An architectural rendering of the University of Washington Life Sciences Building. The building is a large, modern structure with a prominent glass facade on the left side, revealing interior spaces with people. The right side of the building features a facade of vertical, perforated metal panels. The building is set in a lush, green environment with various trees and a landscaped walkway in the foreground. People are shown walking and sitting on the walkway, and a bicycle is parked. In the background, there are more trees and a road with cars. The sky is blue with some clouds.

UNIVERSITY OF WASHINGTON
LIFE SCIENCES BUILDING
ARCHITECTURAL COMMISSION

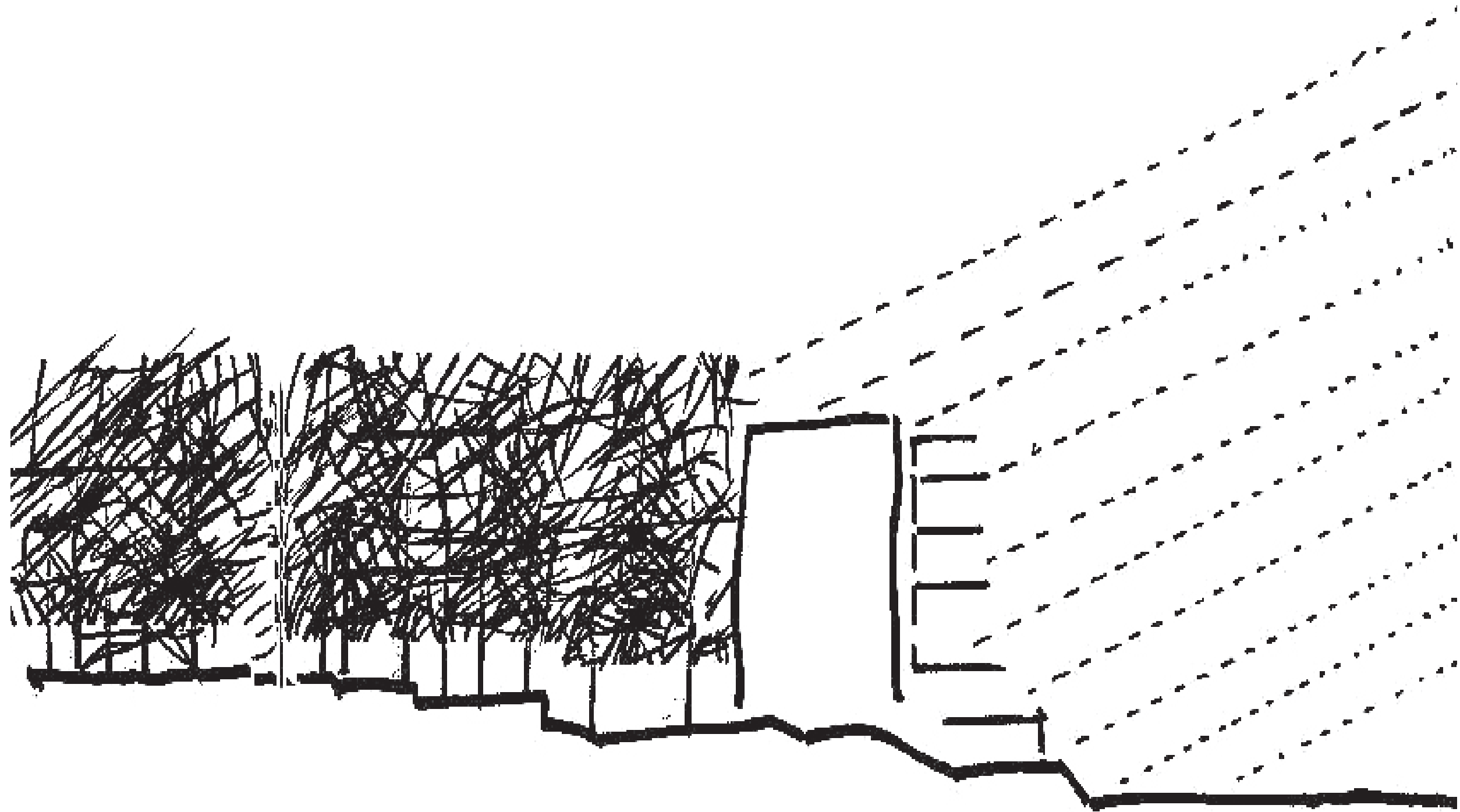
09/28/2015

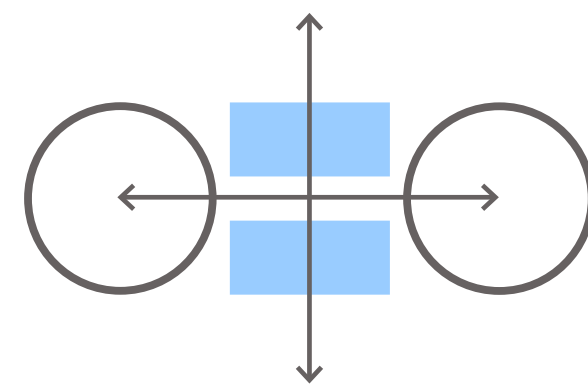
PERKINS+WILL

09.28.15 UNIVERSITY OF WASHINGTON ARCHITECTURAL COMMISSION

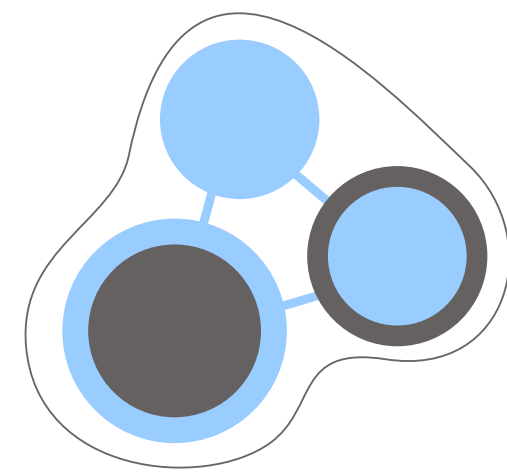
1. DESIGN NARRATIVE + CONCEPT
2. AC COMMENTS FROM 6/29
3. SITE DESIGN
4. EXTERIOR DESIGN
5. INTERIOR DESIGN

1. DESIGN NARRATIVE + CONCEPTS

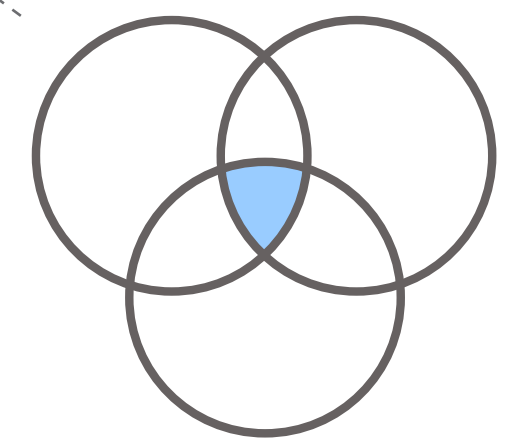




SCIENCE IS A GATEWAY



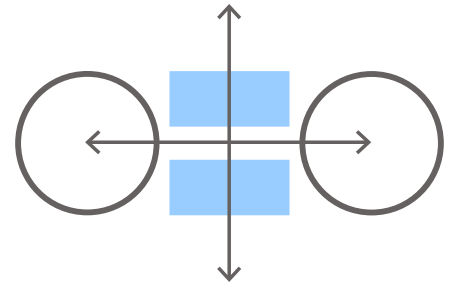
CONNECTIONS



ENGAGEMENTS



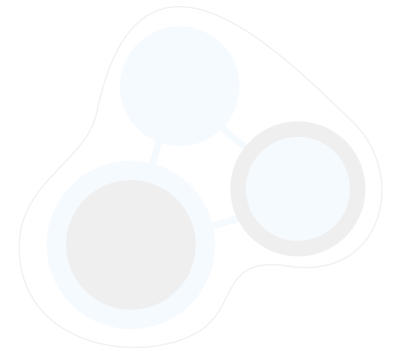
MOLECULES



SCIENCE IS A GATEWAY



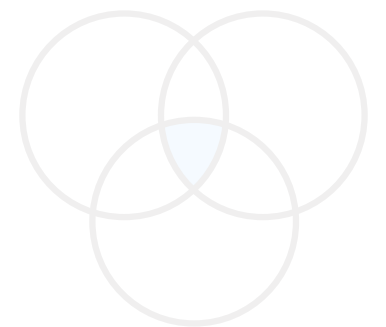
ORGANISMS



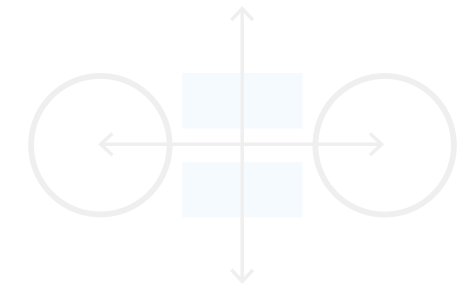
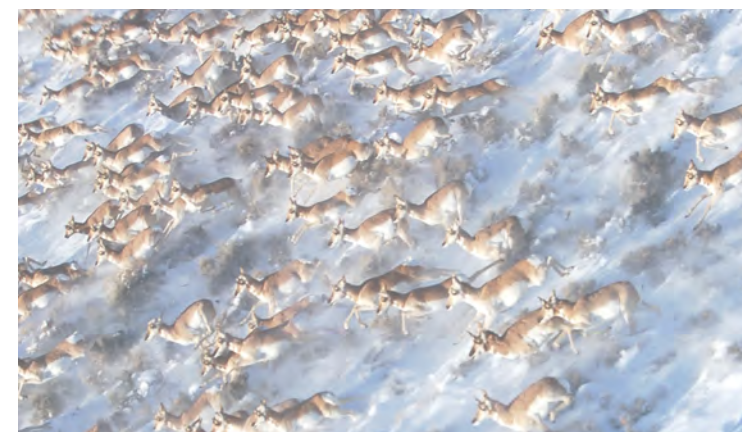
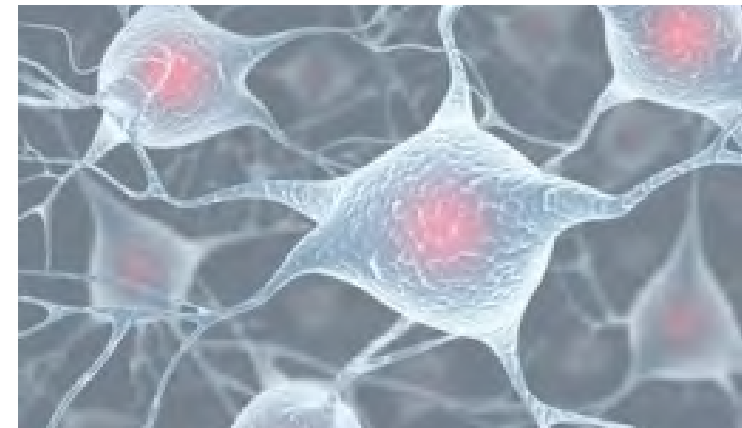
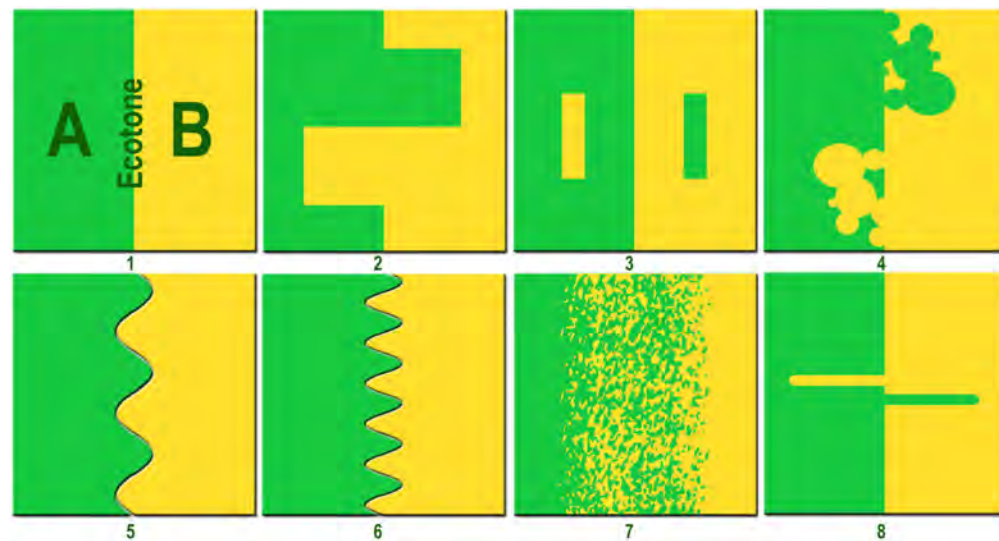
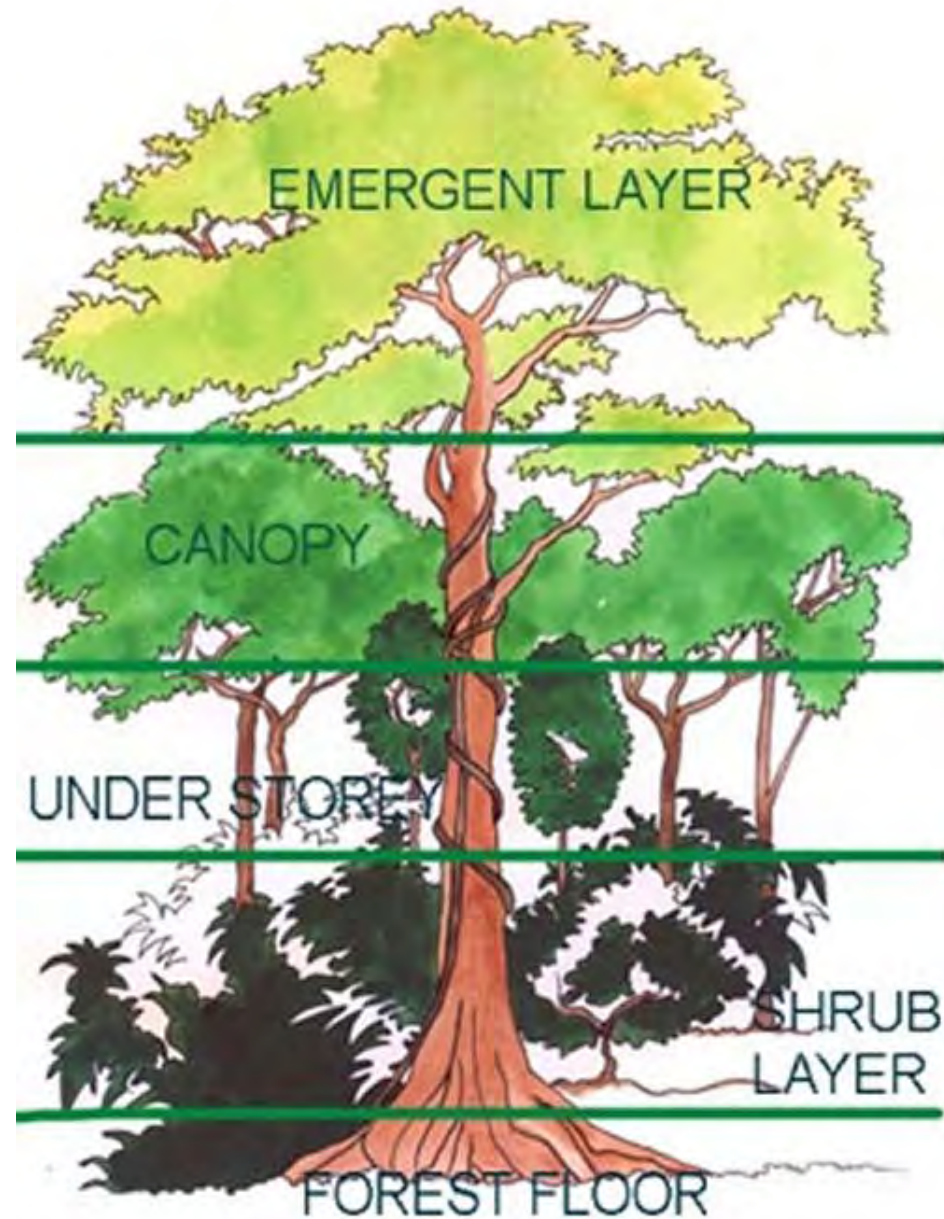
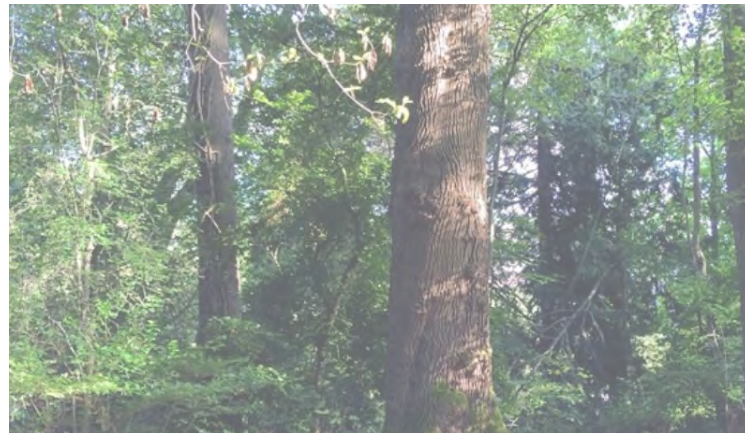
CONNECTIONS



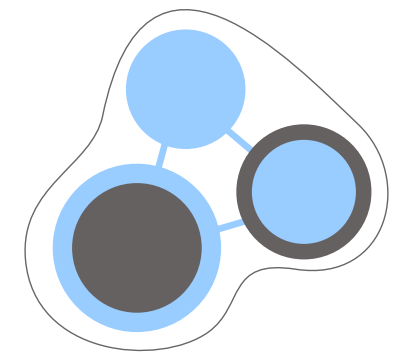
ECOSYSTEMS



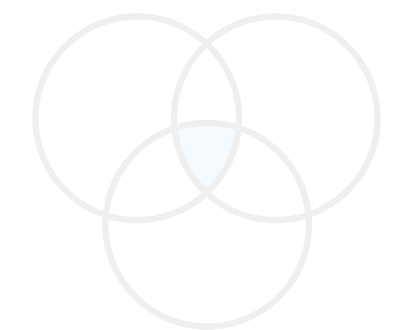
ENGAGEMENTS



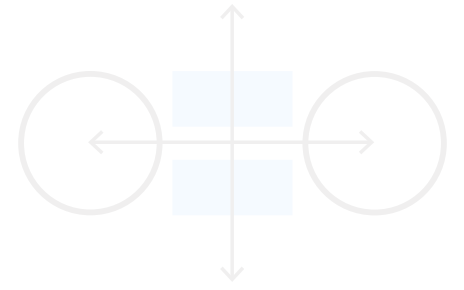
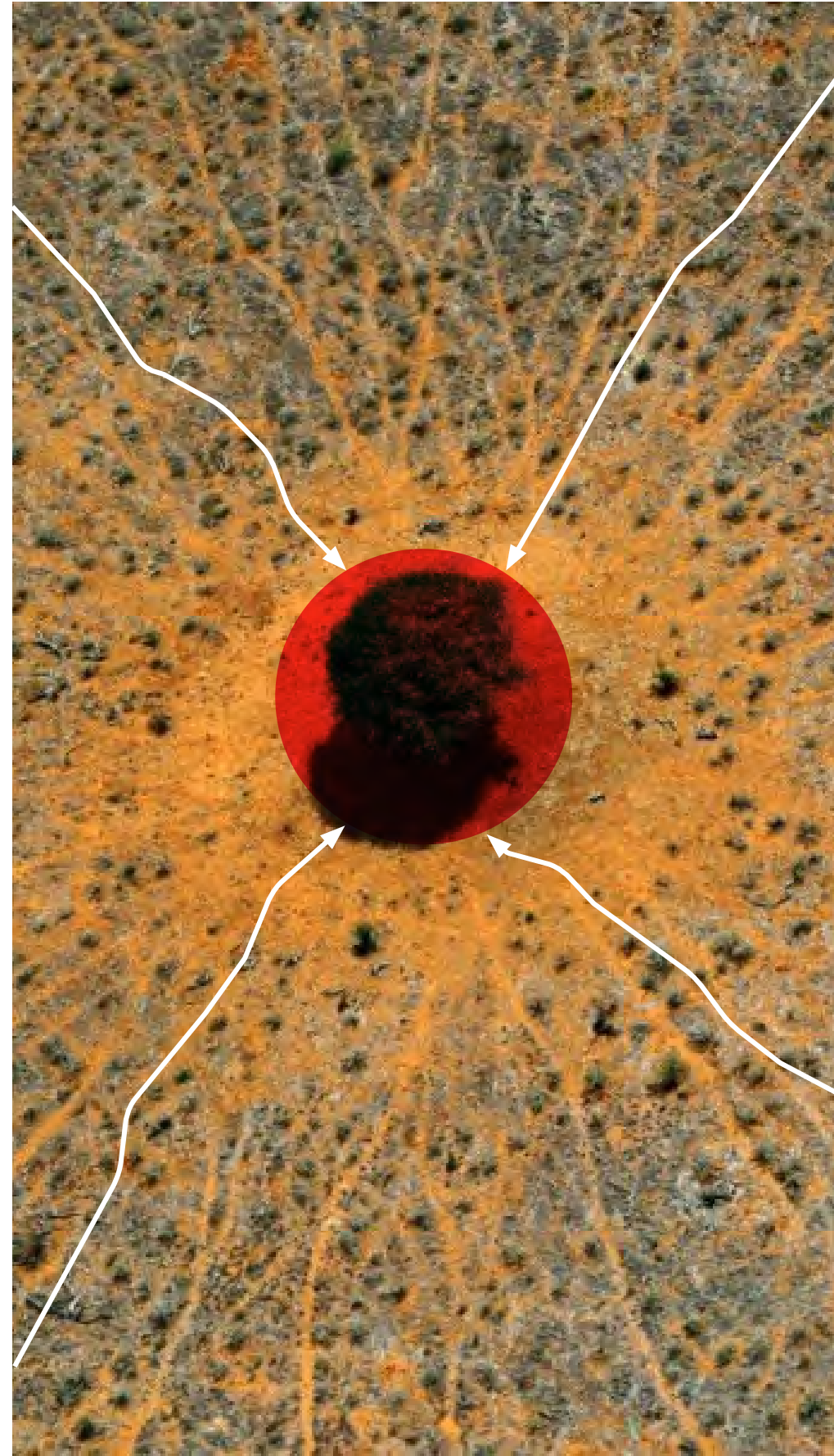
SCIENCE IS A GATEWAY



