QUEENS
EAST RIVER AND NORTH SHORE GREENWAY MASTER PLAN

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Introduction

Project Description

The Queens East River and North Shore Greenway is a proposed 10.6-mile urban shared-use trail, intended to provide access to the shoreline in Queens and improve non-motorized commuter options. It will connect the neighborhoods of Long Island City, Hunters Point, Ravenswood, and Astoria in western Queens with Steinway, Jackson Heights and East Elmhurst in northern Queens and connect four parks on the East River shoreline. This proposed greenway is part of an ambitious multi-year effort to implement a comprehensive citywide network of cycling lanes and greenways. The 1997 *New York City Bicycle Master Plan* identified a 900-mile bicycle network that incorporated the 350-mile network of bicycle and pedestrian paths recommended in the 1993 *Greenway Plan for New York City*. That plan also highlights the East River section of the Queens East River and North Shore Greenway as a priority route. This project seeks to establish continuous waterfront access as recommended in the City's *Comprehensive Waterfront Plan* of 1992.

Study Area

The proposed East River and North Shore Greenway follows the natural boundaries of the western and northern shorelines in Queens. The relatively flat terrain of the study area makes it a desirable route for cyclists, as does proximity to the East River, local parks with unmatched views of Midtown, cultural institutions, landmarks, and links to Manhattan via three bridges. The two gateways to the study area are the Pulaski Bridge in the south and the Flushing Bay Promenade to the northeast. The Pulaski Bridge, with its existing shared-use path, provides the link between Brooklyn and Queens across Newtown Creek. The 1.4-mile Flushing Bay Promenade establishes a connection along Flushing Bay with a link to downtown Flushing and the 40-mile Brooklyn Queens Greenway.

The study area has two major sections: The East River section, and the North Shore section. For reasons of manageability, the entire study area has been divided into five segments (1 through 5):

East River:

(1) Pulaski Bridge to Queensboro Bridge

(2) Queensboro Bridge to Hallets Cove

(3) Hallets Cove to 20th Avenue

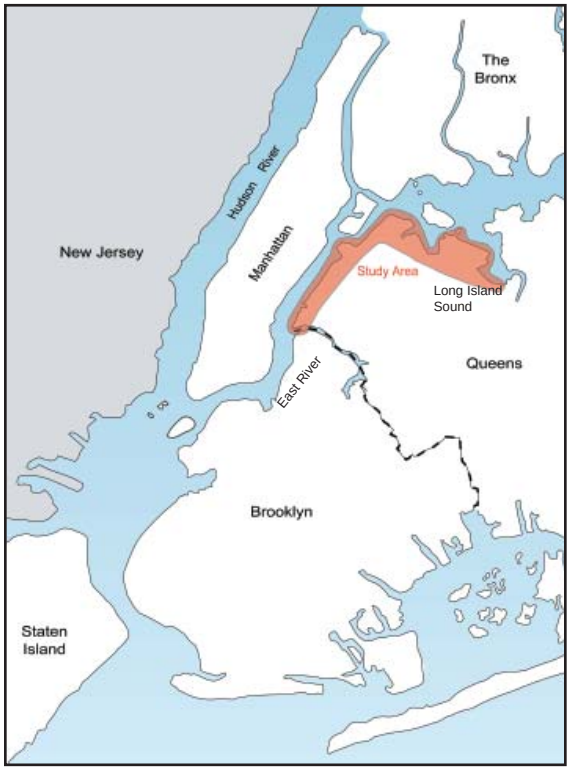
North Shore:

(4) 20th Avenue to 82nd Street

(5) 82nd Street to LaGuardia Airport to the Flushing Bay Promenade

Project Goals

The proposed route would greatly improve public access to the City's waterfront. Many waterfront segments, however, are inaccessible due to current industrial or commercial uses, or because they are privately owned. The creation of an uninterrupted esplanade along the waterfront is at best a long-term project requiring the cooperation of numerous stakeholders. For this reason, this study examines two parallel (and, in some segments, identical) routes, a discontinuous one along the waterfront and a continuous one on-street. The on-street route would take less time and cost to implement, given its use of existing streets and sidewalks, park paths and esplanades (some of which are not on-street), and would be in place as the waterfront esplanade is developed. The on-street route is not just an interim solution; it would provide a direct and continuous route to major destinations preferred by commuters. The on-street route would connect to the Queensboro, Triborough, and Roosevelt Island bridges, link residential and commercial areas, and connect to existing parks and esplanades. Most of the upland communities along the North Shore are separated from the waterfront by industrial, utility, or transportation uses, adding to the importance of an on-street facility.



