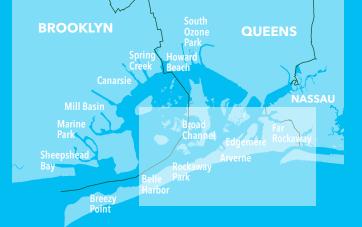
Rockaway & Broad Channel

This study area consists of the neighborhoods of Belle Harbor, Neponsit, Rockaway Park, Seaside, Somerville, Arverne, Edgemere, Bayswater, Far Rockaway, and Broad Channel.



Waterfront and Recreational Amenities

The Rockaway Peninsula lies between Jamaica Bay and the Atlantic Ocean, offering recreational amenities on both bay and ocean sides. Broad Channel is a small community connected by bridges to Howard Beach and Rockaway Park.

Major destinations in the Rockaways and Broad Channel include:

- The Jamaica Bay Wildlife Refuge is a park and natural area affording incredible views of the waterfront and city skyline, as well as a nature center with information about birds and wildlife.
- Visitors to Rockaway Beach & Boardwalk can enjoy the sand and water, a variety of concessions, and the city's only surfing beach. Rockaway Beach is also home to a variety of playgrounds and other outdoor activities.
- Fort Tilden is a former military base which currently offers pristine beaches and trails along with ball fields, art space, picnic areas, and a large community garden.
- Jacob Riis Park is a popular beach offering swimming, sunbathing, picnicking and kite flying. Facilities for baseball, basketball and volleyball are also available, along with a pitch and putt golf course via the Brooklyn Golf Center.

Focus Areas

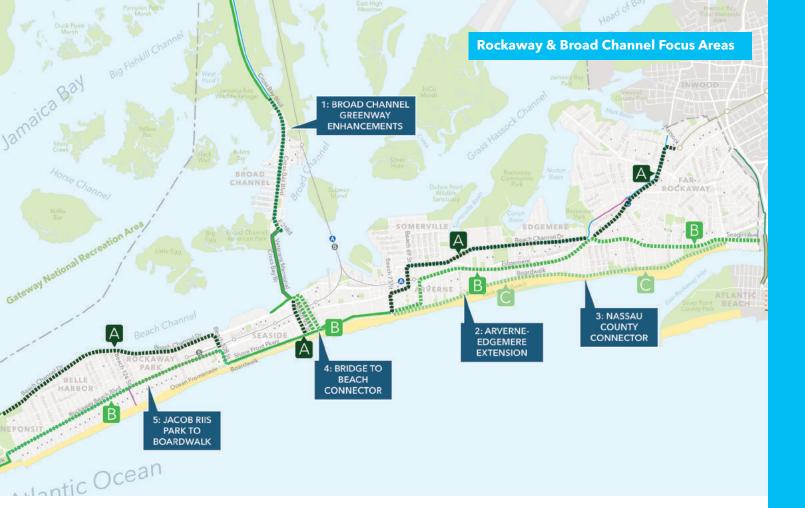
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Alternatives for development within each focus area were discussed at a community workshop on October 16, 2014. Within the Rockaway & Broad Channel study area, five focus areas were identified through the workshop process for further analysis:

