January 2015
PREPARED FOR: **CURVES** H.V.C.E.O Housatonic Valley Council of Elected Officials AHEAD BY: HARTransit HELATER IIANBURY BEGRONAL. BING PIAN

# GREATER DANBURY REGIONAL BIKE PLAN

# FINAL REPORT January 2015

This document was prepared in cooperation with the Federal Transit Administration and the Connecticut Department of Transportation. The opinions, findings, and conclusions expressed in this publication are those of the Housatonic Valley Council of Elected Officials and do not necessarily reflect the official views or policies of the Connecticut Department of Transportation or the Federal Transit Administration.

### Prepared for HVCEO by



Eric C. Bergstraesser, Chief Executive Officer

#### **Report Staff**

Richard A. Schreiner, Director of Service Development Stephanie A. Scavelli, Transportation Planner Andrew C. O'Connell, Marketing and Public Relations Coordinator George Blake, HVCEO Geographic Information Systems Manager

## **ACKNOWLEDGEMENTS**

The authors acknowledge the following people for their expertise, invaluable support, and generous assistance on the development of this project. Apologies extended for any omissions:

**Betty Brosius** 

Jonathan Chew

Jacqui Dowd

Dave and Marti Fine

Sandy Fry

Francisco Gomes (Fitzgerald & Halliday, Inc.)

Stuart Green

Lukas Herbert

Alex Karman

Amy Mangold

Tom O'Brien

Sharon Okoye

David Pattee

John Pilner

Katherine Rattan

Paul Roche

**Cover Photo:** A sharrow marking on the pavement alerts drivers to a designated shared roadway along Housatonic Avenue in New Milford, CT.

# TABLE OF CONTENTS

	PAGE
1 OVERVIEW AND POLICY OBJECTIVES	1
1.1 Introduction	1
1.2 Relevant Federal and State of Connecticut Programs and Policies	4
1.3 Demographics	8
1.4 Bicycle Crash Data	10
1.5 Special Concerns in Bicycle Planning	15
2 INVENTORY OF ROUTES AND PLANS	18
2.1 Housatonic Valley Region Municipal Cycling Efforts and Plans	18
2.2 Municipal and Regional Plans Adjacent the Housatonic Valley Region	26
2.3 Existing and Planned Regional Routes in the Housatonic Valley Region	35
2.4 Grassroots Programs	39
3 BIKE TRANSIT POLICIES AND ENGINEERING TOOLS	41
3.1 Defining the Needs of Bicyclists	41
3.2 Bicycle Rider Demand Estimation	44
3.3 Suitability of State Roadways for Bicycle Use	
3.4 Bicycle Facility Toolbox	
3.5 Intermodal Aspects of Bicycle Transit	52
3.6 Recommendations from CT Bicycle and Pedestrian Advisory Board	. 55
3.7 Zoning Models for Bicycle Parking	56
3.8 Route 7 Corridor Transportation Study	57
3.9 Roadway and Trailway Signage	58
4 TOWN BY TOWN RECOMMENDATIONS	59
4.1 Bicycle and Pedestrian Advisory Committee	59
4.2 Bethel Bike Transit Plan	60
4.3 Bridgewater Bike Transit Plan	60
4.4 Brookfield Bike Transit Plan	60
4.5 Danbury Bike Transit Plan	61
4.6 New Fairfield Bike Transit Plan	61
4.7 New Milford Bike Transit Plan	61
4.8 Newtown Bike Transit Plan	61
4.9 Redding Bike Transit Plan	62
4.10 Ridgefield Bike Transit Plan	62
4.11 Sherman Bike Transit Plan	62
APPENDIX	63
A.1 Design Standards for Bicycle Facilities	63
A.2 Model Bicycle Parking Regulations	67
A.3 New Milford to Norwalk Ride-It-Now Route	69
A 4 Useful Weh Links	70

#### 1 OVERVIEW AND POLICY OBJECTIVES

#### 1.1 Introduction

This Regional Bike Plan provides a framework for how the Housatonic Valley Region can become a safer and more inviting place for bicycling. It is ultimately up to individuals to make the choice to ride a bike, but local governments and citizens groups can change existing public policies and practices to make biking to work, school or play a more attractive option in the community.

The plan updates the Regional Bicycle Plan as produced by the Housatonic Valley Council of Elected Officials (HVCEO) in 1996. Much has changed since that time in the perception and position of bicycling as a mode of transportation.

Between 1977 and 2009 the total number of bike trips in the United States more than tripled and cycling's modal share nearly doubled.

Expanding opportunities for bicycle transportation is a goal of the 2011 HVCEO Regional Transportation Plan. It is also a goal of the parallel 2009 HVCEO Regional Plan of Conservation and Development. This 2014 effort provides a pathway to push these goals into reality.

Fostering travel by bicycle requires a concerted effort in engineering, education and law enforcement, along with a lot of encouragement. Cycling is most prevalent in cities that have invested in cycling infrastructure. Roadway infrastructure and transportation facilities may require modification to allow cyclists and motorists to share the road. In other cases engineers, planners, and public works officials need to learn the perspective of those that wish to travel by bike to their places of employment, education and recreation. And of course, police officers must enforce and citizens must obey traffic laws.

This plan provides an overview of cycling in the context of the Housatonic Valley, an inventory of routes and plans, a toolbox for planners and elected officials and recommended steps to encourage the growth of cycling.

#### Benefits of Cycling

In 1990, the Federal Highway Administration (FHWA) called walking and bicycling "the forgotten modes" of transportation. A decline in the national number of commuter trips made by bicycle or on foot (i.e., 6.7% in 1980 to 4.7% in 1990) had taken place. At the same time, bicyclists and pedestrians were disproportionately represented in crash statistics.

These factors prompted the U.S. Department of Transportation (USDOT) to adopt a forward thinking policy to reverse this trend. USDOT endeavored to increase the total trips made by cycling and walking in the U.S. and to reduce the number of bicyclist and pedestrian related deaths and injuries. In 1994, the first national policy of its kind was advanced to increase the use of bicycles and to encourage planning and design of infrastructure and to improve safety.

As a result of attention and resources invested to create bike-friendly communities, cities across the country have realized economic, public health and environmental benefits.

The health benefits of physical activity provided by cycling are well recognized and include weight management, improved cardiovascular function, and reduced risk for disorders such as diabetes and stroke.



Red bike bicycle racks welcome riders into Danbury's Bike Express Bike Shop located on Division Street. Photo Credit: HARTransit.

For the individual rider, financial savings can be enormous when compared to the cost to operate a motor vehicle. According to the American Automobile Association the average cost to operate a car was \$9,021 in 2013. In comparison, the annual operating cost of a bicycle is about \$120 per year.

The economic benefits of increased bicyclist presence can be far reaching. A 2012 study in the city of Portland, Oregon showed that cyclists spend more per month at local establishments than those arriving by any other mode of transportation. Similarly, a 2009 report in Toronto, Ontario reported that those that bike and walk in the commercial district spent more money per month than those who drove there.

"I believe that making our cities and towns more bike-able and more walkable is essential to the economic future of the state."

Kip Bergstrom, Deputy
Commissioner of CT Department
of Economic & Community
Development, 2013

Many bicycle advocates, including officials in Connecticut, view cycling and its attendant infrastructure as a key piece of long-term economic development. Kip Bergstrom, Deputy Commissioner of the CT Department of Economic and Community Development, speaking at the annual meeting of Bike Walk Connecticut in 2013 stated, "I believe that making our cities and towns more bikeable and more walkable is essential to the economic future of the state."

More specifically, Connecticut's economic future is tied to meeting the needs of the 25-34 age skilled labor demographic. Census data shows the state lost adults in this category between 1990 and 2010 at a 28% rate – the third highest nationally. This group of future leaders and

entrepreneurs are moving from large cities to smaller ones and show a strong preference for locations that are safely navigable by bike or on foot.

#### The Five E's of Bicycle Planning

The League of American Bicyclists provides a popular five E's framework for approaching bike planning issues. The League first formed in Rhode Island in 1880 under the name of the League of American Wheelmen. Today, the League of American Bicyclists is the largest and oldest bicycle advocacy organization in the United States.

The League recommends the following framework from which to examine the multi-dimensional needs of bicycle users and how to develop creative solutions:

- **Engineering:** Creating safe and convenient places to ride and park.
- Education: Giving people of all ages and abilities the skills and confidence to ride.
- **Encouragement:** Creating a strong bike culture that welcomes and celebrates bicycling.
- **Enforcement:** Ensuring safe roads for all users.
- Evaluation and Planning: Making bicycling a safe and viable transportation option.

#### The 1996 HVCEO Bicycle Plan

The 1996 Regional Concept Plan for Bike Route Development - Regional Planning Bulletin 89 was the first comprehensive plan for bicycle transportation in the Housatonic Valley Region.

The goal of the plan was to assist the region's towns and city to develop safe and convenient bicycle riding environments. A discussion of bicycling as an important mode for personal transportation described associated benefits like energy conservation, pollution reduction and enhanced physical fitness. The objective of the plan was to identify corridors where a comprehensive and coordinated bicycle route system might be desirable for transportation and recreational use.

#### The plan provided:

- Background on trends of bicycle use, travel characteristics and special concerns of bicycle planning.
- Bicycle planning overview which identified types of cyclists, the rationale for bicycle route designation, bicycle facility types and the status of intermodal transportation.
- An inventory of regional bicycle proposals and planning efforts as well as projects in neighboring communities in New York and Connecticut.
- Identification of attractors, generators and interregional links.
- Identification of twelve conceptual Regional Bicycle Travel Corridors to be evaluated by CTDOT and local municipalities for shared road or side of the road bicycle routing.
- Identification of nine conceptual Recreational, Tourism and Secondary Bicycle Travel Corridors. The corridors were included by reason of a unique riding experience in the Housatonic Valley, interregional links or complementary extensions of regional bicycle travel routes.
- Supporting programs.
- Steps towards successful implementation of the Plan.

#### 1.2 Relevant Federal and State of Connecticut Programs and Policies

Several recent state and federal statutes, regulations and programs especially relevant to cyclists and planning for cycling in Connecticut have been established and are briefly detailed below.

A designated staff person within the Connecticut Department of Transportation (CTDOT) is now in place to coordinate bicycle and pedestrian issues. The 2012-2015 Statewide Transportation Improvement Program (STIP) has 2% of its \$4.26 billion program invested in pedestrian or bicycle-related projects. This is up from 0.9% in the 2007-2010 STIP.

#### 2009 Connecticut Statewide Bicycle and Pedestrian Plan

The 2009 Connecticut Statewide Bicycle and Pedestrian Plan, prepared by CTDOT articulates an inclusive vision for bicycle and pedestrian planning in Connecticut. The state vision is as follows:

To encourage and promote bicycling and walking throughout Connecticut by providing for the safe, convenient, and enjoyable use of these modes of transportation. Any person will be able to walk, bicycle, or use other types of non-motorized transportation modes safely and conveniently throughout the state.

The statewide plan is based on a "network of on-road facilities and multi-use trails that will connect towns, regions, and Connecticut to neighboring states. Specifically, residential areas, employment centers, shopping areas, recreation and cultural attractions, and schools will accommodate the walking and bicycling needs of users."

The statewide plan presents the following goals:

- **Goal 1:** Develop and maintain a safe, efficient, accessible, and convenient pedestrian and bicycle system that allows users to travel safely and comfortably.
- Goal 2: Integrate and connect the pedestrian and bicycle system with other transportation systems (e.g. roads, rail, bus, etc.).
- **Goal 3:** Support and encourage pedestrian and bicycle connections between neighborhoods, commercial areas, employment centers, schools, state and municipal parks, and other destinations serving the community.
- **Goal 4:** Encourage and support pedestrian and bicycle safety.
- **Goal 5:** Develop and implement educational programs to ensure that transportation facilities will be used safely and responsibly.
- **Goal 6:** Provide financial and technical support and seek to utilize all available funding for the development and construction of bicycle and pedestrian facilities throughout Connecticut, within CTDOT's available resources and consistent with federal program initiatives.
- **Goal 7:** Contribute to public health by providing safe and attractive opportunities for walking and bicycling.

#### Three Feet Rule

Connecticut Public Act 08-101 requires that vehicles overtaking bicycles traveling in the same direction shall pass to the left leaving no less than three feet of distance. The bill requires the Commissioner of Transportation to develop and implement a statewide share the road public awareness campaign to educate both cyclists and motorists on the proper use of state highways.

#### Complete Streets

Connecticut Public Act 09-154 requires accommodations for all users (i.e., motorists, transit users, pedestrians or cyclists) when planning or constructing highways. Any funds received by CTDOT or municipalities for the construction, restoration, rehabilitation or relocation of highways, roads or streets must include a provision whereby at least 1% of funds are used to provide facilities for non-motorists. The statute specifically identifies bikeways and sidewalks as appropriate investments.

The legislation established a Connecticut Bicycle and Pedestrian Advisory Board. The board is responsible for examining the need for bicycle and pedestrian transportation, promoting programs and facilities for bicyclists and pedestrians, and acting as an advisory body to the state on relevant issues.

It is also now the policy of the CTDOT to promote the following complete street objectives:

- Improve safety and mobility for pedestrians of all ages and abilities, bicyclists, the mobility challenged and those who choose to live vehicle free
- Develop and support a transportation system that accommodates to active transportation modes that promote healthier lifestyles
- Develop and support a transportation system that accommodates compact, sustainable and livable communities
- Provide safe access for all users by providing a comprehensive, integrated, connected multi-modal network of transportation options
- Improve mobility and accessibility to activity centers, including: employers, commercial centers, schools, transit, and trails
- Support the state's Transit-Oriented Development efforts through the provision of integrated transportation networks
- Enhance Connecticut's economic competitiveness by enabling communities to become livable, walkable, bike-able, drivable, efficient, safe and desirable.

#### Vulnerable Road Users

Connecticut General Statutes §14-242(f); 14-212c states that no person operating a vehicle that overtakes and passes a person riding a bicycle proceeding in the same direction shall make a right turn unless the turn can be made with reasonable safety and will not impede the travel of the person riding the bicycle.

Public Act 14-31, signed into law in May 2014, mandates a fine of \$1000 for motorists that seriously injure or kill a vulnerable user, such as a cyclist, pedestrian or person in a wheelchair due to reckless driving.

#### Local Transportation Capital Improvement Plan (LOTCIP) Fund Requirements

The LOTCIP program is a new funding source for transportation projects created in Section 74 of Public Act 13-239. As a condition of applying to LOTCIP, CTDOT requires municipalities to submit a completed Bicycle and Pedestrian Travel Needs Assessment Form.

A first year of funding was approved by HVCEO early in 2014. One of eight projects approved directly addresses bike transit. This is Ridgefield's proposed "Farmingville Road Combined Use Trail" funded at \$1.1 million.

#### Safe Routes to School Program

The Safe Routes to Schools (SRTS) program was established under the federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETY-LU) to facilitate the safe travel of school children grades K-8 to bike or walk to and from school. This program provided funding for infrastructure, education and enforcement to over 6,400 schools in all 50 states.

The goal of the program was to improve the health of children and reduce vehicular traffic around schools (approximately 25% of morning traffic congestion is attributable to parents driving children to school) and improve air quality.

The new federal transportation bill, Moving Ahead for Progress in the 21st Century Act (MAP-21), authorized the Transportation Alternatives Program (TAP) which replaced the funding through Safe Routes to School. SRTS activities are eligible to compete for funding through the TAP alongside other programs, including the Transportation Enhancements Program and Recreational Trails Program.

Safe Routes to School is administered in Connecticut by CTDOT which provides extensive technical assistance to communities interested in participating in the program. The state has awarded grants to 47 schools since 2005. Visit walkitbikeitct.org for additional information.



Youth following along learning to safely share the roadway.

Bethel received grant funds under the program and used funds to install sidewalk, sight distance and crosswalk improvements in Education Park and along Plumtrees Road and Maple Avenue back in 2007. In the Town of Bridgewater, Burnham School has participated in International Walk to School Day for the past few years, but has not applied for any program assistance.

#### Federal Bicycle Commuter Incentive

The federal Bicycle Commuter Act or Section 211 of the "Emergency Economic Stabilization Act of 2008" allows employers to provide a tax-free monthly reimbursement for employees who ride a bicycle to work in a "qualifying bicycle commuting month."

A qualified bicycle commuting month is one where an employee regularly uses the bicycle for a substantial portion of the commute between the employee's residence and place of employment and does not receive transportation through a vanpool, transit pass, or qualified parking benefits.

Employers may reimburse employees, tax free, for reasonable expenses related to their bicycle commute. These expenses could include equipment purchases, bike purchases, repairs, and storage in a qualifying month. The benefit is limited to \$20 per month.

The employer gets a tax deduction and saves over providing the same value in gross income.

#### Greenhouse Gas Reduction

Connecticut Public Act 08-98 established a goal of reducing emissions of greenhouse gases to a level at least 10% below that emitted in 1990 by January 1, 2020. By January 2050, the goal is to reduce emissions to a level 80% below that of 2001.

The Connecticut Climate Change action plan of 2005 was developed to help achieve this goal. A part of the greenhouse gas reduction program, the Transit, Smart Growth and Vehicle Miles Traveled (VMT) Reduction Package, recognizes the value of cycling in reduction of greenhouse gas emissions.

This portion of the action plan seeks to increase availability of low greenhouse gas travel choices in Connecticut, such as transit (rail and bus), vanpools, walking, and biking. The plan recommends development of complementary land use polices and incentives to improve the attractiveness of these travel choices.

#### 1.3 Demographics

Biking makes up 1% percent of all trips made in this country which is a 25% increase from 0.8% in 2001. The 2009 National Household Travel Survey (NHTS) indicates that the most common use of bicycles is for recreational purposes, although the share of other trip purposes is growing over time. Commuting represents the greatest rate of increase among trip purposes.

According to the League of American Bicyclists 0.6% of commuters in Danbury use bicycles to travel to work. Although small, the rate was half that (0.3%) in 2001.

The US Census American Fact Finder 2008-2012 Community Survey shows that the largest segment of commuter cyclists in the region reside in Bethel (47%), followed by Danbury (28%) and Ridgefield (14%). The remainder of HVCEO communities contains 10% or less each of the regional bike commuter population.

