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In the Projects: Rebuilding Social Housing in New York City

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IN THE PROJECTS :

Rebuilding Social Housing in
New York City

Ruo Piao Chen & Caroline Jeon
ARC 505 Thesis Prep
Fall 2016



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Problems :

- There a shrinking stock of all types of affordable housing, resulting in the inflation of rent across all demographics.
- The rise in rent makes housing detrimentally unaffordable for people with extremely low incomes.
- Mayor Bill de Blasio also recognizes that there is an affordable housing crisis, promising to build over 200,000 units of affordable housing in the next ten years. However, his plan applies to new and privately-owned construction, not the massive public stock that the city already owns.
- The state of disrepair of public housing combined with generally underutilized sites in 1950's projects makes the public portion of the affordable housing stock particularly opportunistic for future development.

Claims :

- Our project will redevelop an existing public housing site to higher standards of building performance, density, and public programs.

Why :

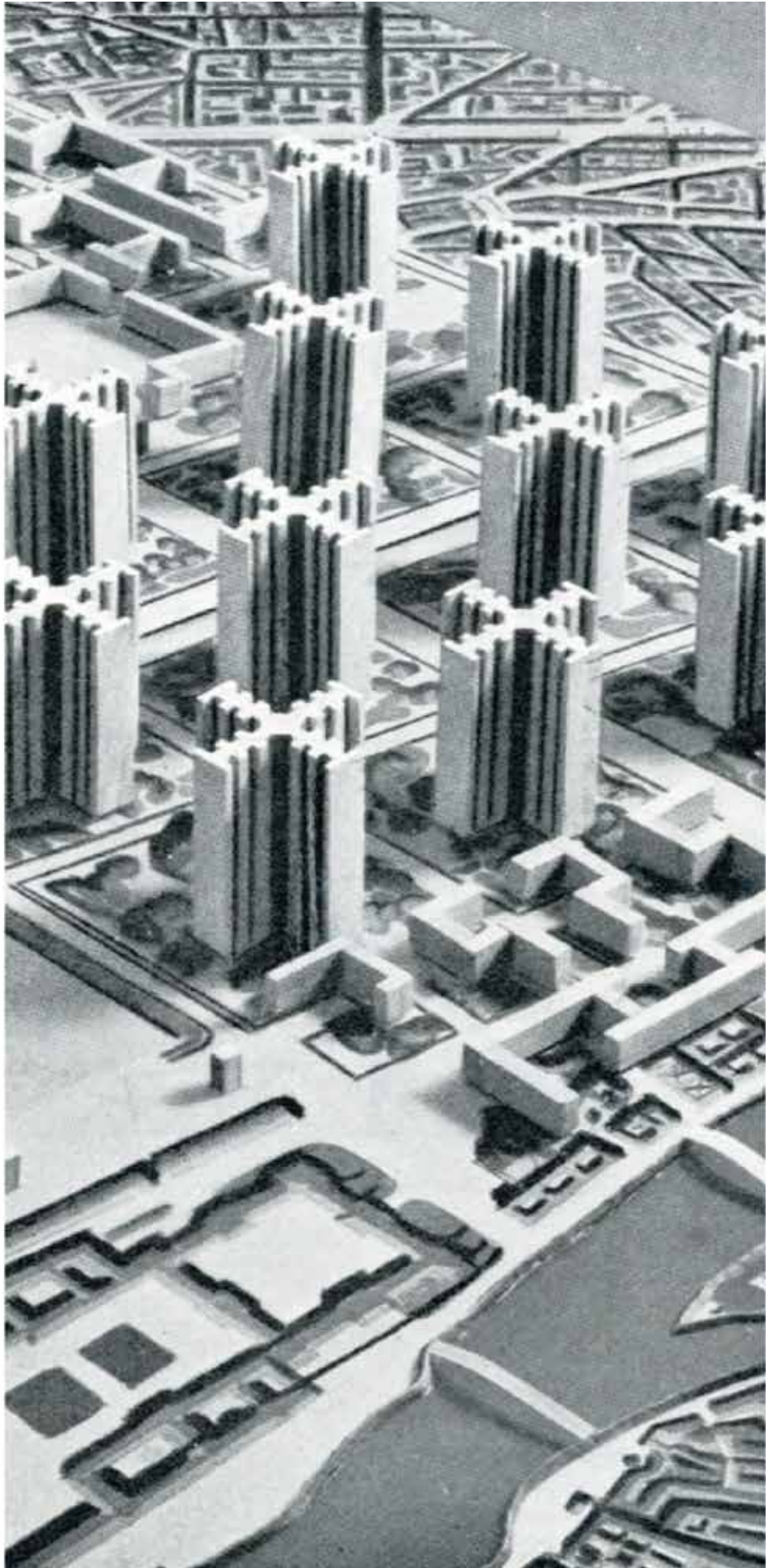
- More affordable units will be open to rent for low-income tenants in New York City.
- The construction methodology for rebuilding our site will become an archetype for similar redevelopments of existing post-war social housing typologies in dense urban areas.
- Mixed-income integration will be possible on publicly-owned sites, resulting in a reduction of associated stigmatism.
- Public housing can be efficient, strategic, and integral to the culture of the neighborhood.

How :

- We will devise a development strategy for the reconstruction of our site, as well as a site strategy to meet the overall needs of the neighborhoods.
- We will use a faster-than-traditional construction methodology in order to not displace existing tenants for an extended period of time.

Question :

- How can rebuilding existing social housing in New York City augment the initiatives already put in place by the de Blasio administration, thereby remediating economic inequality?

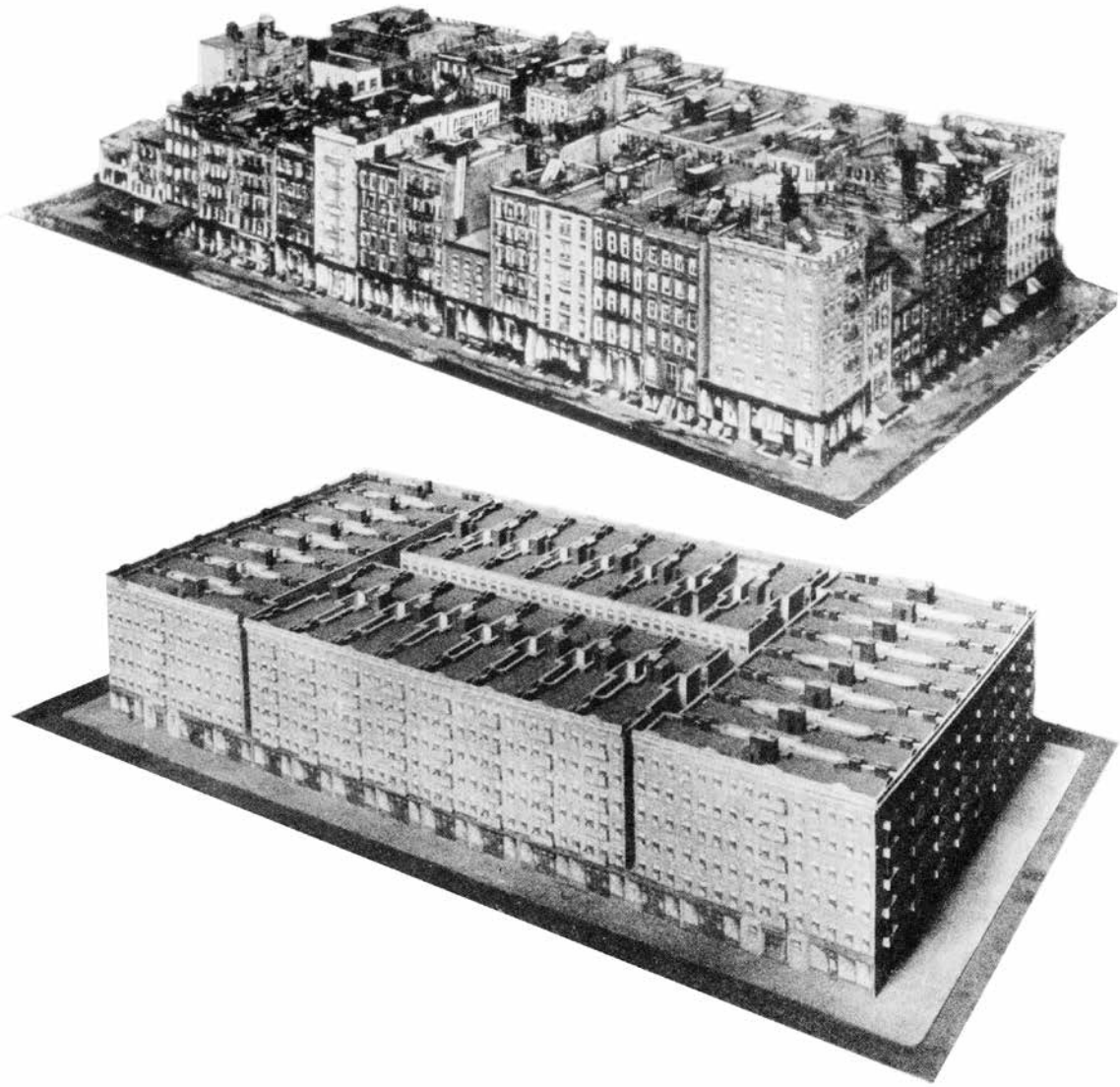


II.

HISTORICAL & PRESENT CONTEXT

Tenement Housing (1860's-)

The island of Manhattan has been a historical map for the redefinition of housing since its conception. Tenement housing, which flourished sometime around 1865, was a way to house low-income residents at a high density level. From the image on the left you can see a comparison of the earliest tenement housing, ones pre-dating any formal building code regulations and so were associated with filth, disease, and poor lighting conditions. They also occupied 90% of the site. It was not until the Tenement House Act of 1901, or "New Law," that the national standard dictated a 70% lot coverage, with running water, egress, and exterior windows, that the typology of residences at the low-income level began to change into one that is still seen in some parts of New York City today, including on our site.



(Figure 1)

Tenement House Act, "New Law" (1901)

Garden Apartments (1920's-)

As density grew in Manhattan during the 1920's, people looked to outer boroughs for housing that relieved them of the filth represented by these stigmatized tenement houses. In places of lower density such as Brooklyn and Queens, there was an explosion of garden apartments, as seen in the image in the middle. These garden apartments consisted of relatively low-rise projects connected by gardens and greenspace. The scale of these projects was what made them successful, but inoperable in higher density locations such as in Manhattan.



(Figure 2)

The Garden Apartments (1920s)

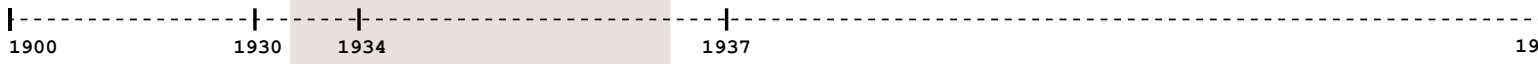

Public Housing (1930's-)

And so city planners looked to the International Movement for inspiration. Post-World War II, there was a huge rise in the population in metropolitan areas and a crisis to house all of these veterans that had come back from war. It was then that Le Corbusier's Radiant City really manifested in the development of public housing in New York. NYCHA, or the New York City Housing Authority, was established in 1934 by the late mayor Fiorello LaGuardia in order to address housing as a public issue, on an unprecedented scale and magnitude. New housing projects began to pop up alongside infrastructural projects such as the FDR drive, which created blocks of low-income social housing that usually manifested formally as the Corbusian "towers in the park" configuration. The original goal of these projects was to build on less footprint in order to activate the ground space using lush greenery and mixed program, while the residents would be able to be lifted from the filth near the ground and enjoy beautiful views on the higher floors.



(Figure 3)


Ville Radieuse, Le Corbusier (1924)

1934

NYCHA
1934


Properties	██████████
Affordable	██████████
Shrinking Stock?	██████████
Needing Repair	██████████
New Families	██████████
Publicly Owned	██████████



1937

Section 8 Portable Vouchers
1937

Properties	██████████
Affordable	██████████
Shrinking Stock?	██████████
Needing Repair	██████████
New Families	██████████
Publicly Owned	██████████



1937

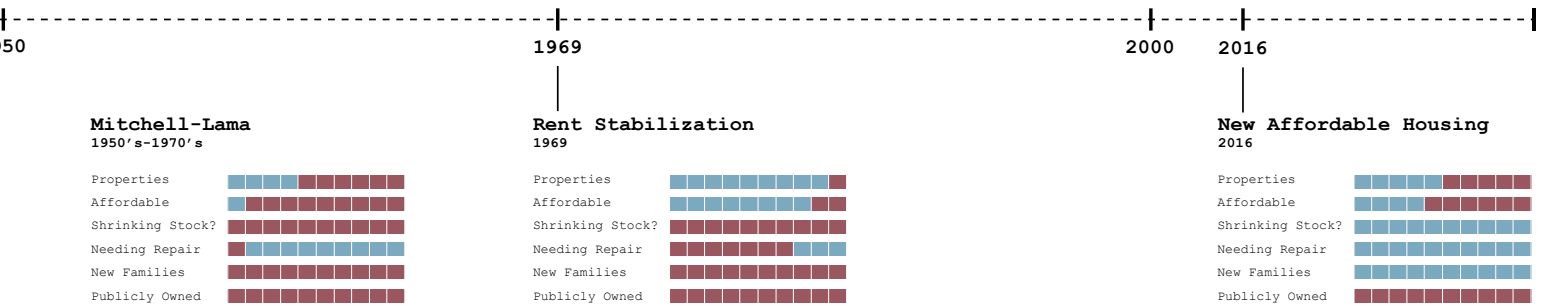
Project-Based Section 8
1937

Properties	██████████
Affordable	██████████
Shrinking Stock?	██████████
Needing Repair	██████████
New Families	██████████
Publicly Owned	██████████

Types of Affordable Housing Available to Residents (20th C.-)

Affordable housing would continue to be an issue throughout the 20th century. The enactment of NYCHA in 1934 would set the tone for the helpful attitude of municipal and federal governments towards proposing different types of affordable housing. Periods throughout the 20th century were marked by completely different approaches in terms of how affordable housing was envisioned by the public sector, but NYCHA remains the oldest and the only public housing initiative.

Because of its rapidly aging buildings and large stock, one would assume that the current administration of the De Blasio mayoral office would focus its affordable housing initiatives on NYCHA, but instead they are looking to new and private developments for their 10-Year Housing Plan.



(Figure 4)

*AMI - Area Median Income, the determining factor for eligibility of New York City Residents for public housing. A full definition can be found at <https://www1.nyc.gov/assets/hpd/downloads/pdf/NSP-tenant-lease-guidelines.pdf>.

Public Housing in NYC Today

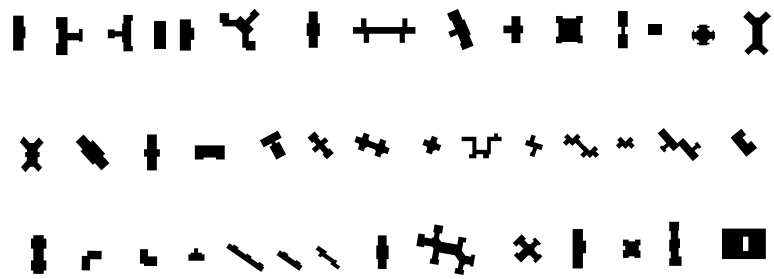
On this map of New York City (figure 5), existing public housing projects owned by NYCHA are highlighted in red. They are easily identifiable by their scale, magnitude, and park-spaces, which are oftentimes in stark contrast to their surrounding environments. They occur in clusters, on the Lower East Side, in Williamsburg and along the L train line in Brooklyn, in Harlem and Washington Heights, in the Bronx, and in Queens. We've created a NYCHA alphabet of sorts based on all of these housing clusters, and realized that a lot of them are remarkably similar in terms of scale and formal strategies.



