

Old Colony Planning Council
70 School Street
Brockton, MA 02301



Old Colony Bicycle and Pedestrian Connectivity and Livability Study

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DISCLAIMER

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*Updated May 2017
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Introduction

The purpose of the Bicycle and Pedestrian Connectivity Study is to help guide Old Colony Planning Council (OCPC) communities on how to improve their Bicycle and Pedestrian Transportation Networks. Without a Bicycle and Pedestrian Connectivity Study, it can be difficult to see the big picture as it pertains to Bicycle and Pedestrian connectivity; therefore, OCPC has prepared this report to provide a framework for advancing bicycle and pedestrian connectivity throughout the Old Colony region.

While working with partner communities, concerns regarding the Bicycle and Pedestrian network were presented and documented through public outreach efforts undertaken by OCPC Staff. Through these outreach efforts, the Bicycle Pedestrian Connectivity Study took this feedback and formulated goals, policies, analysis and recommendations necessary to propose a fully integrated multimodal transportation system.

The study contains information on the current bicycle and pedestrian transportation network, the types of bicycle and pedestrian infrastructure treatments, best practices and finally future proposals for the bicycle and pedestrian transportation network. The study is categorized by community and includes previous studies, bicycle and pedestrian network needs and recommendations for each community.

The Regional Bicycle Pedestrian Transportation System

The benefit of a regional bicycle and pedestrian transportation network is that it allows individuals the ability to travel by other means than by private automobiles in a safe and comfortable manner. Currently, the Old Colony region does not have a uniform bicycle and pedestrian transportation network, but progress is being made in making this a reality. Deficiencies in the network have been identified with cooperation and input from each community. OCPC has identified key bicycling and walking corridors for cyclists and pedestrians.

How can someone living in a rural setting make a day trip to a neighboring community or beyond whether it is via bicycle, walking, transit, or a combination of all the above? Allowing connectivity throughout the region is of utmost importance to the development and improving access in the region. Old Colony Planning Council has created and maintained the Regional Transportation Plan (RTP) to include all communities and advance transportation connections and mode shift throughout the Old Colony region. The RTP provides detail overview of the transportation network and outlook over a twenty-year planning horizon

Universal Access

The definition of Universal Access means to provide complete access to the transportation network for every citizen through various modes of transportation including walking, wheelchair, biking, transit, and motor vehicle. Universal Access enables everyone regardless of age, physical ability, or economic class. University Access calls for the accommodation of all users of the road without bias by using exceptional engineering guidelines set out by agencies such as the Federal Highway Administration, Massachusetts Department of Transportation (MassDOT), Old Colony Planning Council, laws and policies including the Americans with Disability Act, Title VI, and many more.

Planners, engineers, and other decision makers must take into account the vast transportation realm and all that come along with the transportation environment such as sidewalks, crosswalks, pedestrian signals, etc. Creating infrastructure with universal access in mind where persons with disabilities are accommodated ensures that everyone else will also benefit.

Current Regional Pedestrian Network

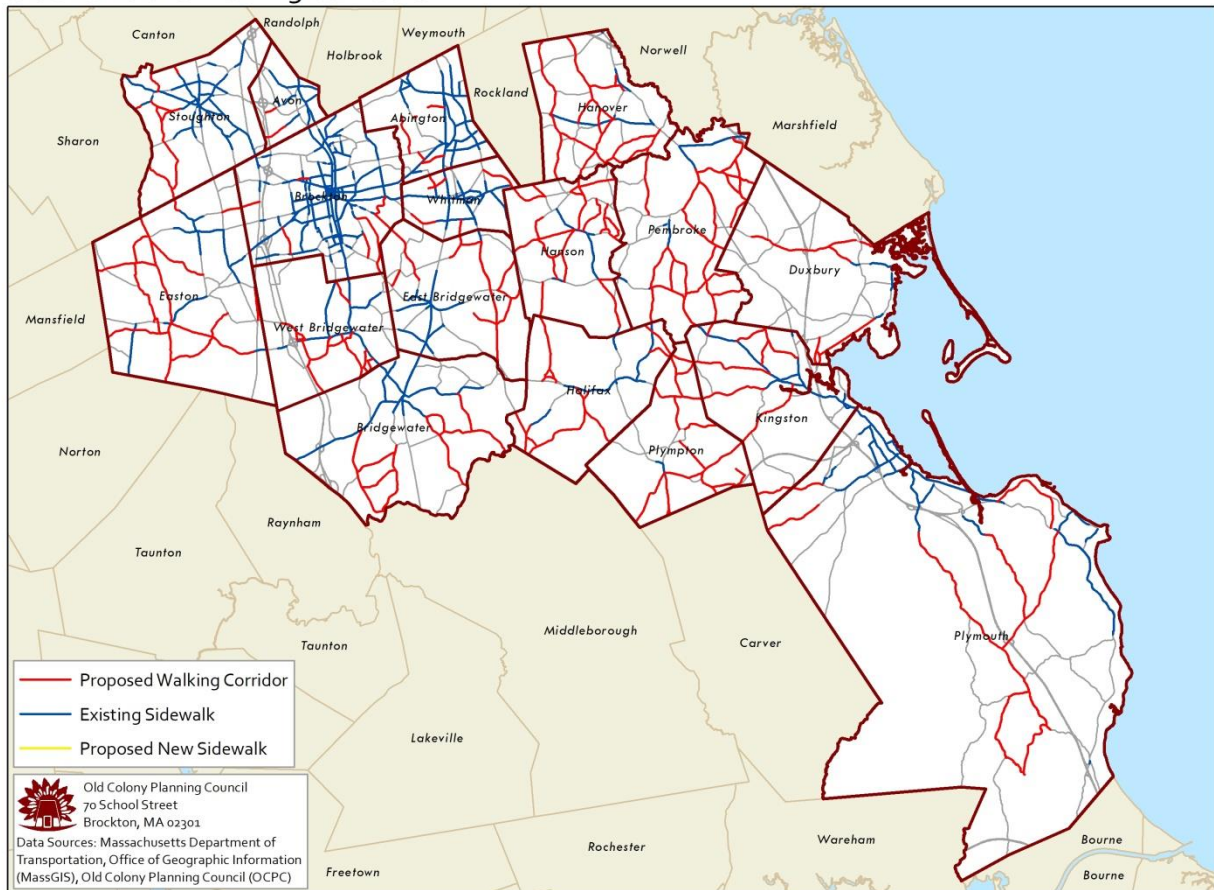
The current Regional Pedestrian Network varies by community. The goal of the Old Colony Planning Council is to guide communities into creating a stronger sidewalk network by educating communities on the benefits of a uniform sidewalk network that may connect communities to each other. In addition, the plan seeks to educate communities about maintenance of the sidewalk network including level of service and snow and ice removal.

According to the Massachusetts Road Inventory File, the Old Colony region has over 390 miles of roadway with a left and/or right sidewalk. A few sidewalks connect communities together such as Whitman and Brockton, Brockton and West Bridgewater, Kingston and Plymouth as well. OCPC will also work with communities looking to implement policies and strategies such as the ADA Transition Plan or Safe Routes to School program, which will help strengthen the ADA network and educate future generations on proper transportation etiquette.

Several parks, nature areas, and recreation areas throughout the region feature walking and shared use paths. These areas include:

- Ames Nowell State Park, Abington
- Borderland State Park, Easton
- D.W. Field Park, Brockton and Avon
- Myles Standish State Forest, Plymouth

Sidewalks and Walking Corridors



Map 1) Existing Sidewalks and Proposed Walking Corridors

Regional Pedestrian Network Needs

The needs of the pedestrian network region wide are similar throughout each community; many sidewalks are orphaned off within the region and lack ADA accommodations. Every person has the right to equitable transportation and a sustainable environment that would allow opportunity for progress, a community without connections limits access and does not take into account those that may have mobile impairments or lack the financial ability to afford a vehicle. Therefore it is imperative to create a pedestrian network that can service the region in whole by making inter/intra-connections within and between communities.

OCPC looks to address these needs by working collaboratively with OCPC communities through efforts such as Safe Routes to School, Road Safety Audits, and projects through the Regional Transportation Plan, Transportation Improvement Program (TIP), Prioritization Plans, and ADA Transition Plans.

ADA Transition Plan

The ADA Transition Plan is based on the requirement that federal funding recipients must develop this plan in compliance with federal and state laws. The plan was developed based on FHWA guidance. Laws applicable to the plan includes, the *Rehabilitation Act of 1973* and the *Americans with Disabilities Act of 1990 (ADA)*, as well as key Massachusetts laws and policies including The Architectural Access Law, Public Accommodations Law, Employment Discrimination Law, and Disabled Persons Protection Act. The ADA is a civil rights law that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the public.

Communities are required to comply with Title II of the ADA as recipients of federal funding, and make a commitment to the Title II requirements. The purpose of ADA Transition Plan is to identify the regulatory requirements for community program access and to evaluate and review policies and practices. Physical and communicative barriers to accessing programs and products for individuals with disabilities are identified, and strategies are to be developed to remove such barriers.

Section 504 of the *Rehabilitation Act of 1973* states that, “No otherwise qualified individual with a disability in the United States, shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance...” Section 504 defines a person with a disability as “Any person who has a physical or mental impairment that substantially limits one or more major life activities, has a record of such impairment, or is regarded as having such impairment”. Reasonable accommodations for employees with disabilities, program accessibility, and effective communication for persons with hearing or vision disabilities are requirements in Section 504.

Communities are required to:

- Comply with the Americans with Disabilities Act of 1990
- Comply with the Rehabilitation Act of 1973, including Section 504
- Appoint an ADA/Section 504 Coordinator
- Provide an agency non-discrimination statement
- Perform and agency self-evaluation
- Develop a Transition Plan
- Make auxiliary aids available for use
- Provide assurance of compliance with ADA and Section 504

Best practices in Pedestrian Infrastructure

Everyone becomes a pedestrian at a certain point in his or her life. Unfortunately, for some, mobility impairment may also become a part of their daily lives as well. In order to accommodate for all we must plan for all. Listed below are some common pedestrian infrastructure best practices:

Crosswalks- Crosswalks are a visual indicator to motorists making them aware that pedestrians will be crossing a road at a designated area. They also indicate to pedestrians where they should be crossing a street. Crosswalks are usually sighted at an intersection, but can be applied in other areas where a community is experiencing a high volume of pedestrians crossing.

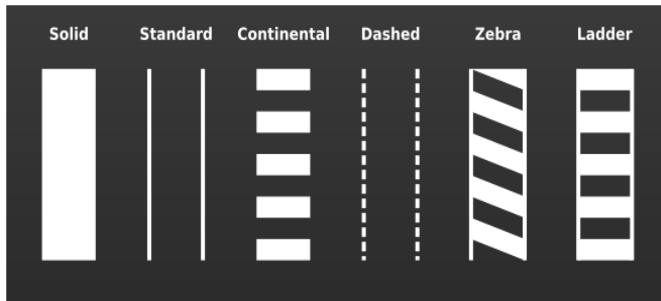


Figure 1) Crosswalk Treatments

Pedestrian Signals – Busy intersections can be an impediment to pedestrians and can even reduce pedestrian activity; especially for those with mobility challenges. Therefore, pedestrian signals provide safe and frequent opportunity for individuals to cross an intersection. Pedestrian signals that are adequately timed to accommodate the most vulnerable, and equipped with audible beacons for people with vision impairments can greatly increase pedestrian comfort while crossing a busy intersection.



Figure 2) Pedestrian Signal



Figure 3) Pedestrian signal button

Sidewalks- Sidewalks are a crucial piece of any Complete Street network as they provide an alternative to driving and allow those that might not have access to an automobile a comfortable means to get around. Sidewalks come in all different widths and use a variety of paving materials depending on their locational context. Wider sidewalks, especially in a commercial area, result in a more pleasant pedestrian experience and encourage more individuals to walk.

Sidewalks should be built with the idea of Universal “Pedestrian” Access in mind. Sidewalks that take into account Universal Pedestrian Access are free of poles and obstructions, and are wide enough to

accommodate a wheelchair user, allowing him or her ability to maneuver their chair without impediment.



Figure 4) Sidewalk

Center Refuge/Refuge Island- If sidewalk intersections are too far apart, a refuge may be located in the median to allow pedestrians a place to wait until it is safe to continue crossing. Refuges should be equipped with pedestrian signals and tactile ramps as well.



Figure 5) Refuge Island

Amenities/Street Furniture- Benches, water fountains, and bus shelters offer pedestrians a safe and comfortable environment to live in. Providing a place to throw away litter, sit on a bench, or park a person's bike creates a sense of security and responsibility to maintain a clean atmosphere.



Figure 6) Street Furniture

Americans Disabilities Act (ADA) Compliancy- Planning for our community means planning for all who inhabit that community. Americans Disabilities Act ensures that all citizens are accommodated for in the nation.

Audible Beacon- Audible beacons give off a sound for those who are visually impaired when the pedestrian signal is activated. This sound allows pedestrians to walk towards the other side of the crosswalk.



Figure 7) Audible Beacon

Americans Disabilities Act Tactile Ramps- Tactile Ramps allow pedestrians with visual impairment to place themselves at the head of the crosswalk so they may cross the street safely. Ramps should be placed on both sides of the crosswalk.



Figure 8) ADA Compliant Tactile Ramp

Pedestrian Network Maintenance

In order to provide adequate access to the pedestrian network, sidewalks must remain in operable condition. Most of the main roadways in the region have a sidewalk on at least one side. However, there are many smaller roadways, particularly in more rural areas, where sidewalks are not present. In some cases, a worn footpath exists and in others, pedestrians share the roadway with vehicles. For existing sidewalks, width, surface type and conditions, and curbing conditions vary. In some cases, sidewalks are in disrepair from weathering and vegetation.

The Old Colony Planning Council created a methodology to measure the adequacy of the sidewalk network in the Old Colony region by measuring and recording street and sidewalk conditions through the Pavement Management System (PMS) and Safety Management System. The Pavement Management System focuses on evaluating sections of federally aided roadway for specific deterioration and hazard criteria, and using these field evaluations to calculate a Pavement Condition Index (PCI) score using a pavement management software.

Level of Service

The Highway Capacity Manual 2010 (HCM) defines Level of Service (LOS) as a quantitative stratification of a performance measure or measures that represent quality of service. The measures used to determine LOS for transportation system elements are referred to as service measures. Service measures should exhibit the following characteristics:

- Travelers' perception (i.e., measures should reflect things travelers can perceive during their journey)
- Service measures should be useful to operating agencies (e.g., agency actions should be able to influence future LOS)
- Directly measurable in the field (e.g., an analyst wishing to determine LOS for a two-lane highway used for recreational access can go into the field and directly measure average travel speed of cars)

The methodology used by OCPC was created by combining different benchmarks such as the Average Daily Traffic (ADT), number of travel lanes, posted speed limit, sidewalk condition, curb ramps, and lighting. The Level of Service grading metric ranges from Good, Fair, to Poor. Feedback for the rubric were received from various professionals in the bicycle and pedestrian advocacy field such as Barbara Jacobson of Massachusetts Bicycle Coalition (MassBike), Nick Jackson of Toole Design, and Stacey Beuttell of WalkBoston.

Snow and Ice Removal

As more people shift to different modes of travel, cities and Towns are increasingly learning to accommodate sidewalks and bicycle lanes. If facilities are present, people will use them year-round therefore, facilities must be maintained year round. Often time's communities face challenges from snow and ice such as snow being plowed onto sidewalks and crosswalks, drains that are clogged and obstructing drainage, removal of snow in a timely fashion.

Communities are encouraged to have policies and action plans in place to address snow and ice removal. A snow removal plan outlines the priorities and actions needed in response to snow. The Snow Removal Policy will address the need to keep facilities clean, maintain continuous communication between departments, and comply with federal and state laws.

Bicycle Transportation

Bicycle transportation continues to become a popular mode of transportation rather than just a recreational pastime. With the ever-growing presence of cyclists, more and more bicycle lanes are being designed and painted on roadways as well. MassDOT's 2013 Healthy Transportation Policy Directive was signed into effect and its purpose is to help further MassDOT's GreenDOT implementation Plan, the Commonwealth's Healthy Transportation Compact and statewide Mode Shift Goal Initiative, makes certain that all MassDOT projects are designed and carried out in a manner where all road users are taken into consideration.

OCPC is committed to working with Old Colony communities on maintaining MassDOT's standard and plan accordingly for cyclists in the region and beyond. Having a strong communication between communities can help expand access for more residents and visitors in the OCPC Region.

Current Regional Bicycle Network

Currently the Old Colony region does not have an established bicycle network yet bicycle facilities do exist in the region. Old Colony Planners and Community members plan to expand upon following the established bicycle facilities listed below:

Claire Saltonstall Boston to Cape Cod Bikeway: The Boston to Cape Cod Bikeway ("Claire Saltonstall Bikeway") is the major bike route in both the Old Colony region and Massachusetts. This facility is approximately 65 miles from Boston to the Cape Cod Canal, and then runs to both Provincetown (about 70 miles from the canal) and Woods Hole (about 20 miles from the canal). Principally, it accommodates long distance recreational trips. The Bikeway traverses existing roadways with the bike route marked by road signs. This facility was developed to utilize low volume back roads as much as possible.

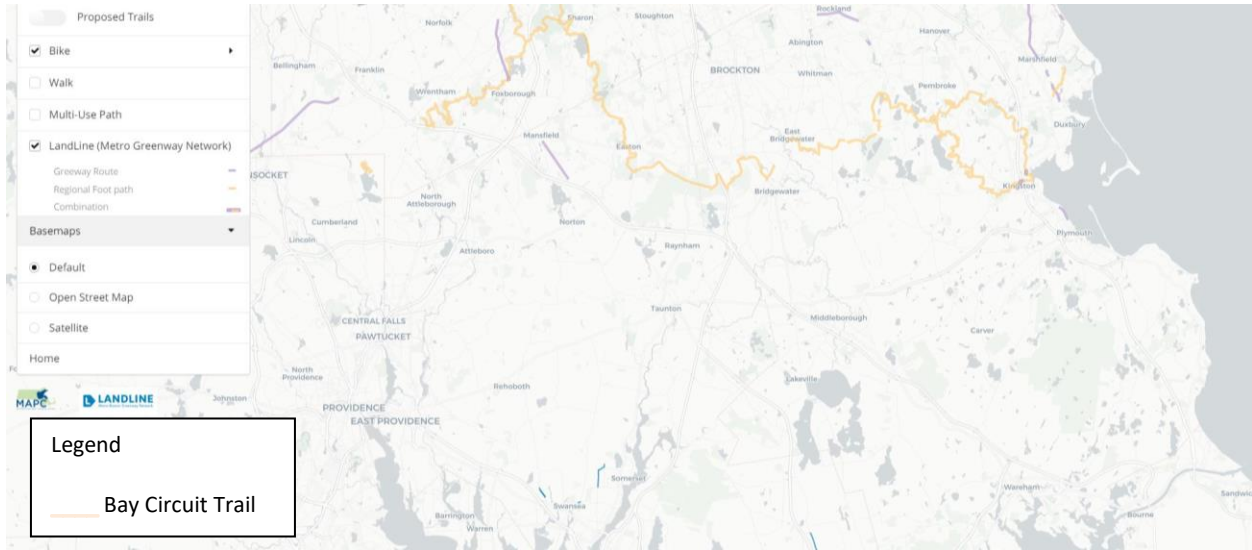
In addition, the bikeway provides bicyclists with considerable opportunities to visit points of interest such as historical sites, shopping districts, and parks. In the years since the bikeway was planned, some of the roads, such Long Pond Road in Plymouth, have had large increases in traffic volume, and significantly more conflict between bicyclists and motorists could be occurring now. The conflicts are more likely on narrow, country-type roadways.

Bay Circuit Trail (BCT): The Bay Circuit Trail is a two hundred mile long recreation trail connecting parks, open spaces, and waterways in eastern Massachusetts.-First proposed in 1929 as an outer "emerald necklace," the route stretches from Plum Island in Newburyport on the North Shore to Kingston Bay, traversing 50 cities and Towns. More than 230 miles of multi-use, passive recreational trail have now been dedicated The BCT varies in surface type, from earthen hiking trails to paved shared-use trails.

Bay State Greenway (BSG): In its 2008 Massachusetts Bicycle Transportation Plan, MassDOT proposed the formation of a 742-mile statewide bicycle network, called the Bay State Greenway (BSG). A primary network supported by secondary routes throughout the Commonwealth, the BSG is aimed at enhancing the State's existing infrastructure.

Seaside Bicycle Trail: The Seaside Bike Trail in Plymouth is a 1.5-mile long facility that runs parallel to the Plymouth seashore between Hedge Road (just south of Cordage Park) and Nelson Street (just north of Downtown Plymouth) at the Nelson Street Recreation Area.

The goal is to expand from the established facilities and work with the built environment, while being cognizant to the different community characteristics and comfort level of cyclists and pedestrians.



Map 2) Metro Area Planning Commission Trail Map

Bicycle Travel Corridors

In efforts to create a stronger network, OCPC has selected key routes to be utilized as Bicycle Corridors. These corridors act as interconnecting routes between communities allowing cyclists to expand their bicycle trips and provide a safe way of doing so. The selected routes are suggested routes and are up to the host community to adopt selected routes and maintain them.

The purpose of the Bicycle corridors is to provide safe infrastructure to cyclists on roads where they may not be enough right of way for other bicycle facility designs, at the same time raising awareness to other road users that cyclists may be present even on rural roads.

placed longitudinal rather than 90 degrees can cause serious injury to a cyclist. Other maintenance issues to take into consideration in regards to network maintenance include:

- Road edges with overgrowth and debris
- Potholes
- Hazards such as grates, covers, and construction equipment cause obstruction

Each OCPC community has different methods of managing snow removal; much consideration must be taken when considering maintaining bicycle facilities due to the different practices used by each community.



Figure 9) Storm grate and bicycle. Source: [BikePGH](#)

Bicycle facilities such as bicycle lanes and bike boxes tend to fade and require more of upkeep than regular road facility devices. Bicycle Pavement markings should be monitored and maintained regularly, maintenance plans tailored to bicycle facilities must provide an overview of vehicles that are tailored to bicycle facility maintenance for all seasons.

Snow and Ice Removal

New England weather can increase wear on bicycle facilities yet cyclists continue to ride during the tough winter months. Therefore, municipalities must keep up with maintaining infrastructure by removal of snow and de-ice surfaces as regular practice. Proper road designs can help municipalities maintain a good bicycle network by providing storage space for the snow after a snowfall. Wide bicycle buffers and sufficient right-of-way on new road ways can help provide accommodation for more mode users.

Engaging cyclists and requesting feedback may also help improve maintenance of bicycle facilities during winter months as well. As cyclists travel, they may make note of incidents or obstacles they have observed or experienced. Municipalities must make an effort to implement public outreach strategies that will entice users to be forthcoming with information. One example may be to provide signage for wayfinding. Another method may be public engagement events where cyclists have opportunity to provide feedback and meet with local officials.

Bicycle Transportation Infrastructure

The purpose of a bicycle network is to connect bicyclists from one location to another on dedicated bicycle lanes or bicycle infrastructure consisting of paved shoulders, bicycle boulevards, and multi-use paths. This network would preferably connect bicycle routes throughout the entire Old Colony region, unfortunately, this network does not exist today but the tide is changing.

A Bicycle network takes into account a bicyclists present and future needs by applying bicycle facilities and implementing the Complete Streets approach.

Cycle Track-Bicycle facilities physically separated from parallel travel lanes, usually on the same level of the sidewalk separated by a green verge or physical barrier



Figure 10) Montreal Cycle Tracks

Dedicated Bicycle Lane- Having dedicated bicycle lane delineates the bicyclist's favorable location. The bicycle lane is exclusive to the bicycle only. Bicycle lanes must be 5-ft.in width to meet MassDOT requirements.



Figure 11) Bicycle lane

Left Side Bicycle lane- Streets with heavy right turn volumes may prove to be a conflict with cyclists riding a bicycle lane. An alternative to this situation is placing the bicycle lane on the left side of the travel lane. Doing so can increase visibility between cyclists and motorists. Left side bicycle lanes may not be conducive to the bicycle network if the street alternates from one way to two-way traffic.



Figure 12) Left Side Bicycle Lane

Buffered Bicycle Lanes- By painting a 3ft' buffer in between cyclists and motor vehicles or parked cars, a buffered bicycle lane will provide separation between motor vehicles and cyclists. Placing a buffered bike lane between cyclists and parked cars allows the parked vehicles to act as a physical barrier.



Figure 13) Buffered Bicycle Lane

Shared Lane Markings - Also known as Shared Use Arrows (Sharrows), sharrows inform motorists and cyclists that the travel lane is to be shared with each other. A sharrow is most effective if the marking is located in the middle of the travel lane rather than to the side.



Figure 14) Shared Lane Markings

Bicycle Boulevard-A bicycle boulevard dissuades motor vehicles from traveling down what may be a series of street segments reserved for cyclists. Some successful boulevards in America are Bryant Avenue in Minneapolis, Minnesota and Palo Alto, California.



Figure 15) Bicycle Boulevard

Recreational Biking (Off-Road) Rail to Trail- A cyclist may not feel comfortable riding alongside traffic on a busy street. Providing off road infrastructure such as shared use paths by connecting open space allows riders to cycle with minimum interaction between vehicles. Providing such infrastructure fosters opportunity to increase the number of riders in a community



Figure 16) Multi Use Trail

Regional Goals, Objectives, and Policies

The goals set out by Old Colony state that the Regional Planning Agency is to improve the inter and intra urban connection between each OCPC community and close the bicycle network gap so users may move effortlessly throughout the region no matter the transportation mode used. Policies and benchmarks may help communities achieve a well-connected network.

Goals and Objectives:

Transportation System Equity

- Target investments to areas that benefit high percentages of low-income and minority populations
- Maximize benefits and minimize burdens associated with projects in low-income and minority areas
- Eliminate barriers to participation in the transportation decision making process

Healthy Active Transportation

- Develop transportation policies that support healthy lifestyles
- Provide incentives and events to raise awareness of Mode Shift
- Road design to include accommodations for all users

System Reliability

- Protect and strengthen transportation systems vulnerable to climate change
- Identify at-risk transportation assets and development of protection measures
- Provide and maintain bicycle and pedestrian network condition and comfortability

Abington

The Town of Abington is a small suburban community located east of the City of Brockton and just north of the Town of Whitman. Abington has a population of 15,985 with a median age of 39.5 years of age. Abington's land-use is dominated by suburban style single-family detached homes, auto oriented shopping centers and strip retail locations. The majority of Abington's commercial businesses and large employers are located along three major corridors: Route 18, Route 123 and Route 139.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

According to the Town of Abington's *Master Plan Update (2009)*, the overarching goals and objectives of the Town in regards to their transportation network is: *"To provide for a safe and efficient network of streets and roadways that provides easy and convenient access for its residents to all locations within and outside of the community and to develop and maintain a balanced multi-modal transportation system that assures the efficient and safe movement of people, goods and services"*(Chapter V p. 9).

Along with developing a balanced transportation network that will move Abington residents safely. The Town seeks to complete the pedestrian network in areas needing pedestrian transportation infrastructure, giving residents the ability to walk to destinations in a safe and efficient manner as described in the Master Plan.

Current Pedestrian Network

Despite the low-density automobile oriented development pattern of the Town of Abington, it has made great strides in building sidewalks throughout the community, especially along high traffic volume roads. Few locations have no sidewalks, and these stretches of roads tend to be small residential side streets that would require homeowners to give up portions of their private properties to make sidewalk construction possible.

Current Bicycle Network

Currently, there are no bicycle lanes in existence in Abington.

Previous Town of Abington Bicycle and Pedestrian Studies

Since the adoption of the personal automobile as the primary mode of transportation, the focus on bicycle and pedestrian accommodations has been less of a priority until recently for The Town of Abington. Suggested bicycle and pedestrian accommodations have been put forth in a number of planning reports as well as the Abington 2009 Master Plan Update.

Master Plan Update (2009)

The purpose of the Master Plan is to provide the community with a statement of public policy regarding how the Town of Abington plans to manage and guide future growth and development in the community; how it plans to address its needs for business and commerce; and, how it plans to improve the overall quality of life of its residents. The goals, policies and strategies outlined in the plan are intended to inform residents, public and non-profit agencies, developers and members of the business community of the Town's position on land use related issues that will provide guidance for decision-making. The programs and recommendations specify a set of actions that the Town will undertake to achieve the goals and policies defined in the Master Plan.

Route 58 Corridor Study (2010)

The Route 58 Corridor Study was initiated as part of the Old Colony Unified Planning Work Program (UPWP FFY 2009 and 2010). It identifies specific and general transportation problems, including issues involving land use and transportation and derives feasible solutions to enhance circulation, safety, and traffic flow efficiency for Route 58 in the communities of Abington, Whitman, Hanson, Halifax, and Plympton.

Route 139 Corridor Study (2010)

Initiated as part of the Old Colony Unified Planning Work Program (UPWP), the Route 139 Corridor Study identifies traffic flow and circulation problems, safety deficiencies, and general problems and concerns within the Route 139 corridor in the Old Colony Planning Council (OCPC) communities of Stoughton, Abington, and Pembroke. Strategies and specific recommendations based on the study findings and stakeholder meetings have been developed to improve traffic flow efficiency within the corridor. This

study focuses on key intersections, signalized and un-signalized, as well as on the road corridor itself, and includes data and analysis for non-motorized travel (pedestrian and bicycle).

Old Colony Management Systems 2011 Annual Report (2011)

The 2011 Old Colony Management Systems Annual Report provides a summary of activities and products prepared by Old Colony Planning Council during the 2011 calendar year in regard to the Congestion Management Process (CMP), the Land Use Management System (LUMS); the Pavement Management System (PMS); and the Safety Management System (SMS). Old Colony Planning Council has developed these four management systems to inform and shape transportation planning activity.

Old Colony Regional Bicycle and Pedestrian Connectivity and Livability Plan (2013)

This study examines bicycle and pedestrian access throughout the Old Colony Planning Council region and makes recommendations to help spur greater and safer travel for those that travel by foot and bicycle. Within the report, roads were examined for bicycle level of service and pedestrian walking condition by community.

MovingU Regional Transportation Plan (2016)

The MovingU Regional Transportation Plan (RTP) provides a document and a process that will meet the challenges of preserving and expanding the transportation system. Following the directives of the law, it includes goals, policies, analyses and recommendations necessary to build and maintain an efficient, effective and affordable regional transportation system. The intention of the RTP is to build on the current transportation system, working to make it comprehensive and fully integrated.

Route 123 Corridor Study (2017)

As part of the Old Colony Unified Planning Work Program (UPWP FFY 2017), OCPC conducted the Route 123 Corridor Study to identify key issues along the corridor such as road conditions, traffic volumes, crash rates, and to identify multi-modal transportation improvements. The scope of the project expanded from the City of Brockton to the Abington/Rockland line. The Complete Streets approach is heavily recommended for the 123 Corridor Study due to the connection between Abington and Brockton and the availability of space for bicycle and pedestrian improvements. The Fixed Route Bus #5 of the Brockton Area Transit Authority (BAT) also services route 123. Therefore, planning for all modes of transportation is essential for the 123 Corridor and other connecting routes in Abington.

Pedestrian Network Needs

The Town of Abington has made great strides toward improving their pedestrian network since their 2009 Master Plan Update and asphalt sidewalks on at least one side of a roadway now cover a large swath of the Town. Even with this notable achievement in providing pedestrian infrastructure, there are still areas of opportunity for the Town to focus on improvement. For example, there are key roadways including portions of Chestnut Street, Linwood Street and small connecting roads that while residential, connect to neighboring communities and will be used by automobiles to travel between Towns. Streets like those just mentioned should be reviewed to see how pedestrian infrastructure could be incorporated to help

increase pedestrian safety. Broadmeadow Lane should be connected to Town Hall and a connection to the decommissioned Southfield Airbase.

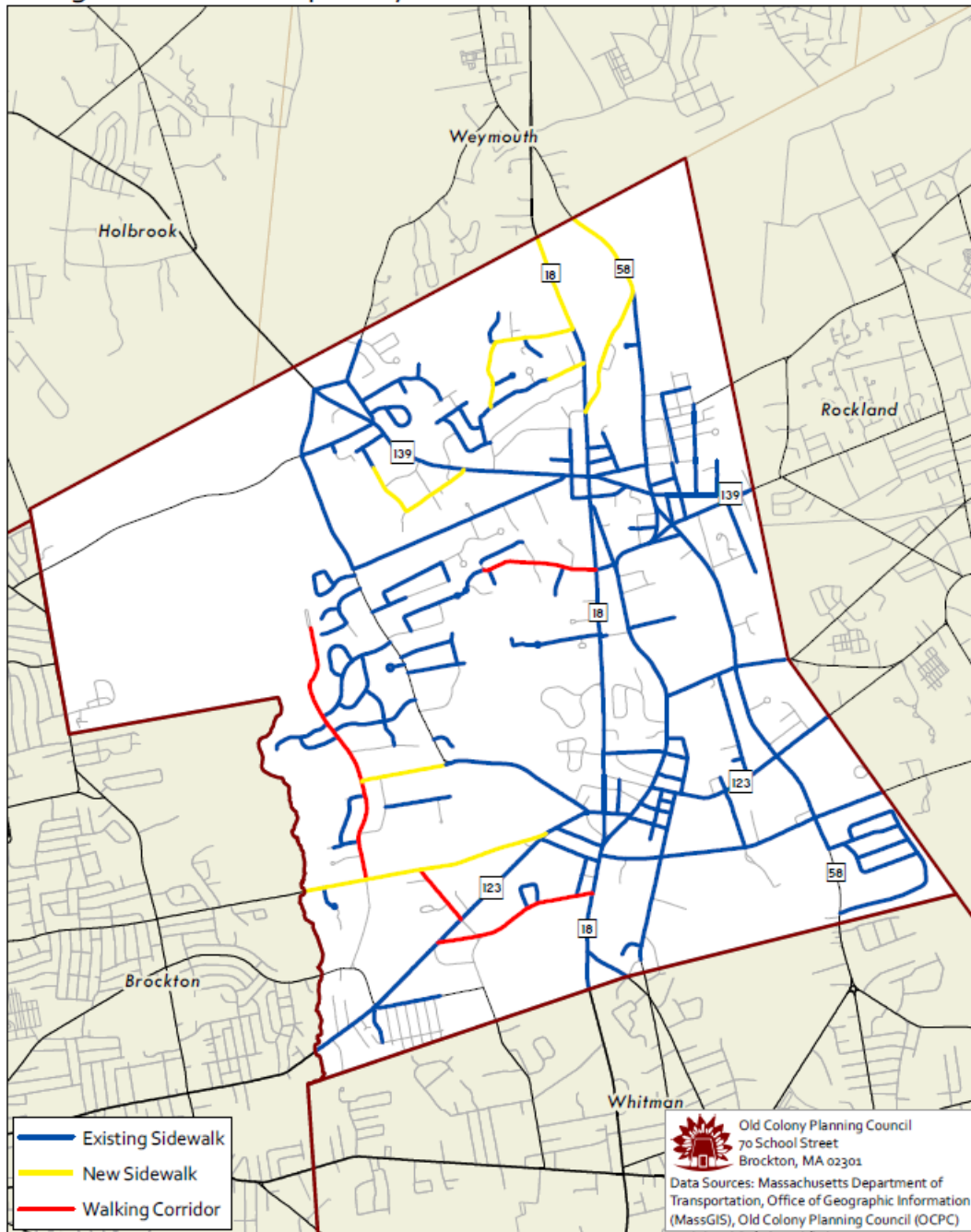
Bicycle Network Needs

A Bicycle network in Abington is currently nonexistent. Utilizing guidelines and reports such as the 123 Corridor study will assist the Town of Abington in moving bicycle improvement efforts forward. Connecting travel corridors with other Towns while bridging intra-connections within the community is essential to building a bicycle network. It is also important to increase bicycle amenities such as repair stations and bicycle racks placed in key areas such as the Arnold Park area, Washington Street (Route 18), and the Lincoln Boulevard area by the High School and Elementary School. Residential streets too narrow for bicycle lanes should look to accommodate bicyclists via Bicycle-Pedestrian Corridor treatments that establish the priority for cyclists and pedestrians while raising awareness of their presence to motorists.