Study Area

Project Scope

This master plan, a joint effort by the New York City Department of City Planning (DCP) and Department of Parks & Recreation, identifies conceptual greenway routes, describes the selection of the preferred route and the criteria used to make the selections.

The scope of work covers proposed signage, striping, landscaping, design guidelines for the trails and lanes, and recommended improvements or alterations to existing facilities.

The Queens East River and North Shore Greenway has been planned and designed in consultation with an advisory committee. The committee included Community Boards 1, 2, and 3, civic organizations and community groups, as well as federal, state and local agencies. Numerous field visits, committee meetings, and valued community input helped shape the outcome of this study.

This master plan should serve as a resource and guide for city, state and federal agencies, community groups and private developers to implement the plan. The many recent or current projects in the study area have been incorporated into this master plan in an effort to create a continuous route in the future.

Funding

Funding for this master plan is provided by the Congestion Mitigation Air Quality (CMAQ) program under the Transportation Equity Act for the 21st Century (TEA-21). CMAQ was first established under TEA-21's predecessor, the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. The program for the first time provides Federal Highway Administration (FHWA) funds for the planning, design, and construction of pedestrian and bicycle facilities to reduce congestion and emissions in non-attainment areas, such as New York City, which does not presently meet air quality standards. The project has $150,000 in funding (80 percent federal, 20 percent local) to prepare the project master plan. Parks & Recreation has been awarded $2,640,000 in CMAQ funds for implementation of the in-park portions along the Queens East River (Phase 1). Councilmember Gioia also allocated $500,000 for this phase. An additional $160,000 in local match funds is needed.

This Document

This document describes the greenway planning framework, discusses the existing conditions within the study area, and proposes routes and route alternatives. The Planning Framework chapter describes the planning initiatives and the framework for the implementation of greenways, bicycle and pedestrian facilities in New York City. The Existing Conditions chapter talks about the general identity of the area and its neighborhoods, giving a rough overview of the predominant land uses and transportation opportunities, including a brief history of the study area. The Proposed Route and Route Alternatives chapter discusses existing conditions, but in a more detailed way, specific to the five segments. This chapter discusses the inland and the waterfront corridor segment by segment, analyzes existing conditions and identifies opportunities and constraints regarding the feasibility of the routes, possible alternative routes, and potential design treatments. Connections between the on- and off-street routes are also highlighted.

Planning Framework

New York City Greenway System

The release of the 1993 *Greenway Plan for New York City* by the New York City Department of City Planning signaled the start of a multi-year effort to create the nation's most extensive urban greenway system – 350 miles of landscaped bicycle and pedestrian paths traversing New York City.

The *NYC Comprehensive Waterfront Plan* (1992), the *Plan for the Queens Waterfront* (1993), and the *New York City Bicycle Master Plan* (1997) call for improved access to the waterfront and a connected greenway facility along the shoreline of Queens.

This master plan adapts the general goals of these documents into goals specific to this study area, as follows:

- Provide non-motorized recreational and commuter opportunities for pedestrians and bicyclists along the waterfront between the Pulaski Bridge and the Flushing Bay Promenade
- Improve access to the waterfront, important landmarks, and destinations such as the East River parks, the North Shore bays, and major transportation facilities, and
- Develop a continuous on- and off-street route (as conditions permit) consistent with the citywide bicycle and greenway network.