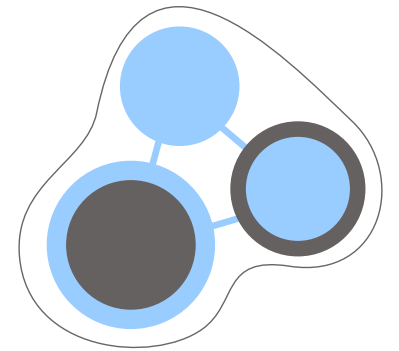
CONNECTIONS



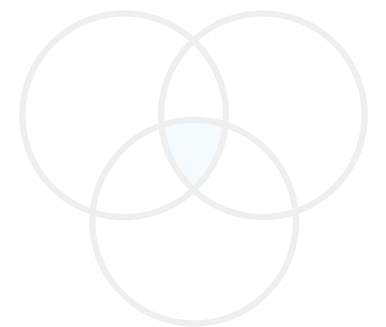
ENGAGEMENTS



SCIENCE IS A GATEWAY

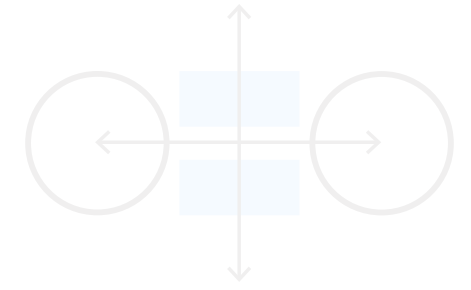


CONNECTIONS

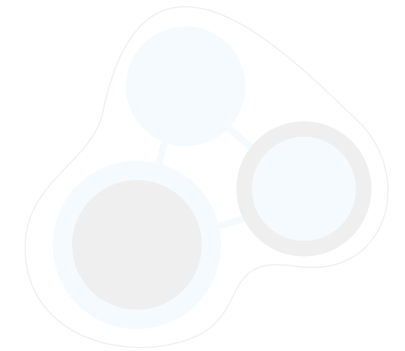


ENGAGEMENTS

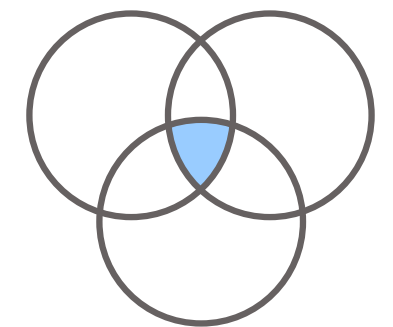
Ecotone = Natural + Technological



SCIENCE IS A GATEWAY

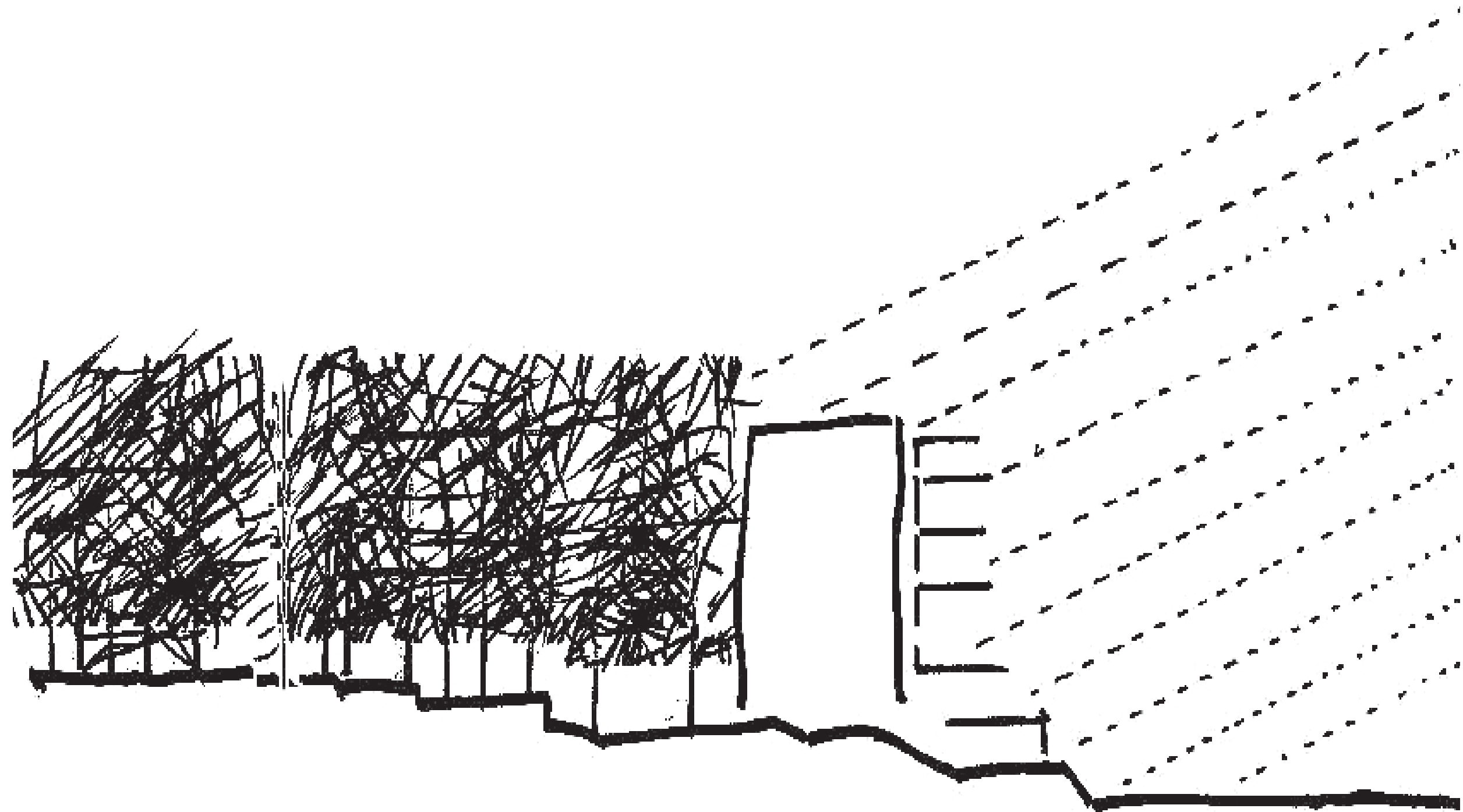


CONNECTIONS



ENGAGEMENTS

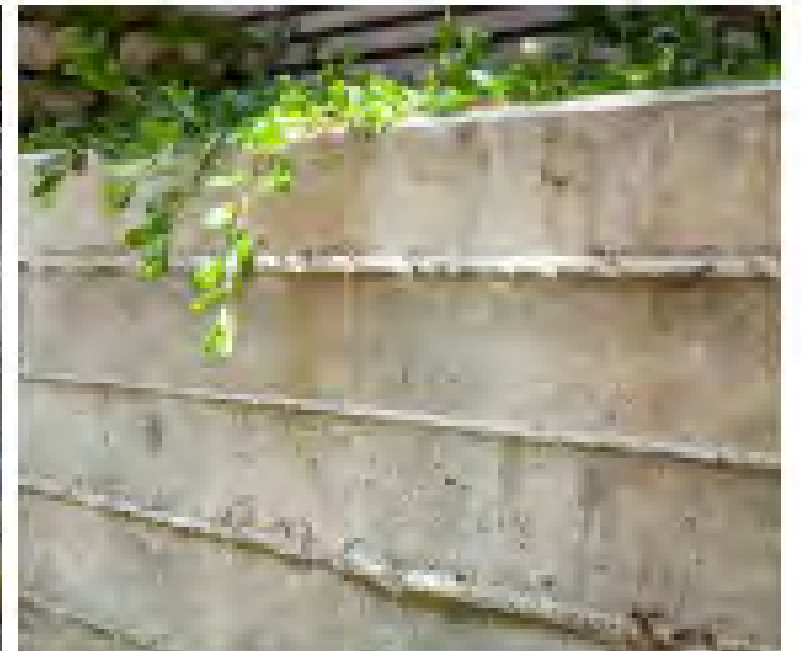
2. AC COMMENTS FROM 6/29

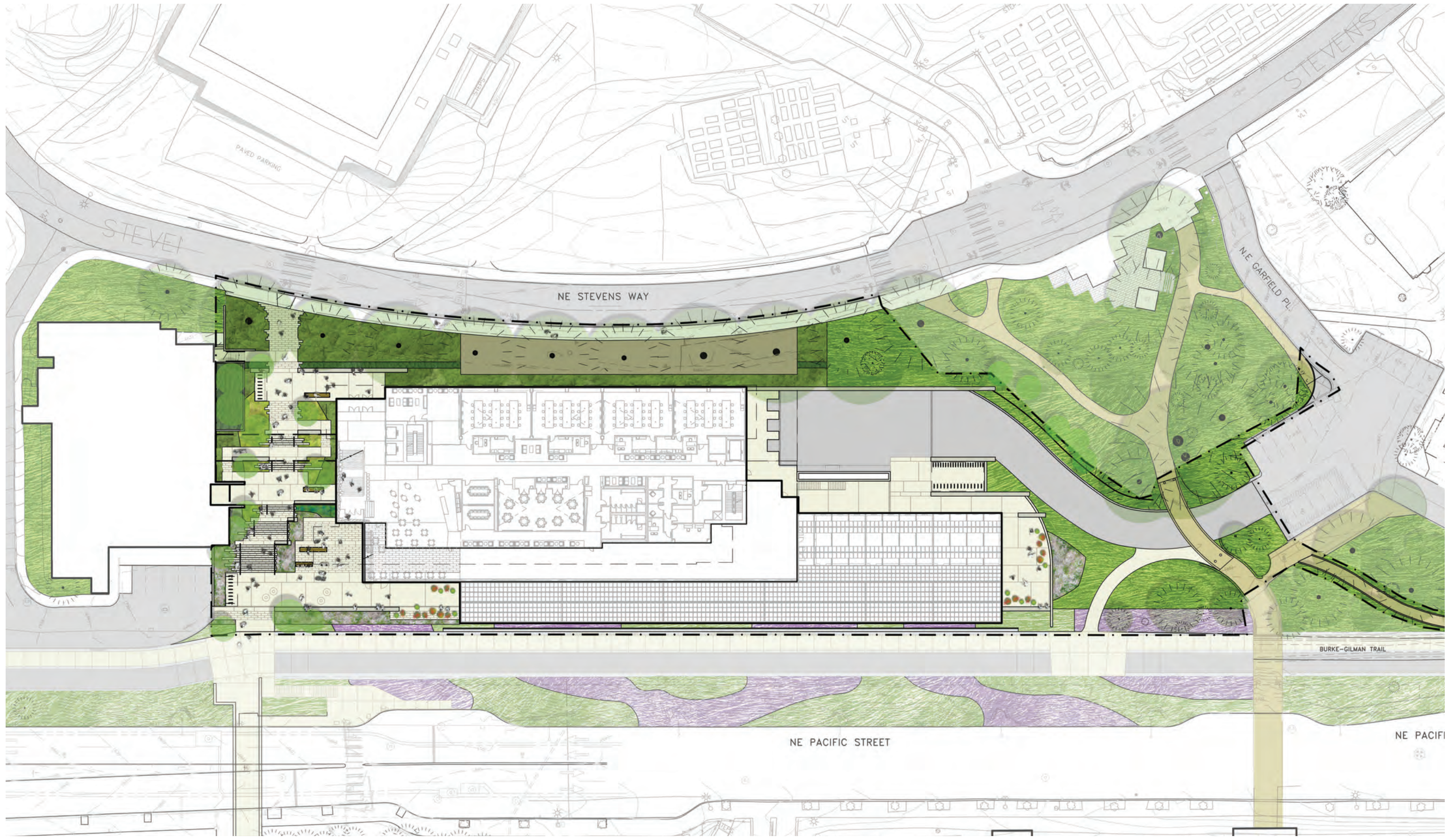


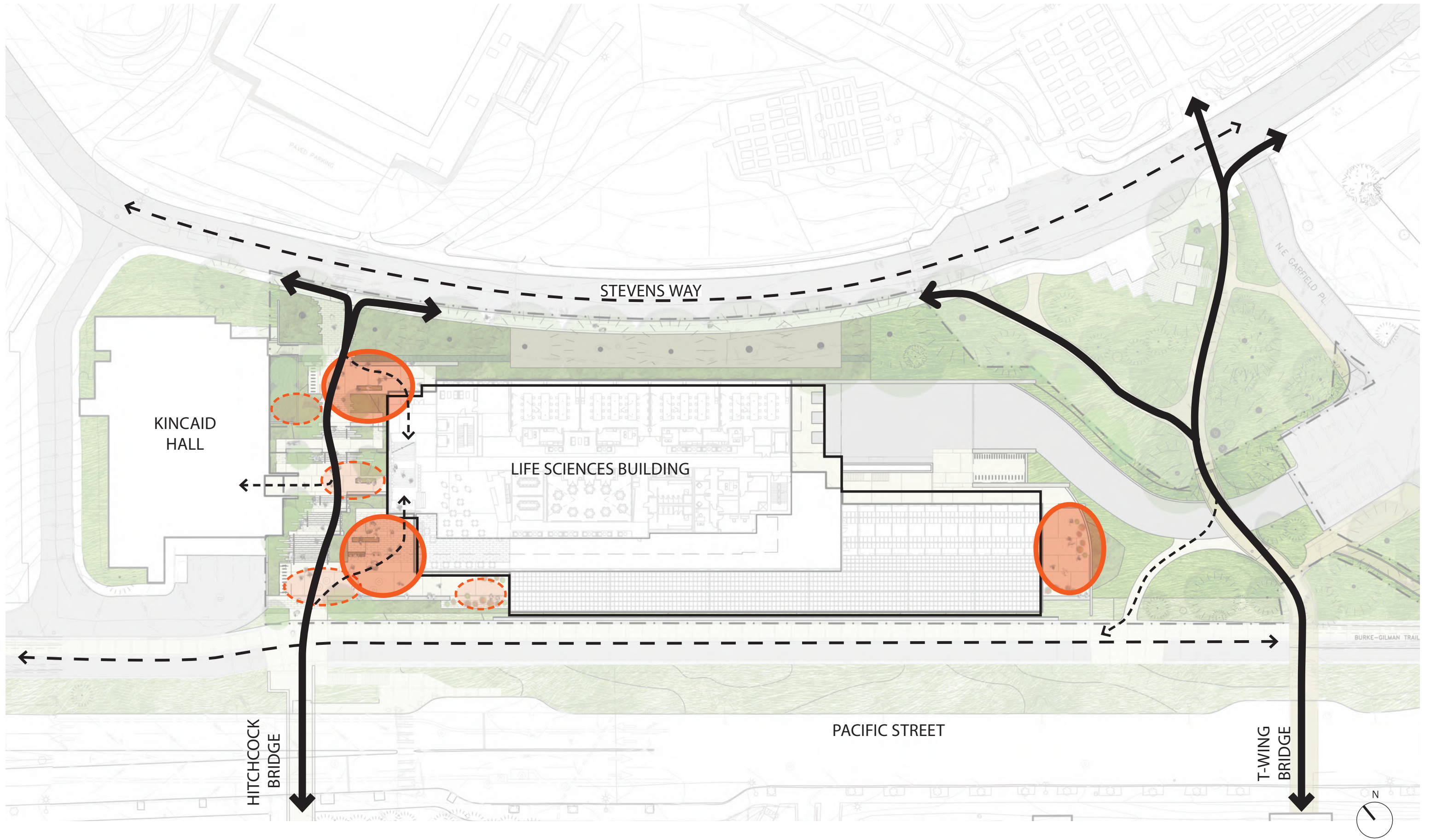
6/29/2015 ARCHITECTURAL COMMITTEE MEETING COMMENTS

- The loading dock should be pulled back from the existing meander path.
- Vertical louvers are appropriate on the south façade, but careful investigation is needed on the effect of depth and spacing of the louvers on the quality of interior light during the day. The perforated fins should create a pleasant, dappled lighting effect.
- The wooden screen of the north façade should be thicker, in order to feel more solid.
- Understand the long-range weathering of the proposed treated composite wood cladding material.
- Reexamine the Burke Gilman Trail edge. A planted buffer would be desirable. The trail width might be reduced along the greenhouses to provide room for modulation or the gravel path might be removed for the length of the site.

3. SITE DESIGN





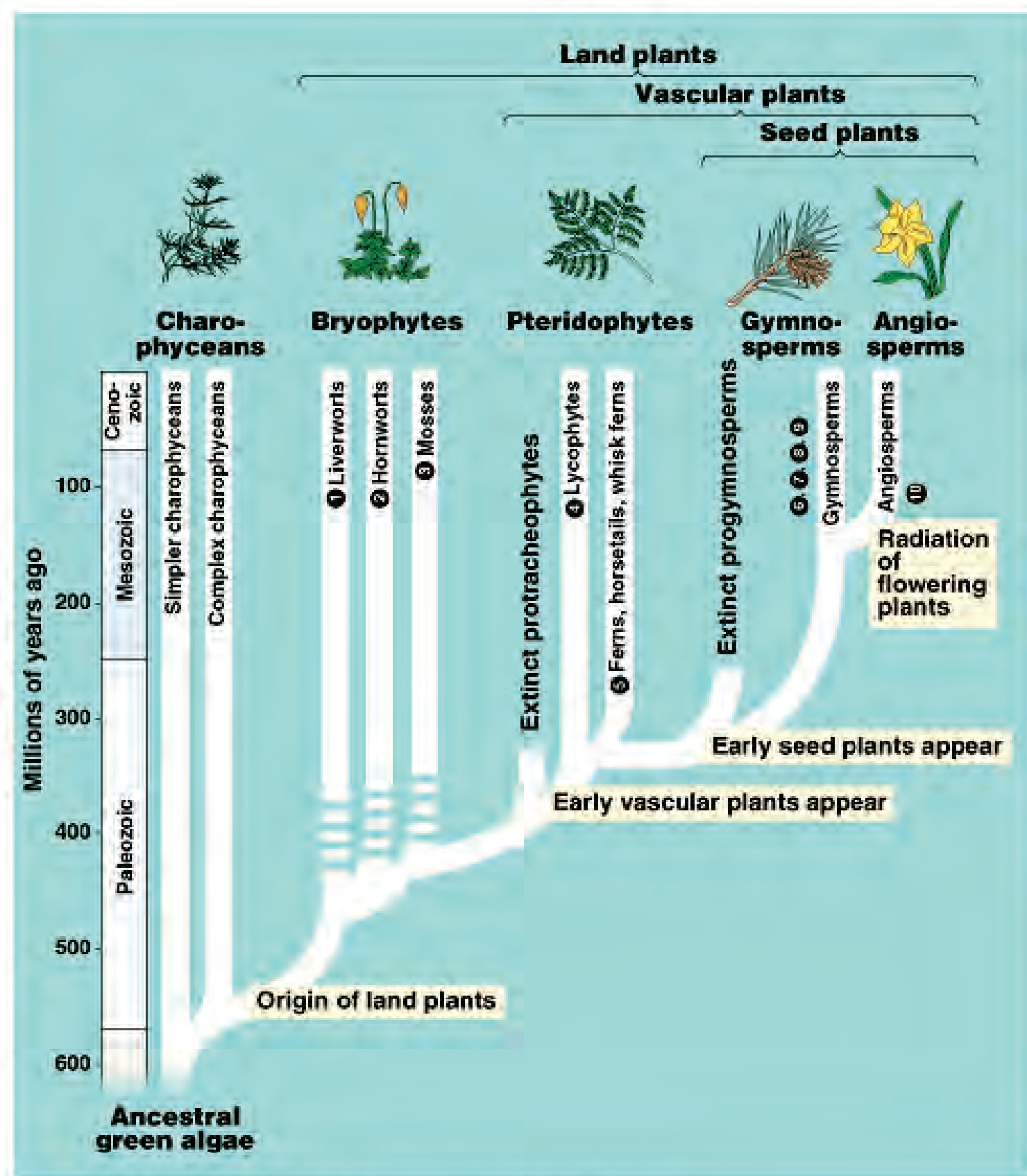


Watering Holes, Nodes, and Wildlife Corridors

University of Washington Life Sciences Building

GUSTAFSON GUTHRIE NICHOL

PERKINS+WILL



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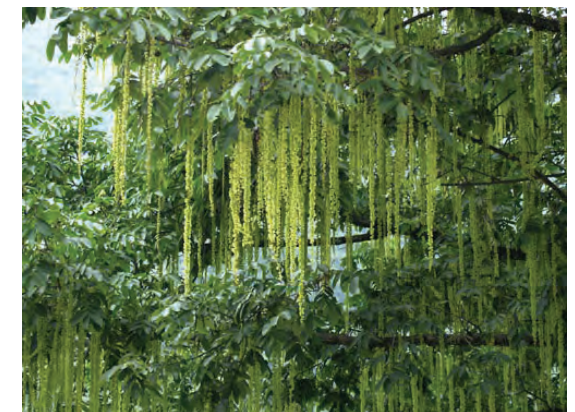
Mosses/ Bryophytes



Ferns/ Pterodophyta



Seeds/ Gymnosperms



Flowers/ Angiosperms





Gunnera tinctoria or *manicata* (giant rhubarb)



Magnolia sieboldii (oyama magolia)



Tetracentron sinense



Helwingia chinensis



Ruscus hypoglossum (mouse thorn)



Wollemia nobilis (wollemi pine)



Illicium henryi (henry anise tree)



Schisandra rubriflora (magnolia vine)



Aristolochia kaempferi (dutchman's pipe)

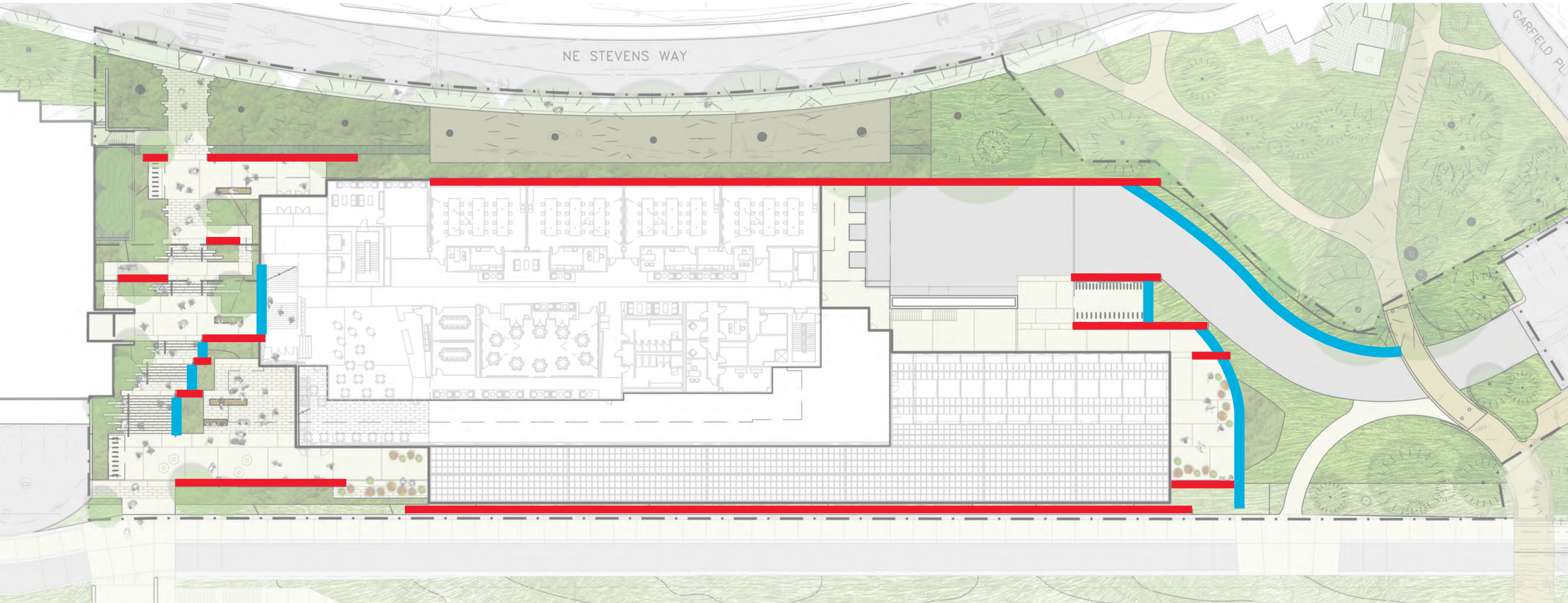


EAST-WEST SECTION

Porch Plant Massing Sections

A Wall: Habitat wall (retaining)
Cast in place concrete

B Wall: Social wall (seating & steps)
Pre-cast concrete



A Wall // Reference Images

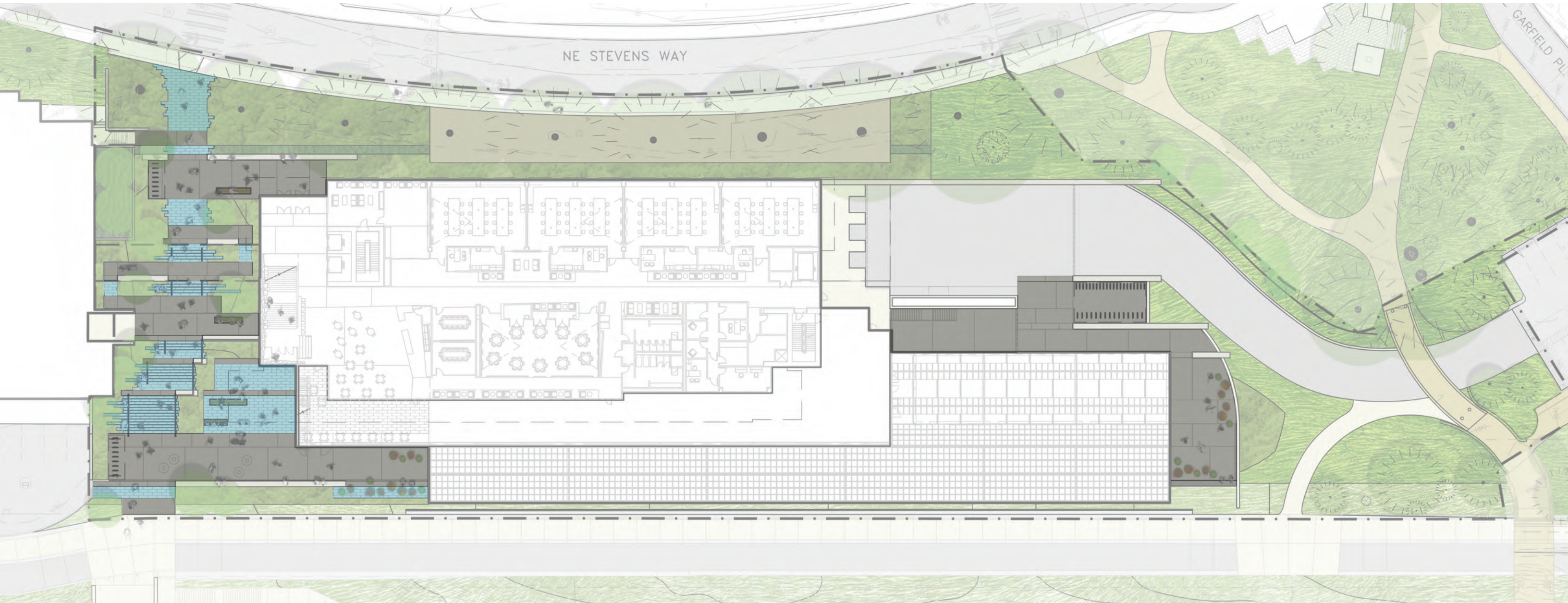


B Wall // Reference Images



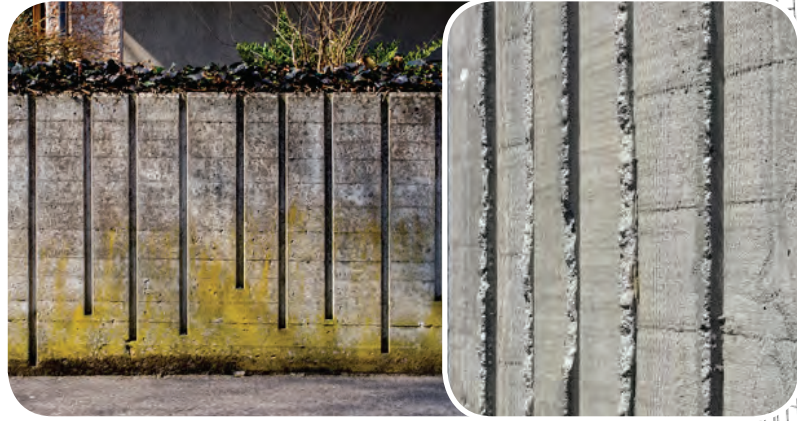
PIP Concrete paving

Pre-cast Concrete unit paving



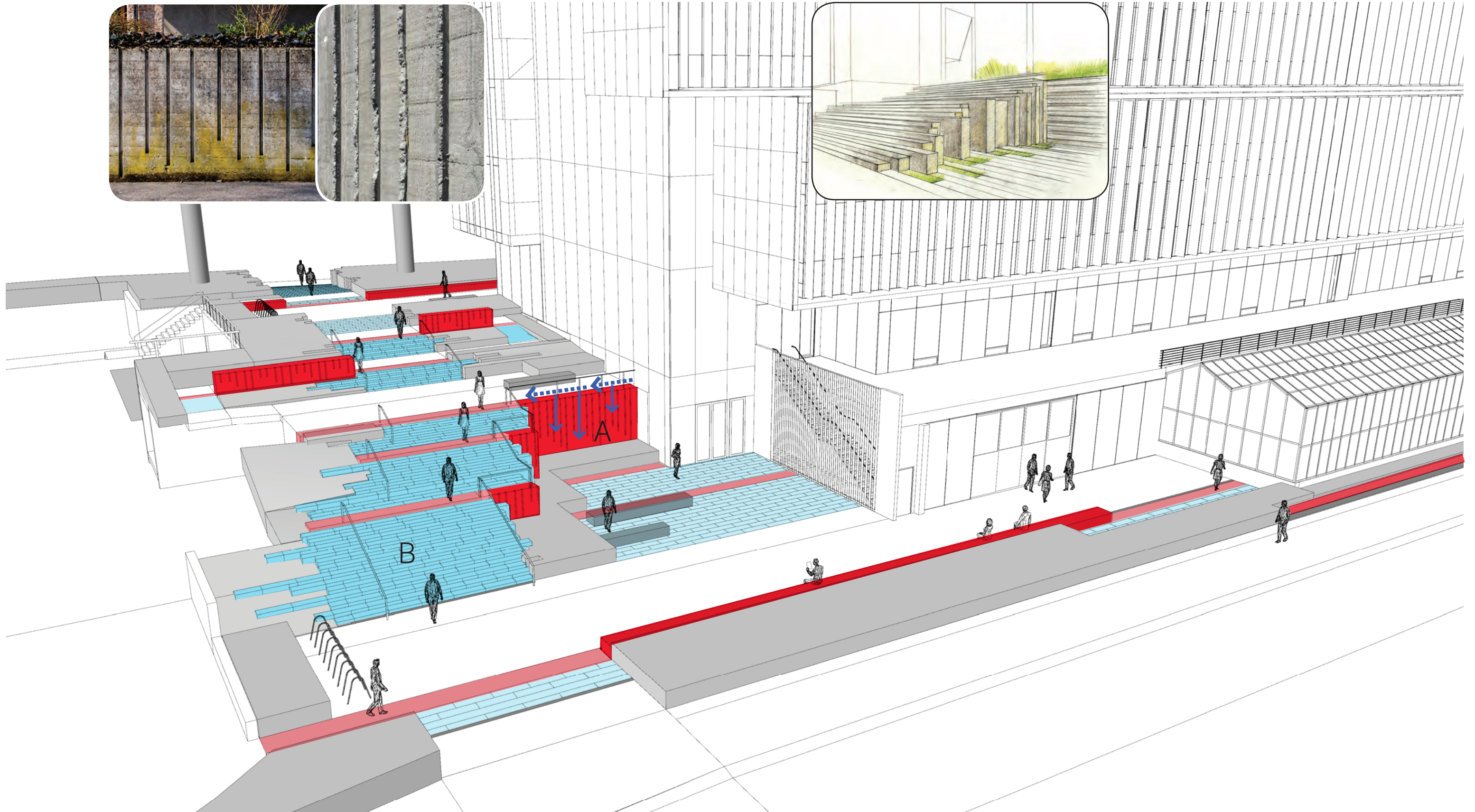
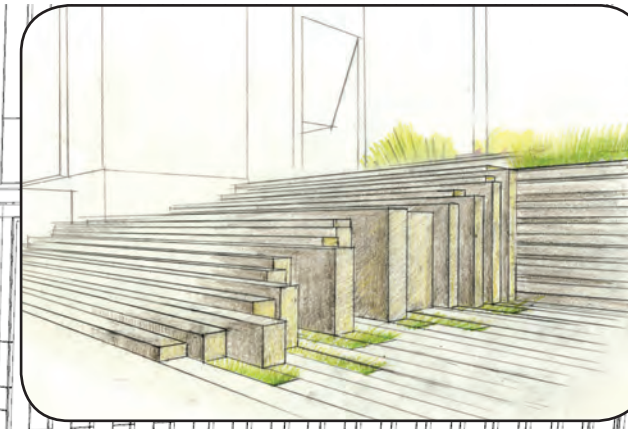
— A Wall - Habitat wall (retaining)

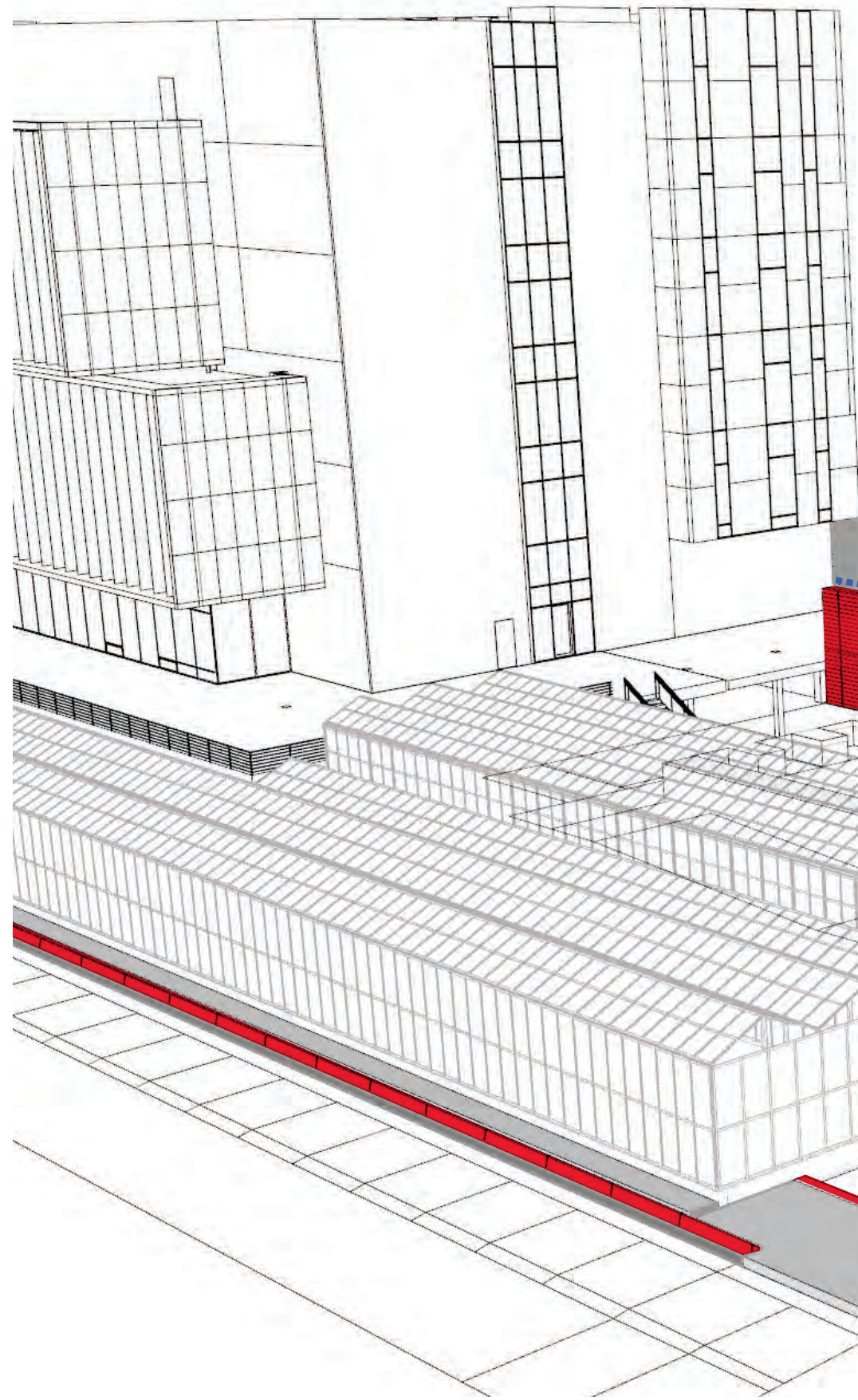
Water + Wall Texture



— B Wall - Social wall (seating, steps)

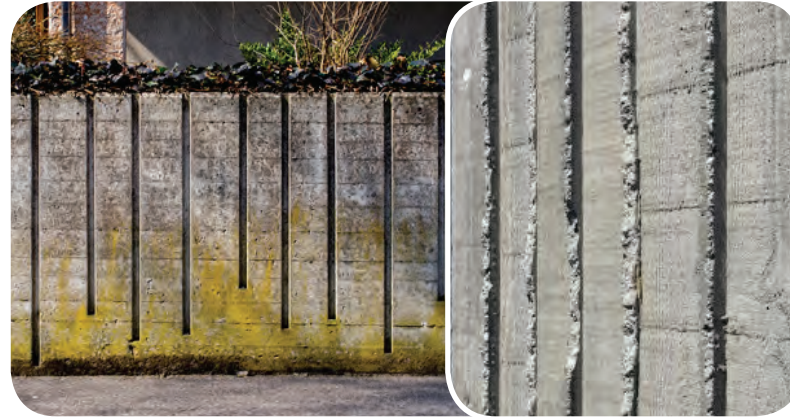
Vertical Slab





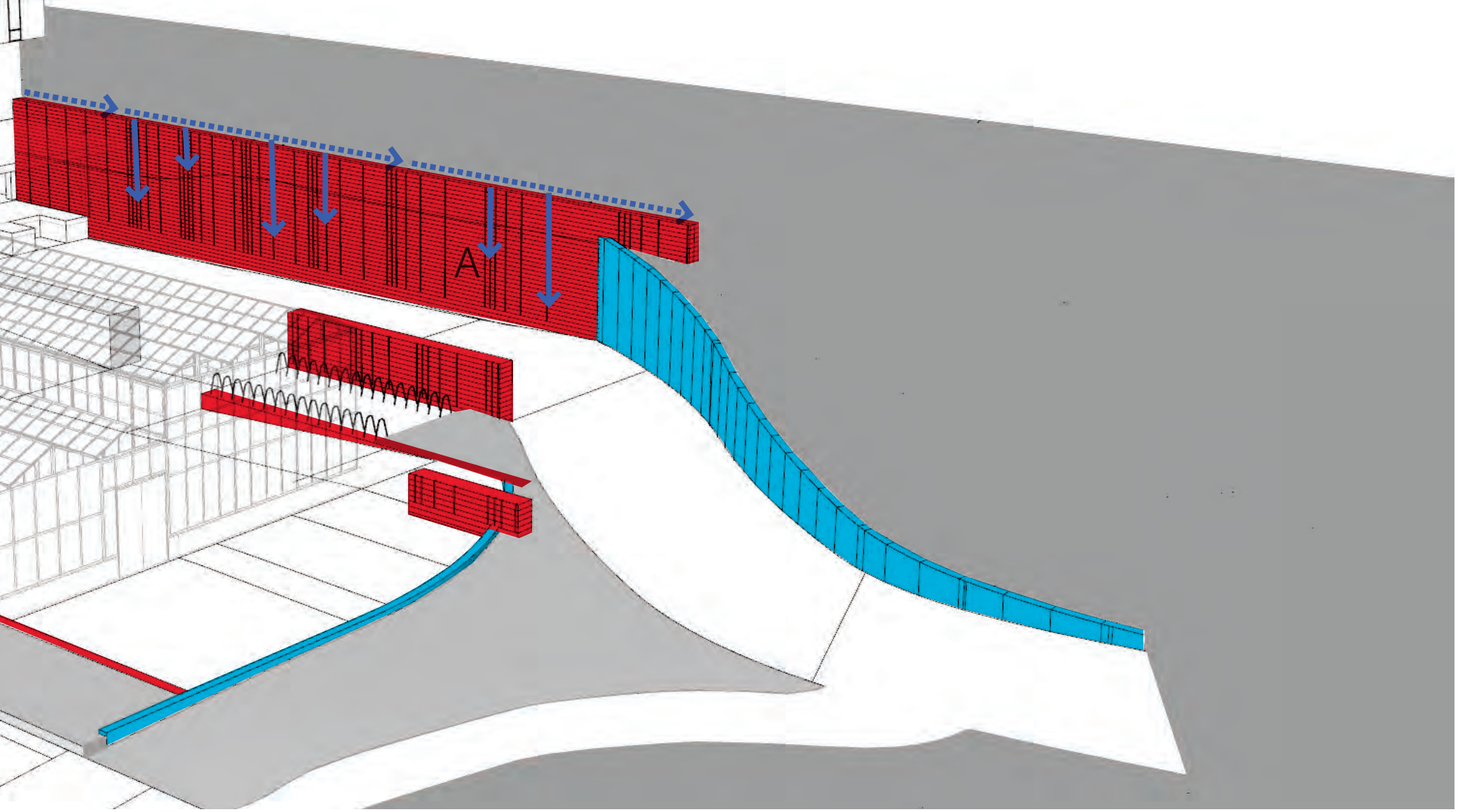
A Wall - Habitat wall (retaining)

