

GLENDALE COMMUNITY COLLEGE

MIKAYEL SARGSYAN



ARCHITECTURAL PORTFOLIO

SKILLS:

CONTENT

PG.

REVIT



3DS MAX



AUTOCAD



TWINMOTION



SKETCHUP



RHINO



2025 STEEL COMPETITION

1 - 4

VILLA SAVOYE CASE STUDY

5 - 6

ARCH 120 - RISING PHEONIX - INFINITE TRACK

7 - 8

DENVER SINGLE-STAIR HOUSING COMPETITION
BY BUILDNER

9 - 10

ACHIEVEMENTS

September, 2024:

The Denver Single-Stair Housing Challenge by Buildner

March, 2025:

Participant of the 2025 STEEL DESIGN STUDENT COMPETITION
25th Annual ACSA/AISC Student Competition

July, 2025:

Receiving GCC's Architectural Drafting and
Design Certificate

August, 2025:

Associates degree - Architectural Drafting & Design - Associate in
Science

ARCH 125 - PARALYMPIC TRAINING FACILITY

11 - 13

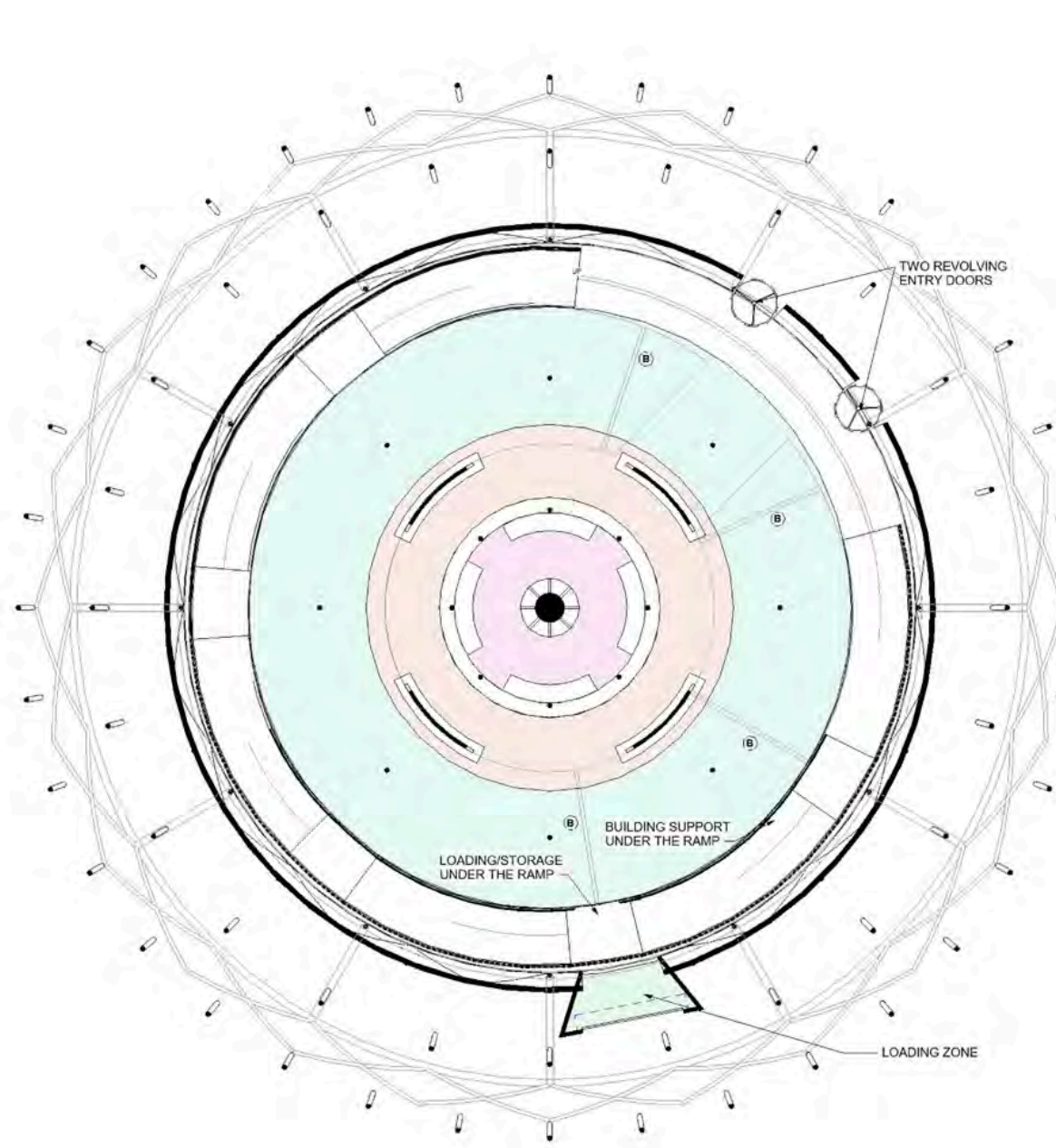
ARCH 135 - MACARTHUR PARK MIX-USE PROJECT

14 - 19

STEEL CYCLONE

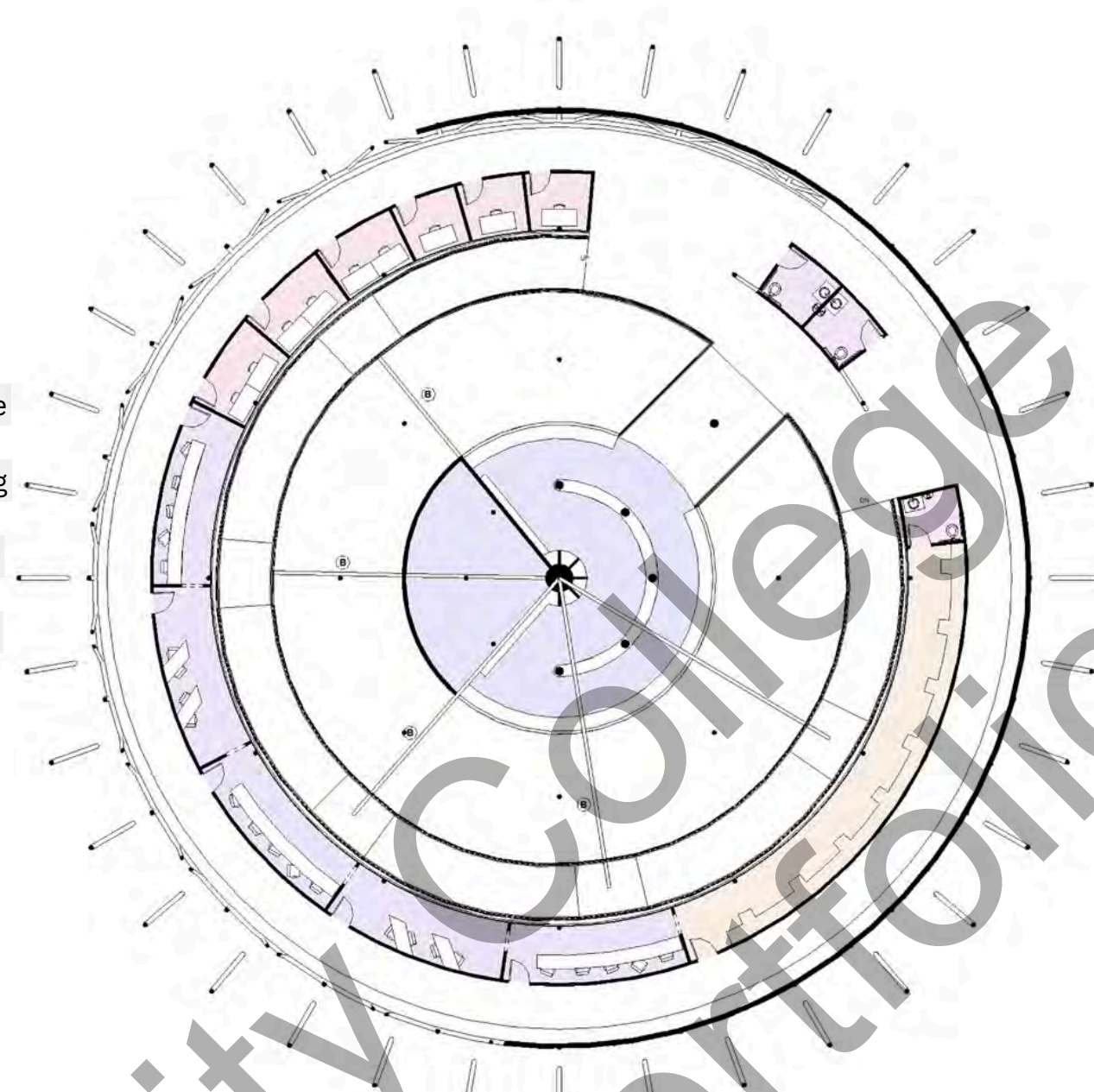
Miami, Florida, a place where sun-drenched beaches and electric nightlife meet destructive tornadoes. Florida ranks 4th among all U.S. states in the frequency of tornado occurrences. Inspired by the powerful form and scale of cyclones, this project symbolizes a beacon of knowledge and freedom for the community, offering a dynamic space to read, study, learn, connect, dine, and even explore the universe in its on-site planetarium.



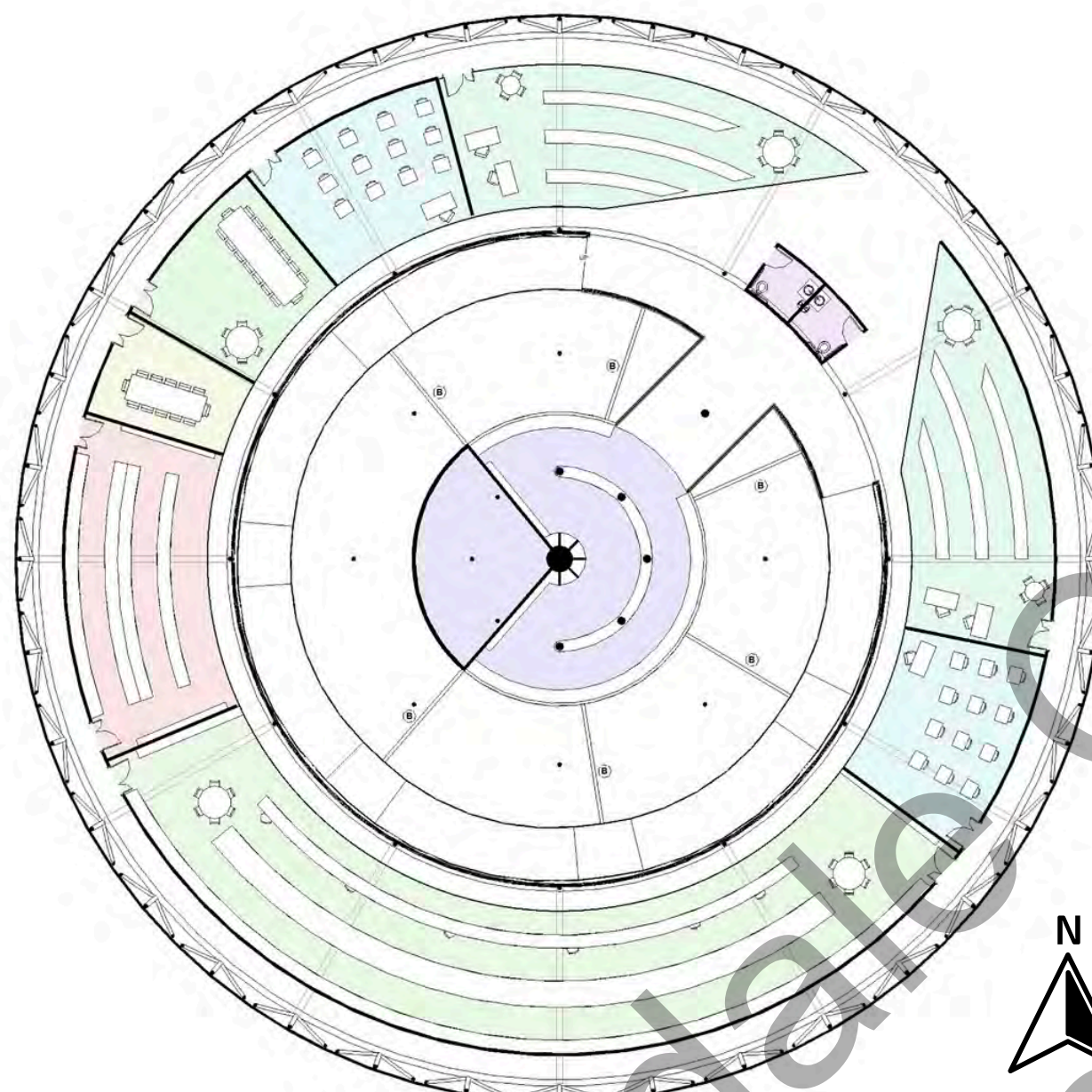


- Room Legend
- Collections
 - Information/Checking-Out Desk
 - Loading Zone
 - Lobby/Seating Area

Level 1, or the ground floor, includes the lobby with an information and checkout desk. It also serves as the loading zone for trucks and deliveries. This level contains collection areas as well. As you move up the ramp to the second floor, the floor space expands. This level features a public reading area and acoustically enclosed study rooms. Both public and staff restrooms are available, along with a staff office and lounge. The wall on the second floor opens to the outside and is not enclosed by a window, connecting the interior with the outdoors.

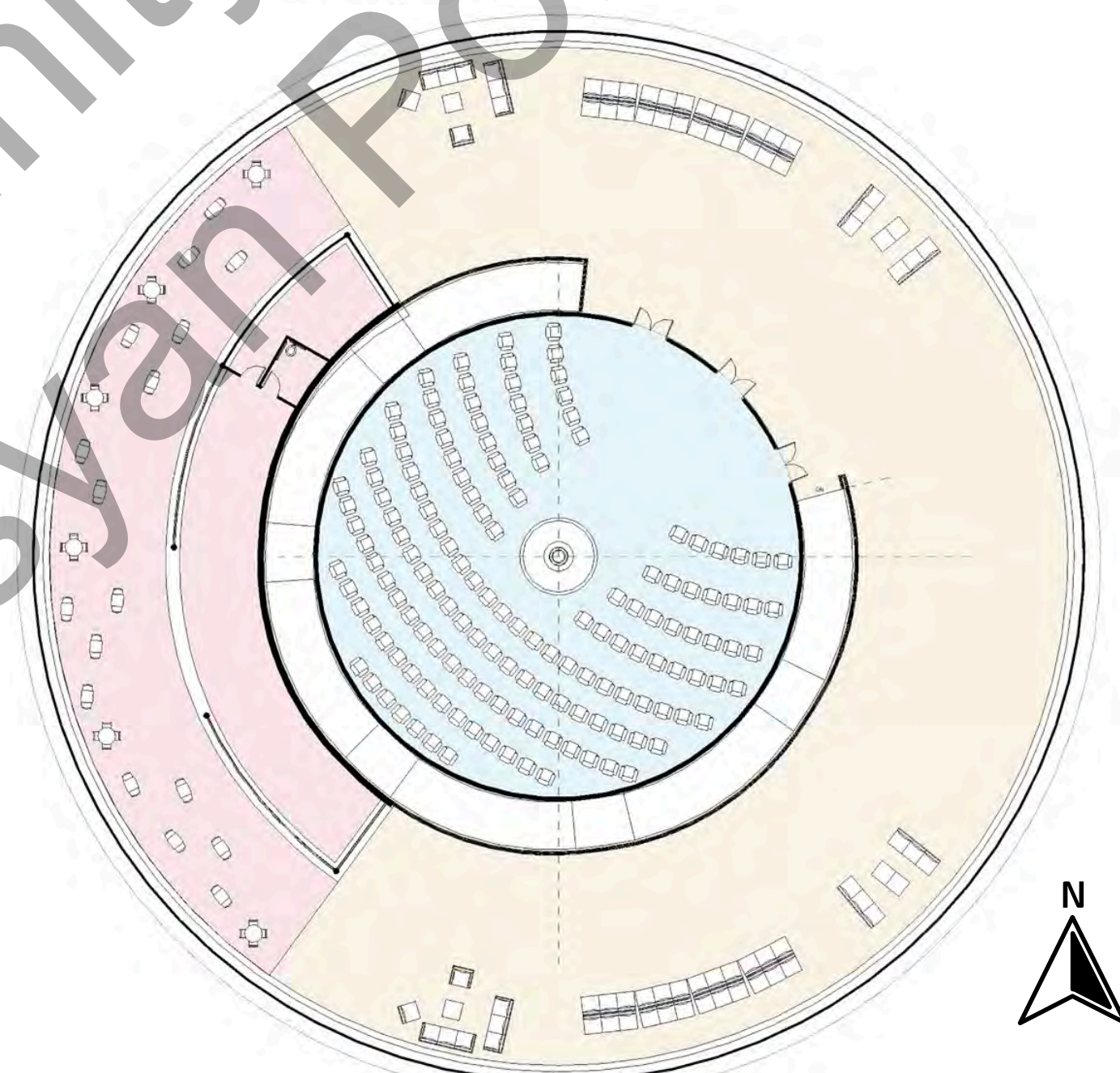


- Room Legend
- Acoustically closed private study spaces
 - Public Restroom
 - Reading Area
 - Staff Lockers & Lounge
 - Staff Office
 - Staff Restroom

