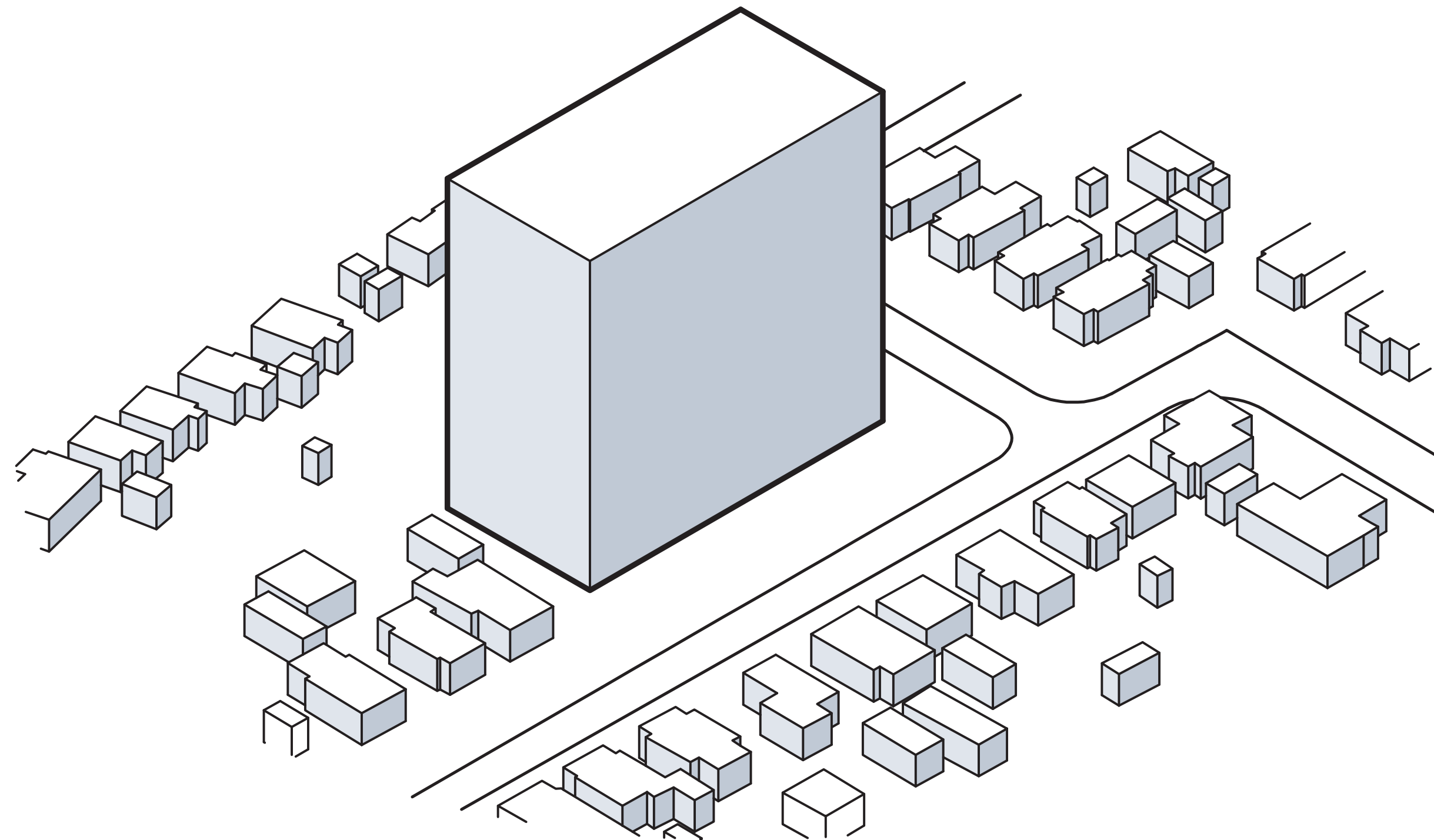
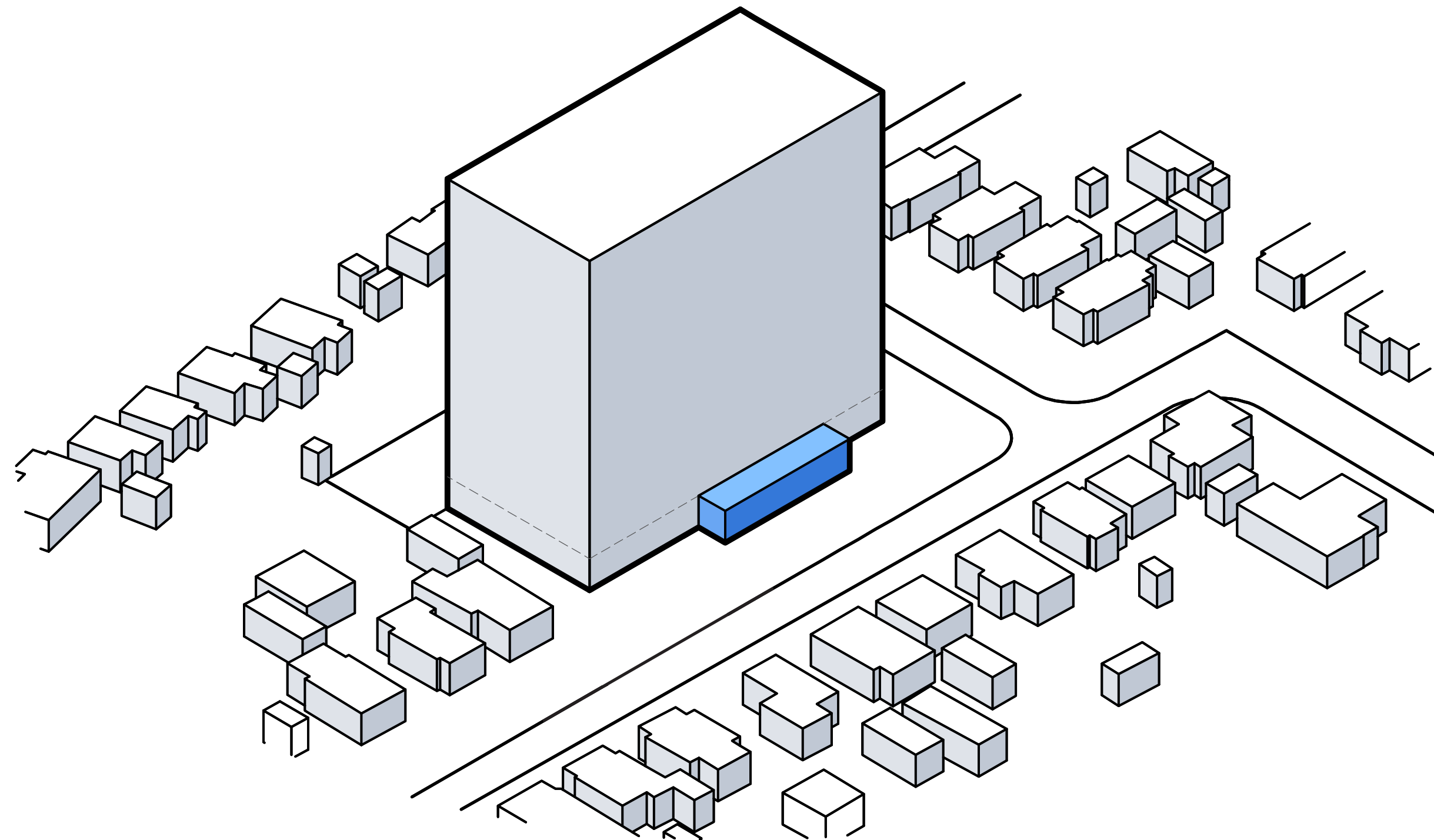


ROYAL.152

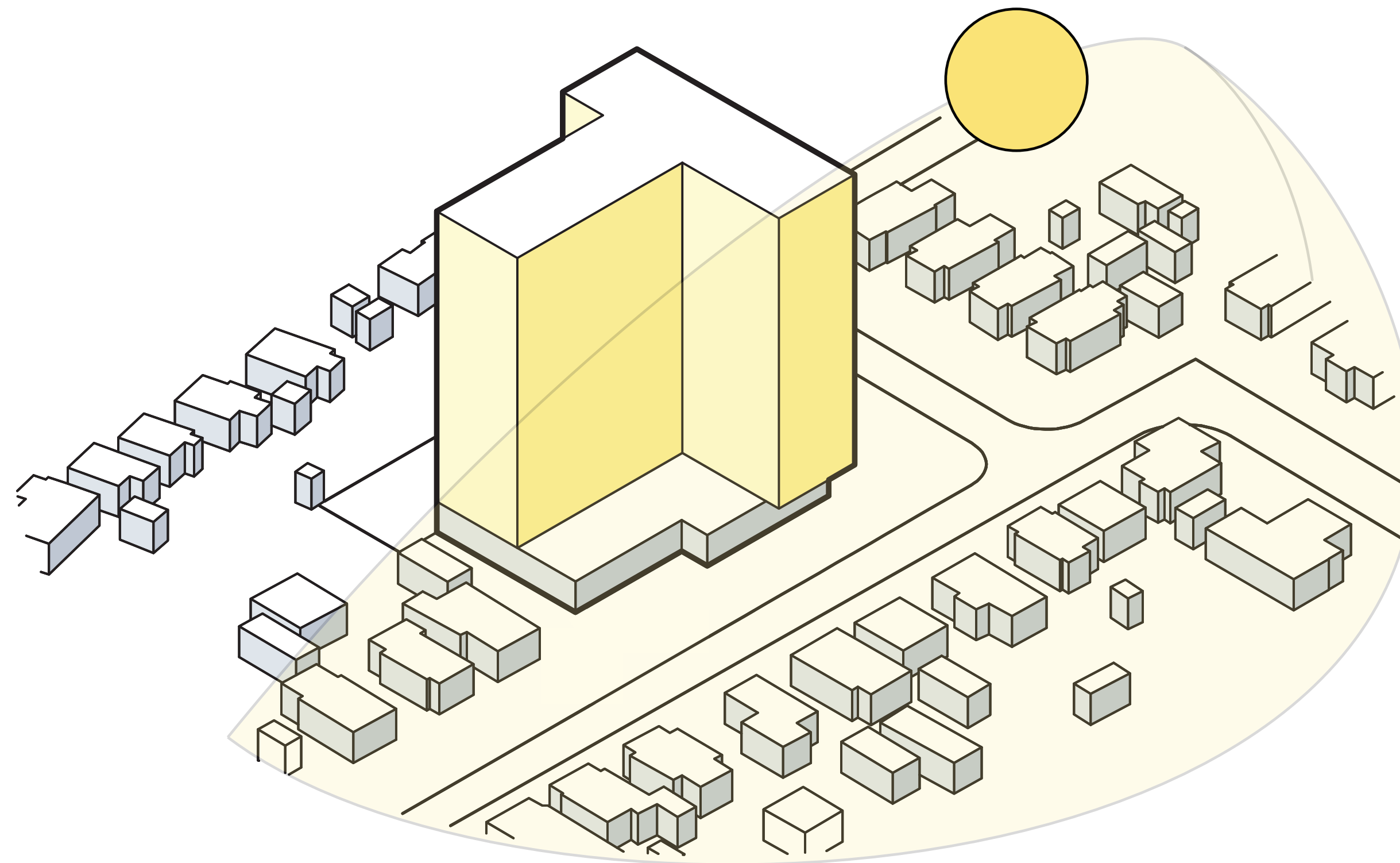




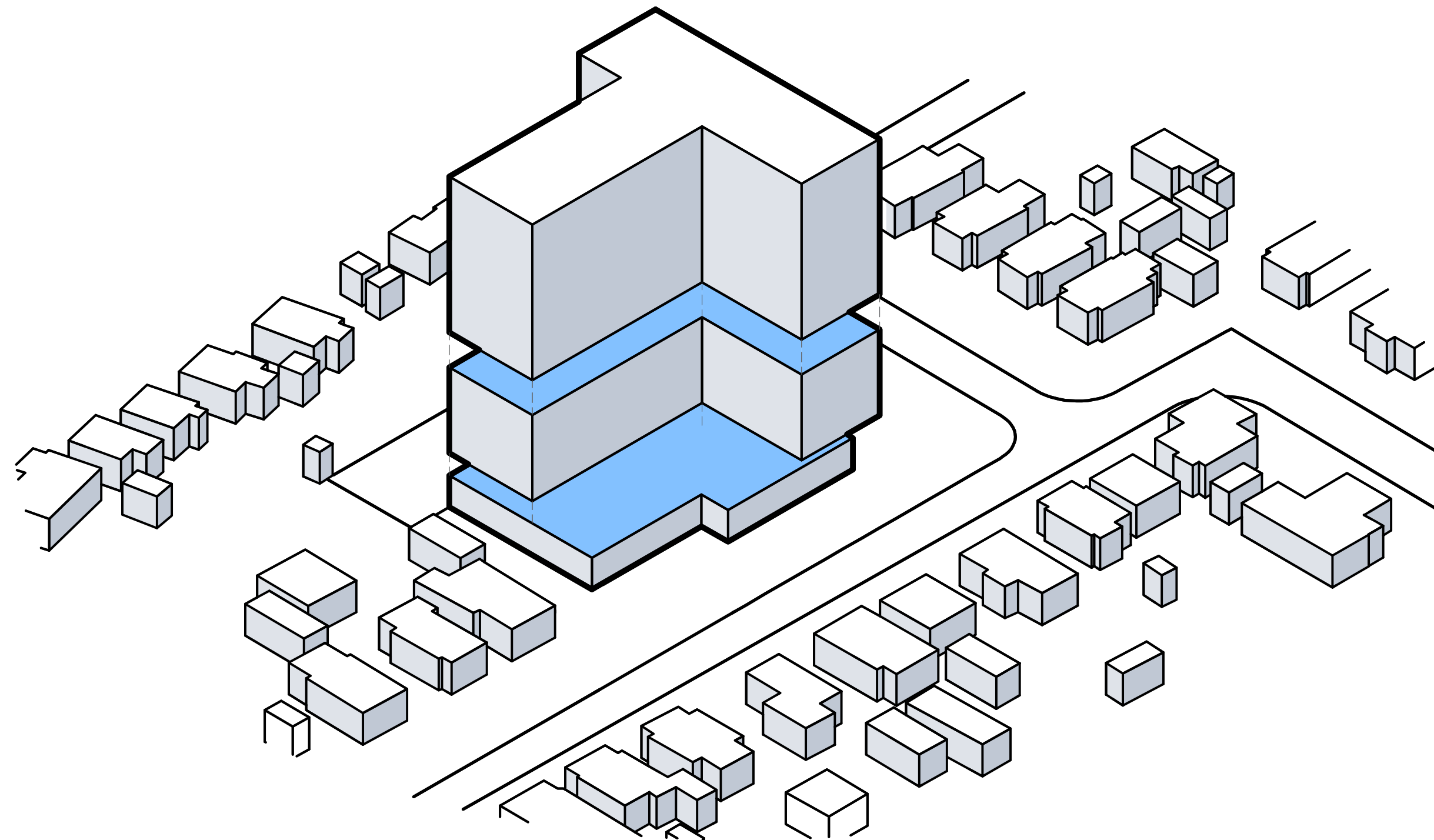
STEP 1: A volume is extruded from the site. Dimensions of the volume is dictated by site constraints and design requirements.



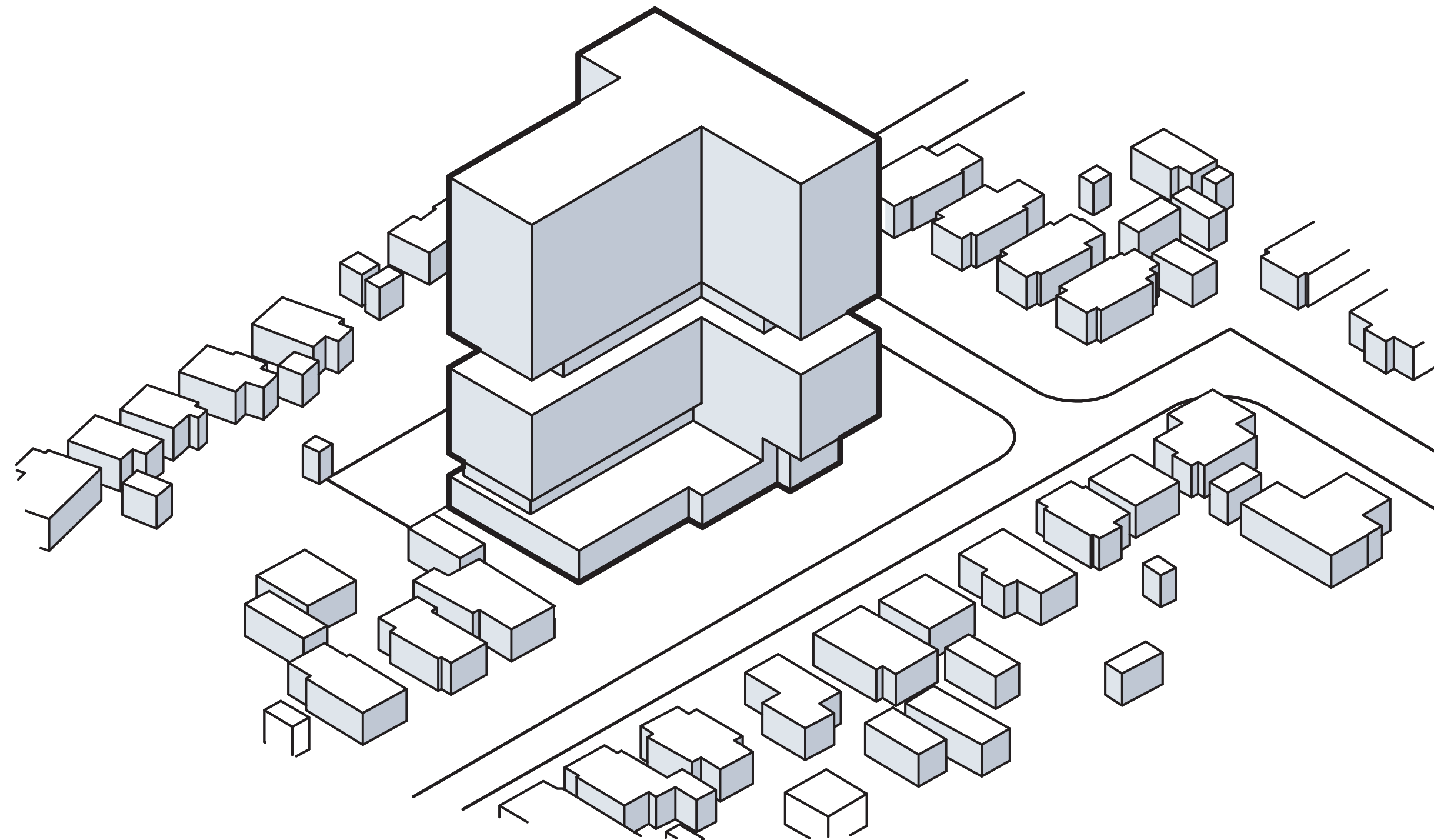
STEP 2: An entrance location is defined and site presence is increased.



STEP 3: The southwest corner of the building is cut away to maximize natural lighting and solar penetration into residential units.



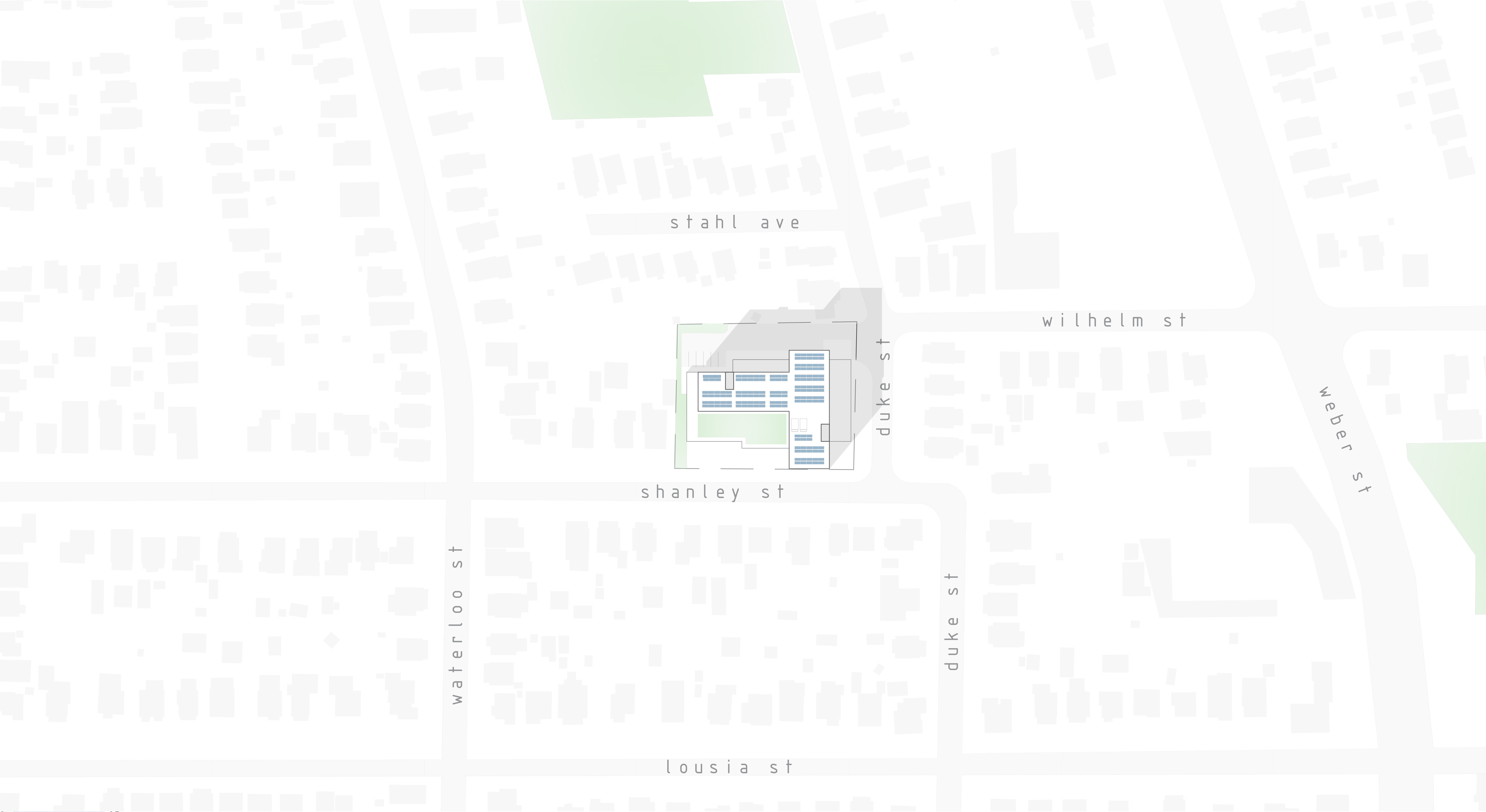
STEP 4: Sections of the building are lifted to create spaces for public and private use.

