

2019 SGH Concepts / Dri-Design Scholarship



SGH
concepts



dri-
design
WALL PANEL SYSTEM




Spring 2019

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



The mission for the Architecture program is to provide the educational foundation for articulate, intellectually aware, self-realizing architecture professionals capable of performing effectively in evolving design disciplines.



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College of Architecture
232 Architecture Hall
Lincoln, NE 68588-0107
(402) 472-7943

architecture.unl.edu

Spring 2019**Arch 411 Architectural Design Studio: Integrate.**

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.

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Photographs.

All photos by Craig Chandler, Director of Photography, University of Nebraska, Office of University Communications unless otherwise noted.

- 4 Sponsors**
- 6 Jury:**
Frank Jacobus, Stephanie Pilat, and Ben Waechter
- 18 Award of Excellence:**
Brenton Rahn and Andres Villegas
- 26 Award of Honor:**
Trevor Kirschenmann and Erik Lemus
- 34 Award of Merit:**
Will Dendinger and Ali Siverhus

The College of Architecture at the University of Nebraska-Lincoln, in partnership with SGH Concepts (A Division of SGH Redglaze Holdings Inc.) and Dri-Design, 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 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, and Dri-Design, a producer of advanced and sophisticated metal wall panel systems.

Spring 2019 - Architecture Design Studio Faculty

Craig Babe, AIA, NCARB, Associate Professor of Practice
- Architecture, University of Nebraska

Mark Bacon, AIA, Creative Director / Senior Associate,
BVH Architects. Lecturer - Architecture.

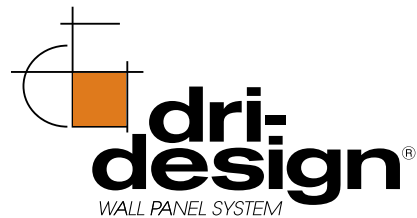
David Newton, Assistant Professor - Architecture,
University of Nebraska

**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 Jason Zeeff of Dri-Design for his continued support of the college and students.



FRANK JACOBUS

Silo AR+D, University of Arkansas

Frank Jacobus is an associate professor and 21st Century Chair of Construction and Technology in the Fay Jones School of Architecture + Design at the University of Arkansas and a principal of the award winning architecture firm SILO AR + D. Among his recent projects is a book titled Archi-Graphic: An Infographic Look at Architecture, published by Laurence King and a book titled "A Visual Biography of Color," published by ORO Editions. Frank's work has been disseminated widely in Architect Magazine, Slate, FastCompany Design, ArchDaily, and many other publications.



STEPHANIE PILAT

University of Oklahoma

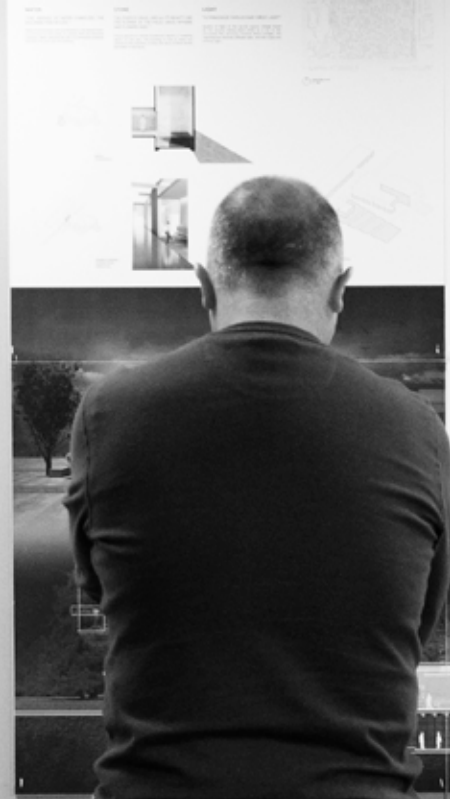
Stephanie Pilat is the Director of the Division of Architecture at the University of Oklahoma. Pilat is a designer and architectural historian whose teaching and research examines points of intersection between politics and architecture. In 2015, Stephanie was named as one of the “30 most admired educators” in the nation by Design Intelligence magazine. Stephanie’s research has been supported by a Fulbright fellowship, a Rome prize from the American Academy in Rome, the AAUW and the Wolfsonian.



BEN WAECHTER

Waechter Architecture

Inspired by experiential and clear, distilled design, Ben founded Waechter Architecture (WA) in order to pursue these concepts in his work. Prior to forming WA, he worked locally and internationally with leaders in architecture including Allied Works Architecture (Portland, OR) and world-renowned architect Renzo Piano (Genoa, Italy). Ben is an award-winning and published designer whose principles lie in providing bold forms arrived at through exercises in concept, distillation, and intelligent programming. His experience includes a wide range of building types: cultural, hospitality, commercial, and multi-family and single-family residential.





DISCUSSION PANEL

Craig Babe and David Newton moderate an insightful panel discussion with jury members Frank Jacobus, Stephanie Pilat, and Ben Waechter. The discussion touched on a range of topics involving architectural practice, the expressive use of materials, and architectural education.





