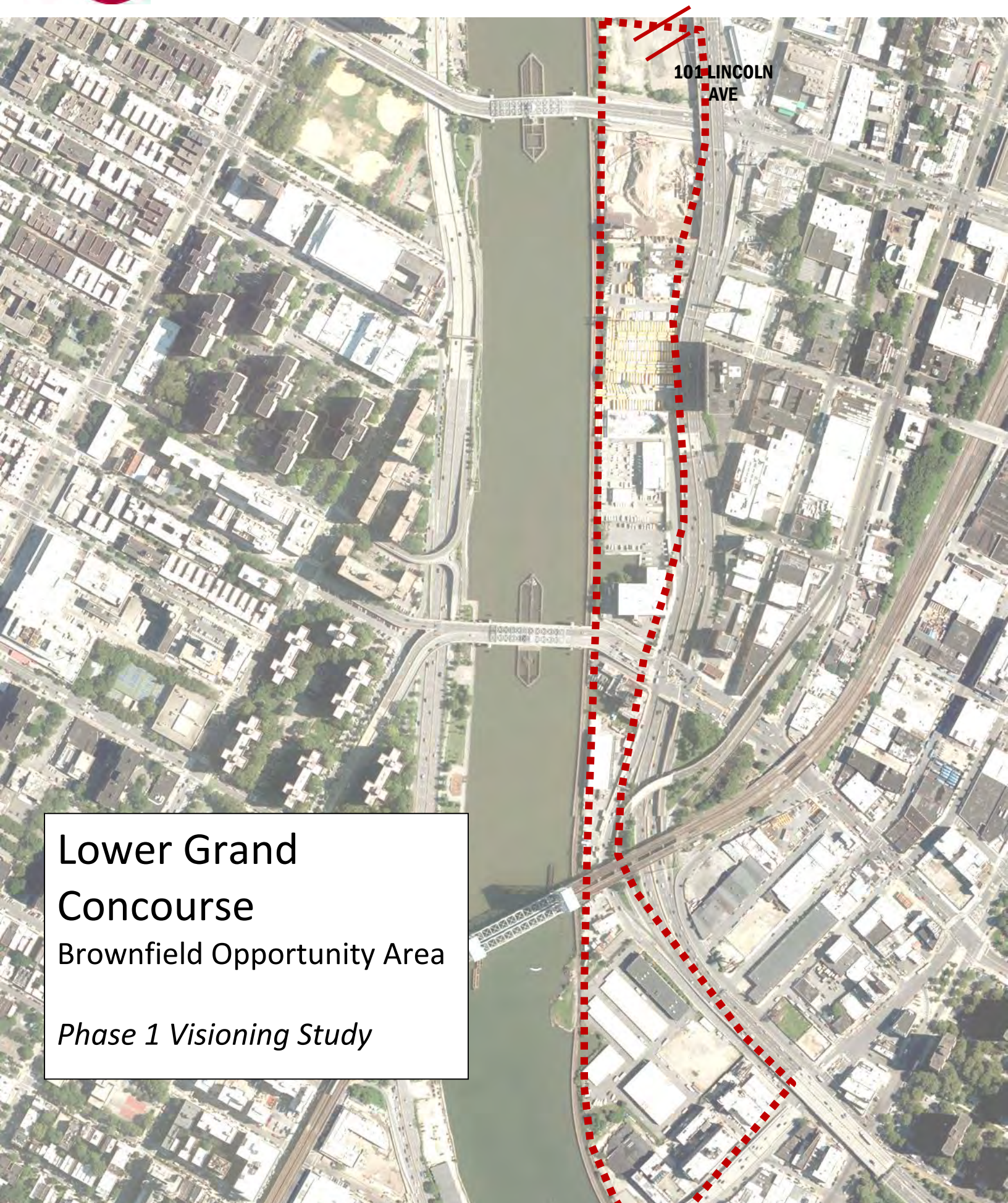
South Bronx Overall Economic Development Corporation



Lower Grand Concourse

Brownfield Opportunity Area

Phase 1 Visioning Study

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SECTION 1: INTRODUCTION

The South Bronx Overall Economic Development Corporation (SoBRO), a community-based organization and affordable housing developer, is a recipient of a New York State Brownfield Opportunity Area (BOA) grant award administered by the New York State Department of State. The BOA program encourages grantees to identify potential development sites with probable environmental contamination issues, whose redevelopment would serve to stimulate broader community-economic development activities,

SoBRO seeks to develop an implementable vision for the Bronx side of the Harlem River waterfront by undertaking an analysis of the waterfront properties stretching northward from the Third Avenue Bridge to the 145th Street Bridge. This analysis will build upon the vision and goals developed by the Department of City Planning during its Lower Concourse rezoning process. It should be noted that the rezoning plan designated the "Special Harlem River Waterfront District" overlaps with the BOA study area described above. SoBRO seeks to develop a site plan that maximizes land use potential within the zoning context, and increases vehicular and pedestrian access to the site, which is currently limited due to the existing street layout and the positioning of the lots.

Fifteen sites have been identified for potential development. The sites are bounded by the Harlem River on the west and by Exterior Street / Major Deegan (I-87) Expressway on the east, from East 149th Street on the north to the Third Avenue Bridge on the south. The following report is an urban design analysis of these sites.

This stretch of properties should be divided into two zones in order to understand the land use and zoning overlays. The dividing point of these two areas is the MetroNorth railroad bridge. The properties to the north have been rezoned from manufacturing to residential and commercial and have been designated the *Special Harlem River Waterfront District (SHRWD)* (NYC Zoning Resolution, Article VII – Chapter 7); the properties to the south are zoned MX-1: M1-3/R8 (mixed use), and do not have any special district overlays, although they are subject to the Zoning Regulations governing waterfront blocks as well as Appendix G 'Flood Resistant Construction' of the New York City Building Code.

The properties to the south of the railroad bridge and their existing land uses are compatible with the existing zoning. The area could be redeveloped in a number of ways including light industrial, residential and commercial. The existing business can also remain and continue to grow. It should be noted that the land below the railroad bridge, owned by MetroNorth, is undeveloped, that is, there are no current structures on it. We believe that this area is a unique Harlem River shorefront environment and should be protected as a natural wetland area (Block 2323, Lot 5, See Figure 8). Any development should be to support the area with appropriate plant material and passive use activities.

We have also used another physical dividing point in the study–the intersection of 138th Street and the Madison Avenue Bridge. This intersection is so impacted by traffic that it creates a barrier to pedestrian movement. The volume of vehicles is due to the combination of the exit and entrance to the Major Deegan Expressway meeting the flow of traffic entering and leaving Manhattan. The traffic lights are timed to move vehicular traffic and do not provide sufficient crossing time for pedestrians. The sites to the north of the Madison Avenue Bridge are Parcels P1 through P6 of the Special Harlem River Waterfront District; the site to the south of the Madison Avenue Bridge include Parcels P7, P8, and P9 of the Special Harlem River Waterfront District, the 'Assemblage' sites and the 101 Lincoln Avenue site.

As a result of the rezoning of the area north of the railroad bridge from manufacturing to commercial, and residential, the value of these properties has changed. The businesses on these properties (industrial, vehicle storage, warehousing, and distribution) are now grandfathered, which allows the current businesses to remain but limits their future ability to expand. A preliminary analysis of the properties, with the new zoning taken into account, yields approximately 2.8 million square feet of residential space (approximately 4,000 dwelling units), 2.3 million square feet of commercial space, and 1.0 million square feet of community facility space. In order to realize the potential of these properties, as a real estate investment and a vital new community for New York City, a series of issues – infrastructure, land use, zoning, waterfront access and design, climate resiliency, and green building design need to be addressed. There will also need to be a development balance between the number of residential units, the amount of commercial (food and pharmacies), community facility (schools and medical), as well as balance between local needs and regional draw created by the uniqueness of the location and the potential commercial opportunites (dining, clothing, music and art) due to the zoning requirements for public access for the proposed public shoreline walkway and public park.

There is also an opportunity, when viewing the study area as a whole, to unite all the sites with an urban design strategy that takes advantage of this unique location and 'brands' it with a consistent physical identity. This begins by establishing a consistent design standard for signage, street lighting, benches, trash receptacles, bus shelters, railings/fencing, and sidewalks. A wayfinding system would also help, showing the highlights of the developing area, but also its context with the surrounding neighborhoods. Massing and building orientation are also important particularly because there is the potential, as an urban design strategy, to have two building 'grids' imposed on each other. 'Grid #1' aligns the building bases with the existing street grid (east of the Major Deegan Expressway) of the adjacent neighborhood. This will provide both visual connection (refer to zoning requirements for visual corridors and upland connections) and direct street connections into the sites. 'Grid #2' is the 'grid' that positions the residential towers above the bases in a manner that maximizes their river views, both upstream and downstream. In addition, the minimum height of the building bases (regulated by zoning) will have their roofs above the Major Deegan Expressway with the residential towers set back from the facades of the base. The opportunity exists to have these roofs green and planted for both environmental reasons (absorption of rainwater) and residential passive recreational use.

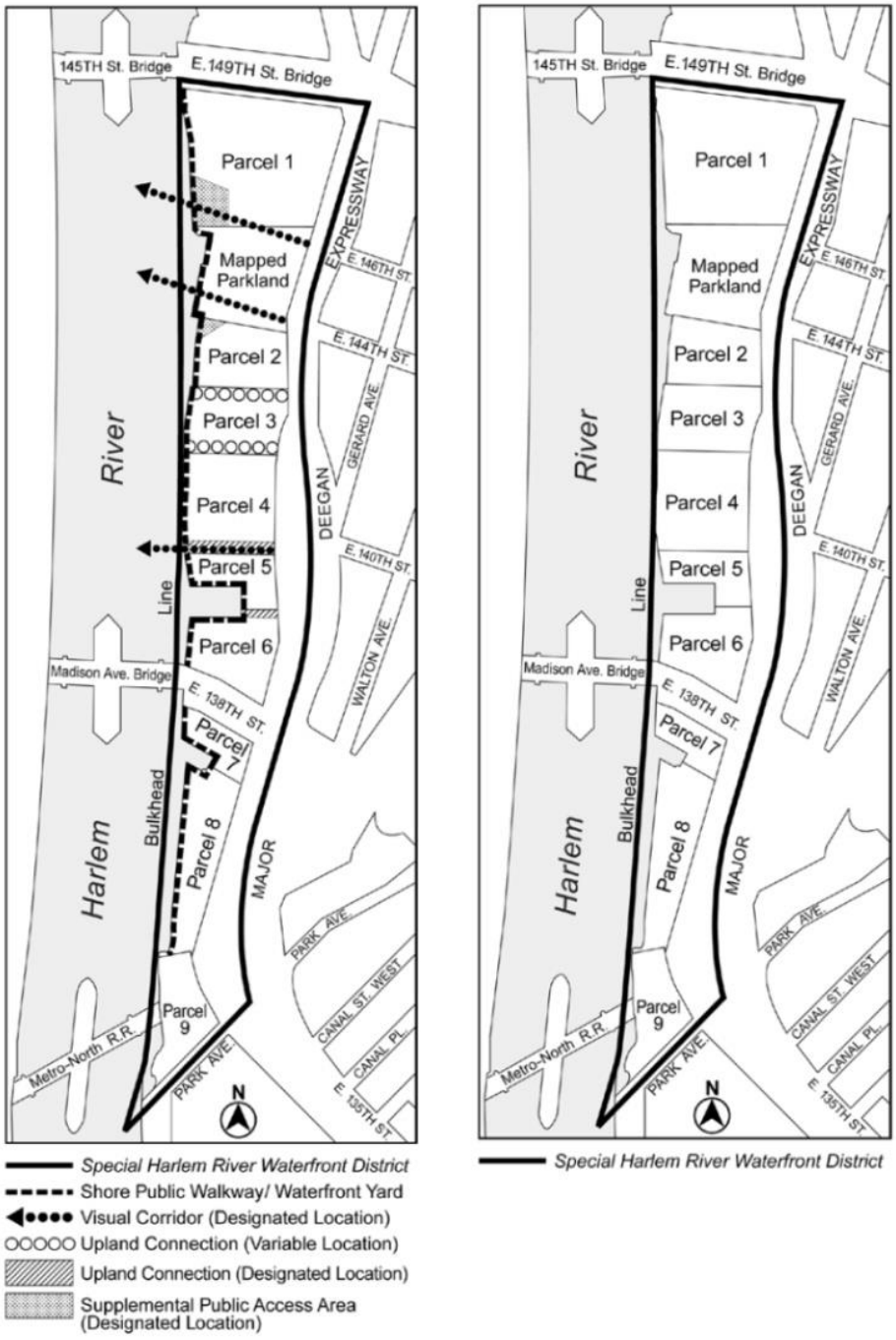

Figure 1 - Special Harlem River Waterfront District Plan and Waterfront Access Plan: Public Elements, (New York Zoning Resolution, Article VIII – Chapter 7, 2009)

Existing Conditions

Figure 2 - Intersection at E. 138th St. Bridge looking east along E. 138th St.

Figure 3 - Underneath the Major Deegan (I-87) looking north along Exterior St. from the fork between Exterior St and Rivera Ave.

Figure 4 - Parcel 1 Existing conditions looking east towards E. 149th St from site access road

Figure 5 - Parcel 3 Existing conditions looking west towards the Harlem River

Figure 6 - Existing J.L. Mott Iron Works Building, 2403 Third Ave.

Tasks

The following tasks were accomplished:

- Lot-by-lot Studies
  - Zoning Analysis
  - Bulk and conceptual Design
- Assemblage Study
  - Analysis of assemblage potential
  - Study of different strategies for the assemblage
- Waterfront Design & Access Plan
  - Renderings of the waterfront vision running the length of the study area
  - Recommendations related to economics/feasibility of incorporating the required shore public walkway into private development scenarios

  - Entry points and pathways of waterfront accessibility from inland neighborhoods and/or recommendations for how to expand access to pedestrians and cyclists
  - Incorporation of a range of shoreline protection mechanisms, such as increased greenspace and improved stormwater management infrastructure, into waterfront open space plans
- Best Management Practices to Minimize Impacts on Natural Features
  - Recommendations related to design standards and guidelines for the BOA area that would build off of LEED for Neighborhood Development and other sustainable design systems
  - Graphics and illustrative materials depicting the green design standards and guidelines
  - Evaluation of shoreline protection mechanism to address risk related to extreme weather events

Methodology

We reviewed existing documents, plans, and studies, including:

Bronx Bus Map (Metropolitan Transit Authority)

Building Resiliency Task Force: Report to Mayor Michael R. Bloomberg & Speaker Christine C. Quinn (Urban Green Council; June 2013)

Building Resiliency Task Force: Sandy – One Year Later (Urban Green Council; October 2013)

National Flood Insurance Program Community Ration System: Coordinator's Manual (Federal Emergency Management Agency, expires September 30, 2013)

New York City Building Code, Appendix G, Flood Resistant Construction

The New York City Waterfront Revitalization Program (New York City Department of City Planning; March 2012)

New York City Zoning Resolutions:

Article I – General Provisions, Chapter 2, *Construction of Language and Definitions*

Article II – Residence District Regulations

Article III – Commercial District Regulations

Article IV – Manufacturing District Regulations

Article VI – Special Regulations Applicable to Certain Areas, Chapter 2, *Special Regulations Applying in the Waterfront Area*

Article VIII – Special Purpose Districts, Chapter 7, *Special Harlem River Waterfront District (HRW)*

Article XII – Special Purpose Districts, Chapter 3, *Special Mixed Used District*

Steps to a Walkable Community: A Guide for Citizens, Planners, and Engineers (Sam Schwartz Engineering PLLC and America Walks; 2012)

Urban Wetlands Protection and Restoration: Identifying Regional Priorities (New York City Department of Parks and Recreation; December 2010 Workshop)

Vision 2020: New York City Comprehensive Waterfront Plan (New York City Department of City Planning; March 2011)

In addition to the research, we walked the study area photographing the streets, bridges, sidewalks, and parcels. We noted traffic flow, pedestrian access, connections to the waterfront and from the waterfront back into the neighborhoods east of the Major Deegan Expressway.

Within those neighborhoods are two important city institutions—Hostos Community College, a division of the City University of New York; and Lincoln Hospital a public hospital managed by the New York City Health and Hospitals Corporation. Both these institutions are accessed via 149th Street. The two major east/west connector streets, (to and from the waterfront) are 149th Street and 138th Street. These two streets have zoning that supports mixed-use activities and have bus and subway service, providing connections to the east Bronx and to Manhattan. These two streets also connect to the Grand Concourse, a major north/south boulevard with bus and subway service that connects to the north Bronx and Manhattan.

The bridges spanning the Harlem River (the 145th Street Bridge, the Madison Avenue Bridge and the Third Avenue Bridge) that connect with the study area provide not just vehicular access but also pedestrian access to neighborhoods in Harlem, connecting to 145th Street (Bradhurst and City College), 135th Street (Harlem Hospital) and 125th Street..

The development parcels within the study area all have significant constraints on them, with access difficult, environmental contamination and lack of public infrastructure. Indeed, some of the sites, even when they are developed will have to deal with surrounding sites that contain uses incompatible with new mixed-use development. However, these sites also present a significant opportunity to create new sustainable mixed-income housing with relevant community facility and commercial uses to support the residential community, create a more resilient shoreline, and provide new public open space through parks, wetlands, and shoreline walkways. The process of predevelopment can also be an opportunity to identify and quantify issues of flood insurance, infrastructure, and real estate financing and tax implications.

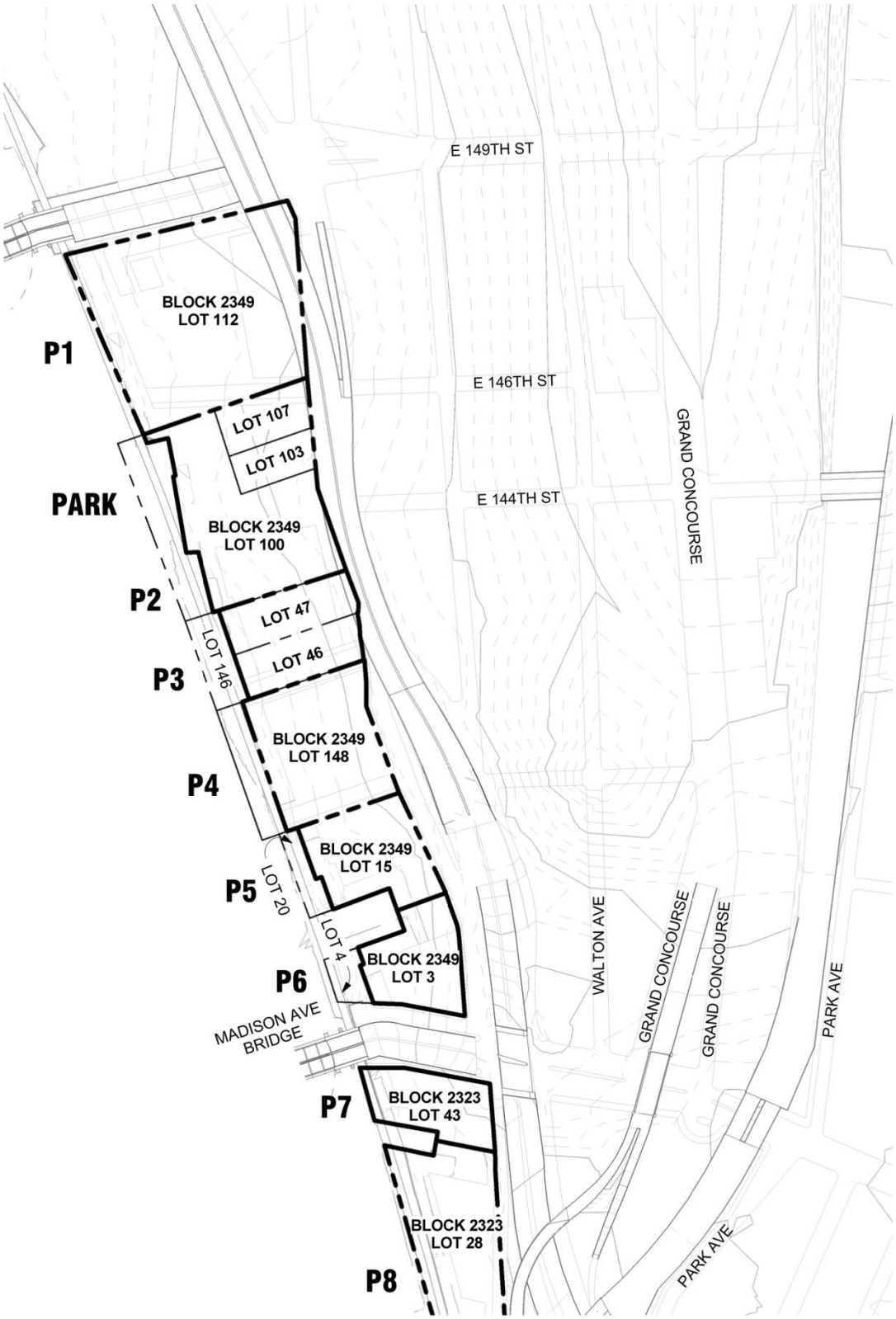

Figure 7 - Waterfront Properties, North

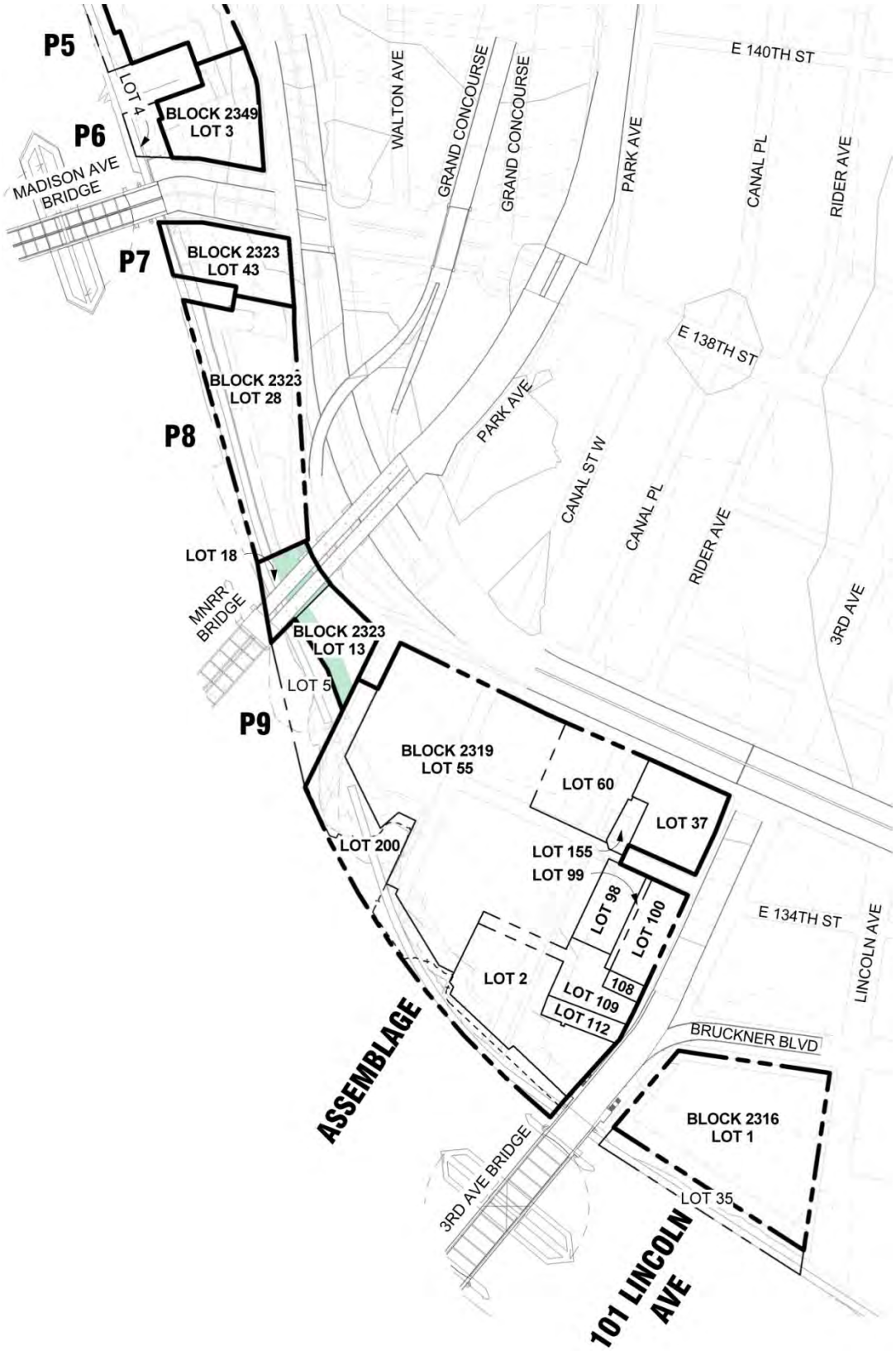

Figure 8 - Waterfront Properties, South

SECTION 2: INFRASTRUCTURE

The types of infrastructure can be divided into two categories—"hard" and "soft." Hard infrastructure refers to the large physical networks necessary to support a modern society (e.g. roads, bridges, sewers, electrical grids, etc.), whereas soft infrastructure refers to the institutions that are required to maintain the economic, health, cultural, and social standards of a society. Both types of infrastructure need to be upgraded or created to support the future development of these properties.

Hard Infrastructure

Transport Infrastructure

Exterior Street / Major Deegan (I-87) Expressway forms the landward boundary for these properties. Currently, it acts as a barrier separating the properties from the surrounding area. In order to support movement to and from this area, road structures (e.g. signage, markings, street lighting, traffic lighting, curbs, sidewalks, and street trees) and mass transit need to be upgraded, and bicycle paths and ferries need to be created.

Exterior Street presents a series of significant design problems. The intersections at East 149th Street and East 138th Street are unsafe for pedestrian crossings and handle a significant amount of traffic with poorly delineated vehicle lanes. East 138th Street (Figure 2) in particular presents a series of design challenges; it is both a major connection to Manhattan, and an entrance and exit from the Major Deegan Expressway. The pedestrian crossings are unsafe and the level of congestion, particularly during rush hour, is significant. The vehicle lanes are poorly delineated and the southbound exiting traffic moves onto Exterior Street creating traffic jams that slow down traffic both on the Expressway and on the local streets.

As a prelude to the development of any individual site, particularly the parcels that comprise the *Special Harlem River Waterfront District (SHRWD)*, public access, and emergency vehicle access (fire, police, ambulance) connections will have to be solved. All sites are required to have a publicly accessible shorefront walkway. New streets, including the required visual corridors and upland connections that connect Exterior Street to the waterfront, must meet minimum FDNY standards for vehicle access. These new streets will also provide a location for new utility infrastructure (water, sewer, power, communication) that will connect the new developments to borough infrastructure.

The new streets and sidewalks will require new plantings and street trees, as well as new street lighting, fire hydrants, public trash receptacles and other elements of public street furniture. Exterior Street will require repaving. Additionally, at Parcel 1 of the SHRWD, the eastern portion of the site where it meets Exterior Street is an easement area – it is within the maintenance and expansion zone around the Expressway and cannot have permanent structures built on it. This in effect becomes a public plaza and

can be designed to meet public gathering needs as well as accommodating informal street vendors as well as bringing some of the commercial energy of the adjacent Gateway Mall to this area.

Currently, there is no public transportation serving Exterior Street. With the rezoning to residential and commercial, the potential density that could be developed here makes public transportation that connects this neighborhood with the borough and city a critical issue. This includes bus infrastructure, bicycling infrastructure, and, due to its location along the shoreline, potential ferry connection.

Public transit suggestions:

- Create a shuttle bus route that runs along Exterior Street, and connects the Grand Concourse at East 149th Street and Third Avenue at East 138th Street. This would connect the community to the 2, 4, and 5 subway lines; and the northbound, westbound, and eastbound bus lines.
- Create an express bus stop at the Madison Avenue Bridge. Exterior Street is a pass-thru at the moment, which does not promote development. Express buses include BxM1, BxM2, BxM3, and BxM18 buses.
- Locate Citibike stations in the development area to connect the community to the 2, 4, and 5 subway lines; the Bronx greenway and other borough connections; and Harlem.
- Locate a ferry dock at the shoreward edge of the required public park that is to be located at the northern end of the *Special Harlem River Waterfront District*.

