2024 SGH Concepts / Dri-Design / Pella Scholarship

Spring 2024
Arch 411 Architectural Design Studio: Integrate
University of Nebraska-Lincoln
College of Architecture

The Architecture Program provides the educational foundation for intellectually aware and self-realizing architecture professionals. We promote collaboration and engagement through excellence in design research and creative scholarship.

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College of Architecture
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(402) 472-7943

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Continuation of complex problems as it relates to the integration and consideration of environmental stewardship. Emphasizing technological considerations as formal and organizational influences including technical documentation, accessibility, site design, life safety, environmental systems, structural systems, and building envelope systems and assemblies.

Photographs.
All photos by Greg Foral unless otherwise noted.

The College of Architecture at the University of Nebraska-Lincoln, in partnership with SGH Concepts (A Division of SGH Redglaze Holdings Inc.), Dri-Design and Pella Windows and Doors of Omaha and Lincoln, has established a student scholarship competition for the fourth-year, undergraduate, architectural design studios. The scholarship recognizes student projects exemplifying outstanding design investigation, resolution, and significance. This opportunity brings together aspiring architects and industry leaders to advance disciplinary knowledge of design, materiality, and innovation.

Following the end-of-semester review, one project from each studio is selected to compete for the SGH Concepts (A Division of SGH Redglaze Holdings Inc.)/Dri-Design/Pella Scholarship. These projects are presented to an external jury who are all established practitioners in their fields. A finalist is chosen for producing and communicating a comprehensive architectural project that is a result of design decisions at different scales. To be successful, students demonstrate a high degree of professional dedication, rigor, open-mindedness, and resourcefulness. Projects are rigorously developed and clearly communicate the breadth and depth of investigation.

We thank our sponsors SGH Concepts (A Division of SGH Concepts Redglaze Holdings Inc.), a leading distributor and installer of customized building products, Dri-Design, a producer of advanced and sophisticated metal wall panel systems and Pella, a .

Spring 2024 - Architecture Design Studio Faculty

Allison Fejfar*, Shive-Hattery, Lecturer of Architecture*

Michael Harpster*, AIA, Assistant Professor of Practice - Architecture*

Michael Hamilton*, AIA, HDR, Lecturer of Architecture*

David Hinsley*, Partner RDG Planning & Design, , Lecturer of Architecture*

Beau Johnson, *AIA, DLR Group, Lecturer of Architecture*

Zeb Lund*, AIA, DLR Group, , Lecturer of Architecture*

David Newton, *Assistant Professor - Architecture*

SPONSORS

SGH CONCEPTS

At the center of our craft is our passion for premium, innovative design. With over 70 years experience in designing and engineering building product solutions for some of the most challenging architectural feats in the market, our focus each day is to find the best way to give form to our clients' vision.

Our team approaches every project with a reverence for making innovative design possible. We are passionate about solving challenges that—in the end—make buildings more beautiful. At SGH Concepts, it is our mission to provide smarter solutions to design opportunities and challenges, from concept to completion. So, whether you are an architect, a general contractor, or an owner, we provide a level of professionalism you demand and a sense of individuality you expect.

We would like to thank Troy Burkey of SGH Concepts for helping establish this program and his continued support of the college and students.

DRI-DESIGN

Founded in Holland, Michigan, in 1995, under the leadership of President Brad Zeeff, Dri-Design has turned the Metal Panel Industry on its ear. With Dri-Design, Zeeff set out to solve what he viewed as the significant shortfalls of traditional metal panel systems: delamination, staining due to the effects of weather on joints and gaskets, a lack of color and texture options, the rising cost of production and inefficient installation practices.

The result of Dri-Design's meticulous engineering, is a 100% recyclable, pressure equalized rain-screen, architectural metal wall panel system that attaches to nearly any substrate without the use of clips or extrusions. The pressure equalized rain-screen design can be installed simply over commercial grade Tyvek onto plywood, or as the most sophisticated outboard insulation pressure equalized rain-screen you can design.

We would like to thank Tyler Howler of Dri-Design for his support of the college and students.

OMAHA & LINCOLN

PELLA WINDOWS AND DOORS OF OMAHA AND LINCOLN

In Pella, Iowa, in 1925, Pete and Lucille Kuyper invested in a newfangled invention – a window screen that rolled up and down like a shade. For the next 99 years Pella Corporation kept innovating, authoring 150 product and design patents for residential and commercial applications. What's more, the Kuyper family has been dedicated to sustainable practices at every level of product development; reclaiming/reusing materials sourced ethically and sustainably, supporting local clean energy sources for manufacturing to do more with fewer resources. Prioritizing the customer, Pella products center on quality that lasts with accessible features to work better for everyone, while lowering utility bills and enhancing indoor comfort.

As part of the Pella Network, Pella Windows and Doors of Omaha and Lincoln is a locally owned branch serving Nebraska for nearly 60 years and we've built a team of trusted, experienced people who care about building customer relationships and investing in our community.

We would like to thank Hollie Schall of Pella for her support of the college and students.

JURY

KATHERINE DARNSTADT

Latent

Katherine Darnstadt is the founder of Latent, an architecture and urbanism practice exploring the influence of design as small or as large as the context allows. Since founding her firm in 2010, Katherine and her firm have pursued projects at the bench, building, and block scale across Chicago and the Midwest. They have prototyped new urban design systems to advance urban food access, supported over 200 small businesses, designed new community centers, and created community design frameworks through co-founding the nonprofit Design Trust Chicago.

She and the firm have been published, exhibited, and featured widely, most recently as The Architectural League's Emerging Voices winner and part of RIBA's 100 Women Architects publication. She previously taught at The School of the Art Institute of Chicago and Northwestern University.

ANNE-CATRIN SCHULTZ

Wentworth Institute of Technology

Anne-Catrin Schultz is a German-born architect, architectural historian, and author. She teaches architectural history, theory, and design at the School of Architecture and Design at the Wentworth Institute of Technology in Boston. Anne-Catrin writes about historic and contemporary tectonics exploring the links between technology, performance, and narrative. Her primary field of research is the work of the Italian architect Carlo Scarpa and the phenomenon of layering in architecture. Her book publications include “Carlo Scarpa–Layers” and “Time, Space and Material–The Mechanics of Layering in Architecture,” exploring layering as a non-hierarchical framework for a continuously changing architectural environment. Tracing the boundaries between reality and imagination, the book “Real and Fake in Architecture–Close to the Original, Far from Authentic?” was published with Menges Editions in 2020. More recently, the impact of technology, politics, and social change on architectural production has been the focus of Anne-Catrin’s research and writing. Anne-Catrin is a member of the editorial board of TAD (Technology|Architecture+Design, tadjournal.org) and has curated the journal’s “Tectonics” issue in 2023. Anne-Catrin is a licensed architect in Baden-Württemberg, Germany.

NADER TEHRANI

NADAAA

For his contributions to architecture as an art, Nader Tehrani is the recipient of the 2020 Arnold W. Brunner Memorial Prize from The American Academy of Arts and Letters, to which he was also elected as a member in 2021. Tehrani was named the 2022 Design Visionary by Cooper Hewitt, Smithsonian Museum of Design and elected to the American Academy of Arts and Sciences. Tehrani is founding principal of NADAAA, a practice dedicated to the advancement of design innovation. Tehrani is also a professor at the Irwin S. Chanin School of Architecture of The Cooper Union in New York, where he served as dean from 2015-2022.

DISCUSSION PANEL

David Newton and Beau Johnson moderate an insightful panel discussion with jury members Katherine Darnstadt, Anne-Catrin Schultz, and Nader Tehrani. The discussion touched on a range of topics involving architectural practice, the expressive use of materials, and architectural education.

STUDIO DESCRIPTIONS

Alternative Residential Consideration

Faculty Mentor: Allison Fejfar and Zeb Lund

Architecture has been, can be, and will continue to be positioned in an array of ways. This studio will embrace this diversity of thought and consider architecture with a similar regard as Jeremy Till's. As we move through the semester we will understand architecture as an act that fully depends on the outside forces which bring it into being.

Cognitecture: The Design of Architectural Atmospheres for Knowledge Creation

Faculty Mentor: David Newton

This studio will explore these questions through the design of an innovation center dedicated to transdisciplinary research on perception and cognition located on the UNL City Campus. The studio will approach the project by immersing students in the scientific and philosophical investigation of perception and cognition. Students will also investigate cognition within the design process. Specifically, generative AI will be explored for its capacity to augment human intelligence in the design process.

THE COMMONS THE COSMETIC

Faculty mentor: Michael Harpster

This comprehensive studio will reimagine contemporary housing practices through the exploration of dense, low-rise infill housing typologies. Engaging with the pragmatic as well as the theoretical, the studio will examine the various constraints that make the construction of low-rise housing such a challenge, using these constraints as the starting point for projective exploration of alternative housing models within metropolitan regions across the United States.

Step Into The Frame

Faculty Mentor: Beau Johnson

In this studio, we will tackle these challenges upon an extremely unique site within the Omaha's downtown urban core – at a variety of scales. These thresholds at the city, building and human scale – all become critical to elevate our human experience. Through initial research, we'll assess the pre+post pandemic workplace and an episodic experience of site.

Grafting Architecture: Timber in the City – Urban Habitats

Faculty Mentor: Michael Hamilton and David Hinsley

This studio will explore ideas around the ancient plant-cultivation technique of grafting in architecture and urban design. Grafting joins tissues of similar or dissimilar plant material to continue their growth together. The upper part called the scion (stems, leaves, flowers, or fruits) while the lower part is called the rootstock is selected for its roots. This can be thought of as a strategy to address the urgent issue of climate change and urban housing needs because it's predicated upon using our existing building stock to add to or insert new construction – increasing density and reusing or repurposing infrastructure. This has the potential to inform architecture and design at multiple scales, provoking tectonic and stereotomic construction.

