Creative Collisions

A RISD Case Study

by Hannah Liongoren

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Creative Collisions
A RISD Case Study

A thesis submitted in partial fulfillment of the requirements for the degree Master of Design in Interior Studies [Adaptive Reuse] in the Department of Interior Architecture of the Rhode Island School of Design

By

Hannah Liongoren

2017

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To Alex and Lumen,
My loves, and creative muses.

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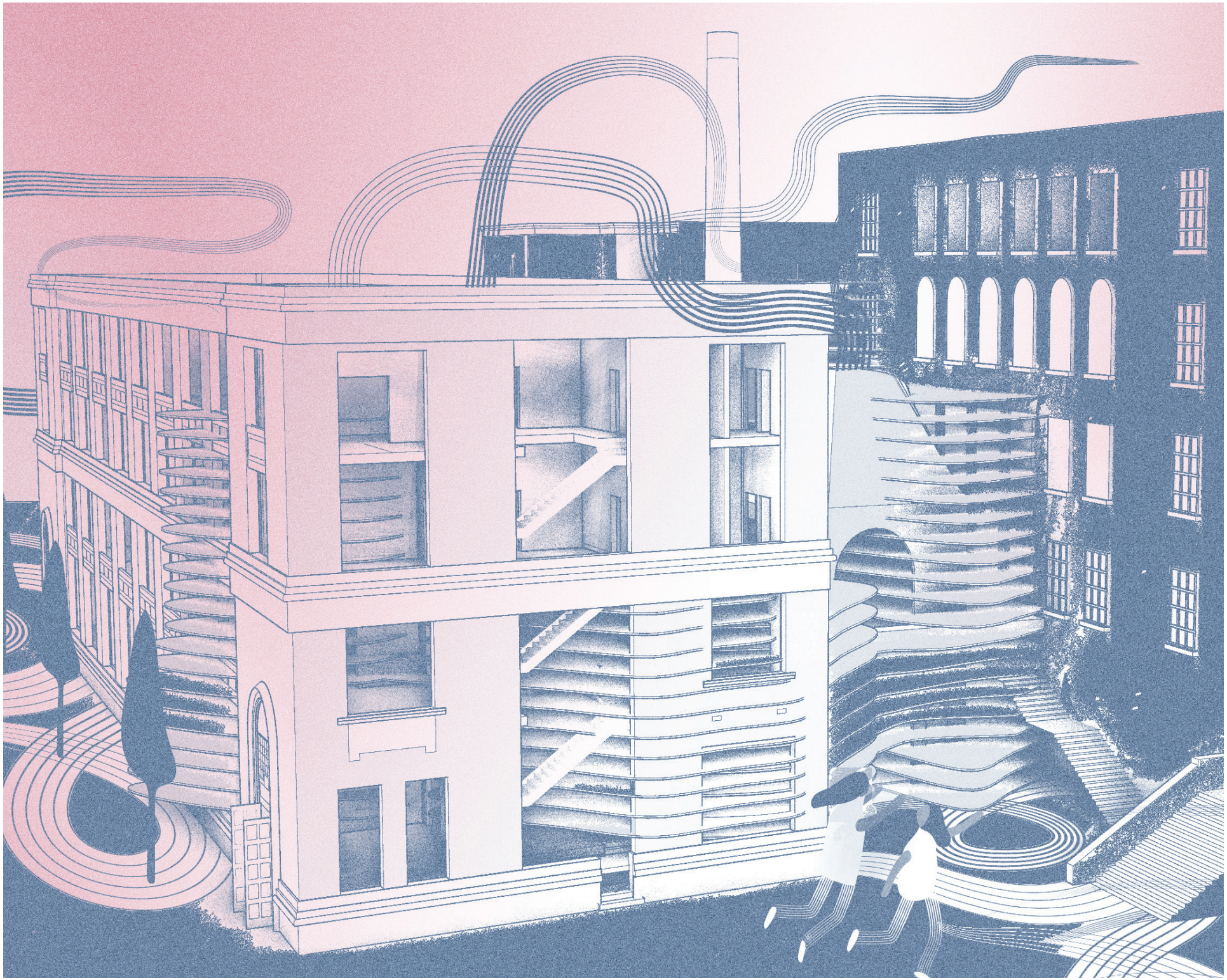
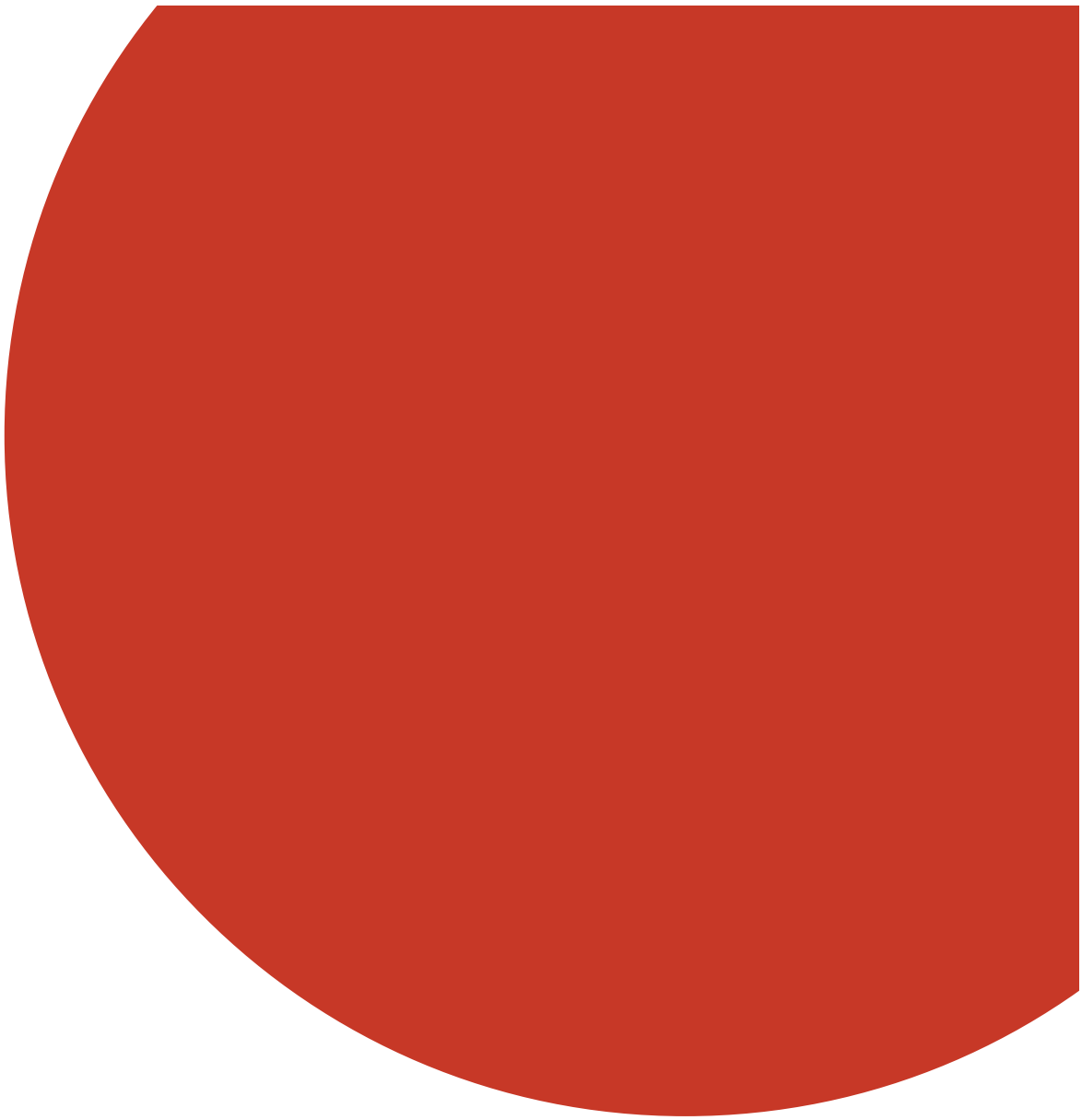


In a creative environment like RISD, brilliant minds are common but it takes more than just a brilliant mind to produce creative work . Often, new ideas are driven by what I call “Creative Collision” or chance encounters of creative people. More often than not, these are unplanned social events that cross the bounds of disciplines and social lines. By nature, creative collisions are unplanned serendipitous events. It is my belief that the design of a space can greatly affect the chance of these creative collisions occuring. It can play a key role in the creative output of a space.

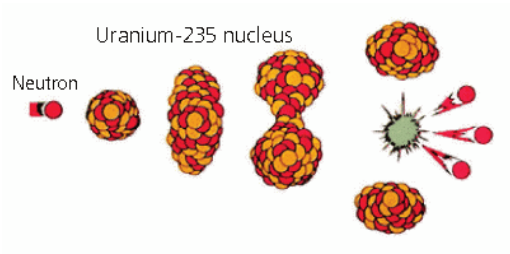


Abstract

Creative collisions play an important role in artistic work. These encounters broaden an artist's perspective, exposing them to new processes, ideas, disciplines, and collaborators. The exact nature of creative collisions is difficult to pin down, as they flourish in an ever-changing mix of social interaction and creative inspiration in a setting of multidisciplinary work. A little-known example of a serendipitous collision between artists occurred between Gustav Klimt and designer Emilie Floge, whose individual medium and style influenced the others' work, and together they dominated the Viennese Secession movement. A similar creative relationship developed between Charles and Ray Eames who met at the Cranbrook Acadamy of Art, and RISD's very own David Byrne, Chris Frantz and Tina Weymouth of the Talking Heads, whose shared art school experience gave birth to one of the objectively coolest bands of all times. While you may never see a story of creative collision play out the same way twice, it is possible to influence collisions by design, creating spaces where collisions are more likely to occur, and giving rise to a robust artistic community that engenders creative outputs that challenge assumptions.

The Rhode Island School of Design is an ideal setting for creative collision – the school hosts a community of students and faculty from diverse backgrounds, working across a multitude of disciplines. While the atmosphere is ripe for creative exchange, the topology of the campus gets in the way of serendipitous encounter. The reason for this goes back to the very beginnings of the university. When RISD was founded, it started out with just one building purchased in the middle of Providence. As RISD expanded, it did so in an ad-hoc way, acquiring more nearby buildings to make space for a growing number of students and departments. The resulting campus is sprinkled throughout the city, with no common space for people to congregate and little casual exposure to the work going on between departments, even in neighboring buildings.

Creative collision will be orchestrated via a central transit platform corridor in the heart of the RISD campus, on the Museum Block bordered by North Main Street and Benefit Street. The intervention has three tenets: designing for circulation to bring together a high density of RISD students and staff from different disciplines housed in various buildings on the block, designing a program that facilitate and attracts serendipitous encounters, and designing the space to reveal the creative process and output of the disciplines housed in the Museum Block. It is the goal of this thesis to elevate opportunities of creative collisions on campus, advancing a culture where the free exchange of ideas broadens and refines the work done on campus and beyond.

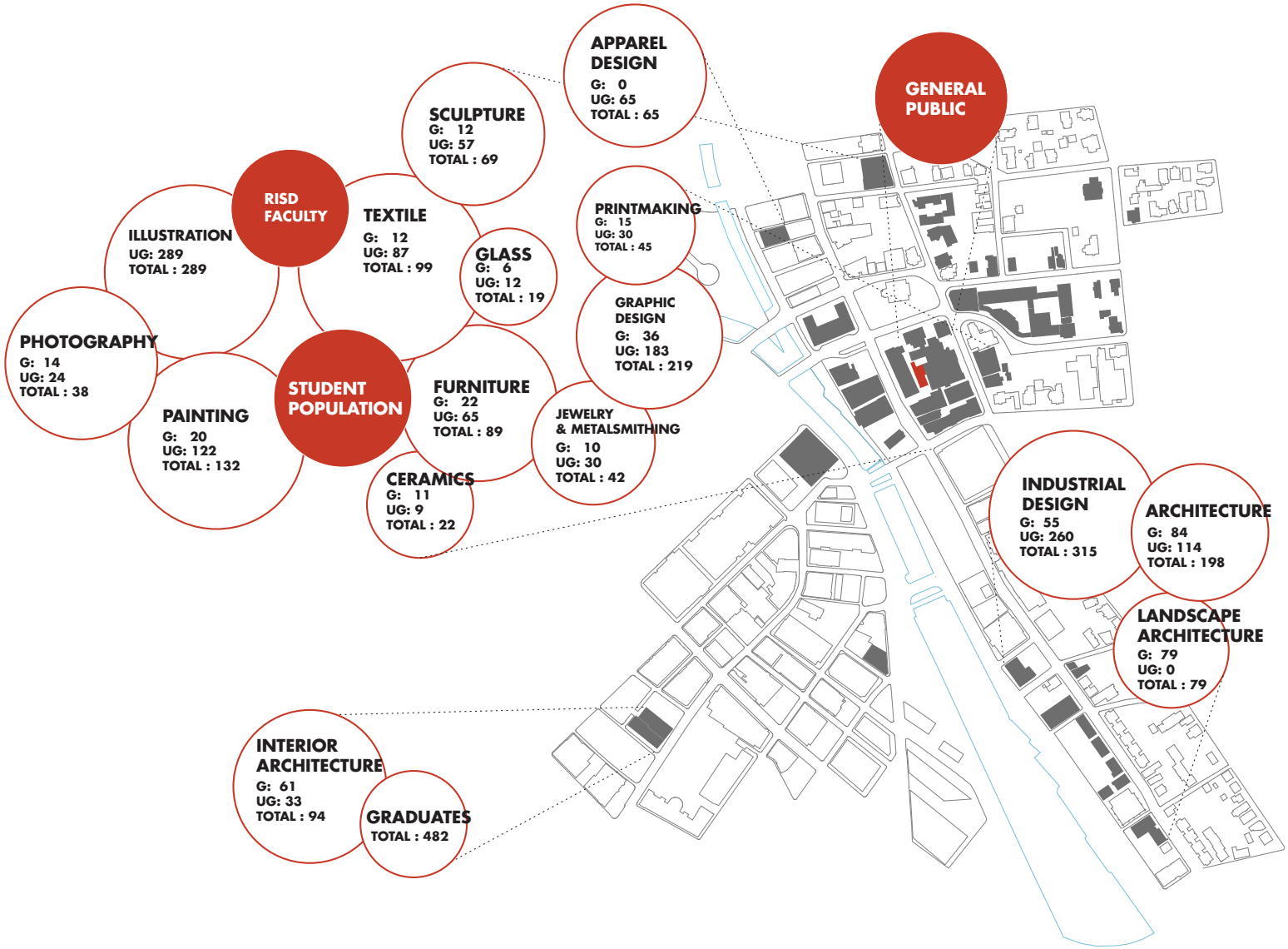


Growing up with artist parents, I was surrounded by artists, musicians, patrons and after three decades of watching how artists operate from the conception of an idea to execution, I came to the conclusion that artists are a lot like uranium. You laugh, but it fits! I used to watch artist friends sit around doing nothing for hours, then get struck by sudden inspiration and dash off a pile of artwork in a creative frenzy. It feels very similar to how a U-238 atom can sit around for years, then suddenly undergo spontaneous fission and release a pile of highly energized neutrons. When an artist would burst into a creative frenzy, artists around him would become inspired, leading to their own creative outbursts.

Which brings me to RISD, an art and design school that offers bachelor's and master's degrees in 19 majors. The potential opportunities for creative chain reactions are limitless. But as the diagram on the left page shows, the campus is scattered around downtown Providence, limiting these encounters to a minimum.

What kind of architecture can create opportunities for students across disciplines to rub shoulders and stimulate ideas, projects and connections?