Energy, Water Management, Communications, & Solid Waste Infrastructure

The current land-use of the sites is storage and recycling. There are parking lots for school buses and utility trucks, automobile sales and storage, a recycling facility, and several personal storage facilities. These have been the historical uses of the land and the existing infrastructure is scaled to support those activities. With the potential for residential and commercial development to be over 2,000 units of housing and a million plus square feet of commercial and community facility development, the existing infrastructure will have to be upgraded to support the new densities and utility demands for the planned residential and commercial uses. This includes increased electric service (and the subsequent need for additional transformers), increased and upgraded water supply and sewer outflow for resident and commercial use as well as a storm sewer system to handle the new streets and developments. Additionally, new communication and technology infrastructure (CATV, fiber optic cabling, cell towers) will be required.

It should be noted that all new infrastructure will have to take into account that the land is at or below the FEMA flood levels. That means resilience planning and negotiating with the utility companies will be necessary to insure the sustainability and protection for these new and expanded services.

Waterfront Infrastructure

One of the more pressing issues with regard to the shoreline is the rebuilding of the bulkheads of the properties along their Harlem River shorelines. Traditionally, this would have meant placing steel shoring along the established bulkhead with a foundation system that would resist the tidal and storm actions of the river. We do not believe that the traditional solution is effective anymore in light of the rising water levels and increasing frequency of storms.

The relevant bulkhead designs should be able to slow down river storm surge and provide 'cisterns' to hold and slowly release water during and after a storm. This should be coupled with a permeable edge on the landward side of the bulkhead, in other words, a wetland should be created to hold and slowly disperse water, a design that will work to absorb storm water energy rather than resist it. The shoreline needs to be made more resilient to more effectively protect and enhance these sites so that development can be encouraged.

Additionally, waterfront infrastructure is required by the New York City Zoning Resolution Article VI – Special Regulations Applicable to Certain Areas, Chapter 2, *Special Regulations Applying in the Waterfront Area and* Article VIII – Special Purpose Districts, Chapter 7, *Special Harlem River Waterfront District* is an important element for the development area. These regulations control the building envelope, building massing, density, and use of each parcel. Additionally they require a park, a waterfront yard, a shore public walkway, visual corridors, and upland connections; which will be discussed in depth in Section 4: Waterfront Infrastructure.

Example Images

Figure 9 – Precast Cisterns & Wave Absorbing Structures, Colwyn Bay & North Wirral

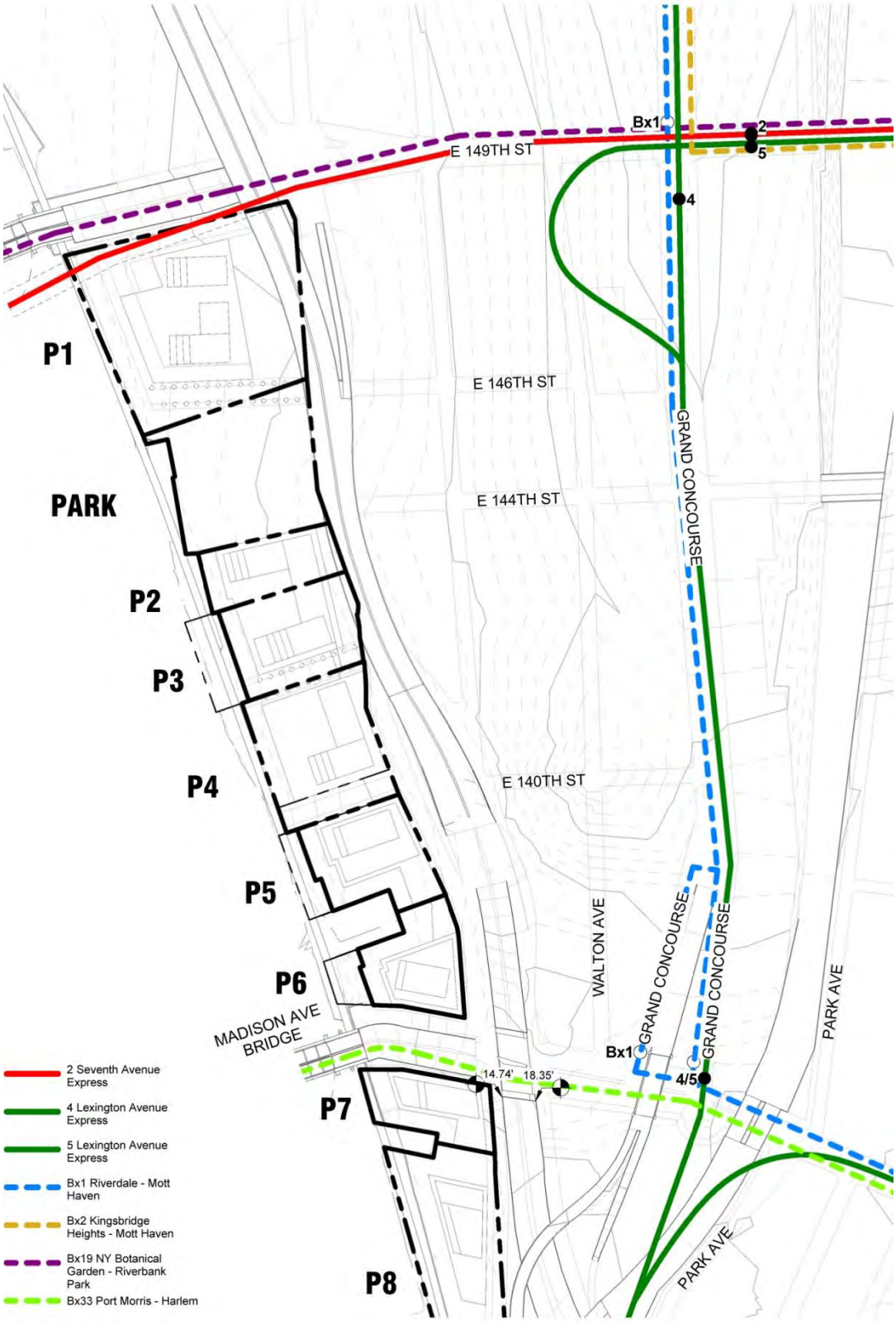

Figure 10 – Public Transit, North

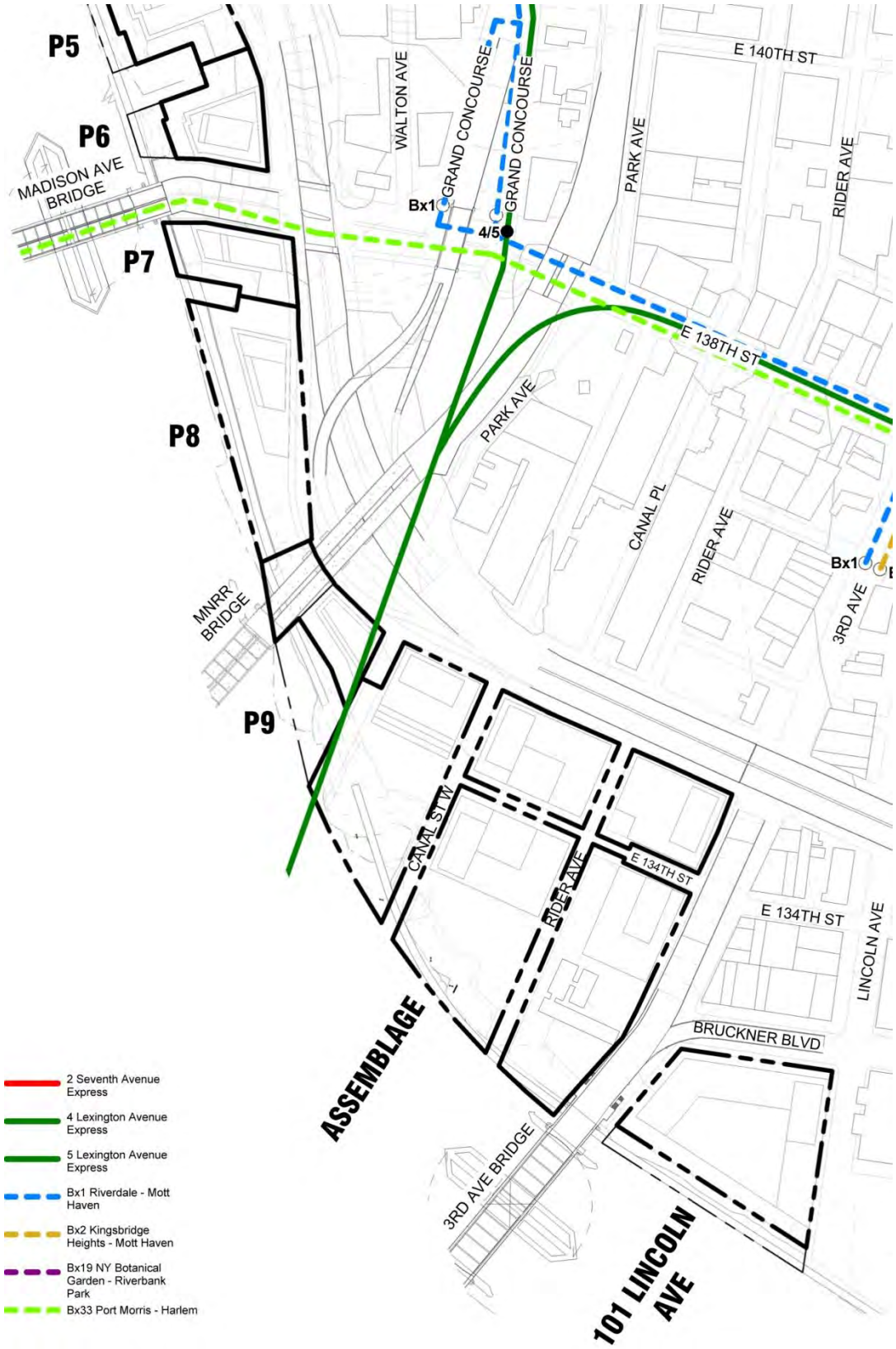

Figure 11 - Public Transit, South

Soft Infrastructure

Law Enforcement & Emergency Services Infrastructure

In order to provide for the safety of the new developments and their residents, businesses, and customers; access for emergency vehicles is required. This is for fire truck, ambulance, sanitation, and police access. Because this area is almost entirely within the flood plain of the Harlem River, evacuation routes should be delineated from the northern and southern sites in the event of a significant storm.

Currently, the properties are located in evacuation zones 1 and 2 with the closest evacuation center located at High School of Law, Government, and Justice on 244 East 163rd Street.

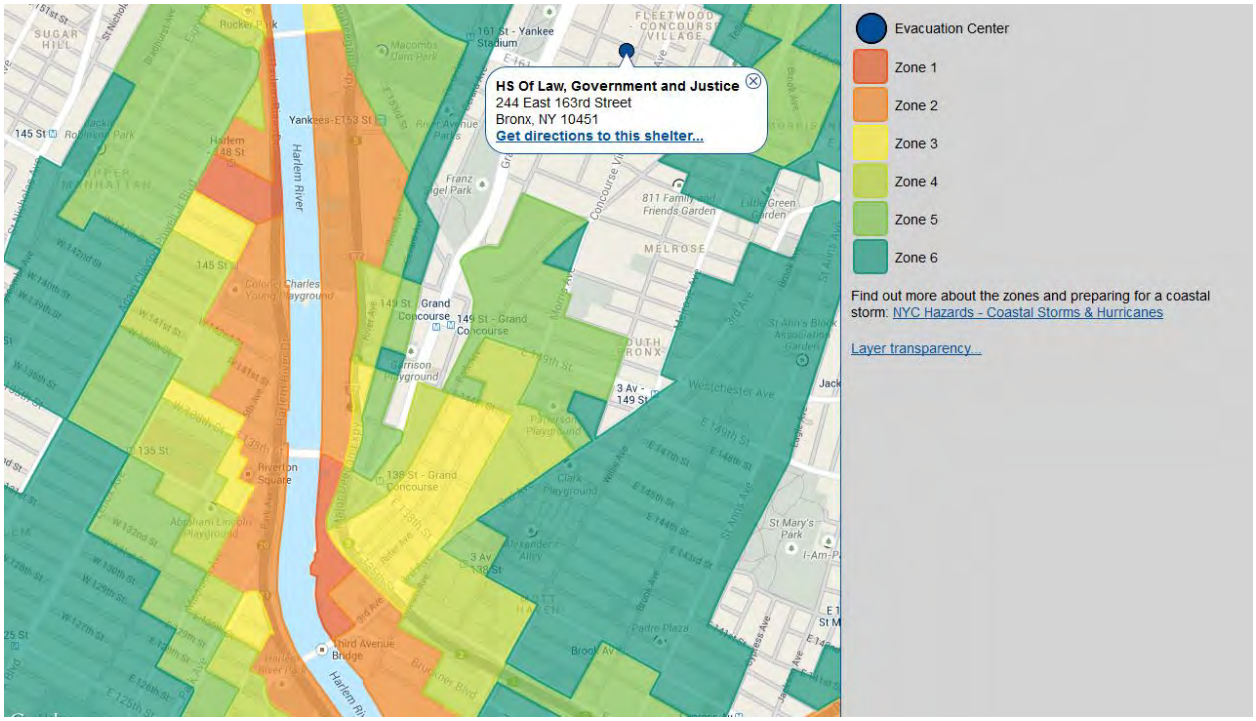

Figure 12 - New York City Office of Emergency Management Hurricane Evacuation Map (December 2013)

Figure 13 - Suggested Evacuation Route, E. 144th St looking east towards Grand Concourse

Suggestions:

- Create an evacuation route along East 144th Street for the northern sites (Figure 13), and Rider Avenue via the Major Deegan (I-87) Expressway pedestrian underpass for the southern sites.
- As density increases over time, an evacuation center, in order to coordinate emergency services in the event of flooding, should be centrally located, Hostos College may be a potential location.

Healthcare, Educational, & Financial Infrastructure

The Major Deegan Expressway (I-87) creates a barrier that isolates the development area from the surrounding Bronx communities. The access to community facilities such as daycare, schools, and healthcare is limited. Additionally, community retail services such as supermarkets and pharmacies are more than 10 blocks away (a pharmacy is located on east 149th street and Morris Avenue and there are grocery stores on 138th Street and Alexander Avenue, both locations are east of the Grand Concourse). An area-wide program description outlined in Section 3: Land Use & Zoning Analysis would locate community facilities and retail within the developments area. This program description takes into account both placement within the development area and an understanding that the development area is naturally divided in two pedestrian zones, north and south, due to the significant traffic at the intersection of East 138th Street and the Madison Avenue Bridge. An easier pedestrian link is to utilize the existing street connection under the Madison Avenue Bridge. This will become more apparent once development occurs on the P6 parcel (north of the bridge) and the P7 parcel (south of the bridge). The connection currently exists (it is a single lane road) and should be made pedestrian once the parcels on either side of the bridge are developed and linked by the shore public walkway.

City Services

New service schedules will be required from various city agencies in order to maintain the neighborhood as development occurs. These include, but are not limited to:

- Department of Sanitation – trash and recycling collection
- Department of Parks – maintenance of the planned park and other public open spaces
- Department of Transportation – road maintenance and snow removal
- MTA – new bus service with stops and shelters
- FDNY – fire hydrants and access
- NYPD – new patrol routes

SECTION 3: PROGRAM, LAND USE & ZONING ANALYSIS

The analysis of the sites has been broken into two categories, land use and zoning.

We have examined these sites as both individual parcels and as a zoned development area (north, being all those parcels within the Special Harlem River Waterfront District, and south, the Assemblage area and the Lincoln Avenue site)) which will have a distribution of uses across all parcels to help support the vision and needs of future residents and businesses in this community.

Each parcel has the potential to be developed individually; in order to maximize the development potential, identify the current market trends, and takes advantage of available public and private financing. When examined individually, all parcels taken together yield the following maximum numbers:

Residential:	In excess of 7.0 million square feet (sqft) or 8,500 dwelling units (DUs)
Commercial:	In excess of 3.9 million sqft
Community Facility:	In excess of 8.1 million sqft

Rather than using these maximum numbers above, our recommended approach is a zoned development area that will create a sustainable community that meets the needs of the future residents, visitors, and businesses; while impacting the surrounding neighborhoods in a positive manner. We have begun to adjust these maximum numbers by implying program (housing, supermarkets, entertainment, schools, cafes, pharmacies, dry cleaners, parking, etc.) across all the parcels located within the conceptual site plan.

Residential:	2.8 million sqft or 4,000 DUs
Commercial:	2.3 million sqft
Community Facility:	1.0 million sqft

Below is a brief land use narrative of the program description of all the parcels. This has provided the background for the individual parcel zoning analyses.

Land Use Analysis

The existing land use of the study area consists of industrial and parking use groups (Figure 14). As a result of the rezoning of this area, these existing land use groups are disallowed in favor of residential, commercial, and light manufacturing (at the southern sites only) use groups. Residential use groups allowed in the study area include single-family detached residences, multi-family residences, and community facilities. Commercial use groups allowed in the study area include hotels, retail stores, offices, maintenance and repair shops, entertainment, department stores, and water related recreation. Manufacturing use groups allowed in the study area include general services and light manufacturing.

The program analysis below further expands on what could possibly be developed in the study area. A market study should be performed to give developers a clearer understanding of what would be both beneficial and profitable for this area.

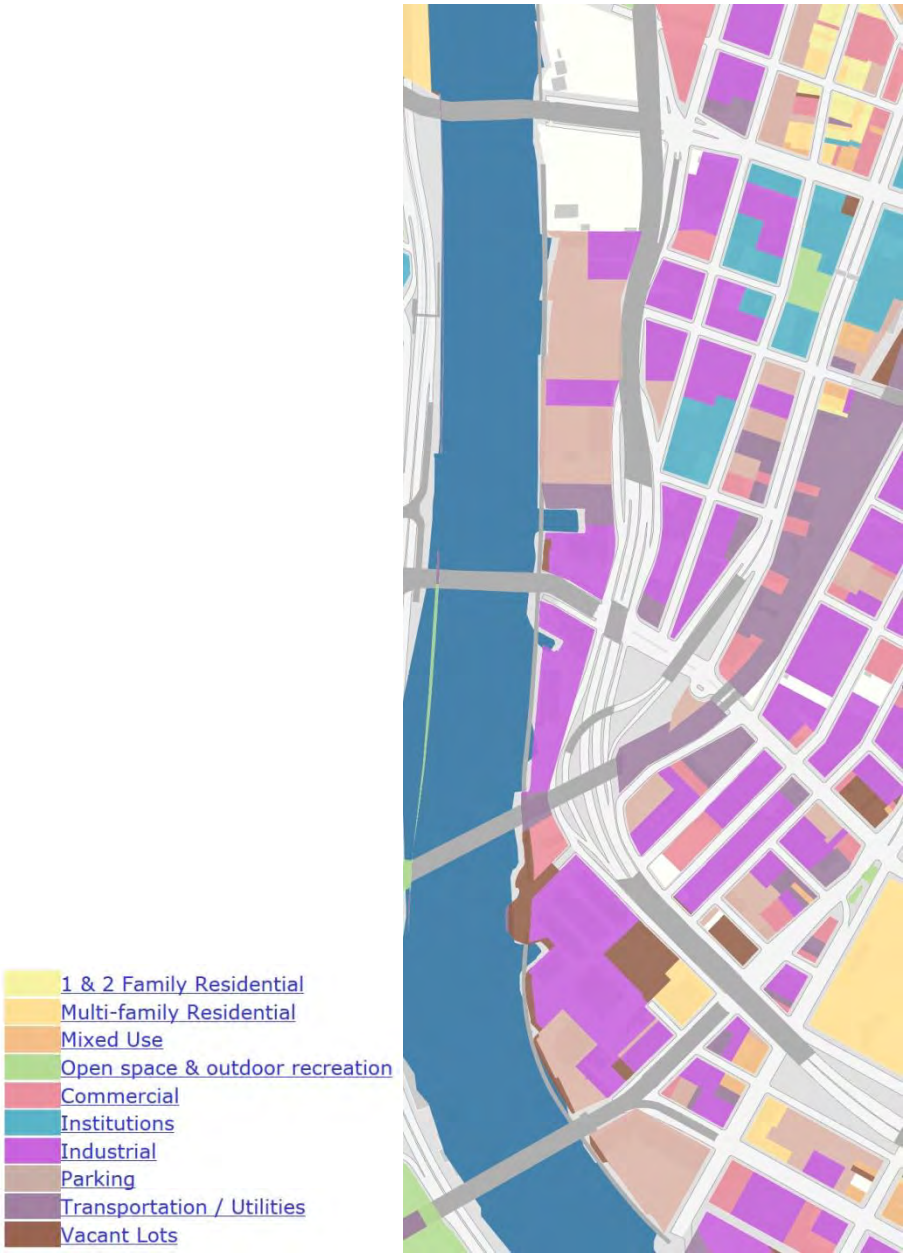

Figure 14 - NYC Oasis Land Use Map (June 2014)

Program Analysis

Parcel 1

The base zoning for this site is commercial (C4-4) which has a residential equivalent of R7-2. The commercial uses would be focused around entertainment uses – movie theater complex, gallery, and

potential indoor sports such as bowling or gymnasium, dining (indoor and outdoor) cafes and/or pubs possibly with live entertainment, food for consumption along the outdoor promenade. Uses might also include specialty shopping such as clothing, baby products, and toys. Residential towers will rise above the commercial base. The area on the eastern boundary of Parcel 1 is an easement for maintenance and expansion of the Expressway. This area can become a public plaza with vendor cart locations, planting and sitting areas.

Parcel 2 and Parcel 3

These two sites are grouped together, since the two property owners are looking at doing a joint development. The base zoning for Parcel 2 is commercial (C4-4) which has residential equivalent of R7-2. The base zoning for Parcel 3 is residential (R7-2) with a commercial overlay (C2-4). The commercial uses for Parcel 2 would be focused around the needs of the residential community such as supermarket and/or specialty food shops, pharmacy, laundry, dry cleaner, other convenience retail and possibly specialty shopping, cafes and restaurants that would permit take-out orders. Parcel 3 would house community facilities within its base, such as a preschool and elementary school, and medical offices. Residential towers would rise above the bases.

The proposed public park for this community, as per the SHRWD, is located between Parcel 1 and 2. The commercial uses, particularly food services should be organized to work with the park.

Parcel 4, Parcel 5 and Parcel 6

The base zoning for these sites is residential (R7-2) with a commercial overlay (C2-4). The base of these buildings could house community facility uses such as day care, elder care, social service offices, and medical offices. General retail/small food shops could be located along the base, particularly fronting the shoreline walkway. Residential towers will rise above the base, possibly some supportive housing, and/or senior housing.

The intersection of Exterior Street and East 138th Street and the Madison Avenue Bridge forms a 'boundary' within the *Special Harlem River Waterfront District*, effectively subdividing the study area into two pedestrian zones, north and south, due to the traffic congestion.

East 138th Street is an extremely dangerous intersection for pedestrians. It is an exit and an entrance to the Major Deegan (I-87) Expressway as well as providing access to Manhattan via the Madison Avenue Bridge and the Third Avenue Bridge. This intersection has high volumes of vehicular traffic, particularly during morning and evening rush hours, with multiple turning lanes and complex traffic signaling. It effectively forms an "invisible yet tangible" pedestrian barrier separating the neighborhoods between the north side and the south side of the intersection.

Parcel 7, Parcel 8, and Parcel 9

These sites, zoned residential (R7-2) with a commercial overlay (C2-4) are separated by 'natural' pedestrian barriers on their north and south sides. On the north, East 138th is the barrier. On the south side, (Parcel 9 and the land below the MetroNorth bridge), the land, owned by MetroNorth, is an undeveloped area that is the most natural shoreline frontage of all the sites. This area should be stabilized and preserved as a wetland and public open space. This area is also where the rail line engages the land and railway signaling and traffic control devices will have to be installed to protect the public as well as the trains.

As these sites are somewhat insulated from the area to the north and south, development should focus on residential above commercial bases. Commercial activity should consist of general retail needs for the residential community. Community facility space could be devoted to educational purposes with a focus on the potential wetland/public open space on its southern boundary.

ASSEMBLAGE SITES

The assemblage sites are those located between the Metro North railroad bridge (the southern boundary of Parcel 9 SHRWD) and the Third Avenue Bridge. The current zoning for these is mixed use MX-1: M1-3/R8. The current land uses are compatible with the zoning and can remain and continue to grow. However, a major land use along the shoreline is for industrial storage and personal storage. This is not necessarily the most productive use of the land and is inconsistent with the new residential and mixed use district planned for the SHRWD. As the area below the Third Avenue Bridge has slowly been developing with old warehouse buildings being converted to residential, new stores and restaurants, artists and antiques dealers occupying former industrial spaces, we thought to reorganize the area to make it more accessible and to bring a greater mixed use density to the sites. Commercial activities should focus on a major retail supermarket that would also serve the community south of the Third Avenue Bridge. Community Facility uses could focus on the burgeoning artist's community south of the Third Avenue and provide gallery space, retail outlets devoted to arts and antiques and artist live/work housing.

