STAY DI HOME

A CONVERTIBLE STADIUM IN TO HOUSING

STADIUMS

THE DARKER SIDE

intense month of an event that not only affects the sports world, but has direct repercussions in the economy, tourism or urban planning of the host country.

On this occasion Russia was chosen to host the event. A total of twelve stadiums in eleven Russian cities have been built and renovated for the FIFA World Cup.

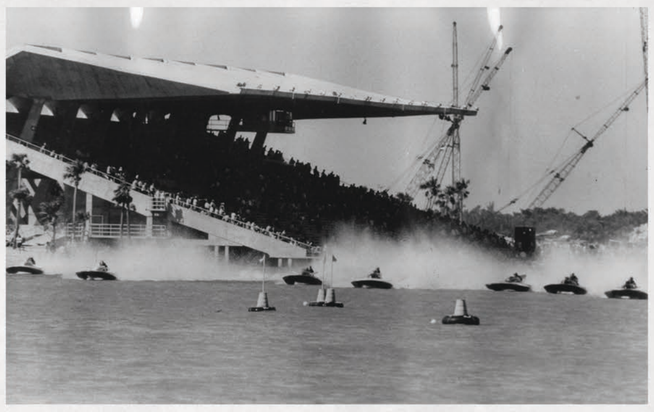
But have you ever thought about what happens when Olympic arenas, World Cup stadiums or other costly sporting venues close at the end of the colourful events for which they were designed? Many go on to host local sports clubs. Others, though, become proverbial 'white elephants', scraping by as glorified parking lots, dirt tracks for stock-car racing and even, as in the case of Montreal's spectacular Olympic Stadium, as a swine-flu vaccination centre.

In the past World Cup edition, the spotlight was on the stadiums in Brazil, a country where there is said to be a shortage of more than five million homes although many more millions of Brazilian reals have been spent on expensive venues like the Arena de Amazônia in Manaus and the Arena das Dunas in Natal. Host to just four World Cup matches, the ambitious 44,000-seat Manaus stadium became home to the local fourth-division football team that attracts crowds of little more than a thousand per game.

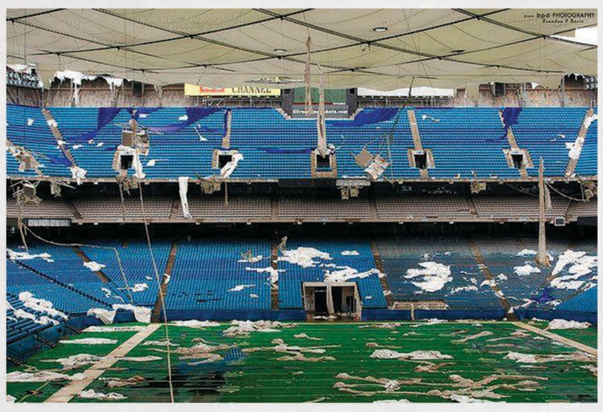
PONTIAC SILVERDOME, MICHIGAN, USA

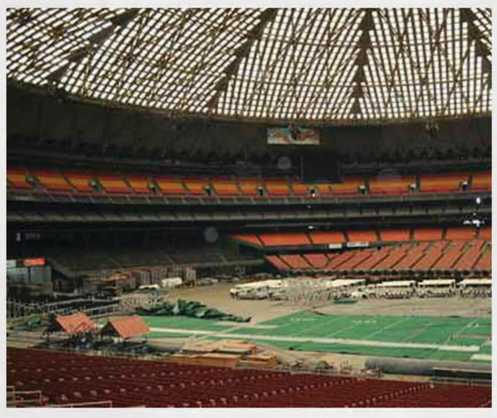
ESTADIO LLUÍS SITJAR, MALLORCA, SPAIN

ASTRODOME, HOUTON, USA

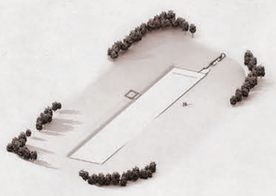


MIAMI MARINE STADIUM, USA





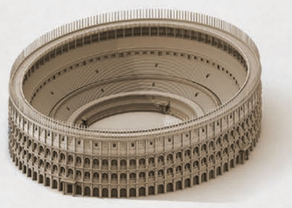
HISTORY



The Stadium at Olympia

Olympia, Greece
Built: fifth century B.C.
Capacity: approx. 45,000-50,000

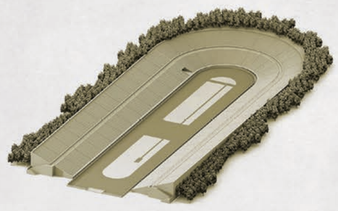
The stadiums of ancient Greece, often carved out of hillsides to allow a clear view, fostered civic and religious engagement. In 776 B.C. Olympia first drew the Greek world to its games, which were banned as pagan a millennium later.



Flavian Amphitheater (Colosseum)

Rome, Italy
Built: A.D. 70-82
Capacity: approx. 50,000

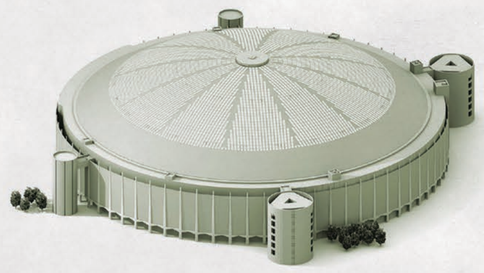
Roman gladiators fought their battles in arenas, a term derived from the Latin word for "sand" which soaked up the blood spilled in their deadly contests. Stadiums across the Roman Empire were designed to maximize spectacle, entertaining and distracting restless populations.



Panathenaic Stadium

Athens, Greece
Built: 331 B.C.; expanded 1894-96
Capacity: 65,000

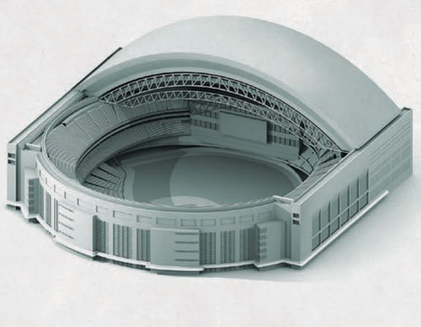
Pierre de Coubertin's revival of the Olympic Games in 1896 also restored stadiums to their place as important civic buildings. The increasingly urbanized public wanted more entertainment, and the industrial revolution's iron, steel, and technology went toward providing it in huge edifices.



Astrodome

Houston, United States
Built: 1962-65
Capacity: 50,000-70,000

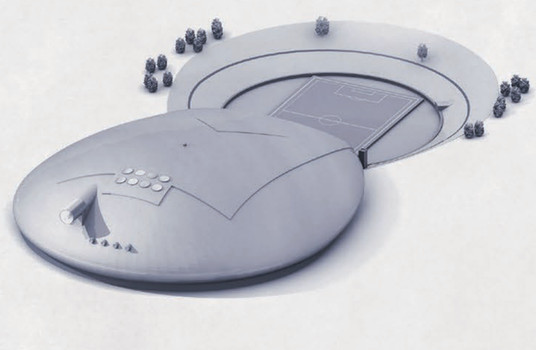
Financial pressures and growing television audiences became the drivers of architectural innovation in stadium design. Stadiums also began to be seen as opportunities for governments and urban planners to boost city fortunes with economically productive sports facilities.



SkyDome

Toronto, Canada
Built: 1986-89
Capacity: 47,107-49,282

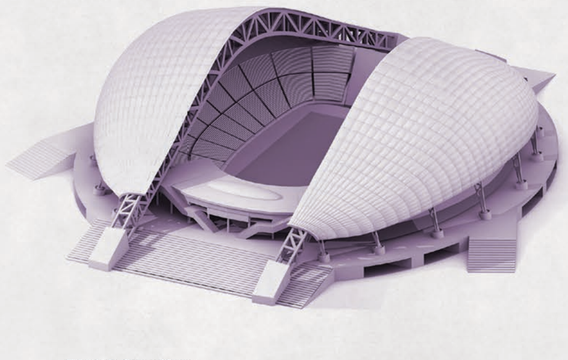
When outdoor sporting events experience inclement weather, attendance and profits drop. To solve this problem, engineers and designers worked to create stadiums that could be transformed from outdoors to indoors at the touch of a button.



Sapporo Dome

Sapporo, Japan
Built: 1998-2001
Capacity: 41,484-53,738

Roofs allowed teams to play in bad weather, but they also made it more difficult to grow the grass that made up the fields. Past stadiums had resorted to artificial turf, but others later implemented retractable fields, especially useful if the stadium hosted multiple sports and events.



Fisht Stadium

Sochi, Russia
Built: 2009-2014
Capacity: 40,000-47,659

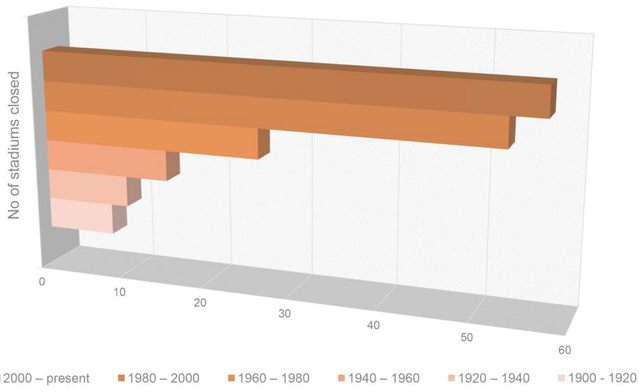
Financial pressures and growing television audiences became the drivers of architectural innovation in stadium design. Stadiums also began to be seen as opportunities for governments and urban planners to boost city fortunes with economically productive sports facilities.

COORDINATED BY:
PROFESSOR PAOLO MAZZOLENI
ASSISTANT ALESANDRA DI STEFANO GARIMALDI

CONCIEVED BY:
MOHIT RAJ (871193)
KARTHIK RAJA RAJU (875342)

POLITECNICO
MILANO 1863

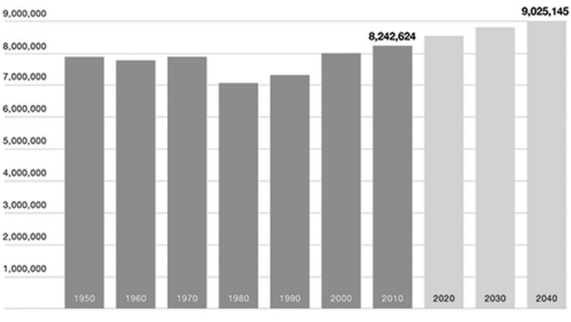
More than 200 stadiums (seating capacity 25,000 and above) around the world have been closed, abandoned or demolished in the past century for various reasons including bankruptcy, failed structures and various bad planning strategies.