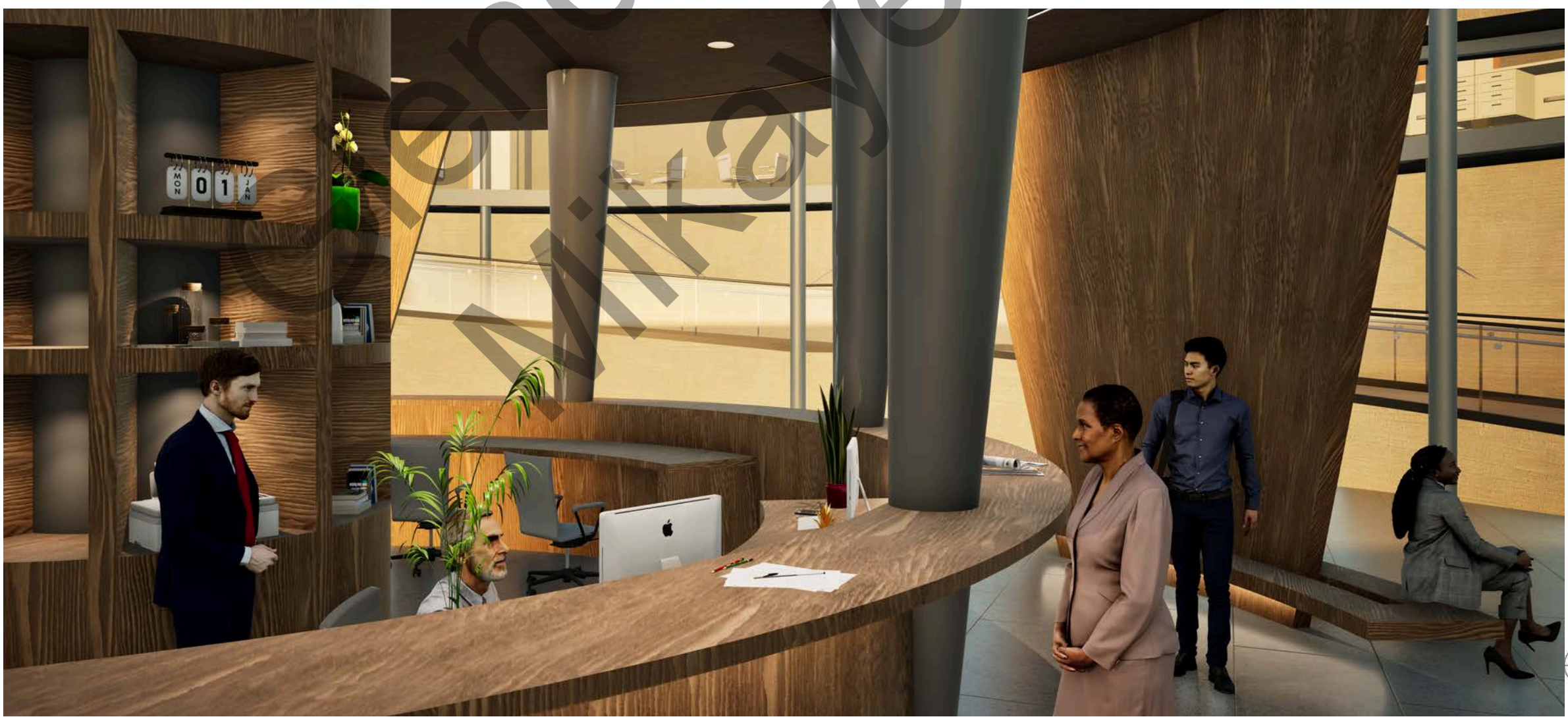


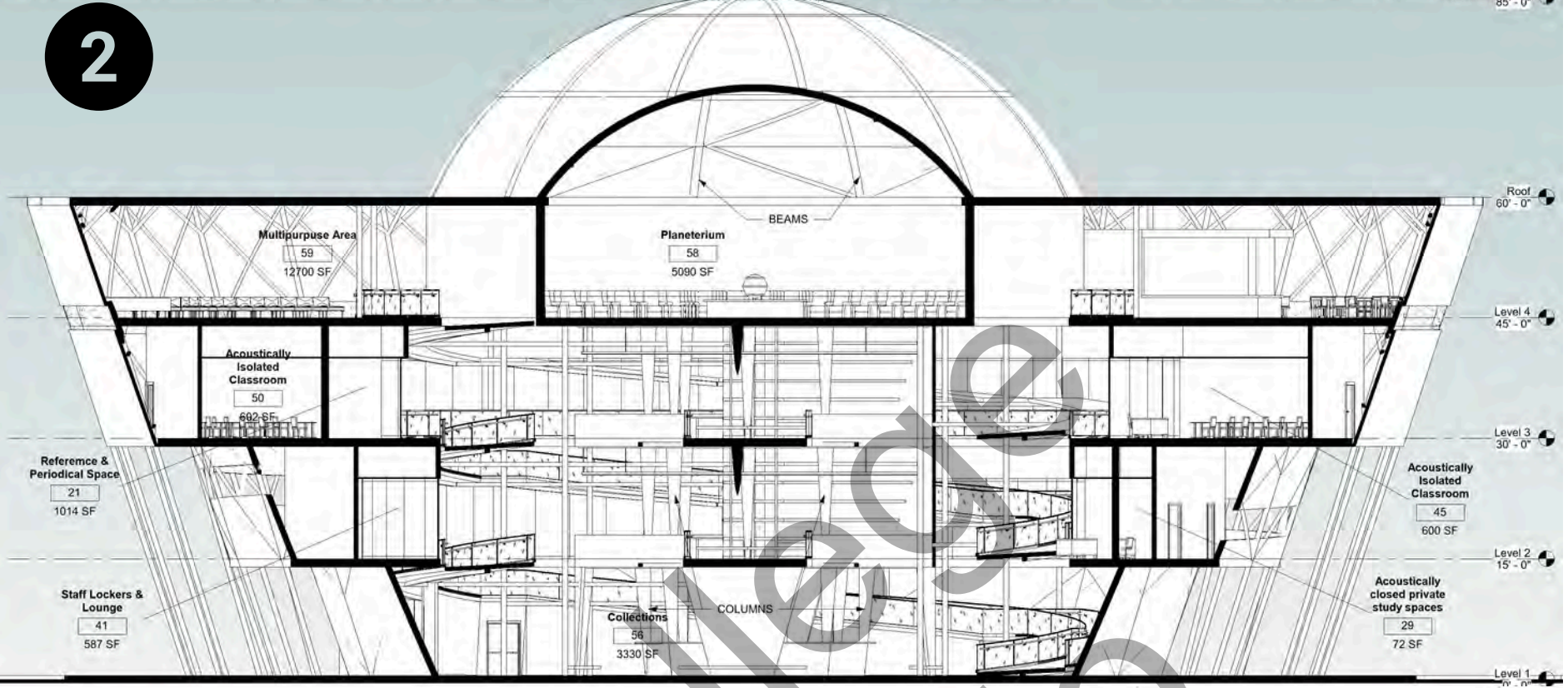
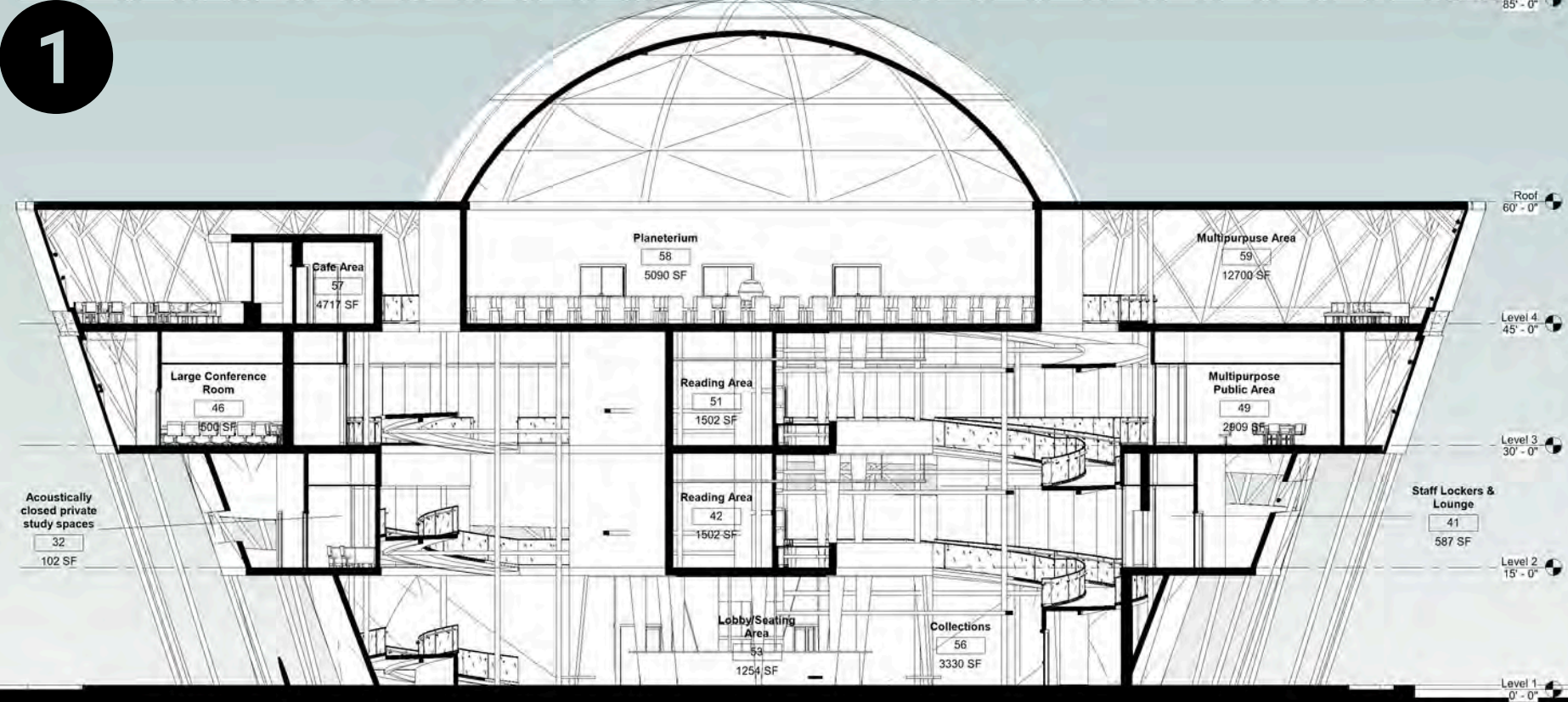
- Room Legend
- Acoustically Isolated Classroom
 - Circulation Workroom
 - Large Conference Room
 - Multipurpose Public Area
 - Public Restroom
 - Reading Area
 - Reference & Periodical Space
 - Room
 - Small Conference Room

As you move up to the third floor, you'll find both small and large conference rooms, along with acoustically isolated classrooms. This floor also includes multipurpose public areas, reading spaces, restrooms, and sections for periodicals and reference materials. A staff circulation room is also located here. The entire floor is surrounded by windows, offering great street views and plenty of natural light. On the way to the fourth floor, the first thing you'll notice is the open layout, with lots of space for public use. This floor features a café for everyone to enjoy, but the main highlight is the planetarium—a large, 150-seat space where visitors can learn about the universe and other topics. Like the floor below, it's surrounded by windows that provide stunning views and lots of natural light.

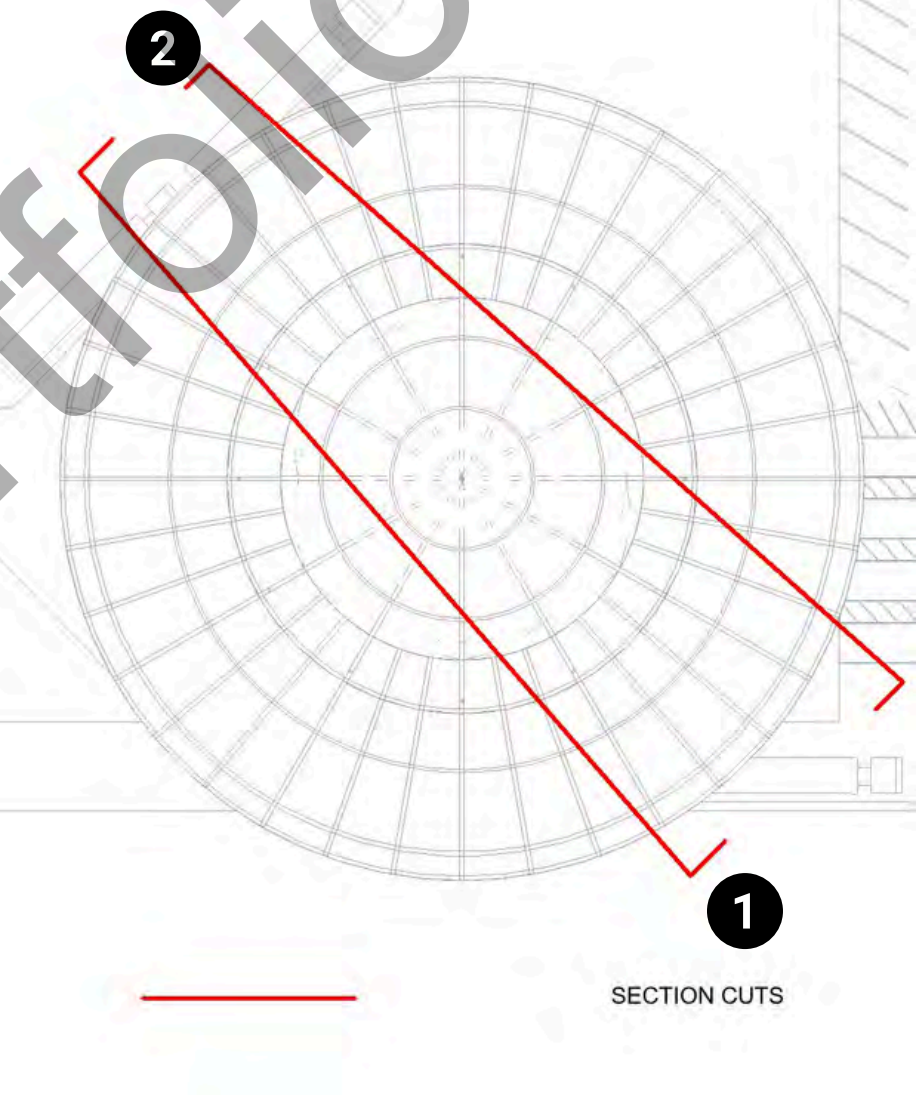


- Room Legend
- Café Area
 - Multipurpose Area
 - Planetarium

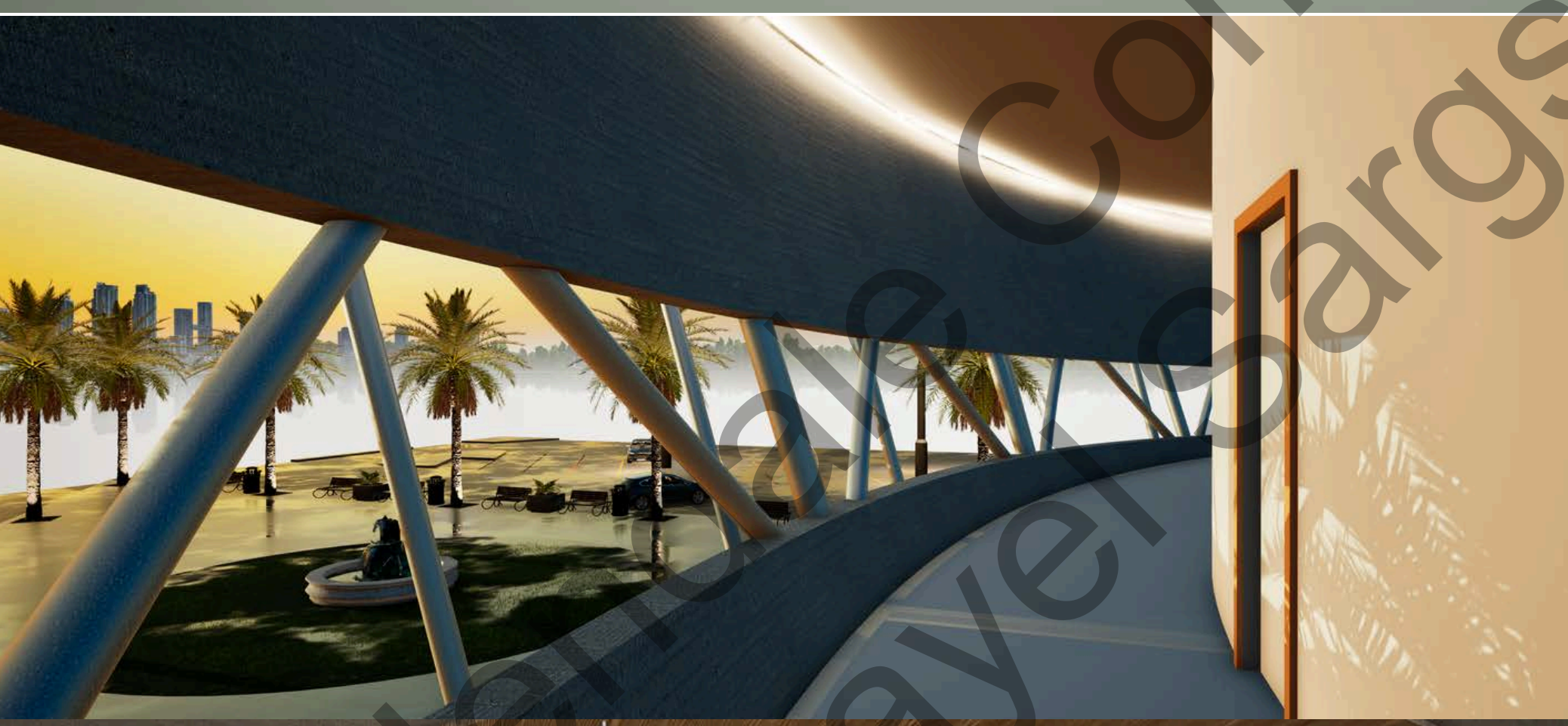
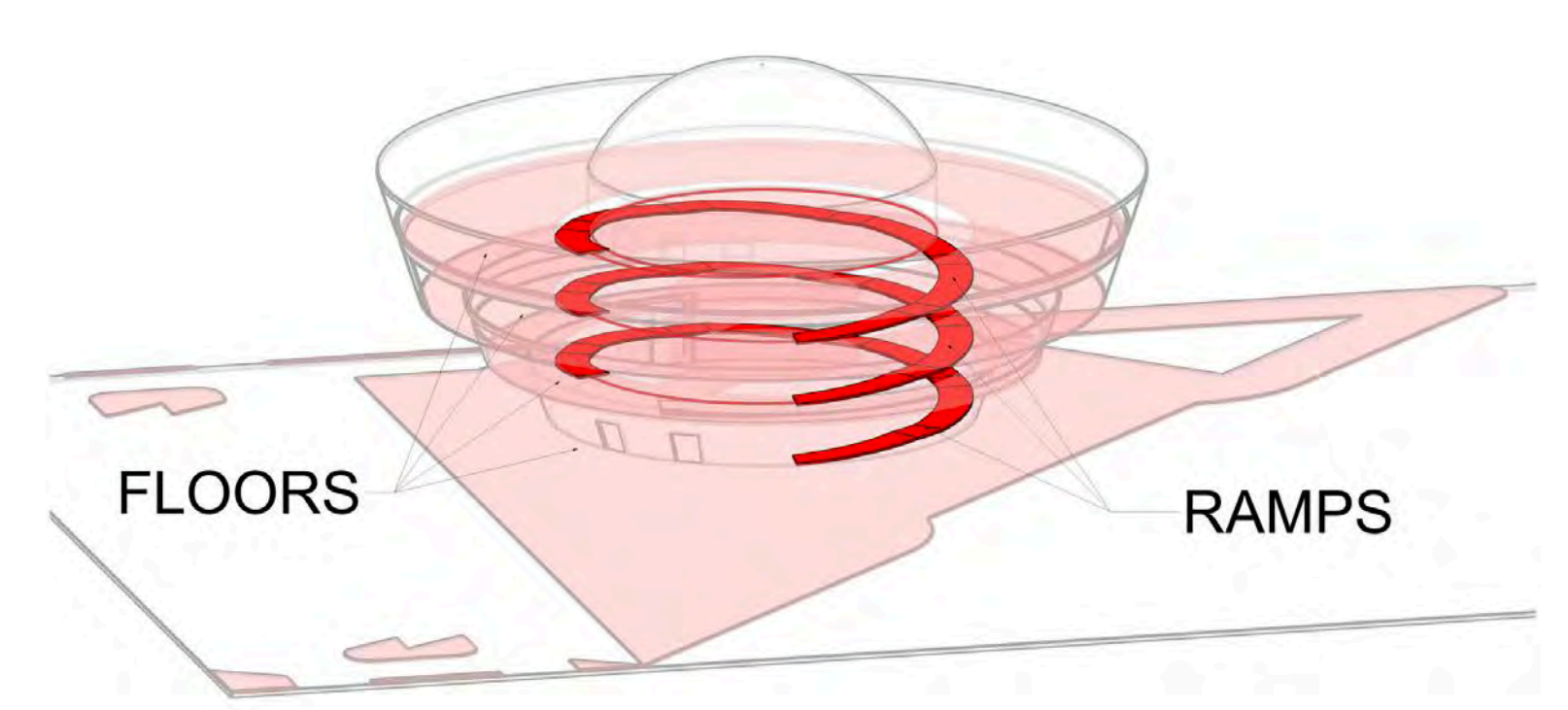




EAST ELEVATION

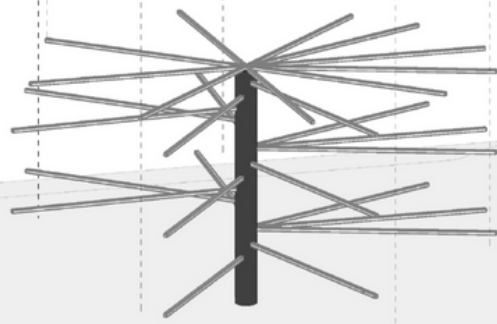
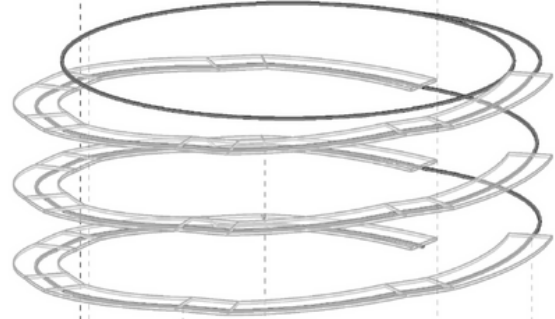
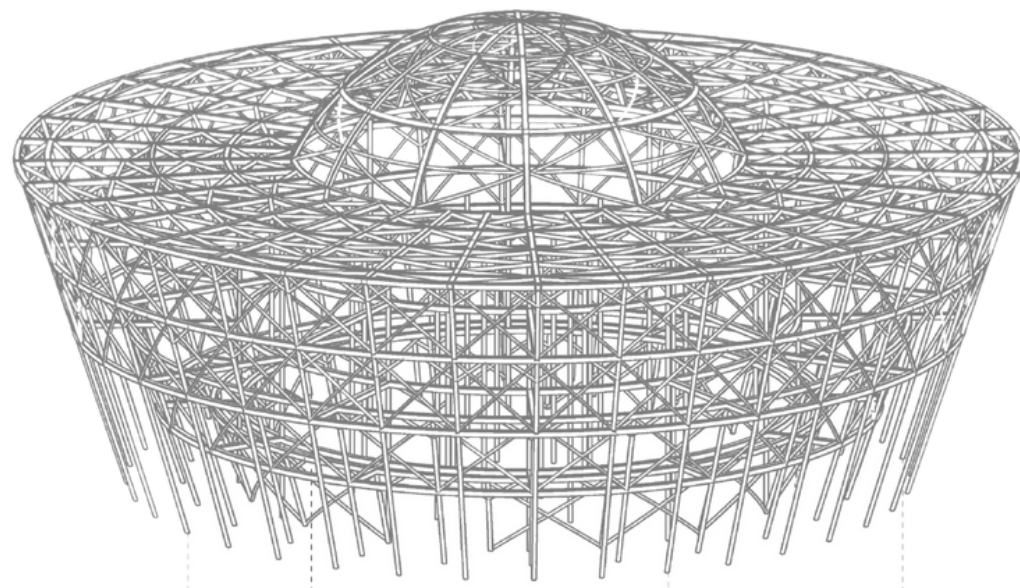


