locker room type facilities for employees who commute by bicycle.
- Objective: Develop and distribute promotional material to persuade employers to provide internal incentive programs to encourage employees to bicycle and walk to work.
- Objective: Provide safe crossings of bridges, rivers and rails. Provide routes around or over limited access highways.
- Objective: Encourage the Connecticut Department of Transportation to review and revise its sidewalk policy.
- Objective: Monitor and analyze bicycle and pedestrian accident data in order to devise ways to improve bicycle and pedestrian safety.
- Objective: Develop regional standards for bicycle and pedestrian facility design that are similar to any standards that the State of Connecticut may have.
- Objective: Assure that schools have a school safe-walk route plan and map.
- Objective: Utilize well-trained adult crossing guards near schools.
- Objective: Integrate bicycle and pedestrian needs into the roadway design process.
- Objective: Include bicycle and pedestrian needs in roadway management and maintenance.

Goal: Utilize street designs that are most conducive to pedestrian and bicycle safety and mobility.

- Objective: Create wide bicycle lanes with clear signage on busy roads. Lanes should be separated from motorized traffic with painted lines on the roadway or, where possible, with a physical barrier of some type.
- Objective: Encourage small turning radii at intersections. Large radii encourage fast cornering, which is not safe for pedestrians.
- Objective: Create wide sidewalks free of obstacles.
- Objective: Create crosswalks with pavement treatments that will be visible to motorists.
- Objective: Create wheelchair ramps at intersections. Ramps should be placed in a fashion that allows disabled users to cross the street without having to go into the path of vehicular traffic. Two ramps per corner are preferred to a single diagonal ramp.

Goal: Encourage a network of linear bicycling and walking trails that will make the Region more navigable for bicycles and pedestrians while enhancing recreational opportunities.

- Objective: Encourage trail connectivity within the Region and throughout New England. The Region should be a part for the East Coast Greenway, which will run from Florida to Maine. Simultaneously, the Region should also be a link on the Farmington Valley

Greenway, which will run through Southington and Plainville on its way from New Haven to Northampton, Massachusetts.

Objective: Acquire unused railroad right-of-way. If railroad right of way is abandoned and not taken over for the purposes of transportation, it becomes a lost linear transportation resource.

Objective: Connect the trail network with the rest of the transportation system. While linear trails cannot make up a complete bicycle and pedestrian network, they can act as key bicycle and pedestrian arterials, provided the surrounding street network is navigable.

Goal: Encourage combined use of walking, bicycling and public transportation.

Objective: Encourage public transportation providers to provide bicycle racks on their buses.

Objective: Place bicycle racks at key public transportation points (i.e. New Britain-to-Hartford Busway Stations) and park-and-ride lots.

Objective: Encourage placement of bus shelters and other pedestrian amenities that make public transportation travel comfortable.

Goal: Increase the likelihood for funding of bicycle and pedestrian accommodations.

Objective: Publicize the Plan's recommendations to funding agencies such as the Connecticut Department of Transportation and the Connecticut Department of Environmental Protection.

Objective: Seek buy-in from the Region's seven towns.

Objective: Update the CCPATH as needed.

Objective: Obtain grants for the implementation of CCPATH recommendations.

Goal: Improve the quality of life in the Region.

Objective: Create a trail network that acts as a recreational resource and provide an option for physical activity.

Objective: Create a transportation network that provides safe, efficient and plentiful bicycle and pedestrian transportation options so fewer automobile trips are taken, leading to improved air quality.

Objective: Use trails, sidewalks and bicycle lanes to provide connectivity to schools, parks, and pedestrian-scale retail areas.

Goal: Educate motorists, bicyclists, pedestrians and school children on bicycling and walking benefits and safety.

Objective: Promote the use of bicycle helmets.

Objective: Educate motorists on interacting with bicycles and pedestrians. Incorporate bicycle awareness into the curriculum of driver education courses and driver retraining courses.

Objective: Educate bicyclists and pedestrians on safety in interacting with vehicles.

Objective: Provide educational materials to schools and libraries for bicyclists and pedestrians of all ages.

Objective: Inform the public about bicycle and pedestrian route locations and work to create a positive image of walking and bicycling.

Goal: Promote bicycle and pedestrian friendly legislation, policies and enforcement.

Objective: Work with appropriate authorities to revise policies that are not conducive to safe and efficient bicycle and pedestrian travel.

Objective: Increase enforcement on issues related to the rights and responsibilities of motorists, bicyclists and pedestrians.

Objective: Compile a list of bicycling "problem areas" that need to be addressed.

VII. Recommendations

A. Making a Bicycle and Pedestrian Friendly Community

1. Placement of bicycle racks at key public and private locations (towns, businesses)

Bicycle racks should be placed at all town halls, libraries and schools along with key retail, multi-family residential and employment areas. Upon the beginning of New Britain-to-Hartford Busway operation, bike racks should be placed at all Busway stations.

2. Placement of bicycle racks on CT Transit buses (ConnDOT, CT Transit, New Britain Transportation Company)

Bicycle racks should be placed on all New Britain public transportation buses when the fleet is replaced in 2008.

3. Adherence to federal laws and regulations (ConnDOT, CCRPA)

Chapter II, Section D shows federal laws and regulations that are aimed at helping create an improved bicycling and pedestrian atmosphere. It is of vital importance that ConnDOT and CCRPA do what they can to assure that non-motorized transportation is given full consideration.

4. Revise the State Sidewalk Policy and consider the needs of bicycles and pedestrians in the permitting process (ConnDOT, State Traffic Commission)

Currently, ConnDOT is unwilling to place sidewalks along roadways it alters, unless sidewalks had already existed on those roads. This is against the spirit of federal law (“Transportation plans and projects shall provide due consideration for safety and contiguous routes for bicyclists and pedestrians.”).⁴¹ The policy should be re-written, starting from the premise that sidewalks will be included in ConnDOT roadway projects, barring unusual circumstances. The State should also pay for the same proportion of the cost of sidewalks as it does for roadways.

5. Spend Surface Transportation Program (STP) funds on improving non-motorized transportation (ConnDOT)

Currently, ConnDOT only uses Transportation Enhancement Program (TEP) funds for bicycle and pedestrian projects. TEP funds make up less than five percent of the State’s total transportation allocation.⁴² In addition, STP and TEP funds should be used on the road network for non-motorized transportation. Most of the TEP projects go to very expensive (and therefore very few) trail projects.

6. Secure other funding sources for bicycle and pedestrian infrastructure (ConnDOT, CCRPA, towns)

Federal Congestion Mitigation and Air Quality (CMAQ) funds can go toward bicycle and pedestrian funding. ConnDOT has a Recreational Trail funding program. CCRPA should act as an information source for these and other available federal, state and non-profit funds.

7. Provide education and outreach to citizens and towns (CCRPA, ConnDOT, towns, schools)

Sponsor design workshops; provide resources to towns; develop model ordinances for sidewalk installation and maintenance; provide model language for plans of conservation and development; provide model details for pedestrian accommodations; and encourage towns to learn from each other. Schools should incorporate bicycle and pedestrian education into their curricula.

8. Assess pedestrian and bicycle facility needs. (CCRPA, towns)

With an ever-changing transportation landscape, it important to continue to explore needs.

⁴¹ Title 23, Chapter 2, Section 217 of the United States Code

⁴² DRAFT *Analysis of Pedestrian and Bicycle Safety Needs*. Connecticut Department of Transportation.

9. Promote bicycling and walking (CCRPA, ConnDOT, towns)

Bicycling and walking can be promoted by walk/bike to work promotions and dissemination of information.

10. Create a regional bicycle map (CCRPA)

Once bicycle lanes and routes become prevalent in the Region, CCRPA should create a free bicycle map that highlights these routes.

