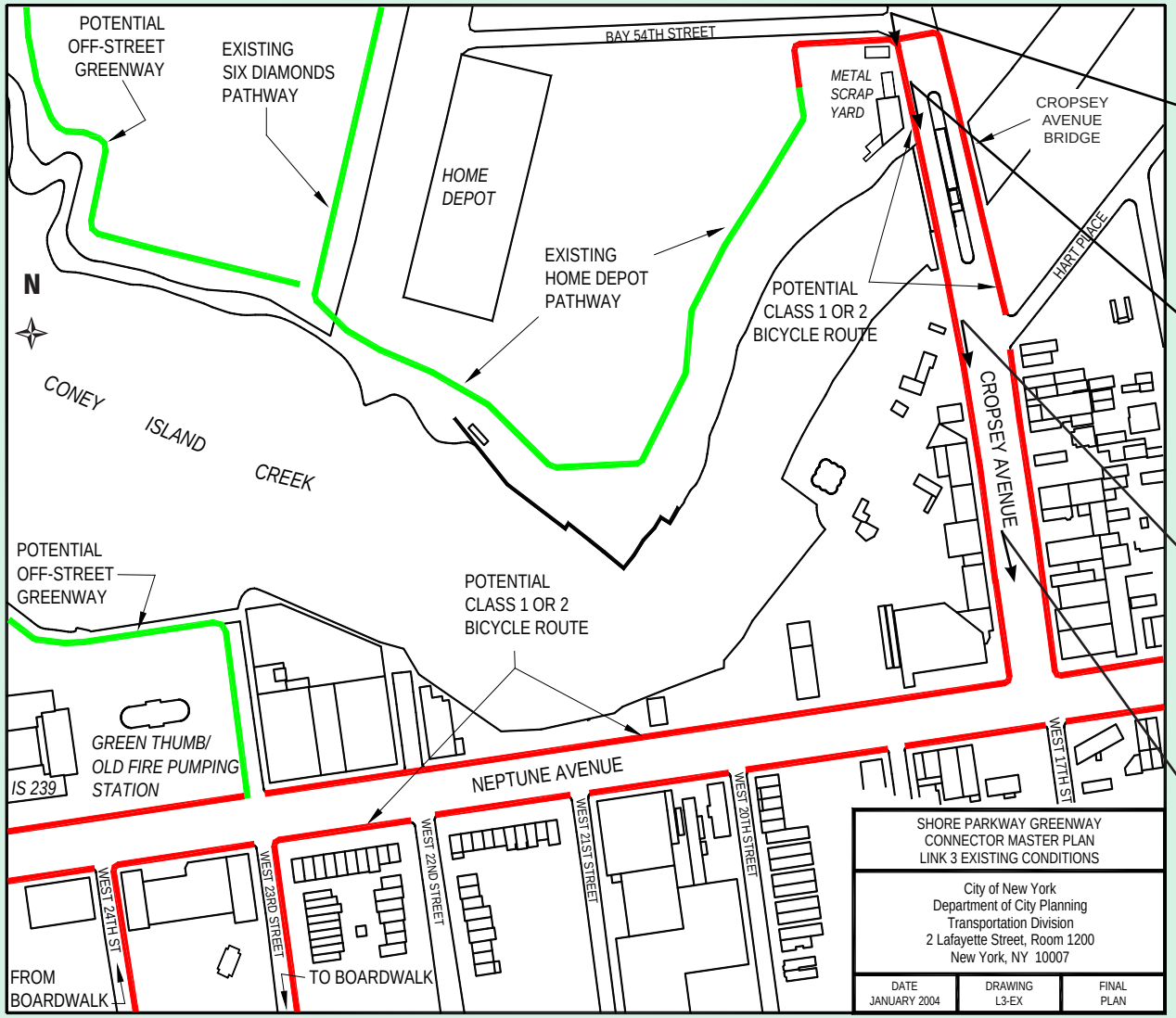
Link 3: Cropsey Avenue from the Home Depot to Neptune Avenue

Proposed Route

Map 7



Link 3: Cropsey Avenue from the Home Depot to Neptune Avenue

Existing Conditions

Link 3 is the shortest study section, but also one of the most difficult to plan. The project initially examined the feasibility of locating the greenway within the Shore Parkway right-of-way as it continues inland east of Cropsey Avenue; though this is not a waterfront route, it would be direct, continuous, and consistent with the design of the existing greenway. However, the lack of available space, the multiple on- and off-ramps and bridges, and the elevated section of the parkway traversing industries and transit storage yards make such a route infeasible.

