

The 'Ōlelo Hawai'i Campus

Architecture for Indigenous Language Revitalization and Normalization

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'Ōlelo Hawai'i, the Hawaiian language, was almost lost. After the overthrow of the Hawaiian monarchy, it was outlawed from schools and supplanted by the English language. By the mid-twentieth century, just a few hundred native speakers remained. The Hawaiian Renaissance of the 1970s saw a return in interest in the Hawaiian language. Since then, a small group of community leaders and educators have been working together to develop a complete educational system spanning from preschool to Ph.D., taught entirely in 'ōlelo Hawai'i. Along the way, the group has grown into a statewide coalition of schools and nonprofit organizations. Their success has seen Hawai'i become an aspirational model for similar indigenous language programs across the nation and around the world. This project, in collaboration with some of these pioneers, is the culmination of four decades of effort in envisioning, designing, and building an 'ōlelo Hawai'i campus-within-a-campus on state university grounds.

A User-Centered Research Collaboration

The 'Ōlelo Hawai'i Campus project was co-led by two Principal Investigators in collaboration with an external consultant with expertise in user research and digital strategy. Our team included paid undergraduate and graduate students from architecture and graphic design programs and recent UH grads. The project was conducted through the UH Community Design Center platform, which is housed in the UHM School of Architecture and operates as a teaching practice that aims to actively bring together students, researchers, faculty, leadership and community members in the design process. Student assistants were involved in all activities, including presenting to clients and engaging with stakeholders.

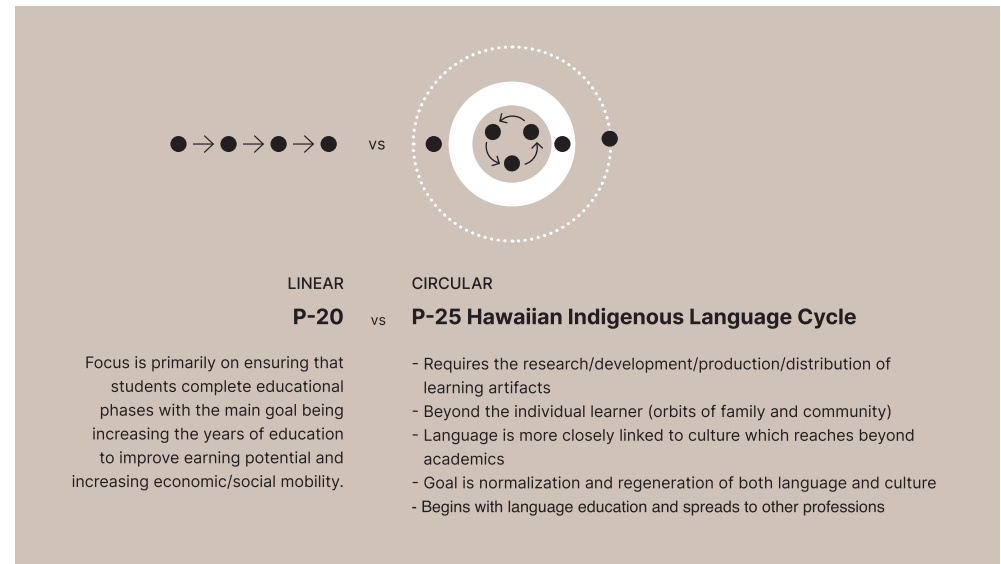
Our team worked in close collaboration with six Hawaiian language and cultural education organizations. Multiple phases of user research, including one-on-one interviews, co-creation workshops, and "talk story" sessions, were held with over fifty Hawaiian language education founders and senior leaders. Students, parents, program graduates, and community members also generously shared their knowledge and experiences during the research phase.

A series of planning strategies, concepts and visualizations were developed with the goal of creating proof-of-concept designs for future development through RFPs. The models, plans, renderings, ROM cost estimates, and other assets created for this project have served as the focal objects for funding negotiations.

Planning Strategies, Cultural Alignments & Protocol Spaces

The site is organized around a series of physical alignments, responding to nine Indigenous cultural pathways (relationships, language, cultural identity, wellness, personal connectivity, intellect, applied achievement, sense of place and worldview), developed by members of the consortium.

The first alignment, at the scale of the site, extends the axis established by an existing building, which serves as an embodiment of the Hawaiian Language Movement, and marks a connection between the waters of Hilo Bay and the sacred mountain Maunakea.



The second alignment, at the scale of the buildings, organizes a system of protocol spaces, to the ma uka - ma kai axis. A third alignment occurs at the scale of the individual participating with their community, as they position themselves in relation to the rising and setting sun.

Three Buildings Framing an Open Green

This project focused on the design of three buildings, a Pre-School, a Production Facility, and a Graduate School & Cultural Center. The assembly of these unique structures frame a programmable open green that can host a wide variety of events.

1 Pre-School: Centered around all-weather play spaces and 'ohana-oriented, flexible classrooms, this simple structure embraces a central, protected, piko space that allows caretakers to keep an eye on the children from almost every space in the building, while providing direct visual and physical connection to the outdoors in all directions.

2 Production Facility: This compact, permeable structure supports a teaching-practice for the research-development-production- distribution cycle of technologies and resources for Hawaiian language education. A series of open-plan, stacked and flexible spaces, adapt to design processes, exhibitions and events, maximizing visual connections inwards and out, and exposing "behind the scenes" for open learning.

