



Borough of Bay Head Complete Streets

Bicycle & Pedestrian Plan Appendix



December 2015



APPENDICES

Appendix A: Design Guidelines

Appendix B: Funding Programs and Sources

Appendix C: Ordinance Review

Appendix D: Environmental Constraints Tech Memo

Appendix E: Meeting Summaries

Appendix F: Ocean County Multi-Modal Transportation Policy Guidelines

APPENDIX A: DESIGN GUIDELINES

Design Guidelines

These design guidelines provide examples of typical physical treatments for enhancing bicycling trips. Sources include the National Association of City Transportation Officials (NACTO) *Urban Bikeway Design Guide* and *Urban Street Design Guide*, 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 Institute of Transportation Engineers (ITE), *State of the Practice Traffic Calming Guide* and *Designing Urban Walkable Thoroughfares*, and the Federal Highway Administration (FHWA) *Designing Sidewalks and Trails for Access, Best Practices Design Guide*.

Table of Contents

Bicycle Facilities

Bike Lanes	1
Contraflow Bike Lanes	2
Advisory Bike Lanes.....	3
Shared Lane Marking or “Sharrows”	4
Bicycle Boulevard or Neighborhood Greenway	5
Bike Box	6
Intersection Crossing Marking/Crossbike	7
Narrowed Lanes	8

Regulatory & Warning Signs for Bicycle Facilities

Bicycles May Use Full Lane Sign	9
Wrong Way Riding Sign	10
Share the Road Sign	11

Bicycle Amenities

Short-Term Bicycle Parking	12
Long-Term Bicycle Parking	13
On-Street Bike Corrals	14
Bicycle Repair Stations	15

Pedestrian Facilities

Sidewalks.....	16
Curb Ramps.....	17
High Visibility Crosswalks.....	18
Raised Crosswalks & Intersections	19
Signal Improvements	20
Pedestrian Refuge Islands.....	21
Rectangular Rapid Flashing Beacon.....	22

Pedestrian Lighting 23

Traffic Calming

 Tight Curb Radii..... 24

 Curb Extensions..... 25

 Daylighting 26

 Gateways..... 27

Pedestrian Signs

 Signs 28

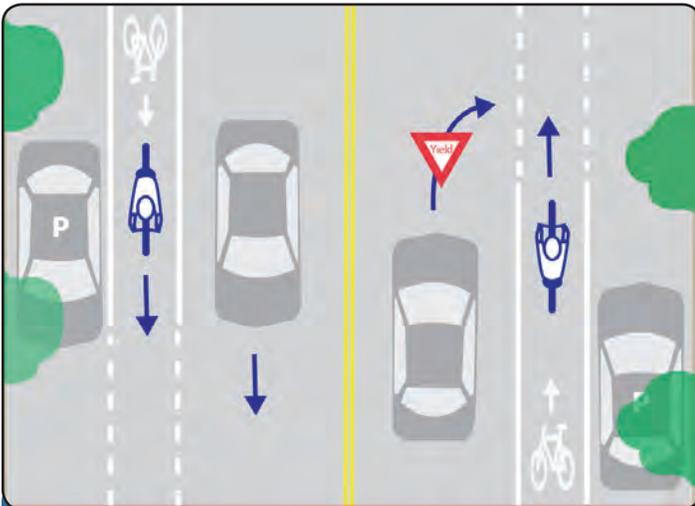
Pedestrian Amenities

 Parklets..... 29

 Green Street Enhancements 30



BIKE LANES



Bike lanes can be striped on the roadway between the parking lane and traffic lane (Credit: Chicago Cartographers - Minneapolis Public Works Department)



Example of a bike lane in Jersey City, NJ

DESCRIPTION

- Bike lanes designate travel space within the roadway for bicyclists through use of striping, pavement markings, and signs
- Most common bicycle facility in the United States

BENEFITS

- Enable bicyclists to ride at their preferred speed without interference from motor vehicle traffic conditions
- Facilitate predictable behavior and movements between bicyclists and motorists
- Visually remind motorists of bicyclists' right to the street

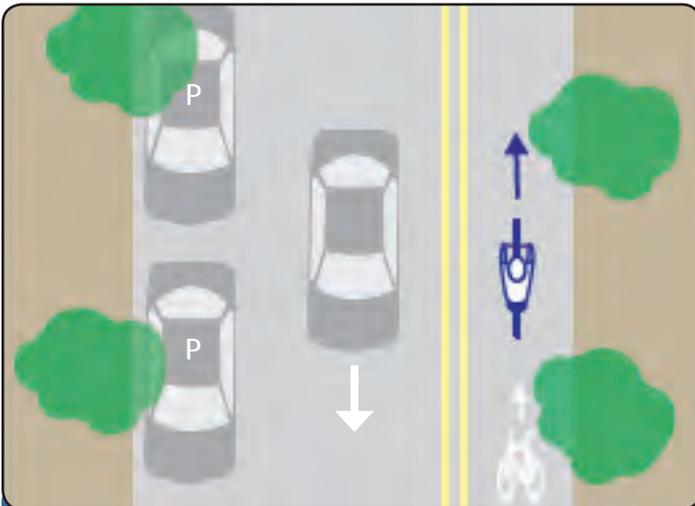
CONSIDERATIONS

- Not all users will be comfortable in a bike lane
- When next to on-street parking there is a risk of bicyclists getting 'doored'
- Greater enforcement is required to prevent motorists from parking in the bike lane

WHEN TO USE/TYPICAL APPLICATIONS

- Most helpful on streets with $\geq 3,000$ motor vehicle average daily traffic, a posted speed ≥ 25 mph, or high transit vehicle volume
- Typically provided on both sides of two-way streets to prevent wrong-way riding
- Minimum 5' wide next to curb, gutter, or on-street parking
- Where space allows, it is desirable to add a 2' buffer zone
- Painted bike lanes increase visibility

CONTRAFLOW BIKE LANE



In this contraflow bike lane, striping delineates space for bicycle traffic traveling opposite the flow of vehicular traffic.



Example of a contraflow bike lane in Portland, Oregon (Credit: NACTO)

DESCRIPTION

- A contraflow bike lane is a bicycle-only lane traveling in the opposite direction of motor vehicle traffic

BENEFITS

- Provides direct access and connectivity for bicycles traveling in both directions
- Bicyclists do not have to make detours as a result of one-way traffic
- Limits dangerous wrong-way riding by allowing cyclists to safely ride in the opposite direction of cars
- Reduces sidewalk riding

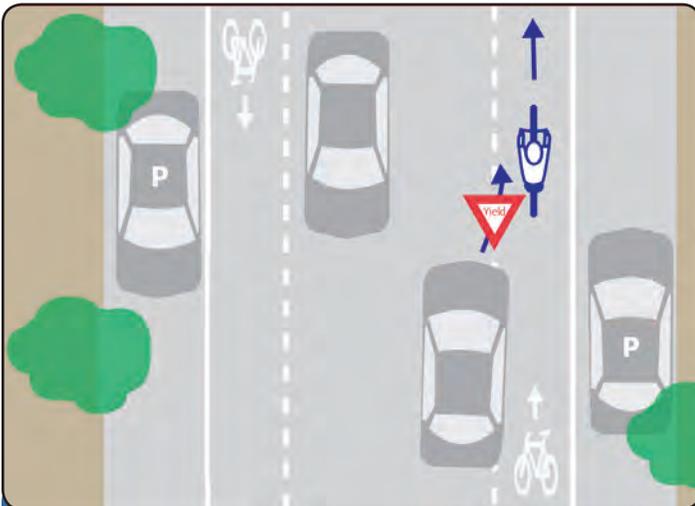
CONSIDERATIONS

- Use only where bicyclists can effectively and conveniently make transitions at the terminus of the lane

WHEN TO USE/TYPICAL APPLICATIONS

- When there are few intersecting driveways, alleys, or streets on the side of the street with the contra-flow lane
- Contraflow bike lanes have a minimum width of 5'
- Separated from opposing traffic with yellow center-line striping
- Accompanying signage is needed

ADVISORY BICYCLE LANES



Dashed lines delineate travel space for bicyclists that is also available to motorists for passing. (Credit: Chicago Cartographers - Minneapolis Public Works Department)



Example of advisory bike lanes in Minneapolis, MN (Credit: bikewalktwincities.org)

DESCRIPTION

- Advisory bike lanes are dashed white lines on both sides of a narrow roadway to delineate bicycle areas
- They are marked with a solid white line on the right when adjacent to on-street parking
- These markings give bicyclists a space to ride, but are also available to motorists if space is needed to pass oncoming traffic
- An alternative to the shared lane marking, they are also known as “suggestion lanes” or “dashed bicycle lanes”

BENEFITS

- A viable option when the roadway is too narrow for mandatory bike lanes
- Striping offers visual separation and reminds people that the road is a shared space
- Motorists tend to travel slower due to friction created with oncoming vehicles
- Reduce motorists encroaching on bicyclists

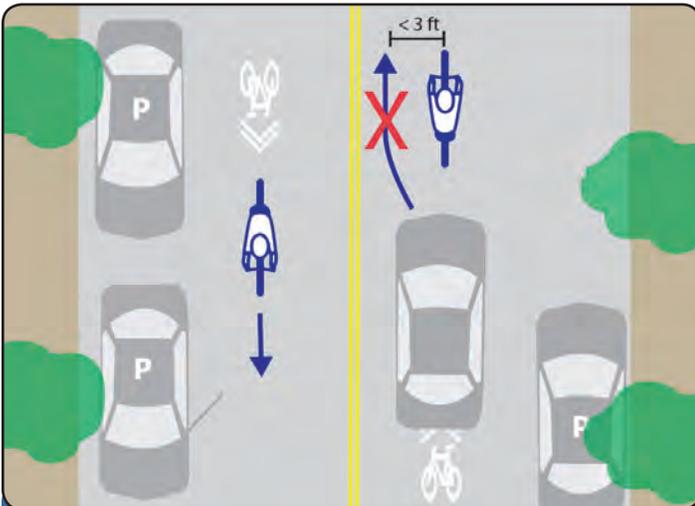
CONSIDERATIONS

- Unfamiliarity with the treatment can lead to confusion
- Less protection for cyclists than a conventional bike lane

WHEN TO USE/TYPICAL APPLICATIONS

- Roads that are too narrow for conventional bike lanes
- Roadways with low traffic volume (less than 6,000 ADT)
- Only used on roads without marked centerlines
- Advisory bike lane width in minimum of 5'
- The center lane (between the dashed lines) must have a minimum width of 16'

SHARED LANE MARKING OR "SHARROW"



A shared lane marking helps the bicyclist achieve proper lateral orientation within the roadway (Credit: Chicago Cartographers - Minneapolis Public Works Department)



Example of a shared lane marking in Maplewood, NJ

DESCRIPTION

- A shared lane marking is a road marking used to indicate a shared lane environment for bicycles and automobiles
- It is not a "bicycle facility" but is used to support a complete bicycle network
- Shared lane markings are most appropriate for lower volume, lower speed streets

BENEFITS

- Reinforces the legitimacy of bicycle traffic on the street
- Assists bicyclists with positioning away from the door zone and other hazards
- May be configured to offer directional and wayfinding guidance
- Alerts motor vehicle drivers to the potential presence of bicyclists
- Requires no additional street space
- Reduces the incidence of sidewalk riding and wrong-way riding

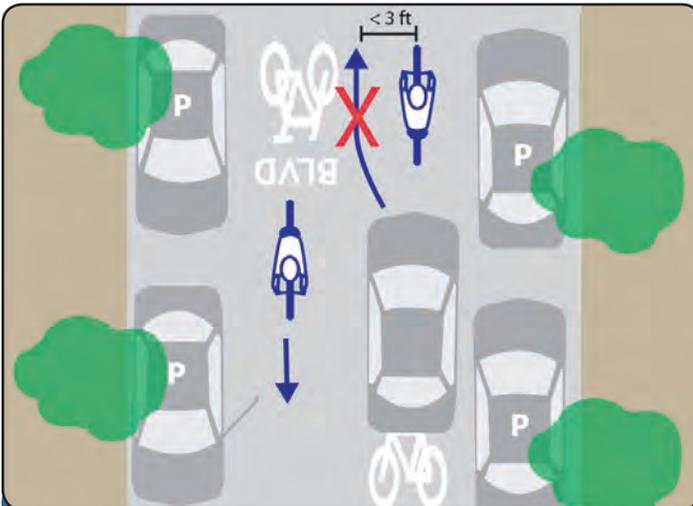
CONSIDERATIONS

- Does not dedicate exclusive use for bicyclists

WHEN TO USE/TYPICAL APPLICATIONS

- On bicycle boulevards or similar low volume, traffic calmed, shared streets
- When there is insufficient width to provide bike lanes
- Not a preferred treatment on streets with posted 35 mph speeds or faster
- Sharrows shall not be used on shoulders or in designated bicycle lanes
- Marking placed a minimum of 11' from the curb where on-street parking is present or 4' from the curb without parking

BICYCLE BOULEVARD OR NEIGHBORHOOD GREENWAY



A bicycle boulevard is a street optimized for bicycle travel that allows for motor vehicle travel. (Credit: Chicago Cartographers - Minneapolis Public Works Department)



Example of a bicycle boulevard in Madison, WI (Credit: NACTO)

DESCRIPTION

- A bicycle boulevard is a low-volume and low-speed street optimized for bicycle travel through treatments such as traffic calming, signage and pavement markings, and intersection crossings
- These treatments allow through movements for cyclists while discouraging similar through trips by non-local motorized traffic
- Motor vehicle access to properties along the route is maintained

BENEFITS

- Creates an attractive, convenient, and comfortable environment for bicyclists of all ages and skill levels
- Can be accomplished with minor changes to street configuration
- Slower vehicle speeds reduce risk of serious collisions
- Since they are shared facilities, no additional street width is needed
- Can be combined with neighborhood greening efforts to enhance street closures and traffic circles with trees and landscaping

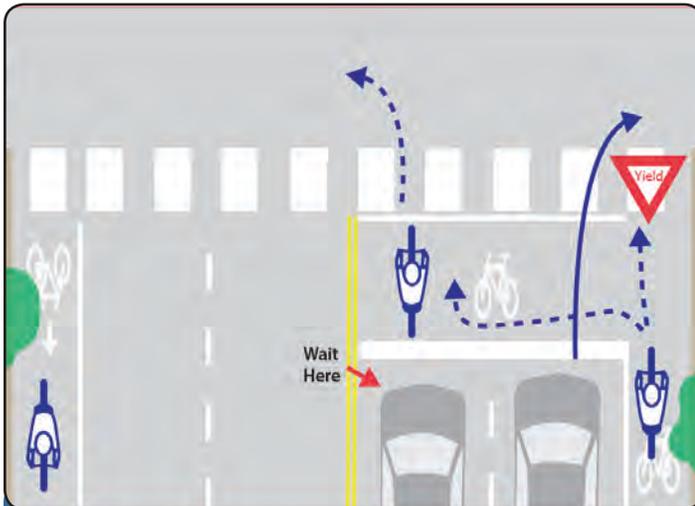
CONSIDERATIONS

- Access to property, impact on traffic patterns, enforcement issues with motorcycles and mopeds, and emergency response

WHEN TO USE/TYPICAL APPLICATIONS

- Best suited for two-lane residential streets without a centerline where vehicle traffic can be restricted to low volumes and slow speeds
- Ideally they are parallel to major streets and provide an alternative without lengthy deviation
- Can vary greatly in design elements but primary characteristics include:
 - low motor vehicle volumes
 - continuous routes that are well marked and signed
 - convenient access to destinations
 - minimal bicyclist delay
 - comfortable and safe crossings for cyclists at intersections

BIKE BOX



A bike box enables bicycles to get ahead of motor vehicles at signalized intersections. (Credit: Chicago Cartographers - Minneapolis Public Works Department)



Example of a bike box in San Francisco, CA (Credit: San Francisco Bicycle Coalition)

DESCRIPTION

- 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

BENEFITS

- Provides a space for cyclists to wait at signalized intersections
- Reduces right-turn (“right-hook”) conflicts between bicyclists and motorists at intersections by increasing cyclist visibility to drivers
- Allows cyclists to position themselves properly to execute a left turn and increases their visibility to drivers traveling in the opposing direction

CONSIDERATIONS

- Right turns on red must be prohibited, though an exception may be made for cyclists (“Except Bikes”)
- May not be compatible at intersections with high volume of right-turning vehicles

WHEN TO USE/TYPICAL APPLICATIONS

- At signalized intersections with high volumes of bicycles and/or motor vehicles
- Intersections with frequent bicyclist left-turns and/or motorist right-turns
- Where a left turn is required to follow a designated bike route
- When the dominant motor vehicle traffic flows right and bicycle traffic continues through
- Bike boxes are typically 14’ deep to allow for bicycle positioning

INTERSECTION CROSSING MARKING/CROSSBIKE



Intersection crossing markings identify where bicyclists should cross. (Credit: NACTO)



Example of a crossbike in Ocean City, NJ

DESCRIPTION

- A crossbike is a pavement marking adjacent to the crosswalk indicating space for bicycles to cross intersections, driveways, or ramps

BENEFITS

- Increases visibility of bicyclists at intersections
- Encourages motorists to yield right-of-way to bicyclists waiting to cross
- Informs all roadway users of where bicyclists should cross
- Separates modes to reduce conflicts

CONSIDERATIONS

- Will have higher than normal wear based on the level of crossing motor vehicle traffic

WHEN TO USE/TYPICAL APPLICATIONS

- Where main bicycle routes cross relatively minor collectors
- Where cross traffic has to yield right-of-way to crossing bicyclists
- Not appropriate where speeds exceed 30 mph unless signalized

NARROWED LANES



Travel lanes can be narrowed through restriping the roadway, which reduces motor vehicle travel speeds as shown in this example from Madison, NJ.