Instead, the route returns to the street network from the parkland in Link 2 and traverses the Coney Island Creek [Map 7]. Cropsey Avenue, the Cropsey Avenue Bridge, and West 17th Street form one of only two vehicular routes (the other being Stillwell Avenue) into the Coney Island peninsula from the west. Ramps to and from the Shore Parkway connect directly with Cropsey Avenue, creating significant traffic congestion, which is further exacerbated by traffic generated by big-box retail stores north of Coney Island Creek, by automotive garages south of the bridge, and further south by the attractions on the Coney Island Boardwalk along the Atlantic Ocean waterfront (see Link 4).

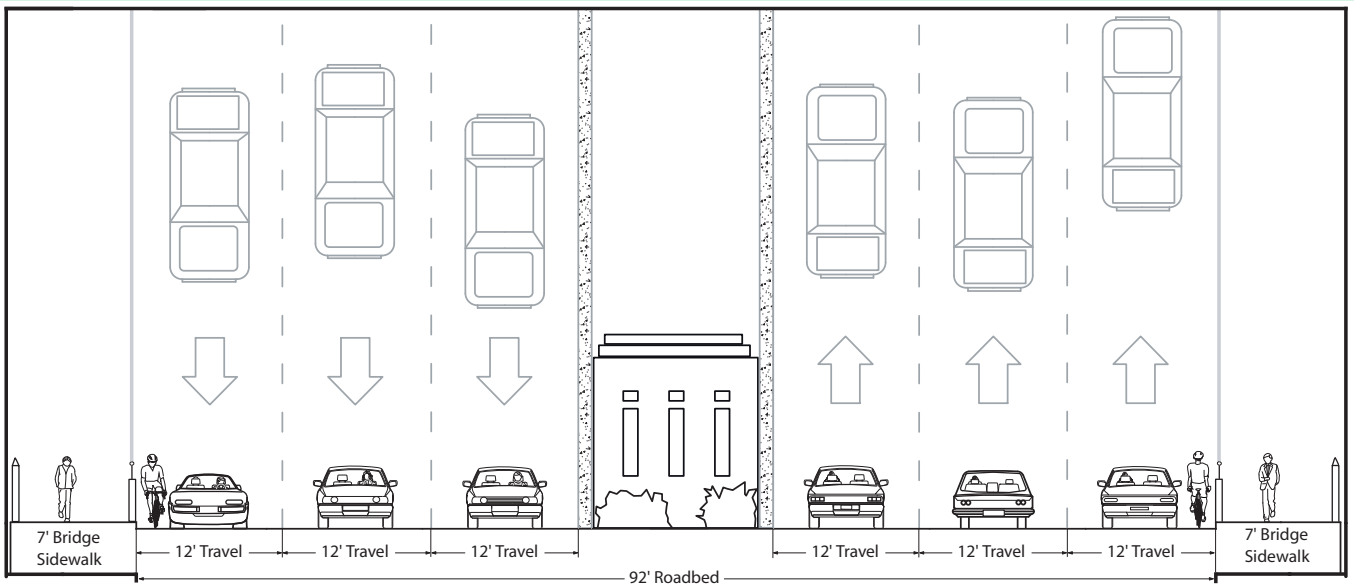
The Home Depot pathway terminates approximately 20 feet from Bay 54th Street on a 10-foot sidewalk about 100 feet west of Cropsey Avenue, where a three-phase traffic signal controls the main entrance to the store. The Cropsey Avenue Bridge, spanning the Coney Island Creek, has three 12-foot travel lanes and a narrow seven-foot sidewalk in each direction [Figure 13]. The bridge carries over 2,000 vehicles in the peak hours. While Cropsey Avenue and the bridge are signed Class 3 bike routes, the heavy traffic and concentration of auto repair shops south of the creek makes this link of the greenway tenuous, with cars illegally parked on the sidewalk, illegally or double-parked on the street, or entering/exiting the garages lining the street. Once over the bridge, Cropsey Avenue intersects Neptune Avenue, the major east-west street traversing Coney Island. The intersection operates poorly, particularly southbound left turns. Cropsey Avenue turns into West 17th Street.

Stillwell Avenue was considered and rejected as an alternative route to Cropsey Avenue. Fieldwork indicated that while Stillwell Avenue carries fewer vehicles than Cropsey Avenue, it has many of the same problems as Cropsey Avenue such as industrial uses, truck traffic, auto repair and service shops, and illegally parked vehicles. Additionally, there is not enough roadbed on Stillwell Avenue or Harway Avenue for a Class 1 or 2 facility without eliminating a travel or parking lane. This route would also lead bicyclists and greenway users inland and away from the waterfront and from Dreier-Offerman Park and Six Diamonds Park.