Pedestrian Transportation Recommendations

Building connections between communities is essential for the advancement of economic activity in each community. Old Colony Planning Council recommends the Town of Abington focus on connecting sidewalks with abutting communities to provide increased access to Abington businesses and vice versa. Businesses such as Strawberry Valley Golf Course and others along the Route 123 Corridor; low traffic streets such as Summer Street, Spruce Street or Randolph Street (Route 139) would benefit if transformed into Walking Corridors. Increased connectivity and improved amenities create an inviting outdoor environment stimulating economic activity by inviting pedestrians and cyclists to patronize local businesses. A recommendation for establishment of Walking Corridors would be installation of signage to alert motorists of pedestrian presence but also educating and encouraging pedestrians to heighten their visibility by wearing bright clothing and equipping themselves with flashlights during evening hours.

Abington Sidewalk Gap Analysis



Map 4) Abington Sidewalk Gap Analysis

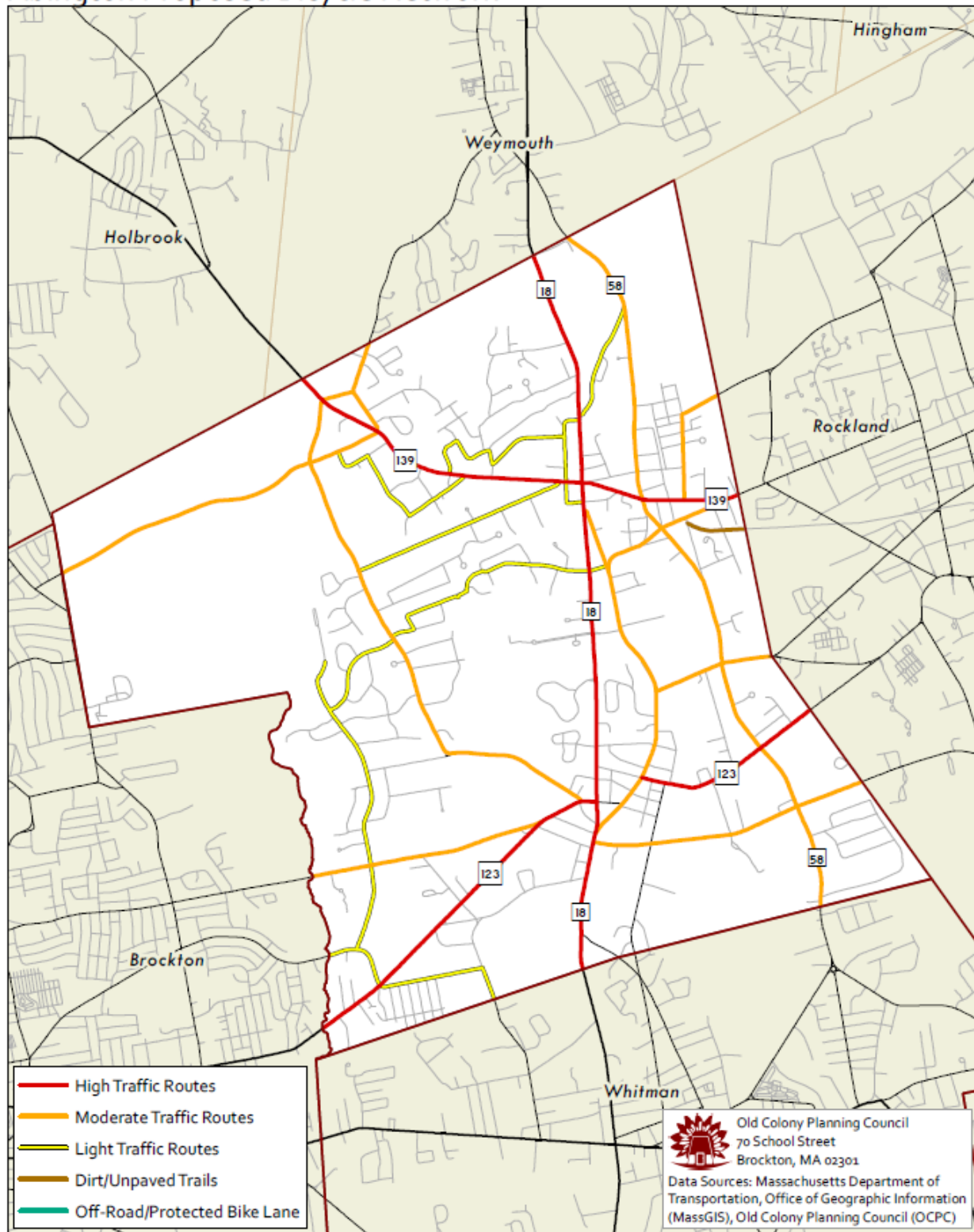
Bicycle Transportation Recommendations

The Town of Abington has a good grid style road network and is viable for a bicycle network where cyclists can get from point a, to point b, without many conflicts or detours. OCPC would recommend creating a bicycle network with wayfinding that would allow cyclists and tourists a guide to where key destinations are in the Town, such as Arnold Park or The Ames Nowell State Park.

Another recommendation would be to continue to provide amenities such as repair stations and bicycle parking at priority locations such as local educational institutions (Abington Middle/High School and Beaver Brook Elementary).

Bicycle lanes are recommended for the main corridor routes including: Washington Street (Route 18), Randolph Street (Route 139), Plymouth Street (Route 58), and Route 123 Centre Ave, Washington Street and Brockton Avenue (Route 123). Bicycle Boulevards would be beneficial to neighborhood streets with low traffic and a high population of families with children.

Abington Proposed Bicycle Network



Map 5) Abington Bicycle Network

Avon

The Town of Avon is primarily a suburban residential community bound by the City of Brockton to the south, Town of Holbrook to its east with Route 24 on its west and Randolph on its northern side. Avon has a population of 4,356 with a median age of 43.9 years. The residential land use is dominated by detached single-family suburban homes. The Town of Avon has direct connection to Route 24 giving the Town access to the regional automobile network. Public transit options are available by the Brockton Area Transit Authority (BAT), allowing access to the regions' public transportation network, and the Massachusetts Bay Transportation Authority (MBTA) that provides additional public transit service and transportation access to Boston and the communities served by the MBTA. Avon has an industrial park containing a multitude of businesses and a Merchants Park that contains large retailers.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

According to the Town of Avon's Community Development Plan there was no one overarching vision statement developed by their 2001 Master Plan, only a series of goals and recommendations that built upon the 2004 Community Development Plan. With no single vision statement, these two plans convey a list of goals and objectives the Town of Avon would like to achieve in their pedestrian network. In the Avon Community Development Plan, the Town seeks to improve existing pedestrian infrastructure as well as establishing integrated pedestrian routes through and between neighborhoods, employment centers, and parks and recreation areas. The Town of Avon also seeks to establish sidewalks along all Town streets.

Current Pedestrian Network

The Town of Avon is well covered by sidewalks, with the exception of a few narrow residential streets. Conditions of the sidewalks vary depending where you are in Town. Along major corridors like Main Street, sidewalks are in need of reconditioning and in other areas they are in good condition. In the sections of Town with older sidewalks, they lack American with Disability Act (ADA) compliant sidewalk ramps and reasonable width for a pedestrian using a wheelchair to pass fixed objects; whereas on the newer sidewalks these accommodations are present.

Current Bicycle Network

Currently there are no bicycle lanes or connections in the Town of Avon.

Previous Town of Avon Bicycle and Pedestrian Studies

Like many other communities throughout the Commonwealth, the Town of Avon has primarily focused on the automobile portion of its transportation network. While automobiles remain the dominate mode of transportation in the community, the Town is considering future investment in pedestrian infrastructure. In the goals and objective section of the 2001 Master Plan, it was put forth that sidewalks should be established where needed and that pedestrian/bicycle routes should be established between neighborhoods, public facilities, and employment centers. In the Community Development Plan, which seeks to build on recommendations laid out in the Master Plan, the Town strengthened its language in regards to pedestrian infrastructure stating that sidewalks should be provided on all streets and reinforced

the need for integrated pedestrian connections between neighborhoods, open space, public facilities, and employment concentrations.

Master Plan (2001)

The Master Plan is a document that guides growth and development within the Town of Avon. This document establishes goals and objectives pertaining to land-use, housing development, economic development, natural and cultural resources, open space and recreation, public facilities and services, and transportation and circulation elements.

Community Development Plan (2004)

The Community Development Plan is a document focused on areas pertaining to housing, economic development, transportation, resource protection, and open space. The Plan builds on recommendations outlined within Avon's 2001 Master Plan and provides implementation strategies on how to achieve these goals.

Road Safety Audit: East Main Street (Route 28)/East Spring Street/West Spring Street (2012)

The East Main Street (Route 28)/East Spring Street/West Spring Street Road Safety Audit (RSA) is intended to identify potential safety improvements that can be evaluated and included as part of future design efforts for reconstruction of this intersection in the Town of Avon. The short-term, low-cost potential improvements could be considered by the responsible agency for immediate implementation, as appropriate to reduce accidents at this location

Old Colony Regional Bicycle and Pedestrian Connectivity and Livability Plan (2013)

This study examines bicycle and pedestrian access throughout the Old Colony Planning Council Region and makes recommendations to help spur greater and safer travel for those that travel by foot and bicycle. Within the report, roads were examined for bicycle level of service and pedestrian walking condition by community.

Avon and Brockton Route 28 Corridor Study (2016)

An in depth study of the Route 28 Corridor, identifying, quantifying and developing short-term and long-term actions that will enhance circulation and traffic flow, improve safety, expand bicycle and pedestrian accommodation, and reduce gaps to essential services.

MovingU Regional Transportation Plan (2016)

The MovingU Regional Transportation Plan provides a document and a process that will meet the challenges of preserving and expanding the transportation system. Following the directives of the law, it includes goals, policies, analyses, and recommendations necessary to build and maintain an efficient, effective and affordable regional transportation system. The intention of the RTP is to build on the current transportation system, working to make it comprehensive and fully integrated.

Pedestrian Network Needs

The Town of Avon has been diligent in establishing sidewalks throughout the community in recent years, but there is opportunity for improvement. The Community Development Plan calls for establishing sidewalks throughout the Town, especially to places of concentrated employment and commercial areas. Some areas of the community where there are concentrations of employers and commercial businesses have sidewalks, which connect them to neighborhoods and other areas of Town. However, there are still sections of the Town where there are no sidewalks for example between the center of Avon and Merchants Park on the far west side of Town.

It is not uncommon to see pedestrians making the perilous walk along Harrison Boulevard (crossing the on and off ramps for Route 24) to reach shops and employment opportunities located at this commercial area. In addition, many residential roads are still in need of sidewalks.

Bicycle Network Needs

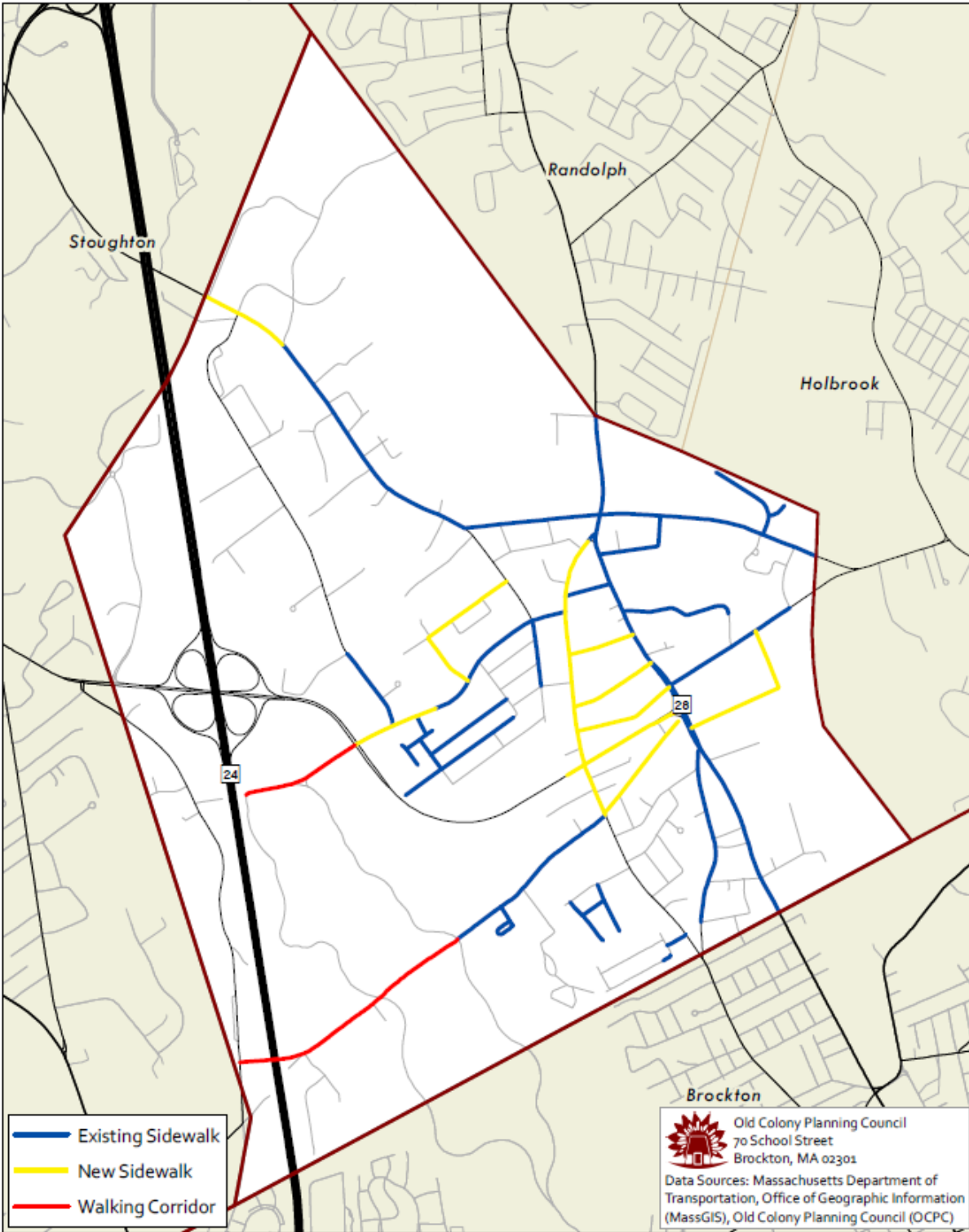
The Town of Avon has worked towards improving bicycle infrastructure for residents and visitors of the community. Avon has installed bicycle parking at a number of locations utilizing Old Colony's Bicycle Parking Program, which is funded through the Old Colony Transportation Improvement Program (TIP). These locations include the Avon Public Library, the Police and Fire Station (Route 28), and the bus stop at Saint Michael's (Route 25). Currently there are no existing bicycle lanes in Avon and cyclists tend to use sidewalks in high traffic areas. Interconnections between communities such as Brockton and Randolph are important in order to incentivize mode shift.

Pedestrian Transportation Recommendations

Old Colony Planning Council recommends that Avon continue to build for pedestrians and be attentive to pedestrian and ADA infrastructure such as incorporating pedestrian signals at significant intersections like East/West High Street and North Main Street. This can be accomplished by creating both a Sidewalk Master Plan and ADA Transition Plan. These two documents together would help guide the implementation and monitoring of new sidewalks and ADA accommodations.

Other pedestrian improvements may include crosswalk improvements and transitioning from Standard crosswalks to Continental crosswalks, thus improving visibility for pedestrians in the crosswalk. Continental Mid-Block crosswalks are recommended in essential locations such as between J. DeMarco Park and St. Michael's Rectory, where a heightened amount of foot traffic may be found on the weekends at the Flea market held at St. Michaels and during special events held at the J. DeMarco Park.

Avon Sidewalk Gap Analysis



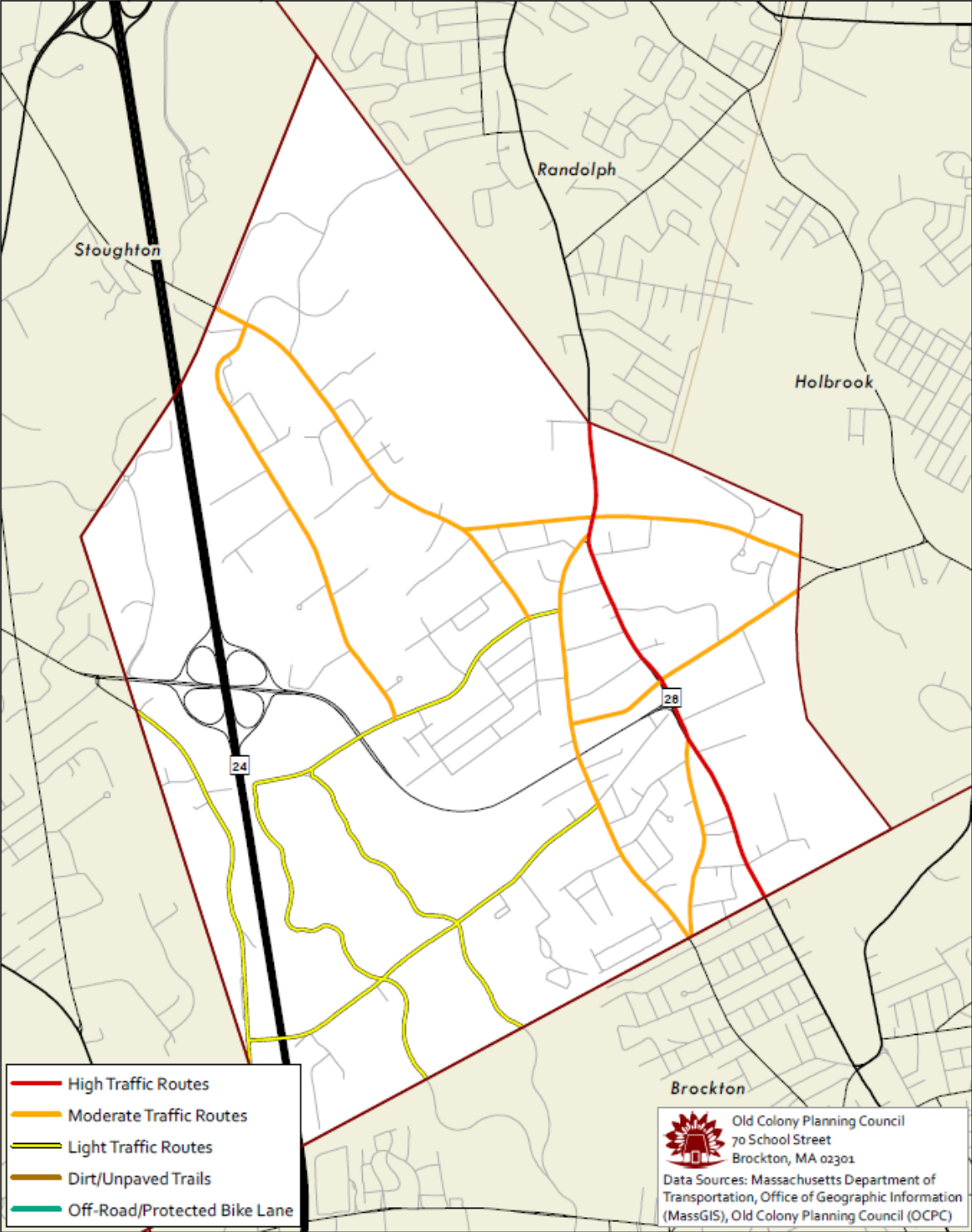
Map 6) Avon Sidewalk Gap Analysis

Bicycle Transportation Recommendations

With a population of 4,356, a majority of Avon's traffic derives from neighboring commuters crossing through Avon. Resources need to be allocated to intercommunity connections to identify essential connecting routes that experience traffic delays and look at ways to award mode shift by providing wayfinding and bicycle lanes for cyclists and travelers. Bicycle routes and potential bus routes may be able to alleviate traffic on corridors such as Harrison Boulevard and Page Street, that connect commuters to Merchant's Park and Avon Industrial Park.

Bicycling within Avon could be essential for daily commuters who attend the high school or work at one of the businesses on Bodwell Street, if bicycle infrastructure were implemented within the community. A Bicycle Network Plan may help accomplish this goal by identifying important locations for local residents as well as attractive destinations for neighboring visitors. The guidelines of the Bicycle Network Plan would build on current advancements made by the community such as bicycle parking at high traffic destinations.

Avon Proposed Bicycle Network



Map 7) Avon Proposed Bicycle Network

Bridgewater

Bridgewater is a charming, residential, suburban community. Located approximately 25 miles south of Boston, the Town is accessible by bus, commuter rail and highway at the junction of Routes 24 and 495. Originally an industrial and agricultural center; the Town of Bridgewater was chartered in 1656. Its historic character and unique landscape is prominent throughout the community, particularly in the downtown central common area. Today Bridgewater is a growing community of approximately 27,000 and serves as home to Bridgewater State University. Founded in 1840 as one of the first normal schools in America, BSU is a premier public university of the Commonwealth of Massachusetts. Offering a diversity of activities, Bridgewater maintains a caring, friendly, small-town, community atmosphere.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

According to the 2001 Master Plan, Bridgewater's goal is to have a more balanced transportation system, which includes better bicycle and pedestrian connections and infrastructure. The Town seeks to expand opportunities to establish greenway connections and as part of the Town's Subdivision Rules and Regulation included requirements to construct multi-use pathways that will connect schools, municipal services, houses of worship, transportation facilities and open space. A number of reports discuss making Central Square more bicycle and pedestrian friendly and seeks to achieve these means through a number of pedestrian oriented improvements to the transportation network and improve the walking connections between Bridgewater State University and Central Square. On June 1, 2016, Bridgewater adopted a Complete Streets Policy mandating that all public and privately funded projects take into account bicycle, pedestrian and transit accommodations.

Current Pedestrian Network

The Town of Bridgewater is fortunate to have a robust sidewalk network throughout most of the Town, especially surrounding Central Square, which is adjacent to Bridgewater State University. Current sidewalks conditions vary depending on age and location. In areas on the edges of Town, sidewalks are newer and tend to be in better condition than those found in the older more walkable sections especially around the Central Square and those corridors leading to the University. The sidewalks in the older sections of Town range in condition from worn to crumbling along some stretches. In areas where there has been recent construction, reconstruction of sidewalks has been encouraged as part of the project, and sidewalks ramps have been upgraded to current ADA standards and the concrete or asphalt is in better condition. Many other sections of Town sidewalks lack appropriate ADA accommodations and are far too narrow to allow two individuals utilizing wheelchairs to pass safely and comfortably.

Current Bicycle Network

Bridgewater is limited when it comes to bicycle accommodation, yet has great potential to fulfill this task of creating a network that services everyone. The Bay Circuit Trail runs through Bridgewater and brings the opportunity for the Town to utilize the Bay Circuit Trail as a starting point for expanding the bicycle network

Previous Town of Bridgewater Bicycle and Pedestrian Studies

A number of studies have focused on how the Town of Bridgewater can improve its pedestrian network and promote biking and walking as a means to reduce traffic congestion, especially through Central Square. Previous studies have recommended improving connections between Central Square and the University be strengthened and upgrading the sidewalks in the Central Square area to meet ADA regulations and address surface quality issues. Additionally, other reports recommended sidewalks be continued down major corridors in Town where they are currently absent or limited to one side of the street.

Bridgewater Master Plan (2001)

The Bridgewater Master Plan is a document that was drafted to help guide future development, infrastructure investment, and conservation efforts in the Town for the near future. The document includes a transportation section that studied and made recommendations to improve circulation for all modes of transportation within the community.

Old Colony Regional Bicycle and Pedestrian Connectivity and Livability Plan (2011)

This study established a strategic vision for improving walking and bicycling opportunities in the Old Colony Planning Council region. This plan fed into the Old Colony Metropolitan Planning Organization's (MPO's) overall Regional Transportation Plan and provided the basis by which future funding priorities of the MPO were established for bicycle and pedestrian accommodations within Abington, Avon, Bridgewater, Brockton, East Bridgewater, Easton, Halifax, Hanson, Kingston, Pembroke, Plymouth, Plympton, Stoughton, West Bridgewater, and Whitman.

Old Colony Regional Bicycle and Pedestrian Connectivity and Livability Plan (2013)

This study set out to examine bicycle and pedestrian access throughout the Old Colony Planning Council region and make recommendations to help spur greater and safer travel for those that travel by foot and bicycle. Within the report, roads were examined for bicycle level of service and pedestrian walking condition by community.

Bridgewater FY 2013 SCR Technical Assistance Project (Central Square Parking, Pedestrian Safety and Traffic Congestion Improvement Plan)

Focused on determining recommendations to help ease traffic congestion experienced around Bridgewater's Central Square, the study also examined solutions to the shortage of accessible off street parking around the square and explored recommendations for long duration parking space for merchants, Town employees, and visitors. In addition to exploring solutions to automobile storage needs, the study also put forth recommendations to improve bicycle and pedestrian circulation in and around Central Square.

Bridgewater Downtown Community Development Master Plan (2014)

Developed for the Town by The Cecil Group and Nelson/Nygaard, this Plan's primary focus was to understand and determine a course of actions to revitalize Bridgewater's Central Square.

Recommendations for improving the walking condition to Central Square, identifying the pedestrian corridors and improving the accompanying infrastructure were discussed.

MovingU Regional Transportation Plan (2016)

The MovingU Regional Transportation Plan provides a document and a process that will meet the challenges of preserving and expanding the transportation system. Following the directives of the law, it includes goals, policies, analyses, and recommendations necessary to build and maintain an efficient, effective and affordable regional transportation system. The intention of the RTP is to build on the current transportation system, working to make it comprehensive and fully integrated.

Complete Streets Policy (2016)

The Town of Bridgewater adopted a Complete Streets Policy deeming that all private and publicly funded transportation projects taking place within the Town of Bridgewater require following the most current guidelines for bicycle and pedestrian infrastructure design and best practices.

Complete Streets Prioritization Plan Howard Stein Hudson (2017)

The Complete Streets Prioritization Plan was created by Howard Stein Hudson as part of MassDOT's Complete Street Funding Program. The Prioritization Plan helps prioritize projects based on potential, need and with input from the community and Town officials. Projects are typically ranked by locations most in need of urgent change and those that are shovel ready in terms of design. The Prioritization Plan is Tier 2 of the Complete Streets Program and helps prepare the Town to seek Tier 3 Project Construction Funding.

Pedestrian Network Needs

While the Town of Bridgewater has a very good pedestrian network that can enable a large portion of the population the ability to walk to places within Town, there are still opportunities to improve walkability in Bridgewater. Sidewalk conditions surrounding Central Square and within the older parts of the Town need to be resurfaced. More direct walking routes through neighborhoods should be sought to help facilitate the ease and speed in which a person can walk in Bridgewater. The sidewalk network should be expanded along roads that do not currently possess sidewalks and improved connections should be established between Central Square and Bridgewater State University.

Within the Complete Streets Prioritization Plan, pedestrian level of comfort is displayed on a map that shows about 70% of the facilities either from low comfort to medium/high comfort while 10% shows high comfort. High pedestrian demand locations such as Central Square, Plymouth Street, Broad Street, School Street and Main Street are a few streets with low pedestrian comfort. More attention must be given to these key locations to improve the comfort for pedestrians.

Bicycle Network Needs

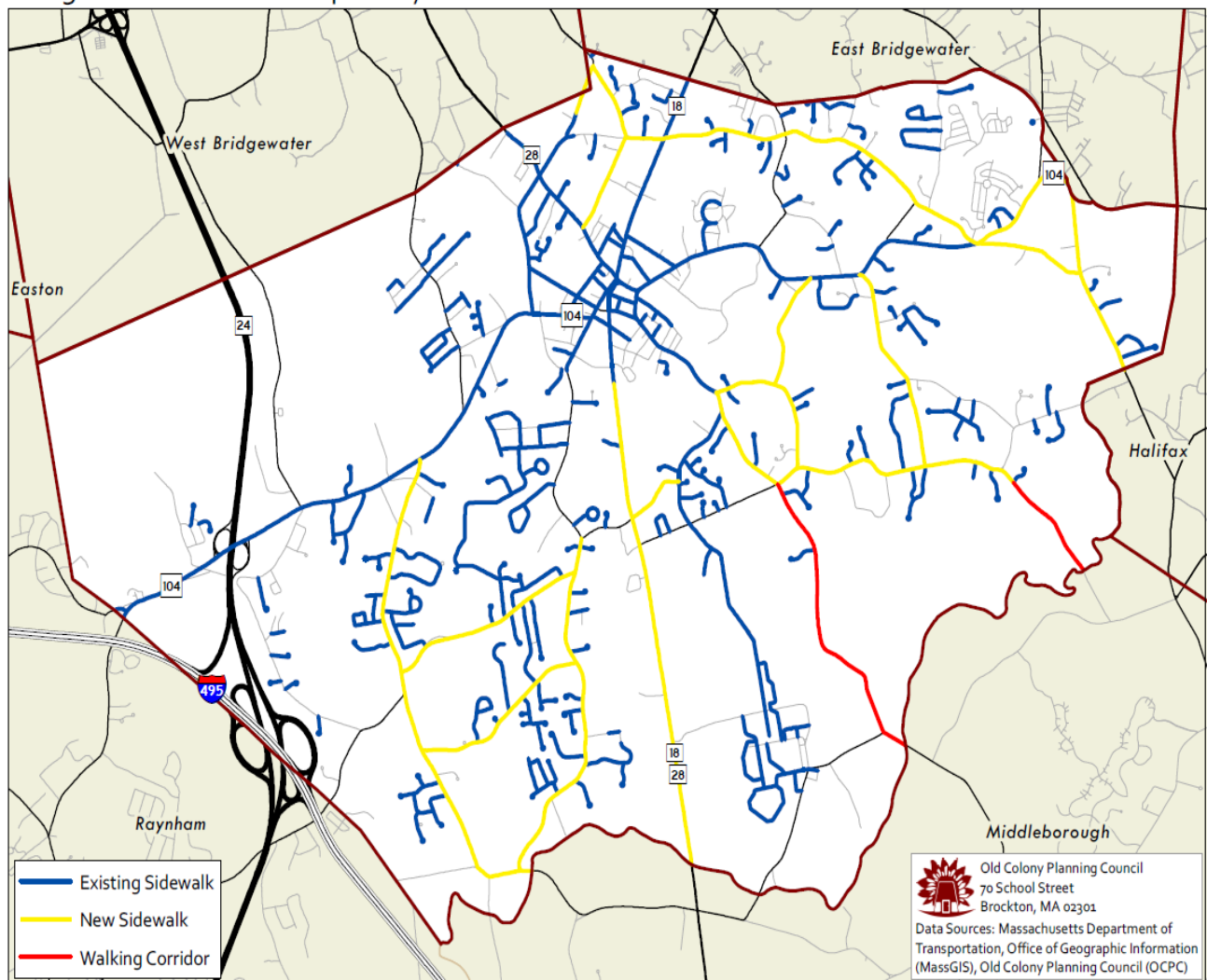
Cyclists have voiced their concerns in several studies about cycling safely in Bridgewater. The bicycle level of comfort in Bridgewater varies showing high comfort on streets further away from downtown and low comfort on main arterial roads such as Bedford Street, Plymouth Street, and Summer Street. Central Square is in need of infrastructure improvements that may increase comfort for cyclists.

Pedestrian Transportation Recommendations

A few recommendations for the Town of Bridgewater would be to provide wayfinding for pedestrians who may want to travel from the University to Downtown, or are coming from other communities to visit Bridgewater. Central Square has ample space for community events where residents and students may assemble. Amenities such as benches, picnic tables, and water fountains should be placed in strategic locations that will provide refuge for pedestrians and attendees.

Recommendations for ADA accommodations may include audible beacons for pedestrian signals and ADA ramps at all intersections. OCPC recommends an ADA Transition Plan and a Sidewalk Plan for the Town of Bridgewater. Doing so will help monitor improvements and help identify existing gaps in the pedestrian network.

