



# The Brooklyn-Queens Greenway: **Eastern Parkway Extension** Master Plan

Michael R. Bloomberg, Mayor  
City of New York

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2006

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## The Brooklyn-Queens Greenway



## EXECUTIVE SUMMARY

The Eastern Parkway Extension Master Plan, a joint project of the departments of City Planning and Parks & Recreation, seeks to eliminate a critical gap in the Brooklyn-Queens Greenway, a 40-mile route for cyclists and pedestrians extending from the Atlantic Ocean to Long Island Sound. The greenway links 13 major open spaces via three historic parkways, including the 1.96-mile Eastern Parkway, the spine of the on- and off-street bicycle network planned for the study area. The parkway's malls, originally built by Olmsted and Vaux, are today landmarks and designated parkland. The south mall is a Class I dual-carriageway for pedestrians and cyclists; the north mall is for pedestrians only.

The Prospect Park Alliance received private and public funds to reconfigure and restore the malls from Grand Army Plaza to Washington Avenue. Restoration will include new street trees, park furniture and DOT-approved crosswalks and neckdowns. The master plan endorses the Prospect Park Alliance's plan to extend the Eastern Parkway greenway one block west to Prospect Park, and recommends additional safety and circulation improvements, including striping bicycle-pedestrian crosswalks between the malls, extending neckdowns into the service roads, and installing greenway, cultural, and historic signs.

The streetscape changes significantly in the 2.25-mile gap between the end of the Eastern Parkway malls and Highland Park on the Brooklyn-Queens border. The landscape changes from residences to industry, utilities, transportation infrastructure, and vacant lots and buildings. The plan seeks to provide a clear non-motorized link between Eastern Parkway and Highland Park through the Weeksville, Ocean Hill, Broadway Junction, East New York, Brownsville, and Highland Park neighborhoods. Three alternate routes have been developed to connect and thus complete the Brooklyn/Queens Greenway. The northern and southern routes primarily follow two parallel arterial streets – Eastern Parkway Extension and East New York Avenue (and Liberty Avenue) – which create irregular intersections as they run diagonally in a northeasterly direction through the street grid. While both proposed routes connect major open spaces and avoid transportation infrastructure south of Highland Park, neither is ideal. The irregular street geometry at intersections results in confusion and uncertainty for vehicles, pedestrians, and cyclists. The streets are narrow and governed by inconsistent parking regulations. High traffic volumes and vehicle speeds contribute to high numbers of accidents along both routes.

Different facility types and treatments are recommended for each route depending on street geometry, traffic levels, land use and population, sidewalk conditions, and accident data. While it is not possible to extend the off-street Eastern Parkway malls, a shared-use sidewalk on Eastern Parkway Extension, Bushwick Avenue, and Highland Boulevard may offer another means to provide an off-street path; where the route is on-street, striped Class 2 or signed Class 3 bicycle facilities are recommended. Other recommendations address safer riding conditions through the installation of pigmented bike lanes, pedestrian-bicycle crosswalks, advanced bicycle boxes, and the reconfiguration of high-accident intersections.

The third route takes advantage of recently-striped Class 2 bicycle lanes on east-west streets south of Atlantic Avenue to connect to the proposed northern and southern routes.



## INTRODUCTION

### Background

The Eastern Parkway Extension Master Plan recommends four miles of new or improved multi-use off-street paths and on-street lanes and signed routes to connect the last remaining gap in the Brooklyn-Queens Greenway, a 40-mile route for cyclists and pedestrians extending from the Coney Island boardwalk on the Atlantic Ocean to Fort Totten, Queens, on the Long Island Sound. It links 13 major open spaces, including Prospect, Highland, Forest, Flushing Meadows-Corona, Kissena, Cunningham, Alley Pond, Crocheron, and Clearview parks, along three historic parkways - Eastern and Ocean parkways and the Vanderbilt Motor Parkway. The existing off-street greenway paths in parks and parkways are augmented by designated on-street lanes and signed routes.

Eastern Parkway serves as the spine for the on- and off-street bicycle network planned for the study area. Starting one block west of Prospect Park, the parkway's malls are today landmarked and designated parkland. The south mall is a Class I dual carriageway for pedestrians and cyclists; the north mall is for pedestrians only. However, the greenway terminates at Ralph Avenue, and there are no bicycle facilities linking the Eastern Parkway malls with the trails of Highland Park at the Brooklyn/Queens border. Building on the historic paths on the malls of Eastern Parkway, the plan recommends a clear link between parks and open spaces in the Prospect Heights, Crown Heights, Weeksville, Ocean Hill, Broadway Junction, East New York, Brownsville, and Highland Park neighborhoods, significantly enhancing the opportunity for effective non-motorized transportation and recreation throughout Brooklyn and Queens.

### Planning Framework

The Brooklyn-Queens Greenway was first proposed in 1987 in *The Brooklyn/Queens Greenway: A Design Study*, by the Neighborhood Open Space Coalition (NOSC). The greenway route was incorporated into the New York City Department of City Planning's 1993 *A Greenway Plan for New York City*, which recommended an ambitious 350-mile system of off-street greenways and on-street greenway connectors, and the 1997 *New York City Bicycle Master Plan* by the departments of City Planning and Transportation, which proposed a system of 550 additional miles of existing and recommended on-street lanes and routes to complement the greenway plan. The City of New York has been aggressive in the pursuit of available federal funds to plan, design, and build the non-motorized network envisioned in these documents. [See Appendix 1: Literature Review]. Since 1993 the City has constructed 32 miles of the Brooklyn-Queens Greenway; it has undertaken the ongoing restoration of Ocean Parkway; and it completed a major rehabilitation of Eastern Parkway in the 1980s.

### Greenway Classifications

A greenway is a multi-use path for pedestrians, joggers, cyclists, skaters, and wheelchair users. Greenways are natural and constructed linear corridors, ranging from on-street lanes to paths in urban parks, that provide capacity for non-motorized transportation facilities. People walk, stroll, or bike on a greenway for recreation, exercise, and commuting.

Eastern Parkway, one of the nation's first greenways, is a prime example of an off-street Class 1, dual-carriageway with separated facilities for pedestrians and cyclists. A Class 1 shared-use path is separated from traffic but users are not physically divided. A Class 2 facility is an on-street bicycle lane, designated by striping, symbols, and signs, and augmented where space permits by a striped buffer. A Class 3 route is designated by signs only. The following schematics illustrate the three types of greenways [Figure 1].