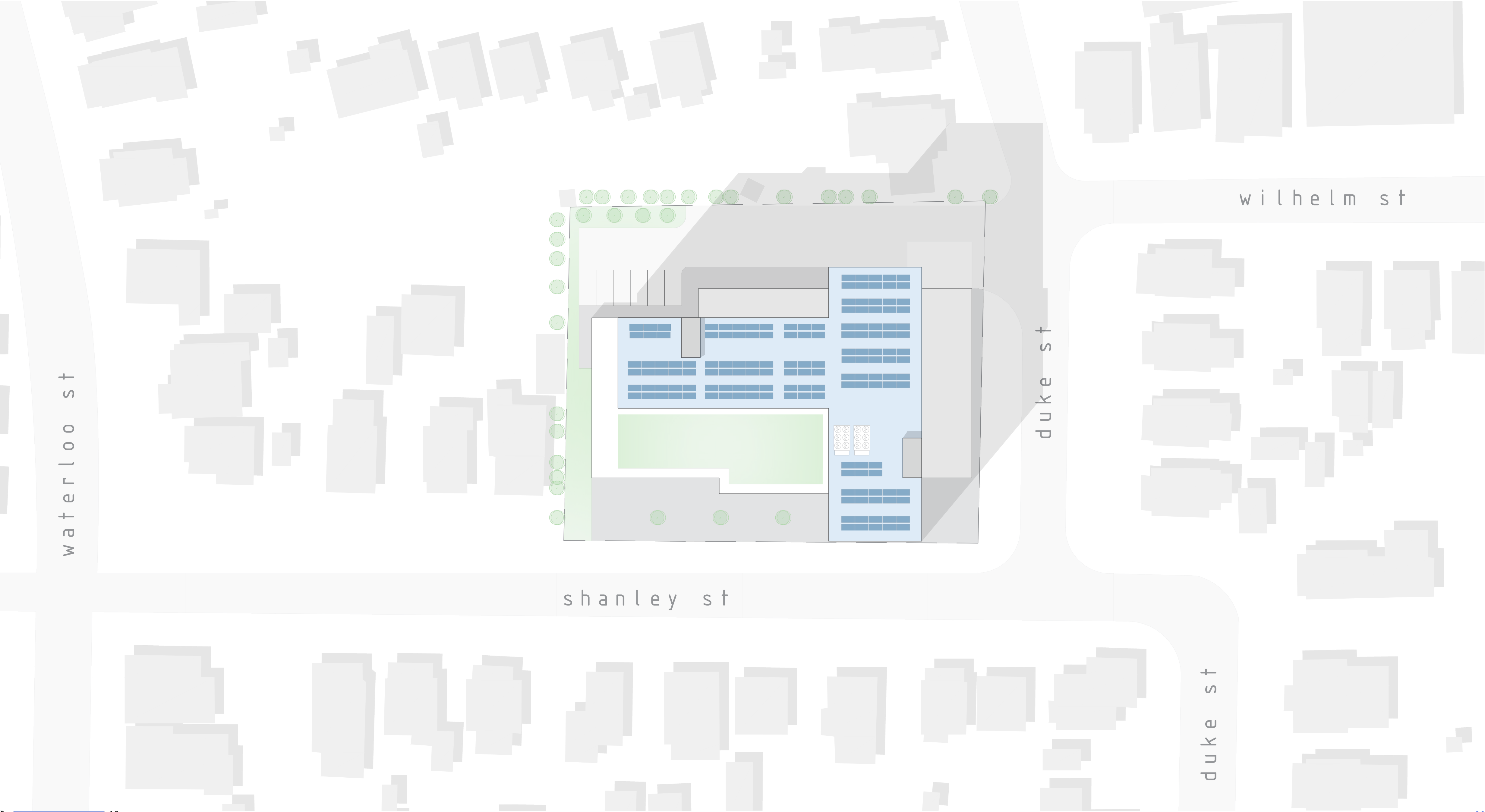


STEP 5: Further changes are made to accommodate the needs of the building.



A blue facade minics the sky and represents the infinite potential of Waterloo's technology sector.







Our Building



North Elevation



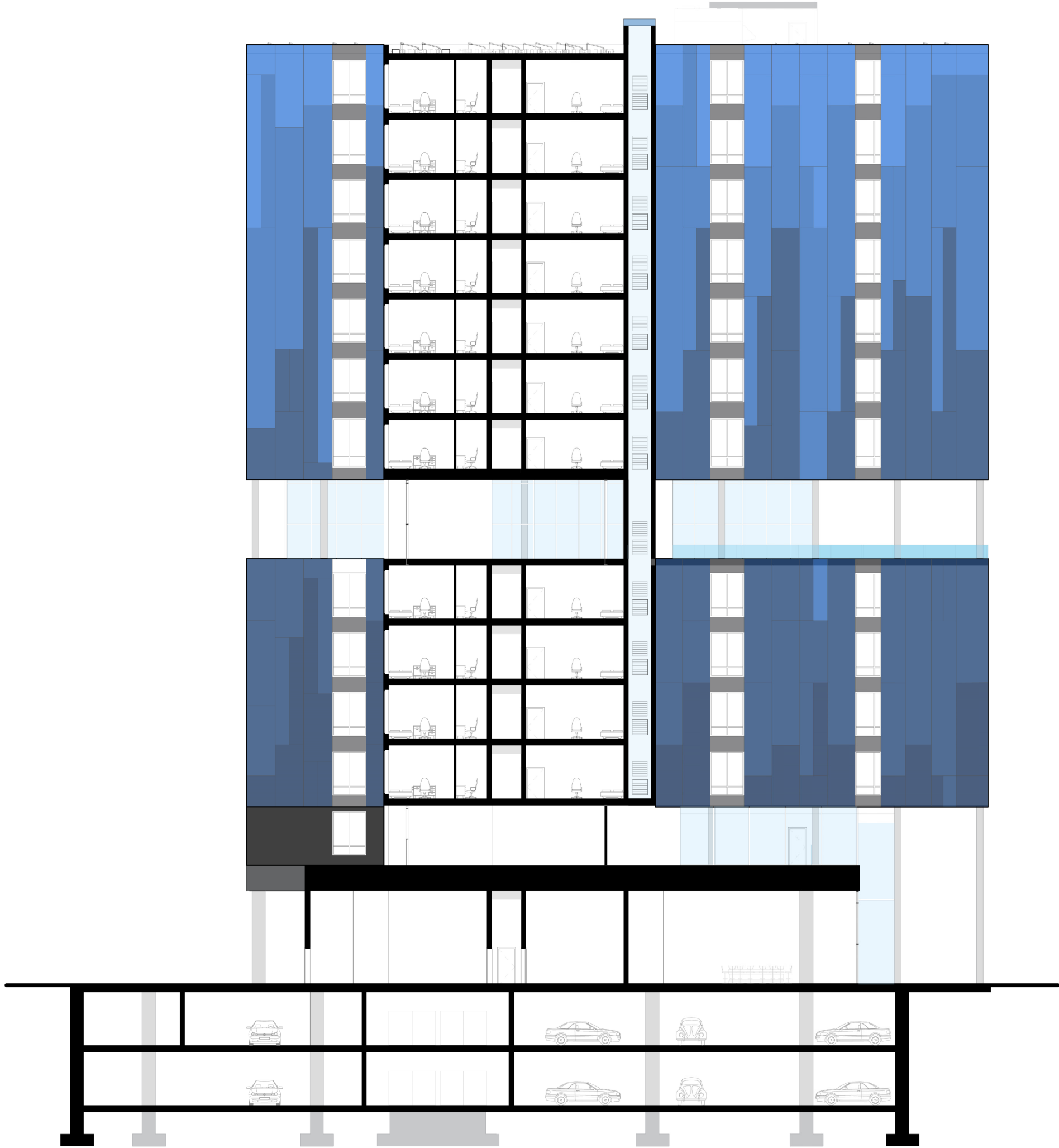
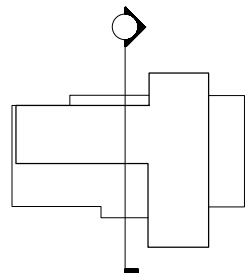
South Elevation



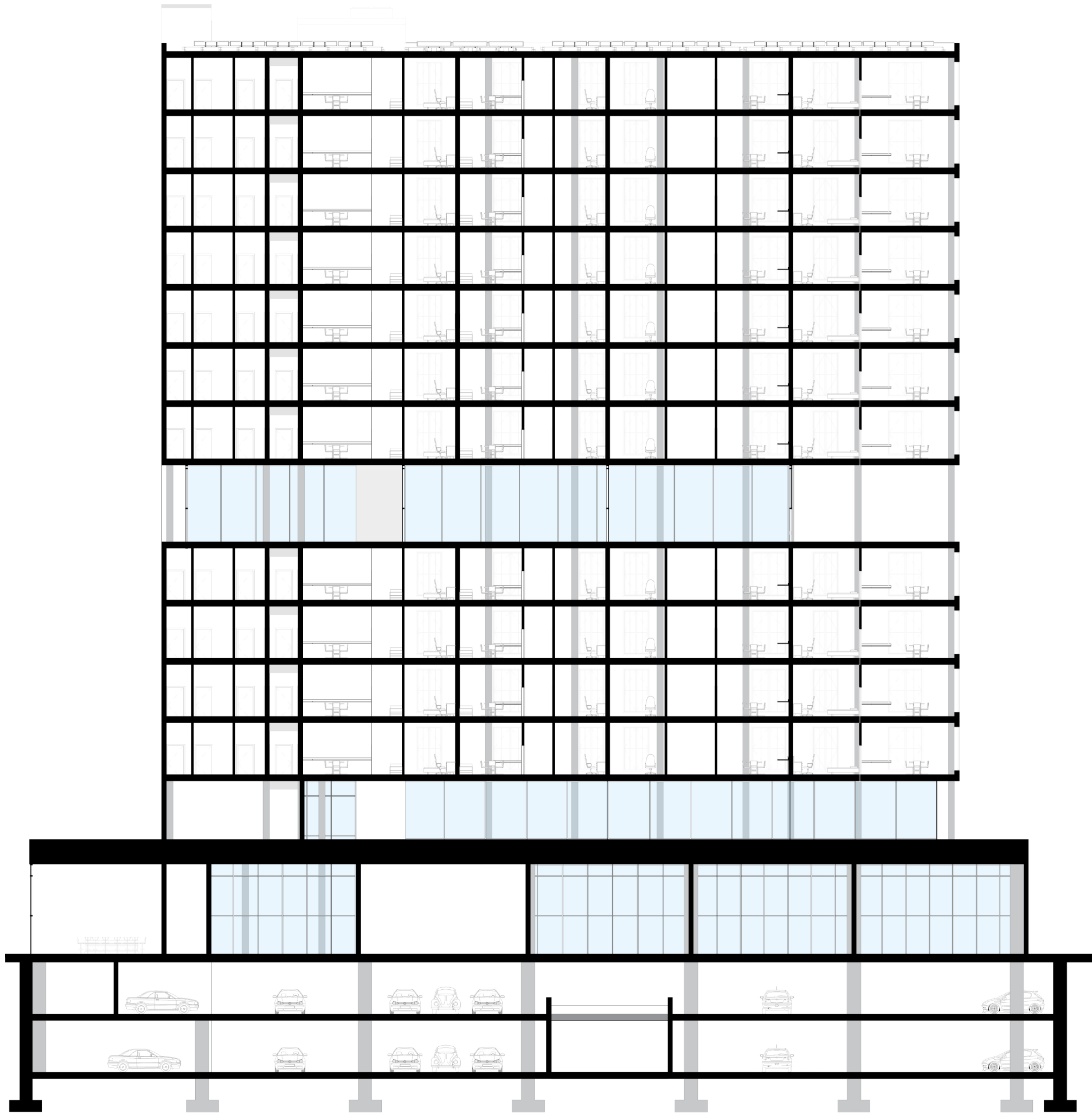
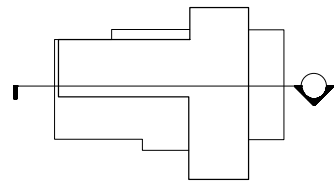
East Elevation