3 Graduate Center & Cultural Center: Minimally touching the site, a series of rooms provide spaces to learn, work, or sleep along a network of wooden decks that pixelate into the landscape. The enclosed pods are designed to be completely off-grid when not in use, while the floating platforms extend learning and dwelling spaces between inside and out.

Zoom-In / Zoom-Out Constructs

Two large models were built to socialize the final proof-of-concept designs. The "Zoom-Out" site model is designed to orient viewers to the overall plan for the mini campus and to illustrate cultural alignments. The "Zoom-In" construct is composed of four models on plinths. This assembly allows the individual models to be displayed together or separately supporting a variety of stakeholder discussions and fund-raising events.



Project Overview

Anatomy of a Collaboration

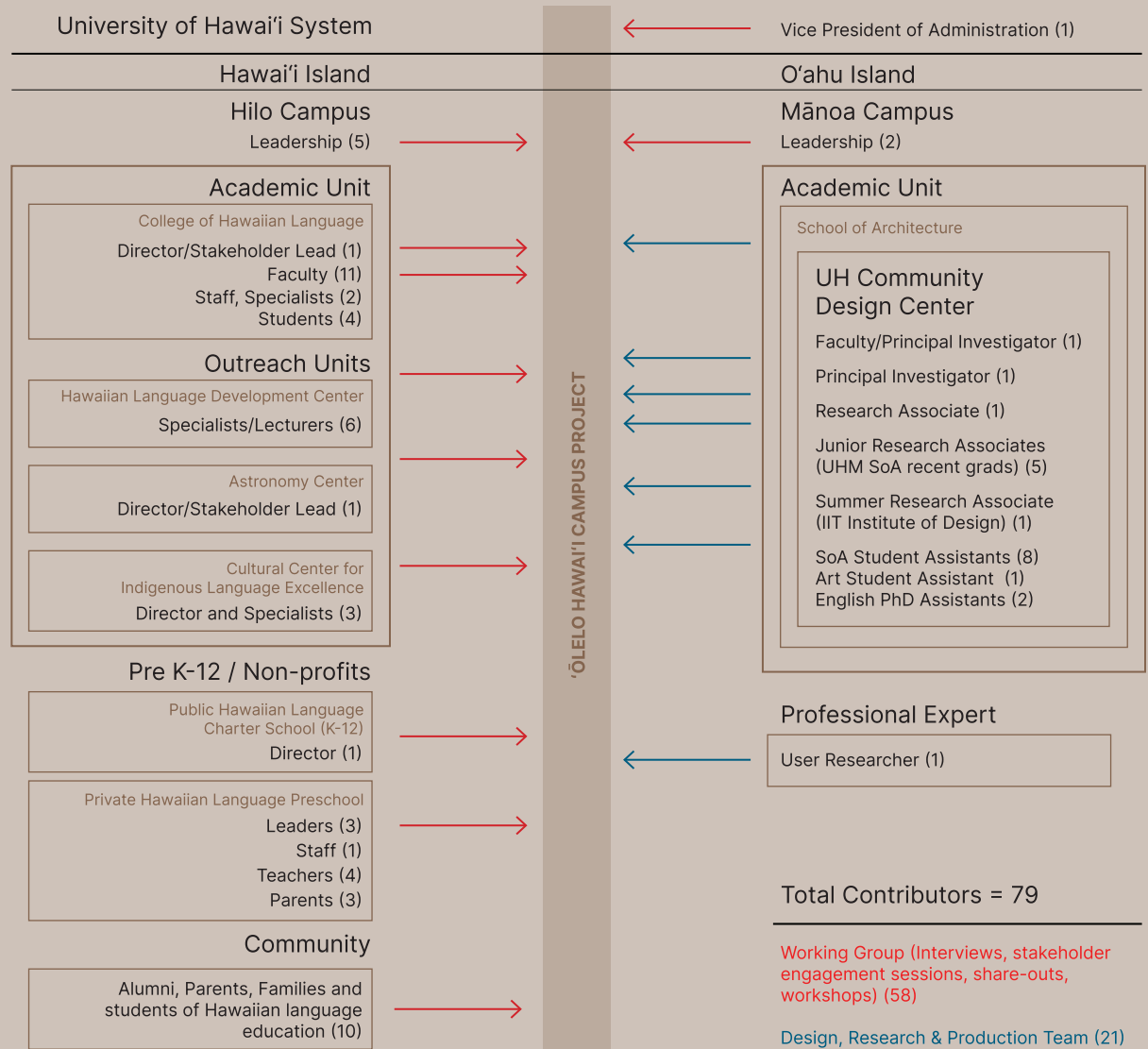
Conducted across three phases, this project kicked off in the Summer of 2020 (during the onset of the global pandemic), and was made possible by the collaboration of over 79 individuals, including client project leads Keiki Kawai'ae'a, Ph.D. (Interim Vice Chancellor for Academic Affairs at UH Hilo) and Ka'iu Kimura (Executive Director of 'Imiloa and Interim Director of Ka Haka 'Ula o Ke'elikolani).

A working group of 58+ leaders, faculty, staff, students and family members participated in interviews, stakeholder engagement sessions, share-outs, and design charrettes that contributed to the programming and strategic development of the project.

A Design-Research-Production team of 21 including faculty, researchers, professionals, and student assistants conducted the work through the community design center within the school of architecture.

Four discrete and interrelated efforts resulted, including the design of a master plan and the design of three buildings.