11. Make public transportation accessible to pedestrians (CCRPA, ConnDOT, towns)

Most public transportation users walk to catch buses. Bus shelters and safe walking conditions will provide the necessary comforts to put people in a position to choose public transportation. Bus shelters should be placed at all busy public transportation points. The following initiatives should take place:

- A quality bus shelter should be placed on West Main Street in Plainville.

B. Road Bicycling

Maps VII-1 through VII-8 show recommended designated road bicycling routes. Depending on road width, traffic speed, traffic volume and other factors, routes should have signage and/or a minimum four foot bicycle lane. What improvements are necessary should be determined on a case-by-case basis. Particular attention should be given to roads scheduled to undergo major construction projects. It is at these times that it is easiest to add a bicycle lane to a roadway. Bicycle lanes should be:

- Buffered from traffic, if possible.
- Marked with “Bike Route” signage.
- At least four feet in width.

Roadways with limited automobile traffic may only be in need of signage.

Specific adjustments that should be made include:

- Establishing a bicycle-sensitive left turn signal at the corner of Farmington Avenue and Northwest Drive (Plainville).

C. Sidewalks and Pedestrian Road Crossings

1. Make sidewalks user-friendly (towns, ConnDOT)

Not only should new sidewalks meet the following standards, but existing sidewalks should be upgraded to meet them:

- Sidewalks should be clear of obstacles.
- Sidewalks should be at least five feet in width (plus two-foot planting strip) and eight feet wide in central business districts.
- When possible, sidewalks should be buffered from auto traffic by four to six feet. Of particular importance are sidewalks in high-automobile traffic areas.
- Sidewalks should be well-maintained. The following sidewalks were discovered by CCRPA to be in disrepair and should be addressed:
 - Walnut Street and South High Street in New Britain.
 - Covington Street in New Britain.
 - Several Sidewalks east of Stanley Street—between Dwight and Park Streets—in New Britain.
 - Harvard and Woodland Streets in New Britain.
 - Route 229 (under rail bridge) in Bristol.
- Roadways should have minimal curb cuts so pedestrians do not encounter too many vehicles mid-block.
- Sidewalks should be complete as opposed to stopping in inopportune places.

- Lighting should be established for safe walking at night. One location in need of lighting is the west side of Middle Street (near Lake Avenue) in Bristol.

2. Place sidewalks in areas lacking in sidewalk coverage (towns, ConnDOT)

For both disabled and non-disabled pedestrians, sidewalk coverage is vital to mobility and safety.

Appendix VII-1 shows destination prioritization. Sidewalks should be placed in many places such as along Route 6 from Plymouth Center to Terryville Center; on Riverside Avenue and the west side of Middle Street (near Lake Avenue) in Bristol; and on the west side of New Britain Avenue and the south side of Farmington Avenue in Berlin.

3. Crosswalks should be utilized (towns, ConnDOT)

Visible crosswalks should be established for pedestrian safety. Crosswalk markings should be visible at night and should not be slippery. Pedestrian signals should be used at crosswalks. Fixed-time signals work best for pedestrians. For intersections with minimal pedestrian activity, pushbuttons are acceptable. Exclusive pedestrian phases are best for busy intersections with high-volume turning movements. At other intersections, they tend to provide poor service to pedestrians. The following adjustments should be made:

- Add pedestrian signals at the intersection of Betsy Road and Farmington Avenue in Plainville.
- Add pedestrian signals at the intersection of East Street and St. Clair Avenue in New Britain.
- Several New Britain intersections have one signal at each corner facing the opposite corner. These intersections should have two per corner facing across each street. These intersections include Main/Columbus, Columbus/High, Washington/Columbus and Myrtle/Washington.
- The intersection of Routes 4 and 179 in Burlington is just north of an access point to the Farmington Valley Greenway. This area is in need of intersection safety measures.
- Add pedestrian signals at the intersection of Orchard Street and School Street in Bristol.
- Add pedestrian signals and crosswalks to the Broad/King/Riverside area of Bristol.
- Add several curb ramps along the northern part of Lake Avenue.
- Add pedestrian signals at the intersection of Lake Avenue and Middle Street.
- Add pedestrian signals to the west side of the Kensington/New Britain and Route 372/Main intersections in Berlin.

4. Place bus stops at the far side of intersections (ConnDOT, CT Transit)

Near side placement tends to block pedestrians' view of traffic, while far side placement encourages pedestrians to cross behind busses.

5. Place curb ramps at all intersections. (ConnDOT, towns, CCRPA)

Disabled sidewalk users have difficulty crossing streets when curb ramps are not installed at intersections. Two ramps should exist at each corner (one at each crosswalk) as opposed to one placed on the corner. The following intersections are in need of curb ramps or curb ramp adjustments. CCRPA found these deficiencies through other activities. It is important to remember that there are certainly other intersections in the Region with curb ramp deficiencies.

- Adjust curb ramps from one on the corner to one at each crosswalk at the following New Britain intersections: Washington/Lafayette and Grove/Lafayette.
- Add curb ramps to the following New Britain intersections: Walnut/Prospect, High/Walnut, Manafort/East, Biltmore/Covington, Yale/Woodland, Fairview/Church, Stanley/Dwight, Harvard/Woodland, East/Chestnut, Connerton/Noble, Connerton/Olive and Stanley/Main.
- Add curb ramps at the East Main Street intersection with Whiting Street in Plainville.
- Add curb ramps to the East side of the intersection of North Main Street and Route 72 in Bristol. Change placement of curb ramps on the west side of the intersection.
- Add pedestrian curb ramps to the Broad/King/Riverside area of Bristol.

D. Trails

1. Complete the Southington and Plainville portions of the Farmington Canal Heritage Rail Trail (Towns of Southington and Plainville, CCRPA, ConnDOT, CT Department of Environmental Protection (ConnDEP))

2. Bristol Recreational Trail (City of Bristol, CCRPA, ConnDOT, ConnDEP)

The project's first phase will create bicycle and pedestrian access from Rockwell Park to the Lake Compounce area, utilizing land adjacent to the Pequabuck River in parts. Other areas use sidewalks and roads. Some streets the route will run on or near are: Barnes Street, School Street, Riverside Avenue, Memorial Boulevard, Middle Street and Lake Avenue. Project components include: several parking lots that will provide access; a paved bicycle trail; a dedicated, striped bicycle lane; and accompanying gravel walking path (where possible); pedestrian bridges across the Pequabuck River (where necessary); access for the disabled; rights-of-way/property acquisition; repaving and repair of rights-of-way; security fencing along portions of rights-of-way; and signage. Future phases will connect to downtown, Forestville, southeastern Bristol and Northwestern Bristol.

3. New Britain-to-Hartford Busway Multi-Use Trail (ConnDOT)

The New Britain-to-Hartford Busway will be a roadway exclusive to buses and will therefore function similarly to rail transit. Currently, a multi-use trail is planned to run along the Busway from Downtown New Britain into Newington, though it will have to use roadways for some of the route, due to the inability to fit the path under Route 9.

4. Farmington River Greenway (ConnDOT, ConnDEP, Town of Burlington)

Currently, the Farmington River Greenway runs along the Farmington River from Canton into Burlington. It also runs in Farmington, a portion that connects with the Farmington Canal Heritage Trail. In this region, a section of just under one mile would be necessary to complete the trail. Other parts in Farmington and Canton need completion as well.

5. Plymouth trails (ConnDOT, ConnDEP, Town of Plymouth)

Two areas in Plymouth have been identified as potential locations for circuitous trails. One would be around Thomaston Reservoir and the other through Mattatuck State Forrest.

