

Outer Cape Bicycle and Pedestrian Master Plan

Alternatives Development Report

May 2016

Prepared by the Cape Cod Commission in coordination with Cape Cod National Seashore
(Cooperative Agreement #P14AC00162)



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Introduction

Cape Cod National Seashore (CCNS) partnered with the Cape Cod Commission (CCC) and the towns of Wellfleet, Truro, and Provincetown to create an Outer Cape Bicycle and Pedestrian Master Plan (OCBPMP). The Master Plan will facilitate a network of bicycle and pedestrian routes linking destinations within the National Seashore and the towns, and establish a primary route for safe travel between the Cape Cod Rail Trail (CCRT) in South Wellfleet and Provincetown. This Potential Alternatives Report explains how potential routes were identified and evaluated, resulting in a list of potential primary and secondary routes for consideration. The report also explains how three proposed Primary Route Alternatives were developed.

PURPOSE AND GOALS

Bicycling is one of the most popular activities at CCNS and is a popular form of transportation and recreation throughout Cape Cod. Outer Cape bicycle trails attract thousands of cyclists each year, and user counts show the numbers continue to increase. The OCBPMP will propose a comprehensive, integrated network of bicycle and pedestrian accommodations and associated amenities on the Outer Cape. This network would provide connections between National Seashore destinations and the towns of Wellfleet, Truro, and Provincetown. It would also enhance recreational opportunities, and encourage bicycling and walking as convenient and viable transportation options. The plan supports the National Park Service's goal to promote health and well-being through initiatives such as *A Call to Action* (NPS 2014), which strives to advance all Park Service units toward a shared vision including efforts to improve residents' awareness of and access to outdoor and cultural experiences close to home, as well as enhancing the connection of communities to parks to improve recreation and natural resources conservation.

Heavy visitation in the summer months, as well as the annual return of seasonal residents, overwhelms many Outer Cape roads with bicyclists, pedestrians, and motor vehicles. Increasing bicycling volumes, including over 250 peak hour counts on the Cape Cod Rail Trail (CCRT), have been recorded. The area's existing infrastructure is becoming inadequate. Town residents, officials, and visitors have expressed concern over a lack of designated spaces for bicycling and the need for more sidewalks to accommodate pedestrians. Limited crossing accommodations for bicyclists and pedestrians on Route 6 is also a concern. Though on-road bicycle routes and off-road paths including the Province Lands and Head of the Meadow bicycle trails exist in the study area, much of the area's bikeways lack connectivity to separated off road paths or bicycle lanes, requiring bicyclists to share space with motor vehicles on roads with high vehicle speeds and high vehicle volumes, resulting in numerous accidents each year. With all of these issues in mind, the following goals and objectives were developed to serve as guiding principles for development of the OCBPMP.

OUTER CAPE BICYCLE AND PEDESTRIAN MASTER PLAN – GOALS AND OBJECTIVES

Goal 1. Provide a safe and enjoyable Cape experience for residents and visitors alike with a system of connected bicycle and pedestrian facilities.

- Create facilities that serve a wide range of bicyclists and/or pedestrians.
- Create facilities that provide relatively direct routes and/or have scenic natural surroundings.
- Minimize motorized/non-motorized vehicle conflict.

Goal 2. Improve bicycle and pedestrian connections throughout the Outer Cape, to the National Seashore, and to public transportation.

- Increase and/or improve connections to high activity and community facilities.
- Increase and/or improve connections to transit.
- Increase and/or improve connections to existing bicycle and pedestrian facilities.

Goal 3. Minimize and/or mitigate adverse cultural and environmental impacts of proposed improvements while seeking ways to realize positive cultural and environmental enhancements.

- Minimize impacts to wetlands, Areas of Critical Environmental Concern (ACECs), and construction of new facilities in flood zones.
- Avoid impacts to sensitive natural resources and cultural resources and fragmentation of habitat areas.

Goal 4. Capitalize on opportunities to coordinate with planned and ongoing projects.

- Create projects that are complimentary to ongoing or planned projects.

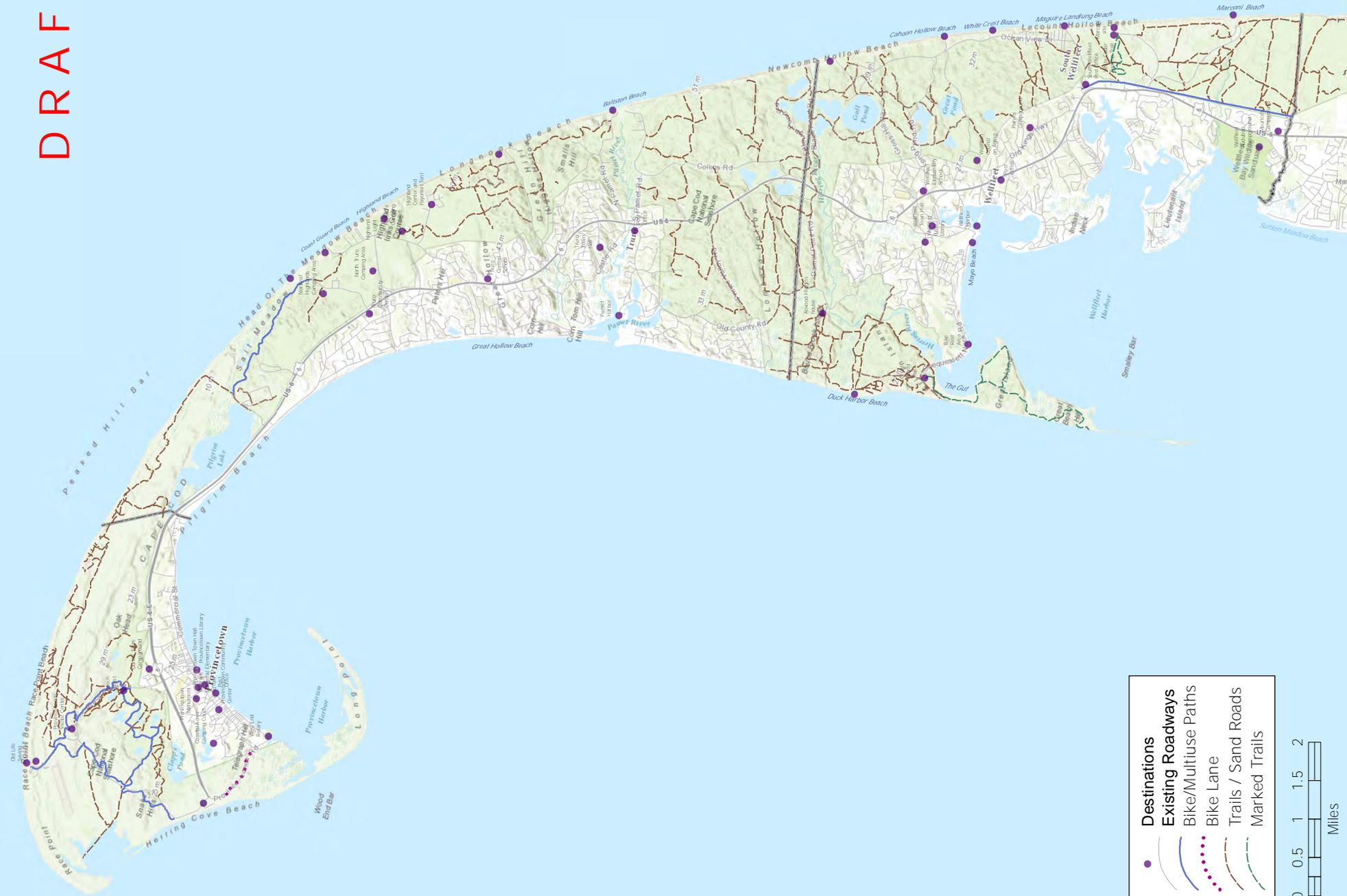
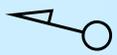
Goal 5. Seek opportunities to enhance adjacent areas.

- Create facilities that have high potential to benefit surrounding land uses.

Goal 6. Maximize use of existing and future assets and funds to create a bicycle and pedestrian network.

- Minimize necessary right-of-way acquisition.
- Select projects that are cost effective.

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Destinations
 Existing Roadways
 Bike/Multiuse Paths
 Bike Lane
 Trails / Sand Roads
 Marked Trails



Outer Cape Bicycle and Pedestrian Master Plan Study Area

Data collected September 2014
 The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel level analysis. It should not substitute for actual on-site survey, or supersede deed research.

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Alternatives Development

STEERING COMMITTEE

The project team established the Outer Cape Bicycle and Pedestrian Master Plan Steering Committee to guide development of the project. It is comprised of two representatives (a designated town official and a bicycle committee chair) from each of the three towns of Provincetown, Truro, and Wellfleet, two CCC staff members, and two CCNS staff members. The town representatives' role is to serve as community contacts/project liaisons and to represent town bicycle and pedestrian matters in the plan's development. CCC and CCNS serve as staff to the committee and are responsible for addressing interests and tasks identified in the project Scope of Work and for guiding the committee in its participation and review of project-related information. The Steering Committee provides guidance on development of alternatives for bicycle/pedestrian routes and facilities, and on how to garner diverse public input. The Steering Committee met approximately monthly from August 2014 through 2015.

EVALUATION CRITERIA

The project team identified criteria, derived from the Master Plan goals, to use in its development and evaluation of potential primary and secondary routes. The criteria are presented below and are discussed in more detail in the Potential Routes Screening and Evaluation Matrix.

DATA COLLECTION

The first phase of plan development focused on data collection and mapping. CCC staff gathered information and prepared maps identifying natural resources and cultural resources in the project area, existing bicycle and pedestrian accommodations, planned or proposed bicycle and pedestrian accommodations, land ownership, and hunting prohibition areas. CCC presented additional data in *Outer Cape Bicycle and Pedestrian Master Plan Phase 1 Data Collection/Transportation Data Report*, which contains transportation data and maps illustrating characteristics of major roadways and designated on-road bicycles routes; bicycle count data; Cape Cod Transit Authority bicycle data; and bicycle/pedestrian crash data from the MassDOT RMV crash database. CCNS staff also provided bicycle accident data for locations within CCNS, and further input regarding natural and cultural resources. The Steering Committee reviewed this data and helped identify topics for the first project workshop. The project team prepared basemaps showing potential bicycle and pedestrian routes based on previous studies and input from the steering committee.

OUTER CAPE BICYCLE AND PEDESTRIAN MASTER PLAN – EVALUATION CRITERIA

Users and Connectivity

1. Does it accommodate varied types of bicyclists: “utilitarian” riders (i.e. biking for work or errands), and recreational riders; as well as various skill levels (A) “experienced,” who have high confidence riding in traffic, (B) “basic adult” bicyclists who lack skill to integrate with fast or heavy traffic, and (C) children – who may be prone to sudden movements.
2. Does it accommodate varied pedestrian users: “utilitarian” riders (i.e. biking for work or errands), and recreational walkers; people with disabilities.
3. Does it facilitate a direct north/south route through the region?
4. Does it provide access to key destinations (i.e. transit, town centers, civic/community services buildings, Park attraction, existing bike/pedestrian facilities, other services)?

Resource Issues

5. Does it impact sensitive natural resources (i.e. wetlands, ACEC, flood zone, habitat, wellhead protection area)?
6. Does it impact significant known or potential cultural resources (i.e. archaeological sites, cultural landscapes)?
7. Does it have minimal topography and grades?
8. Does it create a developed path in otherwise undeveloped area?

Character/Experience

9. Does it seem consistent with the surrounding area’s character?
10. Does it provide a scenic route for recreational riding/walking?
11. Does it provide opportunities for interpretation?
12. Does it provide connections to amenities (ie. food/bathrooms/visitor, and parking facilities)?

Safety

13. Does it provide a low-stress travel experience or provide separation from high traffic roads?
14. Does it provide safe and comfortable access through an area with safety hazards/unsafe crossings?
15. Does it include segments that work better in one direction than others?

Implementation Issues

16. Is there adequate right-of-way? (i.e. no land acquisition is needed)
17. What is the land ownership? (i.e. are there multiple owners?)
18. Are there partnership opportunities for funding?
19. What is the approximate cost? (i.e. design/engineering/build)
20. Is it easy to implement? (i.e. is there local support?)

FIRST PUBLIC WORKSHOP

The Steering Committee held a public workshop on Thursday, October 30, 2014 at the Truro Community Center, where CCC staff provided a project introduction and overview, and town Steering Committee representatives discussed related efforts in their own communities. Attendees participated in three exercises to identify (1) existing and desired bicycle and pedestrian routes and destinations, (2) hazards and areas of concern, and (3) town priorities for bicycle and pedestrian accommodation. Approximately 50 people attended the workshop and participated in the exercises.

In the first mapping exercise, participants used a set of 10 dots to identify their top existing and/or desired bicycling routes inside the study area (i.e between Wellfleet and Provincetown), and used smaller dots to show pedestrian routes. Participants were instructed to add any routes not shown on the map and identify any hazard/"hot spot" locations. . The dots were color-coded to the participants' home town to help illustrate preferences by hometown riders and walkers. In Wellfleet, the Claire Saltonstall bikeway (especially the western legs of West Main Street, Pole Dike Road, and Bound Brook Island Road) were preferred by people from various towns, while the undeveloped rail bed, LeCount Hollow Road, Cahoon Hollow Road, and Route 6 south of the town center all were preferred by Wellfleet residents. Preferred pedestrian routes were primarily located around Wellfleet village, near Great Pond, near the Post Office, and along the rail bed. In Truro, local roads along the Claire Saltonstall bikeway (Old County Road and Castle Road) were again preferred by people from various towns, while Truro residents highlighted Collins Road, Route 6A, Head of the Meadow bicycle trail, and several fire/sand roads within the CCNS between Pamet River and the Highlands. Very few dots were placed on Route 6 in Truro. Pedestrian routes preferred by Truro residents focused along South Highland Road, Head of the Meadow, and Route 6A, especially in the Beach Point area. Unpaved routes within the CCNS were also identified as pedestrian routes. Provincetown had fewer dots placed on the map, but they showed Route 6, Commercial Street, Bradford Street, the Province Lands bicycle trail, and several sand roads were preferred by people from various towns.

Participants also identified hazard areas on a regional map. Wellfleet had a small number of hazard locations, but highlighted the need for safe Route 6 crossings at Lecount Hollow Road (near the end of the CCRT) and at Main Street. Blown sand along Ocean View Drive and sharp curves along Bound Brook Island Road were also noted. Truro had the largest number of hazard marks, stretching along Route 6 through all of North Truro, especially around the Route 6/Route 6A split. Hazards were also identified at Route 6 and Castle Road, and at Route 6 and Stott's Road. Poor sight distances were noted along Old County Road. Pedestrian hazards were noted along Route 6A in the Beach Point area. Participants recommended moving the 4-lane portion of Route 6 further north, improving Route 6 with painted bike lanes, and repaving roads with poor pavement conditions. In Provincetown, hazards were marked at Route 6 intersections with local roads, at the Commercial Street and Bradford Street split, and in the center of town.

When workshop participants broke into groups to discuss specifics about each individual town, top issues raised in Wellfleet were extending the bike path to Route 6, providing bike lanes along Ocean View Drive and Lecount Hollow Road, safe crossings of Route 6 (at Lecount Hollow Road, Old County Road, and West Road), and the need for sidewalks along Briar Lane, Main Street, and Route 6 near the Post Office. Top items in Truro were heavy pedestrian and bicycle traffic in the Beach Point area, four major road crossings on Route 6 (Stott’s Road, Standish Road, Route 6A split, and Castle Road), creating a bike lane or multi-use path along Route 6, and re-paving Collins Road as an alternative to Route 6. Issues raised in Provincetown include creating a safe connection to North Truro, accommodations on Route 6A, and improving connections throughout town.



WORKSHOP #1 – MAP SHOWING PARTICIPANTS’ PREFERRED ROUTES; PARTICIPANTS MAPPING HAZARD LOCATIONS

CAPE COD NATIONAL SEASHORE STAFF WORKSHOP

The project team held a workshop with CCNS staff on November 14, 2014. Its purpose was to update the staff on the plan, including the public workshop input and early route concept development. The team also wanted to get feedback from the staff members on any concerns it might have related to resource protection. Overall, the staff supported using existing roads to provide bicycle and pedestrian accommodations to minimize natural and cultural resource impacts but also noted concerns about attracting more people and intensifying use in rural, “quiet” areas in the Park that residents and visitors enjoy for tranquility and connection with nature. The staff requested that the plan identify areas where hunting is permitted, as these locations may conflict with increased bicycle and pedestrian activity.

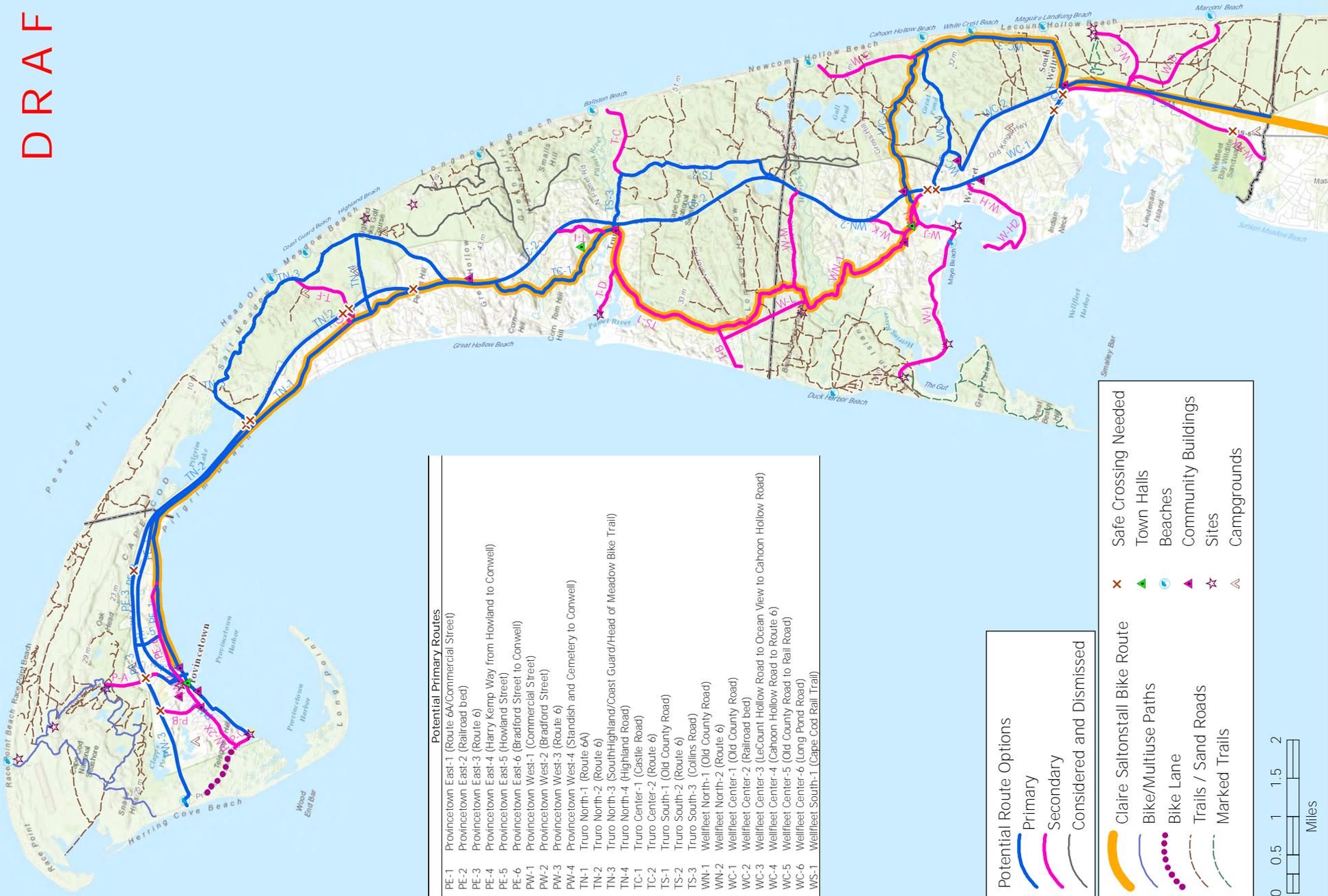
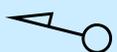
POTENTIAL PRIMARY AND SECONDARY ROUTE CONCEPTS

CCC staff used GIS to map workshop participants’ route preferences and other information they provided such as problematic Route 6 crossings and sidewalk gaps. The project team evaluated the routes for consistency with project goals and conducted a “pre-screening” analysis to eliminate any routes with potential major resource impacts or other characteristics (topographical, land ownership, etc) that might render them infeasible to implement, particularly in relation to other route alternatives. Such routes included fire/sand roads within CCNS dunes and original segments of the Old Kings Highway that have high archaeological sensitivity.

The team mapped remaining route segments under consideration and created two categories of routes: potential “primary” route concepts, and potential “secondary” route concepts. A potential primary route would serve as the “spine” or “stem” through the region, providing an intertown connection from the CCRT terminus in South Wellfleet to Truro and Provincetown. The project team also worked with the Steering Committee to prepare a *Potential Primary and Secondary Route Concepts* map. The map shows potential primary route options (in blue) and potential secondary route options (in pink). The map also includes a table listing the primary route options by location.

Potential route options are numbered by segment as follows: each begins with a letter – ‘W’ represents Wellfleet route options, ‘T’ represents Truro route options, and ‘P’ represents Provincetown route options. Each town primary route option is then coded by segment location: ‘S’ for south, ‘C’ for central, and ‘N’ for north, except for Provincetown routes which are coded ‘E’ for East and ‘W’ for west. Primary route options within each town are numbered, eg. TC-1 (Truro-Central-1). Secondary route options within each town are given a letter to differentiate them from the primary route options, eg. WN-A (Wellfleet-North-A).

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Potential Primary Routes

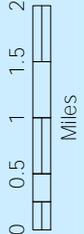
PE-1	Provincetown East-1 (Route 6A/Commercial Street)
PE-2	Provincetown East-2 (Railroad bed)
PE-3	Provincetown East-3 (Route 6)
PE-4	Provincetown East-4 (Harry Kemp Way from Howland to Conwell)
PE-5	Provincetown East-5 (Howland Street)
PE-6	Provincetown East-6 (Bradford Street to Conwell)
PW-1	Provincetown West-1 (Commercial Street)
PW-2	Provincetown West-2 (Bradford Street)
PW-3	Provincetown West-3 (Route 6)
PW-4	Provincetown West-4 (Standish and Cemetery to Conwell)
TN-1	Truro North-1 (Route 6A)
TN-2	Truro North-2 (Route 6)
TN-3	Truro North-3 (SouthHighland/Coast Guard/Head of Meadow Bike Trail)
TN-4	Truro North-4 (Highland Road)
TC-1	Truro Center-1 (Castle Road)
TC-2	Truro Center-2 (Route 6)
TS-1	Truro South-1 (Old County Road)
TS-2	Truro South-2 (Route 6)
TS-3	Truro South-3 (Collins Road)
WN-1	Wellfleet North-1 (Old County Road)
WN-2	Wellfleet North-2 (Route 6)
WC-1	Wellfleet Center-1 (Old County Road)
WC-2	Wellfleet Center-2 (Railroad bed)
WC-3	Wellfleet Center-3 (LeCount Hollow Road to Ocean View to Cahoon Hollow Road)
WC-4	Wellfleet Center-4 (Cahoon Hollow Road to Route 6)
WC-5	Wellfleet Center-5 (Old County Road to Rail Road)
WC-6	Wellfleet Center-6 (Long Pond Road)
WS-1	Wellfleet South-1 (Cape Cod Rail Trail)

Potential Route Options

- Primary
- Secondary
- Considered and Dismissed

Safe Crossing Needed

- Claire Saltonstall Bike Route
- Bike/Multiuse Paths
- Bike Lane
- Trails / Sand Roads
- Marked Trails
- Town Halls
- Beaches
- Community Buildings
- Sites
- Campgrounds



PRIMARY ROUTE OPTIONS SHOWN ON THE <i>POTENTIAL PRIMARY AND SECONDARY ROUTE OPTIONS MAP</i>		
Segment name	Location	Segment Length (miles)
WS-1	Route 6 (West Road to Lecount Hollow Road)	2.3
WC-1	Old County Road (Route 6 to railroad bed)	1.5
WC-2	Rail road bed (Lecount Hollow to OKH/Old County Road)	1.75
WC-3	Lecount Hollow Road (from CCRT) to Ocean View Drive to Cahoon Hollow Road	2.4
WC-4	Cahoon Hollow Road (Ocean View Drive to Route 6)	2.0
WC-5	Old County Road (Railroad bed to Cahoon Hollow Road)	.32
WC-6	Long Pond Road (Ocean View Drive to Main Street)	2.1
WN-1	Main Street from Long Pond Road to West Main/Pole Dike/Bound Brook Island Road	3.8
WN-2	Route 6 (Lecount Hollow to Rose/Collins Road)	4.57
TC-1	Castle Road	2.0
TC-2	Route 6 (from Rose/Collins Road to South Pamet Road)	
TS-1	Old County Road (from Wellfleet town line) to Depot Road to Truro Center Road	3.5
TS-2	Route 6 (South Pamet Road to Route 6A)	2.95
TS-3	Rose Road/Collins Road to South Pamet Road to Truro Center Road	2.3
TN-4	Highland Road (Coast Guard to Route 6A)	1.0
TN-3	South Highland/Coast Guard/Head of Meadow bike trail/High Head to Route 6	4.5
TN-1	Route 6A/Shore Road (from Route 6 to Provincetown town line)	3.92
TN-2	Route 6 (from 6A/Shore Road to Provincetown line)	4.5
PE-2	Rail road bed (Mayflower Ave. proximity to Howland)	1.6
PE-3	Route 6 (Truro town line to Conwell Street)	2.6
PE-4	Harry Kemp Way (Howland Street to Conwell)	0.45
PE-5	Howland Street from railroad bed to Route 6)	0.1
PE-6	Bradford Street (from Commercial to Conwell)	1.15
PW-1	Commercial Street (from Standish to West End rotary)	1.16
PW-2	Bradford Street (from Conwell to Province Lands Road)	1.35
PW-3	Route 6 (Conwell Street to Herring Cove)	1.75
PW-4	Conwell Street-Cemetery Road –Standish Street – Lopes Sq.	.67
PE-1	Route 6A/Commercial (town line to Bradford)	

SECONDARY ROUTE OPTIONS SHOWN ON THE <i>POTENTIAL PRIMARY AND SECONDARY ROUTE OPTIONS</i> MAP		
Segment name	Location	Length (miles)
W-A	West Road (town line to Route 6)	0.55
W-A1	Route 6 (West Road to Lecount Hollow Road)	2.4
W-B	Marconi Beach Road (Route 6 to beach)	1.7
W-C	Marconi Site Road (Marconi Beach Road to overlook)	1
W-H	Cove Road (Route 6 to Pilgrim Spring)	0.85
W-H2	Indian Neck (Pilgrim Spring Road to Indian Neck)	1
WC-6	Long Pond Road (Main Street to Ocean View Drive)	2.15
WC-3	Lecount Hollow Road (CCRT-Ocean View Drive)	0.66
WC-3	Ocean View Drive (Lecount Hollow to Cahoon Hollow Road)	1.72
WC-4	Cahoon Hollow Road (Ocean View Drive to Route 6)	2
W-E	Ocean View Drive (Long Pond Road to Newcomb Hollow parking lot))	1.35
W-M	Pamet Point Road (Route 6 – BBI/Old County Road)	1.25
W-I	Kendrick Ave and Chequesset Neck (from Commercial Street to Griffin Island Road)	2.7
W-J	Bank Street and Commercial Street (from Main Street to Kendrick)	0.6
W-K	Briar Lane (Route 6 to end of existing sidewalk)	0.5
W-L	East Commercial (Main Street to Bank Street)	0.24
WN-1	Main Street, West Main, Pole Dike, Bound Brook (Higgins Lane to Truro line)	3.35
TS-1	Old County and Depot Road (Truro town line to Truro Center Road)	3.3
T-B	Ryder Beach Road (Old County Road to beach)	0.6
T-A	Diana’s Path and railbed (Ryder Beach Road to Bound Brook Island Road)	1.2
T-C	South Pamet Road (Truro Center Road to Ballston Beach parking lot)	1
T-D	Depot Road (Old County Road to Pamet Harbor)	0.65
T-F	Head of the Meadow Road (Route 6 to bike path)	0.9
T-G	Standish Road (Shore Road to Route 6)	0.15
P-A	Race Point Road (Beech Forest to Route 6)	0.52
P-B	Shank Painter Road (Bradford to Route 6)	0.53
PE-5	Bradford Street (Commercial Street split to Conwell)	1.15
P-C	Moors (Province Lands) Road (Commercial Street to Bradford Street Extension)	0.22
PW-1	Commercial Street (Standish Street to west end rotary)	1.2
PW-2	Bradford Street (Conwell Street to Province Lands/Moors Road)	1.35

POTENTIAL BICYCLE/PEDESTRIAN ACCOMMODATION TYPES

Accommodating a range of bicyclist types – from confident, experienced riders to children and less experienced riders – is a goal of the master plan. Providing full separation from motor vehicles provides the most comfortable travel experience for most types of bicyclists but generally requires the most land for construction. Given the wide appeal of multi-use paths and their superior safety, the project team determined that the most appropriate accommodation for the primary route is a separated shared or multi-use path, except in locations where that might be infeasible (due to resource constraints, insufficient right of way, topographic, or other limitation), provide shoulders or bike lanes where feasible. Accommodations along secondary routes would involve less infrastructure change than the primary route and likely would entail providing pavement markings and signage for a share-the-road accommodation, or providing minor separation with shoulder space or bike lanes within the existing roadway footprint. Secondary route pedestrian accommodation would entail sidewalk installation, or signage for a walking trail. See figure of “Accommodation Categories” below.