Source: *A Greenway Plan for New York City*, DCP, 1993

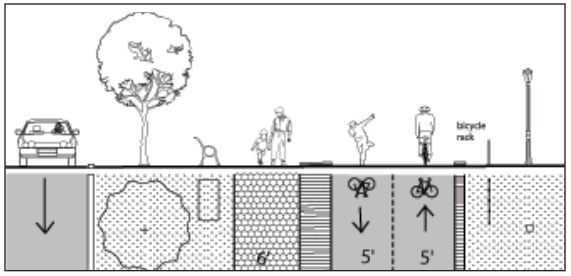
Greenway Classification

A greenway is a shared-use pathway for non-motorized transportation along linear spaces like park paths, waterfront esplanades, river corridors, shorelines, railroad rights-of-way, or city streets. These linear spaces can be natural or constructed landscaped paths for bicyclists and pedestrians. Greenways serve as open space connectors, linking origins and destinations such as parks, nature reserves, cultural areas, historic sites, employment centers, commercial areas, libraries, or schools. Greenways are used for walking, jogging, in-line skating, bicycling, and by wheelchair users.

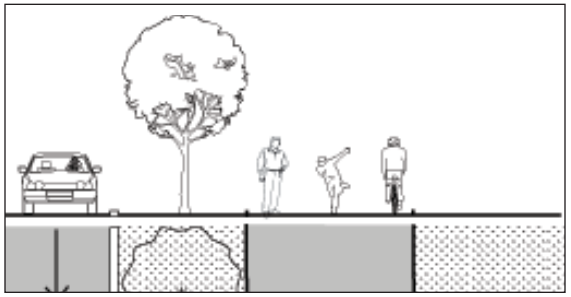
Greenways in New York are classified by type:

Class 1: Shared-use Trail

A shared-use trail is separated from the roadway and delineated by pavement markings and regulatory signage.



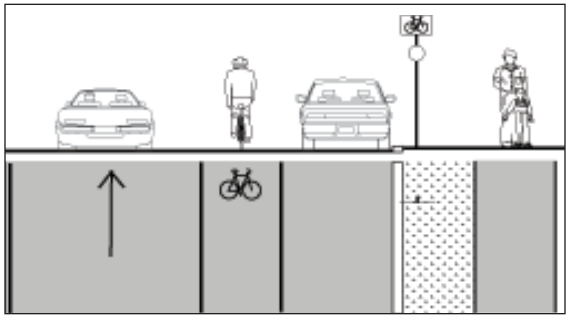
Class 1: Dual Carriageway



Class 1: Shared-Use Path

Class 2: Bicycle Lane

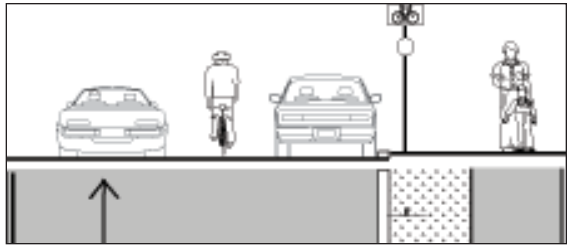
A bicycle lane is part of the roadway and delineated by pavement markings and regulatory signage.



Class 2: Striped On-street Lane

Class 3: Signed Route

A signed route or bike route has informational signage only, typically located at each block along the route.



Class 3: Signed On-Street Route

For class 2 and 3 facilities, sidewalks or a separate facility for pedestrians would have to complement the bicycle facility in order to create a complete greenway. For a detailed description of the greenway classification system, see Appendix 1.

Criteria for a Successful Greenway

The *New York City Bicycle Master Plan* identifies six selection criteria to consider when locating greenways and on-street bicycle routes. These criteria were used to identify the preferred route(s) for the Queens East River and North Shore Greenway.

- Accessibility

Accessibility to major origins and destinations, such as the waterfront, parks, housing, transit, transportation hubs, schools, libraries, and other community facilities within and around the study area is important for greenway users.

- Connectivity

Connectivity with other existing greenway paths and bicycle lanes, and with the waterfront, parks, esplanades, and retail corridors make routes more desirable for cyclists and pedestrians.

- Directness

Routes directly connecting origins and destinations serve as non-motorized traffic corridors are preferred. The more direct a route between two points, such as home and work, the more commuter traffic it may attract.

