SHARROW

OCEAN CITY RAIL TRAIL & BICYCLE BOULEVARD PROJECT

DRAFT ROD

HAVEN AVENUE CORRIDOR REPORT

May 2011

Submitted to:

New Jersey Department of Transportation

The RBA Group, Inc.

OCEAN CITY SHARE THE ROAD RAIL TRAIL & BICYCLE BOULEVARD PROJECT

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APPENDIX

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INTRODUCTION

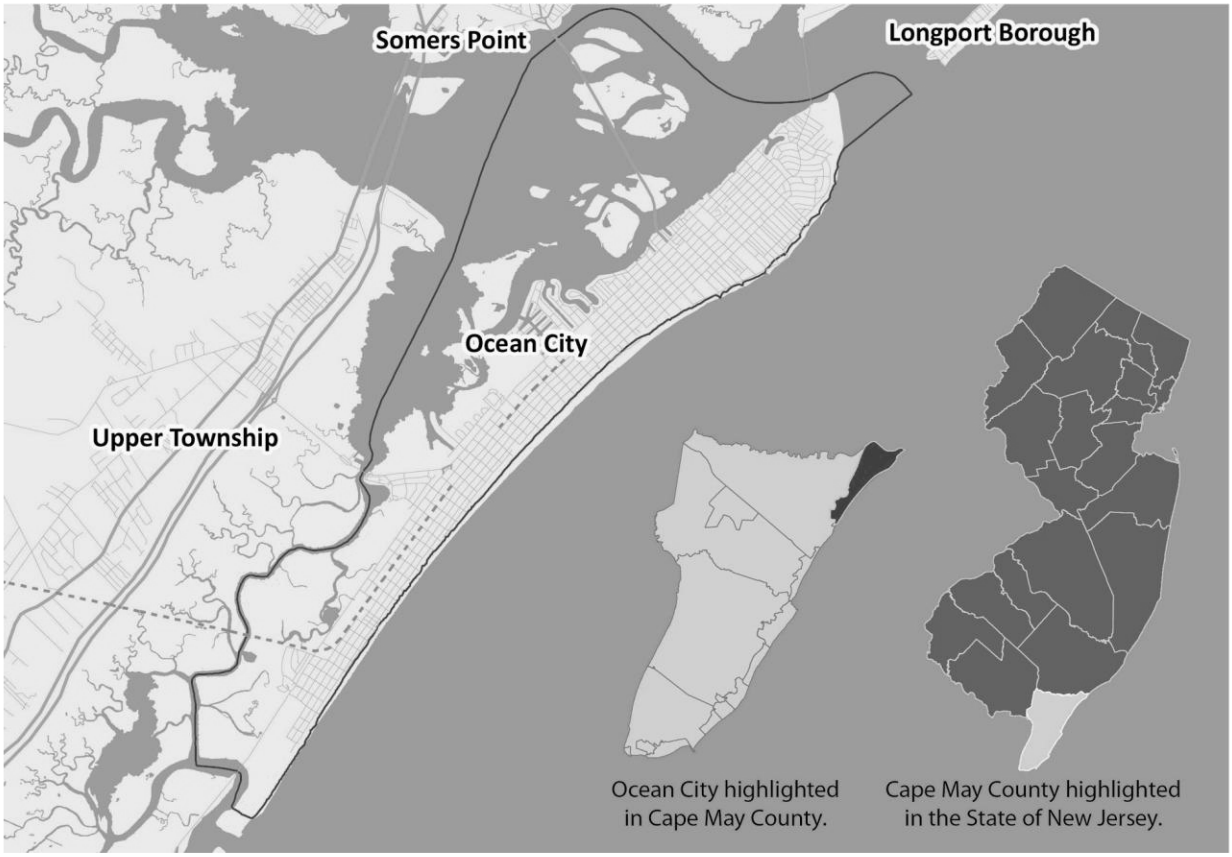
The Ocean City Rail Trail & Bicycle Boulevard project is being conducted under the New Jersey Department of Transportation's (NJDOT) Local Technical Assistance (LTA) Program for the purpose of investigating the potential and viability of providing access to the bay and safer bicycling across Ocean City through development of both rail trail and bicycle boulevard opportunities.

NJDOT provides the information contained in these Local Bicycle and Pedestrian Plans as a service to local communities. The Department and its consultants strive to provide quality planning studies that include a range of recommended improvements, but make no claims, promises, or guarantees about the availability of funding to complete the projects recommended.

The project is comprised of two main tasks: 1) Assess the unique opportunity for safe, multi-use access to the bayside waterfront for education and recreation by opening the former Pennsylvania-Reading Seashore Line rail bed from 36th to 49th Streets to pedestrians, bicyclists, persons with disabilities, etc. and 2) Examine the existing Haven Avenue Bicycle Boulevard to determine a best-practice approach to improve and extend it as a bicycle-priority on-road facility from Corson's Inlet to the Longport Bridge.

The project covers approximately 7 miles of the island of Ocean City and primarily follows Haven Avenue and the Pennsylvania-Reading Seashore Line rail bed.

This Haven Avenue Corridor Report pulls together the findings from data collection efforts, field visits, in-house screenings and community input.



PROCESS

The development of the Haven Avenue Corridor Report was a collaborative process facilitated by consultant team professionals from The RBA Group working closely with the client (NJDOT) and key representatives from the Ocean City community.

The process by which information for this report was gathered included the following primary steps:

- Project Administration and Team Development
- Investigation, System Evaluation and Options Matrix
- Conceptual Design Recommendations
- Public Outreach
- Summary Report

Project Administration and Team Development

The first step in the process was to develop a scope of work and to establish a team of local representatives to steer the project through its development and assist the project consultant team by serving as a clearinghouse for all information relevant to the project while also providing the local perspective. The Steering Committee was comprised of representatives from the New Jersey Department of Transportation, the City of Ocean City representatives (including Engineering, Fire, Police, Schools and City Council), Advisory Council on Physical Fitness, Ocean City Community Association, Chamber of Commerce, Environmental Commission, Main Street Ocean City, South Ocean City Improvement Association, Cape May County Emergency Management, NJDEP Green Acres, and Ocean City PTA.

***Note**: The environmental group, Friends of the Wetlands, was invited but declined to participate on the project steering committee.*

Stakeholders participated in a questionnaire through which primary issues and concerns were established. Below are some of the key issues and concerns related to the Rail Trail and Bicycle Boulevard as identified by the stakeholders. A more detailed list can be found in Appendix E: Stakeholder Questionnaire Responses.

Rail Trail Concerns

- Environmental
  - Wetlands, tidal, endangered species
- Drainage
  - Restoration Opportunity
  - Fill in wash-out areas: concern with flooding
  - Not filling in wash-out areas: concern with dyke protection
- Volume on Rail Trail
  - Concern with volume of cyclists on Rail Trail if it is used to connect the bike boulevard
  - Volume management – multiple route solutions
- Access to Bay/Nature
  - Consider "walking" trail with bicycle parking at either end
- Look/Functionality of Rail Trail
  - Vision: like Corson's Inlet Trail
  - Natural Surface – hard packed (good for bikes), well drained

    - Explore crushed clamshells in same footprint in a way to benefit environment (eco-friendly)
    - Explore boardwalk as possible surface-type
    - Maintain existing vegetation to stabilize rail bed
    - Maintain existing character
    - No added features except interpretive signs
    - Natural – no lights, benches, water fountains, etc. along trail
    - Benches/trash receptacles at trail heads only
- Width of Trail
- FHWA, AASHTO, MUTCD etc Guidelines for trail width
    - Existing: Typical 12' rail bed, 9' rail ties, 62" rails
- Trail Heads
    - Accessibility & management
- Public Feedback
    - Public in favor of Rail Trail – wants to participate in the process
    - Friends of Wetlands group opposed
    - 4th Ward Councilman – open minded – bring "Friends" into discussion
- Littering, Drinking, etc.
- Ownership of Rails
    - Removing rails

Bike Boulevard Concerns

- Safety of novice/family cyclists on busy streets
- Need for bicycle-priority option
- Connectivity to Destinations and Bike Routes/Facilities
- Bicycling Network is Important
- Bikes on Sidewalk in the downtown

Investigation and System Evaluation

The Investigation and Evaluation step was comprised of data collection, in-house environmental research and field investigations resulting in a Rail Trail Investigation Summary and a Bicycle Boulevard Needs Assessment in the following two sections of this report.

Data Collection and Research

Available reports, resources and mapping provided by the City and others were examined as part of the data collection and document review effort. To ensure that the most accurate and current information is utilized for the project, Ocean City and Steering Committee members were asked to provide any documents, data, mapping, etc. that would pertain to this project. Beginning at a project kick-off meeting in December 2010, most data was received by January 2011. Additional information related to Haven Avenue striping dated spring 2010 was provided to the project team in March 2011. All information was reviewed and referenced in relation to this project.

See Appendix G: List of Documents Reviewed for a complete account of information that was made available for this project. The data reviewed for this project included the following:

- Circulation Element of the Master Plan
- Traffic Engineer Report: Haven Avenue Speed Limits and STOP Sign Control Study

- Memo from Arthur Chew, PE, PP, Ocean City Engineer, in response to the ORA Traffic Engineer Report: Haven Avenue Speed Limits and STOP Sign Control Study
- NJDEP Permit to resurface Crook Horn Creek Access Road
- Traffic Mitigation Plan
- Accident Reports
- City Demographic Information
- City Tourism Recognition
- 2007 NJ High Resolution Orthoimagery
- Tax maps/Easements/ROW Information
- Field Survey: "PA-Reading Seashore Lines, Crook Horn Thorofare to 35th Street" prepared by Carl Totten Associates, October 2006
- Correspondence and documents provided by the City referencing information from other community groups such as Friends of the Wetlands related to wetland and flood-prone areas
- Ocean City Ordinances 07-55, 07-56, 10-05
- Letter from Peter A. Riscica, Supervising Highway Engineer, Traffic Engineering & Investigations, New Jersey Department of Transportation regarding Ordinance 07-55; February 8, 2008
- Bicycle Route Traffic Markings Citywide, Haven Avenue – City Bikeway, City Contract 10-035
- Plans of Reconstruction of Haven Avenue from 20th to 24th Street, Contract No. 06-19; Urban Engineers, Inc., March 2006

In-house Environmental Research

A preliminary, in-house environmental GIS data review was conducted to screen for endangered species, hazardous materials and open space along the existing Pennsylvania-Reading Seashore Line rail bed from 49th to 36th streets. The primary method for conducting the in-house research was by using NJDEP's Geology and Environmental iMap program in addition to information provided by Ocean City and others to assess the existing conditions and context of the rail bed on which a shared use path is envisioned.

***Note**: Environmental research for the Bicycle Boulevard task was not included as part of the scope of work for this project.*

Field Investigation

A field investigation was conducted for both the Rail Trail segment as well as the Bike Boulevard alignment from Corson's Inlet to Longport Bridge to determine the condition of the Haven Avenue Corridor in its various stages of completion. Using the information and data collected in other tasks, the former Pennsylvania-Reading Seashore Line rail bed was assessed for opportunities for multi-use access the bayside waterfront for education and recreation between 49th and 36th Streets and a best-practice approach to improve and extend the Haven Avenue Corridor as a bicycle-priority "bicycle boulevard" from Corson's Inlet to the Longport Bridge was evaluated.

The overall assessment resulted in two summaries which are included in the following two sections of this report: **Rail Trail Investigation** and **Bicycle Boulevard Needs Assessment**.

The Rail Trail Investigation Summary includes a description of existing conditions, design guidance, environmental background and a Trail Scenarios Matrix for the segment of the former Pennsylvania-Reading Seashore Line rail bed between 49th and 36th Streets. The summary contains existing conditions mapping and photo documentation as well.

The Bicycle Boulevard Needs Assessment divides the Haven Avenue Corridor (from Corson's Inlet to the Longport Bridge) into 4 segments describing existing conditions and opportunities to enhance on-road bicycle-priority operation for each. Mapping and photo documentation is provided for each segment.

Conceptual Design Recommendations

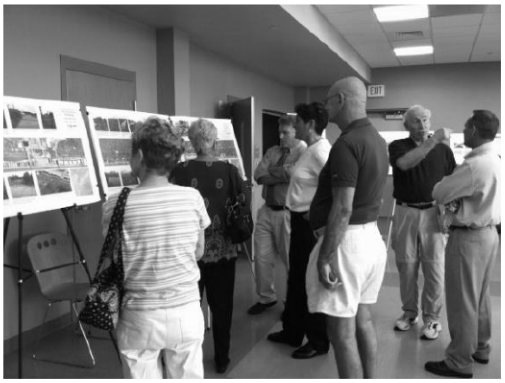
Best-practice on-road conceptual design recommendations are included in this report for the Haven Avenue corridor. Bicycle-priority design concepts were explored for each segment of the corridor extending from Corson's Inlet Park to the Longport Bridge.

Four Recommendations Maps and four Concept Sketches were also prepared for each segment of the corridor.

Summary Report

Finally, the results of the Ocean City Rail Trail and Bicycle Boulevard project were compiled into this final summary report.

COMMUNITY PARTICIPATION



Community outreach is a key element in NJDOT's Local Technical Assistance programs and in order to build on Ocean City's recent efforts to improve bicycle and pedestrian accessibility throughout the city especially related to Stakeholder input and Public Outreach, a Steering Committee comprised of key representatives from Ocean City government and community groups was formed for the purpose of guiding the project direction and providing input and feedback throughout the project's duration (see Appendix A: Steering Committee for a full list of project stakeholders). Steering Committee meetings were held to kick-off the project (December 2010), to review the project process (June 1, 2011), and to wrap up the project.

In addition, a Public Information Center (PIC) was held on (June 17, 2011) to present the status of the Rail Trail and Bicycle Boulevard project to the community. The Public Information Center was an open-house-style format to allow for many members of the community with varying schedules to attend at their leisure. The project team and Steering Committee members were on hand to answer questions and collect public comment for the project.

Meeting agendas and minutes are included in Appendix D: Community outreach Material.

As part of this project, an annotated PowerPoint presentation illustrating the study results and conceptual recommendations was prepared for use in future public meetings by Ocean City officials. The PowerPoint presentation is included in Appendix B: Annotated Presentation.

RAIL TRAIL INVESTIGATION SUMMARY

Overview

The purpose of this Rail Trail Investigation Summary is to assess the unique opportunity for safe, multi-use access to the bay by opening the former Pennsylvania-Reading Seashore Line rail bed from 36th to 49th Streets to pedestrians, bicyclists, persons with disabilities, etc. This summary outlines the findings of in-house environmental research and visual site inspection. No specific conclusions on the potential environmental impacts or permitting issues can be drawn as a part of this assessment without definitive design concepts. However, a table outlining estimated cost per mile for various trail types such as crushed stone, soil or boardwalk is provided. In addition, a "trail scenarios matrix" depicting three trail scenarios and potentially required permits and approvals is provided as a means to offer a big-picture view in determining the viability of utilizing the rail bed for recreational and educational purposes.

It is important to note that while developing concepts and designs for shared use paths, federal and state guidelines should be considered. Projects using federal or state funds are subject to environmental regulations and processes. A conclusive assessment as to the viability of a project based on its impacts to the environment can only be made in relationship to specific proposed designs. The process of environmental assessment also requires the development of design alternatives.

Stakeholders who have participated in this investigation have expressed interest in making use of the rail bed to provide improved multi-use access to the bayside and wetlands, and in providing through access by developing a continuous shared use path. Designs for pedestrian and/or bicycle paths vary widely and each design alternative would have different and specific impacts on the environment. The designs would also be dependent on the extent of access, the type of construction, the materials used, etc.

The federal and state processes for advancing projects from concept to construction are similar. Advancing a concept requires the development of alternative designs to the extent that detailed technical studies can be done to determine specific impacts and their extent. At that time, the feasibility and the permitting processes that would be necessary can be definitively determined. Unless and until intentions and concepts are developed to the extent that alternative designs can be proposed and explored, conjecture cannot lead to valid determinations of viability or cost.

The scope of this project is to assess the environmental context to identify conditions that would require attention in the project development process.

This Rail Trail Investigation Summary concludes that it is possible to utilize the rail bed as a shared use path if the purpose and need is clearly expressed, if the proposed design has the least impact among possible designs, and if mitigation requirements are met. (See Environmental Regulatory Analysis Summary, p. 17)

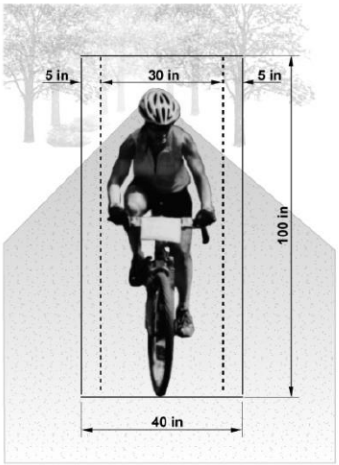
Design Guidance

It is also important to consider the design guidelines of federal and state transportation agencies that pertain to shared use paths in order to qualify the types of uses and conditions of the proposed rail trail in relation to accepted standards. The planning and design of bicycle and pedestrian facilities should be appropriate to the anticipated user volumes. Otherwise, the potential for overcrowding and use conflicts is greater.

The American Association of State Highway and Transportation Officials (AASHTO) publish guidelines for the development of bicycle facilities. These guidelines are similar to those in the New Jersey Roadway

Design Manual. These documents include guidance related to shared use paths. The points below are from the AASHTO Guide for the Development of Bicycle Facilities, 1999.

- In order for a "trail" to be designated as a bicycle facility, it should meet all design criteria for shared use paths.
- Shared use paths should not preclude on-road bicycle facilities, as bicyclists may prefer and choose to ride on road, for example, to achieve higher speeds. A shared use path should be considered a complement to the roadway network.
- The recommended width of a two-direction shared use path is 10 feet. It can be reduced to 8 feet when traffic and pedestrian use is expected to be low.
- Adjacent to waterways or slopes that are greater than 1:3, a 5' separation is desirable. Depending on the height of the embankment and conditions at the bottom, a physical barrier (railing, dense shrubbery, etc.) may need to be provided.



Bicycle Operating Space

Source: AASHTO

Some guidance to consider from the AASHTO Guide for the Planning, Design, And Operation of Pedestrian Facilities, July 2004:

- Two people walking side by side or passing one another generally require 4.67 feet of space. Two people in wheelchairs need a minimum of 5' to pass one another.
- These guidelines are not regulations, but guiding principles. However, deviating from design guidelines will require reasonable justification during the conceptual and design phases.
- Use of the rail bed offers access to the natural environment and outstanding views of the bay and deserves further investigation whether for bicycle and/or pedestrian access. Concepts for future uses and types of facilities should be developed with careful consideration of anticipated uses and appropriate designs so as not to compromise the experience and safety of future users.

Existing Conditions

The project limits are between 49th and 36th Streets, a distance of about 1.37 miles. The observations in this section were made based on a visual assessment. An annotated selection of photographs taken during the field investigation is included on the Existing Conditions Maps 1-4.

A walk-through of the rail bed was completed with the exception of a segment between 46th and midblock between 44th and 43rd Streets. Although the rail bed can be accessed at 45th Street east of the dog park, the rail bed in either direction is inaccessible because of dense vegetation. The rail bed is impassable between 44th and 43 Streets because of an approximately 40' break and intervening waterway midblock.

Ownership

The Ocean City Tax Maps indicate that the rail bed right-of-way occupies a portion of Block 7100, Lot 1 and is owned by the City of Ocean City. In addition, according to a deed provided by the City of Ocean City dated May 30, 2003 (filed with the County of Cape May), the Pennsylvania-Reading Seashore line right-of-way was conveyed to the City of Ocean City (grantee) by the New Jersey Transit Corporation (grantor) for public use (see Appendix J: Deed of Ownership).

However, according to the NJDEP Division of Land Use Regulations, Bureau of Tidelands Management, all lands now or formerly flowed by the mean high tide of a natural waterway are considered "tidelands" and are owned by the State of New Jersey unless use of these lands has been granted through a tidelands license or riparian grant. According to NJDEP Tidelands Claims Area Mapping, ownership of the "wash out" areas along the rail bed between 44th and 43rd Streets and between 40th and 39th Streets are "flowed by the mean high tide" and are therefore property of the State of New Jersey. The remaining rail bed is owned by the City of Ocean City. If the City were to pursue trail development at the "wash out" locations, a Tidelands conveyance application to lease the property for that use would be required.

Context

The alignment of the rail bed is straight and runs north/south parallel to West Avenue. The rail bed is adjacent to extensive wetlands to the west. On the east side, it is immediately adjacent to residential properties between 50th and 48th Streets and to wetlands between 48th and 36th Streets.

- The rail bed is immediately adjacent to the adjoining residential properties between 49th and 48th Streets and is approximately 30' from the houses. Adjacent property owners have landscaped the rail bed in this area.
- From 48th to 46th Street, the distance between the rail bed and the developed residential lots is approximately 200' with wetlands intervening.
- The rail bed is inaccessible from 45th to 44th Streets because of dense vegetation.
- From 45th to 36th Streets, the rail bed is approximately 200' from the developed residential lots with wetlands intervening.

The rail bed can be accessed from:

- On Haven Ave from 50th and 48th Streets
- 46th Street
- 45th Street
- Haven Ave and 36th Street

Condition

The width of the rail bed surface to embankment slope varies between an estimated 10' to 16' although most of the rail bed is 12' to 14'. The elevation varies between approximately 2' and 5'. Below are photographs of the rail embankment at high tide on a new moon. It should be noted that a significant storm event would have a greater effect on the embankment.

The condition of the rail bed varies. It is intact and is relatively stable between 49th and 46th Streets. Between 45th and 36th Street the rail bed has deteriorated and is more heavily vegetated both on the embankment and surface areas and most of the rails have been removed.

The rail bed is intact with the exception of two significant breaks between 44th and 43rd Streets and between 40th and 39th Streets. The rail bed has been washed away in these locations (see photographs on the Existing Conditions maps: #17 and #18, and #23). Each of these breaks is an estimated 40' with a 5 to 6 foot drop to the intervening open water. The rail bed has been partially eroded in other nearby locations, an example of which is shown in photograph #19 between 44th and 43rd Streets.

There are cross drains throughout the rail bed along the length of the project area.

Photos taken during a high tide predicted at 4.4 feet over mean low water, showing top of rail approximately 30" above the water
Source: Ocean City Engineer

Opportunities for Shared Use Path

There are many opportunities and constraints associated with providing multi-use access along the rail bed for some or all of the length between 49th Street and 36th Street. A trail would provide access to the bayside waterfront for recreational and educational purposes. It is important to note that regardless of which scenario (or combination of scenarios) is explored for future conceptual design, NJDEP permits would be required, public need outweighing potential environmental impacts would have to be demonstrated, and the concept would have to show the least overall environmental impact when taking all factors into consideration. Some of the concepts to explore include:

- **Multi-use access between 49th and 36th streets**. Develop an off-road shared use path for both bicyclists and pedestrians between 49th and 36th Street along the rail bed. This concept could be enhanced with informational kiosks and interpretive signage where appropriate. Surface type options vary according to the needs of anticipated future users. The selection of surfaces should be appropriate to the context. Many different surfaces have been applied to shared use paths such as asphalt, concrete, crushed stone/shells, hard packed dirt, boardwalk or a combination of treatments. A shared use path would restore the rail corridor to its original function as a public transportation corridor, this time for bicycle and/or pedestrian use. Off-road shared use paths are typically preferred by families, an idea reinforced by public outreach and project history. A shared use path would be greater than 6 feet wide.
- **Pedestrian-only access between 49th and 36th streets.** Develop a pedestrian-only path along the rail bed with lookouts and interpretive signage where appropriate. Provide trash receptacles and bicycle parking at trail heads. A pedestrian-only path would likely have a width of 6 feet or less.
- **Pedestrian-only access at selected points between 49th and 36th streets.** Construct pedestrian-only path segments to provide access to the natural areas along the bay side of Ocean City. This scenario would not provide continuous access between 49th and 36th Streets. Pedestrian-only segments would likely have a width of 6 feet or less.

Looking southwest from rail bed between 51st St. and 50th St. Extensive views across the wetlands to the west can be seen among the length of the railbed.

The corner of 49th St. and Haven Ave. The rail bed is easily accessed from Haven Ave between 50th - 49th St. 49th St. is the southern terminus of the project area where Haven Ave. ends.

Landscaping between 49th and 48th St. is encroaching on the railbed right-of-way.

Looking east on 48th St. toward the ocean from the rail bed. The next access road to the railbed is 46th St.

Ocean City Rail Trail & Bicycle Boulevard Project

Existing Conditions

Map 1: 51st St - 48th St

March 2011

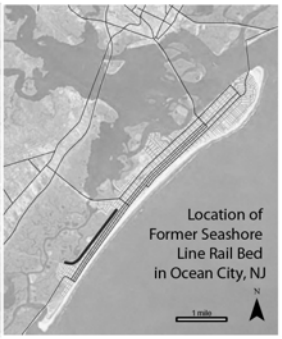
0 200 Ft

Looking north from the corner of 50th and Haven Ave. Haven Ave is a signed bike route.

Walking north on the rail bed between 49th and 48th St. The rail bed is about 30 feet from the houses.

The elevation of the rail bed is approximately 2-3' near 49th St.

Looking west at wetlands from the rail bed near 48th St.



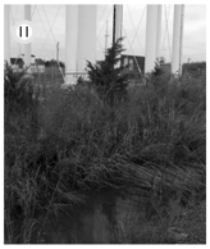
Ocean City Rail Trail & Bicycle Boulevard Project

Existing Conditions

Map 2: 48th St - 44th St

March 2011

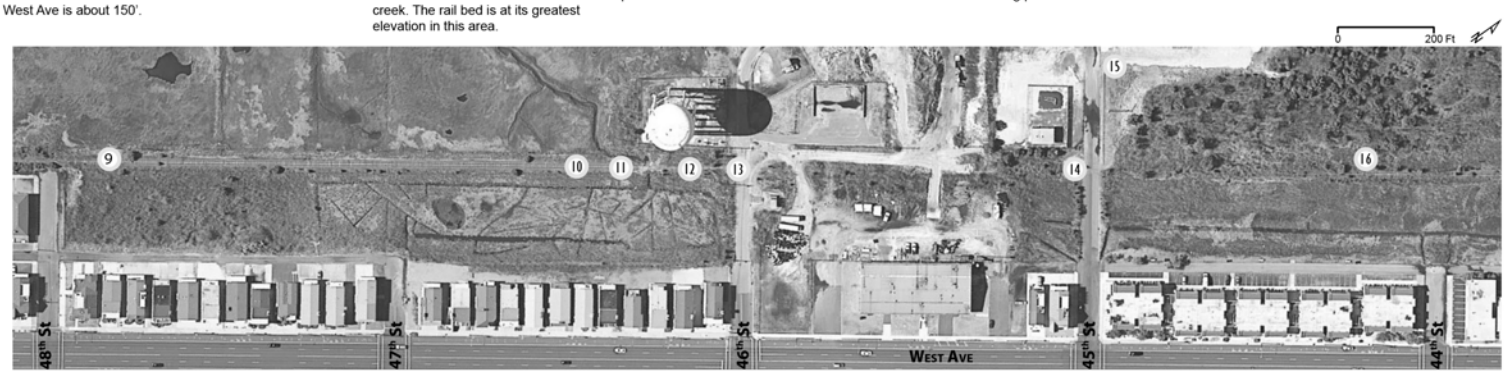
Looking north on rail bed between 48th and 47th St. The distance between the rail bed and houses on West Ave is about 150'.



Looking northwest from rail bed at the water tower across a small creek. The rail bed is at its greatest elevation in this area.

Looking west from 46th St. into the water treatment plant.

Looking southwest from the dog park.

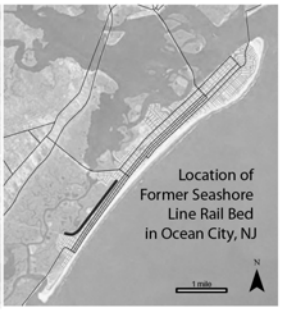


Looking south on rail bed between 47th and 46th Sts.

Looking east from the rail bed south of 36th St. across wetlands at the back of houses located on West Ave.

Looking north across 45th St/entrance to the dog park. The rail bed becomes impassible north of this point due to vegetation.

Bird's eye view of the rail bed near 44th St. Source: bingmaps.com



Ocean City Rail Trail & Bicycle Boulevard Project

Existing Conditions

Map 3: 44th St - 40th St

March 2011

One of two locations where the rail bed has been washed away.

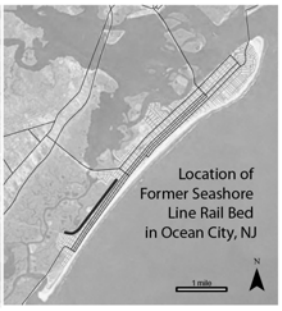
Evidence of rail bed erosion near 43rd St.

Looking west from rail bed over man-made waterways at houses located on the east side of West Ave.

Looking south over the break in the rail bed between 44th and 43rd St.

Looking south on rail bed near 41st St.

Bird's eye view of the rail bed and wetlands near 40th St. The meandering waterways are natural; while the straight ones are man-made.



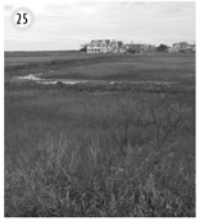
Ocean City Rail Trail & Bicycle Boulevard Project

Existing Conditions

Map 4: 40th St - 36th St

March 2011

The rail bed has been washed away between 40th and 39th St. It is one of two locations where there is a break in the rail bed.



Looking west near 38th St over wetlands at houses on Somerset Lane.

Looking west at man-made waterways through the wetlands.

Looking east on 36th St. The rail bed can be accessed at 36th St.

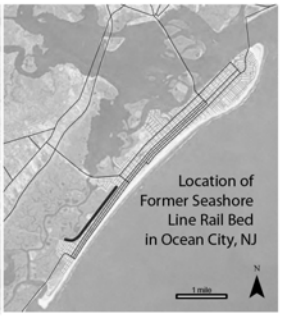
Looking north on Haven Ave from 36th St., the northern terminus of the project area. There are sharrows on this block of Haven Ave and it is a signed bike route.

Looking east over wash out at houses located on West Ave.

Looking east from rail bed over wetlands at 37th St.

The rails have been removed and the ties have become displaced along much of the north of 46th St.

Accessing the rail bed at the end of 36th Street. The rail bed is immediately parallel to Haven Ave. The northernmost roadway where the railbed can be accessed.



Environmental Background

Project Goal

The goal of the Ocean City Rail Trail task is to examine the opportunity for multi-use access to the bayside waterfront for education and recreation by opening the former Pennsylvania-Reading Seashore Line rail bed.

Project Area

The site is located along the railroad bed between 36th and 49th Streets in Ocean City within Cape May County, New Jersey. Haven Avenue was built along the railroad right-of-way. To the east is the Atlantic Ocean and ocean front property. To the west is Peck Bay and Great Egg Harbor Bay with associated lagoons and inlets connected to the bays. The former Pennsylvania-Reading Seashore Line in the southern portion of the island is bounded by wetland areas and residential properties. The entire project area lies within the CAFRA zone and will be subject to those regulations. Information was gathered through visual site inspection and using NJDEP's Geology and Environmental iMap program. Pertinent information has been included in this assessment.

Watershed

The project corridor spans two watersheds. The southern portion is located in the Cape May Watershed (16) and is in the Crook Horn Creek sub-watershed (16DA01). The northern portion of the project area is located in the Great Egg Harbor Watershed (15) and is in the Great Egg Harbor Bay/Lakes Bay/Skull Bay/Peck Bay subwatershed (15CA04).

Waterways

There are four mapped waterways in the vicinity of the proposed project area. They are all designated at FW2-NT/SE1 waterways. This means that the waterways do not support trout production; however, they are tidally influenced and are of high water quality that may be important to other aquatic activities. The waterways near the project area include; Weakfish Creek, tributary to Crook Horn Creek, tributary to Garret Thorofare, and Great Egg Harbor.

Vegetation

The primary community type in the area of the project is coastal salt marsh. Commonly found herbaceous vegetation includes salt marsh cordgrass (*Spartina alterniflora*), salt-meadow grass (*Spartina patens*), with spike grass (*Distichlis spicata*) and black grass (*Juncus gerardi*). Photos of the site show that along the edge there are marsh elder (*Iva frutescens*) and groundsel bush (*Baccharis halimifolia*). Growing in disturbed areas along the edge is phragmites (*Phragmites australis*).

Threatened and Endangered

The wetland and scrub areas provide Rank 4 habitat for state endangered and threatened species as listed below in Table 1. Most of the protected species are birds that require the wetland areas for nesting and foraging. (See Map 5: Protected Species Habitat.)

Note:

According to NJDEP's "Landscape Maps of Habitat for Endangered, Threatened and Other Priority Wildlife" (also known as "Landscape project Maps"). This ranking refers to contiguous habitat type valued according to presence of threatened, endangered or priority wildlife species.

Rank 5 – Presence of one or more wildlife species on the federal threatened and endangered species list.

Rank 4 – Has one or more occurrences of at least one State endangered species.

Rank 3 – Has one or more occurrences of at least one State threatened species.

Rank 2 – Has one or more occurrences of at least one State priority species.

Rank 1 – Meets habitat-specific suitability requirements.

Habitats ranks 3-5 require greater transition areas or "buffers" than do those ranked 1 or 2.

Table 1: Threatened and Endangered Species

Rank	Landscape Version	Species Common Name	Landscape Region	Acres
4	Version 2.1	Black Skimmer	Coastal	103.92357484
4	Version 2.1	Tricolored Heron	Coastal	103.92357484
4	Version 2.1	Glossy Ibis	Coastal	103.92357484
4	Version 2.1	American Oystercatcher	Coastal	103.92357484
4	Version 2.1	Least Tern	Coastal	103.92357484
4	Version 2.1	Northern Diamondback Terrapin	Coastal	103.92357484
4	Version 2.1	Emergent Suitable	Coastal	103.92357484
4	Version 2.1	Common Tern	Coastal	103.92357484
4	Version 2.1	Cattle Egret	Coastal	103.92357484
4	Version 2.1	Snowy Egret	Coastal	103.92357484
4	Version 2.1	Little Blue Heron	Coastal	103.92357484
4	Version 2.1	Black-crowned Night-heron	Coastal	103.92357484
4	Version 2.1	Osprey	Coastal	103.92357484

Wetlands

The bay side of the island between the barrier island and the mainland is lined with Rank 4 Emergent Wetlands. The wetlands contain emergent and scrub-shrub vegetation and are tidally influenced. These ecosystems are dependent upon a mixture of fresh and salt water. Several of the wetlands are mapped as being parkland. Wetlands also surround the existing Ocean City sewage treatment plant. The wetlands

are protected by the Coastal Wetlands Act of 1970 and the Freshwater Wetlands Act of 1987. There are several types of wetlands found in the area as listed below in Table 2. (See Map 6: Wetlands.)

Table 2: Types of Wetlands

E2EM1P	Estuarine Emergent Saline marshes
MODD	Modified Disturbed Wetlands
MODL	Modified Managed Wetlands
PEM1B	Palustrine Emergent Salt marshes
PEM1B/PSS1B	Palustrine Scrub/Shrub and herbaceous wetlands
PEM1E	Palustrine Emergent Herbaceous Wetlands
PF04B	Palaustrine Coniferous Wooded Wetlands
PSS1/4B	Palustrine mixed deciduous scrub/shrub wetlands

Soils

The site is underlain by five different soil types as noted below in Table 3. Most are considered acidic and would require appropriate precautions during construction and excavation activities. While they are all prone to seasonal flooding due to tide changes and storm events, Psammaquents, Pawcatuck-Transquaking, and Appoqunimink-Transquaking-Mispillion are listed on the New Jersey Hydric Soils List when they are found in flats and tidal marshes.

Table 3: Soil Types

USPSBR	Urban land-Psamments, wet substratum complex, 0 to 8 percent slopes, rarely flooded
USPSAS	Urban land-Psamments, sulfidic substratum complex, 0 to 2 percent slopes, occasionally flooded
PstAt*	Psammaquents, sulfidic substratum, 0 to 3 percent slopes, frequently flooded
PdwAv*	Pawcatuck-Transquaking complex, 0 to 1 percent slopes, very frequently flooded
AptAv*	Appoquinimink-Transquaking-Mispillion complex, 0 to 1 percent slopes, very frequently

**Listed hydric soil*

Known Contaminated Sites

Along the rail bed there is one Known Contaminated Site. It is located at the Ocean City Treatment Plant at 45th and Simpson Avenue. (See Map 7: Additional Environmental Constraints.)

Environmental Regulatory Analysis Summary

From a regulatory perspective, providing access along the former Pennsylvania Seashore Line rail bed between 49th and 36th Streets would potentially require various NJDEP permits depending on the type and extent of trail being proposed. It is important to note that no specific conclusions on the potential environmental impacts or permitting issues can be drawn without having definitive design concepts. Also important is the fact that depending on the funding source, different environmental compliance

documentation apply. This analysis does not address either National Environmental Policy Act (NEPA) or Executive Order (EO)-215 applicability as it is unknown at present what the final design concept or source and degree of project funding will be.

For the purpose of this report, this analysis is based on three conceptual scenarios: 1) providing multi-use access (bicycles, pedestrians, persons with disabilities, etc.) between 49th and 36th Streets (a "shared use path") along the rail bed, 2) providing pedestrian-only access between 49th and 36th Streets along the rail bed, and 3) providing pedestrian-only access to the bayside waterfront at selected points between 49th and 36th Streets along the rail bed.

Regardless of which scenario (or combination of scenarios) is explored for future conceptual design, a NJDEP wetland permit application would have to demonstrate (a) there is a public need for the project that outweighs the potential environmental impacts and (b) that the proposed concept satisfies the project need(s), purpose and goals. Both NJDEP and the US Army Corps of Engineers require an alternatives analysis showing that the proposed concept has the least overall environmental impact when taking into consideration all project needs, purpose and goals. It should also be noted that any permits authorized by state and federal agencies would likely include extensive compensatory wetland mitigation requirements.

The information gathered during this investigation yields that it is possible for the existing rail bed to be utilized as a trail if:

- the project purpose and need is clearly expressed as a unique opportunity for safe, multi-use access (including pedestrians, people with disabilities, etc.) to the bayside waterfront for educational and recreational purposes,
- the proposed facility design has the least impact among possible designs, and
- mitigation requirements are met.

The type of trail that would likely impose the least impact would be boardwalk. Because construction would likely have significant impacts to wetlands, threatened & endangered species, water quality, drainage, etc., the mitigation requirements would be extensive. Although it is possible to acquire permits if all the requirements are met, the expense to mitigate would likely cost more than construction. There is no way to identify which permits or mitigation would be required until a design scenario is proposed. At that time, if the design meets the purpose and need, permits and appropriate mitigation measures can be identified.

Examples of trails that were developed along former rail corridors with a similar context as Ocean City are included in Appendix I: Rail Trail Examples.

Liberty State Park, Jersey City, NJ
Source: The RBA Group

Branford Trolley lane, CT
Source: Traillink.com

Rail Trail, Chautauqua County, NY
Source: Traillink.com

Table 4: Trail Scenarios Matrix outlines three conceptual trail scenarios and lists the NJDEP regulatory permits that would potentially be required.

Table 5: Estimated Cost by Trail Type outlines various types of trails in terms of surface material and what the estimated construction cost per mile would be.

Table 4: Trail Scenarios Matrix

Potential Trail Scenarios	Location	Width	Potential Permits/Approvals
Shared Use Path	Between 49th and 36th streets along the rail bed	>6'	▪ NJDEP CAFRA Permit ▪ NJDEP Waterfront Permit ▪ NJDEP Individual Wetland Permit and Compensatory Wetland Mitigation Approval ▪ NJDEP 401 Water Quality Certification ▪ NJDEP Stormwater Approval ▪ U.S. Army Corps of Engineers (COE) Section 10 Permit ▫ COE Commenting Agencies: ▪ NOAA National Marine Fisheries Essential Fish Habitat Assessment for Corp. Permit ▪ U.S. Fish and Wildlife Service Review for Federal T&E Species Impacts ▪ Federal Coastal Zone Management Consistency Determination
Pedestrian-Only Path	Between 49th and 36th streets along the rail bed	≤6'	Same as above but could potentially use ***NJDEP General Wetland Permit*** instead of ***NJDEP Individual Wetland Permit***
Pedestrian-Only Access Segments	Select access points to bayside waterfront between 49th and 36th streets	≤6'	Same as above but could potentially use ***NJDEP General Wetland Permit*** instead of ***NJDEP Individual Wetland Permit***

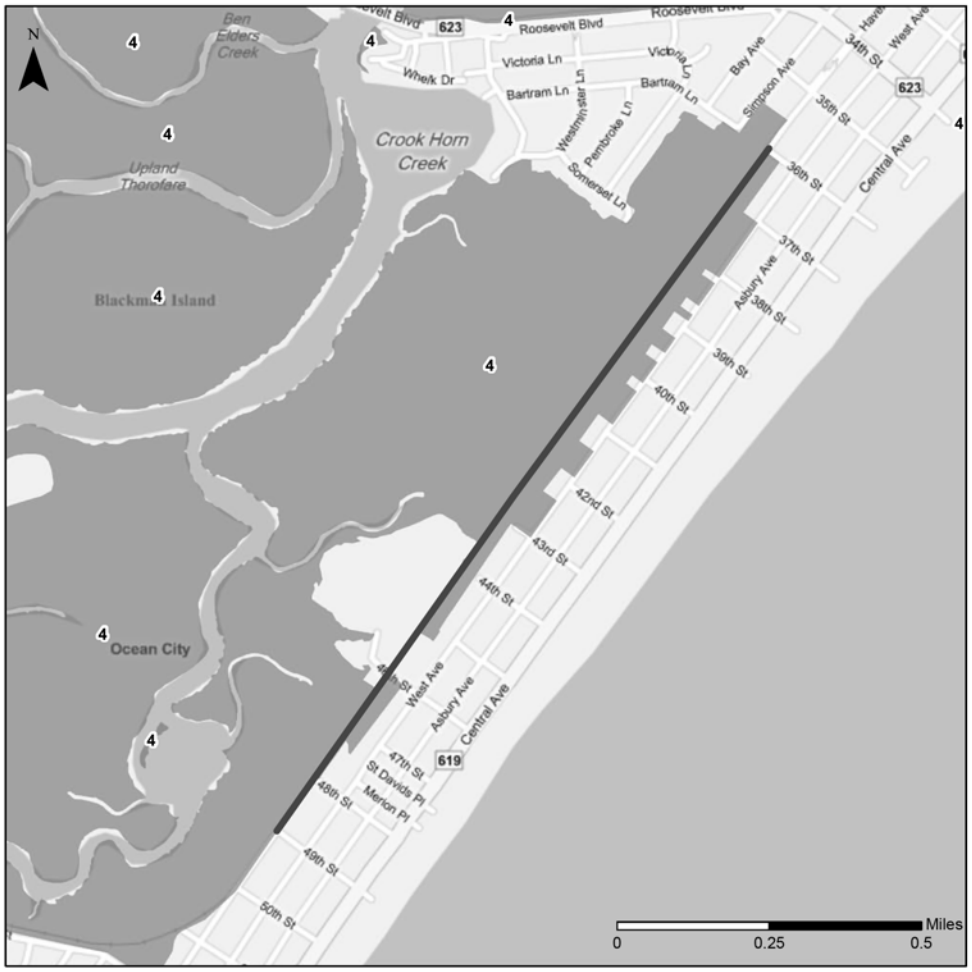
Note: If federal funds are used, the project will likely require approval of a National Environmental Policy Act (NEPA) Compliance Document issued by the U.S. Federal Highway authority (FHWA).

Note: Potentially required permits are determined in part by length and design of trail. If project limits (and associated potential impacts) are reduced, the need for certain permits may be lessened.

Table 5: Estimated Cost by Trail Type

Surface Material	Cost per mile	Longevity	Advantages	Disadvantages
Soil cement	$60,000-$100,000	Medium	Uses natural materials, more durable than native soils, smoother surface, low cost, accommodates multiple use.	Surface wears unevenly, not a stable all-weather surface, erodes, difficult to achieve correct mix. Not recommended for clay type soils.
Granular stone	$80,000-$120,000	Medium-Long (7-10 yrs.)	Soft but firm surface, natural material, moderate cost, accommodates multiple uses. Granular stone should include fines like quarry process, which choke the voids and makes it more firm and stable; does not get displaced easily and is easier to ride on.	Surface can rut or erode with heavy rainfall, regular maintenance needed to keep consistent surface, replenishing stones may be a long-term expense, not for areas prone to flooding or steep slopes.
Asphalt	$200,000-$300,000	Medium-Long (7-15 yrs.)	Hard surface, supports most types of use, all-weather, accommodates most users simultaneously, smooth surface to comply with ADA guidelines, low maintenance.	High installation cost, costly to repair, not a natural surface, freeze/thaw can crack surface, heavy construction vehicles need access.
Concrete	$300,000-$500,000	Long-term (20 yrs. plus)	Hardest surface, easy to form to site conditions, supports multiple use, lowest maintenance, resists freeze/thaw, best cold weather surface, most resistant to flooding.	High installation cost, costly to repair, not a natural-looking surface, construction vehicles will need access to the trail corridor.
Boardwalk, (w/appropriate plank spacing)	$1.5-$2 million	Medium-Long	Necessary in wet or ecologically sensitive areas, natural-looking surface, low maintenance supports multiple use.	High installation cost, costly to repair, can be slippery when wet.
Resin-stabilized	Varies (depending on type of application)	Medium-Long (depending on type of application)	Aesthetics, and less environmental impact, possible cost savings if soil used, can be applied by volunteers.	Need to determine site suitability and durability, may be more costly in some cases.
Native soil	$50,000-$70,000	Short to Long (depending on local use and conditions)	Natural material, lowest cost, low maintenance, can be altered for future improvements, easiest for volunteers to build and maintain.	Dusty, ruts when wet, not an all-weather surface, can be uneven and bumpy, limited use, possibly not accessible.
Wood chips	$65,000-$85,000,	Short-Term (1-3 yrs.)	Soft, spongy surface good for walking, moderate cost, natural material.	Decomposes under high temperature and moisture, requires constant replenishment, not typically accessible, limited availability, not appropriate for flood prone areas.
Recycled materials	Varies	Varies	Good use of recyclable materials, surface can vary depending on materials.	Design appropriateness and availability vary.

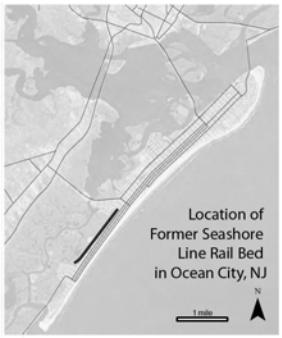
Source: *Trails for the Twenty-First Century, second edition*



Ocean City Rail Trail & Bicycle Boulevard Project

Protected Species Habitat
Map 5

March 2011



Legend

Rail Bed Alignment

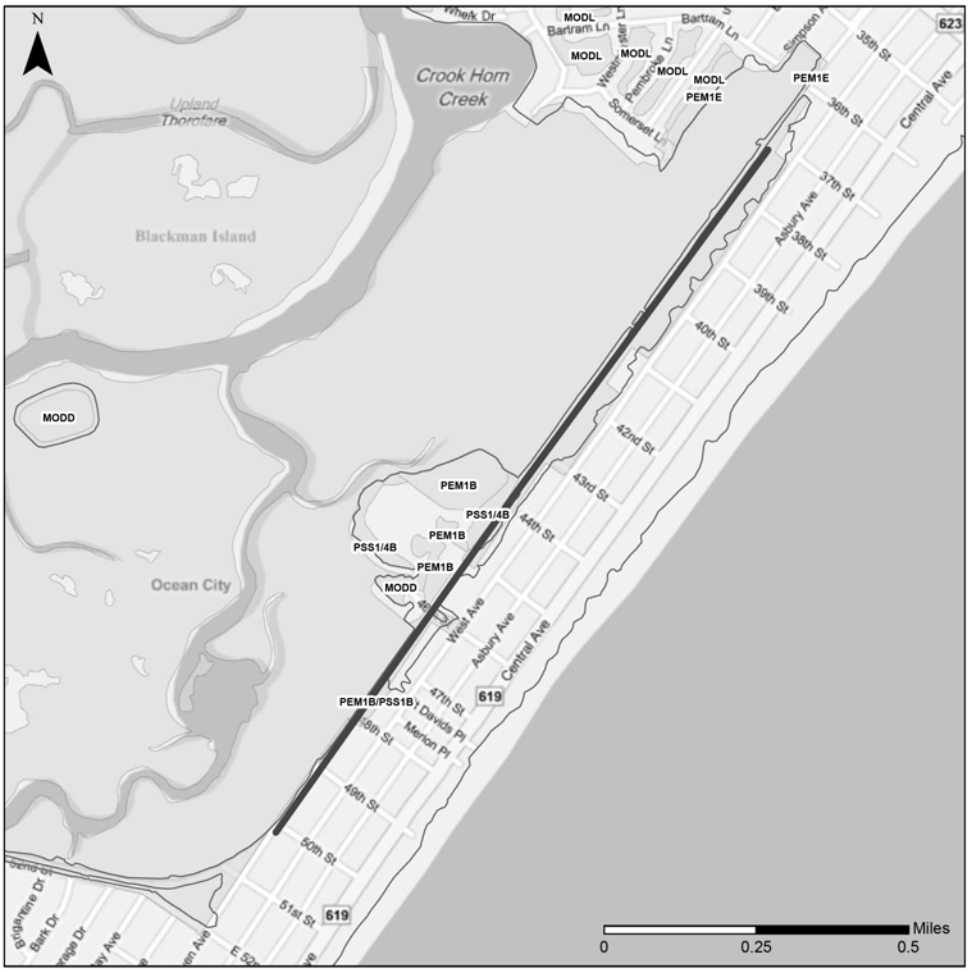
NJDEP Landscape Project 2.1

Emergent Wetland Rank

- Suitable Habitat (1)
- Priority Species (2)
- State Threatened (3)
- State Endangered (4)
- Federal T and E (5)

Bing World Street Map

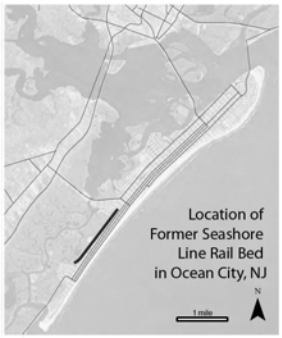
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by the NJDEP and is not State-authorized.