E. Land Use and the Built Environment

1. Sidewalk-friendly regulation (CCRPA, towns)

CCRPA should include the following language in its regional Plan of Conservation and Development (POCD) and promote similar language for the POCDs in its seven towns:

Promote the inclusion of pedestrian paths that provide non-motorized connectivity to schools, houses of worship, businesses, parks and other subdivisions.

Inclusion of this recommendation in the POCD should lead to amended subdivision regulations and site plan review regulations within the town zoning codes. An example of a site plan review standard is:

Prior to approval of any site plan by the Planning and Zoning Commission, the following standard should be ascertained: Safe and efficient non-motorized transportation shall be provided via sidewalks or a trail system linking the property to abutting property, trails, and public rights-of-way. Trails may be used toward requirement for open space.

An example of a regulation for town subdivision regulations is:

In the planning, design and construction of a subdivision, due regard shall be given to the ability for subdivision residents to travel on foot or by bicycle to other subdivisions,

houses of worship, parks, schools and places of business. The Commission may require one of the following to assure that non-motorized movement is possible:

a) Sidewalk coverage on both sides of any newly created streets. In determining whether to require sidewalks, the Commission shall consider the proximity of other uses and nearby sidewalks.

b) Easements for bicycle/pedestrian paths that will connect to other uses. In determining whether to require paths, the Commission shall consider the proximity of other uses and likely future development in the vicinity. Such easements can be used toward requirement for open space.

The State of Connecticut should adopt legislation that allows developers to pay fees in lieu of sidewalk requirements:

The commission may require the provision of sidewalks when, and in places, deemed proper by the planning commission, in which case sidewalks shall be shown on the subdivision plan. Such regulations may allow the commission to impose a fee in lieu of requiring sidewalks, if such commission determines that sidewalks for such subdivision would not serve a substantial purpose. Moneys from such fees shall be used for the construction of sidewalks in established areas of the municipality.

2. Allow for mixed uses and greater density in zoning codes and plans of conservation and development (towns, CCRPA)

Mixing of uses and moderate- to high-density development tend to lead to bicycle- and pedestrian-friendliness.

3. Place parking lots behind businesses (Towns, Businesses)

Zoning codes can require that parking be placed behind businesses. This brings businesses closer to the street—and to each other, which creates a pedestrian-conducive environment.

4. Reduce amount of land required for schools (State of Connecticut)

If schools can be built up as opposed to built out, they are more likely to be able to be placed in an established area of town and, therefore, be accessible on foot.

5. Establish a grid street network (towns)

Town Plans of Conservation and Development should call for a grid street network. Conventional street networks usually push traffic onto a few very busy roads, while other roads remain unconnected to each other. A grid system distributes traffic better and allows non-motorized traffic to access places of interest.

F. Safety

1. Design roadways for lower speeds (ConnDOT, towns)

Traffic calming techniques should be used to slow traffic down. Reducing corner radii and narrowing streets can reduce speed. The following initiatives should take place:

- Traffic calming on East Main Street in Plainville.
- Traffic calming on North Main Street in Bristol.
- Traffic calming on Middle Street (near Lake Avenue intersection) in Bristol.

2. Spend safety funds on areas with high incidents of injury and fatality (ConnDOT)

Currently, ConnDOT utilizes the Suggested List of Surveillance Study Sties (SLOSSS) to determine where to spend safety funds. This list is based on number of accidents and does not account for fatalities or severity of injuries.

3. Spend proportionately based on mode of fatality (ConnDOT)

During 2002-2003, pedestrians made up 13.6 percent of traffic deaths in Connecticut. However, from fiscal year 1998 to fiscal year 2003, only one percent of federal transportation funds in Connecticut were spent on bicycle and pedestrian projects.⁴³ Between 1998 and mid-2001, pedestrian safety received less than 1.8 percent of transportation capital spending. In 1998 and 1999, ConnDOT spent approximately \$3,800 on safety per pedestrian fatality, while spending over \$39,000 per vehicle driver and passenger fatality and over \$1 million per fatality at a rail/highway crossing.⁴⁴

4. Utilize a strong “Safe Routes to School” program (ConnDOT, towns, CCRPA)

Today’s children rarely walk or bicycle to school. “Safe Routes to School” can help enable non-motorized transportation to school while instilling walking for transportation as part of the culture. One location that should be addressed is Glen Street, which accesses North End School and the public High School in New Britain.

5. Allow MPOs to program safety construction funds for traffic calming and pedestrian safety (ConnDOT, CCRPA)

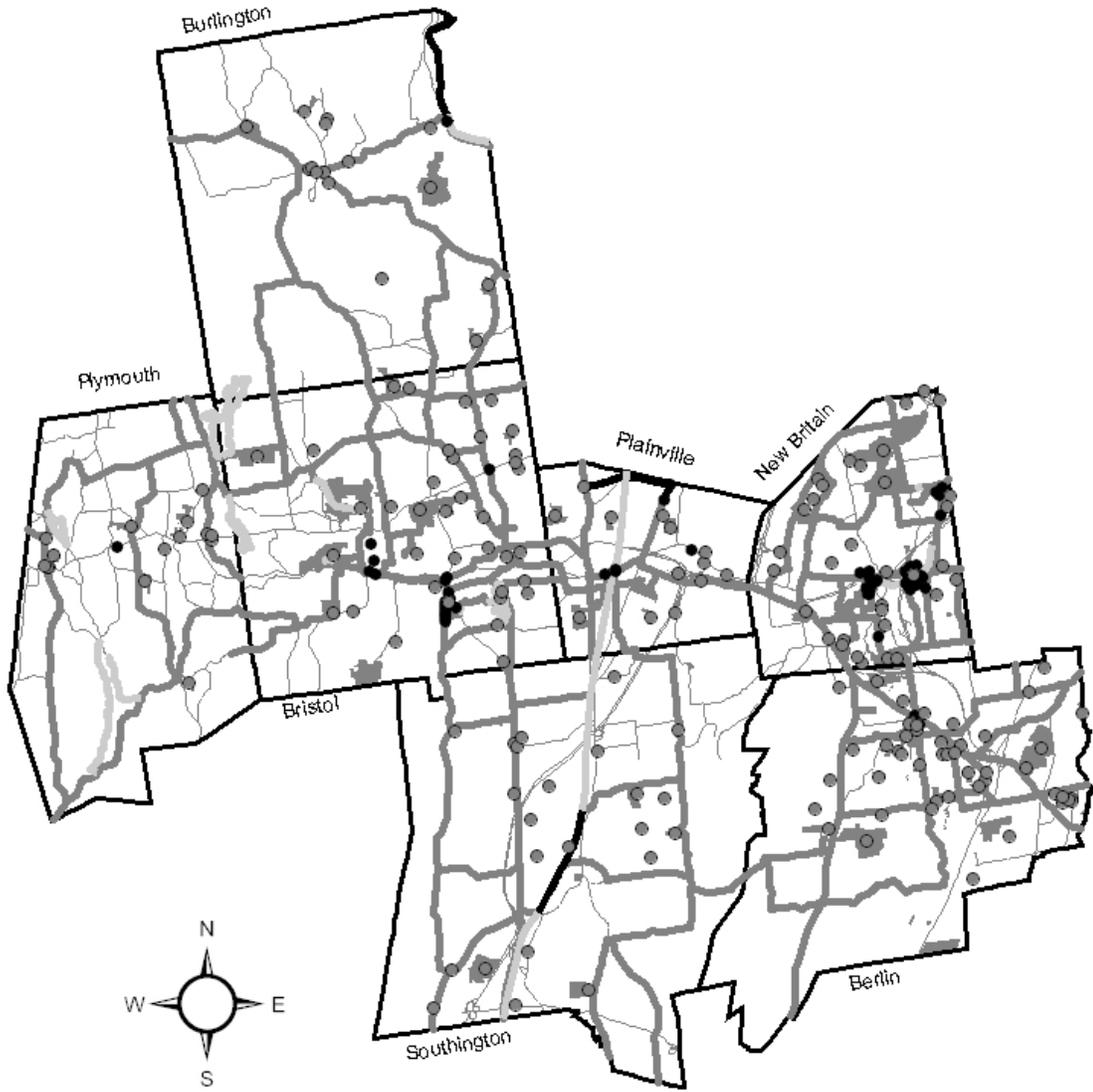
6. Participate in statewide pedestrian and bicycle safety campaigns (regional planning organizations, towns, ConnDOT, State)

State and local Police Academy curriculum should include pedestrian education.