Abandoned stadiums across USA					
Name of stadium	Built year	Seating capacity	Area	Cost of construction (value as of today)	Status
Pontiac Silver dome, Michigan (USA)	1975	82000	127 acres	$314 million	Abandoned (since 2014)
Washington Coliseum, Washington, DC (USA)	1941	8000	3.9 acres	$8 million	Converted to an REI store (Since 2003)
Tiger Stadium, Detroit	1912	52,416	8 acres	$183 million	Demolished (2009)
Miami Marine Stadium	1963	6566	240 acres (land and water)	$14 million	Abandoned (Since 1992)
Candlestick Park	1958	45000	40 acres	$127 million	Demolished (2015)
The Astrodome, Houston (USA)	1965	67925	52 acres	$278 million	Abandoned (since 2008)

S.no	Host Of the FIFA world cup	Year	Expenditure for infrastructure
1	ITALY	1990	$5 BILLION
2	USA	1994	$30 MILLION
3	FRANCE	1998	$340 MILLION
4	SOUTH KOREA/ JAPAN	2002	$5 BILLION
5	GERMANY	2006	$6 BILLION
6	SOUTH AFRICA	2010	$4 BILLION
7	BRAZIL	2014	$11.6 BILLION
8	RUSSIA	2018	$14.2 BILLION

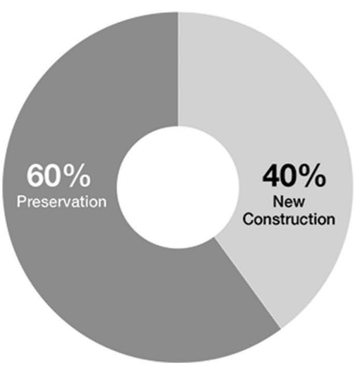
New York City Population: Past, Present, and Future



The Department of City Planning projects that New York City's population will grow from 8.2 million in 2010 and is expected to exceed nine million in 2040, which amounts to a 9.5 percent increase over 30 years.

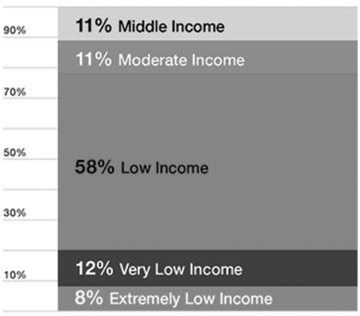
Data Source: New York City Department of City Planning, Population Division

New Construction vs Preservation



Households Served

Share of Housing Units Created or Preserved by Income Band



STAY DI HOME

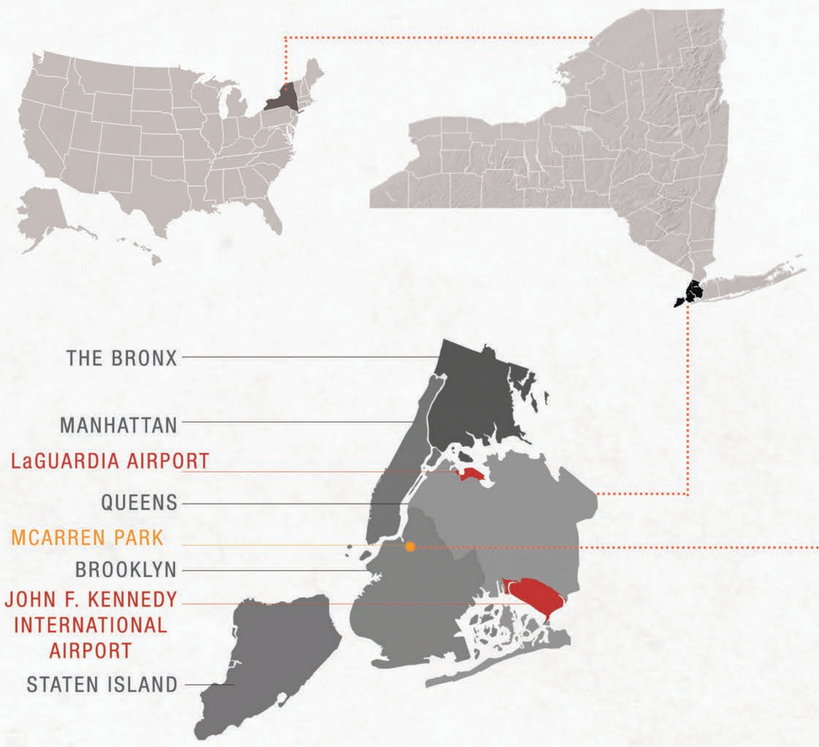
A CONVERTIBLE STADIUM IN TO HOUSING

LOCATION

We are proposing an adaptive design of stadium which will onvert in to housing after FIFA WORLD CUP 2026 to be held in America, Canada and Mexico. For the need of this large scale event we had to choose location in terms of feasebility and connectivity with a great scope of housing in future and finelly we ended up with Brooklyn - New York City.

Brooklyn is the most populous borough of New York City, with an estimated 2,648,771 residents in 2017. It borders the borough of Queens at the western end of Long Island. Brooklyn has several bridge and tunnel connections to the borough of Manhattan across the East River, and the Verrazzano-Narrows Bridge connects Staten Island.

McCarren Park is a public park in Brooklyn which is our site of proposal. It is located in both Williamsburg, Brooklyn and Greenpoint, Brooklyn and is bordered by Nassau Avenue, Bayard Street, Lorimer Street and North 12th Street.



1a. QUENS MIDTOWN TUNNEL (TOLL)

CONNECTION OVER EAST RIVER

1. ROOSEVELT ISLAND BRIDGE

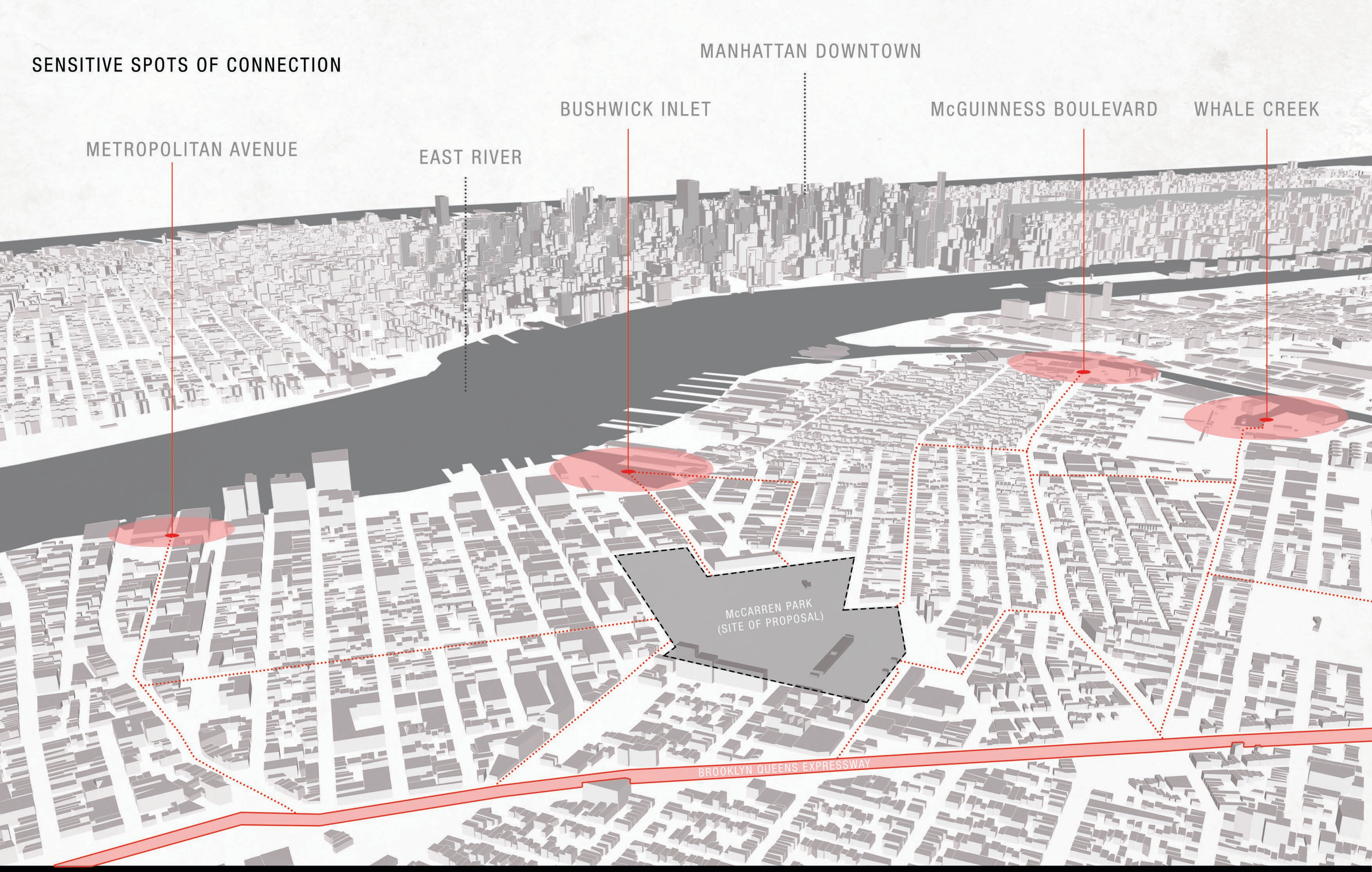
4. MANHATTEN BRIDGE

2. ED KOCH QUEENSBORO BRIDGE

5. BROOKLYN BRIDGE

3. WILLIAMSBURG BRIDGE

SENSITIVE SPOTS OF CONNECTION



STAY DI HOME

A CONVERTIBLE STADIUM IN TO HOUSING

2. LOCATION

POST GRADUATE THESIS - 2019

COORDINATED BY:
PROFESSOR PAOLO MAZZOLENI
ASSISTANT ALESANDRA DI STEFANO GARIMALDI

CONCIEVED BY:
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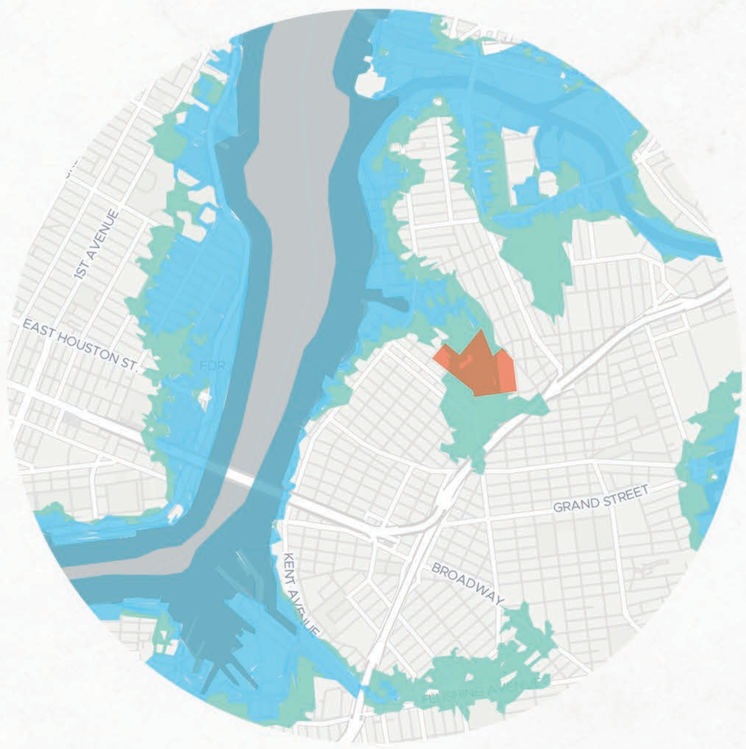
N

