this is a
collection of
drawings,
objects, and
narratives
by daniel noh.

Table of Contents

Daniel Noh

nohdaniel.com
dnoh@andrew.cmu.edu
412.514.3439
2013 wightman st
pittsburgh, pa

Digital Skills

Adobe CC
Rhinoceros
Grasshopper
V-Ray for Rhino
AutoCAD
Microsoft Office
HTML5/CSS3
JavaScript (p5)

Other Skills

Woodworking
Bent Lamination
Steam Bending
Laser Cutting
3D Printing
3-Axis CNC Mill
4-Axis CNC Mill

Languages

English
Korean
Japanese (Beginner)

Achievements

Deans List
Epic Metal's Competition: Finalist

Interests

Illustrations
Theatre
Musicals
UX/UI Design
Sketching

Reference

Heather Bizon
heather.bizon@gmail.com
(607) 279-8247

Education

Carnegie Mellon University | Pittsburgh, PA
Bachelor of Architecture Candidate | 2016-2021
Minor in Design for Learning, Minor in HCI
[GPA: 3.55]

Experience

Carnegie Mellon University | Pittsburgh, PA

Undergraduate Research Assistant

Feburary 2019-Present
Design and fabrication of swings for a park in Hazelwood using steam bent wood under Professor Joshua Bard.

dFab Monitor

August 2018-Present
Monitors and assists other students with design fabrication systems such as laser cutting, CNC milling, and 3D printing.

Undergraduate Research Assistant

May 2018-August 2018
Formatted and organized the research of Professor Dana Cupkova and coded several features for her work collection.

dFab Assistant

May 2018-August 2018
Fabricated tables and assisted in the renovation of several spaces in the dFab space.

Extracurricular

AIAS | Public Relations Chair
April 2019-Present
Designing posters and social media content to engage the Carnegie Mellon School of Architecture's student body to the AIAS CMU Chapter.

inter•punct | Web Designer and Editorial Board
August 2018-Present
Designing posters and social media content to engage the Carnegie Mellon School of Architecture's student body to the AIAS CMU Chapter.

Carrick ECS

Pittsburgh, PA

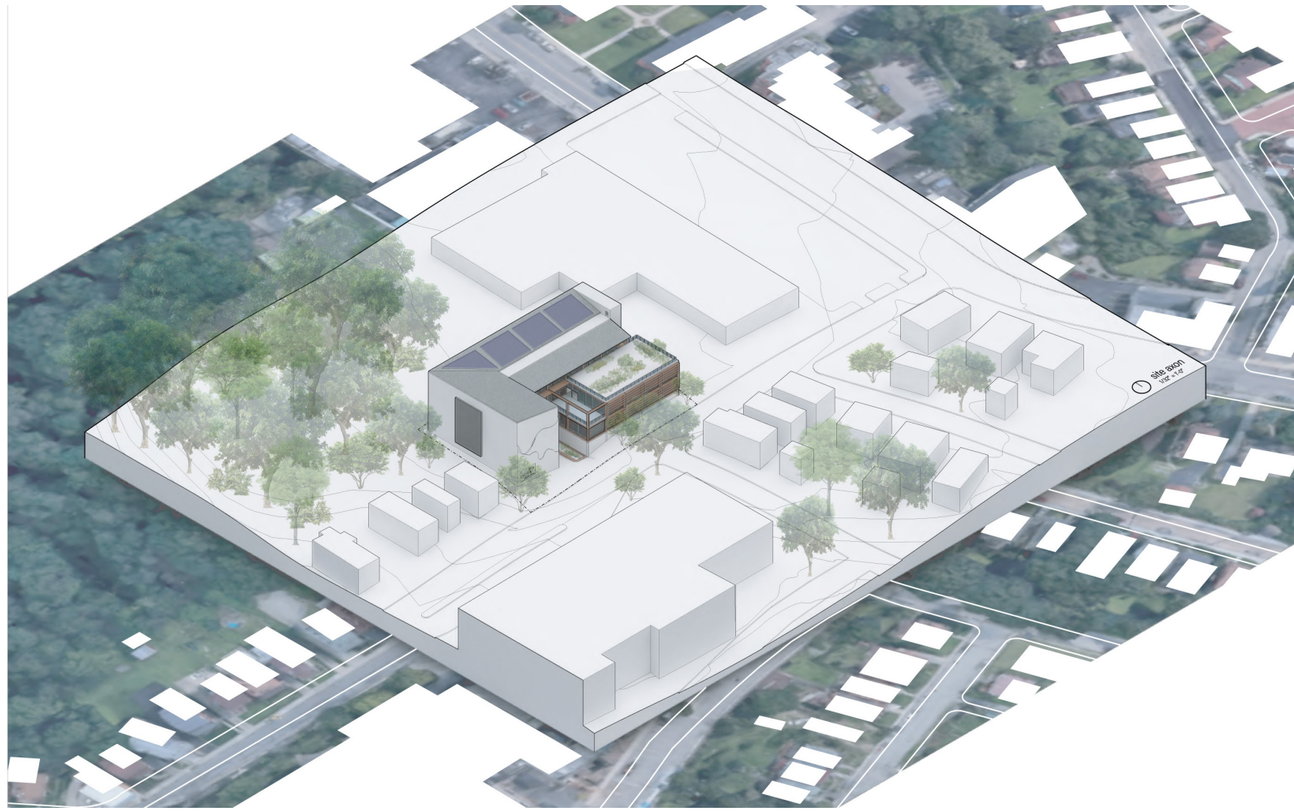
3rd Year Spring
Professor: Steve Lee
Adjunct Professor: Lori Fitzgerald

The focus for the design of this Environmental Charter School was to introduce new learning spaces that are uncommon in schools and rethinking the idea of classrooms. Rather than keeping education confined within four rectilinear walls, this design focused on the spaces outside the classrooms. The building itself also considered various environmental objectives such as solar shading, natural stack ventilation, and water retention to increase the efficacy of the architecture and help economically.

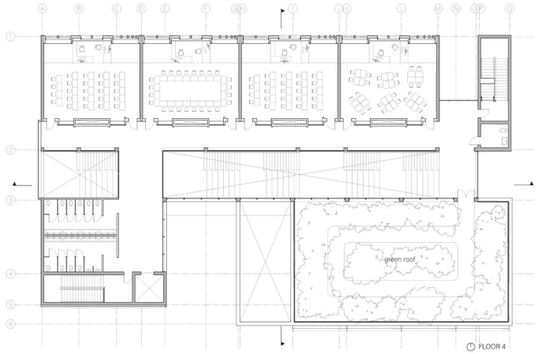
As you enter the middle school, you pass a patch of greenery that exemplifies the school's vision of environmental awareness and are greeted by receptionist. From this location, the circulation bifurcates into two different paths; the left side with a lobby that leads to a staircase for students and faculty and the other side a hallway that leads to different functional spaces in the facility for staff. The hallway also directs the public into the cafetorium for public gatherings and events outside of school hours. This bifurcation allows for safety and security which is achieved through the separation of potential public access from the private student learning environment.

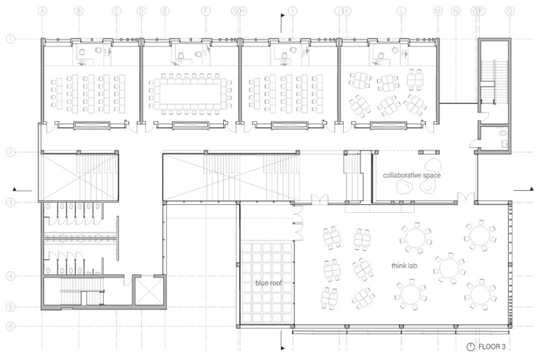
For the students, each programmatic element branches off of a central, extensive social staircase that bisects the site. The social staircase provides an open space where students can socialize and learn in a collaborative environment. Under the staircase exists a branch-like framing system that houses collaboration spaces for smaller group activities or individual work. On the exterior facade, following down the central staircase, is an exposed water retention system which directs rainwater from a green roof to a blue roof to a rain garden. This exposed system allows for visual learners to appreciate and learn about various environmental networks.