Active cyclists are predominantly men with women making up less than a quarter of riders.

The gender gap between men and women has widened since 2001 when women made up 33% of total bicycle trips.



This downtown Danbury resident travels daily by bicycle.

Photo Credit: HARTransit.

NHTS data reveal no significant differences between income levels and cycling. However, researchers have suggested that low income riders are more likely to cycle for purposes of employment and basic needs, while upper income riders skew more towards recreation and

exercise.

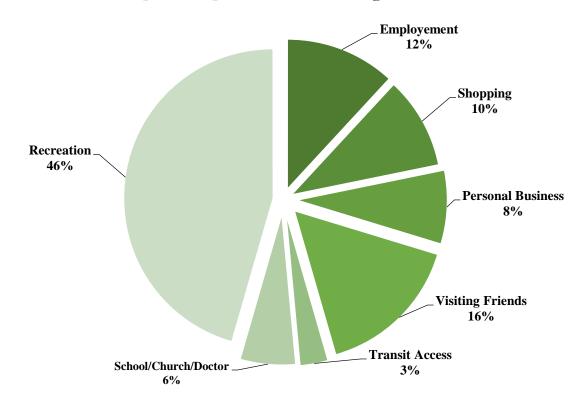


The likelihood of a person choosing to bicycle as a mode of transportation declines with car ownership. NHTS indicates that those who own three or more cars are less than half as likely to bicycle as those with no car.

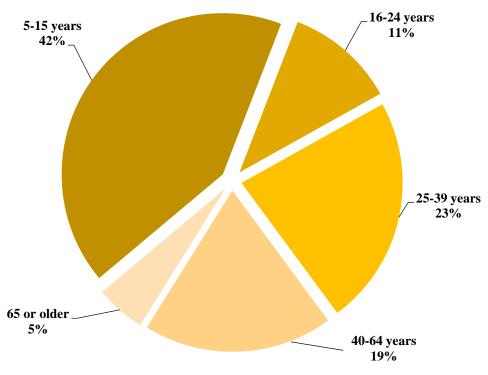
According to national statistics the greatest segment of riders is dominated by those aged 15

and under, followed by the 25 to 39 age range. Between 2001 and 2009, however, NHTS data indicates that every age range showed increases in cycling activity, except for those aged 15 and under. Cycling by those in the 40 to 65 age range grew the most as a percent of total bicycle use, from 10% in 2001 to 19% in 2009.

# Trip Purpose for U\$ Cyclists, 2009



# U\$ Cyclists by Age Group, 2009



Source: Bicycling Trends & Polices in North American Cities (Pucher and Butler, 2011)

#### 1.4 Bicycle Crash Data

The most comprehensive dataset for roadway bicycle-related collisions is provided through the Connecticut Crash Data Repository which currently lists those incidents reported to CTDOT and the Department of Public Safety.

According to this database, **3,508** bicyclists in Connecticut were involved in **3,424** roadway collisions between January 2008 and December 2012. It should be noted that studies suggest

that many pedestrian and bicyclist crashes go unreported, so it is very likely that additional incidents occurred over this timeframe. One in ten injuries were classified as fatal or incapacitating: 26 victims experienced fatal collisions and 364 sustained incapacitating injuries preventing return to normal life.

Over the five year period, 120 (3.5%) bicycle-related collisions reported to CTDOT occurred within the Housatonic Valley Region. Some 10.8% of the incidences were serious: two bicycle-related fatalities and eleven incapacitating injuries. Two additional bicyclist fatalities (noted on page 12) occurred in the fall of 2013 and summer of 2014 which are too recent to show up in this database.

## On Road Bicycle Collisions, Jan 2008-Dec 2012

Source: Connecticut Crash Data Repository

MUNICIPALITY	REPORTED	PERCENT TOTAL
Danbury	66	55.0%
Bethel	16	13.3%
<b>New Milford</b>	13	10.8%
Ridgefield	11	9.2%
Brookfield	4	3.3%
Redding	4	3.3%
Newtown	3	2.5%
New Fairfield	2	1.7%
Bridgewater	1	0.8%
Sherman	0	0.0%

The table on page 11 provides additional information on severe on-road bicycle collisions that occurred in the Housatonic Valley Region between January 2008 and December 2012.

Nearly all (93%) of the region's on-road bicycle collisions occurred during non-adverse weather conditions. In one out of five (24 incidents) the cyclist was not wearing a helmet or high visibility clothing.

In the five year period over fifty-percent of on-road bicycle collisions occurred within the City of Danbury. **Sixty-six** incidents were reported. Bethel, New Milford and Ridgefield each had 16, 13 and 11 reported incidences, respectively. Brookfield, Redding, Newtown, New Fairfield, Bridgewater and Sherman had 4 or less reported on-road bicycle collisions.

See table above for count of on-road bicycle collisions by municipality between January 2008 and December 2012.

Severe On-Road Bicycle Accidents in the Housatonic Valley Region Jan 2008 - Dec 2012

DATE	TUME	TOWN	LOCATION	ROAD SURFACE	LIGHT	INJURY*	AGE	PROTECTION SYSTEM USED
8/29/2012	5:50 PM	Danbury	CT Route 53	Dry	Daylight	Incapacitating	27	Unknown
7/29/2012	5:19 PM	New Fairfield	Indian Hill & Williams Rd.	Dry	Daylight	Incapacitating	15	None
5/3/2012	5:40 PM	Ridgefield	Great Pond Rd.	Wet	Daylight	Incapacitating	52	Unknown
2/22/2012	4:59 PM	Bethel	Library Pl.	Dry	Daylight	Incapacitating	24	No helmet; High visibility clothing
7/12/2011	9:42 AM	Bethel	CT Route 53	Dry	Daylight	Incapacitating	32	Helmet; High visibility clothing
7/12/2011	9:42 AM	Bethel	CT Route 53	Dry	Daylight	Incapacitating	38	Helmet; High visibility clothing
7/10/2011	8:05 AM	Ridgefield	Nod & Twin Ridge Rd.	Dry	Daylight	Incapacitating	59	None
7/9/2011	6:54 AM	Bethel	Winesap Run & Appletree Rd.	Sand, mud, dirt or oil	Daylight	Incapacitating	38	Helmet; High visibility clothing
6/19/2011	9:38 PM	Danbury	West & Montgomery St.	Dry	Dark-not lit	Fatality	7	Unknown
6/11/2011	6/11/2011 12:11 PM	New Milford	Route 7 & Pickett District Rd.	Dry	Daylight	Incapacitating	44	No Helmet; High visibility clothing
6/3/2010	10:29 PM	New Milford	Route 7	Dry	Dark-not lit	Fatality	41	Helmet; High visibility clothing
5/21/2009	5/21/2009 12:09 PM	Ridgefield	Bayberry Hill Rd.	Dry	Daylight	Incapacitating	51	Helmet; High visibility clothing
8/11/2008	8/11/2008 11:50 AM	Bethel	Route 6 at Big Y	Dry	Daylight	Incapacitating	65	Helmet; High visibility clothing

\*An incapacitating injury prevents return to normal life activities.

#### Location of Collisions

The maps on the following pages show the location of on-road bicycle collisions reported between January 2008 and December 2012. When examining crash data by location, some roadways stand out as trouble spots:

- Twenty-one incidences occurred along State Route 53 through Danbury, Bethel and Redding. More than half (57%) resulted in evident injury to the bicyclist. Eighteen out of the 21 occurred in Danbury, one of which resulted in an incapacitating injury. Three incidences occurred in Bethel, two resulting in incapacitating injuries. One incidence occurred in Redding causing a non-incapacitating injury to the bicyclist.
- One of six collisions that occurred on West Street in Danbury resulted in a fatality. Collisions occurred at the intersection of West Street and William Street, Deer Hill Avenue and Montgomery Avenue.
- Six collisions occurred on US Route 6: one in Bethel and five in Danbury. The Bethel crash occurred at the Big Y entrance resulting in serious injury to the cyclist.
- Between 2008 and 2012, five collisions occurred along State Route 302 in Bethel, none of which resulted in serious injury. However, a collision in 2013 resulted in a fatality.
- In New Milford five collisions were reported along US Route 202 and four serious collisions were reported along US Route 7 including one fatality. Collisions along Route 202 occurred at West Street, Peagler Hill Road and Grove Street.

#### Serious Collisions and Fatalities

Between 2008 and 2014 fifteen serious on-road bicycle collisions include four cyclist fatalities and eleven incapacitating injuries preventing return to normal life activities.

The majority of serious cycling injuries occurred in the Town of Bethel (six out of fifteen incidences, including one fatality). Five out of fifteen incidences occurred on either State Route 53 in Bethel or US Route 7 in Danbury and New Milford.

Deaths occurred in Danbury, New Milford and Bethel:

**2010:** A 41 year-old Danbury police officer wearing a helmet and high visibility clothing commuting to work at night along Route 7 in New Milford died in a hit-and-run car collision.

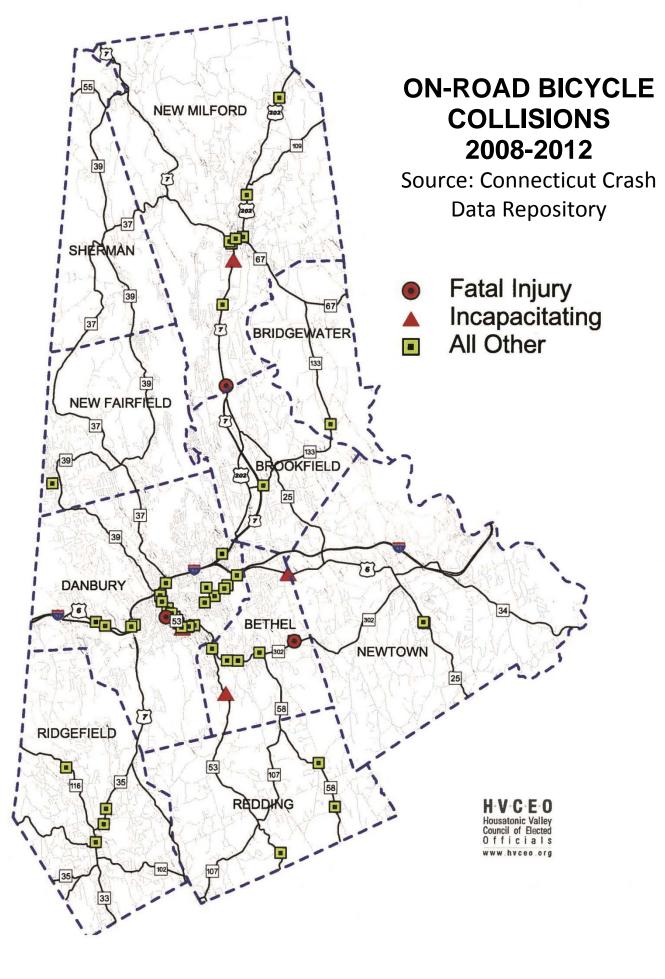
**2011:** A ghost bike on West Street in Danbury memorializes a 7-year old child hit by a van at the intersection of Montgomery Street and West Street. (See image at right).

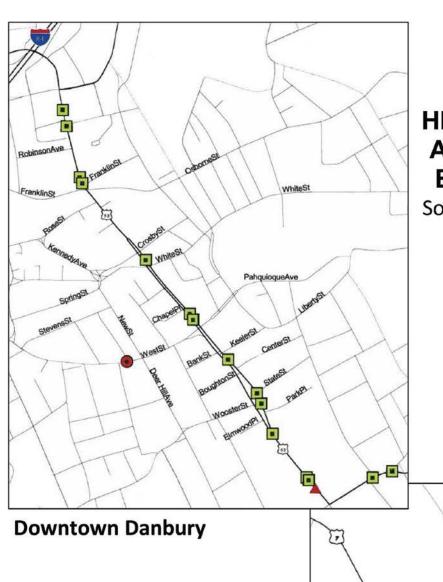
**2013:** A 59 year-old experienced bicyclist from Weston was killed in a hit-and-run car collision along Route 302 in Bethel.

**2014:** A 57 year-old experienced bicyclist was killed in a truck collision along Chestnut Lane Road at 8:30am in New Milford in August 2014.



Photo credit: HARTransit.





# HIGH CONCENTRATION AREAS FOR ON-ROAD BICYCLE ACCIDENTS

Source: Connecticut Crash Data Repository, 2008-2012

Fatal Injury

**A** 

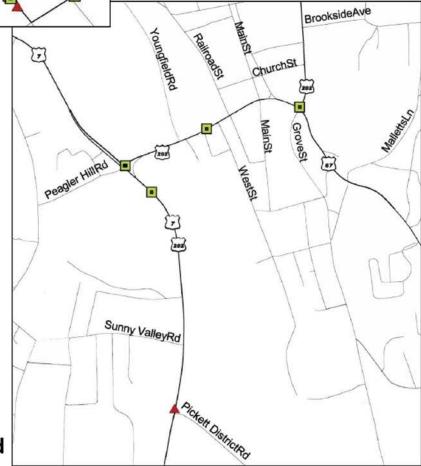
Incapacitating

.

All Other

H-V-C-E-O
Housatonic Valley
Council of Elected
Officials
www.hvceo.org

**Downtown New Milford** 



#### 1.5 Special Concerns in Bicycle Planning

#### **Roadway Conditions**

Bicycle users are especially sensitive to road surface condition. At higher speeds, encounters with surface irregularities, such as potholes, cracks, or gaps can have disastrous results. Some highway maintenance practices, for example chip seal resurfacing, are economical and satisfactory for motor vehicles, but do not perform satisfactorily for bicyclists.

Road debris can also be a challenge to the bicyclist. For example, sand used for winter maintenance can accumulate on the roadway shoulder and curb, causing potentially slippery and abrasive conditions for bicycles traveling on the edge of the paved roadway. Broken glass and metal from auto collisions presents another significant hazard. Even "road-kill" can cause a bicyclist to lose control, veer and either fall or crash with an adjacent vehicle.

Drainage grates and railroad grade crossings can create surface irregularities that are hazardous to bicycles. If designed or maintained inappropriately, these structures may trap a wheel. Other roadside features such as guardrails, lighting and utility poles, and signs, must be constructed with the special clearance requirements of the bicyclist in mind.

#### Space for Riding

On most roads and streets the bicyclist is competing for space in an unfair contest of person and machine. The standard highway lane is generally not adequate to accommodate an automobile and bicycle simultaneously. Several alternatives exist.



CT State Route 99 prior to (left) and after re-striping (right). Photo Credit: CTDOT.

Most bicyclists do not perceive a wide lane as an adequate facility because motorists often drive close to the right edge of a lane despite lane width.

New striping projects can reduce the existing travel lane to allow for additional space in the outer shoulder. Whenever possible, the goal is to provide a minimum shoulder width of four to five feet with travel lanes no less than eleven feet and no more than twelve feet. The reduced travel lane width is almost imperceptible to motorists while providing a much valued buffer for cyclists. Shoulders intended for bicycle use must be adequately swept and maintained.

In 2012, 162 two-lane miles of state roads were restriped to eleven foot lanes. The Vendor-in-Place program for state-funded paving projects has made the biggest contribution to this initiative and allows a change in roadway function without the cost of property takings.

Additionally, bike lanes may be constructed (see appendix for details). A relatively new engineering technique called a "road diet" consists of re-striping an existing multi-lane road to eliminate one or more vehicular travel lanes in order to provide a dedicated bicycle lane. Curbside parking should be either clearly demarcated in spaces located to the right of a bicycle lane or prohibited altogether. Enforcement must ensure that the continuity of roadway width is not interrupted by parked or standing vehicles.

The most far reaching solution is the construction of separate facilities, such as multi-use trails and bike paths. Recent work such as *Bicycling Trends and Polices in Large North American Cities* (Pucher and Buehler 2011) suggest that cities that invest in segregated facilities for cycling and pedestrian use have greater levels of cycling and more women riders.



In 2014 the first Ride of Silence in Danbury was attended by over fifty bicyclists of varying skill level who rode to pay respect to cyclists killed on the road. Photo Credit: Tom O'Brien.

#### Bicycling on Sidewalks

Bicycling on sidewalks is generally discouraged. However, inexperienced cyclists and children may choose to ride on sidewalks when the roadway is perceived as unsafe. Experienced cyclists may ride on sidewalks around blind turns or up steep narrow roads where there is little clearance on the road for cars to safely pass.

Most towns in the Housatonic Valley Region do not restrict bicycling on sidewalks. Little to no sidewalk exists in Bridgewater, New Fairfield or Sherman. Sidewalks and crosswalks were only recently constructed in Newtown and in Redding sidewalks exist in the Georgetown section only. Bethel and Brookfield have substantial sidewalks but do not prohibit or restrict bicycling on sidewalks.

However, Ridgefield, New Milford and Danbury explicitly restrict or prohibit bicycling on their sidewalks. Ridgefield limits the use of bicycling on sidewalks under the following conditions:

No person shall bicycle on any public sidewalk or in any public area of the Town in a reckless manner with disregard for the safety of other persons using said public sidewalk or public area. Ch.128: BICYCLES AND PLAY VEHICLES, §128-1 Use of public areas and sidewalks restricted.

In New Milford bicyclists are restricted from riding on the sidewalk:

No person shall ride, and no person shall allow his or her minor child to ride, a bicycle... on any portion of any sidewalk in the Town of New Milford, except that: (2) This prohibition shall not apply to the riding of bicycles on the sidewalk located on the south side of Bridge Street between the west end of the Housatonic Bridge and the intersection of Bridge and East Streets. Ch. 4A: BICYCLES AND SKATEBOARDS, §4A-1 Riding on sidewalks.

In Danbury bicyclists are prohibited from bicycling on sidewalks:

It is hereby declared unlawful to ride or propel any bicycle, skateboard or other motorized or non-motorized wheeled device upon any public sidewalk or walkway in the City of Danbury. Chapter 12: OFFENSES AND MISCELLANEOUS PROVISIONS, Section 12-5 Regulation of bicycles, skateboards and non-motorized wheeled devices.

