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CAPE COD
COMMISSION

Outer Cape Bike and Pedestrian Master Plan

Phase One: Data Collection

Transportation Data

Updated February 2015

In coordination with Cape Cod National Seashore
(Cooperative Agreement #P14AC00162)



Overview

As part of Phase One task development of the Outer Cape Bicycle and Pedestrian Master Plan (OCBPMP), Cape Cod Commission (CCC) and National Park Service (NPS) staff collected and compiled a variety of transportation data. These data will assist in identifying locations where additional or improved bicyclist and pedestrian accommodation may be needed as well as help with alternatives development, analysis and screening.

Some or all of these data may be presented in the Outer Cape Bicycle and Pedestrian Master Plan final report. As a Phase One deliverable, this memo is for interim purposes and is not intended to serve as the final report.

Characteristics of Major Roadways and Designated On-Road Bicycle Routes

A table entitled *Characteristics of Major Roadways and/or Designated On-Road Bicycle Routes* is presented in Appendix A. This table distills and summarizes much of the raw data included in later appendices. Appendix G *Bicycle and Pedestrian Accommodation Maps* provides accompanying maps of roadway bicycle and pedestrian features, as summarized in the “Bicycle/Pedestrian Accommodation” column of the table.

The CCC project team observed summer season bike, pedestrian, and motor vehicle volumes and measured physical characteristics of the roadways to generate the characteristics table. The team then assigned a qualitative description to some characteristics. Bicycle, pedestrian and motor vehicle volumes and Level of Service (LOS) are classified on a “low” to “high” scale. Physical road characteristics, such as right of way (ROW) and pavement width are presented as approximations of actual conditions. In addition, the team added comments about the roadways such as beach access or high vehicle speeds. The local representation present on the OCBPMP steering committee was valuable in developing and refining this analysis.

Summer (Motor) Vehicle, Bicycle, and Pedestrian Volumes

The summer motor vehicle, bicycle, and pedestrian volume ratings were developed from local knowledge, field observations, and counting data presented later in this report. Route 6, the primary roadway corridor that serves the Outer Cape, has some of the highest summer motor vehicle volumes in the study area. Old County Road, which connects Wellfleet and Truro and provides an alternate “back road” route, shows a low vehicle volume rating. Roads with a high volume of vehicles could warrant separation for pedestrians and bicyclists, depending on vehicle speeds and other roadway conditions. Areas with high bicycle volumes include Lecount Hollow Road, Route 6A in Truro, and Commercial Street, Bradford Street, Conwell Street, Shank Painter Road,

Moors Road, and Province Lands Road in Provincetown. Roads with high pedestrian volumes include Commercial Street, Bradford Street, Conwell Street, and Shank Painter Road. High volumes of bicycles and pedestrians are an indication of a roadway that warrants careful consideration to ensure the appropriate level of accommodation is provided for non-motorist travel.

Lane Configuration, Bicycle/Pedestrian Accommodation

The table's Lane Configuration column indicates the number of lanes that accommodate motor vehicles. All of roadways listed are two-lane except for Commercial Street in Provincetown (one lane, one way) and the four-lane sections of Route 6 in Provincetown and North Truro. The four-lane section of Route 6 is generally characterized by high vehicle speeds and vehicle volumes and a high level of discomfort for bicyclists, due to minimal shoulder space and little separation from high speed vehicles. The Bicycle / Pedestrian Accommodation column shows the roads' features used by bicyclists and pedestrians. A road with a high level of accommodation for bicycles and pedestrians (i.e. sidewalks, four to five foot shoulders, bike lanes, etc.) generally provides a satisfactory level of comfort for users and could result in high volumes of bicycles and pedestrians. Roads without bicycle and pedestrian accommodations, but with high traffic volumes and speeds and which provide connections to popular destinations or to the existing bicycle and pedestrian network may warrant consideration for improved accommodations, particularly where no alternate routes exist.

Speed Limit, Vehicle Level of Service (LOS)

The Speed Limit column shows speed limits for each road according to either the MassDOT roadway inventory, the posted speed limit or, prima facie speed limit listed per MGL Chapter 90 Section 17. Roads with posted speed limits equal to or less than 30 mph (highlighted green in the table) could be desirable/comfortable for bicycle and pedestrian travel. The posted speed limit may not equal the speed of travel. For example, the posted speed limit on Route 6 varies between 45 mph and 50 mph, but speeds of 60 mph or greater can be observed. The table's Approximate Summer Vehicle Level of Service (LOS) column rates the performance of the roadway for vehicles in terms of congestion from "poor" to "very good." LOS indicates the performance of the road for motor vehicles but does not reflect how they interact with bicycles or pedestrians.

Right of Way, Pavement Width, Pavement Condition

The table's Approximate Pavement Width column shows the width of pavement on the roadway. The Approximate Right of Way (ROW) shows the width of land under the control of the agency that owns the roadway, based on the MassDOT roadway inventory file. Roads where the approximate ROW width exceeds the approximate pavement width may be able to accommodate additional bicycle and pedestrian amenities such as a bike lane or sidewalk. Route 6 has the largest ROW: 67-150 feet for the two-lane section in Wellfleet and Truro and 150 feet for the four lane section in Provincetown. The four lane section of Route 6 in Truro also has the widest pavement area, at 46 feet. The smallest ROW is approximated on Conwell Street in Provincetown at 18-26 feet. As a narrow

two-lane road with high bicycle and pedestrian usage as well as motor vehicle volumes, and no separation between the two, bicycle and pedestrian accommodations may be desirable on Conwell Street but not feasible in the current two-lane configuration. (It may be possible to provide them if the road were reconfigured as one-way.) As noted in the Comments column, many bicyclists use Cemetery Road as an alternate route. The smallest pavement width is located on North Pamet Road in Truro at 17 feet. With low motor vehicle volumes, this narrow road may be comfortable for bicycles and pedestrians. The table's Pavement Condition column attributes a "poor" to "very good" ranking of the road surface condition. Poor pavement condition could make a road less desirable for travel by bicycle and vehicles until/unless it is resurfaced.

Comments

The last column in the table shows additional comments that may be useful to consider when determining potential routes and improved accommodations for bicyclists and pedestrians. The comments include general attributes and anecdotes about the road such as curves or nearby destinations, including the beach. This section identifies problems and opportunities that otherwise might not be captured by data and are helpful for later analysis.

The *Characteristics of Major Roadways and/or Designated On-Road Bicycle Routes* table summarizes much of the roadway data presented in the report's appendices, which is useful for identifying initial challenges and opportunities and appropriate/feasible accommodations for bicycles and pedestrians. Roads with high bicycle or pedestrian volumes and high vehicle volumes or speeds may warrant additional accommodations where feasible. Sections of Route 6, Shore Road, Conwell Street, Shank Painter Road, Main Street, and East Commercial/Commercial Street have high volumes of bicycle and pedestrian users and vehicle counts, with little separation between them. Where conditions such as limited ROW, sensitive resources, topography, etc., make implementation of bike and pedestrian accommodations infeasible, alternate routes should be identified.

Bicycle and Pedestrian Count Data

TURNING MOVEMENT DATA/INTERSECTION COUNTS

A table of turning movement counts (TMC) at 22 locations in the study area between 2009 and 2014 is provided in Appendix B: *Turning Movement Counts*.

CCC staff performs turning movement counts throughout the county. A turning movement count is used to determine the volume of movements that motor vehicles make through an intersection over a one to four hour period. Pedestrian crossings and bicycle movements are recorded as well. For the purpose of this study, the data are presented as total volumes during the report hour, separated by each user type. The report hour is typically 16:00-17:00 (4-5pm) for afternoon counts or 8:00-9:00 (8-9am) for morning counts. Counts are usually performed on weekdays during the summer

months. Weather and time of day or date are important factors that influence bicycle and pedestrian volumes and may account for notable variations in bike/ped counts conducted at the same location on multiple occasions. The primary purpose of the turning movement counts is to satisfy data collection needs for signal retiming or potential physical change to a roadway; the bicycle and pedestrian counts are conducted as supplemental data.

The highest bicycle volumes for intersection counts were recorded in Provincetown at the following intersection: Bradford Street at Johnson Street, Bradford Street at Shank Painter Road, Shank Painter Road at Court Street, and at locations on Conwell Street and Race Point Road. These locations also have high pedestrian counts. The next highest bicycle counts occurred in Wellfleet at Coles Neck Road and Bound Brook Island Road/ Pole Dike Road. Lecount Hollow Road had the next highest bicycle intersection counts in Wellfleet. High pedestrian counts also occurred in Provincetown at Route 6A (Bradford Street)/Conwell/Arch Street intersection, Bradford Street/Johnson Street, Bradford Street/Shank Painter Road. Main Street/West Main Street at Briar Lane/Holbrook Avenue in Wellfleet is among the highest pedestrian counts as well.