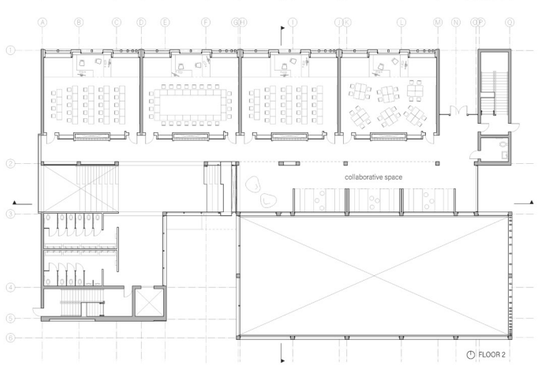
Each floor landing of the staircase leads to major programmatic spaces: the second floor landing allows access to the support tower, the third floor landing directs people into the thinklab, and the fourth floor landing opens out onto the green roof. This system allows each grade level to interact with each other through an interweaving circulation, which is important for social education. To engender inclusivity, the landings were extended to enable handicapped students to utilize the staircase as a social space along with fellow students.

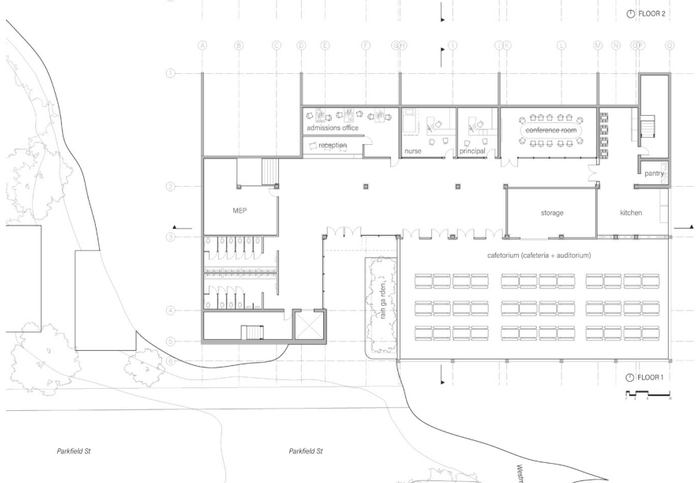


digital site model

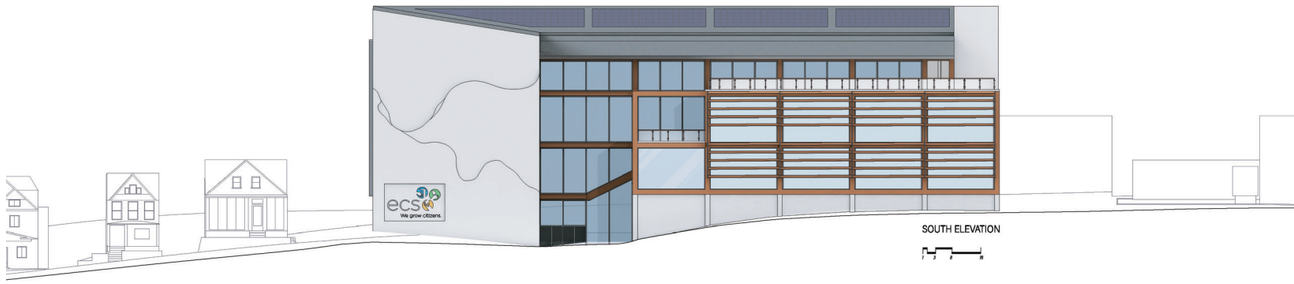

green roof
FLOOR 4


collaborative space
think tank
blue roof
FLOOR 3


collaborative space
FLOOR 2


admissions office
reception
nurse
principal
conference room
pantry
MEP
storage
kitchen
cafetorium (cafeteria + auditorium)
FLOOR 1
Parkfield St
Parkfield St
Westmount Ave


NORTH ELEVATION


SOUTH ELEVATION


LONGITUDINAL SECTION

STACK VENTILATION

PASSIVE VENTILATION SYSTEM THAT USES AIR PRESSURE TO PULL AIR OUT FROM CLASSROOMS THROUGH CHASES

BIOPHILIC EDUCATION

CLASSROOM POSITIONING PROVIDES DIRECT VISUAL ACCESS TO THE FOREST BEHIND THE SCHOOL TO CONNECT THE STUDENTS WITH THE ENVIRONMENT

NATURAL VENTILATION

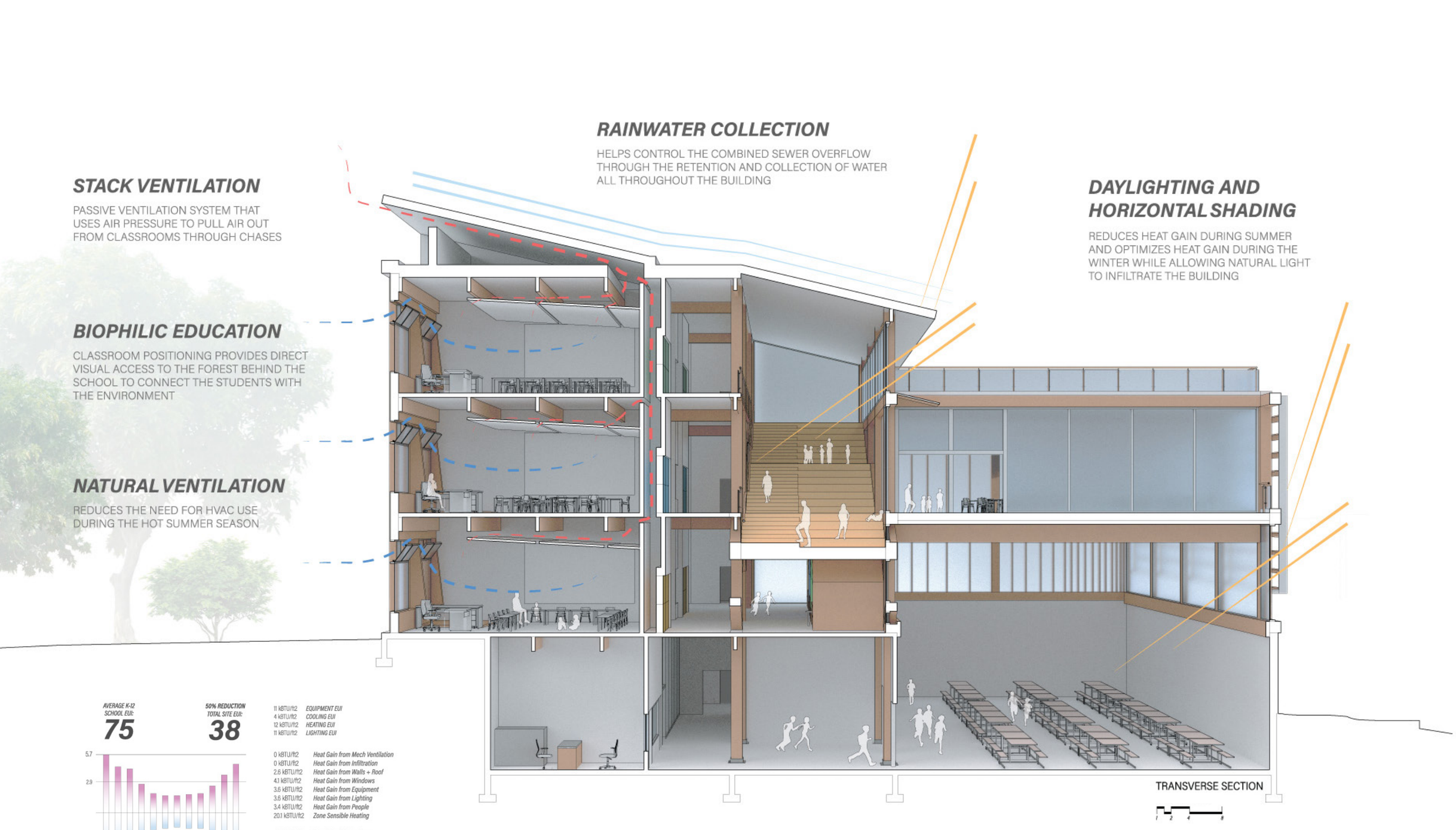
REDUCES THE NEED FOR HVAC USE DURING THE HOT SUMMER SEASON

RAINWATER COLLECTION

HELPS CONTROL THE COMBINED SEWER OVERFLOW THROUGH THE RETENTION AND COLLECTION OF WATER ALL THROUGHOUT THE BUILDING

DAYLIGHTING AND HORIZONTAL SHADING

REDUCES HEAT GAIN DURING SUMMER AND OPTIMIZES HEAT GAIN DURING THE WINTER WHILE ALLOWING NATURAL LIGHT TO INFILTRATE THE BUILDING