HIGHWAYS
ARTERIAL ROADS
LOCAL STREETS
McARREN PARK (SITE)
PUBLIC GREEN AREAS
CEMETRY
MIXED RESIDENTIALS

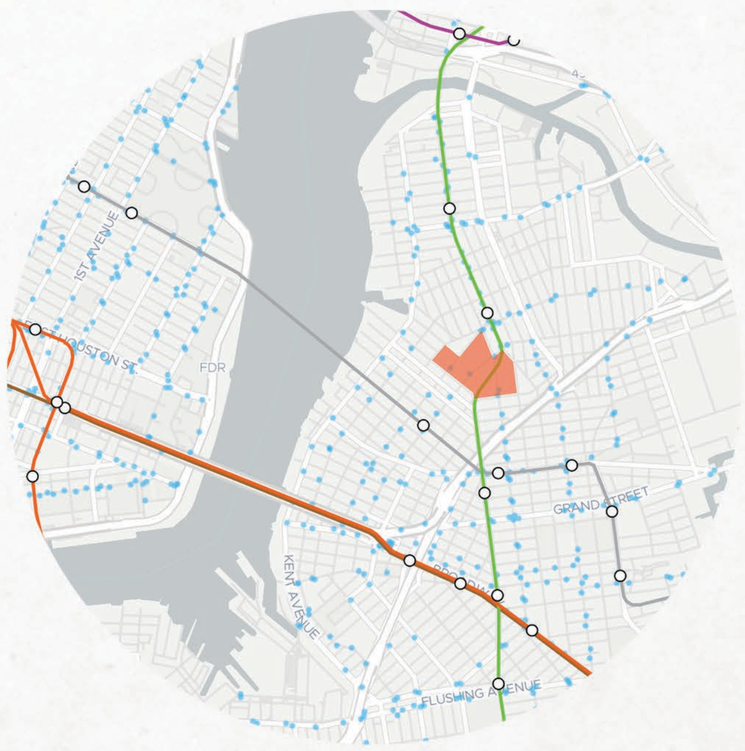
EDUCATIONAL SPOTS



V ZONE
A ZONE
SHADED X ZONE

FLOOD HAZARDS

HISTORICAL SPOTS



SUBWAY STOPS
BUS STOPS

TRANSPORTATION

STAY DI HOME
A CONVERTIBLE STADIUM IN TO HOUSING

3. URBAN ANALYSIS
POST GRADUATE THESIS - 2019

COORDINATED BY:
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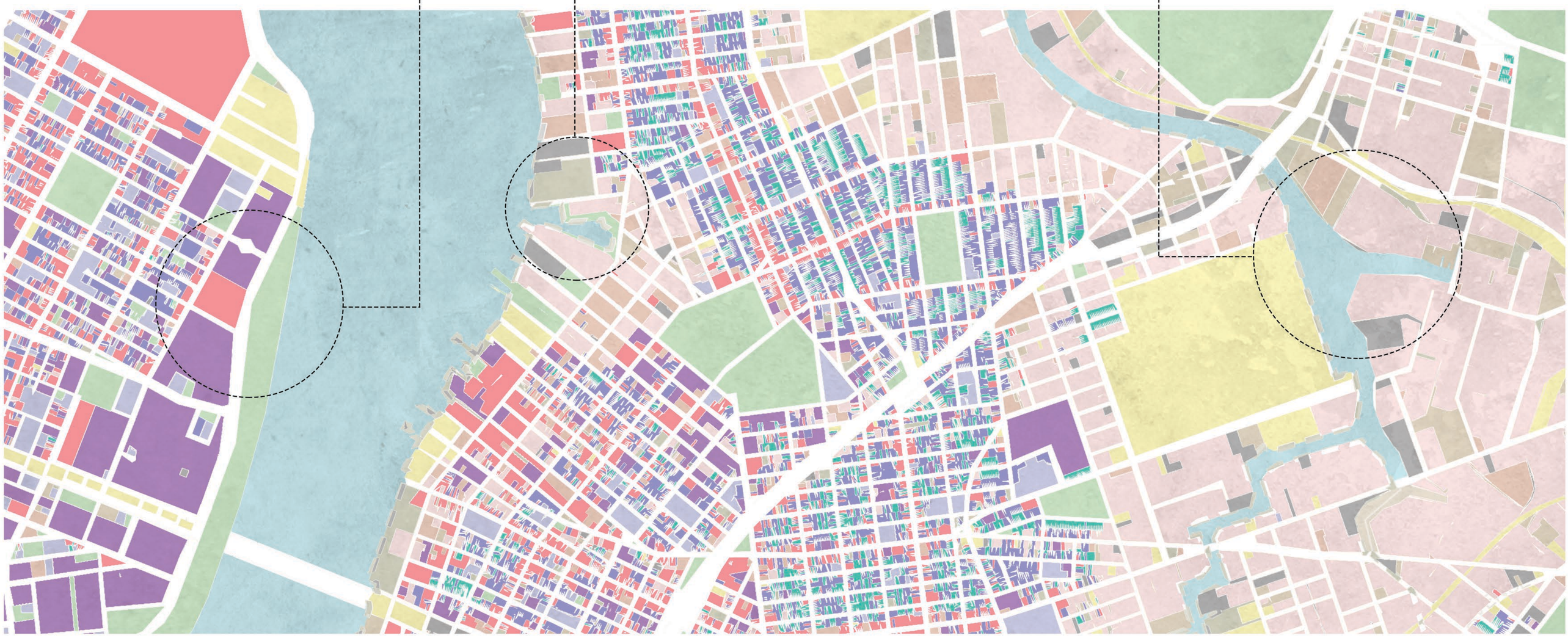
RESIDENTIAL WITH WATERFRONT DEVELOPED

MANUFACTURING PLANTS AROUND BUSHWICK INLET

INDUSTRIAL ZONE AROUND NEWTON CREEK



LAND DISTRIBUTION MAP AS PER ZONING

- INDUSTRIAL & MANUFACTURING [24.20%]
- MULTIFAMILY WALKUP [17.58%]
- MIXED RESD.& COMMERCIAL [11.12%]
- TRANSPORTATION & UTILITY [9.91%]
- MULTIFAMILY ELEVATOR [7.52%]
- 1 & 2 FAMILY [5.31%]
- PUBLIC FACILITIES & INSTITUTIONS [5.30%]
- OPEN SPACE & RECREATION [5.05%]
- COMMERCIAL & OFFICE [4.41%]
- OTHER [3.38%]
- VACANT LAND [3.27']
- PARKING [2.97%]

N

Housing New York: A five-Borough, Ten year plan

Plan to build or preserve 300,000 homes by 2026

goal of 25,000 affordable homes preserved or constructed per year - a rate never avhieved before.

1. Senior Affordable Rental Appartments (SARA): A new affordable housing for senior citizens.

2. NEW Mitchell-Lama Reinvestment program: Help aging Mitchell-Lamas stay affordable and build new affordable and senior housing on un-derused campuses.

3. NEW Neighborhood Pillars Program: Funding for non-profits to purchase rent-regulated buildings and keep them affordable to their tenants.

4. Supportive Housing Loan Program (SHLP): Affordable apartments with on-site services for the most vulnerable households.

5. NEW Mixed-Income Micro: Launch a new program with updated design guidelines to facilitate the creation of apartments that fit changing demographics.

6. NEW Vacant Land Tax: Disincentivize speculators from holding land off the market by taxing it at a higher rate until in-demand housing is built.

7. NEW HomeFix: financial assistance to low-income homeowners to make repairs and keep their homes healthy and safe.

8. NEW Tiny Homes in the Big Apple: Launch a design competition to build small homes on otherwise undevelopable Cityowned land.

9. Extremely Low- and Low-Income Affordability Program (ELLA): New affordable housing for extremely lowand low-income New Yorkers.

10. Mandatory Inclusionary Housing: Areas and buildings rezoned for residential growth must include 20-30% permanently affordable apartments.

STAY DI HOME

A CONVERTIBLE STADIUM IN TO HOUSING

4. LAND DISTRIBUTION

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SHADOWS MAPPING OF BUILDINGS DURING WINTER SEASON

SHADOWS MAPPING OF BUILDINGS DURING SPRING/FALL SEASON

SHADOWS MAPPING OF BUILDINGS DURING SUMMER SEASON

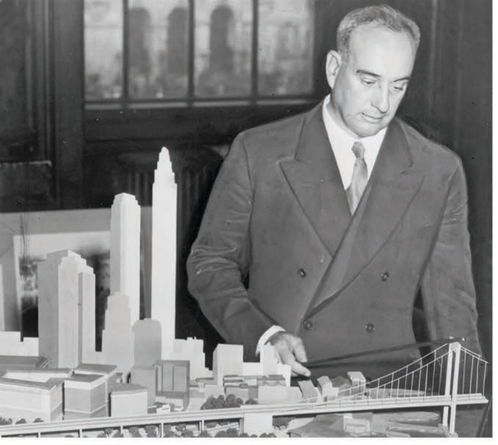
STAY DI HOME

A CONVERTIBLE STADIUM IN TO HOUSING

11 GIANT POOLS BY ROBERT MOSES

During the lean years of the Great Depression, New York City Parks Commissioner Robert Moses set out an ambitious goal to build swimming pools to relieve the summer heat for New York's overheated masses. Moses took on the herculean task of building a record number of pools and recreation centers, all to be ready by the summer of 1936.

In Brooklyn, four centers opened: McCarren Park, in Greenpoint, Red Hook Recreation Center in Red Hook, Sunset Park Center, Sunset Park, and the Betsy Head Center in Brownsville. All of the swimming pools in these centers were enormous, the largest being the McCarren pool, which could hold 6,800 people. They were all state of the art facilities, designed by famed architect Aymar Embury II, and landscape architect Gilmore D. Clarke.



EAST SIDE CHEERS AS CITY OPENS POOL
Million-Dollar Natatorium Is Dedicated by Mayor, Moses and Victor Ridder.
CHILL DAUNTS SWIMMERS

MAYOR DEDICATES BIG HARLEM POOL
Turns Over to 'Children and People' Swimming Center to Accommodate 1,450.

RECREATION IN U. S. DOUBLED IN DECADE
Ten-Year Review of Leisure Pursuits in Nation Covers 2,204 Communities.
SWIMMING MOST POPULAR

STATEN ISLAND POOL IS OPENED BY MAYOR
Moses Presides at Ceremony Dedicating New City Play Site at Tompkinsville.

MAYOR OPENS POOL IN HIGHBRIDGE PARK
Moses Also Attends Ceremony at Fifth Project of Kind to Be Finished in Month.