Space can be utilized for bicycle facilities when motor vehicle travel lanes are narrowed. (Credit: NJ.com)

DESCRIPTION

- Studies have shown that drivers travel more slowly when navigating narrow travel lanes
- A traffic and speed calming effect can be achieved by narrowing the travel lanes, most commonly through re-striping of the roadway

BENEFITS

- Excess right-of-way space can be reallocated to provide wider sidewalks, bicycle lanes, or on-street parking
- Simple roadway restriping to achieve roadway narrowing is inexpensive
- Narrowing traffic lanes makes slower speeds seem more natural to drivers and less of an artificial imposition, as opposed to other physical treatments that compel lower speeds or restrict route choice

CONSIDERATIONS

- Without other provisions for bicyclists, the narrower road may increase conflicts between motor vehicles and bicyclists
- Visually narrowing travel lanes using paint while leaving a several-foot shoulder that emergency vehicles or cyclists can utilize effectively provides a narrow lane for motorists and a wider lane for emergency vehicles and law enforcement

WHEN TO USE/TYPICAL APPLICATIONS

- Lane widths of 10' are appropriate in urban areas and have a positive impact on a street's safety without impacting traffic operations
- Lanes greater than 11' should not be used as they may cause unintended speeding and assume valuable right of way at the expense of other modes of travel

BICYCLES MAY USE FULL LANE Sign (R4-11)



R4-11

The R4-11 sign reinforces that both motorists and bicyclists are entitled to use the travel lane (Credit: MUTCD)



Example of the R4-11 sign applied along a roadway (Credit: bikewalktwincities.org)

DESCRIPTION

- Sign R4-11 “Bicycles May Use Full Lane” may be used in locations where it is important to inform road users that bicyclists might occupy the travel lane

BENEFITS

- Reinforces the law to both motorists and bicyclists may occupy the travel lane

CONSIDERATIONS

- Could mislead inexperienced bicyclists into operating in situations that are beyond their ability

WHEN TO USE/TYPICAL APPLICATIONS

- May be used on roadways where travel lanes are too narrow for bicyclists and motor vehicles to operate side-by-side and no bicycle lanes or adjacent shoulders usable by bicyclists are present
- The sign may be used in addition to or instead of shared lane markings

WRONG WAY RIDING Sign (R5-1B)



The R5-1b and R9-3cP regulatory signs enforce the proper direction of travel for bicyclists (Credit: MUTCD)



Example application of regulatory signs R5-1b and R9-3cP in Pittsburgh, PA (Credit: bikepgh.org)

DESCRIPTION

- Signs R5-1b "Bicycle Wrong Way" and R9-3cP "Ride With Traffic" are regulatory signs used to remind bicyclists that bicycles are vehicles and when operated on a roadway they should travel in the same direction as other roadway traffic (unless there is a contraflow lane)

BENEFITS

- Reinforces the legal requirement of bicyclists to ride with traffic

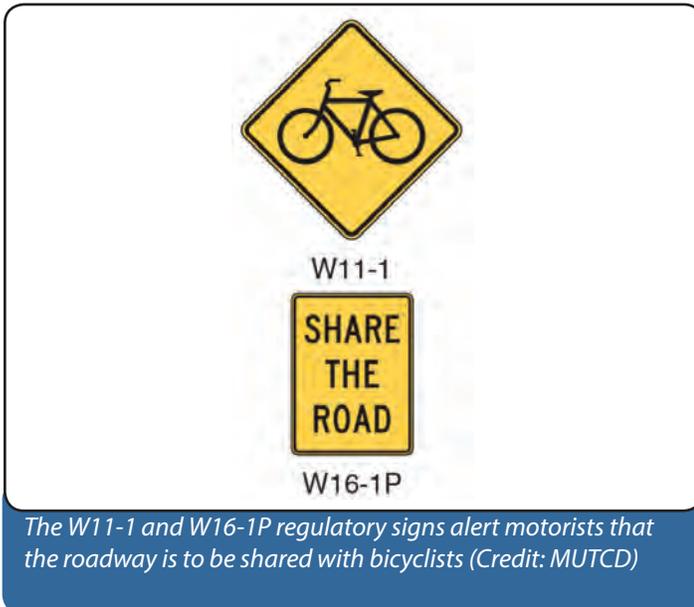
CONSIDERATIONS

- Should be mounted back-to-back with other signs to reduce sign clutter and minimize visibility to other traffic

WHEN TO USE/TYPICAL APPLICATIONS

- For locations where wrong-way riding by bicyclists is frequently observed
- Sign R9-3cP "Ride With Traffic" should be used only in conjunction with and mounted directly below sign R5-1b "Wrong Way"

SHARE THE ROAD Sign (W11-1 & W16-1P)



DESCRIPTION

- The “Share the Road” sign assembly is intended to alert motorists that bicyclists may be encountered and that they should be mindful and respectful of bicyclists

BENEFITS

- Fast, inexpensive and effective way of educating bicyclists and motorists, leading ultimately to greater safety for all

CONSIDERATIONS

- The sign is not a substitute for design measures that can improve the quality of service for bicyclists
- The sign says nothing about where on the road bicyclists are expected to ride

WHEN TO USE/TYPICAL APPLICATIONS

- At the end of a bike lane, or where a shared use path ends
- In work zones where bicyclists may need to share a narrower space than usual
- The sign should not be used to address reported traffic operational issues, as the addition of this warning sign will not significantly improve bicycling conditions
- The sign should not be used to indicate a bike route

SHORT-TERM BICYCLE PARKING



Short-term bicycle parking in Newark, NJ



Short-term bicycle parking is available in a range of styles appropriate to everything from downtown retail districts to traiside access points

DESCRIPTION

- Short-term bicycle parking is used at locations where it is expected that the user will be using the space for the length of a typical errand
- In these instances, bicycle racks provide easy access and are typically easy to locate

BENEFITS

- Low cost and fast implementation
- May be able to use existing fixtures such as meters and tree guards to retrofit racks
- Highly secure and requires little maintenance other than snow removal

CONSIDERATIONS

- Bicycle is not completely secure and parts can be removed by vandals
- Cannot be reserved and may not be consistently available for daily commuting to a transit facility or workplace
- Bicycle is typically exposed to the elements and possible weather damage such as rust

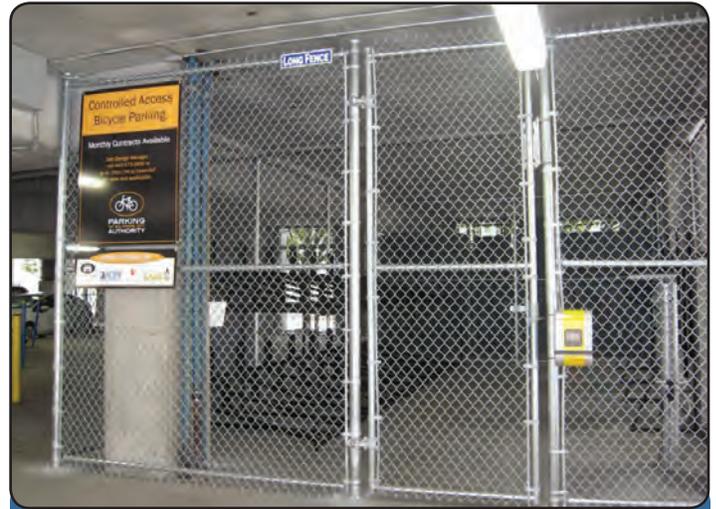
WHEN TO USE/TYPICAL APPLICATIONS

- A short-term parking fixture should be:
 - Convenient to cyclist destination
 - No more than 50' from the entrance
 - Visible from the destination to provide security
 - In a high-traffic area for security
 - Identified by MUTCD sign D4-3 "Bicycle Parking"
 - Along apparent desire lines from bikeways

LONG-TERM BICYCLE PARKING



Bike lockers in Princeton Junction, NJ



Interior controlled-access long-term bicycle parking in Baltimore, MD (Credit: baltimorecity.gov)

DESCRIPTION

- Long-term parking consists of a wider variety of fixture types and site plan layouts and includes cages, bicycle rooms, or lockers located in a variety of different settings, both indoors and outdoors

BENEFITS

- Highly secure, with low risk of vandalism or theft
- Offers protection from the elements and weather related damage and corrosion
- Leased spaces allow for consistent availability for daily cyclist commuters

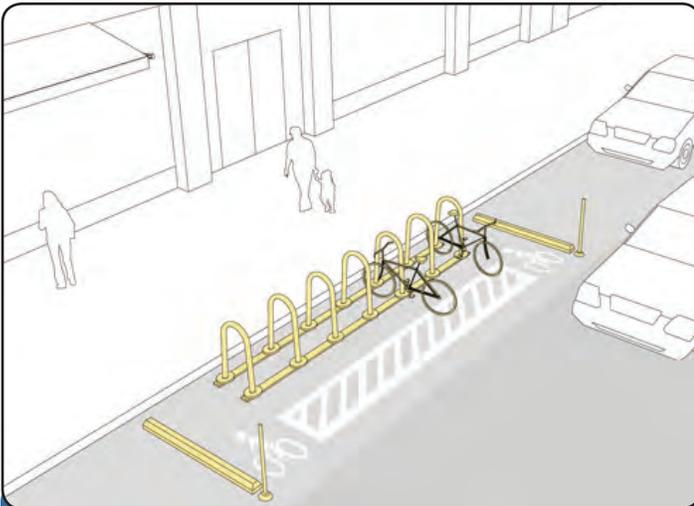
CONSIDERATIONS

- High construction and maintenance costs

WHEN TO USE/TYPICAL APPLICATIONS

- Controlled access through either a smart card or key
- A portion of lockers are available to lease as well as on-demand
- Can also be proved by using a dedicated bicycle room or caged area in a garage with smart card/secure access
- Generally a high level of security is provided with effective lighting, security cameras, or security guards
- Protection from weather and the elements is provided, either indoors or with a shelter

ON-STREET BIKE CORRALS



A bike corral installed on the street provides ample bike parking and preserves sidewalk space for pedestrians (Credit: NACTO)



Example of a bike corral in Pittsburgh, PA (Credit: bikepbg.org)

DESCRIPTION

- Bicycle corrals (also known as “on-street” bicycle parking) consist of bicycle racks grouped together in a common area within the public right-of-way
- Relatively inexpensive way to increase the quantity, accessibility, and overall visibility of bicycling

BENEFITS

- Bicycle corrals move bicycles off the sidewalks, leaving more space for pedestrians, sidewalk café tables, etc.
- Because bicycle parking does not block sight lines (as large motor vehicles do), it is possible to locate bicycle parking in ‘no-parking’ zones near intersections and crosswalks
- Typically hold between five and twelve bike racks (10-24 bike parking spaces) in an area equal to one vehicular parking space
- Corrals act as de facto curb extensions, which effectively shorten crossing distances and increase visibility at intersections

CONSIDERATIONS

- Bike corrals need a maintenance partner (local businesses, property owners, or neighborhood groups) to keep the bike corral clear of debris and snow if installed year round

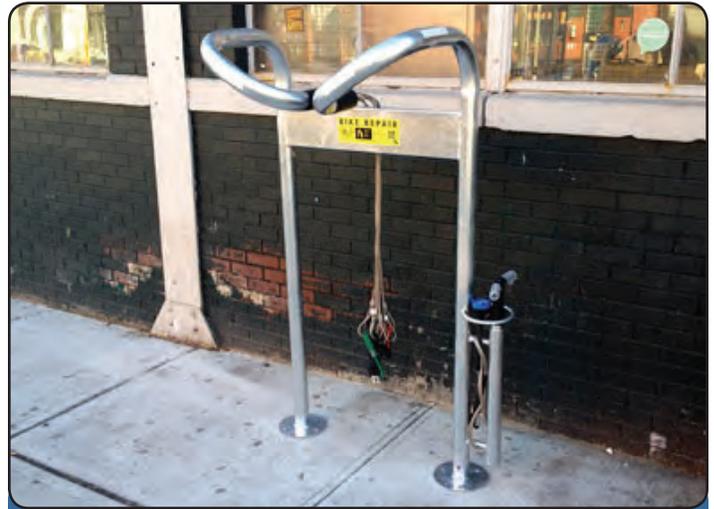
WHEN TO USE/TYPICAL APPLICATIONS

- High pedestrian activity or narrow sidewalk width limits available space for sidewalk bike racks
- There is a moderate to high demand for short-term bicycle parking
- The business community is interested in sponsoring the bicycle corral
- Can be visually enhanced through the use of attractive planters and vegetation to act as buffers from the motor vehicle parking area

BICYCLE REPAIR STATIONS



Bicycle repair station at University of California Santa Barbara
(Credit: www.ucsb.edu)



Bicycle repair station in Hoboken, NJ (Source: City of Hoboken)

DESCRIPTION

- Bicycle repair stations allow cyclists to make minor repairs to their bikes using a free air pump and other tools

BENEFITS

- The repair stands improve the convenience for cyclists making minor, routine repairs, much like services that gas stations often provide for drivers

CONSIDERATIONS

- Heavy-duty cables are used to attach tools and pump to the station and prevent theft

WHEN TO USE/TYPICAL APPLICATIONS

- Generally installed in highly visible spaces often near bike corrals and bicycle friendly businesses

SIDEWALKS



This retail sidewalk in Hoboken, NJ is a vibrant public space for pedestrians and retail patrons.



This sidewalk in Bay Head, NJ provides a safe environment for pedestrians.

DESCRIPTION

- Sidewalks are dedicated pedestrian travel ways that are constructed adjacent to roadways
- Sidewalks are the “backbone” of the pedestrian travel network
- Sidewalks vary in their design and configuration in relationship to surrounding context (downtown, residential, commercial, etc.)

BENEFITS

- Increase safety for all travelers
- Promote walking
- Reduce the incidence of pedestrian collisions, injuries, and deaths
- Enhance the sense of community through better connections to neighbors

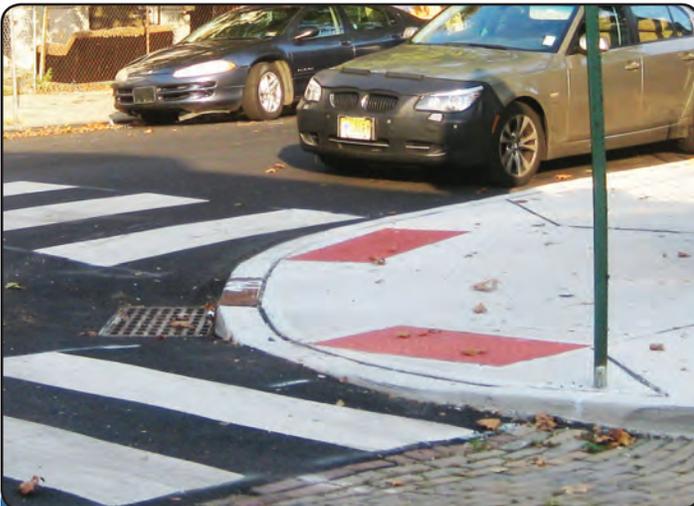
CONSIDERATIONS

- Should be designed for universal access and ADA accessibility guidelines
- Require upkeep, maintenance, and snow or ice removal
- Where feasible, sidewalks should be provided on both sides of the street
- Sidewalk designs are highly variable and should be contextually appropriate

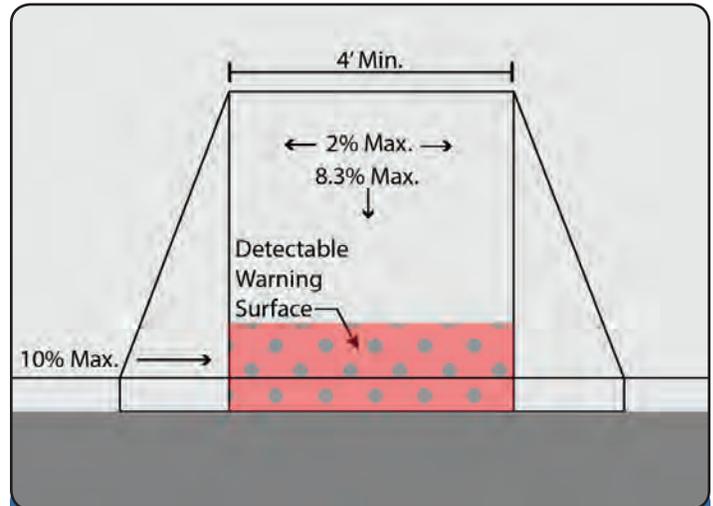
WHEN TO USE/TYPICAL APPLICATIONS

- Should be considered for all public rights-of-way
- Width of sidewalk depends on the number of pedestrians expected to use it at a given time
- Per the FHWA Recommended Guidelines/ Priorities for Sidewalks and Walkways, all sidewalks should be at least 5’ wide
- Near parks, schools, and other major pedestrian generators sidewalks should be 8-10’ wide
- A minimum 2’ buffer for street furniture, utilities, and snow storage should be provided

CURB RAMPS



Intersections should have two perpendicular, ADA-compliant curb ramps per corner.



Curb ramps come in multiple configurations that share the benchmark dimensions shown here.

DESCRIPTION

- Curb ramps provide pedestrians with a means of negotiating any change of elevation between the sidewalk and roadway
- Curb ramps are especially important for people using wheelchairs, strollers, walkers, crutches, handcars, and pedestrians who have trouble stepping up and down high curbs

BENEFITS

- Provide safe, trip-free transition from sidewalk surface grade to roadway surface grade
- Increase safety of intersection crossings for pedestrians with mobility or vision impairments

CONSIDERATIONS

- Curb ramps should be provided for all marked crosswalks
- Curb ramps should be perpendicular to the face of the curb
- Curb ramps should be maintained clear of obstacles, puddles, and debris

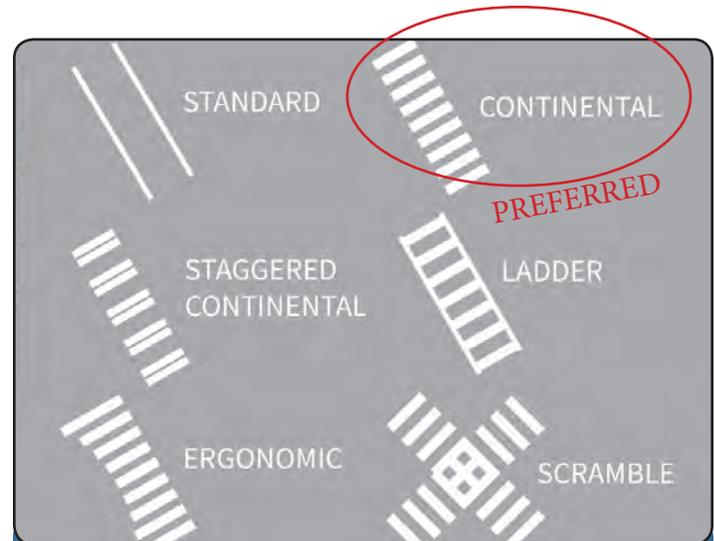
WHEN TO USE/TYPICAL APPLICATIONS

- At all intersections with marked crosswalks
- At all mid-block crossing locations
- At all locations to access on-street accessible parking spaces or passenger loading zones

HIGH VISIBILITY CROSSWALKS



High-visibility crosswalks have been shown to increase motorist yielding and channelization of pedestrians.



Various patterns are common for crosswalk striping, but "Continental" is preferred.

DESCRIPTION

- A crosswalk is the portion of the roadway designated for pedestrians to use to cross the street, channeling pedestrian crossing activity to designated, predictable, and (most effectively) marked areas
- Crosswalk striping that creates a high level of visual contrast with the surface of the roadway is most effective for pedestrians (including those with low vision) as well as drivers

BENEFITS

- Alert motorists to presence of pedestrians crossing the roadway
- Visually instruct pedestrians where it is legal and appropriate to cross the roadway
- Increase pedestrian safety and make pedestrian crossing behavior more predictable for motorists
- Strengthen the pedestrian network and right to the roadway

CONSIDERATIONS

- The continental stripe pattern has been shown in studies to be the most visible marking pattern and stands up well to surface wear
- Ergonomic or scramble crosswalks are a variation that can be considered for certain low-speed, high-pedestrian-volume intersections
- Marked crosswalks alone (without other substantial treatments) should not be installed across uncontrolled roadways where the speed limit exceeds 40 miles per hour
- Avoid unit paver or stamped pattern surfacing due to difficulty of wheelchair crossing and tendency to deteriorate

WHEN TO USE/TYPICAL APPLICATIONS

- At roadway intersections where sidewalks or other pathways are present on both sides of the roadway
- Should be designed to minimize crossing distances and should be straight, to make them easier for people with visual impairments to navigate
- Minimum crosswalk width is 6' but can be up to 15' wide at crossings with a high number of pedestrians

RAISED CROSSWALKS & INTERSECTIONS



A raised crosswalk at Somerville School in Ridgewood, NJ.



