

BROOKLYN

WATERFRONT GREENWAY

DRAFT

**Columbia Street
Connector**
Improvement Plan
Winter 2012



Acknowledgements

The Columbia Street Connector Improvement Plan was created by Regional Plan Association Research Associate Paul Winters, with the assistance of Milton Puryear of the Brooklyn Greenway Initiative and Rob Pirani and Rob Freudenberg of RPA. Jeff Ferzoco and Ben Oldenburg of RPA supervised design and production. Scott Demel of Rogers Marvel Architects prepared the concept plan and rendering. RPA Summer Associate Ashley Wolff developed the background materials for this document.

We would also like to acknowledge Ted Wright of the New York City Department of Transportation, Nette Compton, Matthew Smith, Portia Dyrenforth, Marty Maher, and Mitch Murdock from the New York City Department of Parks and Recreation. Special thanks to Brian McCormick and Meg Fellerath of Brooklyn Greenway Initiative for leading community outreach efforts and organizing the design workshops for this project.

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Introduction

The Brooklyn Waterfront Greenway will connect a series of green spaces along its route, from large regional parks to smaller neighborhood open spaces. One of these opportunities to create new neighborhood green space is along the stretch of Columbia Street between Lorraine Street and the Eric Basin Pier.

The Columbia Street Connector project will attract Red Hook residents to the Greenway and the waterfront via Columbia Street and the Eric Basin Pier by providing a safer and greener pedestrian and bicycle route.

Plans for the Columbia Street Connector will respect the active use of Columbia Street by Red Hook businesses, while also maximizing opportunities for knitting together existing green spaces and other amenities.

Upgrades to the Connector corridor will enhance the streetscape by adding vegetation, green infrastructure for stormwater management, safety improvements for bicyclists and pedestrians, new places for community residents to rest and congregate, shade structures, and sites for the interpretation of local history.

Where feasible, green infrastructure technology will be promoted as a way to sustainably manage stormwater run-off that falls on the street while adding new greenery to the streetscape. Such opportunities to create new amenity and solve critical environmental challenges will be pursued for all portions of the route.

This book and the public process that it reflects offer a common vision for the future of the Columbia Street corridor through Red Hook. The concepts were developed at a community workshop held at the Red Hook Recreation Center in Brooklyn on April 26, 2011. The workshop provided a forum for local residents to voice their opinions about various aspects of the proposed improvements to the Columbia Street Connector corridor.



Design Vision

Improving the Columbia Street corridor from Lorraine Street to the Erie Basin Pier means creating a safe and aesthetically pleasing connection for residents living north in the Red Hook neighborhood seeking to access amenities like Red Hook Park, Added Value's Red Hook Farm, Erie Basin Park and the Erie Basin Pier.

Starting at Lorraine Street, new tree plantings and vegetated swales for capturing stormwater will transform the sidewalk areas on the west side of Creamer, Bay, and Sigourney Streets. At the intersection with Sigourney Street, enhanced safety striping, new directional signage, and a suite of other pedestrian safety features will be installed, signaling that this is where pedestrians and bicyclists can cross Columbia Street safely if they are wishing to access Red Hook Park or the pier.

The Greenstreet at Halleck Street will be expanded and transformed into a native meadow. The site will function as a kiosk with directional signage and neighborhood information. This information will be visible to pedestrians and cyclists without them needing to enter the site.

Erie Basin Pier will receive much needed shade structures and new street trees where viable. There will be new workstations for fishermen. Welcome signage will emphasize amenities at the pier and local history. Eventually, rest room facilities and water fountains will make it possible to spend longer periods of time along this beautiful stretch of New York Harbor.