Bridgewater Sidewalk Gap Analysis

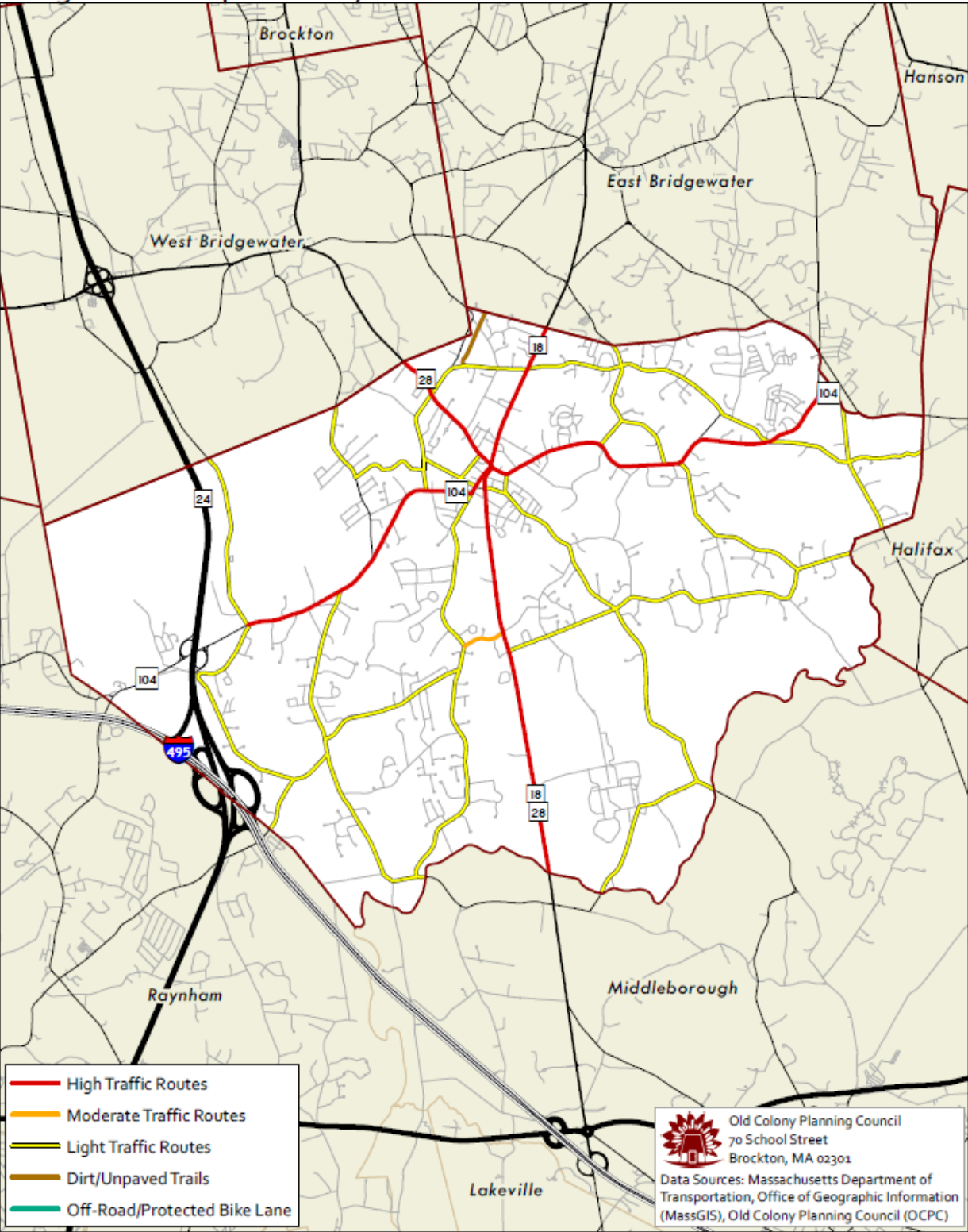


Map 8) Bridgewater Sidewalk Gap Analysis

Bicycle Transportation Recommendations

As cited in the Prioritization plan, bicycle accommodations are encouraged in the Central Square section of Bridgewater, along with corridors approaching Central Square. Recommendations include a bicycle lane both northbound and southbound of Central Square, bicycle lanes on Broad Street, buffered bicycle lanes on Main Street, and shared marked lanes on School Street. The Town of Bridgewater is capable of being a bicycle friendly community with increased connections between Bridgewater State University and the community through improved wayfinding, multi-mode infrastructure, and community engagement.

Bridgewater Proposed Bicycle Network



Map 9) Bridgewater Proposed Bicycle Network

Brockton

The City of Brockton is the only city in Plymouth County and it is the largest community in the region by population size of 93,810 and is about half minority in its population. Located 25 miles south of the City of Boston, Brockton is surrounded by a number of suburban communities and it contains some of the largest employers in the Old Colony region. Land-use is urban throughout most of the city with the exception of its outermost edges, which has suburban feel. Brockton being a historic industrial city, built up long before the automobile became the dominate mode of transportation, has a high degree of walkability due to it's almost city wide sidewalk network.

Brockton is fortunate to have a multitude of transportation options available to its residents. The Brockton Area Transit Authority (BAT) is one of the Commonwealths regional transit authorities that operates within city limits and has its intermodal facility and administration offices located in Downtown Brockton. Two Massachusetts Bay Transportation Authority (MBTA) bus lines and three MBTA Commuter Rail Stations also service Brockton. In addition to the plethora of public transportation options, two Route 24 on/off ramps, giving the city access to the regional automobile transportation network, also services Brockton. Besides Route 24, other state routes including Routes 27, 28, 37, and 123 all run through the City of Brockton providing city residents' access to the Greater Brockton Area and surrounding communities' access to the city.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

Over the past 31 years a number of planning and development documents suggest that the City of Brockton promote walking and hiking as alternative modes of transportation in efforts to ease traffic congestion and spur greater economic activity, especially in the downtown area. Within these plans, strategies include increased connectivity through improved bicycle lanes and sidewalk maintenance in an effort to encourage greater utilization of the commuter rail station and BAT Intermodal Centre.

Taking the recommendations from these reports, it is the goal and objective of the City of Brockton to incentivize bicycle/pedestrian activity throughout the city to ease traffic congestion, encourage economic transaction and reverse the image of the city as being an unsafe place for people to live and work. In addition to greater economic activity and bolstering the city's image, the city seeks to leverage better bicycle/pedestrian infrastructure to stimulate more usage of the Downtown Brockton MBTA Commuter Rail Station and the BAT Intermodal Centre.

Current Pedestrian Network

The City of Brockton is very fortunate to have a comprehensive sidewalk network which is a legacy of its industrial past before the automobile became the dominate mode of transportation, when people walked or utilized other means of transportation to get somewhere due to its legacy as a walkable industrial city, a large portion of sidewalks in the City are very old and in need of improvement. As a result, most sidewalks are not ADA complaint and the surfaces of the sidewalks in some areas are uneven, posing safety issues for those that walk and those that depend on mobility devices. In a few areas, for example in the outermost suburban sections of the city, there is an absence of sidewalks likely because these

sections of the city were developed long after the automobile became the dominate mode of transportation.

Current Bicycle Network

The City of Brockton has made progress in regards to bicycling infrastructure in the City. There is a 5 ft. bicycle lane on both sides of West Elm Street along with bicycle lanes on Centre Street as well. The City of Brockton has adopted a Complete Streets Policy and is looking to expand on their bicycle network.

Previous City of Brockton Bicycle and Pedestrian Studies

A number of recent studies include bicycle and pedestrian elements. These studies seek to leverage Brockton's accessible transportation network to spur greater economic opportunity especially downtown and to encourage people to walk and bike around the city in an effort to improve the image of the city. The City of Brockton also seeks to gain from the return to and growth of urban living in Massachusetts and the nation as a whole.

Downtown Brockton: A Center for Development (1985)

This document prepared by the Brockton Central Inc. is a report focusing on the physical and economic planning of Downtown Brockton and areas adjacent to Downtown. The study recommended a series of proposals designed to revitalize Downtown Brockton and spur additional development.

Brockton Master Plan (1996)

The Brockton Master Plan is a document that creates a framework for the city to follow in protecting and managing open space and recreational areas, the city's water supply, and guides the rezoning of the city. The plan goes further tackling issues of economic development, protecting existing neighborhoods and improving the city's transportation system.

Brockton Comprehensive Policy Plan (1998)

This document was drafted to guide Brockton policy makers in revitalizing city neighborhoods as well as the city's economy. The document defines goals and policies intended to guide city officials, residents, public agencies and organizations doing business in the city on land-use related issues.

Downtown Brockton Market Study and Policy Recommendations (2009)

Commissioned to help the City of Brockton understand the issues plaguing the economic vitality of downtown, this study examined the market conditions of downtown and made recommendations on how these market conditions may be improved. The document reviewed city policies, zoning regulations and existing business to see how these can be leveraged or changed to increase business interest in Downtown Brockton.

City of Brockton Development Planning: Downtown Report (2011)

This report provides the City of Brockton and its development team partners, the Brockton 21st Century Corporation and the Brockton Redevelopment Authority, a guide to the next steps for building the redevelopment pipeline for Downtown Brockton.

City of Brockton Development Planning: Campello Report (2011)

This report was a targeted study focused on the Campello neighborhood in the City of Brockton. It examined various issues affecting the neighborhood and put forth recommendations on how to address these matters.

Brockton Open Space and Recreation Plan (2013)

This plan serves as a guide for the City to aid in the protection and conservation of the City's recreational areas and open spaces. Improved OSRP's tend to help increase grant funding opportunities by providing up to date projects and encouraging incentives.

Southwest Brockton Corridor Study (2014)

The purpose of this study is to identify traffic flow and circulation problems, safety deficiencies, and concerns within the transportation network in the southwest area of Brockton. The study area includes Forest Avenue, from Main Street to Belmont Street, and portions of Belmont Street, Torrey Street, and West Street. This study was initiated as part of the Old Colony's Unified Planning Work Program (UPWP FFY 2014) with the purpose of developing long-term and short-term actions that will enhance circulation and traffic flow efficiency, and to improve safety for non-motorized bicycle and pedestrian traffic.

Brockton Downtown Action Strategy (2015)

The Brockton Downtown Action Strategy Plan is a document developed to help the city guide redevelopment of Downtown Brockton by identifying current needs and putting forth recommendations. One of the recommendations to help redevelop Downtown Brockton was to improve the walking environment. The report called for improving the walking surface of sidewalks, bringing them up to ADA standards and to provide pedestrian amenities like benches.

Avon and Brockton Route 28 Corridor Study (2016)

This study identified, quantified, and studied the Route 28 corridor to develop short-term and long-term actions that will enhance traffic circulation, improve safety, increase bicycle and pedestrian accommodations, and reduce gaps to essential services.

MovingU Regional Transportation Plan (2016)

The MovingU Regional Transportation Plan provides a document and a process that will meet the challenges of preserving and expanding the transportation system. Following the directives of the law, it includes goals, policies, analyses, and recommendations necessary to build and maintain an efficient, effective and affordable regional transportation system. The intention of the RTP is to build on the current transportation system, working to make it comprehensive and fully integrated.

Pedestrian Network Needs

Even though Brockton enjoys a large sidewalk network, there are areas of opportunity where the city can achieve greater walkability. In the outermost suburban portions of the city, sidewalks on residential street

are rare. The lack of sidewalks on residential streets puts pedestrian in the roadway, forcing them to negotiate moving automobiles, which poses a safety risk to pedestrians.

Individuals dependent on wheelchairs for their mobility commonly operate their chairs in city streets due to current sidewalk conditions. Sidewalks that have not been recently built or rebuilt need to be updated to meet the ADA standards. City sidewalks lack ADA compliant ramps along a number of sidewalks throughout the city or have uneven surfaces that pose a hazard and or have obstructions, which wheelchairs cannot reasonably pass in a safe manner or at all. The city needs to tackle these issues of ADA compliance in order to foster greater pedestrian access and infrastructure for all users.

Pedestrian amenities are lacking within the City of Brockton or need more attention in order to facilitate greater pedestrian activity. Pedestrian crosswalks need to be brought up to current best practices and pedestrian crosswalk signals should give pedestrian priority over motor vehicle traffic to ensure greater safety and less conflict between motorists and pedestrians.

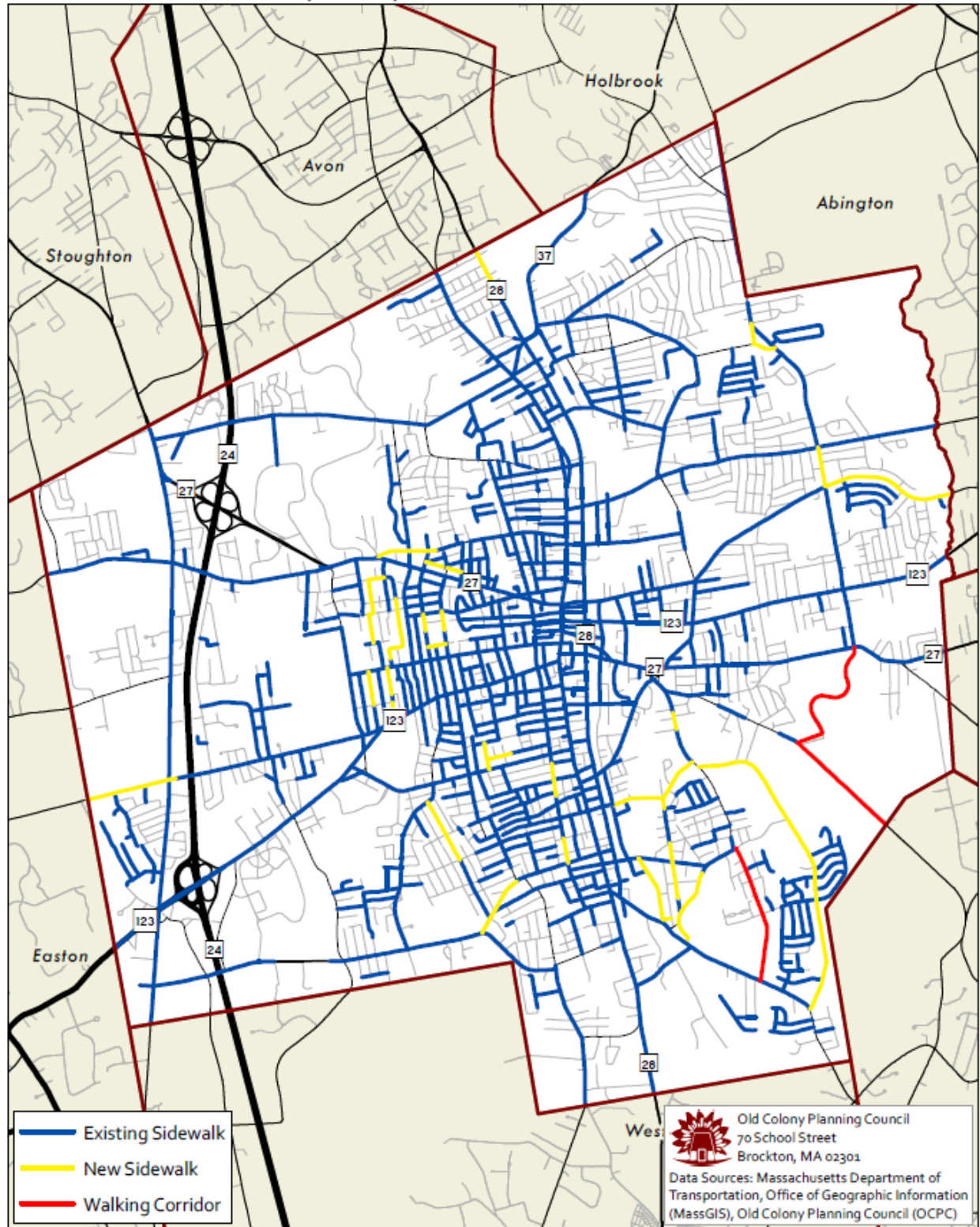
Bicycle Network Needs

The bicycle level of comfort in Brockton depicts a need of support for the bicycle network. Utilizing Strava's Heat map (a map that depicts the most often traveled routes for cyclists and joggers who are tracking miles/routes) shows that there has been a decrease in use of high traffic corridors between 2014 and 2015. These corridors include Pleasant Street, Warren Avenue, and Crescent Street to name a few. Brockton needs a strengthened bicycle network that provides wayfinding and amenities such as bike racks and repair stations in key locations such as the Brockton Area Transit Intermodal Center for example.

Pedestrian Transportation Recommendations

It is recommended that the City of Brockton create a Brockton Sidewalk Transition Plan accompanied by an ADA Transition Plan. Doing so will help monitor improvements and help identify existing gaps in the pedestrian network. Many intersections in Brockton are in need of repair and more increased accommodations for pedestrians and those with mobility issues. Crosswalks should transition from the standard two line crosswalk to the continental crosswalk or ladder crosswalk, audible beacons and ADA ramps should be installed at all intersections in Brockton.

Brockton Sidewalk Gap Analysis



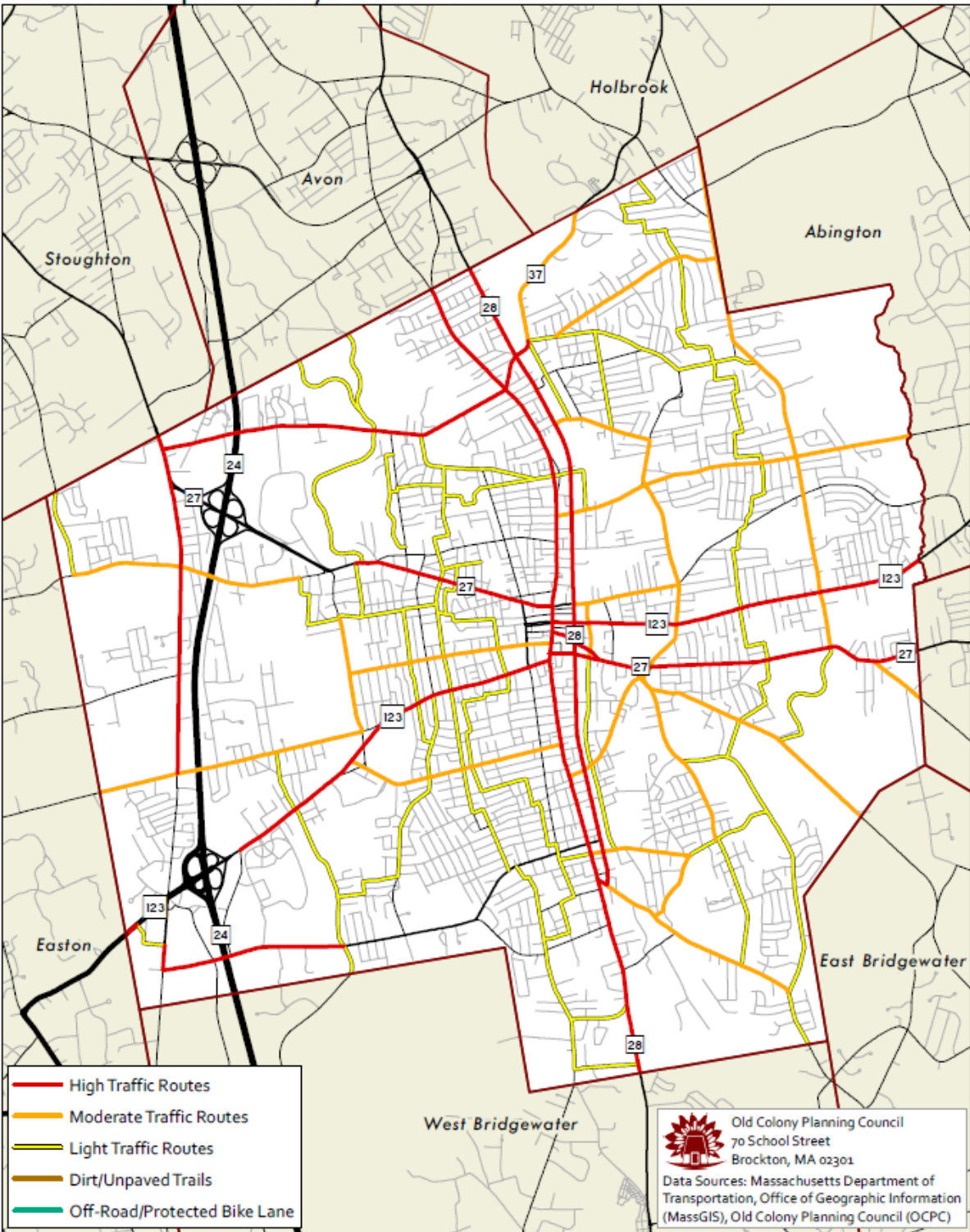
Map 10) Brockton Sidewalk Gap Analysis

Bicycle Transportation Recommendations

There have been a few updates to the bicycle network in Brockton as well, including West Elm Street and Centre Street, which have both been equipped with bicycle lanes. OCPC recommends The City of Brockton continue on its path to becoming a bike friendly community. The City is taking steps towards that goal with its recent adoption of the Complete Streets Policy and commitment to being a Compact Community, a program created by the Baker-Polito Administration in 2016 to help guide communities to implement best practices in different areas of government including transportation.

Old Colony recommends that the City of Brockton promote cycling more often through event planning and educational campaigns such the MassDOT Scan the Streets for Feet campaign or the Safe Trips High School Video Contest, which takes place annually across the Commonwealth. There are also events such as Bike Week and Bike to Work Day that the City can utilize to market biking as an alternative mode of transportation to the community.

Brockton Proposed Bicycle Network



Map 11) Brockton Proposed Bicycle Network

Duxbury

Duxbury is one of the oldest Towns in the Commonwealth, dating back to its founding by the Pilgrims and their leader Myles Standish in 1637. Duxbury is located 35 miles south of the City of Boston and sits along Cape Cod Bay and Duxbury Bay. Duxbury is a very beautiful low-density suburban community with a high median household income and a population of 15,059. The main mode of transportation in the Town is by private automobile. Duxbury has access to the regional automobile network via Route 3. The additional routes traversing Duxbury include Route 3A, Route 14, Route 53 and Route 139. The Town of Duxbury is served by the Greater Attleboro Taunton Regional Transit Authority (GATRA) Marshfield/Duxbury/Kingston bus route, which provides the Town access to the regions public transit system.

Bicycle and Pedestrian Network

The bicycle and pedestrian network in the Town of Duxbury is limited. Most roads and residential streets lack sidewalks or bike lanes for pedestrians and cyclists. Where sidewalks do exist, they do not cover the whole corridor, even along major routes like Route 3A; forcing pedestrians to walk into the roadway or along grassy edges of the road.

Goals, Objectives, & Policies

The goals laid out in past community plans and open space and recreation documents call for a more comprehensive pedestrian network in Town. The stated goals are to develop a network of multiuse paths that would connect the Town to areas of open space by connecting existing walking paths. In addition to making connections to existing pedestrian paths and creating new ones that will provide Duxbury residents' greater access to open space and recreational areas, another goal laid out in these planning documents is to create multiuse paths and link them to commercial areas and municipal services. By linking the commercial areas of the Town via these multi-use paths, the Town will seek to meet one of its other goals of providing pedestrians a dedicated space to travel by foot safely and bring residents to commercial areas for greater economic activity.

Current Pedestrian Network

The current pedestrian network in the Town of Duxbury is limited in coverage. There are sidewalks along some sections of roads in Town, not in others. Most sidewalks in Duxbury are located in Hulls Corner and along roads like Washington Street. Even on corridors where there are sidewalks, they often are not contiguous which force pedestrian to walk in the roadway or along grassy shoulders, presenting an uncomfortable walking environment.

Current Bicycle Network

Even though the Bay Circuit Trail cuts through Duxbury, the Town has no official network and little infrastructure in place for cyclists. A majority of the trail is on arterial roads that coincide with traffic, leaving little opportunity for inexperienced cyclists to enjoy a comfortable ride.

Previous City of Duxbury Bicycle and Pedestrian Studies

A number of studies have been produced for the Town of Duxbury that includes bicycle and pedestrian elements. These studies exam how better bicycling and pedestrian accommodations can be implemented to increase commuter safety. These studies reinforce that better bicycle and pedestrian accommodations

should be implemented to leverage the potential economic benefits gained from more people walking and biking around sections of Town like Hulls Corner.

Duxbury Open Space and Recreation Plan (1997)

The Duxbury Open Space and Recreation Plan is a document that outlines a series of recommendations that will address open space and recreation needs, while maintaining the Town's character and protecting the natural resources Duxbury residents hold dear.

Duxbury Comprehensive Plan (1999)

The Comprehensive Plan is a visioning document that seeks to understand the implication of a fully developed Duxbury. The Comprehensive Plan investigates what affects a fully developed Duxbury would have on land-uses, the local economy, natural and cultural resources, housing, public facilities and services, and transportation. With a careful build out analysis of Duxbury completed, the Comprehensive Plan also lays out an implementation plan to guide development into the future.

Community Development Plan (2004)

The Community Development Plan provides a framework for Town officials for expanding affordable housing and economic development within the community. This planning tool includes a thorough analysis of social, economic, environmental and land use trends and conditions in Duxbury

Hall's Corner Economic Development & Transportation Study (2014)

The Hall's Corner Economic Development & Transportation Study is a document that seeks to understand the issues and advantages of Hall's Corner, a commercial area of Duxbury and the closest thing the Town has to a Town center. The document seeks to identify issues keeping Hall's Corner from greater economic success and to layout a series of short-term and long-term recommendation to help Hall's Corner perform better economically.

MovingU Regional Transportation Plan (2016)

The MovingU Regional Transportation Plan provides a document and a process that will meet the challenges of preserving and expanding the transportation system. Following the directives of the law, it includes goals, policies, analyses, and recommendations necessary to build and maintain an efficient, effective and affordable regional transportation system. The intention of the RTP is to build on the current transportation system, working to make it comprehensive and fully integrated.

Pedestrian Network Needs

Due to the suburban nature of the Town of Duxbury and the dominance of the personal automobile as the main mode of transportation for Town residents, pedestrian accommodations such as sidewalks are absent in a large swaths of Town. This lack of pedestrian infrastructure deters Town residents from circulating Duxbury by foot and contributes to congestion in the commercial areas of Town. In order to achieve the goals laid out in previous planning studies that touch on pedestrian accommodation, the Town of Duxbury should focus on providing more sidewalks and developing pedestrian corridors where their might not be enough room along streets to accommodate all roadway users.

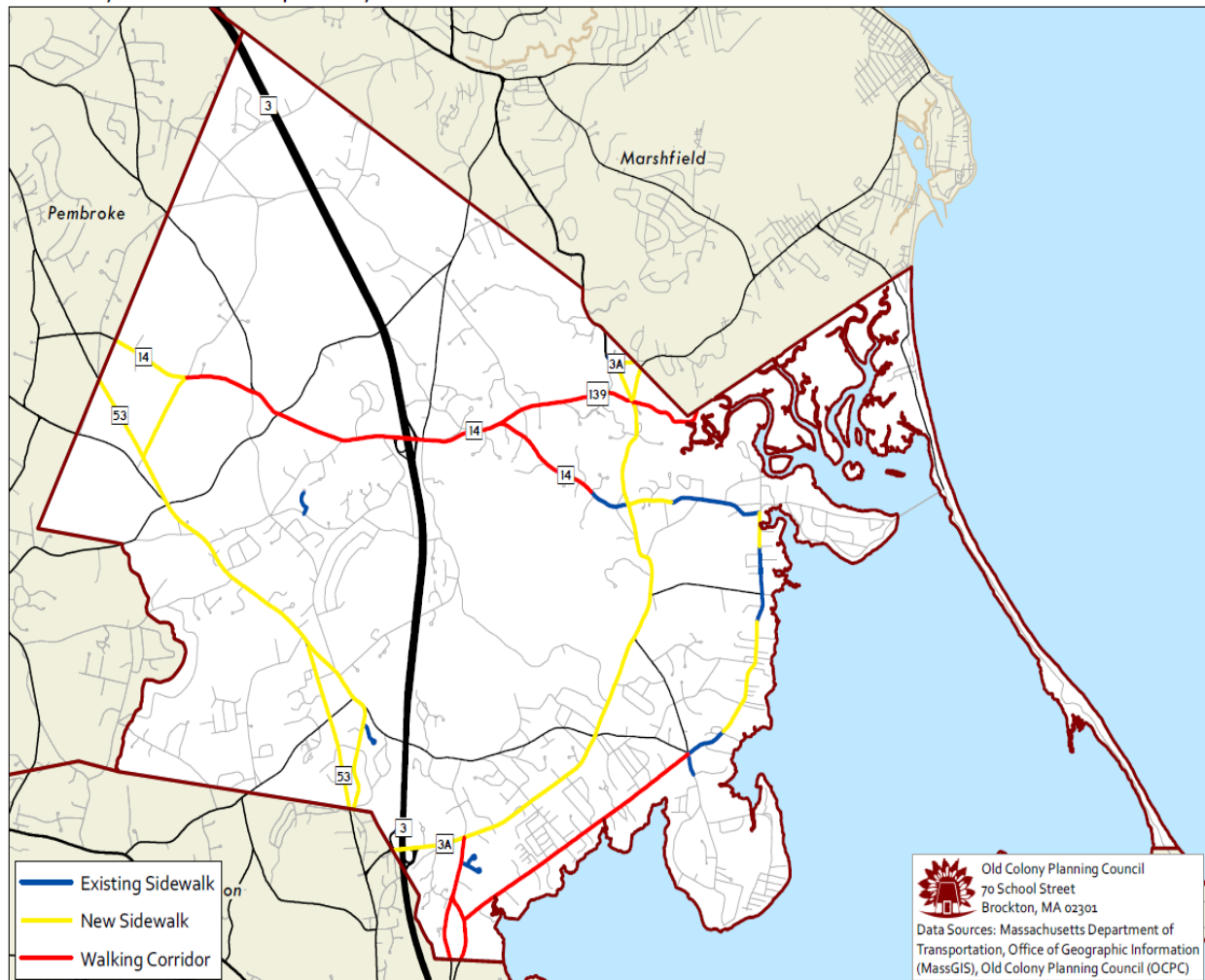
Bicycle Network Needs

There are many scenic roads in Duxbury where cyclists would love to ride, but due to lack of infrastructure and visibility, these low traffic roads become underutilized. Areas in Duxbury such as Hall’s Corner lack infrastructure that would accommodate cyclists who may patronize the businesses. There is a need for improved wayfinding and more accommodations geared towards attracting cyclists and making rides safer.

Pedestrian Transportation Recommendations

It is recommended that Duxbury expand its pedestrian network by creating sidewalks when building and repairing roadways. When traveling through the Town of Duxbury one may notice the “goat trails” along arterial roads, this is a telltale sign that pedestrians are present and in need of accommodation. There is also a strong need for ADA accommodations such as improved crosswalks and pedestrian signals; ADA tactile ramps should be placed at intersections and crosswalks.

Duxbury Sidewalk Gap Analysis



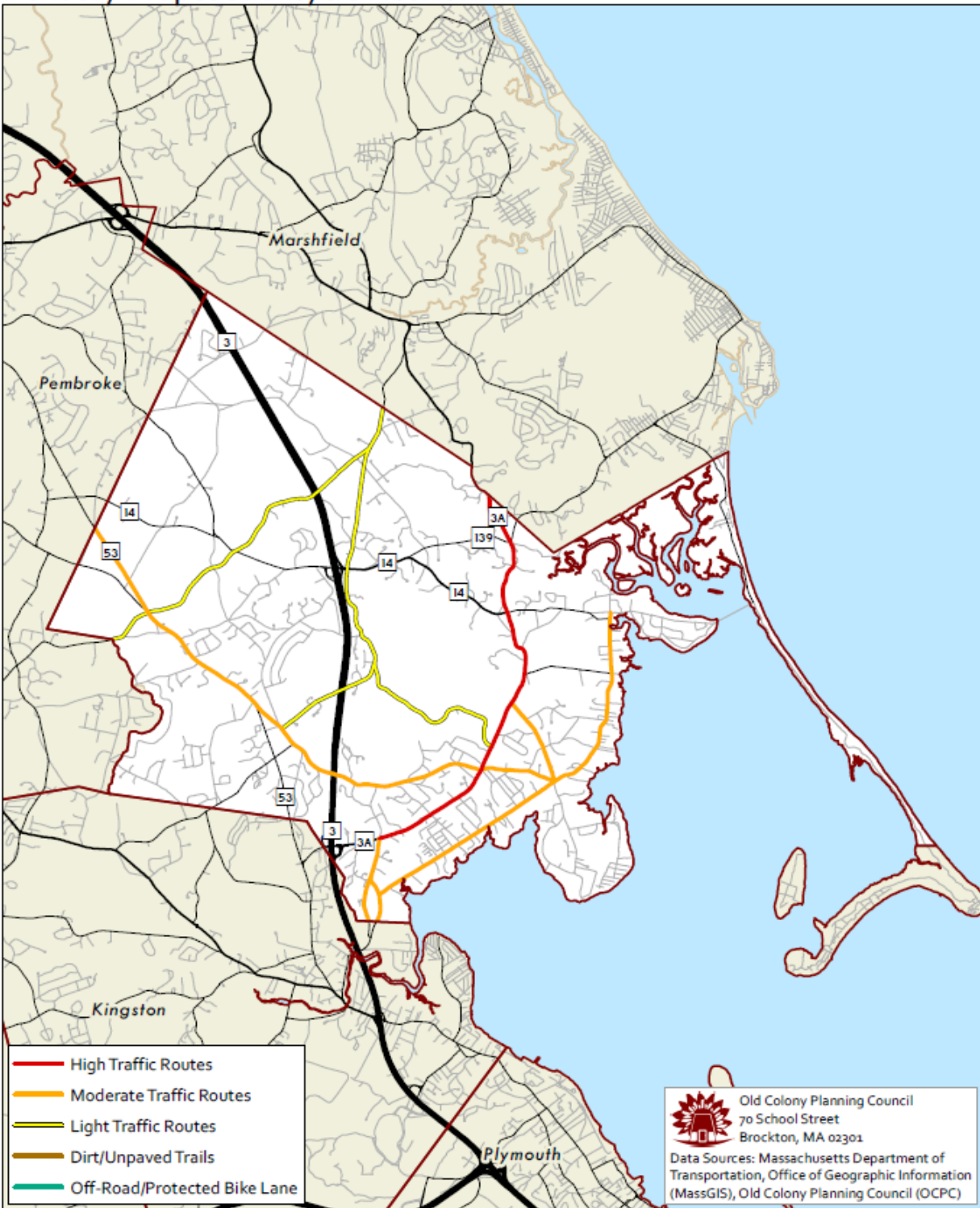
Map 13) Duxbury Sidewalk Gap Analysis

Bicycle Transportation Recommendations

More work needs to be done on the Bay Circuit Trail in Duxbury; building upon the established route and creating connections into the Town. Wayfinding signs will help direct cyclists to key destinations and attract tourists as well.

There are many narrow streets in Duxbury resulting in restrictions that could be remedied by installing shared lane markings, improved wayfinding, and better lighting. Cyclists will not feel comfortable if there is an increased sense of vulnerability while cycling through a certain route. By providing bicycle infrastructure such as bicycle lanes will allow cyclists to ride around the community. Different amenities can provide comfort to cyclists out on the road.