Ocean City Rail Trail & Bicycle Boulevard Project

Wetlands Map 6

March 2011



Legend

Rail Bed Alignment

Upper Coastal Wetland Boundary

Projected Freshwater Wetlands

Bing World Street Map

Types of Wetlands

E2EM1P - Estuarine Emergent Saline marshes

MODD - Modified Disturbed Wetlands

MODL - Modified Managed Wetlands

PEM1B - Palustrine Emergent Salt Marshes

PEM1B/PSS1B - Palustrine Scrub/Shrub & Herbaceous Wetlands

PEM1E - Palustrine Emergent Herbaceous Wetlands

PF04B - Palustrine Coniferous Wooded Wetlands

PSS1/4B - Palustrines Mixed Deciduous Scrub/Shrub Wetlands

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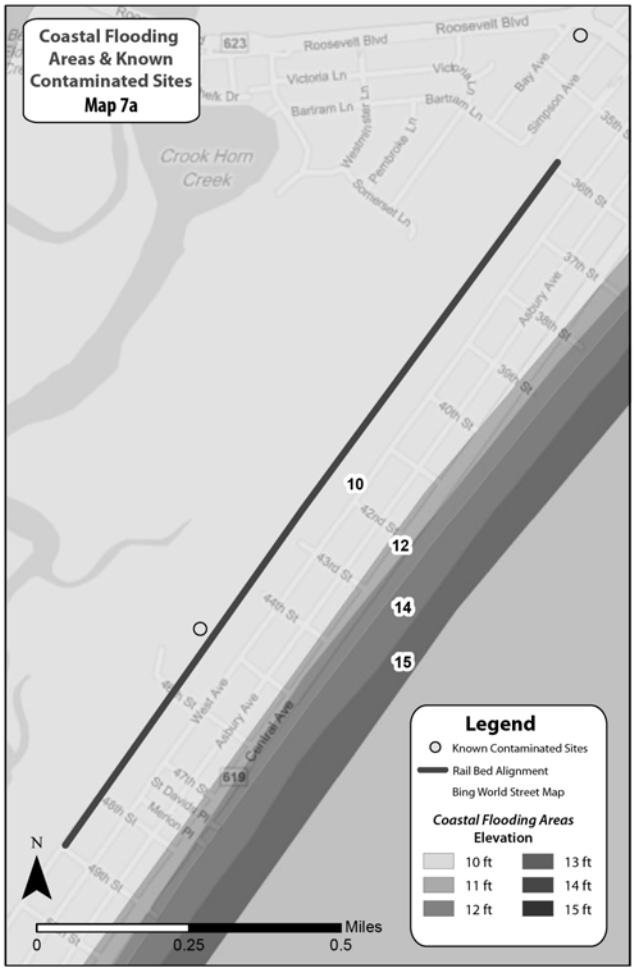
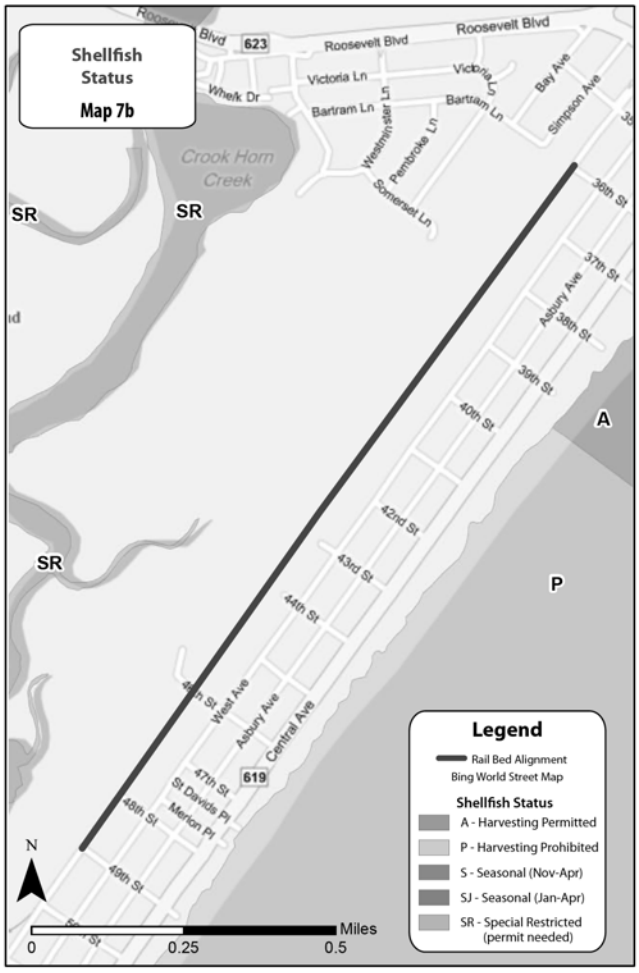


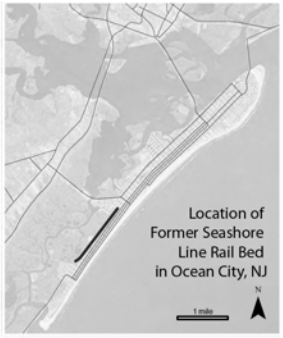


Ocean City Rail Trail & Bicycle Boulevard Project

Additional Constraints

Map 7

March 2011



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 the NJDEP and is not State-authorized.

BICYCLE BOULEVARD NEEDS ASSESSMENT SUMMARY

Overview

The purpose of this Bicycle Boulevard Needs Assessment is to examine the existing Haven Avenue Bicycle Boulevard (OC1 Bike Route) in its various stages of completion between 56th and 1st Streets as well as connections to Corson's Inlet Park to the south and the Longport Bridge to the north.

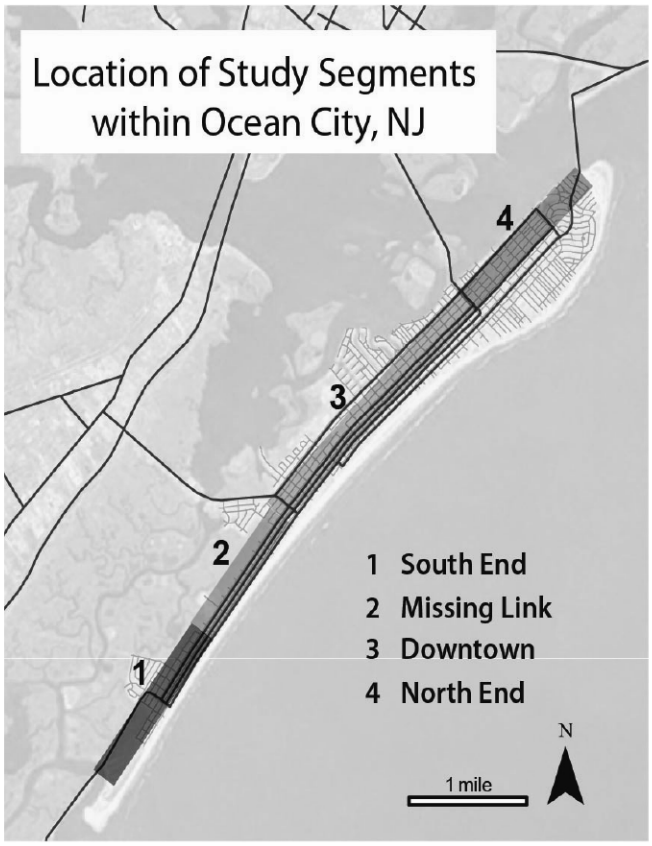
This assessment of the history, existing conditions and proposed future stages of development will lead to a best-practice approach for implementation of a "bicycle-priority" on-road corridor, primarily along Haven Avenue, for the length of the island (approximately 7 miles).

This evaluation identifies barriers, gaps in connectivity, substandard conditions, and assesses the opportunities and constraints associated with the corridor's capability to safely accommodate prioritized bicycle and pedestrian travel.

The corridor is divided into four geographic areas:

- Segment 1 - South End (south of 49th Street)
- Segment 2 - Missing Link (between 49th Street & 36th Street)
- Segment 3 – Downtown (between 36th Street and 9th Street)
- Segment 4 - North End (north 9th Street)

For each of these segments, a summary of existing conditions and opportunities for enhancing the bicycle priority based on state and national design guidance is included.[1] Following each segment description, an Existing Conditions/Opportunities & Constraints Map is provided.



[1] Sources include the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, the Manual on Uniform Traffic Control Devices (MUTCD), the NJDOT Pedestrian and Bicycle Compatible Design Guidelines, the Institute of Transportation Engineers (ITE), State of the Practice Traffic Calming Guide, and the Federal Highway Administration (FHWA) Designing Sidewalks and Trails for Access, Best Practices Design Guide.

Design Guidance

A bicycle boulevard is a type of shared roadway that provides a degree of bicycle primacy on selected roadways. Bicycle boulevards are usually collector or minor arterial streets. Some recommended guidance on the design elements of a bicycle boulevard include the following:

- Select a street that provides a direct and continuous connection for bicyclists. Bicycle boulevards work best on a street grid system.
- Turn stop signs towards intersecting traffic.
- Place motor vehicle traffic diverters at key intersections. The diverters must be designed to allow through bicycle movement. Include a cut-through wide enough to accommodate a bicycle with a trailer (4 feet wide).
- Alternatively, place traffic calming devices on the street. Include traffic circles, speed humps, curb extensions, neck down, chicanes, etc.
- Place directional signs to route bicyclists to key destinations, to guide bicyclists through difficult situations, and to alert motorists to the presence of bicyclists.
- Provide protection where the boulevard crosses higher volume arterial streets with traffic signals and/or median refuge islands where appropriate.

Bicycle Boulevard, Berkeley, CA
Source: Payton Chung on Flickr.com

Travel speeds along a bicycle boulevard are intended to be similar for all traffic, including motor vehicles and bicycles. This helps to diminish conflicts and create a peaceful travel experience for everyone using the roadway. One way to help ensure that motor vehicle traffic does not exceed the intended operating speed is to install a variety of traffic calming features along a roadway. This will help to make it intuitive for motorists to drive appropriately, and makes the roadway 'self enforcing' through its design.

Traffic calming measures that impact driver behavior can be categorized into volume control or speed control. Some measures that target cut-through traffic and minimize volume, include restricted turns, roadway closures or median barriers. Speed control measures include passive concepts such as gateways or streetscape that changes a driver's perspective of a corridor, and active concepts that force a driver to physically alter their travel path. This can be accomplished with speed humps, curb extensions, mini traffic circles or any of numerous tested and proven techniques to help encourage motorists to drive at an intended speed.

Median island with a raised mid-block crosswalk
Source: Richard Drdul from Wikipedia. com

According to Ocean City Ordinance 10-05 (February 2010), the City Council voted to amend the Ocean City Traffic Ordinance, Chapter VII by designating multiple Four-Way Stop Intersections along Haven Avenue. Some research has shown that all-way stop control may reduce speeds in its immediate area, but in some cases, speeds increase between intersections. According to the Institute of Transportation Engineers publication "All-Way Stops Versus Speed Humps: Which is more effective at slowing traffic speeds?" David E. Clark, P.E states that traffic speeds along a roadway increase when a series of all-way stop are installed, but decrease when speed humps are installed.[2]

[2] www.ite.org/traffic/documents/AB00H1902.pdf

Segment 1 – South End

The "South End" segment is comprised of OC1 Bike Route along Haven Avenue between 56th Street and 49th Street, West Avenue from 59th to 56th and connections to Corson's Inlet Trail and the Ocean Drive Bridge to Strathmere.

Existing Conditions

- Ocean Drive, 56th Street and West Avenue are all designated as Cape May County Route 619. 56th Street east of West Avenue is designated as County Route 619 Spur.
- There is a 70 yard gap between the south end of West Avenue and the northeastern terminus of Corson's Inlet Trail. The surrounding area is low lying, likely wetlands.
- There are no dedicated bicycle facilities within the South End except the Corson's Inlet Rail Trail which does not connect to the surrounding roadway network. The trail dead ends just south west of the intersection of West Avenue and 59th Street, with access from the Corson's Inlet State Park.
- Low speed, low motor vehicle traffic volume along Haven Avenue.
- Street quilts have been painted at the intersections of Haven Avenue and 53rd Street and 52nd Street at either end of the playground.
- There is all-way stop control at two intersections along this segment of Haven Avenue, at the intersections with:
  - 53rd Street
  - 52nd Street
- There is a parallel alley between Haven Avenue and West Avenue throughout this segment.
- The pavement width varies between 20 feet and 40 feet along Haven Avenue.
- On street parking is permitted but not striped along Haven Avenue.
- The OC1 Bike Route is signed between 56th and 49th Streets along Haven Avenue.
- West Avenue has head-in angled parking along each side between 55th Street and its southern terminus at 59th Street.

Note: Ocean City Ordinance 10-05 (February 2010) designates 51st and 53rd intersections as four-way-stops.

Opportunities for Enhancing Bike Boulevard

Opportunities for enhancing bicycle-priority travel in the South End include OC1 Bike Route as well as connections to Strathmere Bridge and/or connections to Corson's Inlet. Some opportunities include:

- Construct a boardwalk style shared use path segment to connect the Corson's Inlet Trail to the local roadway network at the south end of West Avenue at 59th Street.
- Bicyclists entering Ocean City from the south travel along County Route 619/Ocean Drive. Provide a visual gateway at 56th Street just south of Ocean Drive. This would provide guidance to Ocean City's bicycle boulevard alignment.
- Extend OC1 Bike Route from the southern terminus of Haven Ave at 56th Street to the west along 56th Street to Ocean Drive. This extension is along County Route 619, and could be extended further south to Strathmere and points further south along a larger County bicycle route network. In the long term OC1 Bike Route could be further extended to include the Corson's Inlet trail, once it is connected to the local roadway network at its northern terminus.
- Enhance bicycle accommodations along Ocean Drive from 56th Street to Strathmere Bridge. Pavement shoulder striping treatments could be enhanced to include signed and striped bike lanes.

- If Corson's Inlet Trail is connected to West Avenue at 59th Street, enhance bicycle accommodations along West Avenue for 3 blocks between 59th Street and 56th Streets, and along 56th Street for 1 block between West Avenue and Haven Avenue. Provide wayfinding signs and pavement striping information - pavement striping treatments could include shared lane markings.
- There is existing angled parking along this segment of West Avenue. The parking could be reconfigured to back-in angled parking to minimize conflicts between bicyclists, pedestrians and auto traffic and maximize visibility.
- Eliminate the stop traffic control at 53rd Street and 51st Street intersections along Haven Avenue in this segment to be consistent with the Ocean City Circulation Element of the Master Plan. The proposed configuration would provide more uninterrupted traffic flow along Haven Avenue.
- As stop signs on Haven Avenue are removed and through-traffic is prioritized, consider other traffic calming elements to keep speeds down but maintain bicycle-priority operation of the roadway. This could include shared lane markings, painted chicanes, colored shoulders, painted or planted medians, curb extensions, speed humps, etc.
- Explore potential locations for bike parking along the bike boulevard where there is potential demand.
- Implement reduced residential speed limit to institutionalize appropriate travel speeds and traffic calming efforts.
- Remove double yellow centerline to minimize "runway" or "highway" feel of overchannelizing a shared roadway. Motor vehicles will tend to drive toward the center of the roadway, giving more space for bicycle use along each travel direction and yield or adjust position when there is oncoming motor vehicle traffic.

Back-in angled parking in Seattle, WA
Source: Carl Sundstrom
www.pedbikeimages/org

Ocean City Rail Trail &
Bicycle Boulevard Project

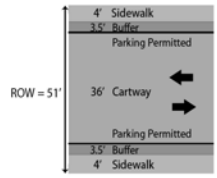
Existing Conditions, Opportunities & Constraints

Map 8 - South End

March 2011

① Rail Trail in Corson's Inlet

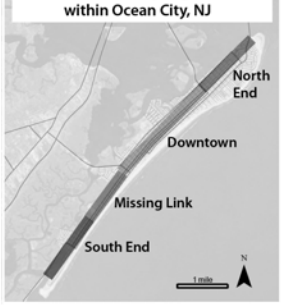
③ Haven Ave between 56th - 51st Streets



② End of Rail Trail in Corson's Inlet

④ Haven Ave between 50th - 49th Streets

Location of Study Segments within Ocean City, NJ



Legend

- Wetlands
- Street Quilt
- School
- Park/ Open Space
- Street Closure
- Back-out Conflicts
- Transportation Center
- Gateway/Access Road
- Off-Road Path
- Stop Sign
- County Road
- Traffic Signal
- OC1 / Haven Ave Bicycle Route
- Planted Median
- City Identified Connector Route
- Angled Parking
- Potential Bicycle Enhancements
- Potentail OC1 Extension

0 0.25 0.5 mi.

GIS Data Sources: Roads & Parcel Layer from Civil Solutions, a division of ARH, modified by the Cape May County Planning Department; Wetlands, NJDEP

Segment 2 – Missing Link

The "Missing Link" segment is described as such because the Haven Avenue corridor is discontinuous between 49th and 36th Streets. In terms of creating a continuous bicycle-priority on-road facility for the entire length of Ocean City, the gap in Haven Avenue is the primary constraint. However, various opportunities to connect the corridor exist. The potential opportunities to fill the gap in Ocean City's bicycle boulevard are presented in this assessment as 3 separate alignment scenarios including:

- West Avenue alignment
- alleyway alignments
- Asbury Avenue alignment

A combination of alignment scenarios can also be considered for future concept design.

The existing conditions and opportunities for each of these alignments are listed below.

Existing Conditions (West Avenue)

- West Avenue is a 70 foot wide 4 lane arterial roadway, designated as County Route 619. There is on-street parking and sidewalks on each side of the road. The wide crossing distance combined with high traffic speeds and volume create a difficult crossing situation for pedestrians.
- There are existing bike lanes adjacent to parking in each direction. There is no buffer between the bike lanes and either the motor vehicle lanes or the on-street parking.
- The traffic volume is approximately 20,000 vehicles per day (Summer Season ADT, OC Circulation Element, 2005).
- The posted speed limit is 30 miles per hour; however, the 85 percentile speed is approximately 40 miles per hour.
- Casual, family and/or novice cyclists primarily choose to bicycle on the sidewalk where they are separated from high traffic speeds and volumes rather than using the existing bicycle lanes on West Avenue. Sidewalk bicycling is prohibited in Ocean City by ordinance.
- Several residential properties have driveway access directly along West Avenue. This contrasts with many of the areas of Ocean City that have alleys behind their homes. Having the only vehicle access along the major roadway and potential bicycle travel way poses potential conflicts when loading, unloading or access the cars if the bicycle facility is located between the auto parking and the houses.
- This segment of West Avenue is a Coastal Evacuation Route.

Opportunities for Enhancing Bike Boulevard (West Avenue)

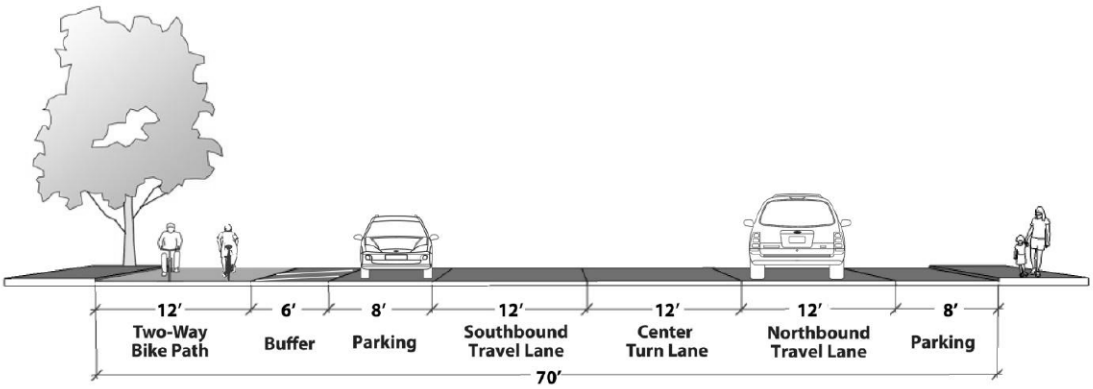
There are multiple configuration options for enhancing bicycle accommodation along the West Avenue corridor. Each of these is described below. Any speed humps or traffic calming measures are subject to NJDOT approval along Coastal Evacuation Routes.[3] The following configurations involve a redistribution of space by re-striping the roadway. No construction is included.

[3] NJ Senate Bill 2482, NJ 214th Legislature, Introduced December 9, 2010 – Status: Pending
Amends NJ Motor Vehicles and Traffic Regulation Title 39:4-8.10
Eliminates DOT approval of municipal traffic calming measures on state or county roadways in business districts **except those roadways designated as a coastal evacuation route**.

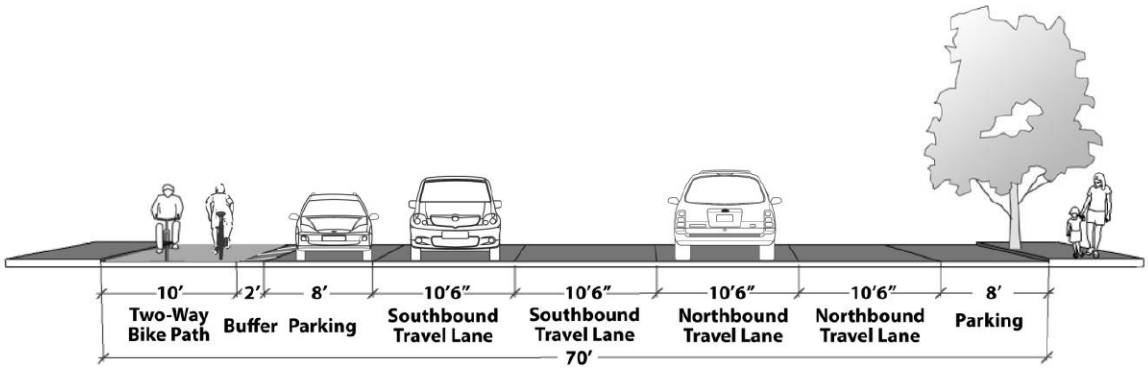
- A bike path for two-way bicycle use could be developed along the west (southbound) side of West Avenue. This concept has the strong advantage of being in close proximity to Haven Avenue. It also has no major roadway crossings, greatly reducing potential conflicts with motor vehicle traffic. Providing a separated facility within the West Avenue right-of-way is completely compatible with the Ocean City vision for the overall Bicycle Boulevard concept. This path would need to be at least 8 feet wide to accommodate two-way bicycle traffic. This concept has a potential for conflicts at residential driveways located along the west (southbound) side of West Avenue. However, similar sidepaths have been constructed and successfully managed throughout the country and abroad. Three potential sidepath configurations are:

Two-way bike path, Washington, DC
Source: The RBA Group

  - *Road Diet and Two-Way Bike Path* (Protected 2-way bike path) This concept places West Avenue on a "Road Diet" to convert the existing four motor vehicle travel lanes to three, including a center turn lane. The "gained space" would be used in combination with the relocated bike lanes to create a buffer and two-way bike path within the existing roadway. This protected bike path would be located along the western (southbound) curb. On-street parking would be located between the bike path and travel lane. Due to the "road diet", this concept has the advantage of including buffers between cyclists and motor vehicles.

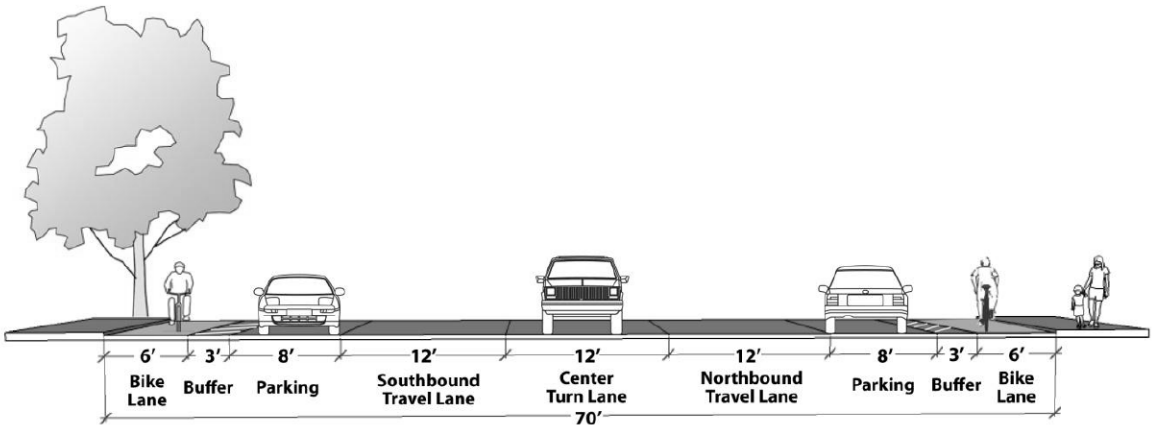


- *No Road Diet and Two-way Bike Path* (Protected 2-way bike path). This concept maintains the current four lane roadway cross section and reallocates the existing bike lane space to a two-way bike path along the west (southbound) side of West Avenue within the existing roadway. This would only have minimal space for any buffer between parking and the bike path or the motor vehicle lanes. This concept is designed to the minimum width allowing for no buffer between bicyclists and motor vehicles.

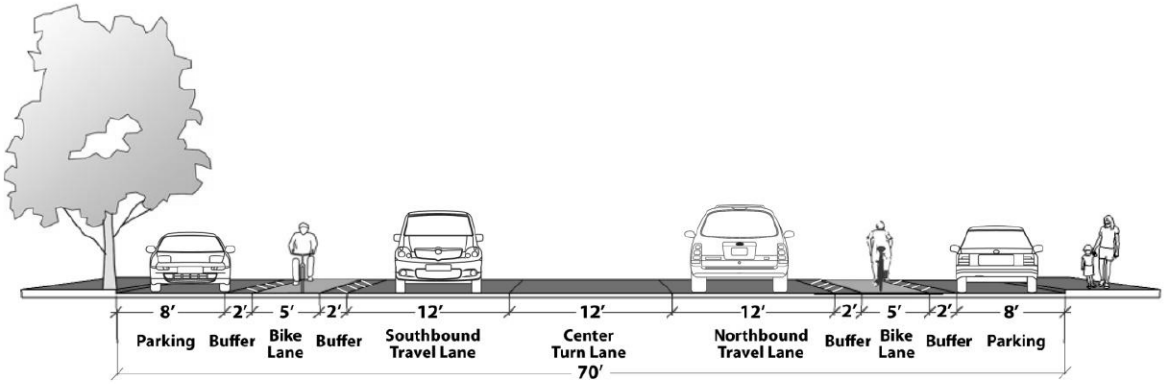


- Bike lanes along West Avenue could be reconfigured to provide buffers between cyclists and motor vehicles. These potential configurations are:

  - *Road Diet and Protected Bike Lanes* (Protected bike lanes) This concept switches the position of the existing on-street parking and the bike lanes and places West Avenue on a "Road Diet" to convert the existing four motor vehicle travel lanes to three, including a center turn lane. The "gained space" would be used to provide buffer areas between the on-street parking and the bike lanes. In the proposed configuration the bike lanes will be next to the curb, and will be separated from the motor vehicle travel lanes by the on-street parking. This restriping configuration can be implemented within the existing roadway width.



- *Road Diet and Bike Lanes with Buffers* (Bike lanes with buffers) This concept will provide space for bike lanes with buffers by placing West Avenue on a "Road Diet" to convert the existing four motor vehicle travel lanes to three, including a center turn lane. The "gained space" would be used to provide buffer areas on both sides of the bike lanes. The bike lanes would be located between the on-street parking and the motor vehicle travel lanes, as they are currently located. The additional buffer areas will help to minimize 'dooring' conflicts between bicycle traffic and the on-street parking.



- Bike boxes should be considered at the approach to the traffic signals along West Avenue at 46th Street and 40th Street.

- Bicycle accommodation along 49th Street and 36th Street should also be enhanced to complete access between Haven Avenue and West Avenue. This could most easily be accomplished through installing signs and shared lane pavement symbols and/or bike lane striping. These two roadways each terminate at Haven Avenue, so traffic volume and speeds should not be a major concern. Turning to and from the northbound side of West Avenue will be a concern, especially if the bike lane concepts are selected, as this will require bicycle traffic to cross West Avenue. Colorized bike lanes or continuous bike chevron symbols could be striped along the intended bicycle travel path to help with both wayfinding and to advertise to motorists that they should anticipate turning bicycle traffic.

- "Bikes may use full lane" Manual on Uniform Traffic Control Devices sign R4-11 should be installed throughout the Bicycle Boulevard.

- Explore potential locations for bike parking along the bike boulevard where there is potential demand.

Existing Conditions (Alleys)

- The existing alleyways between 49th and 36th Streets provide an option for bicycle travel on a low volume facility as compared to on-street riding.
- The alleys fall under City jurisdiction.
- There is very low traffic volume, most of which is very local traffic.
- High potential for conflicts at cross streets (13 blocks to cross). Alley traffic must stop at each cross street.
- There is not one continuous alleyway for the entire length of this segment. East of West Avenue, an alley runs between 47th Street and 36th Street and west of West Avenue, there is an alley between 49th Street and 47th Street. These two sections would have to be pieced together and utilize 47th Street in order for this option to span the entire gap. This would include crossing West Avenue along 47th Street.
- Bicycle and pedestrian traffic will have conflicts with parking cars, utilities and trash collection along the alleys.
- There is angled parking and open access head in parking between 41st Street and 40th Street.
- 47th Street and 36th Street have stop signs on the approaches to West Avenue. West Avenue traffic does not stop at the intersections with 47th Street and 36th Street.
- 49th, 47th, and 36th streets permit on-street parking.

Opportunities for Enhancing Bike Boulevard (Alleys)

Alleyways can be designed to be a natural extension of a bicycle-priority bicycle boulevard. There are opportunities to incorporate shared lane markings in each direction, and pavement stencils of bicycles centered along the narrow two-way travel lane. This is an element of the Woonerf concept ("living street") that has been used successfully in many locations throughout the United States and abroad.

- Require stops on cross streets at the approach to the alley. This would require a change in stop control to be along the east/west cross streets on the approach to the 13 alley crossings.
- Vertical traffic calming measures such as raised intersections, crosswalks or speed tables could be installed at every alley crossing.
- Striped crosswalks, yield lines, continuous chevrons, and/or colorized bike lanes could be installed at every alley crossing.
- Zigzag edge lines should be installed on the approach to every alley crossing.
- Bicycle accommodation along 49th Street, 47th Street and 36th Street should also be enhanced to complete access between the Haven Avenue corridor and the alley alignment along the "Missing Link" segment. This could most easily be accomplished through installing signs and shared lane pavement symbols and/or bike lane striping.
- At 49th, 47th and 36th streets colorized bike lanes or continuous bike chevron symbols could be striped along the intended bicycle travel path across intersections to help with both wayfinding and to advertise to motorists that they should anticipate turning bicycle traffic.

Raised crossing, British Columbia
Source: John Lutton on Flickr.com

- This routing does require crossing West Avenue along 47th Street and 36th Street. To accommodate families and all bicycle traffic a signalized traffic control such as a traditional traffic light or a HAWK signal, that operates only when actuated, should be installed along West Avenue at 47th Street and 36th Street.
    - Bike boxes should be considered to augment the existing bicycle lanes along West Avenue at the approaches to the potential signals at 47th Street and 36th Street.
    - Zigzag edge line treatments should be installed on the West Avenue approach to the major crossing locations, including 47th Street and 36th Street.
    - Install wayfinding signs to confirm and advertise the routing of the bicycle boulevard.
    - "Bikes may use full lane" Manual on Uniform Traffic Control Devices sign R4-11 should be installed throughout the Bicycle Boulevard.
    - Explore potential locations for bike parking along the bike boulevard where there is potential demand.

Zigzag lines
downtown Hilo, Hawaii Island
Source: County of Hawaii

Existing Conditions (Asbury Avenue)

- Ocean City has jurisdiction along Asbury Avenue.
- There is low traffic volume, and speed, along this 32 foot wide roadway.
- There are primarily residential land uses along the roadway.
- Asbury Avenue is three blocks away from Haven Avenue. Using this alignment will require two crossings of West Avenue.
- Ocean City has a concept to create a one-way couplet, with Central Avenue running southbound and Asbury Avenue running northbound. The viability of this concept is being determined by Ocean City. If traffic calming elements are not incorporated into this concept, travel speeds will likely increase.
- Existing stop control is along the east/west cross streets, traffic flow along Asbury Avenue is uninterrupted through the "Missing Link" corridor segment.

Opportunities for Enhancing Bike Boulevard (Asbury Avenue)

All parallel roadways pose an opportunity to connect the Haven Avenue Bike Boulevard in this section. Asbury Avenue, although three blocks east of Haven Avenue, could be considered as a potential link.

- Asbury Avenue could be enhanced with shared lane markings to reinforce the legitimate use and proper lane positioning of bicycle traffic.
- Wayfinding signs could be installed to confirm and advertise the routing of the bicycle boulevard.
- Bicycle accommodation along 49th Street and 36th Street should also be enhanced to complete access between Haven Avenue and the alignment along Asbury Avenue. This could

Mini Roundabout, Vista Street Bike Blvd, Long Beach, CA
Source: Allan Crawford, bikelongbeach.org

most easily be accomplished through installing signs and shared lane pavement symbols and/or bike lane striping.

- This routing does require crossing West Avenue along 49th Street and 36th Street. To accommodate families and all bicycle traffic, a signalized traffic control such as a traditional traffic light or a HAWK signal, that operates only when actuated, should be installed along West Avenue at 49th Street and 36th Street.
    - Bike boxes should be considered to augment the existing bicycle lanes along West Avenue at the approaches to the potential signals at 49th Street and 36th Street.
    - Zigzag edge line treatments should be installed on the West Avenue approach to the major crossing locations, including 49th Street and 36th Street.
- Install wayfinding signs to confirm and advertise the routing of the bicycle boulevard.
- If the one-way couplet concept is implemented along Asbury Avenue and Central Avenue, space within each roadway should be striped for dedicated use by bicycle traffic. This configuration should be refined further if this overall concept is advanced, but could include both traditional bike lanes and contra-flow bike lanes along Asbury Avenue.
- "Bikes may use full lane" Manual on Uniform Traffic Control Devices sign R4-11 should be installed throughout the Bicycle Boulevard.
- Explore potential locations for bike parking along the bike boulevard where there is potential demand.

Ocean City Rail Trail &
Bicycle Boulevard Project

Existing Conditions, Opportunities & Constraints

Map 9 - Missing Link

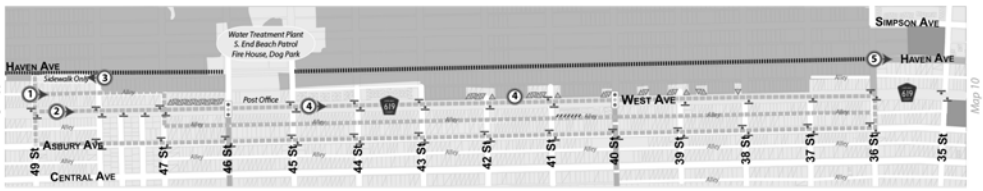
March 2011

① Alley between Haven & West Ave at 49th St

③ Haven Ave between 49th - 48th St

④ Aerial view of the 3 potential on-road extensions of OC1

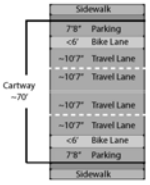
⑤ Looking north on Haven Ave at 36th St



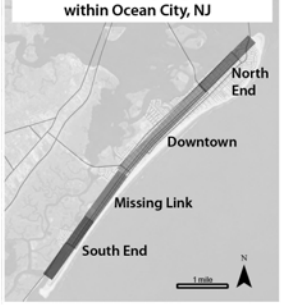
② Looking north on West Ave.

④ Bicycle Facilities on West Ave.

West Ave/Co. Rt. 619 between 55th - 35th St.



Location of Study Segments within Ocean City, NJ



Legend

- Wetlands
- Park/ Open Space
- Transportation Center
- Off-Road Path
- County Road
- OC1 / Haven Ave Bicycle Route
- City Identified Connector Route
- Potential Bicycle Enhancements
- Street Quilt
- Street Closure
- Stop Sign
- Traffic Signal
- Planted Median
- Angled Parking
- Potentail OC1 Extension
- School
- Back-out Conflicts
- Gateway/Access Road

0 0.25 0.5 mi.

GIS Data Sources: Roads & Parcel Layer from Civil Solutions, a division of ARH, modified by the Cape May County Planning Department; Wetlands, NJDEP

Segment 3 – Downtown

This 27-block segment of Haven Avenue traverses the majority of the "downtown" area of Ocean City. Major bicycling and walking destinations are located along this segment, including the Ocean City Community Center and the Intermediate Middle School. This segment of Haven Ave was dedicated as OC1 Bike Route in 2008 and was the first Bicycle Boulevard in NJ.

Existing Conditions

- The Haven Avenue corridor between 36th Street and 9th Street is the backbone of the Bicycle Boulevard in Ocean City.
- Ocean City has jurisdiction of Haven Avenue.
- There are 15 different street configurations in this stretch of Haven Avenue, with varying types of bicycle facilities including:
    - Shared road
    - Side bike path, with or without a planted buffer
    - Planted median and shared travel lanes
    - Painted median and shared travel lanes
    - Center median bike path
    - OC1 Bike Route signage
- Pavement width varies between 20 feet and 53 feet wide.
- Right of Way varies between 29 feet and 71 feet wide.
- There is some forced traffic control, with roadway closures along the 30th Street, 32nd Street and 33rd Street approaches to Haven Avenue from the west.
- Transitions between various roadway segment configurations are not always smooth or intuitive for through bicycle and pedestrian traffic.
- County Route 623/34th Street is a major access to Marmora to the west, with heavy traffic volume. Motor vehicle traffic is reported to frequently cut through the local roadways, using Haven Avenue to avoid traffic signal at West Avenue.
- The posted speed limit is 20 mph.
- The planted median located between 24th Street and 20th Street has a break at the intersection with 22nd street, but is continuous through the intersections with 23rd Street and 21st Street. This forces traffic traveling along 21st Street and 23rd Street to turn right onto Haven Avenue.
- There is all-way stop control at 17 of the 28 intersections along this segment of Haven Avenue, including the intersections with the following roadways:
    - 33rd Street
    - 32nd Street
    - 31st Street
    - 29th Street
    - 24th Street
    - 23rd Street
    - 22nd Street
    - 21st Street
    - 20th Street
    - 19th Street
    - 18th Street
    - 17th Street
    - 14th Street
    - 13th Street
    - 12th Street
    - 11th Street
    - 10th Street.

Note: Ocean City Ordinance 10-05 (February 2010) designates all intersections in the Downtown Segment as Four-Way-Stop control.

Opportunities for Enhancing Bike Boulevard

Opportunities to enhance this segment of Haven Avenue to become a bicycle-priority corridor could include the following:

- Where the existing bicycle accommodation works well, maintain the current treatments. This will minimize construction costs by utilizing existing bicycle facilities where appropriate.
- Enhance bicycle-priority by including treatments ranging from signs and pavement striping to constructing curb extensions and street closures.
- The boulevard treatment that is in place along Haven Avenue between 24th Street and 20th Street, with its planted center median, curb extensions and shared travel lanes, could be extended throughout the corridor. Segments of Haven Avenue that already have a shared use path along one side of the roadway, could also benefit from this treatment. Young children could continue to use the path; however, the shared travel lanes will be emphasized to give bicycle priority.
- "Bikes may use full lane" Manual on Uniform Traffic Control Devices sign R4-11 should be installed throughout the Bicycle Boulevard.

OC Pavement marking with planted median
Source: The RBA Group

- The transitions between the various bicycle treatments along the corridor should be made clearer for all travelers. Providing signs, striping, and pavement treatments should make these transitions intuitive, especially between sidepath and shared lane configurations.
- Shared lane markings could be placed consistently along Haven Avenue.
- Wayfinding signs could be installed to confirm and advertise the routing of the bicycle boulevard.
- A new centerline median could be constructed along several of the roadways that cross Haven Avenue. This would require motor vehicle traffic to turn right; however, bicycle traffic would have a pass through along Haven Avenue. This is a major volume control traffic calming feature that should be studied further to confirm that there will not be unanticipated traffic flow issues throughout the local roadway network. These could be located at 13th Street, 22nd Street and on 31st Street. This should be used in combination with the following opportunities for all-way stops, listed below.
    - Remove stop control at two approaches of several of the all-way stop intersections in this segment. The configuration would be that east/west approaches to Haven Avenue intersections at 32rd, 23rd, 21st and 12th streets have stop control. This would limit through uninterrupted traffic to go no more than four blocks at a time along Haven Avenue before they encounter a stop sign or forced turn.
    - Restrict turns onto Haven Avenue from 34th Street with partial closures. Do not enter along each approach/departure; this concept will need to be refined during the design process.

Partial closure, Vancouver, BC
Source: Payton Chung on Flickr.com

- 34th Street should be emphasized as a major gateway to the Ocean City bikeway network. A large scale gateway, possibly signs or an arched structure over the roadway should be considered.
- Mini roundabouts should be considered for major intersections and connector routes along Haven Avenue, such as at the intersections with 29th Street, 24th Street, 18th Street, and 14th Street.
- Explore potential locations for bike parking along the bike boulevard where there is potential demand.
- Implement reduced residential speed limit to institutionalize appropriate travel speeds and traffic calming efforts.

Ocean City Rail Trail & Bicycle Boulevard Project

Existing Conditions, Opportunities & Constraints

Map 10 - Downtown

March 2011

① Bike path on Haven Ave in the center of the roadway between 35th-34th St

② Haven Ave between 34th- 29th St

ROW = 49'

- 4' Sidewalk
- 8' Paved Path
- 29' Cartway
- Parking Permitted
- 8' Sidewalk

③ Haven Ave from 29th - 26th St

ROW = 52'

- 8' Paved Path
- 19' Landscaped Buffer
- 18' Cartway
- 3' Buffer
- 4' Sidewalk

④ Paved Path between 26th-25th St

⑤ Haven Ave between 25th-24th St

⑥ Haven Ave between 24th - 20th St

ROW = 63'

- 6' Sidewalk
- 3' Buffer
- 8' Parking
- 12' Lane
- 5' Planted median
- 12' Lane
- 8' Parking
- 3' Buffer
- 6' Sidewalk

⑦ Haven Ave between 20th - 18th St

ROW = 57'

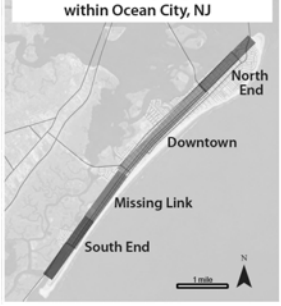
- 5' Sidewalk
- 8' Paved Path
- 8' Parking
- 11' Lane
- 18' Lane/ Parking Permitted
- 6' Sidewalk

⑧ Haven Ave between 10th - 12th St

ROW = 55'

- 8' Parking
- 12' Lane
- 5' Painted Median
- 12' Lane
- 8' Parking
- 10' Sidewalk

Location of Study Segments within Ocean City, NJ



Legend

- Wetlands
- Street Quilt
- School
- Park/ Open Space
- Street Closure
- Back-out Conflicts
- Transportation Center
- Gateway/Access Road
- Off-Road Path
- Stop Sign
- County Road
- Traffic Signal
- OC1 / Haven Ave Bicycle Route
- Planted Median
- City Identified Connector Route
- Angled Parking
- Potential Bicycle Enhancements
- Potentail OC1 Extension

0 0.25 0.5 mi.

GIS Data Sources: Roads & Parcel Layer from Civil Solutions, a division of ARH, modified by the Cape May County Planning Department; Wetlands, NJDEP

Segment 4 – North End

The "North End" segment extends between 9th Street and the Longport Bridge through multiple residential streets and an off-road path. There are currently no bicycle facilities located in this segment.

Existing Conditions

- The bicycle boulevard routing north of 9th Street follows a low traffic volume route between the Longport Bridge and the 9th Street corridor by the transportation center. This alignment includes 10 streets: Aldrich Road, 8th Street, Haven Avenue, a path segment across Memorial Park (adjacent to the Primary Elementary School), 5th Street, Simpson Avenue, Battersea Road, West Inlet Road, Atlantic Boulevard, Bridge Boulevard and Gardens Boulevard.
- Roadway widths vary greatly along these roadways.
- Streets tend to be wider in this area than in the other segments of the bicycle boulevard.
- ROW ranges between 39' and 142'.
- Gardens Parkway has carriage roads parallel to the roadway along each side.
- West Inlet Road has a wide planted center median, making the roadway almost as wide (150 feet) as it is long (160 feet).
- There are crosswalks at the signalized intersections along 9th Street at Bay and West Avenues.
- There is no crossing facility at 9th Street and Haven Avenue.

Opportunities for Enhancing Bike Boulevard

Due to the routing along multiple streets, opportunities for enhancing bicycle-priority travel in this segment vary. Crossing 9th Street is also included in this segment.

- Opportunities for crossing 9th Street include:
  - A pedestrian activated in-roadway illuminated crosswalk could be located at Aldrich Road. This will take full advantage of the existing shared use path along 9th Avenue.
  - A pedestrian activated in-roadway illuminated crosswalk could be located at Haven Avenue. This would require shared use along a short segment of 9th Avenue.
  - A HAWK signal could also be installed at either of these locations, with similar routing issues, but have the additional benefit of a more traditional method of getting motor vehicle traffic to stop for pedestrian and bicycle crossing traffic.
- Similar to the boulevard treatment that is in place along Haven Avenue between 24th Street and 20th Street, install planted center median, curb extensions and shared travel lanes throughout this corridor.
- The bicycle boulevard will make numerous turns along the alignment in the North End of Ocean City. Stripe continuous bicycle chevrons or colorized bike lanes across the intersections where the routing turns. This will provide wayfinding and self advertising for the bicycle boulevard.
- Construct streetscape enhancements along Aldrich Road between 9th Street and 8th Street. This may include large scale murals or other public art.

Roundabout, North Haven, NY
Source: The RBA Group

- Construct curb extensions and enhanced crosswalks along Haven Avenue between 8th Street and 6th Street and along Simpson Avenue between 5th Street and Battersea Road.
- Construct a center line median along 2nd Street across Simpson Avenue, including a bicycle pass through for bicyclists traveling on Simpson Avenue.
- Stripe bicycle lanes with buffered on-street parking on the east/west roads, including: 8th Street, 5th Street, and Battersea Road.
- Redefine roadways as bicycle-priority with traffic calming and shared lane markings along the entire bicycle boulevard.
- Reconfigure West Inlet Drive and Atlantic Avenue to provide dedicated bicycle facilities. Two major options for this are:
  - Cycle tracks or bike lanes along the outside curb line in each direction, buffered from motor vehicle traffic by on-street parking.
  - Convert the boulevard treatment to separate motor vehicle, and bicycle access corridors. Bicycle traffic could be accommodated along a new two-way bike path within the present day western (southbound) half of the roadway. Motor vehicle traffic and parking can be accommodated within the 42 foot wide eastern (northbound) half of the roadway.
- Atlantic Avenue could also be enhanced by constructing a centerline median, curb extensions and enhanced crosswalks between West Inlet Road and Bridge Boulevard.
- Install wayfinding signs to confirm and advertise the routing of the bicycle boulevard.
- Reconfigure the intersections of Atlantic Avenue with West Inlet Road and Bridge Boulevard by constructing modern roundabouts. There is adequate right of way to reconfigure these intersections within the existing paved area, and likely add a significant amount of landscaping to the surrounding area. This concept will need to be refined during the design process.

Gateway, Cedros Avenue, Salano Beach, CA
Source: San Diego Daily photo, blogspot.com

- Designate the carriage lanes along Gardens Parkway for non-motorized use priority, dual bike boulevards with permitted automobile parking/access. This could be accomplished with pavement markings, and signs.
- "Bikes may use full lane" Manual on Uniform Traffic Control Devices sign R4-11 should be installed throughout the Bicycle Boulevard.
- Explore potential locations for bike parking along the bike boulevard where there is potential demand.
- Implement reduced residential speed limit to institutionalize appropriate travel speeds and traffic calming efforts.
- Remove double yellow centerline to minimize "runway" or "highway" feel of overchannelizing a shared roadway. Motor vehicles will tend to drive toward the center of the roadway, giving more space for bicycle use along each travel direction and yield or adjust position when there is oncoming motor vehicle traffic.
- Wayfinding signs could be installed to confirm and advertise the routing of the bicycle boulevard.
- Designate Gardens Parkway as a gateway to the Ocean City bicycle network. A large scale gateway, possibly signs or an arched structure over the roadway should be considered.

Ocean City Rail Trail & Bicycle Boulevard Project

Existing Conditions, Opportunities & Constraints

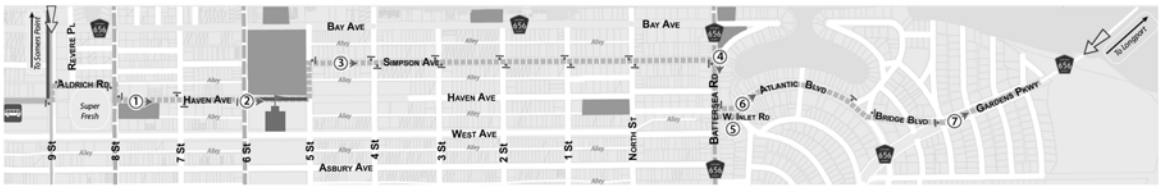
Map 11 - North End

March 2011

① Haven Ave between 8th - 6th St

③ Simpson Ave between 5th St - Battersea Rd

⑥ Atlantic Blvd



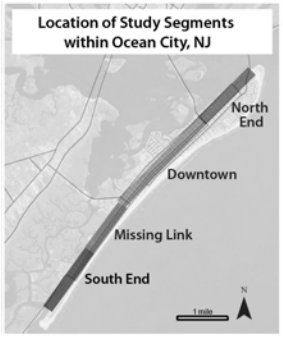
② Path behind school (6th-5th St)

④ Battersea Rd

⑤ Bird's Eye view of W. Inlet Dr

⑦ Gardens Pkwy

Location of Study Segments within Ocean City, NJ



Legend

- Wetlands
- Street Quilt
- School
- Park/ Open Space
- Street Closure
- Back-out Conflicts
- Transportation Center
- Gateway/Access Road
- Off-Road Path
- Stop Sign
- County Road
- Traffic Signal
- OC1 / Haven Ave Bicycle Route
- Planted Median
- City Identified Connector Route
- Angled Parking
- Potential Bicycle Enhancements
- Potentail OC1 Extension

0 0.25 0.5 mi.

GIS Data Sources: Roads & Parcel Layer from Civil Solutions, a division of ARH, modified by the Cape May County Planning Department; Wetlands, NJDEP

BICYCLE BOULEVARD RECOMMENDATIONS OVERVIEW

Ocean City has made great strides in improving the bikeability of its roadway network. The existing "bike boulevard" on Haven Avenue between 36th and 9th streets is the backbone of the network connecting the city's downtown, transportation center, community center and intermediate school. One of the two primary tasks in this Haven Avenue Corridor Report was to examine the existing bike boulevard and make recommendations to extend the on-road bicycle-priority corridor between Corson's Inlet and the Longport Bridge.

Although many options to improve bicycle-priority throughout the corridor were discussed in the previous section of this report, this section narrows the focus to more specific conceptual design recommendations geared toward accommodating casual, family or novice cyclists, discouraging cut-through motor vehicle traffic, and establishing priority to through cycling traffic.

In many cases, treatments that have been implemented along the 4 block segment of Haven Avenue between 24th and 20th can be repeated. In other cases, innovative approaches are suggested to link the varying street configurations into one cohesive on-road cycling corridor. Overall, the concept recommendations are intended to clearly define the look and feel of the Haven Avenue corridor as one in which the shared space with a priority for bicycle travel is obvious.

The recommendations for improvement follow the same geographic areas that were used in the previous section:

- Segment 1 – South End (south of 49th Street)
- Segment 2 – Missing Link (between 49th and 36th Streets)
- Segment 3 – Downtown (between 36th and 9th Streets)
- Segment 4 – North End (north of 9th Street)

The suggested recommendations for each segment are included in **Table 7: Bicycle Boulevard Recommendations** and illustrated in the following maps:

- Map 12: South End Recommendations
- Map 13: Missing Link Recommendations
- Map 14: Downtown Recommendations
- Map 15: North End Recommendations

For each segment in the corridor, a concept sketch illustrating specific target areas is also included.

