

GRACE TILGHMAN

University of Colorado Boulder 2020
Columbia University GSAPP 2018-2019



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sustainability intervention:
new york city

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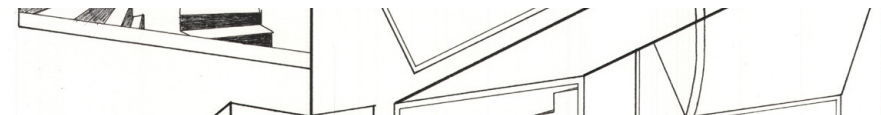
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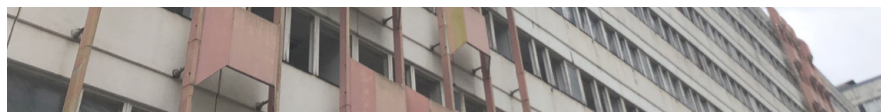
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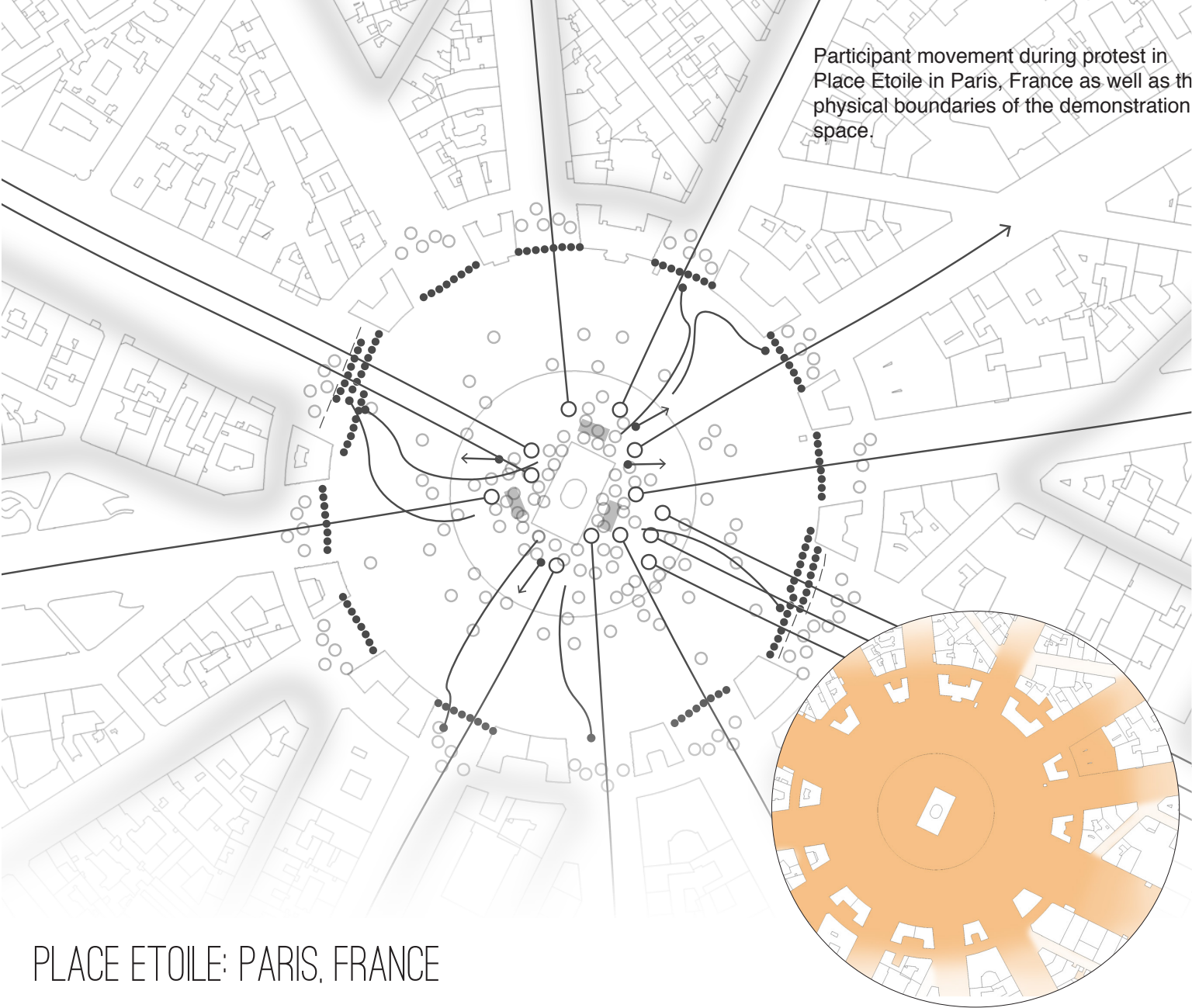
Participant movement during protest in Plaça de Saint Juame in Barcelona, Spain

URBAN STUDIES: POLITICAL DEMONSTRATION

Columbia University Spring 2019

Part of an ongoing research project, these diagrams show how demonstrators choose to occupy a variety of politically significant spaces: Placa de Saint Juame, Barcelona , Anitkabir Mausoleum, Ankara, and Place Etoile, Paris. Examined are the spaces' individual conditions as well as spatial variables that could explain why humans behave the way they do during demonstrations; barriers, penetrability, and public accessibility.