PRE-DELIBERATION

DELIBERATION

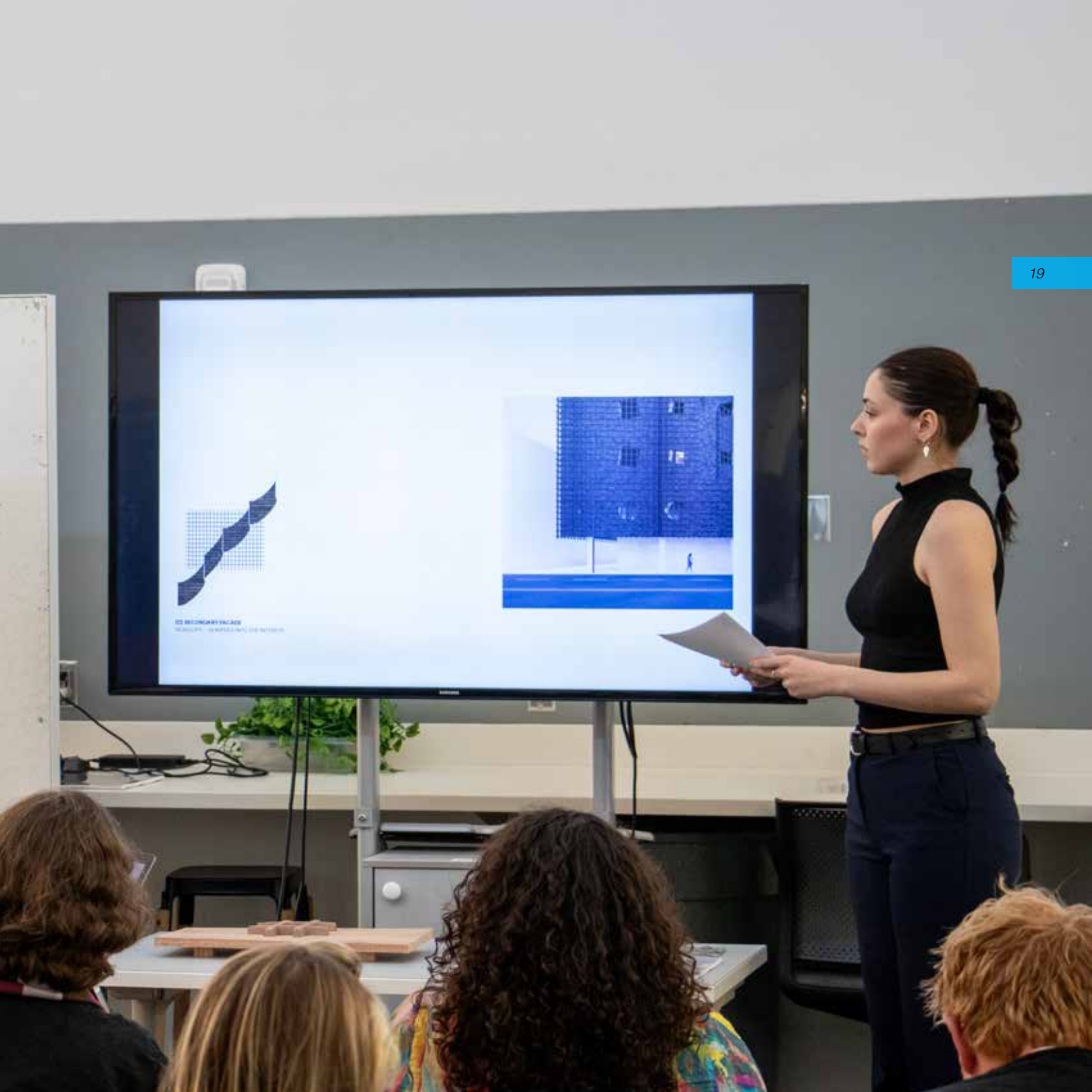

CoARTS

Excellence

CoARTS

Teia Killian and Chloe Martinez
Faculty Mentor: Michael Harpster

Lincoln hosts a large population of individuals in transitional phases of life. This group includes a large immigrant and refugee population, recently incarcerated individuals, and those requiring additional support through community and art therapy. These users demonstrate a need for additional support from their community. The Bennett Martin Library renovation and residential addition provides an opportunity to address this need. The location falls within the rapidly developing music and arts district. Music and art have been found to be wildly beneficial in providing a creative outlet, initiating community development, and improving mental health. The architecture is crafted through the notion of the vaguely familiar, taking familiar elements of Lincoln's surroundings and manipulating them in an unfamiliar way to evoke curiosity and inspire and provide moments of privacy. The familiar aspect of the materials will provide a safe, comfortable feeling while also activating the 4th dimension of architecture where movement and privacy are dictated by form and material. This addition is meant to provide a safe space for this user group and help them find community in Lincoln and comfort in the arts.



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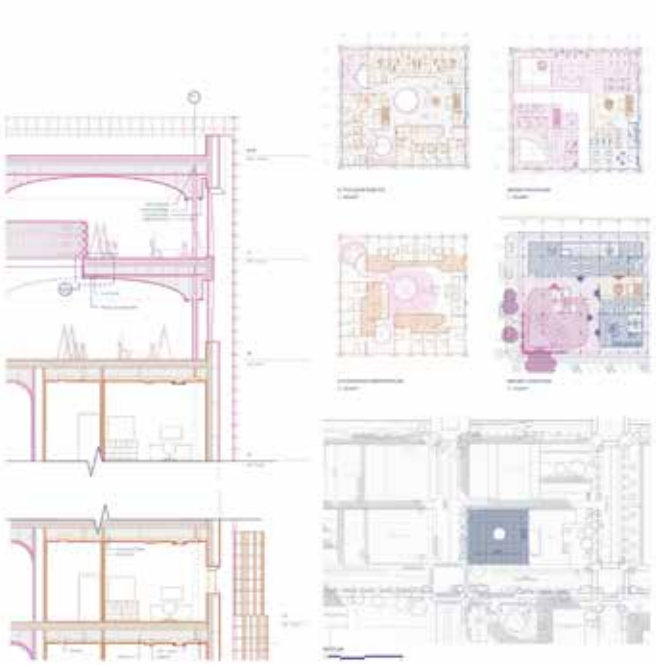

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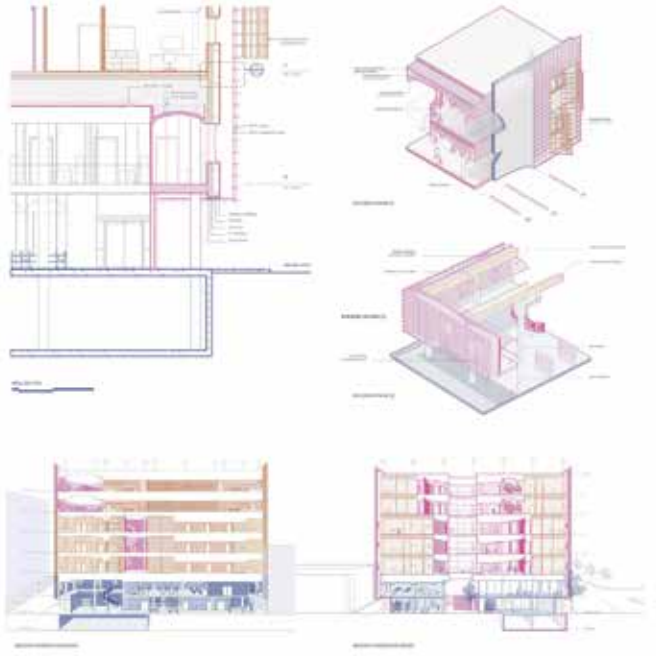
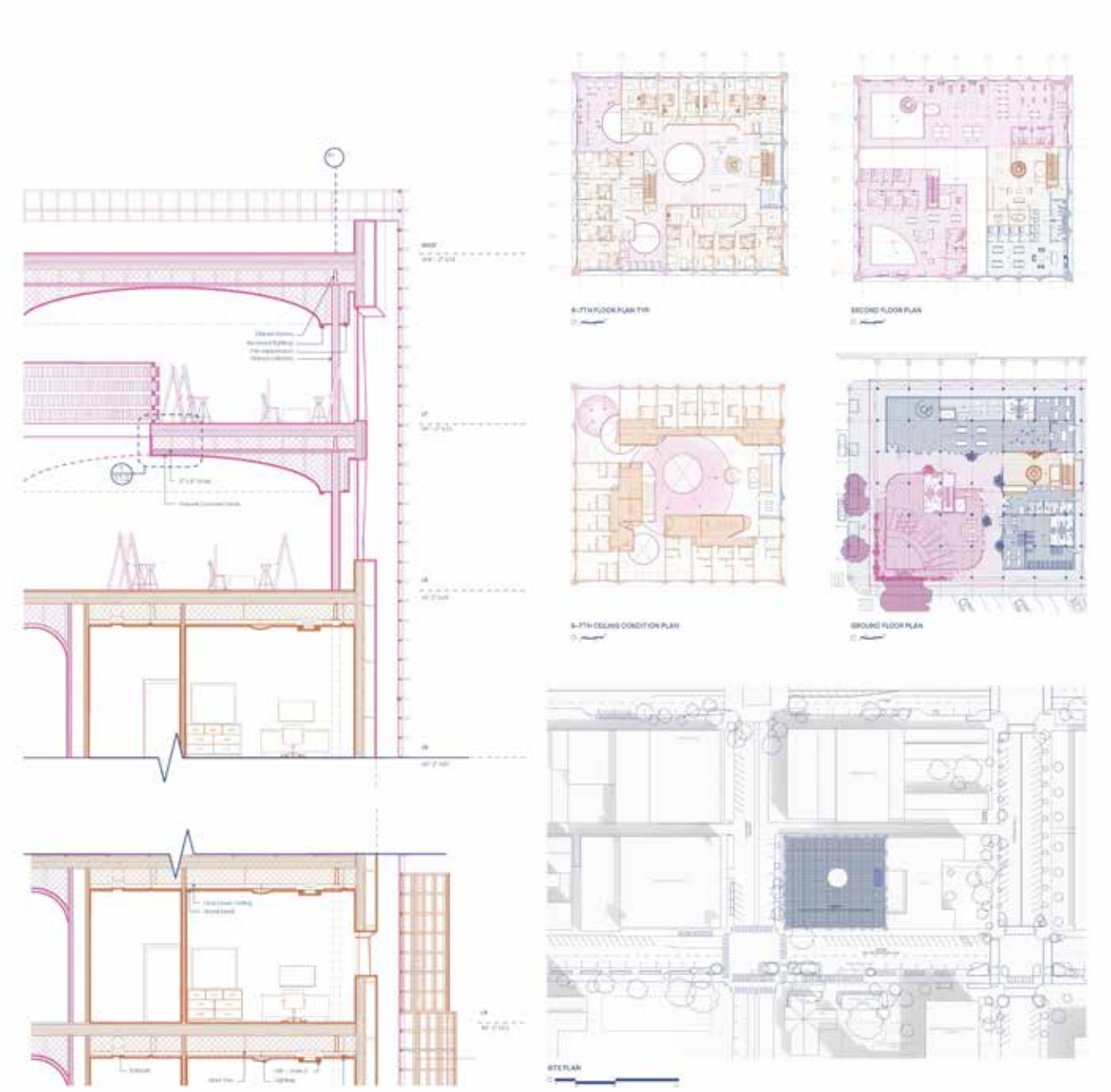


Jury comments: A complex and visually ambitious building grounded in sensitive material studies and a nuanced approach to creative living. The spatial diversity of public spaces creates layered narratives and multiple episodes of resident engagement, with the flexibility to imagine design adaptations and change over time.

