

COM\C

Shining New Light on Energy Efficiency
for Berlin's Sustainable Future



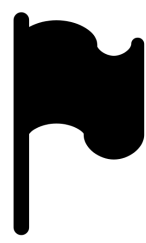
Architectural Engineering+ Graduation Studio
Mats Kolmas
4562135
23-06-2023



/ 'kom.ik / - [ko . mic]

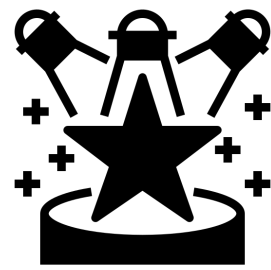
Response to the Formal Opera
(formalities)

DEFINITION
Name



TECHNICAL FUNDAMENT

Natural Ventilation as Funda-
ment of the Architectural Design



COMMUNICATE METHOD

Communicate the Passive Per-
formance to the Public



RE-INTRODUCE THEATRE

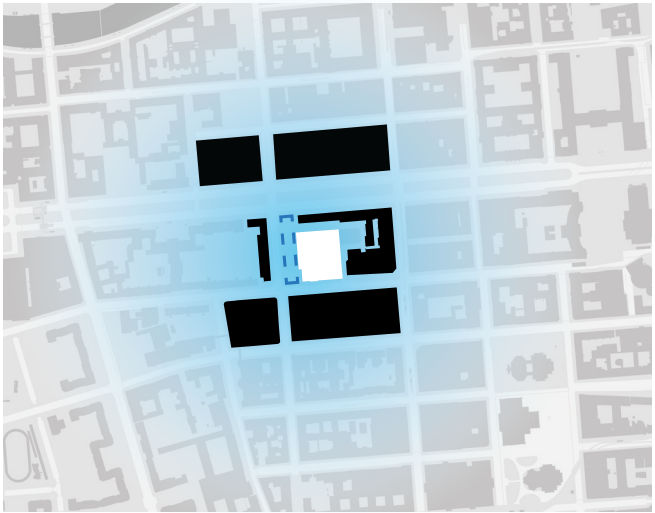
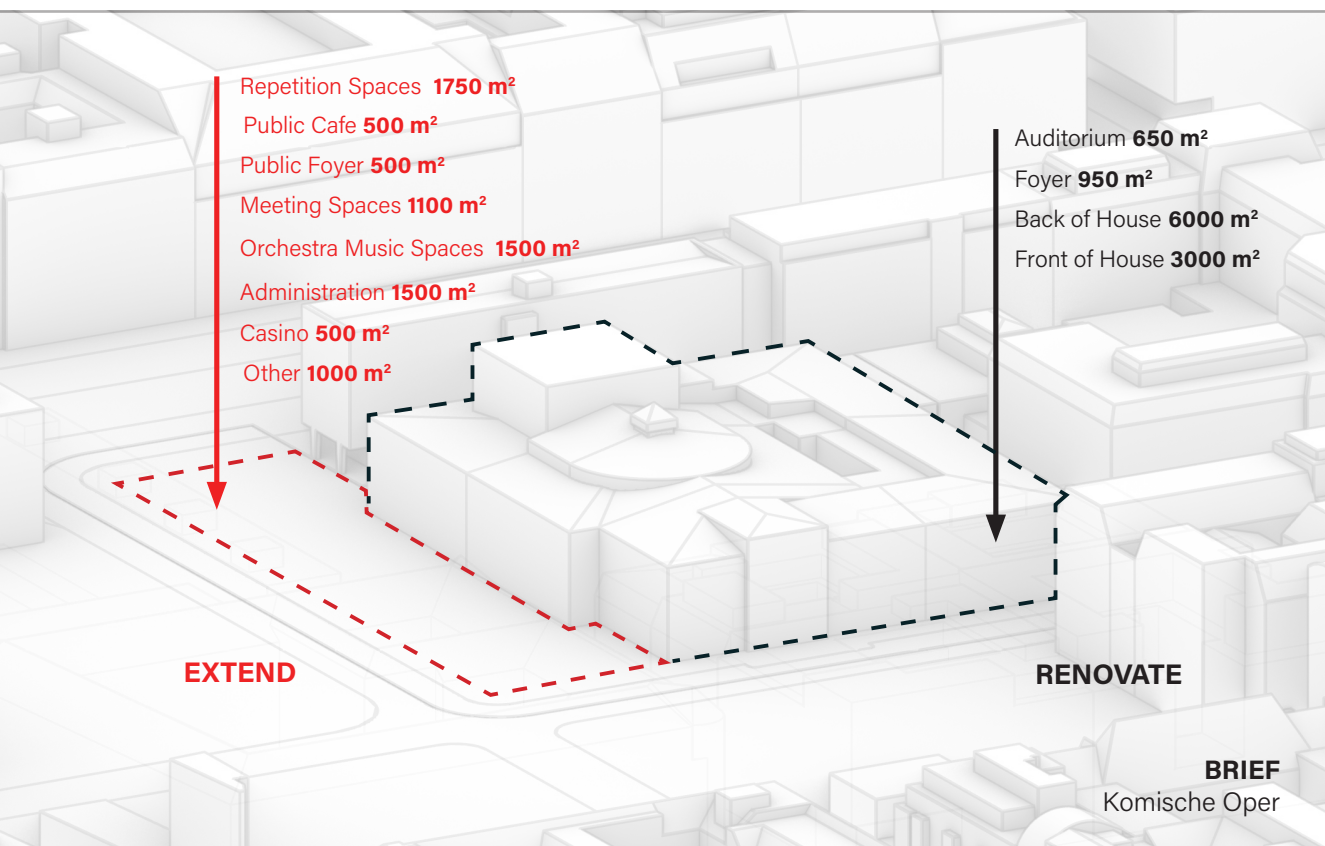
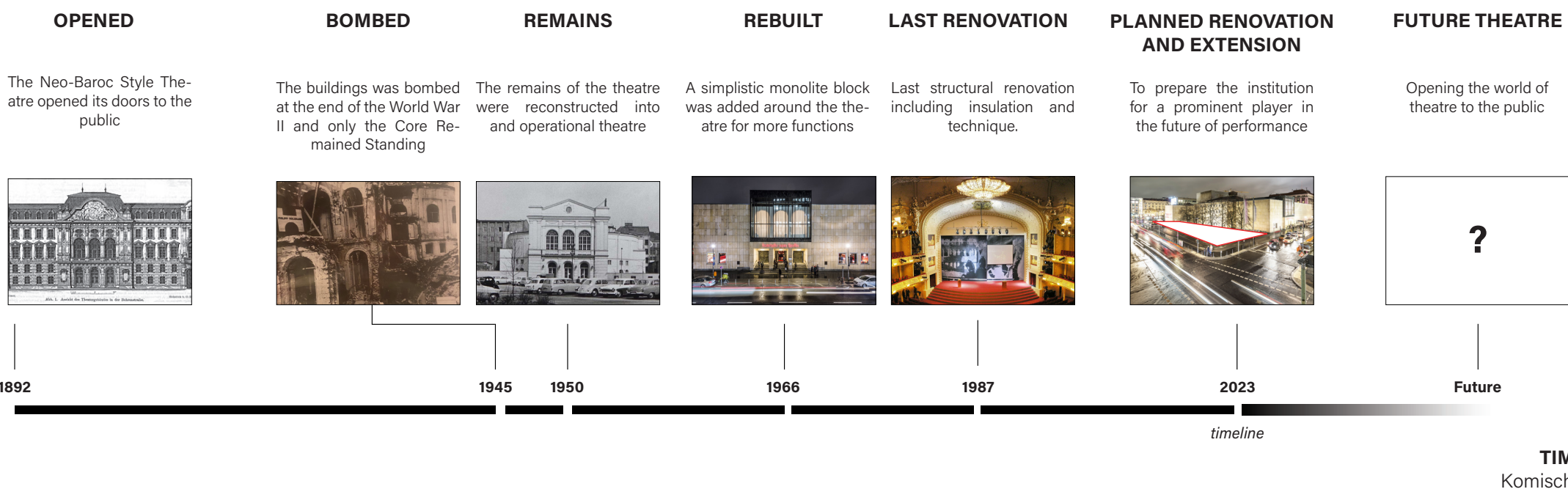
Create an Open Atmosphere of
Opera and Theatre to the City



CLIENT

Sustainable development means using
vision, imagination and creativity to shape
the future, and having the courage to try
new things and explore unfamiliar avenues.
It is about how we would like to live in the
future, and how we respond to issues of the
globalised world in both economy and in
society.

GOAL
German Government Sustainable Development Goals



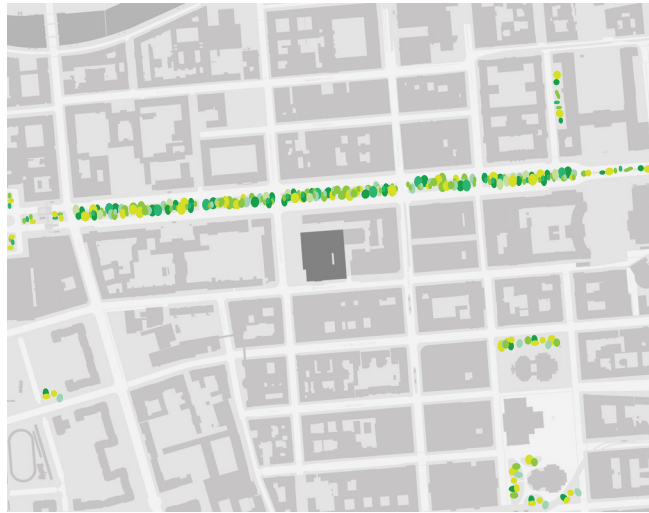
SHELTERED BETWEEN BLOCKS

The existing theatre monolithic block is sheltered between dense other blocks. The extension can help to draw attention back to the theatre.



