ARCHITECTURE PORTFOLIO

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2019-2023

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Included in this document is a collection of my University of Oregon coursework from 2019-2023. The selected works demonstrate a variety of project types with different goals and parameters. Projects that were a group effort are clearly identified as such and the graphics and information presented in this document are only elements of these projects in which I had a major role or developed independently.

CONNOR PATRICK

ASSOC. AIA

SELECTED DESIGN STUDIOS

FOCUSED SAMPLES

DETAIL DRAWINGS

GLENWOOD GROVE

TERMINAL DESIGN STUDIO, WINTER-SPRING 2023

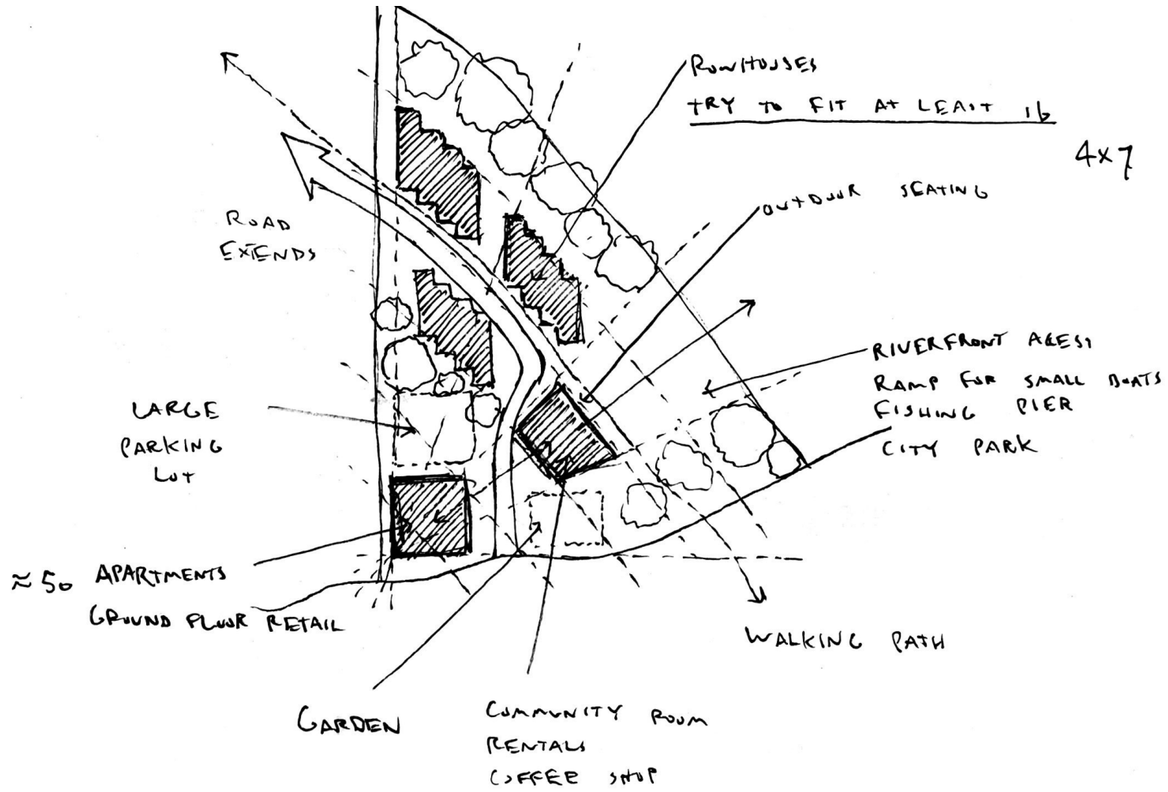
Individual Project, Instructor: Clay Neal
Media: Revit, Lumion, Adobe

DESIGN INTENT

Glenwood Grove is a mixed-use housing development in Springfield, OR. The goal of the studio was to transform an infill site into a thriving place to live, work, and visit. The site selected is a plot of four vacant lots in the suburban neighborhood of Glenwood. While the North side of the Willamette river is home to an expansive network of paths and recreational river access, the South side is comprised of dilapidated industrial buildings blocking views and access to the river.

The Glenwood Grove complex bridges the gap between the serene river and the bustling thoroughfare of Franklin Blvd. by providing much needed housing, a place for the community to gather, and an extension of the vibrant riverfront park that graces the North riverbank. The development will allow a variety of living arrangement options, ranging from small studio apartment units to rowhouse units large enough to accommodate a family of four.

SITE DESIGN



1. Mixed-Use Apartment

5-over-1 podium building featuring commercial storefront space as well as resident amenities and administrative space on the ground floor.

2. Community Center

On the riverfront side of the street is the Community Center, with a coffee shop for passerby and park patrons, as well as an open event space.

3. Resident Park

Adjacent to the resident parking lot and equidistant from the apartment building and rowhouse units is an outdoor space intended for resident recreation.

4. Rowhouse Units

Arranged in clusters of four are the rowhouse units, intended for compact family-oriented suburban living.

EFFICIENT LIVING

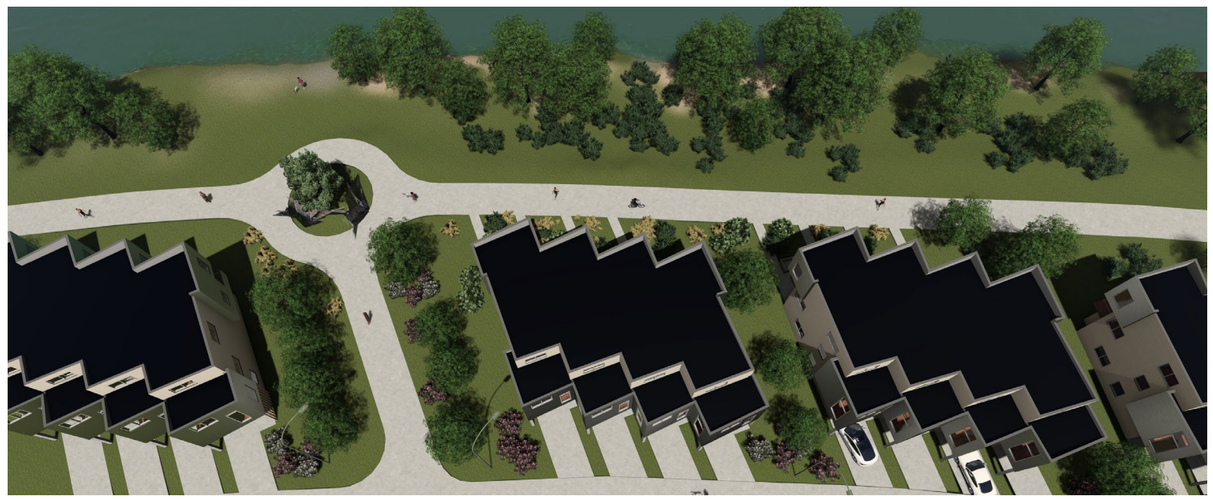
Occupying only 500 sq ft of land apiece, the rowhouse units produces a dense, yet comfortable living situation, perfect for families. The units are oriented to maximize sunlight and utilize cross and stack ventilation to reduce the need for mechanical heating and cooling. Ductless mini-split units further minimize utility costs and environmental impact.

COMMUNITY DEVELOPMENT

The centrally located Community Center offers amenities for residents and visitors alike. The event space contains an adaptable location for meetings, performances and other gatherings. The program also includes a community-operated general store with coffee and snacks, as well as fishing supplies and other recreational goods.

ENGAGING EXTERIORS

A variety of building types are integrated through a network of walking paths, connecting program elements to each other and the surrounding community. A portion of the riverfront that currently has no public river access is transformed into a park that will become a landmark of safety and serenity as the riverfront becomes urbanized over time.



MIXED-USE APARTMENT

GROUND FLOOR PROGRAM

- **Commercial**
  - 2900 sq ft of leasable commercial space
  - Designed to support a restaurant and retail shop
- **Service**
  - Staff office, custodial and trash, mechanical and plumbing, kitchen, storage
- **Resident Amenities**
  - Gym and locker rooms
  - Lobby with seating for 14 and a game table
  - Bicycle storage

UNIT LAYOUT

Upper floors each have small supplementary custodial and mechanical rooms and are supported by a ductless heat-pump VRF heating and cooling system and a tank water heater for each floor. Each floor also has a laundry room with washer and dryer machines with an adjacent lounge area.

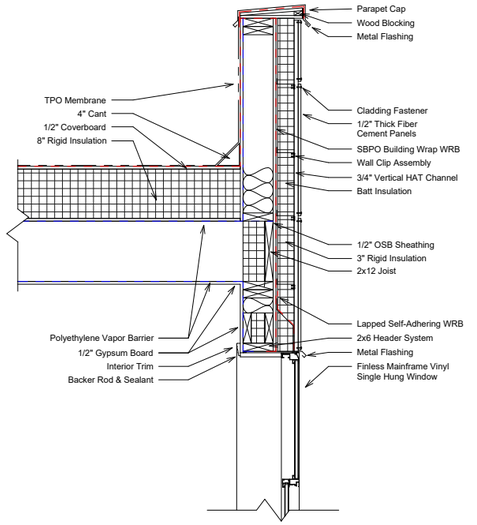
Three unit layouts make up the 71 units, including five accessible units, exceeding the minimum building code requirement of 2% of total units. Double elevator shaft and main stair are centrally located and all dead-end corridors are less than 50 feet from fire exits, per code requirements.