⁴³ *Mean Streets 2004*. Surface Transportation Policy Project. November, 2004.

⁴⁴ *Deadly by Design*. David Hiller and Francisco Gomes. Connecticut Bicycle Coalition. October, 2001.

Map VII-1: Recommendations

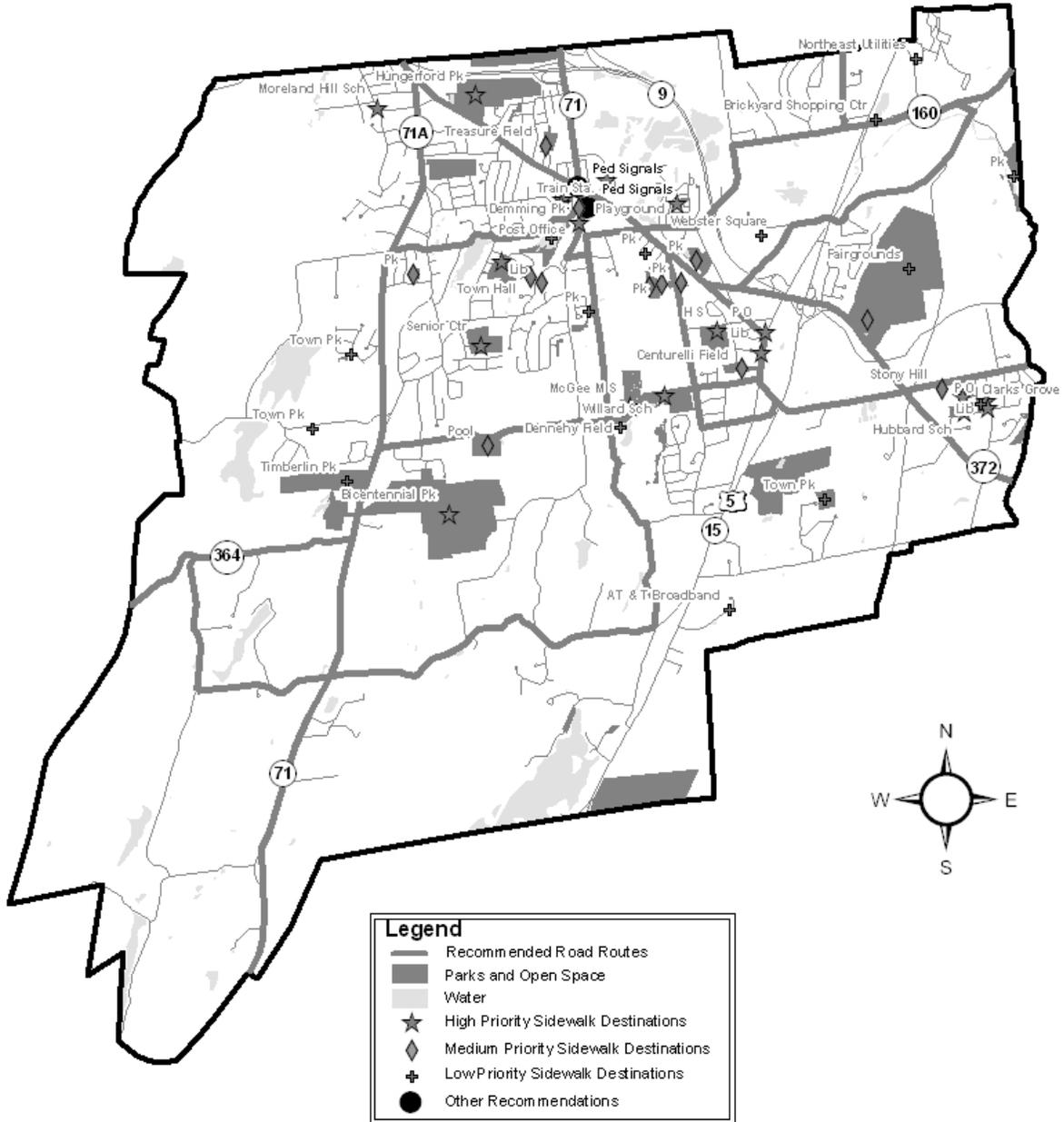


Legend

- Existing Trails
- Recommended Trails
- Recommended Road Routes
- Sidewalk Destinations
- Other Recommendations

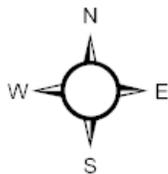
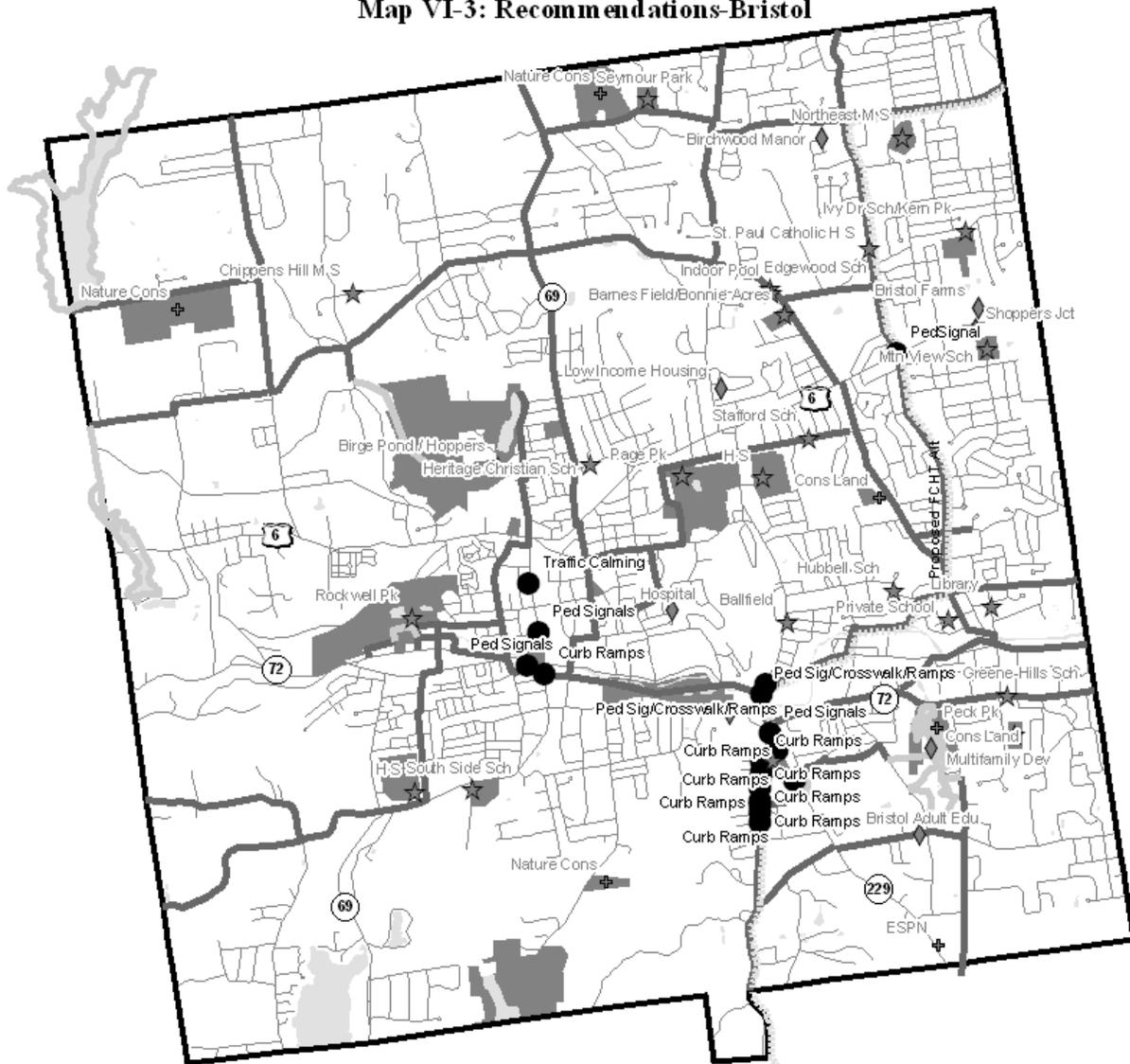
Data from www.esri.com, CT Forset and Park Association and CT Department of Environmental Protection.