ACCOMMODATION CATEGORIES	
<p>A. “SHARE THE ROAD:” Bikes, cars travel in same lane. Treatment options: sharrow, lane striping, signage. Best for low-speed (under 35 mph) roads.</p>	
<p>B. “MINOR SEPARATION:” 3-5’ paved shoulder or 4-6’ dedicated bicycle lane</p>	
<p>C. “FULL SEPARATION:” Shared-use path outside roadway footprint or “protected” bike lane</p>	
<p>P. SIDEWALK/PEDESTRIAN PATH: separate space for pedestrian travel.</p>	

THIS GRAPHIC WAS USED IN THE SECOND PUBLIC WORKSHOP MAPPING EXERCISE TO GUIDE SELECTION OF PREFERRED TREATMENT TYPES. SEE NEXT SECTION OF REPORT.

SECOND PUBLIC WORKSHOP

The second public workshop was held on Thursday, March 26, 2015 at the Wellfleet Public Library. About 35 people attended. The purpose of the workshop was to present the potential primary and secondary route concepts to the public and get feedback on the routes and the types of treatment/accommodation CCC staff gave an update on the project and presented the draft Potential Primary and Secondary Route Concepts. Town steering committee members gave updates on bicycle/pedestrian related matters in their communities. Following the presentation, approximately 30 attendees engaged in mapping exercises where they identified (by placing dots on maps) their preferred primary routes and also indicated the type of bicycle/pedestrian accommodations they preferred along the routes. In Wellfleet, almost all the participants marked the rail bed (WC-2) and the Claire Saltonstall bikeway (WC-3: LeCount Hollow Road/Ocean View Drive; and WC-6: Long Pond Road; WN-1: West Main Street, Pole Dike Road, Bound Brook Island Road) as the preferred primary routes. Only one dot was placed on Route 6. In Truro, dots were placed on all of the primary route options, but the greatest number were placed along Old County Road (TS-1), Collins Road (TS-3), and Highland Road/Head of the Meadow bike trail (TN-3). Very few dots were placed on Route 6. In Provincetown, most dots were placed along Route 6 (PE-3) and along the railroad bed (PE-2).

Attendees marked the maps with their preference for accommodating bicycles and pedestrians based on the following options: “share the road” (A), “minor separation” - paved shoulder/dedicated bicycle lane (B), and “full separation” – shared/multi use path or protected bike lane (C), or a sidewalk/pedestrian path (P). (See “Accommodation Types” worksheet above). They were also asked to provide suggestions and notes on the draft routes. In Wellfleet, most marked Ocean View Drive and other parts of the Claire Saltonstall bikeway for a paved shoulder, though some marked it for ‘share the road’. All identified full separation treatment for the rail bed in Wellfleet, and for parts of Route 6 in Wellfleet. In Truro, Old County Road and Castle Road were marked mostly for ‘share the road’ treatment, though some suggested a paved shoulder on Old County Road. Collins Road and South Highland Road were consistently marked for a paved shoulder. Route 6, Head of the Meadow bike trail and the Old Kings Highway segment nearby were all consistently marked for full separation. Participants also suggested a lane reduction along Route 6 in Truro to accommodate a bike lane. In Provincetown, Route 6 and the rail bed were marked for full separation, while a paved sholder was recommended for local roads Bradford, Conwell and Howland Streets.



WORKSHOP #2 –PARTICIPANTS IDENTIFIED PREFERRED ROUTES AND TREATMENTS IN THE THREE TOWNS.

Evaluation of Potential Routes

Following public input on preferred routes and their treatments, the project team conducted an evaluation of 30 potential primary route segments for consistency with the screening criteria, goals and objectives that the team developed. The evaluation provided a preliminary review of potential segments and created a framework for eventual development of alternatives.

TREATMENT ASSUMPTIONS

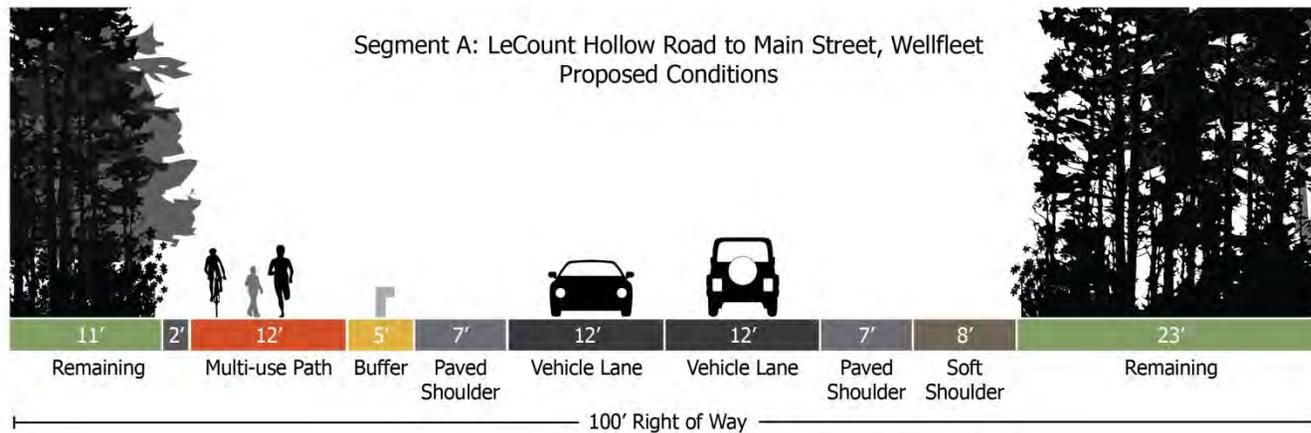
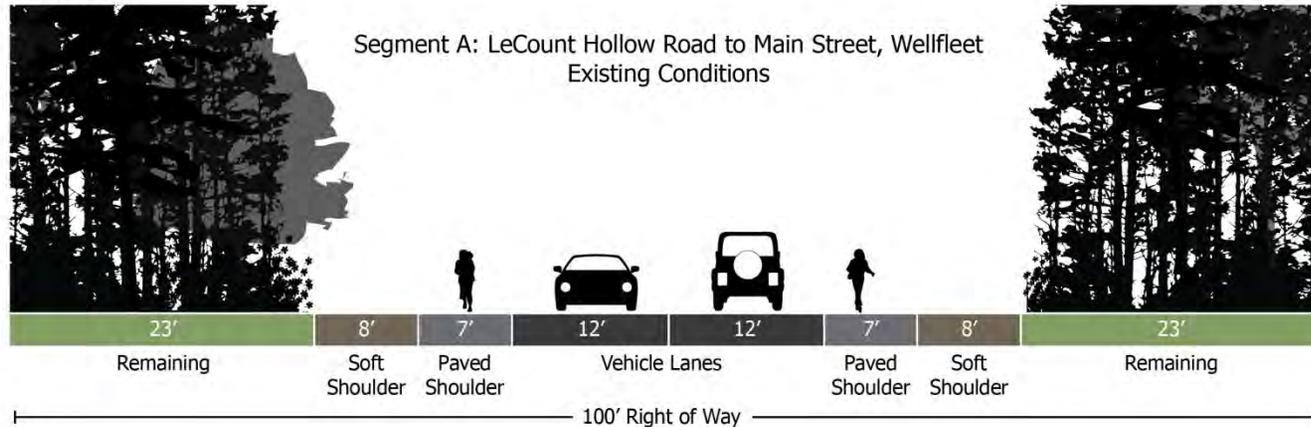
To evaluate route segment impacts, the project team needed to make assumptions about the type of treatment or bicycle/pedestrian accommodation that would be provided along each segment. The screening process assumed that any segment located along Route 6 would be a separated multi-use path that would be accommodated by expanding the existing cleared area approximately 11-14 feet. Typical cross sections illustrating the potential configuration of a multi-use path along various segments of Route 6 are shown on the following pages. Segment A illustrates the portion of Route 6 in Wellfleet with two lanes and a 100-foot right-of-way. Segment B illustrates the portion of Route 6 in Wellfleet and Truro with two lanes and a 200-foot right-of-way. Segment C illustrates the portion of Route 6 in Truro with four lanes and a 200-foot right-of-way. Segment D illustrates the portion of Route 6 in Provincetown with four lanes, a center median, and a 200-foot right-of-way. While these are typical cross sections, there are some areas with constraints such as steep slopes and bridges that would require variation.

Route segments located along local roads were generally assumed to include a 4-foot shoulder on each side plus 1-foot clearance, with some exceptions for local roadways where shared use is proposed due to strong public comment against road widening. Depending on the existing width of pavement, providing 4-foot bicycle shoulders could require clearing between 3-10 feet of additional area. Existing or proposed multi-use trails such as Head of the Meadow Bicycle Trail were assumed to remain as a multi-use path with limited widening (0-2 feet) to meet current trail design standards. Existing unpaved segments such as the rail beds in Wellfleet and Provincetown are proposed to remain unpaved with modest widening (up to 5 feet), and to incorporate some kind of hardened surface in an effort to retain the existing tree canopy and natural character of these Outer Cape settings. The team considered the estimated amount of widening to gauge potential impacts on evaluation criteria such as natural resources, community character, and construction cost.



CAPE COD
COMMISSION

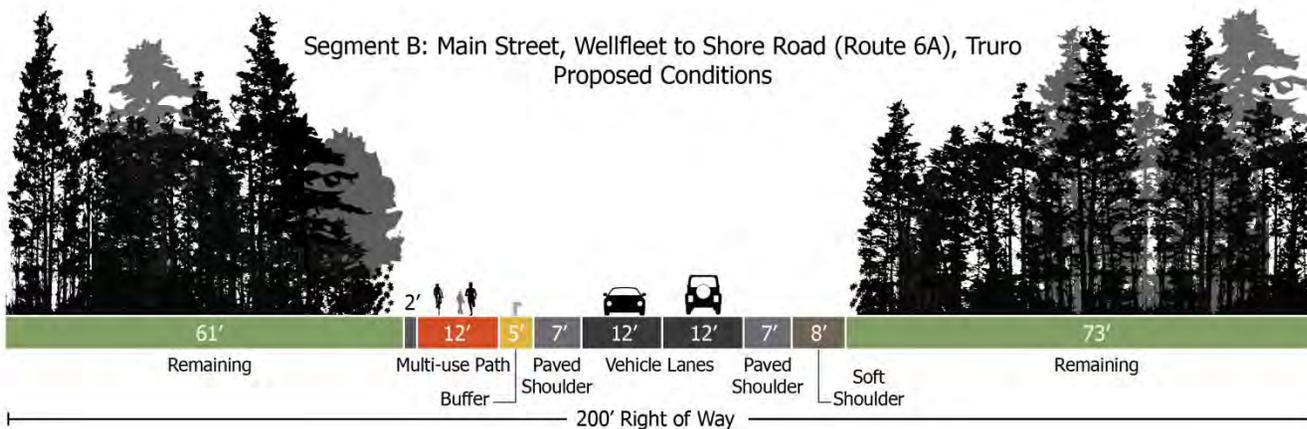
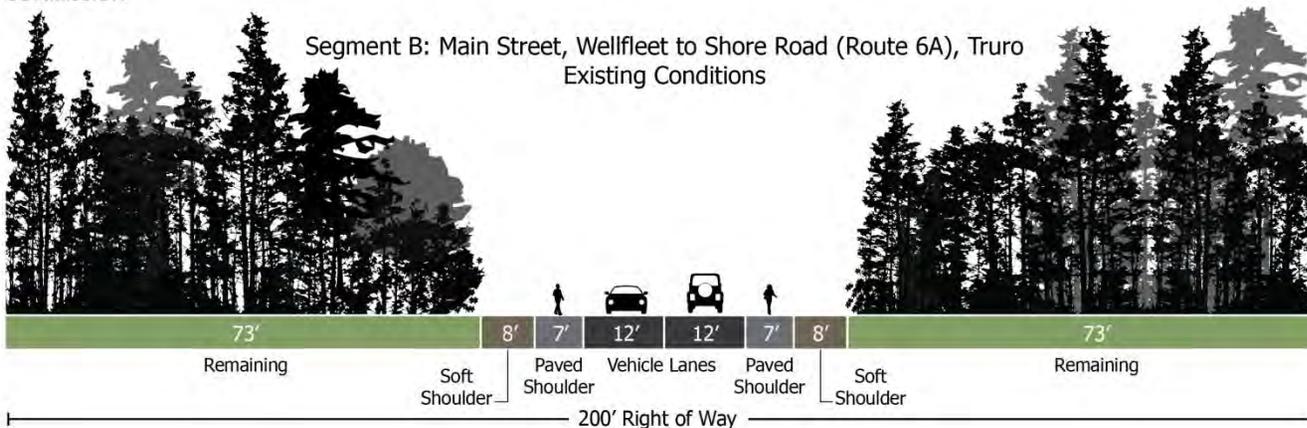
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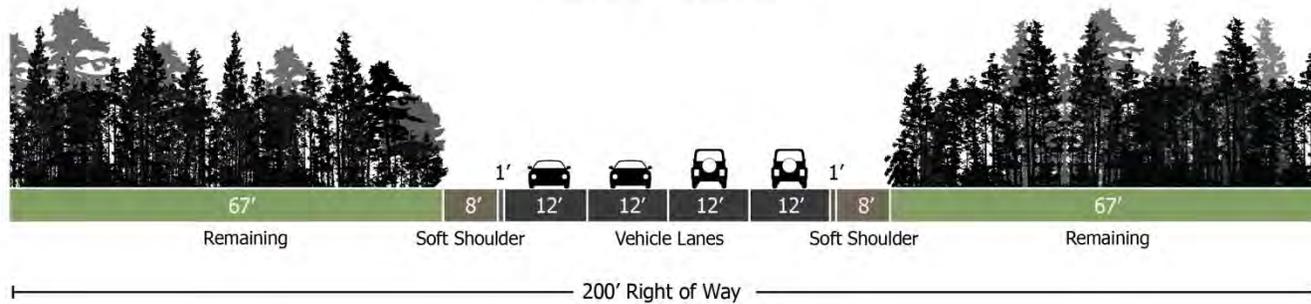
Outer Cape Bicycle and Pedestrian Master Plan Route 6 Multi-use Path Design Concept



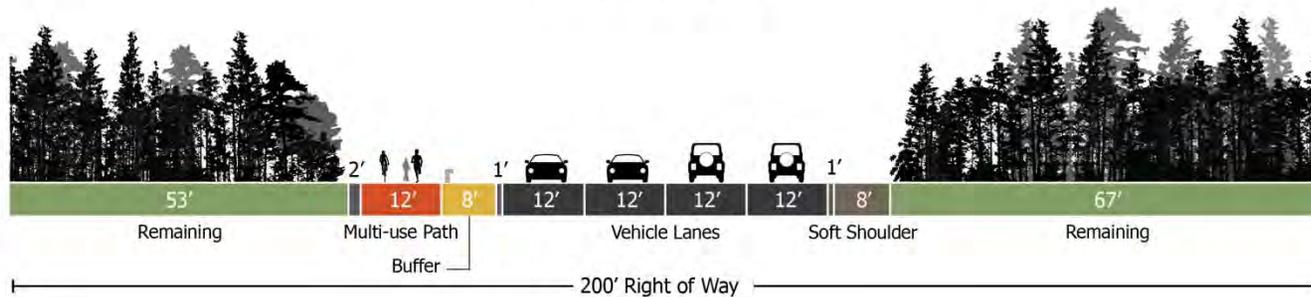


Outer Cape Bicycle and Pedestrian Master Plan Route 6 Multi-use Path Design Concept

Segment C: Shore Road (Route 6A), Truro
to Provincetwon Town Line
Existing Conditions



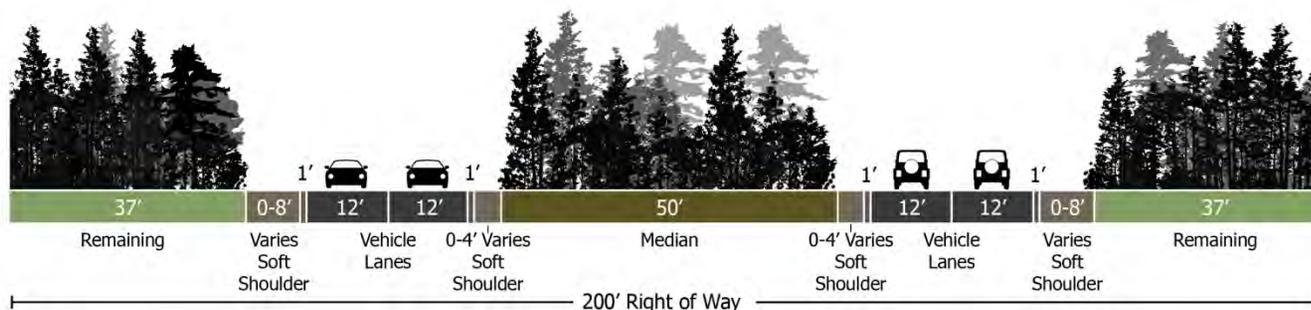
Segment C: Shore Road (Route 6A), Truro
to Provincetwon Town Line
Proposed Conditions



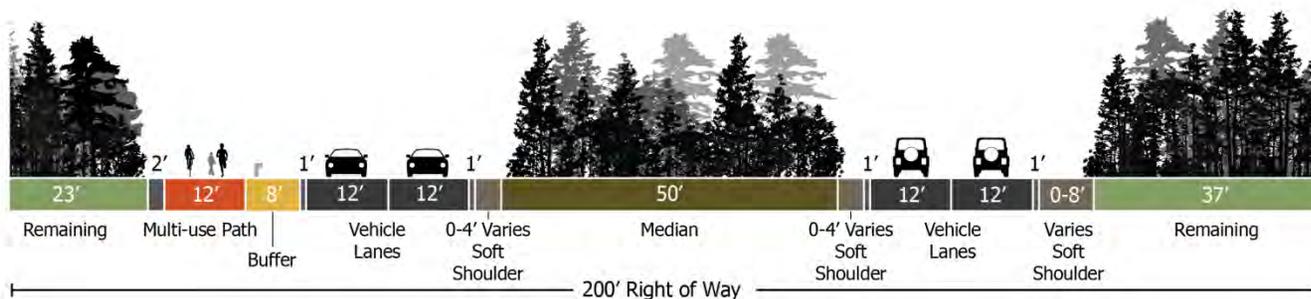


Outer Cape Bicycle and Pedestrian Master Plan Route 6 Multi-use Path Design Concept

Segment D: Provincetown Town Line to Herring Cove Beach
Existing Conditions



Segment D: Provincetown Town Line to Herring Cove Beach
Proposed Conditions



ROUTE SEGMENT SCREENING/EVALUATION MATRIX

The Potential Routes Screening/Segment Evaluation Matrix presents a summary of the review and is included as Appendix A. The headings for each paragraph below correspond to each category of the evaluation criteria (which originated from the Master Plan goals). The team used three symbols to indicate the degree to which each segment meets the review criteria/objectives: a green circle indicates that the segment “fully addresses the objective;” a white diamond indicates that the segment partially addresses the objective; and a red square indicates that the segment does not meet the objective.

USERS/CONNECTIVITY

The evaluation criteria/objectives in this category include the following: creating a route that accommodates different levels of bicyclists (primarily) and pedestrians; providing a direct north–south route between Wellfleet and Provincetown; and providing access to popular attractions/destinations such as town centers, beaches, and attractions in Cape Cod National Seashore.

The multi-use path segments on Route 6 best address these criteria, as an accommodation fully separated from motor vehicles serves most levels/types of bicyclists and pedestrians. Route segments in shoulders (partial/minor separation) and “shared” lanes may not meet the needs of children and inexperienced/less confident riders but are adequate for most. The Route 6, Wellfleet railroad bed, and Rose/Collins Road segments provide the most direct north – south route through Wellfleet and Truro. Three segments in Wellfleet (Lecount Hollow and Ocean View Drive – segment WC-3 Cahoon Hollow Road – segment WC-4, and Long Pond Road – segment WC-6) take riders to ocean beaches, but they follow a much less direct route and provide minor separation from vehicles so they did not meet this criterion/objective.

RESOURCE ISSUES

The evaluation criteria in this category include minimizing impacts to sensitive natural and cultural resources, such as rare species habitat, wetlands, floodplains, historic buildings, and archaeological resources, as well as minimizing impacts to undeveloped areas.

Much of the Outer Cape, and therefore most of the route segments, are located within areas mapped by Massachusetts Natural Heritage Endangered Species Program as “Biomap 2 core habitat.” The evaluation table reflects the degree to which a segment is located within a particular resource area but may not reflect the nature or degree of impacts or potential mitigation. Substantial portions of Pole Dike Road and Bound Brook Island Road (segment WN-1) in Wellfleet, and Old County Road (segment TS-1) in Truro are located within the wetland buffer area; in addition much of Pole Dike Road and Bound Brook Island Road is also located within a flood zone. Due to potential wetland impacts associated with road widening, the team evaluated these segments as not addressing the objectives/criteria in this area.

While several route segments are located in areas with historic buildings, none rose to a level of concern. All route segments either fully address this objective/criterion or partially address it.

The following five potential route segments travel through mostly undeveloped areas: Wellfleet rail bed (segment WC-2); Rose/Collins Road (segment TS-2), Old Kings Highway (segment TN-3(b)), High Head Road (segment TN-3(d)), and Provincetown rail bed (segment P-2(a)). This raised concern in terms of minimizing impacts to undeveloped areas. However, the segments are located on or are expansions of an existing road or railroad bed, so they would not introduce development in a completely undeveloped area.

CHARACTER & EXPERIENCE

The evaluation objectives/criteria in this category include creating a route that is consistent with the surrounding character, providing a scenic route, providing a route with interpretation opportunities, and providing a route that connects to amenities (i.e. food, facilities, etc.).

Several of the potential route segments involve widening of an existing paved area, including the multi-use path segments on Route 6 in Wellfleet and Truro, and the creation of paved shoulders on local roads. Expanding pavement width by 10' to create shoulders on sections of Pole Dike Road and Bound Brook Island Road (segment WN-1), Old County Road (segment WC-1), Cahoon Hollow Road (segment WC-4), and South Pamet Road (segment TS-3(b)) could alter the surrounding character by reducing the tree canopy and/or expanding a winding, narrow road in a wooded or rural setting. Increasing use intensity on the Provincetown Rail bed (segment P-2) by turning the existing walking trail into a multi-use path could alter the character of the tranquil woodland environment. The team evaluated these segments as not addressing the objectives/criteria in this area.

Most of the route segments provide a scenic experience, travelling through coastal, woodland, or rural scenery. The Route 6 segments provide a less scenic route due to their proximity to highway traffic and existing commercial development (though much of North Truro and Provincetown do not have commercial development along the route). Similarly, for providing interpretive opportunities, the Route 6 segments in Wellfleet and Truro (except for TN-2, which runs past an historic cemetery and Pilgrim Heights) did not address this criterion/objective as well as other options.

Several potential route segments did not address the objectives/criteria for connecting to amenities as effectively as others. These are primarily Truro segments, including Route 6 segments in the north and south portions of the town, the Old King's Highway (segment TN-3(b)), and High Head Road (segment TN-3 (d)); plus two Provincetown segments: the rail bed (segment P-2(a)); and the Route 6 segment from the Truro line to Conwell Street (segment P-3(a)).

Grades: Most segments are relatively flat (no grades over 5%) or contain a mix of rolling hills with few steep grades and short grades between 5-10%. Four segments contain grades over 5% on a substantial portion of the route and have rolling hills –Old County Road/Depot Road (segment TS-1); Truro Center Road/Castle Road (segment TC-1); Route 6 from South Pamet Road to Castle Road (segment TC-2(a)); and Route 6 from Castle Road to South Highland Road (segment TC-2(b)).

SAFETY

The evaluation criteria in this category include providing a route where bicyclists feel safe and comfortable, including a low-stress route with minimal conflicts with motor vehicles.

