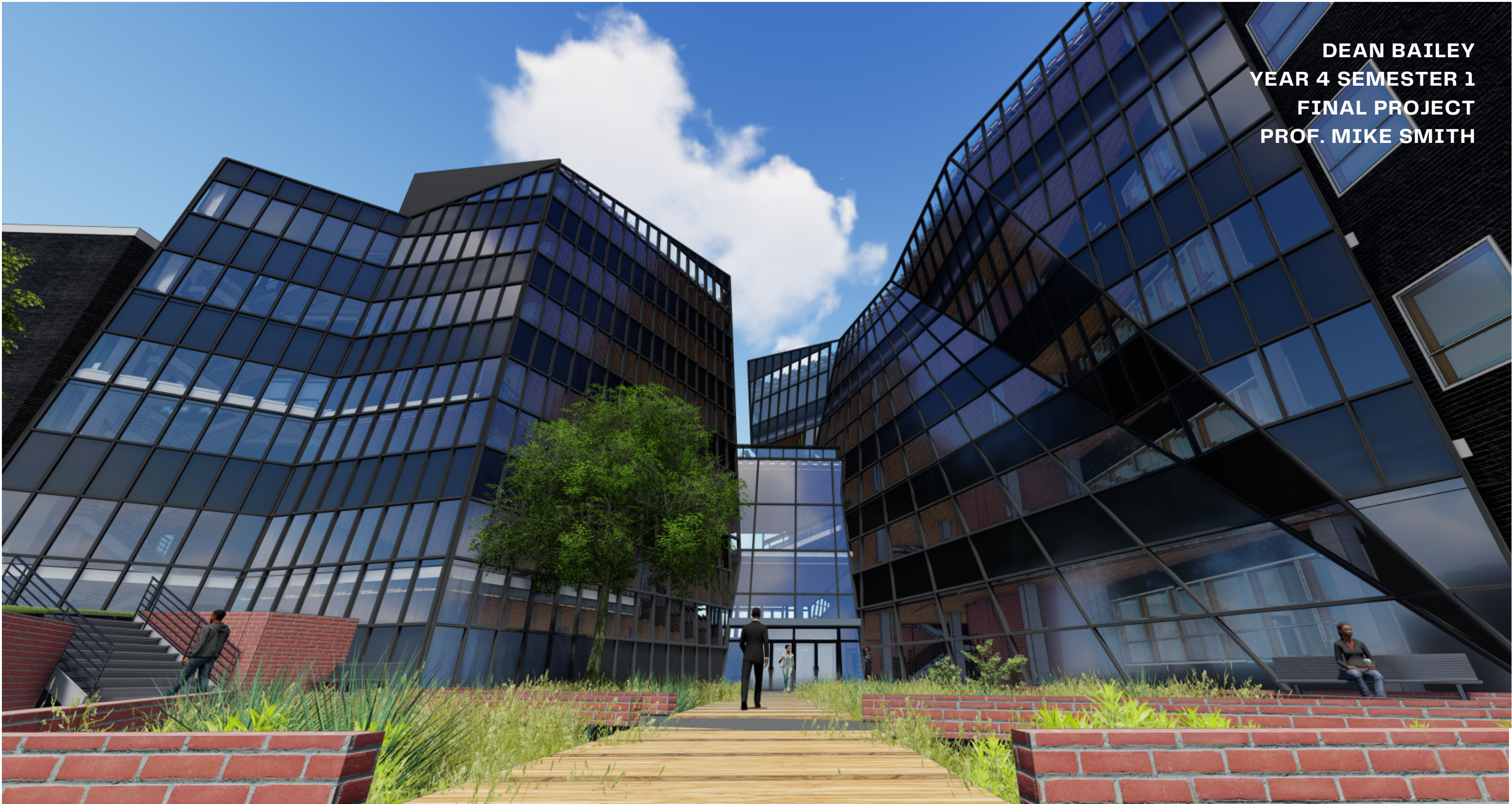


DEAN BAILEY
YEAR 4 SEMESTER 1
FINAL PROJECT
PROF. MIKE SMITH



"THE HOWARD GEM"

THE PROJECT

Fourth years students were required to analyze, research, and respond on reconnecting the two prominent and diverse buildings of Howard Campus, Mackey and Downing from the College of Engineering and Architecture and exploring the ideas of creative place making, incorporating community needs, reconnecting the urban fabric and redesigning the existing two buildings in a more sustainable way. By focusing on the concept of 'creative placemaking', The new building will serve as a bridge to connect the Mackey and Downey buildings and will also provide needed new spaces to accommodate the growing college population

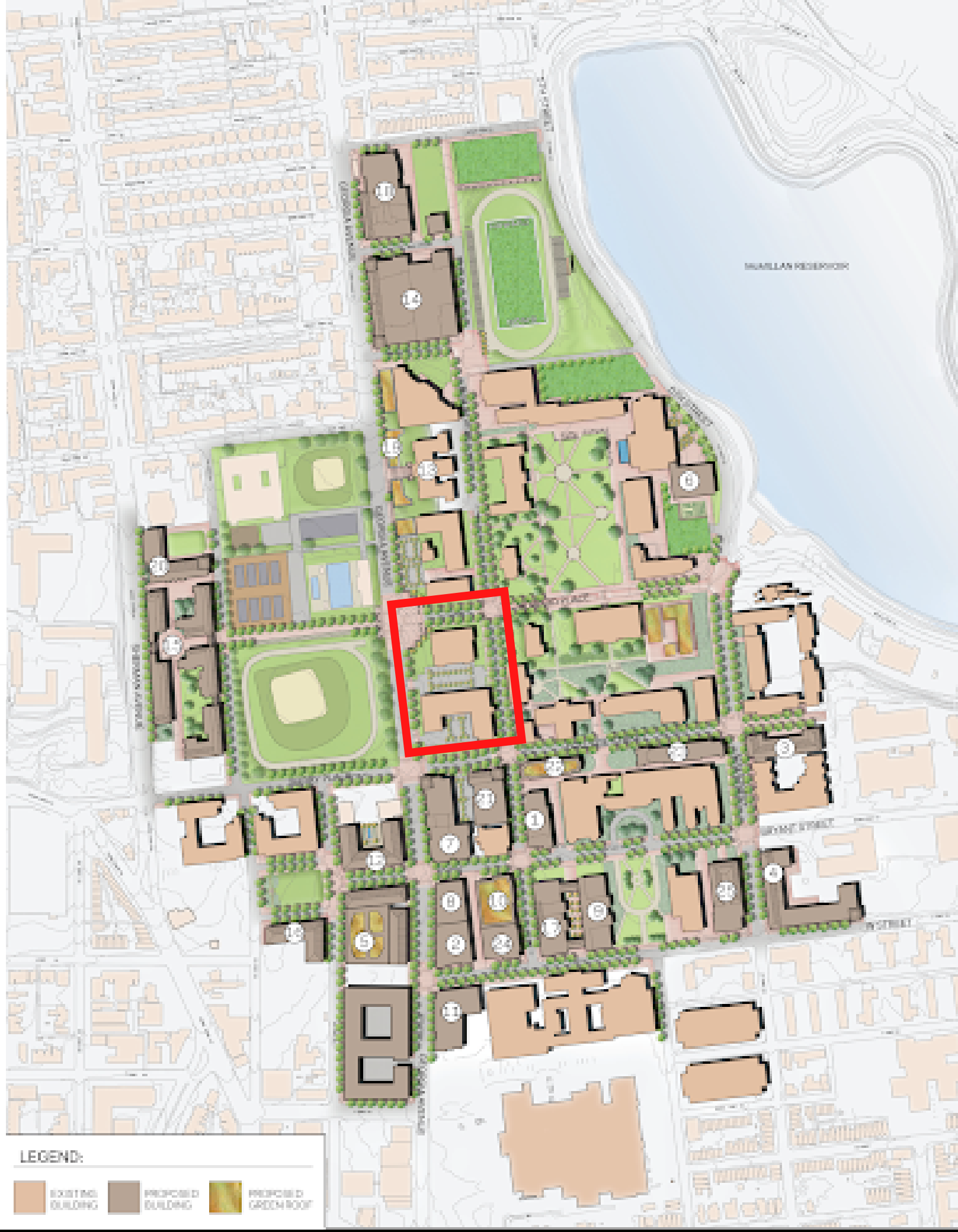
THE PROJECT



Academic Support Bldg A (Education).....25	Chemical Engineering Building.....16	Wheatley Hall.....62W	Louis Stokes Health Sciences Library.....200
Academic Support Bldg B.....24	Chemistry Building.....15	Baldwin Hall.....62B	Lulu Childers Hall (Fine Arts).....28
Andrew Carnegie Hall.....12	College Hall North.....35	Truth Hall.....62T	Mary Bethune Annex.....6
Andrew Rankin Memorial Chapel.....50	College Hall South.....67	Hospital Towers.....65	Mary Bethune Annex Dining Hall.....34
Armour Blackburn University Center.....57	Early Learning Center.....58	Howard Mackey Building (Architecture).....3	Medical Arts Building (Student Health).....19
Cancer Research Center.....19	Effingham Apartments.....92	Howard Manor Apartments.....96	Mental Health Center.....700
CB Powell Building (Communications).....13	Ernest Just Hall (Biology).....7	Howard Plaza Tower (West).....551	Middle School for Math & Science.....40
Charles Drew Hall.....21	Founders Library - MSRC.....29	Howard Plaza Towers (East).....550	Mordecai Johnson Admin. Building.....1
Chauncey Cooper Hall (Pharmacy).....51	Founders Library - UGL.....61	Howard University Bookstore.....5	Numa Adams Building (Medicine).....51
	Frederick Douglass Memorial Hall.....23	Howard University Hospital.....37	Oliver Howard Hall.....33
	Annex II (Nursing & Allied Health Sci.).....17	Howard University Service Center.....39	Ralph Bunche Center.....42
	Annex III (Graduate School).....31	iLab.....iLAB	Russell Dixon Building (Dentistry).....22
	George Cook Hall.....18	Inabel Lindsay Hall (Social Work).....53	School of Business.....10
	Harriett Tubman Quadrangle	Interdisciplinary Research Building.....38	Seeley Mudd Building (Medicine).....45
	Crandall Hall.....62C	Ira Aldridge Theatre.....43	Warehouse Building.....59
	Fraizer Hall.....62F	John Burr Gymnasium Building.....8	WHUR-Radio.....49
		Laser Chemistry Building.....4	WHUT-TV.....54
		Louis Cramton Auditorium.....20	Wilbur Thirkield Hall (Physics).....55
		Louis Downing Hall (Engineering).....26	William Greene Memorial Stadium.....9
			Wonder Plaza (ETS).....2

**Highlighted buildings reflect the new spaces on campus that will accommodate classes during the Spring 2018 semester.

HOWARD UNIVERSITY'S COLLEGES OF ENGINEERING AND ARCHITECTURE EXIST AS ONE SCHOOL DIVIDED INTO AN ARCHITECTURE BUILDING, AND AN ENGINEERING BUILDING. THE SCHOOLS ARE SEPARATED BY A LARGE PARKING LOT THAT COULD BE REPURPOSED TO BRIDGE THE TWO SCHOOLS, AND INTEGRATE THEIR STUDENTS. SUCH AN ADDITION COULD BENEFIT THE UNIVERSITY MASTERPLAN, AND PROVIDE OPPORTUNITIES FOR CREATIVE PLACEMAKING ELEMENTS.



LEGEND:

- EXISTING BUILDING
- PROPOSED BUILDING
- PROPOSED GREEN ROOF

EXISTING SITE AND BUILDINGS

THIS PROJECT WILL BE FOCUSING ON THE REDEVELOPMENT OF THE MACKEY/LKD PARKING LOT SITE



PROPOSED MASTER PLAN



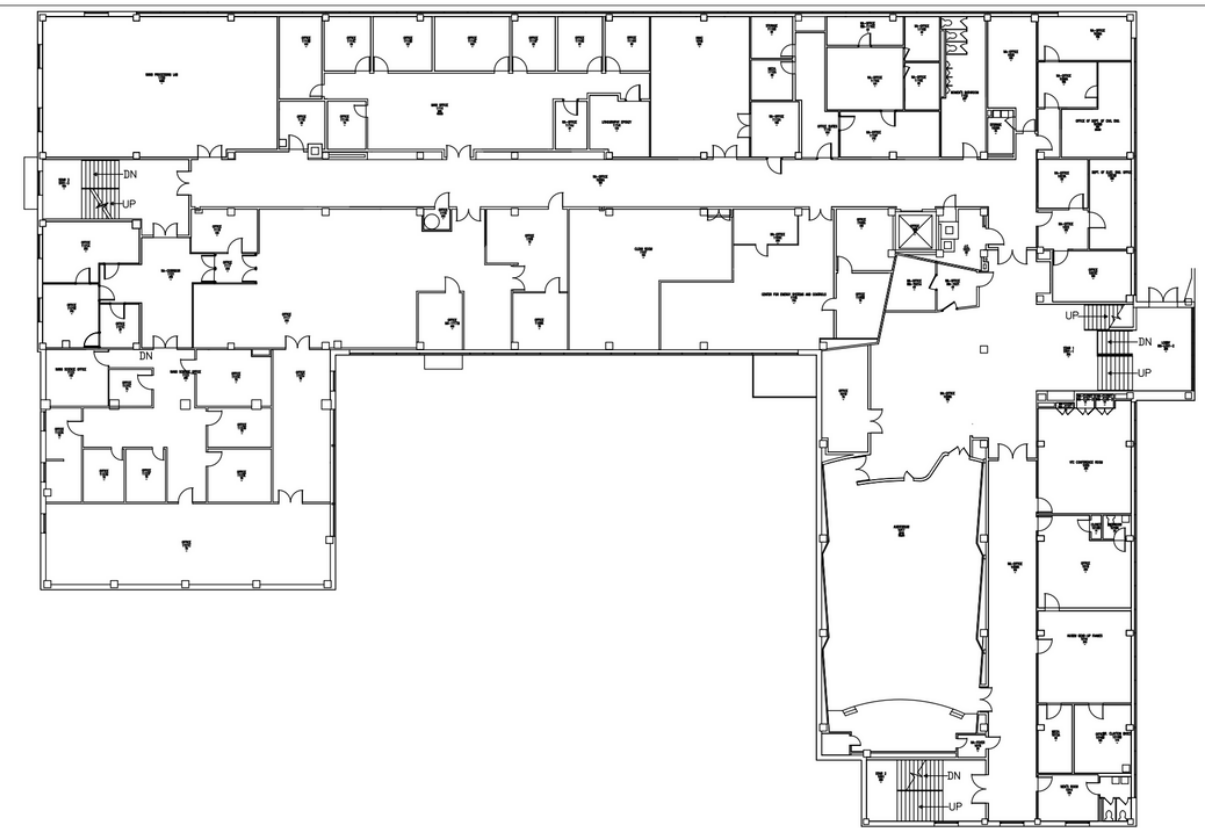
ILLUSTRATIVE MASTER PLAN

EXISTING SITE AND BUILDINGS

THE HOWARD MACKEY BUILDING (MACKEY) WAS FINISHED IN 1936, WHILE THE LEWIS K. DOWNING BUILDING (LKD) WAS COMPLETED IN 1952. SINCE THEN BOTH BUILDINGS HAVE BEEN RENOVATED, AND CONTINUE TO SERVE ARCHITECTURE AND ENGINEERING MAJORS RESPECTIVELY.



HOWARD MACKEY BUILDING - FIRST FLOOR PLAN



LEWIS K. DOWNING BUILDING EXISTING FIRST FLOOR PLAN

PRECEDENTS

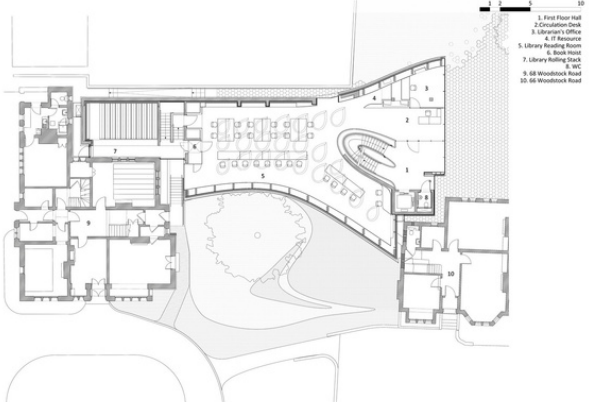
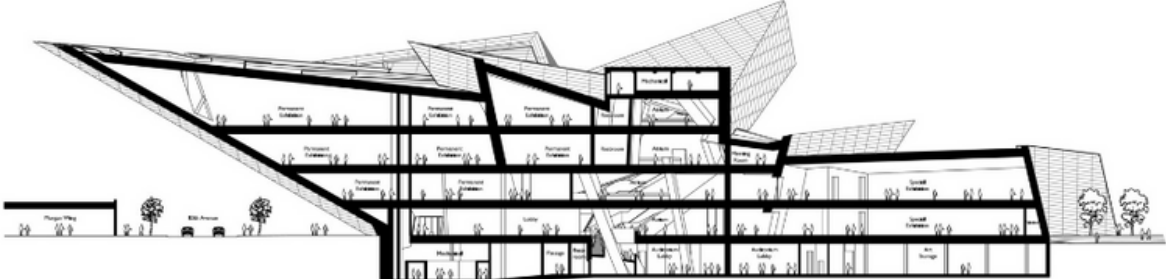


DOMINIQUE PERRAULT

DANIEL LIBESKIND

ZAHA HADID

ANALYSIS OF THE PRECEDENTS
INSPIRED DECONSTRUCTIVISM AS ONE
OF THIS BUILDING'S GUIDING DESIGN
INFLUNCES.



CAMPUS MASTERPLANNING EXERCISE

THIS FINAL DESIGN SEEKS TO MAKE USE OF THE SITE'S DAYLIGHTING AND INTRODUCE MORE GREEN SPACE TO THE CAMPUS.



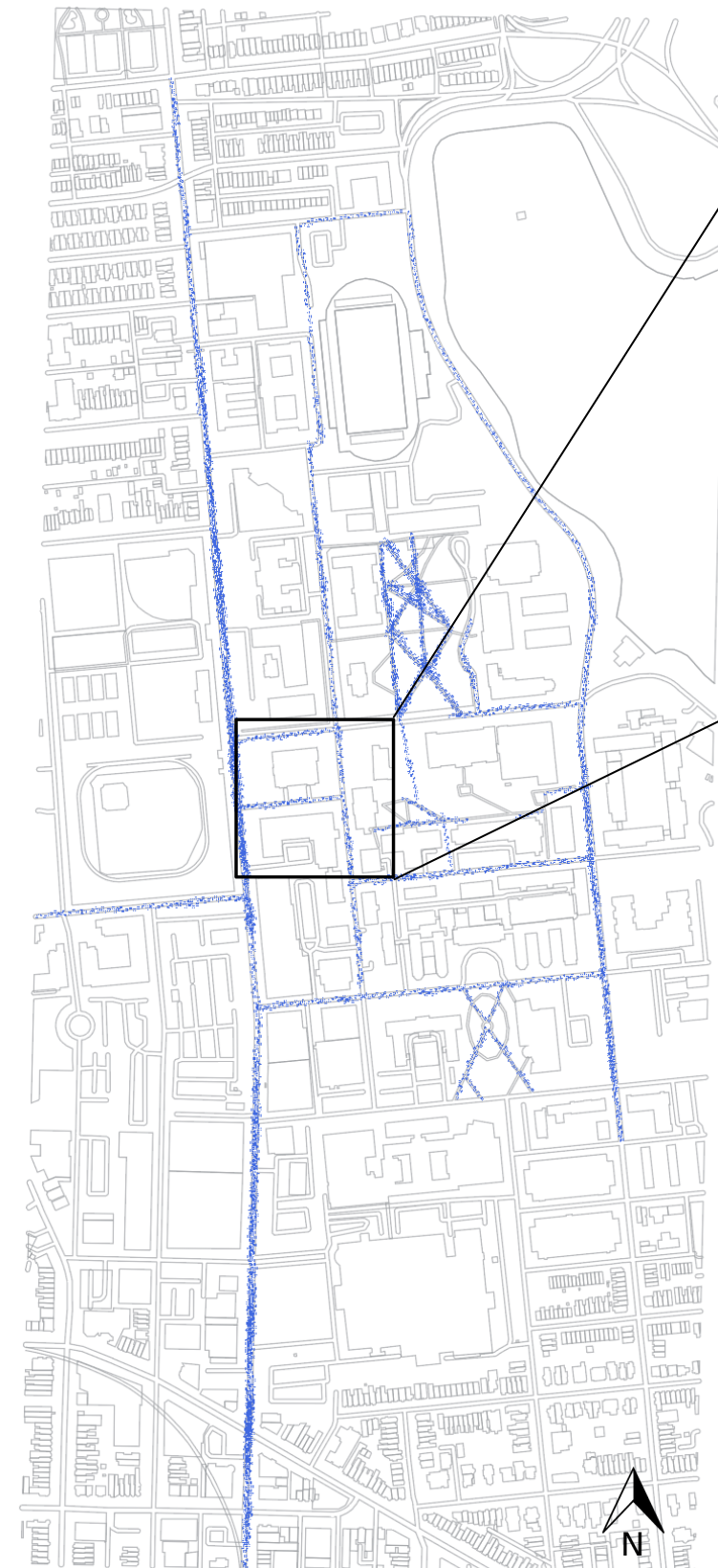
CAMPUS MASTERPLANNING EXCERCISE



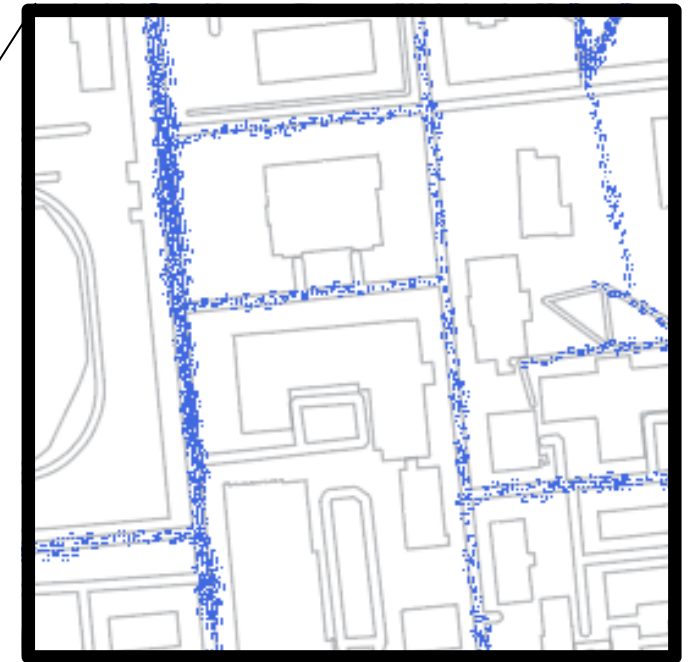
Local Community Footprint



Howard Community Footprint



Combined Footprint



Sources

Howard University undergraduate enrollment data reports 5,410 women and 2,085 men enrolled full time. Majority of the undergraduate student population is enrolled in the College of Arts and Sciences (COAS). COAS Classes are held on the upper quadrangle.