Map VII-2: Recommendations-Berlin



Data from www.esri.com, CT Forest and Park Association and CT Department of Environmental Protection.

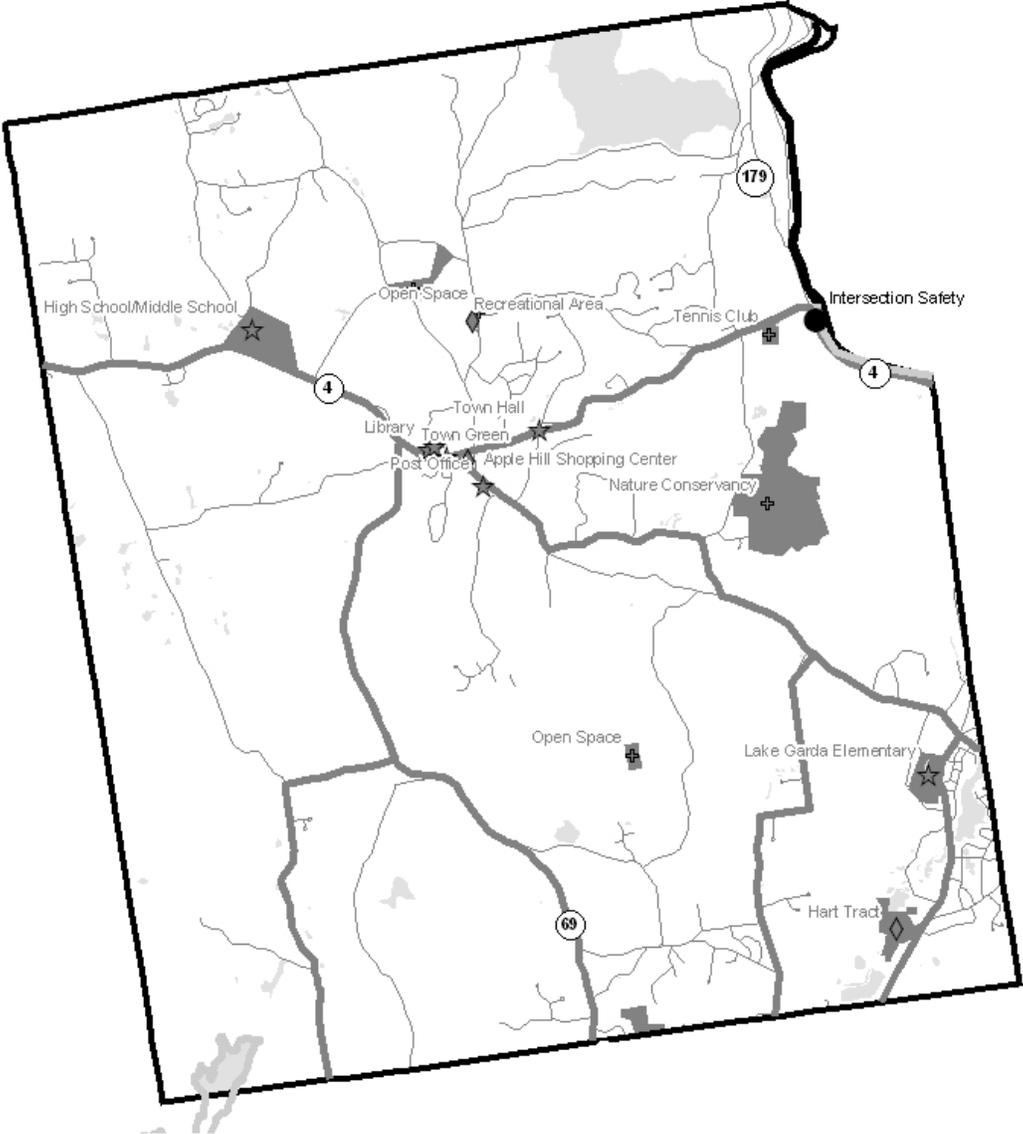
Map VI-3: Recommendations-Bristol



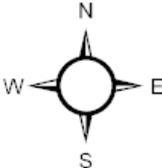
Data from www.esri.com, CT Forest and Park Association and DT Department of Environmental Protection.

Legend	
	Recommended Road Routes
	Recommended Trails
	Potential Alternate Trail Routes
	Parks and Open Space
	Water
	High Priority Sidewalk Destinations
	Medium Priority Sidewalk Destinations
	Low Priority Sidewalk Destinations
	Other Recommendations

