

# TREADWELL HEIGHTS

DENSE URBAN POST PANDEMIC LIVING

## PROJECT NARRATIVE

How will the fear of density within a post pandemic world change the future habitat of urban living and shift the development of housing within these spaces?

Statistics demonstrate that currently more than 55% of the world's population live in dense urban centers and illustrates a significant increase of 2/3 of the world's population will move into dense urban centers by 2050. However, given the status of the current pandemic of Covid-19, there are growing adverse concerns of globalization and the urban environment. As Covid-19 continues to spread, there has become momentum to deglobalize and retreat from dense urban cities in favor of self-preservation. With the positive infection rate of Covid-19 and no near end at sight.

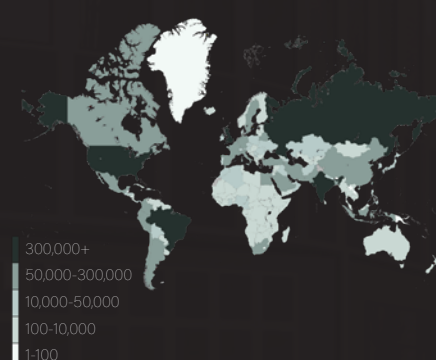
The challenges of existing equalities of equity, access, and health have become more apparent and visible within these communities. The proposal of Treadwell Heights aims to address and minimize the fear of density within a post pandemic world through the reconfiguration of an urban residential high-rise. This design addresses issues of equity through dynamic housing structures of different economic availabilities of different units. Access to social fundamental needs through a system of micro-mobility and programs within the high-rise. And the promotion of green space and medical support to reduce both infection and fear of infection. We must adapt and accommodate for the future of dense urban habitats as we tread forward to promote wellbeing for the enhancement of overall quality of life and health and welfare of all.

## GLOBAL DENSITY DISTRIBUTION



Cities over 1 Million People

## GLOBAL COVID-19 DISTRIBUTION



## FEAR OF DENSITY



## MITIGATION TACTICS

The delivery of public services, facilities and amenities to intended user. Increase access through **Mirco-Mobility**.

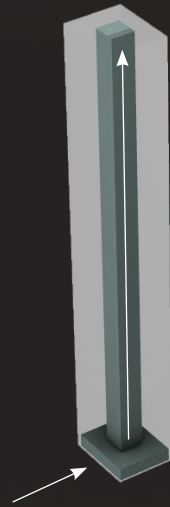
The state of being free from illness or injury. Positive health through access to **green-space** and **medical support**.

Offering varying levels of support depending upon need to achieve greater fairness of community. Improve equity through access of **different programs** and **housing**.

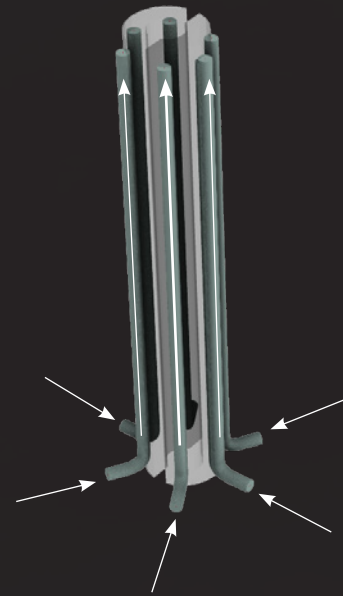




TYPICAL HIGH RISE BUILDING



TREADWELL HEIGHTS

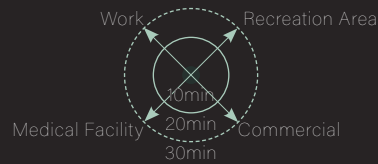
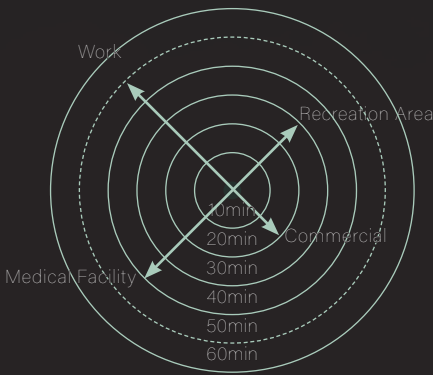


CIRCULATION DIAGRAM  
Micro-Scale

Typical High Rise structures contains single vertical circulation core. Treadwell Heights contains multitude of vertical circulation throughout the building.

