



Portland State BORA

UNIVERSITY

EA 21-082045
DESIGN REVIEW
PSU VSC



TEAM INFORMATION

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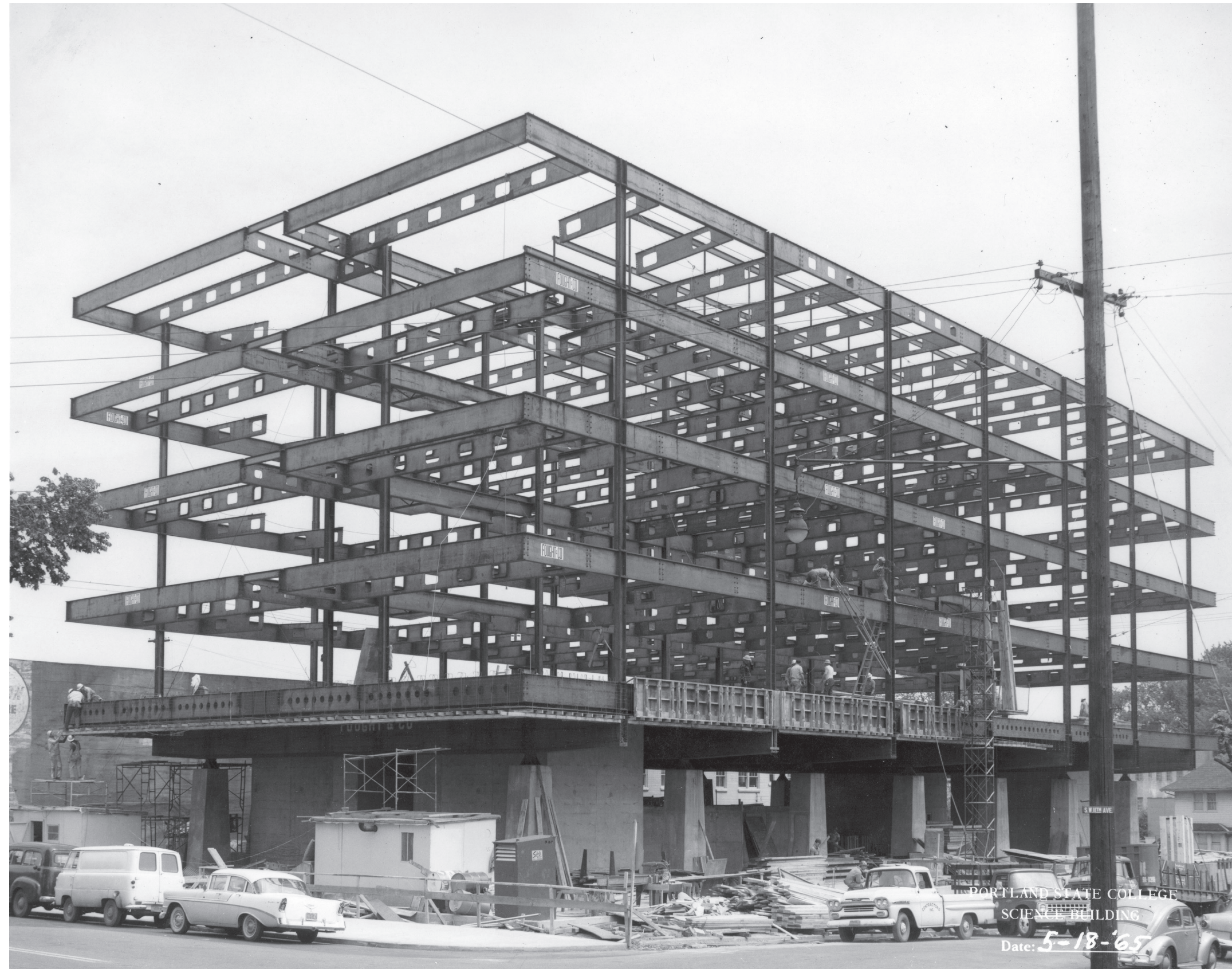
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Existing Building

SB1 HISTORY

Science Building One on the Portland State campus was designed by Skidmore Owings Merrill and constructed in 1964. It is an example of the Brutalist and Neo-expressionist style that is consistent with the dominant architectural character for institutional buildings at the time of its design and construction. The base is a windowless mass that creates a podium, isolating the building from the surrounding landscape. Above the podium there is an articulated concrete grid superstructure that is cantilevered on beams, which sit on a series of inset 'pilots' that rest on the podium level. The building has not been appreciably changed since its original construction. However, the campus context surrounding the building has evolved as many public streets have been turned into pedestrian right of ways consistent with the overall PSU campus.

In renovating this building PSU has approached the project through a particular lens. Choosing to prioritize and foreground the voices and perspectives of BIPOC students, staff and faculty and drawing on the perspective of indigenous members of the college community who teach and study at PSU. In their perception and experience the existing SB1 is described as a fortress; cold, unwelcoming, sterile, intimidating and disconnected from the natural world. It could be said that this is in fact consistent with the intentions of the architectural style.



SB1 UNDER CONSTRUCTION IN 1965



CURRENT NORTH BUILDING EDGE FROM 10TH AVE.



CURRENT STREET FRONT ON 10TH AVE.



CURRENT PRIMARY ENTRY FROM MILL ST.



CURRENT WEST ENTRY FROM 11TH AVE.



CURRENT NORTH PODIUM DECK



CURRENT APPROACH FROM MILL ST.

Project Goals

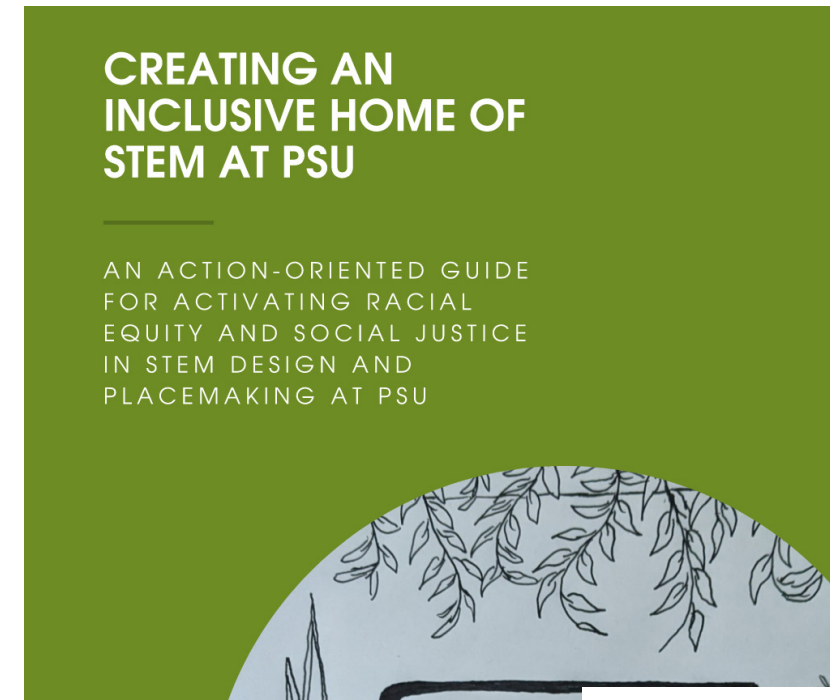
PSU PROJECT GOALS

PSU is committed to creating a campus environment that is welcoming to a more diverse student population and one that promotes equity in student opportunity and success. As the most diverse and most increasingly diverse university in Oregon, this is a core value of the campus and drives decisions across PSU on planning, curriculum, and design. It has been a guiding aspect of the design approach to this building. Additionally, PSU aims to create a learning and community engagement space that uplifts Indigenous values and knowledges.

- Through the VSC design process, PSU, the design team and contractor have emphasized the creation of educational spaces that support the experience of students from BIPOC and other communities historically excluded from higher education and STEM. We are creating spaces and programs that value their experiences, make them feel welcome and safe in order to encourage their enrollment, retention and graduation by connecting them to university life and the broader community.
- To achieve these goals PSU and the design and construction team are employing a process that intentionally challenges traditional systemic approaches that marginalize and undervalue the voices and experiences of students, faculty and staff of color. Our new approach, informed by Tribal and Critical Race Theory, will ensure their input is emphasized and foregrounded in the design and programs that make up the VSC. Through this process we will value student’s experiences to create spaces and programs that support their lives after graduation by connecting and engaging with the broader scientific, engineering and research community.
- The creation of the Socio-Spatial Guide generated by BIPOC student leaders has helped shape the design, placemaking and experience for these students at the renovated SB1. Three important, recurring themes from this group’s discussions and outreach was: 1) the desire to bring nature (indigenous plant and other nonhuman relatives) into the experience of the building to support a sense of connection and mental/physical/spiritual well-being, as well as to support curriculum and learning; 2) the desire to not feel surveilled or like they’re in a fishbowl on the ground level; and 3) make the building feel equally inviting and welcoming to users of diverse abilities, focusing on universal accessibility that provides equal opportunities for all students and does not prioritize users with specific abilities or backgrounds over others.

HISTORICAL IMPLICATIONS OF THE SB1 ARCHITECTURAL STYLE:

- The existing Science Building One communicates very negative messages to students and particularly Indigenous and BIPOC students.
- Recognize the legacy of Brutalism and what it represents in its image of a fortress keeping the natural world out. This is an expression of power and intimidation, which makes the existing building the antithesis of what PSU is striving to provide for students and what they are trying to accomplish with this project.
- Important to recognize that the culture, values and the broader world has changed since the time the building was built. The renovated building needs to work for this time, what is meaningful in today’s culture and what supports today’s students. This is a matter of respect for the needs and the values of the current and future users of the building. Notably, a group of PSU biology alumni from 1967 recently described their first impressions of the building as “cold”, “sterile” and “uninviting”, so arguably this building has never welcomed its users.
- How can the renovated building represent the spirit of this century and the future, rather than look to the past century, preserving outdated values and expression and perpetuating oppression and exclusion?



CREATING AN INCLUSIVE HOME OF STEM AT PSU

AN ACTION-ORIENTED GUIDE FOR ACTIVATING RACIAL EQUITY AND SOCIAL JUSTICE IN STEM DESIGN AND PLACEMAKING AT PSU



Portland State UNIVERSITY

FIRST TWO PAGES OF THE STUDENT ACTION ORIENTED GUIDE

OUR APPROACH

How we design and build space matters. To disrupt past practices that have perpetuated structural racism and other inequities on our campus, PSU is using a critical race theory-informed approach to shape the design and placemaking of the new Vernier Science Center (VSC).

As part of the engagement and inquiry process, we hosted a series of dialogue sessions with Black, Indigenous and People of Color (BIPOC) campus and community stakeholders, including faculty, staff, students, alumni, and community partners. We also invited students participating in PSU’s summer bridge program to complete a socio-spatial survey. Dialogue sessions and the survey invited participants to explore the relationships between space, race, and equity in STEM education.

The BIPOC student-led VSC Engagement and Inquiry Team analyzed findings to create an action-oriented guide for STEM Design and Placemaking.

The seven spatial aspirations presented here reflect key insights generated from stories shared by communities most impacted by educational inequities. Spatial aspirations offer a way to active design and placemaking in service to racial equity and social justice.

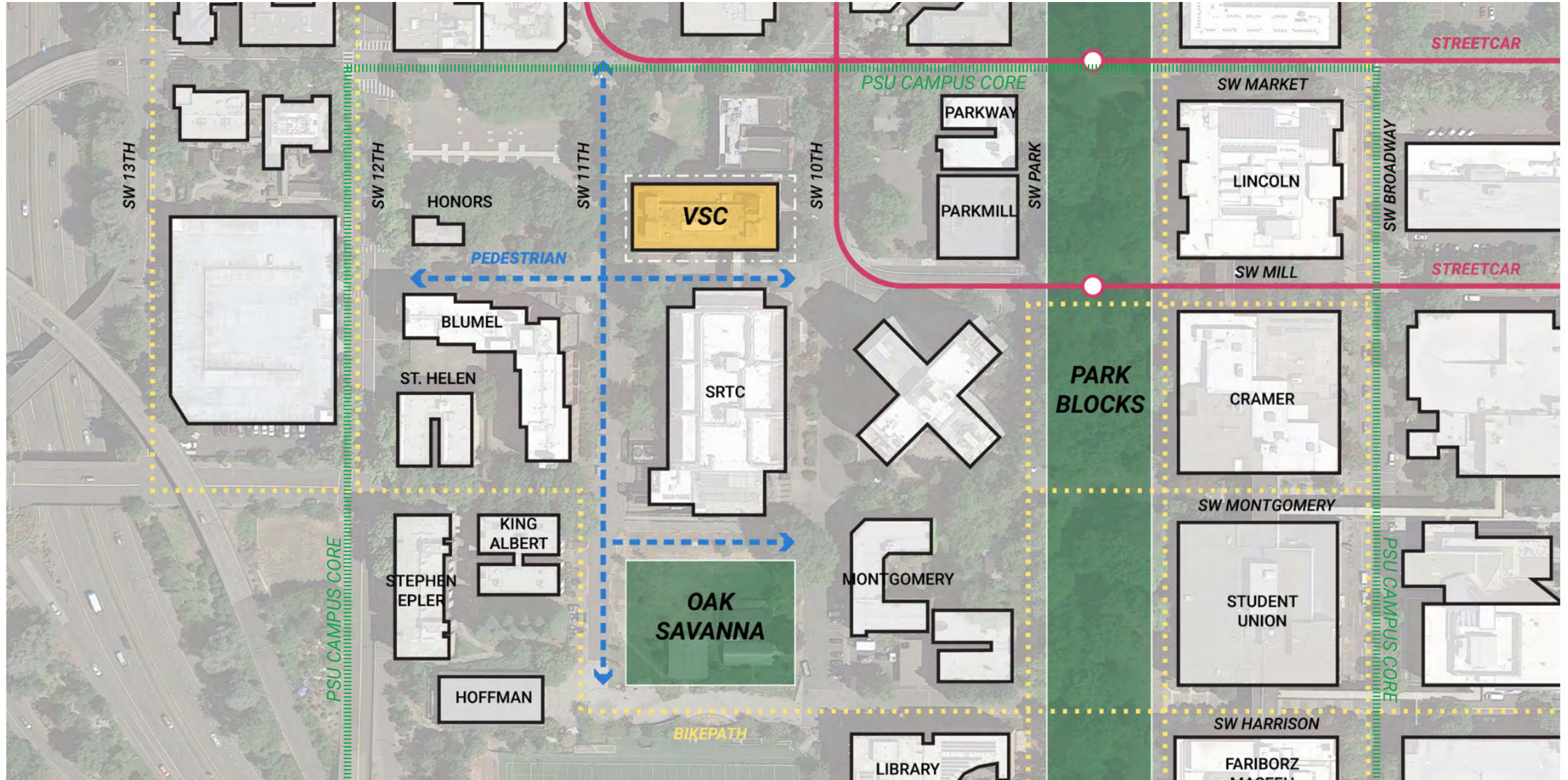
This guide is not a checklist. It reflects a process-oriented effort that engaged local BIPOC communities in conversations situated in a particular socio-spatial context. It serves as a testament to process, not a recipe that can be simply adapted to meet the needs and hopes of BIPOC communities in other spaces, places, and projects. To support equity-centered community design approaches, the process of inclusive outreach and authentic engagement is just as important as the outcome.

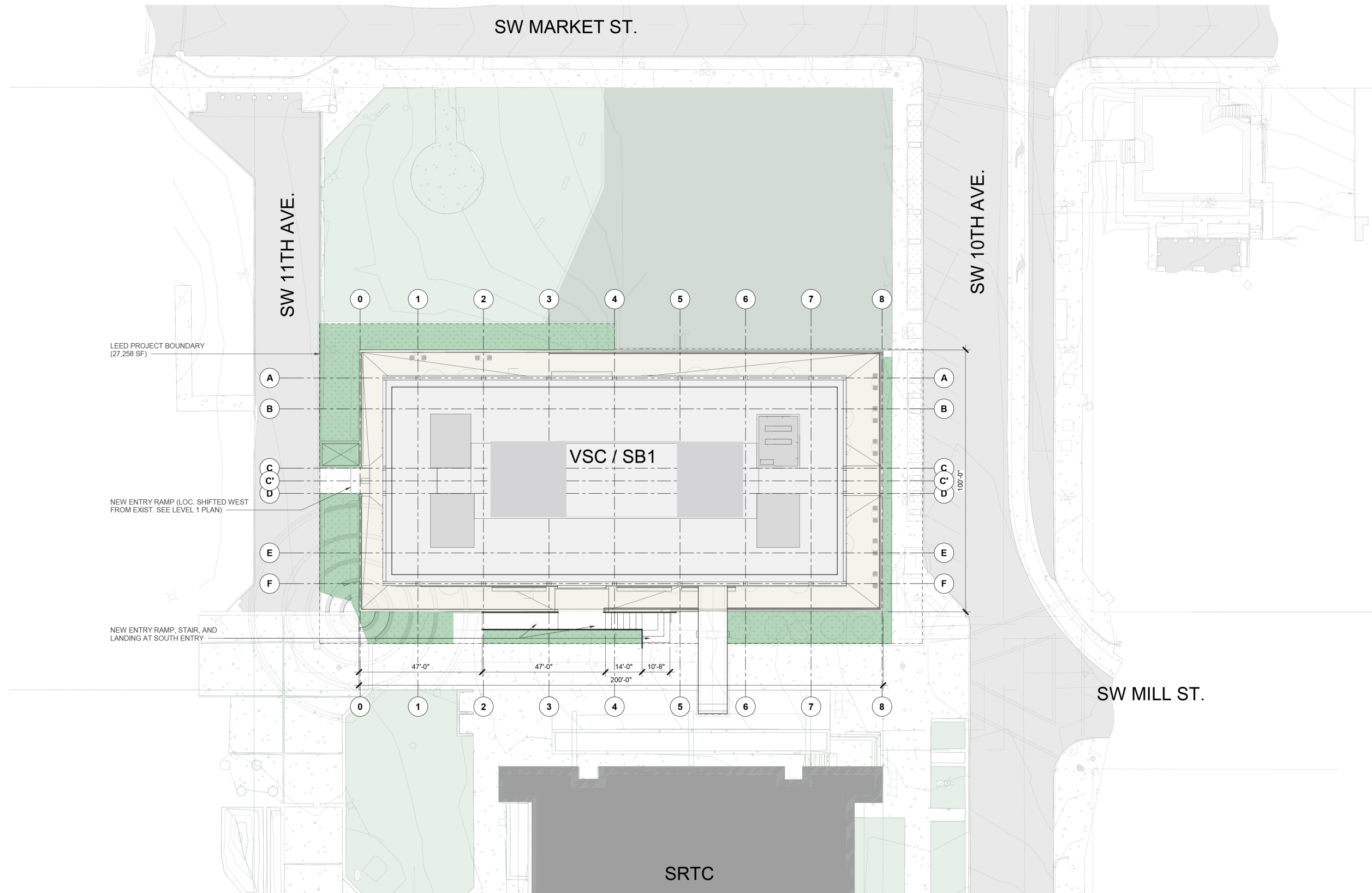
VSC COMMUNITY ENGAGEMENT AND INQUIRY TEAM

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4. Raven Harmon (Student, Health Studies)
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6. Sara Herrejon Chavez (Alum, Environmental Studies '21)
7. Chris Molinar (Student, Architecture)
8. Trish Nicolson (Graduate Student, Counseling)
9. Malcolm Peavy (Student, Biology)
10. Naomi Rodriguez (Student, Environmental Science)
11. Athena Shepherd (Graduate Student, Architecture)
12. Motulama Sipelli (Alum, Health Studies '21)
13. Ben Steward (Student, Indigenous Nations and Native American Studies)
14. Abie Valenzuela (Student, Environmental Science)
15. Todd Rosenstiel (Dean, College of Liberal Arts and Sciences)
16. Suzanne Estes (Interim Associate Dean, Undergraduate Engagement)
17. Cristina Rojas (Communications Manager, College of Liberal Arts and Sciences)
18. Annie Lindgren (Assistant Research Professor, Biology; Director, Center for Life in Extreme Environments)
19. Michael Tingley (Principal, Bora Architects)
20. Becca Cavell (Associate Principal, Bora Architects)

Site Plan







1" = 40'-0"

Design Approach

MAIN ENTRY LEVEL DESIGN APPROACH

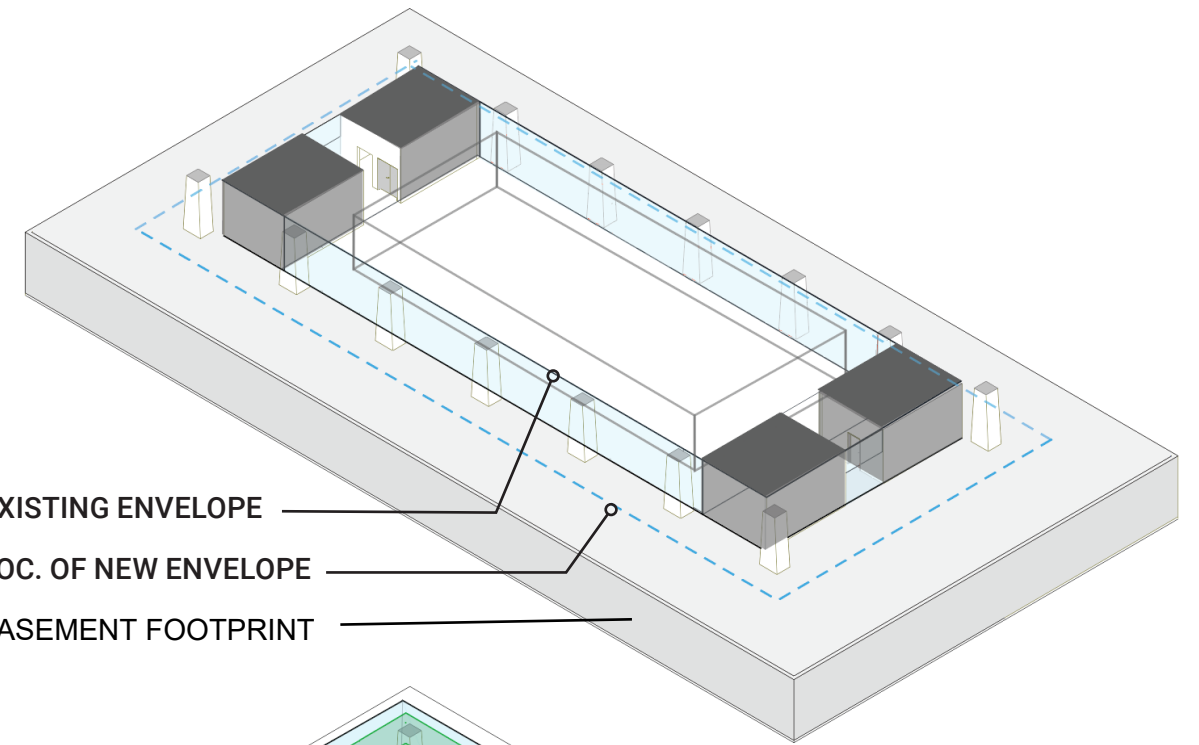
To transform the building and achieve PSU's goal of creating a sense of welcome for all, the design of the proposed renovation removes much of the opaque interior spaces that exist on main podium level and expands the interior space by moving the glass line a few feet outboard of the existing piloti. This creates additional area that will accommodate student gathering and study space as well as providing additional area for services that support student success. A large internal opening in this expanded space will be cut into the podium level to bring natural light into the basement and create a visual connection between the two primary teaching floors in the building.

The ring of new space created around the perimeter of the building will provide small study and gathering areas that support students. Surrounding this ring of new space outside of the glass there will be a ring of deep planters that are filled with native species that are indigenous to the region. These planters provide a buffer that shelters and protects the internal study space from the perimeter circulation creating dappled light and a sense of protection to the students within. It creates a new sense of welcome, using natural plant materials to soften the building's character and the user experience of arrival. From the interior it provides an immediate connection from the users inside the building to the natural world, bringing them in close visual contact with their plant relatives, a condition that is shown to be calming and restorative to people in stressful situations.

The planters will also serve as a teaching resource for students and faculty in the departments of biology and indigenous studies who will study the plants and their interrelationship and how the work to creating a successful thriving ecosystem. The planters are a key element in the success of the proposed design to achieve the goals of the project.