Futuro Viveyendo 2014
Don Vlaschev
Webinar: Aprender

PRE-DELIBERATION







WYUKA SYNAGOGUE



UNL College of Architecture

SGH + Dri-De

Jury

Frank Jacobus, Silo Architecture, Research + Design
Stephanie Pilat, University of Oklahoma, College of Architecture
Ben Waechter, Waechter Architecture (Portland, OR)

16



Dean Kathy Ankerson makes opening remarks and reflects on the impacts of the scholarship over the last five years.

Design Scholarship

(Fayetteville, Arkansas)
Architecture (Norman, Oklahoma)
gon)



Excellence

Fluid Knowledge

Brenton Rahn and Andres Villegas
Faculty Mentor: David Newton

This proposal is for a new center for emerging fabrication technologies located within Lincoln's Innovation Campus. The mission for this design proposal is to create an fluid atmosphere of creative collaboration between the various user groups which consist of researchers, students, and the general public. Through a dynamic space-frame design created through parametric modeling, the building captures the attention of those around it through its graceful shape, partially concealing the tectonic language within. The building comes together physically through the use of various robotic fabrication processes such as CNC robotic bending of the steel space frame as well as robotic welding of the members. A grand entrance draws in curious onlookers to experience first hand how these emerging design strategies are being developed. The facade was given just as much care as we utilized daylighting optimization to create openings where the program required more or less light. This helps create laboratories, classrooms, and offices filled with natural light. The layout of these spaces is intentionally separated. Users are encouraged to move throughout the building as they go from class to lounge or from research lab to office. Random interactions can occur between researchers and students, allowing for vital interdisciplinary knowledge to be shared.



Architecture SGH + Dri-Design Scholarship

Jury

Frank Jacobus, Silo Architecture, Research + Design (Fayetteville, Arkansas)

Stephanie Pilat, University of Oklahoma, College of Architecture (Norman, Oklahoma)

Ben Waechter, Waechter Architecture (Portland, Oregon)



DYNAMIC KNOWLEDGE

The world of digital design and robotic fabrication offers dynamic and exciting ways to approach design with a more innovative method.

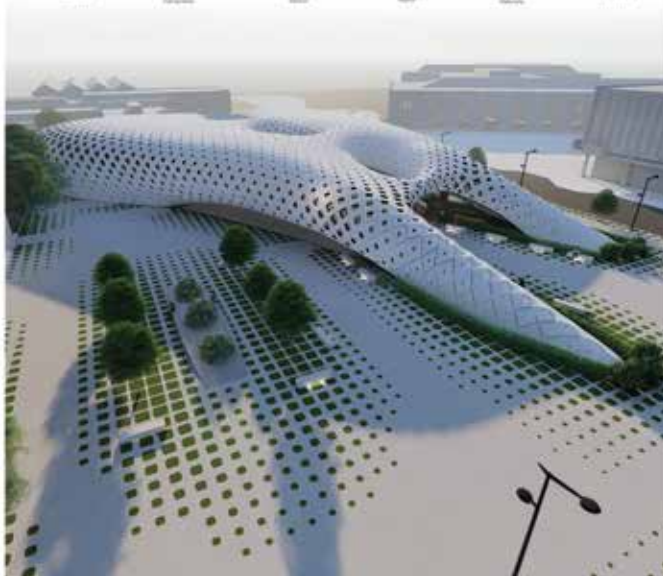
Our proposal is composed of a steel spaceframe structure, covered by a paneling system that allows natural light penetration to the main spaces where knowledge is being created, such as laboratories, collaboration areas, fabrication spaces, and class rooms. A central "courtyard" serves the users as an engine of activity, inspiration and wonder, while also providing an ample space for circulation and interdisciplinary collaboration.

20



1

3



1. Heavy Mass Insulated (HMI) Tower
2. White Mass Perforated Steel Panel System
3. White Perforated Composite to steel Framed Tower
4. Special Impact Insulation
5. Mechanical Panel
6. Acoustic Panel
7. Composites Steel Deck
8. Heavy Mass Steel Deck
9. Insulated Concrete Slab Floor Slab

2

4



Jury comments: *“Fluid Knowledge”* deeply explores emerging technologies and their effect on construction, form, and space. The jury appreciates that the team takes risks and challenges norms of construction in order to demonstrate new possibilities in digital fabrication technology.