The Route 6 segments, existing bike paths, and rail road bed segments would provide full separation from motor vehicles; several routes on low-volume local roads, while only partially separated from motor vehicles (i.e. in paved shoulders), would provide a low stress experience for most riders. Several routes with paved shoulders on moderate traffic roads may provide a more stressful travel experience. Frequent driveway and road crossings for the Route 6 segments in commercial areas of Wellfleet and Truro create stress and conflict points. No segment failed to address the safety criteria/objectives in full, but many addressed the criteria only partially.

IMPLEMENTATION

The evaluation criteria in this category include using the existing public right of way (ROW) for bicycle/pedestrian accommodations, minimizing land acquisition needs (i.e. private property locations), providing a cost effective route, and developing a route plan that has community support.

All route segments are located within public rights-of-way, either state owned (MassDOT or DCR), town-owned, or NPS –owned. None would require easements or rights through private land. The Route 6 multi-use path segments are among the highest cost accommodations. While further analysis may show that they would be cost effective, they were evaluated as not meeting the objectives/criteria at this stage of plan development because they are the highest cost accommodations. The Castle Road segment in Truro is also considered a high cost segment, given the engineering, design, and construction work needed to widen and provide paved shoulders adjacent to steep cross slopes and improve sight lines. These routes scored poorly because of their “significant concerns.” Community support at this stage of route development was mixed but sufficient for all segments to be considered and further refined. However, the Truro Bike and Walkways Committee stated it does not support use of Castle Road or Old County Road as primary routes segments. Widening the connecting segment in Wellfleet (Bound Brook Island Road and Pole Dike) for use as a primary route also lacks community support based on workshop responses and public meetings related to wetland restoration projects in that area.

ROUTES SCREENING EVALUATION RESULTS

The evaluation table shows that many potential segments did not address one or more objectives but fully addressed and partially addressed other criteria. Most of the potential segments remained under consideration for primary routes development.

The project team screened out Wellfleet segment WN-1 (Main Street, West Main, Pole Dike Road, & Bound Brook Island Road) , and Truro segments TS-1 (Old County Road/Depot Road) and TC-1 (Castle Road) following the evaluation. These three segments are linked to one another and together would provide a “back way” route. However, given potential community character and wetland buffer impacts from road widening, and without community support or notable safety benefits to bicyclists, these route segments were dismissed from consideration as primary route segments. They remain as potential secondary route segments. Wellfleet segment WC-5(a) (Old County Road from Route 6 to Old Kings Highway) was not screened out by the evaluation criteria but was dismissed from further consideration at this stage of route development due to more suitable alternative segments in the same area.

The Route 6 segments raised concern due to their cost, less scenic character, and potential conflicts from commercial development and high traffic. Due to their directness and adequate right-of-way to create a fully separated multi-use path, as well as the limited number of suitable alternatives in several areas, they remain under consideration for primary route segments.

PUBLIC COMMENTS

Members of the public provided input on bicycle and pedestrian route planning at the three public workshops and through the CCC and NPS websites CCC and NPS received 36 email comments/letters on the OCBPMP. The table below provides a summary of the comments. (See Appendix D for comments in their entirety.) Overall, the public comments were in support of providing new bike trails accommodations between Wellfleet and Provincetown, with only a few exceptions. Some commenters had additional ideas for the trails, or questions about certain aspects of the proposal. General comments after the first workshop about the proposal as a whole are summarized below.

- Current bike trails are limited, and some feel that only safe way to get to the current trails is by car, so the new trails are welcomed by many.
- Extending bike paths will be good for local businesses by providing an easy way for cyclists to get to them, possibly including spur trails for short trips to commercial centers, as already exist in some locations.
- It will be beneficial for people’s health to offer longer trails which provide more opportunities for exercise and recreation.

- One commenter mentioned an abandoned railroad bed from Wellfleet Village up into Truro which might provide a good location for the bike path if the land is available.
- Security is a concern for those who live or own property along the proposed path. Questions were: will there be a curfew? Will it be used for dog-walking? How will the Seashore minimize litter, noise, and safety? How will the rules be enforced?
- Ensuring ongoing maintenance is a concern, and should be built into a budget. Maintenance should include cleaning trails, trimming back overgrowth, fixing or replacing damaged signage, and repaving trails where tree roots have erupted. It was noted that damaged pavement is an issue on the existing trails.
- A resident of Wellfleet is opposed to the bike trail as it will increase the amount of visitors and traffic on the roads, including those bringing bicycles on their cars in the summer. Opening up sensitive resource areas to more foot and bike traffic was also a concern.
- Taxpayers worry about paying for the trails and what the real cost will be to them.
- The park's proposed (winter 2015) fee increase was seen as too high and might discourage use by families due to financial cost. A graduated fee schedule to charge more for cyclists and less for pedestrians was suggested. There is a concern that this creates a precedent and the fees will go up again in a few more years.

Comments received following the later workshops generally expressed support for improved bicycle and pedestrian accommodations and connections between the three communities, but several opposed routing bicyclists on local roads.

A summary list of all written comments from the first workshop in October 2014 through the third workshop in November 2015 is provided below:

OUTER CAPE BICYCLE AND PEDESTRIAN MASTER PLAN PUBLIC COMMENTS RECEIVED 10/2014 – 4/2016		
Date	Name	Comment Summary
10/14/14	S.C. Fox, Wellfleet	Safety concerns about Lecount Hollow/Route 6 intersection
10/14/14	J.A. Citron, Truro	Question about how to keep up with meetings in off season.
10/15/14	E. Mays	Would like material on website before public meeting
10/15/14	D.Parish, Wellfleet	Question about how to get involved in implementing bike plan
10/15/14	B.Meggison, West Harwich	Would prefer that funds are spent on fixing/maintaining existing infrastructure rather than new construction. Existing CCRT in poor condition.
10/16/14	C.Haynes, Truro	Request to put maps on website in advance of workshop
10/20/14	D.Parish, Wellfleet	Question about attending Truro workshop.
10/28/14	P.Jahnige, DCR	Contacts list for DCR issues.
11/6/14	R. Curley, Wellfleet	Would like to see better images/maps. Concern about safety, especially crossing Route 6 in summer.
11/9/14	J.Schrock	Supports CCRT extension as a separated multi-use path; supports creation of connections to commercial areas.
11/10/14	A.Tsigas	Support bike path and biking safety but concern over bicyclists who don't walk bikes at crossings or wear helmets.
11/18/14	Ri dill	Enjoys CCRT but has concern about hazards – especially at road crossings –from failure to stop and other safety problems from ignoring rules.
11/18/14	E.Hay, Wellfleet	Interest in getting involved with efforts to make biking and walking safer, especially on Route 6 and school routes.
11/22/14	B.Rushmore, Provincetown	Suggests a paved bike trail on south/bay side Route 6 from Truro Rte 6A to Provincelands Rd. Bradford Street too dangerous.
11/23/14	B.Taylor, Wellfleet	Opposed to bike trail extension through Wellfleet due to safety and natural resource impacts from increased usage and exceeding carrying capacity.
3/27/15	M. Snell, Truro	Opposed to using Castle Road for bicycle route.
3/27/15	G. Zebrowski, Wellfleet	Opposed to encouraging more bikes on Ocean View Drive. Rail trail extension is the only way through Wellfleet..
4/1/15	R. Kapit, Eastham & Bethesda	Supports extension of CCRT northward; riders now have to head onto busy summertime roads to ride north to Provincetown.
4/17/15	J. Etsten, Wellfleet	Opposed to routing bicyclists on side roads in Wellfleet.
5/28/15	B. Taylor, Wellfleet	Concerns about safety impacts on Wellfleet roads
8/29/15	J. Farrell	Question about viability of railroad bed from Wellfleet to Provincetown
8/25/15	D. Yochelson, Truro	Concerns about routing bikes on Collins Road, Old Kings Highway, South Pamet, and other narrow roads.
8/26/15	Elena M.	Concern that routing on South Highland Road could impede driver access from side roads and driveways
10/11/15	D. Colton, Provincetown	Would like more attention paid to improving bike/ped conditions on Route 6A from Snail Road to Stott's – safety issues.
11/3/15	K.Nelson, Brewster	In favor of bike path extension
11/3/15	D. Kling	In favor of bike path extension
11/3/15	A.Carow, Wellfleet	In favor of bike path extension
11/3/15	A.Dowdy, Brewster	In favor of bike path extension
11/3/15	D. Coombes, Harwich	In favor of bike path extension
11/3/15	L. Duffy	In favor of bike path extension
11/3/15	N. Rogoff	In favor of bike path extension

OUTER CAPE BICYCLE AND PEDESTRIAN MASTER PLAN PUBLIC COMMENTS RECEIVED 10/2014 – 4/2016		
Date	Name	Comment Summary
11/3/15	M. Ackerman, Brewster	In favor of bike path extension
11/4/15	D. Carlson	In favor of bike path extension
11/8/15	F & J Flint, Truro	In favor of bike path extension
11/16/15	W. Carlson, South Wellfleet	Prefers railroad bed over Ocean View Drive for safety, ease, and protection from wind
2/3/16	D. Neville, Wellfleet	Opposed to using Cahoon Hollow Road
3/1/16	G. Ramer, Wellfleet	Questions about widening, grading to roads
2/18/16	R. McCabe, Wellfleet, NY	Questions about timing of proposal, future workshop

Primary Route Alternatives

Following the second workshop, the project team reviewed the results of the mapping exercises and public comments received, both in the workshops and electronically. It conducted additional site visits and review of project goals, route evaluation criteria, roadway characteristics, and resource maps and refined the potential primary route concepts to create three primary route alternatives for further analysis. The three routes incorporate all road segments that received substantial support from the public and from Steering Committee members, and were designed to provide different types of travel experiences. One incorporates existing rail beds and bicycle paths, one focuses on local scenic roads, and one follows along Route 6. The different options include consideration of a multi-use path on both sides of Route 6, allowing the potential impacts of placing such a facility on the east or west side of the highway to be compared. The three options also provide a range of experiences in terms of their varied scenic characters and in terms of their varied levels of accommodation. The steering committee reviewed the three potential primary route alternatives and potential secondary route alternatives at a meeting on May 7, 2015. Characteristics of the Primary Route Alternatives are included in the Route Summary Tables in the Appendix. The table includes the location of each segment, its length, suggested accommodation, land ownership information, and additional notes. A narrative description of the three potential primary routes follows.

POTENTIAL PRIMARY ROUTES

PRIMARY ROUTE A: EXISTING RAIL BED AND BIKE TRAIL ALTERNATIVE

Travelling north from the Cape Cod Rail Trail, Alternative A follows the DCR-owned rail bed until its intersection with Old County Road/Old Kings Highway, which it follows in paved shoulders to Cahoon Hollow Road and travels west to Route 6, where it would follow a separate multi-use path to Rose Road/Collins Road in Truro, where it would travel in paved shoulders to South Pamet Road. Travelling on paved shoulders west, the route then accesses Route 6 at North Pamet Road where it would follow a separate multi-use path on the east side to South Highland Road. From there it would travel in shoulder space to Coast Guard Road and continue to the unpaved Old King's Highway connection to the Head of the Meadow bike trail. At the bike trail terminus, the route follows High Head Road in shared space to Route 6, where would cross the road north (at Stott's crossing) and continue as a separate multi-use path to Snail Road, where it would connect with the existing railroad bed and continue to Howland Road, where it follows paved shoulders briefly before turning onto the Route 6 right of way following a multi-use until Conwell Street, where it follows the proposed on road shared route down Cemetery Road, Alden Street, Bradford, and Standish to Macmillan Wharf.

PRIMARY ROUTE B: SCENIC LOCAL ROAD ALTERNATIVE

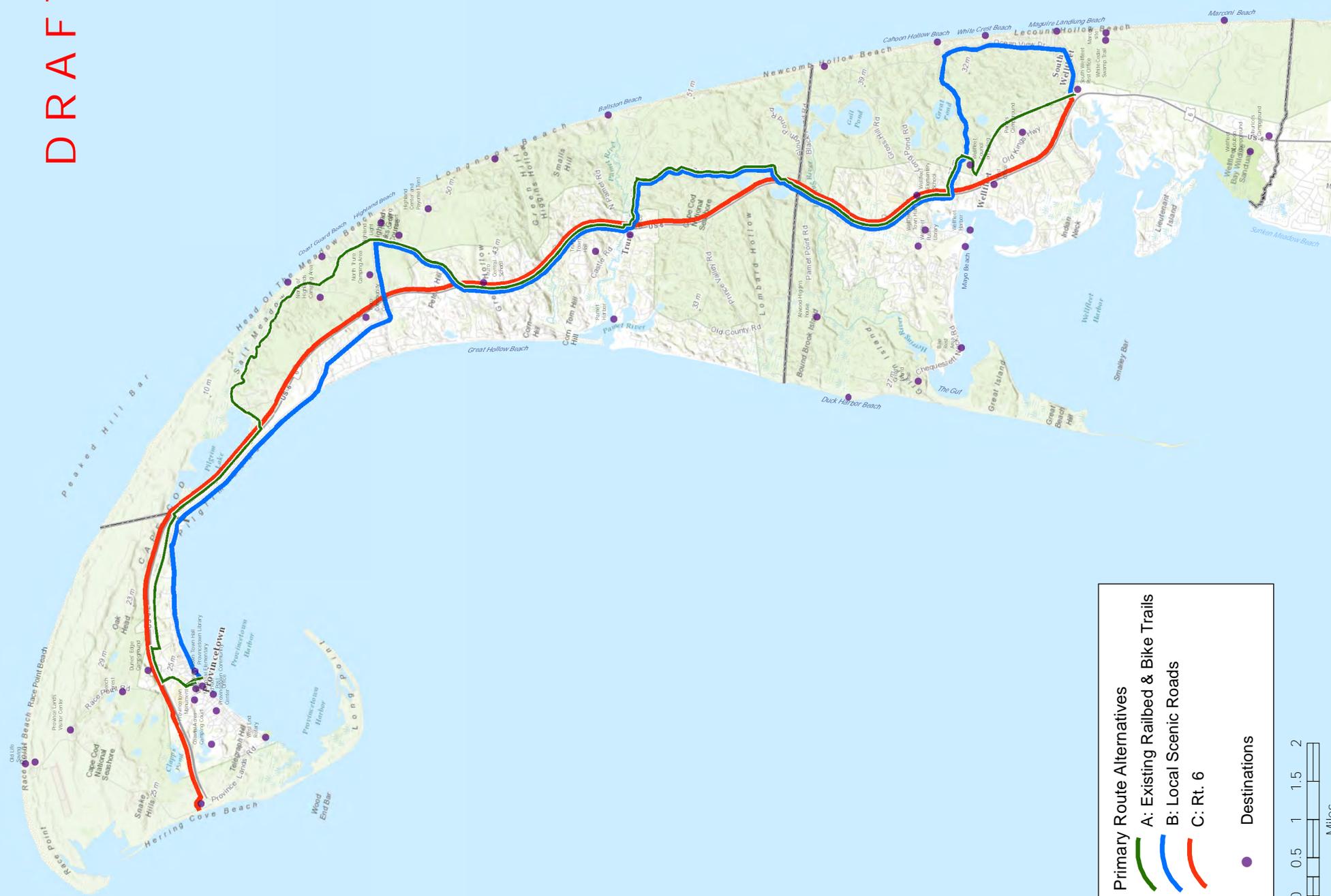
Travelling east from the CCRT, the route takes the scenic Lecount Hollow Road and Ocean View Drive in shoulder space to Cahoon Hollow Road, where it would travel in shoulder space to Route 6 and continue as a separate multi-use path to Rose Road/Collins Road where it would travel on paved shoulders to South Pamet Road. Travelling on paved shoulders west, the route then turns onto North/South Pamet Road and onto Route 6, where it continues as a multi-use path on the east side to South Highland Road. From there it travels in shoulder space along South Highland Road to Highland Road, and continues to Route 6A/Shore Road in shoulder space to Commercial Street in Provincetown where it travels in shared-space to Macmillan Wharf.

PRIMARY ROUTE C: ROUTE 6 MULTI-USE PATH ALTERNATIVE

From the CCRT and Lecount Hollow Road, the route follows Route 6 to Herring Cove beach parking lot. The path would all be on the west and (in Provincetown) south side, until Shank Painter Road, where it crosses to the north side and uses the abandoned old Route 6 layout to Herring Cove Beach parking lot.



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Primary Route Alternatives

- A: Existing Railbed & Bike Trails
- B: Local Scenic Roads
- C: Rt. 6

● Destinations



PRIMARY ROUTE ALTERNATIVES SEGMENT LIST

ALTERNATIVE ROUTE A – EXISTING RAIL BED AND BIKE TRAIL FOCUS

Segment ID	Road Name	Location (south-north)	Segment Length	Suggested Accommodation	Road/Land Owner	Length inside NPS Boundary	Additional Description
WC-2	Railbed	From LeCount Hollow Road to Old County Road/Old King's Highway	1.75 miles	Separated multi-use path; consider unpaved surface (i.e. stone dust or similar)	DCR	-	Direct connection to CCRT. Immediately adjacent to several residences/backyards and serves as access driveway to two dwellings and the utility corridor.
WC-5	Old County/OKH	From railbed to Cahoon Hollow Road	0.35 miles	4' shoulders both sides	Town of Wellfleet	0.32 mile	Undeveloped area except for power lines and Council on Aging/Senior Center.
WC-4	Cahoon Hollow Road	From Old County Rd/Old Kings Highway to Route 6	0.57 miles	4' shoulders both sides	Town of Wellfleet	0.22	Residential neighborhood, with cemetery and restaurant located at intersection. Steep grade at intersection. Town (and MassDOT) is planning for intersection improvements, including bike/ped accommodation, at Main Street.
WN-2	Route 6	From Cahoon Hollow Road to Rose Road/Collins Road	2.32 miles	Separated multi-use path on east side	MassDOT	0.5	Existing shoulders reduced to 1' near between Cahoon Hollow & Main Street signals area, which is included in the Main Street intersection improvement project. Wetlands north and south of intersection west side and Herring river wetlands both sides of Route 6 south of Rose/Collins Road.
TS-3	Rose Road/Collins Road	From Route 6 to South Pamet Road	2.30 miles	4' shoulder both sides	Town of Truro	2.3 miles	Rose Road (south end) provides a 0.18 mile connection between Route 6 and Collins Road. This segment provides a popular scenic alternative to riding on Route 6, as a rural low traffic volume road and offers a low-stress travel experience. It provides access to several walking trails and fire roads. It is primarily undeveloped, with about four homes located off of Collins. Two hills.

Segment ID	Road Name	Location (south-north)	Segment Length	Suggested Accommodation	Road/Land Owner	Length inside NPS Boundary	Additional Description
TS-3	South Pamet Road	From Collins Road to /Route 6 (via North Pamet Road)	0.73 miles	4' shoulder both sides	Town of Truro	0.45 mile	Popular bicycle and pedestrian route, providing access to Ballston Beach and connecting to the town center. Bordered by Pamet River wetland system along most of the north side and along a portion of the south side. Guardrails present along portions of both sides.
TC-2	Route 6	From North Pamet Road to South Highland Road	2.47 miles	Separated multi-use path on east side	MassDOT	-	Steep grade on Route 6 between North Pamet Road and Town Hall Road. Level recovery area borders much of the paved shoulders. Guardrails on east side in sections. Occasional driveways and intersections with low-volume secondary or subdivision roads.
TN-3	South Highland Road	From Route 6 to Coast Guard Road	1.4 miles	4' shoulders	Town of Truro	0.75	Residential neighborhood. Popular route for bicycling and walking. Campground, Highland Light, golf course located on east side. Access to Highlands Center too. Provides quiet low stress alternative to Route 6. Moderate grade between campground and Highland Road.
TN-3	Coast Guard Rd	From South Highland Road to dirt road	0.48 miles	Share the road	Town of Truro	0.48 mile	Beach access road – low vehicle volume. Rural. Popular bike/ped route to beach.
TN-3	Old King's Highway)	From Coast Guard Rd to Head of Meadow trail	0.8 mile	Share the road; stabilize and minor width increase possible	NPS	0.8 mile	Provides access to one residence. 10-12'. Unpaved. Treat with hardener – but keep unpaved
TN-3	Head of the Meadow bike trail	Existing paved bike trail	1.9 miles	Might be widened outside wetlands; may need to raise elevation of some sections	NPS	1.9 miles	Paved bike trail adjacent to wetlands. In poor condition – scheduled for repairs and partial widening 2018.

Segment ID	Road Name	Location (south-north)	Segment Length	Suggested Accommodation	Road/Land Owner	Length inside NPS Boundary	Additional Description
TN-3	High Head Road	From bike trail/parking area to Route 6	0.62 mile	Share the road	NPS	0.62	Subject to flooding – adjacent to wetlands (East Harbor). Dirt road in poor condition. Potential conflict with ORV access route.
TN-2	Route 6 **NOTE Route 6 crossing here (at Stott's)	From High Head Rd and north to Stott's crossing to Provincetown town line	1.70 miles from Stott's to town line (.09 mile from High Head to Stott's)	Separated multi-use path on west side	MassDOT	-	Crossing needed between High Head and Stott's Crossing. Sufficient ROW for bike facility, but road diet suggested by some. Wetlands.
PE-2	Route 6	From Provincetown town line to Snail Road	0.85mile	Separated multi-use path on west side	Town of Provincetown	-	Dunes both sides of Route 6. Less concern about blowing sand on west side.
P-D	Snail Road	Route 6 to railroad bed	0.10	4' shoulders both sides	MassDOT	-	Town may want to extend shoulders all the way to Route 6A.
PE-2X	Railroad bed	From Snail Road – Howland Street	0.96 mile	Existing separate unpaved trail/path; consider unpaved surface	Town of Provincetown	-	This segment uses Snail Road shoulders for .08 mile (Segment P-D).
PE-5	Howland Street	From railbed north to Route 6 Right of Way	0.10 mile	4' shoulder both sides	Town of Provincetown	-	Short connector piece along existing paved road between Route 6 & rail bed.
PE-3	Route 6	From Howland Street to Conwell Street	0.45	separated multi-use path on south side	Town of Provincetown, MassDOT	-	Conwell Street intersection crossing. Wetland buffer area. Town developing plans for sidewalk and bike lane on Conwell.

Segment ID	Road Name	Location (south-north)	Segment Length	Suggested Accommodation	Road/Land Owner	Length inside NPS Boundary	Additional Description
PW-4	Conwell St/ Cemetery Rd/ Alden St/ Bradford St/ Standish St – Lopes Square	From Route 6 to Macmillan Wharf (may be constructed 2017)	0.67 mile	Shoulder on Cemetery Road; share the road elsewhere:	Town of Provincetown, MassDOT (portion of Conwell)	-	*CCNS provided funds to Town of Provincetown through federal grant for bike/ped improvements on this segment. This segment could be replaced by potential connection through Riley's lot from Conwell to Standish/Bradford, if granted.

ALTERNATIVE ROUTE B – LOCAL ROADS FOCUS

Segment ID	Road Name	Location (south to north)	Segment Length	Suggested Accommodation	Road/Land Owner	Length inside NPS Boundary	Additional Description
WC-3	LeCount Hollow Road	From CCRT to Ocean View Drive	0.66 mile	4' shoulder both sides	Town of Wellfleet	0.5 mile	Beach access road. Popular bicycle and pedestrian route, especially in summer.
WC-3	Ocean View Drive	From LeCount Hollow Road to Cahoon Hollow Road	1.72 miles	4' shoulder both sides	Town of Wellfleet	1.72 miles	Popular scenic bicycle and pedestrian route. Heavy use in summer. Residences and town beaches adjacent.
WC-4	Cahoon Hollow Road	From Ocean View Drive to Route 6	2 miles	4' shoulder both sides	Town of Wellfleet	1.68 miles	CCNS woodland abuts both sides of the road east of Old County Road/OKH intersection, where it becomes residential until Route 6. Passes Great Pond. Poor sightlines. Cemetery and restaurant located at intersection. Steep grade at intersection Route 6 intersection.
WN-2	Route 6	From Cahoon Hollow Road to Rose Road/Collins Road	2.32 miles	Separated multi-use path on east side	MassDOT	0.5 miles	Existing shoulders reduced to 1' near between Cahoon Hollow & Main Street signals area, which is included in the Main Street intersection improvement project. Wetlands north and south of intersection west side and Herring River wetlands both sides of Route 6 south of Rose/Collins Road.
TS-3	Rose Rd/Collins Road	From Route 6 to South Pamet Road	2.3 miles	4' shoulder both sides	Town of Truro	2.3 miles	Rose Road (south end) provides a 0.18 mile connection between Route 6 and Collins Road. This segment provides a popular scenic alternative to riding on Route 6, as a rural low traffic volume road and offers a low-stress travel experience. It provides access to several walking trails and fire roads. It is primarily undeveloped, with about four homes located off of Collins. Two hills

Segment ID	Road Name	Location (south to north)	Segment Length	Suggested Accommodation	Road/Land Owner	Length inside NPS Boundary	Additional Description
TS-3	South Pamet Road	From Collins Road to Route 6 (via North Pamet Road)	.73 mile	Shoulder both sides	Town of Truro	0.45	Popular bicycle and pedestrian route, providing access to Ballston Beach and connecting to the town center. Bordered by Pamet River wetland system along most of the north side and along a portion of the south side. Guardrails present along portions of both sides. New sidewalk on south side, west of the Route 6 overpass that extends to the Truro Town Center Road/Depot Road intersection.
TC-2	Route 6	From N Pamet Road to South Highland Road.	2.46 miles	Separated multi-use path on east side	MassDOT	-	Several commercial driveways are located on the west side of Route 6. Steep grade between Truro Central School and South Highland. Sidewalk on the west side between school and police station.
TN-3	South Highland Road	From Route 6 to Highland Road	1.4 miles	4' shoulders	Town of Truro	0.73 mile	Residential neighborhood. Popular route for bicycling and walking. Campground, Highlands Center, Highland Light, golf course located on east side. Provides quiet low stress alternative to Route 6. Moderate grade between campground and Highland Road.
TN-4	Highland Road	From South Highland Road to Route 6A	1.04 miles	4' shoulders	Town of Truro and MassDOT	0.68 mile	Flat terrain, residential neighborhood east of Route 6 overpass, then becomes North Truro Center commercial area, with food market and a couple of small eateries. Popular route to beach.
TN-1	Route 6A (Shore Road)	From Highland Road to Commercial St/town line	3.92 miles	4' shoulders	Town of Truro	-	Steep grade at Route 6A/Highland Road intersection. Route 6A has numerous curb cuts, parking lots, driveways and utility poles both sides. Dune on east/bay side. Beach Point segment is flat terrain.
PE-1	Commercial Street	From Shore Road/town line to Macmillan Wharf	2.2 miles	Share the road	MassDOT & Town of Provincetown		Primary route through downtown Provincetown. High motor vehicle and bike/ped volumes in season. Densely developed. Little room for additional accommodation except striping/pavement markings.