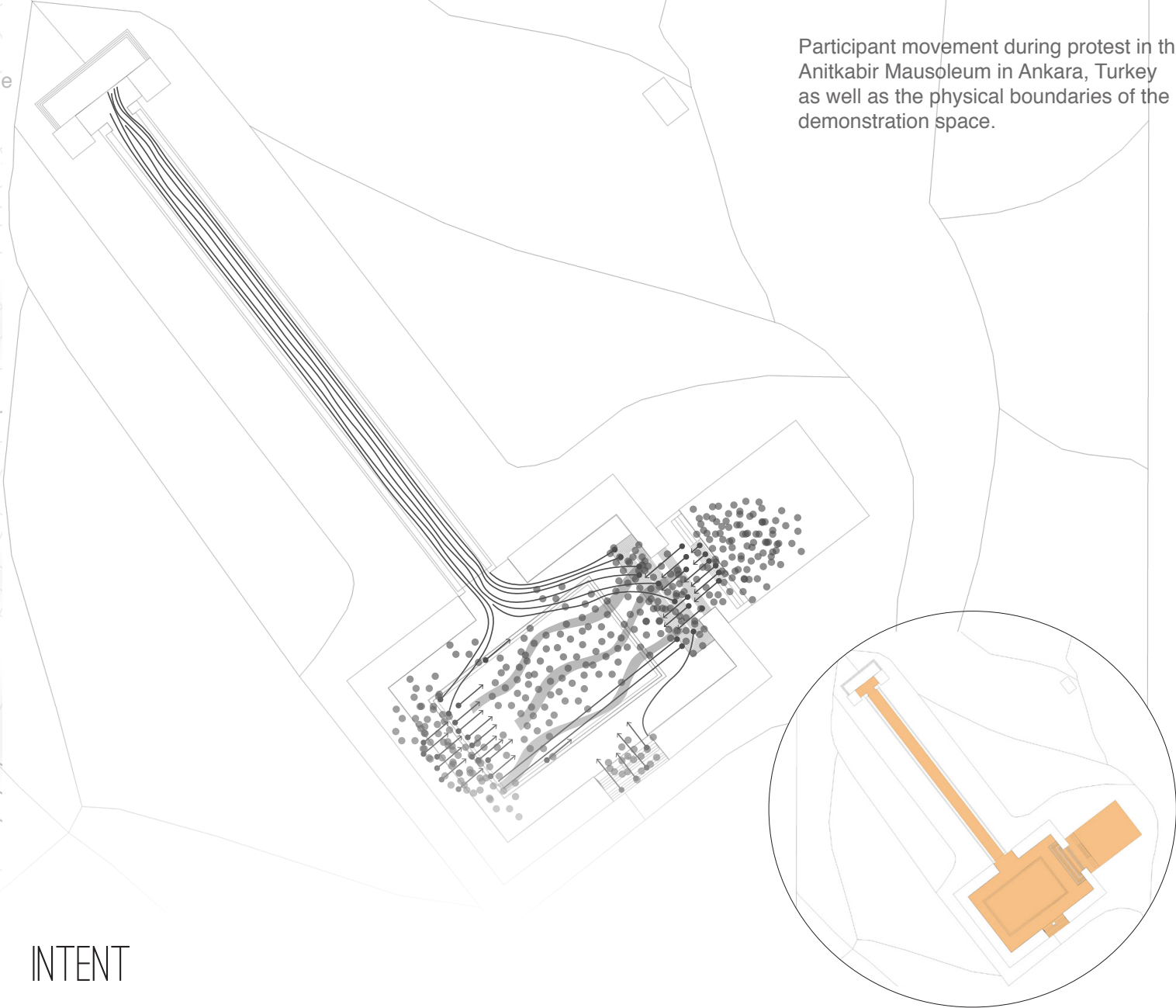
Participant movement during protest in Place Etoile in Paris, France as well as the physical boundaries of the demonstration space.



PLACE ETOILE: PARIS, FRANCE

This historically significant and central landmark in Paris was essential in understanding the behavior of demonstrators in certain public spaces. Because it is so accessible to the public, it sets a larger stage for performance. There are no physical boundaries, and therefore seemingly less restriction for those who are occupying.

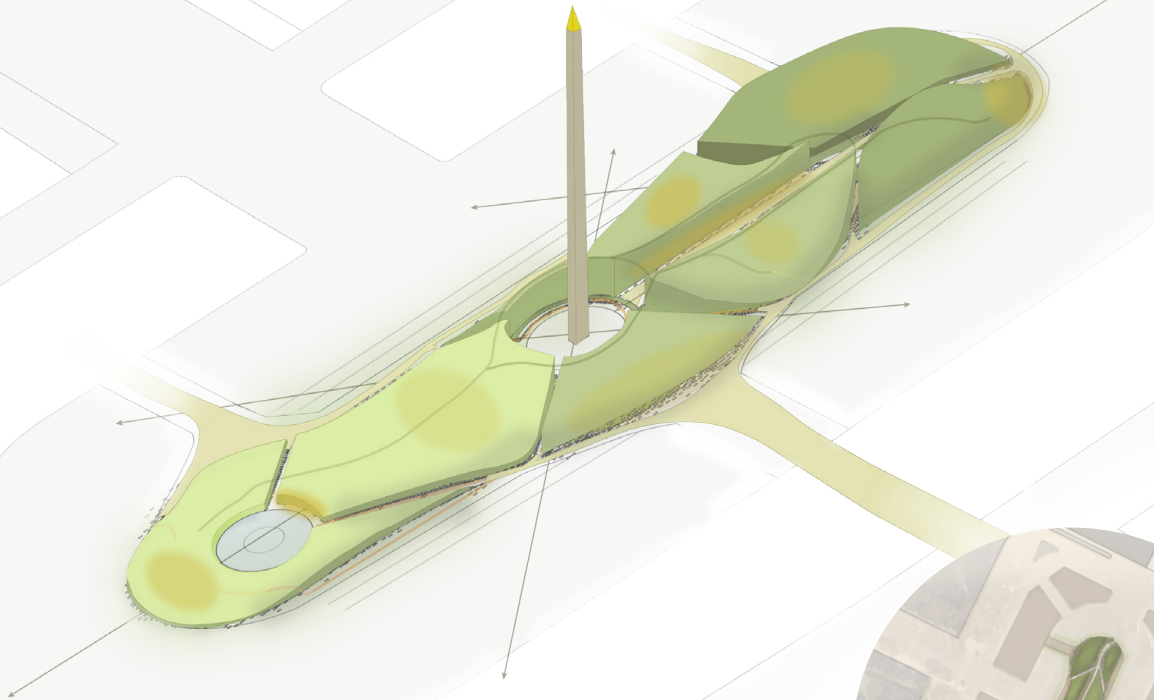
Participant movement during protest in the Anitkabir Mausoleum in Ankara, Turkey as well as the physical boundaries of the demonstration space.



INTENT

Through examining urban areas of common gathering or demonstration and their city's places of parliament one can start to extract the spatial conditions of which are necessary to invoke public gathering.

Final design intervention for Place de la Concorde in Paris, France.



INTERVENTION: CONCORDE

This intervention is an exploration of the possibility of taking a large and dwarfing urban planning experience such as that of Place de la Concorde located on the central axis of Paris, and create a human scale within it. Currently, the square is the largest in Paris and used for large demonstrations. It is dominated by a traffic circle that leaves little space for a safe and enjoyable pedestrian experience.