Majority of the student population resides along 6th St NW

B. ENROLLMENT AND PERSISTENCE

B1 Institutional Enrollment - Men and Women Provide numbers of students for each of the following categories as of the institution's official fall reporting date or as of October 15, 2018. Note: Report students formerly designated as "first professional" in the graduate cells.

B1	FULL-TIME		PART-TIME	
	Men	Women	Men	Women
B1 Undergraduates				
B1 Degree-seeking, first-time freshmen			0	3
B1 Other first-year, degree-seeking	78	114	8	4
B1 All other degree-seeking	1,301	2,960	80	112
B1 Total degree-seeking	1,808	4,143	88	119
B1 All other undergraduates enrolled in credit courses	18	22	17	28
B1 Total undergraduates	1,826	4,165	105	147
B1 Graduate				
B1 Degree-seeking, first-time	301	511	20	33
B1 All other degree-seeking	608	1088	130	190
B1 All other graduates enrolled in credit courses	1	0	4	10
B1 Total graduate	910	1599	154	233
B1 Total all undergraduates				6,243
B1 Total all graduate				2,896
B1 GRAND TOTAL ALL STUDENTS				9,139

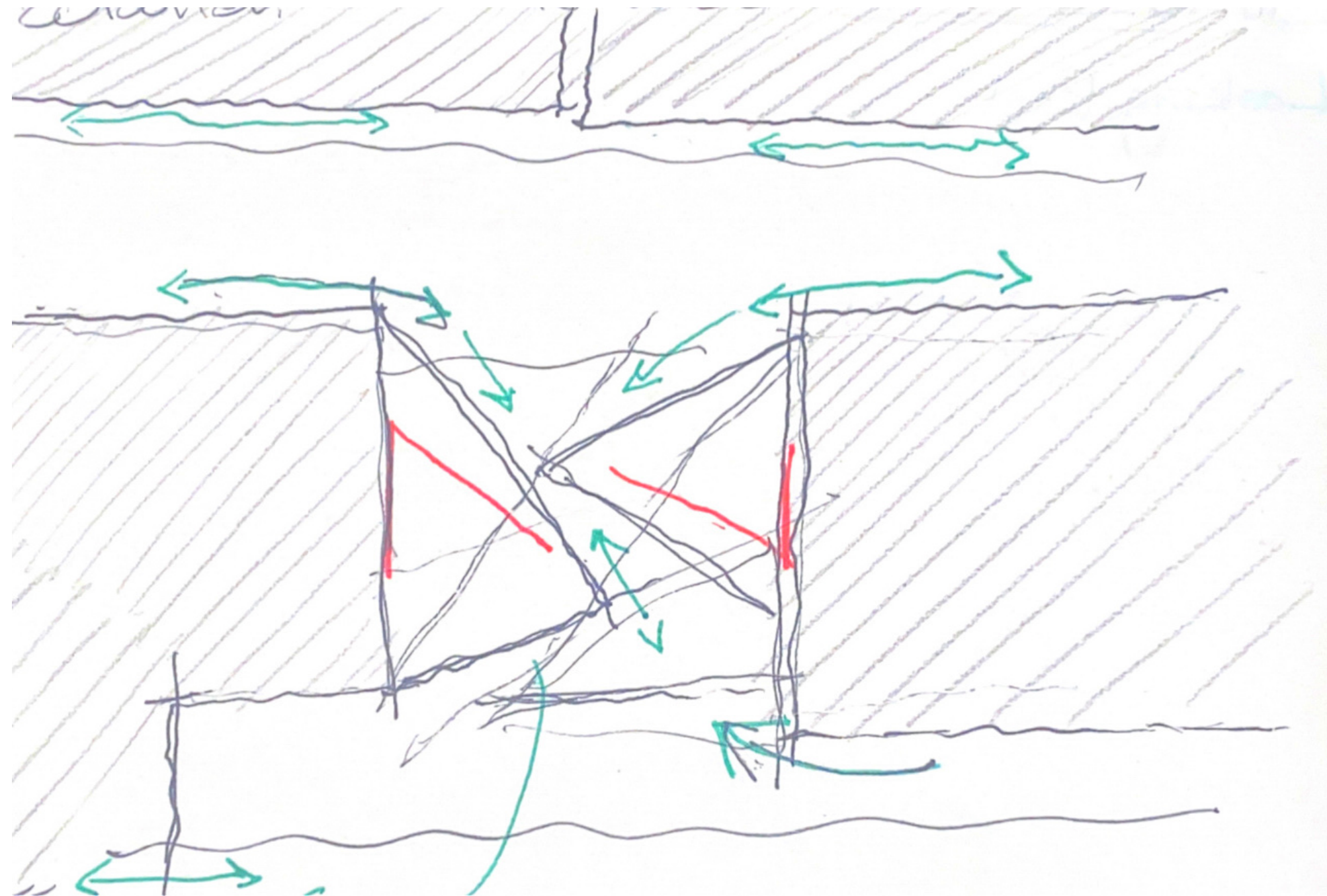
PARTI SKETCH

THE PARTI SEEKS TO DIRECTLY HANDLE THE SITE AS A THOROUGHWAY FOR PEDESTRIANS, AND TO CREATE A LANDING POINT FOR BOTH COLLEGES

Parti

Guiding Words:

- "Interlock"
- "Gasket"
- "Threshold"
- "Habitable Bridge"
- "Gear"
- "Reception"



 Pedestrian Circulation

A tangential bridge, that serves as a gasket, spanning the box that is created by the site between LKD and Mackey. This establishment will serve to bridge the gap between to the two buildings and begin to act as a catcher's mitt for pedestrians circulating through the thoroughfare, that is the larger site.

PROGRAMMING ANALYSIS

THE PROGRAM WAS DERIVED FROM A PRGRAMATIC ANALYSIS OF EDUCATIONAL BUILDINGS ACROSS THE WORLD. THIS WAS THEN MODIFIED TO APPLY TO THE HOWARD SITE, AND FIT INTO THE PARTI ON THE SITE.

Mackey (2/5)



LKD first floor (2/4)



Venn Diagram

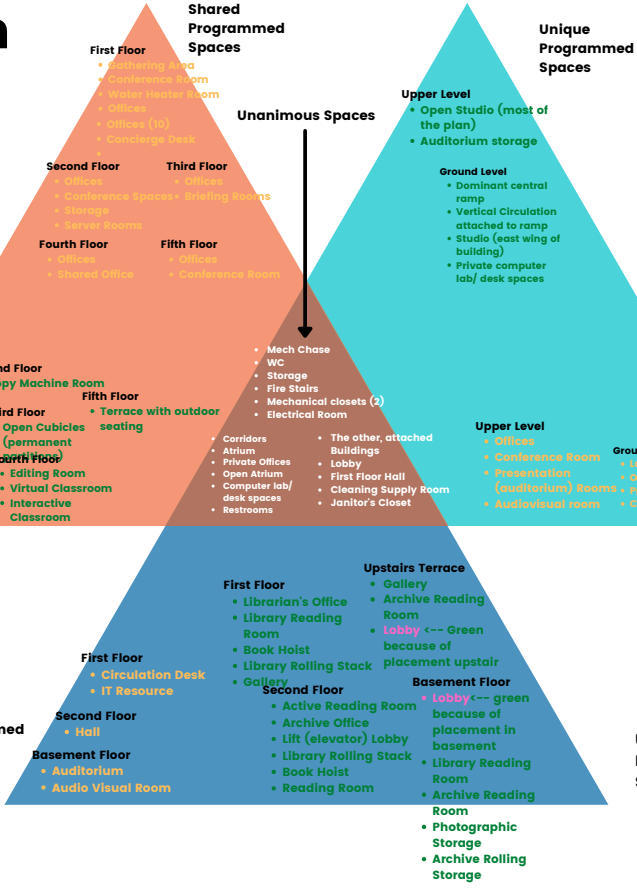
Programmed spaces in precedent: Vanderbilt University School of Nursing



- Unique Programmed Spaces**
- First Floor
 - Outdoor Space
 - Nursing Annex
 - Ramps leading to the second level
 - Kitchen
 - Faculty Break Room
 - Wellness Room
 - Student Lounge
 - Mailroom
 - Second Floor
 - Copy Machine Room
 - Third Floor
 - Open Cubicles (permanent)
 - Editing Room
 - Virtual Classroom
 - Interactive Classroom
 - Fourth Floor
 - Open Atrium
 - Computer lab/ desk spaces
 - Restrooms
 - Fifth Floor
 - Terrace with outdoor seating



- Shared Programmed Spaces**
- First Floor
 - Circulation Desk
 - IT Resource
 - Second Floor
 - Hall
 - Basement Floor
 - Auditorium
 - Audio Visual Room



Programmed spaces in precedent: Milstein Hall at Cornell



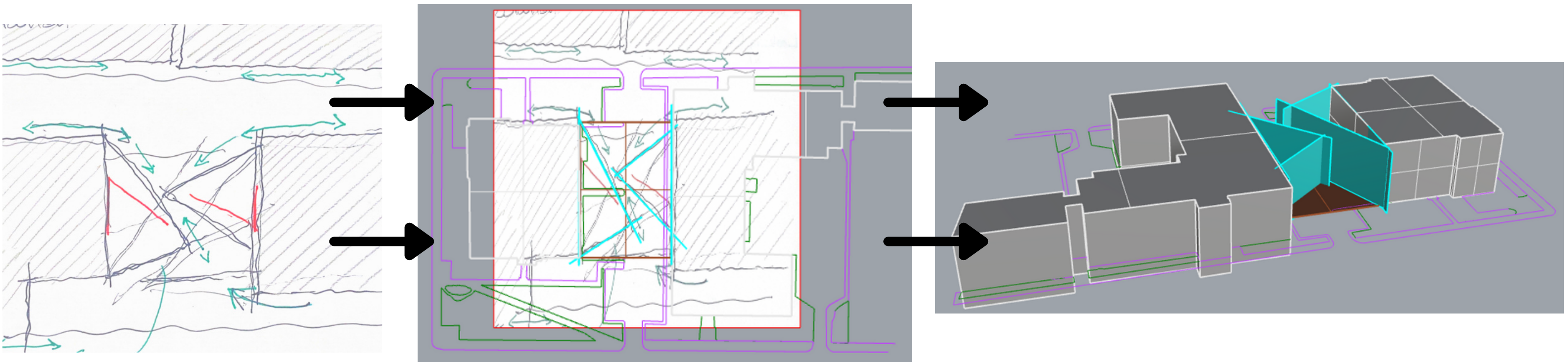
Programmed spaces in precedent: St Antony's College

- Unique Programmed Spaces**
- First Floor
 - Librarian's Office
 - Library Reading Room
 - Book Hoist
 - Library Rolling Stack
 - Galleries
 - Second Floor
 - Active Reading Room
 - Archive Office
 - Lift (elevator) Lobby
 - Library Rolling Stack
 - Book Hoist
 - Reading Room
 - Basement Floor
 - Auditorium
 - Audio Visual Room
 - Upstairs Terrace
 - Gallery
 - Archive Reading Room
 - Lobby ← Green because of placement upstairs
 - Basement Floor
 - Lobby ← green because of placement in basement
 - Library Reading Room
 - Archive Reading Room
 - Photographic Storage
 - Archive Rolling Storage

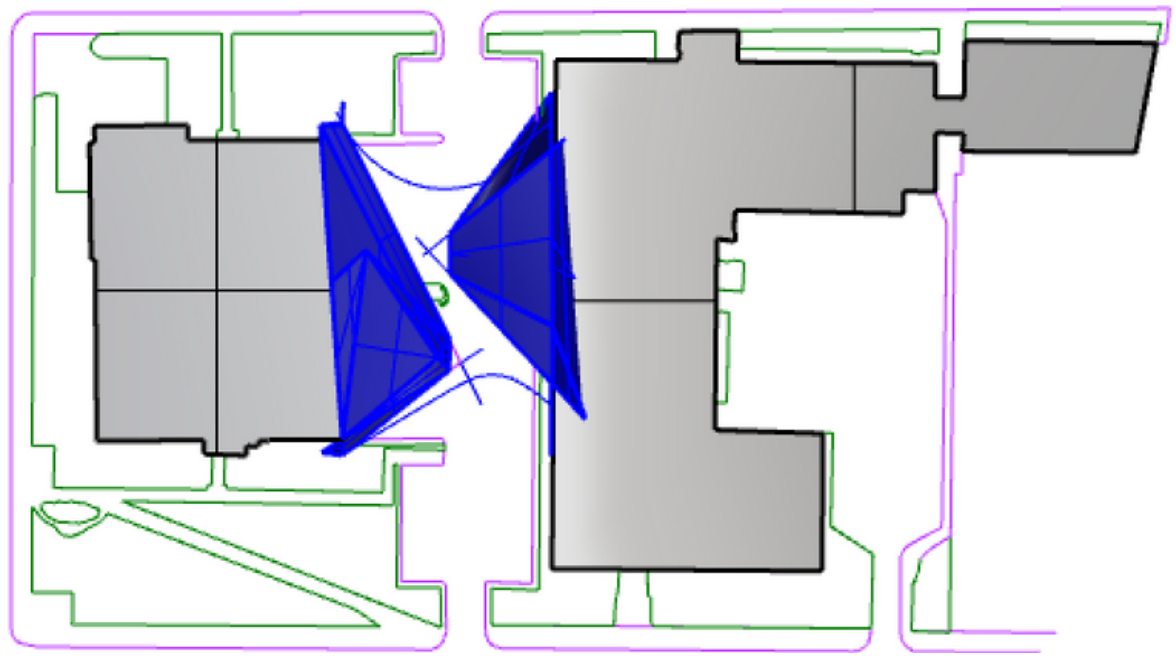
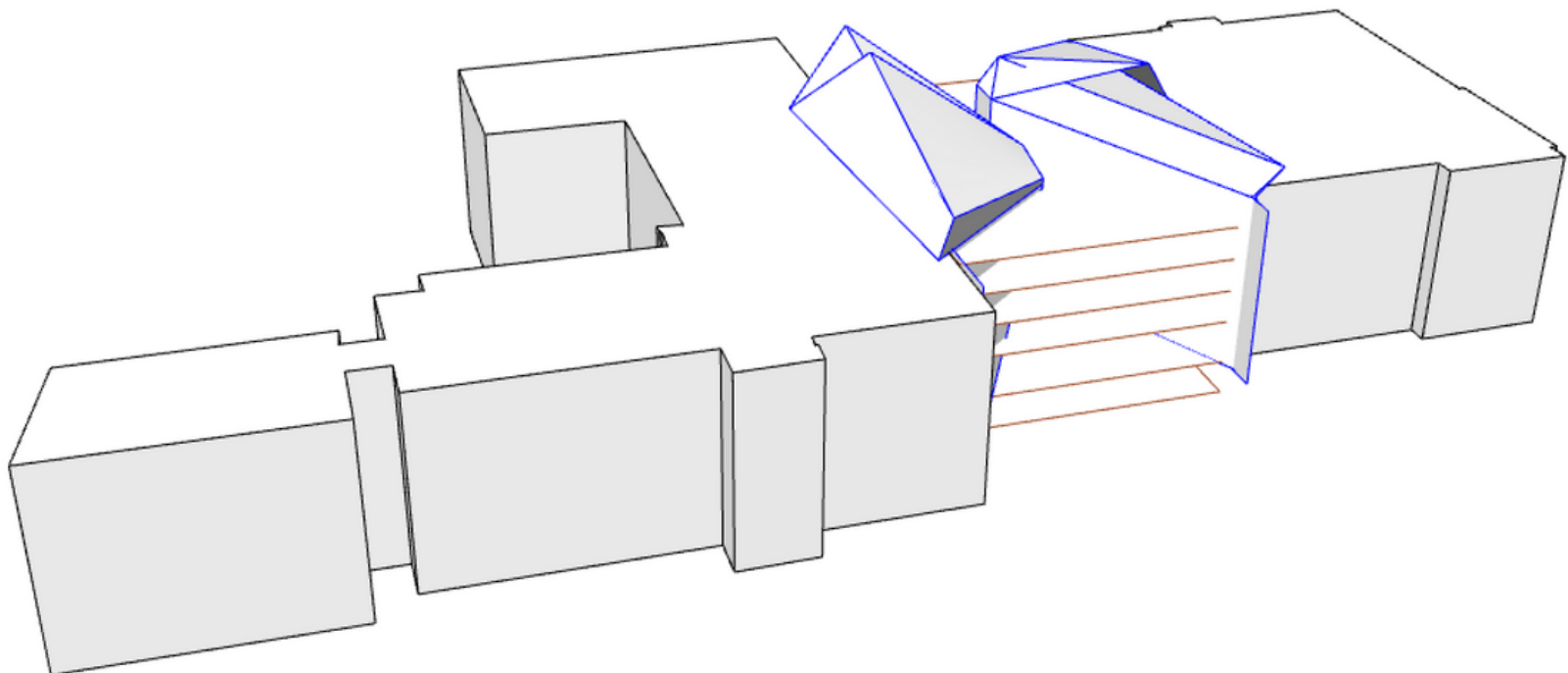
PARTI SKETCH AND MODEL

PARTI SKETCH, MODEL INTO CONCEPTUAL MASS

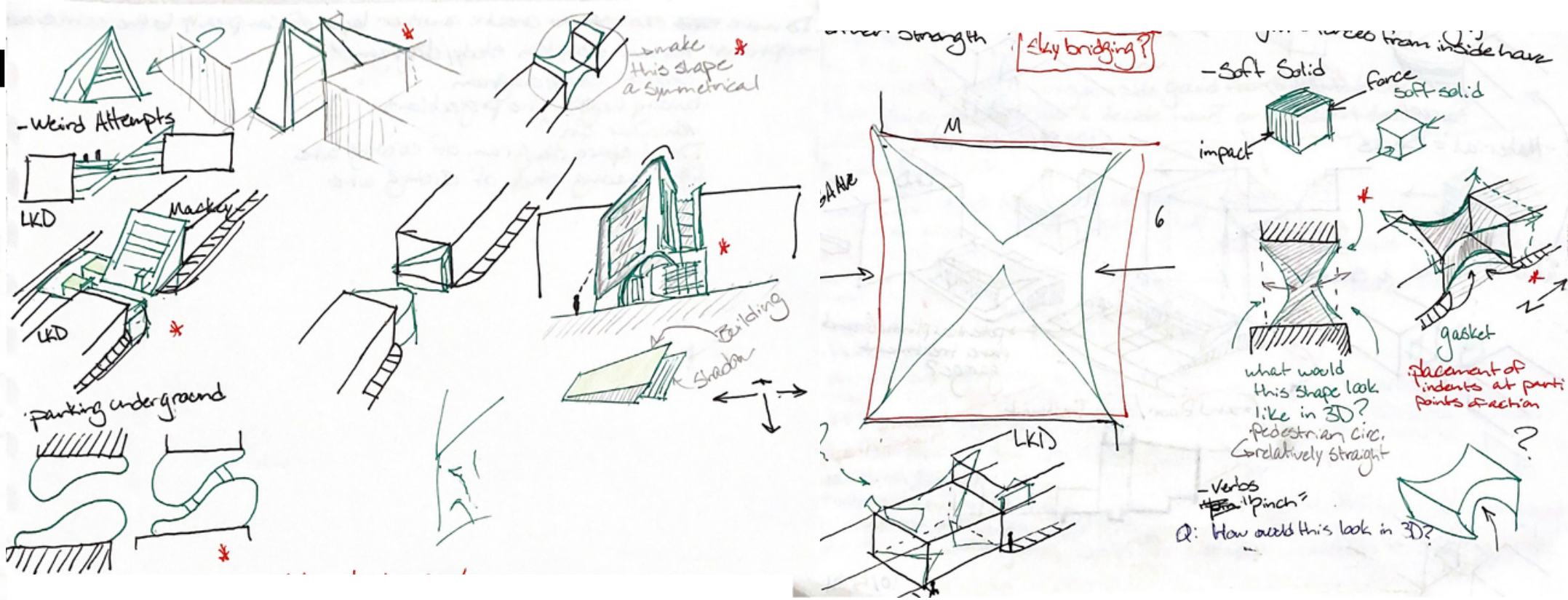
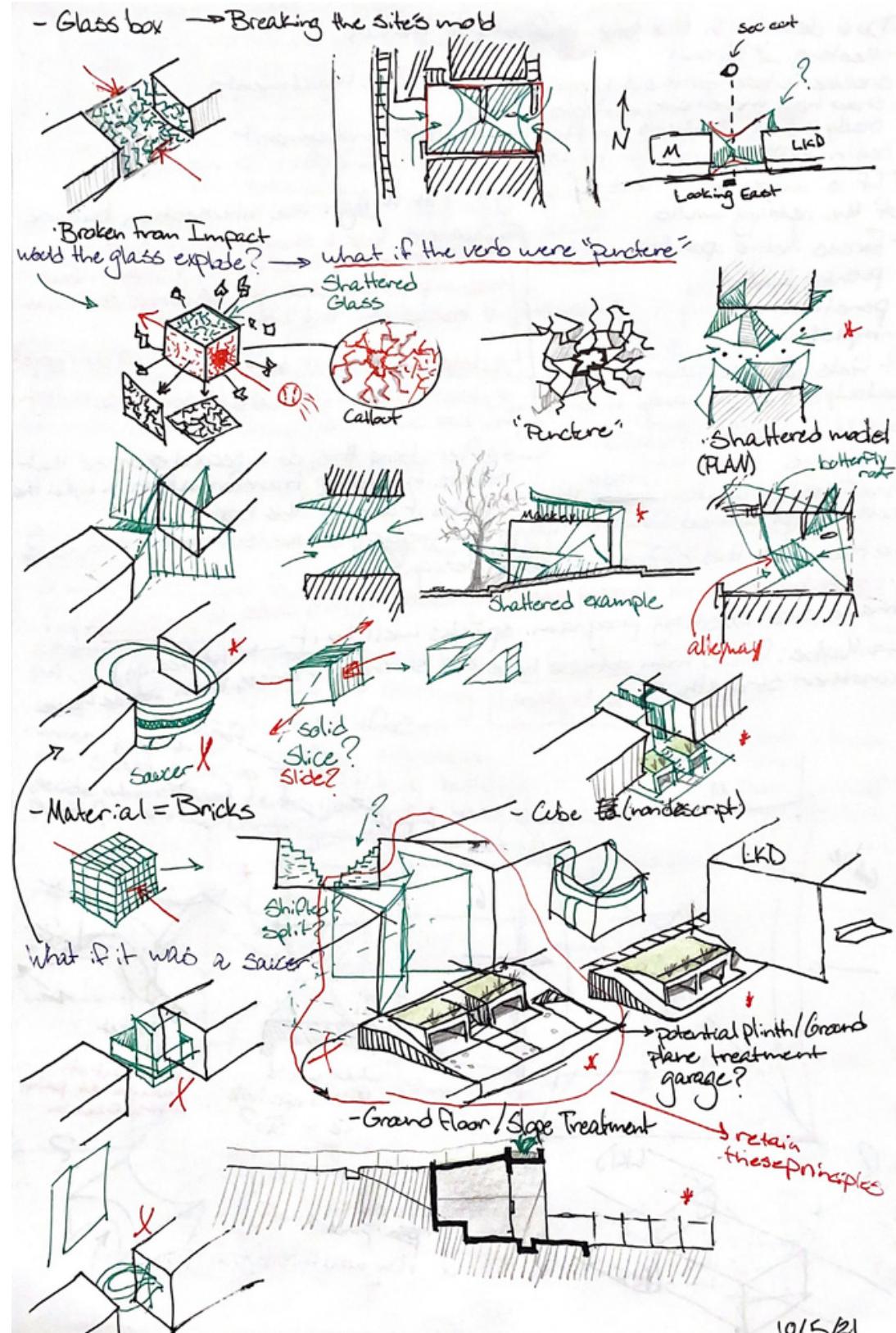
DONE IN RHINOCEROS 5, THIS PROCESS INVOLVED TAKING THE ORIGINAL PARTI, APPLYING IT TO THE SITE AND EXTRUDING IT. THIS CREATED A PRSIMIC DESIGN THAT GAVE REFERENCE TO PRISMS AS CRYSTALS