#### Adjacent Traffic

Much of the perceived hazard of bicycling arises because of the relationship to adjacent traffic. Higher volume and higher speed traffic can increase risk to the bicyclist due to reduced motorist reaction time and the substantially greater damage caused by a high speed collision. In the same context, trucks, buses and other large vehicles not only occupy a large fraction of available lane space, but they can also cause currents of air, dirt and aerodynamic drafts that may disrupt nearby bicyclists. Drivers of commercial vehicles may have limited visibility of bicyclists by virtue of the nature of their larger vehicles.

#### **Visibility**

A road or highway appears much different to the bicyclist than to the motorist. It is not only the ability to see the road and other vehicles, but also to be seen. Hills and curves may conceal bicyclists. Intersections and driveways offer situations where traffic crossing a bicyclist's path may not detect the presence of a bicyclist. In these situations it is important that bicyclists respect the rules of the road, and yield right of way when circumstances dictate.

#### 2 INVENTORY ROUTES AND PLANS

This section provides an inventory of bicycle–related routes, initiatives and policies of the municipal members of the Housatonic Valley Region as well as those in nearby areas. Much of the information described here is derived from municipal Plans of Conservation and Development (POCD).

The first of the following sections details municipal efforts within the region described for each municipality in this ten-town region. The second section of this chapter provides an overview of plans and progress to enhance travel by bicycle in surrounding planning regions in Connecticut and New York Counties. The last section describes several routes and plans of regional significance to the Housatonic Valley.

#### 2.1 Housatonic Valley Region Municipal Cycling Efforts and Plans

#### Bethel

When Bethel developed its 2007 POCD, public outreach suggested broad support for bikeways and sidewalks to alleviate road congestion and to enhance quality of life. As mentioned in Section 1, Bethel is the regions only Safe Routes to School federal grant recipient.

The Enchanted Trail Boardwalk off Plumtrees Road passes through a swampy area and opens out to a meadow and reed bed. It is a great location for bird watching and is home to a huge number of fireflies in the summer. The boardwalk connects to a path suitable for biking.

The town comprehensive plan has an overall recommendation that transportation facilities should be more bicycle friendly, particularly where Transit Oriented Development (TOD) plans are considered. More specific recommendations include:

- The development of off-road bike trails within the Terra Haute property, perhaps with the support of Cannondale.
- Supporting the development of a bike on bus program at HARTransit.
- Collaboration with cycling advocates at the state to develop a map of park and ride lots suitable for commuter cyclists.
- Develop and fund a sidewalk improvement plan for ongoing maintenance of pedestrian infrastructure.

#### Brookfield

Brookfield's first segment (0.25 mi) of the Still River Greenway was recently opened and is accessible for cyclists. For more details see section 2.3. Construction on an additional two-miles in Brookfield is to begin in the near future.

The town's POCD includes a section entitled "Enhanced Facilities for Pedestrians and Cyclists" as detailed below:

It is the aim of this Plan to encourage safe, convenient, comfortable, and secure bicycleriding environments and encourage bicycle transportation as an important transportation mode and recreation activity. The types of bicycle facilities that may be appropriate in Brookfield include: shared roadway, wide curb lane, shoulder bikeway, bike lanes, or multiuse path.

Each and every time road improvement work is undertaken in Brookfield, bicycle uses and needs should be considered and the suitable type of bicycle facility provided.

At the present time, cyclists in Brookfield rely predominantly on roads and streets where conflicts can arise between bicycle and vehicular use. While Routes 25 and 133 have been identified as having potential for accommodating cyclists, traffic volumes on Route 202 exclude all but experienced cyclists. The eventual development of a system of bicycle routes appropriately designed, signed and marked to ensure the safety and enjoyment of Brookfield residents will be facilitated by the preparation of an overall concept plan as soon as possible.



The plan states that the town should work with HVCEO and CTDOT to identify appropriate bicycle routes and post signage identifying the routes and cautioning motorists of the possible presence of cyclists. While the goal should be to create a series of interconnected bicycle routes in the community, priority consideration should be given to establishing bike trails along roads which connect residential areas with centers of activity (e.g., businesses, schools, parks.).

In the fall of 2014 twenty Share the Road signs were installed along five roads in Brookfield: Old Middle Road, Ironworks Hill Road, Pocono Road, Stony Hill Road and Long Meadows Hill Road. The signs were donated by Sound City Cyclists and read, "3 Feet Please. It's the Law." Having grown out of a local grassroots effort, bicycle advocacy groups, the Brookfield Police Department and the Brookfield Public Works Department were instrumental in the initiative.





#### **Bridgewater**

The Bridgewater 2012 POCD recommends that the Village Center-Town Green focus on preserving its small town, rural features and strengthening its capacities by easing automobile traffic and promoting other means of travel.

The plan provides a recommendation to ease traffic and encourage pedestrian/ bicycling access. More specifically, to review the comprehensive 2008 Bridgewater Center Pedestrian Plan prepared by HVCEO and develop a feasible, appropriate plan for pedestrian walkways and bicycle access around the Town Center.

The 2008 HVCEO study here included recommendations for a road diet to create new "shoulder areas" along Hut Hill and Clapboard Roads for pedestrians and bicyclists. As of 2014 part of this 2008 plan is entering design.

#### **Danbury**

The Danbury POCD references three potential bike trails recommended for further study: (1) the "Two Lakes Bikeway" from the East Lake Reservoir to the Margerie Lake Reservoir; (2) a Danbury to Bethel connection; and (3) a Danbury to Brewster connection.

In late 2013 local residents advocated for a more bike-friendly downtown, and bike racks were installed in four locations along Danbury's Main Street. The racks were placed in front of the US Post Office, Naugatuck Valley Community College, at the corner of Main and Keeler streets and on the City Green. The Mayor's office and the Danbury Parking Authority shared the cost for the four racks.



Bicycle parking in lit, sheltered areas with high visibility get wellused, like the rack installed by the Pulse Point bus ticket window. Photo Credit: HARTransit.

Since the early 2000s Danbury Youth Services has coordinated two programs: the Earn-A-Bike Program and Wheels for Kids. The Earn-A-Bike Program offers youth ages eleven to fourteen participation in a character and skills building workshop series. Youth are given hands-on instruction in bicycle repair and graduates are awarded a refurbished bicycle.

During the holiday season Danbury Youth Services coordinates a Wheels for Kids Program. Bikes are donated by community member, volunteers repair the bicycles and during a special event the refurbished bikes are gifted back to the community. The program also distributes helmets and information about bicycle safety.

#### New Fairfield

The following directive is from New Fairfield's 2013 update to its comprehensive conservation and management plan which provides a discussion of bicycle use and plans for the town.

New Fairfield residents and visitors enjoy access to several trail systems for mountain biking, including those at Finn's Land Preserve and Pootatuck State Forest.

During the outreach process when New Fairfield developed its plan, residents were asked, "What environmental sustainability strategies or actions would you personally champion or support in New Fairfield?" Thirty-two respondents said that they would join or support a group that promotes cycling, and twelve said that they would personally champion or start such a group. Recognizing this interest, one recommendation of the POCD is to create a dedicated Bicycle and Pedestrian Committee to volunteer and work toward projects and policies that encourage walkability in New Fairfield.

#### Other recommendations include:

- Address community concerns about walking and biking safety in part by following recommendations from HVCEO's 2005 New Fairfield Center Beautification Study to increase the number of pedestrian connections between different destinations.
- For future Capital Improvement Program (CIP) sidewalk funds, enlist community members to help the Department of Public Works prioritize and seek recommendations for sidewalk repairs.
- Compete for and leverage Safe Routes to School funds to make improvements that allow children to walk or bike to school, as well as improving walkability for all.
- In future CIP projects, including any street improvements, make provisions for a complete streets design review. The design review should gauge suitability of the street for improvements that will make the street safer, easier, and more pleasant for residents to walk and bike instead of drive. Improvements such as sidewalk widening, adding sidewalk buffers, adding bike lanes, and adding sidewalk furniture such as benches, and clearly marked and lighted crosswalks should be considered.
- Organize car-free community events. Summer block parties or festivals that shut down one or more streets to vehicle traffic can help foster social interaction as well as emphasizing non-motorized modes of transportation.

#### New Milford

In recent years the Town of New Milford has undertaken a number of projects that promote bicycling for recreation and transportation.

In 2011 the town was able to use a grant from the General Electric Housatonic Restoration Settlement Fund to create the first off-road segment of the New Milford River Trail, which currently extends for 5 miles from Gaylordsville to the Boardman Bridge.

Additionally, the town has a vision of converting Young's Field Road to a riverfront pathway that would accommodate persons with disabilities, bicyclists and pedestrians. The Young's Field Riverwalk Greenway will create a half-mile path north from Young's Field to Helen Marx Park.

The Young's Field Riverwalk will be paid for with a \$180,000 grant from the General Electric Housatonic Restoration settlement fund. Under the grant terms, the town has until next June to finish the project. A boardwalk will be installed through the wetland portion along the Housatonic River and the remainder of the trail bed will be a permeable decorative asphalt or crushed stone.

New Milford was also the first town in the Housatonic Valley to install 'Share the Road' signage and sharrow pavement markings. These are now in place on Boardman Road, Housatonic Avenue, Grove Street and Hine Hill Road.

In 2013, the town created a transportation management plan, with a detailed discussion of bicycle infrastructure. The plan was recognized with an award from the Connecticut Chapter of the American Planning Association for an outstanding concept, design or plan that improves the human experience of the built environment. The transportation management plan details recommended improvements to the area of Bridge Street as follows:

Bicycle and pedestrian connectivity within New Milford's downtown is a key component of the transportation network. Bicycle demand on Bridge Street is evident, as this route is popular with advanced cyclists on long rides across the region. Bridge Street is also used by residents who access the Downtown from the neighborhoods to the south.

New Milford's bicycle and pedestrian connectivity concept for Bridge Street includes on-street bicycle lanes combined with a limited segment of off-road, multi-use pathway. The bicycle lanes would be five feet wide and would extend from Spring Street to Grove Street on the south side of Bridge Street and between Railroad Street and Grove Street on the north side of Bridge Street. A ten foot wide multi-use pathway, open to bicyclists and pedestrians would connect the existing Young's Field Road to Railroad Street.

In 2014, the New Milford River Trail Association (<a href="www.nmbikewalk.org">www.nmbikewalk.org</a>) in cooperation with Mayor Pat Murphy, Parks & Recreation Director Dan Calhoun and Public Works Director Mike Zarba, launched a successful campaign to install a dozen bike racks in the village center and local parks. Each of the bike racks was funded by a local business or service organization



Successful collaboration amongst bicycle advocates and local community leaders in New Milford created the opportunity for implementing bike-friendly infrastructure throughout town. Photo Credit: New Milford River Valley Trail Association.

#### Newtown

The 2014 Newtown POCD describes challenges the town has faced when trying to move bicycle projects forward:

There are currently no dedicated bikeways within Newtown. Suggestions have been raised concerning the extension of the Monroe rails to trails pedestrian/bikeway facility into Newtown and there was a proposal for the construction of a bike lane on Glen Road (SR 816) that would connect the Sandy Hook Village center with Southbury. This latter proposal has not moved forward, as there are no accurate maps of the right of way along this State numbered road that would permit preliminary engineering work and the development of cost estimates to assess the feasibility of this idea.

Note that the extension of the Pequannock River Trail from Monroe to the south referenced above is complicated because the railroad bed traverses the Charles Batchelder property, an old industrial site with contamination issues. The Pequannock River Trail is discussed further in section 2.2.

The Paugussett State Forest located within Newtown has a trail system that allows mountain biking.

Newtown has established a trails committee that has an active interest in expanding multi-use trails. There is a grant in process for a multi-use trail at the Fairfield Hills Campus. The trails committee has established the following goals:

- Develop a five-year strategic plan to guide all trail development.
- Get the community actively engaged in the use and development of the trail systems.
- Create an ongoing and perpetual process for the development of the trails.
- As a multi-use, multi-purpose trail system, it is intended that the trails will be supporting a variety of uses including hiking, biking, walking and other passive activities.

#### Redding

In Redding's 2008 POCD the Town recognizes the critical importance of regional transportation issues, stating the goal "to promote regional bikeways along major and minor collector roads."

Further recommendations are offered in the Redding POCD under Roads and Mobility:

Research possible sites for additional commuter parking facilities at key locations for future use. Plan and support pedestrian paths, bikeways and greenways for non-motorized travel wherever feasible, [and]

Research and document roads with special character or need for protection, including roads with outstanding scenic qualities, roads long unused and eligible for discontinuance (including the possibility of their retained use for passive recreation or other minor use), and roads suitable or desirable for roadside pedestrian paths or bikeways.

A section of the Norwalk River Valley Trail (NRVT) passes through Redding. Several acres are being put aside by town planners as open space near an incentive housing zone. The incentive housing plan will incorporate the NRVT into its design in a manner consistent with the 2012 Norwalk River Valley Trail Routing Study. This would allow for a safe crossing over Route 7 and provide a connection to the inter-regional Danbury–Norwalk Route 7 LINK bus service.

Collis P. Huntington State Park, located in Redding has an extensive network of mountain biking trails constructed by volunteer members of the New England Mountain Biking Association (www.nemba.org).

#### Ridgefield

The 2010 Ridgefield POCD strives to improve opportunities for cycling and walking:

Increasing the number of trips made by foot or on bicycle can reduce traffic and promote environmental and health benefits. While a community cannot change peoples' behavior, it can increase opportunities and reduce barriers to walking and biking. Private development also plays an important role; when planning new development or redevelopment, site design should account for pedestrians and bicyclists.

In the goals section of the report the following is recommended:

- Enhance Pedestrian and Bicycle Travel
- Expand and enhance the sidewalk network in Ridgefield Center, Branchville, and the Copps Hill area.
- Look for opportunities to connect destinations with pedestrian trails, pathways, and bikeways.
- When roads are improved, consider the needs of bicyclists.

The town completed a bicycle trail study, first published in 2004 and recently updated by the Leading Initiatives in New Connections (LINC) committee of the Ridgefield Parks and Recreation Department. The study provides detailed assessment of existing trailways, design standards, a discussion of regulatory requirements and costs estimates for projects.

A one-mile trail now exists around the Recreation Center property. A new bridge was recently constructed to improve access to the Copps Hill area. The town envisions a connection between the three sections of town (i.e. Main Street, the Recreation Center and Georgetown) through a contiguous route with a focus on multi-use, accessible trails. A plan also exists to connect the recently acquired Schlumberger property adjacent the Ridgefield Branchline Rail Trail to the Recreation Center via the Great Swamp.

The Ridgefield Branchline Rail Trail is currently only accessible by pedestrians, but there is movement to allow access here for cyclists. The Branchline Rail Trail could provide cyclists a safe off-road alternative to Route 102 and connect cyclists from downtown Ridgefield to the Branchville Metro-North train station.

#### Sherman

The 2013 POCD for Sherman expresses the town's desire for connectivity for walking and biking routes:

Connectivity for bicycles and pedestrians should be considered, especially in areas where "dead-end" roads are in close proximity. Potential connectivity of Town Roads (for example: Jericho Road North into Jericho Road South), to enable pedestrian walking access and passage for emergency vehicles should be considered.

Earlier in 2007, HVCEO prepared the Sherman Center Pedestrian Plan. Comments from the public during the comment period were supportive of a bicycle trail between the Sherman town center and Volunteer Park on Route 39. While not addressed in this plan, the suggestion was put forward that this could be explored if the town developed an open space/trail plan.

#### 2.2 Municipal and Regional Plans Adjacent to the Housatonic Valley Region

The Housatonic Valley Region is surrounded by counties and planning regions that have independently pursued the planning and implementation of bicycle facilities. It is important that interregional coordination take place so that, to the greatest extent possible, continuity is maintained across jurisdictional lines and the residents of Greater Danbury have good access to interregional travel. The following is a general discussion of existing and planned facilities within adjoining regions that have the potential to allow interregional connections for bicyclists.

#### Westchester County, New York

The County of Westchester and the following Westchester towns have adopted Complete the Streets policies: Dobbs Ferry, New Rochelle, Rye, Somers, White Plains, Hastings-on-Hudson, Tarrytown and Lewisboro. In June 2012 the City of White Plains launched a dedicated bike lane route system implemented as a low-cost traffic calming tool. Residents from the more suburban sections of White Plains can safely bicycle to Downtown White Plains, the Metro-North Station and the Bronx River Pathway. Share the road signs can be found throughout the Westchester County road system and Westchester has created an extensive system of off-road trails suitable for bicycling.

Route 35 (14.6 mi), an east-west route in northern Westchester County identified by the Westchester County Department of Planning as a priority corridor for bicyclists, connects to the Housatonic Valley Region at the Ridgefield border. A Cross River bypass route through Ward Pound Ridge Reservation along Boutonville Road and Route 124, as well as parallel off-road paths, may provide alternative routes to better address safety concerns.

Even though current road configuration, high traffic volumes and lack of right-of-ways pose challenges to improvements along state highway Route 35, an opportunity exists for an interregional connection to Ridgefield Center. Share the road signs can be found along Route 35 in the nearby towns of Somers, Bedford and Lewisboro. Along South Salem Road and West Lane in Ridgefield Route 35 is designated as "suitable" on the Connecticut Statewide Bicycle Routes.

In the westward direction Route 35 connects with Route 22 (26.8 mi) providing a route from White Plains to Putnam County through the municipalities of White Plains, North Castle, Bedford, Lewisboro and North Salem. A roadway section between Armonk and the Kensico Reservoir was improved with widened shoulders and has become a popular route for experienced bicyclists.

The town of Lewisboro shares a border with Ridgefield. Lewisboro has the potential to provide safe connections from the Housatonic Valley to existing and future trails in Westchester County. These trails include the North County Trail, South County Trail and Mahopac Branch Trailway.

The Mahopac Branch Trailway (5.6 mi) is slated for development as a paved off-road multiuse trail following the former Mahopac Branch Railroad, with a half-mile detour along a utility power line at the county border. The Mahopac Branch Trailway would link the North County Trailway in the Town of Carmel in Putnam County to the Metro-North Golden's Bridge Station in Lewisboro.

The North County Trail (22.1 miles) and South County Trail (14.1 mile) are two paved multiuse trails located primarily along the right-of-way of the former Putnam Division of the New York Central Railroad. The North County Trail connects to Carmel via the Putnam Trailway and travels down through Westchester County into the town of Eastview where it connects to the South County Trail which further continues southward to Yonkers and New York City.