Duxbury Proposed Bicycle Network



Map 14) Duxbury Proposed Bicycle Network

East Bridgewater

East Bridgewater is a community that is mainly rural in nature and located southeast of the City of Brockton. The major Commonwealth routes traversing the Town are Route 18 and Route 106. East Bridgewater has a population of approximately 13,794 residents according to 2010 U.S. Census and a median household income of \$88,534 per annum.

The primary mode of transportation for East Bridgewater residents is by private automobile. There is no fixed route public transportation service in the Town, but East Bridgewater seniors are able to ride the Brockton Area Transit Authority's DIAL-A-BAT service, a demand response public transportation service for those 65 years and older.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

The sidewalk network within the Town of East Bridgewater is modest with most sections of the Town absent of sidewalks along its roadways. The sidewalks that do exist in East Bridgewater are mainly within the center of Town and along portion of Route 18. Most sidewalks are in need of maintenance in order to bring them up to a good state of repair and many require upgrades to meet ADA compliance.

More attention should be focused on the center of Town where there are popular destinations such as Johnny D's Breakfast Place on Central Street or the United States Post Office on West Union Street where vehicular congestion poses a greater risk to pedestrians.

Current Pedestrian Network

In its current state, the pedestrian network in the Town of East Bridgewater is in need of improvements and expansion.

Current Bicycle Network

The Town of East Bridgewater currently lacks any established bicycle network.

Previous City of East Bridgewater Bicycle and Pedestrian Studies

East Bridgewater Bay Circuit Open Space Plan (1998)

The East Bridgewater Bay Circuit Open Space Plan is a document that sought to catalog existing physical, environmental, social, and economic resources of the Town. The report then seeks to understand open space needs within the community and put forth a series of recommendation to achieve this.

East Bridgewater Open Space and Recreation Plan (2005)

The East Bridgewater Open Space and Recreation Plan is a document that was developed to examine the communities remaining natural and historic resources. The plan drew attention to the fact, that due to development, the Town's natural resources were in jeopardy of being lost.

Plymouth Street (Route 106) at Washington Street, East Bridgewater (2011)

The Plymouth Street at Washington Street, East Bridgewater Road Safety Audit examined the roadway conditions at this intersection in regards to safety. This report looked at a number of variables influencing safety for all roadway users at this intersection to determine recommendations for the Town of East Bridgewater. Recommendations were outlined about both low cost countermeasures and those of higher cost.

OCPC Major Bottleneck In-Depth Analysis and Action Plan (2011)

This study focuses on the in depth analysis of three major bottlenecks to develop short-term and long-term actions that enhance the efficiency of traffic flow and circulation.

Old Colony Regional Bicycle and Pedestrian Connectivity and Livability Study (2013)

This study set out to examine bicycle and pedestrian access throughout the Old Colony Planning Council Region and make recommendations to help spur greater and safer travel for those that travel by foot and bicycle. The report, examined roads for bicycle level of service and pedestrian walking condition by community.

Route 18 (Bedford Street) from Whitman Street to Central Square Road Safety Audit (2014)

This document examined the safety conditions along Route 18 from East Bridgewater center to Whitman Street in the southern section. The document looks at the conditions experienced by roadway users of various modes and puts forth recommendations to improve safety for all modes of transportation.

MovingU Regional Transportation Plan (2016)

The MovingU Regional Transportation Plan provides a document and a process that will meet the challenges of preserving and expanding the transportation system. Following the directives of the law, it includes goals, policies, analyses, and recommendations necessary to build and maintain an efficient, effective and affordable regional transportation system. The intention of the RTP is to build on the current transportation system, working to make it comprehensive and fully integrated.

Pedestrian Network Needs

Sidewalk connections must be a priority for the complete streets network in East Bridgewater. Currently there are several gaps within the community, disabling pedestrians from making it to key locations such as the East Bridgewater Jr. /Sr. High School on Plymouth Street. The Town of East Bridgewater should create a Sidewalk Transition plan accompanied by an ADA Transition Plan in order to strategically improve the pedestrian network.

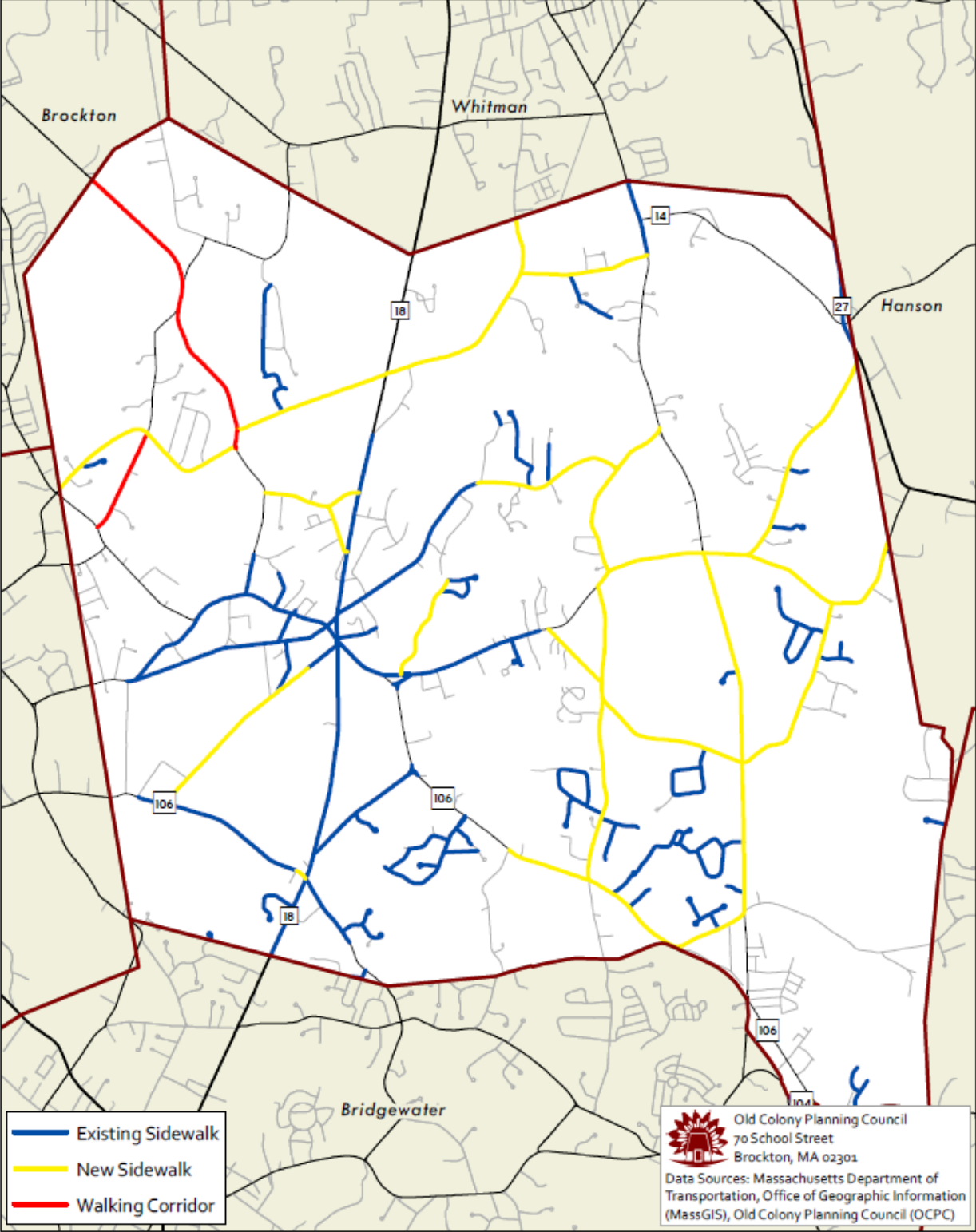
Bicycle Network Needs

The Town of East Bridgewater must create a bicycle network plan or Complete Streets plan identifying key routes and destinations for cyclists. The Town of East Bridgewater may also consider creating a wayfinding system that will allow cyclists and tourists to find key locations to visit while cycling.

Pedestrian Transportation Recommendations

The Old Colony Planning Council recommends creating a Sidewalk and ADA Transition Plan so the Town may be able to plan an assortment of events catering to pedestrians such as walking marathons or community play-ways where streets are temporarily shut down and prohibit access to automobiles.

East Bridgewater Sidewalk Gap Analysis

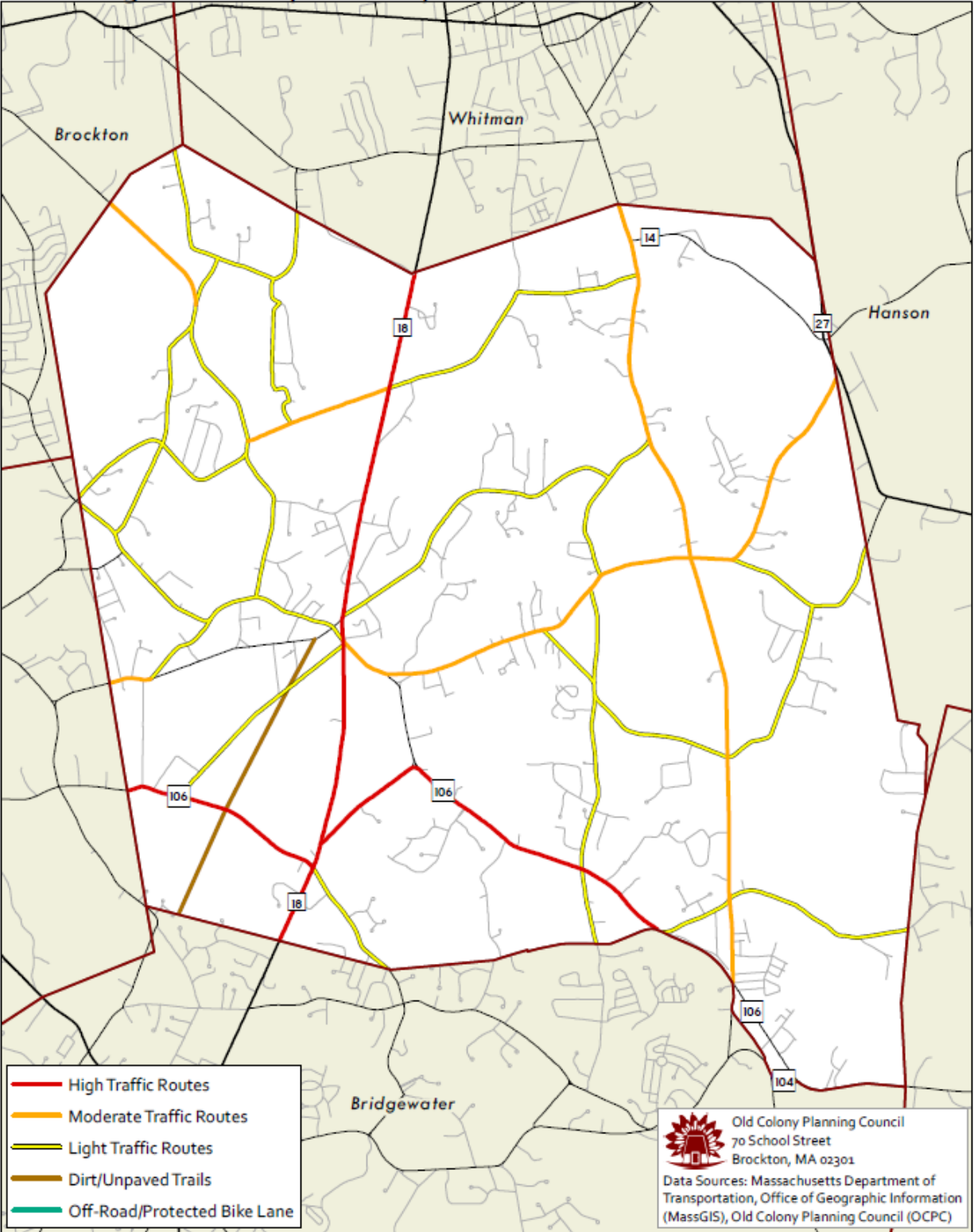


Map 16) East Bridgewater Sidewalk Gap Analysis

Bicycle Transportation Recommendations

Old Colony Planning Council recommends that East Bridgewater establishes a bicycle network. The OCPC Bicycle proposed Bicycle Route Map depicts a few likely bicycle routes and may give the Town an idea of where to start. The map is subject to change, as more cyclists get involved and provides insight through engaging with the Town.

East Bridgewater Proposed Bicycle Network



Map 17) East Bridgewater Proposed Bicycle Network

Easton

The community encompasses 29.18 square miles or 18,675.2 acres and had an estimated population of 23,112 according to the 2010 census. The Town is conveniently located near Routes 24, 95, and 495 and is bordered on the north by Stoughton and Sharon, on the east by Brockton and West Bridgewater, on the south by Raynham, Taunton, and Norton, and on the west by Mansfield. The Town of Easton has a small village feel in its northern section and a rural-bucolic nature in its southern section.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

The Town via their master plan *Envision Easton* recognizes there are opportunities within the community to provide for better bicycle and pedestrian accommodations. The Town of Easton views bicycle/pedestrian accommodations as another integral part of the Town's transportation system. The goals set forth in Easton's Master Plan are to improve connections, safety, way finding, and eliminate gaps in the bicycle and pedestrian network.

Current Pedestrian Network

Easton's pedestrian network robustness depends on where in Town you are. In North Easton, the pedestrian network enjoys better connectivity due to past investments in pedestrian infrastructure that occurred long before the private automobile became the dominant mode of transportation and more walking was required. In South Easton, the pedestrian network experiences far more discontinuity because this section of the Town developed after the personal automobile had taken hold as the primary means of transportation. The reality of the Easton pedestrian network is depending on where you live, work, or shop in Town, transporting oneself by foot can be a challenge.

Current Bicycle Network

In its current state, the Town of Easton does not have an established bicycle network. However, the Town of Easton is working towards creating a strong bicycle network for the community. The *Envision Easton* plan calls for a robust bicycle network while making improvements to the built environment such as intersection improvements, safety audits, and prioritizing high crash locations within the Town boundaries.

Previous Town of Easton Pedestrian Studies

Queset Commons Transit Study (2009)

The Queset Commons Transit Study was a document funded by Douglas King Builders to understand the feasibility of providing public transit service to the Queset Commons development. Part of the study focused on pedestrian and bicycle improvement and how they could leverage existing transit service in proximity to the site.

Queset Commercial District Land-use and Development Study (2012)

The Queset Commercial District Land-use and Development Study was a report drafted with funding provided by South Coast Rail Technical Assistance to identify improvements in the study area in the areas of appearance, function of public infrastructure, and to improve traffic flow, access, and safety for all modes of travel.

Old Colony Regional Bicycle and Pedestrian Connectivity and Livability Study (2013)

This study set out to examine bicycle and pedestrian access throughout the Old Colony Planning Council Region and make recommendations to help spur greater and safer travel for those that travel by foot and bicycle. The report examined roads for bicycle level of service and pedestrian walking condition by community.

Envision Easton-Comprehensive Master Plan (2014)

The Envision Easton document is a policy paper to help guide Town leaders in the subject matters of land-use, economic development, public services and facilities, housing, transportation, natural, historic and cultural resources, and open space and recreation. The document lays out clear goals and policy directives for community leaders to follow to achieve the directives put forth over the course of a number of years.

MovingU Regional Transportation Plan (2016)

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Road Safety Audit: Foundry Street (Route 106) at Turnpike Street (Route 138)

The road safety audit at Route 106 at Route 138 was completed to understand the safety challenges faced by all roadway users that utilize this intersection in Easton. The document then goes into a series of recommendation to help mitigate the safety challenges at this intersection.

Pedestrian Network Needs

The Town of Easton is in need of a well-connected sidewalk network. The Easton Sidewalk Gap Analysis shows an extensive gap between major arterial corridors and pocket neighborhoods in the Town of Easton. Sidewalk connections are absent between Depot Street (Route 123) and Foundry Street (Route 106) where there is a high concentration of businesses and likely a high desire for pedestrian access.

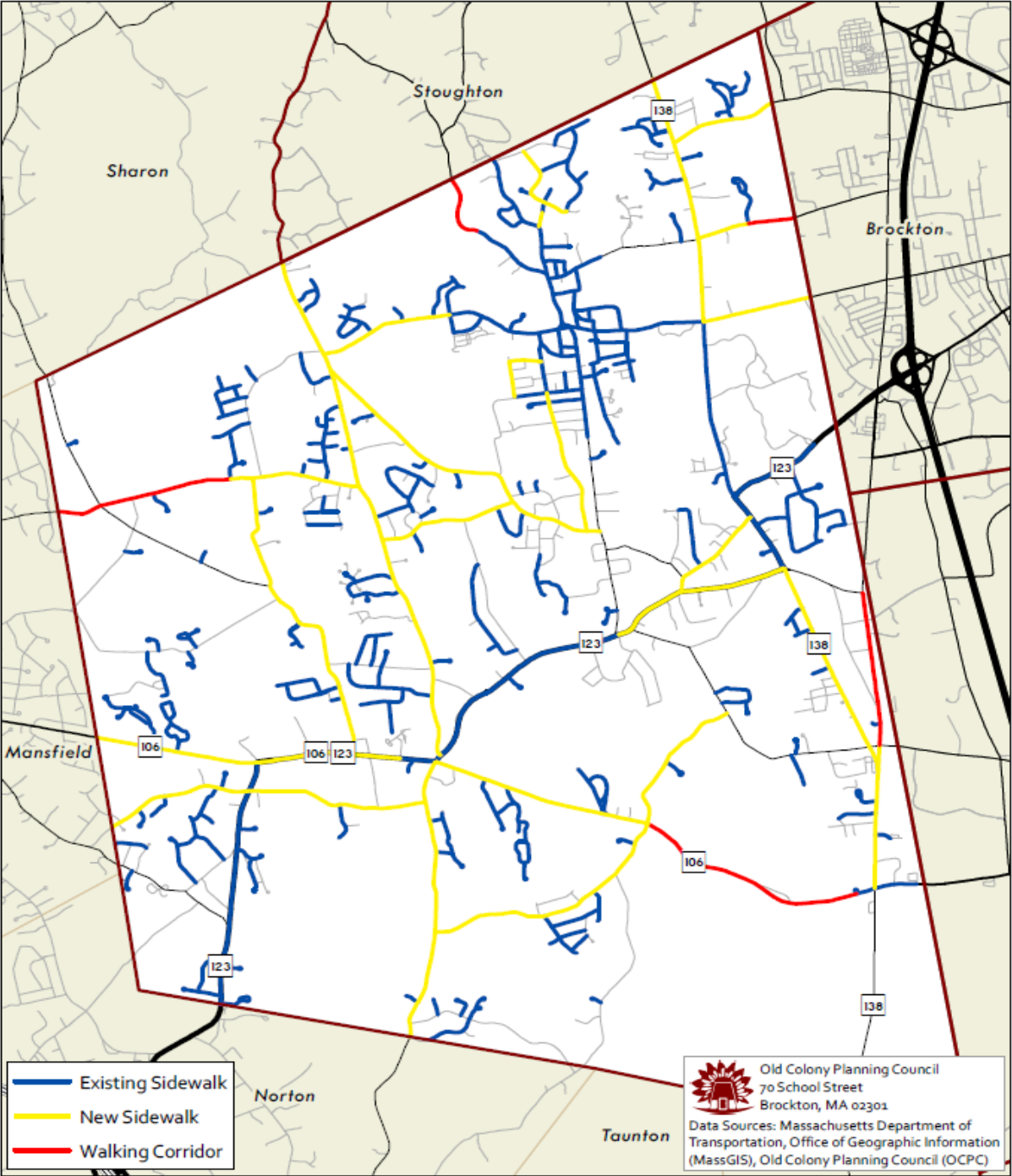
Bicycle Network Needs

Current bicycle network needs include bicycle infrastructure such as bicycle lanes, shared lane markings and better bicycle amenities like bike racks or bicycle parking garages, repair stations, and shower facilities for cyclists on long commutes. Providing these needs will not only help alleviate obstacles for current cyclists but will welcome new cyclists as well.

Pedestrian Transportation Recommendations

To diminish the gap, there needs to be a coordinated effort to address the issue. OCPC recommends the Town of Easton create an ADA and Sidewalk Prioritization plan. The Town of Easton should also consider promoting walking as an alternative mode of transportation by holding events held in the streets of Easton. Doing so will encourage more pedestrians to get out and visit businesses while also raising awareness to both motorists and pedestrians about the vulnerability pedestrians face.

Easton Sidewalk Gap Analysis



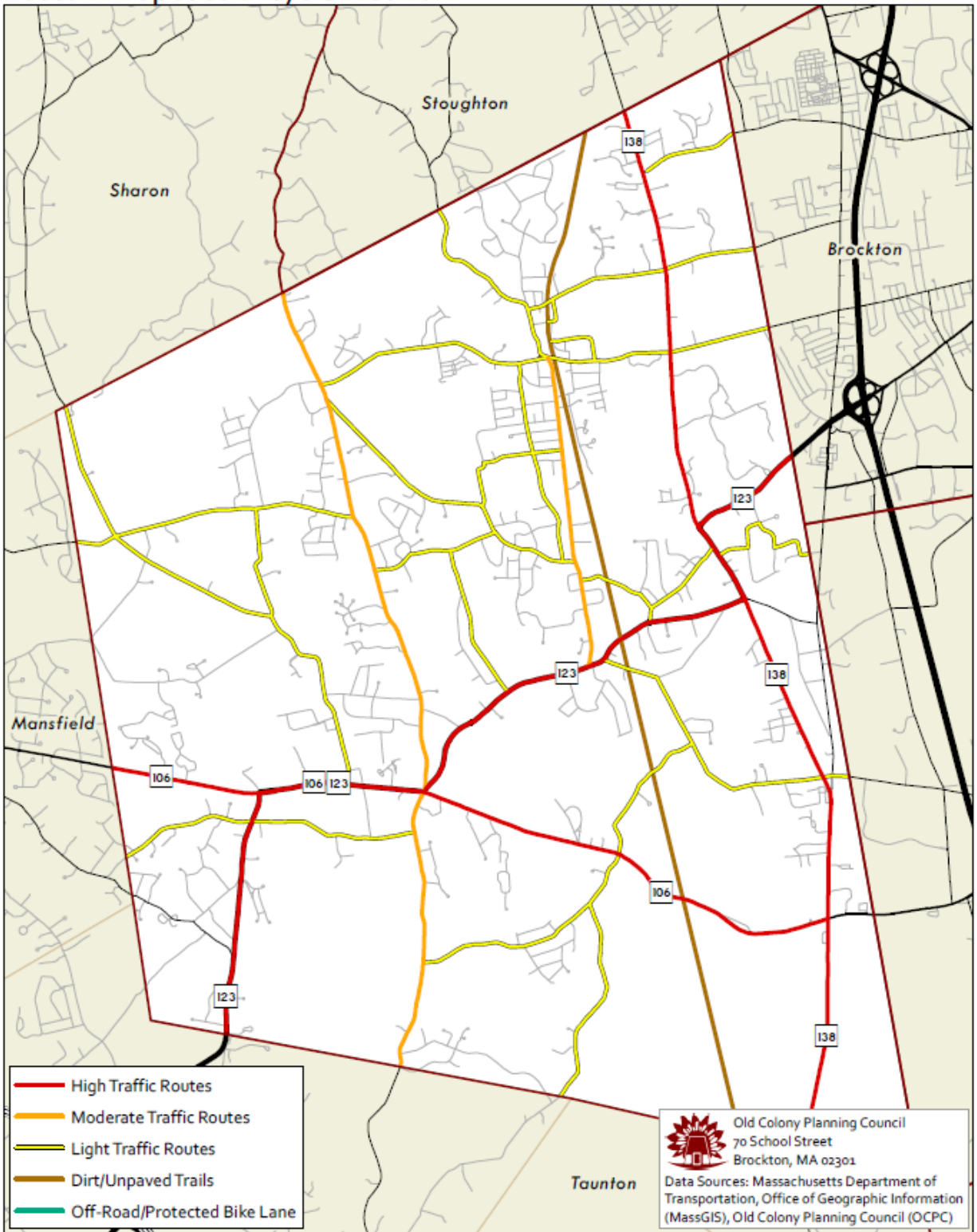
Map 18) Easton Sidewalk Gap Analysis

Bicycle Transportation Recommendations

Recommendations from Old Colony Planning Council include moving forward with the Envision Easton Plan and maintaining consistency with the guidelines provided within the plan. OCPC recommends creating a wayfinding system that will help direct cyclists to attractive locations within the community.

Eastonites should also remain cognizant of the South Coast Rail plans and ensures uniformity between the South Coast Rail plans and the plans of the community.

Easton Proposed Bicycle Network



Map 19) Easton Proposed Bicycle Network

Halifax

The Town of Halifax is a small rural Town located east of the Town of Bridgewater, west of the Town of Kingston, north of the Town of Plympton, and south of the Town of Hanson. Much of the Town can be characterized as rural with small agricultural operations spread throughout the community. The prominent housing types are single family detached home and the private automobile is the dominate mode of transportation.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

While the 2001 Master Plan was never officially adopted by the Town, within the document was a series of goals and objectives the community should strive to achieve. The document stated that Halifax should seek to expand its sidewalk network where needed and develop multi-use paths to help community residents and visitors gain access to nature. Along with expanding the sidewalk network where appropriate and providing access to nature via multi-use paths, the Town's draft Master Plan suggests further bicycle and pedestrian accommodations should be sought to help improve circulation within Town by providing access between neighborhoods and business areas by connecting Cul-de-sacs to allow pedestrian and bicycle egress.

Current Pedestrian Network

Halifax, due to its rural nature, does not have many roads, and few have sidewalks along them. Sidewalks exist along most of the length of Route 106, along some sections of Route 58 and along all of Route 36 within Town boundaries. Along most neighborhood roads, sidewalks are absent.

Current Bicycle Network

Halifax does not currently have a bicycle network.

Previous Town of Halifax Pedestrian Studies

Town of Halifax Master Plan (2001)

The Town of Halifax Master Plan was a document drafted on behalf of the Town by the Old Colony Planning Council to help guide future development. The study's focus areas were demographic trends, natural and cultural resources, land-use, public infrastructure, housing, economic development and open space and recreation. The Town of Halifax did not officially adopt the Master Plan, therefore it was used solely for understanding the bicycle and pedestrian needs identified in this earlier report.

Old Colony Management Systems 2011 Annual Report (2011)

The 2011 Old Colony Management Systems Annual Report provides a summary of activities and products prepared by Old Colony Planning Council during the 2011 calendar year in regard to the Congestion Management Process (CMP), the Land Use Management System (LUMS); the Pavement Management System (PMS); and the Safety Management System (SMS). Old Colony Planning Council developed four management systems that direct much of the transportation planning activity.

Old Colony Regional Bicycle and Pedestrian Connectivity and Livability Study (2013)

This study set out to examine bicycle and pedestrian access throughout the Old Colony Planning Council Region and make recommendation to help spur greater and safer travel for pedestrians and cyclists. The report examined roads for bicycle level of service and pedestrian walking condition by community.

MovingU Regional Transportation Plan (2016)

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Pedestrian Network Needs

The Pedestrian network in Halifax would benefit from stronger connections between existing sidewalks. Halifax streets are limited in accommodations for sidewalks; walking corridors may be a low cost effective way of providing a safe environment for pedestrians in Halifax. The Halifax Sidewalk Gap Analysis Map illustrates several Walking Corridors suggested for implementation within the Town.

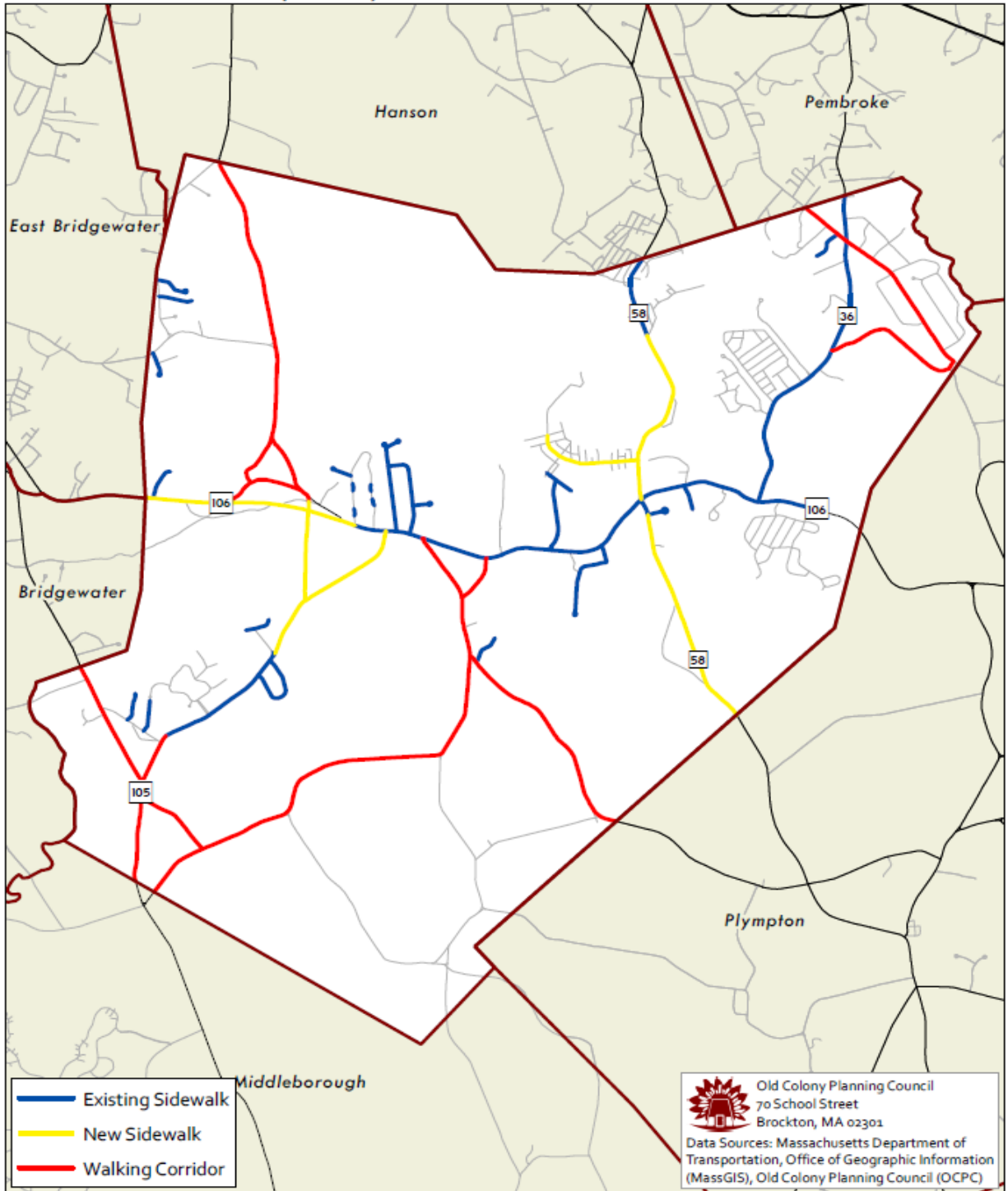
Bicycle Network Needs

Halifax does not have an established bicycle network and needs to identify key routes utilized by cyclists. There are many scenic routes within the Town boundaries, creating opportunities to encourage cyclists and potential tourists to enjoy their environment and see what Halifax has to offer.

Pedestrian Transportation Recommendations

Old Colony Planning Council recommends the Town of Halifax to improve upon its built environment and continue expanding sidewalk connections throughout Halifax. Creating sidewalks on Monponsett Street will allow pedestrians to take in the beautiful scenery provided by East and West Lake. Streets with low traffic impact such as South Street provide the exact conditions needed to create a walking corridor. Those conditions include low vehicle volume, restricted width or road (Right Of Way), and need for lighting/signage.

Halifax Sidewalk Gap Analysis

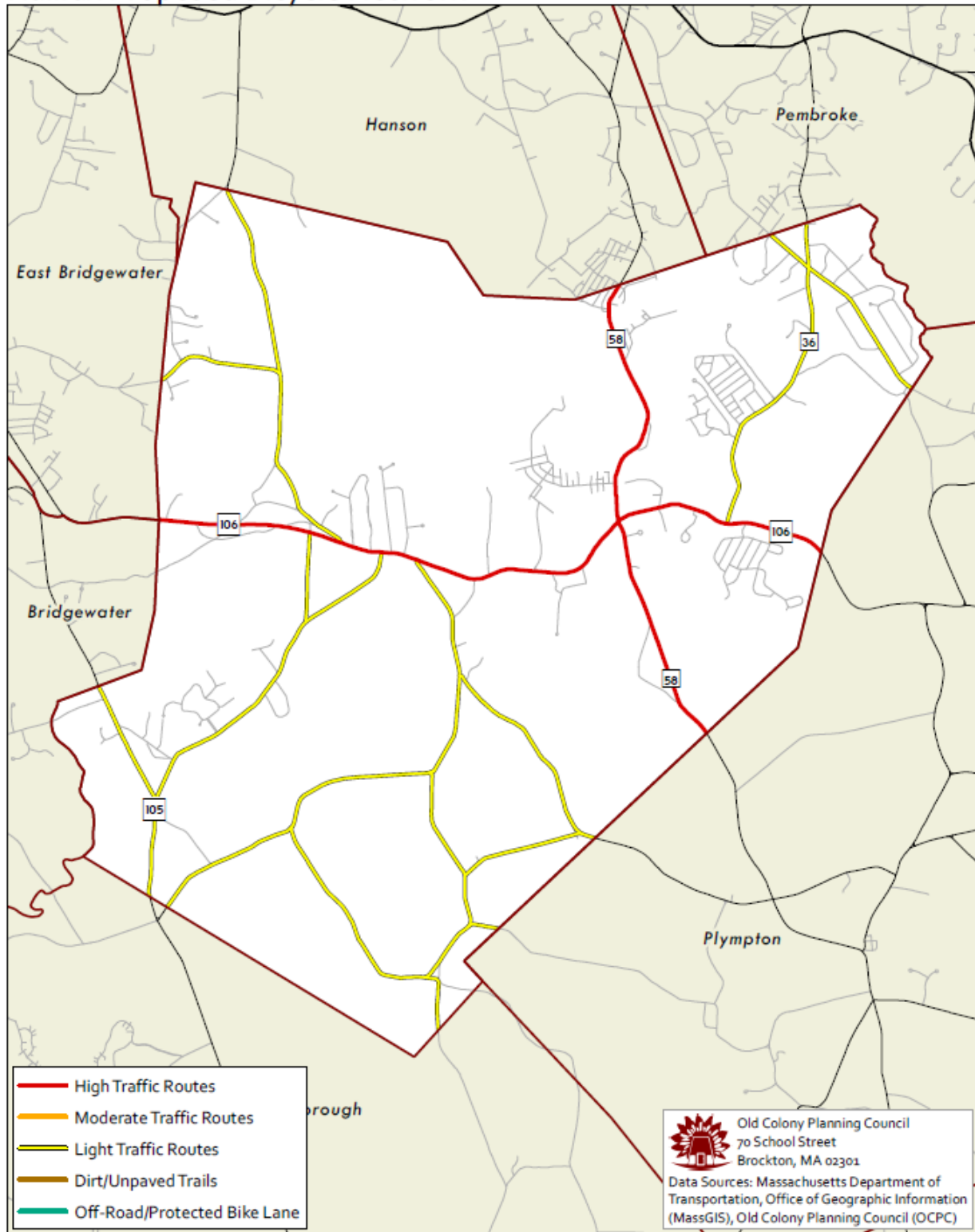


Map 20) Halifax Sidewalk Gap Analysis

Bicycle Transportation Recommendation

Recommendations for bicycle transportation improvements include creating a bicycle network connecting cyclists to essential destinations such as the Plymouth Street (Route 106) and Monponsett Street (Route 58) intersection. Route 106 and Route 58 are high traffic routes as depicted in the Halifax Proposed Bicycle Network Map (See **Figure 16**).