(Figure 5)



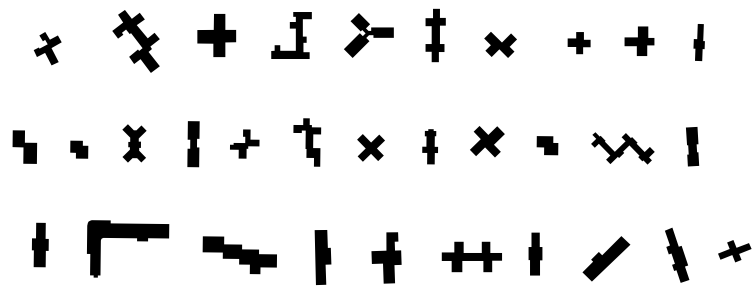
(Figure 6)



Bronx , New York



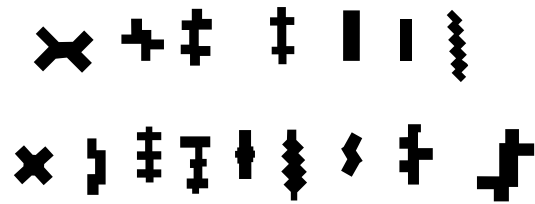
(Figure 7)



Upper Manhattan , New York



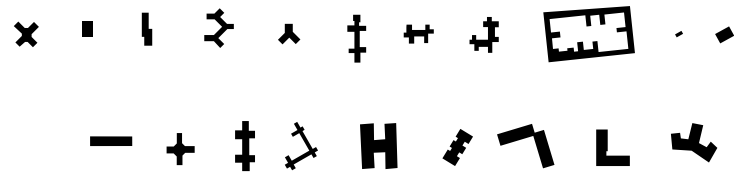
(Figure 8)



Lower Manhattan , New York



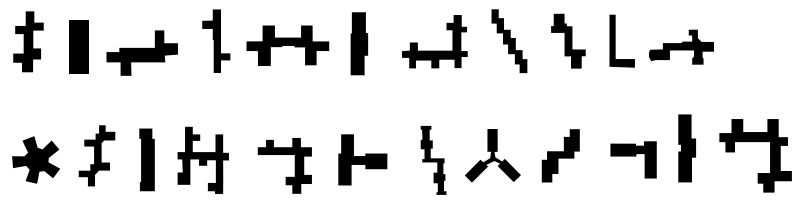
(Figure 9)



Queens , New York



(Figure 10)



Brooklyn , New York



1935

First Houses
 PRO : Low-rise
 Ground floor commercial space
 Enclosed courtyard
 Well maintained
 COW : Odor at first floor
 Poor drainage in courtyard
 Loose bricks
 No elevator



1938

Harlem River Houses
 PRO : Low-rise
 Roof connection
 COW : Built for Blacks
 Poor maintenance
 Vacant units
 Poor security



1940

Queensbridge Houses
 PRO : Y-shaped building for more natural light
 Multi-purpose amenities
 Largest public housing project
 COW : Large exterior open space
 Dangerous neighborhood
 Low maintenance



1943

Stuyvesant Town
 PRO : Small town setting
 One large block
 Few gates
 COW : No public amenities
 Can't walk through gated community



1947

Chelsea-Elliott Houses
 PRO : Densed community
 Public amenities
 Two typologies (tall and short)
 COW : Low maintenance



Williamsburg Houses
 PRO : Relatively small
 Low-rise
 Community activities
 Roof connections
 COW : Built for Whites
 Too open at the ground level
 Pest problem
 No cross ventilation
 No parking spaces

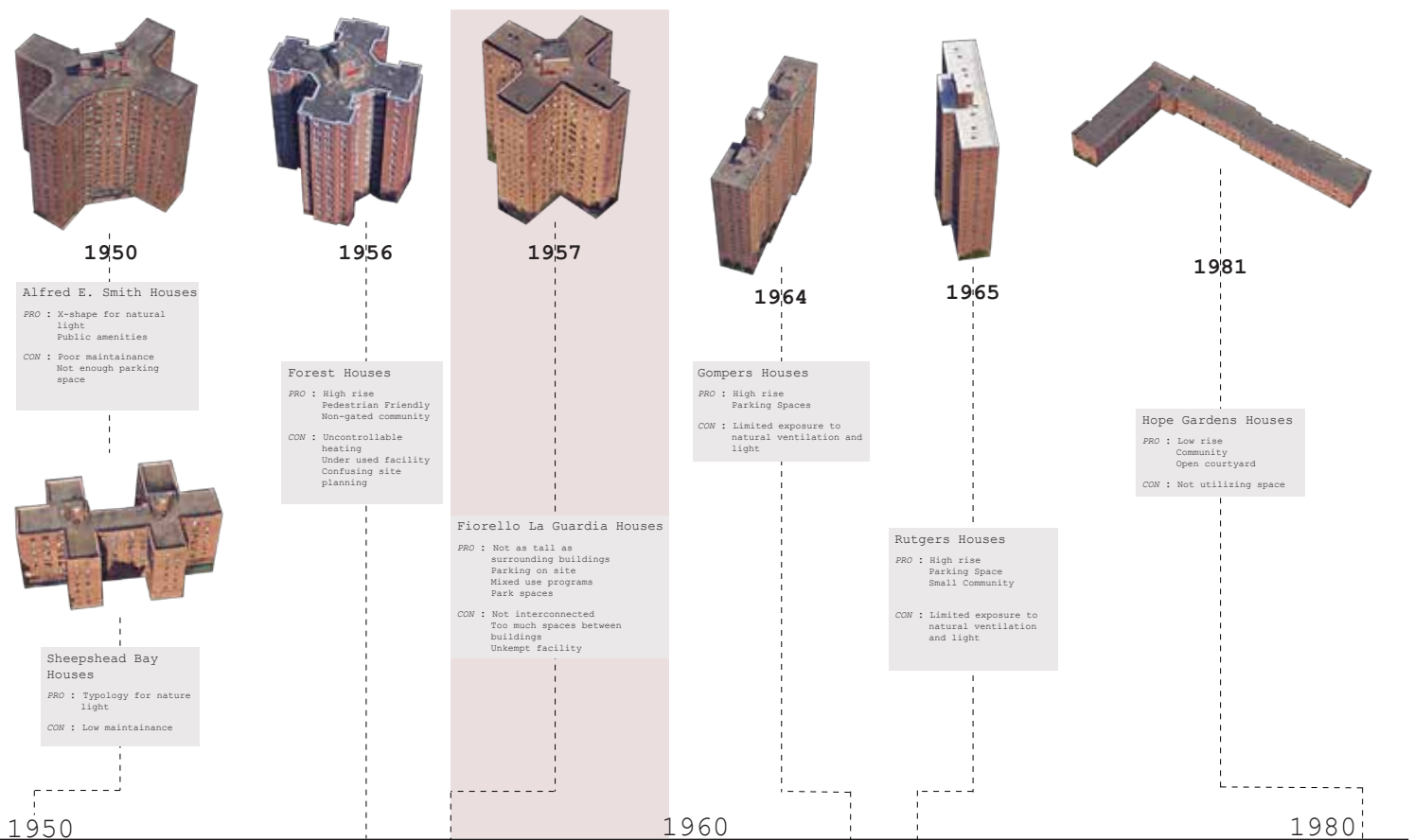


1940

Vladeck Houses
 PRO : Low-rise
 Large outdoor spaces
 Vladeck care for seniors
 COW : Poor security
 Poor maintenance
 Small spaces

1930

As we mentioned before, these typologies are easily recognizable. Here is a timeline of some selected "projects" as we know them, starting with the First Houses in 1935 to the L-shaped Hope Gardens in 1981. All of these housing projects use similar materials, and were developed in the 20th century with a focus on easily repeatable shapes and constructability. Many of these are in a state of disrepair due to outdated building systems and the lack of public funding to address these building issues. Our site, the LaGuardia Houses on the Lower East Side, is only one manifestation of a series of easily recognizable and often stigmatized public housing projects.



(Figure 11)

Site :

Fiorello LaGuardia Houses
250 Madison St
New York, NY

Architect :

Hyman Isaac Feldman

Owned By :

New York City Housing Authority (NYCHA)

Existing Condition :

1,252 apartment of Social housing made for income residents

Typology :

Towers in the park

Neighborhood :

East Broadway

Demographics :

53.6% Hispanic, 26.4% Asian, 16.5% Black, 2.7% White, 0.6%multirace



(Figure 12)

De Blasio's Ten-Year Affordable Housing Plan

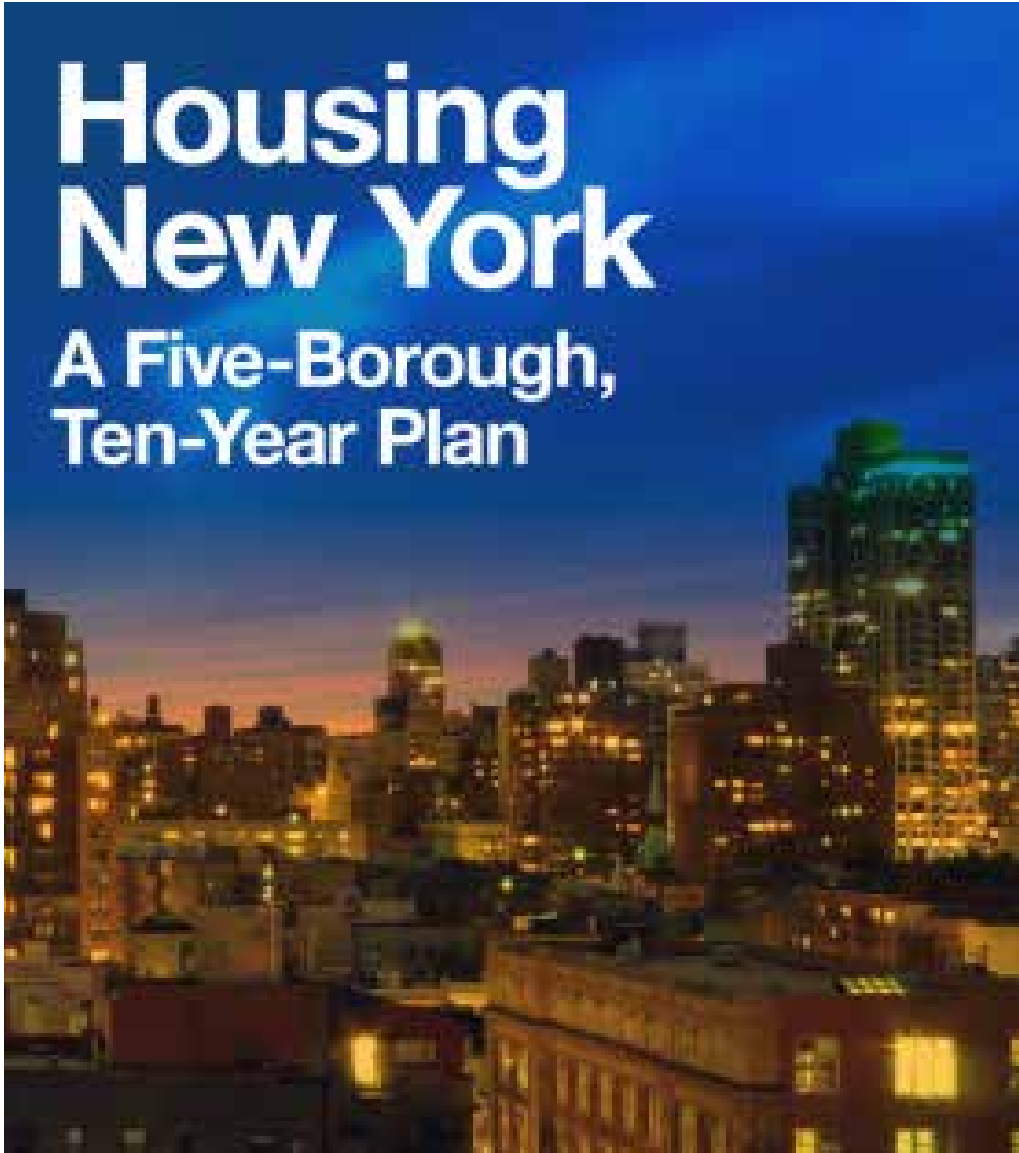
New York City's current mayor, Bill De Blasio, recognizes that there is an affordable housing crisis. In 2016, De Blasio issued a 10-year housing plan that will incorporate 200,000 new units of affordable housing over the next 10 years. However, as mentioned before, his plan is focused on offering private developers incentives to include affordable units in their developments. Even disregarding the fact that most of these incentives only apply for the moderate to middle-income families (100%-165% AMI), the mayor is still not offering much in terms of the gigantic public housing stock that is rapidly deteriorating.

NYCHA has recently auctioned off its properties to private luxury developers in order to fund its operations. Its deficit is growing and the 10-Year Housing Plan does not offer any significant change in the trajectory of this financially-starved landlord.

In response, other public entities such as NYSERDA and NextGeneration NYCHA have issued competitions and other RFP's in order to address these issues of affordable public housing. So what exactly, is this housing crisis that we're talking about?

Housing New York

A Five-Borough,
Ten-Year Plan



(Figure 13)



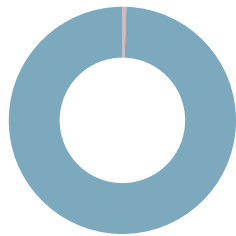
III.

OVERVIEW OF HOUSING CRISIS
IN NYC

Although NYCHA is the largest landlord in New York, serving 1 out of 14 New Yorkers, fewer than 1% of their units are vacant and available each year for rent. The waitlist for these properties can be up to 9 years for eligible city residents. The demand for housing, in comparison, is skyrocketing due to increased rents disproportionate to an annual deflation of income, which ultimately means more and more people need to live in affordable, not market rate, housing

NYCHA's properties, although high in demand, are in such disastrous states that there is a higher risk of death in areas with a high concentration of public housing projects. Because of its operating deficit, their buildings are generally poorly maintained, leading to a proliferation in disease and crime.

. 65%



of NYCHA housing is available for rent each year.

In 2011, only 424,949 Rental Units were available to Extremely Low Income and Very Low Income Households while 979,142 Households of these income levels exist. That's more than 2.3 households per available unit



(Figure 14)

NYCHA serves 1 out of 14 New Yorkers.



In a nutshell...

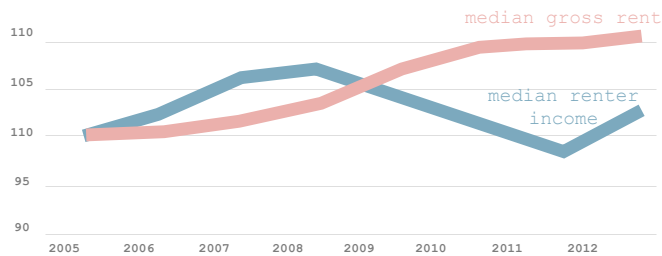


Rent



Income

NYC Median Gross Rent and Renter vs Household Income



Source: 2005-2012 American Community Survey (1-Year Estimates, Bureau of Labor Statistics CPI-NYC)

(Figure 15)

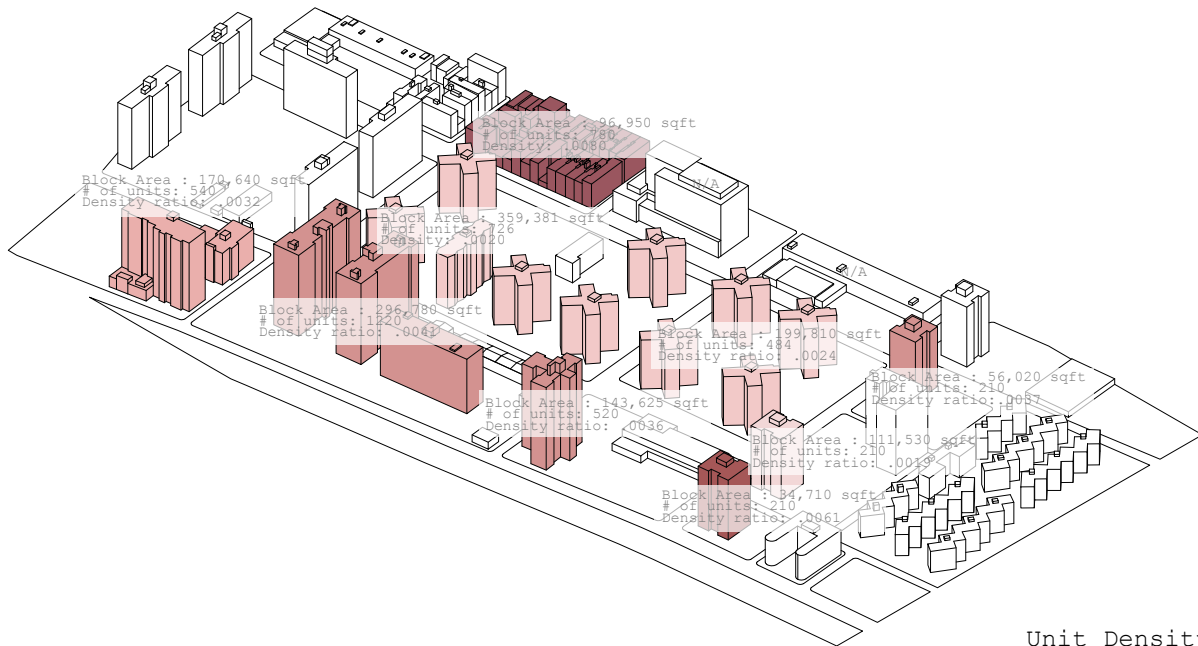


There is a link between neighborhoods with high concentrations of public housing and early death

Source: New York Times (Figure 16)

Our site is marked by the cross-shaped buildings in figure 17. As you can see, although ARCGIS and other datasets regard the La Guardia Houses as of the highest residential density, the houses are actually not as dense as their surrounding buildings, some of which are also owned by NYCHA. By locating our project in a generic and not exceptional NYCHA site, There is an opportunity to densify on other similarly-occupied public housing projects.