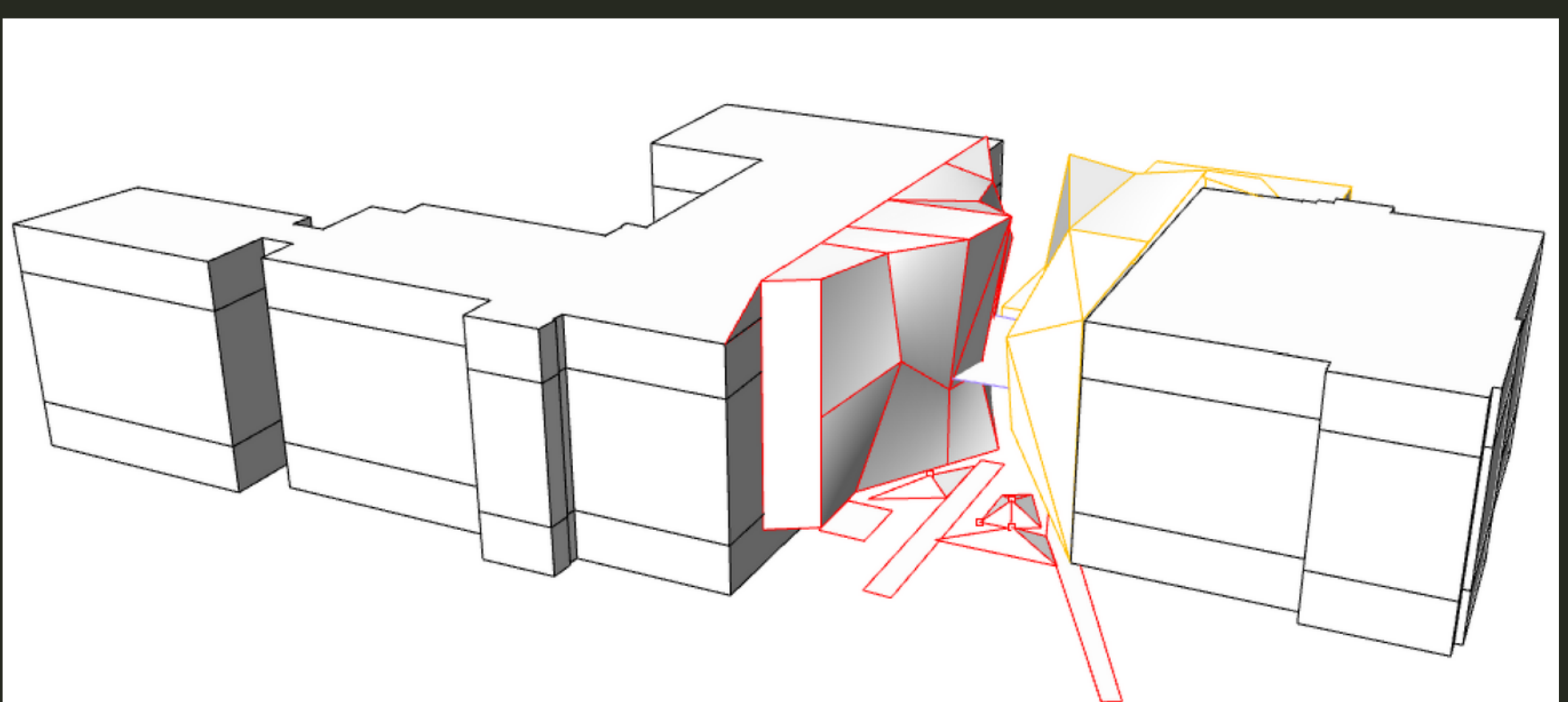
THE MODEL WAS FORMED GEOMETRICALLY BASED ON SIGHT LINES, BUILDING DADUMS AND REFERENCE TO THE GEOLOGICAL FORMATION OF CRYSTALS, AND SEEKS TO EMBODY SOME OF THEIR QUALITIES



CONCEPT SKETCHES/DESIGN



THIS FORM WAS EDITED BASED ON IDEAS OF INTEGRATION OF VIEWS BETWEEN THE MASSES



CONCEPT MODEL

CONCEPT

BECAUSE OF THE PARTI'S EXTRUSION INTO A PRISM, ANALYSIS OF THE BUILDING AS A LIGHT PRISM BECAME A SERIOUS DESIGN CONSIDERATION. THIS EVOLVED FURTHER INTO THE IDEA OF A PRISM AS A CRYSTAL, AND A CRYSTAL AS SOMETHING THAT GROWS FROM A BASE. WITH MACKAY AND LKD SERVING AS BASES, THE ADDITION WOULD BEHAVE SIMILARLY TO A CRYSTAL AS IT ALREADY HAD ANGULAR SHAPES, AND WOULD WELCOME A TRANSLUCENT FACADE. WHILE IT WOULDN'T REFRACT LIGHT, IT WOULD FILTER THE LIGHT INTRODUCED TO THE SPACES.

GROWTH FROM A SOURCE



STRONG, GEOMETRIC SHAPES AND ANGLES

TRANSLUCIVITY

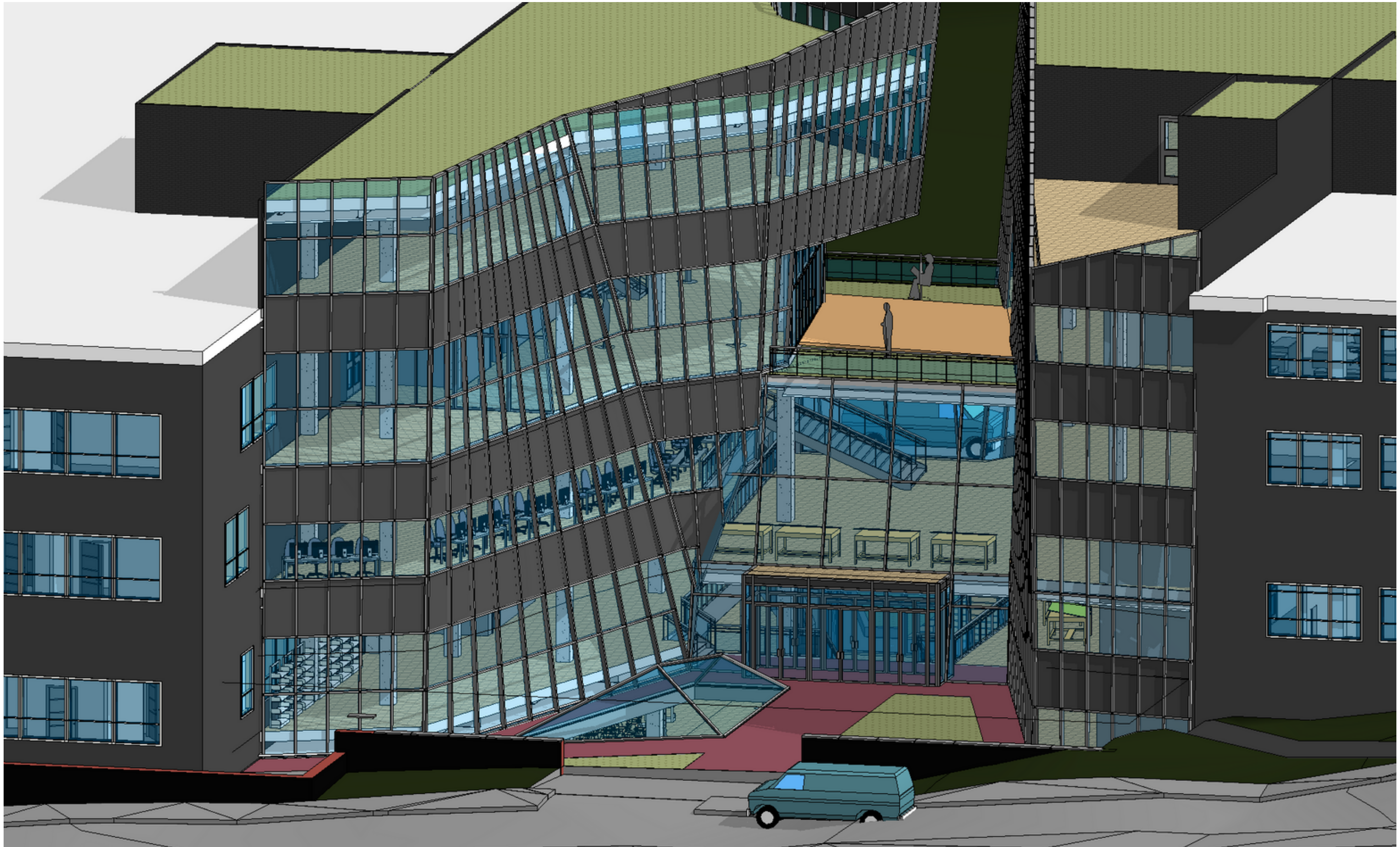


HEIRARCHY OF SIZE AND SHAPE



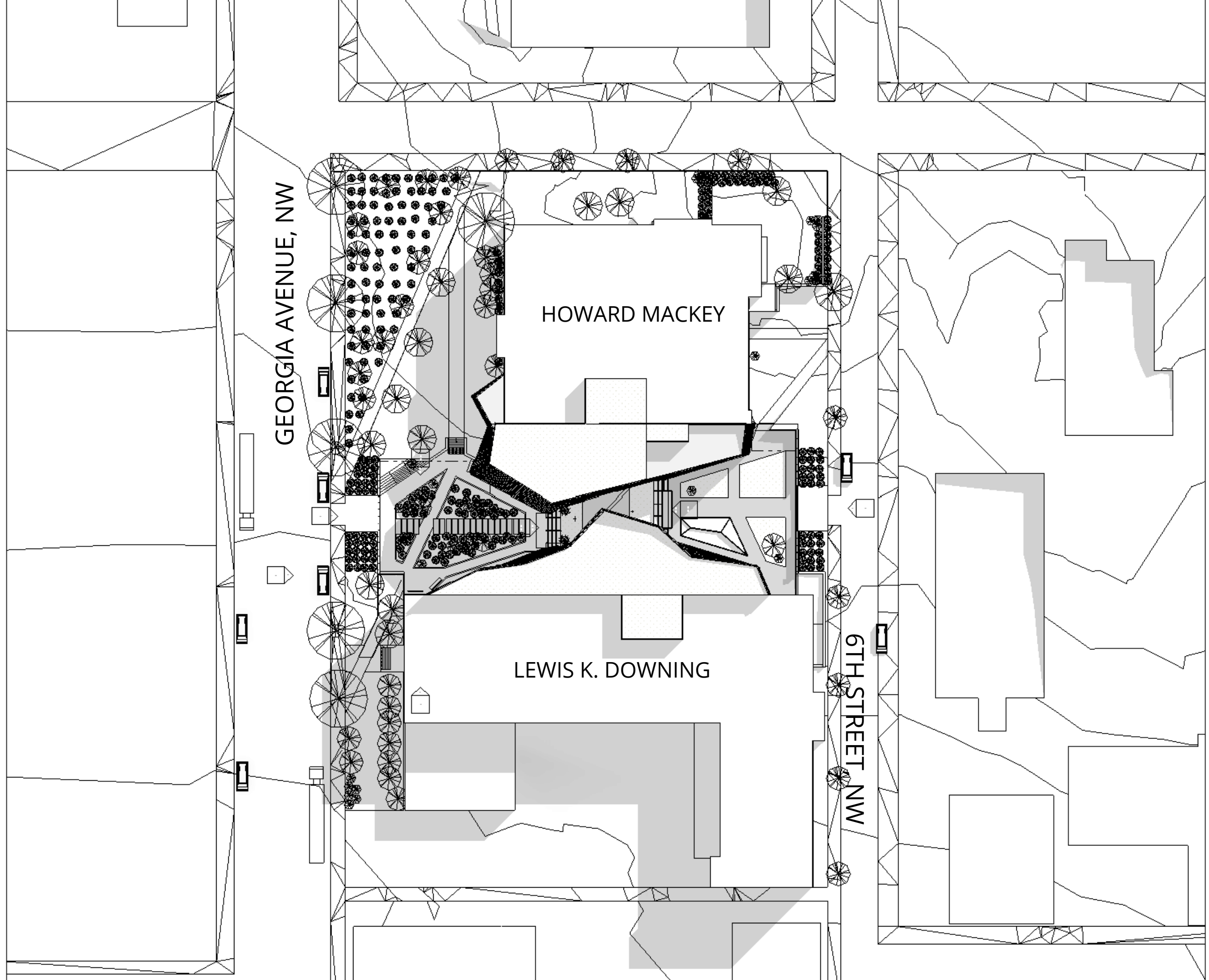
THE DESIGN

"THE HOWARD GEM," GETS ITS NAME FROM ITS PRISMIC DESIGN QUALITIES, CRYSTAL-LIKE FORM, AND IN REFERENCE TO THE WAY IT FILTERS LIGHT THROUGH THE SPACES.



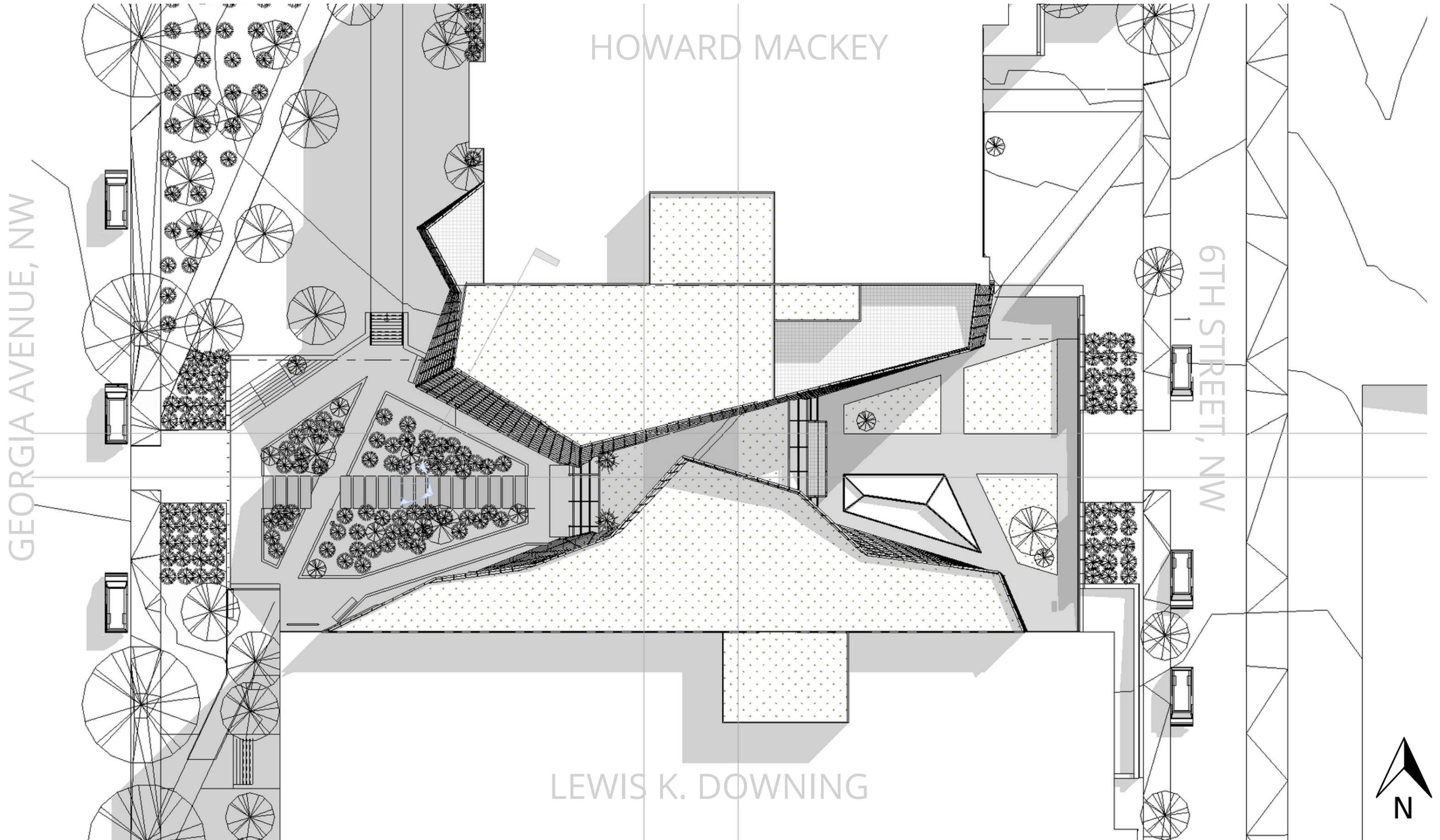
THIS ADDITION SEEKS TO PROVIDE JOINT STUDY AND PRESENTATION SPACES FOR THE ARCHITECTURAL AND ENGINEERING PROGRAMS, WHILE ALSO SERVING AS A GRAND ENTRY FOR THE COLLEGE OF ENGINEERING AND ARCHITECTURE ENTIRELY.

SITE PLAN



SITE PLAN

PARKING WOULD BE LIMITED TO THE STREET



PLANS: DOWNING GROUND (BASEMENT LEVEL)

SHARED SPACES

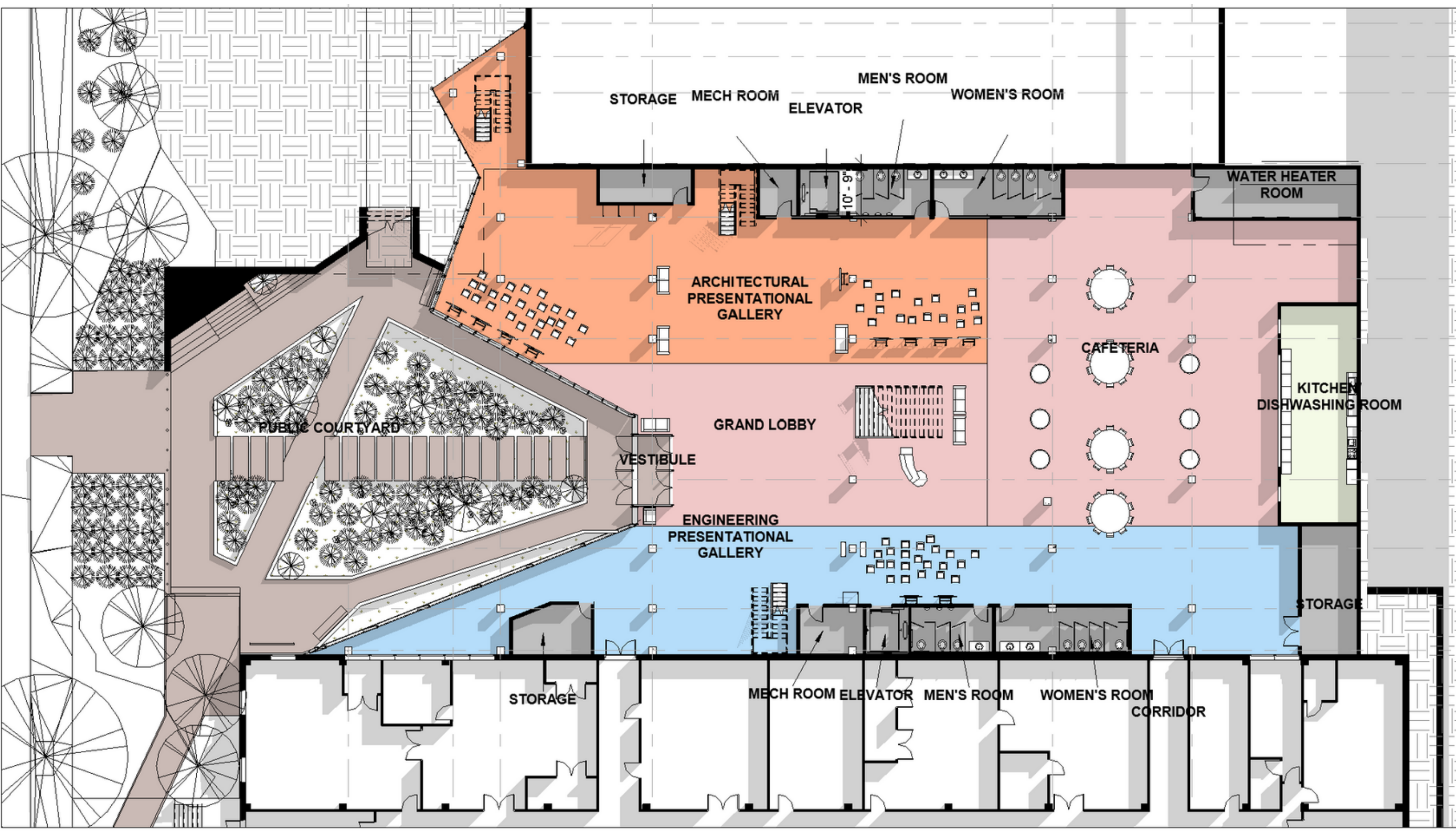
SHARED PUBLIC SPACES

ARCHITECTURE SPACES

ENGINEERING SPACES

GREEN SPACES

UTILITY SPACES



- Room Legend
- ARCHITECTURAL PRESENTATIONAL GALLERY
 - CAFETERIA
 - ELEVATOR
 - ENGINEERING PRESENTATIONAL GALLERY
 - GRAND LOBBY
 - KITCHEN/ DISHWASHING ROOM
 - MECH ROOM
 - MEN'S ROOM
 - PUBLIC COURTYARD
 - STORAGE
 - VESTIBULE
 - WATER HEATER ROOM
 - WOMEN'S ROOM



PLANS: MACKAY BASEMENT (GROUND LEVEL ENTRYWAY)

