



DAN HAWKINS

WORK 2011-2014

CONTENTS

Professional

- I Jan Shrem + Maria Manetti Shrem Museum of Art
- 7 Collegiate School

Academic

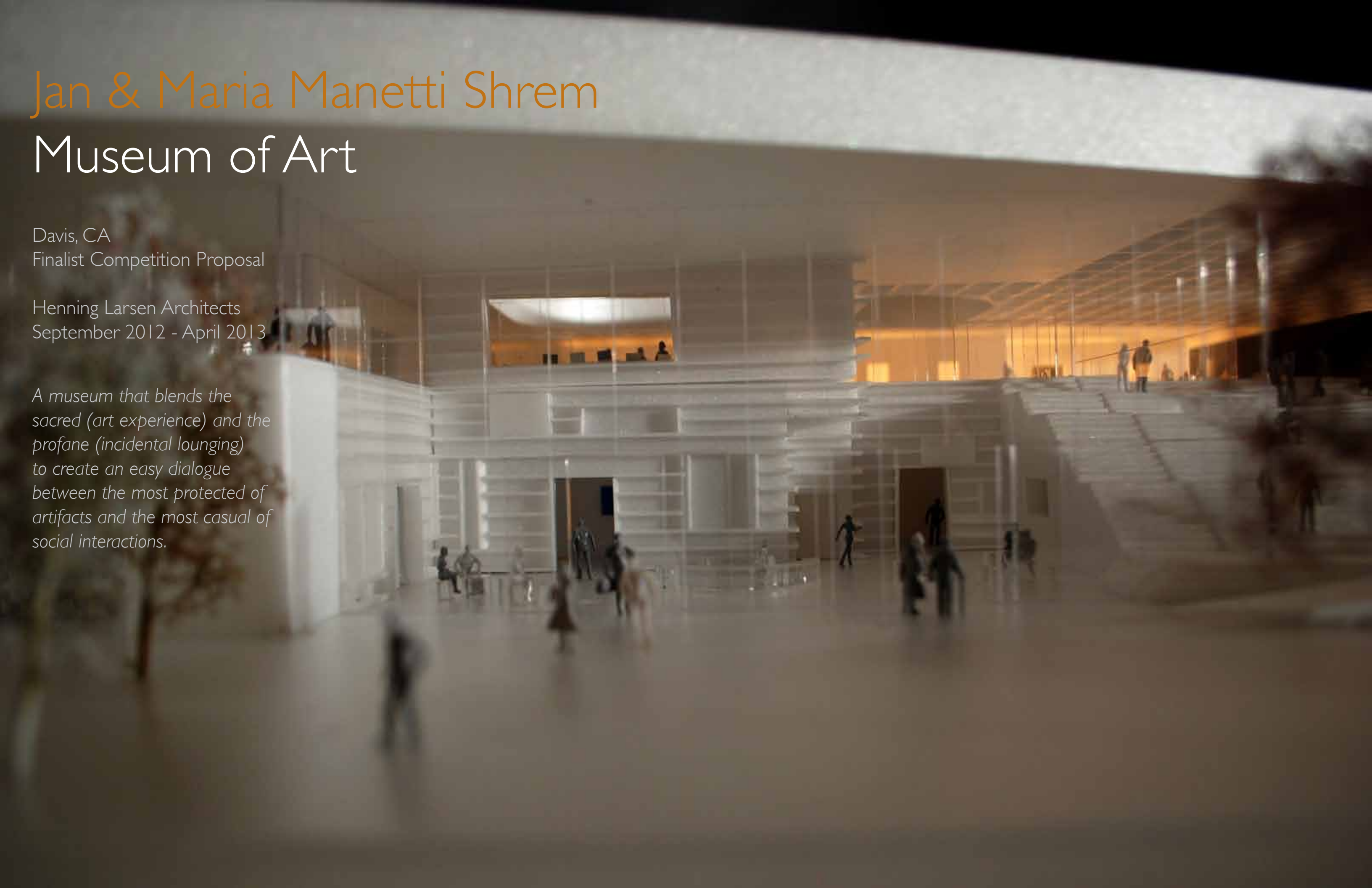
- 15 Polyvalent Skin *kinetic design + sustainability*
- 25 Cocoon Stair *digital fabrication + design*
- 31 [Re]Map [Re]Think [Re]New *landscape + masterplan*

Jan & Maria Manetti Shrem Museum of Art

Davis, CA
Finalist Competition Proposal

Henning Larsen Architects
September 2012 - April 2013

A museum that blends the sacred (art experience) and the profane (incidental lounging) to create an easy dialogue between the most protected of artifacts and the most casual of social interactions.



Jan Shrem & Maria Manetti Shrem

Museum of Art

Davis, CA

Henning Larsen Architects,
September 2012 - April 2013

Project Role: Project aquisition and PQ package layout, Part of three-member core concept development team, Digital 3D modeling and rendering, drafting of final floor plans, sections, and elevations

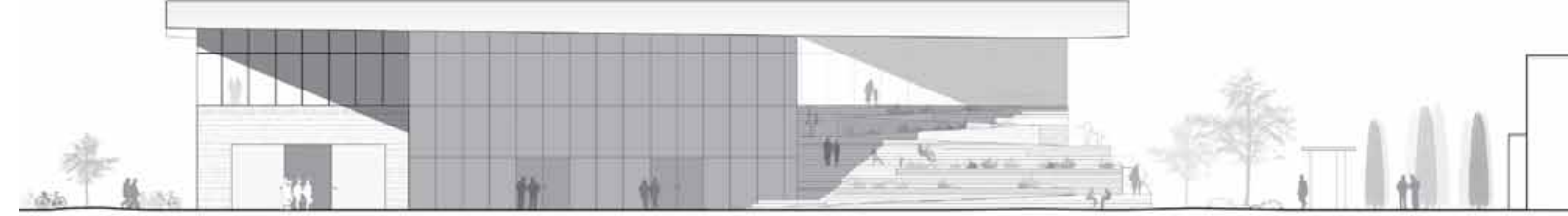
Software: Rhino 5, Adobe Creative Suite CS5, Microstation v8

Team: Michael Sørensen, Morten Krog, Grace Xu, Dominik Mrozinski



East Elevation

North Elevation

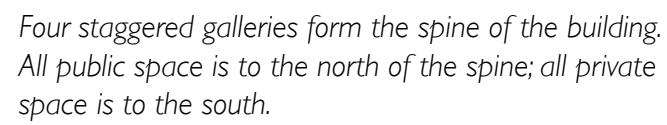


West Elevation

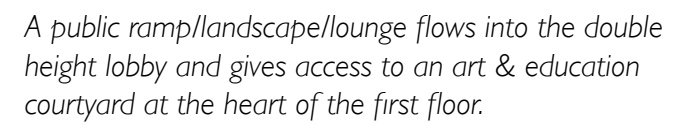
South Elevation



Four staggered galleries form the spine of the building. All public space is to the north of the spine; all private space is to the south.



A public ramp/landscape/lounge flows into the double height lobby and gives access to an art & education courtyard at the heart of the first floor.



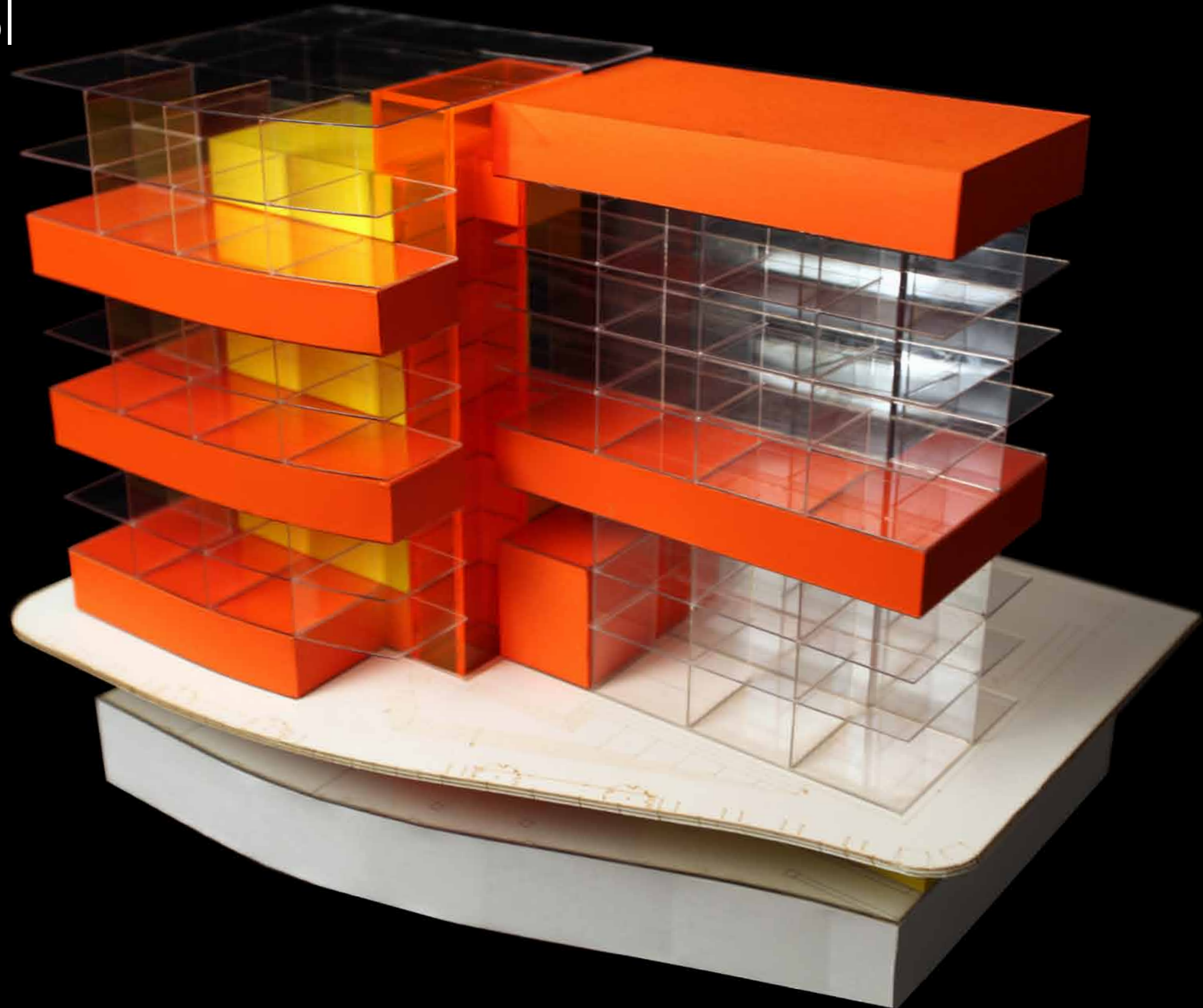
Collegiate School

New York, NY

GLUCK+

August 2013 - April 2014

Three schools - a lower, middle, and upper - stacked and woven together by hubs of shared spaces. A K-12 institution turned into a vertical neighborhood where students, young and old, can interact in unexpected & productive ways.