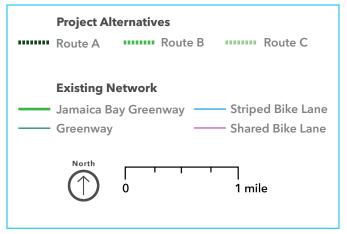




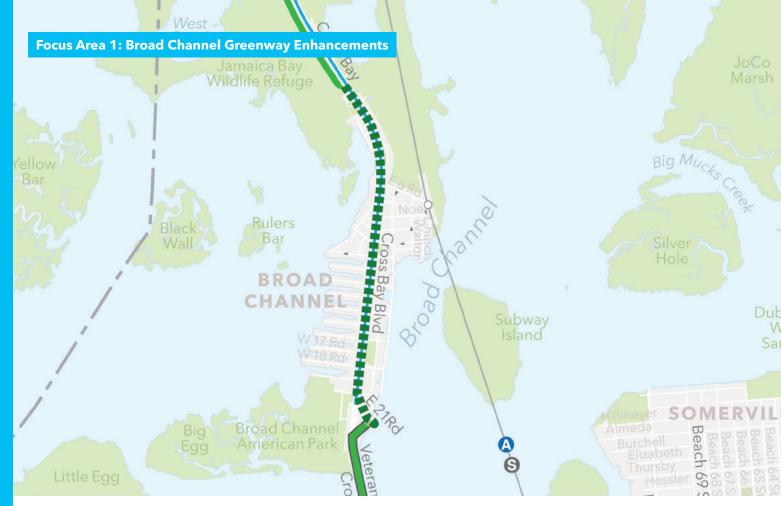




- Focus Area 1: Broad Channel Greenway Enhancements examines alternative enhancements to the segment between the Jamaica Bay Wildlife Refuge and the Cross Bay Bridge.
- Focus Areas 2 and 3: The stretch between Shore Front Pkwy and Far Rockaway was examined as two focus areas: Arverne Edgemere Extension and Nassau County Connector.
- Focus Area 4: Bridge to Beach Connector looks at route alternatives for connecting the Cross Bay Bridge to Rockaway Beach.
- Focus Area 5: Jacob Riis Park to Boardwalk explores possible Greenway enhancements between Shore Front Pkwy and Jacob Riis Park.







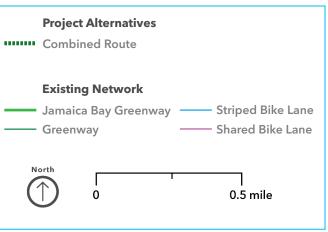
Focus Area 1: Broad Channel Greenway Enhancements

Existing Conditions

The existing section of the Jamaica Bay Greenway in Broad Channel is a two-way path connecting the Addabbo Bridge through the Jamaica Bay Wildlife Refuge, ending roughly 1,000 feet south of the Visitor's Center. There is no crossing available for northbound cyclists to enter the Greenway at its southern terminus. The remaining route through Broad Channel is a mixture of bicycle markings and striped bicycle lanes. Heavy traffic, including buses and trucks, and high vehicle speeds make the on-street portion of the route on Cross Bay Blvd uncomfortable for novice riders or children.

The purpose of improvements in this focus area is to:

- Enhance the existing route through Broad Channel along Beach Channel Dr.
- Enhance wayfinding to the Cross Bay Bridge.





Route Options

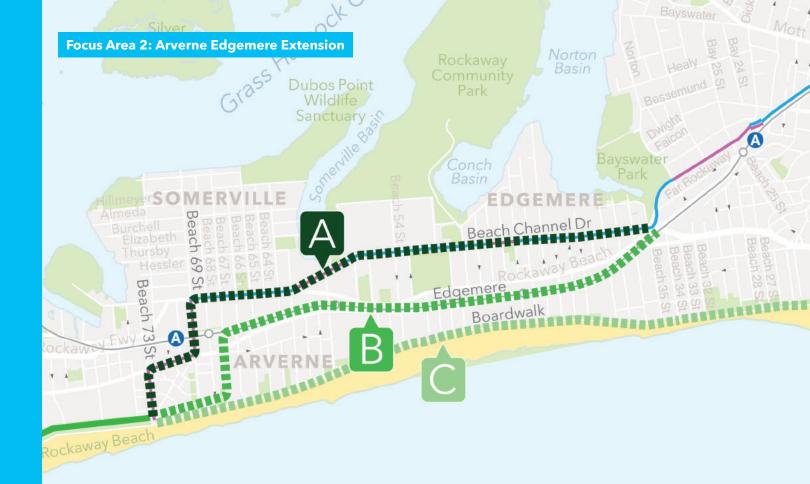
Cross Bay Blvd is the only through-street in Broad Channel, therefore it is the only possible route in this section of the Greenway. However, several potential enhancements to the existing configuration were considered in the planning process.

Selected Route

Cross Bay Blvd

In the short-term, existing conditions will be largely maintained while current flood mitigation capital projects are ongoing. The community's primary concern in this area is to maintain the availability of high-tide parking on the median. This parking is not currently allowed, but is accepted during emergency events. The currently ongoing capital work in the area to raise the streets should resolve the issue of high-tide parking. On-street bicycle markings are proposed on E 21 Rd and Van Brunt Rd to guide Greenway users to the path entrance on the Cross Bay Bridge.