In figures 20 and 21, There is a projected population growth in New York City over the next 30 years. If rent keeps inflating, income keeps deflating, and new affordable housing units are not made available, the number of homeless people sleeping in shelters will also skyrocket.



Unit Density of Site
(Figure 17)



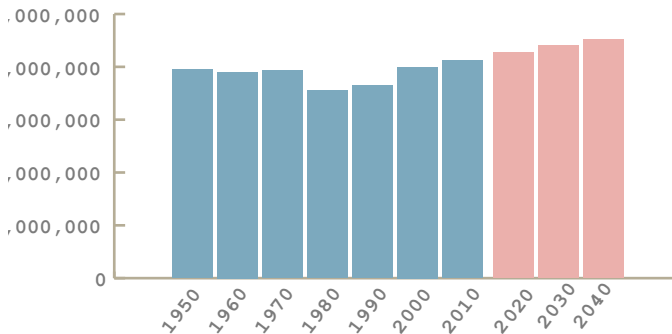
But in actuality, the LaGuardia Houses do not contain as many units per square foot as its surrounding NYCHA counterparts.

■ Our Site
■ Highest
■ Very High

Population Density on Our Site
Source: ARCGIS
(Figure 19)

Supposedly, our site is considered of the "highest density" ...

NYC Population & Projected Growth



There is a projection of 9,025,145 New York City residents by 2040... Unfortunately, many of which will be home less.

Source: NYC Department of City Planning, Population Division

(Figure 20)

Number of Homeless People in NYC Shelter Each Night



Even though 4,700 shelter residents have jobs they are not earning enough to pay NYC's exorbitant rent price.

Gross Residential Density
Source: NYC Department of Homeless Services and Human Resources Administration and NYCS at shelter census reports

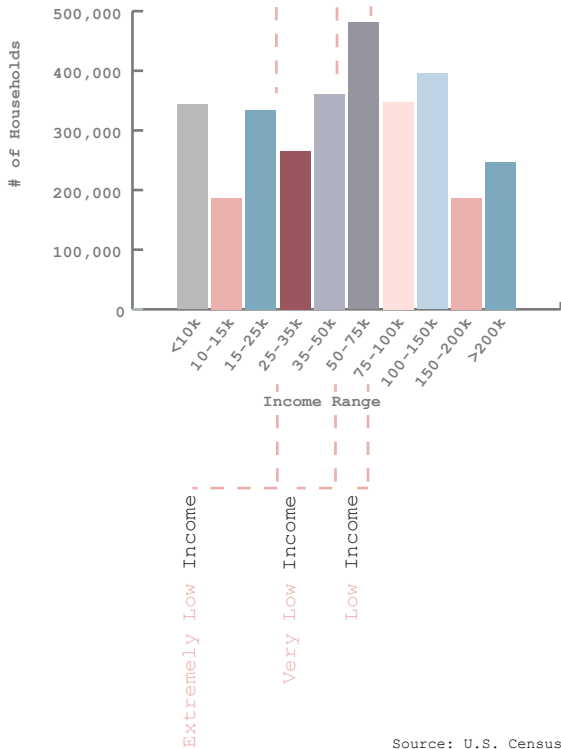
(Figure 21)

Figure 22 shows that well over 50% of New Yorkers are located in the Low Income Household range (up to 60% AMI).

Figure 23 = shows it is almost impossible to avoid rent burden in market-rate unit even if you make the average income of \$69,659 in Manhattan.

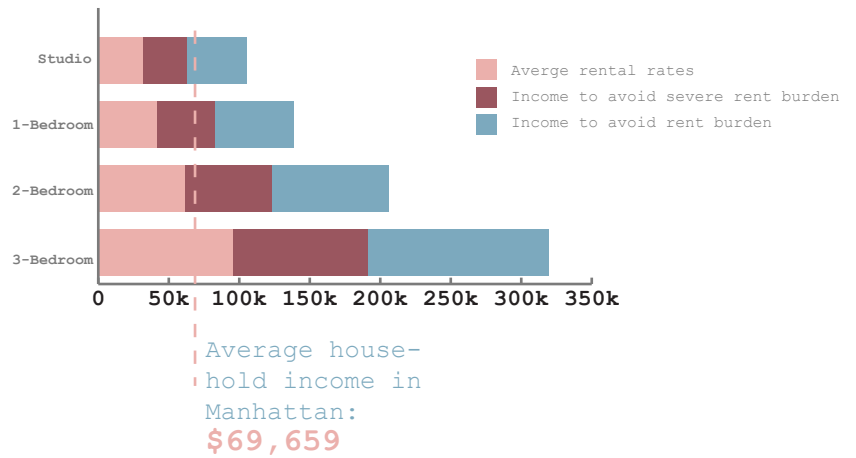
All of this data show that the average New Yorker is not able to afford living in New York.

of NYC Households by Income Range (\$1000's)



Source: U.S. Census Bureau, 2014
(Figure 22)

Income Levels to Avoid Rent Burden (Manhattan)



Source: U.S. Census Bureau, 2013
(Figure 23)

According to the NYC Housing Preservation and Development department, you are rent-burdened if you spend over **30%** of your income on rent. You are severely rent-burdened if you spend over **50%** of your income on rent.

Typical Rent Burdens Across NYC

The median rent-to-income ratio by borough in 2016, or the share of total household income necessary to pay median asking rent



(Figure 24)

Even the average New Yorker is unable to afford to live in New York City. As the largest landlord in NYC, **how is NYCHA planning on tackling this housing crisis?**



IV.

AIM

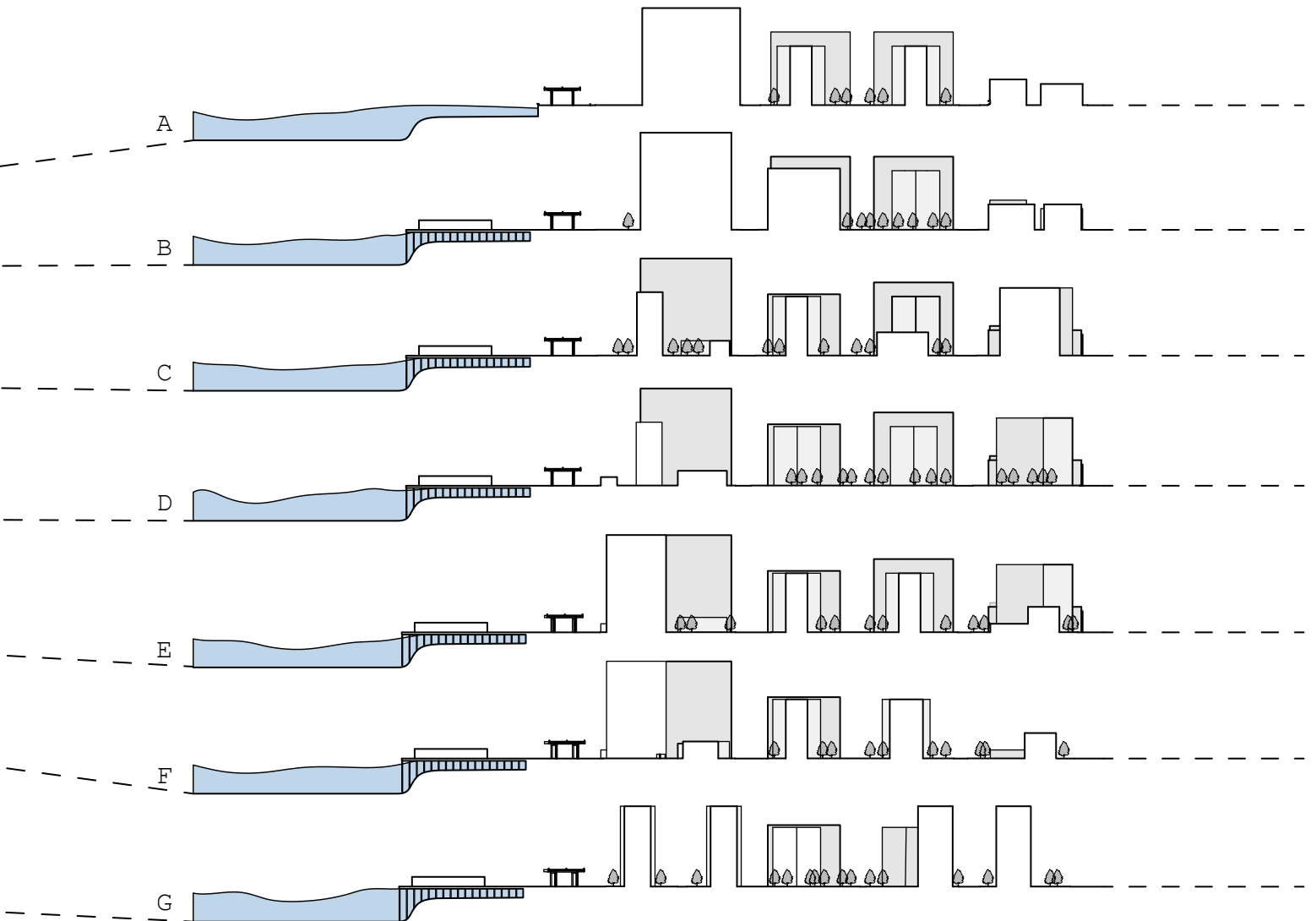
Jumping in the the site more specifically, we wish to address it on two scales. One is the scale of the neighborhood, and the other is at the scale of the building.



(Figure 25)

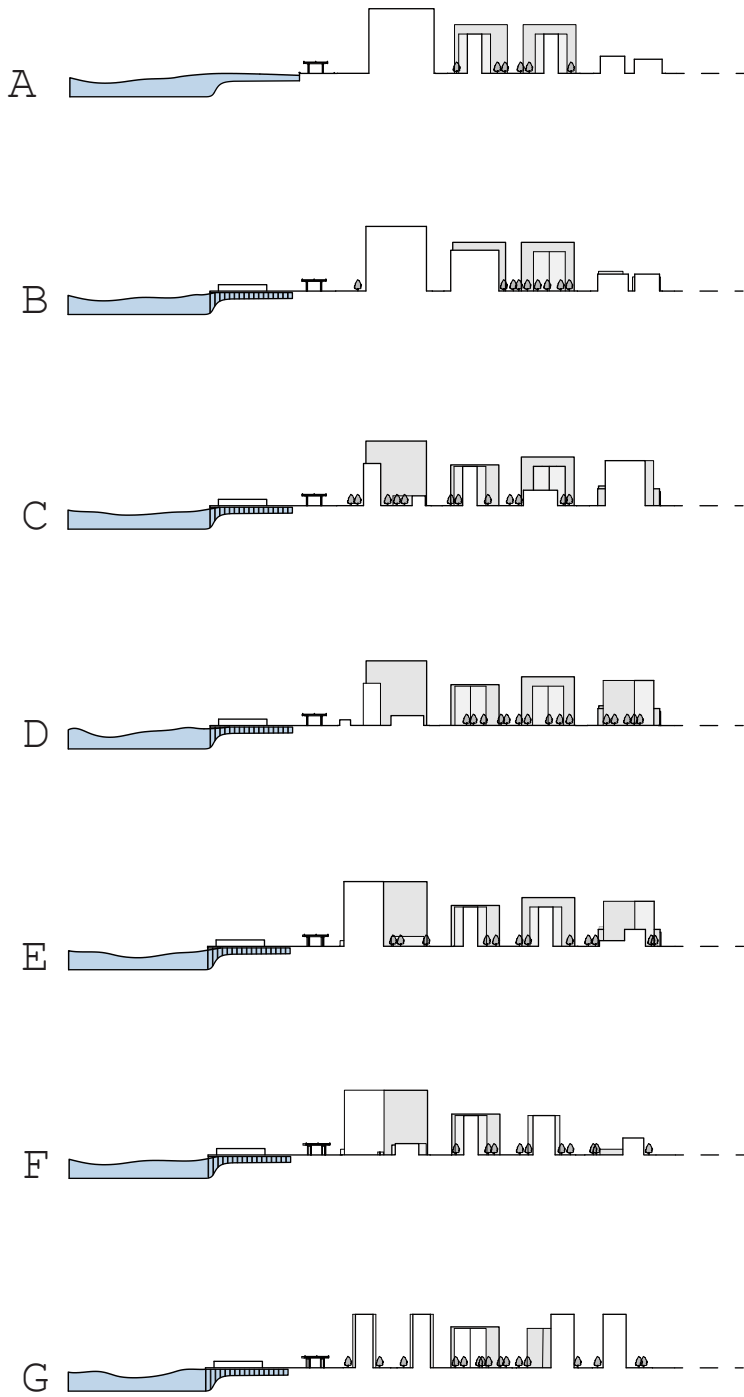


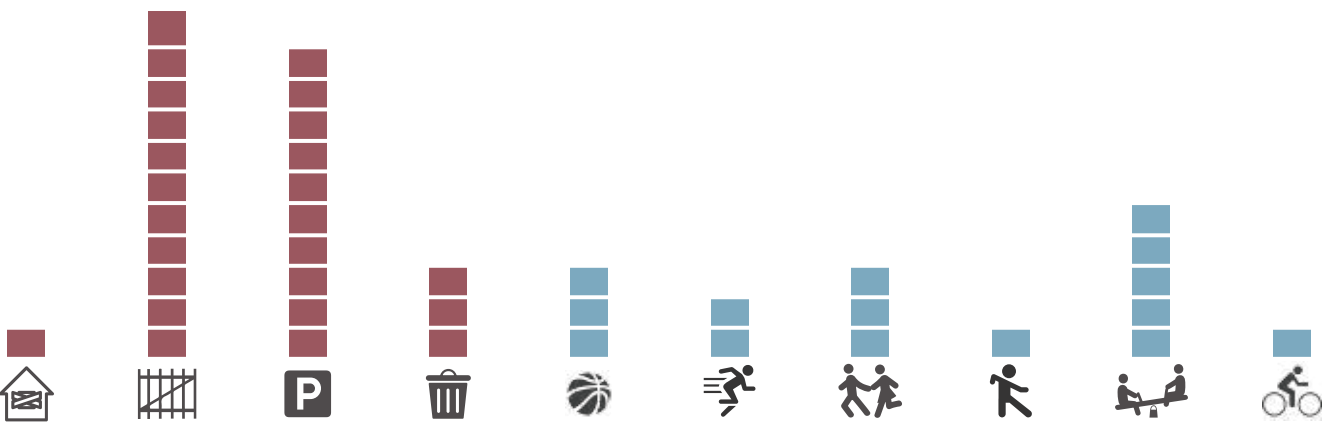
At the scale of the neighborhood, the site contains a lot of discontinuous pedestrian paths on the North-South axis. At the South-most part of the site, a quaint East River Waterfront Esplanade, designed by SHoP Architects, is full of recreational activities and beautiful views of the Manhattan Bridge. However, in order to walk from the retail strip at the north of the site towards the pier, one would engage in a series of sectional conditions that completely dissuade the pedestrian from proceeding. The sectional conditions show that there are a lot of disproportionately massive buildings that are not densely packed at the street level, creating open pockets of underutilized and fenced-off greenspace. In addition, the FDR drive hanging over the pier creates high-speed traffic underneath. With no traffic lights for the safety of the pedestrian, who would even think about crossing this site?



(Figure 26)

From the site photos, we can see that there is a lot of parking on the site. There are also intermittent public programs such as playgrounds and outdoor exercise facilities that are simply too difficult to get to because of the monumental scale of the La Guardia towers and their surrounding NYCHA projects. We wish to connect this axis using a pedestrian-friendly way to allow this site to be less intimidating. Thus, the La Guardia site can be utilized to its bridging capacity rather than ignored.