DYNAMIC KNOWLEDGE

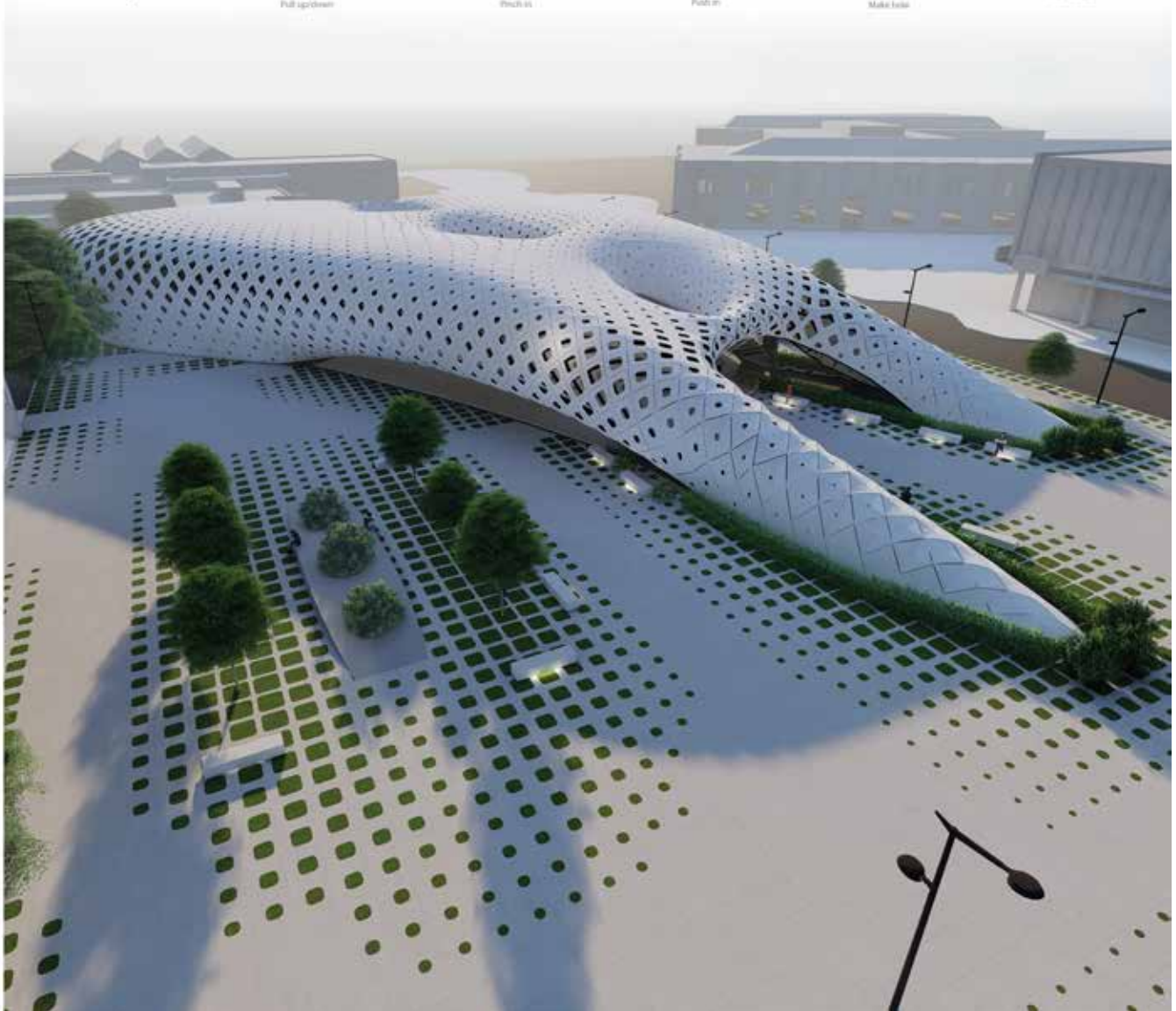
The world of digital design and robotic fabrication offers dynamic and exciting ways to approach design with a more innovative method.

Our proposal is comprised of a steel spaceframe structure, covered by a paneling system that allows natural light penetration to the main spaces where knowledge is being created, such as laboratories, collaboration areas, fabrication spaces and classrooms. A central boulevard serves the users as an engager of creativity, inspiration and wonder, while also providing an ample space for circulation and interdisciplinary collaboration.

22







1. Matte White Insulated GFRC Panel
2. 4" Dia. Fire Protected Steel Spaceframe
3. White Polished Concrete Screed Finished Floor
4. Sound Impact Insulation
5. Hydronic Pipe
6. 4" Concrete Slab
7. Corrugated Steel Deck
8. Open Webbed Steel Joist
9. Insulated Curved Structural Glass



Honor

Wyuka Synagogue

Trevor Kirschenmann and Erik Lemus
Faculty mentor: Mark Bacon

The Wyuka Synagogue sits in the northwest corner of the Wyuka Cemetery in Lincoln, Nebraska. Selected primarily for its seclusion and open space, the site provides easy access from Vine Street -one of Lincoln's major arteries. Conceptually, this project explores the connection between Jewish ideology and three natural materials inherent to sacred architecture: water, stone, and light.

Water signifies purification in Judaism, therefore the traveling over of water thresholds act as a metaphor to cleansing oneself. Water's heavy usage around and through the building symbolizes a strong presence of God. Stone is used to give grounding to the building. It is tradition to lay small stones on the gravesites of deceased Jewish people as a mechanism to "weigh down" the soul on Earth. Third, light is used in the building to signal circulation and to provide varying natural light quality within different spaces based on emotion the setting calls for. Direct light, the lack of light, and diffused light accompany the idea of pure life, pure death, and in what is between.

The primary program consists of a sanctuary, columbarium, crypt, and a jewish learning & community center. Additionally, the building accommodates space for a series of Jewish rituals. Taharais the process of washing, dressing, and praying over the body. Shemira guardings is the act of never leaving the body alone before the funeral. Finally, mikvehis a cleansing ritual where one immerses themselves fully underwater in a small bath as a form of spiritual"rebirth".



ure

i-Design Scholarship

search + Design (Fayetteville, Arkansas)
ma, College of Architecture (Norman, Oklahoma)
e (Portland, Oregon)



WYUKA SYNAGOGUE

Located in the northwest corner of the Wyuka Cemetery in Lincoln, this project explores the connection between Jewish ideology and three natural materials inherent to sacred architecture: water, stone, and light. The program of the synagogue consists of a sanctuary, columbarium, crypts, Jewish learning + community center, and a ritual bathroom.