A raised intersection in Haddonfield, NJ. (Credit: VTC)

DESCRIPTION

- Raised crosswalks are elongated speed humps that feature a marked crosswalk at the same elevation as the adjacent sidewalks
- Raised intersections are raised areas of roadway, including crosswalks, that are higher than the surrounding roadway approaches -- the entire intersection is at sidewalk grade, putting pedestrians and vehicles on the same plane

BENEFITS

- Speed reduction / traffic calming
- Improved safety
- Increase visibility of and for pedestrians

CONSIDERATIONS

- Roadway noise
- Maintenance
- Need for signage
- Emergency vehicle access

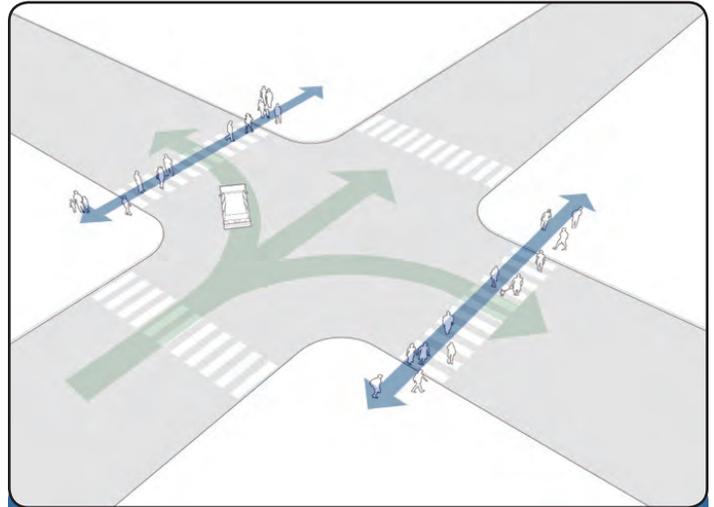
WHEN TO USE/TYPICAL APPLICATIONS

- At intersections or mid-block and should only be used in high pedestrian travel areas
- Most appropriate on streets with only moderate traffic (<10,000 trips/day)
- Particularly effective where heavily used trails cross roadways

SIGNAL IMPROVEMENTS



A pedestrian countdown signal. (Credit: wikimedia.org)



LPIs reduce conflict where pedestrian and turning volumes are high (Credit: modified from NACTO)

DESCRIPTION

- A pedestrian countdown signal displays the number of seconds remaining until the signal changes
- A leading pedestrian interval (LPI) provides pedestrians an advanced walk signal to proceed in the crosswalk before motor vehicles can advance

BENEFITS

- Pedestrian countdown signals help pedestrians accurately decide when it is safe to cross and when they should wait
- LPIs make pedestrians more visible in the intersection, particularly to right-turning motorists who are more likely to yield

CONSIDERATIONS

- Adjustments to signal timing
- Visibility of pedestrian countdown signals in direction of each crosswalk
- Signage

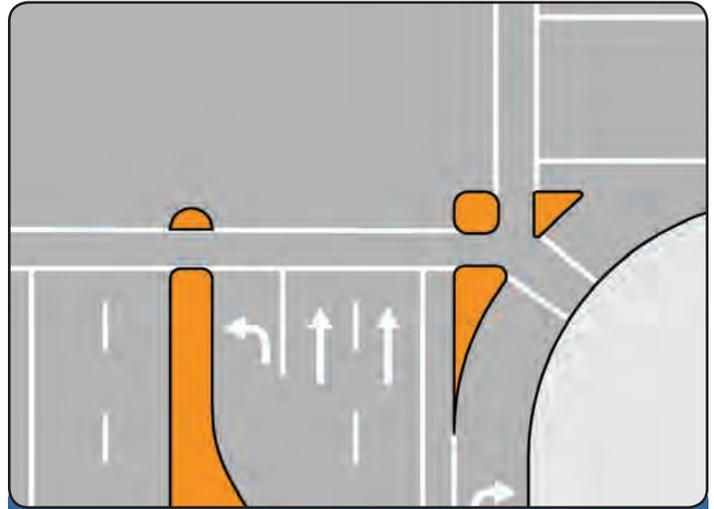
WHEN TO USE/TYPICAL APPLICATIONS

- Pedestrian countdown signals are typically used:
 - At intersections with complex signal phasing (e.g. there is a dedicated left turn phase for motorists)
 - When an exclusive pedestrian signal phase is provided
 - At school zone crossings
 - At intersections with pedestrian refuge islands
- LPIs are typically used where pedestrian volumes and motor vehicle turning movement volumes are both high, and are critical where turning movements create consistent conflict

PEDESTRIAN REFUGE ISLANDS



This pedestrian refuge island cuts through a planted median in Austin, TX (Credit: NACTO)



Refuge islands can make pedestrian crossing safer and more predictable at complex intersections.

DESCRIPTION

- Pedestrian refuge islands, also known as crossing islands, are protected spaces placed on a street at intersections or mid-block crossing locations to separate crossing pedestrians from motor vehicles
- Refuge islands split the crossing distance into manageable portions for slow-moving pedestrians

BENEFITS

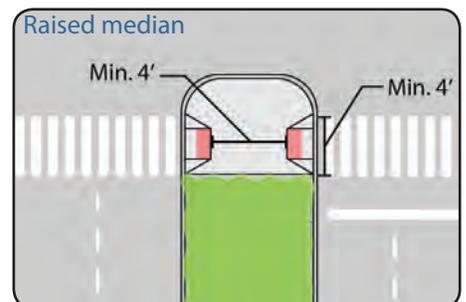
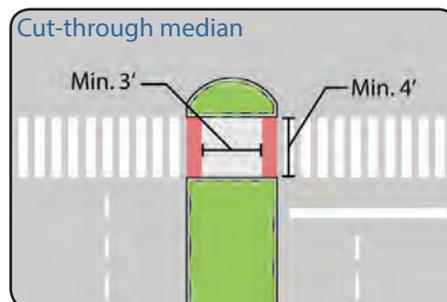
- Reduce pedestrian crossing distance
- Provide pedestrian rest area, separated from automobile traffic
- Reduce speeds by narrowing travel lane widths
- Provide an opportunity for visual enhancement to promote neighborhood identity

CONSIDERATIONS

- May reduce parking and driveway access
- May involve narrowing of traffic lanes
- Narrower road may also increase conflicts between motor vehicles and bicyclists

WHEN TO USE/TYPICAL APPLICATIONS

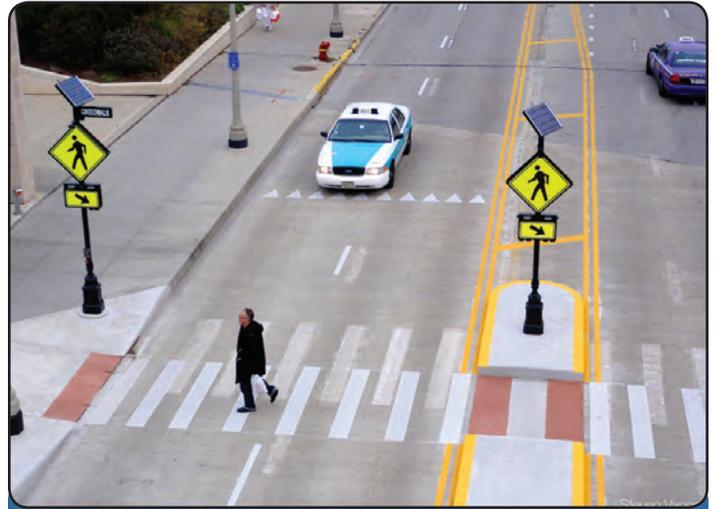
- At wide intersections
- At irregularly shaped intersections
- At intersections where two roads converge into one
- A cut-through median remains level with roadway grade, offering a more efficient design in comparison to raised median islands



RECTANGULAR RAPID FLASHING BEACON



RRFB at a mid-block crossing for pedestrians and bicyclists in Linwood, NJ



RRFBs at a multi-lane crossing with a pedestrian refuge island (Credit: pedbikesafe.org)

DESCRIPTION

- Rectangular rapid flashing beacons (RRFBs) are active warning devices used to alert motorists of crossing pedestrians at uncontrolled crossings
- They remain dark until activated by pedestrians, at which point they emit a bright, rapidly flashing yellow light, which cautions drivers to stop

BENEFITS

- Increase yielding rates over standard pedestrian warning signs, thereby increasing pedestrian safety

CONSIDERATIONS

- Decreased effectiveness may result from overuse, therefore, RRFBs should be limited to locations with the most critical safety concerns, such as pedestrian and school crosswalks with uncontrolled vehicle approaches
- RRFBs have received interim approval from FHWA (pending their formal inclusion in the MUTCD) under Section 1.A.10 of the 2009 MUTCD; however, jurisdictions wishing to use them must inform FHWA prior to installing them on any roadway

WHEN TO USE/TYPICAL APPLICATIONS

- RRFBs should be installed on both the right and left sides of the crosswalk, or in a median if available, on the approach to important pedestrian crossings

PEDESTRIAN LIGHTING



The layout of this lighting at an intersection illuminates the pedestrian in the crosswalk. (Credit: FHWA)



At this mid-block crossing, the pedestrian is illuminated for oncoming vehicles. (Credit: LowerEnergyDesigns.com)

DESCRIPTION

- Appropriate and adequate lighting activity is a vital measure for pedestrian safety
- Pedestrian lighting should work in concert with roadway lighting
- Pedestrian lighting should be implemented at intersections, important points of interest, and along sidewalk corridors

BENEFITS

- Increases safety for pedestrians at dawn, dusk, and night hours by providing ability to see and be seen and increasing driver reaction time
- Increases attractiveness and safety of the public realm during non-daytime hours
- Contributes to sense of place

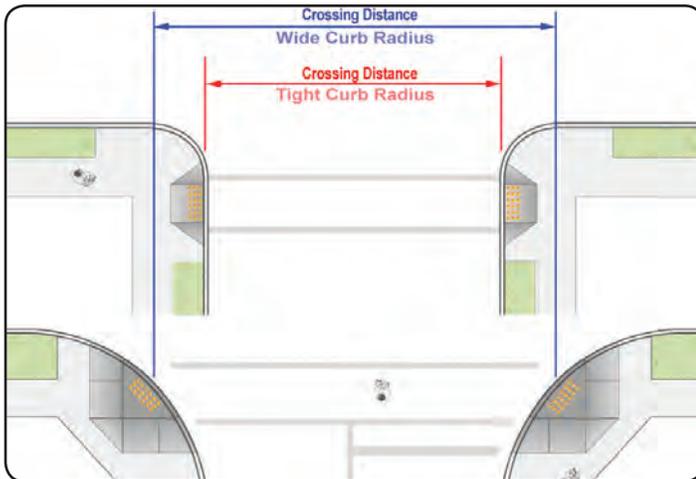
CONSIDERATIONS

- Implementation should include a professional design process that considers
 - the condition and efficacy of existing lighting features
 - existing utility agreements
 - improvements that can be made through supplementing or replacing existing lighting infrastructure

WHEN TO USE/TYPICAL APPLICATIONS

- Lighting at pedestrian crossings should be used:
 - where the speed limit is ≥ 40 mph and the roadway does not have adequate pedestrian conflict detection
 - at intersections, access points, and decision points adjacent to changes in roadway alignment or cross section
 - at connections to transit
 - in areas that generate pedestrian activity
- Pedestrian lighting along sidewalk corridors should be used in shopping districts, downtowns, and areas with high pedestrian volumes

TIGHT CURB RADII



A reduction in curb radius can reduce the intersection crossing distance for pedestrians.



This modified curb radius reduces the speed of turning vehicles and shortens the pedestrian crossing. (Credit: Michael Hintze/ pedbikesafe.org)

DESCRIPTION

- The curb radius at intersections is often designed for the largest of vehicles to make a right turn without deviating from their traffic lane
- Most curb radii are underutilized by such vehicles, and the large radii instead enable standard automobiles to turn at high speeds, while pedestrians are left with awkward, overly long roadway crossing situations
- By reducing the curb radius, the large vehicles can still be accommodated, yet pedestrians can benefit from a measure of traffic calming and a more orderly roadway crossing situation

BENEFITS

- Reduce the speed of turning vehicles
- Allow pedestrians to see and be seen
- Shorten the crossing distance for pedestrians
- Decrease the number of crash conflicts

CONSIDERATIONS

- Turning radius required for buses, trucks, and emergency vehicles using the roadway
- Large trucks do not need to stay on their half of the street when turning onto local streets, and therefore the corner radius does not need to anticipate a close turn by all large vehicles

WHEN TO USE/TYPICAL APPLICATIONS

- Consider application at intersections where turning vehicles have more space than they need, resulting in a proclivity for fast turns or a high incidence of pedestrian collisions

CURB EXTENSIONS



A constructed curb extension improves pedestrian conditions at this busy intersection in Hoboken, NJ



A painted (epoxy) curb extension with plastic pylons is an effective interim or low-cost solution.

DESCRIPTION

- Curb extensions narrow the roadway by extending the curb at key intersections and mid-block locations
- Curb extensions can either be “constructed”, with curbs and concrete surface, or “painted” over existing roadway pavement

BENEFITS

- Traffic calming: reduction in travel and turning speeds
- Reduce crossing distance for pedestrians
- Increase visibility of pedestrians in the roadway environment

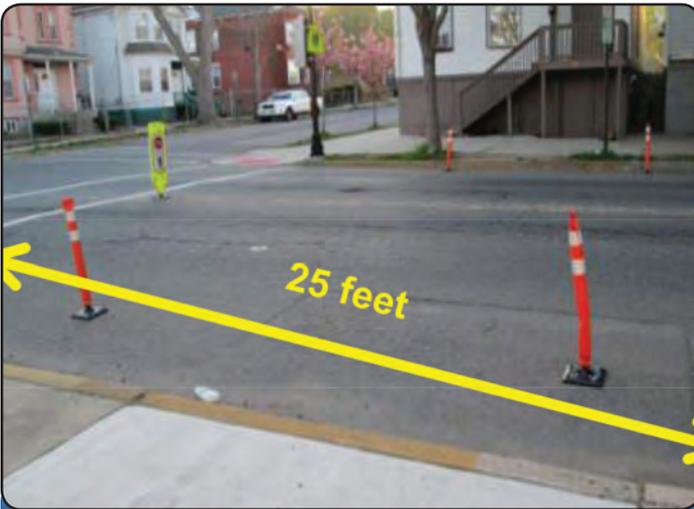
CONSIDERATIONS

- Can reduce availability of on-street parking
- Can complicate plowing and street sweeping operations
- Constructed curb extensions can be costly, especially if roadway drainage must be reconfigured

WHEN TO USE/TYPICAL APPLICATIONS

- Curb extensions can be implemented at intersections, mid-block crossings, and transit stops on all types of streets
- Installation of curb extensions should focus on areas of high pedestrian demand where traffic calming is also a priority

DAYLIGHTING



Plastic pylons mark and preserve the no parking area at this intersection in New Brunswick, NJ (Credit: VTC)



This daylight intersection in New Brunswick, NJ provides space for bike parking (Credit: njbikeped.org)

DESCRIPTION

- By law in New Jersey it is illegal to park within 25' of an intersection and within 50' of a stop sign (though illegal, mainly short-term parking is common in these areas)
- By "daylighting" corners with vertical markers (commonly plastic pylons), the no-parking areas at intersection can be maintained open and preserve visibility at intersections, as intended by law

BENEFITS

- Sight lines at intersections are maintained clear
- Roadway users at intersections are more visible to each other
- Reaction times increase
- Turns are easier for trucks

CONSIDERATIONS

- Daylighting can be a permanent solution or interim application in a larger corner build-out including curb extensions
- Daylighting can provide space in the street for bicycle parking and act as a gathering place for people

WHEN TO USE/TYPICAL APPLICATIONS

- At intersections or other no-parking areas where illegal parking is a concern

GATEWAYS



These pillars, signs, median, and landscaping form a gateway element in Sparta, NJ.



Fencing and landscaping serve as a gateway to the Tahoe Park neighborhood in Sacramento, CA. (Credit: Sirrebral/wikimedia)

DESCRIPTION

- A gateway is a signing, landscaping, or structural treatment to alert motorists they are entering a lower speed environment and they should expect bicyclists and pedestrians
- A gateway can be as simple as signs and landscaping and can be supplemented with other traffic calming measures such as curb extensions, public art, or raised crosswalks

BENEFITS

- Create a unique visual aesthetic for an area
- Create a "sense of arrival"
- Heighten awareness of drivers, bicyclists, and pedestrians as they enter a new area

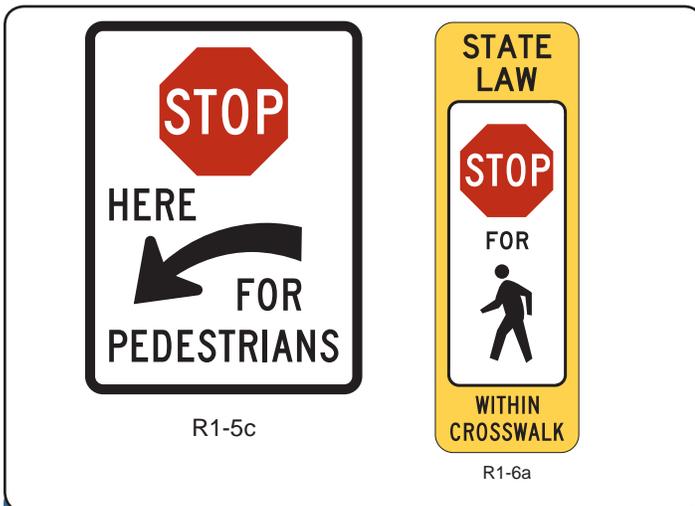
CONSIDERATIONS

- Can require routine or periodic maintenance to preserve visual appeal

WHEN TO USE/TYPICAL APPLICATIONS

- Can be used at entrances to commercial areas, town centers, school zones, neighborhoods, or busy places of activity

SIGNS



The Manual of Uniform Traffic Control Devices (MUTCD) guides the use and placement of traffic signs.



Wayfinding signs and systems are uniquely designed for the surroundings and context.