Credit: Rogers Marvel Architects

North Columbia Street

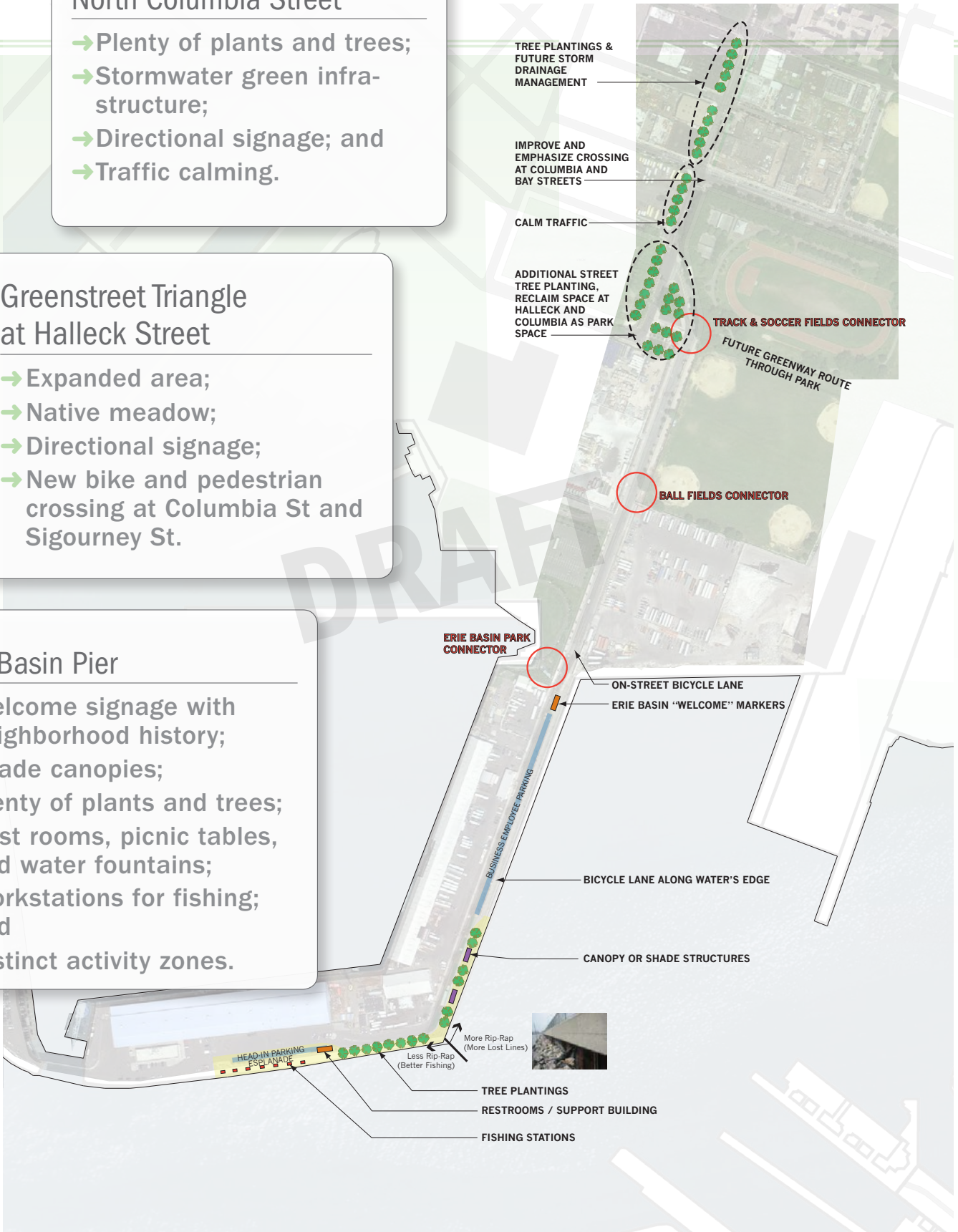
- Plenty of plants and trees;
- Stormwater green infrastructure;
- Directional signage; and
- Traffic calming.

Greenstreet Triangle at Halleck Street

- Expanded area;
- Native meadow;
- Directional signage;
- New bike and pedestrian crossing at Columbia St and Sigourney St.

Erie Basin Pier

- Welcome signage with neighborhood history;
- Shade canopies;
- Plenty of plants and trees;
- Rest rooms, picnic tables, and water fountains;
- Workstations for fishing; and
- Distinct activity zones.