Interior perspective of walking space, extruded stone, raised pathways, and grass bowls in the distance.



CONCORDE



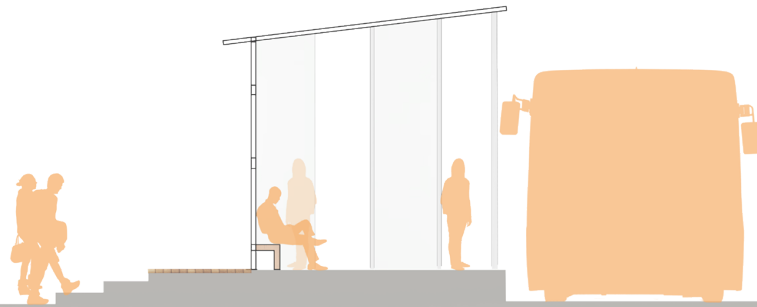
In order to acknowledge the deep and rich history of Place de la Concorde while still finding a way to alter it radically, it was important to emphasize the materials that have been constant within that space for centuries; the stone. Through extruding large grey blocks and using them as sitting, stepping, and guiding features, they support the new green landscape that emerges.



Existing Conditions Long Section

designed by freepik

New Short Section

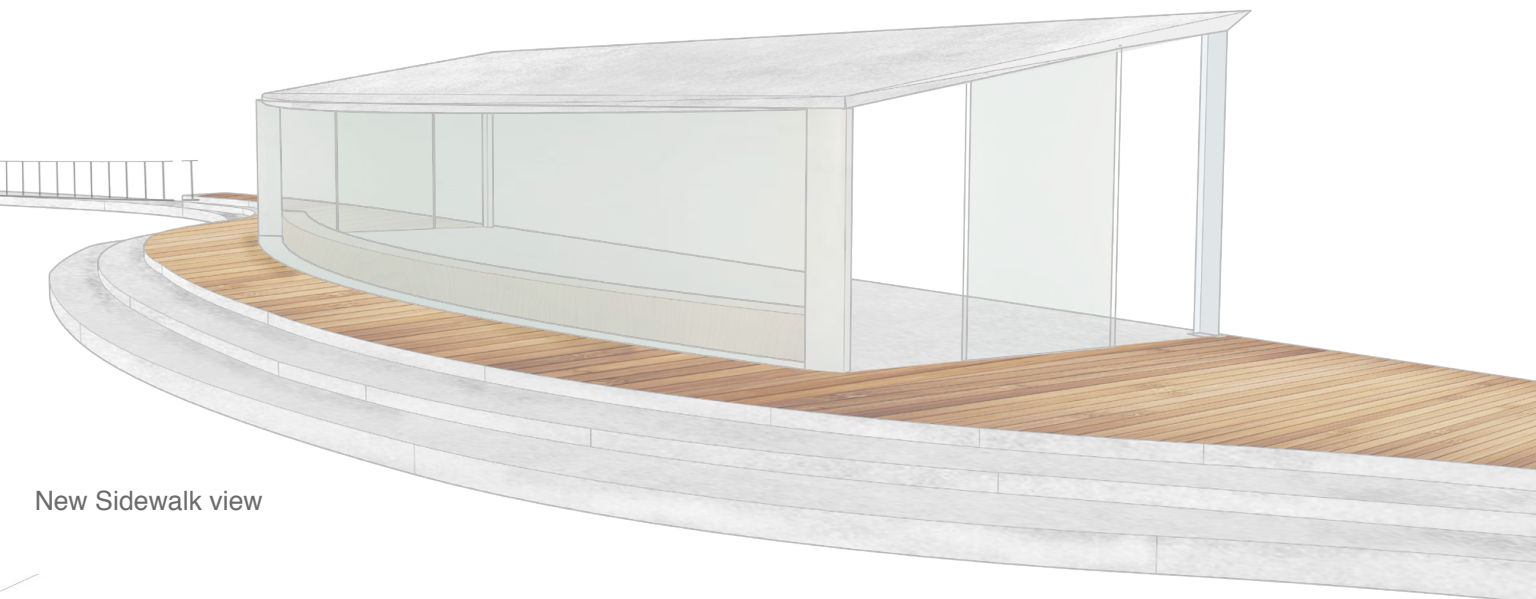


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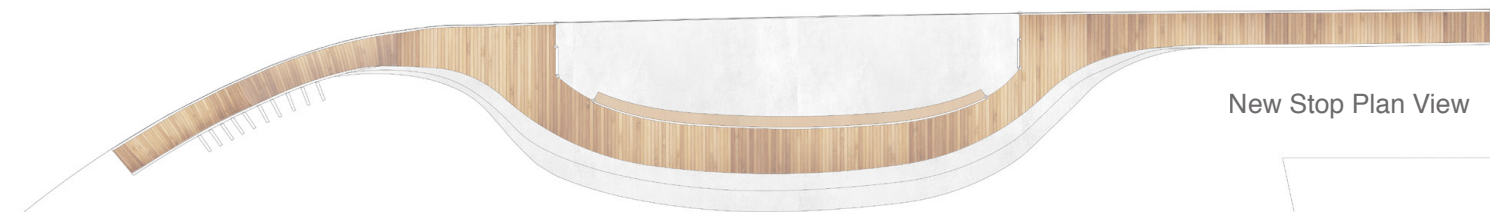
TRANSPORTATION PLANNING: CAMPUS INFRASTRUCTURE REDESIGN

Year 4 Spring 2020

The main goal of this project is to create separation between the pedestrians walking on one of the main axes of the CU Boulder main campus, and those who are utilizing the university's and the city's public transportation. The redesign of one of the main bus stops on the campus will not only encourage students and faculty to use public transportation, it will mirror Bus Rapid Transit stations in order to address efficiency issues. The design works to lift the bus stop off of the ground in order to meet buses' platform levels and it will also separate those who are waiting from those who are walking through the site through this new topography.