ADA compliant wheelchair turning radius in kitchen, bathroom, and bedroom. Widened door frames, extra large shower with handle, easy bedroom and living room access, located close to elevator

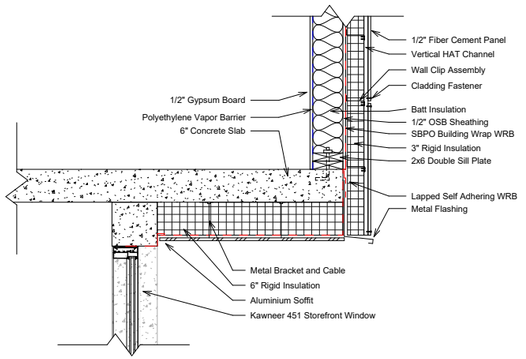
Studio
- *450 sq ft*
- *39 units*

One-Bedroom
- *580 sq ft*
- *27 units*

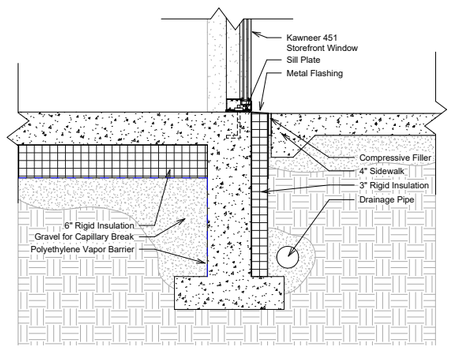
Accessible
- *600 sq ft*
- *5 units*



① Header & Parapet
1" = 1'-0"



② Podium Overhang
1" = 1'-0"



③ Footer & Sidewalk
1" = 1'-0"

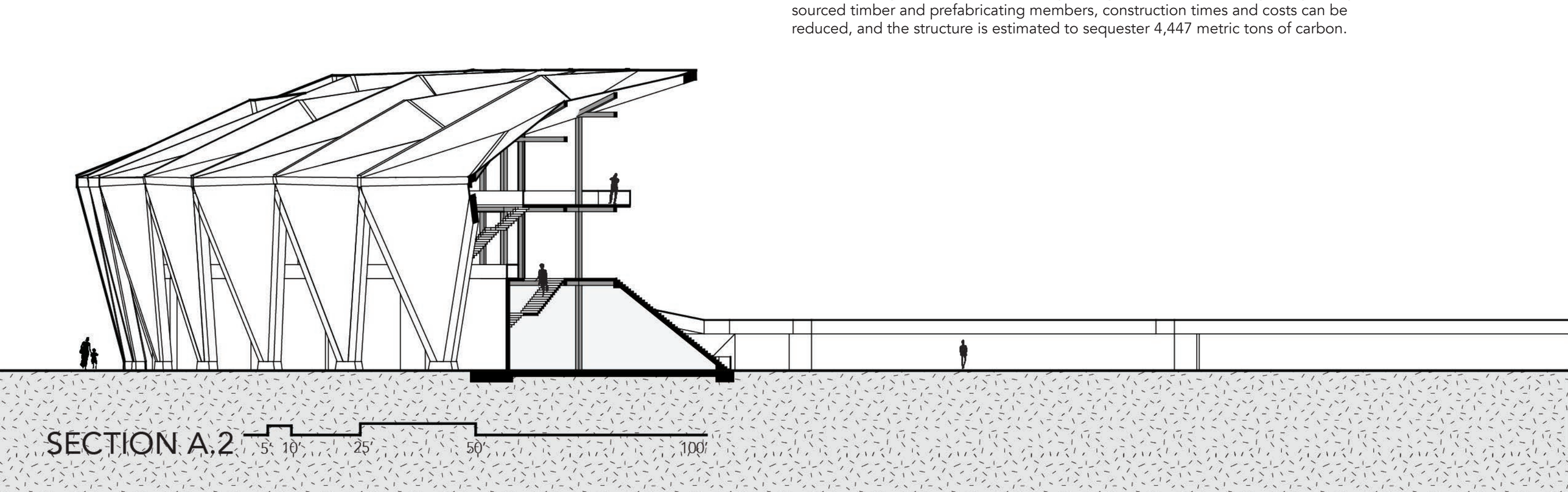
EMERALDS BALLPARK

DESIGN STUDIO, FALL 2022

Group Project, Instructor: Judith Sheine
Media: Rhinoceros, Lumion, Adobe, Physical Models

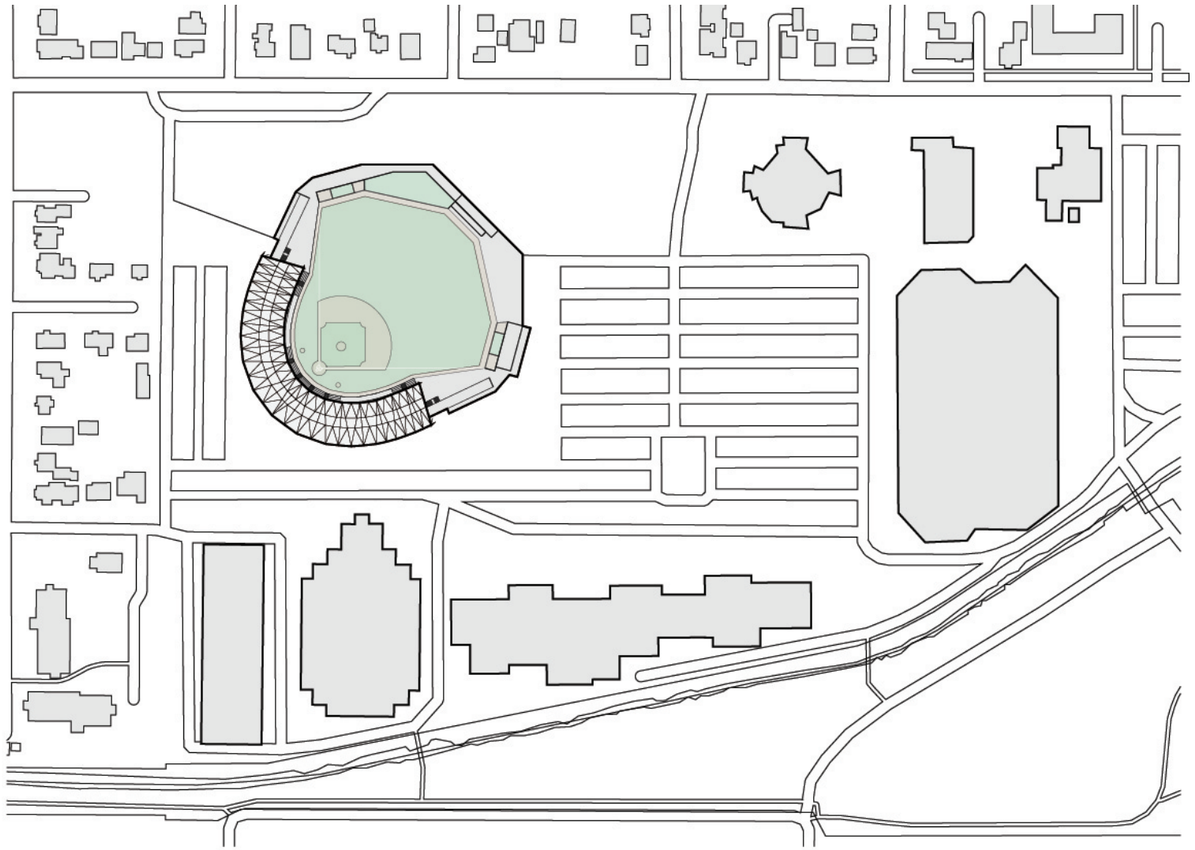
DESIGN INTENT

After meeting with team officials and representatives from the City of Eugene and Lane County, this proposal was developed for a multi-use facility to house the team along with other local teams and events. Along with programmatic elements, a significant requirement of the project was to use a mass timber structure. This is a testament to Oregon's rich logging history and the increasing potential for mass-timber buildings to be sustainable, long-lasting, and cost-efficient. By using locally sourced timber and prefabricating members, construction times and costs can be reduced, and the structure is estimated to sequester 4,447 metric tons of carbon.