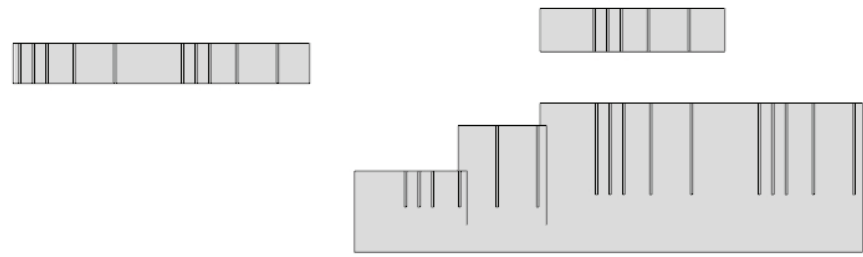
Water + Wall Texture



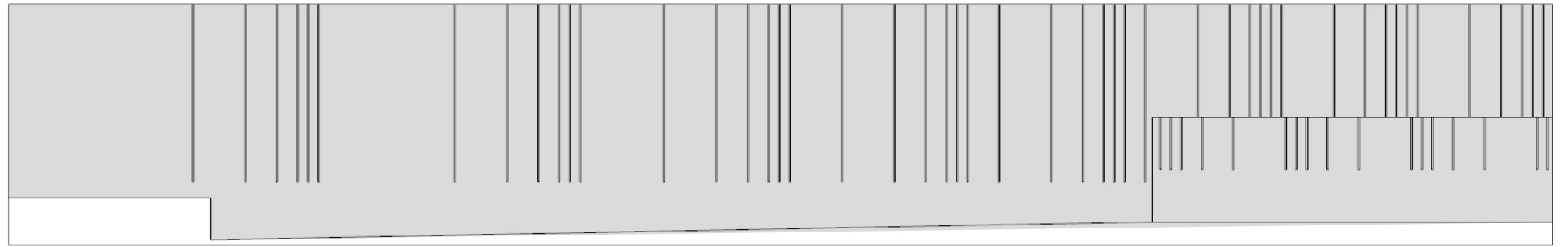
B Wall - Social wall (seating)

Vertical Slab

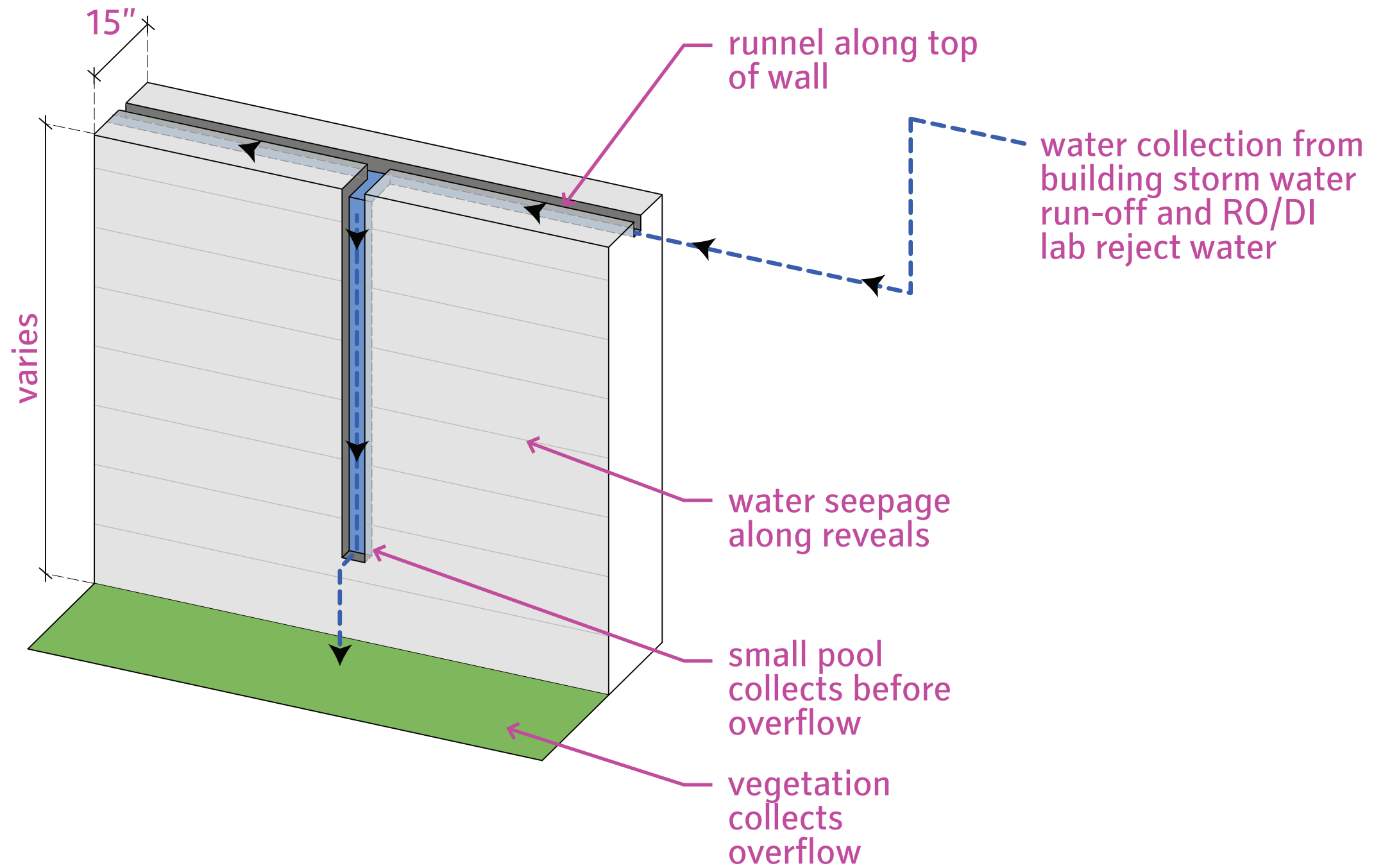




Fibonacci Pattern on Wall Elevations



insects & animals are attracted to water





Looking north toward West Plaza from Burke-Gilman Trail

University of Washington Life Sciences Building

GUSTAFSON GUTHRIE NICHOL

PERKINS+WILL



Interior Stair from L1 to B1, looking out on West Plaza

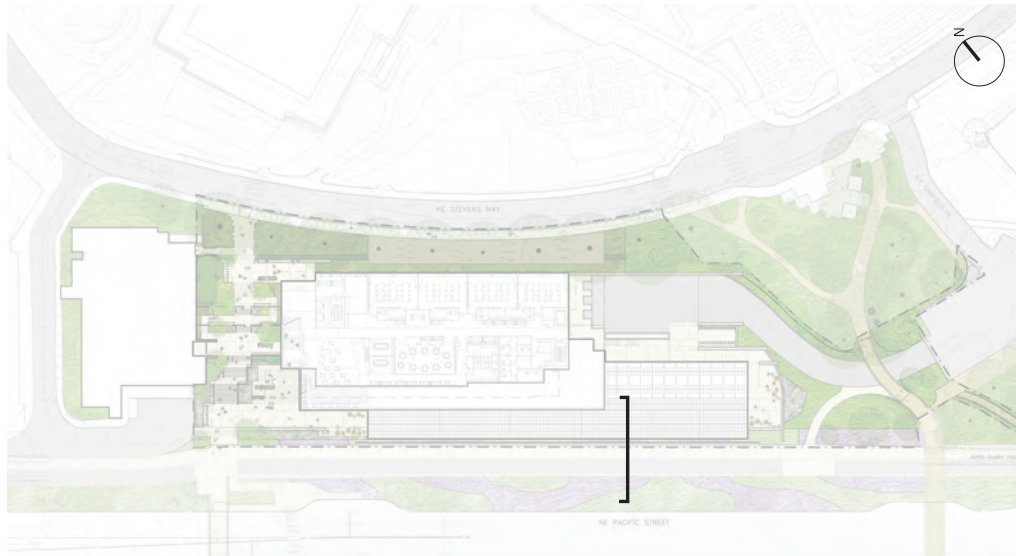


Looking North

University of Washington Life Sciences Building

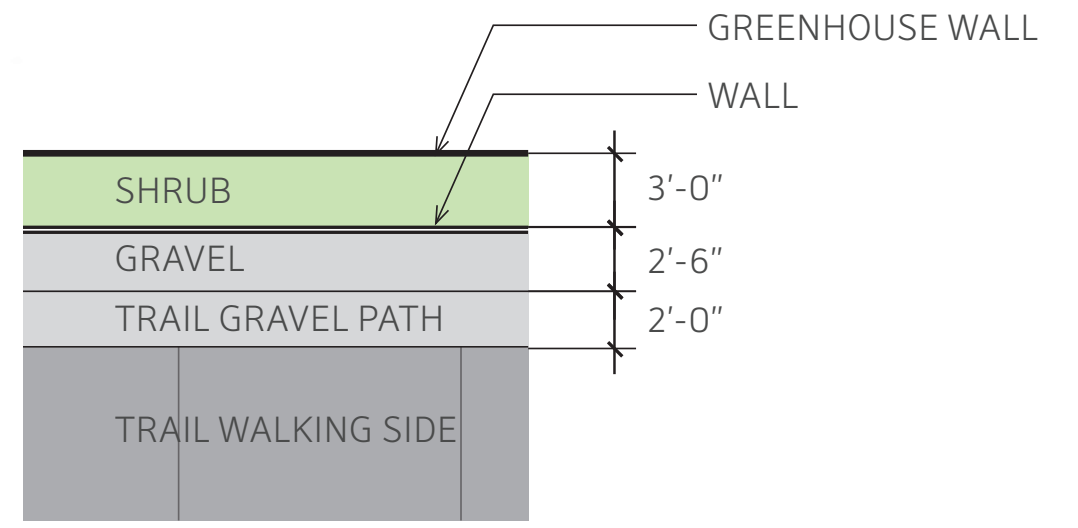
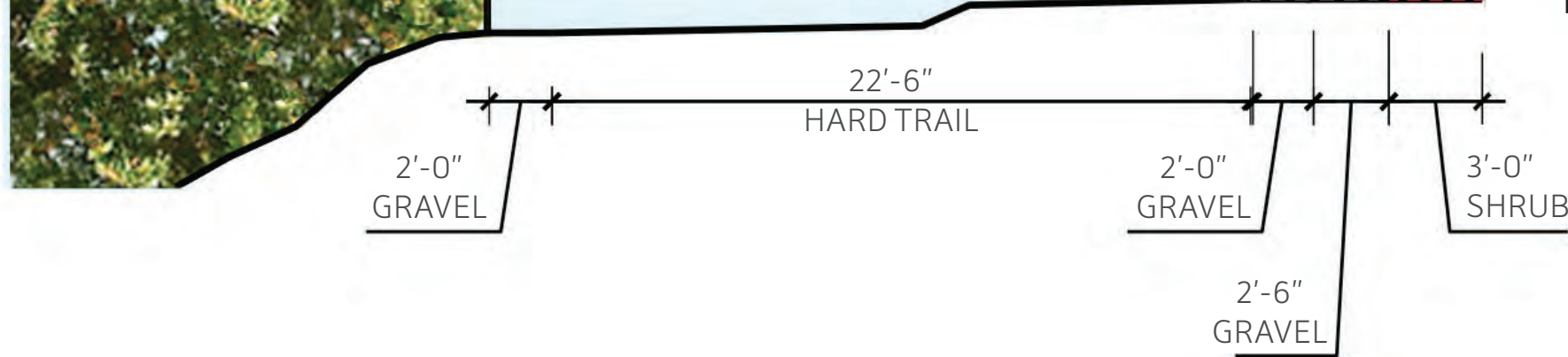
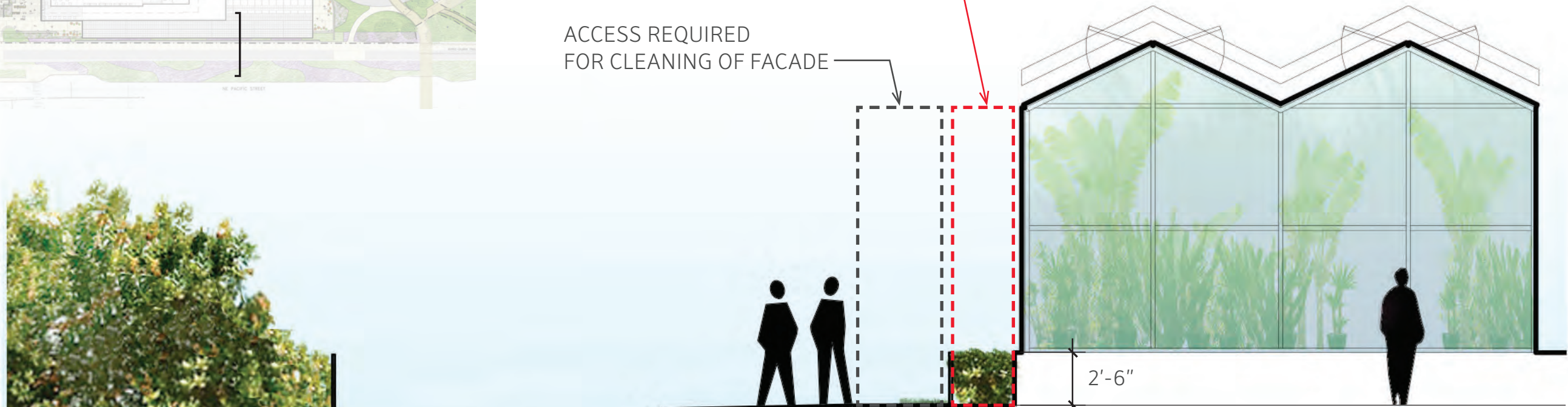
GUSTAFSON GUTHRIE NICHOL