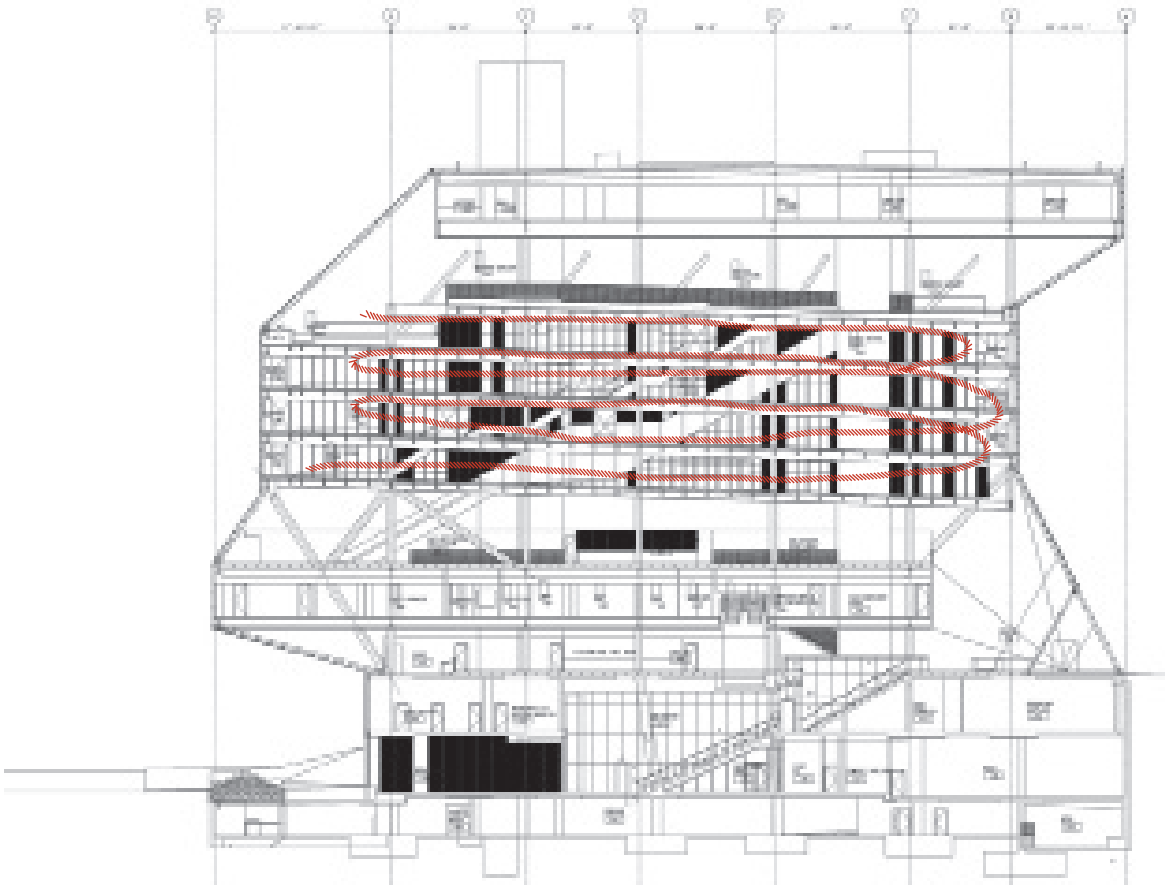
image from http://www.klimt.com/en/gallery/photographies.html


APPAREL DESIGN
G: 0
UG: 65
TOTAL : 65
GENERAL PUBLIC
SCULPTURE
G: 12
UG: 57
TOTAL : 69
RISD FACULTY
ILLUSTRATION
UG: 289
TOTAL : 289
TEXTILE
G: 12
UG: 87
TOTAL : 99
PRINTMAKING
G: 15
UG: 30
TOTAL : 45
GLASS
G: 6
UG: 12
TOTAL : 19
GRAPHIC DESIGN
G: 36
UG: 183
TOTAL : 219
PHOTOGRAPHY
G: 14
UG: 24
TOTAL : 38
STUDENT POPULATION
FURNITURE
G: 22
UG: 65
TOTAL : 89
JEWELRY & METALSMITHING
G: 10
UG: 30
TOTAL : 42
PAINTING
G: 20
UG: 122
TOTAL : 132
CERAMICS
G: 11
UG: 9
TOTAL : 22
INDUSTRIAL DESIGN
G: 55
UG: 260
TOTAL : 315
ARCHITECTURE
G: 84
UG: 114
TOTAL : 198
LANDSCAPE ARCHITECTURE
G: 79
UG: 0
TOTAL : 79
INTERIOR ARCHITECTURE
G: 61
UG: 33
TOTAL : 94
GRADUATES
TOTAL : 482

2

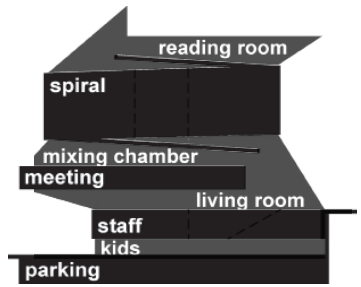
Precedents

A collection of curated inspirations that informed the architectural approach of my project.



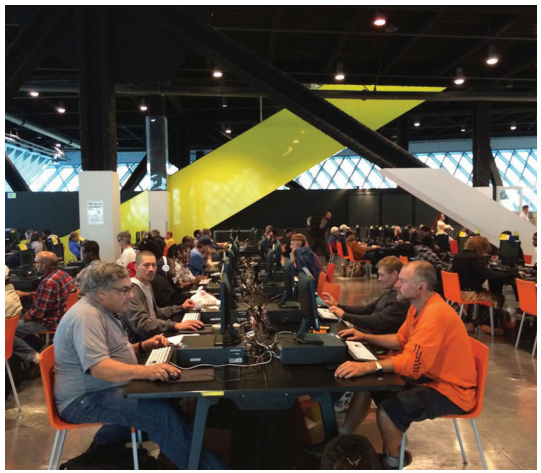
Seattle Central Public Library

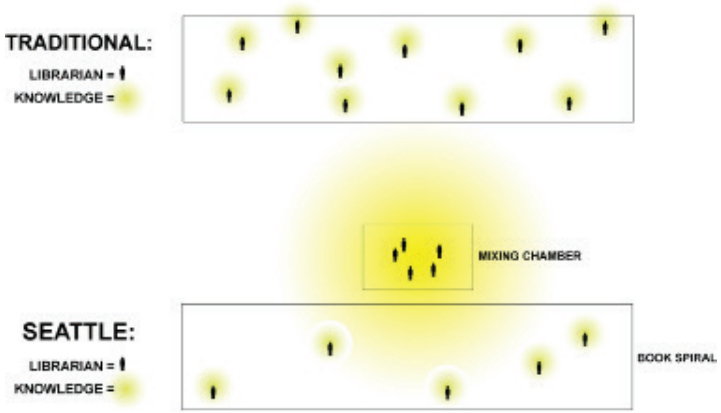
Architect : OMA / LMN
Year Built: 2008
Location: Seattle
Program: Public Library
Relevance: Architectural and Programmatic



Images from http://oma.eu/projects/seattle-central-library

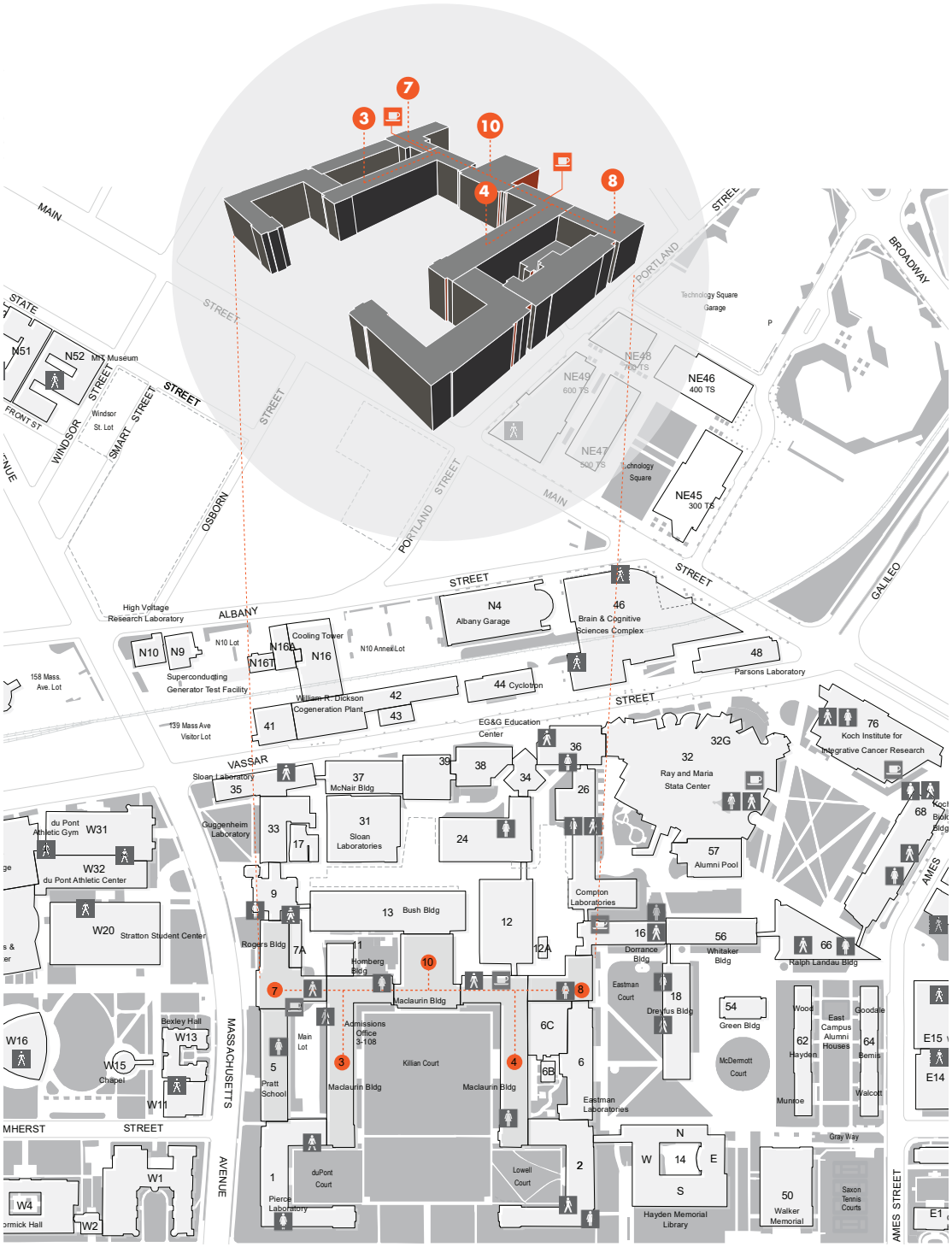
Seattle Central Library fifth floor mixing chamber computer lab (photo by Liz Thelen-Torres, Gould Evans)





The Seattle Central Public Library is an excellent example of a public space that is designed to encourage social interaction. The so called "Mixing Chamber" is explicitly designed to consolidate the library's human and technological intelligence: the visitor is surrounded by information sources (books and computers) and the inevitable human interactions that occur in the open space.

The Book Spiral that traverses around the first level to the fifth floor of the library encourages exploration and curiousity from the visitor.

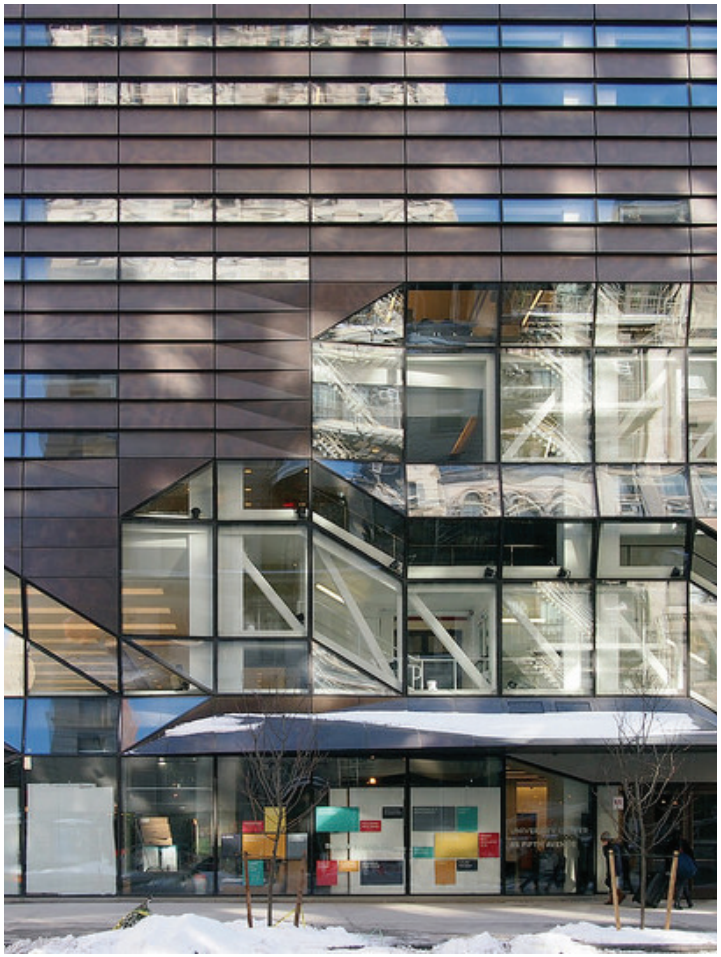


MIT Infinite Corridor

Architect : William W. Bosworth
Year Built: 1913
Location: Boston
Program: Corridor; Indoor route that connects mutiple buildings.
Relevance: Programmatic

A corridor that connects multiple buildings in Massachusetts Institute of Technology (MIT), encourages the culture of creative collision. The Infinite Corridor is the hallway, 251 meters (825 feet) long, that runs through the main buildings of MIT specifically parts of the buildings numbered 7, 3, 10, 4, and 8 (from west to east). The corridor is important not only because it links those buildings, but also because it serves as the most direct indoor route between the east and west ends of the campus. Twice per year, in mid-November and in late January, the corridor lines up with the plane of the ecliptic, causing sunlight to fill the entire corridor, events that are celebrated by students and staff.

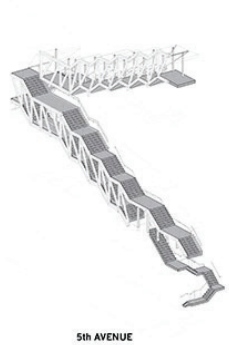
from L - R image from http://mitadmissions.org/blogs/entry/the-infinite-corridor-set-alight , http://web.mit.edu/planning/www/mithenge.html , https://gecd.mit.edu/parents-heres-how-we-help-mit-students



New School

Architect : Skidmore, Owings & Merrill (SOM)
Location: Manhattan, New York
Year Built: 2014
Program: Educational Institution and Dormitory
Relevance: Topological


14th STREET


5th AVENUE


13th STREET

The stairs connecting each of the lower seven floors of The new school building is called the "grand avenue" of staircases. It promotes not only healthful activity, but the multiple public landing spaces they create also encourage interaction and communication. The University Center is a hive of activity, visible from the street through large glass windows, allowing the outside a slice of life happening inside the building.

Image by Eliott Erwitt/Magnum Photos

Bell Labs

Architect: Mervin Kelly
Year Built: 1941
Location: Murray Hill,
Program: Laboratory
Relevance: Theoretical and programmatic

The campus inspired a great innovative time in America and gave birth to inventions like the transistor, the cell phone and solar cells that define the modern age. Thanks to the physicist, Mervin Kelly, the campus is designed architecturally to encourage the culture of creativity through interdisciplinary mingling.

Emilie Flöge (1902)
an oil painting by Gustav Klimt

L - R Emilie Floge by Hans Bohler, 1910 , Austria. Gustav Klimt & Emilie Flöge, 1910 by Hans Böhle

The renowed art nouveou painter, Gustav Klimt would not be known as Gustav Klimt if not for Emily Floge, his partner and collaborator throughout his career. This intersection of talent and interdisciplinary collaboration created revolutionary works of art.

NORTH MAIN ST.

3 Site Analysis


RISD BUILDINGS
MUSEUM BLOCK

My site takes place mainly in the museum block along North Main St. and Waterman St in Providence, Rhode Island. I have two host buildings : The Metcalf Building and the RISD Central Powerplant. The Metcalf building is located at the corner of North Main St. and Waterman st. while the Central Powerplant is behind it. These two properties are one of the first acquistions of RISD between 1893 - 1920 specifically built for the school's use. The school eventually acquired the adjacent properties in the museum block and other properties downtown, but the museum block remains the center of the campus.