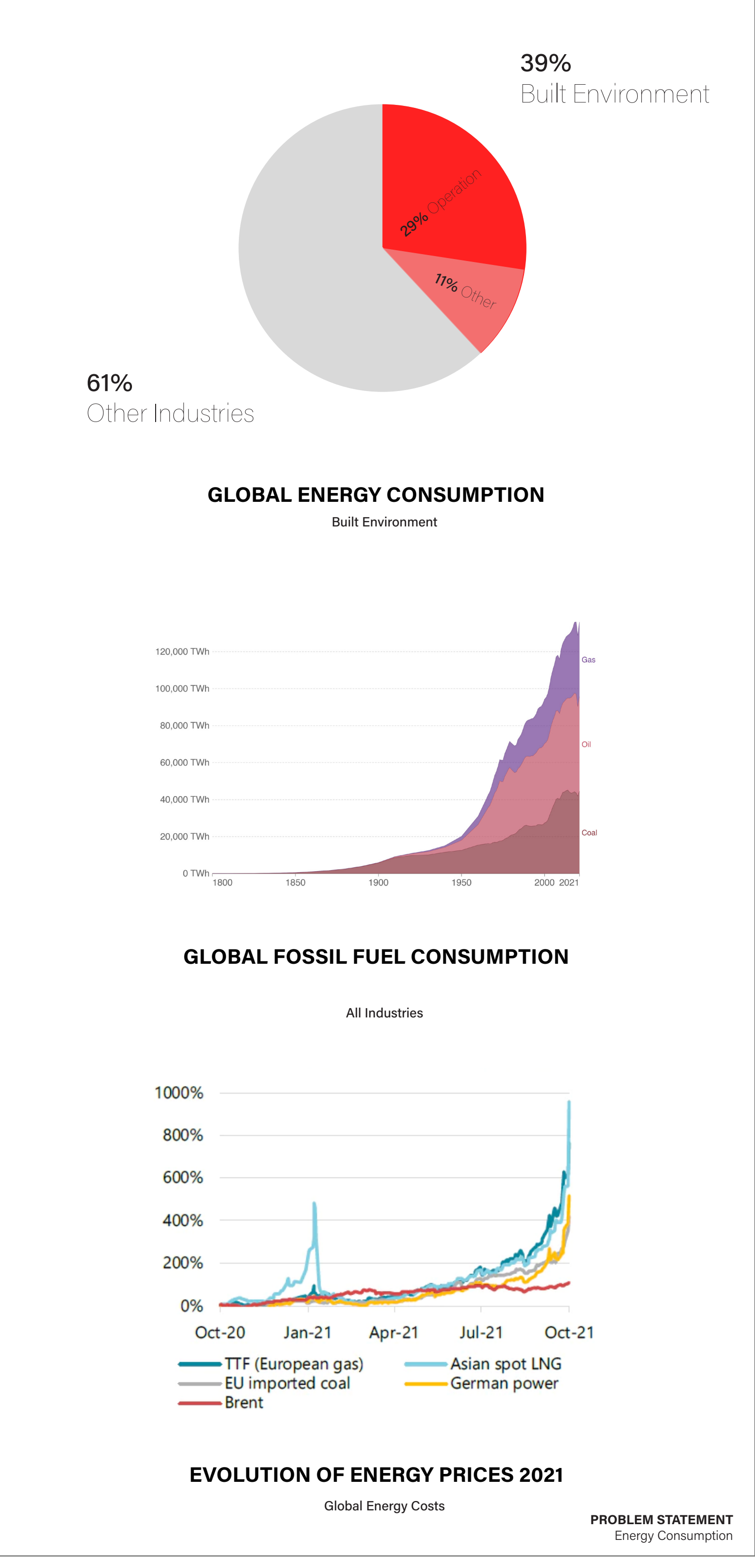
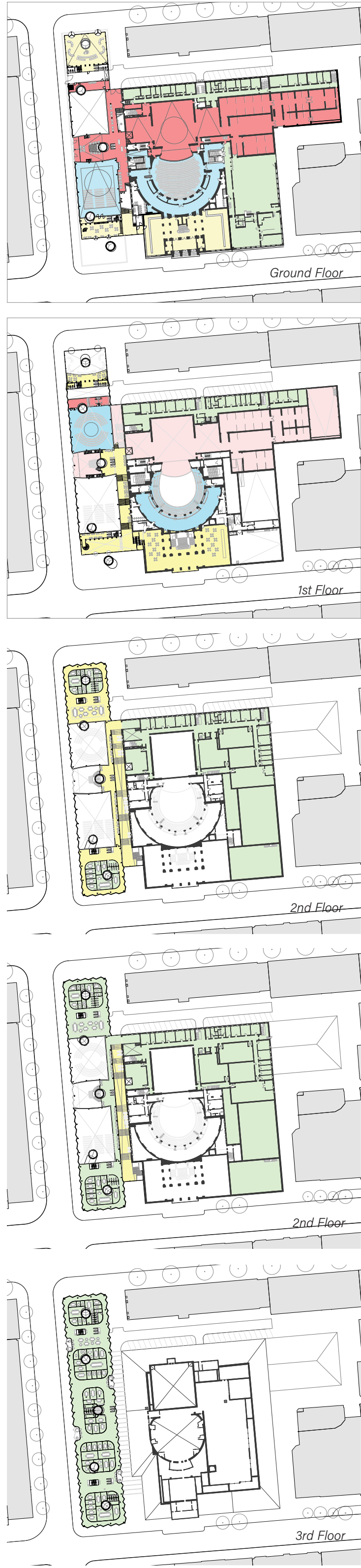
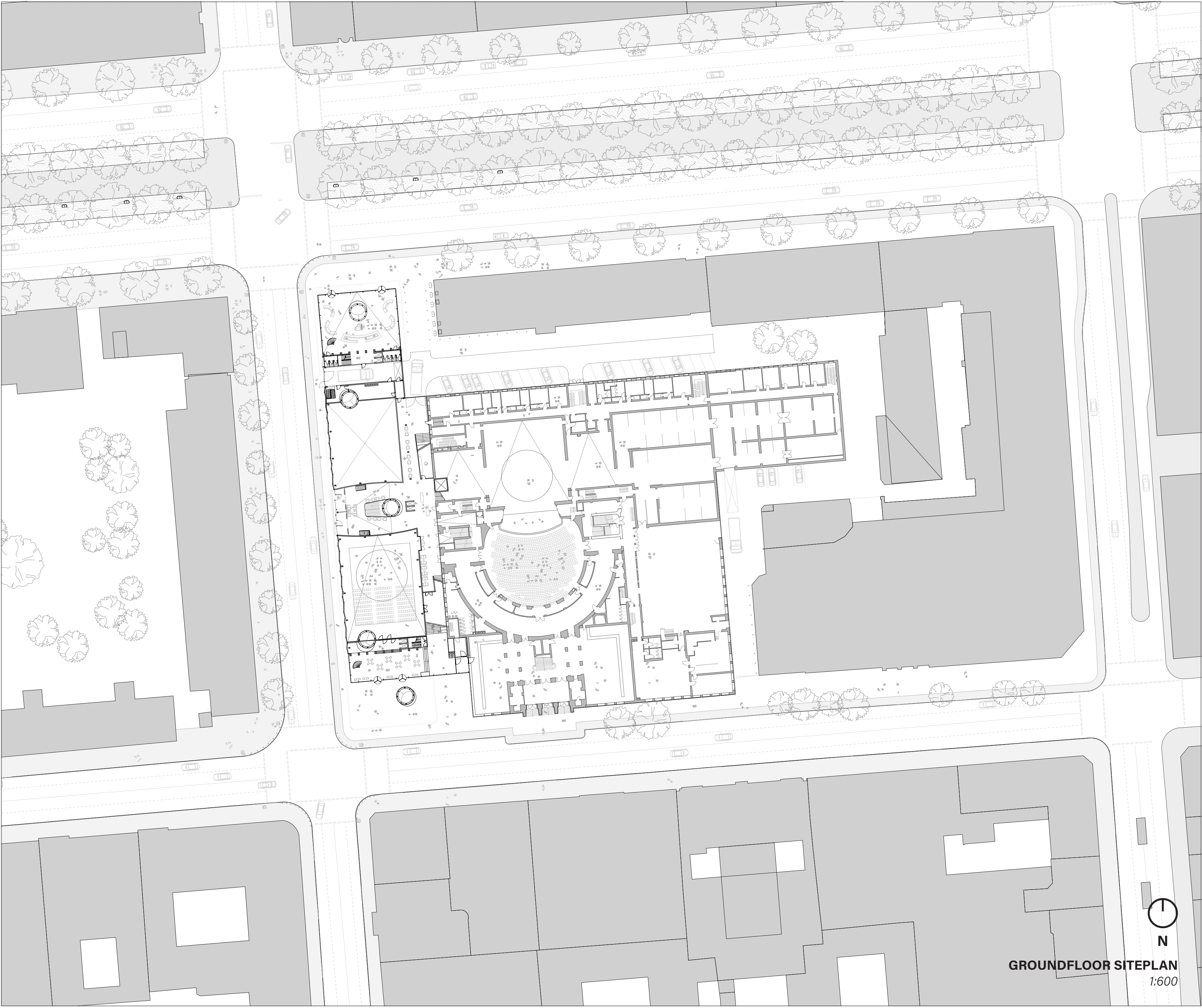
MAIN PEDESTRIAN STREETS

The area is largely a pedestrian area and in the future cars will be restricted to the minimum. The main pedestrian street is just north of the site, Unter Den Linden.



GREEN SPACES

There is limited amount of green spaces available in the area. There runs a main green axis through the neighbourhood just north of the site.



