

Biking Brewster

A strategy to enhance biking in Brewster



Prepared by the Brewster Bikeways Committee
March, 2016

1. Introduction

In creating the Bikeways Committee, the Brewster Board of Selectman formulated the following charge:

The Committee is charged to make recommendations to promote safe and enjoyable bicycling in the town of Brewster and to encourage the use of bicycles for recreation, commuting and as an alternative means of transportation within the town and to neighboring towns on the lower cape.

This statement reflects an array of issues related to making Brewster a more bikeable town, in promoting biking as an alternative to vehicle transport, and making biking part of a healthy lifestyle. Indeed there are many opportunities, local and beyond, that make the Town well suited to increased bike use. The very popular Cape Cod Rail Trail (CCRT) provides a backbone for biking networks and access to popular destinations. The Town's growing reputation as a green community with easy access to outdoor activities make biking a natural component of Brewster's image to complement the numerous hiking trails and beach and pond access points.

At the same time, there are major challenges that constrain biking in town, not the least of which is the narrow profile, heavy vehicular use, and poorly marked crossing points of Route 6A, Brewster's main street. The risk of bike and car accidents is high under these conditions, particularly with inexperienced bike riders.

The purpose of this strategy is to provide a framework for future decisions regarding improvements to the road network, up-grading public facilities, and building public awareness in ways that promote the safe use of bikes for recreation and as an alternative means of transport in Brewster. The strategy should be the basis for more detailed plans as funding becomes available over the next several years.

At the same time, while the strategy targets Brewster Town government and local businesses, we must acknowledge that the Massachusetts Department of Conservation and Recreation (DCR) is also responsible for critical biking infrastructure in Town, notably the CCRT and the network of paths and roads in Nickerson State Park. We encourage DCR to continue to contribute to making Brewster more bikeable by funding regular maintenance and up-grading of this important infrastructure.

The Bikeways Committee thanks the numerous Town officials, Brewster businesses, and biking enthusiasts who have contributed their time and thoughts to this strategy. We also thank the Cape Cod Commission for their preparation of the Biking Brewster map.

2. The opportunity for biking

There are many factors that support expanding biking opportunities in Brewster at the current time. Nationally, greater concern for reducing carbon emissions by changing transport modes and the recognition of the importance of healthy lifestyles are trends on which Biking Brewster builds. More specific to the Town, residents and visitors alike recognize the quality of life that is available through Brewster's rural character, significant amount of conservation area, and natural beauty.

The Cape Cod Rail Trail (CCRT) is the most obvious opportunity and demonstrates its popularity with a variety of biking populations: young and old, individuals and families, and experienced and casual bicyclists. One has only to stop at a trail crossing on a summer weekend to see a large numbers of users of all types pass by. However, at the present time, the Rail Trail is the only significant biking facility in Brewster.

Indeed, biking is already a part of the local economy with a number of businesses benefitting from the popularity of the Rail Trail and the bike traffic it generates. Recognizing this, the Chamber of Commerce's Sustainability Action Plan calls for greater branding of Brewster as an ecotourism center and identifies expanding biking infrastructure as one of the pillars of the action plan. Further development of biking to key destinations and to shopping and restaurants will contribute to the Town's economic development. Studies have documented a significant benefit to local businesses as biking is encouraged.

A number of plans already recognize the importance of expanding biking opportunities. In a citizen survey for the Brewster 2013 Open Space and Recreation Plan, over 60 percent of respondents identified bike trails as important, making them the fourth most requested facility. The Cape Cod Commission's Regional Transport Plan identifies regional biking routes that could pass through Brewster and the Commission's recent Livable Streets study for the eastern portion of Route 6A identifies ways to make that section of road more bike and pedestrian friendly.

Currently and in the recent past, the Town has taken many steps to support biking in Brewster. Scheduled for 2015, repaving Route 6A constitutes a significant improvement in the Town's bike and pedestrian friendly infrastructure, with plans for more and improved sidewalks and extended shoulders to provide more space from the fog lane for bikers. In addition, the Bikeways Committee has worked with Town departments to install more signage to the CCRT and the Natural Resources Department has installed seasonal bike racks at the Town's beach and pond landings. To improve bike safety, the Police Department has established a program of distributing helmets at schools and to summer workers.