WATERMAN ST.
BENEFIT ST.
NORTH MAIN ST.
COLLEGE HILL
RISD Central Power plant
Metcalf Building
N
E
W
S

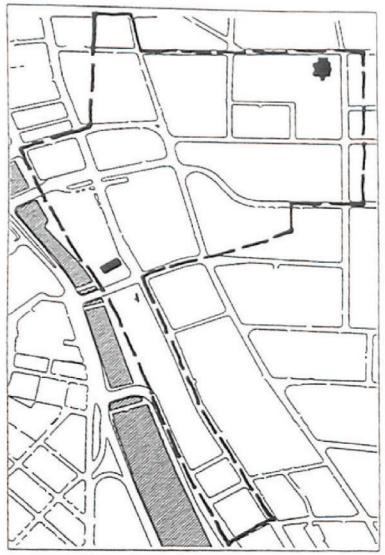


Fig. 14a Campus street grid

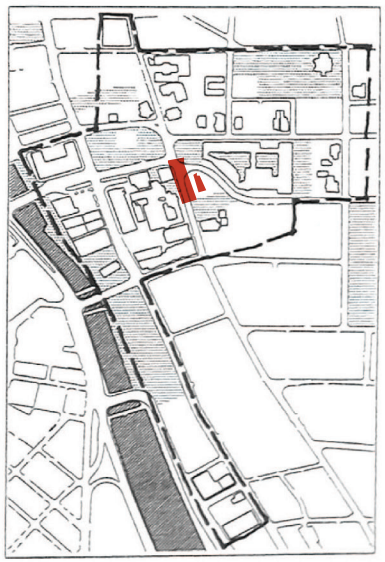


Fig. 14b Campus open spaces

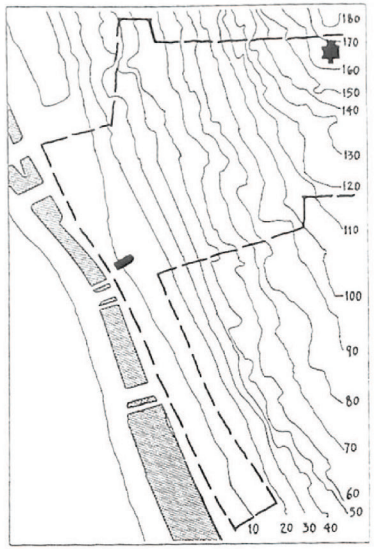


Fig. 14c Topography

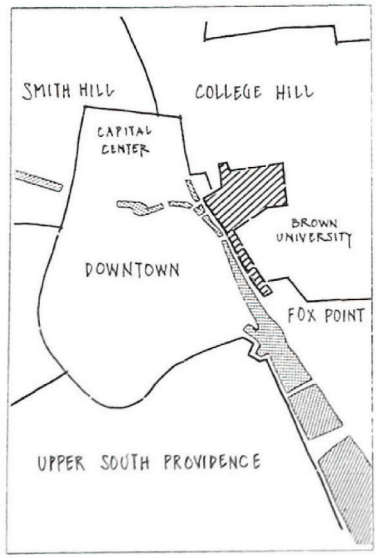
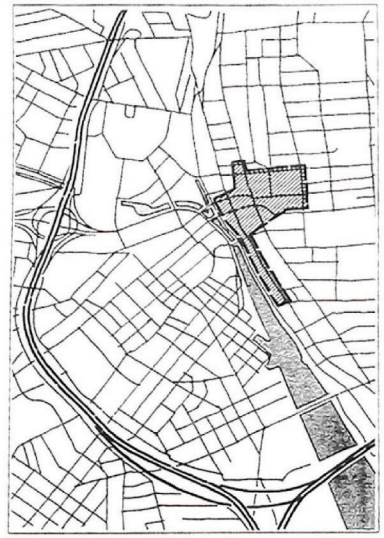
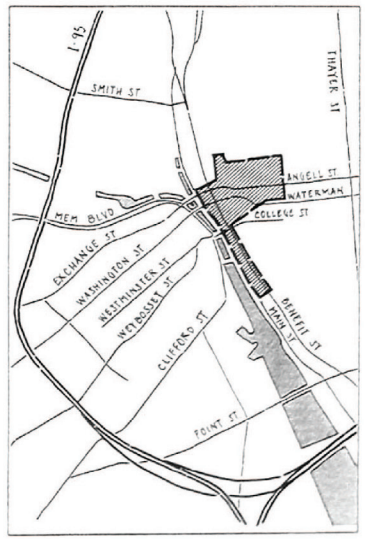


Fig. 14d Adjacent districts





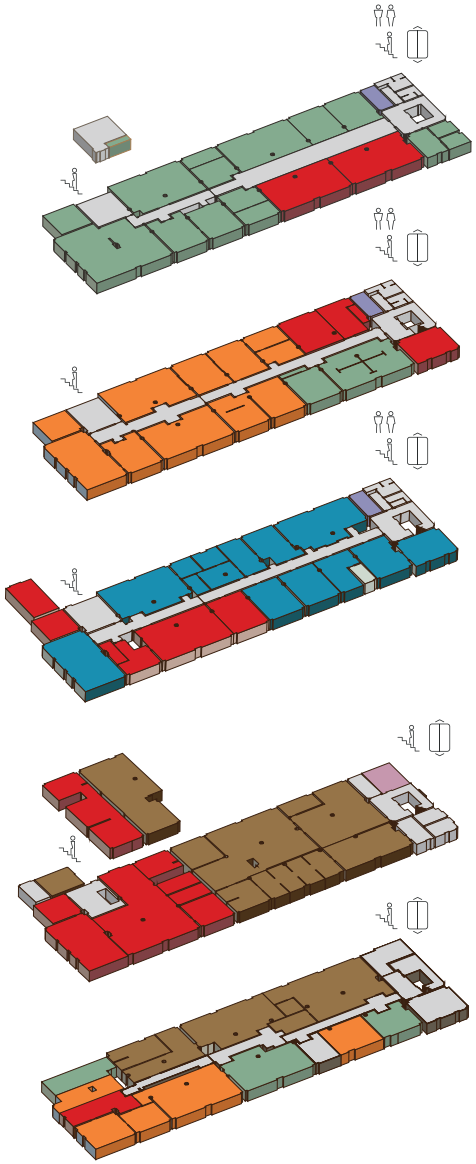
Images from RISD Masterplan 1997

1920, exteriorr view of southwest corner from North Main Street
Image from http://academicaffairs.risd.edu/locations/metcalf-building/

The Metcalf building was donated by the Metcalf family to the RISD Campus as a tribute to Jesse Metcalf, a wealthy textile manufacturer during the industrial revolution in Rhode Island. He was the main main benefactor of RISD since its foundation in 1870 by his wife and RISD co-founder, Helen Adelia Rowe Metcalf.

The building was designed to look and function as a textile factory to teach students about the practical manufacturing of fabrics, as well as developing their design. As RISD's focus eventually move to fine arts from industrial arts, the building housed a total of 6 material and process-based departments under Fine Arts and Architecture+Design Departments.

Looking northeast from corner of North Main Street and Benefit Street, View of west-facing façade from North Main Street - Night time.
Image from http://academicaffairs.risd.edu/locations/metcalf-building/



Transit & Utility
Furniture
Sculpture
Jewelry
Ceramics
Glass
Textile

4

GLASS
GLASS SHOP
STAFF OFFICE
SHOP SERVICE
HM STORAGE
HOME SPACE
CONFERENCE ROOM
CLASSROOM
FACULTY OFFICE

SCULPTURE
HOME SPACE

TRANSIT
CORRIDOR
STAIRWAY
ELEVATOR
PUBLIC RESTROOM
MECHANICAL

3

CERAMICS
SHOP
CRITIC SPACE
HOME SPACE
FACULTY OFFICE
STAFF OFFICE

GLASS
HOMESPACE
CRITIC SPACE

SCULPTURE
SHOP
CLASSROOM
CRITIC SPACE

TRANSIT
CORRIDOR
STAIRWAY
ELEVATOR
PUBLIC RESTROOM

2

JEWELRY
STUDIO
METAL SHOP
HOME SPACE
STAFF OFFICE

SCULPTURE
HOME SPACE
CRITIC SPACE
STAFF OFFICE
SPRAY BOOTH

TRANSIT & UTILITY
CORRIDOR
STAIRWAY
ELEVATOR
STORAGE
MECHANICAL

1

SCULPTURE
METAL SHOP
WOOD SHOP
STAFF OFFICE
OLS

FURNITURE
WOOD SHOP
STAFF OFFICE
HOME SPACE
OLSS
SPRAY BOOTH

TEXTILE
LOOM SHOP

TRANSIT & UTILITY
ELEVATOR
STAIRWAY
MECHANICAL

0

FURNITURE
METAL SHOP
STAFF OFFICE

GLASS
SHOP
STORAGE
HOME SPACE

CERAMICS
STUDIO
SHOP
OLS

SCULPTURE
SHOP

TRANSIT & UTILITY
CORRIDOR
STAIRWAY
ELEVATOR
STORAGE
MECHANICAL
JANITOR ROOM

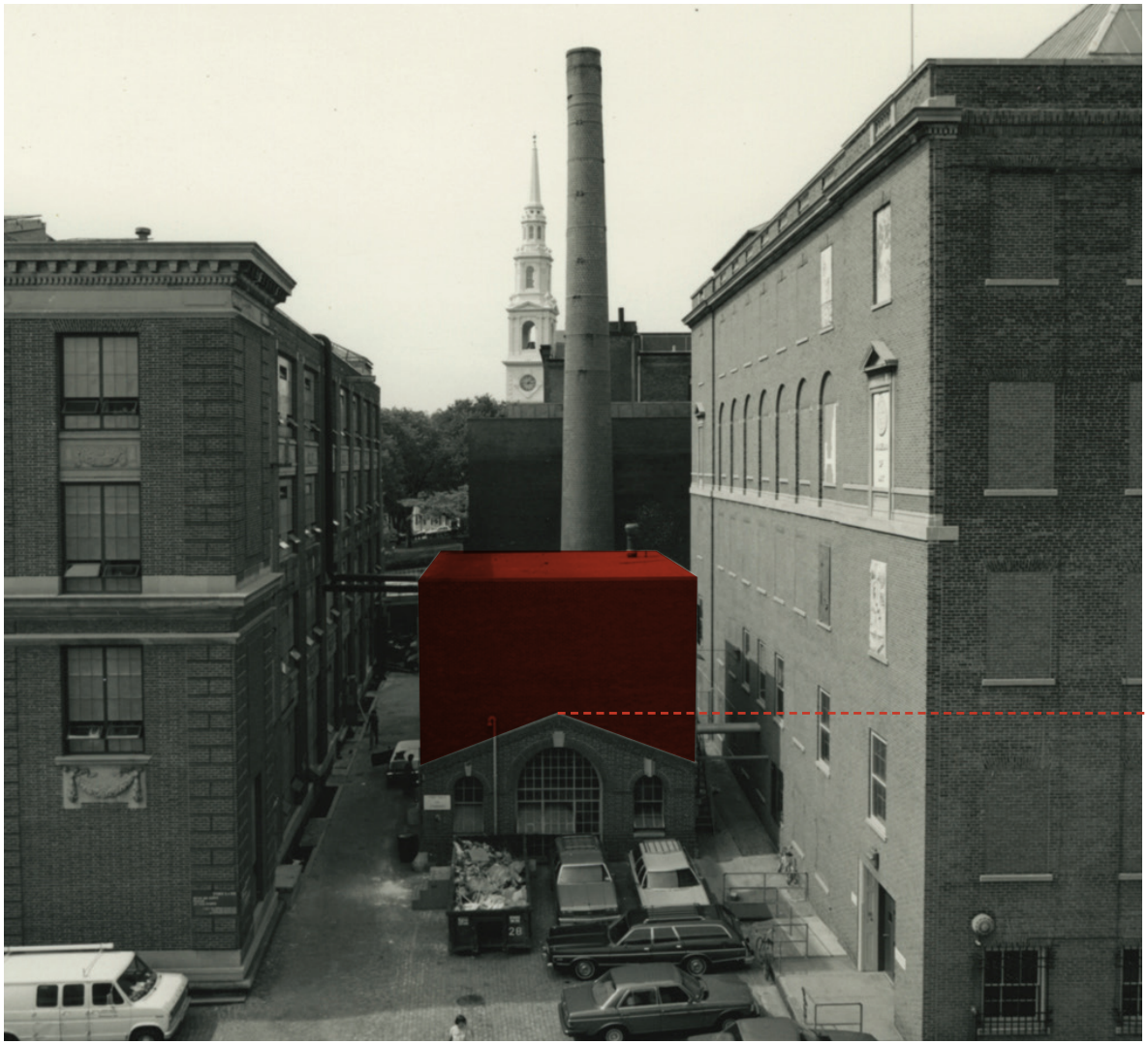


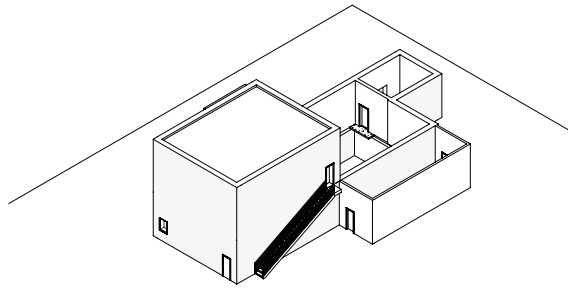
image from http://digitalcommons.risd.edu/risdbuildings/35/

This page
1915
site 9 North Main Street Providence from Metcalf Alley.

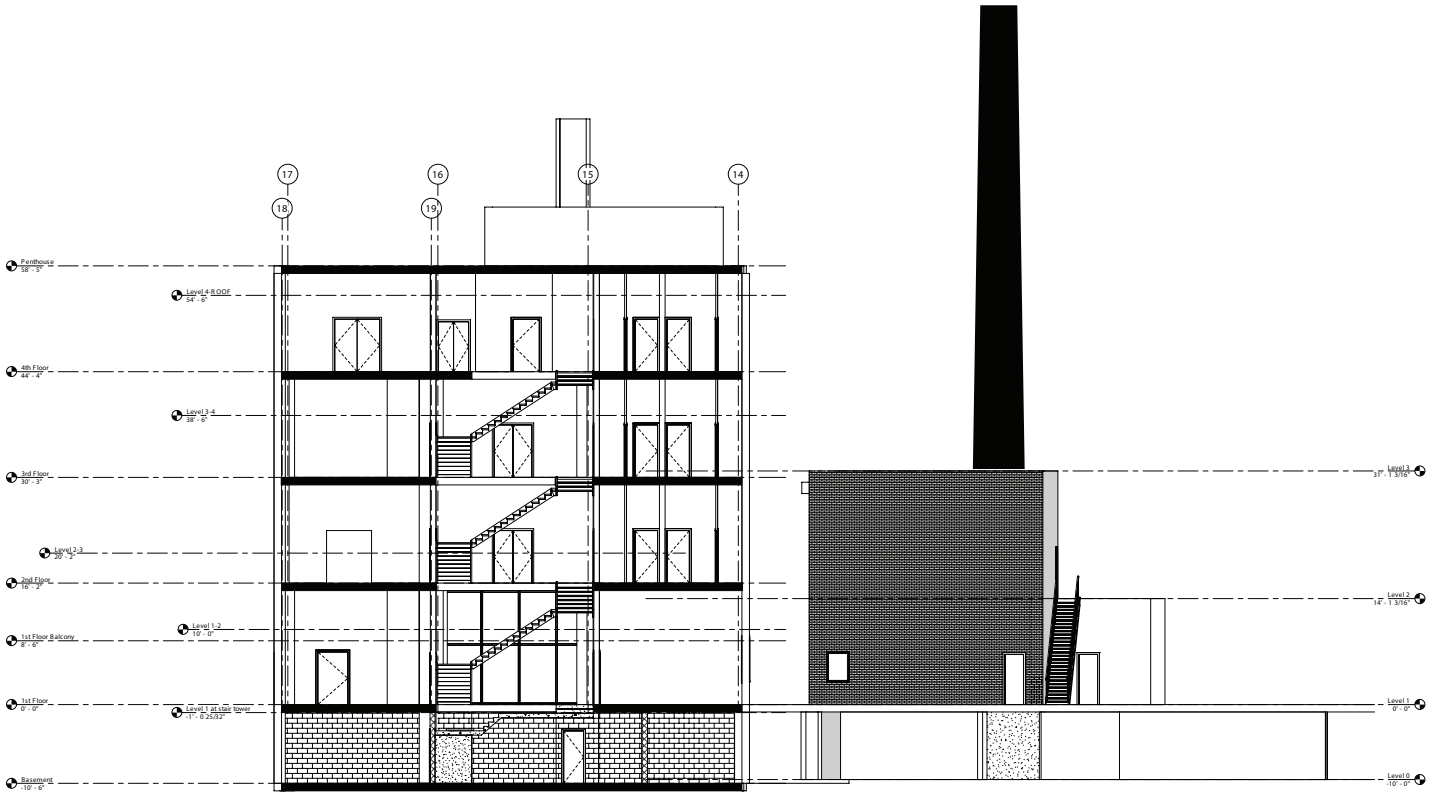
Next Page
1915
Description
site: 9 North Main Street, Providence; from photo: "back of RISD museum (see Green Door), alley between museum and Metcalf / can see church steeple in background / over head shot"