Halifax Proposed Bicycle Network



Map 21) Halifax Proposed Bicycle Network

Hanover

Having existed in one form or another, the area now known as the Town of Hanover was settled by English in 1649 and became a Town in 1727. Hanover can be described as a typical rural Massachusetts Town characterized by very low density suburban homes on large lots with much of the Town left as open space. The dominate mode of transportation for most Hanover residents is by private automobile. The Town does have a major shopping center known as the Hanover Mall, which draws a lot of visitors and employees.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

The Town of Hanover seeks to improve the bicycle and pedestrian experience for its residents and visitors. It was identified in the Town's Master Plan that the sidewalk network where appropriate and in a cost effective manner, should be expanded in a way were maintenance requirements would not be a strain on the municipal budget. In addition to expanding sidewalks, the Town of Hanover seeks to expand its greenway network, especially the Hanover Greenway that runs along the former Old Colony Rail line, which may provide an opportunity to create a bicycle or mixed use path.

Current Pedestrian Network

Hanover has a number of roadways with sidewalks along them, but most sidewalks do not connect to one another. This lack of sidewalk connectivity leaves pedestrian walking in Town streets, which can deter residents from walking and can create unsafe conditions for all roadway users. The lack of sidewalk connectivity can contribute to traffic congestion since most people would choose to drive rather than walk even if their destination is within a reasonable walking distance due to the perceived lack of safety in the pedestrian network.

Current Bicycle Network

Presently, a bicycle network does not exist in Hanover.

Previous Town of Hanover Bicycle and Pedestrian Studies

Master Plan (2008)

The Master Plan is a guiding document prepared by the Hanover Planning Board and staff for use by all Town Boards and Departments. The Master Plan addresses seven (7) major elements in order to coordinate planning for changes and growth over the next ten years. The purpose of a Master Plan is to coordinate the actions necessary by all Town agencies to fulfill a defined vision of the community's future.

Open Space and Recreation Plan 2008-2012 (2008)

The Hanover Open Space and Recreation Plan is a document drafted to help the Town craft policies and objectives to help preserve and maintain open space and recreational areas. The document lays out a series of recommendation and objectives on the types of open space and recreation opportunities the community would like to have built, expanded, and preserved. The document also outlines a five-year action plan to meet these objectives.

Old Colony Management Systems 2011 Annual Report (2011)

The 2011 Old Colony Management Systems Annual Report provides a summary of activities and products prepared by Old Colony Planning Council during the 2011 calendar year in regard to the Congestion Management Process (CMP), the Land Use Management System (LUMS); the Pavement Management System (PMS); and the Safety Management System (SMS). Old Colony Planning Council has developed these four management systems to inform and shape transportation planning activity.

Bicycle and Pedestrian Connectivity and Livability Study (2013)

This study set out to examine bicycle and pedestrian access throughout the Old Colony Planning Council region and make recommendations to help spur greater and safer travel for pedestrian and cyclists. The report examined roads for bicycle level of service and pedestrian walking condition by community.

MovingU Regional Transportation Plan (2016)

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Pedestrian Network Needs

The Hanover Sidewalk Gap Analysis Map reveals that there are many sidewalks within the neighborhoods of Hanover, but sidewalks are absent on main arterial roads with the exception of Rockland Street (Route 139) and portions of Washington Street (Route 53).

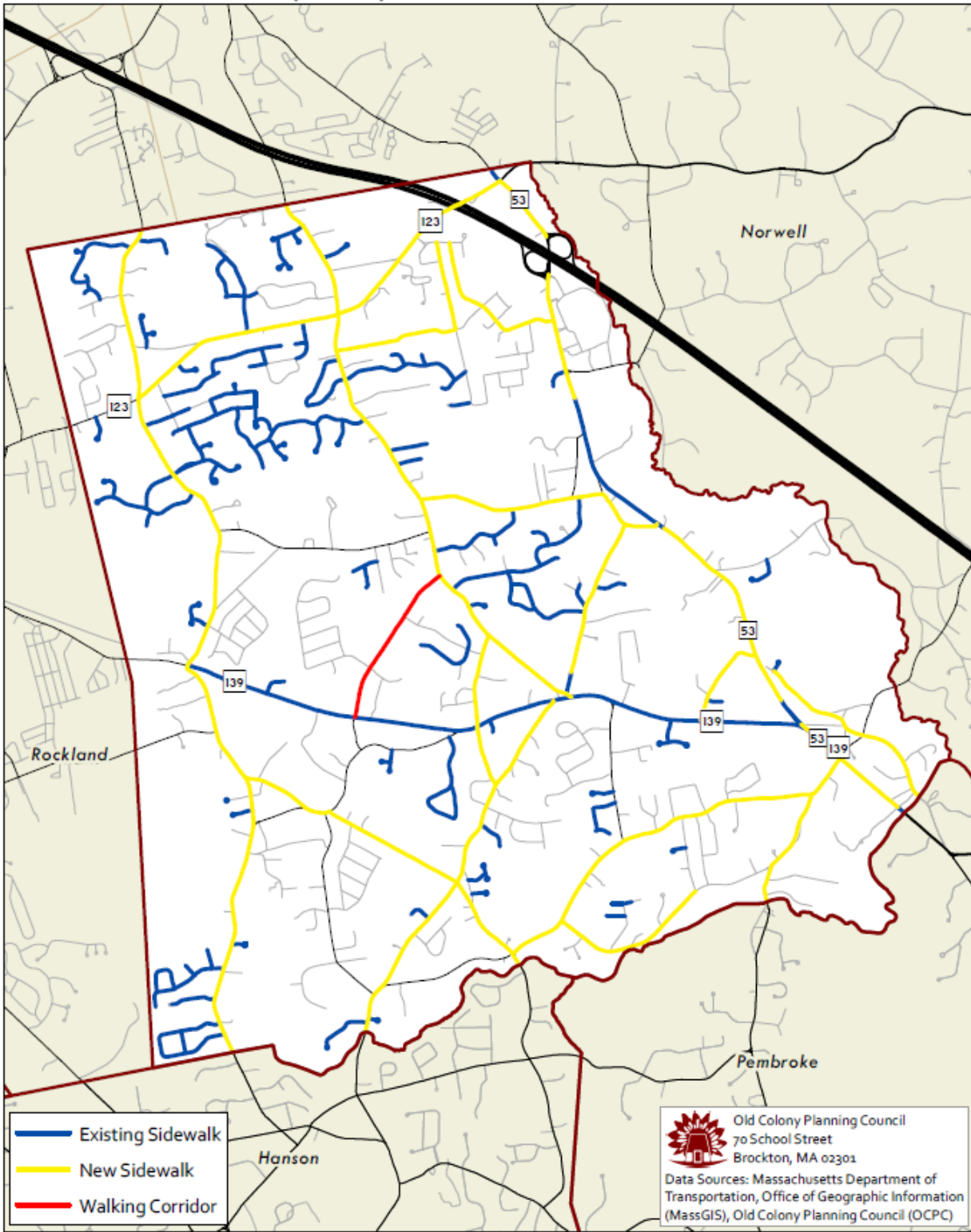
Bicycle Network Needs

Hanover is in need of a strong bicycle network. Currently there is little to no accommodations for cyclists riding in Hanover. The Town will need to identify key routes and may be able to utilize the proposed Bicycle Network map provided by Old Colony Planning Council.

Pedestrian Transportation Recommendations

Old Colony Planning Council recommends the Town of Hanover increase sidewalk connections on main arterial roads and create a Sidewalk and ADA Transition Plan in order to have a clear path to a better connected Hanover.

Hanover Sidewalk Gap Analysis

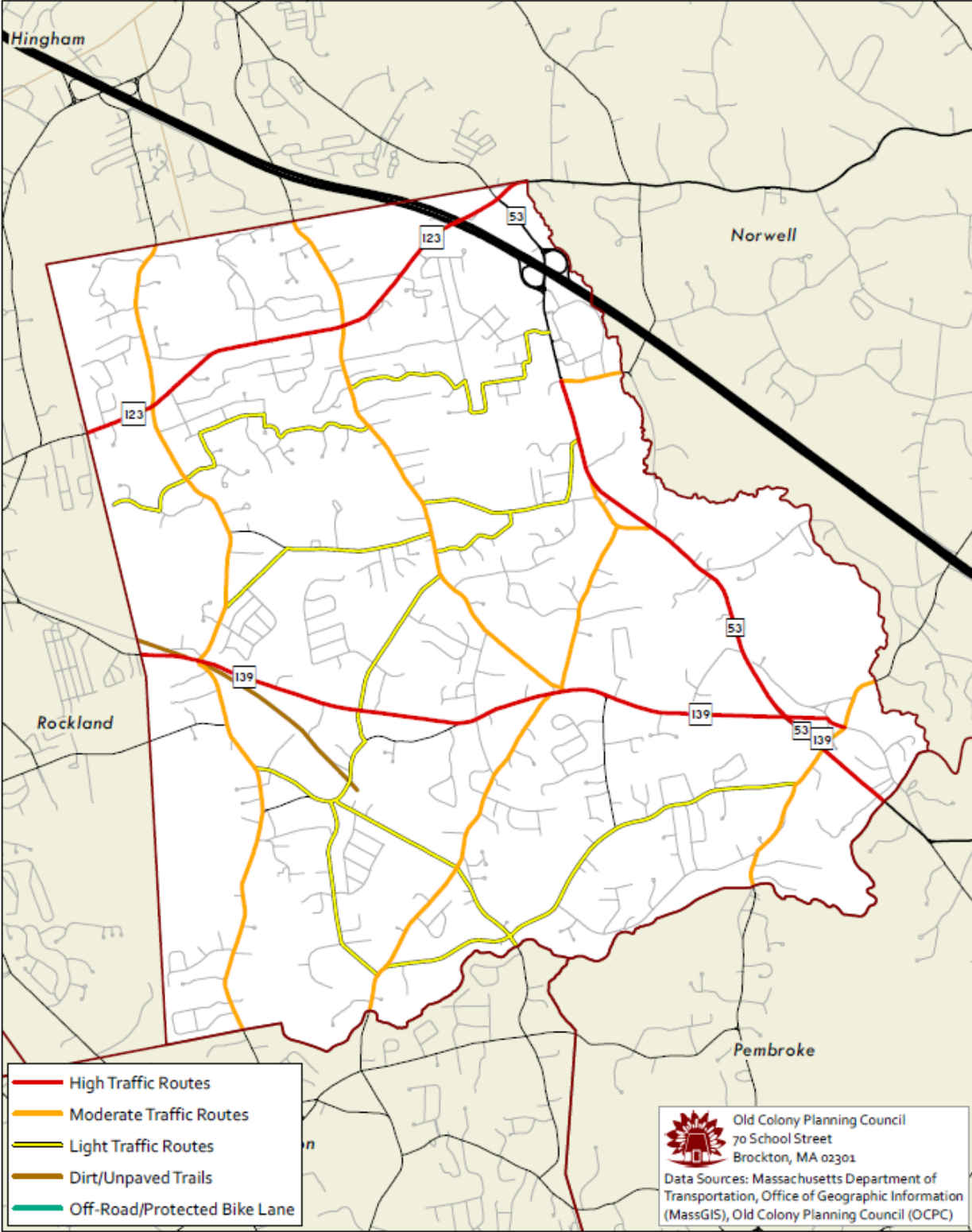


Map 22) Hanover Sidewalk Gap Analysis

Bicycle Transportation Recommendations

Bicycle recommendations for the Town of Hanover include creating a robust bicycle network throughout the Town. The Hanover Proposed Bicycle Network shows Washington Street and Hanover Street as the two main high traffic bicycle routes within Hanover. These two corridors also connect cyclists to other communities and businesses. Strengthening connections through these corridors may also assist in spurring economic vitality in neighboring communities.

Hanover Proposed Bicycle Network



Map 23) Hanover Proposed Bicycle Network

Hanson

Hanson is a suburban community in Plymouth County, incorporated in 1820. Located 25 miles southeast of Boston, it is accessible by Routes 58, 27 and 14. Originally agricultural, today Hanson consists of several small centers and residential subdivisions. It is semi-rural in nature, with little industry and few businesses. Bordered on the east by Pembroke, on the south by Halifax, on the west by East Bridgewater, on the northwest by Whitman, and on the north by Rockland and Hanover; Hanson continues to evolve into an increasingly residential community with a population of 10,209 (U.S. Census 2010) as a result of the continuing suburbanization of the Boston and Brockton metropolitan areas.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

Pedestrian goals are not included in Hanson's Master Plan and there is no direct mention of pedestrian goals in the Town's Open Space Plan, however in reading these documents, one can glean goals and objectives in regards to the pedestrian network. These goals and objectives aim to create a more connected pedestrian network that links existing sidewalks to new ones and those currently not connected to other sidewalks. The Town of Hanson seeks to create a sidewalk network in Town that will encourage community residents to walk and help alleviate traffic congestion in areas.

The Town recently adopted a Complete Streets policy and was awarded funding for intersection improvements to increase connectivity through the MassDOT Complete Streets Funding Program. The proposed improvements to the Liberty Street/County Road (Route 14 at Route 58) intersection will improve the local transportation network for all uses. These improvements have a completion date of June 30, 2019.

Current Pedestrian Network

Hanson's current pedestrian network is very small and disjointed. The longest stretch of sidewalk in Hanson is along Route 58, yet does not continue through the Town. Sidewalks that are in existence mostly lie within residential communities.

Current Bicycle Network

At this time, Hanson does not have a bicycle network.

Previous Town of Hanson Bicycle and Pedestrian Studies

Town of Hanson Master Plan (2008)

Hanson's Master Plan is a document that was drafted to help guide the citizens and its elected officials in the areas of land-use, housing, economic development, natural resources, open space, and circulation. The Master Plan lays out a series of goals and objectives to be met over the course of years to help manage growth and changes the Town of Hanson might experience.

Town of Hanson Open Space and Recreation Plan (2009)

The Town of Hanson's Open Space and Recreation Plan provides information on the Town's regional context, geographical and geological features, natural resources, and recreational opportunities. It

outlines specific actions for the next five years to advance the vision of the 2008 Master Plan's open space and recreation section.

Route 58 Corridor Study (2010)

The Route 58 Corridor Study was initiated as part of the Old Colony Unified Planning Work Program (UPWP FFY 2009 and 2010) to identify specific and general transportation problems, including issues involving land use and transportation. The study derived feasible solutions to enhance circulation, safety, and traffic flow efficiency for Route 58 in the communities of Abington, Whitman, Hanson, Halifax, and Plympton.

Old Colony Management Systems 2011 Annual Report (2011)

The 2011 Old Colony Management Systems Annual Report provides a summary of activities and products prepared by Old Colony Planning Council during the 2011 calendar year in regard to the Congestion Management Process (CMP), the Land Use Management System (LUMS), the Pavement Management Systems (PMS), and the Safety Management System (SMS). Old Colony Planning Council developed these four management systems that direct much of the transportation planning activity.

Old Colony Regional Bicycle and Pedestrian Connectivity and Livability Study (2013)

This study set out to examine bicycle and pedestrian access throughout the Old Colony Planning Council Region and make recommendations to help spur greater and safer travel for pedestrians and cyclists. The report examined roads for bicycle level of service and pedestrian walking condition by community.

MovingU Regional Transportation Plan (2016)

The MovingU Regional Transportation Plan provides a document and a process that will meet the challenges of preserving and expanding the transportation system. Following the directives of the law, it includes goals, policies, analyses, and recommendations necessary to build and maintain an efficient, effective and affordable regional transportation system. The intention of the RTP is to build on the current transportation system, working to make it comprehensive and fully integrated.

Pedestrian Network Needs

The Town of Hanson is in need of a stronger sidewalk network that would provide pedestrians a safe environment to traverse throughout the community. Presently, there is a small percentage of existing sidewalks preventing pedestrians from accessing different parts of their community by foot such as Brook Bend Road off of Brook Street.

Bicycle Network Needs

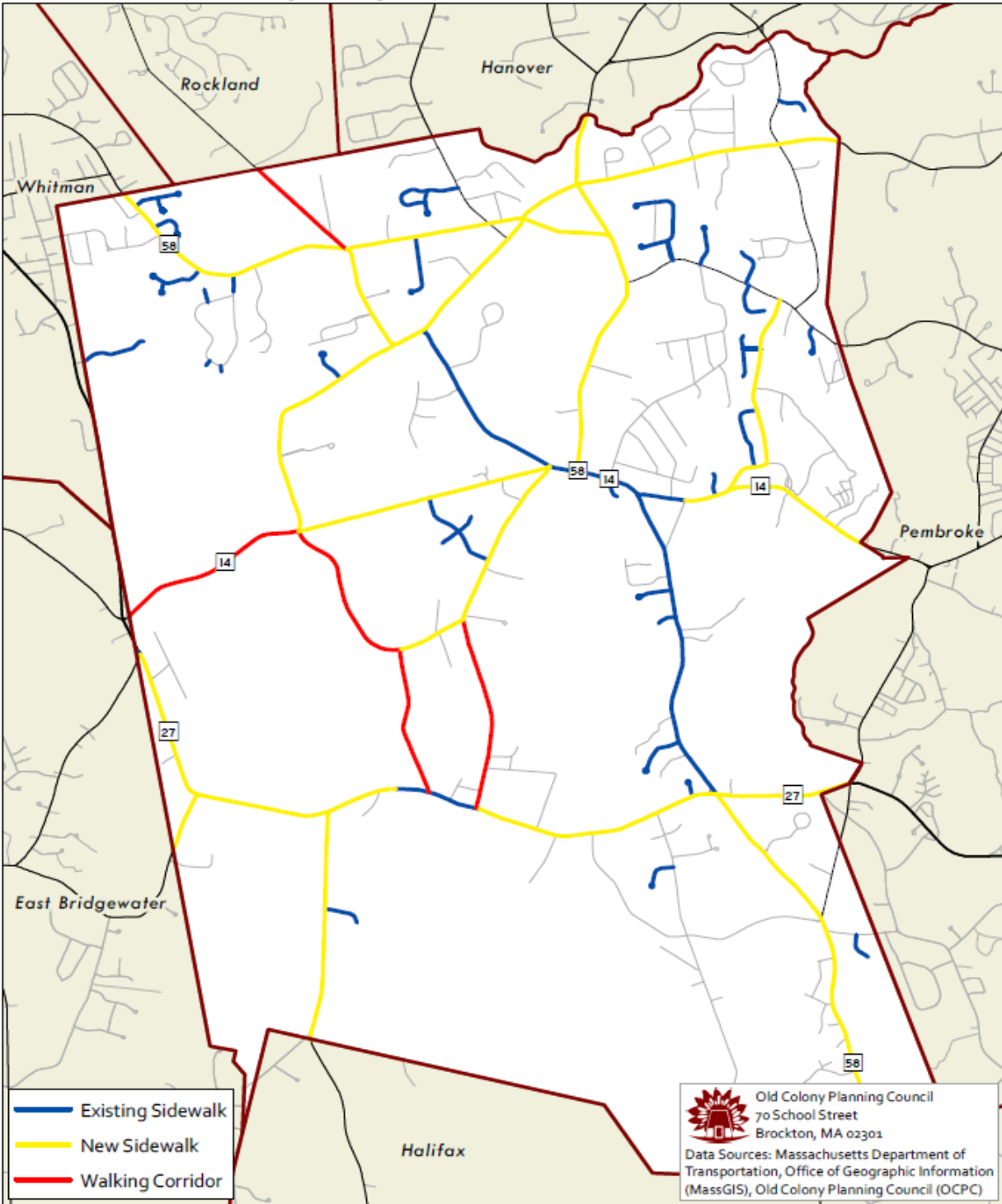
Bicycle network needs in Hanson include the identification of a bicycle network, accommodations for cyclists such as bicycle parking and refuge areas and wayfinding signage for visitors and residents alike.

Pedestrian Transportation Recommendations

Recommendations for the Town of Hanson include connecting dead end neighborhood sidewalks to major arterial roads such as Cross Street and Crescent Street. The Maquan Street and Crescent Street intersection would benefit from the installation of pedestrian signals. The intersection of Indian Head Street and Main Street are also in need of pedestrian improvements including crosswalks and pedestrian

signals. The Maquan Street corridor is currently in the 25% design phase for consideration under the MassDOT TIP funding program (Project # 608506). The proposed layout designs include accommodations for both bicycle and pedestrian connectivity improvements. A Road Safety Audit may help determine issues and support the installation of pedestrian signals and other intersection improvements in the area and throughout Town.

Hanson Sidewalk Gap Analysis

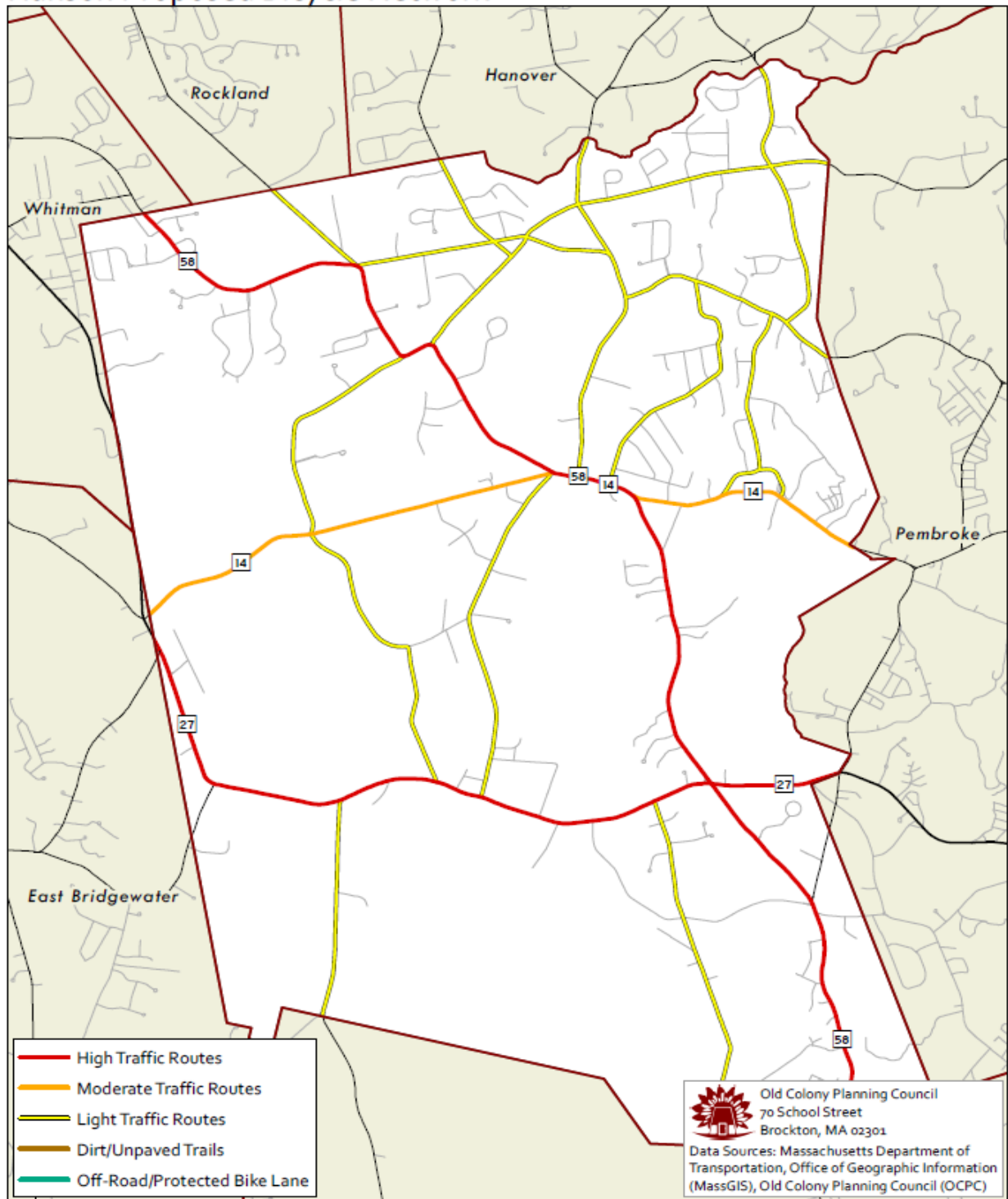


Map 24) Hanson Sidewalk Gap Analysis

Bicycle Transportation Recommendations

Old Colony Planning Council recommends a number of solutions that will improve Hanson's bicycle transportation network and help Hanson become bicycle friendly. One recommendation includes providing bicycle lanes along high traffic routes including Main Street, Indian Head Street, School Street and along moderate traffic Routes including Route 14: County Road, Liberty Street and Maquan Street.

Hanson Proposed Bicycle Network



Map 25) Hanson Proposed Bicycle Network

Kingston

The Town of Kingston is a suburban community 35 miles south of Boston and situated near the Towns of Plymouth and Duxbury. With a small Town atmosphere crisscrossed by a number of waterways that extend to Kingston Bay, Kingston residents enjoy a scenic setting with a historic Main Street, cranberry bogs and seaside access. The primary housing form is single-family detached homes on large lots in a suburban/rural setting. While the primary mode of transportation in Kingston is by automobile, Town residents do have the benefit of a MBTA Commuter Rail Station and GATRA bus services.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

According to current and past planning documents produced by the Town and outside agencies, the Town of Kingston recognizes the need for better pedestrian accommodations. In both its 1998 Master Plan and its most current Open Space and Recreation Plan, creating additional sidewalks is a stated goal. It is noted in both documents that walking around Town can be a dangerous experience due to the lack of sidewalks in some areas and the high traffic speeds on many roads. The objective is to expand the sidewalk network, especially along major Town roads, to increase pedestrian safety and reduce the effects of additional automobile traffic and parking demand.

Current Pedestrian Network

The Town has more sidewalks along major roads than other communities in the region. Despite this advantage, Kingston could still benefit from the increased connectivity that sidewalks allow. Sidewalk coverage is inconsistent with denser parts of Town more likely to have sidewalk coverage. Once removed from the historic Town center, roads are less likely to have a sidewalk. The lack of sidewalks in the outskirts of Kingston make Town residents car dependent which puts additional strain on the road network and parking availability. It also leaves Town residents, without access to a private automobile, forced to walk in the street and subject to dangerous walking conditions.

Current Bicycle Network

The Town of Kingston does not have an established bicycle network.

Previous Town of Kingston Bicycle and Pedestrian Studies

Kingston Master Plan (1998)

The Kingston Master Plan is intended to guide development into the near future. The Plan focuses on a number of areas such as housing, economic development, land-use and growth management, environmental protection and open space, community character and historic preservation, recreation, community facilities and services, public education and circulation. With these topics in mind, the Master Plan lays out a series of strategies for the Town to follow to manage changes in the coming years while maintaining Town character.

Open Space & Recreation Plan Update (2015)

The Town of Kingston Open Space & Recreation Plan was drafted to help the Town manage, improve, and preserve the scenic, cultural, and ecological resources Town residents have come to know and appreciate.

The Open Space and Recreation Plan lays out a series of recommendations to be carried out over the course of seven years dealing with the Town's natural resources and recreational spaces.

Old Colony Management Systems 2011 Annual Report (2011)

The 2011 Old Colony Management Systems Annual Report provides a summary of activities and products prepared by Old Colony Planning Council during the 2011 calendar year in regard to the Congestion Management Process (CMP), the Land Use Management System (LUMS); the Pavement Management System (PMS); and the Safety Management System (SMS). Old Colony Planning Council has developed these four management systems to inform and shape transportation planning activity.

Bicycle and Pedestrian Connectivity and Livability Study (2013)

This study examines bicycle and pedestrian access throughout the Old Colony Planning Council Region and makes recommendations to help spur greater and safer travel for pedestrians and cyclists. The report examined the bicycle level of service and pedestrian walking condition by community.

MovingU Regional Transportation Plan (2016)

The MovingU Regional Transportation Plan (RTP) provides a document and a process that will meet the challenges of preserving and expanding the transportation system. Following the directives of the law, it includes goals, policies, analyses, and recommendations necessary to build and maintain an efficient, effective and affordable regional transportation system. The intention of the RTP is to build on the current transportation system, working to make it comprehensive and fully integrated.

Kingston Master Plan (2017)

The Kingston Master Plan aims to identify key principles and vision for the future of Kingston including Smart Growth, sustainable services, viable transportation, housing choices and the preservation and protection of Kingston's natural and cultural resources.

Pedestrian Network Needs

Although Kingston has a generous amount of sidewalks within the Town, the Kingston Sidewalk Gap Analysis illustrates areas where more accommodations for pedestrian are needed to improve connectivity for the residents.

Bicycle Network Needs

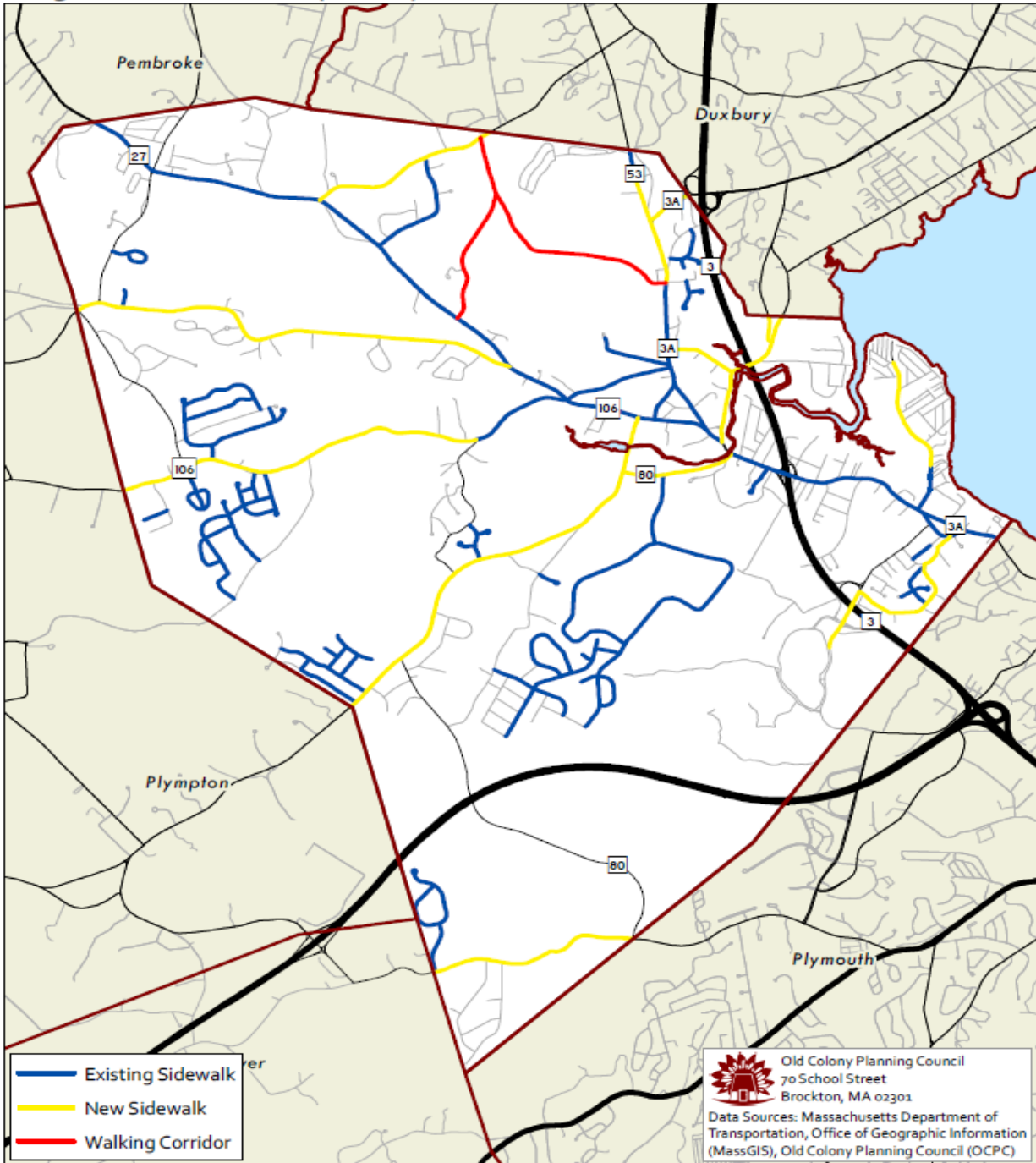
Kingston is not home to any bicycle infrastructure and is in need of Improvement. The proposed bicycle network Map of Kingston shows that there is potential to create connections, not just within Kingston, but with neighboring communities as well.

Pedestrian Transportation Recommendations

OCPC recommends the Town of Kingston create an ADA Transition Plan that will coincide with a Sidewalk Transition Plan to help provide a simple transition to a pedestrian friendly community. The Kingston Sidewalk Gap Analysis will help the community identify areas that lack sidewalks and shape improvements to the network. The map proposes a few sidewalks on main arterial roads, like Elm Street

(Route 80) which connects Kingston to neighboring Plympton but also expands sidewalk connections from Elm Street on to Main Street (Route 106).