However, to continue to develop biking opportunities, Brewster will have to overcome challenges of the narrow profile and heavily travelled nature of Route 6A, secondary roads that lack bike lanes or paths, the lack of defined biking routes, and unsafe behavior on the part of car drivers and bicyclists alike. These activities will be most effective if they are done in a coordinated and comprehensive manner.

3. The strategy for Biking Brewster

In light of the charge to the Bikeways Committee and the opportunities and challenges that exist in Brewster, the Committee has identified five goals that constitute the foundation of the Biking Brewster strategy. The goals are to:

1. Expand recreational biking opportunities
2. Increase bike access to key destinations in Brewster
3. Establish links to regional bike routes
4. Enhance bike safety
5. Build public awareness of biking opportunities and safety

Below, each of these goals is described in more detail, followed by a discussion of near (the next 2 years) and mid-term (3 to 4 years from now) actions to achieve each goal. Because the goals are inter-related and actions can help achieve more than one goal, there is some repetition among the proposed actions. Map 1 shows the principal locational aspects of the Biking Brewster Strategy.

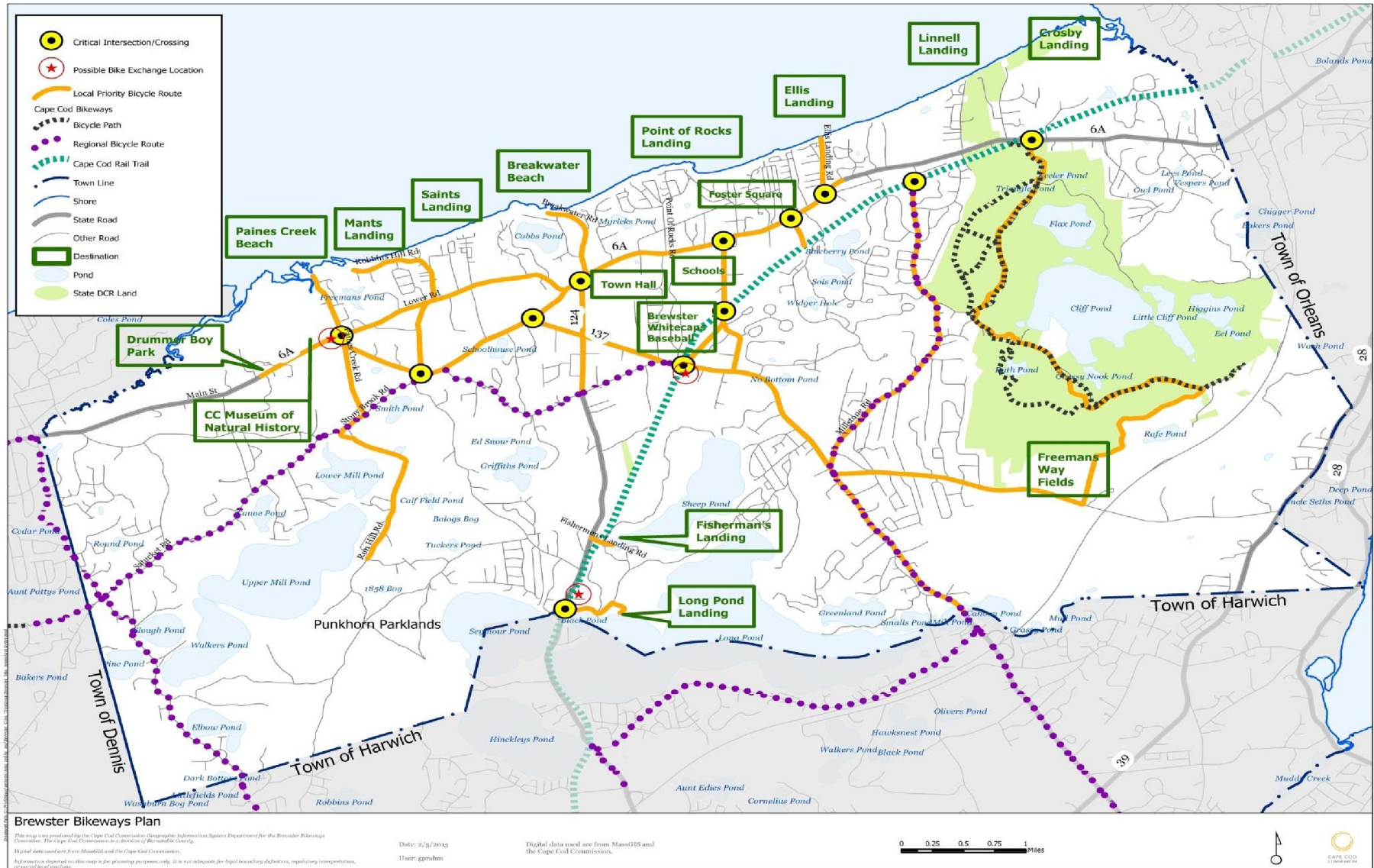
Following the general discussion of goals and activities under them, a near term action plan identifies the specific actions that should be implemented. Some of these may be implemented as part of the way Town departments carry out their business, while other actions, particularly those that require larger investments will require separate action by Town government. Indeed, the Biking Brewster strategy is not a call to action that is separate from other actions of public and private actors. Rather it is intended to become integrated into the plans and activities for which Town departments, local businesses and others are already responsible.