Killian + Martinez | Board 1



Killian + Martinez | Board 2

EXTERIOR: SECOND STREET CONDITION/COURTYARD

INTERIOR: PUBLIC GALLERY

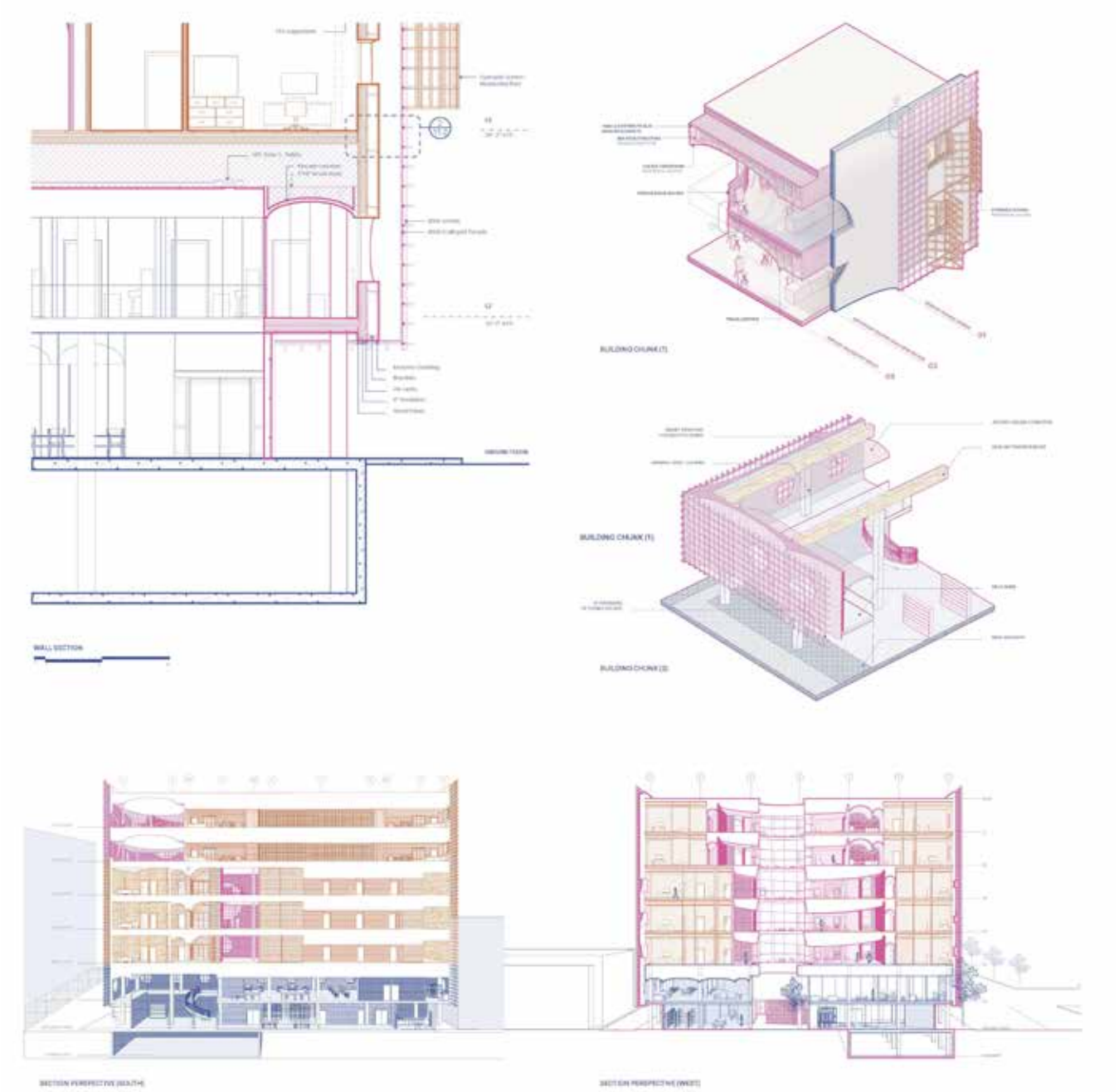
INTERIOR: RESIDENTIAL STUDIO

EXTERIOR: STREET ENTRY

EXTERIOR: STREET CORNER

EXTERIOR: RESIDENTIAL MINI-GALLERY & LOUNGE

Killian + Martinez | Board 3



Killian + Martinez | Board 4

Honor

Home Run

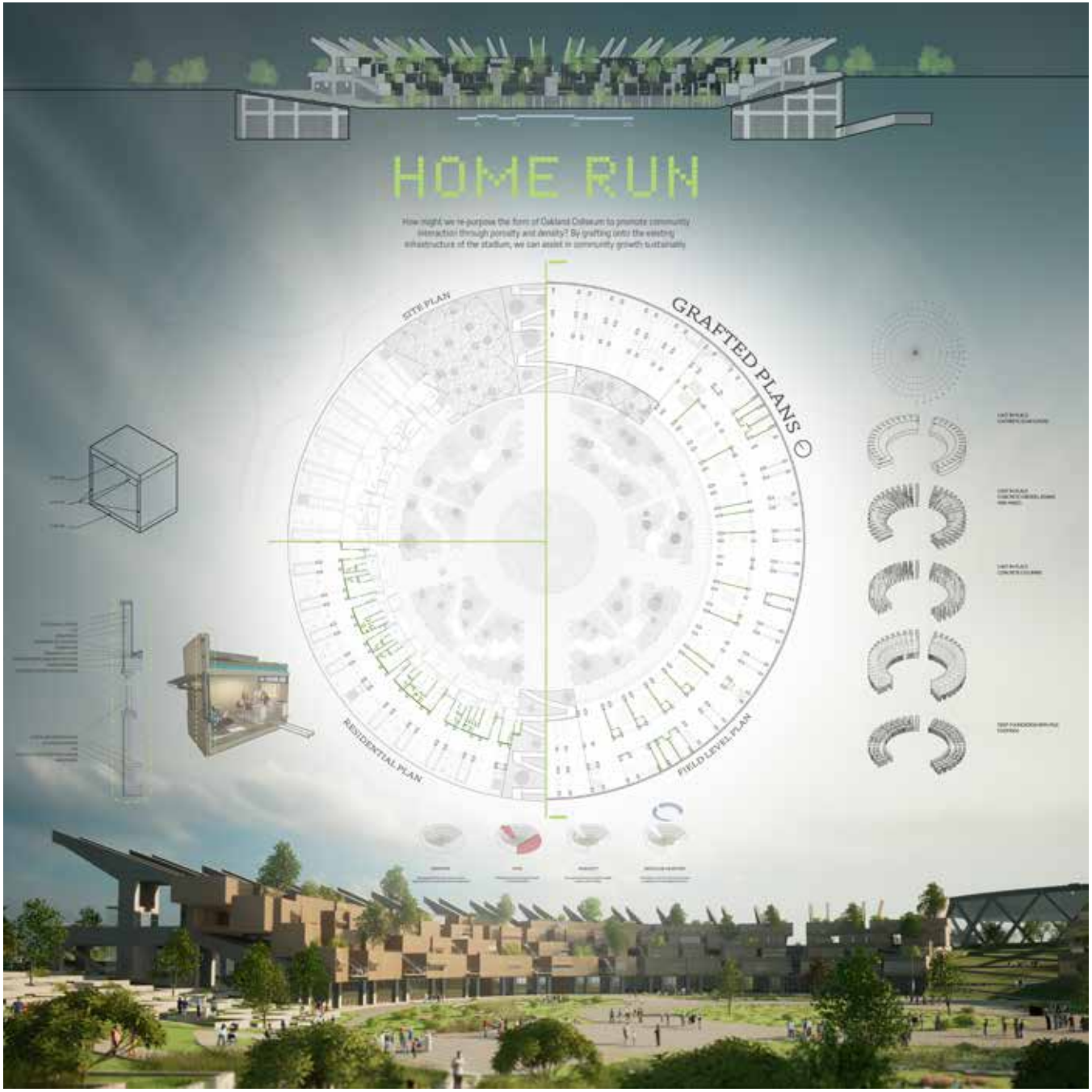
Eli Melendez and Andy Vo
Faculty mentor: Michael Hamilton and David Hinsley

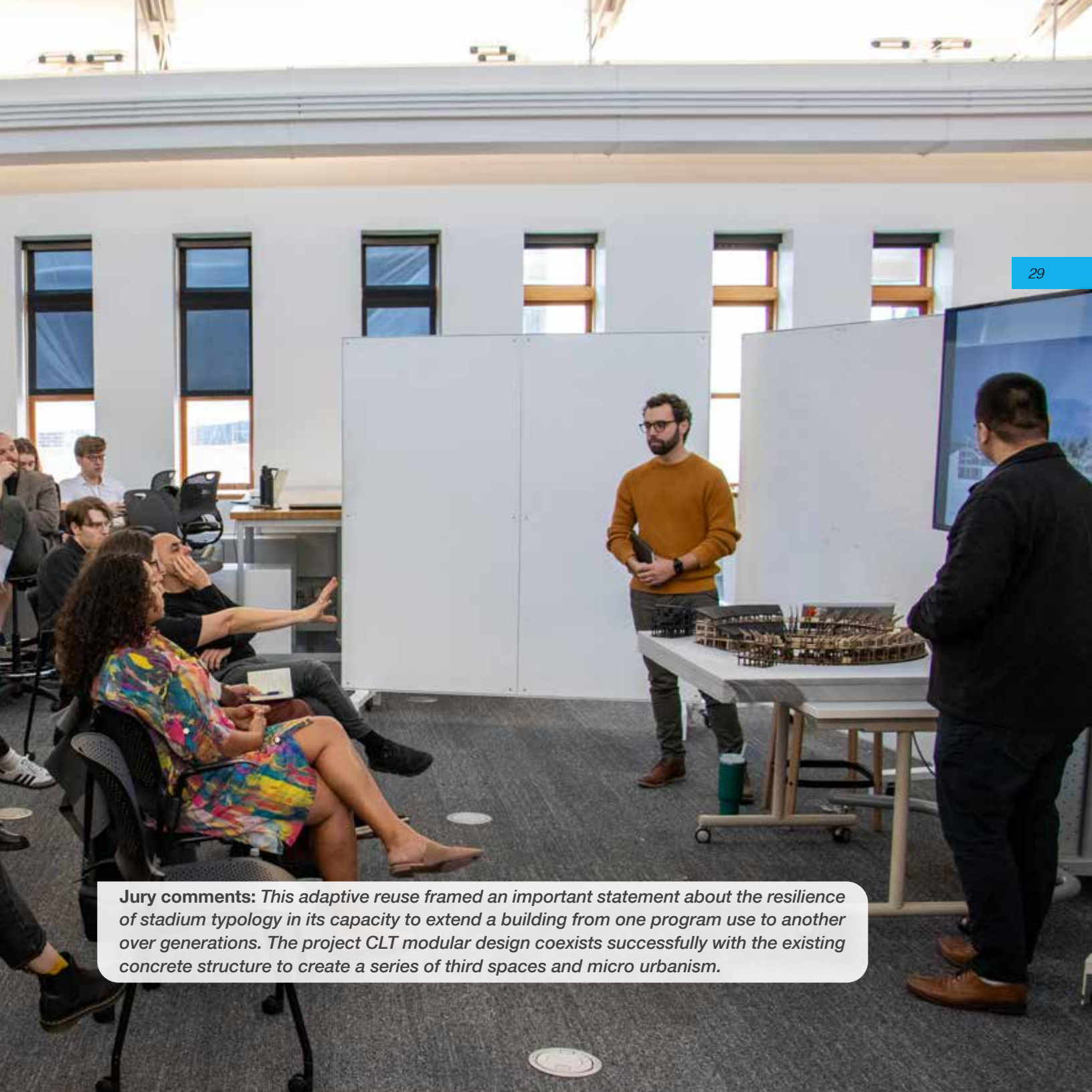
The project questions how we might re-purpose the existing Oakland Coliseum to promote community interaction through porosity and density. A vertical expansion made of mass timber provides the opportunity to create a socially, economically, and environmentally sustainable building that can restore the Coliseum to its previous glory as a cultural landmark in the Bay Area.