The Town of Lewisboro is currently updating its 1985 Bike and Pedestrian Master Plan. This plan prioritizes inter-municipal connections highlighting improvements along state Routes 22, 35, 121 and 123. Route 123 intersects with Route 35 just west of the Ridgefield border.

#### Putnam County, New York

Putnam County has aggressively pursued the planning and construction of the **Maybrook Trailway** which is an east-west rail trail from the Danbury City Line though Putnam County with connections into Westchester County. The Maybrook Trailway is a 5.4 mile off-road pathway adjacent to the Beacon Line.

An extensive network of existing and near complete bikeways from the Connecticut border at Danbury westward through Putnam County along the Maybrook Trailway will allow bicyclist to safely travel off-road north-south through Putnam County along the Putnam Trailway; into Westchester County along the North County and South County trails and all the way to New York City border.

The Beacon Line is an active rail line, albeit seldom used, typically employed by Metro-North to move non-revenue equipment between the Harlem and Danbury Branch Lines. MTA Metro-North Railroad owns the line in New York and the Housatonic Railroad owns the line in Connecticut.

Funding for the Maybrook Trailway has been made available through the Federal Transit Administration Section 5307 Program and a 10% local match with the New York State Department of Transportation. A chain link fence was installed in 2010 to separate the active line from a former secondary line along which the 10 foot wide, paved asphalt bikeway will be built.

Phase A (2.5 miles) from Pumphouse Road in Brewster near Lake Tonetta to the Route 6/ Interstate-84 interchange past Downtown Brewster is a \$3.5 million project currently under construction and expected to be completed by the end of 2014. Phase B (2.9 miles) links the Route 6/I-84 interchange at Starr Ridge Road to Mill Plain Road on the NY/CT state border providing a direct connection to the Housatonic Valley at the border of the City of Danbury. As of this report Phase B (\$4 million) is currently in design with construction anticipated to begin Spring 2015.

The **Putnam Trailway** runs for 12.0 linear miles beginning at Baldwin Place in Mahopac on the Westchester-Putnam border and follows the former Putnam Division of the New York Central

Railroad up through Carmel into Brewster Village. The Trailway is complete except for a one-mile connection between the Putnam Trailway and the Maybrook Trailway, dubbed Stage 4.

The delay of the completion of Stage 4 is due to it being a complicated \$5 million mile which traverses wetlands and active rail lines. It falls within the New York City water supply watershed, managed by the NYS Department of Environmental Protection. Elaborate drainage and storm water treatment systems are thus essential to the design. The project would include a bridge over the rail lines in Brewster where existing above ground utility lines will be placed underground.

Upon completion of this one-mile segment between the Putnam Trailway and Maybrook Trailway, cyclists coming from Danbury could safely travel on a mostly off-road route into Downtown Brewster. In addition, the Putnam Trailway could provide further access for cyclists entering into New York State from the Housatonic Valley near the Maybrook Trailway at the Danbury border who are south-bound towards Westchester County and New York City, or north-bound towards the Putnam and Dutchess County trail systems.

#### **Dutchess County, New York**

As of this bike plan the Poughkeepsie-Dutchess County Transportation Council is currently updating its county-wide Bicycle and Pedestrian Plan. By providing policy and design guidance to municipalities to improve conditions for walking and bicycling, the update builds upon their current Metropolitan Transportation Plan called "Moving Dutchess."

The focus is on improvements to non-motorized access to schools, transit, parks, and other key activity centers and highlights programs to improve safety and encourage walking and bicycling. Dutchess County formed a Bicycle-Pedestrian Advisory Committee in 2012.

Of noteworthy importance is the **Walkway over the Hudson**, which opened to the public in 2009. The Poughkeepsie Highlands Bridge in Ulster County, situated 212 feet above the Hudson River at 1.3 miles long is the longest and highest elevated pedestrian bridge in the world. The repurposed bridge was constructed in 1889 to allow freight trains to cross the Hudson River, and filled that role for over 100 years. It sat unused for several decades before being developed as a pedestrian park.

Bicyclists from the Housatonic Valley could access the Walkway Over the Hudson through multiple trail systems that connect between Westchester, Putnam and Dutchess Counties originating from the Maybrook Trailway at the border of the City of Danbury.

#### South Western Region, Connecticut

Safe and connected bicycle facilities are an essential element of the comprehensive multi-modal transportation system envisioned for the South Western Region as articulated by the South Western Regional Planning Agency (SWRPA). The vision and goals of SWRPA echo that of the state:

To enhance the bicycle and walking environment throughout the South Western Region by providing for the safe, convenient and enjoyable use of these modes of transportation in an effort to meet the publics' demand for improved mobility and a better quality of life.

SWRPA prepared a Bicycle-Pedestrian Safety Corridor Study in June 2012 to analyze and recommend safety improvements along eight sections of state highway in Greenwich, Norwalk, Stamford, and Westport with elevated rates of bicycle and pedestrian collisions.

The Norwalk Pedestrian and Bikeway Transportation Study makes strategic recommendations on walking and bicycling in the City of Norwalk by identifying "priority corridors" for bicycle and pedestrian travel. This 2011 study may serve helpful in encouraging intermodal bicycle and bus connections with the inter-regional Norwalk–Danbury 7 Link bus service operated by HARTransit and the Norwalk Transit District.

The following municipalities within the South West Region have created bicycle master plans: the Town of Greenwich (2001), City of Norwalk (2011) and City of Stamford (2007).

The towns of Weston and Wilton directly border the Housatonic Valley Region to the south. The Plans of Conservation and Development for both Weston and Wilton express encouragement and concern for bicyclists. The town of Wilton's 2009 POCD specifically considers the needs of bicycle-users, as stated in the following excerpt:

In order to preserve Wilton's semi-rural character, the plan proposes that the extant Route 7 expressway right of way be converted into a greenway with walking and bicycling trails.

On-road cyclists leaving the Housatonic Valley enter into Weston along Routes 57 and 53. Weston has readily identified these state roads as shared roadway facilities. Share-the-Road signage was installed on the request of a local bike advocate who successfully convinced the state to install the signs.

The **Norwalk River Valley Trail** (NRVT) is a proposed 38-mile trail through the Norwalk River valley starting in Norwalk passing through Wilton, Ridgefield, and Redding into Danbury. The NRVT Project envisions an alternative transportation connection between the SWRPA and HVCEO regions. For additional information on the NRVT see Section 2.3.

Volunteers celebrated the ribbon cutting for a half-mile demonstration section of the NRVT built on CTDOT land acquired in the early 1970s for the "Super 7" expressway. As hoped the ten-foot wide, half-mile multi-use demonstration trail near Wolf Pit Road off Route 7 in Wilton has

inspired trail blazing, fundraising and organizing in other towns. The demonstration section was funded with more than \$375,000 raised entirely from private sources.

In 1994 the **Merritt Parkway Greenway Study** proposed a 37.5 mile multi-use trail in the Merritt Parkway right-of-way between Stratford and Greenwich that would link into the East Coast Greenway. Cyclists from the Housatonic Valley will be able to travel to the East Coast Greenway in Norwalk via the Norwalk River Valley Trail at an entrance point to the future Merritt Parkway Greenway.

In 2011, CTDOT received a \$1 million National Scenic Byways grant to produce a detailed feasibility study of the Merritt Parkway Trail. Public hearings on this project took place in spring 2014.



In 2014 a newly constructed paved pathway in Wilton, CT sets the course for future development on the Norwalk River Valley Trail. Photo Credit: NRVT Project.

#### Greater Bridgeport Region, Connecticut

The Greater Bridgeport Region sets a new trend in developing plans and adopting policies at the municipal and regional level to promote, encourage, and construct bicycle friendly communities.

The 2011 long range transportation plan (LRTP) for the Greater Bridgeport Planning Region includes an extensive section on non-motorized transportation highlighting complete streets initiatives and bicycle planning. Whereas the needs of pedestrians and bicyclists have often been either ignored or only minimally considered, the regional planning agency takes an active role in providing technical assistance to its member municipalities.

Amongst goals to increase multi-modal transportation opportunities and to preserve and enhance public transportation services within a framework of livable and sustainable communities, their 2011 LRTP sets a goal "to encourage and promote the increased use of bicycling and walking as a mode of transportation while enhancing safety by developing a network of shared-use trails and providing pedestrian walkways and features."

The Bicycle, Pedestrian and Complete Street Policy Statement for the Greater Bridgeport Planning Region envisions,

the need to encourage walking and bicycle travel for transportation, recreation, exercise and quality of life. Walking and bicycle use conserves energy, improves air quality, reduces traffic and the need for parking, improves health and fitness, and improves the local economy through a better quality of life, increased access to local businesses, and greater potential for tourism in the area..

The region understands that the critical element to realizing this vision is adoption, acceptance and implementation of Complete Streets. Greater Bridgeport views Complete Street as an action strategy to achieve regional sustainability goals and fight climate change.

The Town of Fairfield adopted a Bicycle and Pedestrian Plan in 2011 prepared as a collaboration between Fairfield's Bicycle and Pedestrian Advisory Committee and the regional planning agency. The goal of this plan is to create a comprehensive framework to guide the development of bicycle and pedestrian facilities in Fairfield within a complete streets vision. The plan describes how installation of green infrastructure can convert streets into "green" streets.



At the Bridgeport Bus Terminal, a custom bike rack inspired by the ubiquitous Bluefish of Long Island Sound, invites cyclist to safely park their bikes in a visible location.

Photo Credit: Chris Iwerks/Bertaux + Iwerks Architects.

In 2011, the City of Bridgeport requested the regional planning agency assist Bridgeport's Sustainability Office in developing a Complete Streets Plan. The final plan outlines a transportation strategy to promote bicycling and walking, the development of facilities, and

installation of green infrastructure. The plan recommended several immediate demonstration projects to assess the effectiveness of implementing complete streets city-wide.

The Greater Bridgeport Region has a number of ongoing greenway projects:

- The Merritt Parkway Greenway is a proposed pathway extending the entire length of the Merritt Parkway which is a four-lane, limited access highway designed for the exclusive use of passenger vehicles.
- The **Housatonic River Greenway** extends from the northwestern corner of the state to the Housatonic River's mouth in Stratford.
- Designated routes for the **East Coast Greenway** exist throughout Fairfield, Bridgeport and Stratford.
- The Pequonnock River Trail is a multi-use trail that follows the path of the abandoned Housatonic Railway parallel the Pequonnock River.

The **Pequonnock River Trail** is of particular relevance to the Housatonic Valley Region. This rail-to-trail system will extend 16.2 miles when complete. Currently, 10.2 miles are open to the public. The first section completed in 1999 was the Housatonic Railway Rail-Trail in Monroe. This 4.2 mile section begins in Wolfe Park near Purdy Hill Road and ends at the Newtown town line. As previously indicated, the presence of an old industrial site at Newtown in this corridor has impeded extension of the trail further northward.

The Pequonnock River Trail will eventually become the primary north-south shared-use facility in the Greater Bridgeport region, providing a non-vehicular access route to popular destinations along Route 25 and access to Downtown Bridgeport. Linkages from this route can readily be made to on-road routes along the East Coast Greenway, the future Merritt Parkway Greenway and the Housatonic River Greenway.

#### Central Naugatuck Valley Region, Connecticut

The Central Naugatuck Valley Region includes a portion of the **Farmington Canal Heritage Greenway** in the Town of Cheshire. The Farmington Canal Heritage Greenway covers a route of approximately 84 miles from New Haven to Northampton, MA. Over half has been developed as a paved trail for non-motorized recreation and commuting. Access to the trails exists at Brooksvale Recreation Park on Brooksvale Avenue or Todd Street, 350 feet west of the intersection with Route 10.

Currently, no direct off-road link connects Greater Danbury to the Farmington Canal Heritage Greenway. However, as this multi-use trail is considered the premier example in the state, future bike planning should consider potential connections.

Larkin State Park is home to a 10.3 mile multi-use trail situated within a 110 acre state forest that crosses through the towns of Middlebury, Naugatuck, Oxford and Southbury. Multiple access points exist within each town and parking lots are located in Southbury, Oxford and Naugatuck. The trail is neighbored by deciduous woodlands, small horse farms, open water ponds, quiet wetlands and stream-side passages as it stretches from Kettletown Road in Southbury to North Church Street (Route 63) in Naugatuck.

The Larkin State Park Trail may be reached from Newtown via a pedestrian/bicycle access bridge along I-84 eastbound over the Housatonic River at the Newtown-Southbury town line. The trail ends 1.5 miles north-west of the Naugatuck River in the Town of Naugatuck along Route 63.

Municipalities in the Naugatuck Valley are planning a greenway along the Naugatuck River which has some already established sections in the southern part of the region. The Council of Governments of Central Naugatuck Valley (COGCNV) is developing a regional **Naugatuck River Greenway** routing study and the City of Waterbury is completing a routing study specific for the City's portion. In 2003, the Naugatuck Valley Greenway was designated an official state greenway.



The Larkin State Park Trail traverses scenic state parks. Photo Credit: CT DEEP.

The first phase in Waterbury along South Main Street is nearing 30% design as of this plan. The City approved funding to continue the design of the greenway to downtown.

The U.S. Department of the Interior's America's Great Outdoors (AGO) report identified the Naugatuck River Greenway as one of the top 101 outdoors projects in the United States. With support from the National Park Service, COGCNV has been hosting the Naugatuck River Greenway Steering Committee.

In celebration and furtherance of the Greenway, the National Park Service organized an event on September 23, 2012 involving the entire eleven municipality corridor. Cyclists rode the entire corridor, stopping in each town. As part of the AGO bicycle day, Beacon Falls held a ribbon cutting on the first portion of its greenway trail along the Naugatuck River. The town reclaimed part of old Route 8 from Depot Street to Bethany Road (Route 42) using Federal Enhancement Program funds.

If planning and development of the Naugatuck River Greenway is to consider the Route 63 link between Larkin State Park and the Naugatuck River, then Housatonic Valley riders from the Newtown town line could safely access the Naugatuck River Greenway via the Larkin State Park Trail.

## Northwest Hills Region, Connecticut

The Housatonic Covered Bridge Trail also known as "HouBike" is a contiguous on-road bike trail starting in New Milford traveling north through the towns of Kent, West Cornwall, Falls

Village and Salisbury ending just over the state border into Ashley Falls, MA with further connections to other Massachusetts trails.

The overarching goal of the project is to restore and enhance the recreational values and services of the Housatonic River. A route was defined with the specific intention



to avoid using Route 7 and instead follow local roads with low traffic volumes. The broader vision of HouBike is to coordinate with neighboring regions to form a contiguous route from New York City to Montreal along the **Western New England Greenway**.

The route includes approximately 35 miles of existing publicly maintained paved and dirt roads along the banks of the Housatonic River with an additional 10 miles on roads not adjacent the river. The project is considering the best options for moving the 10 miles off the road to the banks of the Housatonic. Publicly owned lands in Kent and Cornwall, for example, may be better options here. Numerous side routes to connect to village centers and points of interest are under consideration for the trail.

The **Naugatuck Valley Greenway**, mentioned in the previous section, continues through the Northwest Hills region. The City of Torrington has taken steps to acquire land to complete their section of the trail. Torrington also plans on developing a greenway from Downtown Torrington to Sunnybrook State Park which will connect to an existing five-mile multi-use trial named the **Sue Grossman Greenway**.

Additionally, the Torrington Plan of Conservation and Development recommends that if state highways are improved adequate shoulder-width for bicycle use be incorporated. The town also adopted a zoning policy for bicycle parking that can serve as model for municipalities in the Housatonic Valley Region. See Appendix A.2 Model Bicycle Parking Regulations in Connecticut.

## 2.3 Existing and Planned Regional Routes in the Housatonic Valley Region

Since the 1996 bike plan several proposals for multi-town greenways and pedestrian/bicycle pathways have developed in the Housatonic Valley.

The approach here has evolved over time. Initial efforts as described in the 1996 Regional Concept Plan for Bike Route Development focused on dedicated pathways. Current proposals look at pathways in combination with existing infrastructure whereby portions of these trails may be on low volume roadways marked with signage and sharrows as well as dedicated pedestrian/bicycle infrastructure.

Some, such as a proposed pathway in Berkshire Corporate Park, have failed to gain traction, but three major efforts are underway: the Norwalk River Valley Trail, New Milford River Trail, and Still River Greenway.

All three routes are linked in a greater **Western New England Greenway (WNEG)**. The WNEG is a "multi-segment, multi-state" greenway that would link NYC and Montreal. The corridor is being pursued largely along Route 7 through the western-most portions of Connecticut, Massachusetts and Vermont.

The first annual ride from Burlington, VT down to Norwalk, CT took place in August 2013 to bring positive attention and media coverage to the Western New England Greenway.

Via the Norwalk River Valley Trail the WNEG will link with the East Coast Greenway at the Merritt Parkway in Norwalk. At the northern end of the Housatonic Valley Region, the WNEG connects to the Northwest Hill's HouBike Trail in Gaylordsville in New Milford.

Additionally, **Huntington State Park** in Redding, Bethel and Newtown serves as a major destination for recreational mountain bikers. The park is home to a nationally recognized one-mile trail constructed by the New England Mountain Biking Association called the **Rock and Roll Trail.** 

In 2013 the Housatonic Valley Council of Elected Officials endorsed detailed recommendations for the Housatonic Valley Region. The recommendations designed a "Ride It Now" bicycle route for the Western New England Greenway project that would connect the off-road portions of the New Milford River Trail, Still River Greenway and Norwalk River Valley Trail, using lightly-traveled existing roads. (See Appendix for turn-by-turn directions.)

## Norwalk River Valley Trail (Ridgefield, Redding and Danbury)

The Norwalk River Valley Trail (NRVT) is a planned 38-mile multi-purpose trail connecting Calf Pasture Beach in Norwalk passing through Wilton, Ridgefield, and Redding to Rogers Park in Danbury.

The ultimate vision of the NRVT is to offer residents a transportation alternative to access rail stations, schools, offices, and businesses, as well as creating outdoor recreational opportunities. Trail surface and its accessibility to different users would be context sensitive. In urban areas like Norwalk the current trail is a paved, multi-use path open to pedestrians, all types of bicyclists,

and wheelchair users. Further north the trail would be soft surface and open to pedestrians, hikers, equestrians, and bicyclists.