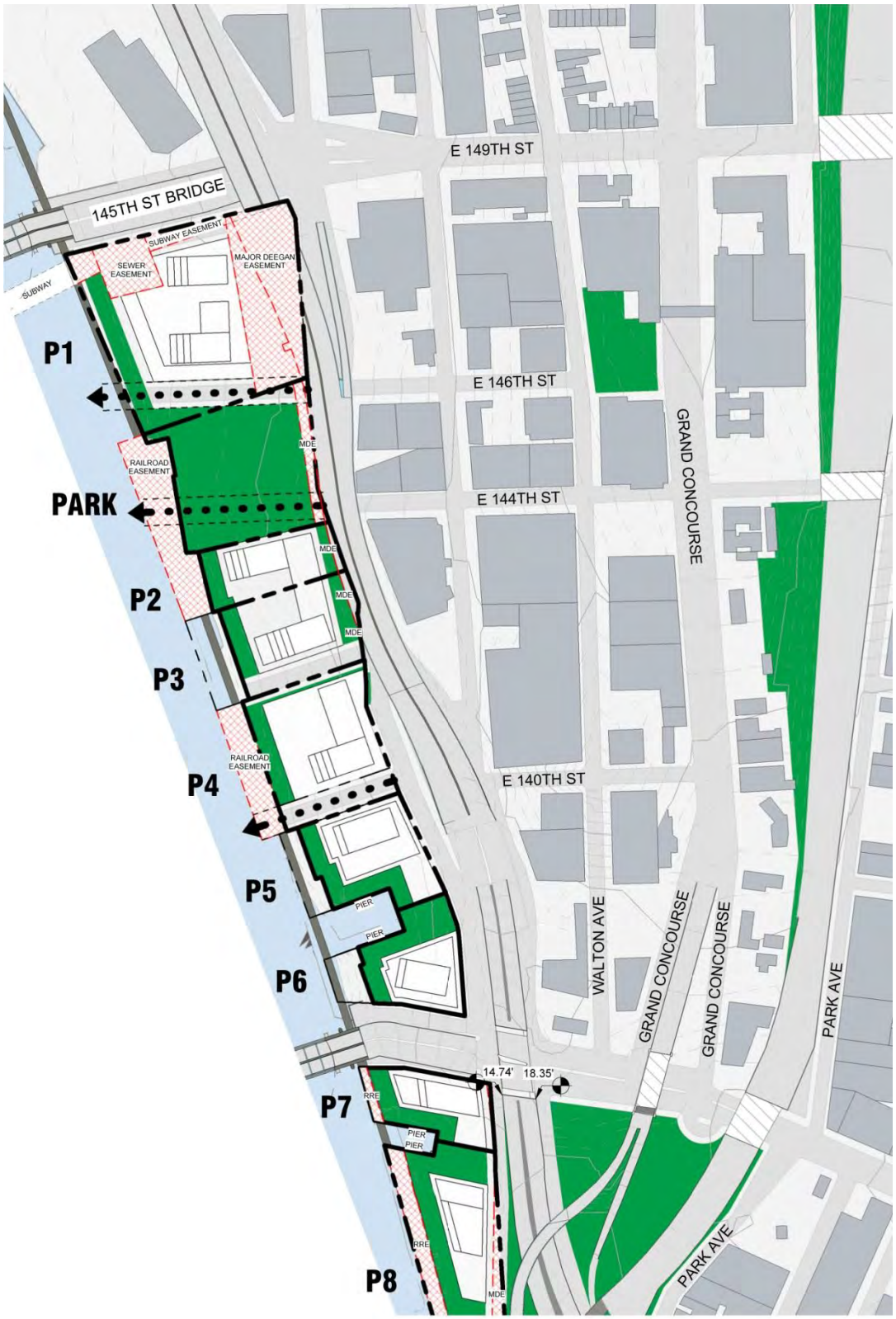

Figure 15 - Suggested Site Plan, North

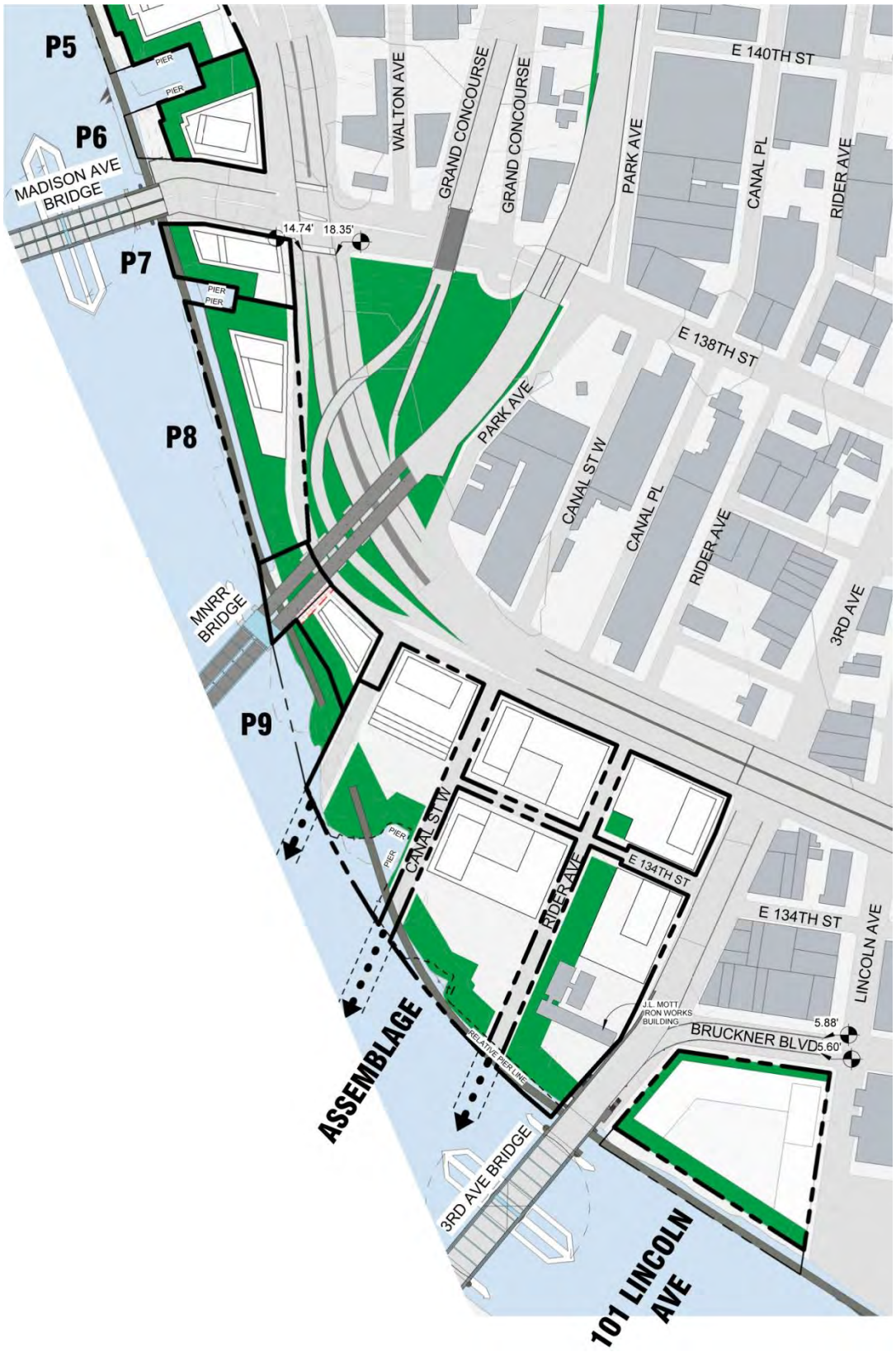

Figure 16 - Proposed Site Plan, South

Zoning Analysis

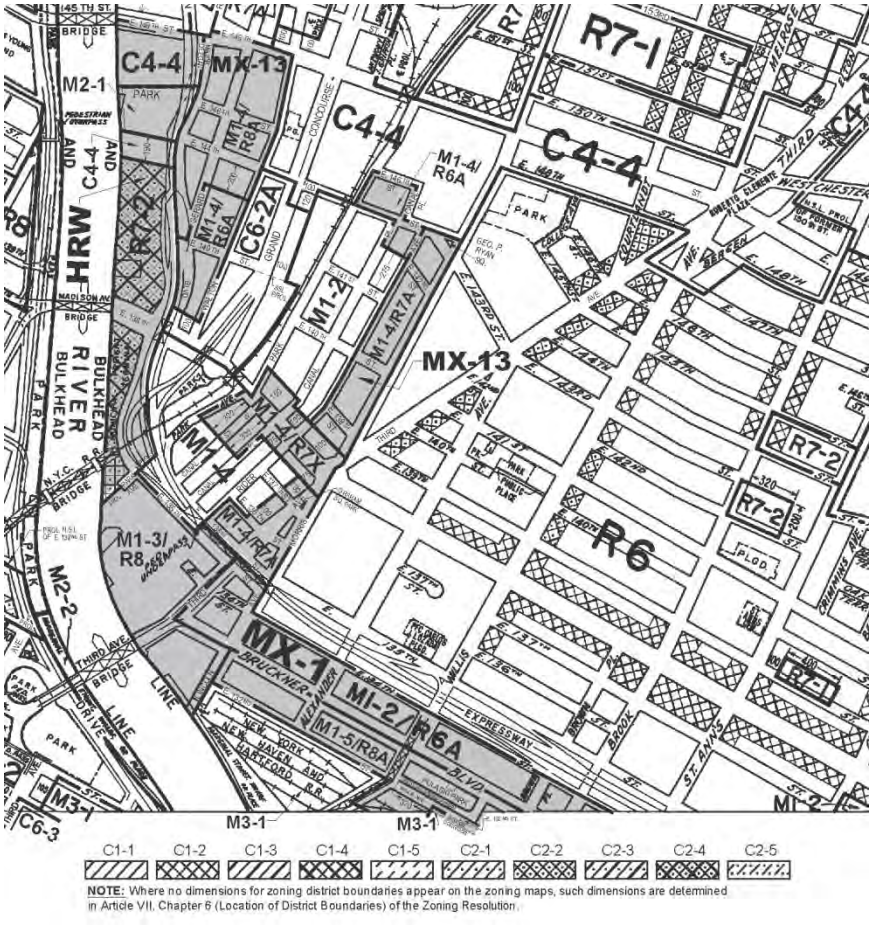

Figure 17 – Partial New York City Department of City Planning Zoning Map 6a (January 2013)

Parcel 1

Parcel 1 has a site area of approximately 191,000 square feet. The base zoning for the site is C4-4 (commercial district), which has a residential equivalent of R7-2. The commercial FAR (Floor Area Ratio) is 3.4, the residential FAR is 3.0 (4.0 if the inclusionary housing regulations are followed) and the community facility FAR is 6.5. The mathematics of this, in each specific use category, reveals the following:

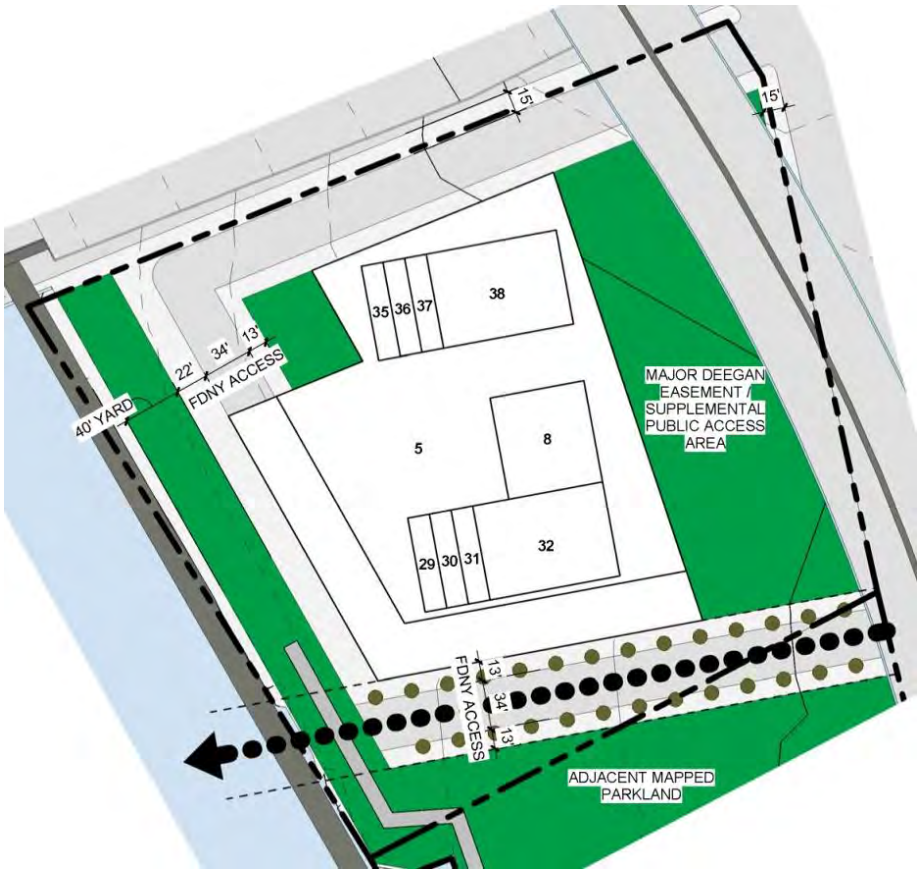

Figure 18 – Parcel 1 Site Analysis

Zoning Analysis – Parcel 1		
Site Description		
	Block / Lot	2349 / 112
	Address	-
	Zoning Map	6A
ZR 34-112	Zoning District	C4-4 (R7-2 equivalent)
	Lot Area	191,000 sqft
Use Regulations		C4-4
ZR 87-10, ZR 32-11	Permitted Uses	1-6, 8-10, 12
Maximum Floor Areas Attainable (FAR)		
ZR 87-21	Maximum Residential FAR (Inclusionary in Parentheses)	3.00 (4.00)
ZR 33-122	Maximum Commercial FAR	3.40
ZR 33-123	Maximum Community Facility FAR	6.50
Maximum Building Floor Areas (FA)		
	Maximum Residential Floor Area (Inclusionary in Parentheses)	573,000 sqft (764,000 sqft)
	Maximum Commercial Floor Area	649,000 sqft
	Maximum Community Facility Floor Area	1,241,500 sqft
Suggested Building Floor Areas		

	Residential Floor Area	461,825 sqft
	Commercial Floor Area	334,490 sqft
	Community Facility Floor Area	0 sqft
Density Factor		
ZR 23-22	Gross Area per Dwelling Unit (DUs)	680 sqft
	Total Number of DUs based on zoning density factor	679
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	462
Lot Coverage		
ZR 62-322, ZR 62-324	Maximum Lot Coverage	R 65%, C 75%, CF 75%
Yard Regulations		
ZR 33-15, ZR 34-231	Front Yard	N/A
ZR 62-332	Rear Yard	N/A
ZR 33-25, ZR 34-232	Side Yard*	30'-0"
ZR 62-332	Waterfront Yard	40'-0"
Base Flood Regulations		
	FEMA Preliminary FIRM #3604970083G	Zone AE, El. 11'-0"
Height Regulations		
ZR 87-32(b)	Minimum Base Height	60'-0"
ZR 87-32(b)	Maximum Base Height	85'-0"
ZR 87-32(b)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"
ZR 87-32(c)	Maximum Transition Height	115'-0"
ZR 87-33(a)	Maximum Tower Height	400'-0"
Waterfront Access Regulations		
ZR 62-55(a)	Shore Public Walkway (SPW) Width	40'-0"
ZR 62-561	Upland Connection (UC) Width	30'-0"
ZR 62-512	Visual Corridor Width	60'-0"
ZR 87-61(c), ZR 62-57	Waterfront Public Access Area Lot Coverage	15%
ZR 87-41	Fire Apparatus Access Road Width	60'-0"
ZR 87-42(a)	Sidewalk (SW) Width***	15'-0"
Notes		
*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".		
**ZR 87-32(b) – The setback beyond the street wall shall be at least 10'-0" along the shore public walkway, mapped parkland, and Exterior Street; and at least 15'-0" along an upland connection.		
***ZR 87-42(b) – A 22'-0" wide walkway shall extend east of and along Parcel 1 building line linking E. 149th St. and the mapped parkland.		

Parcel 2 & Parcel 3

Parcel 2 has a site area of approximately 38,189 square feet and parcel 3 is 62,506. The base zoning for the site is C4-4 (commercial district), which has a residential equivalent of R7-2. The commercial FAR (Floor Area Ratio) is 2.0, the residential FAR is 3.0 (4.0 if the inclusionary housing regulations are followed) and the community facility FAR is 6.5. The mathematics of this reveals the following:

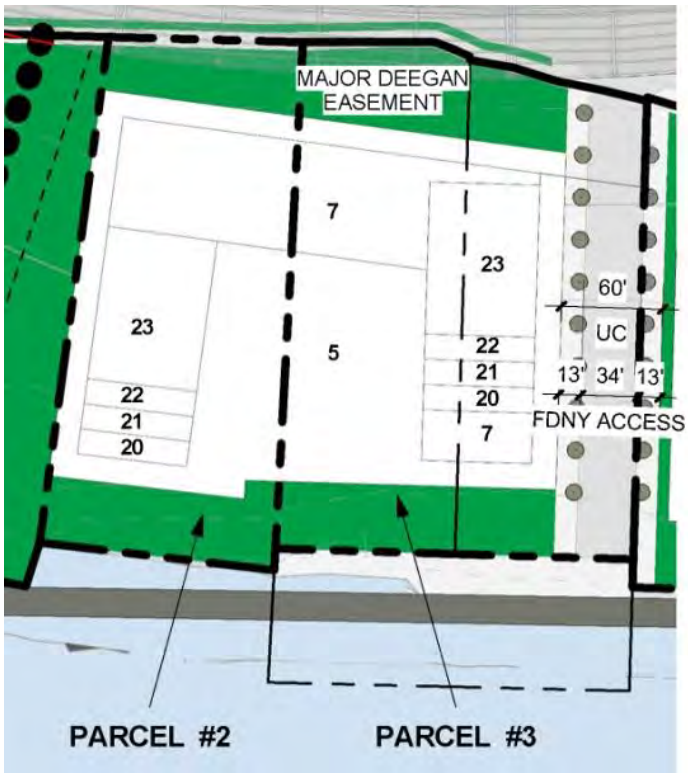

Figure 19 – Parcels 2 & 3 Site Analysis

Zoning Analysis – Parcel 2			
Site Description			
	Block / Lot	2349 / 100 (partial)	
	Address	399 Exterior St.	
	Zoning Map	6A	
ZR 34-112	Zoning District	C4-4 (R7-2 equivalent) R7-2 (C2-4 overlay)	
	Lot Area	39,189 sqft	
Use Regulations		C4-4	R7-2
ZR 87-10, ZR 32-11, ZR 22-11	Permitted Uses	1-6, 8-10, 12	1-4
Maximum Floor Areas Attainable (FAR)			
ZR 87-21	Maximum Residential FAR (Inclusionary in Parentheses)	3.00 (4.00)	
ZR 33-121, ZR 33-122	Maximum Commercial FAR	3.40	2.00
ZR 33-123, ZR 24-11	Maximum Community Facility FAR	6.50	
Maximum Building Floor Areas (FA)			
	Maximum Residential Floor Area (Inclusionary in Parentheses)	114,567 sqft (152,756 sqft)	
	Maximum Commercial Floor Area	129,842 sqft	
	Maximum Community Facility Floor Area	248,228 sqft	
Suggested Building Floor Areas (Parcels 2 & 3)			
	Residential Floor Area	342,814 sqft	

	Commercial Floor Area	129,842 sqft
	Community Facility Floor Area	187,716 sqft
Density Factor (Parcels 2 & 3)		
ZR 23-22	Gross Area per Dwelling Unit (DUs)	680 sqft
	Total Number of DUs based on zoning density factor	504
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	343
Lot Coverage		
ZR 62-322, ZR 62-324	Maximum Lot Coverage	R 65%, C 75%, CF 75%
Yard Regulations		
ZR 33-15, ZR 34-231	Front Yard	N/A
ZR 62-332	Rear Yard	N/A
ZR 33-25, ZR 34-232	Side Yard*	30'-0"
ZR 62-332	Waterfront Yard	40'-0"
Base Flood Regulations		
	FEMA Preliminary FIRM #3604970083G	Zone AE, El. 11'-0"
Height Regulations		
ZR 87-32(b)	Minimum Base Height	60'-0"
ZR 87-32(b)	Maximum Base Height	85'-0"
ZR 87-32(b)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"
ZR 87-32(c)	Maximum Transition Height	115'-0"
ZR 87-33(a)	Maximum Tower Height	300'-0"
Waterfront Access Regulations		
ZR 62-55(a)	Shore Public Walkway (SPW) Width	40'-0"
ZR 62-561	Upland Connection (UC) Width	30'-0"
ZR 62-512	Visual Corridor Width	N/A
ZR 87-61(c), ZR 62-57	Waterfront Public Access Area Lot Coverage	15%
ZR 87-41	Fire Apparatus Access Road Width	60'-0"
ZR 87-42(a)	Sidewalk (SW) Width***	15'-0"
Notes		
*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".		
**ZR 87-32(b) – The setback beyond the street wall shall be at least 10'-0" along the shore public walkway, mapped parkland, and Exterior Street; and at least 15'-0" along an upland connection.		

Zoning Analysis – Parcel 3		
Site Description		
	Block / Lot	2349 / 46 & 47
	Address	355 Exterior St.
	Zoning Map	6A
ZR 34-112	Zoning District	R7-2 (C2-4 overlay)
	Lot Area	62,506 sqft
Use Regulations		R7-2

ZR 87-10, ZR 33-11, ZR 22-11	Permitted Uses	1-4 (Overlay 1-9, 14)
Maximum Floor Areas Attainable (FAR)		
ZR 87-21	Maximum Residential FAR (Inclusionary in Parentheses)	3.00 (4.00)
ZR 33-122	Maximum Commercial FAR	2.00
ZR 24-11	Maximum Community Facility FAR	6.50
Maximum Building Floor Areas (FA)		
	Maximum Residential Floor Area (Inclusionary in Parentheses)	187,518 sqft (250,024 sqft)
	Maximum Commercial Floor Area	125,012 sqft
	Maximum Community Facility Floor Area	406,289 sqft
Suggested Building Floor Areas (Parcels 2 & 3)		
	Residential Floor Area	342,814 sqft
	Commercial Floor Area	129,842 sqft
	Community Facility Floor Area	187,716 sqft
Density Factor (Parcels 2 & 3)		
ZR 23-22	Gross Area per Dwelling Unit (DUs)	680 sqft
	Total Number of DUs based on zoning density factor	504
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	343
Lot Coverage		
ZR 62-322, ZR 62-324	Maximum Lot Coverage	R 65%, C 75%, CF 75%
Yard Regulations		
ZR 33-15, ZR 34-231	Front Yard	N/A
ZR 62-332	Rear Yard	N/A
ZR 33-25, ZR 34-232	Side Yard*	30'-0"
ZR 62-332	Waterfront Yard	40'-0"
Base Flood Regulations		
	FEMA Preliminary FIRM #3604970083G	Zone AE, El. 11'-0"
Height Regulations		
ZR 87-32(b)	Minimum Base Height	60'-0"
ZR 87-32(b)	Maximum Base Height	85'-0"
ZR 87-32(b)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"
ZR 87-32(c)	Maximum Transition Height	115'-0"
ZR 87-33(a)	Maximum Tower Height	300'-0"
Waterfront Access Regulations		
ZR 62-55(a)	Shore Public Walkway (SPW) Width	40'-0"
ZR 62-561	Upland Connection (UC) Width	30'-0"
ZR 62-512	Visual Corridor Width	N/A
ZR 87-61(c), ZR 62-57	Waterfront Public Access Area Lot Coverage	15%
ZR 87-41	Fire Apparatus Access Road Width	60'-0"
ZR 87-42(a)	Sidewalk (SW) Width***	15'-0"
Notes		

*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".
**ZR 87-32(b) – The setback beyond the street wall shall be at least 10'-0" along the shore public walkway, mapped parkland, and Exterior Street; and at least 15'-0" along an upland connection.

Parcel 4

Parcel 4 has a site area of approximately 105,168 square feet. The base zoning for the site is R7-2 (residential district) with a C2-4 commercial overlay. The commercial FAR (Floor Area Ratio) is 2.0, the residential FAR is 3.0 (4.0 if the inclusionary housing regulations are followed) and the community facility FAR is 6.5. The mathematics of this reveals the following:

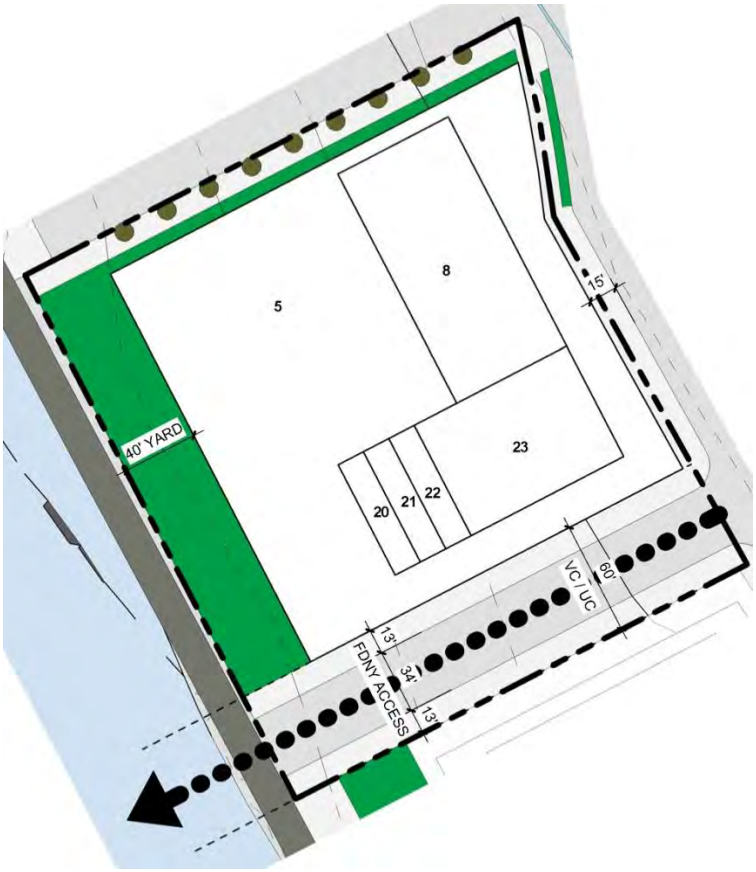

Figure 20 – Parcel 4 Site Analysis

Zoning Analysis – Parcel 4		
Site Description		
	Block / Lot	2349 / 38
	Address	355 Exterior St.
	Zoning Map	6A
ZR 34-112	Zoning District	R7-2 (C2-4 overlay)
	Lot Area	105,168 sqft
Use Regulations		R7-2

ZR 87-10, ZR 33-11, ZR 22-11	Permitted Uses	1-4 (Overlay 1-9, 14)
Maximum Floor Areas Attainable (FAR)		
ZR 87-21	Maximum Residential FAR (Inclusionary in Parentheses)	3.00 (4.00)
ZR 33-122	Maximum Commercial FAR	2.00
ZR 24-11	Maximum Community Facility FAR	6.50
Maximum Building Floor Areas (FA)		
	Maximum Residential Floor Area (Inclusionary in Parentheses)	315,504 sqft (420,672 sqft)
	Maximum Commercial Floor Area	210,336 sqft
	Maximum Community Facility Floor Area	683,592 sqft
Suggested Building Floor Areas		
	Residential Floor Area	178,309 sqft
	Commercial Floor Area	165,178 sqft
	Community Facility Floor Area	110,118 sqft
Density Factor		
ZR 23-22	Gross Area per Dwelling Unit (DUs)	680 sqft
	Total Number of DUs based on zoning density factor	262
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	178
Lot Coverage		
ZR 62-322, ZR 62-324	Maximum Lot Coverage	R 65%, C 75%, CF 75%
Yard Regulations		
ZR 33-15, ZR 34-231	Front Yard	N/A
ZR 62-332	Rear Yard	N/A
ZR 33-25, ZR 34-232	Side Yard*	30'-0"
ZR 62-332	Waterfront Yard	40'-0"
Base Flood Regulations		
	FEMA Preliminary FIRM #3604970083G	Zone AE, El. 11'-0"
Height Regulations		
ZR 87-32(b)	Minimum Base Height	60'-0"
ZR 87-32(b)	Maximum Base Height	85'-0"
ZR 87-32(b)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"
ZR 87-32(c)	Maximum Transition Height	115'-0"
ZR 87-33(a)	Maximum Tower Height	300'-0"
Waterfront Access Regulations		
ZR 62-55(a)	Shore Public Walkway (SPW) Width	40'-0"
ZR 62-561	Upland Connection (UC) Width	30'-0"
ZR 62-512	Visual Corridor Width	N/A
ZR 87-61(c), ZR 62-57	Waterfront Public Access Area Lot Coverage	15%
ZR 87-41	Fire Apparatus Access Road Width	60'-0"
ZR 87-42(a)	Sidewalk (SW) Width***	15'-0"
Notes		

*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".
**ZR 87-32(b) – The setback beyond the street wall shall be at least 10'-0" along the shore public walkway, mapped parkland, and Exterior Street; and at least 15'-0" along an upland connection.