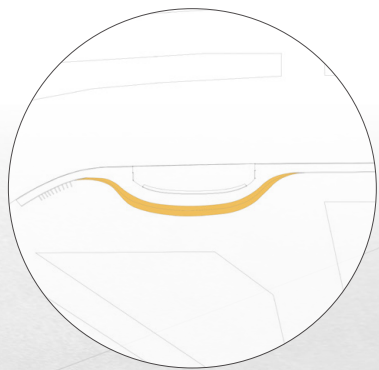
New Sidewalk view



New Stop Plan View

THE ISSUE

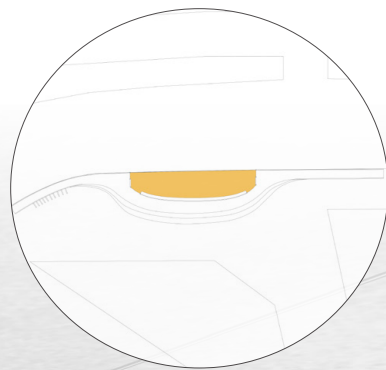
The root of the issue is that the existing bus stop is pushed back from the street and is not an inviting area to sit. Since there is a large sidewalk in between, this means that many students throughout the day walk through this area. Since the bus stop does not designate a specific waiting area for those taking the bus, the two groups of people often collide with each other. There is a need for more efficiency both for the buses as the street only has two lanes, and for the pedestrian circulation on the chosen site. The bus stop needs to be moved towards the street to allow for easier access to the bus as well as the ability for pedestrians not waiting for the bus to pass behind the stop.



steps up to platform



exterior waiting deck



interior waiting deck



interior rendering



03
GREEN HAVEN

Columbia University Fall 2018

Aerial view of capped high way concept
in the Mott Haven community of New
York.

Study and intervention within Mott Haven, New York located in the South Bronx examining the environmental injustice in an underprivileged neighborhood.



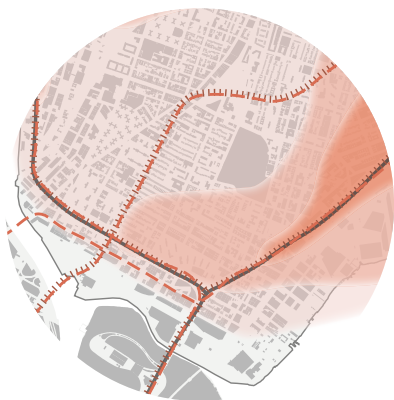
final intervention render of relationship of green space and pedestrian walkways

THESIS

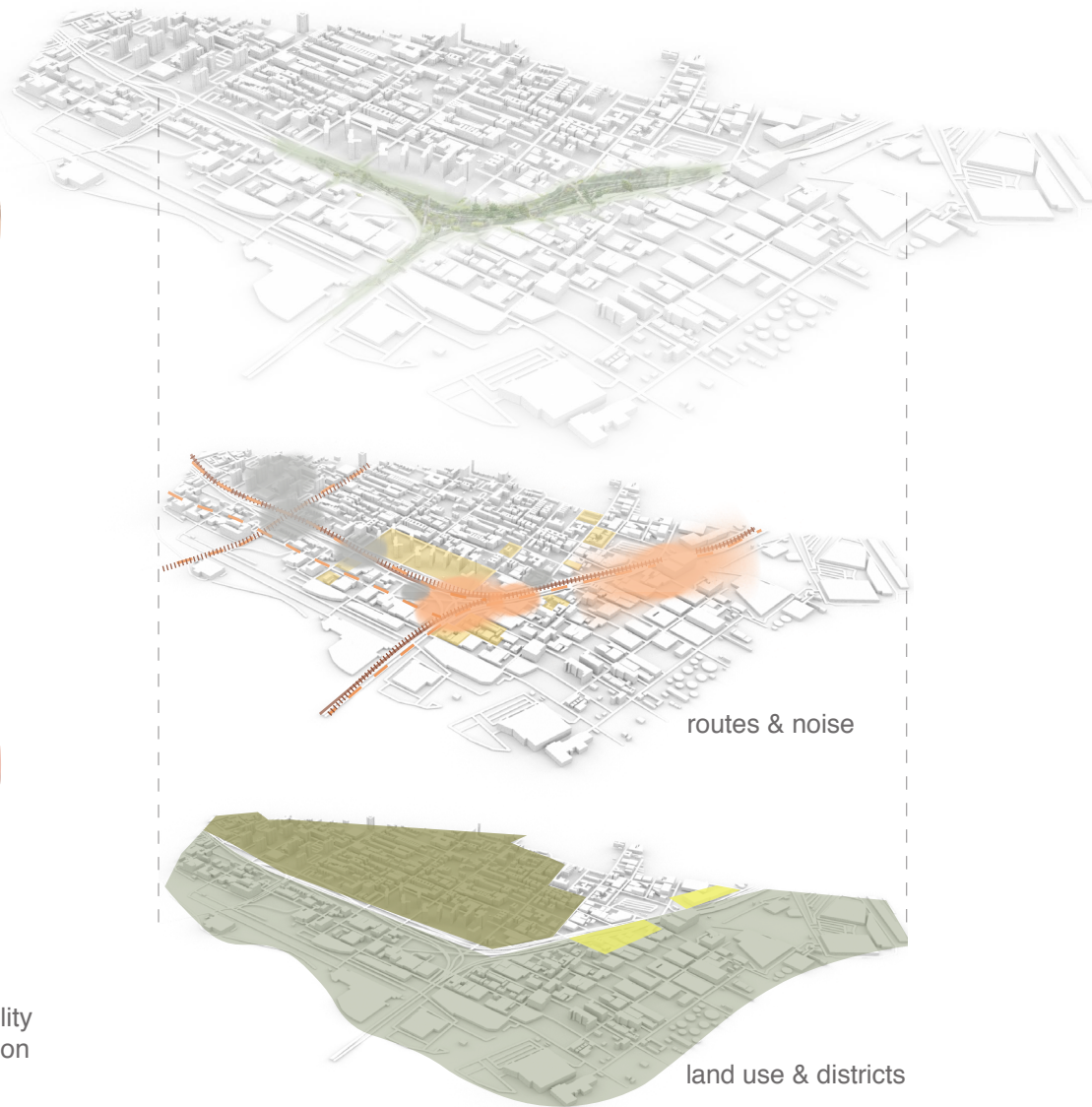
Creating useful boundaries between residents and high pollution levels through the implementation of functional greenspace that permeates and beautifies the community will reduce contact with harmful pollutants in order to help distance Mott Haven from being a neighborhood defined by its harmful industrial setting.



the community of Mott Haven is separated from the waterfront by heavy industry



this amount of industry and truck traffic leads to dangerous air quality and levels of PM 2.5 (concentration diagrammed above)