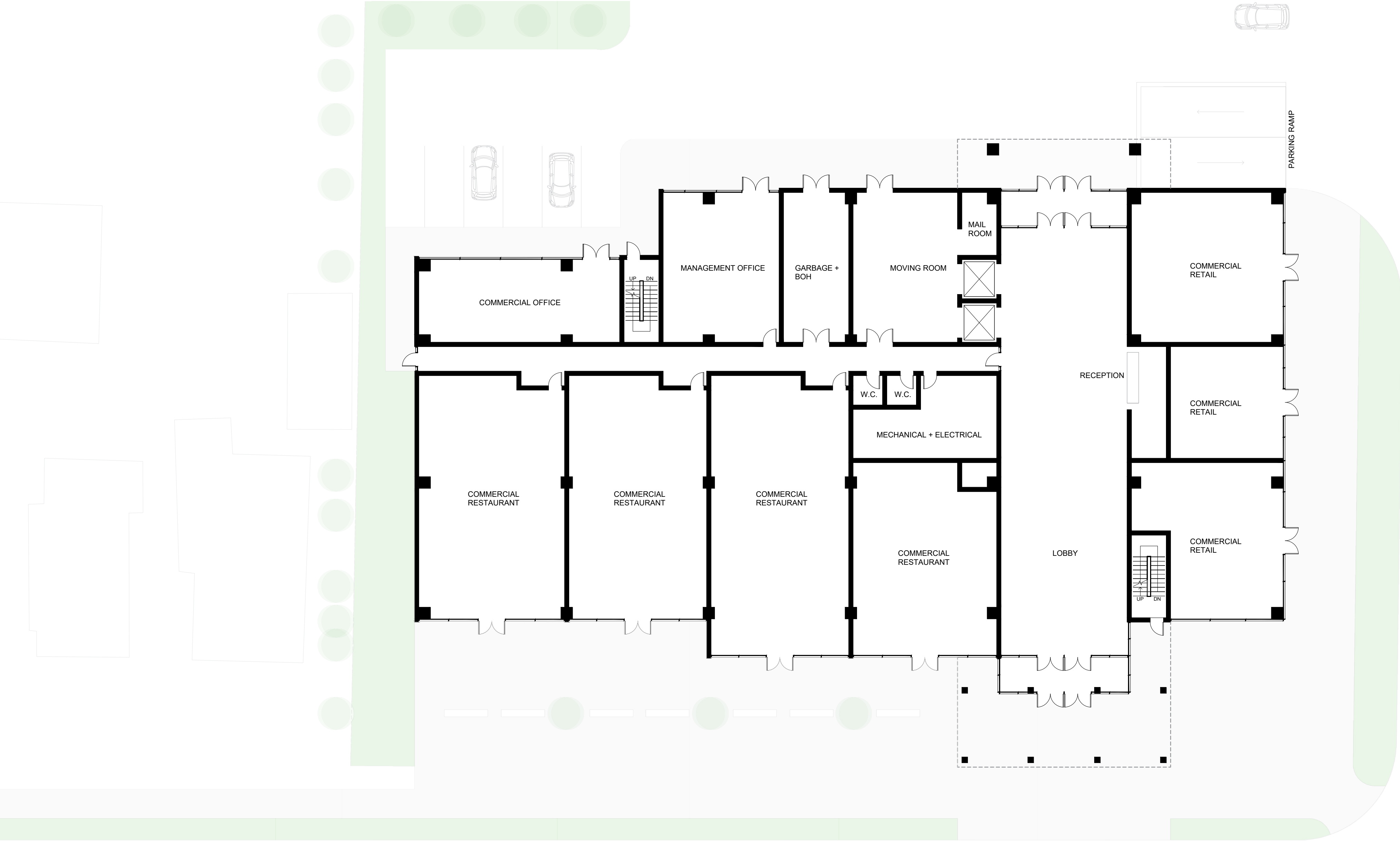
West Elevation

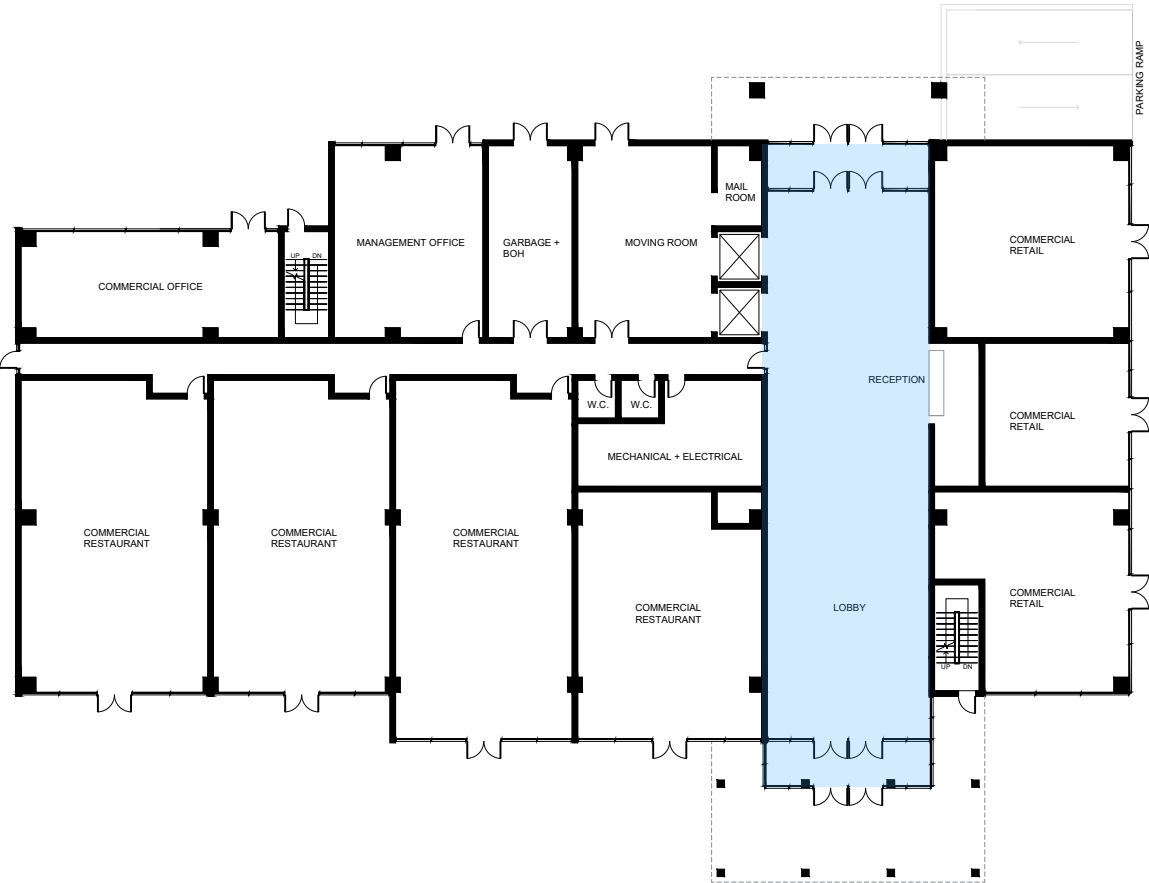


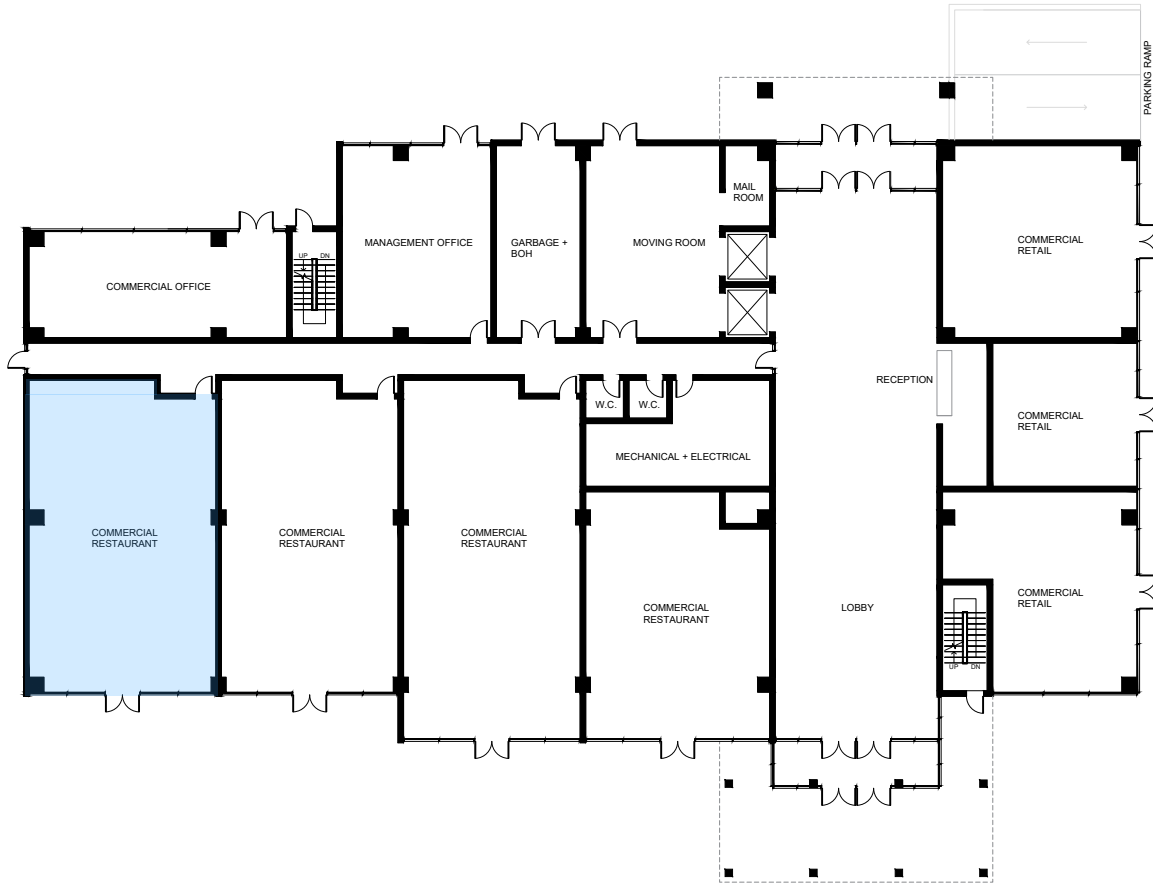
North-South Section

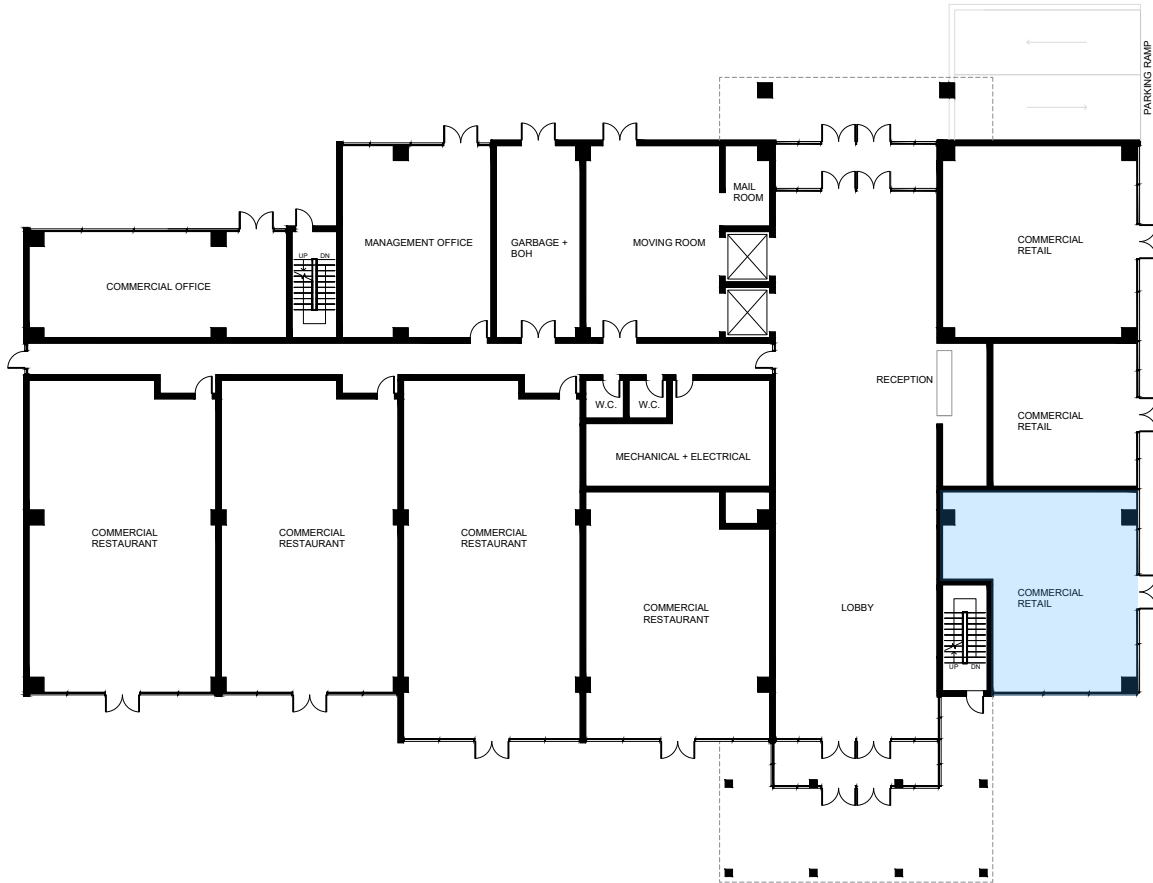


East-West Section



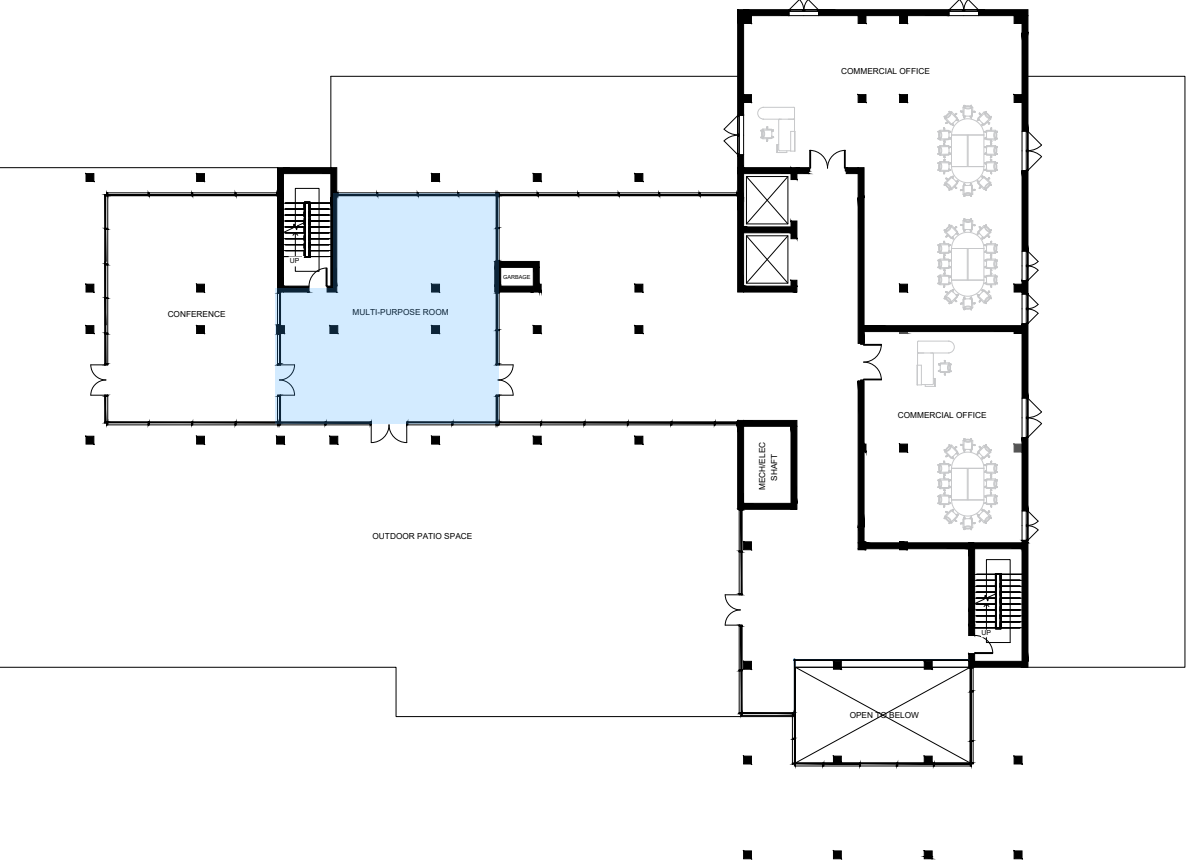






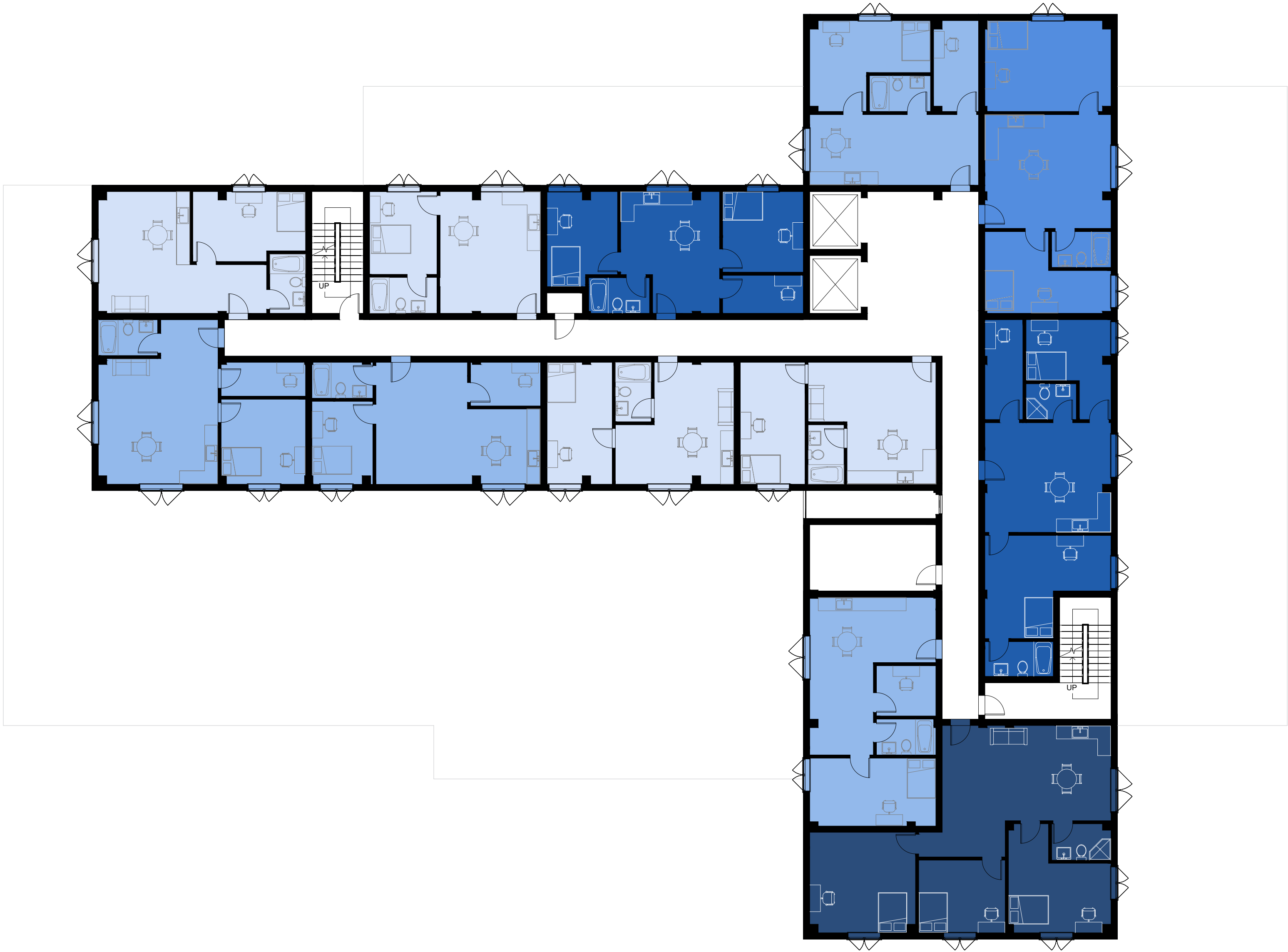


Awesome image!



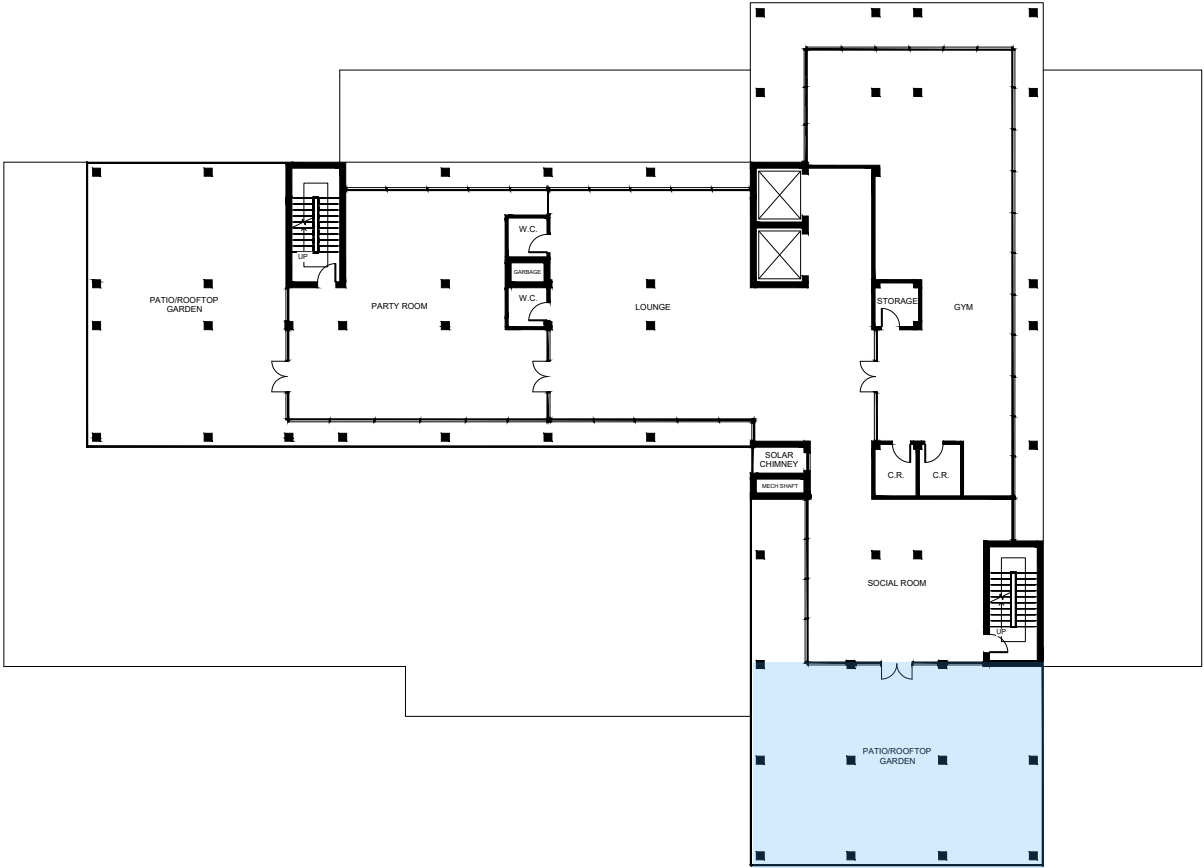


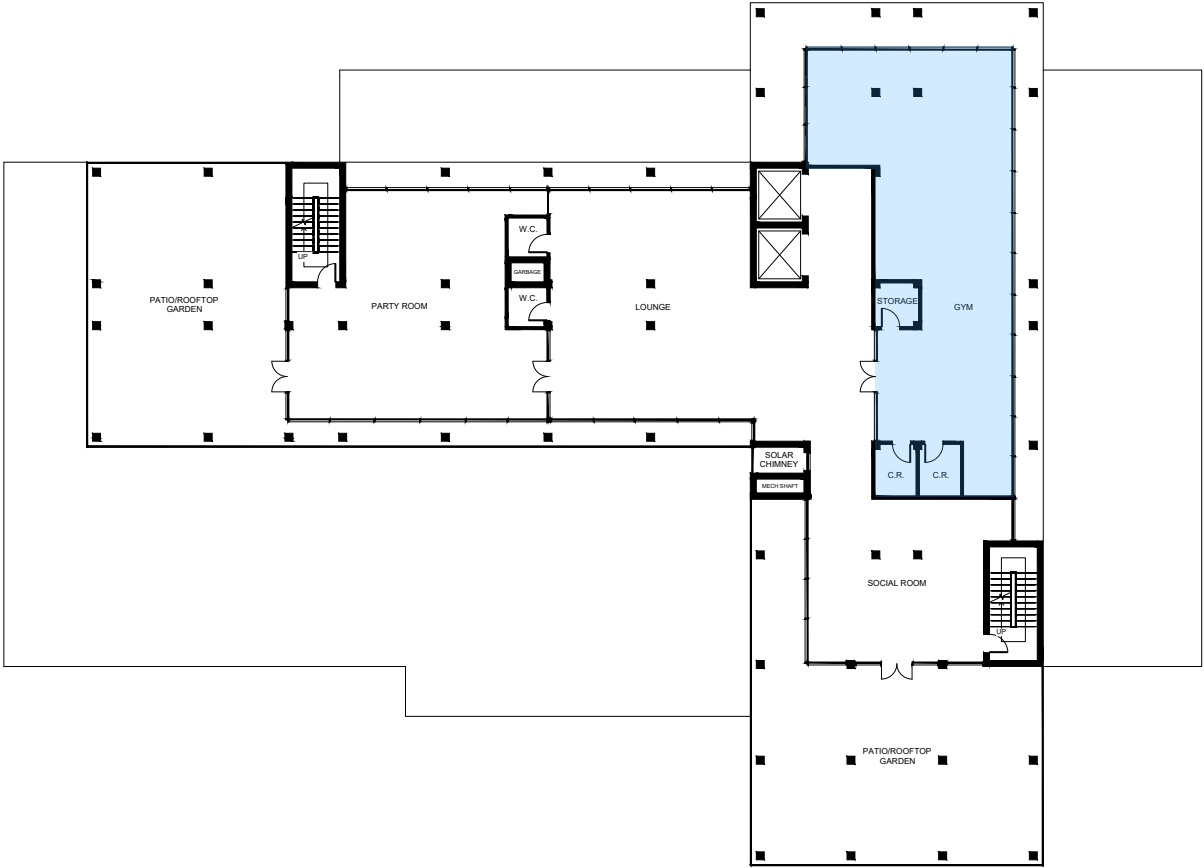
- 1 Bed
- 1 Bed + Den
- 2 Bed
- 2 Bed + Den
- 3 Bed