TRANSVERSE SECTION

1 2 4 8

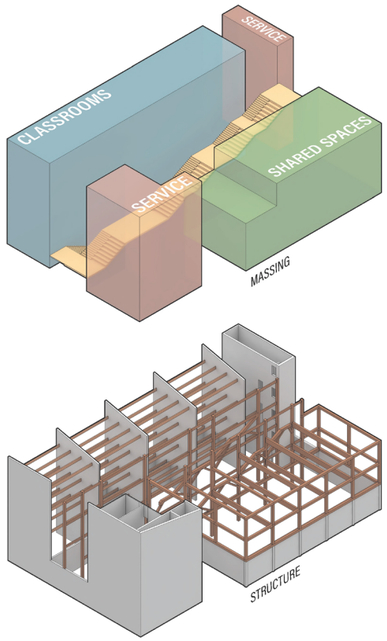
AVERAGE K-12 SCHOOL EUI: **75**

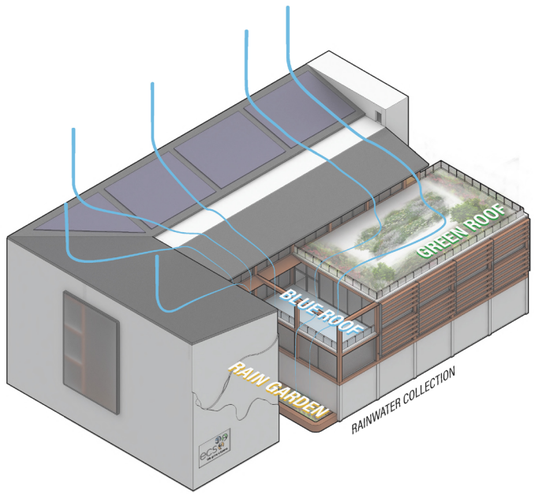
50% REDUCTION TOTAL SITE EUI: **38**

11 kBTU/ft2	*EQUIPMENT EUI*
4 kBTU/ft2	*COOLING EUI*
12 kBTU/ft2	*HEATING EUI*
11 kBTU/ft2	*LIGHTING EUI*

0 kBTU/ft2	*Heat Gain from Mech Ventilation*
0 kBTU/ft2	*Heat Gain from Infiltration*
2.6 kBTU/ft2	*Heat Gain from Walls + Roof*
4.1 kBTU/ft2	*Heat Gain from Windows*
3.6 kBTU/ft2	*Heat Gain from Equipment*
3.6 kBTU/ft2	*Heat Gain from Lighting*
3.4 kBTU/ft2	*Heat Gain from People*
20.1 kBTU/ft2	*Zone Sensible Heating*

-3.8 kBTU/ft2	*Zone Sensible Cooling*
-4.7 kBTU/ft2	*Heat Losses from Windows*
-10.2 kBTU/ft2	*Heat Losses from Walls + Roof*
-5.8 kBTU/ft2	*Heat Losses from Infiltration*
-9.8 kBTU/ft2	*Heat Losses from Mech Ventilation*
-0.3 kBTU/ft2	*Heat Losses from Natural Ventilation*





entry sequence

study nooks under central stairs

central staircase and classrooms

classroom interior

Future Fictions

Pittsburgh, PA

4th Year Fall
Professor: Heather Bizon

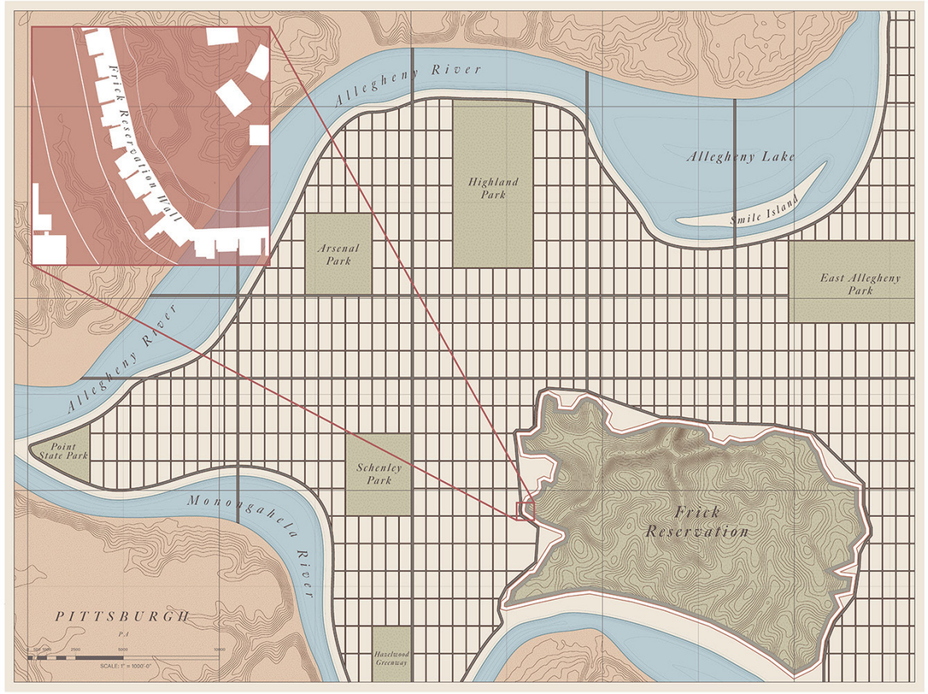
Future Fictions is a studio heavily focusing on narratives and aesthetics. How can a fictional scenario be portrayed as non-fiction? Much like how all architecture starts as a fictional thought and becomes embodied into a real and physical form, Future Fictions is about taking a fictional concept and embodying it into a physical instance through imagery and narrative.

This is project is very much a story as much as it is a spatial exercise. It is about setting up a scenario and letting it play out. Analyzing how various underlying systems shift and adapt to a progression of events happening above ground. Seeing what a community, or two communities, sees through a limited frame and understanding the results of the loss of the full narrative:

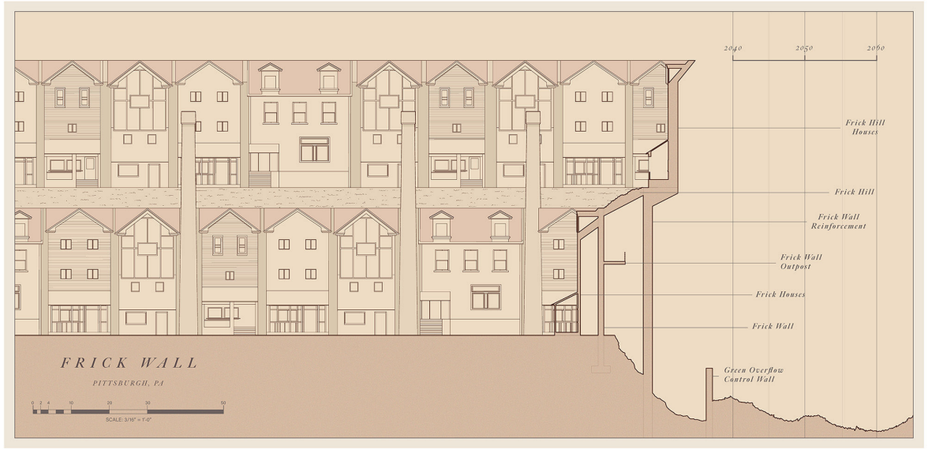
This is a historical documentation of the rise and fall of the Frick Wall, focusing on the themes of control, propaganda, and frailty. The exploration investigates how a society reacts to the growth of a foreign phenomenon.