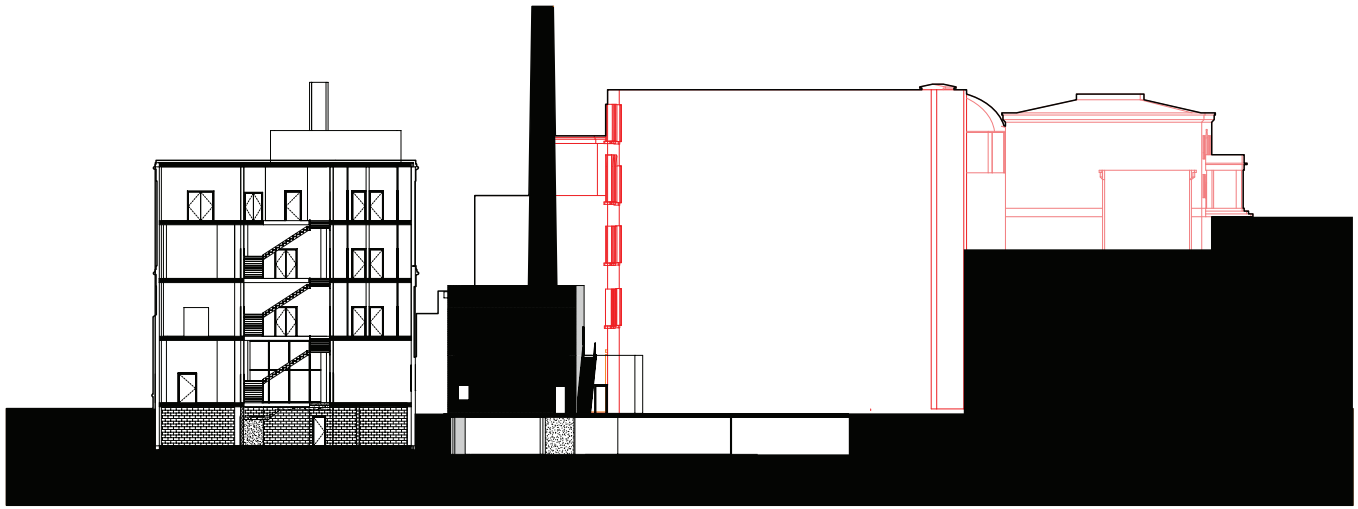
image from http://digitalcommons.risd.edu/risdbuildings/35/

The RISD Central Powerplatn has no written documentation of the history of construction. I was able to find pictures you see here. If you observe the picture closely, the powerplant use to be a single story building as shown on the image on this page. The addition of a second level was probably constructed to make room for more equipment when the school expanded. The Powerplant produces steam and heat to the following buildings: Carr, Waterman, Museum, Chace, Metcalf, Memorial Hall, Bank, College, Market House, Auditorium, Design center, ISB and 20 Washington Place. It also produces chilled water to cool the Mu-



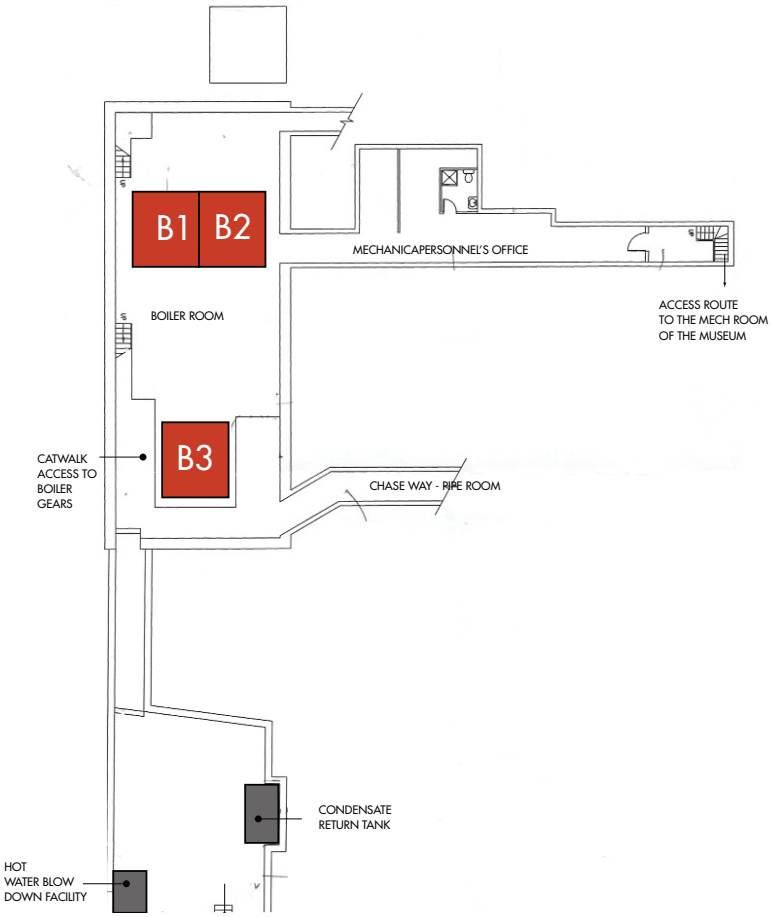
Section of Metcalf Building



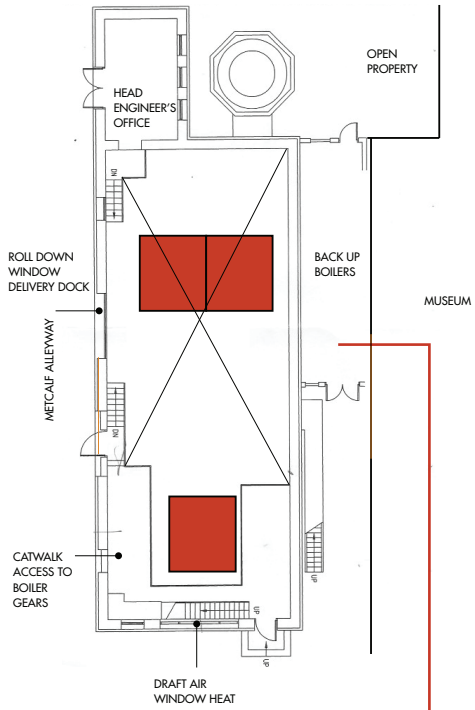


RISD Central Poweplant Floorplans

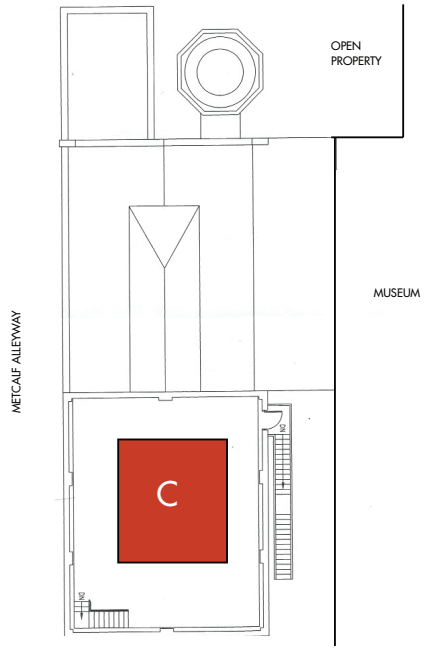
BASEMENT



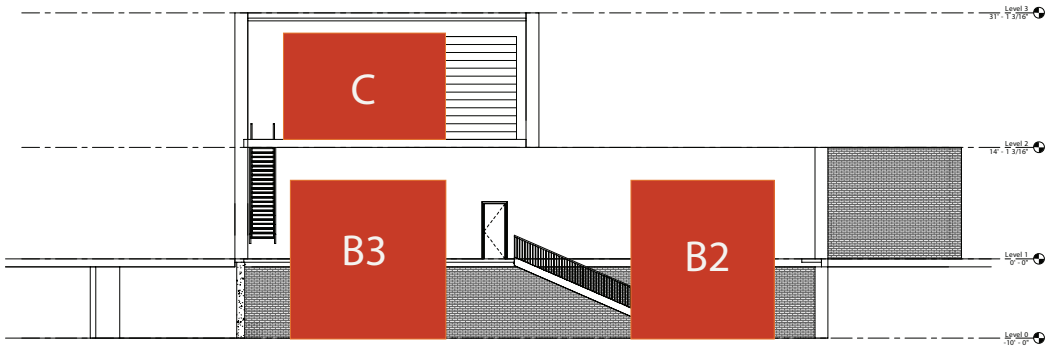
1ST FLOOR



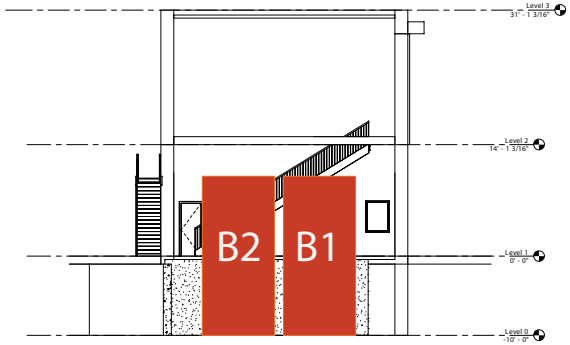
2ND FLOOR



There are two smaller boilers we run in the summer. They are Bryan boilers, 2007, rated for about 2,500 lbs of team per hour, each. They run on natural gas.



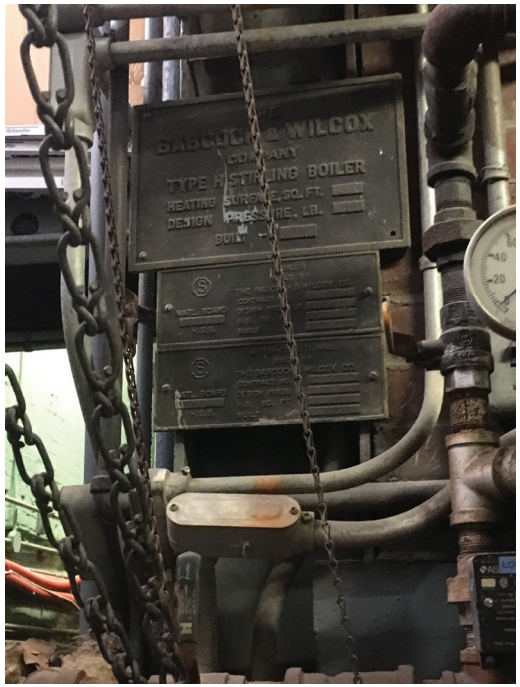
1 Section 1
3/16" = 1'-0"



2 Section 2
3/16" = 1'-0"

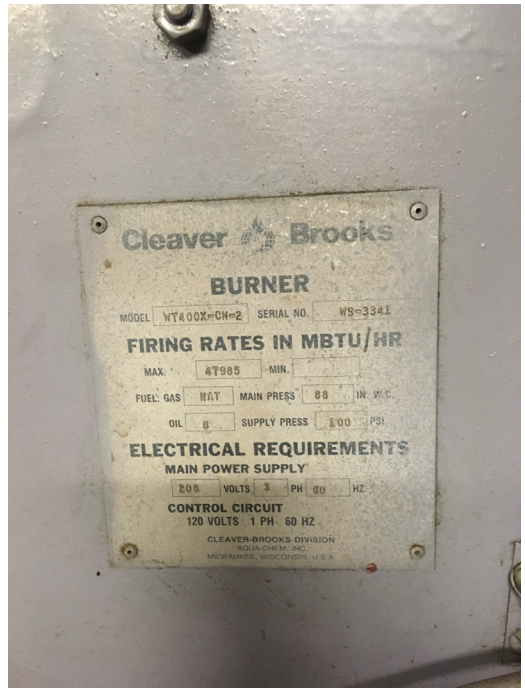
On the second level over the boiler room there is a chiller room with two water-cooled 300-ton centrifugal Carrier chillers, an 80-ton air-cooled Trane chiller, and a 100-ton plate and frame heat exchanger that we can use in economizer cycle with the cooling tower when the weather is cold.

BOILER 1 NAME PLATE



BOILER 2 NAME PLATE

BOILER 3 NAME PLATE

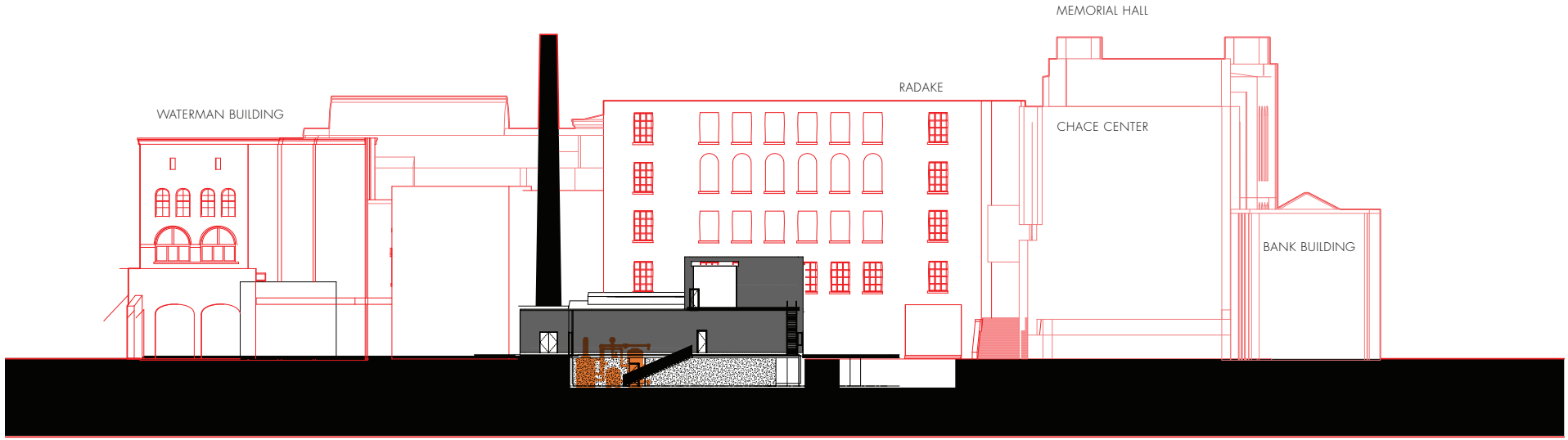


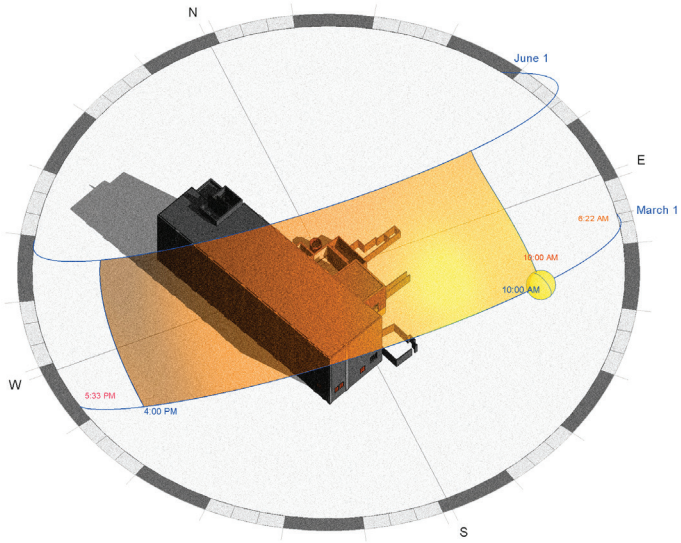
B1 & B2

Babcock and Wilcox
1957
Rated for 20,000 lbs of steam / hour
Run at 80 psi
Fired with #6 residual oil or natural gas.
Using natural gas primarily for the last few years.