- Map 16: South End Concept
- Map 17: Missing Link Concept
- Map 18: Downtown Concept
- Map 19: North End Concept

Most design treatments suggested in this section are in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), the American Association of State Highway and Transportation Officials (AASHTO), and New Jersey Department of Transportation's *Bicycle Compatible Roadways and Bikeways* and *Pedestrian Compatible Planning and Design Guidelines*. Several design treatments are suggested which are currently in widespread use but which are not included in the above-referenced guidelines such as "colored bike lanes", "bike boxes" or "zigzag striping". Their use is typically validated through their inclusion in the FHWA MUTCD experimental process (see Appendix H: MUTCD Request to Experiment). Where such improvements are recommended, they should be implemented through this experimentation process.

Table 6: Bicycle Boulevard Recommendations

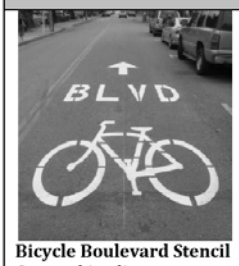
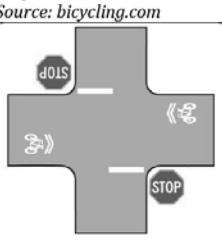
Image	Bicycle Boulevard Recommendations	Bicycle Boulevard Segments			
		South End	Missing Link	Downtown	North End
	Bicycle-Priority Shared Road				
 **Bicycle Boulevard Stencil** *Source: bicycling.com*	Pavement Markings (bike symbols, shared lane markings, etc.)	Entire Segment	Entire Segment	Entire Segment	Entire Segment
 *Source: RBA Group*	Stop Signs (through-priority for Bike Boulevard, east-west streets have stop control)	Haven Avenue at 53rd, 51st - 49th Streets	West Avenue at existing unsignalized intersections	Haven Avenue at 35th, 32nd, 23rd, 21st, 19th, 17th, 15th, 12th, 11th Streets	Existing on Haven, Simpson, Atlantic and Gardens Parkway
Source: County of Hawai'i	Zigzag Striping	Approach to Haven Avenue on 56th, 54th, 53rd, 51st, 50th, 49th Streets	Approach to West Avenue on 48th, 45th, 44th, 43rd, 42nd, 41st, 39th, 38th, 37th Streets	Approach to Haven Avenue on 35th , 32nd, 30th, 28th, 27th, 26th, 25th, 23rd, 21st, 19th, 17th, 15th, 12th, 11th Streets	Approach to Haven Avenue on 7th. Approach to Simpson on 4th, 3rd, 1st and North. Approach to Atlantic on Landing and Harbor. Approach to Gardens Parkway on Edinburg, Aberdeen and New Castle

Image	Bicycle Boulevard Recommendations	Bicycle Boulevard Segments			
		South End	Missing Link	Downtown	North End
	On-Road Dedicated Bicycle Facility				
Two-way Bike Path *Source: RBA Group*	Two-way Bike Path		West Avenue		West Inlet Road, Atlantic Boulevard
Bike Lane *Source: RBA Group*	Bike Lanes	Ocean Drive	49th, 36th Streets		8th, 5th Streets, Battersea Road, Gardens Parkway and Longport Br.
Bike Lane Stencil *Source: RBA Group*	Bike lane stencils	Ocean Drive	49th, 36th Streets		8th, 5th Streets, Battersea Road

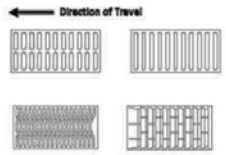
Image	Bicycle Boulevard Recommendations	Bicycle Boulevard Segments			
		South End	Missing Link	Downtown	North End
	Bicycle Safe Drainage Grates	Entire Segment	Entire Segment	Entire Segment	Entire Segment
	Intersection Treatments				
Bicycle Box *Source: gregraisman on flickr.com*	Bicycle Boxes/Advanced Stop Bar and Bicycle Actuation		West Avenue at 49th, 46th, 40th and 36th Streets		9th Street at Aldrich Road
Source: nacto.org	Traffic Signal or other Actuated Signals such as High Intensity Activated CrossWalK beacon (HAWK) to allow for protected bicycle and pedestrian crossing by stopping road traffic only as needed		West Avenue at 49th, 46th, 40th and 36th Streets		9th Street at Aldrich Road

Image	Bicycle Boulevard Recommendations	Bicycle Boulevard Segments			
		South End	Missing Link	Downtown	North End
Source: Alta Planning & Design	High Visibility/Raised Crosswalk/Crossbike	Entire Segment	Entire Segment	Entire Segment	Entire Segment
Source: nacto.org	Continuous Chevrons or Colorized Bike Lane through Intersection and at off-set Connections		Along West Avenue 2-way bike path entire segment		Aldrich and 8th Haven and 8th Path (Haven) and 5th Simpson and 5th Simpson and Battersea W. Inlet and Battersea Atlantic and Bridge Bridge and Gardens Parkway
	Traffic Calming				
Source: Allan Crawford, bikelongbeach.org	Mini Roundabouts			Haven Avenue at 29th, 24th, 18th, 14th Streets	

Image	Bicycle Boulevard Recommendations	Bicycle Boulevard Segments			
		South End	Missing Link	Downtown	North End
Source: The RBA Group	Roundabouts				Atlantic Boulevard at West Inlet Road and Bridge Boulevard
Source: Clarence Eckerson Jr. from streetsblog.org	Speed Humps and Tables			Haven Avenue at 34th, 32nd, 30th, 28th, 27th, 23rd, 21st, 19th, 17th, 15th, 12th, 11th Streets	
Source: FHWA	Painted and Patterned Surfaces (colored shoulders, decorative painted medians, or buffer)	Entire Segment	Entire Segment	Entire Segment	Entire Segment
Source: RBA Group	Centerline Planted Median			Entire Segment*	Simpson Avenue* Atlantic Avenue*

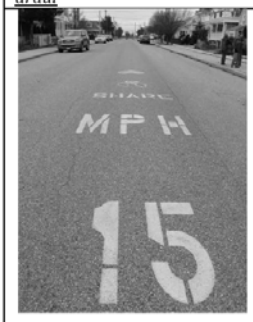
Image	Bicycle Boulevard Recommendations	Bicycle Boulevard Segments			
		South End	Missing Link	Downtown	North End
Source: www.flickr.com/photos/drdul	Curb Extensions	Entire Segment	Entire Segment	Entire Segment	Entire Segment
 *Source: RBA Group*	Residential Speed Limit	Entire Segment		Entire Segment	Entire Segment
Source: RBA Group	Remove Painted Center Line	Entire Segment		Entire Segment*	Entire Segment*

Image	Bicycle Boulevard Recommendations	Bicycle Boulevard Segments			
		South End	Missing Link	Downtown	North End
Source: RBA Group	Non-Motorized Only Crossings (centerline median with pass through/refuge island)			Haven Avenue at 31st, 22nd, 13th Streets	2nd Street at Simpson Avenue
Source: www.pedbikeimages/ DanBurden	Partial or Full Closure (with pass through)			Haven Avenue at 34th Street	
	Signs				
Source: City of Ocean City	Identification Signs (OC1 Bike Route)	Entire Segment	Entire Segment	Entire Segment	Entire Segment

Image	Bicycle Boulevard Recommendations	Bicycle Boulevard Segments			
		South End	Missing Link	Downtown	North End
Source: MUTCD	Wayfinding Signs	Entire Segment	Entire Segment	Entire Segment	Entire Segment
Source: MUTCD	Warning Signs (Crossing/Share the Road/Bikes may use full lane)	Entire Segment	Entire Segment	Entire Segment	Entire Segment
Source: Maralinga in WA, flickr.com	Gateways	Area of Ocean Drive and 56th Street		Area of 34th Street and Haven Avenue	Area of Longport Bridge/Gardens Parkway

* Where applicable

Ocean City Rail Trail & Bicycle Boulevard Project

Recommendations Map 12 - South End

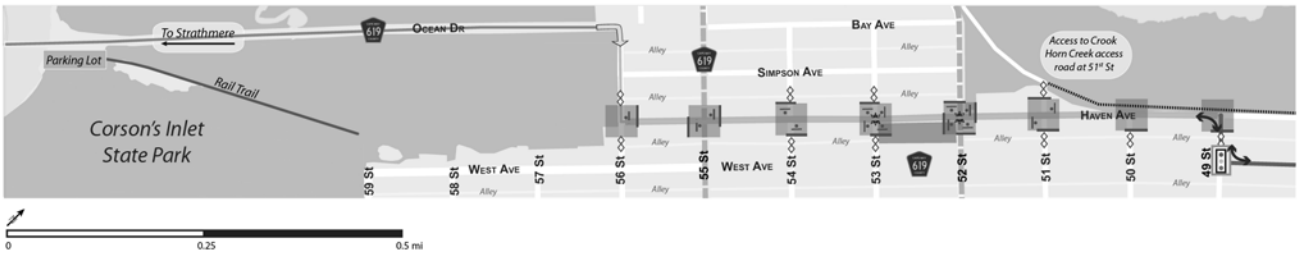
March 2011

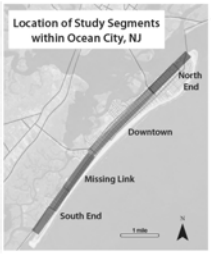
Enhance Bicycle-Priority on Haven Avenue

- Pavement markings (shared lane markings, bike symbols) within travel lane to reinforce shared space.
- Predominantly through-priority on Haven Avenue.
- Stops and zigzag striping on east/west approaches to Haven Avenue.
- Intersection improvements including curb extensions and enhanced crosswalks.
- Traffic calming measures such as colored or serpentine shoulders, decorative painted medians or buffers, etc.
- Implement reduced residential speed limit.
- Install OC1 Bike Route, wayfinding and warning signs along the entire segment.
- Ensure all drainage grates are bicycle safe.

Enhance Bicycle Accommodations to Strathmere Bridge

- Shared lane markings on 56th Street.
- Gateway at 56th and Ocean Drive.
- Bike lanes along Ocean Drive and over bridge.
- Wayfinding signs.





Legend

Recommendations

- Intersection Improvements
- Shared Lane Enhancements
- Dedicated Bicyle Facility
- Gateway Treatment
- Zigzag Treatment
- Bike Connections through intersections
- Bike Box
- Traffic or other Signal (HAWK)
- Stop Control
- Roundabout
- Center line median
- Full Closure
- Speed Hump

Existing Conditions

- Park/Open Space
- Wetlands
- OC1 / Haven Ave Bicycle Route
- City Identified Connector Route
- County Road
- Off-Road Path
- Planted Median
- Stop sign
- Traffic Signal
- Back-out Conflicts
- Street Closure
- Transportation Center
- Street Quilt
- School

GIS Data Sources: Roads Layer from Civil Solutions, a division of ARH, modified by the Cape May County Planning Department; Wetlands, NJDEP

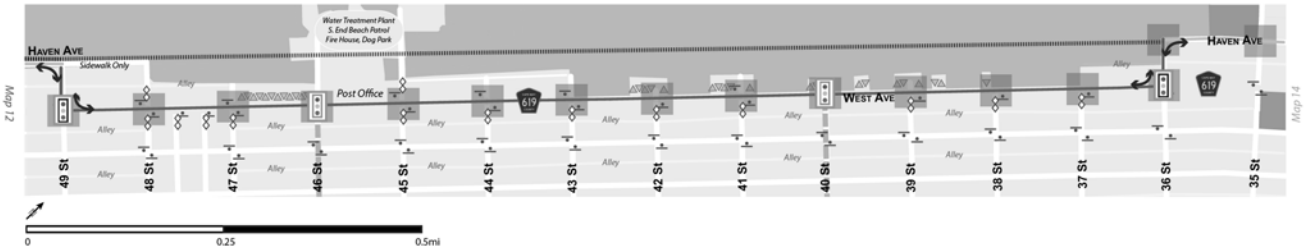
Ocean City Rail Trail &
Bicycle Boulevard Project

Recommendations
Map 13 - Missing Link

March 2011

Road Diet and Two-way Bike Path on West Avenue

- Convert the existing 4 travel lanes on West Avenue to 3 including a center lane. Utilize the left over space to create a buffer and two-way bike path along the western curbline within the existing roadway.
- Pavement markings (bike symbols) on bike path, especially at potential conflict locations.
- Stops and zigzag striping on east/west approaches.
- Provide by painting continuous chevrons and/or colorized bike lanes – detailed intuitive wayfinding at all intersections.
- Bicycle boxes/advanced stop bar and bicycle actuation at signalized intersections.
- Install OC1 Bike Route, wayfinding and warning signs along the entire segment.
- Connect bike path to Haven Avenue at 49th and 36th Streets.
- Bike lanes on 49th and 36th Streets.
- New traffic signal or other actuated signal with bike boxes/advanced stop bar at 49th and 36th Streets.
- Ensure all drainage grates are bicycle safe.



Legend

Recommendations

- Intersection Improvements
- Shared Lane Enhancements
- Dedicated Bicyle Facility
- Gateway Treatment
- Zigzag Treatment
- Bike Connections through intersections
- Bike Box
- Traffic or other Signal (HAWK)
- Stop Control
- Roundabout
- Center line median
- Full Closure
- Speed Hump

Existing Conditions

- Park/Open Space
- Wetlands
- OC1 / Haven Ave Bicycle Route
- City Identified Connector Route
- County Road
- Off-Road Path
- Planted Median
- Stop sign
- Traffic Signal
- Back-out Conflicts
- Street Closure
- Transportation Center
- Street Quilt
- School

GIS Data Sources: Roads & Parcel Layer from Civil Solutions, a division of ARH, modified by the Cape May County Planning Department; Wetlands, NJDEP

Enhance Bicycle Priority on Haven Avenue

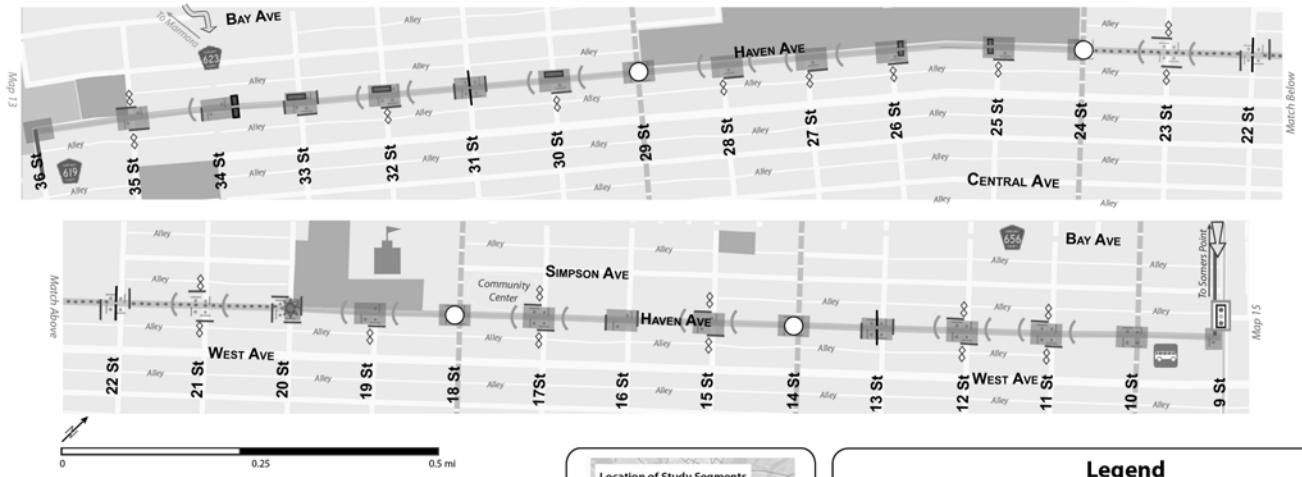
- Pavement markings shared lane markings, bike symbols) within the travel lane to reinforce shared space.
- Predominantly through-priority on Haven Avenue.
- Stop control & zigzag striping on east/west approaches to Haven Avenue.
- Intersection improvements including curb extensions & enhanced crosswalks.
- Ensure all drainage grates are bicycle safe.
- Reduce traffic with non-motorized only crossings (centerline median along cross street with bike blvd pass through) & road closures (with bike blvd pass through).
- Install OC1 Bike Route, wayfinding and warning signs along the entire segment.
- Traffic calming measures including mini-roundabouts, speed humps and painted and patterned surfaces.
- Implement reduced residential speed limit.
- Reduce channelization of shared roadway by removing painted centerline.
- Gateway along 34th Street.

Ocean City Rail Trail & Bicycle Boulevard Project

Recommendations

Map 14 - Downtown

March 2011



Legend

Recommendations

- Intersection Improvements
- Shared Lane Enhancements
- Dedicated Bicycle Facility
- Gateway Treatment
- Zigzag Treatment
- Bike Connections through intersections
- Bike Box
- Traffic or other Signal (HAWK)
- Stop Control
- Roundabout
- Center line median
- Full Closure
- Speed Hump

Existing Conditions

- Park/Open Space
- Wetlands
- OC1 / Haven Ave Bicycle Route
- City Identified Connector Route
- County Road
- Off-Road Path
- Planted Median
- Stop sign
- Traffic Signal
- Back-out Conflicts
- Street Closure
- Transportation Center
- Street Quilt
- School

GIS Data Sources: Roads Layer from Civil Solutions, a division of ARH, modified by the Cape May County Planning Department; Wetlands, NJDEP

Ocean City Rail Trail & Bicycle Boulevard Project

Recommendations
Map 15 - North End

March 2011

Enhance Bicycle-Priority on the streets comprising the bicycle boulevard in the North End of Ocean City including Aldrich Rd., Haven Ave., Simpson Ave., and Gardens Pkwy carriage roads

- Pavement markings (shared lane markings, bike symbols) within the travel lane to reinforce shared space.
- Predominantly through priority for bicycles.
- Intersection improvements including curb extensions and enhanced crosswalks.
- Traffic calming measures such as colored or serpentine shoulders, decorative, painted medians or buffers, etc.
- Implement reduced residential speed limit.
- Remove painted centerline to reduce channelization of shared roadway.
- Reduce traffic with non-motorized only crossings (centerline median along cross street with bike blvd pass through).
- Stops and zigzag striping on east/west approaches.

Enhance Bicycle-Priority throughout the North End Segment

- Provide OC1 Bike Route, wayfinding and warning signs.
- Stops and zigzag striping on east/west approaches.
- Gateway on Gardens Parkway at Longport Bridge.
- Ensure all drainage grates are bicycle safe.

Dedicate On-road Separated Bike Facilities

- Reconfigure West Inlet Drive and Atlantic Avenue to provide a dedicated two-way bike path separated by parking and a painted buffer.
- Pavement markings (bike symbols) on path especially at potential conflict locations.
- Install roundabouts at Atlantic Ave. intersections with West Inlet Dr. and Bridge Blvd.
- Provide bike lanes along Gardens Parkway at its northernmost point extending over the Longport Bridge.
- Connect streets comprising bike boulevard with dedicated bicycle lanes on east/west streets (8th, 5th and Battersea).
- Provide detailed intuitive wayfinding at off-set intersections by painting continuous chevrons and/or colorized bike lanes to connect east/west street bike lanes to bicycle boulevard.

Legend

Recommendations

- Intersection Improvements
- Shared Lane Enhancements
- Dedicated Bicyle Facility
- Gateway Treatment
- Zigzag Treatment
- Bike Connections through intersections
- Bike Box
- Traffic or other Signal (HAWK)
- Stop Control
- Roundabout
- Center line median
- Full Closure
- Speed Hump

Existing Conditions

- Park/Open Space
- Wetlands
- OC1 / Haven Ave Bicycle Route
- City Identified Connector Route
- County Road
- Off-Road Path
- Planted Median
- Stop sign
- Traffic Signal
- Back-out Conflicts
- Street Closure
- Transportation Center
- Street Quilt
- School

GIS Data Sources: Roads Layer from Civil Solutions, a division of ARH, modified by the Cape May County Planning Department; Wetlands, NJDEP

Example of Colorized Bike Lane through Intersection

Source: nacto.org

Examples of Kiosks

Source: flickr.com/photos/chasbot/

Source: flickr.com/tracktwentynine/

Source: thefridaycyclotouriste.com/

Example of Curb Extension

Source: flickr.com/photos/drdul/

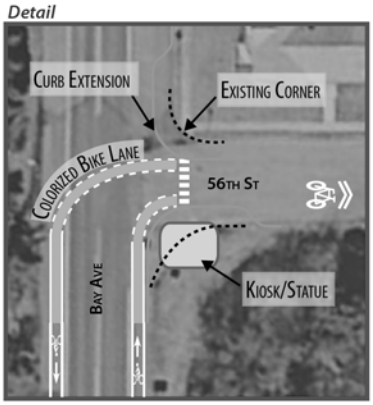
Ocean City Rail Trail & Bicycle Boulevard Project

Conceptual Design Recommendation

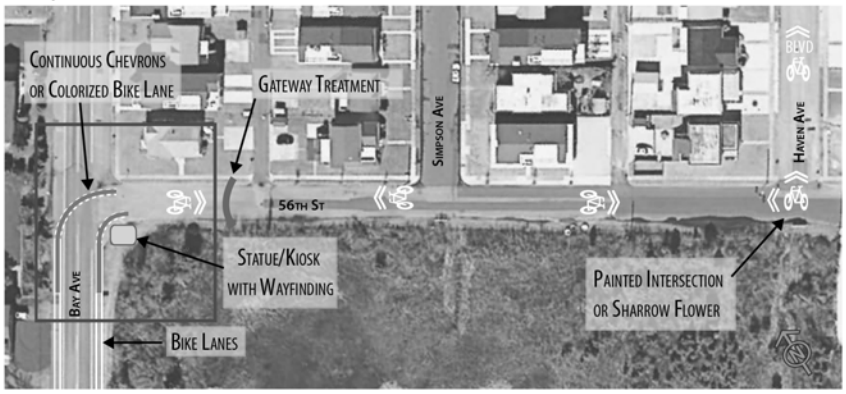
Map 16 - South End Gateway Treatment

May 2011

Detail



Concept Sketch



- A gateway treatment should be constructed along 56th St. within view of the Bay Ave. intersection. This will guide bicycle traffic between Bay Ave. and the Haven Ave. Bicycle Boulevard.
- Colorized bicycle lanes should be striped through the Bay Ave. intersection with 56th St. to emphasize the intended bicycle routing.
- Curb extensions should be constructed to further emphasize bicycle priority and calm motor vehicle traffic.
- A kiosk and/or statue can be constructed to give a visual reinforcement to the Ocean City Bicycle Boulevard and provide information.

Example of Sharrow Flower

Source: J. Maus

Examples of Gateways

Source: SanDiegoDailyPhoto.blogspot.com

Source: City of Ocean City

Examples of Wayfinding Signs

D1-3c

Source: MUTCD

Source: flickr.com/photos/viriyincy/

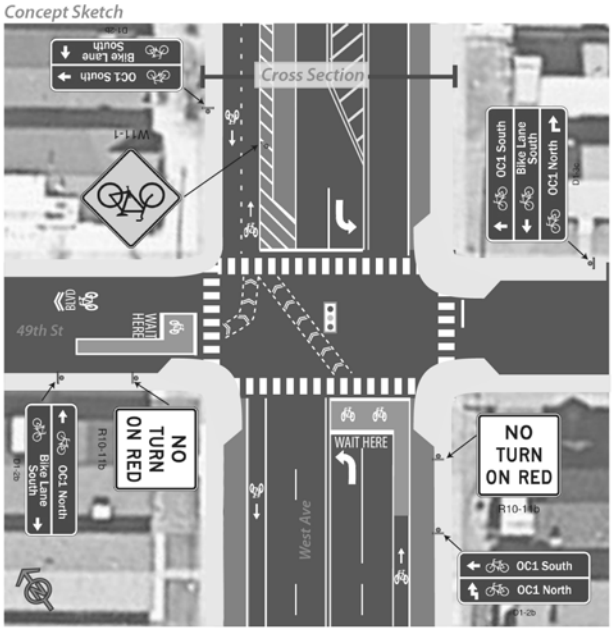
Ocean City Rail Trail & Bicycle Boulevard Project

Conceptual Design Recommendation

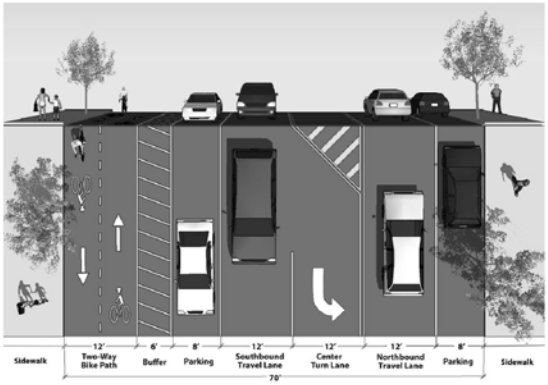
Map 17 - Missing Link West Ave. Two-Way Bike Path

May 2011

Concept Sketch



Cross Section of West Ave with Two-Way Bike Path



- The intersection of 49th St. and West Ave. should be controlled by a new traffic light to manage potential conflicts between turning motor vehicle and bicycle traffic.
- The traffic signal phasing should include advance (lead) phasing for turning bicycle traffic before both the 49th St. green phase and the West Ave green phase of the traffic light sequence. This should include bicycle specific signal heads.
- To further accommodate the advance (lead) phase, a painted bicycle box should be striped ahead of the stop line for motor vehicle traffic. This will provide a space for bicyclists to take full advantage of the advance signal phasing.
- Bicycle crossing pavement striping should also be striped to provide clear wayfinding to the two-way bike path.

Example of a Bicycle Signal Head

Benefits

- Separates bicycle movements.
- Provides priority to bicycle movements.
- Improves operation.
- Protects bicyclists in the intersection.
- Provides appropriate information for bicyclists.

Source: Kyle Gradinger, NACTO Urban Bikeway Design Guide

Example of a Bike Box

Source: flickr.com/tracktwentynine/

Example of a Two-Way Bike Path

Source: The RBA Group

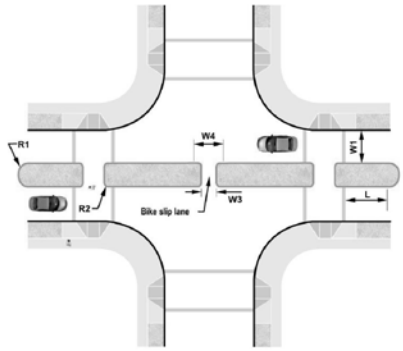
Ocean City Rail Trail & Bicycle Boulevard Project

Conceptual Design Recommendation

Map 18 - Downtown 13th St. Diverter

May 2011

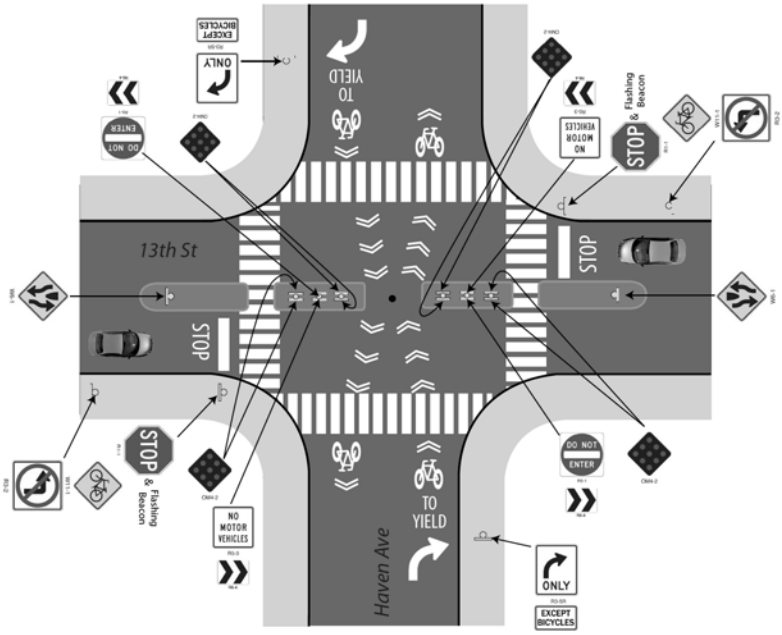
Intersection Median Island



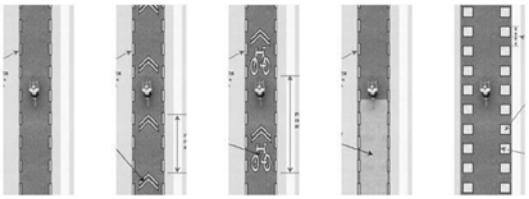
- The lane width (W1) should be sized according to the design vehicle, potentially 16 feet wide along each lane of 13th St.
- The median width (W2) is desirably 8' with a minimum of 6' to accommodate bicyclists, and people pushing strollers to have adequate refuge area between the travel lanes.
- The bike slip lane with (W3) is desirably 5' and can be combined with the EMS access width (W4) is a min. of 10' as shown in the concept.
- The intersection median island should extend past the crosswalks at least 15' (L) to discourage drivers circumnavigating the island, and may be lengthened to coordinate with pavement, streetscape, landscape or other urban design treatments, to a maximum of 25'.

Source: New Jersey Dept. of Transportation Roadway Design Manual

Concept Sketch

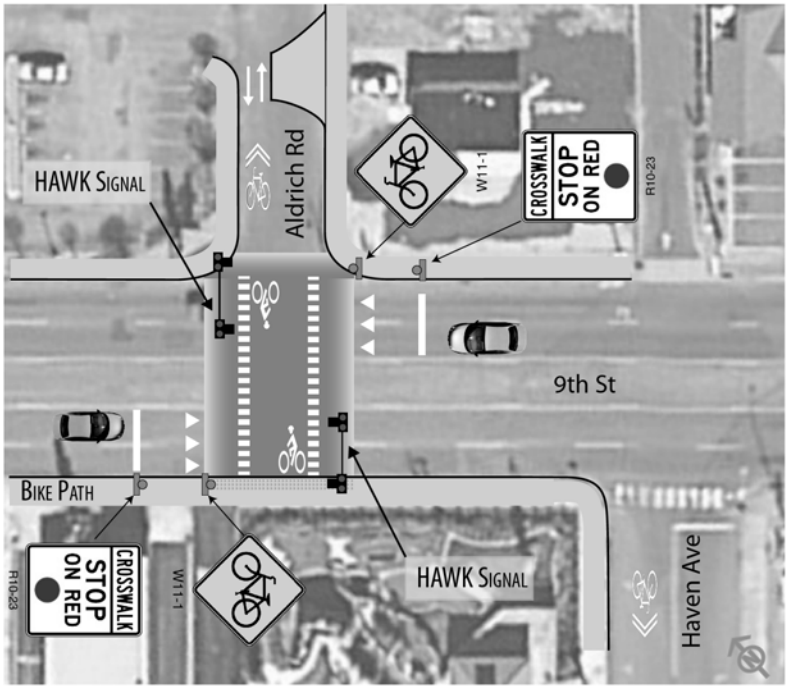


Intersection Crossing Pavement Striping Options

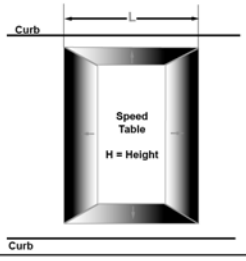


Source: NACTO Urban Bikeway Design Guide

- The intersection median island should be constructed along 13th St. to force motor vehicle traffic traveling along Haven Ave. to turn right. This volume control traffic calming measure will completely eliminate long distance motor vehicle traffic from using the Haven Ave. Bicycle Boulevard, and force motorists to use other parallel roadways for north – south travel, such as West Ave.
- The through bicycle traffic along Haven Ave. should be provided a striped intersection crossing treatment to reinforce that they have priority along the bicycle boulevard and through the intersection with 13th St. Motor vehicle traffic traveling along 13th St. will have stop control and can either continue straight or turn right onto Haven Ave.



Speed Table Dimensions



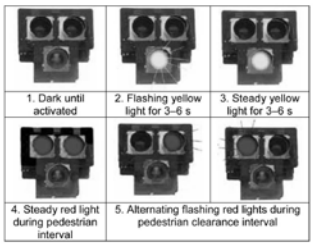
Speed Profile mph	Height (H) inches	Overall Length (L) feet
30	3	22
25	3	20
20	3	18
20	4	20
15	4	18
10	4	16

Source: New Jersey Department of Transportation Roadway Design Manual

Example of a HAWK Treatment

Source: Federal Highway Administration

Example of a Phase Sequence for a HAWK



Source: Improving Pedestrian Safety at Unsignalized Crossings, TCRP/NCHRP Report 112/ 562

Example of a Crossbike

Source: Fundamentals of Bicycle Boulevard Planning & Design, IBPI, Alta Planning & Design, Portland State Univ

Ocean City Rail Trail & Bicycle Boulevard Project

Conceptual Design Recommendation

Map 19 - North End 9th St. Crossing

May 2011

- The Bicycle Boulevard should cross 9th Street at Aldrich Road, with a new crossing. The crossing should be constructed on a raised speed table to increase pedestrian and bicycle visibility, emphasize pedestrian and bicycle movement, and manage traffic speeds on 9th Street.
- To provide gaps in the 9th Street motor vehicle traffic, a **High intensity Activated crossWalK (HAWK)** beacon should be located on the roadside and on mast arms.
- The HAWK operates only when activated (either by push button or passively by detection). This will minimize disruption to motor vehicle traffic when there are no bicyclists or pedestrians attempting to cross 9th Street.
- The HAWK signal head consists of two red lenses over a single yellow lens. It displays a red indication to drivers when activated, which creates a gap for pedestrians and bicyclists to use to cross a major roadway.

APPENDICES

A. Steering Committee

B. Annotated Presentation

C. Funding Sources

D. Community Outreach Material

E. Stakeholder Questionnaire Responses

F. Trail Examples

G. List of Documents Reviewed

H. MUTCD Request to Experiment

I. LTA Scope Approval

J. Deed of Ownership

Appendix A: Steering Committee

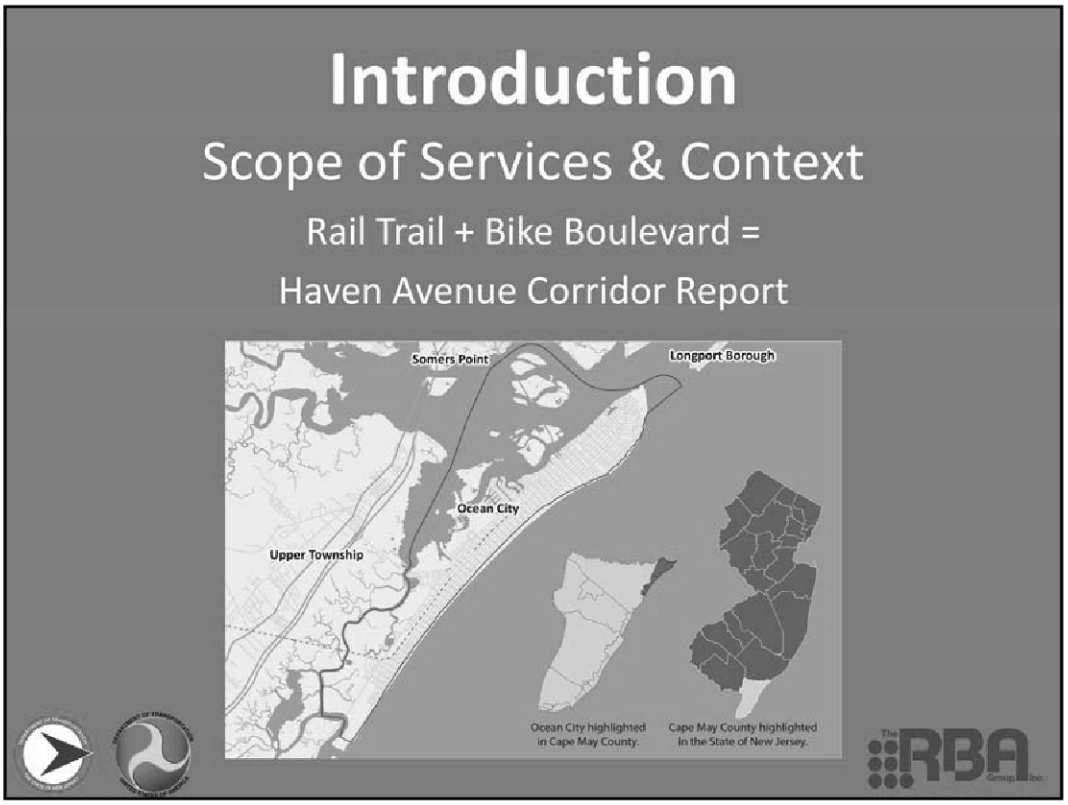
Steering Committee (Primary Contacts)			(Secondary Contacts)		
Arthur Chew	City Engineer	achew@ocnj.us			
Roy Wagner	Council 4th Ward	edwinaroyoc@yahoo.com			
Scott Ping	Council At Large	Scottpink2006@yahoo.com			
Chad Callahan	Chief of Police	ccallahan@ocnj.us			
			Jay Prettyman	OCPD/CAP	jprettyman@ocnj.us
Joe Folglio	Fire Chief	jfoglio@ocnj.us			
			Brad Wiltshire	OCFD	hedhi@comcast.net
Andrew Fasy	Advisory Council on PF & Sports/ OC Community Center Association	fazeoc@comcast.net			
Michele Gillian	Chamber of Commerce	michele@oceancitychamber.com			
Tom Heist	Chamber	theist@heistagency.com			
Curt Gronert	Ocean City Community Assoc	Gronert1@verizon.net			
			Jim Tweed	OCCA	jhtweed@hotmail.com
Dr. Kathleen W. Taylor	Superintendent of Ocean City Schools	ktaylor@ocean.city.k12.nj.us			
			Cecelia Gilleli	PTA President	chijojoluc@comcast.net
			Jen Bowman	PTA	ocwind@verizon.net
Peter Ault	Environmental Commission	pault@elzly.com			
			Bill Stumpfig	EC/Surfriders/ Native Plant Society/World Series of Birding	billstuempfig@comcast.net
Frank McCall	County Emergency Management	frankmccallocnj@msn.com			
Marcia Shallcross	MainStreet	mainstreetoceancity@verizon.net			
			Steve Pittenger	MainStreet/ EC	spittenger@gabrielleandco.com
Steve Jandoli	DEP/Green Acres	steve.jandoli@dep.state.nj.us			
John Fallon	South Ocean City Improvement Association (SOCIA)	johnastro@comcast.net			
	Friends of the Wetlands (invited)				

Appendix B: Annotated Presentation

Message: This presentation will outline the scope of work and findings of New Jersey Department of Transportation's Ocean City Local Planning Assistance project conducted by the RBA Group.

The Ocean City Rail Trail & Bicycle Boulevard Project is being conducted under the New Jersey Department of Transportation's (NJDOT) Local Technical Assistance (LTA) Program for the purpose of investigating the potential and viability of providing access to the bay and safer bicycling across Ocean City through development of both rail trail and bicycle boulevard opportunities.

Background photo: Haven Avenue mural



Message: Project Purpose:
Investigate the potential and viability of providing access to the bay and safer bicycling across Ocean City through development of both rail trail and on road bicycle boulevard opportunities.

Source: The RBA Group

Message: Assess the unique opportunity for safe, multi-use access to the bayside waterfront for education and recreation by opening the former Pennsylvania Railroad Seashore Line rail bed from 36th to 49th Streets to pedestrians, bicyclists, persons with disabilities

Source: RBA

Photos: Bing Maps – aerial view

Message: OC Rail Bed Existing Conditions

- The rail bed runs north/south and is parallel to West Avenue between 49th and 36th Streets, a distance of 1.37 miles.
- There are wetlands to the west.
- On the east side, the rail bed is immediately adjacent to residential properties between 50th and 48th Streets and wetlands for the rest of the corridor.
- The width of the rail bed surface to embankment slope varies between an estimated 10" to 16" although most of the rail bed is 12" to 14".
- Ownership
    - In 2003, the Pennsylvania-Reading Seashore line right-of-way was conveyed to the City of Ocean City by the New Jersey Transit Corporation for public use.
    - However, there are two "wash out" areas along the rail bed between 44th and 43rd Streets and between 40th and 39th Streets that are "flowed by the mean high tide" and are therefore property of the State of New Jersey.

Source: The RBA Group

Photos: The RBA Group

Message: A trail would provide access to the bayside waterfront for recreational and educational purposes

For the purpose of this report, this analysis is based on three conceptual scenarios:
1) providing multiuse access (bicycles, pedestrians, persons with disabilities, etc.) between 49th and 36th Streets (a "shared use path") along the rail bed,
2) providing pedestrian-only access between 49th and 36th Streets along the rail bed, and
3) providing pedestrian-only access to the bayside waterfront at selected points between 49th and 36th Streets along the rail bed.

The rail bed can be accessed at 4 locations:

1. On Haven Ave from 50th and 48th Streets
2. 46th Street
3. 45th Street
4. Haven Ave and 36th Street

Source: The RBA Group

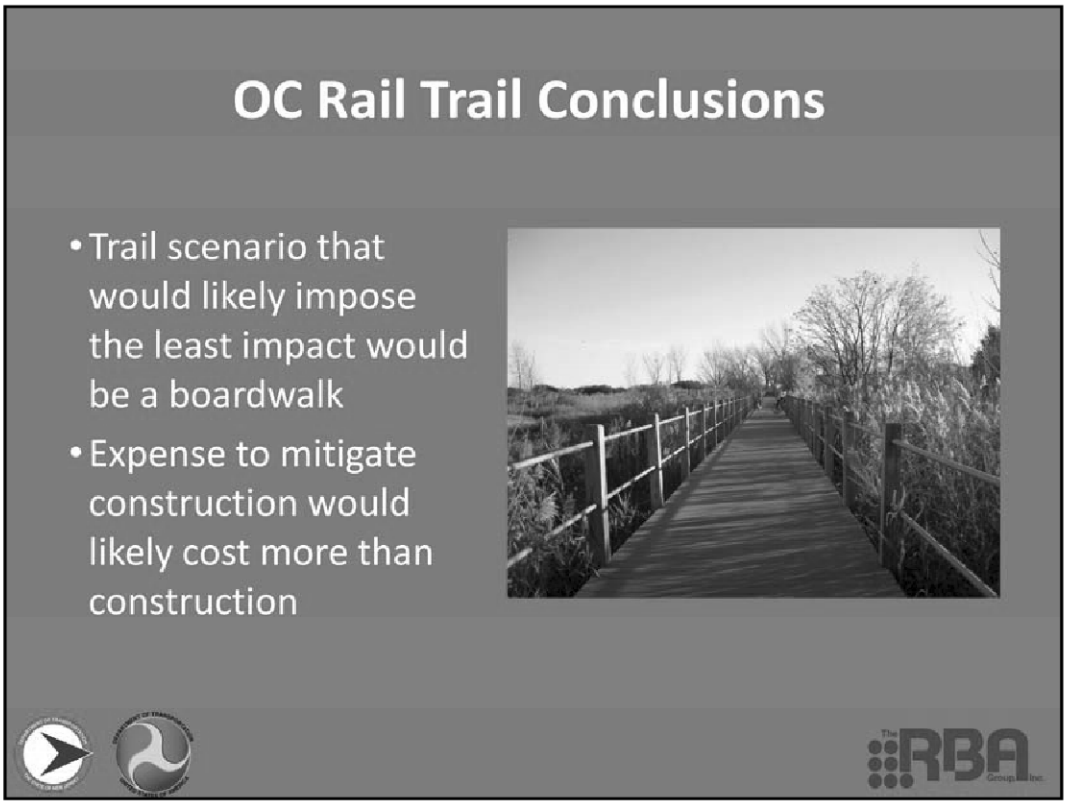
Photos: The RBA Group

Message:

- The Purpose & Need Statement is critical.
- Depending on the funding source, different environmental compliance documentation apply.
- Depending on the type & extent of the trail being proposed, various NJDEP permits would be required.
- There is no way to identify which permits or mitigation would be required until a design scenario is proposed.

Both NJDEP and the US Army Corps of Engineers require an alternatives analysis showing that the proposed concept has the least overall environmental impact when taking into consideration all project needs, purpose and goals. It should also be noted that any permits authorized by state and federal agencies would likely include extensive compensatory wetland mitigation requirements.

Source: The RBA Group

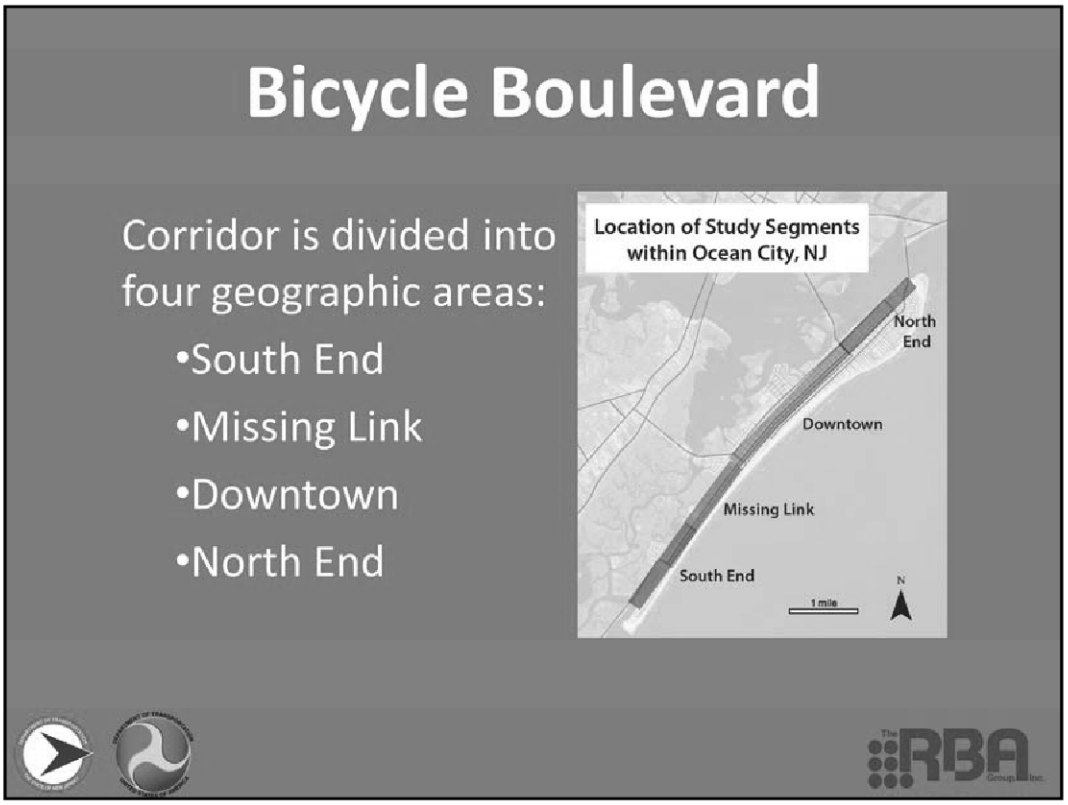


Message:

- The type of trail that would likely impose the least impact would be boardwalk.
- Because construction would likely have significant impacts to wetlands, threatened & endangered species, water quality, drainage, etc., the mitigation requirements would be extensive.
- Although it is possible to acquire permits if all the requirements are met, the expense to mitigate would likely cost more than construction.
- There is no way to identify which permits or mitigation would be required until a design scenario is proposed. At that time, if the design meets the purpose and need, permits and appropriate mitigation measures can be identified.

Source: The RBA Group

Photos: The RBA Group – Liberty State Park, Jersey City



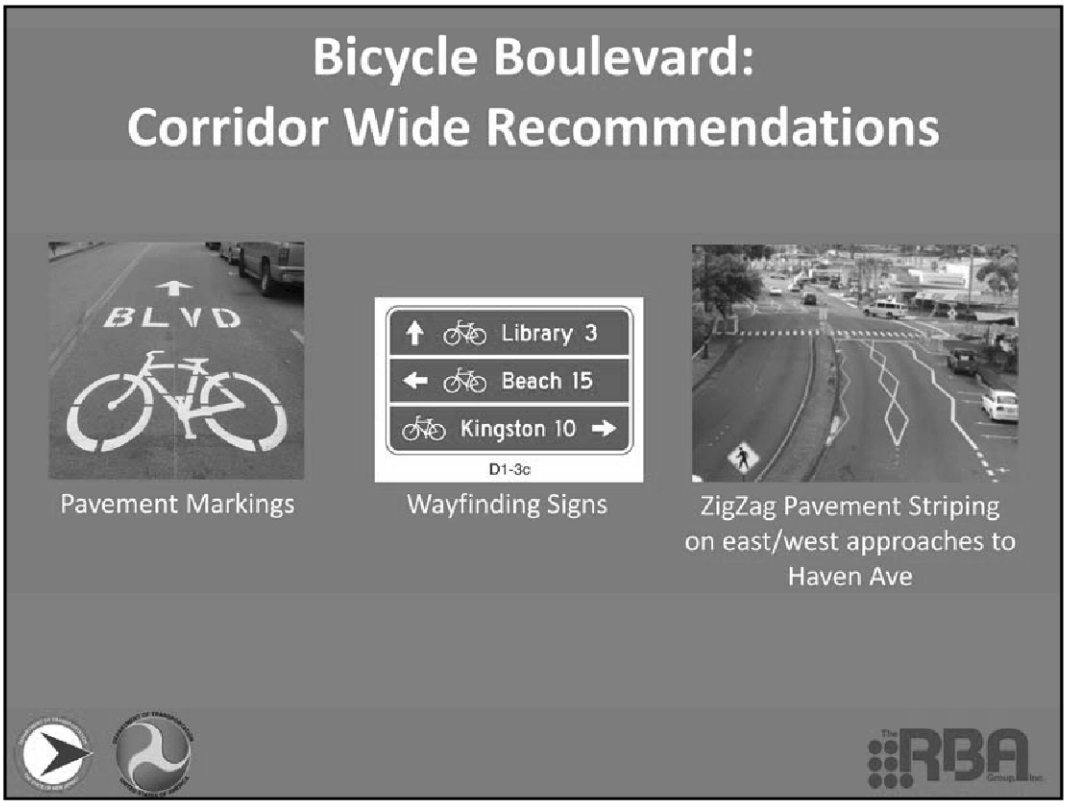
Message:
The purpose of this Bicycle Boulevard Needs Assessment is to examine the existing Haven Avenue Bicycle Boulevard (OC1 Bike Route) in its various stages of completion between 56th and 1st Streets as well as connections to Corson's Inlet Park to the south and the Longport Bridge to the north.

The following slides identify barriers, gaps in connectivity, and assesses the Opportunities and Constraints of safely proritize bicycle travel along the corridor. The Opportunities and Constraints include all possible enhancements.

The Recommendations in this presentation best meet Ocean City's needs and will lead to a best-practice approach for implementation of a "bicycle-priority" on-road corridor, primarily along Haven Avenue, for the length of the island.