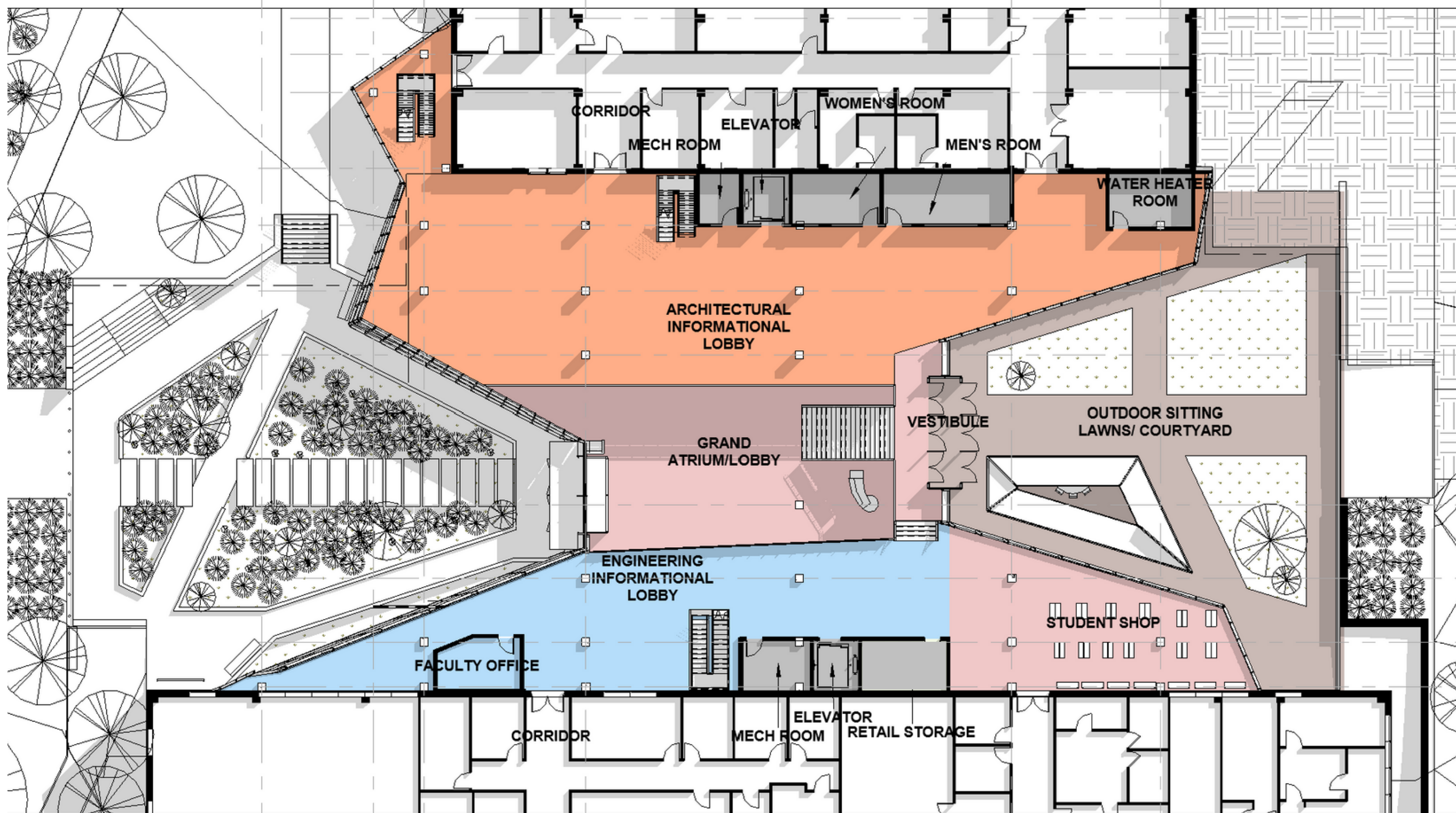
ARCHITECTURE SPACES

ENGINEERING SPACES

SHARED PUBLIC SPACES

GREEN SPACES

UTILITY SPACES



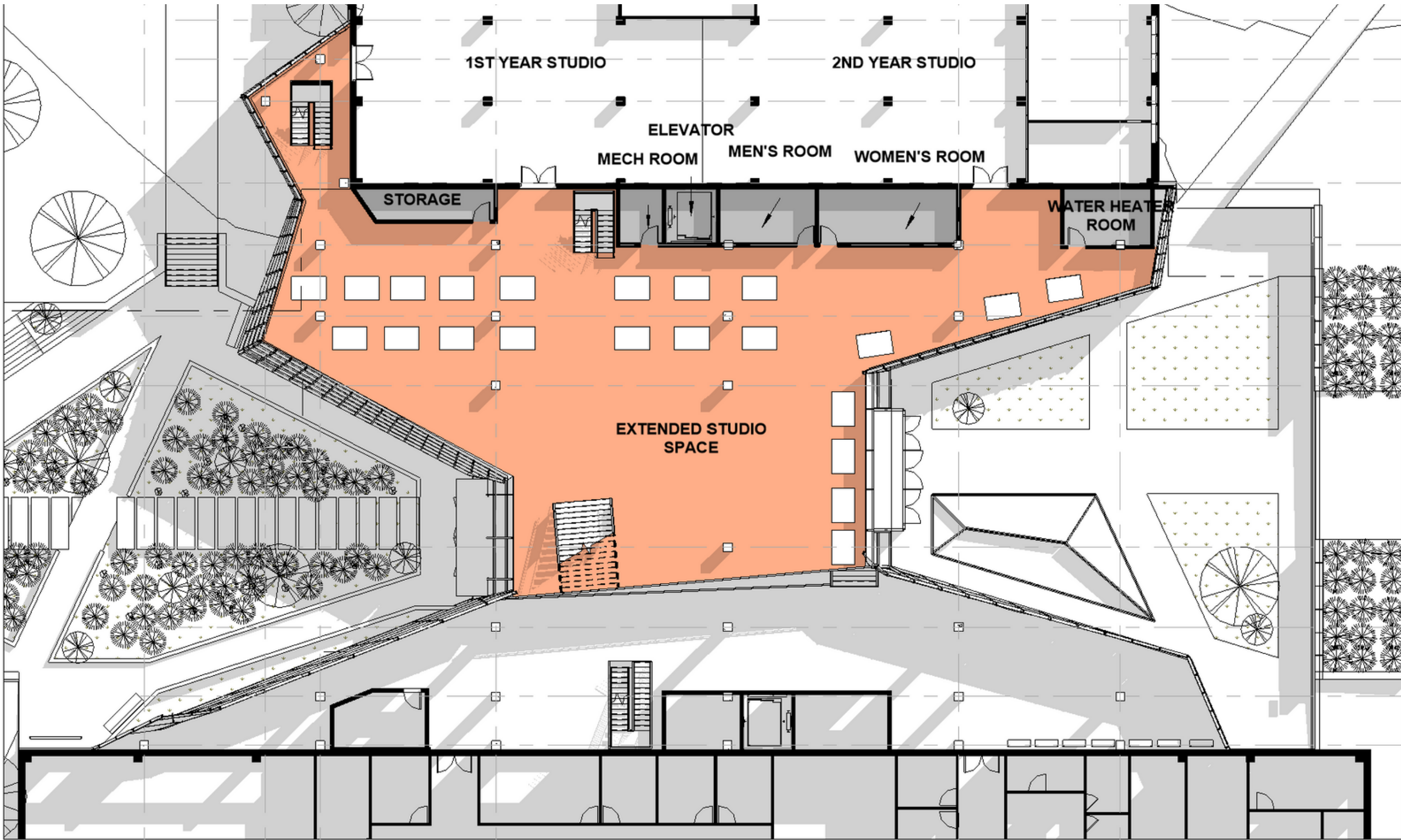
Room Legend

- ARCHITECTURAL INFORMATIONAL LOBBY
- ELEVATOR
- ENGINEERING INFORMATIONAL LOBBY
- FACULTY OFFICE
- GRAND ATRIUM/LOBBY
- MECH ROOM
- MEN'S ROOM
- OUTDOOR SITTING LAWNS/ COURTYARD
- RETAIL STORAGE
- STUDENT SHOP
- VESTIBULE
- WATER HEATER ROOM
- WOMEN'S ROOM



PLANS: MACKAY GROUND (GROUND LEVEL ENTRYWAY)

- ARCHITECTURE SPACES
- UTILITY SPACES



- Room Legend
- ELEVATOR
 - EXTENDED STUDIO SPACE
 - MECH ROOM
 - MEN'S ROOM
 - STORAGE
 - WATER HEATER ROOM
 - WOMEN'S ROOM



PLANS: DOWNING SECOND (MEZZANINE LEVEL)



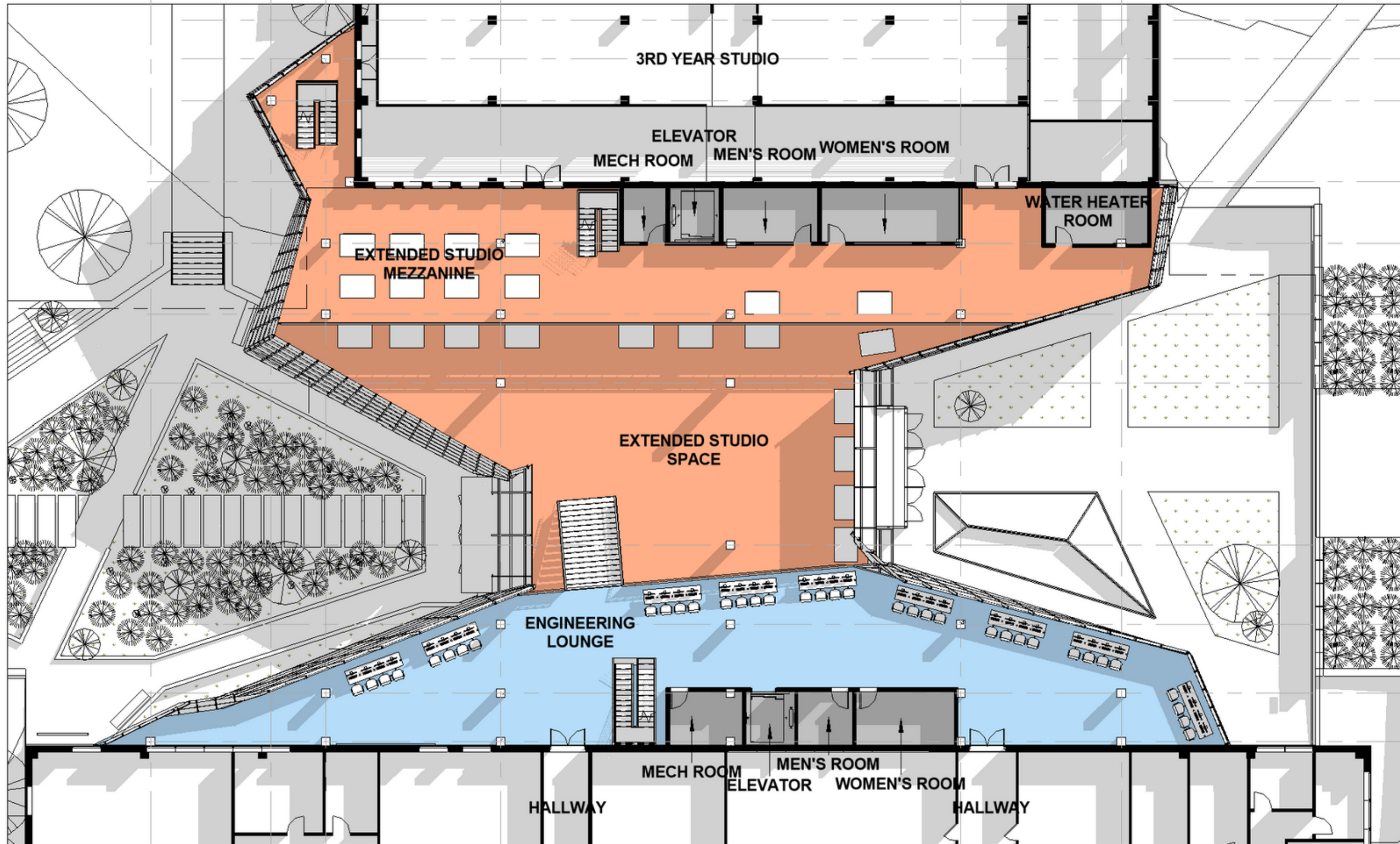
ARCHITECTURE SPACES











ENGINEERING SPACES



UTILITY SPACES



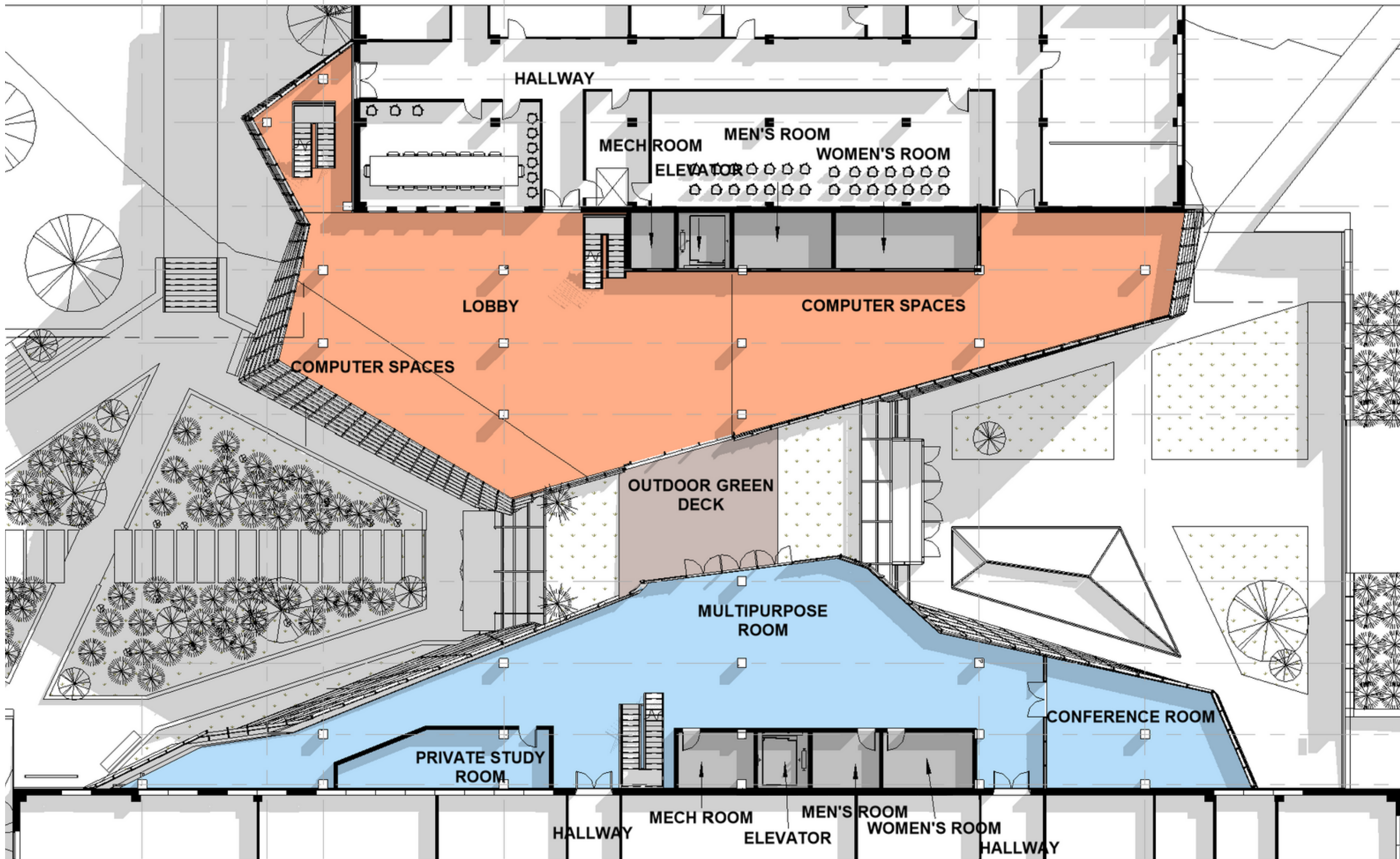
Room Legend

-  ELEVATOR
-  ENGINEERING LOUNGE
-  EXTENDED STUDIO MEZZANINE
-  EXTENDED STUDIO SPACE
-  MECH ROOM
-  MEN'S ROOM
-  WATER HEATER ROOM
-  WOMEN'S ROOM



PLANS: MACKAY FIRST (FIRST FLOOR)

- ARCHITECTURE SPACES
- ENGINEERING SPACES
- UTILITY SPACES
- GREEN SPACES



- Room Legend
- COMPUTER SPACES
 - CONFERENCE ROOM
 - ELEVATOR
 - LOBBY
 - MECH ROOM
 - MEN'S ROOM
 - MULTIPURPOSE ROOM
 - OUTDOOR GREEN DECK
 - PRIVATE STUDY ROOM
 - WOMEN'S ROOM



PLANS: MACKAY SECOND (SECOND FLOOR)










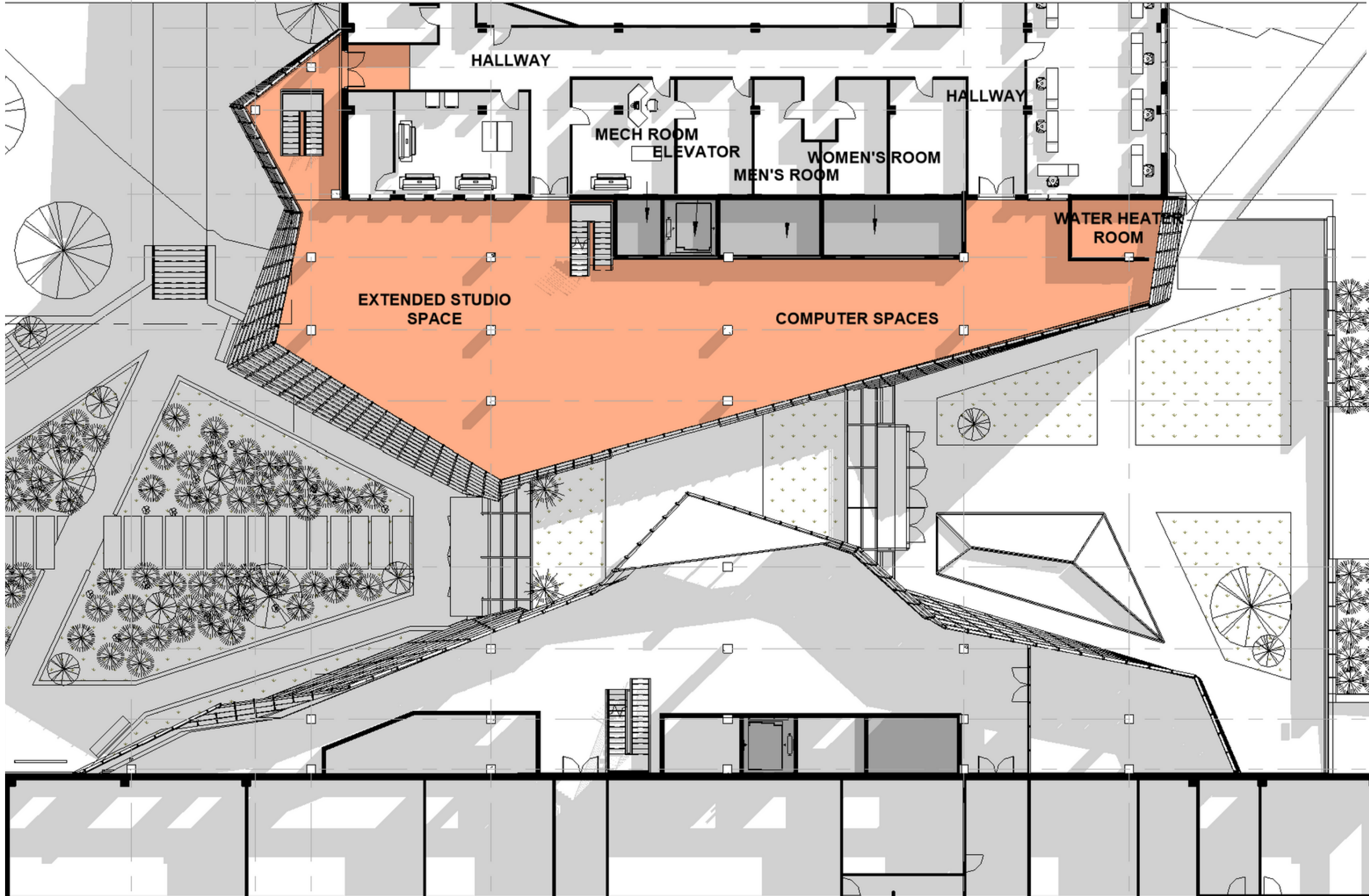
ARCHITECTURE SPACES



UTILITY SPACES

Room Legend

-  COMPUTER SPACES
-  ELEVATOR
-  EXTENDED STUDIO SPACE
-  MECH ROOM
-  MEN'S ROOM
-  WATER HEATER ROOM
-  WOMEN'S ROOM



PLANS: MACKAY TOP (ROOF LEVEL SPACES)