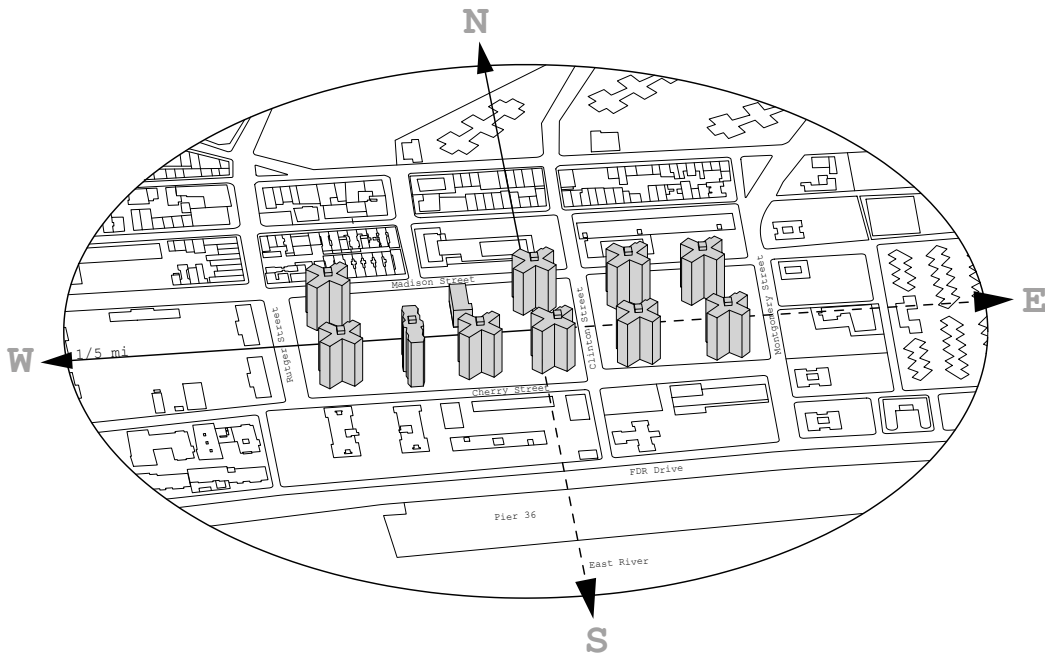
(Figure 27)
47



V.

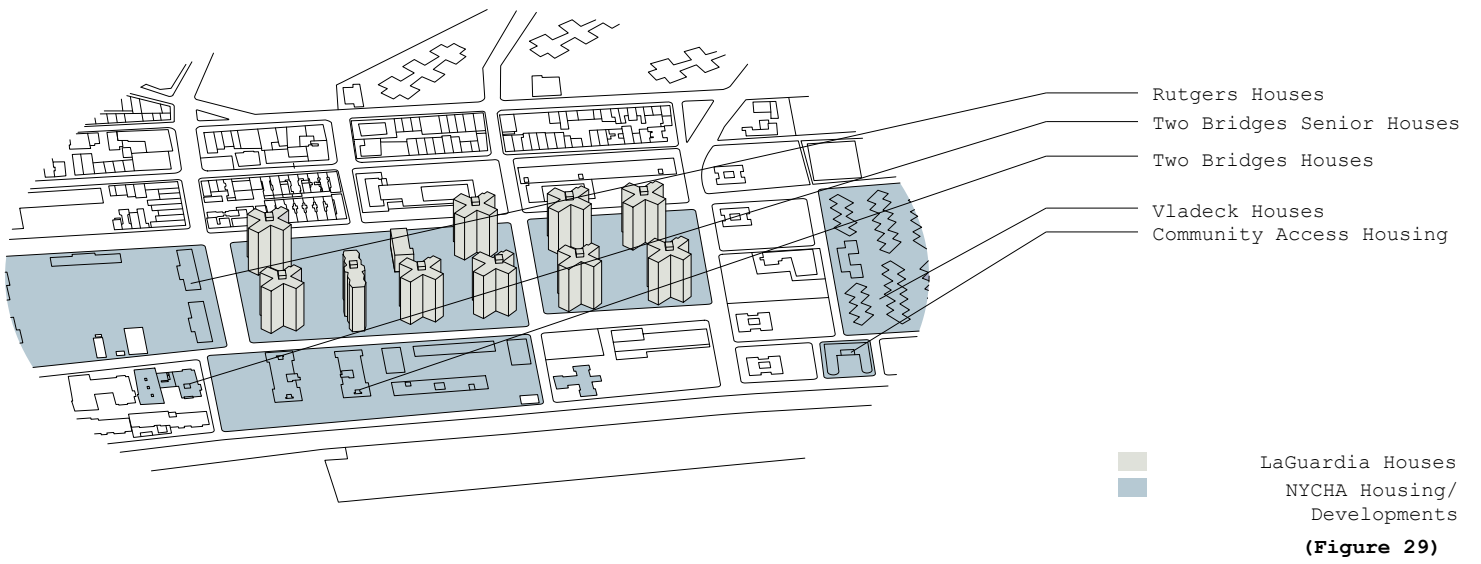
ISSUES

The following axonometric study looks at the site from a programming perspective.

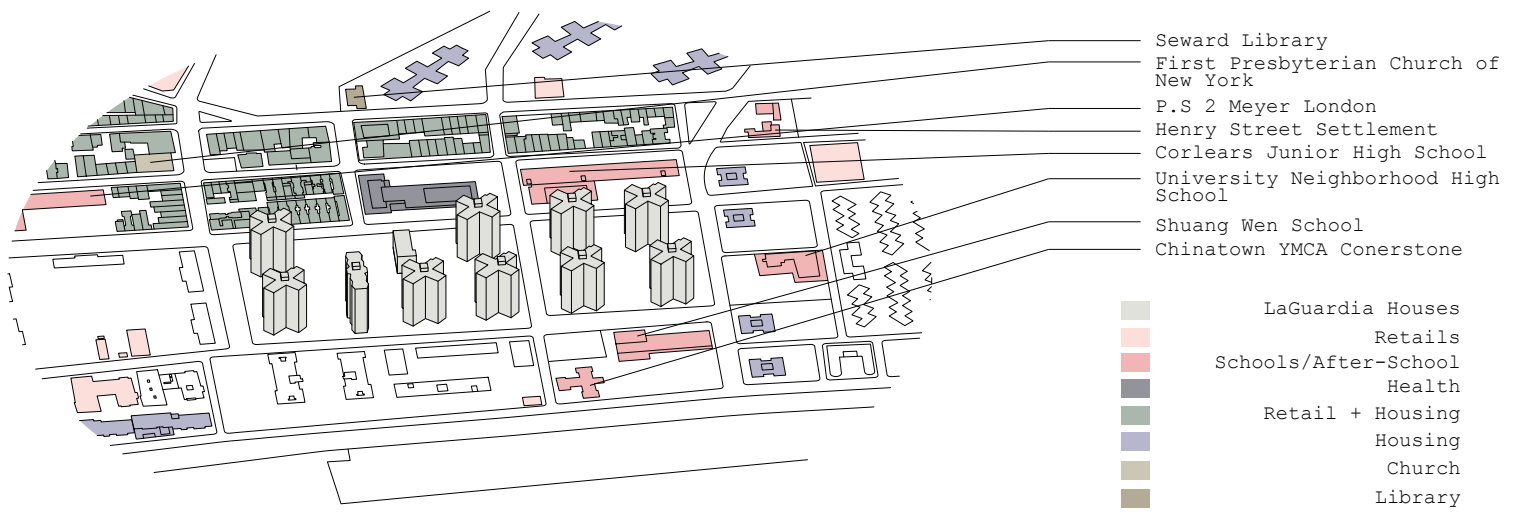


(Figure 28)

Highlighted in blue in figure 29 is NYCHA owned property. The LaGuardia houses is surrounded on all sides by a sort of wall of public housing and infrastructural projects, leading to its semi-monotonous programming.



However, because the site is situated near the Lower East side and Chinatown, there is some small-scale retail program in the blocks just north of the site. There are also many public elementary, junior high, and high schools close to the site. At a larger scale, the LaGuardia Houses is surrounded by program that is quite diverse. In terms of the immediate neighborhood level, it could definitely do better at bridging the gap between densely packed program to the north and disconnected programs to the south.



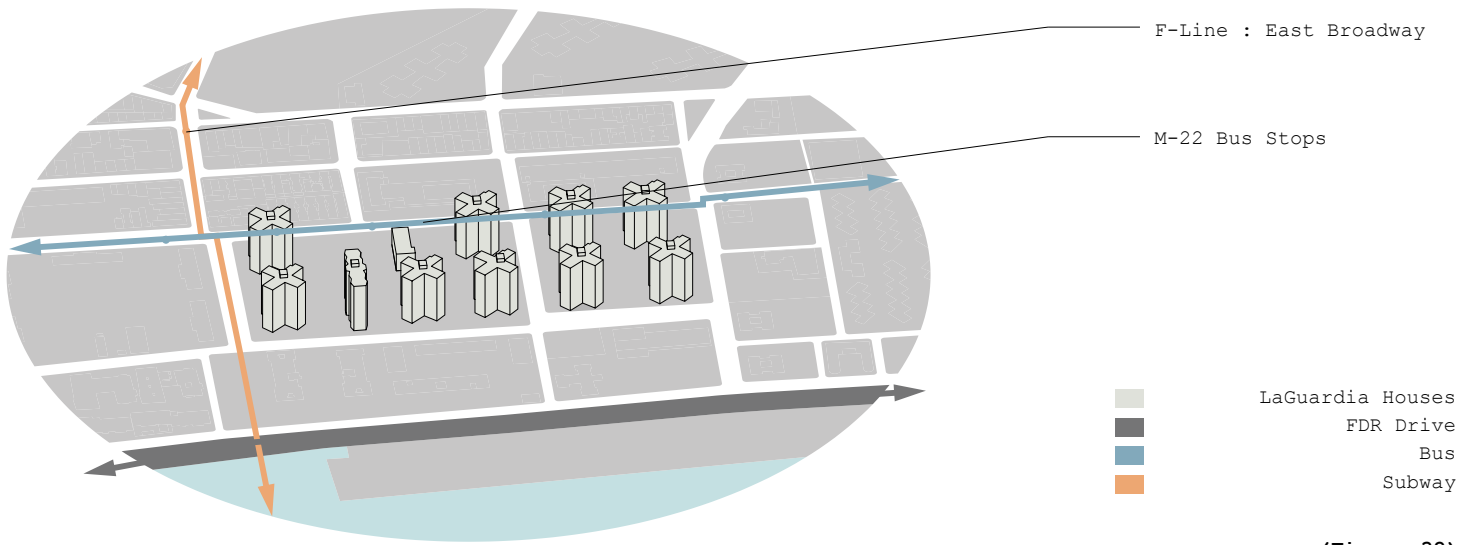
(Figure 30)

Figure 31 shows public parks and greenspace, which the site has an abundance of but much of it is fenced off.



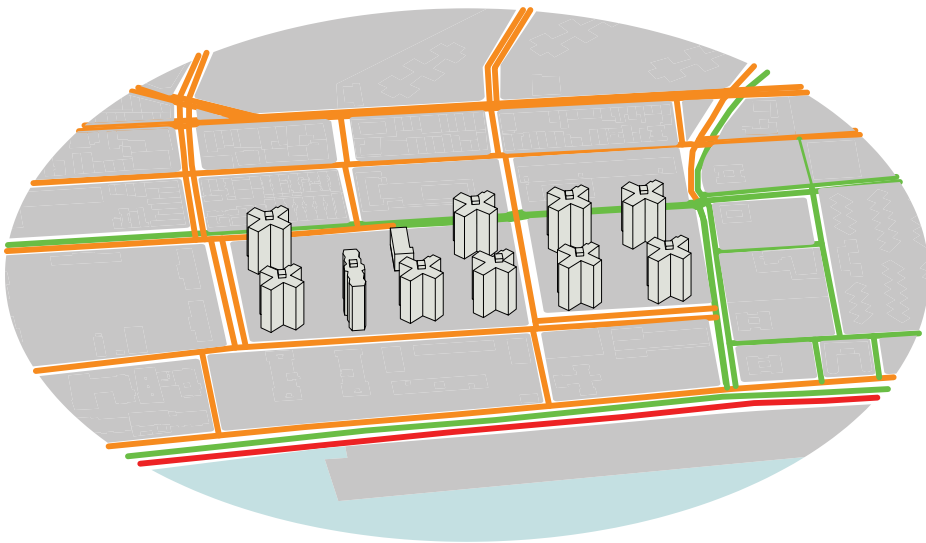
(Figure 31)

Figure 32 shows that the site is well-connected in terms of public transportation. It has access to highways, bus stops, and the F line at the East Broadway subway station. If we zoom out even further from this diagram, there is also a connection to both the Manhattan and Williamsburg bridges.



(Figure 32)

Figure 33 shows traffic patterns on site. Traffic is increased by the two bridges and the FDR drive, all of which are used by commuters from Manhattan to Brooklyn and vice versa.



- LaGuardia Houses
- Fast Traffic
- Mediate Traffic
- Slow Traffic

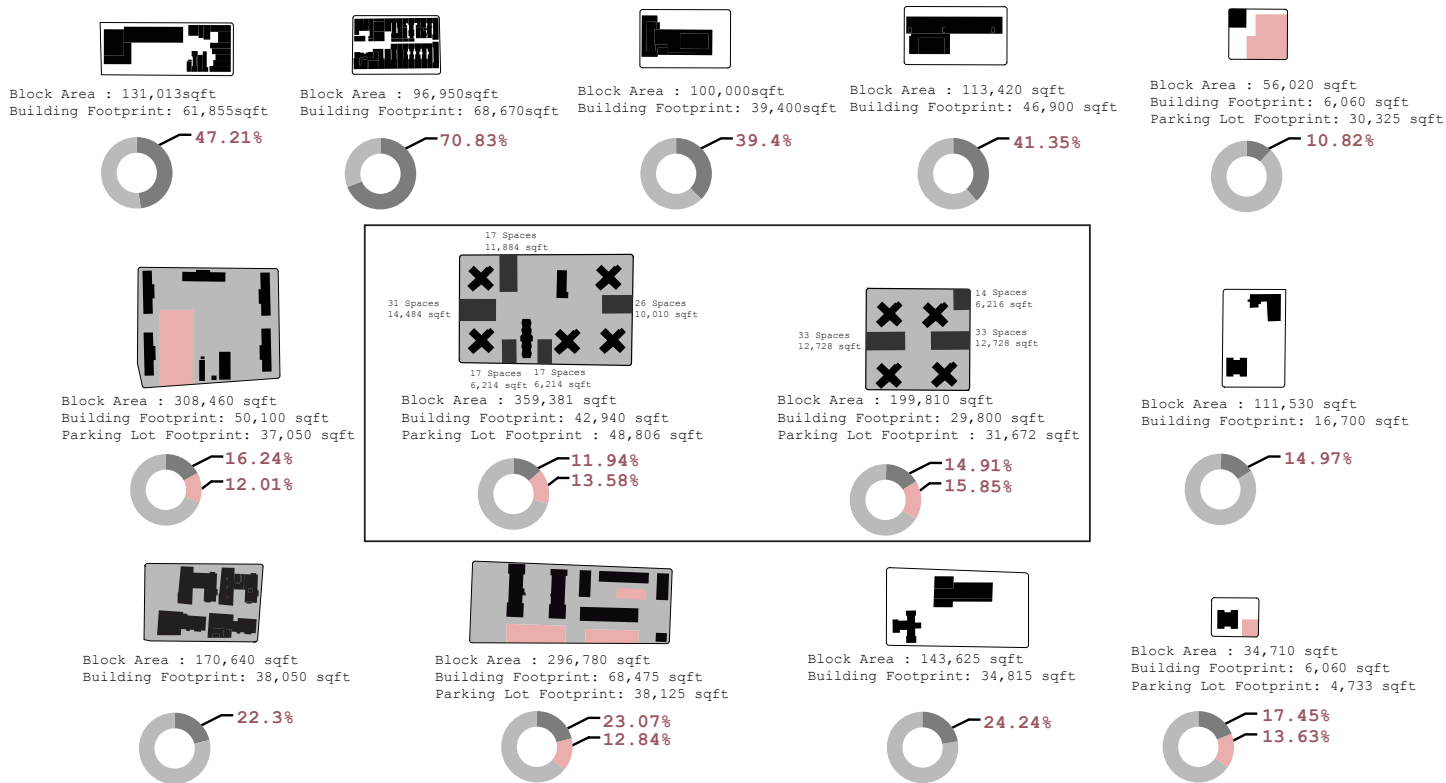
(Figure 33)

The site plan in figure 34 shows parking on our site highlighted in pink. There are a total of 188 parking spots on our two lots. NYCHA properties are highlighted in gray.