PERKINS+WILL



NO ACCESS REQUIRED
IN THIS ZONE

ACCESS REQUIRED
FOR CLEANING OF FACADE





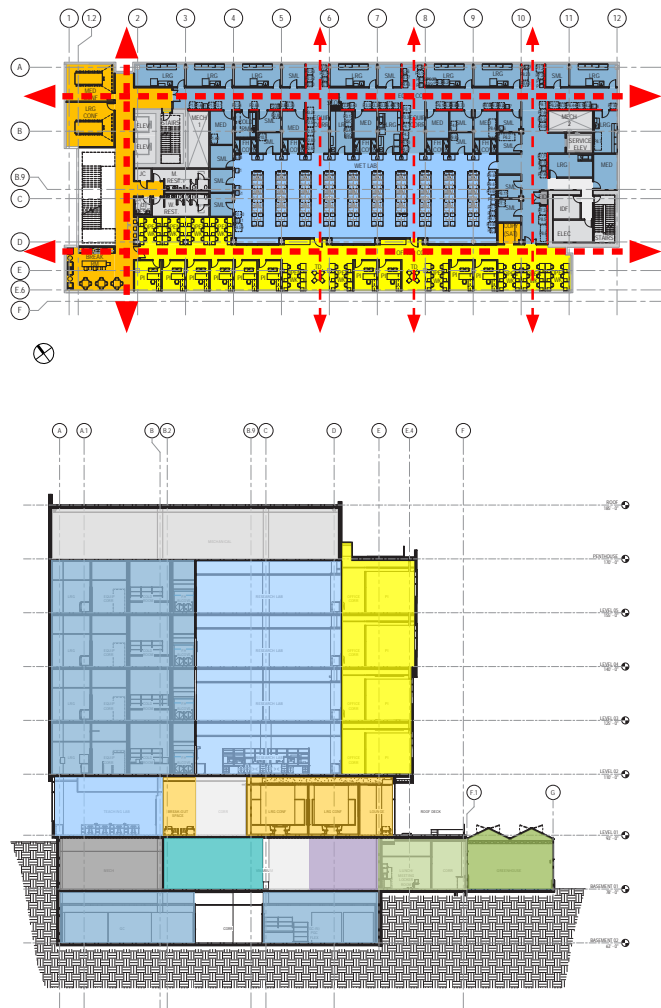


4. EXTERIOR DESIGN

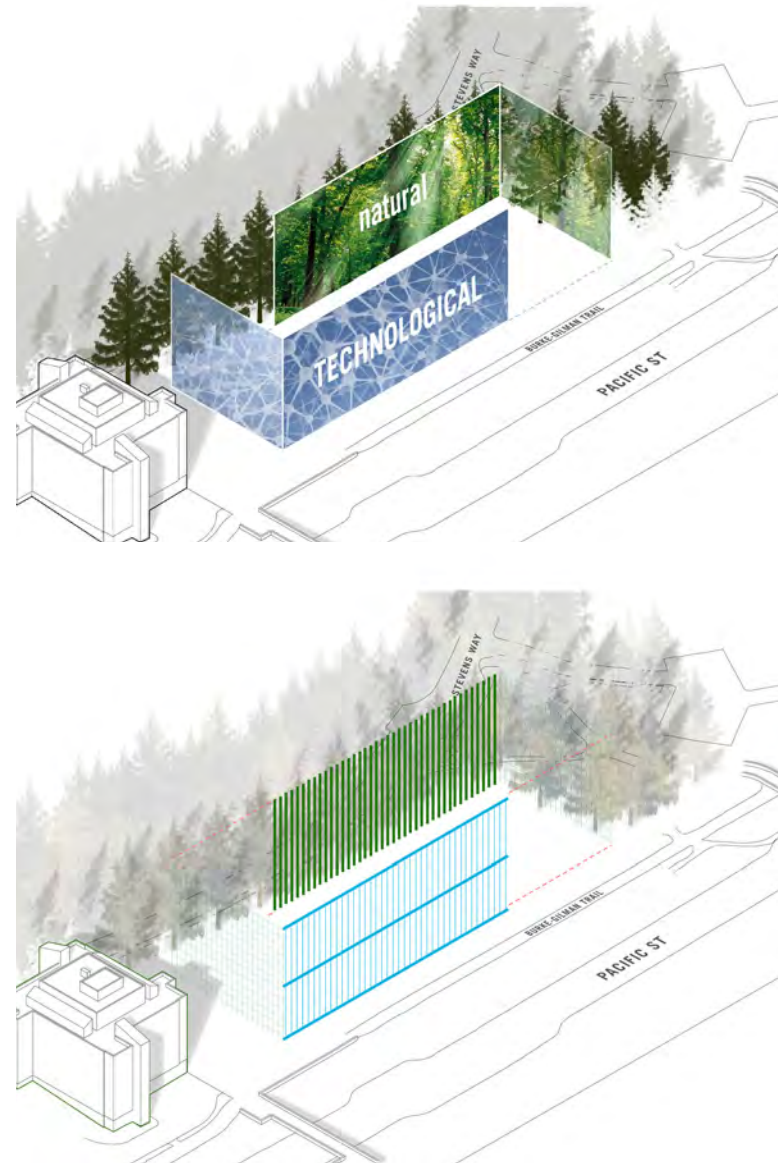


EXTERIOR DESIGN DRIVERS

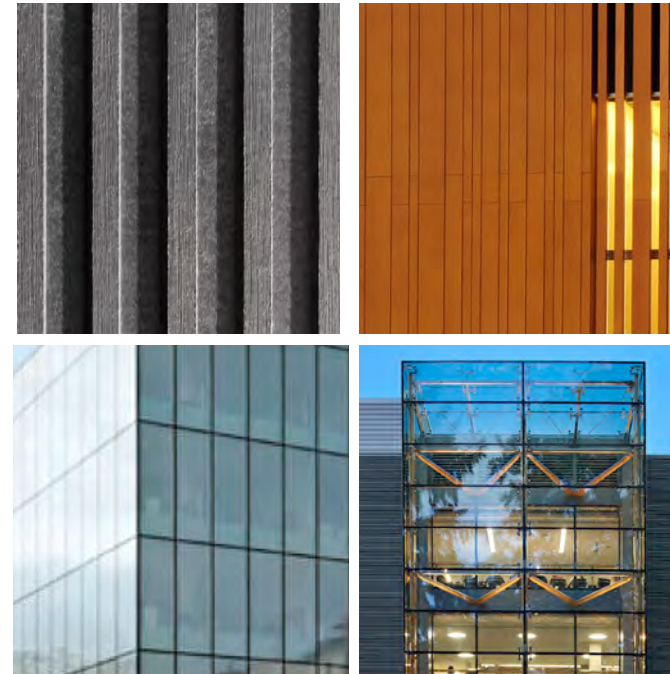
PROGRAMMING



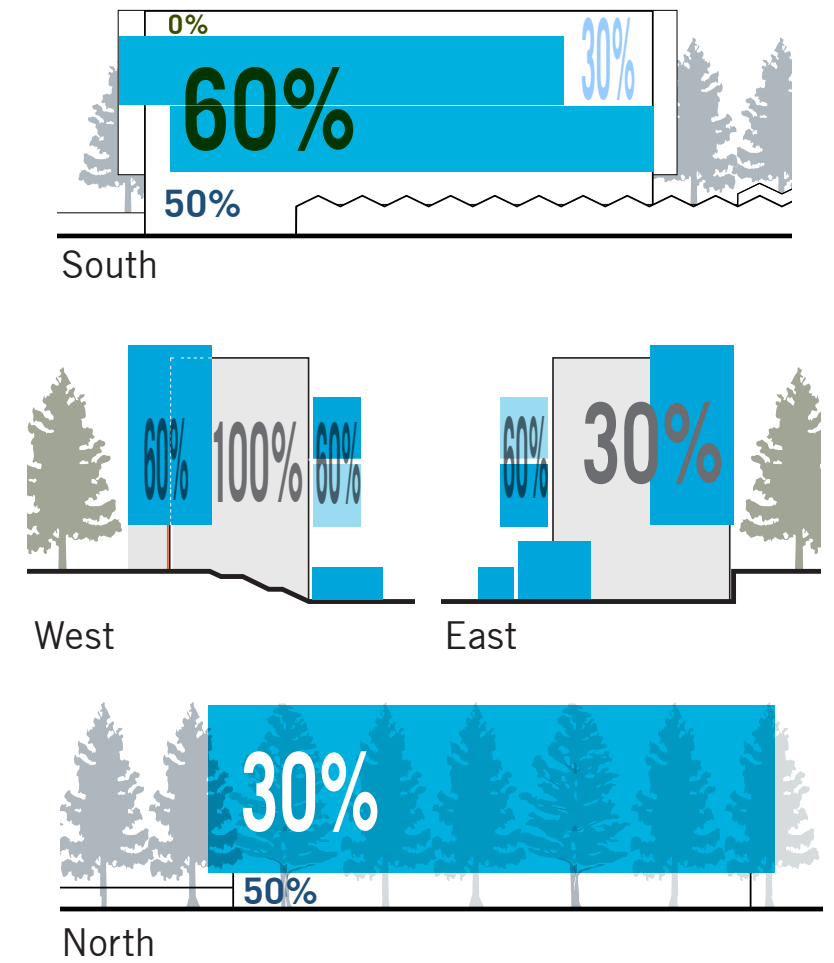
IDENTITY + GRAIN



UNITY + MATERIALITY



PERFORMANCE



SOUTH OFFICE BARS



University of Washington Life Sciences Building I-14

PERKINS+WILL

SOUTH ELEVATION

SCHEMATIC DESIGN

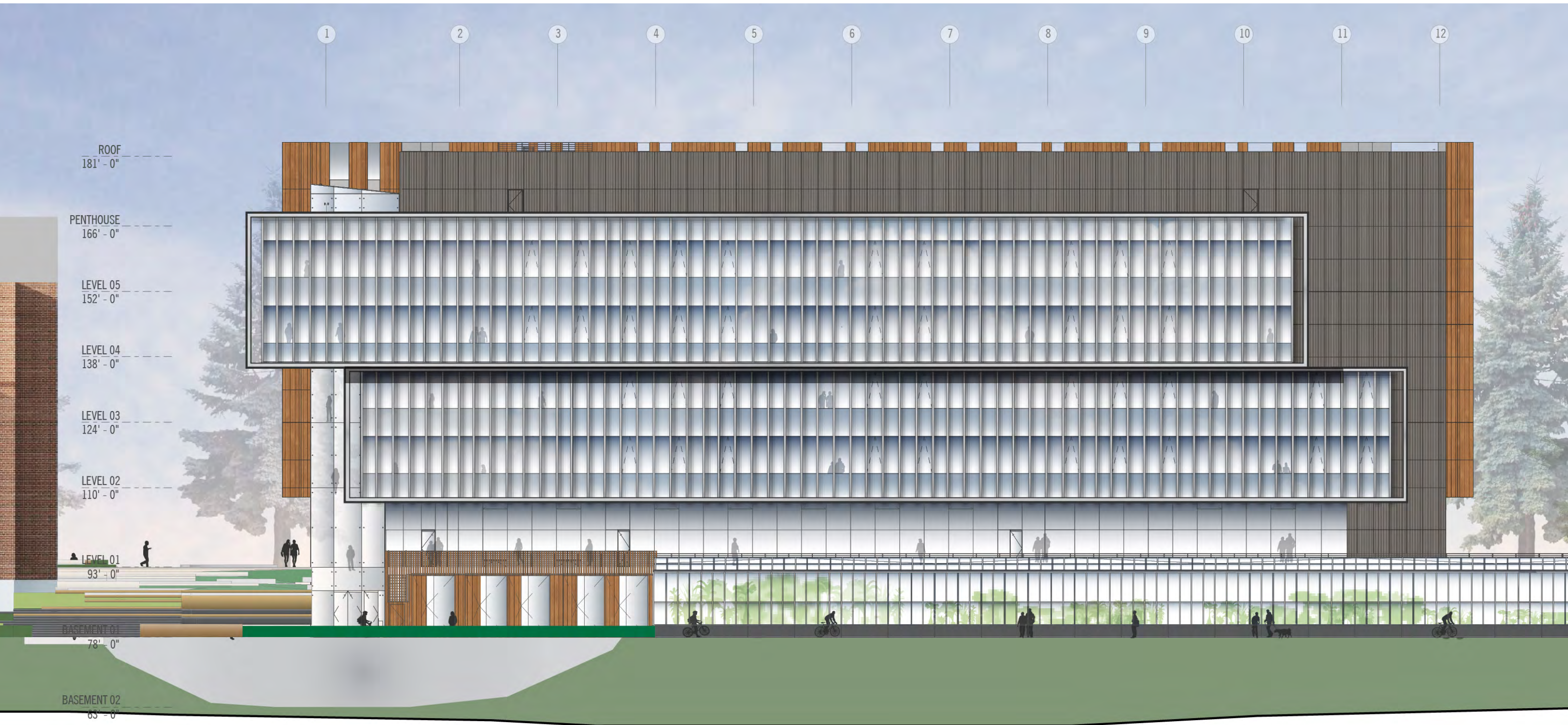


CURRENT

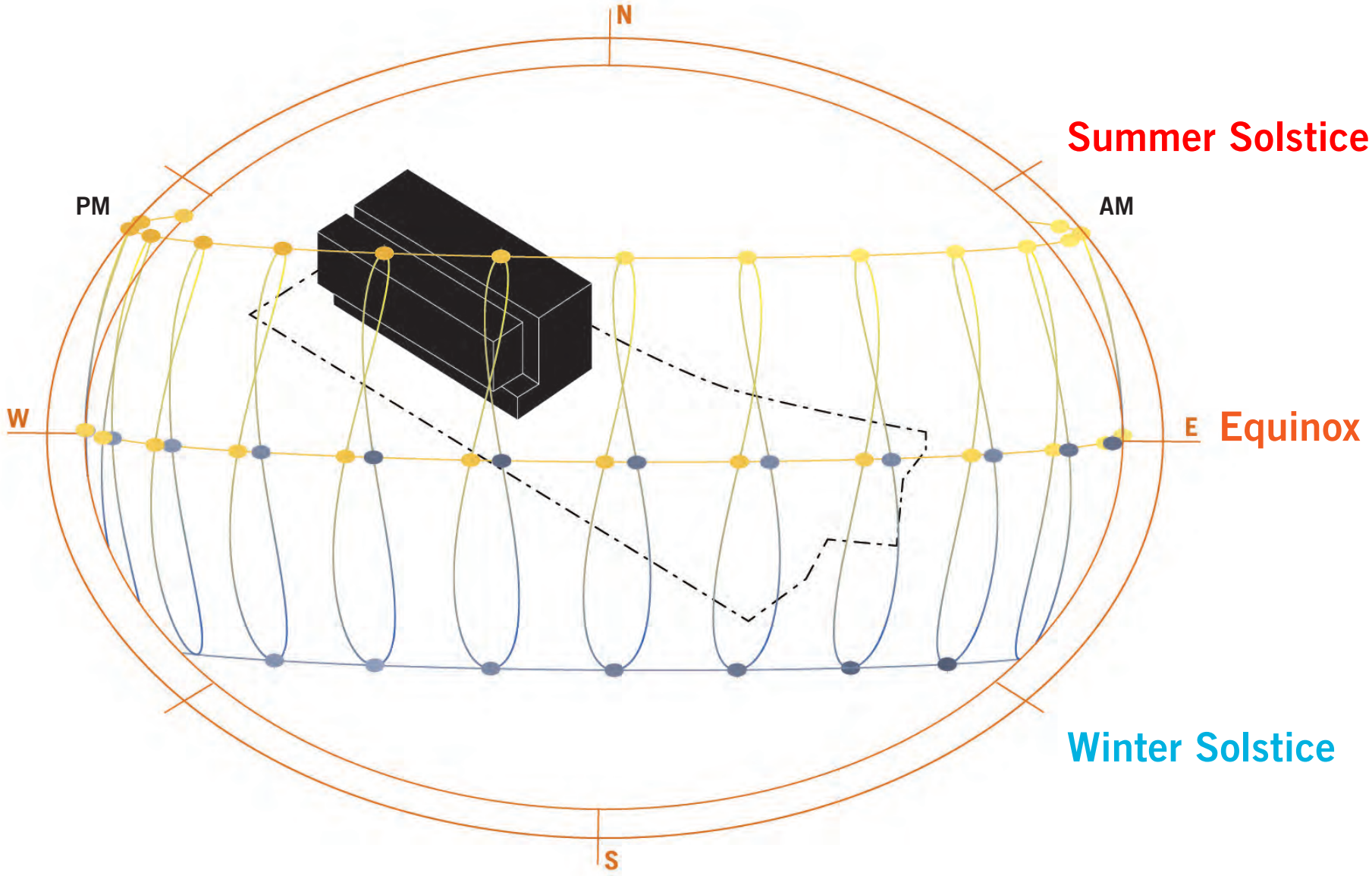




SOUTH ELEVATION



SOUTH ELEVATION



Solar Shading Strategies



Vertical



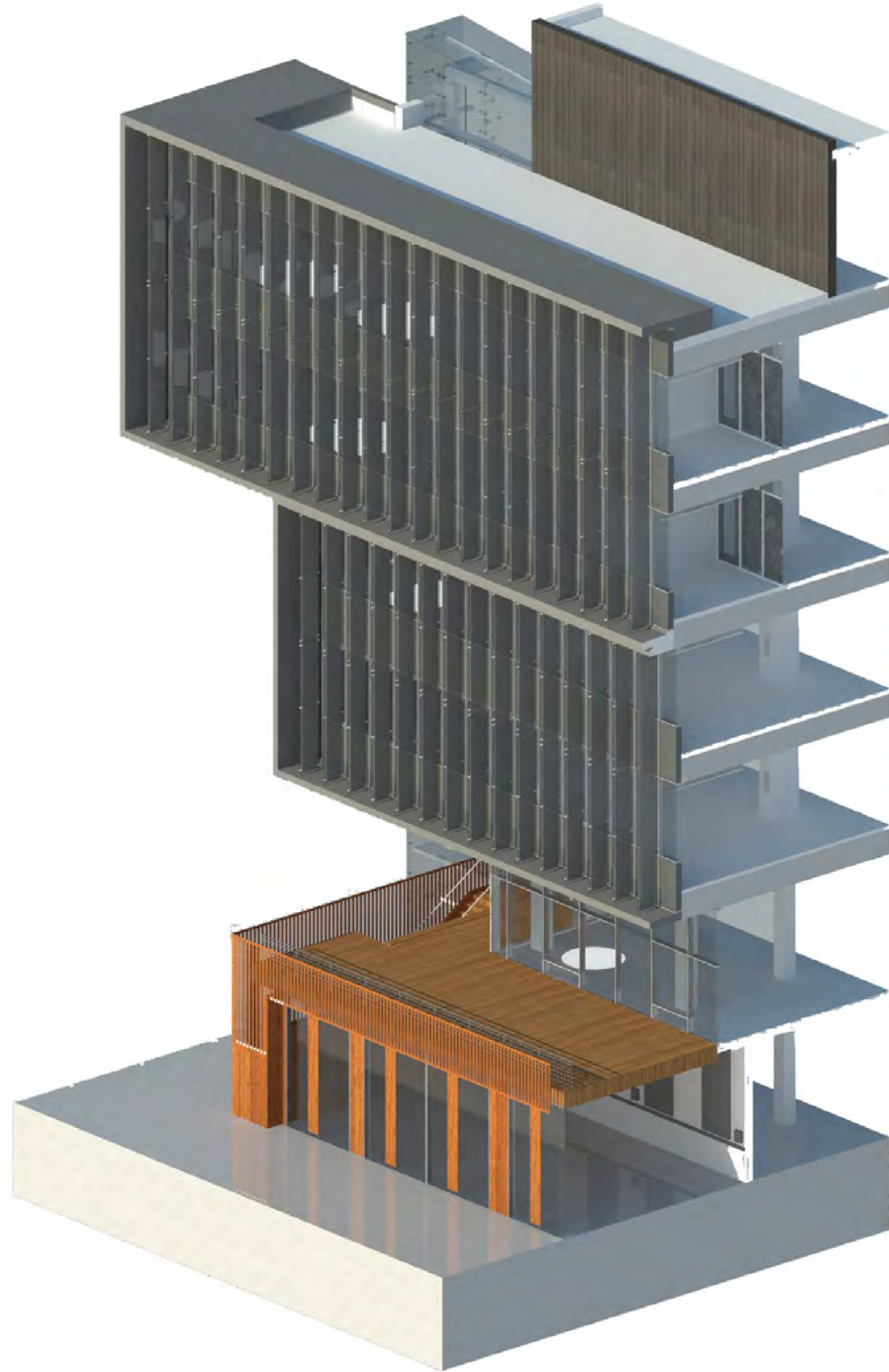
Horizontal



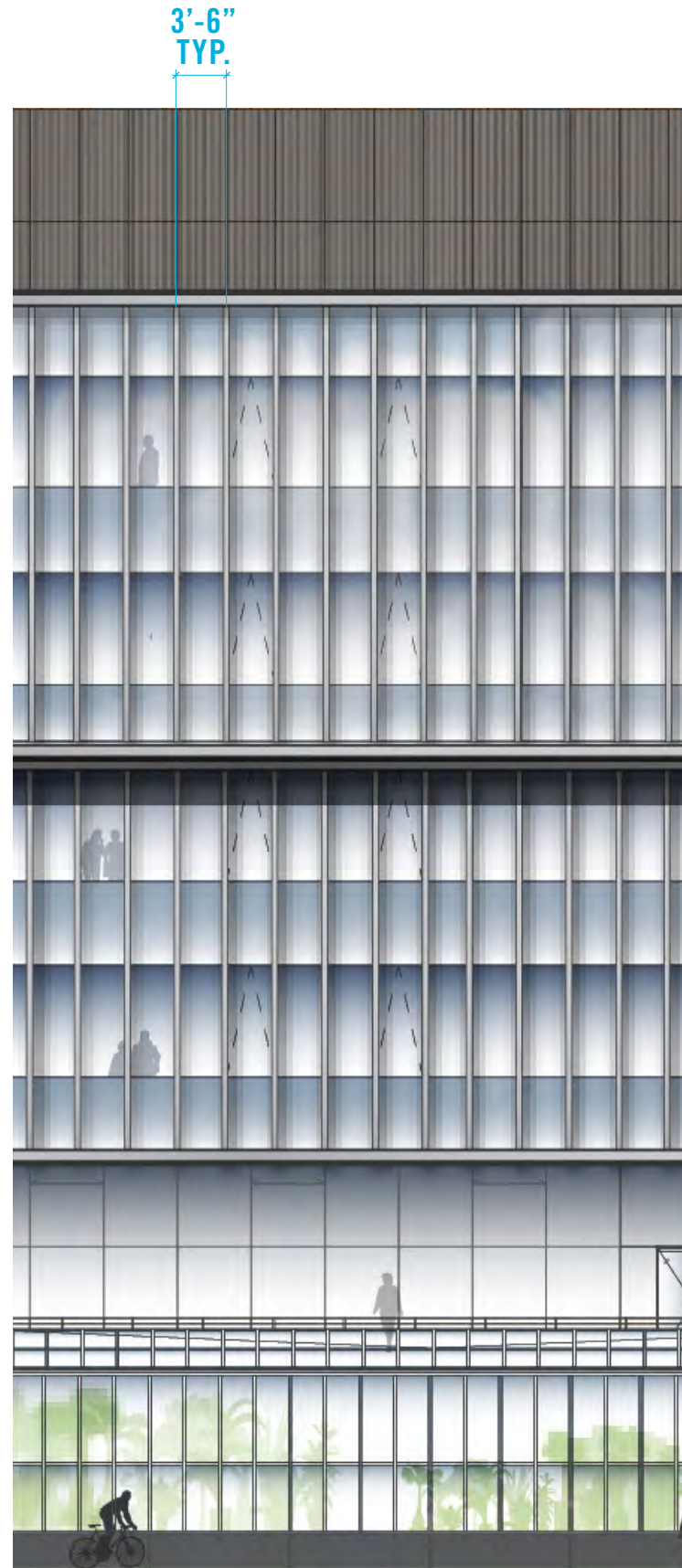
Diagonal



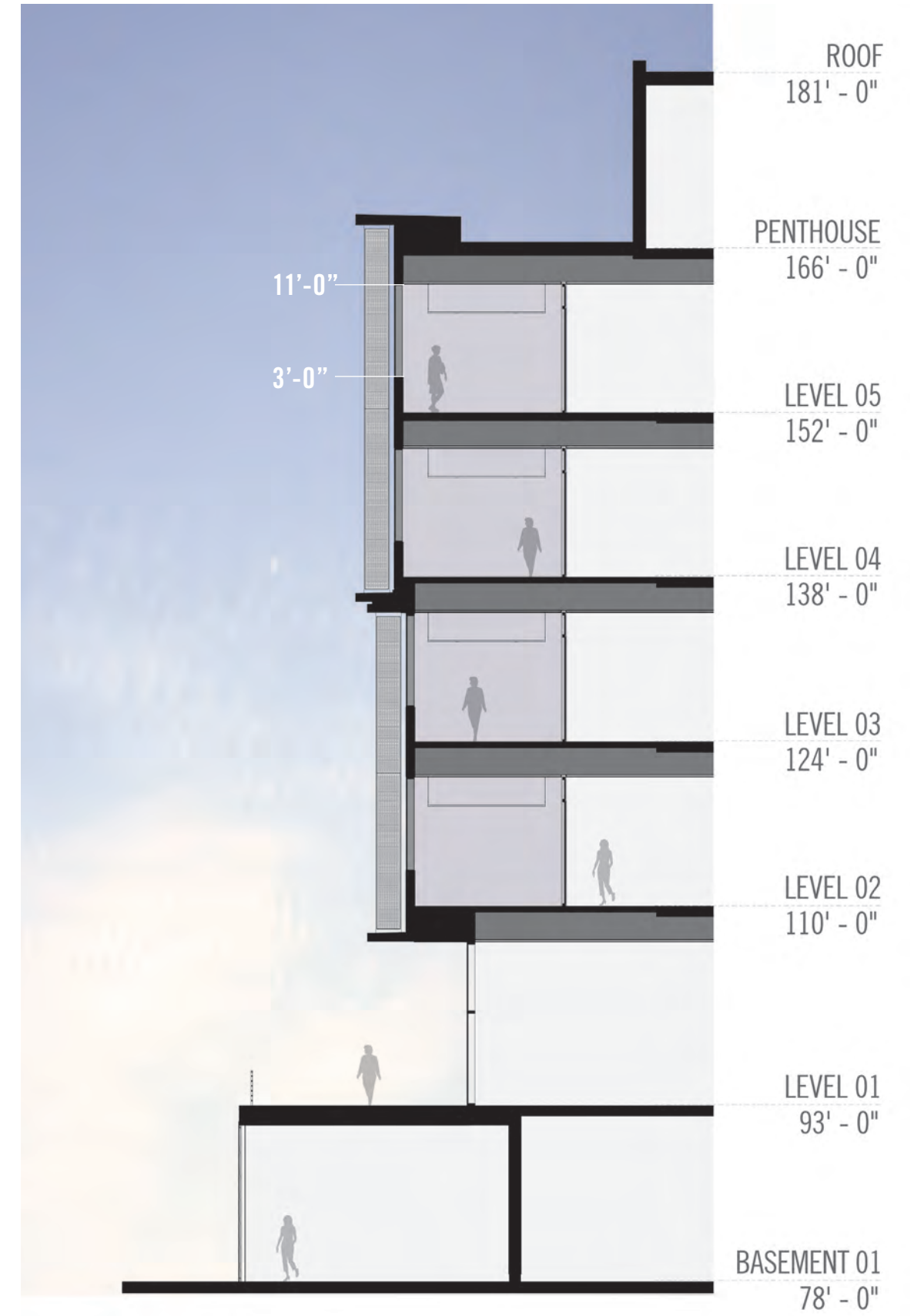
SOUTH ELEVATION



3D AXONOMETRIC

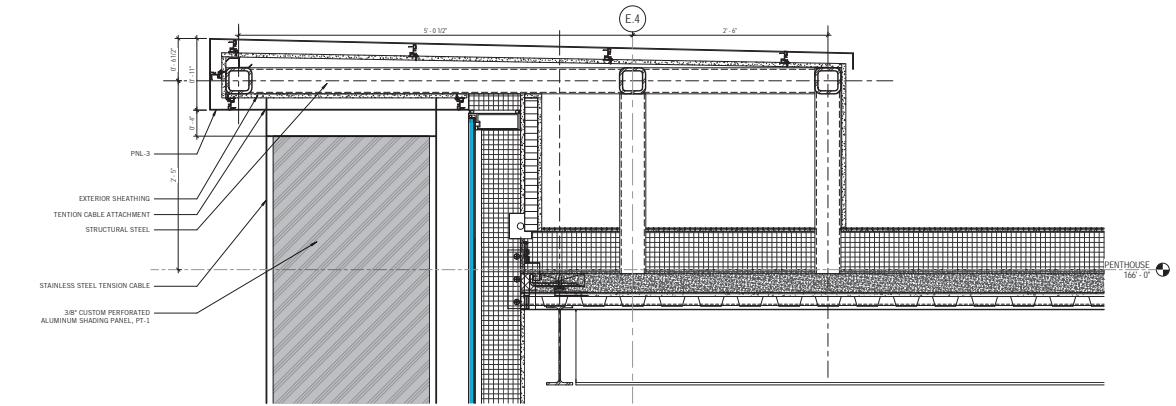
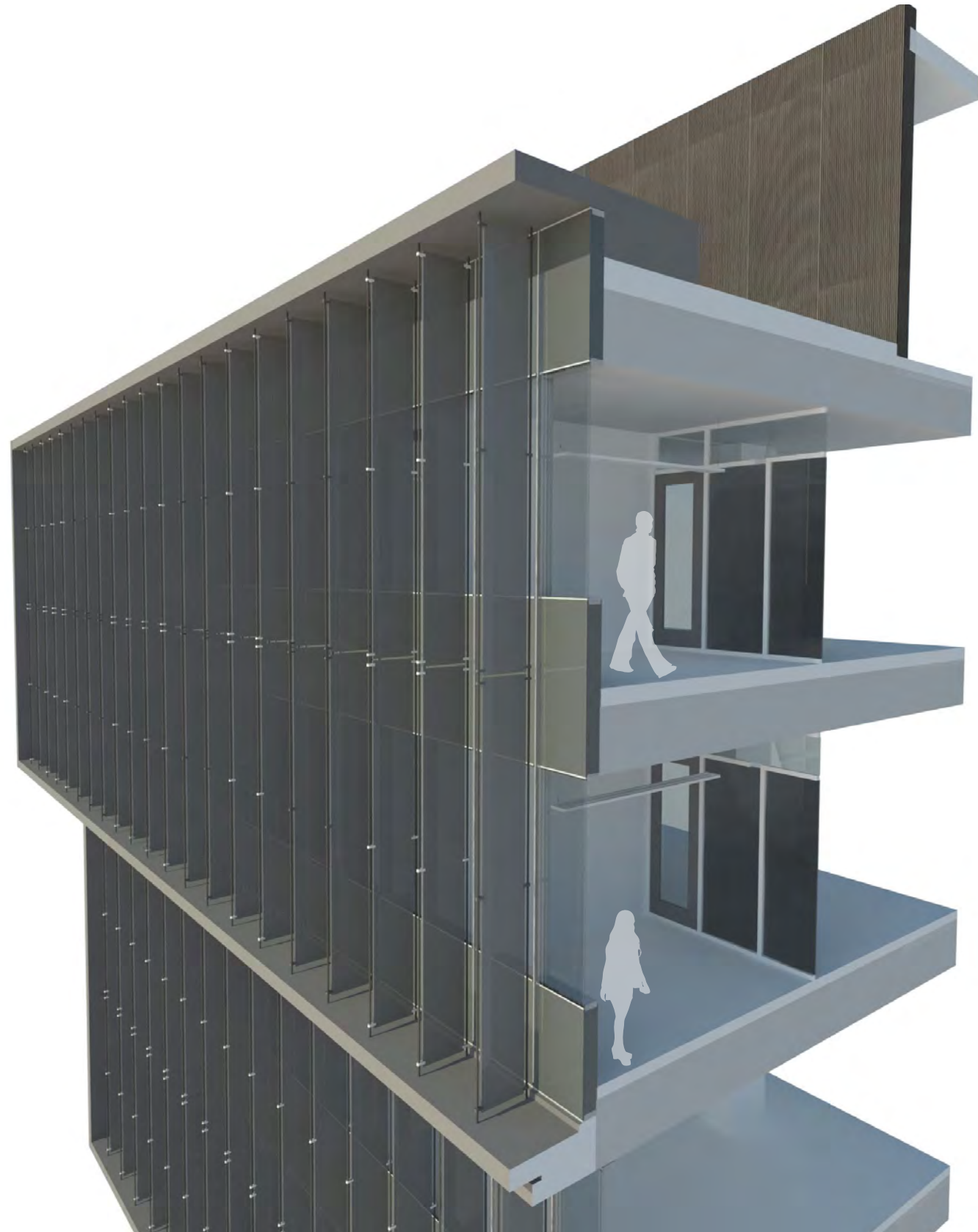


SOUTH ENLARGED ELEVATION

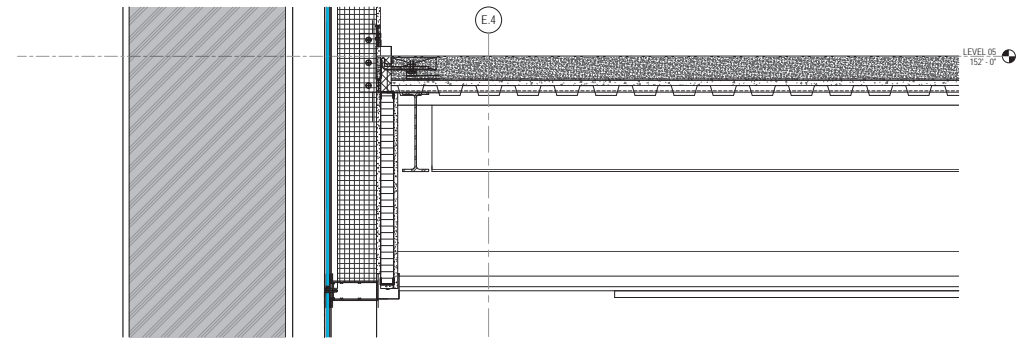


SOUTH WALL SECTION

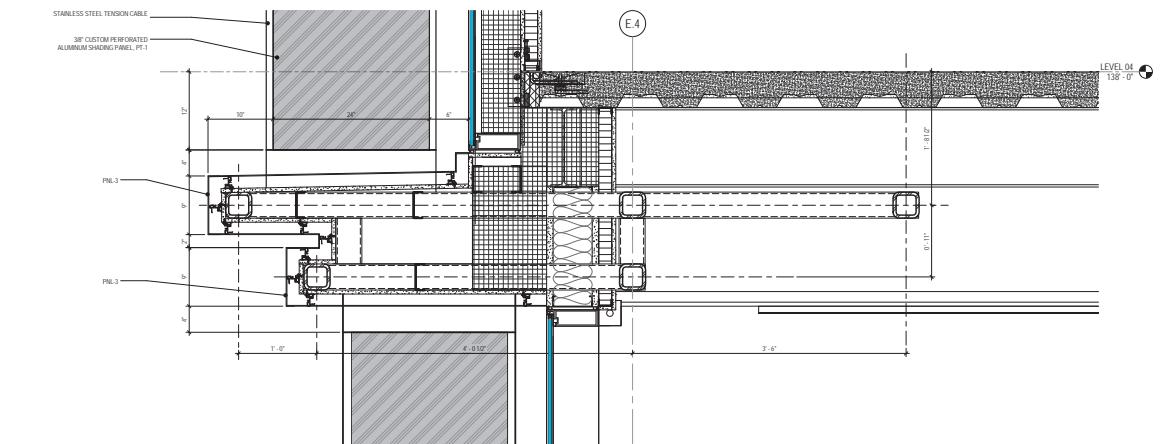
SOUTH ELEVATION



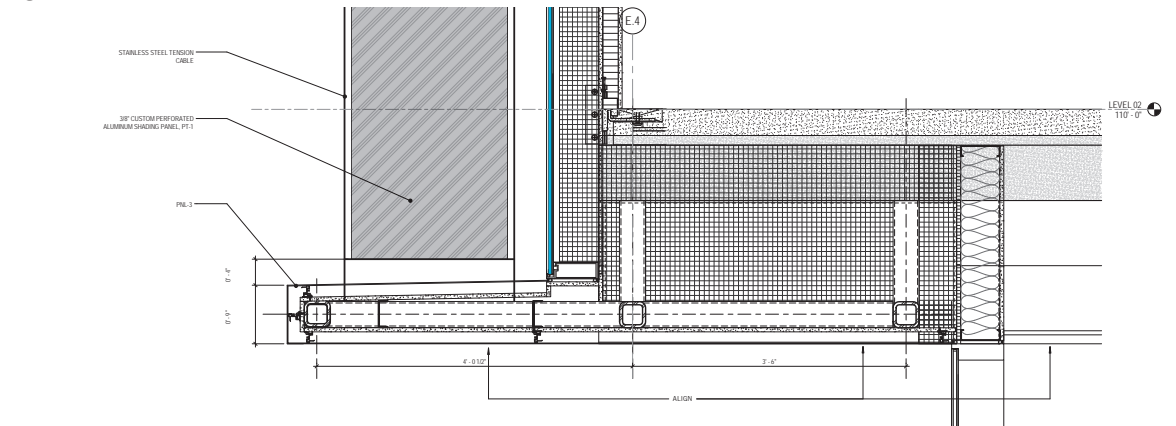
D6 SOUTH FACADE AT PARAPET
1'10\"/>



C6 SOUTH FACADE AT INTERIOR SOFFIT
1'10\"/>

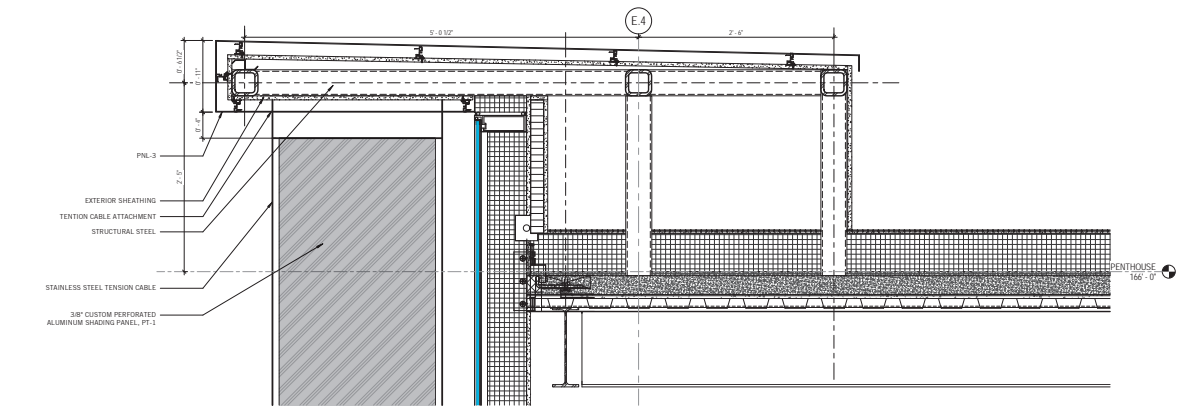


B6 SOUTH FACADE AT MASS SHIFT
1'10\"/>

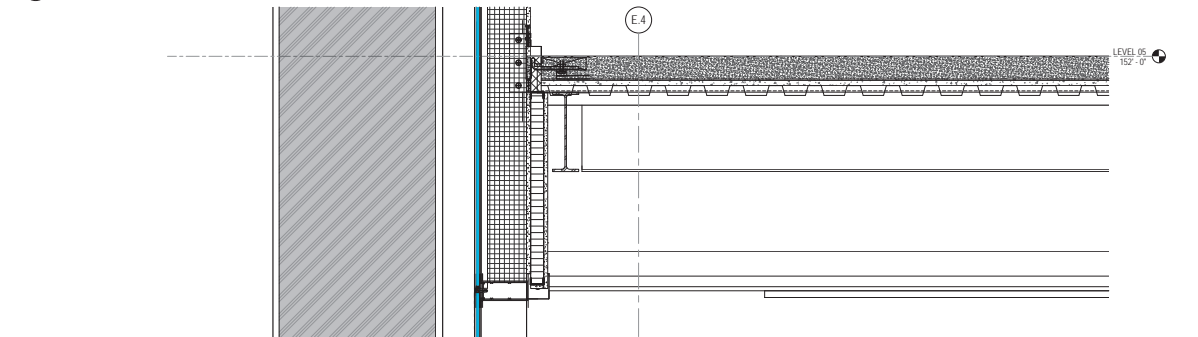


A6 SOUTH FACADE AT EXTERIOR
1'10\"/>

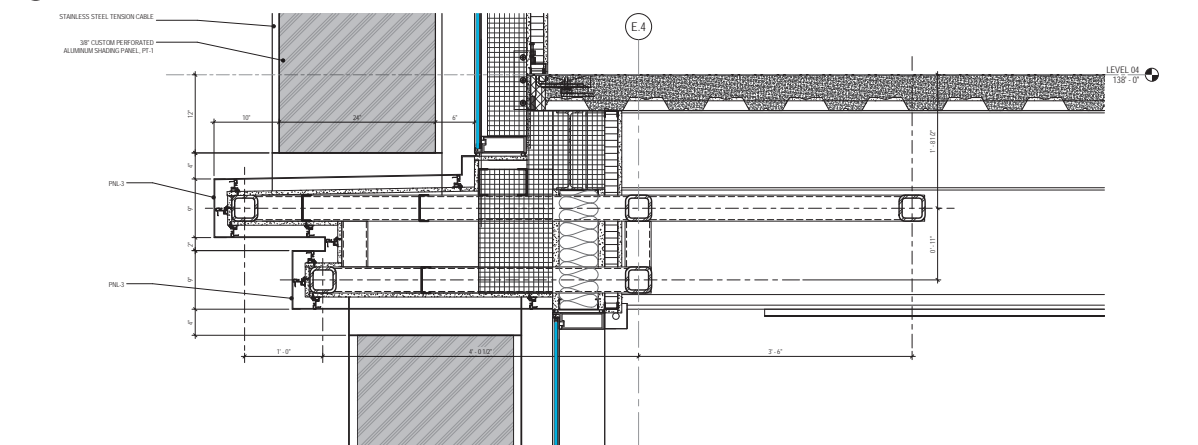
SOUTH ELEVATION



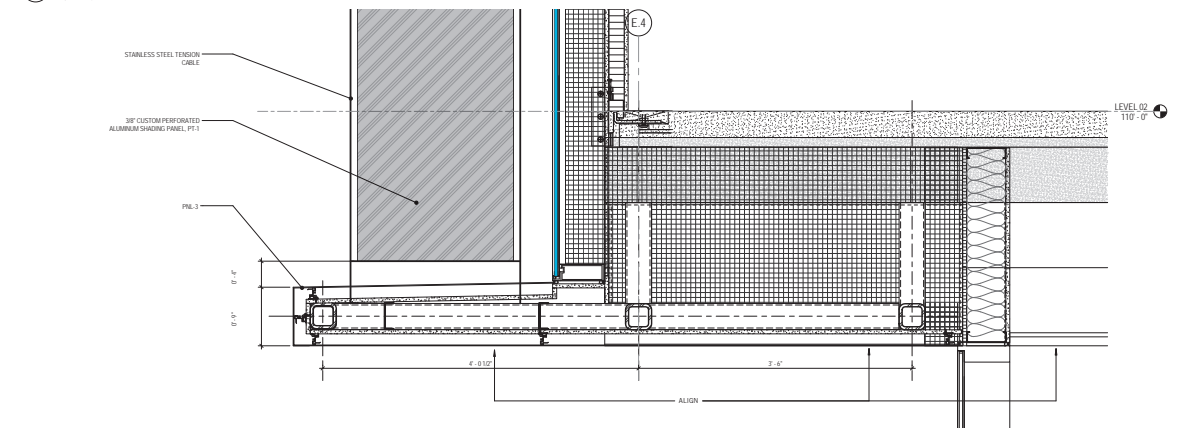
D6 SOUTH FACADE AT PARAPET
1/32" = 1'-0"



C6 SOUTH FACADE AT INTERIOR SOFFIT
1/32" = 1'-0"