The overflowing growth of the flora around Frick Park startled the city of Pittsburgh, starting the construction of the Frick Wall. To reduce the austere view of the wall, faux house facades were built onto it, feigning the existence of a new neighborhood. In response, the 'infected inhabitants' of the Frick Reservation rediscovered and repurposed the coal mines of olden Pittsburgh as a new Underground Railroad to escape the confines of the barrier. On one side of the wall exists an extremely systematized Pittsburgh and the other, a chaotic outburst of greenery. The elevation-section drawing displays the timeline of how the wall was risen over time, where the axonometric drawings illustrate the eventual fall of the wall.

The narrative focuses on the communication of two opposing sides, through the changes both in the visible realm and the unseen infrastructure. The axonometric drawings, as well as the renders, highlights a certain society's opposition to a foreign phenomenon and the fragility of a physical wall.

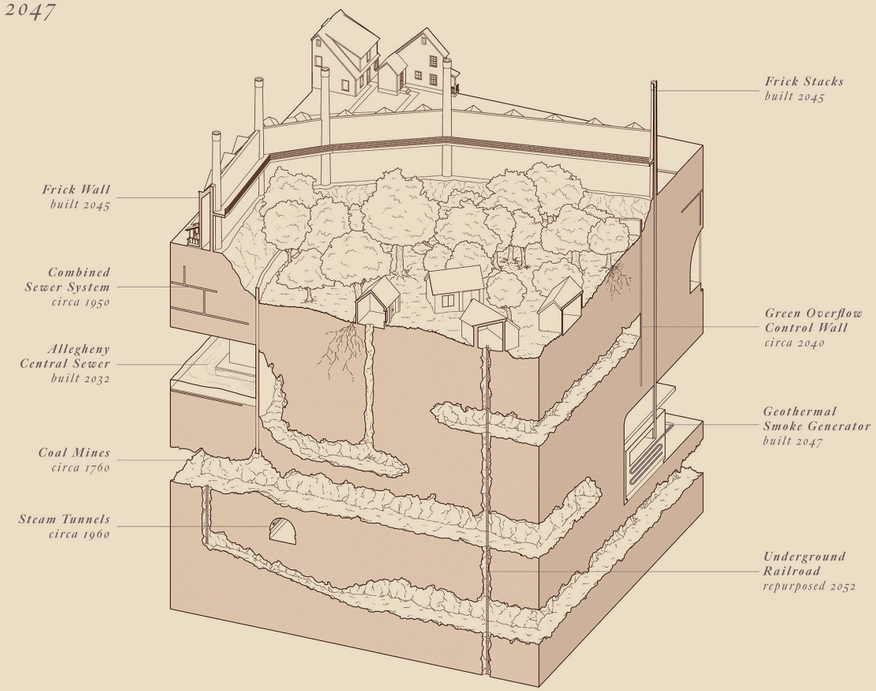


site plan of pittsbugrh in 2047



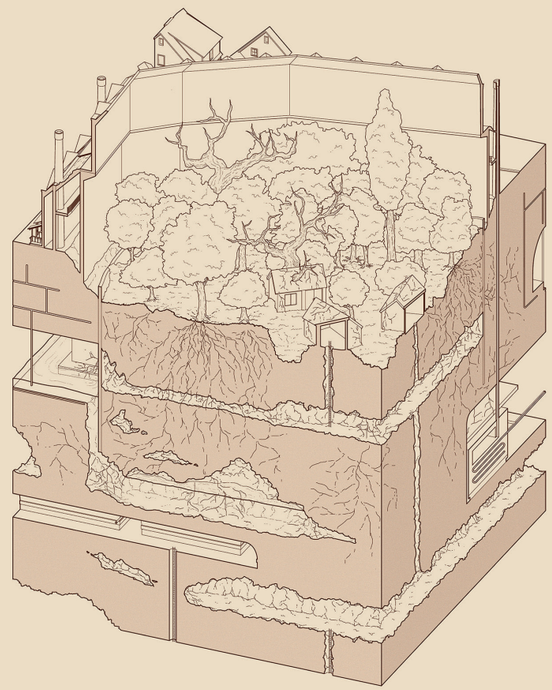
elevation and section of the frick wall in 2054

The Frick Wall
2047



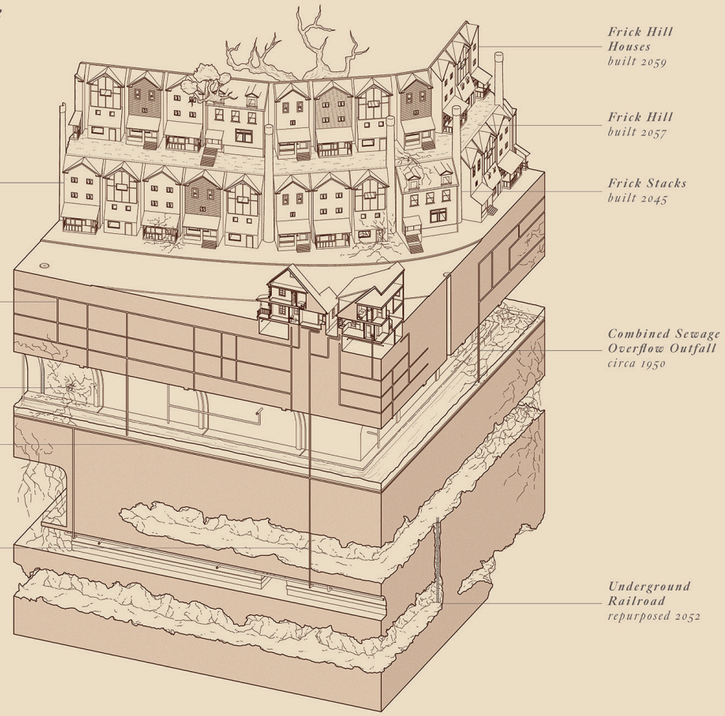
inside the coal mines

The Reinforcement
2054



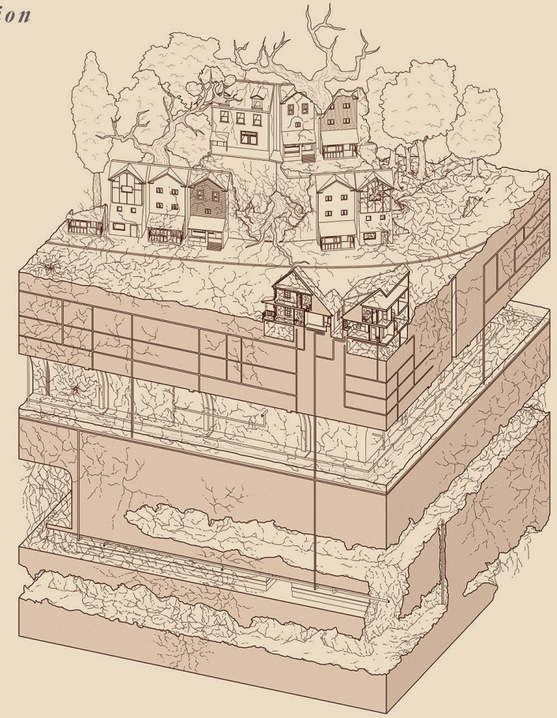
above ground view of the wall and dwellings

The Cityside
2063



the "frick houses" and "frick hill houses"