Goal 1: Expand recreational biking opportunities

This goal targets people who simply want to get out for a ride, enjoy a beautiful day, or get exercise. People are generally looking for a loop that brings them back to their point of origin – either their residence or a place where they have parked their car. The CCRT, the secondary road network, and numerous conservation areas including Nickerson State Park provide a strong network from which to establish formal biking routes, while directing bike traffic away from Route 6A. Three areas present good opportunities for recreational biking and bike loops.

1.A East Brewster: Route 137- Freeman’s Way- Ball fields – Nickerson State Park- CCRT (Millstone Road as an intermediate connector) The loop provides a long ride of approximately 13 miles and takes advantage of the relatively wide rights of way on Route 137 and Freemans Way, in addition to the existing path network within Nickerson and the Rail Trail. The intersection of Route 137 and the CCRT is the potential starting point for the loop. In addition, Millstone Road, linking the CCRT and Freeman’s Way, could constitute a shorter loop within this area and, at the same time, build access for people in the large residential areas of the neighboring developments. The main constraints to this loop are the lack of a well-defined connector from the Freeman’s Way fields area to the network within

Map 1 : Biking Brewster Strategy



Nickerson State Park and the need for bike and pedestrian ways on Millstone Road. Silas Road, part of which is within the Park's southern border and the Water department access road adjacent to the Freemans Way Fields provide an opportunity for building a connector.

Near term actions:

1. Research land ownership on Silas Road, negotiate with the State Department of Conservation and Recreation and Nickerson management about establishing a connector, determine the responsibility (Town or DCR) for building a hard pack bike path
2. Develop a plan to construct bike lanes and sidewalks along Millstone Road as part of the Pavement Management Plan.

Long term actions:

1. Integrate the construction of a bike path or bike lanes along Route 137 and Freeman's Way as part the Pavement Management Plan.
2. Conduct an engineering study for the Nickerson connector and construct bike path

1.B West Brewster: Lower Road and Beach Landings This loop provides access to numerous Town beaches and allows bikers to travel along the pleasant and relatively less traveled Lower Road where other attractions such as the Community Garden and two Brewster Conservation Trust walking trails can be visited (and the Cobb House, future home of the Brewster Historical Society). Lower Road is a very scenic way and bordered by many wetlands making the construction of bike lanes and/or paths probably infeasible.

Near-term actions:

1. Establish signage indicating the bike route and add "share the road" signs and shared lane painted figures on the pavement.

1.C Punkhorn Parklands: The Punkhorn Parklands represent an opportunity for dirt road biking, thus are most attractive to mountain bikers. However, biking should be limited to the road network because Town Conservation Commission policy prohibits biking on the trails. A starting point for loops within the Punkhorn could be the parking lot at the end of Run Hill Road.