- Continuity

Continuity of cycling conditions includes clear visual and physical connections between sections of a greenway, and between adjoining greenways. Factors include pavement conditions, steepness of grade, scenic qualities, and the overall design of a facility.

- Safety

The safety of an on-street signed or striped route is assessed using factors such as curb lane width, traffic volumes, separation between motorized and non-motorized traffic, and vehicle speed. The safety of an off-street route, or greenway, is determined by examining other considerations, such as visibility for all park users, operational conflicts on shared-use facilities and at pedestrian crossings, and access points such as underpasses and stairs. Increasing safety and/or choosing routes with the highest levels of safety would increase the number and variety of riders.

- Feasibility

Feasibility of implementing a Class 1 or 2 facility is based on factors other than funding, such as: land use and ownership, existing roadbed and park path width/conditions, natural barriers, and environmentally-sensitive or secured areas that preclude access.

Existing Conditions

Yesterday – A Brief History

The proposed on- and off-street route roughly follows the shoreline of western and northern Queens through the neighborhoods of Long Island City, Astoria, and East Elmhurst in Community Districts 1, 2, and 3. These neighborhoods previously were independent municipalities and were later incorporated into the City of New York.

Long Island City

Long Island City in western Queens is bounded to the west and the north by the East River, to the east by Hazen Street, 49th Street, and New Calvary Cemetery, and to the south by Newtown Creek. It is the largest neighborhood in the borough and takes in several smaller ones: Hunter's Point, Ravenswood, Astoria, Steinway, and Sunnyside. The area used to flood easily and was sparsely settled before 1853, when two developers, Neziah Bliss and Eliphalet Nott, leveled sand hills and laid out streets. Terminals were built for the Flushing Railroad (1854) and the Long Island Rail Road (1861). During the Civil War, Hunter's Point was industrialized and in 1869 was connected to Astoria by a street railway. In 1870, Long Island City became the fourth incorporated municipality within the current bounds of New York City. Between 1870 and 1873 the Steinway family erected a piano factory on the East River and laid out Steinway Village, which became heavily German. Between 1874 and 1880 swamps were drained and the land filled to end flooding. The notorious Hell Gate Reef, a deadly trap for ships, was dynamited in 1876 and again in 1885. After 1900 heavy industry moved out because of crowding, but the transportation infrastructure attracted newcomers. The Long Island Rail Road electrified its suburban routes in 1905. The Steinway Tunnel for the Flushing line was completed under the East River in 1907 but finally opened in 1915. After the Queensboro Bridge opened in 1909, new streets were laid out, blocks of houses were built and land values rose rapidly. During the 1920s the last open land in Astoria was developed. Aircraft parts were manufactured in Astoria during both world wars. After 1945, many large factories closed or converted into uses such as the Silvercup Studios, the International Design Center, and residential units. The neighborhood attracted immigrants from Asia and Latin America in the 1980s. Long Island City remains the most industrialized area in Queens County, especially in its southern reaches.

Astoria

Astoria in northwestern Queens constitutes the portion of Long Island City north of Broadway. In 1839, the Village of Astoria was incorporated, about the time when industries began to locate in western Queens. It was developed by Stephen A. Halsey, a fur merchant who petitioned the state legislature to name it for the prominent fur trader John Jacob Astor. During the 1840s and 1850s it grew slowly inland from the ferry landing at the foot of Astoria Boulevard. Wealthy New Yorkers built mansions on 12th and 14th streets and on 27th Avenue. The German United Cabinet Workers bought four farms in 1869 between 35th and 50th Streets and developed a German town.