The highest bicycle and pedestrian count intersections in the study area are generally located proximate to activity centers/downtowns and beach routes. They also have a medium to high volume of cars. Adequate accommodations for bicyclists and pedestrians in these locations is important, as high motor vehicle volumes could impact their safety and comfort, and accommodating bikes and pedestrians in activity centers/downtowns helps encourage travel by means other than motor vehicle and may help reduce traffic congestion.

BIKE AND PEDESTRIAN SPECIFIC COUNTS

The table for bike and pedestrian specific counts is attached as Appendix C: *Bike Specific Counts*.

CCC staff also performs bike and pedestrian specific counts. These are similar to the turning movement counts because they identify volume, but differ because they only count non-motorized vehicle traffic, are conducted near bicycle paths or along popular bikeway routes (not intersections), and typically last for twelve hours (in contrast to the one-hour duration for turning movement counts). User types are identified as bicyclists, walkers, joggers, wheelchairs, and children in carriers, skaters, or “other.” The counts also note if the user is wearing a helmet. CCC staff began conducting the bike-specific counts in 2012 and has conducted 11 counts since then. These counts are typically done during 4th of July week, resulting in high volume data that represent peak or seasonal values. Cape Cod National Seashore staff coordinated with CCC staff in 2013 and 2014 by selecting count locations and performing several counts. The bike and pedestrian specific counts could be useful for determining the target audience for facility improvements.

The highest volume of bicycles in the study area was counted at the Cape Cod Rail Trail (CCRT) north of Marconi Road. Moors Road east of Herring Cove Beach and the CCRT

south of LeCount Hollow Road also showed high volumes of bicycles. The highest volume of pedestrians was counted at Moors Road south of Herring Cove Beach, Moors Road east of Herring Cove Beach, Conwell Street north of Cemetery Road, and Route 6A (Shore Road) west of Stotts Crossing. CCRT south of LeCount Hollow Road also show a high volume of pedestrians. Most of these locations provide bicycle and pedestrian accommodations except for Conwell Street (see also discussion in “Summer (Motor) Vehicle, Bicycle, and Pedestrian Volumes” and “Right of Way, Pavement Width, Pavement Condition” sections of this report) and Stotts Crossing. Stotts Crossing, an unsignalized intersection at the four-lane section of Route 6, is notable as a high bike/pedestrian count location characterized by high motor vehicle volumes and speeds. These characteristics suggest that this location should be further analyzed to determine how to accommodate bicycles and pedestrians. Vehicle speeds, roadway features (ROW, shoulder and lane widths) and public input are important aspects of the analysis to consider.

Outer Cape Transit Data

Appendix D presents a count of bicycles carried by the Cape Cod Regional transit Authority (CCRTS) on its “Flex” bus from December 2013 through July 2014.

The Flex travels year-round from East Harwich through the project area to Macmillan Pier in Provincetown. The majority of the route travels along Route 6. The Flex allows riders to access the bus up to $\frac{3}{4}$ of a mile from the designated route on request and has a rack accommodation for 2 bicycles. Bicycle transport on the Flex is lowest in February and grows significantly beginning in May, with a peak in August, and declines through the fall and winter.

In the summer months the CCRTA also operates the Provincetown Shuttle, which travels on Route 6A in Truro and Provincetown. The bus can accommodate two bikes at a time, but no data is available on the number carried.

In addition to the Flex and Provincetown Shuttle, bicyclists and pedestrians on the Outer Cape have access to the “Outer Cape Bike Shuttle,” provided by the National Park Service in coordination with the CCRTA, that runs from Memorial Day through early September. The shuttle service began in 2012 and runs from the CCRT terminus at LeCount Hollow Road in Wellfleet to MacMillan Pier in Provincetown. Ridership data for the shuttle is incomplete but counts available show the weekend of July 4th and weekends in August as peak ridership periods. Passengers mount their bikes on a trailer connected to the rear of the bus. While the shuttle usage data is incomplete, ridership levels are significantly lower than the Flex, which could be due to a shorter route and fewer stops, among other factors.

Bicycle and Pedestrian State Crash Data

Bicycle and pedestrian crash locations are presented in Appendix E in three maps entitled, *Provincetown Pedestrian State Identified Crashes 2009-2014*, *Truro Pedestrian State Identified Crashes 2009-2014*, and *Wellfleet Bicycle and Pedestrian State Identified Crashes 2009-2014*.

Bicycle and pedestrian crash locations are represented by colored dots approximating the location of the incidents. A yellow node represents a vehicle crash involving a bike, and a red node represents a vehicle crash involving a pedestrian. Associated data about the incident is available for each node.

The data are supplied by local and state police reports and were gathered from an online database maintained by the Massachusetts Department of Transportation. The relevancy of the data is limited because the database only includes incidents that are reported to police and typically only includes bicycle and pedestrian crashes involving a motor vehicle. Bicycle to bicycle incidents, bicycle to pedestrian incidents, bicycle to hazard incidents, and unreported incidents are not included.

The data available shows the highest number of crash locations in Provincetown, with the fewest in Truro. While this information is useful in understanding where crashes occur, it is limited in value as it captures only a subset of bicycle and pedestrian crashes. Regardless, Commercial Street in Provincetown and locations along Route 6 in all three towns are both areas where crashes occur, suggesting these locations may need bicycle and pedestrian accommodation improvements. The crash data is also useful for identifying hazardous road locations for bicycles and pedestrians and may be helpful for gaining public support for bicycle and pedestrian safety improvements.

NPS Bike Accident Data

Appendix F presents NPS bicycle accident data from 2005 to 2013. GIS maps indicate the locations of accidents within the park, and accompanying graphs provide data on accident cause. The data shows that the majority of bicycle crashes reported in the park are due to speed/inexperience. The second largest cause of crashes is hazards, with sand as a significant accident cause. Most of the bicycle accidents within the park between 2009- 2013 occurred on the Province Lands Trail.

Bicycle and Pedestrian Accommodation Inventory Maps

Bicycle and Pedestrian Accommodation Inventory maps are presented in Appendix G, with one map for each town. A summary of the data is provided in the *Characteristics of Major Roadways and/or Designated On-Road Bicycle Routes* table (“Bicycle/Pedestrian Accommodation” column) in Appendix A. When reviewed together, the maps and the table provide important information about existing

conditions and characteristics on roads and are may be useful for determining priorities for implementation.

The project team drove throughout the project area using a GPS-enabled collector application to identify bicycle and pedestrian accommodation types and characteristics on primary roads and designated bicycle routes. Among the data collected for each road, the project team noted availability of sidewalks and width of shoulder, and bicycle lane width. Sidewalk condition was classified on a scale from “excellent” to “poor/intermittent” based on width, pavement condition or connectivity. The team also identified locations on Route 6 in Wellfleet and Truro with breaks in the shoulder, and Wellfleet town center locations with sidewalk gaps. The shoulder on Route 6 is frequently used by cyclists, and the breaks allow for conflict with vehicles.

Appendix A:
Characteristics of Major Roadways and/or
Designated On Road Bicycle Routes