Funding for the study was secured by Kai'ali'i Kahele, the second Native Hawaiian to serve as a member of Congress representing Hawai'i since statehood. These funds were ultimately awarded to the university and are being managed by the University of Hawai'i's Vice President of Administration.



Project Title: 'Olelo Hawai'i Campus
Month/Year Completed: May 2023
Role of Nominee (in the project): Designers and Principal Investigators

Collaborators & Funding Sources Expenses: This project was conducted through the university community design center as a proof-of-concept, design-research effort for the university office of the vice-president with the financial support of pre-construction capital improvement funds.

Two principal investigators (a university researcher, and an architecture faculty) lead the work. Research associates and student assistants were involved in research/production efforts, including engagement efforts, visualization, modeling, animation, prototyping and web design.

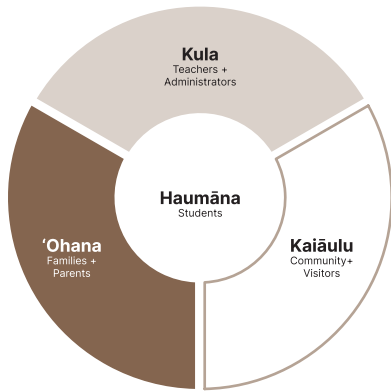
An expert consultant was paid for 390 hours to lead the initial foundational user research. All Design-Research-Production team members that contributed to this project were compensated.
Student Compensation: 12 undergraduate and graduate students contributed to this project as paid project assistants for 3,670 hours from 2020-2023.

Stakeholder Engagement

Foundational User Research

Interviews with ten user groups, totaling more than 50 participants, were conducted via Zoom during the global pandemic. Target participants included Students, Teachers & Administrators, and Parents & Families.

User Categories



Participant Groups

Group 1 - Leadership Interview

Directors (2)

Group 2 - Stakeholder Discussion

Program Coordinator, Projects Manager, Academic Programs Chair, Faculty, Graduate Faculty, PhD Alumni (8)

Group 3 - Curriculum Developers

Curriculum Developers, Program coordinators (5)

Group 4 - Curriculum Developers & Specialists

Curriculum Developers, Publications Coordinator, Information Technology, Website Specialists (6)

Group 5 - Staff & Coordinators

Curriculum Developers, Inventory, student staff, Fiscal Specialist (4)

Group 6 - Graduate Program

Graduate Programs Chair, Academic Programs Chair, Linguistics faculty, graduate faculty, International Outreach (8)

Group 7 - Staff & Coordinators

Student Coordinator, Staff/Chancellor Office (2)

Group 8 - Visitor Program

graduate student, program coordinator, communications, Interim Director, 'APL External Affairs, faculty, teacher (5)

Group 9 - International Students

PhD Alumni, New Zealand, Alaska, Toronto (4)

Group 10 - Hawai'i -Based Students

graduate student, M.A. Alumni, teacher, faculty, graduate student, PhD student, South Dakota (6)

Target Participants

"During parent nights they close the shelves so that it is not distracting for the children when the teachers and parents are speaking."

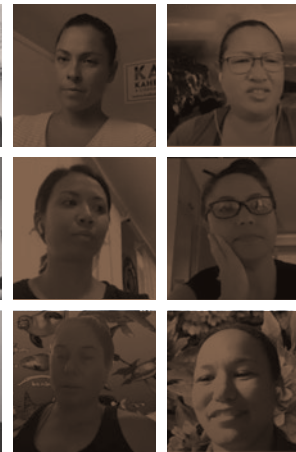
"If you could put your stuff away to the cubby before standing in line...A space for the kids to go when their not ready to enter to calm down...And a way to let the teachers know you are waiting outside, sometimes they are busy and don't notice you waiting at the door."

"...piko was wonderful.. to hear the chants and motivational words...for tours I loved to show our visitors the māla (garden), it was such a cool thing to show outsiders."

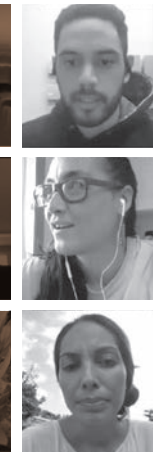
Administrators & Educators



Parents



Students



"What draws people to the school is the way things work... it serves as a model for language revitalization."

"Also logistically you need tables to eat so where the tables are is where they will eat. But during the learning time you bring the shelves by the tables so that the curriculum materials are close to the tables."

"The announcement board is right by the door (outside) that causes a lot of build up (very important, announcements are your life line sometimes)."

"We had to wait 30 years to get the building we have now...So when you put up a building like that it really makes a statement. A building would bring that generation of babies to that land (college)... it shows what we were doing this whole time, just in a visual way."

"Outdoor space is a concrete ground tented area. This area is used for piko, outdoor classrooms, and a play area."



Physical Planning

'Ōlelo Hawai'i Campus

Composed of a **collection of specifically different environments**, each facility is carefully tuned to its mission and program and is **supportive of the larger whole**. The assembly of unique structures frame a quadrangle of programmable open lawn that can host a wide variety of events.

Driving Question

How might our physical environments best support, forward, and embody an 'Ōlelo Hawai'i P-25 Cycle, while furthering our capacity as leaders in global indigenous language revitalization?