CIRCULATION PLAN

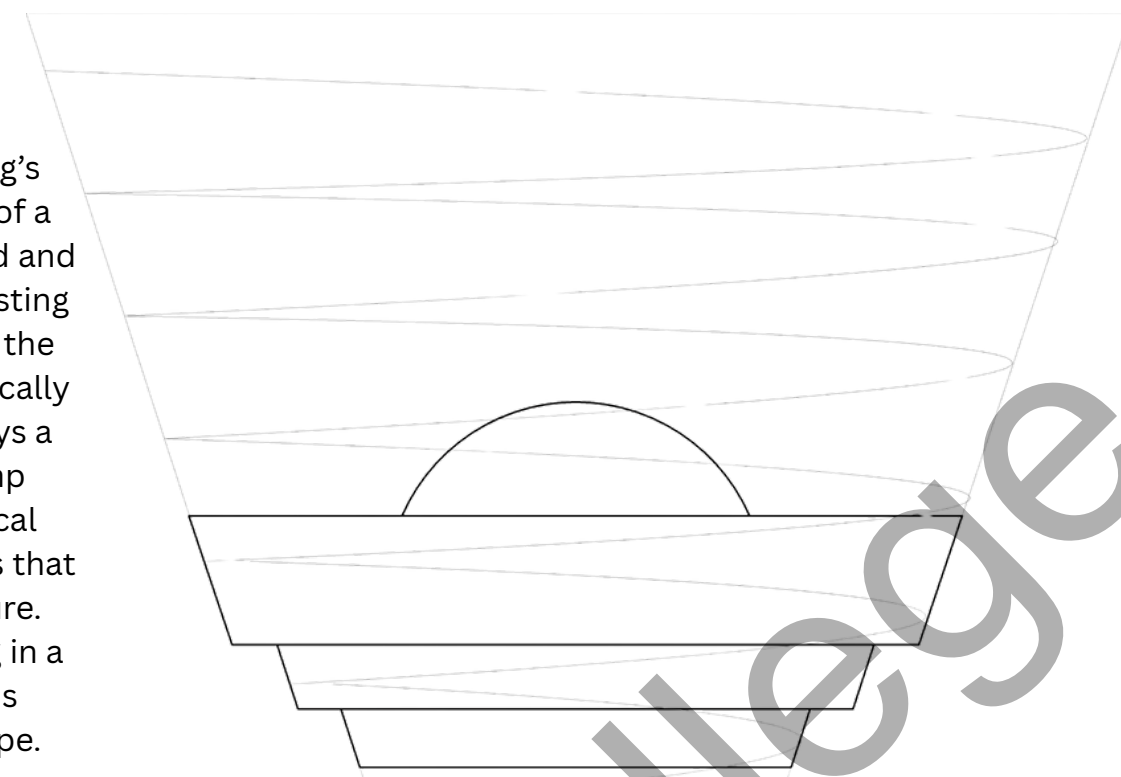


The overall design of the building is inspired by the form of a tornado. Angled exterior walls spiral around the structure, creating a dynamic, tornado-like appearance when viewed from the elevation. Steel columns follow these angled walls, rising in a matching slant to reinforce the swirling effect. Inside, a central system of ramps wraps around the building's core, gradually leading visitors up to the fourth floor. All ramps are fully compliant with ADA regulations, ensuring accessibility for everyone. The building's layout is thoughtfully divided into sections, with a floor plan designed to promote easy circulation and intuitive navigation. While much of the space remains open and inviting, private areas are clearly separated from public zones to provide privacy and comfort for those who need it.

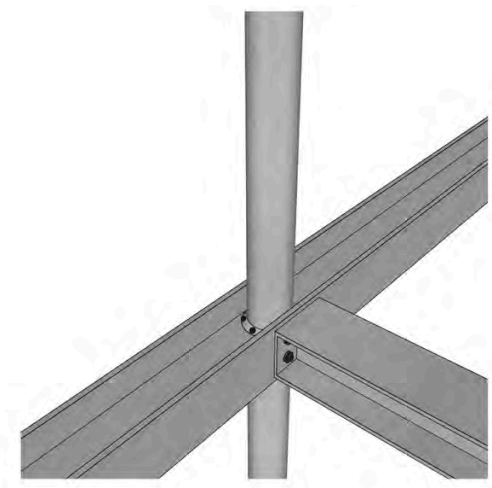
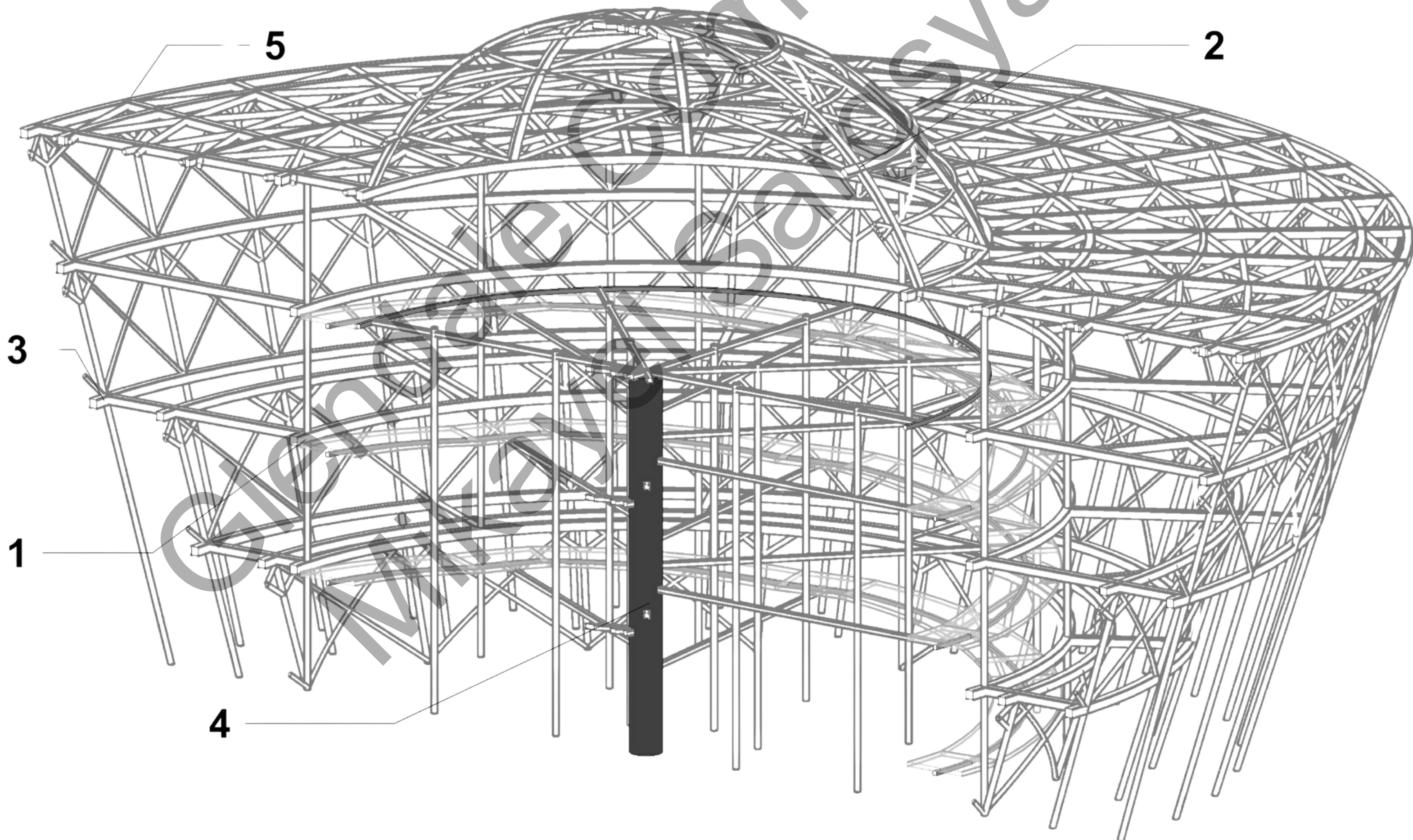
EXPLODED VIEW



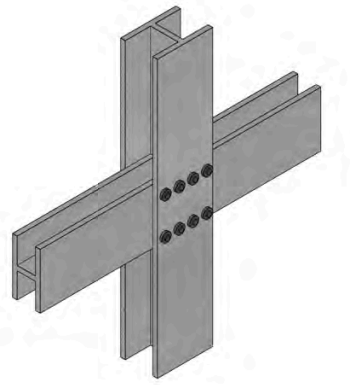
The steel structure is a key part of the building's overall design, which is inspired by the shape of a tornado. The steel columns rise from the ground and extend all the way to the roof, following the twisting motion of the building's form. At the center of the building, a 4-foot diameter steel pole runs vertically from the base to the top. This central pole plays a crucial role in supporting both the spiral ramp system and the planetarium above. The vertical steel columns are connected by 1-foot H-beams that provide horizontal support across the structure. Additional H-beams sweep around the building in a spiral pattern, linking all the vertical columns together and reinforcing the tornado-like shape. Between these beams, welded steel rods are installed to increase the structural strength and stability of the frame. These elements form a series of triangular shapes—widely recognized in engineering as one of the strongest and most stable structural forms. This triangular configuration enhances the building's ability to resist forces like wind and gravity, making the design both striking and structurally sound.



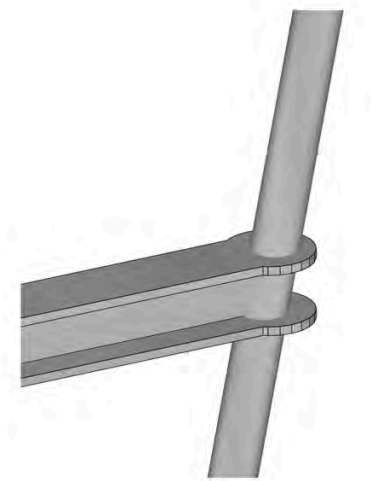
Parti Diagram inspired by the shape of a tornado.



1 Round column passing through H-beams with welded seat and bolted connections



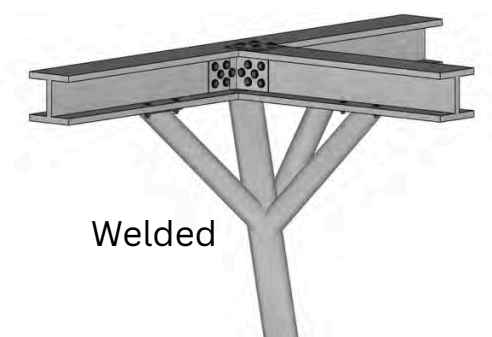
2 Bolted splice connection between two H-beams using cover plates.



3 A beam-to-round-column connection using double shear plates.



4 A bolted HSS-to-round HSS column connection using end plates.

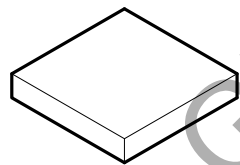


5 A moment-resisting beam-to-beam connection supported by a Y-configured round HSS column with a bolted flange and web connection.

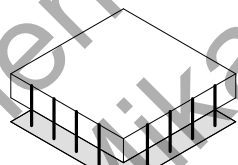
RESIDENTIAL CASE STUDY PROJECT
VILLA SAVOYE
BY Le Corbusier
Mikayel Sargsyan: Paul Chiu Spring 2024



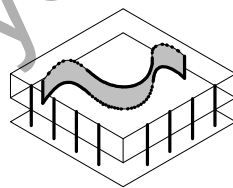
PARTI DIGRAM



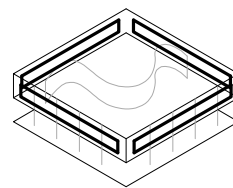
MASS:
 THE TOTAL
 WEIGHT OF
 THE BUILDING



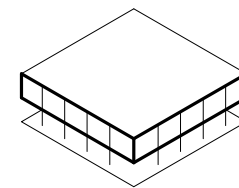
PILOTIS:
 THE TOTAL
 WEIGHT OF
 THE BUILDING
 IS SUPPORTED
 BY COLUMN
 SYSTEM



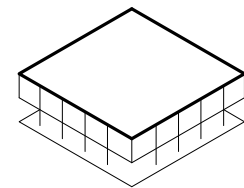
OPEN PLAN:
 ALL INTERIOR
 WALLS ARE
 NOT LOAD
 BEARING, SO IT
 CAN BE FREE
 FORM



RIBBON WINDOWS:
 ALL EXTERIOR
 FACADES ARE NOT
 LOAD BEARING, SO
 THAT IT CAN BE
 CONTINUOUS
 WINDOWS

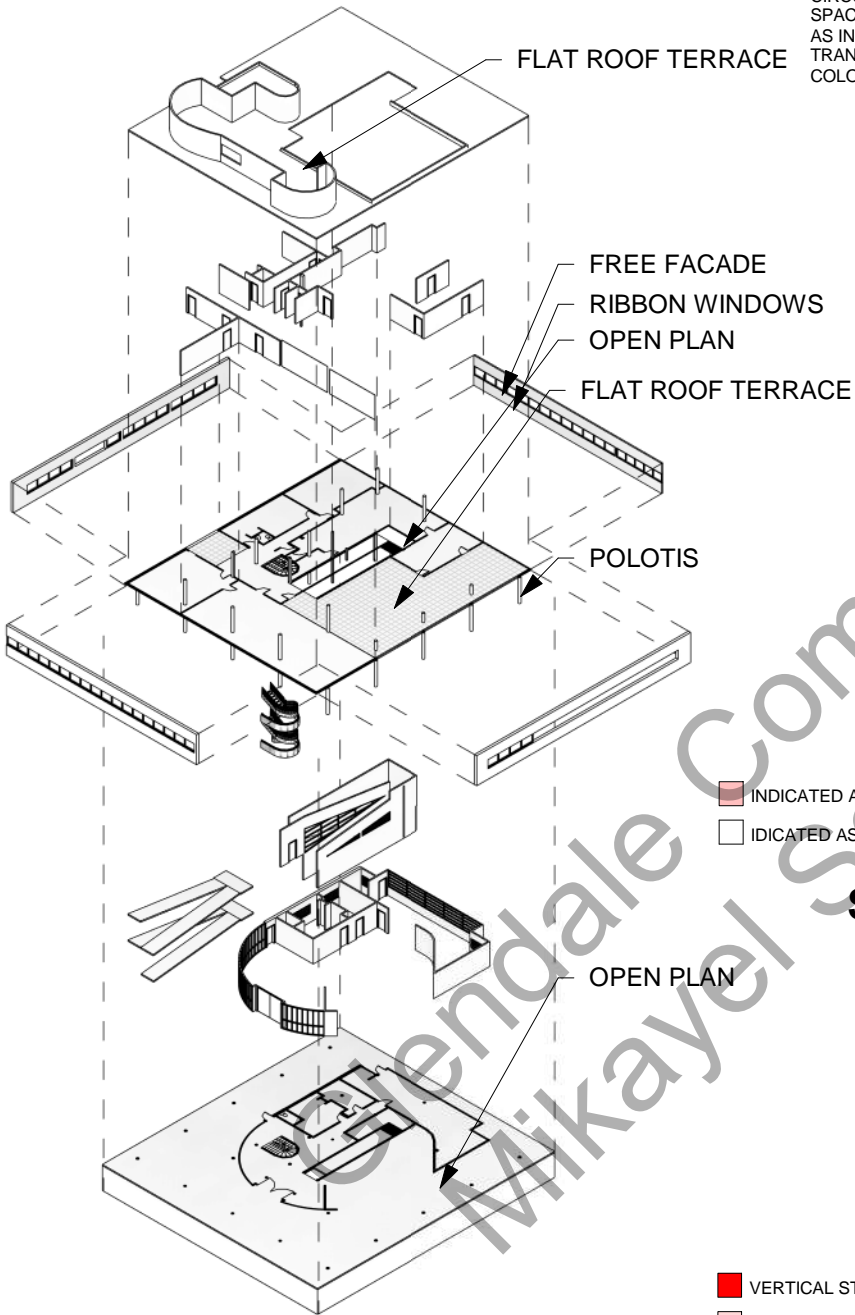


FREE FACADE:
 ALL EXTERIOR
 FACADES ARE
 NOT LOAD
 BEARING, SO
 THAT IT CAN BE
 ANY SHAPE

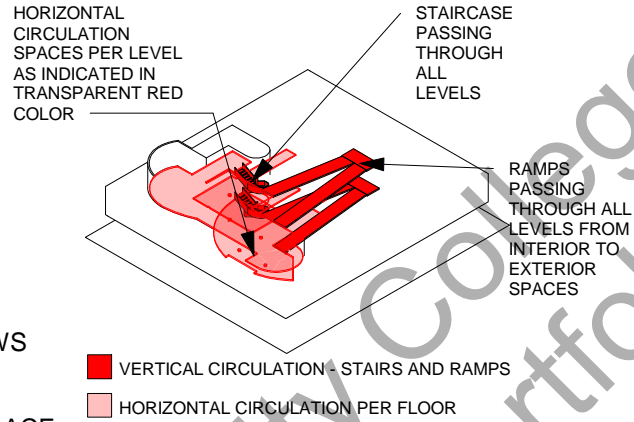


**FLAT ROOF
 TERRACE:**
 ROOF TOP
 GARDEN

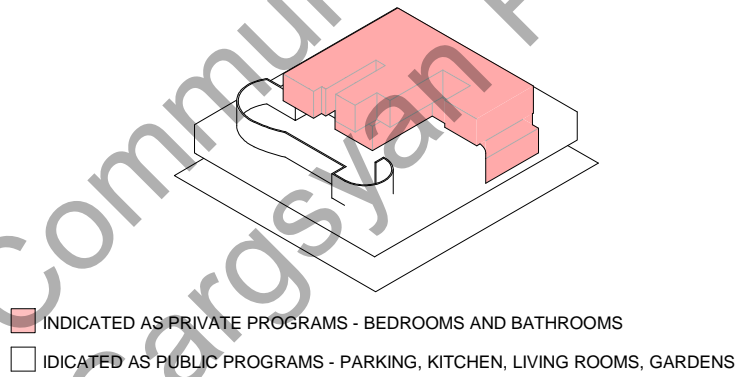
FIVE POINTS OF ARCHITECTURE



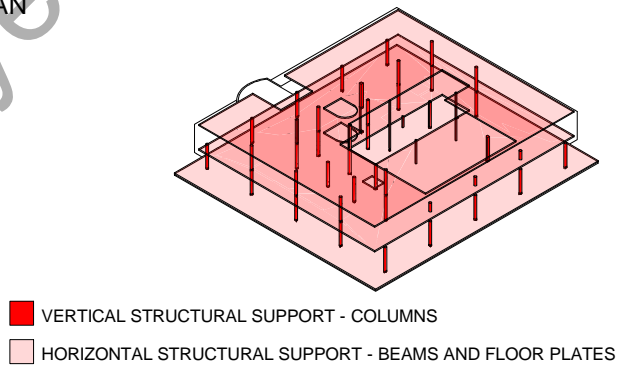
CIRCULATION DIAGRAM



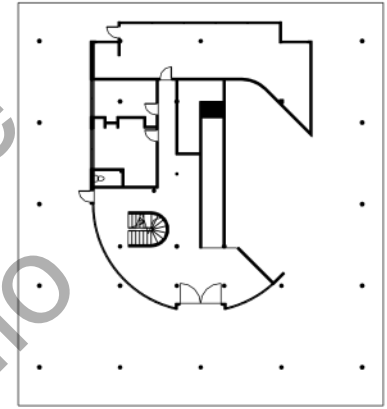
PROGRAM DIAGRAM



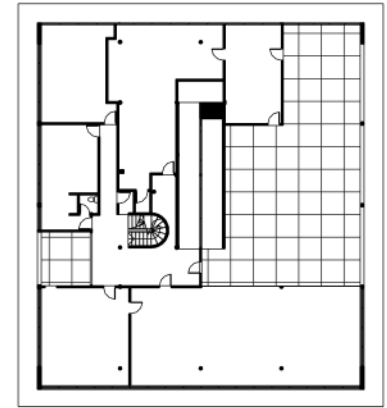
STRUCTURAL DIAGRAM



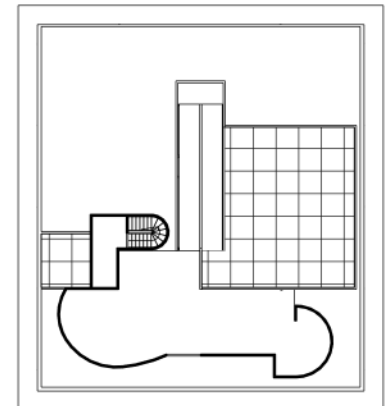
LEVEL 1



LEVEL 2



LEVEL 3



INFINITE TRACK



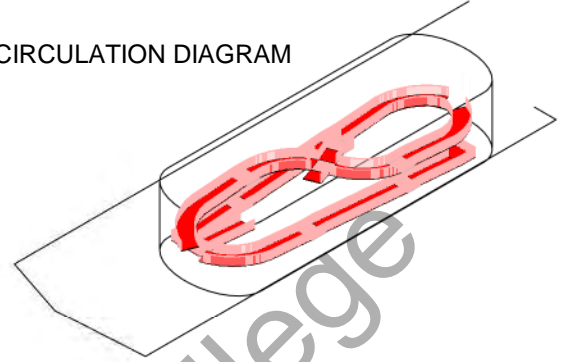
In this project our goal was to design a house for a paralympic athlete. My athlete was Ntando Mahlangu. We needed to use the 5 points of architecture and ADA regulations to design the perfect house with all of the athletes necessities. My design includes an infinity loop ramp that goes around the house. It goes up to the bedroom floors all the way down to the basement area. it symbolizes the track which Ntando runs on.