MAYOR OPENS POOL IN BROOKLYN PARK
Turns On Under-Water Lights in Sunset Swimming Center as 3,500 Look On.
TAYLOR PRAISES MOSES

5,000 IN THE BRONX AT POOL OPENING
La Guardia and Moses Join in Dedicatory Ceremonies in Crotona Park.
10,000 ARE TURNED AWAY

POOL IS DEDICATED AT M'CARREN PARK
Mayor Praises McGoldrick for Early Efforts to Obtain Center for Greenpoint.

NEW SWIMMING POOL WILL OPEN TOMORROW
City Project at Colonial Park in Harlem to Be Dedicated by Mayor and Moses.

25,000 AT OPENING OF HARLEM POOL
Mayor Promises Fairness to Section at Dedication in Colonial Park.
OFFICIALS GET AN OVATION

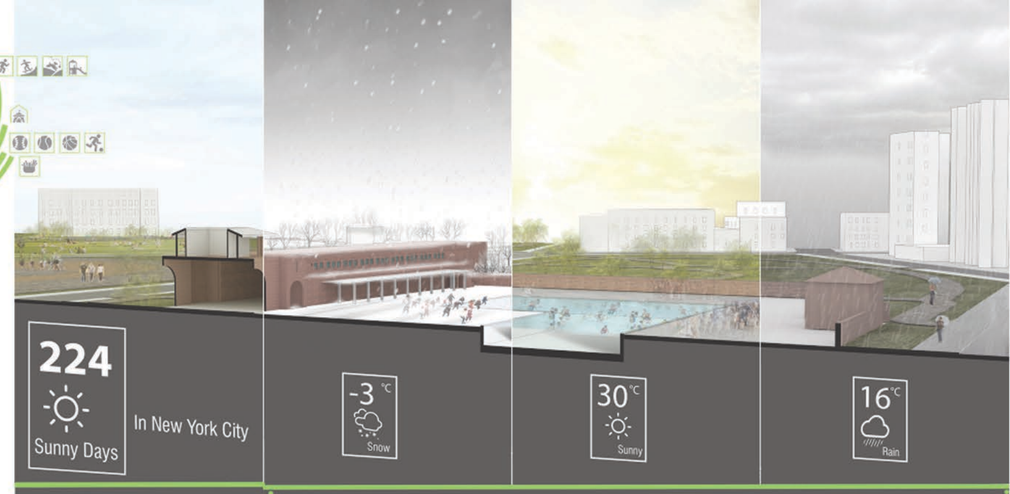
CITY POOL IS OPENED WITHOUT CEREMONIES
Project in Brownsville Just Lets Children Come and 800 of Them Respond.

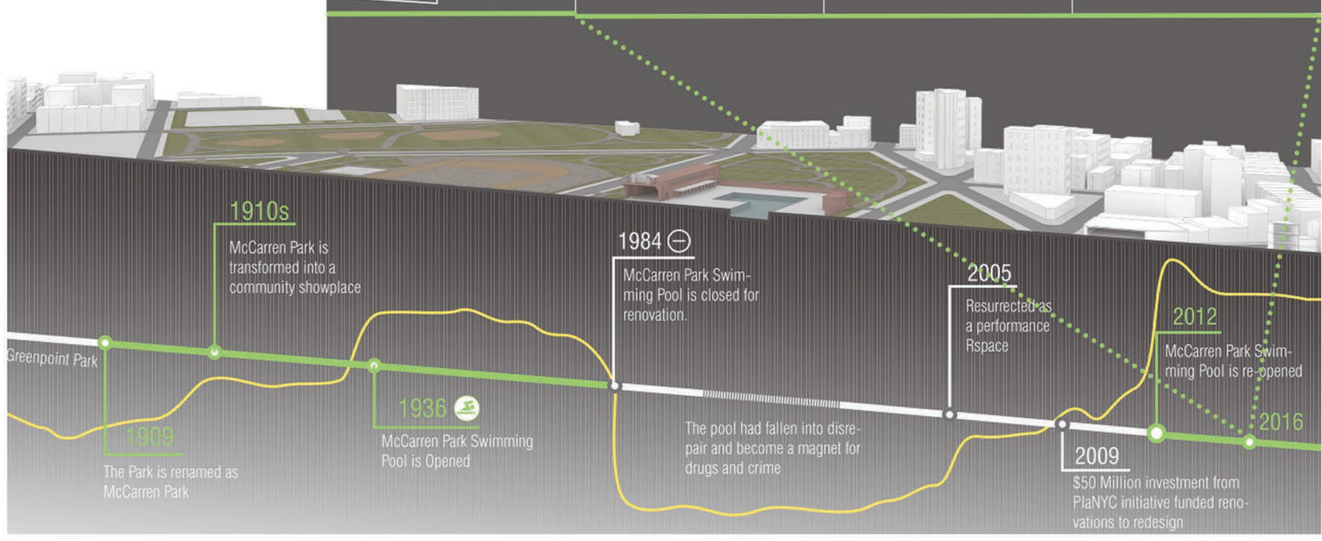
40,000 AT OPENING OF RED HOOK POOL
Most of Area's Residents Turn Out to Cheer the Mayor and Officials at Dedication.

11 POOLS OPENING IN 9 WEEKS - NEW YORK TIMES HEADLINES FROM THE SUMMER OF 1936

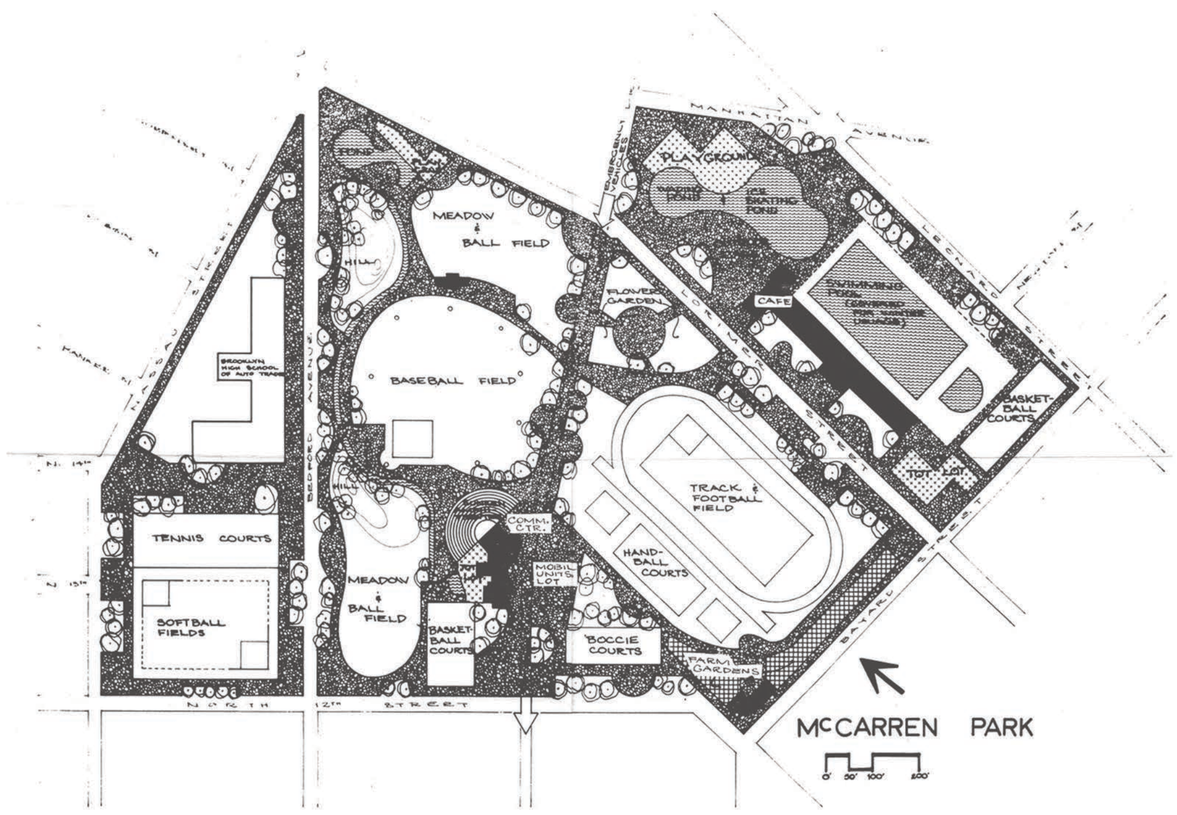
JULY 12, 1937 MCCARREN PARK POOL

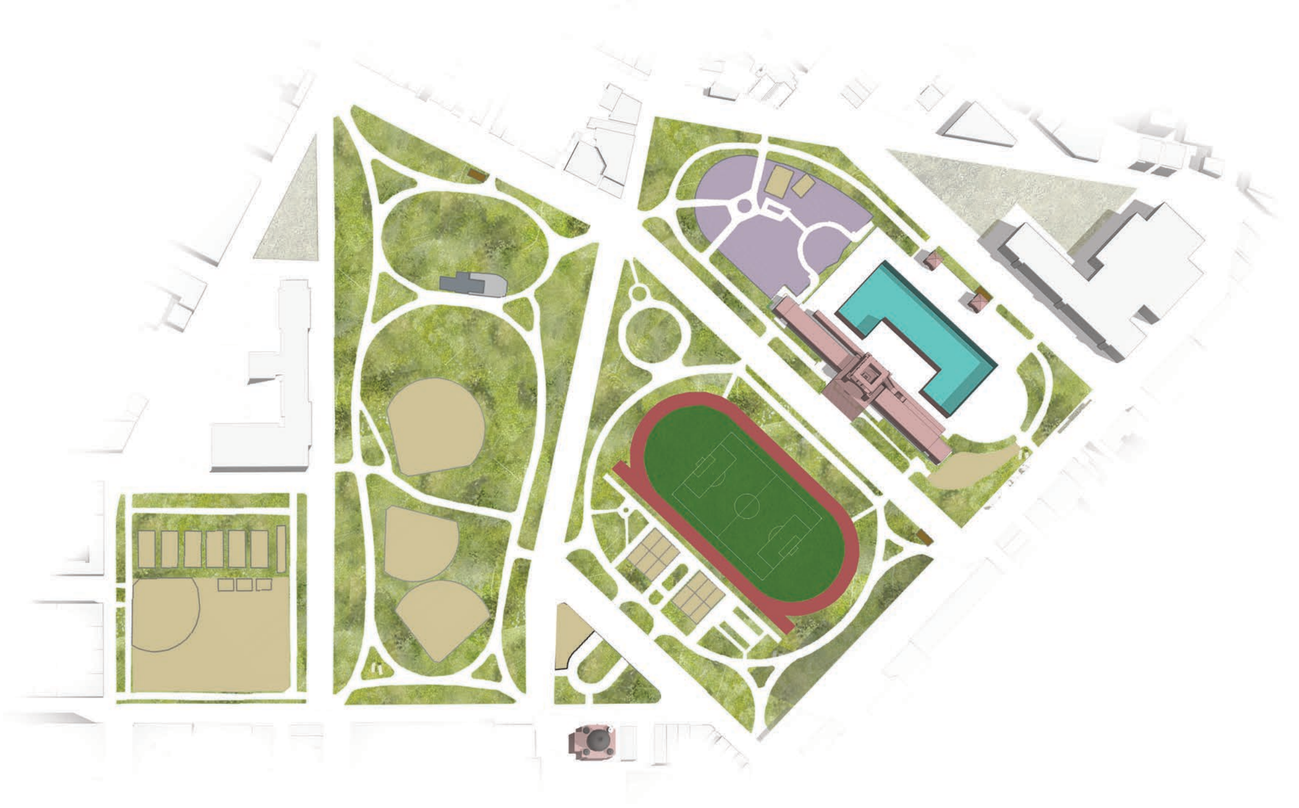
The apparatus of McCarren Park is based on 3 different timelines with varies scales, the history scale, the yearly scale and the daily scale.





