

Reframing Harlem River

Manhattan-Bronx Waterfront Community Design

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Abstract:

Today a renewed interest in the recreational value of the Harlem River, paired with new real estate pressures that are reshaping East Harlem and the Southern portion of the Bronx, the moment is ripe to rethink the current scalar incongruence between city, mobility corridors and the water edge. Both in the case of Manhattan and the Bronx the expansive geometries of the mobility infrastructure has inscribed, along both edges, a physical and operative footprint that is at odds with the scale of the water's edge and the city. This design is to propose an idea to renovate Harlem waterfront area into interactive and livable place in the densely populated city. The first point is to accommodate a number of people with enough housing units, and then hopefully this area could be a catalyst to increase vitality of nearby area. This is a mixed-use area that includes commercial, residences, offices, athletics and recreations, and a pedestrian bridge connecting to Manhattan.



The Harlem River, approximately eight miles long, is a small navigable straight that connects the Hudson River with the East River, marking the border between northern Manhattan and the southwestern edge of the Bronx. Since the construction of the first bridge in 1693, known as the King's Bridge, the Harlem River has been urbanized as a highly engineered conduit responding to commercial, industrial, and navigational needs. The development of the Harlem River was relatively dormant until the mid 19th century when the planning of the Croton Aqueduct, one of the largest public works projects in New York City yielded the construction of the High Bridge, allowing the aqueduct to cross the Harlem River. The construction of this mid 19th century landmark signaled the beginning of an intense period of development along both edges of the Harlem River. The consequent construction of many additional bridges that linked Manhattan to the Bronx, the introduction of the Park Avenue Bridge which expanded service for New York, New Haven and Hartford Railroad and the implementation of the Harlem Line along the Bronx's side of the straight, shifted the river into a new epicenter of mobility infrastructure. This confluence of heavyweight tracks and bridges was further compounded by the introduction of vehicular thru-ways introduced throughout the course of the twentieth century that took advantage of the residual spaces between river and city, further distancing the city from the river and encapsulating small patches of fabric with over-scaled mobility corridors. Today, a renewed interest in the recreational value of the Harlem River, paired with new real estate pressures that are reshaping East Harlem and the Southern portion of the Bronx, the moment is ripe to rethink the current scalar incongruence between city, mobility corridors and the water edge. Both in the case of Manhattan and the Bronx the expansive geometries of the mobility infrastructure has inscribed, along both edges, a physical and operative footprint that is at odds with the scale of the water's edge and the city. Today as East Harlem and eastern the South Bronx continue to rethink the relationship of the city to mobility infrastructure and the water's edge, the time is right to rethink the role of the Harlem River and its adjacent areas as the epicenter of a much more integral and ambitious urban project that can redefine the role of infrastructure as the driver of urbanistic projects in the 21st century.



1840s

Early stage of Harlem River. Water-related industries like boat making started to develop along river.



1850s

The development of the Harlem River was relatively dormant until the mid 19th century when the planning and construction of the Croton Aqueduct



1880s
Putnam Railway was built along river.



1923
Yankee Stadium was built. Accessible waterfront area gradually developed into that as we see today.



1888-1962

Nine bridges were built across the river, including a pedestrian bridge.