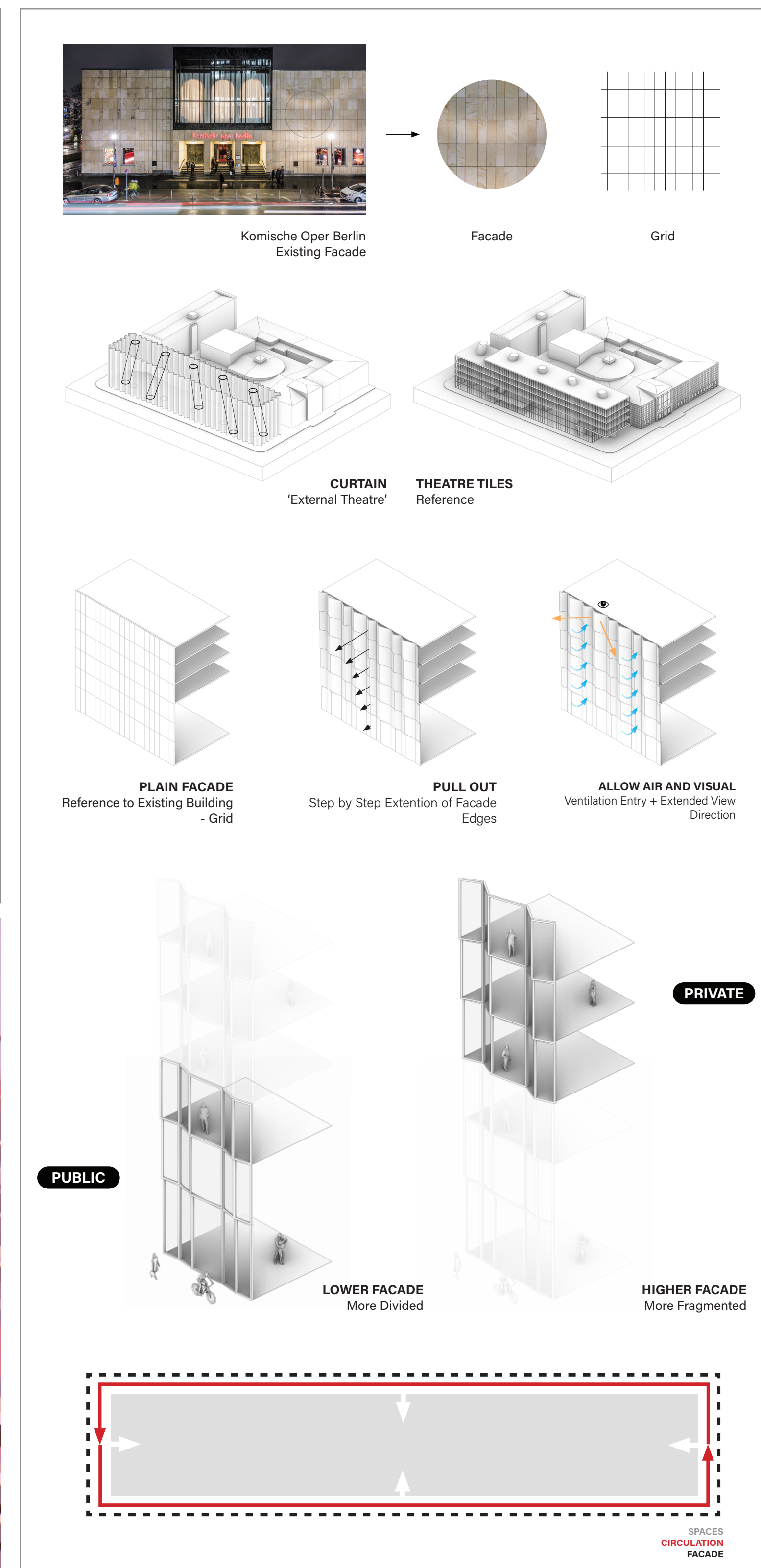
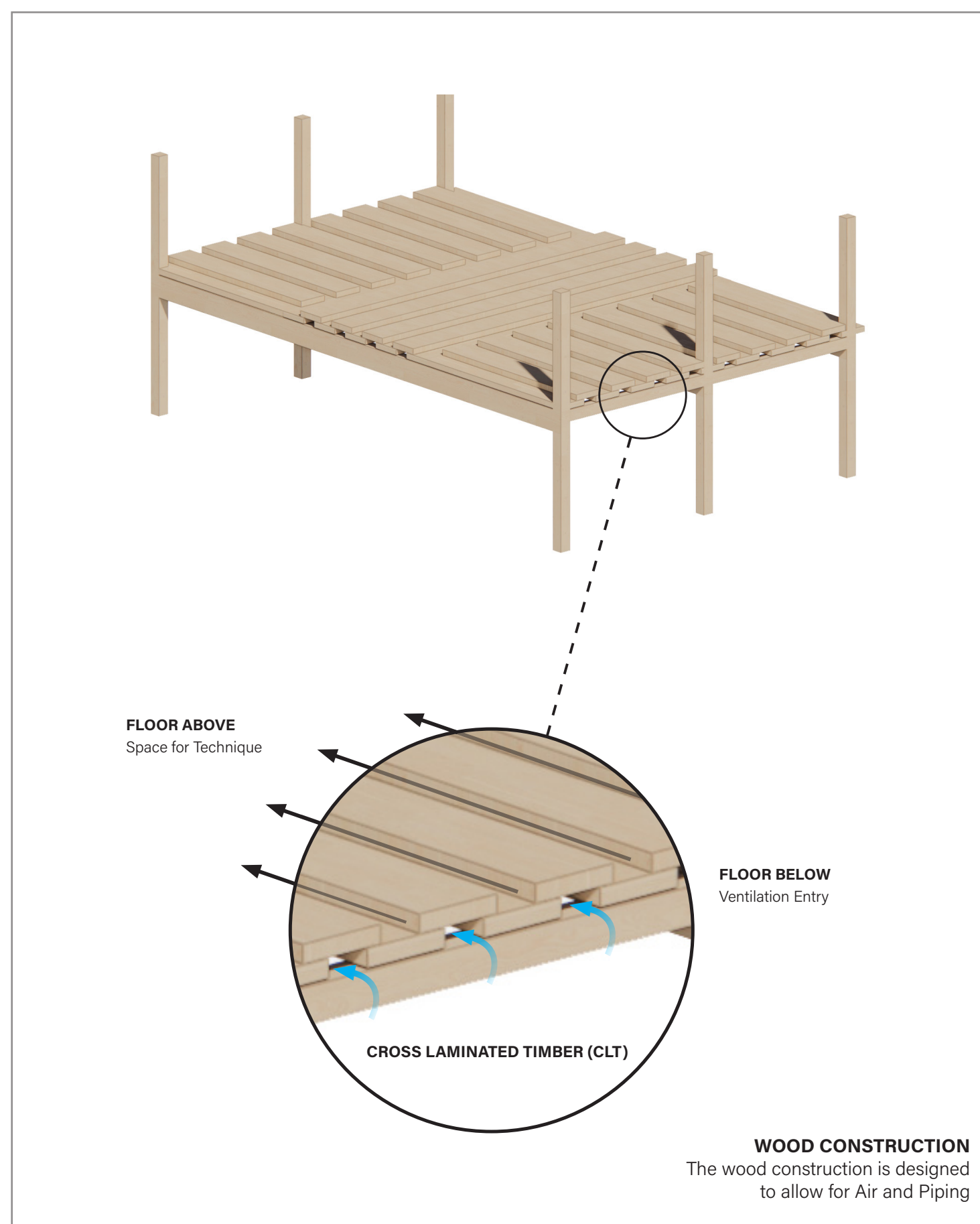
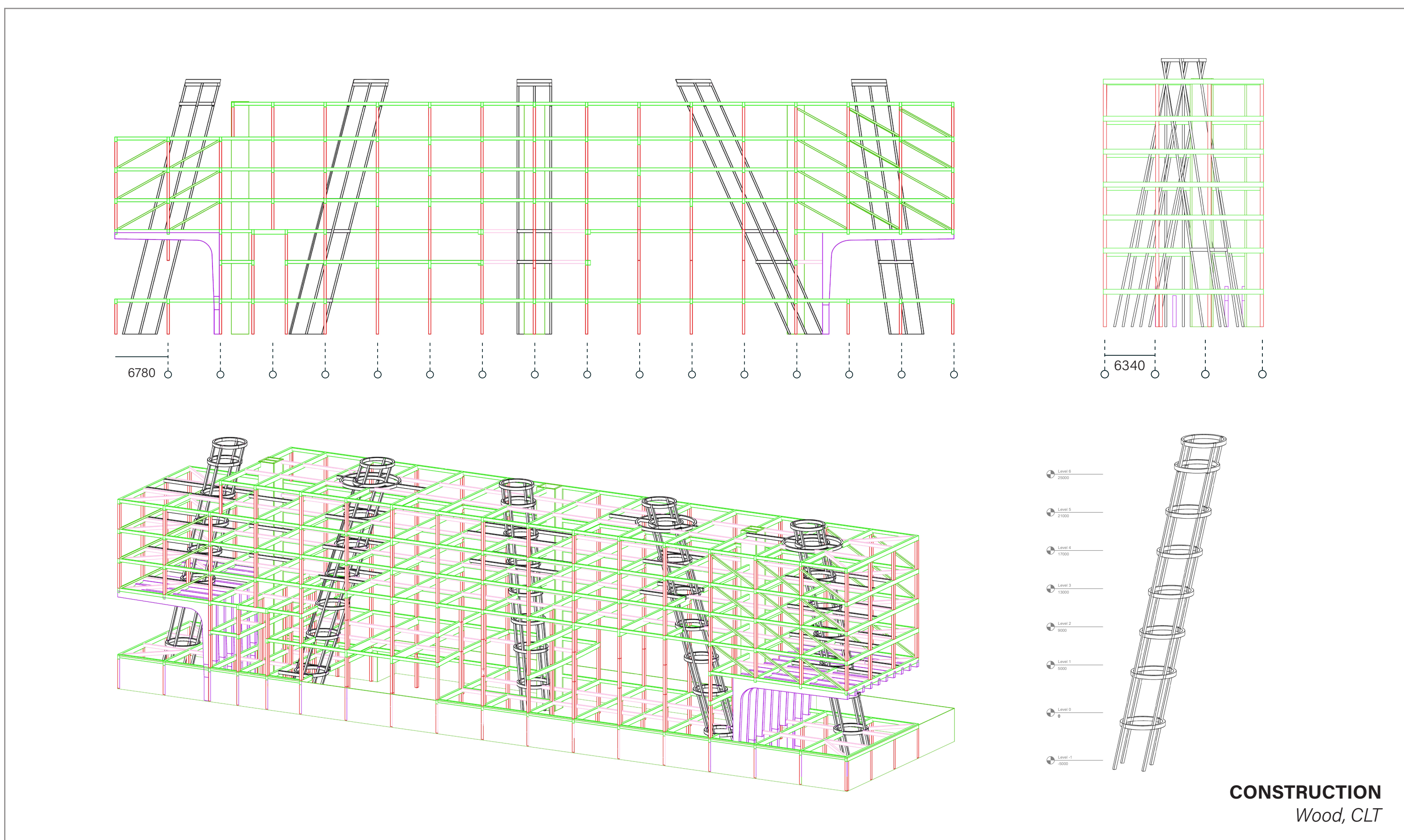
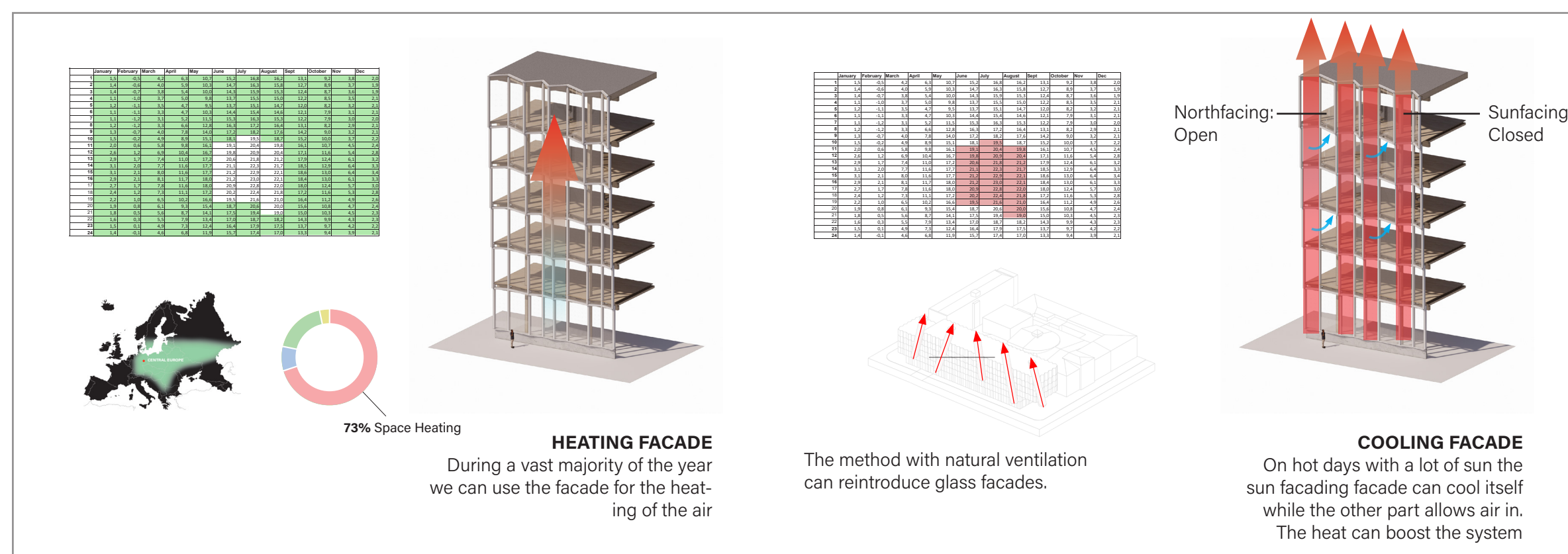
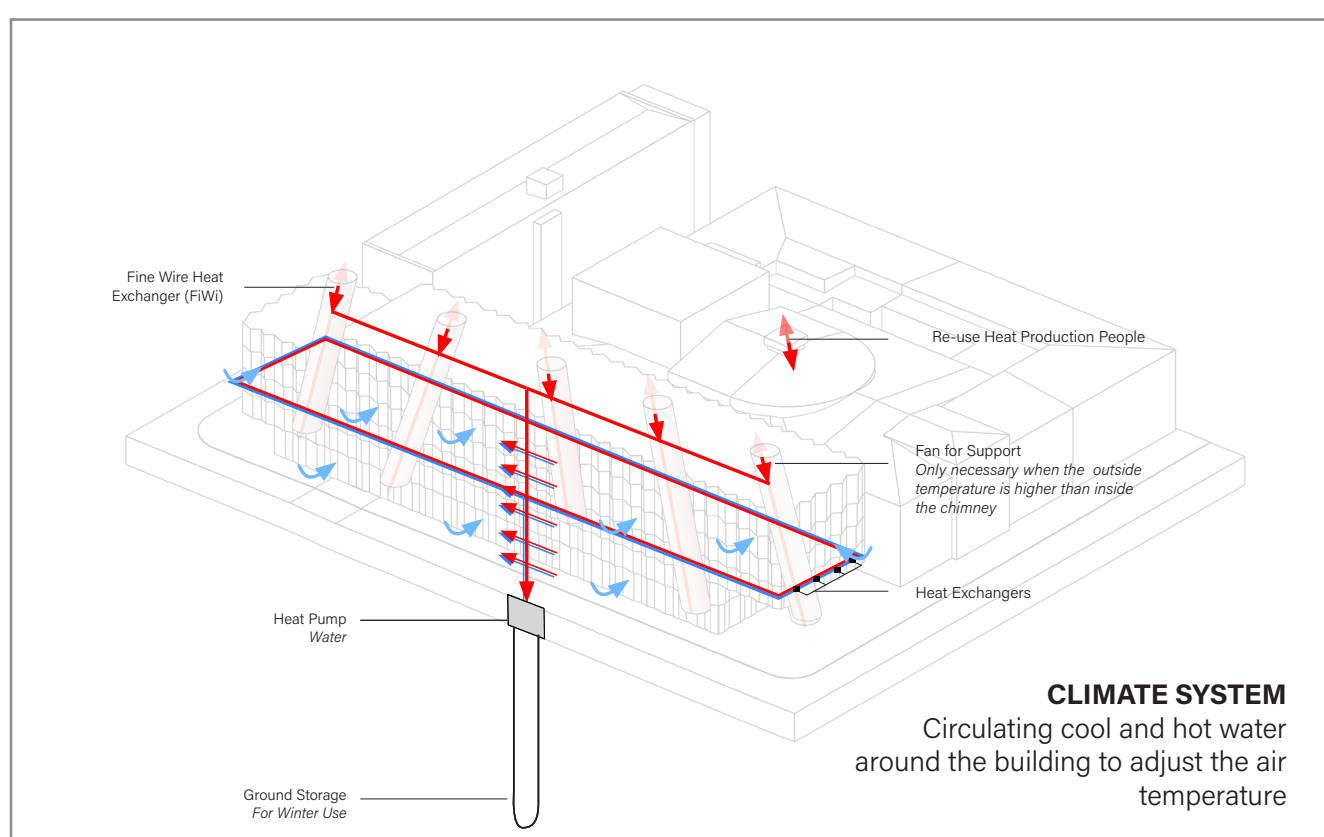
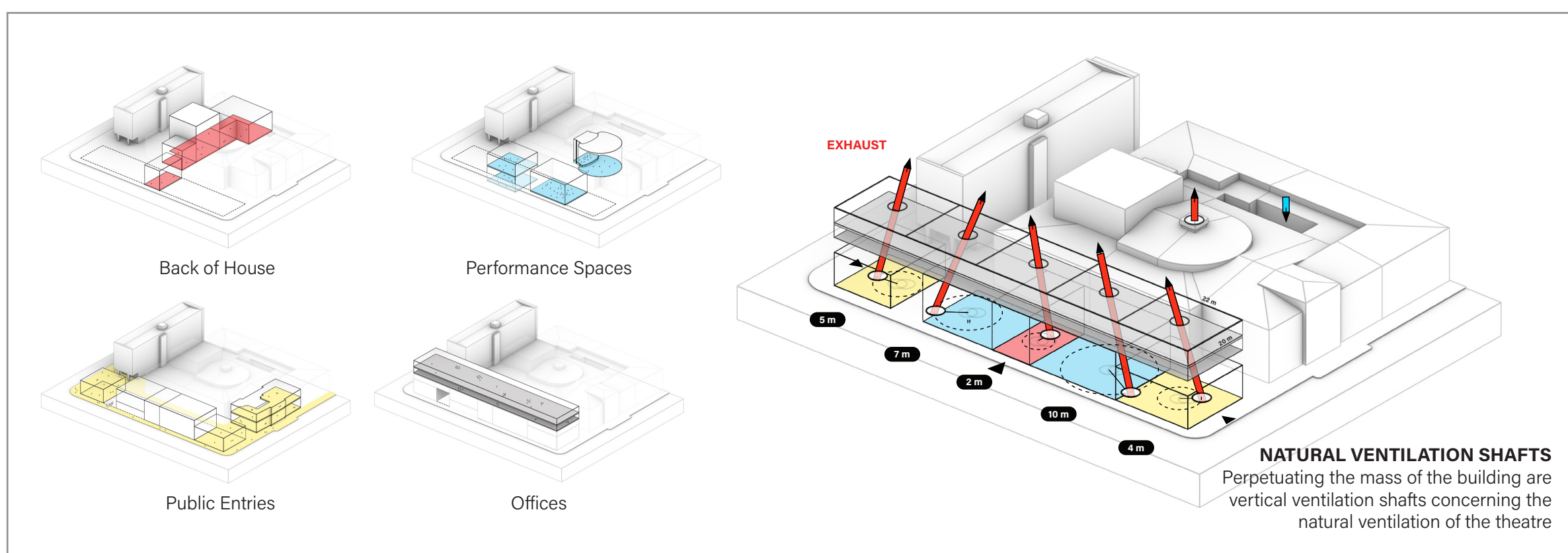
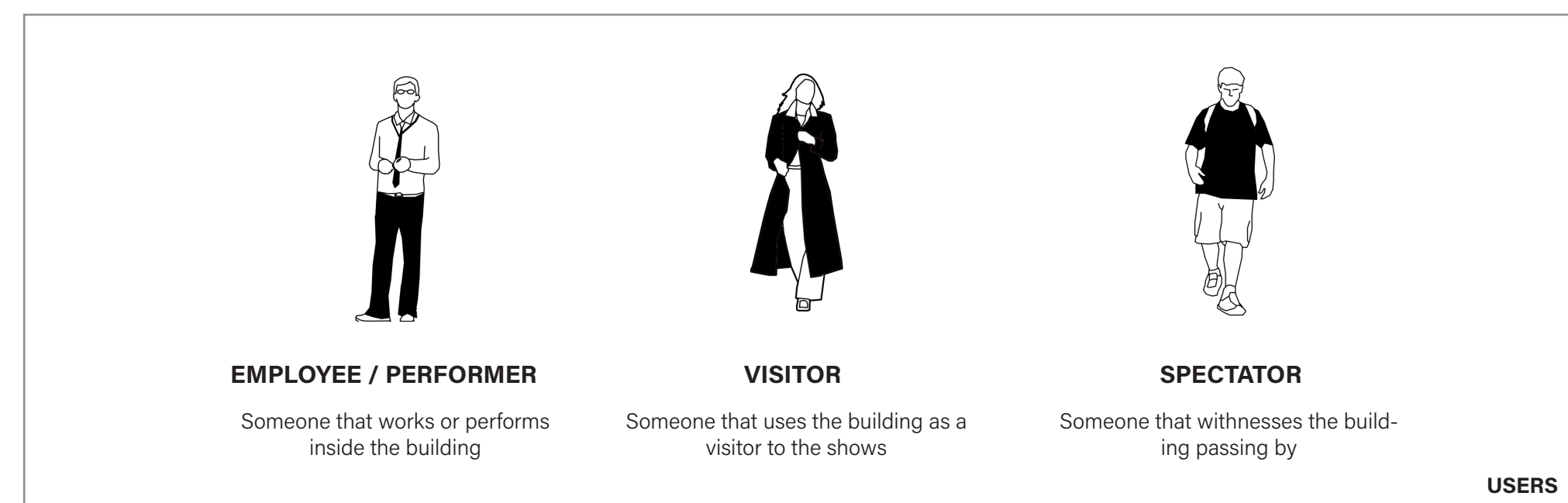
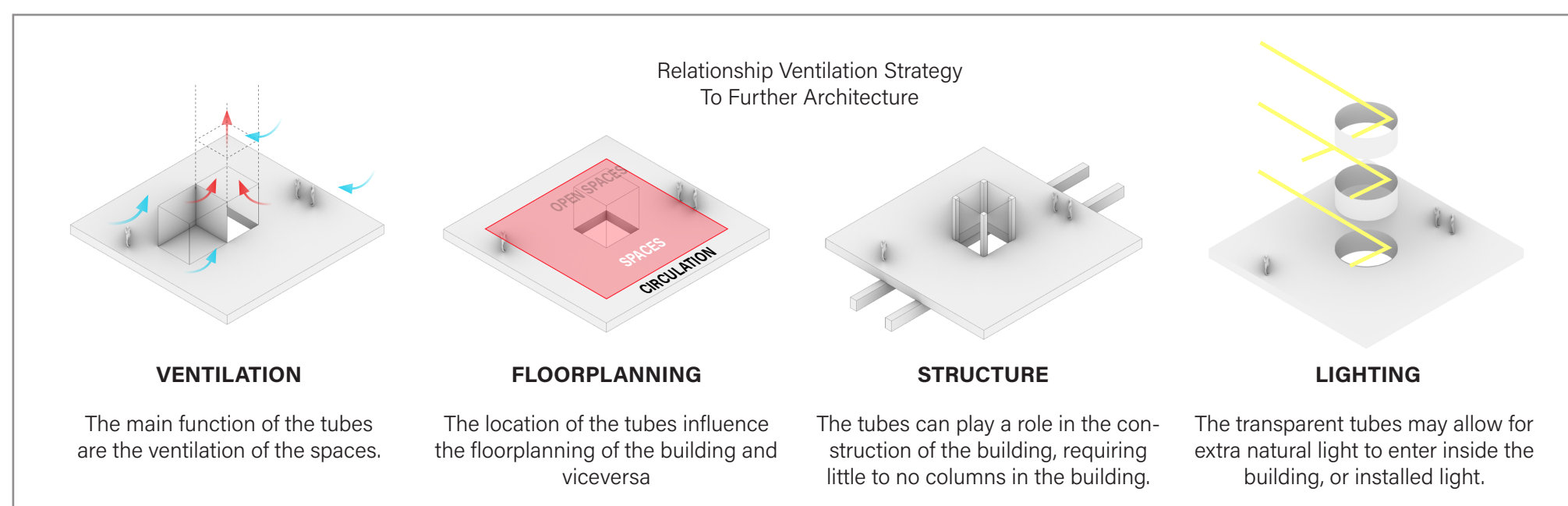
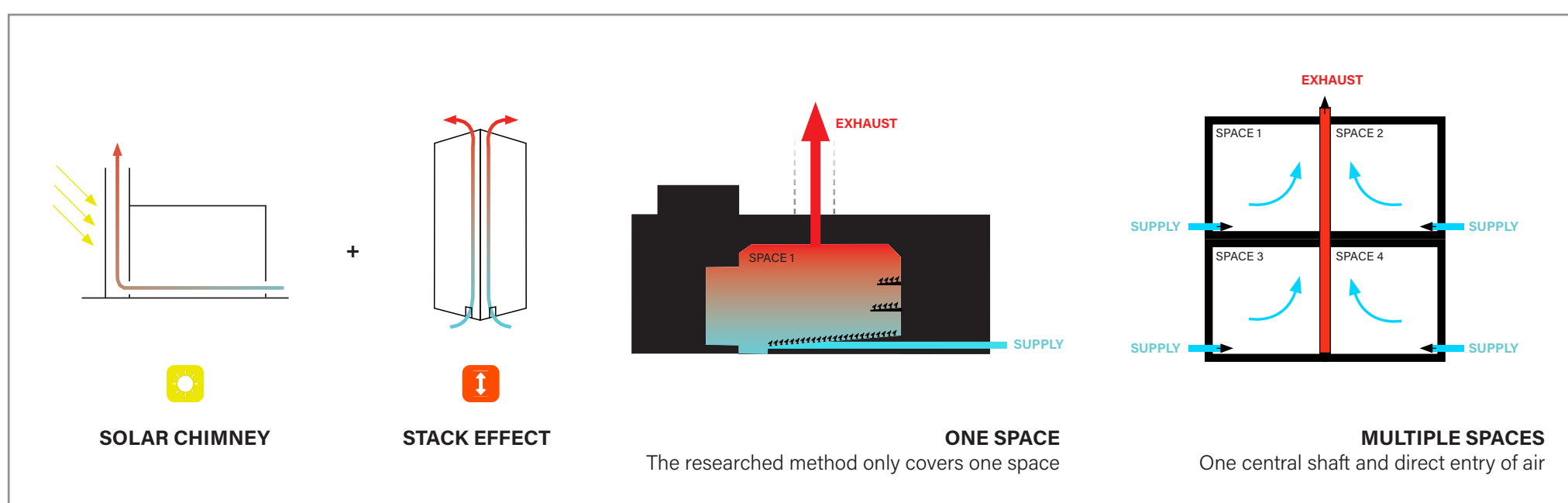
VISUALISATION
Exterior



