



INTRA BOROUGH BICYCLE PLAN BOROUGH OF HIGHLANDS

June 2011

Prepared By

Highlands Borough
Environmental Commission
With assistance from
Martin P. Truscott PP, AICP, LEED-GA

This plan was prepared with funding from the Association of New Jersey Environmental Commissions

**Acknowledgements
Borough Council***

Mayor Frank Nolan
Richard O'Neil
Christopher Francy
Rebecca Kane
Kevin Connelly

Carolyn Cummings, Borough Clerk
Michael Halfacre, Esq., Borough Attorney

*Appreciation is extended to former Mayor Anna Little for her assistance in obtaining grant funding.

Project Team

Stephen Szulecki, Chair, Highlands Environmental Commission
Larry Thorner
Christopher Francy, Council Representative
Peter Mullen
Tim Hill, Highlands Recreation Director

Funding Agency Liaison

Kerry Miller and Kerry Butch, ANJEC

This project was prepared with funding from the Association of New Jersey Environmental Commissions.

Table of Contents

Section	Page
1.0 Goals and Objectives.....	1
2.0 Overview	1
2.1 Highlands Borough Description	2
2.2 Public Outreach Efforts	2
3.0 Parks and Community Points of Interest	3
4.0 Bicycle Route Plan	5
4.1 Segment Descriptions.....	5
4.2 Route Conditions	5
4.3 Location of Equipment and Improvements.....	7
5.0 Implementation Strategy	11
6.0 Consistency with Borough Master Plan.....	12

List of Tables

One: Roadway Segments and Conditions

Two : Bicycle Compatible Roadway Pavement Widths

Map #1: Intra Borough Bicycle Plan

1.0 Goals and Objectives

Goal:

Preparation of a bicycle route plan within the Borough of Highlands that interconnects with the Henry Hudson Trail with municipal, county, state and federal parks as well as community facilities, business areas and other points of interest in the Borough. The Henry Hudson Trail is a 24-mile recreation path , a portion of which traverses the Borough of Highlands.

Objectives:

- Provide economically efficient, environmentally sound linkages for residents and visitors to access recreation facilities, important community facilities and the waterfront;
- Introduce potential customers to the downtown business district;
- Enhance the quality of life by encouraging an increase of recreational biking;
- Involve the public in the development of the plan;
- Provide opportunities for residents to reduce vehicular travel; and,
- Improve safety for bicyclists through signage and pavement markings.

2.0 Overview

The purpose of this document is to prepare a plan for a bicycle route network in the Borough of Highlands. The bicycle route will connect the Henry Hudson Trail to points of interest throughout the Borough, including Popamora County Park, the Route 36 Bridge (for access to bike paths on Sandy Hook), Hartshorne Woods County Park, Twin Lights State Park, Borough parks and the business district. The path will provide locations where riders can access views of Sandy Hook Bay and beyond. The plan will be the blueprint for the installation of a bike path through the Borough and will facilitate the regional bike route. The implementation of the bicycle routes will be implemented by the Borough through installation of pavement striping, roadway signage and kiosks to provide a map of the Inter-Borough Bike Route network, points of interest and other relevant information.

Plan Preparation

This plan was prepared by a project team of the Highlands Borough Environmental Commission with mapping assistance from the Borough' engineering consultant. The plan is the result of the research, fieldwork and planning by the project team and public input.



2.1 Highlands Borough Description

The 2004 Highlands Borough Master Plan Reexamination Report contained the following description of Highlands:

Highlands Borough is a small municipality, 0.71 square miles in area, located in the northeastern corner of Monmouth County. The Borough is a developed community with a diverse housing stock and some high density development. The community contains frontage on the Sandy Hook Bay and is situated near Gateway National Recreation Area. The Borough is served by Route 36. Ferry service is provided from two locations in the Borough to Manhattan. The downtown area of the Borough is located near the waterfront and the uplands area of the municipality is known for the views of the water area and city skyline.

Highlands Borough has an influx of boaters in the summertime as well as visitors to the restaurants in town and the waterfront. The community is mostly residential in character and very oriented to the marine commerce.