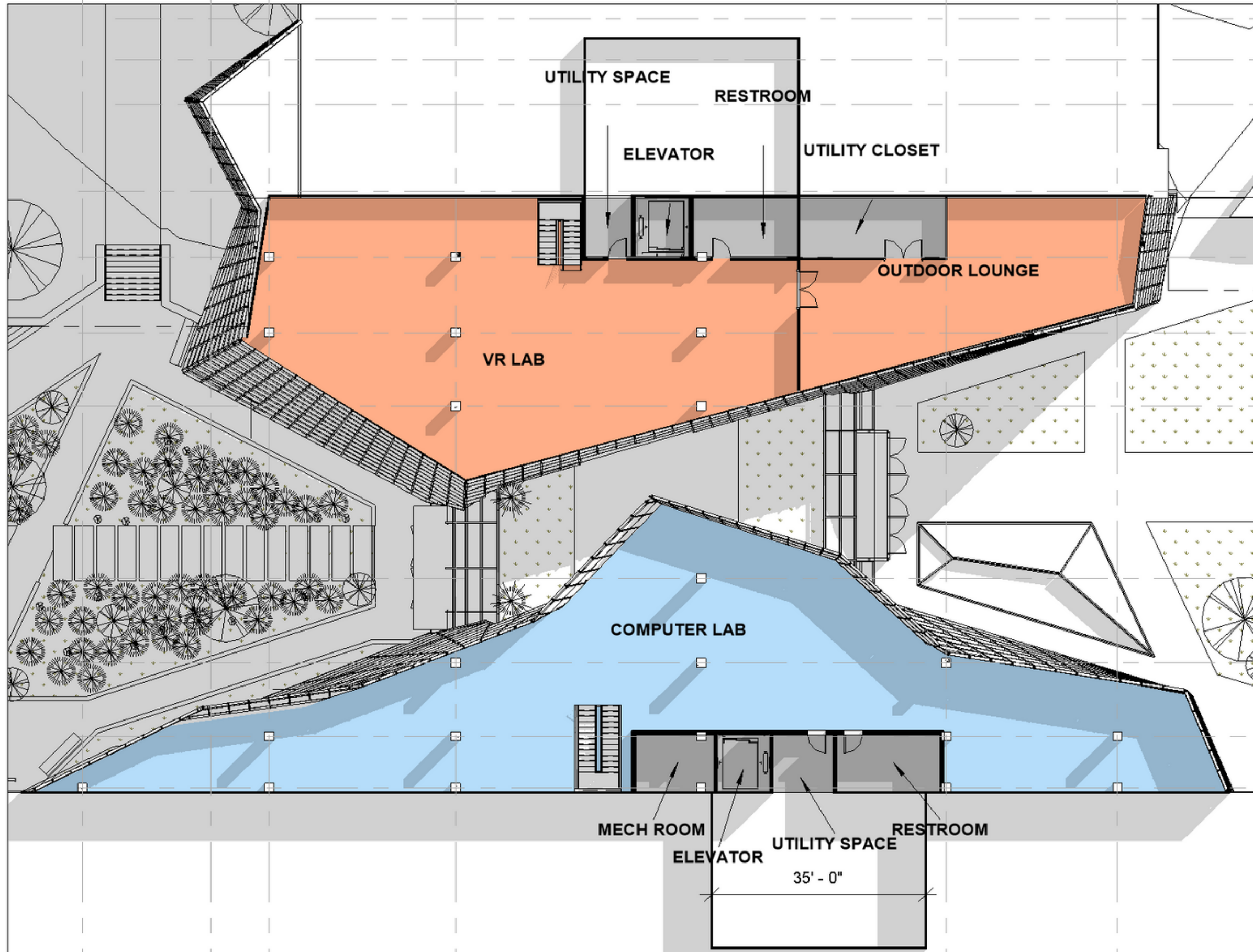
ARCHITECTURE SPACES

ENGINEERING SPACES

UTILITY SPACES

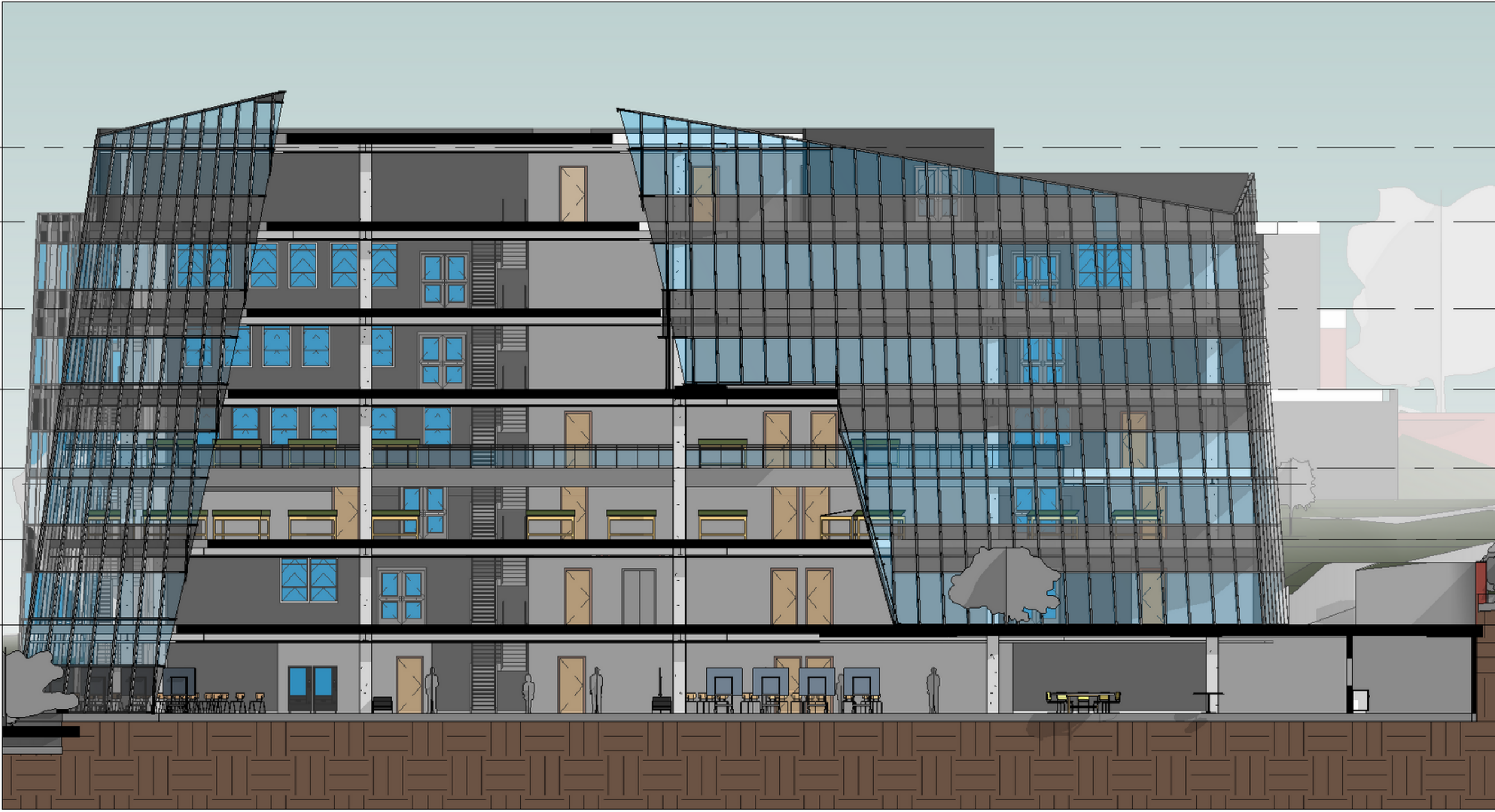
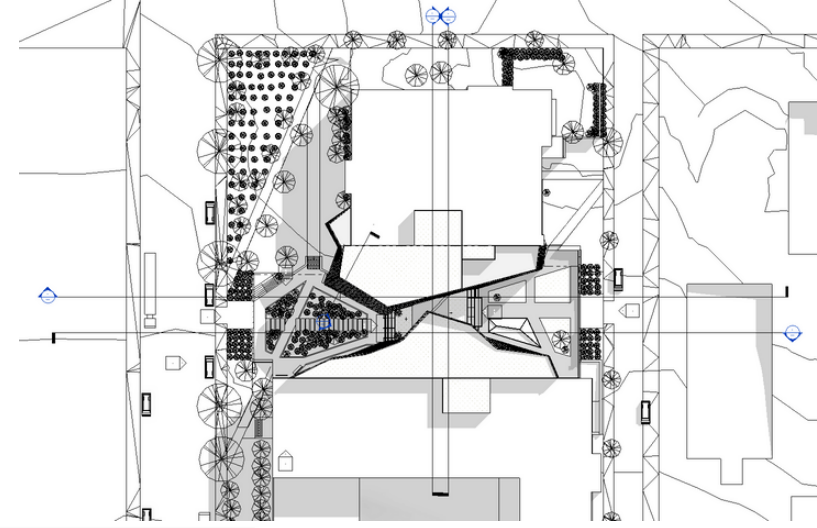
Room Legend

- COMPUTER LAB
- ELEVATOR
- MECH ROOM
- MEN'S ROOM
- OUTDOOR LOUNGE
- RESTROOM
- UTILITY CLOSET
- UTILITY SPACE
- VR LAB



SECTION: NORTH

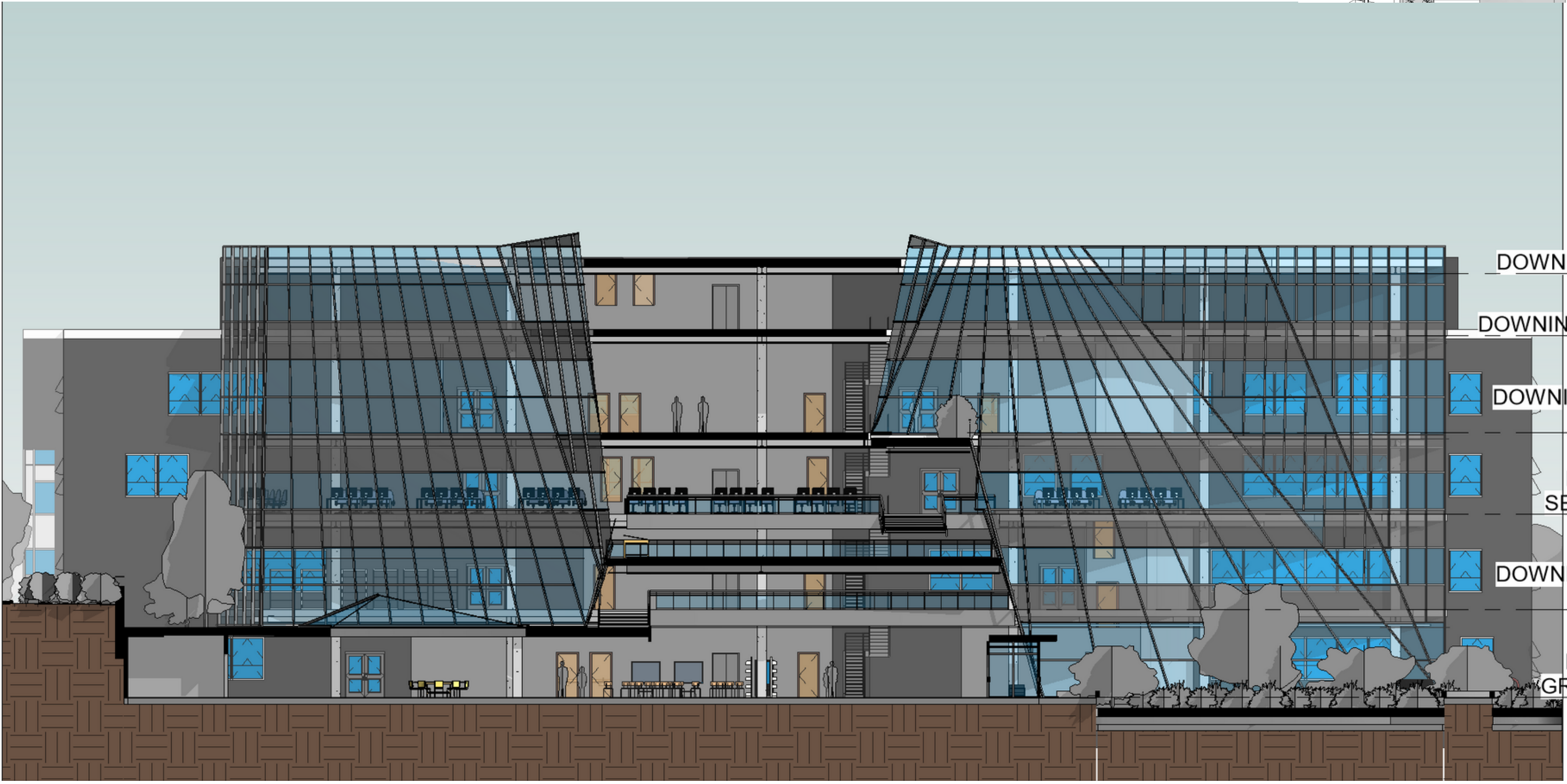
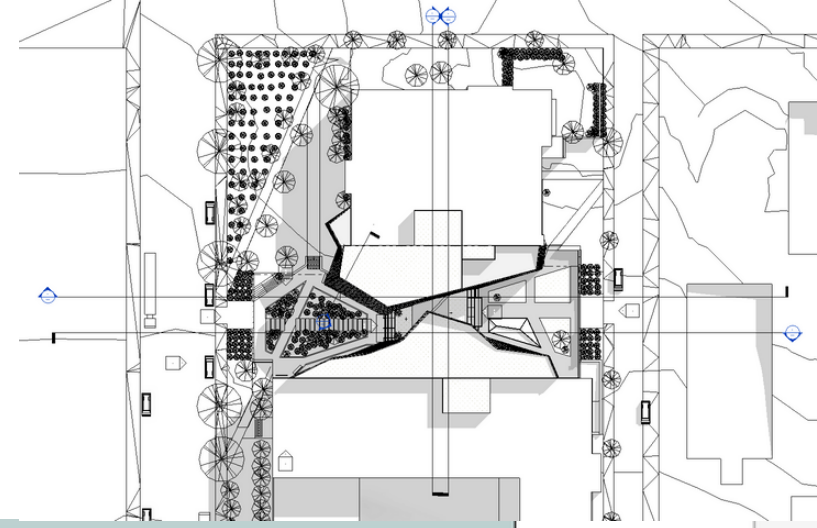
SECTION LOOKING AT MACKEY'S SOUTHERN FACADE



- MACKEY ROOF 61' - 0"
- MACKEY TOP 51' - 5"
- MACKEY SECOND DB 40' - 5"
- MACKEY FIRST DB 30' - 1"
- MACKEY MEZZANINE DB 20' - 0"
- MACKEY GROUND DB 10' - 11"
- MACKEY BASEMENT DB 0' - 0"

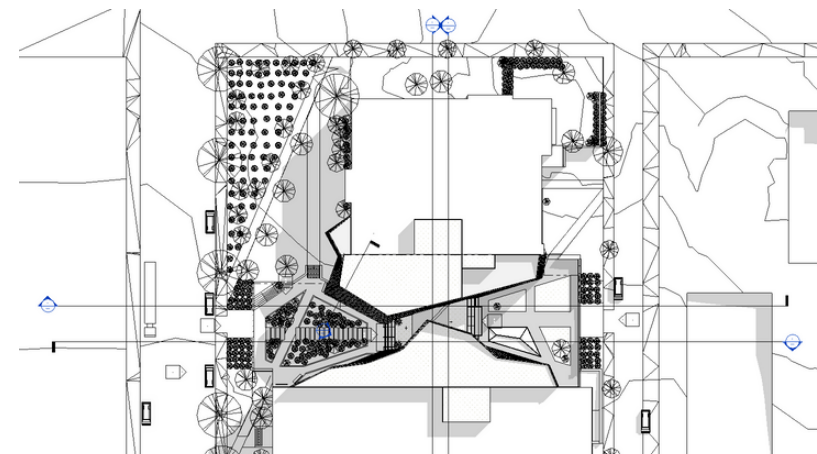
SECTION: SOUTH

SECTION LOOKING AT LKD'S NORTHERN FACADE

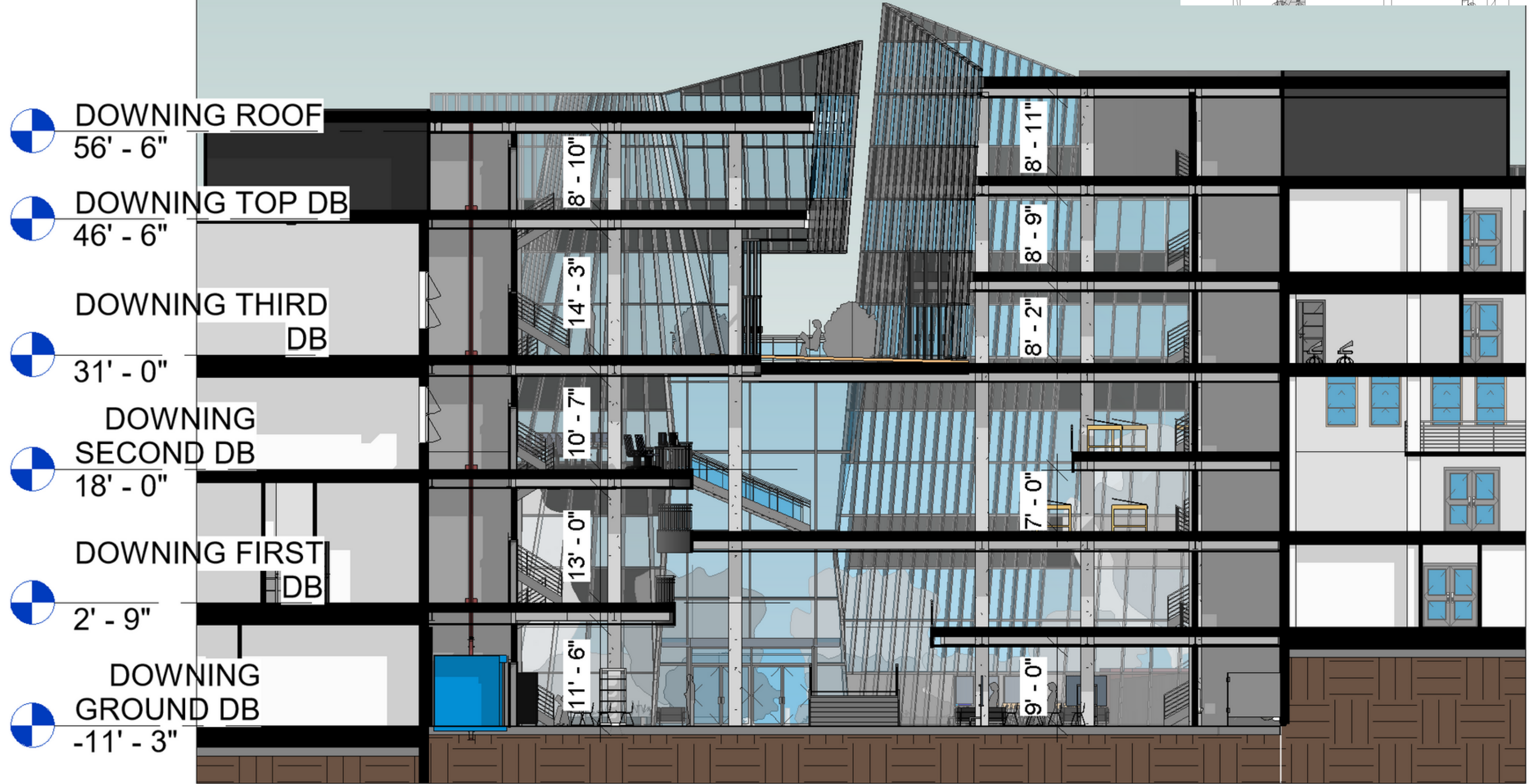
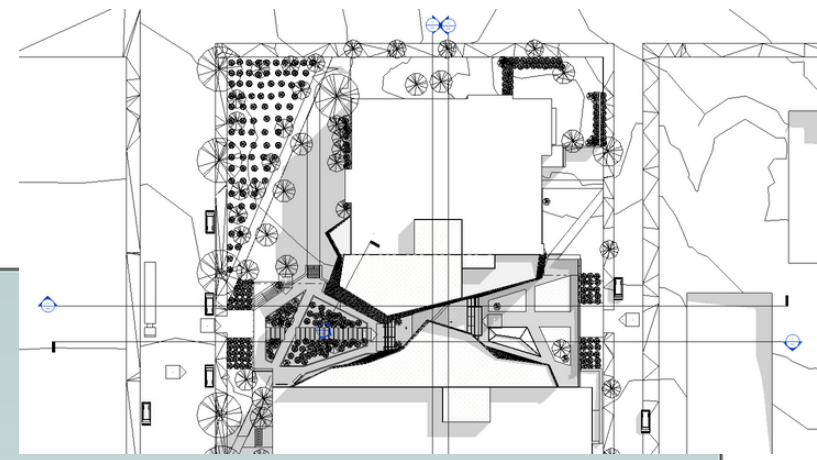


- DOWNING ROOF
56' - 6"
- DOWNING TOP DB
46' - 6"
- DOWNING THIRD DB
31' - 0"
- DOWNING SECOND DB
18' - 0"
- DOWNING FIRST DB
2' - 9"
- DOWNING GROUND DB
-11' - 3"

SECTION: EAST SECTION LOOKING TOWARD 6TH STREET

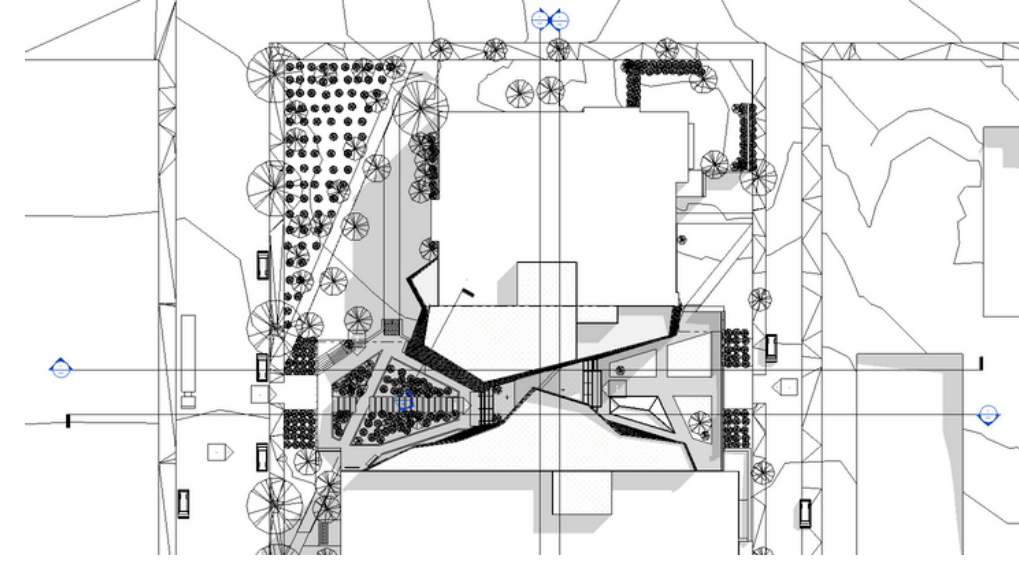


SECTION: WEST SECTION LOOKING TOWARD GEORGIA AVENUE



SECTION: SITE

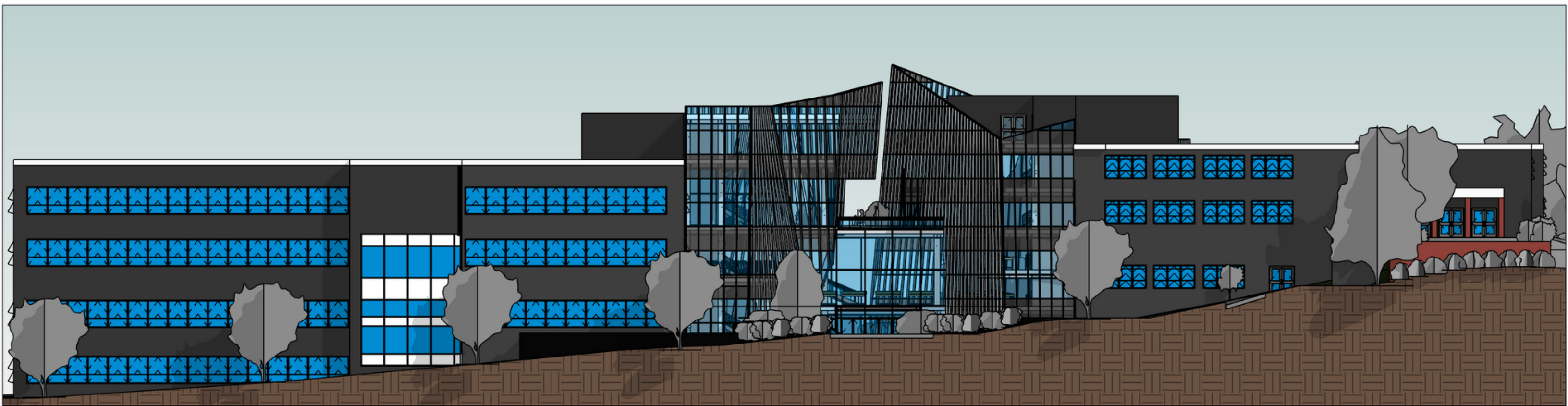
EAST SECTION LOOKING TOWARD 6TH STREET



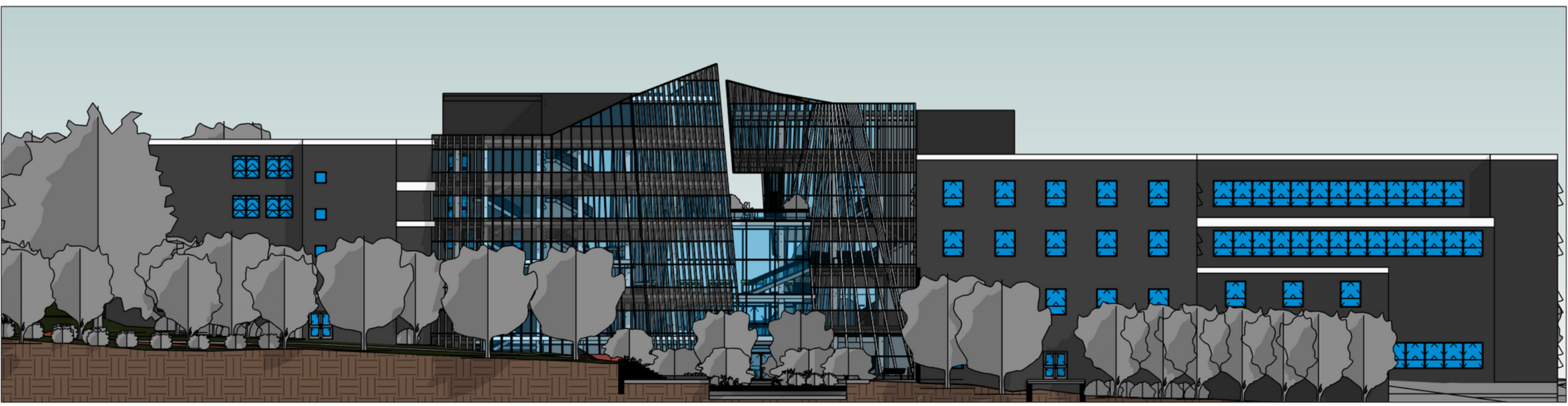
- MACKEY ROOF
61' - 0"
- MACKEY TOP
51' - 5"
- MACKEY SECOND DB
40' - 5"
- MACKEY FIRST DB
30' - 1"
- MACKEY MEZZANINE DB
20' - 0"
- MACKEY GROUND DB
10' - 11"
- MACKEY BASEMENT DB
0' - 0"