CIRCULATION DIAGRAM  
Macro-Scale

In its compact verticality and multi modal transit system, it greatly reduces travel time.



FORMS OF MICRO-MOBILITY



Egress Stairs and Elevator Core

Multipurpose Stairs

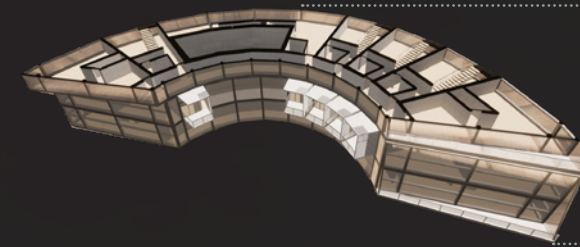
Tram System

Vertical Tram System allows for the diverse and flexible form of transportation within the building. Throughout the exterior facade of the structure, residents and community members have the liberty to travel from one program to another in a single Tram ride.

New Mirco-Mobility system includes a several forms of vertical circulation options which limit commute time and mitigate the spread of illness through interaction.

EXPLODED AXONOMETRIC

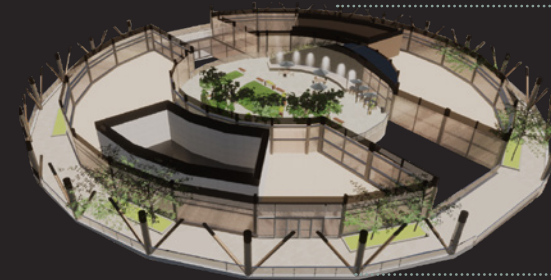
Equity to community with Public Sky Gardens on top floor and Outdoor Central Quad every zone.



RESIDENTIAL FLOOR PLAN

Four types of units per two floors with ranging square footage

Access to Medical Facilities above Central Quads



OBSERVATION + QUAD FLOOR PLAN

Open Outdoor spaces ensure residents and community feel comfortable around each other