WATER

"THE ABSENCE OF WATER SYMBOLIZES THE DISJUNCTION OF GOD."

Water is synonymous with purification and renewal. As a nod to the water, it is absent. Clear cut basins channel water around the base of a courtyard between the park and the building.

STONE

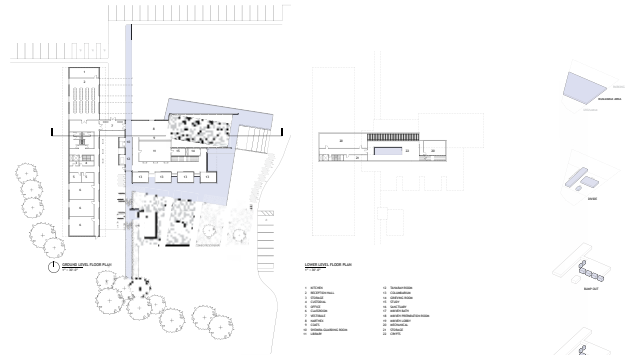
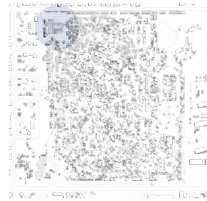
"TO FEEL IT GRAZE, AND ALL ITS BEAUTY LIKE THE PLUMER OF THE FIELD, GRASS WITHERS AND FLOWSERS DIE."

Stone placed as Jewish bathhouse lights a "winking" glow of the sun. The lighting is cast in stone and placed on the canopy to help the look of these buildings in the light.

LIGHT

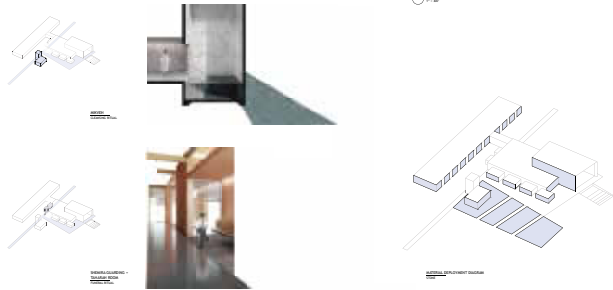
"A SYNAGOGUE SHOULD HAVE GREAT LIGHT"

Quality of light in the sacred space is based on the quality of the light that enters as a nod to the tradition of Jewishly sacred space. The lighting is cast in stone and placed on the canopy to help the look of these buildings in the light.



- Legend**
- 1. OFFICE
 - 2. COMMUNITY CENTER
 - 3. SANCTUARY
 - 4. CRYPTS
 - 5. COLUMBARIUM
 - 6. RITUAL BATHHOUSE
 - 7. JEWISH LEARNING CENTER
 - 8. COMMUNITY CENTER
 - 9. OFFICE
 - 10. COMMUNITY CENTER
 - 11. OFFICE
 - 12. COMMUNITY CENTER
 - 13. OFFICE
 - 14. COMMUNITY CENTER
 - 15. OFFICE
 - 16. COMMUNITY CENTER
 - 17. OFFICE
 - 18. COMMUNITY CENTER
 - 19. OFFICE
 - 20. COMMUNITY CENTER