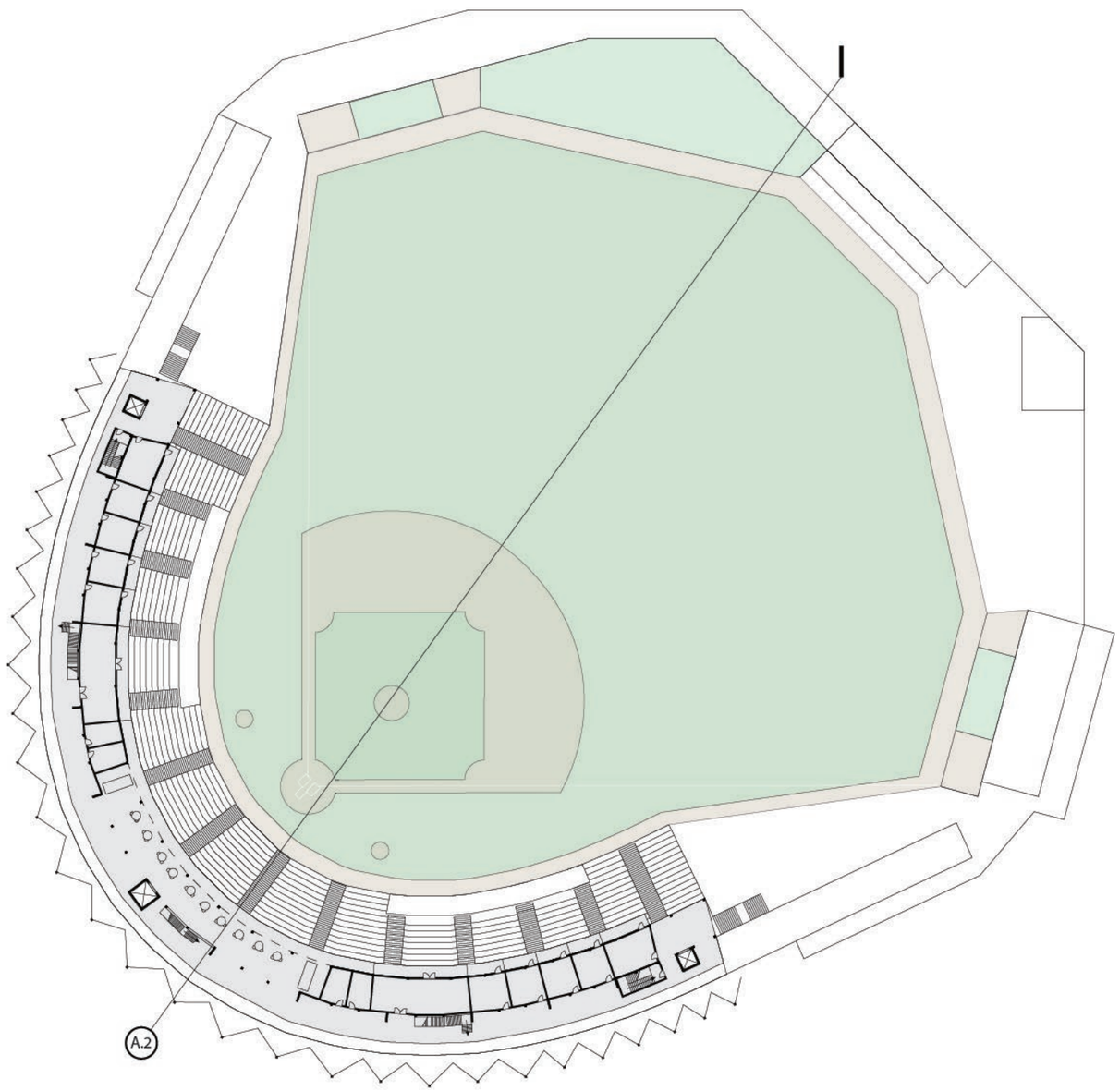


NEIGHBORHOOD CONTEXT

The stadium is carefully situated in a Northeast orientation to minimize obstructive shadows on the playing surface and mitigate traffic and noise for the surrounding suburban community. Beyond the outfield wall, a vegetated park is open to the public and acts as a subtle barrier for the homes across the street. The roof profile slopes down to better integrate the building with its low-rise residential neighbors.



N SITE PLAN 100′ 250′ 500′ 1000′

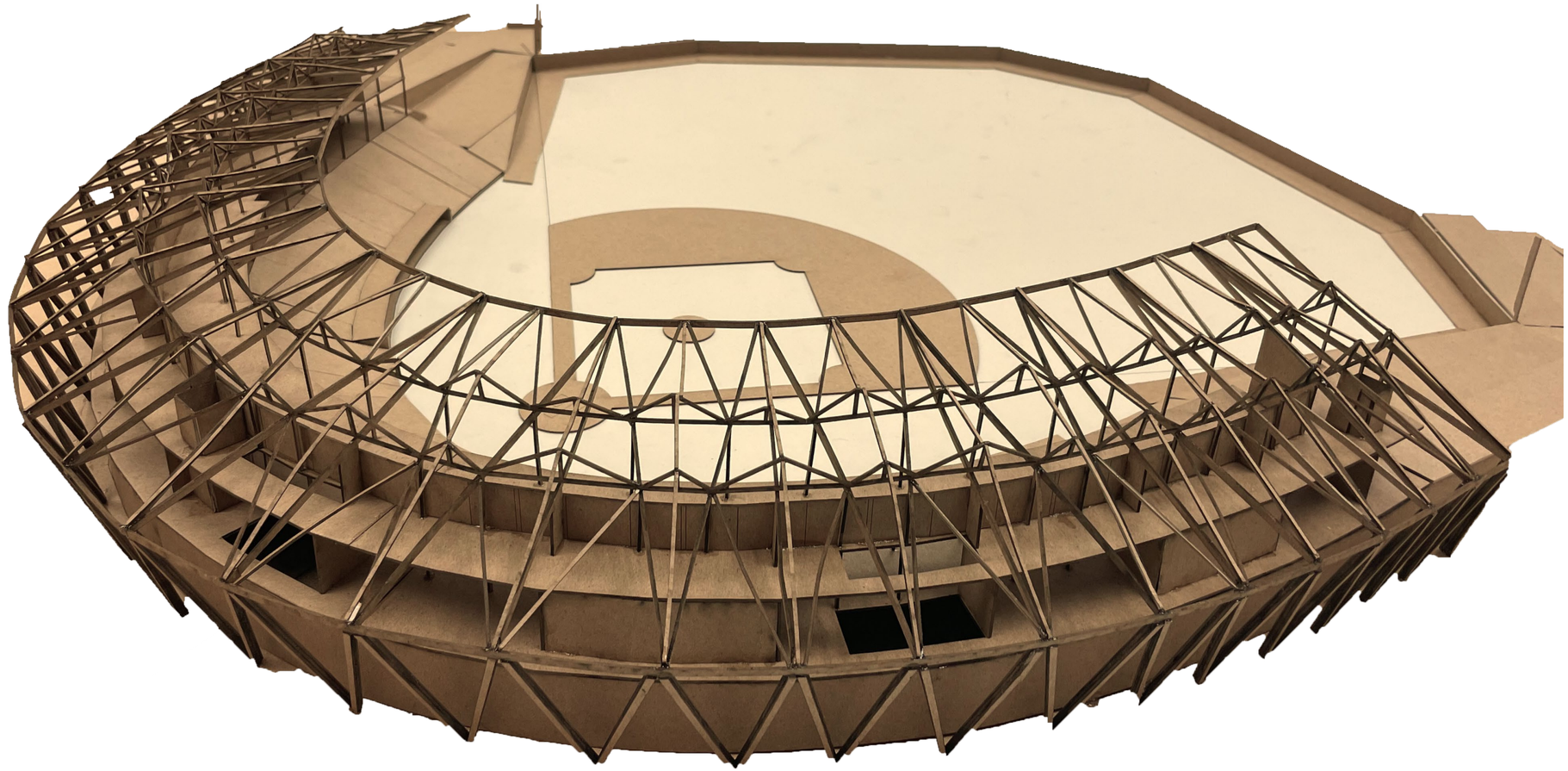


N SUITE LEVEL FLOOR PLAN

10′ 25′ 50′ 100′ 200′

FLEXIBLE FLOOR PLANS

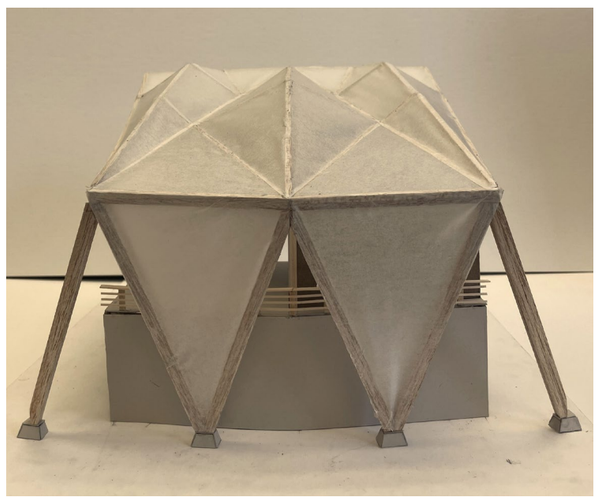
The suite level features 10 private suites, enclosed boxes for press and scoreboard and PA operators, as well as a centrally located open “party deck”, as per request of team management. This space is intended to be used as open seating or standing room during games to provide a social atmosphere and some of the best views of the field. The lack of permanent walls in this area also allow it to be reconfigured to host special events.