CURRENT VS PROPOSED PERIMETER CONDITION

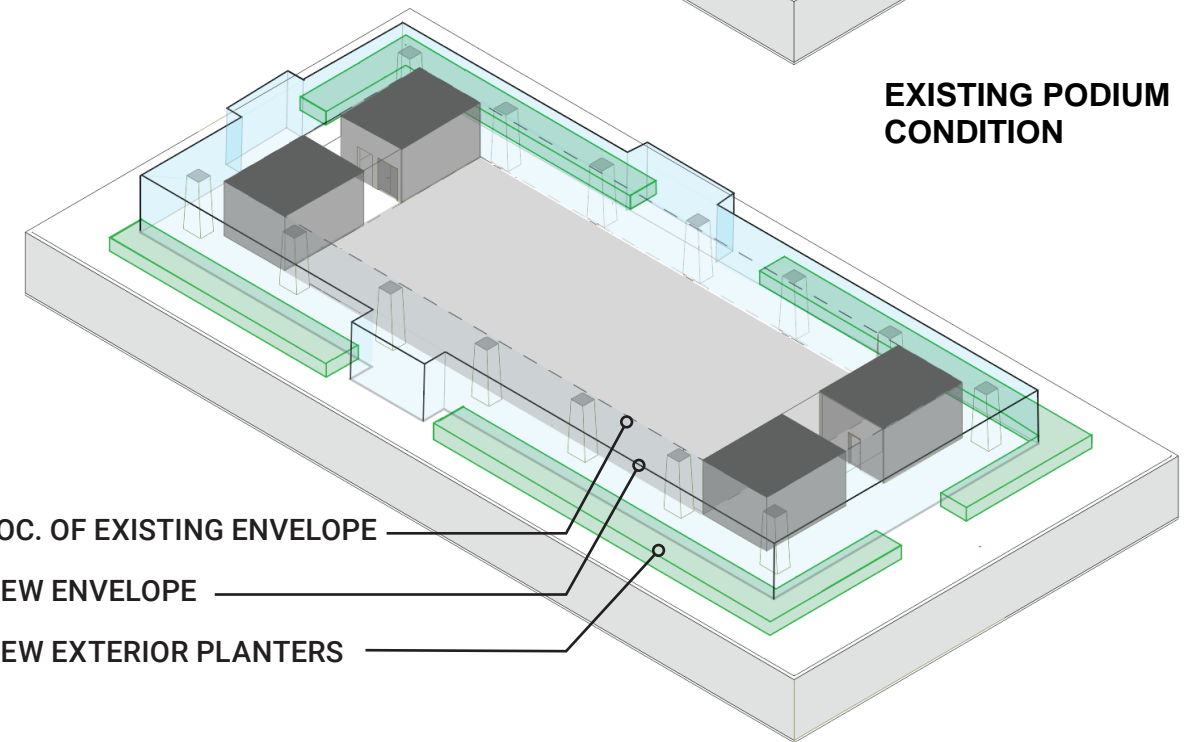


EXISTING ENVELOPE

LOC. OF NEW ENVELOPE

BASEMENT FOOTPRINT

EXISTING PODIUM CONDITION



LOC. OF EXISTING ENVELOPE

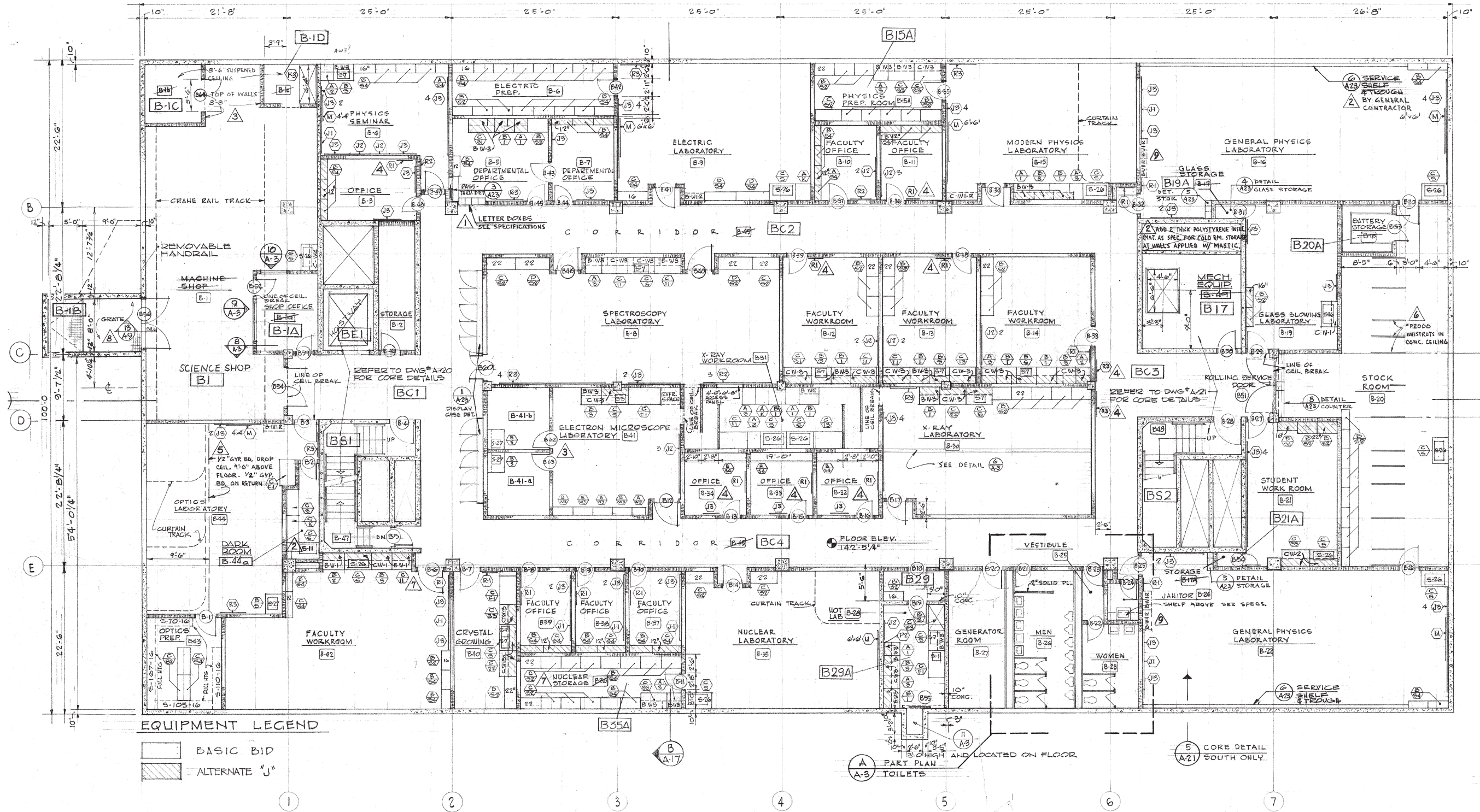
NEW ENVELOPE

NEW EXTERIOR PLANTERS

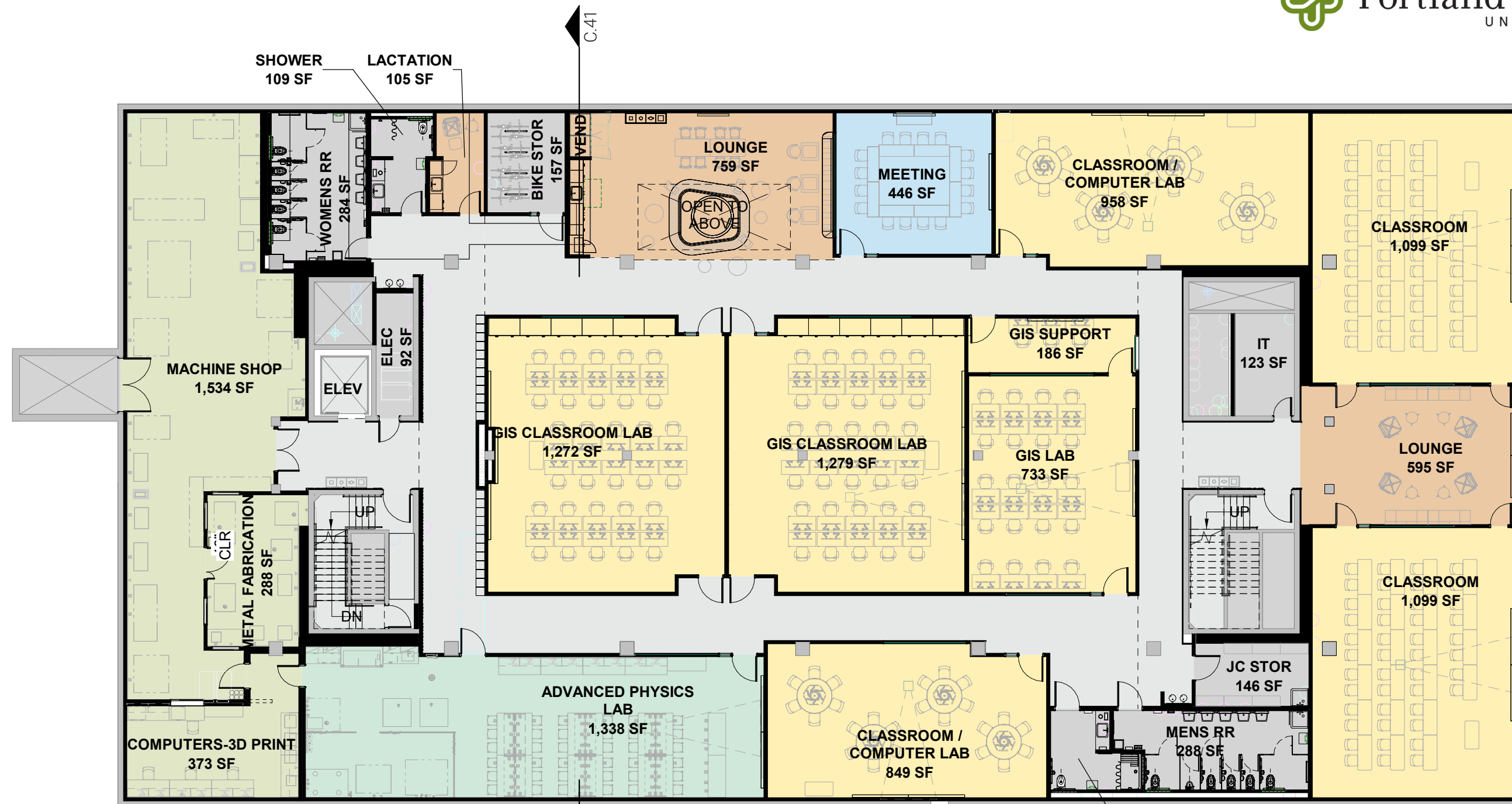
PROPOSED PODIUM CONDITION

PODIUM LEVEL DIAGRAM

Building Plans



1/16" = 1'-0"

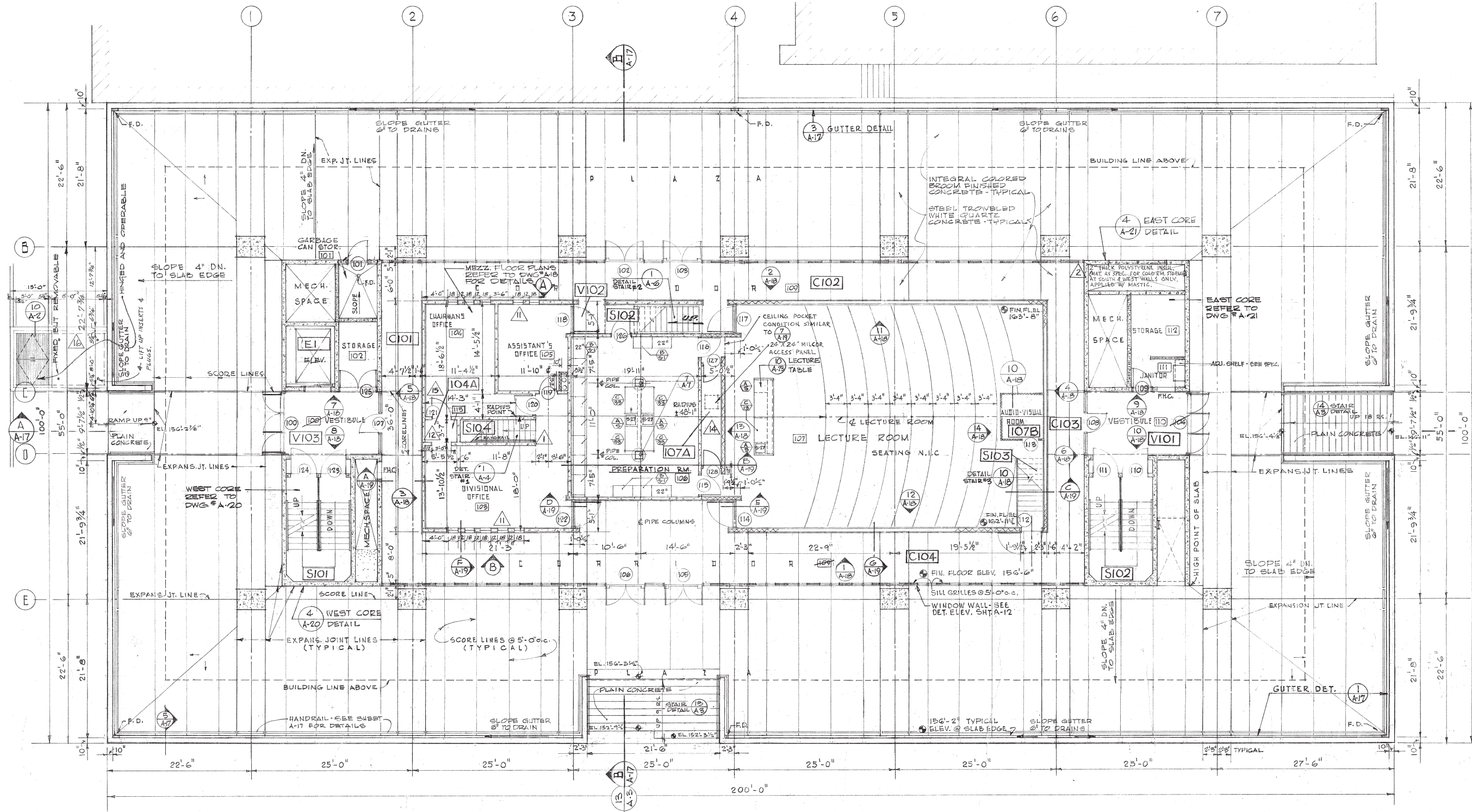


10TH AVE.

PROGRAM SPACES

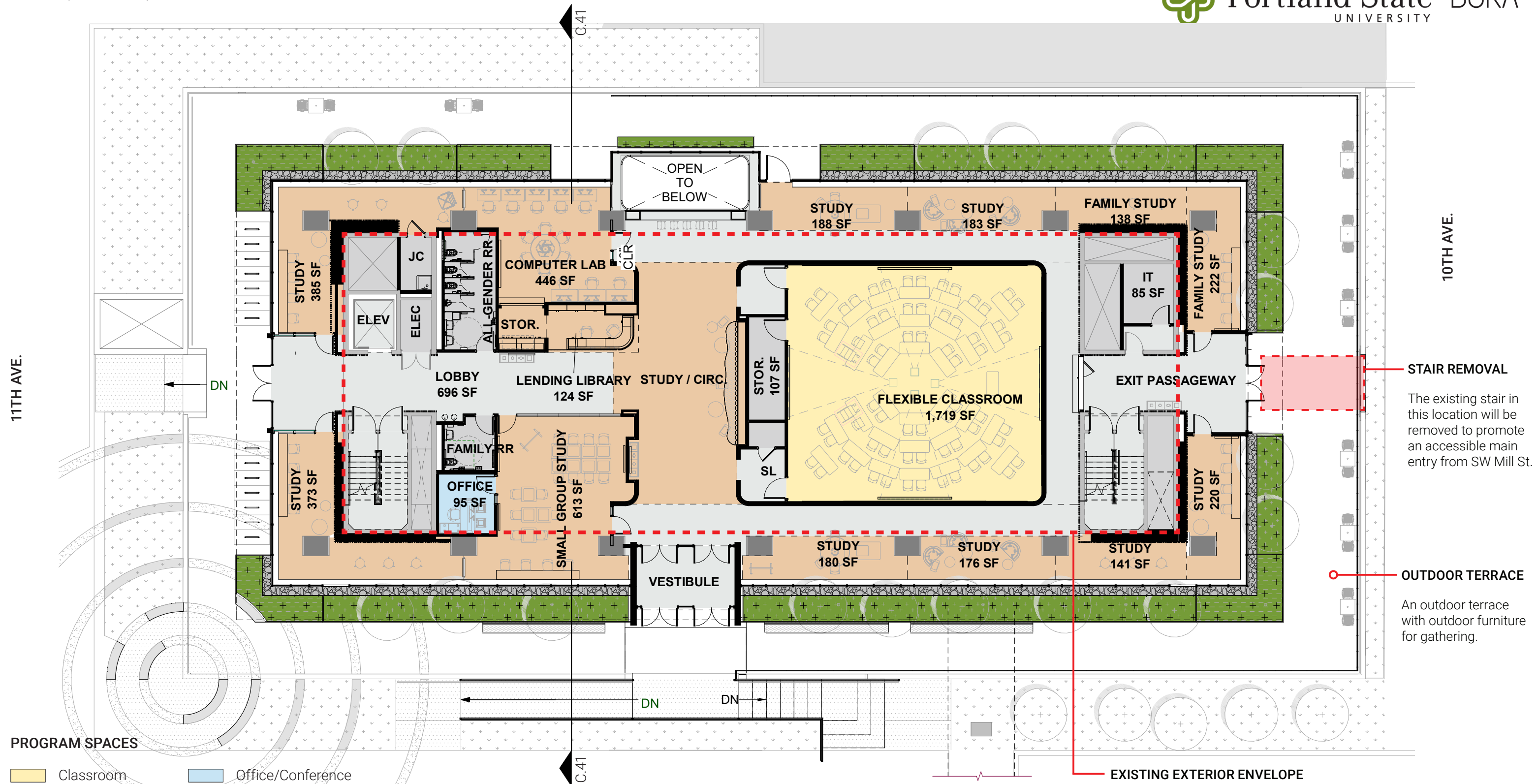
- Classroom
- Dry Lab
- Wet Lab
- Research Lab
- Office/Conference
- Student Support
- Building Support
- Circulation

1/16" = 1'-0"



10TH AVE.

1/16" = 1'-0"



PROGRAM SPACES

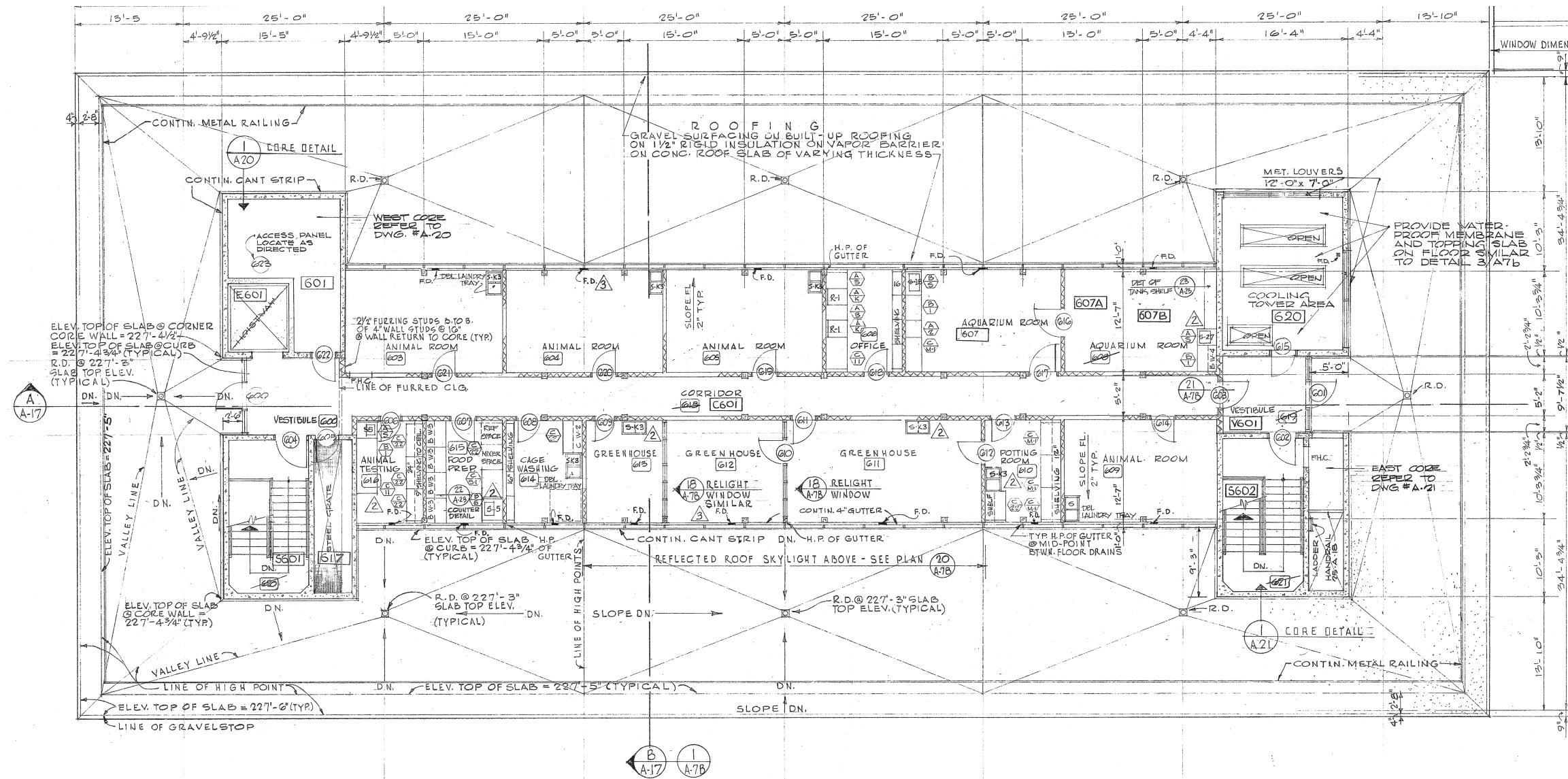
- | | |
|--|--|
| Classroom | Office/Conference |
| Dry Lab | Student Support |
| Wet Lab | Building Support |
| Research Lab | Circulation |

1/16" = 1'-0"

STAIR REMOVAL
The existing stair in this location will be removed to promote an accessible main entry from SW Mill St.

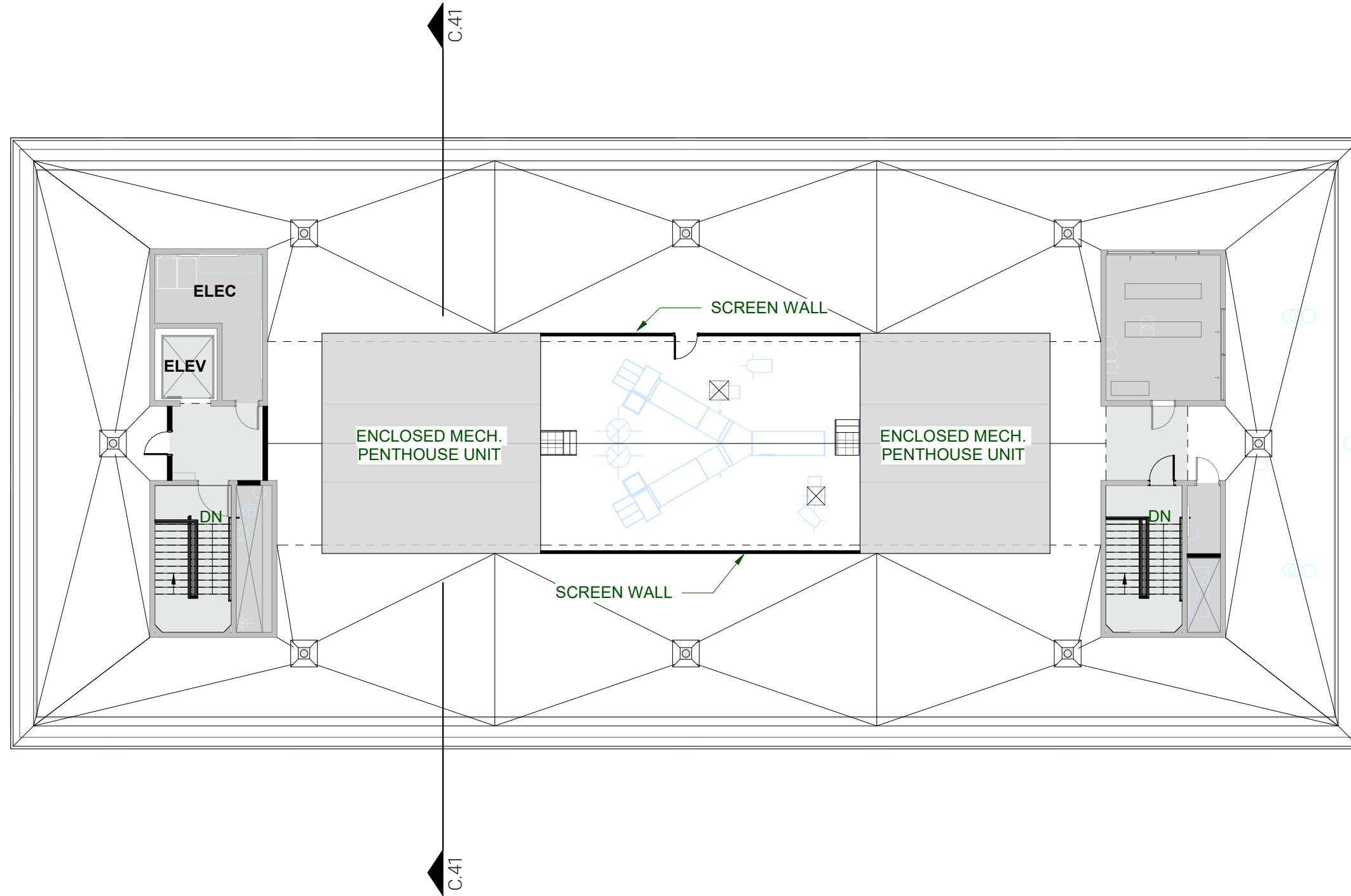
OUTDOOR TERRACE
An outdoor terrace with outdoor furniture for gathering.

EXISTING EXTERIOR ENVELOPE
A new storefront window system will be installed on all sides, expanding the building envelope approx. 5'-0" outboard of the existing concrete columns. Continuous aluminum planters wrap the exterior of the new envelope.












10TH AVE.

1/16" = 1'-0"



PROGRAM SPACES

- | | |
|--|---|
|  Classroom |  Office/Conference |
|  Dry Lab |  Student Support |
|  Wet Lab |  Building Support |
|  Research Lab |  Circulation |

 1/16" = 1'-0"

Perspective Views



Existing Plaster Faced Concrete Facade

Morin Matrix 1.0 Metal Panel Typical Levels 02-05

Cascadia Storefront/Window-wall Typical at Podium Level

Painted Aluminum Planter Containers

Painted Steel Post and Guardrail with Webnet Infill

New Concrete Ramp/Stair at Entry



Existing Plaster Faced Concrete Facade

Morin Matrix 1.0 Metal Panel Typical Levels 02-05

Opaque Spandrel Glass Panels below Windows
Typical East & West Levels 02-05

Cascadia Storefront/Window-wall
with Cardinal Glass Low-E 366 Clear
Typical at Podium Level

Painted Aluminum Planter Containers
Covered Outdoor Bike Parking

New Concrete Ramp at Entry



Cascadia Storefront/Window-wall
with Cardinal Glass Low-E 366 Clear
Typical at Podium Level

Aluminum Curtainwall with Cardinal Glass
(Low-E 366 Clear) at full height glazed bump-

Painted Aluminum Planter Container

Painted Steel Post and Guardrail with Webnet Infill

Design Strategies

TRANSFORM THE BUILDING WHILE RESPECTING IT:

- PSU’s job is to create buildings that make all students feel welcome and provides an environment that encourages them to learn. The Brutalist architectural style of the existing building sends negative signals (e.g., exclusion and oppression), that conflict with the goal of creating an engaged and respectful learning environment. We need to change that messaging.
- This project represents an opportunity to do storytelling around the brutalist history and how the new design has softened and changed that approach. Without these design interventions the project will communicate unintended messages and perpetuate the image that PSU is from another time.
- The indigenous people whose original land this campus occupies and who work and study here at PSU must also be respected and honored. Their voices and their values need to be acknowledged and integrated in how we look at and evaluate the PSU campus and this project.

THE SIGNIFICANCE OF THE PLANTERS:

- Introduction of planters is key to bringing nonhuman relatives (plants, pollinators, etc.) into the building and students’ experience of the building. Elimination/reduction of planters would be against the goal to bring nature inside and soften the edges of the building. This reflects and acknowledges the change that has occurred in our culture and the broader climate since SB1 was built and the desire to invite and welcome more BIPOC students to the space.
- The planters create a buffer of nature and spirituality that surround the students on this arrival floor. They transform the space from a ‘fishbowl’ to a space where you are encouraged to linger, find respite and focus and commune and recharge, not be on display.
- The planters are more than just decoration, they are inviting opportunities for learning, pollinating, reducing heat islands, and providing a spiritual/mental/emotional relief and refuge. Prioritizing the preservation of the building from another time doesn’t reflect the realities of 2022 and what the students have identified as things they need to be conducive to learning and their health.
- The project is striving to both value and preserve the historical character of the original building while creating an environment that is responsive to the values and experience of the students and faculty who will be in this building. The presence of the planters soften the building, create a healing experience, welcoming students and removing the oppressive stigma of the existing building.



OVERALL BUILDING PERSPECTIVE FROM 10TH AVE.

HOW THE PROPOSED DESIGN RESPECTS THE ARCHITECTURAL INTEGRITY OF THE ORIGINAL BUILDING:

- The most significant elements of the buildings original design have been preserved and maintained in the renovation. This includes the expressed concrete frame, the inset windows on the north and south facades and the expression of continuous ‘ribbon’ windows on those elevations.
- The original ‘piloti’ are preserved and remain completely intact. The original piloti, though internalized, are being maintained in their current condition and not enclosed or intersected by walls or re-clad or reshaped.
- The new exterior glass enclosure is clear glass that extends the full height to the underside of the floor above so that the columns can easily be seen from the outside. We will include lighting or paint to highlight their presence and visibility from the exterior.
- The columns have a strong presence on the interior where they break up and subdivide the space inside. As you approach the building they take on increasing presence and visibility. They arguably have more power and presence than they had outside because users will really engage and interact with them as they have a clear zone of free space maintained all around them.

33.130.242 TRANSIT STREET MAIN ENTRANCE

The Zoning Code requires a Main Entrance to a non-residential building to face a Transit Street, with the definition that the Main Entrance is to be to the ground floor, which is defined as the lowest floor within four feet of Transit Street grade. The existing building does not meet this requirement, as the only entry from the transit street is via a stair up to the podium that is 9 feet above grade. The adjacent basement is 4 ft below grade and not capable of being accessed from the street. The existing stair leads to a door that does not currently and will not in the future serve as an entrance to the building. For security reasons this is an exit door only. In addition, the existing stair does not provide an accessible route for all users. It serves only able-bodied users and therefore does not meet PSU's goals for providing equitable and universal access.