FUNCTIONAL TIMELINE OF MCCARREN PARK





PAST OF McCARREN PARK

MCCARREN PARK UNDER CONSTRUCTION, 1936

DANCERS REHEARSE IN MCCARREN POOL 2005

AFTER REOPENING OF MCCAREN POOL 2012

HISTORIC VIEW OF MCCARREN PARK 1937

SECRET UNDERGROUND TUNNELS BELOW MCCARREN PARK

NEW RENDERING OF "DOUBLE SUN" BY MARY TEMPLE

MCCARREN POOL ABONDONED IN 1995

GRAFFITI IN MCCARREN PARK 2002

CURRENT SCENERIO OF MCCARREN PARK

COORDINATED BY:
PROFESSOR PAOLO MAZZOLENI
ASSISTANT ALESANDRA DI STEFANO GARIMALDI

CONCIEVED BY:
MOHIT RAJ (871193)
KARTHIK RAJA RAJU (875342)

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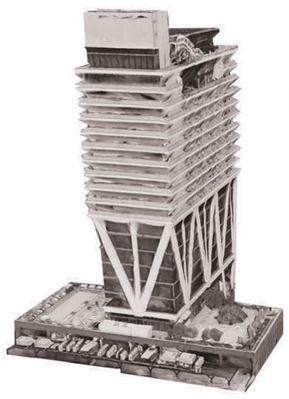
MILANO 1863

HEIGHTS AROUND SITE

1. CONDOMINIUM COMPLEX
HEIGHT: 126 , 148, 203, 94, 75 FEET
CONSTRUCTION:1910, 2006, 2005. 1920, 2004

2. TECHNICAL HIGH SCHOOL
HEIGHT: 68 FEET
CONSTRUCTION: 1937

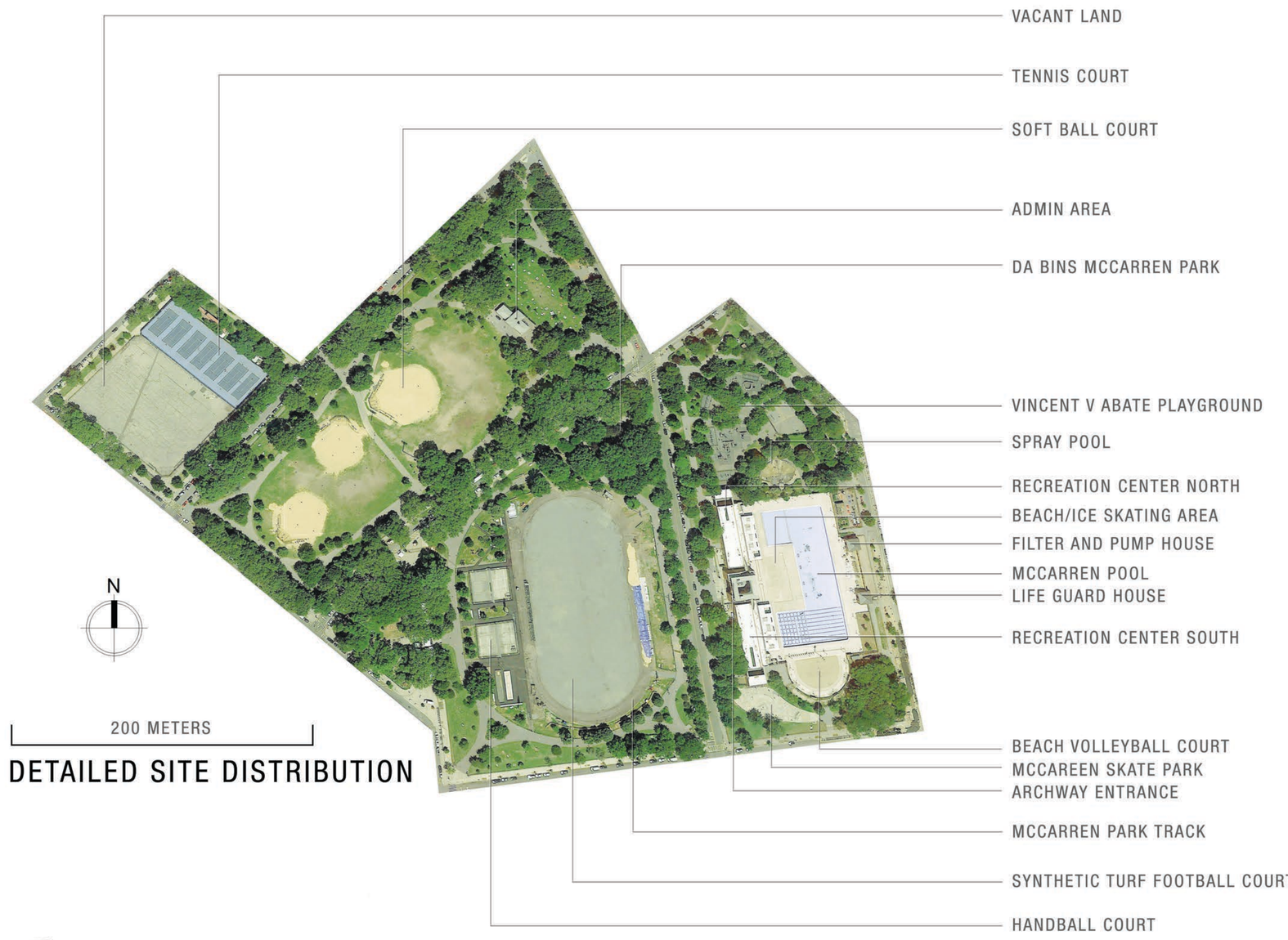
3. RUSSIAN ORTHODOX
CATHEDRAL
HEIGHT: 106 FEET
CONSTRUCTION: 1920



4. THE WILLIAM VALE HOTEL
HEIGHT: 285 FEET
CONSTRUCTION: 2016

5. NORTHSIDE PIERS
HEIGHT: 427, 327, 329, 87 FEET
CONSTRUCTION: 2012, 2010, 2007, 2007

URBAN FABRIC AROUND SITE



DETAILED SITE DISTRIBUTION

1A. ENTRANCE OF MCCAREN POOL
(KEY ELEMENT OF SITE)

STAY DI HOME
A CONVERTIBLE STADIUM IN TO HOUSING

6. EXISTING SITE
POST GRADUATE THESIS - 2019

COORDINATED BY:
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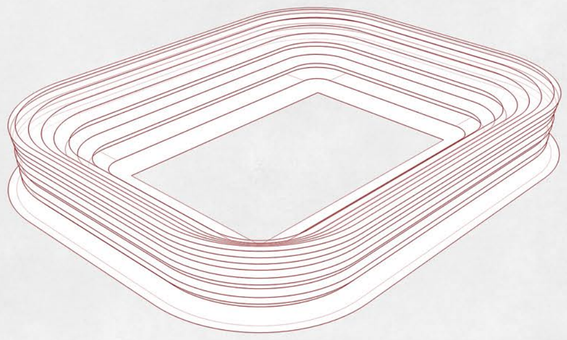


LOCATION

STADIUM OUTSIDE THE CITY

	located in urban area	Vibrant surrounding urban area	Scale fits fabric	Easy access	Integration with street grid	No surface parking	Pedestrian friendly	Daily Events	Flexible program	Public display	Architectural Porosity	Amenities
Times Square, NYC	●	●	●	●	●	●	●	●	●	●	●	●
Trafalgar Square, London	●	●	●	●	●	●	●	●	●	●	●	●
Panathanaic Stadium, Athens						●				●		
Colosseum, Rome	●			●								
Birds Nest, Beijing				●		●	●			●		
Olympic Stadium, London						●			●			
Allianz Arena, Munich										●		
Aviva Stadium, Dublin	●			●					●		●	●
Wembly stadium, London				●					●			●
Madison square, NYC	●	●	●	●	●	●			●			●
Yankee Stadium, NYC	●			●	●	●						●
Barclays center, Brooklyn, NY	●	●		●		●	●		●	●		