CLT is the material of choice for the grafted structure to be added onto the existing cast in place concrete frame. CLT is ideal for its carbon sequestration, its natural origins, and its modularity. Modular assembly provides ease of construction and reduces costs as it can be prefabricated and assembled on site quickly.

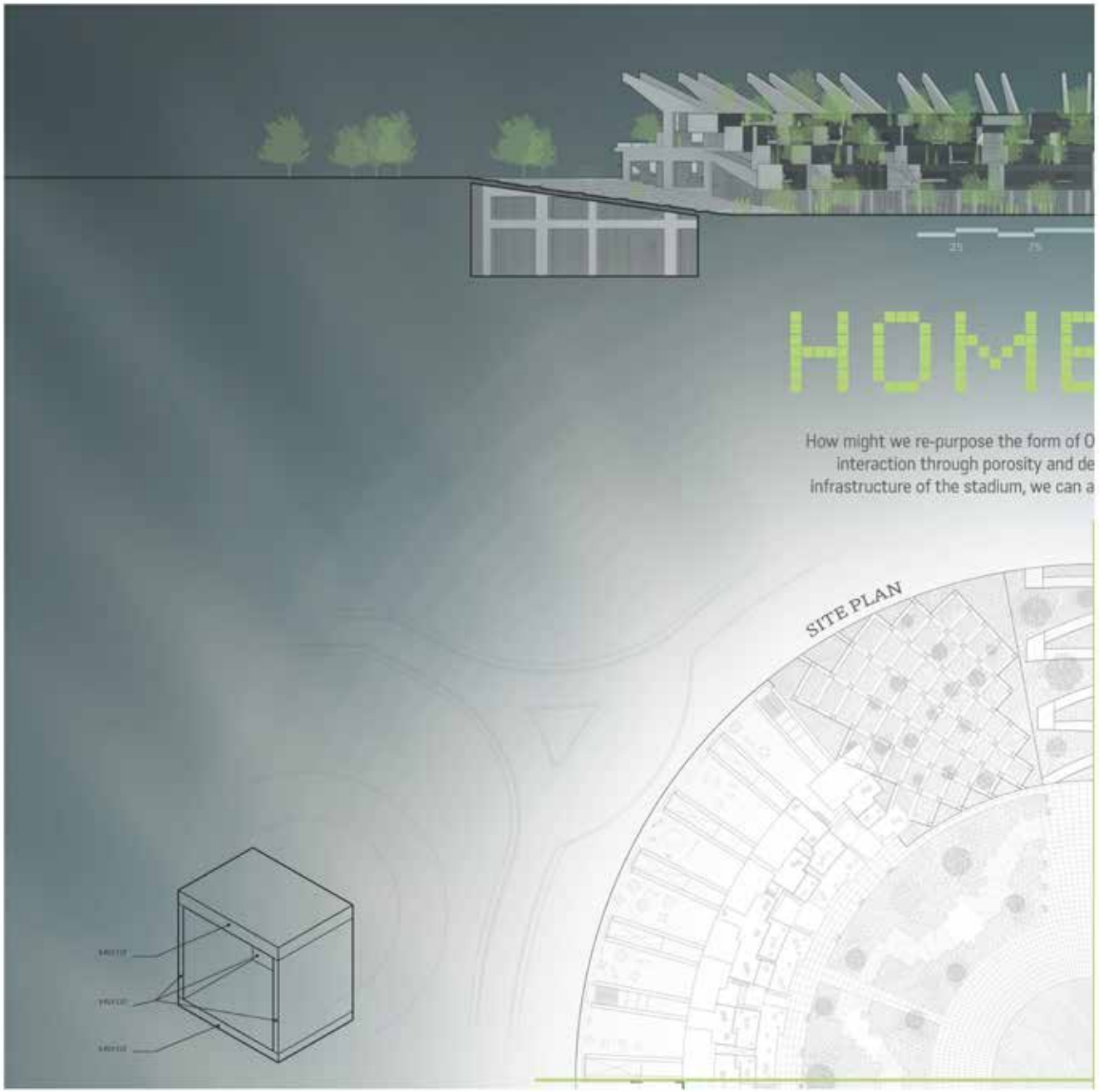
Residential modular units are arranged around circulation voids that echo the experience of traveling to the grandstands at a baseball game. Through these circulation voids, neighbors are brought together and opportunities to build community are given. At the field level, community focused programs are provided to achieve a viable proposition for affordable housing. Food, education, markets, and museums are all programmed to create a community that can flourish. Areas of the field level concourse are left intentionally blank for future development. These spaces are intended to be programmed by the residents themselves. Community members are invited to assess the building's needs and then fill the gaps by starting up organizations that will fill them within the community. The grafting of one thing onto another continues after construction as the community grafts itself into the building in which they reside.


EXISTING
VOID
POROSITY
MODULAR CRAFTING

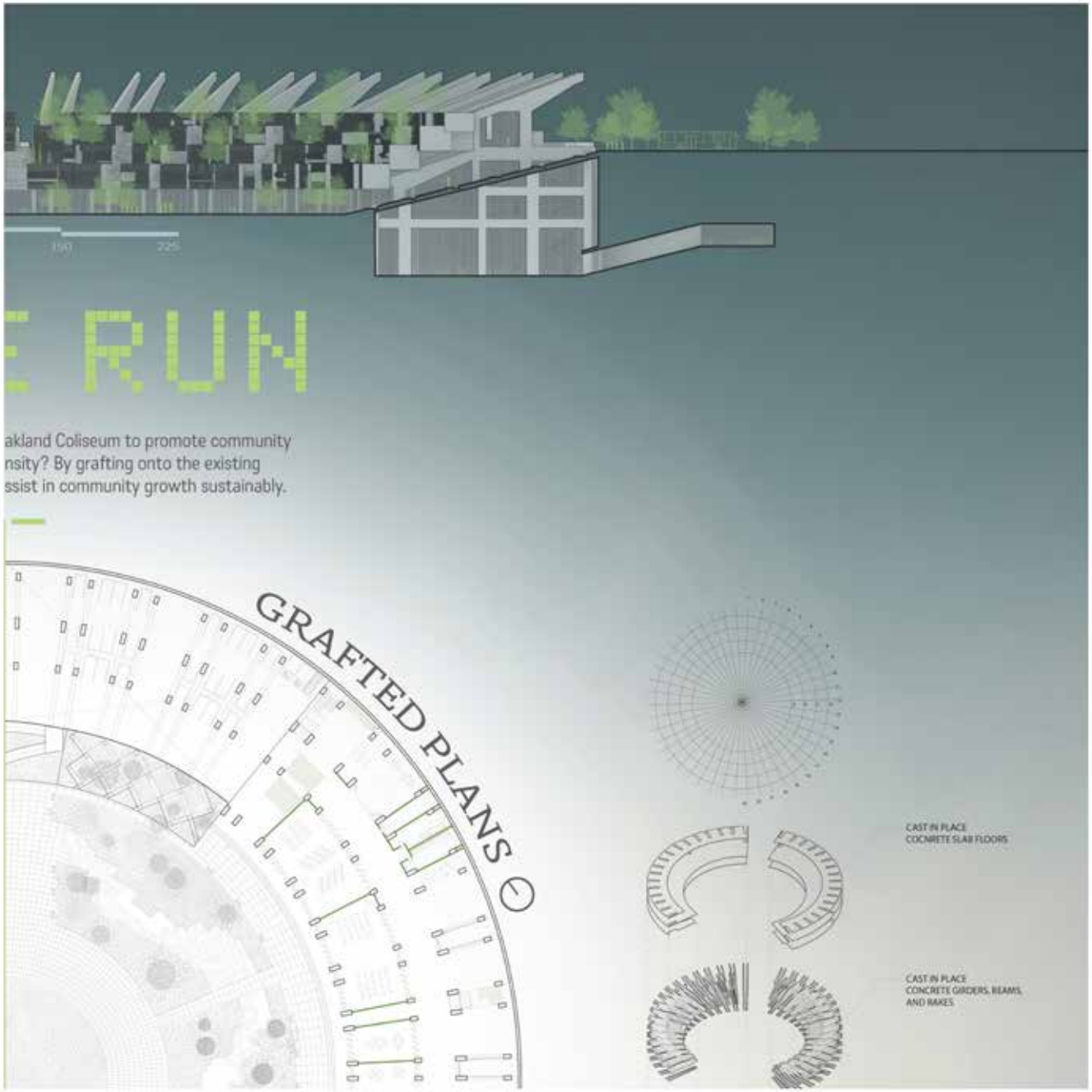

HOME RUN
How might we re-purpose the form of Oakland Coliseum to promote community interaction through porosity and density? By grafting onto the existing infrastructure of the stadium, we can assist in community growth sustainably
SITE PLAN
GRAFTED PLANS
RESIDENTIAL PLAN
FIELD LEVEL PLAN