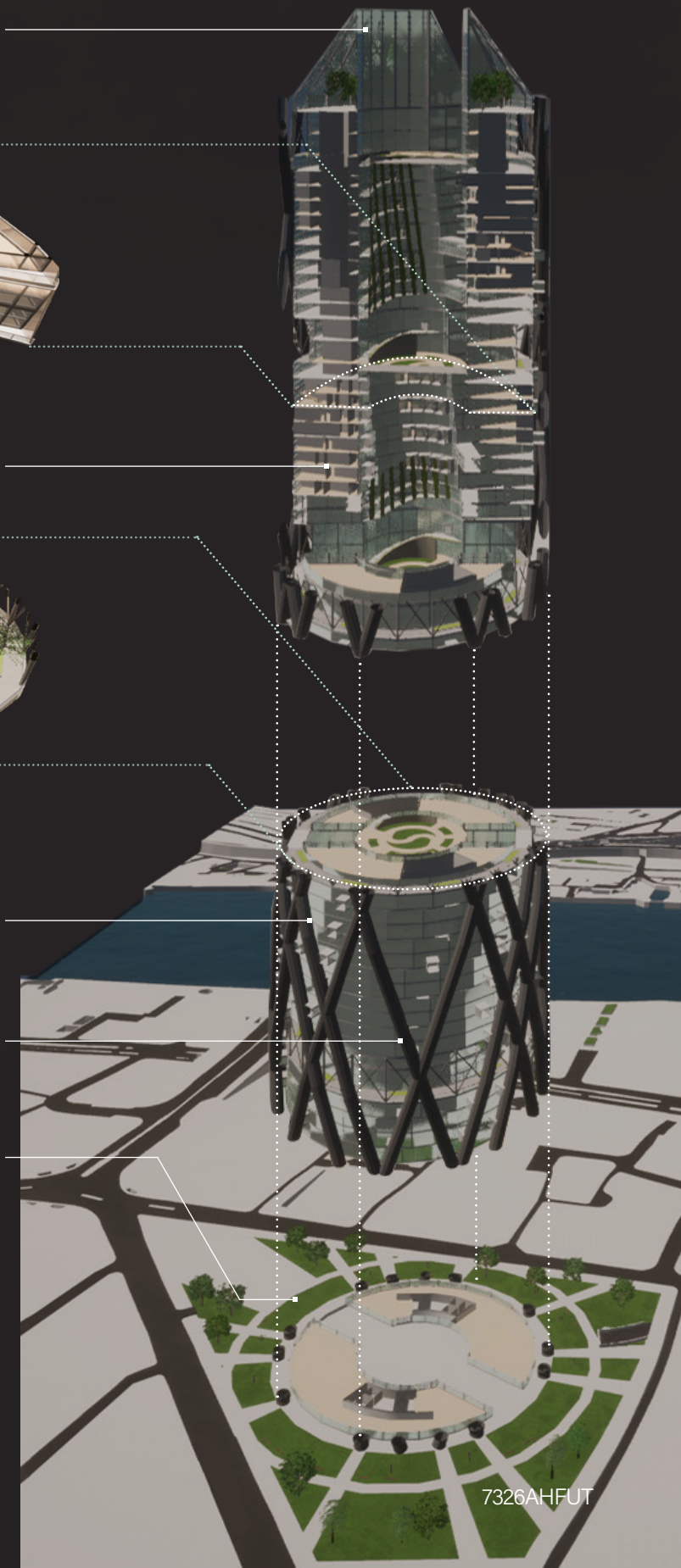
Private Isolation Residential Units offer reserved housing for residents to quarantine away from cohabitation of individuals within the same unit.

Easy access to Commercial, Individual Office, and Communal Outdoor Spaces within each zone to residents and public community.

Exterior Plaza enhances diversity of micro-mobility through pass ways and exterior Tram system