Collegiate School

New York, NY
GLUCK+,
August 2013 - April 2014

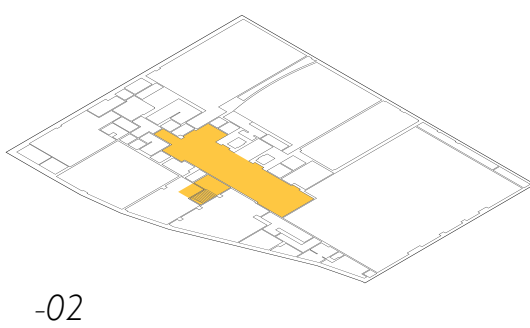
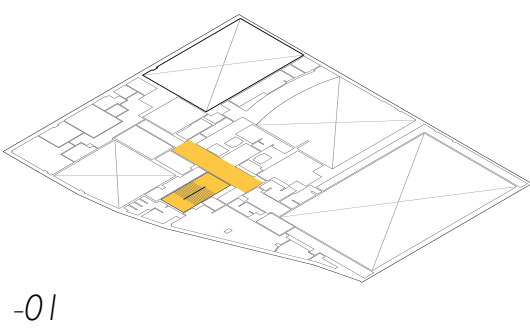
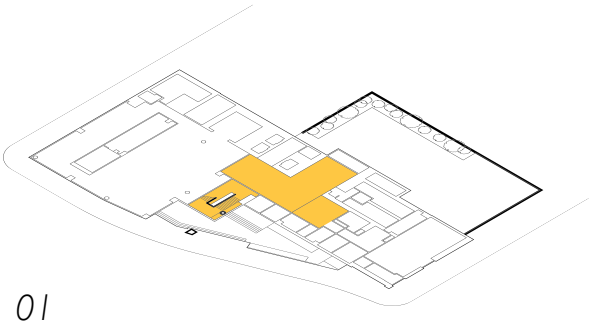
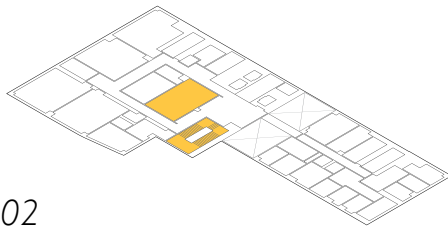
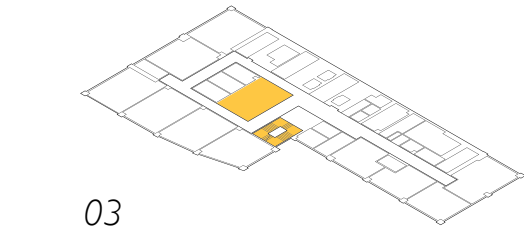
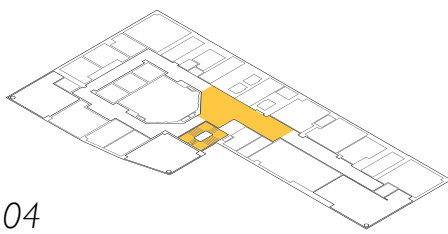
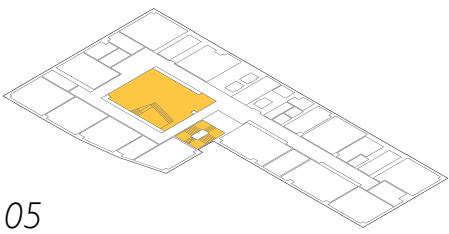
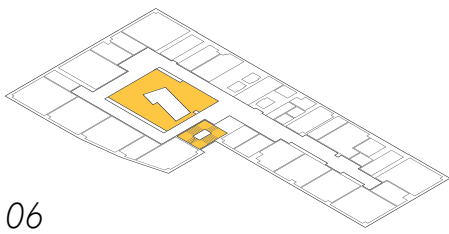
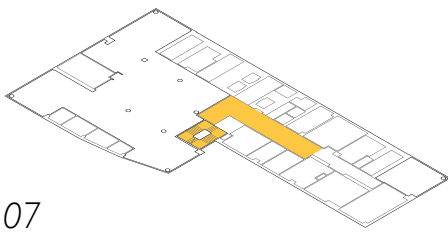
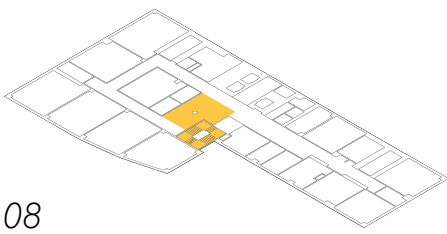
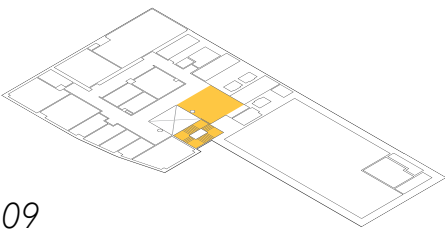
Project Role: Part of the facade design & interior concept team, Built presentation & study models of: facade, entryway, special hub spaces, and floor-by-floor mockups, Digital 3D modeling and rendering, drafting of final interior elevations and plans for design development submission.

Software: Rhino 5, Adobe Creative Suite CS5, AutoCAD 2014

Team: Peter Gluck, Tom Gluck, Stacie Wong, Stephane Derveaux, Kathy Chang, Kelly Barlow, Fiona Booth, Jen Dempsey, Brian Novello, Joanna Stephens, Brian Kim, Ryo Sano, Parisa Mansourian