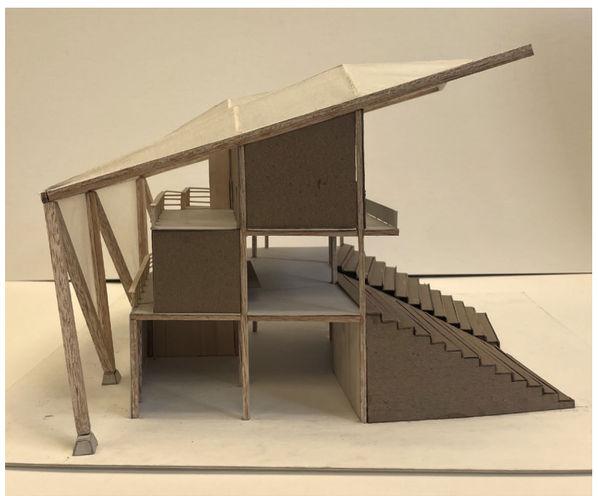


EXPRESSIVE STRUCTURE

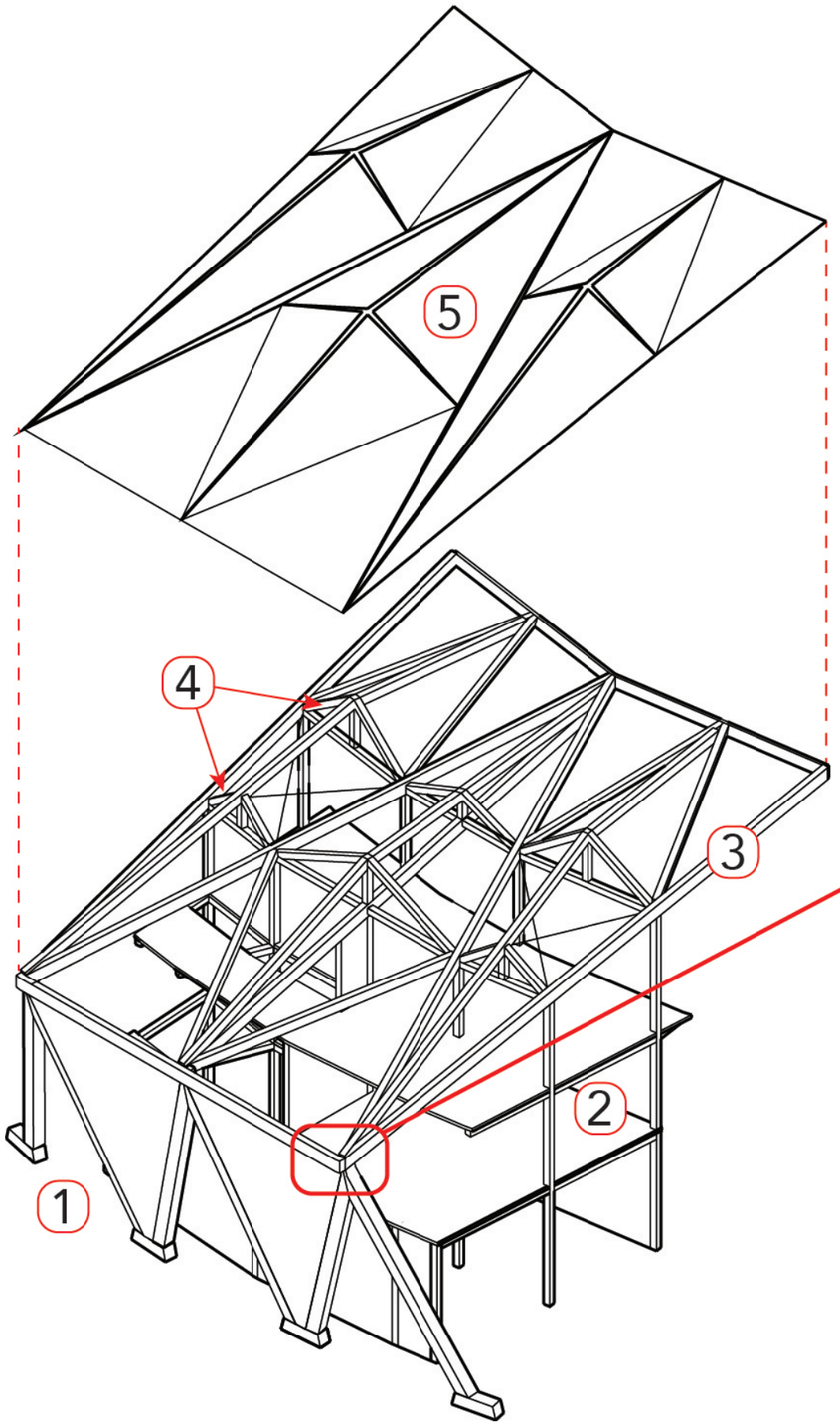
The Emeralds team name is derived from the extensive greenery in the Pacific Northwest, which is paid tribute by the timber structure. A new emerald motif is introduced with a roof form inspired by cut gemstones, providing a “jewel” for the City of Eugene.

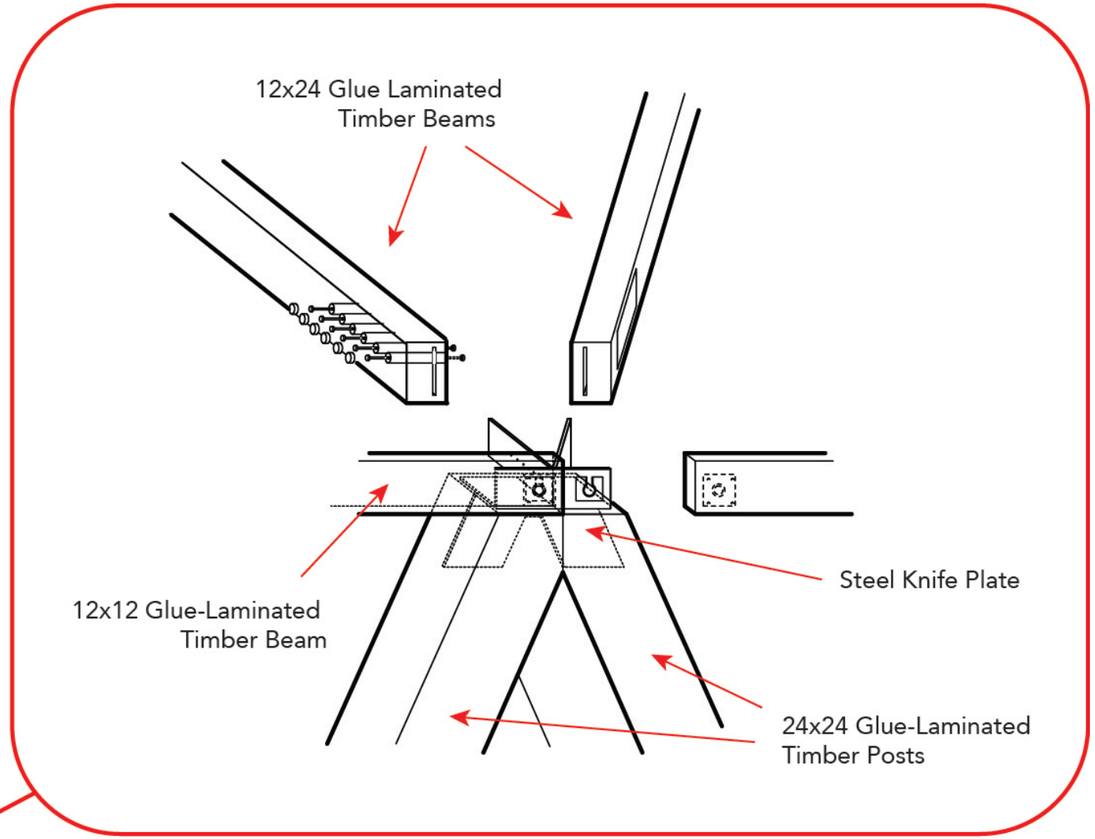
Pictured are a 1/32”=1’ model of the entire stadium and a 1/8”=1’ model of one structural bay, revealing the texture of the roof form and relationship with the playing surface, as well as circulation and ingress/egress locations.





STRUCTURAL ASSEMBLY





1. Angled Glue-Laminated Timber Columns
Laterally braces roof members, partially sheathed in ETFE for weather protection

2. CLT-Concrete Composite Floor Plates
Prefabricated floor plates to maximize construction efficiency and improve seismic performance, fire rating and acoustics

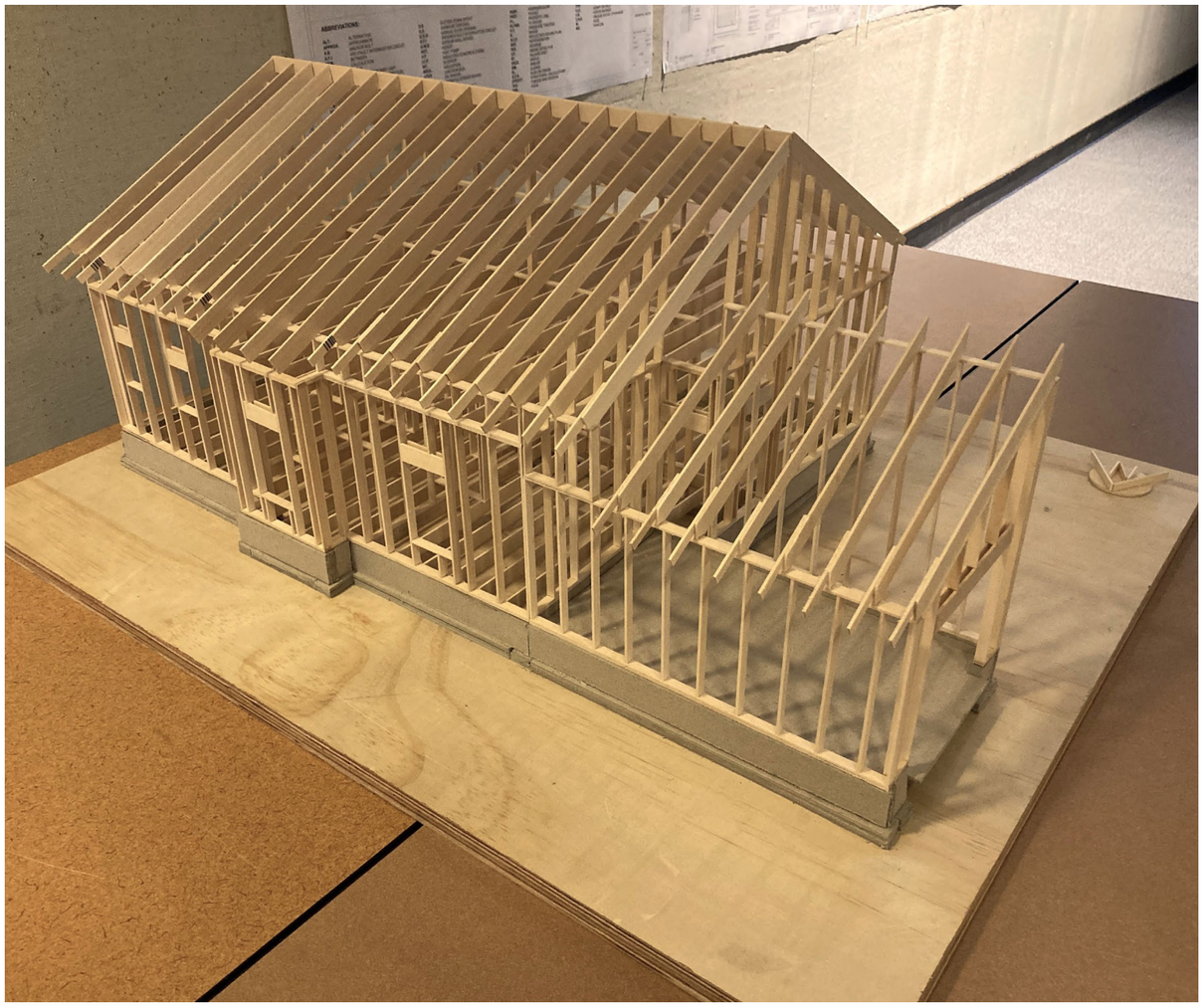
3. Cantilevered Glu-Lam Grandstand Roof
Roof framing composed of heavy timber members up to 50', with a maximum overhang of 30'