MACKEY

LKD

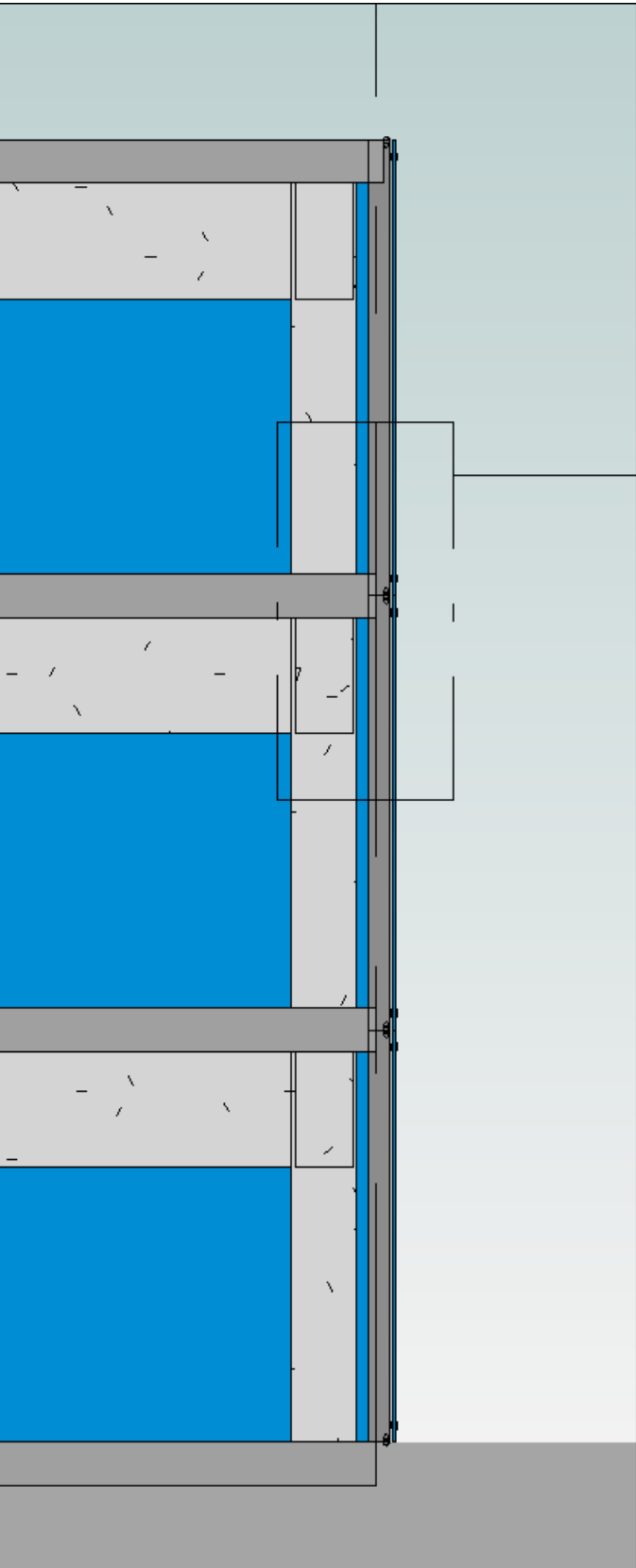


ELEVATION: EAST (6TH ST. ENTRANCE)

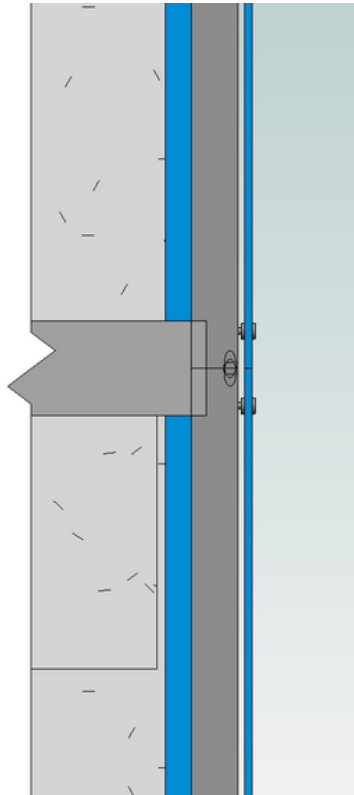


ELEVATION: WEST (GA ENTRANCE)

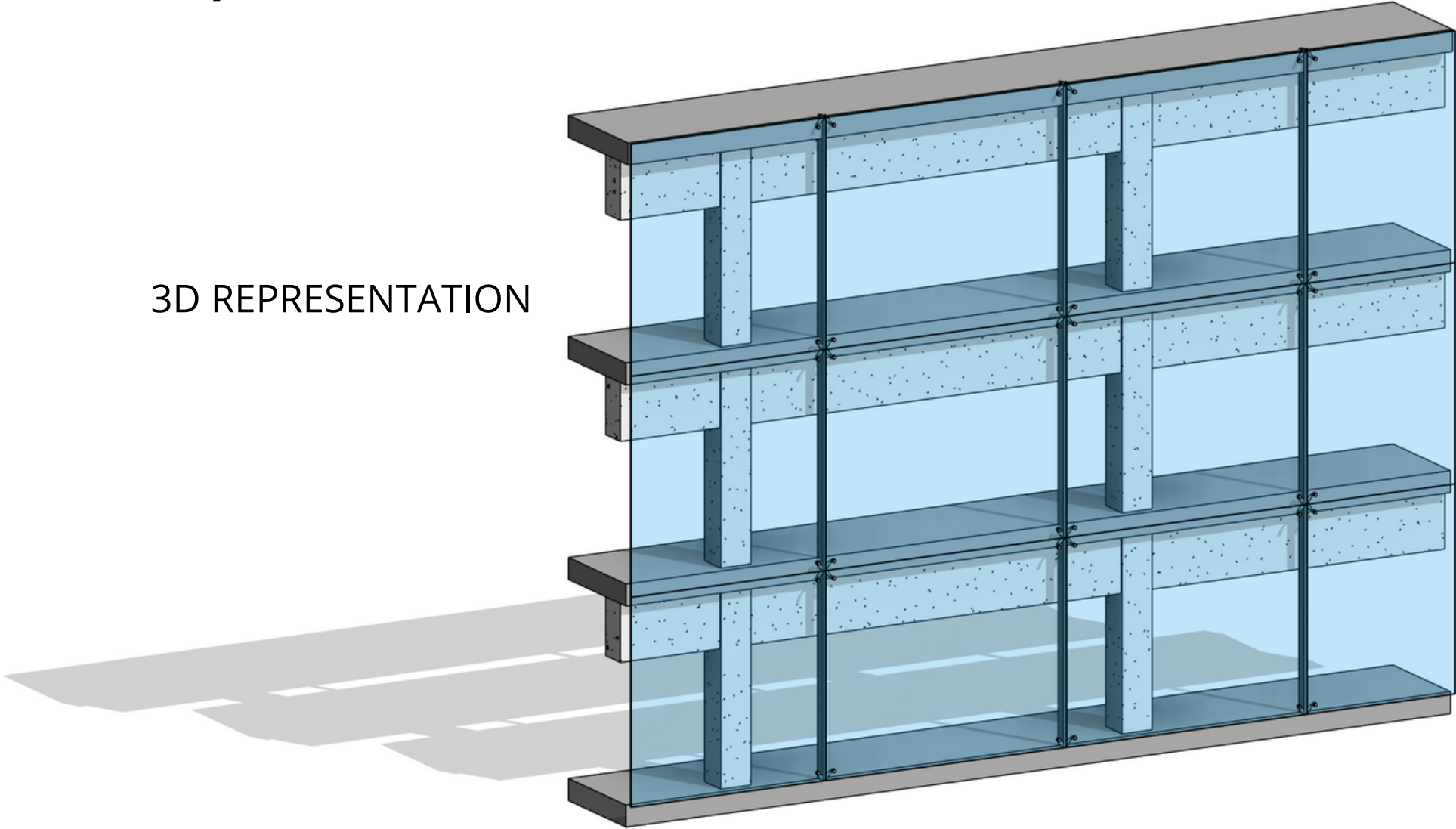
DETAIL MOMENT: BAY STUDY (PROPOSED)



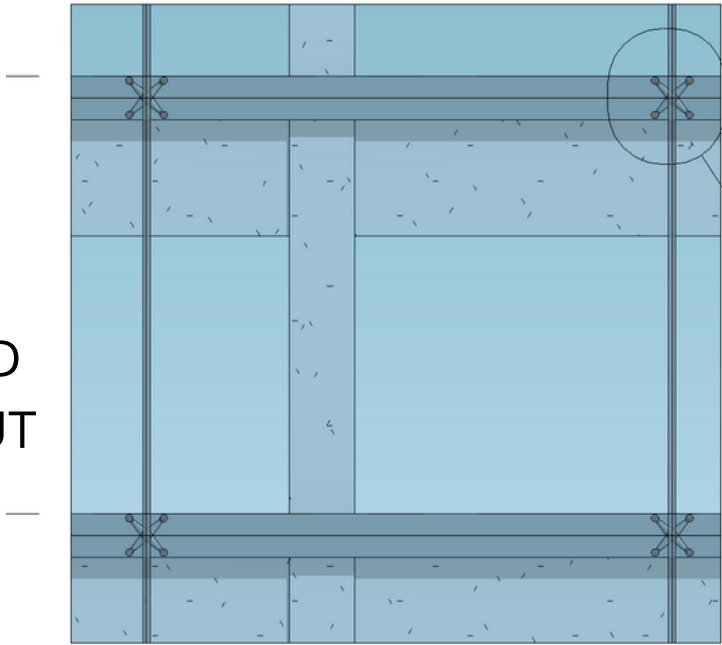
SECTION



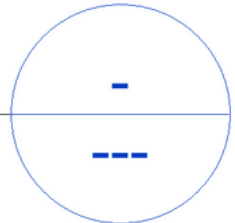
3D REPRESENTATION



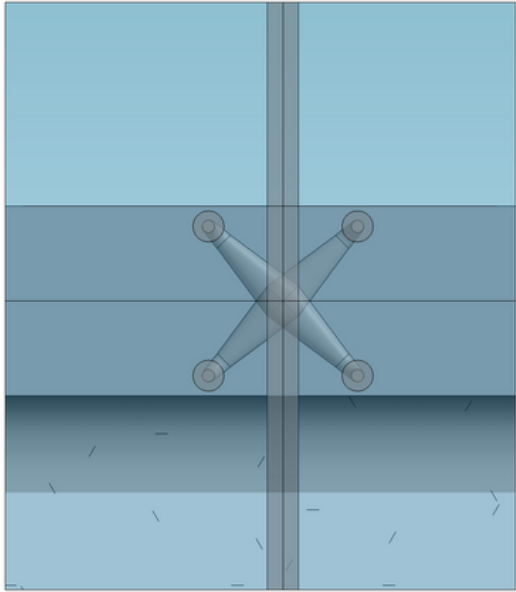
ELEVATION AND
DETAIL CALLOUT



Level 3
20' - 0"



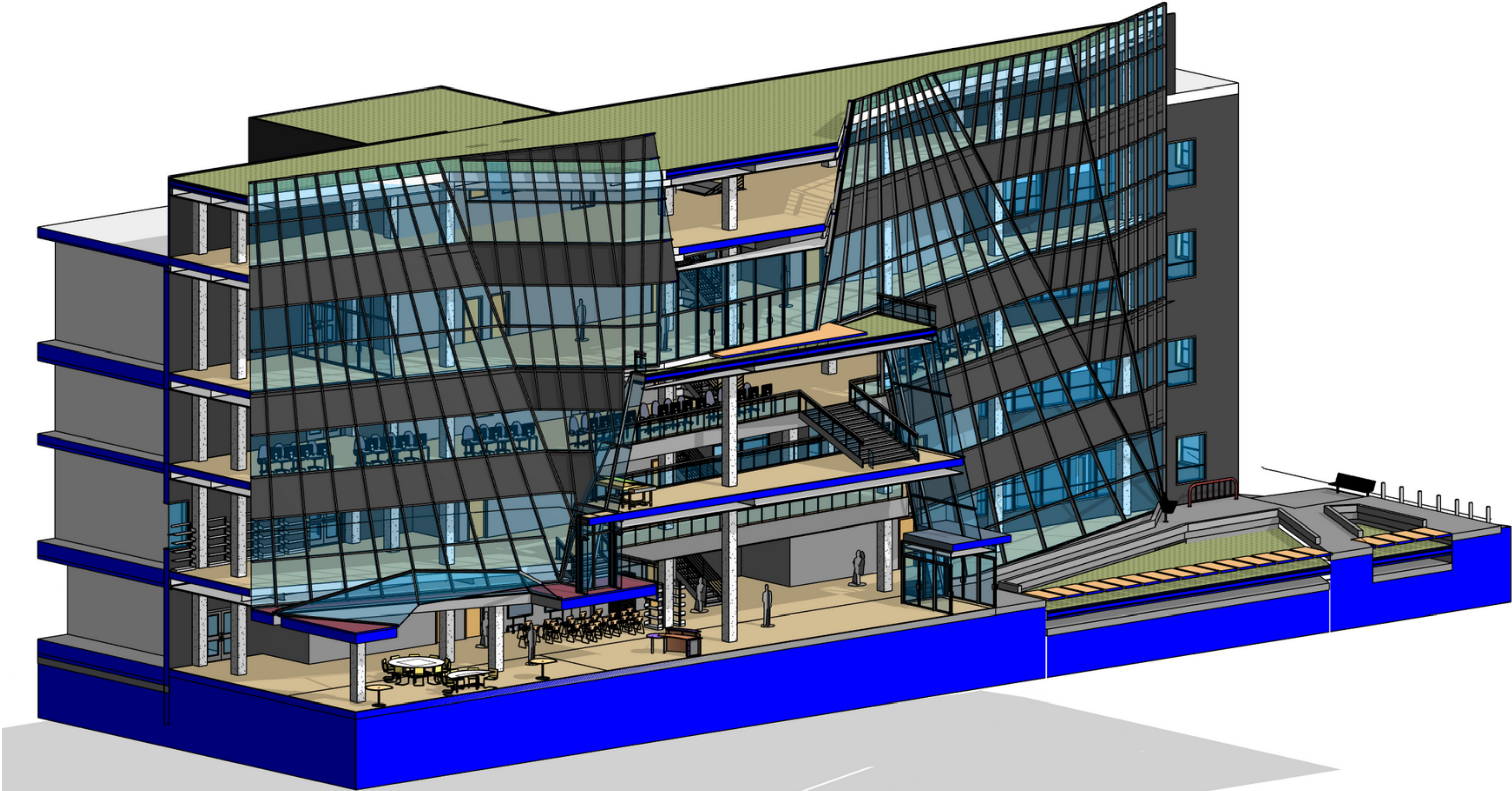
Level 2
10' - 0"



3D SECTION

EACH SIDE OF THE GEM RETAINS ITS OWN PROGRAM, BUT MAKES ACCESS OF SHARED SPACES AND CONNECTIONS FROM THE BASEMENT TO FIRST LEVEL ABOVE GROUND.

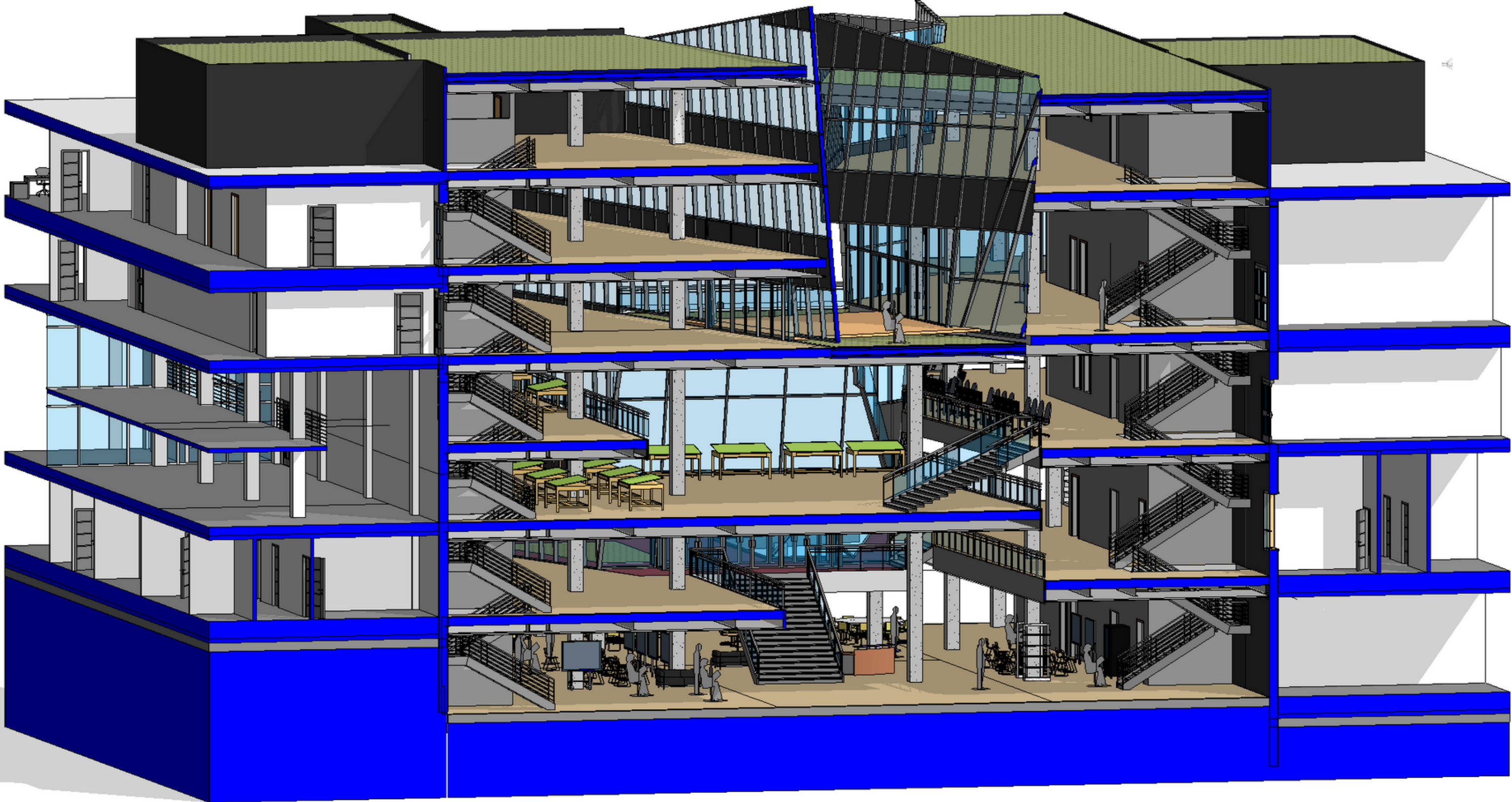
A PERSPECTIVE VIEW OF THE LKD SIDE



3D SECTION

LOOKING TOWARD 6TH STREET

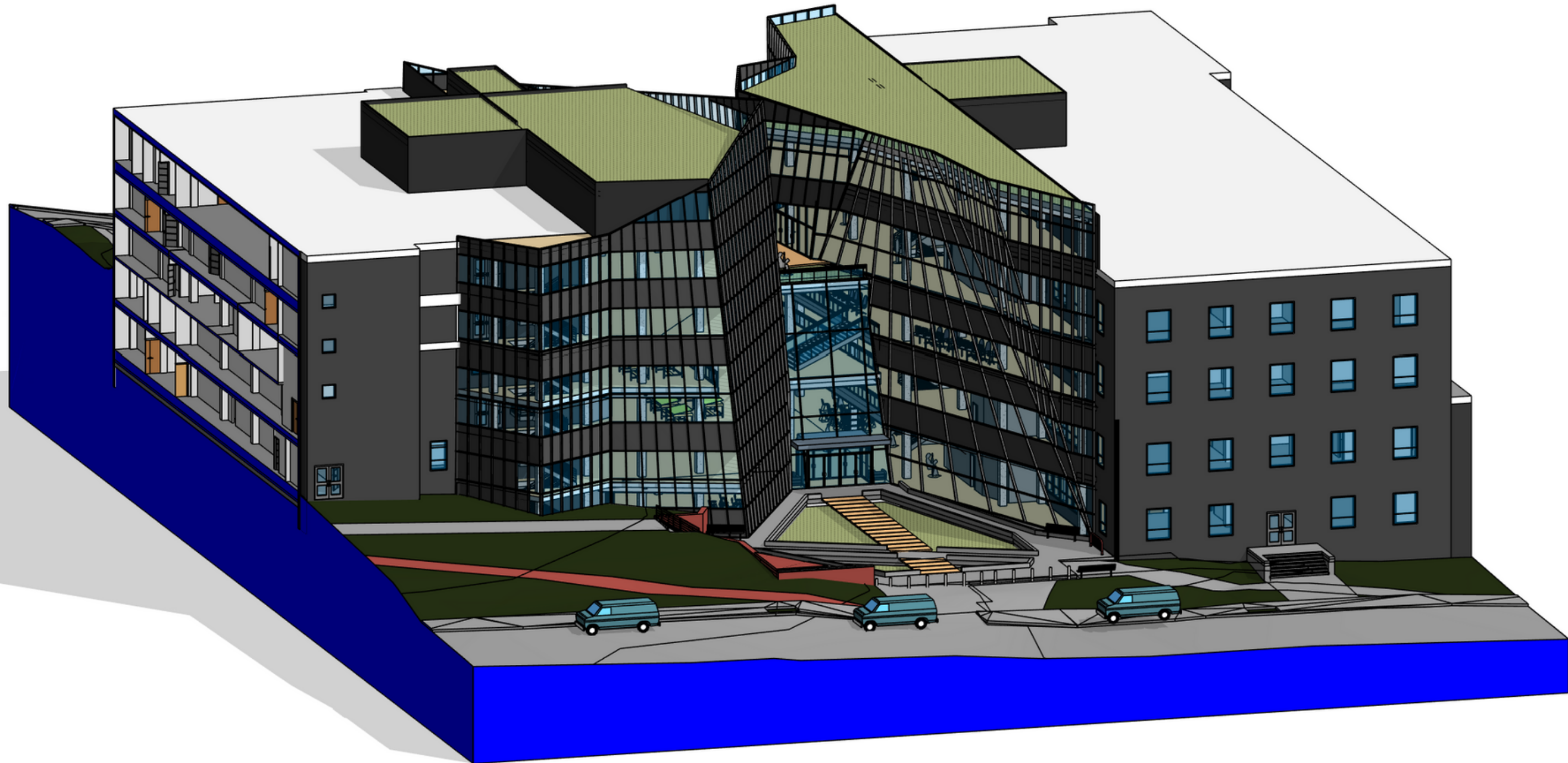
THE GEM BRIDGES THE GAP BETWEEN THE LEVEL CHANGES IN MACKAY AND LKD BY MEANS OF MEZZANINES, ROOF DECKS, STAIRCASES AND ELEVATORS.