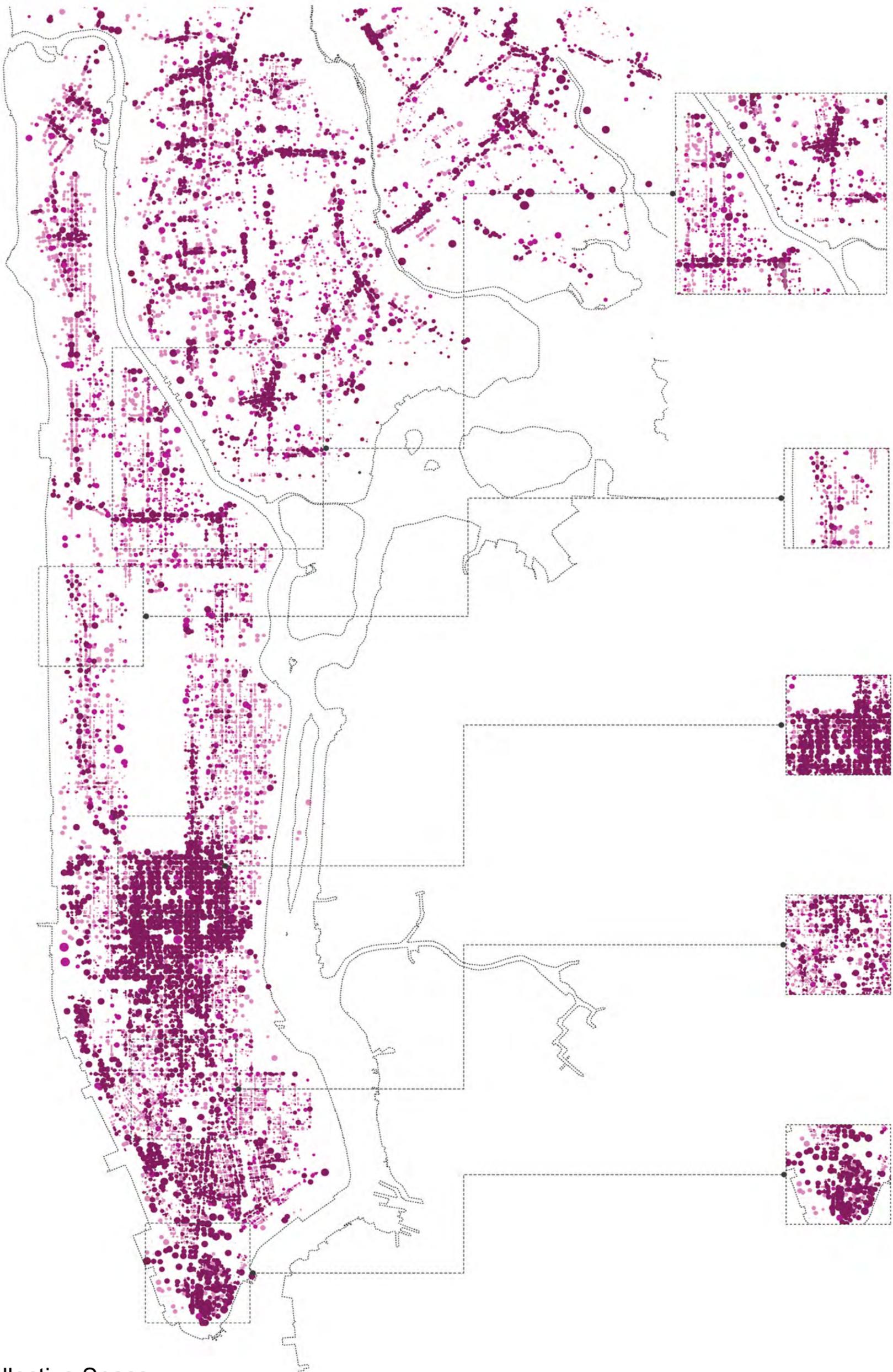


Grand Concourse/Park Ave

Hwy

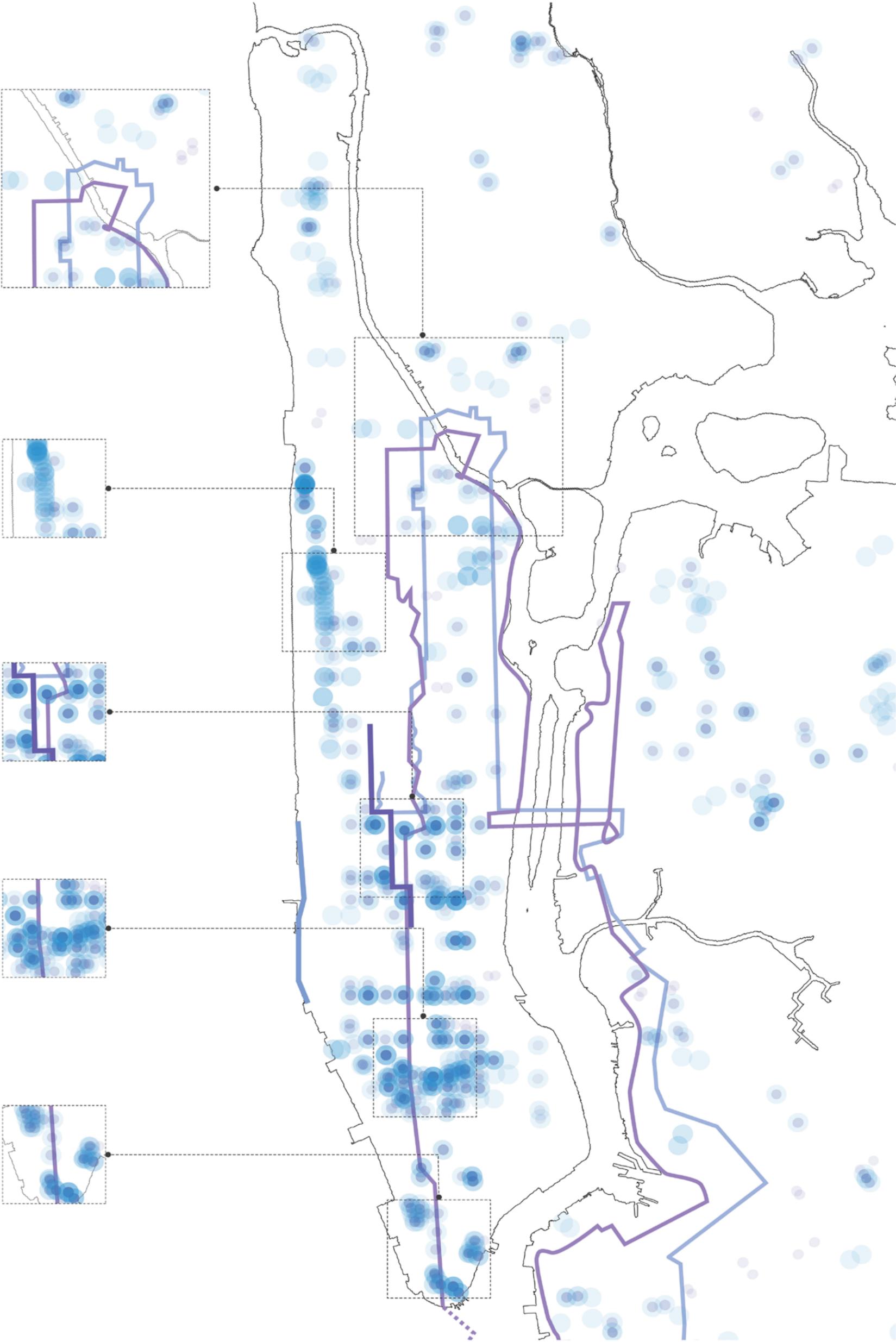
Road grid map. Two highways go along river which made the waterfront less accessible.

Collective Space Mapping



Collective Space

These spaces hold programs that aim to serve the general public. Those collective spaces include spaces that are used for retail purposes, markets and shopping malls, and also public institutions like theatres and museums.



Events

Public activities that invite people to participate in. Those activities have their own specific frequency and location.