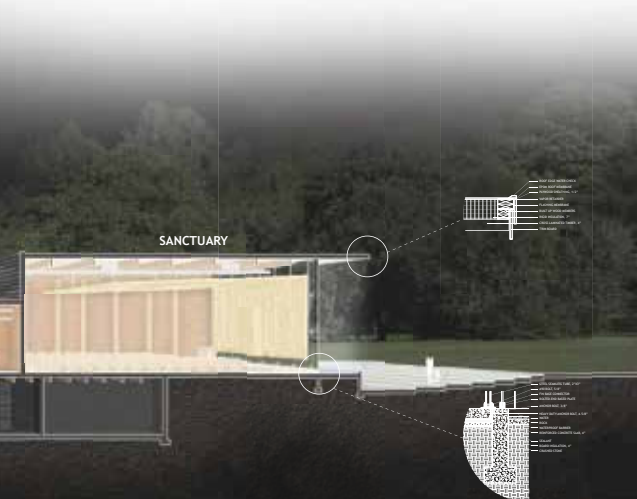
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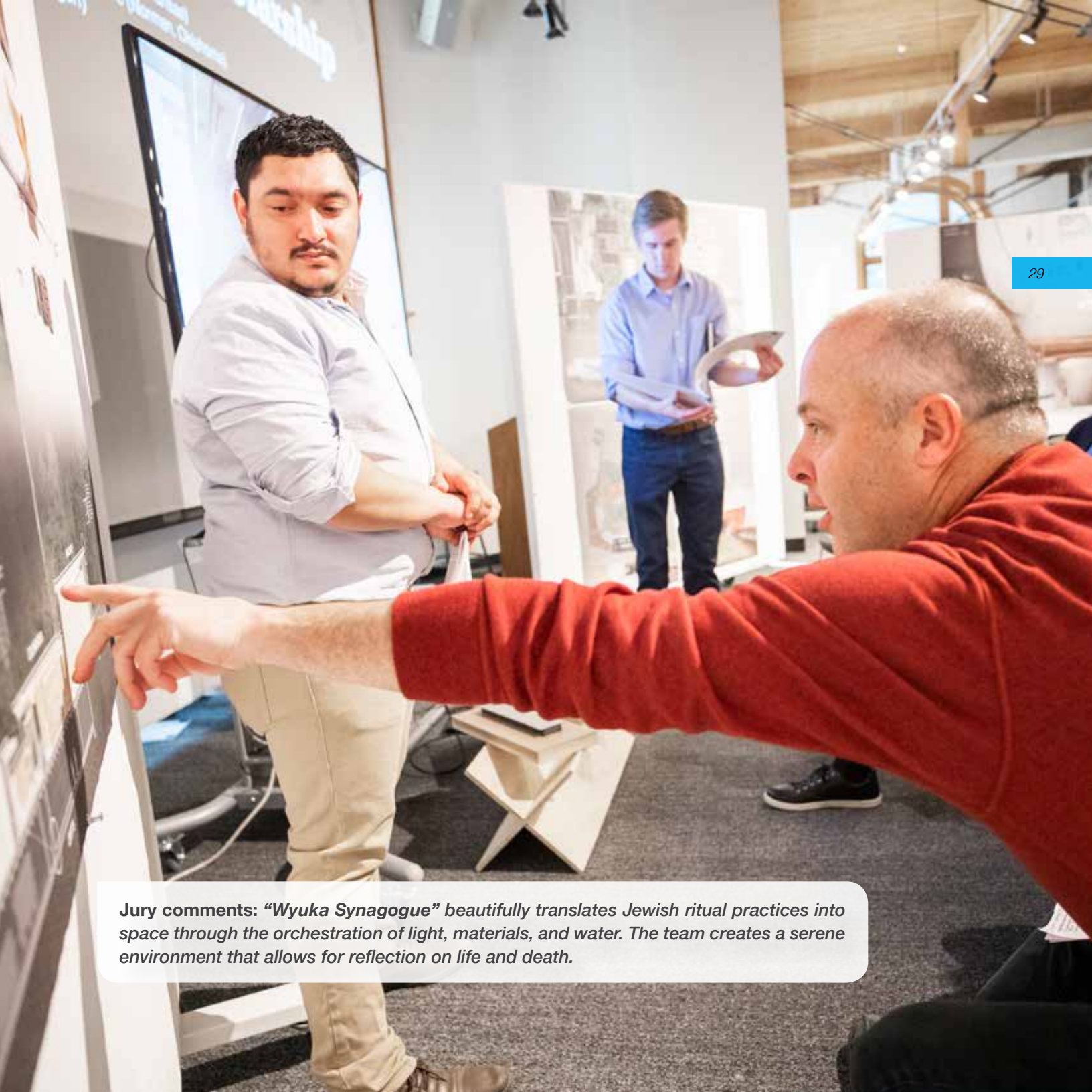


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Jury comments: *“Wyuka Synagogue” beautifully translates Jewish ritual practices into space through the orchestration of light, materials, and water. The team creates a serene environment that allows for reflection on life and death.*

WYUKA SYNAGOGUE

Located in the northwest corner of the Wyuka Cemetery in Lincoln, this project explores the connection between Jewish ideology and three natural materials inherent to sacred architecture: water, stone, and light. The program of the synagogue consists of a sanctuary, columbarium, crypt, Jewish learning + community center, and a ritual bathhouse.

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WATER

"THE ABSENCE OF WATER SYMBOLIZES THE DISCONNECTION OF GOD."

Water is synonymous with purification in the Jewish faith. As a one over or into water, in a sense, their soul becomes cleansed. Water assumes the role of a threshold condition between the pure and the ordinary.



MIKVEH
RITUAL BATHHOUSE

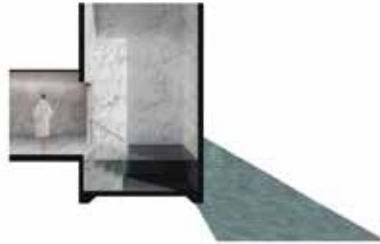


TALMUD TORAH
JEWISH LEARNING +
COMMUNITY CENTER

STONE

"ALL FLESH IS GRASS, AND ALL ITS BEAUTY LIKE THE FLOWER OF THE FIELD; GRASS WITHERS AND FLOWERS FADE."

Stones placed on Jewish headstones signify a "weighing down" of the soul. The building is clad in stone and placed on the cemetery to keep the souls of those buried grounded to the Earth.