VISUALISATION
Foyer Extension

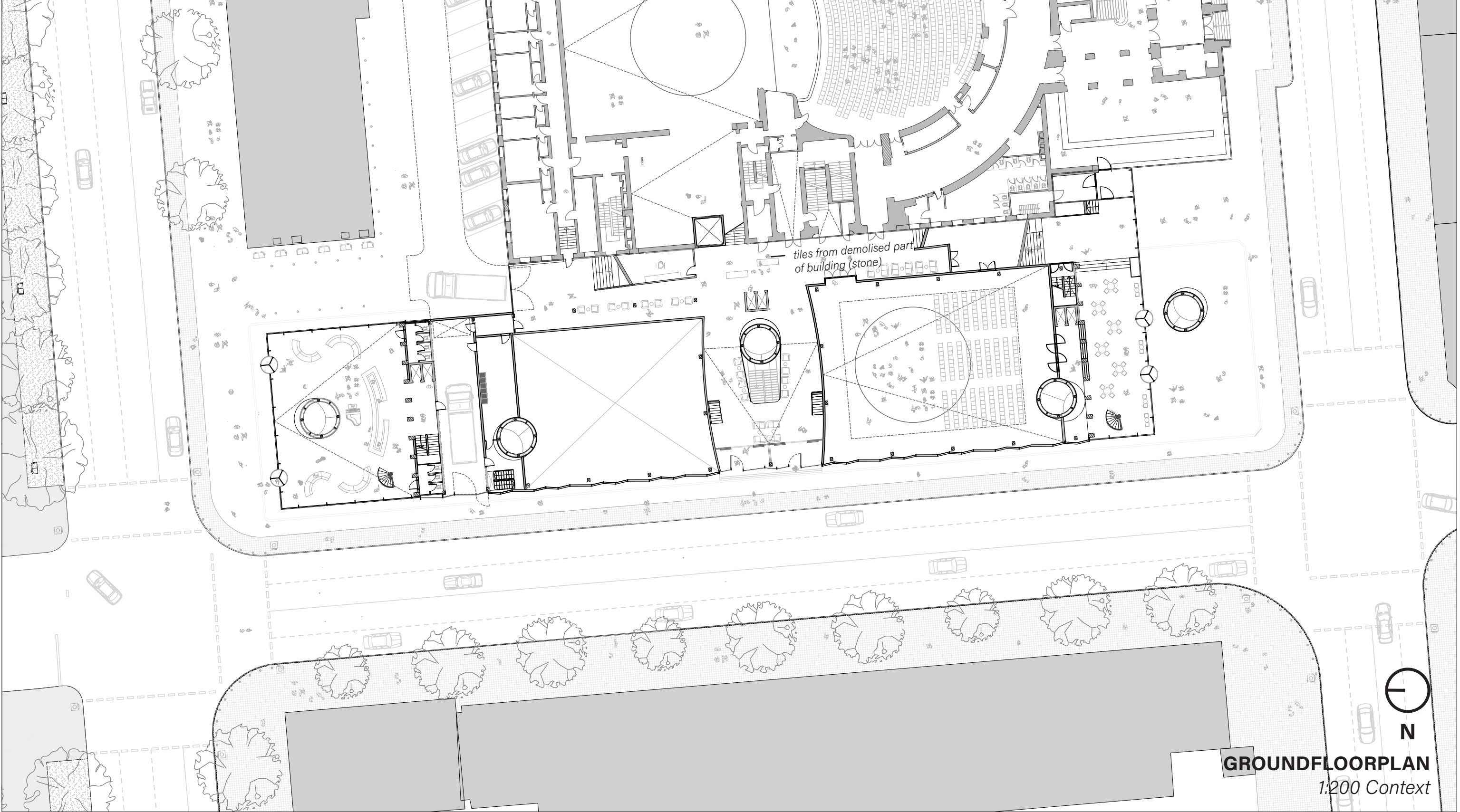
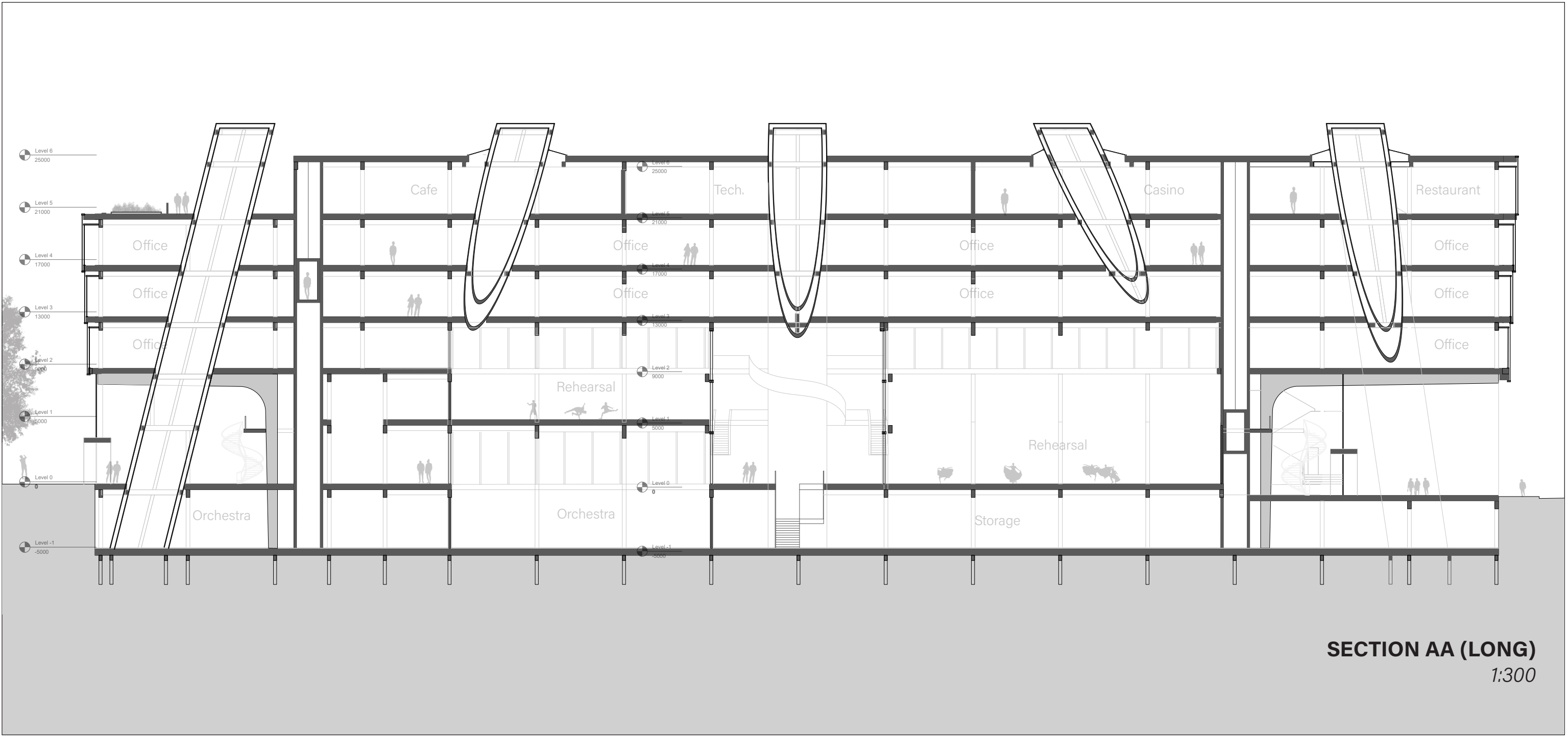
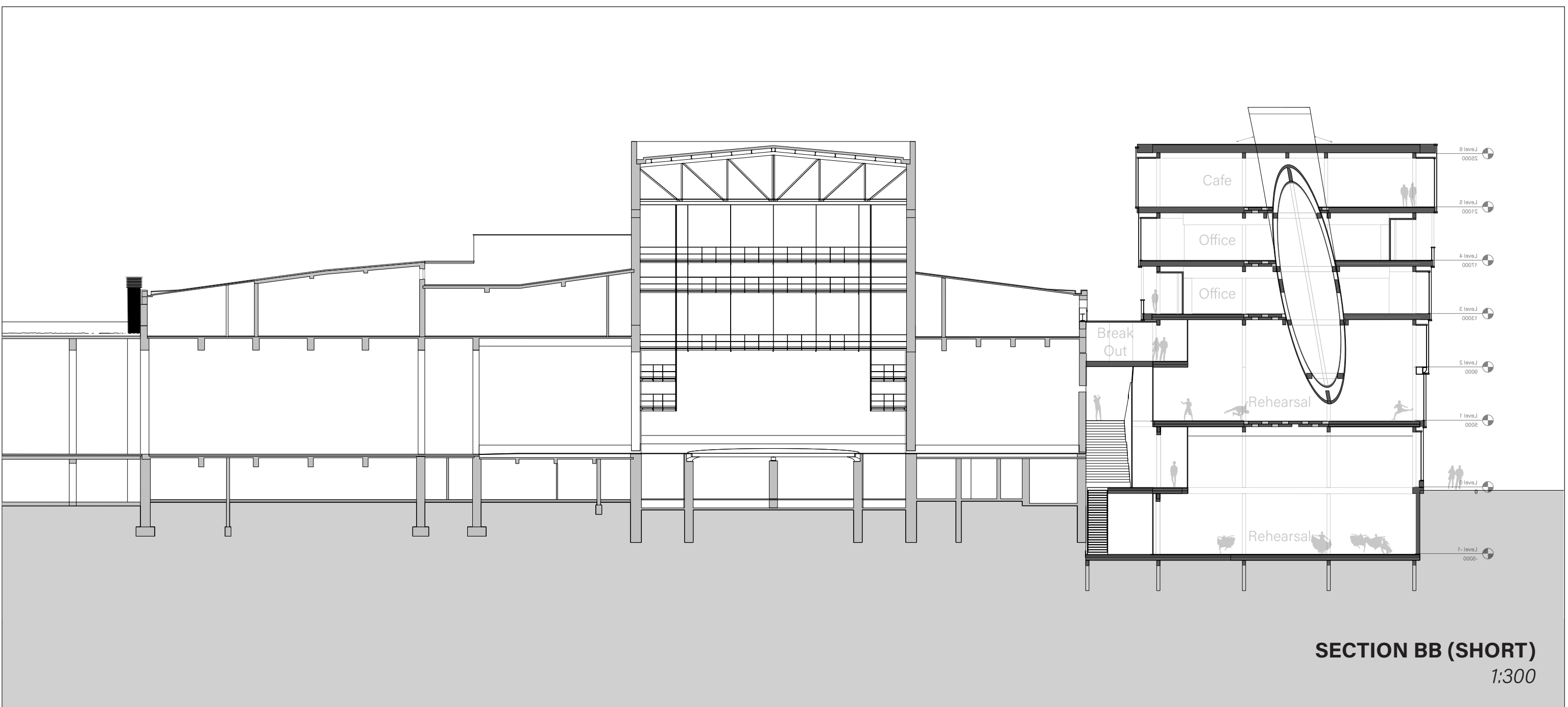
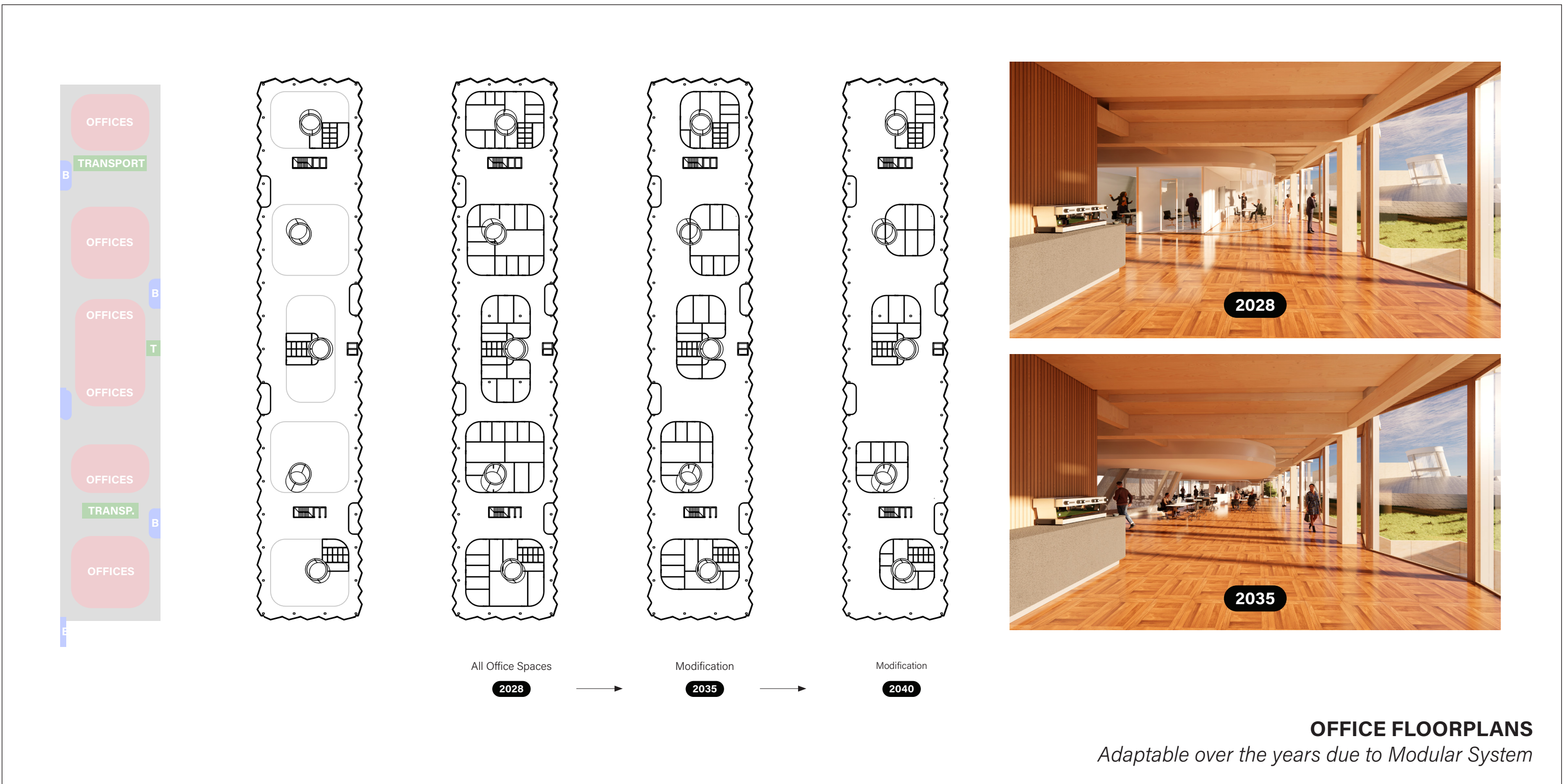
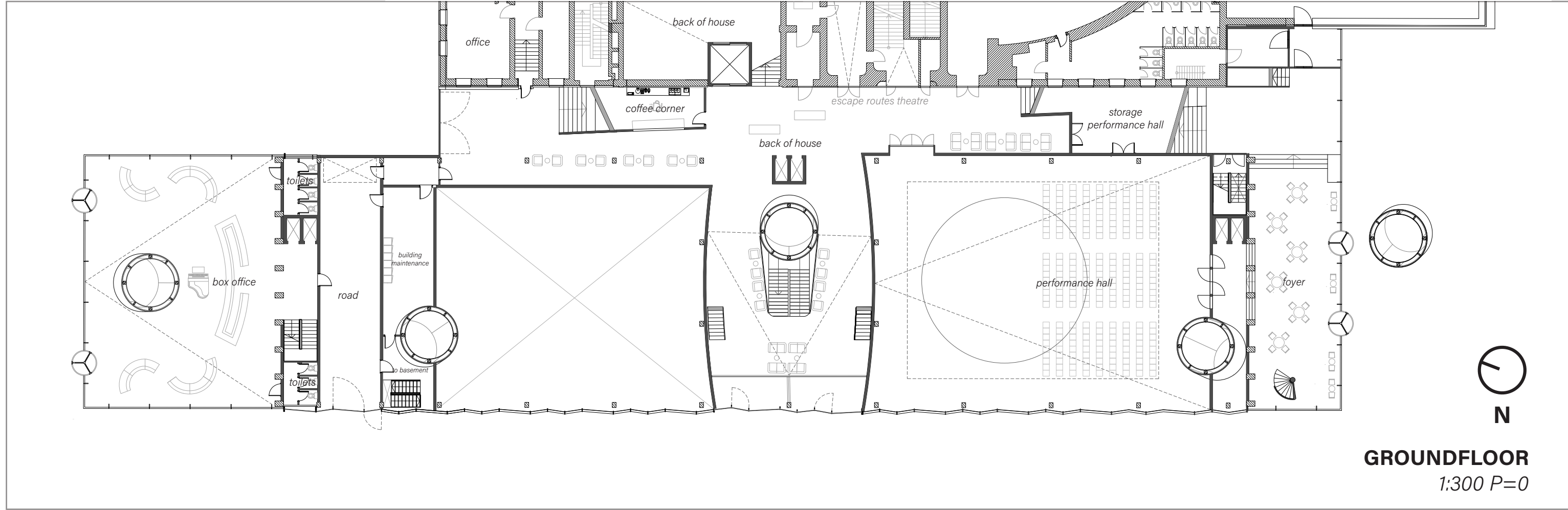