The Borough had a population of 5,005 persons in 2010 (2010 US Census). The population density in 2010 was approximately 7,800 persons per square mile, six (6) times the density of the State of New Jersey.

The Borough is bisected by the Henry Hudson Trail, a bike path maintained by the county, which connects the Borough to Matawan along the Bayshore segment of the trail. Monmouth County has plans to connect the Henry Hudson Trail to Freehold in the future.

2.2 Public Outreach Efforts

This Plan has been prepared and developed with consultation with other Borough officials and the public. The primary outreach efforts are discussed below:

Project Team

The Project team led by Mr. Stephen Szulecki of the Borough Environmental Commission commenced discussions of the plan after receipt of the grant in the late summer/fall of 2010. Meetings were held on August 24, and October 4, 2010 in Borough Hall. The project utilized email discussions and information exchange to supplement in-person meetings. The names of the members of the Project Team are listed on the inside cover page of this document.

A news release was prepared by Mr. Szulecki in early September 2010 for the local newspapers and published in the Two River Times on September 9, 2010. The press release notified the public of the project, its scope and schedule.

Public Meetings

A summary of the bike route plan was presented by Mr. Stephen Szulecki at a Borough Council meeting on December 15, 2010. The presentation included a copy of the draft route map and verbal description of the plan, its status and future steps in the plan preparation. There were several questions by the public primarily focusing on the connection of the route to the Highlands Route 36 Bridge. The questions focused on the Route 36 bridge links from Highlands to Sandy Hook beaches (Gateway National Recreation Area) and the bike route in the federal park. A representative of ANJEC attended the kickoff meeting of the Project team in August and the public meeting in December 2010. The Intra-Borough Bicycle Plan was presented to the Highlands Borough Council on May 18, 2011 by Mr. Szulecki. The Council members were supportive of the Plan and the recommendations therein. A similar presentation was provided to the Planning Board on June 9, 2011. The Highlands Planning Board unanimously passed a resolution to support the Intra Borough Bicycle Plan.

Outside Agencies

The Borough consulted with Spence Wickham, Chief of Acquisition and Design, Monmouth County Parks System on November 30, 2010 to coordinate efforts with Monmouth County and discuss some of the plan proposals. In addition Stephen Szulecki met with Borough of Highlands Chief of Police Joseph Blewitt in February of 2011 to discuss the proposed bicycle route.

3.0 Parks and Community Points of Interest

The following parks and community points of interest in Highlands Borough were deemed significant by the project team for purposes of a bicycle route:

Borough Parks

- Huddy Park
- Miller Beach
- Skate Park/Beach at Community Center
- Veteran's Park
- South Beach Promenade
- Future Park (Navesink Avenue overlook area)



Veteran's Park

County Parks

Hartshorne Woods- Monmouth County Park with bicycle trails
Popamora Park-a Monmouth County Park on the Hudson Trail
(Located in Atlantic Highlands Borough)

State Park/Landmark

Twin Lights State Park and Historic site

Federal

Sandy Hook –Gateway National Recreation Area- via the Route 36 Bridge.

Borough Facilities

Municipal Building
Borough Community Center
Highlands Elementary School
Henry Hudson High School
Parking areas at Borough facilities and in the vicinity of Spring Street

General

Downtown restaurants and businesses
Ferry stop at Connors

4.0 Bicycle Route Plan

4.1 Segment Descriptions

Henry Hudson Trail

The Henry Hudson Trail is major bicycle route in Monmouth County. The Trail is maintained by the Monmouth County Parks System and a portion traverses Highlands. The entire trail is 24 miles in length, mostly paved, 10 foot wide. The bike route when fully complete will travel continuously from the Highlands Bridge westward to Matawan and then south to Freehold. In most areas the Trail is within a former railroad right of way and without any vehicular traffic except at intersections with municipal streets. In Highlands and Atlantic Highlands the Trail is an on-street route and bicyclists must share the road with cars and trucks

Huddy Park Section

The Huddy Park portion of the Highlands Intra Borough Bike Route is another part of the bike route that provides access to the downtown area, the bay beach, the community center and Skate Park as well as Huddy Park. The route has access to benches along Marine Place, views of Sandy Hook, the Bay and the New York City skyline. The route is located on borough streets and many connect to Henry Hudson Trail on Shore Drive. This portion of the bike route, similar to the other segments is also a “share the road” segment.