DESCRIPTION

- Signs can be used to alert or inform motorists of a condition or a potential situation
- Speed limit signs, pedestrian/bicycle/school crossing signs, and in-street pedestrian crossing signs have been used by municipalities to warn motorists of high pedestrian activity, and can help to reduce speeds
- Can be used in conjunction with other measures such as pavement markings

BENEFITS

- Can be low cost
- Increase awareness to drivers of the presence of other roadway users
- Can contribute to a “sense of place”, helping travelers to become oriented to their surroundings and confidently arrive at desired locations

CONSIDERATIONS

- Can clutter the roadway especially on residential streets
- In-street signs may get hit or may need to be removed at night and placed back during the day
- Overall effectiveness can vary

WHEN TO USE/TYPICAL APPLICATIONS

- Roadway signs need to be selected and placed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD)
- Wayfinding signs should be developed and deployed through a study and design to effectively provide directional guidance to pedestrians, bicyclists, and drivers in the context of local landmarks, attractions, and thoroughfares

PARKLETS



A parklet in Sacramento, CA. (Credit: sacbike.org)



A parklet under construction in Princeton, NJ (Credit: nj.com)

DESCRIPTION

- Parklets re-imagine a portion of the street next to the sidewalk -- usually 1-2 parallel parking spaces -- as public space suitable for people to use and enjoy
- Parklets provide amenities like seating, planting, bicycle parking, WiFi, and public art

BENEFITS

- Parklets create a high quality public space experience out of a parking space or other mundane land use
- Parklets foster neighborly interaction
- Parklets are usually designed with a sense of whimsy and delight
- Parklets help to support the sense of place
- Parklets are often grass-roots initiatives that bring together civic-minded organizations and individuals

CONSIDERATIONS

- Can be temporary or permanent in their design, materials, and execution
- Full gamut of design considerations: site, program, size, height, materials, colors, etc.
- Construction scope, oversight, and building codes

WHEN TO USE/TYPICAL APPLICATIONS

- Parklets are typically constructed in parallel parking spaces adjacent to the curb, extending the sidewalk/public space realm into the parking lane
- Parklet ideals can be translated to any public space that would benefit from a higher use

GREEN STREET ENHANCEMENTS



Mature street trees and potted plants improve the appearance and comfort of the streetscape as shown in this example from Sparta, NJ.



This curb extension assists pedestrian crossing and filters stormwater runoff. (Credit: NACTO)

DESCRIPTION

- Roadways are a significant component of the greater landscape and can improve in appearance and hydrological function by including trees and plants
- Roadways are more enjoyable for people when they include trees and plants

BENEFITS

- Healthy street trees provide a visual delineation between the sidewalk environment and the roadway and provide cooling shade
- Plantings that are integrated into streetscape structures, such as curb extensions and pedestrian refuge islands, provide visual appeal and local character
- All plants included in the streetscape environment will reduce the amount of stormwater runoff, and many can be employed to attract birds and pollinators or remove contaminants from soil

CONSIDERATIONS

- Streetscape plants and trees should be selected for urban tolerance, salt tolerance, low-maintenance, and size at maturity
- Maintenance commitments should be fully understood prior to installation of streetscape plantings
- Ensure that root zones have sufficient soil
- Perennial, ornamental grass, or shrub plantings should never exceed 24" in height in areas where they may constrain roadway visibility

WHEN TO USE/TYPICAL APPLICATIONS

- Street trees are appropriate for planting in the "utility strip" often found between the sidewalk and the curb, adjacent to a roadway, or in curb extensions, or medians
- Perennial, ornamental grass, or shrub plantings are appropriate in curb extensions, medians, and to define gathering or seating areas
- Containerized plantings can be advantageous because they are movable and never interfere with underground utilities

APPENDIX B: FUNDING PROGRAMS AND SOURCES



FUNDING PROGRAMS AND SOURCES

The following 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 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.

Federal Funding Opportunities.....	2
Transportation Alternatives Program (TAP)	2
Safe Routes to School Program (SRTS)	3
Local Safety Program	3
Recreational Trails Program (RTP)	4
State Funding Opportunities.....	4
NJDOT Municipal Aid	4
NJDOT Bikeway Grant Program	5
NJDOT Safe Streets to Transit (SSTT)	5
NJ Division of Highway Traffic Safety Grants.....	5
New Jersey Healthy Communities Network Grants	6
Private and Non-profit Funding Sources.....	7
Sustainable Jersey.....	7
People for Bikes Community Grants.....	7
The Robert Wood Johnson Foundation	7
Other Potential Funding Sources.....	7
Municipal Allocations.....	7
Impact Fees.....	8
Local Private-Sector Funding	8
Adopt-A-Trail Programs	8
Membership campaigns.....	8
Local Improvement Districts.....	8

Federal Funding Opportunities

Federal funding available for bicycle related projects is in a state of flux until a new federal transportation bill is updated. The current Federal Transportation Bill —known as Moving Ahead for People in the 21st Century (MAP-21) — was passed in 2012. Federal funding is set to expire on October 29, 2015. As new federal transportation legislation is adopted, the Borough of Bay Head should work closely with NJTPA, Ocean County, and NJDOT to monitor and take advantage of the new funding opportunities.

Transportation Alternatives Program (TAP)

Transportation Alternatives is the largest federal source for bicycle and pedestrian funding under MAP-21. TAP provides federal funds for community based "non-traditional" projects designed to strengthen the cultural, aesthetic and environmental aspects of the nation's intermodal system. TAP projects must relate to surface transportation.

While Transportation Alternatives projects are federally funded, the funds are administered by the New Jersey Department of Transportation and the state's Metropolitan Planning Organizations (MPOs).

Eligible projects must fall into one of the following seven categories:

1. Provision of facilities for pedestrians and bicycles (sidewalks, curb ramps, bike lane striping, wide paved shoulders, bike parking, off-road trails, bike and pedestrian bridges and underpasses).
2. Scenic or historic highway programs including the provision of tourist and welcome center facilities as well as scenic turnouts, overlooks and viewing areas.
3. Landscaping and other scenic beautification (streetscape projects including lighting, benches, planting, decorative walls, and walkways; the reintroduction of native or endangered plants or trees).
4. Historic preservation.
5. Rehabilitation of historic transportation buildings, structures and facilities (including historic railroad facilities and canals).
6. Preservation of abandoned railway corridors (including the conversion and use for pedestrian and bicycle trails).
7. Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity.

The federal funds for TAP projects are provided to the project LPA on a reimbursement basis only. The local public agency (LPA) must have the financial capability to advance project costs for materials and contractors. Before applying, prospective LPAs should assess their capability to comply with state and federal requirements for procurement of materials and services, accounting practices, right-of-way and easement acquisitions, environmental regulations and applicable design standards.

For more information on the Transportation Alternatives Program in New Jersey, visit <http://www.state.nj.us/transportation/business/localaid/alternatives.shtm>

Safe Routes to School Program (SRTS)

The Safe Routes to School Program (SRTS) is a federally funded reimbursement program administered by the New Jersey Department of Transportation (NJDOT), in partnership with the North Jersey Transportation Planning Authority (NJTPA). Under MAP-21 legislation, the Transportation Alternatives Program (TAP) funding does not provide for a standalone Safe Routes to School Program. The New Jersey Department of Transportation (NJDOT) has elected to continue funding the SRTS program separately.

Projects must be located within two miles of a school that serves students in grades K-8. Infrastructure projects may include the installation of sidewalks, crosswalks, bike lanes, multi-use paths, traffic calming measures, and other means to ensure the ease and safety of children walking or biking to school.

Any municipality, school district, or county is eligible to apply for funding after a solicitation is announced. Non-profit organizations are not eligible as direct grant recipients for the solicitation. However, non-profit organizations may partner with a local public agency that will assume responsibility and administration for the grant.

For more information, visit <http://www.state.nj.us/transportation/business/localaid/srts.shtml> or <http://www.njtpa.org/project-programs/project-development/safe-routes-to-school.aspx>

Local Safety Program

The Local Safety Program (LSP) was established by the NJTPA in 2005 in conjunction with NJDOT as a competitive program. The purpose of this program is to advance quick-fix safety improvements on county and local roadway facilities within its region. To date, over \$44 million in projects have been selected for the program. Municipalities located within the subregions may make a request through their respective county to sponsor an application.

Local Safety Program projects typically address NJTPA/NJDOT derived high priority crash locations. Projects must be supported with detailed crash data, and will be in a construction-ready state at the time federal authorization is received. Proposals must demonstrate a location's crash history (using multi-year data) and clearly show a relationship between the types of crashes and the proposed improvements (e.g., pedestrian signals will address a history of pedestrian crashes).

Crash prone locations within the NJTPA region have been identified with the assistance of NJDOT and Plan4Safety using network screening. Bridge Avenue in Bay Head is ranked 42nd on the top pedestrian corridor list for Ocean County because there were two pedestrian crashes along the roadway between 2009-2013. For more on the Local Safety Program, visit <http://www.njtpa.org/project-programs/project-development/local-safety/fys-2016-and-2017-lsp-hrrr-solicitation.aspx>

Recreational Trails Program (RTP)

The Federal Highway Administration's Recreational Trails Program (RTP) provides financial assistance to states for developing and maintaining trails and trail facilities. The RTP funds come from the Federal Highway Trust Fund, and represent a portion of the motor fuel excise tax collected from non-highway recreational fuel use. Since the program's inception in 1993, New Jersey has awarded more than \$16 million to federal, state, county and local governments, and non-profit agencies. Projects are funded on an 80% federal share and 20% matching share basis.

The DEP's Green Acres Program administers the program in New Jersey. Projects are reviewed and recommended for funding by the New Jersey Trails Council. Land on which trail facility is to be funded must be public land or private land with an easement for public recreational use. Maximum grant award is \$24,000 for non-motorized projects.

Permissible uses and projects include:

- Maintenance and restoration of existing trails;
- development and rehabilitation of trailside and trailhead facilities and trail linkages for trails (e.g., parking, signage, shelters, sanitary facilities);
- purchase and lease of trail construction and maintenance equipment;
- construction of new trails in existing parks or in new right of way;
- for motorized use only, acquisition of easement and fee simple title to property for trails.

Activities not eligible for funding include land condemnation; trail feasibility studies; law enforcement activities and personnel; road and sidewalk repairs; purchase of promotional materials; projects on land with railroad tracks; conversion of non-motorized trails to motorized use.

For more visit, http://www.nj.gov/dep/parksandforests/natural/trail_grants.htm

State Funding Opportunities

NJDOT Municipal Aid

Under Municipal Aid program, each county is apportioned a share of the total funding based on population and the number of local centerline miles. Municipalities compete for portions of their county's share. NJDOT provides 75 percent of the grant amount when a town awards a contract and the remaining 25 percent upon completion of the project.

Applications receive points based on various criteria including existing road conditions, Average Daily Traffic (ADT), safety improvements, and access to nodes (schools, residential areas, employment centers, etc.). Other important criteria include the project's readiness to construct, whether the municipality has received an allotment within the last three years, and the municipality's award and close-out performance on previously awarded State grants. For more information, visit www.state.nj.us/transportation/business/localaid/municipaid.shtm

NJDOT Bikeway Grant Program

The NJDOT Bikeway Grant Program provides funds to counties and municipalities to promote bicycling as an alternate mode of transportation in New Jersey. A primary objective of the Bikeway Grant Program is to support the State's goal of constructing 1,000 new miles of dedicated 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

Although priority will be given to construction of new bike paths, the proposed construction or delineation of any new bicycle facility will be considered. Ineligible projects/activities include right-of-way purchases associated with any project, operating costs associated with any project, and planning activity costs. In order to be eligible, a project must place no restrictions upon hours of use by bicyclists (with the exception of dusk-to-dawn closings, as of some parks). Applicants must use the *AASHTO 2012 Guide for the Development of Bicycle Facilities* For more information, visit www.state.nj.us/transportation/business/localaid/bikewaysf.shtm

NJDOT Safe Streets to Transit (SSTT)

SSTT program provides funding to counties and municipalities in improving access to transit facilities and all nodes of public transportation. The objectives of the SSTT program are:

- To improve the overall safety and accessibility for mass transit riders walking to transit facilities.
- To encourage mass transit users to walk to transit stations.
- To facilitate the implementation of projects and activities that will improve safety in the vicinity of transit facilities (approximately one-half mile for pedestrian improvements).

Types of work eligible for funding under SSTT include:

- Intersection safety improvements
- Constructing new sidewalks, curb ramps, sidewalk widening and major reconstruction
- Traffic calming measures
- Pedestrian oriented lighting
- Traffic control devices that benefit pedestrians

Bicycle facilities are not eligible for funding.

For more information, visit www.state.nj.us/transportation/business/localaid/safe.shtm

NJ Division of Highway Traffic Safety Grants

The NJ Division of Highway Traffic Safety offers, on an annual basis, federal grant funding to agencies that wish to undertake programs designed to reduce motor vehicle crashes, injuries, and fatalities on the roads of New Jersey. Municipal, county, state government and law enforcement agencies, as well as non-profit organizations, are encouraged to apply for NJDHTS grant funding to address specific, local traffic safety issues. Grants available include:

Comprehensive Traffic Safety Programs (CTSP's)

Comprehensive Traffic Safety Program grants address multiple traffic safety concerns within a county or larger community. CTSP grants include numerous tasks and strategies involving enforcement, education and engineering. The potential grantee must provide a detailed Problem Identification section with extensive information about the community, motor vehicle crash experience (including pedestrian & bicycle), data analysis and creative solutions to reduce these crashes.

Pedestrian Safety

The goal of the pedestrian safety program area is to lower the pedestrian fatality and injury rates. In the Central Region, municipalities that are statistically high for pedestrian injury crashes are eligible to apply for our Pedestrian Safety Grant. The grant includes funding for overtime enforcement at pedestrian safety hot spots in the community and educational outreach throughout the community.

Other Eligible Programs

Grant applications may also be submitted that utilize enforcement, education or engineering counter-measures to address other specific traffic safety issues including:

- Speed
- Aggressive Driving
- Bicycling Safety
- Crash Investigation
- Distractions
- EMS Training - relating to crash response
- Motorcycle Safety
- School Bus/Pupil Transportation
- Traffic Engineering - primarily pedestrian pavement markings and pedestrian signs, but some traffic studies will be considered

New Jersey Healthy Communities Network Grants

These grants support projects advancing the implementation of policy changes and/or development of the built environment to support healthy eating and active living. Supported projects make the healthy choice the easy choice; make healthy food and beverages the affordable, available and desired choice; encourage and support physical activity by ensuring accessibility and safety; and make healthy school, work, and community environments the norm and not the exception. In 2016, up to 50 New Jersey-based entities will receive grants of up to \$20,000. <http://njhcn.org/>

Private and Non-profit Funding Sources

Sustainable Jersey

Sustainable Jersey registered towns get special priority access and notification of incentives and grants, and are eligible for the Sustainable Jersey Small Grants program. Over \$1.75 million in grants have been provided to towns for community-based projects to improve quality of life in New Jersey.

Eligible projects include actions that would score a municipality points toward Sustainable Jersey certification. This includes projects addressing issues from renewable energy and green building design, waste reduction, a sustainable master plan, water conservation, natural resources management, energy management, and transportation issues. Most projects also include public outreach campaigns and many have involved school children and community organizations. <http://www.sustainablejersey.com/grants-resources/sustainable-jerseysmall-grants-program/>

People for Bikes Community Grants

The PeopleForBikes Community Grant Program provides funding for important and influential projects that leverage federal funding and build momentum for bicycling in communities across the U.S. These projects include bike paths and rail trails, as well as mountain bike trails, bike parks, BMX facilities, and large-scale bicycle advocacy initiatives.

Since 1999, we have awarded 341 grants to non-profit organizations and local governments in 49 states and the District of Columbia. Our investments total more than \$2.9 million and have leveraged nearly \$670 million in public and private funding. <http://www.peopleforbikes.org/pages/community-grants>

The Robert Wood Johnson Foundation

The Robert Wood Johnson Foundation invests in grantees (e.g., public agencies, universities, and public charities) that are working to improve the health of all Americans. Current or past projects in the topic area “walking and biking” include greenway plans, trail projects, advocacy initiatives, and policy development. <http://www.rwjf.org/en/how-we-work/grants.html>

Other Potential Funding Sources

The following funding sources for greenways have been identified by Project for Public Spaces, Rails-to-Trails Conservancy and the National Trails Training Partnership.

Municipal Allocations

The most common sources of funding at the municipal and county level include allocations from a specific department, such as the park and recreation department or public works department. Incorporating funding for maintenance of bicycle and pedestrian facilities into the annual budget guarantees funds are available to cover maintenance.

In some localities, a portion of an increase in the sales tax will be set aside for recreational trail or other conservation funding. Rarely, new taxes will be levied to exclusively support active transportation projects.

Impact Fees

Regulated by subdivision policies, impact fees require residential, industrial and commercial development project leaders to provide sites, improvements and/or funds to support public amenities such as open space and trails. Impact fees may be allocated to a particular trail or greenway from land development projects if the fund is a dedicated set-aside account established to help develop a county- or city-wide system of trail or greenway projects.

Local Private-Sector Funding

Local industries and private businesses may agree to provide support for greenway development through one or more of the following methods:

- Donations of cash to a specific greenway segment
- Donations of services by large corporations to reduce the cost of greenway implementation, including equipment and labor to construct and install elements of a specific greenway
- Reductions in the cost of materials purchased from local businesses that support greenway implementation and can supply essential products for facility development

Adopt-A-Trail Programs

These are typically small grant programs that fund new construction, repair/renovation, maps, trail brochures, facilities (bike racks, picnic areas, birding equipment).

Membership campaigns

The return from this can be significant (The Pikes Peak Area Trails Coalition raises \$18,000 per year), but your effort must be repeated every year.

Local Improvement Districts

Local Improvement Districts (LID) are established areas where local property owners, through self-imposed taxation, fund local improvements within the district. LIDs have been used to fund roadway improvements and could be used for bicycle or pedestrian related improvements.

APPENDIX C: ORDINANCE REVIEW

BICYCLE & PEDESTRIAN POLICY, PLANNING, ZONING & LAND USE REGULATIONS

The RBA Group reviewed sections of the Borough's existing zoning and land use regulations that would be applicable to bicycle and pedestrian planning.. There are six zones within the Borough:

- R-50 Single Family Residential
- R-100 Single Family Residential
- B-1 General Commercial
- B-2 Marine Commercial
- B&B Bed and Breakfast
- C Conservation

The Borough should consider revising the ordinance to include specific requirements for incorporating bicycle and pedestrian facilities in addition to the adoption of a Complete Streets policy. The Borough should adopt the proposed neighborhood greenway network in the ordinance. A schedule with the list of the streets that fall within the neighborhood greenway network should be added to the ordinance. This will ensure that these streets get prioritized when funding is available for upgrades to the bicycle and pedestrian facilities on these streets.

The Bicycle and Pedestrian Plan should be included into the development review process. New developments should contribute to the bicycle and pedestrian plan elements such bicycle parking, connections to attractors, pathways etc. Currently, there is no minimum sidewalk width requirement in the ordinance. Minimum sidewalk widths and planted buffers should be included in the ordinance especially in the B-1 & B-2 zones. Minimum sidewalk width should be 5' as per FHWA and NACTO (6' sidewalk width is desired). In B-1 & B-2 Zones, a wider sidewalk (8' wide) with additional buffer, should be recommended and encouraged.

