PORTFOLIO
SELECTED WORKS
M.S AAC, 2022 - 2023
GSAPP, COLUMBIA UNIVERSITY

JUHI KAMRA
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New York has the highest population density of any major city in the United States. Though New York has about approximately 2300 public spaces available, only 17% of them are currently accessible. Extreme weather conditions can be deadly and some research suggests that difference of 1 F roughly 1.5 percent in the city's mortality rate. The project seeks to apply architecture's disciplinary expertise in designing for thermal comfort, to consider designing for increased thermal survivability.

With these tools like satellite data, multispectral technology or emerging technologies, a new typology of public space can be designed according to the microclimate. Public spaces are just more than a confined space. It can act like a safe haven for people who are vulnerable to heat or cold. Instead of hostile public spaces, an inclusive public space should be designed which is thermally comfortable as well.

As climate change is becoming more evident day by day, it has become a need of today, to start designing architectural spaces according to the microclimates, so that surviving these extreme climates becomes possible for all.
SHELTERS AROUND THE CITY
RAISING TO 2100

Studio - What if. Floating New York
Instructor - Laurie Hawkinson
Group - Juhi Kamra and Namarta Dhore
Spring Semester

FEMA estimates that 13 million Americans currently live within a 100-year flood zone but a new study published in the journal Environmental Research Letters argues the real number of people exposed to flood risk is about 41 million — more than three times FEMA’s estimate. The flood risk is estimated to increase by 45% by the year 2045. Queens is also singled out as a borough with the highest risk of flooding putting over 2700 homes at risk.

The existing site is located at Anabel Basin, in Hunters Point, Queens, and currently consists of warehouses owned by Plaxal and a bar right by the coast edge. The site is in AE 12 zone and will experience a sea level rise of 75 inches in most areas by 2100. This also means that it will experience a flood of about 14ft by the year 2100.

This project is a model for what the implementation of the changes to the coastal construction code might look like. After taking a look at the DOB code in Appendix G the following edits are done:

Proposed Addition:
G311.2.1 Modification to the Area of Special Flood Hazard or Shaded X-Zone:
1. Raise buildings in at risk coastal zone to at least a height of 15ft with by 2030.
2. Add appropriate storm water management systems to sites with occupancy group c d and j in at risk zones by 2030.
MARKET HALL

PROJECT PROPOSED

2023
- building elevated
- paths added
- terracing coast edge

PHASE 1

2030
- water square added

PHASE 2

2050
- park added to connect to ferry
- flood increase by 45%
- building paths remain un flooded

PHASE 3

2100
- program changes

RESEARCH CENTER
URBAN RENEWAL 2050

Studio - Capping the Cross Bronx Expressway
Instructor - Michael Bell
Group - Juhu Kamra and Namrata Dhore
Fall Semester

The Cross-Bronx Expressway or CBE originated in 1929 and was a part of the Regional Plan of New York City at the time. This system was needed because of New York's chronic traffic problems, which grew four-fold between 1920 and 1939.

The Cross Bronx Expressway is blamed for the decay of neighborhoods in the South Bronx. Community members argue that the CBE was intentionally directed through the neighborhood, even though there was a more viable option only one block south. Many of the neighborhoods it runs through have been continually poor since its construction, partly due to the lowered property value caused by the Expressway.

This project is proposed as a catalyst to speed up the already lagging 2050 plan. It impacts most of their parameters for development and positively influences their performance metric. Through interpolation of data, a finer-grain map of looking at the city by utilizing data sets from the past and analyzing them in correlation with one another are created.

A new way of re-routing trucks is proposed so that they remain on the periphery of the manufacturing so as to create habitable environments between the south of Bronx and Manhattan and also around previously burdened CBE adjacent neighborhoods. Restricting the time in which these trucks can go to these warehouses, as during the day the peak traffic is observed. By restricting them to operate only during off hours like 11 pm - 5 am, air pollution and sound pollution can be controlled.

Strategies like this one have also called for a rezoning of the Bronx. Manufacturing from their initial east placement has been moved and shifted to the southwest to allow for habitable conditions between Bronx and Manhattan. This also allows for potential higher-density developments that were previously plagued by poor air quality.