Near-term actions:

1. Build public awareness of mountain biking opportunities (Biking Brewster brochure)

1.D Establish bicycle sharing program: Numerous towns, generally more urban centers, have established bicycle sharing or short term rental points to facilitate biking opportunities by visitors and others who do not own bikes. In metro Boston, a bike sharing program called the "Hubway" has been established by the Metropolitan Area Planning Council. While most likely a longer term option, this kind program could promote recreational biking with exchange points at key locations (particularly where

there are biking loops) around town. The Town might explore working with a regional program, such as working through the Cape Cod Commission, or working through local businesses.

Long term actions:

1. Work with the Cape Cod Commission or local businesses to put a bike sharing program in place

Goal 2: Increase biking access to key destinations in Brewster

Biking could become a viable alternative to cars if key destinations in town were made more accessible to bikes. Bike shop and inn owners have indicated that their biking clients typically want to get to the Town beaches. Campers at Nickerson State Park typically also want to get to the beaches, currently primarily at Linnell and Crosby landings. Brewster’s commercial points constitute important destinations and improving bike access would have a significant economic impact on local businesses. Improving access to these destinations means improving signage, increasing public awareness of bike routes, and expanding bike racks at the destinations. Increasing safety along bike routes will mean using less travelled alternate routes to 6A where possible, providing bike lanes, and improving marking at critical intersections and crossings (see Goal 4). Key destinations include the following:

- Recreation sites: Bay and pond public landings, Freemans Way Fields, Nickerson State Park ponds
- Government services: Town Hall, post office, Brewster Ladies Library, schools
- Shopping: Foster Square area, Brewster General Store, Lemon Tree Village Shops
- Employment centers: Ocean Edge

Near term actions:

1. Prepare a biking map that shows routes and key destinations
2. Install bike racks at key Town-owned destinations and work with businesses to install racks in shopping locations.
3. Improve road safety marking at intersections where bike routes cross major roads (all CCRT crossings, Route 6A and Route 137)
4. Increase toilet facilities at recreational destinations as needed seasonally.

Long term-actions:

1. Plan for bike lanes on routes to key destinations as part of the Pavement Management Plan.
2. Discuss with DCR and Mass DOT the construction of a tunnel under 6A to improve access from the CCRT and Nickerson State Park to Linnell and Crosby landings or a future bayside beach access.

Goal 3: Improve links to regional routes

There is proven demand, particularly among more experienced road bicyclists, for routes across the Cape and some necessarily pass through Brewster. The CCRT is the obvious regional route through Brewster, and signage has recently been put up to direct regional cyclists to it. The Cape Cod Commission’s Regional Transportation Plan indicates a “6B” alternative to travelling on Route 6A which

comes into Brewster on Satucket Road from Dennis. Likewise, improving the bikeability of Route 137 eastbound could create a connector to the Harwich bike network.

Long term actions:

1. Improve signage indicating regional routes

Goal 4: Enhance bike safety

The combination of heavily traffic, narrow roads with no dedicated bike lanes or paths, and bicyclists and drivers operating in unsafe ways can create dangerous situations. Brewster residents and visitors will increase biking as a means of transport if they feel safe on bike routes. At the same time, bicyclists must practice safe behavior by observing road rules and wearing safety clothing and helmets. The tragic accident in 2013 involving a foreign summer worker underscores the need to educate bicyclists about safe road behavior. The Town and businesses can play a significant role in educating the public about safe biking. Biking safety will also be enhanced by the conditions of bike routes, and particularly by creating well-marked crossing points where bike and vehicular traffic intersect.