Thumbs up from youth bicyclists on the Norwalk River Valley Trail boardwalk which was constructed in 2014. Photo Credit: NRVT Project.

The 2012 Norwalk River Valley Trail Routing Study, funded through a Connecticut Department of Energy and Environmental Protection (CTDEEP) grant and prepared by a dedicated group of volunteers serving on the NRVT Steering Committee, developed a series of possible routes for the trail to follow from Danbury to Norwalk.

The study suggests the preferred trail alignment would in many sections follow the right-of-way owned by CTDOT for the "Super 7" expressway planned in the 1970s. The existence of the NRVT would not preclude CTDOT from building the envisioned highway, but such a project is unlikely to move forward due to fiscal and political barriers. The study also examined physical impediments to trail construction, provided elements of trail planning and suggested locations for parking and other amenities.

An estimated one and a half mile connection from Redding through Ridgefield into Danbury poses the greatest technical challenge to the completion of the NRVT in the Housatonic Valley. The terrain includes steep contours, wetlands, and exclusions to bicyclists on the major on-road gateway into Danbury along Route 7. Multiple alternative routing options are being explored and unfortunately the best transportation option along Route 7 is unlikely.

In the early 2000s, Route 7 in Ridgefield and Danbury was expanded to a four lane roadway, exclusively for vehicular traffic with no provision for access by pedestrians or cyclists. In hindsight, failure to accommodate bicycle users on this stretch during the project was a missed opportunity. The lack of access did, however, act as an impetus to develop the NVRT.

Olmstead Road in Redding through Ridgefield Open Space Lands to Laurel Lane in Ridgefield is the steepest site. This segment may have to be smaller than the ten-foot wide trail planned for other segments.

Many foot trails already exist in the southern part of the Housatonic Valley Region, but the NRVT Steering Committee is committed to a multi-use alternative transportation route. The Ives Trail has been considered as one alternative. The Ives Trail is 15-mile nature trail through connected parks and open spaces in Ridgefield, Danbury, Bethel and Redding. The Ives Trail could potentially be connected to the NRVT for hiking/walking, but the difficult topography is not suitable for bicycle users. However, there is limited potential for this trail to become bicycle-friendly because of the right of way/easements acquired which restrict such design improvements.

While the Danbury Committee works to resolve routing, the Ridgefield and Redding committees eagerly build upon momentum from the Wilton demonstration trail moving into trail clearing and fundraising for design and construction.

#### New Milford River Trail (New Milford)

At present the New Milford River Trail includes a 1.5 mile bikeable segment in Sega Meadows Park and 3.5 miles of shared roadway along River Road to Gaylordsville. The long-term goal is to follow the river from Gaylordsville through the New Milford downtown business district and ultimately to the Brookfield town line.

Funding provided by the New Milford Economic Development Commission, the New Milford Recreation Association and a generous anonymous donor, has afforded the New Milford River Trail Association the opportunity to hire a planning firm to undertake a feasibility study that will determine what it might take to connect the Sega Meadows Trail with the downtown. The study is ongoing as of this plan.

In 2014 the New Milford River Trail Association created a survey to gauge popular support for the trailway and interest in making New Milford a more bikeable/walkable community.

As of this plan the New Milford River Trail Association is filing for official 501(c)3 non-profit status.



Two bicyclists ride the scenic New Milford River Trail along River Road, a segment of the Western New England Greenway. Photo Credit: Tom O'Brien.

## Still River Greenway (Danbury, Brookfield and New Milford)

A complete greenway along the Still River will take a coordinated effort from Danbury, Brookfield and New Milford. Completed segments and soon to be completed sections exist primarily in Danbury and Brookfield.

The 2.2-mile trail in Danbury stretches from behind Commerce Park on Eagle Road along the Still River to the railroad tracks near White Turkey Road. A hiking trail was constructed along the river with kayak/canoe launching areas. Even though bicycles are not specifically prohibited, the Danbury section is not conducive to use by cyclists at this stage.

The Still River Greenway in Brookfield is to be completed in two phases. Phase I was completed as a quarter-mile stretch by the Police Station on Silvermine Road which provides parking and a trail entrance.

Phase II is scheduled to be complete by the end of 2014. An additional two-mile segment will extend northbound across a proposed bridge over the Still River with trail along its west bank to a northern trail head located at 777 Federal Road near Four Corners. Southbound, the trail will wrap behind the Town Hall off of Pocono Road east of the river.



Unveiling of the entrance way sign to the Still River Greenway held October 2014.

Photo Credit: H John Voorhees III.

#### 2.4 Grassroots Programs

#### Ciclovia

The term "ciclovia" was coined in Bogota, Columbia in the 1970's to describe a car-free zone created by temporarily blocking motorized traffic on public streets for the benefit of cyclists and pedestrians on Sundays and holidays. The tradition continues in Bogota today. Public performances and aerobics have been added to the event and as much as 20% of the city population (i.e. approximately 2 million people) participate on a weekly basis.

Ciclovias have been implemented in nearby US cities including Cambridge, MA, New York City, NY and Hoboken, NJ. A well established program in Westchester County, NY closes a portion of the Bronx River Parkway to automobile traffic on Sundays in May, June and September.

There are two grassroots efforts to establish ciclovias in the Housatonic Valley Region. A long-term effort has attempted to garner support for a weekly closure to the Route 7 expressway in Danbury and Brookfield. A second more recent proposal would create a ciclovia in the area of Main Street, Danbury.

Connecticut Participants			
COMMUNITIES			
South Windsor			
Simsbury			
Farmington			
West Hartford			
Plainville			
Glastonbury			
BUSINESSES			
Whitcraft LLC			
(Eastford)			
REI			
(West Hartford)			
CT Depart. of Energy &			
Environmental Protection			
(Hartford) CT Mental Health Center			
(New Haven)			
Pratt & Whitney			
(East Hartford)			
Bicycle East LLC			
(Glastonbury)			
UNIVERSITY			
Yale University			
(New Haven)			

**Bike Friendly America** 



Simsbury First Selectman Mary Glassman and South Windsor Mayor Tom Delnicki take pride in their recognition as Bicycle Friendly Communities. Photo Credit: BibeWalbCT.

## **Bicycle Friendly America**

The Bicycle Friendly America program (BFA) sponsored by the League of American Bicyclists (<u>www.bikeleague.org</u>) is a tool for states, communities, businesses and universities to make bicycling a real transportation and recreation option for all riders.

Participating communities, businesses and universities are assessed through a voluntary application process. All applicants receive customized feedback and access to technical assistance. In Connecticut currently four communities, four businesses and one university participate.

Simsbury and South Windsor were the first communities in Connecticut followed by Farmington and West Hartford to receive a Bicycle Friendly Community awards. Communities, businesses and universities within the Housatonic Valley region may consider applying. With guidance and support from the BFA program, residents, town staff, and elected leaders work together to make their communities a safer and easier place to bike.

## Bethel CycleFest

The Hat City Cyclists have organized regular group bike trips for ten years and use Bethel Town Hall as their meet up location. Their annual Bethel CycleFest raises funds for the Danbury Youth Services Earn-A-Bike, program. For more details on this program see Section 2.1.

## National Bike Month

May is national Bike Month. Since 2012 HARTransit has participated in national bike month by hosting a Bike to Work Day event at the Bethel Train Station. In 2014 HARTransit expanded the program into Bike Week offering free bus passes for bicyclists.

Since 2003 the Ride of Silence has grown into an international day of recognition to commemorate cyclists who have been injured or killed on public roadways by motorists and to raise awareness that bicyclists have the right to share the road.

Fifty riders participated in Danbury's first Ride of Silence on May 21, 2014. The ride covered a 4.5-mile loop between Danbury's Main Street and Bethel. Bethel First Selectman Matt Knickerbocker joined as a cyclist and Danbury Mayor Mark Boughton spoke to the gathering.



In 2012 bicycle commuters and local bicycle advocates gather at the Bethel Train Station for National Bike to Work Day. Photo Credit: HARTransit.

## 3 BIKE TRANSIT POLICIES AND ENGINEERING TOOLS

Essential to the planning and implementation of bike facilities are the identification of the needs of bicycle users, and the selection and of policies and appropriate improvements to meet those needs. This section provides an overview of policy and planning elements useful to the implementation of bicycle-friendly projects at the municipal level.

## 3.1 Defining the Needs of Bicyclists

The American Association of State Highway and Transportation Officials (AASHTO) is a non-profit, non-partisan association of U.S. highway and transportation departments representing all five transportation modes; air, highways, public transit, rail and water. The primary goal of AASHTO is to foster the development, operation and maintenance of an integrated transportation system.

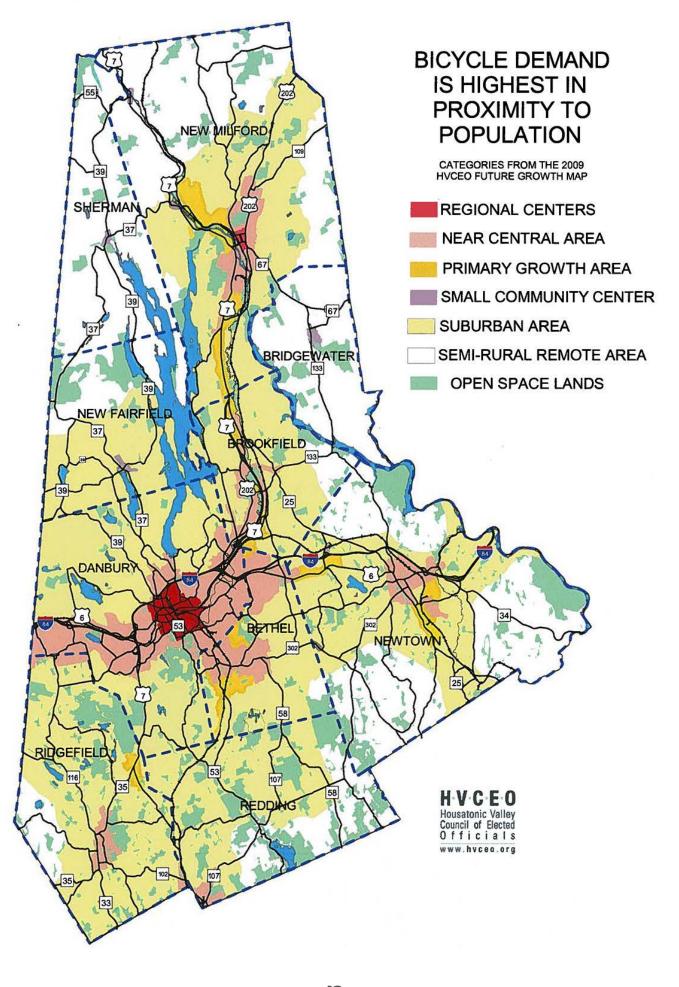
While other standards exist (notably those of the National Association of City Transportation Officials), CTDOT relies on those set by AASHTO for the design of bicycle facilities. This report therefore follows the same emphasis. When defining the needs of bicyclists, AASHTO groups factors influencing bicycle behavior into two categories: trip purpose and level of user skill and comfort.

#### **Trip Purpose**

Trip purpose focuses on the intentions of the ride and further categorizes travel into utilitarian or recreational trips. Utilitarian trips are non-discretionary and include trips made for employment, school and work related activities. Recreational trips are discretionary and made for exercise and leisure. While a single rider may fit into either profile, the specific purpose of a trip will dictate a rider's needs, and in turn, a preference for different facilities.

## **Needs of Bicycle Riders by Trip Purpose**

Source: Adapted from the AASHIO Guide for the Development of Bicycle Facilities, 2012 edition				
RECREATIONAL TRIPS	UTILITARIAN TRIPS			
Visual interest, shade, protection from	Directness of route and connected, continuous			
wind preferred over directness of route.	facilities preferred			
Loop trips may be preferred to	Travel to and from residential, educational,			
backtracking; often same start/end point.	shopping, or work areas.			
Trip distance highly variable (i.e., 1 to 50 miles).	Trip distance typically 1-10 miles.			
Varied topography desired depending on fitness and skill level.	Flat topography desired.			
May ride in groups.	Often single-rider trips.			
May drive bicycle to starting point.	May or may not have access to a personal vehicle or bicycle may be primary vehicle; may utilize public transportation to complete trip			
Typically occur on the weekend or on weekdays before morning commute hours or after evening commute hours.	Highly variable; may occur during morning/evening commute hours or any other time of day.			





New bicycle parking facilities will better accommodate casual riders enjoying shopping and dining in Downtown New Milford. Photo credit: Tom O'Brien.

## Skill Level

Level of user skill and comfort is a second way to categorize cyclists for planning purposes. When using this Bicycle users are broken down into experienced and confident versus casual and less confident.

Experienced and confident riders are comfortable riding on most types of bicycle facilities including roads without any special accommodations for cyclists. Casual and less confident riders are the majority of the population. This group would regularly bicycle if infrastructure was more robust. This is borne out in surveys of potential cyclists conducted in New York City and Hartford that indicate that riders would be more likely to travel by bike if the environment were perceived safer which is accomplished by road markings, signs and simply seeing more people bicycling on the roads.

# **Needs of Bicyclists by Skill Level**

Source: Adapted from the AASHTO Guide for the Development of Bicycle Facilities, 2012 edition

EXPERIENCED & CONFIDENT RIDERS	CASUAL & LESS CONFIDENT RIDERS
Comfortable riding alongside vehicles on roadway; able to navigate streets like a motor vehicle using full width of travel lane and left-turn lanes.	Prefer shared-use pathways, bicycle boulevards, or bike lanes along low volume, low-speed streets.
Comfortable on most streets; may prefer on-street bike lanes, paved shoulders, or shared-use pathways.	May have difficulty gauging traffic and may be unfamiliar with rules of the road for bicyclists; may walk bike across intersections.
Prefer a more direct route.	May use less direct route to avoid arterials with heavy traffic volumes.
Avoid riding on sidewalks; ride with traffic.	If no on-street facility is available, may ride on sidewalks.
May ride at speeds up to 25 mph on level grades and up to 45 mph on steep descents.	May ride at speeds between 8 to 12 mph.
May cycle long distances (> 5 mi).	Trip length typically 1 to 5 miles.

#### 3.2 Bicycle Rider Demand Estimation

According to AASHTO, there is currently no widely accepted data source from which bicycle use and demand estimates are derived. Two common methodologies available include mathematical models based on U.S. Census data, or estimating demand based on roadway traffic volumes and population. Additionally, AASHTO recommends using comparison studies with similar facilities, market analysis and land use tools for planning specific bike facilities.

This section includes a map of high demand major on-road bike routes, a population growth map and a map prepared by CTDOT in 2009 classifying state road suitability for bicycle-use.

### Use of Mathematical Models and Census Data

The 2009 CT Statewide Bus Plan provides an estimate of nearly 700,000 daily bicycle trips statewide, making use of U.S. Census American Community Survey (ACS) data. The plan employs a formula based on the commuting patterns of adults 16 and older, and the travel patterns of school children and college students to develop this estimate. It also includes a factor for those that work at home.

The American Planning Association (APA) describes a similar formula to estimate total bicycle demand for adult riders developed by Kevin Krizek and Gary Barnes of the University of Minnesota in 2006.

The formula is based on bicycle trip data from around the nation:

# Total Bicycle Mode Share = 0.3% + (1.5 x Bicycle Commute Share)

While these methodologies may prove useful at the state or national level, there is significant error associated with the ACS commuting travel data where population numbers are at the level

of small to medium sized municipalities. These mathematical projection tools are thus inherently unreliable for areas such as HVCEO when using ACS data.

#### Use of Population Density

Since bicycle travel demand is highest in proximity to population, the HVCEO regional growth map on page 40 suggests that demand is highest in the regional centers of Danbury and New Milford.

# Did you know?

Arterial and collector roadways in higher density areas exhibit the most demand for bicycle traffic.

The next highest demand areas include Bethel Center, Ridgefield, Georgetown and Newtown, the Route 6 corridor in Danbury and Bethel, and the Route 7 Corridor in Danbury through the Four Corners area of Brookfield.

As this map is primarily based on density without regard to roadway condition, it is more useful when considering the needs of utilitarian riders.

## Use of Roadway Traffic Volume

The map on page 44 illustrates arterial and collector streets in the Housatonic Valley Region. Arterials are high capacity urban roads, such as Route 7. Collectors such as Route 53 in Redding, are low-to-moderate-capacity roads which serve to move traffic from local streets to arterials. Unlike arterials, collector roads are designed to provide access to residential properties.

These major roadways exhibit the most traffic and are likely to be used more heavily by cyclists, particularly those that commute by bike or are more skilled. As a general rule, local roadways with low traffic volumes would not warrant improvements beyond signage.

Municipalities can examine the arterial and collector roadways map in conjunction with the population map to identify priority bike corridors. Town planners and municipalities should be aware of these priority bike corridors when designing transportation improvement projects.

## Need for Improved Statewide Data Collection

CTDOT identifies the need for acquiring baseline data on cyclist and also pedestrian volumes.

CTDOT recommends the development of non-motorized performance measures. Vehicle Miles Traveled (VMT) should not play a role in determing rates of non-motorized fatalities and serious injuries on public roadways and VMT is not a good indicator of bike and pedestrian utilization of the transportation network.