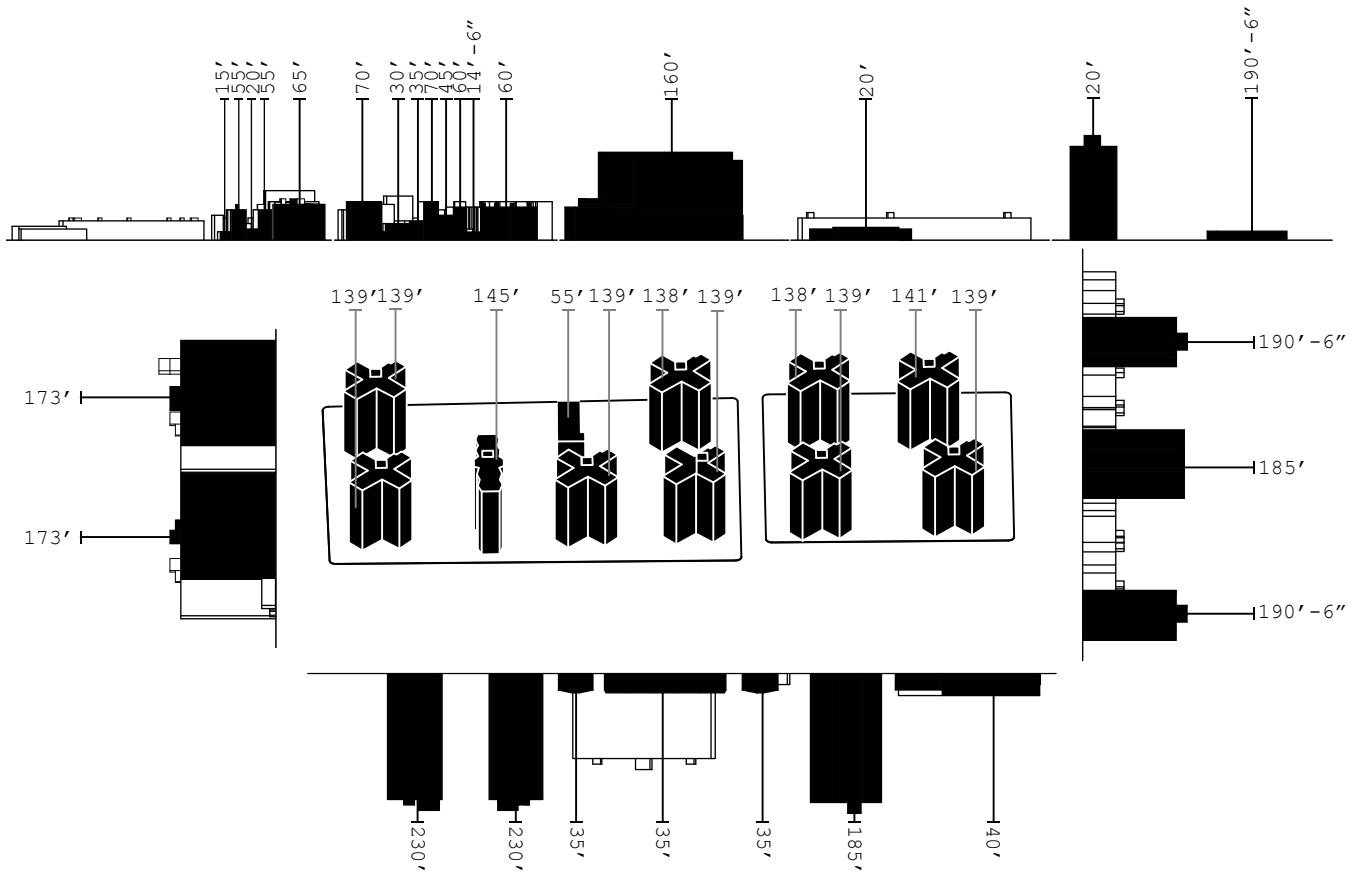
(Figure 34)

As opposed to the northern blocks which are not NYCHA-owned properties, the NYCHA owned properties have significantly more parking on site, which are somewhat redundant when you consider how well the site is connected by public transportation (figure 35).

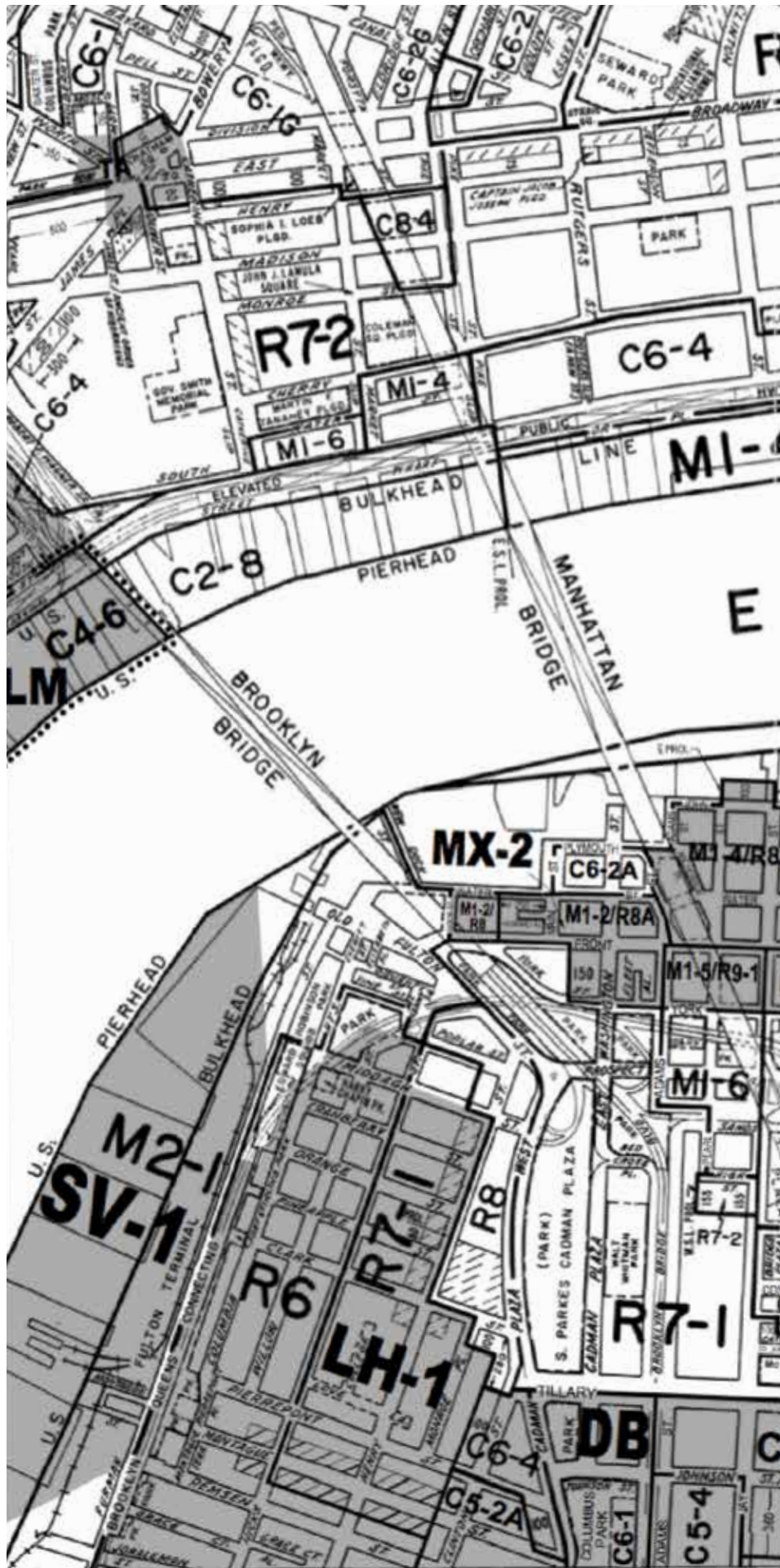


(Figure 35)

In terms of its building footprint, residential density, and height, the LaGuardia Houses are not nearly as dense or as tall as its surrounding buildings.



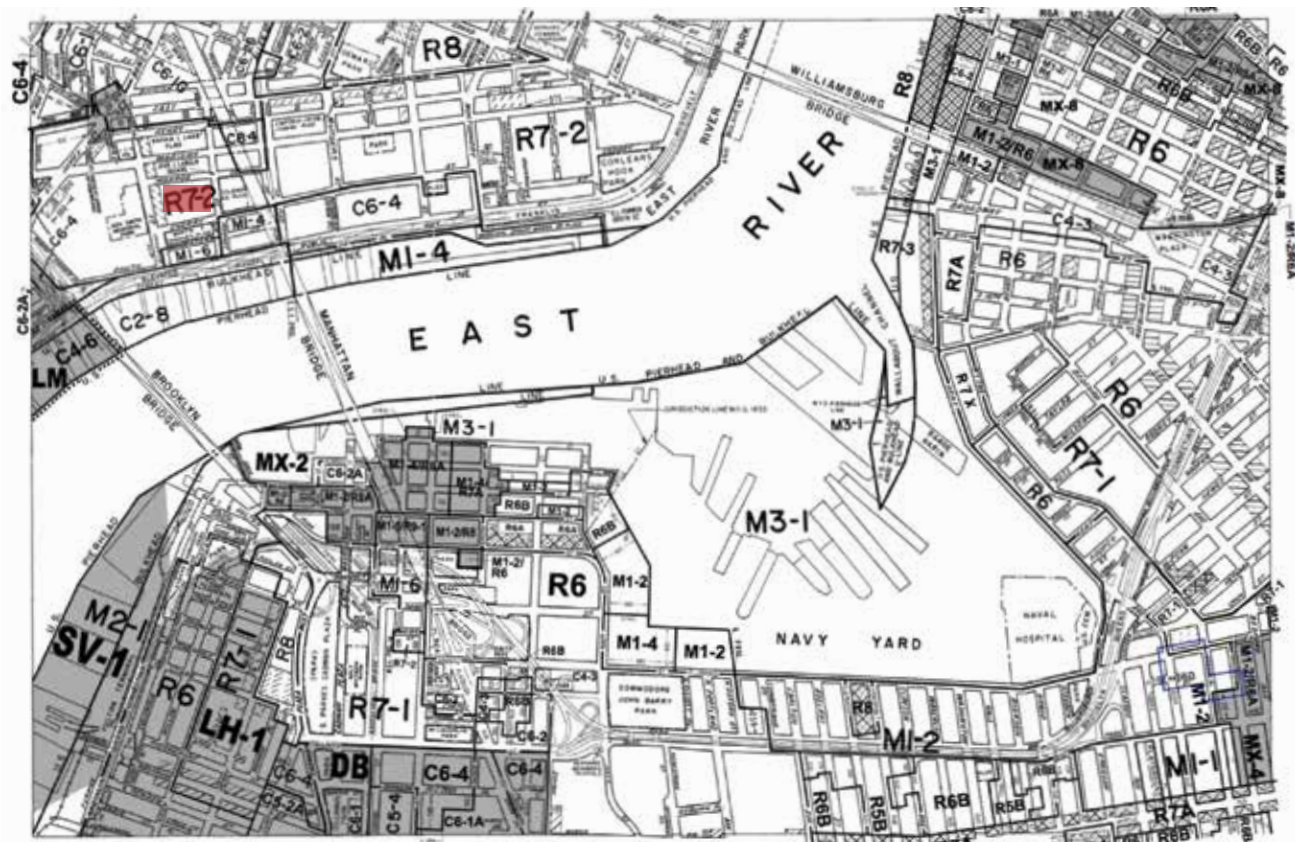
(Figure 36)



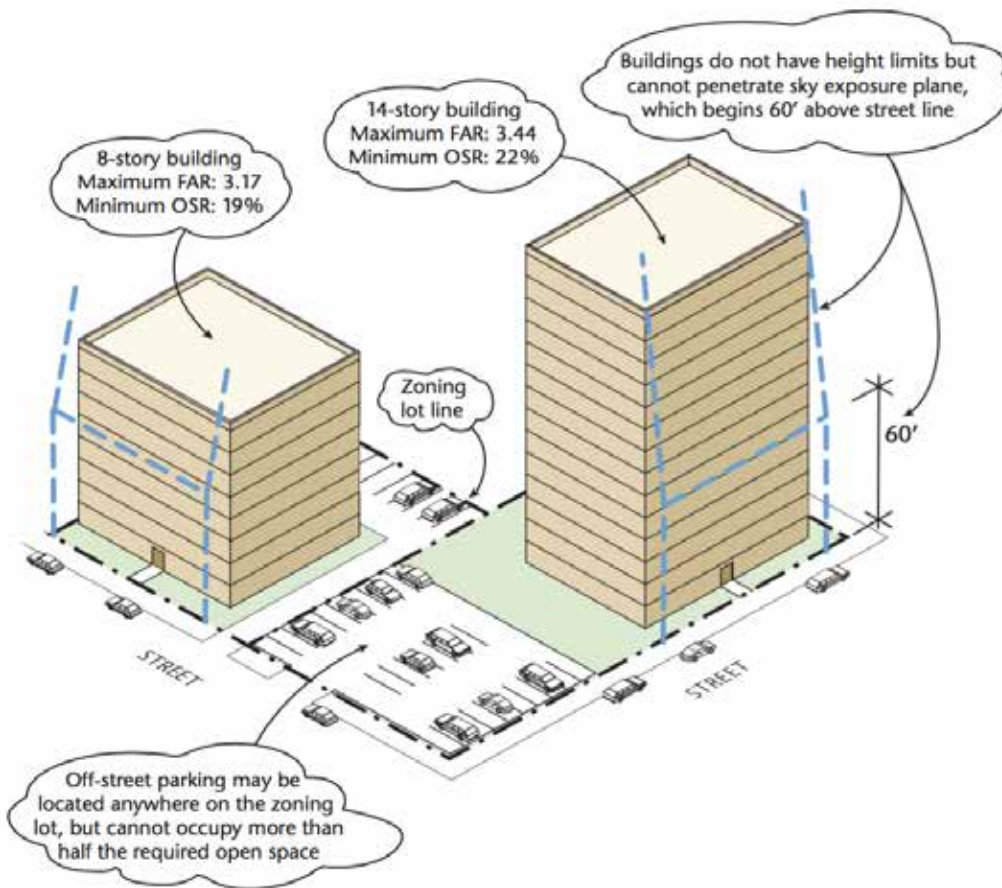
VI .
ZONING

The particularly parking-dominated site strategy is determined partially by zoning regulations. As a R7-2 medium density residential district highlighted in red on the zoning map, there are two types of zoning that affect our site. There is the old zoning typology with no height restriction but a range of FAR and OSR, or open space ratio. The setback follows the sky exposure plane. The second zoning that applies to our site is the Zoning for Quality and Affordability act, which is a part of De Blasio's 10-year plan.

New construction needs only to conform to one set of zoning restrictions. However, because both zoning regulations required 50% of units to have parking on our site, we are looking at possibilities of changing some parts of the zoning regulations that will have massive impacts on our designs.



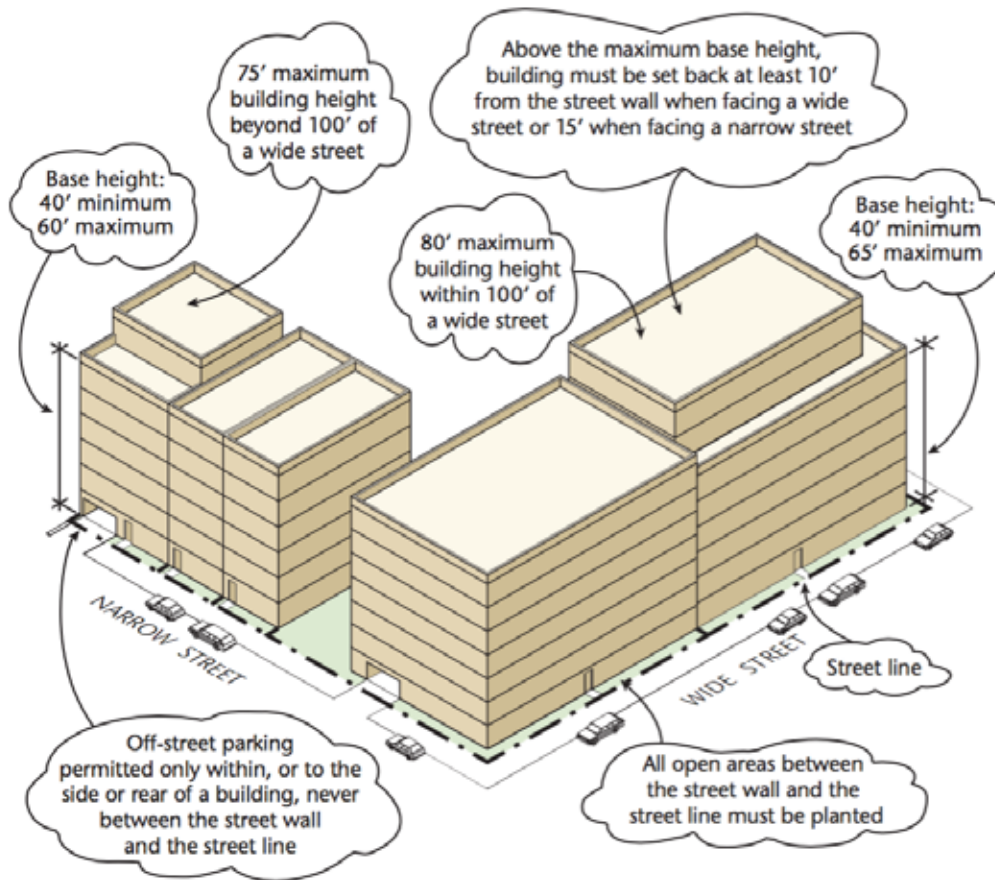
(Figure 37)