ALTERNATIVE ROUTE C – ROUTE 6 FOCUS

Segment ID	Road Name	Location (south to north)	Segment Length	Suggested Accommodation	Land/Road Owner	Length Within NPS Boundary	Additional Description
WC-X	Lecount Hollow **NOTE Route 6 crossing from CCRT here	From CCRT – Route 6	420'	4' shoulders both sides	Town of Wellfleet		Adjacent to French bakery and access drive to South Wellfleet commercial area. Beach traffic in summer. Route 6 crossing needed.
WC-1	Route 6	From LeCount Hollow Road to Cahoon Hollow Road	2.27 miles	Separated multi-use path on west side	MassDOT	-	Numerous curb cuts. Area between Cove Road and Main Street has several commercial driveways and conflict points. Main Street and Route 6 intersection improvements under early design phase.
WN-2	Route 6	From Cahoon Hollow Road to Rose Road/Collins Road	2.32 miles	Separated multi-use path on west side	MassDOT	0.5 mile	Cemetery adjacent to Route 6 and Cahoon Hollow. Existing shoulders reduced to 1' between Cahoon Hollow and Main Street signal area, which is included in the Main Street intersection improvement project. Wetlands north and south of intersection west side and Herring River wetlands on both sides of Route 6 south of Rose/Collins Road.
TS-2	Route 6	From Rose Rd (S)/Collins Road to South Pamet Road overpass	2.3 miles	separated multi-use path on west side	MassDOT	1.9 miles	Good sightlines. Adequate shoulders. and adjacent buffer. Pamet overpass. Bridge has 7'+ shoulders, granite curb and 5' sidewalk on west side, with 3' path on east. Reconfiguration may be needed to accommodate MUP on bridge

Segment ID	Road Name	Location (south to north)	Segment Length	Suggested Accommodation	Land/Road Owner	Length Within NPS Boundary	Additional Description
TC-2	Route 6	From South Pamet Road overpass to Castle Road	1.85 miles	Separated multi-use path on west side	MassDOT	-	5+’ shoulders bordered by grassy sandy flat terrain. Some hills.
TC-2	Route 6	From Castle Rd (north end) to Shore Rd/Route 6A split	1.10 miles	Separated multi-use path on west side	MassDOT	-	Several commercial driveways. Sidewalk and hill between school and police station. Challenging crossing at the merge/6A turn.
TN-2	Route 6	From Route 6A/Shore Rd split to Stott’s crossing	2.9 miles	Separated multi-use path on west side	MassDOT	-	4-lane section starts here. Minimal shoulders. Rolling hills. Road diet potential to accommodate separate multi-use path.
TN-2	Route 6	From Stott’s crossing to Provincetown town line	1.7 miles	Separated multi-use path on south side;	MassDOT	-	Scenic – wetlands both sides. 4-lane road becomes divided 1500’ east of town line. Could consider lane reduction or narrowing
PE-3	Route 6	From Provincetown town line to Conwell Street	2.25 miles	Separated multi-use path on south side; consider lane reduction or narrowing	Town of Provincetown, MassDOT	-	4-lane divided. Minimal shoulders. Steep cross slope near Mayflower Drive, wetlands north. Intersections/entrance roads to Route 6 at Snail Road, Howland, and Conwell.
PW-3	Route 6	From Conwell St to Herring Cove parking lot	1.75 miles	Separated multi-use path on south side.	Town of Provincetown, NPS	0.48 mile	Shank Painter Road Cross Route 6 to north side at Shank Painter Road then follow old highway layout at NPS boundary to Herring Cove beach.

THIRD PUBLIC WORKSHOP

The Steering Committee held a third workshop on November 12, 2015 in Provincetown Town Hall. The purpose of the workshop was to gather public input on a preferred primary route alternative. Approximately 25 people attended. CCC presented an overview of the project, including an update since the March 2015 workshop, and reviewed the three primary route alternatives. Town steering committee members provided updates on bicycle/pedestrian planning in their communities, and CCNS staff discussed ongoing and proposed projects in the Seashore.

Following the presentation, workshop attendees broke into small groups and identified their route preferences on a map that displayed the routes divided into seven segments: Wellfleet Center, Wellfleet North, Truro South, Truro Center, Truro North, Beach Point, and Provincetown. Participants were asked to identify their top choice for each segment. For the Truro North and Wellfleet North segments, all three alternatives are the same (Route 6 multi-use path), so participants did not identify preferences in these locations.

While the results of the mapping exercise represent only the input of the 25 or so people who participated in the activity and are therefore limited in applicability, they show that in Wellfleet and Truro (where available), people preferred alternatives to Route 6. For the Beach Point segment, more people preferred Route 6 to Shore Road/Route 6A. Preferences for the Provincetown segment were almost evenly divided between the three options, with Alternative A being the favorite. Some expressed a preference for asphalt in areas proposed for non-asphalt surface treatment.



WORKSHOP #3 – PARTICIPANTS MARKED THEIR PREFERRED PRIMARY ROUTE THROUGH EACH OF THE SEVEN SEGMENTS.

COMPARISON OF PRIMARY ROUTE ALTERNATIVES

The project team conducted further analysis and compared features of the three Primary Route Alternatives to assist in identifying the preferred primary route. The team also reviewed public input/comments and conducted additional site visits to re-examine problematic locations and investigate opportunities for route revision. Several charts and graphics were developed to help illustrate the differences between the three route alternatives, including a graphic illustrating the length and elevation changes in the three routes, an inventory of curb cuts along each segment of Route 6, a chart of impact on wetland buffers, flood plains and priority habitats, and the estimated cost of each segment of the proposed improvements. (See Appendix B Impact Evaluation Table.)

The narrative below summarizes how each of the three Primary Route Alternatives meets the project Evaluation Criteria developed, and identifies the alternative that best meets that criteria. For some evaluation criteria where there is great variation throughout the length of the alternative (i.e. in the areas of natural and cultural resources), the criteria are discussed for each route segment rather than for the alternative as a whole. A table at the end of the narrative summarizes the discussion further.

The evaluation of each primary route alternative by segment allows for a better understanding of the specific areas of concern along each route. It also allows for easier consideration of hybrid alternatives. The three potential routes intersect at seven locations, allowing segments from each alternative to be selected and reconstituted as a new potential primary route that addresses the greatest number of evaluation criteria. The seven segments were illustrated in the Workshop 3 map and exercise, and are shown in the project area map below.

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Primary Route Alternatives

- A: Existing Railbed & Bike Trails
- B: Local Scenic Roads
- C: Rt. 6
- Destinations



ROUTE EVALUATION

PROVIDING FOR VARIED BICYCLE USERS:

Alternative C seems best for bikes because it is entirely multi-use path and thus accommodates beginners as well as advanced riders. Alternatives A and B would accommodate varied bicycle users, but would be less desirable for beginners because these routes travel in paved shoulders along local roads in some segments. Alternative A has 5.5 miles of paved bike shoulder and Alternative B has 13.8 miles of paved bike shoulder. Alternative A also has varied surface treatments, including 3.51 miles proposed with unpaved surfaces (hardened stone dust or stronger equivalent) on a dirt portion of the Old Kings Highway and on existing railbeds in Wellfleet and Provincetown, which would be less desirable for some riders. Alternative A includes 1.42 miles of “share the road” on the Old Kings Highway and High Head Road. Alternative B also includes a 2.2 mile segment of “share the road” on Commercial Street in Provincetown which would be less desirable for some riders.

PROVIDING FOR VARIED PEDESTRIAN USERS:

Alternative C is believed superior because it provides separation and accommodates all abilities – especially ADA needs. Other alternatives have segments which place pedestrians in roadway shoulders with no sidewalk or other facility. This criteria is less important for determining the spine treatment, as pedestrians are more likely to use shorter segments of the network focused on access to destinations and town centers. All routes provide new designated space for bicycles that will provide additional comfort for pedestrians. Some pedestrians may prefer to walk recreationally along less heavily traveled roads in Alternatives A and B than along a MUP adjacent to the highway.

DIRECT NORTH/SOUTH ROUTE THROUGH THE REGION:

Alternative C is the most direct route, and is approximately 2 miles or 10% shorter than Alternatives A or B. The difference in length is accounted for primarily in the following segments:

- the Collins Road/South Pamet Road segment used by Alternatives A and B is 0.76 miles longer than the Route 6 segment across the same area;
- the Ocean View Drive/Cahoon Hollow Road segment used by Alternative B is 2 miles longer than the Route 6 segment across the same area; and
- the South Highland Road/Head of the Meadow bike trail segment used by Alternative A is 1.8 miles longer than the Route 6 segment across the same area.

Alternative A’s use of the railroad bed in South Wellfleet is similar in length – 0.3 miles longer than Alternative C’s Route 6 segment across the same area.

Alternative B's use of Commercial Street in Provincetown is 0.93 miles shorter than Alternative A's Route 6/railbed/local roads segment across the same area. The Commercial Street segment is also 1.8 miles shorter than Alternative C's Route 6 segment through Provincetown, but Alternative C extends to the farther point of Herring Cove Beach.

If there is a reduction in the amount of hills to climb, a route with additional mileage may be preferred. Grades along the three alternative routes are discussed in the section on Topography and Grades below.

ACCESS TO KEY DESTINATIONS:

All three alternatives provide similar access to year round activity centers in the region, but Alternatives A and B provide access to more destinations outside the Route 6 corridor. Alternative A provides direct access to the Wellfleet Senior Center and North Truro beaches. Alternative B provides direct access to Wellfleet beaches and North Truro village.

[Note that access to amenities such as food, bathrooms, parking is discussed in a separate section below.]

IMPACTS TO SENSITIVE NATURAL RESOURCES:

No wetland alteration is proposed in any of the alternatives, but wetland buffers may be impacted when previously developed roadways abut wetland resource areas.

Measured by numbers alone, Alternative C has the greatest wetland buffer impact with approximately 234,000 square feet. Alternative A has approximately 211,000 square feet of wetland buffer impact, and Alternative B has approximately 158,000 square feet. The largest area of wetland impact occurs in four locations: along Route 6 in the Wellfleet North segment; along South Pamet Road in the Truro South segment; along Route 6 and 6A/Shore Road in the Beach Point segment; and along Route 6 in Provincetown.

Alternative A has the greatest area within floodplain, at approximately 212,000 square feet. Alternative B has 182,000 square feet in the flood plain, and Alternative C has 176,000 square feet. The greatest continuous flood plain impacts occur along Route 6 and Route 6A/Shore Road in the Beach Point segment.

Alternative C has the largest area of impact on priority habitat, with 934,000 square feet. Alternative A impacts 719,000 square feet of priority habitat, and Alternative B impacts 691,000 square feet. The majority of habitat impact occurs in the following areas: along Ocean View Drive and Cahoon Hollow Road (Alternative B) in the Wellfleet Center segment; along Route 6 in the Wellfleet North segment (all three alternatives); along Collins Road in the Truro South segment (Alternatives A and B); along Route 6 in the Truro Center segment (all three alternatives); and along Route 6 in the Truro North segment between the 6/6A split and Stott's Crossing (Alternative C).

Almost the entire Outer Cape is mapped as priority habitat; during the design and permitting phases of project design a more detailed assessment of impacts to individual species habitats would be conducted to assess the nature and extent of impacts from a multi-use path. Only Shore Road and Commercial Street are outside of priority habitat areas. With regard to wetland resources, staff noted that steep grades

adjacent to the sides of existing roadways (especially those leading down to wetlands, kettle ponds, or river beds) would pose a greater concern where widening is involved because potentially greater areas within buffer zones may be more impacted than in flatter sections of the right-of-way .

Any construction of a MUP along Route 6 should avoid creating a barrier to wildlife movement. A wooden guardrail or similar fence-like barrier with openings large enough to allow wildlife movement could reduce potential impacts. Natural Resource staff at the CCC felt that keeping the trail along the heavily used Route 6 corridor would have the least impact on wildlife and priority habitat, focusing use away from currently undeveloped and minimally developed areas. Cumulative impacts associated with introducing activity to these areas go beyond the numbers presented on the Impact Evaluation Table. Some public comments were received citing concern about impacts to vegetation and wildlife from increased public use in areas adjacent to the new designated routes.

The following discussion looks at resource impacts by segment, moving south to north and noting issues in specific areas that could influence the choice of alternative:

Wellfleet Center segment: Alternative A (rail bed) has the least impact on wetland resources, though the west side of Route 6 could also be a low-impact possibility. Alternative B has steep slopes and wetland buffers on the north side of Cahoon Hollow Road in the vicinity of Great Pond. Alternative C (Route 6) has wetland areas on the east side of the highway in the southern portion, but not on the west side. Widening on the east side would likely create impacts to the 100-foot buffer in this area.

Wellfleet North segment: All three alternatives follow the same route (along Route 6), and there are wetlands on the west side of Route 6 both north and south of the Main Street intersection. Construction on the west side of Route 6 would have the greatest wetland buffer impact because it would be closer to the resource. Wetland resources are also in the area of the Gull Pond Road intersection, on both the east and west sides of the highway. Where Perch Pond is located on the east side of Route 6, construction on the west side of the highway would have less impact on wetland buffer areas. Around the Herring River, resources are located on both sides of the highway and construction on either side would have similar impacts. The section around the Herring River includes area in the floodplain/A zone.

Truro South segment: Alternative C (Route 6) has the least impact on wetland resources. Alternatives A and B both follow Collins Road, which passes through wetland buffer areas. Widening could likely involve shifting the road to one side or another to avoid wetland buffer impacts. The greatest wetland impacts occur where these alternatives follow South Pamet Road through the wetlands associated with the Pamet River. This section also includes areas in the floodplain, both the V zone and the A zone. Alternative C follows Route 6 and passes close to Great Pond and Snow Pond. The west side of Route 6 would have less impact on these pond buffers. Route 6 crosses the Pamet River with a bridge, so if the MUP is accommodated on the existing bridge it would not have additional resource impacts.

Truro Center segment: Alternatives A and B (Route 6 east side) have the least impact on wetland resources. No wetland resources are identified on the east side along this segment. Alternative C (Route 6 west side) passes adjacent to wetlands just south of the Long Nook Road intersection.

Truro North segment: Alternative C has the least impact on wetland resources. Some wetlands are located on the east side of Route 6 only along this segment. Alternative A travels along South Highland Road and passes small wetland areas on both sides of the road near the Highland Road intersection. There are no wetland resource impacts along Coast Guard Road and the dirt segment of the Old Kings Highway. The Head of the Meadow Bike Trail travels directly through wetland areas (though the proposed widening is designed to limit wetland buffer impacts as much as possible) and High Head Road abuts wetland areas. Alternative B has similar wetland impacts near the South Highland and Highland Road intersection, but has no wetland resource impacts along Highland Road. Once Alternative B reaches Shore Road, it travels through wetland and beach resource areas, though the area is also widely developed.

Beach Point segment: This constrained area is limited by coastal beach on the west/Shore Road side, and by freshwater wetlands adjacent to Route 6. Alternatives A and C follow Route 6, which is flanked by East Harbor/Pilgrim Lake and wetland areas, though an accommodation could be sited outside of flood zones. Alternative B follows Route 6A between wetland areas and the beach and, though widely developed, much of the route is within the floodplain, including areas in both the V zone and the A zone.

Provincetown East segment: Alternative A has the least wetland impacts here because it avoids some wetland areas along Route 6 and because it travels down Conwell Street and local roads which are not constrained by wetland buffers. Though Alternative A passes through wetland buffer areas (approximately 19,000 square feet), the limited widening of the rail bed needed to accommodate a path would have less wetland buffer impact than following Route 6 through the entire area. Alternative B follows Commercial Street with a share-the-road proposal, so has limited impacts on the wetland resources on both sides of the street. This alternative, however, has flood zone issues similar to Route 6A in the Beach Point section. Alternative C follows Route 6 on the south side, with approximately 50,000 square feet of wetland buffer impacts.

Provincetown West segment: Alternative C is the only alternative for this segment. Here, wetland resources are located on both sides of Route 6, but the proposed route crosses from the south side to the north side at Shank Painter Road, avoiding wetland areas west of Shank Painter. Still, the route impacts approximately 32,000 square feet of wetland buffer although it is located on the former road alignment once it crosses the Park boundary.

IMPACTS TO SENSITIVE CULTURAL RESOURCES:

No historic structures are expected to be directly impacted by the proposed routes, though there are several segments where the proposed alternatives pass through historic neighborhoods or areas with inventoried historic properties. In addition, where the alternatives travel adjacent to rivers, wetlands and pond buffers, there may be concerns about impacts to archaeological resources. Past research has shown that areas with close proximity to wetlands and water bodies have a greater likelihood of having archaeological resources.

Wellfleet South segment: Alternative C (Route 6) crosses several historic areas and approximately 15 inventoried historic structures are visible along the route. None are immediately adjacent to the road edge. Alternative B passes by two inventoried historic structures on LeCount Hollow Road, two on Ocean View Drive, and two on Cahoon Hollow Road, in addition to the cemetery at the corner of Cahoon Hollow Road and Route 6. None would be impacted by the proposed widening. Areas adjacent to wetlands and ponds are typically considered archaeologically sensitive, so any development where this route travels close to Great Pond and Southeast Pond may present concerns regarding archaeological resources. Alternative A also passes by the two historic structures and cemetery along Cahoon Hollow Road and Route 6.

Wellfleet North segment: All three alternatives follow Route 6 in this segment. The west side of Route 6 skirts the edge of the Wellfleet Village National Register Historic District but no buildings or structures appear close enough to the road layout to be impacted. Approximately 6 additional inventoried historic structures are visible along Route 6 in this segment, all set well back from the road edge.

Truro South segment: Alternatives A and B pass eight inventoried historic structures along South Pamet Road and one at the southern end of Collins Road. All but one along South Pamet Road are set well back from the road edge. Due to the wetlands there, the area along South Pamet Road is likely to be archaeologically sensitive. Alternative C passes three inventoried historic structures set well back from the edge of Route 6.

Truro Center segment: All three alternatives follow Route 6, and five inventoried historic structures are visible from the road, set far enough back so that they could be avoided by the proposed MUP.

Truro North segment: Alternative A travels by five inventoried historic properties along Coast Guard Road, all set far enough back to avoid impacts from minor road widening. Where this alternative follows the Head of the Meadow Bike Trail through wetland areas around Pilgrim Spring, the area is archaeologically sensitive. Alternative B passes by one historic structure at the corner of South Highland Road and Highland Road and eleven other historic structures in North Truro village. Several of these are located close to the road and any widening would have to be careful to avoid impacts to the setting. Numerous historic cottage colonies are located along Shore Road as it approaches Beach Point, some are located close enough to the road that their setting would be impacted by road widening. Alternative C passes by the Old North cemetery, which is listed on the National Register of Historic Places and has a wide buffer to Route 6. This undeveloped buffer area could easily accommodate the proposed MUP. No other inventoried historic properties are visible along this route.

Beach Point segment: Alternatives A and C follow Route 6, which does not pass any historic structures, but which does pass wetland areas which are likely archaeologically sensitive. Alternative B follows Shore Road past dozens of inventoried historic properties, many of which are part of historic cottage colonies. This area as a whole, with cottage colonies and bungalows built for the Cape's early tourists circa 1900-1950, has been recommended for listing on the National Register of Historic Places. Any road widening in this area would need to be careful not to impact the historic setting.

Provincetown East segment: Alternative A follows Route 6, the rail bed, and local roads. No historic structures are inventoried along this route until it reaches Cemetery Road within the Provincetown National Register Historic District. Once inside the district, historic structures are placed close to the roadway and would need to be carefully avoided. Wetland areas along Route 6 would also be archaeologically sensitive. Alternative B follows Commercial Street, with no inventoried historic structures until it splits from Bradford Street and enters the Provincetown Historic District. This alternative proposes share the road, which avoids impact to the many historic structures that line the roadway. Alternative C follows Route 6, which does not pass any inventoried historic structures. Wetland areas, however, along Route 6 may be archaeologically sensitive.

Provincetown West segment: Alternative C is the only alternative that covers this segment. No historic structures are inventoried along the proposed route, but wetland buffer areas are likely to be archaeologically sensitive.

MINIMAL TOPOGRAPHY AND GRADES:

All of the alternatives have similar changes in elevation. All three pass through points below 10 feet above sea level at the Main Street/Route 6 intersection in Wellfleet and at the Pamet River in Truro, as well as points greater than 75 feet above sea level in South Truro, at Town Hall hill, and at the Route 6/South Highland Road intersection. Alternative C appears to have slightly less elevation change, due partly to the fact that the highway has been leveled more than local roads. Alternative C has 1,067 feet of elevation gain northbound from Wellfleet to Provincetown, and 1,062 feet of elevation gain southbound from Provincetown to Wellfleet. Alternative A has 1,368 feet of elevation gain northbound from Wellfleet to Provincetown, and 1,393 feet of elevation gain southbound from Provincetown to Wellfleet. Alternative A includes a change in elevation along the Cahoon Hollow Road segment. Alternative B has 1,434 feet of elevation gain northbound from Wellfleet to Provincetown, and 1,275 feet of elevation gain southbound from Provincetown to Wellfleet. Alternative B includes changes in elevation along the Ocean View Drive, Cahoon Hollow Road, and Route 6A segments.

Route Alternative Profiles

A: Existing Railbed & Bike Trails (20.4 miles)
 B: Local Scenic Roads (20.7 miles)
 C: Rt. 6 (18.6 miles)

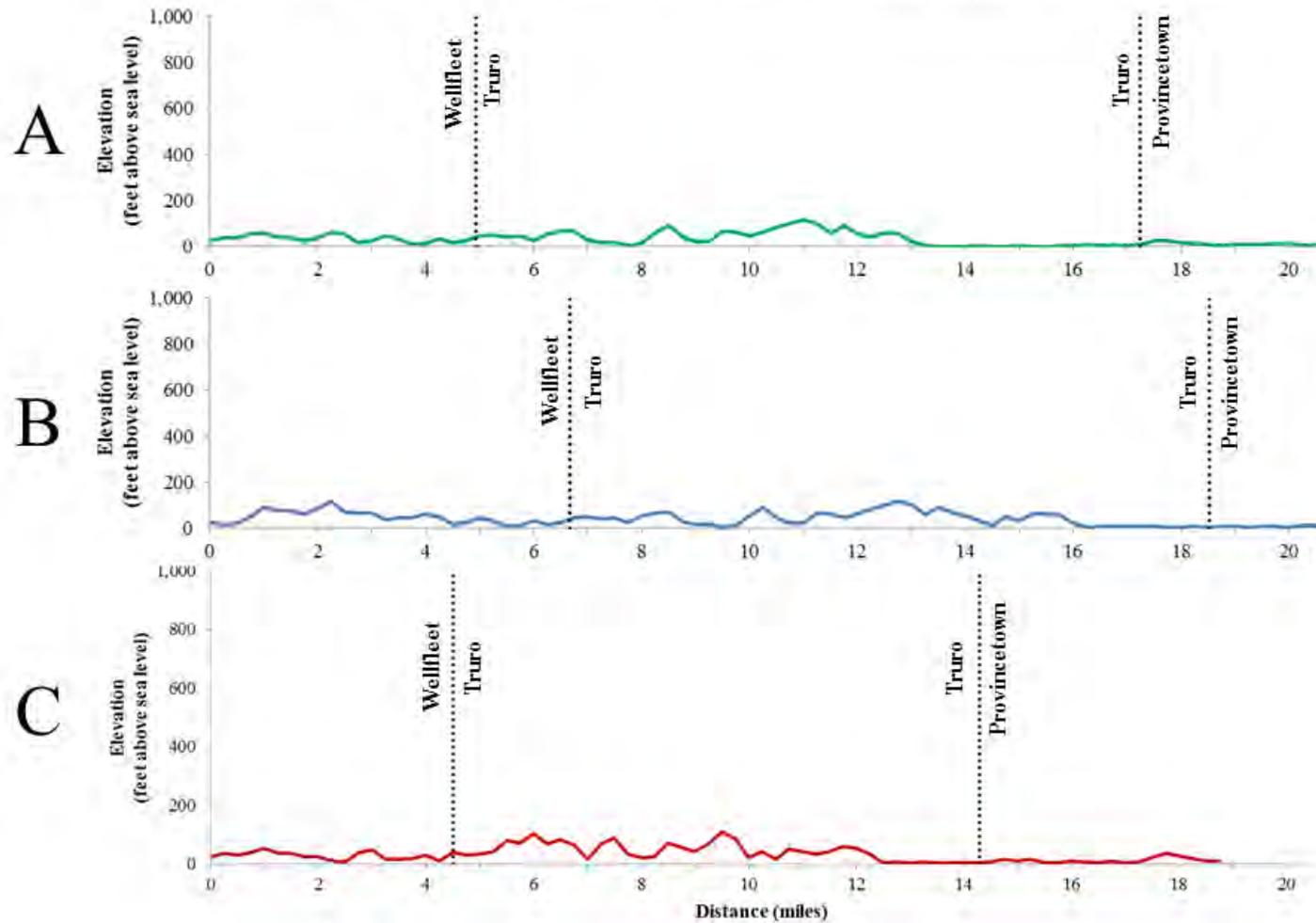


CHART ILLUSTRATING ELEVATION CHANGE AND LENGTH OF THE THREE PRIMARY ROUTE ALTERNATIVES

A: Existing Railbed & Bike Trails Elevation Profile

Wellfleet: Cape Cod Rail Trail Parking Lot, Provincetown: MacMilan Pier

Total Length = 20.4 miles

Wellfleet to Provincetown

Start Elevation: 18 ft.
Max Elevation: 119 ft.
Elevation Gain: 804 ft.

Provincetown to Wellfleet

Start Elevation: 3 ft.
Max Elevation: 119 ft.
Elevation Gain: 817 ft.

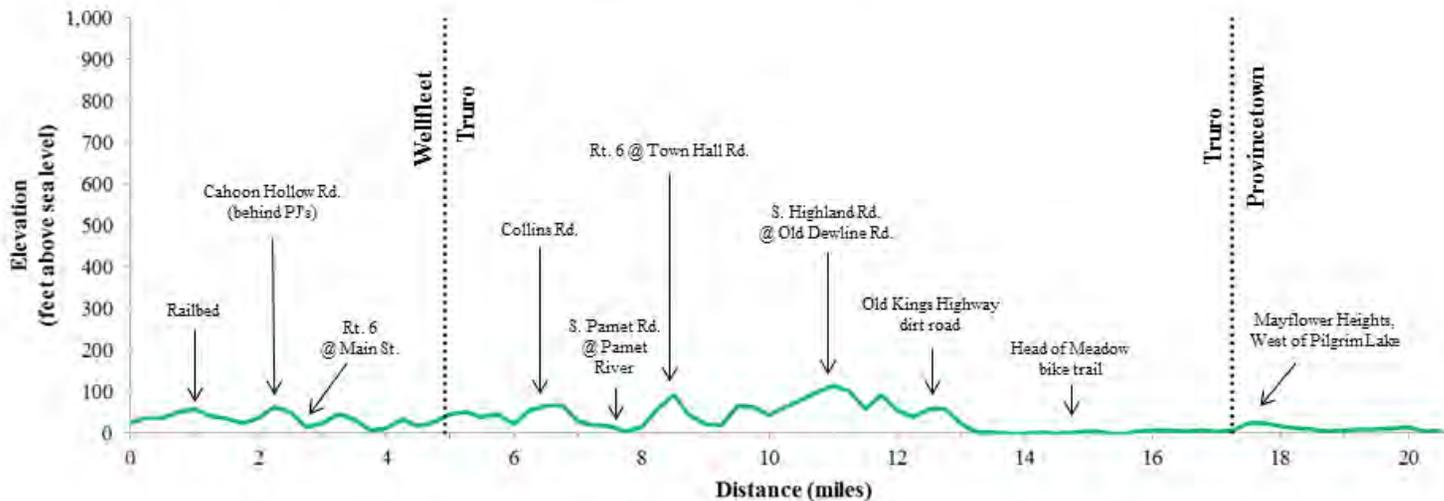


CHART ILLUSTRATING ELEVATION CHANGES ALONG PRIMARY ROUTE ALTERNATIVE A

B: Local Scenic Roads Elevation Profile

Wellfleet: Cape Cod Rail Trail Parking Lot, Provincetown: MacMilan Pier

Total Length = 20.7 miles

Wellfleet to Provincetown

Start Elevation: 18 ft.