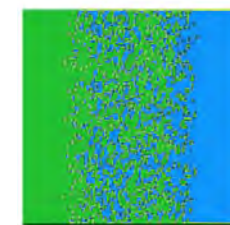
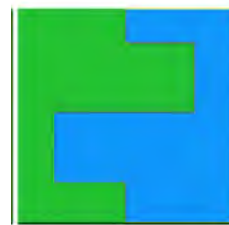
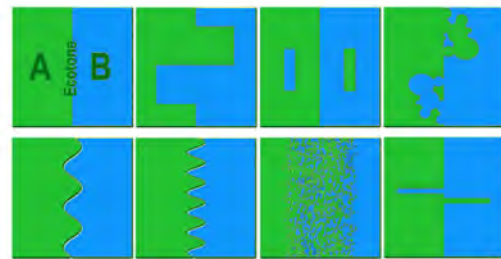
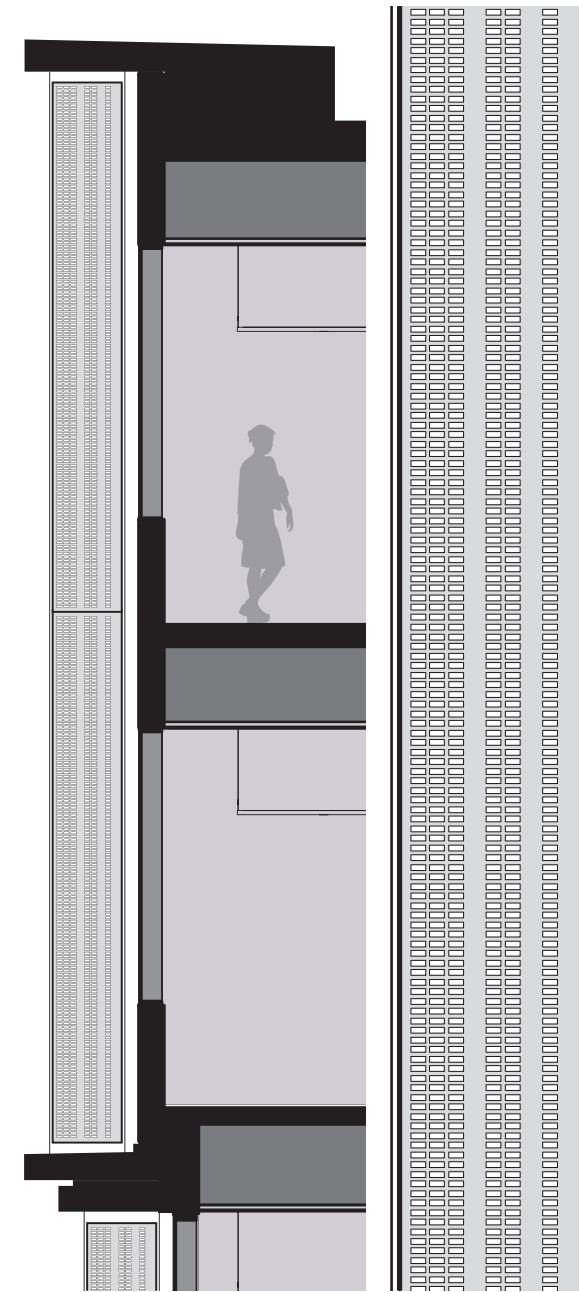
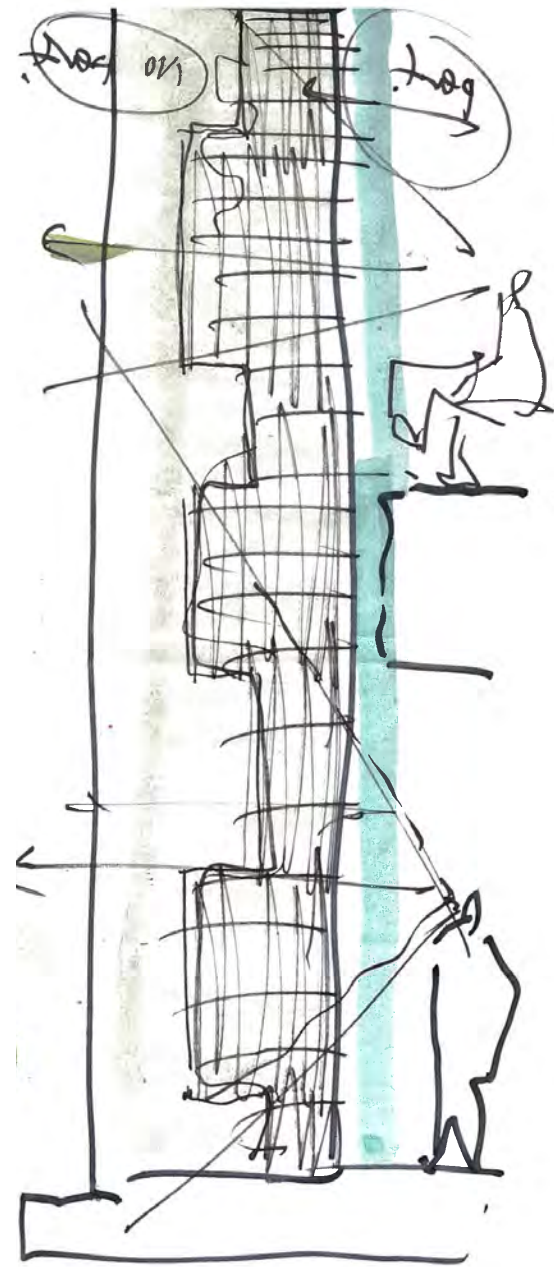


B6 SOUTH FACADE AT MASS SHIFT
1/32" = 1'-0"



A6 SOUTH FACADE AT EXTERIOR
1/32" = 1'-0"

FIN PERFORATION STUDY



NORTH ELEVATION

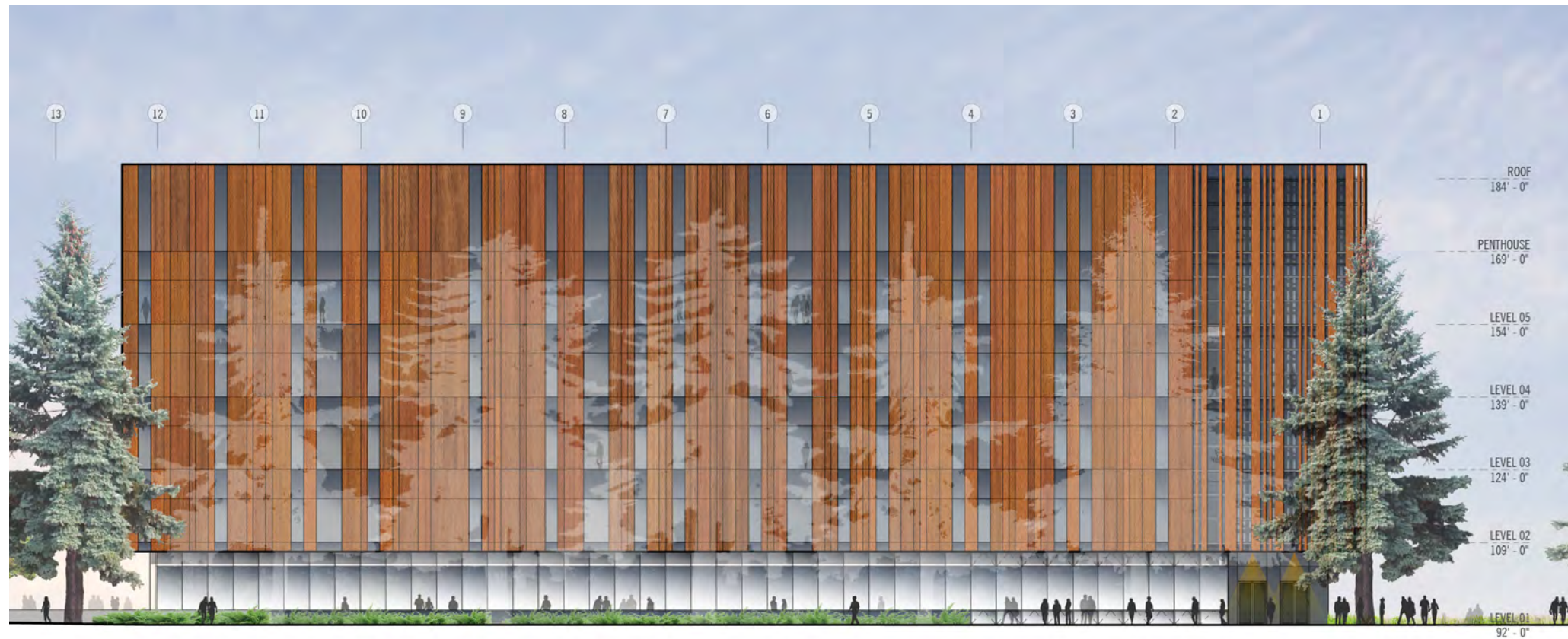


SCHEMATIC DESIGN

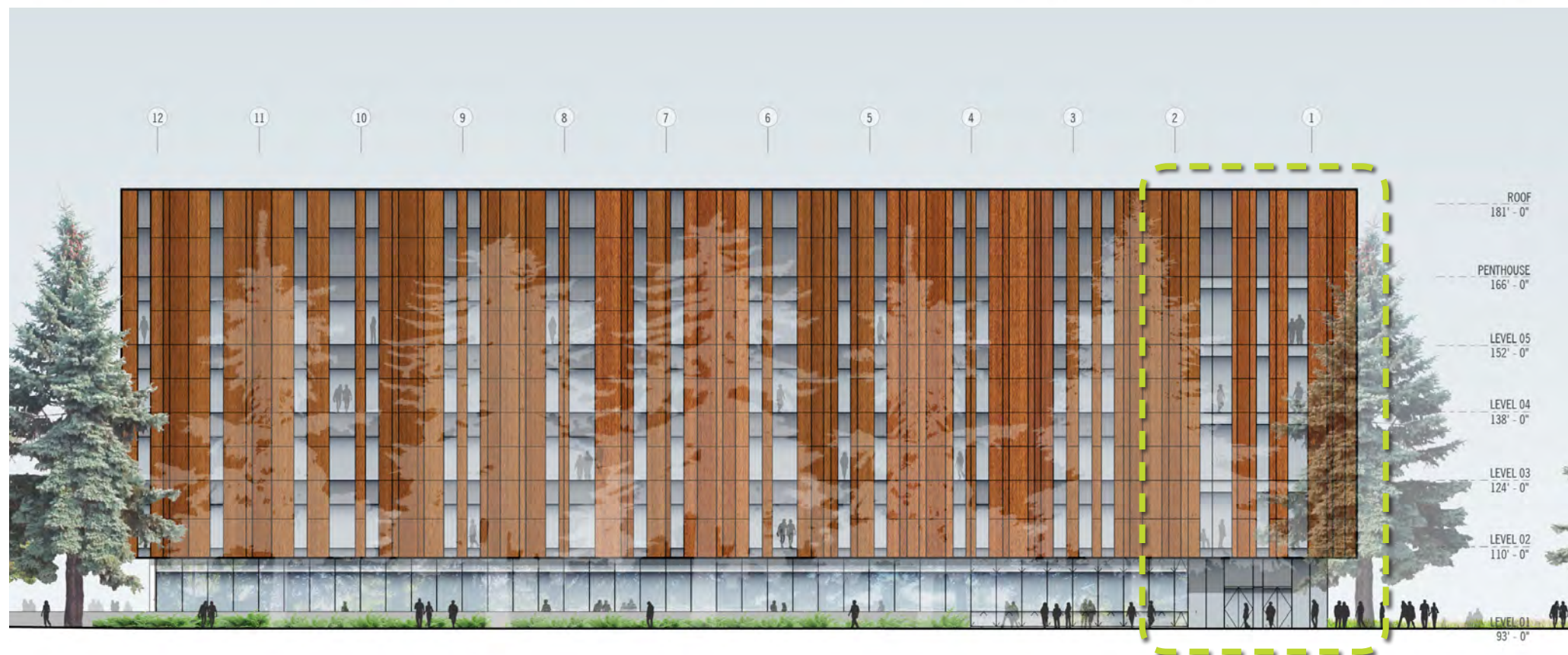
CURRENT

1. Delete Parklex stainless steel framing system at conference rooms
2. Revise Exterior Elevation at NW Corner from 100% Curtain Wall System to 50% Curtain Wall / 50% Parklex System





SCHEMATIC DESIGN

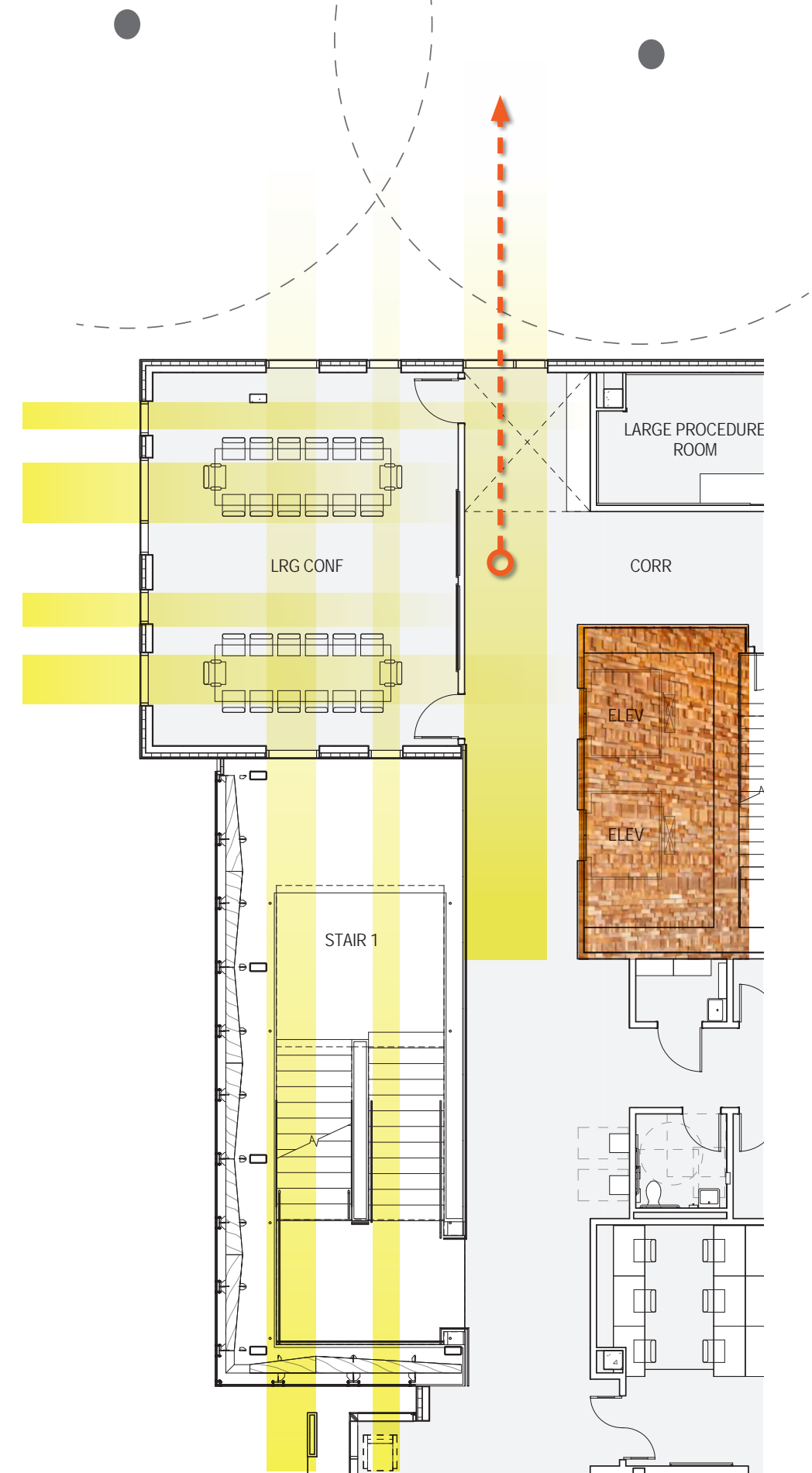


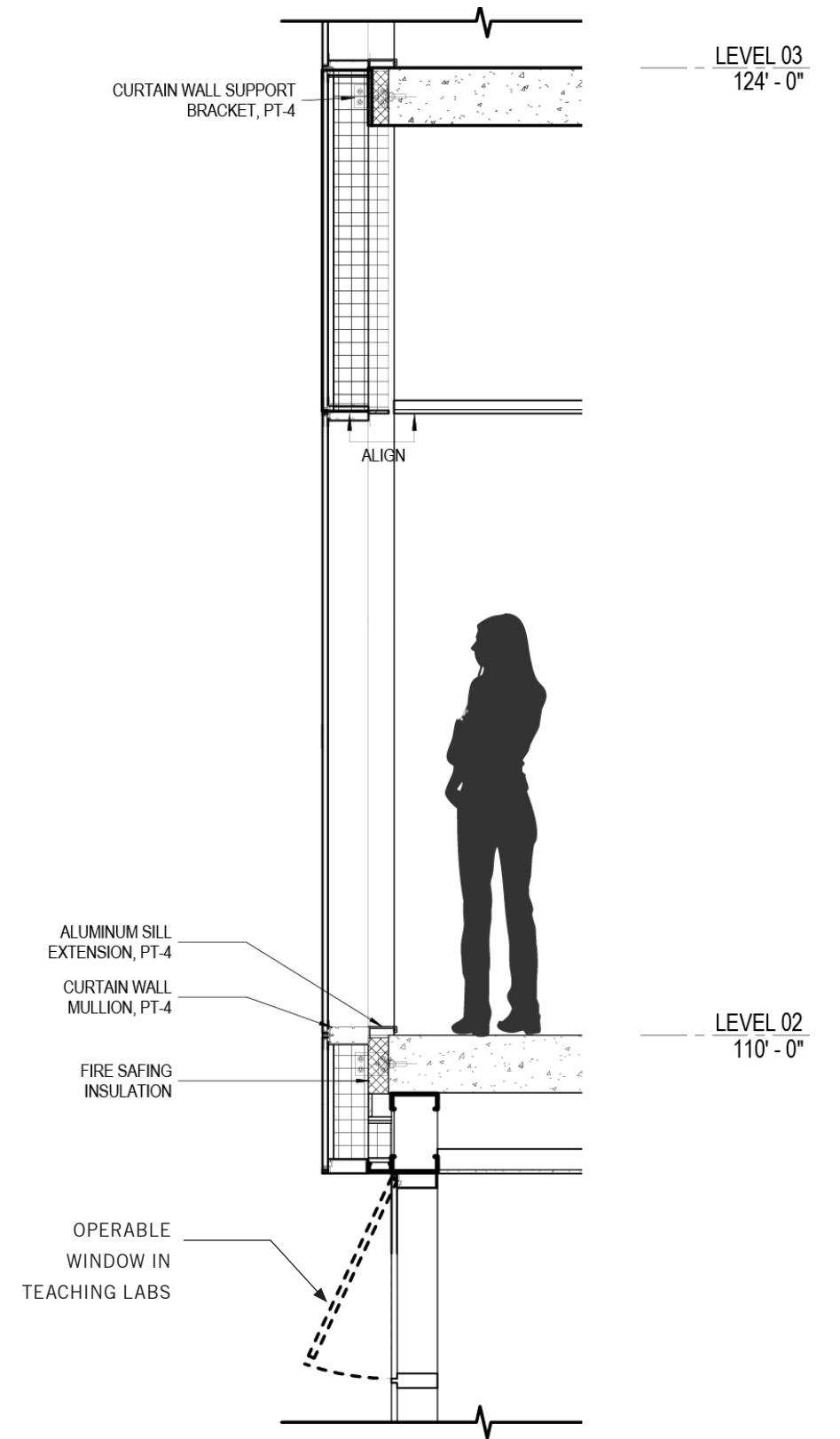
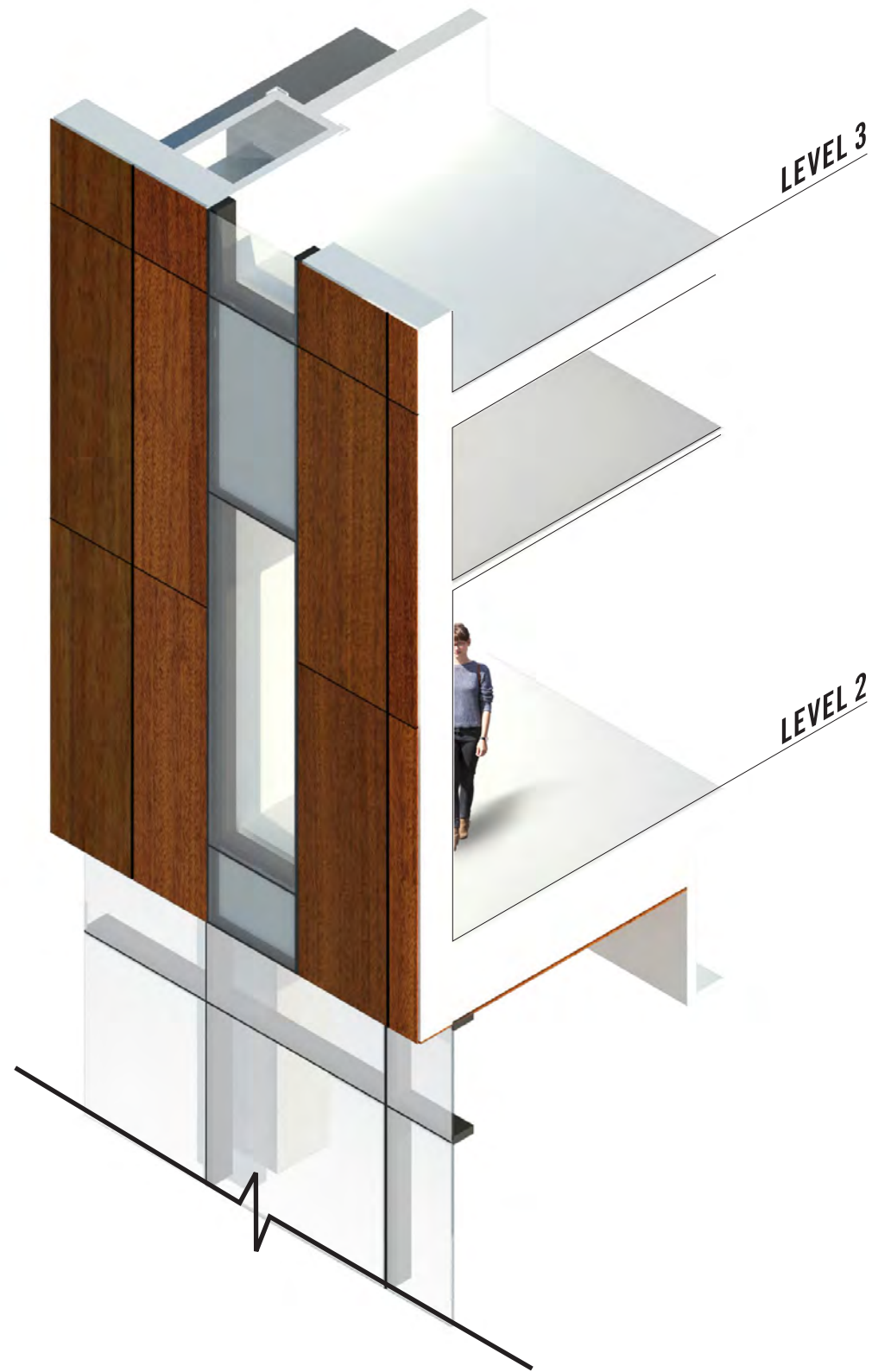
CURRENT

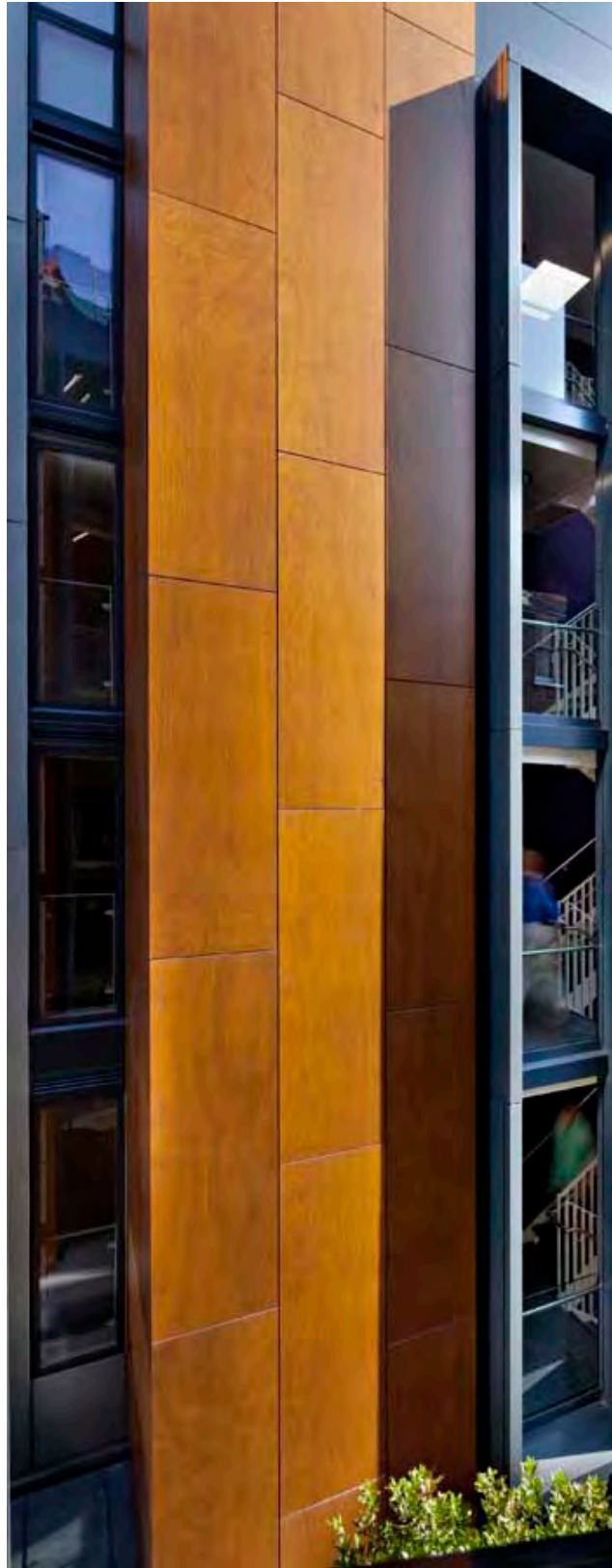
Changes Since Schematic Design



DOUBLE HEIGHT LOUNGE SPACE







HIDDEN FASTENING SYSTEM WITH HANGER SYSTEM

EAST ELEVATION



EAST ELEVATION

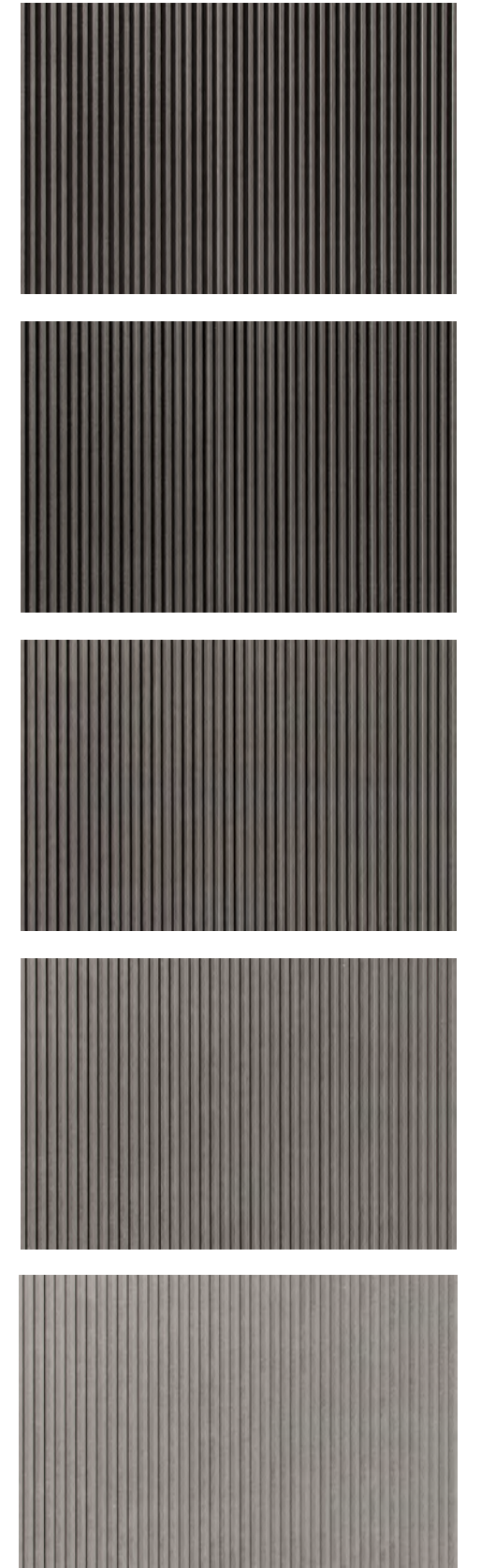
SCHEMATIC DESIGN



CURRENT



EAST ELEVATION



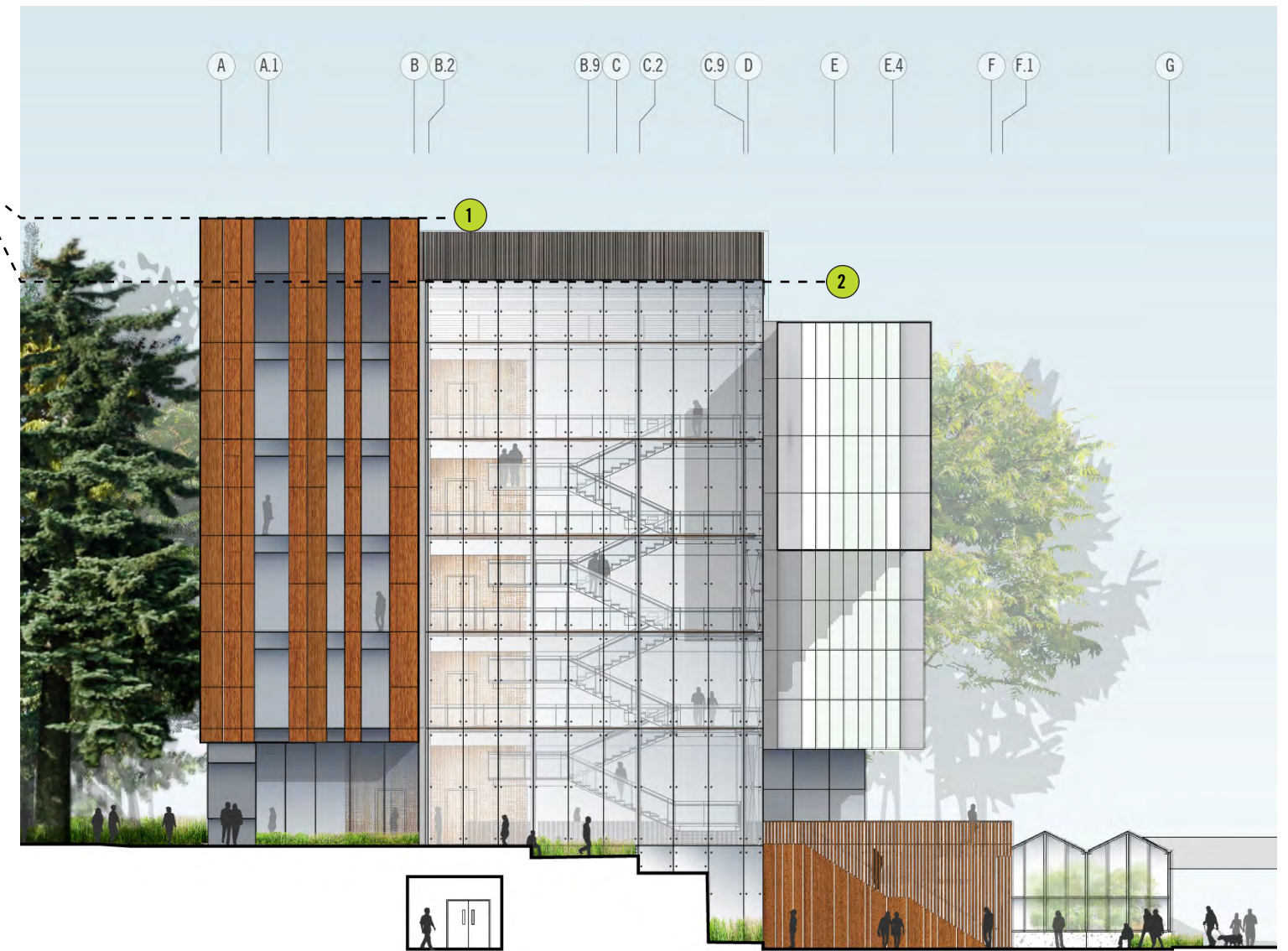
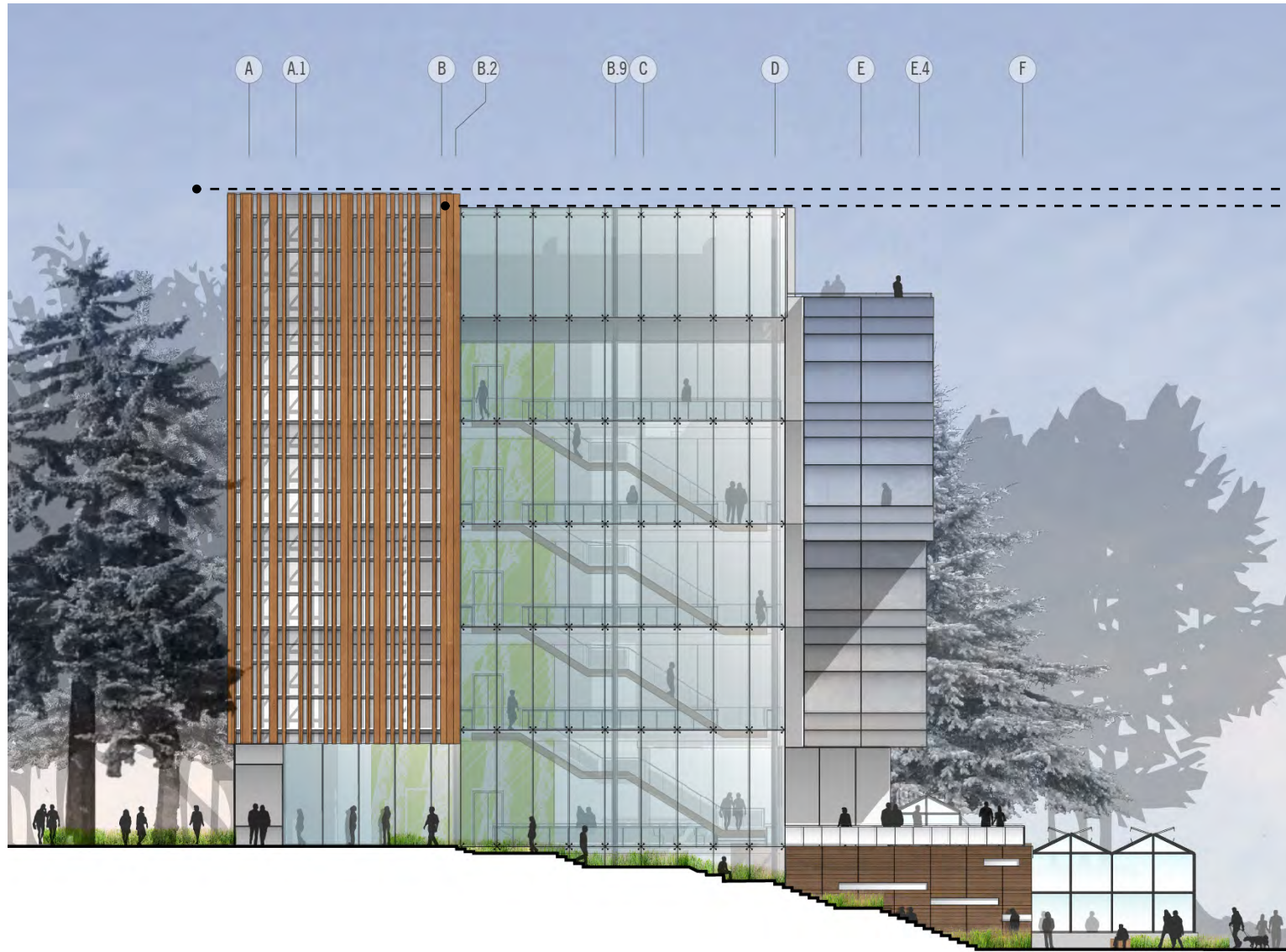
WEST ELEVATION