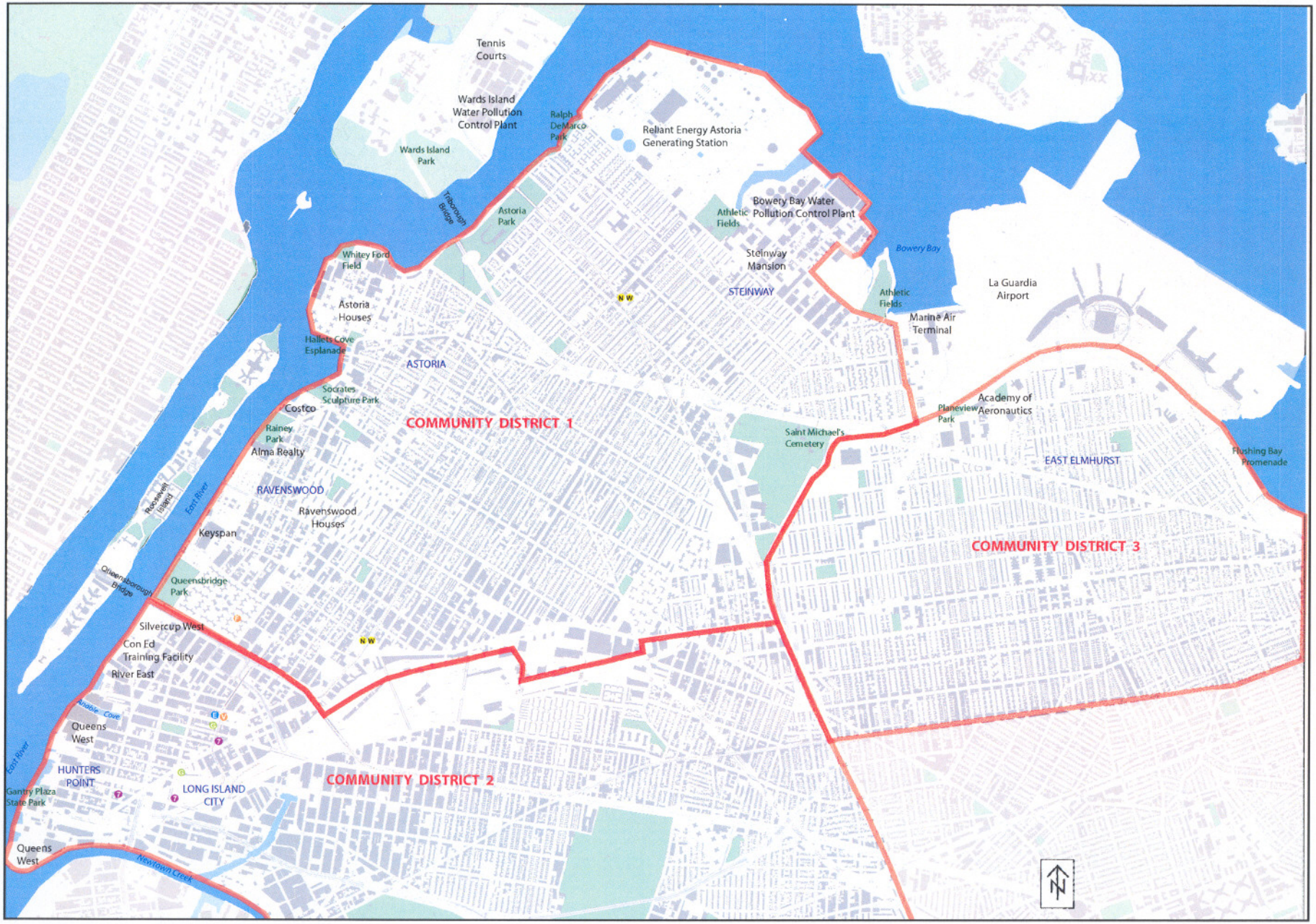
As mentioned, in 1870 Astoria consolidated with Hunters Point, Steinway, Ravenswood and Dutch Kills to form Long Island City. The Steinway community is named after the 19th-century entrepreneur William Steinway, manufacturer of pianos, and real estate and transit developer. The Steinway Piano Factory was built in 1872, surrounded by Victorian row houses built by Steinway for its workers.