Max Elevation: 119 ft.

Elevation Gain: 1,004 ft.

Provincetown to Wellfleet

Start Elevation: 8 ft.

Max Elevation: 119 ft.

Elevation Gain: 980 ft.

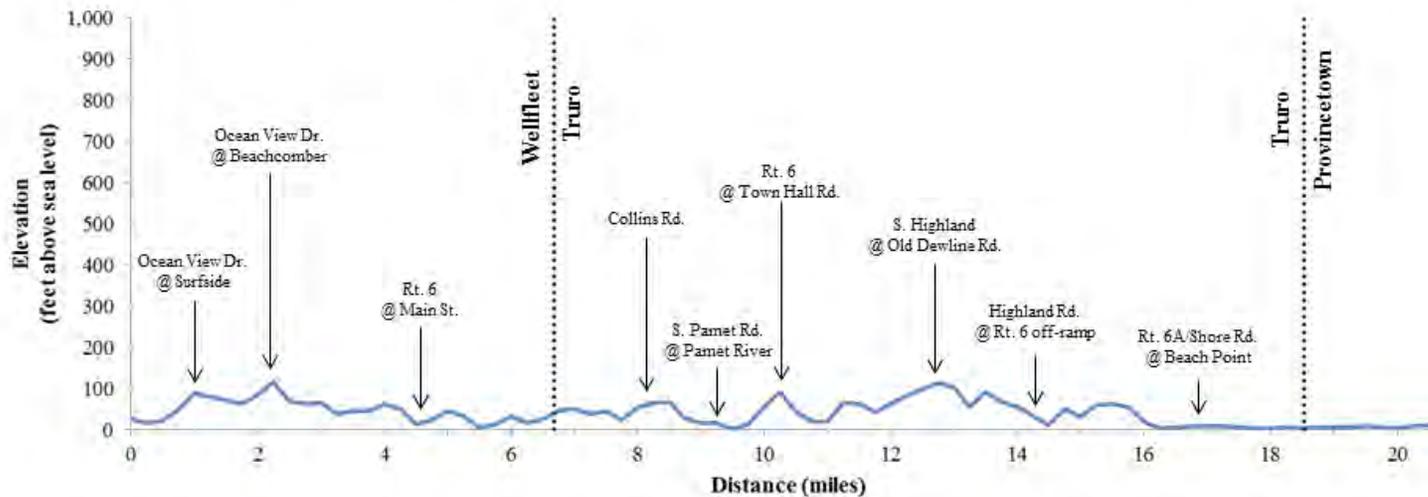


CHART ILLUSTRATING ELEVATION CHANGES ALONG PRIMARY ROUTE ALTERNATIVE B

C: Route 6 Elevation Profile

Wellfleet: Cape Cod Rail Trail Parking Lot, Provincetown: Herring Cove Beach

Total Length = 18.6 miles

Wellfleet to Provincetown

Start Elevation: 18 ft.
Max Elevation: 120 ft.
Elevation Gain: 619 ft.

Provincetown to Wellfleet

Start Elevation: 13 ft.
Max Elevation: 120 ft.
Elevation Gain: 624 ft.

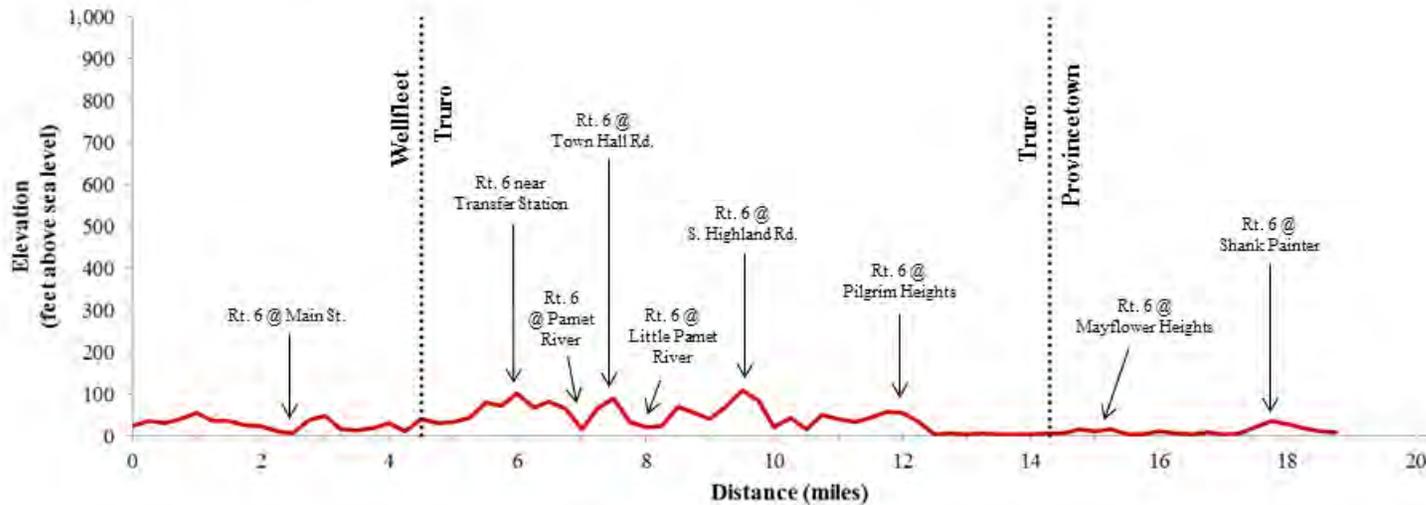


CHART ILLUSTRATING ELEVATION CHANGES ALONG PRIMARY ROUTE ALTERNATIVE C

CREATE DEVELOPED PATH IN OTHERWISE UNDEVELOPED AREA:

Alternative C proposes the least amount of new path in otherwise undeveloped areas. While none of the alternatives propose to create a route where there is not already some type of road or trail, several segments in Alternatives A and B are currently dirt paths or sand roads. In addition, some of the paved roads in Alternatives A and B are definitely rural in nature. Other areas already have a similar use and previously disturbed areas. Some public comments noted concern about increased use of local roads.

Alternative A includes the undeveloped railbed in Wellfleet (1.75 miles), a section of the dirt Old Kings Highway in Truro (0.8 miles), and part of the undeveloped railbed in Provincetown (0.96 miles). It also includes Collins Road in Truro (2.3 miles), which has a rural, undeveloped character. Alternative B includes Cahoon Hollow Road in Wellfleet (2.4 miles), and Collins Road in Truro (2.3 miles), both of which have a rural, undeveloped character. Alternative C includes the abandoned, unpaved segment of Route 6 near Herring Cove Beach (roughly 0.25 miles).

CONSISTENT WITH SURROUNDING AREA CHARACTER:

Alternative C may have the least impact on the surrounding area character because the path would be proposed along the already well-developed Route 6 corridor. Widening for shoulders along local roadways in Alternatives A and B would have some character impacts, especially where existing roadways are quite narrow and natural or cultural resources are close to the road edge. Parts of Cahoon Hollow Road (Alternative B), South Pamet Road (Alternatives A and B), and Route 6A/Shore Road (Alternative B) may have these concerns. Segments in Alternative A that are currently unpaved (railbed segments in Wellfleet and Provincetown and the portion of unpaved Old Kings Highway) are proposed to remain unpaved and be stabilized in an effort to keep them consistent with the surrounding area's character.

SCENIC ROUTE FOR RECREATIONAL RIDING/WALKING:

All routes include scenic elements, perhaps most dramatically along the Beach Point section of North Truro with views of Cape Cod Bay, Pilgrim Lake/East Harbor, and the Provincetown dunes. In addition, all routes include some scenic sections of Route 6 in North Wellfleet near the Herring River. Overall, Alternative B provides the most scenic route, with views of the Atlantic Ocean along Ocean View Drive, rural wooded roadways of Cahoon Hollow Road and Collins Road, and views of Cape Cod Bay and historic structures along Shore Road and Commercial Street. Alternative A provides scenic elements along the wooded railbeds in Wellfleet and Provincetown, the undeveloped Head of the Meadow Bike Trail, as well as the rural wooded Collins Road in Truro. Alternative C is considered the least scenic option because it includes the all of the commercially developed areas along Route 6, especially the most heavily developed Wellfleet Center segment and Truro Center segment.

OPPORTUNITIES FOR INTERPRETATION:

All the routes have numerous opportunities for interpretation, including the Herring River in Wellfleet, kettle ponds near the Wellfleet/Truro town line, East Harbor and High Head, and the Pamet River valley. Alternative A also provides opportunities for interpretation of railroad expansion along the Wellfleet and Provincetown rail beds, of Highland Light and the Truro Highlands, of the Old Kings Highway along the dirt

segment of this road, of Pilgrim Spring and Pilgrim Heights at Head of the Meadow, and of the dunes in Provincetown. Alternative B offers opportunities for interpretation of Ocean Point and Atlantic Ocean erosion along Ocean View Drive, of Wellfleet kettle ponds, of North Truro Village, of Beach Point cottage colonies, and of Provincetown's Historic District. Alternative C provides additional opportunities for interpretation of Shank Painter ponds, Provincetown dunes, and Herring Cove.

CONNECTIONS TO AMENITIES (FOOD, BATHROOMS, PARKING):

All alternatives have access to Wellfleet and Truro commercial uses and parking near the village centers. Alternative A also goes by Head of the Meadow seasonal bathroom facilities and parking. Alternative B has access to Wellfleet seasonal bathroom facilities at the ocean beaches, and goes through North Truro village, which provides food amenities. Alternative C has access to Route 6 commercial uses, Pilgrim Heights in Truro, and Herring Cove Beach bathroom facilities and food concessions.

It was noted that public restroom facilities are currently limited along existing bicycle trails and that this should be addressed in the Master Plan.

PROVIDE LOW STRESS TRAVEL OR SEPARATION FROM HIGH TRAFFIC ROADS:

Alternatives A and C provide the most low stress travel and separation from traffic. Alternative B includes several local roads that can be high traffic areas, especially in summer. Alternative A, with the railbed segments and the Head of the Meadow bicycle trail provides both separation from traffic and travel in less stressful natural areas. Alternative C's multi-use path along Route 6 provides the most separation from traffic, but having the path only 5 feet from Route 6 traffic and crossing many commercial curb cuts may create stressful travel in South Wellfleet and potentially in other commercial areas. Use of shoulders on local roads in Alternatives A and B would locate the route away from some high speed, high traffic areas, but would not avoid all high traffic areas. Locations in Alternative B such as Ocean View Drive on a summer beach day, Route 6A/Shore Road in summer, and Commercial Street in Provincetown can be high traffic areas, though traffic speeds would be moderate.

PROVIDE SAFE AND COMFORTABLE ACCESS THROUGH REGION:

All three Alternatives would provide safe and comfortable access through the region with designated and improved areas for bicycle travel. Alternative C could provide the greatest safety because it includes a multi-use path along its entire length, while Alternatives A and B include some segments along local roadways. However, Route 6 in some locations in Wellfleet and Truro has curb cut crossings or road intersections which would interrupt the proposed multi-use path, creating a different condition than what exists along most other multi-use paths in the region. A curb cut table illustrates the number of curb cuts along various segments of Route 6. In the table, Route 6 is broken into segments that are slightly different from those in the Evaluation Table to focus on segments that begin and end where all three potential primary routes intersect. All existing curb cuts are counted in the table, including two counts for any looped driveway that opens onto Route 6 in two locations. All named roadway are counted as roads in the table, though some are dirt roads and have limited usage.

Route 6 Segment	West side curb cuts			East side curb cuts		
	Roads	Residential Drives	Commercial/ Institution Drives	Roads	Residential Drives	Commercial/ Institution Drives
Wellfleet Center: LeCount Hollow to Cahoon Hollow Rd	16	16	13	12	19	23
total	45			54		
Wellfleet North: Cahoon Hollow to Rose/Collins Rd	11	7	7	9	8	9
total	25			26		
Truro South: Rose/Collins to South Pamet Rd	6	6	3	4	9	1
total	15			14		
Truro Center: South Pamet to South Highland Rd	10	16	12	12	12	2
total	38			26		
Truro North: South Highland to High Head Rd	13	8	7	9	5	8
total	28			22		
Beach Point: High Head to Provincetown line	0	0	0	0	0	0
total	0			0		
Provincetown	5	0	0	1	0	3
total	5			4		

TABLE SHOWING NUMBER AND LOCATION OF CURB CUTS ALONG ROUTE 6 THROUGHOUT THE STUDY AREA

As shown in the table, segments along Route 6 in Wellfleet Center, Wellfleet North, Truro Center and Truro North each include greater than 20 curb cut crossings on the east and west sides of the highway.

The Wellfleet Center segment has both:

- the highest number of overall curb cuts in the study area (54 on the east side; 45 on the west side), and
- the highest number of commercial/institutional curb cuts (23 on the east side; 13 on the west side).

The Truro Center segment has:

- The second highest number of overall curb cuts in the study area, (26 on the east side and 38 on the west side).
- The majority of curb cuts in this section are residential drives and private roads, with Truro's Elementary School the only exception on the east side, and 12 commercial curb cuts on the west side.

With all town segments viewed together, Wellfleet has 10 fewer curb cuts on the west side of Route 6 than the east side. Truro has 19 fewer curb cuts on the east side of Route 6 than the west side.

Addressing another safety issue, some areas along Route 6 in Alternative C are subject to shifting and blown sand which creates a hazard for bicycle travel. This occurs in Provincetown from Mayflower Road to Snail Road on the East/north side of Route 6. It may also occur near the entrance to Herring Cove Beach.

SEGMENTS THAT WORK BETTER IN ONE DIRECTION:

All three Alternatives work well in both directions. There is a slight difference in elevation gain when traveling north or traveling south, but it does not appear to be a major difference.

ADEQUATE RIGHT OF WAY:

All three Alternatives have adequate right of way to provide the proposed facilities. The Route 6 right-of-way ranges from 70-150 feet in Wellfleet and Truro, and is 200 feet wide in Provincetown. Most town roads considered have at least a 40 foot right-of-way. Roads with narrower rights-of-way like Commercial Street in Provincetown are considered for Share the road accommodation.

LAND OWNERSHIP:

All route segments are located on town, state, or federally owned land. Alternative C involves the fewest land owners, with most of the route located within the Route 6 right-of-way owned by MassDOT, plus the town-owned portion of Route 6 in Provincetown and a small portion owned by CCNS at the west end of Provincetown. Alternative A involves the greatest number of land owners, with land owned by Mass DCR along the Wellfleet rail bed, land owned by MassDOT along Route 6, land owned by the towns of Wellfleet, Truro and Provincetown along local roads and the Provincetown rail bed, and the dirt segment of the Old Kings Highway and the Head of the Meadow Bike Trail owned by Cape Cod National Seashore. Alternative B involves land owned by MassDOT along Route 6, and land owned by the towns of Wellfleet, Truro and Provincetown along local roads.

PARTNERSHIP OPPORTUNITIES FOR FUNDING:

Alternative A offers the greatest opportunities for partnership in funding because of the different landowners. Mass DCR, Mass DOT, Cape Cod National Seashore and the three towns could partner in the effort and also fund individual segments through Seashore, State and town capital improvement plans. Alternative C offers opportunities with MassDOT and CCNS. Alternative B offers opportunities for partnership between MassDOT, the three towns, and CCNS.

APPROXIMATE COST:

Comparative cost estimates were developed to better understand the cost implications of the different alternatives, though design details have not been developed. The cost analysis uses recent multi-use path and bicycle accommodation projects to estimate the unit cost of providing different accommodations as follows:

Multi-use path along existing roadway:	\$ 220 per linear foot
Widen existing multi-use path:	\$ 160 per linear foot
Multi-use path on railbed –	
Hardened surface, unpaved	\$ 75 per linear foot
Hardened surface, unpaved with structural base	\$ 125 per linear foot
Paved	\$ 185 per linear foot
Construct 4-foot paved bicycle shoulders:	\$ 110 per linear foot
Share-the-Road markings and signage:	\$ 2 per linear foot

Alternatives A and B are less expensive largely because they include less expensive treatments of 4-foot paved shoulders and unpaved railbeds in Wellfleet and Provincetown. Alternative A’s total estimated cost is \$22.7 million, with \$6.1 million in Wellfleet, \$13.4 million in Truro, and \$3.2 million in Provincetown. Alternative B’s total estimated cost is \$19 million, with \$7.3 million in Wellfleet, \$11.7 million in Truro, and \$32,500 in Provincetown. Alternative C is the highest cost alternative because the multi-use path along Route 6 requires the most new pavement and infrastructure improvements. Alternative C has a total estimated cost of \$30 million, with \$7.5 million in Wellfleet, \$16 million in Truro, and \$6.5 million in Provincetown.

Alternative A offers the lowest cost option in the Wellfleet Center and Truro South segments. Alternative B offers the lowest cost option in the Truro South, Truro North, Beach Point, and Provincetown East segments. Alternative C is the only alternative that includes the Provincetown West segment.

EASE OF IMPLEMENTATION:

The cost will be a primary factor in implementing the primary route. Resource impacts, safety and public support will be other critical factors. Alternative A's primary challenges to implementation are wetland buffer impacts, widening of some local roads, and coordinating the greatest number of landowners. Alternative B's challenges are wetland buffer impacts and public concern over widening and increased use of some local roads. Alternative C's primary challenges are the high cost, design of the multi-use path across multiple commercial driveways, and coordinating construction along Route 6.

ROUTE ALTERNATIVES EVALUATION SUMMARY

<i>Evaluation Criteria</i>	<i>Alt A. Existing Rail Bed and Bike Trail focus</i>	<i>Alt B. Local Roads focus</i>	<i>Alt C. Route 6</i>
Serves varied bicycle users	Good, but 3.51 miles of hardened, non-asphalt surface treatments on some segments may limit some users; 5.5 miles of paved bike shoulder.	Good, but 2.2 mile ‘share the road’ leg in Provincetown will limit some users; 13.8 miles of paved bike shoulder.	Best option for varied bike users because of MUP throughout.
Serves varied pedestrian users	Good, provides mix of MUP, paved shoulders and share the road signage on local roads but no separated space for pedestrians.	Good, provides mix of MUP, paved shoulders and share the road signage on local roads but no separated space for pedestrians.	Best option , provides off road MUP throughout. Location next to highway may be less desirable for long walks. ADA accessible.
Direct north/south route	Good – 20.5 miles. Truro segment including Head of Meadow Bike Trail adds most length.	Good – 20.7 miles. Wellfleet segment along Ocean View Drive adds most length.	Best option – 18.5 miles. 10% shorter than other options, and extends to Herring Cove beach.
Access to key destinations/services	Good – provides best access to Wellfleet Senior Center and North Truro ocean beaches.	Good – provides best access to Wellfleet ocean beaches and to North Truro village.	Good – provides access to other destinations via secondary routes.
Impacts to Sensitive Natural Resources			
Natural Resources Wellfleet Center	Best option – no wetland resources present.	Fair – wetland buffer impacts along Cahoon Hollow Rd near Great Pond.	Good – west side of Route 6 has low wetland buffer impacts.
Natural Resources Wellfleet North	Good – wetland resources on east side of Route 6 at Gull Pond Road, Perch Pond, Herring River.	Good – wetland resources on east side of Route 6 at Gull Pond Road, Perch Pond, Herring River.	Good – wetland resources on west side of Route 6 at Main Street, Gull Pond Road, Herring River.

Natural Resources Truro South	Fair – wetland buffer impacts and floodplain along South Pamet Road.	Fair – wetland buffer impacts and floodplain along South Pamet Road.	Best option – few resource impacts on west side of Route 6.
Natural Resources Truro Center	Best option – no resource impacts on east side of Route 6.	Best option – no resource impacts on east side of Route 6.	Good – wetlands on west side of Route 6 south of Long Nook Rd.
Natural Resources Truro North	Fair – wetland buffer impacts along Head of Meadow Bike Trail and High Head Road.	Fair – wetland buffer impacts along Shore Road at coastline.	Best option – few resource impacts on west side of Route 6.
Natural Resources Beach Point	Best option – East Harbor flanks the east side of Route 6, but it is outside the flood plain.	Fair – wetland resources on east and west sides of Shore Rd, plus sections within Velocity and A zones.	Best option – wetlands flank the west side of Route 6, but it is outside the flood plain.
Natural Resources Provincetown East	Best option – some wetland impacts along Route 6 and rail bed.	Good – share the road has wetland resource impacts, but passes through Velocity and A flood zones.	Good – wetland resource impacts along Route 6 are greater than in Alternative A.
Natural Resources Provincetown West	NA	NA	Good – wetland resource impacts along Route 6.
Impacts to known or potential cultural resources	Good – possible archaeological concerns along South Pamet Rd and Head of Meadow Bike Trail and High Head Road	Good – possible archaeological concern along Cahoon Hollow Rd and South Pamet Rd; historic structures on Shore Rd/Rte 6A	Good- possible archaeological concerns along Route 6 wetland areas
Minimal topography and grades	Good – no major grades	Good – slightly more change in elevation	Good – slightly less change in elevation
New development in undeveloped area	Good option – includes 5.8 miles of trail in rural, undeveloped areas.	Good option – includes 4.7 miles of trail in rural, undeveloped areas.	Best option – includes very little trail in undeveloped areas.
Consistent with area character	Good - Concern about widening along South Pamet Road	Fair - Concern about widening along Cahoon Hollow, South Pamet Road, Shore Rd/Rte 6A	Best option – trail along already developed corridor

Scenic route for recreational riding/walking	Good – scenic railbeds, Head of Meadow Bike Trail, rural wooded roads, East Harbor	Best option – Atlantic ocean views, rural wooded roads, bay views and historic buildings	Fair – commercially developed areas along Route 6, views to bay and East Harbor in N. Truro
Opportunities for interpretation	Equal	Equal	Equal
Connections to amenities (food, bathrooms, parking)	Equal	Equal	Equal
Low-stress travel or separation from high traffic roads	Best option – railbed and bike path segments without car traffic	Good – some local roads with high traffic in summer	Best option – multi-use path, but close to Route 6 traffic
Safe and comfortable access through area	Good	Good	Good
Segments that are better in one direction	Equal	Equal	Equal
Adequate Right-of-way	Equal	Equal	Equal
Land ownership issues	Equal - Greatest number of landowners: MassDOT, DCR, CCNS, three towns	Equal – MassDOT, three towns	Equal – Fewest land owners: MassDOT, CCNS, Provincetown
Partnership opportunities for funding	Best option – greatest opportunity for partnerships in funding by six entities	Good – partnership opportunities between MassDOT and three towns	Good – partnership opportunities between MassDOT, CCNS and Provincetown
Approximate cost	Good - \$22.7 million overall cost; lowest cost option in Wellfleet Center and Truro South segments	Best Option – \$19 million overall cost; lowest cost option in Truro South, Truro Center, Beach Point and Provincetown segments	Fair - \$30 million overall cost; this alternative is the highest cost option for every segment because it is a separate multi-use path
Ease of Implementation	Good – concerns are cost, wetland buffers, local road widening, and coordinating numerous land owners	Good – concerns are cost, wetland buffers, local road widening and increased use of local roads	Good - concerns are higher cost, more complicated facility design, construction coordination along Route 6

HYBRID ALTERNATIVES CONSIDERED

ADDITIONAL SEGMENTS AND CONNECTIONS

The original proposed alternatives did not provide (nor did the analysis consider) a multi-use path along the east side of Route 6 in all areas, but the Routes Evaluation showed that a path along the east side could limit Route 6 crossings and provide continuity if adjacent preferred segments were on the east side of Route 6. For this reason, the project team added a multi-use path following the east side of Route 6 for consideration in the Truro South segment and the Truro North segment.

In another effort to consider safe alternatives to Route 6 crossings, use of the Highland Road underpass to cross Route 6 was added as an option for consideration.

COMBINING SEGMENTS FROM SEVERAL ALTERNATIVES

In the Routes Evaluation, no one alternative provided the “best option” to meet all of the criteria. Instead, each of the proposed alternatives had several segments that provided the “best option,” making it clear that a hybrid alternative combining segments from different alternatives would likely provide the best route. The project team considered how each of the seven study area segments met the project criteria and then worked to identify a hybrid alternative with the highest rating.

Focusing on safety, a hybrid combination of Alternatives A and C was considered with a goal of providing the greatest length of multi-use path while also avoiding heavily developed sections of Route 6. This “Hybrid Option #1” proposes using the railbed in the Wellfleet Center segment, acknowledging it has the greatest separation from other vehicles. It continues with a multi-use path along the east side of Route 6 through the Wellfleet North, Truro South and Truro Center segments, then crosses over to the west side of Route 6 for the Truro North and Beach Point segments. In Provincetown, hybrid option #1 includes a multi-use path on the west/south side of Route 6 until Snail Road, then follows the railbed into downtown Provincetown.

Looking to scenic character, a second hybrid combination of Alternatives A and C was considered in an effort to limit the length along Route 6 and to include more distance along scenic local roadways and bicycle trails. This Hybrid Option #2 proposes using the railbed in the Wellfleet Center segment, acknowledging its scenic wooded character, and continues as a multi-use path along the east side of Route 6 in the Wellfleet North segment. In the Truro South segment, hybrid option #2 follows Collins Road and South Pamet Road, acknowledging their scenic and historic attributes, then continues as a multi-use path along the east side of Route 6 through the Truro Center segment. In the Truro North segment, hybrid option #2 continues along South Highland Road/Coast Guard Road/Old Kings Highway to the Head of the Meadow bicycle trail

and High Head Road, which provides a scenic coastal setting. After crossing at Stott's Crossing to the west side of Route 6, the hybrid option #2 continues through Provincetown, including the lowest traffic volume portion of Route 6 to Herring Cove Beach.

In both of the hybrid options, keeping to the east side of Route 6 in Wellfleet and much of Truro was preferred because it provides good access to various National Seashore destinations and connections to town-owned Atlantic Ocean beaches, as well as avoiding conflicts with commercial driveways.