BUILDING MODEL

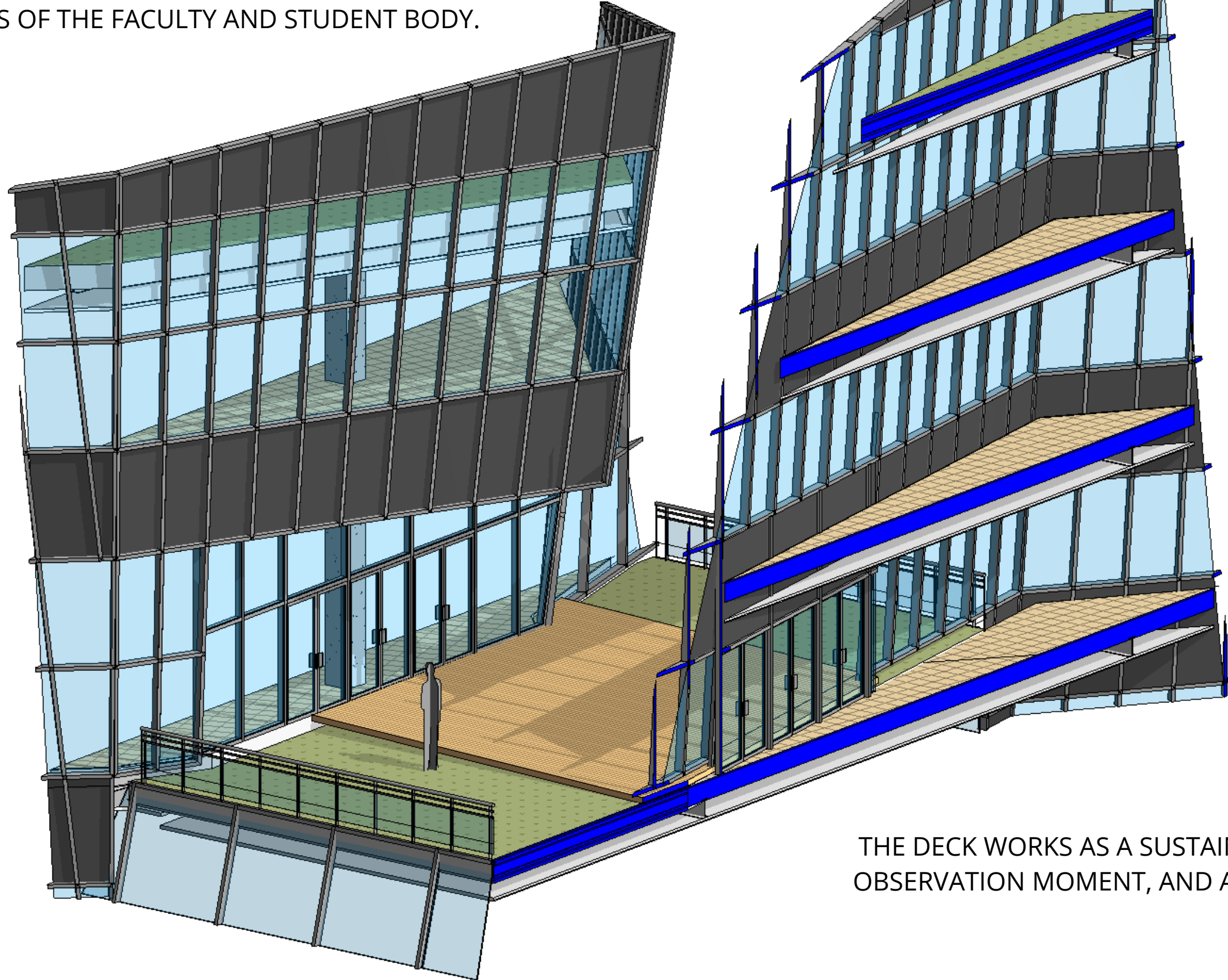
GREEN ROOFS AND RAIN GARDENS ARE INCORPORATED INTO THIS ADDITION TO HELP MANAGE RAINWATER AND PROMOTE SUSTAINABILITY.

THE ADDITION GROWS OFF OF THE EXISTING BUILDING IN A SIMILAR FASHION TO HOW CRYSTALS GROW IN NATURE. LIKE A POLISHED GEMSTONE, ITS FACADE IS TRANSLUCENT, PERMITTING DAYLIGHT INTO THE NEW AND OLD BUILDINGS. THIS WOULD CREATE A HEALTHIER ENVIRONMENT FOR BUSY STUDENTS.



ROOF DECK

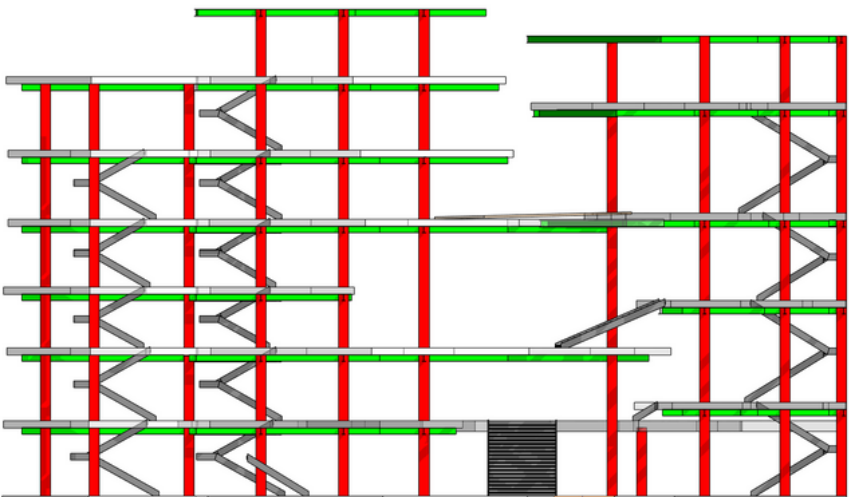
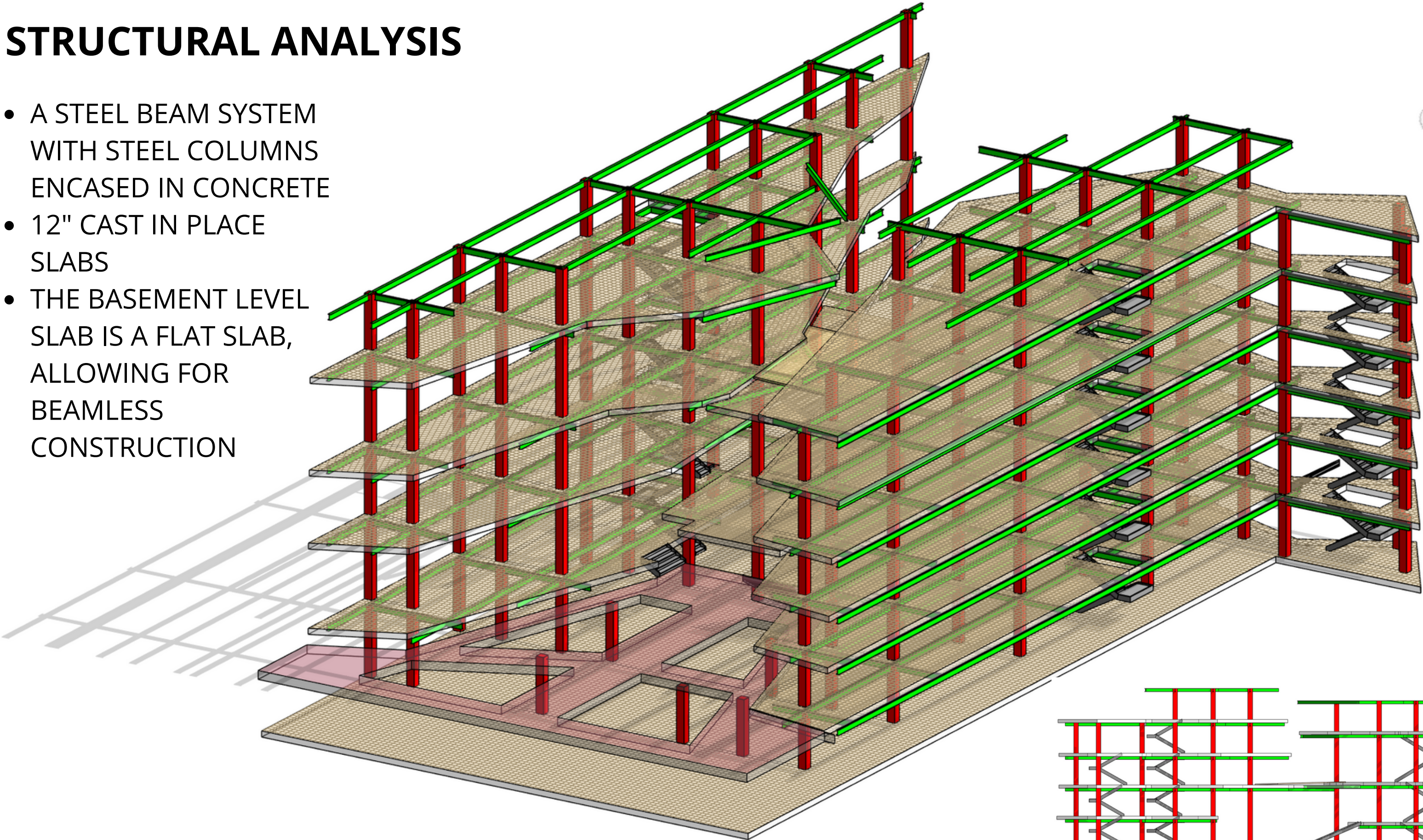
THE OUTDOOR ROOF DECK SERVES AS A CREATIVE PLACEMAKING SPACE IN THIS DESIGN. IT COULD BE USED FOR CLASSES, OR FOR A PRIVATE RELAXING BREAK FOR MEMEBERS OF THE FACULTY AND STUDENT BODY.



THE DECK WORKS AS A SUSTAINABLE STRATEGY, AN OBSERVATION MOMENT, AND AN AMENITY FOR THE COLLEGE.

STRUCTURAL ANALYSIS

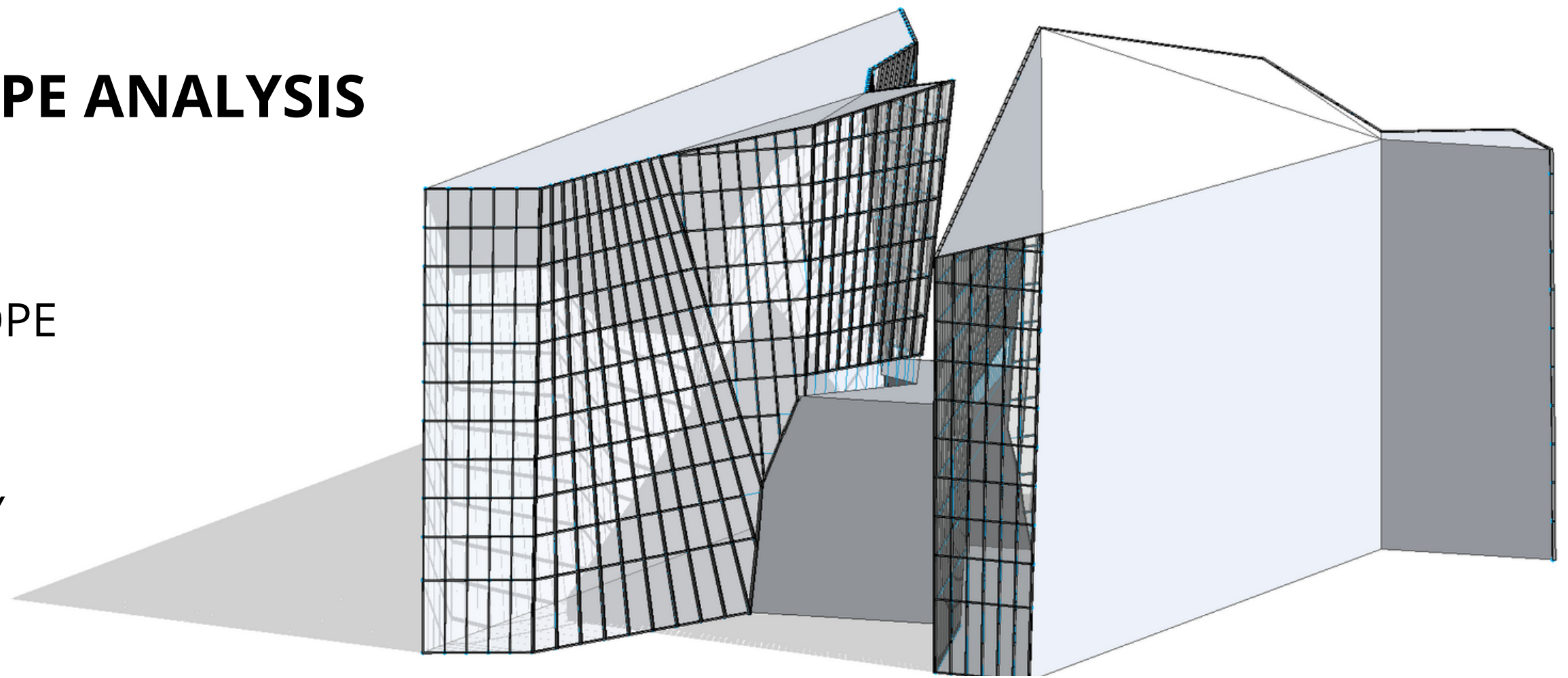
- A STEEL BEAM SYSTEM WITH STEEL COLUMNS ENCASED IN CONCRETE
- 12" CAST IN PLACE SLABS
- THE BASEMENT LEVEL SLAB IS A FLAT SLAB, ALLOWING FOR BEAMLESS CONSTRUCTION



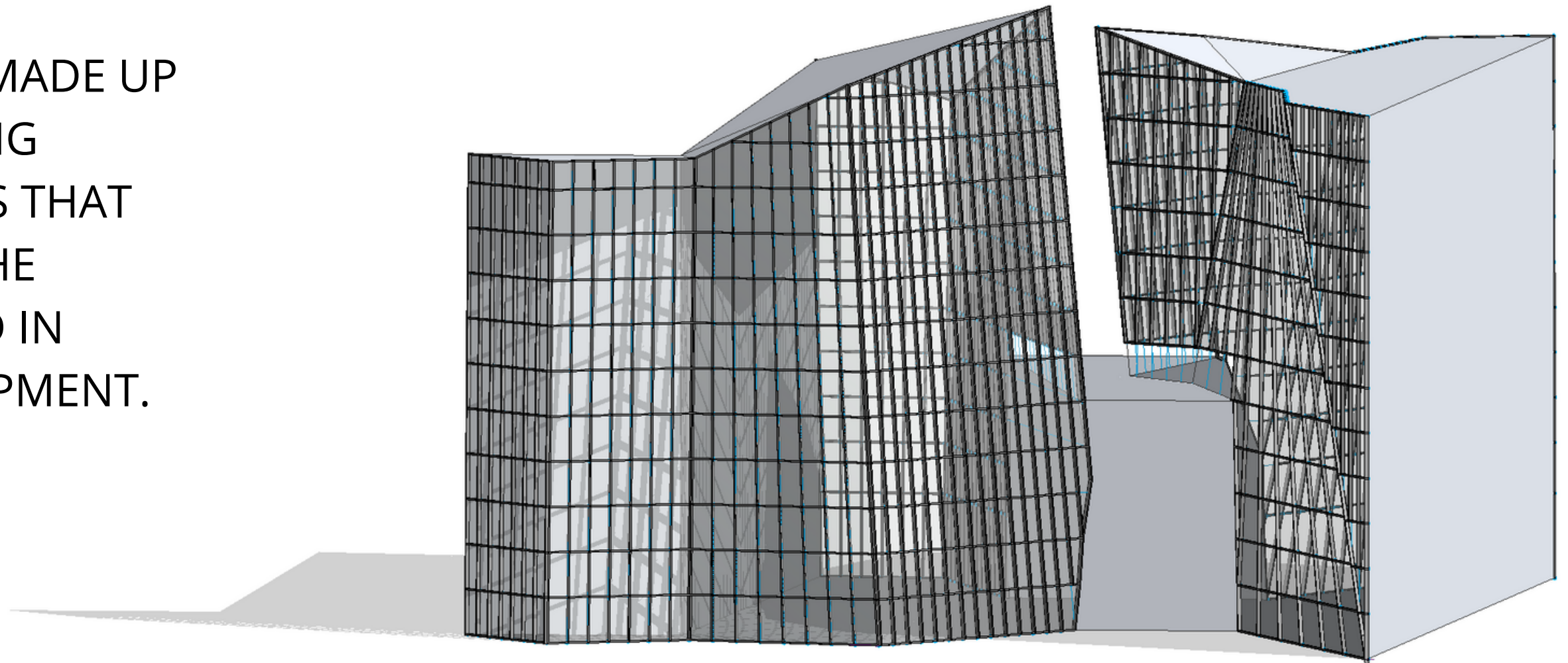
ELEVATION LOOKING TOWARD GEORGIA AVE

BUILDING ENVELOPE ANALYSIS

THE BUILDING ENVELOPE WAS DESIGNED AS A SPECIAL FAMILY, CREATED SPECIFICALLY FOR THIS PROJECT.

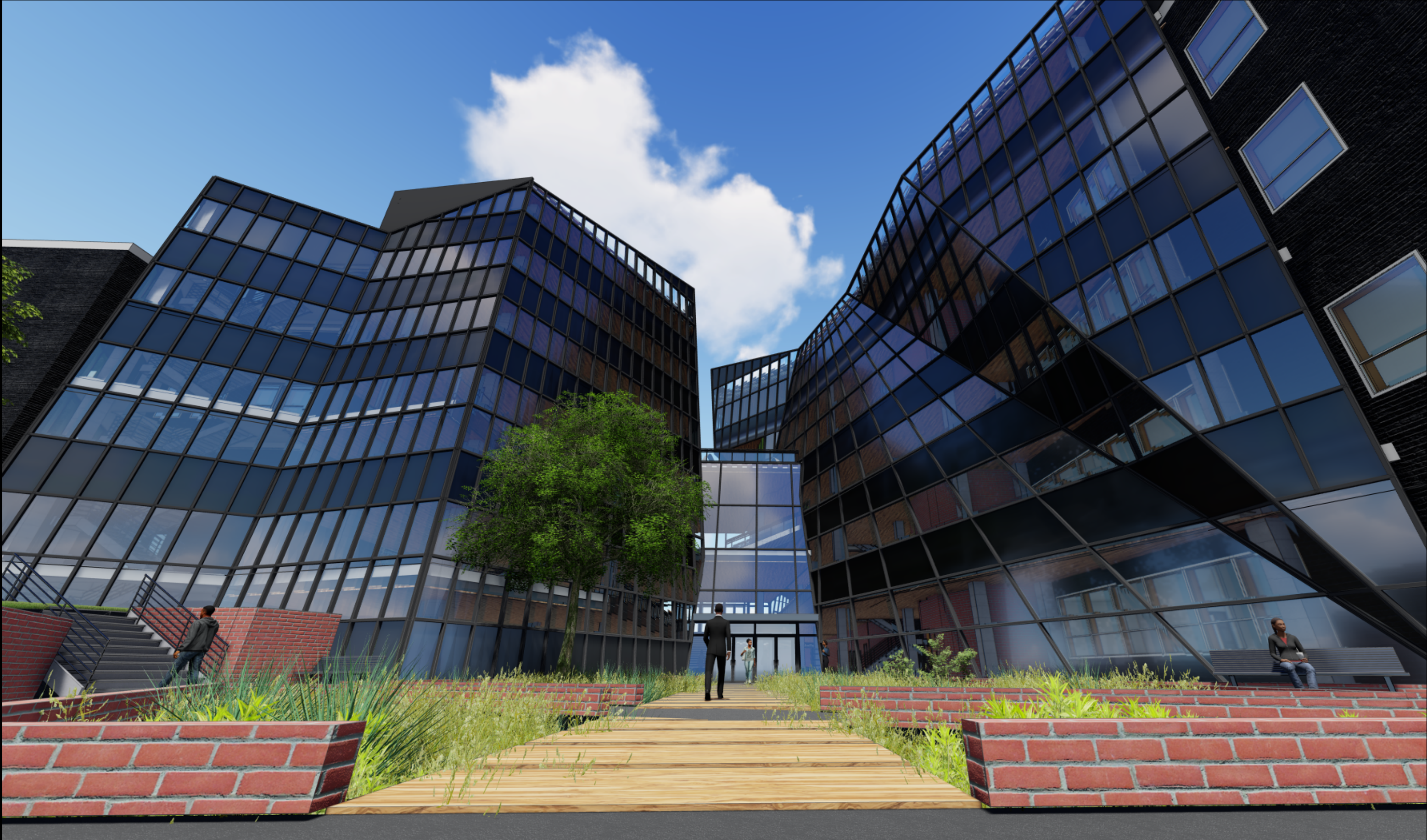


THE FACADE IS MADE UP OF DOUBLE HUNG CURTAIN PANELS THAT CONFORM TO THE SHAPES DEFINED IN DESIGN DEVELOPMENT.