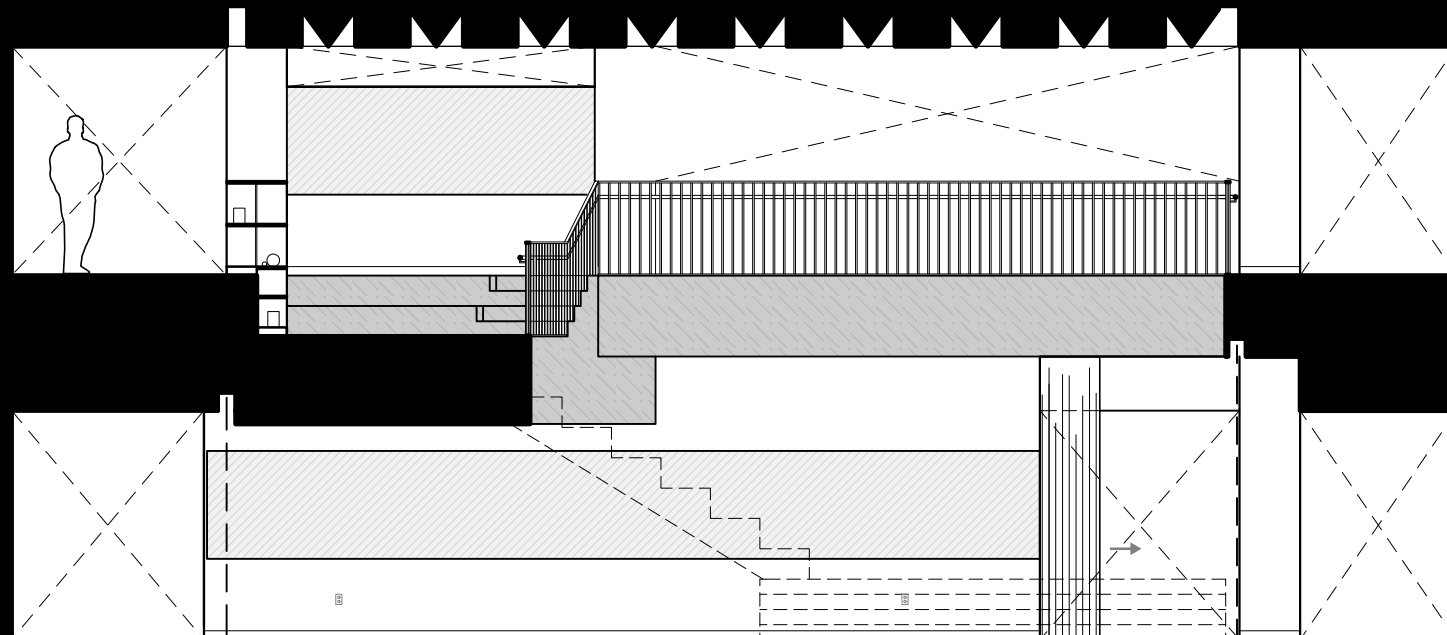


Interior Continuity: Vertical Circulation & Public/Special Spaces Emphasized

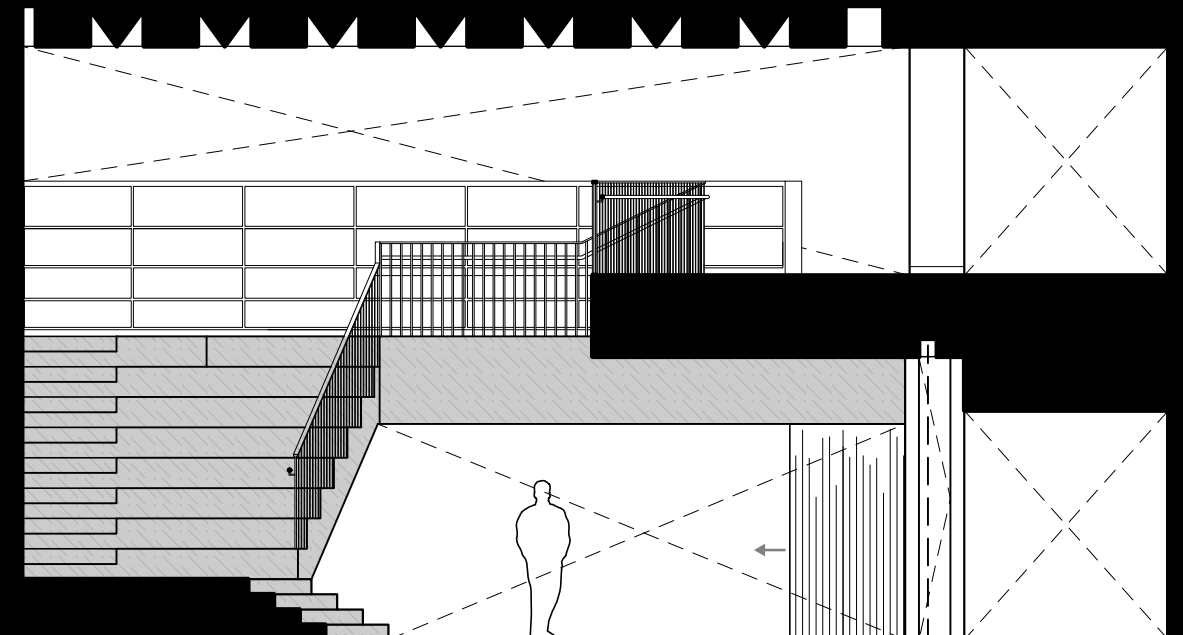


Special Centers: Middle School

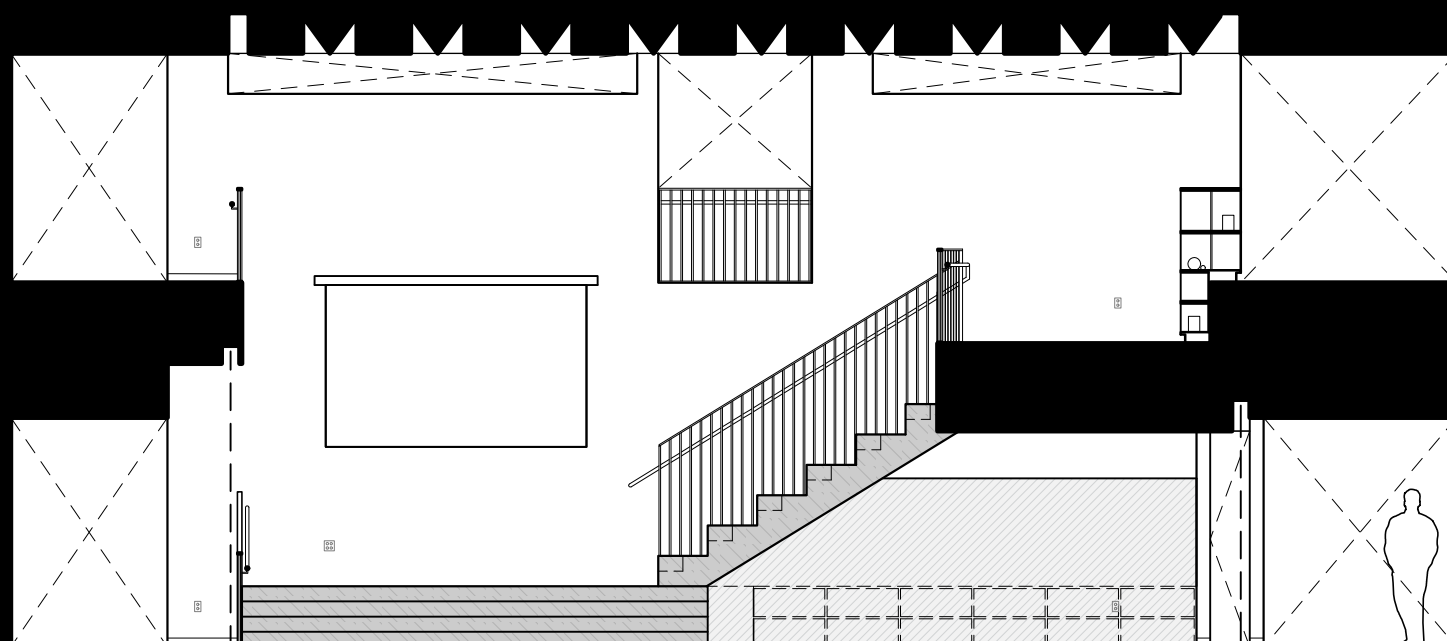
We carved out special centers for each of the three divisions: lower school, middle school, and upper school. These centers are designed to reflect the unique identity of each division within the K-12 school. The middle school center, for students aged 10-14, contains large amounts of bookshelves, seating, and tackable wall surfaces to encourage conversations and collaborations about art, literature, upcoming events, etc. A wooden scaffold around which identity and scholarship can mature...



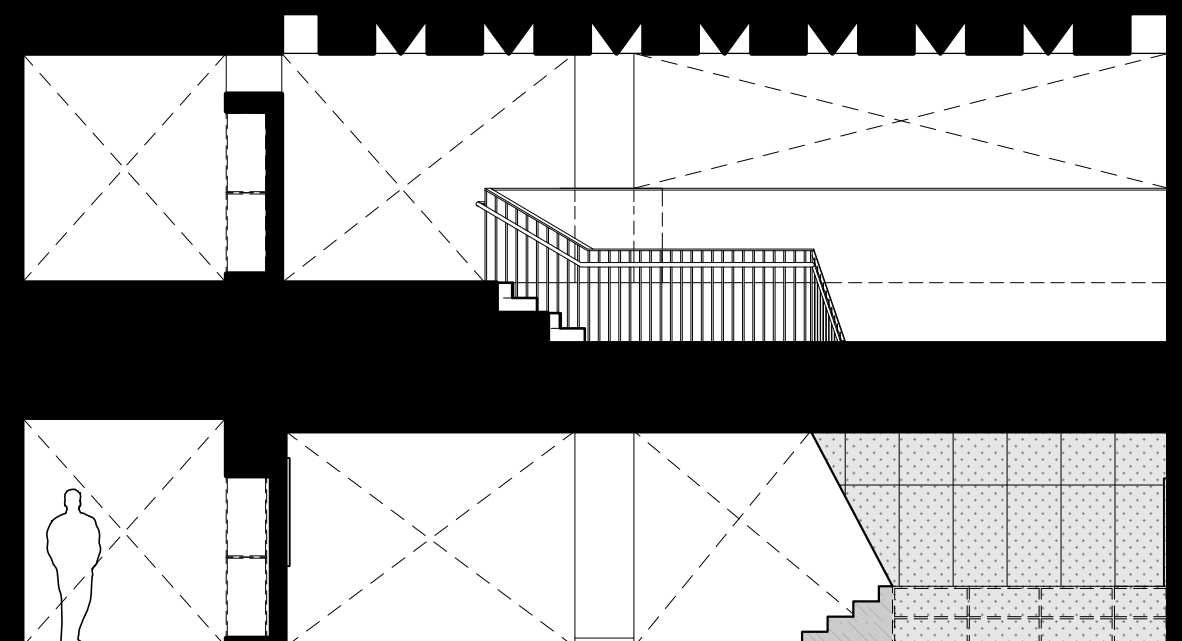
WEST



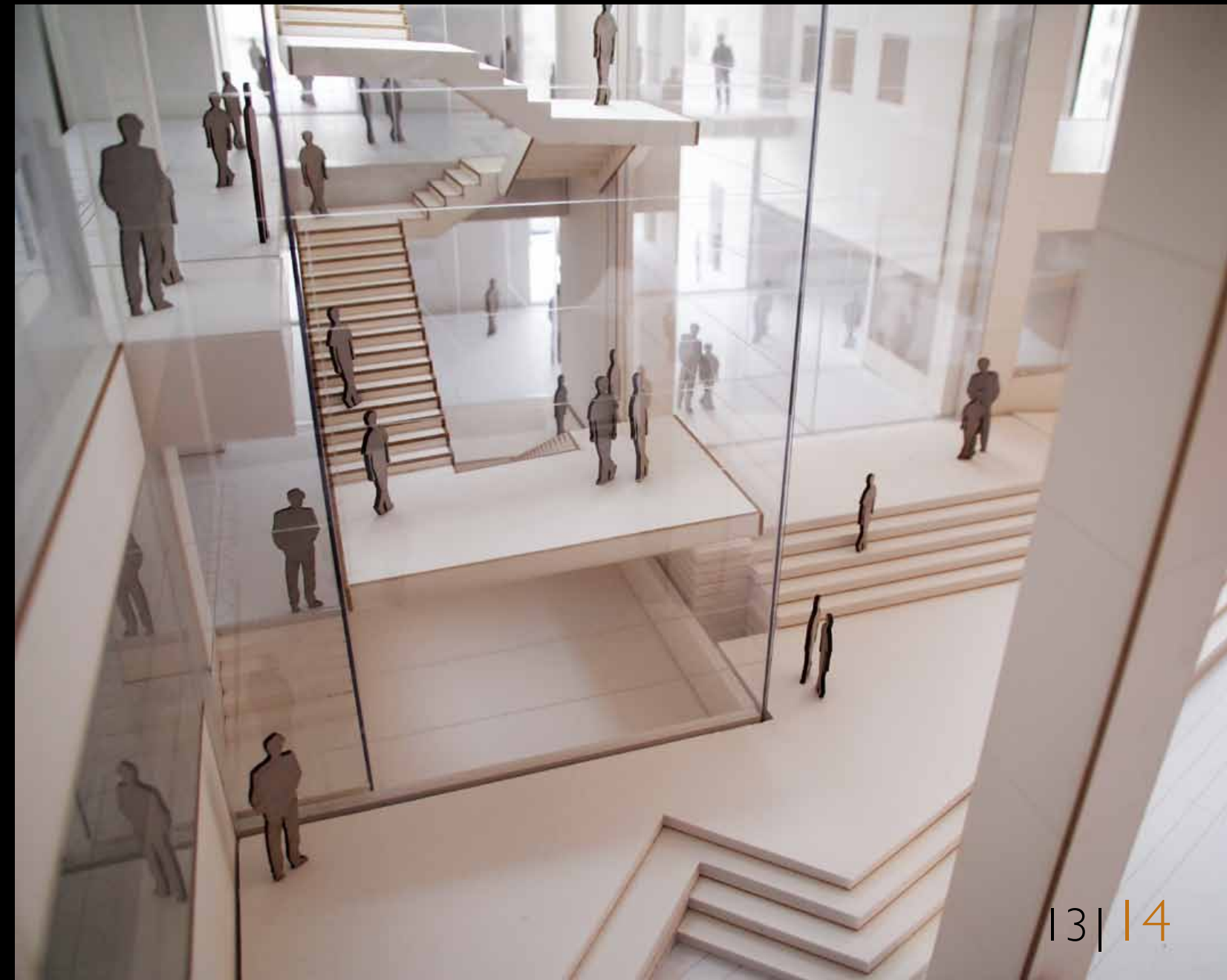
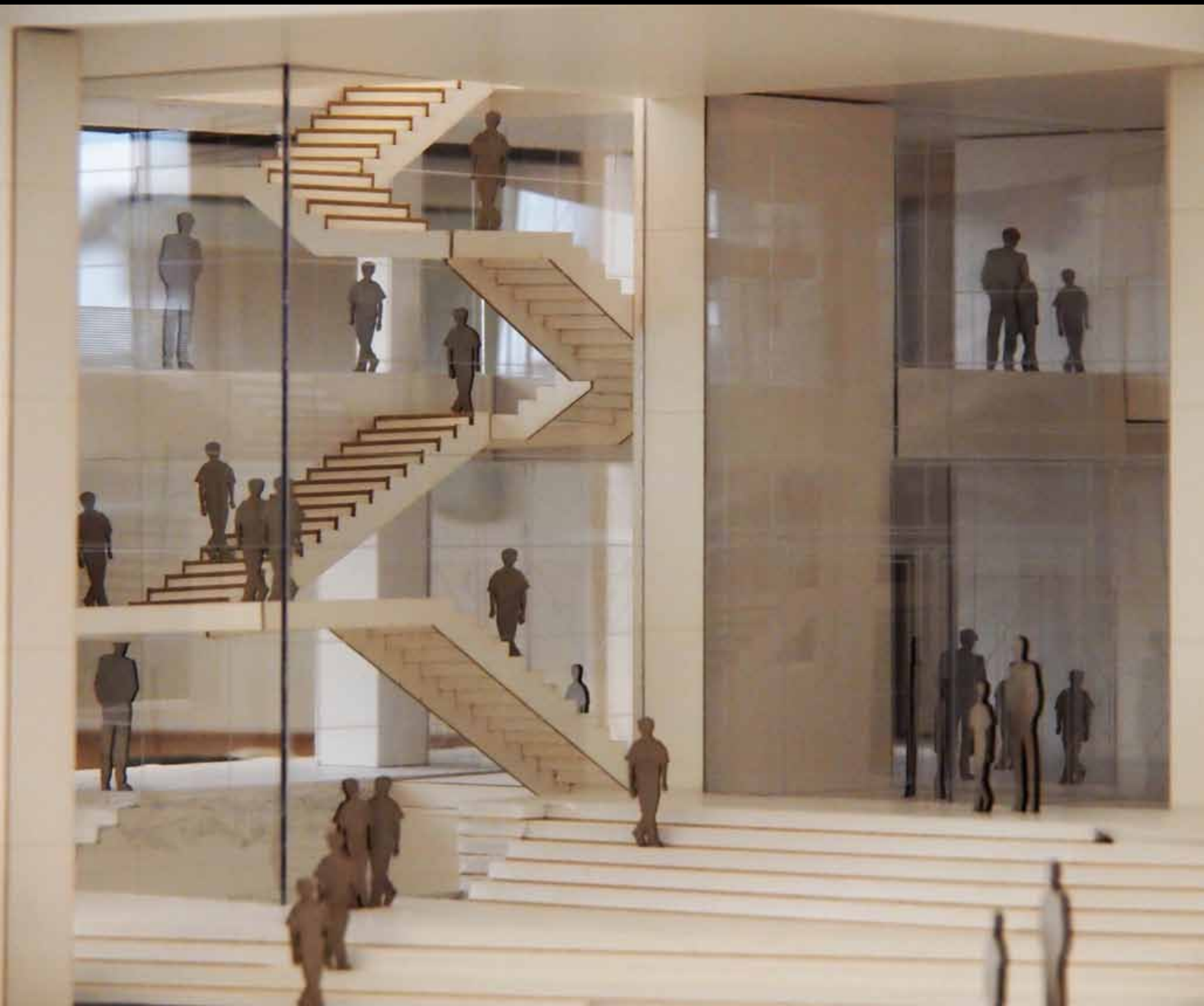
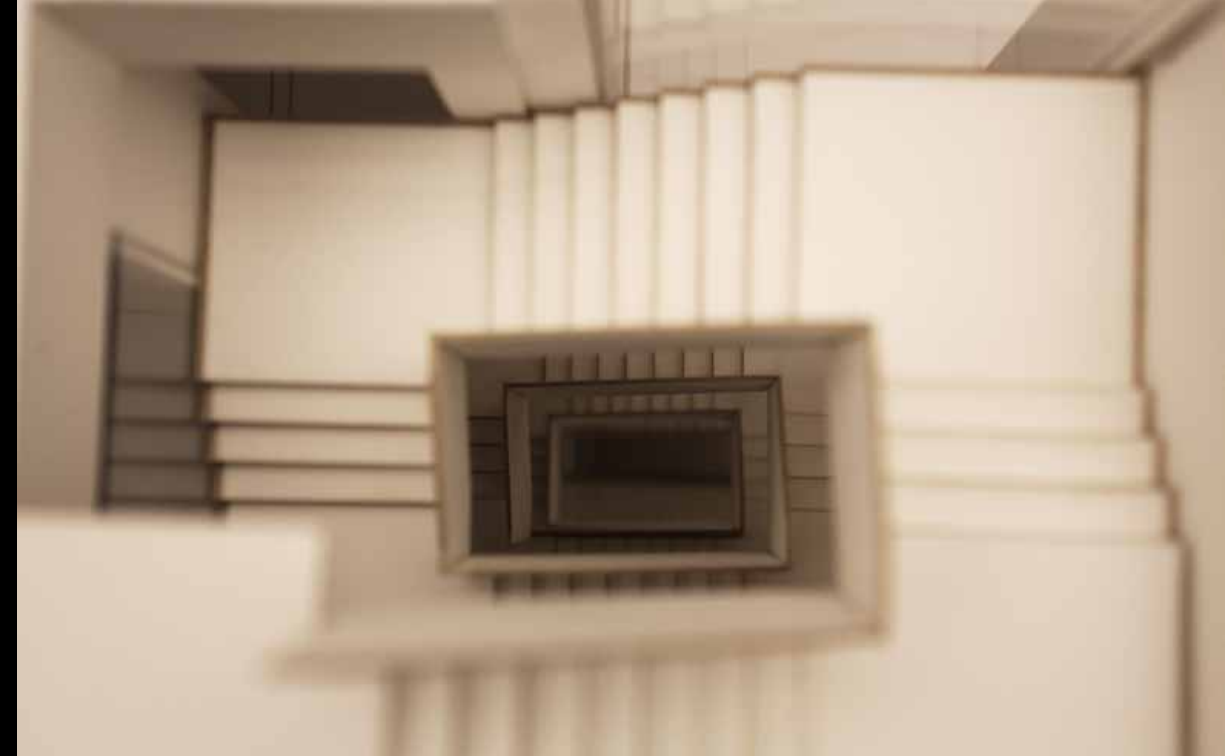
SOUTH