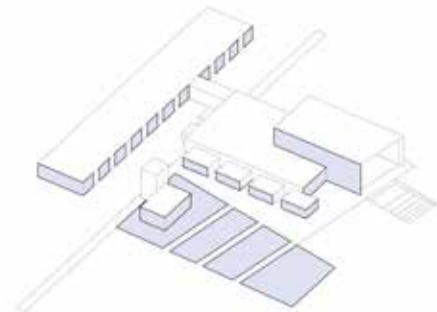
LIGHT

"A SYNAGOGUE SHOULD HAVE GREAT LIGHT"

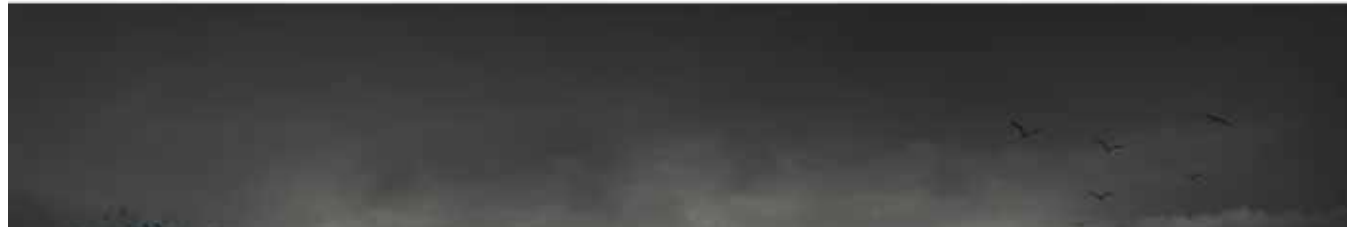
Quality of light in the sacred spaces change based on the activity taking place inside as a cue to the circulation. The sanctuary receives direct sunlight, the columbarium receives diffused light, and the crypts are without light.

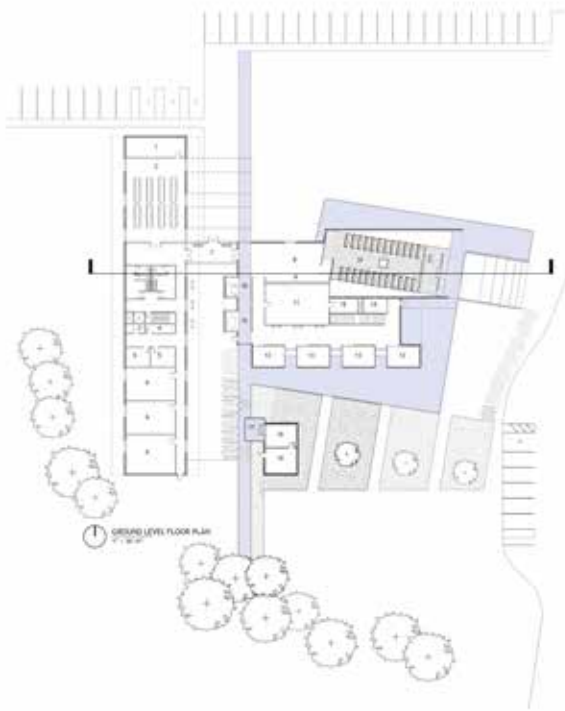


LOCATION PLAN
1/1" = 10'



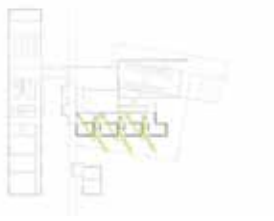
INTERNAL DEPLOYMENT DIAGRAM
1/16"

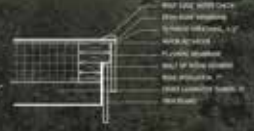
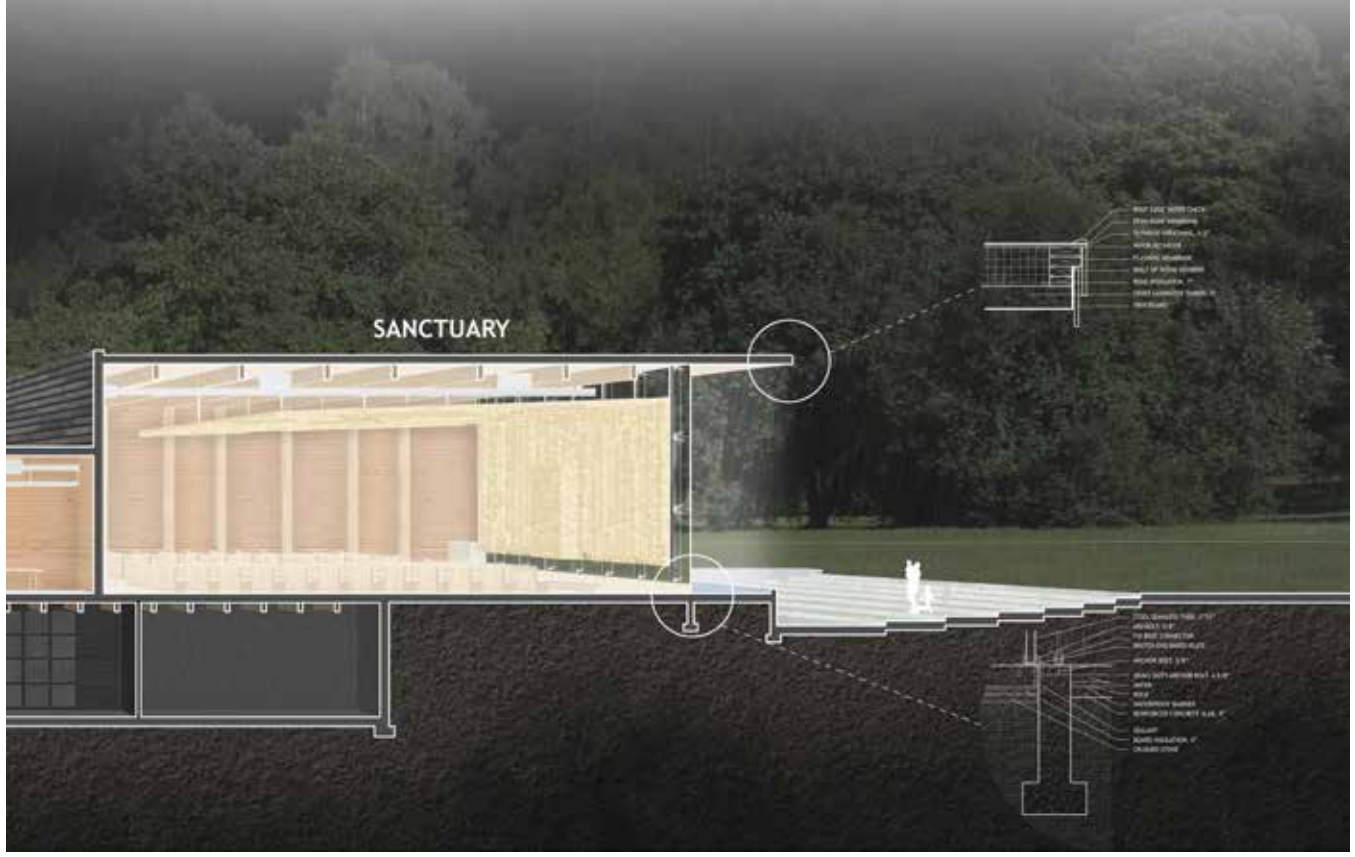