SITE CONTEXT

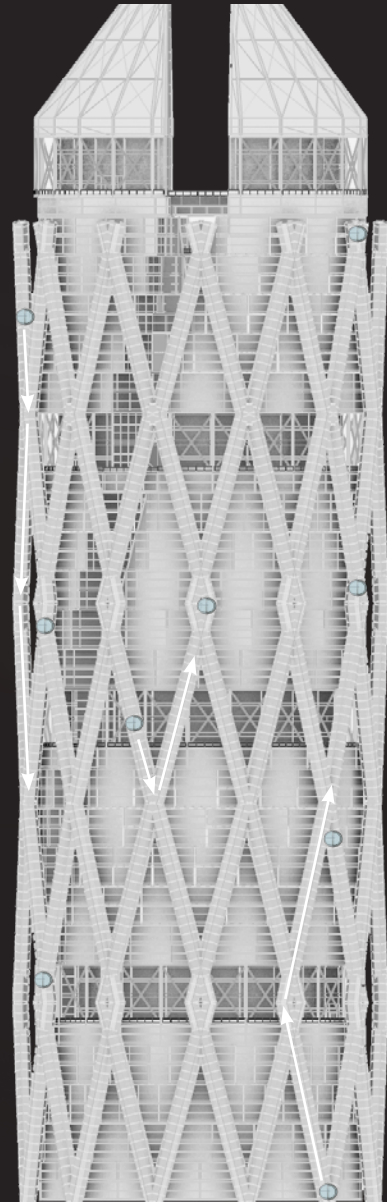
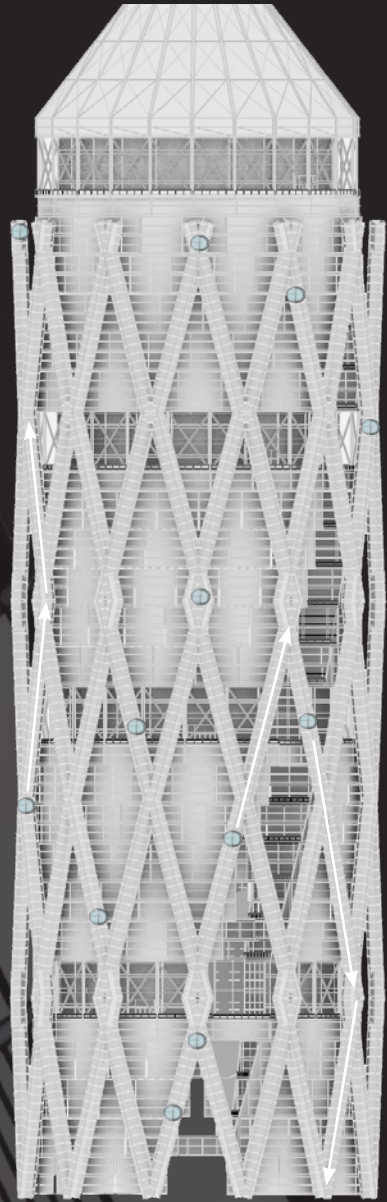
Treadwell Heights is located in one of the most dense areas within England, The London Metropolitan Region. Within the business district of the city of London. The building is situated on the North side of Thames River.