Characteristics of Major Roadways and/or Designated On-Road Bicycle Routes

Roadway	Town(s)	Summer Vehicle Volumes ¹	Summer Bicycle Volumes ²	Summer Pedestrian Volumes ³	Lane Configuration	Bicycle/Pedestrian Accommodation ²	Speed Limit (mph) ³	Approx Pavement Width (ft) ³	Approx ROW (ft) ³	Summer Vehicle LOS ¹	Pavement Condition ⁴	Comments
Marconi Beach Road/ Marconi Station Road	Wellfleet	Low-Medium	Medium	Low-Medium	2-Lane undivided	No/minimal shoulder No sidewalks	30 ⁵	22	90	Very Good	New	Beach access
Lecount Hollow Road	Wellfleet	Low-Medium	High	Medium	2-Lane undivided	No/minimal shoulder No sidewalks	30	21	30	Good	New	Beach access
Old County Road/Old Kings Highway	Wellfleet	Low-Medium	Medium	Medium	2-Lane undivided	No/minimal shoulder No sidewalks	30 ⁵	22	40	Very Good	Fair-Good	
Ocean View Drive	Wellfleet	Low-Medium	Medium-High	Medium	2-Lane undivided	No/minimal shoulder No sidewalks	30 ⁵	20-24	40	Good	Fair-Good	Beach access
Cove Road	Wellfleet	Low-Medium	Low	Low	2-Lane undivided	No/minimal shoulder No sidewalks	30 ⁵	20-22	30	Very Good	Fair-Good	
Cahoon Hollow Road	Wellfleet	Low-Medium	Low	Low	2-Lane undivided	No/minimal shoulder No sidewalks	40	19	30	Very Good	Fair-Good	
Main Street	Wellfleet	Medium-High	Medium-High	Medium-High	2-Lane undivided	No/minimal shoulder 4-5 foot sidealks on both sides for portions	30 ⁵	20-24	35-40	Fair-Good	Fair-Very Good	New sidewalks on west end in 2011, no sidewalk connection to the east to Route 6
E. Commercial Street/ Commercial Street	Wellfleet	Medium-High	Medium-High	Medium-High	2-Lane undivided	No/minimal shoulder 4-5 foot sidealk on north side for portions	30 ⁵	20	30	Fair-Good	Good-Very Good	Recent paving and and sidewalks, utility poles in sidewalk, no side walk on east end.
Chequessett Neck Road/ Kendrick Ave	Wellfleet	Low-Medium	Low-Medium	Low-Medium	2-Lane undivided	No/minimal shoulder No sidewalks	40	16-23	30-50	Good - Very Good	Poor-Fair	Beach access
Long Pond Road	Wellfleet	Low-Medium	Medium	Low	2-Lane undivided	No/minimal shoulder No sidewalks	40	20	40	Very Good	Fair-Good	Curvy
Briar Lane	Wellfleet	Low-Medium	Low	Low	2-Lane undivided	No/minimal shoulder No sidewalks except on end by Main Street	30	24	40	Very Good	Fair-Good	Short segment of sidewalk on east side near intersection with Main Street
Route 6 (2-Lane Undivided portion)	Wellfleet/ Truro	High	Medium	Low	2-Lane undivided	4-5 shoulder with interruptions No sidewalks	45	24	67-150	Poor-Fair	Fair-Good	High speed
Old County Road/Depot	Wellfleet/ Truro	Low	Medium	Low	2-Lane undivided	No/minimal shoulder No sidewalks	25-35 ⁵	19	40-50	Very Good	Fair-Good	Curvy
South Pamet Road	Truro	Low	Medium	Low-Medium	2-Lane undivided	No/minimal shoulder Sidewalk in portion	40 ^{PF}	22	36	Very Good	Fair-Good	New sidewalk at Truro Center Road intersection in 2014, beach access
North Pamet Road	Truro	Low	Medium	Low-Medium	2-Lane undivided	No/minimal shoulder No sidewalks	35	17	33	Very Good	Poor-Fair	
Castle Road	Truro	Low-Medium	Medium	Low-Medium	2-Lane undivided	No/minimal shoulder No sidewalks	40 ^{PF}	21	40	Very Good	Fair-Good	Curvy
Highland Road	Truro	Low-Medium	Medium	Low-Medium	2-Lane undivided	No/minimal shoulder No sidewalks	45 ⁵	24	44	Very Good	Fair-Good	Provides Route 6 crossing from Coast Guard Beach to Route 6A
Route 6A (Shore Road)	Truro	Medium	High	Medium	2-Lane undivided	No/minimal shoulder No sidewalks	35	20	50	Good	Fair-Good	Many/large curb cuts
Route 6 (4-Lane Undivided portion)	Truro	High	Low	Low	4-Lane undivided	No/minimal shoulder No sidewalks	45-50	46	67-70	Good	Fair-Good	High speed
Route 6 (4-Lane Divided portion)	Truro/ Provincetown	High	Low	Low	4-Lane divided	No/minimal shoulder No sidewalks	50	22 + 22	150	Good	Poor-Fair	High speed
Commercial Street (One-way portion)	Provincetown	Medium	High	High	1-Lane one-way	Share the road with bicycles Sidewalks with occasional interruption	25 ⁵	22	30	Poor	Very Good	Low speed, on-street parking
Bradford Street	Provincetown	Medium	High	High	2-Lane undivided	Bike lane for short distance Intermittent sidewalks	20-30	22-26	30-45	Poor-Fair	Poor-Fair	Many driveways, some on-street parking
Conwell Street	Provincetown	Medium-High	High	High	2-Lane undivided	No/minimal shoulder No sidewalks	25	20-22	18-26	Fair-Good	Poor-Fair	Many bicyclists divert to Cemetery Road
Race Point Road	Provincetown	Low-Medium	Medium	Low	2-Lane undivided	No/minimal shoulder No sidewalks	25-30 ⁵	20-24	60	Good	Fair-Good	Parallel bike path for part, beach access
Shank Painter	Provincetown	Medium-High	High	High	2-Lane undivided	Intermittent, poorly delineated, roadway-grade bicycle and pedestrian facilities	25 ⁵	24	50	Fair-Good	Fair-Good	Curb cuts and parking related disruption
Moors Road	Provincetown	Low-Medium	High	Medium-High	2-Lane undivided	Bike lanes near beach access No sidewalks	30	20-24	50-60	Good	New	Beach access, parallel bike path for part
Province Lands Road	Provincetown	Low-Medium	High	Medium-High	2-Lane undivided	No/minimal shoulder No sidewalks	40	20-24	50-60	Good	Poor-Fair	Parallel bike path, beach access

Notes:

All scales are relative to the overall Outer Cape roads

1 - Based on traffic count data, field observations, and local knowledge. See Appendix B: Turning Movement Count Data

2 - Based on field observations. Conditions may vary throughout the corridor. See Appendix G: Bicycle and Pedestrian Accommodation Inventory Map

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, where paved width has changed estimate was taken from aerial photography

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

Updated 10/22/14

Appendix B:
Turning Movement Count Data

Turning Movement Counts					Cape Cod Commission		
Note: Turning Movement Count Data is Typically Two Hours Counts To Determine Turning Movement of Vehicles. Bike, Ped and Total Vehicles is also recorded.							
Site #	Date	Town	Location	Time	Total Vehicles	Total Bike Volume	Total Ped Volume
3845	08/03/2010	Provincetown	Shank Painter Rd at Court St	16:00-17:30	767	103	108
3844	08/03/2010	Provincetown	Shank Painter Rd at Jerome Smith Rd	16:00-17:30	1054	39	23
3843	08/03/2010	Provincetown	Bradford St (Rt 6A) at Shank Painter Rd	16:00-17:30	910	169	178
3822	07/14/2010	Provincetown	Railroad Ave at Johnson St	16:00-17:15	16	17	29
3821	07/14/2010	Provincetown	Bradford St (Rt 6A) at Johnson St	16:00-17:30	997	118	182
3730	07/06/2005	Provincetown	Bradford St at Howland St	16:00-17:30	698	17	28
2262	08/28/1998	Provincetown	Rt 6A at Conwell St & Arch St	11:30-12:30	934		
2262	08/01/1996	Provincetown	Rt 6A at Conwell St & Arch St	16:00-17:30	1171		209
2261	08/03/2010	Provincetown	Rt 6 at Shank Painter Rd	16:00-17:30	1140	25	9
2261	08/26/2009	Provincetown	Rt 6 at Shank Painter Rd	16:00-17:30	859	16	3
2260	07/18/2012	Provincetown	Rt 6 at Conwell /Race Point Rd	16:00-17:30	1460	27	8
2260	07/16/2009	Provincetown	Rt 6 at Conwell /Race Point Rd	16:00-17:30	1425	59	26
2260	08/19/2002	Provincetown	Rt 6 at Conwell /Race Point Rd	16:00-17:30	1518		3
2260	08/06/2001	Provincetown	Rt 6 at Conwell /Race Point Rd	16:00-17:30	1470	57	3
2260	08/01/1996	Provincetown	Rt 6 at Conwell /Race Point Rd	16:00-17:30	1408		
2258	08/19/2002	Provincetown	Rt 6A at Snail Rd	16:00-17:30	658		27
2255	08/19/2002	Provincetown	Rt 6 at Snail Rd	16:00-17:30	1366		8
1249	08/12/2000	Provincetown	Bradford St at Standish Av	11:00-13:00	898		
1249	08/08/2000	Provincetown	Bradford St at Standish Av	11:00-13:00	714		
1243	07/24/1999	Provincetown	Rt 6 at Province Lands Rd	11:00-13:00	441	56	8
1242	07/24/1999	Provincetown	Province Lands Rd at Herring Cove Beach	11:30-13:00	340	42	4
1242	07/22/1999	Provincetown	Province Lands Rd at Herring Cove Beach	16:00-17:30	343	18	
1241	07/24/1999	Provincetown	Race Point Road at Landfill Site Drive	11:00-12:30	330	74	1