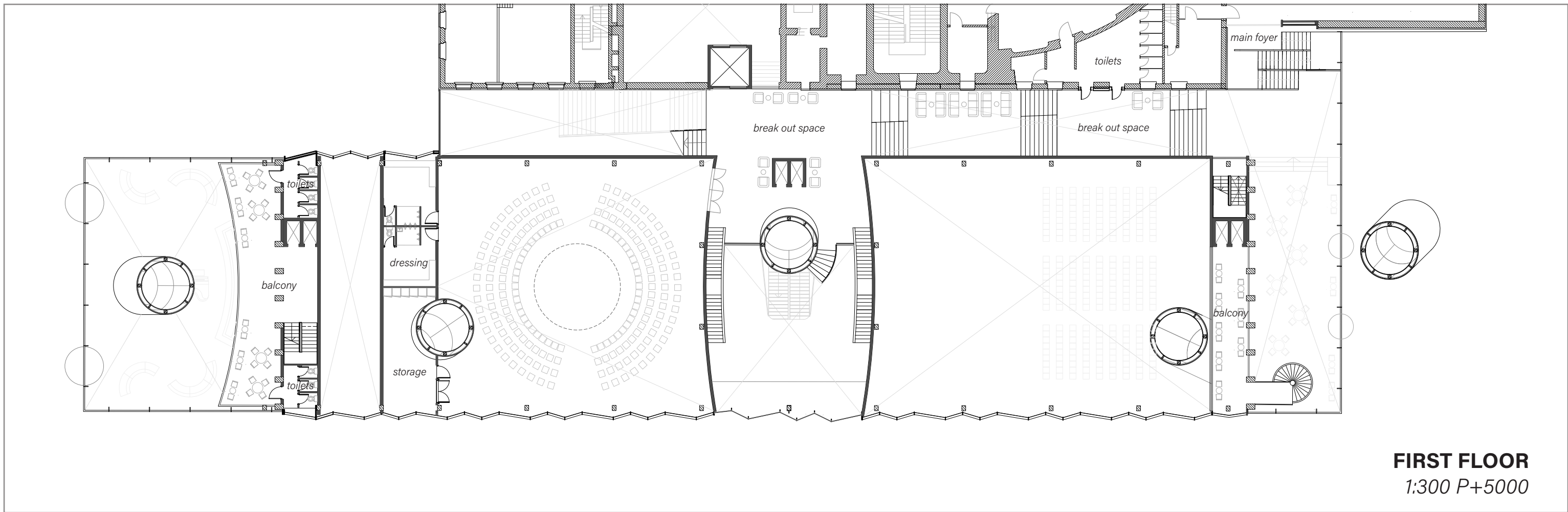
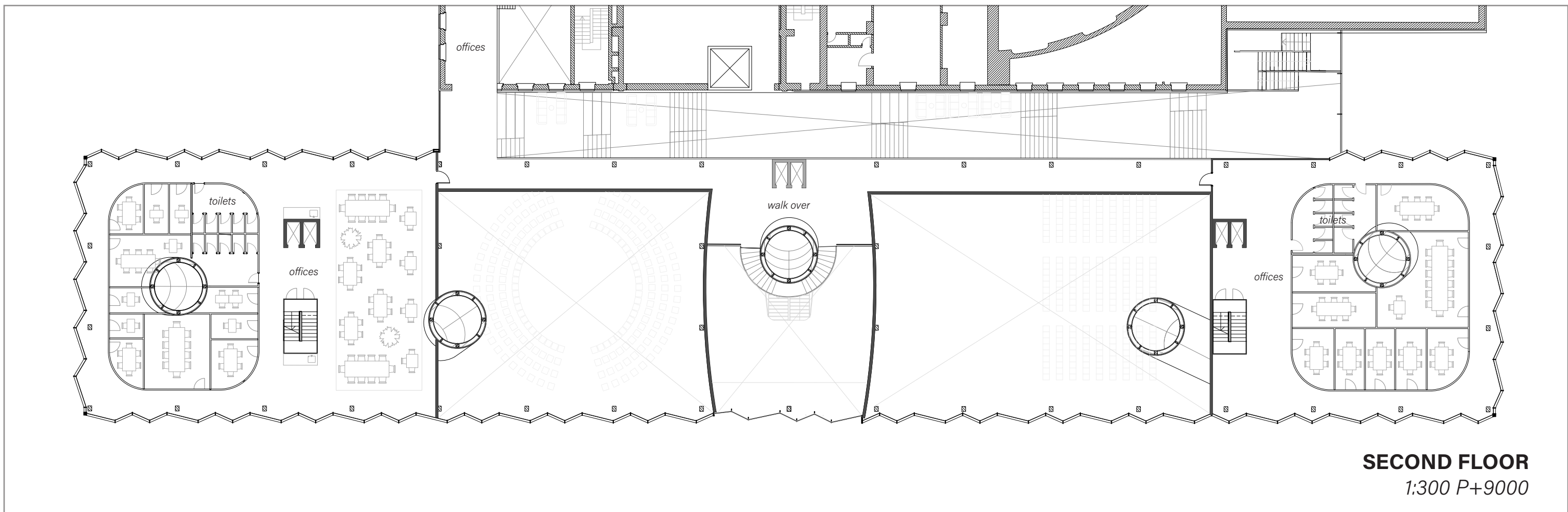
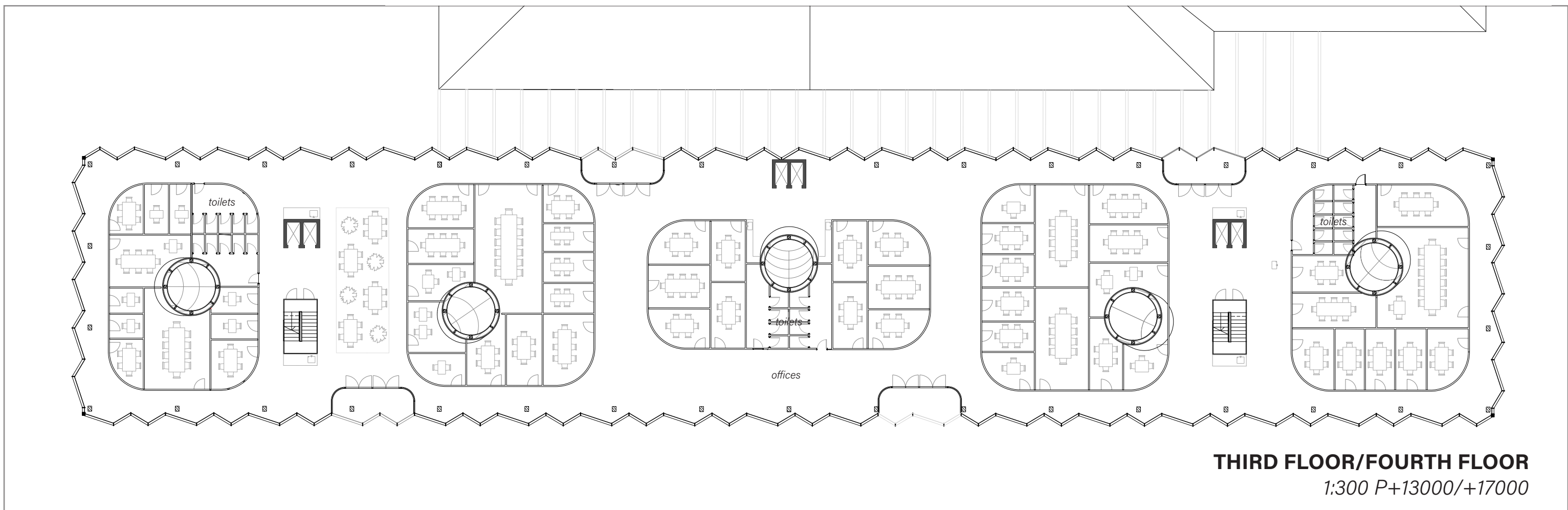
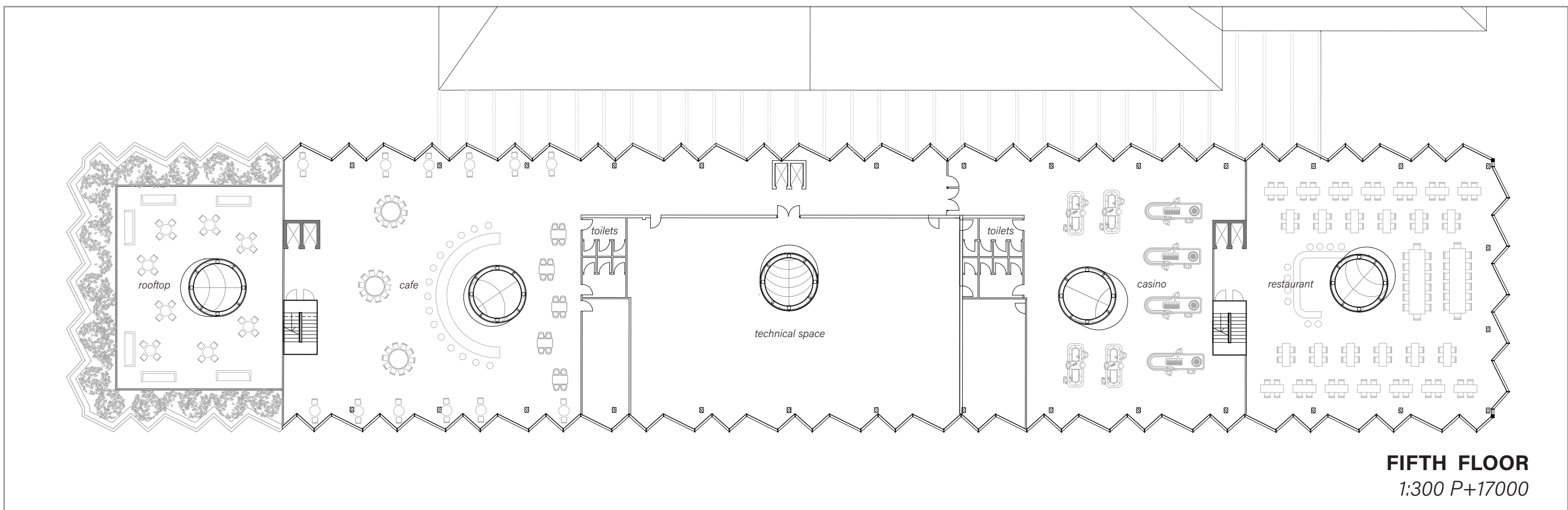
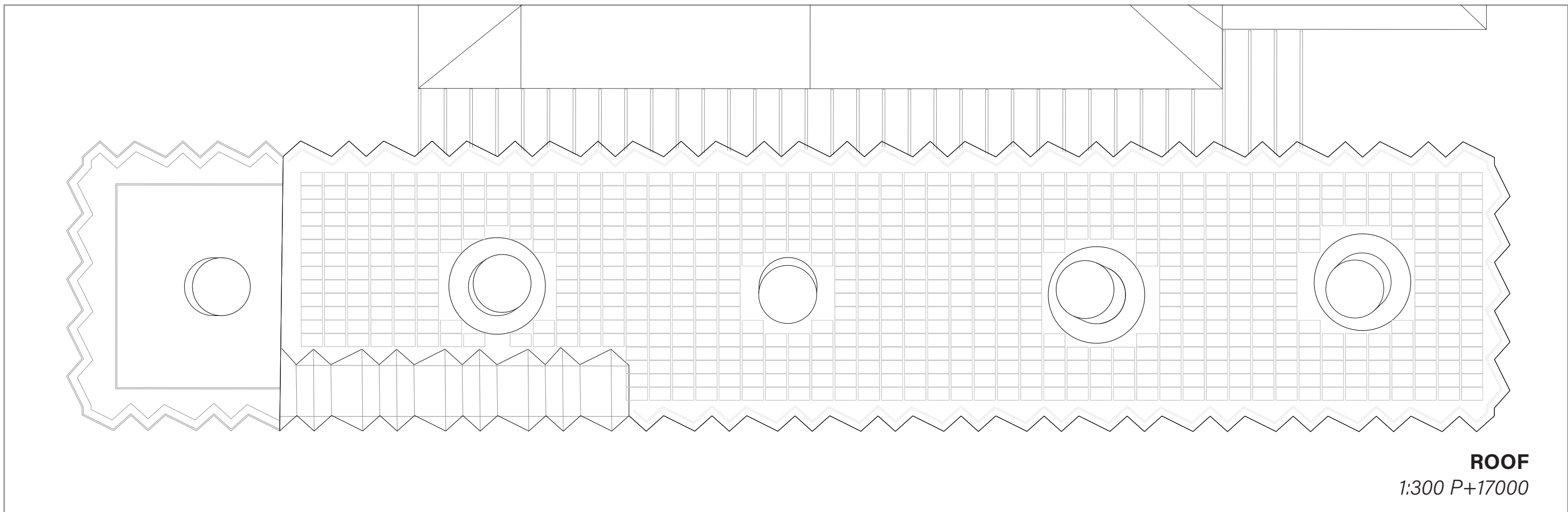
COMAC