EAST



NORTH



Polyvalent Skin

New York City, NY
Kinetic Design + Sustainability

University of Pennsylvania
Undergraduate year 4 (fall 2012)

*...Using the temporal conditions of
sunlight and inhabitation to create a
multi-layered, data-driven facade, which
reveals the implications and effects of
both conditions...*



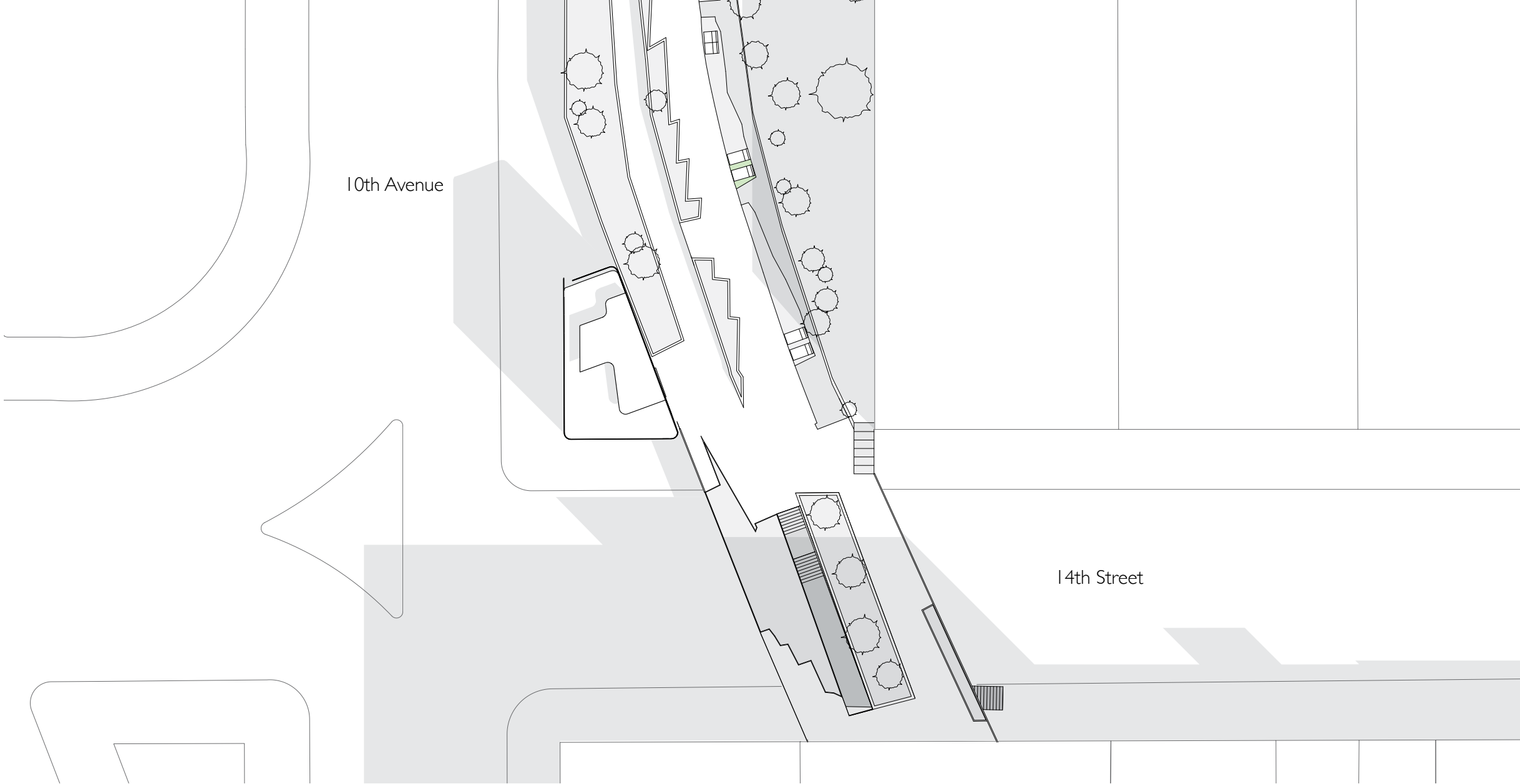
POLYVALENT SKIN

70 Tenth Avenue, New York, NY
University of Pennsylvania, Fall 2011

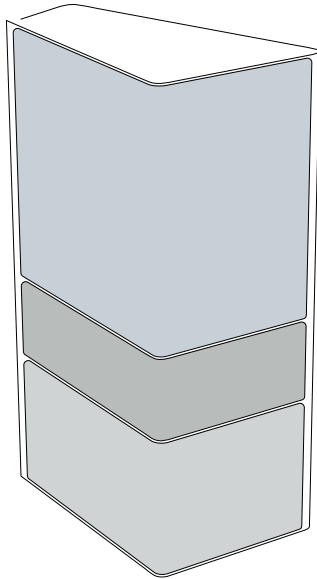
Presented with two sets of geometries (that of the highline and that of the street grid), the building orients to both. The enclosure becomes defined by two L's: orthogonal to both contexts. Three sectional zones emerge: 1, the upper floors: **private residential** space, 2, a zone at the **highline level: semi private/semi public**, and 3, the **street: public**.

Two layers of performance skin wrap the massing. The outer curtain uses **photochromic glass**, which tints darker in response to solar intensity. The surface display becomes one of constantly shifting angles and densities of sunlight. Instantaneous information streams drive it; the combined mappings of wind speeds and incident solar radiation generate a **façade that shimmers with data**.

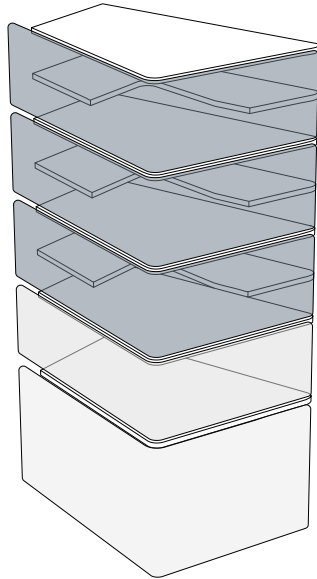
As the sun sets and residents return, the building re-ori-ents itself to the private realm through its second skin. The façade becomes a **manual operation: panels are darkened by a desire for privacy**. Yet while the building turns to face the needs of its interior, it continues its relationship with the public realm. Shaded spaces become pockets of darkness, presenting the pedestrian with a new data-stream of privacy and spatial usage.