* blank means category not counted

1241	07/22/1999	Provincetown	Race Point Road at Landfill Site Drive	11:00-12:30	316	79	8
3812	06/11/2009	Truro	Rt 6 at Truro Central Driveway	14:00-16:00	936	8	11
3812	06/11/2009	Truro	Rt 6 at Truro Central Driveway	7:00-9:00	750	2	14
2271	08/15/2002	Truro	Rt 6 at South Highland Rd	16:00-17:30	1874		
2270	08/23/2002	Truro	Rt 6 at Rt 6A	16:00-17:30	1827		
2270	07/06/1993	Truro	Rt 6 at Rt 6A	15:30-17:30	1370		
1277	08/23/2002	Truro	Rt 6 at Aldrich Road - Noons Drive	16:00-17:30	1851		
3851	06/19/2012	Wellfleet	LeCount Hollow Road at Old State Hwy	16:00-17:30	193	15	2
3850	06/21/2012	Wellfleet	Rt 6 at Cove Rd	16:00-17:30	1558	6	5
3850	10/27/2011	Wellfleet	Rt 6 at Cove Rd	16:00-17:30	810	0	0
2298	06/05/2001	Wellfleet	Rt 6 at West Rd	16:00-18:00	1232	5	0
2298	08/25/1994	Wellfleet	Rt 6 at West Rd	15:30-17:30	2085		
2297	06/19/2012	Wellfleet	Rt 6 at Lecount Hollow Rd/driveway	16:00-17:30	1613	15	1
2297	10/31/2011	Wellfleet	Rt 6 at Lecount Hollow Rd/driveway	16:00-17:30	1040	3	1
2292	7/31/2014	Wellfleet	Rt 6 at Main St	7:00-9:00	1507	15	5
2292	06/21/2012	Wellfleet	Rt 6 at Main St	16:00-17:30	1763	7	4
2292	12/06/2011	Wellfleet	Rt 6 at Main St	16:00-17:30	817	4	0
2287	08/13/1996	Wellfleet	Main St/ West Main St at Briar Ln / Holbrook Av	16:00-17:30	772	3	146
2280	07/18/1996	Wellfleet	Coles Neck & Bount Brook at Pole Dyke Rd	16:00-17:30	95	23	2
1261	06/21/2001	Wellfleet	Rt 6 at Wellfleet Drive-In	16:00-18:00	1524	8	3
1257	06/14/2001	Wellfleet	Rt 6 at Old State Rd (S)	16:00-18:00	1379	0	9
1252	06/05/2001	Wellfleet	Rt 6 at Springbrook Rd	16:00-18:00	1174	4	1
1252	08/02/1990	Wellfleet	Rt 6 at Springbrook Rd	16:00-17:00	2953		
1099	08/23/1994	Wellfleet	Rt 6 at Marconi Station Area Entrance	15:30-17:30	2397		
1099	08/16/1994	Wellfleet	Rt 6 at Marconi Station Area Entrance	10:30-12:30	2223		

* blank means category not counted

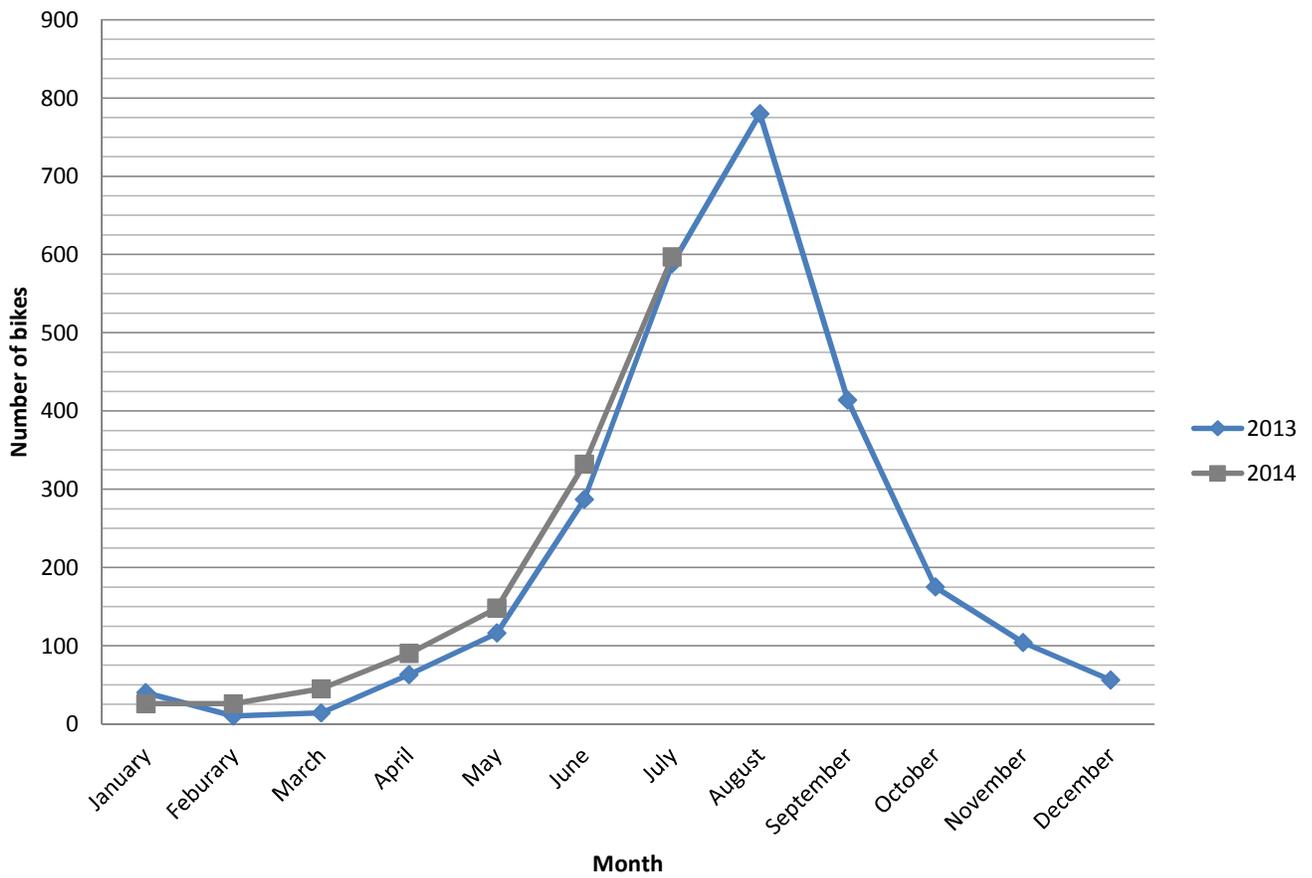
Appendix C: Bike Specific Counts

Bike Specific Counts					Cape Cod Commission					
Note: Bike Counts Typically are 12 Hours Long and Count Volume and Classification of Non Vehicle Road or Path Controllers										
Site #	Date	Town	Location	Time	Total User Volume	Total Bike Volume	Total Ped Volume	Peak Hour	Peak Hour Volume	Helmet Percentage
5224	7/2/2014	Provincetown	Cemetery Rd W of Conwell St	9:00-11:00, 11:00-19:00	168	103	62	13:45	32	
5223	7/2/2014	Provincetown	Moors Road S of Herring Cove Beach Road	7:00-19:00	1359	978	364	11:00	222	
5222	7/2/2014	Provincetown	Conwell St N of Cemetery Rd	9:00-11:00, 11:00-19:00	576	387	178	12:15	90	
5216	7/2/2012	Provincetown	Moor's Road E of Herring Cove Beach	7:00-19:00	1425	1174	238	10:45	182	28.5
5215	7/2/2012	Provincetown	Province Lands Trail W of Race Point (South End)	7:00-19:00	417	368	36			
5221	6/30/2014	Truro	Rt 6A Shore Road W of Stotts Crossing	9:00-19:00	340	226	111	16:00	50	
5199	6/30/2014	Truro	Head of the Meadow Trail E of High Head Road	7:00-19:00	117	87	23	9:45	25	
	6/30/2014	Truro	Stotts Crossing	9:00-19:00	42				10:15	21
5220	7/2/2013	Welfleet	CCRT Btwn Lecount Hollow Rd and Parking Lot	7:00-19:00	384	336	42	2:00	92	69.9
5159	7/2/2013	Welfleet	CCRT S of Lecount Hollow Rd	7:00-19:00	1174	1013	131	11:00	229	77.6
5158	7/2/2012	Welfleet	CCRT N of Marconi Station	7:00-19:00	1380	1271	76	10:30	150	75.9