R7 Height Factor Regulations				
R7	FAR (range)	OSR (range)	Building Height	Required Parking ¹ (min)
	0.87-3.44	15.5-25.5	Governed by sky exposure plane	R7-1: 60% of dwelling units R7-2: 50% of dwelling units

¹In zoning lot 10,000 square feet or less, 30% in R7-1 districts and waived in R7-2 districts; on zoning lot between 10,001 and 15,000 square feet, 30% in R7-2 districts. In R7-1 districts, waived if 5 or fewer spaces required; in R7-2 districts, waived if 15 or fewer spaces required

(Figure 38)



R7 Quality Housing Option						
R7	FAR ³ (max)	Lot Coverage (max)		Base Height (min/max)	Building Height (max)	Required Parking ⁴ (min)
		Corner Lot	Interior/Through Lot			
		Wide Street ¹	4.0	80%	65%	40-65 ft
Narrow Street ²	3.44			40-60 ft	75 ft	

¹ Outside the Manhattan Core

² Includes wide streets within the Manhattan Core

³ 4.6 with Inclusionary Housing designated area bonus on a wide street in an R7-2 district; 3.6 on a narrow street

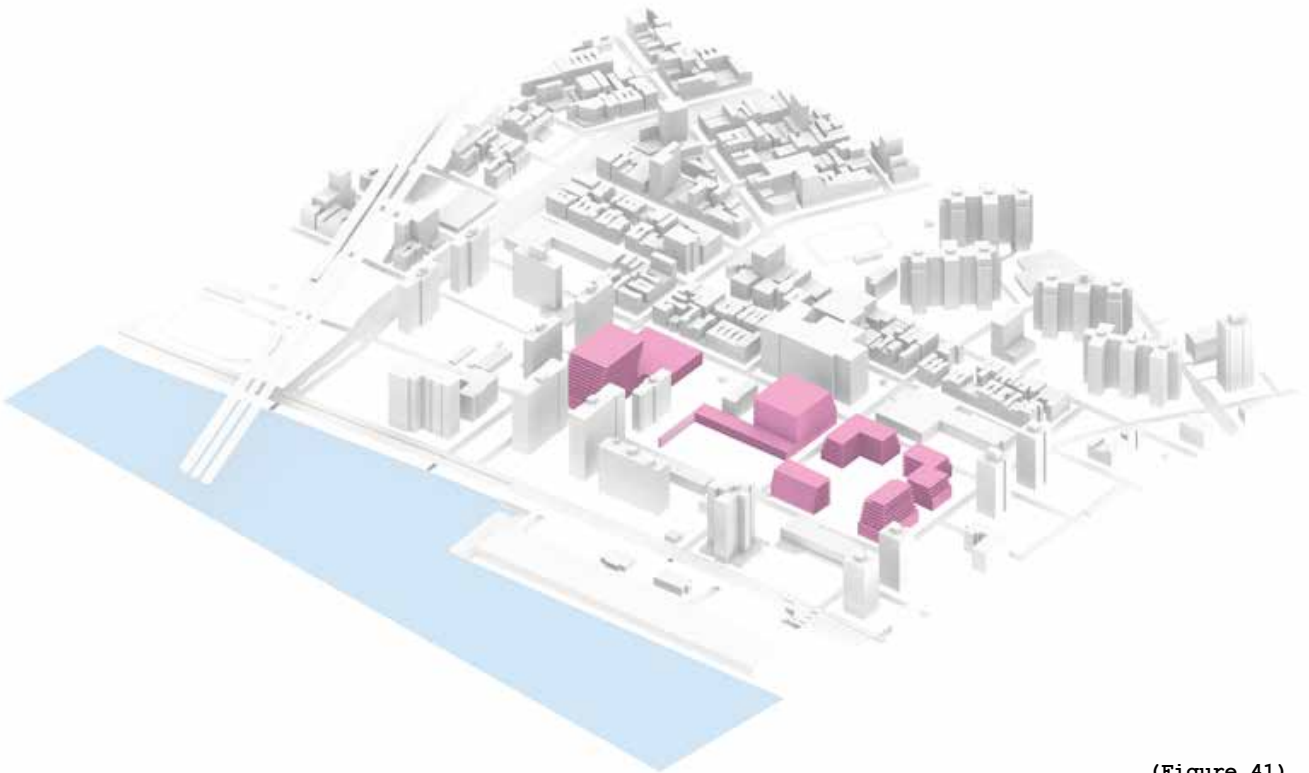
⁴ On zoning lot 10,000 square feet or less, 30% in R7-1 districts and waived in R7-2 districts; on zoning lot between 10,001 and 15,000 square feet, 30% in R7-2 districts. In R7-1 districts, waived if 5 or fewer spaces required; in R7-2 districts, waived if 15 or fewer spaces required

(Figure 39)

The following diagrams will explore the differences between the existing site strategy and new, maximized massings according to the existing zoning. We find that the zoning is largely inept at improving site conditions because of the parking requirements, open space ratios, and height limits.

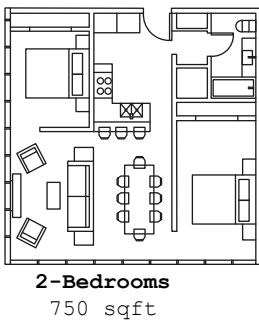
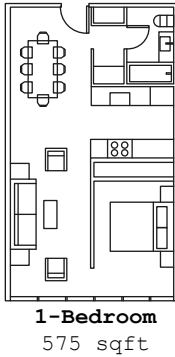
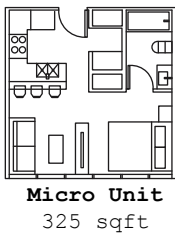
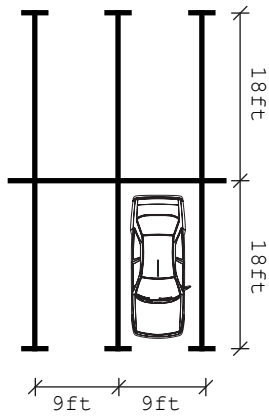


(Figure 40)



(Figure 41)

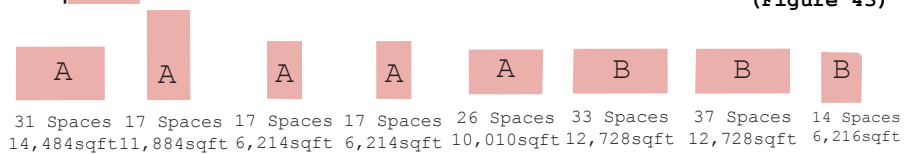
Parking is redundant on our site due to its proximity to public transportation, so we are looking to reduce the amount of on-site parking. The guidelines for this parking reduction refers to a study done by the Institute for Public Architecture. According to their study, up to 80% of parking can be eliminated because of we are located less than 0.1 miles from a subway station.



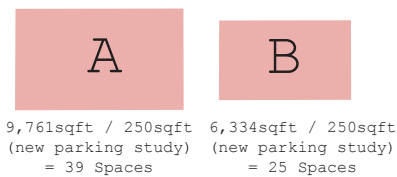
(Figure 42)

ZONE	DISTANCE FROM METRO (MILES)										
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	>1.0
R1-4	-50%	-50%	-40%	-40%	-30%	-30%	-20%	-20%	-10%	-10%	-0%
R5	-60%	-60%	-50%	-40%	-40%	-40%	-30%	-30%	-20%	-20%	-0%
R6	-70%	-70%	-60%	-60%	-50%	-50%	-40%	-40%	-30%	-30%	-0%
R7	-80%	-80%	-70%	-70%	-60%	-60%	-50%	-50%	-40%	-40%	-0%
R8	-90%	-90%	-80%	-80%	-70%	-70%	-60%	-60%	-50%	-50%	-0%
R9/10	-100%	-100%	-90%	-90%	-80%	-80%	-70%	-70%	-60%	-60%	-0%

(Figure 43)



-80%



(Figure 44)

The two figures on the right show how the ground plane changes by reducing 80% of the on-site parking.



↓
-80%

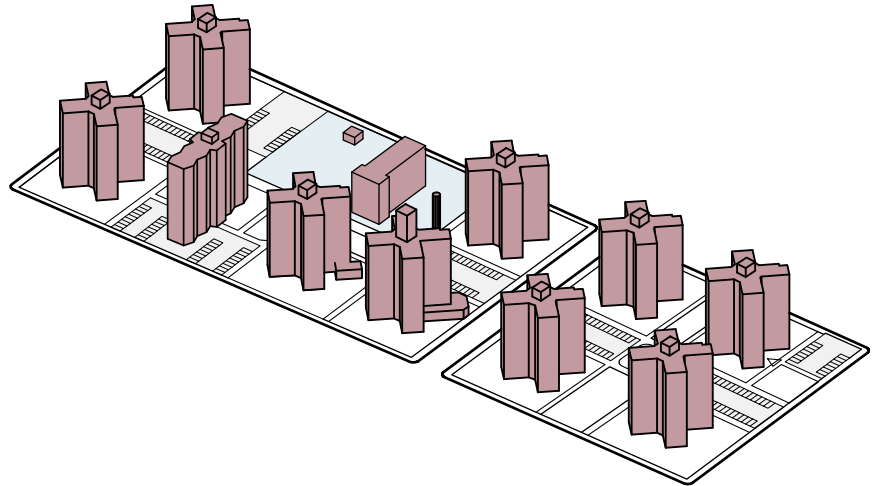


- NYCHA: LaGuardia Houses
- LaGuardia Parking Lot
- Removed Parking Lot

(Figure 45)

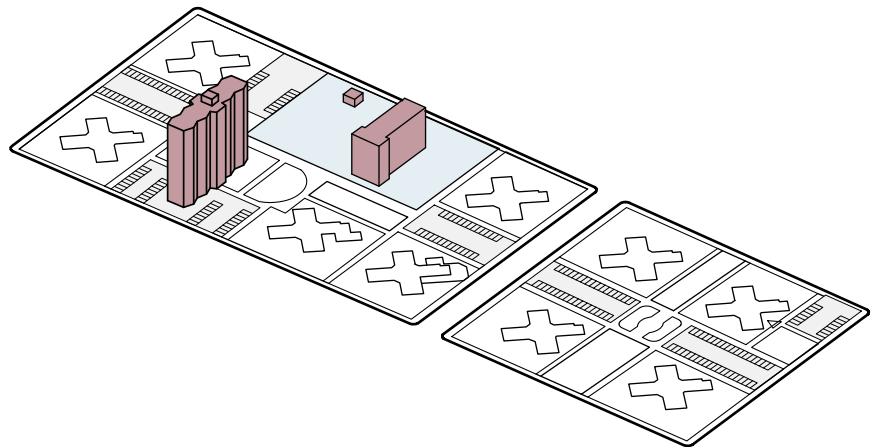
The following studies were done in accordance with the standard zoning regulations. The red represents existing buildings, and figure 48 shows how the old zoning affects the basic massing on site if we were to keep the existing volume of the buildings. In this case, the new building heights are lower than the original buildings, but no new residential units would be introduced. However, the street line would be filled.

EXISTING



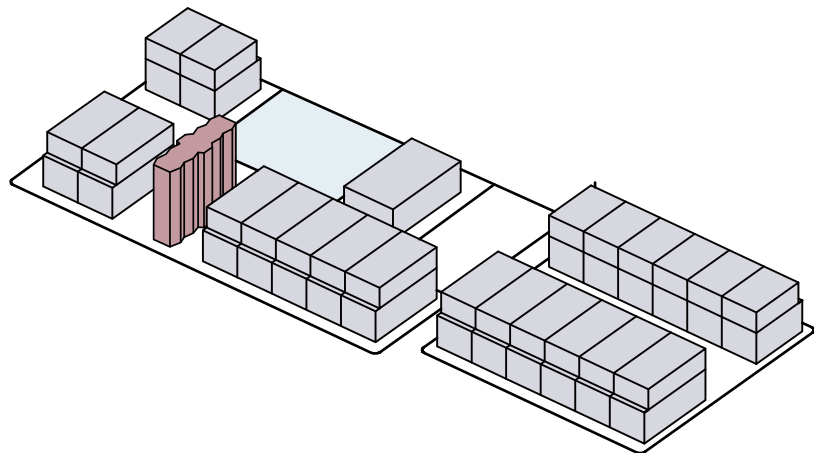
(Figure 46)

DEMO RESIDENTIAL



(Figure 47)

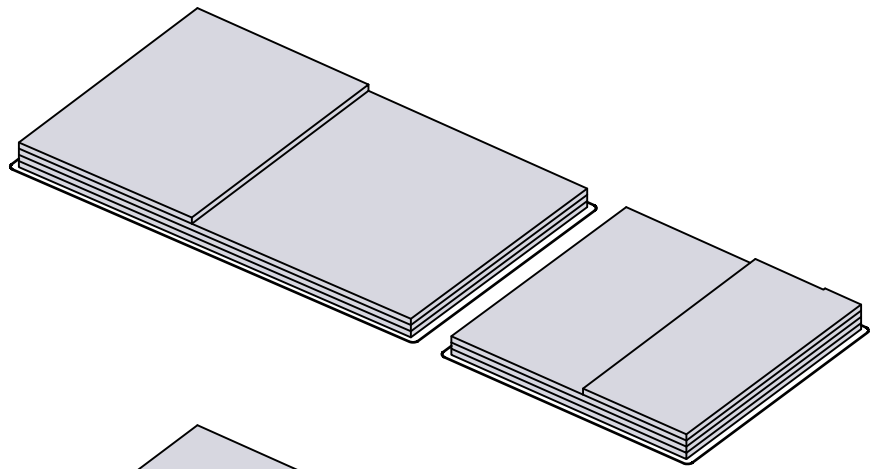
SCHEME #1
Old zoning R7-2



(Figure 48)

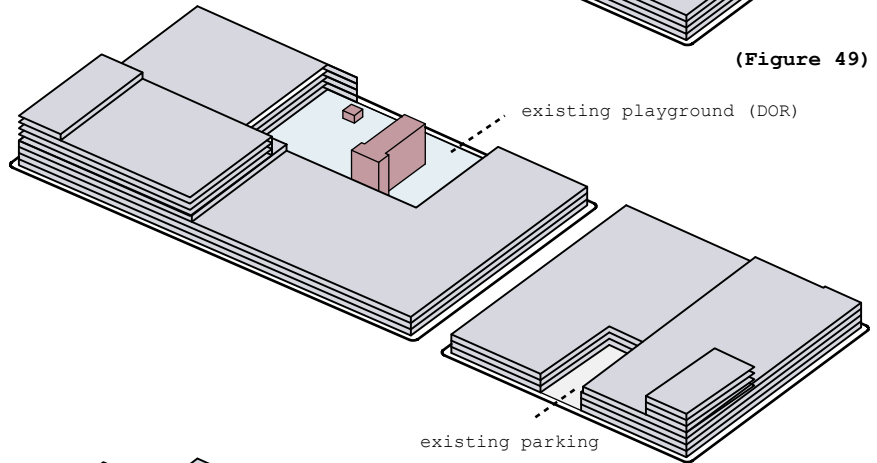
These next diagrams are also massing studies based on the old zoning regulations. In these studies, we maximized the FAR of 3.44 and minimized the OSR to 15.5 in order to get tall building stacks not unlike the original site towers, but denser. This conforms the site further into monumental proportions, an undesirable effect.