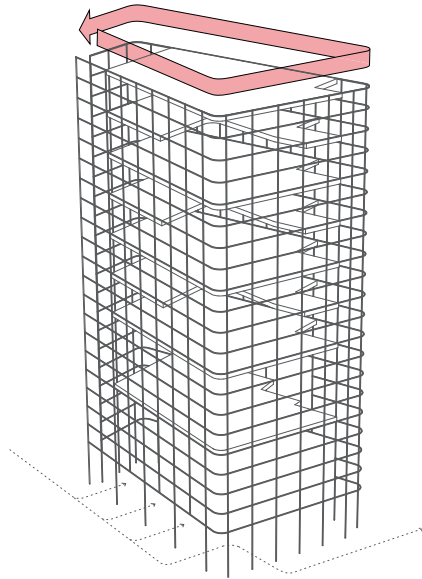
The building is divided (from top): Private, Semi-Public, Public



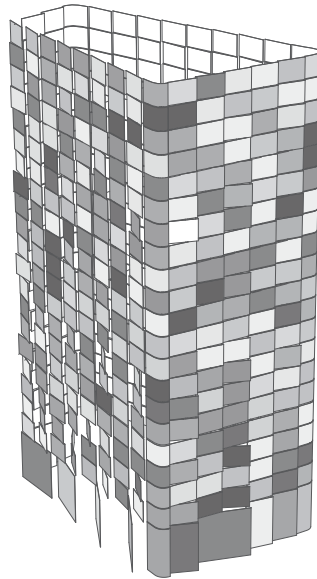
The private zone becomes 3 double floor family units.



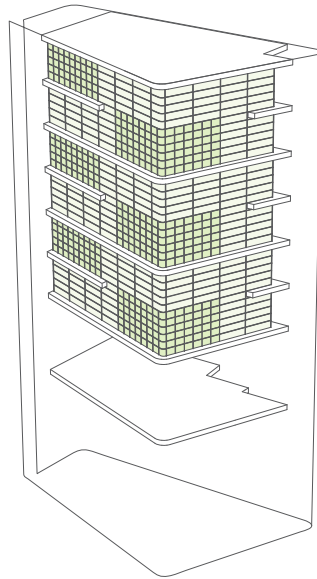
A gridded skin wraps the entire massing



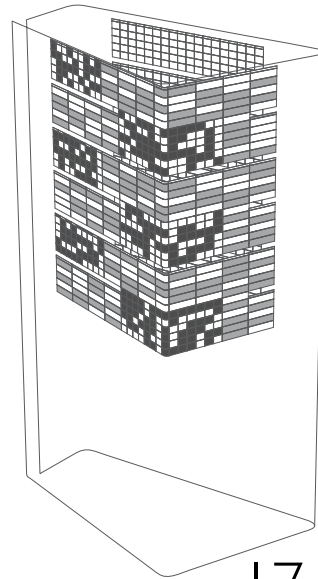
The photochromic glass reacts to solar radiation by changing clear to opaque



An interior skin uses smaller, operable windows to differentiate individual and collective spaces.



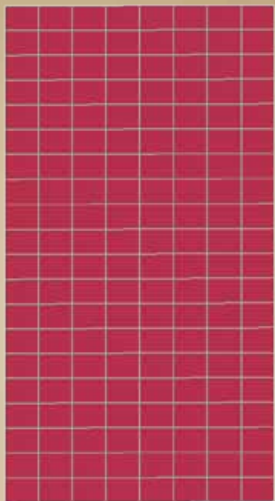
As the interior skin is manipulated by inhabitants, it gives a reading of spatial usage.



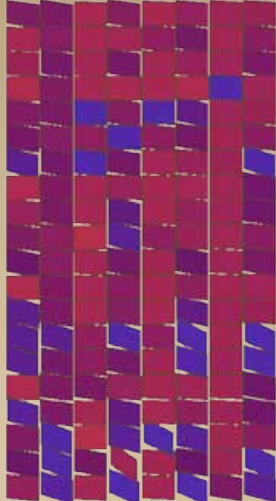
Incident Solar Radiation



JANUARY 22 - 15.30

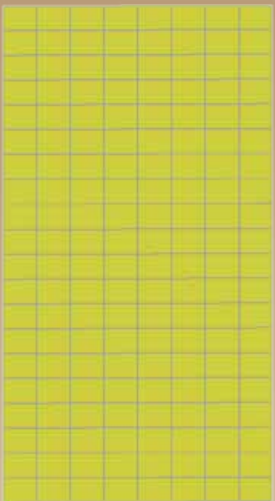


Static

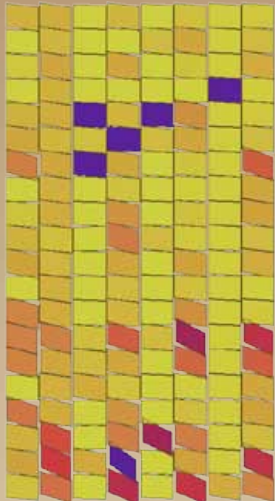


Manipulated

MARCH 22 - 15.30

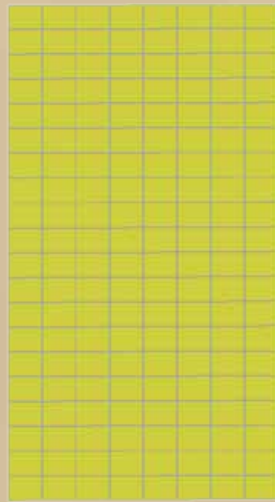


Static

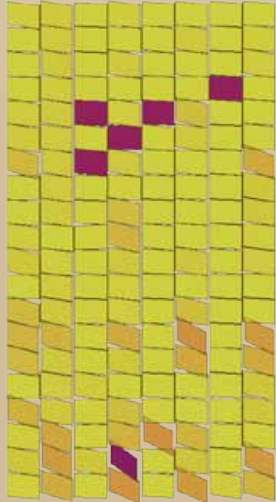


Manipulated

MAY 22 - 15.30

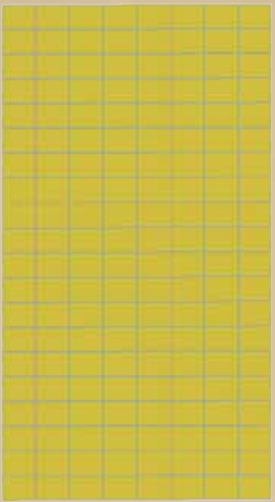


Static

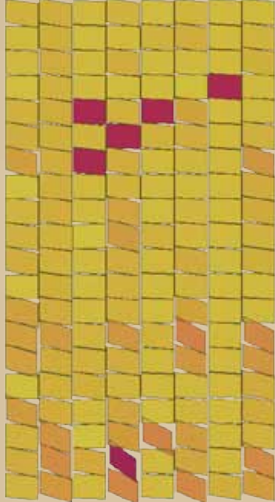


Manipulated

JULY 22 - 15.30

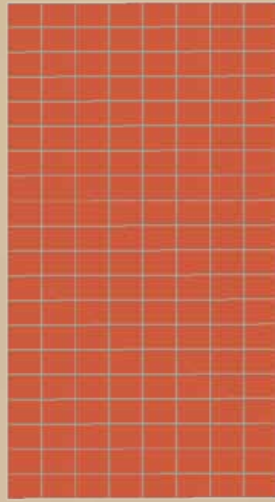


Static

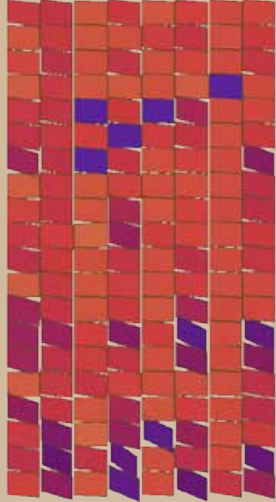


Manipulated

SEPTEMBER 22 - 15.30

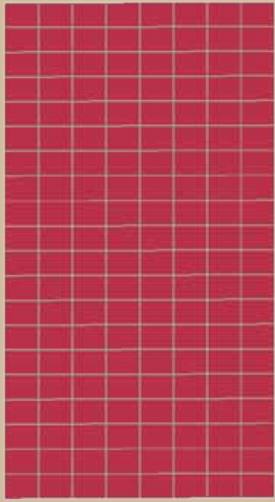


Static

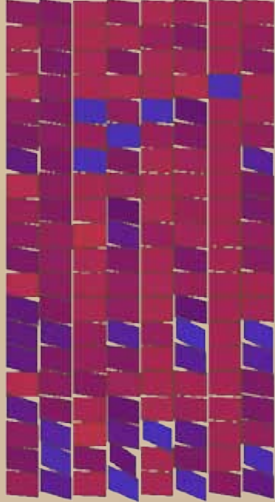


Manipulated

NOVEMBER 22 - 15.30



Static



Manipulated



Using the simulation software Ecotect, the appearance/ reaction of the photochromic skin was tested three times a day, for the 12 months of the year.

Here, the studies show one iteration where all glass panes are closed (giving a singular tonal response to solar radiation), and an iteration where the panes are variously opened (a scenario which allows for natural ventilation).

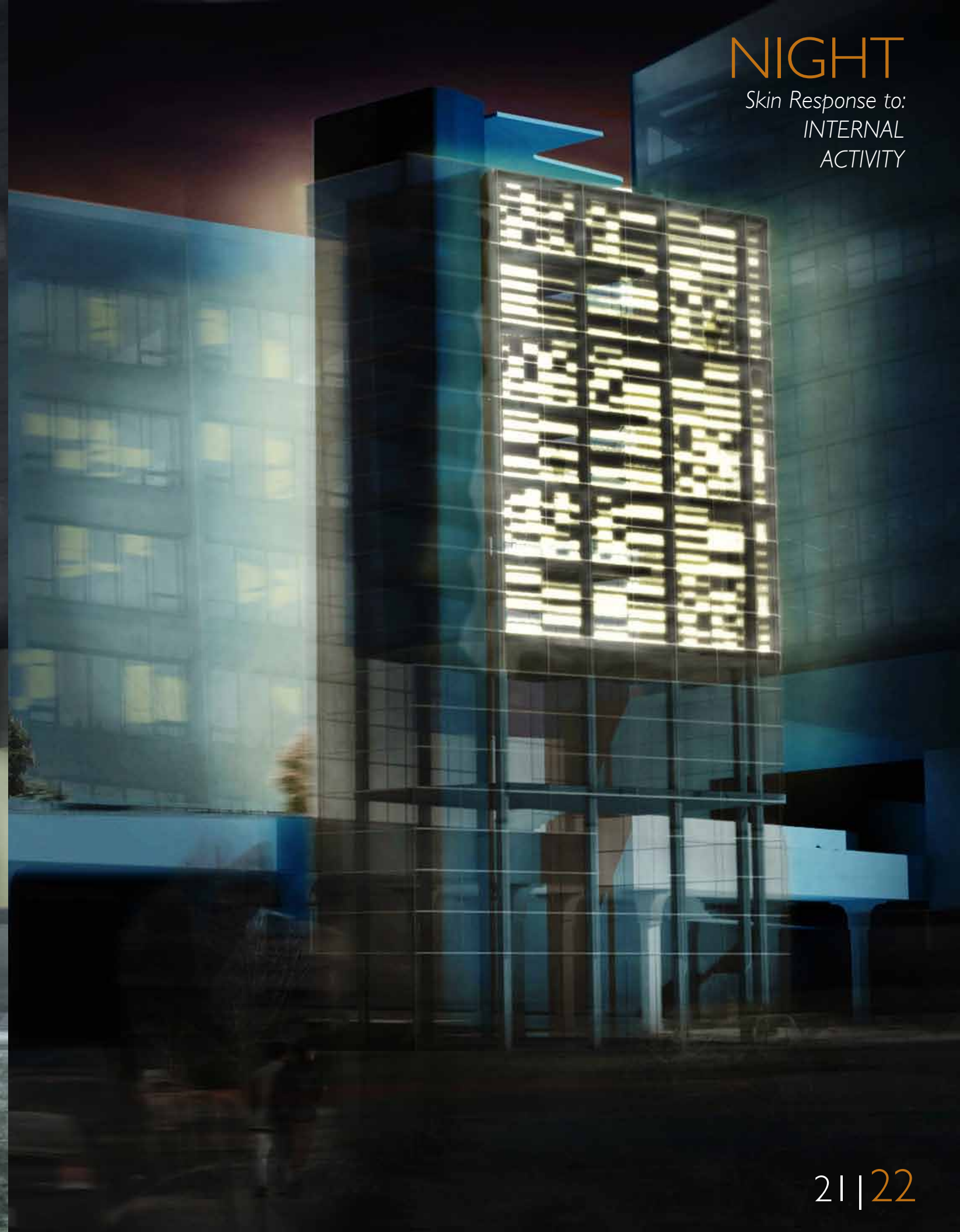
DAY

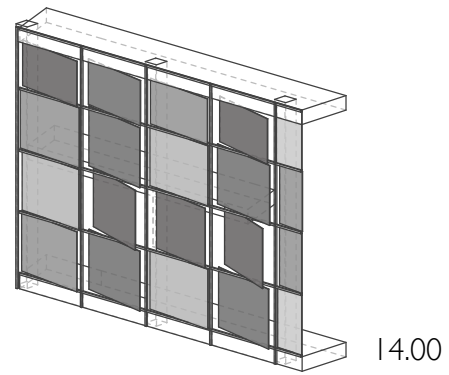
Skin Response to:
INCIDENT SOLAR
RADIATION