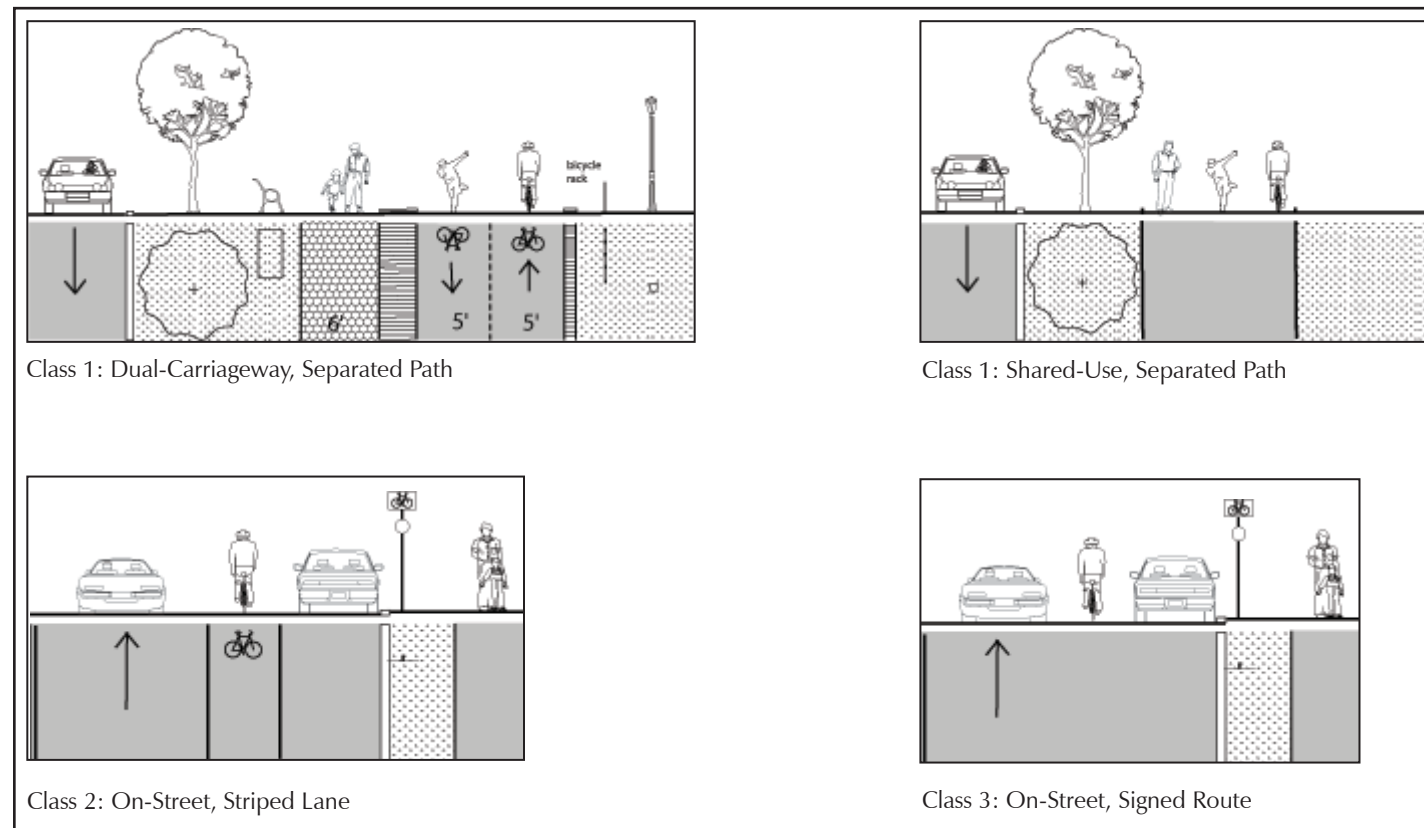


Figure 1: Greenway Classifications

### Goals and Objectives

The Brooklyn-Queens Greenway connects various neighborhoods via a network of enhanced pedestrian and bicycle facilities. This master plan has two primary goals: to expand opportunities for non-motorized transportation in the study area and to extend recreational facilities into neighborhoods close to parks, but not directly linked to them. The existing malls and trails in Prospect Park and Highland Park constitute a large portion of this segment of the Brooklyn-Queens Greenway. A safe and comfortable connection between these two parks would not only benefit the surrounding neighborhoods, but enhance the entire greenway system by creating a larger total network that ultimately attracts more users. Objectives of the plan are to improve the existing bicycle infrastructure on the Eastern Parkway malls, and to enhance the route by developing new infrastructure as part of the on-street bicycle network.

- **Complete the Brooklyn-Queens Greenway, thereby providing a continuous link between Coney Island, Brooklyn, and Fort Totten, Queens.**
- **Create a continuous, 4.25-mile path to link Prospect and Highland parks, and improve access to important landmarks, such as the Brooklyn Museum, Brooklyn Botanic Gardens, and major transportation facilities.**
- **Improve existing Eastern Parkway malls with enhancements such as more signs and street furniture.**
- **Provide viable non-motorized recreational and commuter opportunities for residents of the Brooklyn neighborhoods of Park Slope, Prospect Heights, Crown Heights, Weeksville, Brownsville, East New York, Broadway Junction and Highland Park.**
- **Develop on-street routes consistent with the citywide bicycle network.**

### **The Master Plan**

The Eastern Parkway Extension Master Plan, a joint effort by the departments of City Planning (DCP) and Parks & Recreation, describes existing conditions, identifies conceptual routes for the study area, details the pros and cons of each route, and recommends treatments for preferred and alternate routes. The scope of work includes physical and operational improvements, including new multi-use sidewalks, bicycle lanes, signs, striping, signal timing changes, and landscaping.

