

Connecticut Bicycle and Pedestrian Advisory Board

2016

ANNUAL REPORT



*Ray Rauth's Walk Along the Boston Post Road:
Statewide Bicycle and Pedestrian Safety Concerns
Illustrated Along the Nation's First Highway*





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Annual Report 2016

Edited by Emily Provonsha

COMPLETE STREETS TIMELINE

A Decade of Statewide Accomplishments

- 2005 — Central Connecticut Bicycle Alliance (CCBA) formed
- 2007 — Bike racks installed on CTTransit buses in Stamford, New Haven and Hartford
- 2008 — Statewide 3' passing law adopted
- First modern roundabout constructed on State roadway in West Haven
- 2009 — Statewide Complete Streets law passed
- 'Report an issue' feature published on Connecticut Department of Transportation (CTDOT) website
- CT Bicycle and Pedestrian Advisory Board (CTBPAB) formed
- League of American Bicyclists (LAB) published CT state ranking 44th/50
- CCBA became BikeWalkConnecticut
- 2010 — First bikeshare program established by Simsbury Free Bike
- First municipality to be named Bicycle Friendly Community by LAB
- 2011 — UCONN Crash Data Repository published and publicly available online
- 2012 — First municipality to adopt complete streets ordinance in New Haven
- 2013 — Complete Streets report published by CTDOT
- 144 miles of 2-lane secondary roads restriped to 11' travel lanes by CTDOT
- First municipality to install Rectangular Rapid Flash Beacons in West Hartford
- First university in state to establish bikeshare program at Yale
- Connecticut Department of Motor Vehicles (CTDMV) published drivers manual update including complete streets law
- 2014 — CTDOT Policy on Complete Streets established
- First green bike lanes project in CT on Broad Street in Hartford
- 192 miles of 2-lane secondary roads restriped to 11' lanes by CTDOT
- Vulnerable users law adopted
- 2015 — Police crash data reporting form update and new database available on UCONN Crash Data Repository
- UCONN Storrs bikeshare program established
- "Bike Bill" passed to allow cycle tracks, buffered bike lanes, etc.
- LAB published CT state ranking 21st/50
- 201 miles of 2-lane secondary roads restriped to 11' lanes by CTDOT
- 2016 — First complete streets project on State Road in East Hartford by CTDOT
- 80 Road Safety Audits scheduled, in process or complete by CTDOT
- First cycle track completed in CT on Long Wharf Drive in New Haven
- First contra flow bike lane with bike signals in CT on High St in New Haven
- Bike racks on Metro-North Railroad trains allow bikes during off peak travel
- First high-intensity activated crosswalk (HAWK) signals installed in CT in Stamford
- First leading pedestrian interval signals installed in CT in Stamford



Photo Credit: Joe Balskus, Burnside Avenue Complete Street at Francis Street in East Hartford.

COMPLETE STREETS AND CONNECTICUT

The Connecticut General Assembly enacted a Complete Streets Law in 2009 (CGS §13a-153f and §13b-13a). The law 'completes the streets' by requiring nearly all highway, road, and street programs and projects in Connecticut to accommodate pedestrians, bicyclists, and transit riders. The State took a further step toward complete streets in 2014 with the adoption of a Complete Streets Policy by the Department of Transportation.

With these actions, Connecticut has signaled its support for a transportation system that meaningfully includes and treats all users as equal. Over time, this support is translating into improved facilities and services for people who walk, bike, and take the bus or train, to the benefit of all residents and visitors of the state. This report presents the major statewide bicycle and pedestrian concerns through the lens of Route 1, and lays out recommendations for fully incorporating the needs of all residents and visitors of the state.



Photo Credit: The Bike Beat Blog, State Capitol in Hartford, CT

INTRODUCTION

Roads are significant public spaces within our communities. When roads are safe and inviting, foot traffic increases and local business benefit, people engage in healthy habits like biking and walking. Energy is conserved, and crashes become less frequent and severe. Expenses decrease while our efficiencies increase. People enjoy living and conducting business in safe pedestrian environments. People feel more comfortable relying on transit and leaving the car in the garage when the environment is safe for biking and walking.