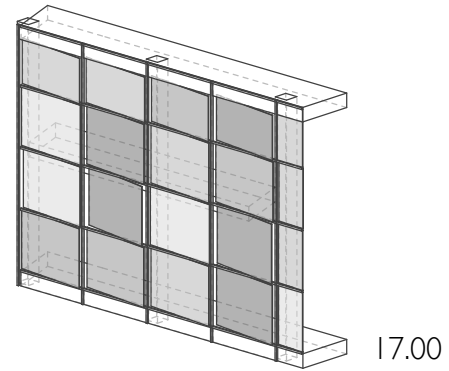
NIGHT

Skin Response to:
INTERNAL
ACTIVITY

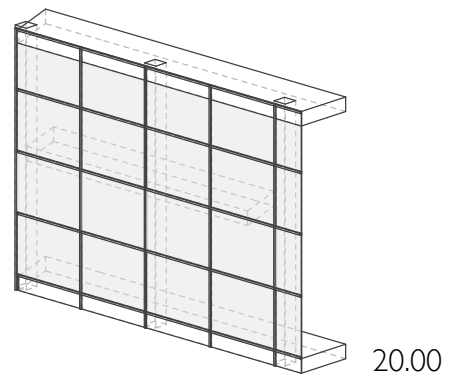




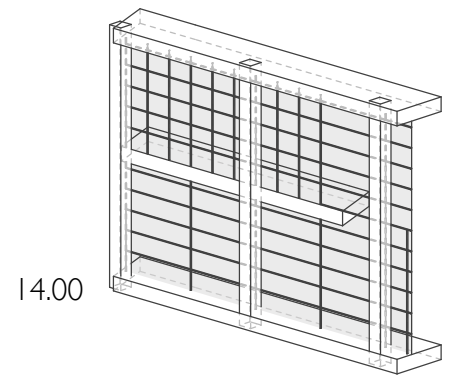
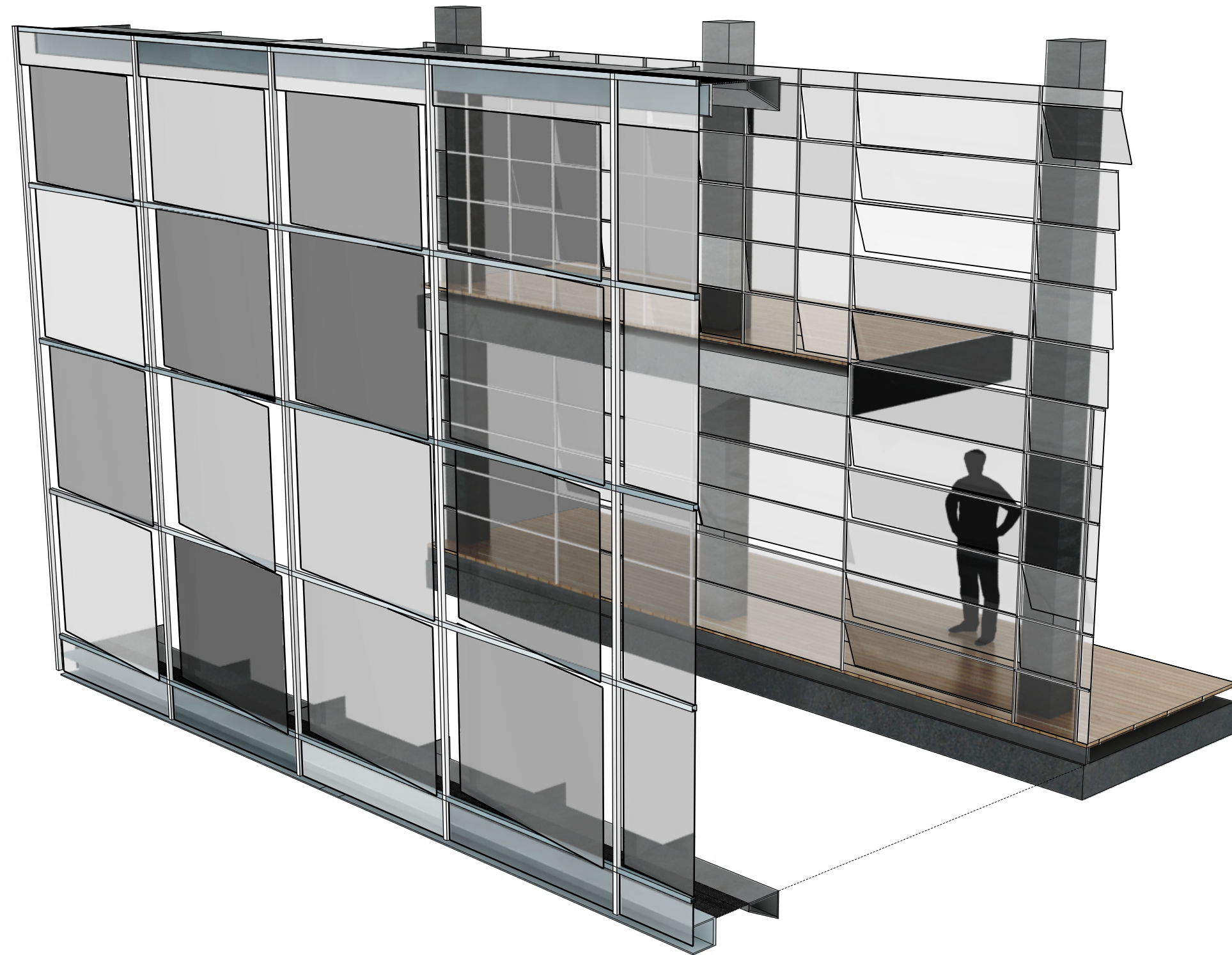
14.00



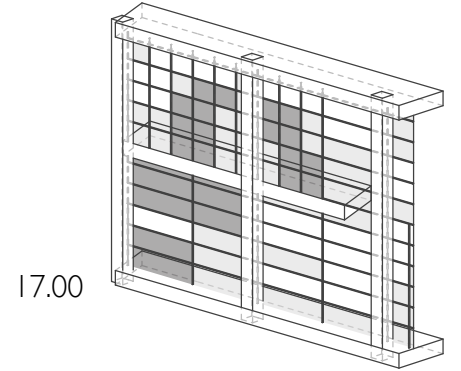
17.00



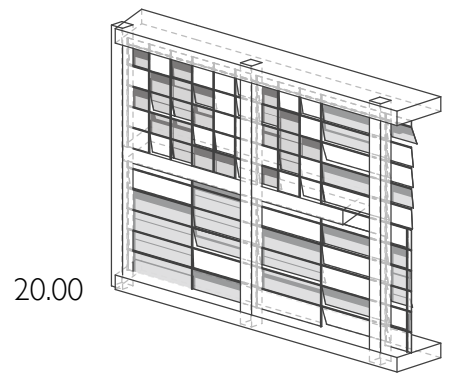
20.00



14.00



17.00



20.00

DAY:

During the day the residents have left. Most of the private usage of the building has been temporarily flushed out. As a result, the tower turns outward to engage with the public and with the sun.

If the image of the tower is in constant transition, how does it remain 'legible' as a building - does it need a fixity?

NIGHT:

As evening arrives, so do the residents. The building re-oriens itself to the private realm through its second skin.

Does this mapping subvert the inhabitant's intentions of privacy: projecting each micro-adjustment onto the 'big' screen?

Cocoon Stair



London, UK
Digital Fabrication + Design

Architectural Association
Spring Semester Program (Spring 2011)

Exploring serial, computer-based fabrication, 'Cocoon Stair' uses a public stairwell as the site for a private, contemplative platform.

COCOON STAIR

London, UK
Architectural Association, Spring 2011

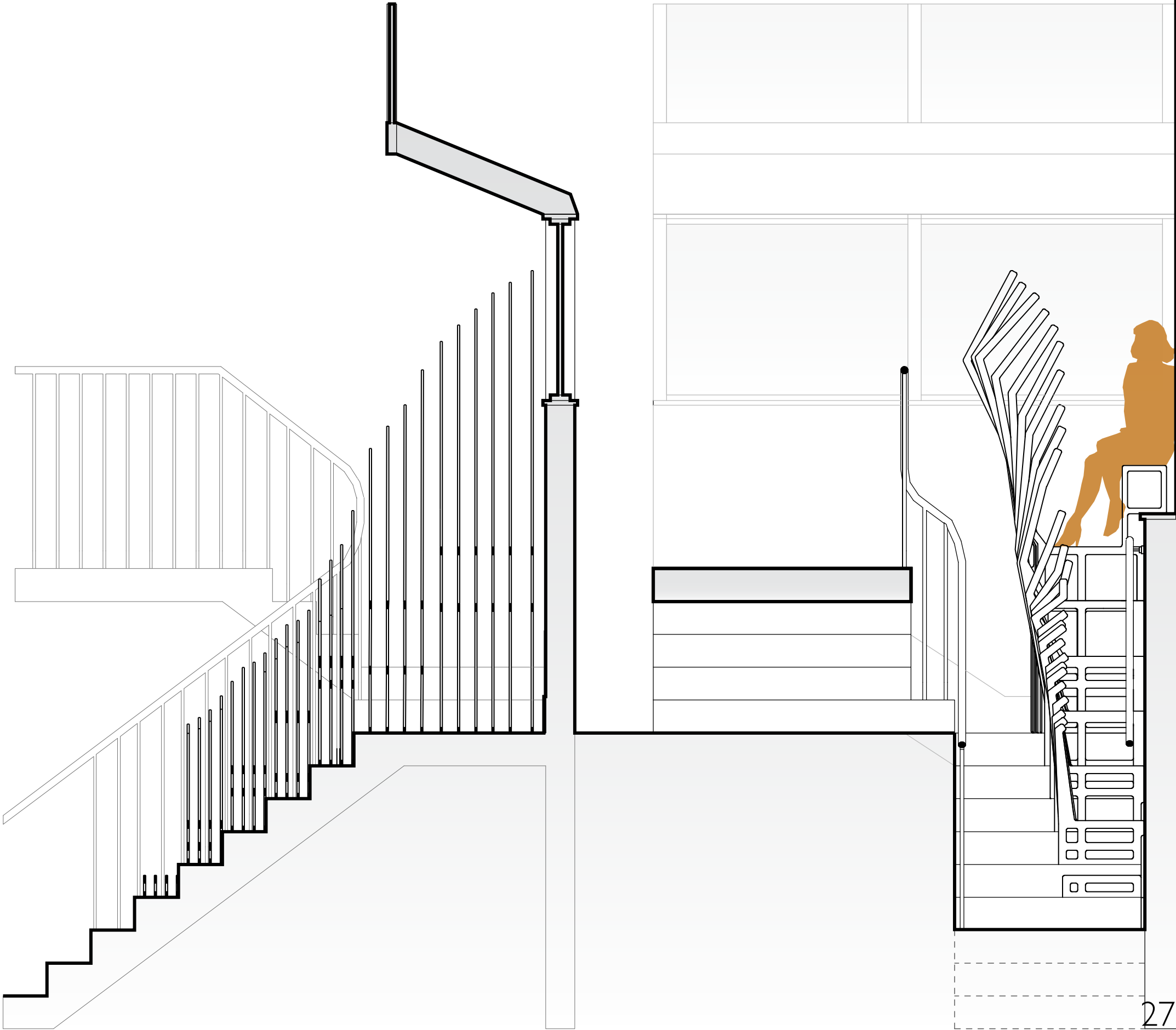
The staircase reveals the problem: **a vertical space with only one level of access...**