The corridor is divided into four geographic areas:
- Segment 1 - South End (south of 49th Street)
- Segment 2 - Missing Link (between 49th Street & 36th Street)
- Segment 3 – Downtown (between 36th Street and 9th Street)
- Segment 4 - North End (north 9th Street)

Source: The RBA Group

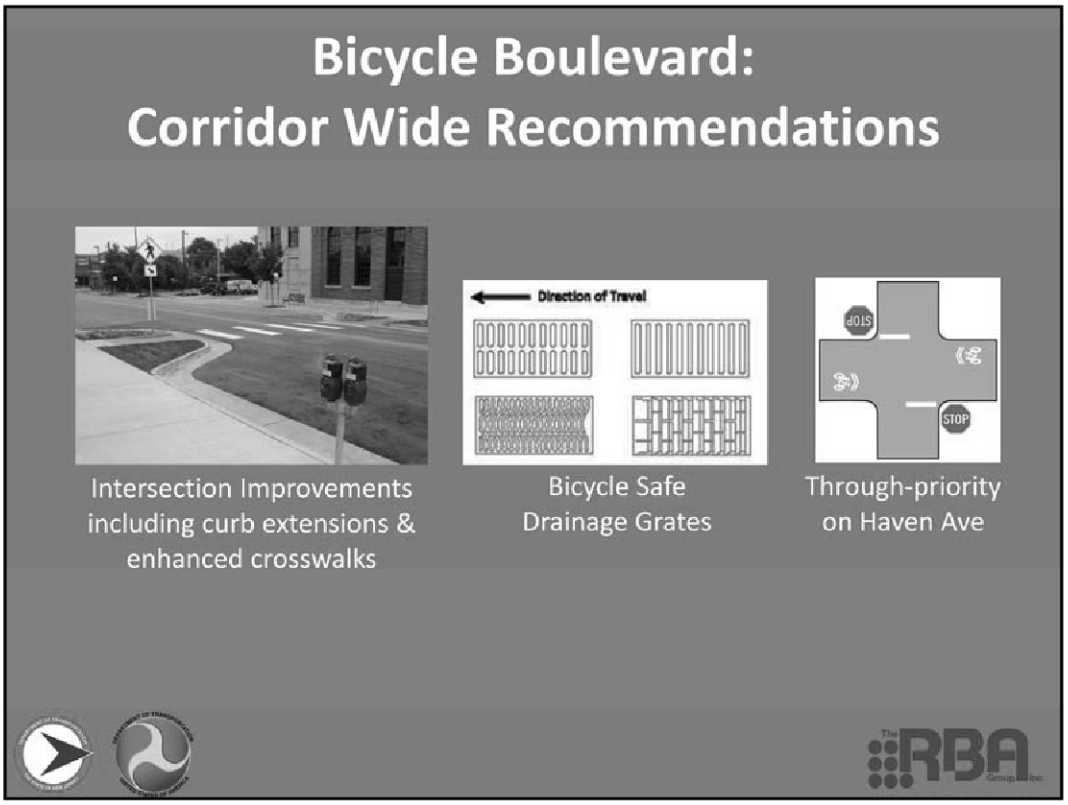


Message: Design elements and recommendations are tailored to each segment but here area few general recommendations for the entire Bicycle Boulevard:

1. Place pavement markings (shared lane markings, bike symbols) within travel lane to:
    1. Reinforce shared space
    2. Help bicyclists with positioning on the roadway
    3. Increase visibility of the bicycle boulevard
2. Install OC1 Bike Route, wayfinding and warning signs to:
    1. Direct bicyclists to and along the bicycle boulevard
    2. Advertize the bicycle boulevard
3. Use zigzag striping on east/west approaches to the Bicycle Boulevard to:
    1. Heighten the awareness of motorists that they are approaching a bicycle priority street

Source: The RBA Group

Photos:
1. Bicycle Boulevard Stencil, source: bicycling.com
2. Wayfinding Sign, source: MUTCD
3. ZigZag Pavement Striping, source: County of Hawai'i

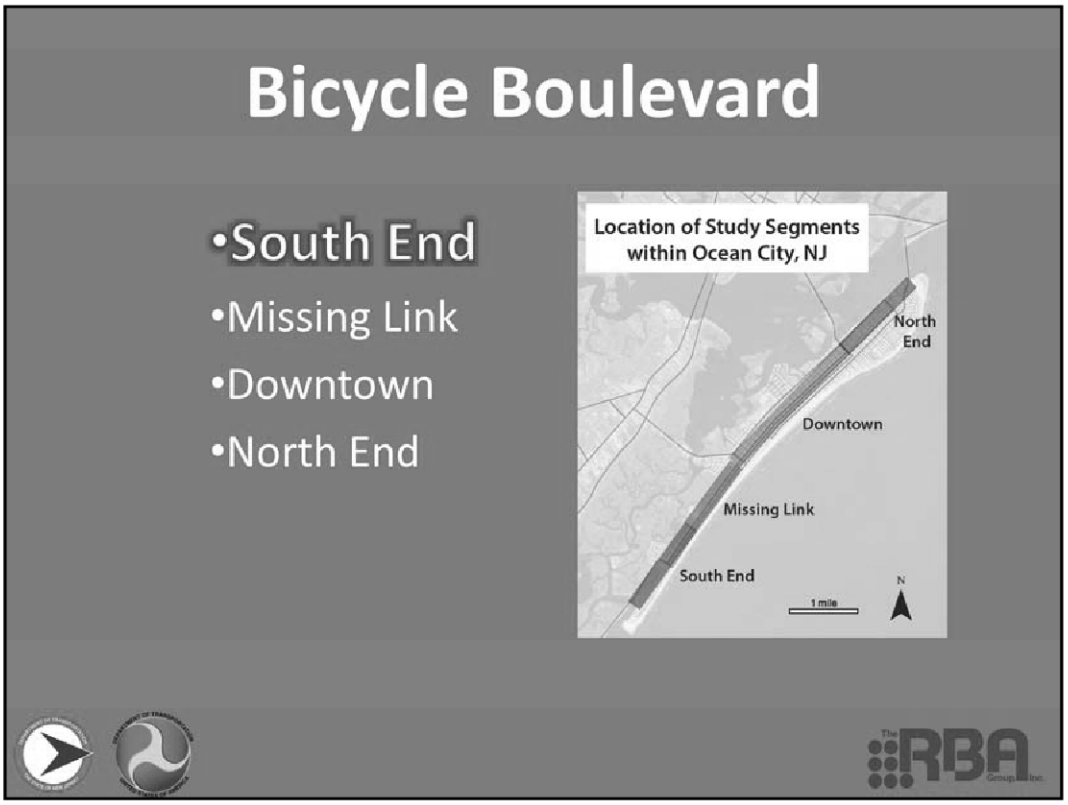


Message: Additional recommendations for the entire corridor include:

1. Intersection improvements improve the corridor for bicyclists and pedestrians. Treatments include:
    1. curb extensions reduce crossing distances and provide room for street furniture including bike parking
    2. enhanced crosswalks increase visibility of bicyclists and pedestrians when crossing
2. Ensure all drainage grates are bicycle safe, with openings small enough to prevent a bicycle wheel from falling into the slots of the grate
3. Stop signs should be turned to stop cross traffic at intersections to prioritize bicycle through travel on the bicycle boulevard.

Photo:

1. Curb Extension, source: flickr.com/drdul
2. Through-priority on Haven Ave, source: The RBA Group



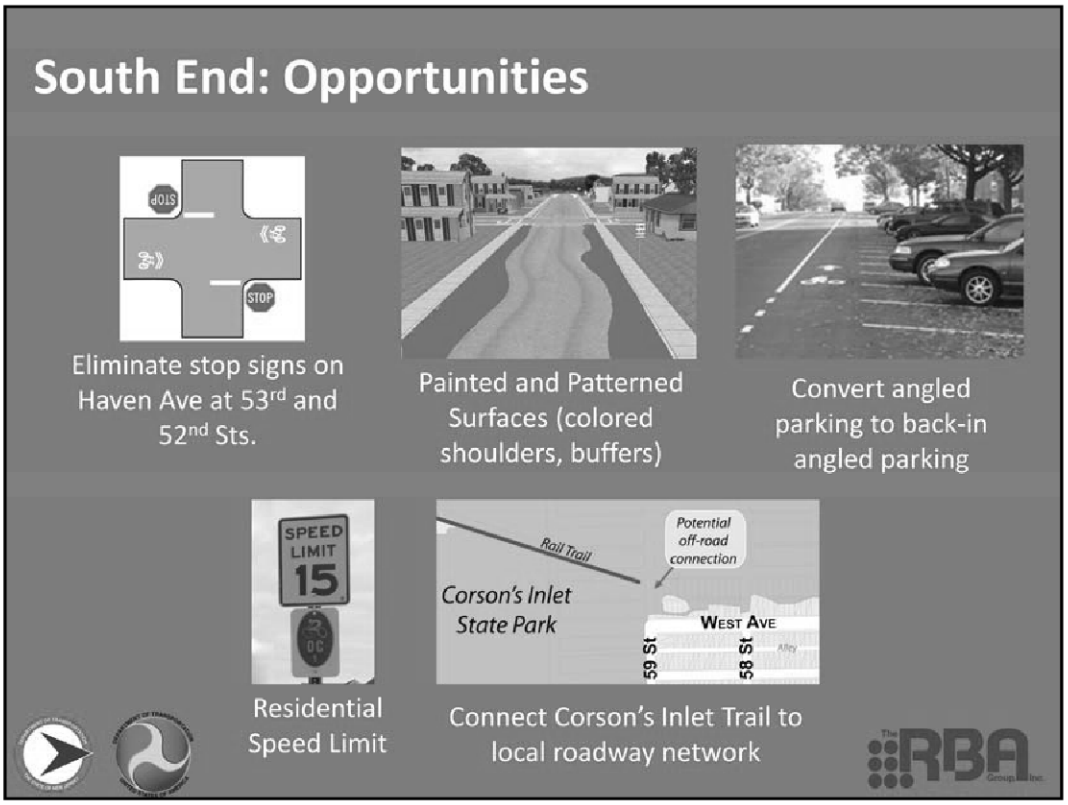
Message: The "South End" segment is comprised of OC1 Bike Route along Haven Avenue between 56th Street and 49th Street, West Avenue from 59th to 56th and connections to Corson‟s Inlet Trail and the Ocean Drive Bridge to Strathmere.

Message:

- There are no dedicated bicycle facilities within the South End except the Corson's Inlet Rail Trail which does not connect to the surrounding roadway network.
- The OC1 Bike Route is signed between 56th and 49th Streets along Haven Avenue.
- Low speed, low motor vehicle traffic volume along Haven Ave.
- The pavement width varies between 20-40 feet.
- Street quilts have been painted at the intersections of Haven Ave & 53rd Street & 52nd Street at either end of the playground. There is also all-way stop control at these two intersections
- On street parking is permitted but not striped along Haven Avenue.

Source: The RBA Group

Photos: The RBA Group



Message: The "South End" Opportunities for enhancing bicycle-priority travel in the South End include OC1 Bike Route as well as connections to Strathmere Bridge and/or connections to Corson's Inlet. Some opportunities include:

- Eliminate the stop traffic control at 53rd Street and 52nd Street intersections along Haven Avenue in this segment to be consistent with the Ocean City Circulation Element of the Master Plan. This would provide more uninterrupted traffic flow along Haven Avenue.
- As stop signs on Haven Avenue are removed and through-traffic is prioritized, consider other traffic calming elements to keep speeds down but maintain bicycle-priority operation of the roadway. This could include shared lane markings, painted chicanes, colored shoulders, painted or planted medians, curb extensions, speed humps, etc.
- Implement reduced residential speed limit to institutionalize appropriate travel speeds and traffic calming efforts.
- Reconfigure angled parking along West Ave to back-in angled parking to minimize conflicts between bicyclists, pedestrians and motorists and to maximize visibility.
- Connect the Corson"s Inlet Trail to the local roadway network at the south end of West Avenue at 59th Street.

Recommendations to connect Strathmere Bridge to the Bicycle Boulevard – next slide

Source: The RBA Group

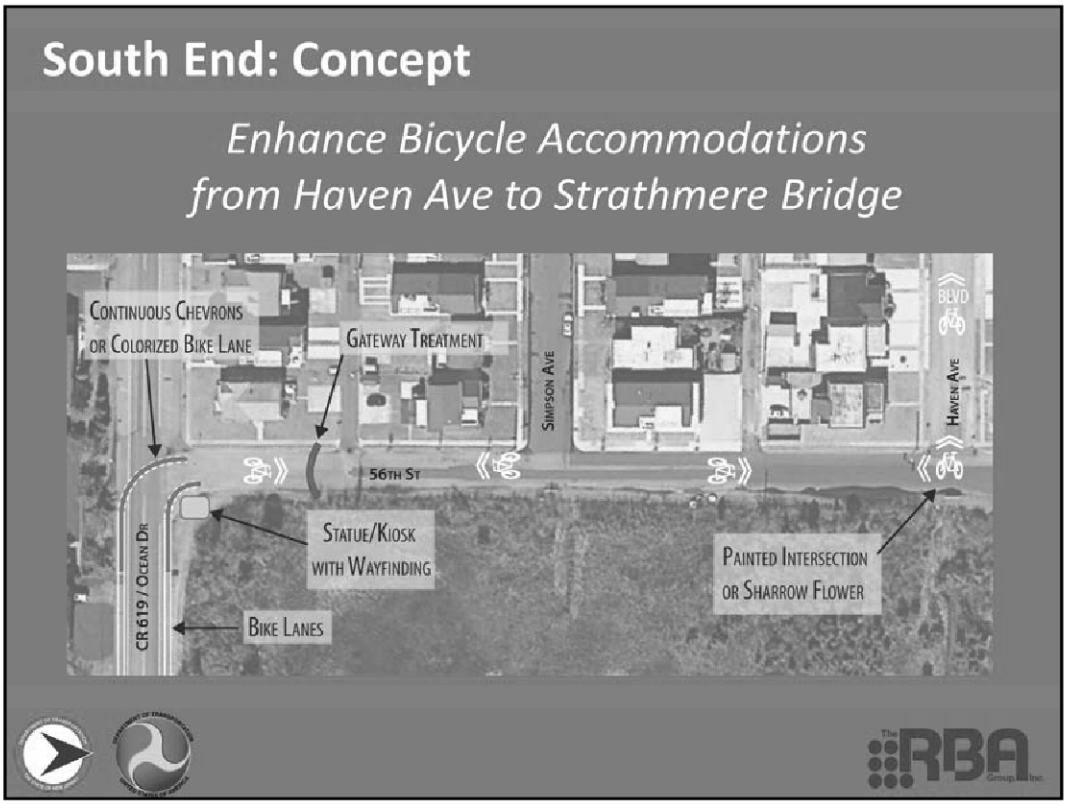
Photos: The RBA Group

Message: Enhance bicycle accommodations from Haven Ave to Strathmere Bridge.

- Extend OC1 from its southern terminus of Haven Ave and 56th Street to the west along 56th Street to Ocean Drive.
- Establish a Gateway at 56th and Ocean Drive to guide bicyclists to the Bicycle Boulevard.
- Install bike lanes along Ocean Drive and over bridge.
- Provide wayfinding signs to the bicycle boulevard and destinations.

Source:
1. Shared lane marking, source: The RBA Group
2. Gateway, source: flickr.com/Maralinga in WA
3. Bike Lanes, source: streetswiki.com
4. Wayfinding signs, source: left – City of Ocean City, right - MUTCD

Photos: The RBA Group

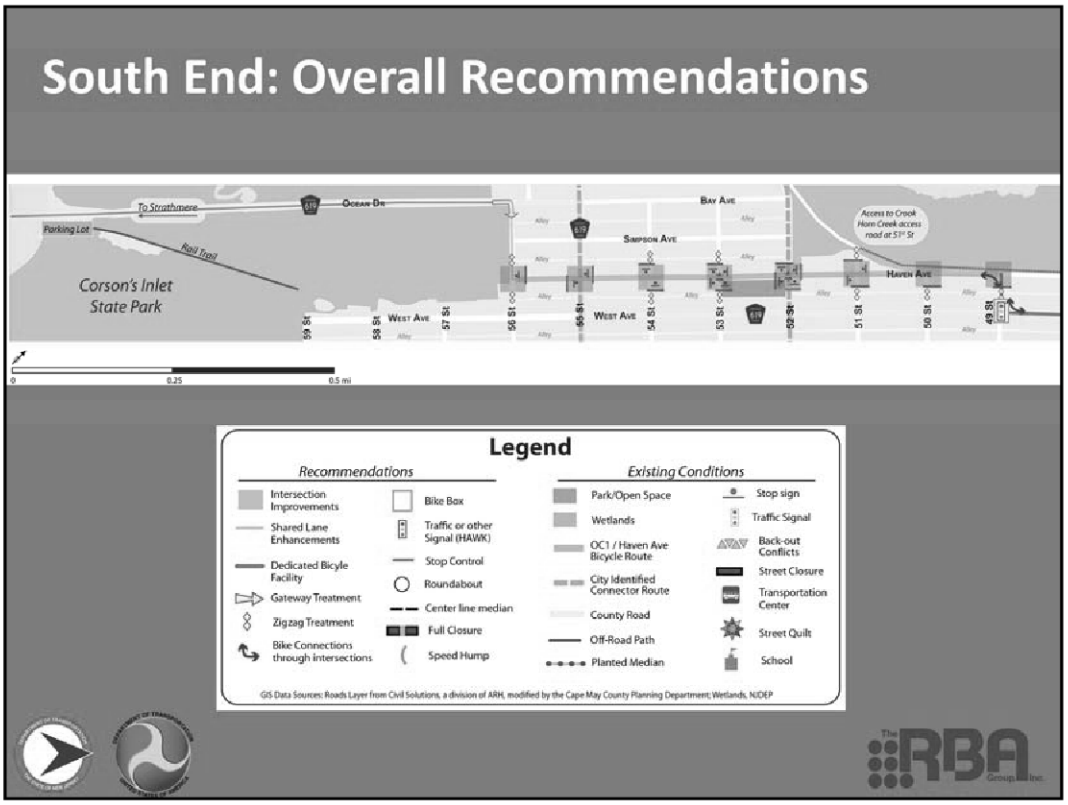


Message: This is what enhancing bicycle accommodations from Haven Ave and 56th St to CR 619 / Ocean Drive could look like. This may include:

- Shared Lane Markings along 56th Street.
- Gateway treatment along 56th Street and/or information kiosk at 56th and CR 619/Ocean Dr. This will guide bicycle traffic to the Haven Ave. Bicycle Blvd.
- Striped continuous chevrons and/or colorized bicycle lane intersection treatment to direct bicyclists to the Bicycle Boulevard

Source: The RBA Group

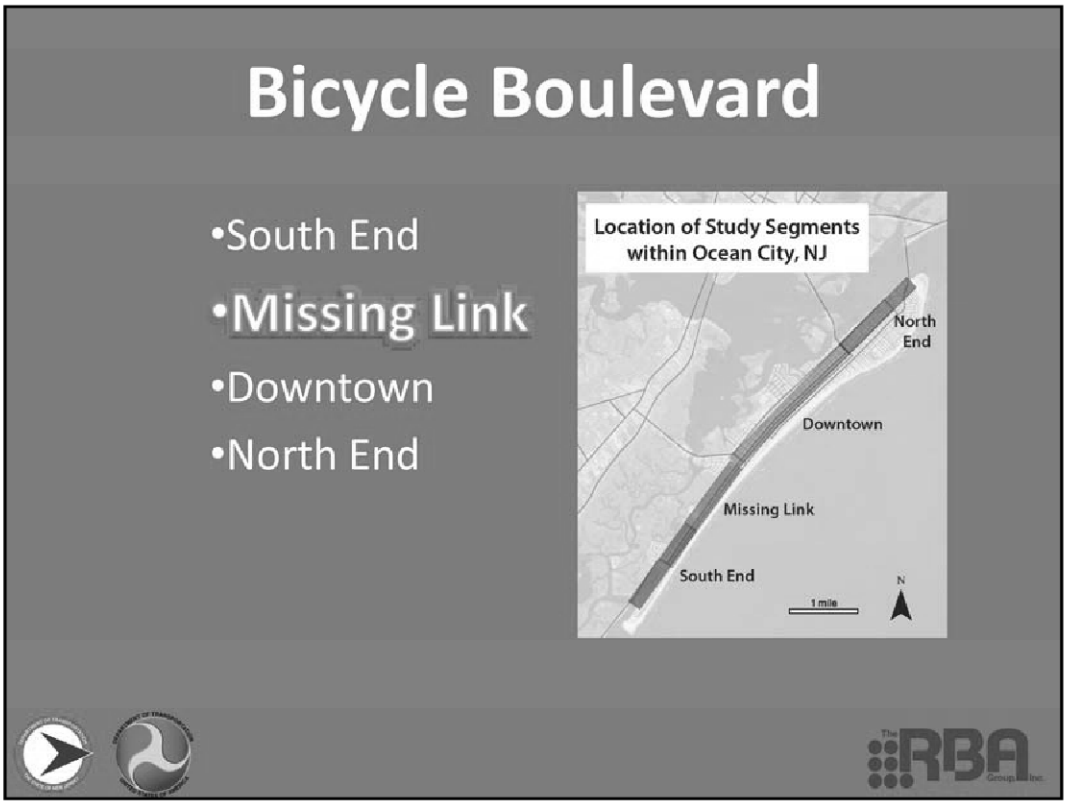
Photos: The RBA Group



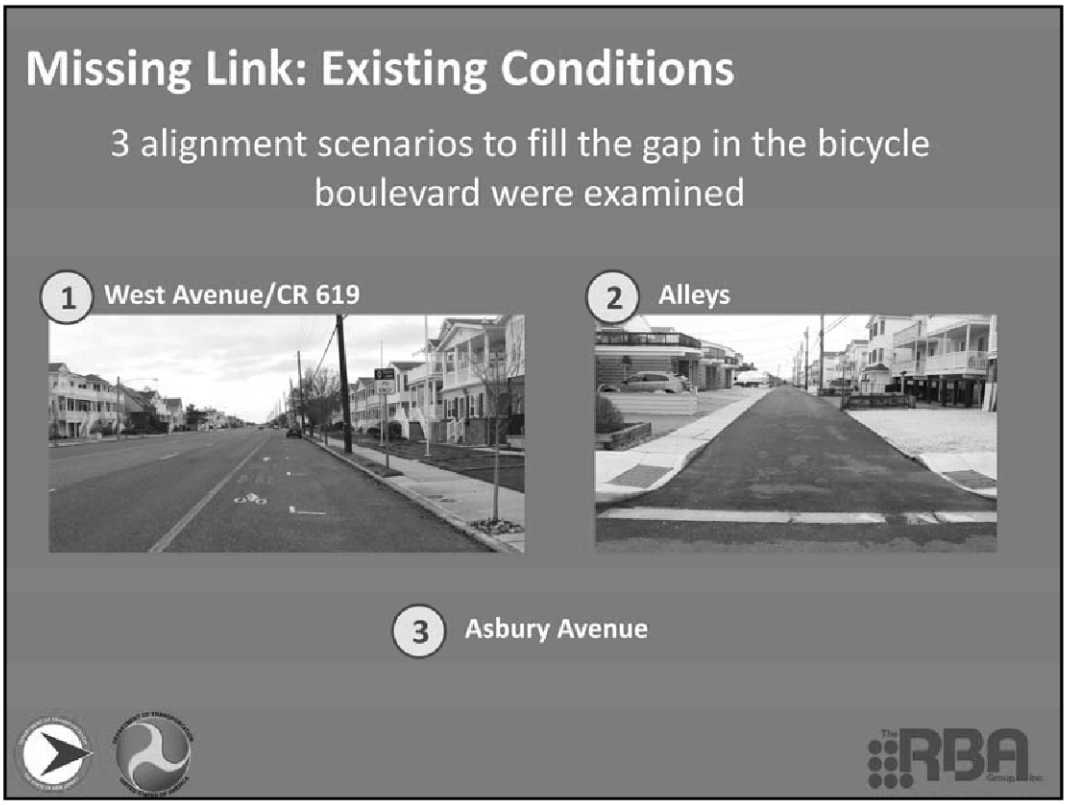
Message: Recommendations Map 12 from the Haven Avenue Corridor Report. This schematically shows where these recommendations would be best implemented.

Source: The RBA Group

Photos: The RBA Group



Message: The "Missing Link" segment is described as such because the Haven Avenue corridor is discontinuous between 49th and 36th Streets. In terms of creating a continuous bicycle-priority on-road facility for the entire length of Ocean City, the gap in Haven Avenue is the primary constraint.



Message: Existing Conditions

Existing Conditions – West Ave/CR 619

- High traffic volume and high speeds
- On-street parking, bike lanes & sidewalks on both side
- Coastal Evacuation Route
- 70 ft. wide 4 lane arterial is wide enough to accommodate all users and modes
- The wide crossing distance combined with high traffic speeds and volume create a difficult crossing situation for pedestrians.

Existing Conditions – Alleyways

- Low traffic volume and low speeds
- High potential for conflicts at cross streets

Existing Conditions – Asbury Ave

- Primarily residential street with low traffic volume and speed
- 3 blocks from Haven Ave. This alignment would require 2 crossings of West Ave

Source: The RBA Group

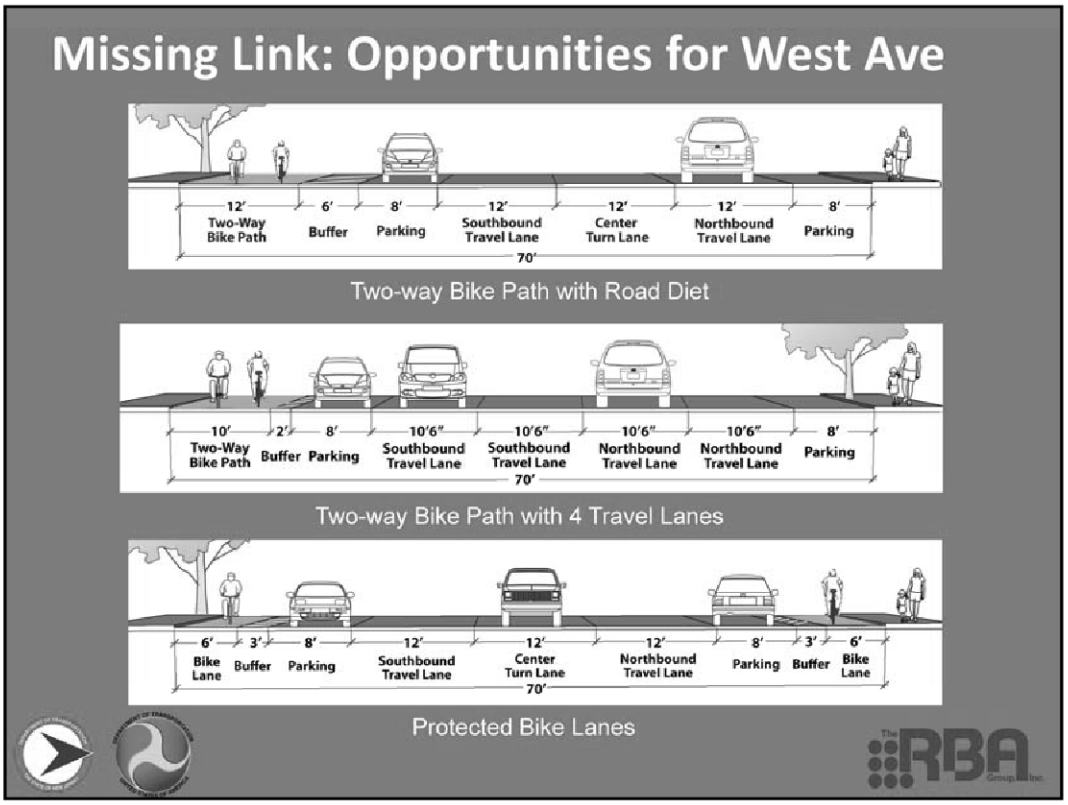
Photos: The RBA Group

Message: Opportunities along the Missing Link Segment:

- Bicycle accommodation should be enhanced to complete access between Haven Avenue and the 3 separate alignment. This could be accomplished through:
    - Installing signs and shared lane pavement symbols and/or bike lane striping.
    - Striping colorized bike lanes or continuous bike chevron symbols could be striped along the intended bicycle travel path to help with both wayfinding and to advertise to motorists that they should anticipate turning bicycle traffic.
    - Wayfinding signs and pavement markings to confirm and advertise the routing of the bicycle boulevard
- Install bike boxes at traffic signals. A bike box is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase.
- Vertical traffic calming measures such as raised intersections, crosswalks or speed tables could be installed at every alley crossing.
- Pavement markings can be used on the bike path at potential conflict locations (such as driveways) to increase awareness among motorists, bicyclists and pedestrians

Source: The RBA Group

Photos:
1. Continuous chevrons, Source: NACTO
2. Bicycle box, Source: flickr.com/GregRaisman
3. Raised Crossing, Source: John Luton
4. Pavement markings on bike path, Source: The RBA Group



Message: Opportunities

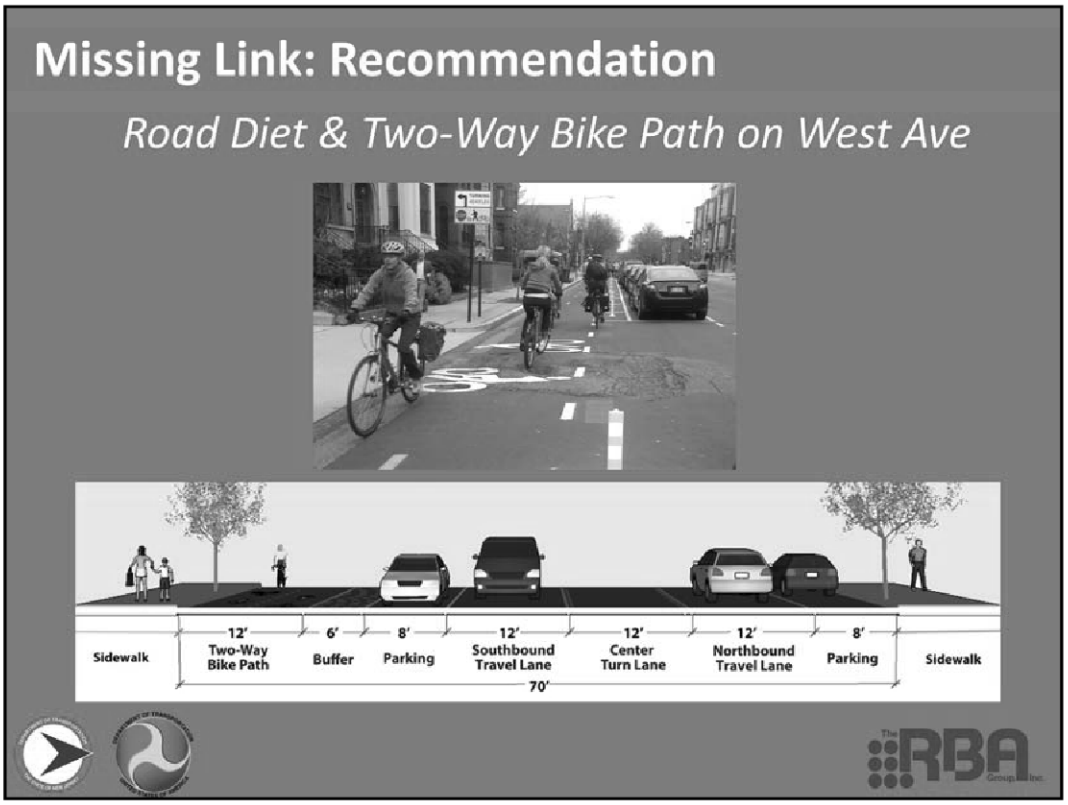
Opportunities for Enhancing Bike Boulevard (West Avenue)

There are multiple ways to redistribute the roadway and enhance accommodations for all users by re-striping the roadway. These include:

- Two-way Bike Path with or without a Road Diet
- Protected bike lanes with Road Diet

Source: The RBA Group

Photos: The RBA Group

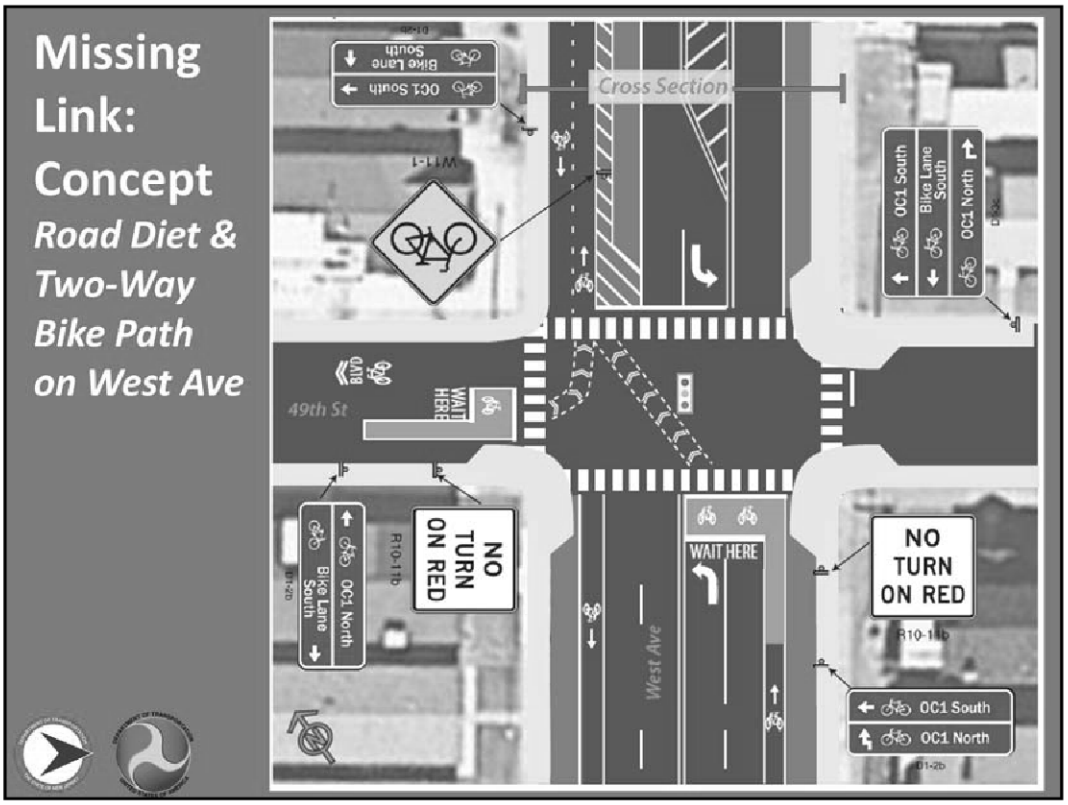


Message: ***Road Diet and Two-way Bike Path on West Avenue***

- Convert the existing 4 travel lanes on West Avenue to 3 including a center lane. Utilize the left over space to create a buffer and two-way bike path along the west (southbound) side of West Ave.
- This concept has the strong advantage of being in close proximity to Haven Ave.
- No major roadway crossings
- Compatible with the Ocean City vision
- At least 8 feet wide to accommodate two-way bicycle traffic

Source: The RBA Group

Photos: The RBA Group



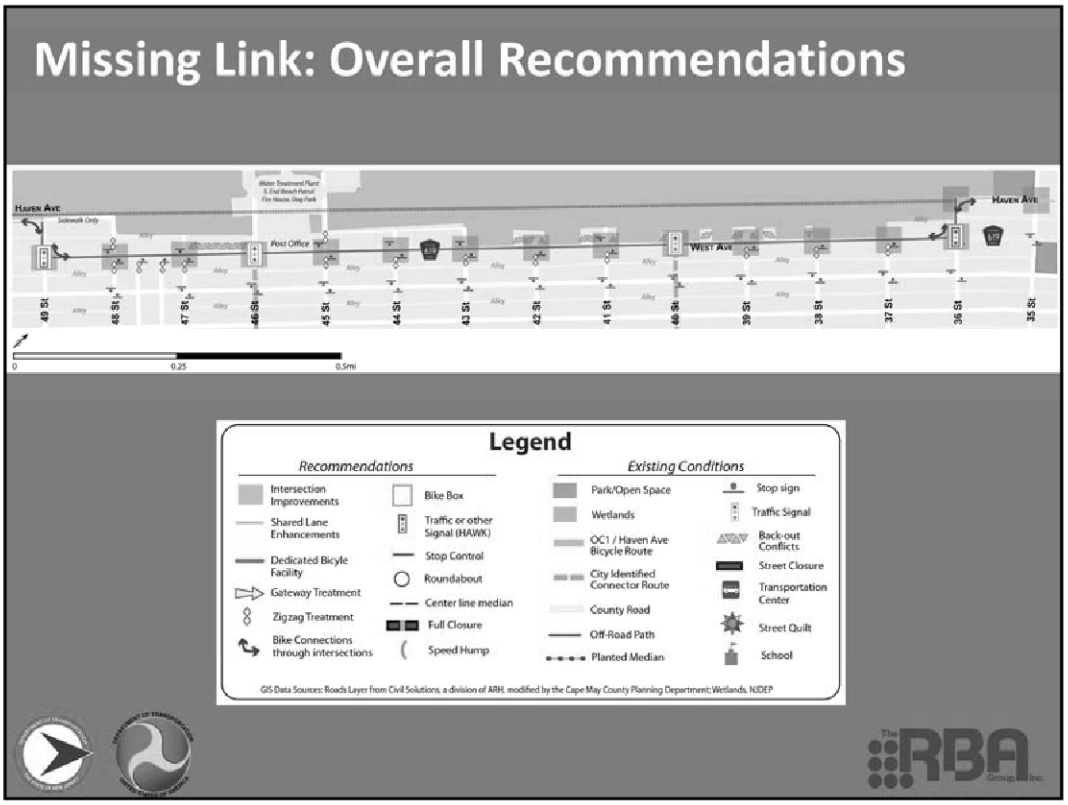
Message: This concept looks at the connection between the two-way bike path and the bicycle boulevard. In addition to installing signs and shared lane pavement symbols and bike lane striping, this concept includes advance (lead) traffic signal phasing for turning bicycle traffic.

This may include:

- New traffic signals at 49th Street and 36th Street to manage potential conflicts between turning motor vehicles and bicycle traffic
- Traffic signal should include advance (lead) phasing for turning bicycle traffic. Signal should include bicycle specific signal heads.
- Advanced bike box should be striped ahead of the stop line for motor vehicle traffic. This provides space for bicyclists to take advantage of the advance signal phasing.
- Continuous chevrons through the intersection
- Wayfinding and warning signs
- Can work with either preserving the four travel lanes along West Avenue or preferably with a lane reduction (road diet) as shown. The largest difference would be narrower lanes and less buffer between the parking and the two-way bike path.

Source: The RBA Group

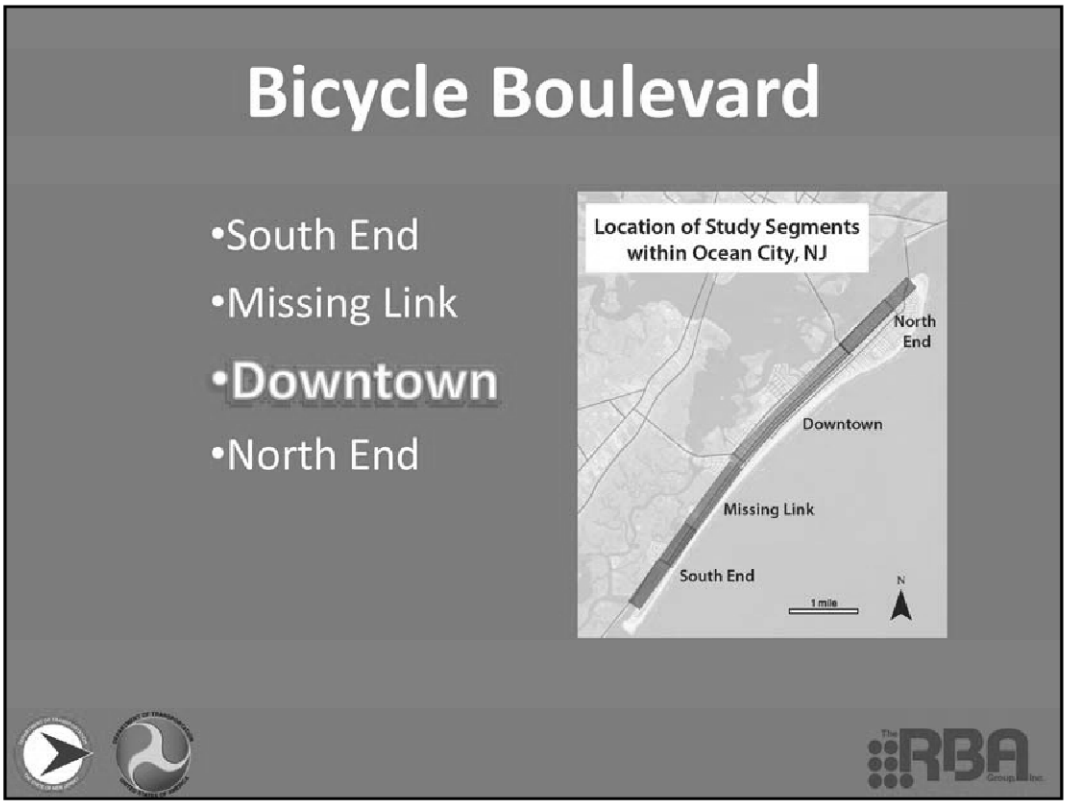
Photos: The RBA Group



Message: Recommendations Map 13 from the Haven Avenue Corridor Report. This schematically shows where these recommendations would be best implemented.

Source: The RBA Group

Photos: The RBA Group



Message: This 27-block segment of Haven Avenue traverses the majority of the "downtown" area of Ocean City. Major bicycling and walking destinations are located along this segment, including the Ocean City Community Center and the Intermediate Middle School. This segment of Haven Ave was dedicated as OC1 Bike Route in 2008 and was the first Bicycle Boulevard in NJ.

Message: Existing Conditions Bike Boulevard

- The Haven Avenue corridor between 36th Street and 9th Street is the backbone of the Bicycle Boulevard in Ocean City.
- There are 15 different street configurations in this stretch of Haven Avenue, with varying types of bicycle facilities including:
    - Shared road
    - Side bike path, with or without a planted buffer
    - Planted median and shared travel lanes
    - Painted median and shared travel lanes
    - Center median bike path
    - OC1 Bike Route signage
- Transitions between various roadway segment configurations are not always smooth or intuitive for through bicycle and pedestrian traffic.
- Motor vehicle traffic is reported to frequently cut through the local roadways, using Haven Avenue to avoid traffic signal at West Avenue.
- There is some forced traffic control.
    - Roadway closures along the 30th Street, 32nd Street and 33rd Street approaches to Haven Avenue from the west.
    - Centerline median forces traffic traveling along 21st Street and 23rd Street to turn right onto Haven Avenue.

Source: The RBA Group

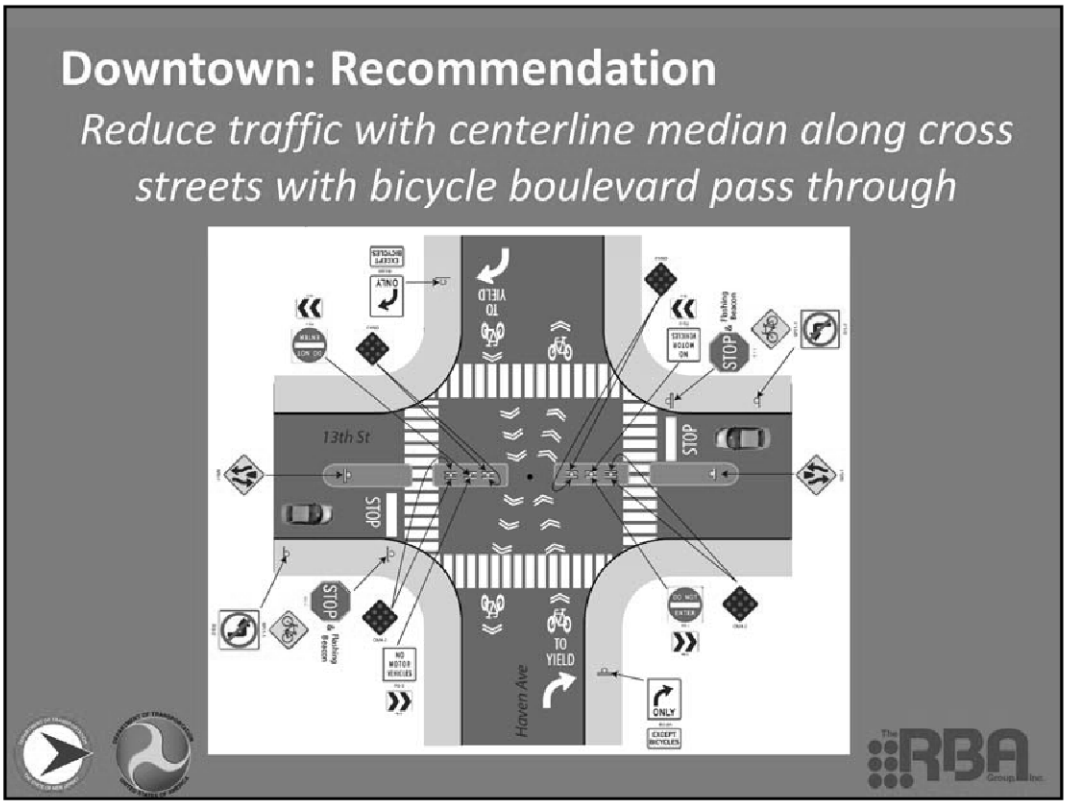
Photos: The RBA Group

Message: Opportunities to Enhance Bicycle Priority on Haven Avenue

- Where the existing bicycle accommodation works well, maintain the current treatments. This will minimize construction costs by utilizing existing bicycle facilities where appropriate.
- The boulevard treatment that is in place along Haven Avenue between 24th Street and 20th Street, with its planted center median, curb extensions and shared travel lanes, could be extended throughout the corridor. Segments of Haven Avenue that already have a shared use path along one side of the roadway, could also benefit from this treatment. Young children could continue to use the path; however, the shared travel lanes will be emphasized to give bicycle priority.
- The transitions between the various bicycle treatments along the corridor should be made clearer for all travelers. Providing signs, striping, and pavement treatments should make these transitions intuitive, especially between sidepath and shared lane configurations.
- 34th Street should be emphasized as a major gateway to the Ocean City bikeway network. A large scale gateway, possibly signs or an arched structure over the roadway should be considered.
- Traffic calming
    - Mini roundabouts reduce vehicle turning and through speeds and reduce unnecessary stops through yield control. Mini roundabouts should be considered for major intersections and connector routes along Haven Avenue, such as at the intersections with 29th Street, 24th Street, 18th Street, and 14th Street.
    - Speed humps and tables reduce vehicle speeds and discourage through vehicle trips
    - Implement reduced residential speed limit to institutionalize appropriate travel speeds
- Reduce channelization of shared roadway be removing painted centerline

Source: The RBA Group

Photos:
1. Treatment between 24th-20th Sts., Source: The RBA Group
2. Gateway, Source: flickr.com/Maralinga in WA
3. Mini roundabout, Source: BikeLongBeach.org
4. Speed hump, Source: Clarence Eckerson Jr. from streetsblog.org
5. Residential Speed Limit, Source: The RBA Group

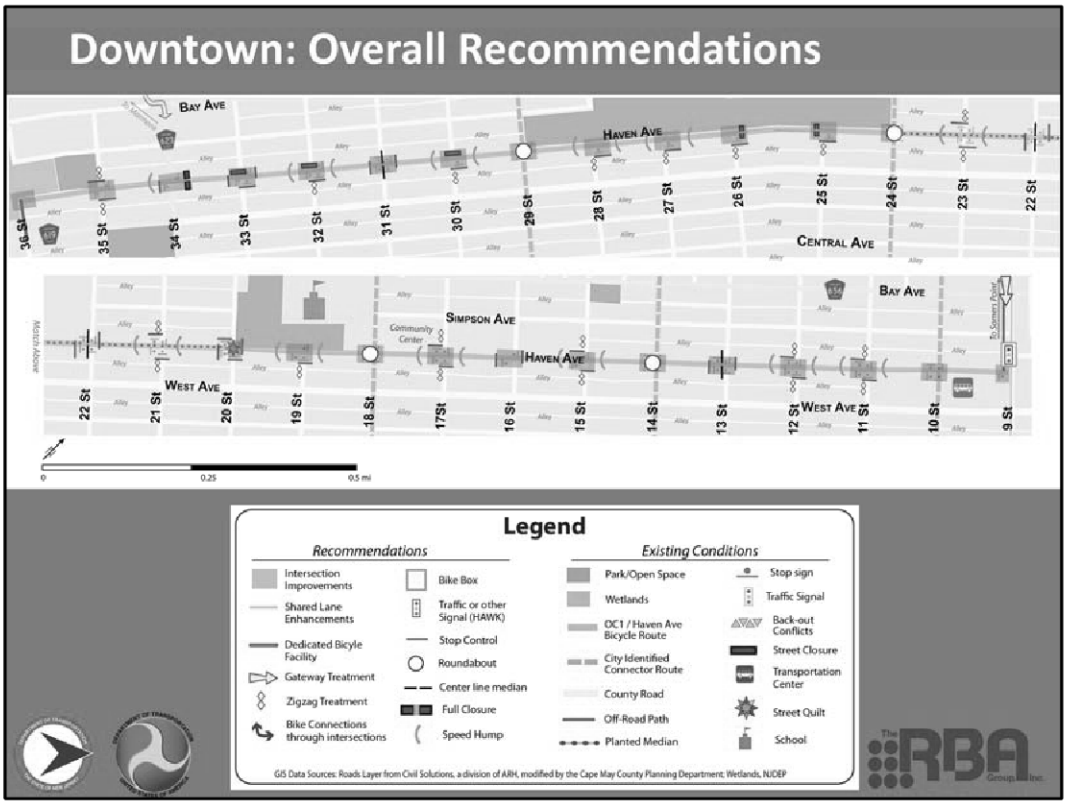


Message: The detailed concept selected from the Downtown segment is focused on providing a traffic diverter island that would be constructed along 13th Street across Haven Avenue.

- This would require motor vehicle traffic to turn right; however, bicycle traffic would have a pass through along Haven Avenue.
- This is a major volume control traffic calming feature that should be studied further to confirm that there will not be unanticipated traffic flow issues throughout the local roadway network.
- Colorized bike lanes or continuous bike chevron symbols should be striped through the intersection along the intended bicycle travel path to help with both wayfinding and to advertise to motorists that bicyclists have priority along the bicycle boulevard.
- Centerline medians could be located at 13th Street, 22nd Street and on 31st Street.