Our transportation system has to work for people who walk, ride a bike, take transit, and drive a car. How we design and construct our roads, and how rights and responsibilities of all road users are defined, are critical interests of the State. The importance of these requirements, to provide safe mobility to our public, is better understood by examining the Route 1 corridor.

The first CTBPAB Chair and current member, Ray Rauth, walked the entirety of Route 1 this summer from Port Chester, NY to Westerly, RI. Route

1, or the Boston Post Road, was the Nation's first highway. It was ridden by colonial postmen, delivering the colonies' first newspapers between New York and Boston. Today, in many places, Route 1 has up to six travel lanes, disconnected sidewalks, and is the most dangerous corridor for people who walk and bike in the state.¹

According to a report by Tri-State Transportation Campaign, Route 1 has been the most dangerous corridor for pedestrians in CT since 2010. Ten pedestrians were killed on Route 1 between 2010 and 2014. Arterial roadways like Route 1, multi-lane roads that often have speed limits of 40 mph or more with little pedestrian and bicycle infrastructure, are the region's most deadly for non-motorists. It is challenging to travel in CT without a car, because so many streets are designed for cars and do not accommodate people who walk and bike. The challenges of Route 1 described in this report are illustrative of conditions throughout Connecticut.

US Senator Chris Murphy, and Congressman Jim Himes also separately walked along Route 1 this summer, bringing attention to issues relating safety, mobility and access for people who walk, bike, or take transit. Further, the Route 1 Corridor

¹ Tri-State Transportation Campaign. The Region's Most Dangerous Roads for Walking. 2010-2014. <http://tstc.org/reports/danger15/>



Photo Credit: Rod Parlee, DASH rider Samuel D'Oyley secures his bicycle before boarding

contains significant concentrated populations of car-less households and vulnerable individuals such as the elderly, disabled or low income. These community members are most likely to rely on walking, biking and transit, and are more vulnerable to unsafe roadway conditions. Finally, Route 1 also has the highest number of crashes of any corridor in the state.

While Route 1 presents examples of the most difficult issues we face in providing safe roads for everyone in the state, it also represents the greatest possibilities for improvement. This report focuses on Route 1 for the purpose of demonstrating the dangers faced by people who walk and bike in Connecticut. The observations, interests and recommendations documented within this report are applicable statewide. Areas identified in this report are snapshots in time. As you are reading this, there may be projects in the books to address these issues, however at the time of writing this report, they represent examples for statewide improvements.



Photo Credit: Andrea Drabicki, New Britain Mobility Tour with Columbus Avenue Project Team

WHAT IS AT STAKE?

The key element of accessible communities is providing safe and convenient places for people of all modes, all ages and abilities as a part of daily activities. There is much at stake for our safety, accessibility, transit-oriented growth, economy and transportation system on Route 1, as well as major corridors throughout the State.

Safety

- Due to its proximity to I-95 and to our regional downtowns, Route 1 experiences some of the highest average daily traffic and due to its design, some of the highest speeds. Speed is one of the greatest factors in the severity of a crash, and studies show that there is an exponential rise in severe injury and fatality with speeds higher than 23 mph. The average risk of severe injury for a pedestrian struck by a vehicle reaches 10% at an impact speed of 16 mph, 25% at 23 mph, 50% at

31 mph, 75% at 39 mph, and 90% at 46 mph. The average risk of death for a pedestrian reaches 10% at an impact speed of 23 mph, 25% at 32 mph, 50% at 42 mph, 75% at 50 mph, and 90% at 58 mph. Risks vary significantly by age.²

- Other reasons to focus on Route 1 are for health, environmental and quality of life, because studies show that people would like to walk and bike more if there are safe places to do so.³

Access to the Economy and Daily Needs

- Route 1 is the highest crash corridor in CT, regional towns should work together to confront this complicated issue so that people can get to work and access daily needs safely.⁴ Several studies show that people who walk and bike spend more at local businesses overall than people who drive, despite spending less money per trip, because they make more frequent trips.^{5 6}
- Route 1 could be a parallel East Coast Greenway Route for visitors who would like to experience our regional downtown areas, which would improve our regional economy. The nation's 60 million annual