SCHEMATIC DESIGN

CURRENT

- 1. Floor-to-floor height reduction by 1' in level 2-5
- 2. Reduce Novum area for West Façade by 30%



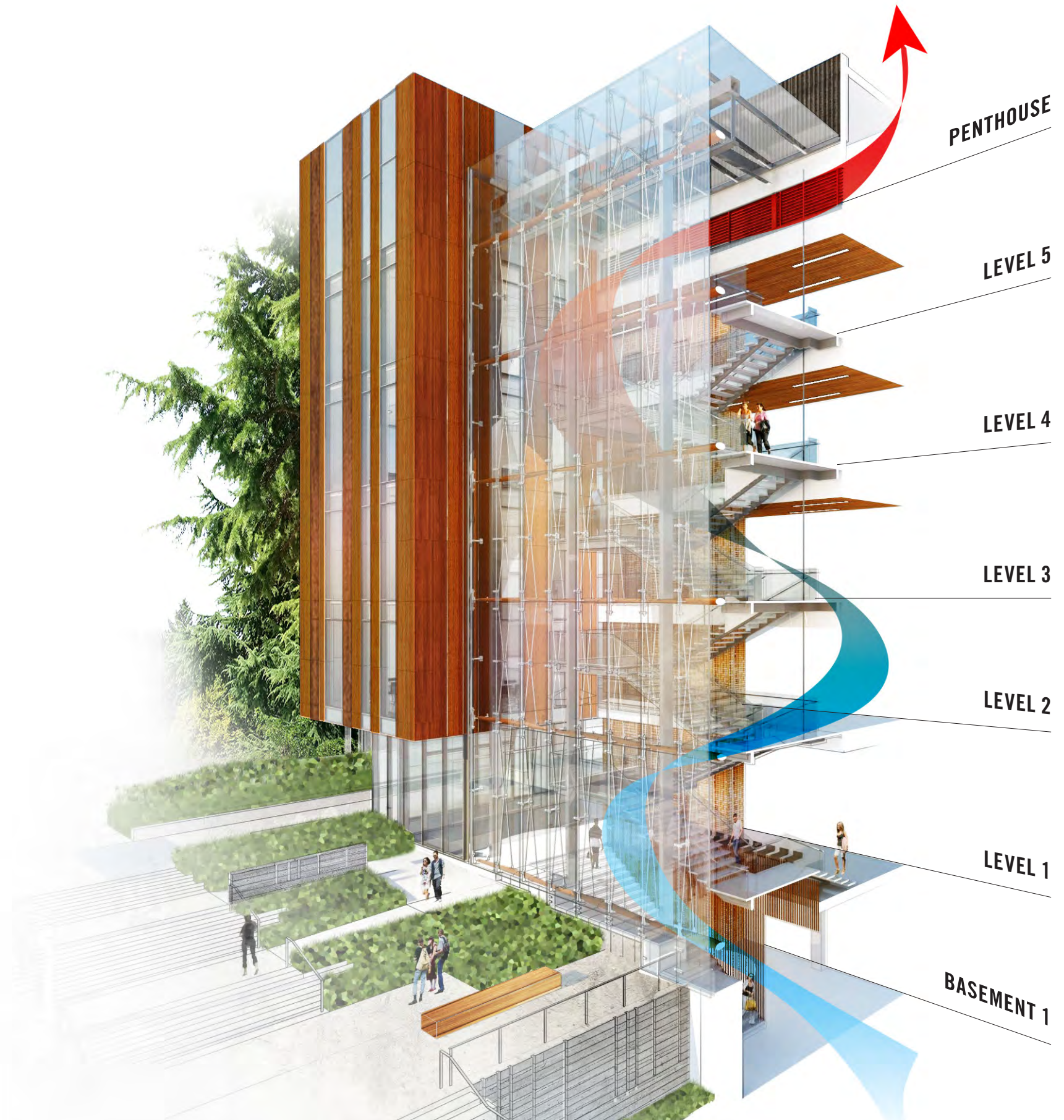
SCHEMATIC DESIGN

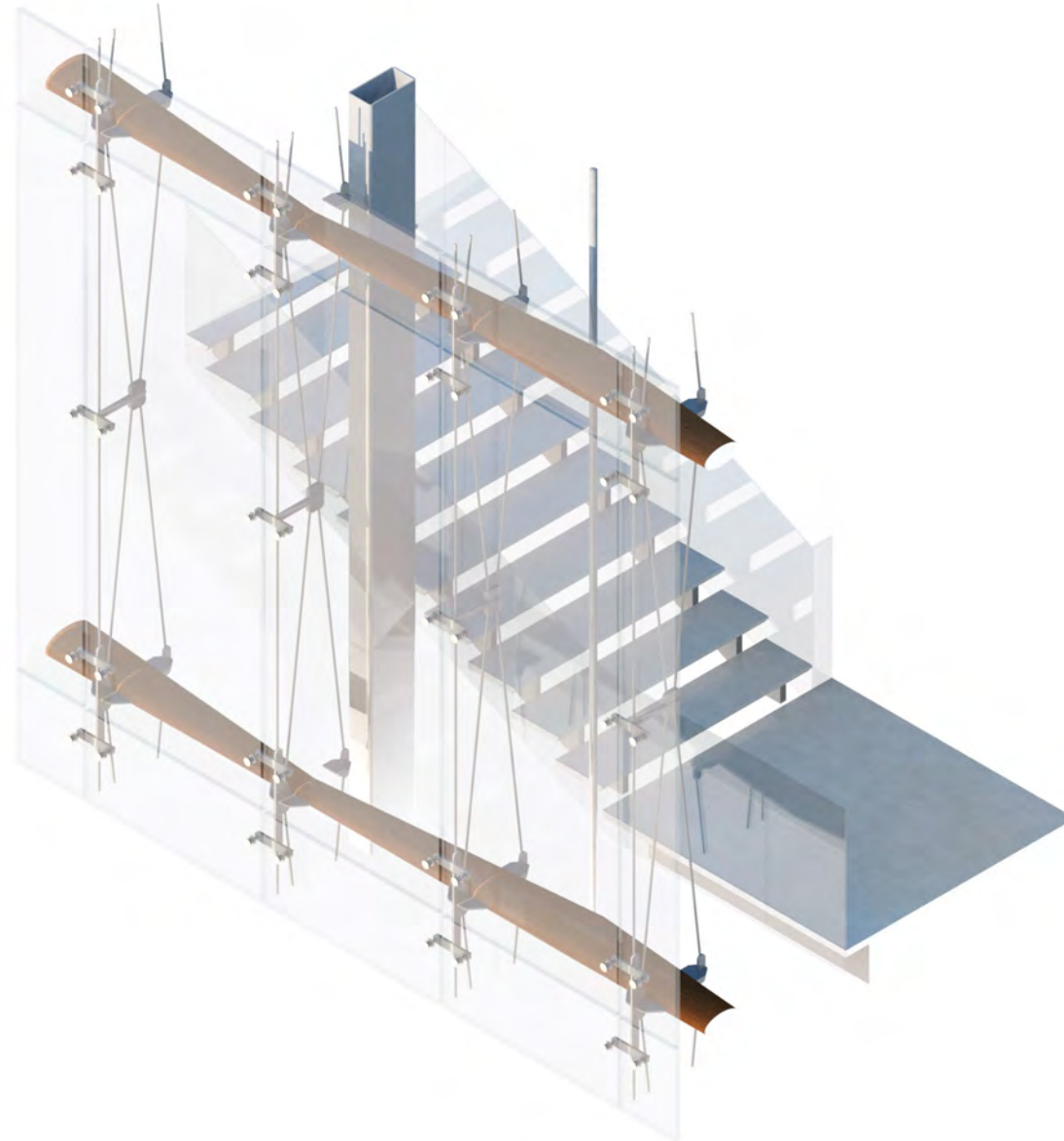


CURRENT



Changes since Schematic Design





TUBE STEEL STRUCTURE WITH INTUMESCENT PAINT

SOLARBAN 70 STRUCTURAL POINT SUPPORTED GLAZING SYSTEM

KING POST

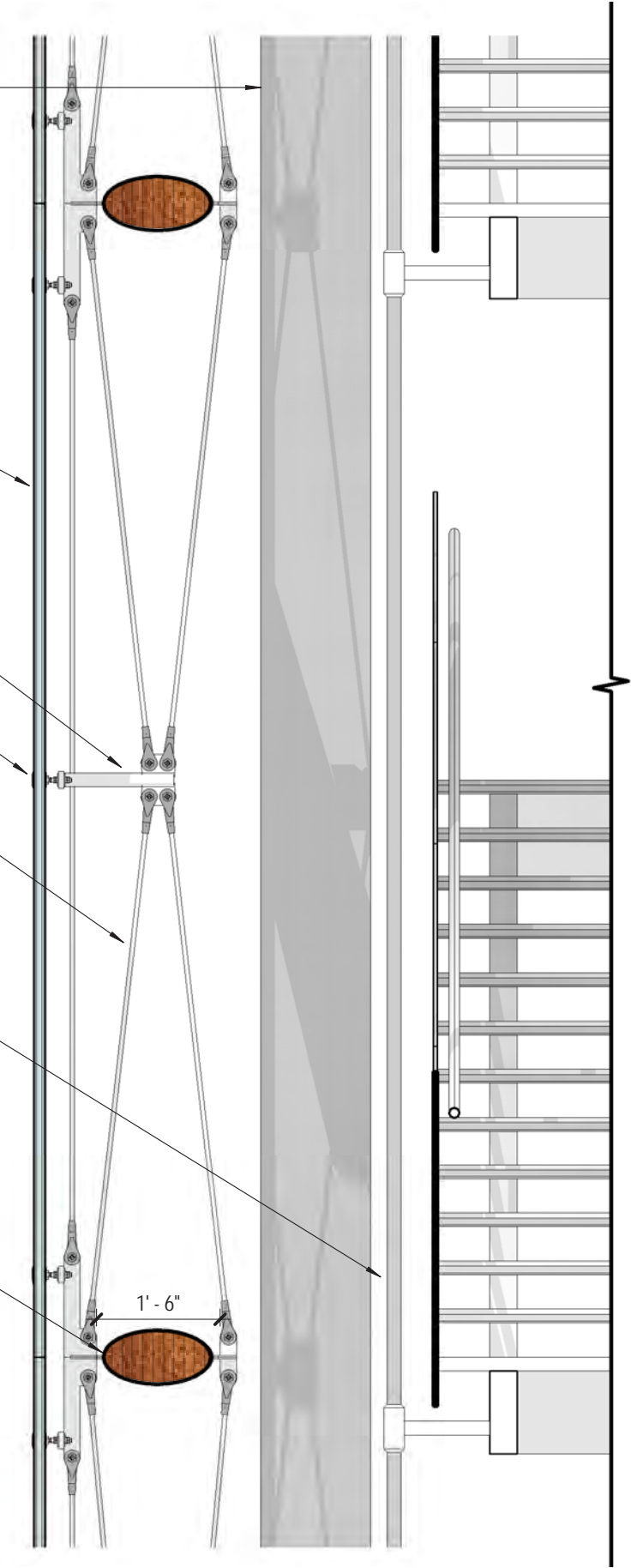
BUTTON-HEAD ROTULES AND PLATE-SPIDER

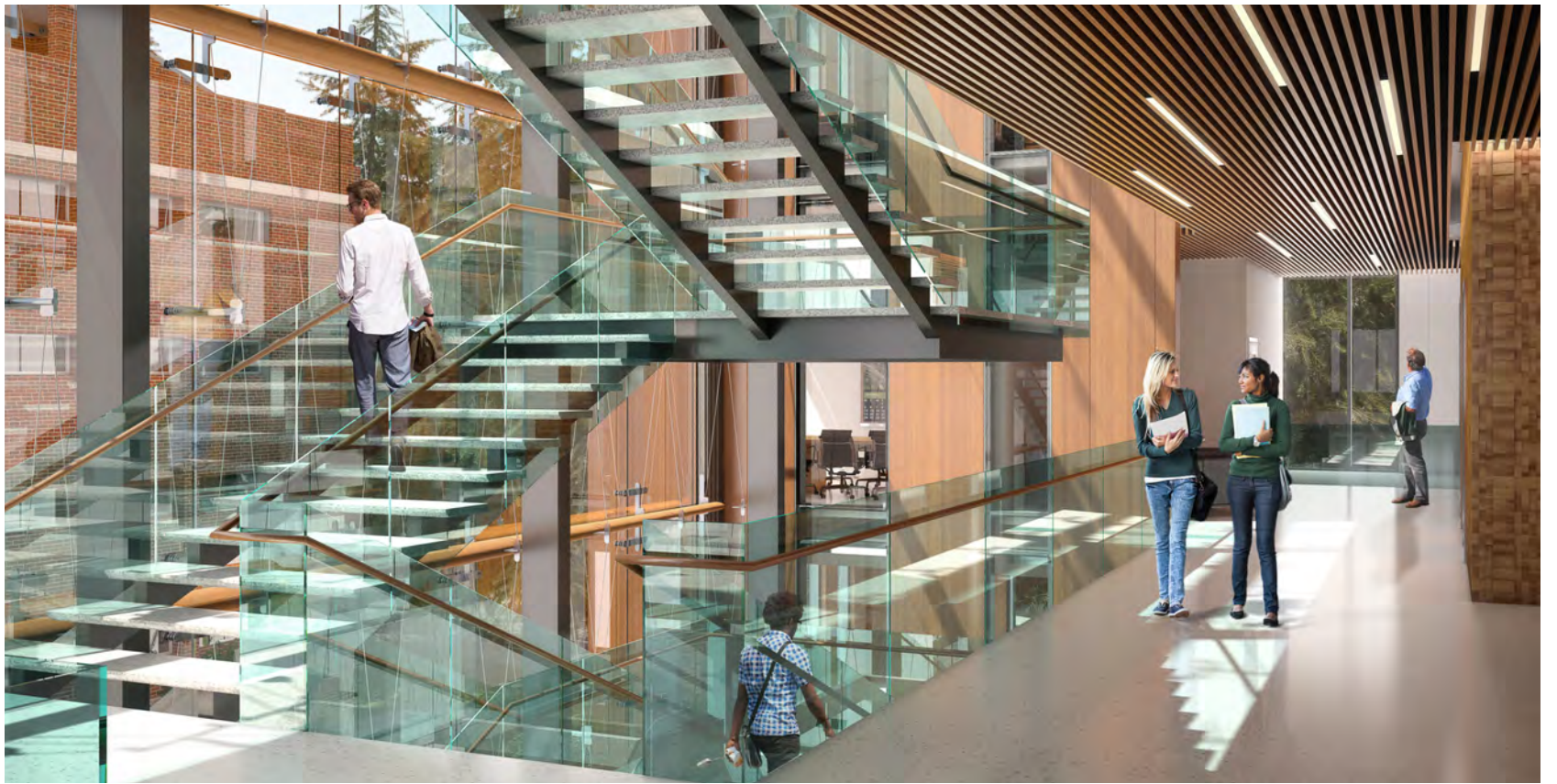
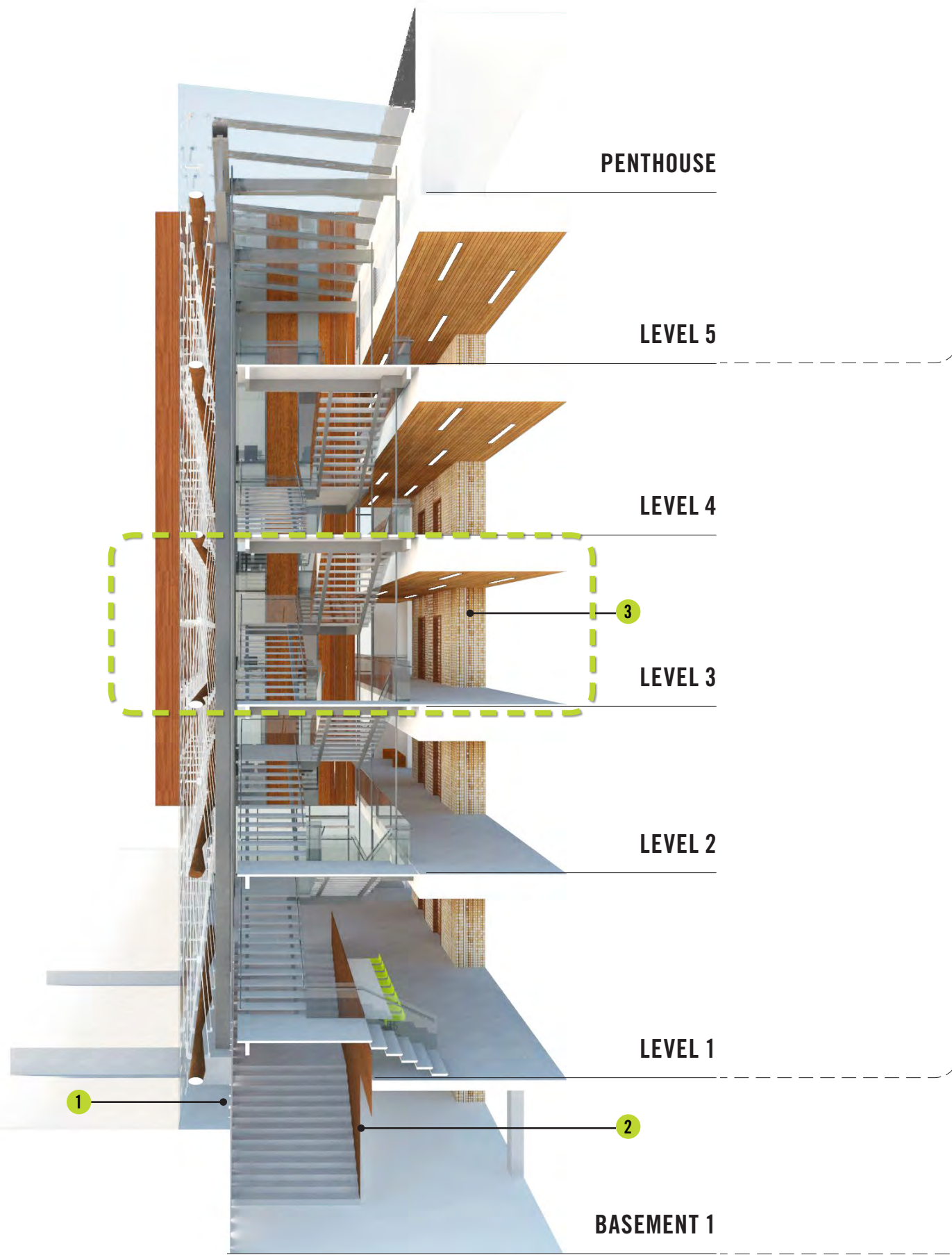
TENSION ROD TR16

STAINLESS STEEL SUPPORT RODS FOR STAIRS

ELLIPTICAL SHAPED GLULAM BEAM AND STEEL BRACKETS SUPPORTED TO MAIN COLUMNS

1'-6"

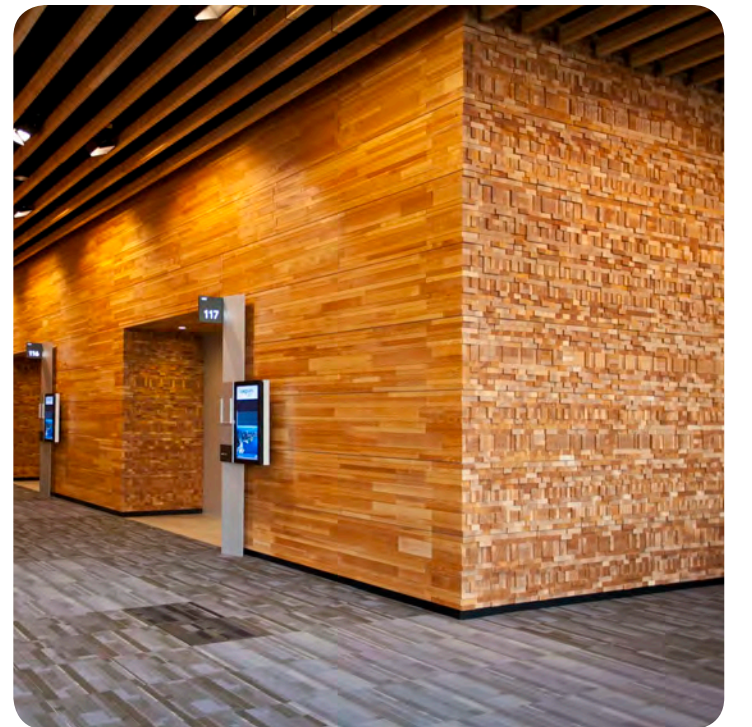




1. Landscape concrete walls establish connection from outside to inside



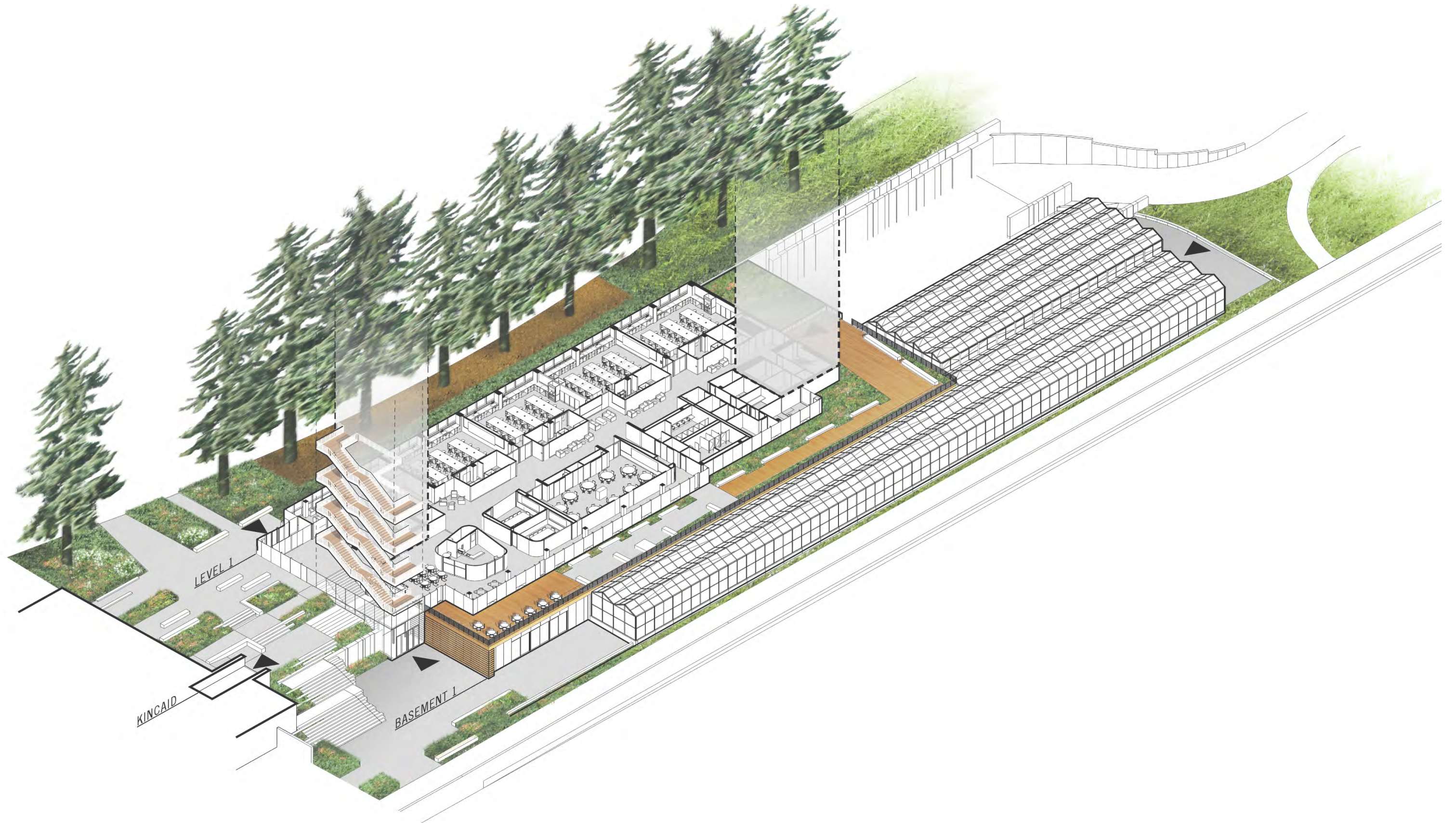
2. Wood screen on Basement 1 stairs carried through from exterior headhouse wall



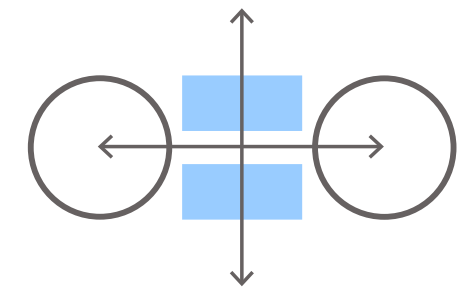
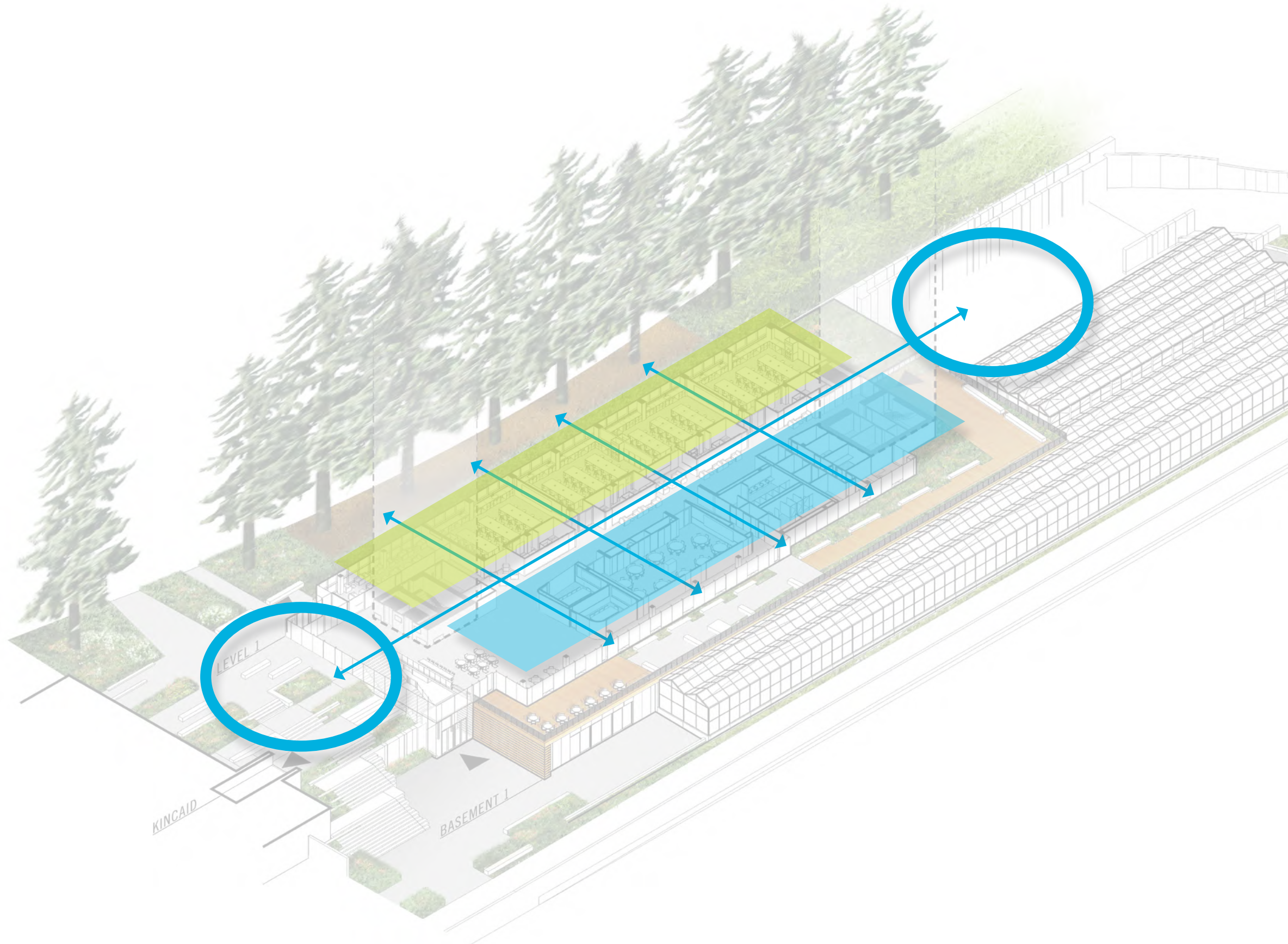
3. Biology related feature wall on core using donated timber