Source: The RBA Group

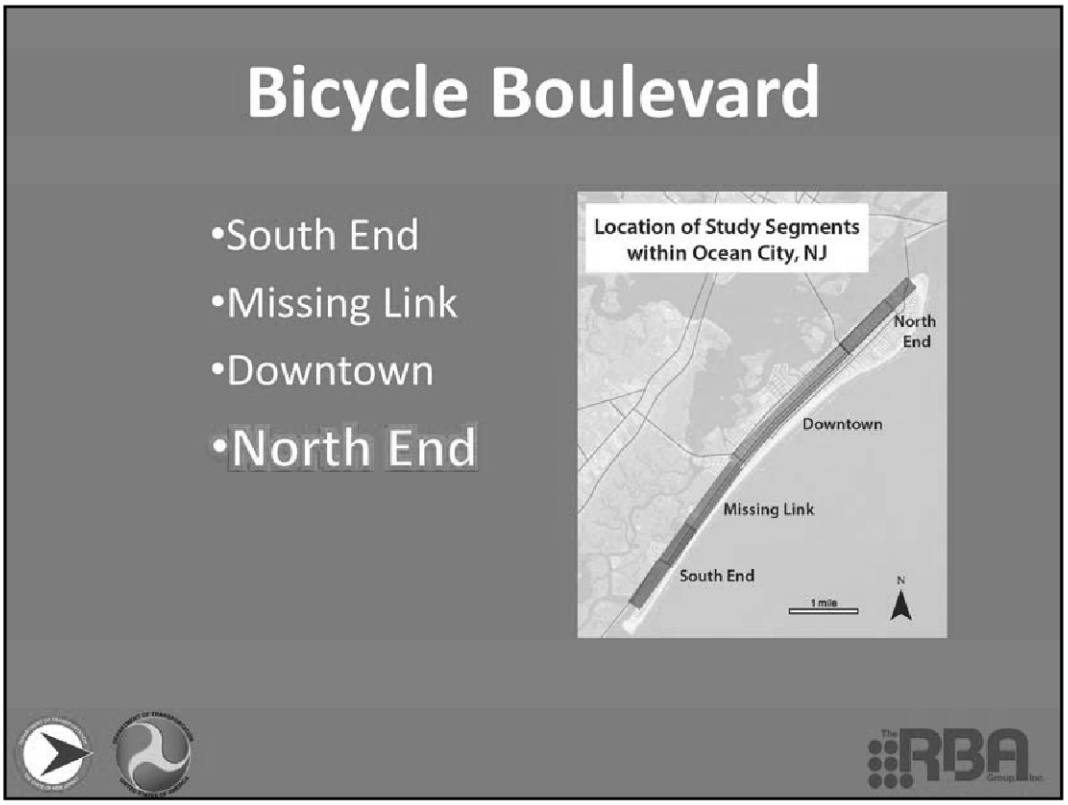
Photos: The RBA Group



Message: Recommendations Map 14 from the Haven Avenue Corridor Report. This schematically shows where these recommendations would be best implemented.

Source: The RBA Group

Photos: The RBA Group



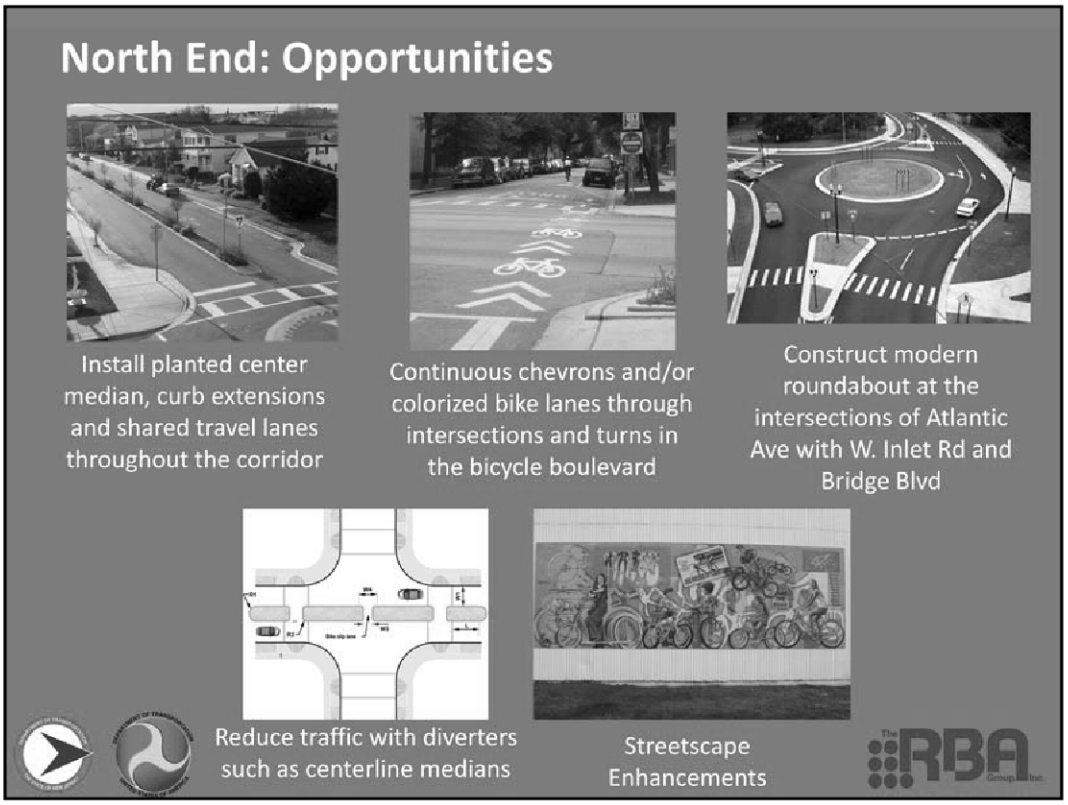
Message: The "North End" segment extends between 9th Street and the Longport Bridge through multiple residential streets and an off-road path. There are currently no bicycle facilities located in this segment.

Message: North End Existing Conditions

- OC1 does not currently continue north of 9th Street
- There are currently no bicycle facilities located in this segment.
- Haven Ave is not a through street in this segment
- The bicycle boulevard alignment will have to include multiple streets
- Streets tend to be wider in this area than in the other segments of the bicycle boulevard (between 39' and 142')
- There is no crossing facility at 9th Street and Haven Avenue.

Source: The RBA Group

Photos: The RBA Group

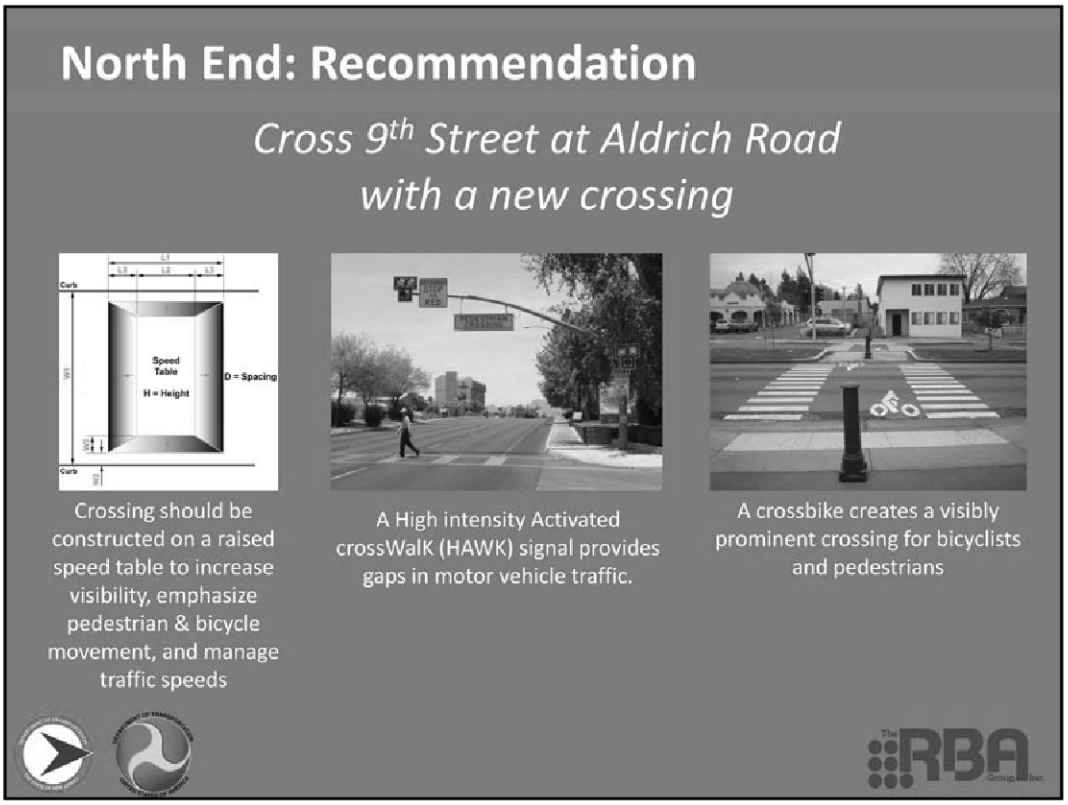


Message: Due to the routing along multiple streets, opportunities for enhancing bicycle-priority travel in this segment vary.

- Similar to the boulevard treatment that is in place along Haven Avenue between 24th Street and 20th Street, install planted center median, curb extensions and shared travel lanes throughout this corridor.
- The bicycle boulevard will make numerous turns along the alignment in the North End of Ocean City. Stripe continuous bicycle chevrons or colorized bike lanes across and at off-set intersections. This will provide wayfinding and self advertising for the bicycle boulevard.
- Reduce traffic on Simpson Ave with centerline median with bicycle boulevard pass through
- Reconfigure the intersections of Atlantic Avenue with West Inlet Road and Bridge Boulevard by constructing modern roundabouts.
- Construct streetscape enhancements. This may include large scale murals or other public art.

Source: The RBA Group

Photos:
1. Planted center median, curb extensions, source: The RBA Group
2. Continuous chevrons, source: NACTO
3. Centerline median diagram, source: NJDOT Roadway Design Manual
4. Modern Roundabout, source: The RBA Group
5. OC1 Mural, source: The RBA Group



Message: ***Crossing 9th Street***

- The HAWK operates only when activated (either by push button of passively by detection). This will minimize disruption to motor vehicle traffic when there are no bicyclists or pedestrians attempting to cross 9th Street.
- The HAWK signal consists of two red lenses over a single yellow lens. It displays a red indication to drivers when activated, which creates a gap for pedestrians and bicyclists to use to cross a major roadway.

Source: The RBA Group

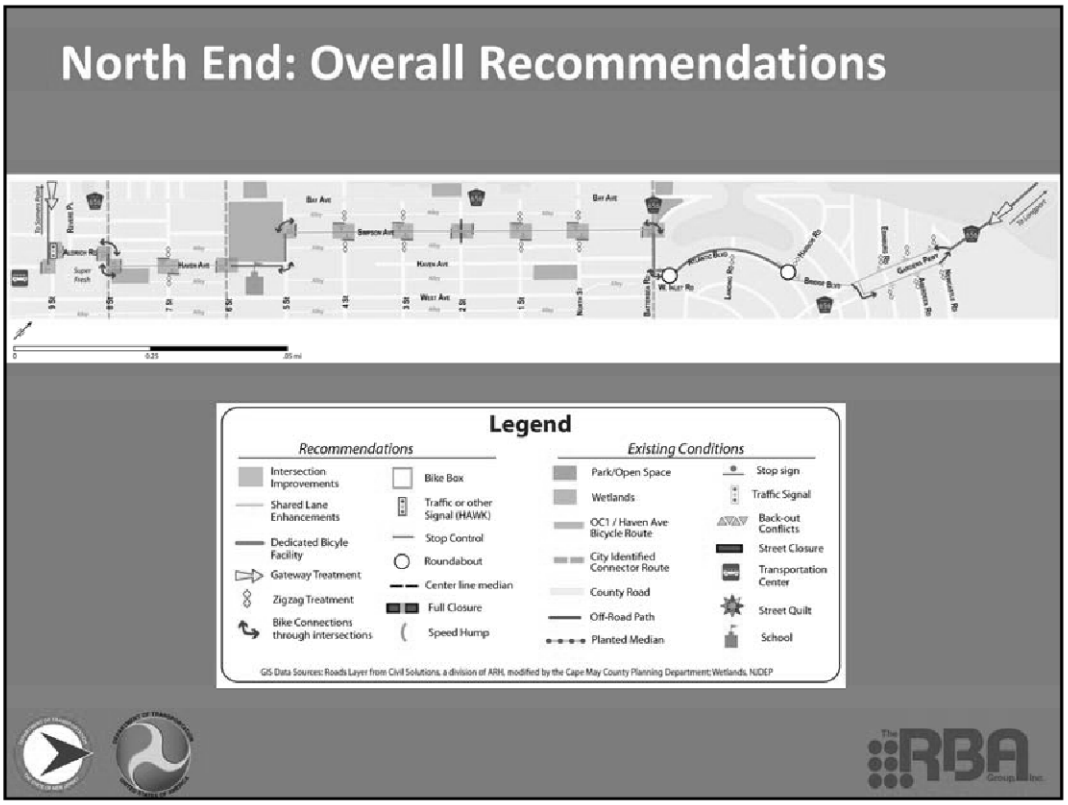
Photos:
1. Raised speed table, Source: NJDOT Roadway Design Manual
2. HAWK signal, Source: FHWA
3. Crossbike, Source: Alta Planning & Design

Message: This is what a raised crosswalk/crossbike at 9th St between Haven Ave and Aldrich Road could look like. This may include:

- A new HAWK (High Intensity Activated crossWalK)
- Raised crosswalk/ crossbike
- Advance warning signs
- This crossing will tie into the newly constructed path along 9th Street and will connect to the new road closure along Aldrich Road

Source: The RBA Group

Photos: The RBA Group



Message: Recommendations Map 14 from the Haven Avenue Corridor Report. This schematically shows where these recommendations would be best implemented.

Source: The RBA Group

Photos: The RBA Group

Message:
Most design treatments suggested in this section are in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), the American Association of State Highway and Transportation Officials (AASHTO), and New Jersey Department of Transportation‟s *Bicycle Compatible Roadways and Bikeways and Pedestrian Compatible Planning and Design Guidelines.*

Several design treatments are suggested which are currently in widespread use but which are not included in the above-referenced guidelines such as “colored bike lanes”, “bike boxes” or “zigzag striping”.

Their use is typically validated through their inclusion in the FHWA MUTCD experimental process (see Appendix H: MUTCD Request to Experiment). Where such improvements are recommended, they should be implemented through this experimentation process.

That’s all folks.

Source: The RBA Group

Photos: The RBA Group

Appendix C: Funding Sources

Funding Sources[1]

The following section is a compilation and brief description of sources of funding that have been, or could be used to fund pedestrian and bicycle improvements in New Jersey. The list is not exhaustive, but it identifies the major funding sources that can be utilized to fund bicycle and pedestrian planning and project development activities, as well as construction. Some funding sources may also be used to fund programmatic activities.

Table 1: Funding Sources is a summary table of all the funding sources noted in this section and highlights those recommended by the project team as being best suited for funding related to the Ocean City Rail Trail & Bicycle Boulevard Project. Using information abstracted from this table, **Table 2: Top Recommended Funding Sources** provides additional information about these top recommended funding sources.

[1] Funding sources and requirements are constantly evolving and are subject to change based on available program funding. Applicants should confirm the availability of the funding source with the noted funding agency.

Federal

Transportation Enhancements (TE)

This federally funded program, administered by NJDOT's Division of Local Aid and Economic Development, focuses on non-traditional transportation-related projects that promote alternative modes of transportation while preserving and protecting environmental resources.

The TE grants are used to help local governments creatively integrate transportation facilities into their local surroundings. The types of projects that can qualify include "provision of facilities for pedestrians and bicycles" and "provision of safety and educational activities for pedestrians and bicyclists." Others include "acquisition of scenic easements and scenic or historic sites," which could be used to enhance the pedestrian experience, "landscaping and other scenic beautification", which might be part of a streetscape project that can be beneficial to pedestrians and "preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails)." The grants can also be used for other types of projects, which may have a more indirect or secondary benefit for bicyclists and pedestrians.

Counties, municipalities and non-profit organizations are eligible to apply. Applications are submitted to the New Jersey Department of Transportation (DOT) and reviewed by several state agencies, including the DOT and the Department of Environmental Protection, as well as the Metropolitan Planning Organizations (MPOs) and representatives from outside the traditional transportation group. This committee reviews the applications and creates a short list to be submitted to the Commissioner of Transportation. Those applications that pass the basic eligibility part of the screening process are sent to the county planning department for the county perspective. Applicants should notify the county planning department about the proposed project.

The Congestion Mitigation and Air Quality Improvement Program (CMAQ)[2]

Authorized by SAFETEA-LU, The Congestion Mitigation and Air Quality Improvement Program provides funds for surface transportation and other projects that help to reduce congestion and improve air quality. The funds are mainly used to help communities in non-attainment areas and maintenance areas to reduce emissions. Non-attainment areas are those areas designated by the Environmental Protection Agency as not meeting the National Ambient Air Quality Standards (NAAQS). A maintenance area was once a non-attainment area but has now reached NAAQS. The SAFETEA-LU CMAQ program provides more than $8.6 billion in funds to State Departments of Transportation (DOT), Metropolitan Planning Organizations (MPO), and transit agencies to invest in emissions-reducing projects. Pedestrian and Bicycle Programs are two kinds of many programs that can be funded using CMAQ funds.

Bicycle and pedestrian programs that can be funded under this program can come in one of many forms. Some include creating trails or storage facilities or marketing efforts designed to encourage bike riding and walking as forms of transportation. Education and outreach programs are also eligible for CMAQ funds and could be used to increase public knowledge about the benefits of biking and walking.

[2] **Source**: "The Congestion Mitigation and Air Quality Improvement Program" by the U.S. Department of Transportation, FHWA, Federal Transit Administration

The funds are made available through the MPOs and NJDOT to local governments and non-profit organizations, as well as to private organizations as part of a public-private partnership.

Recreational Trails Program (RTP)

An annual sum is apportioned to the states, through the RTP, for use in developing and maintaining trails and trail facilities trails related projects, many of which benefit bicyclists and pedestrians. RTP funds come from federal motor fuels taxes collected on sale of fuel for motorized recreational vehicles (ATVs, off road motorcycles, snowmobiles) and is administered through the Federal Highway Administration. In New Jersey, the program, including solicitation of projects and project selection, is administered by the Office of Natural Lands Management in the Department of Environmental Protection. State, county, and local governments and non-profit organizations are eligible for funds.

Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) is administered by FHWA to fund highway safety projects aimed at reducing highway fatalities and serious injuries. Though bicycle and pedestrian projects are eligible for funding, HSIP has been largely overlooked as a resource for these projects. Eligible infrastructure includes bike lanes, bike parking, crosswalks and signage. States can spend 10% of their HSIP funds on public awareness campaigns, education programs and enforcement activities.

Transportation, Community, and System Preservation Program (TSCP)

Grants for implementation under the TSCP program provide financial resources to States, metropolitan planning organizations, local governments and tribal governments to enable them to carry out activities that address transportation efficiency while meeting community preservation and environmental goals. Examples of such policies or programs include: spending policies that direct funds to high-growth regions of the country; urban growth boundaries to guide metropolitan expansion; green corridors" programs that provide access to major highway corridors for areas targeted for efficient and compact development.

Land & Water Conservation Fund (LWCF)

The LWCF program provides matching grants to States and local governments for the acquisition and development of public outdoor recreation areas and facilities. The program is intended to create and maintain a nationwide legacy of high quality recreation areas and facilities and to stimulate non-federal investments in the protection and maintenance of recreation resources. The LWCF could fund the development of river-adjacent bicycle and pedestrian facilities such as a promenade.

Surface Transportation Program (STP) Funds

The program is broadly defined and gives states flexibility to invest in a wide variety of transportation activities. These funds are administered partially through NJDOT and partially through the state's Metropolitan Planning Organizations (MPOs). Bicycle and pedestrian facilities and walkways are specifically listed as eligible activities under this program. Pedestrian and bicycle improvements may be incidental improvements within larger projects which establish bicycle compatibility or designated bicycle and pedestrian accommodations. The funds can also be used for independent bicycle and pedestrian projects along or in the vicinity of roadways. Projects could include shoulder paving, bicycle safe drainage grates, construction of sidewalks or bikeways, installation of pedestrian signals, crosswalks or overpasses. Under SAFETEA-LU, it is specified that these funds may be used for the modification of sidewalks to comply with the Americans with Disabilities Act.

1. **Local Scoping Projects**
   This program, administered by the Metropolitan Planning Organization (MPO) provides federal funds (on a competitive basis) to the sub-regions (counties) to advance projects through preliminary engineering and environmental reviews, ultimately making that project eligible for inclusion in the TIP (as a Local Lead project). The purpose of this program is to identify any cultural or environmental issues that may or will require mitigation during the design and or construction phases of the ensuing federal project. Bicycle and pedestrian projects are eligible for funding under this program. Projects that have successfully completed the Local Scoping process become eligible for federal funding for Design Engineering, Right of Way Acquisition and Construction through the Local Lead Program. NJDOT is involved in the selection process and in requesting authorization of federal funding and review of environmental documents. Municipalities are eligible for the program but must work through the County.

2. **Local Lead Projects**
   This federal program, administered by the MPO (SJTPO) provides funding (on a competitive basis) to the sub-regions (counties) to advance projects through final design and right-of-way. Approximately $80 M is available in cooperation with the MPOs for Local Lead projects. Program funding is to provide for highway and bridge related projects on the county/local road system. Bicycle and pedestrian projects are eligible for funding under this program. Typically, these are projects that have gone through the Local Scoping program. Once a project is selected, NJDOT is involved in processing, establishing federal funding, and reviews.

Section 402 Safety Funds

These funds are administered by the National Highway Traffic Safety Administration (NHTSA) to be spent on non-construction activities to improve the safety of the traveling public. Pedestrian and bicycle projects are on the NHTSA priority list. In each state, the program is administered by a designated Highway Safety representative. In New Jersey, the designated representative is the Director of the Division of Highway Traffic Safety in the Department of Law and Public Safety.

1. **Pedestrian Safety Enforcement and Education Grants**
   This program, administered by the New Jersey Department of Law and Public Safety, Division of Highway Traffic Safety, provides federal (Section 402) funding to governmental subdivisions, often police departments, often for pedestrian safety education and enforcement. The education component provides funding for materials to educate high-risk pedestrian groups. The enforcement component provides overtime funding to enforce traffic laws at high-risk pedestrian locations. Grants are typically given to police departments. In some cases, these funds have been used for minor facility improvements including crosswalk striping and signing.

2. **Comprehensive Traffic Safety Programs (CTSP)**
   This program, administered by the New Jersey Department of Law and Public Safety, Division of Highway Traffic Safety, provides federal (Section 402) funding to governmental subdivisions, typically to counties, to initiate a comprehensive traffic safety program. Under the guidance of a steering committee at the county level, funds can address a variety of traffic safety issues including impaired driving, pedestrian/bicycle safety, school bus safety, work zone safety, aggressive driving, speed enforcement and child safety.

Safe Routes to School (SRTS)

Safe Routes to School (SRTS) is a Federal-Aid program created in SAFETEA-LU and administered by the NJDOT's Division of Local Aid and Economic Development in cooperation with the State SRTS Coordinator. The program provides funds to the States to substantially improve the ability of primary and middle school students to walk and bicycle to school safely. The purposes of the program are to enable and encourage children to walk and bicycle to school, to make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and to facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity (approximately 2 miles) of primary and middle schools (Grades K-8). The program encompasses a comprehensive approach that includes the five E's: Engineering, Education, Enforcement, Encouragement, and Evaluation. Counties and municipalities, school districts, and non-profit organizations are eligible to apply.

Safe Routes to School Mini-Grants

The National Center for Safe Routes to School is maintained by the University of North Carolina Highway Safety Research Center with funding from the U.S. Department of Transportation Federal Highway Administration. They provide mini-grants to eligible organizations to fund activities ranging from the nuts and bolts that help start or sustain a program to new ideas that explore the range of benefits of safe walking and bicycling. Eligible applicants include: Faculty, staff, or parent volunteers at elementary or middle schools; Adult-supervised elementary or middle school groups or clubs; Local governments; Tribal governments; and/or Community-based or private non-profit organizations that will work with a school to improve safety and/or increase the number of children who safely walk or bicycle to school.

State

Bikeway Grant

This program provides funds for municipalities and counties for the construction of bicycle projects. These could include roadway improvements, which enable a roadway or street to safely accommodate bicycle traffic, or designated bikeways (signed bike routes, bike lanes or multi-use trails). The solicitation for project applications occurs at the same time as the solicitation for municipal aid projects. Applications are solicited, evaluated, and rated by NJDOT staff. Based on this evaluation, a list of recommended projects is proposed to the Commissioner of Transportation, who makes the final selection. The program is administered by NJDOT's Division of Local Government Services.

Centers of Place Grant Program[3]

The funding from the Center of Place Grant program is meant to help communities in New Jersey make non-traditional transportation improvements that are meant to aid in managing growth. If a project is selected for funding, it must follow certain standards, including the NJDOT Bicycle Compatible Roadways Planning and Design Guidelines and the AASHTO Guide for the Development of New Bicycle Facilities.

Many different kinds of projects that can be funded with Local Aid for Centers of Place would benefit pedestrians and bicyclists. These include traffic calming improvements, bicycle lanes or modifications to existing roadways to accommodate bicycles, bicycle lockers at transportation facilities, retail complexes and public buildings, mid-block connections/paths to ease bicycle and pedestrian circulation, and strategies which enable mixed use of a 'Main Street' as both public space and a transportation link. Additionally, bicycle trails and pedestrian trails in abandoned railway corridors can also be funded through Local Aid for Centers of Place. Other possible projects that could benefit pedestrians or bicyclists and that can be funded through this program include signage for downtown circulation and street side landscaping.

The grants can be used for project-related activities including preliminary or final design (for Urban Aid or Depressed Rural Centers according to the Transportation Trust Fund Authority Act) and/or construction, including construction inspection and material testing according to the Transportation Trust Fund Authority Act.

Several New Jersey communities have received funding from NJDOT through this program for local pedestrian- and bicycle-oriented projects. Wildwood City, in Cape May County, received $200,000 for their Pacific Avenue Streetscape project. Jersey City, in Hudson County is using their $500,000 grant for a wayfinding project. Franklin Township in Somerset County received $150,000 for a pedestrian access project in Kingston Village. Eight other municipalities also received grants ranging from $75,000 to $500,000 for other projects including town center redevelopments and streetscapes.

[3] Sources: "New Jersey Department of Transportation Centers of Place Handbook: Procedures for Local Aid for Centers of Place Program, November 1998" and *http://www.state.nj.us/transportation/lgs/*.

Municipal Aid Program

Currently, funds are appropriated by the legislature for municipalities in each county based on a formula contained in legislation. These funds can be used for a variety of transportation projects including bicycle and pedestrian related projects. Additional funds are allotted for municipalities that qualify for Urban Aid.

The Municipal Aid program provides funding to municipalities for transportation projects. Funding is made available for municipalities in each county based on a formula that takes into account municipal road mileage within the county and county population. These funds are allocated to individual projects within various municipalities through a competitive process. Funding is allotted to municipalities that qualify for Urban Aid under N.J.S.A. 52:D-178 et seq.

All 566 municipalities may apply. Projects may be improvements to public roads and bridges under municipal jurisdiction. Applications are solicited, evaluated, and rated by NJDOT staff. The results are presented to a Screening Committee comprised of Municipal Engineers and NJDOT staff, appointed by the Commissioner. The Committee evaluates the projects and makes recommendations to the Commissioner for approval.

NJDOT will pay 75% of the award amount at the time that the award of construction is approved by the NJDOT. The remaining amount is paid upon project completion. As is the case with the County Aid program, independent pedestrian and bicycle projects can be funded under the Municipal Aid program; however, few if any independent pedestrian and bicycle projects have been funded through this program.

All projects funded under the Municipal Aid program are subject to NJDOT policy that requires that all bicycle and pedestrian traffic be incorporated into the planning, design, construction and operation of all projects and programs funded or processed by the NJDOT.

Safe Streets to Transit

This competitive program is administered by NJDOT's Division of Local Aid and Economic Development. These funds can be used by both counties and municipalities for projects that improve pedestrian access and safety along routes to transit facilities and all nodes of public transportation. NJDOT Staff evaluates projects and the Commissioner determines the final selection.

Discretionary Aid Program

Currently, subject to funding appropriations, a discretionary fund is established to address emergencies and regional needs throughout the state. Any county or municipality may apply at any time. Under this program, a county or municipality may apply for funding for pedestrian safety and bikeway projects.

The Discretionary Aid program provides funding to address emergency or regional needs throughout the state. Any county or municipality may apply at any time. These projects are approved at the discretion of the Commissioner.

As state funded projects, all projects funded under the discretionary aid program are subject to NJDOT policy which requires that all bicycle and pedestrian traffic should be incorporated into the planning, design, construction and operation of all projects and programs funded or processed by NJDOT.

NJDOT will pay 75% of the award amount at the time of the award of construction with the remaining amount to be paid upon project completion

Natural Resource Conservation Program

The New Jersey Department of Agriculture (NJDA) helps to protect and conserve the state's soil, water and related natural resources through the stewardship efforts of its Natural Resource Conservation Program. The program offers technical support, financial and regulatory assistance, and educational outreach to landowners throughout the state for stream improvements, urban gardening and forestry, open space protection, soil conservation, and non-point source pollution reduction.

Green Acres

The Green Acres program provides loans and grants to counties, towns and nonprofit land trusts to preserve land and develop parks for recreation and conservation purposes. (In a separate part of the program, Green Acres also directly purchases land for the state to increase the state's ownership of open space). The open space land that is purchased by the local government or nonprofit can be used for outdoor recreation, which is why the program is important for funding pedestrian and bicycle projects. The development of bikeways, trails, and other outdoor recreation is eligible for Green Acres funding.

Currently, the mission of the Office of Green Acres is to achieve, in partnership with others, a system of interconnected open spaces that protect, preserve, and enhance New Jersey's natural environment, which serves the historic, scenic, and recreational needs of the public through use and enjoyment. Green Acres' primary focus is acquiring land that creates linkages between existing protected lands to form open space corridors. These corridors provide linear habitat for wildlife to move through, parkland for recreation, and areas of scenic beauty between towns and urban centers. Recreation needs are as diverse as the people who play. To meet these needs, Green Acres funds different types of parks in a variety of settings. Whether in rural, suburban, or urban areas, parks play an important role in sustaining New Jersey's high quality of life. Increasingly, Green Acres gathers other public and private partners together to assist in buying and managing open space. The Program works with municipal and county governments, nonprofit organizations, and the state Farmland Preservation Program to meet compatible conservation goals. To gather more information, call (609) 984-0500.

County/Local

County or municipal funding can be used to fund pedestrian improvements including sidewalks, trails, crosswalks signals, traffic calming and other projects on rights of way under county or municipal jurisdiction, by including the project in the municipal (or county) budget, or bonding for it in the same way bonds are used to fund the construction and rehabilitation of roadway improvements for cars. Pedestrian improvements can be fully or partially assessed against the property owners along whose frontage the improvement (most commonly, a sidewalk) is placed.

As with other categories of funding, bicycle and pedestrian improvements may be incidental to larger roadway projects, or they can be independent. Even small amounts of funding from the county or municipality can be very important since they may be used to leverage or show local commitment in applications for other funding sources (e.g., TE, Local Aid for Centers, etc.).

Cape May County Open Space and Farmland Preservation Trust Fund

The Cape May County Open Space and Farmland Preservation Trust Fund was established to purchase open space parcels that are deemed important to the community and farmland development easements. The Trust is funded by a County property tax of 1 cent per 100 dollars of assessed valuation and currently generates approximately 1.3 million dollars a year. The funds are distributed to municipalities or non-profit organizations for land acquisition only.

Many other counties have established open space trust funds, and have used them to purchase land for bicycle and pedestrian facilities. For example, Atlantic County used $459,000 from the Atlantic County Open Space Trust Fund to help pay for the Atlantic County Bikeway East.

Private & Non-Profit

Smart Growth Planning Grants

The Smart Growth Planning Grant program is a matching grant program, available through the Association of New Jersey Environmental Commissions (ANJEC) that offers grants of up to $20,000 for New Jersey communities. The goal of the grant program is to promote local land use planning that reduces sprawl, creates efficient, walkable communities with open space and green areas and protects environmentally sensitive areas.

The Geraldine R. Dodge Foundation Grants

The Geraldine R. Dodge Foundation offers general operating or project-specific support to organizations that, according to their 2010 guidelines, **"e**nhance the cultural richness of the community in which they reside and contribute to New Jersey's creative economy.**"** This includes use of the arts to revitalize public places and natural spaces.

Franklin Parker Small Grants Program

The Small Grants Program, administered through Conservation Resources Inc. (CRI), provides start-up money to non-profit organizations to provide assistance in land acquisition for preservation, land stewardship and ecological restoration projects. This annual program provides small grants ranging from a minimum of $1,000 to a maximum of $10,000. In 2008, Kingwood Township, Hunterdon County received a $2,000 Small Grant to cover costs associated with the acquisition of critical property within the Delaware River Greenway project area. This acquisition of this property played a key role in maintaining a contiguous greenway network. For more information please contact the Program Coordinator at (908) 879-7942 or visit CRI's website.

Horizon Foundation of New Jersey

The Horizon Foundation of New Jersey supports programs that promote health and wellness, prevention, education and awareness, and facilitate good health. Specifically, the Foundation will fund prevention and educational programs related to heart disease and obesity. Bicycle education can be a contributing factor in reducing and preventing childhood obesity. Only 501(c)(3) organizations located in New Jersey are eligible.

Kodak American Greenways Program Grants

The Kodak American Greenways Program, administered by The Conservation Fund, provides greenway project grants to land trusts, local governments, and other organizations interested in creating or advancing greenway projects.

International Mountain Bicycling Association/USA Cycling Trail Tune-up Grants

The International Mountain Bicycling Association/USA Cycling Trail Tune-up Grant program provides funding and technical assistance to create or improve trails. Trails used for mountain bike racing will receive the highest consideration, but funding can also be used to improve trails for race training and recreational riding. Applicants must be current members of IMBA, as well as USA Cycling member clubs/race promoters.

Bikes Belong Grant Program

The Bikes Belong Coalition is sponsored by member companies of the American bicycle industry. The Coalition's stated goal is to put more people on bikes more often through the implementation of the SAFETEA-LU legislation. One of the Coalition's primary activities is the funding of local bicycle advocacy organizations that are trying to ensure that SAFETEA-LU funded bicycle or trail facilities get built. Grants are awarded for up to $10,000 on a rolling basis. Eligible facility projects include: bike paths, trails, and bridges, mountain bike facilities, bike parks and BMX facilities.

1. **REI/Bicycle Friendly Communities (BFC) Grant Program**
   The REI/Bicycle Friendly Communities (BFC) Grant Program is administered by the Bikes Belong Coalition in partnership with the League of American Bicyclists in an effort to help aspiring cities to experience – and designated cities to maintain – the significant momentum generated by the BFC application process. Grant recipients receive technical assistance from the League to help them prioritize and reach their bike-friendly goals.

Advocacy Advance Grants

Grant program, administered by the Alliance for Biking and Walking, to galvanize state and local bicycle and pedestrian advocacy organizations to develop, transform, and create new campaigns. Startup/Capacity Grants help new advocacy organizations get started and assist established groups in growing stronger. Innovation Grants help advocacy organizations execute new, creative campaigns that can be replicated by other bicycle and pedestrian advocates across North America.

Healthy Kids Grant Program

The General Mills Foundation, through the Healthy Kids grant program, provides grants to community-based groups to find innovative means for youth to adopt a balanced diet and physically active lifestyle. Annually, the foundation awards 50 grants, each for up to $10,000. Applicants must be a non-profit organization which is ideal for school districts.

SmartWool Advocacy Fund

The SmartWool Advocacy Fund supports non-profit organizations that engage youth in an active outdoor lifestyle. Past funding recipients include Minnesota Conservation Corps provides opportunities for youth to act as environmental stewards while participating in outdoor service-learning activities within Summer Youth Program and Youth Outdoors, an after school program.

Additional Resources

Metropolitan Planning Organization (MPO)

Under federal law, a Metropolitan Planning Organization (MPO) is required for each urbanized area with a population of more than 50,000 to ensure that there is a coordinated transportation planning program and vision shared by all agencies within the region. The South Jersey Transportation Planning Organization (SJTPO) is the designated MPO for the Southern New Jersey region that includes Atlantic, Cape May, Cumberland, and Salem counties. The MPO's purpose is to oversee transportation improvement projects and provide a forum for interagency cooperation and public input into funding decisions. The MPO also sponsors and conducts studies, assists county planning agencies and monitors compliance with national air quality goals.

Transportation Management Agency (TMA)

In New Jersey, Transportation Management Associations (TMAs) receive substantial funding assistance through the Department of Transportation. In recent years, these funds have been from federal sources (CMAQ, or STP) although in the past, funding came from state sources. TMAs have carried out and are encouraged to continue to develop and undertake work program elements involving the promotion of bicycling and walking including development of bicycling suitability maps, promotional efforts aimed at increasing bicycling and walking, effective cycling presentations and other activities. In the Cape May County, the TMA is Cross County Connection.

Environmental Infrastructure Financing Program (Clean Water Financing)

The Environmental Infrastructure Financing Program, administered through the NJDEP, provides low-interest loans to assist entities looking to construct new or improve existing wastewater, stormwater, or nonpoint source management facilities. The program also provides loans for the purchase and conservation of open space land, remedial action activities (including brownfields) and well sealing. Applicable entities can be municipalities, counties, sewerage or utility authorities.

Community Development Transportation Lending Services

The Community Development Transportation Lending Services, as administered the Community Transportation Association of America through Community Development Transportation Lending Services, Inc., raises capital through active partnership with public agencies that can be used to finance a broad range of transportation and related investments or Assistance Fund.

Dam Restoration and Inland Water Projects Loan

The Dam Restoration and Inland Water Projects Loan program, administered through the NJDEP, provides low-interest loans to assist in the funding of dam restorations, flood control projects, water pollution control projects, and water-related recreation and conservation activities. Financing is offered through two product lines: The Capital Fund and the Business Operating
projects.

Residential Site Improvement Standards (RSIS)

The Residential Site Improvement Standards (RSIS) currently in effect in New Jersey require new residential developments to include sidewalks. Other municipal and state zoning or access code regulations have been used to require developers to provide both onsite and offsite improvements to benefit bicycle and pedestrian traffic.

New Jersey Conservation Finance Program

The Open Space Institute (OSI) administers a loan program for non-profit land conservation organizations and land trusts to apply for loans for projects that would greatly contribute to the conservation of open space. The OSI has made fourteen loans in NJ, totaling $7.4 million to protect 10,620 acres. Loans are available for up to three years, with a simple interest rate of 3%. Repayment terms will be set in accordance with project needs.

Table 1: Funding Sources

Program	Activities Supported	Administrating Agency/Organization	Contact Information
Federal			
Transportation Enhancements (TE)	Transportation (including bike/ped) Projects	FHWA/NJDOT	http://www.state.nj.us/transportation/business/localaid/enhancements.shtm
The Congestion Management and Air Quality (CMAQ) Improvement Program	Transportation (including bike/ped) Projects	FHWA/NJDOT/SJTPO	http://www.sjtpo.org/Documents/AirQuality/CMAQ_FY12_ProjectGuide.pdf
Recreational Trails Program (RTP)	Bicycle & Pedestrian Projects	FHWA/NJDEP	www.state.nj.us/dep/parksandforests/natural/trail_grants.htm
Highway Safety Improvement Program (HSIP)	Transportation (including bike/ped) Projects	FHWA	www.bikeleague.org/resources/reports/pdfs/highway_safety_improvement_program.pdf
Transportation, Community, and System Preservation Program (TSCP)	Bicycle & Pedestrian Planning & Programmatic Activities	FHWA	www.ibrc.fhwa.dot.gov/tcsp/pi_tcsp.htm
Land & Water Conservation Fund (LWCF)	Bicycle & Pedestrian Planning & Programmatic Activities	National Park Service (NPS)	http://www.nps.gov/lwcf/
Surface Transportation Program (STP) Funds - Local Scoping Projects	Transportation (including bike/ped) Projects	FHWA/NJDOT/SJTPO	http://www.state.nj.us/transportation/business/localaid/scoping.shtm%20
Surface Transportation Program (STP) Funds - Local Lead Projects	Transportation (including bike/ped) Projects	FHWA/NJDOT/SJTPO	www.state.nj.us/transportation/business/localaid/lead.shtm
Section 402 Safety Funds - Pedestrian Safety Education and Enforcement	Pedestrian Planning & Programmatic Activities	NHTSA (National Highway Traffic Safety Administration) & NJDLPS (NJ Dept. of Law and Public Safety)	Gary Poedubicky, Acting Director 609-633-9014 gary.poedubicky@lps.state.nj.us www.nj.gov/lps/hts/grants/

Note: Highlighted items indicate a top recommended funding source.

Table 1: Funding Sources (continued)

Program	Activities Supported	Administrating Agency/Organization	Contact Information
Section 402 Safety Funds - Comprehensive Traffic Safety Program (CTSP)	Transportation (including bike/ped) Planning & Programmatic Activities	NHTSA (National Highway Traffic Safety Administration) & NJDLPS (NJ Dept. of Law and Public Safety)	Gary Poedubicky, Acting Director 609-633-9015 gary.poedubicky@lps.state.nj.us www.nj.gov/lps/hts/grants/
Safe Routes to School (SRTS)	Bicycle & Pedestrian Projects, Planning & Programmatic Activities	FHWA/NJDOT	www.state.nj.us/transportation/business/localaid/srts.shtm
Safe Routes to School (SRTS) Mini-grants	Bicycle & Pedestrian Projects, Planning & Programmatic Activities	National Center for Safe Routes to School	www.saferoutesinfo.org/news_room/minigrants/index.cfm
State			
Bikeway Grant	Bicycle Projects	NJDOT	www.state.nj.us/transportation/business/localaid/bikewaysf.shtm
Centers of Place Grant Program	Non-traditional transportation (including bike/ped) Projects	NJDOT	www.state.nj.us/transportation/business/localaid/centerplace.shtm
Municipal Aid	Transportation (including bike/ped) Projects	NJDOT	www.state.nj.us/transportation/business/localaid/municaid.shtm
Safe Streets to Transit	Bicycle & Pedestrian Projects	NJDOT	www.state.nj.us/transportation/business/localaid/safe.shtm
Discretionary Aid Program	Discretionary Projects (including pedestrian safety and bikeway projects)	NJDOT	www.state.nj.us/transportation/business/localaid/descrfunding.shtm
Natural Resource Conservation Program	Environmental Planning & Programmatic Activities	NJ Dept. of Agriculture	www.nj.nrcs.usda.gov/
Green Acres	Recreation and Conservation (including multi-use trails) Projects	NJDEP - Green Acres Program - Local and Nonprofit Assistance Bureau	Martha Sullivan Sapp, Chief 609-984-0570 www.nj.gov/dep/greenacres/

Table 1: Funding Sources (continued)

Program	Activities Supported	Administrating Agency/Organization	Contact Information
County/Local			
Cape May County Open Space and Farmland Preservation Trust Fund	Conservation	Cape May County - Planning Department	Barbara Ernst, Division Director 609-465-1086
Private & Nonprofit			
Smart Growth Planning Grants	Transportation (including bike/ped) & Community Development Planning & Programmatic Activities	ANJEC (Association of New Jersey Environmental Commissions)	www.anjec.org
The Geraldine R. Dodge Foundation Grants	Sustainability	The Geraldine R. Dodge Foundation	www.grdodge.org
Franklin Parker Small Grants Program	Environmental Projects	Conservation Resources	www.conservationresourcesinc.org/index.php
Horizon Foundation of New Jersey	Community Health (including bike/ped) Planning & Programmatic Activities	Horizon Foundation of New Jersey	http://www.horizon-bcbsnj.com/foundation
Kodak American Greenways Program Grants	Bicycle & Pedestrian Planning & Programmatic Activities	The Conservation Fund	www.conservationfund.org
International Mountain Bicycling Association/USA Cycling Trail Tune-up Grants	Bicycle Projects	International Mountain Bicycling Association/USA Cycling	www.imba.com
Bikes Belong Grant Program - REI/Bicycle Friendly Communities (BFC) Grant Program	Bicycle & Pedestrian Planning & Programmatic Activities	Bikes Belong Coalition in partnership with the League of American Bicyclists	www.bikesbelong.org/what-we-do/bikes-belong-foundation/reibicycle-friendly-communities-grant-program/
Advocacy Advance Grants	Bicycle & Pedestrian Planning & Programmatic Activities	Alliance for Biking and Walking	www.peoplepoweredmovement.org/grants

Table 1: Funding Sources (continued)

Program	Activities Supported	Administrating Agency/Organization	Contact Information
Healthy Kids Grant Program	Community Health (including bike/ped) Planning & Programmatic Activities	General Mills Foundation	http://www.generalmills.com/Responsibility/Community_Engagement/Grants/Champions_for_healthy_kids.aspx
SmartWool Advocacy Fund	Recreation & Bicycle & Pedestrian Programmatic Activities	SmartWool	https://www.smartwool.com/default.cfm#/Smartprint/Advocacy/
Additional Resources			
Metropolitan Planning Organization (MPO)	Transportation (including bike/ped) Planning & Programmatic Activities	South Jersey Transportation Planning Organization (SJTPO)	http://www.sjtpo.org/
Transportation Management Agency (TMA)	Transportation (including bike/ped) Planning & Programmatic Activities	Cross County Connection TMA	www.driveless.com
Environmental Infrastructure Financing Program (Clean Water Financing)	Environmental Projects	NJDEP - Municipal Finance and Construction Element	Stanley V. Cach, Jr., Assistant Director 609-292-8961 stanley.cach@dep.state.nj.us http://www.nj.gov/dep/grantandloanprograms/nhrdriw/htm
Community Development Transportation Lending Services	Transit Programs	Community Transportation Association of America	Transportation Lending Services 202-415-9682 http://www.ctaa.org/webmodules/webarticles/articlefiles/tlsc.brochure.pdf
Dam Restoration and Inland Water Projects Loan Program	Environmental Projects	NJDEP	John Ritchey, NJDEP-Engineering and Construction 609-984-0859 john.ritchey@dep.state.nj.us http://www.nj.gov/dep/grantandloanprograms/nhrdriw/htm
Residential Site Improvement Standards (RSIS)	Bicycle & Pedestrian Projects	NJDCA	www.state.nj.us/dca/divisions/codes/offices/rsis.html

Table 1: Funding Sources (continued)

Program	Activities Supported	Administrating Agency/Organization	Contact Information
New Jersey Conservation Finance Program	Conservation	Open Space Institute	Michael Catania, NJ Field Coordinator 908-879-7942 michael@conservationresourcesinc.org http://www.osiny.org/site/PageServer?pagename=Program_CFP_GeographicRegions_NewJersey

Table 2: Top Recommended Funding Sources

Program Name	Transportation Enhancements (TE)	Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Recreational Trails Program (RTP)	NJDOT Bikeways Grant
Who is Eligible to Apply?	Any municipal or county government, non-profit organization or State agency	Government, non-profit, and private entities(SJTPO's county and municipal members must act as project sponsors).	Local, state and federal government agencies; nonprofit organizations qualifying under section 501 (c) of the Internal Revenue Service Code; and friends of a Park group recognized by a governmental agency as a volunteer organization.	Any municipal or county government
Eligible Infrastructure	Bicycle and pedestrian facilities that provide safe accommodations either through construction of new facilities or improvements to existing facilities; funding is available for design, right-of-way acquisition and construction	Bicycle and pedestrian paths and facilities that aim to reduce air-polluting emissions, or reduce traffic congestion.	Trails and trail facilities.	Bike paths (facilities that are physically separated from motorized vehicular traffic by an open space or barrier either within the highway right of way or within an independent right of way)
Key Project Requirements	Facilities must be related to surface transportation and not created solely for recreational purposes and must comply with all federal administration laws that apply to highway projects; project sponsor is responsible for securing all applicable environmental approvals	After final approval and notification of CMAQ proposals, the sponsor is responsible for implementing and completing the project. This includes any public involvement, planning, design, construction, etc. All project phases are eligible for CMAQ funds, and costs are 100% reimbursable.	The trail proposal must be located on land that is either: a) Publicly owned; or b) Privately owned with a governmental agency holding an easement for public access.	A project must place no restrictions upon hours of use by bicyclists (with the exception of dusk-to-dawn closings, as of some parks).
Local Funding Requirements	Local match varies, usually 20%; funds provided on a reimbursement basis only	Local match 20% (from non-federal sources)	Local match 20%	Initial Payment - The State will pay a percentage of the award amount or a percentage of the allotment whichever is less, at the time of award of contract approval. The current percentage is 75%.

Program Name	Transportation Enhancements (TE)	Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Recreational Trails Program (RTP)	NJDOT Bikeways Grant
Contact Person	Michael Russo, Director **NJDOT Division of Local Aid and Economic Development** 1035 Parkway Avenue PO Box 600 Trenton, NJ 08625-0600 Tel: 609-530-3640 Fax: 609-530-8044 mike.russo@dot.state.nj.us	David S. Heller, Senior Transportation Planner **South Jersey Transportation Planning Organization (SJTPO)** 782 South Brewster Road, Unit B-6 Vineland, NJ 08361 Tel: 856-794-1941 Fax: 856-794-2549 dheller@sjtpo.org	John Flynn, Trails Coordinator **NJDEP, Green Acres Program** Mail Code 501-01 PO Box 420 Trenton, NJ 08625-0420 Tel: 609-984-1014 Fax: 609-984-0608 john.flynn@dep.state.nj.us	District Manager **NJDOT Division of Local Aid and Economic Development District Office** District 4 1 Executive Campus Route 70 West, 3rd Floor Cherry Hill, NJ 08002 Tel: (856) 486-6618 Fax: (856) 486-6771
Additional Information	Bicycle and pedestrian facilities that connect community or regional activity centers such as businesses, schools, libraries, shopping and recreation areas are given the highest priority; applicants may include costs for cultural resource surveys, and preliminary engineering but these projects generally receive lower scores	Minimum amount of funding in any given year is $100,000 and there is no limit on the number of proposals a sponsor may submit.	Of the funding available each year, 30% is allocated for non-motorized trail projects, 30% for motorized trail projects, and 40% for diversified use trail projects. The maximum grant award for a non-motorized trail project is $25,000.	Although priority will be given to construction of new bike paths, the proposed construction or delineation of any new bicycle facility will be considered. Projects eligible for funding under other State Aid and Federal Aid programs may not be considered for funding under the Bikeways program.

Appendix D: Community Outreach Material

Ocean City Rail Trail & Bicycle Boulevard Project

STEERING COMMITTEE MEETING 1
PROJECT KICK-OFF

TUESDAY, DECEMBER 14, 10:00AM TO 11:30AM

Bud Knight Building at 12th Street & Haven Avenue
Duration: 1 ½ hours

AGENDA

The purpose of this meeting is to review the project purpose, approach, scope, and schedule; identify opportunities and issues, available data/reports/background information.

1) **Introductions – Debbie Kingsland, NJDOT**

2) **Scope, Schedule Review**

   a. Bike Boulevard – Laura Torchio, RBA
   b. Rail Trail – Annette Schultz, RBA

3) **Opportunities & Issues – Laura/Annette**
   a. Pre-meeting Questionnaires
   b. Group Discussion

4) **Data Collection – Laura/Annette**
   a. What's been done?
   b. What's available?