Credit: Rogers Marvel Architects

Next Steps

North Columbia Street

RPA and BGI will continue working with the Urban Forestry and Greenstreets divisions of the Parks Department to identify viable locations for planting trees on the west side of Columbia Street

Greenstreet Triangle

RPA and BGI will facilitate meetings with the Department of Transportation and the property owner to find a new street configuration that all parties support. Once all parties approve of a solution, RPA and BGI will reach out to local elected officials to help secure funding for expanding the Greenstreet into the unmapped portion of Otsego Street and redesign the space with special plantings.

DOT will develop traffic calming options that emphasize bicycle and pedestrian crossing at Columbia and Sigourney Streets.

Erie Basin Pier

RPA and BGI will seek grant funding to work with community groups and local businesses to create welcome signage and workstations for the fishing community.

RPA and BGI will seek capital funding to remove expensive to maintain wooden benches, and create new shade structures and picnic tables. This design work would include exploratory boring tests of the substructure of the pier to determine if trees and other planted material can survive below grade. We will also conduct an assessment of the feasibility of installing rest room facilities and water fountains.

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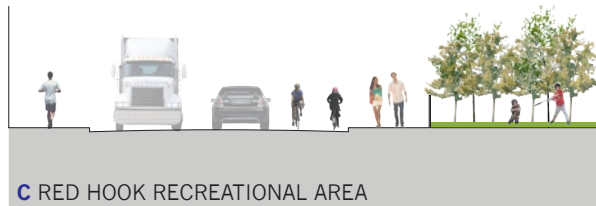
Cross Sections of Proposed Improvements to Columbia Street



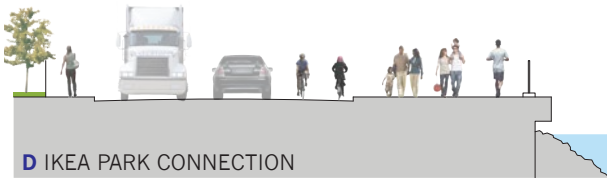
A IN THE NEIGHBORHOOD



B GREENWAY CONNECTION



C RED HOOK RECREATIONAL AREA



D IKEA PARK CONNECTION



E BICYCLE THE WATERFRONT



F CORNER OVERLOOK



G ESPLANADE AND FISHING PIER

Credit: Rogers Marvel Architects

Project Background

The Brooklyn Waterfront Greenway

When complete, the Brooklyn Waterfront Greenway will be a 14-mile, off-street route connecting neighbors and neighborhoods to four major parks and over a dozen local green spaces on Brooklyn's historic waterfront. Separate paths for bicycles and pedestrians will allow cyclists and walkers to commute, exercise, explore, and relax from Newtown Creek – located on the border of Queens and Brooklyn – to the Shore Parkway Greenway, which begins in north Bay Ridge. The Brooklyn Waterfront Greenway is part of New York City's growing greenway network – linking the planned Queens Greenway to the Manhattan greenway network, the Shore Parkway Greenway, and the Jamaica Bay Greenway.

Regional Plan Association and Brooklyn Greenway Initiative have collaborated on the planning and advocacy for this waterfront amenity with funding from New York State's Environmental Protection Fund/Local Waterfront Revitalization Program and sponsored by the Office of the Brooklyn Borough President. Working together with local communities through public planning workshops and other events, RPA and BGI have developed concept plans for the greenway's route and design through Community Boards 1, 2 and 6 – from Greenpoint to Red Hook. RPA and BGI have also prepared a stewardship plan to anticipate maintenance costs and responsibilities for the greenway and its amenities, design principles, a stormwater management plan, and proposals for a network of green spaces along the greenway route, like the Columbia Street Connector.

NYC DOT will release its implementation plan for the Brooklyn Waterfront Greenway in spring 2012, outlining its plan to make a continuous greenway along Brooklyn's waterfront a reality. The plan will establish design standards, designate the final route, and highlight future opportunities for maximizing the user experience and the benefits to adjacent neighborhoods.



Greenway Design Principles

The Brooklyn Waterfront Greenway is more than a simple sidewalk or bicycling route. The breadth of recreational and open space benefits it creates requires a set of core planning principles. The following framework expresses the physical and programming recommendations generated by participants in community workshops:

Create a healthy green edge on the Brooklyn waterfront. Establish public access to the harbor waterfront and waters. Improve public health in communities that line this historically industrial waterfront by providing recreational amenities and programs. Restore and enhance ecological functions in the shoreline environment.