LOWER LEVEL FLOOR PLAN
01' - 01'0"

- | | |
|---------------------------|------------------------|
| 1 RECEPTION | 12 TRAINING ROOM |
| 2 RECEPTION AREA | 13 CONFERENCE |
| 3 THEATRE | 14 OFFICE AREA |
| 4 CORRIDOR | 15 STAFF |
| 5 OFFICE | 16 WORK ROOM |
| 6 LUNcheon | 17 OFFICE AREA |
| 7 RESTROOM | 18 OFFICE MEETING ROOM |
| 8 WAITING | 19 OFFICE AREA |
| 9 LOBBY | 20 MECHANICAL |
| 10 OFFICE/CONFERENCE ROOM | 21 THEATRE |
| 11 ELEVATOR | 22 LOBBY |





Merit


Ride Lincoln I Transit Hub

Will Dendinger and Ali Siverhus
Faculty Mentor: Craig Babe

On the edge of UNL's campus at the corner of 10th and Q streets sits a highly trafficked but lifeless site, currently holding a large parking lot and small privately owned development. UNL's masterplan has slotted this site for future development as an area prominent to the city and University. After examining circulation patterns and the current city and University transit systems, our intervention is a new transit hub. By shifting city bus routes to converge at 10th and Q to a new, more equipped terminal, an opportunity is created to link both UNL and city bus routes. Our design acts as a gateway to campus, downtown, and the Haymarket. The terminal is a node connecting two bus systems, a popular ride-sharing drop off location, bike routes, a close proximity to Haymarket rail station, and next to I-180. By bringing together both city transit patrons and student transit users, this becomes a civic gesture to invite outsiders to the University community. The flow of traffic along the perimeter is fast paced, but as users enter the site and campus, the building acts as a intermediary to slow pedestrians and becomes a node for them to pause. Transit users are greeted by large, public interior garden space, outdoor plazas, study space, food vendors, and green roofs in order to improve the rider experience and foster communal space as people wait. Finally, this transit hub is a communal node working within a larger network of infrastructure systems across the city of Lincoln.