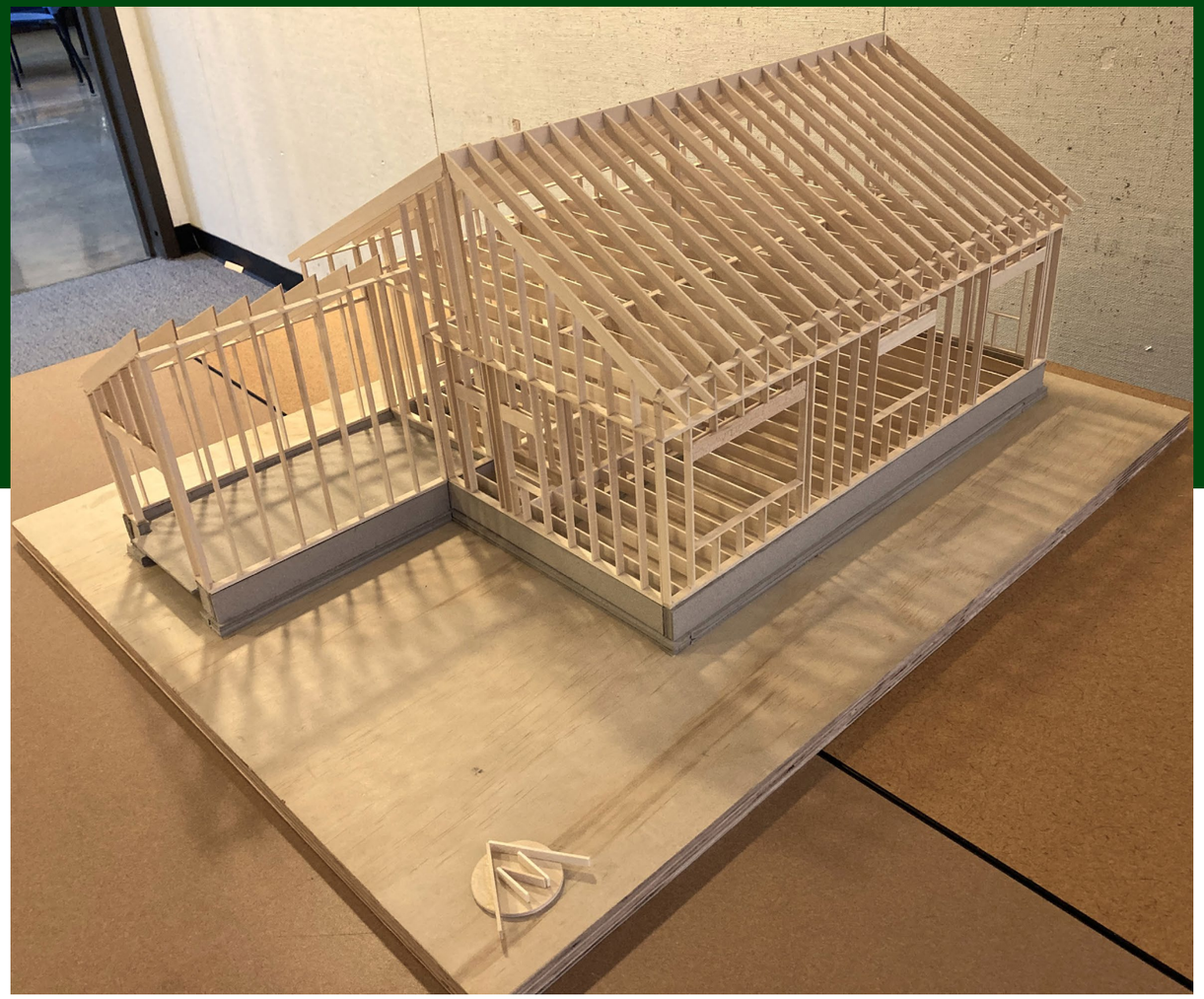
4. King Post Trusses
Transfers roof load to structural columns and provides framework for geometric roof design

5. ETFE Canopy
Weather-resistant and self cleaning, EFTE also allows diffused sunlight to pass through, enabling the natural grass growth on the playing surface

FOCUSED SAMPLES

Work samples in this section demonstrate specific skills by showcasing smaller parts of larger projects. Elements such as media skills, understanding structure and enclosures, and developing unique conceptual ideas are documented here.