Map VII-4: Recommendations-Burlington



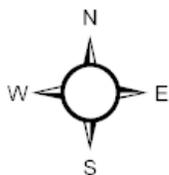
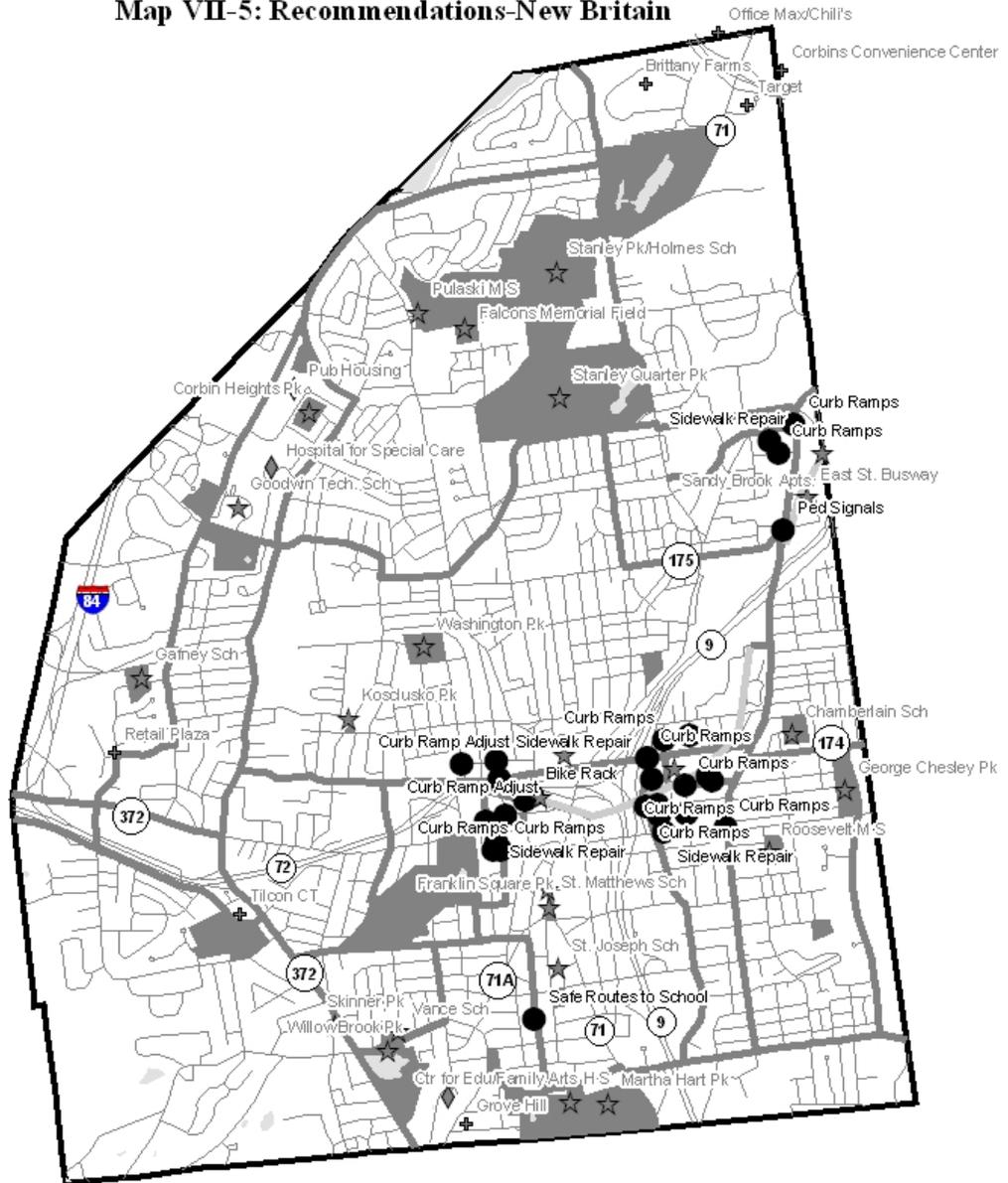
Data from www.esri.com, CT Forest and Park Association and CT Department of Environmental Protection.



Legend

- Existing Trails
- Recommended Road Routes
- Recommended Trails
- Parks and Open Space
- Water
- High Priority Sidewalk Destinations
- Medium Priority Sidewalk Destinations
- Low Priority Sidewalk Destinations
- Other Recommendations

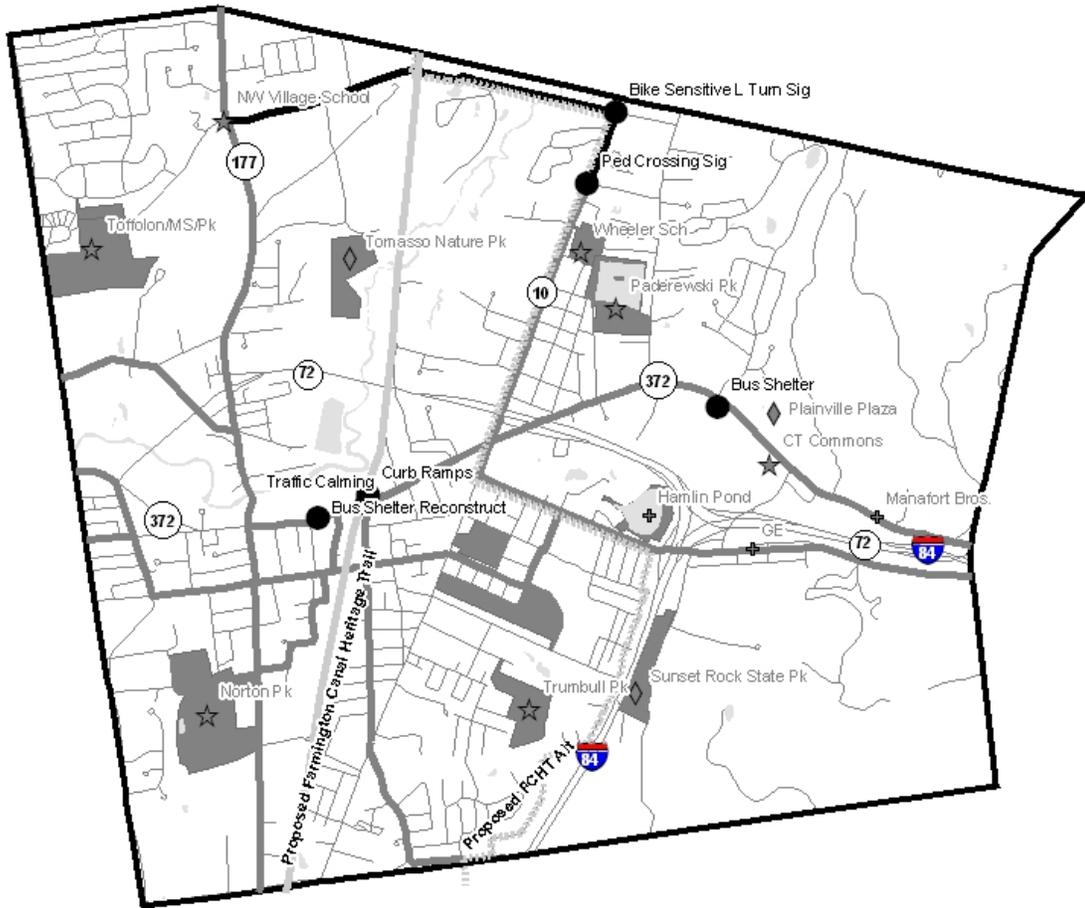
Map VII-5: Recommendations-New Britain



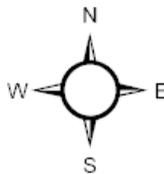
Data from www.esri.com, CT Forest and Park Association and CT Department of Environmental Protection.

Legend	
	Recommended Road Routes
	Recommended Trails
	Parks and Open Space
	Water
	High Priority Sidewalk Destinations
	Medium Priority Sidewalk Destinations
	Low Priority Sidewalk Destinations
	Other Recommendations