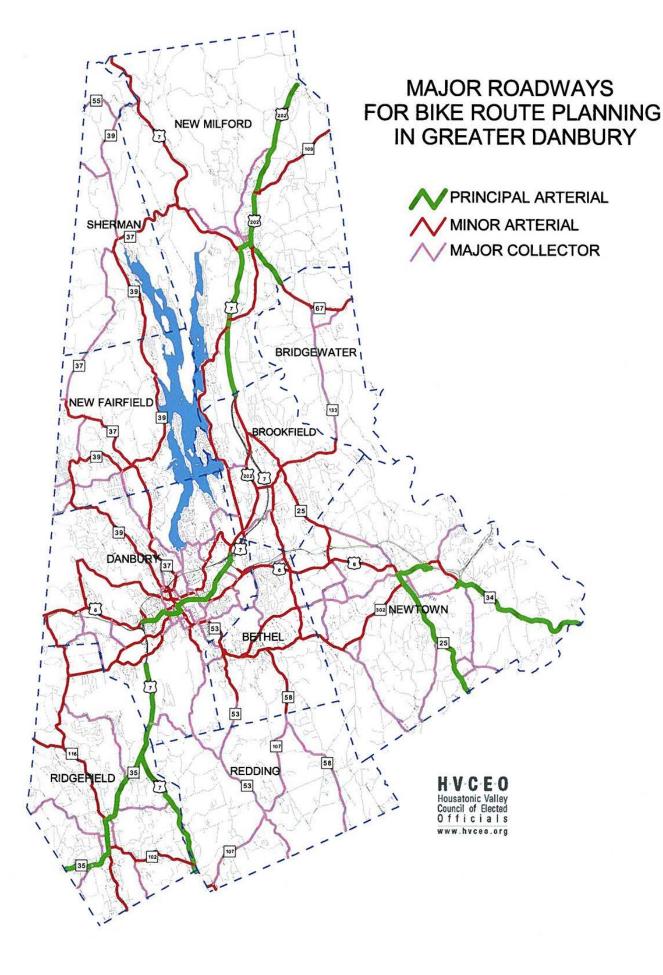
There are three general sets of data that would need to be reported to assess non-motorized performance: crash, volume, and infrastructure.

The ability for Connecticut to establish a baseline of reliable rates for non-motorized fatalities and injuries is limited due to lack of data on bicycle and pedestrian miles traveled.

In Connecticut, bike and pedestrian crash data is reported if a motor vehicle is involved and a police officer writes up the incident and submits a report. Near misses and non-roadway incidents are not included in the data. Although non-motorized fatalities that occur on roadways are reported with high accuracy, non-motorized serious injuries are not. Some agencies may collect non-motorist collisions (e.g. bike on bike, bike on tree, or bike on pedestrian, etc.) on the new Model Minimum Uniform Crash Criteria (MMUCC) 4 PR1 form.

The current lack of volume data represents CTDOT's greatest challenge to implementing the statewide Bicycle and Pedestrian Program. This lack of data impacts the state's ability to prioritize, find funding, and improve safety in a systematic well-planned approach.

CTDOT does not currently collect bike lane miles data on existing infrastructure. There are few existing bike lane miles on state routes and there is no reporting mechanism/requirement set up for local municipalities to report this information to CTDOT. Of all the uncollected data this might be the easiest to collect and could be reported annually to the state by the Metropolitan Planning Organizations.



## **Use of Comparison Studies**

Comparison studies are used to estimate or track bicycle demand for proposed facility improvements based on actual existing facilities.

Before and after studies are often used to assess the changes in modes after improvements are made to bicycle facilities. Studies can focus on the changes in travel activity across an urban area, or can focus on specific facilities by documenting usage before and after improvements.

Similar condition studies use counts or survey data from usage of existing facilities, such as multi use trails to estimate the number of potential users on a similar proposed facility. In this case, it is important to select a facility for comparison located in a municipality or region with similar demographic, economic and environmental considerations.

## 3.3 Suitability of State Roadways for Bicycle Use

# Connecticut Bicycle Suitability Road Map

As part of the 2009 CT Statewide Bicycle and Pedestrian Plan Update, CTDOT developed a system whereby one of five bicycle suitability classifications was assigned to state roadway segments. The classification scheme is based on Average Daily Traffic (ADT) volumes and shoulder width.

In general, roads with wider shoulders and lower traffic volumes are classified as more suitable for bicycle use. However, a two-parameter classification scheme has its limitations. For example, routes desirable for utilitarian or commuting purposes near downtowns and urban areas may be classified as less suitable based on high traffic volumes. Low volume roadways tend to exist in more rural areas and are less useful for commuter purposes. Some roadways with the less suitable designation, for example Route 53 in Danbury, could be quite desirable for those cycling for utilitarian purposes.

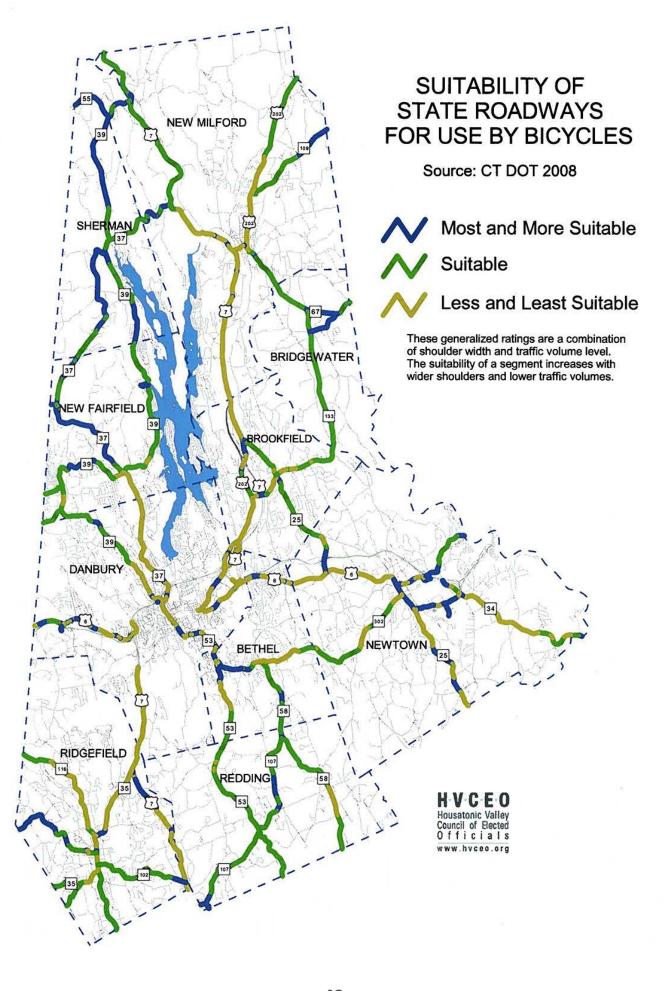
The classification scheme is described in the table to the right. Color codes with deeper green indicate those roadways most suited to cycling based on this methodology. Categories in red and yellow are considered least suitable.

The map on the following page provides a representation of the CTDOT roadway suitability scheme as it applies to the Housatonic Valley Region. Within the context of bicycle planning, this map may be most useful for consideration for casual users.

# Classification of State Roadway Suitability for Bicyclists

Source: 2009 CT Statewide Bicycle & Pedestrian Plan

	Shoulder Width (ft)			
AVERAGE DAILY TRAFFIC	0	1-3	3-6	>6
Less than 2,500	Unsafe	Good	Best	Best
2,500 to 5,000	Unsafe	Fair	Good	Best
5,000 to 7,500	Unsafe	Poor	Good	Best
7,500 to 10,000	Unsafe	Poor	Fair	Best
Greater than 10,000	Unsafe	Poor	Fair	Good



#### 3.4 Bicycle Facility Toolbox

This section defines the typical features and facilities used to encourage bicycle traffic. The appropriate use of these tools according to the standards set by the Association of State Highway and Transportation Officials can been found in the appendix. The authors acknowledge the work of Francisco Gomes in developing this section of the Greater Danbury Regional Bike Plan.

<u>Shared Roadways</u> accommodate both vehicular and bicycle traffic by sharing a lane. Shared roadways may include "Share the Road" signage or sharrow markings. Motorists must maneuver around bicyclists without crossing the center line. Shared roadways are the most common type of bicycle facility in use today.

<u>Sharrows</u> are markings on shared roadways that reminder drivers that bicycles are permitted on most streets. The placement of each sharrow indicates the anticipated lateral location of a bicyclist. Sharrows are most often used on roadways where bicycle traffic is desired but lane width is insufficient for a full bike lane.





<u>Bicycle Lanes</u> designate a portion of the roadway through marking and signage for exclusive use by bicyclists. Bicycle lanes are typically located between the curb and travel lane or between a parking lane and travel lane. Bicycle lanes are the preferred facility for most bicyclists.

<u>Cycle Tracks</u> are roadways physically separated from vehicular and pedestrian traffic for the exclusive use of bicyclists. Unlike a bicycle lane, cycle tracks are separated from traffic by a curb, parking lane, or other physical barrier.



**Bicycle Lane** 



**Cucle Track** 

<u>Shared Use Paths</u> are physically separated from vehicular traffic by a curb, median, or routing independent of street networks often through open space. These facilities allow for shared use by bicyclists, pedestrians, skateboarders, roller-bladers, equestrians, etc. Pathways tend to be recreational in nature, although many are used for commuting or utilitarian trip purposes also.

Roadside Multi-Use Paths or sidepaths run adjacent long segments of highway or short road segments with few streets and/or driveway crossings. When the option to develop pathways in independent right-of-ways is not available, existing roads provide the only travel corridor. A sidepath is not a sidewalk and requires special design. Sidepaths provide one- or two-way movement to non-motorists.

**Bicycle Boulevards** are low speed streets optimized for bicycle traffic. Bicycle boulevards discourage cut-through motor-vehicle traffic but allow local motor-vehicle traffic. Bicycle boulevards are designed to give priority to bicyclists as through-going traffic. These facilities use a combination of traffic calming features, markings, signage, and intersection treatments that prioritize bicyclists. Bicycle boulevards are intended to appeal to all experience levels, from children and casual riders to experienced riders and commuters.







<u>Bicycle Parking Facilities</u> can be as simple as a bike rack or as complex as a storage locker that totally encloses and protects the bike. Bicycle parking is most utilized when placed in well-lit, secure areas and is most convenient when located in close proximity to building entrances.



Top: Bicycle Rack
Right: Bicycle Storage Locker



#### 3.5 Intermodal Aspects of Bicycle Transit

Intermodal transportation is the coordinated use of two or more means of travel for a specific trip. A classic example is to drive a car to a train station, then board a train to the final destination. In this case, facilities are provided to accommodate parked vehicles, to enable pedestrians to move freely from parking lots to the train platform, and so forth.

A bicycle can provide important opportunities for intermodal trips. Bicycling to a park and ride lot or a bus stop may offer enhanced mobility to both commuters and non-commuters.

The integration of bus and rail transit with bicycles is particularly advantageous to commuters. Bicycling to a transit stop extends the car-free reach of transit services and provides a solution to the "last mile" problem; getting to or from the final destination from a transit line. This is demonstrated on the map on page 51, which illustrates the area encompassed by a one mile buffer around transit facilities and the location of major employers.

By planning intermodal travel, cyclists can minimize long distance biking or adverse conditions such as darkness, hilly topography, heavy traffic or poor road surface conditions.

## Bicycle Accommodations at State Park and Ride Facilities

There are bicycle racks installed at the Danbury, Bethel, Branchville and Redding MTA station parking lots on the Danbury Branch Line. While they are placed in well lit, highly visible areas close to boarding platforms, there is no protection from the elements for bicycles parked in the bike racks. There are no special permits or fees for cyclists that wish to use them.

The state-managed park and ride lots off I-84, CT Route 25, CT Route 7 and CT Route 34 in the Region do not provide any special facilities for bicycles.

#### MTA Metro-North Railroad

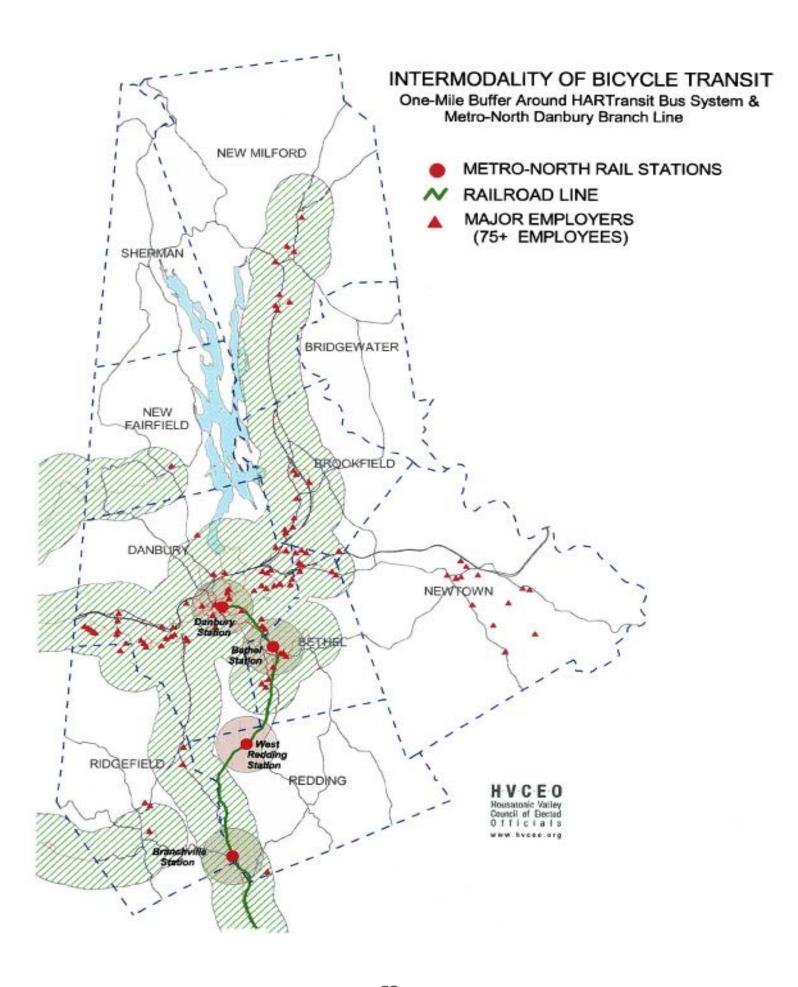
MTA Metro-North Railroad allows transport of bicycles on trains in the off peak period. Space for all riders is at a premium in the peak period, so bikes are not allowed during the morning and evening rush. Folding bicycles, however, may be brought onboard trains as carry-on baggage with no restrictions or permits.

Users are required to obtain a \$5 permit before traveling on trains. On weekdays, there are two bikes per train car permitted with a maximum of four per train. Weekends, MTA allows eight bikes per train with designated bicycle trains allowed to carry more.

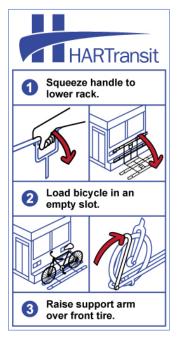
Currently, there are no special securement devices for bicycles on MTA trains and riders must maintain control over bikes while traveling.



Trial bike rack on the New Haven Line. Photo Credit: Aaron Naparstek.



In early 2014, CTDOT announced that it will install 110 Sportworks USA SwingLock bike racks on 50 M-8 rail cars for trial use on the New Haven Mainline (two per car). The rack, which is attached to an interior wall, consists of a padded hook and channel that supports the front wheel. The lower assembly utilizes a swinging rear wheel stabilizer that stows flush to the vehicle wall when not in use.



#### **HARTransit**

All transit buses in the HARTransit fleet are outfitted with two-place Sportworks USA bus bike racks. The racks are installed on the front bumper, and when not deployed, fold flat again the nose of the vehicle. Racks on smaller buses used on evening and Sunday LOOP routes are being phased in as vehicles are replaced.

To load a bike, riders fold down the rack after the bus stops and before boarding. The rider places the bike in the rack and secures it with a spring loaded arm over the front tire, as illustrated in the graphic to the left.

Loading of bicycles onto racks is completed entirely by the rider and requires no assistance by the bus driver. There are no special permits required to use the bicycle racks on HARTransit buses. They may be used throughout the service day. HARTransit allows riders to bring folding bicycles onboard vehicles without restrictions.

To better accommodate bicycle users, bicycle parking was installed at the HARTransit Pulse Point on Kennedy Avenue in Danbury in a well-lit, highly visible, covered area.

#### Peter Pan Intercity Bus

Bicycles may be transported on the Peter Pan intercity bus service as baggage. All bicycles are stored beneath the bus in the luggage bay bin.

Bicycles stored in a bicycle box may be transported on the scheduled trip with the customer. Unpackaged bikes can be transported in a luggage bin on a space available basis.

Unpackaged or packaged bicycles are part of the free baggage allowance; if the number of bags carried with the bicycle exceeds the allowance, the customer is charged an additional fee.

## **Connecting Bus Services**

Bus services including those operated by Norwalk Transit, Milford Transit, Greater Bridgeport Transit, CTTRANSIT and Putnam Area Rapid Transit all have bike rack equipped buses. Bee-Line in Westchester County, NY is the only nearby transit provider that prohibits transport of bicycles on buses.



Bike secured to front loading bus rack.

Photo Credit: HARTransit.

#### 3.6 Recommendations from CT Bicycle and Pedestrian Advisory Board

CGS Sec. 13b-13a established a Connecticut Bicycle and Pedestrian Advisory Board (the Board) within CTDOT. On an annual basis, the Board submits a report to the Governor, the Commissioner of CTDOT and the transportation committee of the state legislature on:

- 1. The progress made by State Agencies in improving the environment for bicycling and walking in the state.
- 2. Recommendations for improvements to State policies and procedures related to bicycling and walking, and
- 3. Specific actions taken by the CTDOT in the preceding year that affect the pedestrian and cyclist environment.

The Board is a strong proponent of the adoption of local complete streets laws and policies to augment existing state and federal requirements. As discussed in Section 1 of this report, Connecticut state law requires 1% of all funds used for the construction, rehabilitation, relocation of highways, roads or streets be expended to provide facilities for all users, including bikeways and sidewalks.

Strongly recommended by the board is municipalities taking ownership of street design and formulating plans for improvement, such as those developed in the City of New Haven.

Basic components of municipal-based bike friendly policies include:

- Updating sidewalk ordinances to require connectivity.
- Updating Zoning and Subdivision Regulations to include Bicycle & Pedestrian data collection, design standards, and accommodations.
- Querying developers as to whether projects comply with the State complete streets law in considering all users.

In its 2013 report, the board also provided recommendations for regions, chiefly, through the development of regional bike routes. The full report is located at <a href="https://www.ctbikepedboard.org">www.ctbikepedboard.org</a>.

The statewide bicycle plan highlights several bike routes identified by cyclists as convenient or appropriate for cross state bicycle travel. This network is limited in that it does not include local roads that cyclists may prefer. The board recommends interregional efforts to build a network that complements the state's program.