5) **Public Outreach Process – Laura/Annette**
   a. Strategies

6) **Next Steps – Laura/Annette, Debbie**

Meeting Materials:

- *Pre-Meeting Questionnaire*
- *Handouts – Agenda, 1-Page Project Summaries, Contact Lists, Data Collection List*
- *Exhibits – Project Limits*

Ocean City Steering Committee Kick-Off Meeting

Bud Knight Building
12th Street and Haven Avenue
December 14, 2010 - 10:00 am

Sign-In Sheet

Name	Affiliation	Email Address	Phone Number
Charles Simonsen	OCPD	CSimonsen@OCNJ.US	
Bill Stuempfig	OCEC	billstuempfig@comcast.net	
Jennifer Bowman	OCPTA	OCWind@verizon.net	609-425-1474
Dr Pamela Vaughan	OCTS	pvaughan@ocean.city.schools.org	609-399-5611
Denise Peck	NJDOT	denise.peck@dot.state.nj.us	609-530-2853
Debbie Kingsland	NJDOT	debbie.kingsland@dot.state.nj.us	609 530 3525
ANNETTE SCHULTZ	RBA	aschultz@rbagroup.com	973-946-5693
Laura Torchio	RBA	ltorchio@rbagroup.com	973 946 5704
Liz Cox	RBA	ecox@rbagroup.com	973-946-5600
Arthur Chew	City of Ocean City	achew@ocnj.us	609-399-6111
Roy Wagna	" " "	edwinaroyoc@yahoo.com	" 399-4429

Ocean City Steering Committee Kick-Off Meeting

Bud Knight Building
12th Street and Haven Avenue
December 14, 2010 - 10:00 am

Name	Affiliation	Email Address	Phone Number
ANDREW FAZ	MACPFIS	FAZEOC@COMCAST.NET	609-827-8083
Jim Tweed	OCCA	jhtweed@hotmail.com	609-398-3124
Tom Heist	OCCCA	theist@heistinsurance.com	602-786-7223
Steve Pittenger	mainstreet	spittenger@gabriellecandco.com	609-399-1008
CHARLES BOWMAN	FIRE/RESCUE	cbowman@ocnj.us	609-602-3580

The RBA Group
ENGINEERS • ARCHITECTS • PLANNERS
7 Campus Drive, Suite 300, Parsippany, NJ 07054 973-946-5600 FAX (973) 898-9472

MEMORANDUM

TO: Record (DRAFT)

FROM: Annette Schultz, The RBA Group
Elizabeth Cox, The RBA Group

DATE: January 20, 2011

SUBJECT: Ocean City Rail Trail & Bicycle Boulevard Project
Steering Committee Meeting #1
RBA #J4380.04 & #J4380.05

PURPOSE OF MEETING

The first meeting of the Steering Committee for the Ocean City Rail Trail & Bicycle Boulevard Project was held on December 14, 2010 at the Bud Knight Building in Ocean City, New Jersey. The purpose of the meeting was to review the project purpose, approach, scope, and schedule; and identify opportunities and issues, available data/reports/background information.

MEETING SUMMARY

1) Introduction

Debbie Kingsland, New Jersey Department of Transportation (NJDOT) Project Manager, welcomed the attendees and introduced The RBA Group as the consultant team who will be providing the professional assistance and technical expertise for the Ocean City Rail Trail & Bicycle Boulevard Projects. She then asked each person to give a brief introduction (sign-in sheet attached).

Ms. Kingsland reviewed the NJDOT Bicycle & Pedestrian Local Technical Assistance (LTA) Program, the type of support and level of effort that Ocean City could expect. The City applied to the NJDOT for the LTA program to investigate the potential and viability a rail trail and design recommendations for the Haven Ave. Bike Boulevard that would provide access to the bay and a safer bicycling facility across Ocean City.

The purpose of the Bicycle Boulevard Study is to examine the existing Haven Avenue Bicycle Boulevard and proposed future stages of completion from 1st to 56th Streets to determine a best practice approach and provide conceptual level recommendations.

The purpose of the Rail Trail Study is to assess the possibility of converting the existing Pennsylvania Railroad Seashore Line from 36th to 49th Streets into a shared use path. The study will research and review relevant data and reports to determine the viability of converting the rail bed into a path. An Action Plan will be provided outlining what tasks would be necessary

for the City to complete if they choose to advance the rail trail by applying for Federal or State funding.

Applying for funding would require the city to follow NJDOT's project development process which includes tasks for evaluation of environmental conditions, permitting, design options and the determination of permitting and other requirements in compliance with federal and state regulations. The Project Team will collect and review relevant available information as it pertains to NJDOTs project development process. The results will be presented in a matrix outlining the next steps and estimated costs.

Arthur Chew, City Engineer and representative for the project, explained the City's objective for the project is to create a safe north-south corridor the length of the island for bicycling. Mr. Chew emphasized the importance of public involvement in this project.

2) Scope and Schedule Review

Laura Torchio, RBA Group, briefly discussed the scope of work and schedule for the Ocean City Rail Trail & Bicycle Boulevard Project. She explained that the Rail Trail and Bicycle Boulevard, although related, are separate tasks within one project. Ms. Torchio informed the group that she will be the lead for the Bicycle Boulevard task and Annette Schultz will be the lead for the Rail Trail task.

For the Bicycle Boulevard project, the Project Team will review the work that has already been complete, evaluate existing conditions, and identify opportunities and constraints to determine a best-practice approach for implementation of a Bicycle Boulevard along the Haven Ave. corridor. The Project Team will recommend four typical conceptual design solutions with the pros and cons of each configuration. The City will also receive an annotated PowerPoint presentation illustrating the study results and conceptual recommendations. Notes will be included for the client to present to stakeholders and the public.

Tom Heist asked for examples of some design elements or treatments that might be recommended. Possible recommendations could include enhanced crosswalks, painted intersections, traffic calming (active and passive), stormwater management, and a wayfinding system.

Laura Torchio further explained that there are two phases for the Rail Trail task. The first phase will involve data collection and identification of the steps that have already been taken by Ocean City or others to evaluate the Rail Trail and to ascertain Ocean City's plans/options for advancing the project. Phase 2 will outline next steps required should the City apply for state or federal funding. She explained that this project is not to advance the design and construction of the rail trail.

3) Opportunities & Issues

The Project Team reminded everyone to fill out and return the pre-meeting questionnaire to Art Chew by Thursday, December 23rd. Art will forward materials to the RBA Group.

Opportunities and issues were discussed during the meeting having to do with both the Bike Boulevard and the Rail Trail.

Bike Boulevard

- Connectivity to Destinations & Bike Routes/Facilities
- Bicycling Network is Important
- Bikes on Sidewalk in the downtown
  - Mindset that sidewalk riding is OK
  - Town has installed "No Bikes on Sidewalks" from 14th to 16th streets

Additional comments: *There are signs on both sides of the road that say "No Bikes on Sidewalks," however people still have the mindset that it is okay. A suggestion was made to place bicycle parking at both ends of the street to reinforce to bicyclists that bicycles belong on the street. Laura Torchio added that on-street pavement markings such as Slared Lane Markings (SLMs, aka, "sharrows") can also help direct bicyclists to the street. The city could also adopt an ordinance that states bicyclists on the sidewalk cannot ride faster than a pedestrian. She reminded the steering committee that although connections to attractions and destinations will be considered, providing design treatments for the downtown is beyond the scope of this project. She emphasized the importance of combining infrastructure improvements with public education and increased enforcement.*

Sergeant Simonson thought that building boardwalks might be compliant within some DEP requirements. Art responded that the project would still need to go through Coastal Area Facility Review Act (CAFRA) and they consider boardwalks above water to be the same as fill. Councilman Wagner asked if applying for a permit was part of this project. Art reaffirmed that preparing a permit application is not a part of this project and that there are many steps before the City could apply for a permit, including doing an Environmental Impact Statement (EIS).

Rail Trail

- Environmental
  - Wetlands, tidal, endangered species

Additional comments: *Councilman Wagner brought up the difficulty of having an open mind about the process. He referenced the city's application to DOT for a rail trail from 36th Street to Crook Horn Creek in 2004-2005 that was denied. He also said DEP had turned down an application for any building on the Crook Horn Creek access road in 2008.*

- Drainage
  - Restoration Opportunity
  - Fill in wash-out areas: concern with flooding
  - Not filling in wash-out areas: concern with dyke protection

Additional comments: *Drew Fasy asked Roy Wagner, Councilman for the City's fourth ward and member of the Friends of the Wetlands, if he knew if the Friends of the Wetlands believed filling in the washout area of the rail bed would create flooding issues or if the berm should be filled in because it acts as a dyke. Councilman Wagner believes the Friends of the Wetlands advocate for not doing anything in the wetlands, including building of any kind.*

Sgt. Simonson suggested comparing flooding today with twenty years ago to see if the tidal vulnerability has increased as the trail washed away. It was pointed out that it would be difficult to compare because of other factors such as sea level rise.

- Volume on Rail Trail
  - Concern with volume of cyclists on Rail Trail if it is used to connect the bike boulevard

- Volume management – multiple route solutions
- Access to Bay/Nature
  - Consider "walking" trail with bicycle parking at either end
- Look/Functionality of Rail Trail
  - Vision: like Corson's Inlet Trail
  - Natural Surface – hard packed (good for bikes), well drained
  - Explore crushed clamshells in same footprint in a way to benefit environment (eco-friendly)
  - Explore boardwalk as possible surface-type
  - Maintain existing vegetation to stabilize rail bed
  - Maintain existing character
  - No added features except interpretive signs
  - Natural - no lights, benches, water fountains, etc. along trail
  - Benches/trash receptacles at trail heads only
- Width of Trail
  - FHWA, AASHTO, MUTCD etc Guidelines for trail width
  - Existing: Typical 12′ rail bed, 9′ rail ties, 62″ rails

Additional comments: *Bill Stuempfig from the Environmental Commission commented that the former railroad passes through a beautiful area and that public access would be an asset. However, he expressed concern that the trail would not be able to handle high levels of bicycle traffic because of width limitations. He said the trail at Corson's Inlet becomes crowded when there are two bicyclists riding side by side or passing.*

Art Chew reported to the group that he and Annette Schultz walked along the length of the rail bed the day before the meeting. The average width of the trail is 12′ with an average drop off between 4 and 5′. The ties are 9′ wide and the width between rails is 5′. There are a couple of places where the rail bed has been washed out including 39th St. and 42nd St.

- Trail Heads
  - Accessibility & management
- Public Feedback
  - Public in favor of Rail Trail – wants to participate in the process
  - Friends of Wetlands group opposed
  - 4th Ward Councilman – open minded – bring "Friends" into discussion

Additional comments: *Tom Heist from the Ocean City Community Association said that public feedback at annual meetings has been supportive of the rail trail. The only opposition group he is aware of is Friends of the Wetlands. He repeated the value of having all groups represented at the table because there may be some issues that might not be considered if they are not at the table.*
(Additional Note: FOW was invited but declined to attend)

- Littering, Drinking, Etc.
- Ownership of Rails
  - Removing rails

Additional comments: *Art Chew informed the group that it appears that someone is removing the rails from the City property. Some rails have already been taken and the nails have been pulled from others. He is going to write a memo to the Mayor and Police Commission informing them of this issue. He does not*

know what they will decide to do with the rails. There was a concern from an attendee that removing the rails might damage or alter the rail bed. Art believed it would not be a problem.

The problem areas for any future Army Corp permitting process will be areas below the tide line and the locations where drainage pipes have washed away parts of the rail bed. Bill Stuempfig pointed out that removal of the rails might accelerate erosion.

An attendee asked if the City decides to sell the rails, could the money go directly to bike projects. Art replied that if the City decides to try to sell the rails, it would go out to bid and there would be a public process. There was mention of an organization called Iron Horse Preservation that removes rails and builds trails.

4) Data Collection

RBA will review available reports, resources and mapping provided by the City and others as part of the data collection and needs assessment tasks. To ensure that the most accurate and current information is utilized for the project, Laura Torchio asked the City and Steering Committee members to provide the information (if available) listed on the Project Data Needs handout (attached) and any other documents, data, mapping, etc. that would pertain to this project.

Art Chew said the city would be able to provide the:

- Circulation Element of the Master Plan
- Two Orth-Rogers Reports
  - A study on speed limits and placement of STOP sign along Haven Avenue between North Street and 36th Street
  - Possible roadway cross-sections within the downtown area
- City's permit application to grade Crook Horn Creek access road
- Traffic Mitigation Plan
- City ordinances are available online at ordinances.com
- Sgt. Simonson will send the Project Team:
  - Ten year accident numbers
  - Information on the City's bicycle and pedestrian education programs

5) Public Outreach Process

As part of this project, the Project Team will present the summary of findings at a Public Information Center to be held hopefully in the spring. The Steering Committee and Project Team will work together to coordinate a date and time for a Public Information Center that corresponds with an already-scheduled event. The Chamber of Commerce has an event calendar which will be used to help coordinate the effort.

6) Next Steps

- Steering committee members return the pre-meeting questionnaire to Art Chew by Wednesday, December 23rd
- City and Steering Committee provide items from the project data needs list to Art Chew and Project Team
- RBA to prepare draft investigation summaries.

Ocean City Rail Trail & Bicycle Boulevard Project
Haven Avenue Corridor Report

STEERING COMMITTEE MEETING 2
REPORT REVIEW

Wednesday, June 1, 2011
10 am to 12 pm

Bud Knight Building at 12th Street & Haven Avenue

AGENDA

The purpose of this meeting is to review the DRAFT Ocean City Rail Trail and Bicycle Boulevard Project, Haven Avenue Corridor Report.

1) **Introductions – Debbie Kingsland, NJDOT**

2) **Report Outline & Content – Laura Torchio, RBA**

3) **Rail Trail Summary Findings – Laura/Jim Brazel, RBA**
   a. Environmental Regulatory Analysis Summary
   b. Trail Scenarios Matrix

4) **Bike Boulevard Needs Assessment Findings – Liz Cox, RBA**
   a. Overview & Design Guidance
   b. Existing Conditions & Opportunities
   c. Trail Scenarios Matrix

5) **Bicycle Boulevard Recommendations & Concept Designs– Mike Dannemiller, RBA**
   a. South End
   b. Missing Link
   c. Downtown
   d. North End

6) **Public Information Center – Laura Torchio, RBA**
   a. Approach
   b. Role of Steering Committee
   c. Date
   d. Logistics, Press Release

7) **Next Steps – Laura, Debbie**

Meeting Materials:
- *Report Copies*
- *Map Boards*
- *Handouts – Agenda, Sign-in Sheet, PIC Outline*

Ocean City Steering Committee Meeting

Bud Knight Building
12th Street and Haven Avenue
June 1, 2011 - 10:00 am

Sign-In Sheet

Name	Affiliation	Email Address	Phone Number
Andrew Tasy	MACPFS	FAZEOC@COMCAST.NET	609-827-8083
Roy Wagner	Ata Word Consultant	EPWIDDROYOC@YAHOO.COM	399-4429
Debbie Kingsland	NJDOT-OBPP	debbie.kingsland@dot.state.nj.us	
Steve Pittenger	Main Street	jgunn@gabridleandco.com	399-1008
Jim Tweed	OCCA	jhtweed@hotmail	398-3124
Scott Ping	Council	SCOTTPING2006@Yahoo.com	425-1424
Paul Marotta	Engineering Inter	pmarotta@udel.edu	
Michael Duttilo	City of OC	mduttilo@ocnj.us	525-9336
John Bowman	OCPTA	OCWind@verizon.net	399-9463
Dom Heist	MACPFS	theist@heistinsurance.com	609-399-0655
BRIAN HOPELY	OCPD	bhopely@ocnj.us	(609)525-9136

Ocean City Steering Committee Meeting

Bud Knight Building
12th Street and Haven Avenue
June 1, 2011 - 10:00 am

Name	Affiliation	Email Address	Phone Number
Jim Brazel	RBA Group	JBrazel@rbagroup.com	
Mike Dannemiller	RBA Group	MDannemiller@rbagroup.com	973.946.5626
Laura Torchio	RBA Group	Ltorchio@rbagroup.com	973 946 5704

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7 Campus Drive, Suite 300, Parsippany, NJ 07054 973-946-5600 FAX (973) 898-9472

MEMORANDUM

TO: Record

FROM: Laura Torchio, The RBA Group

DATE: June 1, 2011

SUBJECT: Ocean City Rail Trail & Bicycle Boulevard Project
Steering Committee Meeting 6.1.11
RBA #J4380.04 & #J4380.05

PURPOSE OF MEETING

A Steering Committee Meeting for the Ocean City Rail Trail & Bicycle Boulevard Project was held on June 1, 2011 at the Henry "Bud" Knight Building in Ocean City, New Jersey. The purpose of this meeting was to discuss the draft Ocean City Rail Trail & Bicycle Boulevard Project, Haven Avenue Corridor Report including project objectives, and upcoming Public Information Center.

IN ATTENDANCE

Debbie Kingsland, NJDOT; James Brazel, RBA; Laura Torchio, RBA; Michael Dannemiller, RBA; Arthur Chew, Ocean City Engineer; Michael Dattilo, Ocean City Administrator; and Ocean City Steering Committee Members: Roy Wagner, Scott Ping, Andrew Fasy, Tom Heist, Jim Tweed, Jen Bowman, Steve Pittenger, Brian Hopely, OCPD, and Paul Marotta, intern.

MEETING SUMMARY

1) Welcome & Introductions

Debbie Kingsland, NJDOT, opened the meeting by conducting a round of introductions among all Steering Committee members. She continued with a description of the project and how the summary of the Rail Trail analysis as well as the Bicycle Boulevard assessment are included in one report called the Haven Avenue Corridor Report.

She indicated that the objectives of the project are twofold:

1. Assess the unique opportunity for safe, multi-use access to the bayside waterfront for education and recreation by opening the former Pennsylvania Railroad Seashore Line rail bed from 36th to 49th Streets to pedestrians, bicyclists, persons with disabilities, etc., and;

2. Examine the existing Haven Avenue Bicycle Boulevard to determine a best-practice approach to improve and extend it as a bicycle-priority on-road facility from Corson's Inlet to the Longport Bridge.

2) Review the DRAFT Haven Avenue Corridor Report

Laura Torchio provided an overview of the DRAFT Ocean City Rail Trail and Bicycle Boulevard Project, Haven Avenue Corridor Report. She introduced the contents of both the report and appendices and indicated where placeholders will exist until after the Public Information Center. Following the overview, a detailed discussion commenced about the Rail Trail Summary and Bicycle Boulevard Assessments and Overview.

Rail Trail Summary

Laura Torchio presented the contents of the Rail Trail Summary including the existing conditions report and mapping, the environmental summary, the trails scenarios matrix and mapping. The Steering Committee members indicated that they had read the report prior to this meeting.

Jim Brazel indicated that the purpose and need statement for the trail development would need to clearly express the project as a unique opportunity for safe multi-use access (including pedestrians, people with disabilities, etc.) to the waterfront and provide recreational and educational opportunities. The proposed facility design had the least impact among possible designs, and mitigation requirements were met. Although permits can be acquired if all the requirements are met, the expense to mitigate impacts (and secondary impacts) may cost more than construction.

He also suggested that there is no way to identify which impacts, permits or mitigation would be required until a design scenario is proposed and a full environmental analysis is conducted. At that point in time, if the design meets the purpose and need, impacts, permits and appropriate mitigation measures can be identified.

During a brief Q&A, the following issues were discussed:

- Design follows intended use and is influenced by design requirements of state or federal funding sources.
- A primary challenge might be defining the projects intended purpose and need.
- Ocean City has been coordinating with Cape May County.
- Costs for similar environmental studies can vary widely. Examples from a northern NJ trail environmental study where only freshwater wetlands were involved cost in the range of $300 - $500K. The project limits and potential impacts (primary and secondary) to threatened and endangered species will determine the level of effort (and cost) of a federal/state and CAFRA environmental impact study.
- US Fish and Wildlife involvement is triggered by federal funding and Army Corps of Engineers involvement
- A boardwalk surface for a shared use path would likely have the least impact to wetlands. Wetland mitigation requirements would likely fall in a 2:1 or 3:1 range.
- Although historically, development could occur in environmentally sensitive areas, current DEP rules are more strict. The objective is to meet the intended purpose and need of the project while having the least possible environmental impacts.

Bicycle Boulevard Assessments and Overview

Laura Torchio presented the Bicycle Boulevard Needs Assessment Summary beginning with a discussion on state of the practice design guidance for a bicycle-priority on-road bicycle boulevard spanning the length of Ocean City. For the purposes of this report, the corridor was segmented into 4 areas: South End, Missing Link, Downtown and North End. Each segment

was reviewed in terms of existing conditions and the various opportunities available for enhancing the bicycle boulevard.

The corridor report concludes with a list of conceptual design recommendations for each segment geared toward accommodating casual, family or novice cyclists, discouraging cut-through motor vehicle traffic, and establishing priority to through cycling traffic.

Laura presented maps and graphics depicting the Existing Conditions and Opportunities & Constraints for each segment.

The following concept sketches will be prepared:

- South End – Gateway
- Missing Link – West Ave two-way bike path
- Down Town – Centerline median diverter with bike pass-through
- North End – 9th street crossing

3) Bicycle Boulevard Recommendations and Concept Designs

Michael Dannemiller and Laura Torchio presented the recommendations for each of the segments of the Bicycle Boulevard along Haven Avenue beginning with the South End. Recommendations primarily reflected many of the Bicycle Boulevard treatments already begun on Haven Avenue in the Downtown such as curb extensions, enhanced crosswalks, traffic calming, etc. The objective is to make it bicycle priority while calming car traffic.

One conceptual design was prepared for each segment to illustrate in a little more detail how design elements can be combined. Each of the 4 concept sketches had elements that could be applied throughout the Bicycle Boulevard.

In the South End, a gateway treatment was explored at the intersection of Ocean Ave and 59th Street to define the beginning of OC1 Bike Route.

The segment referred to as the Missing Link is referred to as such because Haven Avenue does not connect in this area. Therefore, the recommendations for an on-road, bicycle priority connection are focused on West Avenue and the possibilities of reconfiguring it to better accommodate novice or young bicyclists. Although many configurations were examined, a two-way bicycle path on the west side of the roadway is recommended. This would be achieved by redefining the travel lanes to one northbound, one southbound and one center turn lane. Parking on the west side of the street would be moved away from the curb making room for a 12′ bike path and buffer.

A concept sketch was prepared to illustrate the bike path and connections to Haven Ave via 49th Street.

In the Downtown Segment, traffic calming, enhanced intersections, bicycle through-priority, and mini roundabouts were recommended.

A conceptual design for a traffic diverter with bicycle pass-through was presented. Motor vehicles traveling north or south on Haven Avenue would be required to turn while bicycles could continue along the Bicycle Boulevard.

Recommendations for the North End consisted of extending traffic calming and bicycle-priority through to the Longport Bridge along Aldrich, Haven, Simpson, and Atlantic.

A concept sketch for a 9th Avenue crossing at Aldrich Road was presented as the most feasible solution to connecting the Bicycle Boulevard to the North End. The crossing would make use of the newly constructed bicycle path on the south side of the Street. A self-actuated signal (probably a HAWK) would be used to stop automobile traffic to allow for bicyclists to cross. The crossing would be raised to increase visibility and calm traffic.

The members of the Steering Committee were in agreement with the recommendations and concepts presented.

4) Review Public Information Center Approach

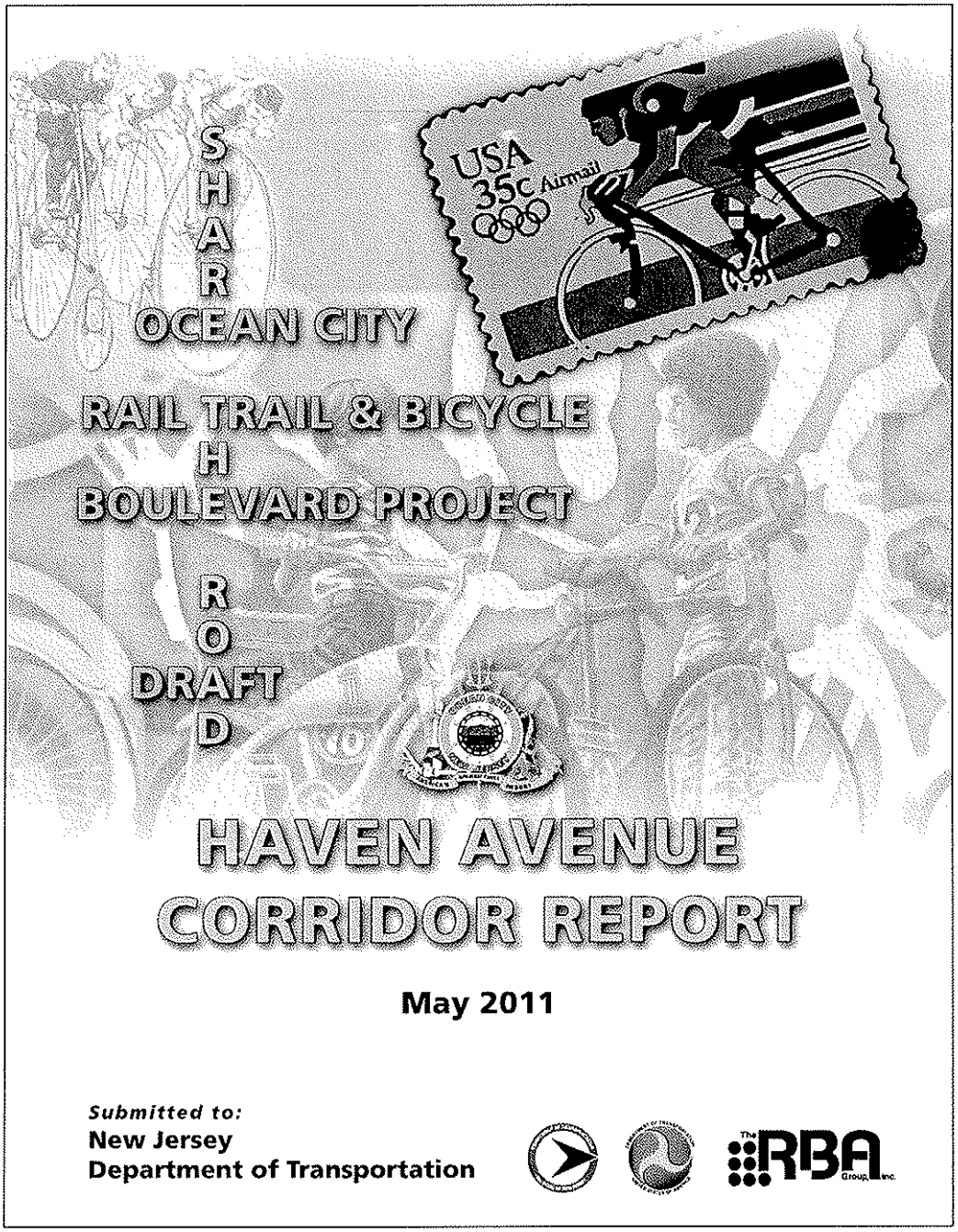
Laura Torchio presented the approach to the Public Information Center as an open-house style meeting with a series of stations set up for viewing and Q&A. The Project Team including RBA, NJDOT and the Ocean City Steering Committee will be on hand to describe the process and answer questions regarding the report.

RBA will prepare a draft press release for OC to use to announce the meeting.

PIC date is confirmed for Friday, June 17, 2011 from 4pm – 7pm at the OC Senior Center.

5) Next Steps

- RBA - give draft press release text to OC
- OC – distribute invitations to SC and Public for PIC
- OC – coordinate logistics for PIC
- RBA – prepare meeting materials for PIC



Public Information Center

Today, Friday, June 17th

4 - 7pm

Ocean City Rail Trail & Bicycle Boulevard Project
Haven Avenue Corridor Report

Ocean City, NJ - The City of Ocean City will host a Public Meeting to share information about enhancing the bicycle boulevard through the City.

Ocean City has received Local Technical Assistance from the New Jersey Department of Transportation concerning the development of safe bicycling routes the length of the island. The report's objectives were twofold: to develop recommendations and design concepts to enhance the existing Haven Avenue Bicycle Boulevard and to assess the opportunity for safe, multi-use access along the former Pennsylvania Railroad Seashore Line rail bed from 36th to 49th Streets.

Members of the public are invited to a Public Information Center to:

. Learn more about the report

. Discuss the state of design guidance for a bicycle-priority, on-road bicycle boulevard spanning the length of Ocean City

. See conceptual design recommendations geared toward accommodating casual, family or novice cyclists

. Provide insight regarding the needs of bicyclists in Ocean City

WHEN: Friday, June 17th, 2011
4pm - 7pm (Arrive any time ; no formal presentation)

WHERE: Cape May County Senior Center
18th Street and Simpson Avenue

#######

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Ocean City Rail Trail & Bicycle Boulevard Project
Haven Avenue Corridor Report

The Ocean City Public Information Center

The format for the Ocean City Public Information Center (PIC) will be an open-house style meeting with a series of stations set up for viewing and Q&A. The Project Team including RBA, NJDOT and the Ocean City Steering Committee will be on hand to describe the process and answer questions regarding the report.

PIC Station Set-up

Station 1	Station 2	Station 3	Station 4	Station 5
WELCOME	*RAIL TRAIL*	*BB EC/OPPS*	*RECOMMENDATIONS*	*CONCEPT SKETCHES*
Greeter:	*Greeter:*	*Greeter:*	*Greeter:*	*Greeter:*
• **Debbie K** • **SC Member**	• **Jim B** • **SC Member** • **Denise P (floating)**	• **Mike D** • **SC Member**	• **Laura T** • **SC Member**	• **Liz C** • **SC Member**
Boards:	*Boards:*	*Boards:*	*Boards:*	*Boards:*
• Project Title/PIC	• EC Maps 1-4 • Env Maps 5-7 • Trail Matrix	• EC/OPPS Maps 8-11	• REC Maps 12 - 15	• CONCEPTS
Display Table:	*Display Table:*	*Display Table:*	*Display Table:*	*Display Table:*
• Sign In Sheet(s) • Name Tags/Markers • Feedback Sheets • Comment Box	• DRAFT Report	• DRAFT Report	• DRAFT Report	

Ocean City Public Information Center

Cape May County Senior Center
18th Street and Simpson Avenue
June 17, 2011
4:00 - 7:00 pm

Sign-In Sheet

Name	Affiliation	Email Address	Phone Number
Andy Jerkee		107 Tarkar Ct	
Cathy + Pete Guinosso			398-2560
Patricia Bodo			398-4886
William Bodo			610-999-1204
Shirley & Malcolm Haskell			
Joyce Judson			609-398-2813
Robert Cassidy		donerightis@hotmail.com	484-678-7678
Geraldine M Schultz			- 856-234-9046
Hattie Schultz			11
Vinton A. Fisher			609-398-1443
T. Lauret Fisher			609 398 1443

Ocean City Public Information Center

Cape May County Senior Center
18th Street and Simpson Avenue
June 17, 2011
4:00 - 7:00 pm

Name	Affiliation	Email Address	Phone Number
Bob Dubil	Resident	bwdubil@verizon.net	(609) 391-9978
Lainie Gerdelman	Resident	lainieknit@yahoo.com	609 6024418
Maryellen Campanaro	Resident	alverda2@comcast.net	609 398 2762
Fred Marcelli	"	Marcellocbeach@yahoo.com	609-398-1856
STAN PSZEZOLKOWSKI	RESIDENT	STANOCNJ@AOL.COM	398-7875
Nancy Harrabee	Resident	nancyharrabee@verizon.net	399-9148
DICK WADDELL	RESIDENT	KELDELL4@BELLSOUTH.NET	398-7484
Culver Zibbley	"		215 896 3822
Suzanne Mancus	"	S.mancus@verizon.net	609-391-0018
Herb Muy	"	herb.muy@verizon.net	
Richard Izapiec	"	Rzapiec@ocl@Comcast.Net	609-231-0262

Ocean City Public Information Center

Cape May County Senior Center
18th Street and Simpson Avenue
June 17, 2011
4:00 - 7:00 pm

Name	Affiliation	Email Address	Phone Number
Donna Zapicc	Resident	zapdr.nj@netzero.net	856 547 4089
Edward Moore	resident	mooreeh@gmail.com	856 308 9662
Tom Hart		heistiu@msn.com	
Lee-Ann McHugh	Resident	leemchugh@comcast.net	610-306-2610
Edith Cipriani	"	EmCipriani@aol.com	610-742-6578
Frank Cipriani	"	"	"
Carl Hast	"		398-7627
H. J. Hayes	Resident	HLHayes3@yahoo	609 602-3606
Jane Snyder	Resident	jasnyder5@comcast.net	609-398-4101
Ray Snyder	Resident	resnyder23@comcast.net	609-398-4101
SUZANNE J. STASHIS	Resident		609 221-9484
Robert Coggshall	RESIDENT	TCOGGSHALL@COMCAST.NET	267-210 0114

NAME	AFFILIATION	E-MAIL	PHONE
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Kate Kraft	resident	KateKRAFT@comcast.net	
Tony Latini	Resident	"ditto"	
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Gail Ping	5415 Haven	maping25@comcast.net	
Noel Wirtz	101 B.E. Atlantic	OCNCW101@comcast.net	
GARY WALLACE	1506 Bay Ave		
Randy Schenke	Consultant	randy@keplanningroup.com	
STEVE SCHMIDT	635 WEST AVE		347-0311
Dolores P. Hazel	10 Argyle Place		399-1016
Marianna H Van Laakman	AN OWNER 3608-10 West Ave OC.		
[illegible]	AN OWNER 3608/3610 West Ave		
JOE NEY	Resident 133 BARK	JOEDELCO@AOL.com	
Linda Gronert	Resident		399-5358
BRIAN MCPEAK	Resident	BMCPEAK@comcast.net	938-0577
MARY AGNES MCPEAK	Resident	MARY.AGNES.MCPEAK@gmail.com	
Jim Tweed	1512 Wesley	jhtweed@hotmail	398-3124
PHILIP RAKE	611 2nd rear	patsdiner@yahoo.com	
GERRY HENNELLY	5212 WEST AVE	GERRY OC2@COMCAST.NET	
PAT JULIANO	1901 WESLEY AVE		
MIKE FOSTER	20 SUNNYSIDE CT		
Meredith Gehrke	4740 West Ave.	mergehrke@gmail.com	609-814-1818
Richard MacIntyre	1719 HAVEN AVE		
Deacon Joe + Kate Orlando	2034 9th St		399-7007
MICHAEL MILLER	THE PRESS	MMILLER@PRESSOFAC.com	463-6712
KEVIN REDMOND	234 Central Ave OC		399-2894
Diane Mayfield	100 Dory Dr		
Sandy Lilly	4114 West Ave		

NAME	AFFILIATION	E-MAIL	PHONE
Michael McMahon	Resident	Mcedor@gmail.com	408-5844
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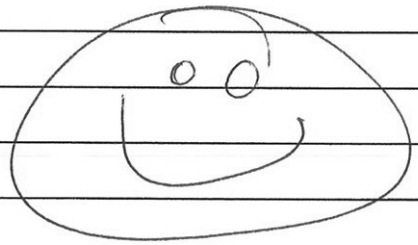
Jennifer Heist	Resident		
Nancy Style	Resident	style536@comcast.net	
Bruce & Charlene Twiggs	Resident	OtstL@comcast.net	
TERRY MCKENNA	RESIDENT	FILTEX2@AOL.COM	398-2455
Mary Anne Gallagher	Own	Mg211o733l@aol.com	
[illegible]	"	"	"
[illegible]	"	"	"

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

We need bike path on old Railroad lines – Safety issue on west ave.
I can't believe how long..... this is taking. the train ran through here for years + destroyed NO wildlife whatsoever. Would see fox + deer + racoons along tracks. If a train doesn't destroy Wild life. I don't think bikers will – OC bikers especially range in age 6 – 106.
Let's see it happen



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Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

Egress to driveways along West where there is no alley (West side) - 1) sufficient line of site to back out - 2) traffic volume - would it be so busy you can't pull out (bike + car) (or in).

Would reducing West to 3 lanes slow + reduce traffic enough?

Perhaps another traffic light at 36th or 37th + then narrow to (like it is on other parts of West Ave.

Slowing traffic + flipping bike/parking lanes would be least costly + very helpful.

Suggestion - do something like above, which would only require painting lines for a summer + see how it works - It wouldn't cost much!

As a resident of West Ave (3846) I strongly support "calming" the traffic + making West safer for bikers (& not moving them to Central).

Nancy Style

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project
Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

Thank you for all your hard work! I have a couple of thoughts / suggestions.

I live on West Ave between 47th + 48th, W. side.

- If there is a bike path, then a buffer, + then parking, I will be parking in the middle of the street. There are times when we are the only car parked on that street which means we are totally vulnerable to being hit, especially at night on one of those many very foggy nights. We are very uncomfortable with this.

- If the plan is to reduce from 4 lanes to 2 lanes in the South end, please do a trial period of using cones during busy July + August to see if it works. This is a lot less expensive than doing all the reconfigurations with paint.

- If the railroad bed is the desired option, be sure it's done within the guidelines of being environmentally safe. How would it be maintained? Weeds are plentiful + weed killer is not an option.

I do ride my bike a lot and appreciate your efforts to making biking safe

(J4380.04.05_PIC_Feedback_Sheet/G)

the RBA Group

Meredith Hehlke

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

I think that the idea to continue the bike path as a bit narrowed with bump outs @ the corners and a median is wonderful. I am a resident of Haven along 20-22nd sts. and we are very happy with how the changes have all worked out.

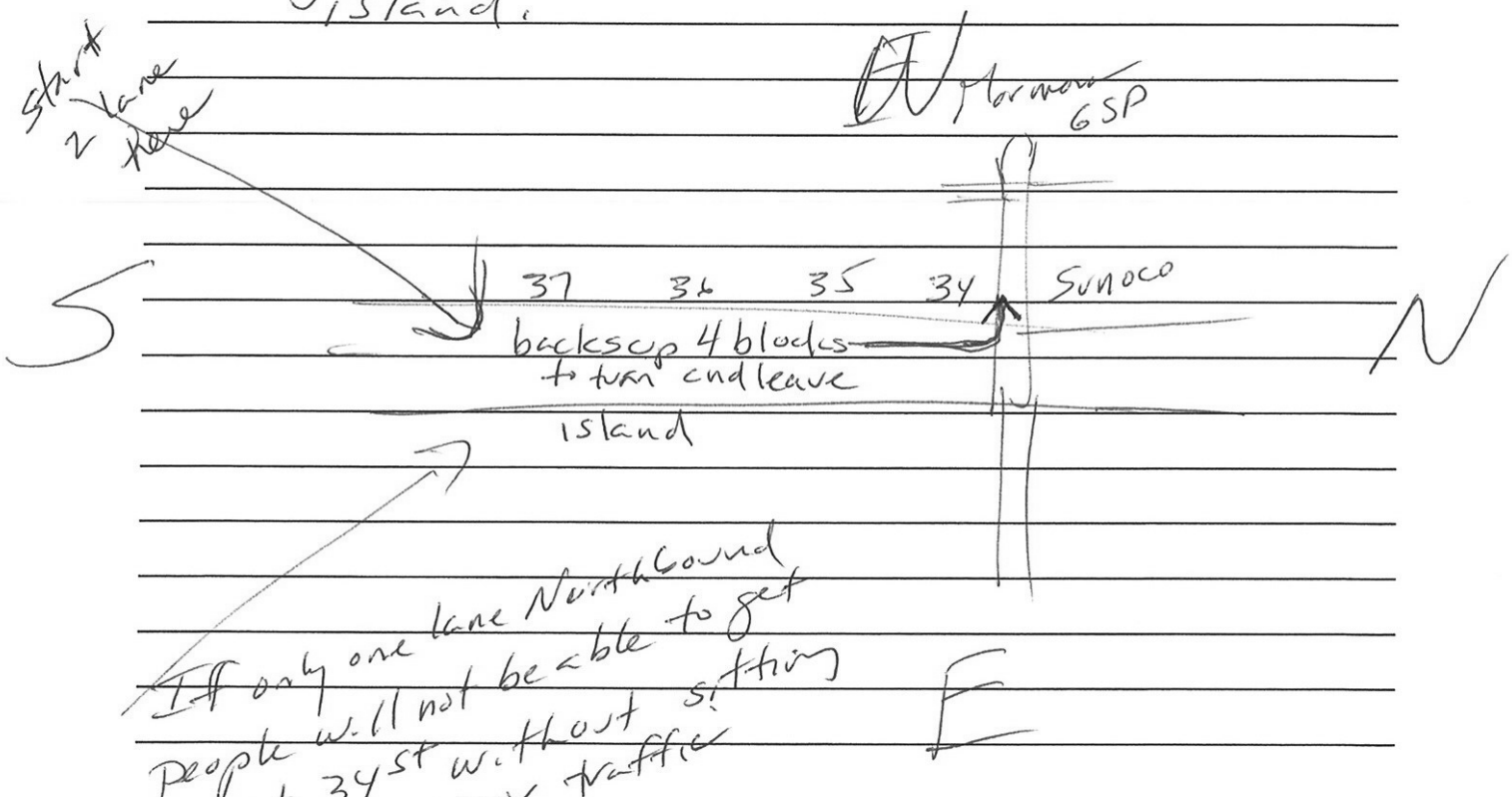
Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

If West Ave. south of 34st becomes one lane each direction, we will have major back ups at the 34st light left turn off the island. It is 4 lanes now and on Saturdays/Sundays especially will back up Northbound for the left on 34st for up to 4 blocks.

We must have 4 lanes to 38th Street so that people northbound will be able to get past 34st ~~and~~ to the rest of the island.



Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

Driveway openings around the 38th st to 40th st may present a visibility problem when many cars especially SUVs are parked in the street. Small children may not be seen when riding bikes in this area.

The safest area is the raised RR bed in this area

The unjust desires of a few property owners who have already begun planting gardens in this area should be ignored, for the safety of children in "America's Greatest Family Resort".

Walter Schultz
301 41st apt 24
Ocean City NJ

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

- The plan lacked any meaningful east/west plan so ~~[illegible]~~ there is comprehensive bicycle planning not only on Haven but moving them east/west

- There is no approach to the impact and mitigation of how alley's will become "through-ways" when restrictions along Haven cause motorists to seek alternative routes. This already happens when cross streets are closed - such as 30th street and motorists then drive fast through the alley on the 2900 block.

- There seems to be ~~an~~ a lack of detailed analysis of the rails to trails option vs. just re-configuring existing streets on Haven Avenue.

- A well laid out plan: who in the city will lead the next steps. This should be under the leadership of the city planning team; not the city engineer's office.

B. McPeak
2928 Haven Ave.
O. City NJ
609-938-0577

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

I like the ~~the~~ traffic calming ideas on Haven; However it is INEVITABLE THAT CARS will travel down the allys IF Haven Ave is closed. They currently use the ally behind my house AT full speed since 30th ST is closed. Alley traffic MUST BE slowed DOWN or forget ABOUT closing Haven to vehicular traffic.

The consultant told me the city ASKED him to consider only the Haven Ave corridor this WAS A foolish idea. !!! The city should have taken A holistic approach to bicycle traffic on the island. In this study, no consideration WAS given TO E-W bike traffic. HOW ARE CYCLISTS SUPPOSED TO TRAVEL FROM HAVEN Ave TO the BOAD WALK or shopping on ASBURY IN A SAFE MANNER?

MORE STUDIES, PLANS + ACTIONS ARE NEEDED

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

IT HAS BECOME APPARENT BY THIS PRESENTATION THAT THE OLD RAIL BED IS AN UN-TAPPED ASSET TO OUR COMMUNITY. ALTHOUGH A LARGE PATH FOR BICYCLES MAY NOT BE PRUDENT, AT MINIMUM WE SHOULD BE PROVIDING A WALKING PATH WHERE RESIDENTS + VISITORS CAN EXPERIENCE AND ENJOY ALL THE WONDERS OF OUR WETLANDS AREAS. IF WE DO NOT FORGE FORWARD ON BUILDING THIS RAIL-TRAIL, WE WOULD BE CHEATING OUR CHILDREN, GRANDCHILDREN + GREAT GRANDCHILDREN OUT OF AN AWESOME EXPERIENCE. WE NEED TO TAP THIS ASSET!

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project
Haven Avenue Corridor Report

0

Please provide any feedback regarding the Haven Avenue Corridor Report.

WELL IT LOOKS LIKE THE RAILS TO TRAILS PROJECT ISN'T GOING TO HAPPEN — GOODBYE RAILS TO TRAILS GRANT $ MONEY — NOW WE'LL BE ASKED FOR OUR TAX MONEY INSTEAD.

WEST AVE IS A BAD IDEA. THIS IS A HEAVILY TRAVELED ROAD FOR ENTERING & EXISING OC

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

(1.) Put a bike rack at 9th & Haven (by the sculpture)

(2) Put a bike rack at 23rd & beach

(3.) more bike racks at the Community Center

(4.) Biking Haven to 34th St – how can the cyclist cross 34th St!?

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

Thanks!

I support making West Ave. safer by changing the lanes to one in each direction + a center turn lane.

What to do with the County road portion?

When is the NEXT STEP?

Please ask the OC sentinal to keep reporting!

Thanks —

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project
Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

This West Ave recommendation is a poor idea the assumptions of slow traffic is flawed in OC.

I wonder what kind of biker is envisioned —
seems not kids
not those out for a pleasant ride

might work for racers & athletic enthusiasts

I would rather not have a biker path than use West Avenue

Hamilton

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

I presently live on 21st & Haven Ave and I have enjoyed the bike path and what it has done for our neighborhood. It's great to have coffee on the front porch in the morning and watch families with their children enjoy their activity in SAFETY.

The City of Ocean City should continue the Bike Path throughout the Island like it is at our location. This can be done with planning and support of the people.

Richard Lapiec
Happy Supporter of
The Bike Path

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

It is obvious that developing the old rail bed as a south end bike trail is the best option for motorists, cyclists and walkers. As a resident I sincerely hope the city's leaders give this option serious consideration.

~~While~~ While the alternatives offer viable options for this much needed trail completion, building it on the old rail bed makes the most sense.

Thanks for holding this meeting so those of us not involved in all the recent public bickering have a chance to offer input!

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

Too bad – looks like recommendations are for West Ave. I was so looking forward to a beautiful route – much like other cities. I am a avid biker – but I am not interested in riding on West Ave.

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

DON'T MAKE WEST AVE 2 LANES
SOUTH OF 34th ST

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

As an engineer would recommend the use of check valves in the area of West ave in the streets above 40th to stop flooding from tidal effects sewers.

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

Suggestion for traffic at 34th & West:

So dangerous to cross here, I recommend you stop all traffic, allow pedestrians to cross & crisscross safely!!!

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project
Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

TO ME, IT'S A MATTER OF SAFETY
BIKE ON THE STREET, OR ON THE RAILBED

Frank Cipriani
3532 West Ave.

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project
Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

Target West Ave -
I'm all for the Wetlands

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

Please Please make the Bike Trail. It is VERY VERY NEEDED. This is a win-win for the surrounding houses in the North-end, their property values will increase. The abandon ~~trail~~ train rails are a nuisance and a hazard to children, but the bike trail ~~to~~ would remove that while making the trail accessible and safe. Furthermore the habitat that is ~~f~~ there will not be disturbed - how can it be? The railroad tracks have been there for Decades, what will laying asphalt on the ~~rails-tracks~~ Additionally Disturb? I find this argument ~~put~~ forth by the Anti-Bike group to be fake and disingenuous. The installation of a bike trail in O.C. will benefit the entire City, ~~and~~ increase exercise for people, and allow people to view nature safely.

(see Rails-to-Trails.org.)

Please install this Bike Trail Immediatly.

Thank You -

Marian Ragusa
marrag08243@yahoo.com.

Ocean City Rail Trail & Bicycle Boulevard Project
Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

I do not like the idea of two way bike paths on one side of West Ave.

I think the bikes should stay back on Haven where the speed is lower and it is safer

Linda Gronert
full time resident

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

I would love to see the bike route expanded in Ocean City. I use the trails rather than take my car whenever possible.

I love the use of Haven Ave for bikers, and think that the trails enhance the safety of children and seniors who bike.

Please make this a reality.

Diane Brucker
115 Wahoo Drive
O.C 08226

610 357 8165

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project
Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

BASED ON the CURRENT DETAILS, I HOPE O/C WILL FINALLY ABANDON THE CONCEPT OF DEVELOPING A "BIKE PATH" ON the OLD RAIL BED. THE COSTS ARE EXCEEDINGLY PROHIBITIVE, AND THE ONGOING COST OF MAINTENANCE, REPAIR + SERVICE OF THE FACILITY IS SOMETHING THE CITY DOES NOT NEED. OUR CITY, OUR STATE AND OUR FEDERAL GOVT, CAN NOT AFFORD SUCH AN EXPENDANCE.

Develop West Ave from 36th to 55 AS A two LANE ROAD (AS IN the NORTH END) WITH A New BIKE PATH FROM 36th to 49th (ON WEST). CONNECTING to HAVEN.

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

RECONFIGURING WEST AVE. WILL BE A MESS WITH THE SUMMER RESIDENTS AND TENS OF THOUSANDS OF WEEKLY RENTERS TRYING TO FIGURE OUT ~~THET~~ THE TRAFFIC PATTERNS.

ADDING TWO LANES FOR BIKE TRAVEL ON WEST AVE. ADDS LITTLE TO ENHANCE O.C. A PATH THROUGH THE WETLANDS WOULD BE A WONDERFUL NATURE SIGHT AND EDUCATIONAL TOOL.

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

The rails is the only way to do a bike path in O.C.

Redoing West still presents many safety problems as well as problems for people who live on the West side of West!.

Putting a bike path on the old railroad bed makes sense, allows all people to enjoy the Wetlands views - not just those who happen to live along there but don't own it.

For safety - you need to get the bikers off of West Ave in any configuration.

Lets stop wasting time and do us all a favor by using common sense to get this done before we are too old to get on a bike

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

I like much of what I see. I would most like to see the bike lanes on the inside of the parked cars on West. In the near term, there are two things that would be helpful. 1) painted symbols in the bike lanes representing a bicyclist being "doored". I think this would remind drivers to look before opening the door when they park. 2) the traffic lights in OC have sensors that don't react to cyclists. If a car doesn't show up, the light never changes.

Thank you

(J4380.04.05_PIC_Feedback_Sheet/G)

Ocean City Rail Trail & Bicycle Boulevard Project
Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

Regarding the Southend West Ave Conception is unacceptable. Cars will open both doors at all times, are we expected to wait with our packages, suitcases, ect. until the bike path is clear of riders. Bike traffic going both ways on the west side of West Ave will be confusing & dangerous for young riders. Traffic making a left or right turn on West Ave will back up cars for a mile. West ave. is a truck route some are very large and shake the passing cars.

Do you really want to expose a family with young children to this heavy traffic? I would not let my children ride on this street!

(J4380.04.05_PIC_Feedback_Sheet/G)

The RBA Group

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

It's a shame that a few people who are "trespassing" on the current "missing link" have caused so much controversy. Since they are using the area next to the rails, they should be charged for their use.

We are not NY city!

They use of West ave in this area although will cost less, it is the ugliest solution. You have houses on West that will suffer from this. You have the wetlands with ~~at~~ their beauty to be taken advantage of. A bikepath will enhance this area. A train rode over for so many years & look the Wetlands are still there. Make it like the path next to the bird sanctuary.

The fact that there are fees + permits for the Wetlands use and all the other hurdles to go thru — Well if the city can pay $2+ million for a parking lot. — Then there certainly can be funds for this project.

Riding on West is like taking your life in your hands at any given moment.

Why not use the old Railroad Area to enhance OC. There's money out there for this, There are grants etc. available. Don't make OC ugly. The Wetlands use is not cost prohibitive.

Ocean City Rail Trail & Bicycle Boulevard Project

Haven Avenue Corridor Report

Please provide any feedback regarding the Haven Avenue Corridor Report.