Create Connections. Connect the waterfront neighborhoods to each other, the rest of Brooklyn and neighboring greenways in Queens, south Brooklyn, and Manhattan. Knit together regional and community parks, unique neighborhood attractions, and the transit system.

Explore the area's history and maintain its unique character. Create opportunities to showcase the rich urban landscape along the Brooklyn waterfront and its neighborhoods. Respect the needs of Brooklyn's successful maritime industries while increasing the public's understanding of how the waterfront is used.

Celebrate the diversity of Brooklyn. Showcase neighborhoods, natural environments, culture, art, and industry. Accommodate the needs of a wide variety of people from local residents to destination-oriented visitors.

Green Spaces

At strategic points along the route, a series of public green spaces will further enhance the greenway experience for cyclists, pedestrians, neighbors, and families.

These green spaces will offer relief from the urban environment by providing spaces for greenway users to rest, relax, and recharge during their journey. Each green space will offer a different landscape, history, and potential for unique design and experience.

The Columbia Street Connector extends the benefits of the greenway to community members and visitors in Brooklyn who might not otherwise choose the waterfront as a destination. By greening Columbia Street and upgrading bicycle and pedestrian safety along the corridor, there is the potential to draw in a variety of different groups from the greater Red Hook community. Whether it serves as an entry point to the larger greenway or as an access point to the Red Hook waterfront, improvements should result in new amenity, link together existing community assets, and facilitate and inspire a wide variety of interests related to the waterfront.

History



View of Red Hook, circa 1875

1836 Dutch Settle Roodde Hoeck, meaning “Red Point” for its red soil and point-like formation.

1841 Atlantic Basin is constructed, reclaiming Red Hook's rural and marshy lands for development.

1864 Erie Basin is built to handle increased shipments resulting from the construction of the Erie Canal.

1934 NYC Parks Department begins to acquire land for what will become Red Hook Park. Red Hook Houses are constructed as part of the New Deal to house dockworkers and their families.

1946 Construction of the Gowanus Expressway isolates Red Hook from the rest of Brooklyn.

1950s The introduction of container shipping consolidates business at Brooklyn's ports, leaving large sections of waterfront property under-utilized.

1980s Erie Basin Pier is rebuilt.

2000s Green infrastructure projects are planned. Projects are expected to create new green space and amenity along Columbia Street.

Columbia Street Connector

Overview

Red Hook's waterfront is often overlooked. The historic and on-going industrial use of the waterfront also limits the opportunities for recreational activities. This lack of public access to the waterfront has separated parts of Red Hook from the unique experience of its shoreline. The Columbia Street Connector will draw Red Hook residents and visitors down to the waterfront and the Greenway by greening the streets and improving Eric Basin Pier.

The project site stretches from the intersection of Columbia and Lorraine Streets, through the Greenstreet site at Halleck and out to the Eric Basin Pier. At Lorraine Street, the Connector reaches to the Red Hook Houses, the most densely populated section of the neighborhood. Continuing south on Columbia Street, a wide sidewalk and on-street bike lane currently exist alongside industrial lots, a parking lot, Red Hook Community Farm, and Red Hook Park. The Columbia Connector joins the Greenway at an existing Greenstreet on Halleck Street. Here, a section of Halleck street has been demapped and closed off to vehicle traffic by new sidewalks. At this point, Greenway users can continue east into Red Hook Park and on to Sunset Park, south to the pier, or west to Eric Basin Park. From Halleck Street, the connector continues down Columbia Street past baseball fields, the Gowanus Industrial Park, and Eric Basin Park. The final section of the connector is the Eric Basin Pier, a pier with unobstructed views across Gowanus Bay.

One of the challenges of the site is that it includes three distinct elements:

- North Columbia Street;
- William Todd Greenstreet;
- Eric Basin Pier.

Like other sections of the Greenway, each segment of the Columbia Street Connector has unique design considerations, but must also function as part of a larger network.