² AAA Foundation for Traffic Safety. Impact Speed and a Pedestrian's Risk of Severe Injury or Death. 2011. <https://www.aaafoundation.org/sites/default/files/2011PedestrianRiskVsSpeed.pdf>

³ New York City Department of Transportation. Cycling in the City: An update on NYC Cycling Counts. 2013. <http://www.nyc.gov/html/dot/downloads/pdf/2013-nyc-cycling-in-the-city.pdf>

⁴ Tri-State Transportation Campaign. The Region's Most Dangerous Roads for Walking. 2010-2014. <http://tstc.org/reports/danger15>

⁵ Clifton et al. Consumer Behavior and Travel Mode Choices. Oregon Transportation Research and Education Consortium 2012. http://kellyclifton.com/Research/EconImpactsOfBicycling/OTRECRpt-ConsBehavTravelChoices_Nov2012.pdf

⁶ Bike Lanes, On-street Parking and Businesses. The Clean Air Partnership. 2009.

http://www.bikeleague.org/sites/default/files/bikeleague/bikeleague.org/programs/bicyclefriendlyamerica/bicyclefriendlybusiness/pdfs/toronto_study_bike_lanes_parking.pdf



Photo Credit: Don Hyman, Fairfield Bike & Pedestrian Task Force

recreational bicyclists spend \$46.9 billion on meals, transportation, lodging, gifts and entertainment.⁷

- Route 1 could provide connectivity between regional North-South bike routes like Mill River Greenway and Norwalk River Valley Trail.
- In Stamford, Norwalk, Bridgeport and likely most towns across CT, Route 1 is surrounded by the some of the densest neighborhoods and highest concentrations of zero-car households and vulnerable users such as elderly, disabled and those in poverty.
- Route 1 is the primary east-west link for all modes between the commercial districts of CT's coastal towns.

Success of Transit-Oriented Development

- From a regional perspective, the areas surrounding Route 1 are projected to grow due to transit-oriented development trends. These new residents prefer active lifestyles, modal choice, and safe, vibrant neighborhoods.

High Cost of Crashes

- The annual cost of crashes along Route 1 in

terms of property damage, injury, fatality, police response, emergency response, medical, etc is immense. The National Safety Council (NSC) estimates that the cost of each person killed in a traffic crash to be \$4,538,000 (2012 dollars). Multiplying this number by the 5,469 pedestrians and bicycles killed in the US in 2012 totals more than \$24.8 billion. The NSC also estimates the average injury cost per person involved in a crash to be \$58,700. Multiplying this number by the 125,000 estimated pedestrian and bicyclist injuries in the US in 2012 totals more than \$7.3 billion.⁸

Achieving the Greatest Potential for an Intermodal Transportation System

- Route 1 represents a barrier for "first/last mile" safety for Metro-North Railroad and Shoreline East train riders and bus users and people avoid the safety risk of crossing it on foot or bike by driving, thus improving safety for all modes would mitigate traffic congestion.
- Safety improvements for walking and biking on Route 1 would help to support increased bus ridership, such as future Bus Rapid Transit services between towns along the coastal corridor.

⁷ Flusche, Darren. League of American Bicyclists. Bicycling Means Business: The Economic Benefits of Bicycle Infrastructure. 2012. [http://www.advocacyadvance.org/site_images/content/Final_Econ_Update\(small\).pdf](http://www.advocacyadvance.org/site_images/content/Final_Econ_Update(small).pdf)

⁸ National Safety Council. Measuring the Cost of Unintentional Injuries. 2014.

http://www.nsc.org/NSCDocuments_Corporate/estimating-costs-unintentional-injuries-2016.pdf

RAY'S WALK ALONG ROUTE 1: Bicycle and Pedestrian Safety Issues Encountered from Greenwich to West Haven