SCHEME #2
 Old zoning R7-2
 A)Max FAR 3.44



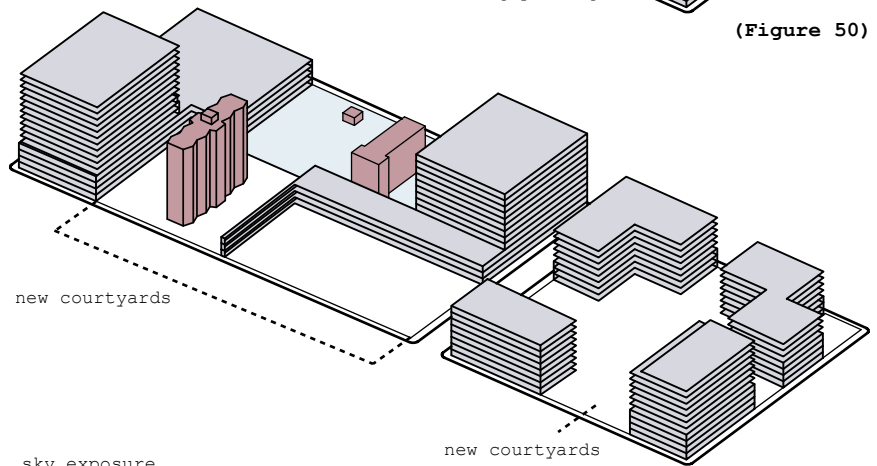
(Figure 49)

SCHEME #2
 Old zoning R7-2
 A)Retain old playground
 B)Retain 1 parking lot



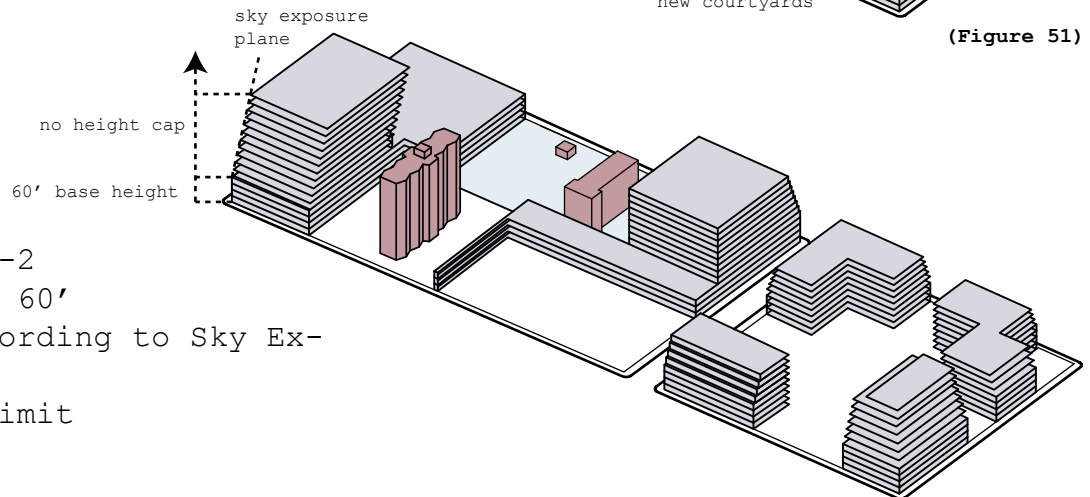
(Figure 50)

SCHEME #2
 Old zoning R7-2
 A)Least OSR 15.5
 B)Some new parking



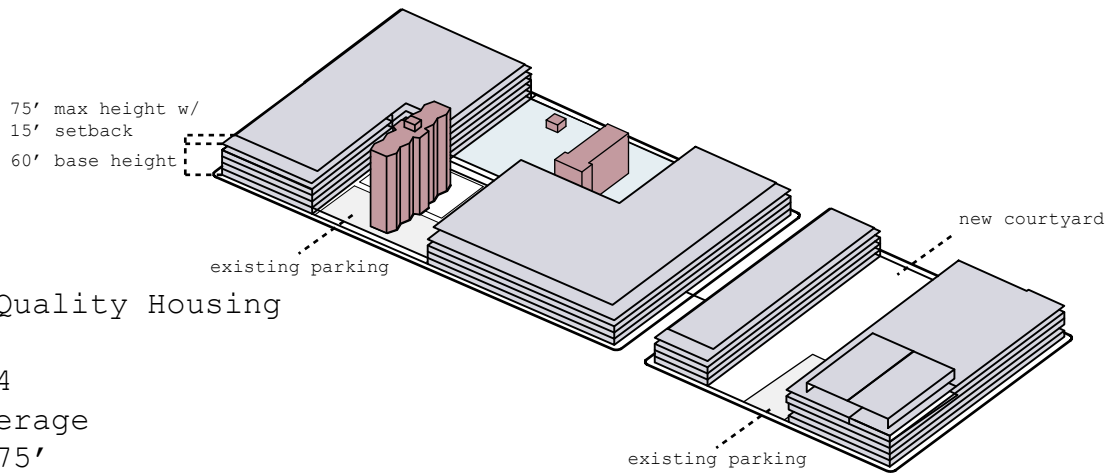
(Figure 51)

SCHEME #2
 Old zoning R7-2
 A)Base Height 60'
 B)Setback according to Sky Exposure Plane
 C)No height limit



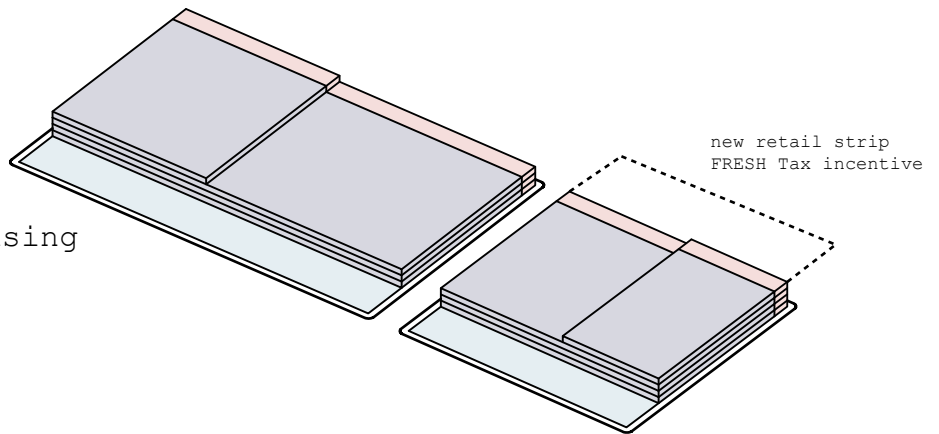
(Figure 52)

These studies were conducted with the new Quality Housing Option zoning for R7 districts. In this case, up to 80% of lot coverage may be granted for corner lots, although there is a height restriction of 75' facing a narrow street. The resulting is similar to a mat building. Although more units may be incorporated, strategic perforations in the mass need to be constructed in order to break up the massive scale of the building footprint.



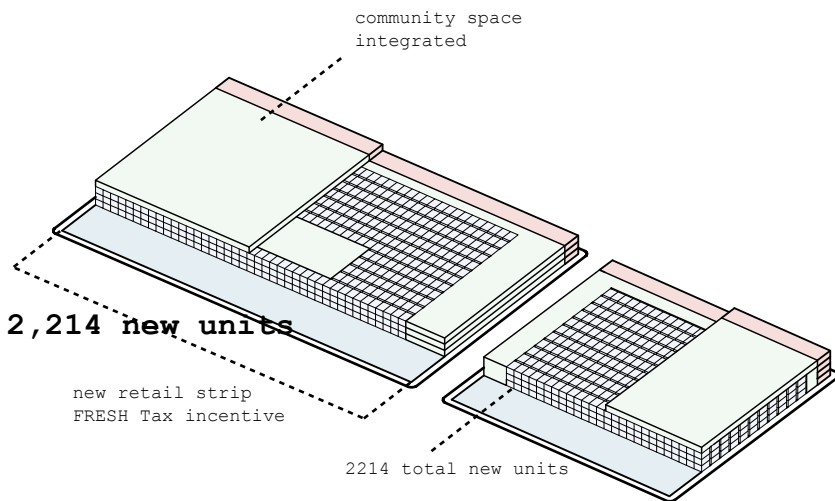
SCHEME #3
 New Zoning Quality Housing
 Option
 Max FAR 3.44
 65% Lot coverage
 Max Height 75'
 Setback 15' above 60' base
 height
 50% Parking

(Figure 53)



SCHEME #4
 New Zoning Quality Housing
 Option
 Max FAR 3.44
 Max 80% Lot coverage
 Max Height 75'
 50% Parking

(Figure 54)



SCHEME #4
 70% Residential
 20% Community
 10% Retail
 1,252 old units --> **2,214 new units**

(Figure 55)



VII.

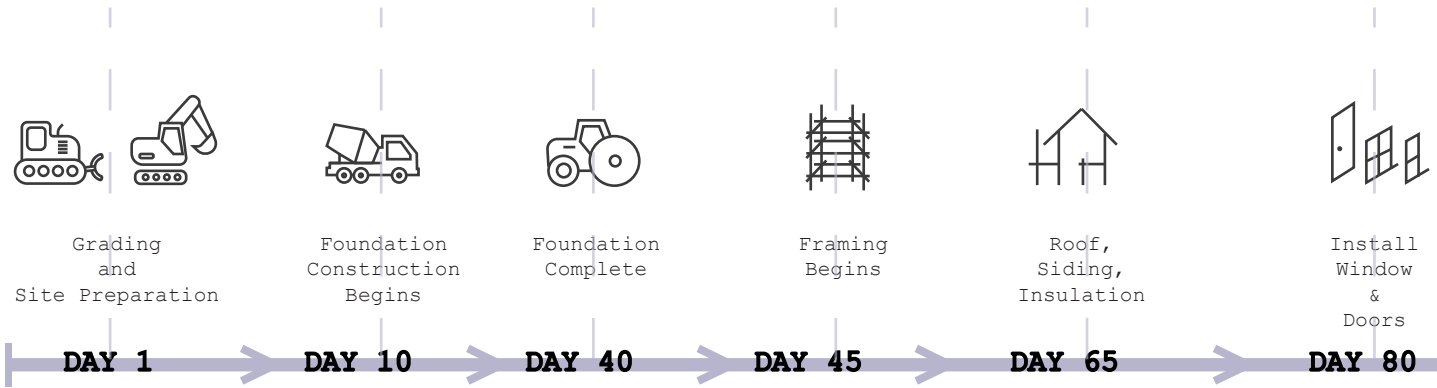
CONSTRUCTION METHOD

Our project also takes into account the simultaneous demolition and construction of new units on the site. In order to best meet our goals, we chose to design with modular and pre-fab construction in mind.

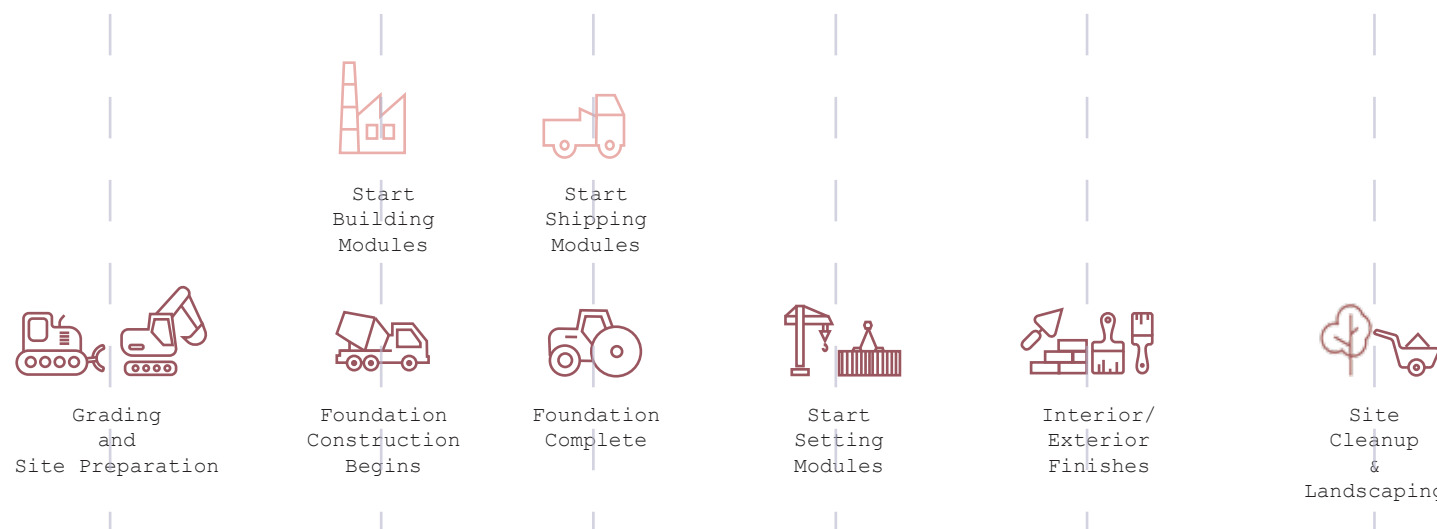
Construction Goals :

1. Do not displace residents during construction for over 1 week
2. Time-efficient construction
3. Sustainable construction
4. Energy-efficient construction
5. Reduce site disruption

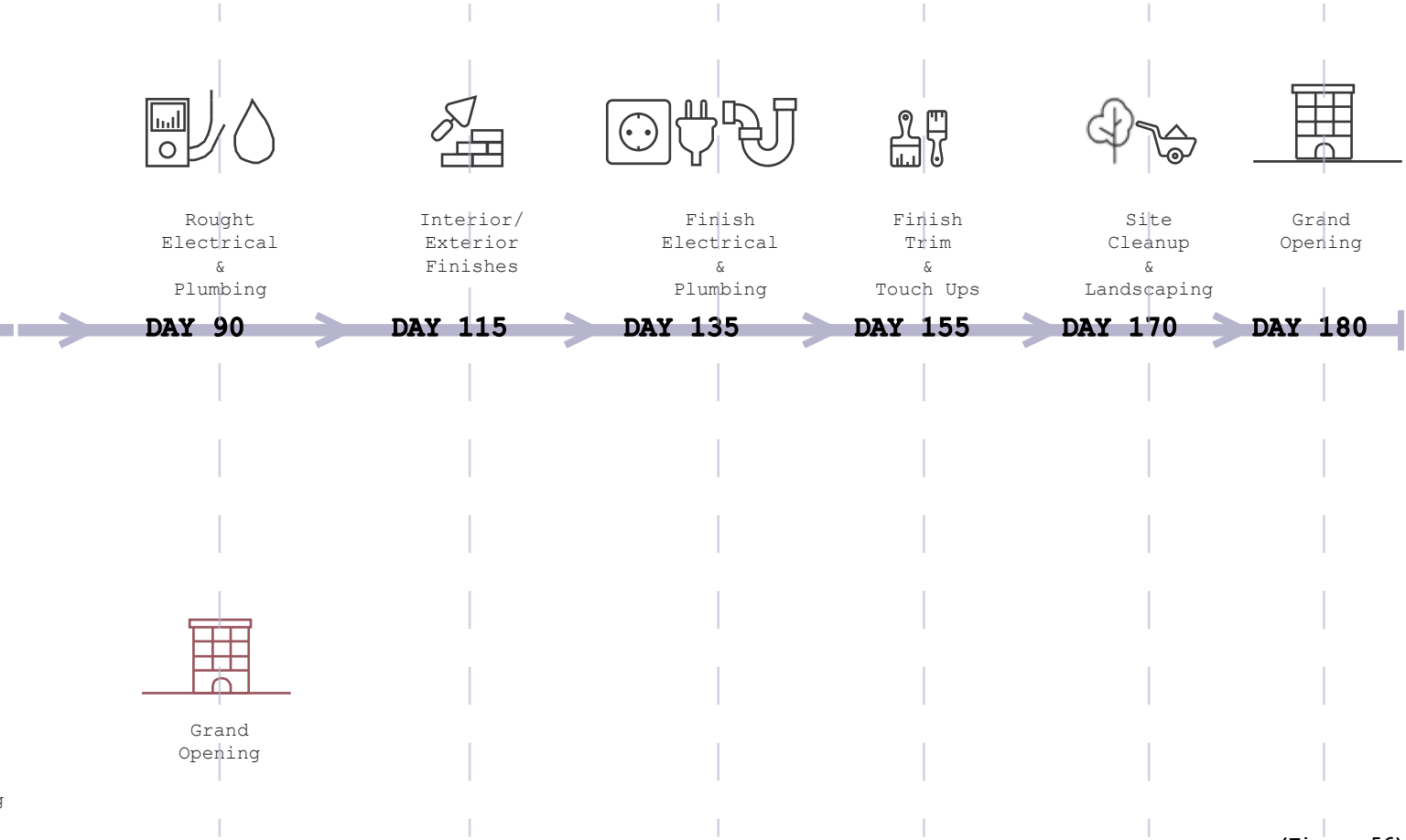
Traditional Construction Method



Modular Construction Method



The timeline below compares traditional construction methods to the modular construction method. The modular construction process takes half as much time because most of the unit construction is done off-site, in a separate facility.



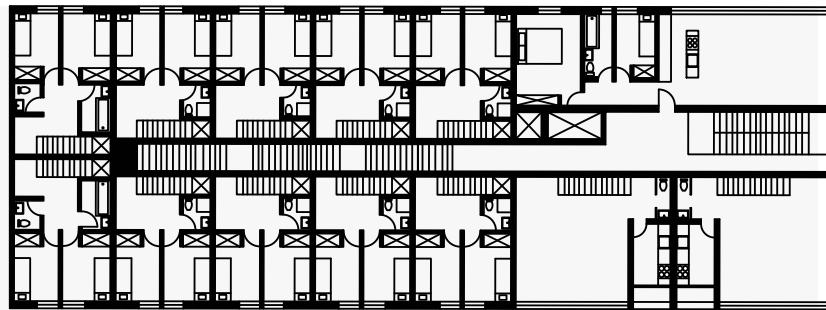
(Figure 56)



VIII.