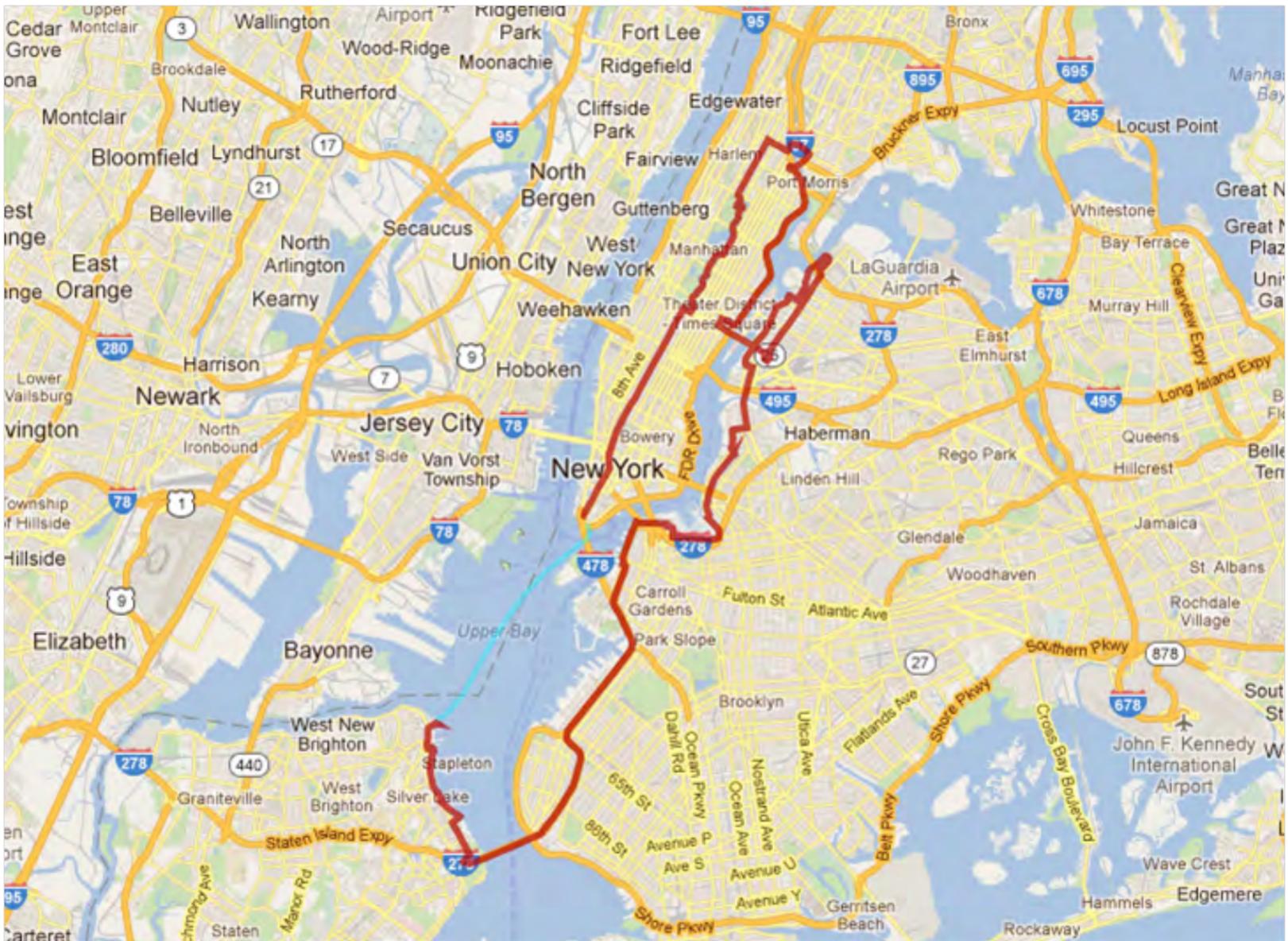


NYC Marathon Route



NYC Favorite Jogging Routes

A lot of events happen near the south part of the Harlem River, but significantly less at the north part.



NYC 5 borough Bike Route

Site Location

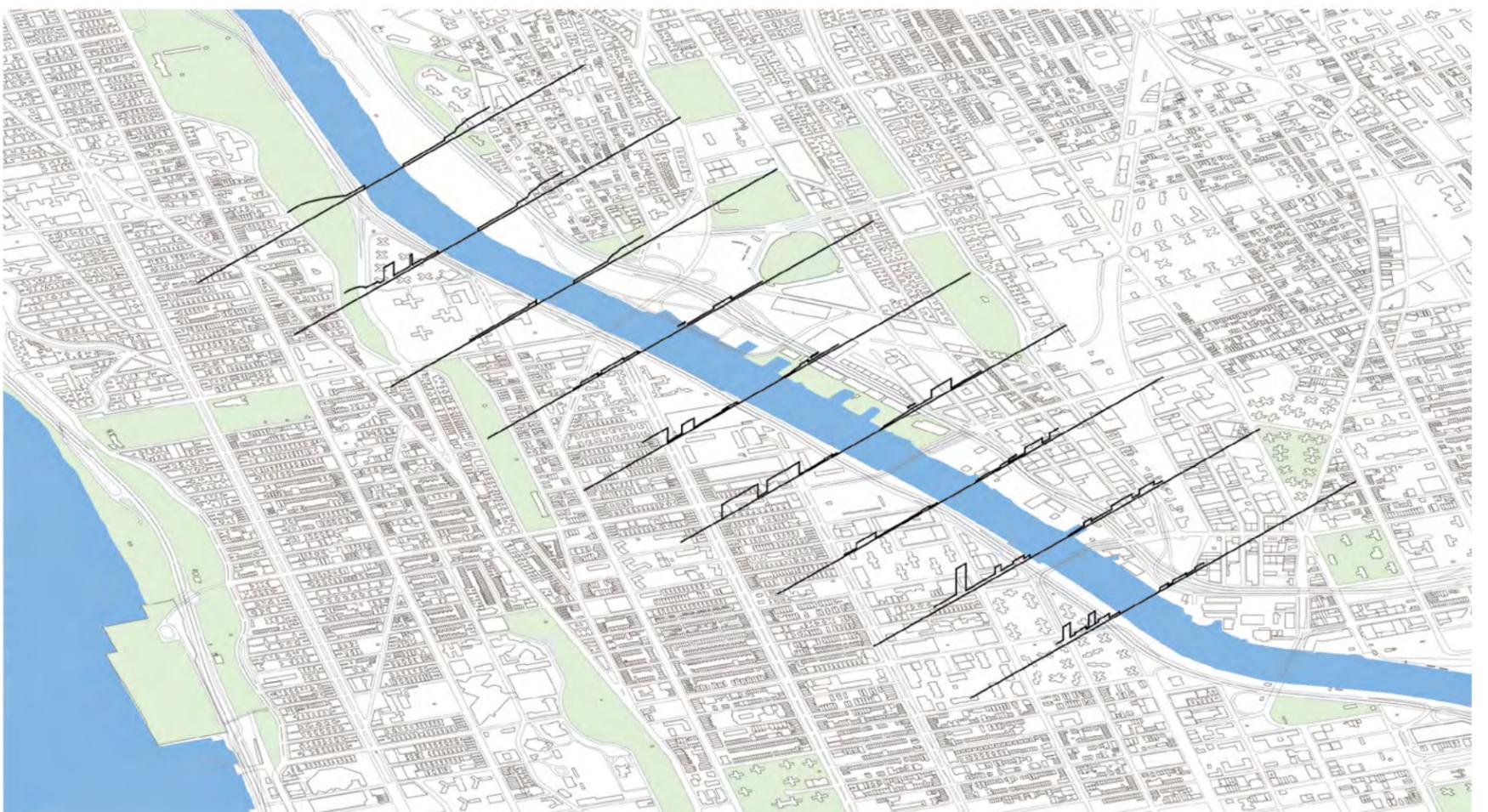


Issues here:

1. Limited access to waterfront and fragmental infrastructures
2. Lack of vitality in old manufacturing/industrial zones
3. Insufficiency of living and parking spaces and supporting amenities

Research objectives:

1. To reconfigure the existing infrastructure and terrain to make an open space network throughout the region linking cultural/recreational facilities, parks and the waterfront, even on a larger urban scale.
2. To make a mixed-use community that could be a catalyst to increase vitality of nearby areas.
3. To suggest a new reduced car use lifestyle in a walkable community.



1. Connectivity



Manhattan/Bronx



Buildings



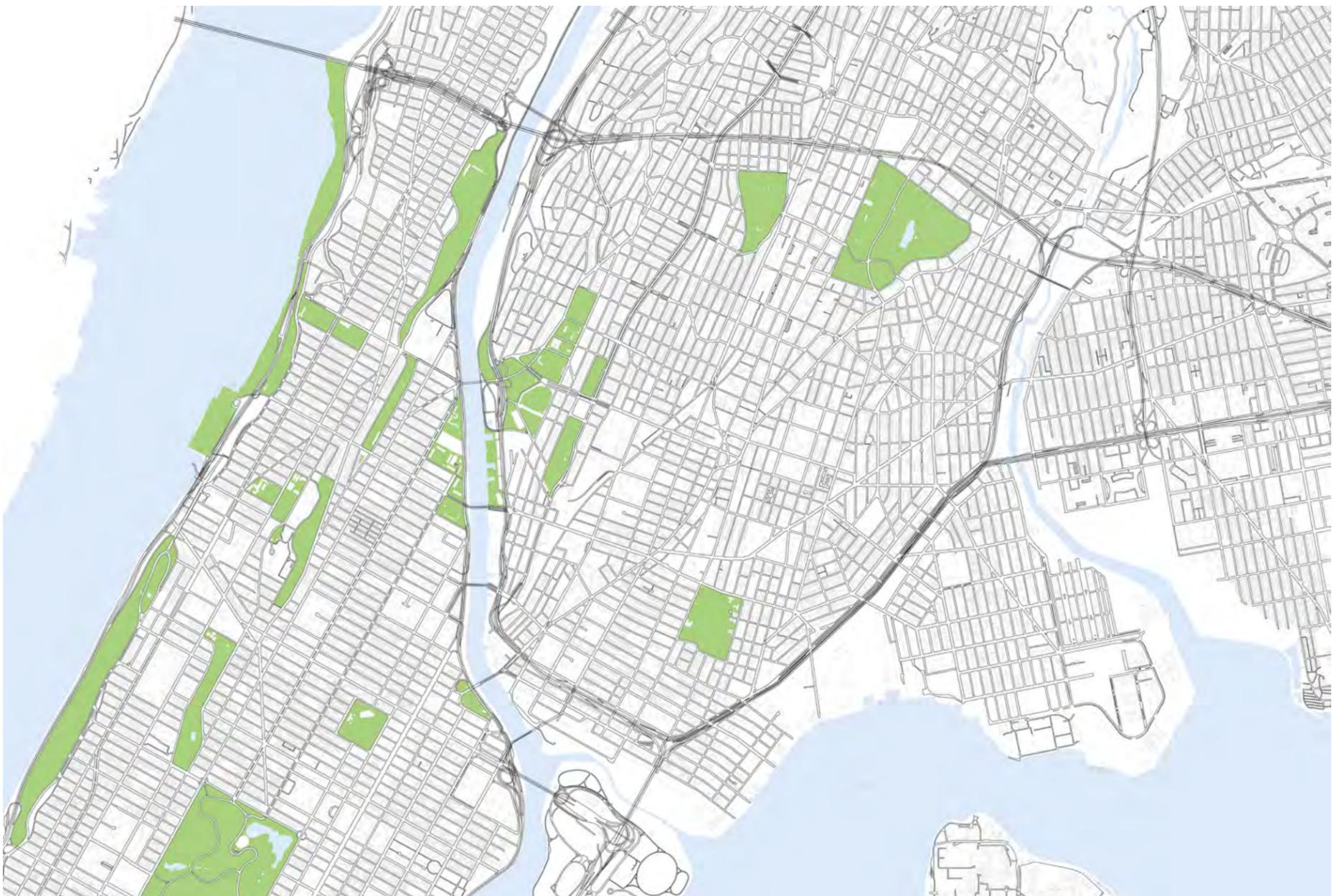
Parking Lots



Green Spaces

Manhattan/Bronx, there's a big difference in parking spaces. As Manhattan is too expensive to build enough parking lots, but in Bronx it's much cheaper. And much more recreational spaces and parks are in Bronx.