Regional councils of government play a key role in the selection of transportation projects for funding. The Board further recommends that regional planning bodies make provisions for all users a requirement for all projects they approve. The regions should identify the needs of pedestrians and cyclists and develop projects to address them.

#### 3.7 Zoning Models for Bicycle Parking

In looking at ways to encourage cycling, it is important to recognize that where there is a lack of secure parking facilities a major barrier for bicycle users exists, especially for commuters.

The City of New York identified lack of secure parking as one of the top two reasons why non-commuting cyclists do not commute by bicycle. The City has since implemented zoning language requiring bicycle parking where appropriate.

Communities as diverse and New Haven, Torrington and Tolland in CT have instituted bicycle parking zoning policies. Examples of actual bicycle zoning polices are included in Appendix A.2, Model Bicycle Parking Regulations in Connecticut. According to CTDOT's Nonmotorized Coordinator, the state has not defined a preferred or best practice here.

The following is an example of a bicycle parking facilities policy that the municipalities of HVCEO may want to incorporate into local zoning regulations:

# **Model Zoning Policy for Municipalities**

Source: Planning and Policy Models for Pedestrian and Bicycle Friendly Communities in New York State (2007)

## Section XXXX: Bicycle Parking Facilities

- Bicycle parking shall be provided in accordance with the following guidelines. All projects submitted for site plan approval shall identify bicycle racks and lockers in accordance with these guidelines.
- 2. Bicycle parking types:
  - Type 1 Bicycle Parking shall be defined as bicycle racks intended for short-term parking.
  - Type 2 Bicycle Parking shall be defined as bicycle lockers intended for long-term parking.
- Bicycle Parking Specifications: All bicycle parking devices shall be provided in accordance with guidelines published by the

Association of Pedestrian and Bicycle Professionals (APBP).

# Section XXXX: Bicycle Parking Schedule

The following minimum amounts of bicycle parking shall be provided:

- Residential (Multi Family): 1 bicycle parking space per dwelling unit
- Commercial Uses: bicycle parking spaces = 10% of required auto parking
- Institutional (Schools): 1 bicycle parking space for every 10 students and staff Government: 1 bicycle parking space per every 10 employees
- Industrial Uses: 1 bicycle parking space per 1000 sq. ft.

## 3.8 Route 7 Corridor Transportation Study

The Route 7 Corridor Study provides a prime example of the integration of the needs of bicyclists into a transportation study. It developed a pro-active plan to address current and long-range travel in southwestern Connecticut, with a balanced approach of multi-modal improvements focusing on connectivity between modes and destinations in the Route 7 Corridor.

The plan, created by HVCEO in cooperation with SWRPA in 2011, notes that while Route 7 is a high volume road with limited cycling facilities; it is used by many cyclists due to the relatively flat topography and lack of other north/south alternatives.

There are a number of detailed bicycle and pedestrian facility enhancements described in the plan. These include

- Completing gaps in sidewalks.
- Better pedestrian connections to Cannondale Station
- ADA upgrades at seven intersections along Route 7
- Shoulder upgrades to better accommodate commuter bicycling
- Bike accommodations at intersections
- Bike signage program
- Secure bicycle shelters in villages and train stations
- Advancing the Norwalk River Valley Trail





Lack of secure and protected bicycle parking means Danbury cyclists must find creative solutions.

Photo Credit: HARTransit.

## 3.9 Roadway and Trailway Signage

As with other signs used on state and local roadways, there are existing standards for bicycle facility signage. Chapter 9 of the 2009 Manual on Uniform Traffic Control Devices (MUTCD) with 2012 revisions, as published by Federal Highway Administration, specifies the design, size and placement of bicycle signage.

The MUTCD manual provides detailed requirements for roadway and way finding signage as well as pavement markings appropriate to given bicycle facilities

Signage on multiuse trails is more variable and can be customized. Putnam County and Westchester NY recently went through a controversial process where signage was proposed for their multiuse trail systems that included advertising.

## Go Online!

The 2009 Manual on Uniform Traffic Control Devices is available for download in PDF format at:

http://mutcd.fhwa.dot.gov/pdfs/2 009r1r2/pdf\_index.htm

Both counties considered a program that would have sold corporate sponsorships on signs to defray maintenance costs. Ultimately, these proposals were defeated as antithetical to the experience of using the multiuse trails.





Sharrow markings (left) and Share the Road signs (right) along Housatonic Ave/Boardman Rd in New Milford are compliant with the Manual on Uniform Traffic Control Devices. Photo Credit: HARTransit.

#### 4 TOWN BY TOWN RECOMMENDATIONS

This section details recommend future actions and policies to improve cycling access to the Greater Danbury area. A summary of recommendations is provided below for each municipality. Many of the details specific to each municipality are derived from individual municipal Comprehensive Plans of Conservation and Development.

There are two recommendations that are universal amongst all communities. The first is the creation of a regional Bicycle and Pedestrian Advisory Committee to shepherd the development of bicycle policies and infrastructure, as detailed in section 4.1. The second relates to the adoption of local complete streets policies.

A complete streets policy envisions every transportation project as an opportunity to improve safety, accessibility and mobility for all users as a means towards a safe, efficient transportation network which enhances quality of life and economic vitality. As described in this report, the Connecticut Bicycle and Pedestrian Advisory Board recommends that each municipality follow the state's example and adopt a local complete streets policy.

This policy would consider the needs of all users (i.e., pedestrians, cyclists, transit users and motorists) of any age or ability in all planning, programming, design, construction, reconstruction, retrofit, operations and maintenance activities related to all roads and streets. Creation of a complete streets policy at the municipal level would enable municipalities to better define what complete streets mean to their community.

## 4.1 Bicycle and Pedestrian Advisory Committee

A regional bicycle and pedestrian advisory committee (BPAC) would envision a safe pedestrian and bicycle friendly transportation system existing as an economic asset to the Housatonic Valley Region.

The BPAC would act as a proponent of the Complete Streets movement and serve an advisory committee to town staff and elected officials. The BPAC would provide a venue for public input on matters relating to bicycle and pedestrian facilities and programs.

The overarching goal of the BPAC would be to increase the number of people who can safely and reasonably choose walking or bicycling as a mode of travel and recreation.

# The Vision

A safe pedestrian and bicycle friendly transportation system existing as an economic asset to the Housatonic Valley region.

## The BPAC would be responsible for:

- Promoting bicycle and pedestrian safety through education and training;
- Promoting awareness from motorists for bicyclists and pedestrians;
- Supporting the development of bicycle and pedestrian improvements to infrastructure, trailways and policies;

- Promoting the positive impact which bicyclists and pedestrians have on the local economy;
- And, promoting the health and environmental benefits associated with walking and biking.

# Strategies the BPAC may consider include:

- Encourage the adoption of bike parking ordinances and local complete streets policies;
- Develop safe routes to school programs and town bicycle/ pedestrian sub-committees;
- Encourage communities, businesses and universities to apply to the Bike Friendly America program;
- Work with CTDOT to clear debris and vegetation from road shoulders and install sharrows and share the road signage along state roadways;
- And, organiz Complete Streets trainings for town staff, planners and engineers.

#### 4.2 Bethel Bike Transit Plan

- Adopt a complete streets policy as recommended by the CT Bicycle and Pedestrian Advisory Board.
- Develop off road trails within the Terra Haute property.
- Collaborate with cycling advocates at the state level to develop a park and ride map suitable for commuting cyclists.
- Develop a sidewalk improvement plan for ongoing maintenance of pedestrian infrastructure.
- Due to high rates of bicycle collisions on Routes 53 and 302, complete a study to develop counter measures that would improve safe use of these facilities for cyclists.

## 4.3 Bridgewater Bike Transit Plan

- Adopt a complete streets policy as recommended by the CT Bicycle and Pedestrian Advisory Board.
- Develop plans for pedestrian walkways and bicycle access around the Bridgewater Town Center.
- Restripe and provide signage on Hut and Clapboard Roads to enlarge the shoulder to facilitate by bicyclists and pedestrians.

#### 4.4 Brookfield Bike Transit Plan

- Adopt a complete streets policy as recommended by the CT Bicycle and Pedestrian Advisory Board.
- Continue the development of the Still River Greenway Trail and connections to Danbury.
- Support the development of the Western New England Greenway project
- Develop a concept plan for bicycle routes with appropriate signage and markings.

## 4.5 Danbury Bike Transit Plan

- Adopt a complete streets policy as recommended by the CT Bicycle and Pedestrian Advisory Board.
- Complete a bicycle and pedestrian access plan which would include the examination of multi-use trails as described in the Danbury Plan of Conservation and Development.
- Due to high rates of bicycle collisions on Main Street (Route 53), South Street, Newtown Road and West Street complete a study to develop counter measures that would improve safe use of these facilities for cyclists.
- Enhance the accessibility of the Still River Greenway to facilitate travel by bicycle and complete its connection to the Brookfield portions of the trail.
- Support the development of the Western New England Greenway project and Norwalk River Valley Trail.
- Work with CTCOT to install sheltered bike racks at park and ride lots of exits 1, 2 and 7 of I-84 at Miry Brook on Route 7.
- Pursue efforts to make trail connects to Putnam County's Maybrook Trailway at the NY/CT state line

#### 4.6 New Fairfield Bike Transit Plan

- Implement the complete streets policies as described in the New Fairfield Plan of Conservation and Development.
- Establish a town bicycle and pedestrian committee.
- Enlist community members to help the Department of Public Works prioritize and recommend sidewalk repairs.
- Create a Safe Routes to School program.
- Create car free community events.

#### 4.7 New Milford Bike Transit Plan

- Adopt a complete streets policy as recommended by the CT Bicycle and Pedestrian Advisory Board.
- Follow the recommendations of the 2013 New Milford Transportation Management Plan for bicycle access, especially the recommendations for Bridge Street, which are supported by bicycle crash data.
- Support development of New Milford River Trial and Western New England Greenway
- Work with CTDOT to create a bike lane/signage on the shoulder of Route 7 by restriping and narrowing the travel lanes. There have been several serious bike collisions here.
- Install additional "share the road" signs and sharrows on back roads that provide an alternative to Route 7. Suitable candidates include Sunny Valley Road, Picket District Road, Ericson Road, and Candlewood Lake Road.

## 4.8 Newtown Bike Transit Plan

 Adopt a complete streets policy as recommended by the CT Bicycle and Pedestrian Advisory Board.

- Complete a bicycle and pedestrian access plan which would include the study of multiuse trails as suggested by the Newtown Trails Committee.
- Support the extension of the Pequannock River Trail into Newtown from Monroe.
- Work with CTDOT to install sheltered bike racks at the park and ride lots at I-84 exits 9 and exit 11.

## 4.9 Redding Bike Transit Plan

- Adopt a complete streets policy as recommended by the CT Bicycle and Pedestrian Advisory Board.
- Complete a study of roads suitable or desirable for roadside multi-use paths.
- Support the development of the Norwalk River Valley Trail and the Western New England Greenway.

## 4.10 Ridgefield CT Bike Transit Plan

- Implement the complete streets policies as described in the Ridgefield Plan of Conservation and Development.
- Implement the recommendations of the town Bicycle Trail Study.
- Support the development of the Norwalk River Valley Trail and the Western New England Greenway.

#### 4.11 Sherman Bike Transit Plan

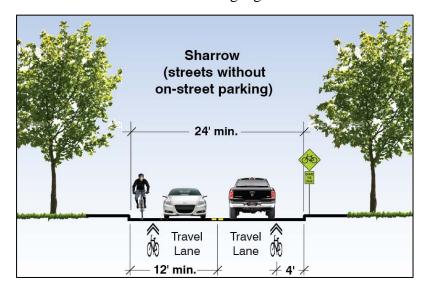
- Adopt a complete streets policy as recommended by the CT Bicycle and Pedestrian Advisory Board.
- Identify areas where multiuse trials for bicyclists and pedestrians between dead end roads in close proximity would be feasible.
- Conduct a feasibility study of a multiuse trail between the town center and Volunteer Park along Route 39.

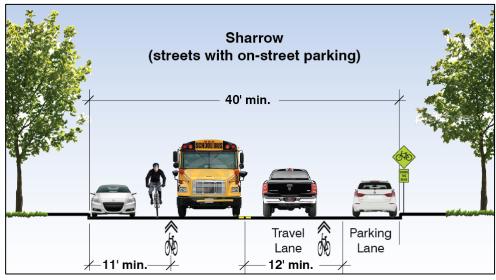
## **APPENDIX**

## A.1 Design Standards for Bicycle Facilities

## Sharrow

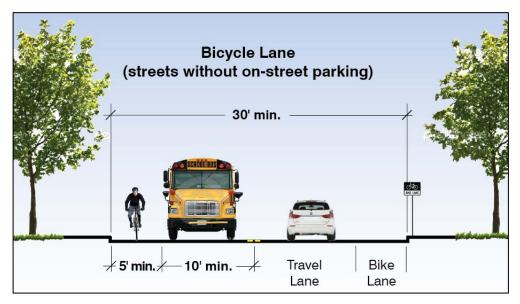
- Roadway speed limit 35 mph
- 15,000 average daily traffic maximum
- 12 ft. minimum travel lane width (14 ft. preferred)
- 24 ft. minimum pavement width for two way traffic without on-street parking
- 40 ft. minimum pavement width where on-street parking is present on both sides of roadway
- Sharrow pavement markings spaced 250 ft. or less
- Center of sharrow marking should be located 4 ft. from edge of roadway if no on-street parking present or minimum of 11 ft. from edge of roadway where on-street parking present
- In combination with "Share the Road" signage

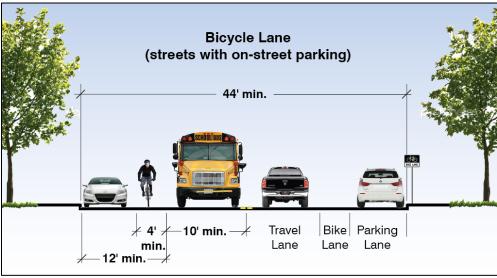




#### Bike Lane

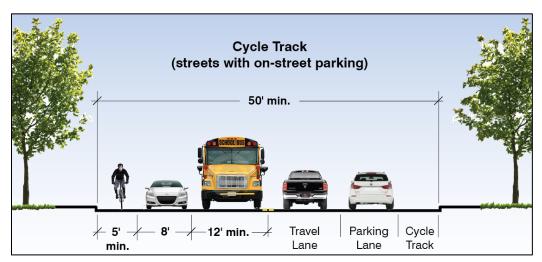
- Suitable for collector and arterial roadways or high volume local streets
- 4 ft. width without curb or 5 ft. width with curb (15-16 ft. travel lanes)
- Pavement markings spaced at 500 ft. maximum or more frequently in dense urban settings
- Install "Bike Lane" signage at beginning of lane spaced every mile and at significant intersections
- When placed adjacent to on-street parking, the stripe that separates the bicycle lane from the travel lane should be a minimum of 12 ft. from curb. If parking volumes are substantial or parked car turnover is high, such as near downtown locations or streets with metered parking, width should increase to 14 ft. so as to avoid collisions in door zone of parked vehicles.
- Bike lanes should be installed on both sides of roadway so as to discourage riding in the wrong direction

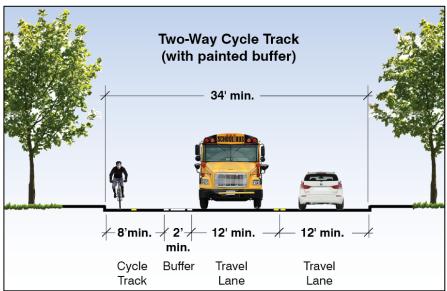




## Cycle Track

- Use on streets that have minimal crossings and curb cuts
- 5 ft. wide minimum for one-way and 8 ft. wide minimum for bi-directional.
- Intersections should include signage that alerts motorists of bicyclists crossing from the cycle track at roadway intersections.
- Vegetation and parking should be limited near intersections so that bicyclists and motorists are within the field of vision.
- Intersection treatments are needed to mitigate turn movement conflicts. Protective measures include retrofitting signalized intersections to provide separate left and right turn movements, adding bicycle-only signals, prohibiting right turn on red light, and installing warning signage or special markings at unsignalized intersections.
- For bi-directional cycle tracks, motorists should be alerted to bicyclists approaching from both directions.
- One-way cycle tracks should be paired so as to discourage wrong-way riding.





## Shared Use Path

- 8 ft. wide minimum (10-12 ft. wide preferred)
- Bi-directional travel preferred
- Minimize roadway and driveway crossings
- Provide signage indicating permitted uses

#### Bike Boulevard

- Less than 1,500 average daily traffic volumes, such as local streets or low-volume collector roadways
- Primarily residential
- Avoid transit or truck routes
- Maximum speed limit of 20 mph
- Traffic calming elements must be in place to keep actual speeds within 20 mph.
- Utilize signage and pavement markings
- Streets that intersect or cross the bicycle boulevard should be traffic controlled by stop signs or signalization
- Bicycles should be accommodated if not prioritized at intersections

## Bicycle Parking

- Located near building entrances but does not obstruct pedestrian movement
- Installed in a secure, visible, well-lit area to maximize utilization
- Post-and-loop style, U-shaped, and A-frame racks should be installed as parallel multiples spaced 30 inches apart
- The design of a bicycle rack should accommodate the following:
  - o Support the bicycle upright by its frame at two points
  - o Prevent the wheel from tipping over
  - o Enable the frame and one or both wheels to be secured
  - o Support bicycles that lack a horizontal top tube
  - o Allow front-in parking
  - o Design should allow a U-lock to secure to front wheel
- Avoid the following bicycle rack designs:
  - o Comb
  - o Toast
  - o Schoolyard
  - Other wheel bending racks that provide no support for bicycle frame.
- Always avoid wave style racks.

#### A.2 Model Bicycle Parking Regulations in Connecticut

The following are excerpts from municipal zoning regulations relevant to bicycle parking in Torrington and Tolland:

## City of Torrington

Bicycle parking facilities should be provided as part of new multi-family developments of four (4) dwelling units or more, new retail, office and institutional developments greater than 10,000 square feet, all transit transfer stations and park-and-ride lots.