Focus Area 2: Arverne Edgemere Extension

Existing Conditions

This focus area includes Arverne, Edgemere, and Somerville. There are existing east-west bicycle facilities on Beach Channel Dr between Beach 69th St and the Nassau County line at Hassock St. These facilities are a mixture of shared, striped, and buffered bicycle lanes.

The purpose of improvements in this focus area is to:

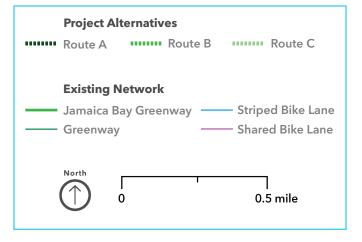
• Enhance wayfinding and north-south connections between Cross Bay Bridge, esplanade, and Rockaway Beach and Boardwalk.

Route Options

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Option A: Enhance Existing On-Street Routes

Beach Channel Dr is a heavily trafficked bus and truck route. Bicycle facilities on Beach Channel Dr are a mixture of shared, standard, and buffered bicycle lanes. Beach Channel Dr runs 1,500 feet north of and parallel to the Boardwalk between Beach 69th St and Beach 35th St. In sections where the route consists of shared lane





markings, the facility can be enhanced by removing parking on one side and installing standard and buffered bike lanes.

Option B: Rockaway Fwy Path

Rockaway Fwy lacks pedestrian facilities, but as it runs underneath the elevated A train, is also a major pedestrian route. Because of the pillars holding up the A train, options to modify the roadway are severely constrained. Along this segment, the roadway runs parallel to Edgemere Ave, closely enough that the two roadways could function together with westbound traffic on Rockaway Fwy and eastbound traffic on Edgemere Ave. This configuration would allow a path to be installed in between the pillars.

Option C: Designate Boardwalk as Greenway

The Boardwalk west of Beach 60th St is currently closed. It is being reconstructed as part the Rockaway Boardwalk Reconstruction project and is scheduled for completion by 2017. The new design will include bicycle lanes. However, existing regulations prohibit cycling at peak times.

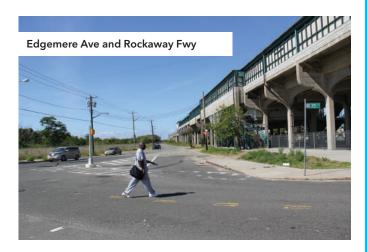
Selected Route

Designate Boardwalk as Greenway

The boardwalk is considered to be a high-quality recreational and transportation corridor, and therefore serves as the Greenway. Walking, jogging, skating and bicycling have been popular activities on the Boardwalk since its construction. Currently, bike riding is prohibited on weekends and holidays from Memorial Day weekend to Labor Day between 10 am and 6 pm, as per NYC Parks policy.

Facility Design

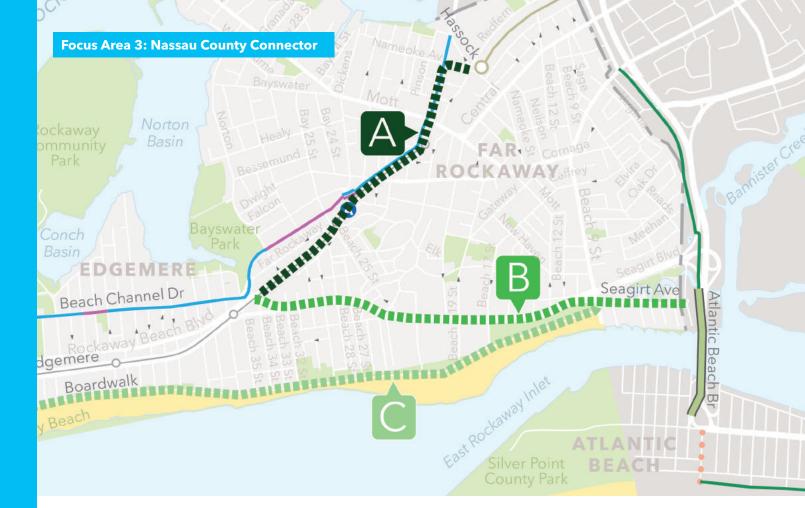
Ongoing reconstruction of the Boardwalk includes bicycle lanes. DOT will continue to work with NYC Parks to address bicycle access and safety issues.