Downtown Section

The Downtown section of the Highland Intra Borough Bike Route provides access to the downtown retail shops and restaurants. Parking is available for bicyclists in a municipal parking lot along Shore Drive in the vicinity of Spring Street. This portion of the route connects to Miller Street beach and Veterans Riverfront Park

Hill Section

The most challenging section of the Highlands Intra Borough Bike Route, from a bicyclist’s point of view, is the hill section on Borough streets such as Grand Tour, Portland Road and Highland Avenue. A segment of the bike connects to Hartshorne County Park at the Rocky Point entrance and the Twin Lights Historic site. Parking for bicyclists on this route is available at Hartshorne Park, Henry Hudson High School and Twin Lights National Historic Site.

4.2 Route Conditions

A listing of all of the segments by street name of the Intra-Borough Bike Route is provided below. The table also lists the width of each road segment, the number of vehicle travel lanes and the current parking regulations.

Table One
Roadway Segments and Conditions

Street	Roadway Conditions	Vehicle Travel Lanes	Parking Regulations
Henry Hudson Trail Shore Drive	Flat; PM	Two	None
Hill Area			
Highlands Avenue	Hills; Varied surface	Two	None
Portland Avenue	Hills; Varied surface	Two	None
Grand Tour	Hills; Varied surface	Two	None
Peak Street	Hills; Varied surface	Two	None
Downtown Area			
South Street	Flat; residential area	Two	None
Shrewsbury	Flat; residential area	Two	None
Miller Street	Flat; residential area	Two	None
North Marina Area			
Huddy	Flat; residential area	Limited*	None
Marina Street	Flat; residential area	Limited*	None
Bay Avenue	Flat; business area	Limited*	None
Snug Harbor	Flat; residential area	Limited*	None
Washington Avenue	Flat; residential area	Limited*	None
Sea Drift Avenue	Flat; residential area	Limited*	None

* = by on-street parking.

PM = pavement markings for bike lane.

Table 2
Bicycle Compatible Roadway Pavement Widths
Condition I
Annual Average Daily Traffic (AADT) 1200 - 2000*

	Urban w/Parking	Urban w/o Parking	Rural
<50 km/h (30 mph)	SL 3.6m (12 ft.)	SL 3.3m (11 ft.)	SL 3.0m (10 ft.)
50 km/h-65 km/h (31-40 mph)	SL 4.2m (14 ft.)	SL 4.2m (14 ft.)	SL 3.6m (12 ft.)
>80 km/h (50 mph)	NA	SH 1.2m (4 ft.)	SH 1.2m (4 ft.)

* For volumes less than 1200 a shared lane is acceptable.

KEY: SH=shoulder SL=shared lane

Source: *Bicycle Compatible Roadways and Bikeways: Planning and Design Guidelines, April 1996, NJDOT*

4.3 Location of Equipment and Improvements

Bicycle racks

Bicycle racks will be located at various locations along the bike route to encourage bike route usage, enhance the bicycle experience and promote patronage at local shops. The bike rack locations at certain landmarks or destinations will also encourage bicycle trips by residents to such facilities and augment the recreational assets of the Borough parks. The design of the racks should be individualized around a theme and customized based on the location. The number and type of bike racks will be based upon Borough funding or grant availability. Several possible examples are shown below to illustrate several different types such as a bike rack for only several bikes, one that could include advertising, a stylistic rack and others.



Bicycle racks already exist at Marine Place and Popamora County Park.

Bicycle racks should be located at Hartshorne Woods, Ferry terminal, a downtown location near the restaurants such as Cornwall Square, the Skate Park/ community center site, Miller Street beach, Twin Lights, Henry Hudson High School, Huddy Park, the Municipal Parking Lot near South Second Street and Veterans Park.

Kiosks

Kiosks will be strategically placed along the bicycle route to provide information to bicyclists as to the current location, points of interest on or near the route, distance to other points, and location of nearest restroom facilities. The kiosks may also have information about local restaurants or other commercial establishments. The kiosk structure will be permanent however it is envisioned that the information at the location will be changeable in some form to highlight, Borough events, certain community amenities or businesses.