Jury comments: *This adaptive reuse framed an important statement about the resilience of stadium typology in its capacity to extend a building from one program use to another over generations. The project CLT modular design coexists successfully with the existing concrete structure to create a series of third spaces and micro urbanism.*

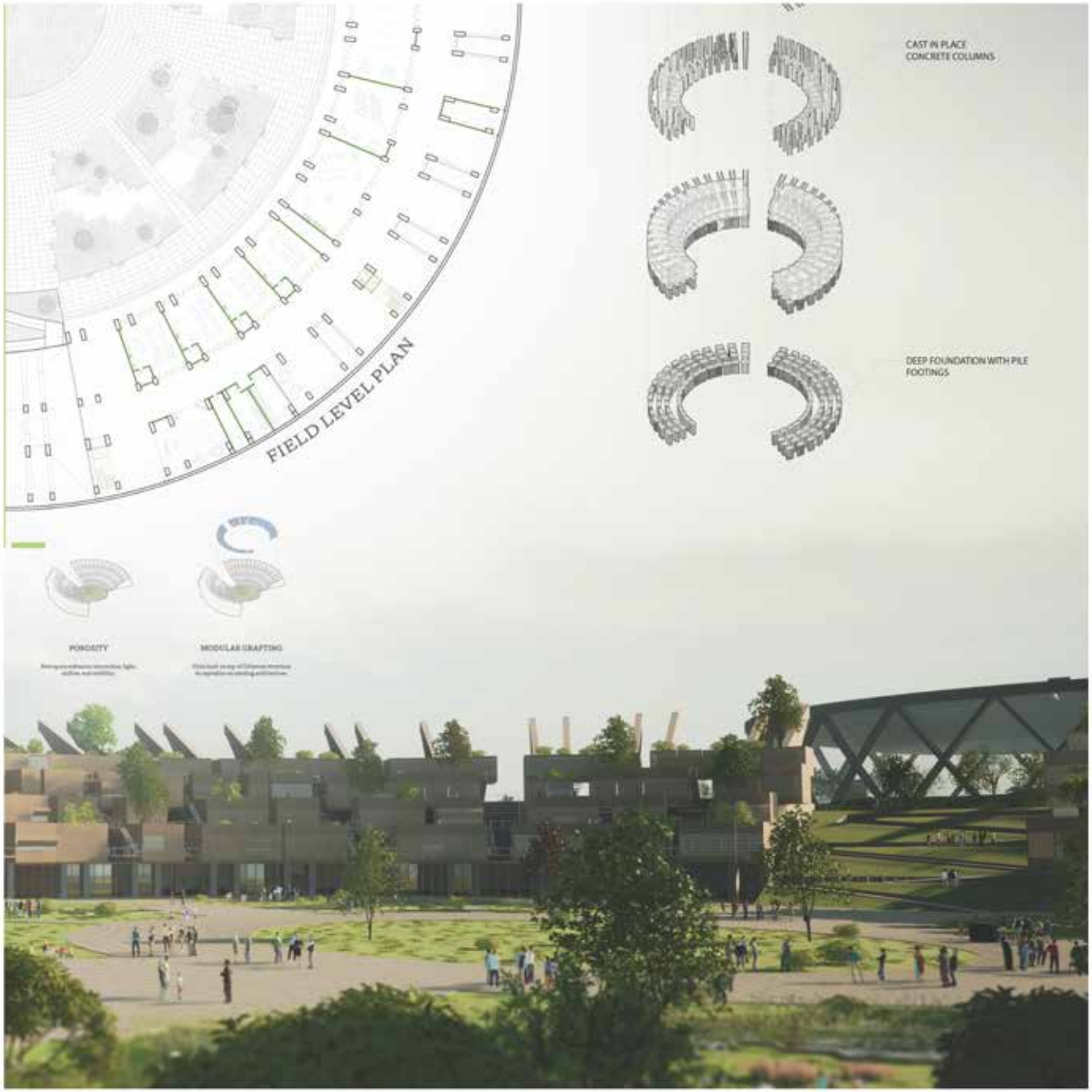


Melendez + Vo | Board 1



Melendez + Vo | Board 2

Melendez + Vo | Board 3



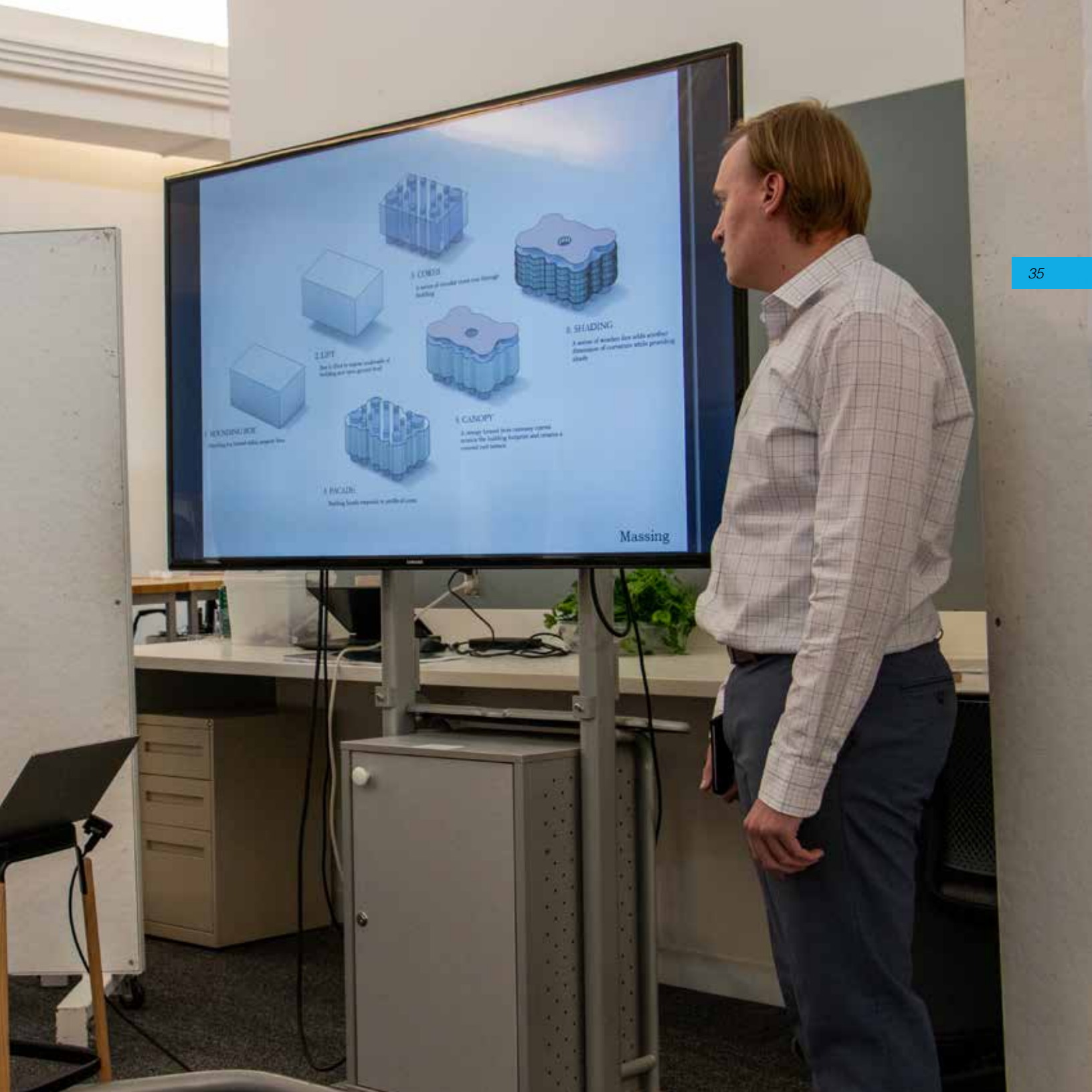
Melendez + Vo | Board 4

Merit

New Heights

Carson Beard and Lauren Wilwerding
Faculty Mentor: Beau Johnson

In order to challenge the constraints of the conventional office setting, our design intends to integrate natural conditions such as openness, flexibility and connection to give a sense of fluidity to the built environment. This integration initiates from the building's cores. In the metaphor of the forest, these cores are seen as trunks, with lightness and openness gradually increasing as one moves away from the cores. We strive to maintain privacy elements while creating new vitality and interaction through open, dynamic areas. Through our design, the natural environment breaks the barriers of the traditional office space, enhancing the overall atmosphere and functionality of the building.