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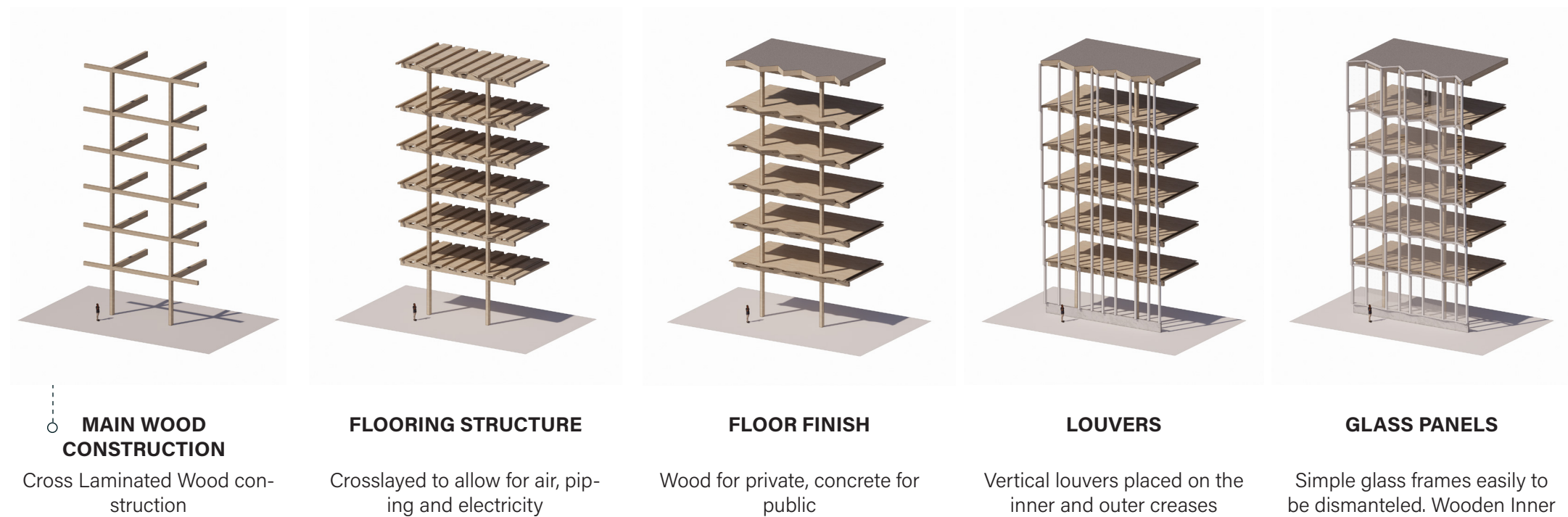
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VISUALISATION
In Between Existing Theater and Extension