Key

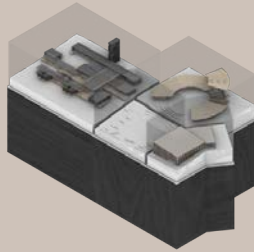
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|--|---|
| <p>1 Hale 'ōlelo*
Ka Haka 'Uia O Ke'elikōlani College of Hawaiian Language
Undergraduate (primary)</p> | <p>4 Pūnana Leo
'Aha Pūnana Leo
Preschool, Hi'ipēpē Infant Program</p> |
| <p>2 Hale Kuamo'o
Hawaiian Language Center</p> | <p>5 'Imiloa*
'Imiloa Astronomy Center
Pre K-12 grade programs</p> |
| <p>3 Graduate Center
& Mokuola Honua
Ka Haka 'Uia O Ke'elikōlani College of Hawaiian Language
Graduate & PhD (primary)
Global Center for Indigenous Language Excellence</p> | <p>6 Nāwahī*
Ke Kula 'o Nāwahīokalanip'ōpu'u Lab Public Charter School
K-12 Hawaiian-medium school</p> |

* Existing facility

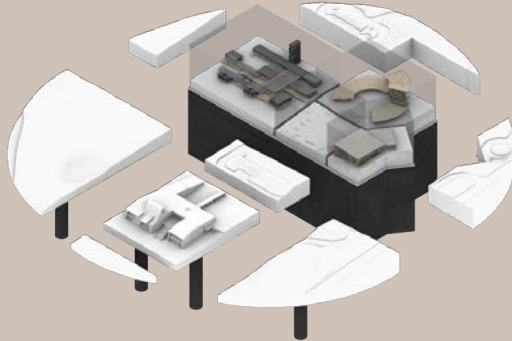


Exhibition Elements

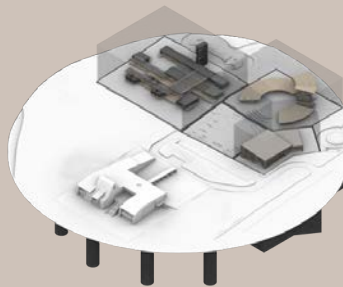
Two large constructs display all three buildings in the context of the surrounding topography and the immediately adjacent existing structures. Built for viewing first in Honolulu, O'ahu and then subsequently in Hilo, Hawai'i, they are designed for ease of crating and disassembly.



4 Individual Models
Plywood bases & acrylic vitrines for individual use/storage/protection



Lightweight Foam Clip-Ons
Smaller removable components for ease of storage/transport

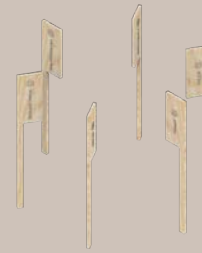


Zoom-In Model
Phases 2a, 2b, and 3 cluster
Focused on individual projects

Connected Island
Diameter 8-10"



Star Compass & Alignment Marker
Highlights Ma uka - Ma kai axis



Didactic flags
Plywood, conceal base seams



Foam site model
3'-10" diameter



CNC'd table top
Scalloped pattern etched into surface
Space for additional text/info



Curved plywood base
4'-10" diameter, 6 segments
for storage/transport



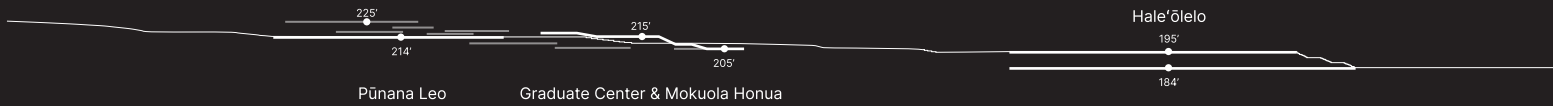
Plywood base
Inset base, 1" reveal for shadow line

Zoom-Out Model
Orientation device
Focused on Cultural Alignments





◀ 13,796' MAUNAKEA



Pūnana Leo Graduate Center & Mokuola Honua

Hale'ōlelo
195'
184'

HILO BAY ▶
• 0'

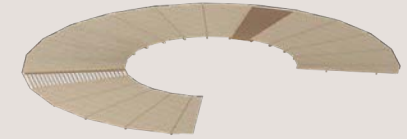
Pre-School

Pūnana Leo

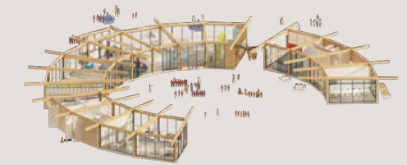
Housing 'Aha Pūnana Leo and the Hi'ipēpē Infant Program, the structure will be home to the Preschool system's main Hilo location. It is composed of classrooms, administrative and meeting spaces, a kitchen, and a laundry facility.



Glass canopy with embedded photovoltaics, provides shade for use in rain or shine



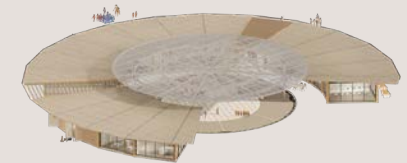
Standing seam metal roof with large overhangs



Mobile Planters can be moved between Learning Octants for flexible outdoor learning and playing



Central plaza organized by the Star Compass, dedicated space for structured piko and alignment protocols



Lānai Play: Large lānais, pergolas, and awnings provide access to play and learning spaces in all types of weather.



Ohana-Oriented: Classrooms open onto one another to accommodate teaching and community events, covered outdoor spaces allow for protected drop-offs, and generous maintenance rooms simplify self-directed make parent/community volunteering.