### **The Study Area**

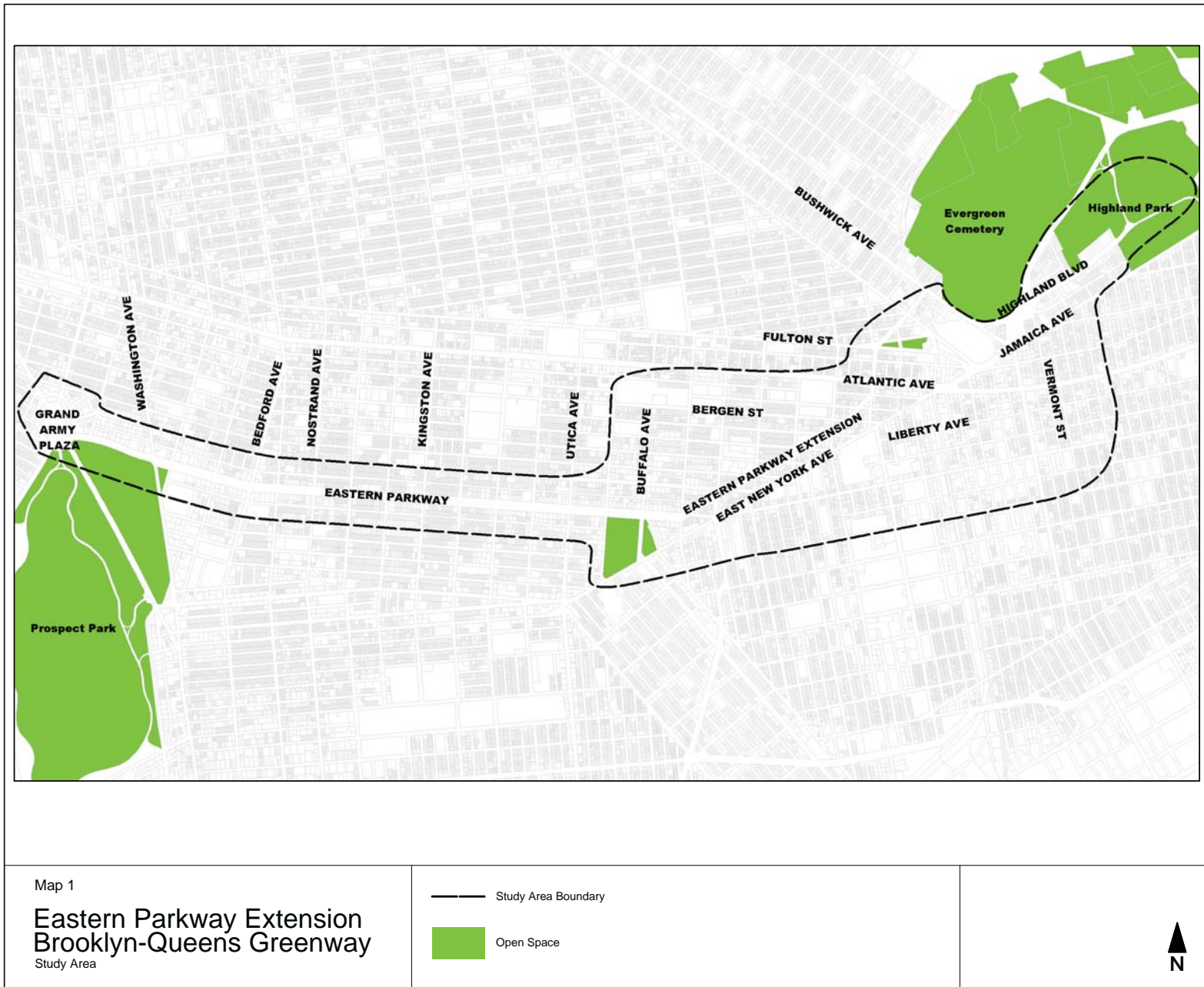
The project study area is in central Brooklyn between Prospect Park and Highland Park on the Queens border [Map 1]. The proposed routes, as identified in previous citywide plans, follow Eastern Parkway, a major arterial and transit corridor with historic greenway malls, from the eastern edge of Prospect Park to the termination of the malls at Ralph Avenue. Eastern Parkway links western Brooklyn to the remainder of the study area, which expands to include proposed routes on Eastern Parkway Extension and East New York Avenue/Liberty Avenue; east-west streets south of Atlantic Avenue and west of Eastern Parkway Extension; and north-south streets connecting to Highland Park.

### **Public Outreach**

An Advisory Committee, composed of representatives of elected officials, city and state agencies, community boards, civic groups and associations, and advocacy groups [See Acknowledgments], was formed to provide local input to better inform and improve the project. The committee met at project milestones to review and comment on plans and documents prior to their release.

### **Funding**

This project is federally funded through the Congestion Mitigation Air Quality (CMAQ) program of the Transportation Equity Act for the 21st Century (TEA-21) with matching funds from New York City. CMAQ funds, available only in non-attainment areas, which do not meet air quality standards, provide for the planning, design, and construction of bikeways to improve air quality and reduce congestion on existing roadways. The project budget of \$343,000 includes slightly less than \$100,000 for the development and installation of greenway and historic signs on the Eastern Parkway malls.