INTERIM AND LONG-TERM ROUTES

Given the complexity and cost of developing a multi-use path along Route 6 and the belief that there were other viable alternatives in some segments, the project team considered the possibility of making the Route 6 multi-use path segment a long-term goal and following some existing roadways as an interim proposal. On local roads where there is concern about widening due to environmental or character impacts for an interim route, the project team will consider less intrusive accommodation designs such as lane striping, sharrows, and traffic calming measures.

Preferred Primary Route Selection

PROJECT TEAM PREFERRED PRIMARY ROUTE

NPS and CCC staff recommended a combination of the Hybrid Alternatives as the preferred Primary Route, selecting Hybrid Option #1 as the preferred primary route because of its safety benefits. Acknowledging that Hybrid Option #1 would require significant investment and could take a long time to complete, Staff identified the segments in Hybrid Option #2 as very desirable scenic routes that could serve as safe primary routes in the interim. . The recommended primary route follows a multi-use path along the east side of Route 6 in most areas, but utilizes the railroad bed in South Wellfleet and incorporates existing scenic roads and bike paths in Truro as an interim solution to ease implementation. The project team considered the hybrid to be best in terms of safety and ability to provide comfortable and low stress accommodation for most types of bicyclists and pedestrians, since it provides full separation from motor vehicles for most of its length. The route also uses already disturbed road corridor rights-of-way and generally follows a direct route through the three towns. The scenic segments envisioned for the short term could become enhanced accommodations with relatively little infrastructure change/investment and are more easily implemented than a multi-use path on Route 6.

STEERING COMMITTEE PREFERRED PRIMARY ROUTE

At its meeting of February 26, 2016, the Steering Committee reviewed the project team's preferred alternative for the Primary Route and selected Hybrid Option #1 as the long-term goal for the primary route, and Hybrid Option #2 as the interim primary route. There was not consensus about the need for both an interim and long-term primary route in some areas. Some Steering Committee members believed that the interim primary routes in Truro were sufficient for the long term, while others voiced belief that a multi-use path should be the ultimate goal for all sections of the study area. Given the complexity of the project and the large size of the area, the focus on construction of a multi-use path should be in segments where there are no interim primary route options.

PREFERRED PRIMARY ROUTE

The following discussion includes the project team’s explanation of their choice of preferred route for each segment of the study area, as well as the issues and concerns raised by the Steering Committee members.

Wellfleet Center Segment

- Wellfleet Center Preferred Primary Route – Railroad bed; bike shoulder on Old Kings Highway and Cahoon Hollow Road
- Issues/Concerns – Cahoon Hollow Road/Route 6 intersection; abutter concerns about Cahoon Hollow Road safety and impacts character; surface treatment for railroad bed

In the **Wellfleet Center segment**, Alternative A (railroad bed and bike shoulder on a portion of Old Kings Highway and Cahoon Hollow Road) was considered the best option in terms of safety and distance without motor vehicles, natural character and directness. It is also the lowest cost alternative considered. Alternative B (bike shoulder on LeCount Hollow/Ocean View Drive/Cahoon Hollow) is not preferred because it is less direct and would entail road widening in some wetland buffer areas and in some areas with tree canopy, impacting the character and raising concern from residents. There was also concern that coastal erosion could impact Ocean View Drive, threatening the longevity of the route and making it a poor financial investment. Alternative C (multi-use path along Route 6), though direct, is not preferred primarily because of the large number of commercial curb cuts and conflict points along this section of Route 6, plus the fact that it is the highest cost alternative. Steering Committee members concurred that the railroad bed was the preferred option in this segment, though they voiced concern about the Cahoon Hollow Road and Route 6 intersection and recommended that variations be explored to avoid this intersection, possibly bringing the path behind the cemetery and coming out at the plaza and coordinating with planned improvements to the Route 6/Main Street intersection. They referred to Cahoon Hollow Road abutters’ concerns about character and natural resource impacts as well. They noted that CPA funds could potentially be a source of funding if easements or land purchases were pursued. The Steering Committee also raised concerns about using a non-asphalt surface and requested that more research be done into alternatives to address maintenance issues and a surface that can accommodate the most users.

Wellfleet North Segment

- Wellfleet North Preferred Primary Route – Multi-use path along east side of Route 6
- Issues/Concerns – None (though design would need to accommodate bridge over Herring River)

In the **Wellfleet North segment**, all three alternatives would use a separated multi-use path, but on different sides of Route 6. Both sides have about the same number of curb cuts, but Alternative A and Alternative B (multi-use path along east side of Route 6) has less wetland buffer impacts so it is the preferred alternative. Alternative A/B also provides continuity to the preferred routes to the north. Alternative C (multi-use path along west side of Route 6) is not preferred because of its greater proximity to wetlands. Steering Committee members supported the choice of Alternative A/B.

Truro South Segment

- Truro South Preferred Primary Route – Multi-use path along east side of Route 6 in Long Term, with Collins Road/South Pamet Road as Interim Primary Route
- Issues/Concerns – Design of improvements for interim route along Collins Road/South Pamet Road

For the **Truro South segment**, a multi-use path along the east side of Route 6 (Hybrid Option #1) was considered the best option because it would avoid crossing Route 6 further north, and it would avoid concerns about wetland buffer impacts and road widening along South Pamet Road and Collins Road. Alternative A/B (bike shoulder on Collins Road and South Pamet Road) is a scenic, low stress ride, but potential widening of South Pamet Road to accommodate shoulders make this segment problematic given the wetland resources and character. Alternative C (multi-use path along west side of Route 6) is not preferred because it would require additional Route 6 crossings. Steering Committee members had mixed opinions about whether the primary route should follow Route 6 or Collins Road, noting that Collins Road/South Pamet Road would provide a welcome break from travel alongside Route 6 traffic and a scenic route more characteristic of the Outer Cape. It is also the lowest cost alternative. There was concern that the proposed widening of these roads might impact character and raise a negative public reaction and perhaps the multi-use path would be more feasible, but also comment that bicyclists using South Pamet Road to access the beach would prefer some sort of safer accommodation. Ultimately, this route was proposed as an interim primary route and the committee requested alternative treatments be explored to improve safety for bicyclists with less impact on character and wetland concerns. Possibilities include removing the center line and re-striping to create “advisory” (dashed) bicycle shoulders, or other treatments to reduce widening in sensitive areas, such as sharrows/share-the road signage.

Truro Center Segment

- Truro Center Preferred Primary Route – Multi-use path along east side of Route 6
- Issues/Concerns - None

In the **Truro Center segment**, Alternative A/B (multi-use path along east side of Route 6) was preferred over the west side because of fewer curb cuts, less wetland buffer impact, and better connectivity to the Truro Elementary School and other routes within Cape Cod National Seashore. The Steering Committee agreed that Alternative A/B was preferred because it provided better access to heavily used ocean beaches and connectivity between segments.

Truro North Segment

- Truro North Preferred Primary Route – Multi-use path along east side of Route 6 until Highland Road, using underpass to cross to west side of Route 6 further north in Long Term, with bike shoulder along South Highland Road/Coast Guard/Old Kings Highway to Head of the Meadow bike trail and High Head as Interim Primary Route
- Issues/Concerns – surface treatment and limiting vehicle access for interim primary route on unpaved portion of Old Kings Highway; Stott's Rd crossing improvements for bicycle safety; potential to accommodate multi-use path with lane diet in 4-lane section of Route 6

For the **Truro North segment**, both Alternative A (bike shoulder along South Highland/Coast Guard/Old Kings Highway to Head of the Meadow bike trail and High Head) and Alternative C (multi-use path along west side of Route 6) were considered good choices. The benefits of Alternative A are that it uses an existing bike trail and provides a scenic route with connections to beaches and destinations with the Seashore. It is also the less expensive alternative. The advantage to Alternative C is that it has the least wetland impacts and provides a consistent multi-use path, though it lacks connectivity with segment to the south which is on the east side of Route 6. Alternative B (bike shoulder along South Highland/Highland/Shore Road) is the lowest cost alternative, but runs along Shore Road without full separation in an area that is high traffic in the summer season. There are also concerns about impacts to wetland buffers and road character from widening along Shore Road. Steering Committee members agreed that CCNS plans to fund improvements to the Head of the Meadow bike trail in the near future could make Alternative A easier to implement in the short term, so it should be considered the interim primary route. There were questions about the appropriate surface treatment of the unpaved Old Kings Highway segment and recommendations made to close it to motor vehicles. The Committee recommended the long-term primary route continue as a multi-use path along the east side of Route 6 from South Highland Road until Highland Road, then use the Highland Road underpass to cross over to the west side of Route 6 and continue north from there. This would coordinate well with the town's plans to stripe a bike lane along Highland Road. Committee members noted that a lane diet on the 4-lane section of Route 6 would make using Route 6 more attractive.

Beach Point Segment

- Beach Point Preferred Primary Route – Multi-use path along west side of Route 6

- Issues/Concerns - potential to accommodate multi-use path with lane diet in 4-lane section of Route 6

In the **Beach Point segment**, Alternative C (multi-use path along west side of Route 6) was preferred to provide continuity with the previous segment and to avoid higher potential for sand incursion in Alternative A on the east side of Route 6. Alternative B (bike shoulder along Shore Road/Route 6A) was not preferred because of concerns for high traffic along Route 6A, the amount of roadway within the floodplain, as well as character and wetland buffer concerns from road widening, though it has the lowest cost estimate. The Steering Committee agreed with the use of Alternative C and noted that a lane reduction on Route 6 could facilitate its construction.

Provincetown Segment

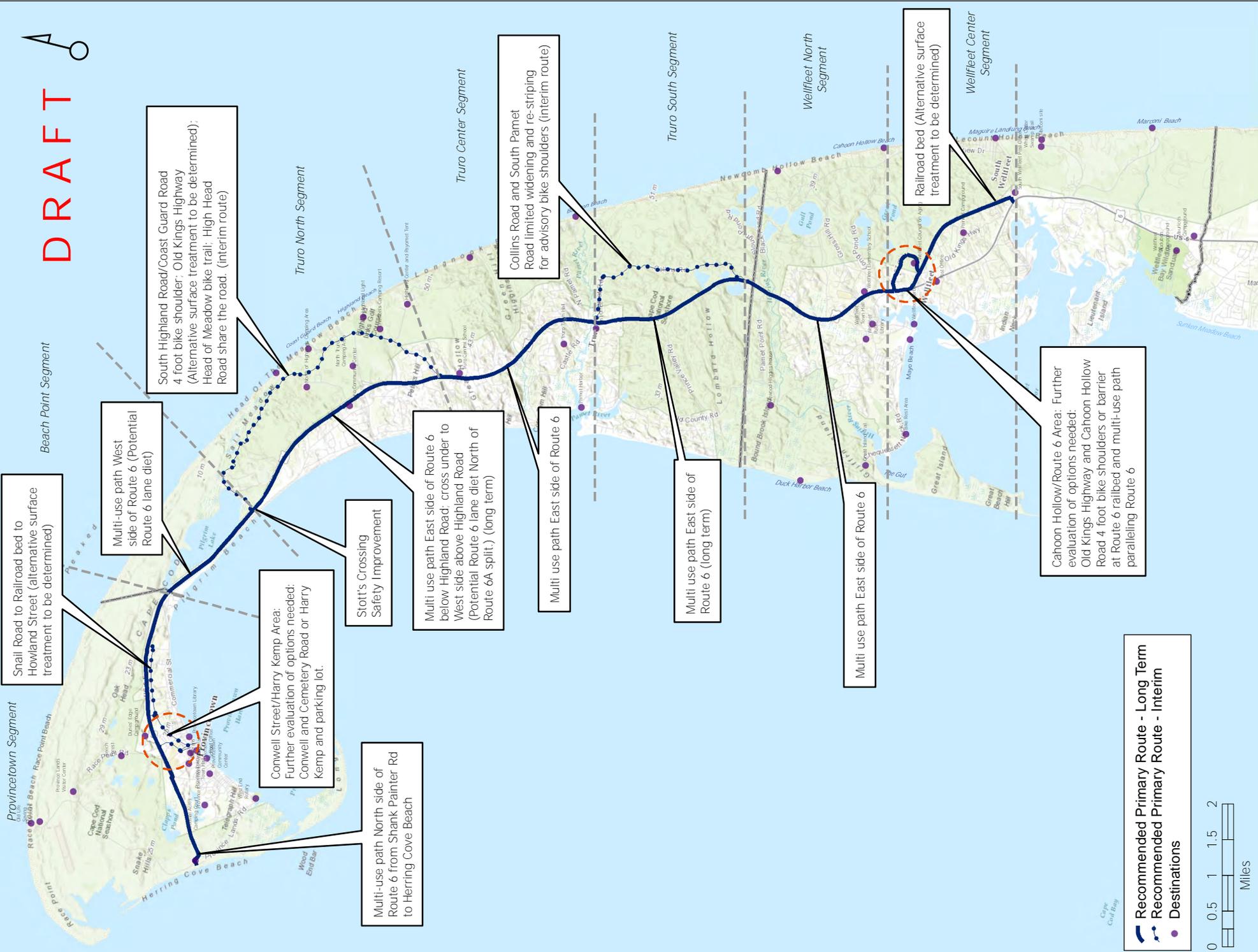
- Provincetown Preferred Primary Route – Multi-use path along west/south side of Route 6 to Shank Painter Road then crossing to north side of highway in Long Term, with railroad bed from Snail Road to Howland and Conwell Street to Cemetery Road to Macmillan Pier as Interim Primary Route
- Issues/Concerns – surface material for unpaved railroad bed; explore possible more direct route on local roads to town center, including use of Harry Kemp Way and access through Riley parking lot; potential to accommodate multi-use path with lane diet in 4-lane section of Route 6

In the **Provincetown segment**, Alternative A (multi-use path along west side of Route 6/railroad bed from Snail Road to Howland Road/Conwell Street to Cemetery Road to Macmillan Pier) was the preferred town option and has the least wetland buffer impact. Alternative B (Commercial Street) was ruled out because it would remain as a share-the-road segment with no additional accommodation. Alternative C (multi-use path along west/south side of Route 6 to Shank Painter Road, then crossing to the north side) has the benefit of providing a multi-use path all the way to Herring Cove and could be constructed at a later date. The Steering Committee acknowledged that Alternative A was the town’s preferred route and determined it would be appropriate as an interim primary route given its existing components along the railroad bed and local roads. There were some questions about the appropriate surface material for the unpaved railroad bed and also whether the route could be altered to lead more directly into the town center using Harry Kemp Way with an easement through the Riley lot (should that option become available) to Standish Street, thus eliminating the Howland Street /Route 6 /Conwell Street/Cemetery Road segment). Use of the easternmost portion of the railroad bed was not considered due to elevation changes and wetland concerns as well as private property issues. Some voiced concern about topography along Route 6 near Mt. Gilboa and the Truro/Provincetown town line. Alternative C’s multi-use path along Route 6 was preferred as a long term goal. The Committee acknowledged the potential for a lane diet in the 4-lane section of Route 6 to accommodate the multi-use path.

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Beach Point Segment

Provincetown Segment



South Highland Road/Coast Guard Road
4 foot bike shoulder; Old Kings Highway
(Alternative surface treatment to be determined);
Head of Meadow bike trail; High Head
Road share the road. (Interim route)

Multi-use path West
side of Route 6 (Potential
Route 6 lane diet)

Small Road to Railroad bed to
Howland Street (alternative surface
treatment to be determined)

Conwell Street/Harry Kemp Area:
Further evaluation of options needed;
Conwell and Cemetery Road or Harry
Kemp and parking lot.

Multi-use path North side of
Route 6 from Shank Painter Rd
to Herring Cove Beach

Stott's Crossing
Safety Improvement

Multi use path East side of Route 6
below Highland Road; cross under to
West side above Highland Road
(Potential Route 6 lane diet North of
Route 6A split.) (long term)

Multi use path East side of
Route 6

Collins Road and South Pamet
Road limited widening and re-striping
for advisory bike shoulders (interim route)

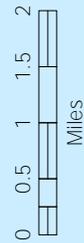
Multi use path East side of
Route 6 (long term)

Multi use path East side of
Route 6

Railroad bed (Alternative surface
treatment to be determined)

Cahoon Hollow/Route 6 Area: Further
evaluation of options needed;
Old Kings Highway and Cahoon Hollow
Road 4 foot bike shoulders or barrier
at Route 6 railbed and multi-use path
paralleling Route 6

- Recommended Primary Route - Long Term
- - - Recommended Primary Route - Interim
- Destinations



PRIMARY ROUTE ISSUES NEEDING FURTHER EVALUATION

ALTERNATIVE SURFACE TREATMENTS:

Explore non-asphalt treatments for dirt road and railbed sections and their use in various parks and bicycle trails in the northeast. CCNS is examining non-asphalt treatments for the Old Kings Highway section in Truro; there is justification for more varied surface treatments within the boundaries of the Park to maintain existing character and minimize new paved areas area which fragment sensitive plant and wildlife habitat. Both the Wellfleet and Provincetown railbed segments, while outside CCNS, are located in mapped rare species habitat areas and have a rural feel to them due to existing tree canopy and surrounding vegetation. Asphalt installation requires greater initial excavation (harmful to trees) to provide rock base depth. The project team heard concerns at the public workshops about using asphalt on the Wellfleet railroad bed because of its existing natural character. Hardened non-asphalt surfaces can accommodate most bicyclists and are used throughout the country.

CCC staff conducted research to understand options for surface treatment and identify their pro's and cons. They also consulted with NPS and conducted internet searches to find examples of bike or multi-use paths with non-asphalt surfaces, particularly in locations with similar weather conditions to Cape Cod. Perhaps the longest example is the Erie Canal Bikeway, which runs east – west from Buffalo to Albany (360 miles) along the canal towpath. Much of it is stone dust (composed of crushed limestone) . Other examples include Katy Trail in Missouri (250 miles) and Minuteman National Park battle road trail in Lexington, Massachusetts. Hard packed stone dust trails may feel like pavement and be universally accessible when compacted and dry. Under wet conditions, however, the surface can be difficult for narrow bike tires and wheelchairs. Initial installation for stone dust/crushed limestone may be cheaper than asphalt, as it requires less excavation depth. Annual maintenance costs tend to be less too, provided the path has proper drainage and is not located in a flood prone area which could cause erosion damage.

POTENTIAL FOR ROUTE 6 LANE DIET:

Explore the concept of a “lane diet” for the four-lane section of Route 6 in Truro and Provincetown to determine its feasibility and potential to reduce construction costs and natural resource/habitat impacts from installation of a separated multi-use path within the Route 6 right-of-way. A lane diet in this location could result in a two-lane highway with one lane of travel in each direction, or a three-lane highway with two lanes in one direction.

CCC performed traffic counts at multiple points along the roadway as presented in the attached table. The table shows the highest measured directional traffic volumes, summer average daily traffic volumes, and 85th percentile speeds on Route 6 from North Eastham to Provincetown. On the four lane section of Route 6, between Shore Road in Truro and the Provincetown/Truro town line, the highest measured traffic volumes in the summer months ranged from 1,018 to 618 vehicles per hour in one direction. On the four lane section of Route 6 between the town line

and Herring Cove Beach in Provincetown, the highest measured traffic volumes in the summer months ranged from 852 to 190 vehicles per hour in one direction. (The analysis uses summer traffic volumes as these are the peak conditions and recent counts are available. Recent year round counts are not available, but observation and past data shows that they are significantly lower.) Speed measurements on the four lane sections show 85th percentile speeds as high as 63 mph. The posted speed limit is 50 mph. Measurements show top speeds of over 65 miles per hour, and town officials have identified speeding as a problem. The four-lane sections of Route 6 do not provide bicycle or pedestrian accommodations. The two-lane sections in Truro and Wellfleet have 6 to 8 foot paved shoulders that are frequently used by bicycles and pedestrians.

The Federal Highway Administration (FHWA) states that typically the traffic threshold for considering lane reduction from four lanes to two is 875 vehicles per hour in one direction or average daily traffic as high as 24,000 vehicles per day in both directions¹. This is a guideline, not a standard, and does not account for special conditions/features such as seasonal population swings or geography. As shown in the graph and table attached, Route 6 in Truro has a maximum directional volume higher than the FHWA hourly volume threshold. Vehicle volumes for Route 6 in Provincetown do not exceed the thresholds. The summer average daily traffic volumes for the entire four lane segment fall below the daily volume threshold of 24,000 vehicles. In addition, sections of Route 6 that have two lanes in Truro and Wellfleet show higher traffic volumes than those that have four lanes in North Truro and Provincetown.

Decreasing the number of lanes could impact vehicle flow during peak summer hours because the peak hour volumes are near or above the feasibility threshold. Outside of the peak summer hours and the summer months, traffic volumes are significantly lower than the thresholds. Traffic flow would likely be similar to the two lanes sections of Route 6 in Truro and Wellfleet. One question raised is the impacts to level of service at intersections. With appropriate intersection design, including carrying sufficient through lanes and incorporating turning lanes with sufficient storage, impacts may be mitigated. In relation to roadway speeds, FHWA states that municipalities typically reduce the number of lanes to reduce extreme and 85th percentile speeds. Case studies and traffic simulation suggest that the 85th percentile could decrease between 3 to 5 mph and the number of speeders that violate the posted speed limit could decrease by 7 percent. Actual impacts will vary based on abutting land use and roadway geometry.

A review of safety literature suggests that the number of crashes is typically reduced when a four lane road is reduced to two or three lanes. Specific case studies include reduction on roadways with turning lanes, low density and segments with 8 or fewer intersections per mile². Since lane reductions typically result in lower speeds, implementation could also have positive impacts on crash severity. FHWA states that a difficult aspect of implementing a lane reduction is public perception. One method to address concern could be to conduct a trial period. Sometimes lane reduction occurs during construction and a trial marking plan could be consistent with previous roadway projects. The impacts to congestion can be observed rather than estimated and the public gets a chance to drive the roadway under the proposed conditions. To have a

positive impact to public perception, the trial period should last a reasonable amount of time, such that perception can adjust to the change and react to the impacts. The discontinued travel lanes could allow for designated space for bicycles and pedestrians and/or include a shoulder, as on the two lane portions of Route 6 in Wellfleet and Truro. A shoulder could allow vehicles to maneuver around vehicles turning left off Route 6. Bicycles could use the shoulder, as occurs on the two lane sections in Truro and Wellfleet. As a longer term project, a multi-use path physically removed from the travel lanes and shoulder is proposed. A lane reduction would allow the new path to be closer to the roadway centerline, minimizing the impacts to local ecology. Concerns include summer southbound afternoon/evening commute traffic, which could be further examined to identify available forms of mitigation.

CAHOON HOLLOW ROAD AND INTERSECTION WITH ROUTE 6 IN WELLFLEET:

Explore alternatives to avoid the intersection of Cahoon Hollow Road and Route 6 where the slope of the roadway and the constraints of the cemetery affect the ability to design a safe bicycle shoulder. Consider potential to bring the route behind the cemeteries and link to the pharmacy plaza. Consider potential alternate routes to connect the railroad bed with the Main Street/Route 6 intersection. Coordinate with proposed MassDOT improvements for this area.

SOUTH PAMET ROAD AND COLLINS ROAD IN TRURO:

Consider alternative accommodations for this interim primary route that would increase safety but limit widening of the roadway in wetland and historic areas. Alternatives include removing the center line and re-striping to create bicycle shoulders, or lesser amount of widening.

CONSIDER ALTERNATIVES FOR INTERIM PRIMARY ROUTE IN PROVINCETOWN:

Explore potential for interim primary route to follow Harry Kemp Way and travel through existing privately-owned parking lot to Provincetown town center.

ROUTE 6 SAFE CROSSING DESIGNS:

Consider designs for safe crossings at Stott's Crossing where the Interim Primary Route would cross Route 6, and at other locations where bicyclists need to cross Route 6 to access the Primary Route.

ADDRESS CONSTRAINED AREAS ALONG ROUTE 6:

Consider changes to multi-use path design in areas with physical constraints along Route 6, such as at the Herring River bridge in Wellfleet, and the Pamet area bridge/overpass in Truro. Consider slope constraints along Route 6 adjacent to Mt. Gilboa in Provincetown.

Secondary Routes

Secondary Routes through the region provide important means of access from the primary route to destinations and neighborhoods. The project team identified secondary routes in each town based on input from town bicycle and pedestrian committees and from public workshop attendees. Road segments that were considered as primary routes but dropped out of consideration during the course of alternatives development (or were not chosen as the preferred alternative) are included as potential secondary routes. A list of all secondary routes is included in a table at the end of this section.

TOWN PREFERENCES FOR SECONDARY ROUTES AND THEIR TREATMENT

The project team held a series of meetings with staff members in each of the towns to identify their priorities for secondary routes and the appropriate treatment of the routes.

WELLFLEET

The Wellfleet meeting was held on March 29, 2016 in the Wellfleet Senior Center and was attended by town staff and committee members.

PRIORITIES (SEE TABLE AT THE END OF THIS SECTION FOR LIST OF ALL SECONDARY ROUTES)

- Main Street/Route 6 intersection area – this area is planned for pedestrian improvements and a crossing signal, but needs to be coordinated with plans for the primary bicycle route.
- LeCount Hollow Road – primary beach access route from Cape Cod Rail Trail. Need to accommodate bicyclists without harming scenic character. Consider removing the centerline and marking bicycle shoulders within the existing paved area.
- Ocean View Drive from LeCount to Cahoon Hollow Road – this is a major beach access road and a scenic route. Safety improvements are needed to address pedestrians and cyclists when summer traffic volumes are high. Consider removing the centerline or using a dashed line and marking bicycle shoulders within the existing paved areas on these roadways.
- Ocean View Drive from Cahoon Hollow to Gross Hill Road – re-stripe this section of roadway with a bicycle shoulder.
- Marconi Beach Road – the National Seashore has proposed removing the centerline on this roadway as a test. If effective in improving safety for cars and bicyclists, it can serve as a model for other roadways in the region.
- East Commercial Street – provide sidewalk from town pump to Uncle Tim’s Bridge along the water side.

- Briar Lane – provide sidewalk in a way that preserves the rural character of this roadway. Consider coordinating design with water main installation.
- Cove Road – provide sidewalk from Route 6 to Pilgrim Spring’s Road to improve access to town center for neighborhood residents.

CONCERNS

Pole Dike Road area keep narrow travel lane for vehicles to allow more shoulder space for bicycles, especially at hills and sharp turns. Don’t want to widen roadway due to wetland buffer and character issues, but bicycle safety can be improved.

Town also has concerns about the restroom facility at the north end of the Cape Cod Rail Trail because it has been poorly maintained, and has general maintenance concerns about any new segments of regional bicycle trail. Maintenance costs and responsibilities should be explored as part of the master plan.

TRURO

The Truro meeting was held on March 29, 2016 at Truro Town Hall and was attended by town staff and committee members.