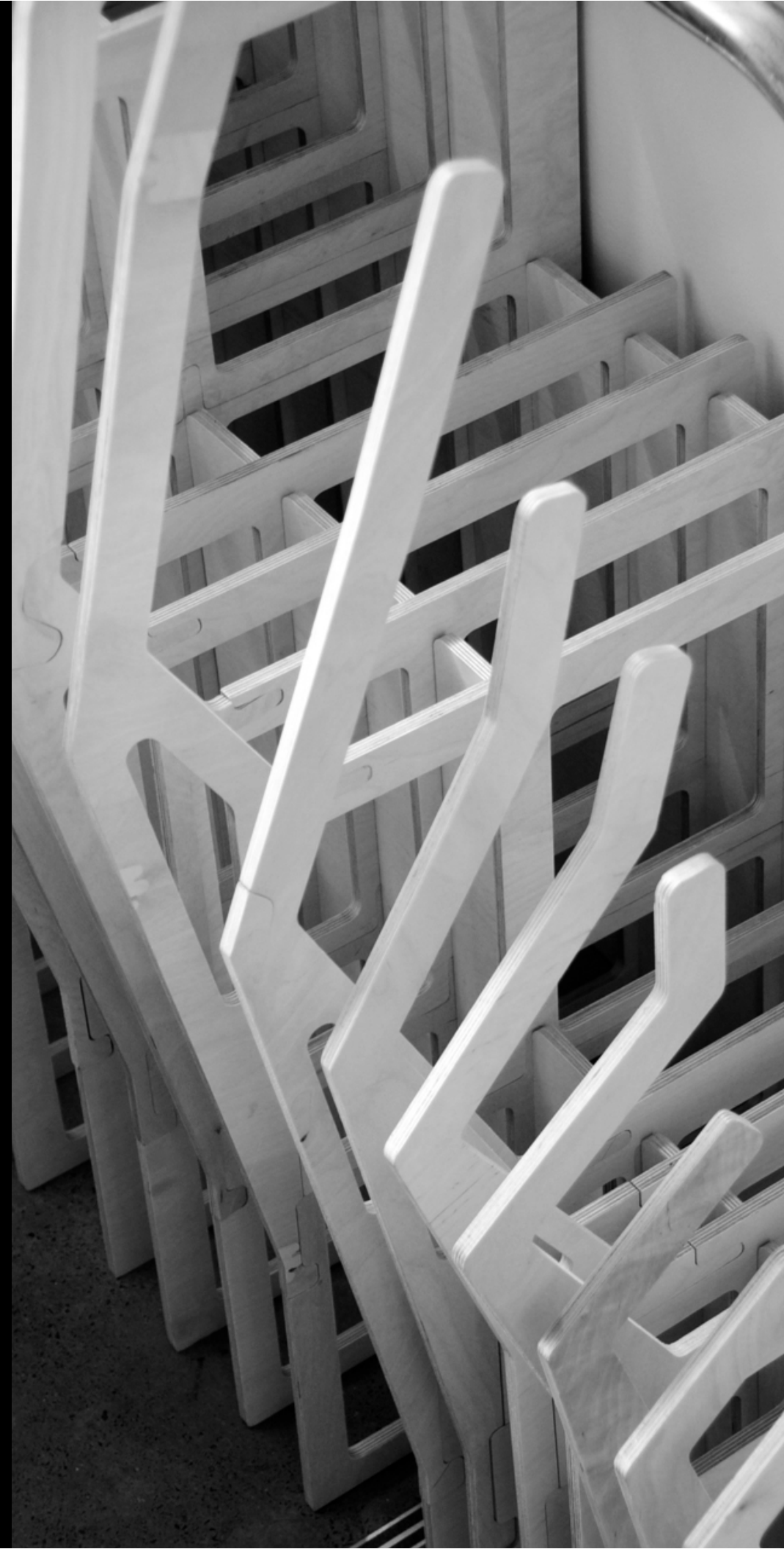
The Cocoon Stair generates a secondary platform. Half of **the existing staircase splits** upward to meet the new platform. This splitting is an indication of how the two planes - the first being the landing of the stair, the second being the new platform - are related to each other. While they originate as one, they culminate as two distinct identities. This new plane is an inherently private one. The balustrade begins as a railing and ends as a cocoon. In the same way, it also **begins in a public plane and ends in a private one.**

The project also explores the **potential and efficiency of serial, computer-based fabrication.** Every element is CNC-milled from 12 millimeter plywood, in portable sizes. It was milled at the AA workshop in Hooke Park, Dorset, England and carried back (personally) to the AA for installation.



The existing stairwell...





[Re]Map [Re]Think [Re]New

Reading Viaduct, Philadelphia, PA
Landscape + Masterplan

University of Pennsylvania
Undergraduate year 4 (spring 2012)

An infrastructural ruin examined and masterplanned through the twin lenses of culture and ecology. Ceremonial + columbarium spaces are blended with commercial greenhouses to create a new urban typology for Philadelphia.



[Re]Map [Re]Think [Re]New

Reading Viaduct, Philadelphia, PA
University of Pennsylvania, Spring 2012
Collaboration with 2 classmates

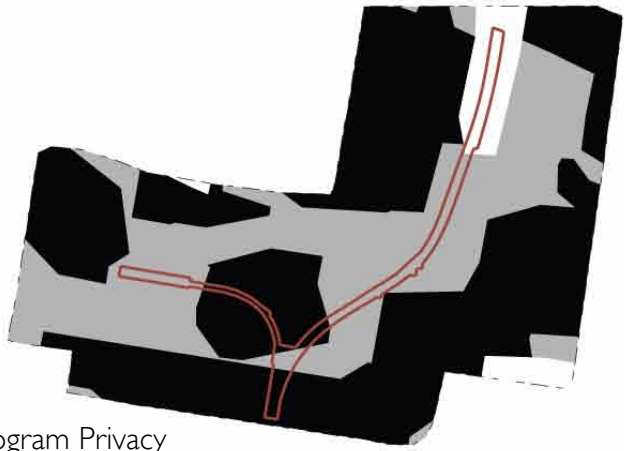
[Re]Map: Appropriating an **urban infrastructural ruin** (the Reading Viaduct in Philadelphia), urban expansion takes the form of a public promenade, which **combines a remembrance park with a commercial nursery**. The surrounding context is mapped and considered in four unique ways: ownership (private/public), building permanence (high/low), likelihood of spontaneous movement (high/low), and programmatic permanence (high/low). Overlaid, the four base mappings find unlikely relationships and optimized zones along the viaduct.

[Re]Think: The two principle programs (remembrance park and nursery) are mapped into zones along the viaduct where they will be **most compatible or most catalytic to the surrounding context**. Dense mixtures of remembrance park and nursery force a deeper examination of their relationship.

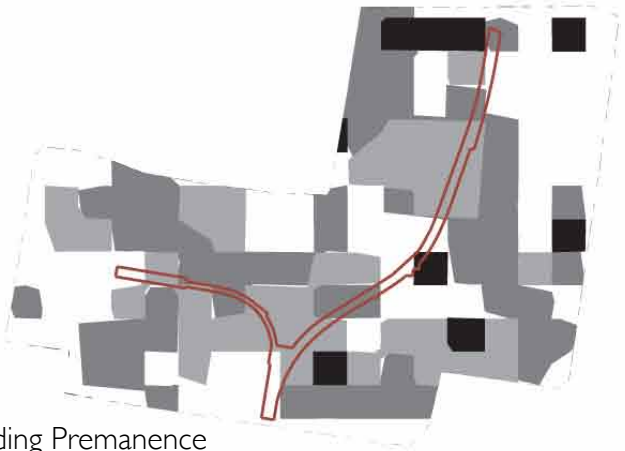
[Re]New: **Using topographic shifts as an indicator of programmatic mixture and intensity**, a landscape emerges which articulates separate commercial and ceremonial spaces. Splits in the topography are also inhabited by combinations of ritual and nursery – creating a new civic typology that demands engagement.