## STUDY AREA EXISTING CONDITIONS

### Neighborhoods

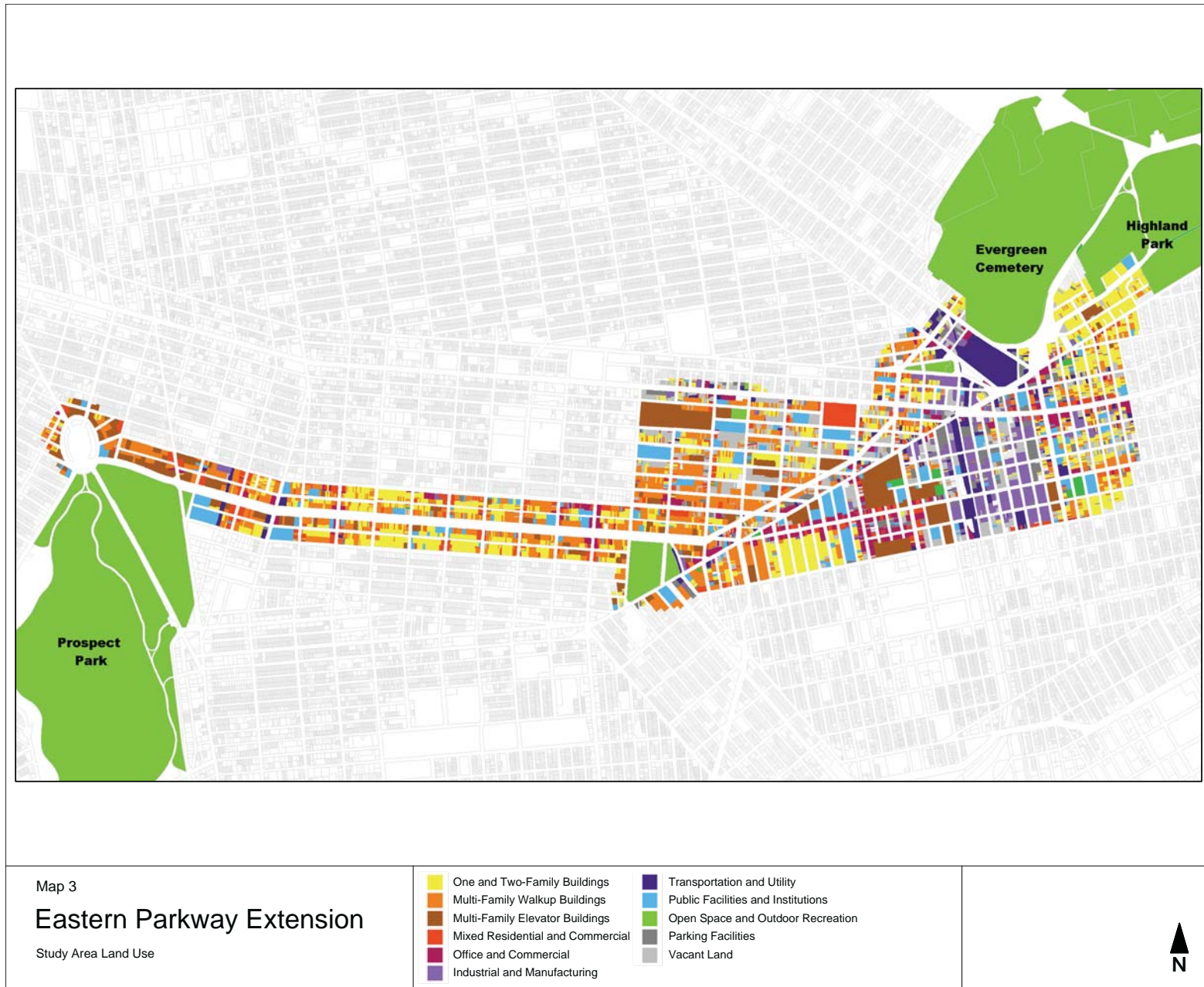
The study area is located in Brooklyn Community Districts (CD) 4, 5, 8, 9 and 16, and Queens CD 5. The neighborhoods of Prospect Heights and Crown Heights lie on either side of the length of Eastern Parkway. According to the 2000 Census, approximately 87,000 people live within four blocks of Eastern Parkway [Map 2]. Brooklyn CDs 8 and 9, whose largest two populations are a majority of African-Americans and a minority of Orthodox Jews, have higher poverty levels and are younger than the rest of Brooklyn or New York City.

The communities of Ocean Hill and Brownsville in CD 16 border either side of Eastern Parkway Extension/East New York Avenue. About 36,000 people live within four blocks of the aforementioned streets; the population is primarily black and Hispanic. The east end of the study area includes the southeastern corner of Bushwick in CD 4, and the neighborhoods of Highland Park and East New York in the north half of CD 5. Approximately 12,000 people live along the route on Liberty Avenue, Vermont Street, and Miller Avenue.

### Zoning

The area is comprised mainly of residential zoning districts. At the western end, the blocks directly around Grand Army Plaza and Prospect Park are zoned R7A and R8X, which allows larger buildings with higher densities than the rest of the study area. The majority of the north side of Eastern Parkway is zoned R6, a slightly lower density which in the study area has produced development that is usually toward the lower end of the allowed density, with buildings typically four stories or under, though there are some larger apartment buildings and institutions. There are C1 and C2 commercial overlays on Eastern Parkway adjacent to major intersections, allowing the retail and personal-service shops, like grocery stores and dry cleaners, needed in residential neighborhoods as well as some broader retail and service establishments.

The eastern end of the study area has a greater variety of zoning districts. An R6 zone lines the northern edge, and a C8-2 district lines the southern edge of Eastern Parkway Extension. Typical uses in this district include automotive service and repair shops. The proposed routes go through M1-zoned blocks along Conway Street and Bushwick Avenue and on either side of Liberty Avenue. These M1-1 and M1-2 manufacturing districts, located adjacent to low- and medium-density residential areas zoned R5 and R6, permit light manufacturing, retail, and office uses. They often act as a buffer for heavier manufacturing districts. M1-2 districts house older, low-density industrial areas. Residential use is not permitted in the C8 or M1 districts.





## Land Use

Land use in the study area is diverse, and includes both residential and commercial uses [Map 3]. The westerly portion of the study area features multi-family residential structures, large public institutions, and major open spaces, making the neighborhood a popular destination. One- and two-family residential buildings, including brownstone and limestone row houses, predominate along Eastern Parkway.

North of Eastern Parkway and west of Eastern Parkway Extension land uses remain residential, with high-rise apartments interspersed by one- and two-family homes and vacant land. Eastern Parkway Extension has fewer institutions and commercial uses than to the west. East New York Avenue between Lincoln Terrace and Mother Gaston Boulevard is a mix of low-rise and multi-family residences and public institutions. Industrial uses, parking lots, and vacant land occupy the area north of East New York and south of Jamaica Avenue between Mother Gaston Boulevard and Pennsylvania Avenue.

The northeast end of the study area south of Evergreen Cemetery is dominated by transportation infrastructure, utilities, industry, and vacant land. Trucks, driveways, sporadic parking, and parkway on- and off-ramps make it difficult to traverse this area. South of Highland Park are low-density residential neighborhoods. The park and cemetery comprise the western edge of a swath of open space in Queens uniquely characterized by over a dozen cemeteries, ending in Forest Park at the eastern edge.



Industrial area on Conway Street



Residential area seen from Truxton Street

### **Destinations** [Map 4]

A number of regional and local parks are located along the study corridor, the largest of which are Prospect and Highland parks. At 526 acres, Prospect Park is the largest park in Brooklyn and a notable destination for Brooklyn residents. Designed by Frederick Law Olmsted and Calvert Vaux, the designers of Central Park and Eastern Parkway, Prospect Park has a 60-acre lake, Brooklyn's only forest, recreational facilities, and a bike lane along its loop road. It attracts over six million visitors a year. Lincoln Terrace Park at the east end of Eastern Parkway is 21 acres and features a baseball field, playgrounds, and handball and tennis courts. The three-acre Callahan and Kelly Playground, near Evergreen Cemetery, offers a baseball diamond and basketball courts; the park is shared by the community and Public School 255. Highland Park, just east of the Brooklyn-Queens border, stretches over 141 acres and contains tennis courts, football and baseball fields, gardens, and an ice rink. It is adjacent to the 50-acre former Ridgewood Reservoir, which Mayor Bloomberg recently transferred from the Department of Environmental Protection to Parks & Recreation to develop as a recreational space. Until such development takes place the reservoir will serve as an informal nature preserve.