Roundabout with ice cream store without crosswalks to get there in Greenwich



SB Exit 9 has no crosswalk, but sidewalks exist on that side of Route 1 only, which prevents people from accessing bus stops on both sides



No fall zone nor sidewalk buffer for pedestrians in Norwalk despite many lanes of fast moving traffic



Crosswalk across from MNR train station does not lead to another sidewalk, but a parking lot for businesses in Westport



Bus stop disconnected from sidewalks and crosswalks in Milford as well as a lack of bus stop facilities



High crash location for left turning vehicles failing to yield to pedestrians in crosswalk in Stamford. (Two pedestrians hit November



Sidewalk on south side ends abruptly, no crosswalk, and bus stops present on both sides in Darien near the local YMCA



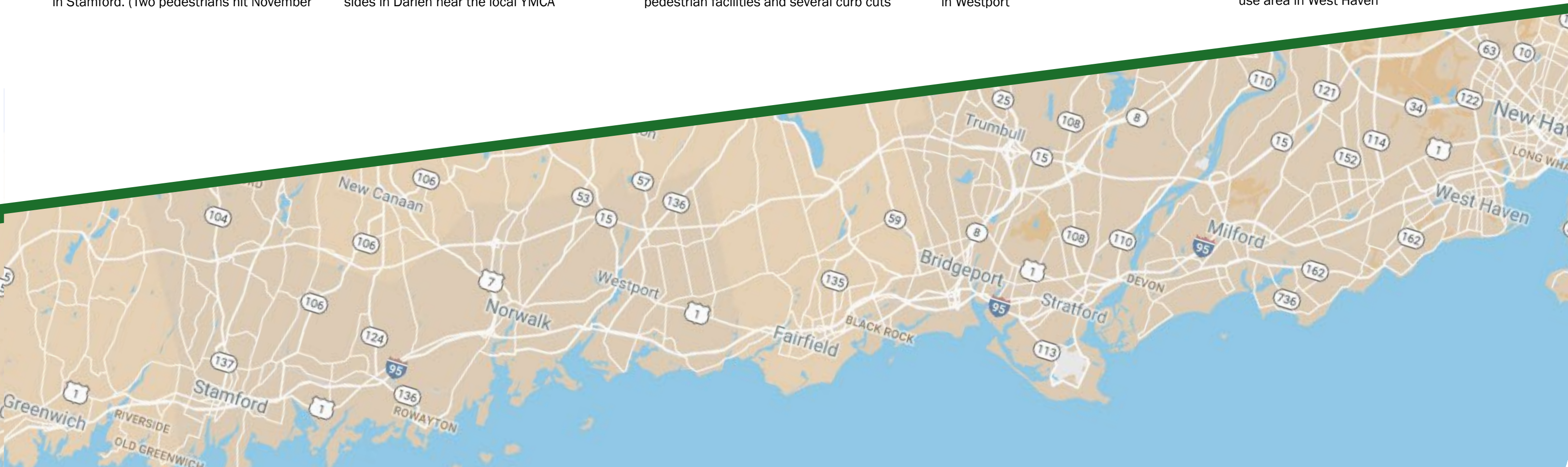
Customers must drive in and out of each store's parking using Route 1 due to lack of pedestrian facilities and several curb cuts



Lack of sidewalks and other pedestrian and bus facilities near a major commercial area in Westport



No safety signage for pedestrians during construction near a university and mixed-use area in West Haven



RAY'S WALK ALONG ROUTE 1: Bicycle and Pedestrian Safety Issues Encountered from New Haven to Stonington



Many parking garages and surface parking lots near a major commuter rail station where TOD should be in New Haven



This bus stop is stranded on a side of the street with no sidewalks near an intersection with no crosswalks in East Haven



This intersection has very wide turning radii, which encourages fast right turns and creates unsafe walking environment in Clinton



Lack of bike racks or designated lanes in downtown near the train station in New London



Only one pedestrian signal button and no crosswalks to get to stores on both sides of the street in Stonington



Route 1 abruptly becomes an on-ramp to I-95 and pedestrians must turn onto a neighborhood street in New Haven