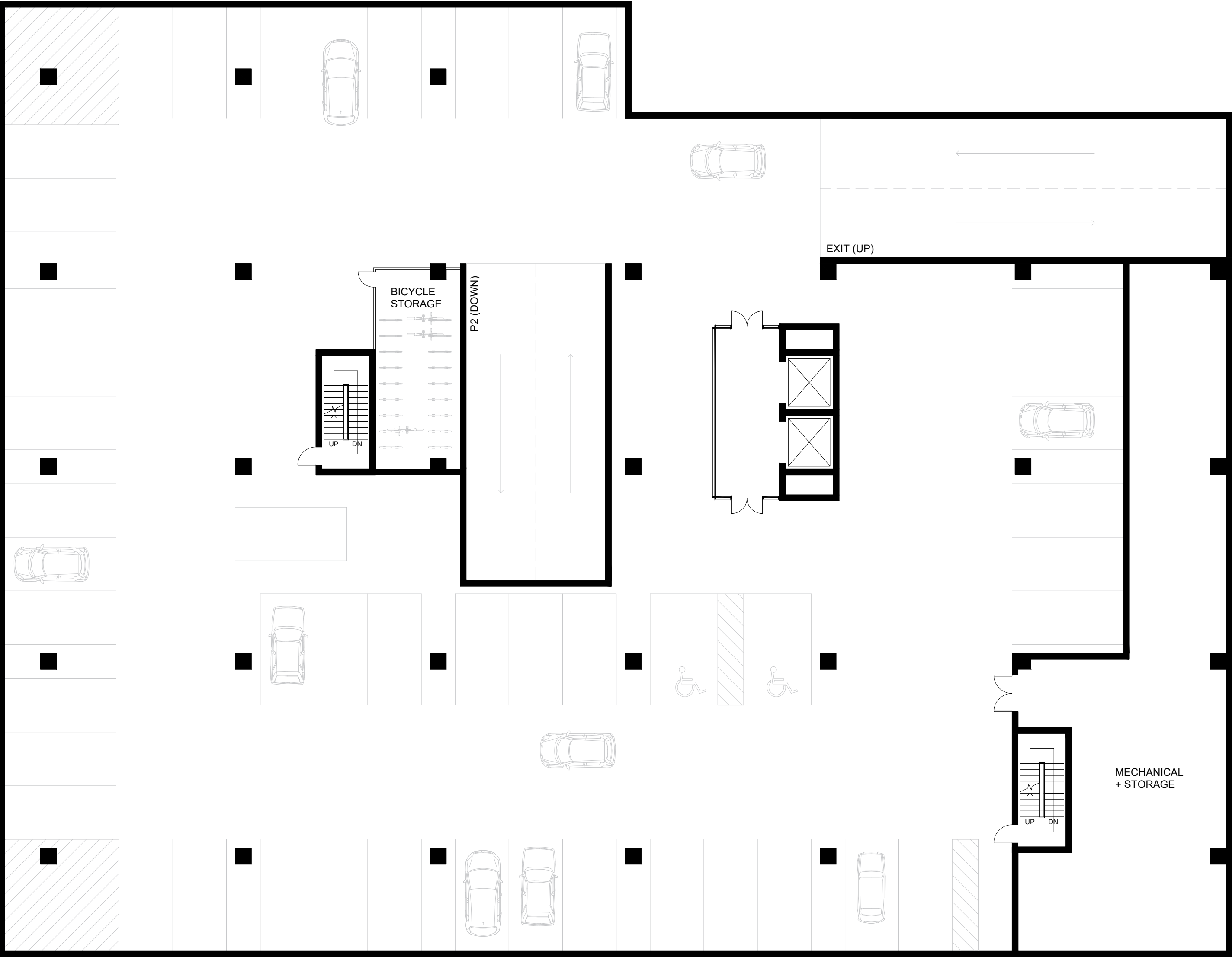


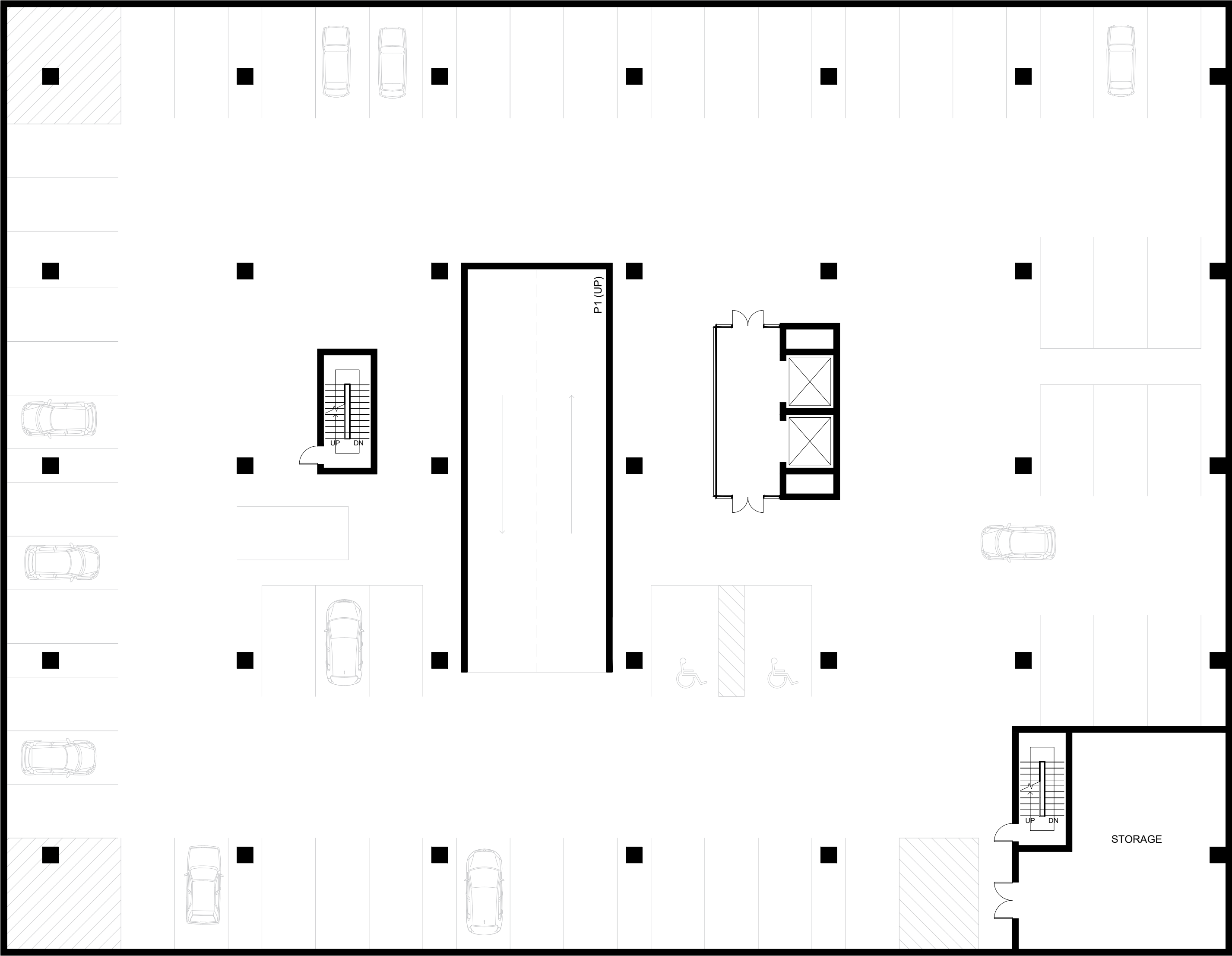






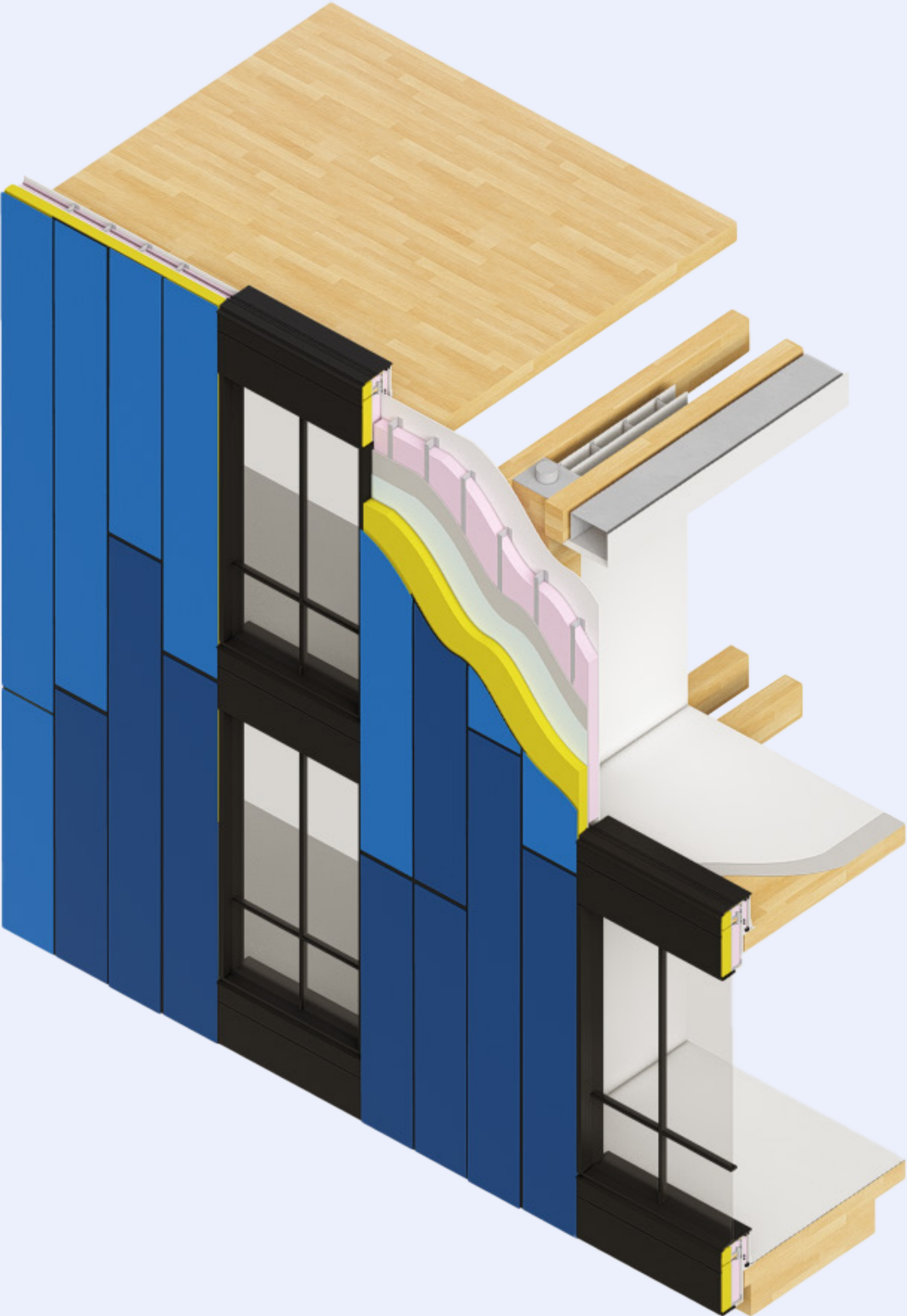








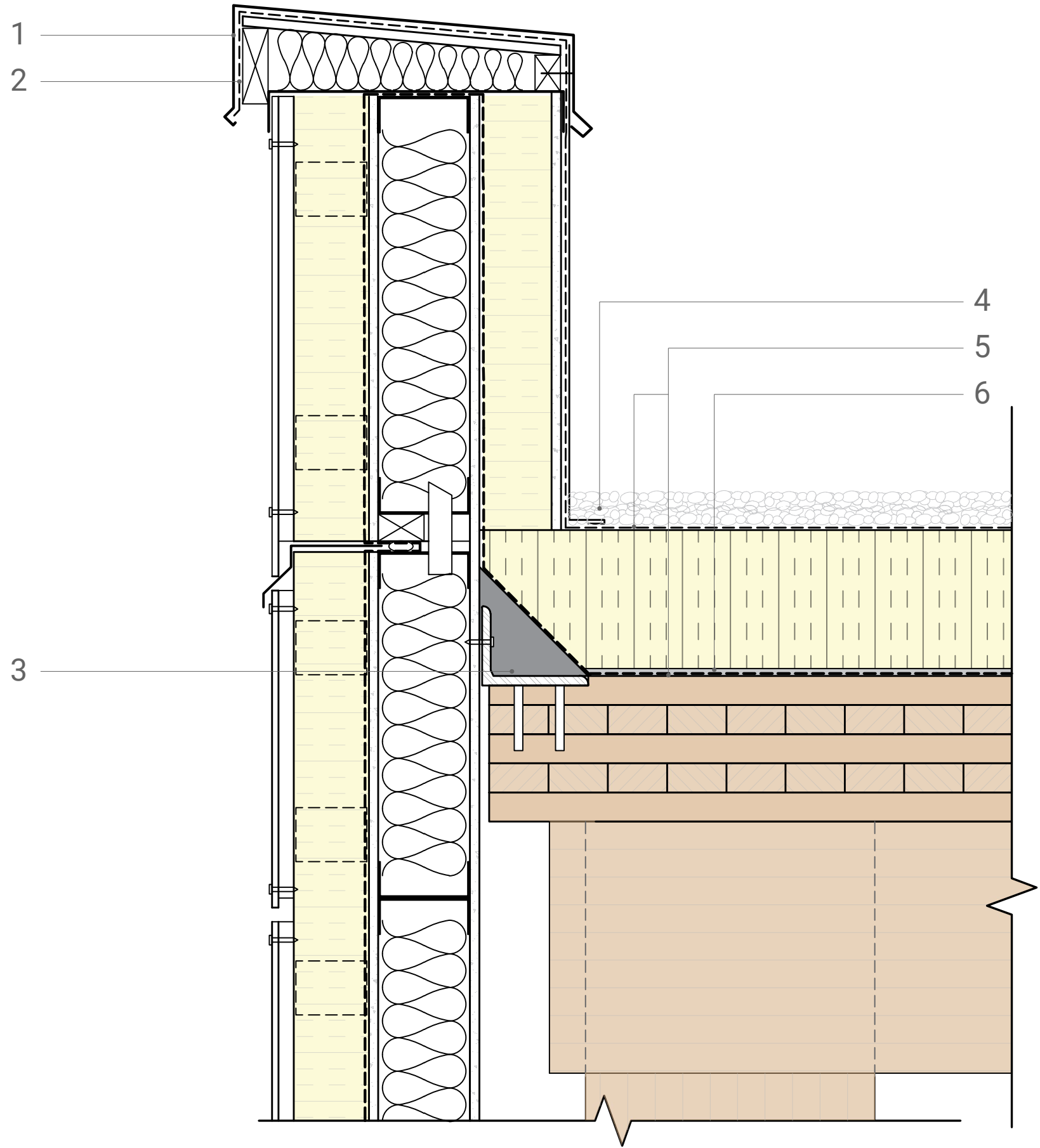
Enclosure + Structure + Mechanical



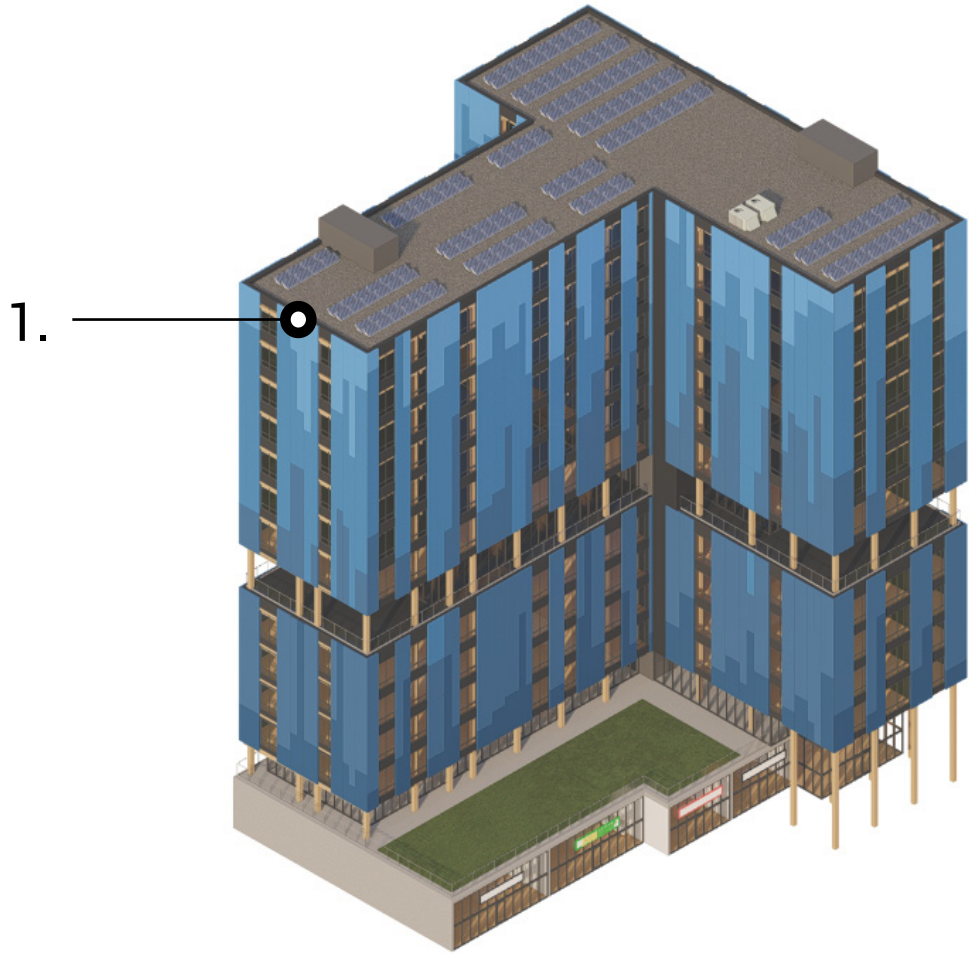
Modular Prefabricated ACM Panel System



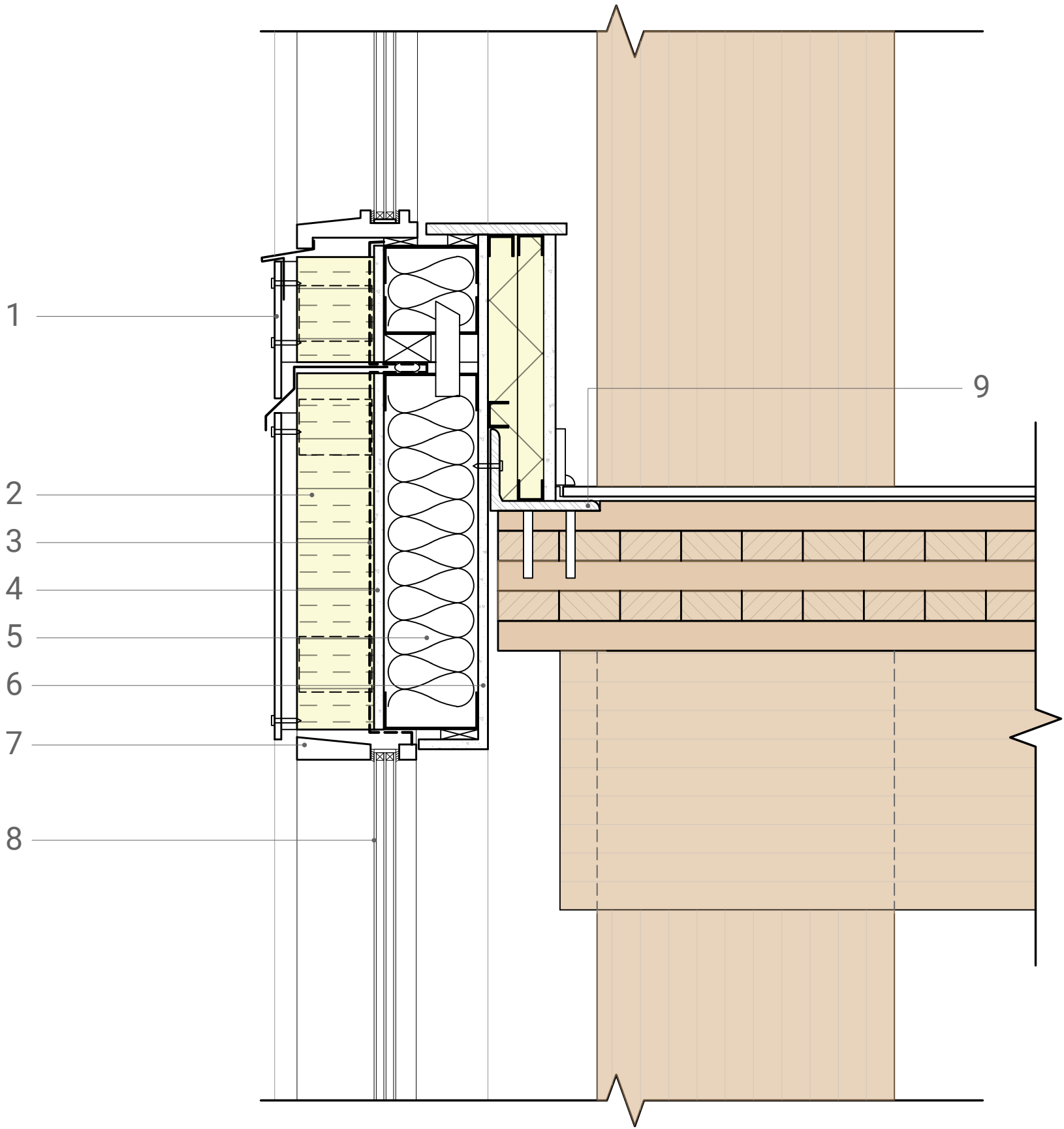
- 1 PARAPET FLASHING
 - 2 WATER CONTROL MEMBRANE
 - 3 CANT
 - 4 BALLAST ON FILTER FABRIC
 - 5 ROOF MEMBRANE
 - 6 DRAINAGE MAT
 - 7 WOODEN SOFFIT PANEL
 - 8 ALUMINUM WINDOW WALL MULLION
- ?



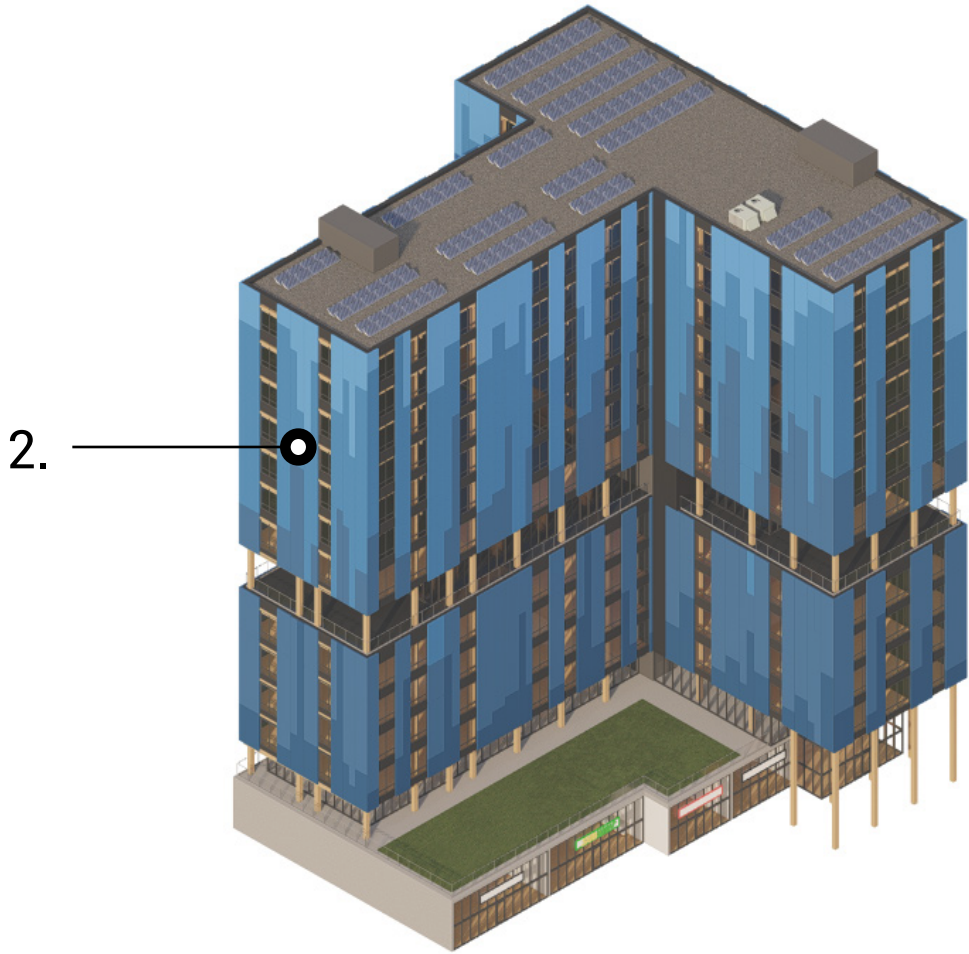
1. Parapet Detail



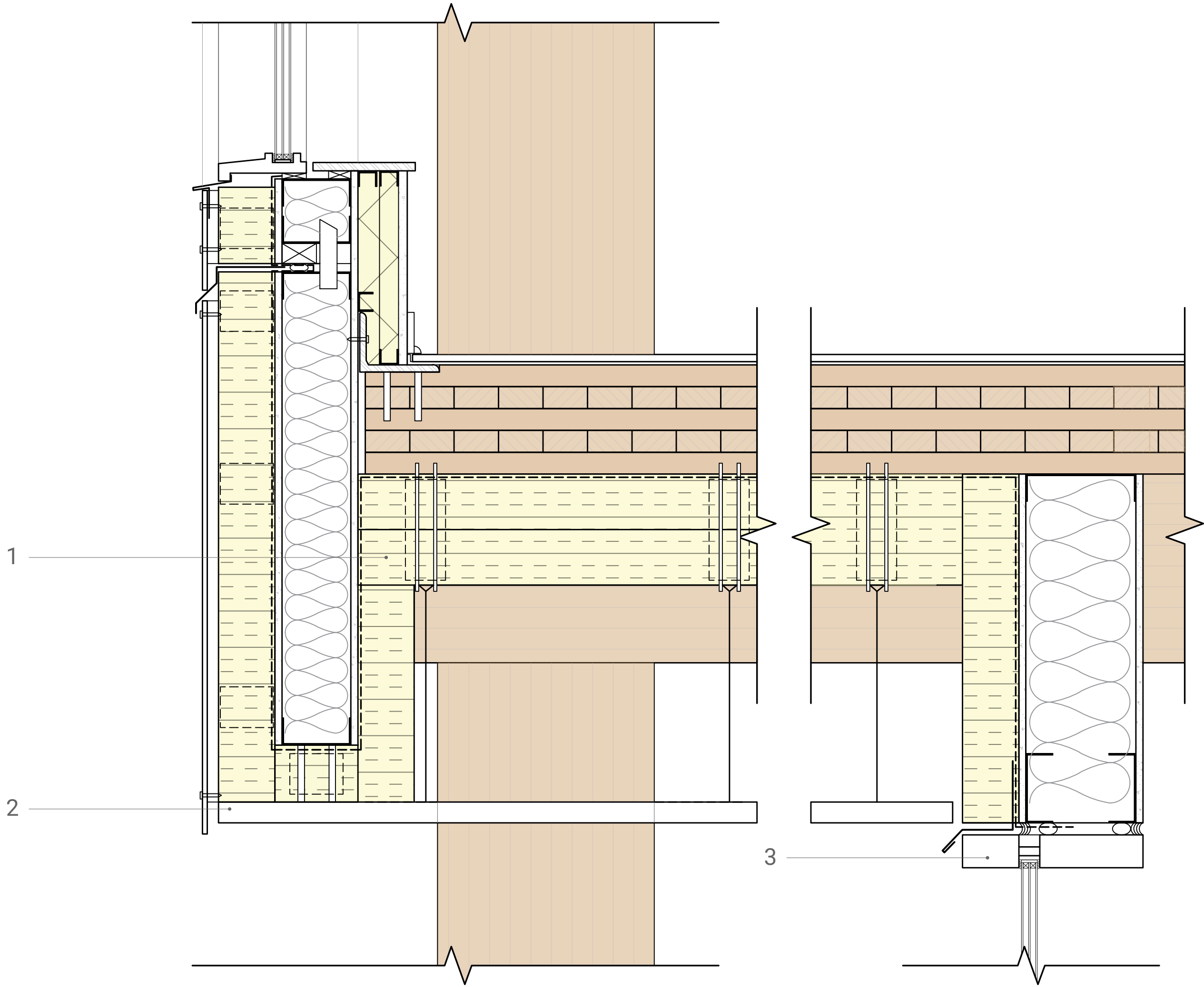
- 1 ALUMINUM CLADDING PANEL
- 2 SEMI RIGID STONE WOOL INSULATION
- 3 AIR WATER VAPOR BARRIER
- 4 FIBRE GLASS GYPUSM SHEATHING
- 5 STEEL STUD W/POLYERETHANE INSULATION
- 6 PAINTED GYPSUM WALL BOARD
- 7 ALUMINUM WINDOW MULLION
- 8 TRIPLE GLAZED WINDOW
- 9 STEEL ANGLE