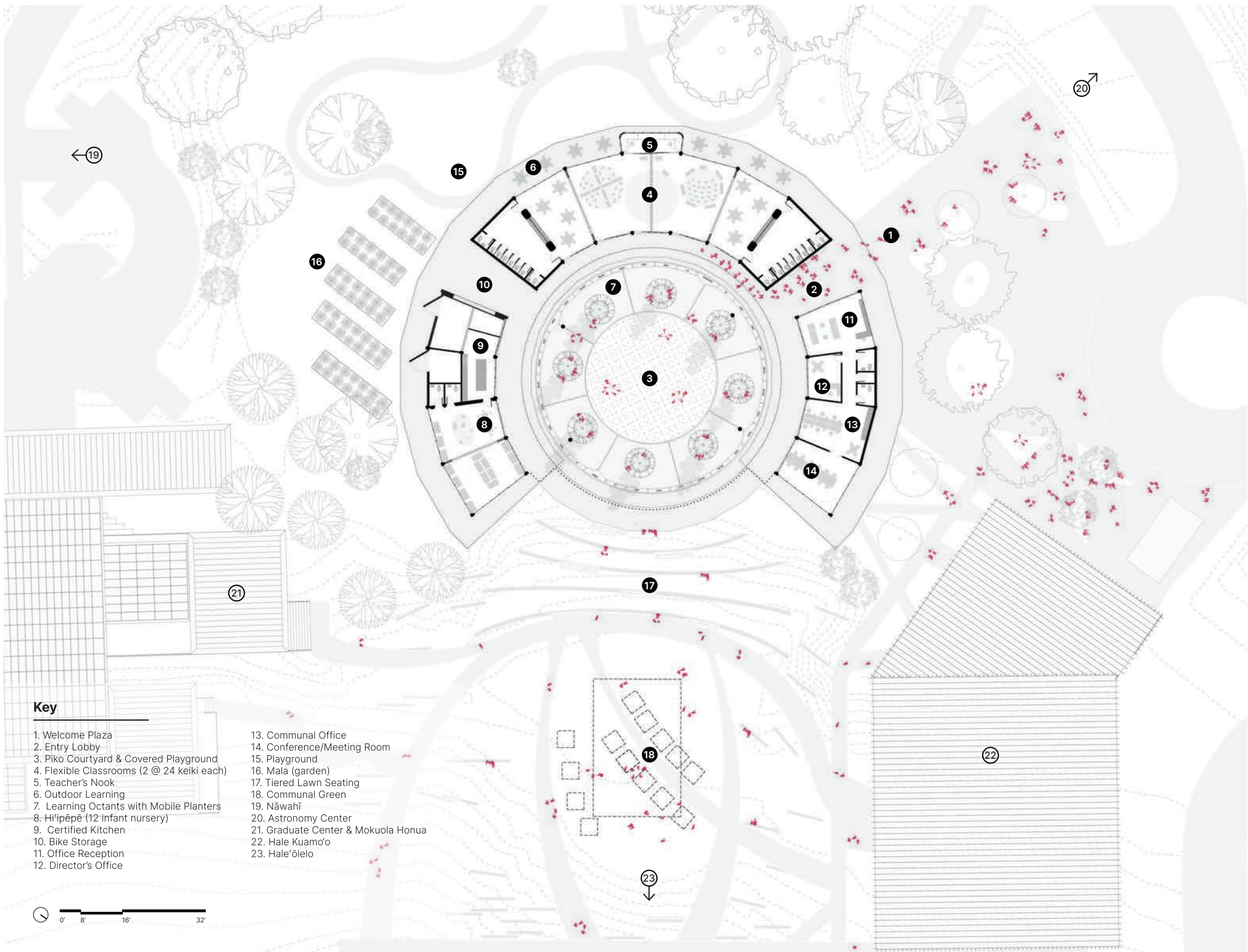


Safe Shape: The simple, shed roofed structure embraces a central, piko space that allows teachers, parents, and aides to keep an eye on the keiki from almost every space in the building.



'Āina-Connected: Classrooms have direct visual and physical connection to the outdoors, creating a sense of calm and providing for planned and spontaneous teaching moments.





Key

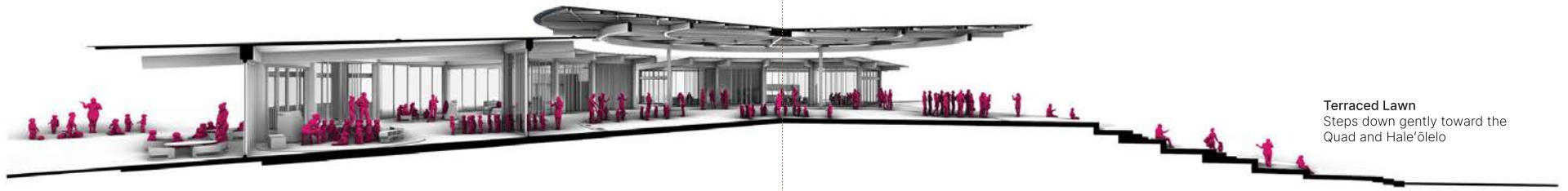
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| 1. Welcome Plaza | 13. Communal Office |
| 2. Entry Lobby | 14. Conference/Meeting Room |
| 3. Piko Courtyard & Covered Playground | 15. Playground |
| 4. Flexible Classrooms (2 @ 24 keiki each) | 16. Mala (garden) |
| 5. Teacher's Nook | 17. Tiered Lawn Seating |
| 6. Outdoor Learning | 18. Communal Green |
| 7. Learning Octants with Mobile Planters | 19. Nāwahī |
| 8. Hi'ipēpē (12 infant nursery) | 20. Astronomy Center |
| 9. Certified Kitchen | 21. Graduate Center & Mokuola Honua |
| 10. Bike Storage | 22. Hale Kuamo'o |
| 11. Office Reception | 23. Hale'ōlelo |
| 12. Director's Office | |





Simple Shed Roof with Deep Overhangs
Standing seam metal roof and cross-laminated timber structure provide cover from the rain and sun.