Proposed kiosk locations, as shown on the Bicycle Plan, are Popamora County Park at the entrance to the Borough, at Hartshorne Wood County Park, at the South Bay Beach promenade (for bicyclists from Sandy Hook), the municipal parking lot along Shore Drive near South Second Street and at the Skate Park, a centralized location within the Borough.

Interpretative Displays

To enhance the bicycle route experience, interpretative displays should be installed at strategic overlook locations, such as Marine Place and the future Navesink Avenue Overlook park. The display would consist of a graphic map or profile of the key landmarks (e.g. New York City skyline) that can be viewed from that location.

Signage

The following are examples of signs that should be provided along the road segments utilized for the bicycle path:



A route map could also be provided at various locations.

The signs will assist bicyclists following the route. The signage will also be for vehicular traffic to improve safety.

Pavement Markings

Examples of some pavement markings:



(Hilliard; 2009)



(Vancouver, Washington; 2009)

All of the bike routes should contain signage identifying the route and notifying the motorists to “share the road”.

Storm Sewer Grates

A preliminary review of the existing storm grates on the proposed route show that nearly all of the storm grates are compliant with the “bike- safe” design.



An example of a bicycle safe storm grate on Shore Drive.

5.0 Implementation Strategy

The implementation strategy for the Highlands Intra-Borough Bike Route Plan is long term. The route can be put in place by the Borough Department of Public Works personnel based on the availability of funding and staff. The implementation of the bike route will necessitate municipal efforts, using this plan as a blueprint, to seek grant funding from county, state federal and foundations for the cost of the signage, bike racks and kiosks.

Funding Sources

Potential grant funding sources are the following:

Monmouth County Parks System

While the County Parks System funds are intended to provide monies for the development of parks, the important relationship of the Intra-Borough Bike network to the Henry Hudson Trail may be a sufficient link to obtain implementation funding.

New Jersey Department of Transportation (NJDOT)

The NJ DOT provides funding for municipal transportation projects on an annual basis. These are competitive grants are in the \$100,000 to \$150,000 range and sometimes larger.

NJ Green Acres

The NJ Green Acres Program provides grant and loan funding for recreational development.

Bikes Belong

The Bicycles Belong Coalition is a national non-profit organization. One of its programs is a grant to local organizations, agencies, and citizens for developing and continuing bicycle facilities projects that will be funded by the TEA-21 program (Transportation Equity Act for the 21st Century). The maximum grant is \$10,000.

Association of New Jersey Environmental Commissions (ANJEC)

This report is funded by ANJEC. Funding may be possible at a future date from ANJEC provided that the municipality has secured other funding sources and provided evidence of some implementation.

Other Possible Funding Sources which should be investigated include:

1. Local School District. Since the bicycle compatible roadway improvements serve school transportation objectives, the local or regional school district should be approached.
2. Safe Routes to Schools. Federal funds to states for safer bikeways and safer street crossings are consistent with the goals of the Highlands Intra-Borough Bike Route.
3. Open Space Trust Funds.