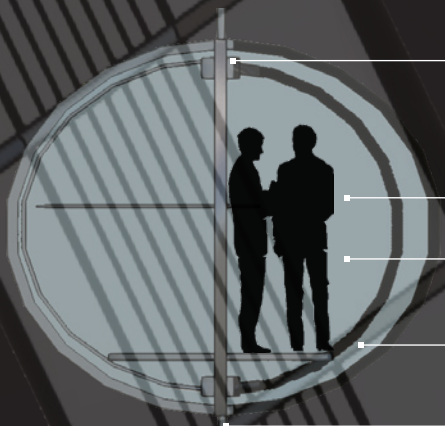


NORTH ELEVATIONS

EAST ELEVATIONS



TRAM SPHERE ANATOMY



UV Disinfection Light integrated on top of Sphere for safe, quick and efficient sterilization of bacteria, viruses and other harmful pathogens.

Two half revolving doors on both side of Tram Sphere.

Glass Facade, along side a steel structure.

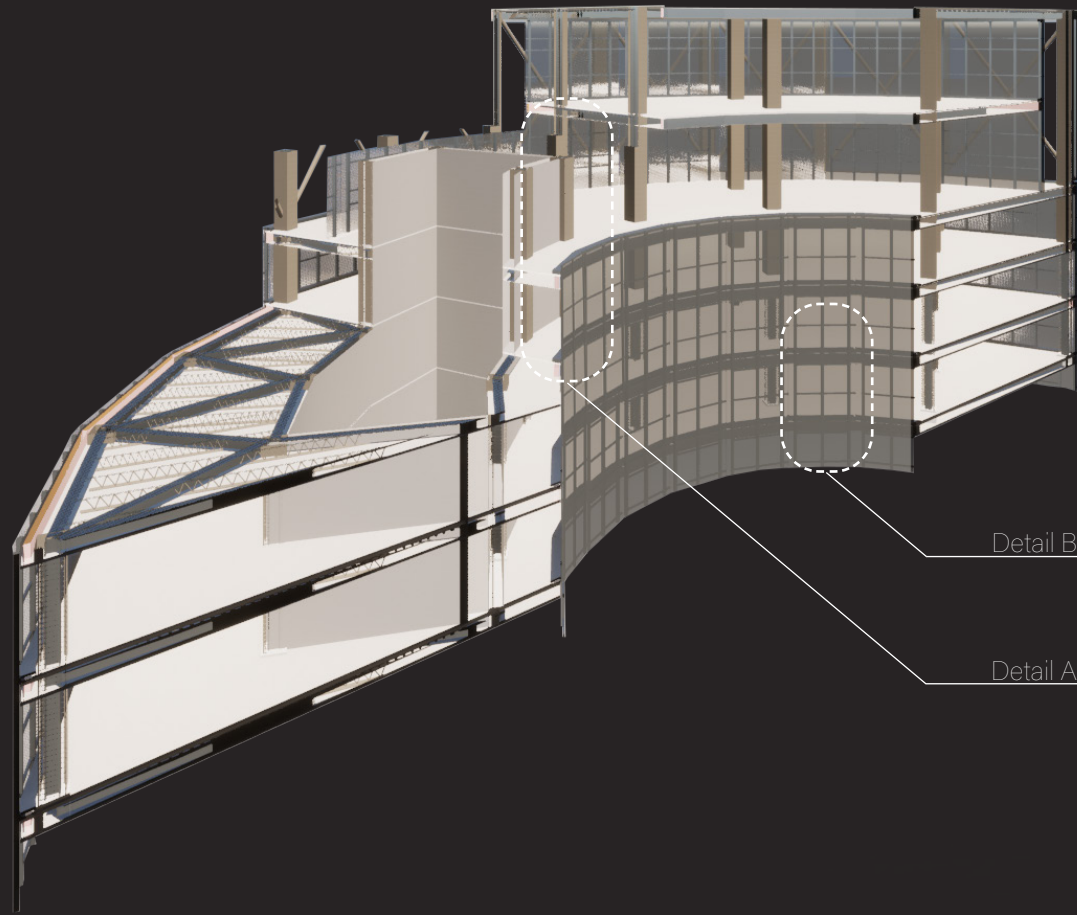
Weight distribution on lower ground for upright position throughout tube path

Gyro-sphere design. Attached by two steel tubes.