Also highlighted on the map are schools, recreational and cultural institutions, and senior centers with a capacity of over 500 people. Notable cultural institutions include the Brooklyn Museum, the Brooklyn Botanic Gardens, and the central branch of the Brooklyn Public Library, all bordering Prospect Park at the western end of the study area and all of which recently completed major renovations, including the new entrance to the Brooklyn Museum. The newly-constructed Jewish Children's Museum is on Eastern Parkway and Kingston Avenue. Schools in the immediate vicinity of the route include PS 155, PS 157, PS 167, Prospect High School, Clara Barton High School, and Medgar Evers College.



Callahan and Kelly Playground



Highland Park





Map 4

## Eastern Parkway Extension

Destination Map

- |                                       |   |
|---------------------------------------|---|
| 1) Brooklyn Public Library            | 12) I.S. 394                                  |
| 2) Brooklyn Museum of Art             | 13) H. Gilroy Senior Center                   |
| 3) Prospect Heights High School       | 14) P.S. 12                                   |
| 4) Clara Barton High School           | 15) P.S. 327 Dr. Rose B. English School       |
| 5) P.S. 241 - Emma L. Johnston School | 16) Mt. Ararat Pres Church Senior Center      |
| 6) Medgar Evers College (CUNY)        | 17) I.S. 55                                   |
| 7) Olmeh Torah Elementary School      | 18) I.S. 271 John M. Coleman School           |
| 8) Billy St. Louis Senior Center      | 19) P.S. 332 Charles Hamilton Houston School  |
| 9) Brooklyn Children's Museum         | 20) William H. Maxwell Vocational High School |
| 10) P.S. 167 Parkway School           | 21) Atlantic Senior Center                    |
| 11) P.S. 169                          | 22) P.S. Juan Morel Campus School             |



## **Transit**

The study area is well-served by public transportation. Subway stops and lines [Map 4] include the IRT 2, 3, 4, and 5 lines running under Eastern Parkway. The 4 and 5 lines run on an express track, and in the study area both stop only at Franklin Avenue, where the 5 train turns south. The 2 and 3 lines run locally and also stop at stations including Grand Army Plaza, the Brooklyn Museum, and Nostrand Avenue. The 2 turns south with the 5 at Franklin Avenue. The 3 line continues east to stations at Kingston Avenue and Utica Avenue, where the 4 terminates and the 3 travels above ground east of Eastern Parkway. To the north the A and C lines parallel Eastern Parkway, with local stops along the entire corridor and express and local stops at Nostrand Avenue, Utica Avenue, and Broadway Junction, a major transportation hub providing connections to the L, J and Z subway lines running through the area. Other subway stations near the route include the Franklin Avenue Shuttle at the Botanic Gardens, the J and Z stations at Van Siclen Avenue and Fulton Street, and an L stop at Bushwick Avenue and Aberdeen Street. The Long Island Railroad stops at Atlantic and East New York avenues.

Twenty bus lines cover portions of the study area. East-west bus routes include the B71, B17, and the B14 along the west and east ends of Eastern Parkway, respectively, but no bus line runs the length of the parkway. The B12 and B40 buses run on East New York and Liberty avenues. The B45 runs on Sterling and St. Johns places; the B65 follows Dean and Bergen streets, and the B25 travels on Fulton Street. North-south bus routes that cross Eastern Parkway include the B41 on Flatbush Avenue; the B69 on Grand Army Plaza; the B48 on Classon/ Franklin avenues; the B49 on Bedford/Rogers avenues; the B45 on Washington Avenue; the B44 on Nostrand/New York avenues; the B43 on Brooklyn/Kingston avenues; the B46 on Utica Avenue; and the B15 on Ralph/Buffalo avenues. North-south routes that cross Eastern Parkway Extension and East New York Avenue include the B7 on Saratoga/Hopkinson avenues; the B60 on Rockaway Avenue; and the B83 and B20 on Pennsylvania Avenue/ Broadway; the B24 on Broadway and Atlantic Avenue; and the Q56 on Jamaica Avenue.

## **Current Projects**

Prospect Park Alliance Restoration of Eastern Parkway Malls

The Prospect Park Alliance (PPA), a public/private partnership with Parks & Recreation, is in the midst of a project to restore Eastern Parkway between Grand Army Plaza and Washington Avenue to its former historic state (See Section 1 Recommendations). In August 2004, PPA and Parks & Recreation completed the \$2 million reconstruction of the Baily Fountain.

Weeksville/Utica Avenue Transportation Study

NYC DOT is assessing the transportation needs of four Brooklyn neighborhoods, including a portion of the Eastern Parkway Extension study area. The on-going study addresses congestion, trucks, levels of service, and safety. At Utica Avenue, traffic calming measures, including turn prohibitions and new crosswalks between the malls, were implemented recently. Large, overhead street signs were installed at all Eastern Parkway intersections to better orient drivers.

Reconstruction of Boyland Pedestrian Plaza

The NYC Department of Design and Construction (DDC) is rebuilding the Thomas S. Boyland pedestrian plaza at Prospect and Hopkinson avenues at Eastern Parkway Extension.