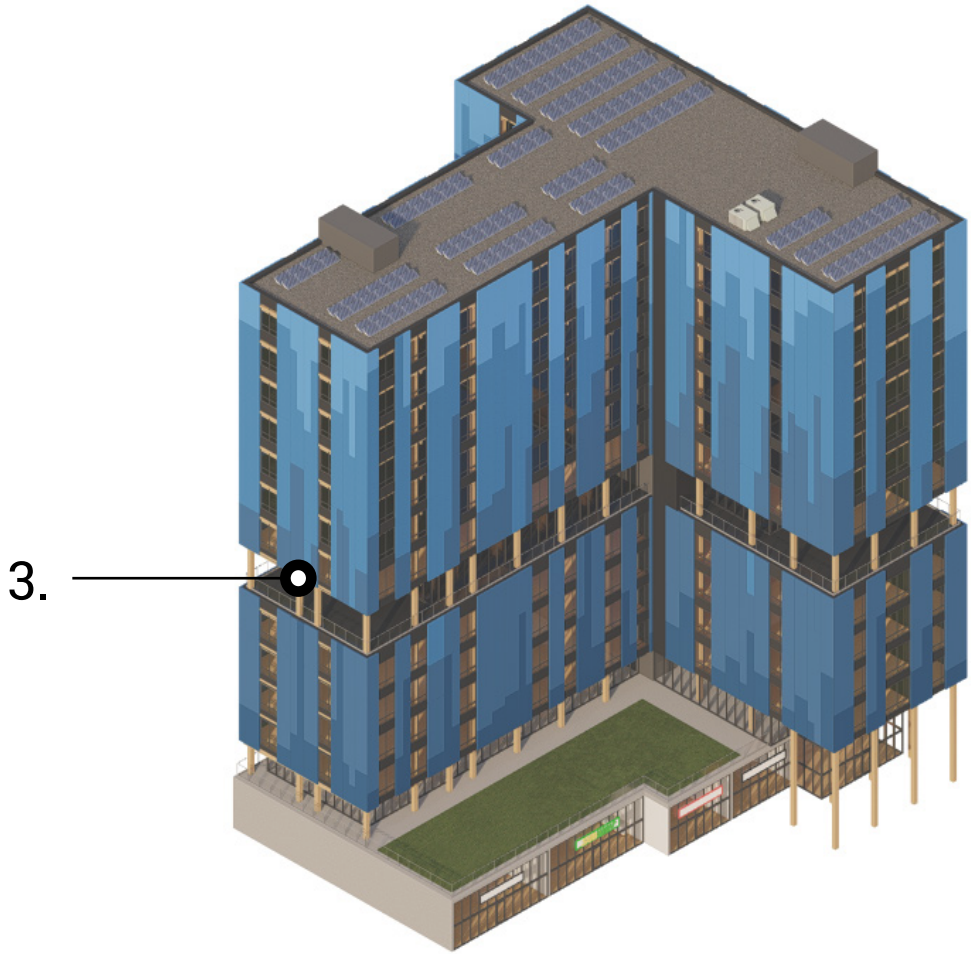
2. Spandrel Detail

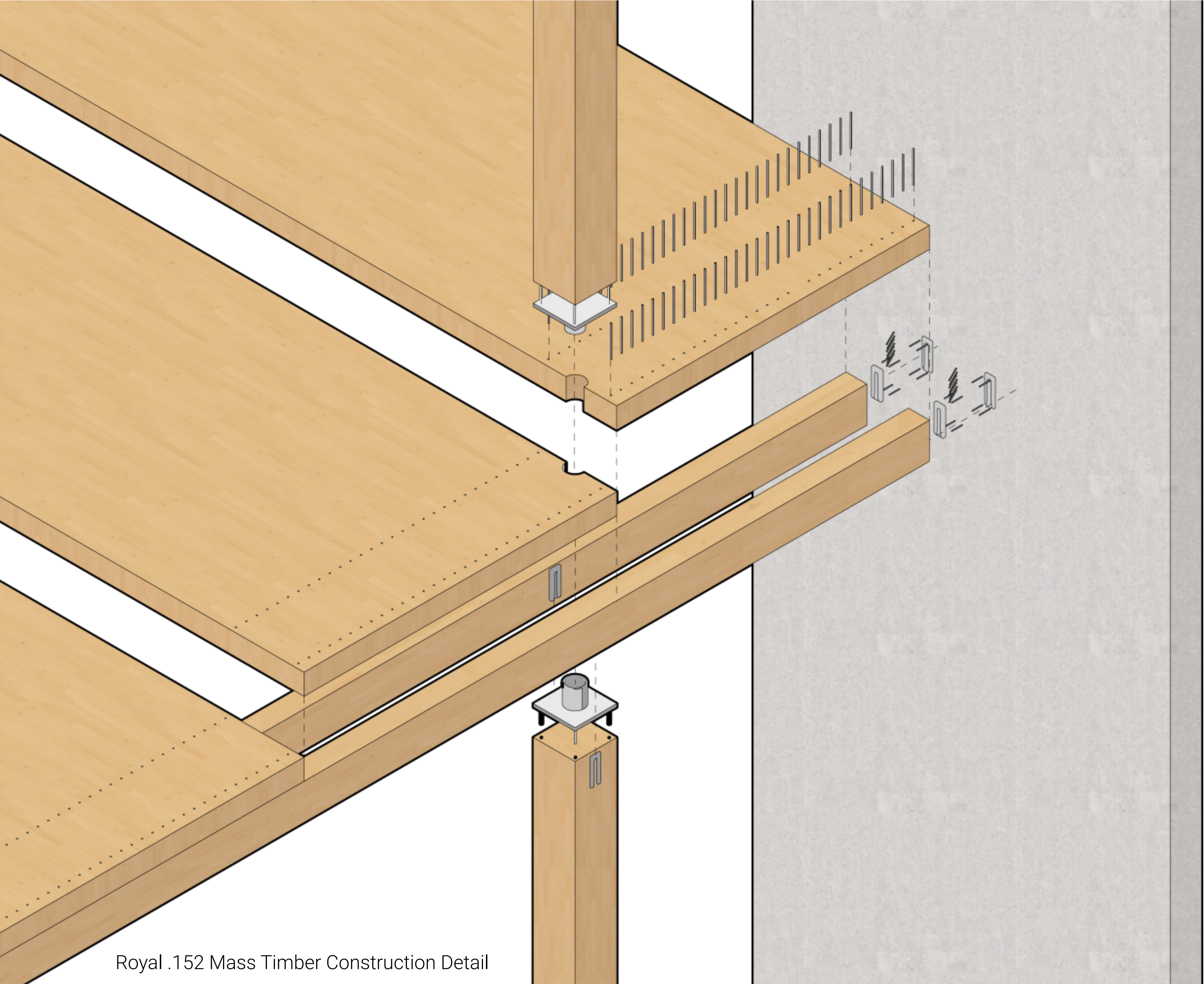


- 1 SEMI RIGID STONE WOOL INSULATION
- 2 WOODEN SOFFIT PANEL
- 3 ALUMINUM WINDOW WALL MULLION



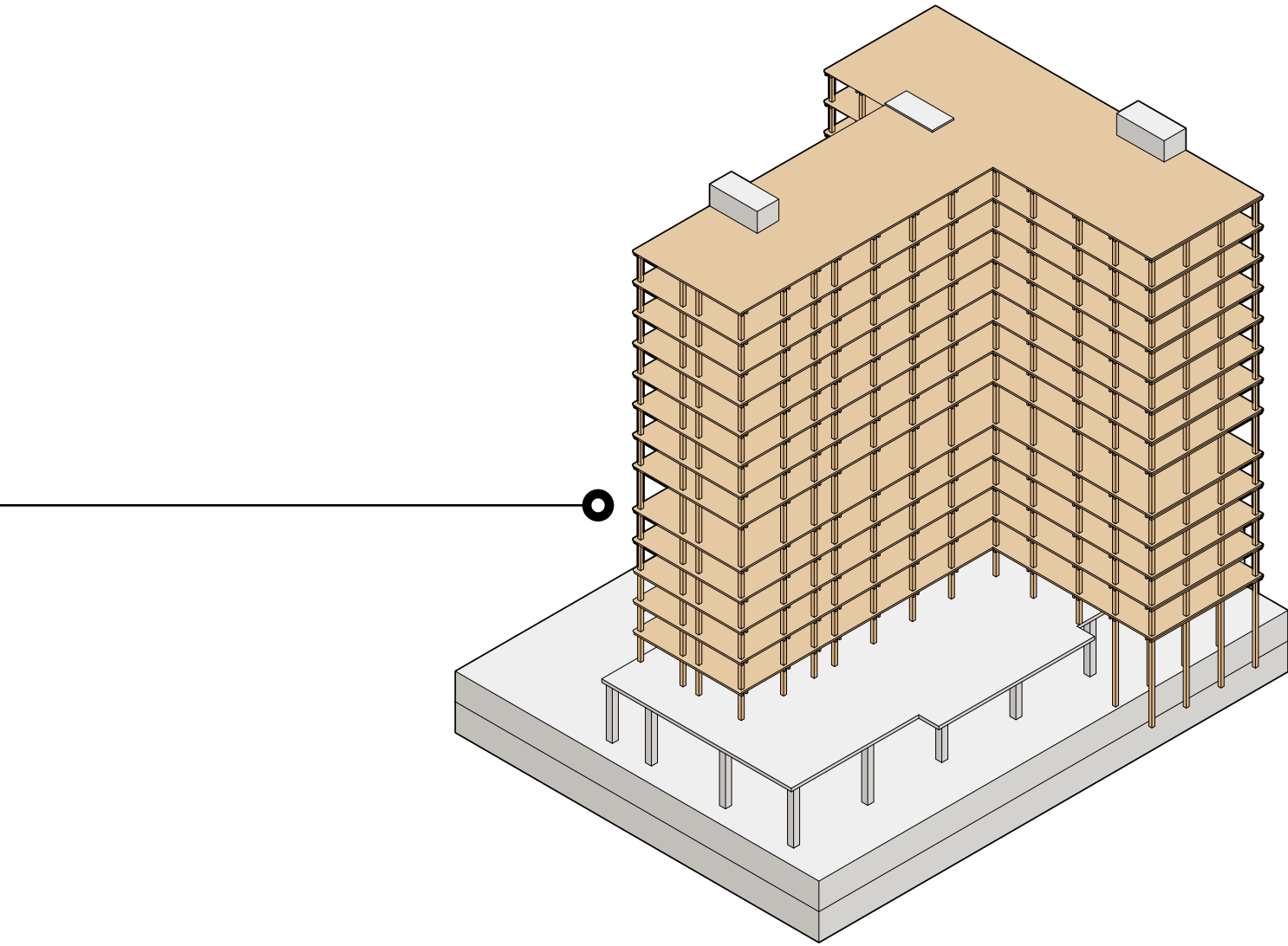
3. Soffit Detail





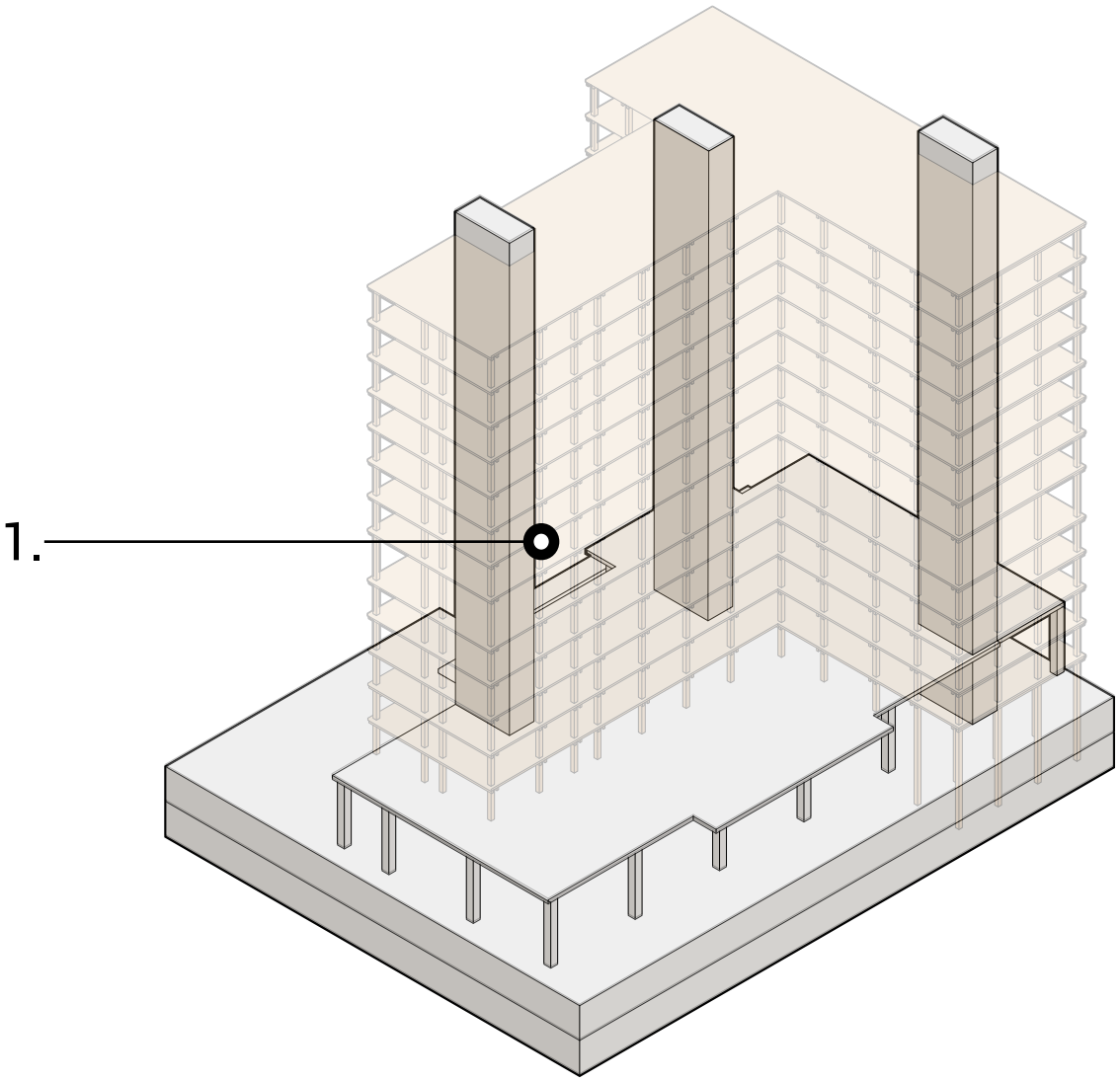
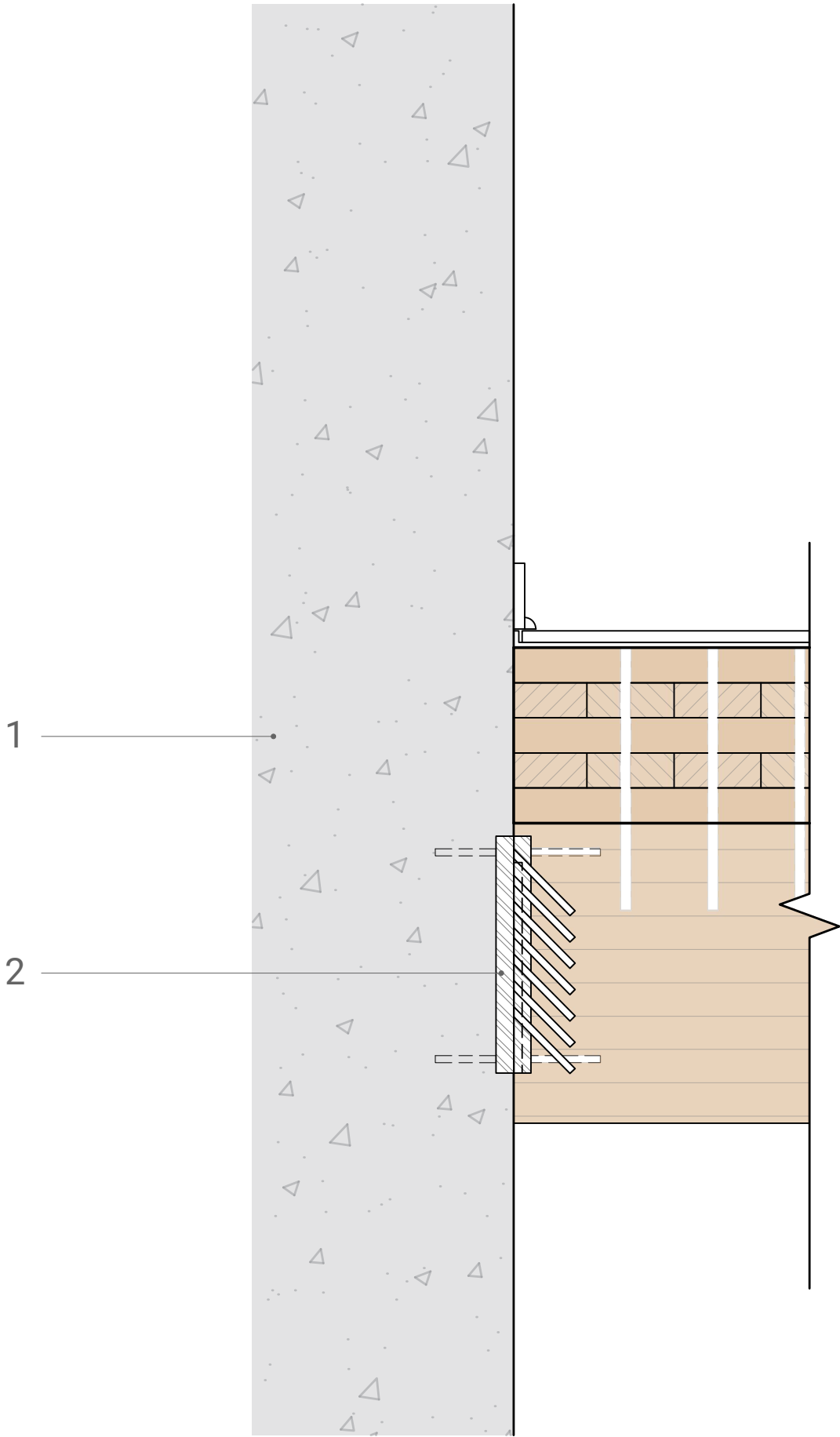
Royal .152 Mass Timber Construction Detail

start with the big picture before you get to details - what is the system overall - plans? then get to the details once you've provided a context



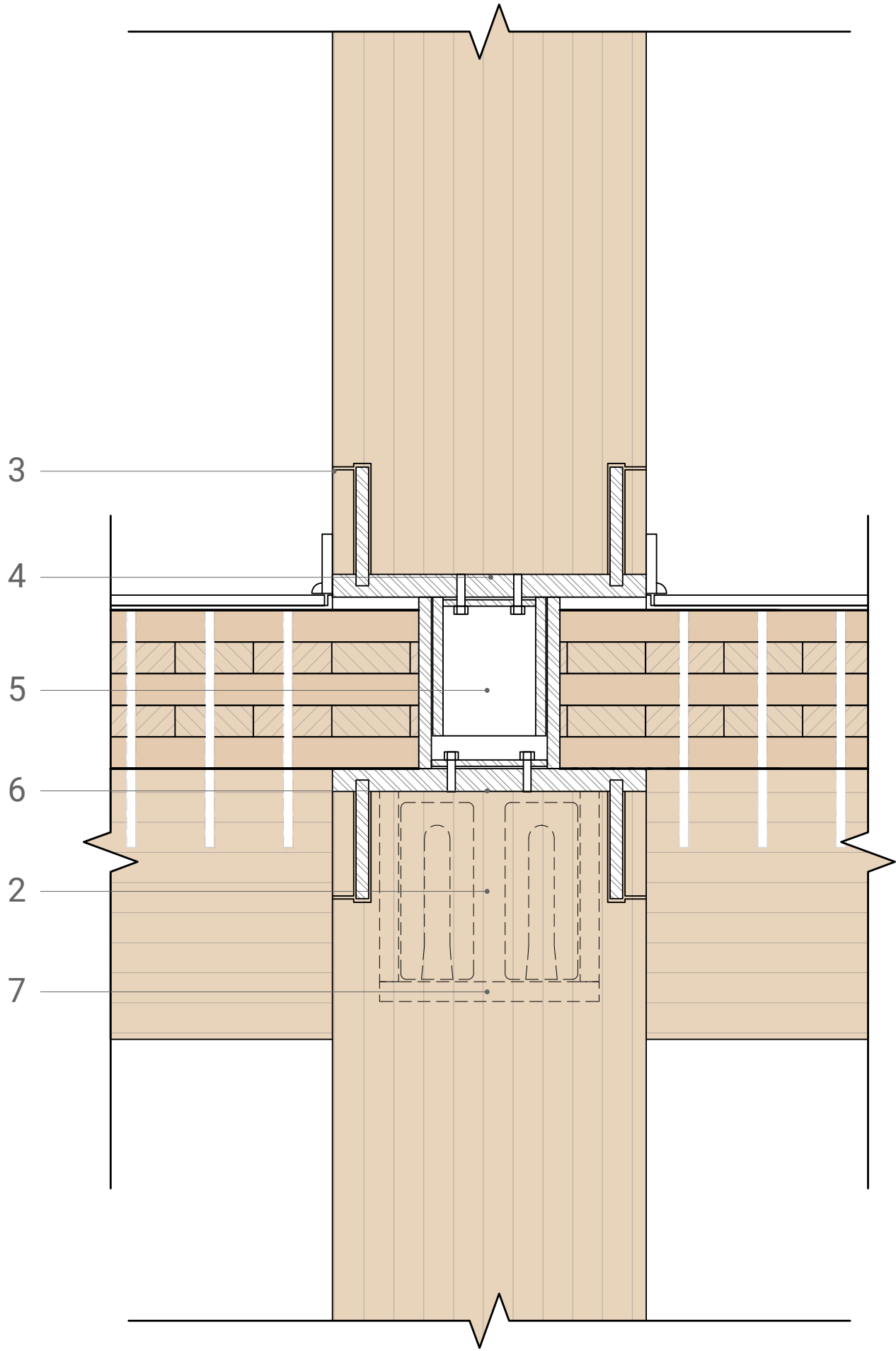
briefs describing the systems?

- 1 CONCRETE SHEAR WALL
- 2 STEEL DOVE TAIL CONNECTION
- 3 EPOXY RELIEF HOLES
- 4 SHIM PLATE
- 5 HSS COLUMN
- 6 STEEL PLATE
- 7 FIRE PROTECTION SEALANT
- 8 WOODEN FLOOR FINISH
- 9 ACOUSTITECH MEMBRANE
- 10 CLT FLOOR PANEL
- 11 STEEL SHEAR RODS
- 12 GLULAM BEAM
- 13 GLULAM COLUMN
- 14 CONCRETE TRANSFER SLAB

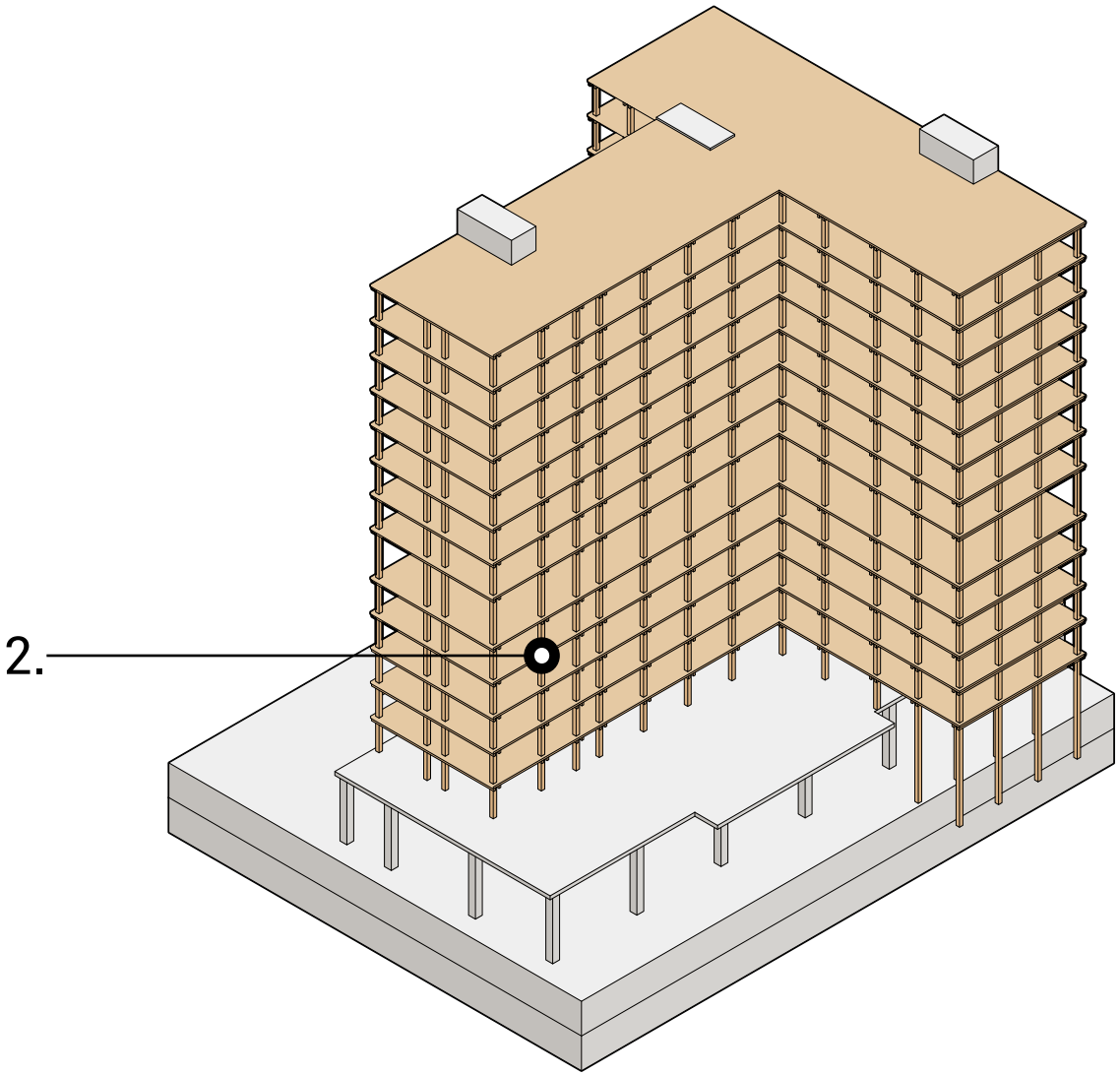


1. Beam to Core Detail

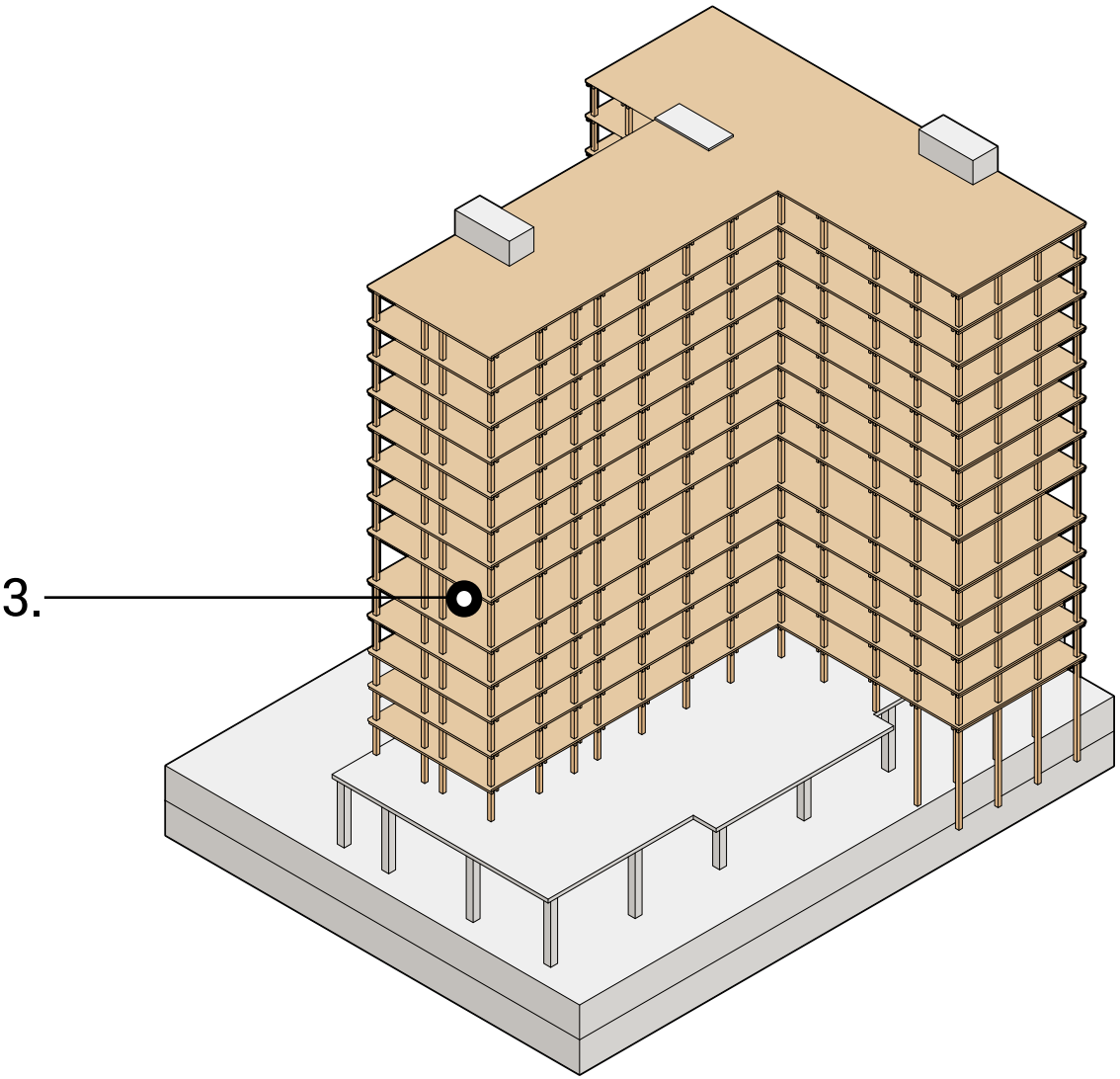
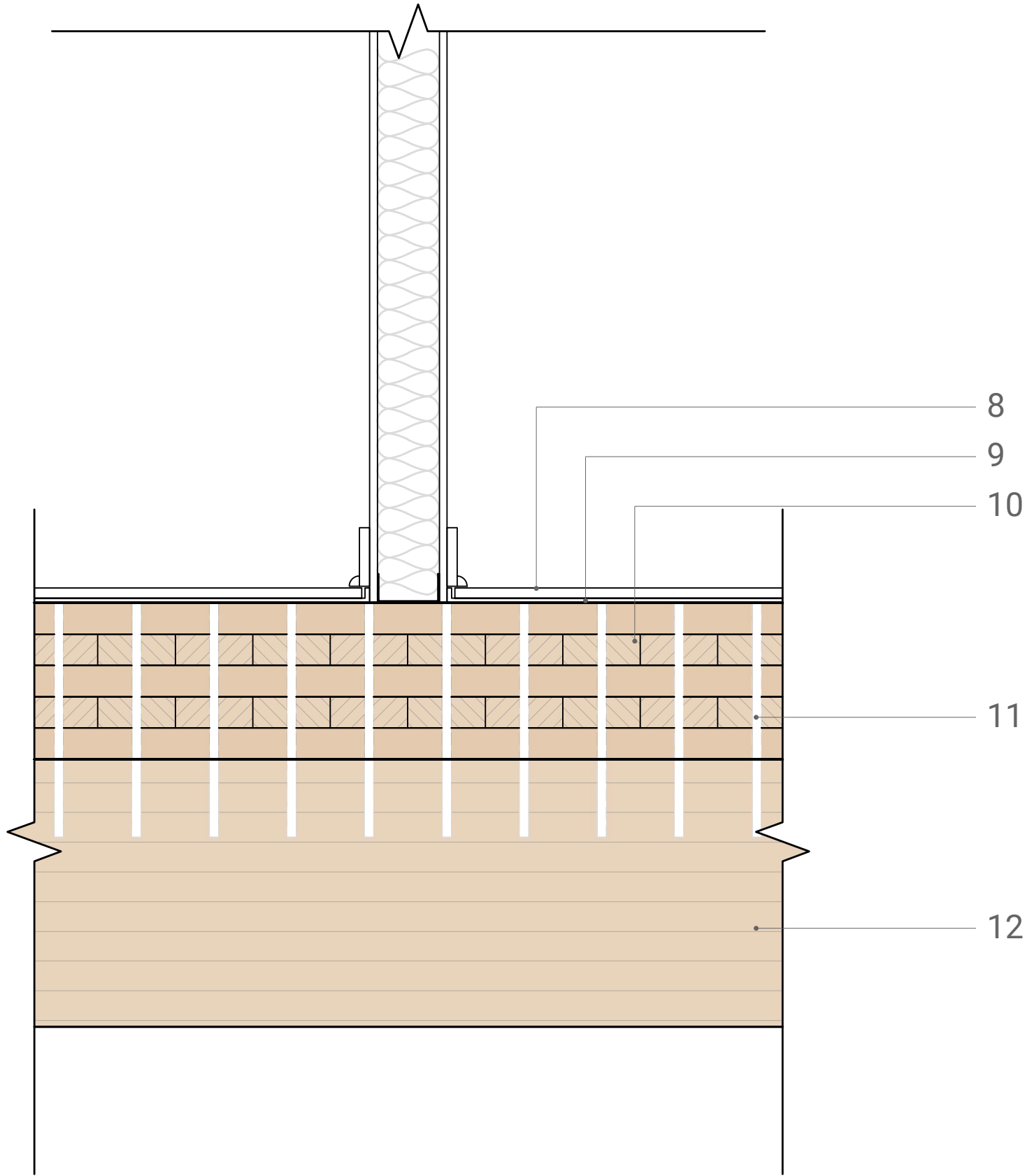
- 1 CONCRETE SHEAR WALL
- 2 STEEL DOVE TAIL CONNECTION
- 3 EPOXY RELIEF HOLES
- 4 SHIM PLATE
- 5 HSS COLUMN
- 6 STEEL PLATE
- 7 FIRE PROTECTION SEALANT
- 8 WOODEN FLOOR FINISH
- 9 ACOUSTITECH MEMBRANE
- 10 CLT FLOOR PANEL
- 11 STEEL SHEAR RODS
- 12 GLULAM BEAM
- 13 GLULAM COLUMN
- 14 CONCRETE TRANSFER SLAB