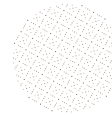
Transparent Photovoltaic Canopy
Structural system reflects logic of Star Compass and provides space for outdoor classroom, recreational, and community activities.



Terraced Lawn
Steps down gently toward the Quad and Hale'ōlelo

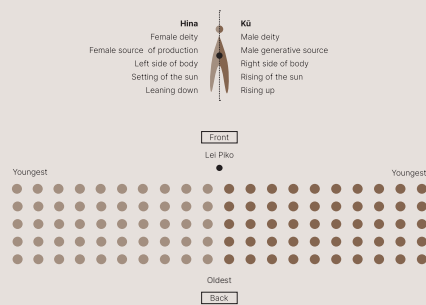
Flexible Classrooms
Can be joined together for group activities and can open directly outdoors, onto the courtyard, playground or mala.

Protected Courtyard
A protected courtyard embraces the central piko. Bounded by the thirty-two houses of the Star Compass, the space serves as a focal point for the entire 'Ōlelo Hawai'i Campus.



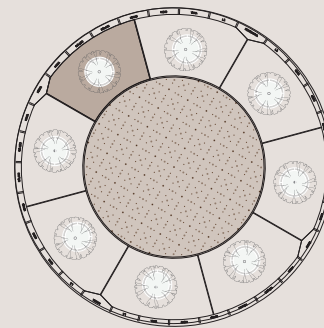
Piko Grid
Canopy-covered courtyard as focal, dedicated space for protocol. A system of points organized into overlapping grids, spaced at 2' and 3' intervals, order the space for protocol. Sized for keiki and adults, the Piko Grid is aligned with the Star Compass.

Centering the Learner
The courtyard piko aligns the learning process with land, sea, stars, and ancestral knowledge. Marking the origin point of the education journey, the preschool is surrounded and supported by generations of learners and educators.

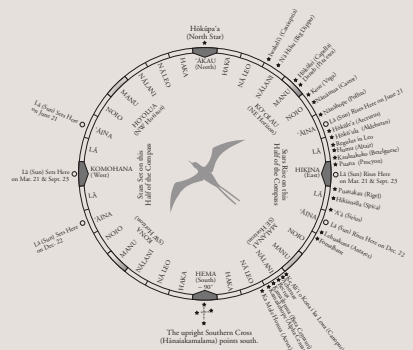


Piko: Protocols & Alignment Framework

Source: Naturalizing Rituals of Behavior that Rally Hawaiian Cultural Competence at Nāwahioalaniōpū Honua. Kamanā, Kauaē



Courtyard: Mobile Planters can be moved between Learning Octants for flexible outdoor learning and playing



Star Compass: Foundational framework for navigation

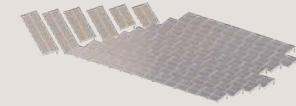
Source: Polynesian Voyaging Society website. Thompson, Nainoa.



Production Facility

Hale Kuamo'ō

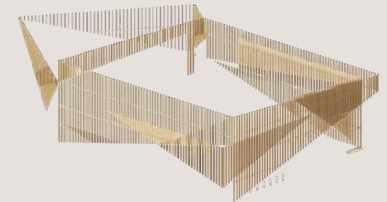
Operating as a teaching practice, students workers will learn alongside professional graphic designers, specialized researchers, curriculum designers, audio/sound/video experts, and language specialists to build the next generation of Hawaiian language education.



Photovoltaic array



Standing seam metal roof with large overhangs



Aluminum, vertical fins provide shading and protection from wind and rain



Split level plan navigates grade change and permits multiple access points for different user groups



Full Cycle: The research-development-production-distribution cycle is supported by a series of stacked and easily accessible spaces.



Design-Led A collaborative studio environment sits on the top floor. The open plan allows for responsive mentorship between staff and students while highlighting the multi-disciplinary nature of the work.



In Process: A flexible, second floor gallery/event/exhibition space, invites inhabitants and guests to see behind the scenes.