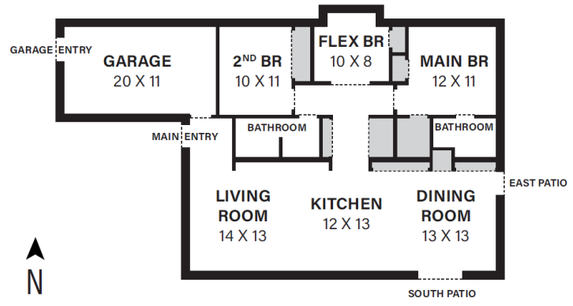


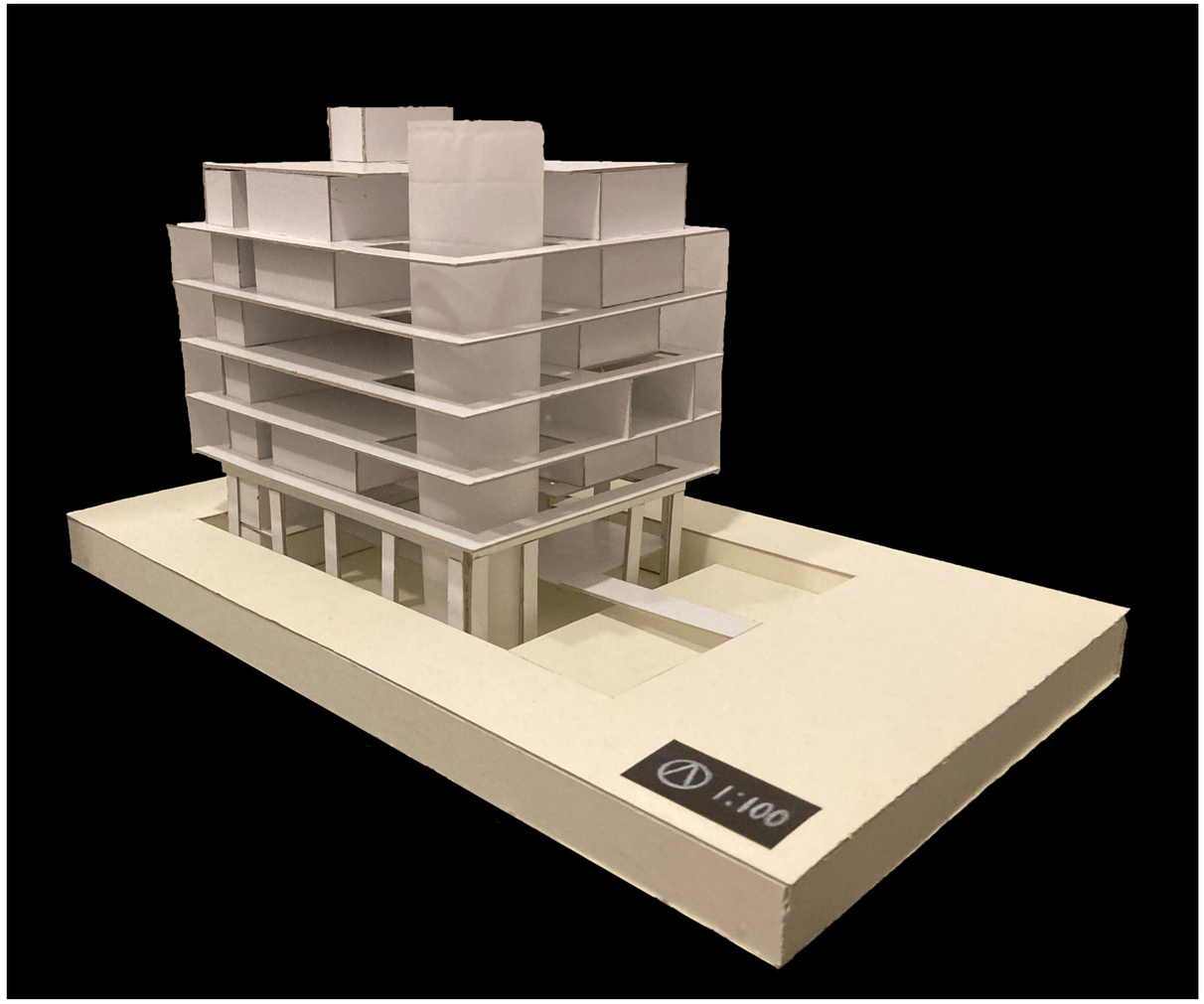


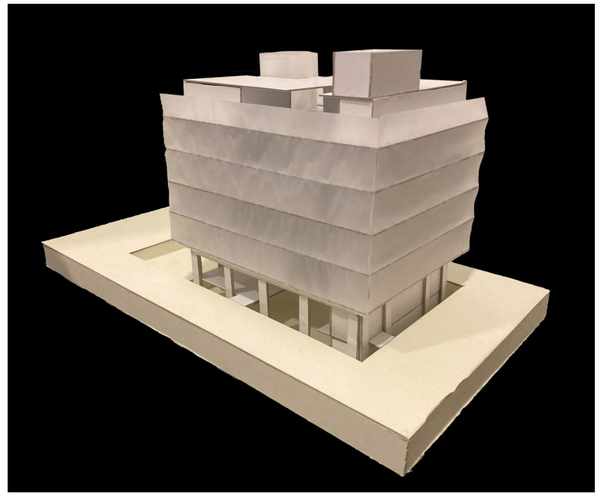
OREGON BILDS HOUSE #6

A collaborative effort of a class of 16 students, Oregon BILDS is a University of Oregon program to build real affordable family housing to be purchased by a family in need. BILDS Houses 1-5 are constructed and occupied, while House 6 remains in progress.

The final project required a detailed scale model of the home's advanced light-wood frame at 1/2"=1'. The model is complete with foundation stem walls and hanger floor joists, header and sill plates, complete window framing with cripple studs, and interior walls and door-frames.



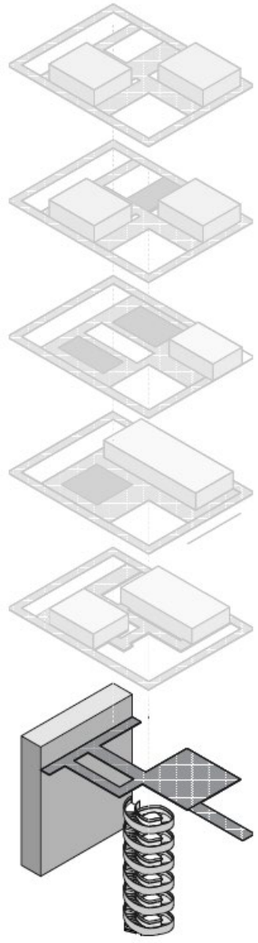


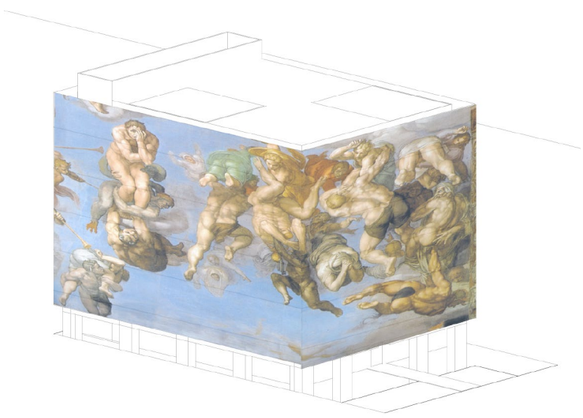


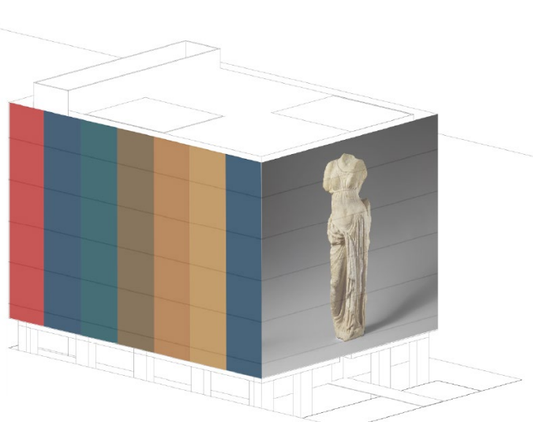
PETRA ACADEMY

Part of a study abroad trip to Rome, Italy, the Petra Academy is an urban school to train master stone-carvers. A once prolific skill apparent in the numerous architectural landmarks in Rome, much of the aging city is in need of delicate repair.

The Petra Academy's translucent double-skin facade aims to provide a muted and modern take on the typical urban Roman building, so as to not infringe on the grandeur of the neighboring Chiesa di San Salvatore in Lauro. On different occasions, the skin acts as a projector screen for film, art, or simply an imitation of the standard facade of its neighbors.



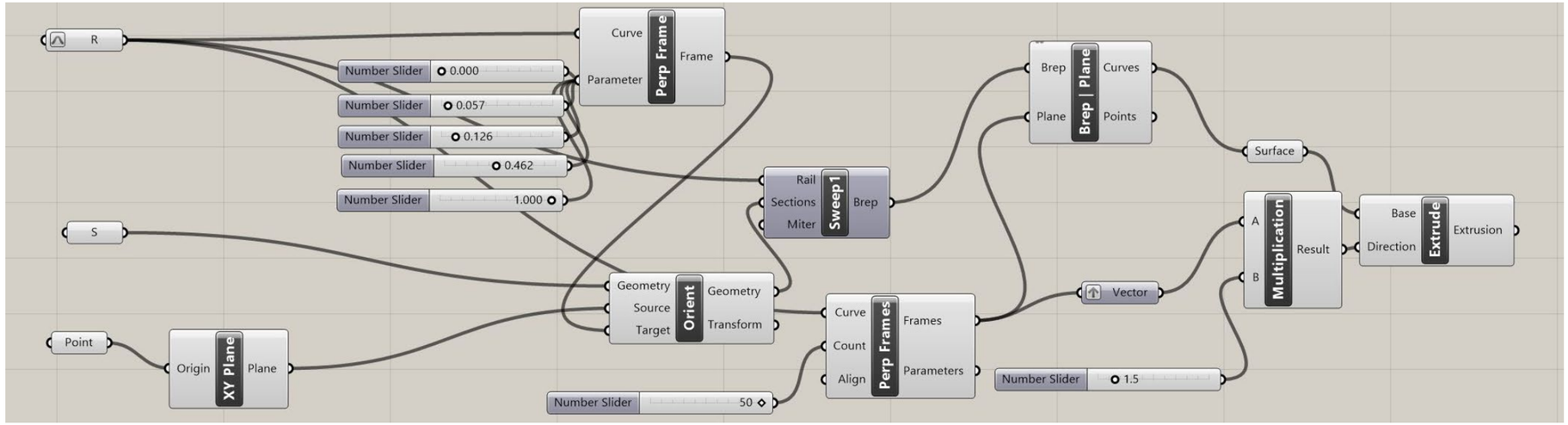


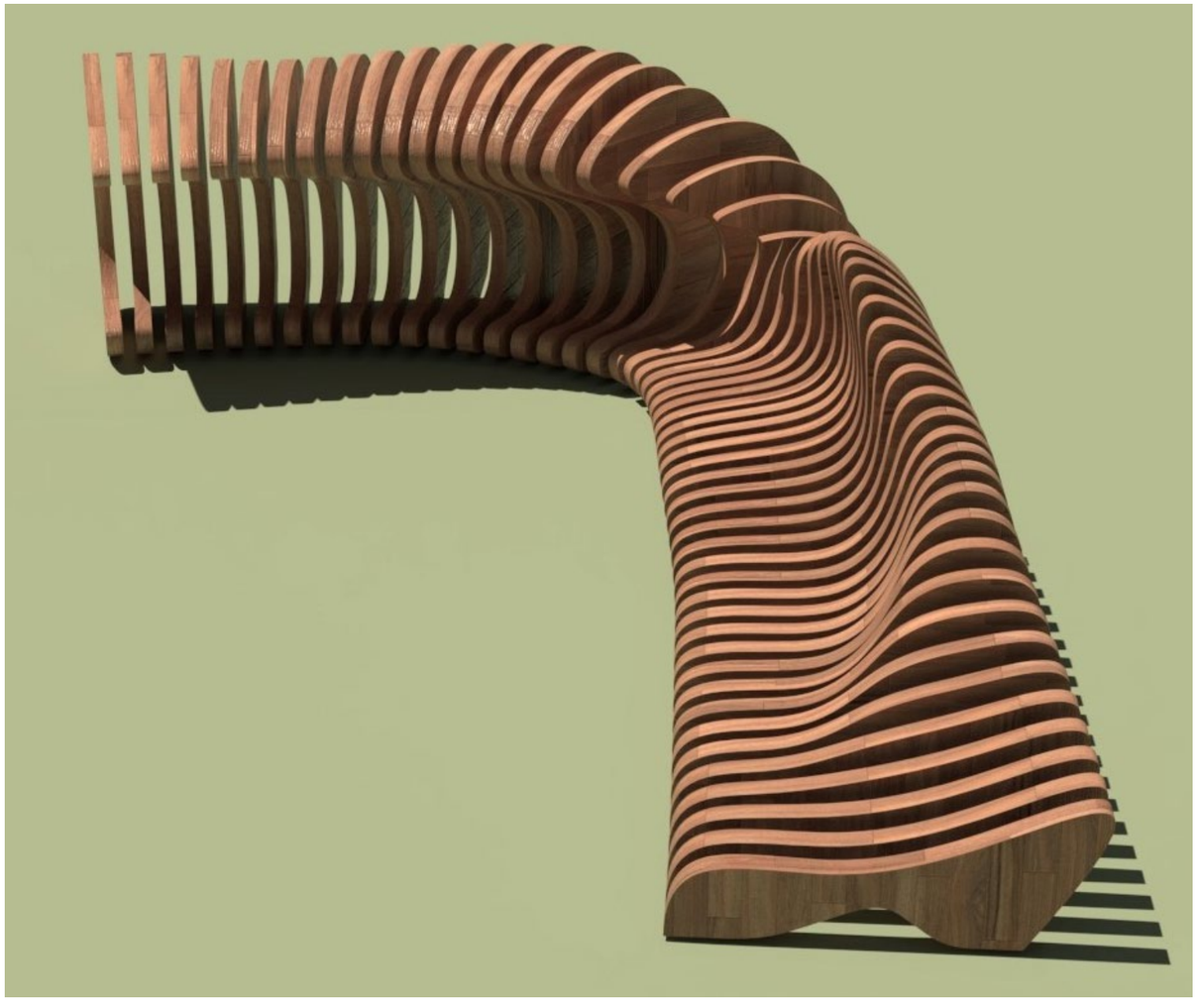


PARAMETRIC BENCH

As part of an exercise to learn the Grasshopper Rhino plugin program and vRay lighting settings, The parametric bench was developed to offer multiple user experiences in a seamlessly integrated design.