The Ruination
2072



the ruination of the wall

East Liberty Office Building

Pittsburgh, PA

2nd Year Spring
Professor: Jeremy Ficca
Adjunct Professor: Eddy Man Kim

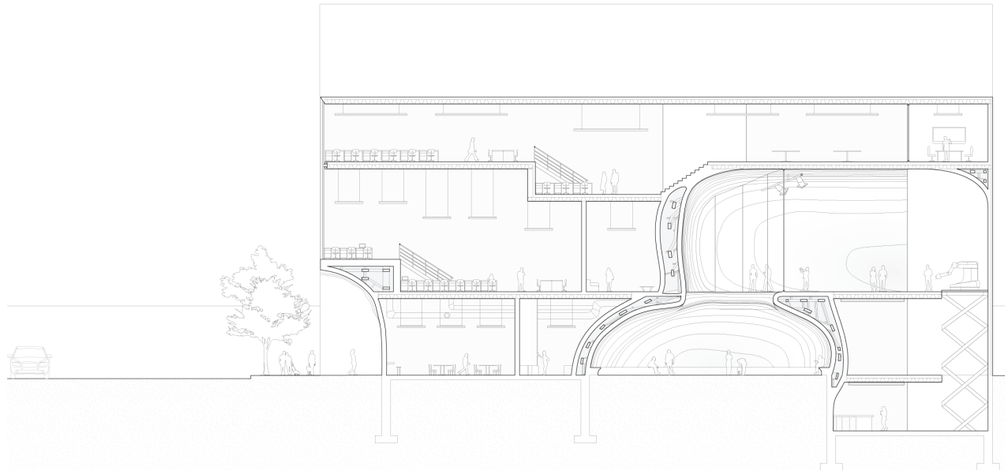
East Liberty is a culturally diverse neighborhood located along eastern Pittsburgh, Pennsylvania. The site is situated just in-between the gentrification line, amidst older commercial buildings, a Target, the East Liberty Presbyterian Church, Bakery Square (home of Pittsburgh's Google office), and a bus-way that links directly to Downtown Pittsburgh. In this rich environment, of both cultural vibrancy and cultural sensitivity, students were prompted to design an office building for a widget company.

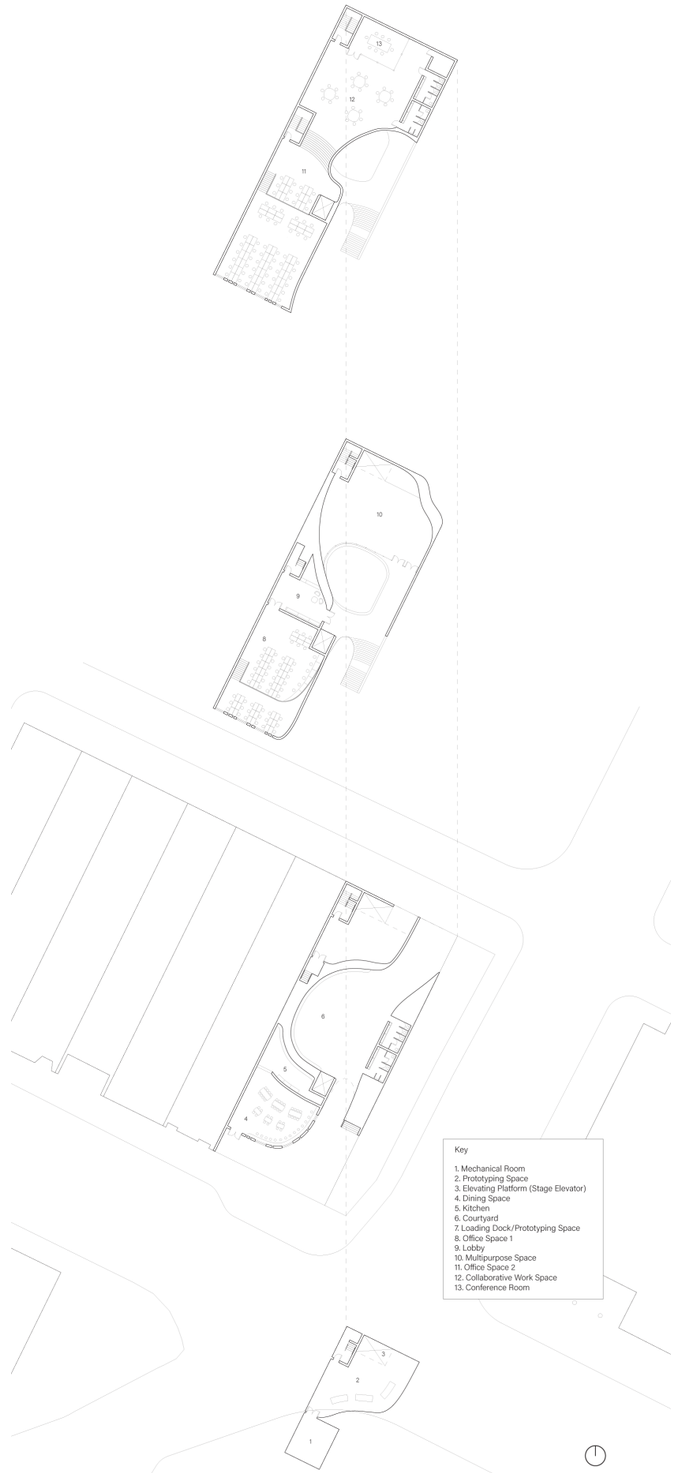
The form of the building was designed through several sectional cross-sections to allow for a much more spatially oriented analysis of the architecture. The negative space formed from the stacked slices provided the most open spaces, while the volume housed the primary office space.

In the upper floors of the building exists more private programmatic spaces such as the offices and multipurpose space. The central multipurpose space is celebrated as the central void which was formed from the erosion of the rectangular datum of the site. This monumental space can be used flexibly due to the large space the cave-like form provides, and even more so thanks to the elevating platform which rises from the basement storage, to the prototyping space, and finally to the stage of the versatile room. Moreover, curtains can be moved to either flood the space with natural light for more public events or closed and the room filled with artificial light for private events. The prototyping space is located on the first floor to provide easy access to a docking space from the service road, however, this space is only accessible from the second floor.

Sensitive to the flow of this area, this design keeps the lower levels of the office open to the public. The office building is open to both ends of the site, allowing entry from both ends of the area, the front catering to the bus-way and the back opening up to both residences and a public parking lot. In the center is an open courtyard to help connect the hyper-organic architecture back to the community.

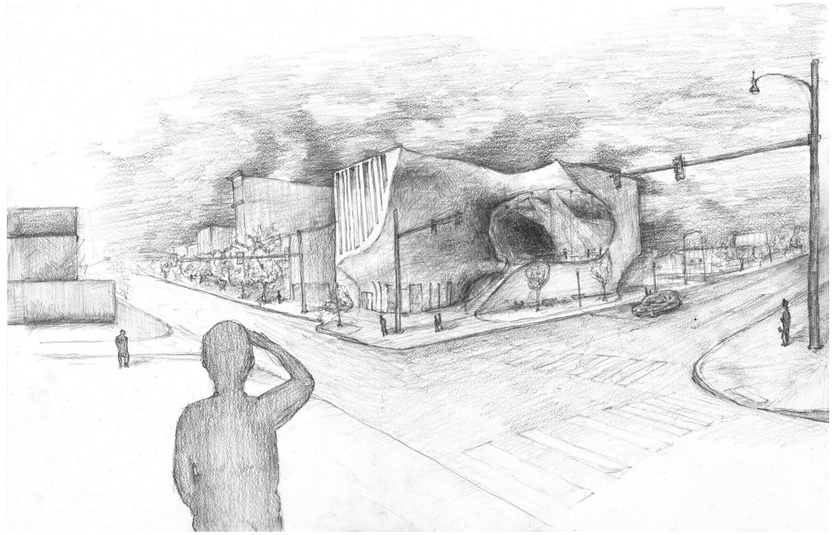
This project is about heeding to the ebb and flow of a population while also acknowledging the accelerating development of the community.