PROJECT SITE

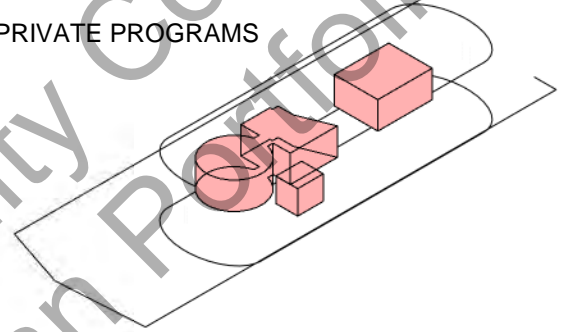


708 E. Palmer Avenue, Glendale, CA

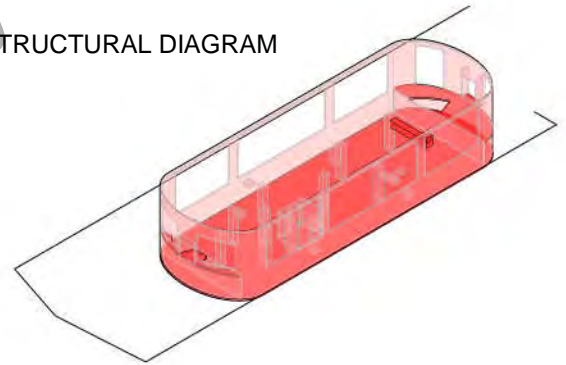
CIRCULATION DIAGRAM



PRIVATE PROGRAMS



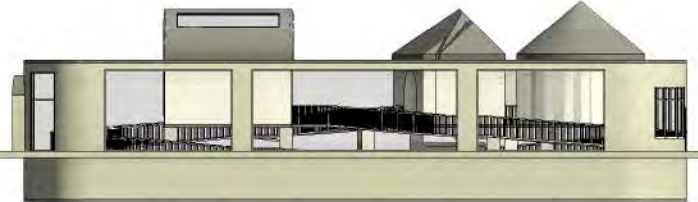
STRUCTURAL DIAGRAM



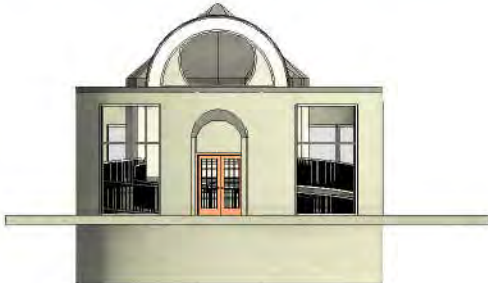
EAST ELEVATION



WEST ELEVATION



NORTH ELEVATION



SOUTH ELEVATION

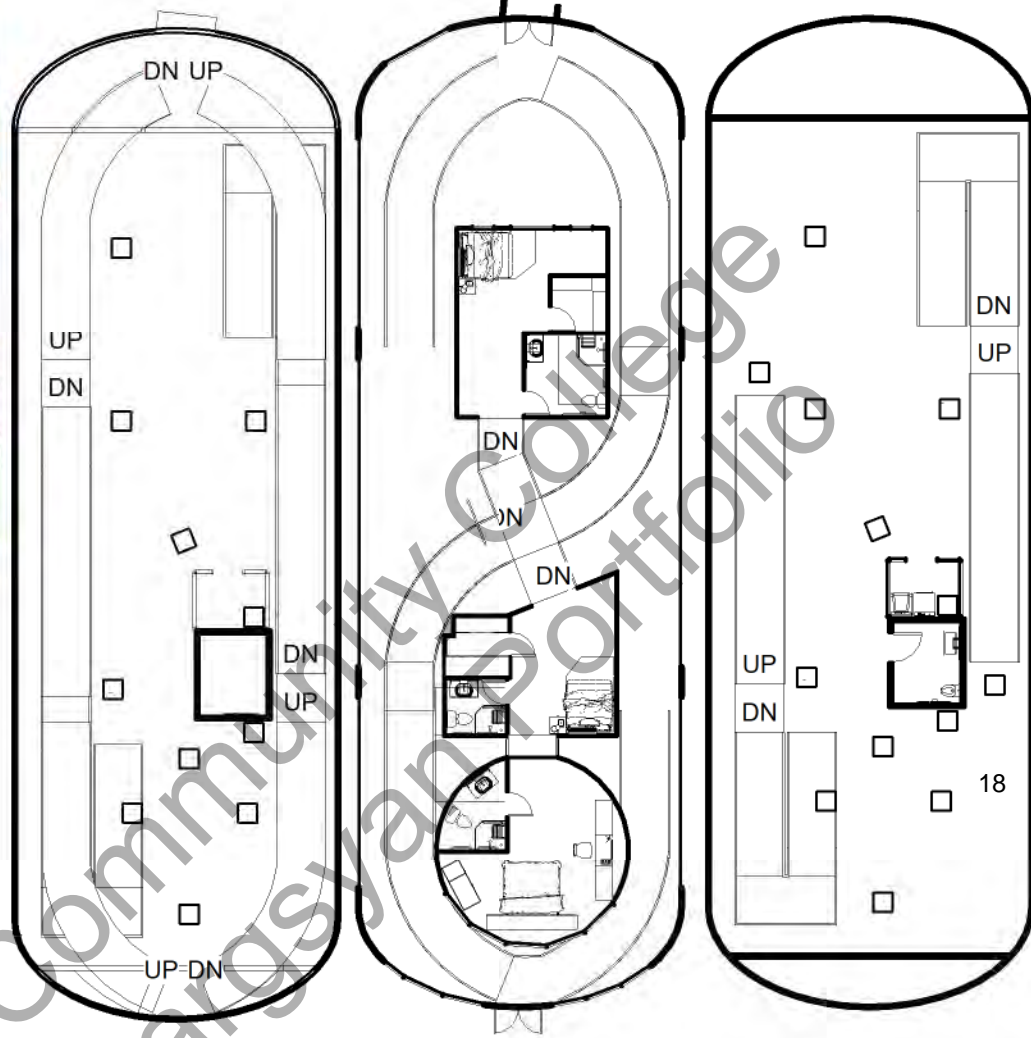




THERE ARE 3 FLOOR PLAN LEVELS. THE FIRST FLOOR, SECOND FLOOR, WHERE THE BEDROOMS ARE LOCATED AT, AND THE BASEMENT. IT IS ALL CONNECTED BY RAMPS AND HELP UP BY COLUMNS. EVERYTHING IS WITHIN ADA REGULATIONS. THE WALLS SURROUNDING HAVE LARGE WINDOWS FOR NATURAL LIGHTING. THE SITE CONTAINS A 3 CAR PARKING, INCLUDING ADA VAN, IN THE BACK

MEET NTANDO MAHLANGU

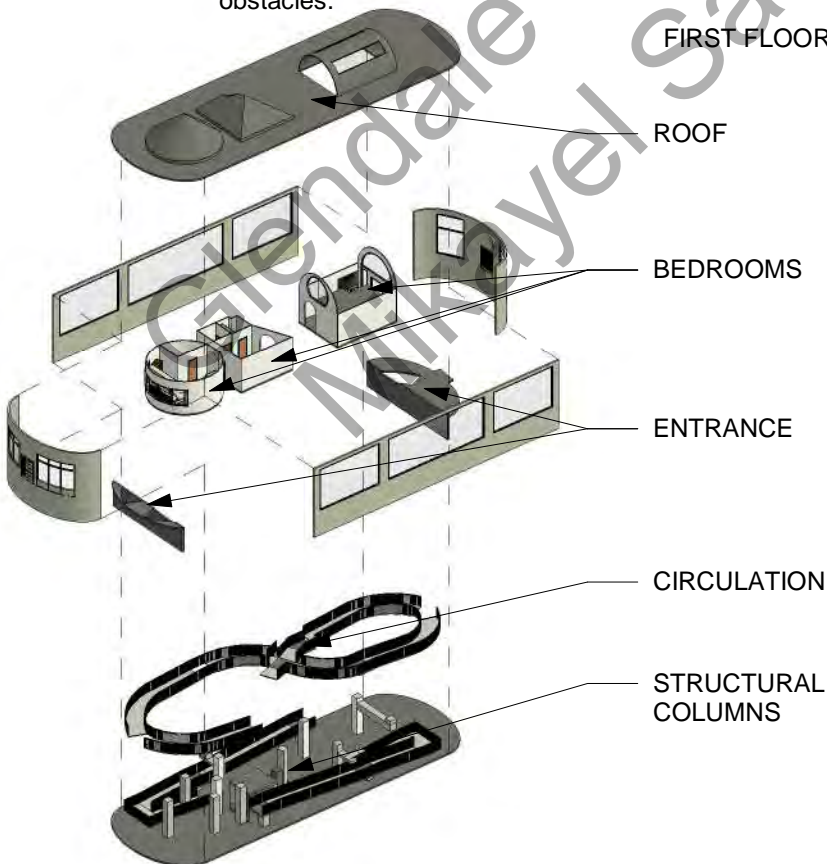
Ntando Mahlangu's journey is one of resilience and triumph. Born with a condition that led to the amputation of both legs, he spent his early years in a wheelchair but never let his challenges dim his passion for sports. With the support of family and friends, he remained determined. His life changed when he received carbon fiber prosthetic blades, allowing him to pursue running and discover his true potential. Through hard work and perseverance, he became a Paralympic champion, winning medals on the world stage and inspiring countless others to chase their dreams despite obstacles.



FIRST FLOOR

SECOND FLOOR

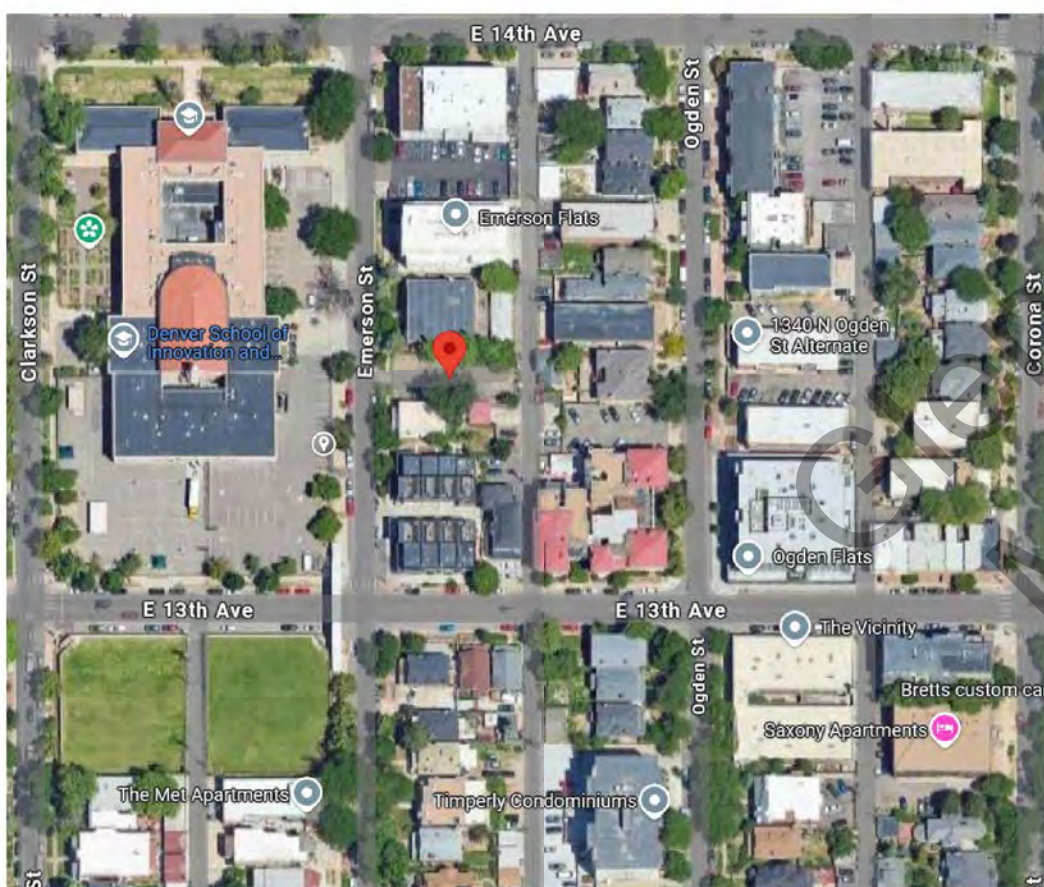
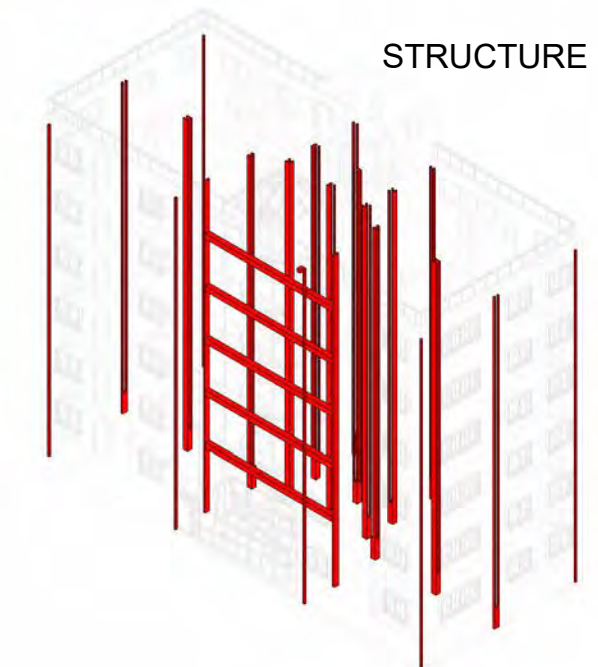
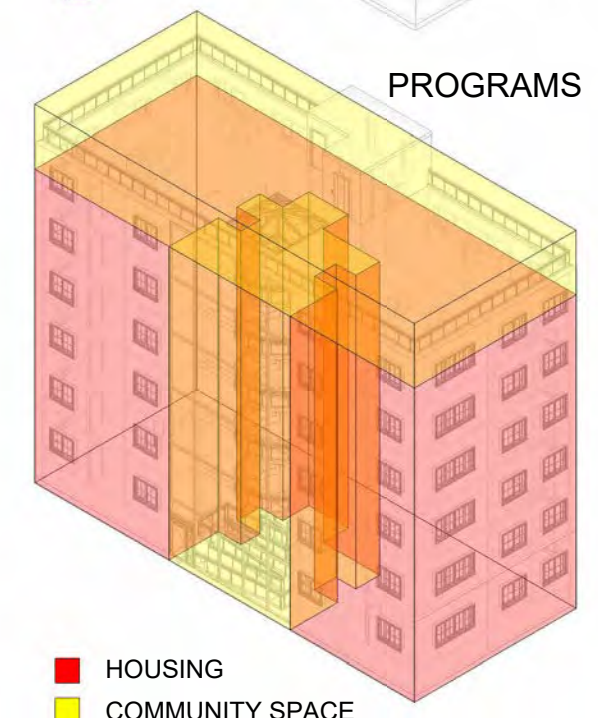
BASEMENT FLOOR



SECTIONS

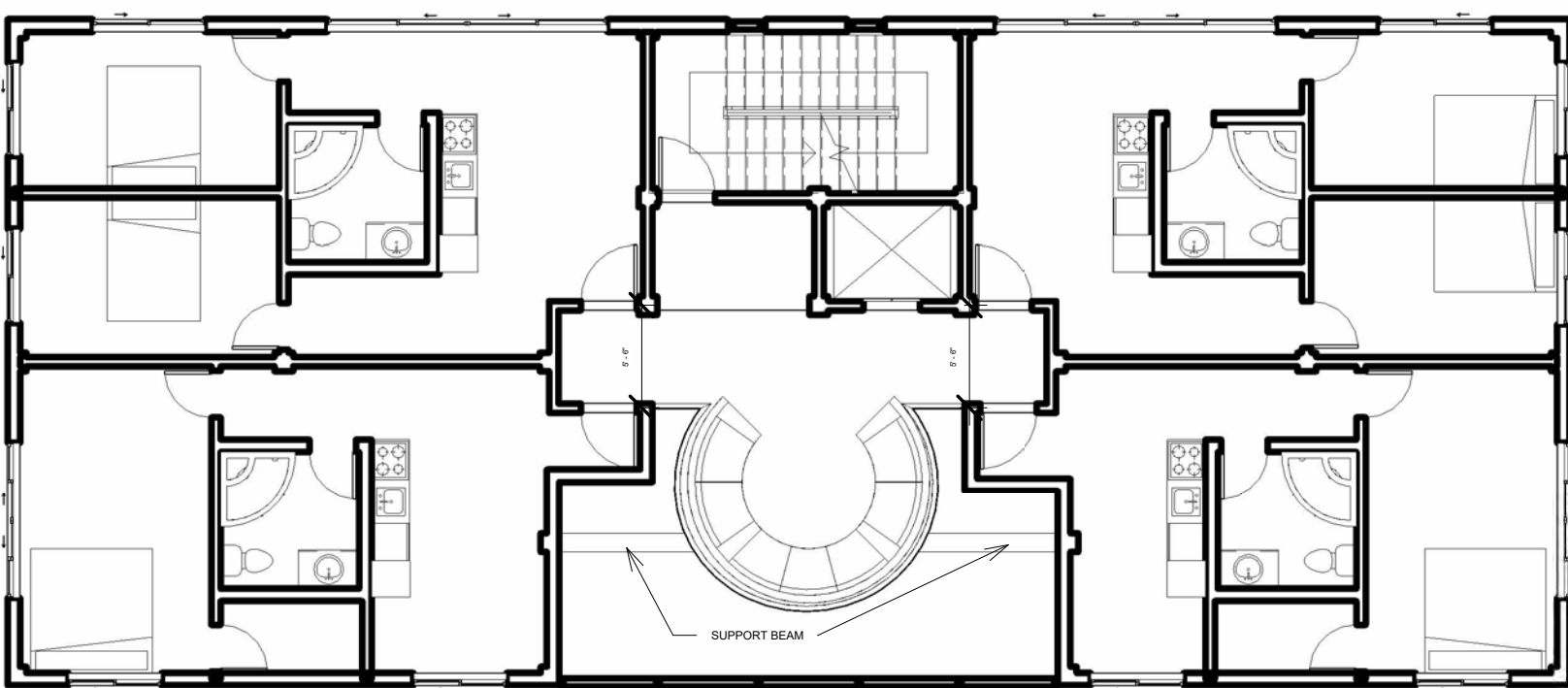
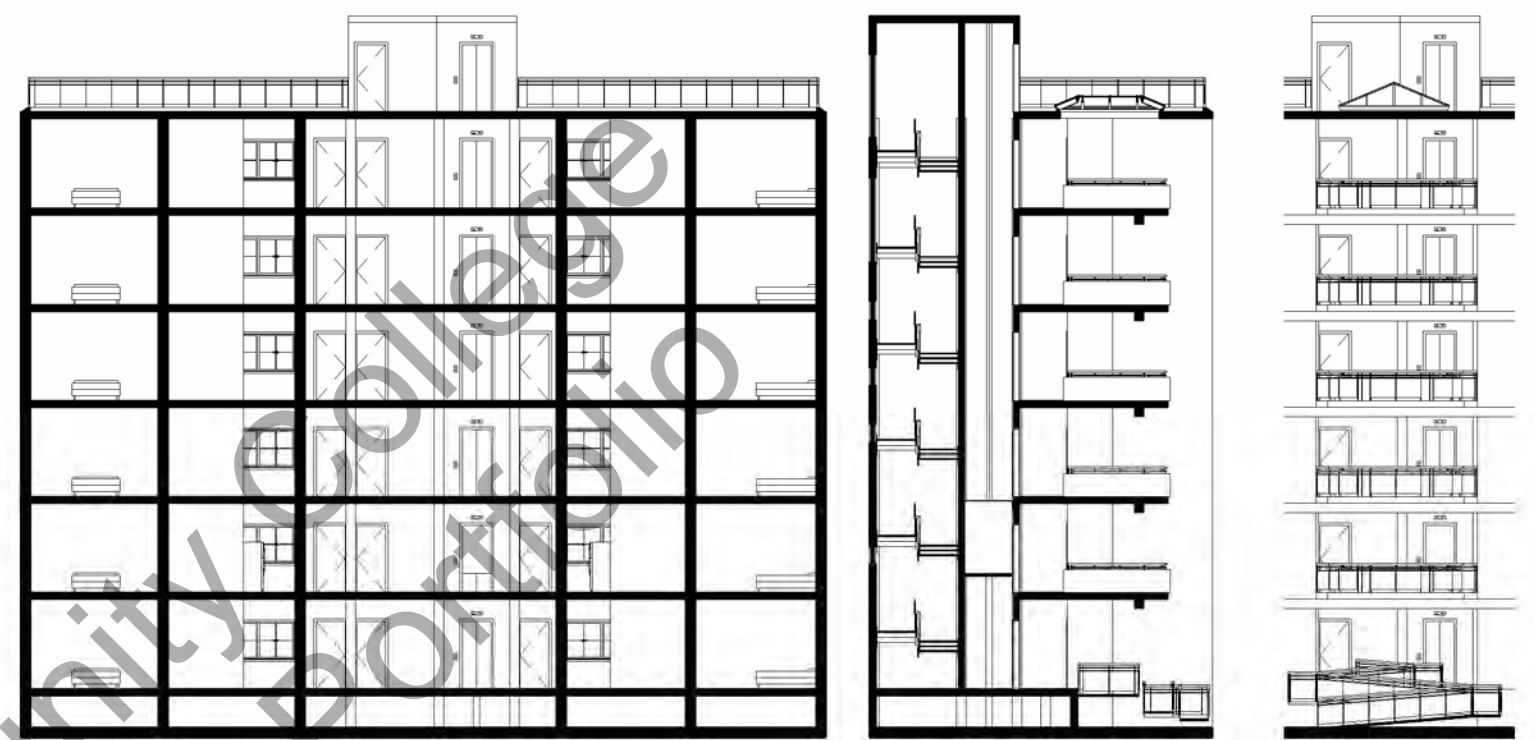