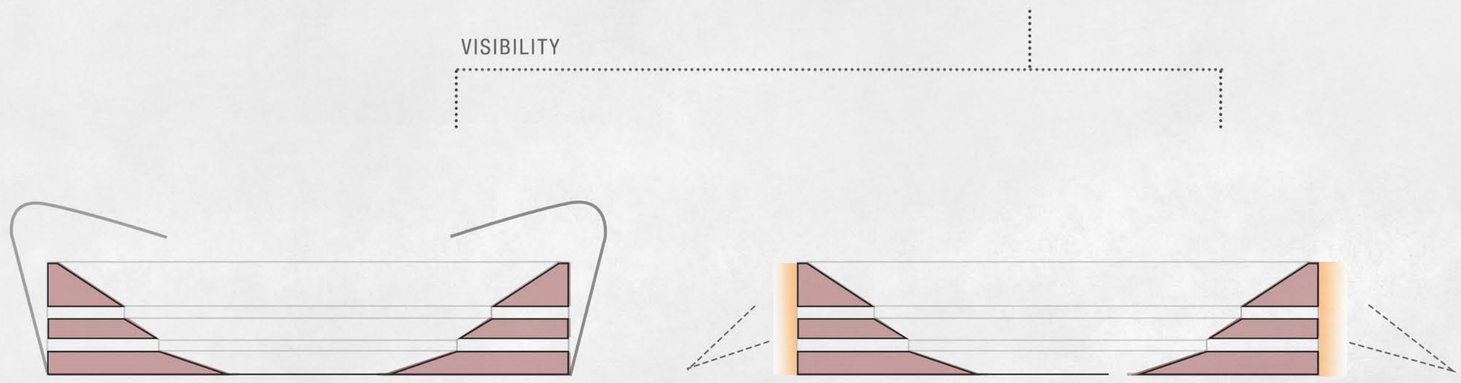
STADIUM INTSIDE THE CITY

POROSITY

SOLID

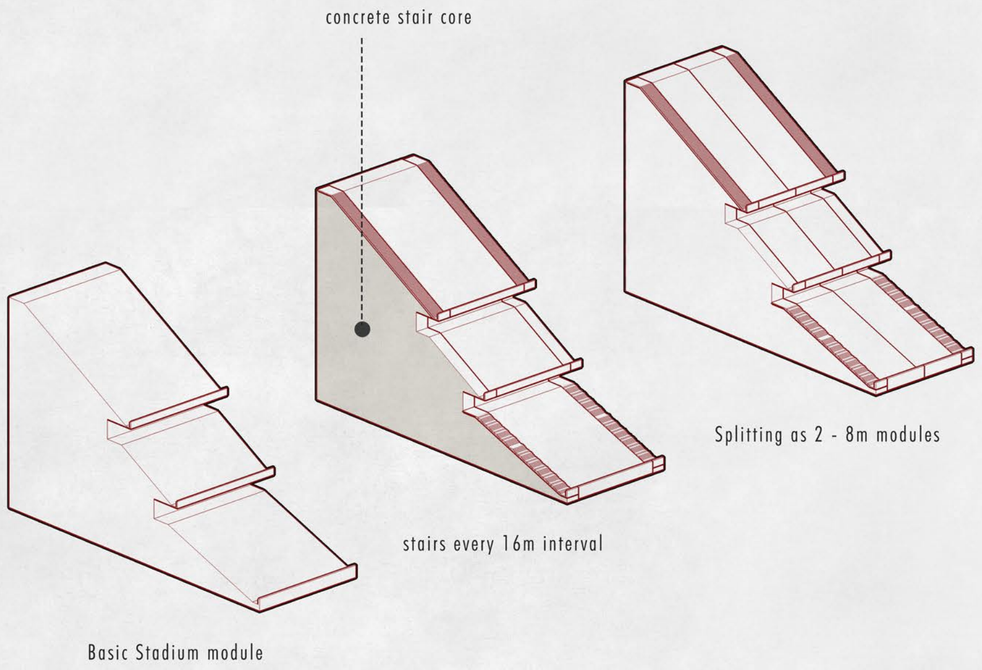
POROUS

VISIBILITY



BOUND

CONNECTED

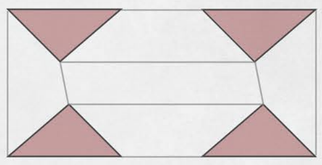


USAGE

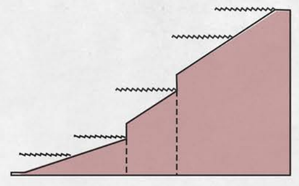
PERMANANT STADIUM

ADAPTIVE STADIUM

USAGE

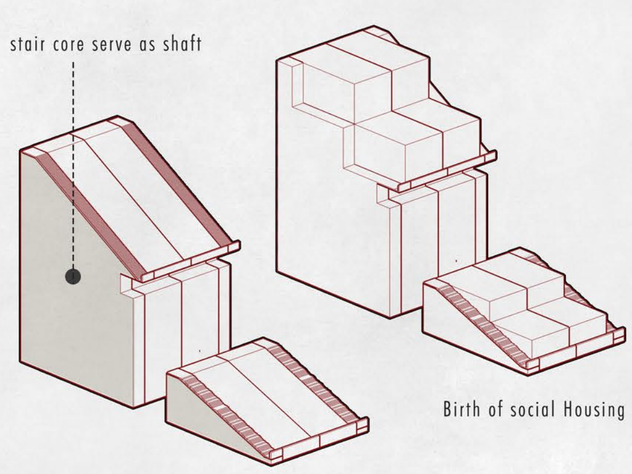


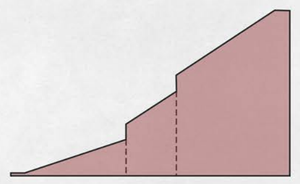
SYNCHRONISED ADAPTIVE

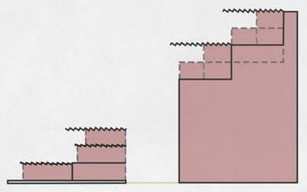


TEMPORARY ADAPTIVE

PERMANANTLY CONVERTIBLE







COORDINATED BY:
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ASSISTANT ALESANDRA DI STEFANO GARIMALDI

CONCIEVED BY:
MOHIT RAJ (871193)
KARTHIK RAJA RAJU (875342)

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A CONVERTIBLE STADIUM IN TO HOUSING

9. STADIUM PLAN

POST GRADUATE THESIS - 2019

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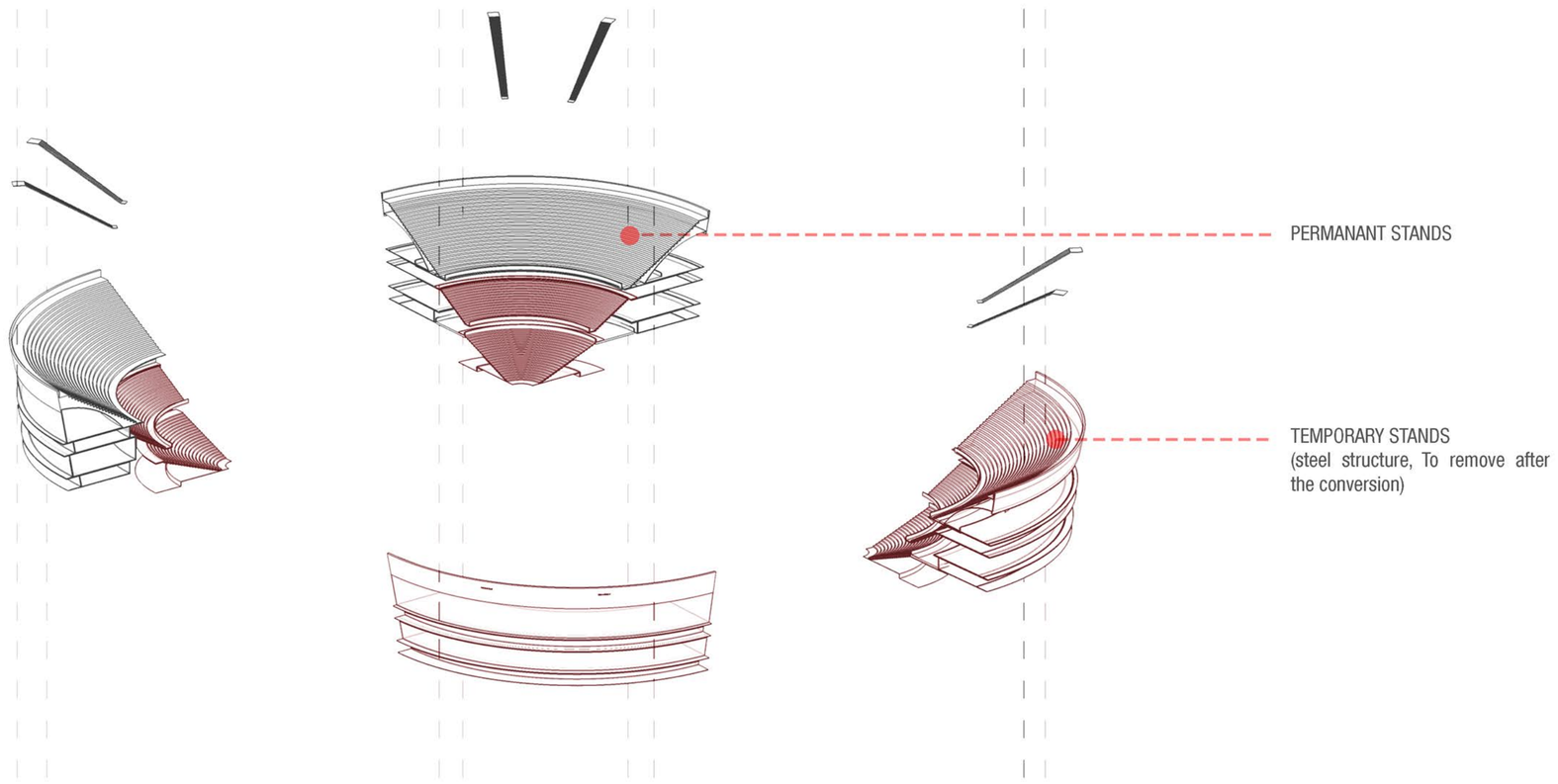