Kingston Sidewalk Gap Analysis

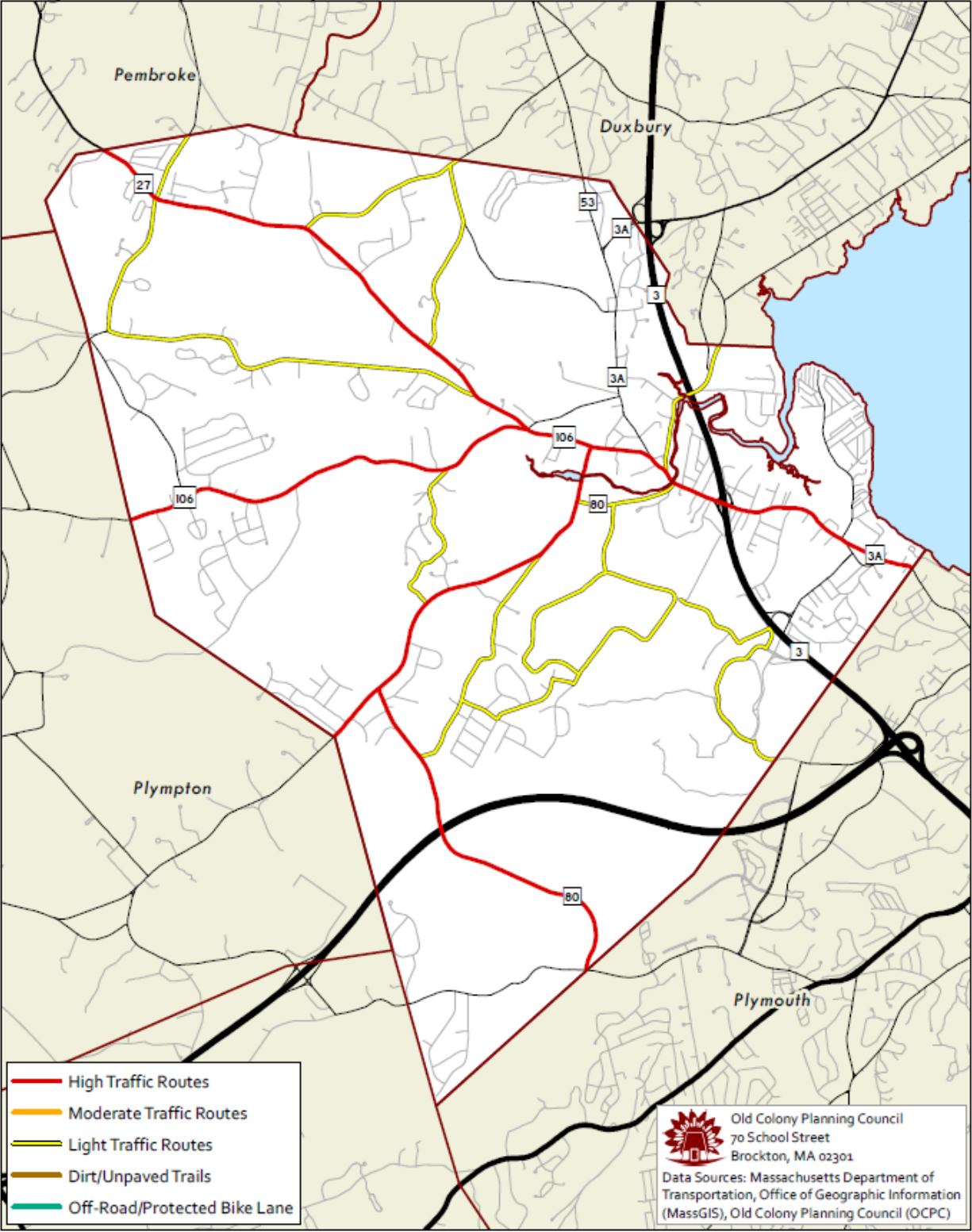


Map 26) Kingston Sidewalk Gap Analysis

Bicycle Transportation Recommendations

Old Colony Planning Council has provided a proposed bicycle Network Map that illustrates routes that would benefit different level of cyclists from experienced to novice. The map identifies Main Street, Elm Street, Wapping Street, and Pembroke Street as high traffic routes that would need extensive improvements to accommodate novice cyclists such as cycle tracks or off-road paths like Rails to Trails or mixed-use paths. Wayfinding is also important in the Town of Kingston, which has a few attractions such as the Kingston Mall Collection, the oceanfront view, and many other natural and cultural resources for residents and visitors to enjoy.

Kingston Proposed Bicycle Network



Map 27) Kingston Proposed Bicycle Network

Pembroke

Pembroke is a suburban community located in the South Shore area of southeastern Massachusetts. Pembroke is located 26 miles south of Boston, 16 miles north of Plymouth and 14 miles east of Brockton. Much of the Town can be characterized by vast amounts of undeveloped land and suburban single-family homes. The Town's population stands around 19,563.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

The goal, objectives, and policies laid out by the Town of Pembroke are to increase the opportunities for Town residents to be able to walk around the community. It is frequently stated in planning documents drafted by the Town or by outside agencies on behalf of the Town, that walking accommodations like sidewalks should be developed in areas where they do not exist in order to give people the option to walk to local destinations, which in turn can ease traffic congestion and improve the health of Town residents.

Current Pedestrian Network

Due to Pembroke's rural nature, the primary mode of transportation is the private automobile. The reliance on automobiles by Pembroke residents has led to a lack of attention to the pedestrian network. There are a number of sidewalks in Pembroke, but most of these sidewalks are located in housing subdivisions and lack connections that would allow people to walk between neighborhoods or to commercial areas. Limited or non-existing connections between neighborhoods leave pedestrians the choice to either walk in the roadway or over rely on automobile transportation.

Current Bicycle Network

Currently the Town of Pembroke does not have an established bicycle network.

Previous Town of Pembroke Bicycle and Pedestrian Studies

Town of Pembroke Master Plan (2004)

The Master Plan is a document drafted to help guide Town residents and leaders in shaping future community development. The plan focuses on seven key elements including: land-use, housing, economic development, natural and cultural resources, public facilities and services, and circulation.

Pembroke Open Space Plan (2005)

The overarching goals of the Open Space Plan are to help Pembroke make decisions on land conservation, preserving the Town's semi-rural character, and protecting the community's water resources and natural attributes. The Plan seeks to achieve all these goals while maintaining Pembroke's aesthetic appeal and economic engine.

The 2011 Old Colony Management Systems Annual Report provides a summary of activities and products prepared by Old Colony Planning Council during the 2011 calendar year in regard to the Congestion Management Process (CMP), the Land Use Management System (LUMS); the Pavement Management System (PMS); and the Safety Management System (SMS). Old Colony Planning Council has developed these four management systems to inform and shape transportation planning activity.

Bicycle and Pedestrian Connectivity and Livability Study (2013)

This study examines bicycle and pedestrian access throughout the Old Colony Planning Council Region and makes recommendations to help spur greater and safer travel for bicyclists and pedestrians. The report examines roads for bicycle level of service and pedestrian walking condition by community.

Road Safety Audit: Washington Street (Route 53) at Pleasant Street (2014)

This Road Safety Audit of Route 53 at Route 139 & Pleasant Street examines the safety issues contributing to the large number of crashes occurring at this intersection. The document reviews existing conditions and analysis of traffic data to form a series of recommendations to address the safety concerns.

Road Safety Audit: Route 53 (Washington St) at Route 139 & Route 14 (2016)

This Road Safety Audit of Route 53 at Route 139 & Route 14 examines the safety issues contributing to the large number of crashes occurring at this intersection. The document reviews existing conditions and analysis of traffic data to form a series of recommendations to address the safety concerns.

MovingU Regional Transportation Plan (2016)

The MovingU Regional Transportation Plan provides a document and a process that will meet the challenges of preserving and expanding the transportation system. Following the directives of the law, it includes goals, policies, analyses, and recommendations necessary to build and maintain an efficient, effective and affordable regional transportation system. The intention of the RTP is to build on the current transportation system, working to make it comprehensive and fully integrated.

Pedestrian Network Needs

The Town of Pembroke is in need of sidewalk expansion and more ADA accommodation. Sidewalks are limited to neighborhood streets and are non-existent on main corridors with the exception of Center Street, Washington Street, and Schoosett Street.

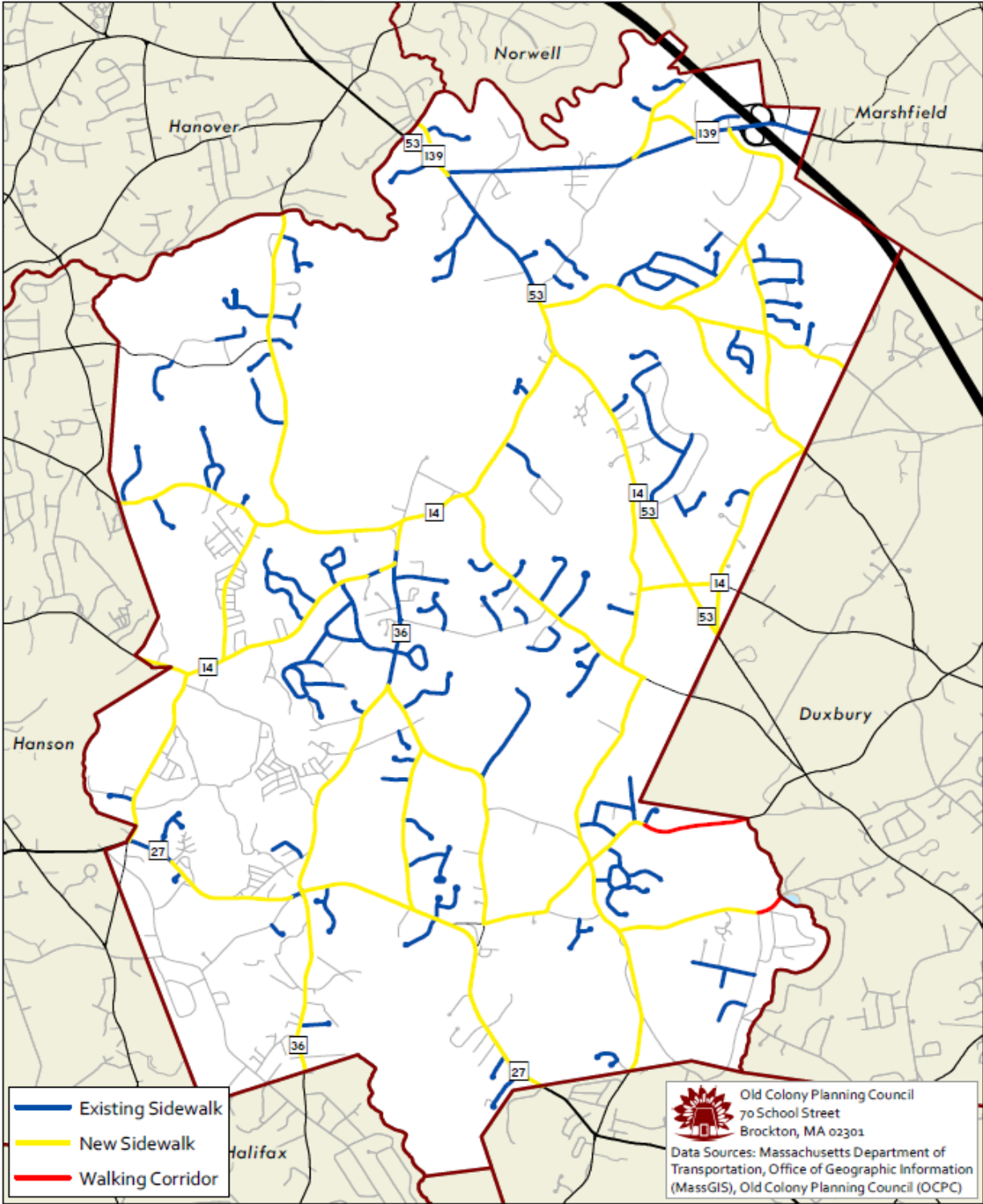
Bicycle Network Needs

A bicycle network does not currently exist in the Town of Pembroke.

Pedestrian Transportation Recommendations

In its current form, the sidewalk network is limited to neighborhood streets, which are not connected to main arterial roads and are essentially dead end sidewalks. In order to rectify this situation the Old Colony Planning Council recommends the Town of Pembroke create a Sidewalk and ADA transition Plan while utilizing the Pembroke Sidewalk Gap Analysis Map to identify major gaps in the network and locate low hanging fruits where sidewalk connections can be made.

Pembroke Sidewalk Gap Analysis

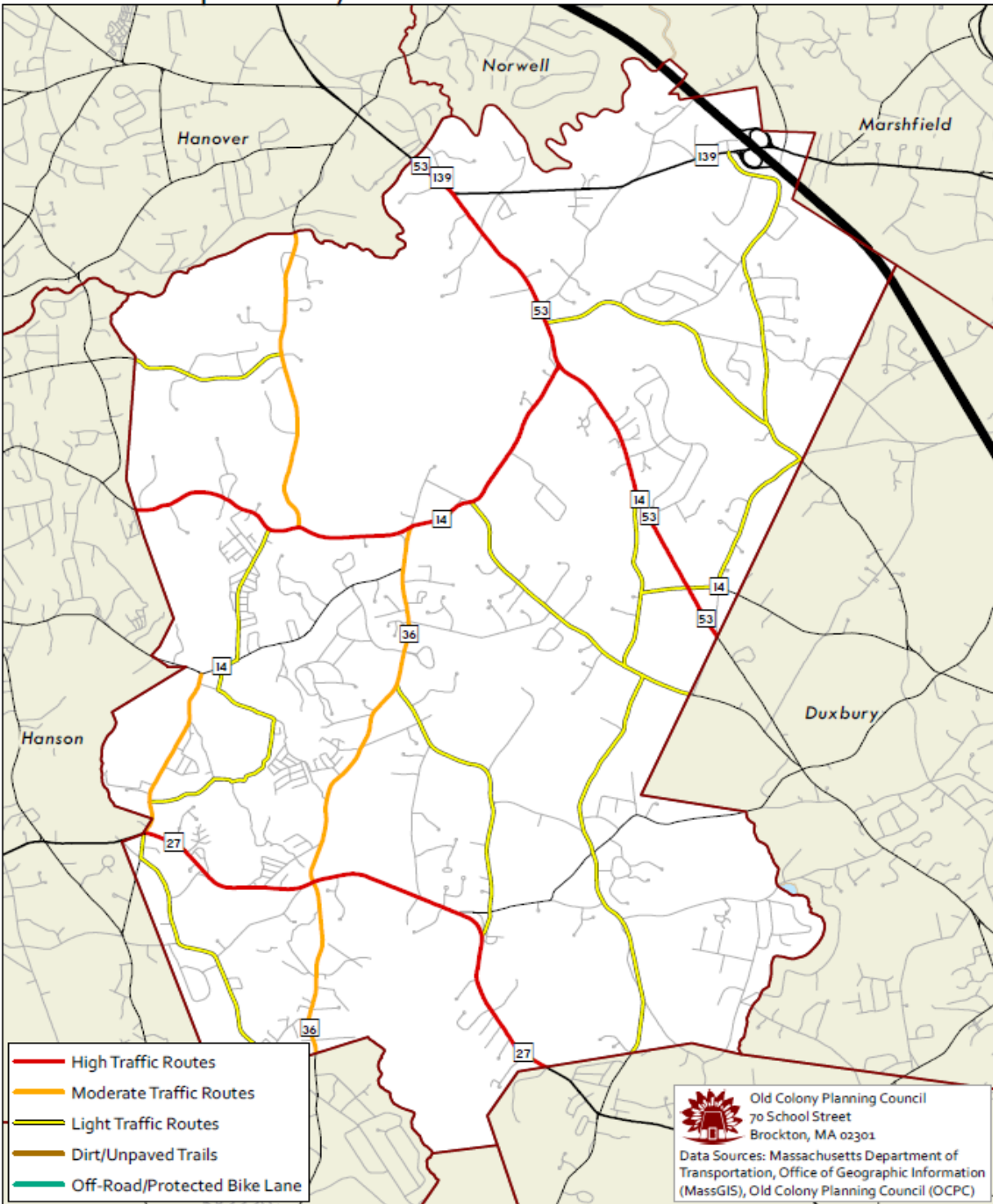


Map 28) Pembroke Sidewalk Gap Analysis

Bicycle Transportation Recommendations

Recommendations for improving the Town of Pembroke's bicycle transportation connectivity include identifying key routes by utilizing the Proposed Bicycle Network Map. Providing wayfinding in the Town of Pembroke may garnish more tourism or patronization of businesses by helping direct cyclists towards key destinations. OCPC would recommend creating a uniform sign design for wayfinding and implement it throughout the Town. It would be in the interest of the Town to coordinate the amenities for cyclists to coincide with key destinations.

Pembroke Proposed Bicycle Network



Map 29) Pembroke Proposed Bicycle Network

Plymouth

The Town of Plymouth is a suburban Town 40 miles south of Boston and 24 miles east of the City of Brockton. Plymouth has a storied historical past, being that it was where the Pilgrims founded the Town after arriving from England, launching the Pilgrim story. Much of the Town of Plymouth can be characterized as suburban or rural in land-use with the exception of its downtown, which is dense with a charming Town village feel. Plymouth is one of the largest Towns by land area in the Commonwealth with a population of 58,281.

Plymouth is fortunate to be serviced by both the Greater Attleboro Taunton Regional Transit Authority (GATRA) which provides public transit bus service and receives public transit commuter rail service that is provided by the MBTA, giving Plymouth access to the rest of the region and Boston by rail. In addition, a private bus company transports passengers to Boston and Providence. Despite all the transportation option available to Plymouth residents, the majority of residents choose to drive.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

In many of the planning documents, the Town of Plymouth recognizes its bicycle and pedestrian accommodations are lacking throughout the community. In the Master Plan, Town leaders call out the need to expand the bicycle/pedestrian network to facilitate more walking and biking between neighborhoods and commercial centers to help alleviate automobile traffic and foster greater economic activity. Additionally, these planning documents expressed the need for more sidewalks and bike facilities in order to protect those residents that choose to walk rather than drive to a destination. Further, these documents state the need for safe facilities that help travelers in Town transit over Route 3 in a safe and comfortable manner that provides linkages to open space and recreation areas.

Current Pedestrian Network

The current pedestrian network in the Town of Plymouth is highly concentrated in the downtown and in the neighborhood of North Plymouth. Outside these two sections of the community, sidewalks are few and those that do exist tend not to connect to anything or lead anywhere. Due to this small and highly concentrated network of sidewalks, many Plymouth residents have no choice but to drive to their destination, since they cannot access their destination safely on foot.

Current Bicycle Network

A solid bicycle network does not exist in Plymouth. There are bicycle facilities located on Water Street and the Town is looking to expand the bicycle network.

Previous Town of Plymouth Bicycle and Pedestrian Studies

West Plymouth Master Plan (1993)

The West Plymouth Master Plan sought to understand the issues affecting the west side of the Town in the areas of capital investment, growth management, community development, and economic development.

Growing Smarter in Plymouth's Fifth Century (2006)

Growing Smarter in Plymouth's Fifth Century is Plymouth's Master Plan drafted to look at growth and development in the Town for the next 20 years. Elements reviewed in the plan dealt with: land-use, natural resources, open space and recreation, historic and cultural resources, economic development, public facilities/services, and transportation. Through the review of these elements, recommendations help guide Town leaders in these seven areas.

Cedarville Village Center Master Plan Update (2009)

The Cedarville Village Center Master Plan Update is one of the five village center Master Plans that sought to understand the needs of each of the Town's centers. Out of concern that Cedarville Village public infrastructure is not keeping pace with private development, the Town sought to tackle this issue and devise this plan to help Cedarville meet the challenges it is facing. The subject areas in which the document reviewed deal with open space and recreation, residential development, the environment, commercial development, historical preservation, public facilities, utilities and zoning.

North Plymouth Village Center Master Plan Update (2011)

The North Plymouth Village Center Master Plan Update seeks to review the study area and to see how continued improvement can be made since the last Master Plan update drafted in 1992. The goals of this recent update are the continued quest to create a strong commercial center while maintaining the village identity and feel. In addition, the Plan seeks to increase safety, improve and maintain infrastructure while increasing recreational opportunities.

Old Colony Management Systems 2011 Annual Report (2011)

The 2011 Old Colony Management Systems Annual Report provides a summary of activities and products prepared by Old Colony Planning Council during the 2011 calendar year in regard to the Congestion Management Process (CMP), the Land Use Management System (LUMS); the Pavement Management System (PMS); and the Safety Management System (SMS). Old Colony Planning Council has developed these four management systems to inform and shape transportation planning activity.

Town of Plymouth Affordable Housing Plan (2013)

The Town of Plymouth Affordable Housing Plan is a document that sought to understand the opportunities and challenges in providing affordable housing. The plan reviewed the local and regional population characteristics, household characteristics, housing characteristics, housing market forces and housing attainability.

Bicycle and Pedestrian Connectivity and Livability Study (2013)

This study set out to examine bicycle and pedestrian access throughout the Old Colony Planning Council Region and makes recommendations to help spur greater and safer travel for pedestrians and cyclists. The report examined roads for bicycle level of service and pedestrian walking condition by community.

Manomet Village Center Master Plan Update (2014)

The Manomet Village Center Master Plan Update is one of the five village center Master Plans that sought to understand the needs of each of the Town's centers. This plan tackled the issues civic pride and identity,

public space and access to it, public infrastructure, economic development, environmental protection and historical preservation.

Special Events Traffic Analysis and Management Plan

This document sought to understand the circulation challenges that face the Town of Plymouth while hosting special events. The study reviewed existing circulation infrastructure and patterns in order to make recommendations to the Town as to how to manage higher than average traffic during special events. The document laid out a series of immediate, short-term, and long-term actions to lessen the negative impacts generated by special event traffic situations.

Road Safety Audit Water Street and Nelson Street Intersection (2015)

The Water Street and Nelson Street Intersection road safety audit, requested by the Town of Plymouth, was a review of this intersection to address safety concerns in an attempt to understand the issues on the ground that can contribute to unsafe conditions at this intersection. The review included recommendations to help the Town address the safety issues at this intersection in both the short-term and long-term.

MovingU Regional Transportation Plan (2016)

The MovingU Regional Transportation Plan provides a document and a process that will meet the challenges of preserving and expanding the transportation system. Following the directives of the law, it includes goals, policies, analyses, and recommendations necessary to build and maintain an efficient, effective and affordable regional transportation system. The intention of the RTP is to build on the current transportation system, working to make it comprehensive and fully integrated.

Pedestrian Network Needs

With its vast space of land, walking may be difficult for many Plymouth residents, but with the combination of transit and a sound sidewalk network, pedestrians may enjoy a more comfortable commute knowing the first and last mile of their commute will not be difficult. The pedestrian network needs for the Town of Plymouth consists of creating a Sidewalk and ADA Transition Plan accompanied by a wayfinding system that includes time length and distance of commute to each destination.

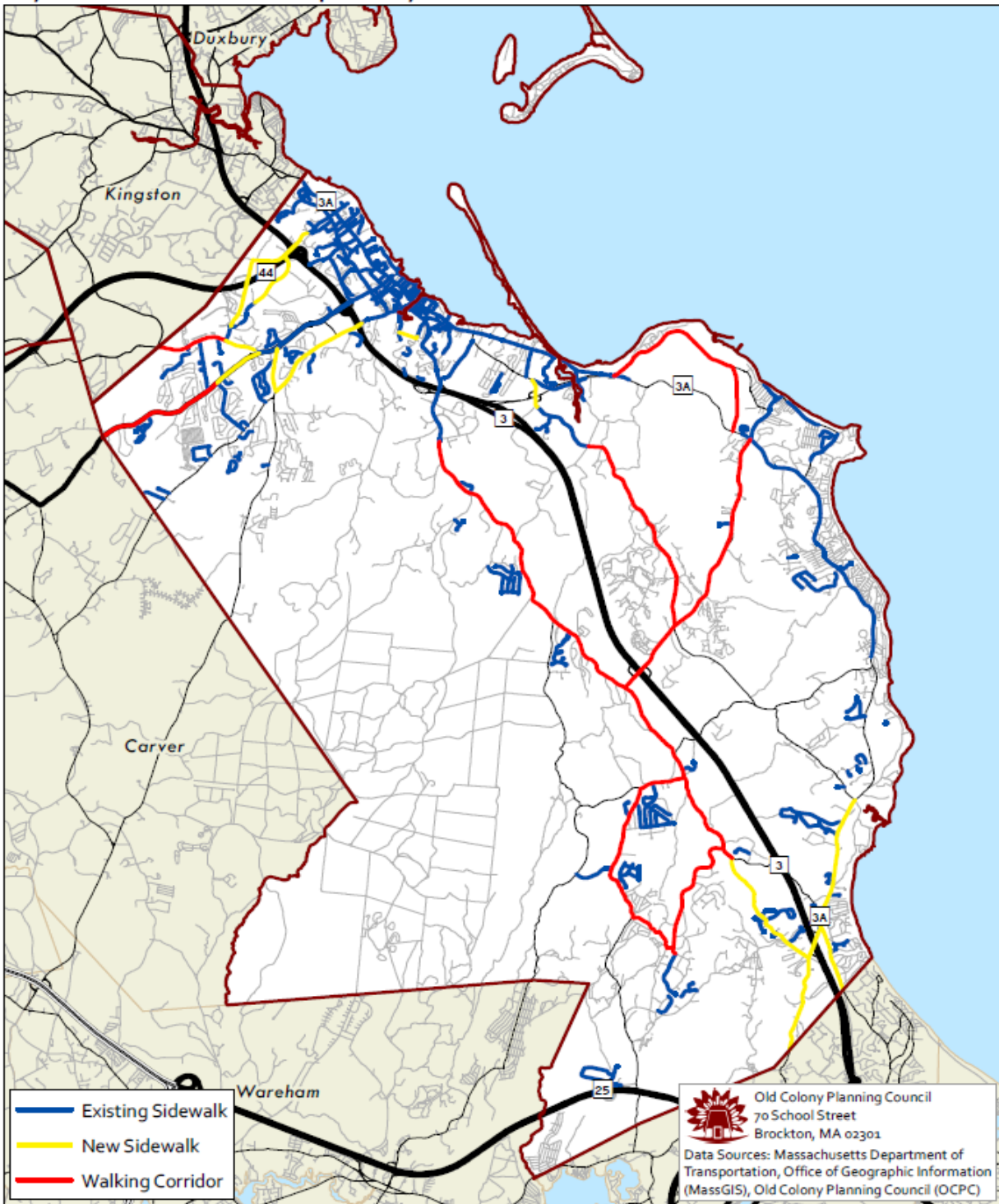
Bicycle Network Needs

The Town of Plymouth is in need of a uniform bicycle network. Plymouth is a tourist destination for local, regional and world travelers. The Town of Plymouth is in need of a bike share system that would accommodate residents and visitors.

Pedestrian Transportation Recommendations

Old Colony Planning Council recommends the Town of Plymouth create a Sidewalk and ADA Transition Plan, which will help guide the development of sidewalks and ADA Accommodations within the Town. OCPC would also recommend looking at expanding Safe Routes to School Participation to all schools throughout the community. Doing so will educate the youth on proper pedestrian etiquette.

Plymouth Sidewalk Gap Analysis



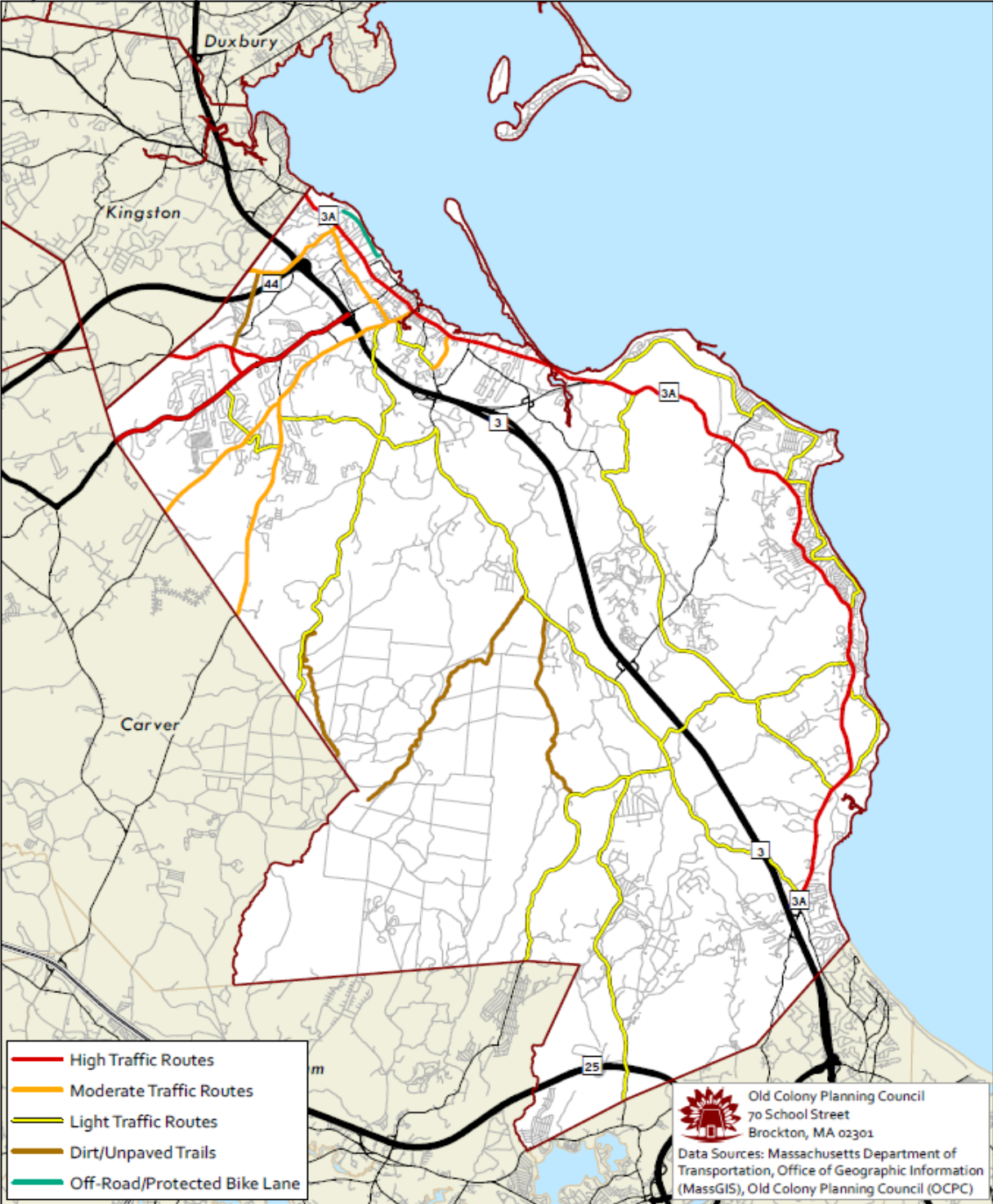
Map 30) Sidewalk Gap Analysis

Bicycle Transportation Recommendations

Plymouth is in need of a strong bicycle network especially within the Town Center. OCPC recommends utilizing the Plymouth Proposed Bicycle Network map and coordinate bicycle projects on high traffic routes and moderate traffic routes to accommodate cyclists of all comfort levels. The Town of Plymouth also has dirt or unpaved trails utilized by off-road cyclists. A wayfinding system may encourage more cyclists to use the off-road trails, which may also serve as a connection for cyclists looking to commute through certain parts of the Town, while providing a safe way of getting there.

With Plymouth being a tourist centric community, consideration should be given to participating in a bicycle share program within the Town of Plymouth. Accompanied by a wayfinding system and improved bicycle infrastructure, a bicycle share program may increase tourism and spur economic activity by saving tourists money on gas, parking and increasing expendable income.

Plymouth Proposed Bicycle Network



Map 31) Plymouth Proposed Bicycle Network

Plympton

Situated 35 miles south of Boston and 15 mile east of Brockton, the Town of Plympton is a small suburban Town with a population of around 2,600 and is very much a bedroom community. The Town has a rural feel that can be characterize by a landscape of thick woods, farms, and cranberry bogs. As the result of this suburban/rural landscape, the primary mode of transportation in Plympton is by private automobile.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

According to the Plympton Open Space and Recreation, the Town proposes to create a series of multiuse paths traversing the community. The Town proposes to make new developers building in the community to fund and incorporate sections of the multiuse path in their proposed development. Plympton will be seeking to include this requirement of building multiuse paths in new developments in its subdivision rules and regulations.

Current Pedestrian Network

Plympton's current sidewalk network is very small and only lies along a stretch of Route 58 near Town Hall and in a few neighborhood subdivisions. Outside these limited areas, Plympton needs stronger sidewalks and pedestrian amenities.

Current Bicycle Network

The Town of Plympton does not have a bicycle network within the community.

Previous Town of Plympton Pedestrian Studies

Old Colony Management Systems 2011 Annual Report (2011)

The 2011 Old Colony Management Systems Annual Report provides a summary of activities and products prepared by Old Colony Planning Council during the 2011 calendar year in regard to the Congestion Management Process (CMP), the Land Use Management System (LUMS); the Pavement Management System (PMS); and the Safety Management System (SMS). Old Colony Planning Council has developed these four management systems to inform and shape transportation planning activity.

Bicycle and Pedestrian Connectivity and Livability Study (2013)

This study examines bicycle and pedestrian access throughout the Old Colony Planning Council Region, the study makes recommendation to help spur greater and safer travel for pedestrians and cyclists. The report examined roads for bicycle level of service and pedestrian walking condition by community.

Pedestrian Network Needs

The Town of Plympton has almost no sidewalk network. The lack of sidewalks Town-wide forces residents to drive for all purposes and severely limits the mobility of those that do not own an automobile or are not able to drive. In addition to limiting mobility, the lack of a network of sidewalks create safety issues for those that choose to walk along Plympton roads or have to because they have no other means by which to travel.

Plympton needs to expand its sidewalk network in order to give Town residents choice in how they get around. A more robust sidewalk network will enable residents to walk safely in the community and give them the option to travel by foot rather than by private automobile. The expansion of the sidewalk network would help mitigate some of the issues brought by traffic congestion and give those not able to drive for whatever reasons the ability to walk around Plympton safely.