The proposed design seeks to eliminate this stair allowing the east side of the basement to be repurposed for active uses.

- In the spirit of responding to the goal of the Zoning code to activate the street edge, a series of large window openings have been cut into the basement wall to bring light and views to the newly activated basement space, while providing visual access to the uses inside the building for pedestrians on the street.
- Removal of the stair will further allow the east terrace at the podium level to serve as a place of gathering and outdoor activity directly adjacent to the transit street.
- Finally, the existing stair creates a safety concern for PSU by allowing individuals to hide in the narrow stairway canyon and threaten pedestrians walking by on the sidewalk. Removal of this stair will address this concern.

The closest main entrance to the Transit Street for the building will continue to be the historic main entrance facing Mill Street. This entrance is being modified to create a new stair and ramp condition that provides universal access to the main building entry. The redesigned entry will create a more visible entry with closer access to users approaching the building from the transit street. In addition to this main entrance on Mill Street, the building will have a second entry on 11th Avenue, a busy pedestrian corridor on the PSU campus that is directly accessible on grade, meeting the goals of universal access.



EAST ELEVATION ALONG 10TH AVE.



CURRENT SB1 PHOTO FROM 10TH AVE.

Building Elevations



1/16" = 1'-0"



1/16" = 1'-0"

New Enclosed Mech Penthouse Units

Screen Wall

Existing Plaster Faced Concrete Facade

Vertical Ribbed Metal Panels (Matrix 1.0) Typical Levels 02-05

Cascadia Storefront/Window-wall Typical at Podium Level

Knee Wall at Podium (Painted Aluminum)

Painted Aluminum Planters

.07 CORE ROOF
242'-6 1/2"

.06 LEVEL 6
227'-3"

.05 LEVEL 5
214'-9"

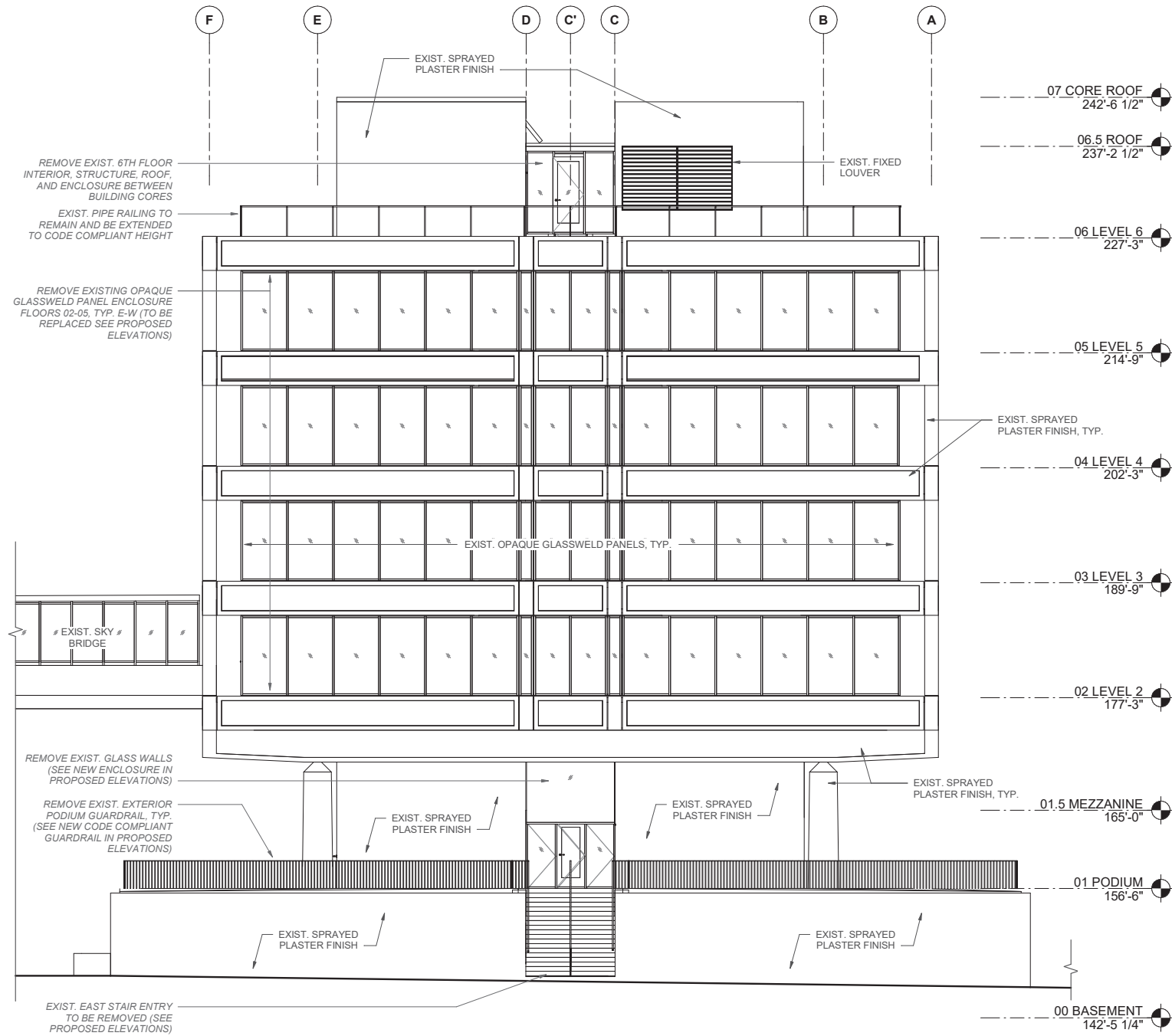
.04 LEVEL 4
202'-3"

.03 LEVEL 3
189'-9"

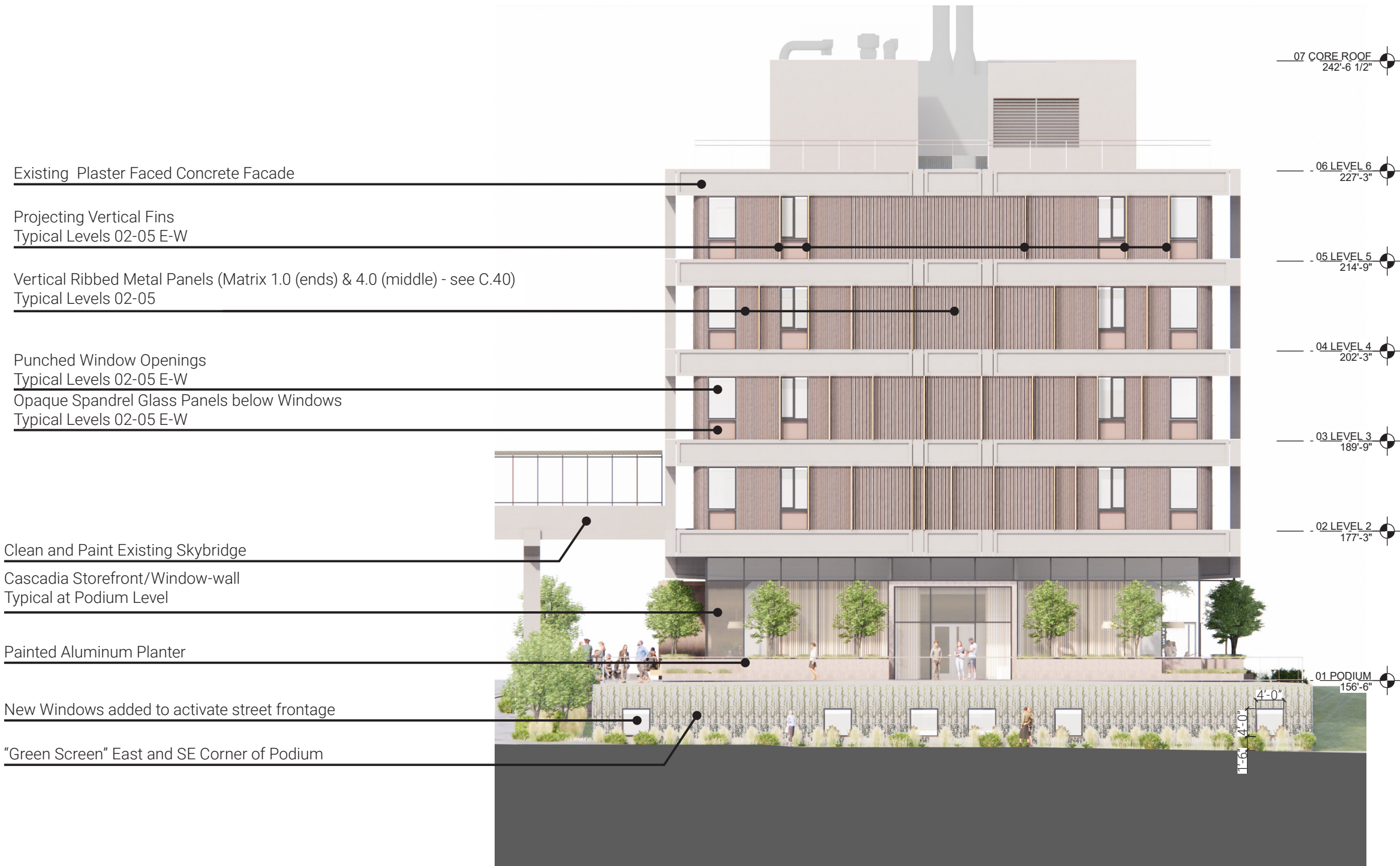
.02 LEVEL 2
177'-3"

.01 PODIUM
156'-6"

1/16" = 1'-0"



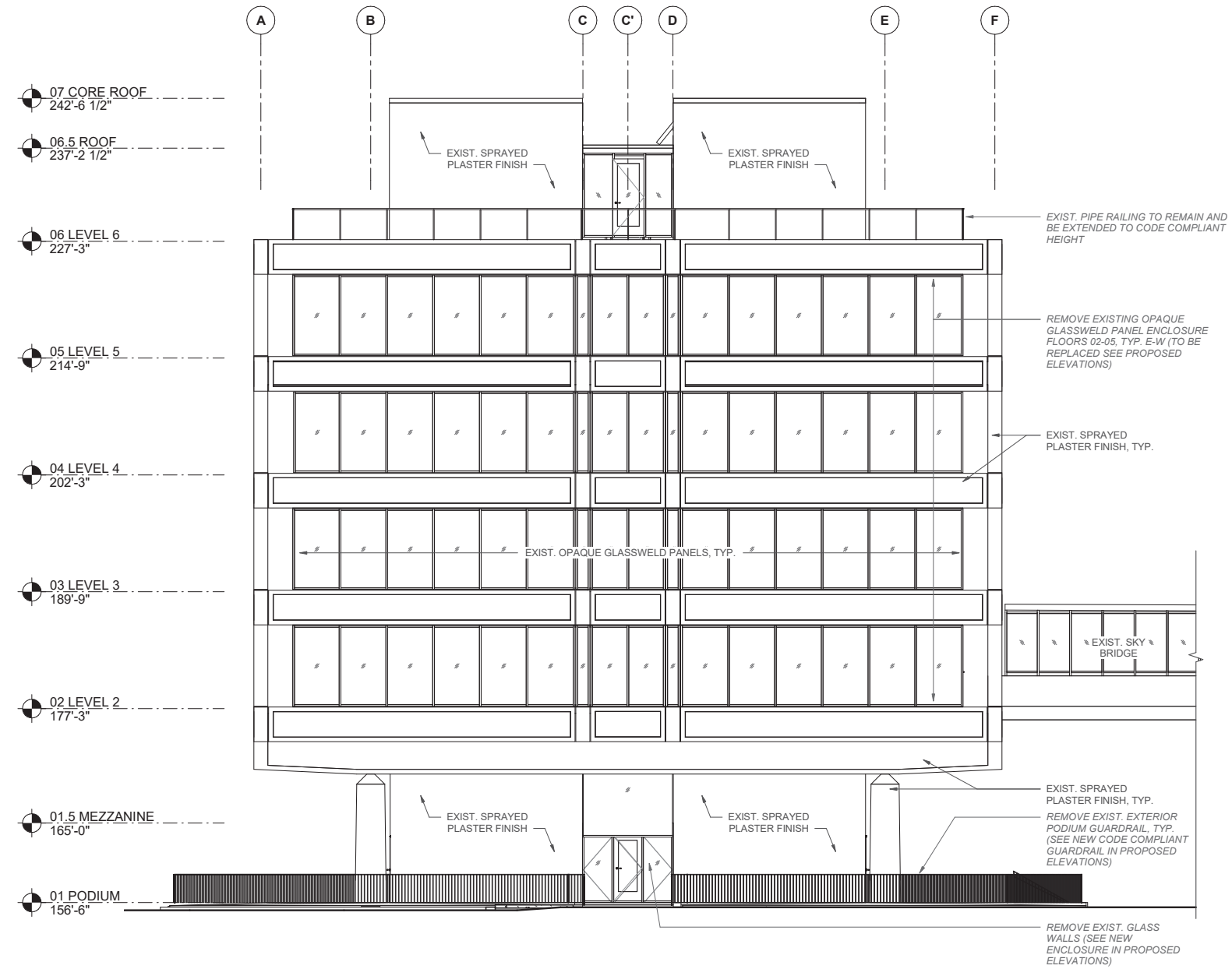
1/16" = 1'-0"



STREET FACING WINDOW COVERAGE

Along 10th Ave. the East Elevation of VSC will have approximately 10% more glazing within 10'-0" of finished grade than the existing street facing elevation which is 0% glazed.

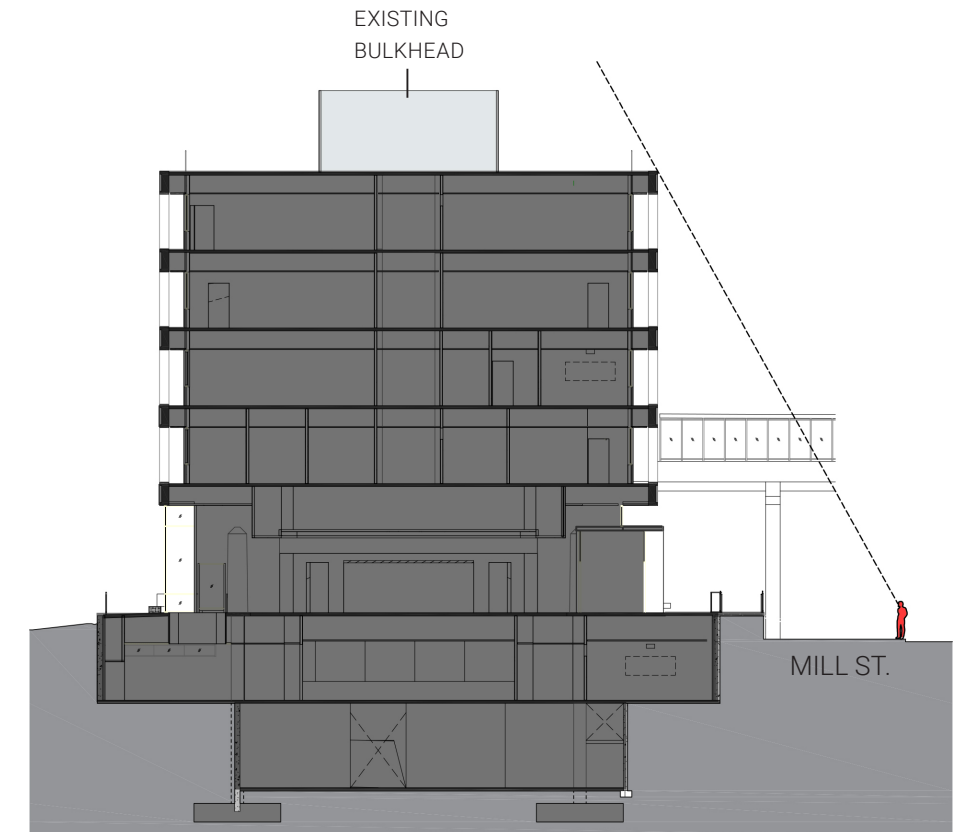
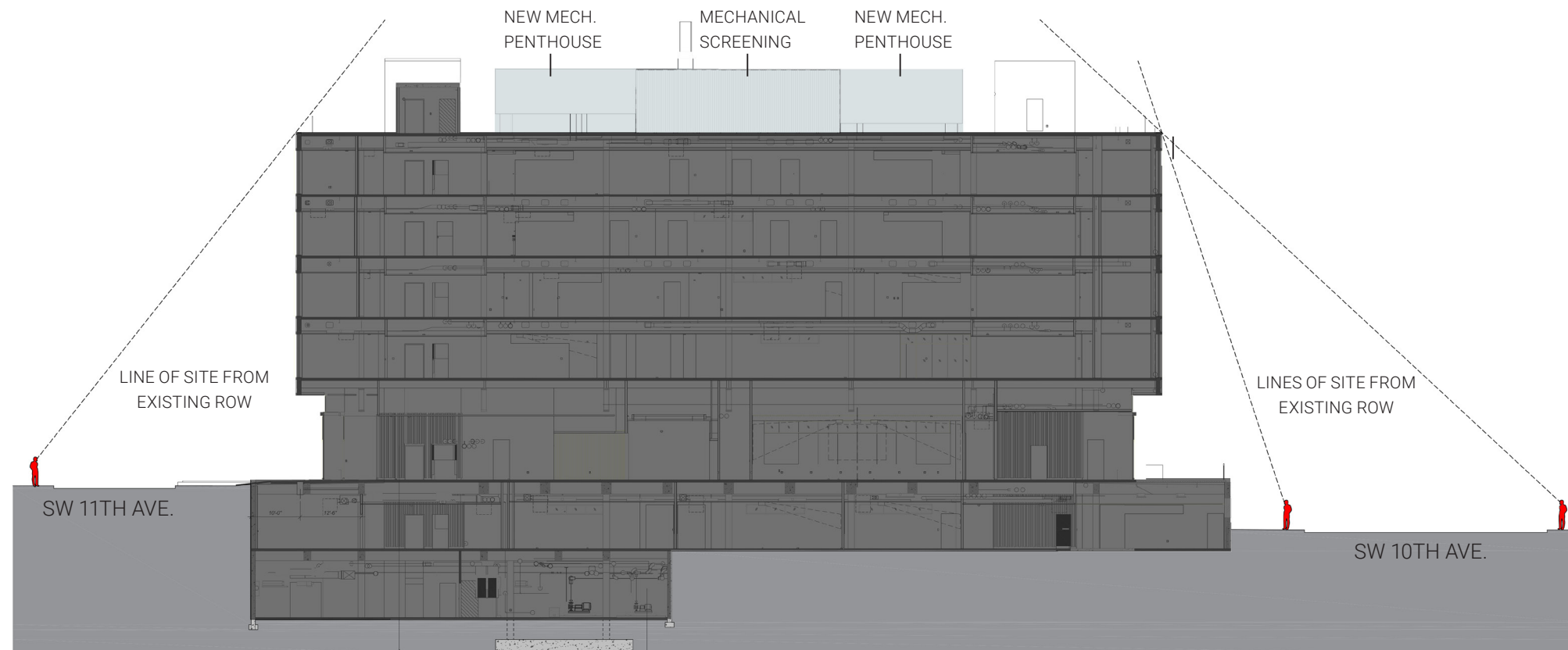
1/16" = 1'-0"



1/16" = 1'-0"

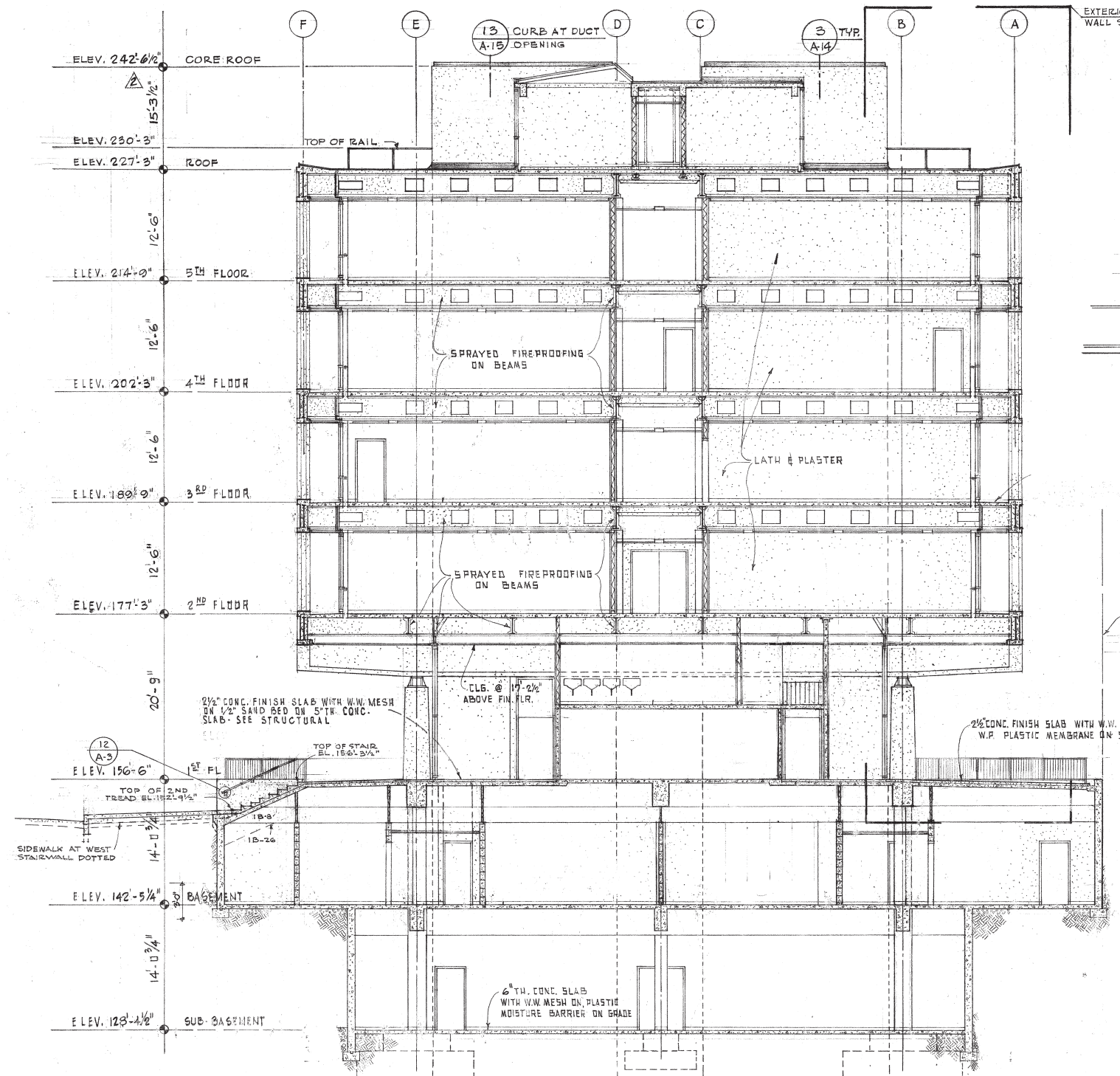


1/16" = 1'-0"



Building Sections

BUILDING SECTION - EXISTING
N/S



1/16" = 1'-0"

BUILDING SECTION - PROPOSED
N/S

PROPOSED MECH PENTHOUSE

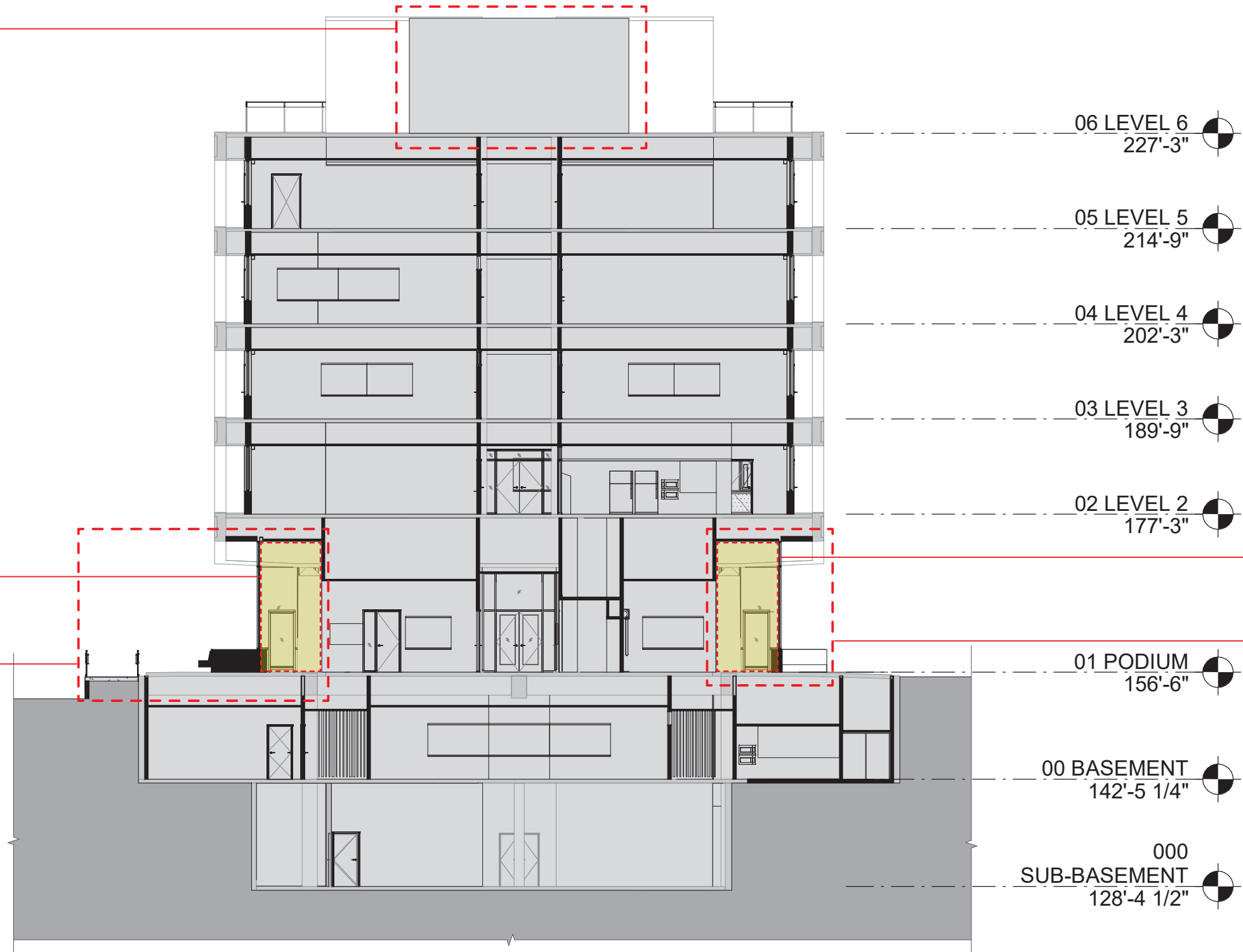
Existing 6th Floor roof, walls, and structure removed except for concrete cores, with new Enclosed Mechanical Penthouse Units installed (see sightline diagrams on C.27)

ADDITIONAL PROGRAM SPACE

New enclosed space accommodates student lounges (see C.15)

PROPOSED SOUTH ENTRY

New Vestibule, Ramp, and convenience Stair to improve accessibility and provide a clear entry point at the exterior (see C.15).