Massing


NEW HEIGHTS
ARCH 411
SPRING 2024
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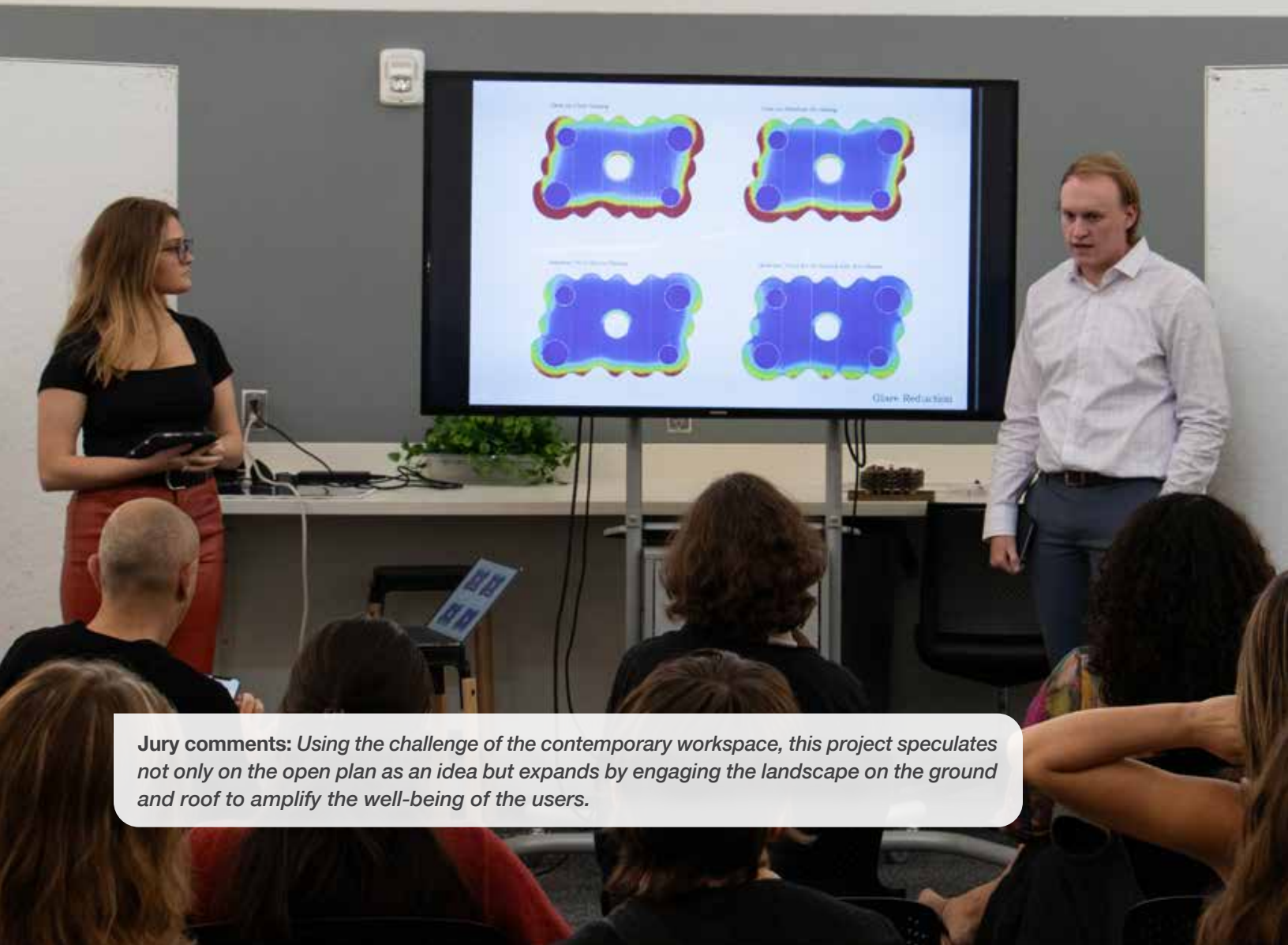
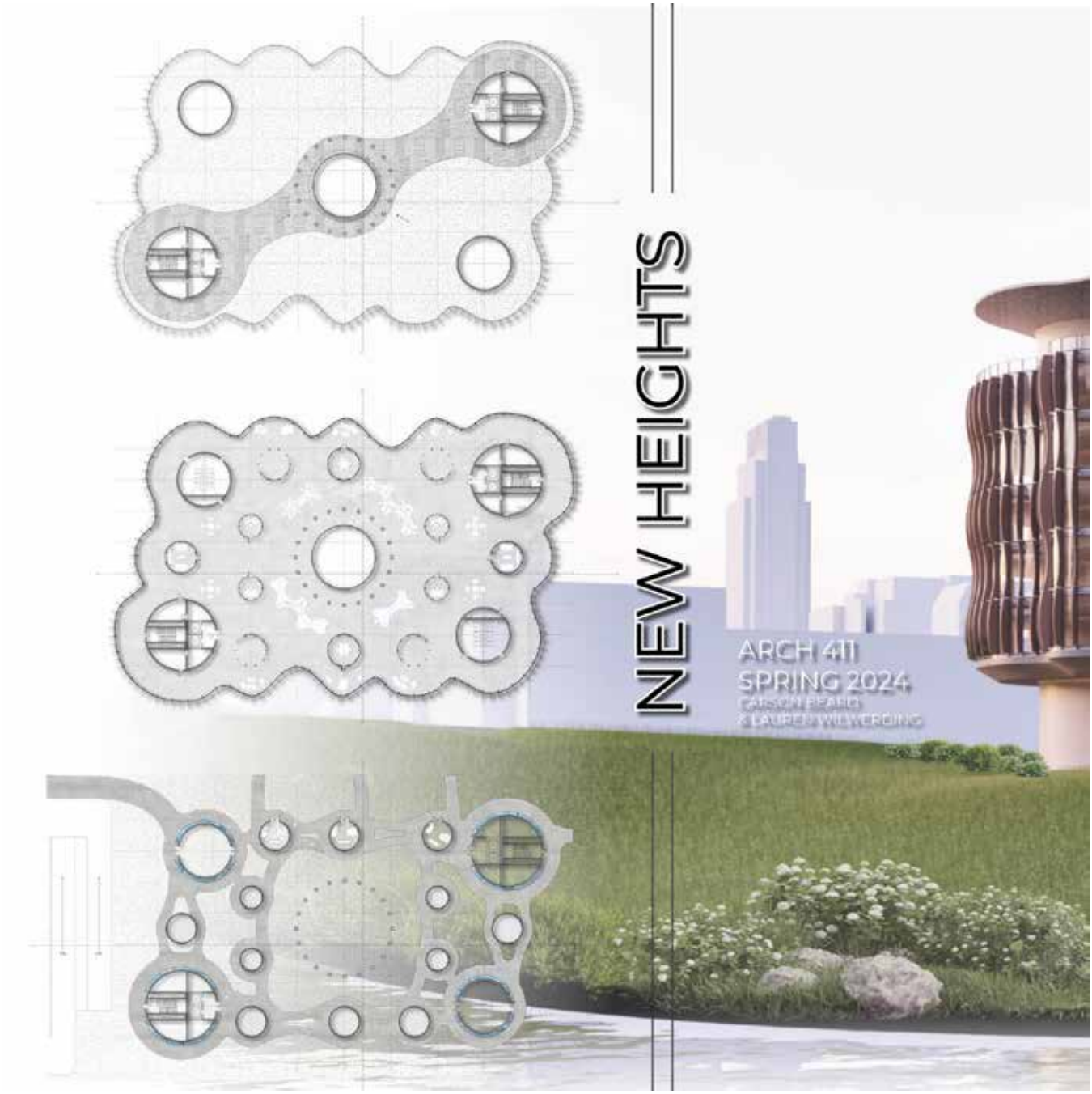
VISUAL CONNECTION
CIRCULATION
FLEXIBILITY

1 2

3 4



Jury comments: *Using the challenge of the contemporary workspace, this project speculates not only on the open plan as an idea but expands by engaging the landscape on the ground and roof to amplify the well-being of the users.*



Beard + Wilwerding | Board 1

Beard + Wilwerding | Board 2

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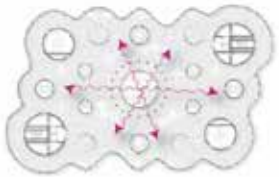


VISUAL CONNECTION

CIRC

JLATION FLEXIBILITY

Beard + Wilwerding | Board 4

Merit

Home With

Caleb Dreibelis and Grant Wolfe
Faculty Mentor: Allison Fejfar and Zeb Lund

Our supportive housing building is made to provide a secure and nurturing space for individuals who are experiencing homelessness. Our program comprises of five floors: a public area on the first floor, a workshop on the second floor, and housing on the third, fourth and fifth floors. Our primary objective is to facilitate healing and recovery for those who have undergone traumatic experiences and to create a sense of belonging among residents.

We have meticulously considered critical adjacencies to ensure that our programmatic objectives are met. For instance, our first-floor public area is easily accessible and visible, promoting inclusivity and a sense of safety. The second-floor workshop is in close proximity to the public area, making it readily available for residents to engage in programming and workshops. Our programmatic analysis has led us to adopt a trauma-informed design approach which is the most effective way to cater to the needs of our residents. Our approach prioritizes safety, trustworthiness, choice, collaboration, and empowerment. We have thoughtfully selected materials, colors, and textures to create a welcoming and calming environment for our residents.

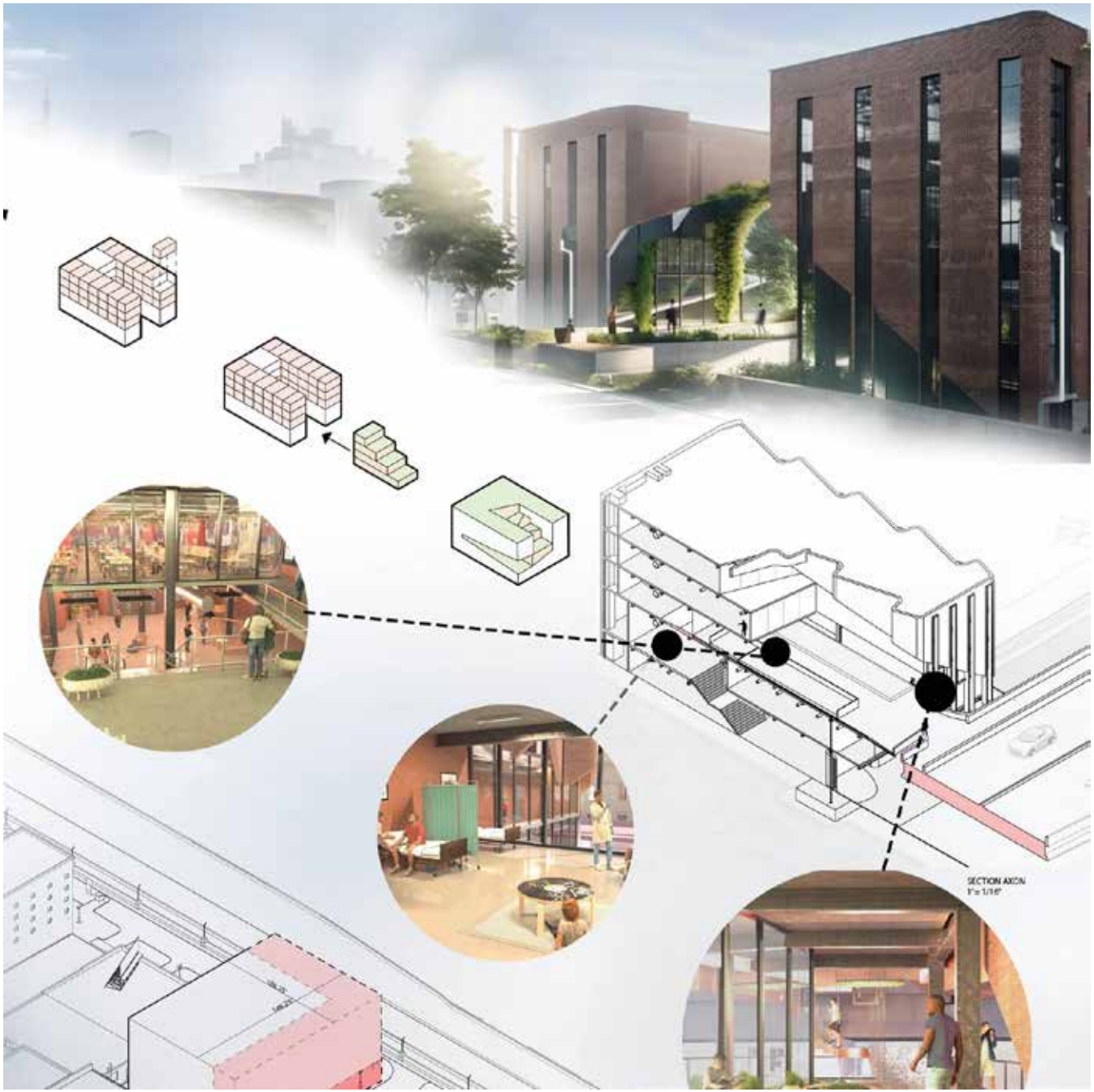
In conclusion HomeWith is designed with a trauma-informed design, critical adjacencies, and a safe and supportive environment to fulfill the needs of our residents. We aim to foster a sense of community and healing among our residents and equip them with the resources they require to recover from their experiences. We are confident that our approach will result in a successful and effective permanent supportive housing building.