PRECEDENT STUDIES

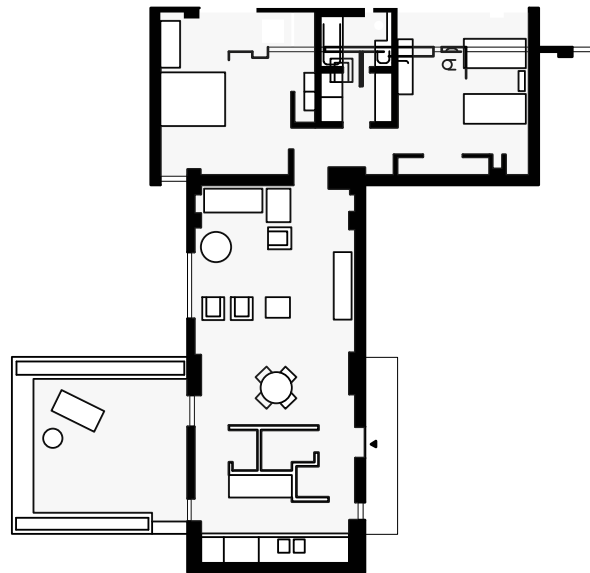
The following precedent studies look at existing modular, pre-fab, and affordable housing examples by planar arrangement and a set of criteria that we have constructed to evaluate the success of these projects. The precedents studied are the Mirador Housing Project, Habitat 67, Seijo Townhouse, Brunswick Centre, NYC Emergency House, Nagakin Capsule Tower, Carmel Place, and Sugar Hill Development. These precedents are located globally as well as right in the heart of New York City.



MIRADOR HOUSING PROJECT
 MADRID, SPAIN
 MVRDV



(Figure 57)



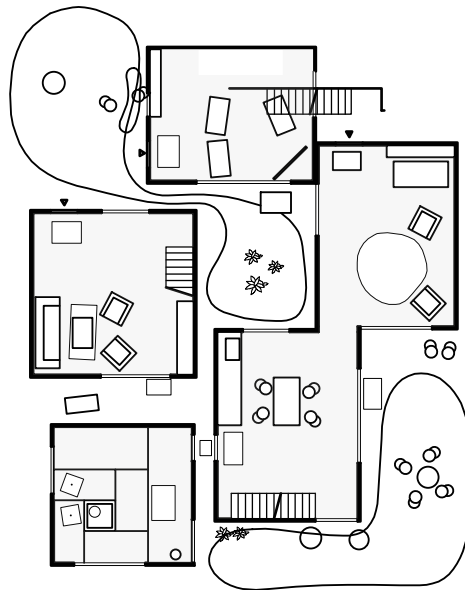
HABITAT 67
 MONTREAL, CANADA
 MOSHE SAFDIE



Unit size
 Unit cost
 Construction time
 Construction cost
 Community



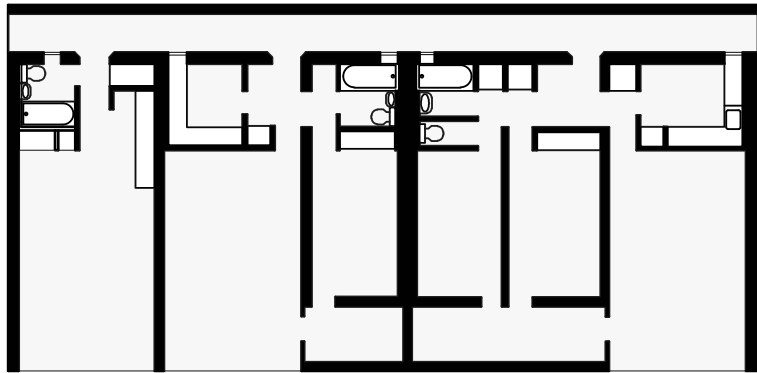
(Figure 58)



SEIJO TOWNHOUSE
 TOKYO, JAPAN
 SANAA



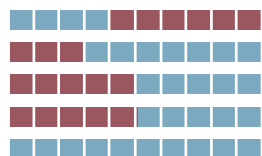
(Figure 59)



BRUNSWICK CENTRE
 LONDON, U.K.
 HODGKINSON & MARTIN



Unit size
 Unit cost
 Construction time
 Construction cost
 Community

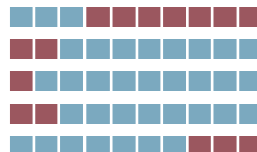


(Figure 60)

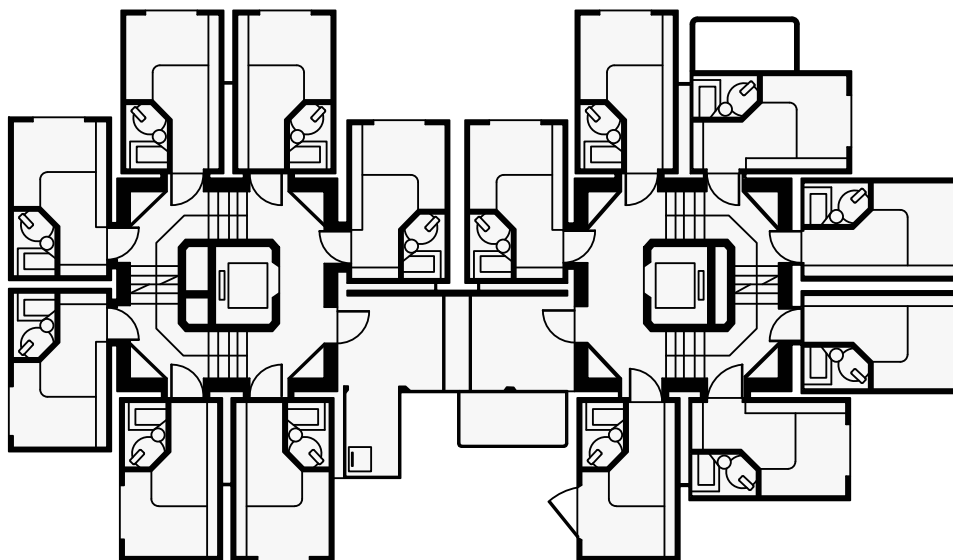


NYC Emergency Housing
 BROOKLYN, NEW YORK
 GARRISON ARCHITECTS

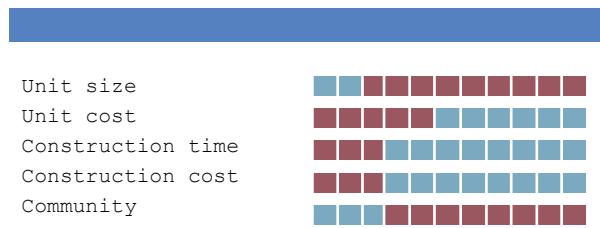
Unit size
 Unit cost
 Construction time
 Construction cost
 Community



(Figure 61)



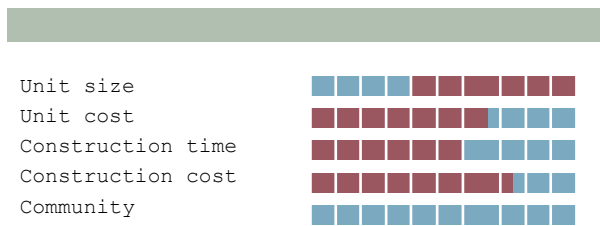
NAKAGIN CAPSULE TOWER
 TOKYO, JAPAN
 KISHO KUROKAWA



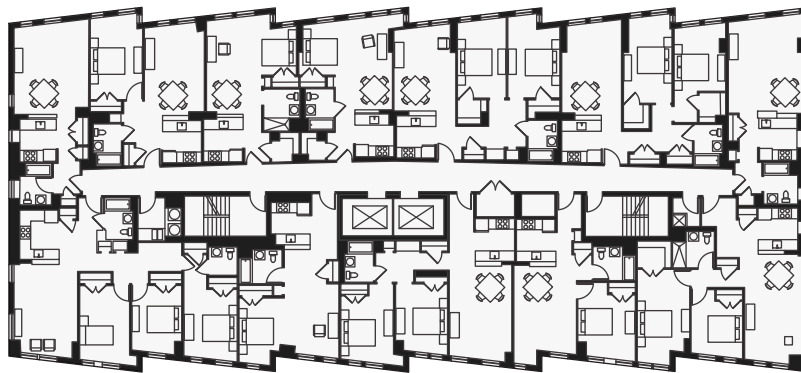
(Figure 62)



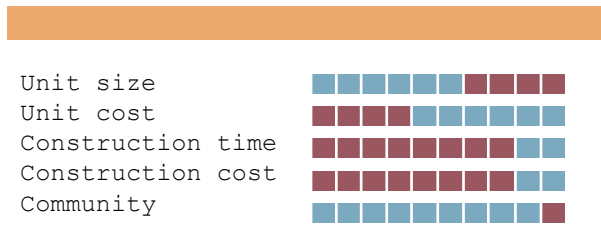
CARMEL PLACE
 New York, New York
 NARCHITECTS



(Figure 63)



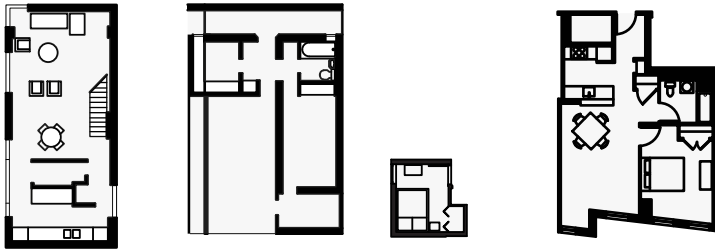
SUGAR HILL DEVELOPMENT
 BRONX, NEW YORK
 ADJAYE ASSOCIATES



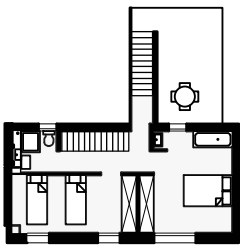
(Figure 64)



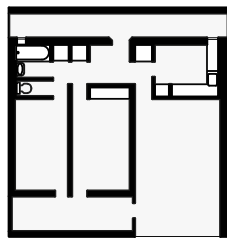
Studio 475SF
 Studio 325SF
 Studio 555SF
 Studio 145SF



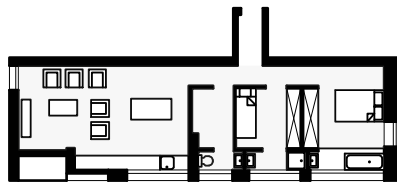
1-Bed 588SF
 1-Bed 777SF
 1-Bed 115SF
 1-Bed 655SF



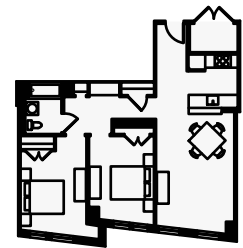
2-Bed 841SF



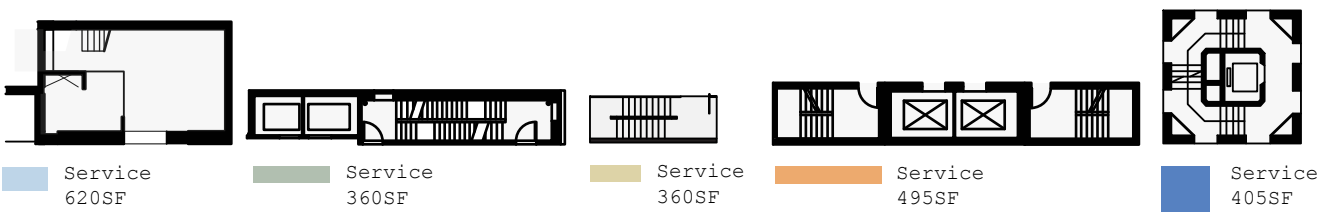
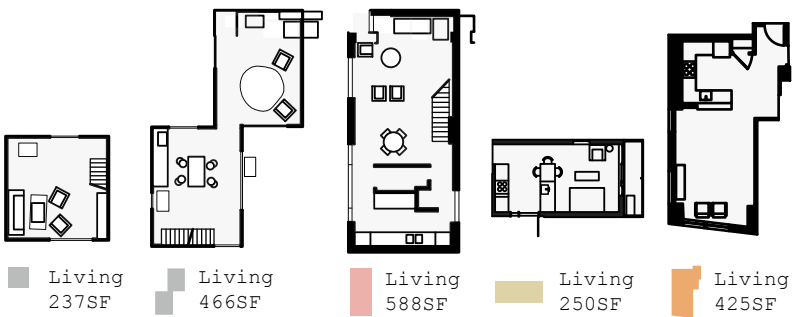
2-Bed 1099SF



2-Bed 1104SF



2-Bed 865SF



(Figure 65)

IX.

CONCLUSION

OUR PROJECT



(Figure 66)

Our plan to re-design and rebuild the LaGuardia Houses has several goals, all of which align with the goals of the De-Blasio Administration, but fulfills them to a degree that surpasses the public sector's expectations.

- To include more housing units
- To re-define affordability
- To create an economically-sustainable project
- To connect the site to its surrounding neighborhood
- To establish equity for low-income residents so that they may have permanent housing that surpasses the minimum standard
- To formulate a prototype of the reconstruction of public housing throughout New York City.

X.

GLOSSARY & REFERENCES

Glossary

Affordable housing - any housing project containing units that are below market rate. The specific level of affordability is defined by the municipalities that govern the site of the project.

Area Median Income - the median of reported incomes in the 5 boroughs of New York, as well as its neighboring wealthier suburbs. It is a criteria by which affordability is often determined in New York City.

Bill De Blasio - the current mayor of New York City. 10-Year Housing Plan incentivizes 200,000 new private developments to be made affordable on a sliding scale of AMI.

Floor Area Ratio (FAR) - according to the New York City Department of Planning, the floor area ratio (FAR) is the principal bulk regulation controlling the size of buildings. FAR is the ratio of total building floor area to the area of its zoning lot. Each zoning district has an FAR which, when multiplied by the lot area of the zoning lot, produces the maximum amount of floor area allowable on that zoning lot. For example, on a 10,000 square foot zoning lot in a district with a maximum FAR of 1.0, the floor area on the zoning lot cannot exceed 10,000 square feet.

Mat building - a term coined by Alison Smithson, a mat-building is one that is usually relatively low to the groundplana and covers much of it in its plan strategy.

Mitchell-Lama - a program that provides affordable rental and cooperative housing to moderate-middle income families as determined by AMI.

NextGeneration NYCHA - a NYCHA rebuilding initiative started by the De Blasio administration.

NYCHA - New York City Housing Authority. NYCHA owns all of the public housing stock in New York, making it the largest single landowner in the city.

NYSERDA - The New York State Energy Research & Development Authority.

Open Space Ratio (OSR) - according to the New York City Department of Planning, the open space ratio (OSR) is the amount of open space required on a residential zoning lot in non-contextual districts, expressed as a percentage of the total floor area on the zoning lot. For example, if a building with 20,000 square feet of floor area has an OSR of 20, 4,000 square feet of open space would be required on the zoning lot ($0.20 \times 20,000$ sq ft).

Quality Housing Program - enacted by Bill De Blasio, The Quality Housing Program, mandatory in contextual R6 through R10 residence districts and optional in non-contextual R6 through R10 districts, encourages development consistent with the character of many established neighborhoods. Its bulk regulations set height limits and allow high lot coverage buildings that are set at or near the street line. The Quality Housing Program also requires amenities relating to interior space, recreation areas and landscaping.

R7 - a medium density residential district as classified by the New York City Department of Planning.

R7-2 - a R7 district with extra parking requirements. In R7-2 districts, parking must be provided for 50% of the units.

Rent stabilization - a program in New York that began in 1943, stating that certain apartments that are rent stabilized cannot have their rents raised by levels more than those set by local rent boards. Tenants cannot be evicted or denied signing their leases for any other reason other than not paying rent. However, because this program is unsubsidized, landlords are lobbying for the return of these apartments to market rate after the original tenants move out. There are over 1 million apartments in New York City that are rent stabilized, but the stock is rapidly shrinking.

Section 8 - part of a federal act called the Housing and Community Development Act of 1978.

Section 8 Portable Vouchers - in the portable vouchers option of the section 8 act, rental assistance is tied with the tenant. The tenant pays no more than 30% of their income on rent.

Section 8 Project-Based - in the project-based section 8 act, rental assistance is tied with specific apartments. The tenant pays no more than 30% of their income on rent. However, there is no guarantee of affordability if the tenant decides to move out of the associated apartment.

Social housing - as defined in Michael Harloe The Recommodification of Housing (1981) by Michael Harloe, social housing is has the following qualities:

1. Ostensive (directly or clearly demonstrative) definition: housing built/managed for rent by local authorities or housing associations or other registered providers
2. Low rent, security, housing need- three dimensional definition from shelter

Ten-year plan - enacted by Bill De Blasio in 2016, the Ten-year plan is his administration's answer to the current housing crisis in New York City.

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