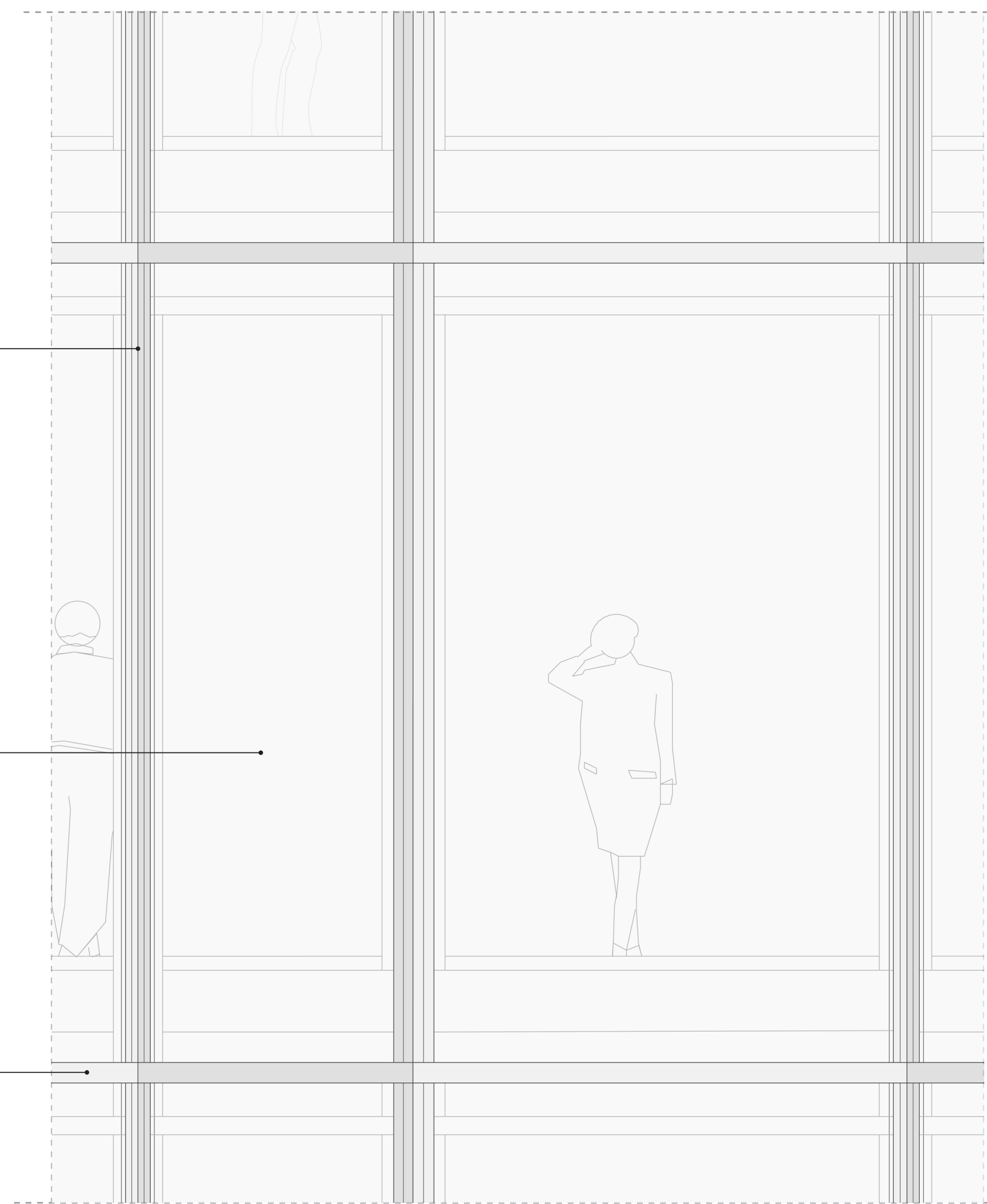
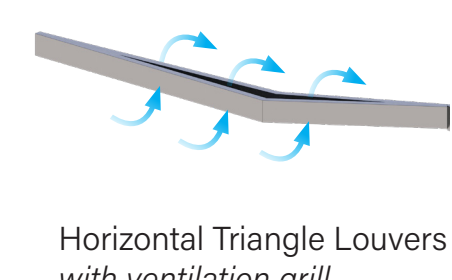
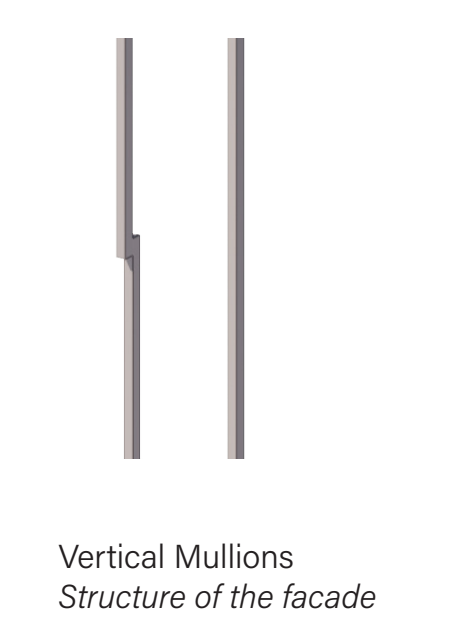


VISUALISATION
Box Office, Unter Der Linden Entry

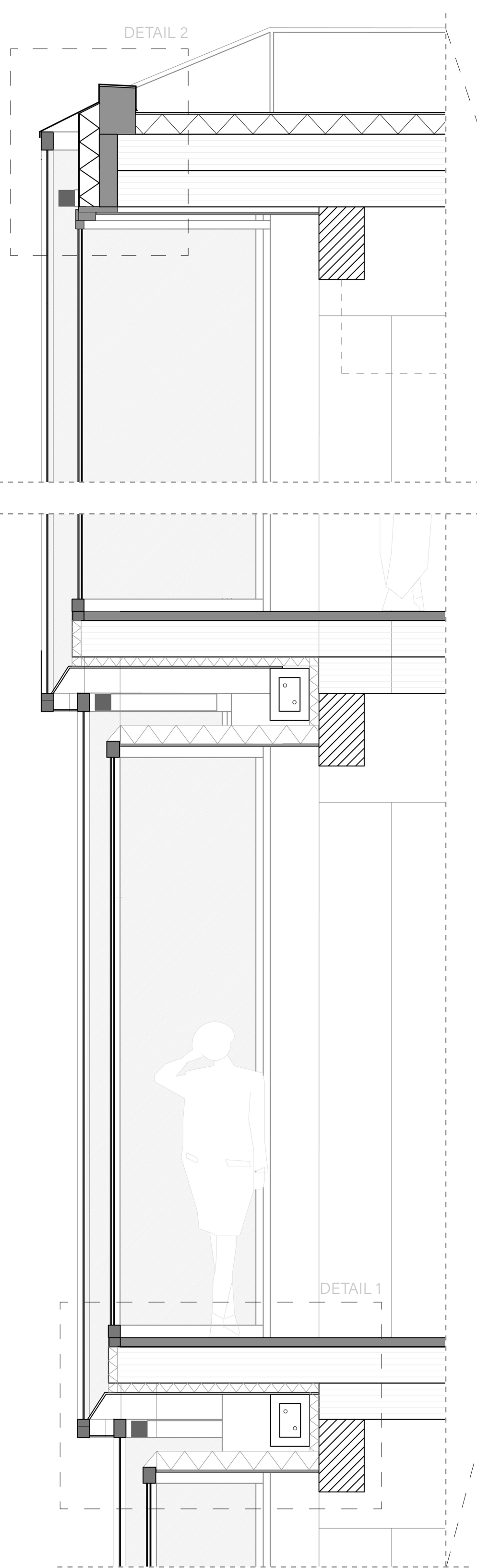


CONSTRUCTION OF THE FACADE
Diagrammatic

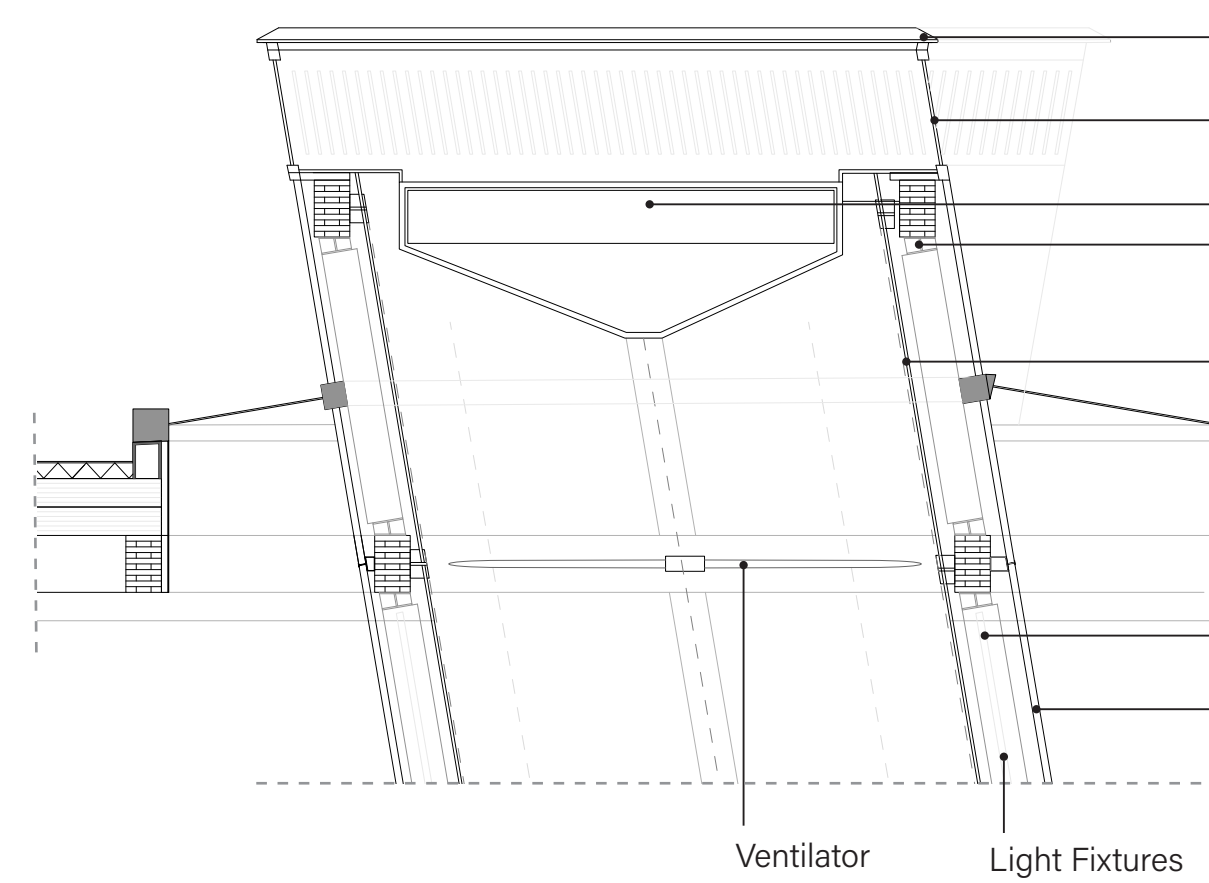
ELEMENTS OF THE OUTER SKIN



FACADE ELEVATION
1:20



FACADE SECTION
Vertical 1:20



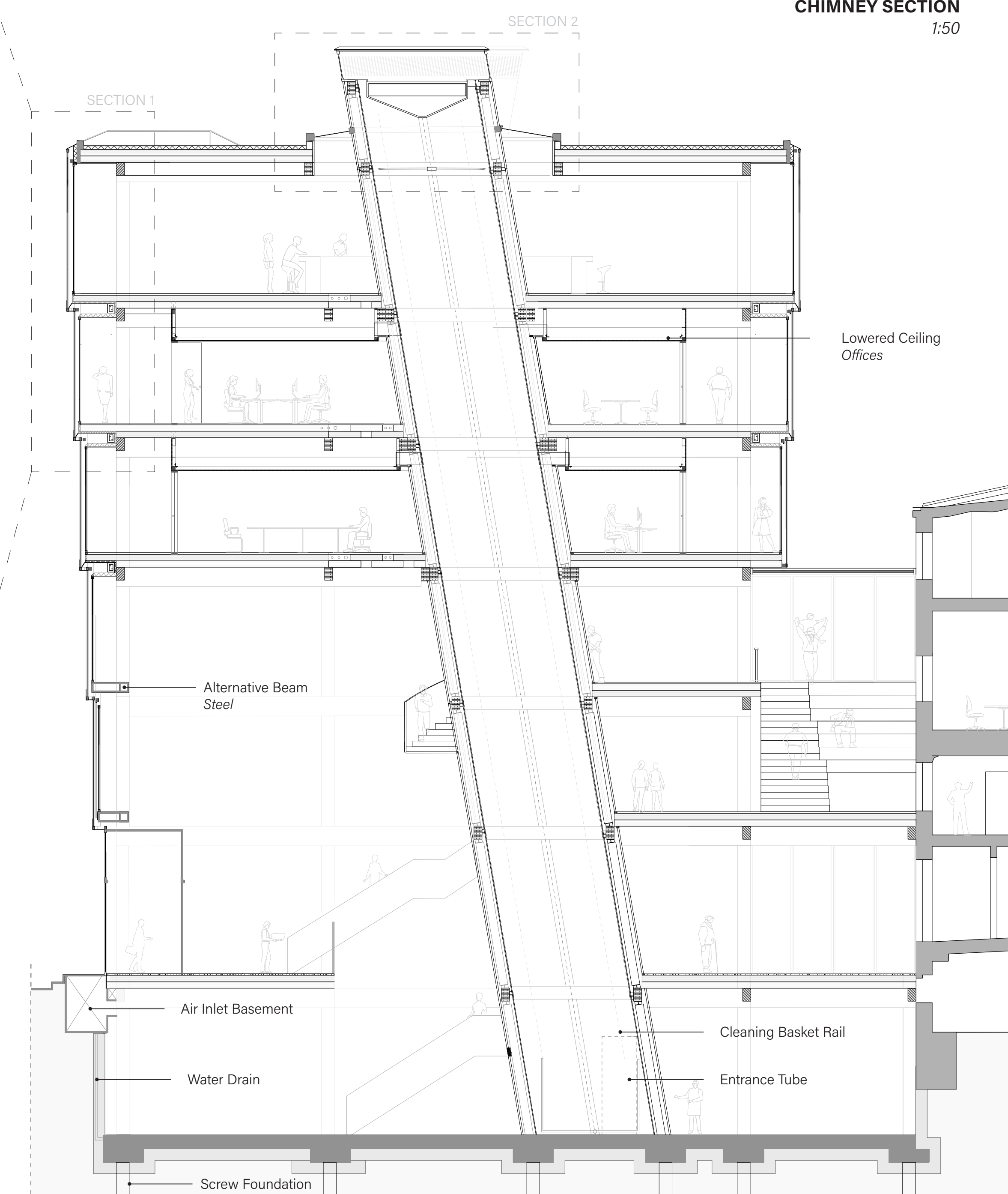
Aluminium Finish
Against the Rain
Ventilation Grill
No Wind Recoil
FiWi Heat Exchanger
Steel Connectors