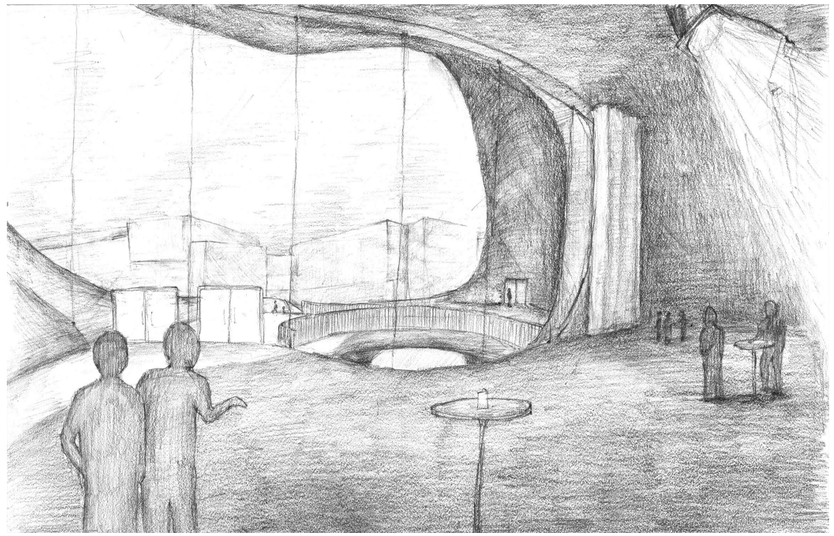


Key

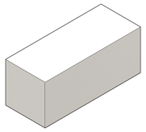
1. Mechanical Room
2. Prototyping Space
3. Elevating Platform (Stage Elevator)
4. Dining Space
5. Kitchen
6. Courtyard
7. Loading Dock/Prototyping Space
8. Office Space 1
9. Lobby
10. Multipurpose Space
11. Office Space 2
12. Collaborative Work Space
13. Conference Room



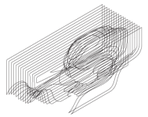
exterior view



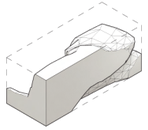
view from inside the multipurpose space



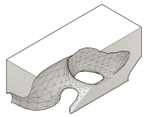
initial



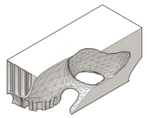
slice



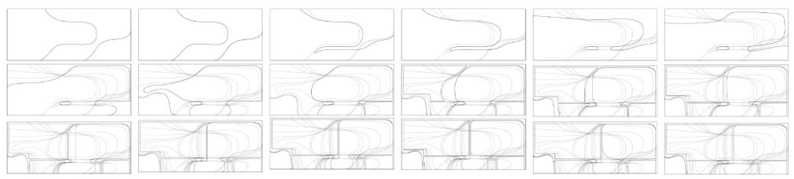
form

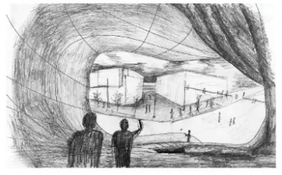


erode

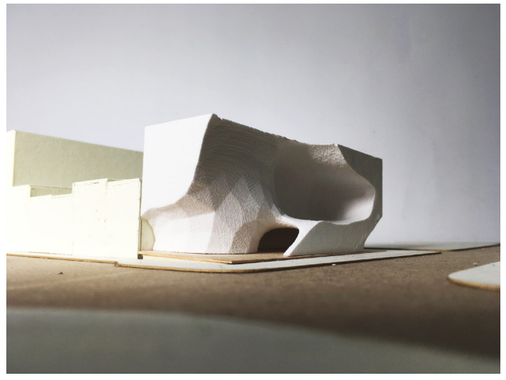


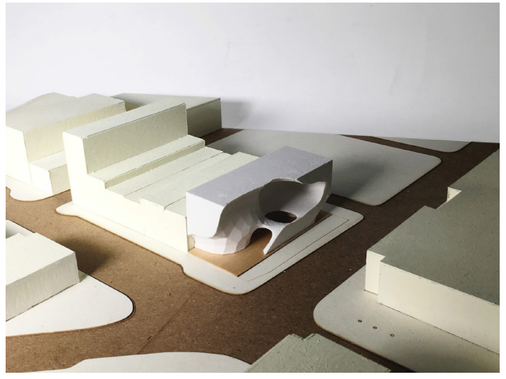
light





parti, sketch renders, and initial sectional sequence drawings

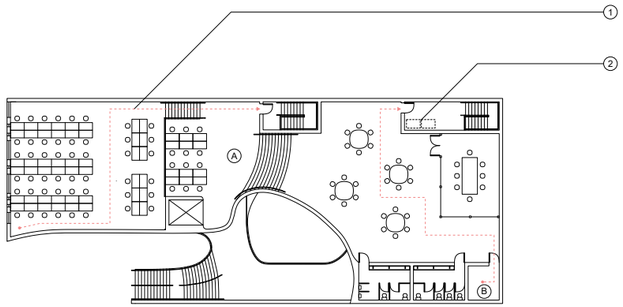




rockite sketch model and 3d printed final parti model

Ⓐ UPPER FLOOR OFFICE SPACE (B)
BUSINESS AREA: 100 GROSS
AREA: 5080 SF OCCUPANCY: 51

Ⓑ STORAGE (S2)
ACCESSORY STORAGE: 300 GROSS
AREA: 91 SF OCCUPANCY: 1



THIRD FLOOR PLAN
1/16" = 1'-0"

6121-3 PENN AVENUE
PITTSBURGH, PA

THE FOLLOWING CODE REVIEW IS IN ACCORDANCE WITH IBC 2018.

IN ACCORDANCE WITH 304.1 IN THE IBC, THIS OFFICE BUILDING IS AN OCCUPANCY TYPE B.
OCCUPANCY TYPE: B

IN ACCORDANCE WITH 602.2 IN THE IBC, THIS STEEL AND CONCRETE CONSTRUCTED BUILDING WITH NO FIRE-RESISTANT COATING HAS A CONSTRUCTION TYPE OF 1B.
CONSTRUCTION TYPE: 1B

TABLE 504.3
AS AN OCCUPANCY TYPE B AND CONSTRUCTION TYPE 1B BUILDING WITH A SPRINKLER SYSTEM, THE MAXIMUM BUILDING HEIGHT IN FEET ABOVE THE GRADE PLANE IS 180'. THE CURRENT DESIGN IS 60' TALL, SO IT IS CODE COMPLIANT.

TABLE 504.4
AS AN OCCUPANCY TYPE B AND CONSTRUCTION TYPE 1B BUILDING WITH A SPRINKLER SYSTEM, THE MAXIMUM STORIES IS 12. THE CURRENT DESIGN IS 3 STORIES TALL, SO IT IS CODE COMPLIANT.

TABLE 506.2
AS AN OCCUPANCY TYPE B AND CONSTRUCTION TYPE 1B BUILDING WITH A SPRINKLER SYSTEM, THE MAXIMUM AREA ALLOWED IS UNLIMITED.

ANNOTATION KEY:
1. TABLE 1017.2
AS AN OCCUPANCY TYPE B WITH A SPRINKLER SYSTEM, THE MINIMUM EXIT ACCESS TRAVEL DISTANCE IS 300'. THE LONGEST ROUTE IS 103'.

2. IN ACCORDANCE WITH 1009.6.3, A 30" BY 48" AREA OF REFUGE MUST BE PROVIDED FOR EVERY 200 OCCUPANTS. TWO ARE PROVIDED IN EACH FLOOR.