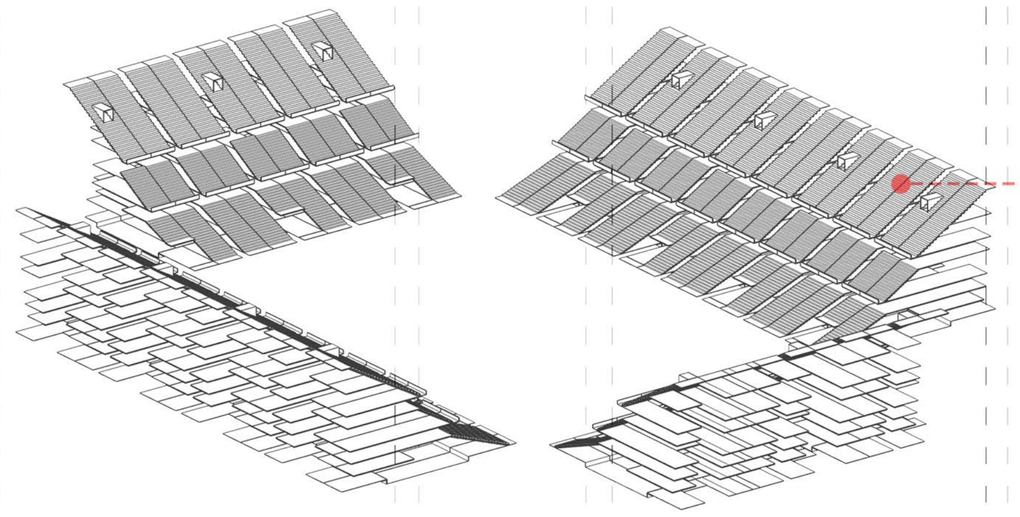

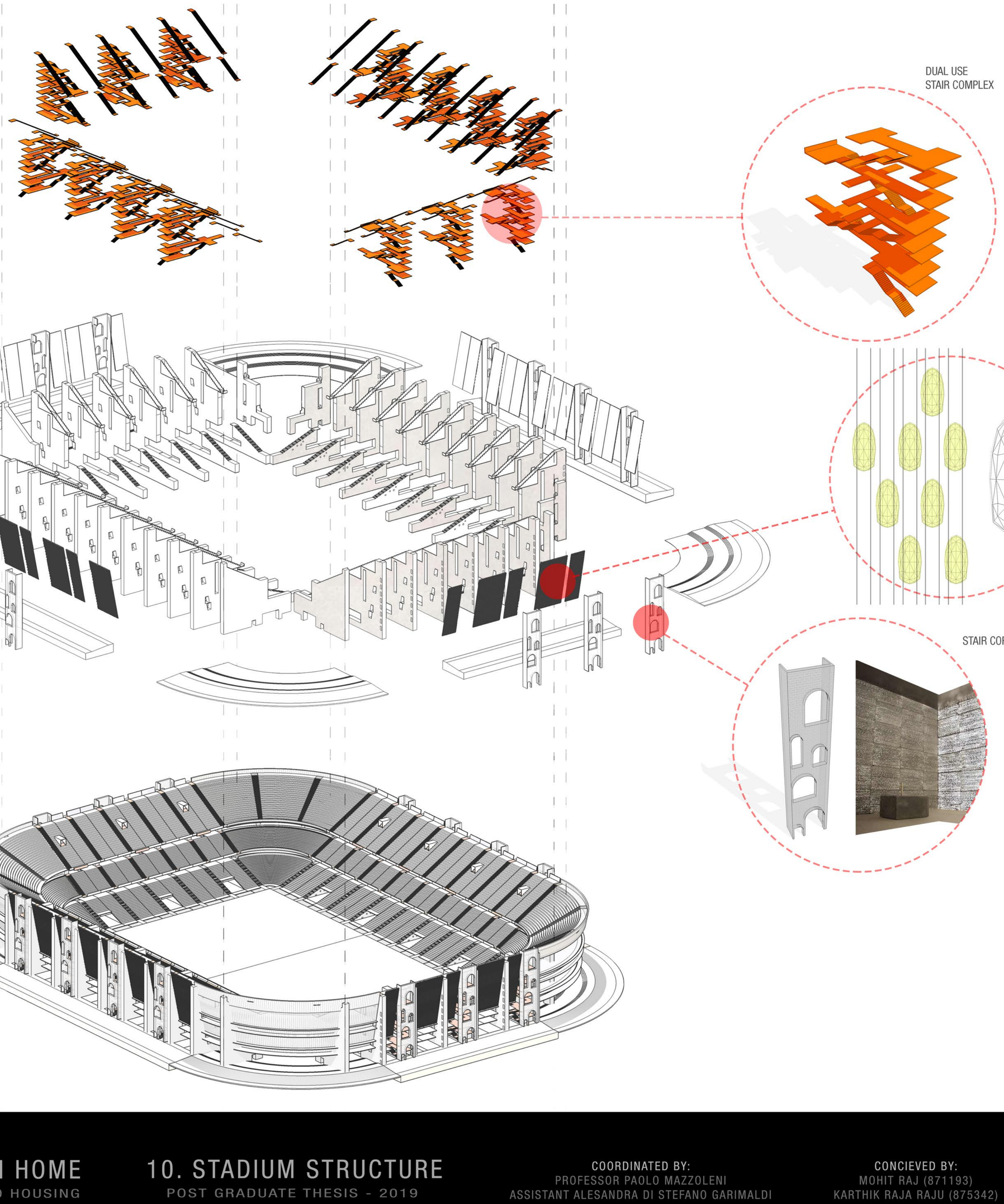

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10. STADIUM STRUCTURE

POST GRADUATE THESIS - 2019

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11. TRANSFORMATION

POST GRADUATE THESIS - 2019

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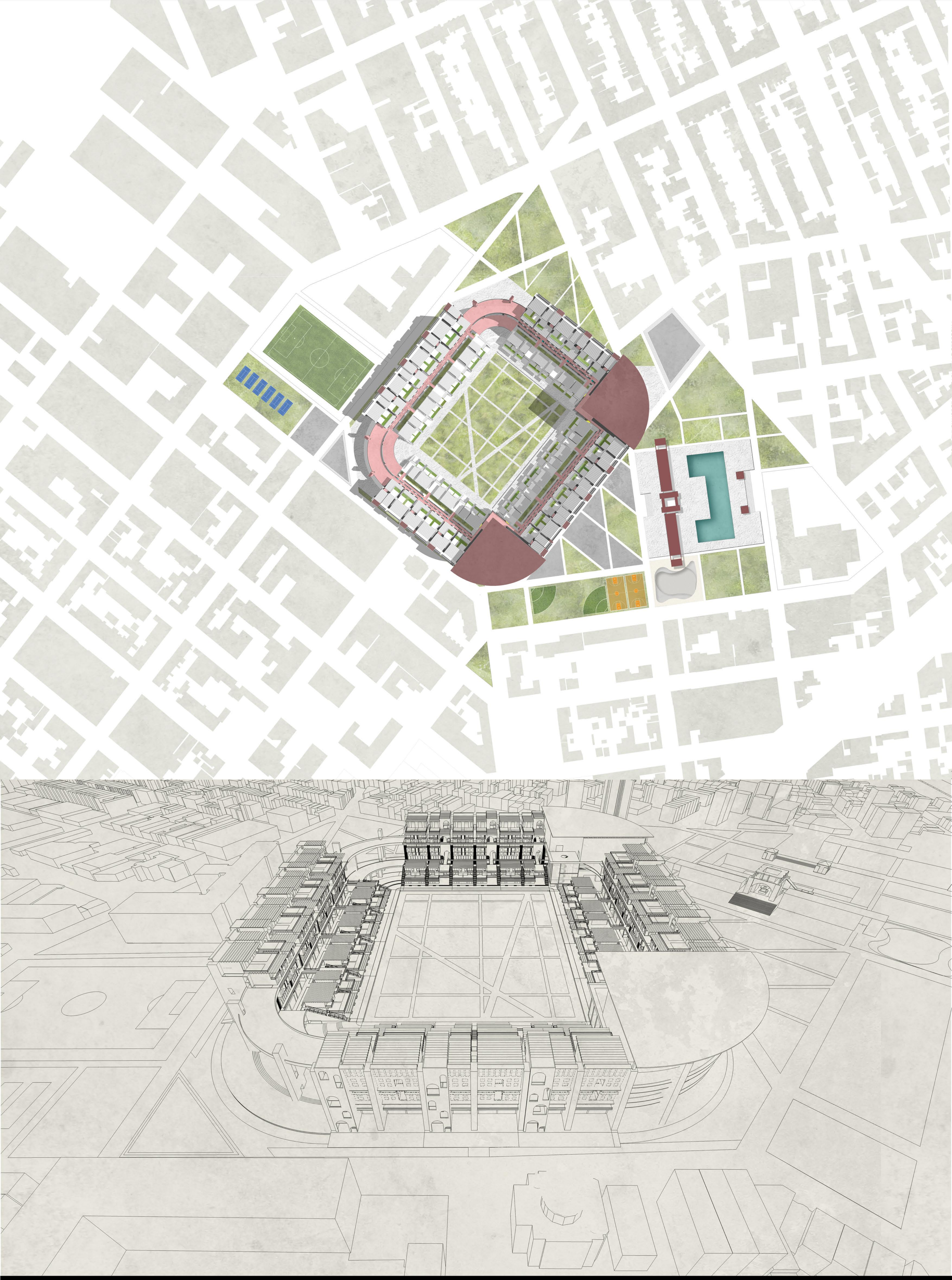

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12. HOUSING PLAN

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13. HOUSING PLAN

POST GRADUATE THESIS - 2019

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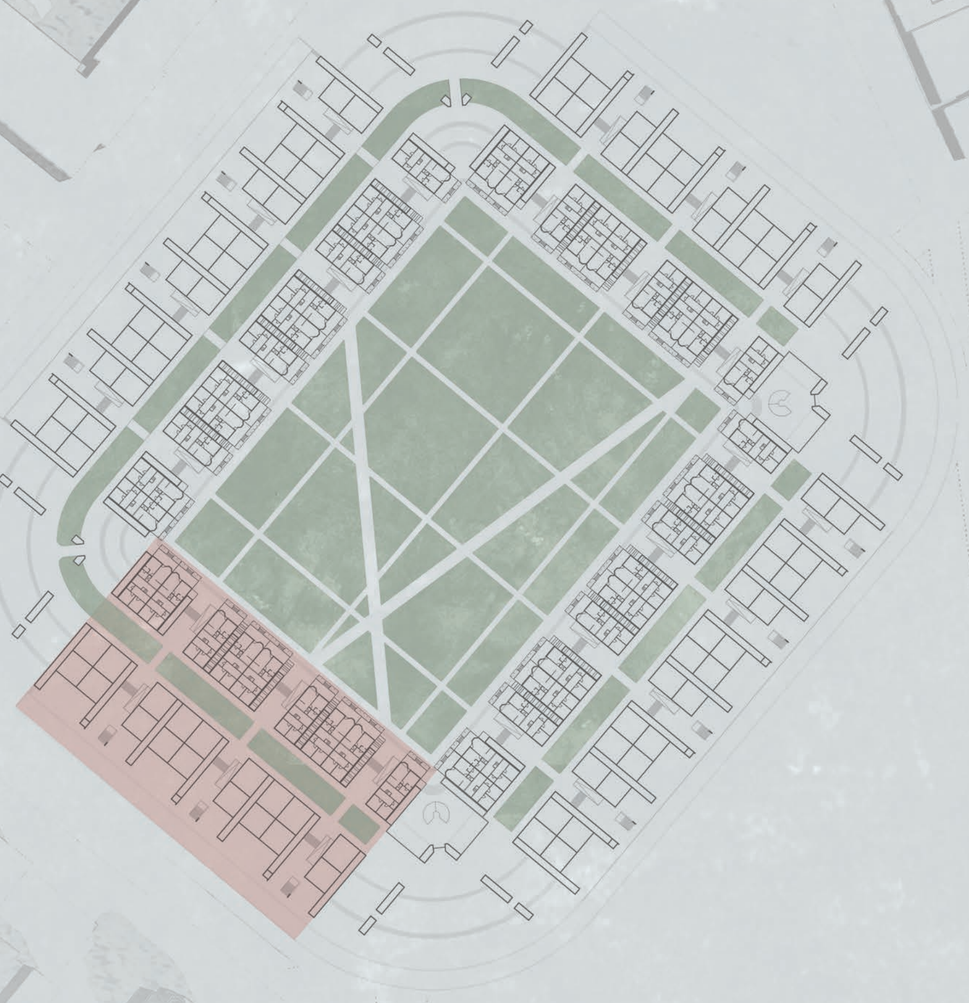