Parcel 5

Parcel 5 has a site area of approximately 54,543 square feet. The base zoning for the site is R7-2 (residential district) with a C2-4 commercial overlay. The commercial FAR (Floor Area Ratio) is 2.0, the residential FAR is 3.0 (4.0 if the inclusionary housing regulations are followed) and the community facility FAR is 6.5. The mathematics of this reveals the following:

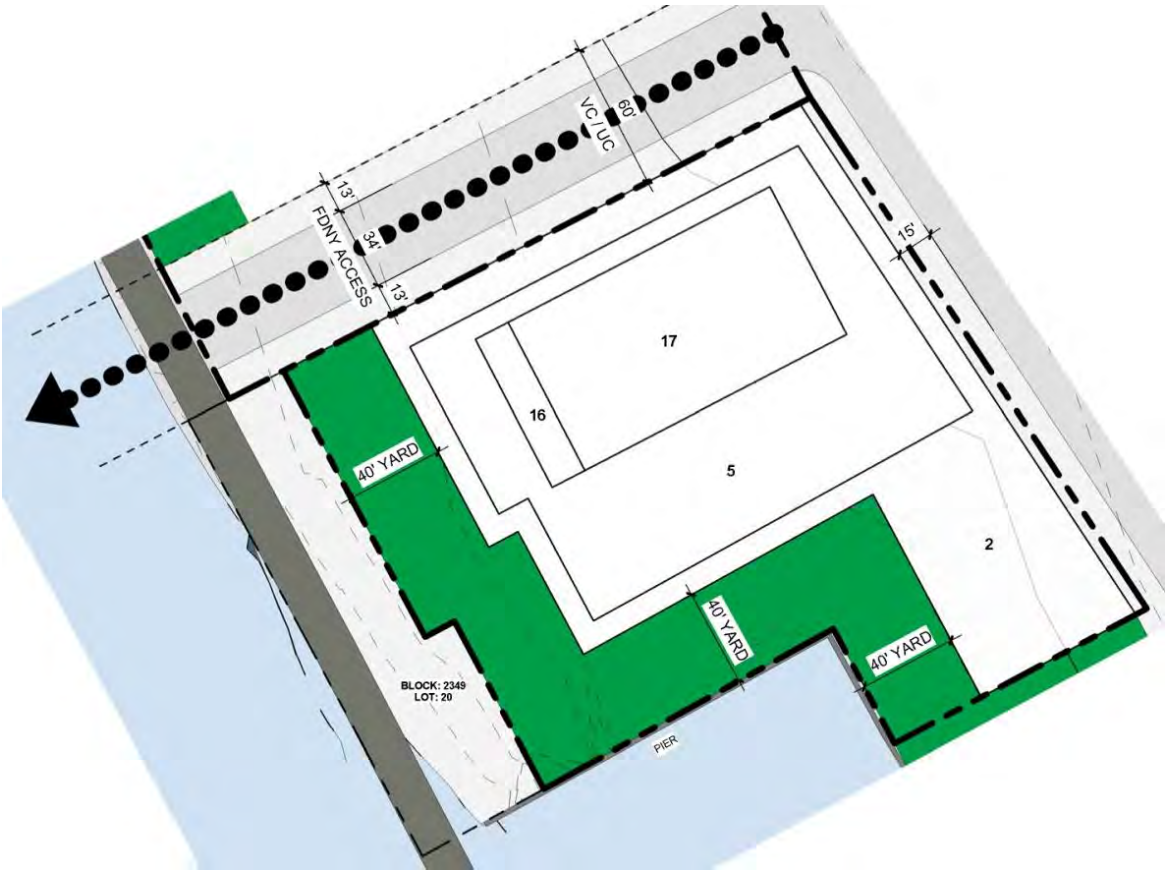

Figure 21 – Parcel 5 Site Analysis

Zoning Analysis – Parcel 5		
Site Description		
	Block / Lot	2349 / 15
	Address	281 Exterior St.
	Zoning Map	6A
ZR 34-112	Zoning District	R7-2 (C2-4 overlay)
	Lot Area	54,543 sqft
Use Regulations		R7-2

ZR 87-10, ZR 33-11, ZR 22-11	Permitted Uses	1-4 (Overlay 1-9, 14)
Maximum Floor Areas Attainable (FAR)		
ZR 87-21	Maximum Residential FAR (Inclusionary in Parentheses)	3.00 (4.00)
ZR 33-122	Maximum Commercial FAR	2.00
ZR 24-11	Maximum Community Facility FAR	6.50
Maximum Building Floor Areas (FA)		
	Maximum Residential Floor Area (Inclusionary in Parentheses)	163,629 sqft (218,172 sqft)
	Maximum Commercial Floor Area	109,086 sqft
	Maximum Community Facility Floor Area	354,529 sqft
Suggested Building Floor Areas		
	Residential Floor Area	108,764 sqft
	Commercial Floor Area	97,982 sqft
	Community Facility Floor Area	46,676 sqft
Density Factor		
ZR 23-22	Gross Area per Dwelling Unit (DUs)	680 sqft
	Total Number of DUs based on zoning density factor	159
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	109
Lot Coverage		
ZR 62-322, ZR 62-324	Maximum Lot Coverage	R 65%, C 75%, CF 75%
Yard Regulations		
ZR 33-15, ZR 34-231	Front Yard	N/A
ZR 62-332	Rear Yard	N/A
ZR 33-25, ZR 34-232	Side Yard*	30'-0"
ZR 62-332	Waterfront Yard	40'-0"
Base Flood Regulations		
	FEMA Preliminary FIRM #3604970083G	Zone AE, El. 11'-0"
Height Regulations		
ZR 87-32(b)	Minimum Base Height	20'-0"
ZR 87-32(b)	Maximum Base Height	40'-0"
ZR 87-32(b)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"
ZR 87-32(c)	Maximum Transition Height	85'-0"
ZR 87-33(a)	Maximum Tower Height	300'-0"
Waterfront Access Regulations		
ZR 62-55(a)	Shore Public Walkway (SPW) Width	40'-0"
ZR 62-561	Upland Connection (UC) Width	30'-0"
ZR 62-512	Visual Corridor Width	N/A
ZR 87-61(c), ZR 62-57	Waterfront Public Access Area Lot Coverage	15%
ZR 87-41	Fire Apparatus Access Road Width	60'-0"
ZR 87-42(a)	Sidewalk (SW) Width***	15'-0"
Notes		

*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".
**ZR 87-32(b) – The setback beyond the street wall shall be at least 10'-0" along the shore public walkway, mapped parkland, and Exterior Street; and at least 15'-0" along an upland connection.

Parcel 6

Parcel 6 has a site area of approximately 42,488 square feet. The base zoning for the site is R7-2 (residential district) with a C2-4 commercial overlay. The commercial FAR (Floor Area Ratio) is 2.0, the residential FAR is 3.0 (4.0 if the inclusionary housing regulations are followed) and the community facility FAR is 6.5. The mathematics of this reveals the following:

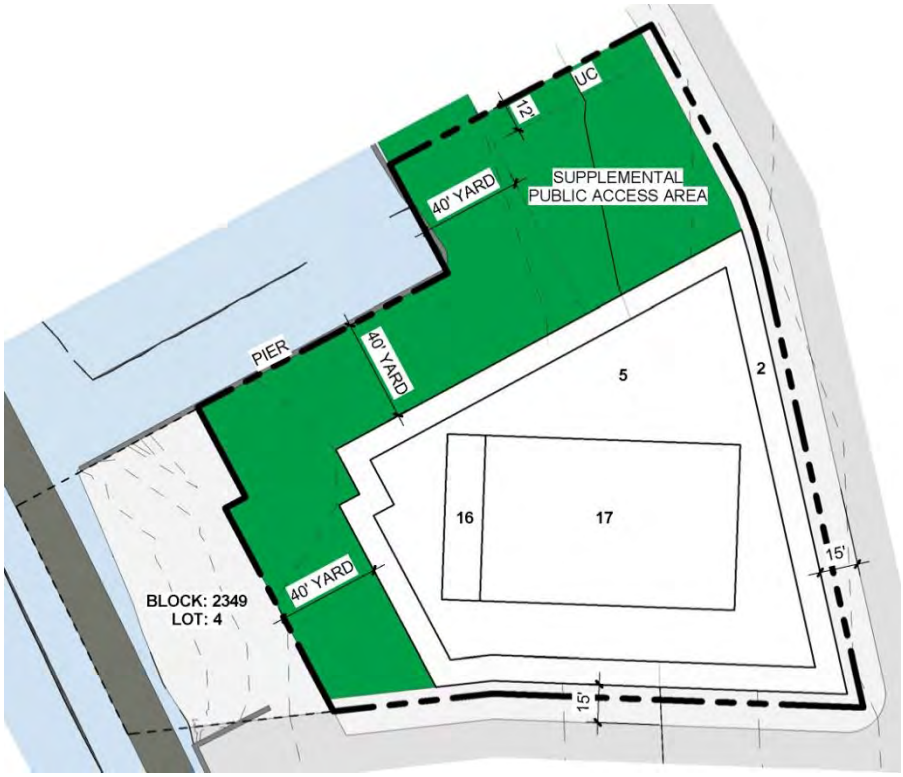

Figure 22 – Parcel 6 Site Analysis

Zoning Analysis – Parcel 6		
Site Description		
	Block / Lot	2349 / 3
	Address	255 Exterior St.
	Zoning Map	6A
ZR 34-112	Zoning District	R7-2 (C2-4 overlay)
	Lot Area	42,488 sqft
Use Regulations		R7-2
ZR 87-10, ZR 33-11, ZR 22-11	Permitted Uses	1-4 (Overlay 1-9, 14)

Maximum Floor Areas Attainable (FAR)		
ZR 87-21	Maximum Residential FAR (Inclusionary in Parentheses)	3.00 (4.00)
ZR 33-122	Maximum Commercial FAR	2.00
ZR 24-11	Maximum Community Facility FAR	6.50
Maximum Building Floor Areas (FA)		
	Maximum Residential Floor Area (Inclusionary in Parentheses)	127,464 sqft (169,952 sqft)
	Maximum Commercial Floor Area	84,976 sqft
	Maximum Community Facility Floor Area	276,172 sqft
Suggested Building Floor Areas		
	Residential Floor Area	88,725 sqft
	Commercial Floor Area	47,728 sqft
	Community Facility Floor Area	53,661 sqft
Density Factor		
ZR 23-22	Gross Area per Dwelling Unit (DUs)	680 sqft
	Total Number of DUs based on zoning density factor	141
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	89
Lot Coverage		
ZR 62-322, ZR 62-324	Maximum Lot Coverage	R 65%, C 75%, CF 75%
Yard Regulations		
ZR 33-15, ZR 34-231	Front Yard	N/A
ZR 62-332	Rear Yard	N/A
ZR 33-25, ZR 34-232	Side Yard*	30'-0"
ZR 62-332	Waterfront Yard	40'-0"
Base Flood Regulations		
	FEMA Preliminary FIRM #3604970083G	Zone AE, El. 11'-0"
Height Regulations		
ZR 87-32(b)	Minimum Base Height	20'-0"
ZR 87-32(b)	Maximum Base Height	40'-0"
ZR 87-32(b)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"
ZR 87-32(c)	Maximum Transition Height	85'-0"
ZR 87-33(a)	Maximum Tower Height	300'-0"
Waterfront Access Regulations		
ZR 62-55(a)	Shore Public Walkway (SPW) Width	40'-0"
ZR 62-561	Upland Connection (UC) Width	12'-0"
ZR 62-512	Visual Corridor Width	N/A
ZR 87-61(c), ZR 62-57	Waterfront Public Access Area Lot Coverage	15%
ZR 87-41	Fire Apparatus Access Road Width	60'-0"
ZR 87-42(a)	Sidewalk (SW) Width***	15'-0"
Notes		
*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".		

**ZR 87-32(b) – The setback beyond the street wall shall be at least 10'-0" along the shore public walkway, mapped parkland, and Exterior Street; and at least 15'-0" along an upland connection.

Parcel 7

Parcel 7 has a site area of approximately 38,344 square feet. The base zoning for the site is R7-2 (residential district) with a C2-4 commercial overlay. The commercial FAR (Floor Area Ratio) is 2.0, the residential FAR is 3.0 (4.0 if the inclusionary housing regulations are followed) and the community facility FAR is 6.5. The mathematics of this reveals the following:

Figure 23 – Parcel 7 Site Analysis

Zoning Analysis – Parcel 7		
Site Description		
	Block / Lot	2323 / 43
	Address	110 E. 138th St.
	Zoning Map	6A
ZR 34-112	Zoning District	R7-2 (C2-4 overlay)
	Lot Area	38,344 sqft
Use Regulations		R7-2
ZR 87-10, ZR 33-11, ZR 22-11	Permitted Uses	1-4 (Overlay 1-9, 14)
Maximum Floor Areas Attainable (FAR)		
ZR 87-21	Maximum Residential FAR (Inclusionary in Parentheses)	3.00 (4.00)
ZR 33-122	Maximum Commercial FAR	2.00
ZR 24-11	Maximum Community Facility FAR	6.50
Maximum Building Floor Areas (FA)		

	Maximum Residential Floor Area (Inclusionary in Parentheses)	115,032 sqft (153,376 sqft)
	Maximum Commercial Floor Area	76,688 sqft
	Maximum Community Facility Floor Area	249,236 sqft
Suggested Building Floor Areas		
	Residential Floor Area	94,143 sqft
	Commercial Floor Area	42,120 sqft
	Community Facility Floor Area	32,317 sqft
Density Factor		
ZR 23-22	Gross Area per Dwelling Unit (DUs)	680 sqft
	Total Number of DUs based on zoning density factor	138
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	94
Lot Coverage		
ZR 62-322, ZR 62-324	Maximum Lot Coverage	R 65%, C 75%, CF 75%
Yard Regulations		
ZR 33-15, ZR 34-231	Front Yard	N/A
ZR 62-332	Rear Yard	N/A
ZR 33-25, ZR 34-232	Side Yard*	30'-0"
ZR 62-332	Waterfront Yard	40'-0"
Base Flood Regulations		
	FEMA Preliminary FIRM #3604970083G	Zone AE, El. 11'-0"
Height Regulations		
ZR 87-32(b)	Minimum Base Height	60'-0"
ZR 87-32(b)	Maximum Base Height	85'-0"
ZR 87-32(b)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"
ZR 87-32(c)	Maximum Transition Height	115'-0"
ZR 87-33(a)	Maximum Tower Height	300'-0"
Waterfront Access Regulations		
ZR 62-55(a)	Shore Public Walkway (SPW) Width	40'-0"
ZR 62-561	Upland Connection (UC) Width	30'-0"
ZR 62-512	Visual Corridor Width	N/A
ZR 87-61(c), ZR 62-57	Waterfront Public Access Area Lot Coverage	15%
ZR 87-41	Fire Apparatus Access Road Width	60'-0"
ZR 87-42(a)	Sidewalk (SW) Width***	15'-0"
Notes		
*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".		
**ZR 87-32(b) – The setback beyond the street wall shall be at least 10'-0" along the shore public walkway, mapped parkland, and Exterior Street; and at least 15'-0" along an upland connection.		

Parcel 8

Parcel 8 has a site area of approximately 144,890 square feet. The base zoning for the site is R7-2 (residential district) with a C2-4 commercial overlay. The commercial FAR (Floor Area Ratio) is 2.0, the

residential FAR is 3.0 (4.0 if the inclusionary housing regulations are followed) and the community facility FAR is 6.5. The mathematics of this reveals the following:

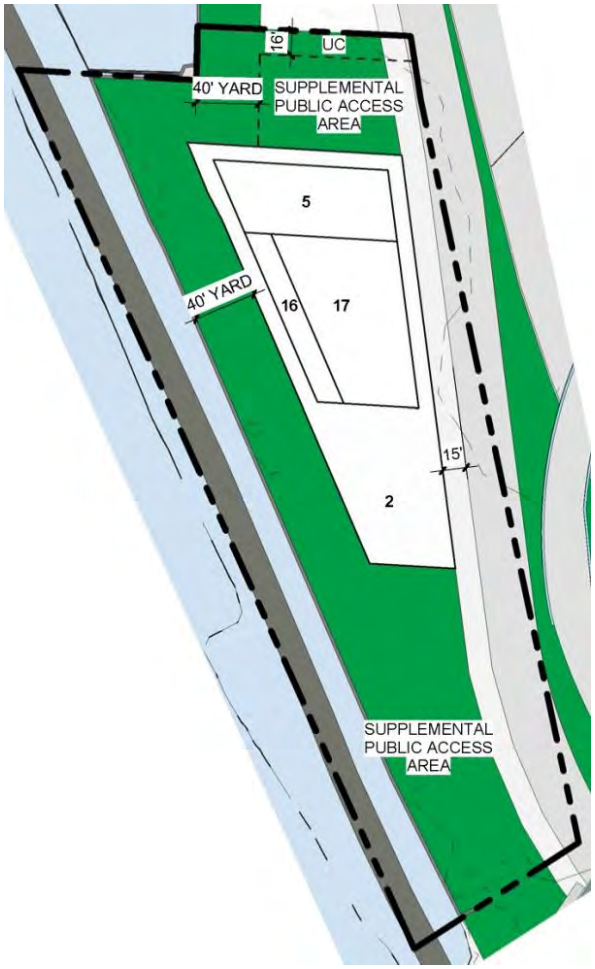

Figure 24 – Parcel 8 Site Analysis

Zoning Analysis – Parcel 8		
Site Description		
	Block / Lot	2323 / 28
	Address	63 Exterior St.
	Zoning Map	6A
ZR 34-112	Zoning District	R7-2 (C2-4 overlay)
	Lot Area	144,890 sqft
Use Regulations		R7-2
ZR 87-10, ZR 33-11, ZR 22-11	Permitted Uses	1-4 (Overlay 1-9, 14)
Maximum Floor Areas Attainable (FAR)		
ZR 87-21	Maximum Residential FAR (Inclusionary in Parentheses)	3.00 (4.00)
ZR 33-122	Maximum Commercial FAR	2.00
ZR 24-11	Maximum Community Facility FAR	6.50

Maximum Building Floor Areas (FA)		
	Maximum Residential Floor Area (Inclusionary in Parentheses)	434,670 sqft (579,560 sqft)
	Maximum Commercial Floor Area	289,780 sqft
	Maximum Community Facility Floor Area	941,785 sqft
Suggested Building Floor Areas		
	Residential Floor Area	99,978 sqft
	Commercial Floor Area	49,635 sqft
	Community Facility Floor Area	39,483 sqft
Density Factor		
ZR 23-22	Gross Area per Dwelling Unit (DUs)	680 sqft
	Total Number of DUs based on zoning density factor	147
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	100
Lot Coverage		
ZR 62-322, ZR 62-324	Maximum Lot Coverage	R 65%, C 75%, CF 75%
Yard Regulations		
ZR 33-15, ZR 34-231	Front Yard	N/A
ZR 62-332	Rear Yard	N/A
ZR 33-25, ZR 34-232	Side Yard*	30'-0"
ZR 62-332	Waterfront Yard	40'-0"
Base Flood Regulations		
	FEMA Preliminary FIRM #3604970083G & #3604970091G	Zone AE, El. 11'-0"
Height Regulations		
ZR 87-32(b)	Minimum Base Height	60'-0"
ZR 87-32(b)	Maximum Base Height	85'-0"
ZR 87-32(b)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"
ZR 87-32(c)	Maximum Transition Height	115'-0"
ZR 87-33(a)	Maximum Tower Height	300'-0"
Waterfront Access Regulations		
ZR 62-55(a)	Shore Public Walkway (SPW) Width	40'-0"
ZR 62-561	Upland Connection (UC) Width	30'-0"
ZR 62-512	Visual Corridor Width	N/A
ZR 87-61(c), ZR 62-57	Waterfront Public Access Area Lot Coverage	15%
ZR 87-41	Fire Apparatus Access Road Width	60'-0"
ZR 87-42(a)	Sidewalk (SW) Width***	15'-0"
Notes		
*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".		
**ZR 87-32(b) – The setback beyond the street wall shall be at least 10'-0" along the shore public walkway, mapped parkland, and Exterior Street; and at least 15'-0" along an upland connection.		

Parcel 9

Parcel 9 has a site area of approximately 25,000 square feet. The base zoning for the site is R7-2 (residential district) with a C2-4 commercial overlay. The commercial FAR (Floor Area Ratio) is 2.0, the residential FAR is 3.0 (4.0 if the inclusionary housing regulations are followed) and the community facility FAR is 6.5. The mathematics of this reveals the following:

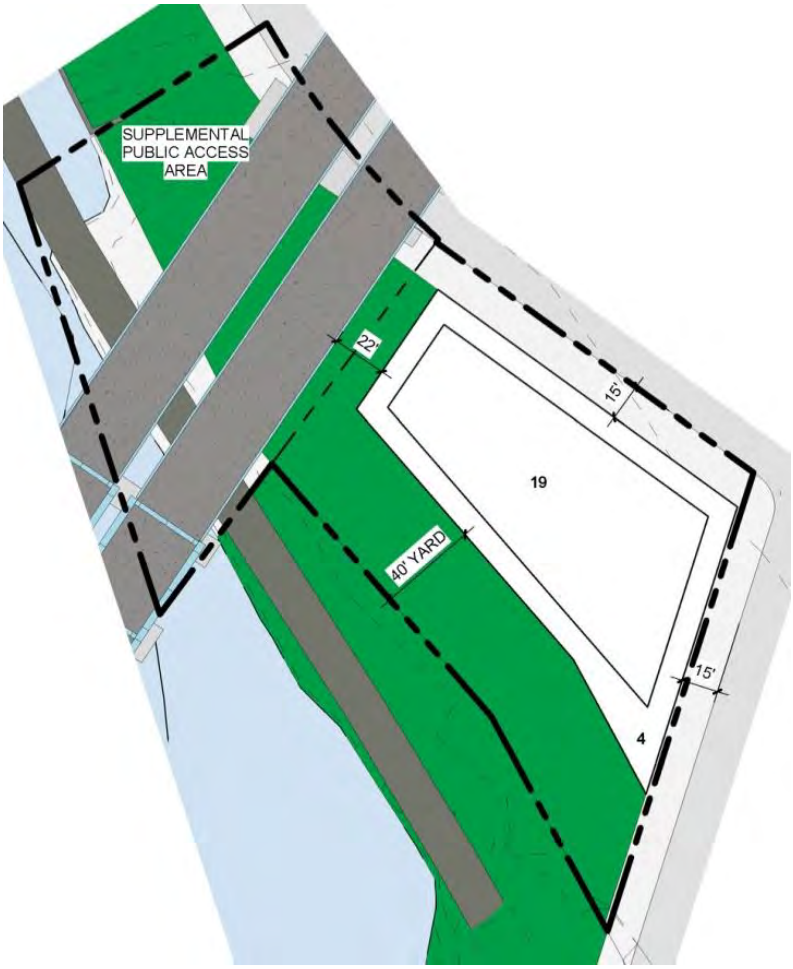

Figure 25 – Parcel 9 Site Analysis

Zoning Analysis – Parcel 9		
Site Description		
	Block / Lot	2323 / 13 & 18
	Address	188 E. 135th St.
	Zoning Map	6A
ZR 34-112	Zoning District	R7-2 (C2-4 overlay)
	Lot Area	25,000 sqft
Use Regulations		R7-2
ZR 87-10, ZR 33-11, ZR 22-11	Permitted Uses	1-4 (Overlay 1-9, 14)
Maximum Floor Areas Attainable (FAR)		

ZR 87-21	Maximum Residential FAR (Inclusionary in Parentheses)	3.00 (4.00)
ZR 33-122	Maximum Commercial FAR	2.00
ZR 24-11	Maximum Community Facility FAR	6.50
Maximum Building Floor Areas (FA)		
	Maximum Residential Floor Area (Inclusionary in Parentheses)	75,000 sqft (100,000 sqft)
	Maximum Commercial Floor Area	50,000 sqft
	Maximum Community Facility Floor Area	162,500 sqft
Suggested Building Floor Areas		
	Residential Floor Area	96,231 sqft
	Commercial Floor Area	39,149 sqft
	Community Facility Floor Area	37,503 sqft
Density Factor		
ZR 23-22	Gross Area per Dwelling Unit (DUs)	680 sqft
	Total Number of DUs based on zoning density factor	141
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	96
Lot Coverage		
ZR 62-322, ZR 62-324	Maximum Lot Coverage	R 65%, C 75%, CF 75%
Yard Regulations		
ZR 33-15, ZR 34-231	Front Yard	N/A
ZR 62-332	Rear Yard	N/A
ZR 33-25, ZR 34-232	Side Yard*	30'-0"
ZR 62-332	Waterfront Yard	40'-0"
Base Flood Regulations		
	FEMA Preliminary FIRM #3604970091G	Zone AE, El. 11'-0"
Height Regulations		
ZR 87-32(b)	Minimum Base Height	60'-0"
ZR 87-32(b)	Maximum Base Height	85'-0"
ZR 87-32(b)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"
ZR 87-32(c)	Maximum Transition Height	115'-0"
ZR 87-33(a)	Maximum Tower Height	300'-0"
Waterfront Access Regulations		
ZR 62-55(a)	Shore Public Walkway (SPW) Width	40'-0"
ZR 62-561	Upland Connection (UC) Width	30'-0"
ZR 62-512	Visual Corridor Width	N/A
ZR 87-61(c), ZR 62-57	Waterfront Public Access Area Lot Coverage	15%
ZR 87-41	Fire Apparatus Access Road Width	60'-0"
ZR 87-42(a)	Sidewalk (SW) Width***	15'-0"
Notes		
*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".		
**ZR 87-32(b) – The setback beyond the street wall shall be at least 10'-0" along the shore public walkway, mapped parkland, and Exterior Street; and at least 15'-0" along an upland connection.		

Assemblage

The area that we have noted as the 'Assemblage' does not fall within the *Special Harlem River Waterfront District*. The zoning is M1-3/R8, a special mixed use district. The area is subject to a series of overlapping zoning regulations as per below:

- As per the NYC Zoning Regulations Article I – Chapter 2, *Definitions* the sites are collectively classified as a waterfront area, which is the geographical area comprising all blocks between the pierhead line and a line 800 feet landward from the shoreline.

- As defined in Article VI – Chapter 2, *Special Regulations Applying in the Waterfront Area*, depending on the location of the lot with respect to the shoreline, those lots with a boundary along the shoreline are waterfront zoning lots with requirements for waterfront public access areas. Lots without a shoreline boundary are defined as waterfront blocks.

- Within the Waterfront Area, all developments on zoning lots within waterfront blocks are subject to all the provisions of Article VI – Chapter 2. The regulations of all other Chapters of the Zoning Resolution are applicable, except as superseded, supplemented or modified by the provisions of this Chapter. In the event of a conflict between the provisions of this Chapter and other regulations of the Zoning Resolution, the provisions of Article VI – Chapter 2 shall control.

- Article II – Chapter 8, *Quality Housing Program* applies to all developments, except for the bulk regulations.

- The bulk regulations of Article XII – Chapter 3, *Special Mixed-Use Districts* do apply. This yields a maximum Far of 7.2 with lot coverage ranging from 70% to 75%.

The existing land uses are all compatible with current zoning, but do not represent the best possible use of the land and public access is difficult. The waterfront uses are currently light industrial and storage and, without a redevelopment scenario, potentially limit the continuity of the shorefront public walkway. A mixture of ground floor and second floor retail, business, and community facility spaces, particularly devoted to art and antiques (to work with what is happening in the community to the south) can be accommodated here. The remainder of the development should be residential and combine typologies such as typical family housing, live/work spaces for artists, and supportive housing.

A zoning analysis of the Assemblage area has been done utilizing the current block/lot configurations. However, the current configuration of the blocks and lots, when viewed through the lens of new mixed-use development, will require the placement of new streets and sidewalks for access (pedestrian, private

and public (police, fire, medical) vehicles as well as infrastructure (water, sewer, gas, electricity, and communications) easements.

In order to show how the area might look with access, the street/blocks have been reworked to reflect the street system on the landward side of the Major Deegan Expressway. We are using the urban design ideas of the *Special Harlem River Waterfront District* to lay out the streets, create visual corridors, evacuation routes, and public access and base elevation grades. We would maintain the street frontage and block sizes along the north side of the Third Avenue Bridge and break up the remaining parcel into three development sites and increase the amount of shorefront open space and increase public access to it.