Neighborhood Profile

From residential to industrial to recreational and at a length of almost a mile, the site is a microcosm of the larger Red Hook neighborhood. The Red Hook Houses are the largest NYC Housing Authority development in Brooklyn with a population of over 6,300 residents. Heading south from Lorraine Street, several businesses line Columbia Street. Red Hook Community Farm is to the west on Sigourney Street. Added Value established the Farm in 2003 to empower neighborhood teenagers through hands-on agricultural education. On Saturdays, the Farm hosts a farmer's market.

Columbia Street curves to the east along the perimeter of Red Hook Park. There is a Greenstreet named for William Todd, a ship-builder working in Brooklyn at the turn of the 19th century. Red Hook Park offers a wide variety of active recreation options, including an outdoor swimming pool, sports fields, and a running track. Food vendors park their trucks along the Bay Street side of the park, selling a wide variety of Latin American dishes. Gowanus Industrial Park is south of Red Hook Park and includes parking lots, a Hess gas station and a defunct grain terminal. To the west of Erie Basin there is Erie Basin Park, a public space alongside IKEA, beverage distribution warehouses, and a New York Police Department impound lot. The pier serves as a popular fishing destination.



Red Hook Houses



Red Hook Vendors



Columbia and Bay Streets



Red Hook Industry and IKEA



Red Hook Pool



Gowanus Industrial Park



Baseball at Red Hook Park



Red Hook Community Farm

Columbia Street Connector

Demographics

Census data indicates that 65% of Red Hook households are below the federal poverty line. All but 10% of Red Hook families are living on less than \$50,000 per year.

A large proportion of the residents are children. In 2000, 31% of the population was younger than 14 years old, compared to the national average of 21.4%*.

Nearby Green Spaces

Red Hook Park

58.5 acres, adjacent to the middle section of the Connector.

Facilities: Barbecue grills, basketball courts, playgrounds, gym, soccer fields, baseball fields, handball courts, pool, running track, and open lawns.

Coffey Park

8.27 acres, .3 mile from site

Facilities: Barbecue grills, basketball courts, handball courts, playgrounds, and open lawns.

Red Hook Community Farm

2.75 acres, adjacent to the site.

Youth programs and a Saturday market.

Erie Basin Park

7 acres, .15 mile from site

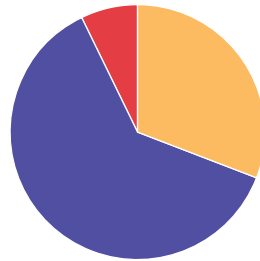
Facilities: Waterfront Greenway, open lawns, fishing spots, water taxi stop, where maritime history is narrated and displayed.

Valentino Pier

2.22 acres, .6 mile from site

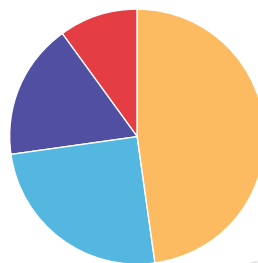
Facilities: Kayak and canoe launch, fishing spots.

Age Breakdown



- % of Population 14 or younger
- % of Population 15 - 64 years
- % of Population 65 years or older

Income Distribution



- \$0 - \$14,999
- \$15,000 - \$29,999
- \$30,000 - \$49,999
- \$50,000+

*Demographic information was taken from 2000 census data for census tracts 55, 57, 59 and 85, with a total population of 10,131 residents.



■ Project Site
 ■ Existing Park/ Open Space
 ■ DOT Proposed Greenway

Site Features

The views from the Columbia Street Connector vary as you move south from Lorraine Street towards the pier. From the northern end, two and three-story commercial buildings line the streets. As you approach Halleck Street, the Todd Memorial Greenstreet site and its small grove of London Plane trees come into view.

Once on the Esplanade, the view opens up to the expanse of Gowanus bay. The old grain terminal makes an impressive backdrop. To the south, the industrial waterfront of Sunset Park is in full view.

The majority of the Columbia Street Connector is paved with concrete and asphalt. Stormwater, therefore, is not absorbed into the ground, but rather channeled into the city's stormwater system. The Todd Memorial Greenstreet is most likely the only section of the connector with appreciable stormwater retention. The Esplanade also has ducts that drain water directly into the Gowanus Bay.