Thousands of houses were built in the 1890s and the early twentieth century. The first rapid transit line, the Astoria elevated, opened on 31st Street in 1917. The Kaufman Astoria Studios, where Rudolph Valentino, the Marx Brothers, and Paul Robeson made films, were later used by the government for making training and propaganda films. Abandoned in 1971, the studios were eventually restored for television and motion picture production and one building now houses the Museum of the Moving Image. After the Second World War, Astoria was largely Italian. Greeks rapidly increased in number after 1965. They now account for slightly less than half its population. St. Demetrious is the most prominent of eleven Greek Orthodox Churches in the area. Other ethnic groups have also established communities in the area, including Colombians, Chinese, Guyanese, and Koreans, and to a lesser extent Ecuadorians, Romanians, Indians, Filipinos and Dominicans.

East Elmhurst

East Elmhurst in north-central Queens is bounded to the north by LaGuardia Airport, to the east by Flushing Bay, to the south by Northern Boulevard, and to the west by 85th Street. Prior to World War I, North Beach, as it was called then, was "Queens County's Coney Island" on Long Island Sound, with picnic grounds, dance halls, and amusement park rides. The area was developed in 1905 as a neighborhood of frame houses on small lots; those on the bluff overlooking the Bowery Bay had private beaches. Prior to 1937 the area was wholly residential, but transportation and utility uses, including the Bowery Bay Water Pollution Control Plant, transformed the shoreline before and after WW II.

Overview Study Area



Built for the New York World's Fair of 1939-1940, LaGuardia Airport borders Bowery and Flushing bays on the site of the Gala amusement park and a small airport, which was enlarged by reclaiming 350 acres of waterfront. Operated by the Port Authority of New York and New Jersey, LaGuardia Airport has two runways, 72 airplane gates, and handles over 25 million passengers annually. It is a major employer: over 9,000 persons work at the airport, and it contributes $5.7 billion in economic activity to the metropolitan region, generating 63,000 jobs. Proximity to the airport brought commercial development to Ditmars Boulevard, including airport-related uses such as hotels, bus and livery car service.

Flushing Meadows-Corona Park and Flushing Bay Promenade were built on the Corona Dumps, land-filled marshes on either side of the Flushing River, for the 1939-1940 New York World's Fair. The 1,250-acre park is populated by the remnant buildings and pavilions of both world's fairs, including the Unisphere and sports facilities such as Shea Stadium and the USTA Tennis Center.

Today

Land Use

The East River shoreline is used by industrial and manufacturing firms requiring waterfront access and proximity to Manhattan and by a sometimes incongruous mix of utility power plants, transformers, and parks with waterfront access and stunning views of Manhattan. South of the Queensboro Bridge the study area is mainly industrial, to its north is a mixed residential/commercial community of high-density housing projects interspersed with clusters of one- and two-family homes. Commercial uses are primarily corner convenience stores and delis, restaurants, and automobile-related facilities.

Development of the waterfront has revived since 1990. A new private residential development, a Con Edison training facility, and a Costco warehouse store have been built in recent years. New power-generating facilities owned by Keyspan and Con Edison have been constructed on waterfront parcels; other vacant lots have been developed as destinations within the emerging LIC arts district, such as Socrates Sculpture Park. The Citicorp Building was completed in 1989 and at 48 stories is the tallest building in New York City outside Manhattan. Several other large-scale projects are currently underway, such as the Queens West mixed-use development at Hunters Point, the rezoning of a 36-block area of Long Island City to encourage commercial development, Silvercup West, Silvercup Studio's project on the East River, and the redevelopment of Queens Plaza, including improved vehicular, pedestrian, and bicycle access to the Queensboro Bridge.

The North Shore waterfront contains primarily active industrial, utility, and transportation uses, including the Reliant Energy Astoria Generating Station (formerly Con Ed) Astoria electricity generating plant (290 acres), the Bowery Bay Water Pollution Control plant (45 acres), the Steinway Piano factory, the bridge to Rikers Island Penitentiary, and LaGuardia Airport (680 acres) and its Marine Air Terminal. Along the waterfront east of the airport is the 1.4-mile Flushing Bay Promenade, reconstructed in 2001, at the north edge of Flushing Meadows-Corona Park.

The following list gives an overview of the 2000 land use distribution for Community Districts 1 to 3, as listed in the Queens *Community District Needs 2002/2003*. The map on page 14 depicts the land uses specific to the study area.