Assemblage (Combined)	
Suggested Residential Floor Area	630,396 sqft (850 DUs)
Suggested Manufacturing Floor Area	602,246 sqft
Suggested Community Facility Floor Area	193,273 sqft

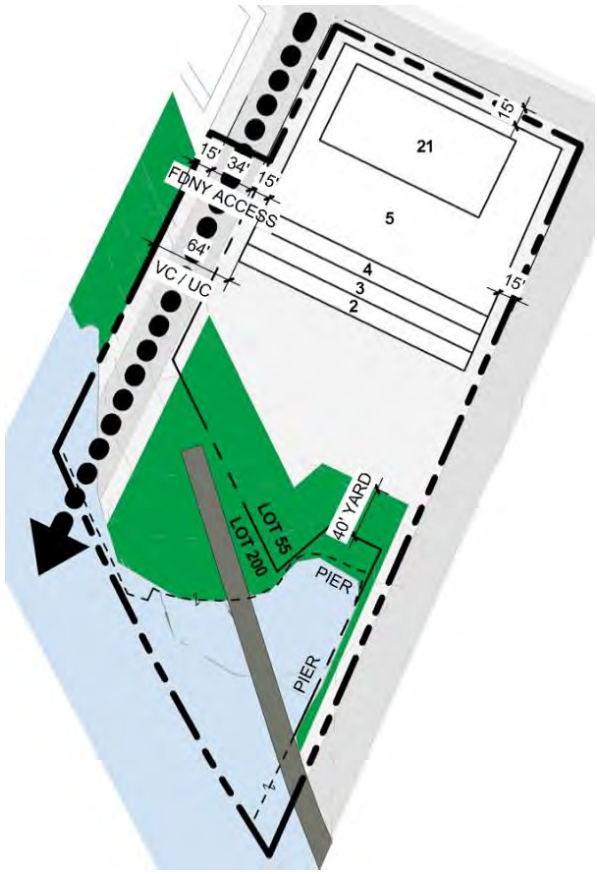

Figure 26 – Assemblage, Part A Site Analysis

Zoning Analysis – Assemblage, Part A			
Site Description			
	Block / Lot	2319 / 55 (partial) & 200 (partial)	
	Address	200 E. 135th St. 2391 3rd Ave.	
	Zoning Map	6A	
ZR 34-112	Zoning District	Mixed Use: M1-3/R-8	
	Lot Area	139,183 sqft (estimated)	
Use Regulations		M1-3	R-8
ZR 42-11, ZR 22-11	Permitted Uses	3-14, 16-17	1-4
Maximum Floor Areas Attainable (FAR)			
ZR 62-327, ZR 123-64, ZR 123-63, ZR 23-145	Maximum Residential FAR – Quality Housing	N/A	7.20
ZR 123-64, ZR 43-12	Maximum Manufacturing FAR	5.00	N/A
ZR 123-64, ZR 24-11	Maximum Community Facility FAR	6.50	
Maximum Building Floor Areas (FA)			
	Maximum Residential Floor Area	1,002,117 sqft	
	Maximum Manufacturing Floor Area	695,915 sqft	
	Maximum Community Facility Floor Area	904,689 sqft	
Suggested Building Floor Areas			
	Residential Floor Area	131,625 sqft	
	Manufacturing Floor Area	55,164 sqft	
	Community Facility Floor Area	101,335 sqft	
Density Factor			
ZR 62-322	Gross Area per Dwelling Unit (DUs)	740 sqft	
	Total Number of DUs based on zoning density factor	177	
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	132	
Lot Coverage			
ZR 62-322	Maximum Lot Coverage	R 70%, C 75%, CF 75%	
Yard Regulations			
ZR 43-304	Front Yard	N/A	
ZR 23-47, ZR 24-391	Rear Yard	30'-0"	
ZR 23-462(c), ZR 43-25	Side Yard*	N/A	
ZR 62-332	Waterfront Yard	40'-0"	
Base Flood Regulations			
	FEMA Preliminary FIRM #3604970091G	Zone AE, El. 11'-0"	
Height Regulations			
ZR 62-341(c)(1)	Minimum Base Height	65'-0"	70'-0"

		CF 80'-0"	
ZR 62-341(a)(1-2)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"	
ZR 62-341(c)(2)	Maximum Tower Height	185'-0"	210'-0"
		CF 225'-0"	
Waterfront Access Regulations			
ZR 62-55(a)	Shore Public Walkway (SPW) Width***	40'-0"	
ZR 62-561	Upland Connection (UC) Width	30'-0"	
ZR 62-512	Visual Corridor Width	50'-0"	
ZR 62-57	Waterfront Public Access Area Lot Coverage	20%	
Parking Regulations			
ZR 25-23	Residential Vehicle Parking Requirement	40% of residences	
ZR 25-811	Residential Bicycle Parking Requirement	1 per 2 dwelling units	
Notes			
*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".			
**ZR 62-341(a)(1-2) – The shore public walkway, visual corridor, upland connection, or supplemental access areas shall be considered a street; and its boundary shall be treated as a street line. The setback shall be 15'-0" along a narrow street (<75'-0") and 10'-0" along a wide street.			

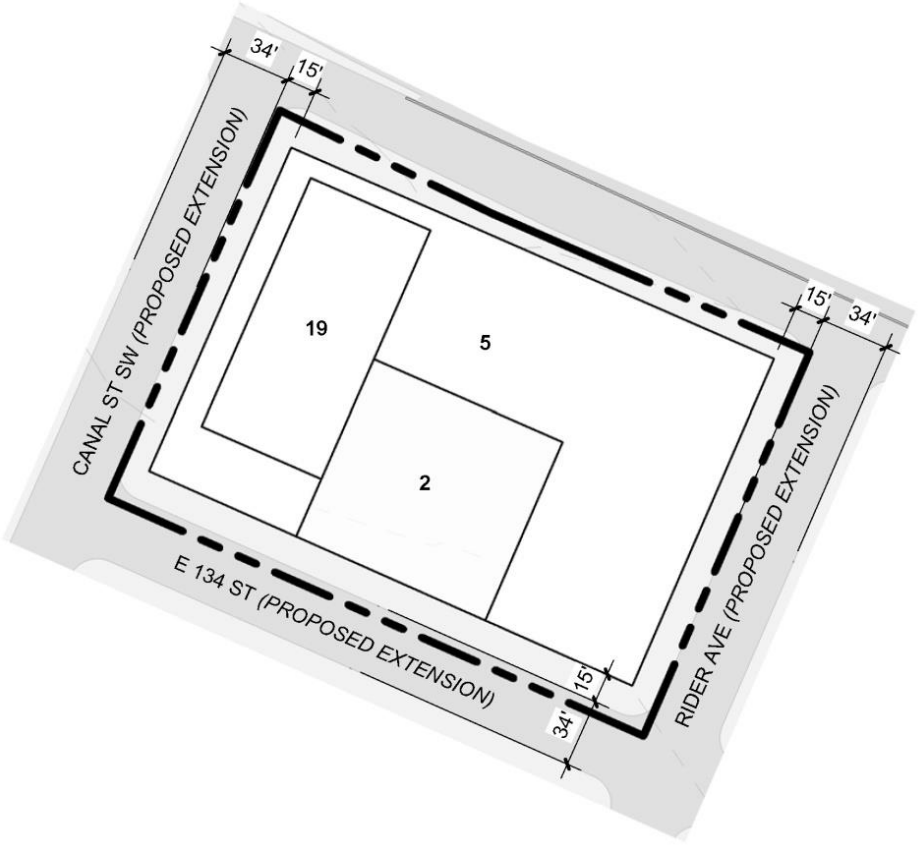

Figure 27 – Assemblage, Part B Site Analysis

Zoning Analysis – Assemblage, Part B			
Site Description			
	Block / Lot	2319 / 55 (partial) & 60 (partial)	
	Address	200 E. 135th St.	
	Zoning Map	6A	
ZR 34-112	Zoning District	Mixed Use: M1-3/R-8	
	Lot Area	71,522 sqft (estimated)	
Use Regulations		M1-3	R-8
ZR 42-11, ZR 22-11	Permitted Uses	3-14, 16-17	1-4
Maximum Floor Areas Attainable (FAR)			
ZR 62-327, ZR 123-64, ZR 123-63, ZR 23-145	Maximum Residential FAR – Quality Housing	N/A	7.20
ZR 123-64, ZR 43-12	Maximum Manufacturing FAR	5.00	N/A
ZR 123-64, ZR 24-11	Maximum Community Facility FAR	6.50	
Maximum Building Floor Areas (FA)			
	Maximum Residential Floor Area	514,958 sqft	
	Maximum Manufacturing Floor Area	357,610 sqft	
	Maximum Community Facility Floor Area	464,893 sqft	
Suggested Building Floor Areas			
	Residential Floor Area	122,850 sqft	
	Manufacturing Floor Area	201,901 sqft	
	Community Facility Floor Area	0 sqft	
Density Factor			
ZR 62-322	Gross Area per Dwelling Unit (DUs)	740 sqft	
	Total Number of DUs based on zoning density factor	166	
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	123	
Lot Coverage			
ZR 62-322	Maximum Lot Coverage	R 70%, C 75%, CF 75%	
Yard Regulations			
ZR 43-304	Front Yard	N/A	
ZR 23-47, ZR 24-391	Rear Yard	30'-0"	
ZR 23-462(c), ZR 43-25	Side Yard*	N/A	
ZR 62-332	Waterfront Yard	N/A	
Base Flood Regulations			
	FEMA Preliminary FIRM #3604970091G	Zone AE, El. 11'-0"	
Height Regulations			
ZR 62-341(c)(1)	Minimum Base Height	65'-0"	70'-0"
		CF 80'-0"	
ZR 62-341(a)(1-2)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"	

ZR 62-341(c)(2)	Maximum Tower Height	185'-0"	210'-0"
		CF 225'-0"	
Waterfront Access Regulations			
ZR 62-55(a)	Shore Public Walkway (SPW) Width***	40'-0"	
ZR 62-561	Upland Connection (UC) Width	30'-0"	
ZR 62-512	Visual Corridor Width	50'-0"	
ZR 62-57	Waterfront Public Access Area Lot Coverage	20%	
Parking Regulations			
ZR 25-23	Residential Vehicle Parking Requirement	40% of residences	
ZR 25-811	Residential Bicycle Parking Requirement	1 per 2 dwelling units	
Notes			
*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".			
**ZR 62-341(a)(1-2) – The shore public walkway, visual corridor, upland connection, or supplemental access areas shall be considered a street; and its boundary shall be treated as a street line. The setback shall be 15'-0" along a narrow street (<75'-0") and 10'-0" along a wide street.			

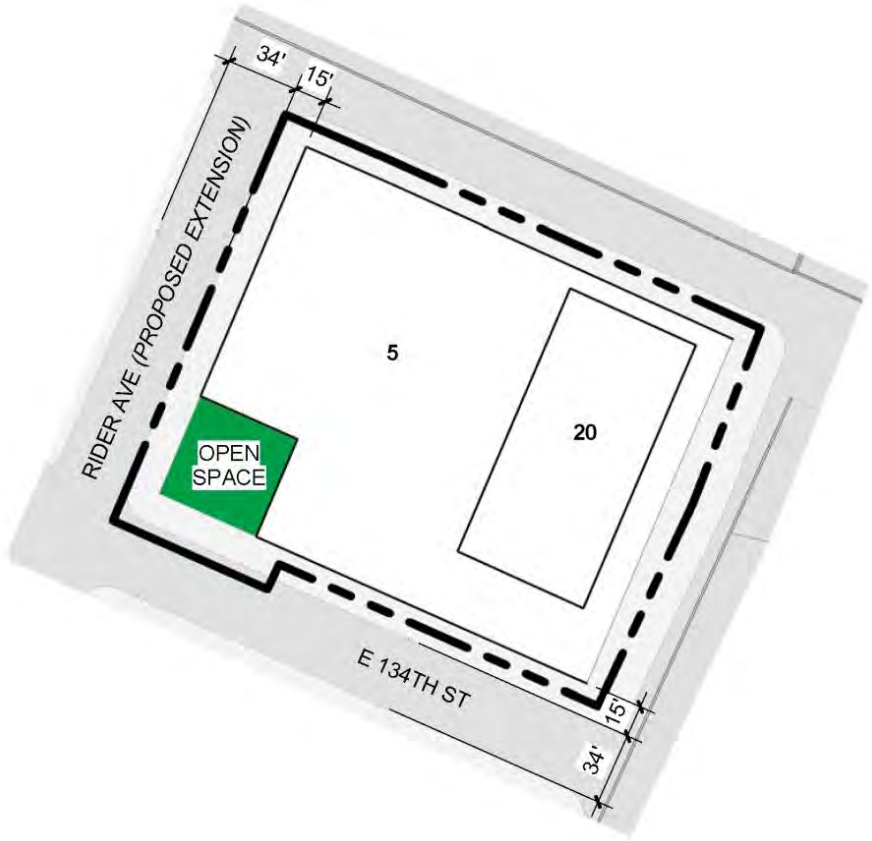

Figure 28 - Assemblage, Part C Site Analysis

Zoning Analysis – Assemblage, Part C			
Site Description			
	Block / Lot	2319 / 37, 60 (partial), & 155	
	Address	2439 3rd Ave.	
	Zoning Map	6A	
ZR 34-112	Zoning District	Mixed Use: M1-3/R-8	
	Lot Area	51,666 sqft (estimated)	
Use Regulations		M1-3	R-8
ZR 42-11, ZR 22-11	Permitted Uses	3-14, 16-17	1-4
Maximum Floor Areas Attainable (FAR)			
ZR 62-327, ZR 123-64, ZR 123-63, ZR 23-145	Maximum Residential FAR – Quality Housing	N/A	7.20
ZR 123-64, ZR 43-12	Maximum Manufacturing FAR	5.00	N/A
ZR 123-64, ZR 24-11	Maximum Community Facility FAR	6.50	
Maximum Building Floor Areas (FA)			
	Maximum Residential Floor Area	371,995 sqft	
	Maximum Manufacturing Floor Area	258,330 sqft	
	Maximum Community Facility Floor Area	335,829 sqft	
Suggested Building Floor Areas			
	Residential Floor Area	131,657 sqft	
	Manufacturing Floor Area	146,395 sqft	
	Community Facility Floor Area	36,599 sqft	
Density Factor			
ZR 62-322	Gross Area per Dwelling Unit (DUs)	740 sqft	
	Total Number of DUs based on zoning density factor	177	
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	132	
Lot Coverage			
ZR 62-322	Maximum Lot Coverage	R 70%, C 75%, CF 75%	
Yard Regulations			
ZR 43-304	Front Yard	N/A	
ZR 23-47, ZR 24-391	Rear Yard	30'-0"	
ZR 23-462(c), ZR 43-25	Side Yard*	N/A	
ZR 62-332	Waterfront Yard	N/A	
Base Flood Regulations			
	FEMA Preliminary FIRM #3604970091G	Zone AE, El. 11'-0"	
Height Regulations			
ZR 62-341(c)(1)	Minimum Base Height	65'-0"	70'-0"
		CF 80'-0"	
ZR 62-341(a)(1-2)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"	

ZR 62-341(c)(2)	Maximum Tower Height	185'-0"	210'-0"
		CF 225'-0"	
Waterfront Access Regulations			
ZR 62-55(a)	Shore Public Walkway (SPW) Width***	40'-0"	
ZR 62-561	Upland Connection (UC) Width	30'-0"	
ZR 62-512	Visual Corridor Width	50'-0"	
ZR 62-57	Waterfront Public Access Area Lot Coverage	20%	
Parking Regulations			
ZR 25-23	Residential Vehicle Parking Requirement	40% of residences	
ZR 25-811	Residential Bicycle Parking Requirement	1 per 2 dwelling units	
Notes			
*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".			
**ZR 62-341(a)(1-2) – The shore public walkway, visual corridor, upland connection, or supplemental access areas shall be considered a street; and its boundary shall be treated as a street line. The setback shall be 15'-0" along a narrow street (<75'-0") and 10'-0" along a wide street.			

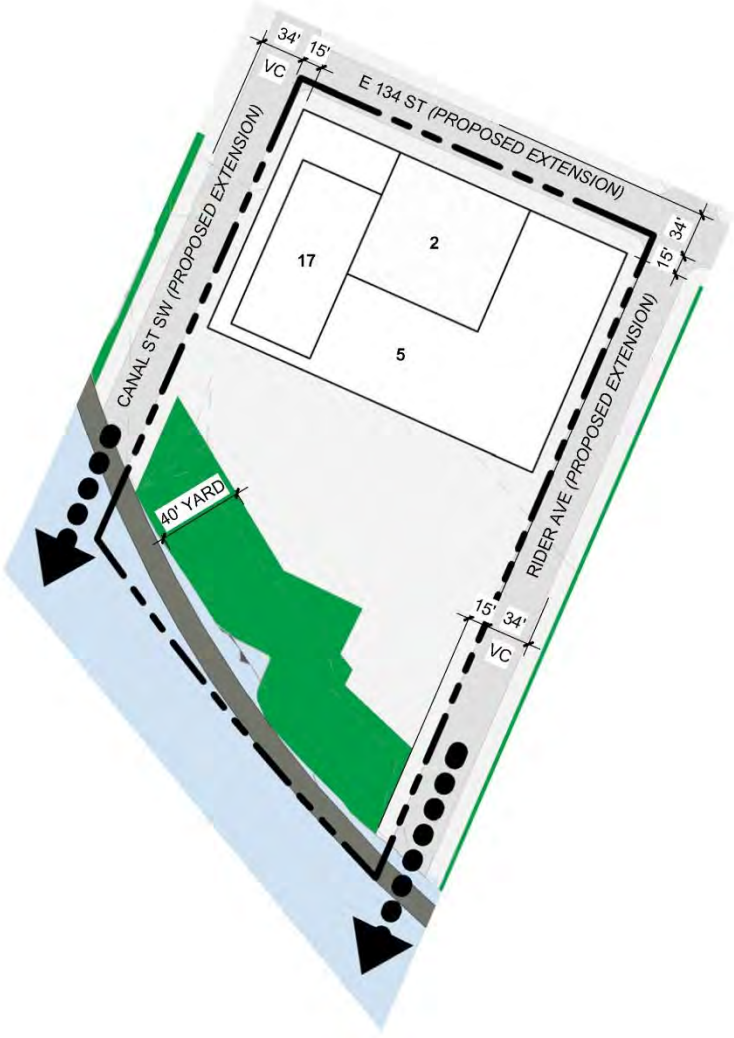

Figure 29 - Assemblage, Part D Site Analysis

Zoning Analysis – Assemblage, Part D			
Site Description			
	Block / Lot	2319 / 2 (partial), 55 (partial), 109 (partial), & 200 (partial)	
	Address		
	Zoning Map	6A	
ZR 34-112	Zoning District	Mixed Use: M1-3/R-8	
	Lot Area	154,647 sqft (estimated)	
Use Regulations		M1-3	R-8
ZR 42-11, ZR 22-11	Permitted Uses	3-14, 16-17	1-4
Maximum Floor Areas Attainable (FAR)			
ZR 62-327, ZR 123-64, ZR 123-63, ZR 23-145	Maximum Residential FAR – Quality Housing	N/A	7.20
ZR 123-64, ZR 43-12	Maximum Manufacturing FAR	5.00	N/A
ZR 123-64, ZR 24-11	Maximum Community Facility FAR	6.50	
Maximum Building Floor Areas (FA)			
	Maximum Residential Floor Area	1,113,458 sqft	
	Maximum Manufacturing Floor Area	773,235 sqft	
	Maximum Community Facility Floor Area	1,005,205 sqft	
Suggested Building Floor Areas			
	Residential Floor Area	105,301 sqft	
	Manufacturing Floor Area	96,373 sqft	
	Community Facility Floor Area	21,201 sqft	
Density Factor			
ZR 62-322	Gross Area per Dwelling Unit (DUs)	740 sqft	
	Total Number of DUs based on zoning density factor	177	
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	132	
Lot Coverage			
ZR 62-322	Maximum Lot Coverage	R 70%, C 75%, CF 75%	
Yard Regulations			
ZR 43-304	Front Yard	N/A	
ZR 23-47, ZR 24-391	Rear Yard	30'-0"	
ZR 23-462(c), ZR 43-25	Side Yard*	N/A	
ZR 62-332	Waterfront Yard	40'-0"	
Base Flood Regulations			
	FEMA Preliminary FIRM #3604970091G	Zone AE, El. 11'-0"	
Height Regulations			
ZR 62-341(c)(1)	Minimum Base Height	65'-0"	70'-0"

		CF 80'-0"	
ZR 62-341(a)(1-2)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"	
ZR 62-341(c)(2)	Maximum Tower Height	185'-0"	210'-0"
		CF 225'-0"	
Waterfront Access Regulations			
ZR 62-55(a)	Shore Public Walkway (SPW) Width***	40'-0"	
ZR 62-561	Upland Connection (UC) Width	30'-0"	
ZR 62-512	Visual Corridor Width	50'-0"	
ZR 62-57	Waterfront Public Access Area Lot Coverage	20%	
Parking Regulations			
ZR 25-23	Residential Vehicle Parking Requirement	40% of residences	
ZR 25-811	Residential Bicycle Parking Requirement	1 per 2 dwelling units	
Notes			
*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".			
**ZR 62-341(a)(1-2) – The shore public walkway, visual corridor, upland connection, or supplemental access areas shall be considered a street; and its boundary shall be treated as a street line. The setback shall be 15'-0" along a narrow street (<75'-0") and 10'-0" along a wide street.			

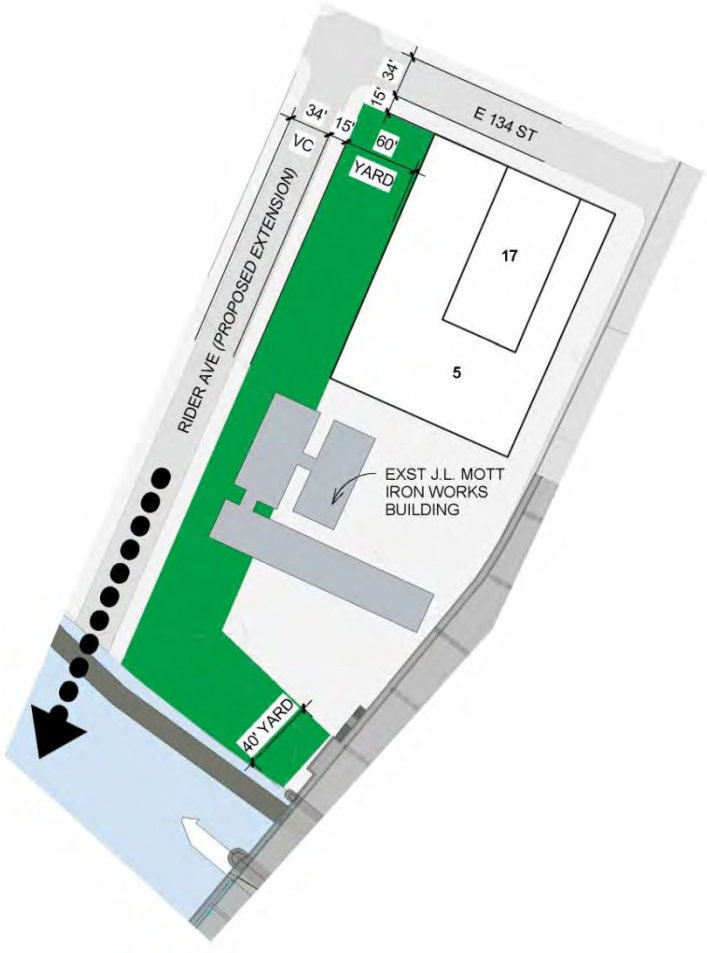

Figure 30 – Assemblage, Part E Site Analysis

Zoning Analysis – Assemblage, Part E			
Site Description			
	Block / Lot	2319 / 2 (partial), 55 (partial), 98, 99, 100, 108, 109 (partial), 112, 200 (partial)	
	Address	2401 3rd Ave, 200 E. 135th St., 220 E. 134th St., 2417 3rd Ave., 2415 3rd Ave., 2413 3rd Ave., 2403 3rd Ave.	
	Zoning Map	6A	
ZR 34-112	Zoning District	Mixed Use: M1-3/R-8	
	Lot Area	138,090 sqft (estimated)	
Use Regulations		M1-3	R-8
ZR 42-11, ZR 22-11	Permitted Uses	3-14, 16-17	1-4
Maximum Floor Areas Attainable (FAR)			
ZR 62-327, ZR 123-64, ZR 123-63, ZR 23-145	Maximum Residential FAR – Quality Housing	N/A	7.20
ZR 123-64, ZR 43-12	Maximum Manufacturing FAR	5.00	N/A
ZR 123-64, ZR 24-11	Maximum Community Facility FAR	6.50	
Maximum Building Floor Areas (FA)			
	Maximum Residential Floor Area	994,248 sqft	
	Maximum Manufacturing Floor Area	690,450 sqft	
	Maximum Community Facility Floor Area	897,585 sqft	
Suggested Building Floor Areas			
	Residential Floor Area	138,963 sqft	
	Manufacturing Floor Area	102,413 sqft	
	Community Facility Floor Area	34,138 sqft	
Density Factor			
ZR 62-322	Gross Area per Dwelling Unit (DUs)	740 sqft	
	Total Number of DUs based on zoning density factor	188	
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	139	
Lot Coverage			
ZR 62-322	Maximum Lot Coverage	R 70%, C 75%, CF 75%	
Yard Regulations			
ZR 43-304	Front Yard	N/A	
ZR 23-47, ZR 24-391	Rear Yard	30'-0"	
ZR 23-462(c), ZR 43-25	Side Yard*	N/A	
ZR 62-332	Waterfront Yard	40'-0"	

Base Flood Regulations			
	FEMA Preliminary FIRM #3604970091G	Zone AE, El. 11'-0"	
Height Regulations			
ZR 62-341(c)(1)	Minimum Base Height	65'-0"	70'-0"
		CF 80'-0"	
ZR 62-341(a)(1-2)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"	
ZR 62-341(c)(2)	Maximum Tower Height	185'-0"	210'-0"
		CF 225'-0"	
Waterfront Access Regulations			
ZR 62-55(a)	Shore Public Walkway (SPW) Width***	40'-0"	
ZR 62-561	Upland Connection (UC) Width	30'-0"	
ZR 62-512	Visual Corridor Width	50'-0"	
ZR 62-57	Waterfront Public Access Area Lot Coverage	20%	
Parking Regulations			
ZR 25-23	Residential Vehicle Parking Requirement	40% of residences	
ZR 25-811	Residential Bicycle Parking Requirement	1 per 2 dwelling units	
Notes			
*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".			
**ZR 62-341(a)(1-2) – The shore public walkway, visual corridor, upland connection, or supplemental access areas shall be considered a street; and its boundary shall be treated as a street line. The setback shall be 15'-0" along a narrow street (<75'-0") and 10'-0" along a wide street.			

101 Lincoln Avenue

Zoning Analysis – 101 Lincoln Ave.			
Site Description			
	Block / Lot	2316 / 1	
	Address	101 Lincoln Ave	
	Zoning Map	6A	
ZR 34-112	Zoning District	Mixed Use: M1-3/R-8	
	Lot Area	133,700 sqft	
Use Regulations		M1-3	R-8
ZR 42-11, ZR 22-11	Permitted Uses	3-14, 16-17	1-4
Maximum Floor Areas Attainable (FAR)			
ZR 62-327, ZR 123-64, ZR 123-63, ZR 23-145	Maximum Residential FAR – Quality Housing	N/A	7.20
ZR 123-64, ZR 43-12	Maximum Manufacturing FAR	5.00	N/A
ZR 123-64, ZR 24-11	Maximum Community Facility FAR	6.50	
Maximum Building Floor Areas (FA)			
	Maximum Residential Floor Area	962,640 sqft	
	Maximum Manufacturing Floor Area	668,500 sqft	
	Maximum Community Facility Floor Area	869,050 sqft	

Suggested Building Floor Areas		
	Residential Floor Area	96,525 sqft
	Manufacturing Floor Area	206,882 sqft
	Community Facility Floor Area	151,327 sqft
Density Factor		
ZR 62-322	Gross Area per Dwelling Unit (DUs)	740 sqft
	Total Number of DUs based on zoning density factor	130
	Total Number of DUs based on SoBRO family factor (1,000 sqft)	97
Lot Coverage		
ZR 62-322	Maximum Lot Coverage	R 70%, C 75%, CF 75%
Yard Regulations		
ZR 43-304	Front Yard	N/A
ZR 23-47, ZR 24-391	Rear Yard	30'-0"
ZR 23-462(c), ZR 43-25	Side Yard*	N/A
ZR 62-332	Waterfront Yard	40'-0"
Base Flood Regulations		
	FEMA Preliminary FIRM #3604970091G	Zone AE, El. 11'-0"
Height Regulations		
ZR 62-341(c)(1)	Minimum Base Height	65'-0" / 70'-0" / CF 80'-0"
ZR 62-341(a)(1-2)	Minimum Setback Beyond Base Height**	10'-0" / 15'-0"
ZR 62-341(c)(2)	Maximum Tower Height	185'-0" / 210'-0" / CF 225'-0"
Waterfront Access Regulations		
ZR 62-55(a)	Shore Public Walkway (SPW) Width***	40'-0"
ZR 62-561	Upland Connection (UC) Width	30'-0"
ZR 62-512	Visual Corridor Width	50'-0"
ZR 62-57	Waterfront Public Access Area Lot Coverage	20%
Parking Regulations		
ZR 25-23	Residential Vehicle Parking Requirement	40% of residences
ZR 25-811	Residential Bicycle Parking Requirement	1 per 2 dwelling units
Notes		
*ZR 23-861 – The minimum distance between a legally required window and a side lot line shall be 30'-0".		
**ZR 62-341(a)(1-2) – The shore public walkway, visual corridor, upland connection, or supplemental access areas shall be considered a street; and its boundary shall be treated as a street line. The setback shall be 15'-0" along a narrow street (<75'-0") and 10'-0" along a wide street.		