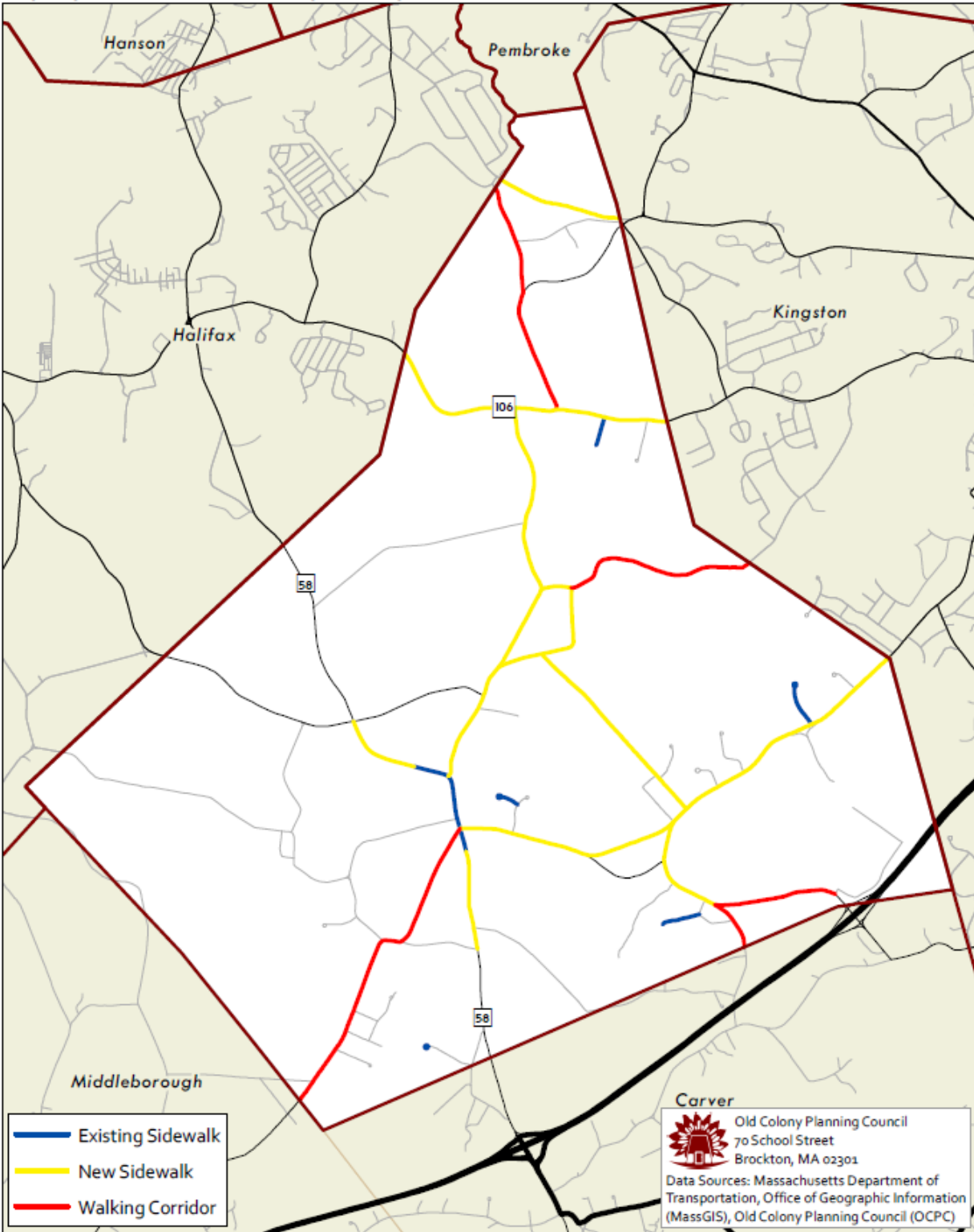
Bicycle Network Needs

The Town of Plympton does not have a bicycle network. The Town has two high traffic routes that cut both East and West (Route 106) including North and South (Route 58) throughout the Town.

Pedestrian Transportation Recommendations

Old Colony Planning Council recommends that the Town of Plympton create a Sidewalk and ADA Transition Plan and utilize the Sidewalk Gap Analysis Map provided by OCPC to coordinate efforts of expanding the sidewalk network in Plympton. OCPC would also recommend looking at creating walking corridors where there is not enough space for sidewalks.

Plympton Sidewalk Gap Analysis

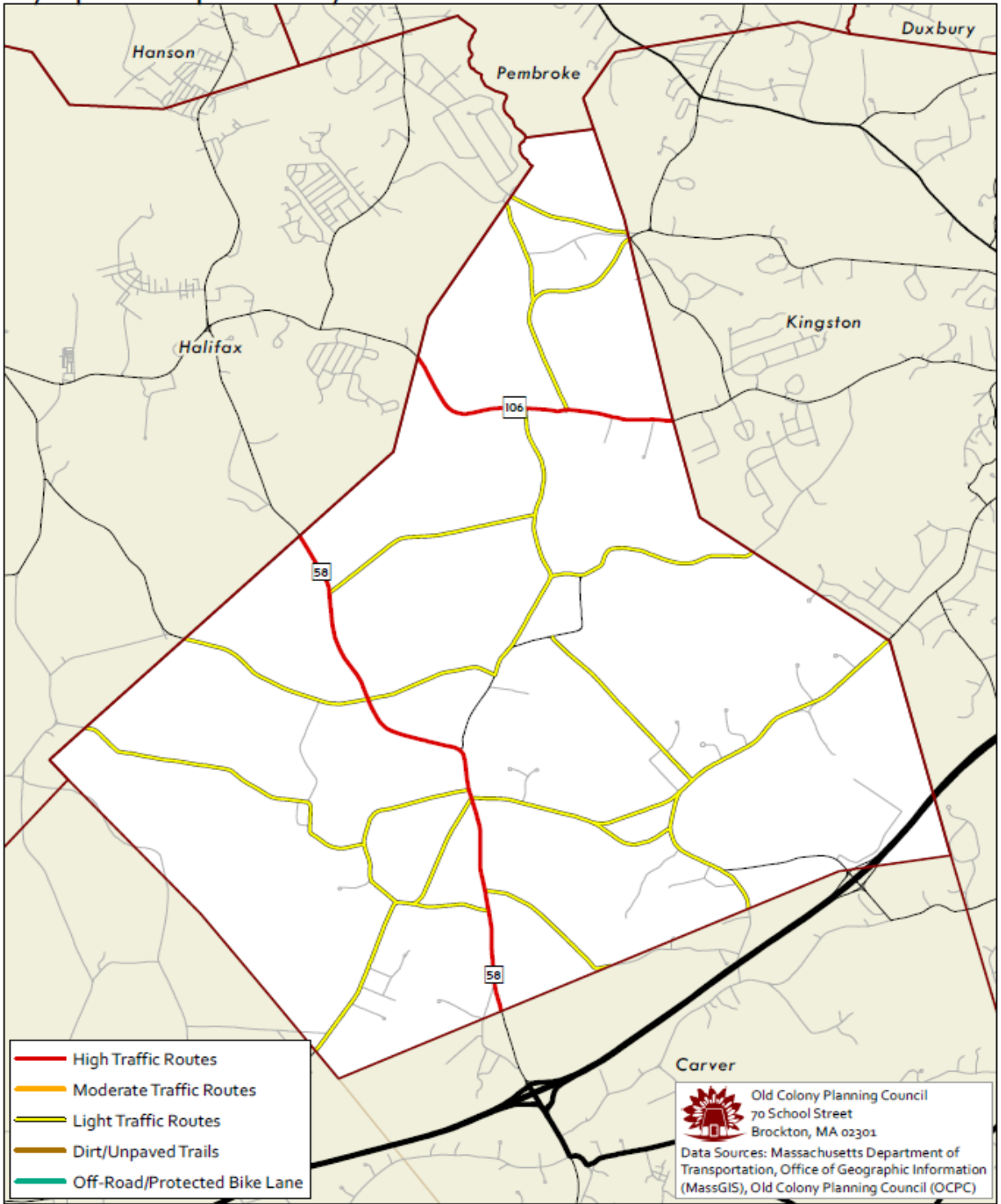


Map 32) Plympton Sidewalk Analysis

Bicycle Transportation Recommendations

Utilizing the Strava heat map supports the point that the Town of Plympton has a great foundation for a strong bicycle network; Cyclists can be identified on the map commuting on high traffic routes such as Main Street (Route 58) and County Road (Route 106) already. Cyclists are also using light traffic roads such as Brook Street and Upland Road. OCPC would recommend utilizing the Plympton Proposed Bicycle Network Map to assist in developing the bicycle network for Plympton. OCPC would also recommend creating a wayfinding system for new and visiting cyclists.

Plympton Proposed Bicycle Network



Map 33) Plympton Proposed Bicycle Network

Stoughton

The Town of Stoughton is the third largest community in the Old Colony Planning Council region, with a population of around 26,962 (U.S. Census. 2010). While some might say that Stoughton is a suburb, it is a suburb with a strong urban feeling in the downtown area. The primary means of transportation in Stoughton is by automobile. In addition to private automobile travel, Stoughton is fortunate to have many public transportation options. Operating in the Town is the Brockton Area Transportation Authority's Route 14 bus line, connecting Stoughtonites to the City of Brockton and to the Town of Canton. The MBTA Commuter Rail Providence/Stoughton line provides a rail link between the Town and Boston's Back Bay, which is very popular in the region because it brings commuters directly to Boston's Financial District.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

The goal, objectives, and policies of the Town of Stoughton are to increase walking and biking in the community. Stoughton seeks to establish a bicycle/pedestrian network system that gives pedestrians and bicyclists safe and convenient access to schools, public libraries, commercial areas, neighborhoods, and other locations of interest in the Town.

Current Pedestrian Network

The Town of Stoughton's pedestrian network varies in connectivity depending on where one would find themselves in the community. The location with the most connected pedestrian network is the Town center and in particular around the MBTA station. Sidewalks are present in outlying areas, but tend to have missing links to the rest of the pedestrian network leaving some sections of Stoughton without available sidewalks and forcing pedestrians to walk in Town streets.

Current Bicycle Network

A bicycle network does not currently exist in Stoughton.

Previous Town of Stoughton Bicycle and Pedestrian Studies

Stoughton Community Development Plan (2004)

The Stoughton Community Development Plan was funded to help the Town manage future development and growth through constructing a series of visions, strategies, and goals. The study focuses on four areas. These four areas are natural resources and open space, housing, economic development, and transportation.

Stoughton Central Business District Study (2005)

The Stoughton Central Business District Study was drafted to help the Town understand the needs of the Central Business District. The document reviewed the study area in order to help improve Stoughton's Central Business District economic performance and overall attractiveness to the community and visitors. The study touches on a number of land-use decisions and architectural guidelines that would help the Town revive Stoughton Center's economic competitiveness.

Stoughton Center Design Review Guidelines (2006)

The Stoughton Center Design Review Guideline is a document that provides the Town and potential developers with architectural and street design guidance to help make the downtown section of Stoughton more pedestrian and cyclist friendly.

Stoughton Open Space and Recreation Plan (2007)

The Town of Stoughton's Open Space and Recreation Plan sought to understand existing Town open space and recreational areas and determine how they can be improved to continue their mission of providing enjoyment to Stoughton residents. Additionally the plan seeks to improve access to open space and recreational areas by all modes of transportation and for those with mobility challenges.

Road Safety Audit: Canton Street (Route 27) at School Street and Summer Street (2009)

The road safety audit at the intersection of Canton Street at School Street and Summer Street reviewed this intersection to better understand the safety issues experienced by all users. The document identifies safety issues affecting the area and makes proposals to help alleviate these problems for increased safety for all roadway users.

Old Colony Management Systems 2011 Annual Report (2011)

The 2011 Old Colony Management Systems Annual Report provides a summary of activities and products prepared by Old Colony Planning Council during the 2011 calendar year in regard to the Congestion Management Process (CMP), the Land Use Management System (LUMS); the Pavement Management System (PMS); and the Safety Management System (SMS). Old Colony Planning Council developed these four management systems that direct transportation planning activity.

Stoughton Route 27 Infrastructure Needs Assessment Study (2012)

The Stoughton Route 27 Infrastructure Needs Assessment Study that was funding through South Coast Rail Technical Assistance Funding to help improve the potential success of South Coast Rail Service. The study focuses on the AMB Business Park, the RK Plaza on Park Street, and numerous smaller lots along Park Street in Stoughton and reviews these sites for potential infrastructure and transportation improvements.

Bicycle and Pedestrian Connectivity and Livability Study (2013)

This study examined bicycle and pedestrian access throughout the Old Colony Planning Council Region and made recommendations to help spur greater and safer travel for bicyclists and pedestrians. The report examined roads for bicycle level of service and pedestrian walking condition by community.

2013 Major Bottleneck In-Depth Analysis and Action Plan (2013)

The 2013 Major Bottleneck In-Depth Analysis and Action Plan is a focused study of the Central Street/Harrison Blvd area and the traffic bottlenecks experienced along this corridor. The document proposes a series of recommendations the Town of Stoughton might implement to improve traffic flow and help reduce the impact of those bottlenecks along the Central Street/Harrison Blvd corridor.

Northeast Stoughton Priority Development Area Land Use Study (2014)

The Northeast Stoughton Priority Development Area Land Use Study reviews a study area located just north of the Stoughton IKEA, west of Turnpike Street, south of Page Terrace, and just east of Route 24 to encompass the Stoughton recycling center. The study explores areas for improvement to make the area more economically advantageous and easier to access by all transportation modes.

Stoughton Master Plan (2015)

The Stoughton Master Plan is a document that seeks to understand the needs of the Town and guide growth and development into the near future. The Stoughton Master Plan has identified a number of areas to focus upon including: land-use development, economic development, transportation, housing, community facilities and services, natural and historical resources, and open space and recreation.

Stoughton Tosca Drive Area Infrastructure Needs Assessment Study (2015)

The Stoughton Tosca Drive Area Infrastructure Needs Assessment Study is a South Coast Rail Technical Assistance funded study to help improve the potential success of the South Coast Rail. The study reviewed the Tosca Drive area to better understand the infrastructure needs and improve its economic vitality. The report includes recommendations in regards for improvements to transportation and utility infrastructure.

MovingU Regional Transportation Plan (2016)

The MovingU Regional Transportation Plan provides a document and a process that will meet the challenges of preserving and expanding the transportation system. Following the directives of the law, it includes goals, policies, analyses, and recommendations necessary to build and maintain an efficient, effective and affordable regional transportation system. The intention of the RTP is to build on the current transportation system, working to make it comprehensive and fully integrated.

Road Safety Audit: Washington Street (Route 138) at Central Street (2016)

The Road Safety Audit at the intersection of Washington Street and Central Street was a review of the intersection to determine safety concerns. The document includes a series of recommendations put forth by the review team in order to address the safety concerns identified.

Pedestrian Network Needs

The Town of Stoughton does not have as many needs when it comes to sidewalks as other Town do in the Old Colony region; however, there is opportunity for improvements to its pedestrian transportation network. While Stoughton does have a generous numbers of sidewalks throughout the community, there are corridors that lack sidewalk connectivity, and do not connect to the overall pedestrian network. These unconnected sidewalks should be connected to the wider pedestrian network, while corridors that cannot support sidewalks should be improved to facilitate better pedestrian safety as they walk along the road.

Bicycle Network Needs

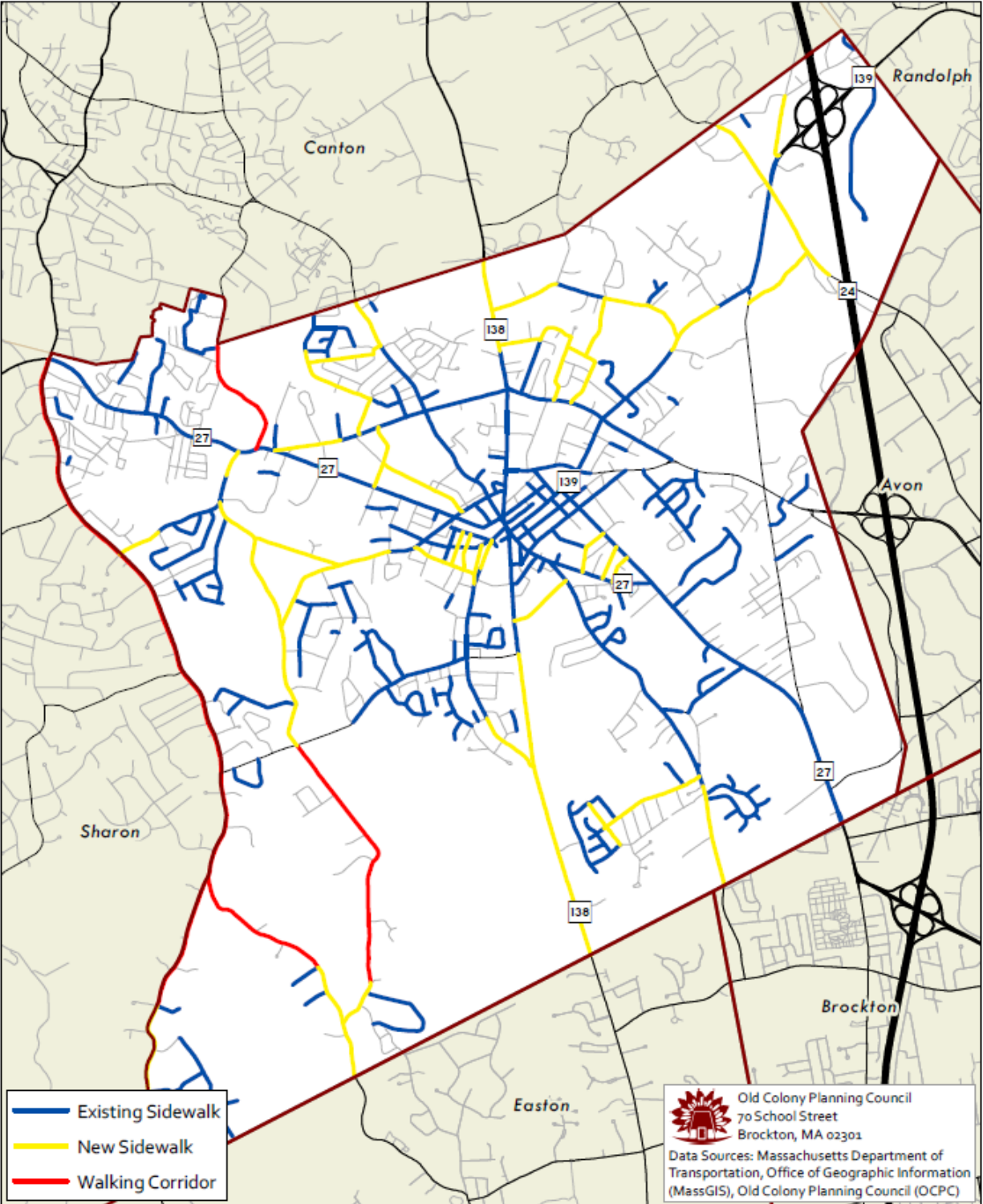
Stoughton is in need of a strong bicycle network along with amenities for cyclists. The Strava Heat Map supports the point that the Town of Stoughton has a great foundation for a strong bicycle network. The

downtown section of Stoughton sees the most cyclists and is a high traffic route; attention should be given to this area, as it is attractive area to many residents and visitors due to businesses, location of municipal services, and proximity to the Stoughton Commuter Rail Station.

Pedestrian Transportation Recommendations

Old Colony Planning Council recommends the Town of Stoughton create a Sidewalk and ADA Transition Plan in collaboration with the Old Colony Sidewalk Gap Analysis Map. Certain corridors in Stoughton may not be able to accommodate sidewalks, in this instance OCPC recommends creating Walking Corridors on streets such as Bay Road, Highland Street, and West Street to name a few. Walking corridors will allow pedestrians to access these scenic streets and raise awareness for drivers that pedestrians are utilizing the road.

Stoughton Sidewalk Gap Analysis

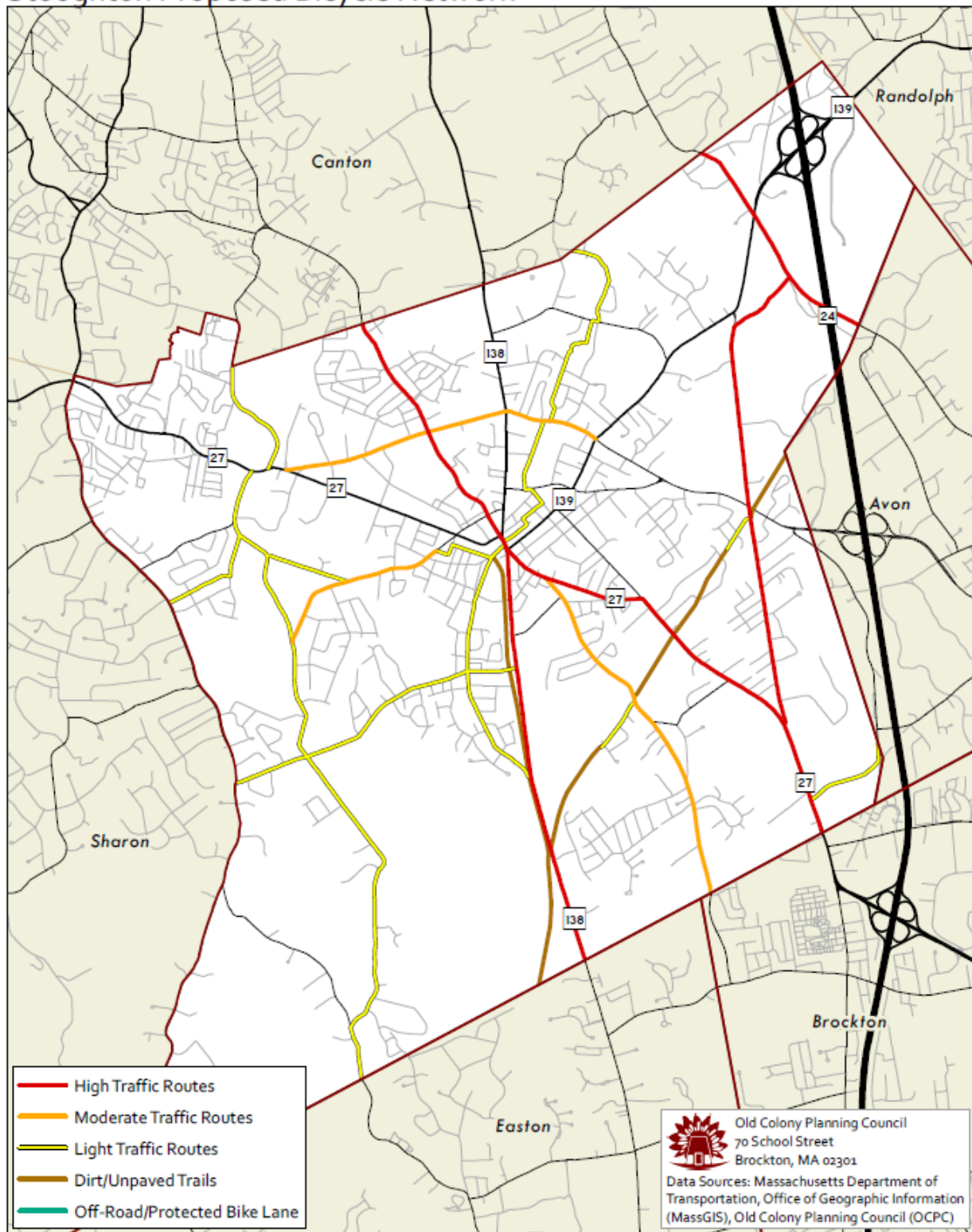


Map 34) Stoughton Proposed Bicycle Network

Bicycle Transportation Recommendations

OCPC recommends the Town of Stoughton utilize the Stoughton Proposed Bicycle Network Map to identify key routes and prioritize projects. The Town of Stoughton should also consider providing bicycle amenities including bicycle racks and repair stations throughout the community. Washington Street has adequate space for a protected bicycle lane until the lane approaches downtown where the road width narrows. The recommendation for Downtown Washington Street would be to provide a shared marked lane.

Stoughton Proposed Bicycle Network



Map 35) Stoughton Proposed Bicycle Network

West Bridgewater

West Bridgewater is a small residential Town bordering on the City of Brockton, and located at the junction of Routes 24 and 106. The Town can be characterized as suburban with its dotting of single family homes on large lots, to rural in nature due to the number of working farms and the abundance of open space within Town boundaries. West Bridgewater is very much a bedroom community to the City of Brockton and the City of Boston.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

The goals, objectives and policies West Bridgewater has put forth in regards to its pedestrian network is to expand the network throughout the community. The Town seeks to build sidewalks along all major roadways to connect neighborhoods, schools, open space, and as a mean of transportation to help alleviate traffic. Additionally, West Bridgewater wants to encourage its residents to cycle within the community and seeks to improve pedestrian safety.

Current Pedestrian Network

West Bridgewater has a number of sidewalks in the community but there are areas where the pedestrian network is none-existent. The lack of sidewalks in some areas makes for dangerous walking conditions, as individuals must walk in the roadway to get somewhere. It forces some that would choose to walk to a destination in Town to take their car, contributing to traffic congestions. Others, that do not own a car but are not comfortable walking in the street are stranded and depend on others for transportation.

Current Bicycle Network

West Bridgewater does not have an established bicycle network.

Previous Town of West Bridgewater Bicycle and Pedestrian Studies

Comprehensive Plan Town of West Bridgewater (2001)

The Town of West Bridgewater's Comprehensive Plan is a document that seeks to guide the community in a number of areas including land-use, housing, economic development, open space, natural and recreation resources, historic and cultural resources, public facilities and services, transportation and implementation. The Comprehensive Plan seeks to provide West Bridgewater officials with guidance to meeting future development challenges that might arise in relation to those seven elements.

Traffic Signal Warrant Study (2009)

This document investigated whether or not the intersection of Route 106 at Howard Street is a candidate for signalization.

South and Howards Streets Pedestrian Safety Study (2010)

The South and Howards Street Pedestrian Safety Study resulted in a turning movement count study, where all manners of automobile traffic, pedestrian and bicycle transportation activity is counted to help a community understand all modes of travel in a given location.

Road Safety Audit: East Center Street/West Center Street (Route 106) at North Main Street/South Main Street (Route 28) (Central Square) (2012)

The Road Safety Audit of Central Square in West Bridgewater was a review of the intersection to help alleviate the high crash occurrences at this location. The audit report puts forth a series of short-term and long-term recommendation in hopes of reducing car crashes and other traffic incidents.

MovingU Regional Transportation Plan (2016)

The MovingU Regional Transportation Plan provides a document and a process that will meet the challenges of preserving and expanding the transportation system. Following the directives of the law, it includes goals, policies, analyses, and recommendations necessary to build and maintain an efficient, effective and affordable regional transportation system. The intention of the RTP is to build on the current transportation system, working to make it comprehensive and fully integrated.

Pedestrian Network Needs

The Town of West Bridgewater has provided sidewalks on key routes but is in need of expansion, for example East Center Street (Route 106) past Center Street does not have sidewalks discouraging pedestrians from visiting businesses and enjoying the scenic views the Town has to offer.

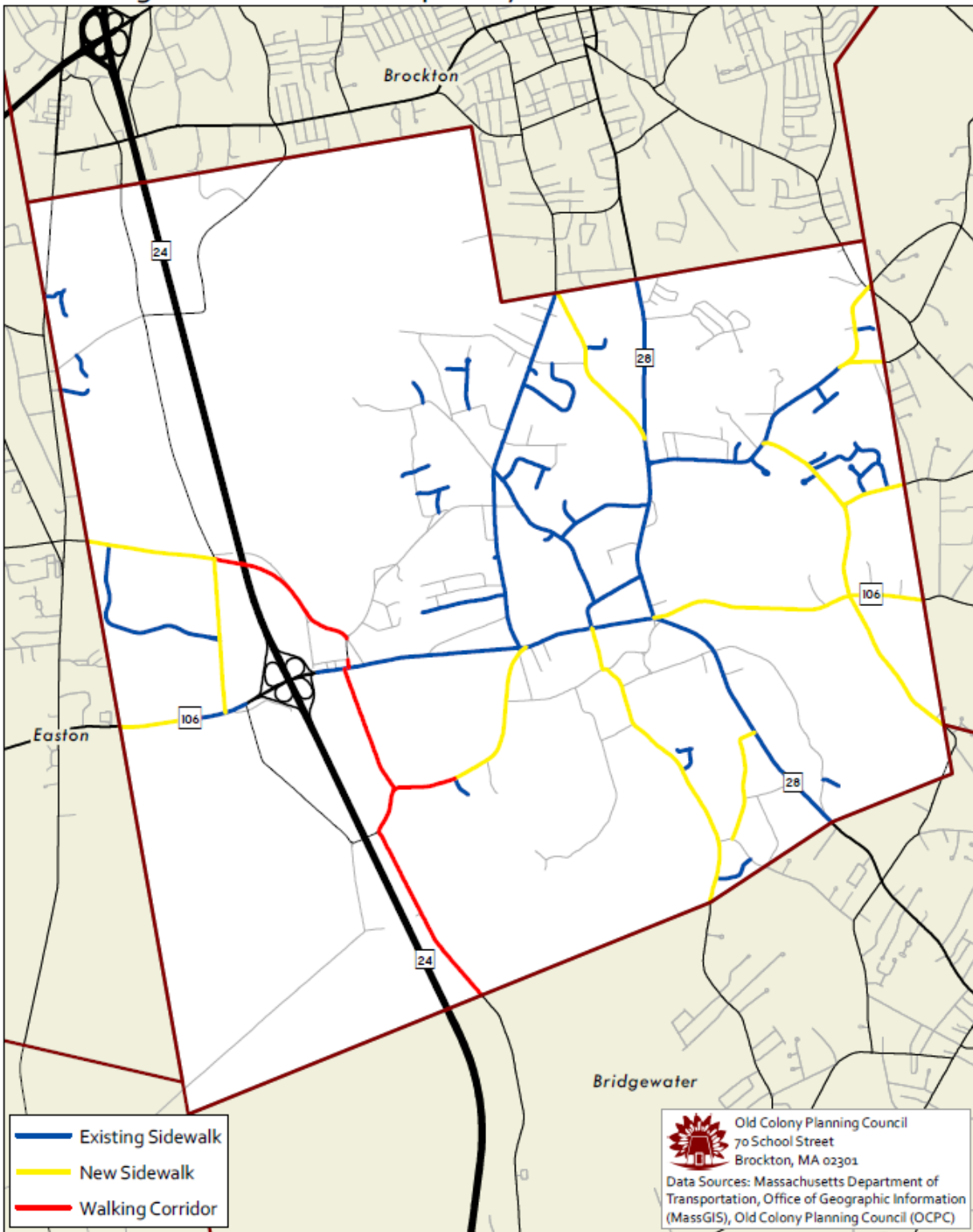
Bicycle Network Needs

The Town of West Bridgewater does not have an established bicycle network.

Pedestrian Transportation Recommendations

Old Colony Planning Council recommends that the Town of West Bridgewater create a Sidewalk and ADA Transition Plan along with the West Bridgewater Sidewalk Gap Analysis. OCPC recommends creating Walking Corridors on streets such as Scotland Street, South Elm Street, Lincoln Street and West Street.

West Bridgewater Sidewalk Gap Analysis

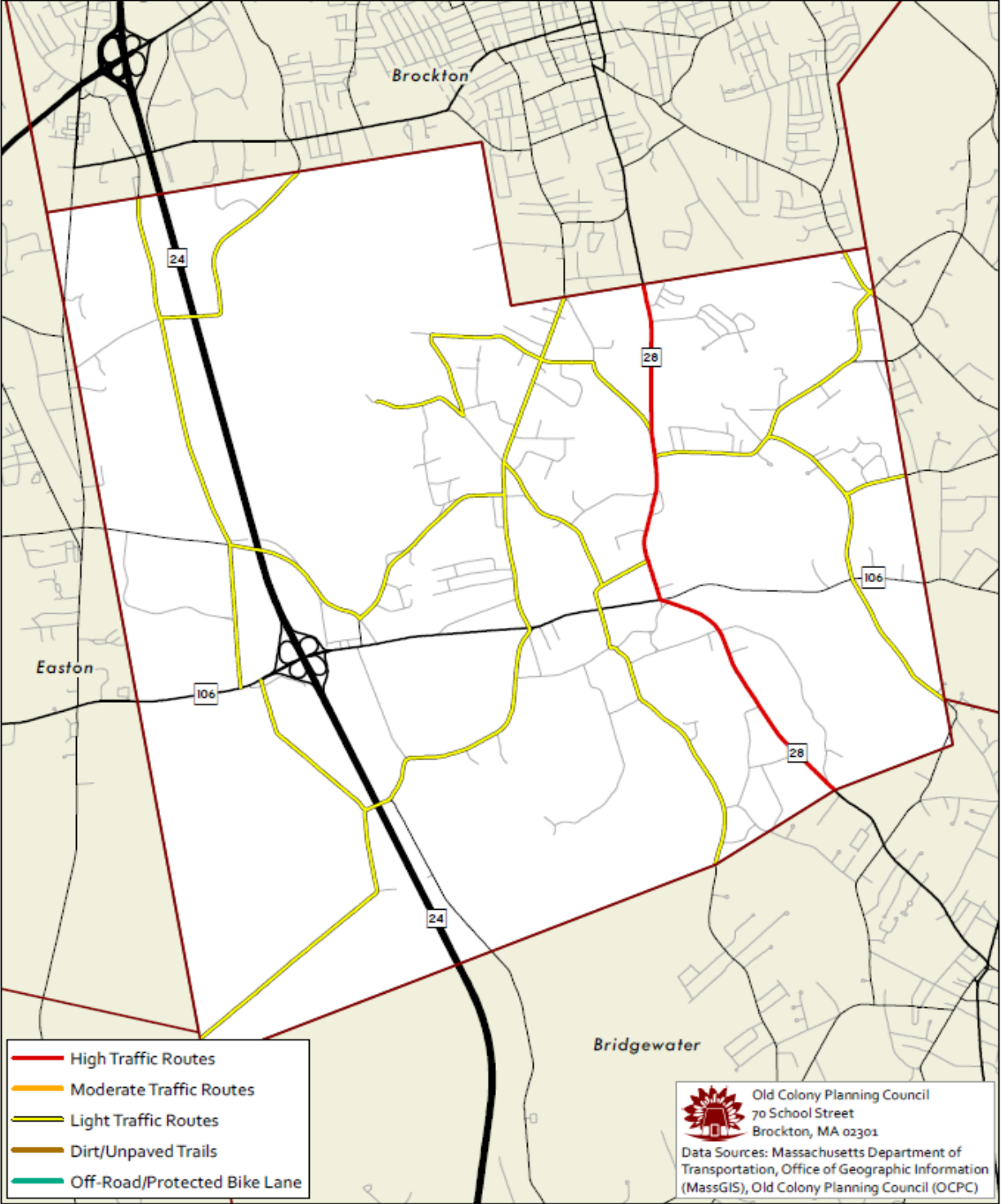


Map 36) West Bridgewater Sidewalk Gap Analysis

Bicycle Transportation Recommendations

The Town of West Bridgewater is in need of a strong bicycle network to provide access for residents of West Bridgewater, but also to those that are looking to connect to neighboring communities such as Bridgewater or Brockton. OCPC recommends West Bridgewater to create a bicycle network by identifying key locations and routes by using the West Bridgewater Proposed Bicycle Network map (**See Figure 31**) along with creating a wayfinding system that will inform cyclists how long their destination is from the point of origin.