Bike Riding is Extremely Dangerous on West Ave past 34th St. My Sister was Knocked off her Bike when Someone opened the Car Door as she passed. It would be greatly appreciated to have the Bike path Especially for Senior Citizens

Edith Cigman
3532 West Ave
610-742-6578

Laura Torchio

From: Eric Sauder <ESauder@verizon.net>
Sent: Friday, June 17, 2011 5:53 PM
To: ltorchio@rbagroup.com
Cc: fazeoc@comcast.net; mayor@ocnj.us; 'Roy J. Wagner'; 'Keith P. Hartzell'
Subject: Bike trail

General:

I'd like to see Ocean City become a bike and pedestrian friendly town supplemented by public transport. I believe that the excessive amount of traffic in the summer time comes from people staying on the island and driving back and forth to the boardwalk. There's no need for it. Instead of buying parking lots and facilitating private transport, the City should be investing in and supporting public transport. It's the environmentally responsible thing to do, and the City could realize a considerable revenue stream from public transport. Besides which it would go far to enhancing the appeal of Ocean City. We could become Nantucket South ☺

Haven Avenue:

I liked what I saw. East/ West car traffic should be halted at every intersection (with the exception of the major corridors) to allow for continuous (through) bike traffic. I also liked the idea of forcing through traffic off of Haven by forcing a right turn at the intersections. The only people who should be driving on Haven are the residents that live on Haven, and then only to enter their own block. Anything that could be done to discourage vehicular traffic from crossing Haven Avenue should also be considered. I know it would significantly increase the cost, but for safety's sake I think it would be wise to have traffic lights installed with sensors that can detect oncoming bike traffic.

West Avenue:

I like the concept of two dedicated bidirectional bike lanes along the bayside at least for the "missing link". I would like to see the existing bike lanes on West maintained. I suspect that Haven will mostly be used for family rides. Serious bike riders will need another avenue for crossing the City. For a serious bike rider riding on Haven will be about as much fun as riding on the boardwalk. I think you have at least two classes of bike riders and you need to try to accommodate all.

Rail to trail:

Because of the extensive permitting and the associated costs I believe this option has become cost prohibitive. I'd support leveling and compacting the old railroad bed off of (is it 51st street?) for a nature walk. There aren't many places in Ocean City where you can see a natural habitat.

Thanks for your presentation. As they say "a picture is worth a thousand words".

Eric Sauder / Ocean City

Appendix E: Questionnaire Responses

1) What is your vision for the Bike Blvd & the Rail Trail?

- My vision for the Rail Trail is to see it completed from one end of the island to the other. It would be the safest way to bike, jog or walk the length of the island. I am a year round resident who wants to ride safely off of West Ave. and also enjoy the view of nature as I ride.
- Safe biking around the island, not only end to end but bay to beach.
- I would like to see a bike trial that provides for a safe way for children & I to travel on the island from one end to the other. I live in the south end (47th Street) and bike down to the Longport Bridge & back. I think the trail needs to take into account the amount of summer traffic/visitors that OC gets each year.
- I don't have a vision, per se. However, I favor a bike route from as far north as is practical to as far south as practical. Hopefully at a safe and enforced speed limit.
- I would like to see the bike path continue along the old railroad bed all the way to where it exits Ocean City.
- It would be great if these could be created and linked up with other trails in Cape May County to form a continuous network from Cape May to Ocean City. The boulevard would include safe crossings at 9th and 34th streets.
- A bike route that creates in the rider an appreciation of the diverse areas of the whole island including beach (via boardwalk), residential, and bays (via rail trail).
- Taking a SAFE ride with my grandkids and along the trail educate them about the wetlands and nature.
- I envision a bike trail from the north end to the south end of Ocean City where bike riders can safely ride and enjoy the outdoors and their surroundings.
- safe place for families to ride
- I ride an old beach bike all over the island from the South end, over a thousand miles per yr, shopping from 55th to 8th as well as Asbury Ave. and on the boardwalk, the library, community center, banking, riding the boardwalk in the off season, breakfast & lunch at various places, and friends all over the island. I use everything, the roads, bike lanes, the beach at low tide, boardwalk, bike lanes and of course the Bike Blvd. So, for people using bikes or walking to get around the island, City wide access to the bike route, to and from any point on the island, and traffic calming are essential.
- As the beginning of a system of accesses that allow bicycles to be used as transportation, not just a recreational ride.
- We would like to be able to ride without worry of being hit by cars. We personally know of a man who was killed by having to ride past parked cars on a main street. We believe that taking the path off of West Ave. and putting it on the rail trail would be ideal. Putting the trail on another street or ally would not be prudent.
- A safe place to ride with my family from one end of town to the other.
- A safe trail for families to visit the entire island.
- To have a safe and scenic ride for pleasure, exercise, and basic island transportation.
- Create a new attraction for Ocean City and make it a destination for active people that do not like having to drive every time they need to go out. Expand on our small town charm of an active, walking town that thinks progressively.
- Love what was done on Haven Ave. I am sure whatever needs to be done should be done with the planners on biking.

- Safe bike routes for all ages and abilities.
- As envisioned it will give families and kids a safe way to traverse the island. As I stated before, to make it truly useful as a bike path it needs to be a through avenue. Large parts of the existing bike path require that the rider stop at every cross street (or run the stop signs) which makes the bike trail all but useless for a serious rider (and potentially dangerous). For that reason, unless the stop signs are changed, I wouldn't use the bike trail and will continue to ride on West Avenue, which is a through street. The bike path as is creates a safety issue because of the configuration of the stop signs at the intersections. Stop signs should be moved to halt traffic crossing the trail. I would support a dedicated bike path across the island and extending it if those issues are addressed.
- A safe bike path for my family to travel.
- To have a marked bike area that promotes pleasure and safe biking thru ocean city. Bike paths improve towns and become desired areas to be near.
- Having a safe bike and walking trail extend from Longport Bridge, down to where the old RR came in from Upper Township. Then the trail extending over a new bridge across the inter-coastal back to Upper Township. Also, that 34th St. Bridge and Roosevelt Blvd. be rebuilt to have a walking/bike path out to Mamora.
- I envision numerous safe routes north and south and east to west for bikers, pedestrians etc. with a wide focus on the entire island not just one north south route. All new street paving should incorporate this bike/walk/run concept to create a uniform infrastructure making it easier for all to understand the rules of the road and adopt a share the road mentality.
- A safe and comprehensive network of pathways for pleasure or purposeful travel throughout the island that is developed through a consistent master plan over time.
- Biking trails should be as comprehensive as possible in Ocean City commensurate with public safety.
- That Ocean City has a safe and viable alternative for cycling around the city. A bike route that is not on any of the major streets/intersections (i.e. – West, Central, Asbury Ave.) as they are presently designed.
- A bike trail that connects one end of the island to the other end free of any automobile traffic.
- A Bike path that would be safe for all bikers, fiscally feasible for taxpayers, environmentally sensitive to the wetlands, and concern for the flooding that would occur if the rail bed was disturbed, especially for the Haven Ave. residents.
- I envision a continuous, thru-bikeway from the Longport Bridge to Corsons Inlet. A greenway where bicyclists have the right of way – few north/south stop signs. Reduced cross traffic. Reduction/elimination of north/south auto access. Safe crossing at major intersections: Battersea Rd., 9th Street, 34th Street and 55th Street. A clearly defined greenway – signs, traffic-calming, signage, etc. Making the bike boulevard a special place to be for bikes and pedestrians. Rail Trail: Simple and natural. No "Amenities"! (lights, etc.) natural surface. In harmony with the surroundings. Accessible at 36th, 45th and 46th, and 49th. Also a possible added access point at 40th.
- A bike route that creates in the rider an appreciation of the diverse areas of the whole island including beach (via boardwalk), residential, and bays (via rail trail).
- End of island to end of island
- South end over the old railroad bed
- North end connection behind super-fresh-playground-primary school down Simpson – West Atlantic to bridge.

- A simple trail with a natural surface, trees, and no amenities.
- As an avid biker, I would prefer to see West Avenue converted to one lane in each direction for cars, add landscaped medians with breaks at each street to accommodate turning traffic. This would leave room for a dedicated bike lane instead of having to share the bike lane with parked traffic. For a model, look at our friends in Avalon and Stone Harbor along Dune Drive.
- I feel the rail trail and bike path should be 1 concept.
- Bike Blvd would be accomplished on streets and the rail trail would be a short nature path (similar to Corson's state park) on the easily converted sections of track.
- To have a safe user friendly method of traversing the city using other than motor vehicles, bikes, pedestrians, etc.
- Bike Boulevard – a place that families with small children as well as less experienced bikers can bike at a leisurely pace in a safe manner.

2) Complete these sentences, circling either "good idea" or "not a good idea":

a. The Bike Boulevard is **(not a good idea)** It still provides danger to young children riding with their parent. Car doors opening, traffic up and down West Ave. and cars being side swiped by erratic bike riders.
b. The Rail Trail is a **good idea** because it is so much safer for all concerned. The existing bike trail from 9th to 35th Street is a pleasure to ride on. Safe and well maintained.)

a. The Bike Boulevard is a **good idea** because… there are a huge number of people traveling by bike on the island and because biking promotes physical health and reduces pollution.
b. The Rail Trail is **not a good idea** because …it may be invasive to the existing wetland and may not be functional during times of flood. But I am open minded to research being done to possibly overcome these barriers.

a. The Bike Boulevard is a **good idea,** but the stop signs need to be eliminated. Bike riders should be following the same rules as vehicles therefore a biker has to stop at each street. You cannot rely on drivers to give bike riders the right of way...some will, but I have seen many who do not. Especially when children are riding without adult supervision. They tend to race each other and just not aware of their surroundings as much as an adult might be. You must keep in mind that a child just does not have the experience that an adult has.
b. The Rail Trail is a **not a good idea** because …I must admit I have my concerns about this rail trail. I think there are other alternatives & feel it may impact the environment of the marsh lands. I am also concerned that the paved surface of the railroad bed will cause more runoff water not to be easily absorbed into the ground therefore causing flooding which is something OC does not need. Another concern is how will the surrounding area of the railroad bed not be impacted while this trail is being built/cleaned up. It seems it is very overgrown in parts & you would need construction equipment to clear it out properly to make sure it does not grow back. Also, how will the trail be kept cleared...who would be responsible?

a. The Bike Boulevard is a **good idea** because… it provides a safe means to travel nearly anywhere in the city for myself, wife, and especially our grand kids. I would prefer to see the speed limit maintained at 15 mph, with <u>more enforcement</u>.
b. The Rail Trail is a **good idea** because … Same answer as a) In addition, it would allow our grand kids to see a bit more of nature. Me, too.

a. The Bike Boulevard is a **good idea** because it will provide a safe route for bike riders, not only for exercise, but also GREEN transportation.
b. The Rail Trail is a **good idea** because it will aide in less automobile exhaust and will increase safety for cyclists.

a. The Bike Boulevard is a **good idea** because… It is a great idea because will provide a safer alternative to the present options, and it will make getting around Ocean City for errands and shopping locally without the negative aspects of driving and parking.
b. The Rail Trail is a **good idea because** …It is also a great idea because it will provide a safer passage to the south end and points beyond.

a. The Bike Boulevard is a **good idea** because … it increases safety for cyclists, pedestrians and motor vehicles by providing a clear routes and understanding for all of right of way rules.
b. The Rail Trail is a **good idea** because … it promotes appreciation of wild areas and what Ocean City used to be before it was developed.

a. The Bike Boulevard is a **good idea** because…It enhances the quality of life of everyone who lives, and visits, Ocean City.
b. The Rail Trail is a **good idea** because …The Rail Trail, however, opens a new and interesting/educational opportunity while getting fit!

a. The Bike Boulevard is a **good idea** because…it creates a bike path which incorporates safety while riding. The path will be well marked out and protected from car traffic.
b. The Rail Trail is a **good idea** because …it will utilize an off the road path for bike riders.

a. The Bike Boulevard is a **good idea** because… it provides a place to safely ride.
b. The Rail Trail is a **good idea** because … can be a part of bike path, more bikers then walkers.

a. The Bike Boulevard is a **good idea** because…Great, the portions completed so far meet my objectives above, I live on the West side of West, on Haven Ave., the Bike Blvd is my street and I love it.
b. The Rail Trail is a **good idea/ not a good idea** because …Depends on its proposed use, if you mean as the solution to the problems facing pedestrians & bikers in the Southern part of town -36th-49th-, then--- sorry no. I have issues with the rail trail related to its limited access, practicality for the area it is trying to help and lack of traffic calming. A rail trail as I've seen it proposed will not provide the access I'd like, nor will it calm traffic or assist in moving around in the area it spans. It will span from 36th to 49th – then the Bike Blvd takes over again from 49th to 56th. Within those 13 blocks, [1/5th of the island], there is limited access, at only 3 points, the two ends and 46th Street greatly reducing its usefulness as a way to move around the neighborhood. Rail Trail users from the area and trying to come to the area in question, 36th - 49th will have to use and cross the fastest, widest street on the island to get to it, and then use the existing streets, that we all agree are the problem, to move around on. I can't make that concept work for me. Dealing with West Ave. is the problem down my way [on Haven Ave., 51st], a street level bike route with traffic calming will address that, a rail path can't. It'll be great if you are at one end or the rail trail going to the other, you'll be able to avoid West Ave., but not in or around the affected area.

a. The Bike Boulevard is a **good idea** because it allows safe recreational cycling.
b. The Rail Trail is a **good idea** because it offers a scenic part of the trip that uses existing right of way.

a. The Bike Boulevard is **not a good idea** because…it is too dangerous.
b. The Rail Trail is a **good idea** because …it is safer, provides better views for a leisurely ride.

a. The Bike Boulevard is a **good idea**.
b. The Rail Trail is a **good idea** because …It provides a scenic and safe place to ride.

a. The Bike Boulevard is a **good idea** because… I believe the Bike Boulevard is a good idea because Haven Ave. is not a busy street in the So. End. Bike traffic would not be a problem; it could go straight through to 56th St.
b. The Rail Trail is a **good idea** because …The Rail Trail sounds good but the opposition is strong. The Rail Trail would have to continue from 51st St. on to Haven Ave. to make a safe route to Corson's Inlet.

a. The Bike Boulevard is a **good idea** because…This is the first time I have heard the term "bike boulevard." If it means a bike path from one end of the island to the other, I think it is a wonderful idea. This city seems to have more bike riders every year. People enjoy riding their bikes on vacation. It's fun, it has physical benefits, and it has environment benefits. In the summer, I always choose a bike over a car to do my errands. Biking, as it is now, is still pretty dangerous except for the Haven Ave. path. I feel very safe on that route.
b. The Rail Trail is a **good idea** because …The rail trail is a wonderful idea as well. So many cities have done this. I used to live in Fairfax, VA and they had a wonderful rail trail. I have also visited every National Park in the USA. Many of these parks have built walkways over swamps, wetlands, and volcanic grounds as well as into caves. It seems to work. I don't see litter, disrespect for the environment, or damage to the surrounding area. I see visitors having a great, memorable time. I can't believe that OC is so unique that this can't work. I do not know what a bike blvd. is but it has to be better than the current joke on West Ave. The rail to trail is a great idea. Nice location, low impact on wetlands. It will improve current overgrowth and disrepair of rail bed and create yet another low cost, low maintenance, attraction that can be used in advertising Ocean City to our residents and visitors.

a. The Bike Boulevard is a **good idea** because…Sounds good.
b. The Rail Trail is a **good idea/ not a good idea** because …Do not know too much about the Southern End, as I am near the airport and just love Haven Ave.

a. The Bike Boulevard is a **good idea** because…Good idea- safe biking for all.
b. The Rail Trail is a **good idea** because …Good idea- safe biking, scenic natural views, one less person on West Ave.

a. The Bike Boulevard is a **good idea** because…The bike boulevard is a good idea if it is made into a through avenue. Otherwise PLEASE MAINTAIN the bike lanes on West Avenue for that purpose.
b. The Rail Trail is a **good idea** because …The rail trail is a good idea if it is paved. I understand the environmental concerns but you don't want to ride a road bike on packed

earth or loose cinders and it would be unusable (if not dangerous) when wet. If it can't be paved I don't know that it's a good idea, and an alternative should be considered.

a. The Bike Boulevard is a **good idea** because… of safety over West Avenue and healthy exercise.
b. The Rail Trail is a **good idea** because … it connects the whole island. It also gives us a glimpse of nature.

a. The Bike Boulevard is a **good idea** because…a known place for biking, so that bikes, cars and pedestrians are more aware of each other
b. The Rail Trail is a **good idea** because … a safe place for biking, walking and exploring in ocean city, a place families can get away from traffic and enjoy fresh air, exercise, and nature.

a. The Bike Boulevard is a **good idea** because…Gives a safe environment for biking and encourages the use of bikes. Let's work on making safe routes to get to and from it.
b. The Rail Trail is a **good idea** because …As long as it can be done with minimal intrusion to any wildlife or the wetlands, this would create another outdoor activity to be enjoyed by all who live and come to Ocean City.

a. The Bike Boulevard is a **good idea** because…a central, identifiable route raises awareness of all vehicle operators to a bicycle presence.
b. The Rail Trail is a **good idea** because …it is a successful model in other communities similar to Ocean City.

a. The Bike Boulevard is a **good idea** because…It's a good idea because of the safety feature it provides the rider.
b. The Rail Trail is a **good idea** because… If the NJ DOT finds this to be a viable route, both financially and environmentally, then this route is nothing short of a fabulous idea and a home run! There are a number of reasons why this would be good: Safety, enjoying/sharing nature, encouraging bike riding as oil nears $100 dollars a barrel, etc.

a. The Bike Boulevard is a **good idea** because of what was stated above.
b. The Rail Trail is a **good idea** because it would be quite scenic without disrupting the wetlands and by providing a safe bicycle route for residents and visitors.

a. The Bike Boulevard is a **good idea IF** …the existing bike blvd. was widened to prevent motorists from opening their doors into the bikers.
b. The Rail Trail is not a good idea because the damage that would be done to the wetlands, the costs for such a project, and the loss of quiet and peace for residents adjacent to the rail trail, and the concern for flooding.

a. The Bike Boulevard is a **good idea** because… It utilizes a former railway running the length of the Island, in the center of the island. This makes it accessible to all residents. It also is away from the busiest area – beach and boardwalk. Haven conveniently has 2 schools, the community center, playgrounds/ballfields, food stores, pharmacies, etc. So it is a convenient "artery". Creating/completing this will offer residents a safe place to walk, run, bike in a quiet, leisurely enjoyable space. It would encourage more active transportation.

b. The Rail Trail is a **good idea** because …This rail trail would connect the Haven Ave. bike boulevard – connect the south end neighborhoods to the rest of the island safely. It would also provide opportunity. Access to wetlands which is very limited.

a. The Bike Boulevard is a **good idea** because it increases safety for cyclists, pedestrians and motor vehicles by providing a clear understanding for all right of way rules.
b. The Rail Trail is a **good idea** because it promotes appreciation of wild areas and what Ocean City used to be before it was developed.

a. The Bike Boulevard is a **good idea** because…
b. The Rail Trail is a **good idea** because …

a. The Bike Boulevard is a **good idea** because…it gives people of all ages and abilities a safe place to bike to major destinations in town. In addition, bike boulevards will make the adjacent neighbors more attractive and desirable to live in.
b. The Rail Trail is a **good idea** because … because it will promote bike safety, connect more people to back bay nature, and become another memorable place for residents and visitors to visit.

a. The Bike Boulevard is **a good idea** because…if patterned after Avalon and Stone Harbor along Dune Drive, it would work well. It would also serve to slow down car traffic on West as no one seems to abide by the 35 mph speed limit. It promotes good health and less cars which is good for the environment. It reduces our reliance on motor vehicles, it will slow the pace of people down, it is a healthy alternative for kids (like the school bus concept), can help in the overall congestion on the island and the parking problems around town.
b. The Rail Trail is **not a good idea/good idea** because …I am neutral on this until the feasibility study is completed. Exposes people to the wonders of nature. Not a good idea if it creates too much unnatural structure in the area. Good idea if it provides access for people to appreciate the natural beauty and function of the wetlands. It gets people out in an area normally not experienced when visiting Ocean City. It increases our profile for people seeking a different walking or biking area. This natural setting is unknown to many visitors. In addition, it gets bikes off West Avenue.

a. The Bike Boulevard is a **good idea** because the City needs family-friendly bike routes along the length of the island as well as across the island.
b. The Rail Trail is a **good idea** because …it will bring people to access the beauty of the wetlands. I am unsure if it will work for bikes but at a minimum it will be a great nature walking trail.

3) How would these facilities benefit the community? Who would benefit? Why?

- Everyone in the community that ride, walk or jog would have a safe place to enjoy their pleasure. And a lot of people will choose the bike path to safely get to the boardwalk for their morning ride. It would keep them off of the main roads on which they cause unsafe and scary driving conditions for motorist.
- Safety, health, decreased traffic, decreased emissions; everyone would benefit; because of all the benefits listed.

- I think if we have a designated bike trail in OC it would help alleviate some of the traffic, possibly more people would use their bikes to get around. It is a great workout to ride your bike and enjoy the beautiful surroundings OC has to offer.
- I believe all would benefit. That is; residents as well as visitors. Because it would add to the enjoyment of living in or visiting Ocean City.
- Everyone benefits when you create safer roads.
- They would make the community a safer for bikers, make it more attractive to tourists, benefit local businesses, alleviate parking congestion, provide a better commuting alternative for students and workers. They would improve the image of Ocean City as an up-to-date, healthy, and safe resort.
- Bike routes provide regulated access to all the places they lead, both natural and developed. It benefits cyclists, pedestrians, tourists, residents, and wildlife because it increases our experience and therefore our appreciation of the diverse areas of our island and our willingness to protect it.
- There will be fewer "near misses" or hits of riders. Also, it will enhance property values and quality of life.
- It will benefit all who utilize the facilities. A safe environment for riding their bikes.
- Would benefit everyone. Safe place for families and good exercise
- More biking and pedestrian activity will result in less automobile congestion, on the roads and in the finite parking spaces. From a fiscal point of view more people on the street/sidewalk results in more traffic into the commercial properties'. For the people doing the biking and walking, the health benefits are widely known to be positive.
- As a safe pathway, the entire community benefits by increasing public safety generally. Specifically, it offers safety and access to both riders who live here and tourists. It also is an additional attraction for potential visitors. Importantly, it will promote family riding because safety fears for children are limited.
- Everyone would benefit who would use it. If in a safe location it would encourage more people to enjoy biking in Ocean City.
- They would keep bike traffic off of West Avenue and everyone would benefit.
- These bike routes would benefit the locals as well as tourists. This would provide easy access to shop, eat and visit different beaches & neighboring activities plus visit friends who vacation or live at the other end of OC without parking issues.
- Safer biking, a more island feeling, alternative transportation. Everyone would benefit - bikers, motorists, and pedestrians.
- A huge benefit to the active community of OC. Bikers and runners. Finally an attraction for the south end. The south end deserves this.
- I think having fewer cars traveling on our roads would be great. I also think that end of OC could use a Haven Ave.
- All would benefit- bikers & pedestrians. Biking from one end of the island to the other would be easier. Maybe people would bike to the boards rather than take a car.
- I suspect the rail trail would be used mostly by tourists during the summer, which isn't to say it doesn't have its merits. It would be one more benefit the city could offer to tourists. As a side note I'm pleased with the community center. It makes you proud of the town and where it's heading.
- All bikers and nature enthusiast would benefit due to increased biking safety and riding through nature.

- Everyone would benefit hopefully it would mean a few less cars on the roads - helps promote health to the residents and visitors in town. Ocean City does have many bike riders it would encourage more people to use bikes if they see the town catering to it, nice paths, bike racks, quicker and cheaper than driving and parking.
- Improve access from South end to Community Center. Unite the community. Volunteers could help build necessary structures/bridges where RR bed has been eroded.
- It would allow people to enjoy the wetlands, allow for educational opportunities similar to those conducted at the Stone Harbor facility and give another outlet for families. It would encourage biking as a mode of travel, cut down on CO2 emissions, and beautify the city.
- All members of the community benefit (full and part time residents and guests) by having access to an automobile alternative. Benefits-safe travel, physical well-being, pollution reduction (air and noise), convenience, reduced parking needs, tourism attraction.
- Any improvements would be a boon to residents in terms of enjoyment of their environment, enhancement of public health and added value to the general property in the City as a whole. Landlords would reap a benefit through the added attractiveness of Ocean City.
- Local residents would benefit, part time homeowners, tourists, the town of Ocean City would benefit from increased tourism and more revenue to local businesses. Locals, homeowners and tourists would all benefit by having the opportunity to be exposed to the beauty of nature.
- It would benefit both visitors and residents by providing a safe area for recreation and exercise. It would also provide an opportunity for families to bike from the North End to the South End of the island.
- If done properly, it would allow residents & vacationers safe travel from the north and south ends of the island. This could eliminate some vehicle traffic.
- Offering more active transportation opportunities would benefit almost all in the community. Young children, seniors, families, etc. A healthier community with more exercise and less pollutants. I also think creating a very bike friendly community would have economic benefits by bringing more tourists to town, possibly improving the "shoulder" seasons.
- Bike routes provide regulated access to the places they lead. It benefits all who can appreciate contact with others: cyclists, pedestrians, tourists, residents and wildlife because it increases our experience of the diverse areas of our island.
- Biker friendly; benefits everyone; green, healthy, and this is a shore/beach community plus its kool.
- People of all ages and abilities. People who love nature or want to connect with it. People who must bike for economic reasons. People who choose to bike to reduce our carbon footprint. People who bike to promote personal fitness.
- I think converting West Avenue benefits more people; exposes people to nature, gets cars off roads. Bicyclists, walkers, runners, nature observers.
- Provide better access to the City as a whole for bikers.
- Increase safety in the City.
- Provide another reason for tourists to visit the City.

4) What issues do you think may need to be addressed as part of this project?

- Should summer residence have the right to hold back a project that benefits year round residents as well as summer residents and our tourism renters. The full length bike rail trail would be a great help in promoting tourism for our town. (If the research team finds that the rail trail would not endanger the wet lands or cause more flooding, the project should go on.) When people bought or built behind the wet lands they knew what to expect as far as flooding goes. The rail trail is not going to make any difference when the tide rises.
- Respect for wildlife, bike safety, litter disposal, crime, noise pollution in residential areas, signage, maintenance, landscaping, dog usage (I would want dogs to be allowed).
- Definitely the stop signs along Haven Avenue. I think this needs to be addressed before anything else. I realize that there are concerns about keeping the traffic calm along there as well. I do not ride along Haven Avenue because it is a nuisance to have to come to a stop at every intersection. It is much better to ride along Central or Asbury Avenues where you have the right of way most of the time.
- I think there is a misconception that the rail trail will increase flooding. As I understand it, no earthwork will be carried out other than removing rails & ties, and rolling the existing beds. I really believe those that protest against it aren't as concerned about the wetlands as they say. Instead, I see them as NIMBYs but wouldn't dare use that as their argument.
- The only issue I have would be to be sure all the poison ivy, oak, etc. was removed from alongside the rail bed when the path is built.
- Funding and bogus environmental issues raised by the selfish few.
- a) Trash receptacles and pick-up, b) pervious coverage, c) habitat protection, d) wetlands reclamation, e) non-property taxpayer funding.
- Concerns of the opposition to Rail Trail on environmental and liability grounds.
- Environmental issues, flooding issues, safety for participants, and funding for creation and maintenance of the project.
- Cost and consensus of community for one or the other.
- South end , West Ave. from 55th to 36th ,reduced to 1 lane each way, speed reduced to 30mph [minimum] this will add only 34 seconds to the trip between 34th and 55th , North/South crossings on Haven Bike Blvd @ 55th, 35th,34th and 9th streets. I'm finding more people each year slowing & stopping for pedestrians ,not so much for bikes –they don't have to unless you're walking the bike across, even then those particular crossings are not easy. East/West crossings still need work all over, parking is closer than I like to the corners, visibility is limited if that space is being used and traffic doesn't yield [or have to] for bikes being ridden, yet it may take a bike a little longer than a car from a stop to cross the road. A route from 9th St. North to the Longport Bridge.
- Bogus fears of negative impact on wetlands. State and National parks throughout the country have trails and boardwalks that both allow and limit access. Folks who are users of the trail would use trash receptacles if provided.
- Loss of privacy for home owners along the path. Unfortunately for them, they do not own the view.
- Dangers of east/west travel. If OC is to become a bicycle-friendly community, there must be a way to travel throughout the city safely and fearlessly. What a wonderful place this would be if we could ride to shop, go to the doctor, and visit friends - not just take a recreational ride. Of course, we would need parking spaces for the bikes.

- People on the rail trail do not own this area and this will not hurt their views of the wetlands. They are being selfish. They don't pay extra taxes for the wetland and all should be able to enjoy the views.
- Wetland preservation, eco-conscious.
- The Bike Blvd issue is how to implement the path from 35th St to 46th St.
- Safety, cost, sensitivity of those in opposition.
- The residents seem to be overwhelmingly in favor of this. You will never convince anyone whose backyard it will be in that it is a good idea. Address maintenance costs. No lights, no trash cans.
- Just keep it safe and rules of biking none to everyone...bikers and drivers.
- Environmental and cost.
- That the rail trail will negatively impact the quality of life of the residents that live along it. Ocean City being what it is I don't feel that it would be intrusive or otherwise create a problem for the residents. I think that riders would stay on the trail and simply pass through. How disruptive are the bike riders on the existing streets? I haven't heard complaints from the residents where the trail now exists. Maybe shrubs or trees could be planted along the corridor as a screen if privacy is an issue.
- Obviously, don't ruin the environment.
- How to keep the area maintained, and attractive to everyone.
- State to accept some wetland infringement as necessary to promote the welfare of the community.
- Cost to the taxpayer including those to maintain, parking of the bikes, safety, proper use of shared roadway.
- Environmental impact, automobile traffic flow, bicycle rider education.
- Good and sensitive design. Let us not make the 'perfect' the enemy of the 'desirable'.
- Cost of the project to the local community….. Environmental impact….. Effect on homeowners directly near the rail trail…. Maintenance and upkeep.
- Obviously, the residents along Haven Avenue may feel that there will be an intrusion to their privacy. If the project does go through, it is imperative that the cyclists have a great deal of respect for private property and the wetlands.
- COST: financially, environmentally, flood control, value of residents home's along bike path.
- Bike Boulevard:
  - Crossings at major roads: Battersea, 9th, 34th, and 55th
  - Improvements between 10th and 13th
  - East/west connectors to boardwalk, downtown, etc.
- Rail-Trail
  - Negative perceptions from "wetland destruction" slogan – opposition by vocal minority
  - Privacy at 4800 block
  - Possible environmental issues
  - 2 washout areas
  - Funding

- Trash receptacles and pick-up.
- Pervious coverage.
- Habitat protection.

- Wetlands reclamation.
- Non-property taxpayer funding.
- Paving options.
- Signage – information.
- Environmental concerns. Economic concerns. Safety concerns. Privacy concerns.
- Environmental concerns if the rail trail is considered wetlands. Dangers of riding bikes on West Avenue.
- Unstable areas of the rail bed between 36th and 40th streets need to be addressed without impacting wetlands (and with DEP/CFOE approval).
- The Friends of the Wetlands need to be brought to the table. This is not us vs. them; it is good for the whole island. Need to show them the impact on wetlands (minimal) and the benefits to the island.
- Safe crossing of 9th Street.
- Safe crossing of 34th Street.
- North-south access from 36th Street o 49th Street.

5) Are there opportunities of any kind that you think the Project Team should know about? (i.e., related community activities, initiatives, or projects; organizations or people who might have special knowledge or insights; community events where the project could be presented)

- I would like to have the Project Team at one of my meetings of the OC Republican club, where I can invite the public. I have a Trustees and Executive board meeting on Jan. 11TH. I would like to suggest that possibility to them at that time.
- I think most organizations are aware of the project. The problem is getting them all to communicate without fall out. A good event at the south end to present the project would be the 4th of July Bike Parade.
- I hope this committee reviews the idea of reconfiguring West Avenue in the south end. I understand there was a proposal to reduce West Avenue into one lane in each direction, then have a parking lane for vehicles and then a designated bike lane closest to the curb. I realize there is one block (46th Street) where the homes have their driveways facing the street so this block would need to be looked at, but with that said I think this is the best solution. It would make West Avenue safer for pedestrians to cross. Last year while riding my bike near 41st Street I saw a child about 10 or 11 years old. He was at the crosswalk waiting to cross West Avenue. He was off his bike. Vehicles in the right northbound lane stopped as well as both of the southbound lanes. The boy begins to cross when an impatient driver in the northbound stopped lane goes around the car in front of him and goes through the intersection. Still to this day I am not sure how this child was not struck by this impatient driver. This child was being very careful. I would have started to cross just like he did...no one was coming and all traffic when he started to cross the street was stopped. I feel a review of West Avenue for the proposed south end bike path maybe a good solution not only for continuing the bike path, but also for a safer West Avenue. I have brought this up to the mayor, Cape May County freeholders & Ray Wagner. The only person I have received a response back from is Ray Wagner who also agreed with me.
- The Pinellas Trail in Florida provides a great model for a county-wide bike path, complete with overpasses over busy roads.

- Reach out to all civic and community organizations, schools and clubs by offering to give presentations at their meetings, contribute articles to their newsletters or websites
- Show the Power Point presentation that has been shown at various meetings. It is excellent and should be used as often as possible to as many people as possible.
- Presentations to as many civic and community organizations as possible. Prepare and hand out literature on bike safety. These handouts should be given to motels, hotels, real estate agents who handle rentals, bike rental facilities, etc. It is important that we educate as many people as possible on safety. Too often, we have tourists come to our city, fling down their bags, and off they go on their bikes unsafely.
- Make sure police are involved; they have a lot of insight. Already have a bike unit fully operational that might have ideas or direction.
- No, but I'd propose having it printed in the local papers, Current & Gazette along with a return address or contact email address for opinions and ideas to be presented.
- No.
- N/A
- I think the team does an excellent job in the communication. I believe it is a good idea to have an independent study of the issues raised by the Friends of the Wetlands.
- Schools. Get the kids involved and make it a family thing. The kids deserve this safe corridor.
- Only in the area six-seven months a year. I am not knowledgeable.
- If the rail trail is completed across the length of the island you could do a theme event … a family ride around the island with water/ice cream stops. I don't know if the entire length of the bike trail would be bi-directional but it would be cool to have a circuit or loop designated specifically as a bike trail.
- You may reach out to other local communities that have had a bike path added in the last 10 years and get their opinions. Bike shops may have some insight. You may want to poll the children in our schools. Possibly set up an info table at the end of the boardwalk on Saturdays to solicit answers.
- The word (good and bad) is being spread thru town from meetings and news media, continue to promote the positive side of the project by addressing and including all age, social levels, I think this is already being done. Garden associations might want to be involved in making the area look nice and natural (the section completed in the 20's might benefit from this).
- I think by creating an organized ride on the bike route you would raise awareness and support for the advancement of a friendly bike town.
- Activities of PTA, Advisory Council for Physical Fitness and Sports, Friends of the Wetlands.
- Regarding the establishing of a local group that supports and works on behalf of this project, I think that it is imperative that the group initially focus on educating the general public by getting in front of as many local organizations as possible. After the results of the NJ DOT study are presented, then and only then, should we proceed with a grass roots movement for signatures.
- Certainly, events such as bike-a-thons to raise money for the Humane Society or similar charities would be appropriate. There could also be beautification projects along the rail bed by individuals or community groups.

- Before any stage of this bike path is started, there must be a concerted effort to contact as many residents, who will be directly affected by this project, and have a meeting so that the time is convenient as possible, for all to attend.
- Potential for "Safe Routes to School"
- Reach out to all civic and community organizations, schools and clubs by offering to give presentations at their meetings, contribute articles to their newsletters or websites. Recruit individuals to create support network island wide.
- No. Sensitivity to privacy issues of the homeowners along the rail bed. Be sensitive to the agendas of vocal homeowners spreading misinformation.
- Community activities, initiatives, or projects; organizations or people who might have special knowledge or insights; community events where the project could be presented.
- I think your team has good representation, with the exception of the neighbors in the South end, along the proposed 36 to 49 route.

6) General Comments

- Keep up the fight. Thanks for all you do.
- At a bike path meeting early on, using Asbury Ave as a "share the road" route was suggested, instead of Haven. Possibly too heavily traveled? It is closer to the beach and runs almost end to end uninterrupted. It got brushed past at the meeting because Haven had already been initiated but it still might be a good idea, especially for the shopping district. The pedestrian shopping street is a big draw in Cape May. Good luck!
- I live opposite the bird sanctuary on Haven Ave., where there is the paved cycle path. It was installed the year we moved in. It has brought enjoyment to just about everyone, including ourselves. It has also brought litter, which we have learned to live with. At times, the City will send a small crew around to pick up, and we residents also go out on occasion to pick up. Unfortunately, some of the litter is thrown over the fence into the reserve. I don't see that stopping, and if I lived in the area of the rail trail I would anticipate it to be an issue there as well.
- I think this is a wonderful idea and Thank you for your efforts to see it through. I am looking forward to walking/biking over the bridge as I live very close to it. I am sure most people who live south of 34th street would appreciate a convenient safe place to do the same.
- Provisions for runners and walkers should be included on the bike paths. Dogs should be prohibited! Keep up the good work, and have a great holiday.
- Immediately respond to all erroneous claims made by anyone. Rumors can either spread like wildfire, or they can be made to backfire.
- This will be good for everyone, but we need to get council on board and educate them, especially.
- Continue to maintain a pr campaign on why this is needed. Try your best to prevent bike paths which will put participants in danger. Educate. Answer false statements being made, but do not get into a contest over them. Continue to communicate with the public. Keep up the good work.

- Good luck let me know if there is anything I can do to help.
- My reading of rails to trails info indicated that they are in favor of bike routes alongside the road whenever possible. The cost is greatly reduced, the roads go where the people want/need to, and the high visibility causes increased path usage and street traffic calming even if no other measures are taken. As I've said before – to those that have heard it before, sorry for the repetition - A path on the rail bed will be nice, I'll use it if built, but not to move around in the Southern part of town, only to go past it. To move around the 36-49th street area, without any change to the traffic patterns I'd still have to go to a light ,cross and move around on Asbury or Central. Do I think we should use West the way it is now, no. I'd like to see the considerable abilities available here find a way to reduce West from 35th to 55th streets down to 1 lane each way, lower the speed limit to 30 mph,[or 25] and install nice wide bike lanes, protected where possible. This will do far more from 35th - 55th to encourage pedestrian and bike traffic, for the look and feel of the Southern part of West Ave. and the island in general. If no changes to traffic patterns on West Ave. can be made – I'd propose a corridor at 36th Street funneling bike traffic over to Central av. Convert Central Ave. to one lane/one way South, diagonal parking protecting a bike route on the West side of the road. The area would also gain some much needed parking spaces, in this area the beachfront properties all have curbside access to their driveways, resulting in almost no street parking on the Ocean side of the road.
- Limiting fear of riding needs to be addressed in order to promote bicycling in OC - the fear of parents for their children and the fear of adults to take to the bikes.
- Thank you!
- I believe both plans are good for the safety of the cyclists.
- Keep up the good work and make this happen. Thanks.
- Keep up the good work and please do not give up or in.
- Thanks for still working on the biking in OC. I wish something could be done with the boardwalk and speeding bike riders.
- Move forward with the project ASAP if blessed by the DOT.
- <u>My vision for OC as a biking destination and biking lifestyle community.</u>

  Boomers nearing retirement age and families with children want safe physically active life-styles (potential residents, at least in summer) and periodic adventures (tourists). OC's bike trail/blvd should connect seamlessly (with great signage which is now lacking) to Ocean Drive north and south of Ocean City. Also, the bike trail/blvd should have three seamless circuits:
  - to-from Atlantic City
  - to-from Somers Point
  - to-from Cape May

  Being a dry town, OC offers relatively safe streets (not so many drunks and no so many rowdy young people… no offense, I am the mother of some of these young people and I'm glad they tend to congregate elsewhere for their rowdiest activities!)
  First Lady Obama's "get moving" campaign is just the tip of the iceberg on a necessary and unavoidable cultural shift towards more green transportation, healthier eating, and increased exercise. As a country, this culture shift will be needed to get a handle on our extreme health care expenses and our national deficit and debt. We could dove-tail with a "Get Moving to Ocean City" (or Coastal NJ) movement of our own.
  In addition to a designated trail/blvd, Ocean City needs:

- Clear signage throughout the City to inform motorists and cyclists about the rules of the road.
- A publicity campaign for rules of the road included in weekly free papers and realtor handouts
- Required lights for night riding.
- Better speed limit control throughout the city (not just on the "trail/blvd)
- Bike racks everywhere
- A few notable biking events throughout the year (check out the Seagull Century (http://www.seagullcentury.org) organized by Salisbury University in Maryland… something like this and maybe even some major events across the bay on the ferry.
- To promote itself as a town where you could park your car on arrival for your vacation and not drive at all while you are here. Maybe even offer a remote parking lot for people to leave their cars behind for the week and get by with strollers, bikes, and the jitney/trolley. This would require a better traffic pattern at the West Ave. 8th to 10th area of town so people could use the grocery store and downtown areas. The bike trail/blvd map should show the major shopping spots, library/community center, etc.

The Rail Trail is a low impact use of a natural treasure and should be an integral part, but not even a major part in the big scheme of a bike-centric town.

- Drew Fasy should consider running for higher office. The guy is a genius! (Which is likely why he's not running for an office).
- Thanks for taking the initiative to lead this endeavor. You have my support.
- For a "Family Resort" it is absolutely necessary to have a safe/bike dedicated path.
- The more input and perspectives, the better. There will be other opportunities for public input. I would encourage everyone to participate in the process.
- I am in favor of this project and would like to see it come to fruition. I also appreciate all of the hard work and effort the city and interested community members have invested into this project thus far!
- I'm not sure if a bike path of some sort is such a pressing issue, especially in these economic times, but if reasonable heads prevail, a compromise can be done to move forward to the next stage. A drawing or a sketch would be nice.
- A great number of Ocean City residents are grateful to the DOT and RBA Group for your involvement in this worthwhile project. Your expertise and leadership will be greatly appreciated!
- Immediately respond to all erroneous claims made by anyone. Rumors can either spread like wildfire, or they can be made to backfire.
- Let's get moving! There is no downside
- Thank you for coming!
- This will benefit the community greatly. Awareness of the long history of trail idea in Ocean City. I think we really need to explore the alternative bike routes. With or without the rail trail, bike safety is a big problem in this town.
- Concerned over the issues with bikers next to a substantial drop to water.

Appendix F: Trail Examples

Trail Examples

The following pages present details on five existing trails and one proposed trail located in environmentally sensitive areas in New Jersey, New York and Connecticut. Two of the examples are located along abandoned rail lines.

Trail projects like these often use funding from multiple sources, both public and private. These trail examples note one or more public funding sources including the Federal Highway Administration (FHWA) Recreation Trail Program (RTP), FHWA Transportation Enhancements (TE), and New Jersey Department of Transportation (NJDOT) Local Aid Bikeways Program.

Trail Name:	Irondequoit Lakeside Multi-Use Trail
Location:	Monroe County, New York
Organization:	Monroe County Department of Environmental Services
Trail Category:	Rail Trail
Activities:	Biking, walking
Length:	4.7 mile
Surface:	Asphalt, Concrete, Cinder, Wood
Funding:	Total: Federal - $1.2 mil; County - $705,000; Local - $460,000 (cash and in-kind services)
Conditions:	Wetlands
Comments/Notes:	This trail connects three existing recreational activity centers and crosses over a wetland. In order to preserve the ecological value of the wetlands, a priority was placed on creating a path that minimized any adverse impacts. An elevated pedestrian boardwalk was used because it has the least overall impact on the wetland and allows the trail users to learn about the functions of wetlands without negatively impacting the area. The trail also includes signs and rest stops along the way to better accommodate users. (source: the Pedestrian and Bicycling Information Resource Center, http://www.bicyclinginfo.org/library/details.cfm?id=4161)
More information:	The Pedestrian and Bicycling Information Resource Center, http://www.bicyclinginfo.org/library/details.cfm?id=4161

Source: Pedestrian and Bicycling Information Resource Center

Trail Name:	Branford Trolley Trail
Location:	Branford, Connecticut
Organization:	Town of Branford
Trail Category:	Rail Trail
Activities:	Walking, birding and wildlife
Length:	480 feet
Width:	4 feet
Funding:	$25,000 grant provided by the Long Island Sound Fund
Conditions:	Tidal wetlands, tidal river, fronting Long Island Sound
Comments/Notes:	The Branford Trolley Trail is a footbridge along the path of an abandoned historic trolley track. The bridge connects to a popular existing nature walk. Visitors to the Branford trolley track footbridge can expect to see numerous shorebirds in the tidal estuary, feeding in the marsh or wading in the shallow waters of the tidal creek. This marsh area also provides habitat for many fish, mammals and invertebrates. (Description from the Connecticut Department of Environmental Protection)
More information:	http://www.lisrc.uconn.edu/coastalaccess/site.asp?siteid=694 http://www.ct.gov/dep/lib/dep/long_island_sound/soundout/sofeb00.pdf

Source: traillink.com

Source: CT DEP

Trail Name:	Ralph C. Sheldon Jr. Trail (Part of the Chautauqua Rails-to-Trails System)
Location:	Chautauqua County, New York
Organization:	Chautauqua Rails-to-Trails
Trail Category:	Nature Trail
Activities:	Walking, birding
Length:	4.5 miles
Surface:	Dirt and grass
Funding:	*FHWA Transportation Enhancement* Year programmed: 2002 Federal award: $517,561 Local match: $155,500 TE Category: 1 (Bicycle and Pedestrian Facilities) Description: This project consists of a 24 mile trail from Rt 76 in Sherman to Rt 20 at Brocton.
Conditions:	Trail passes through woodlands and through wetlands which offer habitat suitable for beavers and migrating waterfowl.
Comments/Notes:	Trail runs thru protected wetland via raised dirt trail bed constructed by Chautauqua Rails-to-Trails. As part of mitigation for placing bankrun gravel for trailbed on the wetland behind town, CRT has erected 15 signs identifying natural and man-made points of interest. As part of the mitigation required by the NYS Department of Environmental Conservation (NYDEC), 10 bird nesting boxes have been placed as an Eagle Scout project in the wetland.
More information:	716.269.3666 crtt@fairpoint.net www.chaurtt.org

Source: traillink.com

Trail Name:	Swamp Trail (part of the Estell Manor Park Trail System)
Location:	Mays Landing, Atlantic County, NJ
Organization:	Atlantic County Parks
Trail Category:	Nature Trail
Activities:	Walking (bicycles are not permitted)
Length:	1.8 mi.
Surface:	Boardwalk
Funding:	*FHWA Recreation Trail Program* Project Year: 1993 Funding Provided: $13,000 Project Description: Construct trail, ADA Project Year: 1996 Funding Provided: $10,000 Other funding: $10,000 Project Description: Construct trail Project Year: 1998 Funding Provided: $10,000 Other funding: $10,000 Project Description: Trail development Project Year: 2001 Funding Provided: $12,750 Other funding: $12,750 Project Description: Maintenance
Conditions:	Cedar swamp, coastal forest
Comments/Notes:	The Swamp Trail Boardwalk is a fully accessible elevated wooden nature trail that crosses some of the most beautiful areas of the Park. Along the way you will see streams, a cedar swamp, coastal forest, ruins of the Bethlehem Loading Company, and 2 bump outs that take you right to magnificent views of South River. There is also a boardwalk extension that leads to Oak Ridge Trail. *(source: http://www.aclink.org/PARKS/mainpages/estell.asp)*
More information:	Harry Tillett, Department Head, Atlantic County, Div. of Parks & Recreation 609-625-1897

Source: panoramio.com/hoganphoto

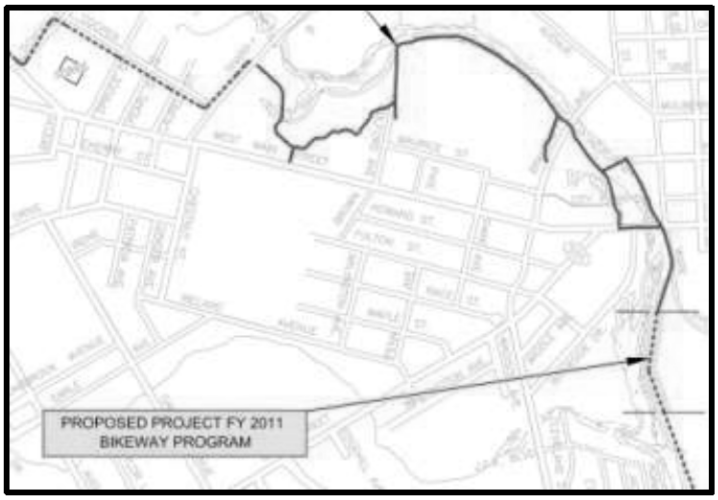
Source: panoramio.com/hoganphoto

Trail Name:	Red Trail
Location:	Cape May Point, Cape May County, NJ
Organization:	Cape May Point State Park
Trail Category:	Nature Trail
Activities:	Hiking
Length:	0.5 miles
Surface:	Boardwalk
Funding:	*FHWA Recreation Trail Program* Project Year: 2001 Funding Provided: $3,000 Other Funding: $6,000 Other Funding Source: State Parks, in-kind contributions Project Description: Trail Renovation
Conditions:	The trails wind through marsh and swamp, dune forest, ponds, grassy dune, and beach.
Comments/Notes:	The Red trail, a boardwalk trail which is wheelchair accessible. It has several observation platforms
More information:	NJ DEP http://www.state.nj.us/dep/parksandforests/parks/capemay.html Cape May Times http://www.capemaytimes.com/nature/capemay-park.htm

Source: capemaytimes.com

Source: capemaytimes.com

Trail Name:	Maurice River Bikeway Trail Phase V (Proposed)
Location:	Millville, Cumberland County, NJ
Trail Category:	Nature Trail
Activities:	Bicycling
Length:	1100 feet (The existing trail is about a mile and a half long.)
Surface:	Boardwalk, other
Funding:	*NJDOT 2011 Bikeway Program* Award Amount: $390,000
Conditions:	Wetlands, Maurice River waterfront
Comments/Notes:	The reason the portion of the trail that this grant money will go toward is small is because it cuts through wet lands and will include a bridge crossing. *(source: The News of Cumberland County, http://www.nj.com/cumberland/index.ssf/2011/02/millville_gets_390000_for_bike.html)*
More information:	NJDOT, Local Aid Bikeways Program http://www.state.nj.us/transportation/business/localaid/bikewaysf.shtm



Source: The News of Cumberland County

Appendix G: List of Documents Reviewed

1. ***Ocean City Circulation Element**, Orth-Rodgers Associates Inc., March 2005*
   The Circulation Element provides information on existing conditions and recommendations for bicycle, pedestrian, vehicular, parking and transit improvements. Data includes traffic volumes taken during the summers of 1999, 2000, 2001 and 2003; crash data for 2002; and descriptions of crashes involving bicyclists and pedestrians from 2001-2002. Recommendations include reconfiguring 9th Street to include medians and five foot bicycle lanes and reconfiguring West Avenue between 15th-55th Street as a three-lane cross-section with two through lanes, a left-turn lane, 6 foot bike lanes and 8 foot parking lane. A goal of the Circulation Element is to create a bicycle network. The Plan identifies roadways of "compatible width" for average bicyclist to travel. Roads with bike lane potential include 9th Street, West Avenue, Bay Avenue and Wesley Avenue.