ADDITIONAL PROGRAM SPACE

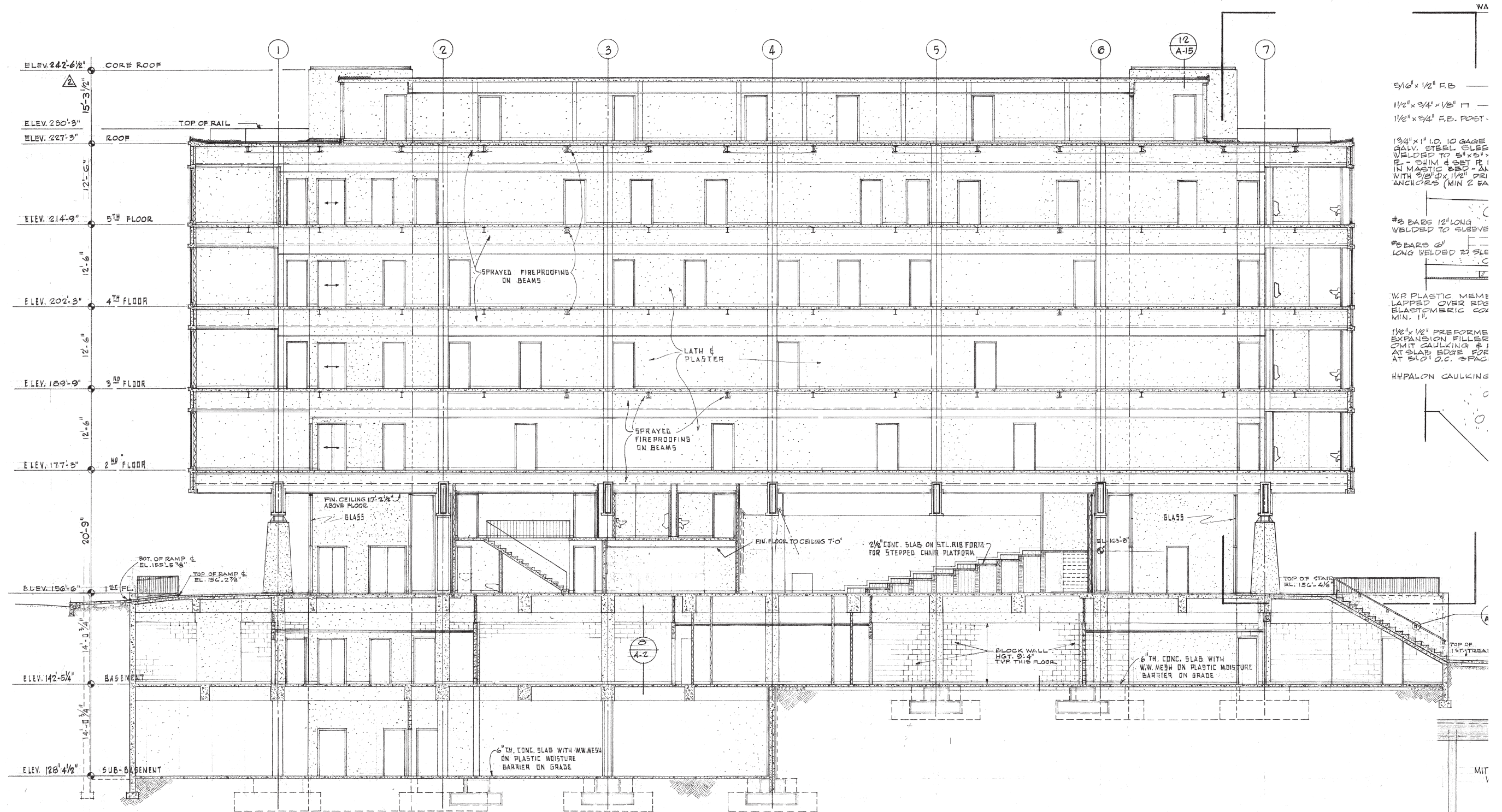
New enclosed space accommodates student lounges (see C.15)

PROPOSED PERIMETER GLAZING

New storefront window system installed on all sides, expanding the building envelope 5'-0" outboard of the existing concrete columns. Continuous aluminum planters line the new envelope (see C.15)

1/16" = 1'-0"

BUILDING SECTION - EXISTING
E/W



1/16" = 1'-0"

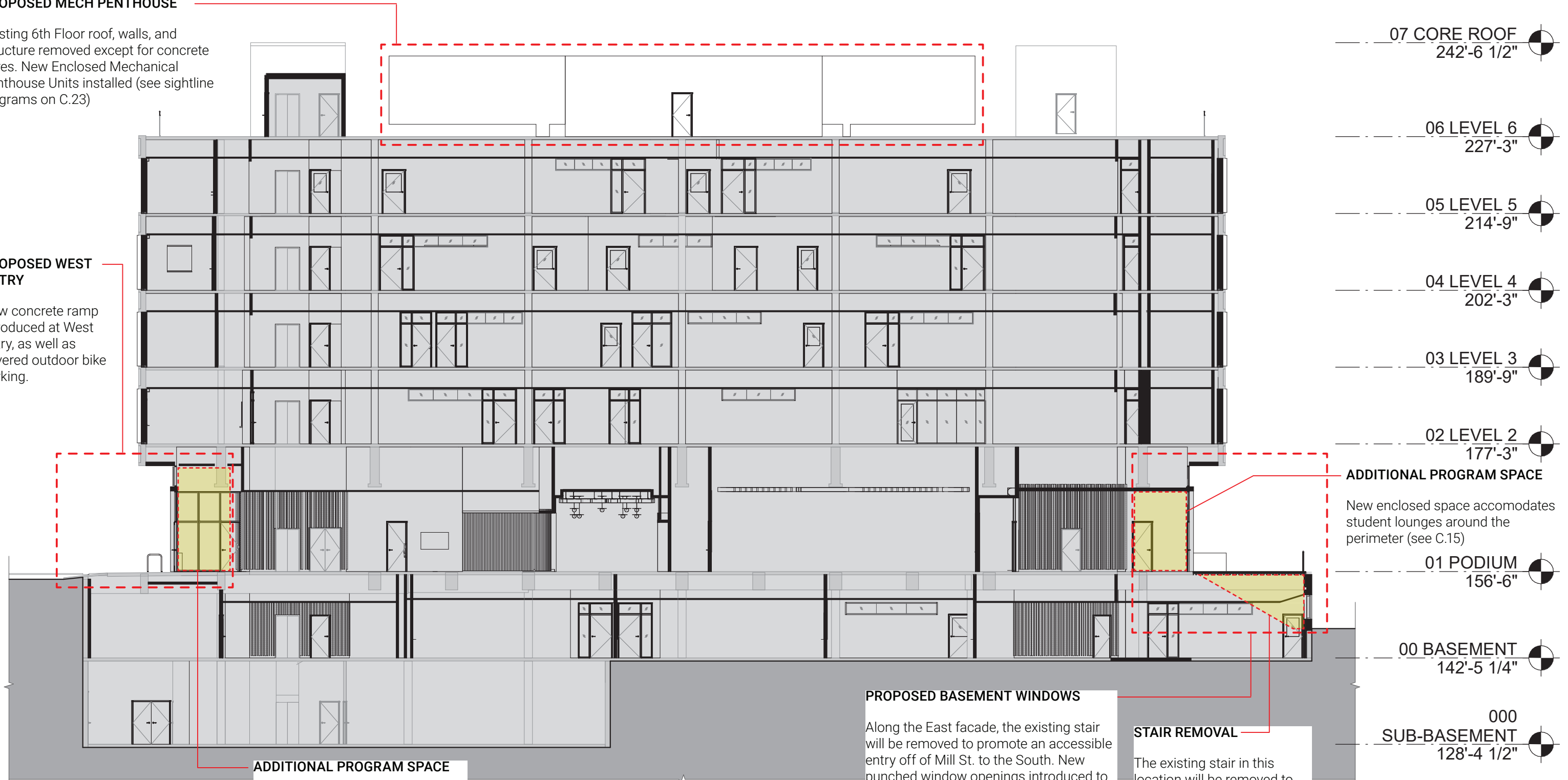
BUILDING SECTION - PROPOSED
E/W

PROPOSED MECH PENTHOUSE

Existing 6th Floor roof, walls, and structure removed except for concrete cores. New Enclosed Mechanical Penthouse Units installed (see sightline diagrams on C.23)

PROPOSED WEST ENTRY

New concrete ramp introduced at West Entry, as well as covered outdoor bike parking.



07 CORE ROOF
242'-6 1/2"

06 LEVEL 6
227'-3"

05 LEVEL 5
214'-9"

04 LEVEL 4
202'-3"

03 LEVEL 3
189'-9"

02 LEVEL 2
177'-3"

ADDITIONAL PROGRAM SPACE
New enclosed space accomodates student lounges around the perimeter (see C.15)

01 PODIUM
156'-6"

00 BASEMENT
142'-5 1/4"

000 SUB-BASEMENT
128'-4 1/2"

ADDITIONAL PROGRAM SPACE
New enclosed space accomodates student lounges around the perimeter (see C.15)

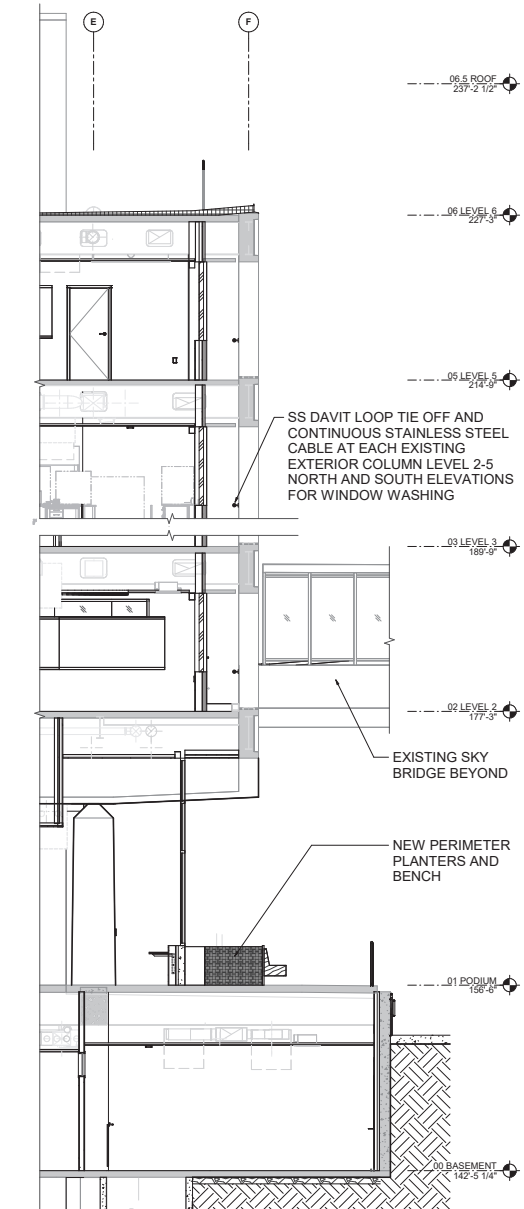
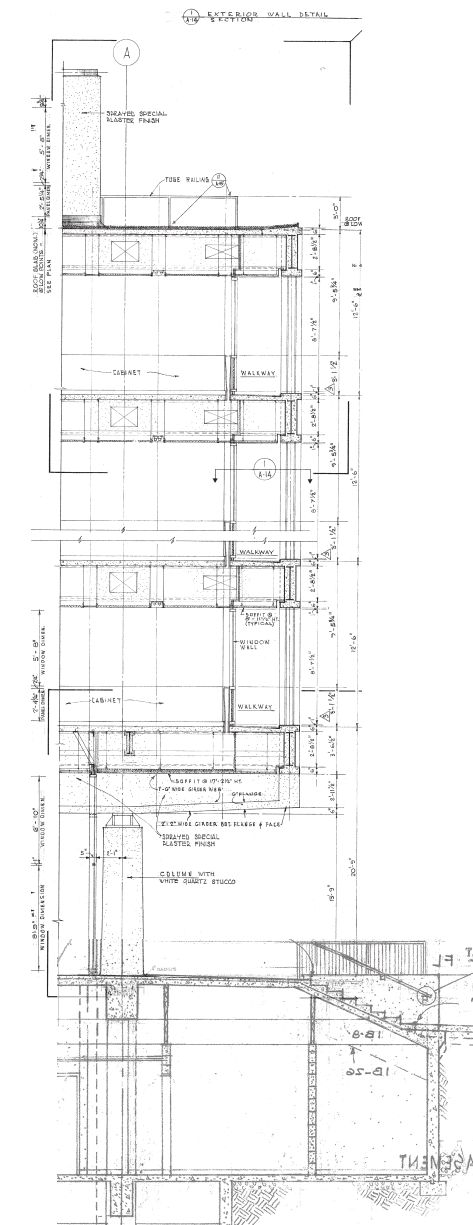
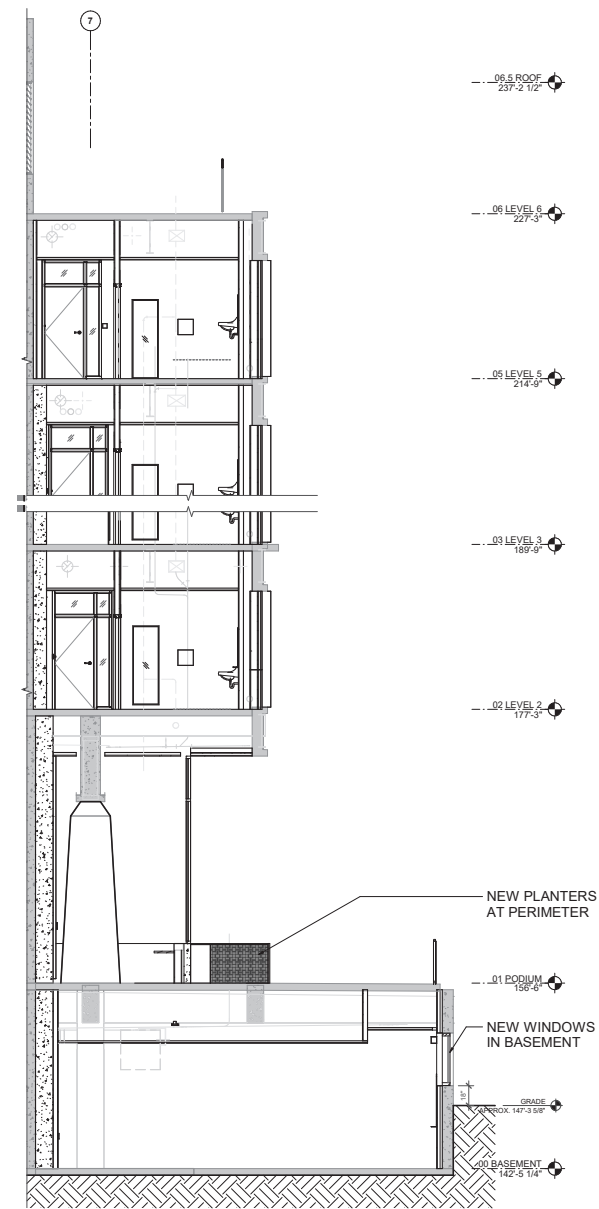
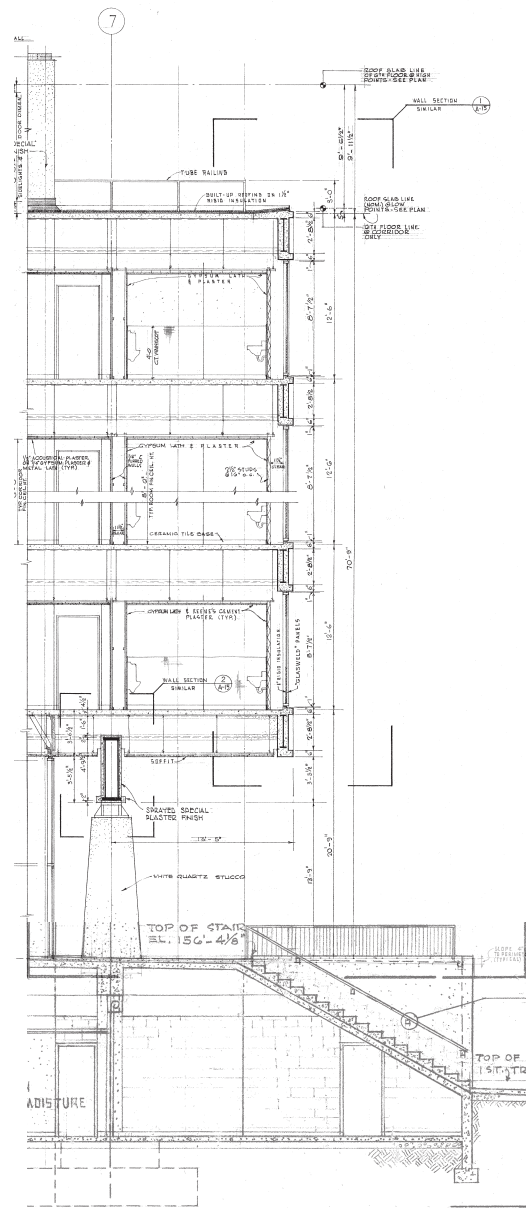
PROPOSED BASEMENT WINDOWS
Along the East facade, the existing stair will be removed to promote an accessible entry off of Mill St. to the South. New punched window openings introduced to bring daylight into the Basement along 10th Ave.

STAIR REMOVAL
The existing stair in this location will be removed to promote an accessible main entry from SW Mill St.

1/16" = 1'-0"

Enlarged Details

Wall Sections
 East Wall - Existing/Proposed, South Wall - Existing/Proposed

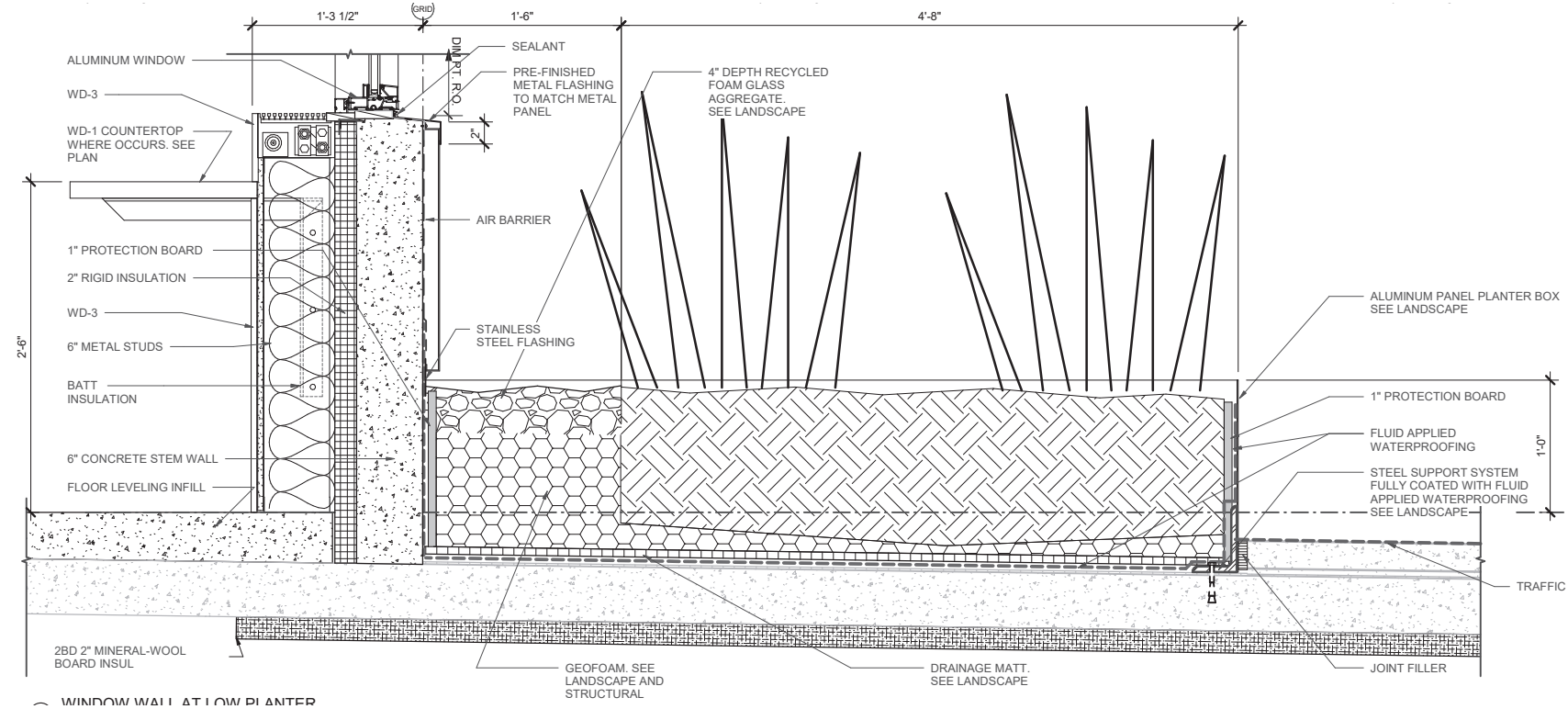


East Wall Section - Existing
 Scale: 1/16" = 1' - 0"

East Wall Section - Proposed
 Scale: 1/16" = 1' - 0"

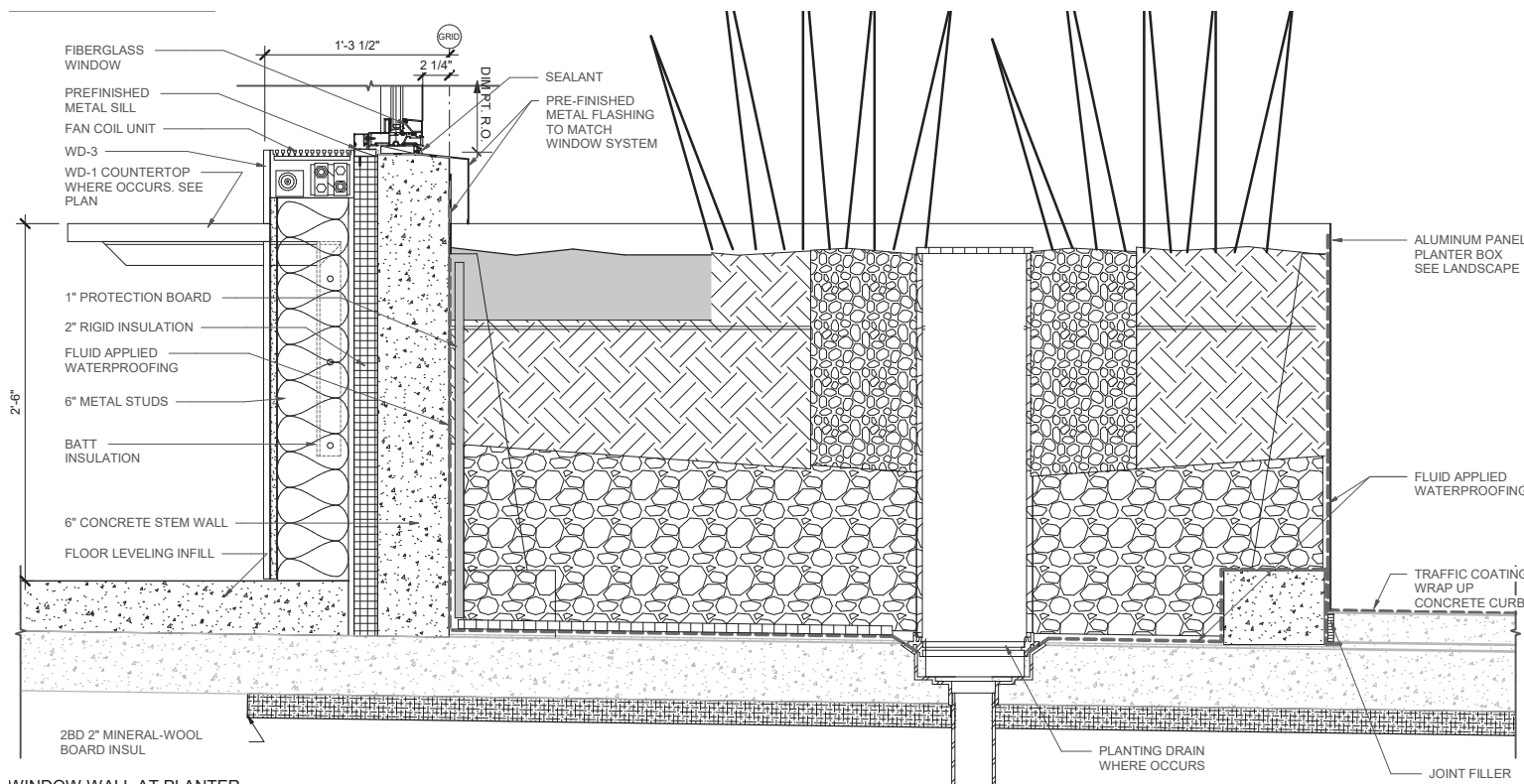
South Wall Section - Existing
 Scale: 1/16" = 1' - 0"

South Wall Section - Proposed
 Scale: 1/16" = 1' - 0"



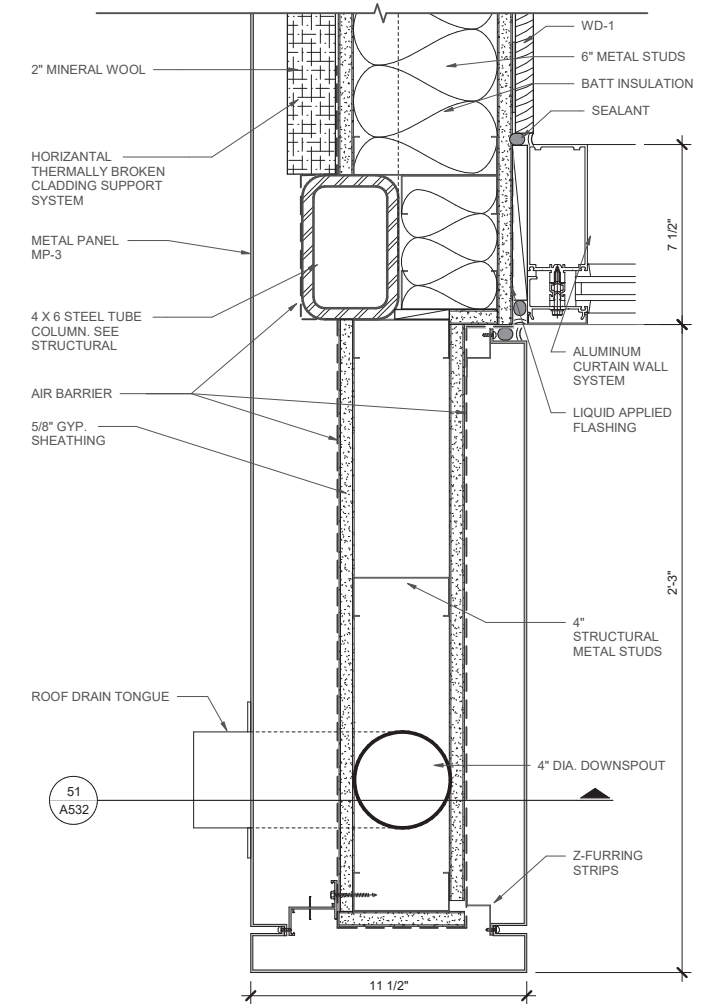
Wall @ Low Planter

Scale: 3/4" = 1' - 0"



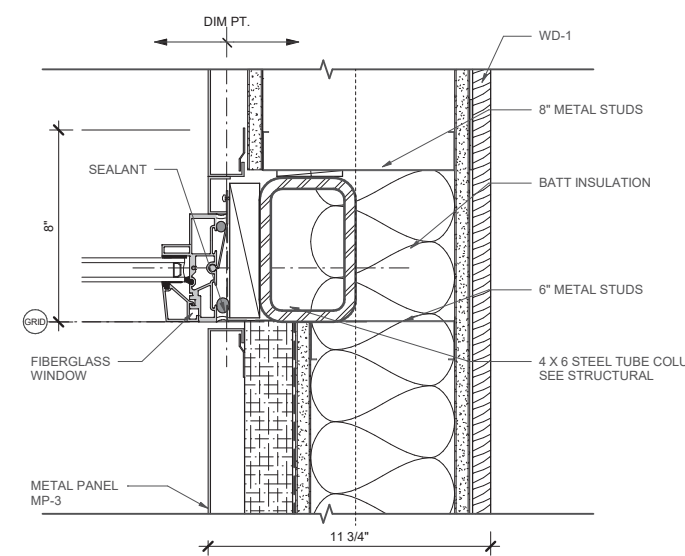
Window @ Planter

Scale: 3/4" = 1' - 0"