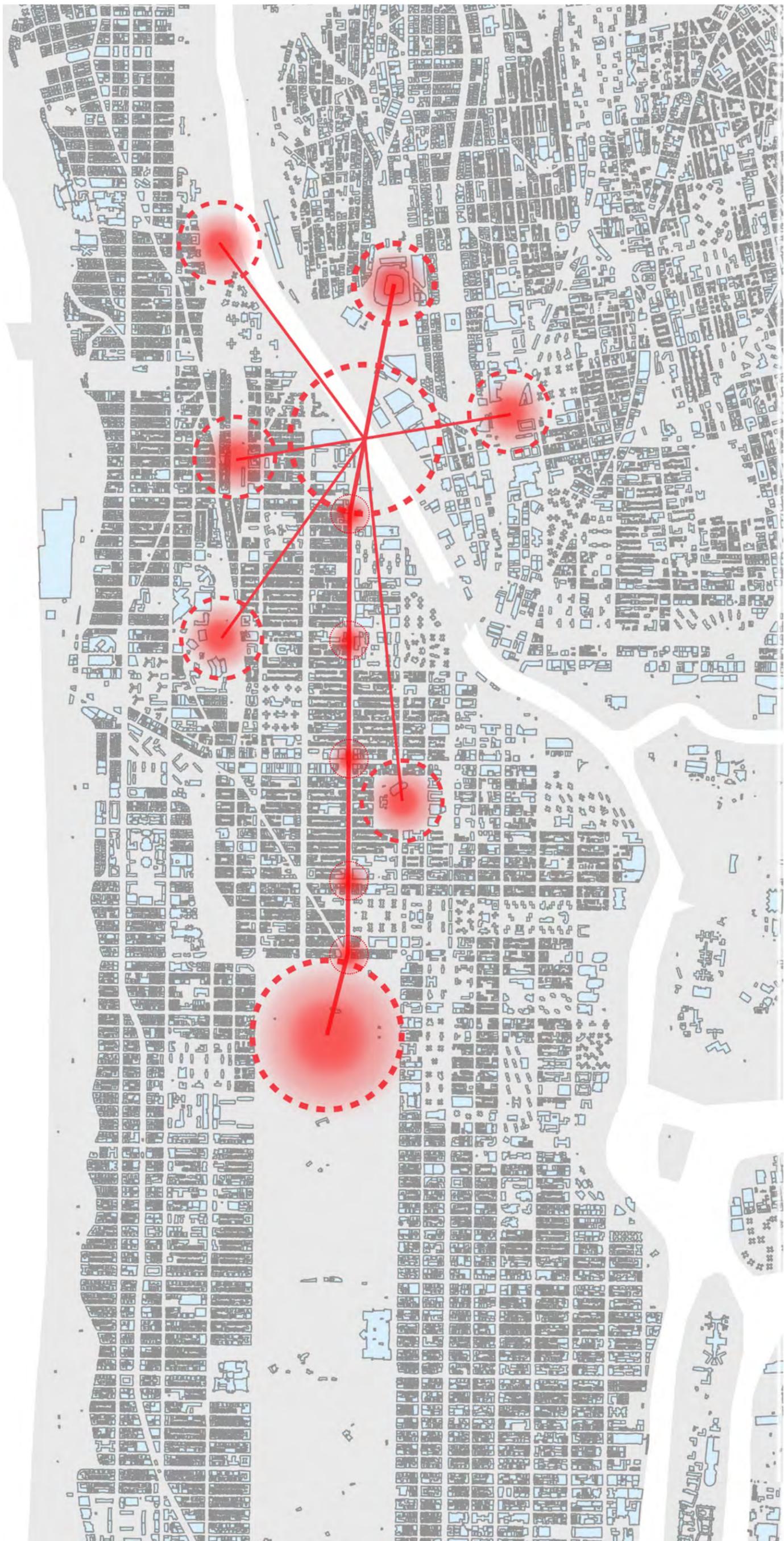
Parks in nearby area





Nearby undergoing projects: Yankee stadium redevelopment program. Old stadium is made into a public park. By connecting playgrounds at North, there's a green spine to riverfront, til Mill Pond Park. And what's going on at south is the south bronx waterfront esplanade program, which to gain critical momentum to build an esplanade, bounded by restaurants, stores, and residential towers.



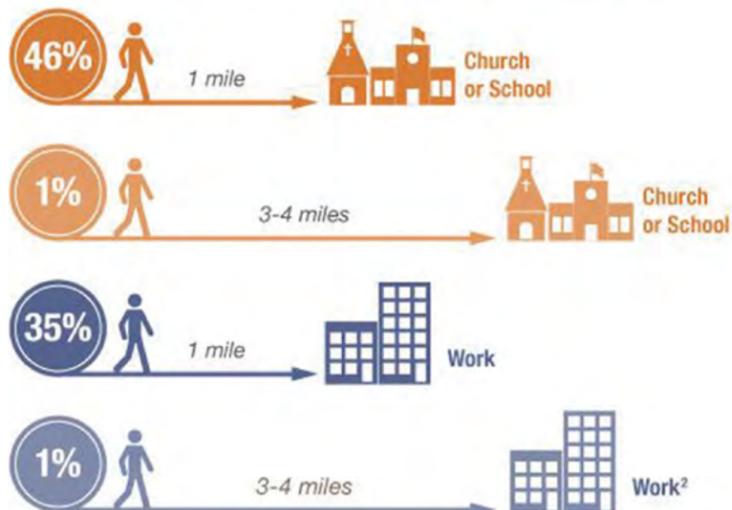


Solution: Connecting all nearby spots, especially the stadium to central park, which is the main axis where most people come and go.