2.Column to Beam Detail

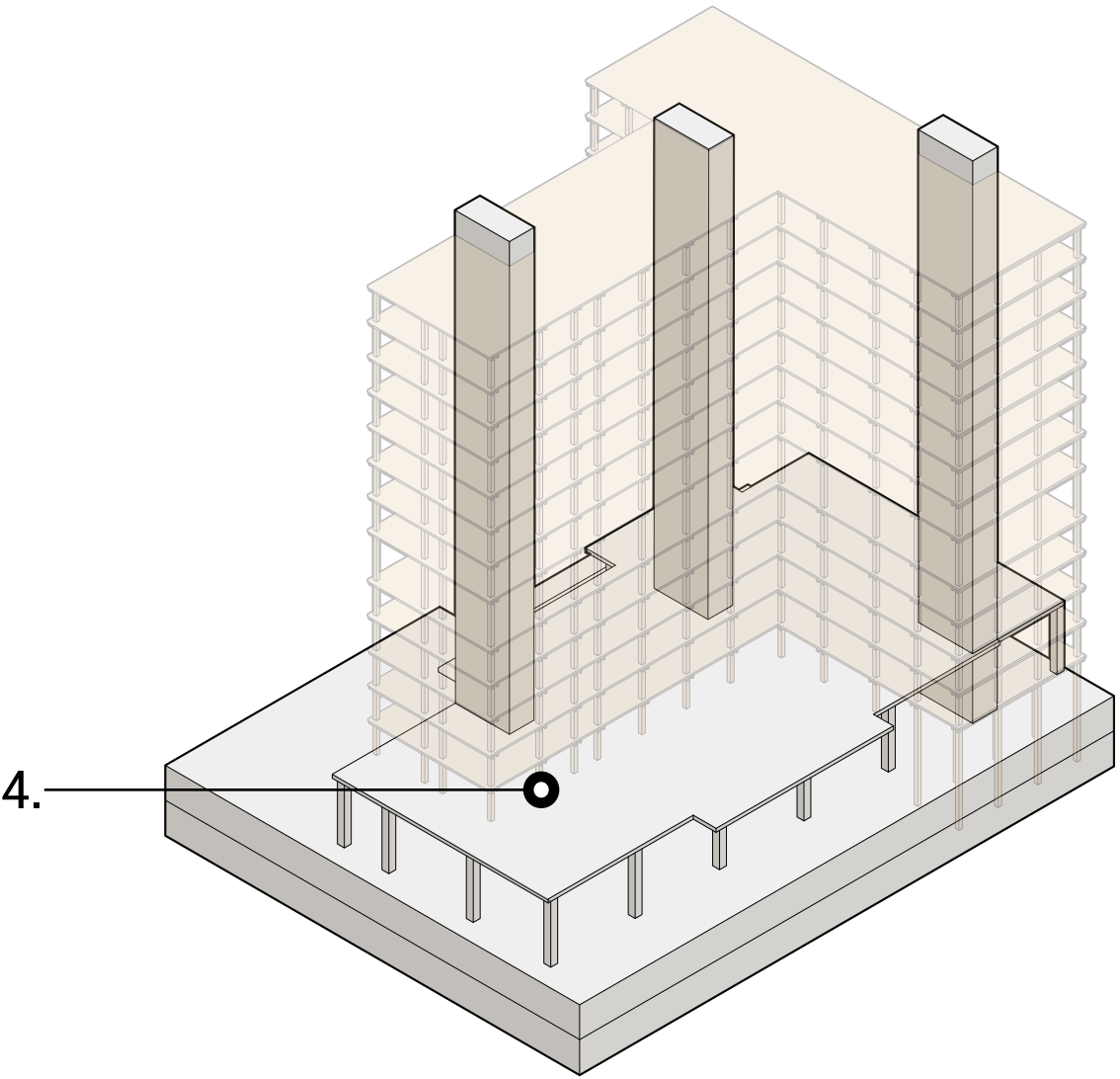
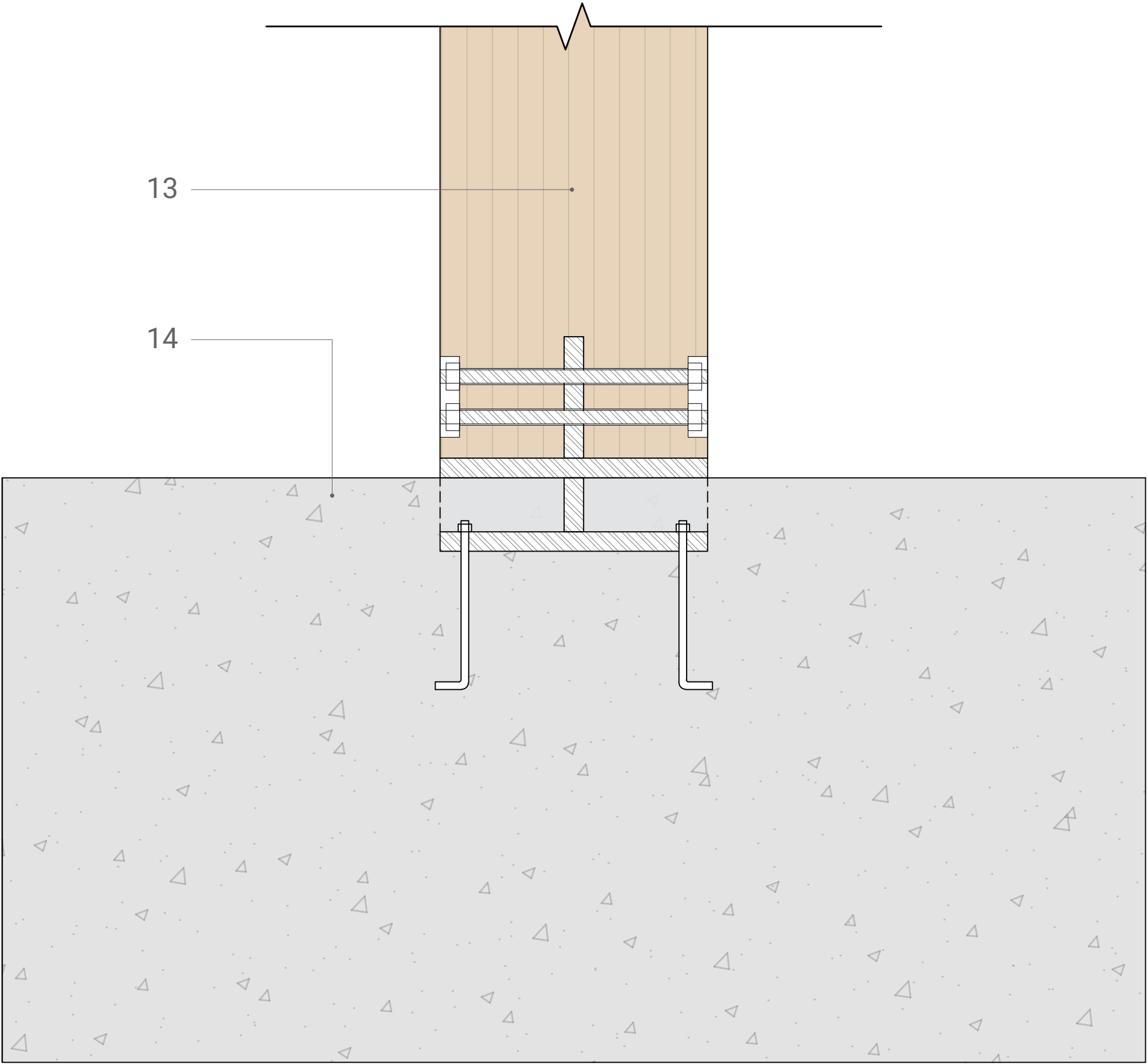


- 1 CONCRETE SHEAR WALL
- 2 STEEL DOVE TAIL CONNECTION
- 3 EPOXY RELIEF HOLES
- 4 SHIM PLATE
- 5 HSS COLUMN
- 6 STEEL PLATE
- 7 FIRE PROTECTION SEALANT
- 8 WOODEN FLOOR FINISH
- 9 ACOUSTITECH MEMBRANE
- 10 CLT FLOOR PANEL
- 11 STEEL SHEAR RODS
- 12 GLULAM BEAM
- 13 GLULAM COLUMN
- 14 CONCRETE TRANSFER SLAB

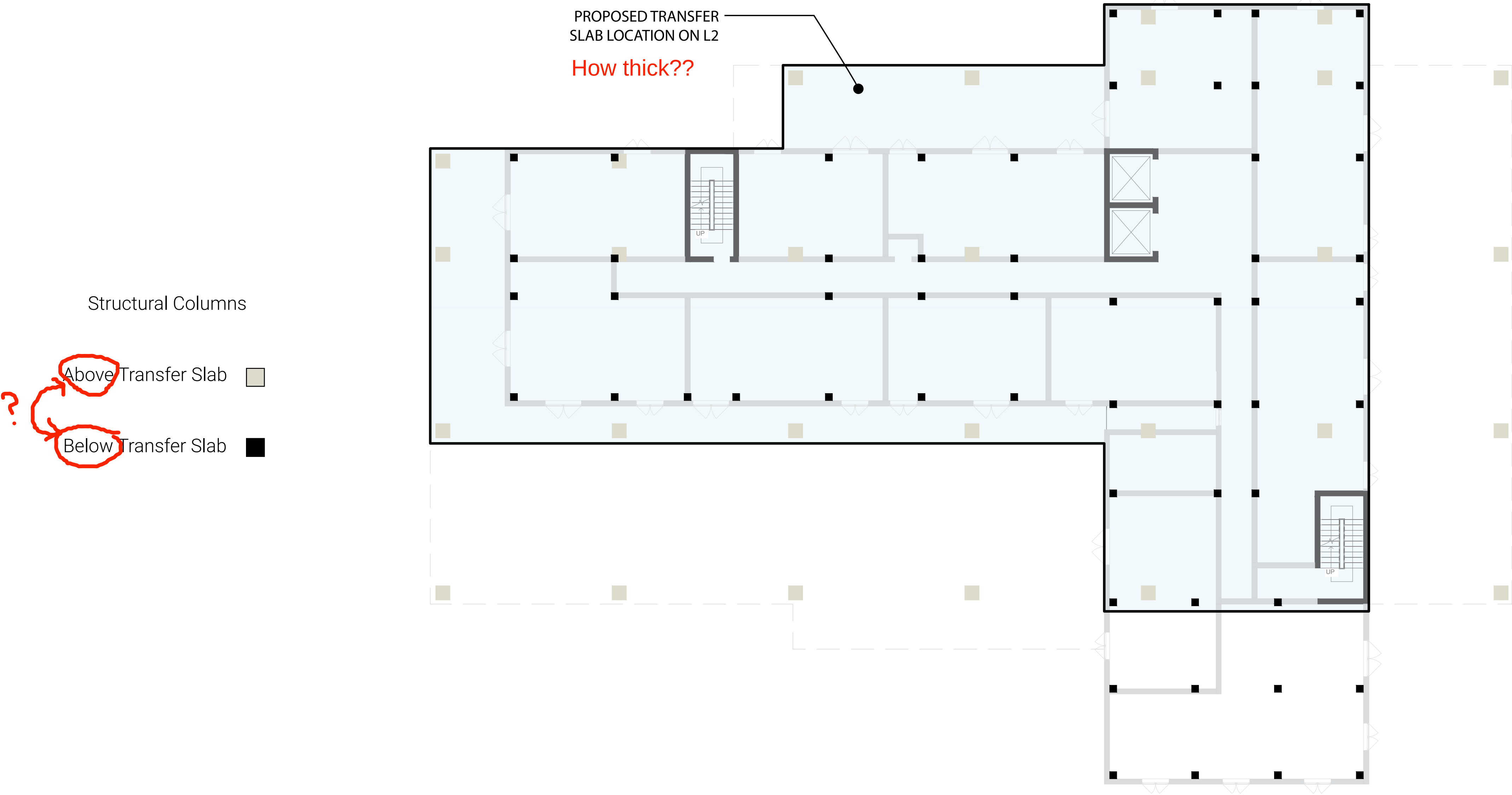


3. Partition Wall to Slab Detail

- 1 CONCRETE SHEAR WALL
- 2 STEEL DOVE TAIL CONNECTION
- 3 EPOXY RELIEF HOLES
- 4 SHIM PLATE
- 5 HSS COLUMN
- 6 STEEL PLATE
- 7 FIRE PROTECTION SEALANT
- 8 WOODEN FLOOR FINISH
- 9 ACOUSTITECH MEMBRANE
- 10 CLT FLOOR PANEL
- 11 STEEL SHEAR RODS
- 12 GLULAM BEAM
- 13 GLULAM COLUMN
- 14 CONCRETE TRANSFER SLAB



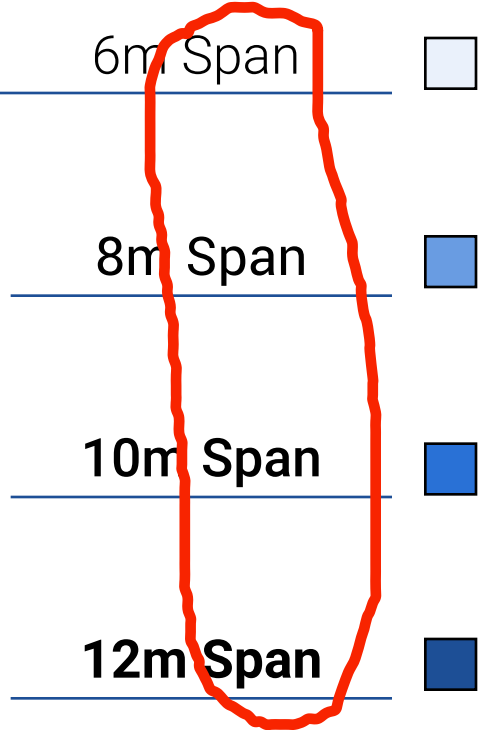
4. Column to Transfer Slab Detail



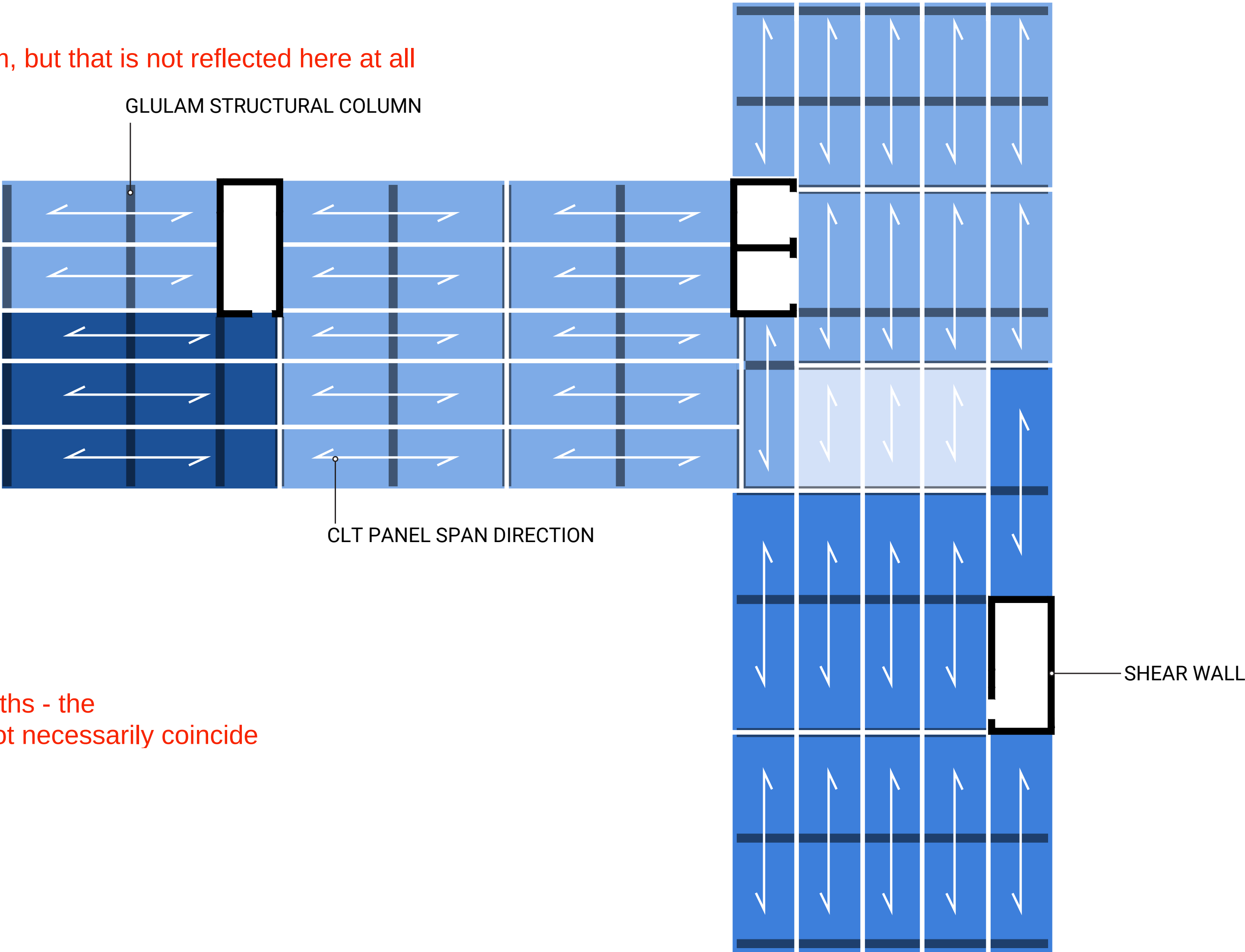
the colours don't really help - there are conventions to showing structural elements - use them

your details and images show a double beam system, but that is not reflected here at all

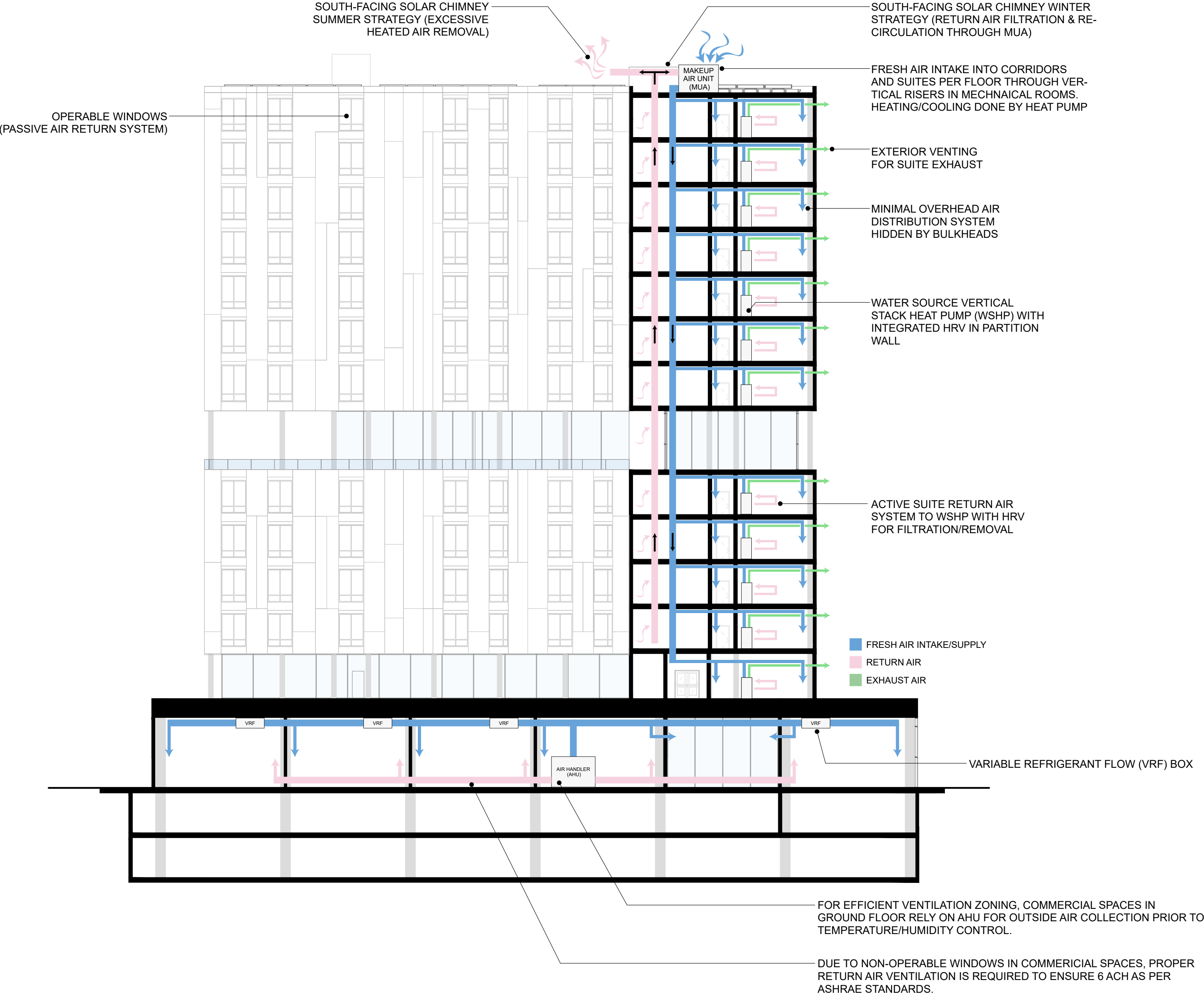
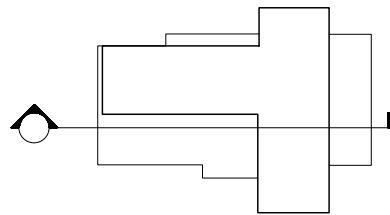
5-Ply (191mm) CLT Floor Panel