DENVER SINGLE-STAIR HOUSING CHALLENGE BY BUILDNER

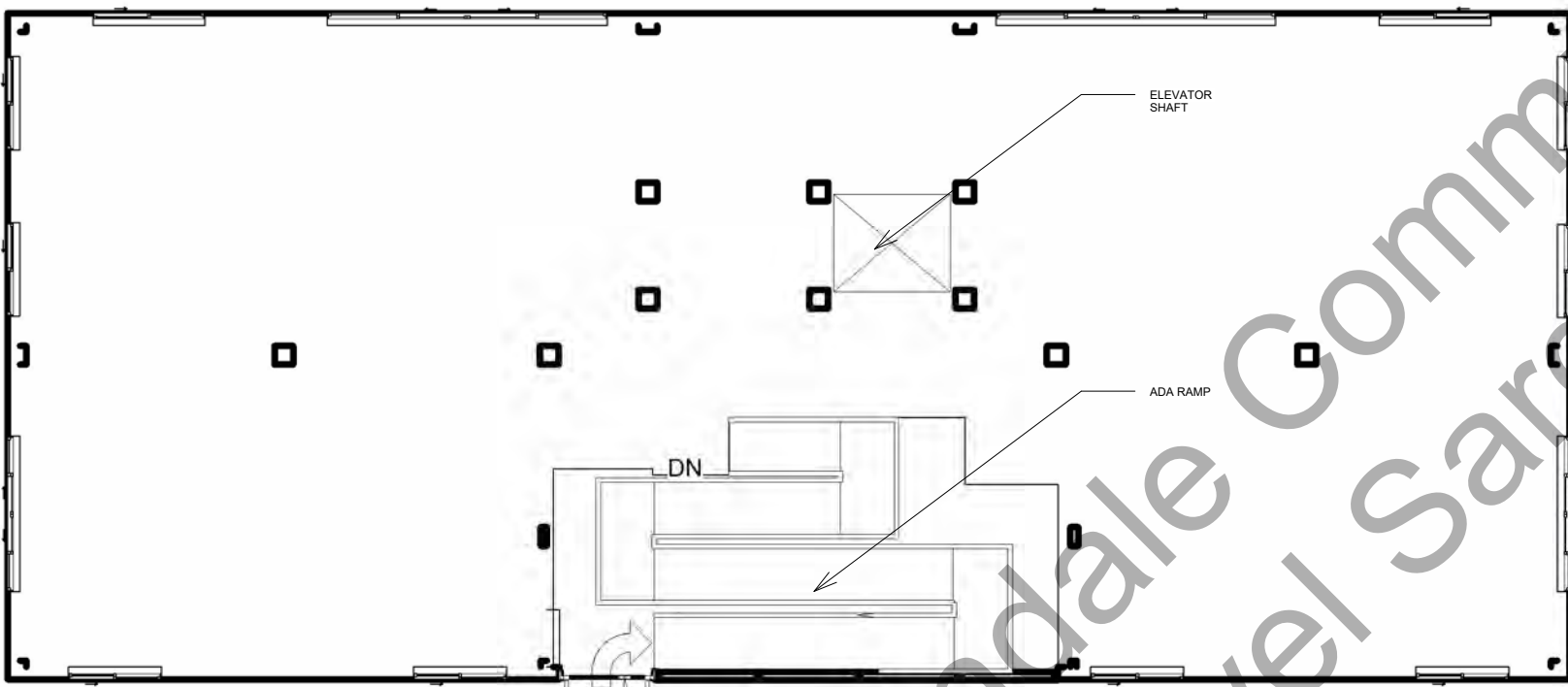


The idea for this project was to design a sustainable, affordable, and simple apartment building with a maximum of 24 units. We were required to use a point-access block staircase, which is a single staircase that serves as a fire exit for the residents. I also lifted the building 4 feet off the ground to ensure privacy for the first-floor residents. The entrance includes a ramp for those who require it, as well as an elevator that goes from the first floor all the way to the rooftop. Our task was to identify a problem and solve it—an objective to overcome or a goal to meet. My idea was that many buildings nowadays, especially in large cities with tall structures, lack a gathering space or community center—a place where people can come together, kids can play, or residents can cook and socialize. That's why I designed the rooftop area as a community space for the residents. It includes seating, a kids' area, a garden, grills, and a nice view. The structure is supported by columns and beams. The walls extend from the ground all the way to the top, as the floor plan is consistent throughout each level of the building, making construction more efficient. The building consists of twelve 2-bedroom units and twelve 1-bedroom units, ranging from 450 to 600 square feet. All units include one bathroom.

SECTION CUTS



LEVEL 1 - 6



GROUND LEVEL

ELEVATIONS

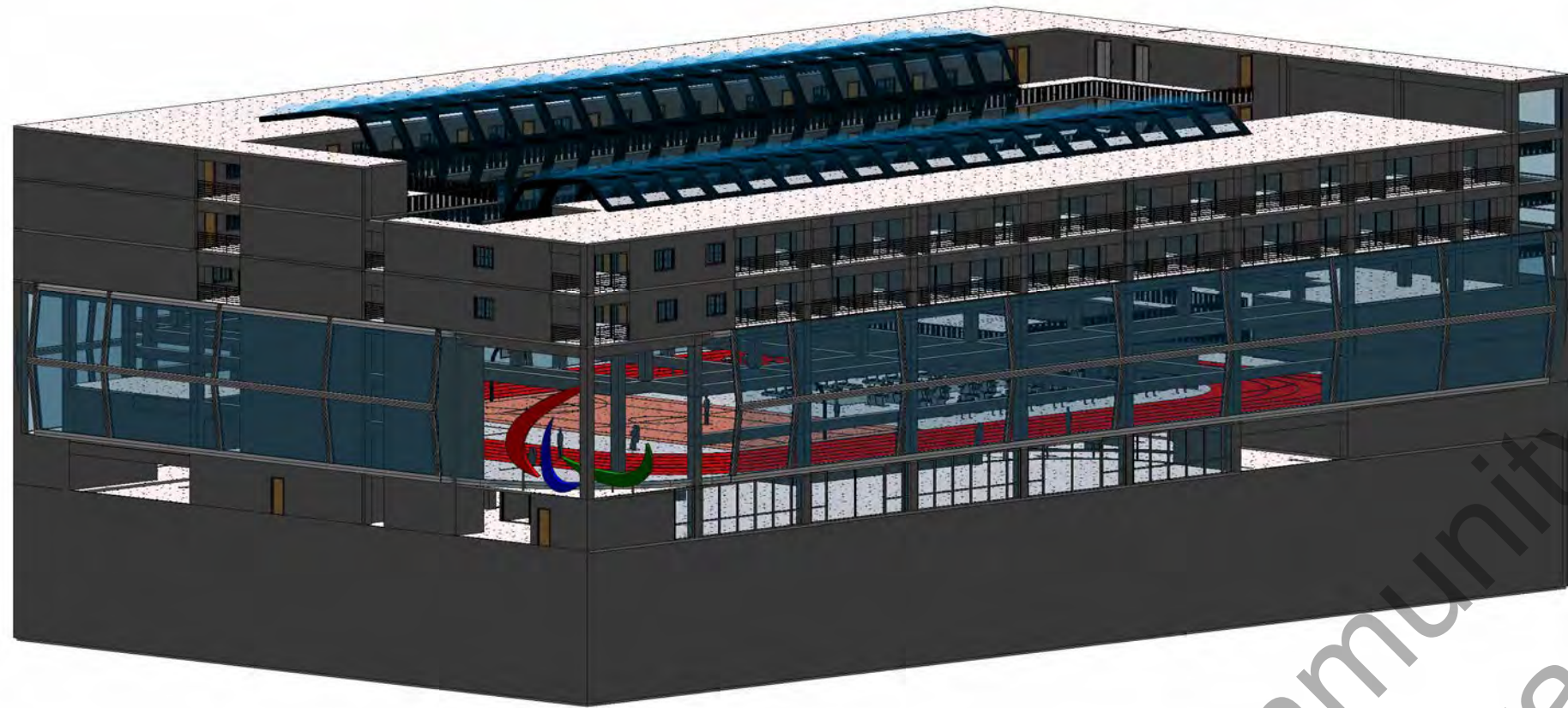


EAST NORTH SOUTH WEST

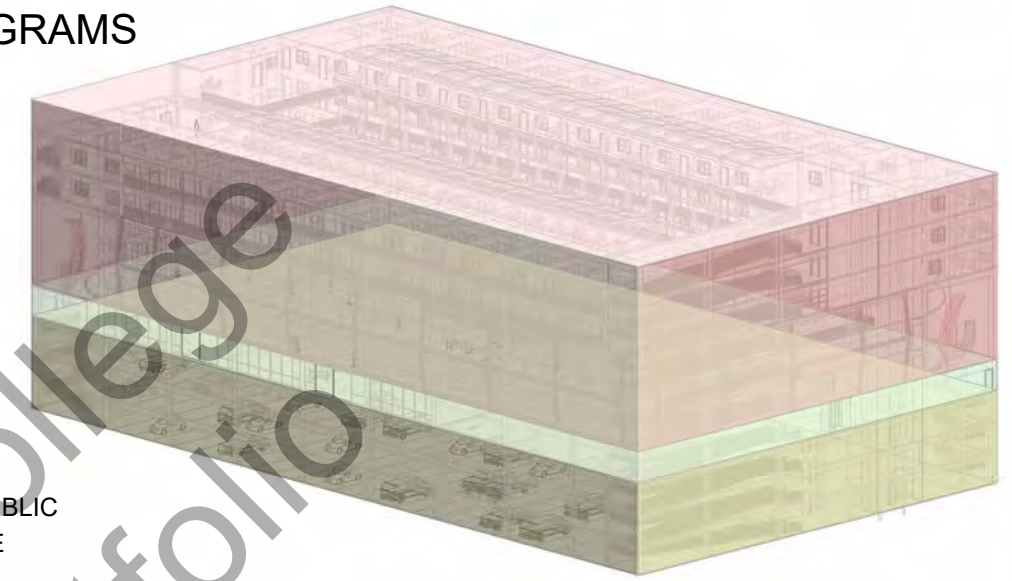
RENDERINGS



PARALYMPIC TRAINING FACILITY

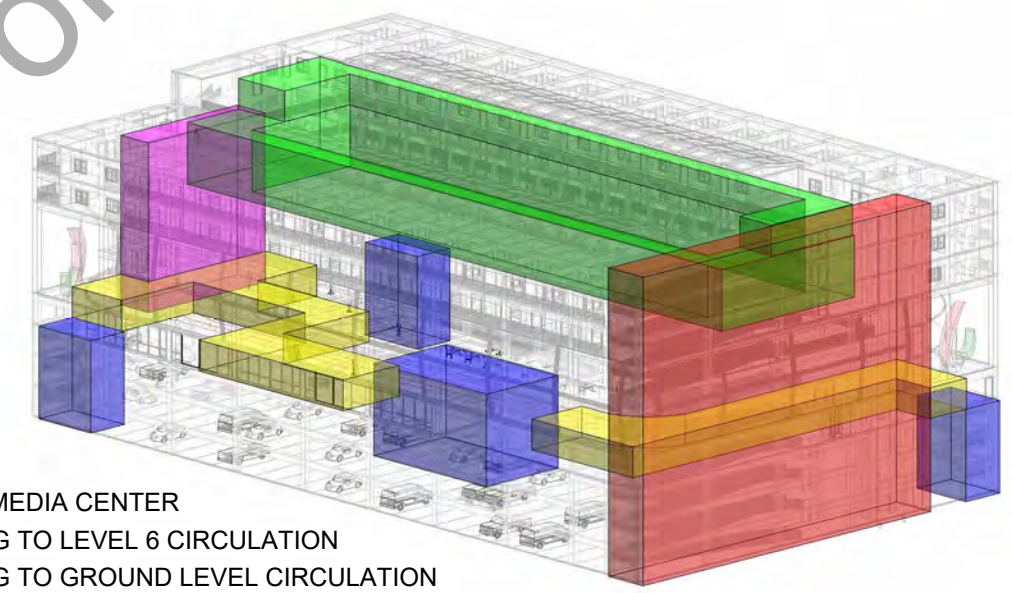


PROGRAMS



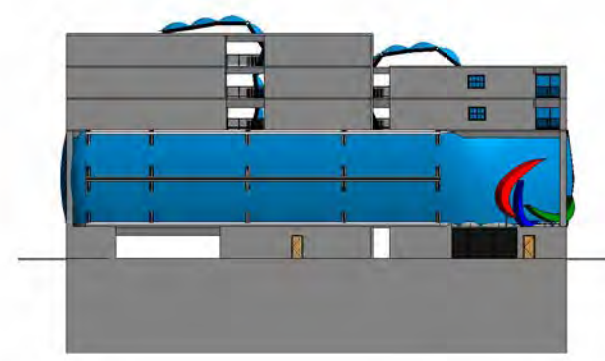
- SEMI-PUBLIC
- PRIVATE
- PUBLIC

CIRCULATION

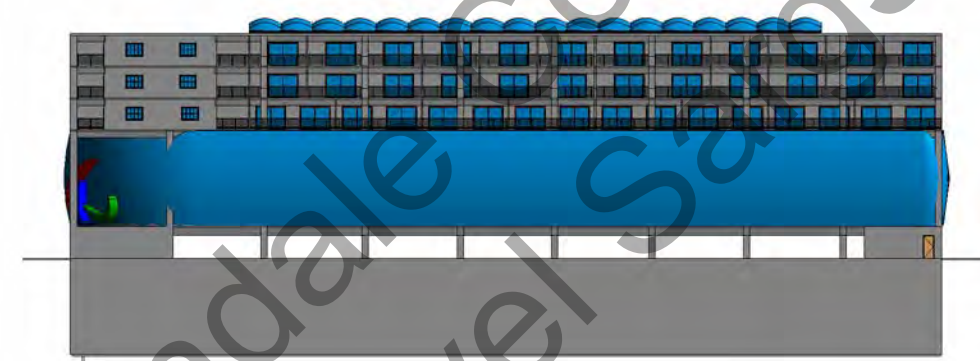


- LOBBY/MEDIA CENTER
- PARKING TO LEVEL 6 CIRCULATION
- PARKING TO GROUND LEVEL CIRCULATION
- LIVING UNITS CIRCULATION
- GROUND LEVEL TO LEVEL 6 CIRCULATION