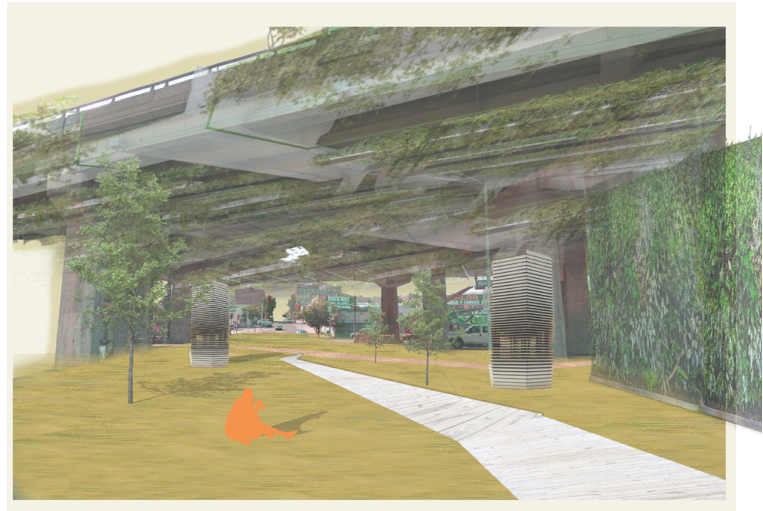
routes & noise

land use & districts

THE SITE

The implementation of this project would be crucial to the success, as the community members must be involved and tend to the green space in order to make up for lack of funding.

In order to address the high pollution levels in Mott Haven as well as lack of community space, a green space running underneath the highway that separates the industrial space from the rest of the neighborhood would be implemented. It features community green space and gardens as well as air-filtering technology. Additionally, this concept implements foliage in order to mitigate the issue of noise pollution.



air- filtration park



open green space

INTERVENTION





04

THE URBAN EDGE

Year 2 Spring 2018

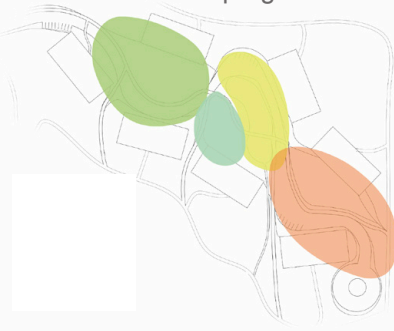
Landscape intervention for future campus addition to the main quad area

Semester 2 was dedicated to creating a master plan of CU Boulder's South Campus which exists currently as large open and green space. The assignment emphasized the incorporation of apartments and townhomes, academic buildings, and recreation buildings all while preserving as much open space as possible.

vegetation plan



program distribution



topographic condition



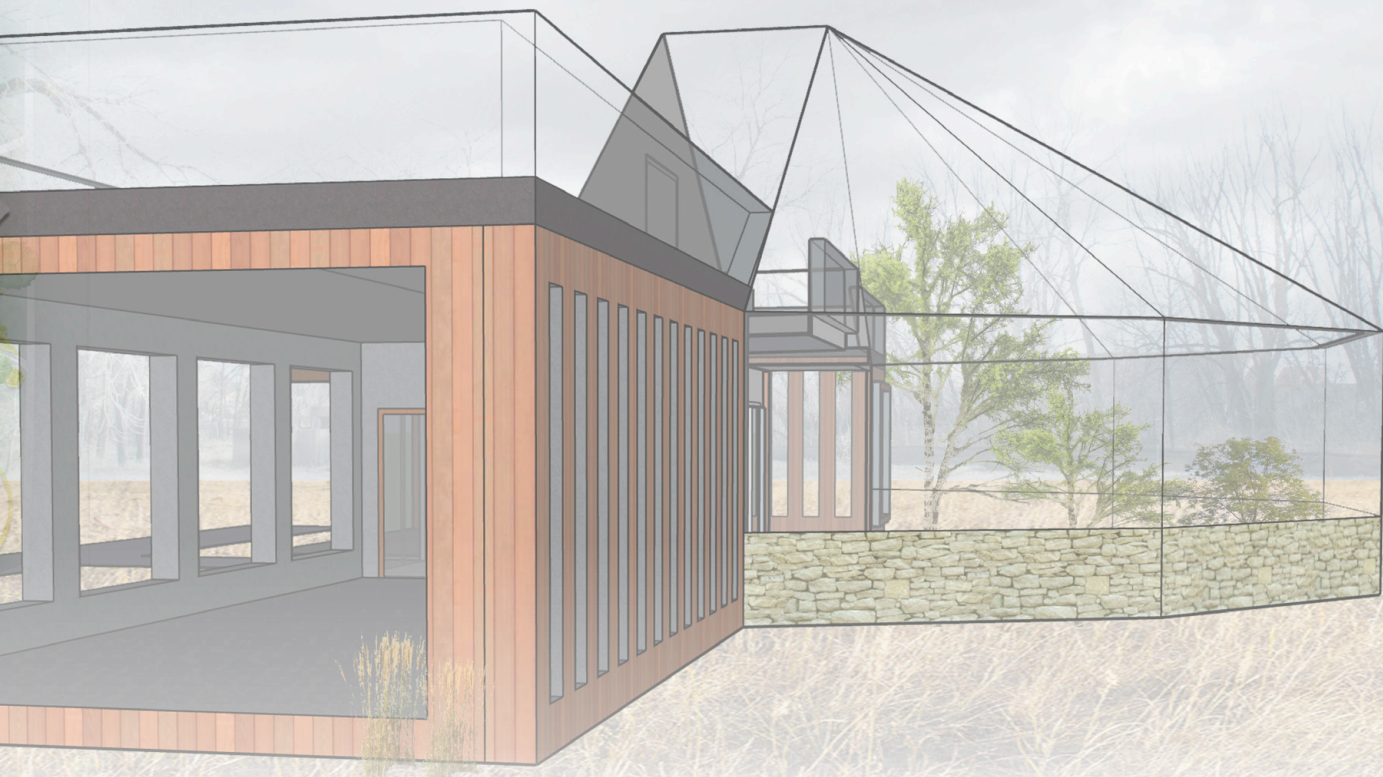
concept plan



1. residential buildings
2. planters
3. recreational green space
4. riparian flood zone
5. short-term parking
6. private residential green space
7. traffic circle

SITE ANALYSIS & PLAN

For this landscape architecture-focused assignment, the focus is on creating a walkable and inclusive space for the apartment residents which are the buildings shown in this plan. The goal was to emphasize the undulating nature of the site's existing open space within the design, influencing users to slow down and stroll through the curved pathways.