CODE REVIEW AND EGRESS

ASSIGNMENT 4A
PAGE: 1 OF 3

48-215 48-647
MATERIALS & ASSEMBLY
SPRING 2018

INSTRUCTOR: DAMIANI

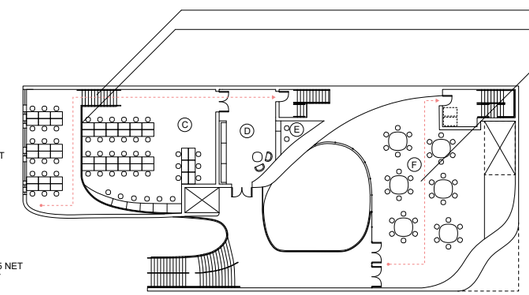
DANIEL NOH

Ⓒ LOWER FLOOR OFFICE SPACE (B)
BUSINESS AREA: 100 GROSS
AREA: 1927 SF OCCUPANCY: 20

Ⓓ LOBBY (A3)
ASSEMBLY (CONCENTRATED): 7 NET
AREA: 455 SF OCCUPANCY: 65

Ⓔ RECEPTION DESK (A3)
ASSEMBLY (FIXED SEAT): -
AREA: 59 SF OCCUPANCY: 2

Ⓕ EVENT SPACE (A3)
ASSEMBLY (UNCONCENTRATED): 15 NET
AREA: 2055 SF OCCUPANCY: 137

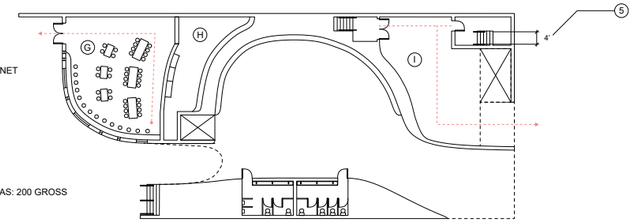


SECOND FLOOR PLAN
1/16" = 1'-0"

Ⓖ DINING SPACE (A2)
ASSEMBLY (UNCONCENTRATED): 15 NET
AREA: 974 SF OCCUPANCY: 65

Ⓗ KITCHEN (F1)
KITCHENS: 200 GROSS
AREA: 412 SF OCCUPANCY: 3

Ⓘ PROTOTYPING SPACE (H2)
FABRICATION/MANUFACTURING AREAS: 200 GROSS
AREA: 1054 SF OCCUPANCY: 6



FIRST FLOOR PLAN
1/16" = 1'-0"

TABLE 601
AS A CONSTRUCTION TYPE 1B BUILDING THE FIRE-RESISTANCE RATING REQUIREMENTS ARE:

PRIMARY STRUCTURAL FRAME: 2 HOURS
BEARING WALLS (EXTERIOR AND INTERIOR): 2 HOURS
NONBEARING WALLS AND PARTITIONS (EXTERIOR): IN ACCORDANCE WITH TABLE 602, AS A BUILDING WITH A FIRE SEPARATION DISTANCE LESS THAN 5FT AND AN OCCUPANCY TYPE B: 1 HOUR
NONBEARING WALLS AND PARTITIONS (INTERIOR): 1 HOUR
FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS: 2 HOURS
ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS: 1 HOUR

IN ACCORDANCE WITH 1005.3.1 IN THE IBC, THE CAPACITY OF MEANS OF EGRESS STAIRWAYS SHOULD BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD BY A FACTOR OF 0.3".

FLOOR 2: 224 * 0.3" = 67.2"
FLOOR 3: 52 * 0.3" = 15.6"

TABLE 1006.3.2
BECAUSE THE MAXIMUM OCCUPANCY OF THE BUILDING IS 350 PEOPLE, A MINIMUM OF 2 MEANS OF EGRESS IS NECESSARY FOR THIS BUILDING.

TABLE 1020.1
THE REQUIRED FIRE-RESISTANCE RATING (IN HOURS) FOR A OCCUPANCY TYPE B BUILDING IS 0 WITH A SPRINKLER SYSTEM.

ANNOTATION KEY:
2. IN ACCORDANCE WITH 1009.1.1 IN THE IBC, ONE ACCESSIBLE MEANS OF EGRESS IS REQUIRED FROM AN ACCESSIBLE MEZZANINE LEVEL.

3. IN ACCORDANCE WITH 1015.2 IN THE IBC, GUARDS SHALL BE LOCATED ON MEZZANINES.

4. IN ACCORDANCE WITH 1029.2 IN THE IBC, ASSEMBLY SPACES THAT HAVE AN OCCUPANT LOAD OF GREATER THAN 300 AND IS PROVIDED WITH A MAIN EXIT, THAT MAIN EXIT SHALL BE SUFFICIENT CAPACITY TO ACCOMMODATE NOT LESS THAN ONE-HALF OF THE OCCUPANT LOAD. HOWEVER, THE EVENT SPACE HAS AN OCCUPANCY LOAD OF 137 PEOPLE.

5. IN ACCORDANCE WITH 1009.3.2 IN THE IBC, STAIRWAYS SHALL HAVE A CLEAR WIDTH OF 48" MINIMUM BETWEEN HANDRAILS.

CODE REVIEW AND EGRESS

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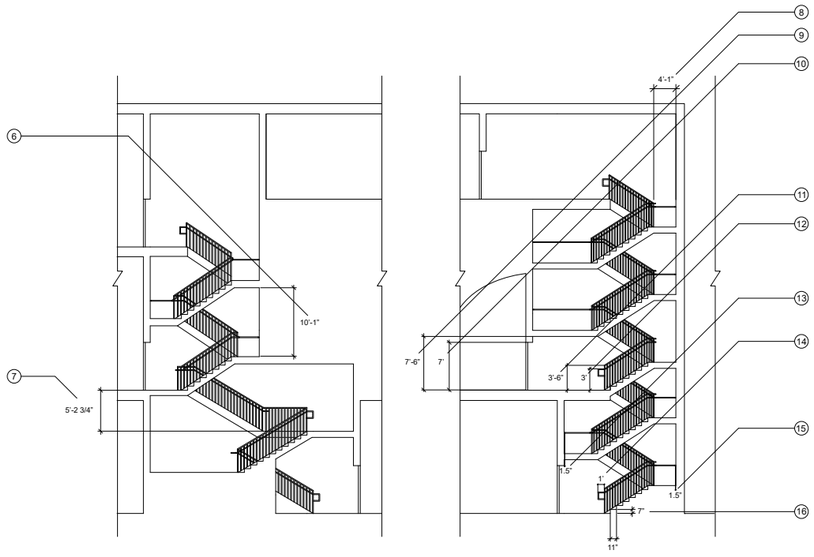
MATERIALS & ASSEMBLY
SPRING 2018

INSTRUCTOR: DAMIANI

DANIEL NOH



CENTRAL EGRESS SECTION
1/8" = 1'-0"

NORTH EGRESS SECTION
1/8" = 1'-0"

ANNOTATION KEY:

6. IN ACCORDANCE WITH 1011.3 IN THE IBC, STAIRWAYS MUST HAVE A HEADROOM CLEARANCE OF AT LEAST 80". THE CURRENT RANGE IS 7'-6" TO 10'-1".

7. IN ACCORDANCE WITH 1011.8 IN THE IBC, A FLIGHT OF STAIRS SHALL NOT HAVE A VERTICAL RISE GREATER THAN 12' BETWEEN FLOOR LEVELS OR LANDINGS.

8. IN ACCORDANCE WITH 1011.6 IN THE IBC, EVERY LANDING MUST BE AT LEAST 48". THE SMALLEST IS CURRENTLY 49".

9. IN ACCORDANCE WITH 1003.2 IN THE IBC, THE MEANS OF EGRESS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7'-6" ABOVE FINISHED FLOOR.

10. IN ACCORDANCE WITH 1010.1.1 IN THE IBC, THE MINIMUM CLEAR OPENING HEIGHT OF DOROS SHALL BE NOT LESS THAN 6'-8".

11. IN ACCORDANCE WITH 1015.3 IN THE IBC, GUARDS SHALL NOT BE LESS THAN 42".

12. IN ACCORDANCE WITH 1014.2 IN THE IBC, HANDRAILS SHALL NOT BE LESS THAN 34" OR GREATER THAN 38".

13. IN ACCORDANCE WITH 1014.7 IN THE IBC, CLEAR SPACE BETWEEN A HANDRAIL AND A WALL OR OTHER SURFACE SHOULD NOT BE LESS THAN 1 1/2".

14. IN ACCORDANCE WITH 1014.6 IN THE IBC, HANDRAILS SHOULD RETURN TO A WALL, GUARD, OR WALKING SURFACE. WHERE HANDRAILS ARE NOT CONTINUOUS BETWEEN FLIGHTS, THE HANDRAILS SHALL EXTEND HORIZONTALLY NOT LESS THAN 12" BEYOND THE TOP RISER AND CONTINUE TO SLOPE FOR THE DEPTH OF THE TREAD BEYOND THE BOTTOM RISER.

15. IN ACCORDANCE WITH 1014.3.1 IN THE IBC, CIRCULAR HANDRAILS MUST NOT BE LESS THAN 1 1/4" OR GREATER THAN 2" IN DIAMETER.