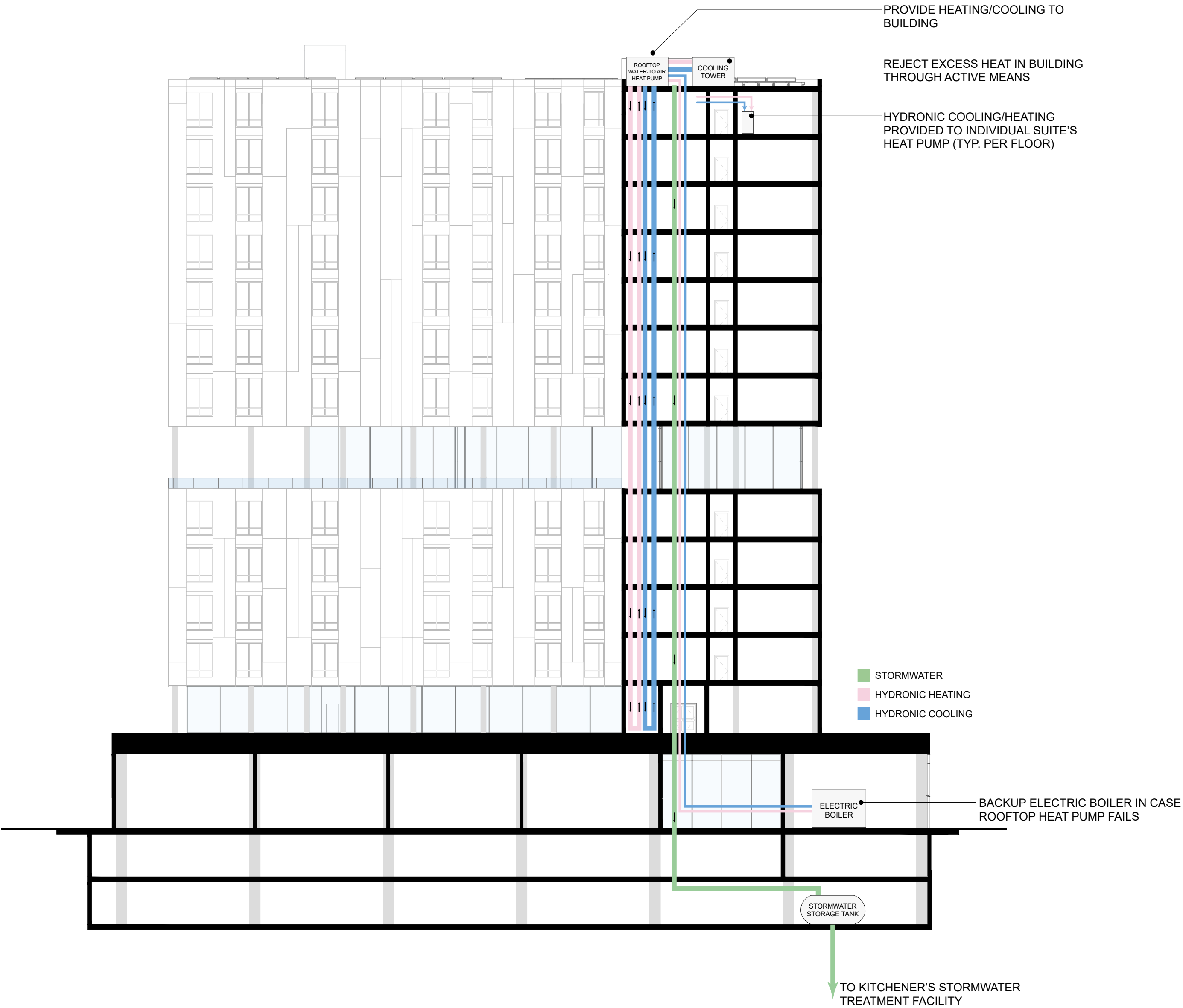
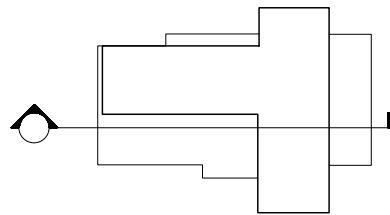


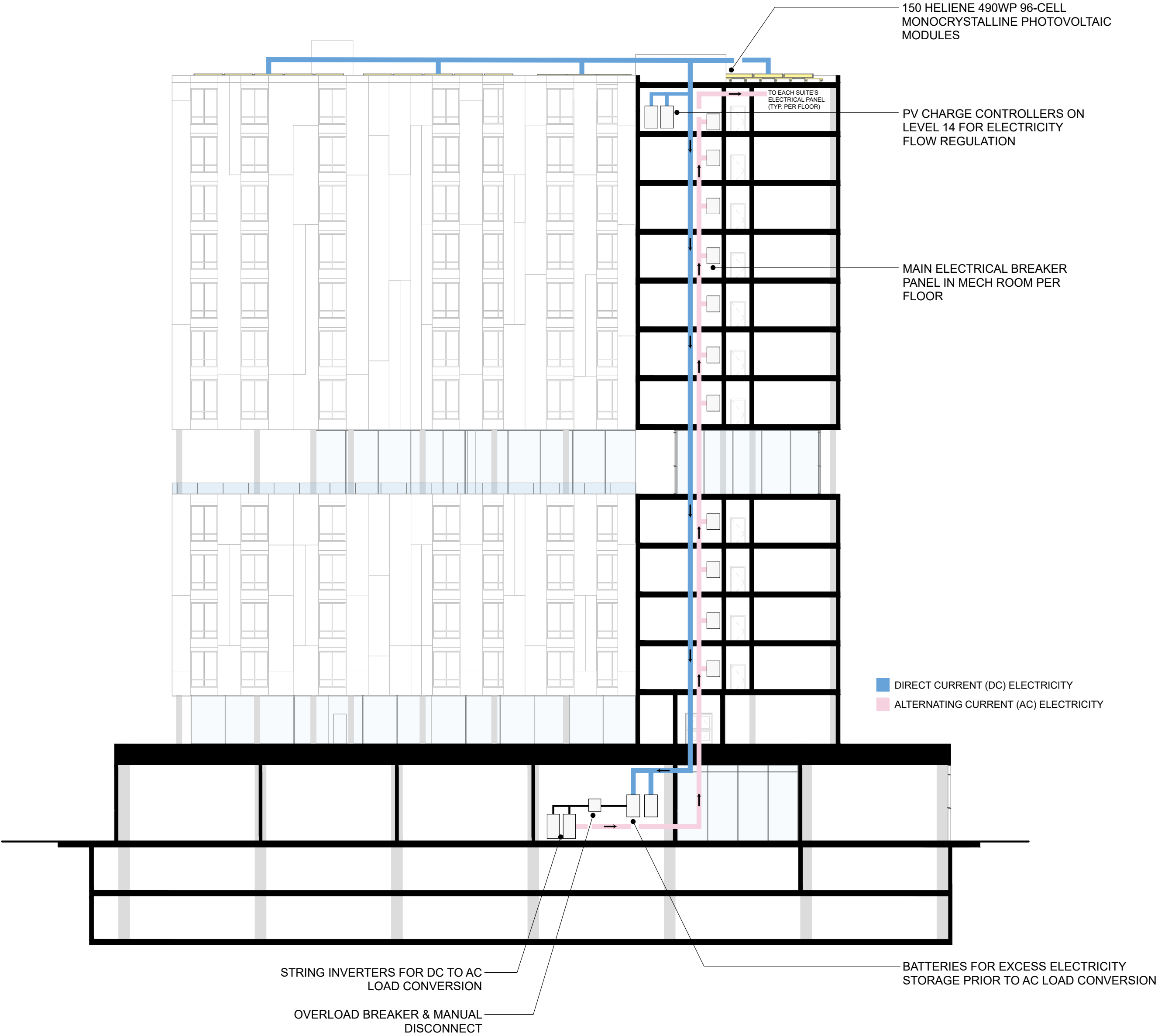
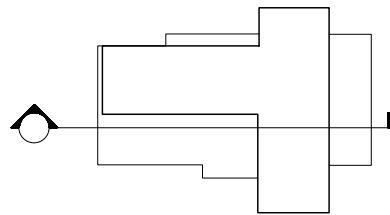
these are not your spans - they are panel lengths - the span is from support to support - the two do not necessarily coincide



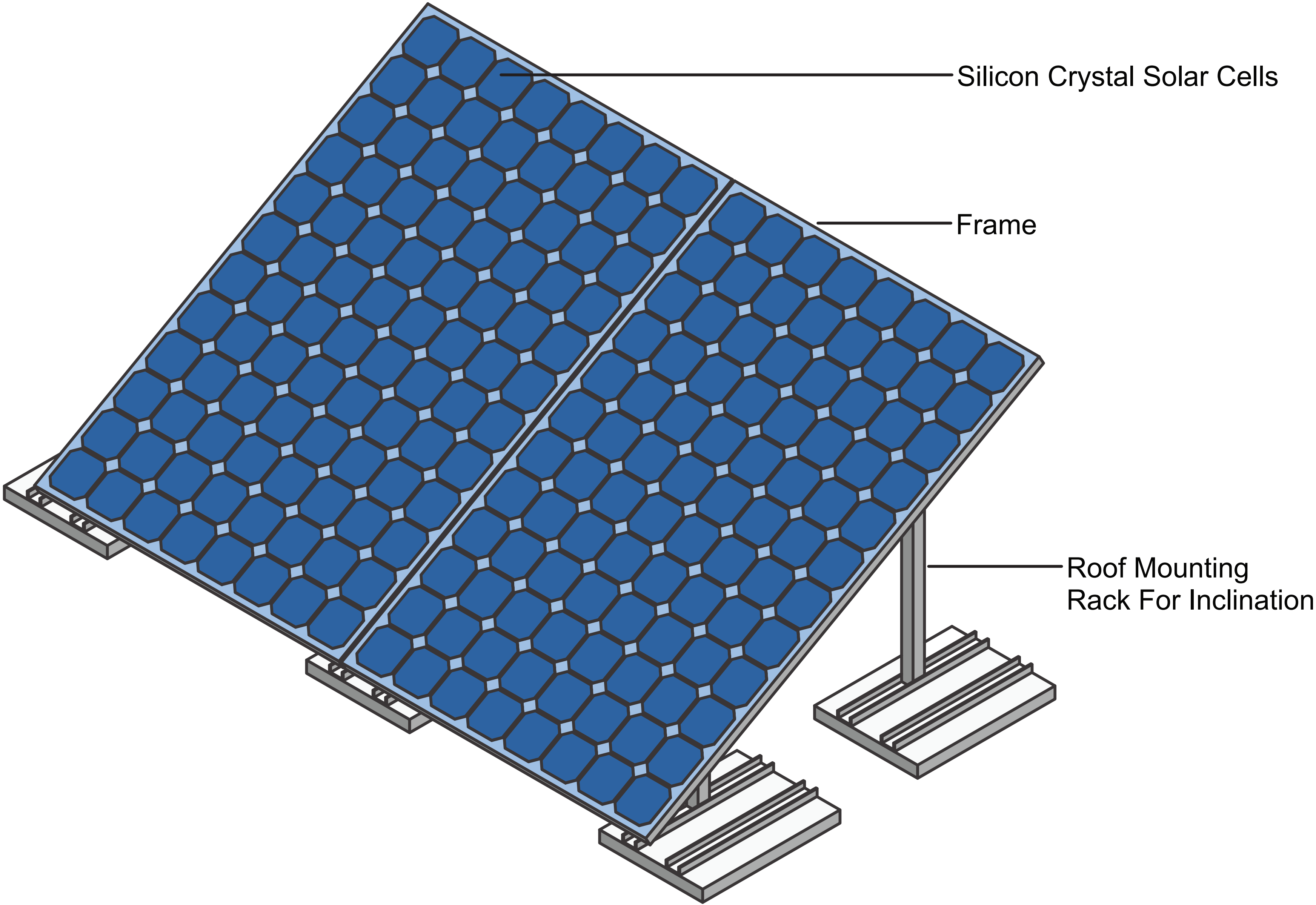


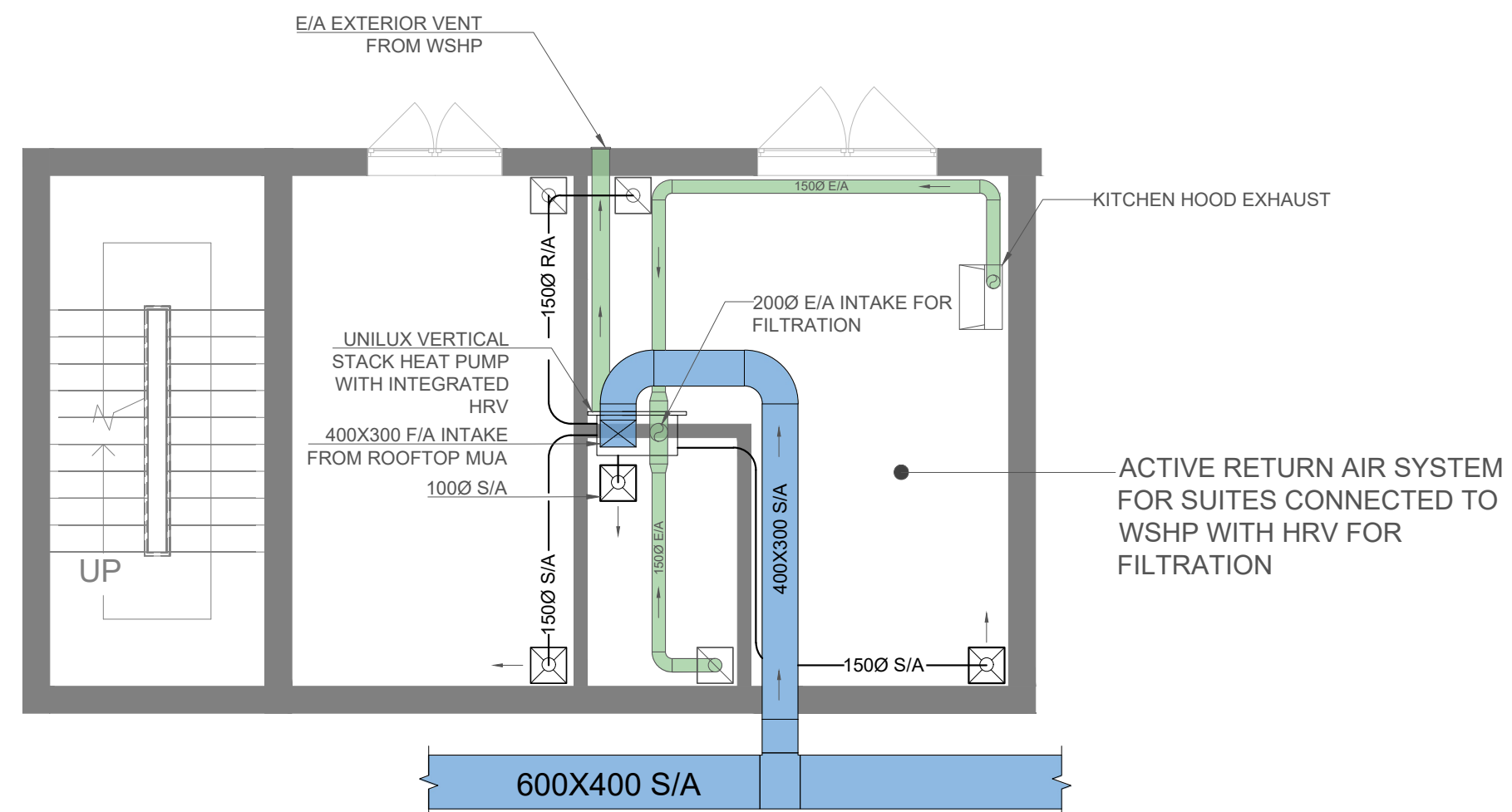




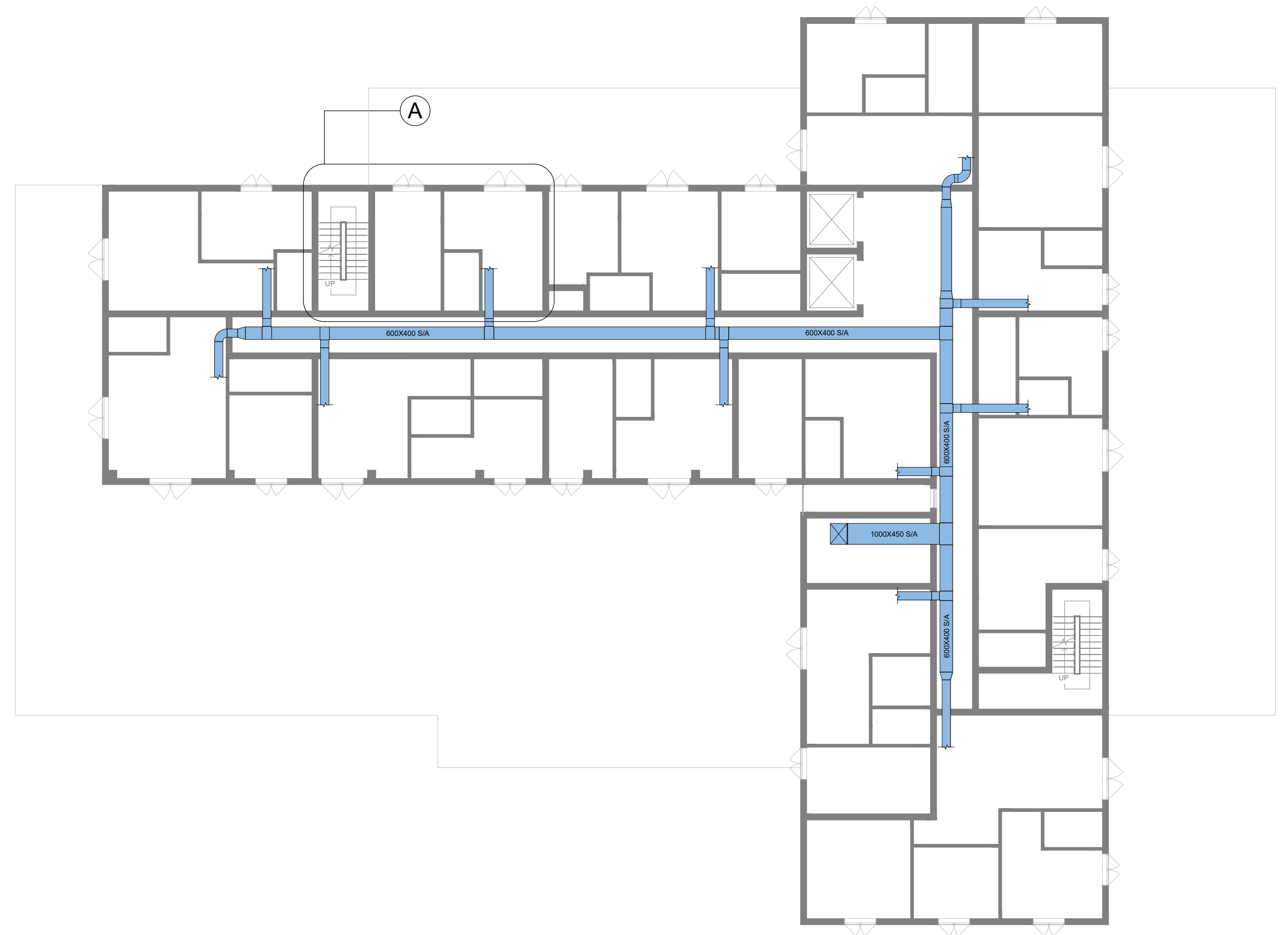


96 CELL MONOCRYSTALLINE SOLAR PANEL 3D SCHEMATIC

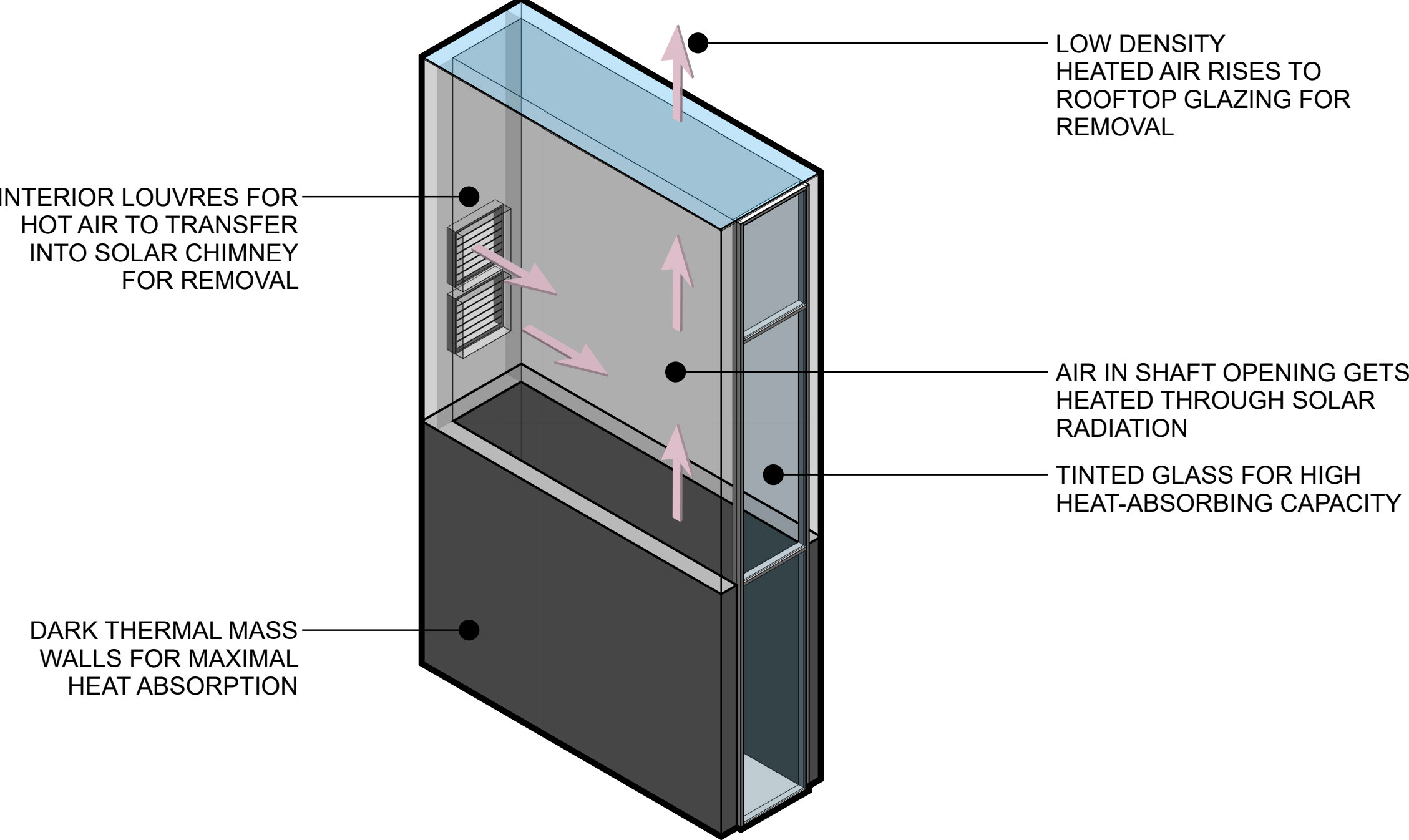




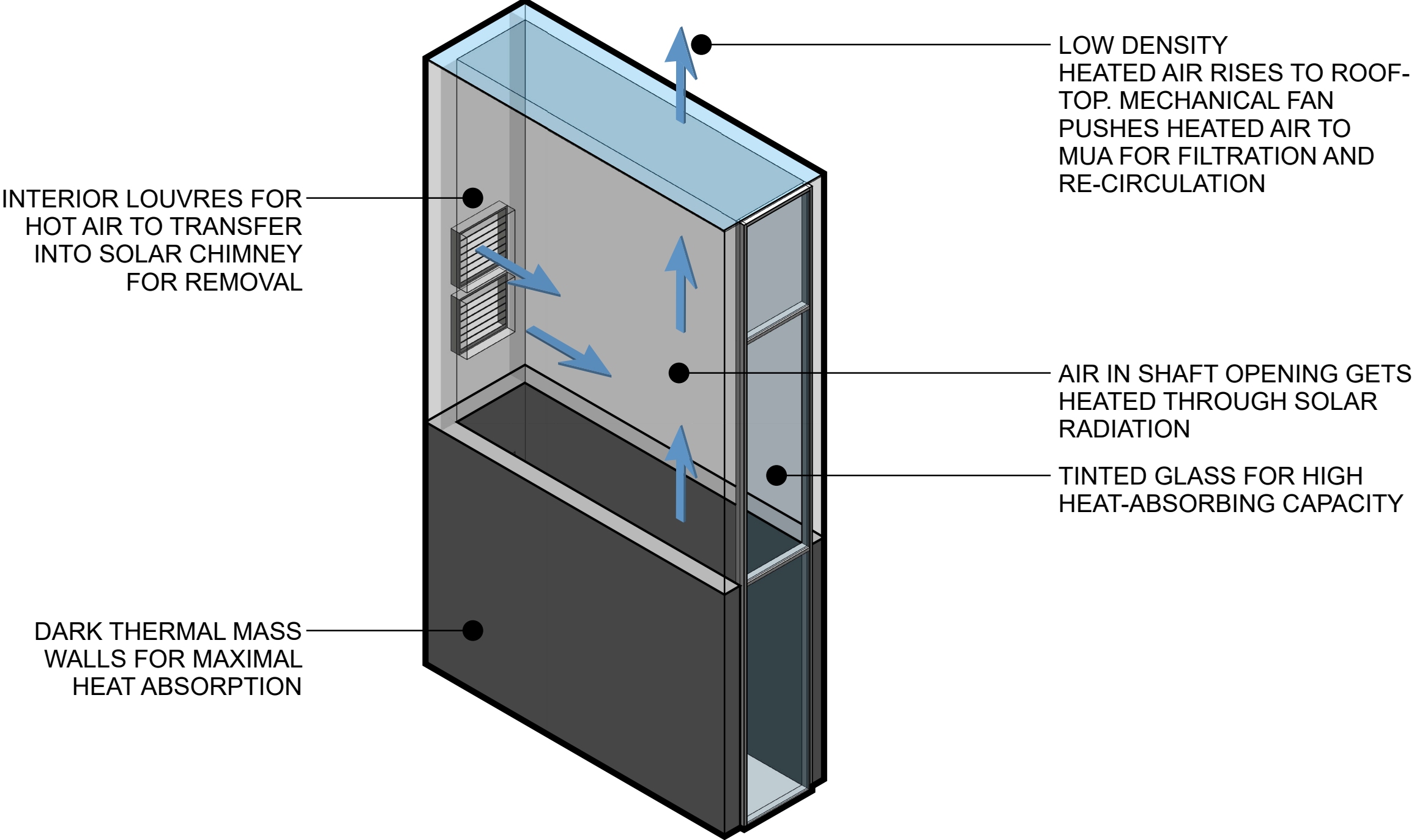
A INSUITE HVAC LAYOUT (TYP.)