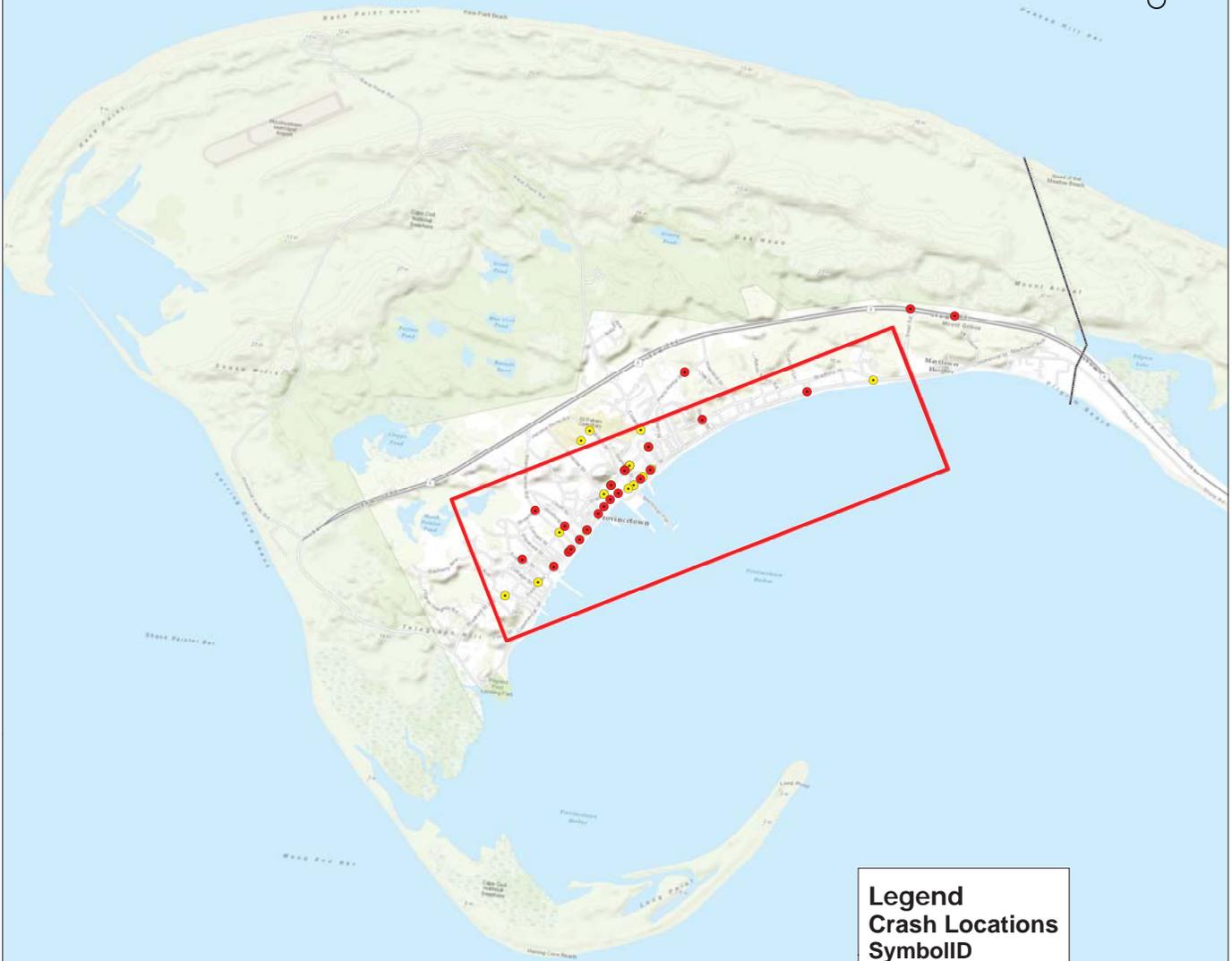
* blank means data not recorded for the field or time interval

Appendix D:
CCRTA Flex Route Bicycle Data

Number of Bikes on the CCRTA Flex Route

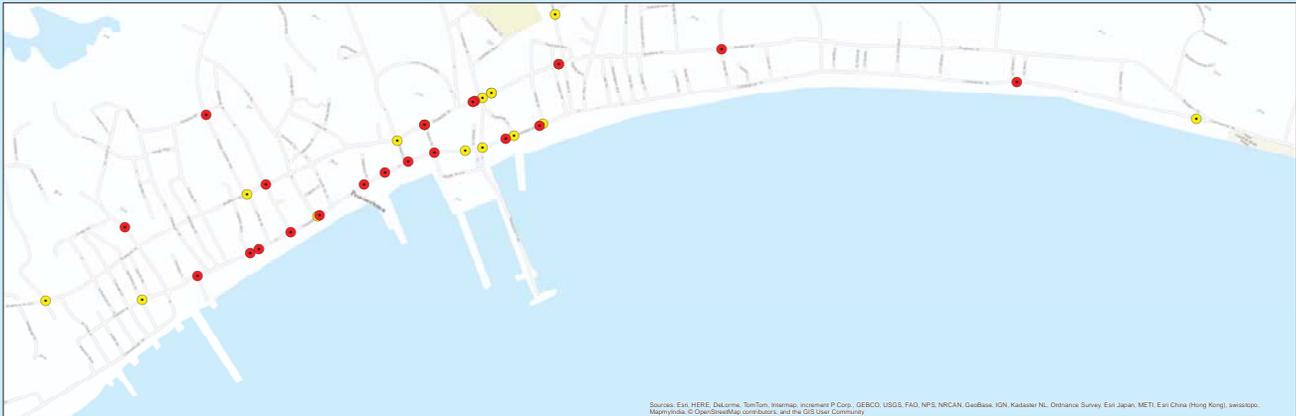


Appendix E:
Maps of State Identified Crashes Involving
Bicycles and/or Pedestrians

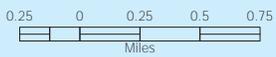


Legend
Crash Locations
SymbolID

- Bicycle
- Pedestrian
- Town Line



Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, Mapbox, © OpenStreetMap contributors, and the GIS User Community



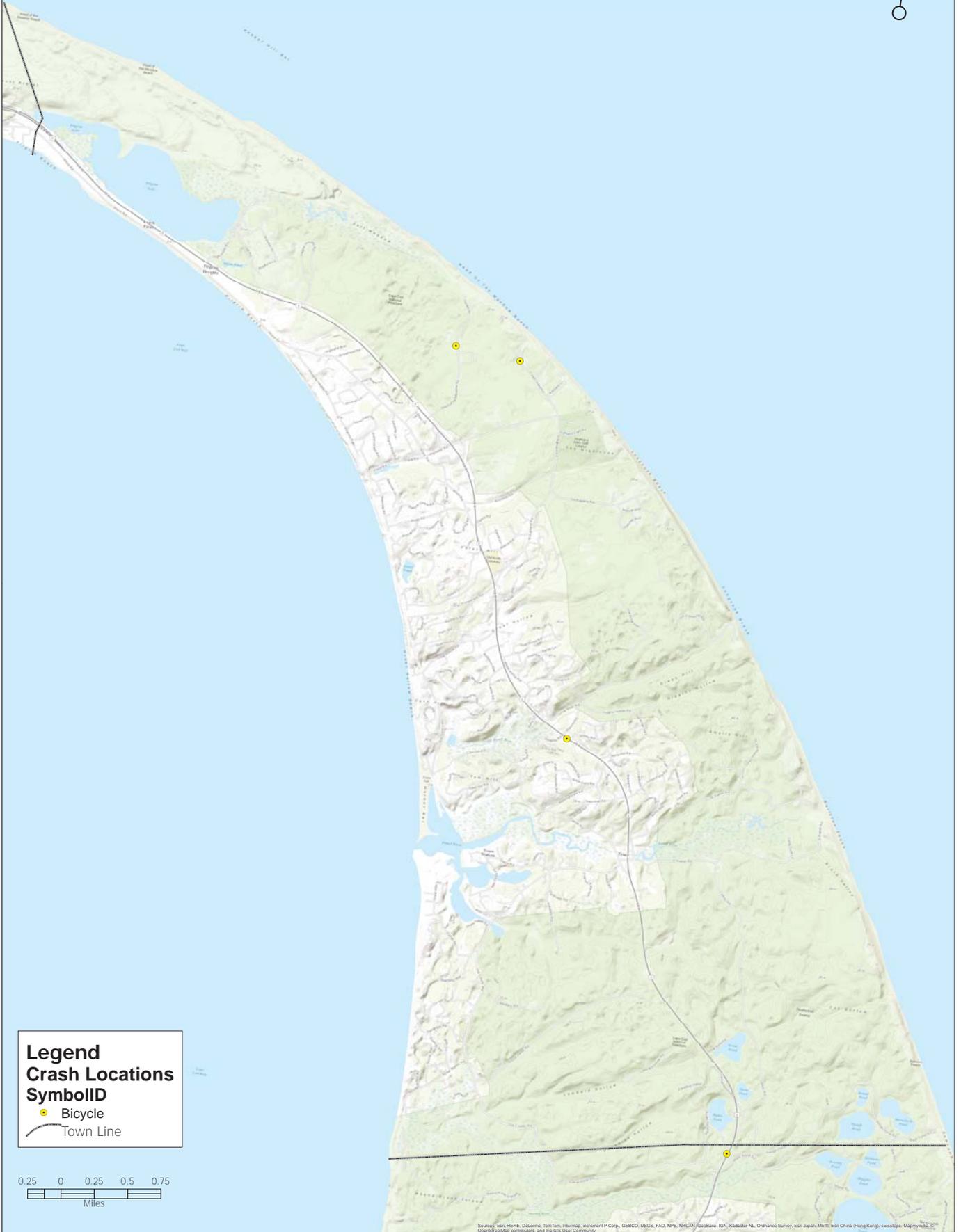
Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, Mapbox, © OpenStreetMap contributors, and the GIS User Community

Provincetown Bicycle and Pedestrian State Identified Crashes 2009-2014
 Updated December 2014

User: pTierney
 Date: 12/16/2014

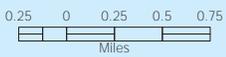
The information depicted on these maps is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel level analysis. It should not substitute for actual on-site survey, or supersede deed research.