Map VII-6: Recommendations-Plainville



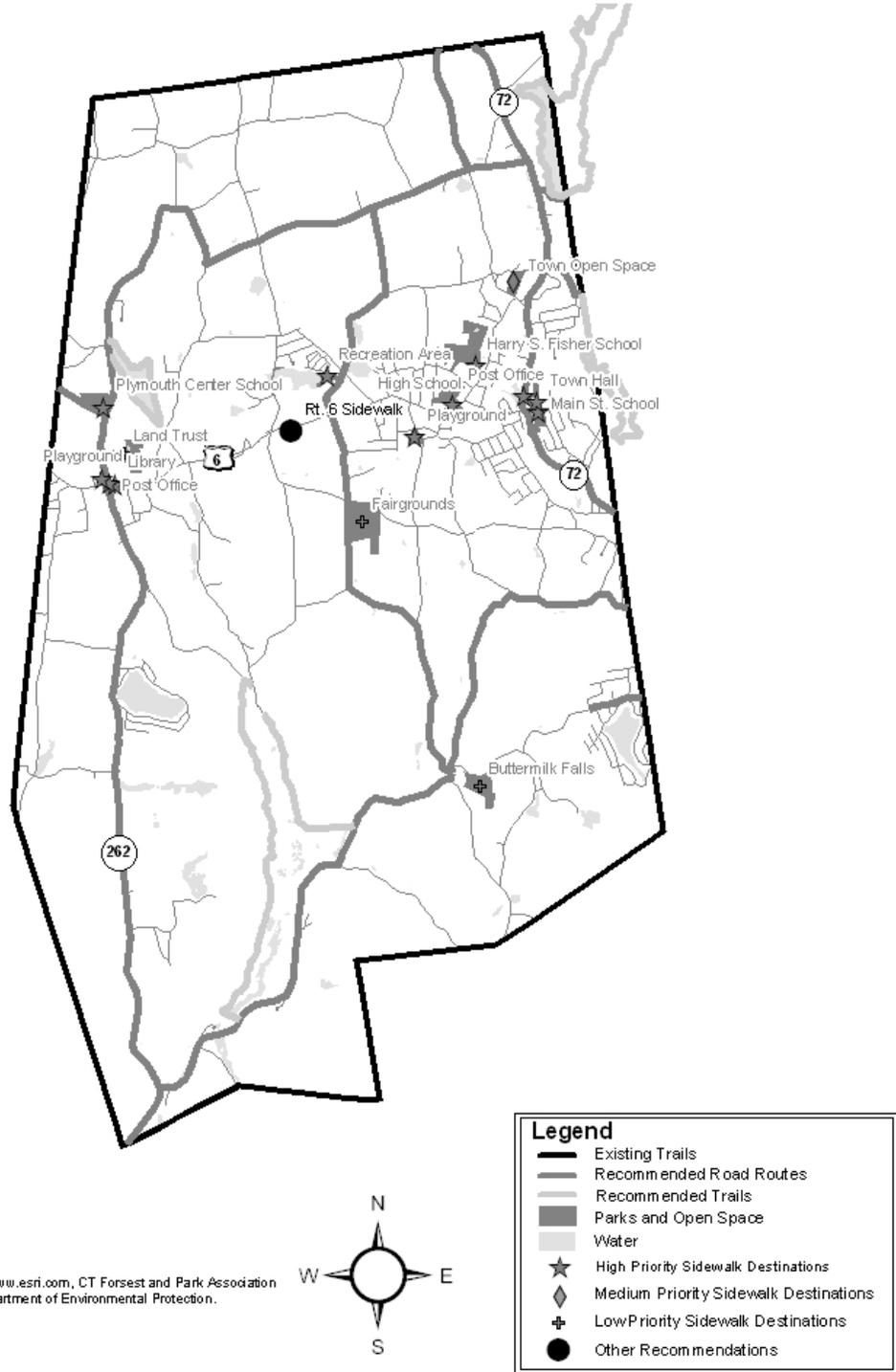
Data from www.esri.com, CT Forest and Park Association and CT Department of Environmental Protection.



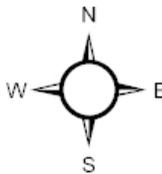
Legend

- Existing Trails
- Recommended Road Routes
- Recommended Trails
- Potential Alternate Trail Routes
- Parks and Open Space
- Water
- High Priority Sidewalk Destinations
- Medium Priority Sidewalk Destinations
- Low Priority Sidewalk Destinations
- Other Recommendations

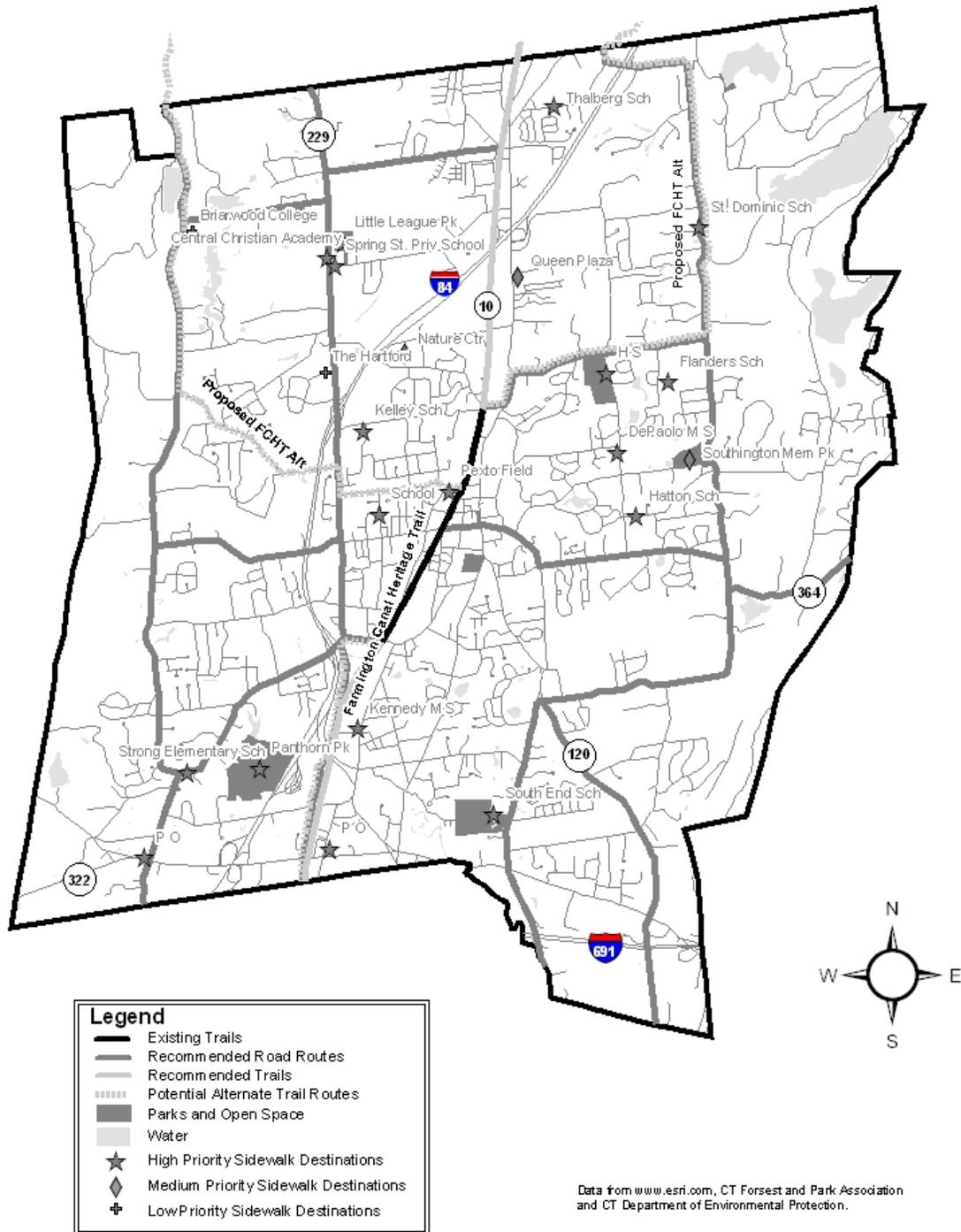
Map VII-7: Recommendations-Plymouth



Data from www.esri.com, CT Forest and Park Association and CT Department of Environmental Protection.



Map VII-8: Recommendations-Southington



APPENDIX

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Appendix I-1: Public Involvement

A. CCPATH Steering Committee

On the inside cover of this document are members of the CCPATH Steering Committee. CCRPA staffed the Committee, which was composed of a variety of regional and state interests. The group met several times and helped determine the Plan's direction. Summaries of the Committee's meetings can be obtained by contacting CCRPA.

B. CCRPA CCPATH Open Houses

Staff had two open houses. The dates, times and locations are as follows:

Monday, May 16

6:30-7:30

New Britain Public Library

(Hawley Room)

20 High Street, New Britain

Tuesday, May 17

4:30-6:00

CCRPA Office

(Board Room)

225 Main Street, Suite 304, Bristol

Public Outreach: These open houses were promoted in the following ways:

- Legal Notices in the Hartford Courant and the Sunday Press Herald (New Britain/Bristol).
- Notices to people interested in trails and bicycling (provided by CT Department of Environmental Protection)
- Notices to municipal clerks in the Region.
- Press releases.