Glass Inner Tube

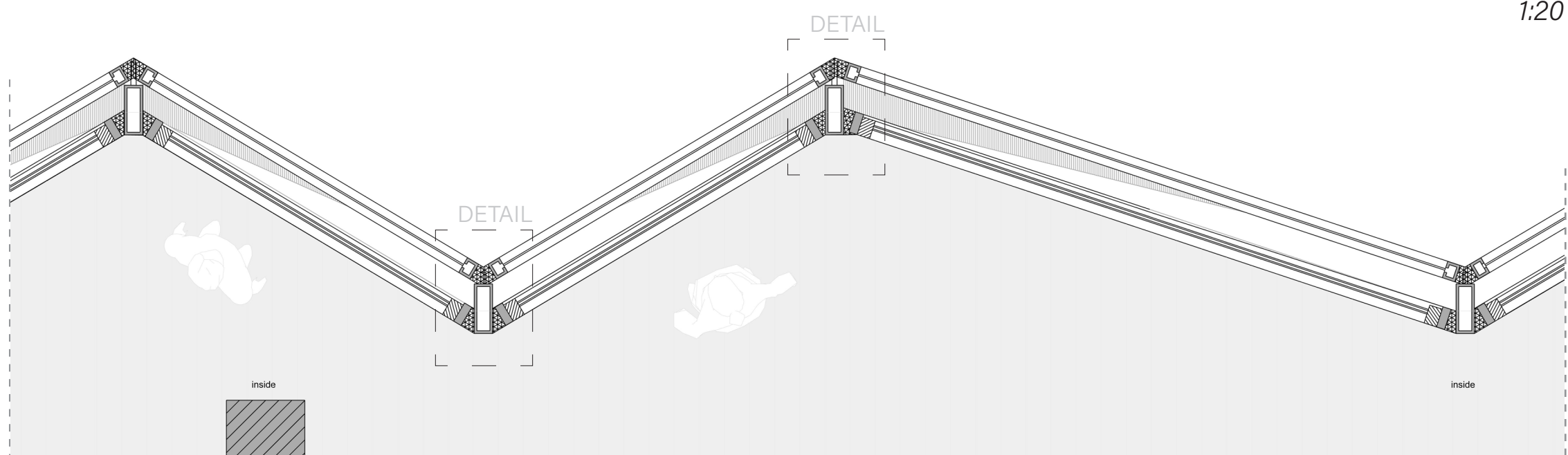
Wooden Roof Stand
Wood Finish

Wood Columns
350 mm x 350 mm
Polycarbonate
Dongal Seamless Wall Systems
50mm Recycled Plastic
Transparent/Translucent

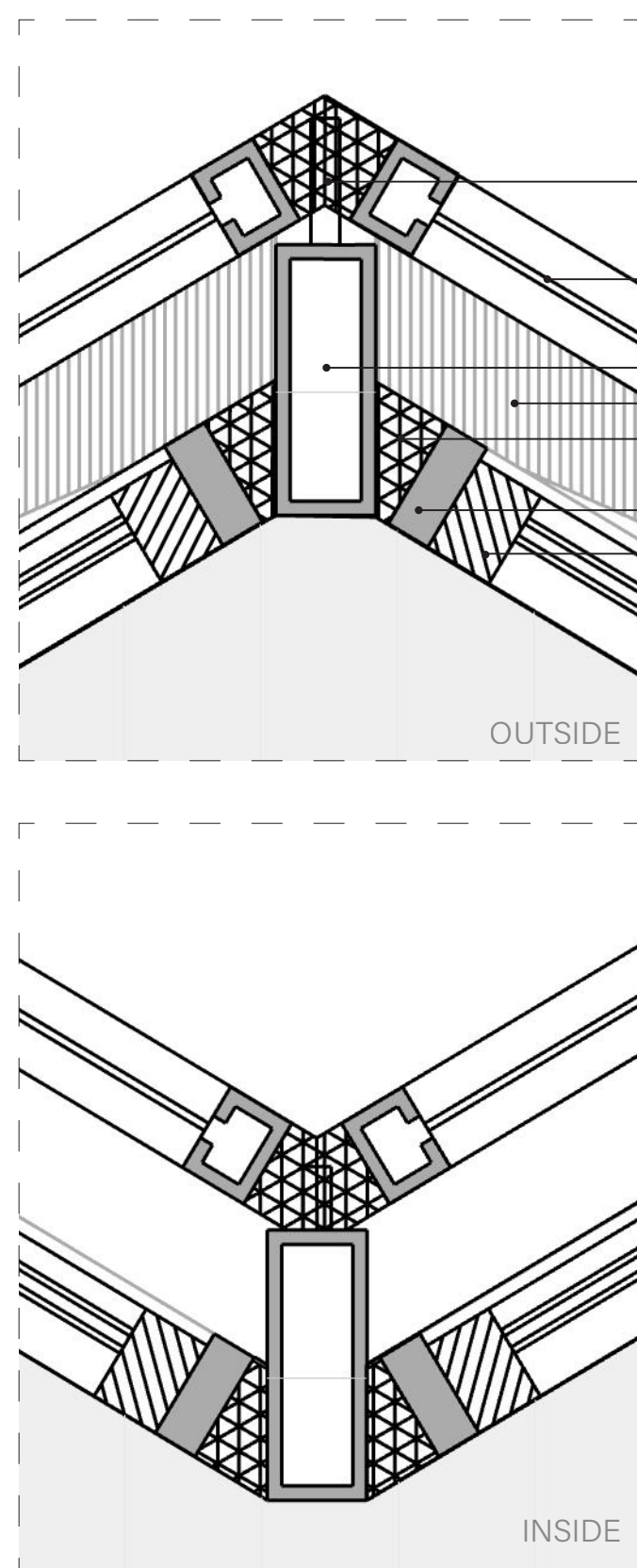
CHIMNEY SECTION
1:50



BUILDING SECTION DETAIL
1:100



FACADE SECTION
Horizontal 1:20



HORIZONTAL DETAIL FACADE
1:5

Pin

Strong Glass 6 mm

Aluminium Vertical Mullion

Vent

Variable Spacer

Different per Floor

Hinge

Wood Doorframe

Openable Valves for Ventilation
For hot days to cool the facade

Wooden Roof Stand

Aluminium Cover

Water Proofing

Alumium Click Frame

Insulation 100 mm

Aluminium Vertical Mullion

Vertical Mullion Connection
To Wood Roof Construction

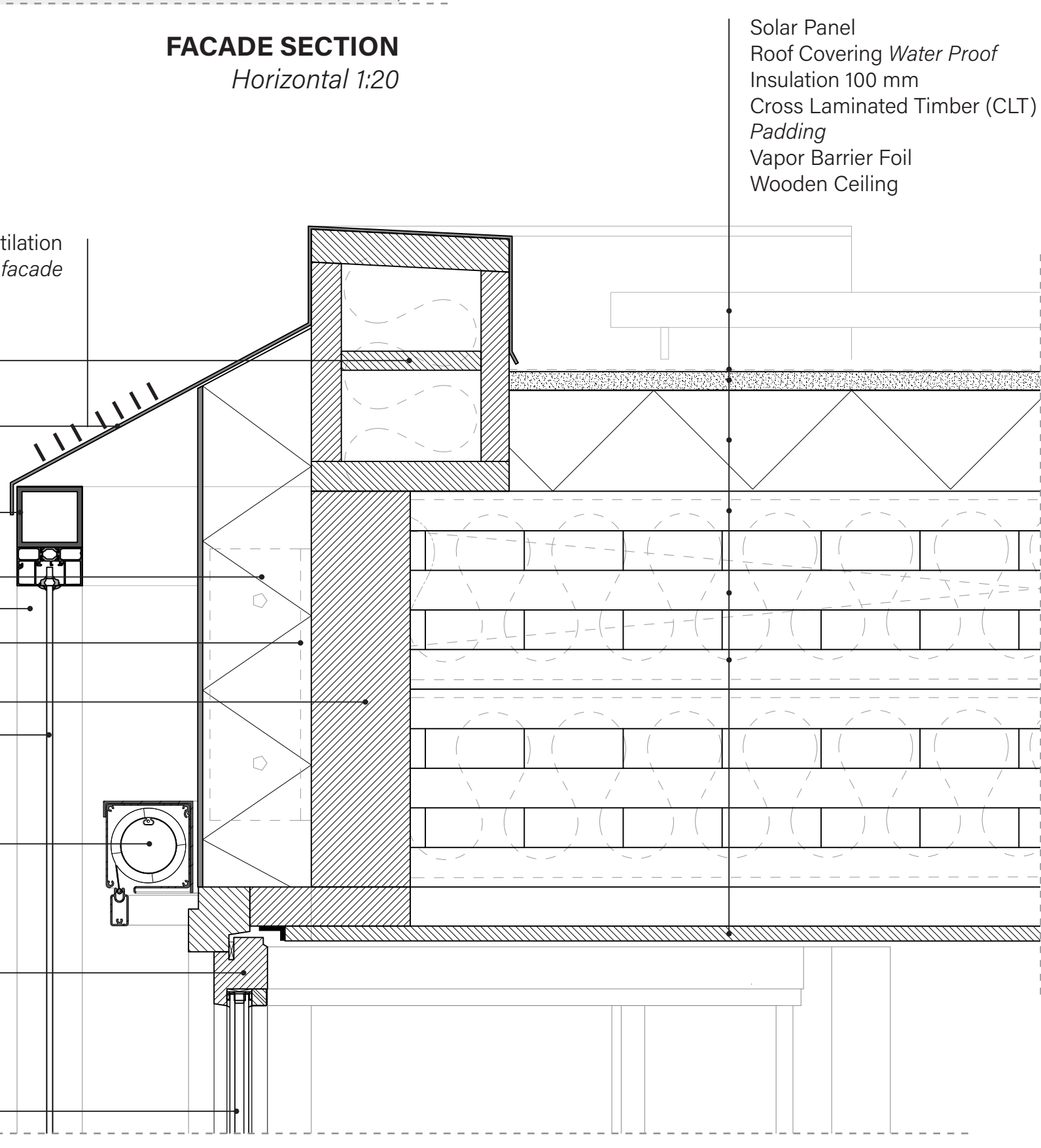
Kopfbalk

Strong Glass 6 mm

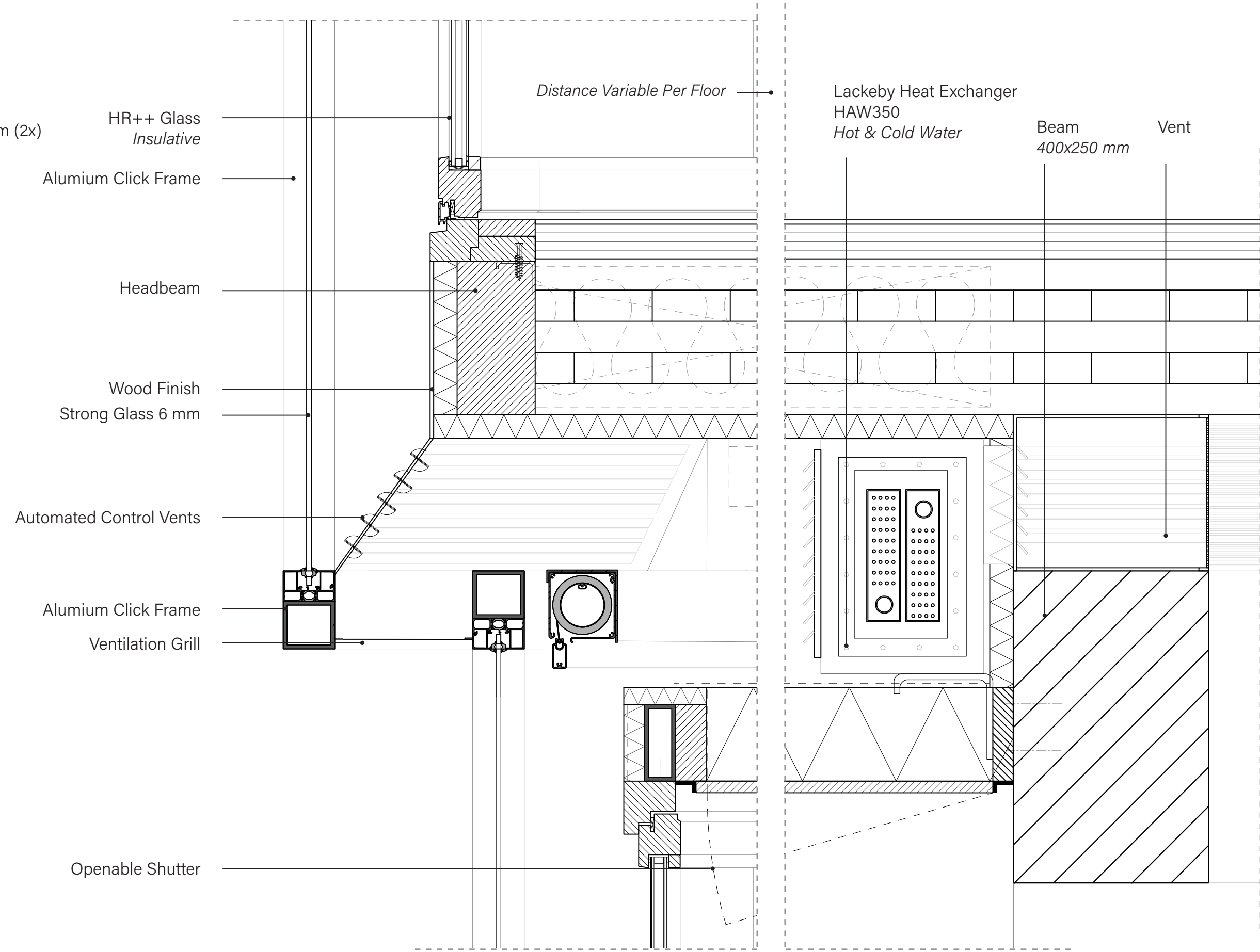
Roller Blind

Rotating Wood Door Frame

HR++ Glass
Insulative



FACADE ROOF DETAIL
1:5



FACADE ROOF DETAIL
1:5