Near-term actions:

1. Construct bike lanes and wider sidewalks on 6A as part of the re-paving program
2. Discourage vertical curbs, where possible
3. Improve safety marking at key intersections and crossings – signage and road painting (see Appendix A, Proposed Bikeway Crossing Guidelines).
4. Provide incentives to encourage the purchase and use of helmets
5. Promote bicycle safety information at tourist destinations, such as inns and other local businesses
6. Provide bicycle safety information at the Brewster Information Center
7. Encourage reflective material on bikes and clothing
8. Work with local bike shops to provide safety information with bike rentals
9. Conduct a bike safety program in the Brewster schools

Long-term actions

1. Construct bike lanes and paths on secondary roads
2. Improve sidewalks and dirt roads where there is bike travel

Goal 5: Expand public outreach about biking in Brewster

Expanding biking in Brewster will have economic and environmental benefits and enhance the Town's reputation as a forward thinking and green community. Public outreach to promote biking must go hand in hand with improving biking conditions and safety education. Many public outreach activities can be done in the near term.

Near-term actions

1. Prepare a Biking Brewster guide for distribution at the Information Center, library, resorts and B&Bs, bike shops, and on the Town website. The guide should include a map which also can be displayed at key locations around town, including kiosks on the CCRT.
2. Provide biking information to people as they purchase beach stickers at the Information Center.
3. Organize bike tours to show bike routes.
4. Coordinate outreach with the Regional Transit Authority.
5. Coordinate branding Brewster as a bike friendly town with the Chamber of Commerce.
6. Create a “Biking Brewster” cell phone and tablet app.

4. Near-term action plan

The list of actions below are intended to, first, take advantage of other investments the Town and State DOT are taking, such as the Route 6A re-paving, and second, to begin to show progress in making Brewster bike friendly without other major investment. Over the longer term, other actions can take place as resources are made available and as other investments are made, most notably under the Pavement Management Plan.

| Goal/Activity | Specific actions | Responsibility | Estimated Costs ¹ |
|---|---|--------------------------------|---|
| Goal 1: Expand recreational biking opportunities | | | |
| 1.a Establish a Nickerson connector from Freeman’s Way Fields | <ul style="list-style-type: none"> • Research parcel ownership on Silas Road for connector • Negotiate agreement with DCR on use of Silas Road as connector and responsibility for installing bikeable surface (e.g. hardpack) | Town staff | NA |
| 1.b Incorporate bike lanes, sidewalks, and improved crossing design into repaving projects as part of the Pavement Management Plan. | Integrate biking design into repaving for Underpass Rd. and Millstone Rd, both near term repaving priorities | Brewster DPW | TBD by Town meeting 2015 |
| 1.c Install biking signage on Lower Rd | Add “share the road” signs and shared lane painted figures on the pavement | Brewster DPW | \$800 – painted figures (4@\$200) \$600- signs (2 @ \$300) |
| Goal 2: Increase bike access to key destinations in Brewster | | | |
| 2.a Install bike racks at town facilities and businesses | <ul style="list-style-type: none"> • Inventory bike rack needs at Town facilities • Purchase and install bike racks (estimate 10 initially) • Work with Chamber of Commerce and businesses to develop a branded bike rack program for businesses | Town staff, Bikeways Committee | \$660 per unit= \$6600 |
| 2.b Incorporate bike lanes, sidewalks, and improved crossing design into repaving | See Activity 1.b, above | Brewster DPW | |

¹Adapted from: Federal Highway Administration, *Costs for Pedestrian and Bicyclist Infrastructure Improvements*, UNC Highway Safety Research Center, October 2013