PRIORITIES (SEE ALSO TABLE OF SECONDARY ROUTES AT END OF THIS SECTION)

- Stott’s Crossing – this is a major Route 6 crossing to access High Head and the Head of the Meadow bicycle trail. It is very difficult to cross these four lanes of traffic in the summer and improvements are needed. A road safety audit should be conducted. A protected crossing with a median to create a protected location between lanes of Route 6 and a Hawk signal should both be considered.
- Head of the Meadow/Standish Way – Head of the Meadow Road provides access to two beaches so is heavily used. It is wide enough to accommodate bicycles and the pavement is in good condition, but crossing at Route 6 needs to be made safer. Consider removal of the center line and striping for bike lane on Head of the Meadow Road. Standish Road is a busy biking area due to the town library and recreation/senior center location there. This adds to the importance of this Route 6 road crossing.
- Castle Road/Route 6 crossing – this is a popular but difficult crossing due to sight distance. Need to make safety improvements here.
- South Pamet Road – summer traffic volumes are greater on this roadway because it provides access to the beach. They would like to provide some kind of accommodation on this roadway but acknowledge there are concerns about character impact. Consider removal of the center line and possible minimal pavement widening options.

- Old County Road/Depot Road – hill by Mill Pond is a visibility problem and condition of road is poor in sections. Repair poor pavement at the bridge and consider widening to allow for a climbing lane on both uphill lanes from Mill Pond crossing, possibly in conjunction with new culvert construction.
- Collins Road – the quality of pavement on this roadway should be improved. Making it part of the interim primary route may open up additional funding sources. To retain its character, alternatives to wide bicycle shoulders should be considered, such as a stabilized unpaved shoulder, removing the center line, etc.
- Head of the Meadow Bike Path – CCNS is planning a repaving project in the next few years to address the poor condition of pavement on the path.
- Education efforts – consider Cape-wide announcements to increase public awareness of bicycle safety issues. Variable message boards, informational brochures at key visitor spots, and other means of risk mitigation should be pursued.

CONCERNS

Depot Road is a busy route to Pamet Harbor and it includes boat trailer traffic, so the town would like to improve bicycle safety but believes there would be community concern about character impacts if bicycle lanes were proposed. Alternative means of increasing bicycle safety on this roadway should be considered. This group discussed the potential for a road diet in the 4-lane section of Route 6 where there have been very high travel speeds. The town would like to provide alternatives to travel on Route 6 for bicyclists uncomfortable with traveling on this section of highway, and would also like to make improvements to increase safety along this section of roadway. The town was interested to see how a lane diet might affect travel speeds, level of service at intersections, and allow for separation between north and southbound lanes. Because of the large areas of natural resources in the East Harbor area, a lane diet was seen as possibly a better way to accommodate bicycles with less impact on sensitive resources. Any consideration of reducing the number of lanes needs to consider how to deal with freezing fog or blowing snow along East Harbor that has required public safety officers to close some eastbound travel lanes up to a few times a year.

PROVINCETOWN

The Provincetown meeting was held on March 28, 2016 in the Provincetown Town Hall and was attended by town staff and committee members.

PRIORITIES (SEE ALSO TABLE OF SECONDARY ROUTES AT END OF THIS SECTION)

- Harry Kemp Way - The town requested that Harry Kemp Way also be considered as a potential primary route segment because there is a possibility of working with the owner of Riley's parking lot to bring a bicycle path through that property to the center of town. A bike route through that property would be a more direct route from the existing rail bed segment and could provide safe separation from vehicles if designed appropriately.
- Shank Painter Road - Town staff indicated their preference to accommodate bicycles along Shank Painter Road with a 5 foot bicycle lane.
- Bradford Street – Since this road varies in character along its length, bike accommodations will also vary. In some areas, a bike shoulder of 4 feet should be provided, but where there is currently on-street parking and a narrower layout a more limited accommodation is appropriate. They discussed creating climbing lanes where the grade warrants it. Sharrows will be painted on Bradford Street this spring in an effort to educate both motorists and bicyclists to share the road.
- Commercial Street – This road is heavily traveled by bikes and vehicles. The narrowness of the street and the proximity of historic buildings on either side make new accommodation difficult. The town plans to paint sharrows along all of Commercial Street this spring as part of an educational campaign.
- Snail Road – The town prefers a 5 foot bike lane on Snail Road.
- Conwell Street – Cemetery Road to MacMillan Pier project – This project was funded by CCNS through a TRIP grant and provides a shared road connection from Conwell Street to Cemetery Road to Standish through to the pier.
- Providing bicycle connection to the Province Lands Bicycle Trail from Route 6 to the transfer station area/NPS boundary.
- Education efforts – the town is developing a bicycle parking application and other ways to educate users.

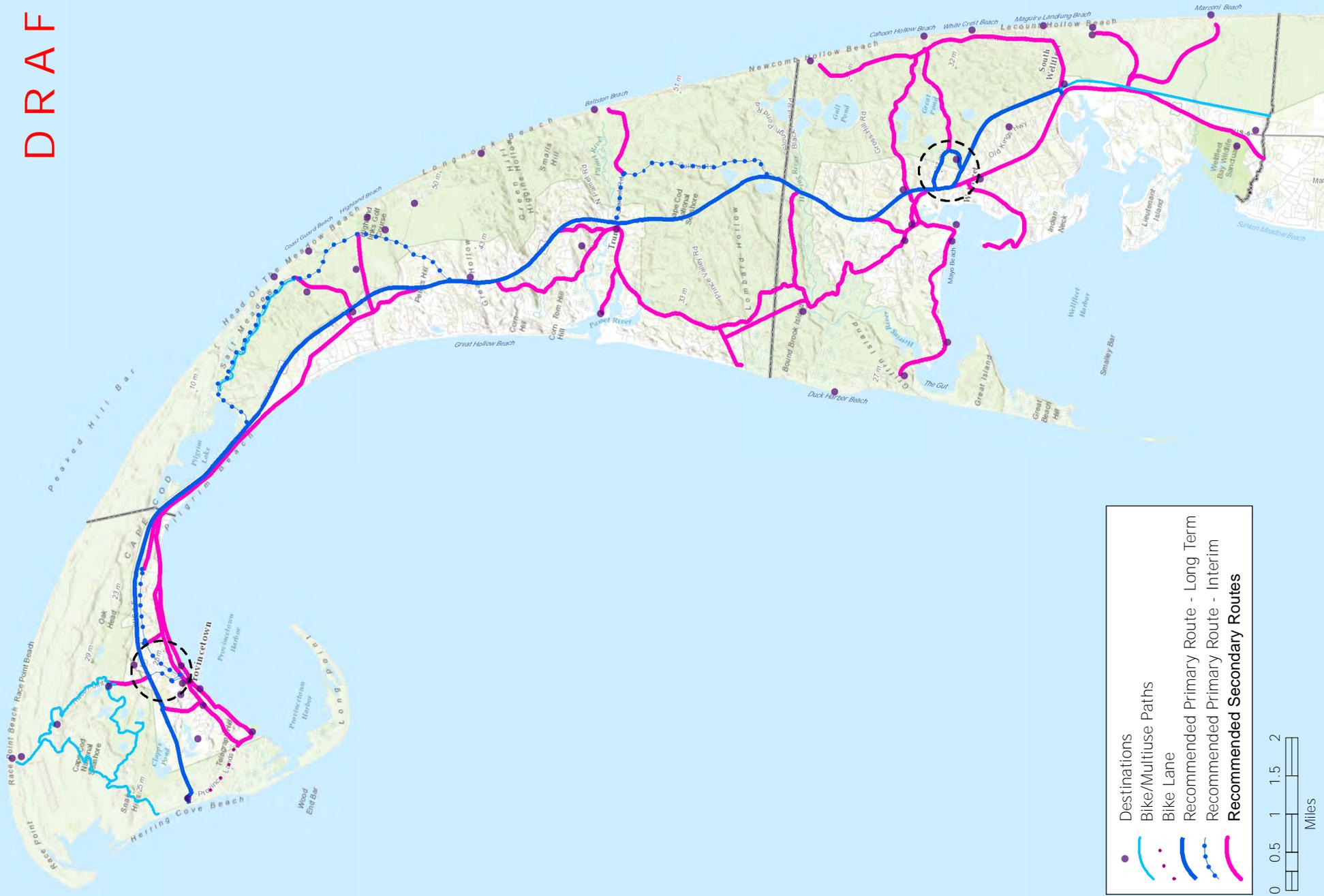
CONCERNS

The high volume of bicyclists on very narrow roadways is a major concern in Provincetown. Various education efforts are being considered in addition to accommodations along key travel routes.

The group also discussed the possibility of a lane diet on Route 6 in Provincetown, either in the western-most portion of the highway or along the entire length of the route. This option should be fully explored in recognition of potential cost savings and reduced environmental impacts from using some of the existing developed road bed. Options to consider include removing one lane from each direction of traffic, or removing one lane from a single direction. They would like to know more about potential impacts to level of service at the Conwell Street light if these options were pursued. Input from all public safety staff would be critical in this discussion.



DRAFT



-  Destinations
-  Bike/Multiuse Paths
-  Bike Lane
-  Recommended Primary Route - Long Term
-  Recommended Primary Route - Interim
- Recommended Secondary Routes**



TABLE OF SECONDARY ROUTES

Segment ID	Road or Trail Name	Location (south-north)	Route Length	Suggested Accommodation	Road/Land Owner(s)	Length inside NPS boundary	Additional Description
WELLFLEET							
W-AX	West Road	Town line to Route 6	0.55 miles	Share the road	Town	-	Part of original Claire Saltonstall Bikeway route. Hazardous Route 6 crossing. Route 6 crossing and access to CCRT needed – has limited value/connectivity otherwise.
W-A ¹	Route 6	West Road to Lecount Hollow Road	2.4 miles	4' minimum shoulders both sides	MassDOT	-	Segment has existing four-foot shoulders. No changes proposed. Used by high speed bicyclists as alternative to CCRT.
W-B	Marconi Beach Road	Route 6 to beach	1.7 miles	4' shoulders both sides	NPS	1.7 miles	Consider 4- foot “advisory”(dashed line) bike lanes, with removal of centerline, within existing footprint. Potential pilot project.
W-C	Marconi Site Road	Marconi Beach Road to overlook (Marconi site)	1 mile	Share the road	NPS	1 mile	
W-H1	Cove Road	Route 6 to Pilgrim Spring	0.85	Pedestrian/sidewalk	Town of Wellfleet	-	Walking connection into town.
W-H2	Indian Neck Road	Pilgrim Spring Road – Indian Neck	1-mile	Share the road	Town of Wellfleet	-	Conservation area access.

Segment ID	Road or Trail Name	Location (south-north)	Route Length	Suggested Accommodation	Road/Land Owner(s)	Length inside NPS boundary	Additional Description
WC-6	Long Pond Road	Main Street to Ocean View Drive	2.15 miles	Share the road	Town of Wellfleet	1.5 miles	Existing Claire Saltonstall route. Wellfleet bike committee wants to re-route it to Cahoon Hollow once Main Street improvements are complete.
WC-3	Lecount Hollow Road	From CCRT-Ocean View Drive	0.66 mile	4' shoulders	Town of Wellfleet	0.5 mile	route. Consider speed reduction measures such as lower speed limit. Sand drift/accumulation issue
WC-3	Ocean View Drive	From Lecount Hollow to Cahoon Hollow Road	1.72 miles	3' shoulders	Town of Wellfleet	1.72 mile	Consider speed reduction measures such as lower speed limit. Sand issues –especially at Lecount intersection.
WC-4	Cahoon Hollow Road	From Ocean View Drive to Route 6	2 miles	Share the road	Town of Wellfleet	1.68 miles	Consider speed reduction measures
W-E	Ocean View Drive	Long Pond Road to Newcomb Hollow beach parking lot	1.35 miles	Share the road	Town of Wellfleet	1.35 miles	Beach area access.
W-M	Pamet Point Road	Route 6 – Old County Road	1.25 miles	Share the road	Town of Wellfleet	1.25	Scenic rural road – provides connection to Old County Road and Route 6. Low priority
W-I	Kendrick Avenue – Chequesset Neck Road	Commercial Street – Griffin Island Road	2.71	Share the Road	Town of Wellfleet	0.35 mile	Bicycle and walking route from harbor to Great Island.

Segment ID	Road or Trail Name	Location (south-north)	Route Length	Suggested Accommodation	Road/Land Owner(s)	Length inside NPS boundary	Additional Description
W-J	Bank Street & Commercial	Main Street to Kendrick	0.6 miles	Share the Road	Town of Wellfleet	-	Existing sidewalk. Route to harbor from downtown.
W-K	Briar Lane	Route 6 – Main Street	0.5 miles	Pedestrian/sidewalk	Town of Wellfleet	-	Connect to existing sidewalk on south side near Main Street (but could cross to north side to Route 6). High priority for bike and walkways committee.
W-L	East Commercial Street	From Main Street to Bank Street	0.24 miles	Pedestrian/sidewalk	Town of Wellfleet	-	
WN-1	Main Street, West Main, Pole Dike, Bound Brook ²	Higgins Lane to Truro line	3.8 miles	Share the road and minor safety improvements such as narrow lanes and fog line.	Town of Wellfleet	1.3 miles	Claire Saltonstall Bikeway route from Long Pond Road through Truro.
TRURO							
TS-1	Old County & Depot Road	Truro town line to Truro Center Road	3.3 miles	Share the road, with climbing lane marsh hill	Town of Truro	-	Consider providing a climbing lane at Mill Pond. Eagle Neck Creek culvert replacement could provide opportunity for bike accommodations.
T-B	Ryder Beach Road	Old County Road to beach	0.60 miles	Share the road, stabilize shoulder	Town of Truro	-	Low priority.
T-A	Rail bed & Diana's Path	RR bed from Bound Brook Island Road to Ryder Beach Road.	1.2 miles	Pedestrian – existing trail. Signage	Truro Conservation, trust, NPS	.94	Low priority. Remain unpaved.

Segment ID	Road or Trail Name	Location (south-north)	Route Length	Suggested Accommodation	Road/Land Owner(s)	Length inside NPS boundary	Additional Description
T-C	South Pamet Road	Truro Center Road to Ballston beach	1 mile	Share the road	Town of Truro	1 mile	(Overlaps with potential primary route). Top priority as a secondary route, especially eastward to beach.
T-D	Depot Road	From Old County Road–Pamet Harbor	0.65 miles	4' shoulders	Town of Truro	-	More space needed for bicycles due to boats on road (in tow).
T-F	Head of the Meadow Road	Route 6 to bike path	0.9 mile	4' shoulder or bike lane – see note	NPS	0.86 mile	Crossing problem between Head of Meadow & Standish. Potential pilot project for NPS. Consider Hawk signal for crossing. Consider advisory bike lane/shoulders without centerline. HIGHEST PRIORITY CROSSING for Truro bike committee. (See also Standish Road below.)
T-G	Standish Road	Route 6A to Route 6	0.15	Share the road	Town of Truro	-	Crossing problem to Head of Meadow (0.25 mile distance between Standish & Head of the Meadow.) This segment goes together with Head of the Meadow and signal. HIGH PRIORITY crossing.
TC-1	Truro Center Road/Castle Road *Route 6 crossing needed	From Truro Center Road to Route 6 north	2.10 miles	Share the road	Town of Truro	-	
TN-4	Highland Road	From South Highland Rd to Route 6A	1.04 miles	4' shoulder both sides	Town of Truro and MassDOT (ramps)	0.68 mile	MassDOT to install share the road signage 2016.
TN-1	Route 6A (Shore Road)	From Highland Road to	3.92 miles	4' shoulder both sides	Town of Truro	-	High priority segment.

Segment ID	Road or Trail Name	Location (south-north)	Route Length	Suggested Accommodation	Road/Land Owner(s)	Length inside NPS boundary	Additional Description
		Commercial St/town line					
PROVINCETOWN							
P-A	Race Point Road	Transfer Station – Route 6	0.22 mile	4' shoulders	Town of Provincetown ,MassDOT		Shoulders or bike lane could be located in ROW.
P-B	Shank Painter Road	Bradford Street – Route 6	0.53 mile	5' bike lane	Town of Provincetown	-	* Town is working on plan for Shank Painter Road improvements – accommodation type to be determined.
PE-6	Bradford Street	Commercial Street split to Conwell Street	1.15 miles	Share the road & 4' climbing lane*	Town of Provincetown	-	Climbing lane on uphill, share the road on downhill.
P-C	Moors Road (Province Lands Road)	Commercial Street to Bradford Street extension	0.22	5' bike lane	MassDOT	-	Join existing bike lane
P-D	Snail Road	Commercial St-Route 6	0.25	5' bike lane	MassDOT	-	Connector to Route 6A, Route 6, and RR bed.
PW-1	Commercial Street	Standish Street – west end rotary	1.2 miles	Share the road	Town of Provincetown	-	
PW-2	Bradford Street	Conwell Street – Prince Street	0.4 mile	Share the road, with climbing lane Winslow to Prince	Town of Provincetown	-	
PW-2X	Bradford Street	Prince Street – Moors Road	1 mile	4' bike lane	Town of Provincetown	-	

Segment ID	Road or Trail Name	Location (south-north)	Route Length	Suggested Accommodation	Road/Land Owner(s)	Length inside NPS boundary	Additional Description
PE-1	Commercial Street	From Shore Road/town line to Macmillan Wharf (Standish Street)	2.2 miles	Share the road	MassDOT & Town of Provincetown		

Appendices

APPENDIX A: POTENTIAL ROUTES SCREENING/SEGMENT EVALUATION MATRIX

APPENDIX B: IMPACT EVALUATION TABLE – POTENTIAL PRIMARY ROUTES

APPENDIX C: POTENTIAL SECONDARY ROUTE CHARACTERISTICS

APPENDIX D: PUBLIC COMMENTS

POTENTIAL ROUTES SCREENING/SEGMENT EVALUATION SUMMARY

ROUTE SEGMENTS:	WC-1	WC-2	WC-3	WC-4	WC-5 (a)	WC-5 (b)	WC-6	WN-1	WN-2	TS-1	TS-2	TS-3 (a)	TS-3 (b)	TC-1	TC-2 (a)	TC-2 (b)	TN-1	TN-2 (a)	TN-2 (b)	TN-3 (a)	TN-3 (b)	TN-3 (c)	TN-3 (d)	P-1	P-2 (a)	P-2 (b)	P-2 (c)	P-3 (a)	P-3 (b)	P-4	
ROUTE SEGMENTS:	Route 6 (MUP) - LeCount Hollow to Main St	Rail bed (MUP) - LeCount Hollow to Old Kings Hwy	LeCount Hollow & Ocean View Drive (shoulder)	Cahoon Hollow Road (shoulder)	Old County Road (shoulder) - Route 6 to Old Kings Hwy	Old Kings Hwy (shoulder) - Rail bed to Cahoon Hollow	Long Pond Road (shoulder)	Main St, Pole Dike & Bound Brook Island Rd (shoulder)	Route 6 (MUP) - Main St to Rose Rd	Depot Rd (shoulder) - town line to Pamet R./Truro Center Rd	Route 6 (MUP) - Rose Road to South Pamet Road	Rose Road/ Collins Road (shoulder)	South Pamet Rd (shoulder) - Collins Rd to Route 6	Truro Center Road/ Castle Road (shoulder) - Pamet River to Route 6	Route 6 (MUP) - Castle Rd to South Highland	Route 6 (MUP) - Shore Rd/Rt 6A (shoulder) - Route 6 split to town line	Route 6 (MUP) - South Highland to High Head	Route 6 (MUP) - High Head to town line	South Highland Road/ Coast Guard Road	Highway (shared lane) - Coast Guard Rd to Head of Meadow	Head of Meadow bike trail (MUP)	High Head Road (shared lane) - bike trail to Route 6	Route 6A/Commercial Street (shared lane)	Rail bed (MUP) - Snail Rd to Howland St	Howland St (shoulders) - rail bed to Route 6	Conwell Street/ Cemetery Road/ Alden Street	Route 6 (MUP) - town line to Conwell Street	Route (MUP) 6 - Conwell St to Herring Cove	Bradford Street(shoulders and shared)		
SCREENING FACTORS:																															
USERS/CONNECTIVITY																															
Serves varied levels/types of bicycle users	all users	all users	hard for kids/traffic	hard for kids/traffic	hard for kids/traffic	hard for kids/traffic	hard for kids/traffic	hard for kids/traffic	all users	hard for kids/traffic	all users	hard for kids/traffic	hard for kids/traffic	hard for kids/traffic	all users	all users	hard for kids/traffic	all users	all users	hard for kids/traffic	shared lane low traffic volume	all users	shared lane/low traffic vol.	hard or kids/traffic	all users	hard for kids/traffic	hard for kids/traffic	all users	all users	hard for kids/traffic	
Serves varied levels/types pedestrian users	all users	all users	traffic/part separation	traffic/part separation	traffic/part separation	traffic/part separation	traffic/part separation	traffic/part separation	all users	traffic/part separation	all users	traffic/part separation	traffic/part separation	traffic/part separation	all users	all users	traffic/part separation	all users	all users	traffic/part separation	shared space, low traffic volume	all users	shared space, low traffic volume	Existing sidewalk most of the segment	all users	traffic/part separation	shared space except for bradford, station	all users	all users	No sidewalk/shared most of segment.	
Provides direct north/south route	direct	direct	not direct	not direct	direct	direct	not direct	less direct	direct	less direct	direct	direct	direct	less direct	direct	direct	direct	direct	direct	less direct	less direct	less direct	less direct	direct	direct	direct	direct	direct	direct	direct	
Accesses key destinations	via side roads	via side roads	access to beaches	access to beaches	Nothing on this segment	access to campground, COA	access to beaches	town ctr, Atwood Higgins	via side roads	only at end	via side roads	via side roads	via side roads	via side roads	via side roads	via side roads	Ntruro Ctr, Beach Point	via side roads	no	Payomet, Highland Light, beach	Head of Meadow	Head of Meadow, Pilgrim hghts	HOM bike trail	downtown, beaches	via side roads	via side roads	downtown	via side roads	Herring Cove	downtown	
RESOURCE ISSUES																															
Minimal natural resources impacts	biomap, wetlands	biomap	biomap	biomap, pond edge	biomap	biomap	biomap, pond edge	wetlands, biomap, floodzone	wetlands, biomap	wetlands, biomap	biomap	biomap	biomap	biomap	biomap	biomap	part biomap	wetlands, biomap	wetlands, biomap	wetlands, biomap	biomap	biomap	wetlands, biomap	wetlands, biomap, FEMA flood	wetlands, biomap	biomap	no mapped resources	wetlands, biomap	biomap	no mapped resources	
Minimal cultural resources impacts	some historic	no historic	few historic bldgs	few historic bldgs	few historic	no historic	few historic bldgs	some historic	some historic	some historic	few historic bldgs	few historic bldgs	some historic	some historic	few historic bldgs	few historic bldgs	some historic	some historic	some historic	some historic	few historic bldgs	few historic bldgs	few historic bldgs	some historic	some historic	few historic bldgs	few historic bldgs	some historic	few historic bldgs	some historic	
Minimal impacts undeveloped areas	mostly developed	dirt trail	lightly developed	lightly developed	lightly developed	lightly developed	lightly developed	BBI Rd undeveloped area	mostly developed	lightly developed	lightly developed	mostly undeveloped	lightly developed	lightly developed	lightly developed	lightly developed	mostly developed	mostly developed	lightly developed	lightly developed	lightly developed	lightly developed	existing bike trail	mostly undeveloped	mostly undeveloped	dense development	undeveloped, walking trail	mostly developed	dense development	undeveloped highway corridor	dense development
CHARACTER & EXPERIENCE																															
Consistent with surrounding character	adds pavement to corridor	higher usage	widening	widening	widening	widening	widening	widening	adds pavement to corridor	widening	widening	widening	widening	widening	adds pavement to corridor	adds pavement to corridor	widening	adds pavement to corridor	adds pavement to corridor	minor widening	non asphalt	minor trail widening	existing width	most of segment shared	non asphalt	minor widening	shared route	widens highway	widens highway	minor widening	
Provides scenic route	little scenic	scenic/wooded	coastal/wooded	wooded/rural	partly wooded	wooded	wooded	historic/wetlands	little scenic	views/wooded	wooded/rural	wooded/rural	wooded/rural	views/rural	partly wooded highway	commercial area	water, dunes views	water, dunes views	water, dunes views	wooded	wooded/rural	wetlands, coastal views	wetlands, coastal views	bay view	woodland, nature path	little scenic	cemetery, Monument, downtown	dunes, woodland	dunes, woodland	character bldgs, writer/artist homes, bas relief...	
Provides interpretation opportunities	none obvious	railroad/woodlands	coast/historic	pond/woodlands	None obvious	woodlands	pond/woodlands	wetlands/historic	herring river	Pamet Harbor, cemeteries,	ponds	ponds/woodlands	wetlands/historic	pamet river, castle hill	none obvious	none obvious	Shore Road, Beach Point	cemetery, pilgrim hghts	East Harbor, railroad	Highlands Ctr, Highland House, light	woodland, OKH	wetlands, Pilgrim Hghts	East Harbor	waterfront, artist/writer homes, historic	vegetation, wildlife	none obvious	cemetery, hist bldgs, pier	East Harbor, dunes, woodland	dunes, quaking bog, Herring Cove	restrooms, food, lodging	
Connects to amenities (food/facilities)	theater/food/P.O.	only at end	only at Rt 6	only at Rt 6	Only at Route 6	senior ctr	grade school	only in town center	police, fire, limited food	limited/town center	no services	no services	no services	limited/town center	no services	food, school	food, Ntruro ctr	no services	no services	campground, Highland ctr, light	no services	seasonal/bathouse	no services	food, shops, lodging	no services	no services	food, shops, lodging benches,	Herring Cove restrooms, food	restrooms, food, lodging		
Avoids steep grades	no steep grades	no steep grades	moderate grades	moderate grades	moderate grades	moderate grades	moderate grades	moderate grades	moderate grades	steep grades, long hills	no steep grades	moderate grades	no steep grades	steep grade, long hills	steep grade near Pamet	steep grade by school	moderate grades, except steep @ Highland/6A	moderate grades	no steep grades	moderate grades	moderate grade	no steep grades	no steep grades	no steep grades	no steep grades	no steep grades	moderate grade	no steep grades	no steep grades	moderate grades, steep @ prince St.	
SAFETY																															
Low stress travel and/or separation from high traffic roads	full separation	no traffic	summer traffic	summer traffic	moderate traffic	moderate traffic	modest traffic	modest traffic	full separation	modest traffic	full separation	little traffic	low traffic volumes	little traffic	full separation	full separation	summer traffic	full separation	full separation	moderate traffic	low traffic	full separation	low traffic but shared lane	summer traffic	full separation	moderate traffic	full separation	full separation	full separation	moderate traffic	
Provides safe/comfortable access through area	curb cut crossings	driveway/access	limited separation	limited separation	limited separation	limited separation	limited separation	limited separation	curb cut crossings	limited separation	few crossings	low traffic volumes, speeds, conflict points	low traffic volumes, speeds	poor sightlines, hills,	curb cut crossings	curb cut crossings	summer traffic volumes, speeds, curb cuts	full separation, few curbcuts, crossings	full separation, few curbcuts, crossings	moderate traffic volume, speed	low traffic, speed	full separation	low traffic, speeds	high traffic volumes,	full separation	moderate traffic volumes, speeds, short segment	conflict points, on street parking	full separation, few crossings	full separation	moderate traffic volumes, driveways, parked cars	
IMPLEMENTATION																															
Adequate right-of-way	MA DOT	MA DCR	town	town	town	town	town	town	MA DOT	town	town	town	town	town	town	MA DOT	town	MA DOT	MA DOT	town	NPS	NPS	NPS	town	town	town	town, MassDOT	town, MassDOT	MassDOT	town	
Land ownership issues	driveway crossings	addressed in court	none known	none known	none known	none known	none known	none known	none known	none known	none known	none known	none known	none known	none known	none known	none known	none known	none known	none known	none known	none known	none known	none known	conservation restriction	none known	none known	none known	none known	none known	
Cost - design, engineering, construction	high cost	high cost	widening, markings	widening, markings	widening, markings	widening, markings	widening, markings	widening, markings	high cost	widening, markings	high cost	widening, markings	widening, markings	widening, retaining	high cost	high cost	widening, markings	high cost	high cost	widening, markings	widening, markings	widening, markings	trail rehab funded	markings	markings	markings	markings	work underway	high cost	high cost	
Community support														character impacts								Funded NPS			permitting, CR		work underway				
Key:	Moderate grade= sections > 5&, no grades over 10%; steep grades = 10% grades in sections.																														
	Fully addresses objective																														
	Partially addresses objective																														
	Does not address objective																														