The Borough of Bay Head already requires loading and unloading spaces to be located at the side or rear of the buildings. However, there are no regulations about parking in the front yard. In order to maintain the visual quality and contribute to the walkability of the street, vehicular parking should not be permitted in the front yard of non-residential uses in the B-1 & B-2 zones. The Borough should reduce the minimum front yard requirement for non-residential uses in the B-1 & B-2 zones from 20' to 10' and add a maximum front yard setback requirement. Buildings placed close to the street help slow traffic down, provide a storefront character to the street, and encourage walking. The Borough should consider encouraging shared driveways and internal vehicular circulation among adjacent businesses in the downtown and commercial areas to reduce the number of curb cuts. The Borough should consider adding a maximum driveway width restriction for residential and non-residential zones to limit the length of curb cuts along the sidewalks. Allowing shared driveways and parking areas create safer walking and bicycling environments, while also increasing the aesthetic quality of the streets.

Bicycle parking should be added as a permitted accessory use in all non-residential zones. Bicycle parking can either be required (commercial, institutional or marinas uses only) or incentivized by providing a reduction in overall vehicular parking requirements if bicycle parking is provided. The Borough should consider changing the sidewalk maintenance program to one where costs are shared by the Borough and property owners. In addition, the Borough should create a sidewalk maintenance/repair funding program. This will ensure that sidewalks are regularly maintained and repaired.

The Borough has a Schedule of Through Streets (Schedule V) within the ordinance that specifies which streets (or portions of streets) are designated as Through Streets. Stop signs are to be installed on the near right side of each street intersecting the Through Street. Given a recent accident at Clayton Avenue and perceived speeding issues, Clayton avenue should be removed from the list of through streets.

No.	Topic	Current Status in Ordinance / Reexamination Report	Recommendation
1	Bicycle Boulevard/ Neighborhood Greenway	None	Add the bicycle boulevard / neighborhood greenway network to the ordinance and create a schedule with the list of the streets that fall within the network. This will ensure that these streets get prioritized when funding is available for upgrades to the bicycle and pedestrian facilities on these streets.
2	Site Plan & Subdivision review	None	Bicycle and Pedestrian Plan to be incorporated into development review process. New developments should contribute to the bicycle and pedestrian plan elements such bicycle parking, connections to attractors, pathways etc. (Add to Section 147-63)
3	Front Yard setbacks maximum	None	Bulk regulations should also include maximum front yard setbacks so buildings are not placed too far back from the street. (Add to Section 147-14 & Appendix A)
4	Landscaping height restrictions	Yes, maximum 3' height requirement for fences and any other obstruction to vision (Section 147-6 F Fences)	Consider specifying hedges/shrubbery to not exceed 3' in height. (Section 147-6 F Fences)
5	Off-Street Parking regulations in front yards	None	Off-Street parking should not be permitted in front yards of the B-1 & B-2 Zones (Add to Section 147-13 C)
6	Shared Parking requirements	None	Modify the Borough ordinance to allow for shared parking and increase flexibility for parking requirements to be met through on-street parking or off-site facilities. (Add to Section 147-13)

7	Driveway width	10' minimum width	Consider adding a maximum driveway width restriction - 20' in B-1 & B-2 Zones and 12' in residential zones. (Add to Section 147-13)
8	Bicycle Parking	None	Bicycle parking to be installed where there are attractors, including, but not limited to, food stores, train stations, education uses and shopping centers. Bicycle parking shall be equal to at least 10% of the total required number of parking spaces. Minimum capacity of four bicycles to be provided and should be located away from travel paths of motorized vehicles and pedestrians. Bicycle parking can be located either on the sidewalk adjacent to the entrance or within one-third of the parking area closest to the building. Add to Section 147-6.1 B Accessory Uses & Section 147-13 Parking, loading and vehicular access.
9	Bicycle Safety Regulations	None	Adopt an ordinance prohibiting bicyclists from riding on sidewalks.
10	Bicycle Safe Grates	Yes in two sections - Section 207-4 (stormwater management requirements for major development) and Section 207-26 (Design Standard)	No change
11	Sidewalk funding	Sidewalk replacement fund mentioned in Reexamination report	Create a funding program for the construction of new sidewalks and maintenance/replacement of existing sidewalks. (Add to Article II: Sidewalk Construction) Consider changing the sidewalk maintenance program to one where costs are shared by the Borough and property owners. (Edit Section 209-15)
12	Sidewalk widths	None	Minimum sidewalk width should be 5' as per FHWA and NACTO - 6' is desired. In B-1 & B-2 Zones, a wider sidewalk - 8' wide with additional buffer, should be recommended and encouraged. (Add to Article II: Sidewalk Construction)
13	Through Streets	Yes, a list of Through Streets is included in Section 222-23 Schedule V: Through Streets	Clayton Avenue should be removed from the Through Streets list to allow the installation of a four-way stop at the intersection of Egbert Street and Clayton Avenue. (Section 222-23 Schedule V)

**APPENDIX D: ENVIRONMENTAL
CONSTRAINTS
TECH MEMO**



Part of this planning effort includes assessing the potential for a walking and biking path along the alignment of a former rail line between the train station and Clayton Avenue and considering the possibility of a pedestrian bridge over Twilight Lake. A preliminary, in-house environmental GIS data review was conducted to screen for endangered species, hazardous materials and open space around Twilight Lake and 200' from either side along the abandoned rail bed from the train station to the border of Mantoloking

An NJDEP GeoWeb, U.S. Fish and Wildlife Information for Planning and Conservation (IPaC), Green Acres Recreational Open Space Inventory (ROSI) List, and Natural Resources Conservation Service (NRCS) computer search was performed. The following information was available on the NJDEP GeoWeb database and was researched for the Study Area:

- Historic Properties,
- Archaeological Site Grids,
- Planning Areas,
- Groundwater Contamination Areas (Currently Known Extent-CKE),
- Groundwater Contamination Areas (Classification Exception Area-CEA),
- Known Contaminated Sites List (KCSL),
- Shellfish Classification Areas,
- Soils,
- Streams,
- Landscape Project 3.1 for Atlantic Coastal Area (i.e. protected species data),
- Tidelands Limits,
- Freshwater Wetlands, and
- Parcels (Blocks and Lots).

The Study Area goes through many of the **Listed Historic Properties**. An Archaeological Site Grid exists on the southern portion of the Study Area.

The Study Area is located in the **CAFRA State Planning area**, is listed as Planning Area Number 2, Suburban and Planning Area Number 52, Environmentally Sensitive Barrier Island. There are no mapped Open Space areas within the limits of Bay Head. Green Acres was also researched to verify if there is Open Space in the Borough of Bay Head. There are no Green Acres ROSIs listed within the Borough of Bay Head.

Groundwater Contamination Areas (Currently Known Extent-CKE and Classification Exception Area-CEA) and Known Contaminated Sites List (KCSL): There is one KCSL within the Study Area. The KCSL is identified as NJ Transit Incorporated located on Twilight Drive. The Contaminant Source Category is "A" and the Remedial Level is 2-10 AOCs.

Shellfish Classification Areas – Twilight Lake is listed as "prohibited" for shellfish. The NJDEP metadata described prohibited as, "harvest not allowed under any conditions".

Soils: The soils on the north side of the Twilight Lake consist of AptAv – Appoquinimink-Transquacking-Mispillion complex, very frequently flooded with a typical profile of mucky silt

loam to silt loam to mucky peat; The southern side of Twilight Lake and the remainder of the Study Area consists of PstAt – Psammaquents, sulfidic substratum, frequently flooded with a typical profile of coarse sand to gravelly sand to mucky peat.

Streams: Bayhead Harbor Tributary goes from the northwest of Twilight lake and exits on the southern end of Twilight Lake; FW2-NT/SE1; freshwater wetland-non-trout/saline water.

Landscape Project 3.1 is the NJDEP listing of **Threatened and Endangered species**. The Study Area, according to the NJDEP indicates Black-crowned Night-heron (*Nycticorax nycticorax*), Rank 3 – Stated Threatened; Osprey (*Pandion haliaetus*) Rank 3 - State Threatened; Bald Eagle (*Haliaeetus leucocephalus*) Rank 4 – State Endangered and Least Tern (*Sternula antillarum*) Rank 4 – State Endangered may be present within, or near, the Study Area. IPaC is the US Fish and Wildlife listing of Threatened and Endangered species and according to IPaC the Study Area has Piping Plover – Threatened (critical Habitat: “There is **final** critical habitat designated for this species”), Northern Long-eared Bat, Threatened and Seabeach Amaranth, Threatened. Other than Piping Plover, IPaC identifies “no critical habitats designated for these species.

Wetlands: NJDEP mapped wetlands are located on the northern portion of the island within Twilight Lake as saline marsh low marsh wetlands and Phragmites dominate coastal wetlands.

Parcels: This was researched through the NJDEP Parcels database because on the Borough of Bay Head, NJ Parks and Wildlife Sanctuaries §169-1 Establishment of Parks and Wildlife Sanctuaries lists, Lot No. 1 in Block No. 21 as shown on the Bay Head Tax Map as an established wildlife sanctuary to be known as Kellogg Memorial Island. According to NJDEP Parcels Block 21, Lot 1 is located within the northern section of Twilight Lake. From north to south of Twilight Lake the parcels of the island(s) are designated as Block 21, Lot 1, Block 25, Lot 16.03, Block 25, Lot 16.02, and Block 25, Lot 16.01 to be within the Study Area.

Permits Required:

NJDEP

The Wetlands Act of 1970 requires a **Coastal Wetlands permit** for impacts to coastal wetlands. Wetlands permits are required for all activities in the mapped wetland areas.

Statewide General Permit 17 (GP17) and General Permit 17A (GP17A) authorizes activities in freshwater wetlands, transition areas, and/or State open waters necessary for construction of a trail and/or boardwalk for use by pedestrians, bicycles, and other non-motorized methods of transport. General permit 17 does not authorize construction of a restroom, gazebo, rain shelter, or any covered or enclosed structure. General permit 17 does not authorize construction of a roadway for use by automobiles, golf carts, motorcycles, motorized trail bikes, all-terrain vehicles, or other motor vehicles.

NJDEP Freshwater Wetlands Individual Permits – If impact levels or design considerations preclude the use of either a GP17 or GP17A, an NJDEP Individual Freshwater Wetlands Permit may be required. This type of permit, if ultimately necessary, will require mandatory compensatory wetland mitigation.

The Coastal Area Facility Review Act of 1973 (CAFRA) established the CAFRA Zone , as the bounds of CAFRA regulation. Activities within the CAFRA Zone may require a **CAFRA permit** from NJDEP.

Waterfront Development within the CAFRA Zone, the limit of waterfront development jurisdiction is the mean high water line. Construction of the proposed open water bridged sections of the path may require an NJDEP Waterfront Development Permit and, potentially, a Tidelands Conveyance from NJDEP’s Bureau of Tidelands.

State Historical Preservation Office (SHPO)

The proposed Study Area passes through mapped Historic Properties/Districts. This path may require **coordination with SHPO** and cultural studies may need to be performed.

Army Corps of Engineers (ACOE) and U.S. Coast Guard

Bridged sections of the proposed path may potentially require Sections 9/10 and/or 404 permits from the Army Corps of Engineers as well as approval from the U.S. Coast Guard.



APPENDIX E: MEETING SUMMARIES

TABLE OF CONTENTS

- I. Kickoff Meeting Memo - March 27, 2015
- II. Visioning Workshop Minutes – June 10, 2015
- III. Public Information Center Minutes – August 26, 2015
- IV. Wrap-up Meeting Memo – December 9, 2015

FROM: Elizabeth Ward, Project Manager
Mike Dannemiller, Principal Engineer

DATE: April 15, 2015

MEETING: Kickoff March 27, 2015

SUBJECT: Bay Head Complete Streets – Bicycle and Pedestrian Plan
RBA #J4666.10

Purpose

To introduce NJDOT's Local Technical Assistant (LTA) Program; review the project scope, schedule & outcomes; and begin identifying destinations, barriers, and priorities.

Steering Committee Members in Attendance

1. Char Charlton, GO Bay Head!
2. Chil Tillson, Public Works Department
3. Diane Cornell, Bay Head Home & School Association
4. Jenny Jimenez, Ocean County Department of Planning
5. Jerry Foster, Greater Mercer TMA
6. John Ernst, Ocean County Engineering Department
7. John Henry Morris, Bay Head Planning Board
8. Mike Viscardi, NJ TRANSIT
9. Robert Hoffman, Bay Head Police Department
10. Roger Faulkenbury, Bay Head Business Association
11. Tom Charlton, Bay Head Momentum
12. Victoria Pecchioli, Ocean County Department of Planning



Project Team Members Present

13. Bill Riviere, NJDOT
14. Brian Valentino, Borough of Bay Head
15. Elizabeth Ward, The RBA Group
16. Mike Dannemiller, The RBA Group
17. Chris Stokes, Stokes Creative Group
18. Nicole Pace, Stokes Creative Group

Materials Distributed to Steering Committee (attached)

- Agenda
- Project Overview
- Questionnaire
- Project Flyer
- Contact List

Action Items/ Next Steps

1. RBA will confirm the date and location for the Visioning Workshop with the Borough. The meeting is tentatively scheduled for Wednesday, June 10 from 4:00-8:00pm. It is anticipated that the meeting will be at the Fire House.
2. RBA will create a survey for Bay Head Elementary School to distribute to students during Bike to School Week in May.
3. RBA will schedule and conduct a field investigation to determine the condition of bicycle and pedestrian facilities.
4. The Borough of Bay Head will provide available reports, resources and mapping to the Project Team. This may include, but not be limited to: Master Plan, Tax Maps, Easements, Rights of Way, Aerial Maps, Police Reports/Crash Data.
5. RBA will invite the Steering Committee and Project Team to “Basecamp.”

Mapping Exercise Summary

1. The Steering Committee identified destinations, corridors and areas of constraint.
2. A path along the alignment of the former rail line connecting the train station to the town center is a priority for the municipality.
3. Wayfinding is an issue in town, and should be included in the plan.
4. More bicycle parking is needed in the Town Center and at the beach access points. Racks can also be a source for public art.

Meeting Summary

Introductions

- Bill Riviere, Project Manager for the NJDOT, welcomed the attendees and introduced the project and project team. He explained that the goal of the Plan is to become a blueprint for improvements and not a document that sits on a shelf. The attendees introduced themselves.

Project Overview

- Elizabeth Ward, Project Manager for the RBA Group, gave an overview of the schedule. The 8 month project will be completed in October.
- Public outreach meetings are targeted for the following dates:
 - a. Visioning – Wednesday, June 10th
 - b. Concept Review – Wednesday, August 26th
- Meetings are anticipated to be held at the Bay Head Fire House and are anticipated to be held in an “Open House” format, with a flowing schedule that is anticipated to run from 4:00pm to 8:00pm. There will be no formal presentations, allowing participants to come and go as convenient for them.
- Mike Dannemiller from RBA presented types of bicycle and pedestrian facilities and discussed the Complete Streets movement. He explained that there are a range of options to make streets more bicycle and pedestrian friendly. Sometimes it may make driving less convenient. What recommendations get advanced will be something the Steering Committee and Borough will have to decide.
- There are a lot of public outreach tools currently in place.
 - a. Bay Head uses a reverse 911 telephone system to contact local residents of municipal information.
 - b. The newspapers – Ocean Star and Asbury Park Press are typically used for local information.
 - c. The on-line blog Point Pleasant Patch is frequently used for local information.

- d. Board of Education shares much of its information on-line. The website: <http://www.bayheadschool.org/> is a good source of school based information. Elementary School students may be able to be included in any targeted outreach or interview process. Students have a 'bike safety week' in May.
- The Bay Head Clam Bake is a major opportunity to get local resident input. This is sponsored for the Fire Department, and will be held on Saturday, August 15, 2015.

Mapping Exercise

- The Steering Committee identified destinations, corridors and areas of constraint.
 - Destinations include: Mueller's Bakery, the beaches, Mount Street, Yacht Club, Bed & Breakfasts, School and Library, Train Station, and the Recycling Center.
 - Preferred Routes include: East Ave., Lake Ave., Clayton Ave., Park Ave., Osborne Ave., and Bay Ave. The bike path behind Centennial Park is popular with kids.
 - Area of constraint include: Bridge Ave. especially the intersection with Lake Ave., unmarked crossings of Route 35, especially at the beach entrance streets, the intersections of Bay Ave. and Park Ave. and Bay Ave. and Bridge Ave.
 - Gaps in sidewalk include: Clayton Ave., Lake Ave., West Lake Ave. and Osborne Ave.
- Walking and bicycling tour maps developed by GO Bay Head! were shared, identifying routes used when conducting tours of Bay Head.
- The "Blue Route" or at least access to the launch point for this water trail should be prioritized in the plan.
- Bicycle parking at major destinations and throughout the downtown central business district and at beach access points, not just at off-site centralized locations, should be included in the plan. These could be a source for public art.
- Wayfinding is an issue in town, and should also be included in the plan.
- Crossing guard locations should be confirmed with the police and BOE.

Other Information

- The year round population ~1,000 and the summer population is about ~10,000. There are about ~1,000 residential buildings in town.
- The Mayor and Police Chief sent a letter to NJDOT last fall requesting left turn signals along Route 35 and painted crosswalks at unsignalized intersections. They have not received a response.
- The Borough had looked into a contraflow bicycle lane on East Avenue about a decade ago but that type of facility was not approved at the time. If there is enough space on East Avenue, they would be interested in seeing if it is a possibility at this time.
- The information gathered during the mapping exercise will be populated on the projects WikiMap.

Borough of Bay Head Complete Streets Bicycle and Pedestrian Plan

AGENDA STEERING COMMITTEE KICK-OFF MEETING

Friday, March 27, 2015
10:00am – 12:00pm
Bay Head Fire House
81 Bridge Avenue

Purpose: To introduce NJDOT’s Local Technical Assistant (LTA) Program; review the project scope, schedule & outcomes; and begin identifying destinations, barriers, and priorities.