Rockaway Boardwalk







Focus Area 3: Nassau County Connector

Existing Conditions

There are a combination of shared lane and standard bike lanes between Beach 35th St and Far Rockaway on Beach Channel Dr. While the Boardwalk can act as a Greenway, it is currently closed to cyclists on weekends and holidays from Memorial Day to Labor Day between 10 AM and 6 PM as per NYC Parks policy. Therefore, alternative routes were presented for consideration at a community workshop on October 16, 2014.

The purpose of improvements in this focus area is to:

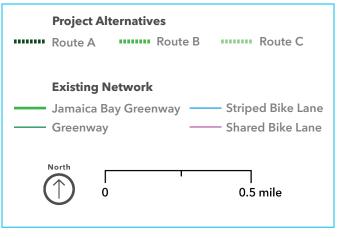
• Enhance bicycle and pedestrian access to the waterfront and Boardwalk.

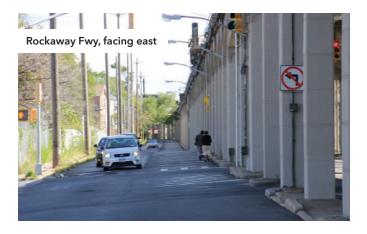
Route Options

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Option A: Rockaway Fwy

Rockaway Fwy lacks pedestrian facilities, but as it runs underneath the elevated A train, is also a major pedestrian route. Because of the pillars holding up the A train, options to modify the roadway are severely constrained. Along this segment, a path with a mountable





curb could be installed to accommodate pedestrians, with standard bicycle lanes installed on the street.

Option B: Seagirt Blvd

Seagirt Blvd is a wide roadway with a wide, landscaped median. It is the only direct east-west road in Far Rockaway. Extra roadway capacity could be converted into a parking protected bicycle lane along the median, with additional pedestrian crossing space at median tips. This design would calm traffic, while also providing a Greenway route alternative to the Boardwalk. At Beach 9th St, the route would turn down Seagirt Ave to connect to the Nassau Expressway Greenway just beyond Beach 2nd St.

Option C: Designate Boardwalk as Greenway

The Boardwalk between Beach 35th St and Beach 9th St is currently open. It is slated for reconstruction as part the Rockaway Boardwalk Reconstruction project by 2017. The new design will include bicycle lanes. However, existing regulations prohibit cycling at peak times.

Selected Route

Designate Boardwalk as Greenway

The Boardwalk has long been a popular route for waterfront recreation. Walking, jogging, skating, and cycling have been popular activities on the Boardwalk since its construction. The Boardwalk is considered to be a high-quality recreational and transportation corridor, and therefore serves as the Greenway.

Facility Design

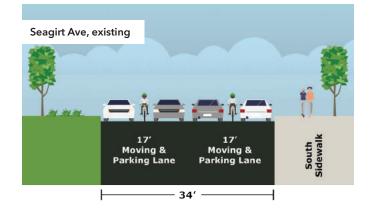
DOT will continue to work with NYC Parks to ensure that the Boardwalk is accessible to cyclists during peak season. Where the Boardwalk ends at Beach 9th St, shared lane bicycle facilities and pedestrian facilities will be installed on Seagirt Ave to connect to the County line.

Future Traffic Calming Project

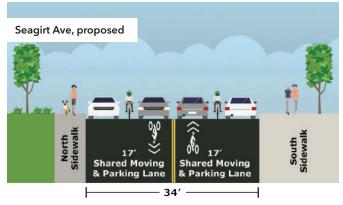
Rockaway Fwy and Seagirt Blvd should be evaluated for future traffic calming projects and pedestrian enhancements. Bicycle lanes may be considered as part of future traffic calming projects.