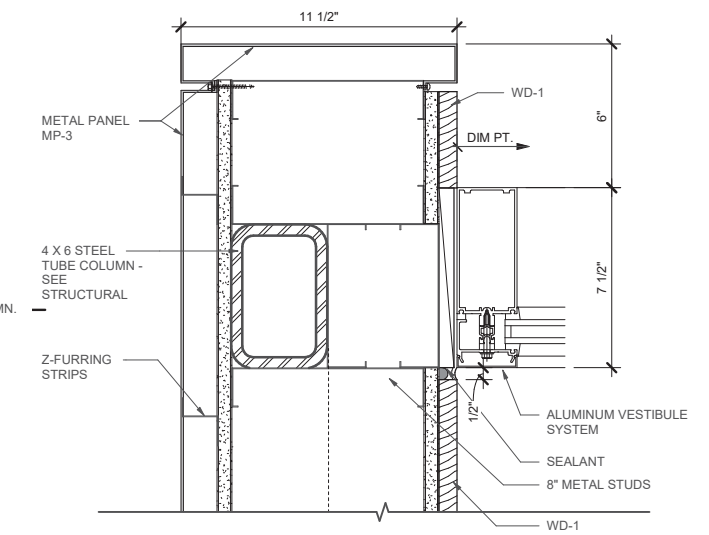
Entry Vestibule Window Wall Corner Section

Scale: 1-1/2" = 1' - 0"



Entry Vestibule Window Wall Section

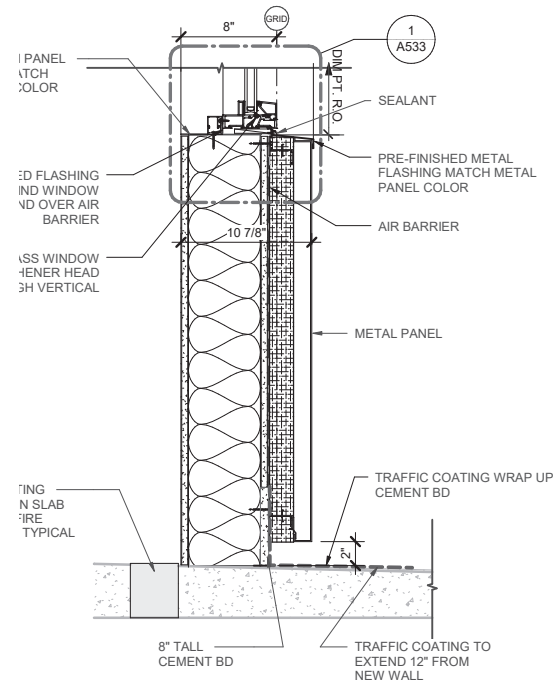
Scale: 1-1/2" = 1' - 0"



Alumn Vestibule Corner Mullion

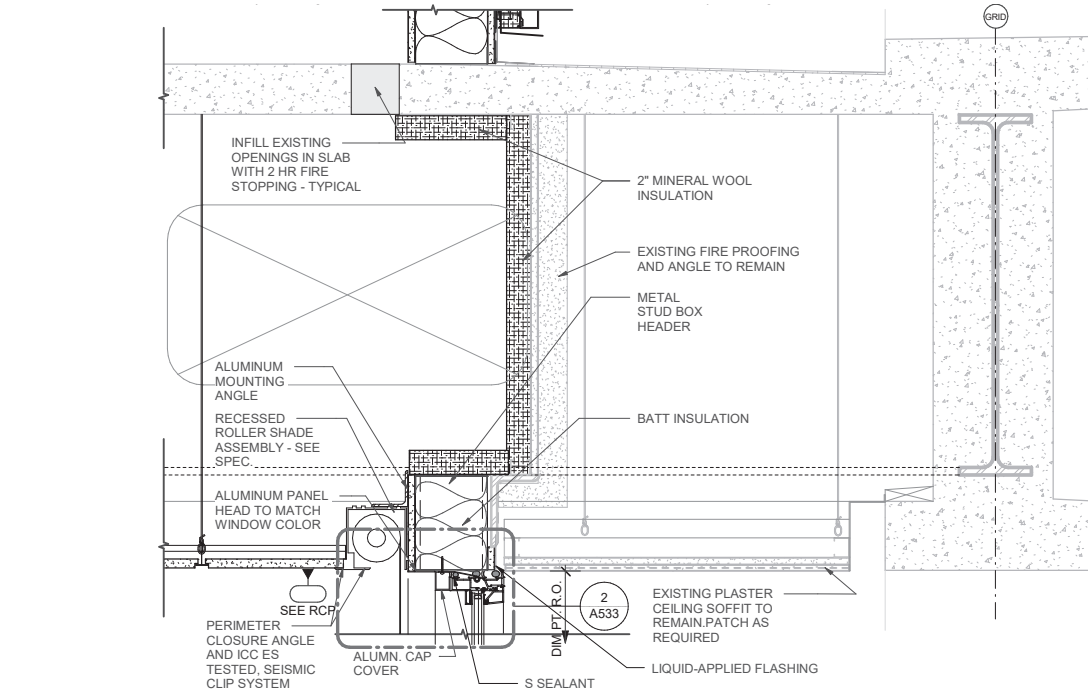
Scale: 1-1/2" = 1' - 0"

DETAILS
Window Details



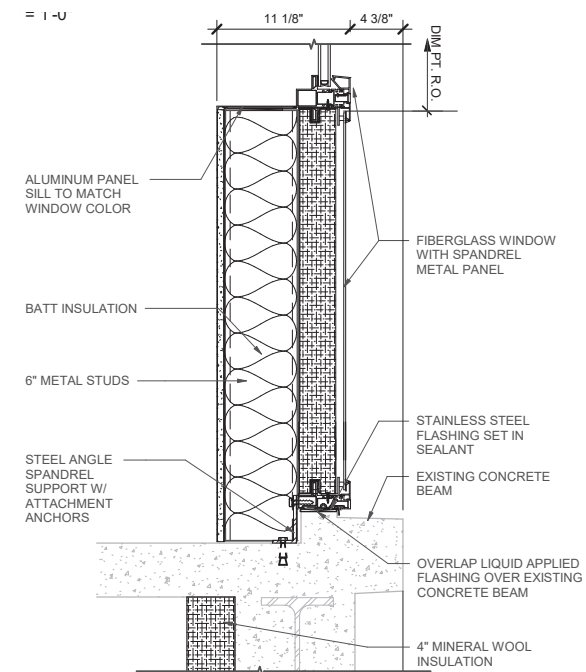
Window Sill - Levels 02-05 North & South

Scale: 3/4" = 1' - 0"



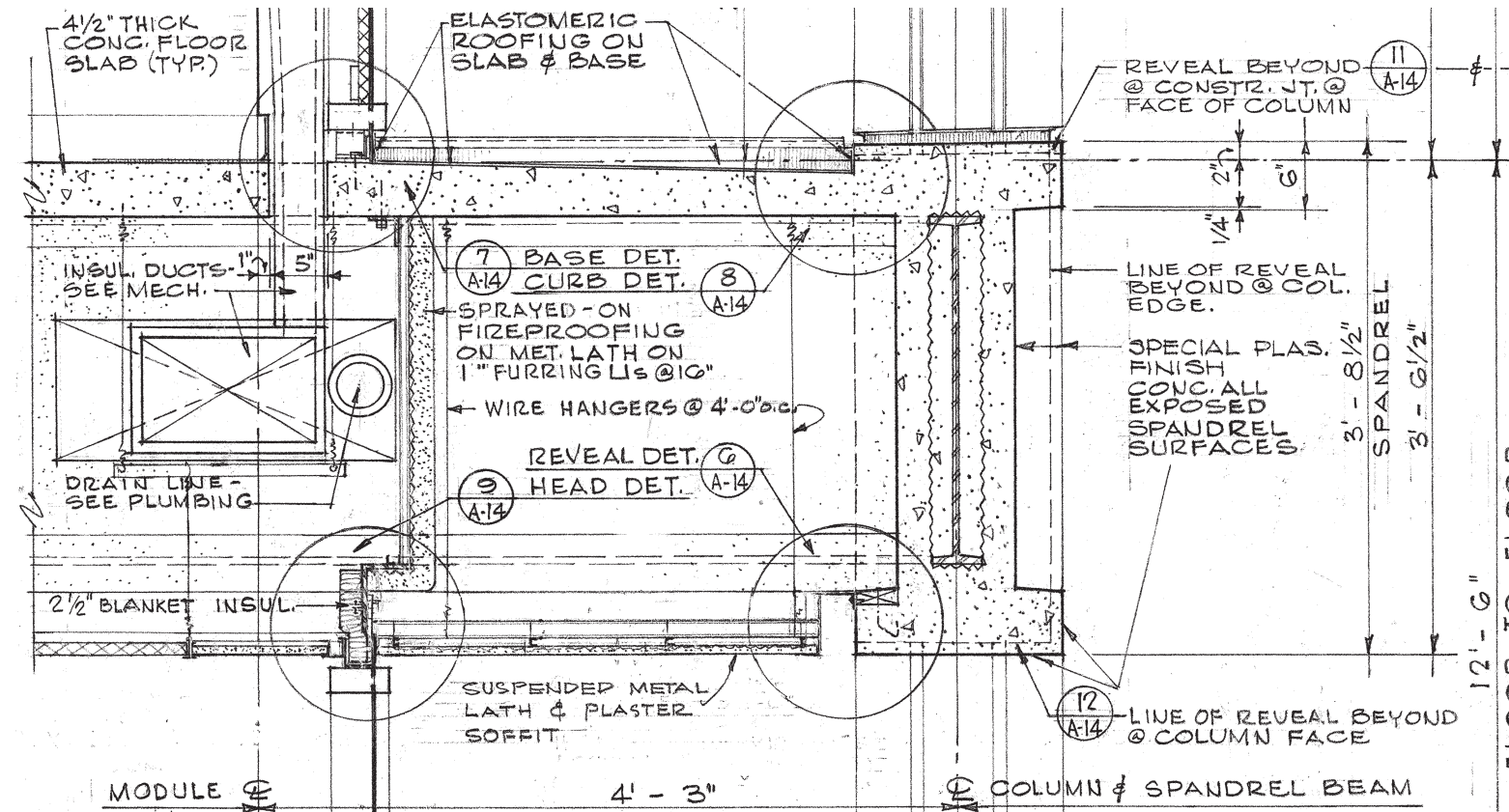
Proposed Typical Window Head - Levels 02-05

Scale: 3/4" = 1' - 0"



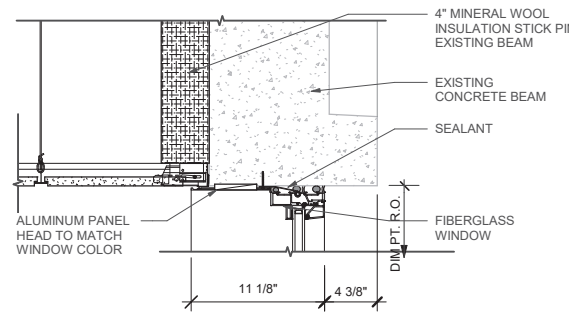
Window Sill - Levels 02-05 - East & West

Scale: 3/4" = 1' - 0"



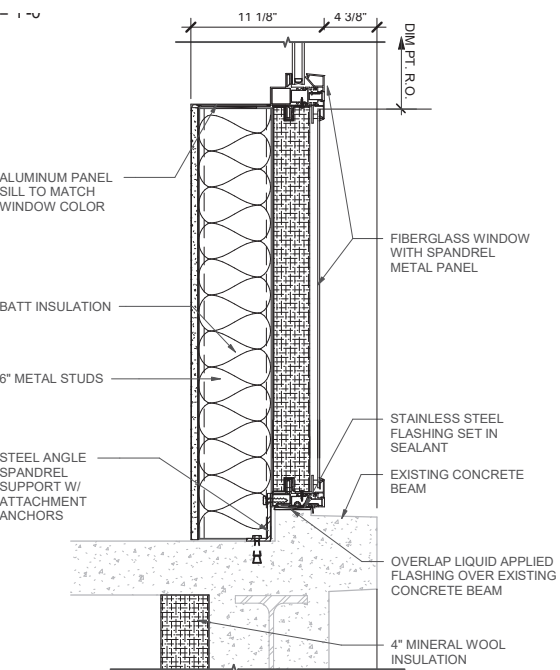
Existing Typ. North-South Upper Floor Ext. Wall Section

Scale: 3/4" = 1' - 0"



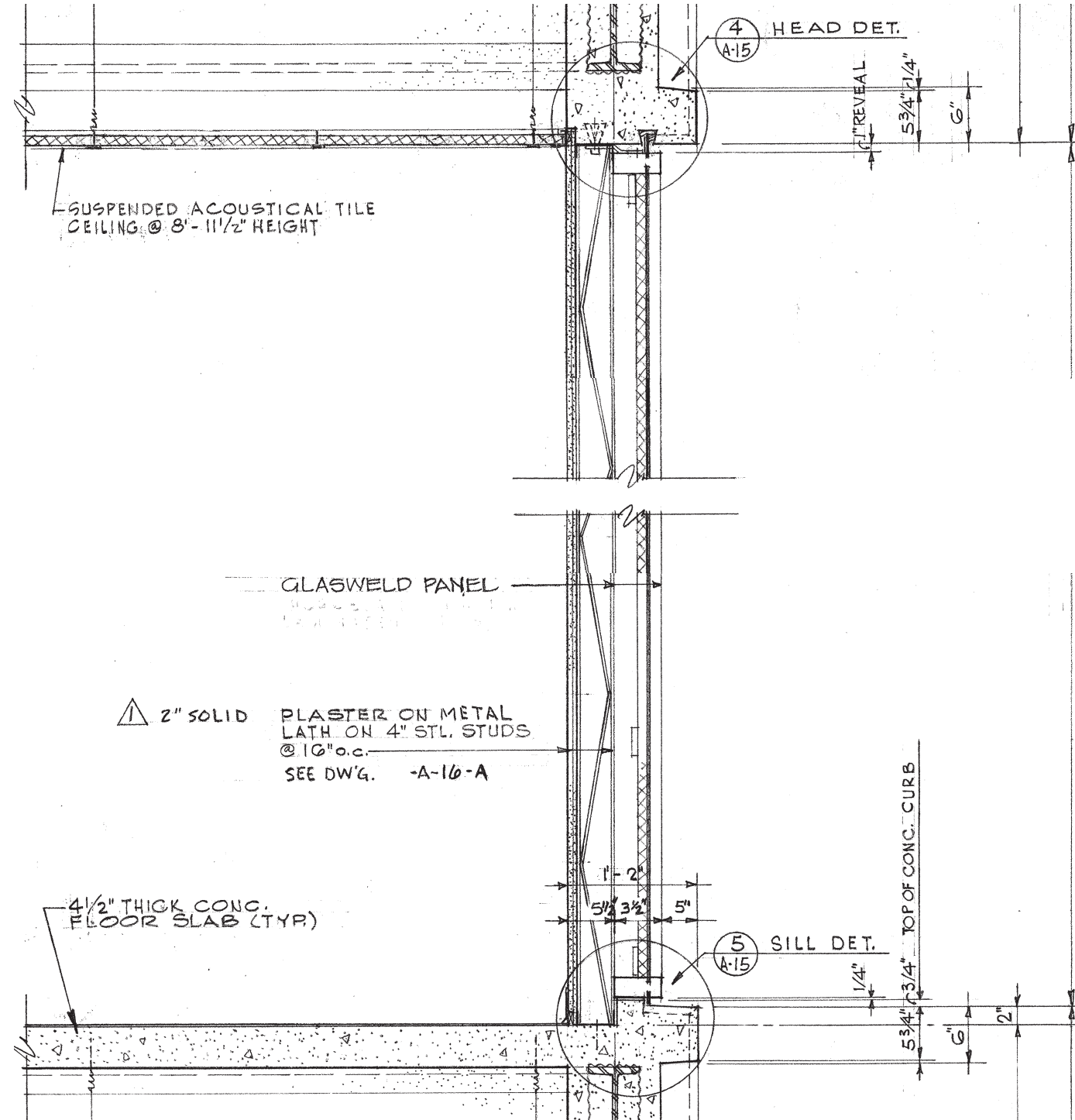
Proposed Window Head - Levels 02-05 - East & West

Scale: 3/4" = 1' - 0"



Proposed Window Sill & Spandrel - Levels 02-05 - East & West

Scale: 3/4" = 1' - 0"

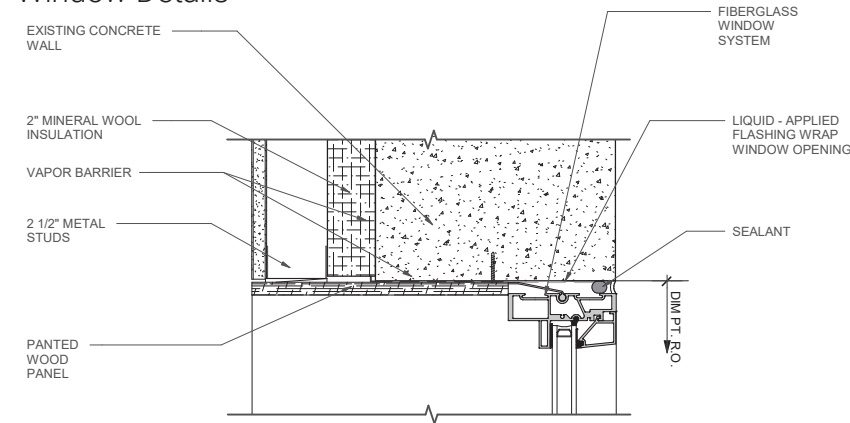


Existing Typ. East & West - Levels 02-05 Wall Section

Scale: 3/4" = 1' - 0"

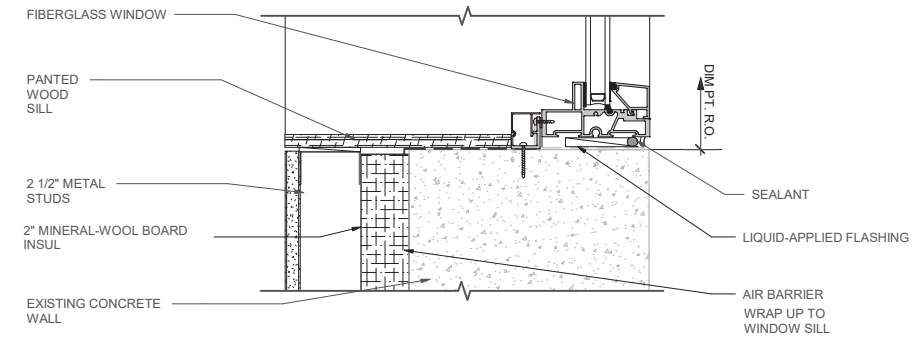
DETAILS

Window Details



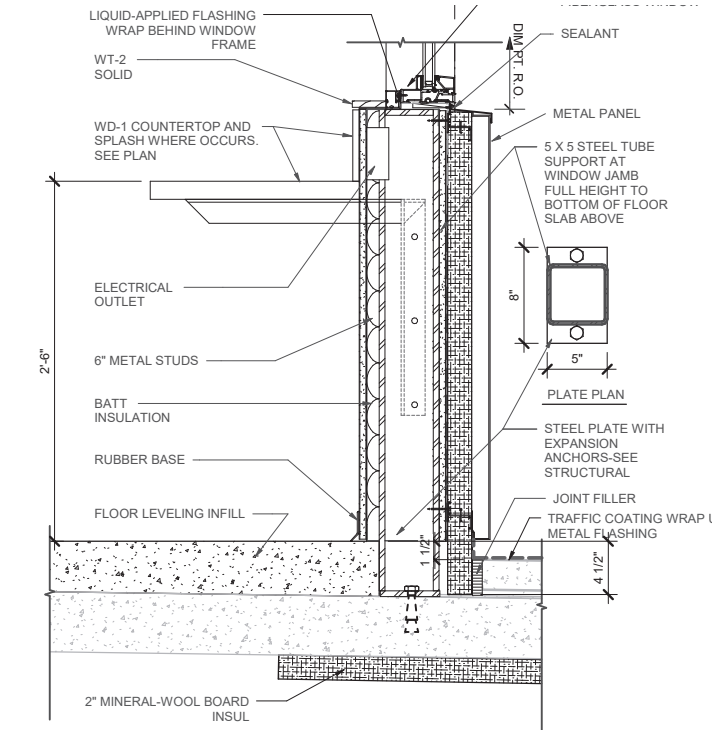
Window Head - Basement Level

Scale: 1 1/2" = 1' - 0"



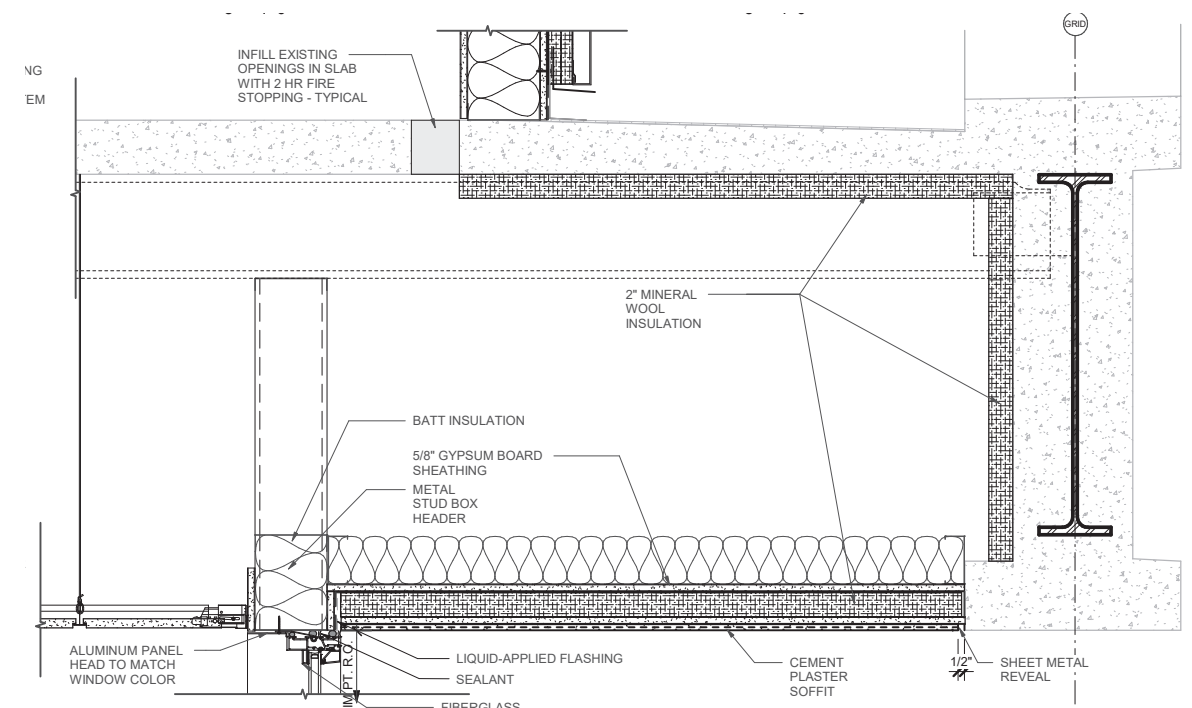
Window Sill/Jamb Sim - Basement Level

Scale: 1 1/2" = 1' - 0"



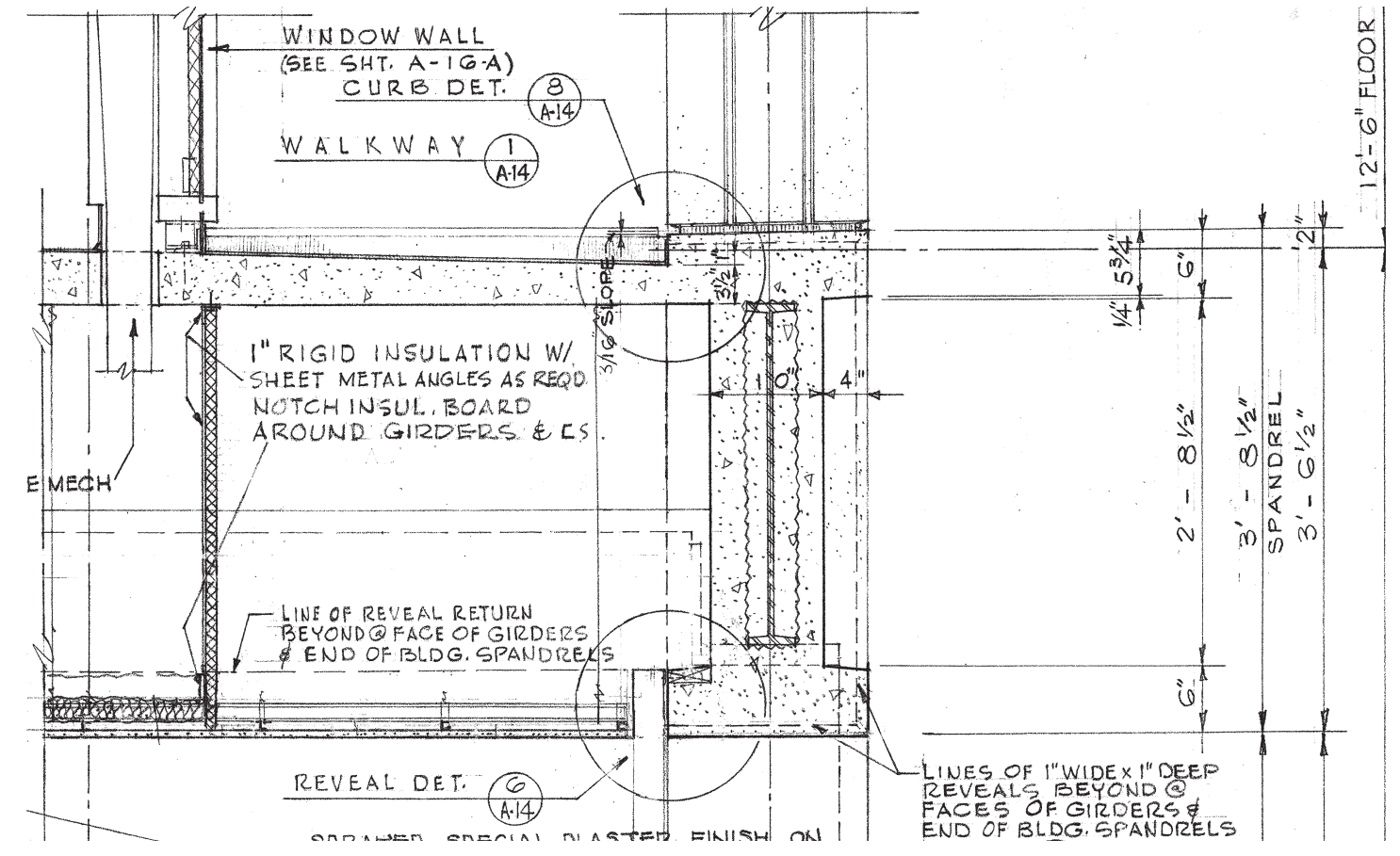
Proposed Window Wall @ Exposed Concrete Wall

Scale: 3/4" = 1' - 0"