HomeWith

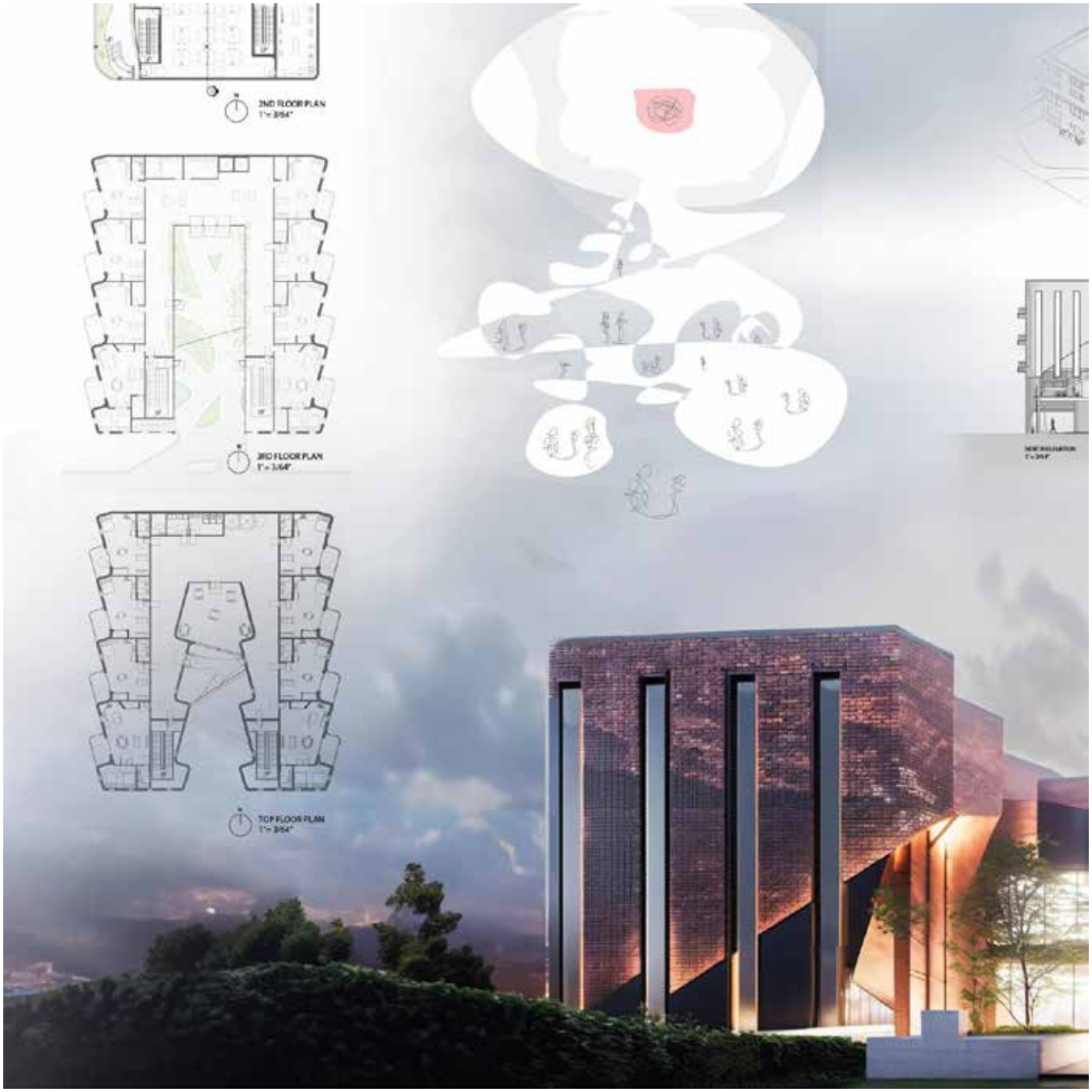

PERMANANT TRANSITIONAL HOUSING

Jury comments: *This team produced a dignified civic response to emerging challenges of homelessness, probed with programmatic complexity paralleled by sematic virtuosity.*

Dreibelis + Wolfe | Board 1



Dreibelis + Wolfe | Board 2



Dreibelis + Wolfe | Board 3

Dreibelis + Wolfe | Board 4

Merit

The Mind Center

Pierce Bower and Jenda Simonsen
Faculty Mentor: David Newton

The “Mind Center” is a transdisciplinary research center on UNL’s city campus that embeds grounding and elevating architectural affordances for users to embody as affect, thus promoting the cognitive and collaborative innovation cycle. Researchers engaged in the collaborative innovation cycle bounce between broad, high-level (elevated) cognition, and narrow, action-oriented (grounded) states of mind. The “Mind Center” provides researchers with affective opportunities to support these states of mind and ultimately stimulate innovative creation. The design proposal transcends conventional boundaries to cultivate a balance of work and rest (action and mindfulness) which then positively impacts productivity. By orchestrating the architecture to “act” upon itself, the built environment becomes a dynamic entity, inviting occupants to interact and immerse themselves fully. Through this interaction, minds grasp the actions of the space, forming expectations and perceiving affordances.

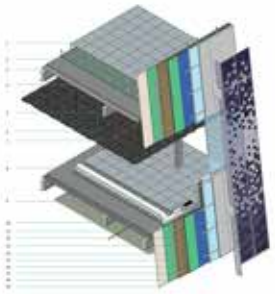
These architectural affordances are embedded in form, materiality, and circulation, that provide users with opportunities to embody elevating and grounding architecture. Architectural affordances and embodiment are rooted in the Enactive Approach to Architectural experience, wherein users of a space psychologically and physiologically reciprocate the architecture’s affect. Affect emerges through the ongoing interactions between an individual’s bodily processes, their environment, and their cognitive and emotional systems. It highlights the reciprocal relationship between bodily states, environmental stimuli, and subjective experiences of emotion. By aligning architectural elements with cognitive processes, the Mind Center breaks traditional boundaries, offering a space where design can transcend disciplines and inspire innovation.


STRUCTURE ISOMETRIC

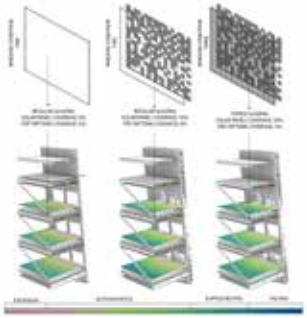
SECTION A

ELEVATING CONCEPT VIGNETTES

INTEGRATION ISOMETRIC DRAWING



DAYLIGHT STUDY

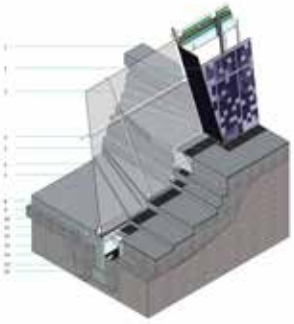


INTERIOR RENDER

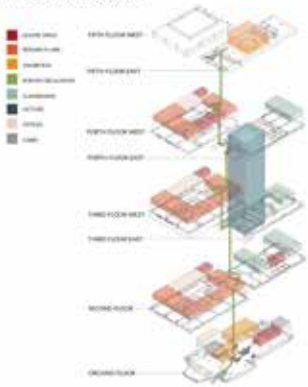
INTERIOR RENDER

GROUNDING CONCEPT VIGNETTES

INTEGRATION ISOMETRIC DRAWING



PROGRAM AXONOMETRIC



INTERIOR RENDER

EXTERIOR RENDER

SOUTH ELEVATION

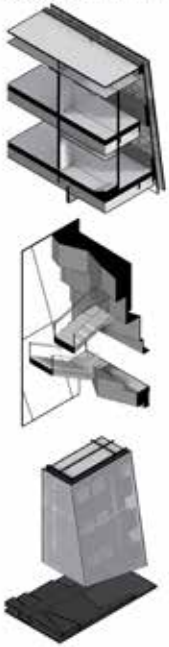
NORTH ELEVATION

EAST ELEVATION

WEST ELEVATION

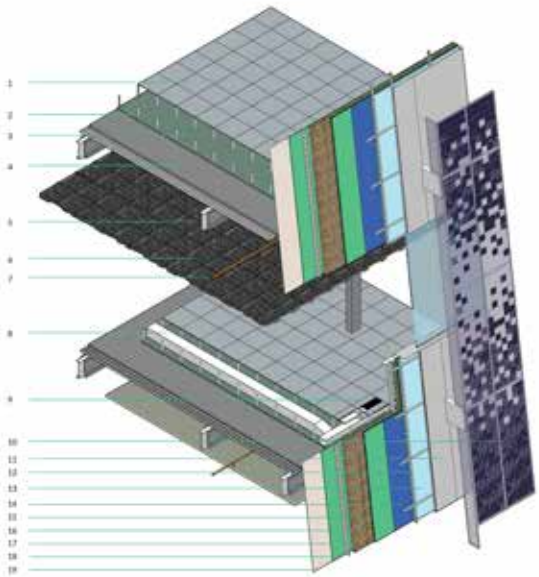
Jury comments: *This project represents a sophisticated mediation between the experiential aspects of affect and the technical means of architectural operations.*