Community District 1:

1-2 Family Residential:	21%
Multi-family residential:	25%
Mixed residential/commercial:	5%
Commercial/Office:	7%
Industrial:	14%
Transportation/Utility:	10%
Institutions:	5%
Open Space/Recreation:	7%
Parking Facilities:	3%
Vacant Land:	3%

Community District 2:

1-2 Family Residential:	13%
Multi-family residential	12%
Mixed residential/commercial:	2%
Commercial/Office:	5%
Industrial:	31%
Transportation/Utility:	7%
Institutions:	3%
Open Space/Recreation:	14%
Parking Facilities:	6%
Vacant Land:	5%

Community District 3:

1-2 Family Residential:	46%
Multi-family residential:	26%
Mixed residential/Commercial:	4%
Commercial/Office:	8%
Industrial:	1%
Transportation/Utility:	2%
Institutions:	7%
Open Space/Recreation:	1%
Parking Facilities:	2%
Vacant Land:	3%

Transportation

Long Island City and Astoria are served by several subway lines. The 7 stop at Vernon Boulevard and Jackson Avenue is the only subway station within the immediate study area. Inland east of the study corridor, the G train stops at 21st Street in LIC; the R,V, and E trains stop at Queens Plaza, and the F train stops at 21st Street in Ravenswood. Long Island Railroad (LIRR) stations in Long Island City and ferry service available from Hunters Point provide additional commutation options.

Bus lines through the Queens-Midtown Tunnel to the Pulaski Bridge include the X51, X63, X64, and the X68. The Q102, Q103, and Q104 buses travel on portions of Vernon Boulevard. The Q18 bus travels on 27th Avenue between 8th and 12th streets. The Q66 bus travels between Main Street-Flushing and 21st Street and Queensbridge along Northern Boulevard and 35th Avenue.

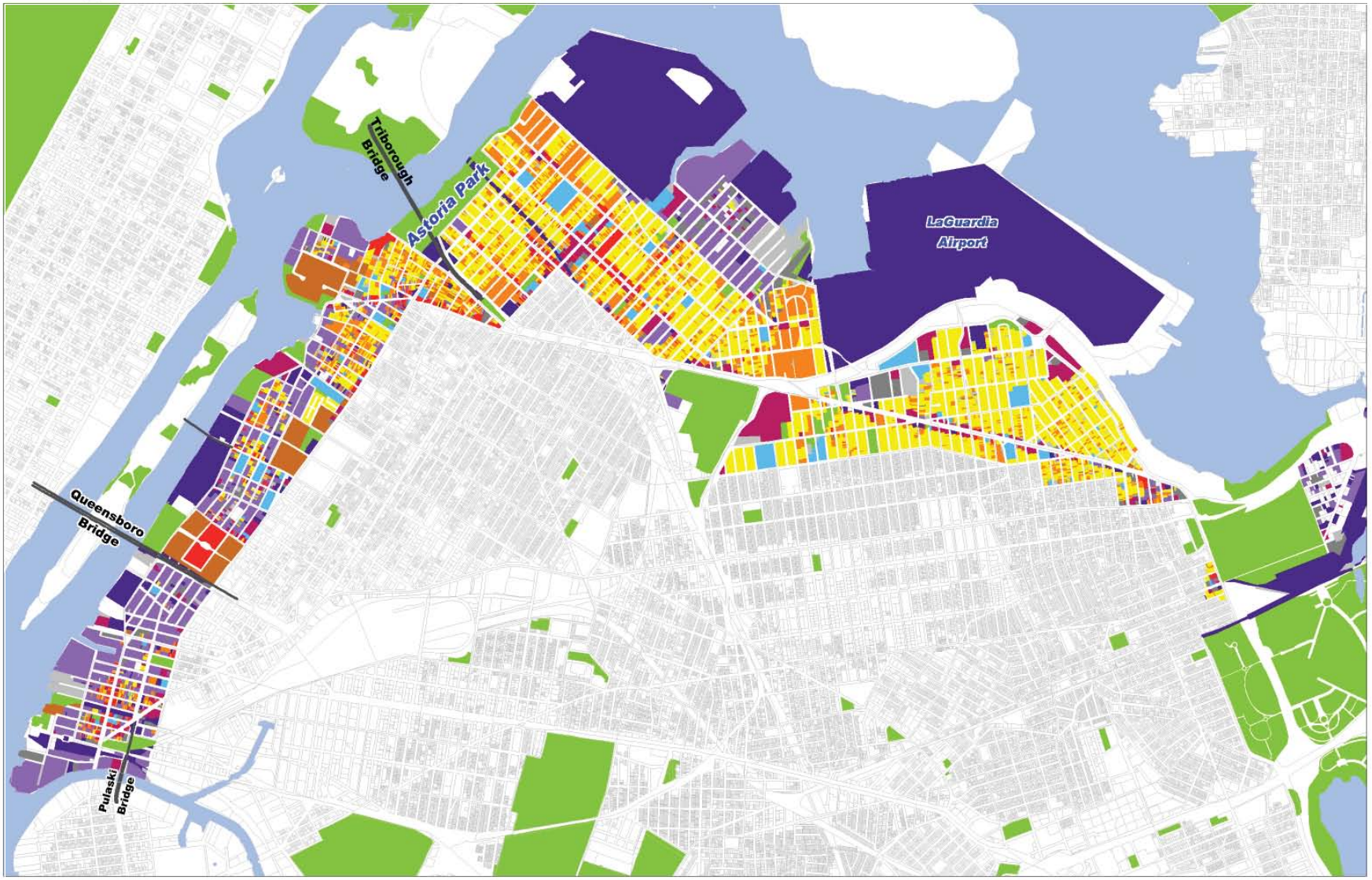
The elevated N and W lines terminate in Astoria at the Astoria/Ditmars Boulevard station two blocks south of 20th Avenue. Subway service is not available along the route in Jackson Heights and East Elmhurst. The Willets Point/Shea Stadium and the Main Street Flushing stations on the 7 line provide subway access near the eastern terminus of the proposed greenway. A Long Island Railroad (LIRR) station in Flushing provides additional commutation options.