16. IN ACCORDANCE WITH 1011.5.2 IN THE IBC, STAIR RISERS HEIGHTS SHALL BE 7" MAXIMUM AND THE TREAD DEPTH SHALL BE 11" MINIMUM.

CODE REVIEW AND EGRESS

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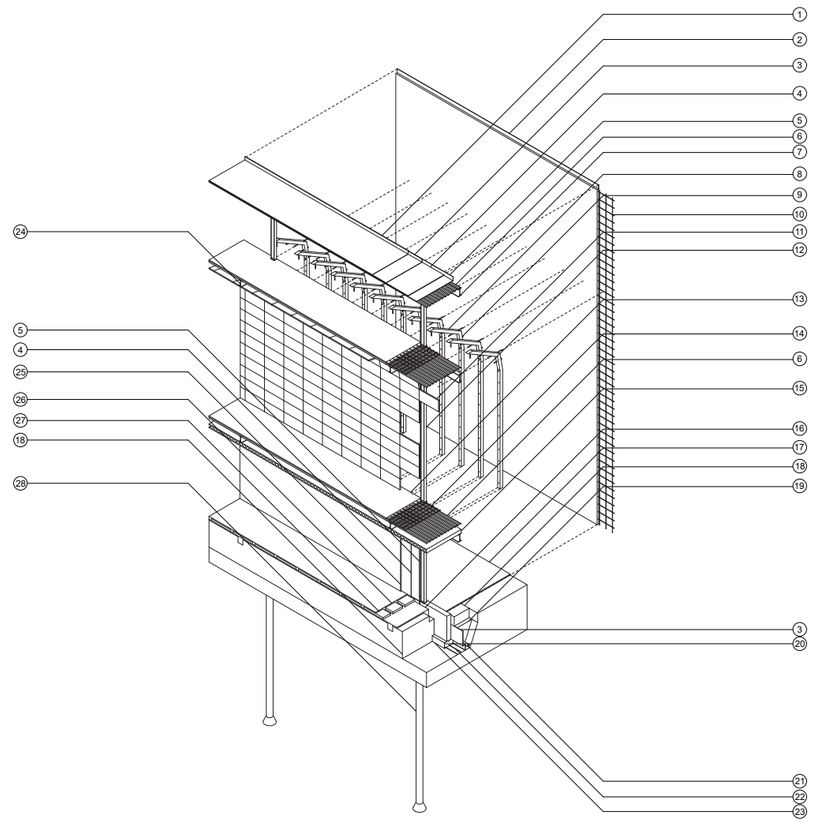

1. METAL CAP FLASHING AND EPDM ROOFING
2. 4" THK CAST INSITU CONCRETE WALL
3. WATERPROOFING
4. RIGID INSULATION
5. VAPOR BARRIER
6. STEEL DECKING
7. STEEL PRIMARY BEAM W16X46 @ 30' O.C.
8. CAST STONE SUPPORT STEEL
9. METAL STUD BRACING
10. #6 REINFORCING BAR @ 16" O.C.
11. 2" THK PREFABRICATED CONCRETE PANELS
12. STEEL COLUMN W8X24 @ 15' O.C.
13. 2" THK POLISHED CONCRETE SLAB
14. WELDED WIRE MESH
15. 8" THK HOLLOWCORE CONCRETE PLANKS
16. PRECAST CONCRETE LATTICE GIRDER
17. SIDEWALK
18. COMPACTED GRAVEL FILL
19. GRAVEL BACKFILL
20. REINFORCED CONCRETE FOOTING
21. FOUNDATION DRAIN WITH FABRIC
22. (3) #6 REINFORCING BAR
23. 10" THK CAST INSITU CONCRETE
24. STEEL BEAM W12X26 @ 15' O.C.
25. 2" THK PREFABRICATED CONCRETE WALL
26. 2" THK CAST INSITU CONCRETE FLOOR
27. POLYSTYRENE BLOCKS
28. 12" DIAMETER REINFORCED CONCRETE CAISSON DRIVEN 30' DEEP

ENCLOSURE

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MATERIALS & ASSEMBLY
SPRING 2018

INSTRUCTOR: DAMIANI

DANIEL NOH

Wooden Handrail And Balustrade

4th Year Fall
Professor: Jeremy Ficca

The movement of a person up and down a staircase is relative to each person, some skip steps, some walk at the steady pace, some bounce up and down. So how do you make a handrail that is purposefully designed around the entire movement of the body, rather than just the grasp of the hand? Moreover, how can this be done through contemporary fabrication techniques?

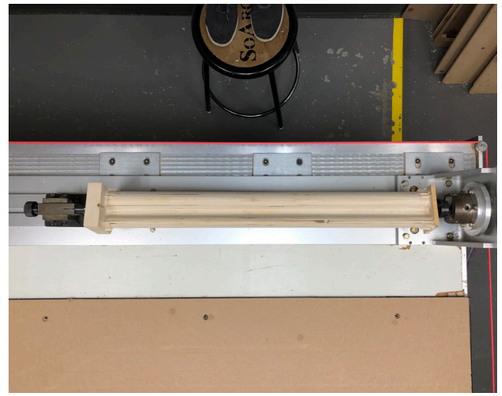
Taking the qualities of Alvar Aalto's furniture and detailing, various forms were prototyped digitally and physically. There was special consideration for how a hand wrapped around the railing, much like many of Aalto's handrails. Through the full utilization of the CNC-Machine at Carnegie Mellon University School of Architecture's Design Fabrication Lab, as well as bent lamination techniques, this prototype of a handrail and baluster was created.

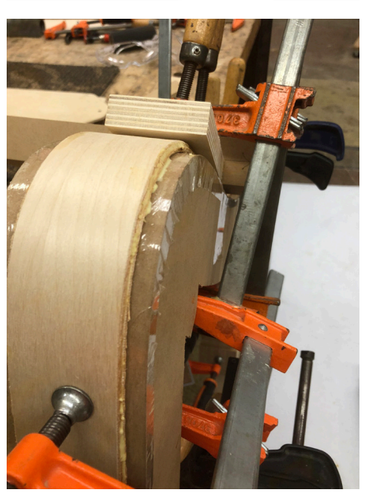
The initial prototyping involved analog processes of molding clay to fit a hand. The first clay prototype failed due to the density and crackling nature of paper clay. The second clay prototype used proper molding clay that was far easier to manipulate. However, it was apparent that the clay was too variant through its profile. The final physical prototype involved hand- carving floral foam over several days, fine-tuning it to various hand sizes and shapes. Using this profile with slight modifications throughout each process, various forms were created through digital means (laser cutter, CNC). The chipboard was unsuccessful in the y-axis scaling, and the HD foam shifted during the CNC, resulting in scalloping.

Prototyping the baluster involved a far more digital to physical conversation. The form was first digitally iterated in Rhino until a satisfactory form was generated. This form was then profiled out on the CNC mill (2.5 axis) as a mold. For the first bent lamination tests, chipboard strips and standard multipurpose glue was used in a stagger method. Through this mold, it was apparent that the extreme curve at the top would not be structurally sound; moreover, it would be difficult to wrap the layers of veneer around the curve. The curvature was modified to a lesser degree and another mold form was milled out, this time with an outer mold to spread out the pressure of the clamps. After a couple of small layer tests, the final baluster was produced.

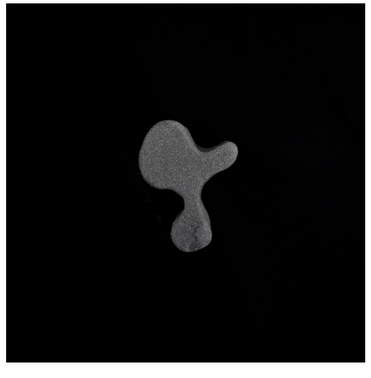
The Aalto inspired handrail ended up taking the form of an object you want to hold on to, but also a form that invites you to let go.

render of final design






DANISH OIL



handrail form process work: paper clay, clay, gardening foam, stacked chipboard, 4-axis CNC on laminated high density foam, and 4-axis CNC on birch plywood

Illustrations And Digital Drawings

Personal Projects