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|--|--|--|---|
| projects as part of the Pavement Management Plan. | | | |
| Goal 4: Bike safety | | | |
| 4.a Improve safety marking at key intersections | <ul style="list-style-type: none"> Establish standards for marking intersections on the CCRT, Rt. 6A, and other Town roads (See Appendix A for proposed Guidelines) Install intersection markings on CCRT as part of Pavement Management Plan and Route 6A as part of repaving program | Brewster DPW | \$31,100 per CCRT crossing, \$2,620 per Rt. 6A crossing, \$2,820 per other Town Rd crossing |
| 4.b Conduct a safety orientation/program for Ocean Edge employees and other businesses | <ul style="list-style-type: none"> Participate in orientation program for Ocean Edge summer employees, distribute helmets, reflective decals/tape | Bikeways Committee | \$500 |
| 4.c Provide safety materials and publicity at the Visitors Center and bike shops | <ul style="list-style-type: none"> Prepare display at Information Center with safety information including MassDOT bike safety brochure | Bikeways Committee, Brewster Police Department | \$200 display and materials |
| 4.d Install "Share the road signage" on 6A | | Brewster DPW | \$2000- signs (10 @ \$200) |
| 4.e Continue bike safety and helmet program in schools through BPD | | Brewster Police Dept. | Grant funds |
| Goal 5: Build public awareness of biking opportunities and safety | | | |
| 5.a Provide biking materials at Brewster Visitors Center | <ul style="list-style-type: none"> Prepare display as part of safety program (above), including brochure and map (schedule for 2016 after completion of 6A repaving) | Bikeways Committee | \$500 for display and materials (brochure costs below) |
| 5.b Create Biking Brewster Brochure | <ul style="list-style-type: none"> Design standard biking map Print brochure for widespread distribution | Bikeways Committee | \$2,000 Brochure and map design \$1000 printing (5,000 copies) |
| 5.c Install maps on CCRT kiosks | <ul style="list-style-type: none"> Map design and production for kiosks | Bikeways Committee | \$1000 |

APPENDIX 1: PROPOSED BIKEWAY CROSSING GUIDELINES

The objective of these guidelines is to standardize crossings so that drivers become accustomed to the signage and treatment and are better prepared to stop when bicyclists and pedestrians are crossing. Three crossing treatments are proposed for three different types of crossing situations. The most heavily marked, for the CCRT, is required in light of the heavy bicycle traffic on that bikeway. A special treatment for Rt 6A will alert drivers at the most important crossings (see Bikeways map). The graphics of the proposed markings and treatments described below are presented on the pages that follow.

1. CC Rail trail- Routes 124, 137, Millstone and Underpass roads*

- a. **Marking/treatment:** 10' -12' stamped pavement; 2' yellow (thermoplastic) lines* outside of crossing pavement, curb extensions.
- b. **Signage:** Warning "Biking Crossing" 200' from crossing; "Bike crossing" with arrow at crossing; "State law, Stop for pedestrians..." at crossing; motion activated warning light (as in Harwich).

Costs per crossing

| | |
|--|----------|
| Signs 6 @ \$300 | \$1,800 |
| Curb extensions | \$13,000 |
| Stamped pavement (12 linear ft. at \$50) | \$600 |
| Thermoplastic | \$700 |
| Warning light | \$15,000 |
| Total | \$31,100 |

2. Route 6 A:

- a. **Marking/treatment:** 10' stamped pavement, 2' white lines outside of crossing pavement (white - to be consistent with other white pavement markings as required by State DOT standards.)
- b. **Signage:** Warning "Biking Crossing" 200' from crossing; "Bike crossing" with arrow at crossing; "State law, Stop for pedestrians..." at crossing; possible flashing light

Costs per crossing

| | |
|--|---------|
| Signs 6 @ \$300 | \$1,800 |
| Stamped pavement (10 linear ft. at \$50) | \$500 |
| Painting | \$320 |
| Warning light | \$7,000 |
| Total | \$9,620 |
| Total w/o warning light | \$2,620 |

3. Other Town Roads

- a. **Marking/treatment:** Thermoplastic longitudinal lines, 2' white lines outside of crossing pavement
- b. **Signage:** Warning "Biking Crossing" 200' from crossing, "Bike crossing" with arrow at crossing; "State law, Stop for pedestrians..." at crossing.

| | |
|--------------------|---------|
| Costs per crossing | |
| Signs 6 @ \$300 | \$1,800 |
| Thermoplastic | \$700 |
| Painting | \$320 |
| Total | \$2,820 |

* CCRT intersections will be phased in according to the Town paving schedule. Thermoplastic lines can be tested at one intersection to determine performance in winter and whether they should be set in the pavement.

Curb Extension



Shared lane image



Share the Road sign



Stamped pavement at the Stony Brook Mill



Crossing Ahead sign



Motion activated flashing light at Harwich CCRT crossing on Rt 124



Crossing sign