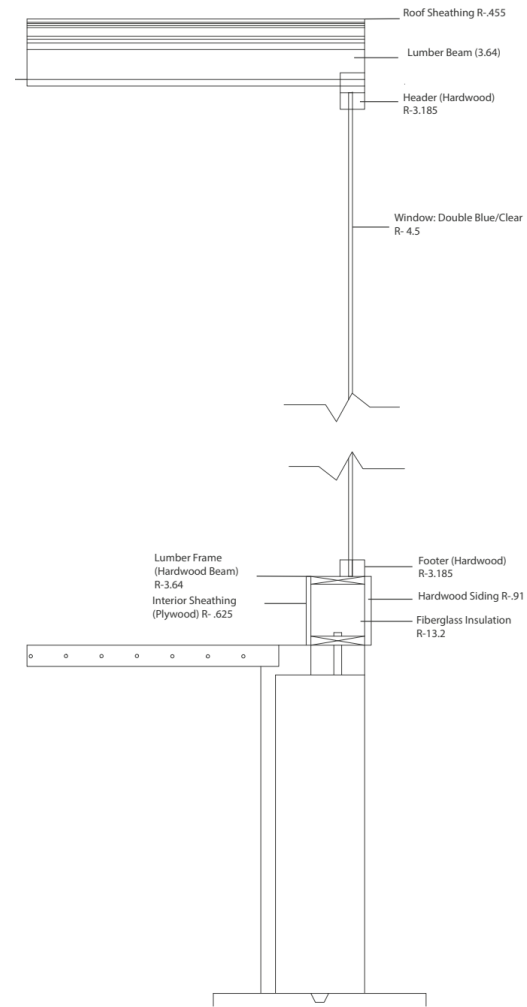
EAST CAMPUS GREENHOUSE

Year 2 Fall 2017

The second half of the semester was focused on the design for a greenhouse for CU Boulder's East Campus. Within this design project we were to incorporate an 800 square foot classroom, greenhouse, and multi-use outdoor space.



final & midterm model photographs

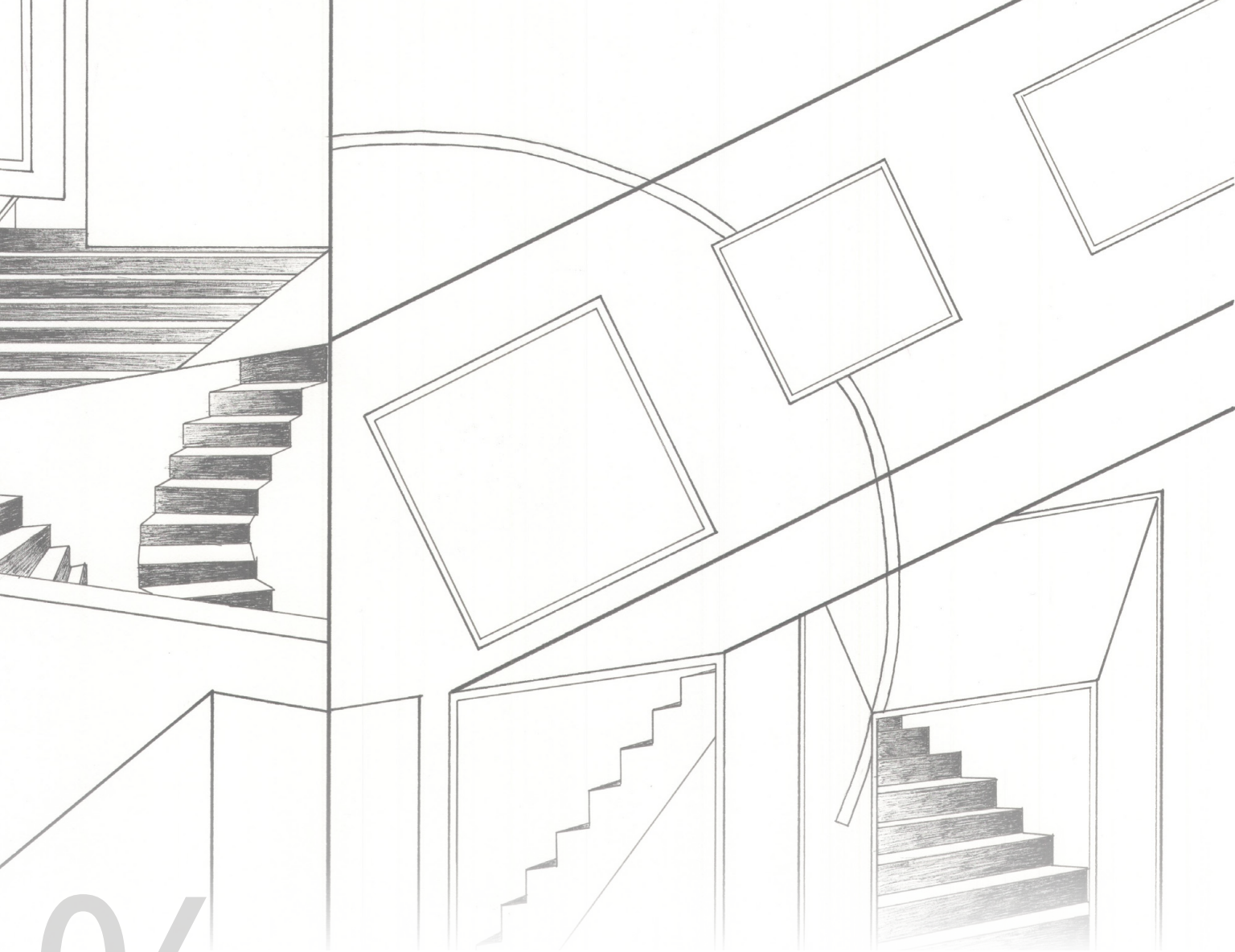


technical wall section showing materiality

GREENHOUSE FINAL DESIGN



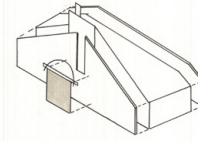
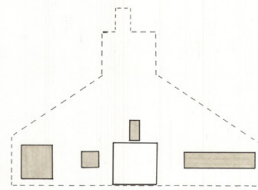
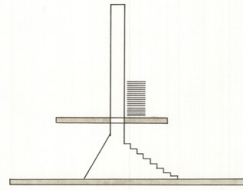
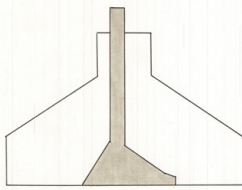
This greenhouse is intended to be a cohesive community experience. This was achieved by creating a structure that is easily accessible and visible to passersby through its open spaces and large dome-shaped greenhouse; experimenting with boundaries between the interior and exterior nature. The primary design intention is for the occupants of the classroom to be able to see the greenhouse and the surrounding environment through large connecting windows and easy linear circulation throughout the building.