The curved seating area transitions from an open sunbathing bed to a covered seating area with protection from sun and wind. The organic form creates a sense of dynamic movement and unique shadows throughout the day.





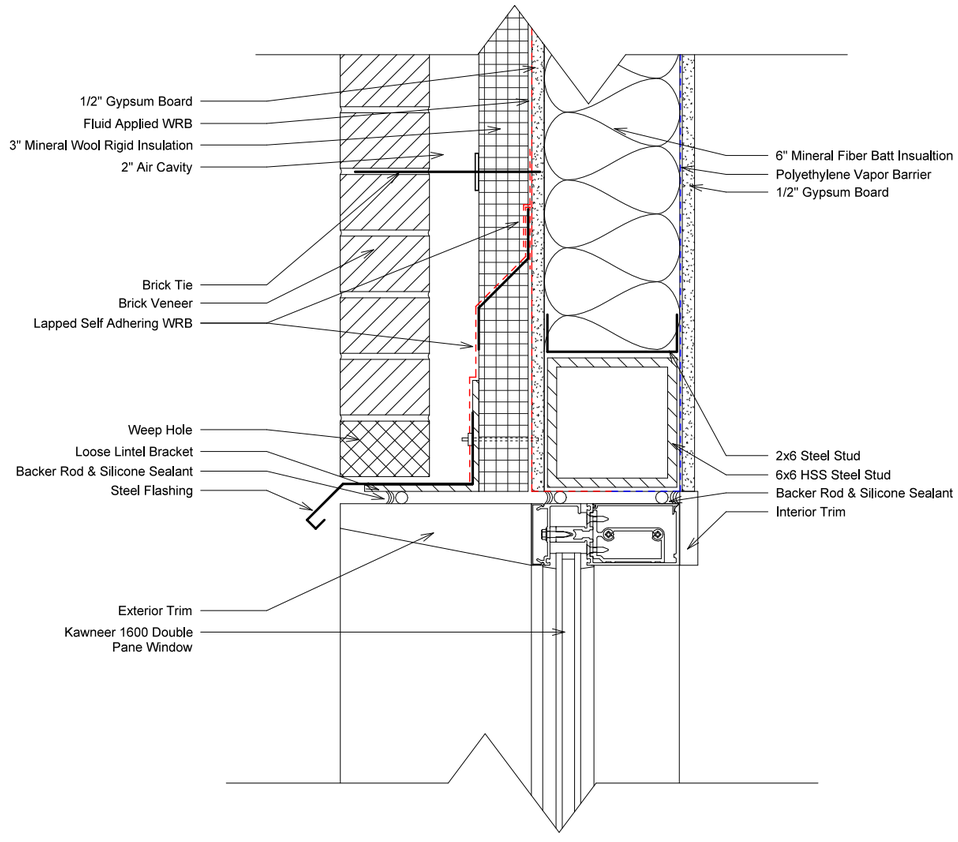
DETAIL DRAWINGS

Selected wall section details from two projects, a multistory steel frame building and a small wood-frame cabin. Objectives were to learn wall assembly materials, develop high-performance building enclosures and practice detail drawing conventions.

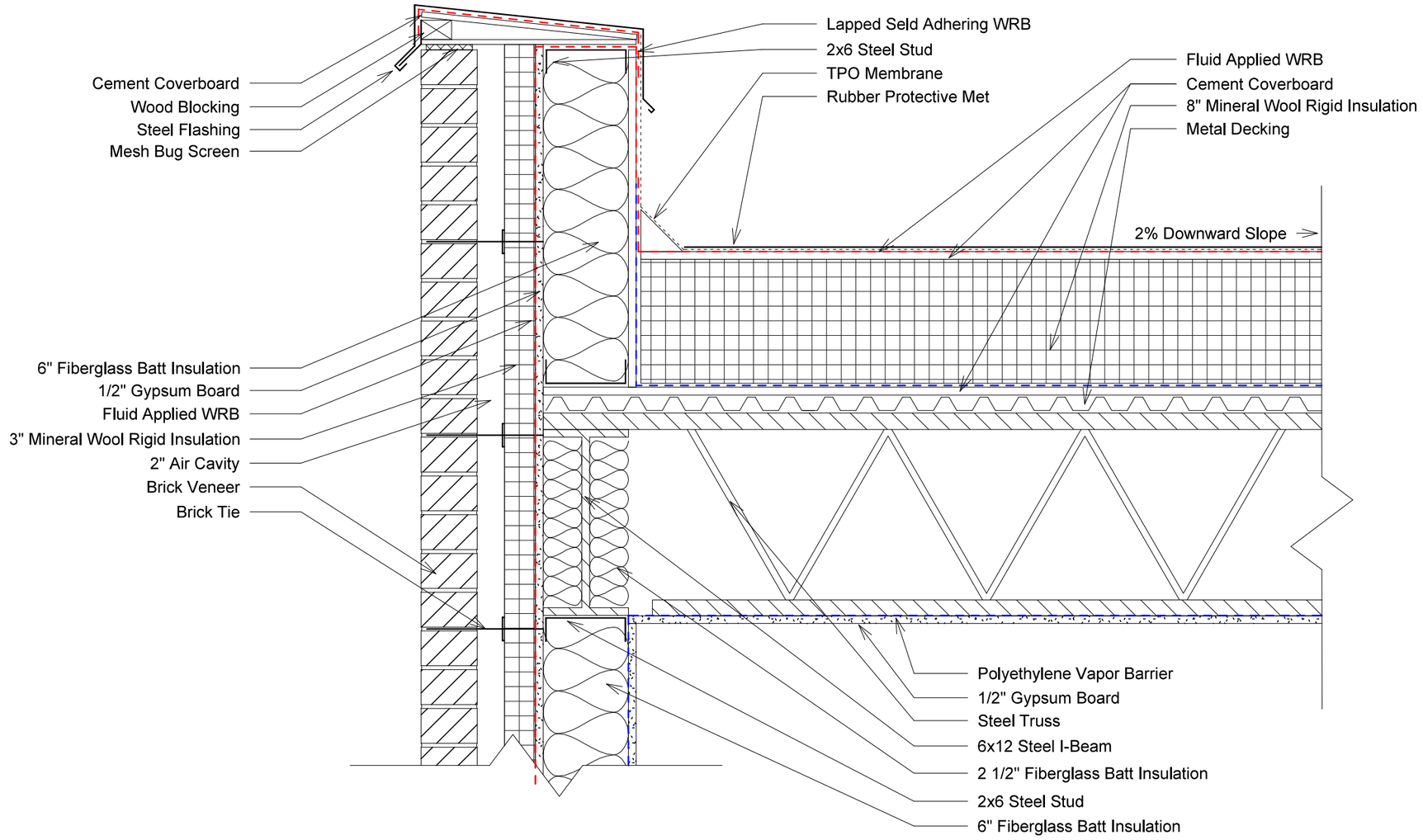
NOTE: DRAWINGS ARE SLIGHTLY SCALED DOWN FROM ORIGINAL SIZE TO FIT PAGES

STEEL FRAME - BRICK FACADE

A reimagination of University of Oregon's Tykeson Hall using a new wall assembly of light-gauge steel frame with a brick facade and high-performance windows. Attention was taken to watertight enclosure with properly organized control layers and cladding assembly. R-Values are roughly 30 and 41 for the walls and roof respectively.