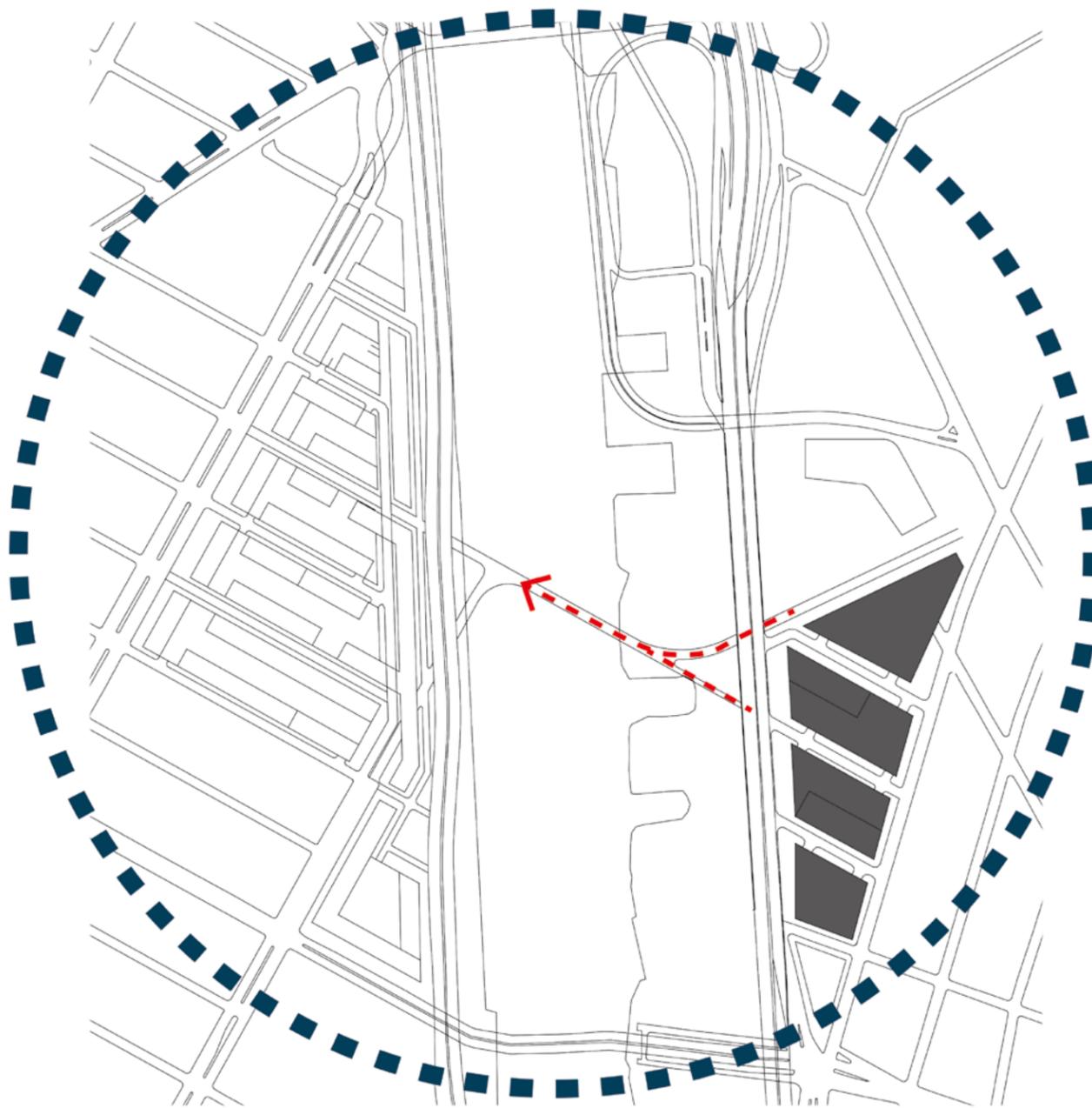
2. Reduced Car Use Lifestyle

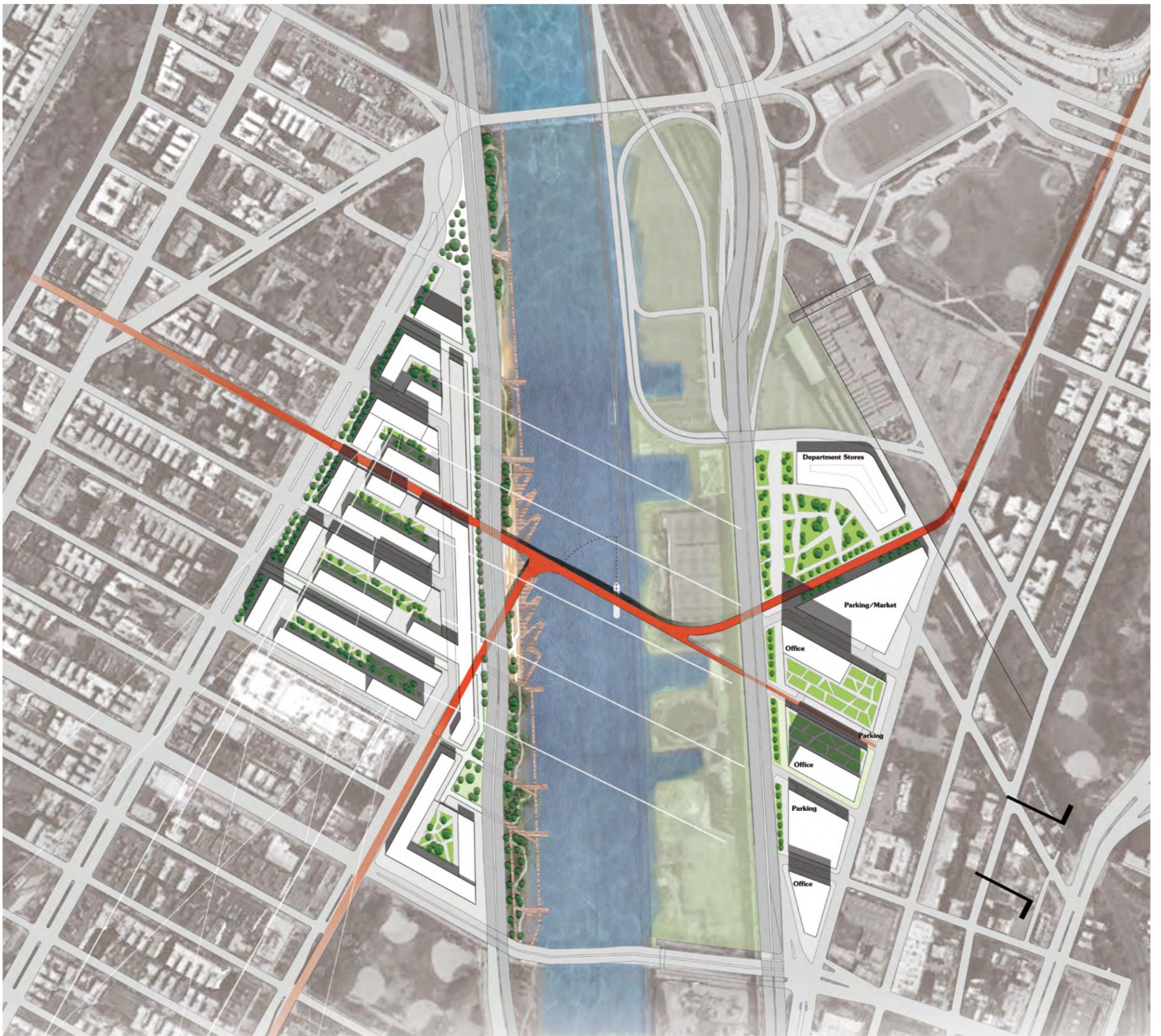


STUDIES SHOW PEOPLE WILL WALK TO DESTINATIONS:



1/4 mile radius is a comfortable and acceptable distance with 10-min walk. As Manhattan side is no longer affordable to build more parking lots, my idea is to put all parking at Bronx side except few temporary parking in Manhattan. The Bronx side parking could be a shared place with nearby communities and Yankee stadium which takes almost 80 games per year. The people can take the pedestrian bridge to Manhattan which would greatly shorten the distance than current situation.