POTENTIAL PRIMARY ROUTES - IMPACT EVALUATION TABLE - 3/10/16

Segment ID	Road Name	Location (south-north)	Segment Length (Miles)	Suggested Accommodation	Approx Existing Width (ft) ⁴	Expansion Width (ft)	Approx ROW (ft) ⁴	Area of Disturbance (ft ²)	# Route 6 Crossings	# Driveway Crossings (for MUP only)	Wetland Buffer (linear ft)	Impact to Wetland Buffer (ft2)	flood plain (linear ft)	Impact to Floodplain (ft2)	Priority Habitat (linear ft)	Impact to Priority Habitat (ft2)	Estimated Cost of Accomodation ⁶	Estimated cost of segment
ALTERNATIVE ROUTE A																		
WC-2	Railbed	From LeCount Hollow Rd to Old County Rd/Old King's Highway	1.75	Separate multi-use path; consider unpaved surface (i.e. stone dust or similar)	11	5	90	46,200		1 (res. driveway)	90	450	0	-	9200	46,000	\$ 1,617,000	Wellfleet Ctr - \$2,365,070
WC-5	Old County/OKH	From railbed to Cahoon	0.35	4' shoulders	22	10	40	18,480			0	-	0	-	1900	19,000	\$ 284,592	
WC-4	Cahoon Hollow Road	From Old County Rd/Old Kings Highway to Route 6	0.57	4' shoulders	22	10	40	30,096			200	2,000	0	-	1500	15,000	\$ 463,478	
WN-2	Route 6	From Cahoon Hollow Road to Rose Rd/Collins Road	2.32	Separate multi-use path on East side	32-40	11		134,746		26 (east side: 9 road, 9 comm. driveway, 8 res. driveway)	4300	47,300	3100	34,100	9400	103,400	\$ 3,772,877	
Wellfleet subtotal			4.99					229,522	0	27		49,750		34,100		183,400	\$ 6,137,947	
TS-3	Rose Rd/Collins Road	From Route 6 to South Pamet Road	2.3	4' shoulders	20-22	10	40	121,440			400	4,000	0	-	12100	121,000	\$ 1,870,176	Truro South - \$2,488,147
TS-3	South Pamet Road	From Collins Rd to Route 6 (via North Pamet Road)	0.76	4' shoulders	22	10	40	40,128			2800	28,000	2500	25,000	4000	40,000	\$ 617,971	
TC-2	Route 6	From South Pamet Rd to South Highland Rd	2.47	Separate multi-use path on East side	32-38	11	70-150	143,458		26 (east side: 12 road, 2 comm. driveway, 12 res. driveway)	300	3,300	300	3,300	9700	106,700	\$ 4,016,813	Truro Center - \$4,016,813
TN-3	South Highland Rd	From Route 6 to Highland Rd	1.4	4' shoulders	25	7	60	51,744			200	1,400	0	-	5700	39,900	\$ 1,138,368	Truro North - \$4,140,998
TN-3	Coast Guard Rd	From South Highland Rd to dirt road (OKH)	0.48	Share the road	25	0	40	-			800	-	0	-	2500	-	\$ 7,096	
TN-3	Old King's Highway/sand road	From Coast Guard Rd to Head of Meadow trail	0.8	Unpaved road/path ; stabilize and minor width increase possible	10 - 12 unpaved	0		-			0	-	0	-	4200	-	\$ 739,200	
TN-3	Head of the Meadow bike trail	Existing paved bike trail	1.9	Might widen outside wetlands; may need to raise elevation of some sections	10-12	2		20,064		-	10000	20,000	10000	20,000	10000	20,000	\$ 2,247,168	
TN-3	High Head Road	From bike trail/parking area to Route 6	0.62	Share the road; may widen outside wetlands	20 unpaved	0	35	-			3300	-	3300	-	3300	-	\$ 9,166	
TN-2	Route 6	From High Head Rd & Stott's crossing to Provincetown town line	1.7	Separate multi-use path on West side	Undivided: 50. Divided: 26 & 26	14	100-150	125,664	1	-	4900	68,600	9000	126,000	5600	78,400	\$ 2,764,608	Beach Point- \$2,764,608
Truro subtotal			12.43					502,498	1	26		125,300		174,300		406,000	\$ 13,410,566	
PE-2	Route 6	From Provincetown town line to Snail Road	0.85	Separate multi-use path West/South side	26 & 26	14	200	62,832		2 (west side: 2 road)	0	-	0	-	4500	63,000	\$ 1,382,304	Ptown East- \$3,173,681
P-D	Snail Road	From Route 6 to railroad bed	0.1	4' shoulders	23	9		4,752			0	-	0	-	500	4,500	\$ 81,312	
PE-2X	Railbed	From Snail Road - Howland Street	0.96	Existing separate unpaved trail/path; consider unpaved surface	11	5		25,344		-	3300	16,500	700	3,500	5100	25,500	\$ 887,040	
PE-5	Howland St	From railbed north to Route 6 ROW	0.1	3' shoulders	25' (40'+ at Route 6 intersctn)	3	90	1,584			200	600	0	-	500	1,500	\$ 81,312	
PE-3	Route 6	From Howland St to Conwell Street	0.45	Separate multi-use path on West/South side	26 & 26	14	200	33,264		1 (west side: 1 road)	1700	23,800	0	-	2400	33,600	\$ 731,808	
PW-4	Conwell St/ Cemetery Road/ Alden Street/ Bradford St/ Standish St - Lopes Square		0.67	Shoulder & share the road (Project underway)	25 (varies)	0	20 (varies)	-			200	-	500	-	800	-	\$ 9,905	
Provincetown subtotal			3.13					127,776	0	3		40,900		3500		128,100	\$ 3,173,681	
Alt A Totals			20.55					859,795	1	56	32,690	215,950	29,400	211,900	92,900	717,500	\$ 22,722,195	

POTENTIAL PRIMARY ROUTES - IMPACT EVALUATION TABLE - 3/10/16

Segment ID	Road Name	Location (south-north)	Segment Length (Miles)	Suggested Accommodation	Approx Existing Width (ft) ⁴	Expansion Width (ft)	Approx ROW (ft) ⁴	Area of Disturbance (ft ²)	# Route 6 Crossings	# Driveway Crossings (for MUP only)	Wetland Buffer (linear ft)	Impact to Wetland Buffer (ft2)	flood plain (linear ft)	Impact to Floodplain (ft2)	Priority Habitat (linear ft)	Impact to Priority Habitat (ft2)	Estimated Cost of Accomodation ⁶	Estimated cost of segment
ALTERNATIVE ROUTE B																		
WC-3	LeCount Hollow Road	From CCRT to Ocean View Drive	0.66	4' shoulder both sides	21	11	30	38,333			200	2,200	0	-	3500	38,500	\$ 536,659	Wellfleet Ctr - \$3,561,465
WC-3	Ocean View Drive	From LeCount Hollow Rd to Cahoon Hollow Rd	1.72	4' shoulder both sides	20-24	8	40	72,653			0	-	0	-	9100	72,800	\$ 1,398,566	
WC-4	Cahoon Hollow Road	From Ocean View Dr to Route 6	2	4' shoulder both sides	22	10	40	105,600			200	2,000	0	-	9200	92,000	\$ 1,626,240	
WN-2	Route 6	From Cahoon Hollow Rd to Rose Rd/Collins Road	2.32	Separate multi-use path on East side	32-38	11		134,746	1	26 (east side: 9 road, 9 comm. driveway, 8 res. driveway)	4300	47,300	3100	34,100	9400	103,400	\$ 3,772,877	Wellfleet North - \$3,772,877
Wellfleet subtotal			6.7					351,331	1	26		51,500		34,100		306,700	\$ 7,334,342	
TS-3	Rose Rd/Collins Road	From Route 6 to South Pamet Road	2.3	4' shoulder both sides	20-22	10	40	121,440			400	4,000	0	-	12100	121,000	\$ 1,870,176	Truro South - \$2,488,147
TS-3	South Pamet Road	From Collins Road to Route 6 (via North Pamet Rd)	0.76	4' shoulder both sides	22	10	40	40,128			2800	28,000	2500	25,000	4000	40,000	\$ 617,971	
TC-2	Route 6	From South Pamet Rd to South Highland Rd	2.47	Separate multi-use path on East side	32-38	11	70-150	143,458		26 (east side: 12 road, 2 comm. driveway, 12 res. driveway)	300	3,300	300	3,300	9700	106,700	\$ 4,016,812	Truro Center - \$4,016,812
TN-3	South Highland Road	From Route 6 to Highland Road	1.4	Shoulder both sides (min 4 ft)	25	7	60	51,744			200	1,400	0	-	5700	39,900	\$ 1,138,368	Truro North - \$3,755,013
TN-4	Highland Road	From South Highland Rd to Route 6A	1.04	4' shoulder both sides	24	8	44	43,930			0	-	0	-	4600	36,800	\$ 845,645	
TN-1	Route 6A (Shore Road)	From Highland Road to Commercial St/town line	3.92	4' shoulder both sides	22	10	45-50	206,976			7000	70,000	12000	120,000	4000	40,000	\$ 3,187,430	Beach Point - \$1,416,800
Truro subtotal			11.89					607,675	0	26		106,700		148,300		384,400	\$ 11,676,402	
PE-1	Commercial Street	From Shore Road/town line to Macmillian Wharf	2.2	Share the road	22	0	30	-			7200	-	6700	-	800	-	\$ 32,525	Ptown East - \$32,525
Provincetown subtotal			2.2					0	0	0		0		0		0	\$ 32,524.80	
Alt B Totals			20.79					959,006	1	52	22,600	158,200	24,600	182,400	72,100	691,100	\$ 19,043,269	

POTENTIAL PRIMARY ROUTES - IMPACT EVALUATION TABLE - 3/10/16

Segment ID	Road Name	Location (south-north)	Segment Length (Miles)	Suggested Accommodation	Approx Existing Width (ft) ⁴	Expansion Width (ft)	Approx ROW (ft) ⁴	Area of Disturbance (ft ²)	# Route 6 Crossings	# Driveway Crossings (for MUP only)	Wetland Buffer (linear ft)	Impact to Wetland Buffer (ft ²)	flood plain (linear ft)	Impact to Floodplain (ft ²)	Priority Habitat (linear ft)	Impact to Priority Habitat (ft ²)	Estimated Cost of Accommodation ⁶	Estimated cost of segment
ALTERNATIVE ROUTE C																		
WC-X	Lecount Hollow Road	From CCRT – Route 6	0.0795	4' shoulder both sides	21	11	30	4,617	1		0	-	0	-	400	4,400	\$ 64,643	Wellfleet Center - \$3,756,208
WC-1	Route 6	From LeCount Hollow Rd to Cahoon Hollow Rd	2.27	Separate multi-use path on West side	32-40	11	70-150	131,842		45 (west side: 16 road, 13 comm. driveway, 16 res. driveway)	900	9,900	0	-	7000	77,000	\$ 3,691,565	
WN-2	Route 6	From Cahoon Hollow Rd to Rose Rd/Collins Road	2.32	Separate multi-use path on West side	32-40	11	Varies. Narrowest @ Cahoon Hollow: 80' widens north of Main St: 70-160'	134,746		25 (west side: 11 road, 7 comm. driveway, 7 res. driveway)	4300	47,300	2300	25,300	7800	85,800	\$ 3,772,876	
Wellfleet subtotal			4.67					271,205	1	70		57,200		25,300		167,200	\$ 7,529,084	
TS-2	Route 6	From Rose Rd (S)/Collins Road to South Pamet Rd overpass	2.3	Separate multi-use path on West side	32-38	11	70-150	133,584		15 (west side: 6 road, 3 comm. driveway, 6 res. driveway)	0	-	0	-	12000	132,000	\$ 3,740,352	Truro South - \$3,740,352
TC-2	Route 6	From South Pamet Rd overpass to Castle Rd (north end)	1.85	Separate multi-use path on West side	32-38	11	70-150	107,448		23 (west side: 6 road, 3 comm. driveway, 14 res. driveway)	300	3,300	300	3,300	6700	73,700	\$ 3,008,544	Truro Center - \$4,024,944
TC-2	Route 6	From Castle Rd to Shore Rd/Route 6A split	1.1	Separate multi-use path on West side	32-38	11	70-150	63,888		25 (west side: 7 road, 15 comm. driveway, 3 res. driveway)	0	-	0	-	3800	41,800	\$ 1,788,864	
TN-2	Route 6	From Route 6A/Shore Rd split to Stott's crossing	2.9	Separate multi-use path on West side	50	14	100-150	214,368		18 (west side: 10 road, 1 comm. driveway, 7 res. driveway)	1900	26,600	1500	21,000	14800	207,200	\$ 4,716,096	Truro North - \$5,486,096
TN-2	Route 6	From Stott's crossing to Provincetown town line	1.7	Separate multi-use path on West side; consider lane reduction or narrowing	Undivided: 50. Divided: 26 & 26	14	100-150	125,664		-	4900	68,600	9000	126,000	5600	78,400	\$ 2,764,608	Beach Point - \$2,764,608
Truro subtotal			9.85					644,952	0	81		98,500		150,300		533,100	\$ 16,018,464	
PE-3	Route 6	From Provincetown town line to Conwell Street	2.25	Separate multi-use path on South side; consider lane reduction or narrowing	26 & 26	14	200	166,320		3 (west side: 3 road)	4700	65,800	0	-	11900	166,600	\$ 3,659,040	Ptown East - \$3,659,040
PW-3	Route 6	From Conwell Street to Herring Cove parking lot	1.75	Separate multi-use path - cross from South to North at Shank Painter Rd; use old Route 6 layout	26 & 26	14	200	129,360	1	-	2900	40,600	0	-	9200	128,800	\$ 2,845,920	Ptown West - \$2,845,920
Provincetown subtotal			4					295,680	1	3		106,400		-		295,400	\$ 6,504,960	
Alt C Totals			18.52					1,211,837	2	154	19900	262,100	13100	175,600	79200	995,700	\$ 30,052,508	

Notes:
 1 - Based on traffic count data, field observations, and local knowledge
 2 - Based on field observations. Conditions may vary throughout the corridor
 3 - Based on the speed limit noted in the MassDOT roadway inventory or
 P - Based on the posted speed limit or
 PF - based on prima facie speed limit is listed per MGL Chapter 90, Section 17
 4 - Based on data in the MassDOT roadway inventory file, aerial photography and/or on-site measurement.
 5 - Based on data from Cape-wide pavement management initiative
 6 - Based on estimate for linear accommodation treatment. Does not include crossings. No cost included for 'share the road' signage or markings.

POTENTIAL SECONDARY ROUTE CHARACTERISTICS - DRAFT FOR DISCUSSION PURPOSES fall 2015

Segment	Road Name	Additional Description (south-north)	Segment Length	Suggested Accommodation	Summer Vehicle Volumes ¹	Summer Bicycle Volumes ¹	Summer Pedestrian Volumes ¹	Lane Configuration	Bicycle/Pedestrian Accommodation ²	Speed Limit (mph) ³	Approx Pavement Width (ft) ⁴	Approx ROW (ft) ⁴	Summer Vehicle LOS ¹	Pavement Condition ⁵	Land/Road Owner	Length inside NPS Boundary (mile)
WELLFLEET																
W-AX	West Road	Town line to Route 6	0.55 miles	Share the road			LOW	2-lane undivided	No/minimal shoulder No sidewalks	30	20	35	Fair	Good	Town of Wellfleet	
W-A ¹	Route 6	West Road to LeCount Hollow Road	2.4 miles	4' minimum shoulders both sides	High	Low	LOW	2-lane undivided	4' shoulders	45	24	150			MassDOT	
W-B	Marconi Beach Road	Route 6 to beach	1.7 miles	4' shoulders both sides; pilot removing center line on road	LM	M	LM	2-Lane undivided	No/minimal shoulder No sidewalks	30 ^P	22	90	Very Good	Very Good	NPS	1.7
W-C	Marconi Site Rd	Marconi Beach Road to overlook (Marconi site)	1 mile	Share the road	L	M	L	2-Lane undivided	No/minimal shoulder No sidewalks	30 ^P	22	90	Very Good	Good	NPS	1- mile
W-H	Cove Road	Route 6 to Pilgrim Spring	0.85 mle	Pedestrian/sidewalk	LM	Low	Low	2-Lane undivided	No/minimal shoulder No sidewalks	30 ^P	20-22	30*+	Very Good	Good	Town of Wellfleet	
W-H2	Indian Neck	Pilgrim Spring Road – Indian Neck	1-mile	Share the road	LM	Low	Low	2-Lane undivided	No/minimal shoulder No sidewalks	30 ^P	20-22	40	Very Good	Fair-Good	Town of Wellfleet	
WC-6	Long Pond Road	Main Street to Ocean View Drive	2.15 miles	Share the road	LM	Med	Low	2-Lane undivided	No/minimal shoulder No sidewalks	40	20	40	Very Good	Fair-Good	Town of Wellfleet	1.5
WC-3	Lecount Hollow Road	From CCRT- Ocean View Drive	0.66 mile	4' shoulders	M	H	M	2-Lane undivided	No/minimal shoulder No sidewalks	40	21	30*+	Good	Very Good	Town of Wellfleet	1.5
WC-3	Ocean View Drive	From LeCount Hollow to Cahoon Hollow Road	1.72 miles	3' shoulders	M	M	M	2-Lane undivided	No/minimal shoulder No sidewalks	30 ^P	20-24	40	Good		Town of Wellfleet	
WC-4	Cahoon Hollow Road	From Ocean View Drive to Route 6	2 miles	Share the road	M	L	L	2-Lane undivided	No/minimal shoulder No sidewalks	40	19-22	40	Very Good	Good	Town of Wellfleet	
W-E	Ocean View Drive	Long Pond Road to Newcomb Hollow Beach parking lot	1.35 miles	Share the road	Med	Med	Med	2-Lane undivided	No/minimal shoulder No sidewalks	30 ^P	20-24	40	Good	Fair-Good	Town of Wellfleet	1.35
W-M	Pamet Point Road	Route 6 – Old County Road	1.25 miles	Share the road	Low	Low	Low	2-lane undivided	No/minimal shoulder No sidewalks	35	18	30	Good	Very Good	Town of Wellfleet	1.25
W-I	Kendrick – Chequessett Neck	Commercial Street – Griffin Island Road	2.71 miles	Share the Road	LM	LM	LM	2-Lane undivided	No/minimal shoulder No sidewalks	40	16-23	30-50	Good - V. Good	Very Good	Town of Wellfleet	0.35
W-J	Bank Street & Commercial	Main Street to Kendrick	0.6 miles	Share the Road	Med-High	Med-High	Med-High	2-lane undivided	4-5' sidewalk	30	21	36	Very Good	Very Good	Town of Wellfleet	
W-K	Briar Lane	Route 6 – Main Street	0.5 miles	Pedestrian/sidewalk	Low-Med	Low	Low	2-Lane undivided	No/minimal shoulder Sidewalk in portion	30	24	40	Very Good	Fair	Town of Wellfleet	
W-L	East Commercial Street	From Main Street to Bank Street	0.24 miles	Pedestrian/sidewalk	Med High	Med-High	Med-High	2-Lane undivided	No/minimal shoulder 4-5 foot sidewalk on north side of Commerical	30 ^P	20	30*	Fair-Good	Good	Town of Wellfleet	
WN-1	Main Street, West Main, Pole Dike, Bound Brook ²	Higgins Lane to Truro line	3.35 miles	Share the road and minor safety improvements such as narrow lanes and fog line	Low	Med	Low	2-lane undivided	No/minimal shoulder. Main & West Main have sidewalk	30-35	16 (Bound Brook)-22	35-40		Fair-Good (to be raised for Herring River work)	Town of Wellfleet	1.3

POTENTIAL SECONDARY ROUTE CHARACTERISTICS - DRAFT FOR DISCUSSION PURPOSES fall 2015

Segment	Road Name	Additional Description (south-north)	Segment Length	Suggested Accommodation	Summer Vehicle Volumes ¹	Summer Bicycle Volumes ¹	Summer Pedestrian Volumes ¹	Lane Configuration	Bicycle/Pedestrian Accommodation ²	Speed Limit (mph) ³	Approx Pavement Width (ft) ⁴	Approx ROW (ft) ⁴	Summer Vehicle LOS ¹	Pavement Condition ⁵	Land/Road Owner	Length inside NPS Boundary (mile)
TRURO																
TS-1	Old County & Depot Road	Truro town line to Truro Center Road	3.3 miles	Share the road; wider climbing lane	Low	Med	Low	2-Lane undivided	No/minimal shoulder No sidewalks	25-35 ^P	19-20	40-50	Very Good	Fair-Good	Town of Truro	
T-B	Ryder Beach Road	Old County Road to beach	0.60 miles	Share the road	Low	Low	Low	2-lane undivided	No/minimal shoulder. No sidewalk		18-20	35	Very Good		Town of Truro	
T-A	Rail bed & Diana's Path	RR bed from Bound Brook Island Road to Ryder Beach Road .	1.2 miles	Pedestrian – existing trail. Signage	–	Very Low	Low	walking path	Unpaved -sand trail	n/a	n/a		n/a	n/a	Truro Conservation Trust, NPS	0.94
T-C	South Pamet Road	Truro Center Road to Ballston Beach	1 mile	Share the road; stabilize shoulder	Low-Med	Med	Low-Medium	2-Lane undivided	No/minimal shoulder Sidewalk in portion	40 ^{PF}	22	36	Very Good	Good	Town of Truro	1-mile
T-D	Depot Road	Old County Road–Pamet Harbor	0.65 miles	4' shoulders	Low-Med	Low	Low	2-lane undivided	No/minimal shoulder. No sidewalk	25-35 ^P	19	40-50	Very Good	Fair-Good	Town of Truro	
T-F	Head of the Meadow	Route 6 to bike path	0.9 mile	Share the road; Hawk signal at Rt 6 crossing	Low	Med	Low	2-lane undivided	No/minimal shoulder, No sidewalk	30	25	48			NPS	0.86
T-G	Standish Way	Route 6A to Route 6	0.15 mile	Share the road; Hawk signal at Rt 6 crossing	n/a	Med	Low	2-lane undivided	No/minimal shoulder, No sidewalk		26	36			Town of Truro	
TC-1	Truro Center Road/Castle Road	From Truro Center Road to Route 6 north	2.10 miles	Share the road	Low	Med	Low	2-lane undivided	None	-	21	40	Good	Good	Town of Truro	
TN-4	Highland Road	From South Highland Rd to Route 6A	1.04 miles	4' shoulder both sides	Med	Med	Low	2-lane undivided	None	45	24	44	Very Good	Fair	MassDOT, Town of Truro	0.68
TN-1	Route 6A (Shore Road)	From Highland Road to Commercial St/town line	3.92 miles	4' shoulder both sides; Hawk signal at Rt 6/Stott's Crossing	Med	Med	Med	2-lane undivided	None	35	22	45-50	Very Good	Good	Town of Truro	

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PROVINCETOWN																
P-A	Race Point Road	Transfer Station - Route 6	0.22 mile	4' shoulders	LM	Med	Low	2-lane undivided	No/minimal shoulder. No sidewalk	25-30	20	60			NPS, MassDOT	
P-B	Shank Painter Road	Bradford Street – Route 6	0.53 mile	5' bike lane	MH	High	High	2-lane undivided	Sidewalk in places	25	24	50	Fair-Good	Fair-Good	Town of Provincetown	
PE-6	Bradford Street	Commercial Street split to Conwell Street	1.15 miles	Share the road	Med	High	High	2-lane undivided	No/minimal shoulder. No sidewalk	20-30	24	45	Poor-Fair	Poor-Fair	Town of Provincetown	
P-C	Moors Road (Province Lands Road)	Commercial Street to Bradford Street extension	0.22 mile	5' bike lane	LM	High	MH	2-lane undivided	No/minimal shoulder No sidewalks	30	20-24	50-60	Good	New-Fair	MassDOT	
P-D	Snail Road	Route 6A to Route 6	0.25	5' bike lane				2-lane undivided	No/minimal shoulders. No sidewalks						MassDOT	
PW-1	Commercial Street	Standish Street – west end rotary	1.2 miles	Share the road	Med	High	High	1-lane, 1-way	Sidewalk, with occasional interruption	25 ^P	22	30	Poor	Very Good	Town of Provincetown	
PW-2	Bradford Street	Conwell Street - Prince Street	0.4 mile	Share the road	Med	High	High	2-lane undivided	Intermittent sidewalks	20-30	22-26	30-45	Poor-Fair	Poor-Fair	Town of Provincetown	
PW-2x	Bradford Street	Prince Street - Moors Road	1 mile	4' bike lane	Med High	High	High	2-lane undivided	Bike lane on west end	20-30	22-26	30-45	Poor-Fair	Poor-Fair	Town of Provincetown	
PE-1	Commercial Street	From Shore Road/town line to Standish	2.2 miles	Share the road	Med	High	High	undivided east of Bradford St; the rest is 1-	No shoulders. Sidewalk-north side	25	22	30	Poor	Very Good	MassDOT, Town of Provincetown	

Notes:

All scales are relative to overall Outer Cape roads

1 - Based on traffic count data, field observations, and local knowledge

2 - Based on field observations. Conditions may vary throughout the corridor.

3 - Based on the speed limit noted in the MassDOT roadway inventory or
P - Based on the posted speed limit or
PF - based on prima facie speed limit is listed per MGL Chapter 90, Section 17

4 - Based on data in the MassDOT roadway inventory file, aerial photography, or on site measurement.

5 - Based on data from Cape-wide pavement management initiative

CAPE COD COMMISSION

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