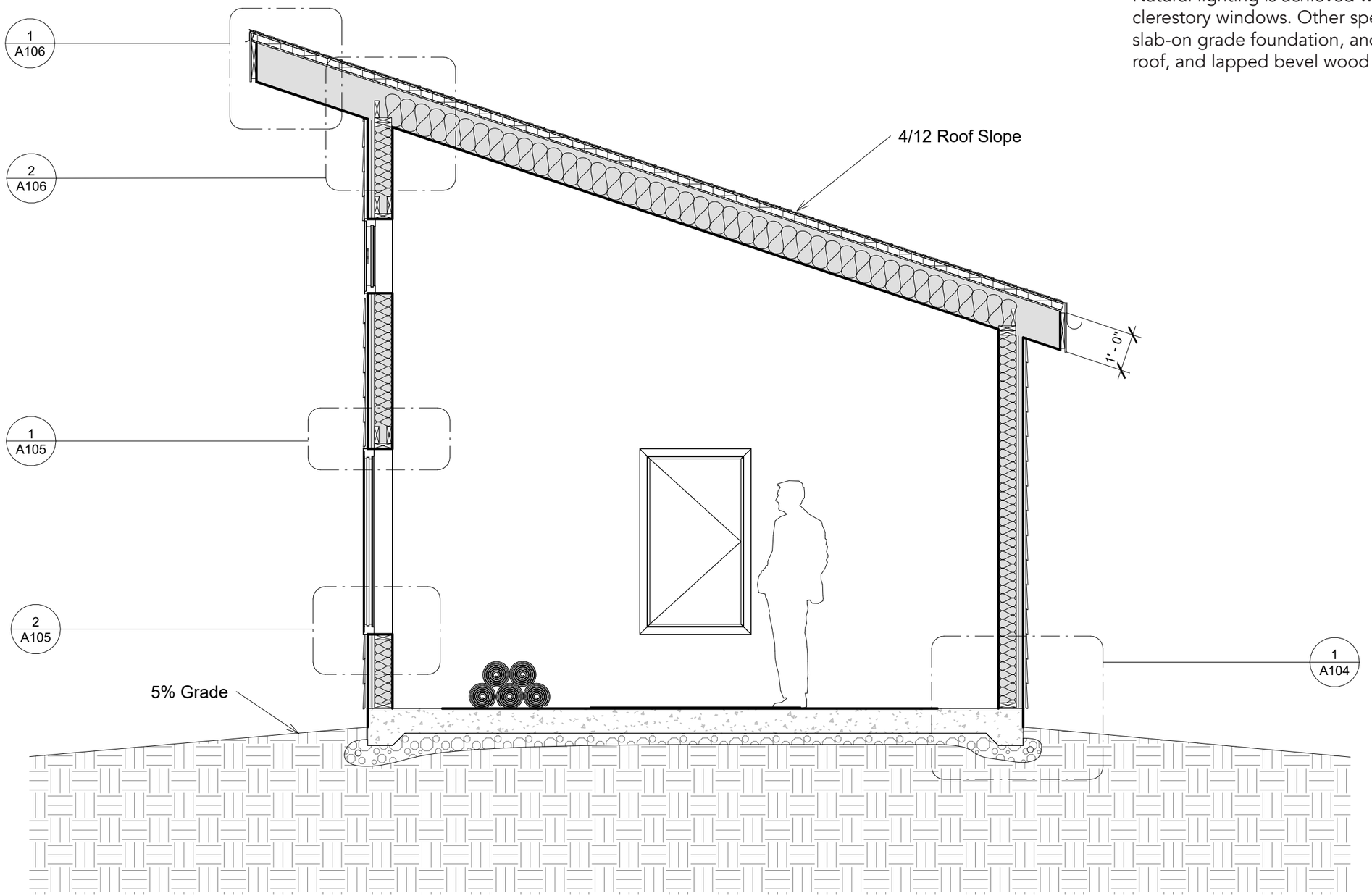
1 Window Head Detail
3" = 1'-0"



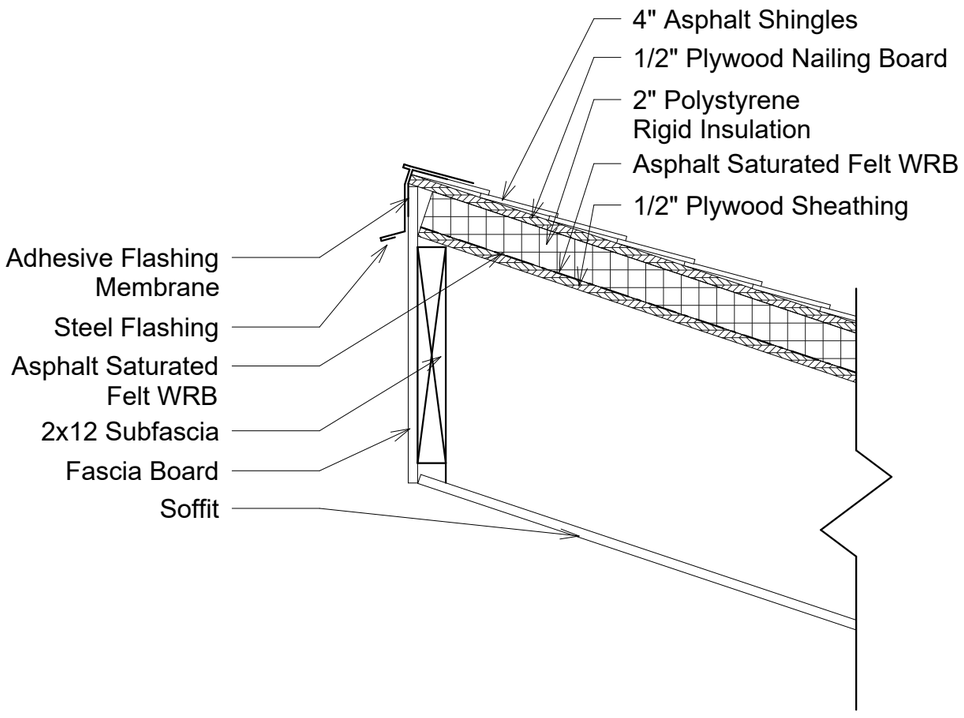
1 Upper Parapet and Roof
1 1/2" = 1'-0"

WOOD FRAME - WOOD SIDING

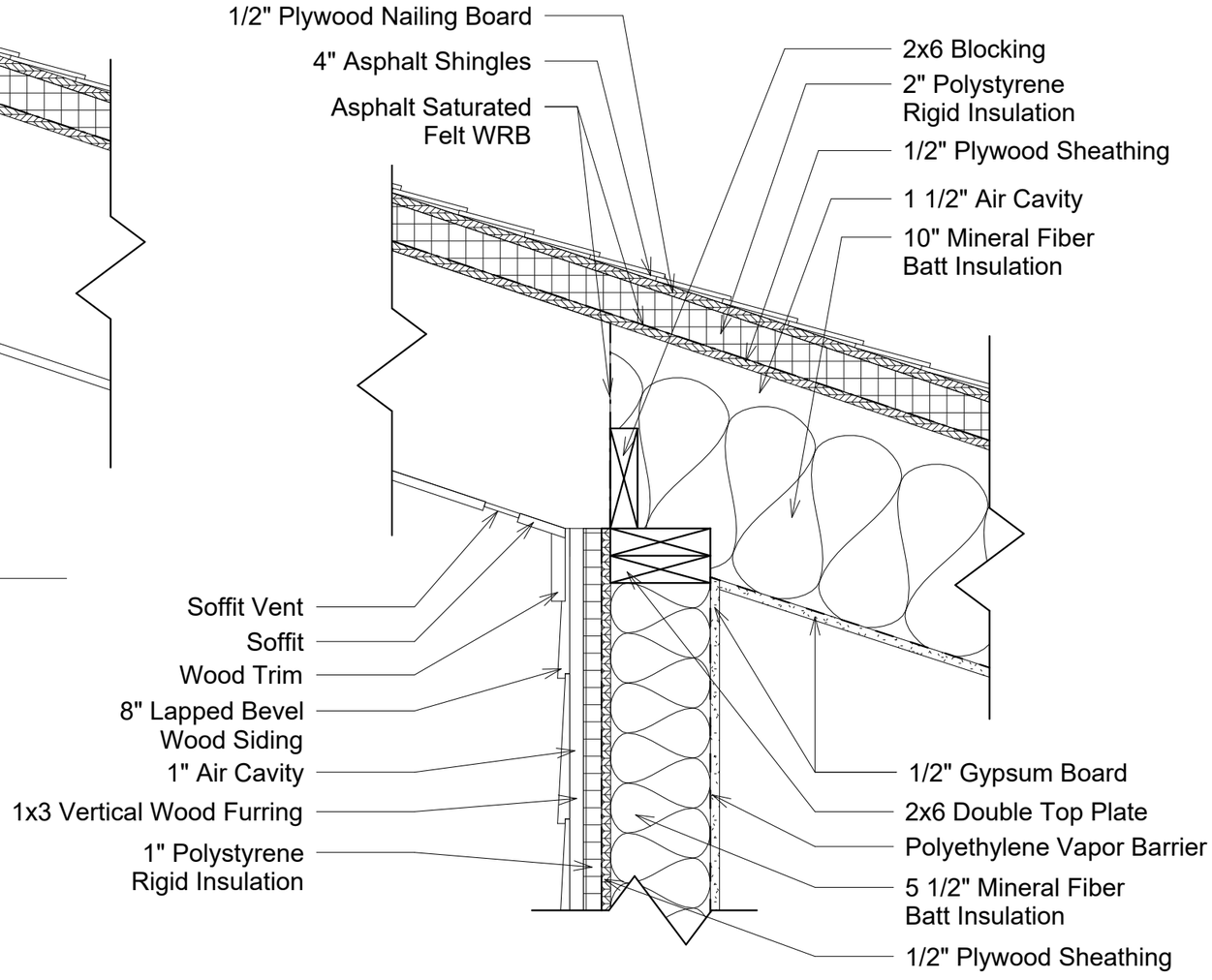
The program is a small one-room studio space featuring a cost efficient advanced light wood frame wall assembly with excellent thermal insulation. Natural lighting is achieved with south-facing clerestory windows. Other specifications include a slab-on grade foundation, and a high-ceiling shed roof, and lapped bevel wood siding.



1 Transverse Section
3/8" = 1'-0"



1 Roof Edge Detail
1 1/2" = 1'-0"



2 Wall to Roof Detail
1 1/2" = 1'-0"