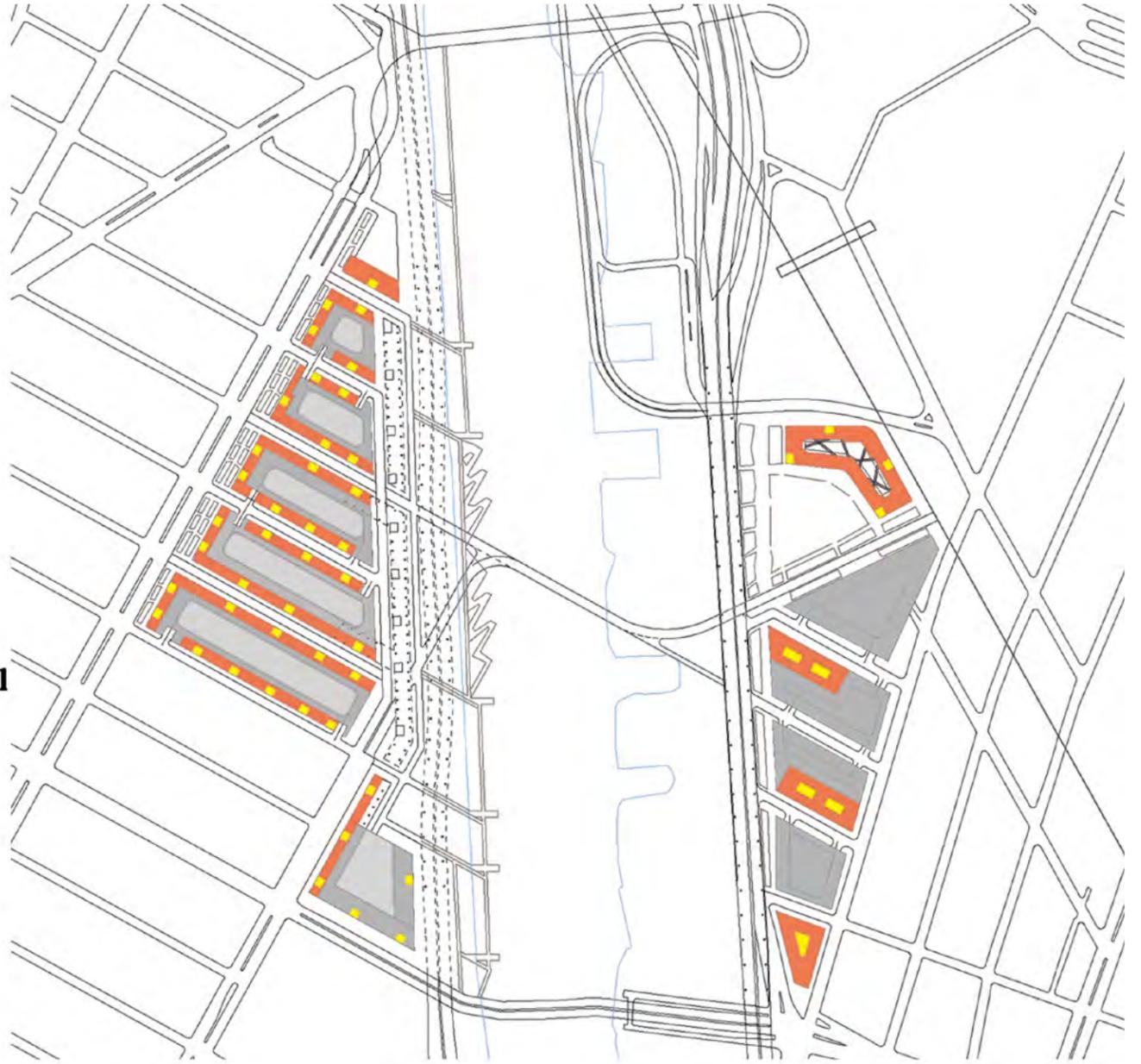


3. View-oriented

In order to maximize the visibility of Manhattan and Harlem river, the buildings get higher gradually from south to north, to obtain a full view of central park, NY skyline and the river.



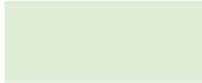
-  **Commercial**
-  **Parking**
-  **Staircase**