SECTION 4: CLIMATE RESILIENCY

Flood Protection

All the sites are within and below the FEMA minimum flood level. The FEMA ABFE (advisory base flood elevation) for the development area is 11 feet. This flood elevation affects every parcel, and for the majority it covers the entire parcel. This is understandable as the shoreline ranges in elevation from 5 feet to 7.3 feet; and Exterior Street ranges in elevation from approximately 15 feet to 8 feet. The implications of this are that in a significant storm or storm surge the majority of the sites will be inundated. Currently, shoreline protection is inconsistent in the development area (e.g. rip-rap, sea walls, nothing). None of the existing shoreline protection will effectively dissipate the energy of a significant storm or storm surge; or provide a barrier at or above the ABFE to protect the parcels.

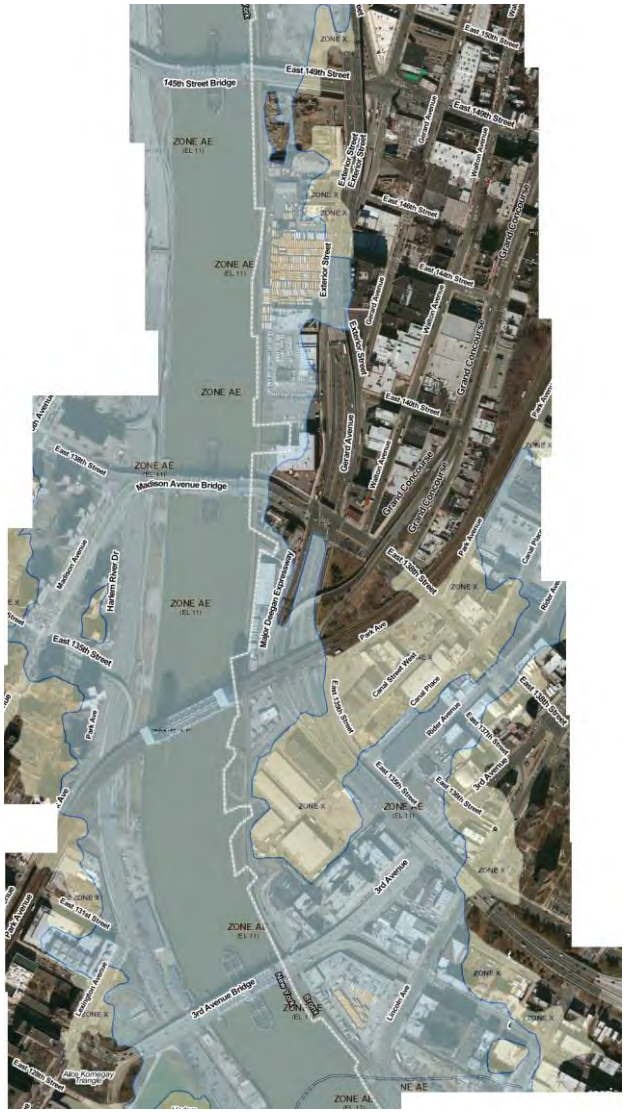

Figure 31 - FEMA Draft Flood Insurance Map (FIRM) (December 2013)

Shoreline protection and resiliency is critical in any redevelopment scenario for these sites. The approach to the shoreline should be consistent with all the sites and work with the required public shoreline walkway. Our recommendation is to develop and construct a wetland along the shoreline. This should be coupled with raising the base elevation of all the sites to above the minimum FEMA base flood level (approximately elevation 11). As part of the site mitigation efforts to remove contaminated soil, fill should not be used to raise the base elevation of the sites. Rather a platform needs to be created that can house cisterns that can take storm surge and significant rainfall, store it and slowly release it in order to reduce the potential for flooding. These ideas are further explored in Section 5: Waterfront Design and Access.

Environmental Remediation

Every parcel in the development area will require a level of environmental remediation necessary for redevelopment to occur. Each parcel has some level of ground pollution based on the years of industrial use. One of the earliest industrial facilities, the J.L. Mott Iron Works dating from the mid 1820s, still stands adjacent to the Third Avenue Bridge. Environmental remediation is further complicated because the majority of the development areas is below the ABFE. As a result, the amount of soil that needs to be encapsulated or replaced with clean fill during the development process may be increased.

Climate Resilience Suggestions:

- Re-grade the parcels to increase the percentage of the development area that is at or above the ABFE, while maintaining a relationship with the adjacent streets. If the site is not significantly regraded, use the area below the first floor (recommended to be at ABFE) as a stormwater retention basin. Refer to Section 2 'Waterfront Infrastructure'.
- Locate the first floor of each building (excluding parking) at or above the ABFE. Parking is permitted below the design flood elevation. Refer to the New York City Building Code Appendix G Flood Resistant Construction.
- Create urban wetlands in the 40 foot required waterfront yard. Wetlands would contribute to stormwater retention, filter water before returning it to the Harlem River, and revitalize the local ecosystem.
- Install riprap along the entire waterfront as a means of shoreline protection.
- Locate all boiler and utility rooms above the FEMA ABFE, and consider zoning utility services for the larger development areas.
- Because of potential flooding issues, use a form of alternative power that can be disconnected from the power grid and coupled with onsite battery storage to keep emergency pumps, lights, and elevators operational when there is a failure in the power grid.
- Plant native vegetation that is salt water resistant throughout the development area.
- In lieu of street trees, provide a continuous 5 foot wide planting strip along Exterior Street where the Major Deegan (I-87) Expressway shades the sidewalk. Grasses and low shrubs are more shade tolerant and would contribute to stormwater retention in the development area.

Shoreline Resilience Strategies

The design of the landscape edge along the Harlem Riverfront between the 3rd Avenue Bridge and the 145th Street Bridge will play a major role in forming a Resilient Coastal edge for any new development along this edge.

Specific Site and Building Measures include:

- Dry and wet flood proofing for the proposed buildings.
- Elevating any new structures on fill above the recommended FEMA elevations for new structures.
- Site protection can include sheet piling, bulkheads and revetment structures.

Specific Site and Landscape Measures include:

- Elevating existing streets and promenades.
- Elevating river overlooks
- Creating new waterfront parks that include neighborhood programming, small plazas, playgrounds, dog runs and spaces for exercise.
- Building bulkheads where the spaces are narrow and structure is needed.
- Constructing revetments and planting these structures where possible.
- Building living shorelines and improving habitat.
- Forming beaches and soft edges.
- Constructing wetlands and planted terraces.
- Forming artificial reefs and floating habitat islands.
- Building Bio-swales and storm-water treatment landscapes including treating storm water from the Major Deegan Expressway.
- Forming grassy berms that are accessible within the park areas.

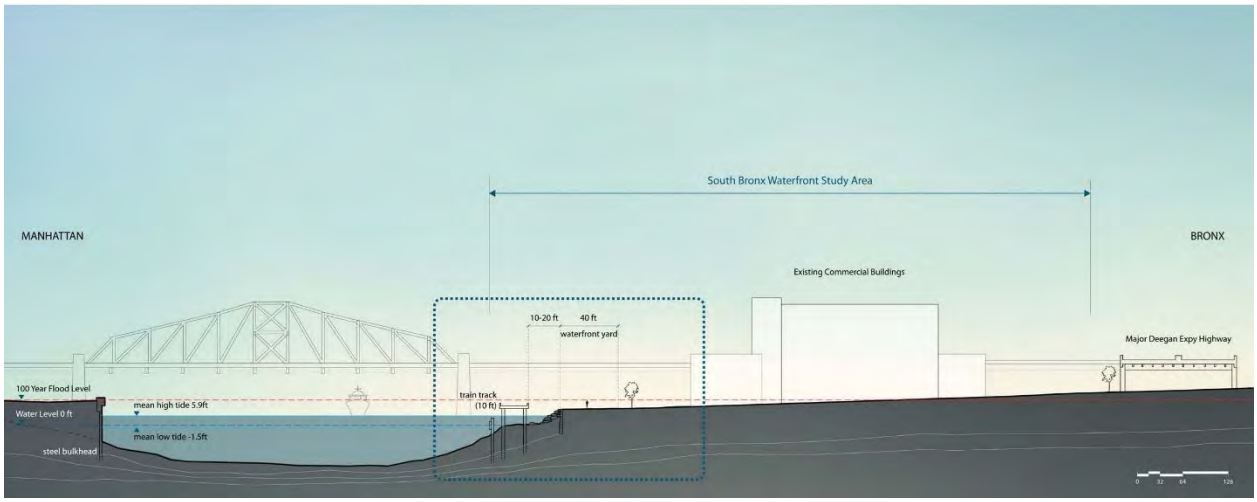

Figure 32 – Cross Section through Harlem River and Project Study Area | Existing Condition

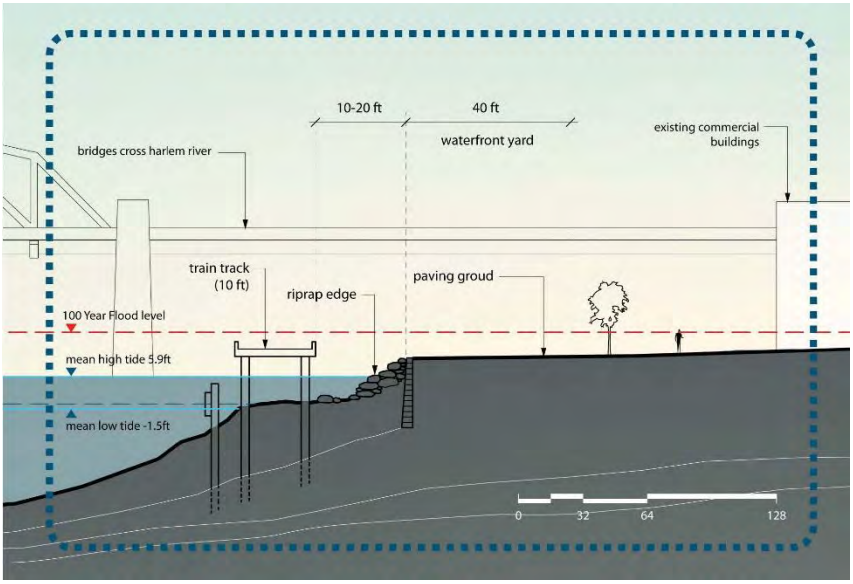

Figure 33 – Zoom Cross Section through Harlem River | Existing Condition

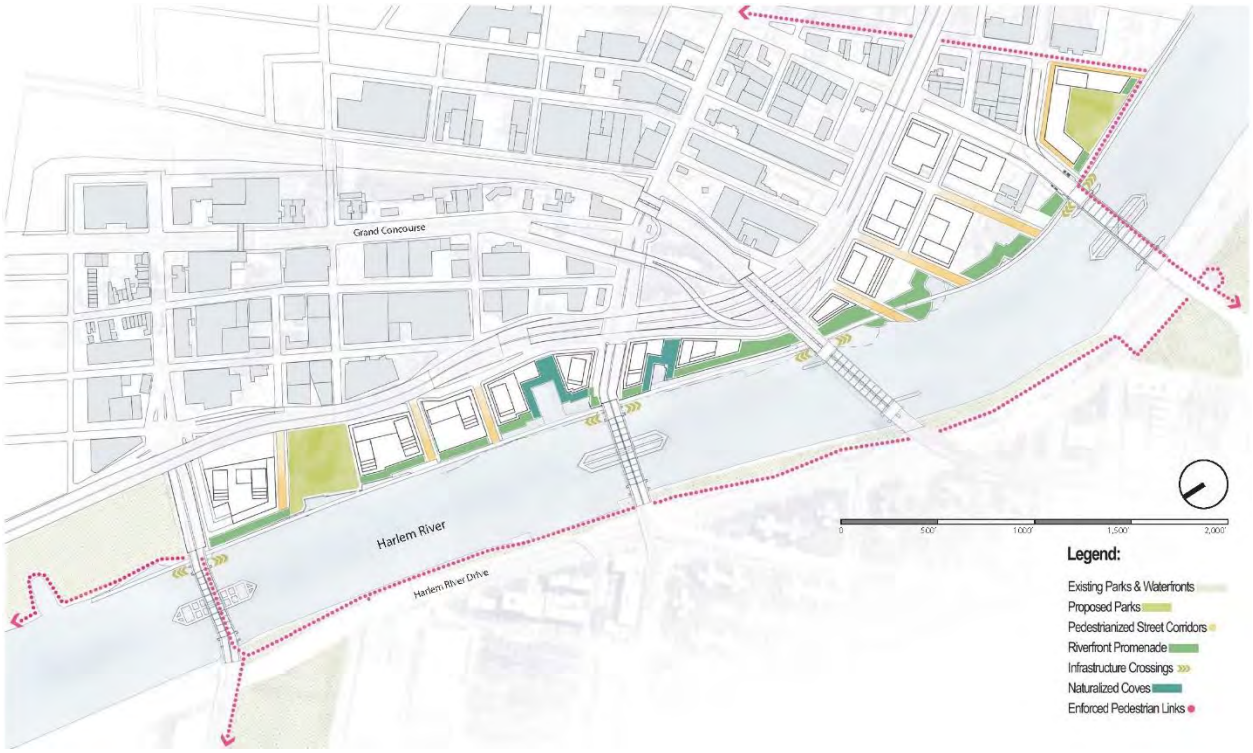

Figure 34 – Shoreline Resilience Strategies Site Plan

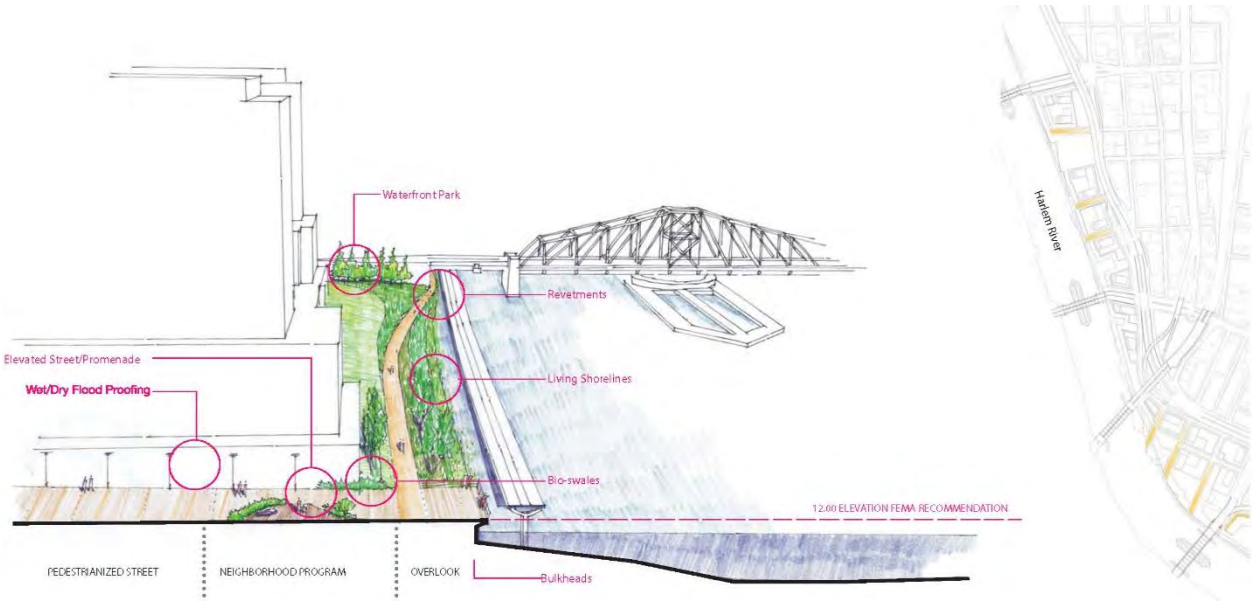

Figure 34 – Bulkhead with Elevated Overlook

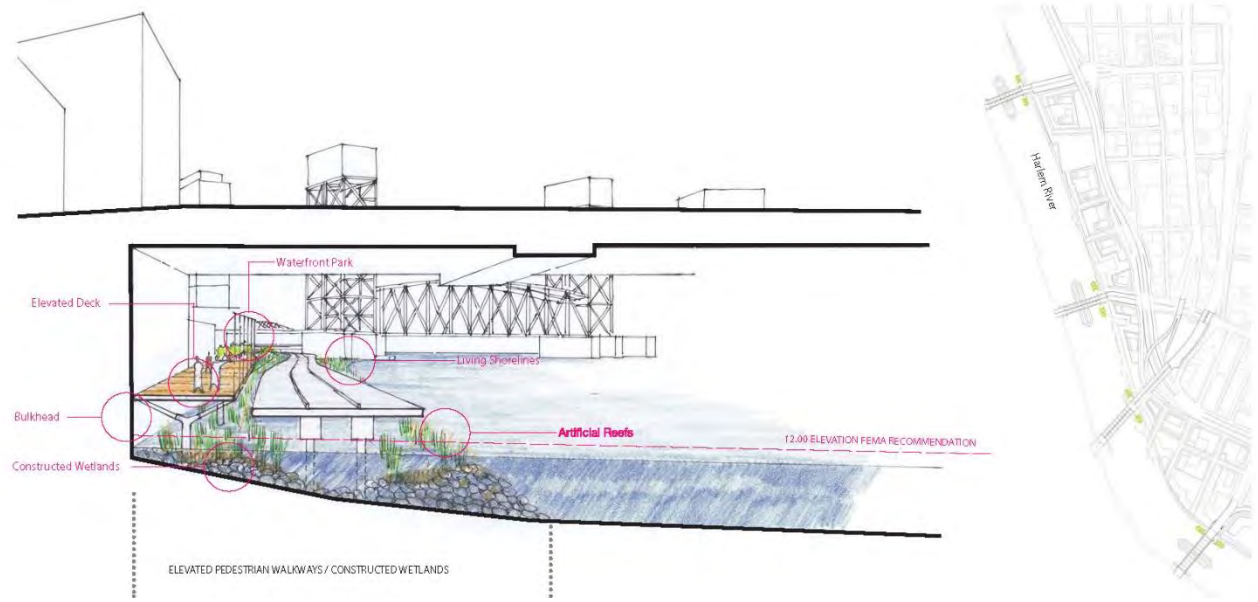

Figure 35 – Elevated Pedestrian Connection

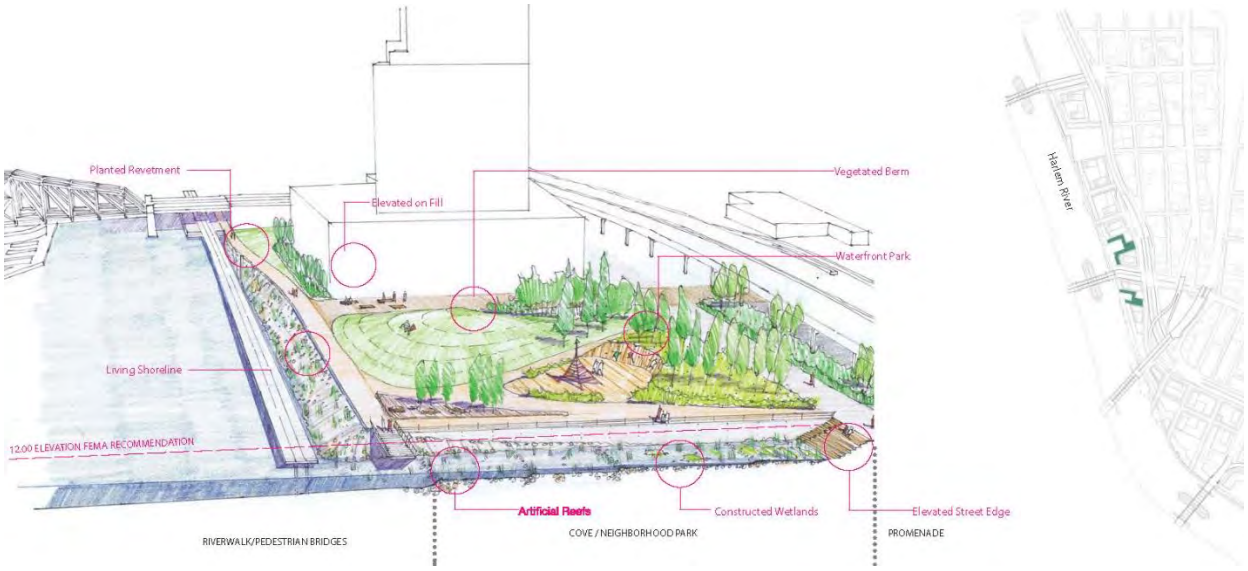

Figure 36 – Constructed Wetlands / Pedestrian Platforms

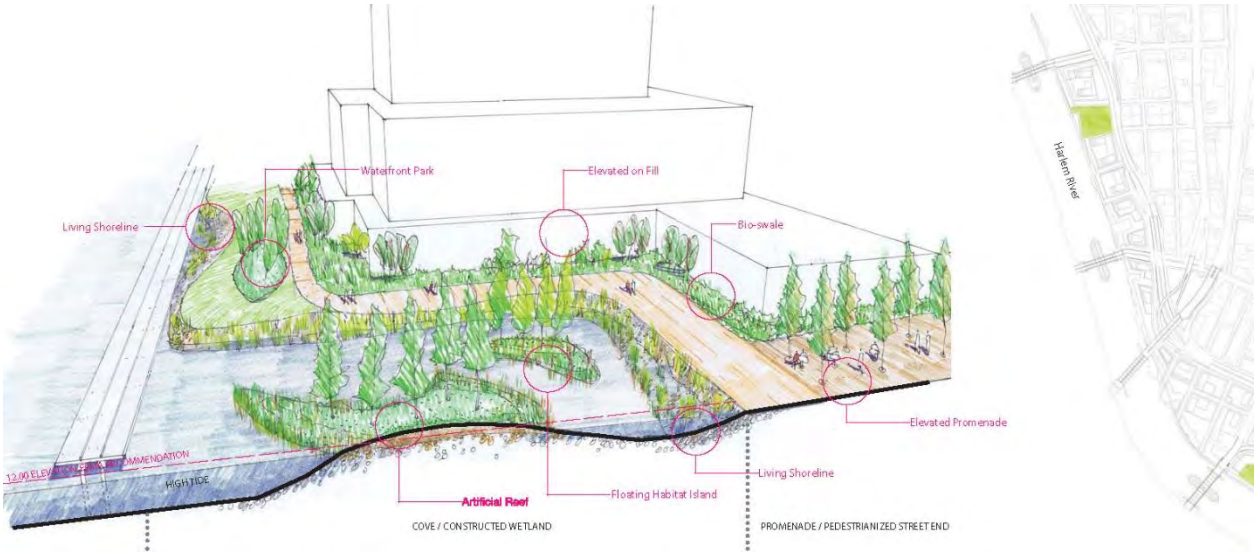

Figure 37 – Constructed Cove / Habitat Islands

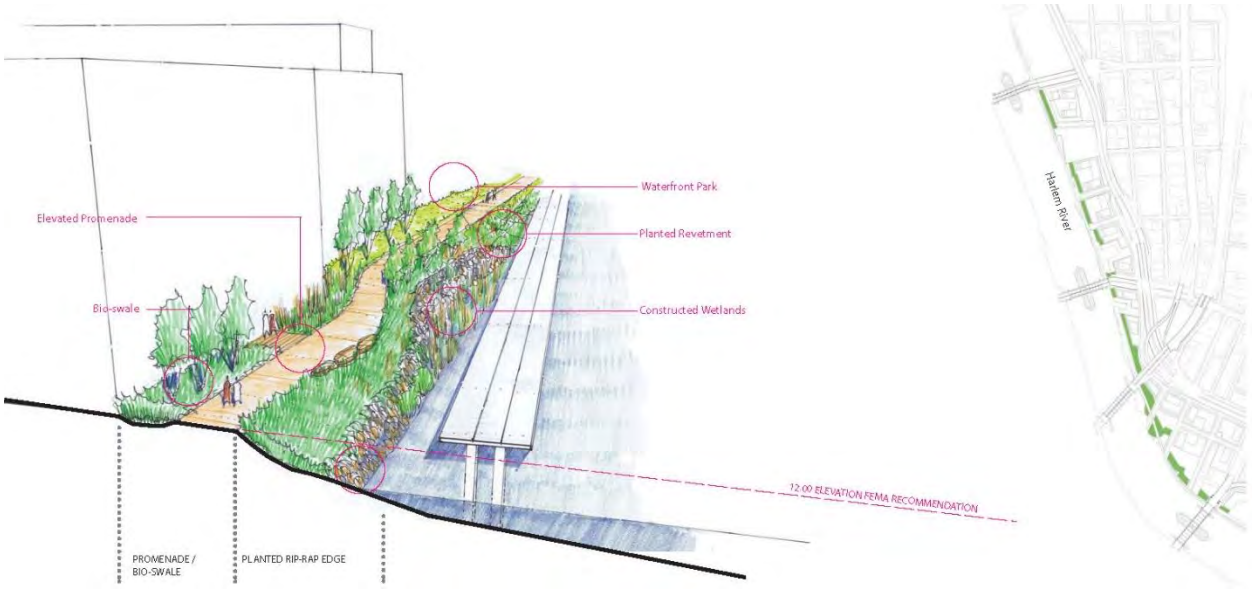

Figure 38 – Soft Edges / Planted and Rip-Pap and River Walk

Example Images

Figure 40 – Bulkhead with Elevated Overlook

Figure 41 – Elevated Pedestrian Connection

Figure 42 – Constructed Wetland / Pedestrian Platform

Figure 43 – Constructed Cove / Habitat Island

Figure 44 – Soft edges / Planted and Rip-Rap and Riverwalk

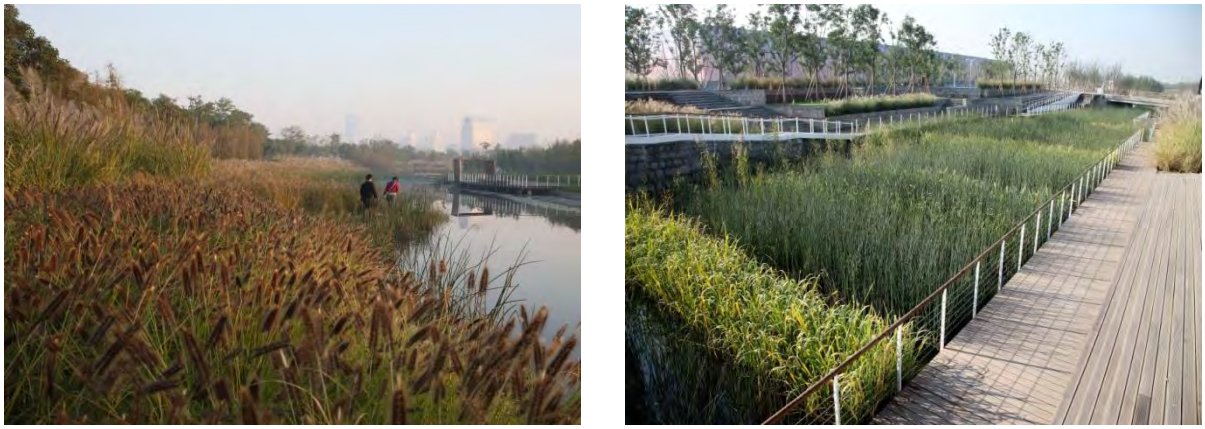

Figure 45 – Urban Wetlands, Shanghai Houtan Park

Figure 46 – Shoreline Riprap

SECTION 5: WATERFRONT DESIGN & ACCESS

Waterfront access is an issue in the overall development area. As per the New York City Zoning Resolution Article VI – Chapter 2, *Special Regulations Applying in the Waterfront Area* and Article VIII – Chapter 7, *Special Harlem River Waterfront District*; a 40 foot deep waterfront yard with a shore public walkway is be required along the entire length of the waterfront in the development area. This is complicated by the existing railroad line located on pilings in the Harlem River at approximately 10 – 20 feet from the edge of the shoreline. This railroad line creates a barrier for access to the water's edge. Additionally the railroad line has an elevation of 10 feet at East 149th Street that drops down to a low point of 7½ feet at the Metro North Railroad Bridge. These elevations are both below the FEMA advisory base flood elevation (ABFE) of 11 feet. In the event of flooding caused by a hurricane or storm surge, these tracks will be inundated.