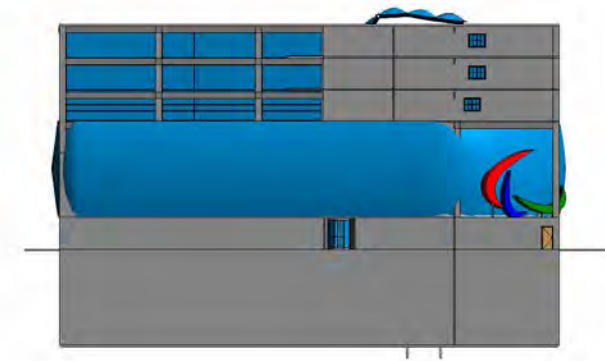
ELEVATIONS



EAST



SOUTH



WEST

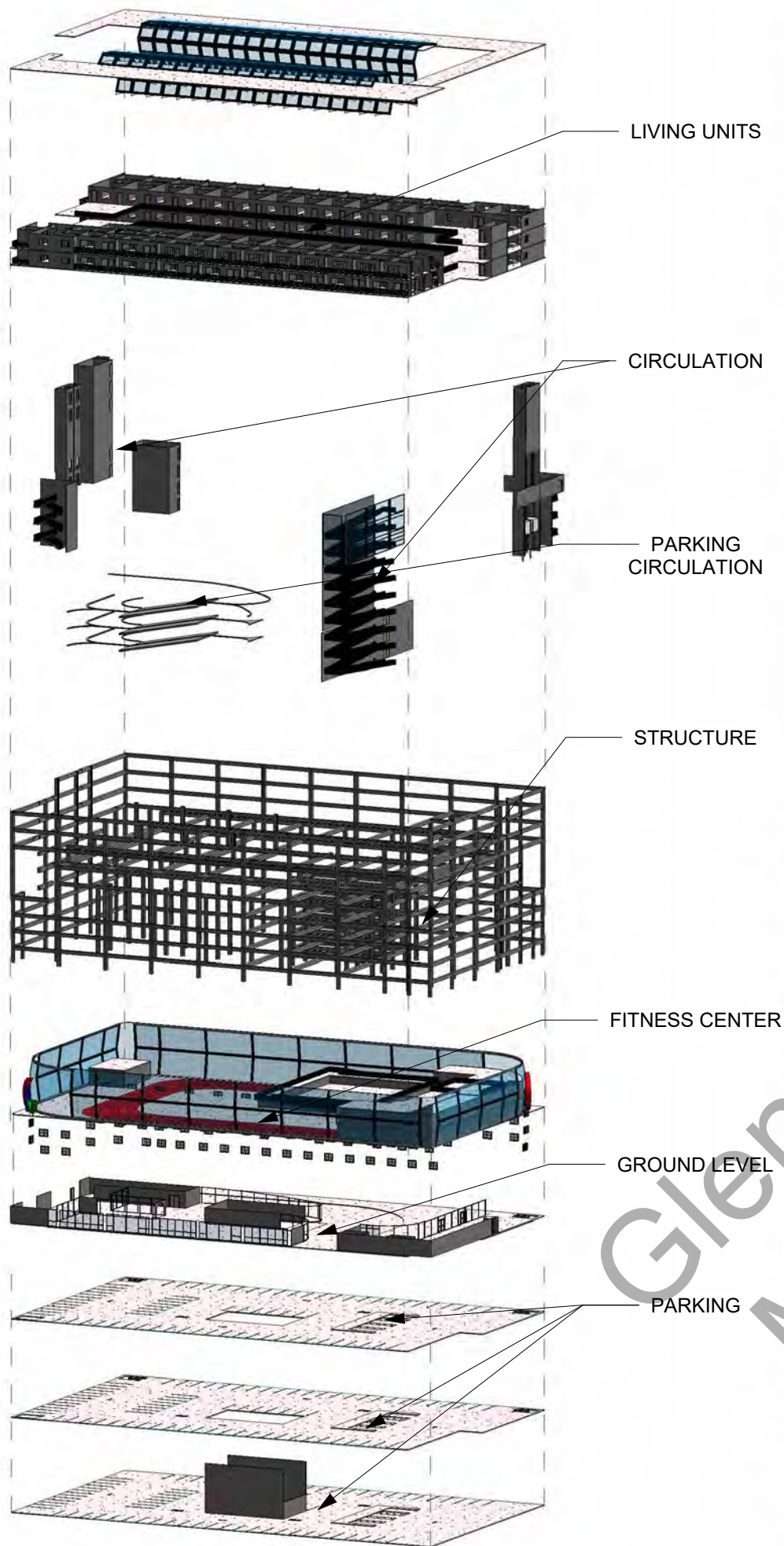


NORTH

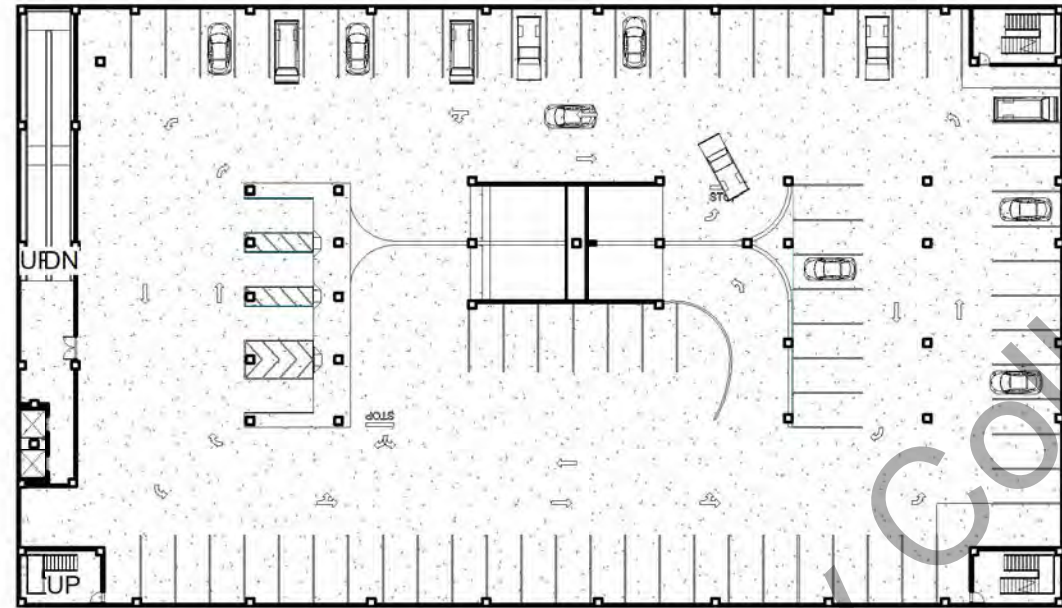
STRUCTURE



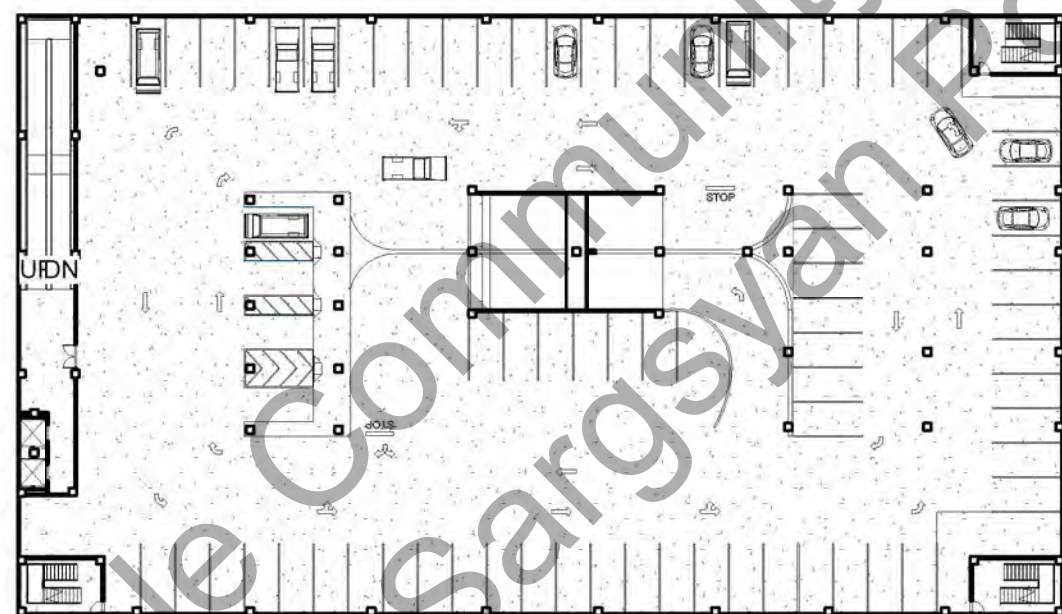
EXPLODED VIEW



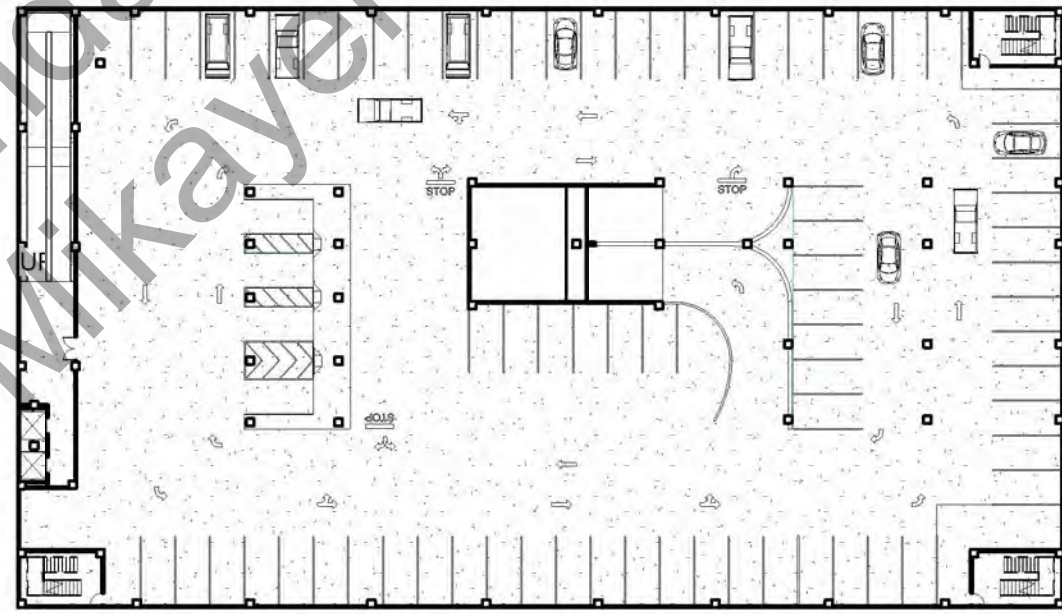
PARKING LEVEL 1



PARKING LEVEL 2



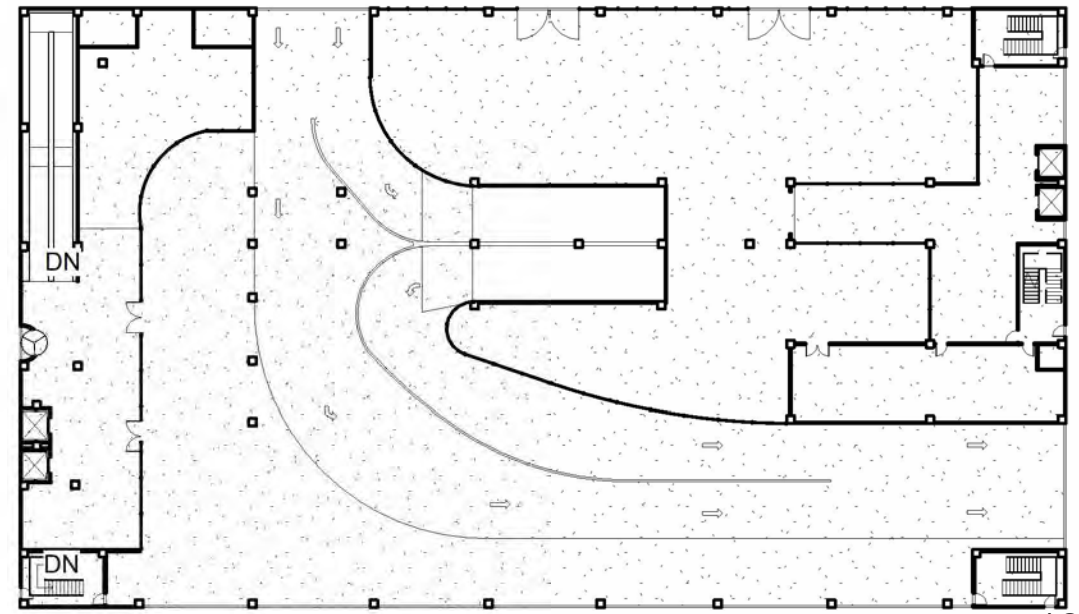
PARKING LEVEL 3



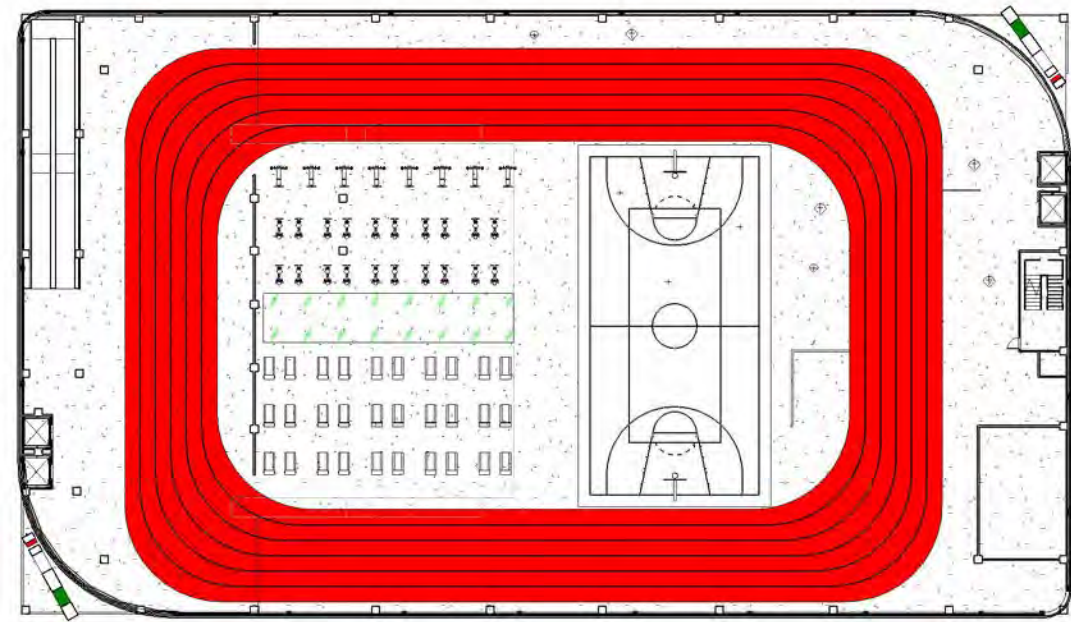
ABOUT THIS PROJECT

In this project, our goal was to create a fitness center for Paralympic athletes. We needed to include a media center, a cafeteria, a lobby, a pool for the swimmers, a track for the runners, and a fitness area for bikes, treadmills, weightlifting, and more. We also needed to design living units: 20 two-bedroom units and 30 one-bedroom units. The facility includes a minimum of 200 parking spaces, 12 of which are ADA van accessible. An ADA ramp is installed, running from the underground parking all the way to the top. A drop-off area is provided for buses. Each living unit floor has a laundry room as well as two fire exits. The cafeteria includes a 1,000 square foot kitchen, which is connected to the nearly 5,000 square foot media center. A trash chute extends to the living unit floors, making waste disposal more convenient. The structure is supported by columns and beams, resembling a jungle gym system. The pool has two locker rooms for men and women, as well as a medical center for emergencies and injuries. The training facility features an open roof plan, meaning there is no overhead covering except for 30-foot glass walls on the sides. This design ensures proper ventilation and allows chlorine fumes to dissipate. The area for treadmills and bikes is covered by the pool structure to protect it from rain damage.