Link 3: Cropsey Avenue from the Home Depot to Neptune Avenue

Existing Conditions

Cropsey Avenue Bridge



Existing Conditions

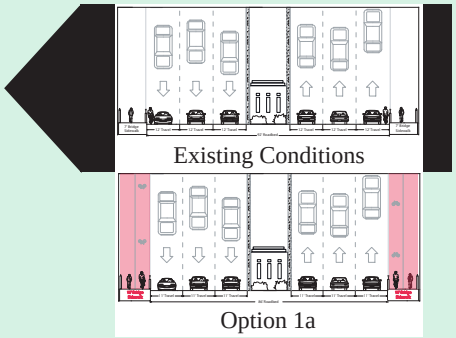


Figure 13

Link 3: Cropsey Avenue from the Home Depot to Neptune Avenue

— Cropsey Avenue Bridge
  - Traffic Congestion
  - No Roadway Available for Bicycles

— Variable Parking Conditions
  - Illegal Parking

— Industrial and Commercial
  - Auto Repair Agglomeration

Existing Conditions

Link 3: Cropsey Avenue from the Home Depot to Neptune Avenue

Recommendations

Two recommendations, one short-term and one long-term, are proposed. In either case, the sidewalk from the Home Depot path to Cropsey Avenue should be widened, striped and designated as a Class 1 shared-use facility. Bay 54th Street should be signed as a short Class 3 link from West 22nd Street and Six Diamonds Park to Cropsey Avenue. Pathway users would cross at the existing signalized intersection at Bay 54th Street to travel over the Cropsey Avenue Bridge.

Option 1: Upgrade the Class 3 Bike Route to a Shared Lane Facility with Markings, Signage & Traffic Calming

There are few options available to improve the Class 3 signed bike route on this link. An on-street striped bike lane is infeasible: given traffic congestion in the area, it is not possible to remove a travel or parking lane for non-motorized use. However, each of the six travel lanes on the bridge could be reduced from 12 feet to 11 feet and the additional three feet in each direction could be used to create a Shared Lane Facility along the curb with pavement markings and signage [not shown]. A Shared Lane Facility is used when there is not enough space to create a Class 1 or 2 facility. The NYCDOT has already successfully tested the shared lane bicycle route marking on University Avenue in the Bronx. A shared lane facility will increase motorist awareness of bicyclists.

Option 1a: Improve the Bridge Pathway and Route with Markings, Signage & Traffic Calming

Three feet could be added to each of the bridge sidewalks using the same approach as above, thereby creating a 10-foot shared-use pathway which will enable bicyclists to ride over the bridge off-street [Figure 14]. "Bikes Yield to Pedestrians" and other warning signs should be posted on both sides of the pathway to warn of possible conflict between greenway users.

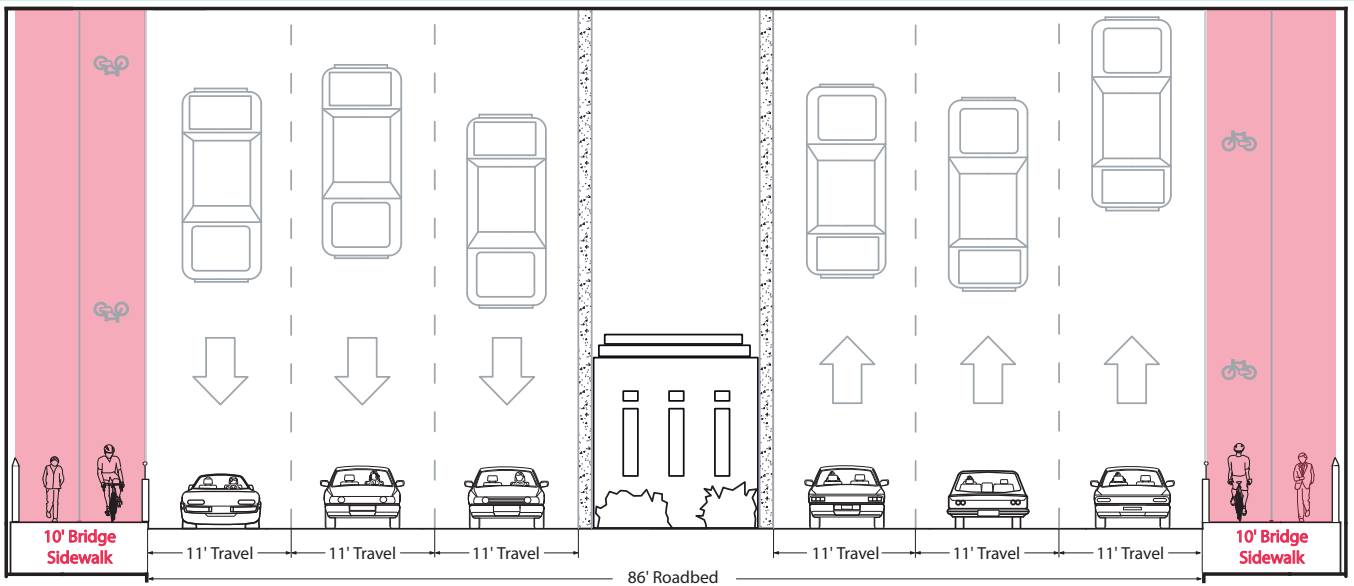
In both Option 1 and Option 1a, traffic calming measures, such as curbside bollards or metal railings, could be installed in an attempt to make the sidewalks passable for pedestrians and alleviate some congestion by minimizing illegal parking and thereby improving safety for bicyclists and pedestrians. However, the local auto repair shops are unlikely to change their operating practices, so physical improvements, even supported by enforcement, may not greatly improve the on-street route.