Figure 47 - Oak Point Railroad Line

We have examined several approaches for the shorefront walkway requirement. Our recommendation would be option 2 or 4 below:

In order to provide access to the waterfront, both visually and physically, the Special Harlem River Waterfront District requires the creation of visual corridors; upland connections and supplemental public access areas (see the diagram of the *Special Harlem River Waterfront District* diagram in Section 1: Introduction). All visual corridors are in required locations as are the supplemental public access areas. The upland connections have both required locations and variable locations. We recommend that 144th Street, with its required visual corridor as well as Rider Avenue, in the portion of the study area south of the Madison Avenue Bridge, be designated evacuation routes. These two streets provide the most direct route to areas above the FEMA minimum flood levels.

1. Waterfront access is visual only. A shore public walkway would be constructed on the landward side of the tracks at a minimum elevation of 11 feet. If the shore public walkway were built at an elevation higher than the FEMA ABFE level, it will create a more protected public structure, and will also support views above and over the tracks.
2. Waterfront access can be achieved by incorporating the track in pier structures that form the extensions of the required visual corridors connecting the shoreline to upland streets. These would be on-grade crossings. Railroad crossing gates would be required in order to limit access in the event of a train moving along the tracks. These pier structures could be used for docking purposes.
3. Waterfront access can be achieved by going above the tracks and descending on the waterfront side. Natural access points exist above the tracks at the edge of the three bridges that pass over the tracks connecting the Bronx to Manhattan (the 145th street Bridge, the Madison Avenue Bridge, and the Third Avenue Bridge). A platform could be designed that engaged the existing sidewalks on the bridges and provides access to an elevated shore public walkway as well as locations at the water's edge.

Our design approach for the shoreline is to soften it up by providing a riprap edge with a wetlands zone extending into the parcels then gradually bring it up to meet the elevation of Exterior Street, with the exception of parcel 9 of the *Special Harlem River Waterfront District.* At Parcel 9, the railroad line engages the shoreline and moves landward, allowing a large portion of the land to be west of the rail line. This land, undeveloped, is a wetland. Our recommendation is to allow this portion of land to remain as a wetland, a unique public open space in this portion of the Bronx, with new plantings and protections. The shore public walkway would be elevated 1 foot above the ABFE and meander through the wetlands zones in this waterfront yard.

Figure 48 - Parcel 9 Existing Conditions

Figure 39 - Parcel 9 Existing Conditions

By planting the edges of all sites, and elevating the buildings and the shore public walkway, the water pushed onto shore during a significant storm or storm surge would be more easily slowed down and absorbed. When there are no storms the wetlands zone would continue to filter water and would assist in revitalizing the local ecosystem along the Harlem River.

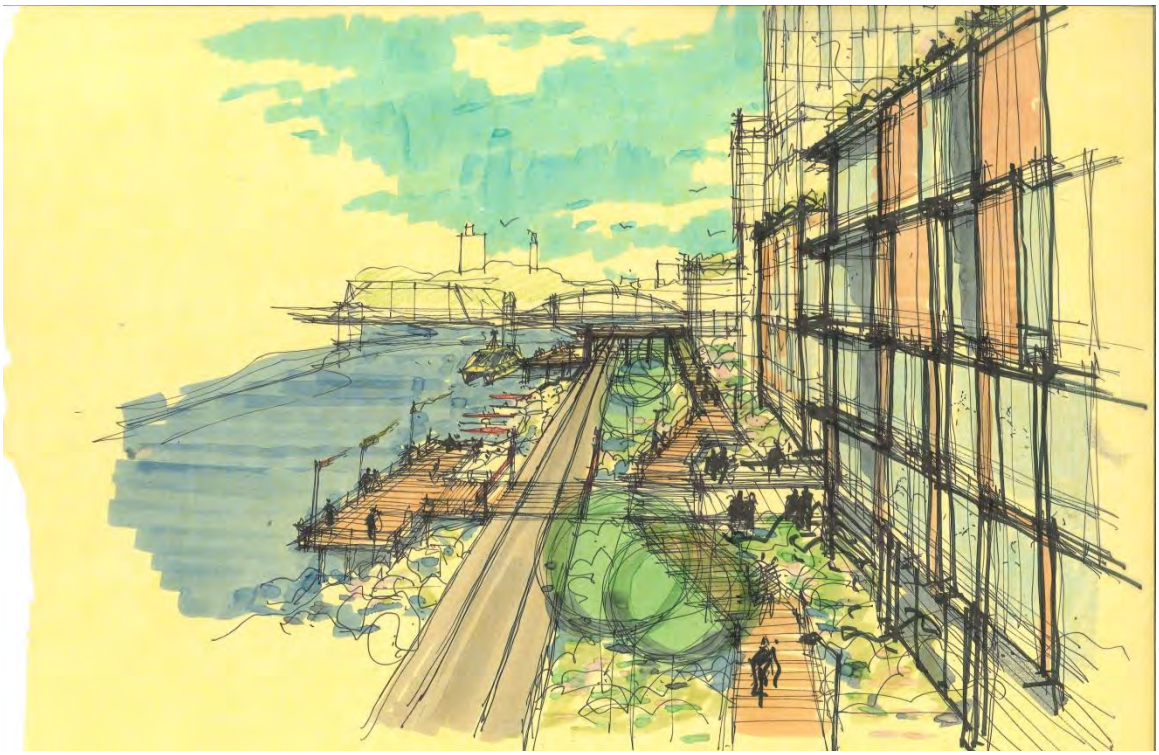

Figure 40 - Proposed Shore Public Walkway, View of Parcels 2 & 3 looking north

Example Images

Figure 41 – Elevated Shore Public Walkways, Hong Kong Wetland Park

SECTION 6: DESIGN STANDARDS & GUIDELINES

An opportunity exists to view these parcels as a single entity by looking at them through the lens of an acceptable (and manageable) set of design standards. Design standards can address many issues including sustainability, energy efficiency, environmental impact, climate resiliency, public access, neighborhood identity, urban design, and architecture. These parcels are 'isolated' from the existing urban street grid by the Major Deegan Expressway on their east and the Harlem River on the west; creating an opportunity to manifest a unique identity within the borough like other shoreline developments (Battery Park City and the River Park Houses/Roberto Clemente State Park). By promulgating a set of design standards, all development will have an underlying consistency while simultaneously allowing the separate parcels to attain an individual design expression.

Design standards that are adopted through the 197A planning process require ULURP and will allow the Community Board, Borough President, City Council, residents, and businesses within the district to reach a consensus on vision, support new development, and reduce political obstacles that can hinder development. Design standards organized around LEED rating systems and the Enterprise Green Communities program can set a consistent set of sustainability standards that will reduce the long term cost of building operations, and promote the long term health objectives of new residents and businesses. Design standards adopted through the National Flood Insurance Program's Community Rating System can create a more resilient community and reduce property insurance costs. Taken all together, these design standards can create a more attractive and desirable community.

A set of urban design standards has already been created through the regulations pertaining to the Special Harlem River Waterfront District. These regulations include basic building massing, building heights, setbacks, yards, street and sidewalk widths, visual corridors, planting, and public access requirements. These existing standards and guidelines should be incorporated into the framework of design standards that can apply to the other sites located in the BOA study area in order to achieve a consistency to all future shoreline developments.

We have divided the standards and guidelines recommendations into short- and long-term implementation categories. Short-term implementation includes guidelines that can be integrated into the design and development of a single parcel while long-term implementation includes guidelines that affect the entire development area and impact the growth of this new community.

Design Guideline Suggestions:

- Orient buildings so that the bases (commercial and/or community facility uses) form street walls along streets, visual corridors, upland connections, and emergency access roads), and orient the towers (residential uses) to maximize solar orientation and views along the Harlem River.
- Brand the neighborhood by design standards for signage, street lighting, benches, trash receptacles, bus shelters, fencing, and sidewalks.

- All building, including rehabs, in the development are to achieve a minimum LEED Gold rating.
- Use Energy Star qualified appliances and lighting throughout properties to reduce the electricity demand/infrastructure necessary for the development area.
- Use efficient mechanical systems (e.g. pumps, boilers, fans …) to reduce the electricity demand/infrastructure necessary for the development area.
- Use ultra-low flow plumbing equipment throughout the properties to reduce the water demand/infrastructure necessary for the development area.
- Use local durable materials to minimize the life cycle cost of finishes for the development area.
- All roofs should be planted and/or have a high albedo surface
- Provide sources of alternative power (photo voltaic panels, for instance)
- Use high albedo, permeable paving for all hardscapes within the development area.
- Apply for a parking reduction or waiver to reduce the amount of parking necessary for the development area.
- Use local durable materials to minimize the life cycle cost of finishes for the development area.

Long-Term Implementation

LEED for Neighborhood Development (LEED-ND)

Unlike EGC and other LEED rating systems, LEED for Neighborhood Development combines green building design and construction with urban development issues such as, location and linkage, neighborhood pattern and design, green infrastructure. Even if the certification is not pursued for the development area, it is recommended that it is used as a guideline during the development of infrastructure.

National Flood Insurance Program – Community Rating System (NFIP-CRS)

A major issue in the cost of development of any of these sites and the ability of a development to reduce the cost of insurance is compliance within the National Flood Insurance Program Community Rating System (CRS). To quote from their website:

> *The CRS program, started in 1990, provides flood insurance premium reductions based on a participating community's implementation of floodplain management programs that exceed the minimum requirements established by the NFIP. Credit points for the CRS floodplain management activities determine a community's CRS Class. Currently, there are 1,229 communities participating in CRS. The CRS continues to see growth with an average of 35 new communities joining each year, and 80 communities achieving CRS Class improvements."*
>
> *The National Flood Insurance Program (NFIP) provides federally backed flood insurance. To be covered by a flood insurance policy (for the structure and/or its contents), a property must be in a community that participates in the NFIP. To qualify for the NFIP, a community adopts and enforces a floodplain*

management ordinance to regulate development in flood hazard areas. The objective of the ordinance is to minimize the potential for flood damage to future development. Under the Community Rating System (CRS), communities can be rewarded for doing more than simply regulating construction of new buildings to the minimum national standards. Under the CRS, the flood insurance premiums of a community's residents and businesses are discounted to reflect that community's work to reduce flood damage to existing buildings, manage development in areas not mapped by the NFIP, protect new buildings beyond the minimum NFIP protection level, preserve and/or restore natural functions of floodplains, help insurance agents obtain flood data, and help people obtain flood insurance.

Unfortunately, although the City of New York has received a number allowing it to participate in the National Flood Insurance Program, the number is applicable across the entire city. Due to the diversity of the topography and waterfront areas, the City has never received a CRS rating. In other words, what might work for Staten Island won't work for the Bronx and what works for Bronx shoreline of the Harlem River might not work for the Bronx shoreline along the Long Island Sound? Without a CRS number, there is nothing to base an insurance discount on.

A solution for this problem would be to have the Boroughs, possibly broken down by Community Boards, apply for individual numbers. A component of the Community Rating System involves the power to make community-wide land-use decisions. Since land-use decisions are made through the ULURP process, which involves both the Borough President as well as the Community Board, particularly in shoreline communities because of the public access requirements, this approach could tailor the ratings to the needs and issues of the individual communities. It would require the Mayor to initiate this type of action.

Another element in the issue of waterfront access is designing with a set of standards for the study area that would reduce the cost of property flood insurance in a post-development scenario. The cost of flood insurance in coastal communities can be quite high, serving to limit the types of development simply due to cost. By complying with standards and getting certified by the National Flood Insurance Program, these costs can potentially be reduced between 5% - 40%. A basic element of this program is to provide elevation certificates that show that the finished construction of new or substantially rehabilitated buildings is at or above the minimum elevation of 11 feet (the FEMA ABFE) or higher.

Short-Term Implementation

Enterprise Green Communities (EGC)

Complying with Enterprise Green Communities is a basic requirement for all new developments that receive public funding or support. EGC provides a guideline for building environmentally friendly and affordable residences. Similar to LEED for New Construction and LEED for Homes, it considers site location, site improvements, water conservation, energy efficiency, materials, indoor air quality; and

operations and maintenance. Unlike LEED-NC or LEED-H, the cost implications are less significant since the reporting requirements are minimal.

LEED Rating Systems (LEED-NC, LEED-H, LEED-CI, LEED-CS, LEED-OM)

LEED rating systems have more rigorous requirements than EGC, but have the potential to be more attractive for both public and private financing. Whether or not to pursue LEED should be decided on a parcel by parcel basis. Our recommendation would be to have all new residential, commercial, community facility, and manufacturing uses comply with some type of green guidelines.

SECTION 7: URBAN DESIGN ANALYSIS

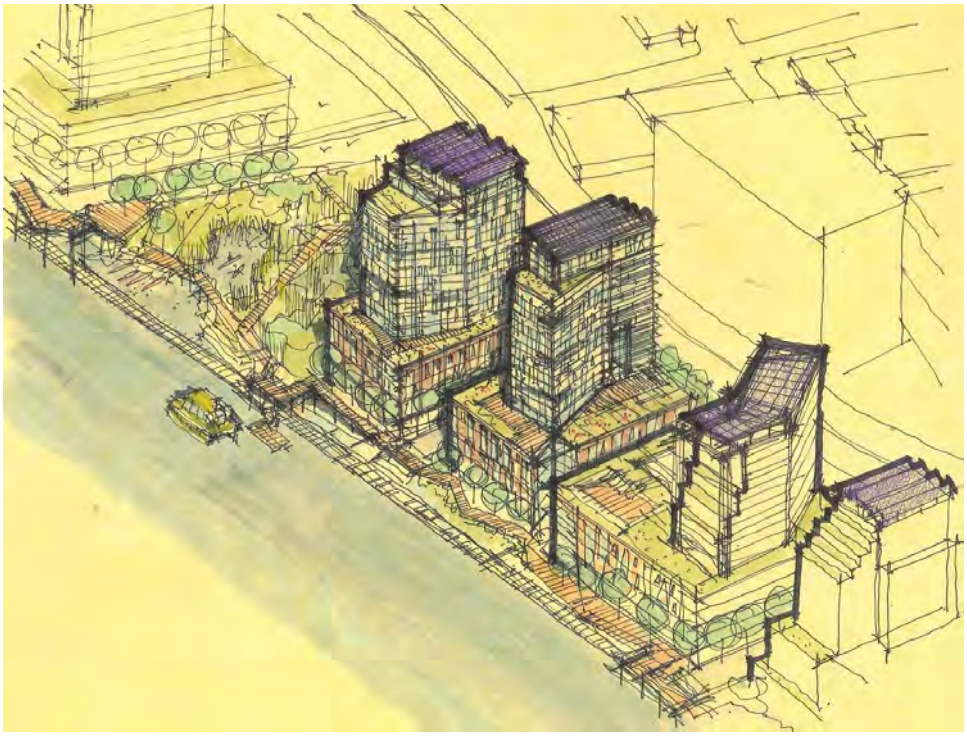

Figure 52 - Proposed Building Envelope, Parcels 2 & 3

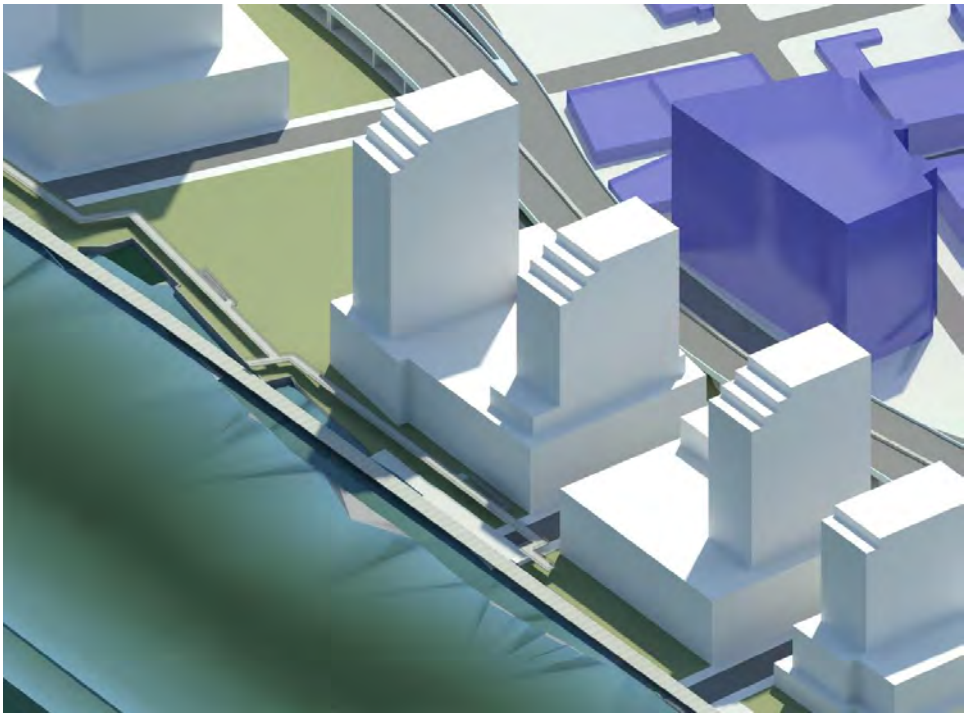

Figure 53 – Massing Studies, Parcels 2 & 3

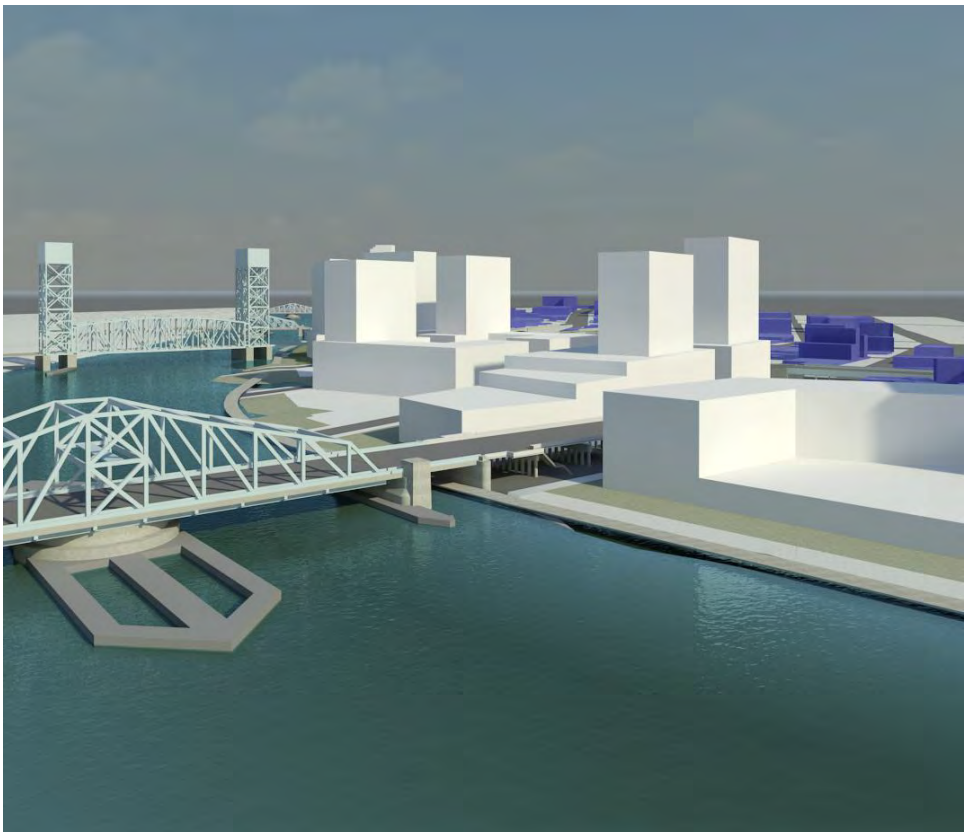

Figure 54 - Massing Studies, 101 Lincoln Ave (right) & Assemblage
looking north along the Harlem River
from the 3rd Avenue Bridge to the MetroNorth Railroad Bridge

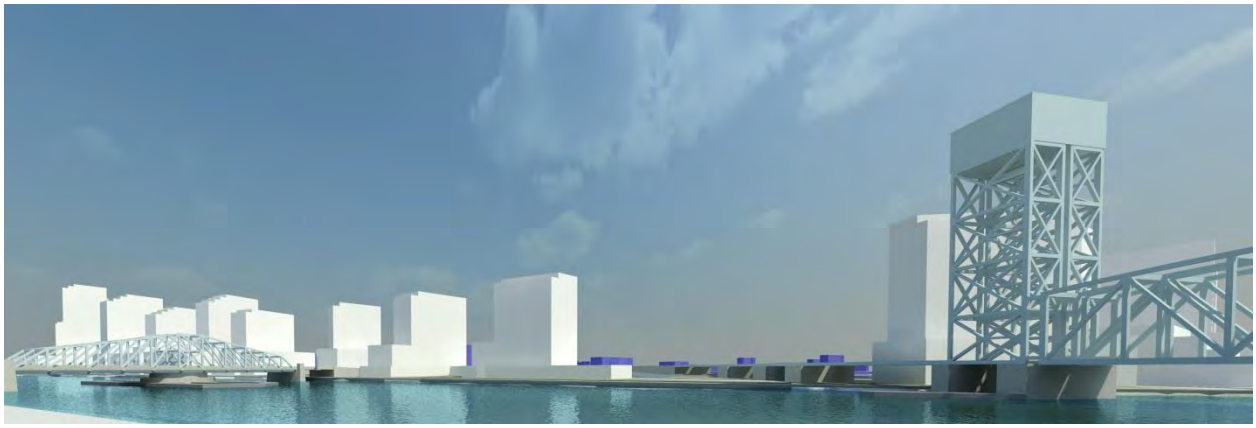

Figure 55 – Massing Studies, Parcels 9 (right) thru 1
looking north along the Harlem River

Figure 56 – Massing Studies, Assemblage (foreground) & Parcels 9 thru 6
looking north along the Harlem River toward the MetroNorth Railroad Bridge

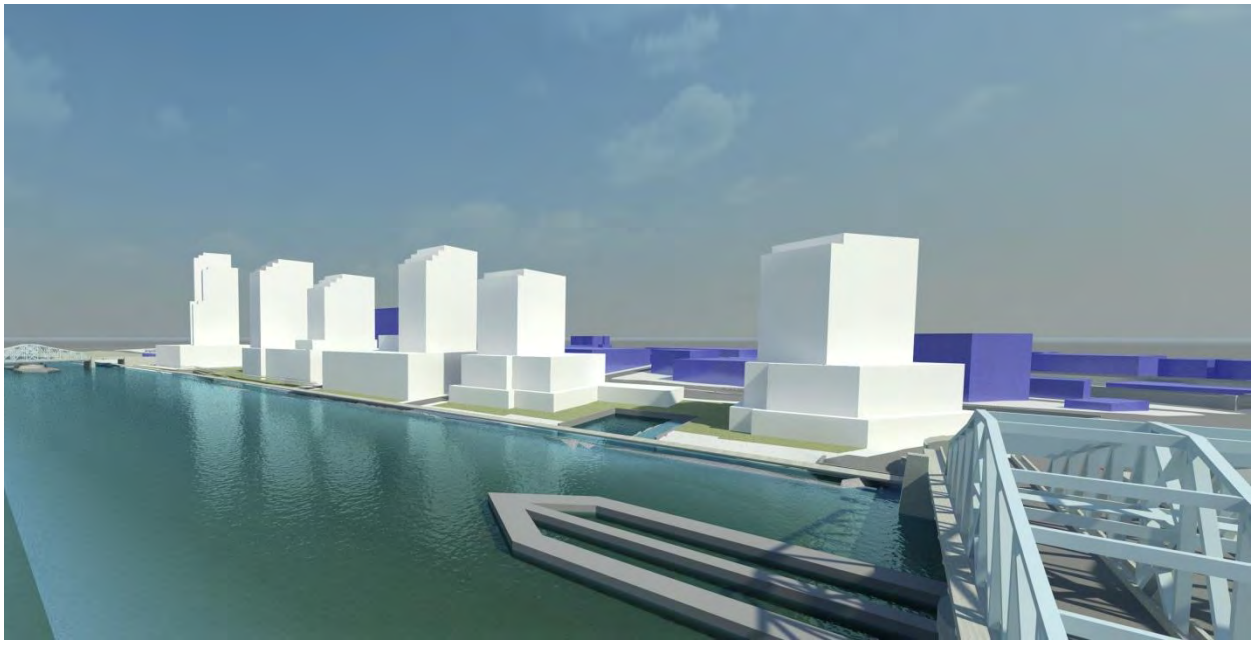

Figure 57 – Massing Studies, Parcels 6 (right) thru 1
looking north along the Harlem River

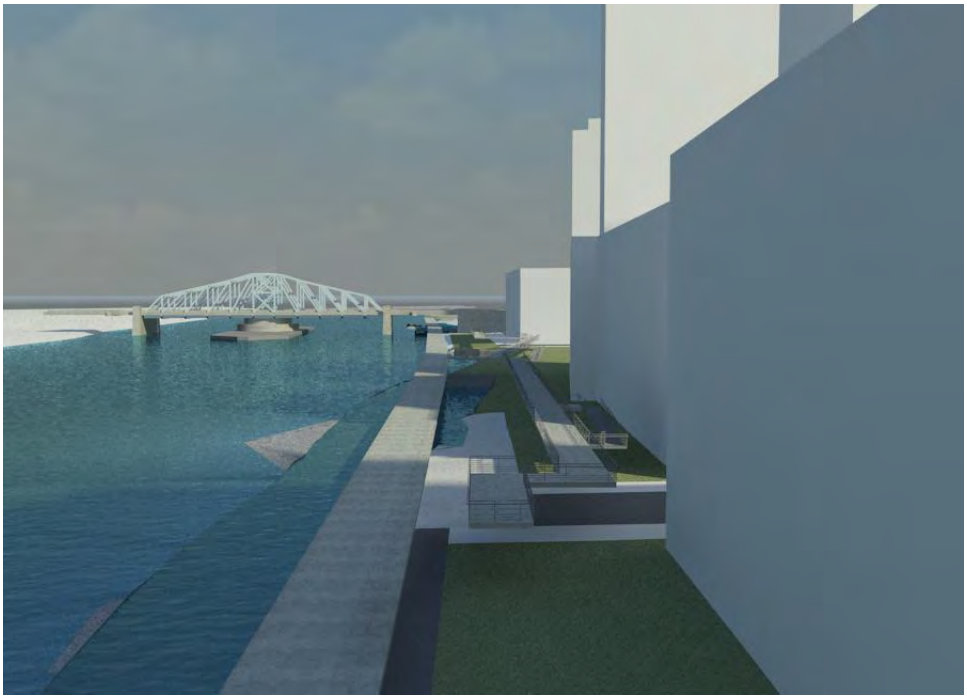

Figure 58 - Massing Studies, Parcels 2 & 3 (foreground)
looking north along the Harlem River

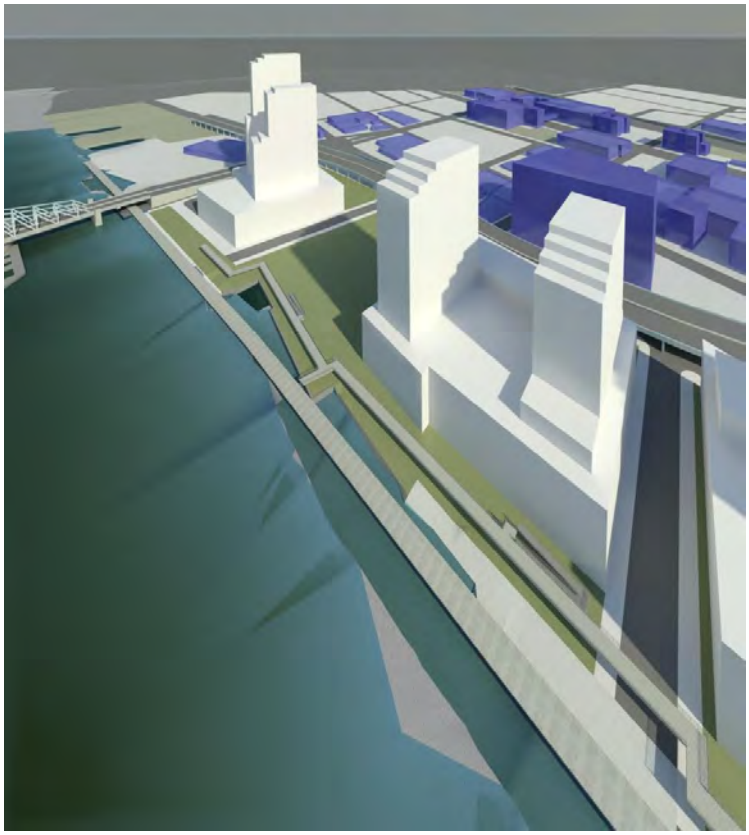

Figure 59 - Massing Studies, Parcels 1, 2 & 3 (combined) (right)
looking north along the Harlem River