Legend
Crash Locations
SymbolID

- Bicycle
- Town Line



Source: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri, Japan, METI, ESR, China (Hong Kong), Swisstopo, Mapbox, © OpenStreetMap contributors, and the GIS User Community

Truro Bicycle and Pedestrian State Identified Crashes 2009-2014

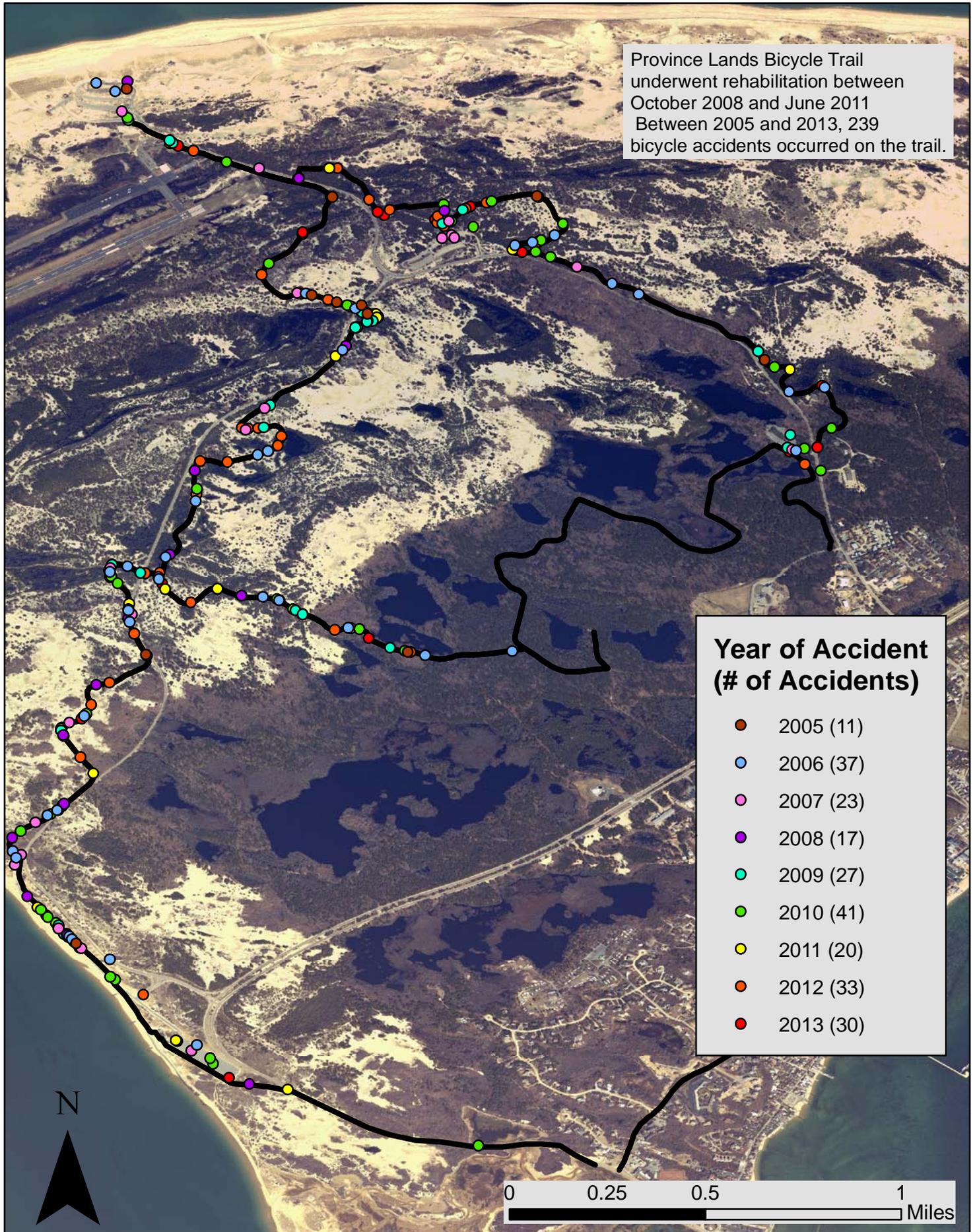
Updated November 2014
 User: ptierney
 Date: 12/16/2014



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Appendix F:
Cape Cod National Seashore Bicycle Crash
Data

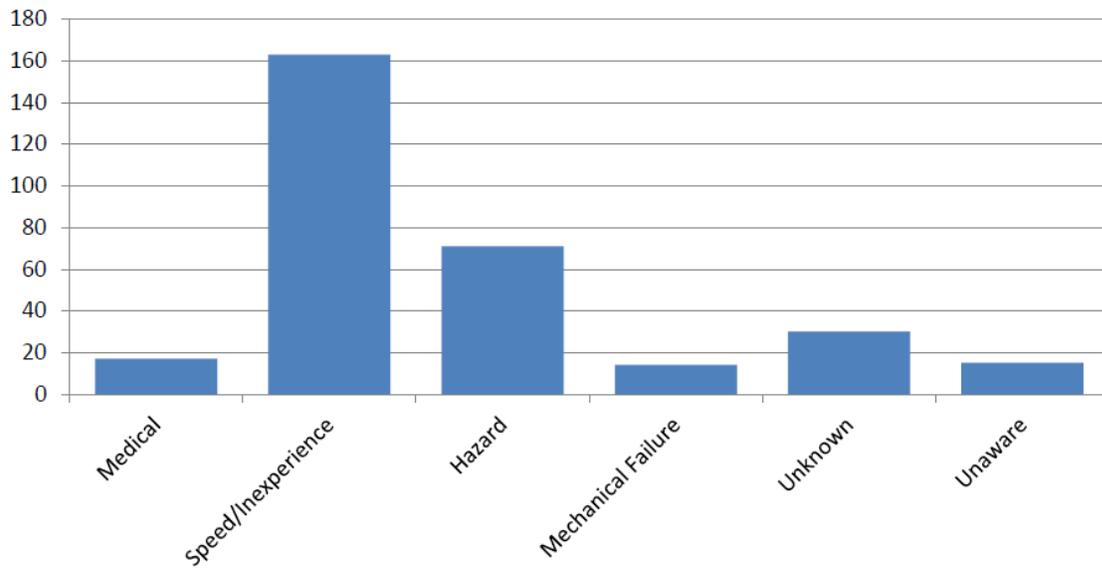
Province Lands Bicycle Accidents (2005-2013)