Qualities of light and shade change as you move from the exposed sidewalks of northern Columbia Street to the canopied triangle of Todd Memorial Greenstreet. On the pier there is no source of shade. The water reflects the sun, intensifying its strength.

Average traffic noises blend with cheers and shouts from the playgrounds and fields in Red Hook Park. At Halleck Street, sounds from trucks intensify with proximity to the industrial waterfront. The Esplanade is calm and quiet with the occasional car radio playing to an audience of fishermen.

Management and Maintenance

The varied nature of the segments and the mix of jurisdictions involved necessitate a multi-tiered management and maintenance strategy for the Connector:

Tree Cover & Vegetation



Columbia Street south of Lorraine lacks street trees. Sections of sidewalk are lined with spontaneous growth of grasses and other herbaceous perennials.



The Greenstreet, a small vegetated patch of the right-of-way maintained by the Parks Department, includes a grove of five mature London Plane trees and a bed of Juniper shrubs.



There is no existing vegetation on the Esplanade.



Brooklyn Greenway Initiative (BGI)

BGI is planning to lead stewardship of the Greenway. It is interested in maintaining the route, but recognizes that to do so requires a dedicated source of funding.

Department of Parks and Recreation (DPR)

DPR is responsible for maintaining street trees and Greenstreets. The extent of their involvement depends on the types of greening

projects that are ultimately chosen.

Erie Basin Marine Associates

Under an agreement with the city, Erie Basin Associates manages the public spaces on the pier. The company supports the proposed improvements, but it cannot commit any new resources to maintenance responsibilities. New responsibilities might include watering, pruning, supplying plant material, or replacing damaged structures.

Community Workshop

Summary of Analysis

Opportunities

- Length of the route offers potential for significant impact in the neighborhood.
- Space to expand the Greenstreet at Halleck.
- Opportunity to connect numerous destinations.
- Route intersects the Brooklyn Waterfront Greenway.
- A number of neighborhood groups and businesses in Red Hook could take a stewardship role.

Constraints

- Length of the route makes more ambitious capital projects and their attendant maintenance responsibilities financially difficult.
- Connector is a narrow corridor.
- Truck traffic may compromise safety for pedestrians and bicyclists.
- Nearby parks and public spaces compete for limited funding and political attention.

Workshop Summary

On April 26, 2011, Regional Plan Association and Brooklyn Greenway Initiative held a community visioning workshop at the Red Hook Recreation Center in Red Hook, Brooklyn.

The purpose of the workshop was to gather ideas and community feedback about the Columbia Street Connector, one of the green spaces that will enhance the user experience on the Brooklyn Waterfront Greenway.

Extensive outreach efforts prior to the workshop yielded a diverse audience from the neighborhoods surrounding Columbia Street. Participants were briefed on the goals of the project, challenges and opportunities, and then shown several alternatives that illustrated how Columbia Street could be revitalized as a successful bike and pedestrian corridor.

Participant Questions

Participants broke into smaller discussion groups to focus on the following five questions:

1. Who are the current and prospective users of the route?
2. How can we draw these groups to the waterfront and the greenway?
3. What are the unfulfilled recreational and open space needs in Red Hook?

4. What uses and design treatments for each of the three parts of the Connector will best meet those needs?
5. How can these improvements help integrate the Connector with the rest of the Waterfront Greenway?

Findings

Workshop participants made recommendations for each segment of the Columbia Street Connector. Participants were also asked to consider the ways in which all three segments will relate to one another and the rest of the Brooklyn Waterfront Greenway.

Connector-wide Improvements

The purpose of the Columbia Street Connector is to increase access to Red Hook's waterfront. Participants identified two main challenges to accomplishing this goal: 1) getting local residents who live north in Red Hook—where the water is not visible—to think of the pier as a viable leisure destination, and 2) existing street conditions that compromise pedestrian and bicycle safety along the route to the water.