Character of West Communicating Stairs

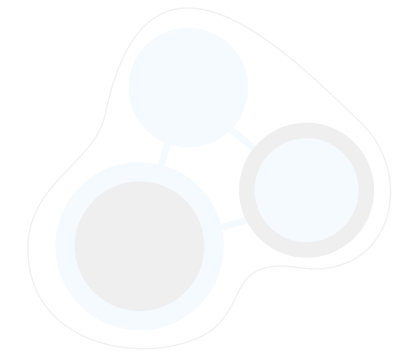
5. INTERIOR DESIGN



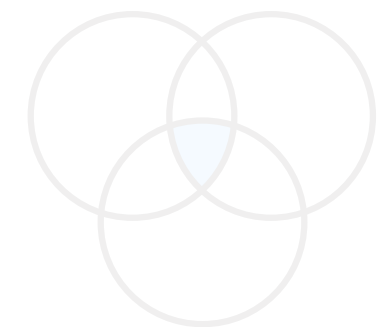
CONCEPT DIAGRAM



SCIENCE IS A GATEWAY

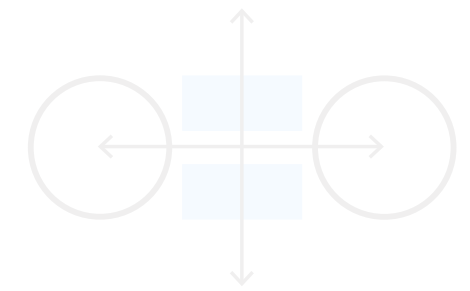
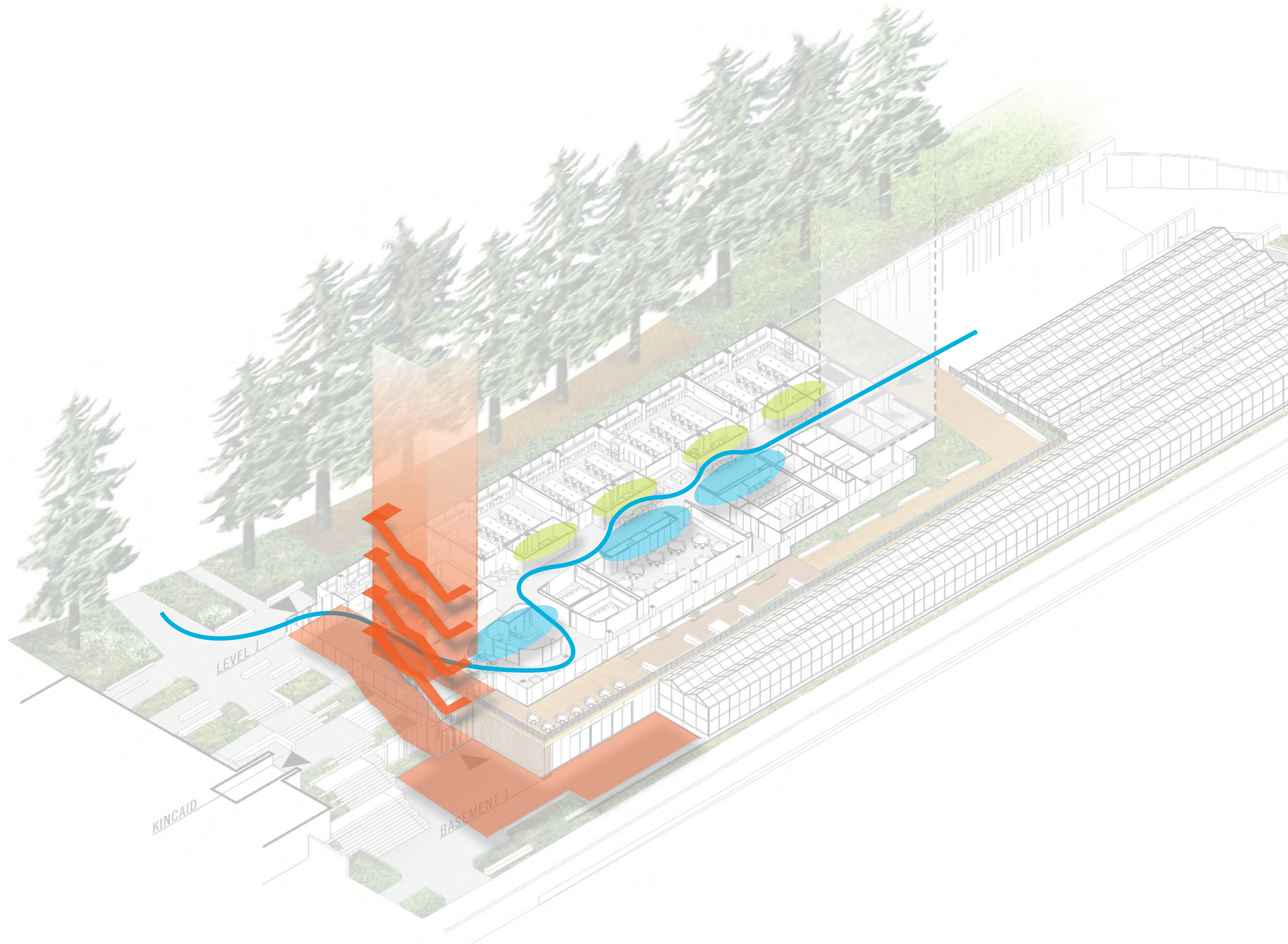


CONNECTIONS

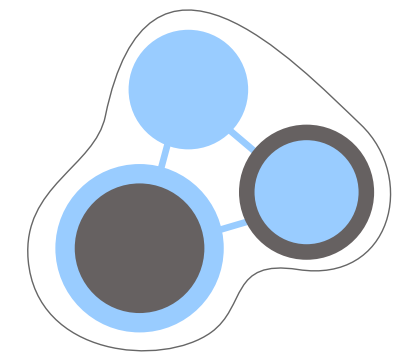


ENGAGEMENTS

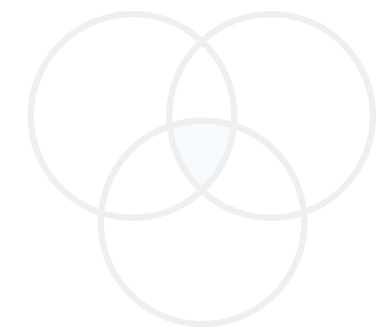
CONCEPT DIAGRAM



SCIENCE IS A GATEWAY

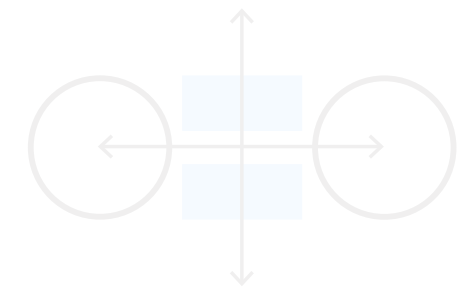
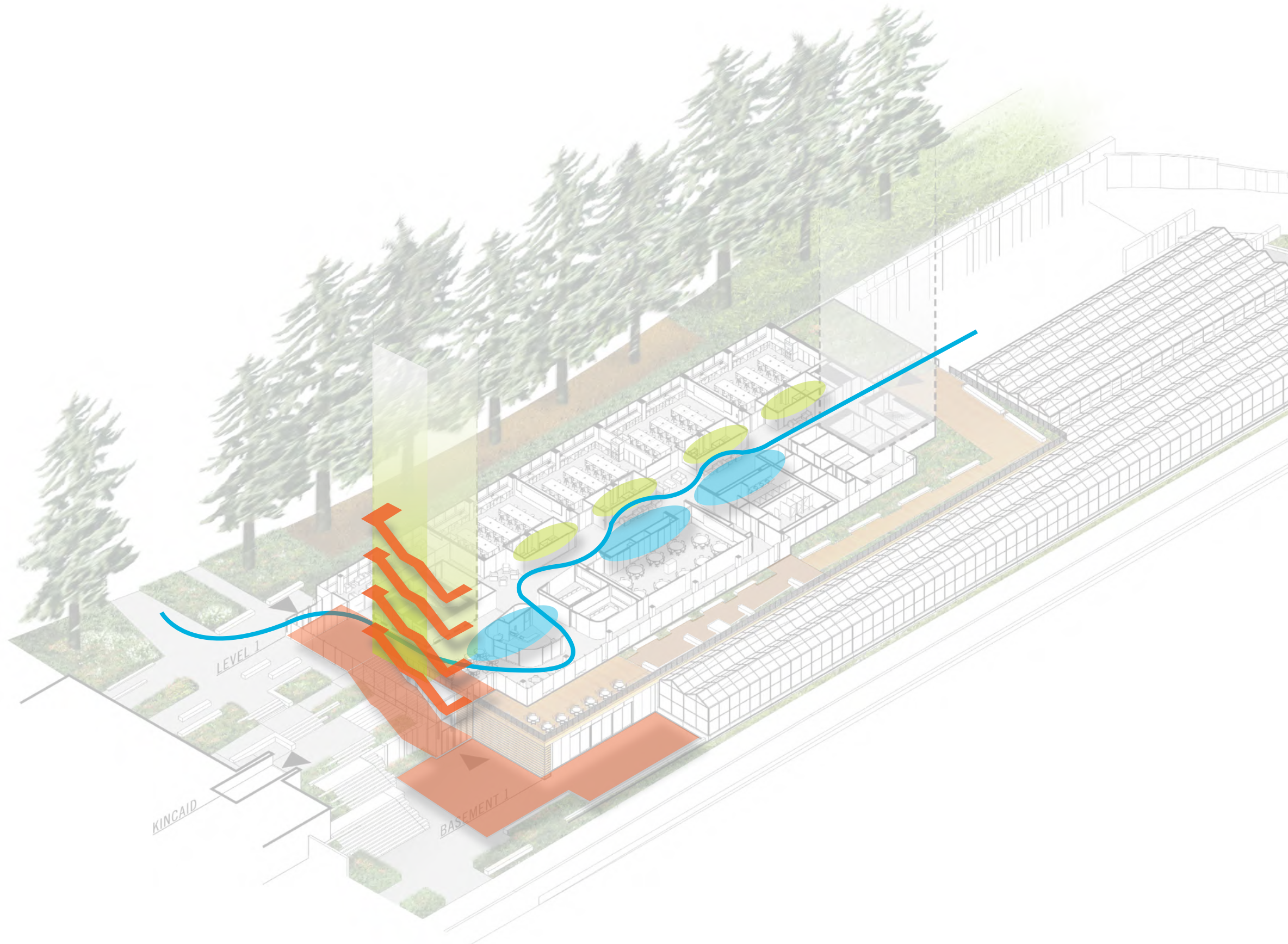


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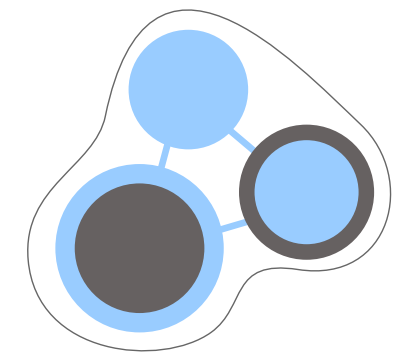


ENGAGEMENTS

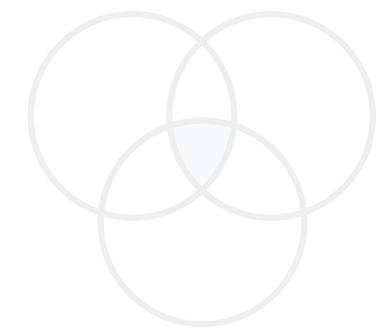
CONCEPT DIAGRAM



SCIENCE IS A GATEWAY

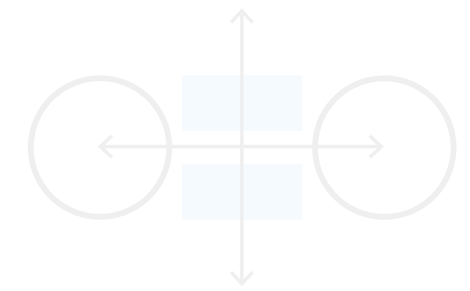
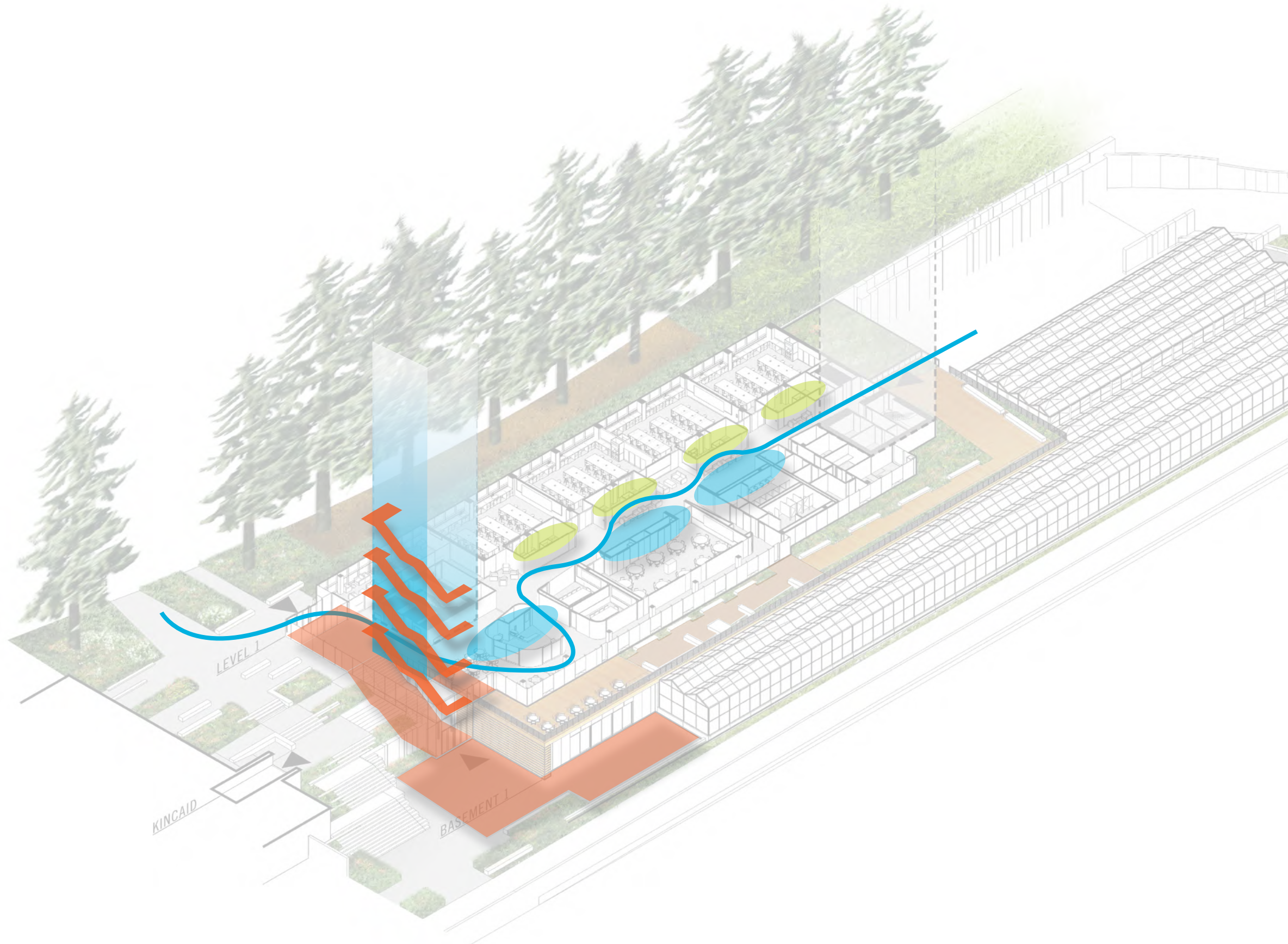


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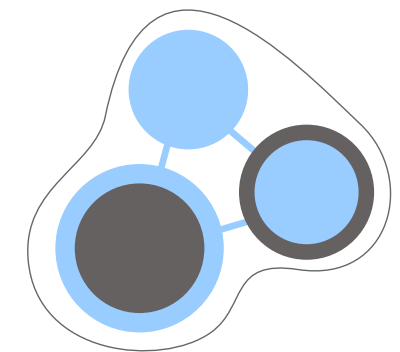


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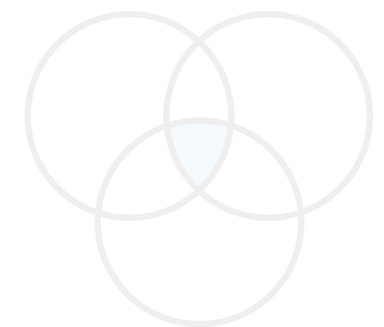
CONCEPT DIAGRAM



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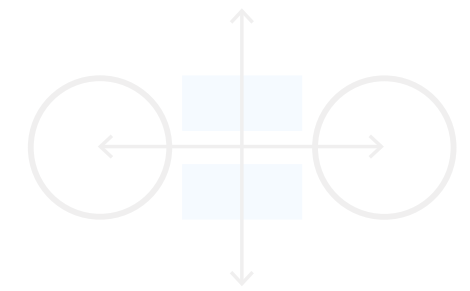
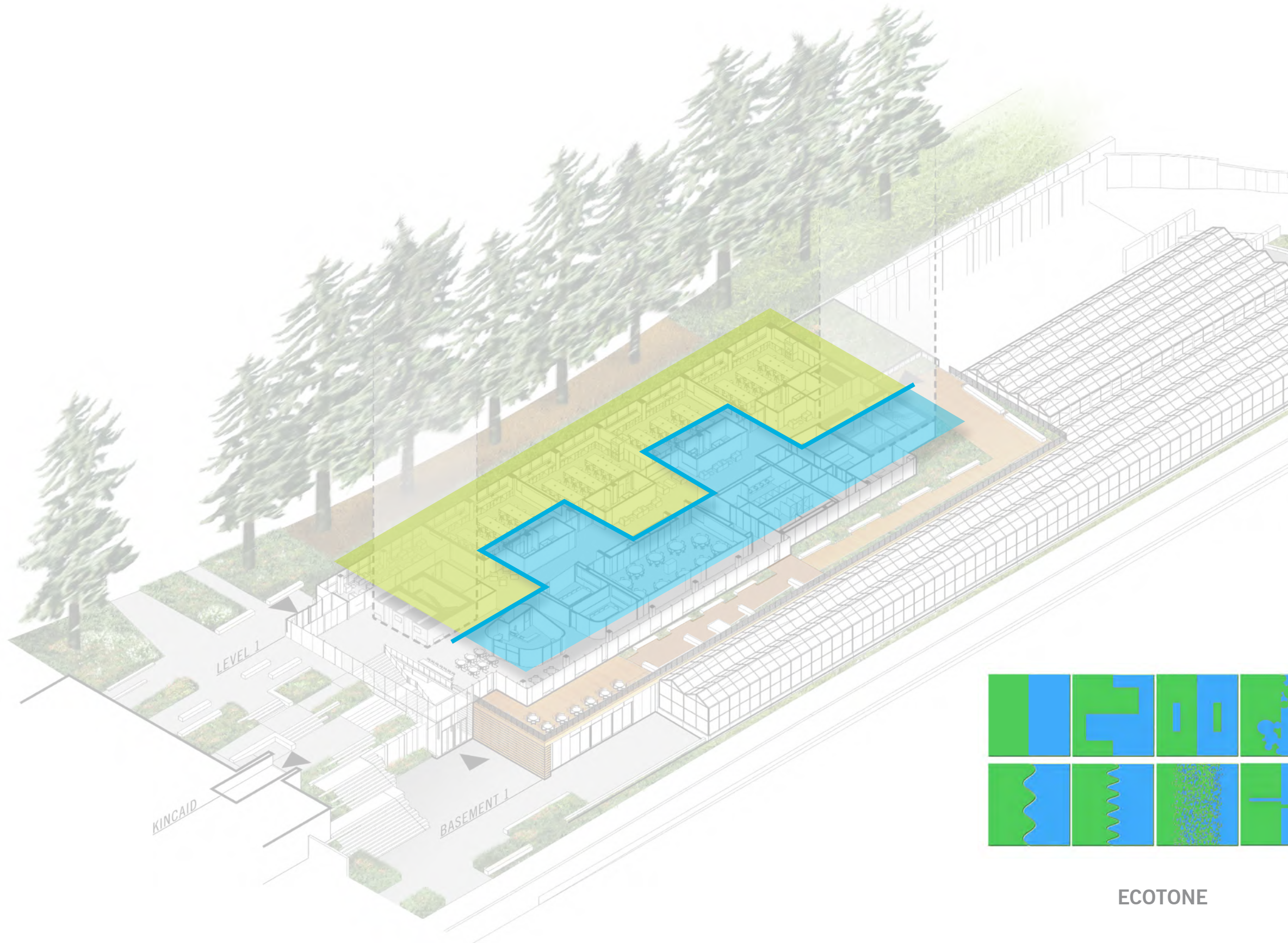


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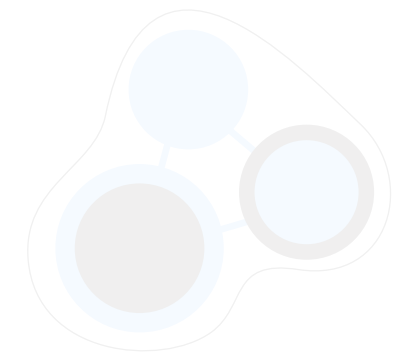


ENGAGEMENTS

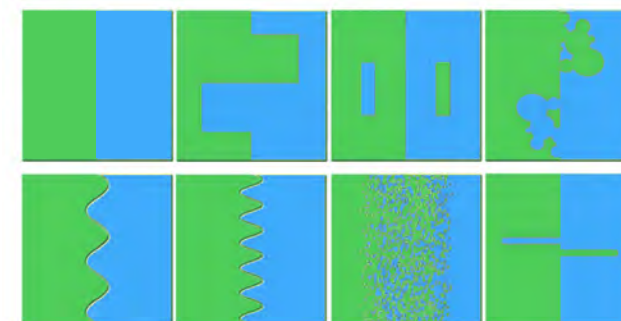
CONCEPT DIAGRAM



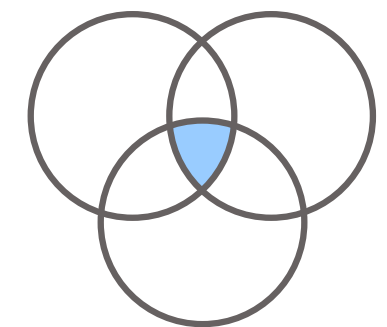
SCIENCE IS A GATEWAY



CONNECTIONS

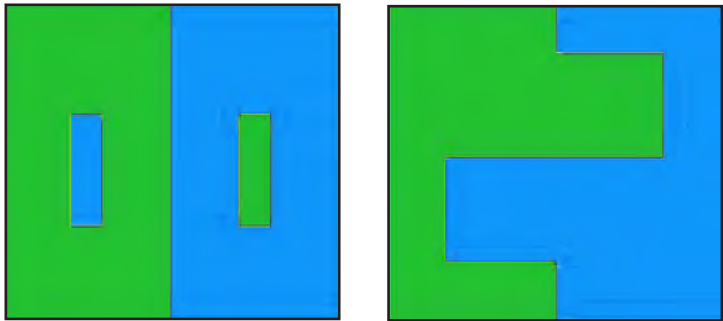
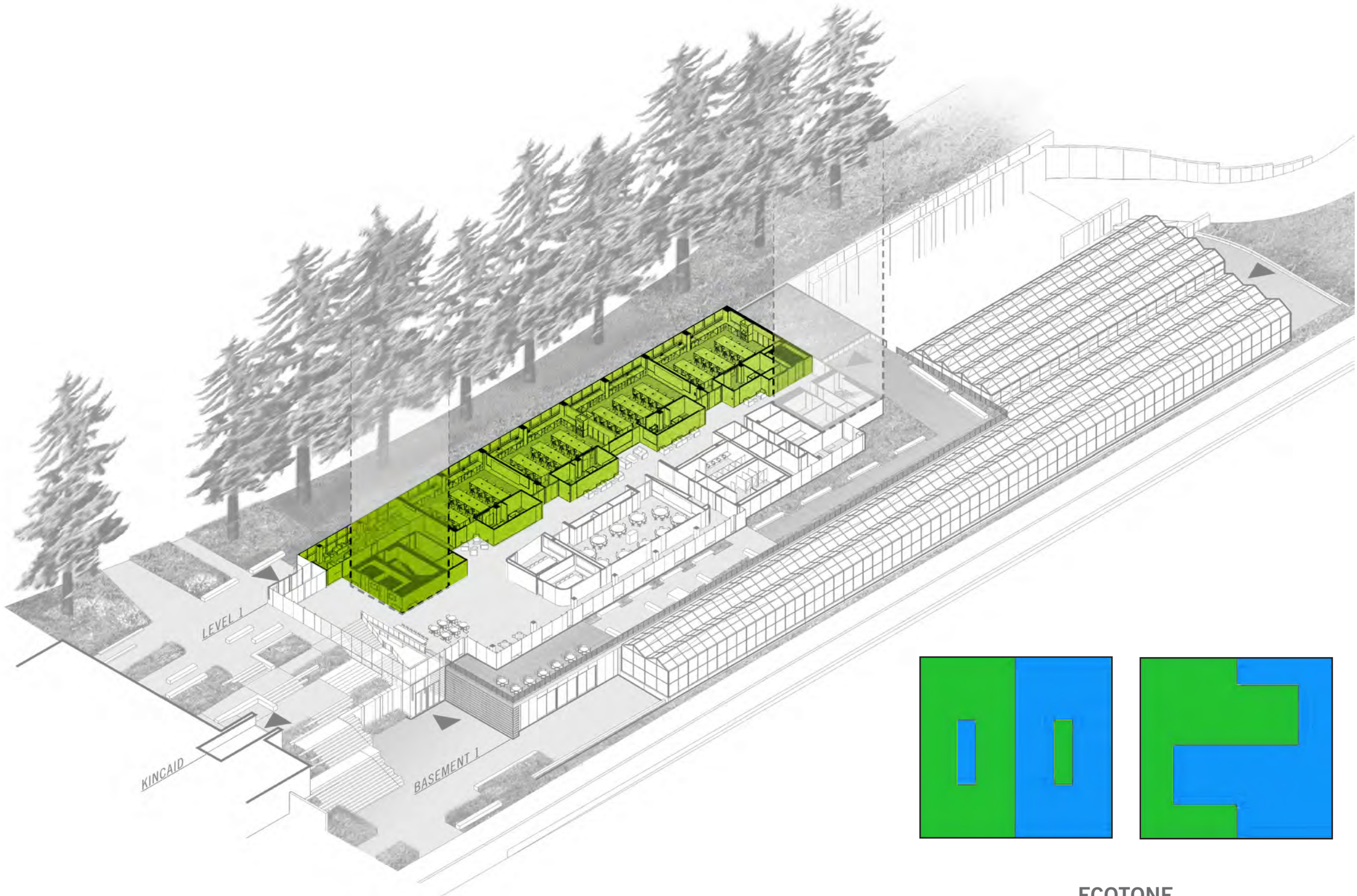