No sidewalks, crosswalks or signage near a commercial area in Guilford



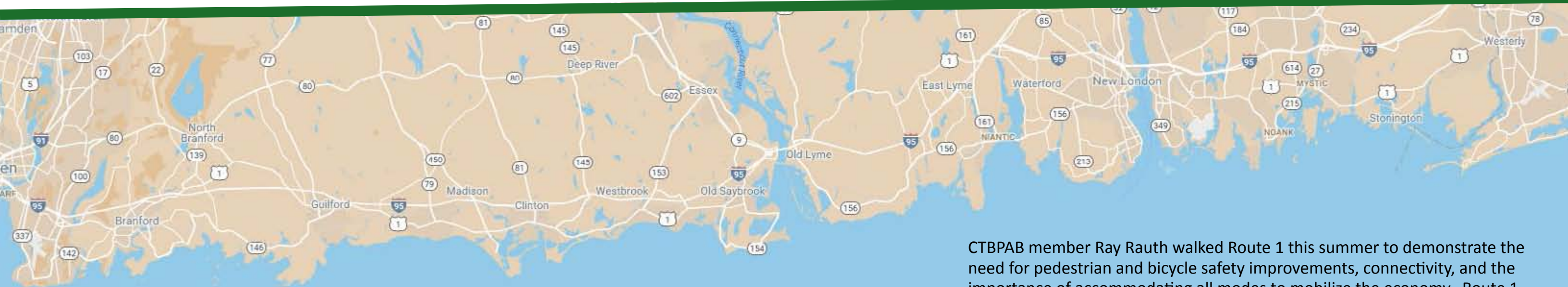
Route 1 continues on a sidewalk along the bridge over the river, but there is no directional signage to get to it in Old Saybrook



Missing ADA tactile warning strips, audible pedestrian signal, and ped signal head at every corner in Groton



Faded white lines, no lighting and no rumble strip separating the shoulder from the travel lane in Stonington



CTBPAB member Ray Rauth walked Route 1 this summer to demonstrate the need for pedestrian and bicycle safety improvements, connectivity, and the importance of accommodating all modes to mobilize the economy. Route 1 runs through 25 CT towns for 117 miles from the borders of Port Chester, NY to Westerly RI.

GOALS AND RECOMMENDATIONS FOR 2017

Safety for bicycles and pedestrians in terms of connecting to daily needs and the economy for all ages and abilities

Integration of bicycles and pedestrians to public transit

Coordinating bicycle and pedestrian improvements with capital projects or programs across statewide agencies

Safe routes to schools

Recommendation	Goal	Agency
Hire an Engineering Consultant to complete the update of the 2002 CT Highway Design Manual.		CTDOT
DOT as the owner of property and protector of the public interest to take the lead in providing bike-ped improvements on state roads.		CTDOT
Designate a set aside of Highway Safety Improvement Program funds for bicycle and pedestrian projects.		CTDOT
After the success of Burnside Avenue Complete Streets Demonstration, focus on Route 1 to implement the next Complete Streets Demonstration project.		CTDOT, Regions, Municipalities
Implement short term pedestrian safety recommendations from existing studies on Route 1 and begin to develop plans for long term recommendations.		CTDOT, Regions, Municipalities
Develop designs for the bike routes identified in the CT Bike Ped Plan Update 2016, especially Route 1.		CTDOT, Regions, Municipalities
Implement short term recommendations from Community Connectivity RSA's and make funding available to plan and construct long term recommendations.		CTDOT, Regions, Municipalities
Establish short-term bike racks and long term bike storage at major bus and train stations, such as an indoor bike room with key card entry or bike lockers with key access.		CTDOT, Local Transit Service Provider
Complete road safety audits around all major rail and bus transit stations to ensure bicycle and pedestrian safety, access and connectivity.		CTDOT, Regions, Municipalities, Local Advocates