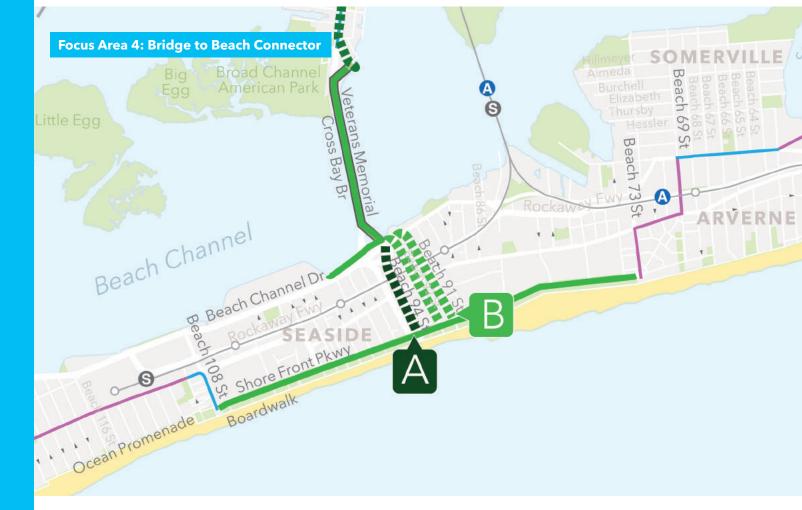












Focus Area 4: Bridge to Beach Connector

Existing Conditions

The Cross Bay Bridge connects Broad Channel to Rockaway Park. An existing pedestrian ramp on the east side of the bridge allows Greenway users to cross the bridge. No pedestrian connection across Beach Channel Dr exists at the base of the bridge on the Rockaway side. In addition, no bicycle facilities connect the Bridge to Rockaway Beach.

The purpose of improvements in this focus area is to:

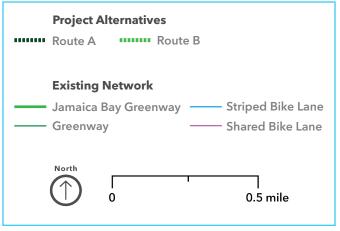
- Connect Broad Channel and Rockaway Beach.
- Connect the Jamaica Bay Esplanade underneath the Cross Bay Bridge to the neighborhood.

Route Options

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Option A: Direct Connection, Beach 94th St

Option A installs a two-way route on Beach 94th St, creating a direct connection between the bridge ramp and Cross Bay Bridge Esplanade and Rockaway Beach. This would place cyclists on a main road, while also





allowing for separation from most traffic. This option requires the installation of a signal at Beach 92nd St, Beach 94th St and Beach Channel Dr as well as geometric changes to the intersection. The design would also include additional parking on Beach 94th St.

Option B: One Way Pair, Beach 91st St and Beach 92nd St

This route installs shared bicycle lane markings on a oneway pair of residential streets. Disadvantages of this route include difficulty in crossing due to low visibility across Rockaway Fwy and no opportunity to provide separation from traffic.

Selected Route

Beach 94th St

A direct connection on a portion of Beach 94th St was strongly preferred by the community. However, two-way cycling traffic on Beach 94th St north of Rockaway Fwy was not preferred. The preferred route for southbound cyclists is instead to detour to an existing southbound street. Options for the southbound cycling connection include Beach 91st St to Rockaway Fwy and connecting from the Esplanade to Beach 95th St. The northbound route on Beach 94th St was selected based on its directness, ease of wayfinding, access to public uses such as the Queens Public Library, and partial separation from traffic.

Facility Design

Planned improvements include:

- Installation of a signal and crosswalk at Beach 92nd St and Beach Channel Dr.
- Northbound shared bicycle markings on Beach 94th St, between Shore Front Pkwy and Beach Channel Dr.
- Southbound contraflow bike lane along the median on Beach 94th St between Rockaway Fwy and Shore Front Pkwy.
- Southbound shared use markings on Beach 94th St or Beach 91st St.
- Safety improvements at the intersection of Rockaway Fwy and Beach 94th St.