SUMMER ☀️



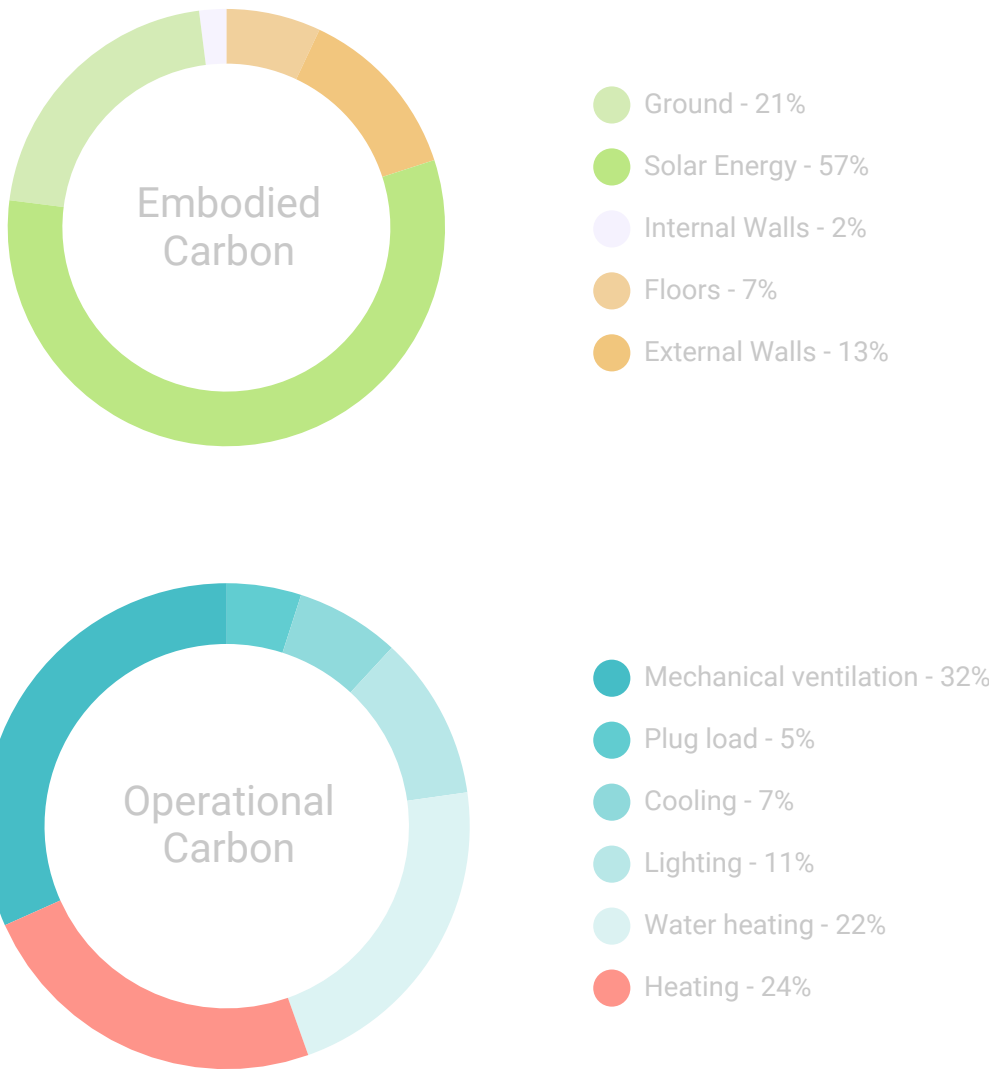
WINTER ❄️



Passive Strategies

A solar chimney is placed south-facing of the building for passive heating/cooling. As it is located next to the elevator core, it's able to have continuous interior dark-coloured thermal mass walls spanning over 14 stories without compromising the overall aesthetics. The exterior surface of the solar chimney consists of insulated tinted glazing for optimal solar heat absorption. It is designed to draw in hot air from the interior louvres in the corridors, which then rises through solar heating to be expelled or reused in MUA depending on seasonal demands through the top of the chimney, creating a natural circulation of air.

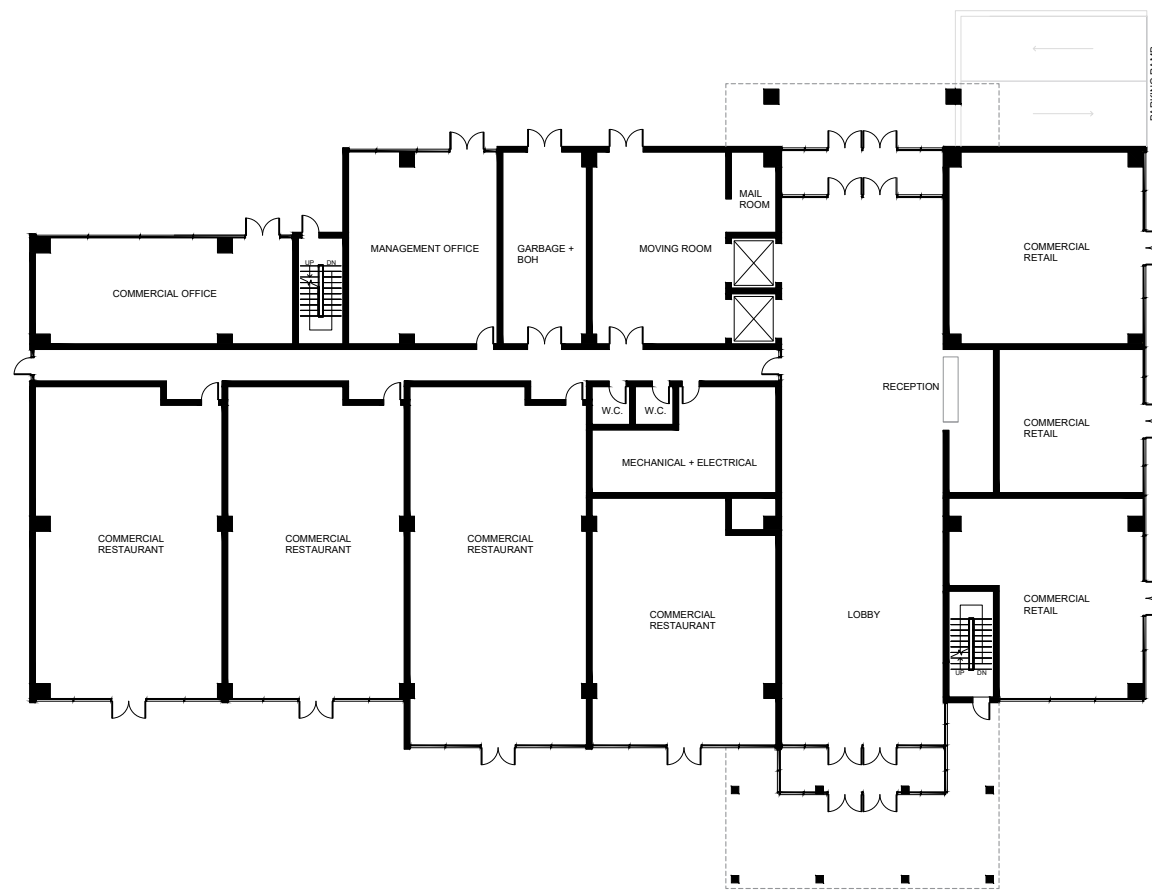
Rooftop monocrystalline solar panels are also integrated to enhance the building's energy performance. All DC energy generated will be processed and converted to AC energy through inverters on the ground floor; which then are distributed throughout the building. Any excess electricity will be stored in batteries or sent back into the grid in exchange for on-bill credits.



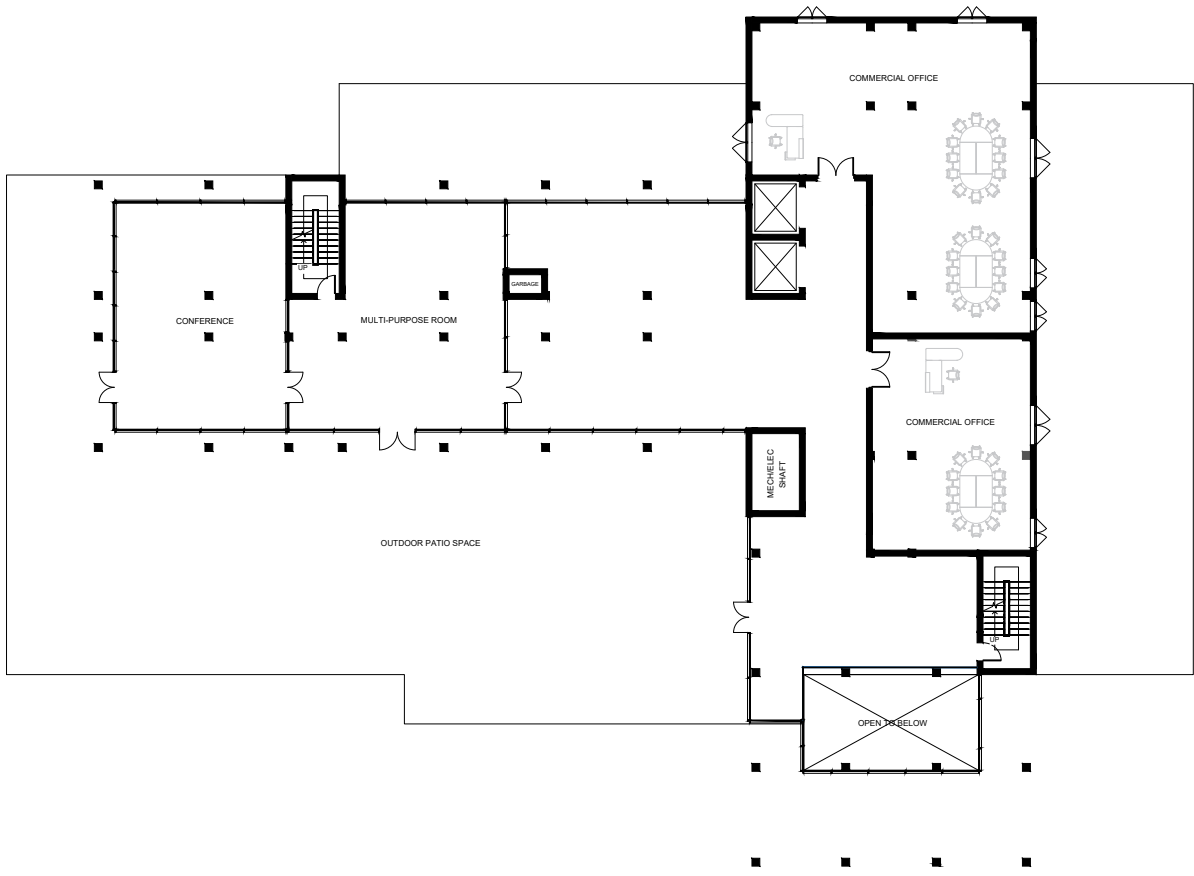


Thank you.

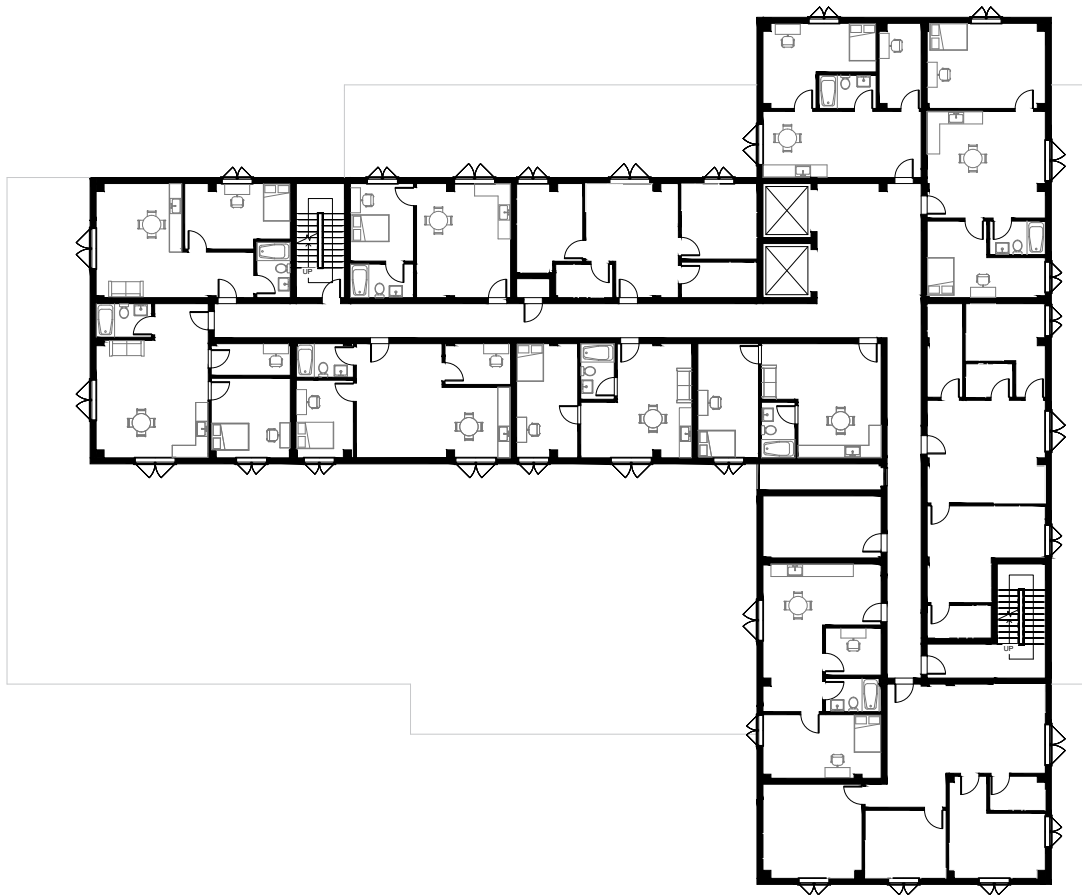
Appendix



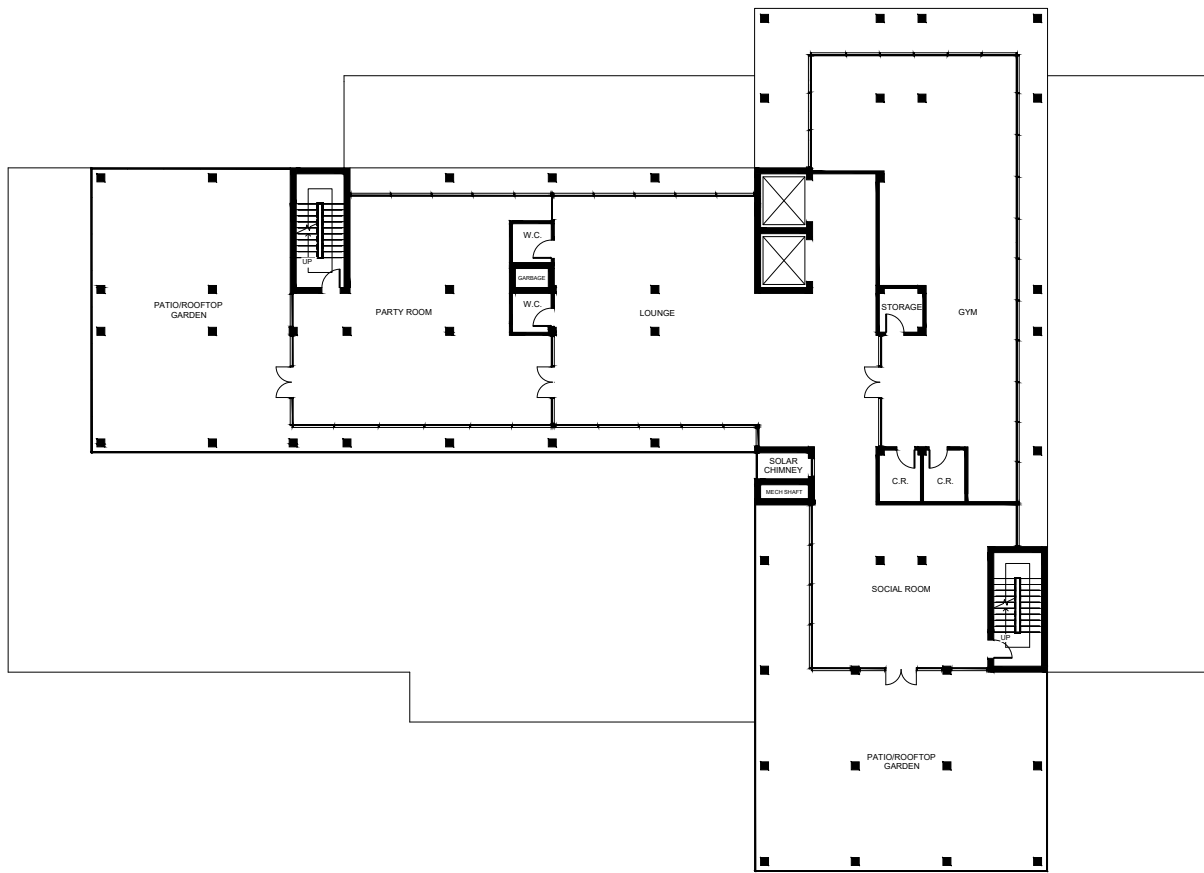
Ground Floor



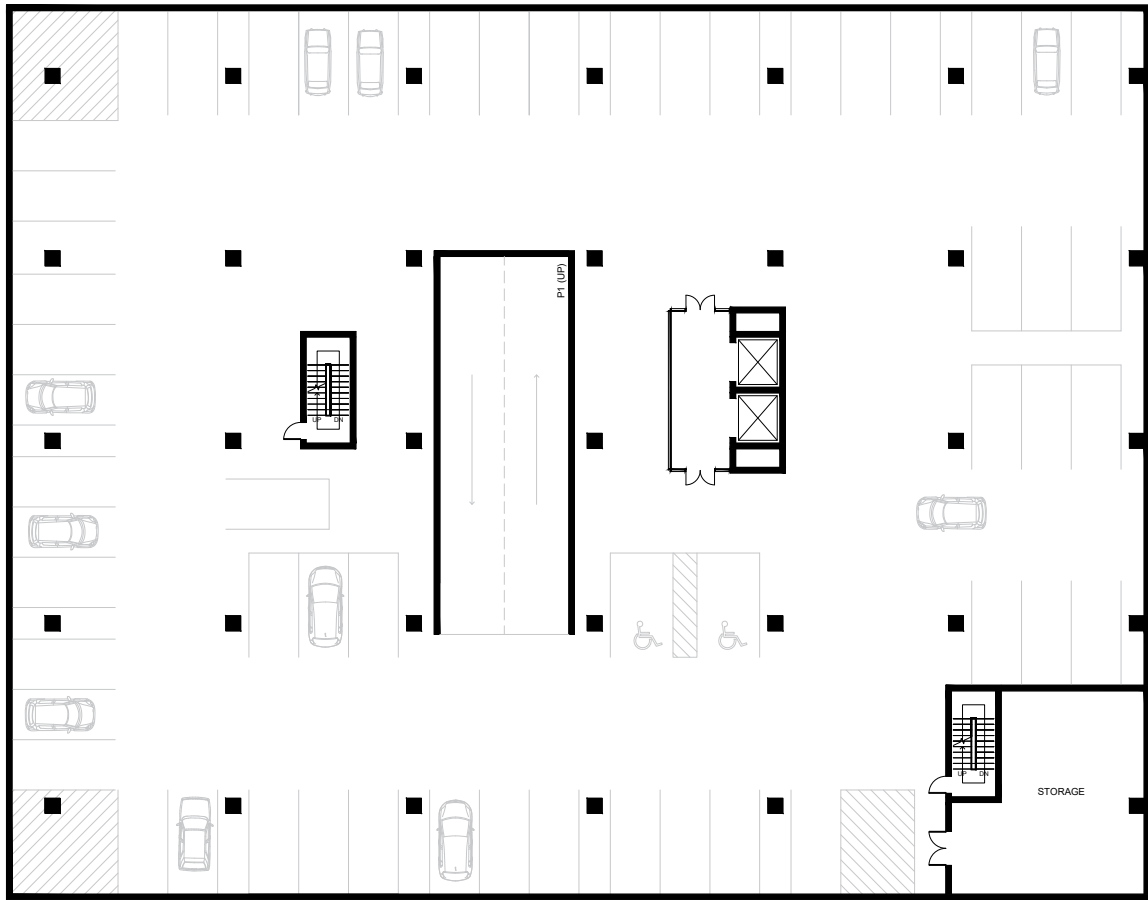
Lower Amenity



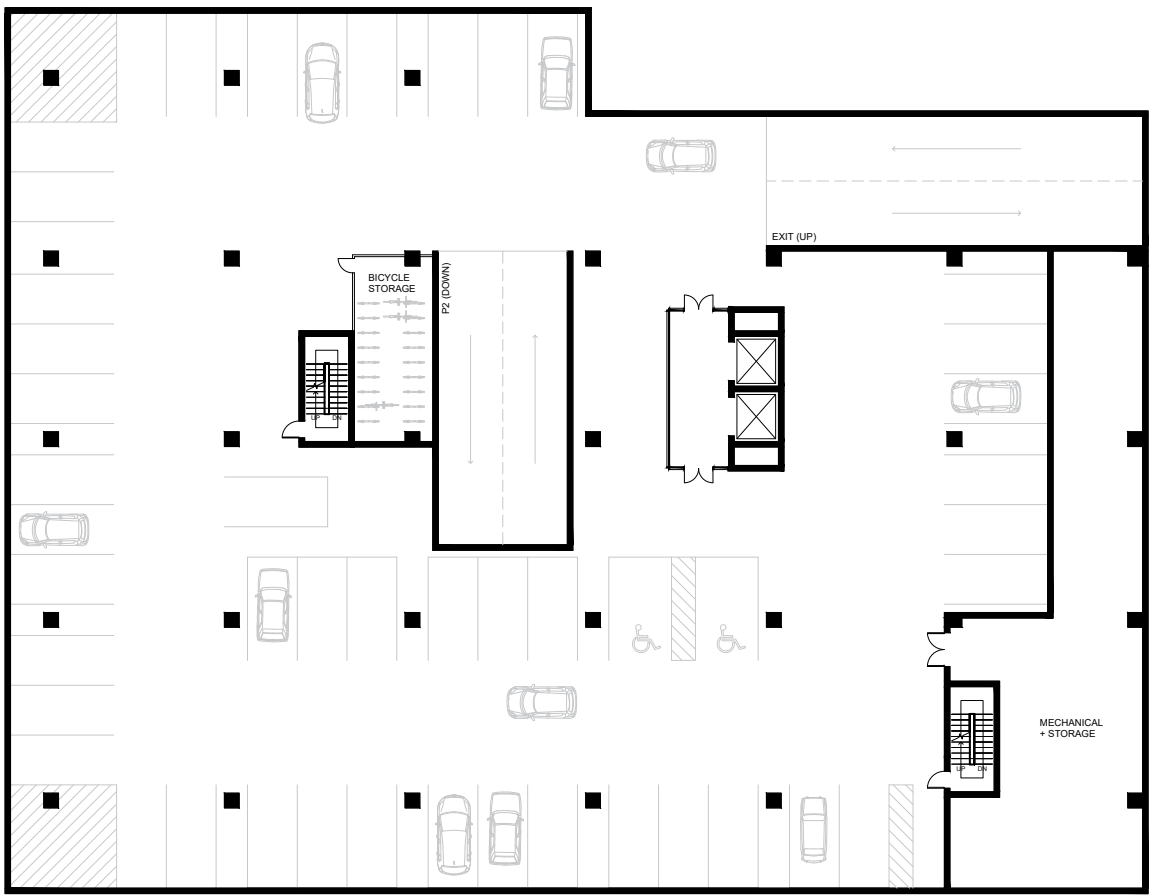
Residential



Upper Amenity



Parking P2



Parking P1