These meetings were held in an open house format. CCRPA staff made a brief presentation on the Plan's topics and was available to answer questions and take comments. Maps were placed throughout the room and participants were encouraged to draw on them to indicate areas that were in need of bicycle or pedestrian accommodation. A comment sheet was provided at the second open house.

FIRST MEETING:

Monday, May 16

6:30-7:30

New Britain Public Library

The following people attended this meeting: Richard Corliss, Plainville Community/Economic Development Coordinator; Walt Veselka, Bristol Public Works Director; and Jim Cassidy of the Plainville Greenway Alliance. Mr. Cassidy marked the maps with suggested bicycle and pedestrian amenities. Issues addressed included clearing snow off of sidewalks in the winter, crosswalks, wheelchair curb ramps and bicycle routes.

SECOND MEETING:

Tuesday, May 17

4:30-6:00

CCRPA

The following people attended this meeting: Tom Doyle, Bristol Resident; Walter Veselka, Bristol Public Works Director; Leslie Lewis, CT Department of Environmental Protection (DEP); Don Padlo, CCRPA Board; and Robyn Bugbee, Bristol Development Authority. From the DEP's perspective, Ms. Lewis stated that she hopes to see regional priorities, which will help her agency determine what is most important for future implementation. Mr. Padlo stated that there is a need for sidewalks. It was suggested that CCRPA work with communities, ConnDOT the City and schools to determine where kids can walk. It was also suggested that bicycle shops be used as resources for finding the best road routes to ride. Ms. Lewis stated that a survey for the DEP State Recreational Plan found paved trails to be the number one recreational wish in Connecticut.

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Appendix VII-1: Sidewalk Destination Prioritization

High Priority

BERLIN			
Moreland Hill School (Private) #	Hubbell School ^	CT Commons #	
East Berlin Library #	Edgewood School ^	Paderewski Park #	
“East Kensington” Post Office #	Heritage Christian School @	Norton Park #	
Murray Heights Playground #	E. Gordon Stocks Playground @	Trumbull Park #	
Senior Center #	Northeast Middle School @	Northwest Village School ^	
E. Berlin Pool/Tennis #	Greene-Hills School @	Toffolon School/Middle School @	
East Berlin Post Office *	BURLINGTON		
Kensington Post Office *	High School/Middle School #	Northwest Park @	
Hungerford Park *	Library #	PLYMOUTH	
Percival Ave Pk/Pool *	Burlington Post Office #	Plymouth Center School #	
Bicentennial Park *	Little League Field #	Plymouth Library #	
Berlin High School ^	Town Green #	Terryville Post Office #	
Hubbard School ^	Town Hall #	Plymouth Post Office #	
St. Paul School ^	Lake Garda Elementary School #	Plymouth Center Playground #	
“East Kensington” Library ^	NEW BRITAIN		
Berlin Community Center ^	Falcons Memorial Field #	Harry S. Fisher School *	
McGee Middle School @	Stanley Quarter Park *	Main St. School *	
Willard School @	EC Goodwin School *	Town Hall *	
Berlin Train Station @	Stanley Park/Holmes School *	Veterans Memorial Playground *	
BRISTOL			
Seymour Park #	St. Matthews Lutheran School ^	Terryville HS ^	
Peck Park #	New Brite Plaza ^	Lake Winfield Rec. Area %	
Ivy Drive School #	Washington Park ^	SOUTHINGTON	
Bristol Central HS *	Kosclusko Park ^	Central Christian Academy #	
Page Park *	George Chesley Park ^	St. Dominic School #	
Ballfield (King/5 th /6 th) *	Willow Brook Park ^	Spring St. Private School	
Birge Pond/Hoppers *	Martha Hart Park ^	Pexto Field #	
Chippens Hill Middle School *	Chamberlain School ^	Western Little League Park #	
South Side School ^	Roosevelt Middle School ^	Panthorn Park #	
Stafford School ^	Pulaski MS/Falcons Field @	Post Office-Southern Sou #	
Mountain View School ^	New Britain High School @	Post Office—SW Southington #	
Bristol Eastern HS ^	St. Joseph School @	Strong Elementary School *	
Private School (Welch Dr.) ^	Corbin Heights Park @	Hatton School *	
St. Paul Catholic High School ^	Franklin Square Park @	High School ^	
Forestville Library ^	Skinner Park @	Kennedy Middle School ^	
Rockwell Park ^	East St. Busway Station (future) @	Flanders School ^	
Barnes Field/Bonnie Acres ^	Vance School @	Thalberg School ^	
Bristol Indoor Pool ^	E. Main St. Busway Station (fut) @	DePaolo Middle School @	
PLAINVILLE			
	Gaffney School @	South End School @	
	Wheeler School #	Kelley School @	
		School (N. Summit St.) %	

Medium Priority

BERLIN			
Berlin Library/Town Hall #	BRISTOL		
Treasure Field #	Birchwood Manner #	NEW BRITAIN	
Deming Park #	Multifamily Development (Davis Dr.) #	Hospital for Special Care #	
Seymour Rd Town Park #	Multifamily Development (Birch St. #	Center for Edu and Fam Arts *	
Webster Park #	Bristol Adult Education *	Sandy Brook Apartments ^	
Stony Hill Condos *	Bristol Farms *	New Britain Public Housing @	
Washington Av. Town Pk *	Shoppers Junction *	PLAINVILLE	
Centurelli Field *	Bristol Hospital ^	Plainville Plaza #	
Lions Mem. Pool *	Knollwood Estates ^	Sunset Rock State Park #	
Warner Rd. Town Park ^	BURLINGTON		
Willard/Columbus Town Pk ^	Foot Road Recreation Area #	Tomasso Nature Park #	
Lower Ln/Tairview Rd. Pk ^	Apple Hill Shopping Center #	PLYMOUTH	
	Hart Tract #	Judd Road open space %	
		SOUTHINGTON	
		Nature Center (Melcon Dr.) %	
		Southington Mem Park %	
		Queen Plaza Shopping Ctr %	

Low Priority

BERLIN	BRISTOL	NEW BRITAIN
Beckley Mills Rd Town Pk #	Nature Conserv.-Marsh Rd. #	Corbins Convenience Center #
Bruce Av Town Park #	Nature Conserv.-Shangri La #	Chili's/Office Max #
Four Rod Rd. Town Park #	Nature Conservancy-Shrub Rd. #	Brittany Farms mult-fam area #
Canterbury Rd. Town Park #	Malone Pd Conservation Land *	Retail Plaza (Stanwood/Beechwood) #
Reservoir Rd. Town Park #	ESPN *	Target #
Oxyoke Dr. Town Park #	Brook St. Conservation Land ^	Grove Hill *
Timberlin Park #	BURLINGTON	Tilcon CT *
Fairgrounds #	Fresh Air Camp #	PLAINVILLE
Webster Square Shopping Ctr #	Vineyard Road Open Space #	Manafort Brothers #
Brickyard Shopping Center #	Stone Road Open Space #	GE #
AT&T Broadband #	Punch Brook Tennis Club #	Hamlin Pond #
Northeast Utilities #	Nature Conservancy-Taine Mt. #	PLYMOUTH
Railroad Pond *	SOUTHINGTON	Plymouth Land Trust #
Clark's Grove *	The Hartford %	Buttermilk Falls %
Dennehy Field ^	Briarwood College %	Terryville Country Fair %

No Sidewalk Access

* Very Limited Sidewalk Access

^ Some/One-Side Sidewalk Access

@ Good but Incomplete Sidewalk Access

% No Data