## RECOMMENDED ROUTES AND TREATMENTS

### Selection Criteria

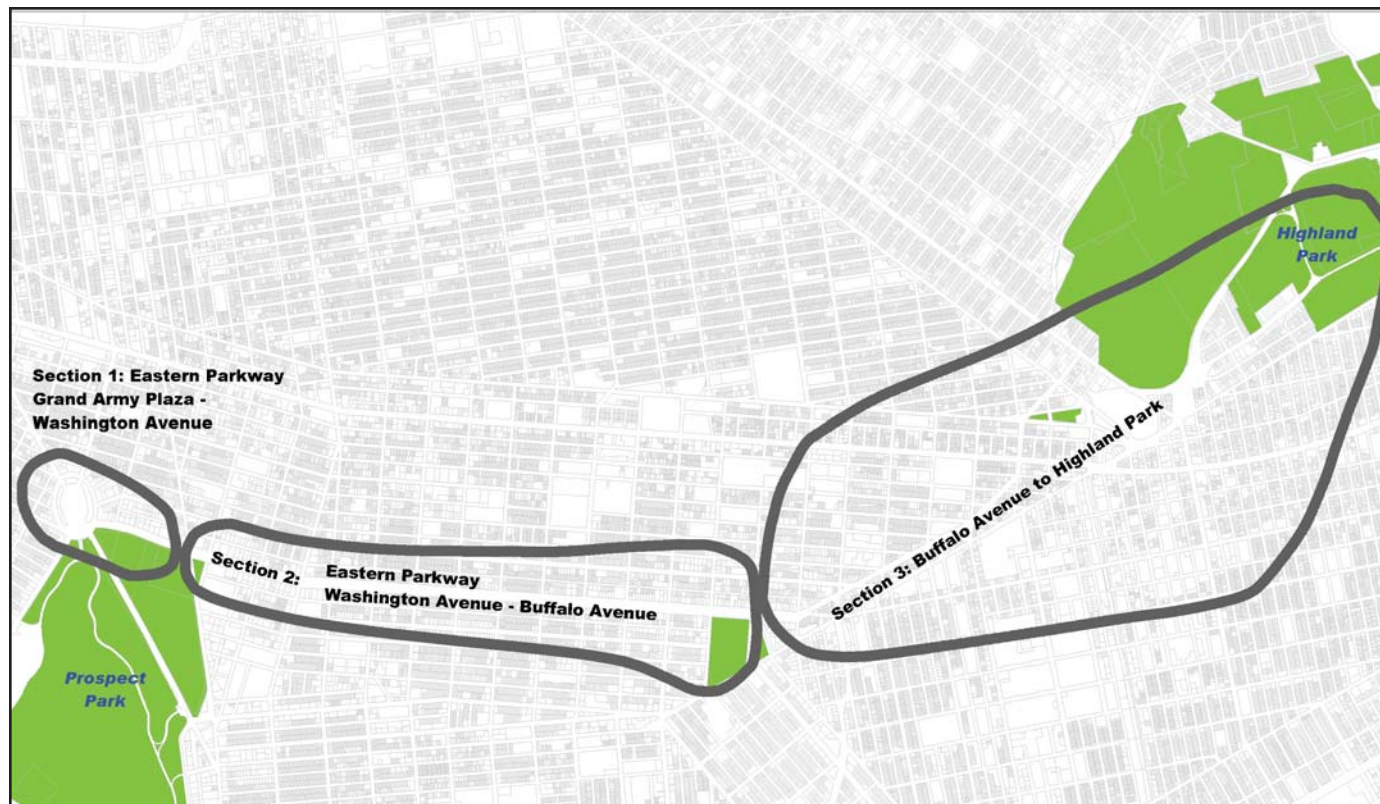
The routes described in the sections to follow are recommended in the *New York City Bicycle Master Plan* and the plan for the Brooklyn-Queens Greenway. Six selection criteria are considered when choosing greenways and on-street bicycle routes.

1. **Accessibility** to major origins and destinations, such as Prospect and Highland parks, the Brooklyn Museum, schools, and other community facilities located within and around the study area.
2. **Connectivity** with other routes, including the Brooklyn-Queens Greenway, the Bedford Avenue bike lanes, and Class 2 lanes on Bergen and Pacific streets and St. Marks Avenue striped as part of the extensive citywide network recommended in the *New York City Bicycle Master Plan*.
3. The **directness** of the route to major destinations is as important to cyclists as those using automobiles and public transportation. Routes are chosen in part based on how quickly they connect destinations such as employment centers, retail districts, and recreation.
4. The **continuity** of cycling conditions emphasizes clear visual and physical connections between sections of a greenway. Steep grade changes should be avoided where possible.
5. The **safety** of a route is determined by factors such as curb lane width, traffic volume, and vehicle speed, and measured by analyzing recent accident data. Increasing safety and/or choosing the safest routes increases ridership and encourages a greater variety of riders.
6. The **feasibility** of implementing a bicycle facility is dependent on factors (other than cost) such as land use and ownership, existing traffic and roadway conditions and width, and natural barriers and ecologically-sensitive areas that preclude access.

### Route Segments

The study area has been divided into three sections: (1) Grand Army Plaza to Washington Avenue; (2) Washington Avenue to Buffalo Avenue; and (3) Buffalo Avenue to Highland Park [Map 5]. The divisions are based on natural boundaries and the present conditions of the study area. The first two sections have one defined route along Eastern Parkway. The third section has three possible paths: two parallel diagonal routes that travel primarily on Eastern Parkway Extension and East New York Avenue/Liberty Avenue, respectively, and a route that travels on east-west side streets and then connects with the easterly sections of the two described routes.

In this report existing land use and street conditions are discussed, issues and opportunities are identified, and findings and recommendations are made for each route segment. The report highlights both positive and negative attributes of the route that may affect the operation of a bike lane. Recommended are a combination of Class 1, 2 and 3 facilities, along with striping, signage, and changes to street geometry and signal timing.



Map 5: Study Area by Section

## SECTION 1: EASTERN PARKWAY FROM GRAND ARMY PLAZA TO WASHINGTON AVENUE

### Introduction

There are currently no bicycle facilities in this 0.32 mile-long block of Eastern Parkway. An important goal of the project is to establish a clear connection between Prospect Park and the Eastern Parkway malls. The work of the PPA offers the opportunity to extend the greenway west to Prospect Park. The lack of the formal malls that define Eastern Parkway and the availability of excess roadbed unnecessary for vehicles make this section ripe for improvement for pedestrians and cyclists.

### Existing Conditions

Eastern Parkway begins at Grand Army Plaza, a large oval plaza situated at the north end of Prospect Park. Grand Army Plaza is bounded by wide perimeter streets (Plaza Street West and East). Local traffic enters and exits in a counter-clockwise direction at signalized intersections at the north and south ends of the oval, and at non-signalized intersections in between. Flatbush Avenue, a major two-way arterial, intersects diagonally with the plaza, providing direct vehicular connections between downtown Brooklyn and the Atlantic Ocean waterfront.

The parkway starts/ends at the intersection of Plaza Street East and Flatbush Avenue, which, despite signals and crosswalks, is difficult for both pedestrians and cyclists to navigate due to its width. Eastern Parkway then slopes up a long block to Washington Avenue. Between Grand Army Plaza and Washington Avenue, the parkway has three eastbound and three westbound lanes and a westbound north service road separated from the parkway by a median/mall. The service road is wide and easily accommodates a travel lane and two parking lanes.



Grand Army Plaza

The Brooklyn Public Library; the Brooklyn Museum, one of the largest museums in the country; the 52-acre Brooklyn Botanic Garden; and Mount Prospect Park are located on the south side of the parkway.

On the north side of the parkway the block is interrupted by Underhill Avenue, a north-south street that terminates at a T-intersection with the Eastern Parkway service road. The intersection is signalized, but the north service road is controlled only by a stop sign. East of Underhill Avenue, the service road narrows and the median widens to 20 feet. Despite a recent tree planting, the mall is in poor condition due to subway ventilation grates and broken pavement. A mid-block signalized intersection marked by ladder crosswalks facilitates pedestrian access to the Brooklyn Museum and entrances to the IRT subway station, one on the south sidewalk, the other on the north mall.