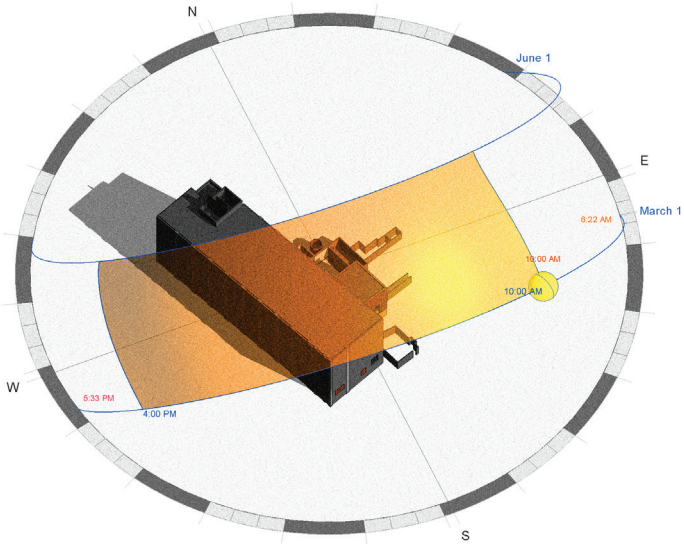
B3

Cleaver Brooks
1985 or so
Rated for 40,000 lbs of steam/ hour.
Run at 100 psi.
It is also dual fuel, #6 oil or gas.

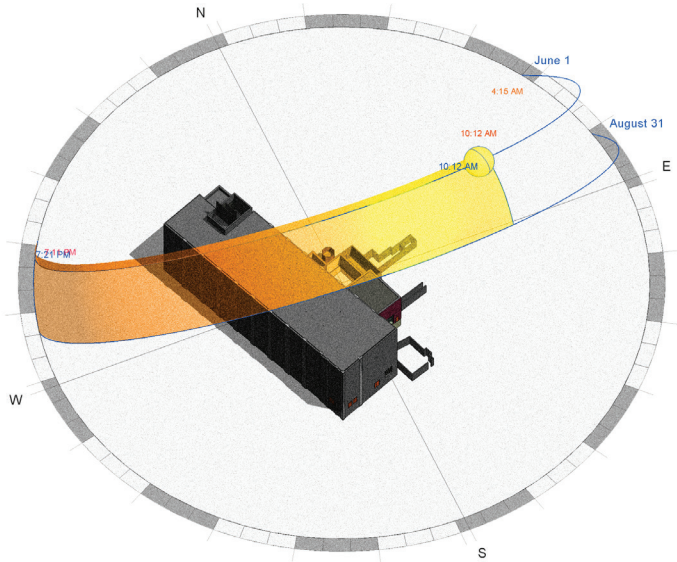

MEMORIAL HALL
RADAKE
WATERMAN BUILDING
CHACE CENTER
BANK BUILDING



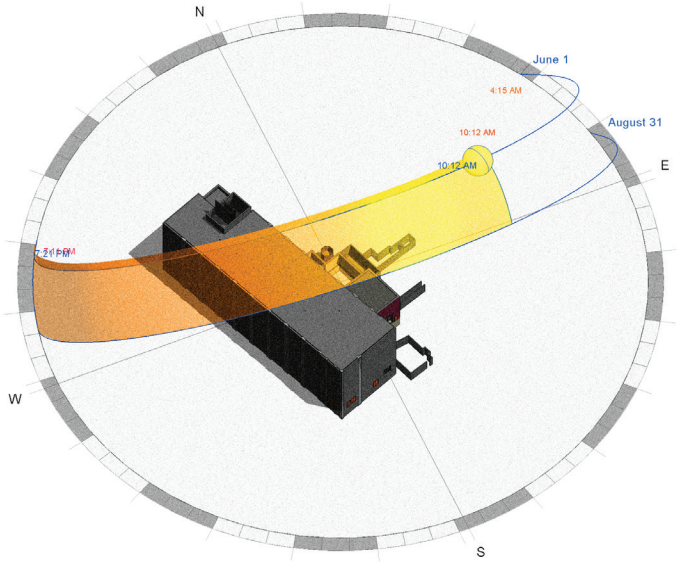
Winter
December 1 - February 28



Spring
March 1 - May 31



Summer
June 1 - Auugust 31



Fall
September 1 - November 30

1

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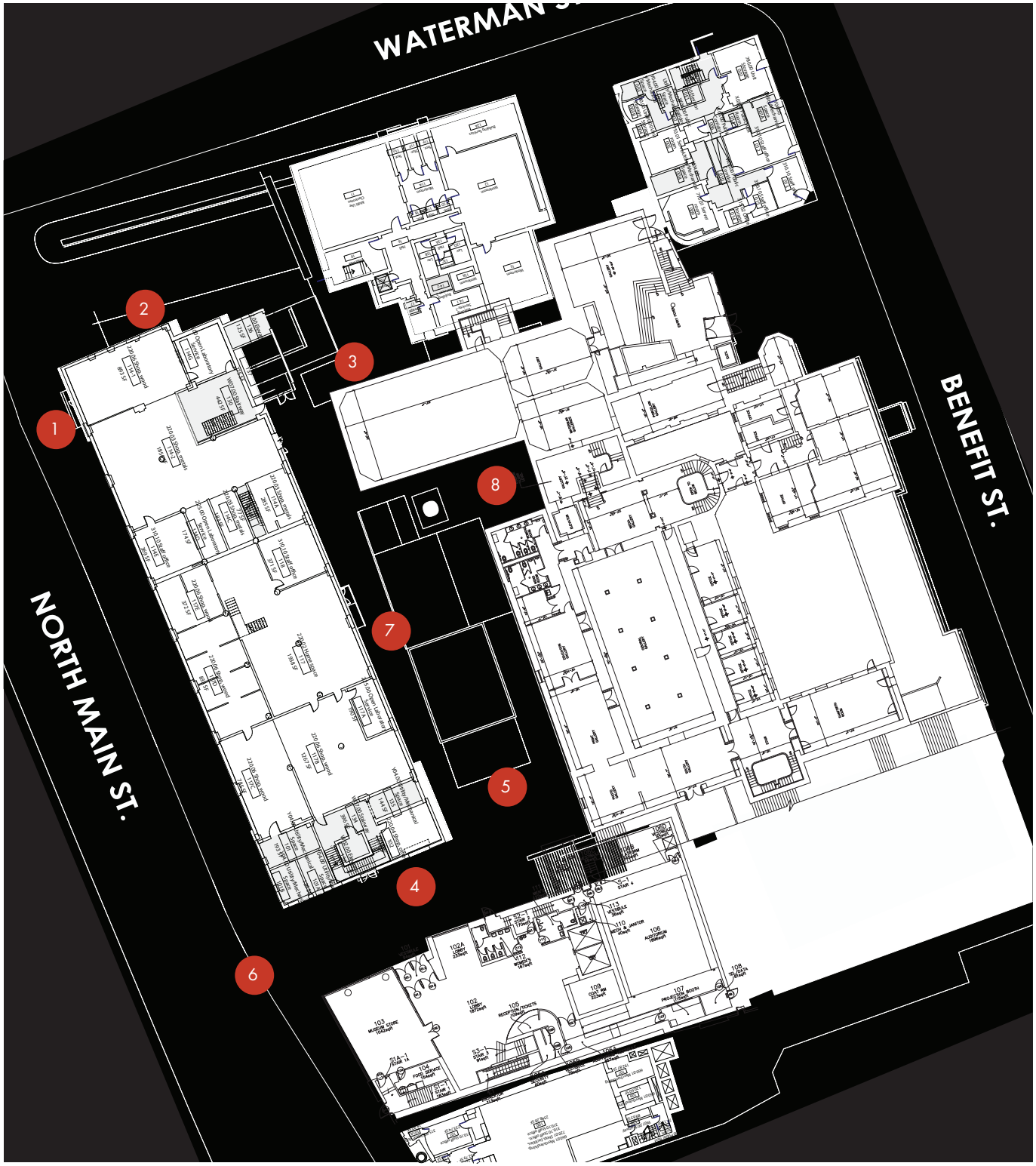
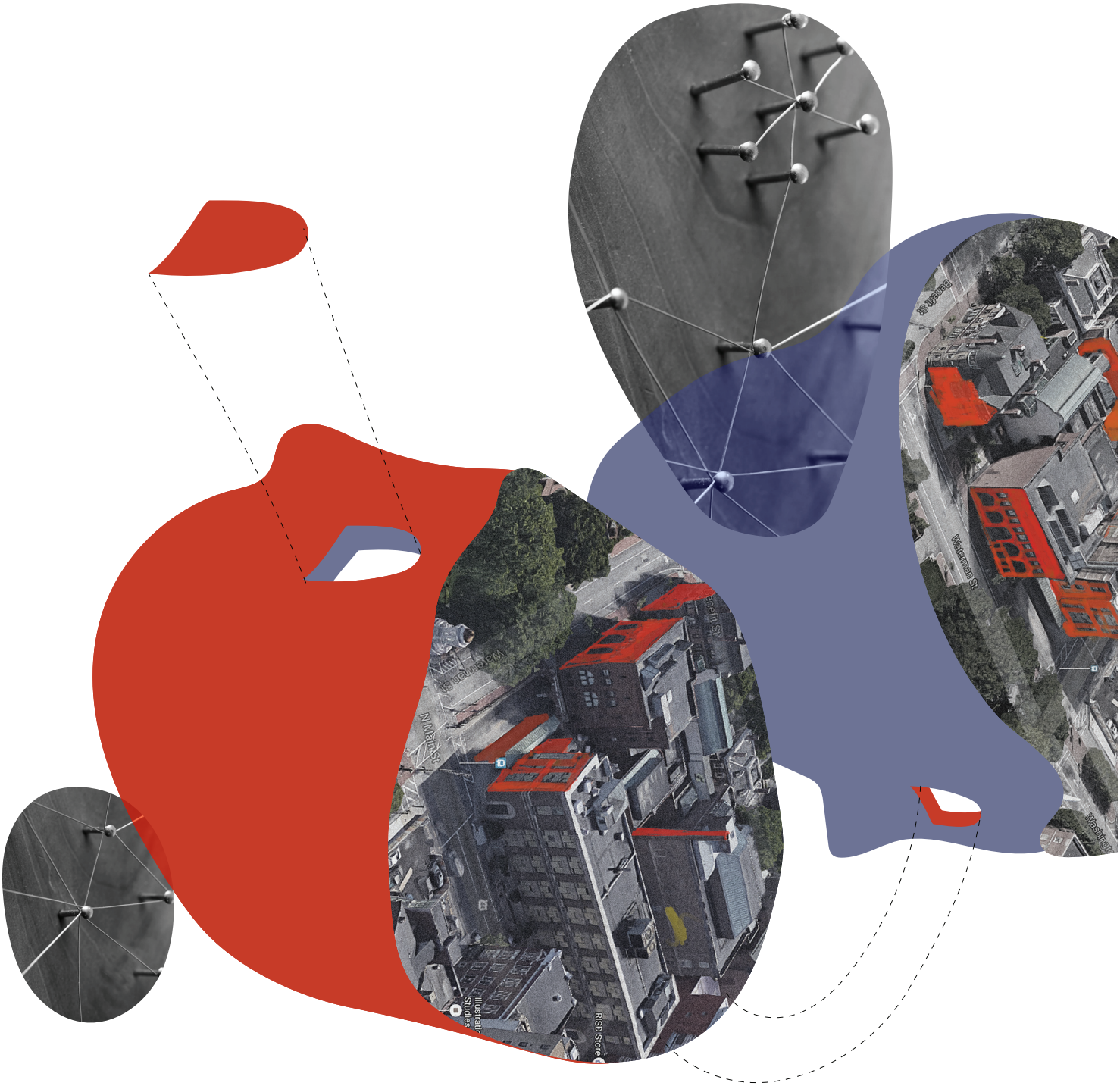


Photos description

1 East side tunnel
2 Close up of East side tunnel bus waiting shed
3 Metcalf building corner of north main st and Benefit st viewed from the 2nd floor of ISB building 4 Metcalf textile big loom 4 View from ISB building, second floor,
5 Radake building view Chace center plaza
6 View of the chace center plaza from the Market House
7 Alley way between the Metcalf Building and the central power plant
8 View of the power plant


Benefit St
Waterman St
Benefit St
Waterman St
RISD Store

4 Program and Circulation

Collision Oportunities

Activating creative collisions required me to pay close attention to the programmatic occupation of the buildings of the Museum block. Pin-pointing under-utilized areas within the museum block that will interact closely with the site of my intervention is integral in the selection of the site. In this diagram I've mapped out the public accessibility of the buildings in the museum block. Identifying that the central power plant is a prime spot in activating social interactions because of the possible flow of foot traffic from different members of the community.

EAST SIDE TRANSIT TUNNEL

ENTRY WAYS

Image and info based from RISD Masterplan

PUBLIC

51 — RISD MUSEUM
— (52) Pendleton House
— (53) Farago
— (54) Radeke
— (55) Waterman Galleries

18 — CHACE CENTER
Dryfoos Student Media Gallery
Experimental and Foundation
Studies Studios
Jacques + Natasha Gelman
Student Gallery
Michael P. Metcalf Auditorium
Minskoff Center for Prints,
Drawings + Photographs
Museum Special Exhibitions
Galleries
RISD WORKS Museum Shop + Café
Student Gallery Lobby

SEMI PUBLIC

16 — CARR HOUSE
Carr Haus Café
Center for Student Involvement (CSI)
Disability Support Services (DSS)
Intercultural Student Engagement (ISE)
Office of International Student
Services (OISS)
Student Affairs
Student Conduct Office
The Arthur Loeb Design Science
Collections

10 — BANK BUILDING
Furniture Design Offices + Studios
risd:store 3D

60 — WATERMAN BUILDING
Edna W. Lawrence Nature Lab
Experimental and Foundation
Studies Offices + Studios
Waterman Gallery

PRIVATE

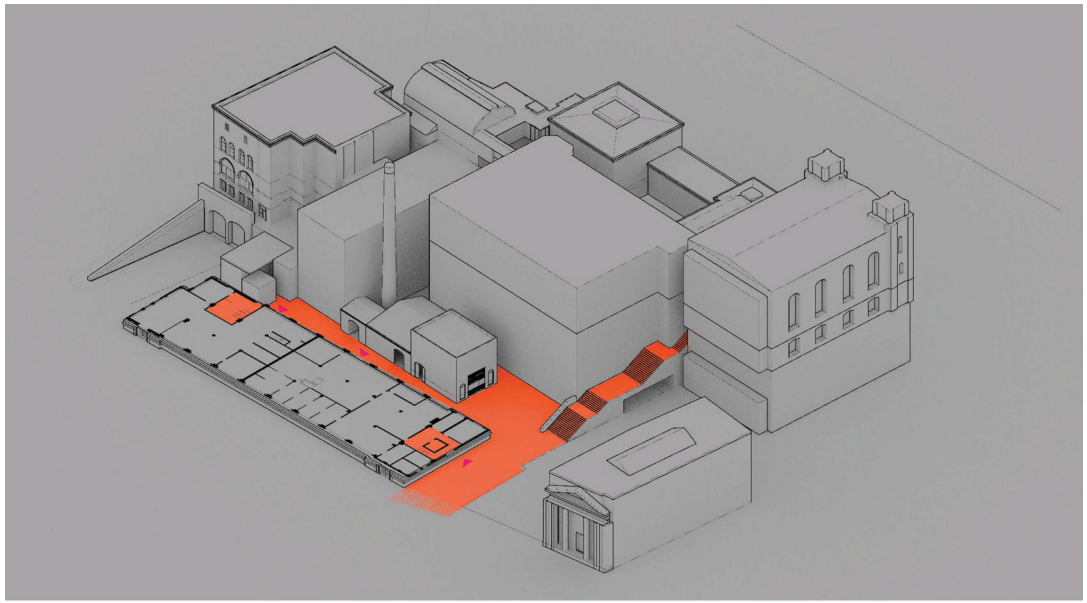
17 — CENTRAL POWER PLANT (CPP)
Facilities

21 — COLLEGE BUILDING
Architecture + Design Division Offices
Environmental Health + Safety
Faculty Association Offices
Liberal Arts Division Offices + Classrooms
Painting Studios
Textiles Offices + Studios
Writing Center