ECOTONE



ENGAGEMENTS

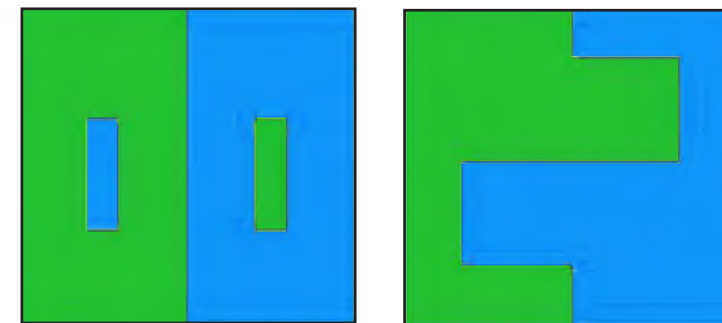
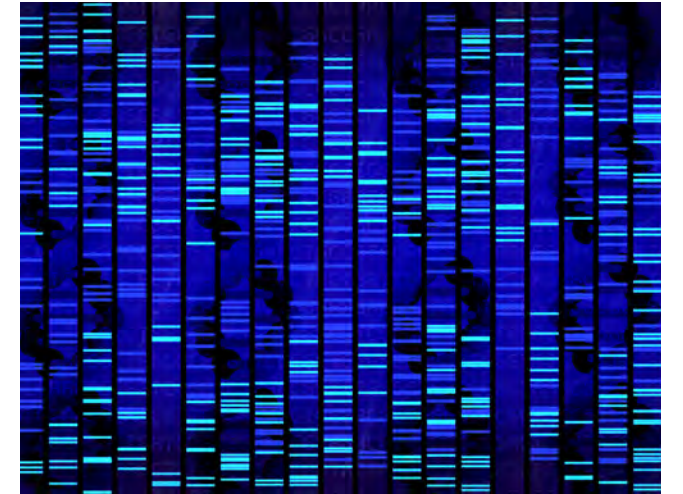
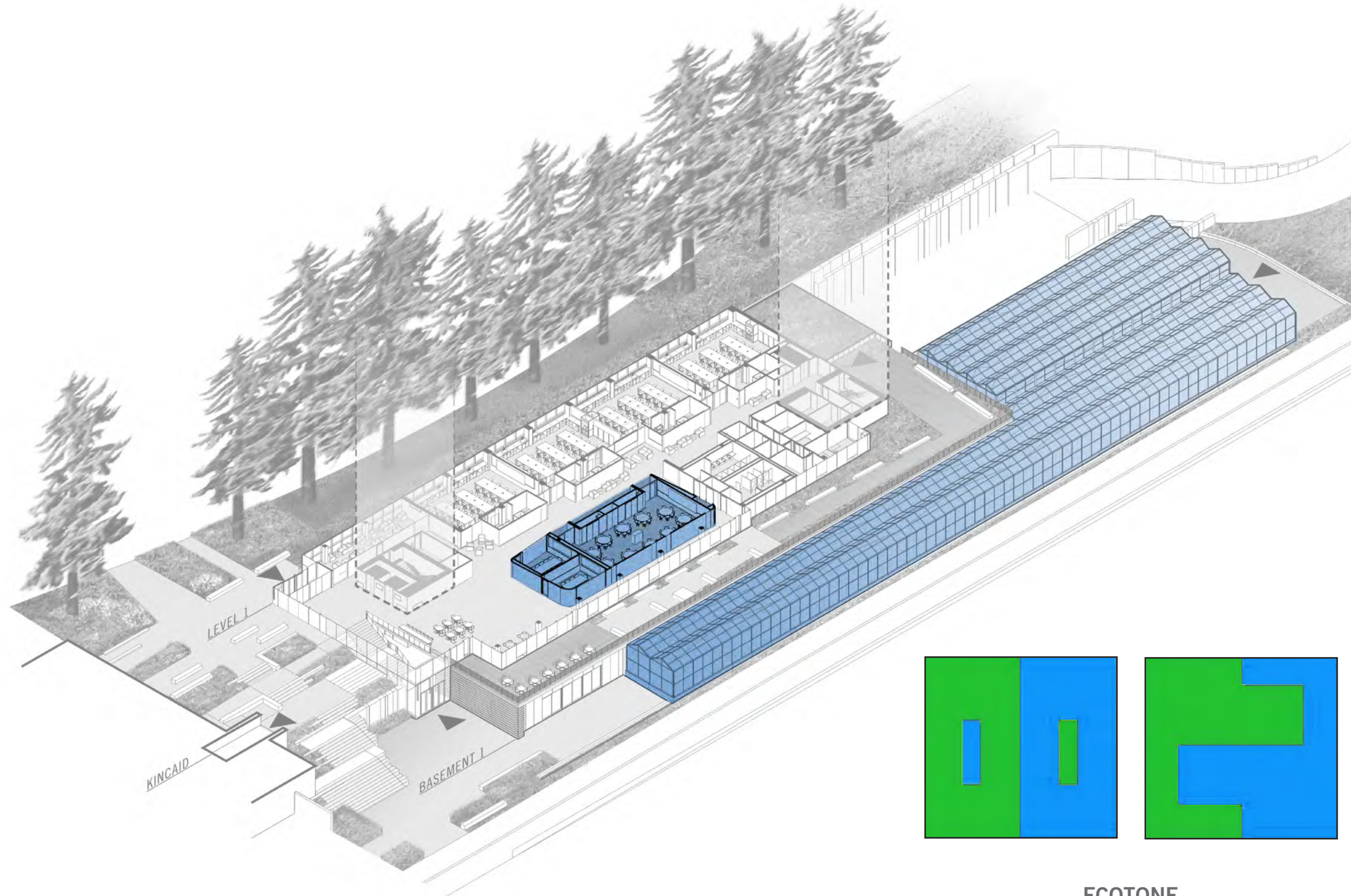
ECOTONE DIAGRAM - NATURE



ECOTONE



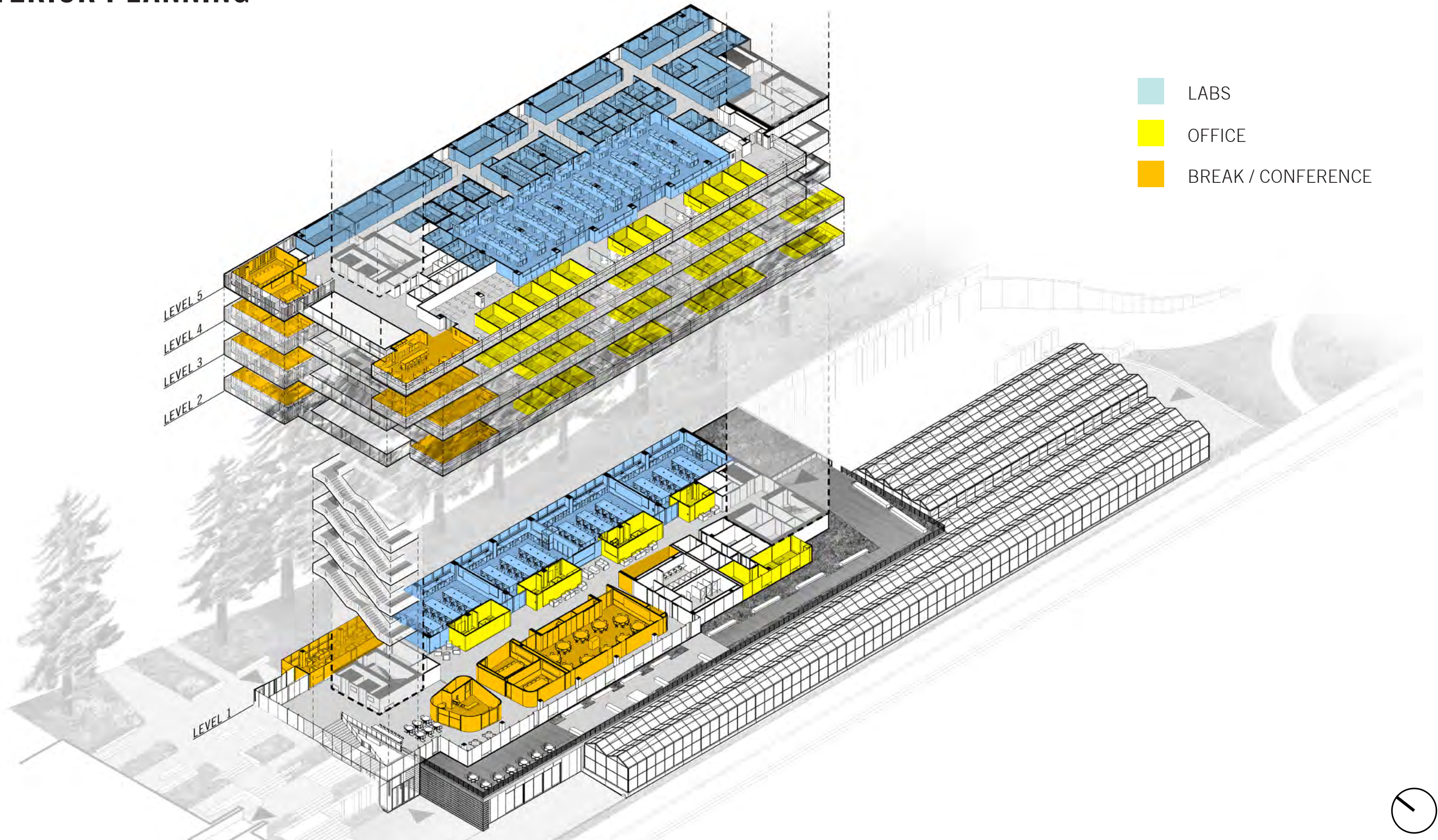
ECOTONE DIAGRAM - TECHNOLOGY



ECOTONE



INTERIOR PLANNING



- LABS
- OFFICE
- BREAK / CONFERENCE

GRAND STAIR // PUBLIC CORE

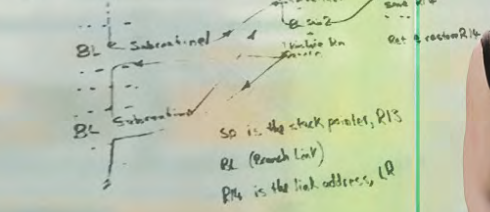


OFFICE CORRIDOR



HW # 10; 2, 1, 2, 2, 2, due Wed.

D) Subroutines & the Stack



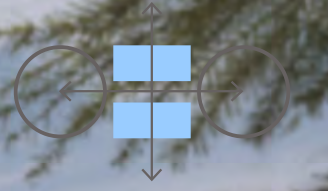
1. (Part B for 2.15, A for 3.30)

$$\int x^2 \ln(3x) dx$$

By parts $u = \ln(3x) \quad dv = x^2 dx$
 $du = \frac{1}{3x} dx \quad v = \frac{x^3}{3}$

$$= \ln(3x) \frac{x^3}{3} - \int \frac{x^3}{3} \cdot \frac{1}{3x} dx$$
$$= \ln(3x) \frac{x^3}{3} - \int \frac{x^2}{9} dx$$
$$= \ln(3x) \frac{x^3}{3} - \frac{1}{9} \frac{x^3}{3} + C$$
$$= \frac{x^3}{3} \ln(3x) - \frac{x^3}{27} + C$$

Enhanced Connections to Campus



SCIENCE IS A GATEWAY



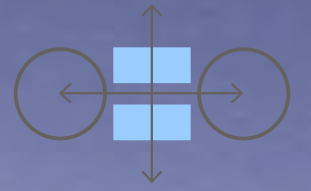
CONNECT



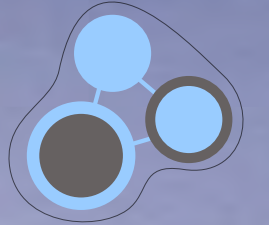
ENGAGE



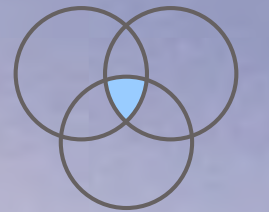
Ecotone = Engagements



SCIENCE IS A GATEWAY



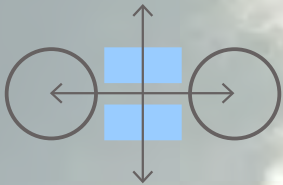
CONNECT



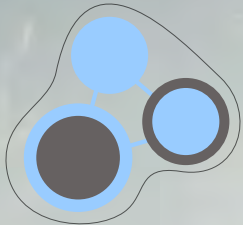
ENGAGE



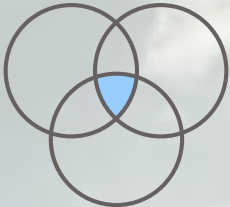
Science is a Gateway



SCIENCE IS A GATEWAY



CONNECT



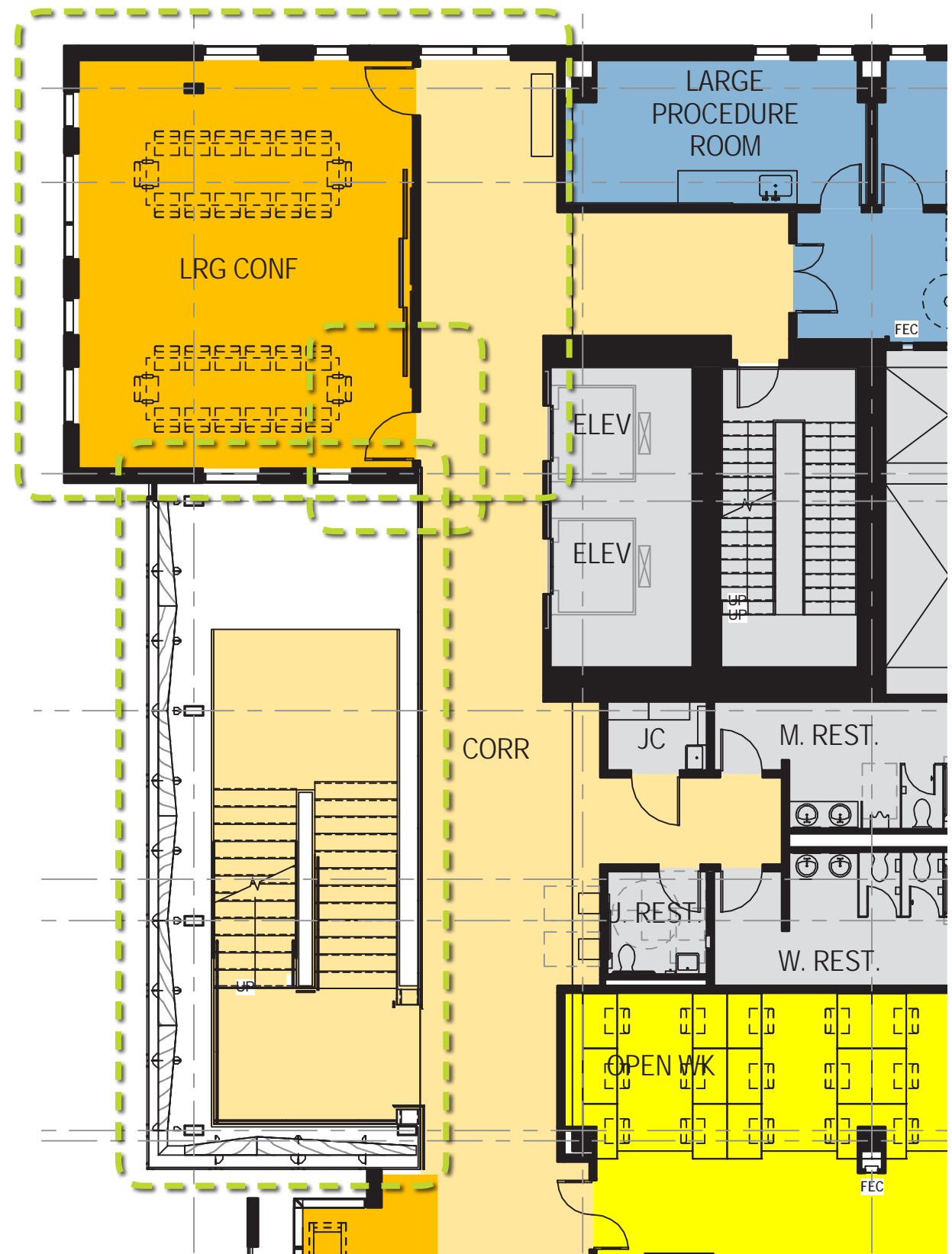
ENGAGE

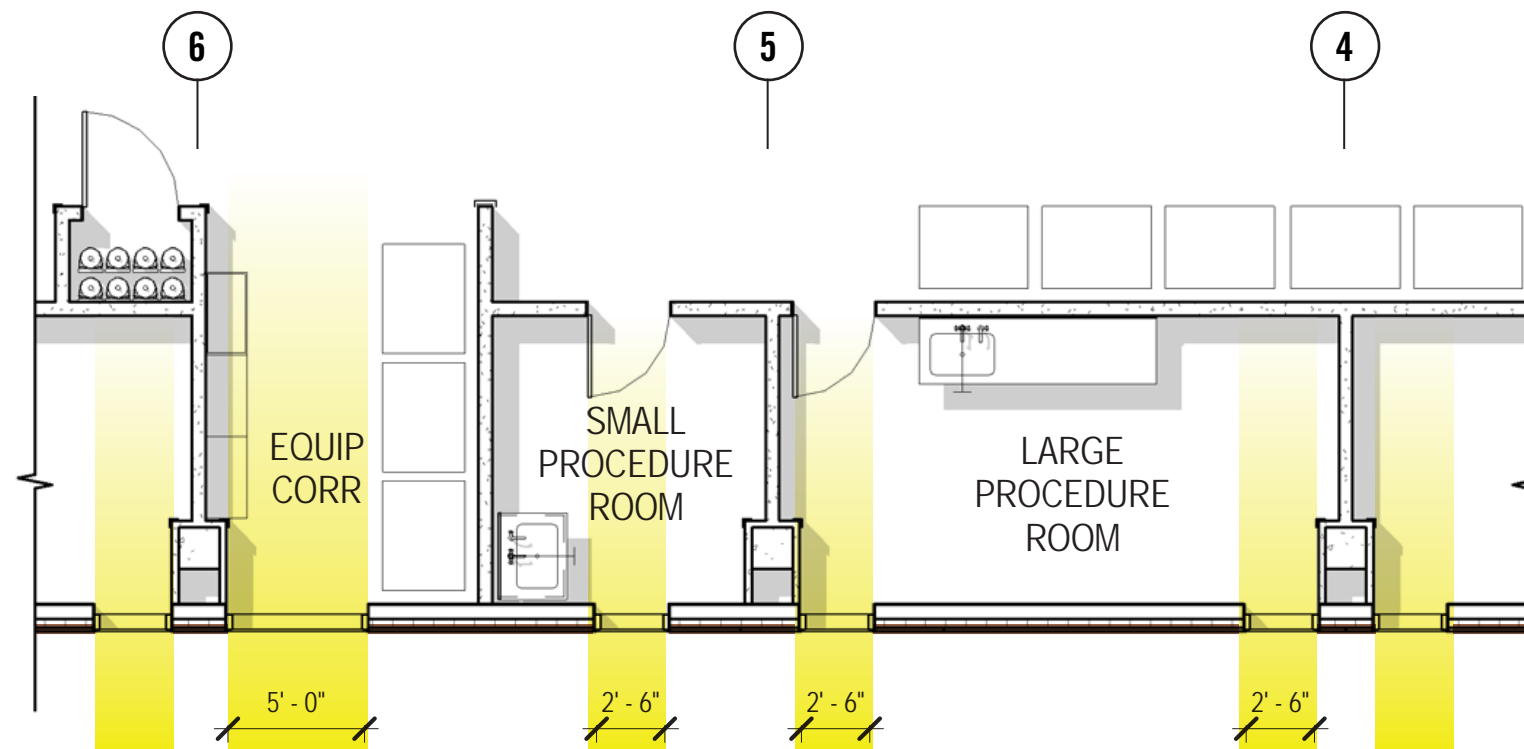
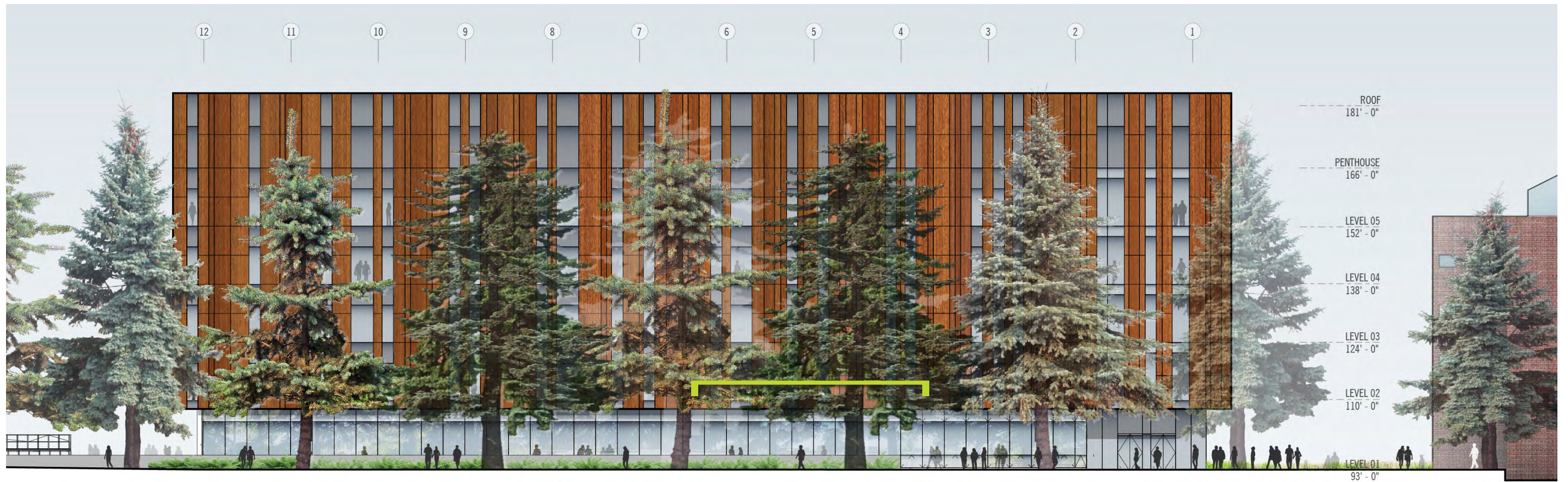


SCHEMATIC DESIGN

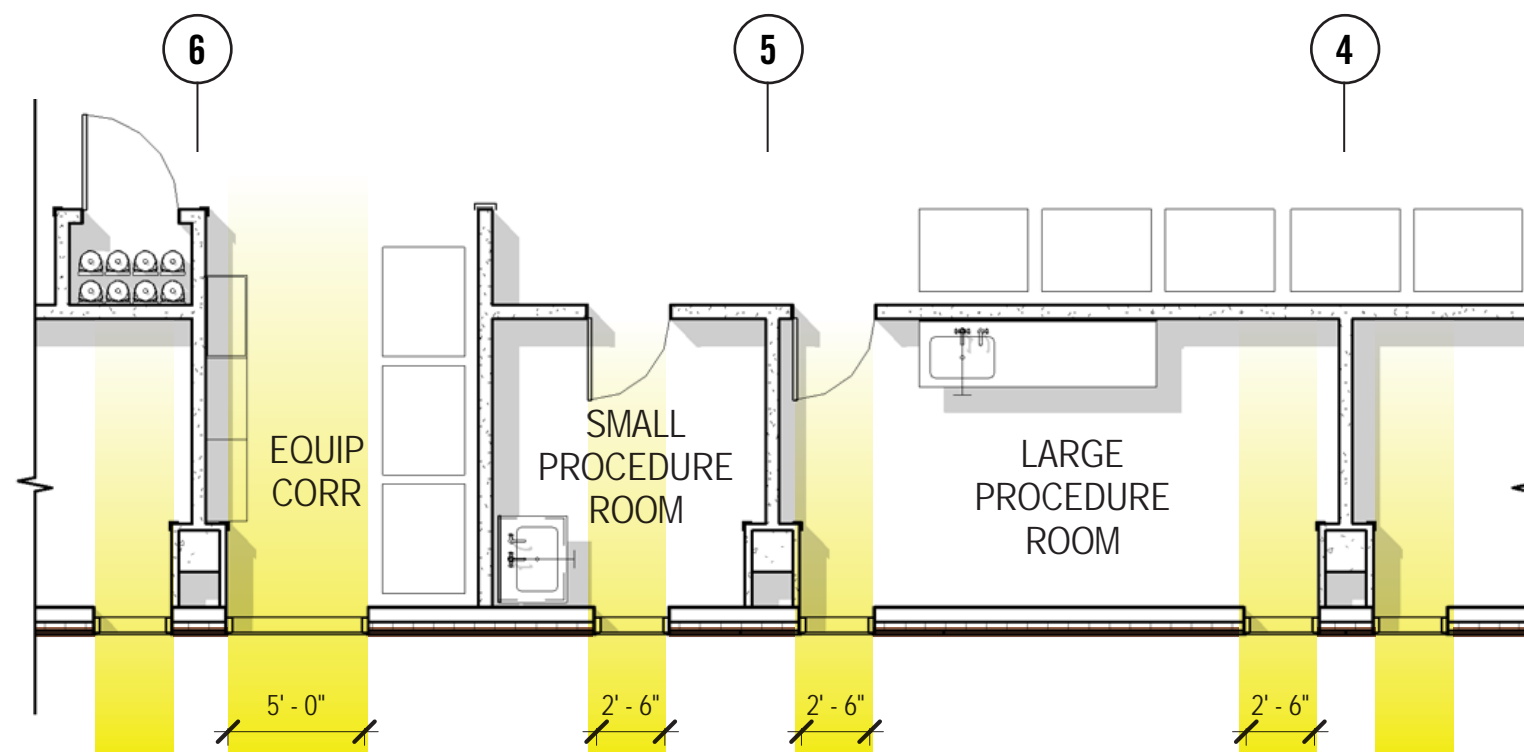
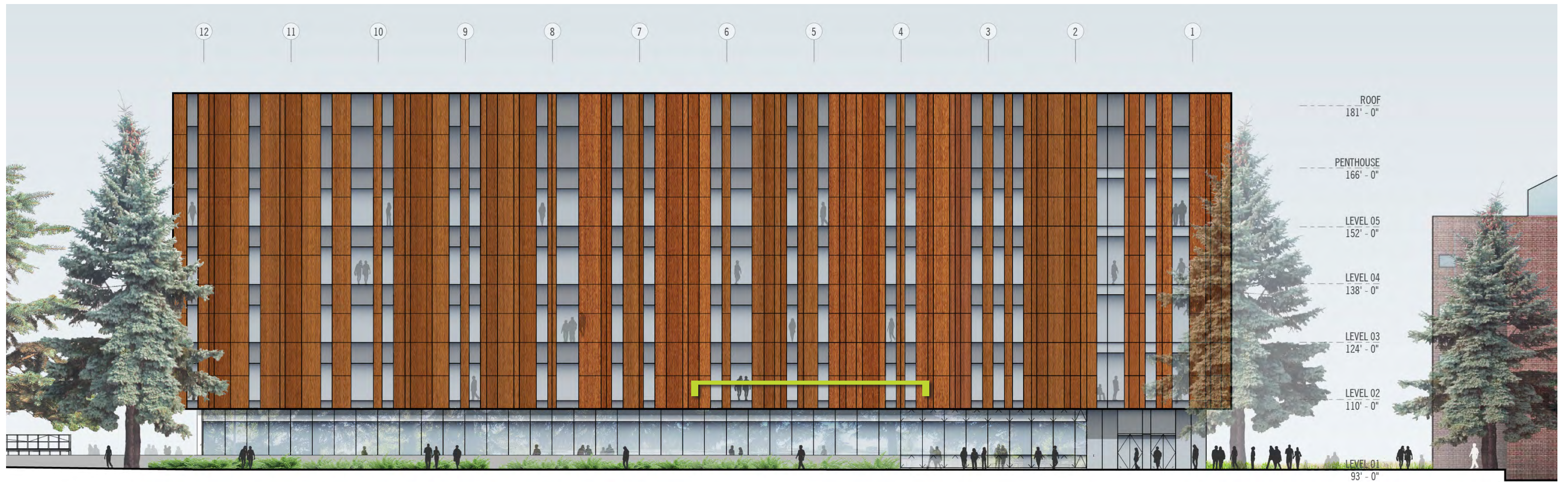


CURRENT

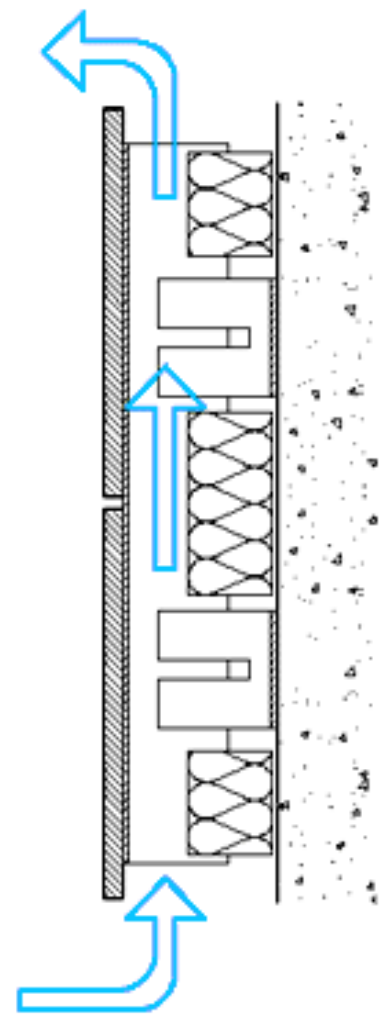




North Elevation & Typical Lab Support Plan

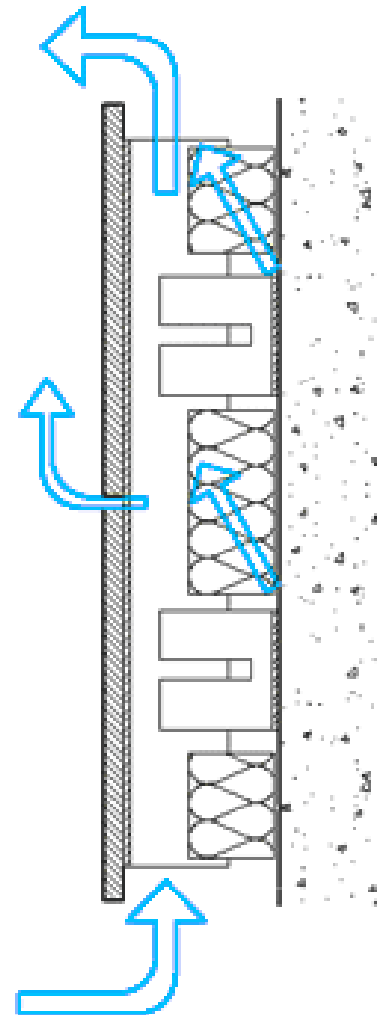


North Elevation & Typical Lab Support Plan



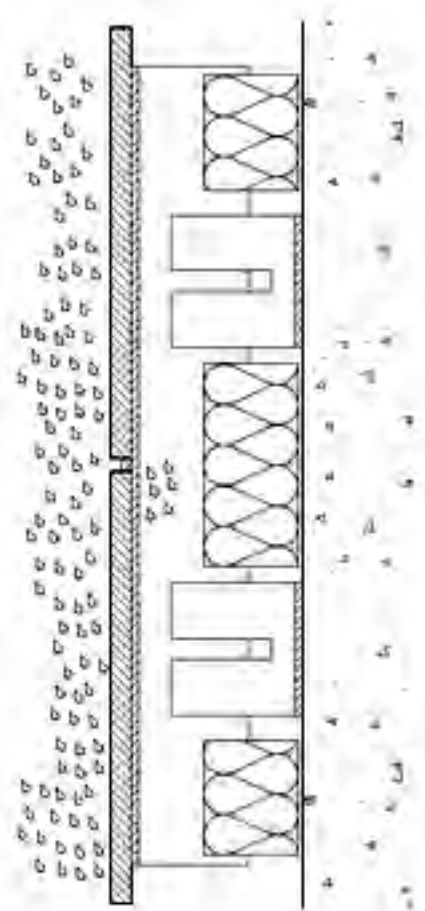
VENTILATED FACADE

The ventilated facade consists of creating a “moving air chamber” between the panels and their next cladding element.



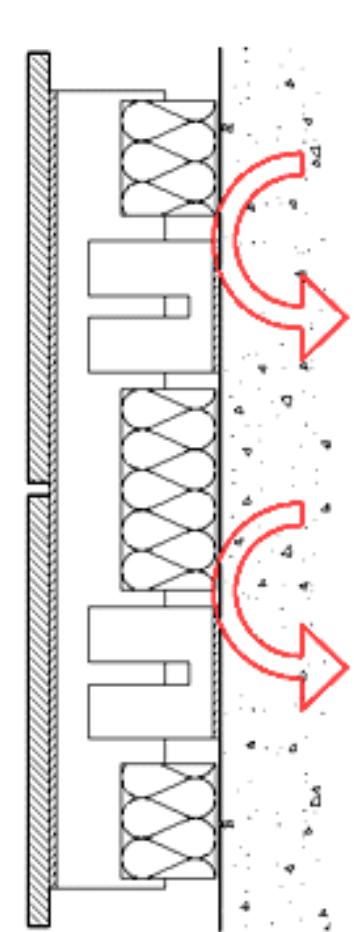
PERMEABILITY

Moving air diffuses water vapor from the inside to the outside, and facilitates the transpiration of the facade, preventing condensation from forming behind the panels.



WATER PROTECTION

Moving air provides greater protection from the elements, because it prevents rain water from infiltrating inside the building structure.



THERMAL INSULATION & ELIMINATION OF HEAT BRIDGES

The load-bearing structure is insulated from the exterior structure, eliminating heat bridges. In this manner, temperature fluctuations are reduced in the interior cladding, which leads to energy savings.