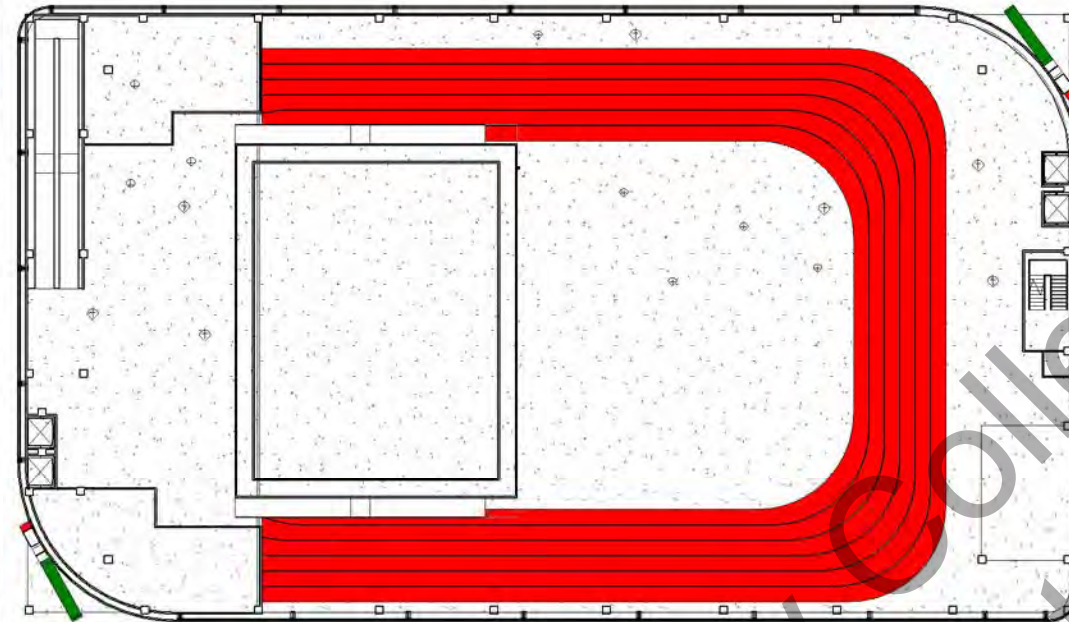
GROUND LEVEL



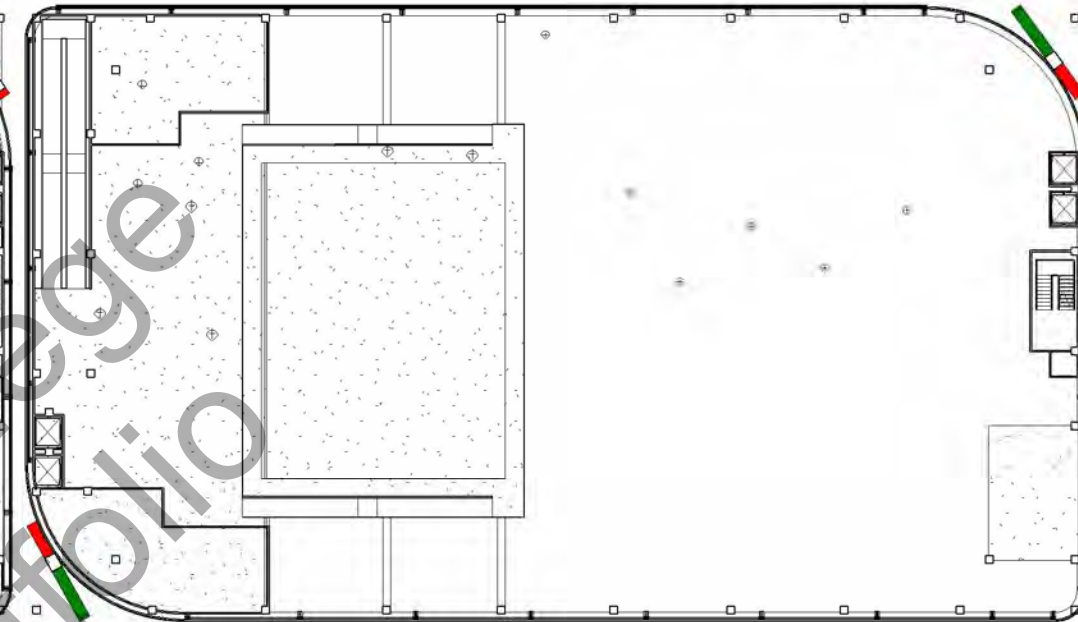
LEVEL 1 - FITNESS CENTER



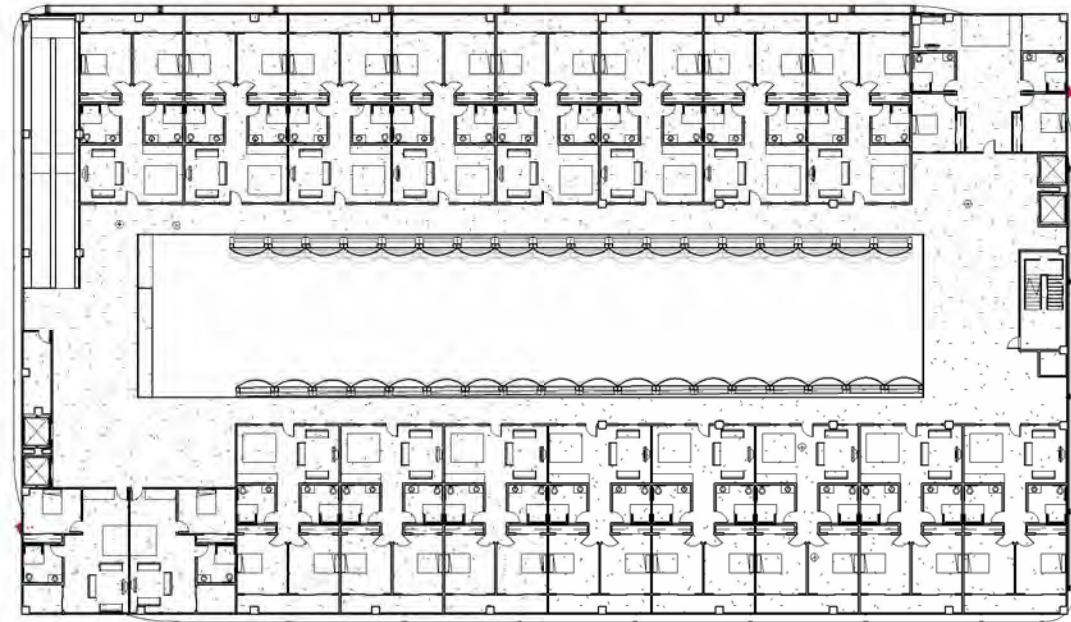
LEVEL 2 - LOCKERS/POOL RAMP



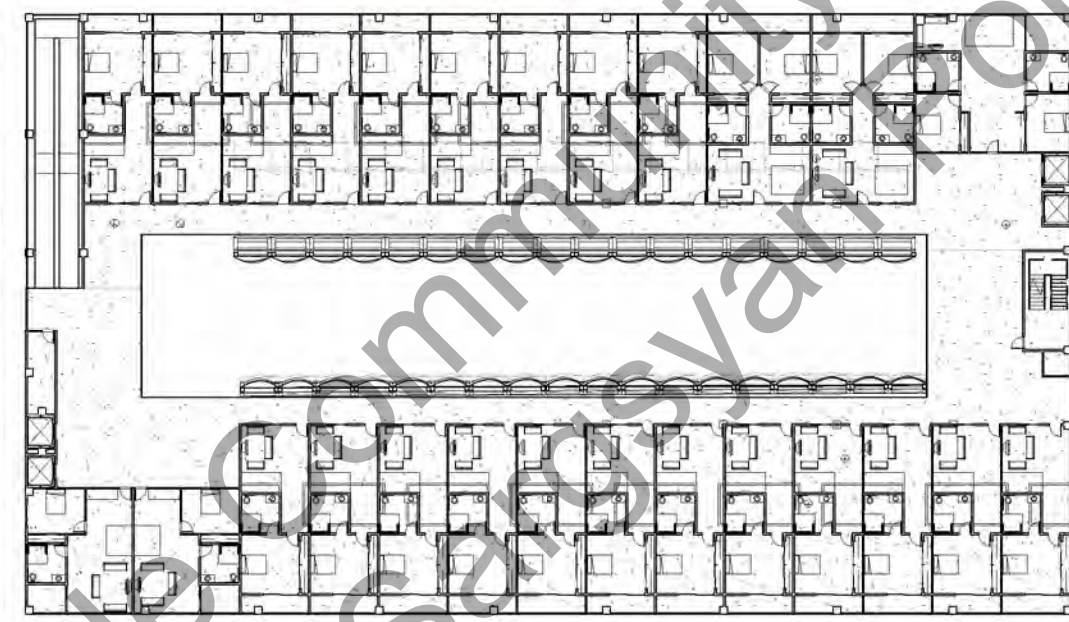
LEVEL 3 - POOL FLOOR



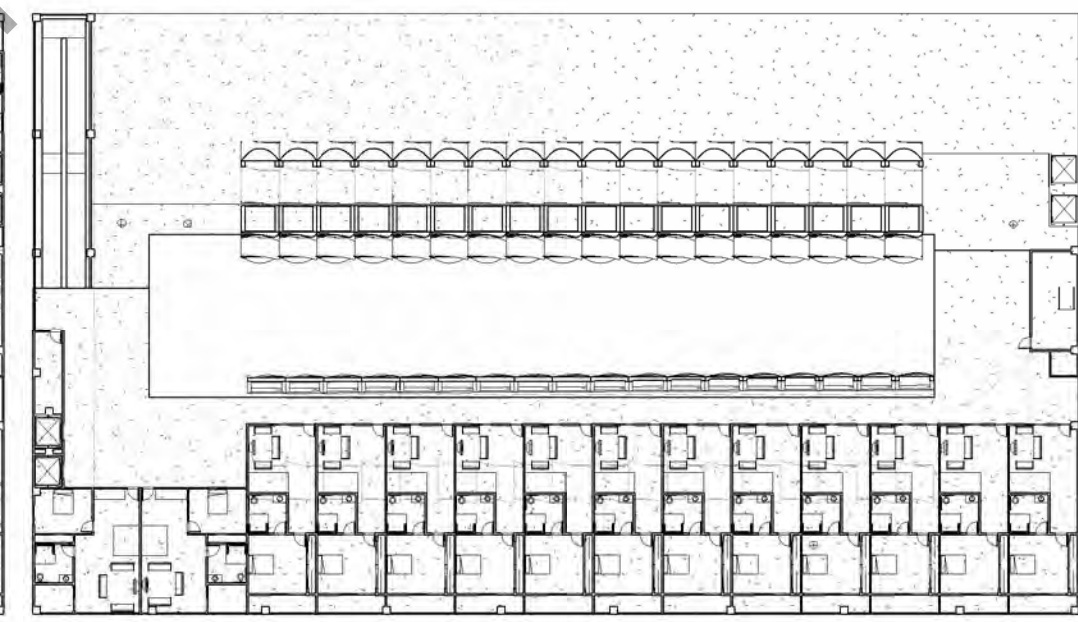
LEVEL 4 - LIVING AREA



LEVEL 5 - LIVING AREA



LEVEL 6 - LIVING AREA



ROOM LAYOUT

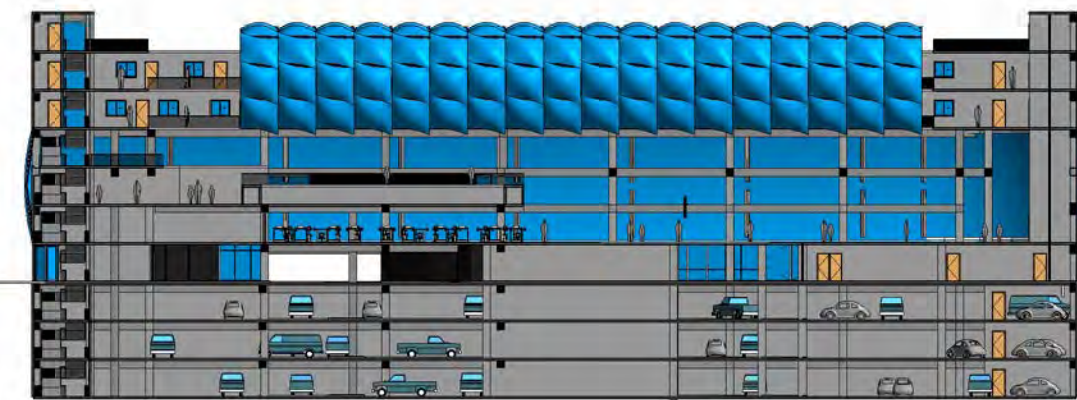
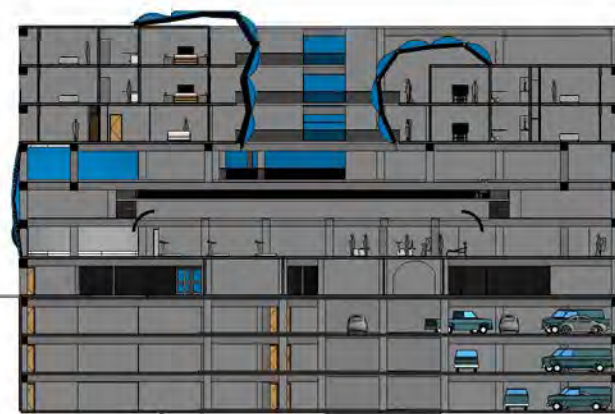
DESCRIPTION

SECTION - NORTH TO SOUTH

SECTION - EAST TO WEST



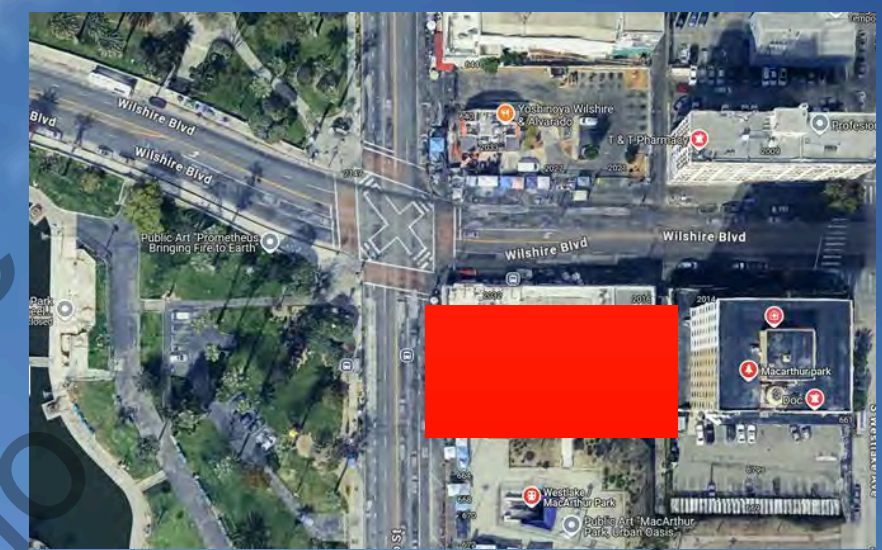
The bedroom units all contain a living area with seating, a pantry, and a place to eat. The one-bedroom unit includes an ADA bathroom, a closet, and a 50-square-foot balcony. The two-bedroom unit includes individual closets, individual ADA bathrooms, and a large balcony accessible from the bedrooms. The two-bedroom unit is over 1,300 square feet, and the one-bedroom unit is over 800 square feet.

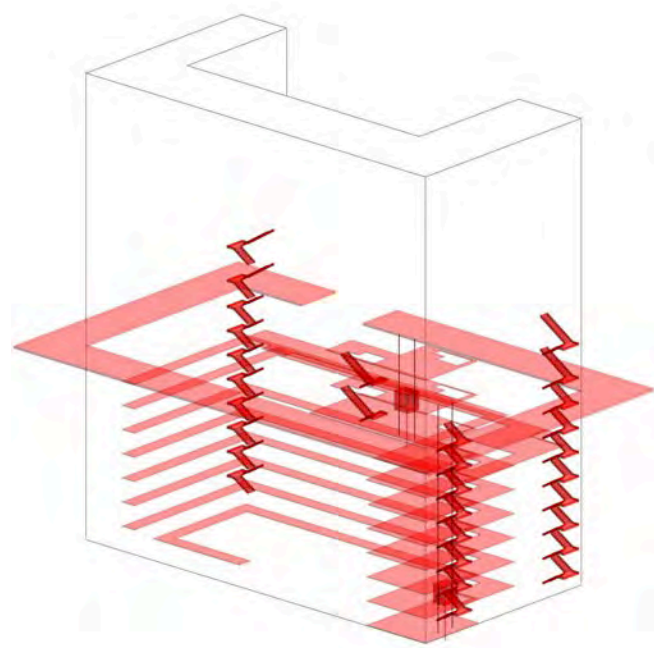


MACARTHUR PARK PROJECT - MIXED-USE BUILDING

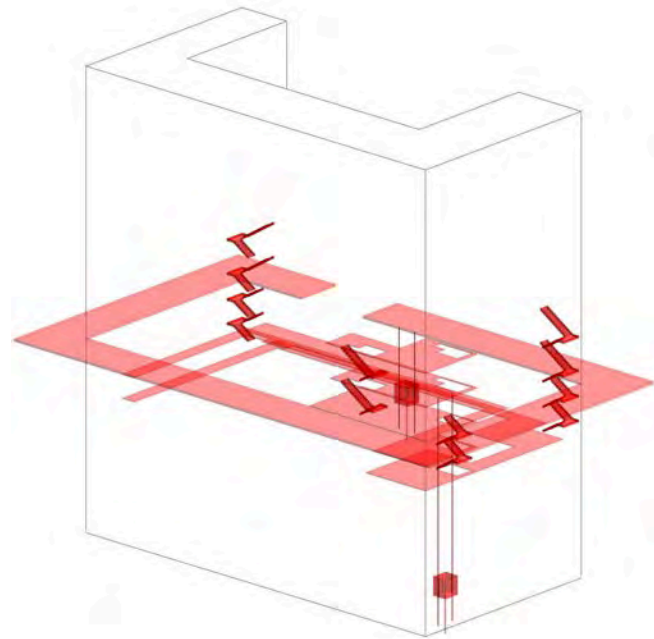
LOCATION: 650 S ALVARADO ST, LOS ANGELES, CA

THE GOAL WAS TO DESIGN A HIGH-RISE MIXED-USE BUILDING THAT SERVES THE COMMUNITY AND CONNECTS DIRECTLY TO THE METRO STATION BELOW. LOCATED AT S. ALVARADO STREET AND WILSHIRE BOULEVARD, ACROSS FROM MACARTHUR PARK, THE BUILDING SITS IN A DENSE, HIGH-TRAFFIC AREA. THE MAIN CONCEPT IS SECURITY FOR THE COMMUNITY. WHILE THE RESIDENTIAL LOBBY IS SEPARATE FROM THE COMMUNITY AND CHILDCARE LOBBIES, ALL UPPER-FLOOR ACCESS IS CONTROLLED THROUGH A SECURE ENTRY. THE DESIGN USES AN OPEN FLOOR PLAN WITH MINIMAL WALLS WHILE MAINTAINING ACCESS CONTROL. THE PROGRAM IS VERTICALLY ARRANGED: THE GROUND FLOOR INCLUDES THE MAIN ENTRY AND RETAIL, LEVELS 1-2 ARE FOR COMMUNITY USE, 3-4 FOR CHILDCARE, 5-7 FOR HOUSING, AND EIGHT UNDERGROUND LEVELS FOR PARKING. THE FACADE FEATURES OPERABLE GLASS CURTAIN PANELS INSPIRED BY THE AL BAHAR TOWERS, AND TWO EMERGENCY EGRESS STAIRS ARE LOCATED AT OPPOSITE ENDS OF THE BUILDING.

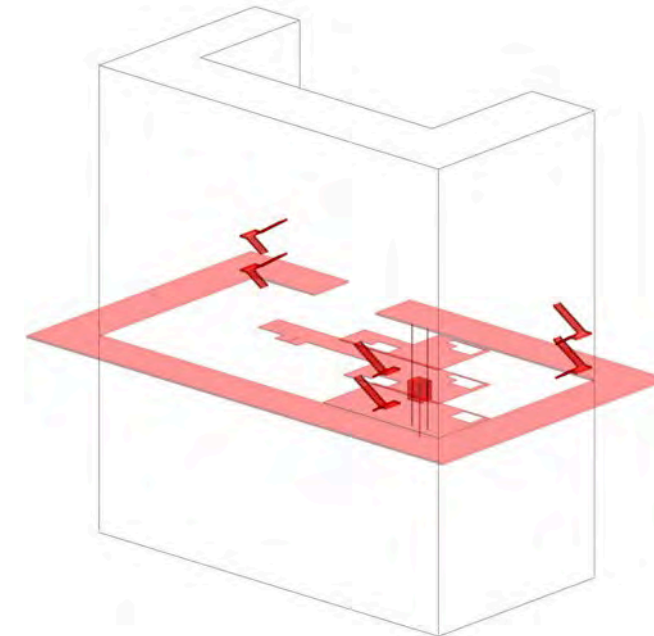




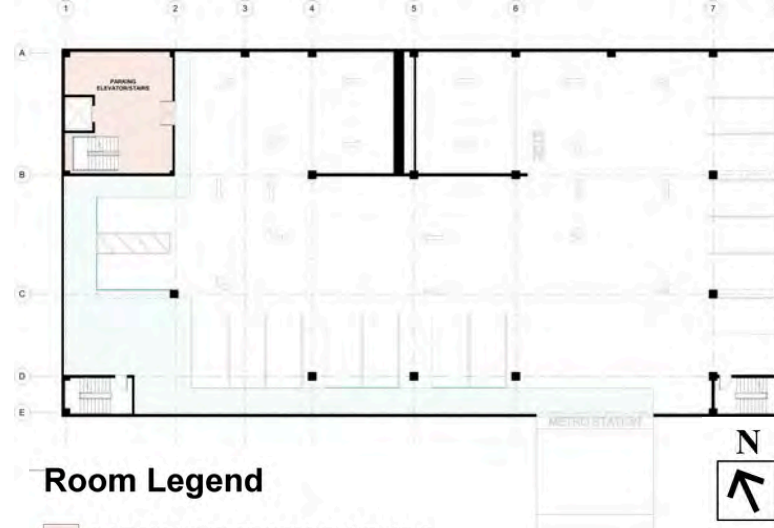
PARKING TO COMMUNITY SPACE



METRO TO COMMUNITY SPACE



STREET TO COMMUNITY SPACE



Room Legend

- PARKING ELEVATOR/STAIRS
- PATH FROM METRO TO ELEVATOR

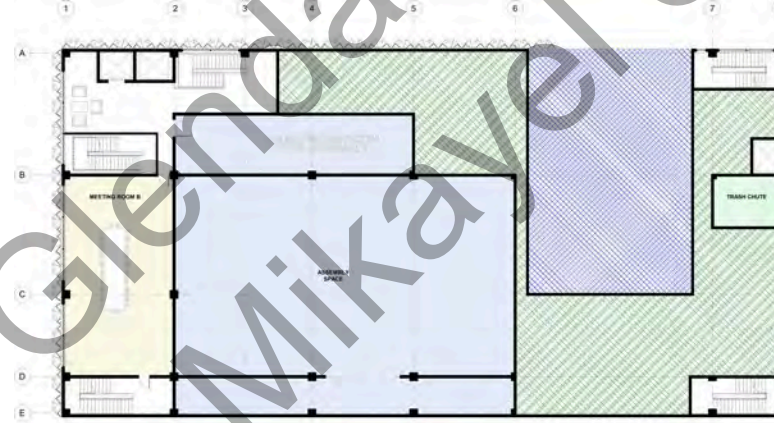
METRO PARKING LEVEL



Room Legend

- ADMINISTRATION
- MALE RESTROOM
- ASSEMBLY SPACE
- MEETING ROOM A
- DINING ROOM
- PRE-FUNCTION AREA
- FEMALE RESTROOM
- TRASH CHUTE
- KITCHEN

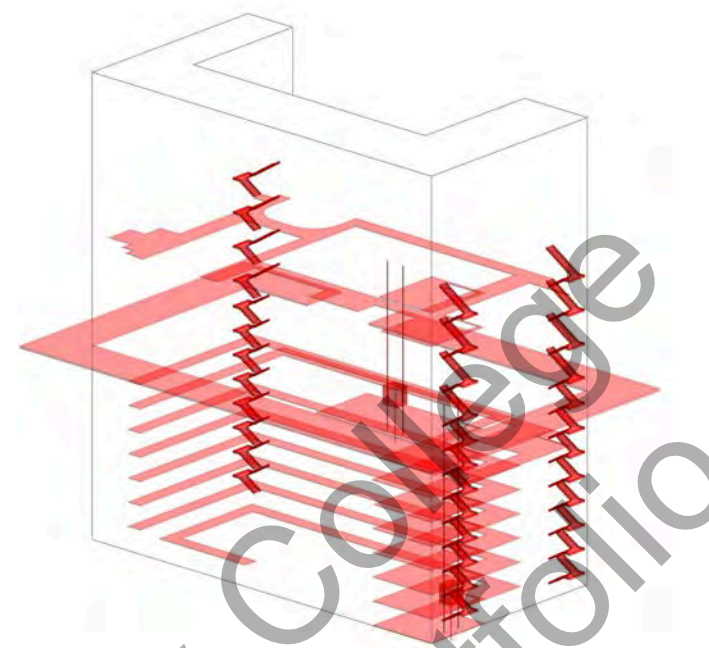
LEVEL 1 - COMMUNITY



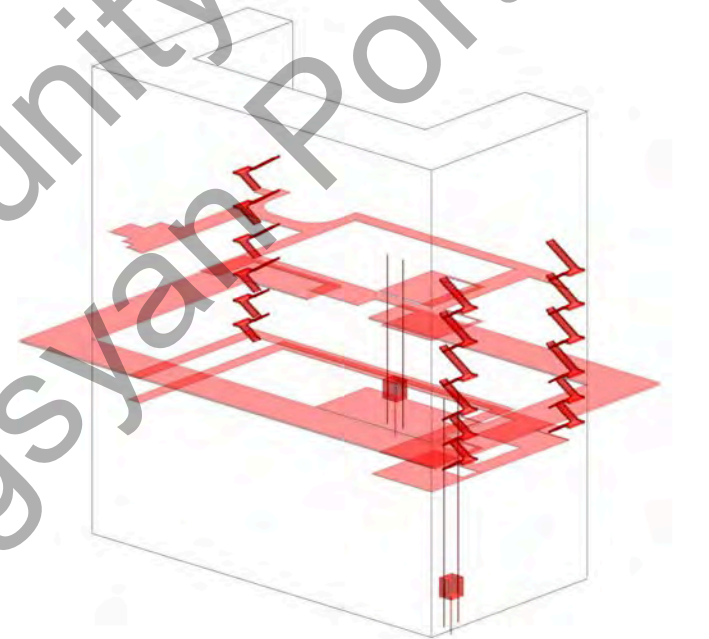
Room Legend

- ASSEMBLY SPACE
- MEETING ROOM B
- TRASH CHUTE
- UNUSED SPACE
- OPEN SPACE

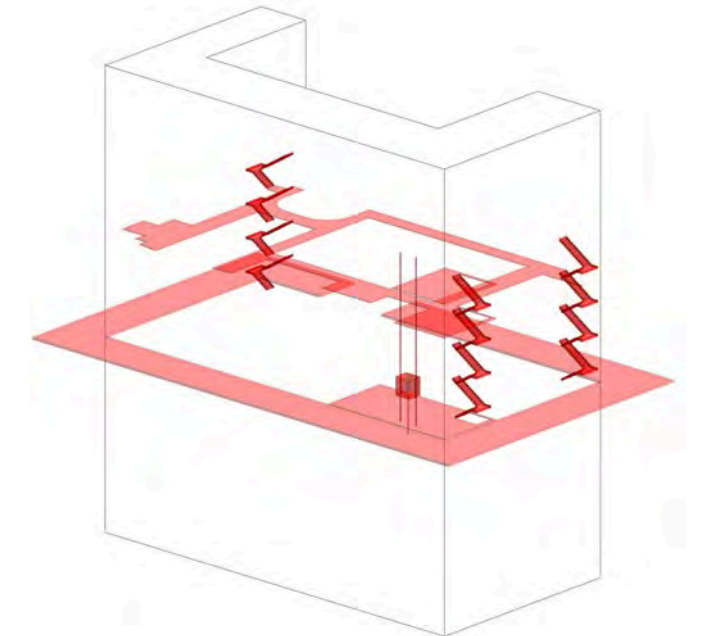
LEVEL 2 - COMMUNITY



PARKING TO CHILDCARE



METRO TO CHILDCARE



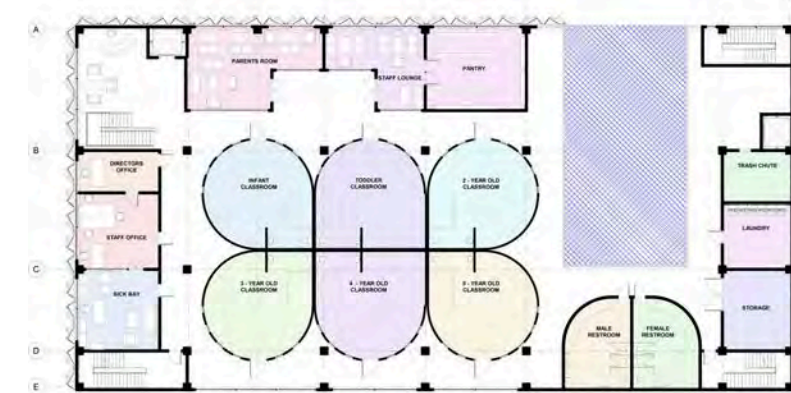
STREET TO CHILDCARE



Room Legend

- EMPLOYEE RESTROOM
- MAIN LOBBY
- OFFICE
- PUBLIC RESTROOM
- RESIDENTIAL LOBBY
- RETAIL
- TRASH CHUTE

GROUND LEVEL



Room Legend

- 2 - YEAR OLD CLASSROOM
- MALE RESTROOM
- STORAGE
- 3 - YEAR OLD CLASSROOM
- PANTRY
- TODDLER CLASSROOM
- 4 - YEAR OLD CLASSROOM
- PARENTS ROOM
- TRASH CHUTE
- 5 - YEAR OLD CLASSROOM
- SICK BAY
- OPEN SPACE
- DIRECTORS OFFICE
- STAFF LOUNGE
- FEMALE RESTROOM
- STAFF OFFICE
- INFANT CLASSROOM
- LAUNDRY