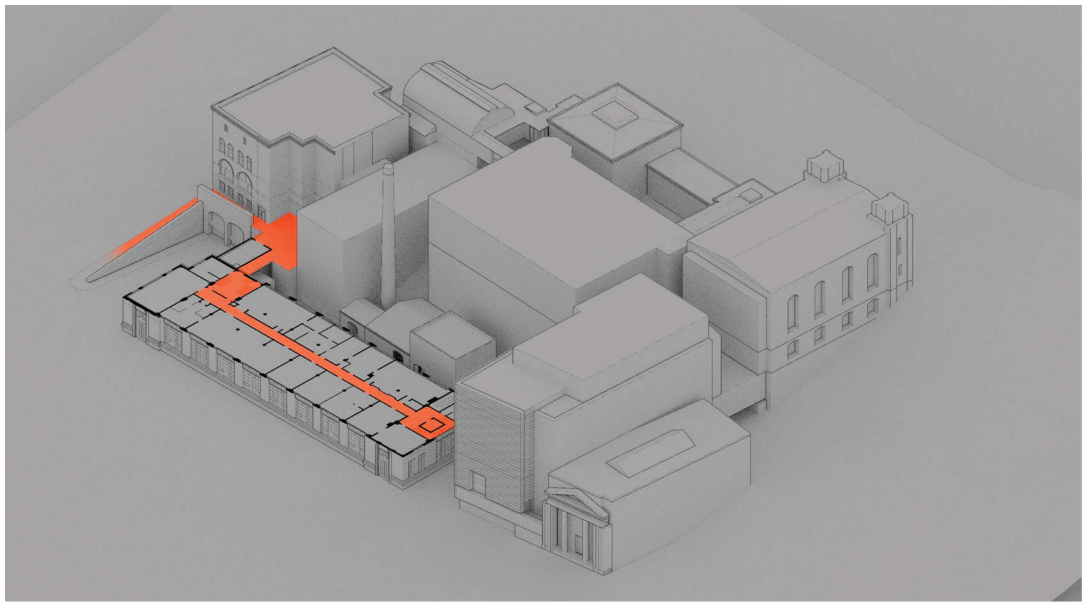
38 — MEMORIAL HALL
Painting Galleries, Offices +
Studios
Printmaking Studio
Tap Room

39 — METCALF BUILDING
Ceramics Offices + Studios
Furniture Design Woodshop
Glass Offices + Studios
Jewelry + Metalsmithing Offices +

Circulation Analysis

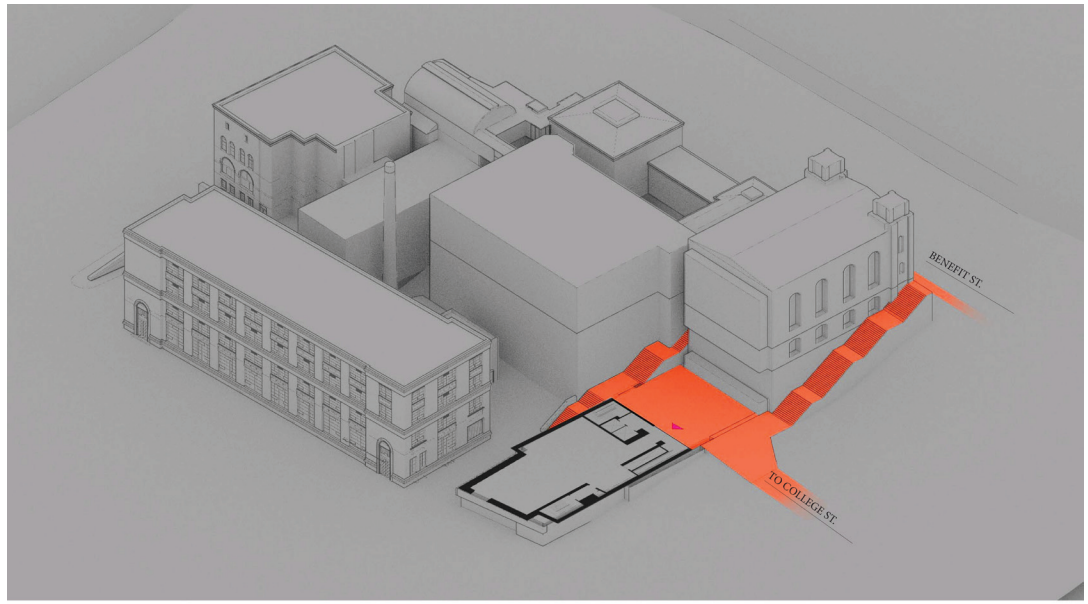


METCALF BUILDING GROUND FLOOR

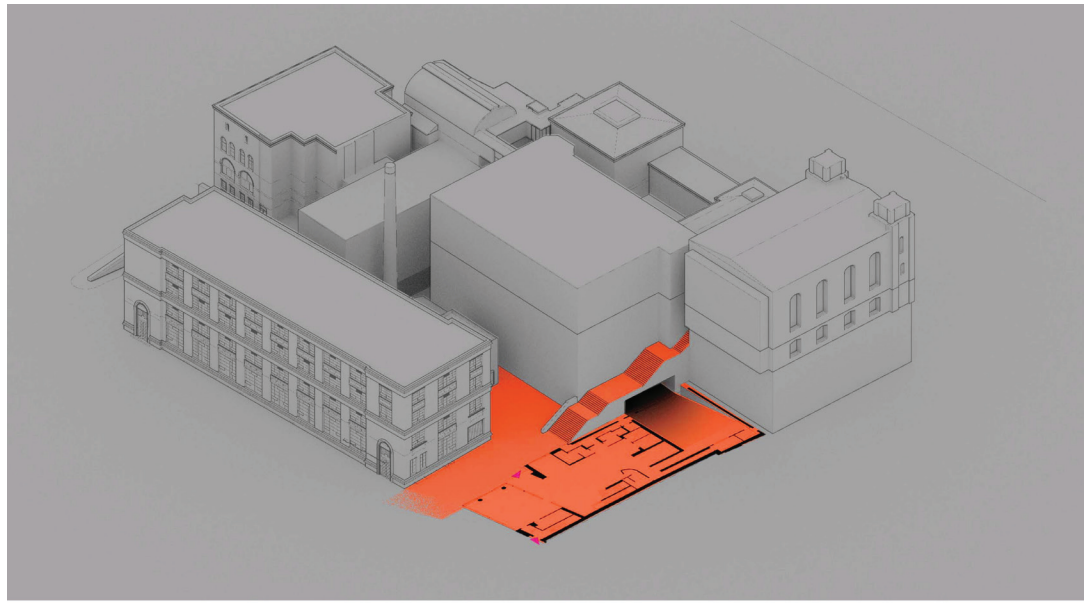


METCALF BUILDING FLOOR 2

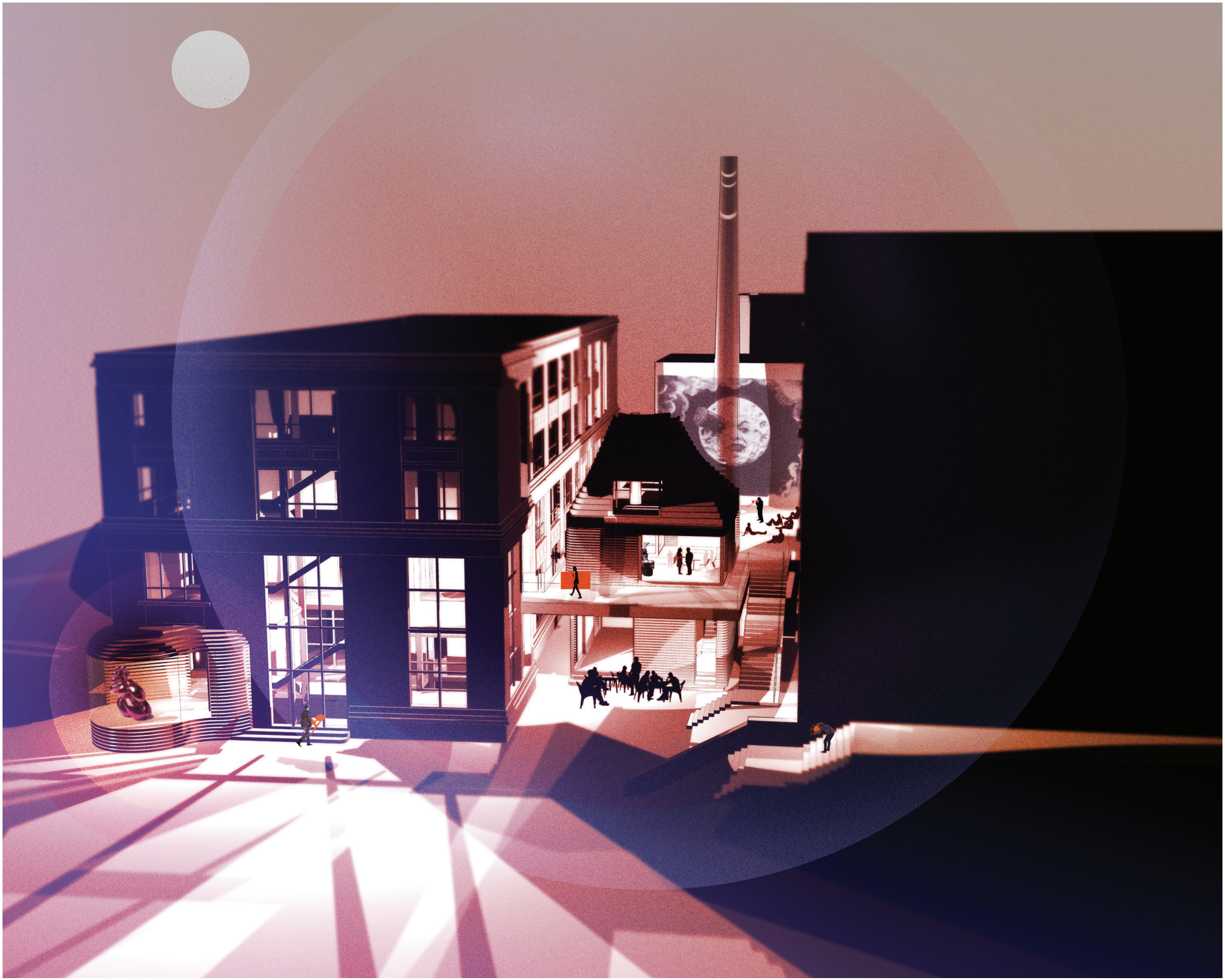
Images from RISD IntAR Mdes Class 2017 Research materials



CHASE CENTER FLOOR 2



CHASE CENTER GROUND FLOOR & AUDITORIUM



5 Intervention

Program

Blobs merging together and flowing and bumping into bigger blobs was a fascinating allusion to collision that informed the shape of my intervention.

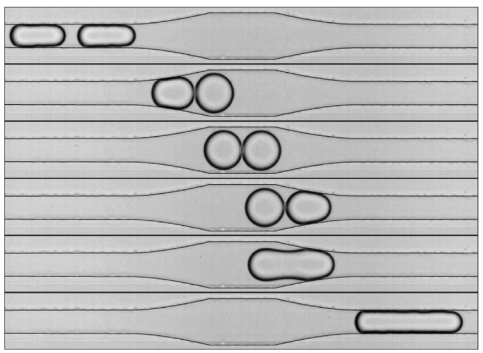


image from Phys. Rev. Lett. 100, 024501 (2008)

PLATFORM ACCESS POINTS

Two access points from Waterman St. and the east side providence tunnel and a bridge connecting the parking lot

WAITING SHED

By demolishing the spray room shed, we allow an entryway from the East Side Tunnel waiting shed. People can meander through the alleyway behind the Metcalf building exposing them to the woodshop and metalshop of the Scuplture and Furniture department. The alley way leads up to the the plaza of the Chace center.

HEATED PLATFORM

A construction of a platform that connects the second floor bridge from Waterman St. will harness the excess heat from the boiler room on the first level of the powerplant.

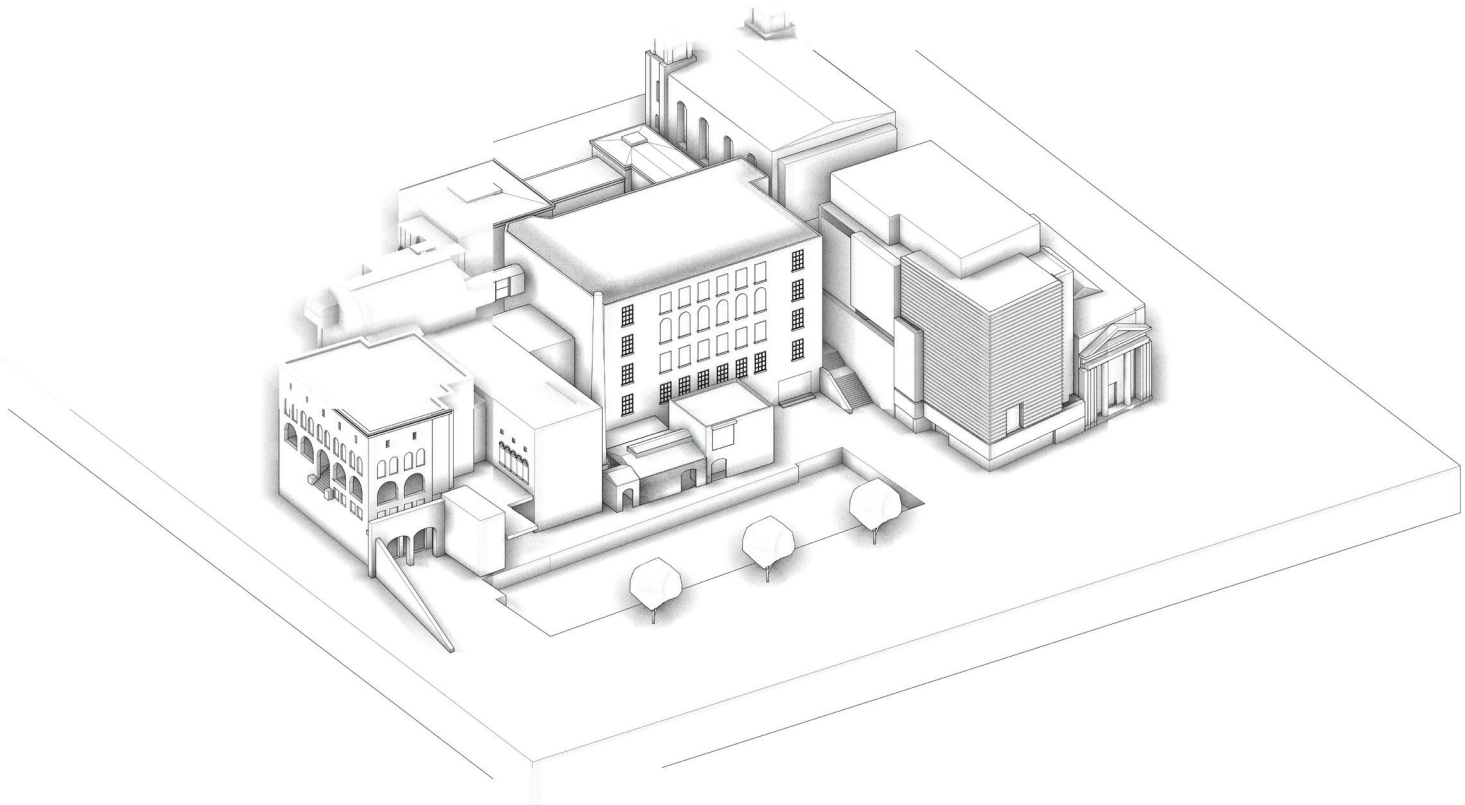
COFFEE ROASTER & CAFE

Smell stimulation: The roasting smell of coffee will draw people into the platform.