Workshop participants proposed several strategies for encouraging more people to take advantage of the waterfront. The first suggestion was for a series of murals and other art installations created by local artists that emphasized the continuity of the route, as well as local maritime and neighborhood history. The second suggestion was for

branding, signage, and way-finding to inform local residents of waterfront amenities and to help people navigate down to the water. Finally, participants recommended additional interpretive elements as part of a larger education effort to inform the public about green infrastructure, bioswales, and stormwater management. This improvement plan recommends installing welcome and directional signage at strategic points along the route as it is the most feasible opportunity to emerge from the workshop discussions.

North Columbia Street (Lorraine to Sigourney Street)

Workshop participants were concerned about speeding cars and trucks driving down Columbia Street. The group was interested in design strategies that created a safer pedestrian environment, especially for children who walk down Columbia Street to Red Hook Park.

The northern section of Columbia Street is actively used by the businesses located along the corridor, limiting the number and extent of alternative configurations to the street. Assuming that the businesses on the street remain primarily industrial, participants believed that the west side of the street was better suited for streetscape improvements because fewer businesses are located there.

Participants recommended that the New York City Department of Transportation (NYC DOT) identify ways to improve pedestrian and bicycle safety along the route, especially at the intersections of Creamer

and Sigourney Streets. Speed tables, wider sidewalks, traffic lights, and additional stop signs were all proposed by participants as traffic calming options that NYC DOT should review. Participants also suggested planting street trees along the route. Importantly, participants were in favor of additional greenery and green infrastructure so long as the Connector project did not remove any of the capacity for parking along Columbia Street.

Participants were supportive of existing proposals to use green infrastructure to manage stormwater. Green infrastructure creates an opportunity to green the streetscape and widen the sidewalk while also managing stormwater. Besides their environmental benefits, these types of projects will help to further establish the Connector as a contiguous vegetated pathway down to Red Hook's waterfront.

The William Todd Greenstreet

The Greenstreet sits at the convergence of two roads that merge into Columbia Street. Participants viewed the space as an extremely dangerous point along the route for pedestrians and cyclists. Some workshop participants did not believe it was worth considering possible improvements to the Greenstreet until plans were made to resolve the safety concerns.

Participants proposed creating a "T-intersection" at Sigourney and Columbia. Expanding the sidewalk on the east side of the intersection will channel cars in a smaller roadbed, creating additional sidewalk and planting space near the entrance of Red Hook Park. Wider sidewalks would create an extra buffer between trucks and people, and additional opportunities to add greenery. Locating the crossing at Columbia and Sigourney also creates a hub for people with diverse interests. Greenway users, Red Hook residents seeking out the waterfront or Red Hook Park, and people going to Added Value's Red Hook Farm will all funnel through the area at the same point.

Opinions were divided between leaving it as a passive space to look in on and expanding the site to create a public plaza. Addressing

safety concerns with crossing the street would be key to creating a public plaza.

A more diverse mix of visually-appealing, lower-maintenance native plants should complement the existing London Plane trees. Participants also recommended using the Greenstreet as an information hub and a platform for signage and other information to attract people down to the Esplanade and provide way-finding.

Participants considered expanding the Greenstreet into the demapped portion of Otstego Street located just south of the site as a way to create a small plaza with seating. There may be enough demand to use the unmapped portion behind the Greenstreet for food vendors or as an outpost of Red Hook Farm for vending fresh produce.

All of the recommendations for repurposing the Greenstreet must still accommodate access to the business that relies on the unmapped portion of Otstego Street for access to the property.

Erie Basin Pier

Most participants agreed that the pier is underutilized by the community. Local fishermen are its most frequent users. A group of skateboarders also spends time on the pier in the early evenings in the warmer months. With upgrades to the site, participants believed that the pier could improve the experience for fisherman and attract youths coming alone or with their families. Participants believed that the site's lack of basic amenities were what kept more people from spending time there. There was consensus for adding bathroom facilities, water fountains, picnic tables, grills, and shade structures. For the fishermen specifically, access to water, shade, and some kind of workstation were seen as the important upgrades. Workshop participants believed that youths and families will use the Esplanade more if there were more amenities, such as play sprinklers, chess tables, and children's games like hopscotch, and interpretive signage. Other people suggested building a skate park to make safer accommodations for the skateboarders who are already spending time at the site.