- I. Welcome & Introductions *Bill Riviere, NJDOT*
 - a. Project Team and Steering Committee Introductions
 - b. Role of Steering Committee

- II. Project Overview
 - a. Scope of Work, Schedule and Outcomes *Liz Ward, RBA*
 - b. Tools in the Toolbox..... *Mike Dannemiller, RBA*
 - c. Public Outreach *Chris Stokes & Nicole Pace, Stokes Creative Group*

- III. Mapping Exercise

- IV. Next Steps *Liz Ward, RBA*
 - a. Data Collection and Needs Assessment
 - b. Visioning Workshop



PROJECT OVERVIEW

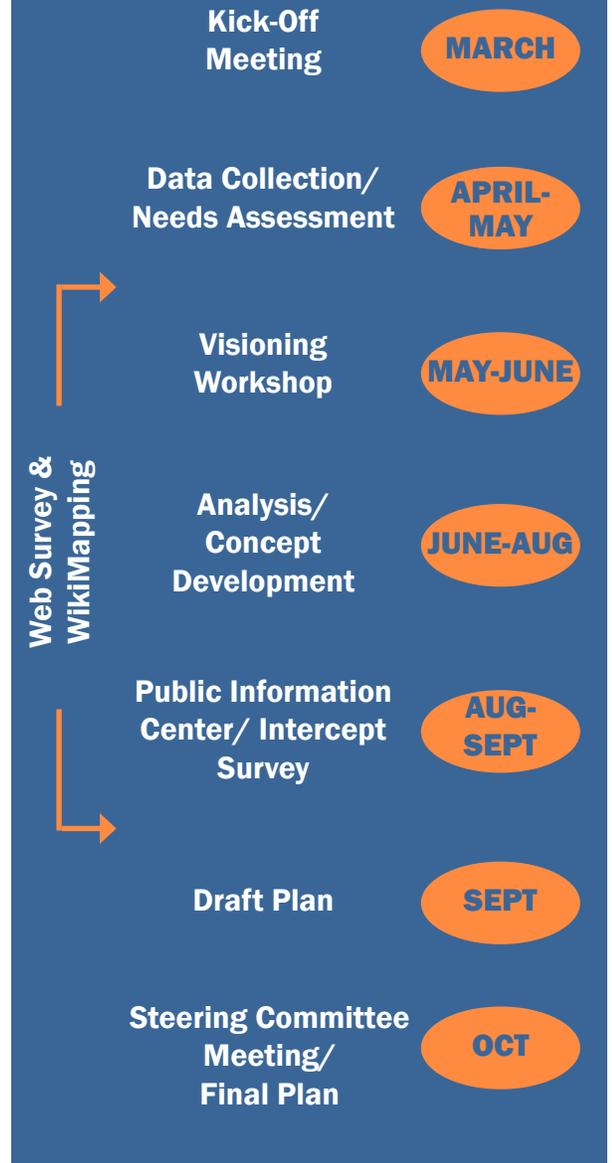
KEY INPUTS FOR PLAN DEVELOPMENT



PLAN OUTCOMES

- Community vision & goals
- Priority bicycle and pedestrian network
- Preliminary assessment for a path along former rail line over Twilight Lake and for a path along the perimeter of Twilight Lake
- Concepts for major routes and locations
- Ordinance and policy review
- Potential education, enforcement and encouragement programs
- Potential funding sources
- Implementation matrix

PROJECT TIMELINE



Why Plan for Bicyclists & Pedestrians?

- Improves personal health
- Increases mobility & access, particularly for youth, older adults, the financially constrained
- Saves money on transportation --> more disposable \$
- Reduces traffic congestion
- Increases opportunities for social interactions
- Provides enjoyment
- Increases transportation options
- Improves safety for all road users
- Improves access to public transit
- Decreases air, water, and noise pollution
- Supports climate change emission reduction goals
- Stimulation of the local economy
- Increases opportunities for tourism
- Decreases road maintenance costs

Borough of Bay Head Complete Streets Bicycle and Pedestrian Plan

QUESTIONNAIRE STEERING COMMITTEE KICK-OFF MEETING Friday, March 27, 2015

- 1) How do you rate overall walking conditions in Bay Head?
 Excellent Why?
 Good
 Fair
 Poor

- 2) How do you rate overall bicycling conditions in Bay Head?
 Excellent Why?
 Good
 Fair
 Poor

- 3) What do you think are the three things the Plan needs to address?

- 4) Can you give an example of a place (local or national) where you enjoy walking or bicycling? Why?

- 5) Can you suggest individuals and/or groups that we should be including in this discussion?

- 6) What information – plans, studies, data, mapping, etc. – should the project team be familiar with to advance this project? (Please provide digital copies if available).



Bicycle and Pedestrian Plan



The Borough of Bay Head was selected by the New Jersey Department of Transportation's Office of Bicycle & Pedestrian Programs for Local Technical Assistance in the development of a comprehensive Bicycle and Pedestrian Plan with planning assistance provided by The RBA Group. The Plan will identify opportunities for improvements and programs necessary to provide for a safer, stronger, and more efficient bicycle and pedestrian network, an essential component to building a healthy community that supports active living.

THE BICYCLE AND PEDESTRIAN PLAN WILL:

begin in the spring

advance Bay Head's mission to improve the health and wellness of its residents

develop concepts emphasizing connections between key destinations

address Complete Streets and Safe Routes to School Policies and Programs

serve as a tool for the borough to use when applying for funding

identify strategies to create, enhance, or expand bike and pedestrian facilities in the borough

create a community vision for Bay Head's bike and pedestrian network into the future

engage the public through workshops, surveys, and a steering committee

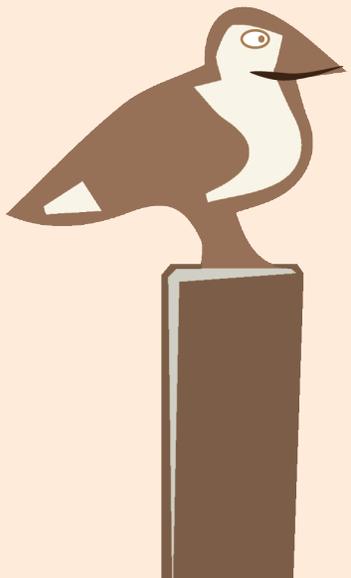
encourage efficient and safe bicycle and pedestrian travel for community members of all ages and abilities

end in October 2015

for more information contact:

Brian Valentino, MPA, ICMA-CM
Borough Administrator
bvalentino@bayheadnj.us
732-892-0636

Elizabeth Ward, AICP
Planner
eward@rbagroup.com
973-946-5736



Squaaaaawk! Ever heard of **Complete Streets**?

Complete Streets balance the needs of drivers, pedestrians, bicyclists, transit vehicles, emergency responders, and commercial vehicles. A **Complete Streets Policy** ensures that local roadways are designed or improved with safety and comfort for all users. Complete Streets policies make our roadways safer and more accessible and create numerous public health and economic benefits for communities.

Want to learn more? Visit njbikeped.org today!



RBA

Borough of Bay Head Complete Streets Bicycle and Pedestrian Plan Project Contact List

Steering Committee

Name	Organization	Title	Email	Phone
William (Bill) Curtis	Borough of Bay Head	Mayor	bcurtis@bayheadnj.us	732-892-0638
D'Arcy Rohan-Green	Borough of Bay Head	Council President	darcygreen@gmail.com	732-295-0117
Brian Valentino	Borough of Bay Head	Administrator	bvalentino@bayheadnj.us	732-892-0636
Robert F. Hoffman	Bay Head Police Department	Chief of Police	roberthoffmanjr@comcast.net	732-892-0632
Charles (Chip) Tillson	Public Works Department	Supervisor	bhpublicworks@verizon.net	732-899-6782
Joe Todisco	Bay Head Fire Department	Fire Chief	todiscojh@yahoo.com	732-233-0885
John Henry Morris	Bay Head Planning Board	Board Member	jhmorris100@gmail.com	732-233-0277
James Cane Kellogg	Bay Head Improvement Assoc.	Board Member	ickellogg4@aol.com	973-376-1652
Diane Cornell	Bay Head Home & School Assoc.	President	dmcornell@gmail.com	732-714-0692
Andy Frizzell	Bay Head School Foundation	President	frizzell@comcast.net	732-714-0692
Roger Faulkenbury	Bay Head Business Assoc.	Association Member	roger@therapeuticfitnessnj.com	732-899-0920
Sherry Urner	The Seaweeder's	Club Member	bayhead42@aol.com	732-882-9879
Char Charlton	GO Bay Head!	Co-Chair	charlainecharlton@gmail.com	973-747-2699
Tom Charlton	Bay Head Momentum	Director	tscharlton@gmail.com	973-454-7352
Jerry Foster	Greater Mercer TMA	Executive Director	jfoster@gmtma.org	609-452-1491
Mark Villinger	Ocean County Dept. of Planning	Principal Planner	MVillinger@co.ocean.nj.us	732-929-2054
Victoria Pecchioli	Ocean County Dept. of Planning	Principal Planner	VPecchioli@co.ocean.nj.us	732-929-2054
Jenny Jimenez	Ocean County Dept. of Planning	Planner Trainee	Jjimenez@co.ocean.nj.us	732-929-2054
John Ernst	Ocean County Engineering Dept.	Dir. of Engineering	JErnst@co.ocean.nj.us	732-929-2130
Mike Viscardi	NJ TRANSIT		mviscardi@njtransit.com	973-491-7183

Project Team

Name	Organization	Title	Email	Phone
William Riviere	NJDOT, OBPP	Project Manager	william.riviere@dot.state.nj.us	609-530-4646
Elizabeth Ward	The RBA Group	Planner (Project Manager)	eward@rbagroup.com	973-946-5736
Miike Dannemiller	The RBA Group	Principal Engineer (Technical Advisor)	mdannemiller@rbagroup.com	973-946-5626
Chris Stokes	Stokes Creative Group	Principal	cstokes@stokescg.com	609-859-8400
Nicole Pace	Stokes Creative Group	Public Outreach Specialist	npace@stokescg.com	609-859-8400





FROM: Liz Ward & Michael Dannemiller
TO: Bill Riviere
DATE: June 18, 2015
SUBJECT: Bay Head Complete Streets Bicycle and Pedestrian Plan
Visioning Workshop Minutes - June 10, 2015
RBA #J4666.10

Workshop Overview

A public visioning workshop was held on Wednesday, June 10 to introduce the plan to the public and to provide an opportunity for public input on visioning, goals, and priorities for bicycle and pedestrian travel in Bay Head.

The workshop was held as an open house format. Boards and materials explaining the project purpose, existing conditions, design treatments and Complete Streets were set up around the room. Attendees circulated at their own pace and the Project Team and Steering Committee members were available to answer questions and discuss issues. In addition, the public was asked to mark-up maps with destinations, opportunities and constraints and provide input on their vision and goals. There were also two presentations.

Attendance

The sign-in sheet is attached.

Project Team Members Present

- Bill Riviere, NJDOT
- Liz Ward, The RBA Group
- Mike Dannemiller, The RBA Group
- Nicole Pace, Stokes Creative Group

Insights from the Workshop

1. There are three separate business districts in Bay Head – 1. Bridge Avenue, 2. Mount Street, 3. Main Avenue (Route 35). All are located along or near the abandoned rail line.
2. Bicycle parking at the beach access points is perceived to be inadequate.
3. There is no wayfinding around Bay Head – the Clock is an ‘anchor’ or well recognized focal point in the center of town. Distances could be presented as number of steps or number of minute bike ride from the clock to major destinations. However, some in attendance were concerned about sign clutter.
4. There are more ‘close calls’ of bicycle crashes than those that get reported.

Action Items/Next Steps

1. RBA will draft a Vision Statement and Goals utilizing input and priorities gathered at the Workshop for Steering Committee review.
2. RBA will finalize and submit Existing Conditions Tech Memo
3. RBA will begin identifying a proposed bicycle and pedestrian network and developing concepts.
4. Stokes will post a video of the presentation to the project website.

Mapping Exercise Summary

Attendees identified destinations, preferred routes, barriers and areas in need of improvement, and opportunities. Images of the maps are attached.

Destinations

- Docks/access points along Twilight Lake
- Beach access points
- Mount Street shopping
- Yacht Club
- School
- Bridge Street
- Recycling Center
- Coming Soon:
 1. Shopper's Village, a retail development located on the east side of Scow Ditch with frontage along Bridge Avenue and Lake Avenue. It will include 6 commercial buildings and one residential building.
 2. A new restaurant on the west side of Scow Ditch along the north side of Bridge Avenue
 3. New Borough Hall

Preferred Routes

- Walking and Bicycling
 1. East Avenue (entire length)
 2. Lake Avenue (between Osborne Avenue and Bridge Avenue)
 3. Bridge Avenue (between West Lake Avenue and Lake Avenue)
- Walking
 1. Park Avenue along the lake (between Bridge Avenue and West Lake Avenue)
 2. From the Train Station to Twilight Lake along the abandoned rail line
 3. Twilight Road (between Birch Place and Lake Avenue)
 4. Birch Place
- Bicycling
 1. Grove Street (entire length)
 2. West Lake Avenue (between Bridge Street and Meadow Avenue)
 3. Club Drive (between Bridge Street and the Yacht Club)
 4. Through the municipal parking lot to the bike path

Barriers/Areas in Need of Improvements

- Multiple attendees expressed a need to for connections in the northwest area of the Borough near the railroad loop. Desired connections included:
 1. Western Avenue to Evergreen Drive
 2. Park Avenue to Evergreen Drive through the Recycling Property (Borough property)
 3. Evergreen Drive to Warren Place through the railroad loop and wetlands (NJ TRANSIT property)

4. About 500' along the abandoned rail line and then west through the wetlands along the southern edge of the railroad loop

Visioning Exercises

Attendees were asked to vote for their favorites among a list of goals, write key words related to their vision for walking and bicycling in Bay Head, and provide a video testimonial related to their vision.

Goals

- The goals that received the most votes were:
 1. Integrate bicycle and pedestrian planning into Bay Head's planning process (11 votes)
 2. Educate all users on their rights and responsibilities (9 votes)
 3. Develop a safe and continuous bicycle and pedestrian network (8 votes)
 3. Foster a culture that welcomes walking and bicycling for fitness and transportation (8 votes)

Vision

- Some of the key words that relate to participant's vision for Bay Head include:
 1. Maintaining the small town feel
 2. History/Heritage
 3. Ecology
 4. Safety
 5. Connected
 6. Economic vitality
 7. All ages
 8. Community

Video Testimonials

- Six residents provided their vision for walking and bicycling including recommendations. A link to the video will be provided on the project website.

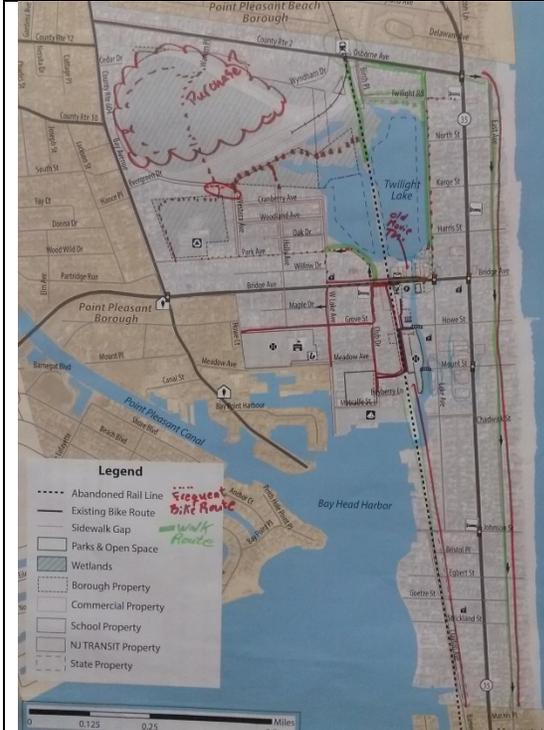
Overview of the Pre-Workshop Bicycle Ride

Prior to the meeting, Mike Dannemiller and Liz Ward led a bicycle ride around town with Tom and Char Charlton of GO Bay Head and Chip Tillson, Bay Head Public Works Department Supervisor. The purpose of the ride was to gain insight from the Steering Committee on issues related to bicycling and to demonstrate potential design treatments along selected corridors. Duct tape was used to simulate temporary roadway striping. The tape was removed after the field test. A demonstration contra-flow bike lane along East Ave was favorably received by the members of the Steering Committee in attendance. Demonstration advisory bike lanes along Club Drive were also favorably received and could be representative of a treatment along many local roads in Bay Head.

Attachments

- Images of the Marked-up Maps and the Vision and Goals Boards
- PowerPoint slides
- Sign In Sheet

Images of Marked-up Maps and Vision and Goals Boards



GOALS

Please vote for the goals most important to you using the sticker dots provided. You place all four stickers next to one goal or distribute the stickers across multiple issues.

Improve the health and wellness of residents by encouraging active lifestyles.	●●●●●
Develop a safe and continuous bicycle and pedestrian network.	●●●●●●●●●●
Educate all users on their rights and responsibilities.	●●●●●●●●●●
Promote sidewalks and streets as enjoyable public spaces.	
Prioritize safety for the most vulnerable road users when designing roads and intersections.	●●●●●
Foster a culture that welcomes walking and bicycling for fitness and transportation.	●●●●●●●●●●
Balance enforcement and public education efforts to improve safety for all users.	●●●●●●●●●●
Promote the bicycle and pedestrian network to attract businesses and visitors.	●●●●●●●●●●
Reduce the environmental impacts of the transportation system.	●●●●●
Improve connectivity to/with adjacent communities.	●●●●●●●●
Become more strategic and successful in competing for grant funding.	●●●●●●●●
Integrate bicycle and pedestrian planning into Bay Head's planning process.	●●●●●●●●●●

Post your ideas for goals here. Add stickers to vote for goals added by others.

Keep traffic slow moving	●●●●●
Reduce the bike traffic on sidewalks! Sidewalks are for pedestrians! (And children on tricycles) Reduce wrong-way cyclists!	●
Do not impede Motor Veh Traffic	●●●●●
Sidewalks for young children bike to be streets for adult bikes	●●●●●
Carriots are have impaired vision and reflexes Out deal with illegal bike driver	●
NJ Runs a deficit. Who pays for this What is cost per bike? per mile Bikers don't pay road tax when they aren't driving on it	●
Create walking paths where there are no good paths - places that people would walk when there are not sidewalks	

Borough of Bay Head Complete Streets Bicycle & Pedestrian Plan

Public Meeting #1 /Visioning Workshop
June 10, 2015




Introductions

- Bay Head
 - Mayor Bill Curtis
 - Steering Committee
- New Jersey Dept. of Transportation
- Consultants
 - RBA Group
 - Stokes Creative Group



Why Plan for Pedestrians?

- Walking is the **most fundamental of all transportation modes** and part of nearly every trip we make.
- Planning for pedestrians is **planning for everyone!**



Why Plan for Bicyclists?

- Bicycling has potential to **increase mobility options** for the relatively short trips that make up the majority of our daily travel
- **Quick and convenient** way to access many destinations



Purpose of the Plan

1. Create a **Community Vision**
2. Identify a **Priority Bicycle & Pedestrian Network**
3. Develop **Concepts** and **Guidelines**
4. Assess the potential for a **Path along the Former Rail Alignment** between the train station & town center
5. Identify **Recommendations** including an **Implementation Plan**

Schedule

- **March:** Kick-off
- **April thru June:** Existing Conditions
- **July thru August:** Analysis & Concept Development
- **September thru October:** Draft and Final Report





Existing Conditions

(or what we've learned so far)

Bay Head's compact size, flat terrain, mix of land use, historic buildings, and street grid network are



ideally suited for walking and bicycling!

Existing Conditions

(or what we've learned so far)

Bay Head is committed to improving



Image: Star News Group

the health and wellness of its residents!