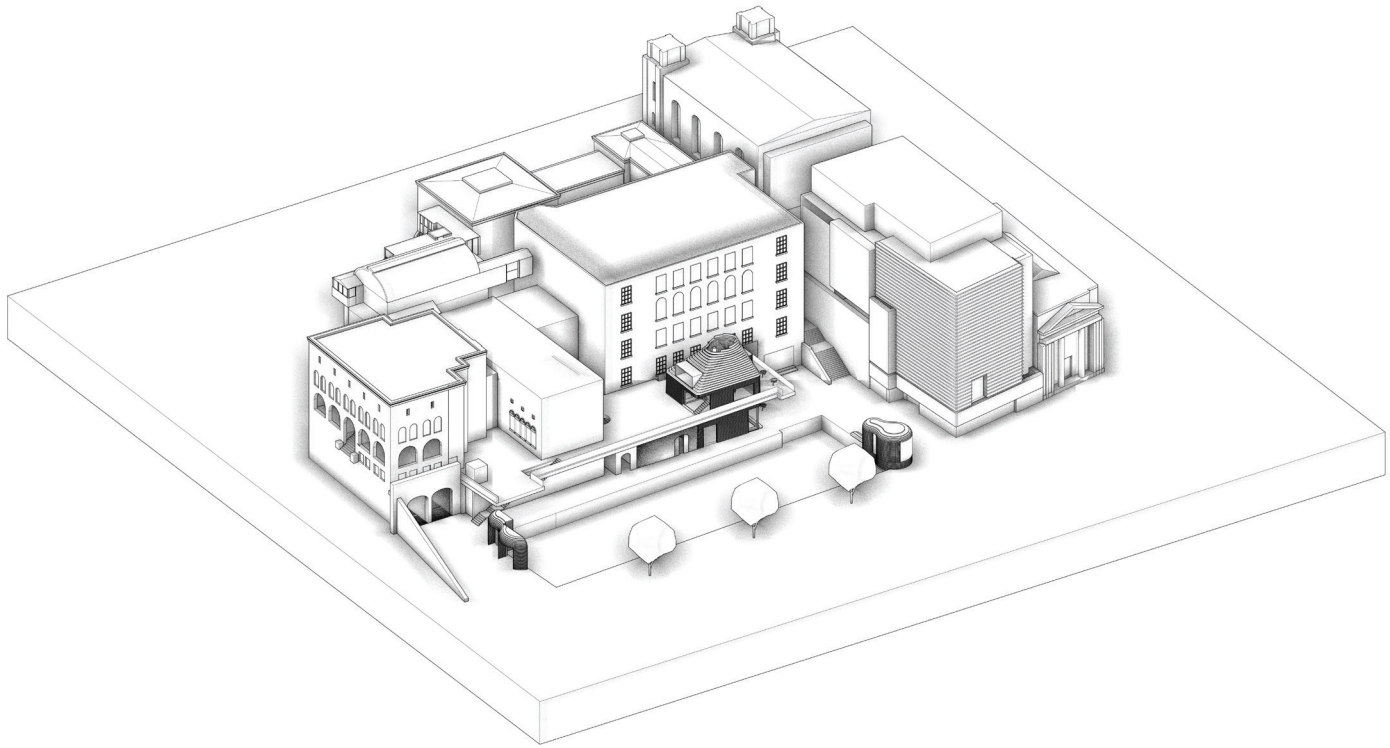
GALLERY
Sight stimulation: Opening a gallery from the

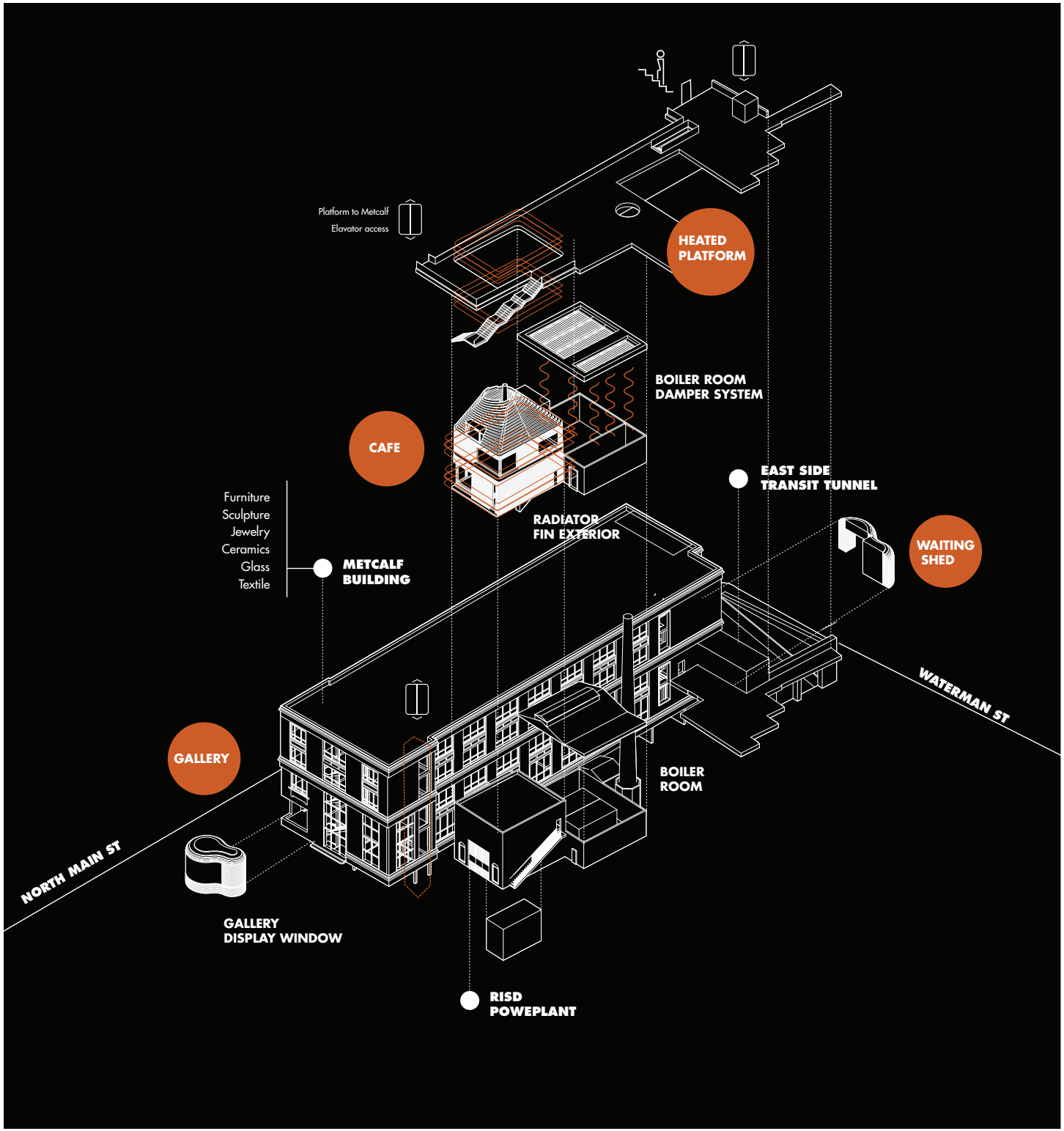

NORTH MAIN ST.
WATERMAN ST.

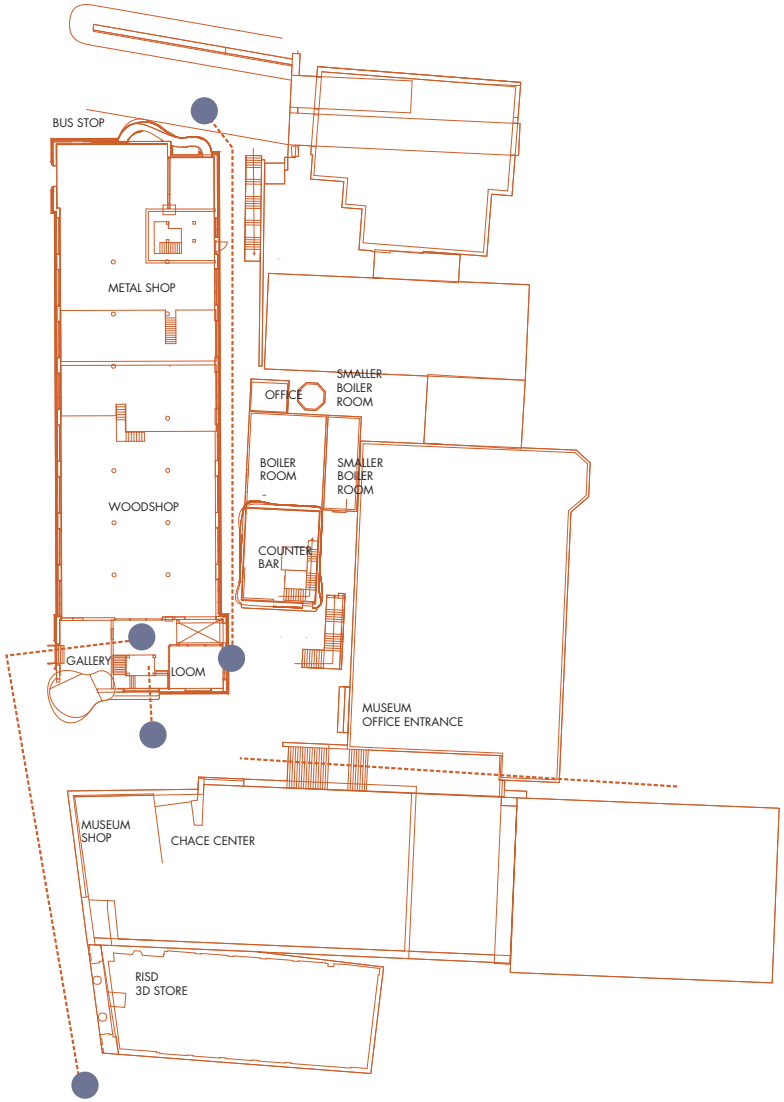
Before



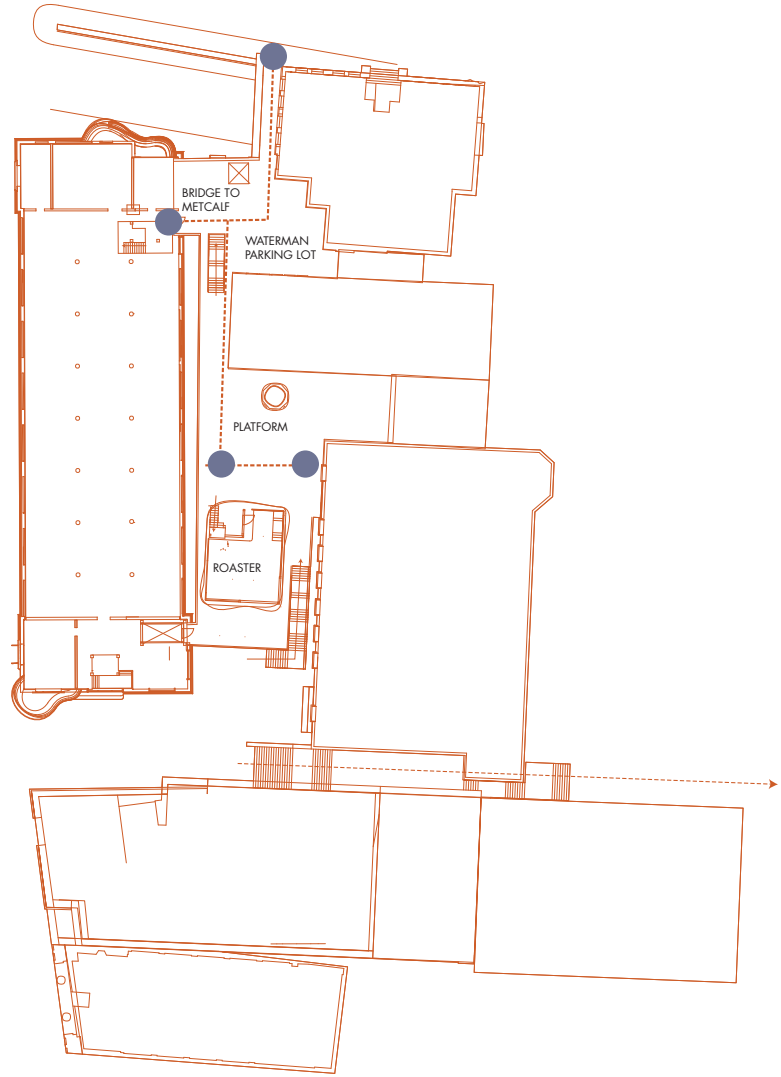
After



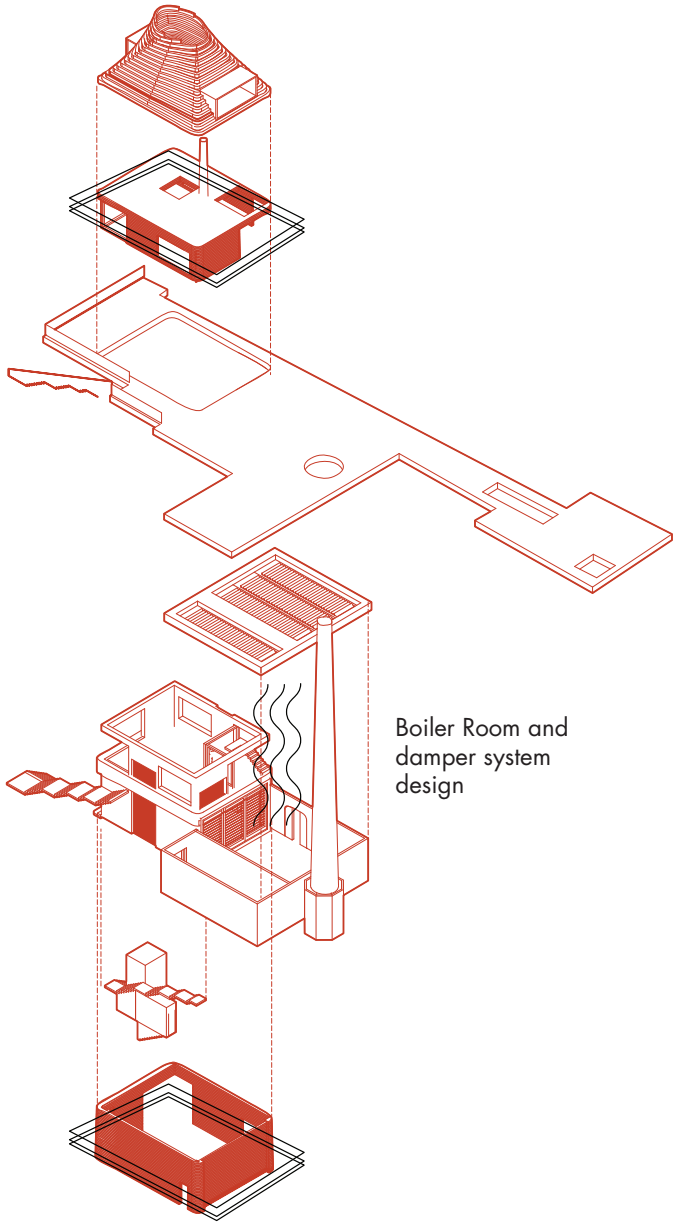

Platform to Metcalf
Elavator access
HEATED PLATFORM
BOILER ROOM DAMPER SYSTEM
CAFE
EAST SIDE TRANSIT TUNNEL
RADIATOR FIN EXTERIOR
WAITING SHED
Furniture
Sculpture
Jewelry
Ceramics
Glass
Textile
METCALF BUILDING
WATERMAN ST
GALLERY
BOILER ROOM
NORTH MAIN ST
GALLERY DISPLAY WINDOW
RISD POWEPLANT