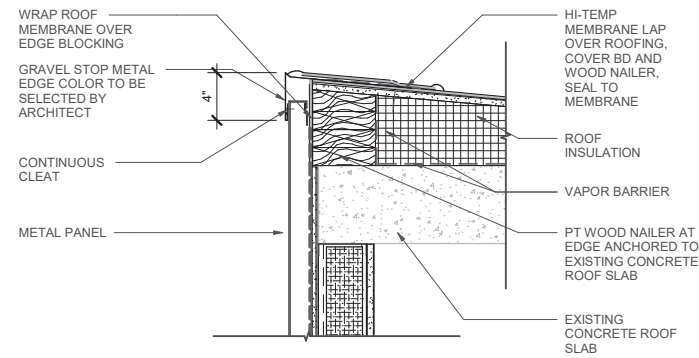
Window Head @ First Floor

Scale: 3/4" = 1' - 0"



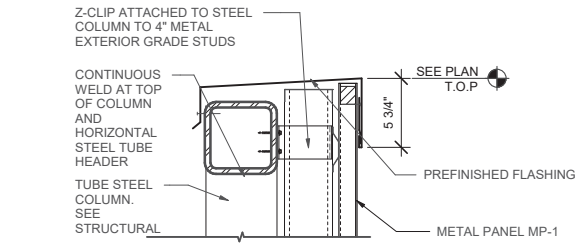
Existing First Floor Soffit & Second Floor Ext. Wall Typ. North-South

Scale: 3/4" = 1' - 0"



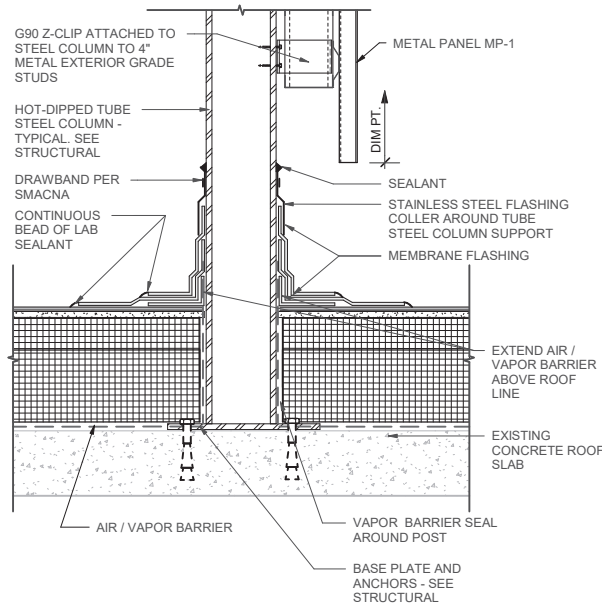
Metal Panel Screen Wall At Head

Scale: 3/4" = 1' - 0"



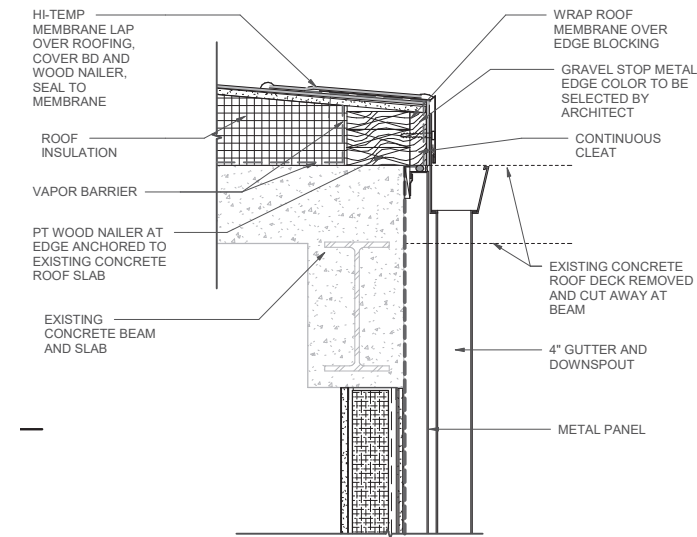
Roof Edge @ Vestibule Door Side

Scale: 3/4" = 1' - 0"



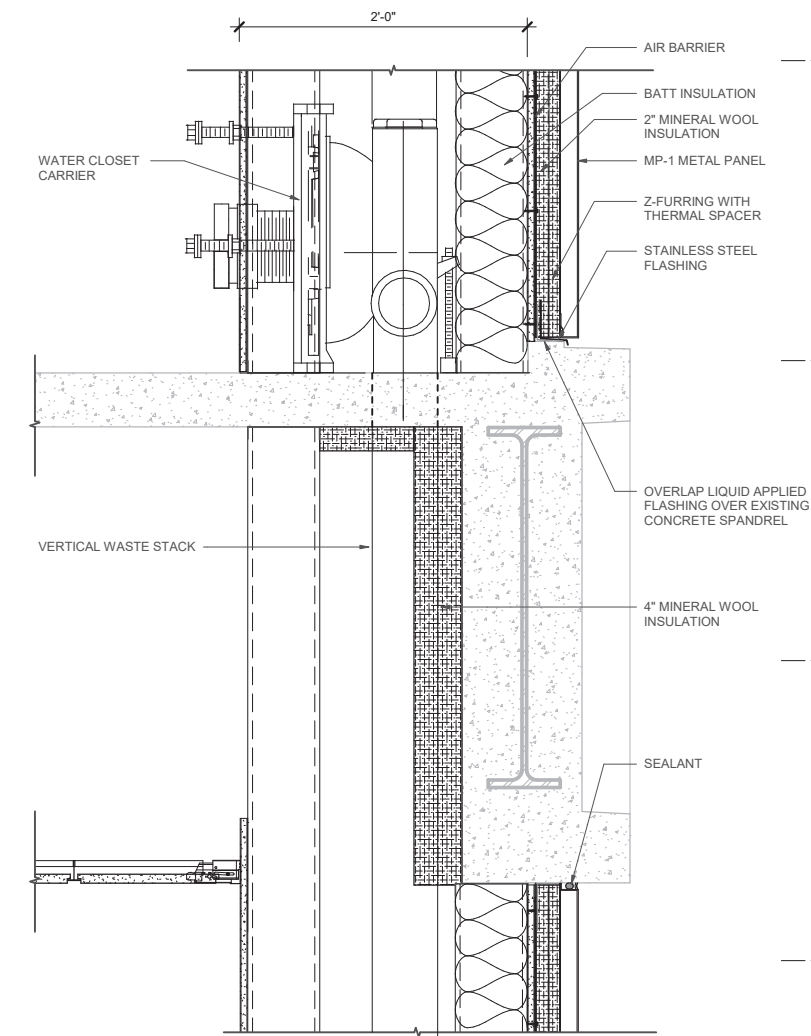
Metal Panel Screen Wall At Post

Scale: 3/4" = 1' - 0"



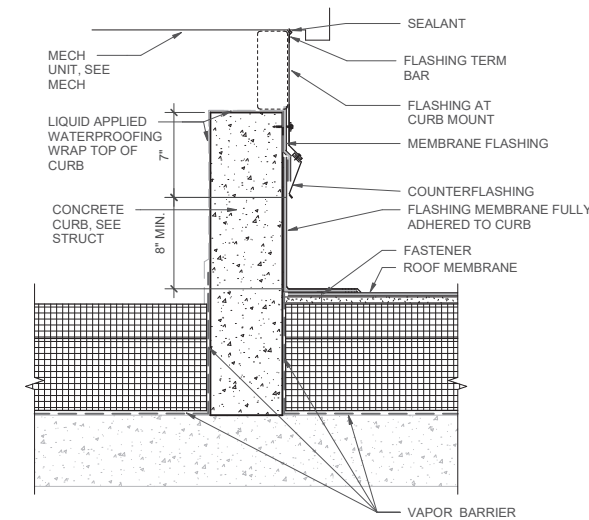
Roof Edge @ Vestibule

Scale: 3/4" = 1' - 0"



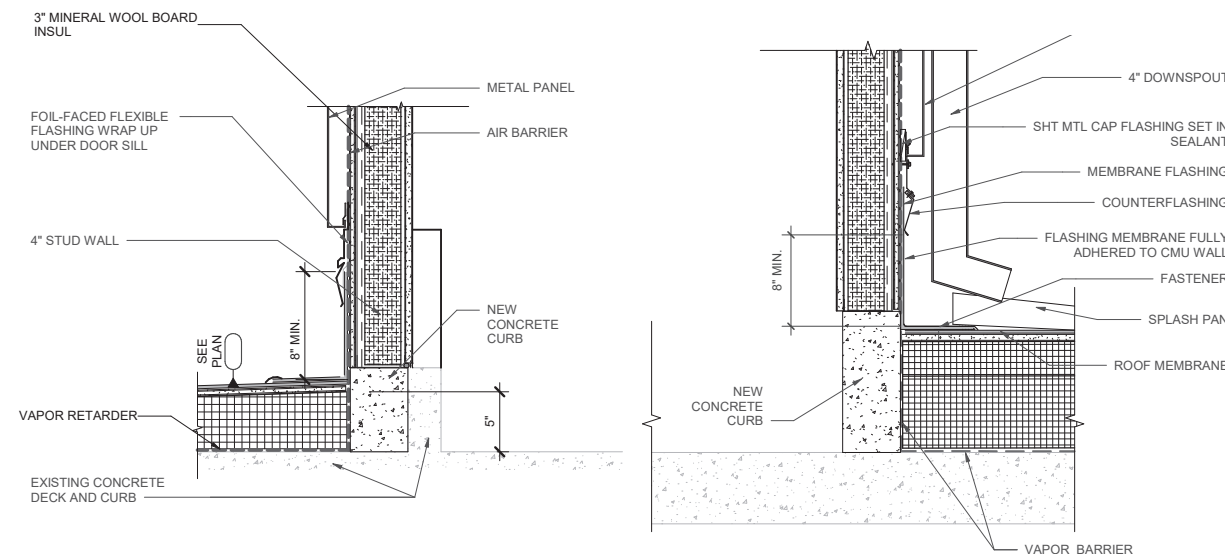
Exterior Wall @ East Facade

Scale: 3/4" = 1' - 0"



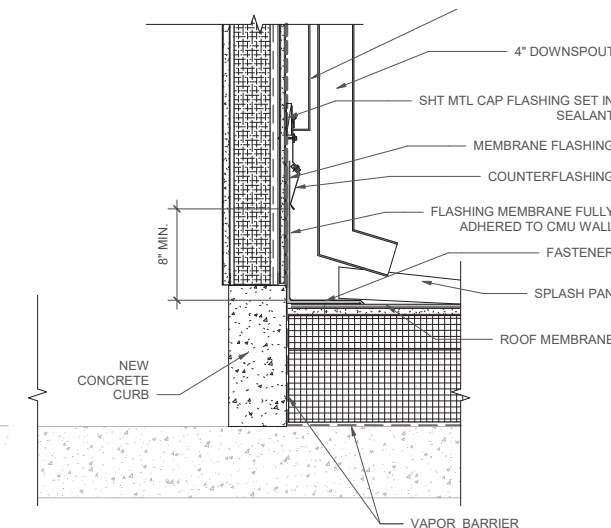
Concrete Curb At Mech Unit

Scale: 3/4" = 1' - 0"



Roof Sill At Access Wall

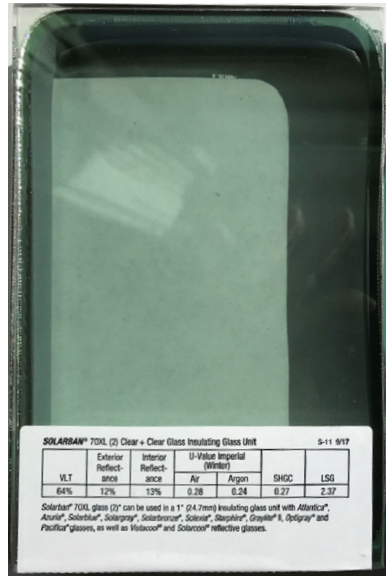
Scale: 3/4" = 1' - 0"



Roof Downspout At Vestibule

Scale: 3/4" = 1' - 0"

Building Materials/Colors



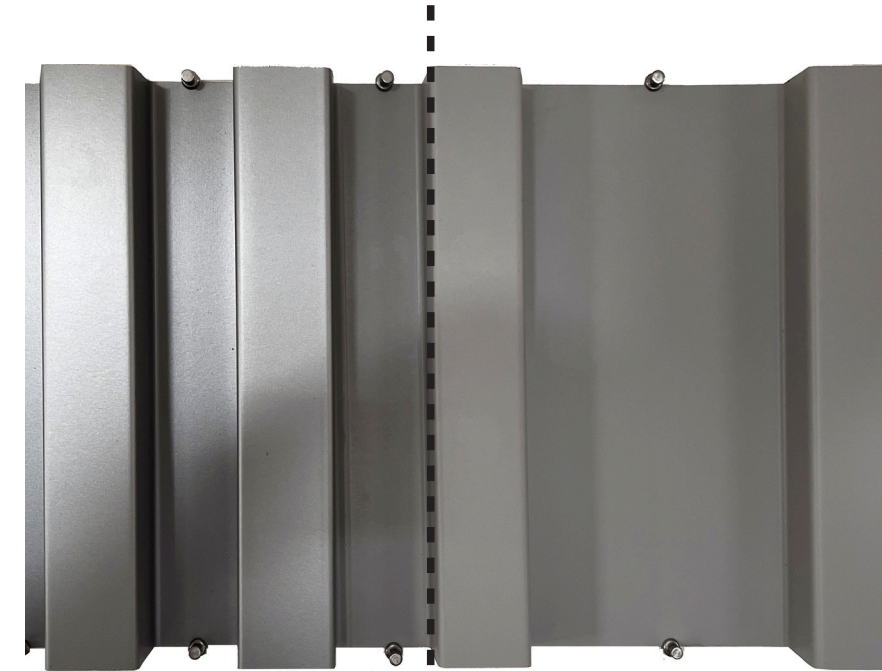
Cardinal Glass, Low-E 366 Clear Low E Glazing
(Based on Vitro Solarban 60 & 70)
(North / South, East / West 2-5)



Medium Grey Spandrel Glass
(East / West Levels 2-5)



Painted Aluminum Panels
Planter / Knee Wall Facing
(Podium Level)



Ribbed Metal Panels:
Morin Matrix 1.0 (Painted)
(North / South, East / West 2-5)

Ribbed Metal Panels:
Morin Matrix 4.0 (Painted)
(East / West Levels 2-5)



Copper with Bead Blasted Finish
Custom Vertical Fins
(East / West Levels 2-5)



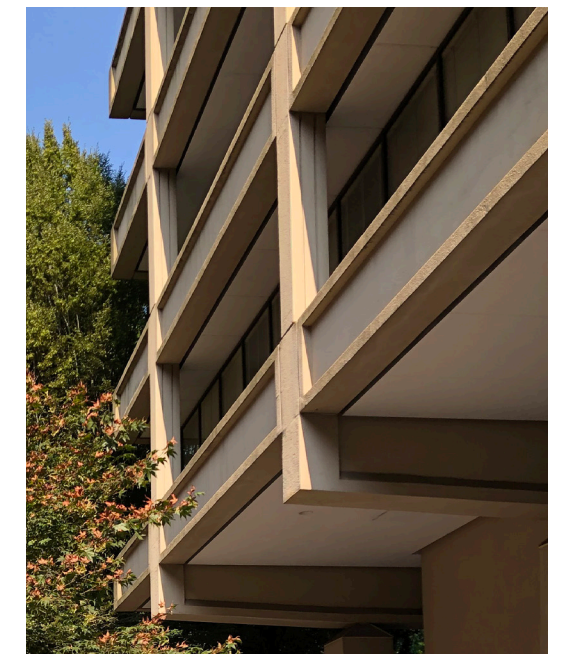
Webnet Guard Rail Infill
(Podium Level)



Podium Level Metal Trim + Mullions
(Guard Rail, Ballustrade, Mullions to match)

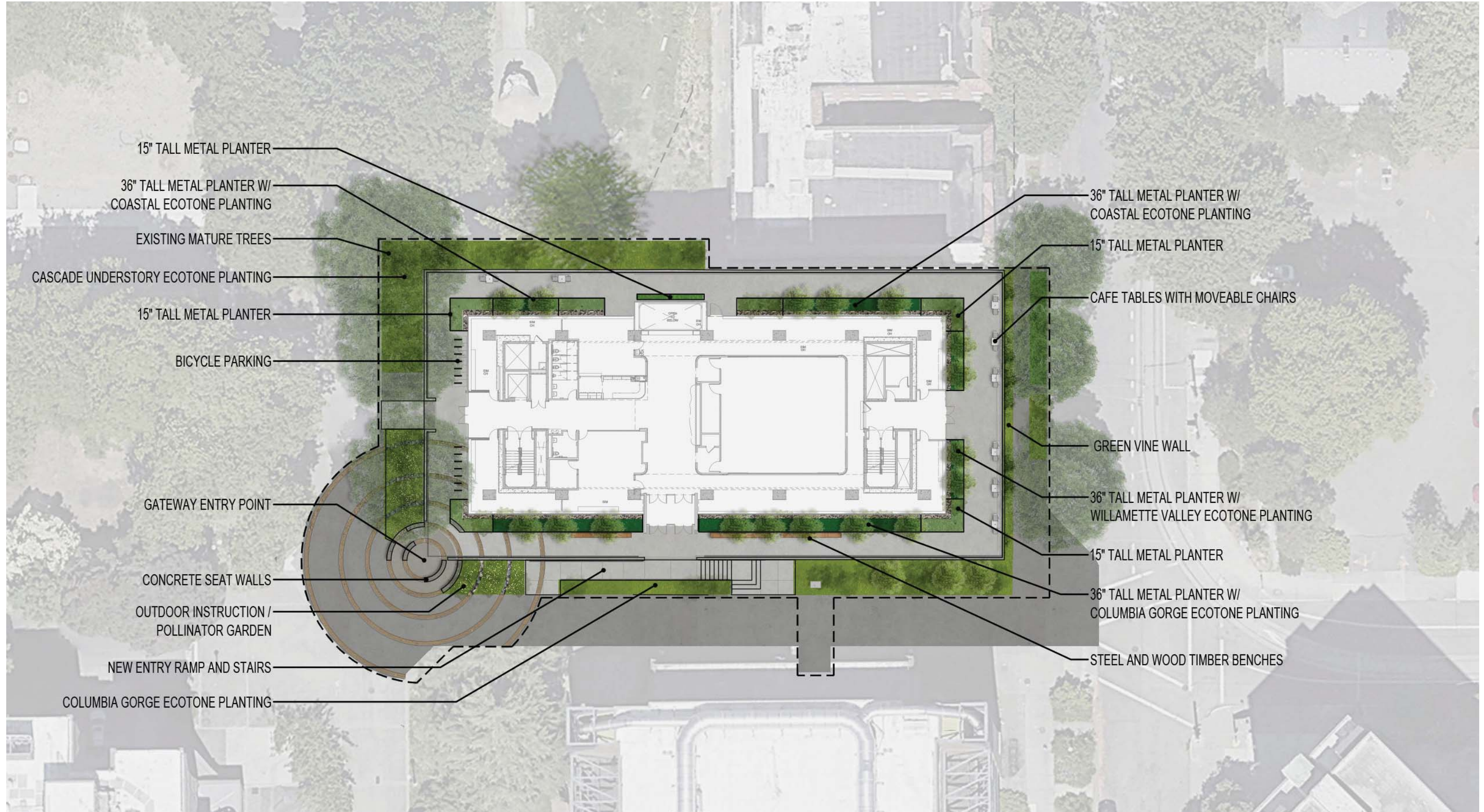


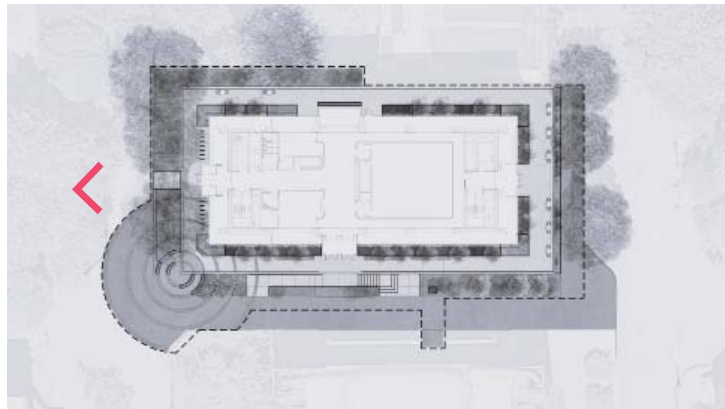
Cascadia Storefront and Window Wall with Low-E Clear Glazing (Upper Right)
(See mullion trim at left and glazing at upper left)

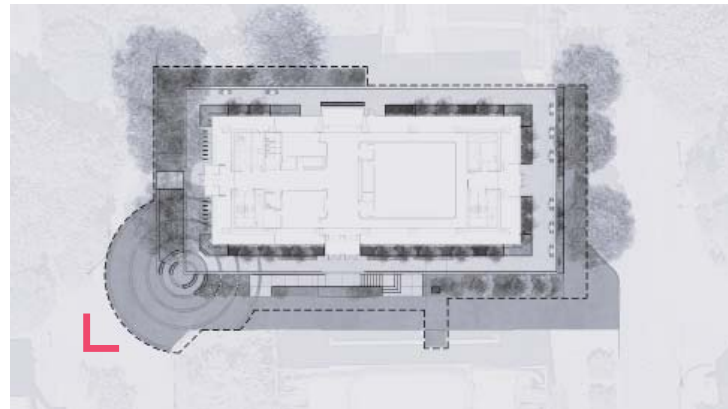


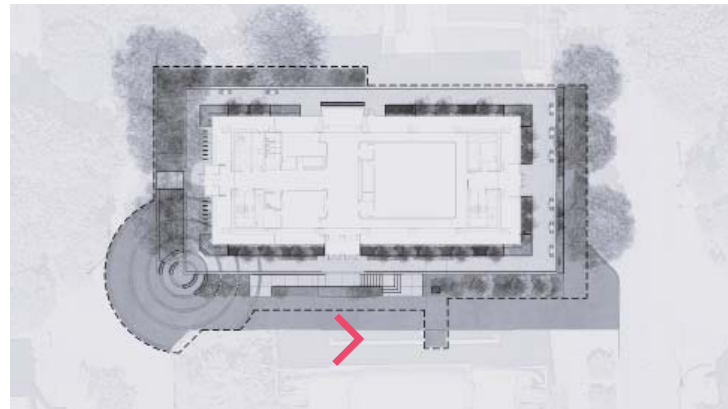
Existing Plaster Faced Concrete Facade to be Painted