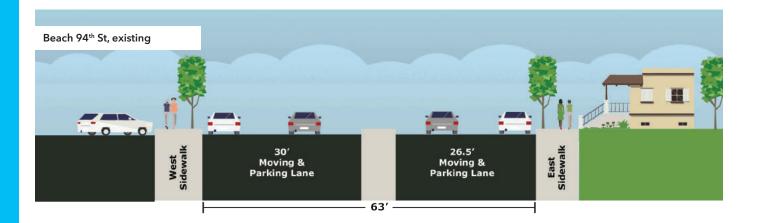
Future Enhancement Project

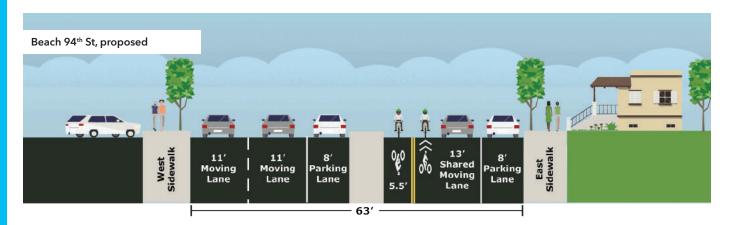
Capital build-out of safety improvements at Beach 94th St and Beach Channel Dr should be pursued as a Future Enhancement Project.



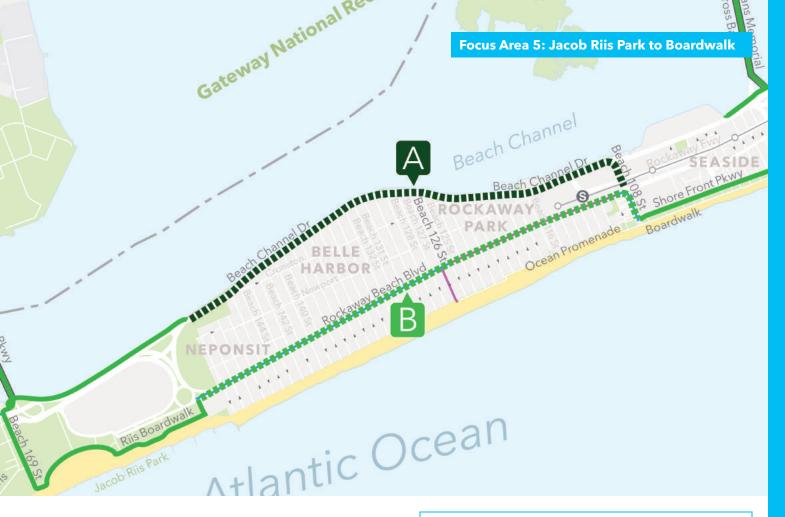








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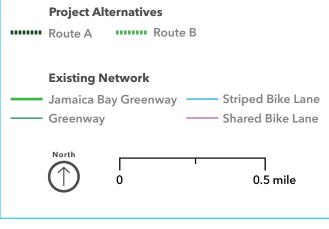


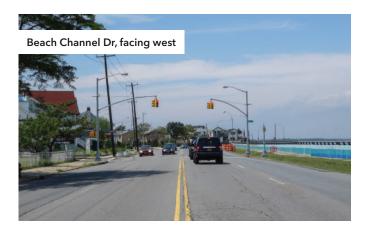
Focus Area 5: Jacob Riis Park to Boardwalk

Existing Conditions

The current Greenway route from Rockaway Park to Jacob Riis Park utilizes on-street bike lanes on Rockaway Beach Blvd. West of Beach125th St, this facility consists of buffered bicycle lanes. East of Beach 125th St, it is shared bicycle markings. Prior to damage from Hurricane Sandy, an alternative route existed along the Ocean Promenade Walkway, connecting to the Rockaway Boardwalk. This route will be reconstructed as part of Phase III of the Rockaway Boardwalk reconstruction project under EDC and NYC Parks.

Jacob Riis Park is accessible from the Jamaica Bay Greenway across the Marine Park Bridge. An esplanade along the Bay extends one-mile east from the bridge. This scenic route is enjoyed by joggers, cyclists, fishermen, and others. However, there is no connection to the esplanade from the neighborhood on its eastern end. Instead, the esplanade terminates at an uncontrolled stretch of high-speed, high-volume roadway.





The purpose of improvements in this focus area is to:

- Enhance the Greenway connection between the Jacob Riis Boardwalk and the Shore Front Pkwy Greenway.
- Connect the Jamaica Bay Esplanade to Neponsit and Belle Harbor.

Route Options

Option A: Create Bayside Esplanade, Beach Channel Dr

Option A creates a protected path along the Jamaica Bay waterfront by reallocating roadway width. This option would provide spectacular views of the Bay and Manhattan skyline. It would also provide a direct connection from the east to the existing Jamaica Bay Esplanade, with continuing connections to Jacob Riis Park, Fort Tilden, and the Marine Pkwy Bridge. This design would require the removal of one lane of traffic on a portion of Beach Channel Dr where excess roadway capacity exists.