## The Brooklyn-Queens Greenway

Eastbound Eastern Parkway widens as it approaches Washington Avenue to include a left turn lane, and a slip lane on the north mall permits westbound parkway drivers access to the service road, thereby compromising pedestrian circulation. The intersection is signalized; and a high-visibility crosswalk connects the southwest corner to the greenway on the south mall. The intersection averaged 18 reportable vehicular accidents and two pedestrian accidents per year [See Appendix 3: Accident Analysis].

### Findings [Map 6]

- Pedestrian and bicycle traffic is heavy due to major destinations and proximity to Prospect Park.
- Continuity between this block and the greenway is poor, due to the lack of a southern mall.
- Designated pedestrian/bicycle space is lacking since there is no southern mall and the northern mall is narrow
- There are poor pedestrian connections between the north median/mall and the formal malls east of Washington Avenue.
- The north service road is exceptionally wide and excess roadbed unnecessary for vehicles may be recaptured for pedestrians and cyclists.
- Washington Avenue had the seventh highest number of total and pedestrian accidents, including a fatality, among the 16 Eastern Parkway intersections.
- Bicycle parking is insufficient at the entrance to the Eastern Parkway subway station, the Brooklyn Museum, and especially the Brooklyn Public Library.
- Few informational signs indicate the historic and cultural significance of the area.

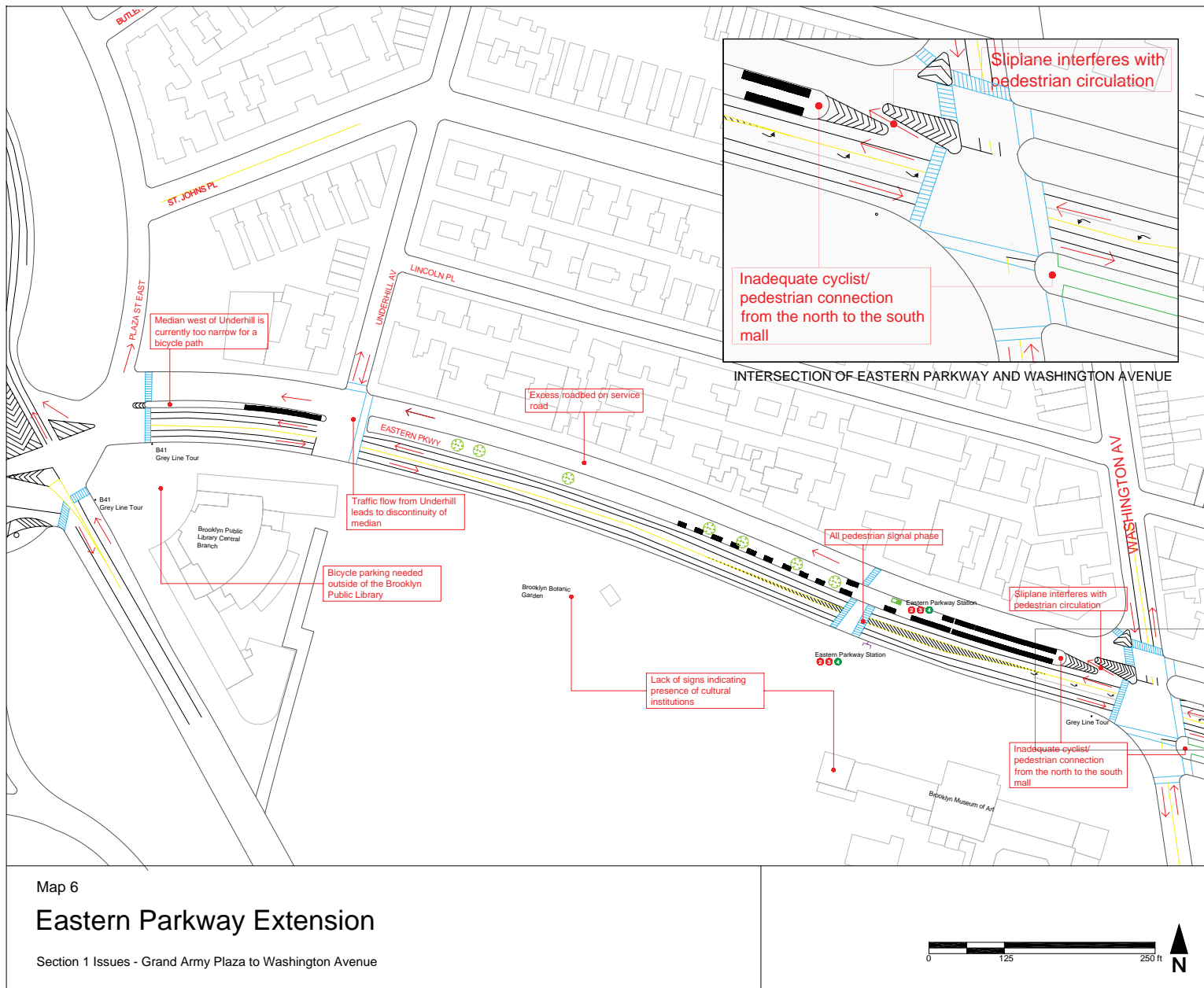


Prospect Park Bike Path



Eastern Parkway crosswalk at Washington Avenue





## **Recommendations**

Recommendations to reconfigure this block of Eastern Parkway were developed in coordination with Parks & Recreation and PPA. The PPA is a public-private partnership with Parks & Recreation. Its main goal is to restore and preserve Prospect Park. The organization has completed a plan to restore the mall between Grand Army Plaza and Washington Avenue and install crosswalks and neckdowns. All necessary approvals and funds are being sought, and these improvements are to be implemented through Parks & Recreation as part of a capital reconstruction expected to begin in spring 2006. A summary of the Prospect Park Alliance project is as follows (also see figure 3, Proposed PPA Schematic of Eastern Parkway, on pages 22 and 23):

### **Reconstruct the north mall**

The plan widens and extends the existing north median/mall. The plan seeks to continue the standard formal mall west from Washington Avenue to Grand Army Plaza, including extending the mall through the intersection at Underhill Avenue. Both the median and existing north mall would be widened, taking space from the north service road. The slip lane between the parkway and service road would be eliminated.

### **Install neckdowns**

Neckdowns, sidewalk extensions at the street corner, are recommended on the south side of Eastern Parkway where it intersects Washington Avenue and Grand Army Plaza. The neckdown at Washington Avenue would align the curb with the south mall and shorten the crossing distance for greenway users.