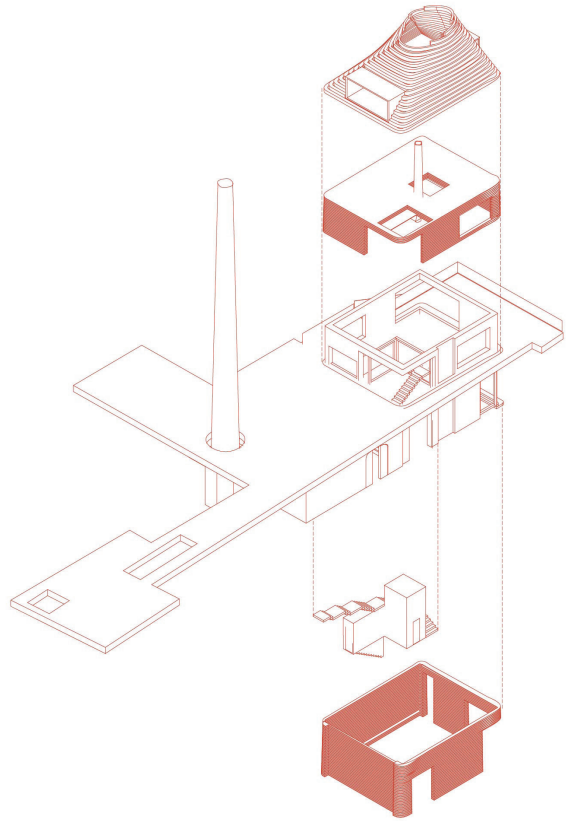
LEVEL 1

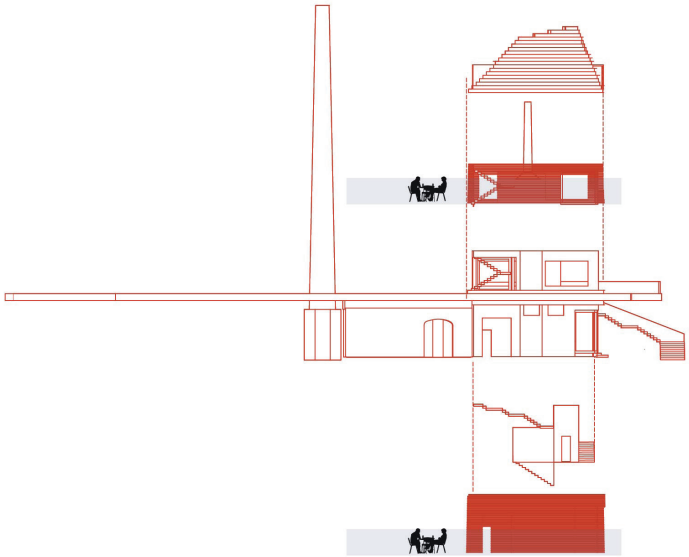


LEVEL 2

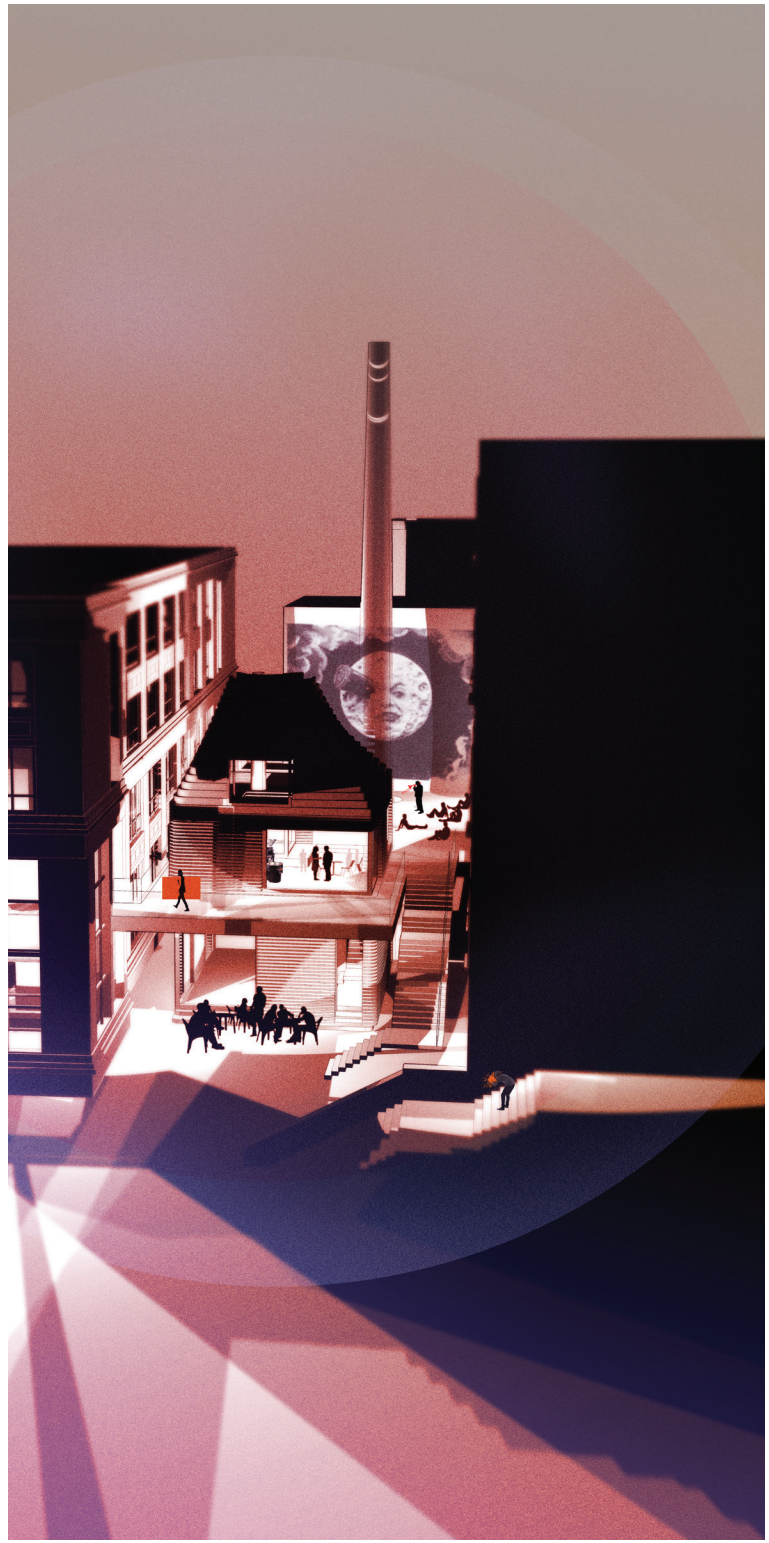


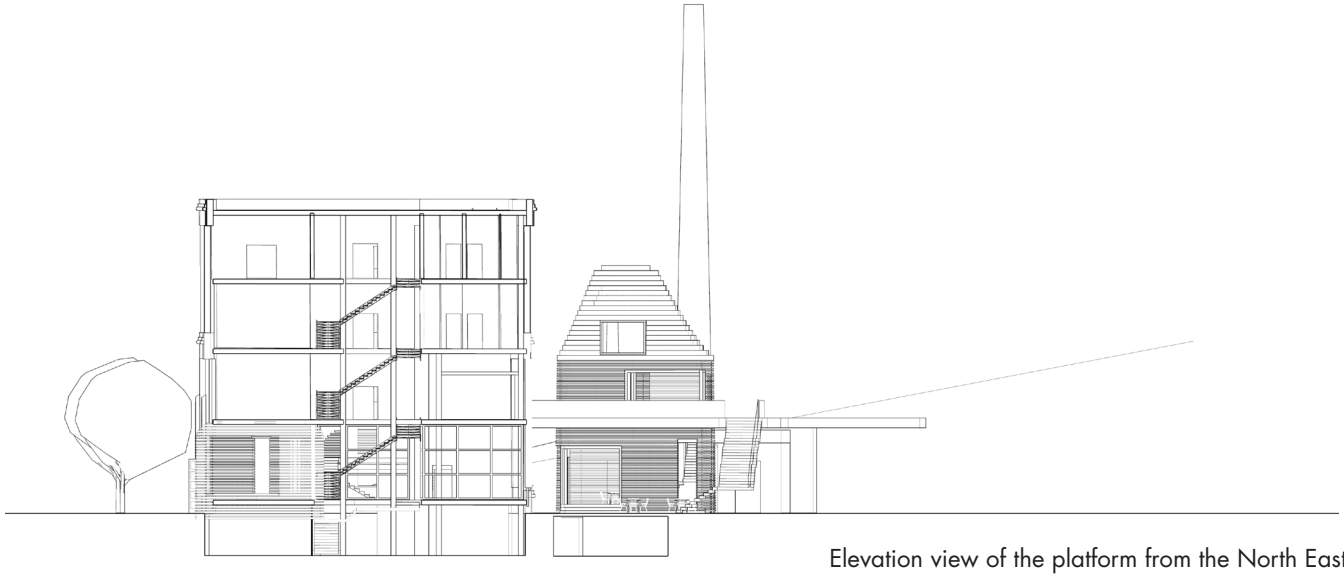
Boiler Room and damper system design





The Radiator fins are designed to harness heat from the boiler room with a controlled damper system. The flow of the heat will circulate around the fins up to the height of a seated person.



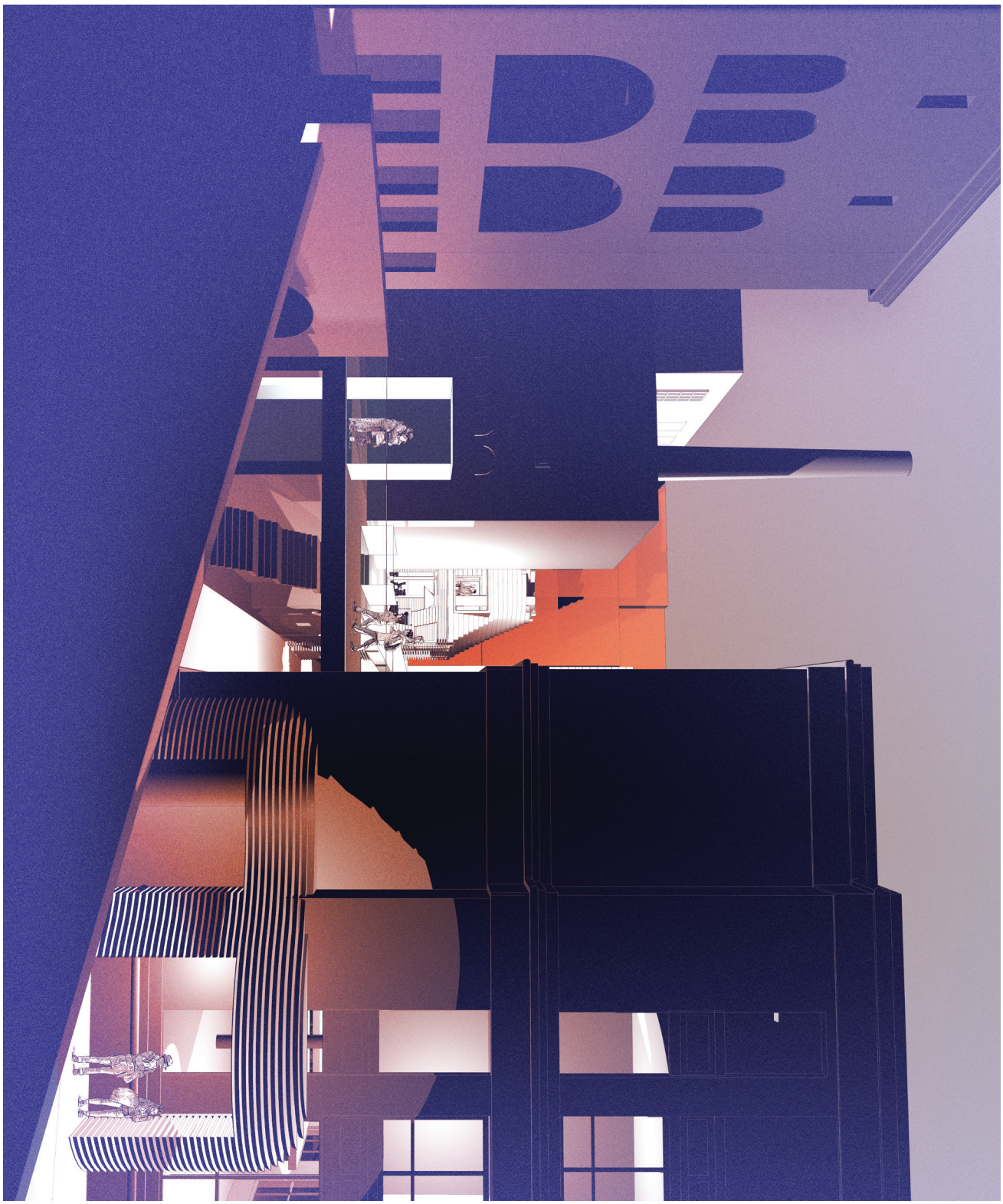


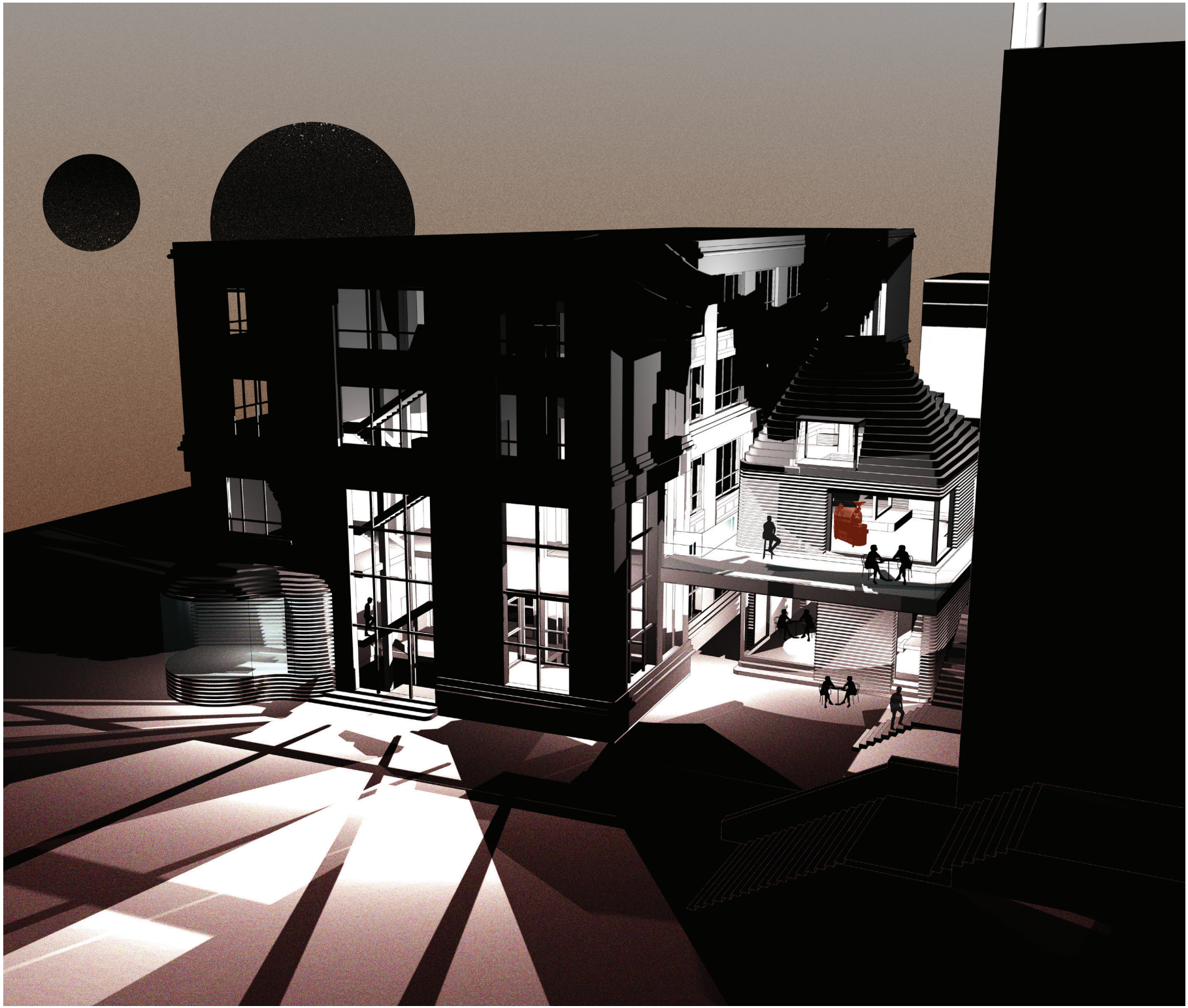
Elevation view of the platform from the North East side

Elevation view of the platform from the North East side

This thesis was inspired by waiting for my bus at the east side tunnel in a group of creative people standing in isolation, zoning out or staring at our phone screens. This sterile scene struck a stark contrast to the creative wonderland ten feet away behind the brick walls of Metcalf. It seemed funny to me that minds capable of creative work in their respective studios would shut down as soon as they stepped outside, rather than being engaged when they're finally mixing with creative people from other disciplines. In the world of this intervention I'd like to see the dulled eyes and phone screens from that bus stop replaced with lively conversation with strangers and wide-eyed interest at the labyrinth of creative activity going on all around.

People images from imagesctock






6

Annotated Bibliography

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–Jon Gertner traces the origins of some of the twentieth century's most important inventions and delivers a riveting and heretofore untold chapter of American history. At its heart this is a story about the life and work of a small group of brilliant and eccentric men-Mervin Kelly, Bill Shockley, Claude Shannon, John Pierce, and Bill Baker-who spent their careers at Bell Labs.

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Author Anonymous, "MIT Infinite Corridor, Wikipedia.com, https://en.wikipedia.org/wiki/Infinite_Corridor accesed on December 6, 2016.
– Description of my precedent, Infinite corridor