Option B: Enhance Existing Route, Rockaway Beach Blvd

Option B enhances the existing route along Rockaway Beach Blvd. The most difficult section of the existing route is between Beach 116th St and Beach 111th St. Along this commercial stretch, Rockaway Beach Blvd is 34' wide and accommodates two-way shared vehicular and bicycle traffic and one lane of parking. Sidewalks are also extremely narrow along this stretch, with less than 5' of usable space on each side.

Selected Route

Enhance Existing Route, Rockaway Beach Blvd

Enhancing the existing route along Rockaway Beach Blvd was selected based on community preference to maintain four lanes on Beach Channel Dr, as well as the opportunity to connect to the Boardwalk at Beach 126th St when it is reopened. While this route does not offer waterfront views, it maximizes access to the Boardwalk and Jacob Riis Park.

Facility Design

In the short-term, the route will be maintained in its existing configuration. Where feasible, additional pedestrian safety improvements such as lead pedestrian interval signals and high-visibility crosswalks should be installed. Additional network connections should be investigated to connect to the Jamaica Bay Esplanade with a new signal at Beach 144th St.





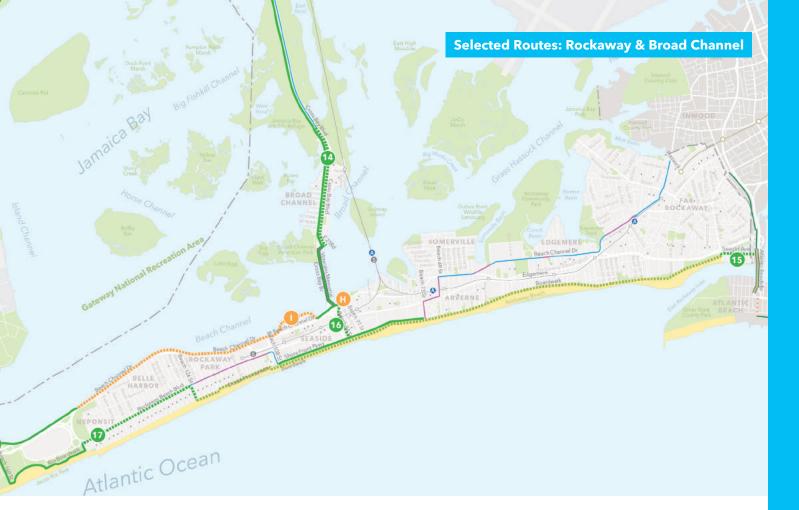
Reconstructed Boardwalk Path, planned



Future Enhancement Project

Additional pedestrian improvements along Beach Channel Dr are recommended as a Future Enhancement Project. Community feedback received during the planning process included support for installation of a Greenway along sections of the roadway where no lane removal would be required between Beach 116th St and Beach 123rd St.

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Selected Routes: Rockaway & Broad Channel

Planned Greenway Projects

14: Broad Channel Greenway Enhancements

- Cross Bay Blvd
- E 21 Rd/Van Brunt Rd

15: Nassau County Connector

- Beach 9th St (Boardwalk to Seagirt Ave)
- Seagirt Ave, between Beach 9th St and Beach 2nd St

16: Bridge to Beach Connector

- Beach 94th St between Beach Channel Dr and Rockaway Fwy
- Beach 94th St between Rockaway Fwy and Shore Front Pkwy

17: Jacob Riis Park to Boardwalk

- Rockaway Beach Blvd, between Jacob Riis Park and Beach 126th St.
- Beach 126th St, between Rockaway Beach Blvd and Ocean Promenade

Proposed Projects New or Enhanced Greenway Route Future Enhancement Project Bike Network Expansion Boardwalk Reconstruction Project Existing Network Jamaica Bay Greenway Striped Bike Lane Greenway Shared Bike Lane North 0 1 mile

Future Enhancement Projects

H: Beach 94th St Safety Improvements

• Work with MTA to improve pedestrian crossing at Beach Channel Dr and Beach 92nd St

I: Bayside Path

• Work with NYC Parks, DOE and private property owners to construct continuous multi-use path along waterfront