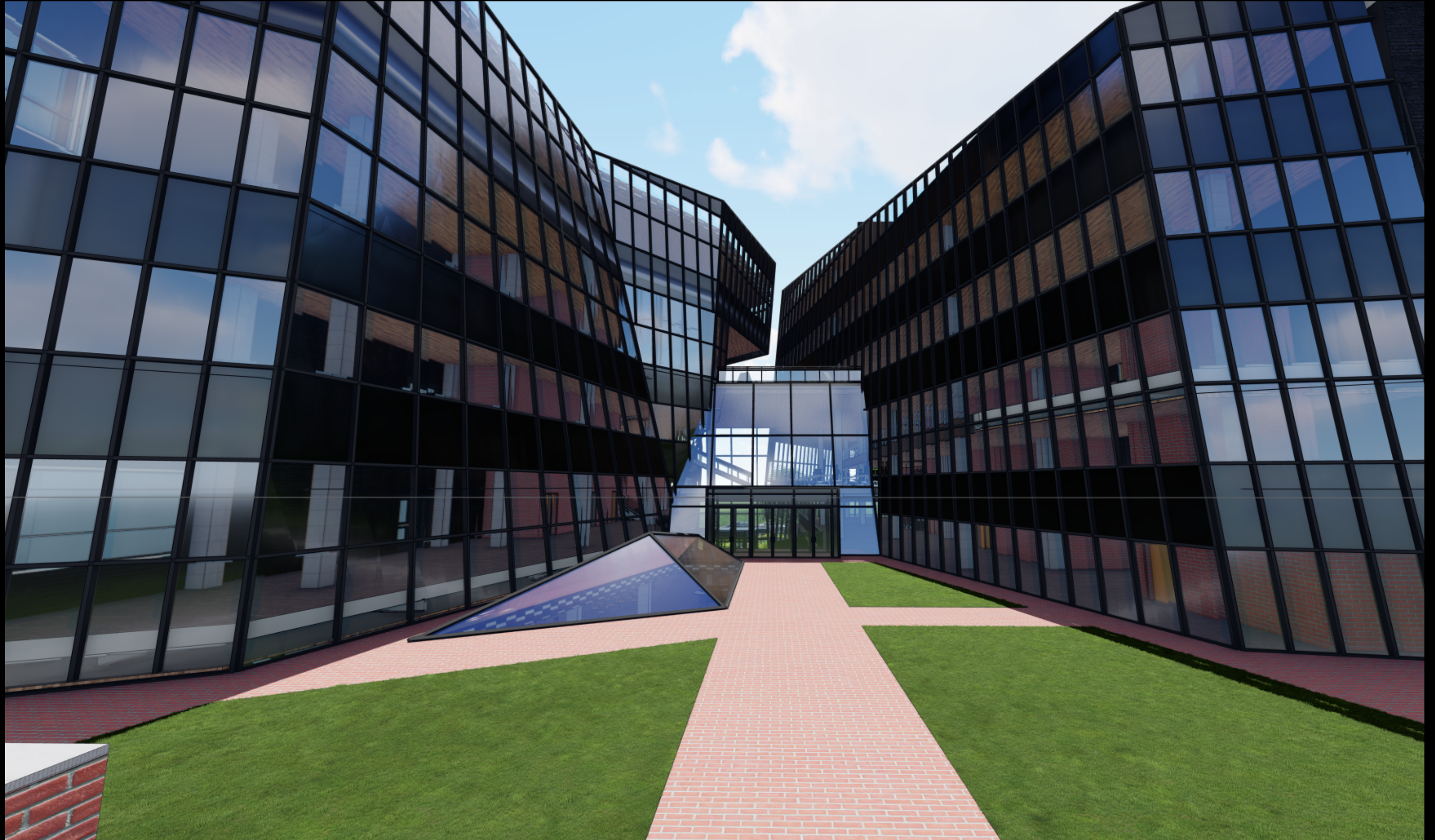
VIEWS

OUTDOOR COURTYARD AND ENTRY SEQUENCE (GEORGIA AVENUE)



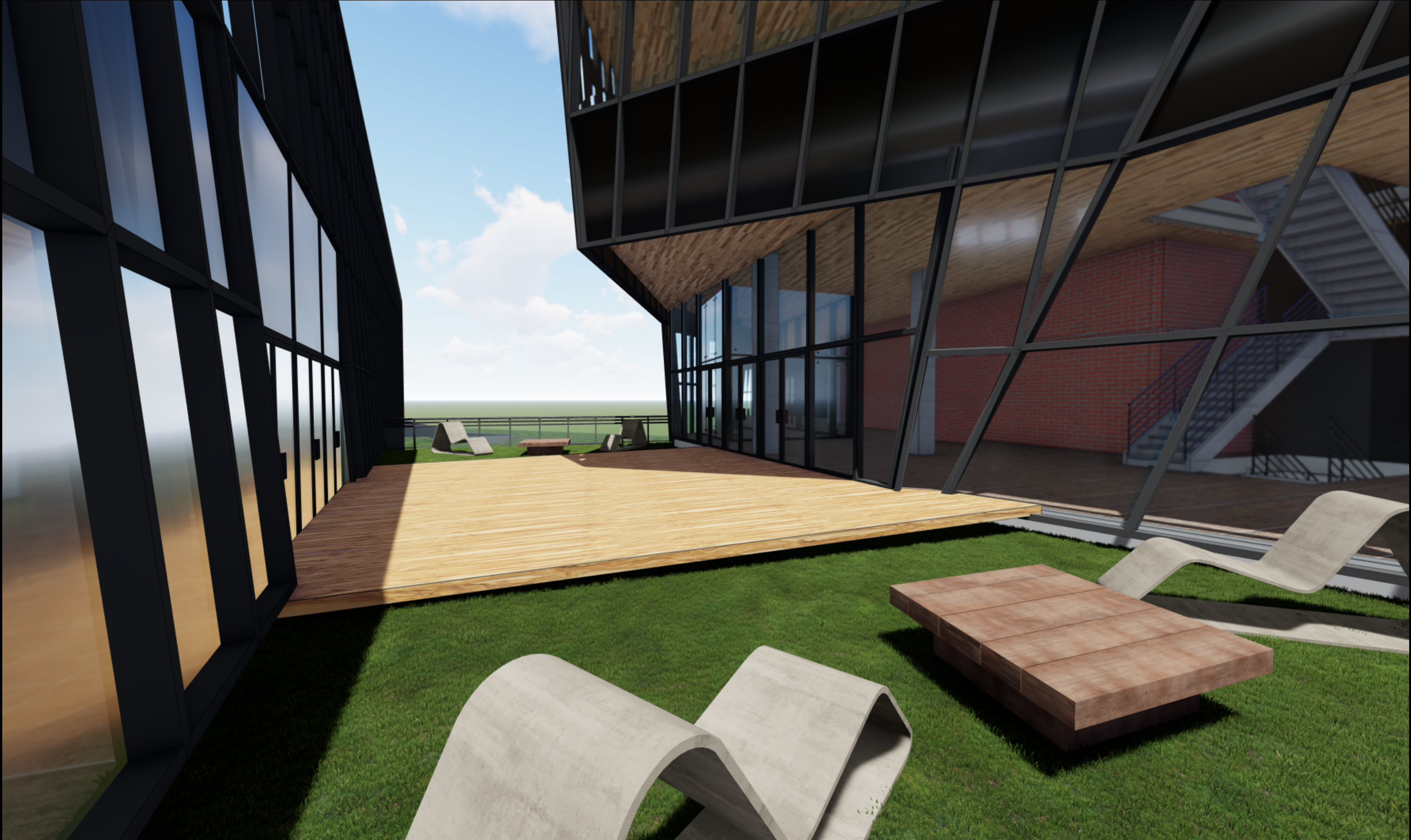
VIEWS

SITTING COURTYARD AND ENTRY SEQUENCE (6TH STREET)



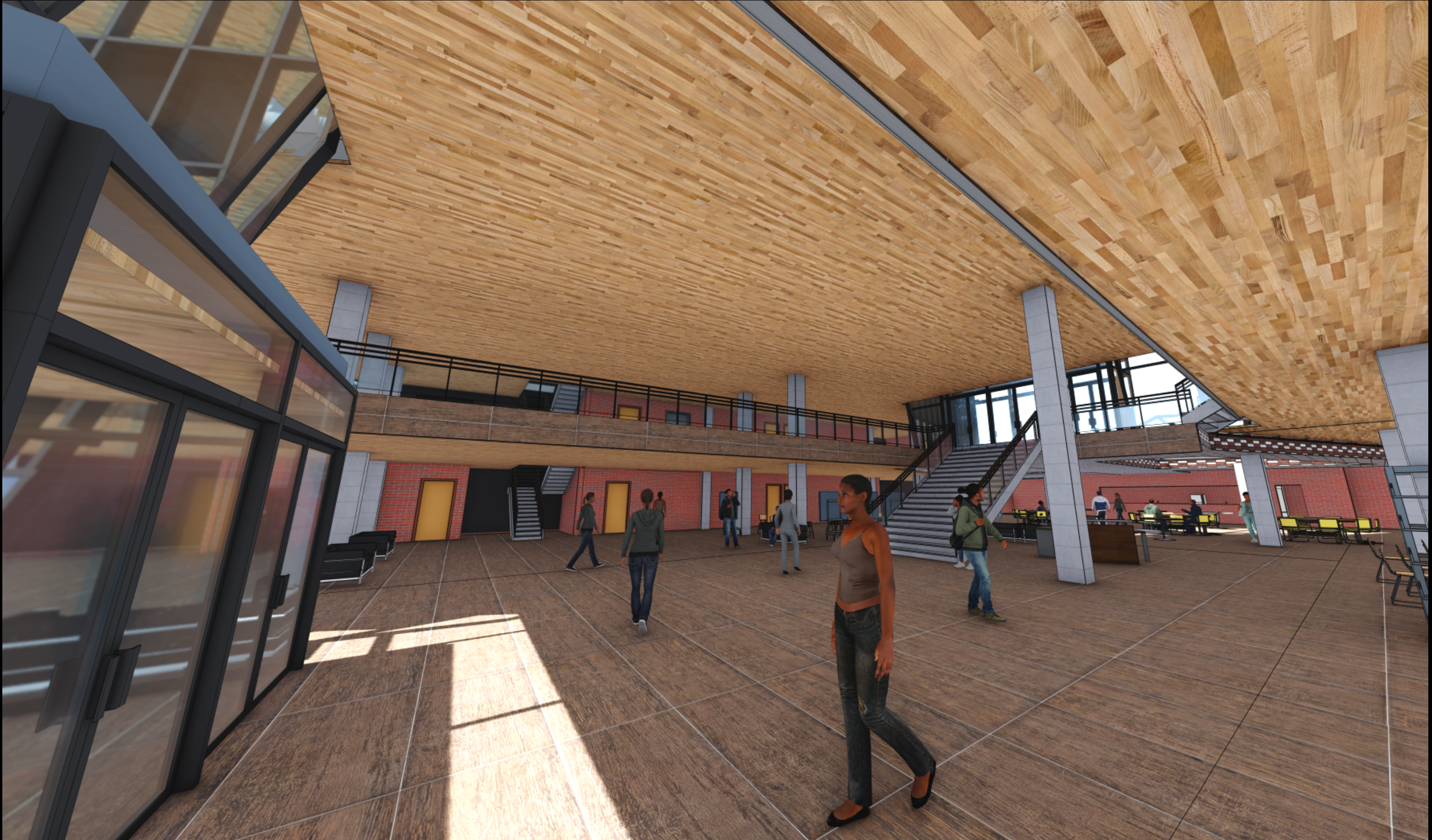
VIEWS

STUDENT GREEN ROOF AND OUTDOOR LOUNGE



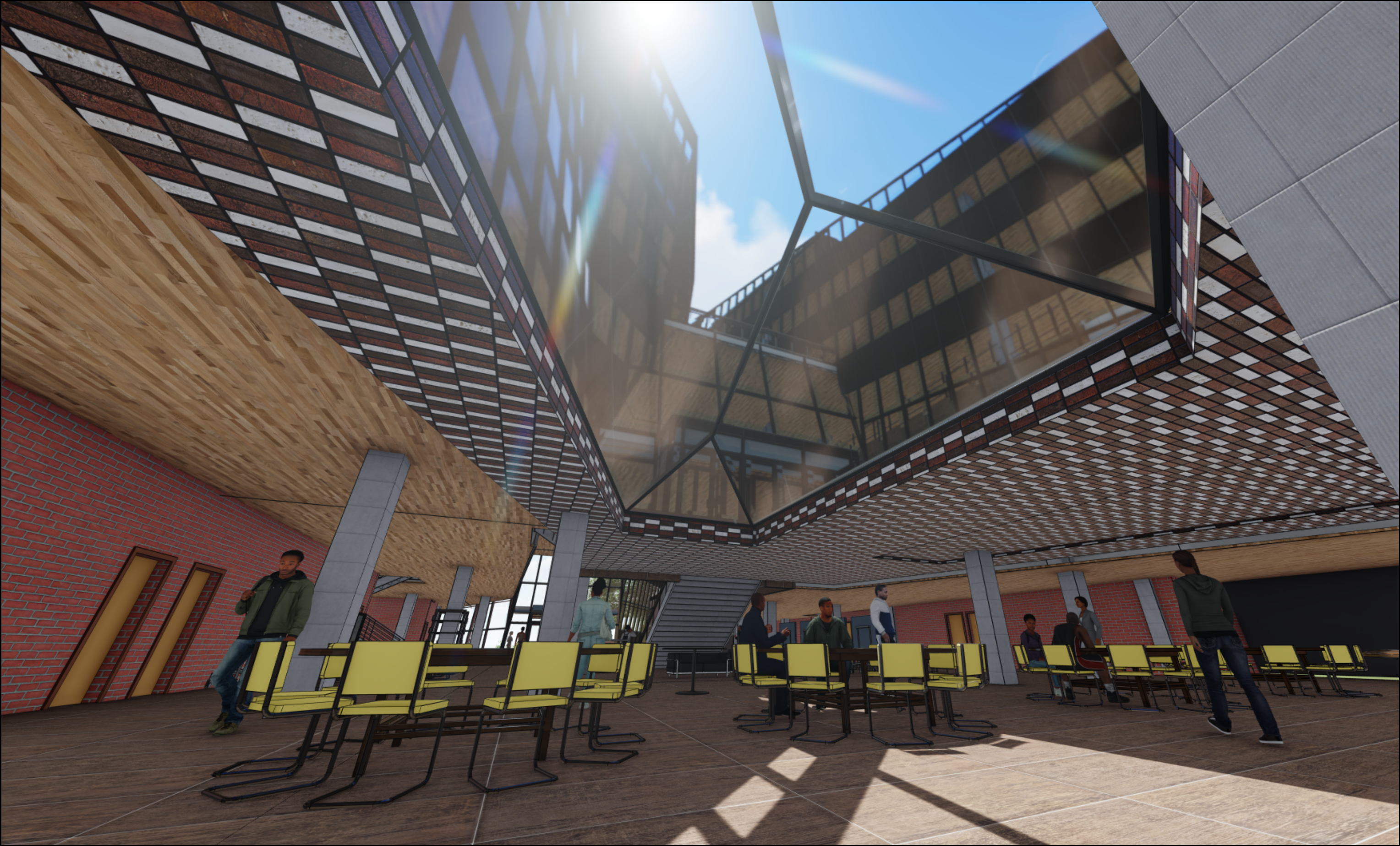
VIEWS

GRAND LOBBY AND BASEMENT LEVEL



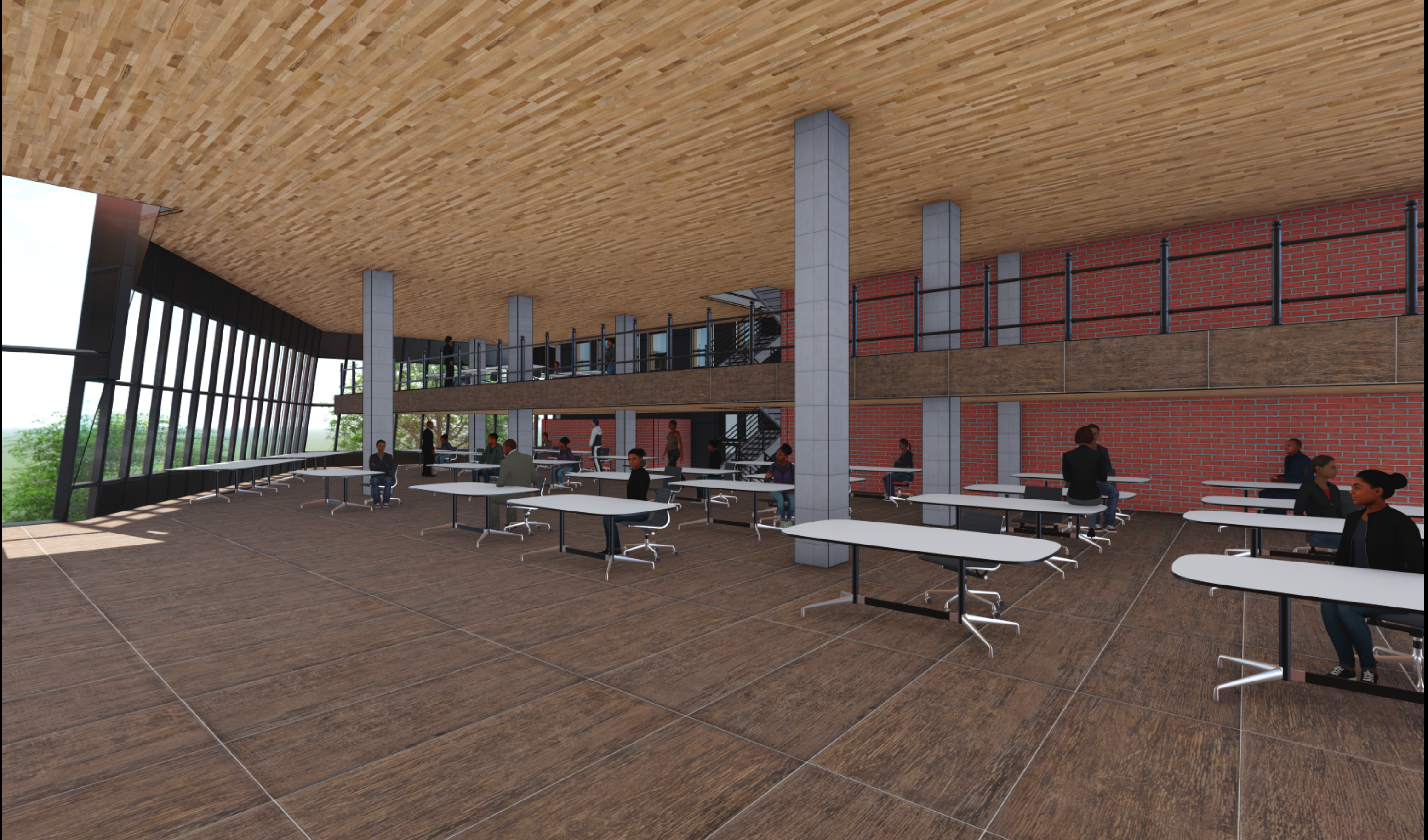
VIEWS

CAFETERIA AND SKYLIGHT



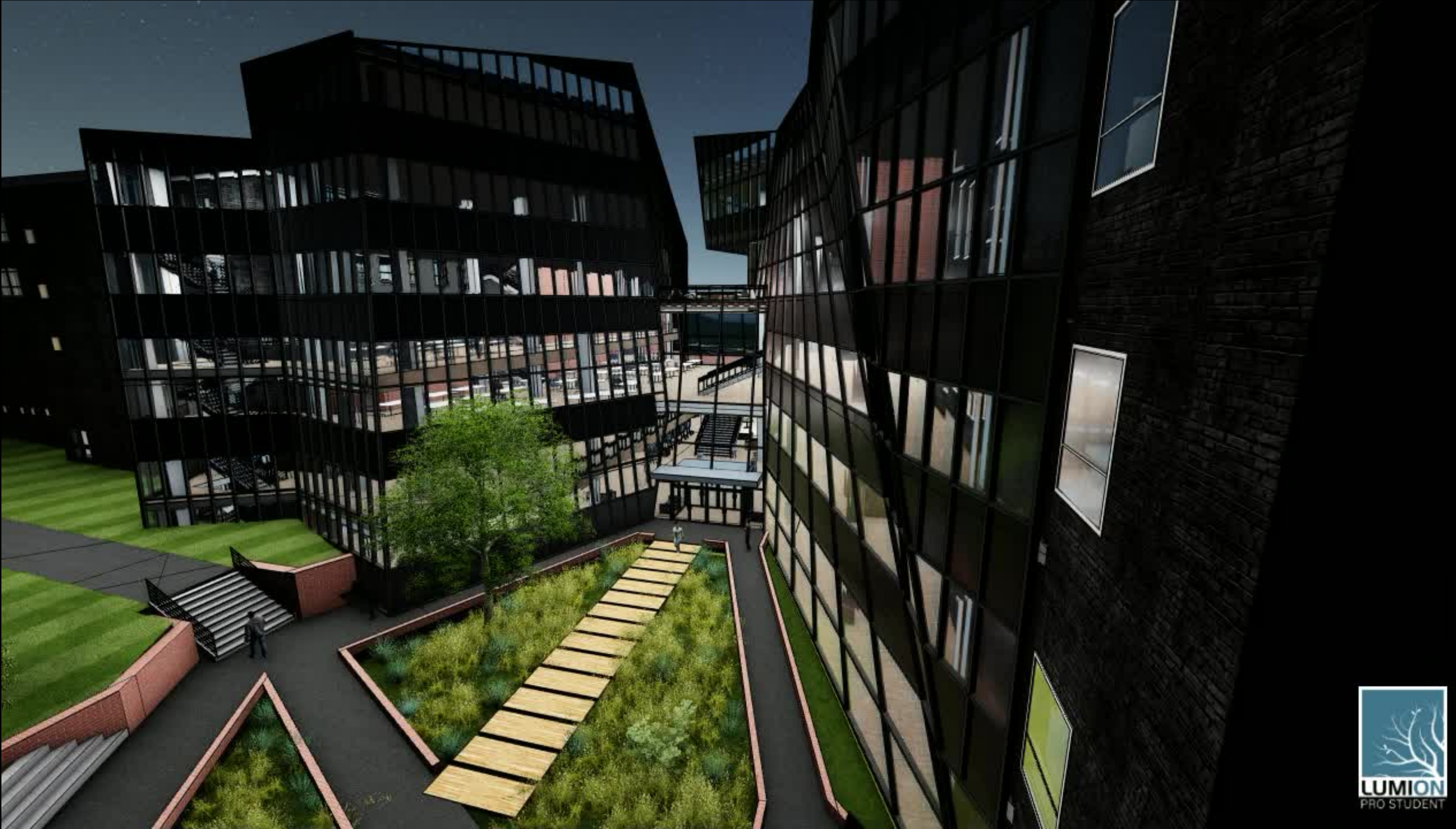
VIEWS

EXTENDED ARCHITECTURAL STUDIO SPACES



VIEWS

LIGHTING EXAMPLES AND STRATEGIES--NIGHT VIEW



VIRTUAL TOUR

THANK YOU!