ELEVATING CONCEPT VIGNETTES



INTEGRATION ISOMETRIC DRAWING

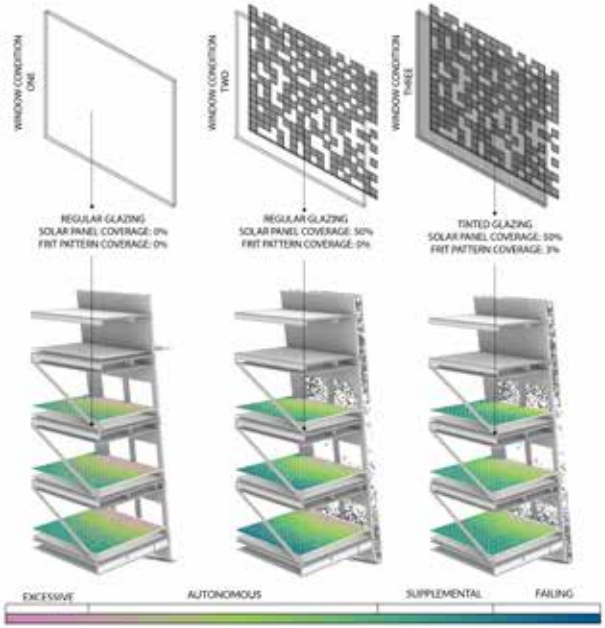
1. 2 ft. Concrete Floor Tiles
2. 1 ft. Floor Riser Grid
3. 1 in. Acoustic Baffle
4. 3 in. Composite Steel Deck
5. W18x46 Steel Beam w/ 2 hr Intumescent Coating
6. Acoustic Drop Ceiling
7. Autoesatic Fire Sprinkler
8. 10" x 12" UFAD Duct
9. In-Floor Vent + Fin Tube Radiator
10. Photovoltaic Glazing
11. Aluminum Siding
12. 3 in. Batton
13. 2 in. Rigid Insulation
14. Class 1 Vapor Barrier
15. 3 Layers 5/8 in. Gypsum
16. 2x4 Metal Studs, 24 in. OC
17. 3 in. Batt Insulation
18. 5/8 in. Gypsum
19. Class 3 Vapor Barrier



Bower + Simonsen | Board 1

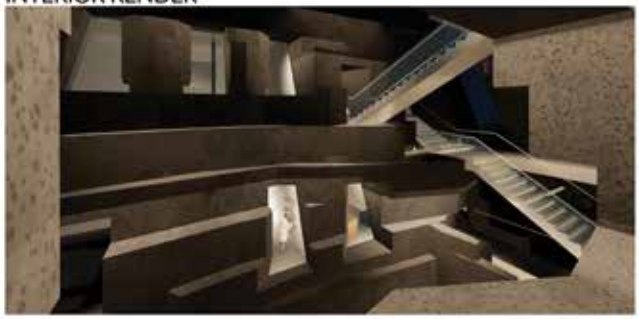
SECTION A

DAYLIGHT STUDY



INTERIOR RENDER

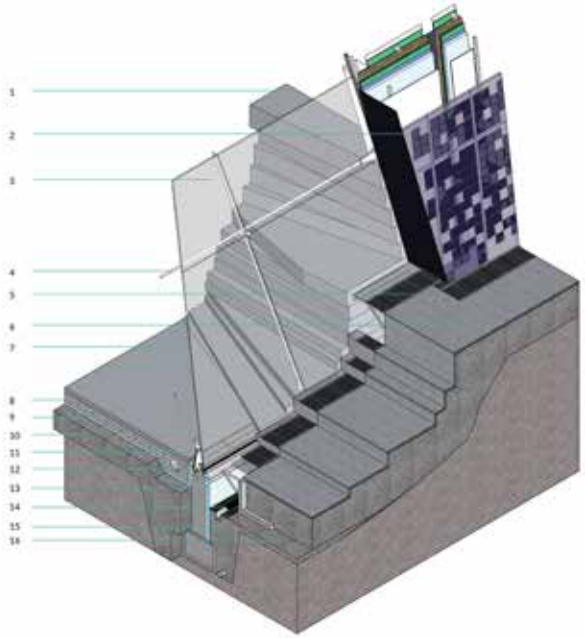
INTERIOR RENDER



GROUNDING CONCEPT VIGNETTES

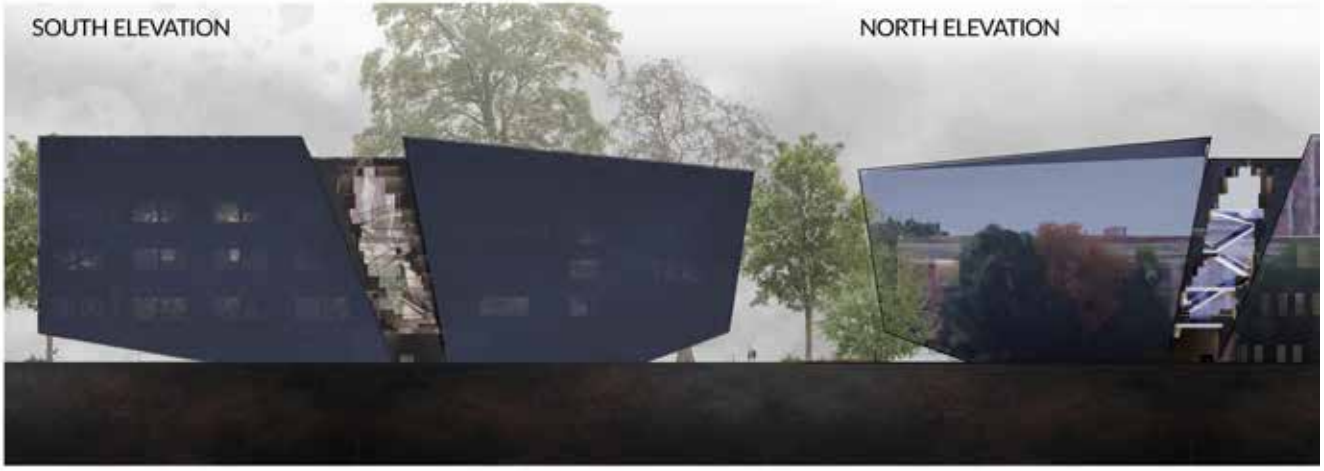
INTEGRATION ISOMETRIC DRAWING

1. GFRC Rock Panel
2. DSF Envelope
3. Double, Clear, Low E Glazing
4. 1/2 in. Steel Cable
5. Granite Drainage Grate
6. 1-1/2 in. Think Granite Pavers
7. 3 in. Polished Lightweight Concrete
8. 5 in. Concrete Slab
9. Class 1 Vapor Barrier over 2 in. Rigid Insulation
10. 4 in. Gravel
11. Tie-Rod Knife Plate Connection
12. UFAD Duct
13. 12 in. Thick Foundation Wall
14. 2 in. Rigid Insulation Over Class 1 Vapor Barrier
15. Perimeter Drainage
16. Retaining Wall
17. 3 in. Batt Insulation

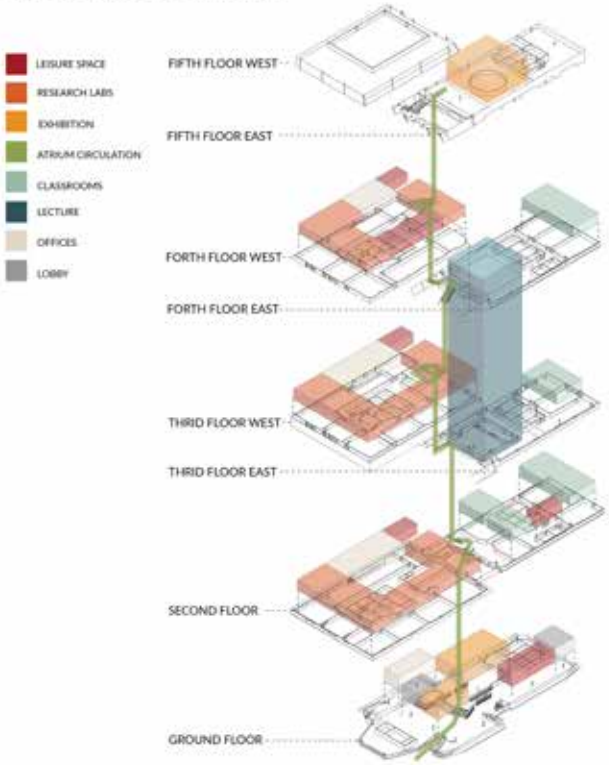


SOUTH ELEVATION

NORTH ELEVATION



PROGRAM AXONOMETRIC



INTERIOR RENDER

EXTERIOR RENDER

Bower + Simonsen | Board 4

SGH Concepts + Pella + HDR + Whiting-Turner

*A special thanks to **William DeRoin (HDR), Adam Meyer (Whiting Turner) Hollie Schall (Pella) and Troy Burkey (SGH Concepts)** for discussing the collaborative integration for the new addition to Architecture Hall at UNL.*
(photo taken by Kerry McCullough-Vondrak)


ALPHA TAU OMEGA

DESIGN STUDIOS

**** Studio Finalist***

Allison Fejfar, Lecturer
Zeb Lund, Lecturer
* Caleb Dreibelbis and Grant Wolfe | Merit

Dehray Eleutice
Cameron Field
Rachel Fuelberth
Alex Gallegos
Max Jirovsky
Gabriel Logan
Emily Lorius
Evan Robinson
Elijah Velinsky
Sydney Weintz
Sophia Wiemers

Michael Harpster, Professor of Practice
* Teia Kilian and Chloe Martinez | Excellence

Abdulaziz Al Araimi
Drue Bower
Philip Boyd
Erica Guenther
Olivia Hordvik
Jordan McLaughlin
Joseph Miller
Kal-El Morman
Dalton Sedlacek
Rhiannon Strazdas
Michael Ungurian
Callahan Weeks
Taylor Yakel

Michael Hamilton, Lecturer
David Hinsley, Lecturer
* Elias Melendez and Andy Vo | Honor

Alexander Alderson
Katelyn Allen
Levi Brox
Alexi Caines
Jessie Grieser
William Janecek
Michael Mancuso
Muminjon Mirzoev
Gabriel Puente
Gavin Stelling
Justin Supeh

Beau Johnson, Lecturer
* Carson Beard and Lauren Wilwerding | Merit

Isaac Alvarado
Chelsea Anderson
Will Byers
Machelle Cooper
Kendall Hartley
Lydia Kramer
Sara Lee
Michael Leiting
Anna Miles
Brian Mork
Matthew Pearson
Dennis Sotelo-Flores

David Newton, Associate Professor
* Pierce Bower and Jenda Simonsen | Merit

Jiang Chen
Landyn Bish
Sreemedha Chintamadaka
Gianna Jergovic
Kayden Lichtas
Halima Moore
Christopher Nguyen
Elizabeth Pernicek
Connor Randleman
Chloe Strecker
Abriana Wilson
Allison Woodring

Katherine Darnstadt offers insightful reflections from the jury to the finalist projects prior to announcing the winners.

2024 SGH Concepts / Dri-Design / Pella Scholarship

Spring 2024
Arch 411 Architectural Design Studio: Integrate
University of Nebraska-Lincoln
College of Architecture