Destinations

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> • Town Center (shops & municipal buildings) • Train Station • Twilight Lake • Centennial Park • Mount Street • Places of Worship (4) | <ul style="list-style-type: none"> • Bay Head School • Beaches • Post Office • Library • Tennis Courts • B & B's (4) • Yacht Club | <ul style="list-style-type: none"> • Recycling Center • Bay Head Historical Society and the NJ Boating Museum (both located just over the border in Point Pleasant) |
|---|--|---|



Challenges & Constraints

- Gaps in sidewalk network
- Connection between the train station and town center
- Congestion during summer months (roads & sidewalks)
- Unmarked crosswalks
- Missing curb ramps
- Wrong-way bicycle riding
- Availability of bicycle parking
- Constrained roadway widths
- Sidewalks not cleared of snow in the winter
- Safety – especially at intersections

Pedestrian and Bicyclist Crashes



- 5 bicyclist crashes at Bay Ave & Osborne Ave
- 3 bicyclist crashes at Bay Ave & Bridge Ave
- 3 bicyclist crashes at Mount Street & Route 35
- 3 crashes (1 pedestrian, 2 bicyclist) at Mount Street and Route 35
- 2 pedestrian crashes at Town Center

Opportunities

- Low-volume neighborhood streets are good bicycling and walking routes
- Former rail corridor has potential to be developed into a path
- Sidewalk network is nearly complete
- Available width:
 - Within the existing curb for bicycle facilities
 - Within the right-of-way for pedestrian amenities (wayfinding, trees, benches)

Developing a Vision

- What will success look like if the Bicycle and Pedestrian Plan is implemented?
- Designed to inspire; bold yet achievable



Example Vision Statements

Walnut Creek will provide **safe, convenient and well-maintained** pedestrian and bicycle facilities that are accessible to **people of all ages and abilities** as part of **complete streets** and a multi-modal transportation network.

Oahu is a bicycle- and pedestrian-friendly community where walking and bicycling are **safe, viable, and popular** travel **choices** for **residents and visitors** for all ages.

Walking and bicycling in Salt Lake City will be **safe, convenient, comfortable, and viable** transportation options that **connect people to places**, foster **recreational and economic development** opportunities, improve personal health and the **environment**, and elevate **quality of life**.

Complete Streets – Consider the Needs of All Travelers

- Complete Streets doesn't mean every street has sidewalks, bike lanes, transit
- Context sensitivity:
 - External context: land use
 - Internal context: who is likely to use the street - bicyclists, pedestrians, transit users, drivers?



What Do Travelers Want?

- Convenience
- Safety
- Comfort
- Access
- Reasonable travel time
- Low cost
- Reliability
- Speed?



What You Measure Matters?

What could we measure?

- Reduced speed
- Reduced crashes
- Increase walking
- Increase bicycling
- Decrease noise
- Increase neighborhood and business satisfaction
- Improved air quality



What are the Benefits of Complete Streets?



The Cost of Incomplete Streets

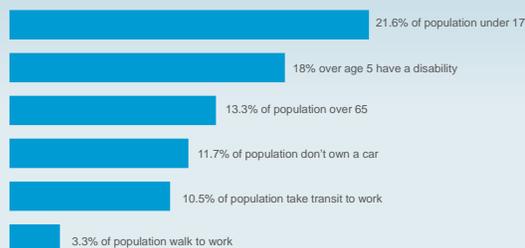
- Limited mobility for many
- Safety of all roadway users
- Public health and quality of life



The Cost of Incomplete Streets - Mobility

- Many are underserved by our incomplete streets

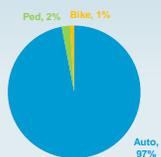
Non-Driving Population



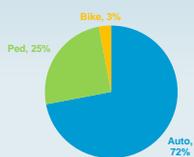
The Cost of Incomplete Streets - Safety

- Safety of all roadway users

Safety concerns: 276,926 total crashes in 2012



Safety concerns: 486 fatal crashes in 2012



The Cost of Incomplete Streets - Health

- Public health and quality of life

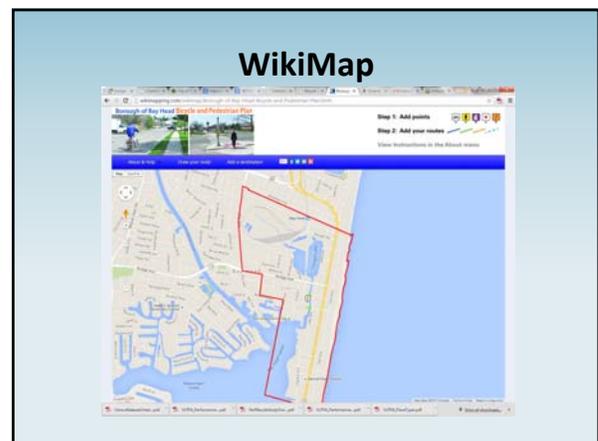
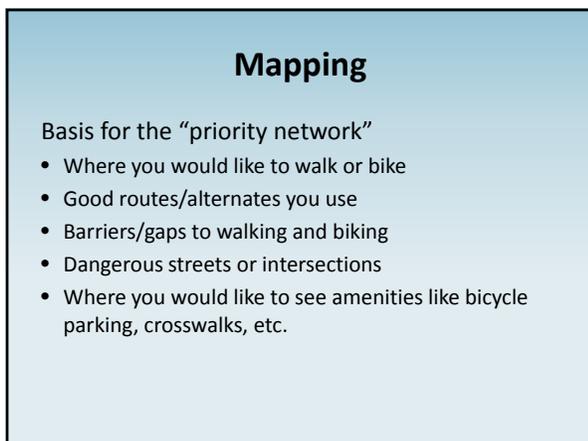
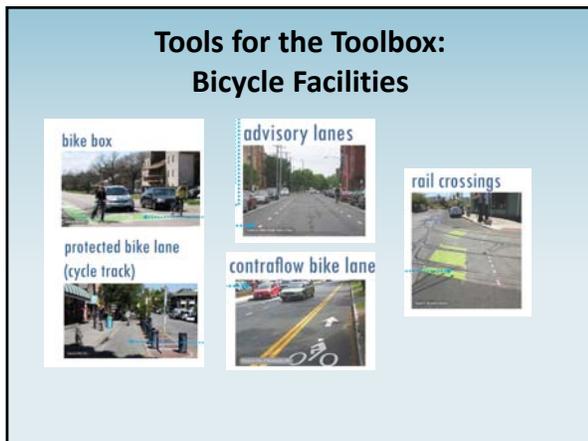


The Cost of Incomplete Streets

Bottom line: Transportation infrastructure has a very long life cycle. If we design only for cars and trucks, it will have repercussions for many, many years. We can't afford a future like that.

Tools for the Toolbox: Pedestrian Facilities







Next Steps

- Survey and WikiMap
- Analysis and Concept Development
 - Design Guidelines
 - Ordinance Review
 - Funding Sources
 - Implementation Matrix
- Public Meeting #2 – Wednesday, August 26th



Stations

1. Welcome / Plan Overview & Purpose / Survey
2. Existing Conditions
3. Vision and Goals
4. Complete Streets / Tools for the Toolbox
5. Mapping Exercise



NAME	ADDRESS	EMAIL ADDRESS
TOM CHARLTON	18 HARRIS ST.	TSCHARLTON@GMAIL.COM
Bob Hen	204 EAST AVE	HEINRF@AOL.COM
Silke Stutz	204 East Ave	scsem1@yahoo.com
Bonnie Delaney	719 Boone Jan Rd Pk1.	
Sue Costen	35 Mount St. Bay Head	bcurtis@bayheadnj.us
Robert Hoffman	BHPD	choffman@bayheadnj.us
PATRICIA GOSICK	336 W. LAKE AVE, BH	PATRICIA-GOSICK-14@MSD.COM
Jenny Jimenez		
Mike Viscardi	204 BAY ST TRANSIT	MVISCARDI@NJTRANSIT.COM
John Henry Morris	253 Evergreen Dr	jhmorris100@gmail.com
Kathy Winterstein	277 Osborne Ave	KWINTERSTEIN@CAPCAST.NET
Kathy Winterstein	'11	
Suzi Van Dine	111 Meadow AVE.	SUZIE VAN GRAN@gmail.com
Jim Kellogg	77 Johnson	jskellogg4@aol.com
Linda Harrington	512 Club Drive	buddharuby@yahoo.com



NAME	ADDRESS	EMAIL ADDRESS
Christine Hesse	356 West Lake Ave BH	LURBHVT@AOL.COM
BRIAN MAGORY	1510 Bay Ave BH	smagory@aol.com
Chip Tillson	610 Lake Ave.	chippublicworks@unicon.net
JOHN ERNST	Deer County 129 Hooper Ave TR	JERNST@CO.OCEAN.NJ.US
Anthony Vence	42 Mount St. Bayhead	turner@comcast.com
MURPHY Tillson	508 CLUB DR '1	
Roger Faulkenbury	58 Bridgic Ave. Bayhead	r.faulkenbury@gmail.com
Mike Dannemitter	RBA	MDannemitter@rbagroup.com
MARY GRASS	2 TWILIGHT RD	Bayheadsands@aol.
Liz Ward	RBA	eward@rbagroup.com
Gail Zimmer	50 Mountain	
Ray Family	"	
Ray WADSEY		
Gail Zimmerman		
Peter & Joan Wright	416 Riverside Lane, Brielle	peten@wrightasset.com



NAME	ADDRESS	EMAIL ADDRESS
Anne Erbe Darren & Sarah	83 Osborne Ave. Bay Head	bayerbe@aol.com
JESSICA FASANO	421 RIVER AVE	





FROM: Liz Ward and Mike Dannemiller

TO: Bill Riviere

DATE: September 1, 2015

SUBJECT: Bay Head Bicycle and Pedestrian Plan
Public Information Center Minutes – August 26, 2015, 4:00-7:00pm
RBA #J4666.10

Workshop Overview

A Public Information Center (PIC) was held on Wednesday, August 26 to present findings and recommendations to the community and to solicit input and comments about the plan.

The PIC was held as an open house with a series of stations on various aspects of the project such as existing conditions, opportunities and constraints, vision and goals, concepts, recommendations, and programmatic improvements. Approximately 70 people attended the PIC. They circulated at their own pace and members of the Project Team and Steering Committee were available to answer questions and discuss issues.

Attendance

The sign-in sheet is attached.

Project Team Members Present

- Bill Riviere, NJDOT
- Liz Ward, The RBA Group
- Mike Dannemiller, The RBA Group
- Nicole Pace, Stokes Creative Group

Insights and Ideas from the PIC

1. Many people identified the intersection of Clayton Avenue, Johnson Street and Lake Avenue as an area in need of improvement. This area was the site of a recent serious bike accident involving a 10-year-old child and was the focus of much public discussion.
2. Many attendees expressed interest in developing a multi-use path on the abandoned rail right of way on the east side of Clayton Avenue.
3. More education for bicyclists, pedestrians and motor vehicle drivers on their rights and responsibilities is needed, especially during the summer months. Potential venues for education include the Bay Head Yacht Club, Bay Head's Summer Rec program, and the Bay Head Improvement Association (point of distribution for beach badges).
4. Lake Avenue
 - a. Some people asked if restricting (permit) or removing parking on one side of the street was an option. However, many of the residences along Lake do not have driveways.
 - b. Others suggested that Lake Avenue be converted to a one-way northbound street.
5. Questions were raised about speed bumps and maintenance, especially snow plows. There was also a question if kids on skateboards would use the speed humps as a jump.

6. There was some confusion regarding the legality of bicyclists riding on sidewalks. The state does not prohibit it but some municipalities limit or prohibit bicycles on sidewalks by local ordinance. There was a suggestion to create a “Walk your bike” zone along Bridge Avenue between Lake Avenue and Park Avenue.
7. There was a recommendation to add a crossing guard at the intersection of Clayton Avenue and Johnson Street.
8. A potential Boy Scout Eagle project could be on Helmet Safety. They could set up a station at the beach.
9. Many people would like to see the helmet law enforced. This could require hiring staff to enforce helmet use with a special focus on beach access roads.
10. Construction vehicles parking on the street narrows the travel lanes and limits visibility.
11. Temporary rumble strips were suggested as an alternative to speed humps as a way to calm traffic.

Action Items/ Next Steps

1. Post the documents from the PIC to the project website.
2. RBA will revise the concepts based on public input.
3. RBA will begin to draft the Plan for distribution to the Steering Committee at the end of September.
4. Bay Head will organize an “Action Committee” to begin planning for implementation of recommendations as soon as possible.

Attachments

1. Sign-in sheet
2. Summary of Comments
3. Survey Summary

NAME	ADDRESS	EMAIL ADDRESS
Bill Cuntis	Bay Head	bcuntis@bayheadnj.us
Dot Monks	Bayhead 820 East Ave	dot1818@gmail.com
Patricia Applegato	137 Oak Ave. BH	BH Clerk@Verizon.net
MR+MRS Joseph Fodiso	754 CLAYTON AVE	ToDiscoJH@Yahoo.com
Sgt. John LaSpina	Bay Head P.D.	jlaSpina@bayheadpolice.org
Chip Tillson	610 Laker Ave.	BHPublicworks@vivilon.net
Tim Conely	548 Maria Ave	
Rae Ken	71 Goetze St	
Viviana Dughi	56 Johnson	ginnydughi@aol.com
Melissa Nugent	45 Bridge Ave Bay Head	mlisshugent@yahoo.com
Jenny Jimenez	129 Hooper Ave. Toms River NJ	jjimenez@co.ocean.nj.us
George Schweickert	70 Osborne Ave BH	mgeschwick@gmail.com
John HUNEKE	716 CLAYTON AVE BH	jphnhuneki@Comcast.net
Swany Peter Broshhek	209 Osborne Ave BH	SBRDSHEK@LMCOFFACTNERS.com
Dz. I MARCOUS	62 Egbert ST.	



NAME	ADDRESS	EMAIL ADDRESS
Paul Powell	179 Budge Ave	PaulPowell@yahoo.com
MIRIAM NARCOS	62 EGERT ST.	
FRANK ROMAN	425 EAST AVE	FRONAN@GMAIL.COM
ANNA BENTH	939 Lagoon Lane	anyabarr@verizon.net
Peter Lordy	548 MAIN AV.	
MARISE GORNBATH	400 EAST AVE	MARSETG@aol.com
BARRY PEARCE	94 BRIDGE AVE BAY HEAD, NJ 08749	pearceb2@gmail.com
Judy Dahl	734 Clayton Ave	
Meg Selling	60 Johnson St.	megselling@gmail.com
Nancy Mignon	61 Johnson St.	lucasmignon@yahoo.com
Betsy Vreeland	72 Goetze St	vreelandfamily@yahoo.com
Michael & Maureen Staub	336 East Ave	JerseyShoreIrish@gmail.com
Bonnie Hurley	506 West Lake	Hurleyt3@aol.com
Ruth Hundel	716 Clayton	rrhundel@comcast.net
Robert Grassi	654 Lake Avenue	GmtBayheadyachtclub.org



NAME	ADDRESS	EMAIL ADDRESS
Jinde Hammer	512 Club Dr	
John Johnson	290 Bridge Ave.	
ARRIGO COURT	528 WEST LAKE AVE	
GUNN + DICK MARTIN	568 EAST AVE.	
Lynn Hanington	659 East Ave.	
LeMellie Peltre Sella	37 Kango	
Sharon Jones	549 East Avenue	
Kathleen Fell	137 Bridge Ave	
Jerry Foster	15 School Rd Farnham	jfoster@gmtma.org
Shelden Pisanj	27 Bay Pt. Harbour Pt Fls	sheldeno@aol.com
for the myth group		
Mary S. Glass	2 TWILIGHT RD	
Wini Kozlowski	560 Lake Ave	winkozlowski@hotmail.com
Sally Younghaus	630 Lake Ave	Sallyyounghaus@comcast.net
Shelden Blatow	231 Lake Ave	sheldengwriter@yahoo.com



NAME	ADDRESS	EMAIL ADDRESS
JOSEPHINE HERO	173 BRIDGE AVE	hero893@comcast.net
Annie Huneke	716 Clayton Ave	anniehuneke@gmail.com
Kate Walden	716 Clayton Ave	kate.walden@yahoo.com
Zoo Zoo Stacks/Ro-Find	43 Mount St.	zzstackles@gmail.com
ANN CASTAGNOLA	409 LAKE AVE.	acastagnola@comcast.net
JON YOUNGSHANS	524 LAKE AVE	jonyoungshans@mac.com
Jennifer Szot	830 Clayton Ave	jenniferszot@gmail.com
Kathy Wintersteen	277 Osborne Ave	KWINTER12@COMCAST.NET
Phil Wintersteen	277 Osborne Ave	TOBYW276@COMCAST.NET
Sherry Urner	42 Mount St	SURN2K@comcast.net
Kim DUNCAN	55 EGBERT ST	Kimiskey@gmail.com
SUSAN BRISTOL	800 EAST. AVE.	SPBARCH@AOL.COM
Jennifer Rustum	57 Egbert St.	jrustum@comcast.net
Joan Siboni	348 East Ave	joansiboni@gmail.com
Page Rustum	840 East Ave	prustum@gmail.com



Borough of Bay Head Complete Streets Bicycle and Pedestrian Plan PUBLIC INFORMATION CENTER COMMENTS

1. Kathy Wintersteen
 - Would like to see walking/biking network continuous including cross over the old NJ Transit on Twilight Lake.
 - Safety of utmost importance.
 - Training important – no one follows rules now – neither bike riders or cars seem informed.
2. S. Urner
 - Very important to consider one-way (S→N) on Lake Avenue – at least for summer. Avenue too narrow for 2 travel lanes, parking both sides, and bicycles.
 - Like Clayton Avenue immediate plan – must put emphasis on developing a multi-use lane on RR right of way.
 - Parking of big box trucks, big landscape trucks, construction equipment on our main traffic streets is “an accident waiting to happen” with bikes especially. Consider enforced parking on side streets.
3. Joan Siboni
 - Great job
 - Glad to see plan for “contra” bike line on East Ave.
 - Anything to impose some order – we just all want to enjoy it and not compromise one another’s safety.
4. Jon Younghans
 - Johnson/Lake/Clayton – restrict parking closest to intersection. Signage around intersection.
 - Use railroad right of way on eastside of Clayton for cycle pedestrians.
 - Parking on one side of Rt. 35. Parking on one side of Lake Street. Bridge to Twilight along Lake Avenue west side lane and sidewalk.
5. No Name
 - Worst corner/intersections Clayton/Johnson and Johnson/Lake.
 - Need a stop sign at Clayton and Johnson and a crosswalk at that intersection.
 - Need a sidewalk on the east side of Clayton where the railroad was. Is that state or local land?
6. Maureen Staub
 - Educating the drivers, skateboarders, rollerbladers, bicyclists and pedestrians on the rules of the road is critical. The safe movement of all is based on trust – that we each know and abide by the rules. That means we need to ensure we know the rules and that they are enforced. If we can trust with confidence, then everyone will be much safer.
 - Enforce the helmet law and if possible consider passing a local law for bicyclists and skateboarder >17.