2. ***Draft City of Ocean City Circulation Element Update,** Orth-Rodgers Associates Inc., March 2010*
   This document outlines potential feasible alternatives for addressing bicycle circulation as well as potential alternate routing for NJ Transit buses in downtown Ocean City. The update focuses on concepts for an east-west bicycle connection in the general area of 9th Street and a north-south bicycle connection between the established striped bicycle lanes on Haven Avenue and the Ocean City-Longport Bridge to the north.

3. ***Ocean City Hand Mark-up Bicycle Route Network Map**, City of Ocean City*
   Map identifies extension of Haven Avenue bike route to the Longport-Ocean City Bridge, east-west cross town streets, and a north-south LSV (low speed vehicles) route. (Not official.)

4. ***Ocean City Ordinances***
   - *07-55 – An Ordinance Amending a Portion of Ordinance 87-17, Chapter VII, Traffic of the Revised General Ordinances of the City of Ocean City to Reflect Changes;* passed by the Council of Ocean City, New Jersey on December 20th, 2007
     - The ordinance changes the wording from 4 Way Stop Intersection to Multi-way Stop Intersection and adds additional Multi-way Stop provisions for Haven Avenue intersections between 9th and 34th Street.
   - *07-56 – An Ordinance Amending a Portion of Ordinance 87-17, Chapter VII, Traffic of the Revised General Ordinances to Reflect Changes;* passed by the Council of Ocean City, New Jersey on December 20th, 2007
     - Ordinance 07-56 reduces the speed limit along Haven Avenue from 9th to 34th Streets to accommodate a bikeway.
   - *10-05 – An Ordinance Amending Chapter VII, Traffic, of the Revised General Ordinances of the City of Ocean City to Provide Changes to Certain Streets and Intersections;* passed by the Council of Ocean City, New Jersey on February 11th, 2010
     - The ordinance amends street operation along Haven Avenue including parking, one-way designation, and four-way stop intersections.

5. ***Letter from Peter A. Riscica, Supervising Highway Engineer, Traffic Engineering & Investigations, New Jersey Department of Transportation regarding Ordinance 07-55; February 8, 2008***
   Mr. Riscica informs the City that a traffic investigation needs to be conducted before consideration can be given for recommending approval of the ordinance to the Commissioner of Transportation. He requested for each intersection an 8-hour traffic count, an analysis of 3 years of accident records, geometric features and sight distance measurements. After NJDOT staff receives this data, they will be able to initiate their investigation.

6. ***Bicycle Route Traffic Markings Citywide, Haven Avenue – City Bikeway, City Contract 10-035***
   - *Technical Specifications*, Department of Planning and Engineering, Revised January 31, 2010
   - S*ummary of Bids*, Purchasing Division, Date Received May 25th, 2010
   - *Sharrow, Striping and Traffic Marking Plan, Department of Planning and Engineering;* Office of Engineering & Construction, City of Ocean City, Arthur J. Chew III, Professional Engineer, Revised April 30, 2010

7. ***Tax maps/Easements/ROW Information***
   - *Survey of Former Right-of-Way, Ocean City Branch of the Pennsylvania – Reading Seashore Line, formerly Atlantic City Railroad, Crook Horn Creek Thorofare to 35th Street; Carl Totten, Land Surveyor, October 2006*
   - *Plans of Reconstruction of Haven Avenue from 20th to 24th Streets, Urban Engineers, Inc., March 2006*
   - *City of Ocean City Tax Maps, Arnold W. Barnett, October 2005*

8. ***NJDEP Permit to resurface Crook Horn Creek Access Road,*** *New Jersey Department of Environmental Protection, May 18, 2009*
   The NJDEP granted Ocean City permission to resurface the existing roadway within the existing footprint, which will be utilized as a bicycle/pedestrian nature trail from the terminus of 51st Street to the Crook Horn Creek. A pedestrian bridge and nature overlook were not approved.

9. ***2007 NJ High Resolution Orthoimagery***

10. ***Accident Reports***
    - *Plan4Safety*
      Plan4Safety is a NJDOT sponsored program that offers a tool to transportation officials to filter and analyze statewide crash records for more detailed and place-based analysis. Information on crashes involving bicyclists between++ 2003-2010 were downloaded and analyzed.
    - *NHTSA Law Enforcement Challenge Information – 2009 Ocean City Police Traffic Accomplishments, City of Ocean City*

The report provides an overview of the Traffic Safety Program including safety campaigns, an aggressive driving program, and installing Community Traffic Safety Quilts, crosswalks, and 'yield to pedestrians' signs. The report also summarizes the effectiveness of the program's efforts.

- *Ocean City Police Department, Traffic Safety Unit, Multi-Year Accident Statistics January 1, 2001 – August 28, 2010*
  During this time period there was a total of 3,073 crashes in Ocean City, 219 involved a bicyclist or pedestrian. 85% of the crashes involving a bicyclist or pedestrian also involved an injury. There was one pedestrian fatality on July 7, 2009 at Central Avenue and 14th Street.

11. ***Traffic Engineer Report: Haven Avenue Speed Limits and STOP Sign Control Study,*** *Orth-Rodgers & Associates, Inc., Winter of 2007-2008.*

    ORA initiated a study in the winter of 2007-2008 to evaluate Haven Avenue from North Street to 36th Street to recommend appropriate speed limits and placement of STOP signs. The report notes that the City would like to see 15 MPH speed limit and all-way STOP control at each intersection. The report concludes that a single uniform speed limit posting is not realistic for Haven Avenue because there are seven different cross-sections with roadway widths varying from 17 – 45 feet, six different ways to accommodate bicycle traffic, and varying traffic volumes. The report also concludes that several of the four way STOP signs are unjustified and that STOP signs should never be used to control speed.

12. ***Memo from Arthur Chew, PE, PP, Ocean City Engineer to Jim Rutala, Re: Ocean City Bicycle Routes – 7-09-002,*** *May 5, 2009*
    Arthur Chew recommends that the speed limit on Haven Avenue from 9th Street to 56th Street be set at 20 MPH with bump outs and center medians similar to those installed on Haven Avenue between 20th Street and 24th Street and to change Haven Avenue from 26th Street to 29th Street to a one-way street in the southbound direction with parking on the eastern side to eliminate cut through traffic. Mr. Chew also recommends that the north-south STOP signs be removed on Haven Avenue at the 'T'-intersections. He disagrees with a number of ORA's recommendations to remove STOP signs because they are not consistent with the Circulation Element of the Master Plan and the traffic patterns in the City in which the north/south streets are generally free flowing and east/west streets have stop or signal requirements.

13. ***Neighborhood Traffic Management Program (NTMP),*** *January 28, 2010*
    The NTMP is designed to identifying sections of Ocean City that are removed from the through street network and are self contained with significant year round residential populations. The NTMP includes three types of projects: Local Street Improvement Projects, Neighborhood Area Studies, and Cross-Town Streets Speed Control and Share the Road Projects. Nine specific areas as well as all areas surrounding schools and playgrounds were identified as benefiting from this program. Two of the areas, Haven Avenue (900-3300 block) and Simpson Avenue (unit block to 400 block), are located within the proposed north-south bicycle corridor.

14. ***Select Ocean City Demographic Information,*** *U.S. Census Bureau*
    - The population of Ocean City decreased by 4.4% from 15,378 in 2000 to 14,701 in 2009
    - 10.4% of the population does not have a vehicle
    - 4.8% of the population walked to work
    - 31% of the population 65 years and over has a disability
    - The median age is 48
    - 56% of housing units are for seasonal, recreational or occasional use

15. ***Tourism Recognition,*** *Ocean City web site (www.ocnj.us)*
    - In 2009, Ocean City was voted #1 beach in New Jersey, #1 beach for day trippers, and #1 beach for ecotourism
    - The Ocean City area was ranked on the 2009 Forbes' list of Best Small Places for Business and Careers
    - Ocean City was honored by the National League of Cities for winning the 2008 Innovation in governance award in the category of Innovative Local Use of Clean and Sustainable Energy
    - American Heart Association named Ocean City one of the few Fit Friendly communities in the country

16. Correspondence and documents provided by the City referencing information from others related to wetland and flood-prone areas including US Fish and Wildlife Analysis of Crook Horn Creek, 8/7/09, 2005 Analysis by Junetta Dix, Environmental Scientist, and Presidential Executive order 11988, among others.

Appendix H: MUTCD Request to Experiment

If you think you have an idea for a new traffic control device or a different application of an existing device that will improve driver safety, but the device is not included in or on compliance with the MUTCD, it is possible to experiment with the device or its use. This experimentation is conducted in a controlled setting. http://mutcd.fhwa.dot.gov/condexper.htm

All requests for experimentation should originate with the State/local highway agency or toll operator responsible for managing the roadway or controlled setting where experiment will take place. That organization forwards the request to the FHWA - with a courtesy copy to the FHWA Division Office. The FHWA must approve the experiment before it begins. Requests may also be forwarded directly to the FHWA Division Office, and the Division Office can submit the request to the FHWA Headquarters Office. All requests must include:

1. A statement of the nature of the problem, including data that justifies the need for a new device or application.
2. Describe the proposed change, how it was developed, how it deviates from the current MUTCD.
3. Any illustration(s) that enhance understanding of the device or its use.
4. Supporting data that explains how the experimental device was developed, if it has been tried, the adequacy of its performance, and the process by which the device was chosen or applied.
5. A legally binding statement certifying that the concept of the traffic control device is not protected by a patent or copyright (see MUTCD Section IA.10 for additional details.)
6. The proposed time period and location(s) of the experiment.
7. A detailed research or evaluation plan providing for close monitoring of the experimentation, especially in the early stages of field implementation. The evaluation plan should include before and after studies as well as quantitative date enabling a scientifically-sound evaluation of the performance of the device.
8. An agreement to restore the experimental site to a condition that complies with the provisions of the MUTCD within 3 months following completion of the experiment. The agreement must also provide that the sponsoring agency will terminate the experiment at any time if it determines that the experiment directly or indirectly causes significant safety hazards. If the experiment demonstrates an improvement, the device or application may remain in place as a request is made to update the MUTCD and an official rulemaking action occurs.
9. An agreement to provide semiannual progress reports for the duration of the experimentation and to provide a copy of the final results to the Office of Transportation Operations (HOTO) within three months of the conclusion of the experiment. HOTO may terminate approval of the experimentation if these reports are not provided on schedule.

How to Send the Requests to FHWA Headquarters

Requests for experimentation approval should be on agency letterhead and should be sent electronically as an attachment (PDF or Word Document) to an e-mail to: MUTCDofficialrequest@dot.gov. [Note: if e-mail is not possible, the letter may be sent via postal mail or delivery service to FHWA at 1200 New Jersey Avenue, S.E., HOTO-1, Washington, DC 20590.

A successful experiment is one where the research results show that the public understands the new device or application, the device or application generally performs as intended, and the device does not cause adverse conditions. The "experimenter" must evaluate conditions both before and after installation of the experimental device and describe the measurements of effectiveness (MOEs) of the safety benefits and traffic benefits (e.g., better visibility, reduced congestion).

Appendix I: LTA Scope Approval

Local Technical Assistance Scope Approval

I acknowledge, on behalf of CITY OF OCEAN CITY, that I have reviewed the Scope of Work for the pending Local Technical Assistance Study and that it accurately depicts the desires of the Town Administration regarding what specific planning activities will be undertaken as well as what will be included as part of the final product.

MOattilo MICHAEL OATTILO

Name

ACTING BUSINESS ADMINISTRATOR

Title

10/1/10

Date

Appendix J: Deed of Ownership

Bk D3026 Pg203 #353 (4)

Prepared By:
Suzanne L. Silverman, Esq.

COUNTY OF CAPE MAY
Consideration 10.00
Realty Transfer Fee .00
Date 06-24-2003 By CLERK.JD

DEED

This Deed made on May 30, 2003,

BETWEEN

New Jersey Transit Corporation, an instrumentality of the State of New Jersey,

Whose address is One Penn Plaza East, Newark, New Jersey, 07105-2246,
referred to as the Grantor,

AND

The City of Ocean City,

whose post office address is Ninth Street and Asbury Avenue, Ocean City, New Jersey, 08826,

referred to as the Grantee.

The words "Grantor" and "Grantee" shall mean all Grantors and Grantees listed above.

Transfer of ownership. The Grantor grants and conveys (transfers ownership of) the property described below to the Grantee. This transfer is made for the sum of $10.00 (Ten Dollars).

The Grantor acknowledges receipt of this money.

Tax Map Reference. (N.J.S.A. 46:15-1.1) Municipality of Ocean City, Block No. 7100 AND 7101 to Crook Horn Creek, Lot No. 1, Account No. n/a
[ ] No property tax identification number is available on the date of this deed.
(Check box if applicable.)

Property. The property consists of the land and the buildings and structures on the land in the City of Ocean City, County of Cape May and State of New Jersey. The legal description is:

All of the New Jersey Transit Railroad right-of-way, commonly known as the Ocean City Branch railroad line, of varying widths from 10 feet to 25 feet from the southern terminus immediately south of Crook Horn Creek to the northerly terminus at the intersection of Tenth Street and Haven Avenue, all in the City of Ocean City, as more specifically set forth on the "Valuation Maps" of the Pennsylvania-Reading Seashore Lines formerly Right-Of-Way and Track Map of the Atlantic City Railroad, Ocean City Branch, dated June 30, 1917 revised December 31, 1955, V31NJ3 sheets 9 through 19 inclusive.

BEING a portion of the same Property conveyed on April 1, 1976 to the State of New Jersey, acting by and through the Commuter Operating Agency of the New Jersey Department of Transportation under deed from Consolidated Rail Corporation, a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, recorded in the Cape May County Register's Office on November 15, 1984, in Deed Book 1578, page 396. In accordance with N.J.S.A. 27:25-21 title became vested in New Jersey Transit Corporation, an instrumentality of the State of New Jersey.

Possession. At the closing, the Grantee shall be given possession of the Property to be utilized for public purpose only and with no resale or nonpublic use allowed and when the same shall cease to be used for a public use by the Grantee, the Property shall then revert back to the Grantor, its successors, grantees or assignees.

Bk D3026 Pg204 #353

NCR 66 - Affidavit of Consideration or Exemption
RTF-1(Rev. 2/1/00)
P 11/01

STATE OF NEW JERSEY
AFFIDAVIT OF CONSIDERATION OR EXEMPTION
(c. 49, P.L. 1968)
or
PARTIAL EXEMPTION
(c. 176, P.L. 1975)

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www.allegal.com 800.222.[illegible] Page 1

To Be Recorded With Deed Pursuant to c. 49, P.L. 1968 as amended by c. 308, P.L. 1991 (N.J.S.A. 46:15-5 et seq.)

STATE OF NEW JERSEY
}SS.
COUNTY OF Essex

FOR RECORDER'S USE ONLY
Consideration $ 10.00
Realty Transfer Fee $ E *
Date 6-26-03 By [illegible]

* Use symbol "C" to indicate that fee is exclusively for county use.

(1) PARTY OR LEGAL REPRESENTATIVE *(See Instructions #3, 4 and 5 on reverse side)*

Deponent, Suzanne Silverman (Name), being duly sworn according to law upon his/her oath deposes and says that he/she is the Legal Representative (State whether Grantor, Grantee, Legal Representative, Corporate Officer, Officer of Title Co., Lending Institution, etc.) in a deed dated May 30, 2003 transferring real property identified as Block No. 7100 and 7101 Lot No. 1 located at City of Ocean City (Street Address, Municipality, County) and annexed hereto.

(2) CONSIDERATION *(See Instruction #6)*

Deponent states that, with respect to deed hereto annexed, the actual amount of money and the monetary value of any other thing of value constituting the entire compensation paid or to be paid for the transfer of title to the lands, tenements or other realty, including the remaining amount of any prior mortgage to which the transfer is subject or which is to be assumed and agreed to be paid by the grantee and any other lien or encumbrance thereon not paid, satisfied or removed in connection with the transfer of title is $ 10.00

(3) FULL EXEMPTION FROM FEE

Deponent states that this deed transaction is fully exempt from the Realty Transfer Fee imposed by c. 49, P.L. 1968, for the following reason(s): Explain in detail. (See Instruction #7.) Mere reference to exemption symbol is not sufficient.

7(h) Grantor is an instrumentality of the State of New Jersey

(4) PARTIAL EXEMPTION FROM FEE

NOTE: *All boxes below apply to grantor(s) only. ALL BOXES IN APPROPRIATE CATEGORY MUST BE CHECKED. Failure to do so will void claim for partial exemption. (See Instructions #8 and #9.)*

Deponent claims that this deed transaction is exempt from the increased portion of the Realty Transfer Fee imposed by c. 176, P.L. 1975 for the following reason(s):

A. SENIOR CITIZEN *(See Instruction #8)*
- ☐ Grantor(s) 62 years of age or over.*
- ☐ One- or two-family residential premises.
- ☐ Owned and occupied by grantor(s) at time of sale.
- ☐ Owners as joint tenants must all qualify except in the case of a spouse.

B. BLIND *(See Instruction #8)*
- ☐ Grantor(s) legally blind.*
- ☐ One- or two-family residential premises.
- ☐ Owned and occupied by grantor(s) at time of sale.
- ☐ No owners as joint tenants other than spouse or other qualified exempt owners.

DISABLED *(See Instruction #8)*
- ☐ Grantor(s) permanently and totally disabled.*
- ☐ One- or two-family residential premises.
- ☐ Receiving disability payments.
- ☐ Not gainfully employed.
- ☐ No owners as joint tenants other than spouse or other qualified exempt owners.

* IN THE CASE OF HUSBAND AND WIFE, ONLY ONE GRANTOR NEED QUALIFY

C. LOW AND MODERATE INCOME HOUSING *(See Instruction #8)*
- ☐ Affordable According to HUD Standards.
- ☐ Meets Income Requirements of Region.
- ☐ Reserved for Occupancy.
- ☐ Subject to Resale Controls.

D. NEW CONSTRUCTION *(See Instruction #9.)*
- ☐ Entirely new improvement.
- ☐ Not previously used for any purpose.
- ☐ Not previously occupied.

Deponent makes this Affidavit to induce the County Clerk or Register of Deeds to record the deed and accept the fee submitted herewith in accordance with the provisions of c. 49, P.L. 1968.

Subscribed and sworn to before me this day of 6th June, 20 03

Suzanne Silverman
Suzanne Silverman, DAG
Name of Deponent

New Jersey Transit Corp.
Name of Grantor

One Penn Plaza East
Newark, NJ 07105
Address of Deponent

One Penn Plaza East
Newark, NJ 07105
Address of Grantor at Time of Sale

Marguerite J. Graves
MARGUERETE J. GRAVES
NOTARY PUBLIC OF NEW JERSEY
I.D. No. 2057087
My Commission Exp. Dec. 23, 2004

FOR OFFICIAL USE ONLY
Instrument Number _____ County _____
Deed Number _____ Book _____ Page _____
Deed Dated _____ Date Recorded _____

IMPORTANT - BEFORE COMPLETING THIS AFFIDAVIT, PLEASE READ THE INSTRUCTIONS ON THE REVERSE SIDE HEREOF.
This form is prescribed by the Director, Division of Taxation in the Department of the Treasury, as required by law, and may not be altered or amended without the approval of the Director.

Bk D3026 Pg205 $353

Type of Deed. This Deed is called a Quitclaim Deed. The Grantor makes no promises as to ownership or title, but simply transfers whatever interest the Grantor has to the Grantee.

Signatures. The Grantor Signs this Deed as of the date at the top of the first page. If the Grantor is a corporation, this Deed is signed and attested to by its proper corporate officers and its corporate seal is affixed.

Witnessed or Attested by:

Witness

New Jersey Transit Corporation

H. Charles Wedel
Chief Financial Officer and Treasurer

STATE OF NEW JERSEY, COUNTYOF MERCER SS:

I CERTIFY that on May 30, 2003, H. Charles Wedel personally came before me and acknowledged under oath, to my satisfaction, that this person:

a) was the maker of this Deed;
b) executed this Deed as his or her own act; and
c) this Deed was made for $10.00, as the full and actual consideration paid or to be paid for the transfer of title. (Such consideration is defined in N.J.S.A. 46:15-5);

Signed and sworn to before me on
May 30, 2003

Notary Public or Attorney-at-Law
Suzanne L. Silverman
Attorney-at-Law
State of New Jersey

Bk D3026 Pg206 #353
RECORDED COUNTY OF CAPE MAY
ANGELA F. PULVINO, COUNTY CLERK
Recording Fee 45.00
Date 06-26-2003 @ 02:06p

Deed	Dated: , 2003
New Jersey Transit Corporation, Grantor, TO The Ocean City, New Jersey Grantee,	Record and Return to: Gerald J. Corcoran, Esquire Youngblood Corcoran 3205 Fire Road Post Office Box 850 Pleasantville, NJ 08232

Ocean City, NJ
Rail Trail &
Bicycle Boulevard Project

Haven Avenue
Corridor Report

Introduction

Scope of Services & Context

Rail Trail + Bike Boulevard =

Haven Avenue Corridor Report

Rail Trail

Assess the unique opportunity for multi-use access

to the bay along the rail bed from 36th to 49th Streets

Rail Bed Existing Conditions

- Adjacent wetlands

- Neighboring residential properties

Opportunities for Shared Use Path

OC Rail Trail Conclusions

It is possible for the existing rail bed to be utilized as a trail ***if:***

- Public need outweighs environmental impacts
- Proposed concept satisfies the project need(s), purpose and goals.
- The facility design has the least impact among possible designs, and
- Mitigation requirements are met

OC Rail Trail Conclusions

Bicycle Boulevard

Corridor is divided into four geographic areas:

- South End
- Missing Link
- Downtown
- North End

Bicycle Boulevard:
Corridor Wide Recommendations

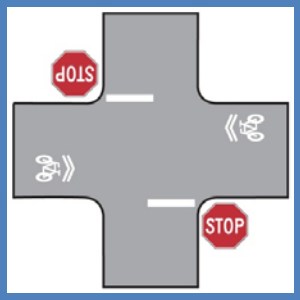
Pavement Markings

ZigZag Pavement Striping on east/west approaches to Haven Ave

Wayfinding Signs

Bicycle Boulevard:
Corridor Wide Recommendations

Intersection Improvements including curb extensions & enhanced crosswalks



Through-priority on Haven Ave

Bicycle Safe Drainage Grates

Bicycle Boulevard

- **South End**
- Missing Link
- Downtown
- North End

South End: Existing Conditions

Street Quilt on Haven Ave.

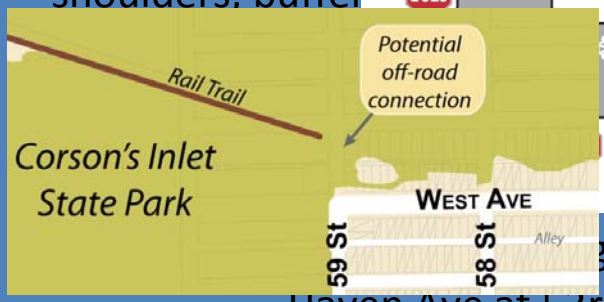
OC1 Bike Route Sign

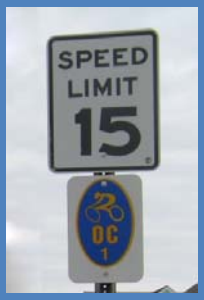
Haven Ave between 56th-51st Sts.

Haven Ave at 49th St

South End: Opportunities

Painted and Patterned Surfaces (colore
shoulders, buffer





gns on Residential Speed Limit

Haven Ave at 53rd and 52nd Sts.

Connect Corson's Inlet Trail to local roadway network

Convert angled parking to back-in angled parking

blish
eway
t
6th
t
nd
ean
r.

South End: Recommendation

Enhance Bicycle Accommodations from Haven Ave to Strathmere Bridge

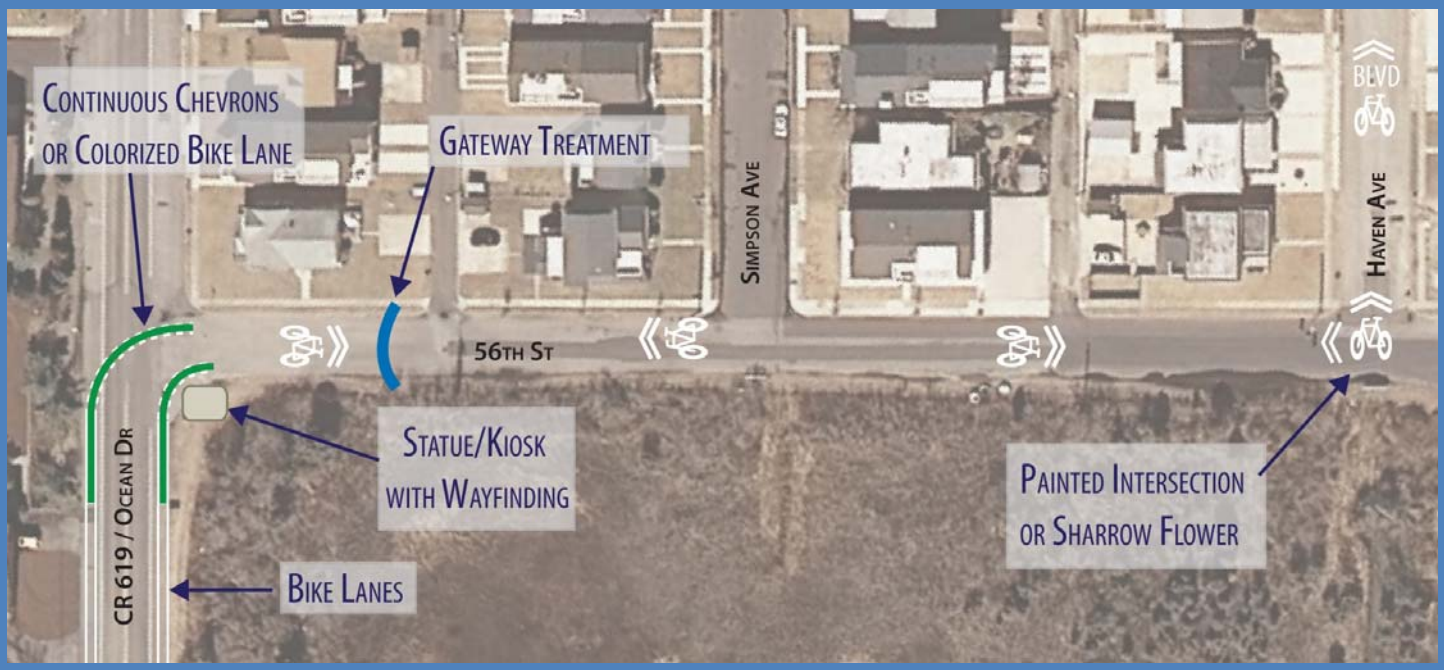
Paint Shared Lane Markings on 56th St

Install Bike Lanes along Ocean Dr & over bridge

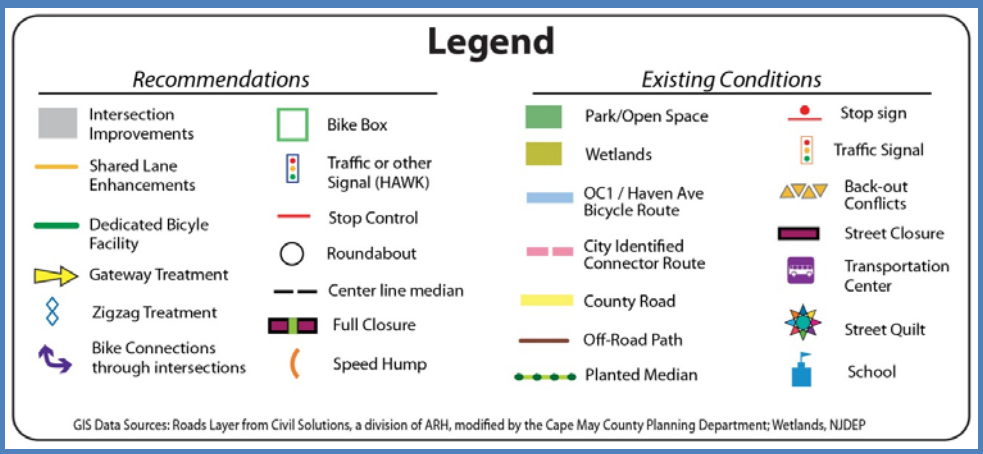
Direct Bicyclists with Wayfinding Signs

South End: Concept

Enhance Bicycle Accommodations from Haven Ave to Strathmere Bridge



South End: Overall Recommendations



Bicycle Boulevard

- South End
- **Missing Link**
- Downtown
- North End

Missing Link: Existing Conditions

3 alignment scenarios to fill the gap in the bicycle boulevard were examined

1

2

3

A s

West Avenue/CR 619

Asbury Avenue

Missing Link: Opportunities

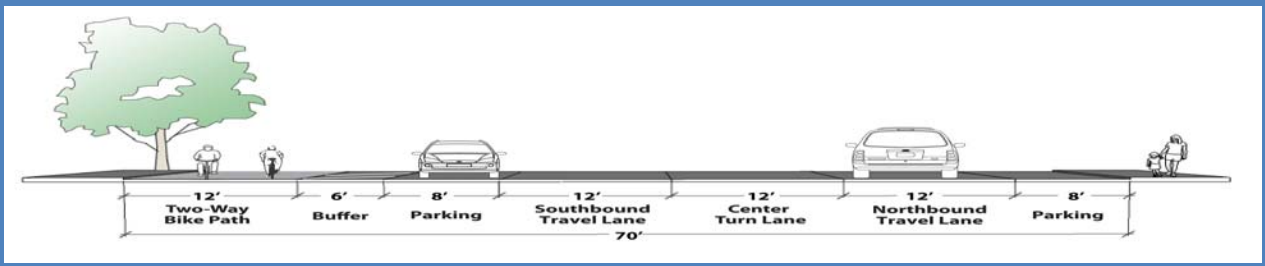
Continuous chevrons and/or colorized through inters

Bicycle boxes / advanced stop bar actua nterse

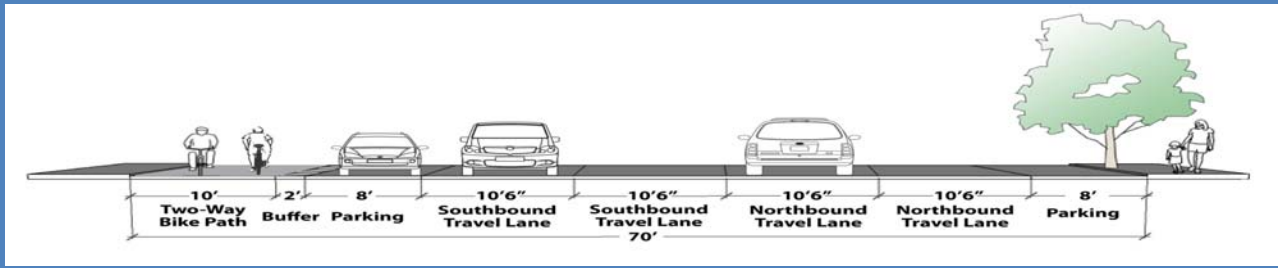
Vertical traffic calming measures such as raised crosswalks at alley crossings

Pavement markings (bike symbols) on bike path, especially at potential conflict locations

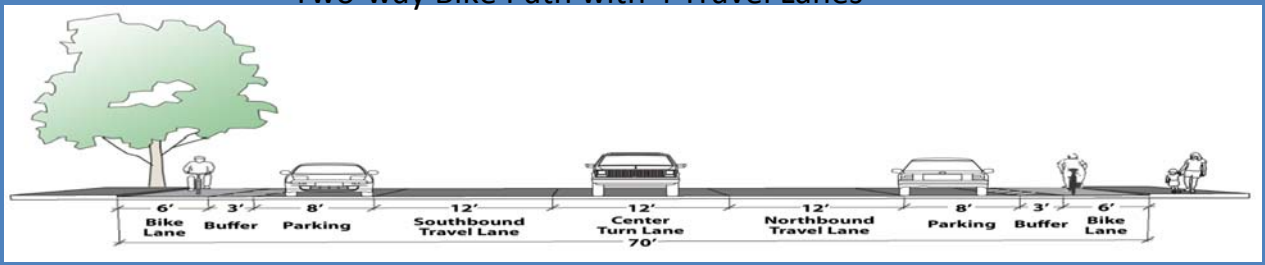
Missing Link: Opportunities for West Ave



Two-way Bike Path with Road Diet



Two-way Bike Path with 4 Travel Lanes



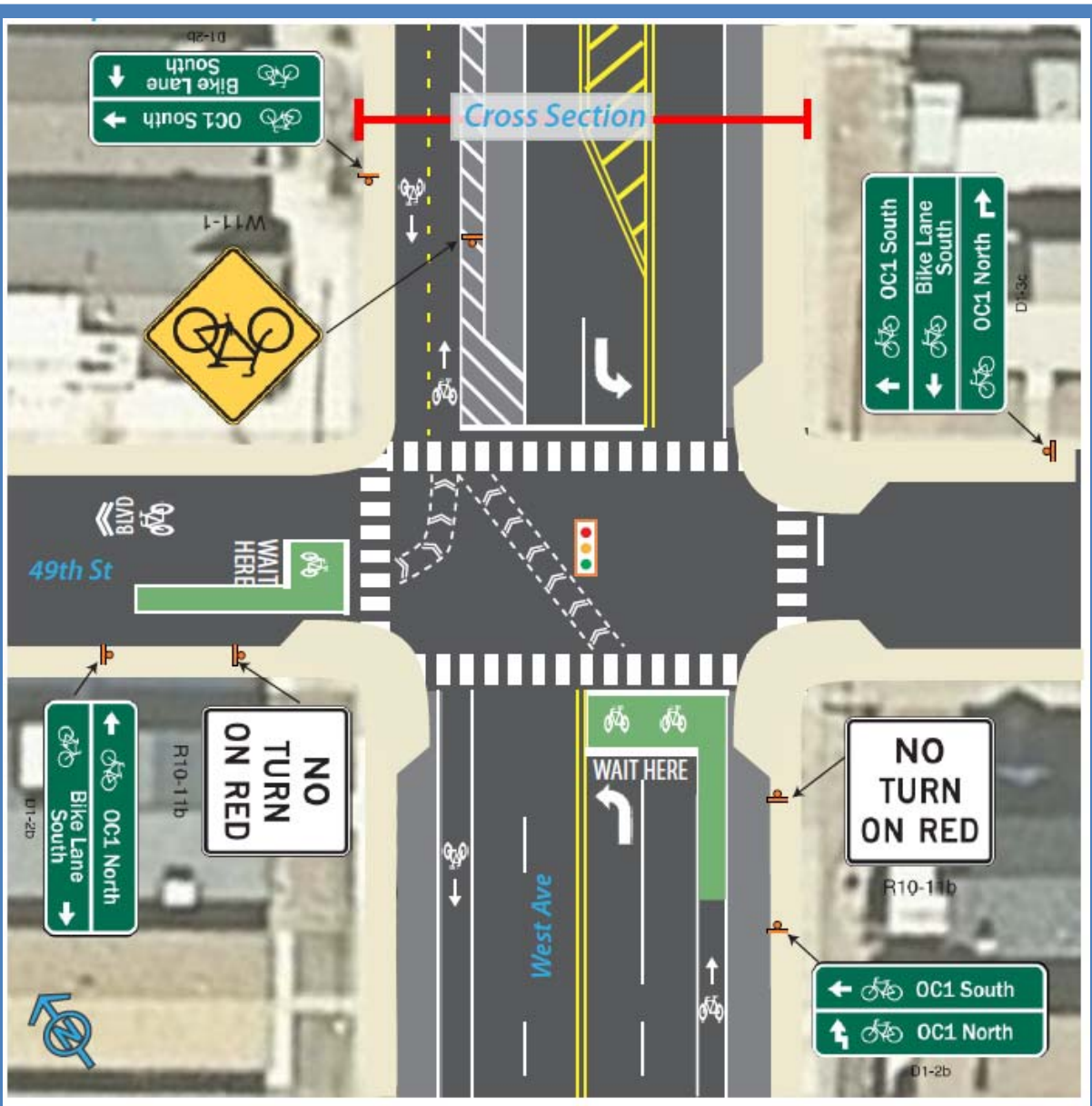
Protected Bike Lanes

Missing Link: Recommendation

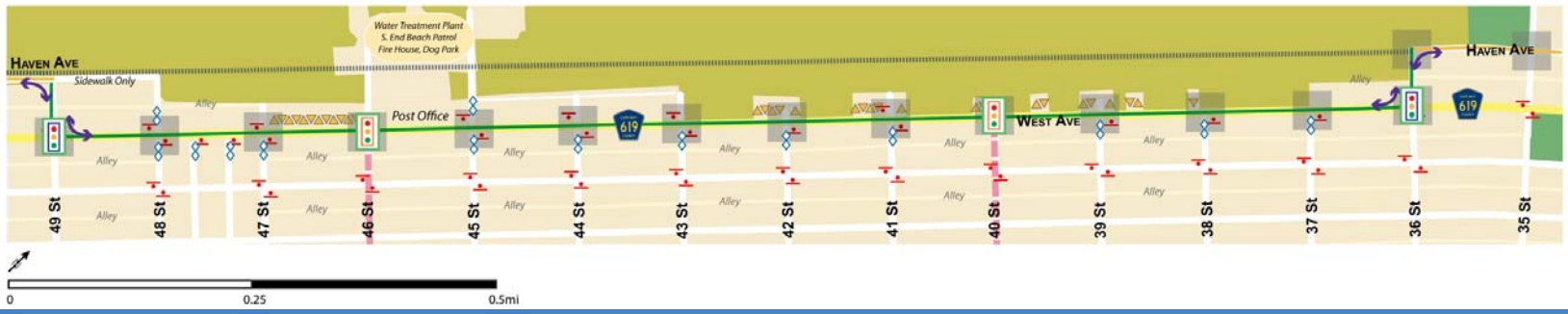
Road Diet & Two-Way Bike Path on West Ave

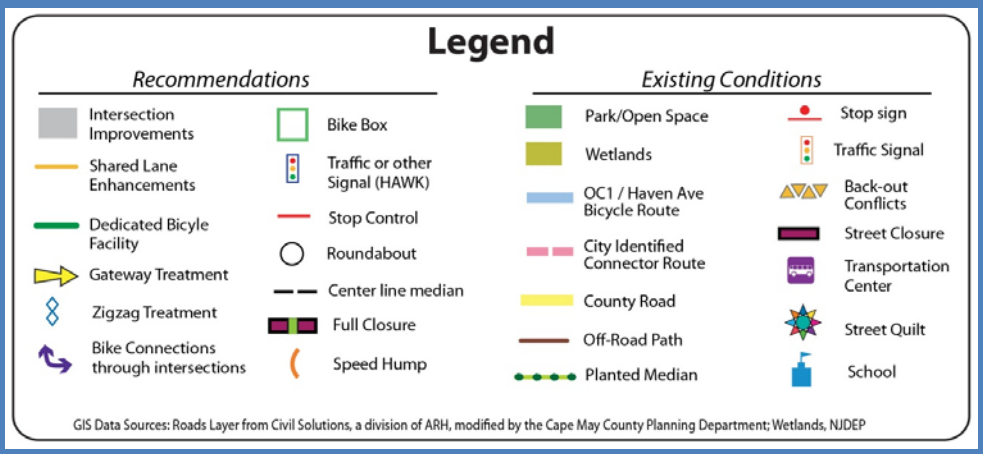
Missing Link: Concept

Road Diet & Two-Way Bike Path on West Ave



Missing Link: Overall Recommendations





Bicycle Boulevard

- South End
- Missing Link
- **Downtown**
- North End

Downtown: Existing Conditions

There are ***15 different*** street configurations on Haven Ave including:

Side Bike Path

Side Bike Path with planted buffer
Shared Road

Planted Median
w/ Shared Lane

Center Median Bike Path

blish
eway

Downtown: Opportunities

t
th
t

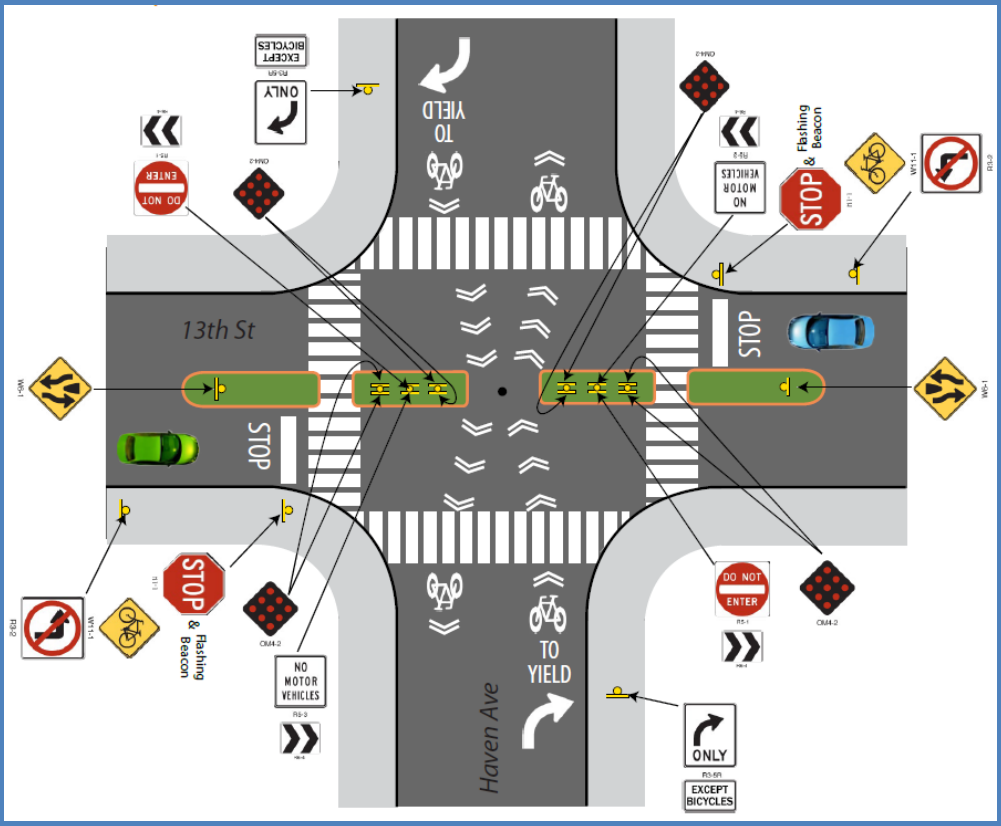
Mini Roundabouts at major intersections and at connector routes

Speed Humps and Tables

Residential Speed Limit Treatment between 24th – 20th Sts. could be extended throughout the corridor

Downtown: Recommendation

Reduce traffic with centerline median along cross streets with bicycle boulevard pass through



Downtown: Overall Recommendations

Legend

Recommendations

- Intersection Improvements
- Shared Lane Enhancements
- Dedicated Bicyle Facility
- Gateway Treatment
- Zigzag Treatment
- Bike Connections through intersections
- Bike Box
- Traffic or other Signal (HAWK)
- Stop Control
- Roundabout
- Center line median
- Full Closure
- Speed Hump

Existing Conditions

- Park/Open Space
- Wetlands
- OC1 / Haven Ave Bicycle Route
- City Identified Connector Route
- County Road
- Off-Road Path
- Planted Median
- Stop sign
- Traffic Signal
- Back-out Conflicts
- Street Closure
- Transportation Center
- Street Quilt
- School

GIS Data Sources: Roads Layer from Civil Solutions, a division of ARH, modified by the Cape May County Planning Department; Wetlands, NJDEP

Bicycle Boulevard

- South End
- Missing Link
- Downtown
- **North End**

North End: Existing Conditions

Simpson Ave

Atlantic Blvd & W. Inlet Dr

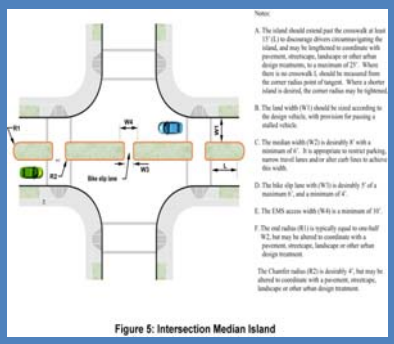
Gardens Parkway

9th St. & Aldrich Road

North End: Opportunities

Continuous chevrons and/or colorized bike lanes through intersections and turns in the bicycle boulevard

Construct modern roundabout at the intersections of Atlantic Ave with W. Inlet Rd and Bridge Blvd



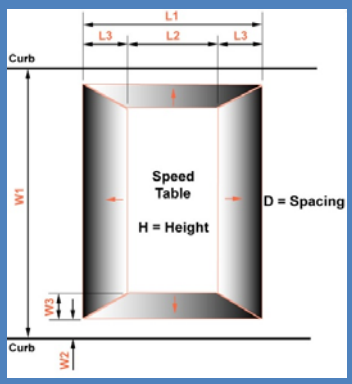
Reduce traffic with diverters such as centerline medians

Streetscape Enhancements

l planted center
n, curb extensions and shared travel lanes throughout the corridor

North End: Recommendation

Cross 9th Street at Aldrich Road with a new crossing

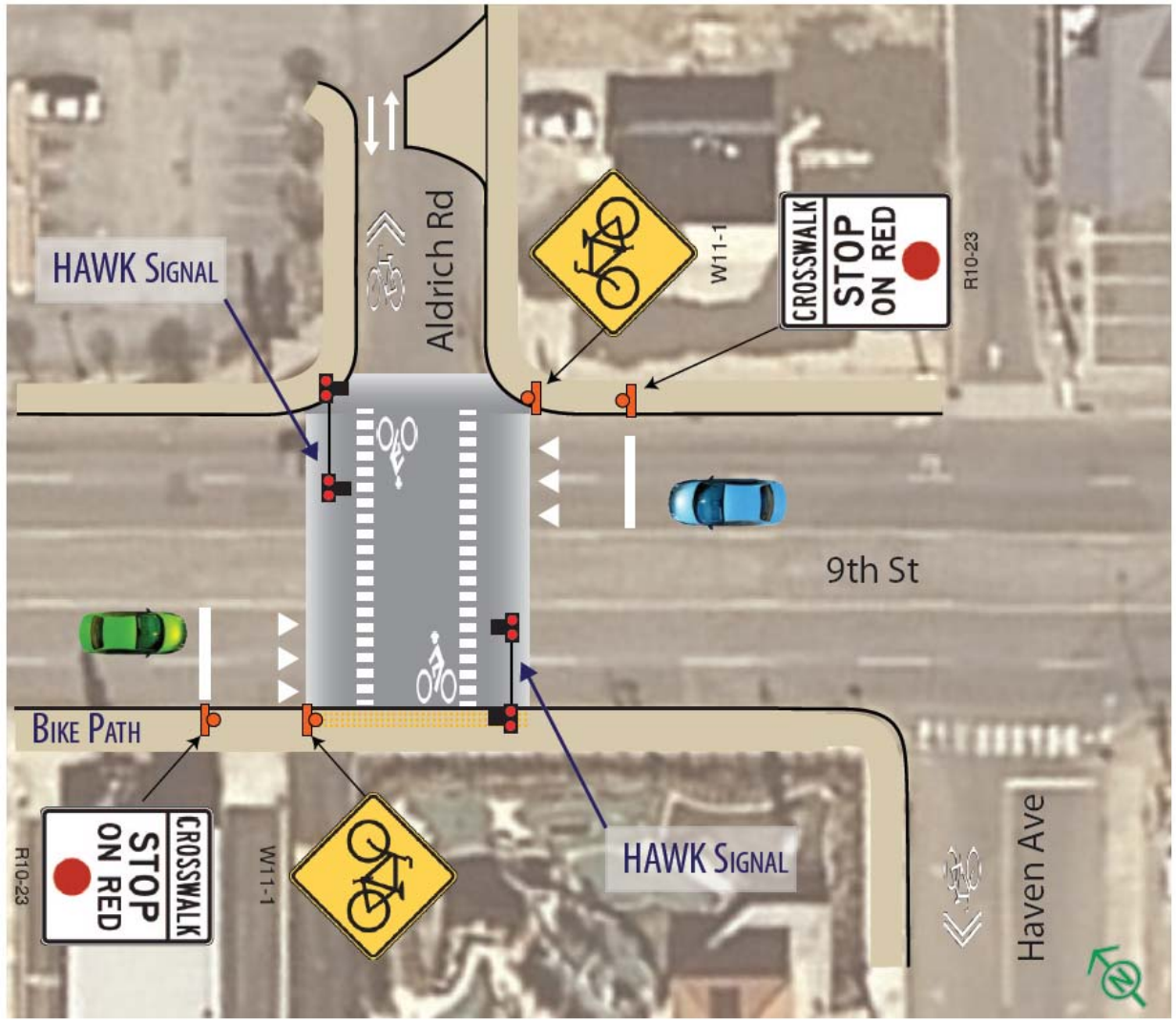


Crossing should be constructed on a raised speed table to increase visibility, emphasize pedestrian & bicycle movement, and manage traffic speeds

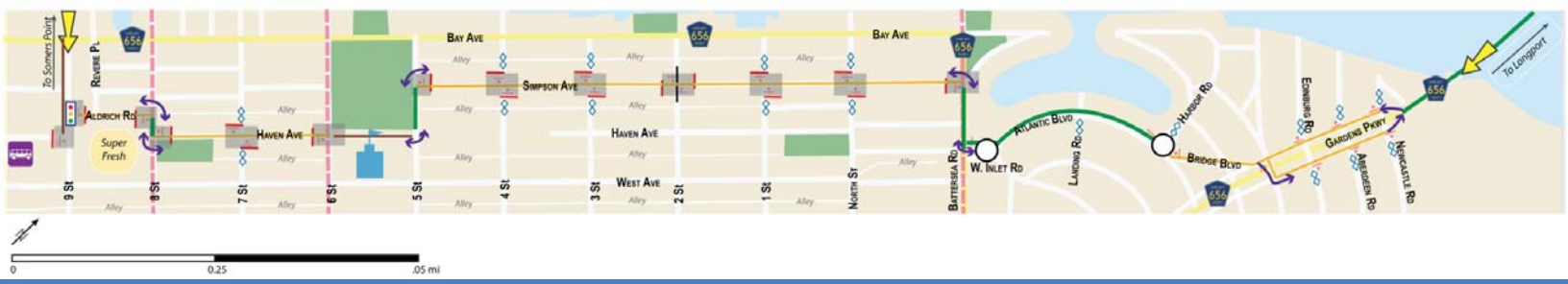
A High intensity Activated crossWalK (HAWK) signal provides gaps in motor vehicle traffic.

A crossbike creates a visibly prominent crossing for bicyclists and pedestrians

North End Concept: *9th Street Crossing*



North End: Overall Recommendations



Legend

Recommendations

- Intersection Improvements
- Shared Lane Enhancements
- Dedicated Bicyle Facility
- Gateway Treatment
- Zigzag Treatment
- Bike Connections through intersections
- Bike Box
- Traffic or other Signal (HAWK)
- Stop Control
- Roundabout
- Center line median
- Full Closure
- Speed Hump

Existing Conditions

- Park/Open Space
- Wetlands
- OC1 / Haven Ave Bicycle Route
- City Identified Connector Route
- County Road
- Off-Road Path
- Planted Median
- Stop sign
- Traffic Signal
- Back-out Conflicts
- Street Closure
- Transportation Center
- Street Quilt
- School

GIS Data Sources: Roads Layer from Civil Solutions, a division of ARH, modified by the Cape May County Planning Department; Wetlands, NJDEP

Ocean City, NJ
Rail Trail &
Bicycle Boulevard Project