Once over the bridge in Coney Island, greenway users would employ the existing crosswalks at Neptune Avenue, a signalized but busy intersection, to continue east or west. Bicyclists would then have to negotiate entering back onto Cropsey Avenue through appropriate signage and markings. Signal timing changes are proposed at the intersection of Neptune and Cropsey avenues to improve traffic operations (See Appendix 2: Traffic Analysis).

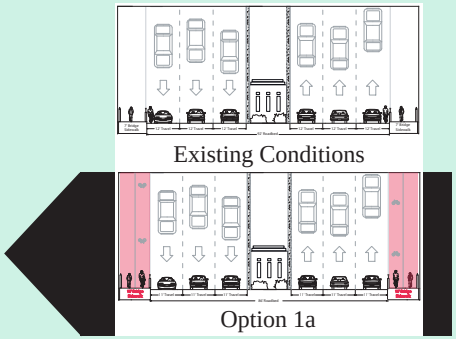
Link 3: Cropsey Avenue from the Home Depot to Neptune Avenue

Recommendations

Option 1a: Class 1 Shared-Use Sidewalk



Option 1a



Existing Conditions

Option 1a

Figure 14

Link 3: Cropsey Avenue from the Home Depot to Neptune Avenue

Recommendations

Option 2: Build a New Pedestrian-Bicycle Bridge over Coney Island Creek

This option proposes to construct a prefabricated bridge for non-motorized users over the Coney Island Creek [Figure 15]. This long-term improvement would circumvent Cropsey Avenue and West 17th Street, eliminating all conflict between pathway users, park users, and motorized vehicles. This action would link the existing waterfront parks and paths on either side of the water. Dreier-Offerman Park, Six Diamonds Park and the Home Depot path would be directly connected with Leon S. Kaiser Park.

The National Oceanic Atmospheric Administration (NOAA) navigation maps, which show water depth and navigation channels, indicate that the Coney Island Creek is only 10 feet deep. The creek is not navigable by commercial craft, given the eight-foot vertical clearance of the Cropsey Avenue Bridge and the numerous derelict wooden boats and barges in the creek. Therefore, the approach ramps and grade for the bridge would not be unusually long or high. The bridge must be ADA complaint.

This new pedestrian and bicycle bridge could span the creek at a number of places. The shortest span for such a bridge - approximately 130 feet - is from the Home Depot path to the old wooden pier at West 21st Street in Coney Island. As stated earlier, the Home Depot path is only open during certain hours. A bridge landing in city-owned parklands would ensure public control of the infrastructure and its operating hours under the jurisdiction of the Department of Parks & Recreation, but would increase the length and the cost of the bridge.

The most cost-effective bridge would be a modular or prefabricated, clear span bridge. The clear span eliminates the need for costly pier construction in the water and minimizes any adverse environmental impact. Prefabricated pedestrian bridges are manufactured by a number of firms and in a number of styles, materials, finishes and treatments. Bridge designs include the bow truss, modified bow truss, pratt truss, x-brace truss, and cable-stayed structures. The standard design for the bow truss, in the shape of a parabolic curve, is 120 foot clear span. The modified bow truss is a long span bridge up to 250 feet. The cable-stayed bridge is an economical approach to a long clear span of from 180 to 400 feet. Bridge structures may be made of steel, aluminum, or timber, and decks may be of wood or concrete. Treatments for steel bridges include galvanizing, weathering, and painting. The design and construction of any necessary bridge abutments and the erection of the bridge would be the responsibility of the City.

Link 3: Cropsey Avenue from the Home Depot to Cropsey Avenue

Figure 15