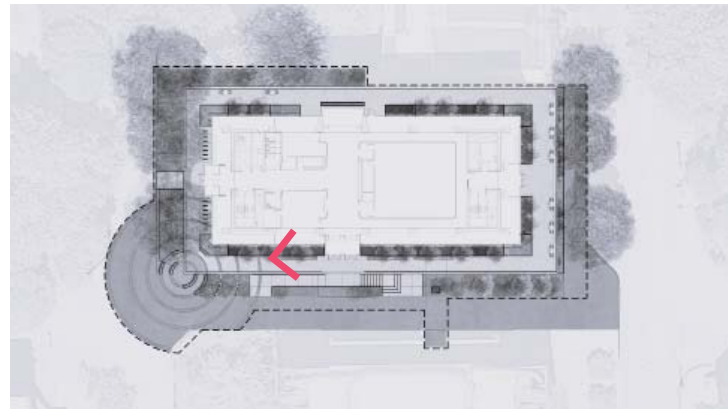
Landscape

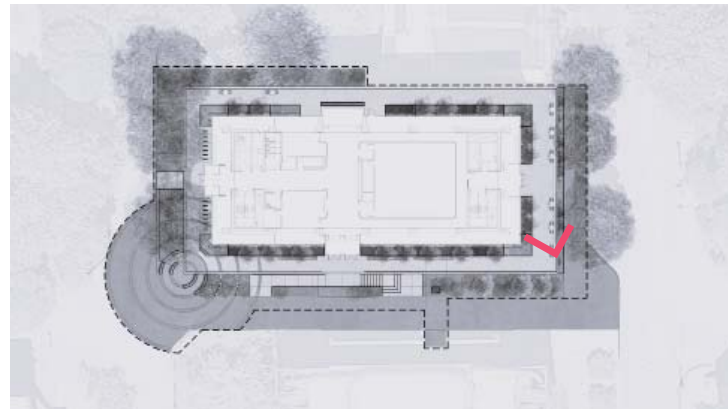


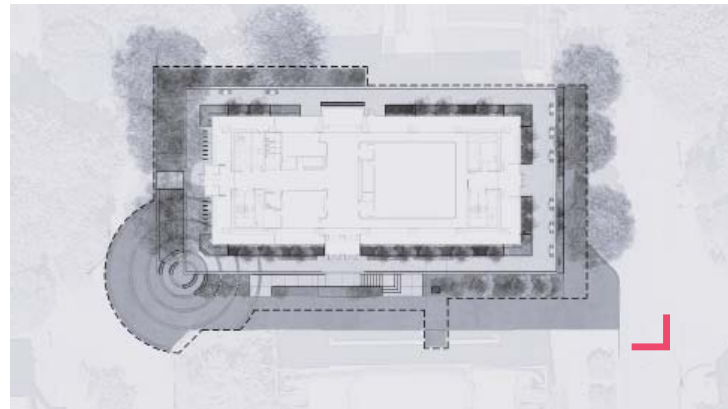


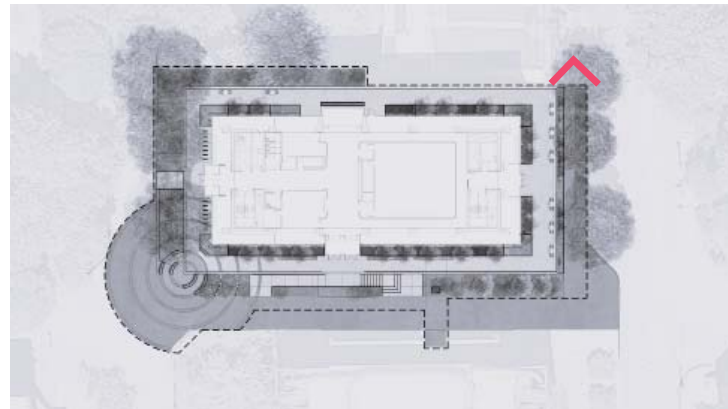


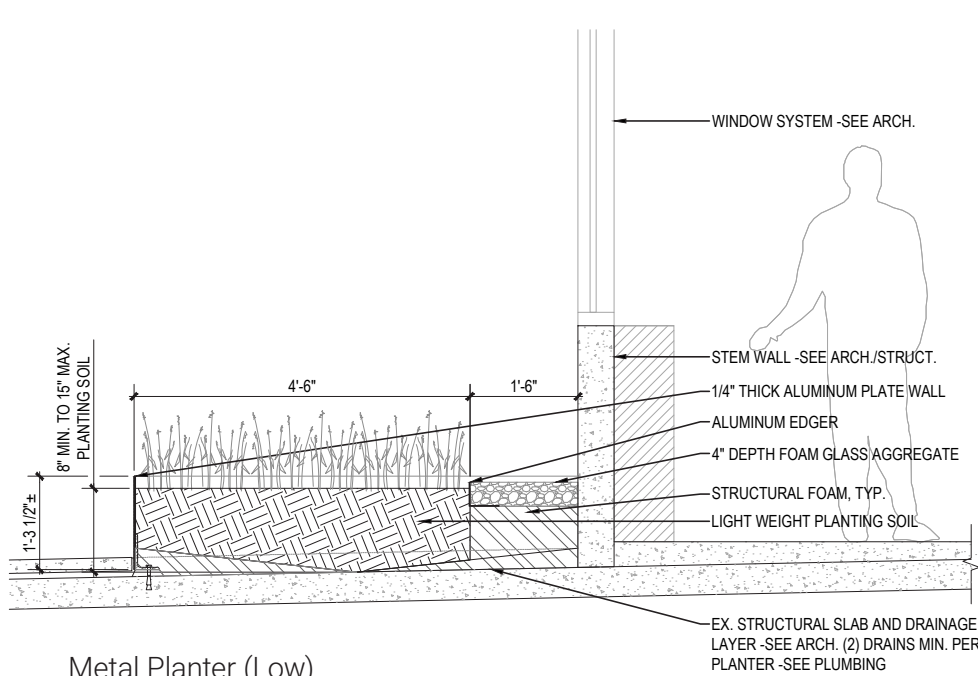






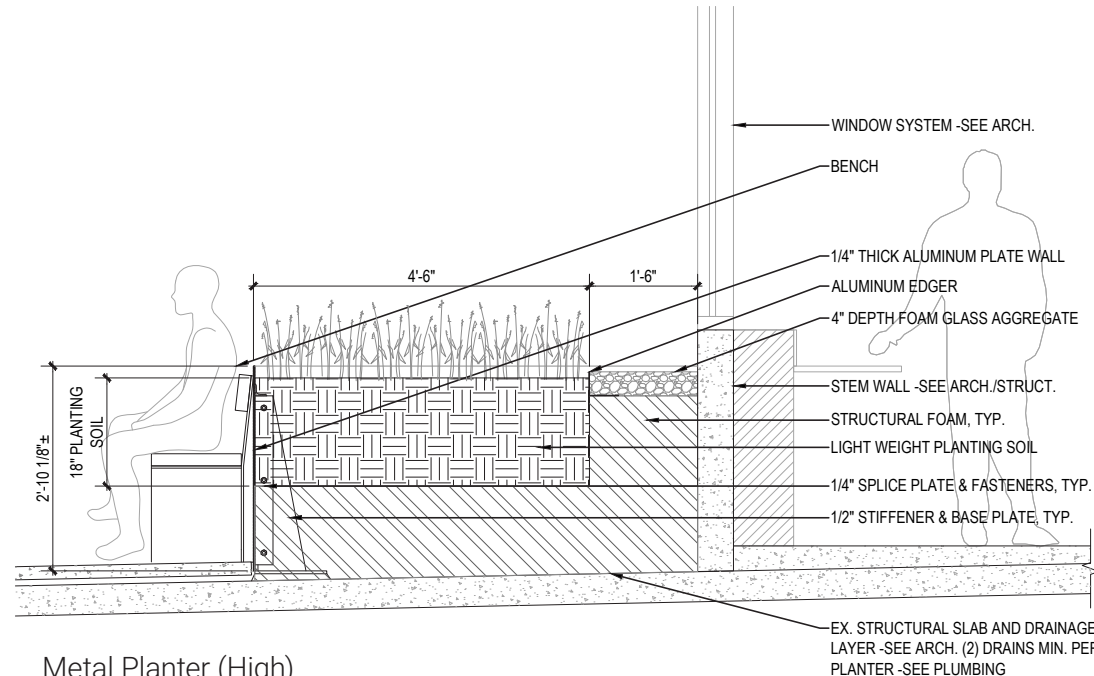






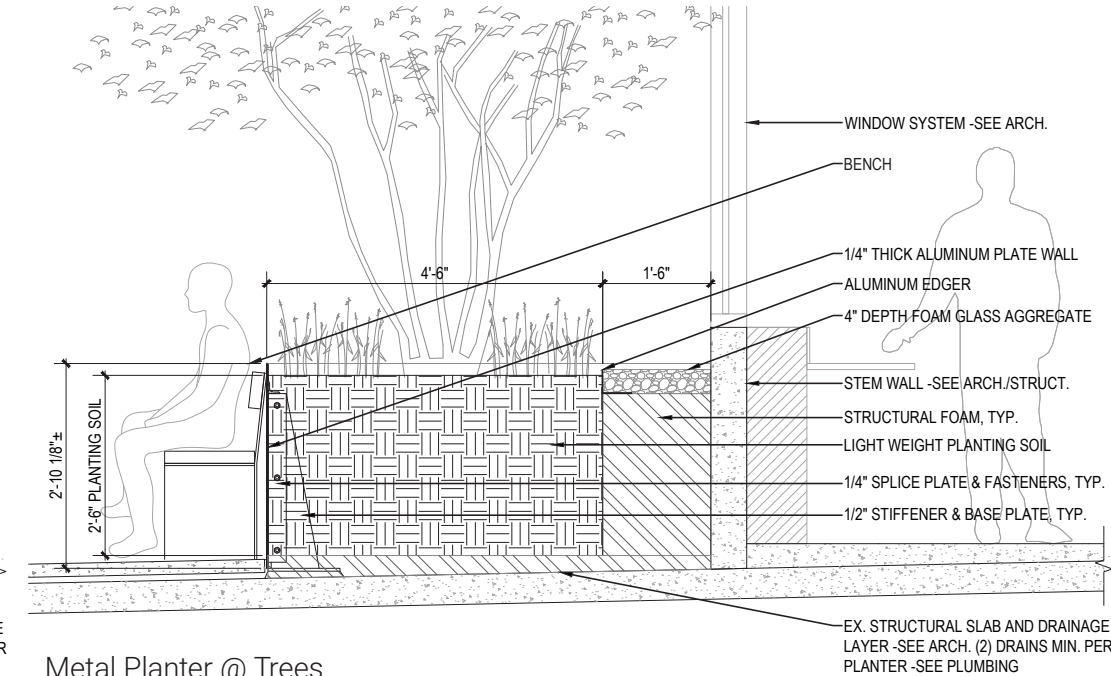
Metal Planter (Low)

Scale: 1/2" = 1' - 0"



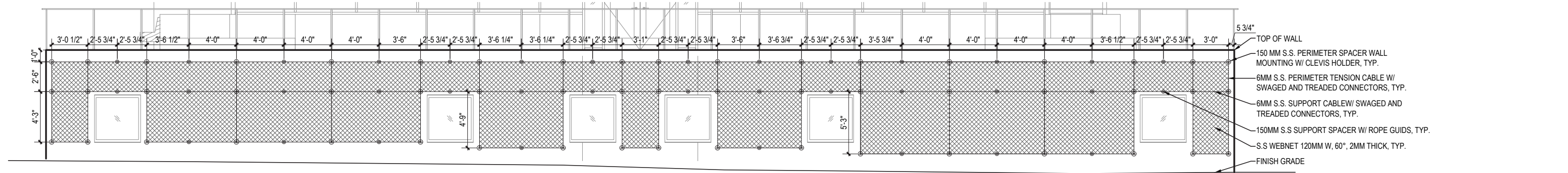
Metal Planter (High)

Scale: 1/2" = 1' - 0"



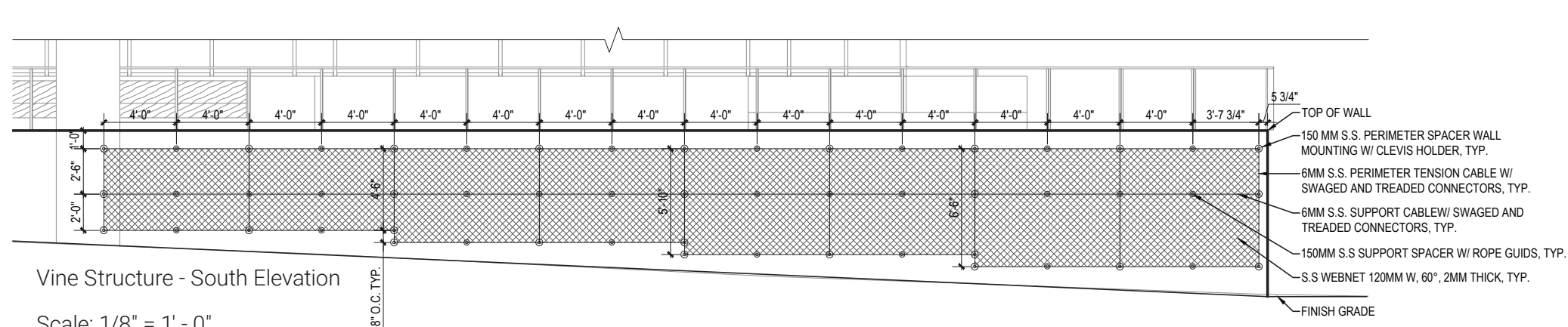
Metal Planter @ Trees

Scale: 1/2" = 1' - 0"



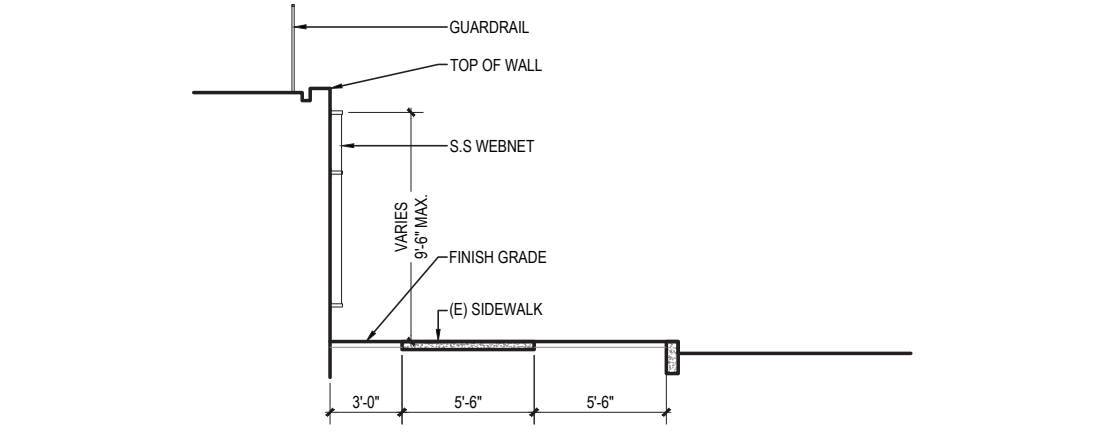
Vine Structure - East Elevation

Scale: 1/8" = 1' - 0"



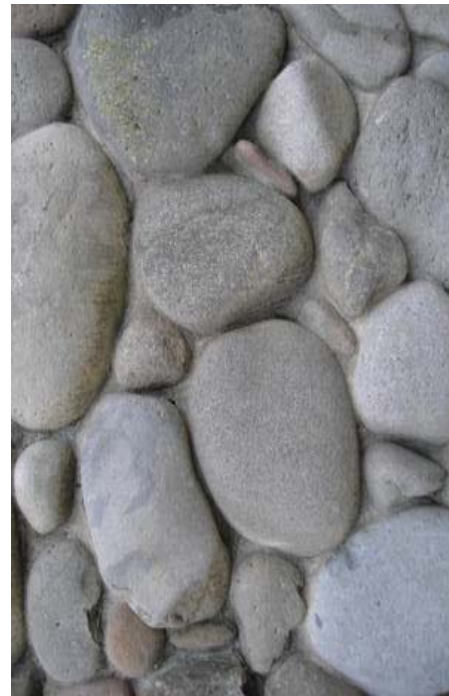
Vine Structure - South Elevation

Scale: 1/8" = 1' - 0"





CONCRETE PAVING
(MEDIUM BROOM FINISH)



MORTARED RIVER COBBLE
(BANDS IN PLANTING BEDS)



CONCRETE SEAT WALLS
(SMOOTH ARCH. FINISH)



PAINTED ALUMINUM PANELS
(PODIUM LEVEL PLANTERS)



STAINLESS STEEL WIRE MESH AND CABLE TRELLIS



CAMPUS STANDARD TRASH RECEPTICALS



CAMPUS STANDARD BIKE RACK



WOOD AND POWDER COAT STEEL BENCHES

UNDERSTORY / FOUNDATION PLANTING



CEANOTHUS SANGUINEUS

CEANOTHUS VELUTINUS

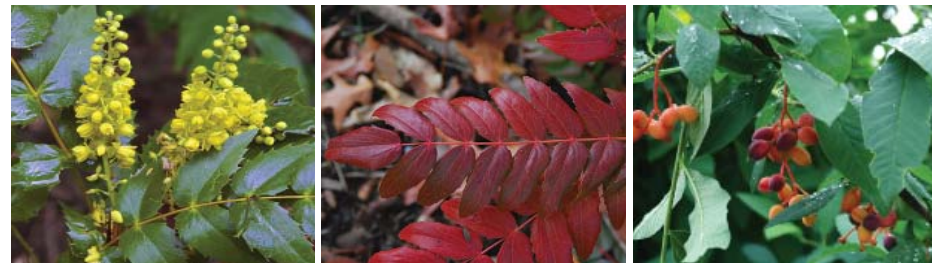
GARRYA ELLIPTICA



HOLODISCUS DISCOLOR

HOLODISCUS DISCOLOR

MAHONIA AQUAFOLIA 'COMPACTA'



MAHONIA NERVOSA

MAHONIA NERVOSA

OEMLERIA CERASIFORMIS



RIBES SANGUINEUM

RIBES SANGUINEUM

ROSA NUTKANA



SYMPHORICARPOS ALBUS

VACCINIUM OVATUM

GROUNDCOVERS / FERNS



ASARUM CAUDATUM

CORNUS CANADENSIS

FRAGARIA CHILOENSIS



MAHONIA REPENS

POLYSTICHUM MUNITUM

HERBACEOUS PERENNIALS



ACHILLEA MILLEFOLIUM

AQUILEGIA FORMOSA

ASCLEPIAS SPECIOSA



CAMASSIA QUAMASH

ERIOPHYLLUM LANTANUM

LUPINE SPP.



PENSTEMON SPP. ASARUM CAUDATUM

GREEN WALL VINES



TRACHELOSPERMUM JASMINOIDES



AKEBIA QUINATA





ACER_CIRCINATUM



AMELANCHIER ALNIFOLIA



AMELANCHIER ALNIFOLIA



ARBUTUS MENZIESII



CORYLUS CORNUTA



CORYLUS CORNUTA



QUERCUS GARRYANA



SAMBUCUS CAERULEA



SAMBUCUS CAERULEA



TAXUS BREVIFOLIA



TAXUS BREVIFOLIA

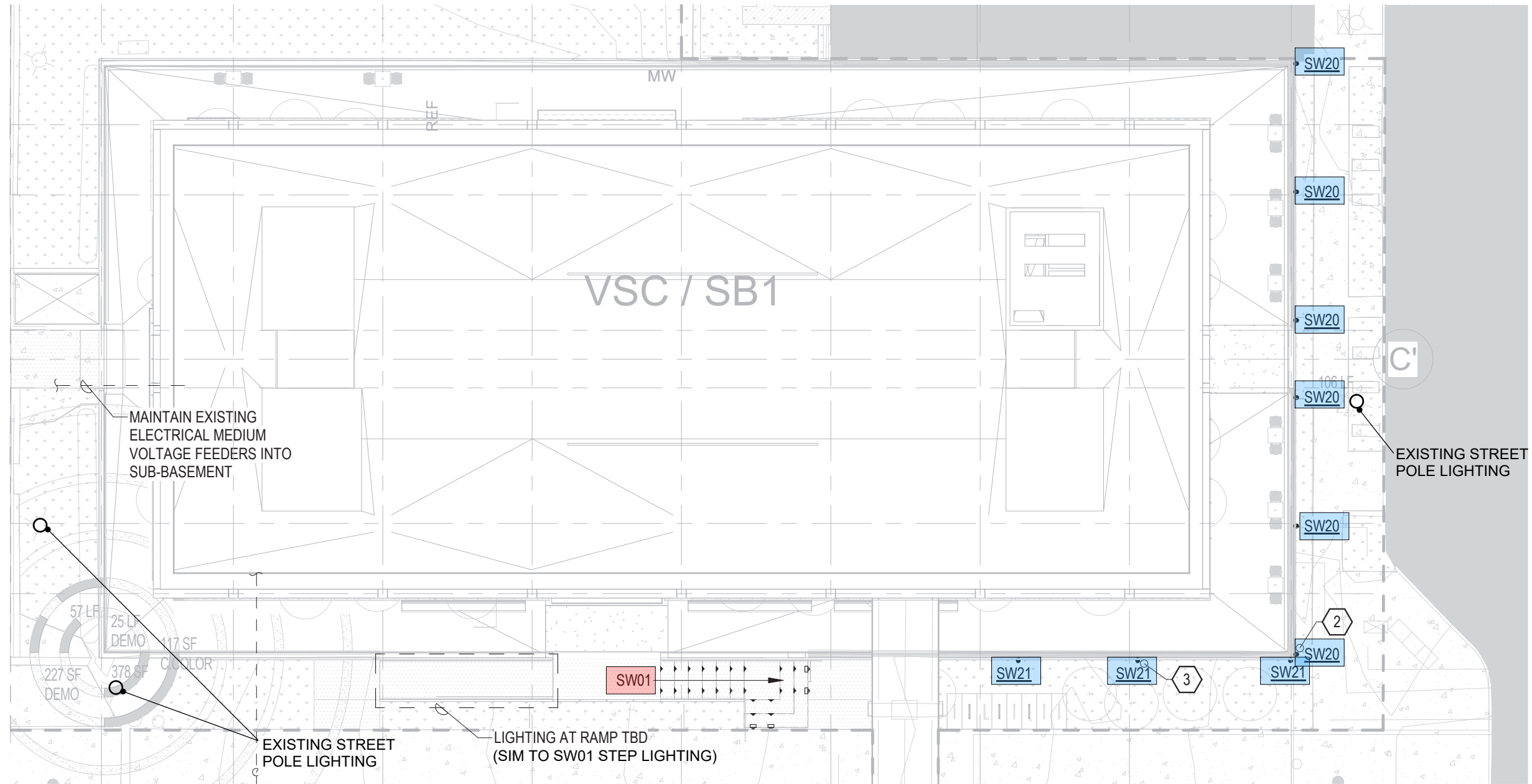


TSUGA MERTENSIANA



TSUGA MERTENSIANA

Lighting



	EXTERIOR LIGHTING - RECESSED DOWNLIGHTS																		
	8003	EXTERIOR	ACUITY	ACULUX	AX4 SERIES	ADJUSTABLE DOWNLIGHT	4-INCH DOWNLIGHT	RECESSED CEILING	50 DEGREE OPTIC	5-10V DIM 10% TO 100% RANGE	3000K	80	2200	LUMENS	19	WATTS	ACUITY ACULUX AX4 ADJUSTABLE SQUARE	ACUITY ACULUX AX4 ADJUSTABLE SQUARE	PROVIDE WET LOCATION LENS
		EXTERIOR LIGHTING - WALL MOUNT LUMINAIRES																	
SW01	SW01	EXTERIOR SOFFITS	LIGMAN LIGHTING			IN WALL STEPLIGHT				5-10V DIM 10% TO 100% RANGE									
	SW10	EXTERIOR	LIGMAN LIGHTING		LEEDS 4 SERIES	WALL MOUNT AREA LIGHT	NORMAL 3-INCHES x 5-INCHES x 4-INCHES	SURFACE MOUNT WALL	TYPE II OPTIC	5-10V DIM 1% TO 100% RANGE	3000K	80	1400	LUMENS	14	WATTS	LIGMAN LEEDS 4 SERIES		
SW20	SW20	EXTERIOR	LIGMAN LIGHTING		CRN41 SERIES	WALL MOUNT AREA LIGHT	NORMAL 6-INCH DIAMETER CUSTOM ARM	SURFACE MOUNT WALL	TYPE II OPTIC	5-10V DIM 1% TO 100% RANGE	3000K	80	2300	LUMENS	18	WATTS	LIGMAN CRN41 WALL MOUNT		CUSTOM 24-INCH ARM
SW21	SW21	EXTERIOR	LIGMAN LIGHTING		CRN41 SERIES	WALL MOUNT AREA LIGHT	NORMAL 6-INCH DIAMETER CUSTOM ARM	SURFACE MOUNT WALL	TYPE II OPTIC	5-10V DIM 1% TO 100% RANGE	3000K	80	2300	LUMENS	18	WATTS	LIGMAN CRN41 WALL MOUNT		CUSTOM 24-INCH ARM

(SEE C.54 FOR CUT SHEETS)



1/16" = 1'-0"

Model	Location	Brand	Product Line	Series	Mounting	Dimensions	Optics	Beam Spread	Dimming	Power	Height	Depth	Weight	Notes
SD03	EXTERIOR	ACULUX	ACULUX	AX4 SERIES	ADJUSTABLE DOWNLIGHT	4-INCH DOWNLIGHT	RECESSED CEILING	50 DEGREE OPTIC	0-10V DIM 10% TO 100% RANGE	3000K	90	2200	LUMENS	19 WATTS ACULUX AX4 ADJUSTABLE SQUARE PROVIDE WET LOCATION LENS
SW01	EXTERIOR SOFFITS	LIGMAN LIGHTING			IN WALL STEPLIGHT				0-10V DIM 10% TO 100% RANGE					5
SW10	EXTERIOR	LIGMAN LIGHTING		LEEDS 4 SERIES	WALL MOUNT AREA LIGHT	NOMINAL 3-INCHES x 6-INCHES x 4-INCHES	SURFACE MOUNT WALL	TYPE II OPTIC	0-10V DIM 1% TO 100% RANGE	3000K	80	1400	LUMENS	14 WATTS LIGMAN LEEDS 4 SERIES
SW20	EXTERIOR	LIGMAN LIGHTING		CINATI SERIES	WALL MOUNT AREA LIGHT	NOMINAL 6-INCH DIAMETER CUSTOM ARM	SURFACE MOUNT WALL	TYPE III OPTIC	0-10V DIM 1% TO 100% RANGE	3000K	80	2300	LUMENS	18 WATTS LIGMAN CINATI WALL MOUNT CUSTOM 24-INCH ARM
SW21	EXTERIOR	LIGMAN LIGHTING		CINATI SERIES	WALL MOUNT AREA LIGHT	NOMINAL 6-INCH DIAMETER CUSTOM ARM	SURFACE MOUNT WALL	TYPE III OPTIC	0-10V DIM 1% TO 100% RANGE	3000K	80	2300	LUMENS	18 WATTS LIGMAN CINATI WALL MOUNT CUSTOM 24-INCH ARM

SD03 - PODIUM CEILING SOFFIT

AX4 SERIES | 4" APERTURE
Downlight | 1200 - 3200 Lumens

TRIM STYLES

FEATURES

- SPOT ONI OPTICS**
 - 45° Visual cutoff to source and source image
 - Field Interchangeable TIR Optics in 11 distributions including a Wide Batwing distribution for general illumination
 - Accommodates up to 2 beam control lenses or filters
- TRU-LINE™ PRECISION INSTALLATION**
 - Patented aperture translation features +/- .15" of translation ensures perfect fixture-to-structure alignment (US Patent 8,277,090)
 - Robust Pro-V™ bar hangers provide robust, non-binding action. (US Patent 8,038,113)
- EXCEPTIONAL PERFORMANCE FROM 4-INCH APERTURE**
 - Up to 3258 lumens delivered!
 - Exceptionally consistent color with < 2SDCM
 - Excellent color rendition with 95+ CRI | 90+ R9 Available
 - Comprehensive family of Downlight, Adjustable Accent and Wall Wash Luminaires

PERFORMANCE

LUMEN PACKAGE	WATTS IN	DELIVERED LUMENS	EFFICACY (LPW)
12LM	9	1271	141
17LM	13	1629	125
22LM	19	2216	116
27LM	25	2737	109
32LM	33	3258	98

FLANGE STYLES

SW01 - NEW STAIR AND RAMP

ULE-40591 Legend 1 Recessed

Construction
Aluminum Casting
Less than 0.1% copper content - Marine Grade 6060 extruded & LMG Aluminum High Pressure die casting provides excellent mechanical strength, clean detailed product lines and excellent heat dissipation.

Finish
8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive - Silicon Gasket
Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management
LMG Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermal below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

BUG Rating
B0 - U3 - G1

Surge Suppression
Standard 10kv surge suppressor provided with all fixtures.

Finishing
All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

Paint
UV Stabilized 4.9MI thick powder coat paint and baked at 200 Deg C. This process ensures that Ligman products can withstand harsh environments. Rated for use in natatoriums.

Hardware
Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes
Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

High Impact Acrylic Lens
Manufactured with UHM High Impact, Naturally UV Stabilized Injection Molded Acrylic.

Optics & LED
Precision optic design provides exceptional light control and precise distribution of light. LED CRI > 80

Lumen - Maintenance Life
LED @ 10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Construction
A range of vandal resistant rectangular wall recessed luminaires. Suitable for indoor or outdoor applications in residential, shopping and pedestrian areas as a decorative guide light. Available in a variety of frame and LED light source options, including turtle friendly amber LED.

As an option, this luminaire can be provided with a special wall clamp bracket that provides a clamping option when installing in drywall or wood panel walls.

Available in amber and white 2700K, 3000K, 3500K and 4000K. Consult factory for additional colors. The Legend spotlight range can be provided with colored lenses to provide a decorative architectural touch to the building, please see options.

All Ligman fixtures can be manufactured using a special pre-treatment and coating process that ensures the fixture can be installed in natatoriums as well as environments with high concentrations of chlorine or salt and still maintain the 5 year warranty. For this natatorium rated process please specify NAT in options. Fixture can be installed in natatoriums as well as environments with high concentrations of chlorine or salt and still maintain the 5 year warranty. For this natatorium rated process please specify NAT in options.

Additional Options (Consult Factory For Pricing)

- SMB Surface Mount Box
- DWC Dry Wall Clamp

SW10 - ROOFTOP VESTIBULE

ULEE-30011 Leeds 4 Medium Surface Downlight

Construction
Clean, beautiful, surface wall fixtures with class leading performance. Minimalist form, yet the most powerful and flexible lighting tool of its type, offering packages up to 4000 lumens and microVos technology.

A range of small, square and rectangular, ADA compliant wall mounted luminaires with options of upward or downward light distributions. Ideally suited to illuminate the wall and surfaces in front of wall and for light accents on vertical surfaces using high efficiency LEDs. The Leeds is suitable for indoor and outdoor applications and provides a clean, visually appealing solution for small, unobtrusive wall mounted luminaires.

This luminaire is available in 3 different sizes and combinations of down, up or up/down light distributions.

This fixture utilizes microVos technology, meaning the ability to do Type I, II, III, IV & V distributions as well as hybrid distributions to suit the designer's requirements.

Using the microVos optics allows for very wide spacing to mounting height ratios, while still providing perfect uniformity and code compliant light levels.

The Leeds has been IDA Dark Sky certified for cct's of 3000K or lower.

Additional Options (Consult Factory For Pricing)

- SCD Surface Conduit Decorative Trim
- 4" Octagonal 3-Box Mounting Plate

CITY OF FLAGSTAFF & TURTLE FRIENDLY COMPLIANT

Narrow Spectrum Amber LEDs
Peak wavelength between 680 & 695 nanometers and a full width of 50% power no greater than 15 nanometers.

Optics & LED
Precision optic design provides exceptional light control and precise distribution of light. LED CRI > 80

Lumen - Maintenance Life
LED @ 10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

SW20/21 - EXTERIOR PLANTING WALLS

UCI-30131 Cinati Type I, II, III & IV Surface

Construction
Aluminum
Less than 0.1% copper content - Marine Grade 6060 extruded & LMG Aluminum High Pressure die casting provides excellent mechanical strength, clean detailed product lines and excellent heat dissipation.

Finish
8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive - Silicon Gasket
Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management
LMG Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermal below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

Surge Suppression
Standard 10kv surge suppressor provided with all fixtures.

BUG Rating
B0 - U3 - G1

Finishing
All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

Paint
UV Stabilized 4.9MI thick powder coat paint and baked at 200 Deg C. This process ensures that Ligman products can withstand harsh environments. Rated for use in natatoriums.