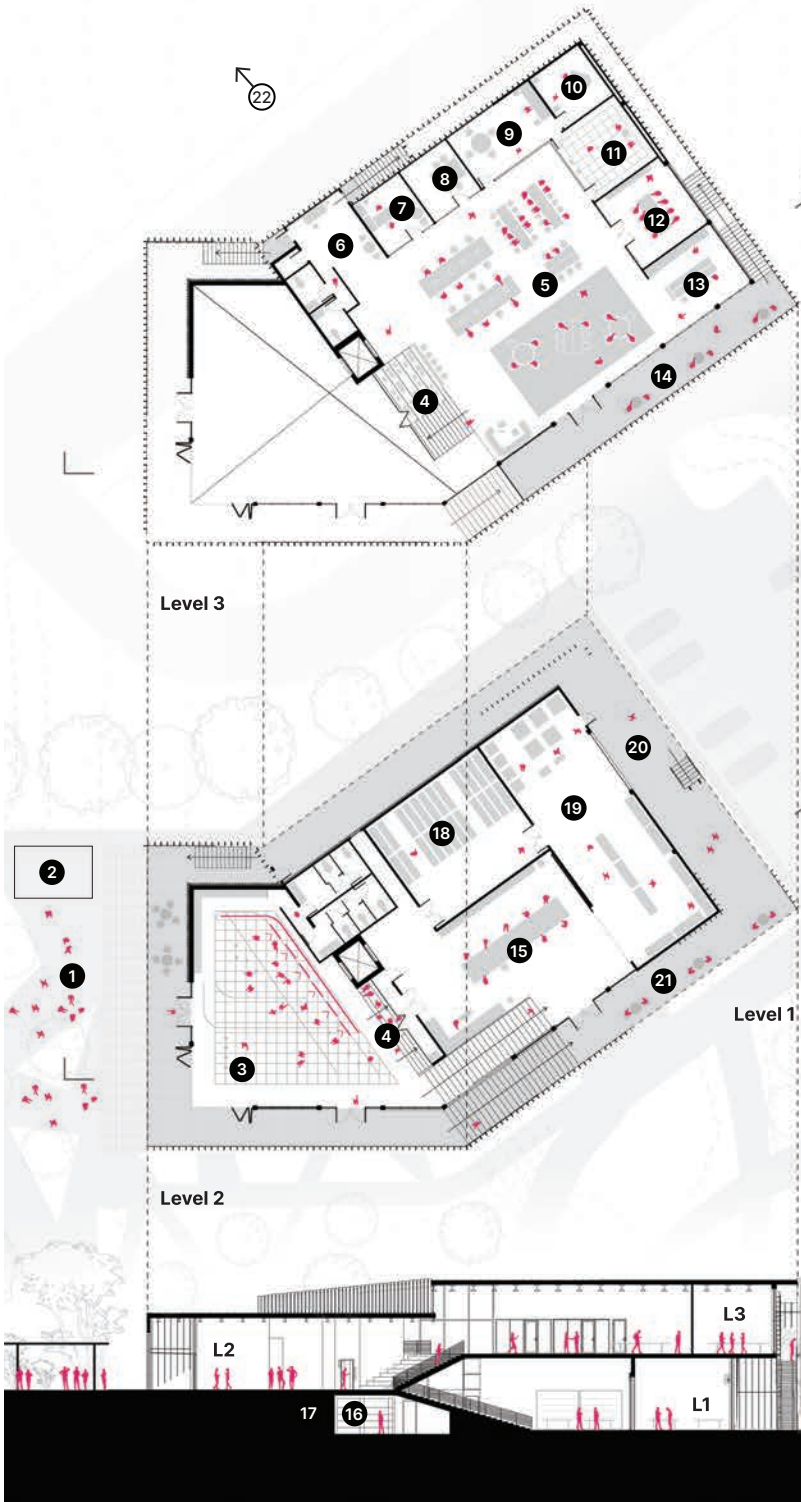
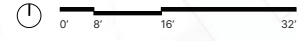


Mixed Media: The facility supports traditional print-based work and accommodates settings for increasing efforts for video-based work and digital development.



Key

- 1. Welcome Plaza with Seating Berms
- 2. Covered Performance Pavilion
- 3. Exhibit Lobby
- 4. Bleacher & Open Stair
- 5. Design Studio
- 6. Breakout Space
- 7. Director's Office
- 8. Small Conference Room
- 9. Audio Mixing
- 10. Audio Studio
- 11. Video Green Screen
- 12. Large Conference Room
- 13. Communal Kitchen
- 14. Covered Lanai
- 15. Print Lab
- 16. Storage
- 17. Mechanical Room
- 18. Archive
- 19. Warehouse
- 20. Loading Dock
- 21. Covered Lanai
- 22. 'Imiloa
- 23. College of Hawaiian Language
- 24. Nāwahi
- 25. Communal Green
- 26. Pūnana Leo, Graduate Center & Mokuola Honua

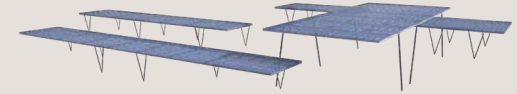




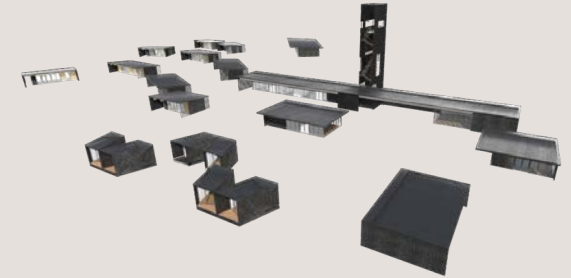
Grad / Ph.D / Outreach

Graduate Center & Mokuola Honua

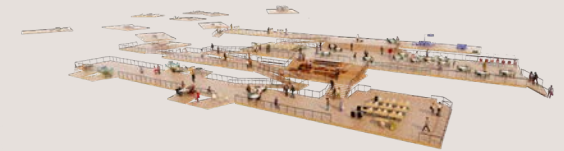
This structure houses the Graduate and Ph.D programs for the Ka Haka 'Ula O Ke'elikōlani College of Hawaiian Language, as well as the Mokuola Honua cultural center. It is composed of a visitor center, lanai, kitchen and cafe, learning and research facilities, as well as short and long term housing.