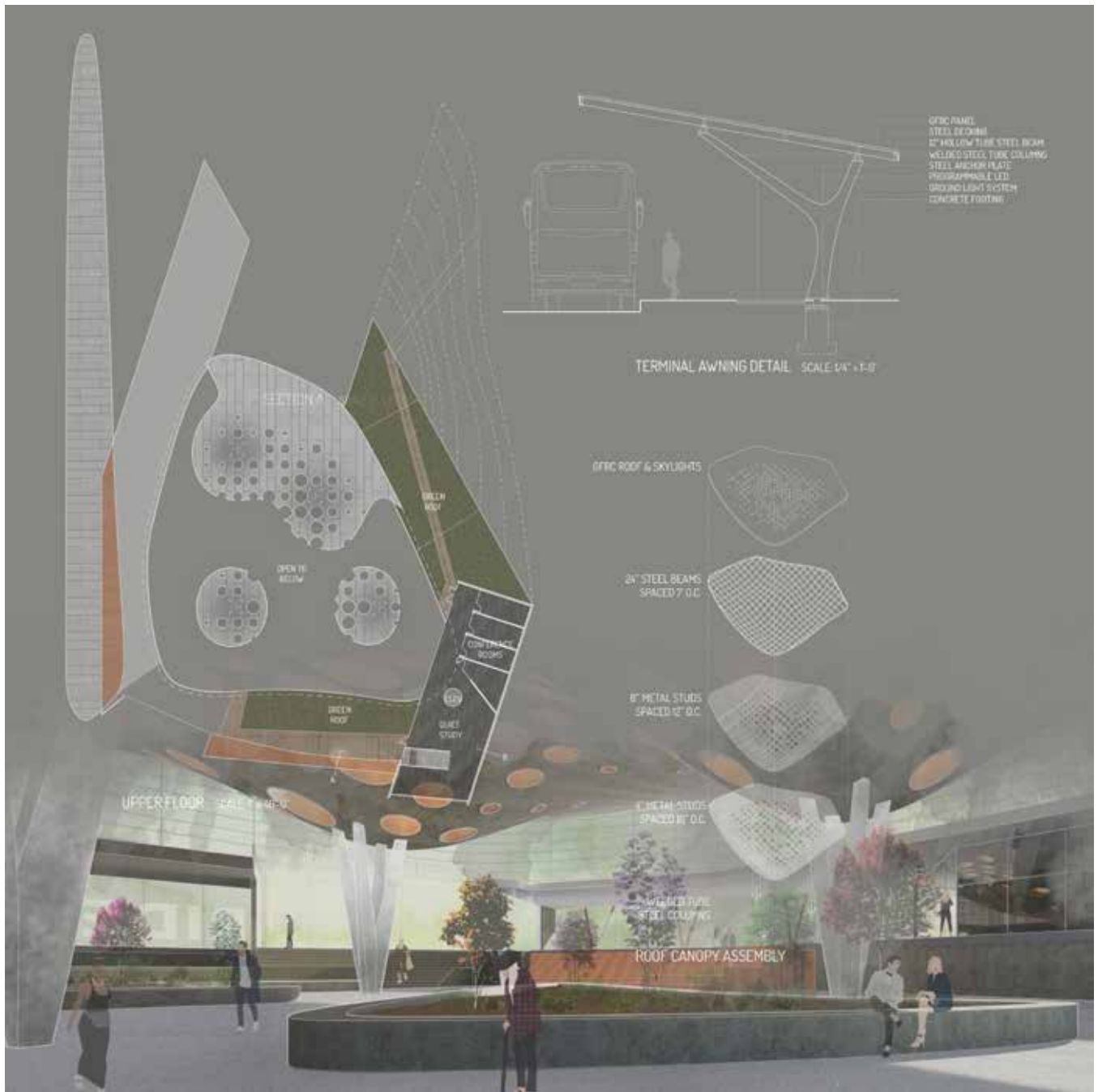




A woman with short brown hair and glasses on her head, wearing a black long-sleeved top, is speaking and gesturing with her hands. She is in a meeting room with several other people seated in the background. A woman with long blonde hair is in the foreground, looking towards the speaker. The room has large windows and a whiteboard with architectural drawings.

Jury comments: *“Ride Lincoln” advocates for a communal transit hub that goes beyond utilitarian function. The team’s proposal grows out of great site selection and analysis and illustrates that a transit hub can be more than a path but also a community gathering place.*





Dendinger + Siverhus | Board 2



Concept Series

Substrates

- Standard 18-22 gauge G-90 galvanized steel
- Galvanized steel, galvalume® steel, aluminum or stainless steel – optional
- Zinc – 039"

Surface Finish

- Smooth
- Embossed
- Zinc: Smooth only

Animal Rescue League of Iowa / Ankeny, IA



sealants, gaskets, or butyl tape means no
leaking and no maintenance for owners.

44

DRI-DESIGN

dri:
design

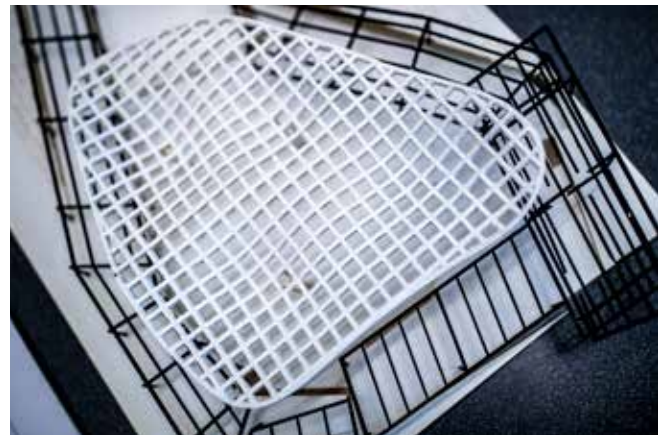
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www.dri-des

*Jason Zeeff from Dri-Design presenting logics of systematic assembly.
(photo taken by Kerry McCullough-Vondrak)*



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Call 472-1390
Multi-Media Help
Call 472-5811





Craig Babe, Associate Professor of Practice

* Will Dendinger and Ali Silverhus | *Merit*

Christopher Centes	Rachel Kosmacek
Faith Choat	Connor Swearingen
Ashley Glesinger	Megan Waldron
Caleb Goehring	
Rebecca Kalhorn	

Mark Bacon, Lecturer

* Trevor Kirschenmann and Erik Lemus | *Honor*

Marwa Al ka'abi	Noah Schacher
Jared Andrews	Adrian Silva
Joshua Frederick	Emily Tetschner
David Huisman	Madeline Whitted
Jessica Larsen	Hieu Nguyen

David Newton, Assistant Professor

* Brenton Rahn and Andres Villegas | *Excellence*

Jose Cano	Joshua Pfeifer
Benjamin Friesen	Joseph Synek
Tyler Koraleski	
Ashley Peterson	

* **Studio Finalist**



Frank Jacobus and jury offer insightful reflection on finalist projects prior to announcing the winners.

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