-  **Low Speed Road**
-  **Road Grid**



Open Space/Ground Level

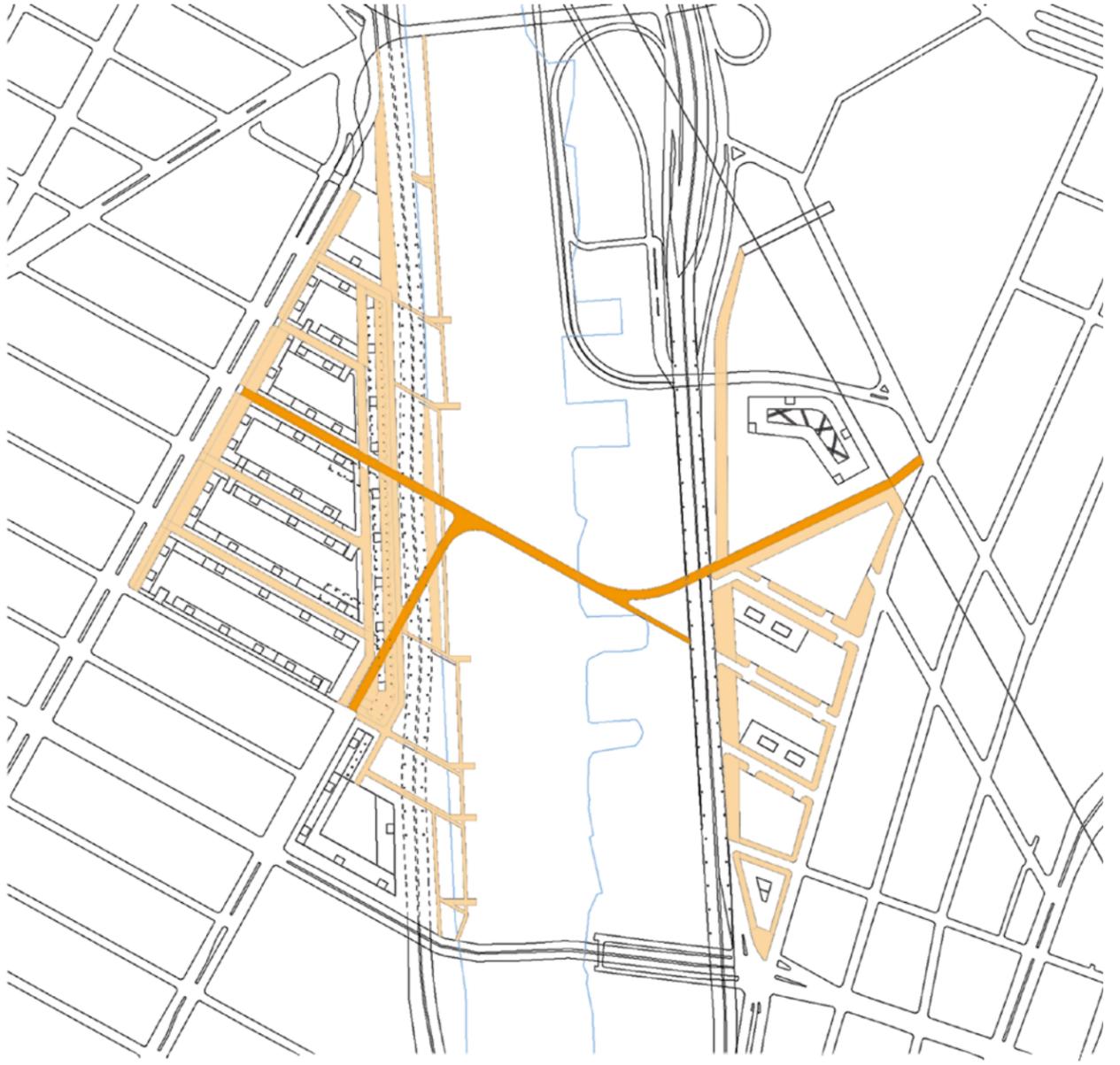
-  **Green Corridor**
-  **Mill Park**



Open Space/2nd Level

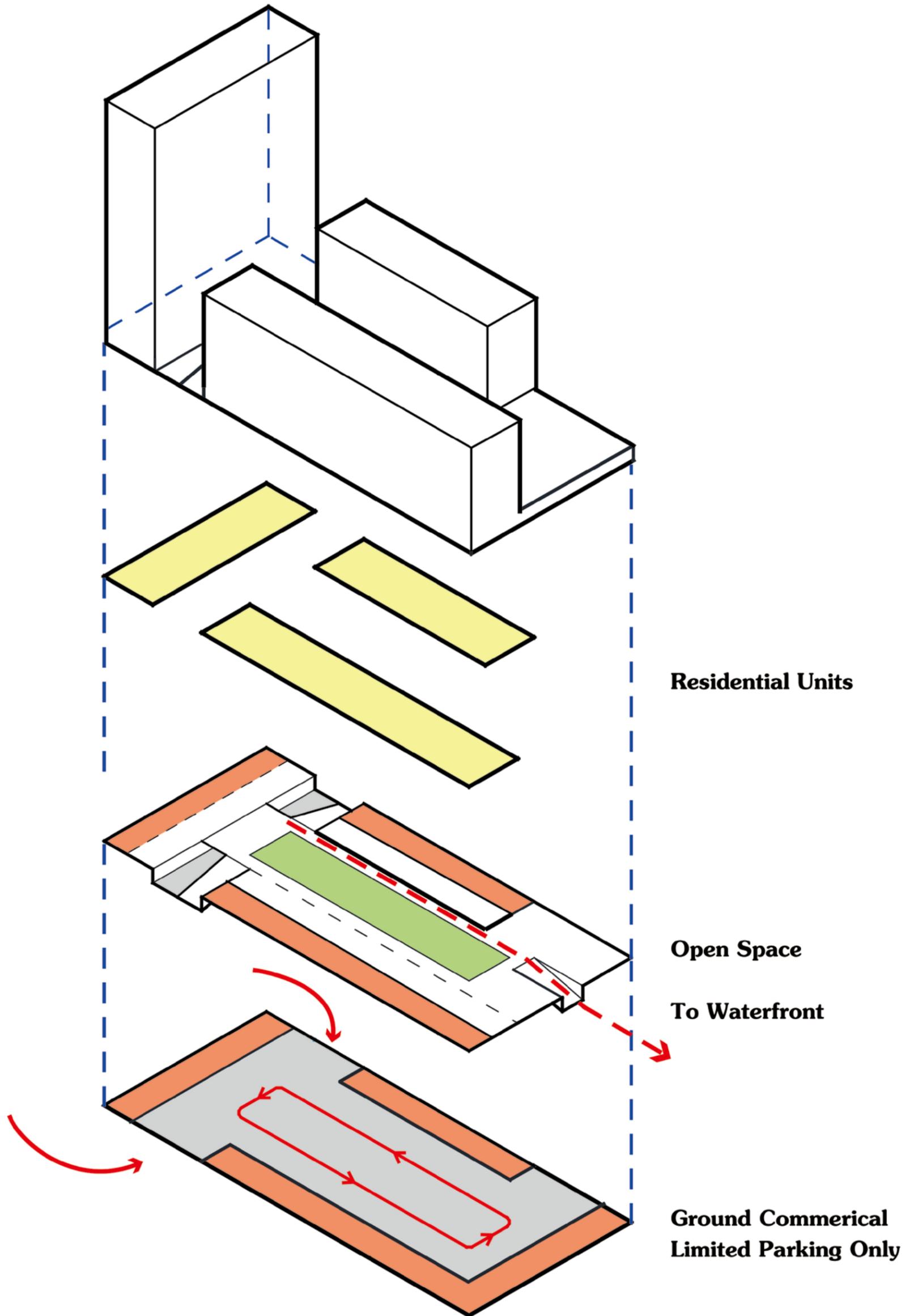


 **Pedestrian Paths**
 **Pedestrian Bridge**



Typical Block Unit

In total 1200 Units @1,000 sf, FAR 9-13



4. Accessible Waterfront Landscape