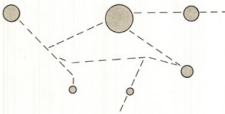
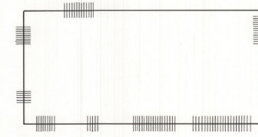
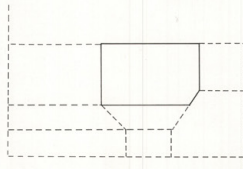
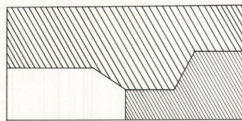
PRECEDENT STUDY: VANNA VENTURI HOUSE

Year 2 Fall 2017

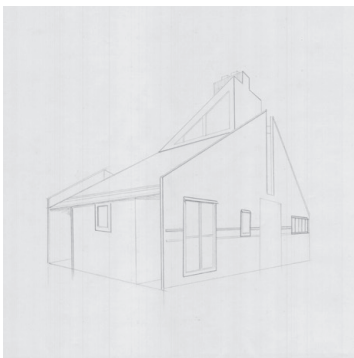
This precedent study took as its subject the Vanna Venturi House, designed by Robert Venturi for his mother, Vanna Venturi. Venturi was and still is considered the “father of postmodernism” as it is clear through his use of design elements on the facade that are not structurally relevant to the house itself. He also played with size, scale, and contrast and symbolism of different aspects of the design.



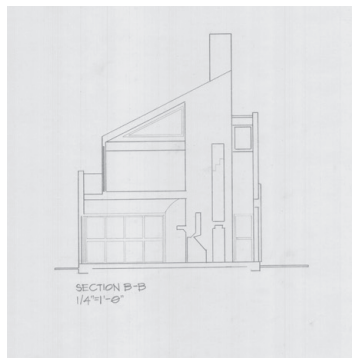
structure, vertical stratification, prospect and refuge, assembly



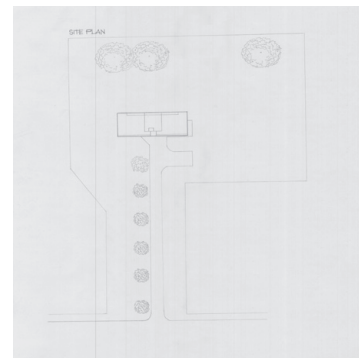
density, configuration, penetrability, circulation



perspective view



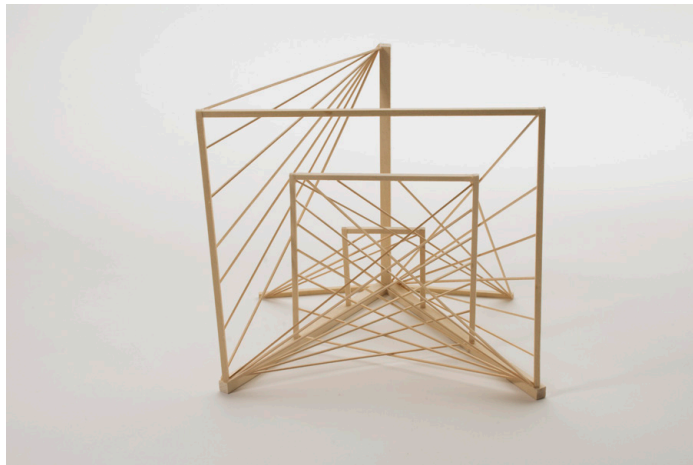
section b-b



plan view

ORTHOGRAPHIC DRAWINGS & DIAGRAMS

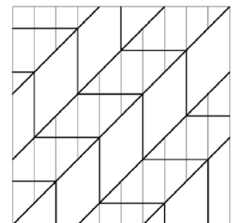
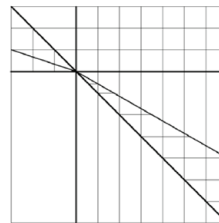
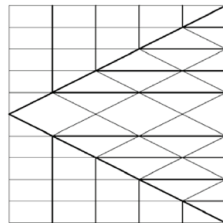
Venturi chose to put a large beam and arch above the door that do not add to the building's structural integrity. Through examining the floor plans of the building, it was clear that he played with contrast and scale within the interior as well, manipulating the circulation so that the building consists of large rooms and small, narrow doors that connect them



07

ASSEMBLAGE

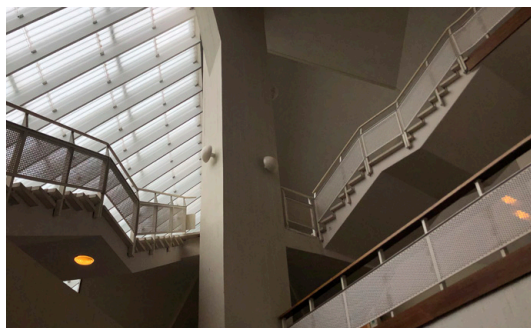
Year 1 Spring 2017



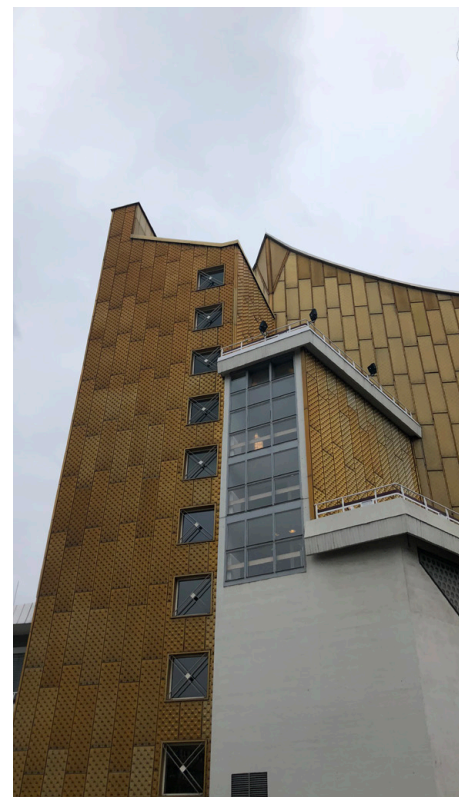
This assemblage study examined primary, secondary, and tertiary structural systems. Working within a 9 by 9 inch cube, the goal was to design a grid system that experimented with the conversation between structural elements and their emphasis.