Hardware
Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes
Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens
Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED
Precision optic design provides exceptional light control and precise distribution of light. LED CRI > 80

Lumen - Maintenance Life
LED @ 10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Cone-shaped wall-mounted downlight fixtures. Simple clean form hiding multiple high-performance glare free optic choices.

A cone shaped wall wash luminaire. Suitable for outdoor up, or down light applications. This luminaire is provided with precision optics and high powered LEDs, to provide narrow, medium, wide and very wide distributions. The vandal resistant tempered glass is available in clear or lightly frosted versions.

This product is suitable for commercial, as well as residential applications and with the selection of optics available can provide an excellent lighting solution. Integral electronic driver. Fixture is mounted over a 3" octagonal junction box. For Type I, II, III & IV, please see UCI-30131

Additional Options (Consult Factory For Pricing)

- SCD Surface Conduit Decorative Trim

Cut Sheets

CASCADIA WINDOWS & DOORS
 Window Wall - Technical Data Sheet

CASCADIA
 WINDOWS & DOORS

UNIVERSAL SERIES™ WINDOW WALL

Boasting the best of both worlds—cost savings and uncompromising performance—Cascadia’s Universal Series™ Window Wall allows architects and specifiers to substantially improve the overall thermal performance of commercial and high-rise buildings without sacrificing glazing area.

Designed and manufactured in North America, the Universal Series features an innovative, commercial-grade fiberglass frame boasting 150% improved thermal performance compared to traditional aluminum windows.

- Custom sizes & configurations
- AW Performance Class designation (casements, awnings, fixed windows)
- Low-VOC standard & custom colors meet AAMA 625 performance criteria
- Double (one Low-E) & Triple (two Low-E)
- LBC Red List Free

INHERENT LOW THERMAL CONDUCTIVITY FRAME

THERMOSET PULTRUDED FIBERGLASS FRAME

DOUBLE & TRIPLE-GLAZED, LOW-E IGUS

INTERIOR & EXTERIOR GLASS STOPS AVAILABLE

THREE INDEPENDENT GASKETS

INTERNALLY FASTENED CORNER SHEER-BLOCK

50-80 YEAR LIFESPAN (MODELLED)

FOAM INSULATION THROUGHOUT FRAME

CASCADIA WINDOWS & DOORS

Universal Series™ Window Wall - Technical Data Sheet

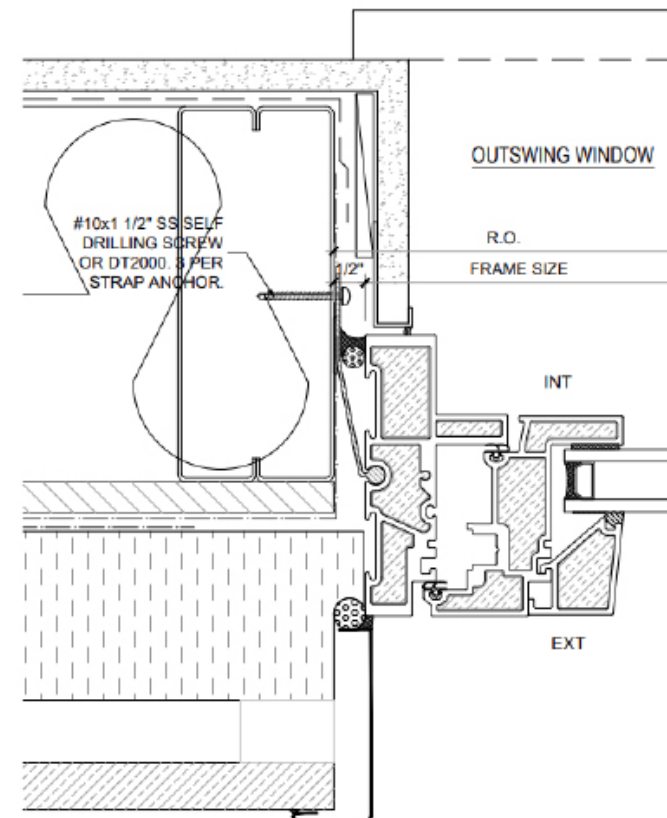


DOUBLE GLAZED - NFRC THERMAL PERFORMANCE SUMMARY VISION AREAS

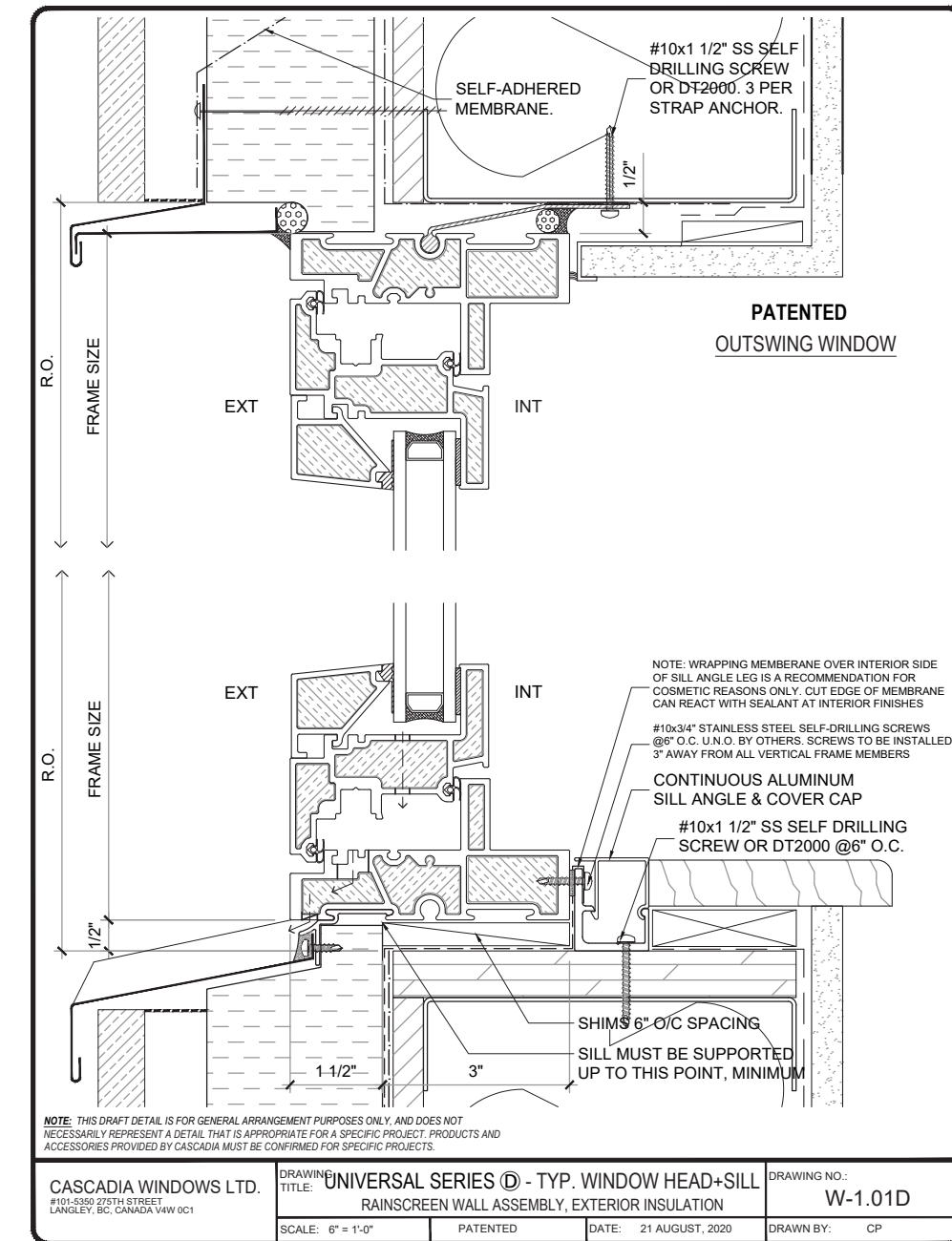


LOW-E OPTIONS	CENTER-OF-GLASS DATA			U _w (U-VALUE OF WINDOW) PER NFRC METHOD (BTU/HR*FT ² *F)					
	CARDINAL (90% ARGON FILL, UNO)	U _g	SHGC	VT	FIXED	CASEMENT	AWNING	SWING DOOR	SLIDING DOOR
STANDARD DOUBLE GLAZED (ONE LOW-E ON SURFACE #2 OR #3 / STAINLESS STEEL SPACER)									
180 (#3)	0.26	0.68	0.79	0.26	0.25	0.25	0.24	0.24	0.24
270 (#2)	0.25	0.37	0.70	0.25	0.24	0.24	0.23	0.23	0.23
366 (#2)	0.24	0.27	0.65	0.24	0.24	0.24	0.23	0.23	0.23
340 (#2)	0.25	0.18	0.39	0.25	0.24	0.25	0.23	0.23	0.23
PREMIUM DOUBLE GLAZED (TWO LOW-E ON SURFACES #2 & #4 / STAINLESS STEEL SPACER)									
180/i89	0.21	0.62	0.77	0.21	0.22	-	0.20	0.21	0.21
270/i89	0.20	0.36	0.69	0.21	0.21	-	0.20	0.20	0.20
366/i89	0.20	0.27	0.63	0.20	0.21	-	0.19	0.20	0.20
340/i89	0.20	0.17	0.38	0.20	0.21	-	0.19	0.20	0.20

Note: Triple Glazed information can be found on page 3
Glass: 6mm-13mm-6mm



PATENTED



CASCADIA WINDOWS LTD. #101-5350 275TH STREET LANGLEY, BC, CANADA V4W 0C1	DRAWING TITLE: UNIVERSAL SERIES © - TYP. WINDOW HEAD+SILL RAINSCREEN WALL ASSEMBLY, EXTERIOR INSULATION	DRAWING NO.: W-1.01D
SCALE: 6" = 1'-0"	PATENTED	DATE: 21 AUGUST, 2020
		DRAWN BY: CP

CASCADIA WINDOWS & DOORS
 Cascadia Storefront Glazing - Technical Data Sheet

CASCADIA STOREFRONT GLAZING

Following up on the launch of the world's first fiberglass window wall in the Spring of 2019, Cascadia Windows & Doors has tackled another traditionally poor performing building envelope component—storefront glazing.

The company has formally unveiled a high-performance, factory-built storefront solution, utilizing Cascadia's award-winning Universal Series window frames. The Cascadia Storefront boasts significantly higher thermal and water penetration resistance ratings compared to traditional, site-built storefront assemblies. This novel solution allows architects and specifiers to improve a notoriously weak point in a building's assembly, while at the same time offering developers and construction firms a simpler, lower cost option.

- Factory-built, ready for quick on-site installation
- Custom sizes & configurations
- Commercial-grade fiberglass frames
- Fully compatible with various commercial doors (provided by others)
- Double (one Low-E), Triple (two Low-E) & Premium Triple (three Low-E)
- LBC Red-List Free

CASCADIA
 WINDOWS & DOORS





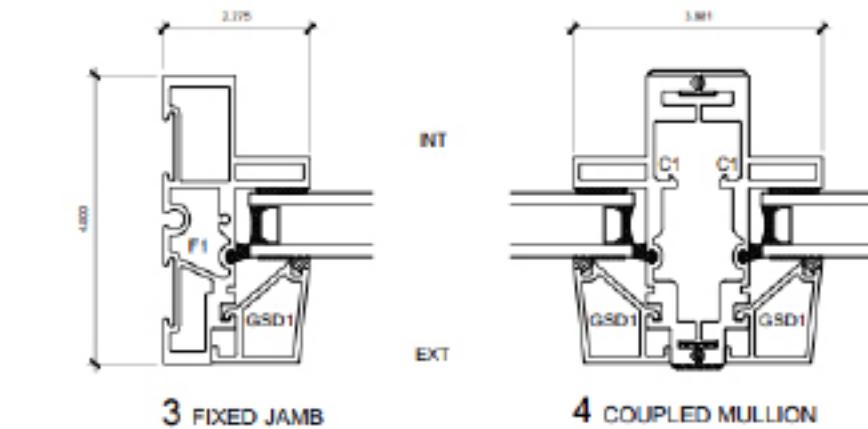
NFRC THERMAL PERFORMANCE SUMMARY
 VISION AREAS



WINDOWS & DOORS - CARDINAL STAINLESS STEEL SPACER BAR					
LOW-E OPTIONS	CENTER-OF-GLASS DATA			UW (U-VALUE OF WINDOW) PER NFRC METHOD [BTU/HR*FT2*F]	
	U-GLASS	G-VALUE	VT	FIXED EXT GLAZED	FIXED INT GLAZED
DOUBLE GLAZED (ONE LOW-E)					
180 (#3)	0.26	0.68	0.79	0.26	0.26
270 (#2)	0.25	0.37	0.70	0.25	0.25
366 (#2)	0.24	0.27	0.65	0.24	0.24
340 (#2)	0.25	0.18	0.39	0.25	0.25
TRIPLE GLAZED (TWO LOW-E)					
180/180 (#2/5)	0.13	0.56	0.70	0.15	0.15
270/180 (#2/5)	0.13	0.33	0.62	0.14	0.15
366/180 (#2/5)	0.13	0.25	0.57	0.14	0.14
340/180 (#2/5)	0.13	0.16	0.34	0.14	0.14
TRIPLE GLAZED (THREE LOW-E COATINGS, SURFACES #2,4,6)					
180/180/i89	0.12	0.53	0.68	0.13	0.13
270/180/i89	0.11	0.32	0.60	0.13	0.13
366/180/i89	0.11	0.24	0.56	0.13	0.13
340/180/i89	0.11	0.15	0.33	0.13	0.13

Double Glazed Glass: 6mm-13mm-6mm
Triple Glazed Glass: 6mm-13mm-6mm-13mm-6mm

CASCADIAWINDOWS.COM
 2021.11.V9



PATENTED

NOTE: WRAPPING MEMBER OVER INTERIOR SIDE OF SILL ANGLE LEG IS A RECOMMENDATION FOR COSMETIC REASONS ONLY. CUT EDGE OF MEMBRANE CAN REACT WITH SEALANT AT INTERIOR FINISHES

#10x3/4" STAINLESS STEEL SELF-DRILLING SCREWS @6" O.C. U.N.O. BY OTHERS. SCREWS TO BE INSTALLED 3" AWAY FROM ALL VERTICAL FRAME MEMBERS

CONTINUOUS ALUMINUM SILL ANGLE & COVER CAP
 1/4" DIA. TAPCON SCREWS WITH 1 1/2" EMBEDMENT @6" O.C.

SHIMS 6" O/C SPACING
 SILL MUST BE SUPPORTED UP TO THIS POINT, MINIMUM

NOTE: THIS DRAFT DETAIL IS FOR GENERAL ARRANGEMENT PURPOSES ONLY, AND DOES NOT NECESSARILY REPRESENT A DETAIL THAT IS APPROPRIATE FOR A SPECIFIC PROJECT. PRODUCTS AND ACCESSORIES PROVIDED BY CASCADIA MUST BE CONFIRMED FOR SPECIFIC PROJECTS.

NOTE: ANCHOR CLIPS AT HEAD AND JAMBS ARE INTERMITTENT

CASCADIA WINDOWS LTD. #101-65199 275111 STREET LANGLEY, BC, CANADA V4W 0C1	DRAWING TITLE: UNIVERSAL SERIES © - STOREFRONT WINDOW RAINSCREEN WALL ASSEMBLY, EXTERIOR INSULATION SCALE: 6" = 1'-0" PATENTED DATE: 3 MARCH, 2020	DRAWING NO.: W-1.01 DRAWN BY: CH
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CUT SHEETS

Morin Matrix Wall Series Metal Panels
Levels 2-5 North, South, East, West facades

Metal Wall & Roof Systems
North America

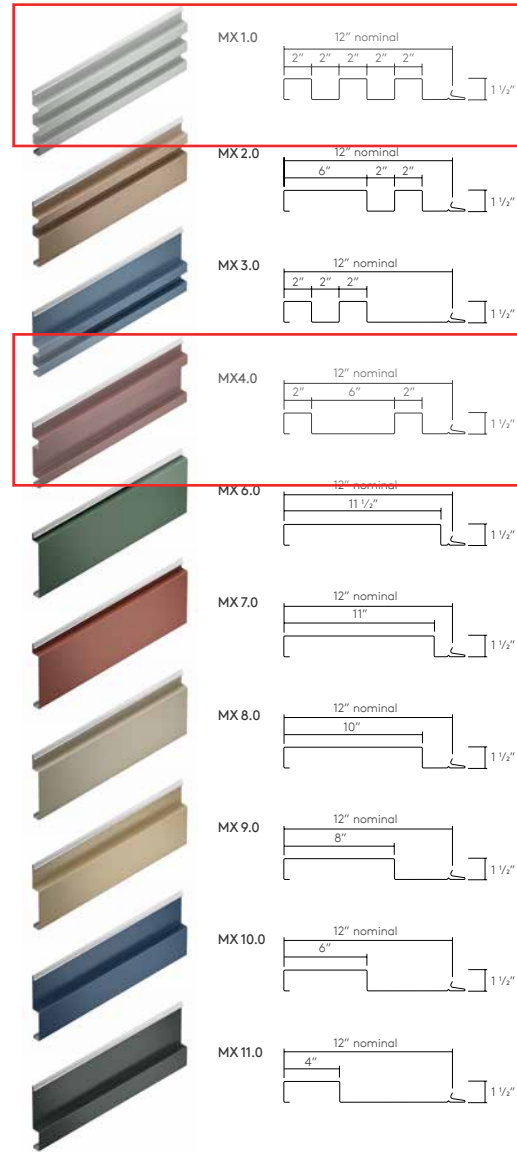


Matrix Wall Series

Inspired by technology, Morin Matrix Series® is the next evolution in an integrated concealed fastener rainscreen wall panel system.



Morin
A Kingspan Group Company



HQ / East 685 Middle Street, Bristol, CT 06010 T: 1-800-640-9501
West 10707 Commerce Way, Fontana, CA 92337 T: 1-800-700-6140
South 1975 Eidson Drive, DeLand, FL 32724 T: 1-800-640-9501
www.morincorp.com

With ten unique panel profiles, as well as complimentary extruded aluminum trims and MiterSeam corners, the designer has all the tools necessary to create the next award winning design.

- Concealed clip and fastener design
- Can be installed horizontally or vertically
- Weather resistant or rainscreen rear ventilated application
- Ideal for new or retrofit projects
- Smooth surface standard, stucco embossed texture optional
- All PVDF painted finishes available
- Perforated options available
- Optional factory caulking available

Panel Depth:
1 1/2" (38mm)

Cover Width:
12" (305mm)

Lengths:
5' (1.52m) to 30' (9.14m) standard.
Shorter and longer lengths available

Galvalume / Zincalume Painted Steel Options:
18 GA* (1.19mm) / 20 GA (91mm) /
22 GA (.76mm) / 24 GA* (.60mm)

Aluminum Options:
.032 GA (.80mm) / .040 GA (1mm) /
.050 GA (1.27mm)

Stainless Steel Options:
22 GA (.76mm) / 24 GA (.60mm)

Zinc Options:
20 GA (1.0mm) / 22 GA (.91mm)

Natural Copper Options:
20 oz. / 16 oz.

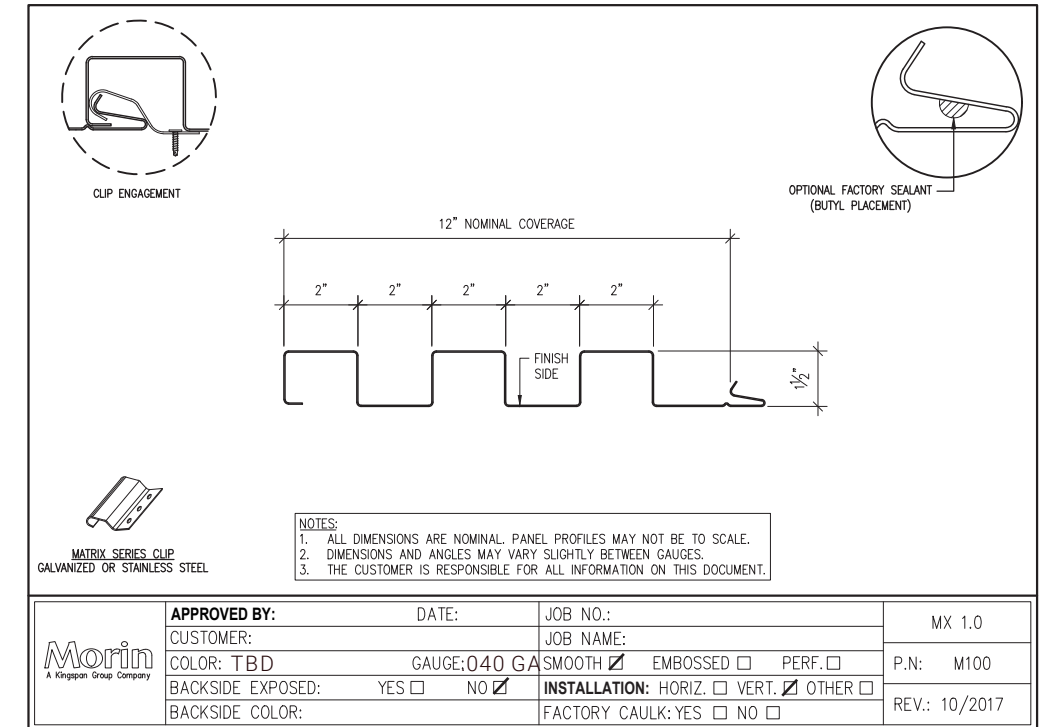


Easy Integration
Common joint allows multiple panel integration with Integrity Series and Pulse Series®

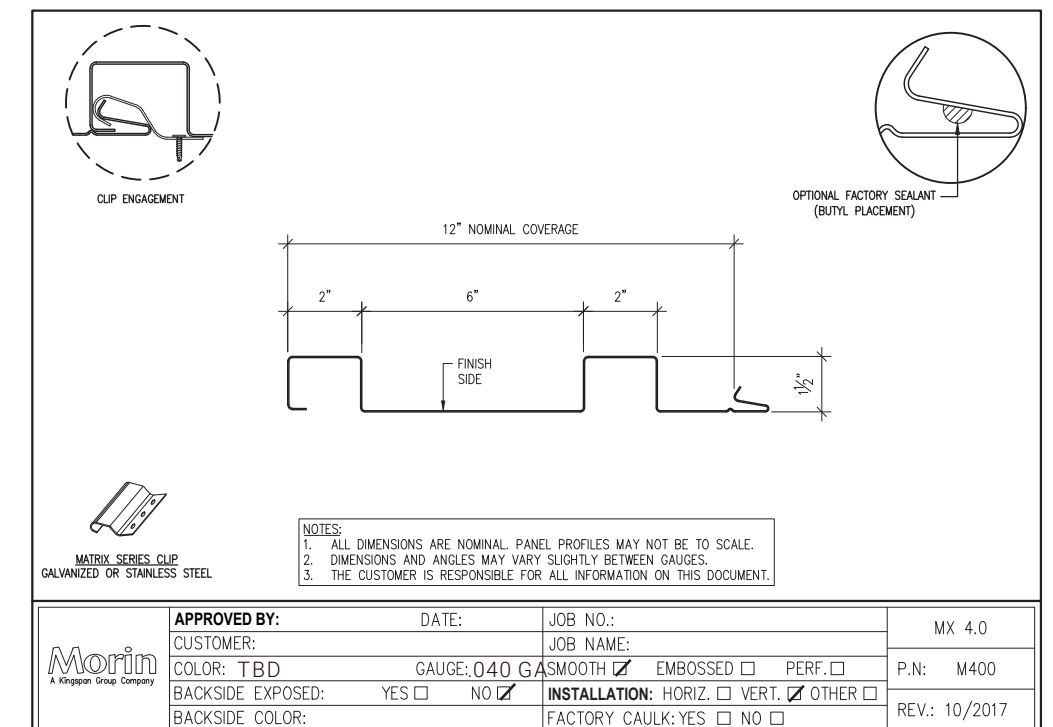
*Only available on certain profiles.

Morin
A Kingspan Group Company

MX 1.0

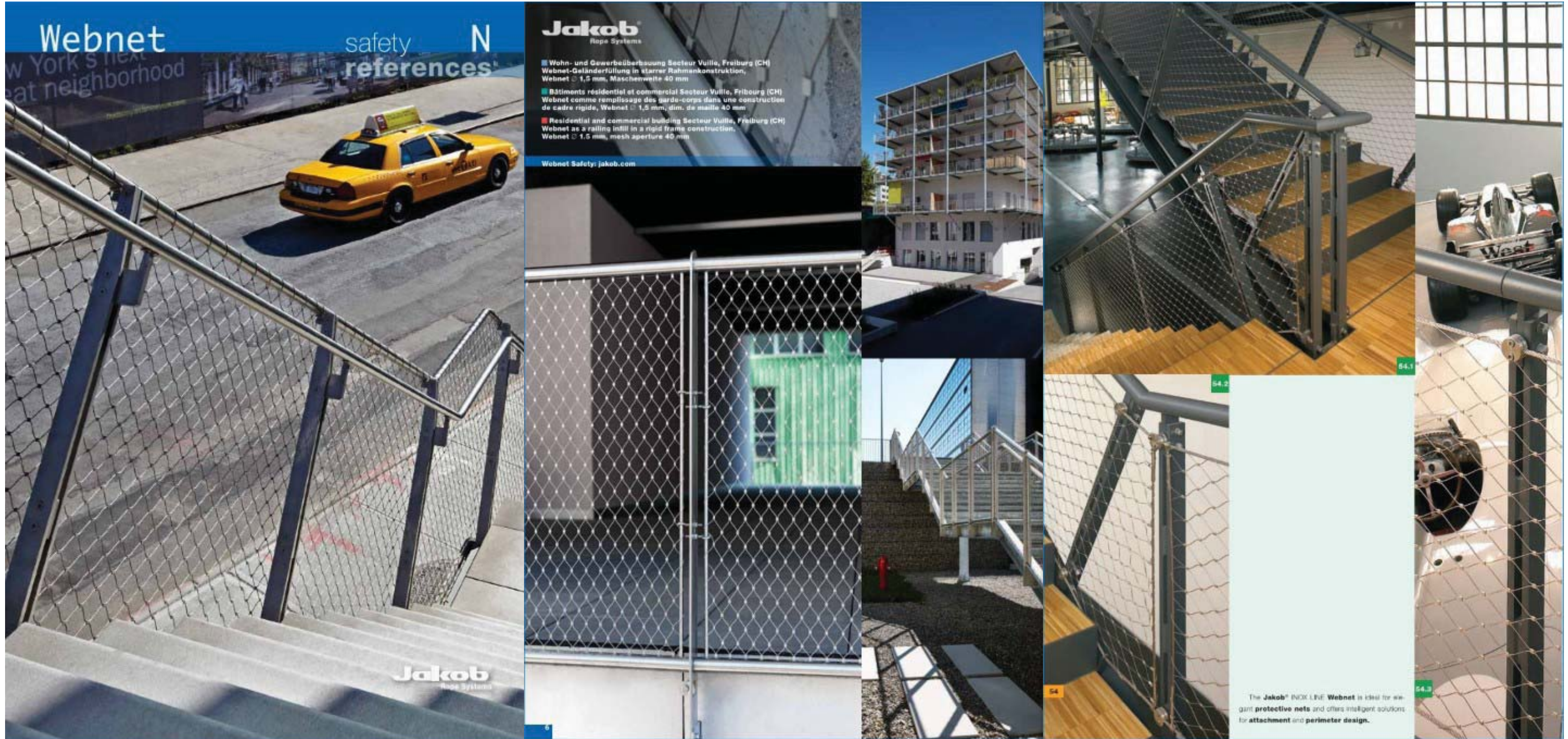


MX 4.0



CUT SHEETS

Jacob Rope Systems - INOX LINE Webnet N₂ (Guard Rail Infill)



BORA

Bora Architects

720 SW Washington, Suite 800

Portland, Oregon 97205