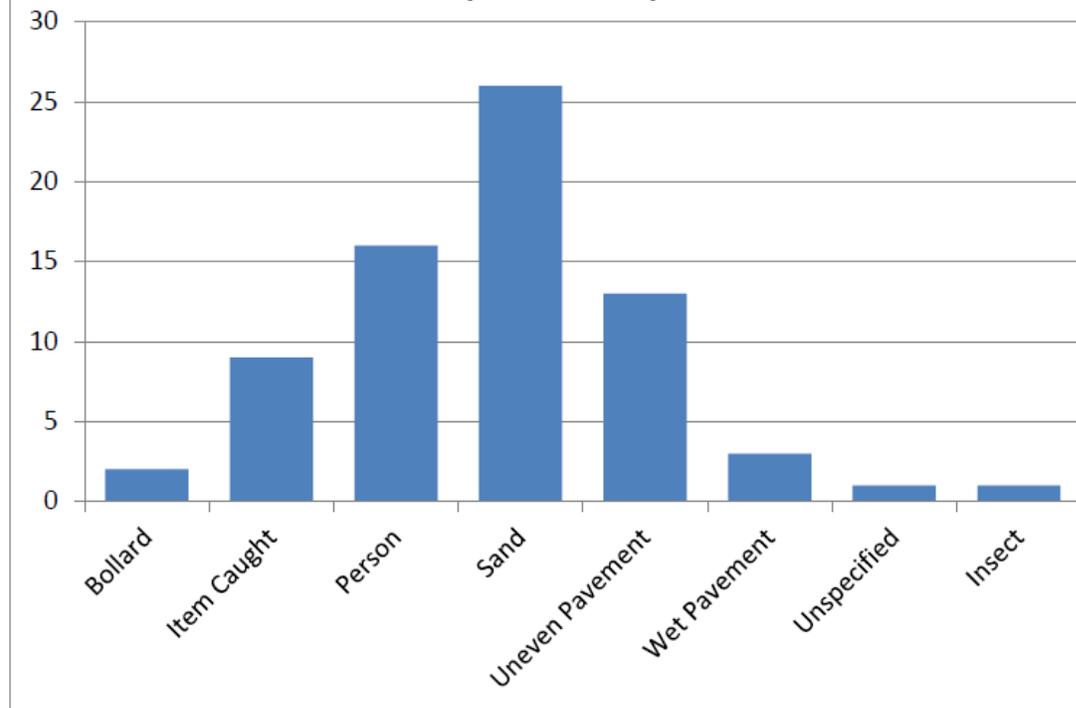
Head of the Meadow Bicycle Accidents (2005-2013)



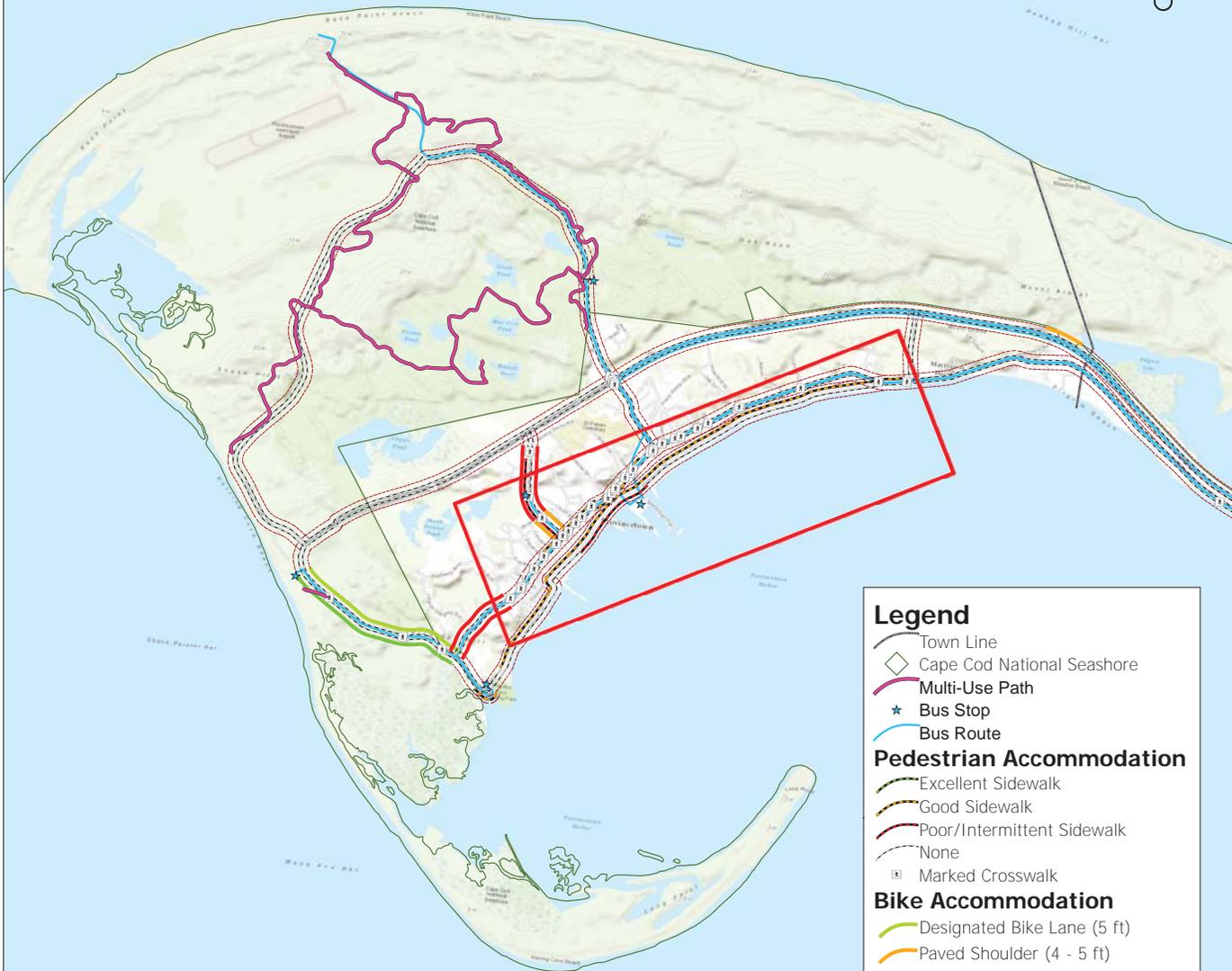
Bicycle Accidents by Cause (2005-2013)



Hazard Subcategories (2005-2013)



Appendix G:
Bicycle and Pedestrian Accommodation
Inventory Maps



Legend

- Town Line
- Cape Cod National Seashore
- Multi-Use Path
- Bus Stop
- Bus Route

Pedestrian Accommodation

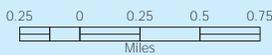
- Excellent Sidewalk
- Good Sidewalk
- Poor/Intermittent Sidewalk
- None
- Marked Crosswalk

Bike Accommodation

- Designated Bike Lane (5 ft)
- Paved Shoulder (4 - 5 ft)
- Narrow Paved Shoulder (2 - 4 ft)
- Minimal/No Paved Shoulder (<2 ft)
- Brief Shoulder Interruption



Sources: Esri; HERE; DeLorme; TomTom; Intermap; increment P Corp.; GEBCO; USGS; FAO; NPS; NRCAN; GeBCast; IGN; Kadaster NL; Ordnance Survey; Esri Japan; METI; Esri China (Hong Kong); Swisstopo; Mapbox; OpenStreetMap contributors; and the GIS User Community



Sources: Esri; HERE; DeLorme; TomTom; Intermap; increment P Corp.; GEBCO; USGS; FAO; NPS; NRCAN; GeBCast; IGN; Kadaster NL; Ordnance Survey; Esri Japan; METI; Esri China (Hong Kong); Swisstopo; Mapbox; OpenStreetMap contributors; and the GIS User Community