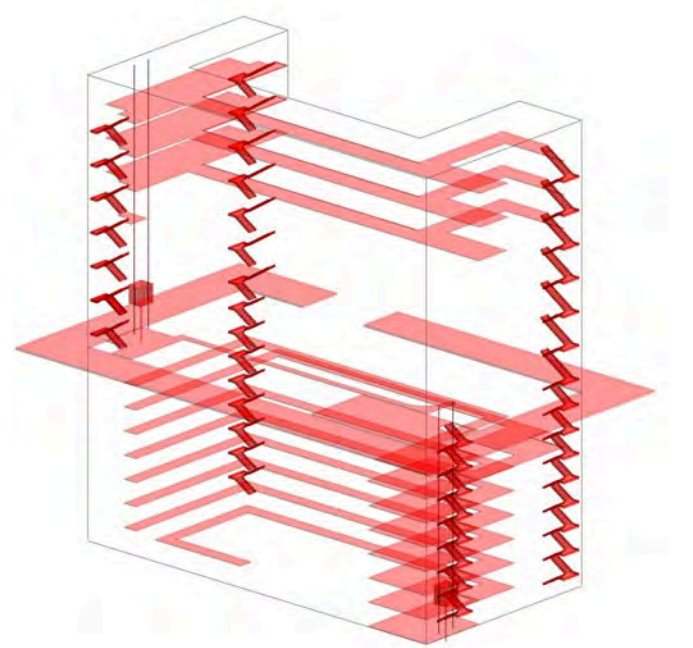
LEVEL 3 - CHILDCARE



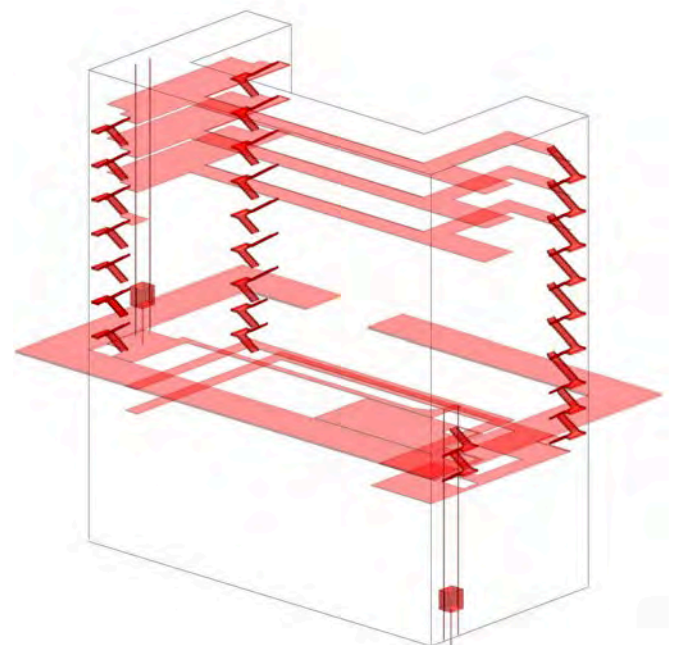
Room Legend

- INDOOR PLAY AREA
- MULTIPURPOSE ROOM WITH STORAGE
- OUTDOOR PLAY AREA
- TRASH CHUTE
- OPEN SPACE

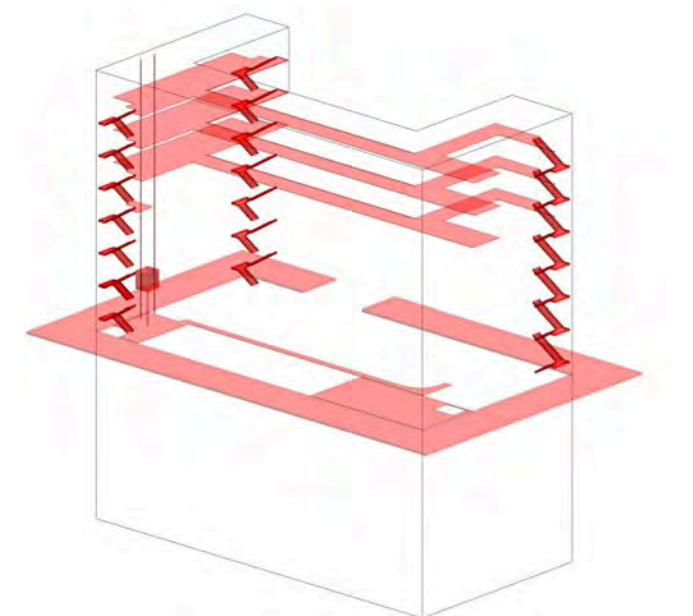
LEVEL 4 - CHILDCARE



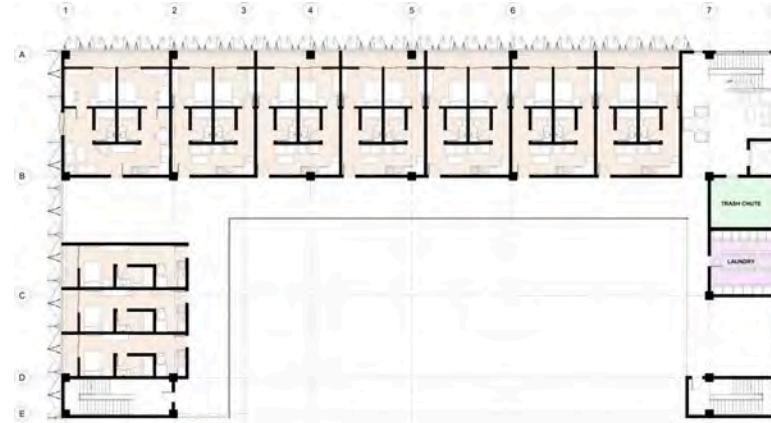
PARKING TO COMMUNITY SPACE



METRO TO COMMUNITY SPACE



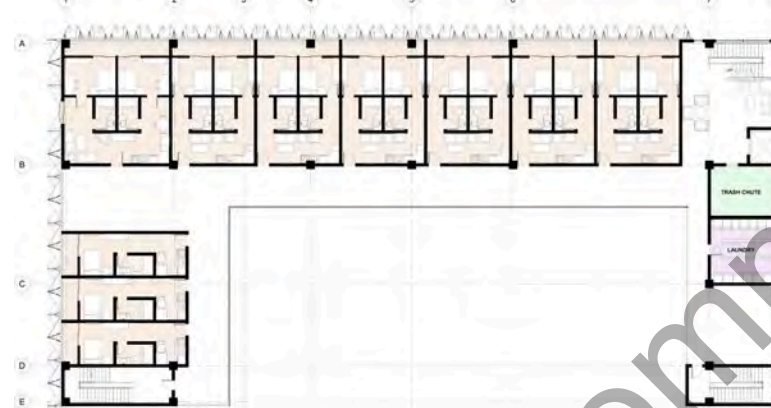
STREET TO COMMUNITY SPACE



Room Legend

- LAUNDRY
- LIVING
- TRASH CHUTE

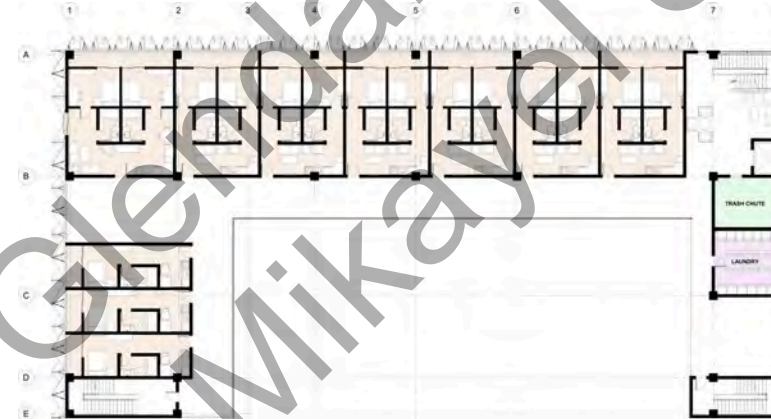
METRO PARKING LEVEL



Room Legend

- LAUNDRY
- LIVING
- TRASH CHUTE

LEVEL 1 - COMMUNITY



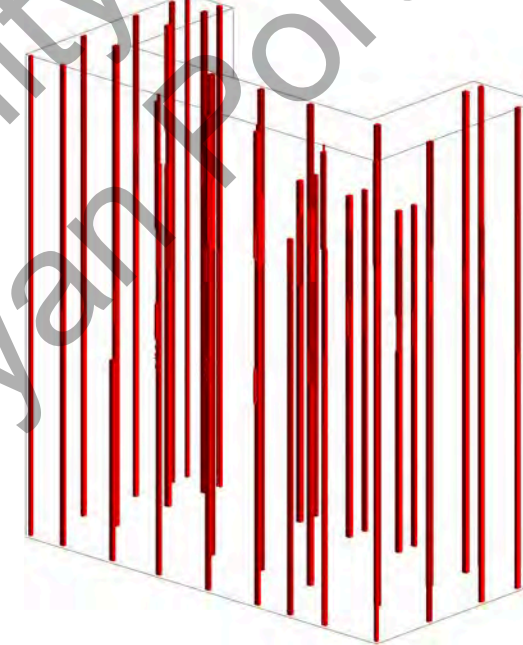
Room Legend

- LAUNDRY
- LIVING
- TRASH CHUTE

LEVEL 2 - COMMUNITY



PARTI DIAGRAM

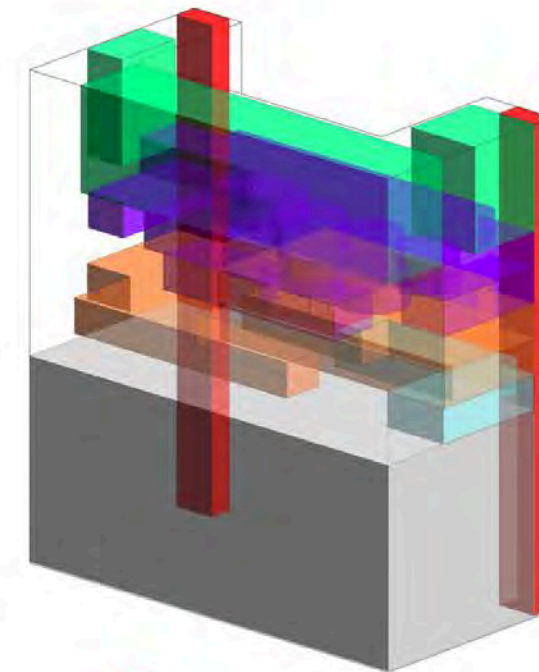


STRUCTURAL COLUMNS



STRUCTURAL COLUMNS+BEAMS

PROGRAM DIAGRAM



LIVING UNITS

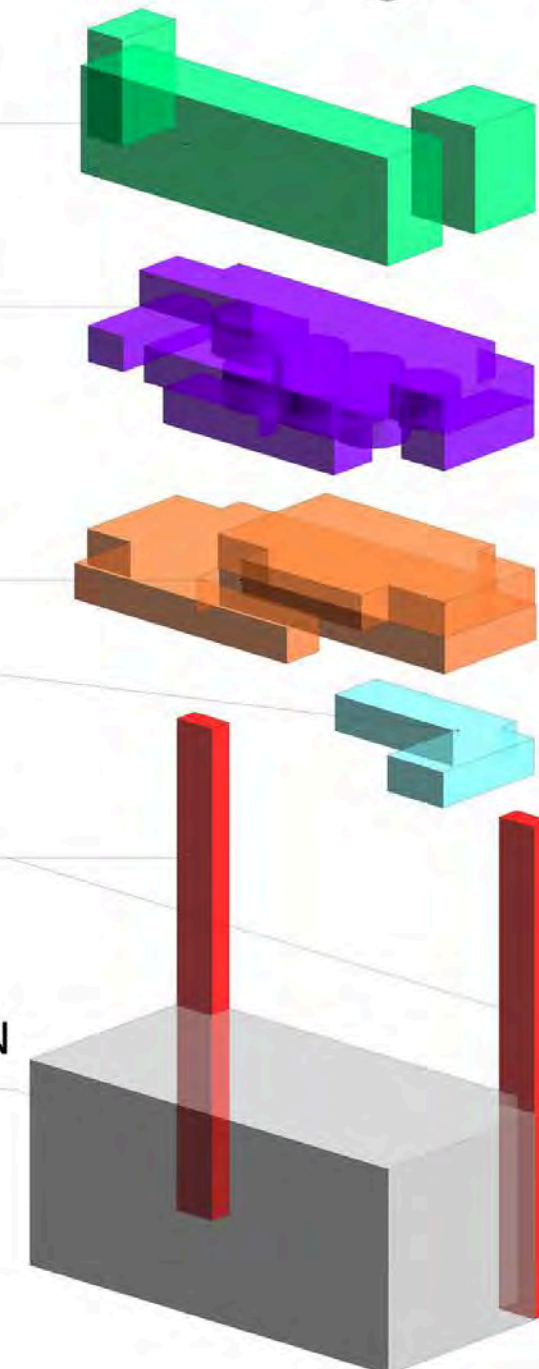
CHILDCARE CENTER

COMMUNITY SPACE

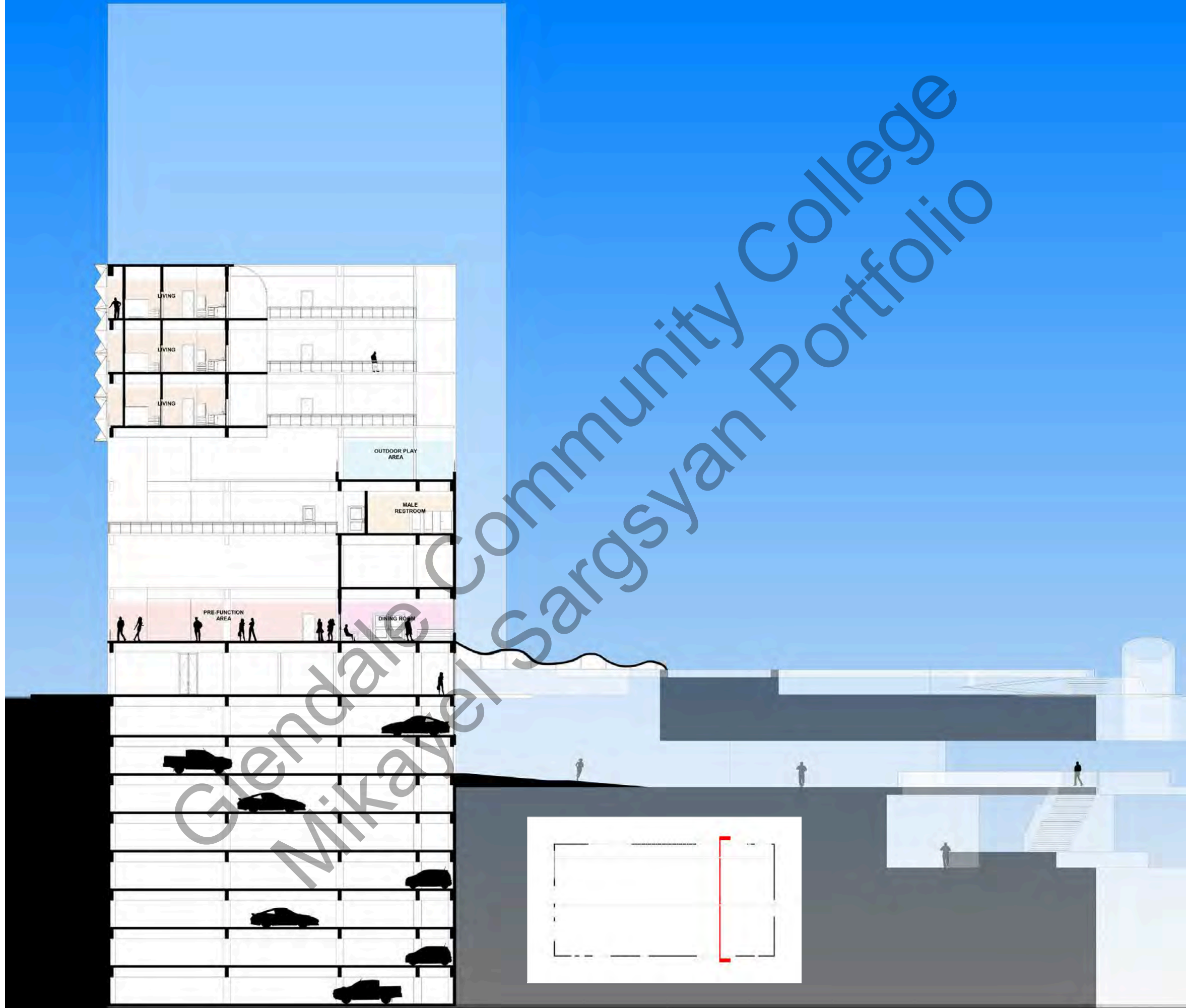
RETAIL

EMERGENCY STAIRCASE

UNDERGROUND PARKING



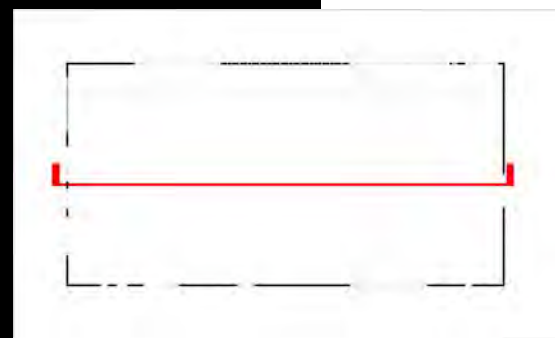
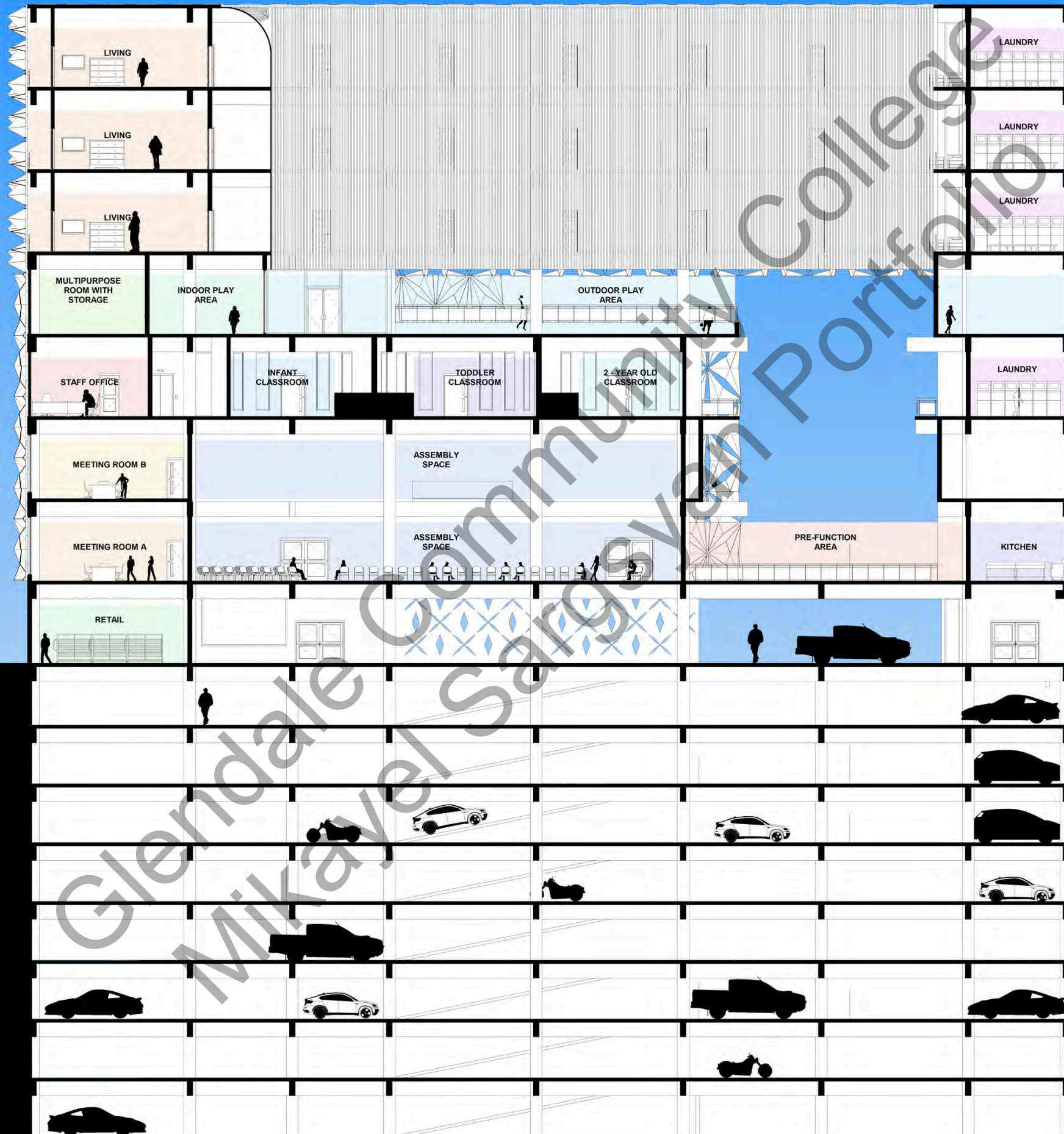
VERTICAL SECTION FACING EAST



VERTICAL SECTION FACING WEST



HORIZONTAL SECTION FACING NORTH - 1



HORIZONTAL SECTION FACING NORTH - 2