Borough of Bay Head Complete Streets Bicycle and Pedestrian Plan PUBLIC INFORMATION CENTER COMMENTS

7. Meg Sellig

- We used to live at 56 Johnson St. Such a crazy corner – I would hold my breath while sitting on the porch! Please put a specific bike lane on the old railroad (state land) along Clayton. Then please take away parking on Lake or make one way – Please! Thank you.

8. Lucas Mignon

- Murals at intersections not my favorite.
- Alternate side street parking causes cars to weave – unsafe for bikers.
- *Lower all side street speed to 15 mph.
- Make 2-way bike lane on 1 side of street. Use state right of way property for this on Clayton.
- Focus also on pedestrian crosswalk at Lake at BHYC East Dock.

9. Annette Todisco

- Speed bumps on Clayton
- Make Lake a one-way

10. No Name

- Thank you for trying to improve the biking in BH. It is long overdue – too many cars on Lake. Johnson/Lake intersection is a disaster and sidewalk additions are a must. Thank you.

11. Silke Stutz

- Most ideas/recommendation ok.
- Osborne Ave. – NOT!! Playing chicken – traffic is not a good idea on any street.
- People/pedestrians need to be on sidewalks.
- If Lake Ave. is turned into a one-way street: East Ave. should be one-way northbound, Lake Ave. one-way southbound.

12. Joseph Todisco

- Lake Ave. and Clayton would be best served with a 15 mph speed limit during summer.
- All properties on west side of street on Clayton should be required to have sidewalks.

13. Kathleen Tul

- I know it's among the things you're looking at but just thought I'd encourage consideration of asking the State to devote its RR ROW to the benefit of Bay Head's bicyclists and walkers, it would be awesome. Thanks for all you've done!

14. No Name

- Lake Ave. one-way

15. Chip Tillson

- All streets should have sidewalks on both sides. Especially around Twilight Lake, ? , Clayton Avenue, and East Avenue at north end.
- There should be an marked crosswalk at Park and Bay Ave. (across Bay Ave.).
- Improvements on East Ave. should extend through Mantoloking.

Borough of Bay Head Complete Streets Bicycle and Pedestrian Plan PUBLIC INFORMATION CENTER COMMENTS

16. Annie Huneke

- I like the proposals to improve safety on Clayton. I think the Clayton/Johnson curve is very important to get right and as a separate issue, the Johnson/Lake intersection. If you ride with the traffic on Clayton/Johnson and need to take a left on Lake (which so many people do, especially children), that left is very daunting and dangerous without any stops at that intersection. We need a 3-way stop at Johnson & Lake!!

17. Zsa Zsa Stackles

- An artistically created “functional” bike rack has been erected on the corner of my studio space. The artist is on-board for recreating individual sculptures of “dune fencing” bicycle racks to suit any area needing a rack or two. My design is conducive to the beach feel of the community while basically blending into its environment. Please stop by ReFind on Mount to view for yourself.

18. Ann Castagnola

- Your presentation at the firehouse is excellent! The organization is outstanding! The plans will surely enhance the community while providing safety for all. Thank you.

19. Susan Bristol

- The suggestions (or concepts) for specific streets are sound and generic enough not to be controversial.
- These suggestions have limited long term benefits without conceptual linkage to regional conditions/opportunities (beyond municipal border).
- The street sections/prototype lane diagrams must be incorporated to landscape, environmental and green stormwater/rain gardens concepts. Environmental issues in relation to infrastructure are not just wildlife constraints (poster #3) but opportunities (to filter street runoff, etc.).
- Lake Avenue “walkway” should be a boardwalk (not paved) and under it be pervious surface.
- Traffic calming strategies could be implemented in more locations than Bridge and Bay.
- Train station main section could be more rigorous intersection. A box and special marking at train crossing (so therefore, not a “mid-block” condition).
- Enhancements – Small extensions and infrastructure to create bike and pedestrian destinations (area water, into marsh, at reconstructed wetland, waterview, etc.) connected to bike/walk lanes.
- Action plan? How related/become catalyst for integrated infrastructure improvements at bike/path interventions.

20. George Schweickert

Background:

- Osborne is a main east/west street on the north side of town; wide street with parking lanes on both sides.
- No stop signs exist through the entire length of the street, except for the traffic light at Main Avenue intersection.
- About midway, train tracks may slow down vehicle traffic temporarily
- Otherwise, vehicle traffic generally moves fast; only immediate residents obey 25 mph speed limit

Borough of Bay Head Complete Streets Bicycle and Pedestrian Plan PUBLIC INFORMATION CENTER COMMENTS

- Weekends see much heavier traffic; many more cars originate from Lake Ave, going either way on Osborne, or terminate on Lake from Osborne from either direction (challenge for vehicles and bikers trying to work through that intersection)
- On the east end of the street (east of the tracks), cars going east will routinely speed up to make the light at Main Ave; cars going west will speed up to cross the tracks before the gates go down (once drivers hear the bells)
- It seems that most bicyclists and mid- to older-teens heading to or from the beach, and bike in “swarms,” biking across the entire street, periodically checking behind and ahead to decide if the swarm moves to the left or right lane when cars approach. Lots of chit-chat within the swarms. At times, not all bikers follow the swarm, making it more challenging for drivers in both directions. Can’t say that I have ever seen single-file biking.
- On weekends, most street parking spots are filled, forcing bicyclists into car lanes for the swarms.
- Some family bikers, but not many.
- Bike speed is generally moderate to fast.
- We see some handlebar riders, but fewer over the past few years.
- Very few bike helmets.

Suggestions:

- Better bike education on safer locations (e.g., lanes) for bikers.
- **Biker education must extend to Point Pleasant schools, since most young bikers are not locals.**
- Enforce biker helmet rules
- More focused attention on vehicular speed limit enforcement.
- Speed bump(s), especially between tracks and traffic light at Main Avenue

Other questions:

- On Rte. 35, what do the insignias painted on the vehicle lanes mean? Do cars “defer” to bikers? What does that mean? What are rules and how are they enforced? Especially for out-of-towners?

Borough of Bay Head Complete Streets Bicycle and Pedestrian Plan PUBLIC INFORMATION CENTER SURVEY RESULTS

SURVEY RESULTS (27 TOTAL)

QUESTION 1: HOW DO YOU RATE OVERALL WALKING CONDITIONS IN BAY HEAD?

Excellent:	2
Good	16
Fair	9
Poor	0

WHY?

Excellent:	<ul style="list-style-type: none"> • There are many more cars & people in Bay Head than in years past
Good	<ul style="list-style-type: none"> • Sidewalks, and car drivers are accepting of walkers • Some crowded sidewalks with plantings • Varies from street to street • Traffic/speeders
Fair	<ul style="list-style-type: none"> • Broken sidewalks • Decent sidewalks in most places • Walking on East Ave. is haphazard especially on summer weekends. People walk >2 abreast blocking traffic; cars drive at excessive speed, very little enforcement • Much traffic, summer visitors who aren't sure of where they are going (whether driving, biking or walking) • More sidewalks on Clayton Ave. • People walk on wrong side of road • Sidewalks uneven or broken • Bad sidewalks • Sidewalks uneven/missing • Not enough crosswalks
Poor	N/A

Borough of Bay Head Complete Streets Bicycle and Pedestrian Plan PUBLIC INFORMATION CENTER SURVEY RESULTS

QUESTION 2: HOW DO YOU RATE OVERALL BICYCLING CONDITIONS IN BAY HEAD?

Excellent:	0
Good	7
Fair	11
Poor	7

WHY?

Excellent:	N/A
Good	<ul style="list-style-type: none"> • Flat land, I ride 3 seasons, not just summer- summer would rating would be fair • Just more people • This varies (street to street) also
Fair	<ul style="list-style-type: none"> • Sharrows are not a bike plan. Infrastructure needs to be re-aligned for safe bike passage-make it a priority • Parked trucks and cars make visibility poor. We need to enforce parking restrictions on contractors—police not tough enough • No one following rules • We could use a bike lane down 35 because I bike to Seaside and in Bay Head we have to share the road • Not following cycling laws
Poor	<ul style="list-style-type: none"> • No shoulders, erratic sidewalks • There is no room on 35. Bicyclists are at risk on being hit by moving vehicles and even by parked cars when doors are opened into their path • Much traffic, summer visitors who aren't sure of where they are going (whether driving, biking or walking) • Dangerous • Cyclists cannot see around vehicles—vehicles parked everywhere

QUESTION 3: HOW IMPORTANT IS IT TO YOU TO IMPROVE WALKING AND BICYCLING IN BAY HEAD?

Very Important	24
Somewhat Important	3
Not Important	0
Only Improve Walking	0
Only Improve Bicycling	0

Borough of Bay Head Complete Streets Bicycle and Pedestrian Plan PUBLIC INFORMATION CENTER SURVEY RESULTS

QUESTION 4: WHAT DO YOU THINK ARE THE THREE THINGS A BICYCLE AND PEDESTRIAN PLAN NEEDS TO ADDRESS?

- Driving behavior
- Cyclist obedience to laws/rules
- Community embracement of the plan
- Education
- Consistency of enforcement
- Possibility of building multi-use plan along RR right-of-way
- Safety, safety, safety
- Space to provide greater safety
- Knowledge of NJ code
- Citizen's manners
- Lights, brakes, bell, helmet, kick-stand
- Speed bumps
- Educating drivers, bicyclists and pedestrians on the rules/laws
- Bike/pedestrian lanes provided N/S
- Helmet law enforced--- can we make it mandatory for >17 years of age?
- One side parking on Lake Avenue, both sides ok on Sunday from Mount to Howe on Bridge
- Dedicated bike lanes
- Reduction in parking
- Clearer marking at crosswalks
- Bicycles need to pay attention to people
- Rider education
- Driver awareness
- Strict helmet enforcement
- Clean up sidewalks
- Lights for bikes
- Helmets for kids
- Car speed
- Right on red issues
- More signage
- Crosswalks across East Ave at all beach paths
- 15mph speed limit on East Ave
- More stop signs and speed bumps on East Ave
- Safety for pedestrians/bike riders
- Design to blend into the charm of Bay Head
- Safety for cars
- Lower speed limits
- Insist on kids wearing helmets
- Bicycle lights required at night
- Better bicycle racks near the bakery

Borough of Bay Head Complete Streets Bicycle and Pedestrian Plan PUBLIC INFORMATION CENTER SURVEY RESULTS

- Lake Ave parking near Johnson St.
- Crossing guard at Johnson, Clayton
- Sidewalks on Clayton Ave
- Cars need to slow down when they see a biker or walker (age 10)
- Public following rules of road
- Bushes cut to provide visibility
- More cross-town access
- Bike lane down 35
- Advertise biking on the same side as traffic is going (age 12)
- Advertise walking on the opposite side of the road than the side that the traffic going your direction (age 12)
- Separate cars, bikes and pedestrians
- True bicycle paths
- Enough sidewalks
- Speed of vehicles through town
- Lower speed on East Ave to 15mph
- Put stop signs facing north on East Ave at every beach crossing
- Put speed bumps on East Ave
- Cyclist not going with flow of traffic
- No texting while cycling
- Wear helmets
- More crossing guards in winter

QUESTION 5: COMMENTS?

- I want to safely ride from Point Boro to Beach (Bay Head) and back
- Bicycles need to obey the rules
- It's an extremely difficult situation. We can't afford to limit the parking as more people bring more cars
- I'd suggest that you do to Clayton/Lake what you did to East Ave—only North bound- all the way
- Crosswalks needs to be monitored more, no one stops.
- On East Ave many cyclists are speeding
- We have 500 plus children riding bikes to/from Bridge all summer- we need to help them ride safely
- They should make a bike lane cause it's the main use of transportation in the summer months (age 10)
- Use electronic signs flashing bicycle rules



FROM: Elizabeth Ward, Project Manager
Mike Dannemiller, Principal Engineer

DATE: December 10, 2015

MEETING: Wrap-up Meeting, December 9, 2015

SUBJECT: Bay Head Complete Streets – Bicycle and Pedestrian Plan
RBA #J4666.10

ATTENDEES: Sign-in Sheet attached

Purpose

Close out the project and steering committee involvement and to discuss the process of implementing the recommendations of the Borough of Bay Head Complete Streets Bicycle and Pedestrian Plan.

Meeting Summary

- The Borough has already begun implementing some recommendations.
 - Three bike safety events are scheduled for the spring and summer – one at the school, one at the yacht club, and another through the Bay Head Improvement Authority. Greater Mercer TMA is assisting with the events.
 - There are also plans to include educational flyers in the packets distributed to summer residents and renters.
- Coordination between departments within Bay Head (police, public works, school, etc.) as well as with the State, County, and NJ TRANSIT is going to take effort. The Borough would like appoint a coordinator. This will help to synchronize efforts on applying for grants, and ensure that Bay Head groups combine efforts and not compete for the same grants.
- There are plans to invite the Steering Committee members to continue their involvement as the Advisory Committee to oversee implementation of the Plan, including prioritizing projects.
- There was discussion of whether to adopt a Complete Streets policy. Jerry Foster of Greater Mercer TMA offered to help draft a policy. Bill Riviere also mentioned that the Voorhees Transportation Center at Rutgers University provides resources, as does the National Complete Streets Coalition.
- The Borough will follow-up with NJ TRANSIT regarding installation of additional bike racks at the station.
- Another service Greater Mercer TMA provides is assistance with putting together Safe Routes to School and Transportation Alternatives grant applications.
- There will be a Council presentation regarding marking crosswalks at unsignalized along Route 35 on January 4th, 2016 at 7:00pm. All are welcome to attend.
- A memo on the next steps to advance a path across Twilight Lake will be finalized by the end of March.

Signature	Name	Organization	Email	Phone
	Andy Frizzell	President, Bay Head School Foundation	frizzell@comcast.net	732-714-0692
	Bill Curtis	Mayor, Borough of Bay Head	bcurtis@bayheadnj.us	732-892-0638
	Bill Riviere	Project Manager, NJDOT, Office of Bicycle & Pedestrian Programs	william.riviere@dot.state.nj.us	609-530-4646
	Char Charlton	Co-Chair, GO Bay Head!	charlainecharlton@gmail.com	973-747-2699
	Charles (Chip) Tillson	Supervisor, Public Works Department	hppublicworks@verizon.net	732-899-6782
	D'Arcy Rohan-Green	Council President, Borough of Bay Head	darcygreen@gmail.com	732-295-0117
	Diane Cornell	President, Bay Head Home & School Assoc.	dmcornell@gmail.com	732-714-0692
	Elizabeth Ward	Planner, The RBA Group	eward@rbagroup.com	973-946-5736
	James Kellogg	Board Member, Bay Head Improvement Assoc.	ickellogg4@aol.com	973-376-1652
	Jenny Jimenez	Planner Trainee, Ocean County Dept. of Planning	jjimenez@co.ocean.nj.us	732-929-2054
	Jerry Foster	Greater Mercer TMA	ifoster@gmtma.org	609-452-1491
	Joe Todisco	Fire Chief, Bay Head Fire Department	todiscojh@yahoo.com	732-233-0885
	John Ernst	Director of Engineering, Ocean County Engineering Dept.	Jernst@co.ocean.nj.us	732-929-2130
	John Henry Morris	Board Member, Bay Head Planning Board	Jhmorris100@gmail.com	732-233-0277

Signature	Name	Organization	Email	Phone
	Mark Villinger	Principal Planner, Ocean County Dept. of Planning	Mvillinger@co.ocean.nj.us	732-929-2054
	Mike Dannemiller	Principal Engineer, The RBA Group	mdannemiller@rbagroup.com	973-946-5626
	Mike Viscardi	NJ TRANSIT	mviscardi@njtransit.com	973-491-7183
	Robert F. Hoffman	Chief of Police, Bay Head Police Department	roberthoffmanjr@comcast.net	732-892-0632
	Roger Faulkenbury	Bay Head Business Assoc.	roger@therapeuticfitnessni.com	732-899-0920
	Sherry Urner	The Seaweeders	bayhead42@aol.com	732-882-9879
	Tom Charlton	Director, Bay Head Momentum	tcharlton@gmail.com	973-454-7352
	Brian Mazony	Councilman - Bay Head	bmazony@bayheadnj.us	732-600-1200
	Joseph Todisco	BAY HEAD FIRE CO	TODISCOJH@A100.COM	732-2330-8855
	Robert Sherman	Bay Head PD	RSherman@bayheadpolice.org	732-773-2637
	Robert Hein	Councilman - Bay Head	HEINRF@aol.com	703 628 - 3300

APPENDIX F: OCEAN COUNTY MULTI-MODAL TRANSPORTATION POLICY GUIDELINES



OCEAN COUNTY
MULTI-MODAL TRANSPORTATION POLICY GUIDELINES

The Ocean County Board of Chosen Freeholders fully recognizes the importance of multi-modal transportation and the ever increasing desire for safe bike routes throughout Ocean County. Cycling is not only an excellent form of recreation and exercise, but a growing means of affordable short trip transportation.

Wherever possible, off-road/bike paths should be encouraged. The County's own "Barnegat Branch Trail" is the off-road spine of the County bikeway system linking public parks, municipal bike paths and other regional features.

In those instances where an off-road trail is not possible, and a municipality wishes to advance a segment of bikeway along a County roadway, the following shall apply:

DESIGN CRITERIA

1. The proposed bike path or lane shall be part of a duly established "Bikeway" Plan and be identified with the applicable route markings.
2. The proposed bikeway should be off-road. If this is not possible, the design of the bike lane shall follow the criteria established in the "NJDOT Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines."
3. The design of all pavement marking regulatory signs and bike route identification signs shall comply with the requirements of the 2009 Edition of the "Manual on Uniform Traffic Control Devices" (MUTCD), as amended.
4. The proposed bike path/bike lane may not diminish the through volume capacity of the roadway.

PROCEDURES

1. Upon notifying the County of their intentions, any-municipality desiring to implement a bike path or bike lane in a County Right-of-Way shall subsequently submit the following for review and approval of the County Engineer:
 - a. Copies of the approved municipal bikeway plan identifying the extent and location of the segment in question.
 - b. A dimensioned plan prepared by the municipality's Engineer showing the design and layout of the bike path or bike lane, pavement widths, parking regulations, intersection treatments, pavement markings, regulatory signs and route markers in accordance with MUTCD designations and requirements.

c. A certification from the municipal Engineer that the proposed design meets or exceeds the preferred requirements of Chapter 3 of the “NJDOT Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines” and Part 9, Traffic Control for Bicycle Facilities, 2009 MUTCD, as amended.

2. Upon approval by the County Engineer, the municipality will adopt an ordinance to create the bike path or lane, including applicable penalties, and a maintenance provision.

3. Upon concurrence of the Board of Chosen Freeholders, the municipality will, at its expense, install or cause to have installed all pavement markings and regulatory signs and the Municipal Engineer shall inspect and provide written certification that the project has been built in compliance with the approved plans and referenced standards, subject to the final approval of the County Engineer.