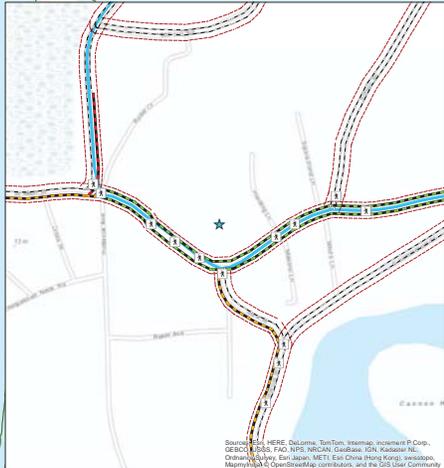
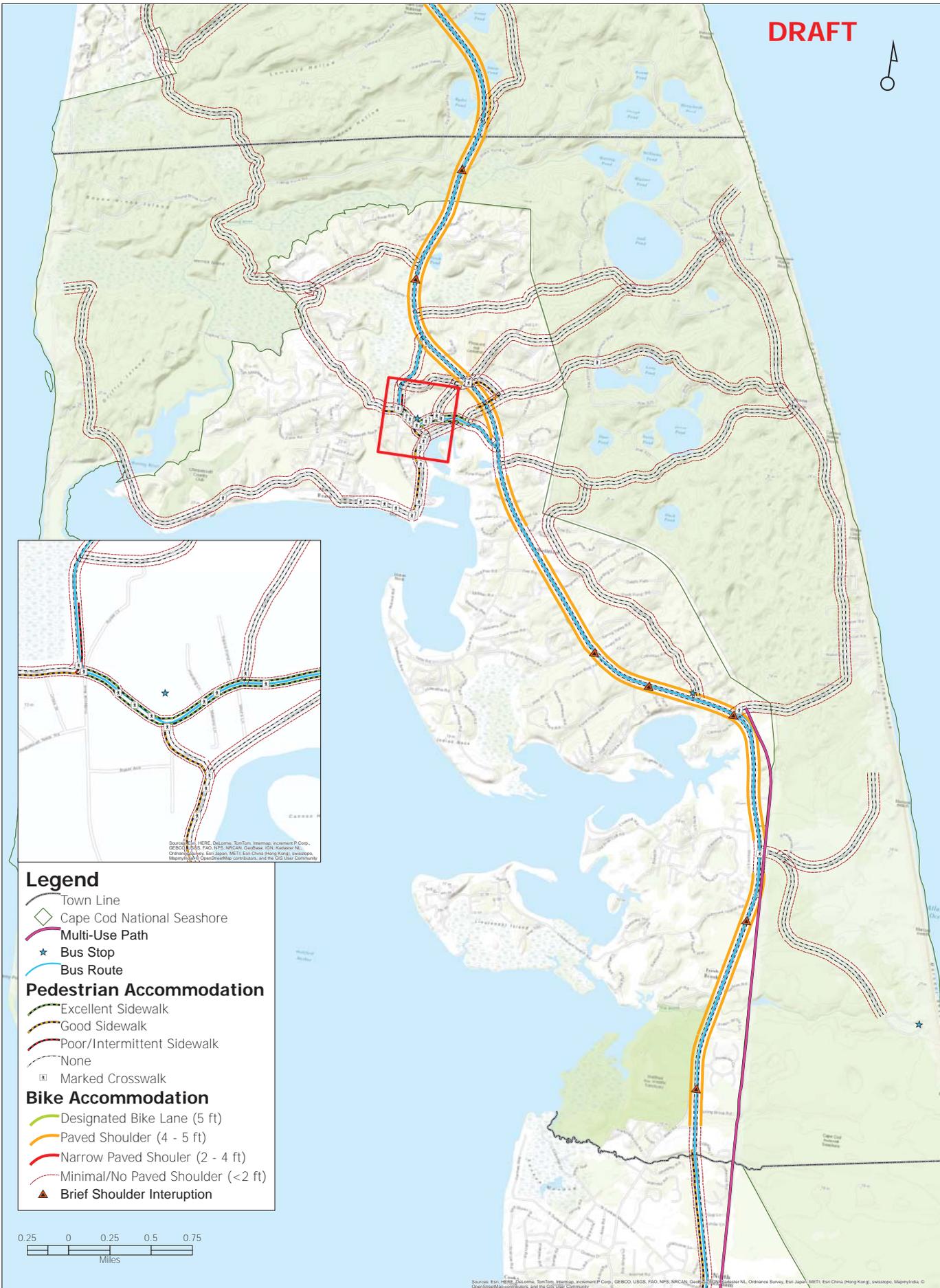
Provincetown Bicycle and Pedestrian Accommodation Inventory
 Updated November 2014

User: areynolds
 Date: 11/24/2014

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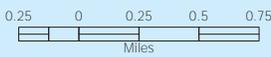
DRAFT



Source: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, Mapbox, OpenStreetMap contributors, and the GIS User Community

Legend

- Town Line
- Cape Cod National Seashore
- Multi-Use Path
- Bus Stop
- Bus Route
- Pedestrian Accommodation**
- Excellent Sidewalk
- Good Sidewalk
- Poor/Intermittent Sidewalk
- None
- Marked Crosswalk
- Bike Accommodation**
- Designated Bike Lane (5 ft)
- Paved Shoulder (4 - 5 ft)
- Narrow Paved Shoulder (2 - 4 ft)
- Minimal/No Paved Shoulder (<2 ft)
- Brief Shoulder Interruption



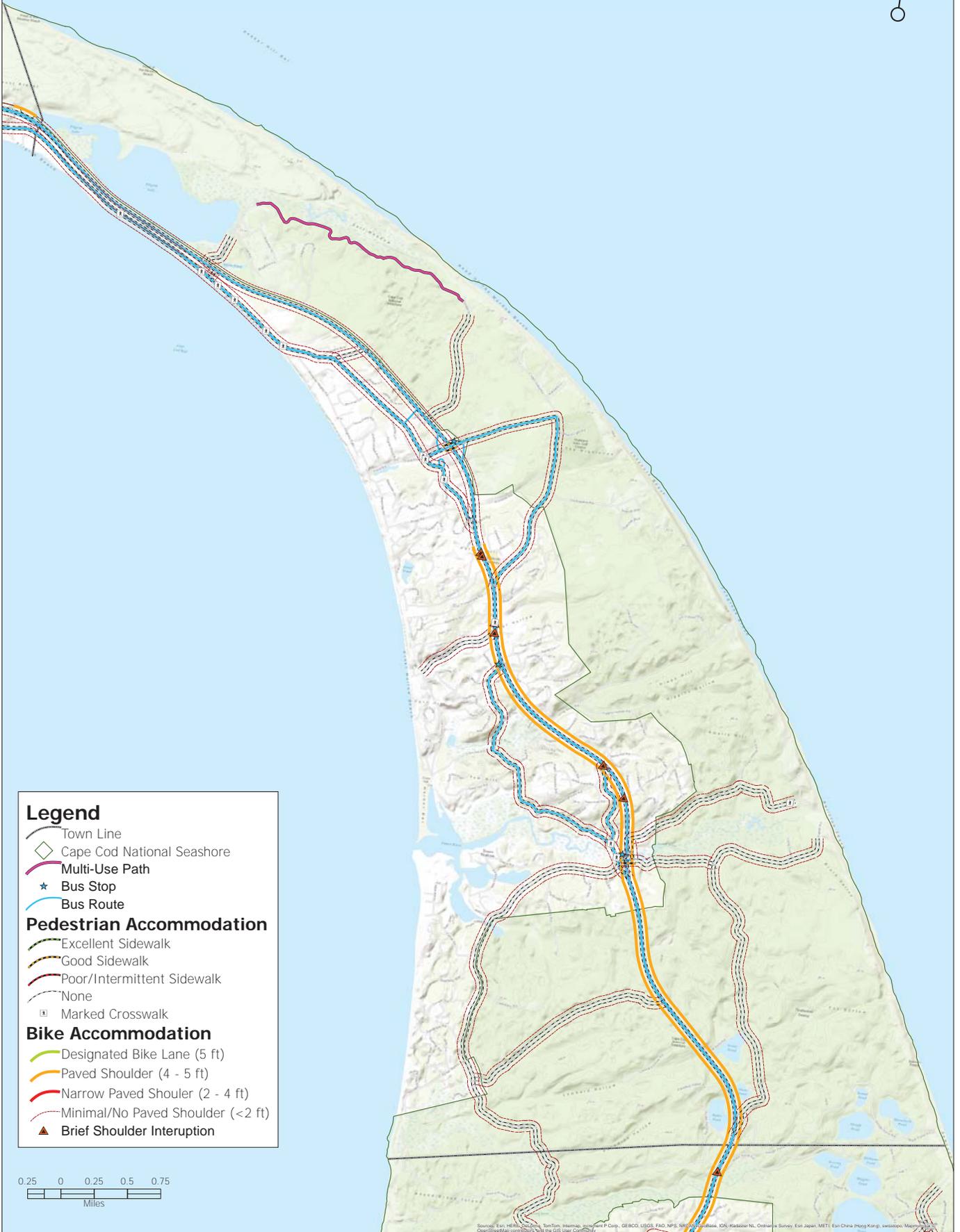
Source: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, Mapbox, OpenStreetMap contributors, and the GIS User Community

Wellfleet Bicycle and Pedestrian Accommodation Inventory

Updated November 2014
User: areynolds
Date: 11/24/2014



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Legend

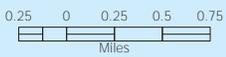
- Town Line
- Cape Cod National Seashore
- Multi-Use Path
- Bus Stop
- Bus Route

Pedestrian Accommodation

- Excellent Sidewalk
- Good Sidewalk
- Poor/Intermittent Sidewalk
- None
- Marked Crosswalk

Bike Accommodation

- Designated Bike Lane (5 ft)
- Paved Shoulder (4 - 5 ft)
- Narrow Paved Shoulder (2 - 4 ft)
- Minimal/No Paved Shoulder (<2 ft)
- Brief Shoulder Interruption



Source: Esri, HERE, DeLorme, TomTom, Intermap, swisstopo, P Corp., GEBCO, USGS, FAO, NPS, NRC, GEBCO, Esri, Swisstopo, IGN, Mapbox, NLS, OpenStreetMap contributors, Swisstopo, Mapbox, and others. © 2014 Esri. All rights reserved. This is a conceptual diagram and does not represent actual data.

Truro Bicycle and Pedestrian Accommodation Inventory

Updated November 2014
 User: areynolds
 Date: 11/24/2014



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