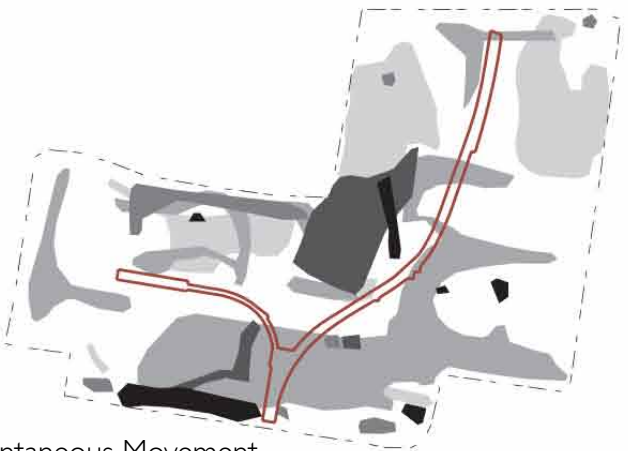
Site: Reading Viaduct



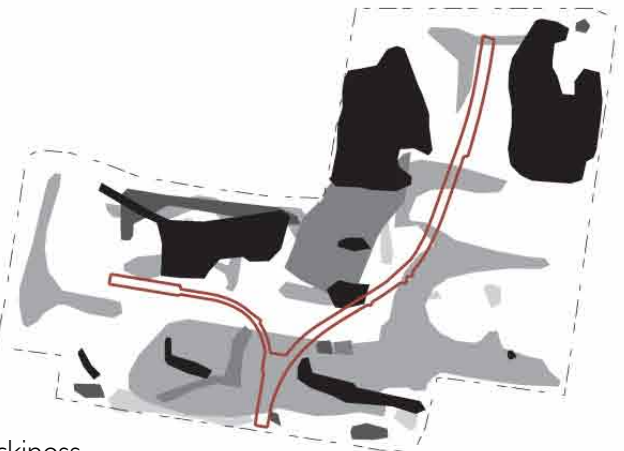
Program Privacy



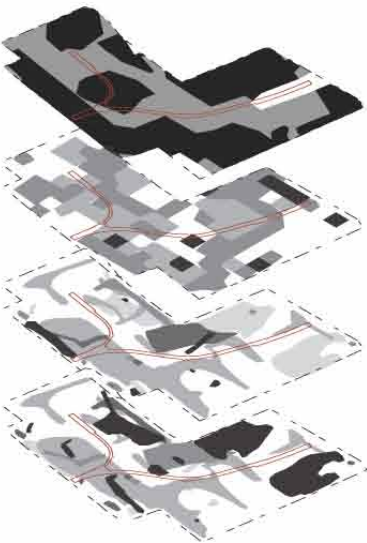
Building Permanence



Spontaneous Movement



Stickiness

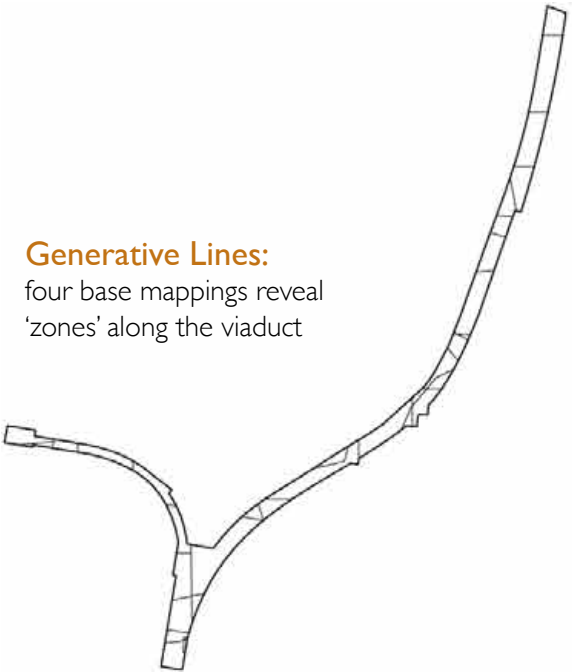


Map Overlay

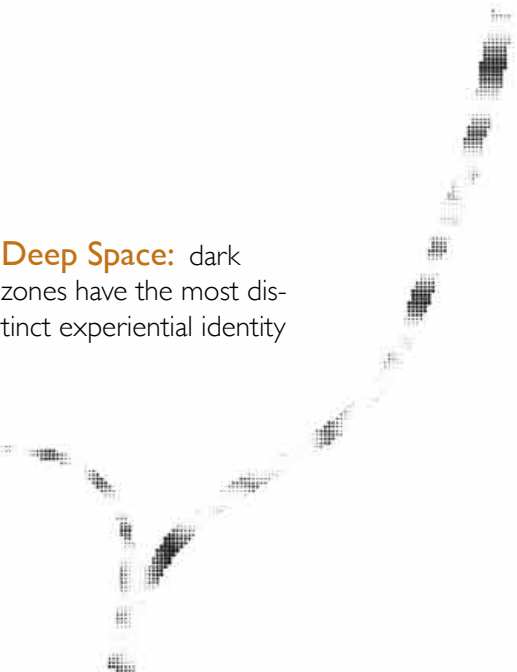


Generative Lines:

four base mappings reveal 'zones' along the viaduct



Deep Space: dark zones have the most distinct experiential identity

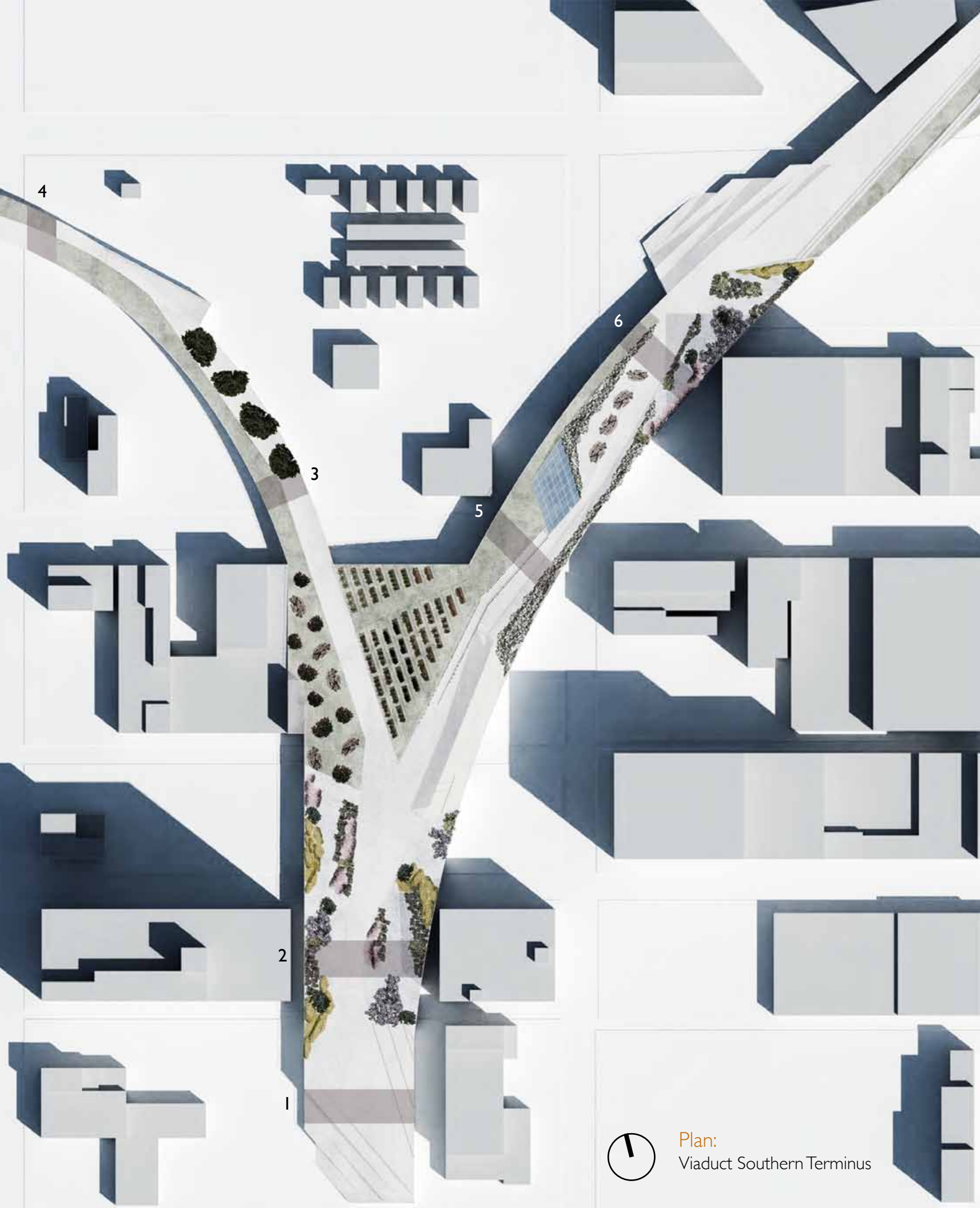


Experiential Gradient: light zones use 'buffer' programs



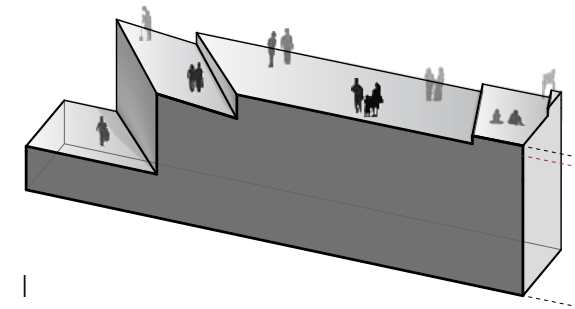
Program Gradient: 6 salient programs grafted into zone structure



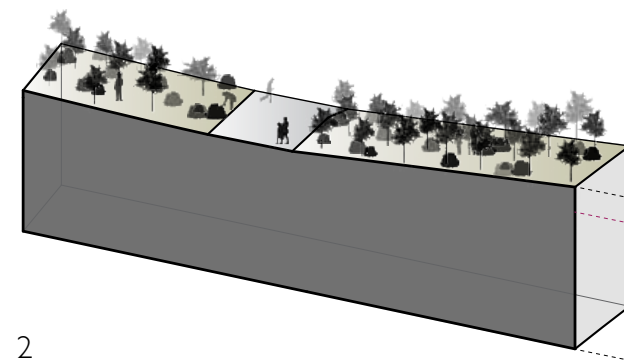


Chunk Sections

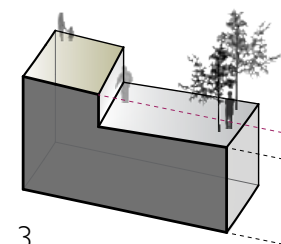
The magnitude of cross sectional shifting indicates the mixture and intensity of spaces. For example, in a zone of mixed sales office and columbarium - two unique and strongly antagonistic programs - the topography of the viaduct splits into multiple paths with a maximum offset of 16'. The viaduct is experienced as a set of gradual slopes which in cross section sharply articulate usage difference and intensity.



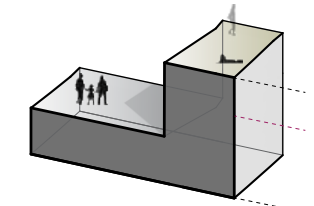
□ Neutral/Leisure



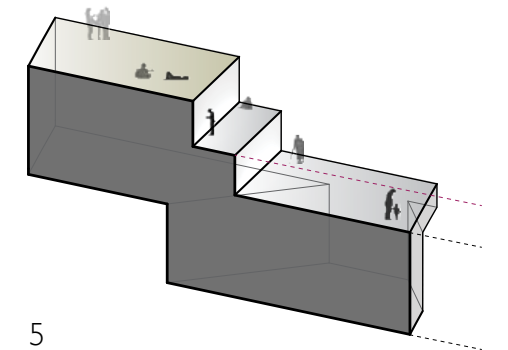
2
■ Nursery



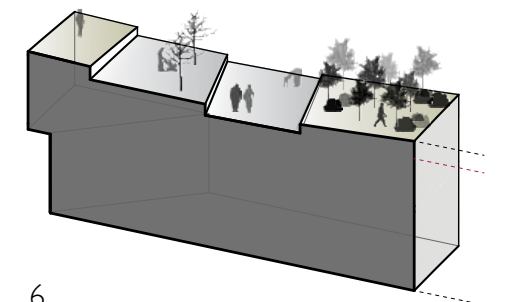
3
■ Columbarium



4
■ Sales Office
■ Columbarium



5
■ Sales Office
■ Columbarium



6
■ Nursery
■ Auxiliary Cultural Structures



CEREMONIAL SPACE + GREENHOUSE

An embedded crystal of glass emerges from the landscape, oriented to eastern and southern sun. The glass box serves as a commercial greenhouse during most days; when an event is scheduled, the potted plants that occupy the middle of the house are relocated to the perimeter. In this way, the ceremonial space isn't left unused for a large portion of the year and greenhouse plants are able to provide additional privacy for the events. Ultimately, what could have been rejected as an inappropriate combination of programs is envisioned as a new way to pay respects.