West Bridgewater Proposed Bicycle Network



Map 37) West Bridgewater Proposed Bicycle Network

Whitman

The Town of Whitman is a small suburban community which lies east of the City of Brockton, south of the Town of Abington and west of the community of Hanson. The Town of Whitman has its own MBTA Commuter Rail Station and is traversed by a number of State Routes including: Routes 14, 18, 27 and 58. Most of Whitman can be characterized by its single-family homes and it possesses a small village center with shops, restaurants and convenience stores.

Bicycle and Pedestrian Network

Goals, Objectives, & Policies

The goal, objectives, and policies of the Town of Whitman are to increase walking in the community. Whitman seeks to promote pedestrian circulation in Town, especially between neighborhoods and schools and between the community and the MBTA Commuter Rail Station. Additionally, Whitman seeks to improve pedestrian access in the Town center.

Current Pedestrian Network

Whitman has an extensive network of sidewalks throughout the community, especially compared to other communities in the Old Colony region. Only a few sections of the Town or deep in neighborhood subdivisions can one find a lack of sidewalks. When one reviews the state of sidewalks in the community, they would find uneven, cracked and a hodgepodge of asphalt patch work. This is not a situation unique to the Town of Whitman.

Current Bicycle Network

The Town of Whitman does not have an established bicycle network.

Previous Town of Whitman Bicycle and Pedestrian Studies

Town of Whitman Master Plan (2004)

The Whitman Master Plan is a guiding document to help Town officials in visioning development in the community. The Master Plan seeks to provide a framework on a number of document elements such as: natural and cultural resources, land-use trends, circulation, services and facilities, housing, economic development and open space and recreation.

Town of Whitman Community Development Plan (2004)

The Whitman Community Development Plan is a guiding document drafted to assist Town officials in framing future development in Whitman. The Community Development Plan is an extension of the Town's Master Plan, which takes the elements of resource protection, open space, housing, economic development and transportation and further analyzes them.

Route 27 Corridor Traffic Study (2008)

The Route 27 Corridor Traffic Study was a review of Route 27 in the Old Colony Planning Council region to determine traffic issues and provide reasonable solution to these problems while taking into account current and future land-use policies. Additionally, the report puts forth recommendation to improve bicycle and pedestrian safety.

Route 58 Corridor Study (2010)

The Route 58 Corridor Study was a review of this corridor located in the Old Colony Planning Council region to understand the traffic congestion and safety issues experienced along the route. The document includes a series of recommendations to improve traffic flow and pedestrian and bicyclist safety.

Road Safety Audit: Route 18 (Bedford St) at Auburn St (Route 14) and Temple St (Route 27) (2015)

The Road Safety Audit was a review of two intersections; Route 18 at Auburn Street (Route 14) and Route 18 at Temple Street (Route 27) to determine safety concerns. The document includes a series of recommendations put forth by the review team in order to address the safety concerns identified.

MovingU Regional Transportation Plan (2016)

The MovingU Regional Transportation Plan provides a document and a process that will meet the challenges of preserving and expanding the transportation system. Following the directives of the law, it includes goals, policies, analyses, and recommendations necessary to build and maintain an efficient, effective and affordable regional transportation system. The intention of the RTP is to build on the current transportation system, working to make it comprehensive and fully integrated.

Pedestrian Network Needs

While the Town of Whitman is fortunate to enjoy an extensive sidewalk network, there are a few areas where sidewalks should be installed to help complete the network. Those areas in need of sidewalks are the northeast sections of the Town along Route 58 and along the remaining portion of Route 14. In addition there are areas in the northern sections of the Town along Pine Street and Beulah Street that require completion of the pedestrian network.

Along with the need to expand the sidewalk network, much of Whitman's sidewalk network is in need of maintenance or repair and upgrading to make walking in the community a more pleasurable experience.

Bicycle Network Needs

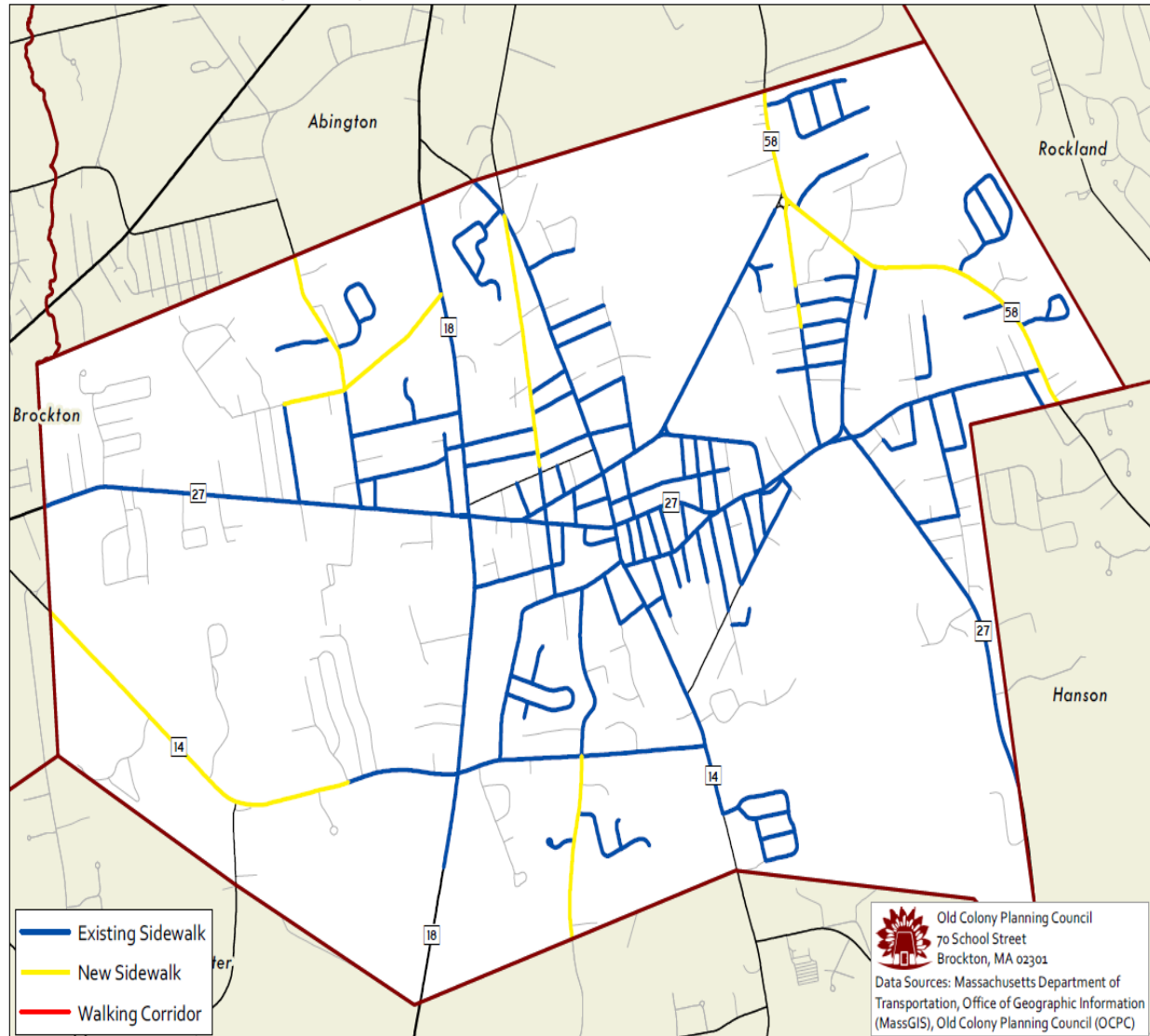
Currently, a bicycle network does not exist in Whitman.

Pedestrian Transportation Recommendations

Whitman should make every effort to improve the appeal of its pedestrian network. Encouraging walking in the community can help reduce traffic congestion, and spur greater economic activity as well. Despite the fact that the Town of Whitman is fortunate to be well covered with sidewalks with only a few roads in need of sidewalk installation, not much pedestrian activity takes place.

In order to spur more pedestrian activity, there is a need to focus on the quality of its pedestrian amenities. Providing pedestrian amenities like street trees to offer shade and protection from rain along with the removal of obstacles and clutter from sidewalks can increase pedestrian enjoyment.

Whitman Sidewalk Gap Analysis

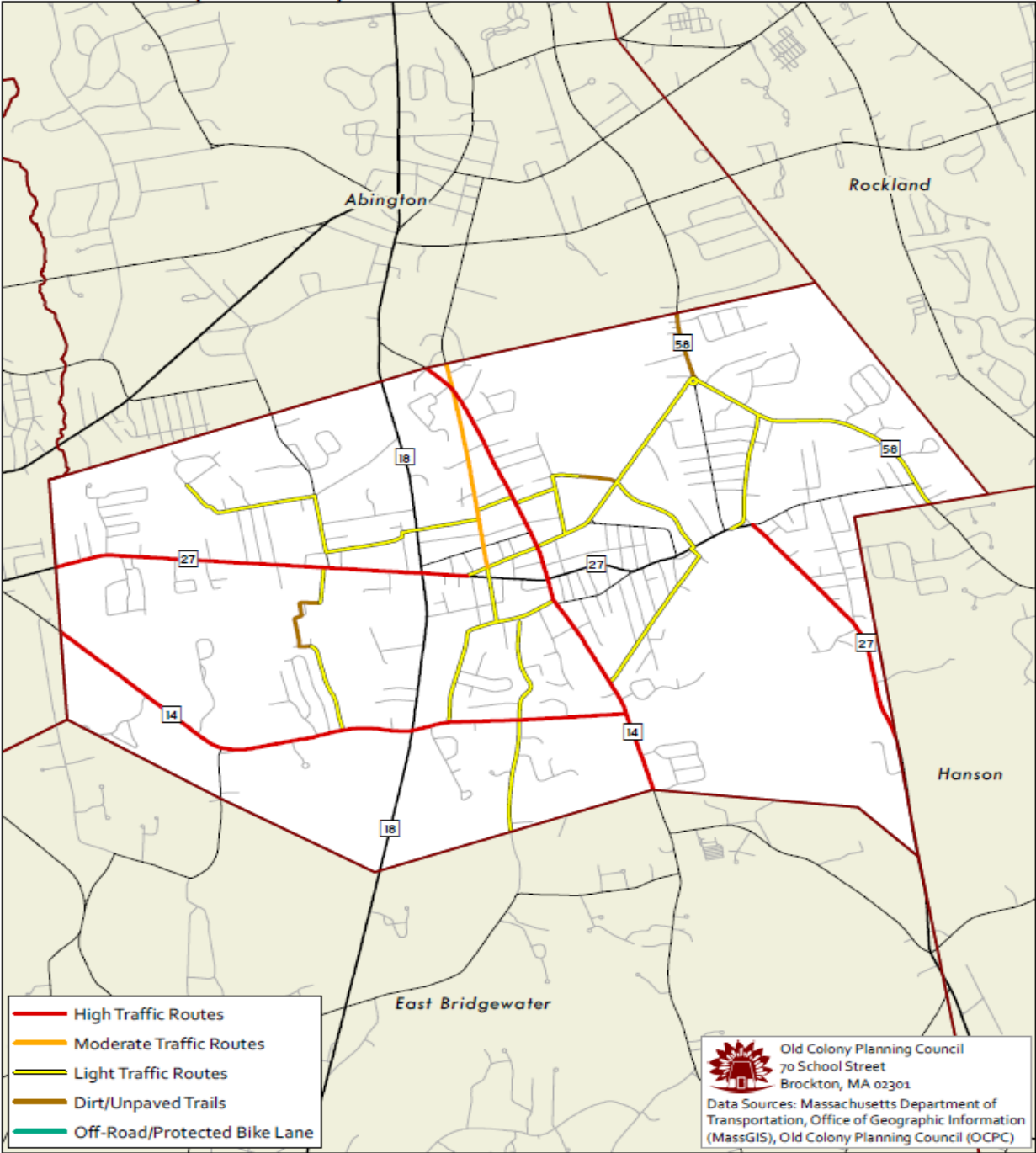


Map 38) Whitman Sidewalk Gap Analysis

Bicycle Transportation Recommendations

Old Colony recommends that the Town of Whitman create a bicycle network by utilizing the Whitman Proposed Bicycle Network map provided by Old Colony Planning Council. High traffic routes are identified on the Network map and include Temple Street (Route 27), Auburn Street (Route 14), Washington Street, and Franklin Street (Route 27). Beulah Street is designated as a Moderate Traffic Route and can be utilized as an alternative for Bedford Street (Route 18) due to the heavy traffic. OCPC would also recommend that the Town of Whitman provide bicycle amenities for cyclists such as repair stations and bicycle parking racks and facilities where warranted.

Whitman Proposed Bicycle Network



Map 39) Whitman Proposed Bicycle Network

Public Outreach

In order to understand where cyclists and pedestrians are going, public outreach was essential to obtaining the information necessary to form this report. The purpose of the public outreach process is to understand the population served by Old Colony Planning Council and identify stakeholders, including groups of people who have been underserved throughout history, including the elderly, minorities, those with Limited English Proficiency (LEP), and populations living beneath the poverty line.

In order to guide the development of this report, OCPC also erected a Bicycle Pedestrian Advisory Committee (BPAC), which attracted a variety of stakeholders including community members, municipalities, community organizations, and elected officials.

Public Outreach Process

OCPC planners created two surveys, which allowed participants to voice their concerns over bicycle and pedestrian issues in the region.

To garner this information and participation in the BPAC, OCPC staff conducted a public outreach effort through several outlets including social media, local newspapers, community websites, mail, public meetings, and public events. The Public Outreach Process included:

- 2 Newspaper articles in the Enterprise
- One video detailing the Bicycle Pedestrian Safety and Connectivity report
- Safe Routes To School Meeting
- February 24, 2016 BPAC Meeting
- Duxbury Citizens Volunteer Meeting
- July 27, 2016 BPAC Meeting
- November 21, 2016 BPAC Meeting



Figure 17) Bike to Work Day

Safe Routes To School Meeting

OCPC Planners met with SRTS coordinators Adam Blye and Moss Lynch on January 27, 2016 to discuss SRTS participation from schools in the Old Colony region and where SRTS can help in providing bicycle and pedestrian access and education.

Bicycle Pedestrian Advisory Committee

A Bicycle Pedestrian Advisory committee was created by the Old Colony Planning Council to help facilitate a conversation about bicycle and pedestrian access in each OCPC community. With a total of 27 members the BPAC were able to help guide the development of the plan by providing insight and feedback about barriers pedestrians and cyclists face in their community. This diverse group included, the Cape Verdean Association, community members, Planners, MassDOT representatives, elected officials (Senator Vinny Macedo), and the Whitman Police Department. Each member provided insight into how and where OPCP may be able to focus on providing improvements in the region.

February 24, 2016 BPAC Meeting

After contacting The Brockton Enterprise to conduct a story on the Bicycle Pedestrian Connectivity Study and Bicycle Pedestrian Advisory Committee (BPAC), the Old Colony Planning Council convened with BPAC members at the Whitman Public Library. Here planners and community members discussed the purpose of the Bicycle Pedestrian Advisory Committee and the connectivity and safety report.



Figure 18) BPAC Meeting Whitman Library

Duxbury Citizens Volunteer Meeting

On January 13, 2016, OCPC planners met with Duxbury Planning Director Valerie Massard AICP, CFM, Professor Malcolm MacGregor, and concerned members of the community to discuss potential bicycle and pedestrian improvements in Duxbury. What was a productive meeting led to the inclusion of comments from stakeholders and participation with the Bicycle Pedestrian Advisory Committee.

July 27, 2016 BPAC Meeting

The Bicycle Pedestrian Advisory Committee met at the Plymouth Library on July 27, 2016 to present and discuss the Bicycle and Pedestrian survey results and receive feedback from BPAC members.



Figure 19) BPAC Meeting Plymouth Library

November 21, 2016 BPAC Meeting

OCPD staff met a final time with the bicycle pedestrian advisory committee to discuss the bicycle and pedestrian network selected for the region. At the meeting, some members considered adding routes such as possible rail to trail locations along Route 138. Overall, members were satisfied with the network selections. Comments from the final BPAC meeting are listed below.

Comments from November 21, 2016 BPAC Meeting:

Brockton Comments

- Large amount of serious riders on W Chestnut who are part of community who are commuting to work.
- East side of Train tracks Perkins and Commercial St can be utilized as Rails to Trails corridor or Bicycle Boulevard.
- Possibly use power lines by Ames Beaver Brooks for off road trails.
- Having bicycle connections from Brockton Commuter Rail Station to train station.

East Bridgewater Comments

- Old Colony Rail line ROW may be used as Rails to Trails Path.
- One opponent currently has property on ROW. Negotiating may benefit for the greater good of the community.
- Silver Lake Brockton water/ transmission line can be utilized as off road trail.

Easton Comments

- A water line from to Dighton exists on Route 138.
- Using sewer lines + easements G.P.S for routes.

- Using data like strava app to move things forward for example where people are riding most get priority for establishing routes.

Join the Old Colony Bicycle and Pedestrian Advisory Committee

When: Monday November 21, 2016 at 6:00 p.m.

Where: Brockton Main Public Library at 304 Main Street
Brockton, MA 02301

Old Colony Planning Council (OCPC) formed a Bicycle and Pedestrian Advisory Committee (BPAC) and requests your attendance to review the Regional Bicycle and Pedestrian Connectivity and Safety Study.

The purpose of this meeting is to review the final findings of the Bicycle and Pedestrian Safety and Connectivity Study.

Please RSVP to Jimmy Pereira, Community/ Transportation Planner at jpereira@ocpcrpa.org or at 508-583-1833 Extension 217.

The Old Colony MPO fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations in all programs and activities. The Old Colony MPO operates without regard to race, color, or national origin (including limited English proficiency), age, sex, disability, ancestry, ethnicity, gender, gender identity or expression, sexual orientation, religion, creed, veteran's status, or background. Any person who believes him/herself or any specific class of persons, to be subject to discrimination prohibited by Title VI may by him/herself or by representative file a written complaint with the Old Colony MPO. Complaints are to be filed no later than 180 days from the date of the alleged discrimination. This meeting is accessible to people with disabilities and those with limited English proficiency. Accessibility accommodations and language services will be provided free of charge, upon request, as available. Please contact Pat Ciaramella at 508-583-1833 Extension 202 for more information.

If this information is needed in another language, please contact Pat Ciaramella at 508-583-1833 Extension 202.

- Se esta informação é necessária em outro idioma, entre em contacto com Pat Ciaramella em 508-583-1833 Ramal 202.
 - Si se necesita esta información en otro idioma, por favor póngase en contacto con Pat Ciaramella al 508-583-1833 extensión 202.
 - Si yo bezwen informasyon sa a nan yon lòt lang, tanpri kontakte Pat Ciaramella nan 508-583-1833 Ekstansyon 202.
- The public discussion of the Transportation Improvement Plan (TIP) at Old Colony JTC, Old Colony MPO, and transportation meetings satisfies the Program of Projects (POP) public hearing requirements of the Federal Transit Administration (FTA).

Figure 20) Old Colony Planning Council Bicycle Pedestrian Advisory Committee November 21, 2016 Meeting

Conclusion

Planning for the Old Colony region cannot be done without the input and cooperation of community decision makers and members. The purpose of the Bicycle Connectivity Study is to examine current conditions, and develop recommendations for improving and expanding the pedestrian and bicycle accommodations throughout the Old Colony region. With the continuing rise of gas prices and Green House Gas emissions, the work to increase mode shift is paramount to the regions success whether economically or environmentally.

This report looks to serve community members by providing resources for educating the population on utilizing the bicycle and pedestrian network while being safe doing so. A combined effort put forth by Old Colony Planners, Old Colony Communities, and educators will catapult the educational outreach further. Having a strong connection where the mantra each one teach one, each one reach one is applied. Whether a teacher gives the lesson of road safety and mode shift, police officer, or parent, everyone at any given time can learn a lesson or teach a lesson.

Regional Planning Agencies are able to provide an overview of the big picture, but it is up to the municipalities to implement and remain consistent in regards to maintaining and strengthening the transportation network.

Appendix

Newspaper

The Enterprise

Bicycle and pedestrian advisory committee forming in Brockton area

Monday Posted Feb 8, 2016 at 4:45 PM
Updated Feb 8, 2016 at 4:58 PM

"It's kind of like the chicken or the egg," said Jimmy Pereira, a transportation planner who is organizing the effort for the Old Colony Planning Council. "What comes first? The people biking or the infrastructure for it? A lot of people say, if you build it, they will come."

By **Marc Larocque**
Enterprise Staff Writer
[@Enterprise_Marc](#)

BROCKTON – A new committee is being formed to help guide the future of bicycle and pedestrian infrastructure in the Brockton area.

"It's kind of like the chicken or the egg," said Jimmy Pereira, a transportation planner who is organizing the effort for the Old Colony Planning Council. "What comes first? The people biking or the infrastructure for it? A lot of people say, if you build it, they will come."

The Bicycle and Pedestrian Advisory Committee will ideally consist of a wide range of state lawmakers, local officials and residents, Pereira said. The Old Colony Planning Council is inviting stakeholders from its 17 member communities, including Brockton, to take part in an advisory committee meeting at 6:30 p.m. on February 24, at the Whitman Public Library, located at 100 Webster St. in Whitman.

The committee will develop a study aimed at supporting ongoing local, regional and state planning efforts related to the infrastructure for pedestrian and bicycle movement throughout the Greater Brockton area, Pereira said. The hope is for members of the committee to help identify key issues, concerns and locations to be included in the study.

"Brockton and the region doesn't have a compatible bicycle network where routes are outlined and there is wayfinding (signage)," Pereira said. "We're looking at building this network from the ground up. ... The idea is if you do have this infrastructure in place, then people will use it, utilize it and there will be a bunch of benefits that come along with it, such as health benefits. ... There's economic benefits. ... There are environmental benefits, also."

To reserve a place on the advisory committee, call Pereira at 508-583-1833, ext. 217, or email him at jpereira@ocpcra.org.

The committee will meet several times to review, discuss and provide insight on the existing conditions, before developing recommendations and implementation strategies. The end result will be a final study, which will be provided to the Massachusetts Department of Transportation, public safety offices and municipal governments.

The study will also serve an important role to point out deficiencies in pedestrian infrastructure throughout the region, especially in Brockton, where accidents involving pedestrians have been far too common in recent years, Pereira said.

"Currently in Brockton, there has been a high case of pedestrian crashes," Pereira said. "So to address these issues, we look at how we can improve the environment for pedestrians and also motorists. This may include having crosswalks improved, and pedestrian signals with improved timing."

Appendix A) February 8, 2016 Press release for Bicycle Pedestrian Advisory Committee invitation

The Enterprise

Brockton-based planning agency launches online bicycle travel survey

Tuesday Posted Apr 12, 2016 at 3:18 PM
Updated Apr 13, 2016 at 4:42 PM

"Getting this info will be helpful identifying key issues pedestrians and bicyclists face, to tailor our study to the major concerns of the region," said Jimmy Pereira, a transportation planner for the Old Colony Planning Council.

By **Marc Larocque**
Enterprise Staff Writer
[@Enterprise_Marc](#)

BROCKTON – A regional planning agency based in Brockton is now conducting an online survey to reach out to bicyclists for their input on riding conditions in the local area.

"This survey will help us identify key issues in each community," said Jimmy Pereira, a transportation and community planner for the Old Colony Planning Council. "We want to hear from bicyclists, pedestrians, business owners, motorists, drivers, and those who don't bike as often. We want to know why they don't walk and bike more often – everyone, from school children to the elderly."

To participate in the bicycle and pedestrian survey, go online to

_____ and _____.

Pereira led the Old Colony Planning Council effort to organize the Bicycle and Pedestrian Advisory Committee, which consists of local stakeholders who held their first meeting in late February.

The survey will help the committee develop a regional bicycle and pedestrian travel study, detailing the infrastructure needs and other key issues for bicycle and pedestrian travel. The study will be completed by September, Pereira said.

That study covers the 17 member communities of the Old Colony Planning Council, including Brockton, Abington, Avon, Bridgewater, Duxbury, East Bridgewater, Easton, Halifax, Hanover, Hanson, Kingston, Pembroke, Plymouth, Plympton, Stoughton, West Bridgewater and Whitman. The study will be used as part of the agency's Unified Planning Work Program to help guide projects funded through the Massachusetts Department of Transportation and the Federal Highway Administration, Pereira said.

"Getting this info will be helpful identifying key issues pedestrians and bicyclists face, to tailor our study to the major concerns of the region," Pereira said.

Contact Pereira with any questions or concerns by at jpereira@ocpcra.org, or by phone at 508-583-1833, ext. 217.

Appendix B) April 12, 2016 Press release for online Bicycle Pedestrian Survey

The Need for Educational Campaign

Streets are intended to be used by a variety of people traveling by a variety of modes. Whether walking, biking, or driving, everyone should be able to feel safe and comfortable while traveling to their destination. Education is essential to the safety of new and experienced drivers, cyclists, pedestrians, and individuals with mobility challenges. Knowing the basics of road usage can increase awareness and prevent conflicts between road users.

It is necessary to educate all road users on how to properly use the road. Whether it is informing pedestrians to look both ways before crossing, reminding cyclist to travel with traffic, or drivers to look for cyclists before opening vehicle doors and yielding to pedestrians, much can be gained by educating the public; helping to decrease conflicts between bicyclists, pedestrians, and motorists.

Providing an educational campaign around road safety will help the public avoid conflict and encourage utilization of alternative means of transportation while making communities a safer place. Creating a safe environment by applying bicycle and pedestrian infrastructure throughout the region will increase the conditions for more people to walk and bicycle in their neighborhoods and to businesses; improved infrastructure will not only foster a safe environment for neighborhood residents but for business patrons as well.

Texting and Driving has become a major issue for pedestrians and cyclists, calling for an educational effort to combat distracted driving. Texting while driving not only puts the driver at risk; it also places everyone near the texting driver in danger. Educating motorists on the laws against texting and the danger, they put themselves and those in the vicinity of the texting driver.

The Old Colony Planning Council recommends having a robust educational program for the Old Colony region where interested motorists, cyclists, or pedestrians may be able to find safety information relative to their communities. Each community has a unique attribute for the region, whether rural or urban each neighborhood has its own design that would cater to the occupants of that community. The Bicycle and Pedestrian Safety Connectivity Study looks at each community individually, yet connects the network to each neighboring municipality within the Old Colony region, making it important for cyclists and pedestrians to learn how to travel safely in whatever setting they may encounter.

Benefits to an educational campaign include:

- Awareness around safety in the community
- Engaging community members and uniting efforts between cyclists and pedestrians
- Acknowledging motorists and their safety concerns relative to cyclists and pedestrians
- Creating a safe environment where diverse modes of transportation are admired and it is understood that streets are for all types of users.

As part of the Bicycle and Pedestrian Safety Connectivity Study, OCPC planners looked at current education campaigns catering to road safety while cycling, walking or driving. Planners found out that the information was readily accessible on several websites including the Old Colony Planning Council webpage. Below are several educational programs available in the OCPC region:

Pedestrian Education Programs

Pedestrians are the most vulnerable road users; in 2014, there were a total of 4,884 pedestrian fatalities and 65,000 injuries in the United States (NHTSA). Therefore, it should be a priority for pedestrians to learn how to properly use the road and for motorists to be aware of the presence of pedestrians. Several organizations have taken the lead in educating pedestrians how to transverse in their community safely.

Safe Routes to School (SRTS) is a national leader in educating young minds to think about road safety and active transportation. Safe Routes to School collaborates with MassDOT with a statewide awareness program that guides elementary and middle school students on how to safely walk to and from school and utilize active transportation. Educating the youth on safe walking and cycling habits can help forge a strong etiquette for pedestrians and drivers in future generations.

Some examples of programs offered by SRTS:

Walking Assessments: Part of the SRTS is to walk around the school and assess the walking and biking conditions for students. Once data is collected, SRTS program managers look at ways to improve the infrastructure for students and faculty along with the neighborhood.

Walking School Bus/Bike Train Formations: Children learn to walk and bike in groups while being accompanied by an adult chaperone, the purpose of this program is to teach students how to safely commute to school and home while curbing idled parking.

Bicycle and Pedestrian Safety Trainings: SRTS offers training for students on how to successfully ride their bicycles and how to safely transverse along sidewalks and at intersections.

WalkBoston has led the charge in pedestrian advocacy in Massachusetts since 1990. The goal for WalkBoston is to improve walking conditions throughout the Commonwealth by providing support and educating everyone ranging from walkers to municipal engineers on the importance of walking and its use as a basic form of transportation. Addressing concerns such as rural walking, WalkBoston has the support of Governmental agencies in looking at ways to accommodate every pedestrian regardless of where they live.

Some examples of pedestrian education programs offered by WalkBoston:

Snow Clearance Programs: New England is known for its treacherous storms; therefore, WalkBoston has developed a Sidewalk Snow Clearance Guideline to help educate others (municipal and state agencies, individual property owners/managers, and advocacy organizations) on how to ensure public safety on sidewalks after snowstorms.

Research: WalkBoston focuses on research that helps address issues organizers face while conducting walk audits and working with the community such as ways to educate and shift vehicle occupants from their cars to walking or biking to school.

Teen-Senior Programs: WalkBoston has bridged the gap between young adults and seniors by creating teaching materials and a curriculum for schools to educate young adults on deciphering street plans and understanding complete streets pedagogy so that young adults may share their knowledge and concerns with others in their community.

Walk audit: A walking audit is an inventory of issues that may hamper the walkability of a community. An audit is often undertaken by an assortment of community representatives including the police department, Engineering and Public Works Departments, Planning Departments, and community groups and citizens. Data such as crash information, traffic volume, and traffic speed information are compiled prior to the audit to help those conducting the audit understand the current walking conditions.

While performing the walk audit, participants will be noting things such as a lack of crosswalks or incomplete sidewalk connections, and other infrastructure deficiencies that make walking difficult. Walk audits allow planners, engineers, and municipal officials to understand the issues faced daily by pedestrians in the audit area so that they can plan better pedestrian accommodations.



Figure 3: Mark Fenton conducting a walk audit with the Town of Stoughton and OCPC Planners

Bicycle Education Programs

726 Bicyclists were fatally injured while cycling in the US during 2014(NHTSA). The Massachusetts Bicycle Coalition (MassBike) has helped countless communities in Massachusetts improve cycling conditions for bicyclists, and continues to spread knowledge by collaborating with government officials on improving bicycle riding conditions for citizens visiting and residing in the Commonwealth. Bicycling in the commonwealth has seen improvement since the implementation of the Healthy Transportation Engineering Directive.

The Massachusetts Bicycle Coalition also known as MassBike has been consistent with educating the public on proper bicycle riding behavior by providing bicycle training activities such as Bike Rodeos for school children, police training sessions and even provides classes for unexperienced cyclists no matter

the age. The benefits of learning how to properly utilize a bicycle allows people to feel more comfortable out on the road and out of their cars. Education reduces danger/risk to cyclists.

Some bicycle education classes and programs provided by MassBike are:

Bike Skills for Women: Women represent 43% of the population riding bikes. Fashion, fear and economics are the main discussion points for this class, amongst other important issues women may face while cycling.

Basics of Better Bicycling: Introduction class to first time cyclists in a classroom setting.

Group riding 201: Advanced class for cyclists looking to learn how to ride in a group.

Bike Audits: Riding a bicycle can be fun and healthy form of transportation, but safety must be a priority at all times while cycling. Bicycle audits assist in assessing riding conditions for cyclists on streets and intersections of the road. Bicycle audits are performed by Municipal Planners, Engineers, Police, community members, and bicycle advocates all observing obstacles that may hinder cyclists such as poor street lighting, sidewalk width and condition, traffic volume, presence of bicycle infrastructure, trash and debris, topography, and other dangers.



Figure 2: MassBike along with OCPC Planners riding on Main Street

Motorists Education Programs

In 2012, Massachusetts Executive Office of Public Safety and Security reported that there were a total of 349 vehicle fatalities. The National Highway Traffic Safety Association counted 383 fatalities for the same year. Educating drivers is just as important to educating cyclists and pedestrians, therefore the National Highway Traffic Safety Administration and MassDOT have created a Distracted Drivers Awareness Campaign. Teaching people to be safe while driving is equivalently important as teaching a pedestrian to walk safely across the street.

It is against Massachusetts law to text while driving, distracted driving is a serious offense and a senseless act that can result in death.

Some existing drivers' education programs and initiatives are:

National Safety Council (NSC): The National Safety Council is the nation's prominent safety advocate addressing issues such as distracted driving, teen driving, and safety in the community. As part of their safety campaign, the NSC promotes April as Distracted Driving Awareness Month and June as National Safety Month. The National Safety Council also holds courses for drivers who have acquired infractions in their licenses and must take a course to reinstate their licenses.

MassDOT Don't Text and Drive Campaign: MassDOT relayed messages across the Commonwealth cautioning motorists to put down their phones and not text while driving. The message was relayed on a message board along major highways and around high traffic areas.

"Faces of Distracted Driving" Campaign: The National Highway Traffic Safety Administration along with the United States Department of Transportation has created a series of video that looks at the lives of people affected by distracted driving.

GreenDOT? What Is It?

The GreenDOT Policy Directive was established on June 2, 2010 and is aimed at promoting sustainable transportation practices in the State of Massachusetts. The GreenDOT Policy is based off of three main objectives that are:

- 1) Reducing Greenhouse gas emissions through the Global Warming Solutions Act
- 2) Advance healthy transportation methods and smart growth development by implementing the Healthy Transportation Compact
- 3) Finally, support environmental stewardship through educational activities that protect the natural environment and smart growth development

The purpose of the GreenDOT Policy is to establish a guideline where all future MassDOT projects will make sure to include pedestrian and bicycle accommodations for all Massachusetts residents and visitors. GreenDOT has also developed the Healthy Transportation Compact which mandates communities to adopt best practices that will result in improved transportation and land use planning.