Launch a coordinated and widespread bike, pedestrian and vehicle safety campaign including education on how all users can use the road.		CTDOT, DMV, Regions, Municipalities, DESPP
Connect critical gaps in bicycle and pedestrian network.		CTDOT, Regions, Municipalities
Review the E-bike legislation that PeopleForBikes worked on for CTBPAB and advocate to State Legislation to adopt it.		OLR, State Legislature
CTDOT hire a Bike & Pedestrian Coordinator, designate Bike & Pedestrian Coordinators at CTDOT's District Offices, and Regional COGs designate a staff member to be the Bike & Ped Coordinator.		CTDOT headquarters and District Offices, Regions
Take advantage of training opportunities with CTDOT, UCONN Technology Transfer Center, BikeWalkCT, CT Conference of Municipalities and CTBPAB.		CTDOT, Regions, Municipalities, Local Advocates
Coordinate state roadway maintenance with local complete street plans.		CTDOT, Regions, Municipalities
Review crosswalk legislation to ensure pedestrians are protected with the right-of-way when they are at a crosswalk instead of in the crosswalk.		OLR, State Legislature
Allow speed enforcement cameras in school zones during school hours.		State Legislature
Consider walkability of site when approving new schools, and estimate the cost of school bus transportation compared with implementing a safe routes to school program.		Siting Commission, Department of Education
With the end of the Safe Routes to School Program, CTDOT should continue to designate funding for SRTS through regional funding solicitations for municipalities.		CTDOT, Regions, Municipalities
Create model curriculum for bicycle/pedestrian safety training in elementary schools.		Department of Education
Use Safe Routes to School Toolkit to create a local Safe Routes to School Program.		Local School Boards, Parent-Teacher Organizations

2016 CASE STUDY: NEW BRITAIN

LESSONS LEARNED: LOW COST PATH TO BIKE SAFETY

To implement traffic calming strategies or to designate space within the existing roadway for bike facilities, the City of New Britain has used restriping pavement markings, which is an easy and cost-effective method. Bike lanes often only require pavement markings and signage. While most of the major construction projects are focused Downtown, around CTfastrak and spot intersection improvements, the City has created a citywide bicycle network. Of the 36 plus miles of bicycle network, 18 miles are dedicated bike lanes. It helped New Britain earn “Bicycle Friendly Community” status from the League of American Cyclists.

THREE BIKE LANE PROJECT EXAMPLES

Myrtle Street is an Urban Collector roadway that links Stanley Works and a large low income housing development to downtown. By reducing travel lanes to 11-ft, the existing road width was adequate to install 6-ft bike lanes.



John Downey Drive was four lane road with average travel speeds well above the posted speed limit and the perceived speed even higher. The speed and lack of shoulders made John Downey Drive unattractive to cyclists of all skill levels. In 2014 the city converted the four lane road into three lanes, one each direction and a two-way left-turn lane, with bike lanes. The road saw an immediate reduction in speed and became attractive to cyclists.



Columbus Boulevard was a four lane road with a center median. Similar to John Downey Drive, high travel speeds and no shoulders made it unattractive to cyclists. Columbus Boulevard runs through Downtown and provides a link the CTfastrak Multi-use Trail so bicycle amenities were desirable. After studying traffic volumes the City determined that four lanes were not required and converted one lane in each direction to a buffered bike lane. As a result, Columbus Boulevard is now one of the most utilized bike routes in the city.



Case Study Credit: Carl Gandza, City of New Britain

2016 CT BICYCLE AND PEDESTRIAN SELECTED PHOTOS



Photo Credit: Debbie Thibodeau, West Hartford Open Streets



Photo Credit: Elm City Cycling, New Haven Bike Month



Photo Credit: Dave Fine, Annual Santa Ride in Danbury



Photo Credit: Andrea Drabicki, Mobility Ride on CTfastrak multi-use trail in New Britain



Photo Credit: Debbie Thibodeau, Simsbury High School bike education



Photo Credit: Kaitlin Latham, NorWALKer Event



Photo Credit: Bridgeport Co-op, Bike repair shop volunteers



Photo Credit: People Friendly Stamford, Monday Night Bike Ride in Springdale



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Photo credit: Ryan King, New England News Collaborative