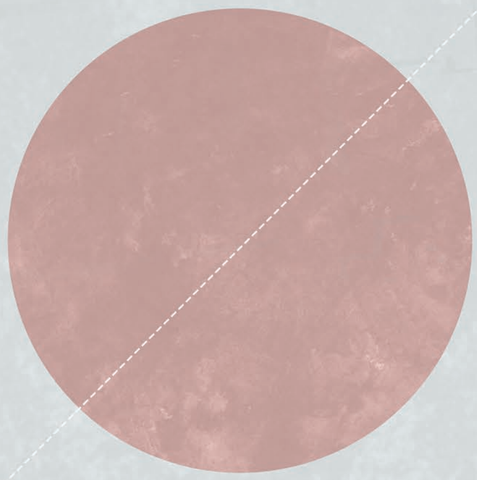

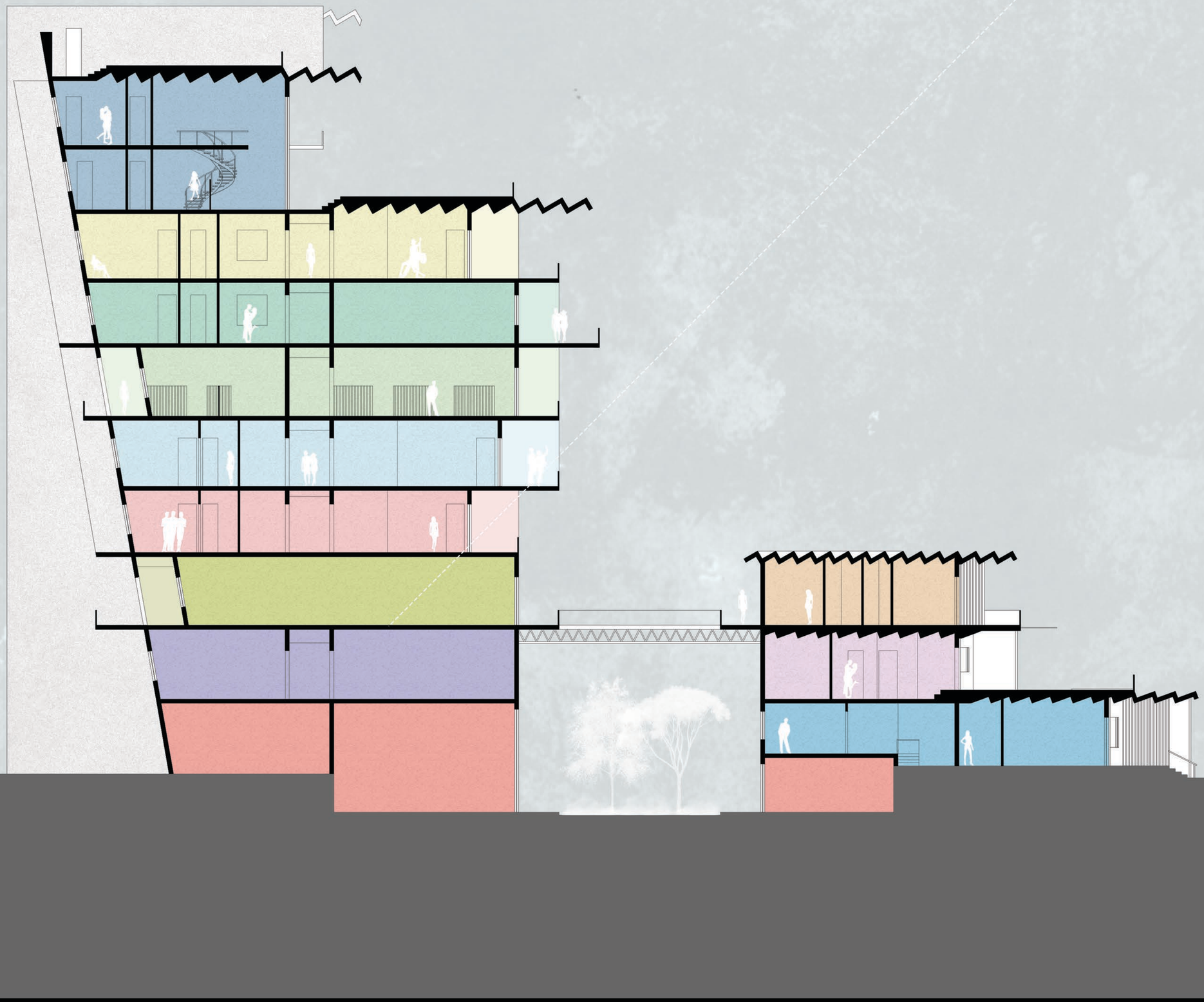

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16. SECTION

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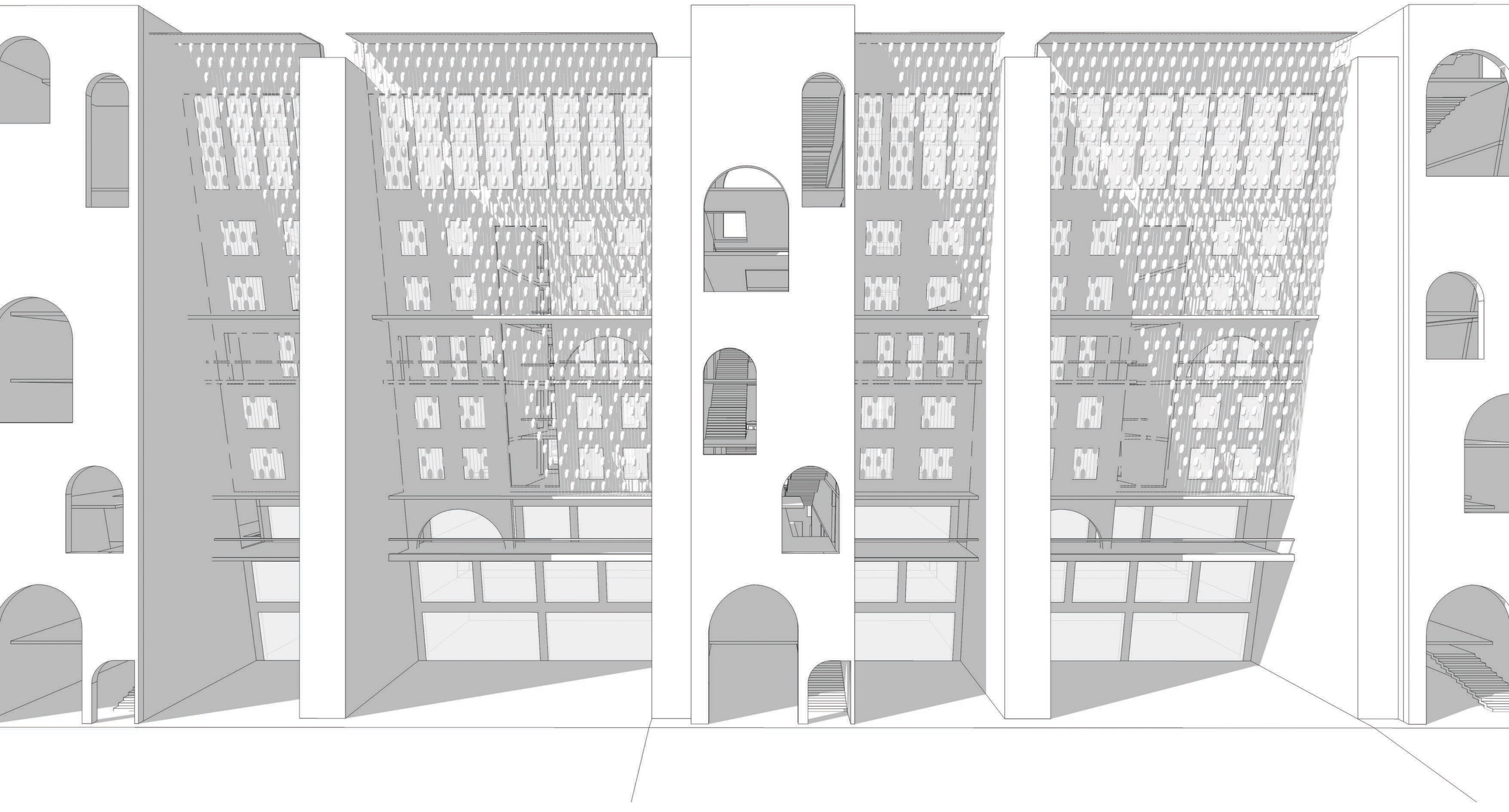

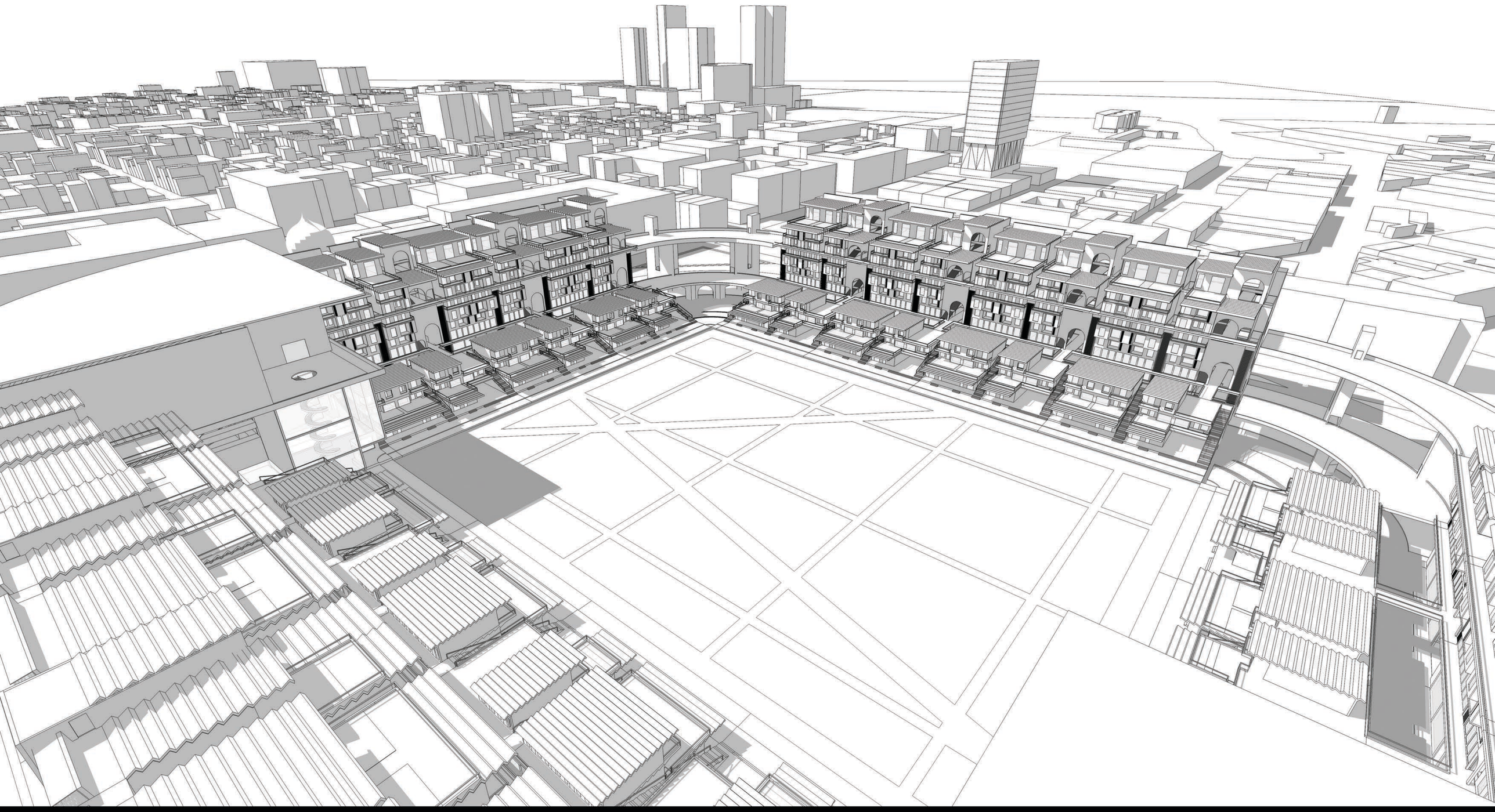

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17. VIEWS

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