Glass canopy with embedded photovoltaics, provides shade for use in rain or shine



Lightweight pavilions with individual HVAC units and electrical shutoffs, reduces energy use



Acetylated wood deck follows topography, reducing site disturbance, naturally termite and rot resistant



System of ground trusses and minimal concrete piers, reduces disruption to underground lava tubes



Light Touch: Minimal excavation for the simple pier system reduces disruption to the soil, while allowing the natural flow of water through the ecosystem.



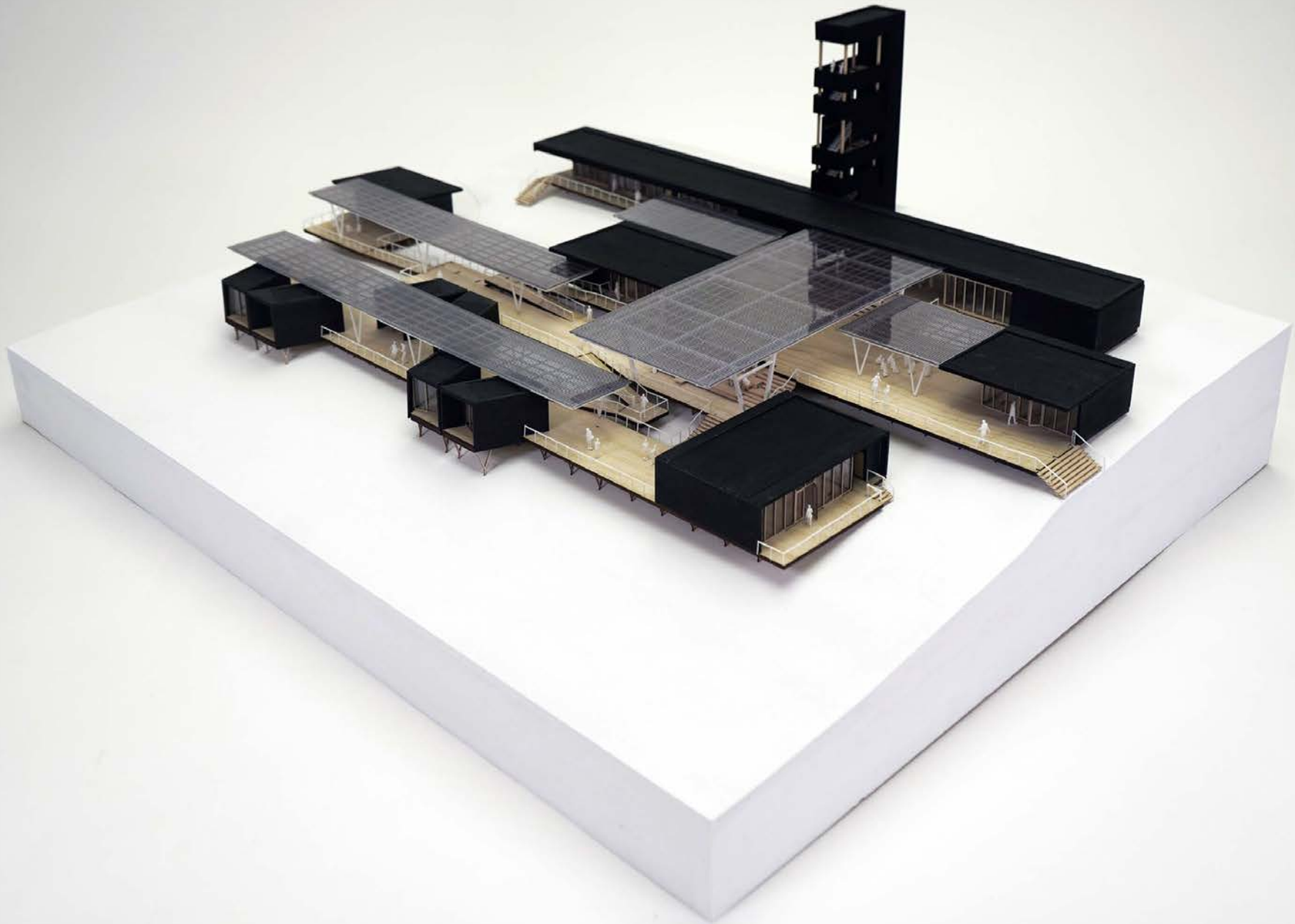
Open Platform: Decks, floating on prefabricated trusses, step down the hillside following the existing topography. Lightweight structures, sitting on and adjacent to the deck system, are connected by photovoltaic awnings



Global View: A viewing tower invites visitors up to witness views of the larger landscape while a ground level visitor center shares information about indigenous language and culture.



Radically Responsible: Classrooms, work pods, and short-term housing are designed to be taken offline when not in use, eliminating the waste of energy for air conditioning and "vampire load" at receptacles and other electric devices.



Key

- 1. Welcome Plaza
- 2. Covered Entry Lobby
- 3. Visitor Center
- 4. Event Lanai
- 5. Observation Tower
- 6. Offices & Restrooms
- 7. Classroom
- 8. Dining Lanai
- 9. Communal Kitchen / Cafe
- 10. Guest Suite (1 Bed, Accessible)
- 11. Study Pods / Breakout Rooms
- 12. Class Lab
- 13. Guest Suites (1 & 2 Bed)
- 14. Bunkhouse (24 Beds)
- 15. 'Imiloa
- 16. Pūnana Leo
- 17. Hale Kuamo'o
- 18. Communal Green
- 19. Hale'ōlelo
- 20. Nāwahi