- 1. Bicycle parking requirements should apply to all new construction, changes of use, or substantial improvement.
- 2. When provided, bicycle parking spaces shall:
  - a. provide a convenient place to lock a bicycle, and shall be at least six (6) feet long, two (2) feet wide, and shall provide at least seven (7) feet of vertical clearance, unless a bicycle locker is provided;
  - b. be capable of locking the bicycle and supporting the bicycle in an upright position and be securely anchored to a supporting surface.
  - c. Bicycle parking shall not interfere with pedestrian circulation and shall be separated from automobile parking.
- 3. For any use where bicycle parking is required, if the vehicular parking is covered or partly covered the bicycle parking will be covered at the same ratio.
- 4. Bicycle racks shall be located at each main building entrance, and placed in an area that is highly visible.

#### Town of Tolland

It is the intent of these regulations to promote and support access by bicycle and walking throughout the community. To this end, all parking lots must be designed to provide safe and convenient pedestrian and bicycle access as a part of any parking lot design including safe and convenient pedestrian and bicycle movement to and from public walkways and/or bikeways, or streets.

## A. Pedestrian Design Standards.

Once people step out of their cars, they become pedestrians. Clearly defined routes that are well-lit and buffered from vehicle areas help address these needs. Safe, comfortable, and convenient pedestrian facilities encourage walkers to visit more than one place on foot, rather than encouraging them to drive from place to place. In addition, people will walk through parking lots when they represent a shorter route to desired destinations.

Provision for safe and convenient pedestrian access shall be incorporated into landscaping plans for any parking area. This shall be clearly shown on all site plans.

All walkways shall be constructed to provide for:

- 1. Safe separation or delineation of all walkways from motor vehicle traffic through the use of raised sidewalks and/or landscaping between sidewalks and parking spaces and/or driving aisles. (Town of Tolland Zoning Regulations Rev.: July 1, 2013.)
- 2. Safe, well-articulated pedestrian crossings demarcated with pavement markings, pedestrian warning signs, and lighting.
- 3. A minimum of four (4) feet in width.
- 4. Inclusion of plantings, benches and lighting along walkways and at all pedestrian crossings.
- 5. Design, construction and maintenance to accommodate disabled individuals per Americans with Disabilities Act (ADA) requirements where feasible.

Clearly Defined Walkways Within Parking Lots – Marked walkways, separated from traffic lanes and vehicle overhangs, shall be provided from parking areas to the entrances of establishments.

B. Bicycle Access Design Standards.

Convenient, secure bicycle parking is important in encouraging bicycle use for transportation.

Bicycle parking facilities shall be designed and installed to include:

- 1. Spaces that are a minimum of 2 feet by 6 feet per bicycle.
- 2. The minimum number possible of potential conflict points between bicycles and motor vehicles.
- 3. Lighting.
- 4. Provision for locking of bicycles to the rack or bicycle locker.

# A.3 New Milford to Norwalk Ride-It-Now Route

The "Ride It Now" route links the HouBike Trail in New Milford with the East Coast Greenway.

TOTAL MILES	TURN-BY-TURN DIRECTIONS	DISTANCE
	Start from Bridge St & Railroad Ave in New Milford, CT	
0.0	Head northeast on CT-202 Bridge St toward Main St	0.2
0.2	Take 2 <sup>nd</sup> right onto Grove St	2.3
2.5	Street name changes to Still River Dr at Lovers Leap Bridge	0.3
2.8	Take 1 <sup>st</sup> left onto Pumpkin Hill Rd — before RR tracks	0.3
3.1	Take 1 <sup>st</sup> right onto Erickson Rd	1.3
4.4	Continue straight onto Aldrich Rd	1,1
5.5	Bear left onto Old Middle Rd - passing under RR tracks	1.2
6.7	Go straight at stop sign onto Ironworks Hill Rd	0.6
7.3	Turn right at stop sign on CT-25	0.05
7.4	First left onto Pocono Rd	1.9
9.3	Turn left at stop sign onto CT-133 N/Junction Rd	0.05
9.3	Take 1 <sup>st</sup> right at stop sign onto Stony Hill Rd	0.9
10.2	Turn left to remain on Stony Hill Rd	1.7
11.9	Turn right at stop sign onto Hawleyville Rd	0.6
12.5	Go straight at traffic light, across US-6 onto Benedict Rd	1.1
13.6	Turn left at stop sign onto Walnut Hill Rd	0.2
13.8	Take 2 <sup>nd</sup> right onto Rockwell Rd	0.8
14.6	Turn right at four-way stop sign onto Plumtrees Rd	1.3
15.9	Bear right onto Maple Ave	0.5
16.4	Turn left at small traffic island onto Chestnut St	0.1
16.5	Go straight at traffic light, across CT-302 onto Chestnut St	0.05
16.6	Take 1 <sup>st</sup> right onto Nashville Rd	1.6
18.2	Bear left at stop sign onto CT-53 S/Turkey Plain Rd	4.6
22.8	Go straight at stop sign, merging on CT-53/CT-107	0.1
22.9	At next stop sign, turn left onto CT-53/Glen Rd	0.7
23.6	Turn right at stop signs onto CT-53/Newtown Turnpike	2.3
25.9	Turn left onto Valley Forge Rd	3.8
29.7	At second stop sign, straight onto Lyons Plain Rd	0.05
29.7	Bear right onto River Rd	2.2
31.9	Turn left at stop sign onto Good Hill Rd	0.7
32.6	Go straight at traffic light, across CT-57 onto Broad St	0.3
32.9	Turn left at stop sign onto Newtown Turnpike	0.8
33.7	Straight at traffic light across CT-33 to stay on Newtown Tpk	0.9
34.6	Turn left at four-way stop sign onto Cranbury Rd	1.3
35.9	Take 1 <sup>st</sup> right onto Patrick Ave	0.2
36.1	Take 2 <sup>nd</sup> left onto Wolfpit Rd	0.3
36.4	Turn left at stop sign onto Strawberry Hill Ave	1.3
37.7	Straight at traffic light across US-1, stay on Strawberry Hill	0.2
37.9	Pass underneath RR track	1.6
39.5	Intersection of CT-136/Winfield Ave in Norwalk, CT	0.05
39.6	END OF ROUTE	

#### A.4 Useful Web Links

#### ALLIANCE FOR BIKING AND WALKING

## www.bikewalkalliance.org

The Alliance for Biking & Walking is non-profit coalition that strengthens state and local bicycling and walking advocacy organizations throughout North America. The Alliance offers advocacy tools to win campaigns that transform communities into great places to bike and walk in support of the People Powered Movement. Other resources include a members-only Listserv, networking and leadership development, and grants and scholarships for organization and community leaders.

## AMERICAN BICYCLING EDUCATION ASSOCIATION

## http://abea.bike/

The American Bicycling Education Association (ABEA) is the first organization of its kind. Building on the success of the groundbreaking CyclingSavvy (http://cyclingsavvy.org), ABEA is dedicated to supporting successful bicycling through bicycling-related education for the general public, traffic engineers, transportation planners, law enforcement professionals and educators.

#### BICYCLING STREET SMARTS ONLINE GUIDE

## http://www.bikexprt.com/streetsmarts/usa/index.htm

"Bicycling Street Smarts: Riding Confidently, Legally and Safely" is a comprehensive online tutorial which teaches riders of all skill level safe bicycling techniques for riding on public roads.

#### **BIKE-UP OF GREATER DANBURY**

### www.meetup.com/Bike-Up-of-GreaterDanbury/

Bike-Up of Greater Danbury was formed in 2010 as a MeetUp group. Today there are over 250 members. Bike-Up of Greater Danbury is a cycling group for all skill levels that help adults feel confident and ride safely by participating in group rides.

## BIKE WALK ALLIANCE OF WESTCHESTER AND PUTMAN

## http://westchesterbikewalk.org

The Bike Walk Alliance of Westchester and Putnam is a program of the East Coast Greenway Alliance and a 501(c)(3) organization. Since it was founded in 2009 the Alliance has served as the unified voice of cyclists and pedestrians in Westchester and Putnam by advocating for complete streets for all users, connecting existing and future trail ways, raising public awareness, and working with public and private institutions to promote cycling and walking.

#### **BIKE WALK CONNECTICUT**

#### www.bikewalkct.org

Bike Walk CT is a statewide advocacy organization whose mission is to change the culture of transportation by ensuring that bicycling and walking are safe, feasible and attractive options for a healthier, cleaner Connecticut. Bike Walk CT is a leading voice in the state for the Complete Streets Movement.

#### CONNECTICUT BICYCLE AND PEDESTRIAN ADVISORY BOARD

## www.ctbikepedboard.org

In 2009 Public Act 09-154 called for the creation of an eleven member Connecticut Bicycle and Pedestrian Advisory Board appointed by the Governor and other state elected officials. The CT Bicycle and Pedestrian Advisory Board seeks to achieve full integration of walking, bicycling, and transit use into Connecticut's transportation system and to facilitate the implementation of the state's Complete Streets Law.

#### CONNECTICUT DEPARTMENT OF TRANSPORTATION

## www.ct.gov/dot/bikeped

The mission of the CTDOT is to provide a safe and efficient intermodal transportation network that improves the quality of life and promotes economic vitality for the State. In 2009 CTDOT developed a Statewide Bicycle and Pedestrian Transportation Plan. At the above link CTDOT hosts a web-based information center called the Bicycle and Pedestrian Dashboard. Contact Connecticut Bicycle and Pedestrian Coordinator Katherine Rattan at katherine.rattan@ct.gov.

#### DANBURY YOUTH SERVICES

## www.danburyyouthservices.org/programs/earn-a-bike

Danbury Youth Services is a private, non-profit agency designated as the Youth Services Bureau for the City of Danbury. DYS is a licensed psychiatric clinic. DYS strengthens families by supporting and fostering hope and teaching skills necessary to lead a positive, productive life. At-risk youth in Danbury have the opportunity to participate in a character and skills building workshop series called the Earn-a-Bike program or receive a refurbished bicycle during the holiday season through Wheels for Kids.

## EAST COAST GREENWAY ALLIANCE

## www.greenway.org

The East Coast Greenway Alliance promotes the vision for connecting local trails into a continuous East Coast Greenway (ECG) and provides strategic assistance for states, counties, and municipalities that build local trail sections to be officially designates trails as part of the ECG trail system. The ECG links many of the major cities along the eastern coast of the United States between Canada and Florida. Nearly 30 percent of the route is already on traffic-free greenways, creating safe, accessible routes for people of all ages and abilities.

#### **ELM CITY CYCLING**

## http://elmcitycycling.org

Elm City Cycling (ECC) is the City of New Haven's home for bicycle advocacy and community. ECC is a volunteer-run, member-supported non-profit organization that aims to make New Haven a better place to get around by bicycle by both advocating for better bicycling conditions and organizing fun events like the monthly Bike to Work Breakfast.

#### FARMINGTON CANAL RAIL-TO-TRAIL ASSOCIATION

#### www.farmingtoncanalgreenway.org

This association promotes the Farmington Canal Heritage Trail, an 84-mile pedestrian and bike path that links New Haven, CT to Northampton, MA of which half is paved for non-motorized use.

#### HAT CITY CYCLISTS

#### www.hatcitycyclists.org

Hat City Cyclists is an organization of dedicated recreational bicyclists of varying experience and skill level. Group rides are centralized around Danbury including a weekly Wednesday evening group Ride N' Dine. HCC has organized a popular charity race for over twenty years called CycleFest.

#### **HEALTHY GEARS**

## http://healthygears.com

Healthy Gears is a Connecticut-based company dedicated to improving the health of its participants by incorporating cycling into their lifestyle. Healthy Gears offers individual and employer wellness programs.

#### HOUSATONIC COVERED BRIDGE TRAIL

#### houbikewalk.org/

The "HouBike" Trail seeks to make the aesthetic beauty of the Housatonic River Valley accessible to pedestrians, hikers and bicyclists in order to increase public appreciation and enjoyment of the river. The route runs along 45 miles of the river though scenic areas of Salisbury, Canaan Falls Village, Cornwall, Kent and New Milford. The website includes directions, major destinations and rest stops, history and other trip planning information.

#### LEAGUE OF AMERICAN BICYCLISTS

## http://bikeleague.org

Originally founded as the League of American Wheelmen in 1880, the League of American Bicyclists is the largest and oldest national bicycle-advocacy organization in the United States. The mission of the League is to lead the movement to create a bicycle friendly America. Communities, businesses and universities can participate in programs and events which provide toolkits, resources and other support in an effort to enhance bicycle infrastructure for all riders.

## MERRITT PARKWAY TRAIL ALLIANCE

## www.merrittparkwaytrail.org

The Merritt Parkway Trail Alliance is working towards creating a safe, attractive multi-use trail along the Merritt Parkway right-of-way for both enjoyment and transportation.

#### NEW ENGLAND MOUNTAIN BIKING ASSOCATION

#### www.nemba.org/

The New England Mountain Biking Association (NEMBA) is a recreational trails advocacy organization with 25 chapters throughout New England and 5,000 members. NEMBA's mission is to promote the best that mountain biking has to offer and to steward the trial systems that create and preserve open spaces.

#### NEW MILFORD RIVER TRAIL ASSOCIATION

## www.nmbikewalk.org

The New Milford River Trail Association (NMRTA) is non-profit organization of volunteers dedicated to advancing the development of the New Milford River Trail as part of the Western New England Greenway. The NMRTA works to create a bike-friendly New Milford with safe travel routes along New Milford roadways and designated trail ways.

#### NORWALK RIVER VALLEY TRAIL PROJECT

#### www.nrvt-trail.com

The NRVT project aims to build 38 miles of multi-purpose trail connecting Calf Pasture Beach, Norwalk to Rogers Park, Danbury, passing through Wilton, Ridgefield, and Redding on the way.

#### PEDESTRIAN AND BICYCLE INFORMATION CENTER

### www.pedbikeinfo.org

The PBIC is funded by the U.S. Department of Transportation Federal Highway Administration and maintained by the Pedestrian and Bicycle Information Center of the University of North Carolina. The PBIC produces a variety of reports, guides and case studies, and offers training and technical assistance to engineers, planners, developers, advocates, and elected officials.

#### PEOPLE FOR BIKES

## www.peopleforbikes.org

People for Bikes (P4B) is a national coalition of bicycle suppliers and retailers and a charity foundation. P4B spent more than \$30 million on bicycling, invested \$2.1 million in community projects and leveraged more than \$654 million in federal, state, and private funding. P4B contributed millions to national programs like Safe Routes to School, the League of American Bicyclists, and International Mountain Bicycling Association.

#### PLAINVILLE GREENWAY ALLIANCE

# http://plainvillegreenway.blogspot.com

The Plainville Greenway Alliance is a volunteer organization working to develop a linear park through the town of Plainville CT. This paved trail will connect the Farmington Valley Greenway to the north and Farmington Canal Heritage Trail to the south. It will eventually be part of the 3,000 mile Maine to Florida East Coast Greenway.

#### **RAILS-TO-TRAILS CONSERVANCY**

## www.railstotrails.org

Rails-to-Trails Conservancy is a non-profit organization based in Washington, D.C. whose mission it is to create a nationwide network of trails from former rail lines. The organization provides technical resources for trail building, information about existing trails, and advocates for the Rail-to-Trails Movement.

#### RIDGEFIELD BICYCLE SPORT CLUB

## http://ridgefieldbicycle.com/about/about-ridgefield-bicycle-sport-club-pg76.htm

Founded in 2011 the RBSC brings together advocates of cycling from Ridgefield, Wilton, New Canaan, Norwalk, Weston, Easton, Redding, Bethel, Danbury and Newtown and North Salem, South Salem, Lewisboro, Pound Ridge, Goldens Bridge and Mount Kisco in New York.

#### SAFE ROUTES TO SCHOOL

## www.ctsaferoutes.org

The Connecticut Department of Transportation offers assistance to schools that wish to develop and implement a Safe Routes to School Plan. The Program is designed to empower schools and communities to make walking and bicycling to school a safe and routine activity for elementary and middle school students. Contact Connecticut's Safe Routes to School Program Coordinator Sharon P. Okoye at sharon.okoye@ct.gov for more information.

#### SHORELINE GREENWAY TRAIL

## http://wordpress.shorelinegreenwaytrail.org

Shoreline Greenway Trail is an all-volunteer organization dedicated to building a 25-mile continuous path for bicyclists, walkers and hikers on the Connecticut Shoreline from Lighthouse Point in New Haven through East Haven, Branford, and Guilford to Hammonasset Beach State Park in Madison.

#### SOUND CYCLISTS BICYCLE CLUB

#### www.soundcyclists.com

Sound Cyclists Bicycle Club is based in Fairfield County and is one of the largest cycling clubs in New England. The club first formed in 1977. Their mission is to promote well-organized rides, a general interest in cycling, a cycling-related social forum and to encourage safe bicycling.

#### THREAD CITY CYCLERS

## www.threadcitycyclers.com

Thread City Cyclers (TCC) is a non-profit bicycling club based out of Willimantic, CT. The mission of TCC is to provide opportunities for cyclists of various skill levels to physically challenge themselves and to train for races and other cycling events in a manner that builds individual performance, teamwork, and goodwill among club members.

## TRI-STATE TRANSPORTATION CAMPAIGN

#### www.tstc.org

The Tri-State Transportation Campaign is an alliance of public interest, transit advocacy, planning and environmental organizations working to reverse deepening automobile dependence and sprawl development in the New York/New Jersey/Connecticut metropolitan region.

#### WESTCHESTER CYCLE CLUB

## www.westchestercycleclub.org

The Westchester Cycle Club (WCC) is a non-profit organization founded in 1975 comprised of members from New York City, Westchester and Putnam. The WCC advances public education around safe riding and the benefits of bicycling; promotes community awareness and enjoyment of cycling through events, tours, lectures, demonstrations and other activities open to members and general public; and promote the development of cycling facilities. In 2011 the League of American Bicyclists designated the WCC the top bicycling club in the United States.

#### WESTERN NEW ENGLAND GREENWAY

#### www.wnegreenway.org

Development of the Western New England Greenway is currently guided by the Bike Committee of the Upper Housatonic Valley National Heritage Area. The Bike Committee seeks to bring together local organizations in Connecticut, Massachusetts and Vermont that are developing bike routes and pathways that will form a contiguous network from Norwalk, CT to Burlington, VT.