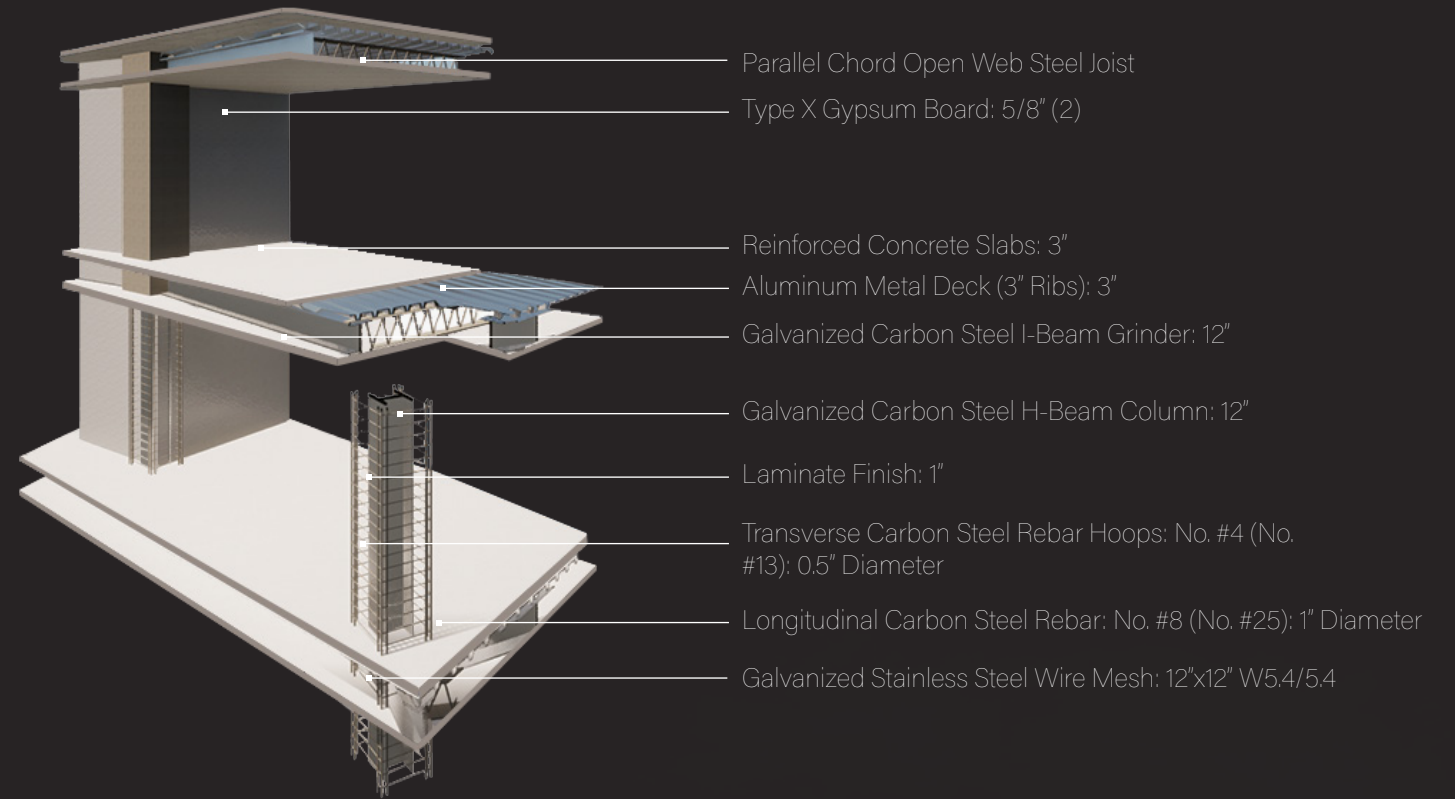


DETAIL SECTION  
Zone One Floor 7-13



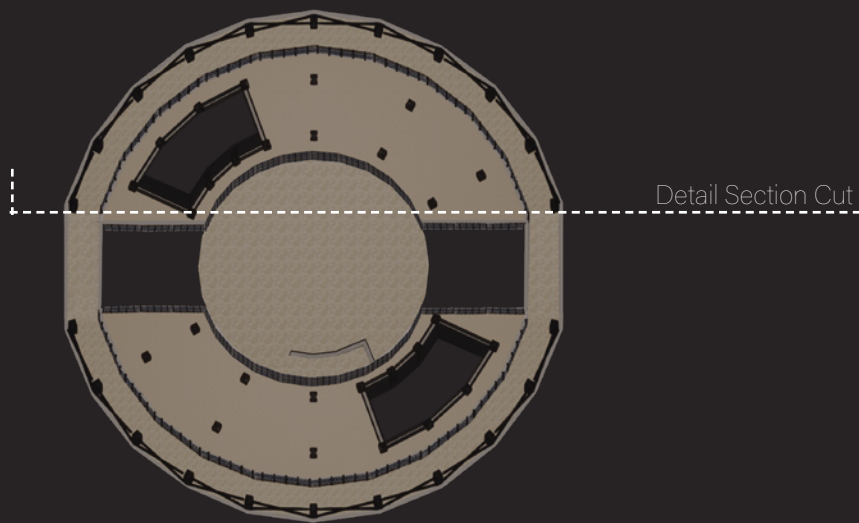
Detail B

Detail A

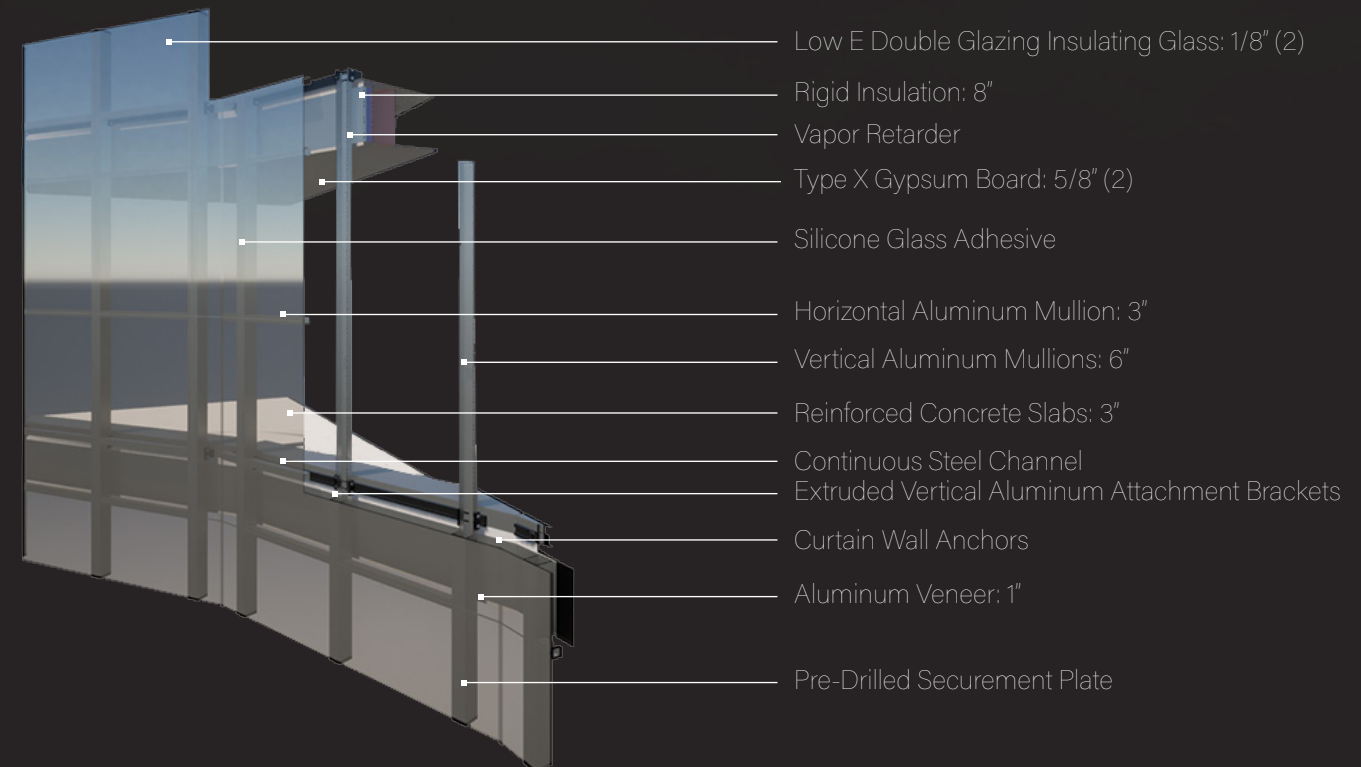


- Parallel Chord Open Web Steel Joist
- Type X Gypsum Board: 5/8" (2)
- Reinforced Concrete Slabs: 3"
- Aluminum Metal Deck (3" Ribs): 3"
- Galvanized Carbon Steel I-Beam Grinder: 12"
- Galvanized Carbon Steel H-Beam Column: 12"
- Laminate Finish: 1"
- Transverse Carbon Steel Rebar Hoops: No. #4 (No. #13): 0.5" Diameter
- Longitudinal Carbon Steel Rebar: No. #8 (No. #25): 1" Diameter
- Galvanized Stainless Steel Wire Mesh: 12"x12" W5.4/5.4

Detail A: Vertical and Horizontal Structure



Detail Section Cut



- Low E Double Glazing Insulating Glass: 1/8" (2)
- Rigid Insulation: 8"
- Vapor Retarder
- Type X Gypsum Board: 5/8" (2)
- Silicone Glass Adhesive
- Horizontal Aluminum Mullion: 3"
- Vertical Aluminum Mullions: 6"
- Reinforced Concrete Slabs: 3"
- Continuous Steel Channel
- Extruded Vertical Aluminum Attachment Brackets
- Curtain Wall Anchors
- Aluminum Veneer: 1"
- Pre-Drilled Securement Plate

Detail B: Curtain Wall