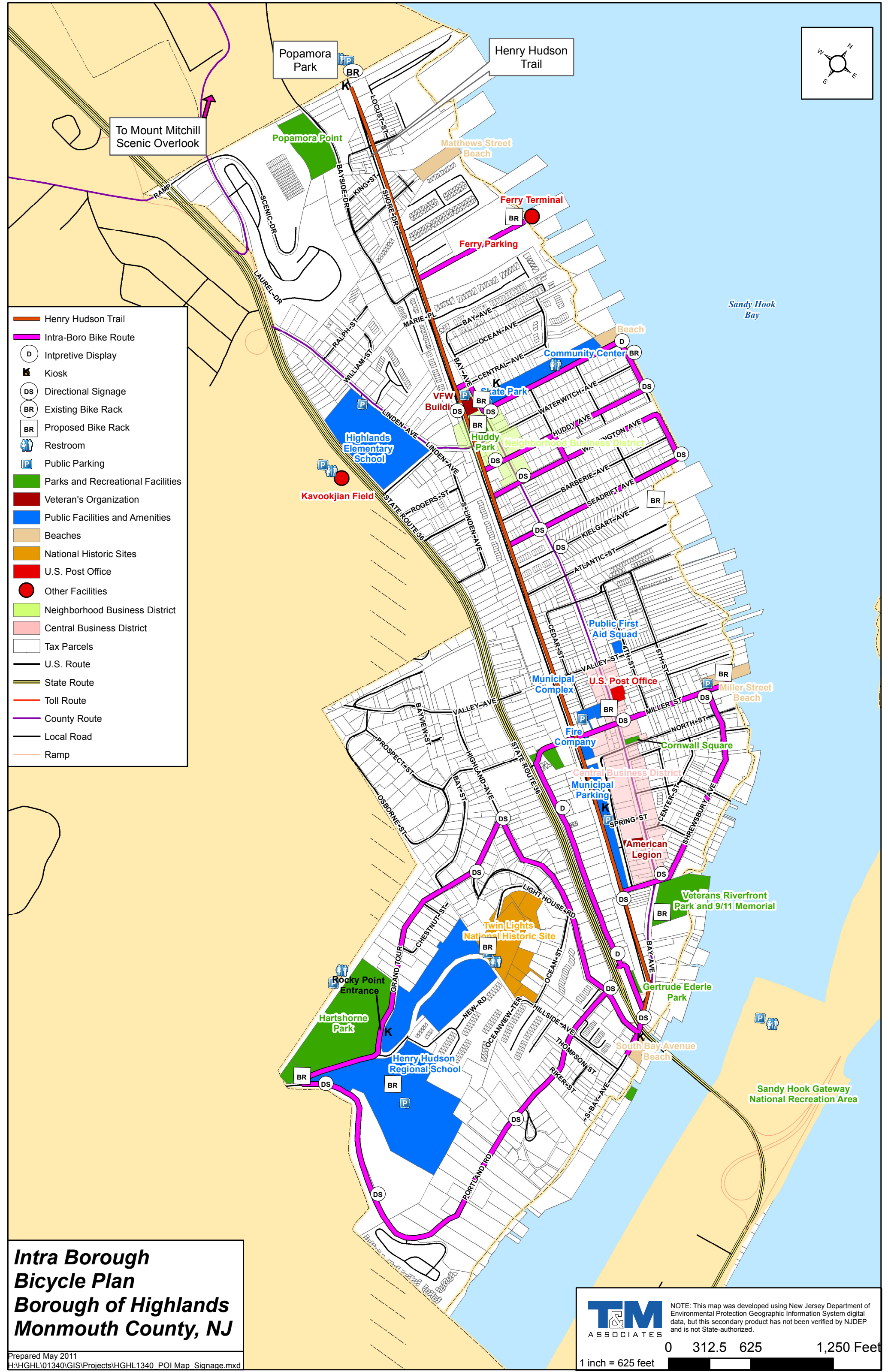
6.0 Consistency with Borough Master Plan

The Intra-Borough bike route plan is consistent with the Circulation Plan Element of the 2004 Highlands Borough Master Plan. The Circulation Plan Element contains the following recommendation:

The Borough should work with the County to determine designated bike routers within Highlands. The route should connect many of the public areas, such as parks and schools, which already provide bike racks, benches and other amenities for cyclists. Road way designations should be based on shoulder width (both existing and proposed), speed limits, for motorists, and level of traffic.

Photograph Credits

Page #	Credit
Cover page	Martin Truscott, T&M Associates
Page one	Martin Truscott, T&M Associates
Page 3	Paul Ricci, AICP/PP, (formerly of T&M Associates) for the 2004 Highlands Master Plan
Page 9	www.Pedbikeimages.org/Heather Bowden/2009
Page 10	www.Pedbikeimages.org/Jennifer Campos/2009



**Intra Borough
Bicycle Plan
Borough of Highlands
Monmouth County, NJ**

Prepared May 2011
H:\HGHL\01340\GIS\Projects\HGHL1340_POI Map_Signage.mxd



NOTE: This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not State-authorized.

0 312.5 625 1,250 Feet

1 inch = 625 feet