Figure 60 - Massing Studies, Parcels 1 (left) thru 9 looking south
looking south along the Harlem River from the 145th Street Bridge

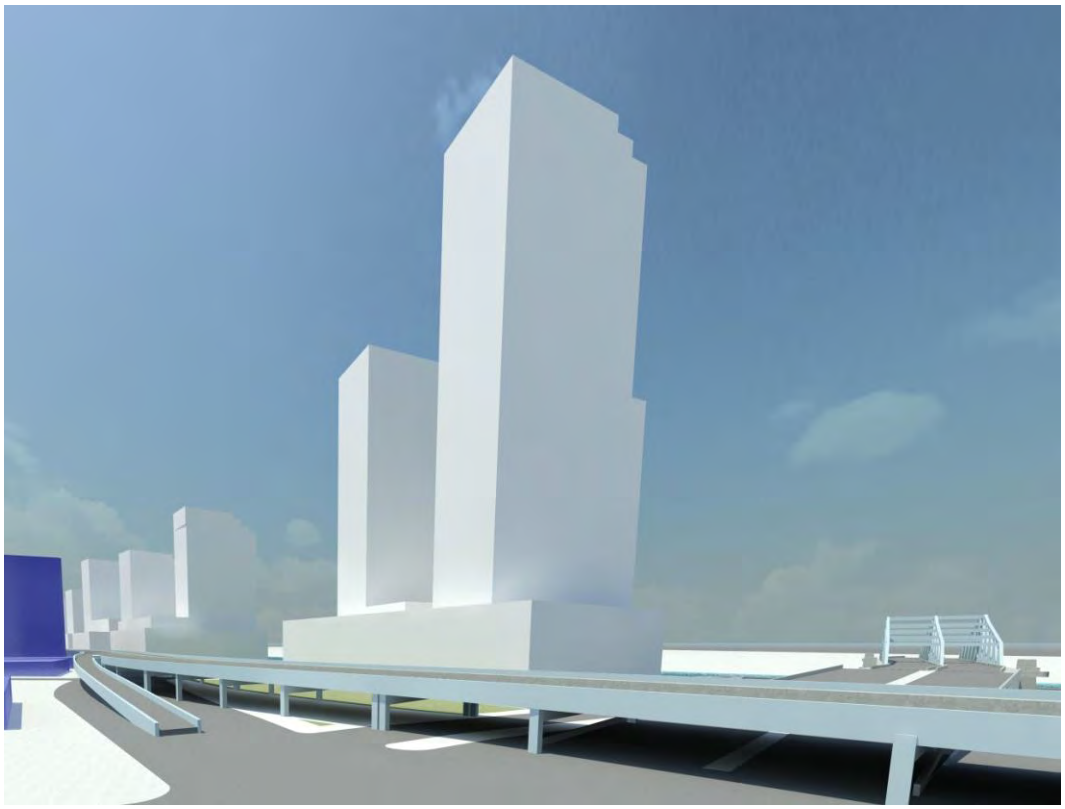

Figure 61 - Massing Studies, Parcels 1 (foreground) thru 5
looking south along the Major Deegan Expressway

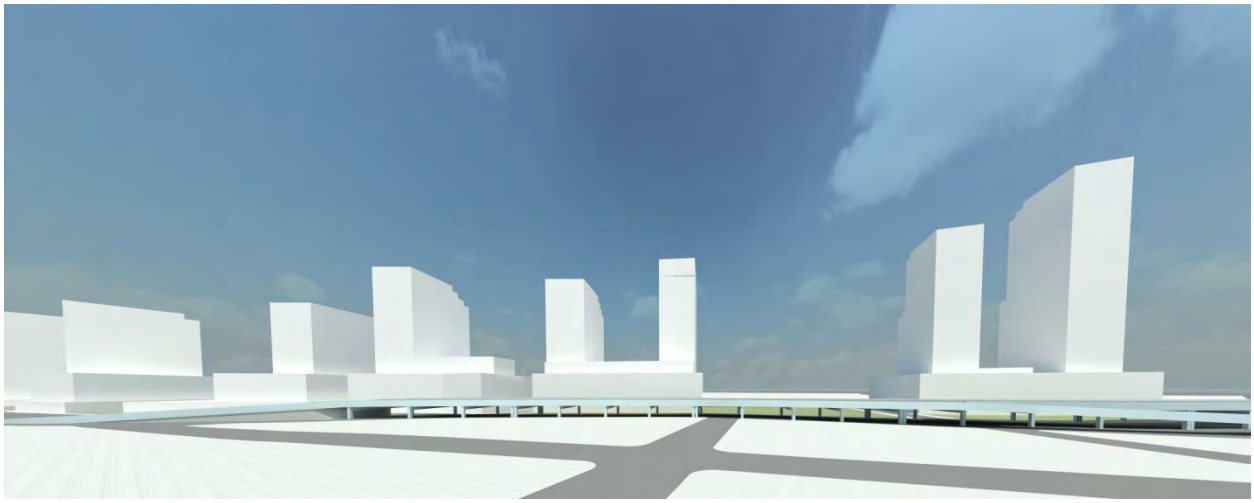

Figure 62 - Massing Studies, Parcels 1 (right) thru 7
looking west from the Bronx

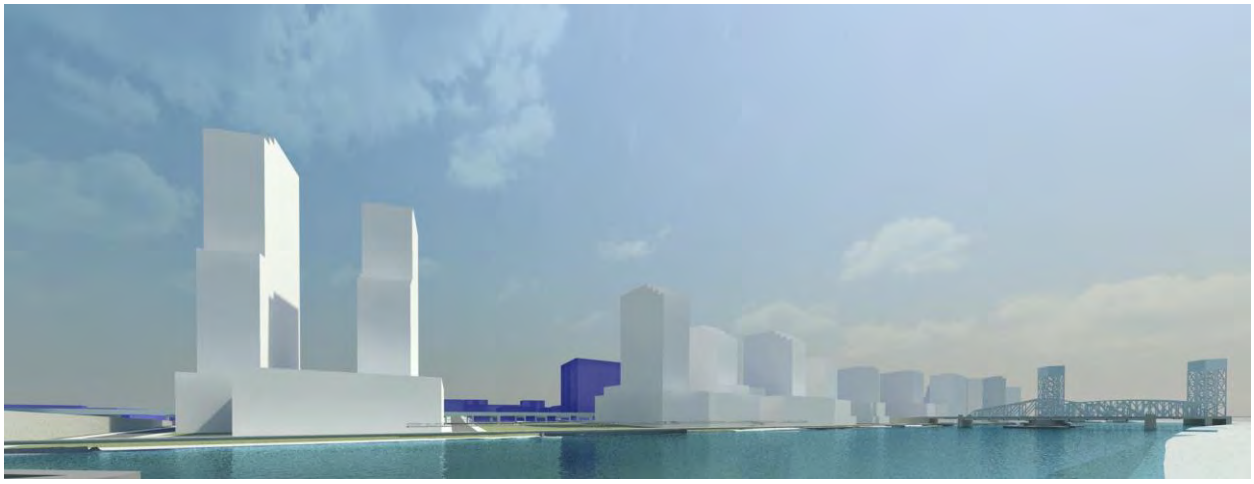

Figure 63 - Massing Studies, Parcels 1 (left) thru 8
looking east from Manhattan

SECTION 8: SPECIAL REVIEWS

The development of these sites along the Bronx shoreline of the Harlem River might be facilitated through a planning and development process under the leadership of SoBRO, coordinating with the Bronx Borough President's Office, Community Board 1, the City of New York and the agencies (the Dept. of City Planning, The Dept. of Housing Preservation and Development, the Dept. of Transportation and the Dept. of Environmental Protection) responsible for planning and development.

All sites will be subjected to a public review process because of the public access requirements. Development is further complicated by the larger scale planning issues (elaborated in this report) that include consistent and effective resilient shoreline protection, sites below the minimum FEMA flood level, parcel designations inconsistent with property ownership boundaries, infrastructure impacts and environmental mitigation.

The following examines what public reviews might support a sustainable development agenda that would look to the leadership provided by SoBRO to manage what will be a complex and difficult development agenda.

Special Reviews

New York City Building Department Review

Under regulations contained in the 2008 New York City Building Code: Appendix G: Flood-Resistant Construction any development occurring within an area of special flood hazard, shall include an application and all documents demonstrating that the development complies with all relevant provisions of this appendix. These would include applications for drawing approvals, permits for construction, certifications for wet floodproofing and dry floodproofing, utility certifications and special inspections during construction. To quote from Section G104.2 Permit application requirements, "….the commissioner shall not approve such application unless all plans, details, data, and documents demonstrating that the development complies with Section G104 and all other provisions of this appendix."

Beginning on October 1, 2014, all New York City Construction Codes will be updated. This will affect all work that is filed with the DOB after this date. In addition to the code updates a series of local laws have been passed in response to the aftermath of Superstorm Sandy. Below, is a list and brief description of the new local laws that have taken effect or will take effect on October 1, 2014.

Post Superstorm Sandy New York City Local Laws		
LL 29/13	Raising & Moving Buildings	April 2, 2013
LL 79/13	Ensure Toilets & Sinks Work Without Power	October 1, 2014
LL 82/13	Providing a Flood Manual	October 2, 2013
LL 83/13	Preventing Sewage Backflow	October 2, 2013

LL 95/13	Protecting Patient Care Areas	November 19, 2013
LL 96/13	Survey Data & Flood Maps	November 19, 2013
LL 98/13	Create Emergency Plans	May 18, 2014
LL 99/13	Cable Length & Fuel Oil Storage	November 19, 2013
LL 100/13	Relocate & Protect Building Systems	October 1, 2014
LL 101/13	Preventing Wind Damage to Buildings & Systems	October 1, 2014
LL 108/13	Hookups for Temporary Equipment	October 1, 2014
LL 109/13	Temporary Flood Shields	December 2, 2013
LL 110/13	Supply Drinking Water Without Power	October 1, 2014
LL 111/13	Emergency & Standby Power	December 2, 2013
LL 143/13	Safeguard Toxic Materials Stored in Flood Zones	March 30, 2014

City Planning Commission (CPC) Review

A CPC review will likely (confirm) be required for all parcels within the development area. To quote the zoning regulation handbook:

> *For most developments on waterfront blocks, the Chairperson of the City Planning Commission must certify that the proposed development complies with requirements for public access and visual corridors. Once certified, a maintenance and operation agreement with the Department of Parks and Recreation must be filed and recorded before a building permit can be issued by the Department of Buildings. The review procedure helps the city enforce maintenance obligations and the public's right of access to these areas during required hours of operation and, for planning purposes, track the progress of waterfront development throughout the city*

City Environmental Quality Review (CEQR)

Although an Environmental Impact Statement (EIS) has been completed for the *Special Harlem River Waterfront District* (as part of the rezoning effort), it is probable that a CEQR review for each parcel will have to be performed, once a program and site plan has been determined. This is because the development will directly area will impact the following city-wide issues:

- **Traffic** – This is further complicated by the exiting and entrancing from and to I- 87 (the Major Deegan Expressway) that impacts local street traffic at 138th Street. This is exacerbated by the fact that the two bridges accessible from this exit provide toll-free access and egress from Manhattan. As an industrial area with a limited amount of traffic on the access road of the expressway can create dense traffic conditions, particularly at rush hours, the impact of hundreds of new units of housing, commercial and community facility uses will create unsafe and environmentally dangerous traffic conditions, as the owner occupied vehicles of the new residents and businesses compete for limited road space.

- **Air Quality** – In a post-development scenario, a significant amount of automobile traffic, and concomitant amount of congestion, will be generated. This is on top of the heating and cooling systems necessary for the new buildings, which will also contribute pollutants to the air.
- **Waste** – The amount of sewage produced by the development area will have a significant impact on the existing sewage treatment plants in the city. The capacity of the current wastewater treatment plants will need to be examined in order to determine if it is adequate.

Uniform Land Use Review Procedure (ULURP)

A ULURP procedure for each parcel will be required to map new streets (e.g. upland connections, visual corridors, and emergency access roads) and new utility easements. Excluding the amount of time required preparing the application and being certified for ULURP by the Dept. of City Planning, this procedure takes six months ~~n~~ and will undergo review by the Department of City Planning, the City Planning Commission, the Bronx Community Board #1, the Bronx Borough President, the Mayor, and the City Council.

It should also be noted that the new parcel designations within the *Special Harlem River Waterfront District* (SHRWD) are not consistent with the existing property ownership boundaries. This will make for some difficulties as property owners negotiate with one another in order to maximize the potential of their sites (fortunately, as part of the new underlying zoning, all new streets, visual corridors and upland connections can be counted toward site area and FAR calculations). A particular issue will be the development of the proposed new public park to be located between SHRWD parcels 1 and 2. The City will have to acquire this land from the individual property owners. Costs for acquisition will have to be allocated, and a park design developed and incorporated into the City's capital budget

197A Plan Development

Quoted from the NYC Department of City Planning website:

> *One of the formal ways to develop a community-based plan is set out in Section 197A of the City Charter, which authorizes community boards and borough boards, along with the Mayor, the City Planning Commission (the "Commission"), the Department of City Planning ("DCP"), and any Borough President, to sponsor plans for the development, growth, and improvement of the city, its boroughs and communities. Once approved by the Commission and adopted by the City Council, 197A plans guide future actions of city agencies in the areas addressed in the plans. Neighborhood or civic groups within the larger community may draft a 197A plan, but they must be approved, sponsored, and submitted by a community board, borough board, or borough president.*
>
> *Review of 197A plans occurs in two stages. The first stage, the threshold review, is conducted by the Department of City Planning and the City Planning Commission to ensure that a plan is complete, coherent, and properly documented before it is reviewed on its merits. The second stage, substantive review, allows for community board, borough president, City Planning Commission, and City Council*

consideration of the plan's objectives, policies, and proposals. The process may culminate in approval of the plan as submitted, approval as modified by the City Planning Commission and/or the City Council, or disapproval.

Taking a 197A plan from inception to adoption is a lengthy process and requires the continuing commitment of its sponsors even after adoption to ensure successful implementation. With that commitment, an appropriate set of objectives and a realistic outlook, a community board may find the 197A process well worth the effort.

By developing a plan and having it go through ULURP might be a requirement due to the public access requirements, new streets, and infrastructure and mitigation measures for traffic and waste. The 197A process would allow the Community Board to weigh in on the plan and adopt it, which could also stimulate development as it removes a political barrier at the approval process since the local community board has reviewed it and the plan has moved through public process for acceptance.

Flood Insurance

During the initial stages of development, whether on one parcel or several parcels, a risk analysis of these sites is pertinent in order to anticipate the impact of flood insurance costs, both as an aspect of construction financing and post-construction and occupancy costs. The risks and costs associated with building on sites whose base elevations are below the FEMA Flood elevations will also be a factor in which financial institutions (private and public) will be willing to take on the risk of financing and what premiums and conditions will have to be met as insurance costs anticipate the risk of natural disaster.

An analysis of proposed building planning, systems and materials as well as preparedness planning that will assist in reducing the impact of coastal flooding should be part of the insurance discussion at these initial stages. These capital costs could be higher but might help offset the cost of insurance, particularly after construction financing is closed out with permanent financing. In particular, the standards referenced in The New York City Building Code, Appendix G *Flood Resistant Construction* are applicable.

A major issue in the cost of development of any of these sites and the ability of a development to reduce the cost of insurance is compliance within the National Flood Insurance Program Community Rating System (NFIP-CRS). New York City has applied to this program and has gotten an NFIP number and can schedule a Community Assessment Visit in order to establish effective criteria, earn a classification that can then be applied for potential flood insurance premium reductions. However, this number is for the entire city, that is, all boroughs would have to be in compliance on identical criteria. Due to the size and diversity of New York City, this has not been achievable. However, if the individual boroughs were to apply and receive separate numbers, the process of assessment and the establishment of compliance guidelines might be more readily achievable and more reflective of local conditions. This process could be enforced through the Dept. of City Planning certification process that is required for all waterfront development in which public access and amenities are required.

A piece of late breaking news, January 30, 2014, the United States Senate passed the bipartisan Homeowner Flood Insurance Affordability Act (the House of Representatives has not yet voted on this). In summary this act will:

- Delay implementation of dramatic flood insurance rate increases and protects NFIP policy holders who have no annual caps on their rate increases;
- Provide targeted relief to those policyholders until FEMA certifies that their maps are accurate;
- Provide funds to reimburse homeowners for successful map appeals;
- Eliminate penalties on communities self-financing flood protection;
- Protect the basement exception that allows the lowest proofed opening in a home to be used for determining flood insurance rates;
- Establish a Flood Insurance Rate Map Advocate within FEMA to answer current and prospective policyholder questions about the mapping process;

Tax Increment Financing

One of the more difficult financial challenges will be the cost and financing of the public infrastructure necessary for any development to occur. These will include utilities (water, sewer, power, telecommunications), as well as shoreline protection and new site grading to above the FEMA minimum flood level. Without in-place infrastructure, the true value of the sites cannot be realized – the area cannot support market-rate residential development and there is no residential community to draw commercial and community facility development.

Tax increment financing (TIF) is a public financing method that has been used as a subsidy for infrastructure and other community improvement projects. TIF is a method by which future gains in taxes to subsidize improvements that will create conditions for future tax gains. The 'tax increment' is when an increase in site value and private investment generates an increase in tax revenues above the existing tax value. A portion of this tax increment, within a defined district, finances the debt that is issued to pay for the project. TIF creates funding for public projects by borrowing against the future increase in these property-tax revenues.

An issue that will surface at this location will be the time frame in which the tax increment can be realized. It is not unusual for New York to allow deferment of real estate taxes for 10 – 20 years in order to encourage development. Additionally the extent to which overall infrastructure can be provided, and the time frame for an acceptable plan to be agreed upon and implemented, is partially determined by the level of overall plan development, i.e., whether each site will be developed individually and independently or if there is an overall agreed upon plan that will allow the sites to work within a predetermined framework.

A good example of this is the Shore Public Walkway. A shore public walkway is required on all sites in any development scenario. The walkway is a public amenity allowing access and pedestrian movement along the shoreline of the Harlem River (examples of this include the East River Esplanade and the shoreline line paths along the Hudson River boundary of Battery Park City). This amenity, once built, will add to the value of all the development parcels as it becomes a unique amenity providing a riverside "front door' to all the development parcels.

An important aspect of Tax Increment Financing is the planning process by which the TIF is created. This could allow all stakeholders, including the individual landowners, the respective Borough and City agencies, and SoBRO in its role of facilitator and manger of the BOA to establish priorities that might include the shore public walkway, the required visual corridors and upland connections, utilities and emergency service vehicle access plans. The TIF planning when coupled with a 197A plan can set the pattern for potential development and assist in determining the value added for this infrastructure, creating a cohesive vision for the entire length of the waterfront that can be implemented.

Development Schedule Complexities

There is a complexity to any development that occurs within the study area due to the series of overlapping regulations (City Planning, Dept. of Buildings, and Environmental Protection) regarding the development of buildings on waterfront blocks, within flood zones and requiring public access. These regulatory requirements include mandated review periods to achieve certification and then as part of a public approval process. This will be necessary prior to obtaining a Department of Buildings (DOB) permit for construction. Of course any DOB filing will have to include time to develop the construction documents and the time necessary for review and approval. If there are any public monies involved, including municipal bonds or subsidy funds that will be involved for the affordable housing components will also include review and approval time from the Dept. of Housing Preservation and Development.

These regulatory requirements do not include the time frame for any ULURP (Uniform Land Use Review Process) certifications and public review periods that will be required for any new street mappings. The new street mappings will have to include utility infrastructure location (water, sewer, and gas, communications, which will require capacity analysis, transformer locations, and sewer outfall connections). A ULURP action will also require a CEQR (City Environmental Quality Review) filing and this filing, due to the traffic and sewage impacts will probably trigger the requirement for an Environmental Impact Statement.

The schedule implications for the above actions, all necessary prior to a construction start, will require a significant amount of time prior to any construction start and will significantly increase the cost of development. Added to the cost of development will be property insurance, specifically flood insurance. Since the bulk of the sites are in the flood plain and below the FEMA flood level, this will be a significant cost during construction as well as after occupancy and conversion to permanent financing. Added to all

of this will be the time and cost for any environmental mitigation that might be required on these former Industrial sites.

On the outside possibility that it will be possible to reduce the cost of flood insurance. It will be important for the design to incorporate an accepted set of resilience standards, which when correlated with sustainability standards (required with any public financing) will also add time and cost to development. Resilience standards, acceptable (ratable) by the National Flood Insurance Program will require coordination and consensus between the Mayor's Office, the Office of the Bronx Borough President and Bronx Community Board 1. These issues could be worked out through the 197A planning process.

Reviewing this web of regulatory processes, public reviews, and schedule duration impacts, we recommend that a comprehensive timeline and schedule be developed that takes into account the entire study area. This will support the necessary infrastructure development and phasing, resiliency standards, sustainability standards and all ULURP actions required prior to physical development. This would include a financing structure that amortizes the cost of utility infrastructure necessary for private development. This should also take into account market conditions and affordability ratios.

To begin this larger multi-tiered planning we suggest looking at the following programs for plan approval to support the long-term development interests:

- 197 A
- LEED for Neighborhood Development
- NFIP Resilience Planning

SECTION 9: SUMMARY

The following issues, as delineated in this report, have surfaced during our study:

- What is the impact of the development area on existing energy, water management, communications, and solid waste infrastructure?
    - Can the existing wastewater treatment plants handle the additional load?
    - Can the existing power plants handle the additional load?
    - Can the existing water treatment plants handle the additional load
- What is the scope of environmental mitigation of contaminated soil?
- What is the long-term value of the existing rail line and its effect on waterfront access?
- Can a consistent and resilient shoreline protection strategy be developed that unites all the sites?
- The parcels within the *Special Harlem River Waterfront District* all front (Exterior Street) on the underside of the Major Deegan Expressway. This area will need to be 'renovated' with sound vibration/absorption material under the roadbed structure, new lighting and new Exterior Street roadway paving
- How should legal grade be established at or above ABFE that can be a benchmark for all development
- What are the cost implications and regulatory sign-offs that are necessary to move the utility point of service at or above the ABFE?
- What are the traffic impacts on the Major Deegan (I-87) Expressway and the redesign of the following intersections?
    - East 138th Street and Madison Avenue Bridge, including on and off ramps to the highway and local access streets
    - East 149th Street and the 145th Street Bridge
- What are the regulatory sign-offs that are necessary to create a public or private shuttle bus and/or reroute existing bus routes.
- What are the regulator sign-offs that are necessary to receive a parking requirement reduction?
- What is the cost impact for insurance on a project in a flood zone (during construction and post occupancy)?
- Individual site development without the support of a publicly approved plan versus a plan that has been taken through a public approval process allowing flexibility on individual site development

As the questions poised above indicate, the development of the Bronx shoreline of the Harlem River presents many challenges. As the City of New York continues to grow, as once affordable neighborhoods in Queens, Brooklyn and northern Manhattan continue to 'gentrify', opportunities for affordable housing, sustainable development, and mixed use development become increasingly difficult to achieve. The Harlem River shorefront, between 149th Street and the Third Avenue Bridge, is a

significant opportunity to develop a new mixed-use community in a unique location and, as an aspect of development, strengthen shoreline protection, provide important public amenities and open space to this underserved portion of the Bronx, build on the strength of the existing commercial and institutional presence – the Gateway Mall, Hostos College, Lincoln Hospital – and provide a significant amount of housing of varied typology and diverse income affordability.

We would also recommend that a development phasing plan be explored. As the area breaks down into three zones – The Special Harlem River Waterfront District can be divided into 2 zones, north and south of the Madison Avenue Bridge with the third zone being the area we have noted as the 'Assemblage Sites' (a portion of this area was examined in an earlier report to SoBRO as a planning study for 2401 Third Avenue). Each zone should be looked at as unique and, to a limited extent 'stand-alone', for their development of new residential, commercial and community facility uses; tied together by the are 3 significant places for public access and open space – the shorefront public walkway, the proposed public park between SHRWD Parcel 1 and 2 and the potential wetlands open space at the south end of SHRWD Parcel 9. Furthermore, each of the zones can be tied together visually though urban design standards for paving, lighting, and graphics.

Shoreline protection and resiliency along with infrastructure should be developed comprehensively and phased into place so that site development can proceed in as flexible manner as possible. Comprehensive planning that engages all stakeholders and sets urban design standards coupled with sustainability and resilience standards needs to be adopted to insure that these difficult sites have the framework for successful and financially strong development.

GLOSSARY

Base Plane – a plane from which the height of a building or other structure is measured…in the flood zone, either the base flood elevation may be the level of the base plane or building height may be measured from the flood resistant construction elevation as provided in Article VI – Chapter 4, *Special Regulations Applying in Flood Hazard Areas*.

FEMA – Federal Emergency Management Agency

Flood Zone – the area that has a one percent chance of flooding in a given year as indicated on the effective Flood Insurance Rate Maps (FIRM), plus any additional area that has a one percent chance of flooding in a given year as indicated on the flood maps.

Flood Maps – the most recent advisory or preliminary maps or map data released by the Federal Emergency Management Agency (FEMA) after October 28, 2012 until such time as the City of New York adopts new final Flood Insurance Rate Maps.

Shore Public Walkway – a linear public access area running alongside the shore or water edges of a platform on a waterfront zoning lot.

Supplemental Public Access Area – a public access area provided on a waterfront zoning lot, in addition to other required public access areas, in order to fulfill the required waterfront public access area requirements. A supplemental public access area shall not include a shore public walkway or an upland connection.

Upland Connection – a pedestrian way which provides a public access route from a shore public walkway to a public sidewalk within an open and accessible street, public park or other accessible public place.

Visual Corridor – a public street or open area within one or more zoning lots that provide a direct and unobstructed view to the water from a vantage point within a public street#, public park, or other public place.

Waterfront Area – the geographical area comprising of all blocks between the pierhead line and 800 feet landward from the shoreline.

Waterfront Block – a block in the waterfront area having a boundary at grade coincident with or seaward of the shoreline.

Waterfront Zoning Lot – a zoning lot in the waterfront area having a boundary at grade coincident with or seaward of the shoreline.

APPENDIX

Bronx Bus Map (Metropolitan Transit Authority)

FIMA Community Rating System Fact Sheet

National Flood Insurance Program Community Ration System: Coordinator's Manual (Federal Emergency Management Agency, expires September 30, 2013)

New York City Building Code, Appendix G, Flood Resistant Construction

New York City Department of City Planning, Community-Based Planning, 197A Plan

New York City Zoning Map 6a

New York City Zoning Resolutions:

- Article I – General Provisions, Chapter 2, *Construction of Language and Definitions*
- Article II – Residence District Regulations
- Article III – Commercial District Regulations
- Article IV – Manufacturing District Regulations
- Article VI – Special Regulations Applicable to Certain Areas, Chapter 2, *Special Regulations Applying in the Waterfront Area*
- Article VIII – Special Purpose Districts, Chapter 7, *Special Harlem River Waterfront District (HRW)*
- Article XII – Special Purpose Districts, Chapter 3, *Special Mixed Used District*

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Mission of SoBRO

The mission of the South Bronx Overall Economic Development Corporation is to enhance the quality of life in the South Bronx by strengthening businesses and creating innovative economic, housing, educational and career development program for youth and adults.

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