holocaust museum sketch



haus der statistik



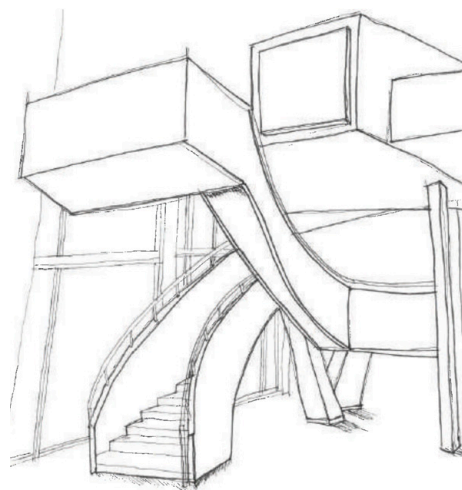
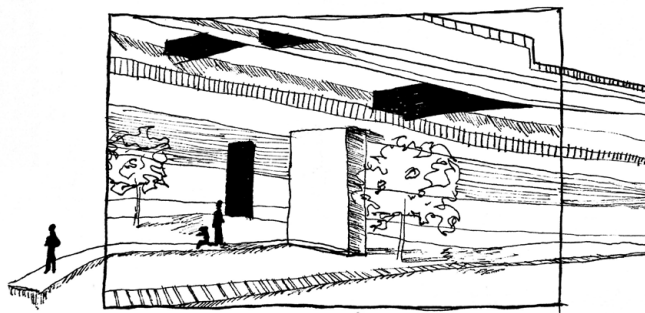
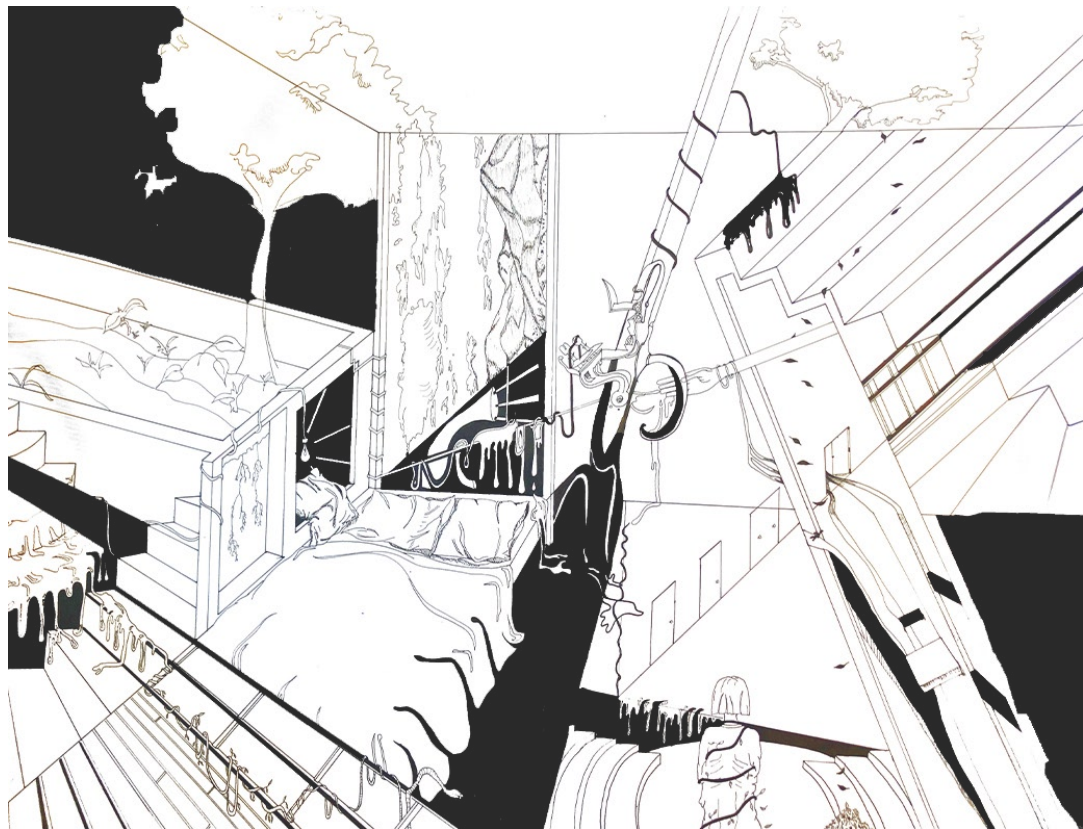
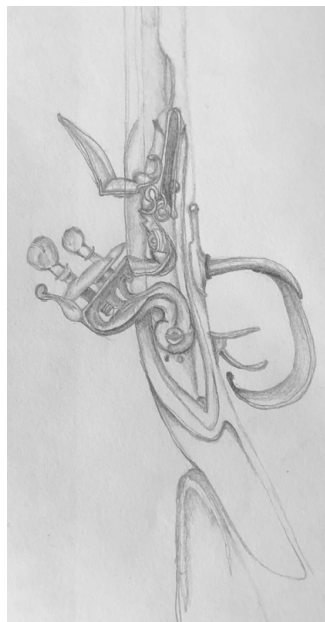
Berlin philharmonie



BERLIN
08

Columbia University Spring 2019

Through traveling to Berlin with the New York/Paris GSAPP Program, the hope was to examine urban areas and ways of demonstration or gathering and defining questions concerning the dynamics of public gathering as contrasted from city to city, begging several questions concerning the similarities of methods used in this city versus others. Additionally the focus was on exploring how architecture influences and aids these gatherings.



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