### **Mark crosswalks**

Crosswalks are recommended between the north and south corners of Eastern Parkway and Grand Army Plaza, and at Washington Avenue between the northern malls. Pedestrians and cyclists face multiple vehicular turning movements where the road intersects the off-street path. Crosswalks between the northern malls would provide a designated legal means for pedestrians and cyclists to cross the roadway. Existing signs on the malls at each intersection instruct "Turning Vehicles Yield to Pedestrians in the Crosswalk." A marked crosswalk would reinforce the sign's message. At Utica Avenue DOT recently striped crosswalks between the malls on Eastern Parkway as part of a redesign of the intersection. Similarly, crosswalks between the Ocean Parkway greenway malls were recently implemented by DOT at the request of the Department of Parks & Recreation. Crosswalks should permit use of the road between the malls for both queuing vehicles and greenway users.

Additional bicycle treatments and signs for this segment as per this report's recommendations include:

#### Path design and dimensions

The new Class 1 path on the north mall should be designed with the same dimensions – eight feet for cyclists and six feet for pedestrians, separated by a small, raised granite divider – as the path on the south mall. Stenciled bicycle and pedestrian symbols should be used to demarcate the space allocated to each user. Subway grates on the malls may require the path to narrow in certain sections.

#### Crosswalk design

The high-visibility crosswalks recommended between the north malls at Washington Avenue should be designed for both cyclists and pedestrians. The crosswalks should be 14 feet wide, as at Utica Avenue. A bicycle-pedestrian crosswalk would also establish a clear connection from the north to the south mall, strengthening the continuity of the greenway.

The crosswalks between the malls should be augmented to maximize safety and minimize vehicular-pedestrian/bicyclist conflict. The stripes at each edge of the crosswalk should be constructed of a slightly raised surface, such as profiled markings or rumble strips, to provide a visual and physical warning to turning vehicles.

#### Install a leading pedestrian-bicycle interval signal phase

A leading pedestrian-bicycle interval should be incorporated into the signal timing at each intersection. Pedestrian signals with universal symbols should be installed at the intersections along the north malls. "Walk Your Bike" signs should be posted at Washington Avenue connecting the malls.

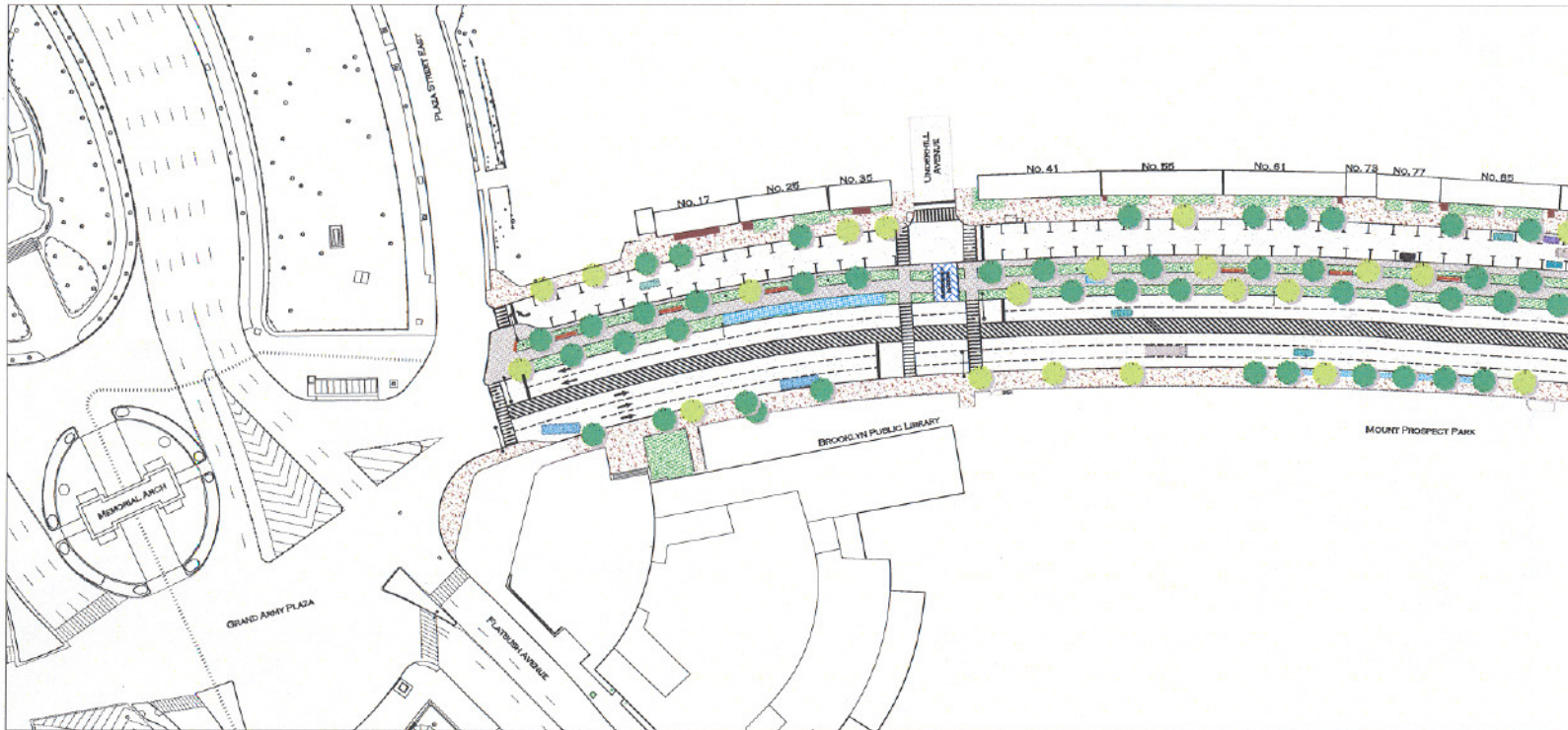
#### Install greenway and destination signs

Greenway signs and cultural signs denoting Prospect Park, the Brooklyn Public Library, the Brooklyn Museum, and the Botanic Garden should be installed as per the sign plan developed for this project by Parks & Recreation [Figure 3].



Figure 2: Destination sign pointing toward the Brooklyn Children's Museum





This page and next, Figure 3: Proposed Prospect Park Alliance schematic for Eastern Parkway between Grand Army Plaza and Washington Avenue. The design will be revisited and possibly altered when implementation funding becomes available.