The R101 bus runs along 20th Avenue from 21st Street to Hazen Street. The M60 and Q33 buses run on 23rd Avenue, and the Q19A, Q23, and Q48 bus lines travel on segments of Ditmars Boulevard. The Q33, Q47, Q48, and M60 also serve La Guardia Airport.

Population

The rapid development of the East and North shores in the past century and the proximity to Manhattan make the study area a popular residence. The map on page 11 shows the population density by census tract for the year 2000. The most densely populated areas are the census tracts set back from the water, with highest densities at Queensbridge Houses and in the greater Astoria area. Astoria is part of Community District 1, which is the most ethnically mixed district in Queens with over 118 nationalities.

Land Use


Triborough Bridge
Astoria Park
LaGuardia Airport
Queensboro Bridge
Pulaski Bridge
One- and Two-Family Residential
Multi-Family Walkup Residential
Multi-Family Elevator Residential
Mixed Residential and Commercial
Commercial and Office
Industrial and Manufacturing
Transportation and Utility
Public Facilities and Institutions
Open Space and Outdoor Recreation
Parking Facilities
Vacant Land
N
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1
miles

2000 Population by Census Tract

Project Constraints and Opportunities

Waterfront Access

The development of the East River waterfront over the past years, decades, and centuries created a vast mix of land uses along the shoreline. A checkerboard of industrial, commercial and residential uses, along with transportation infrastructure, parks and open spaces lines the shoreline today. Opportunities for waterfront access that existed in 1992 – as described in the Comprehensive Waterfront Access Plan – are no longer available for certain sites. In addition, the existing esplanade along the Queensbridge Park waterfront is in need of repair and has been fenced off to prevent access. However, new development precluding access to the waterfront is counterbalanced by new residential development, such as Queens West, Silvercup West, and the River East site, where waterfront access for the public is being created.

The map to the right gives an overview of current waterfront access along the East River and lists stretches with future potential access. Due to the industrial, utility, and transportation uses along the North Shore, there is no major access to that shoreline at this time.

Waterfront Access Map