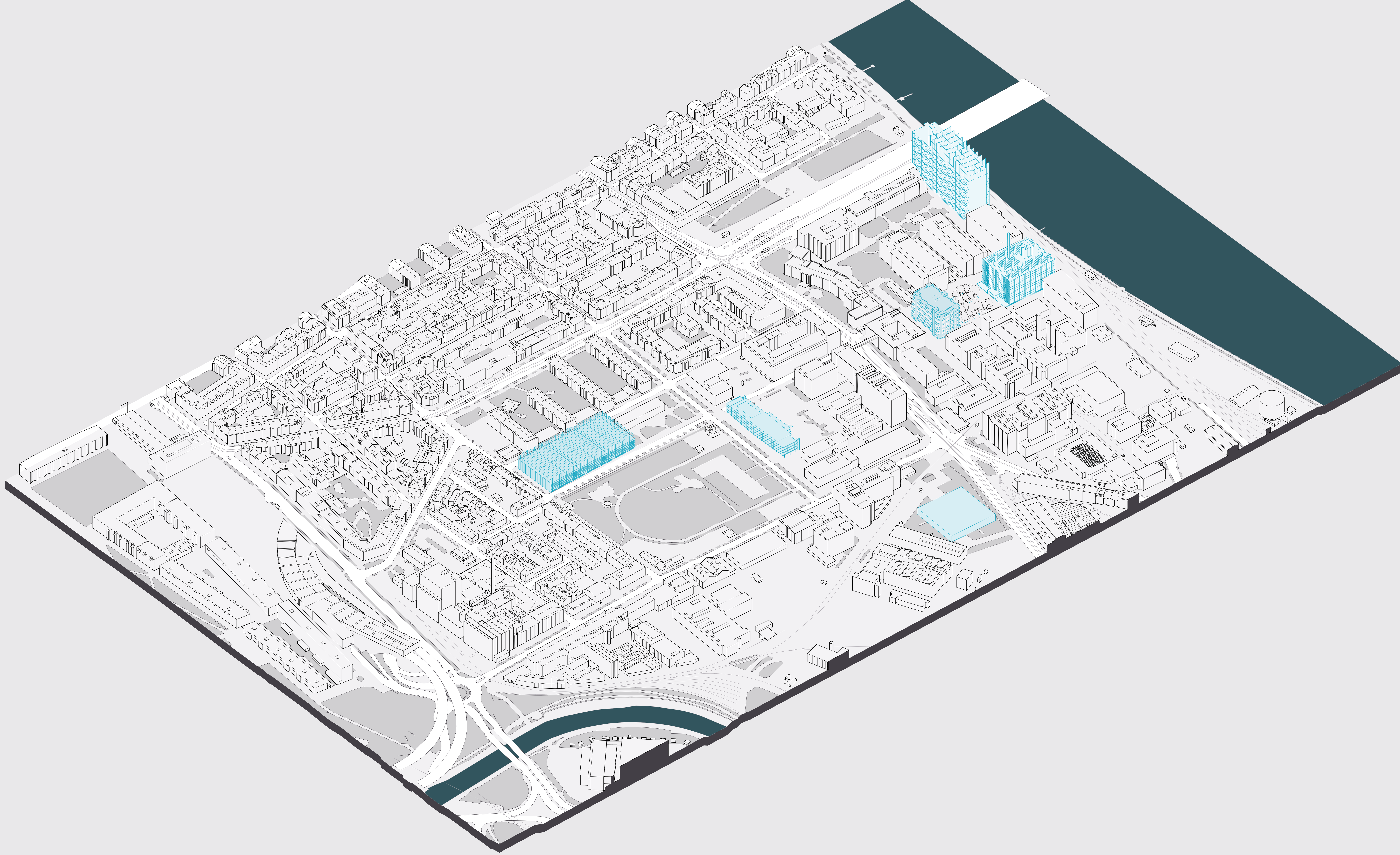


# TOWARD AUTONOMY

Low impact living in a converted highrise

Masterarbeit / FS 2020  
Thema C / RE-USE CIBA  
Studio Anne Lacaton  
Dawit Tadesse





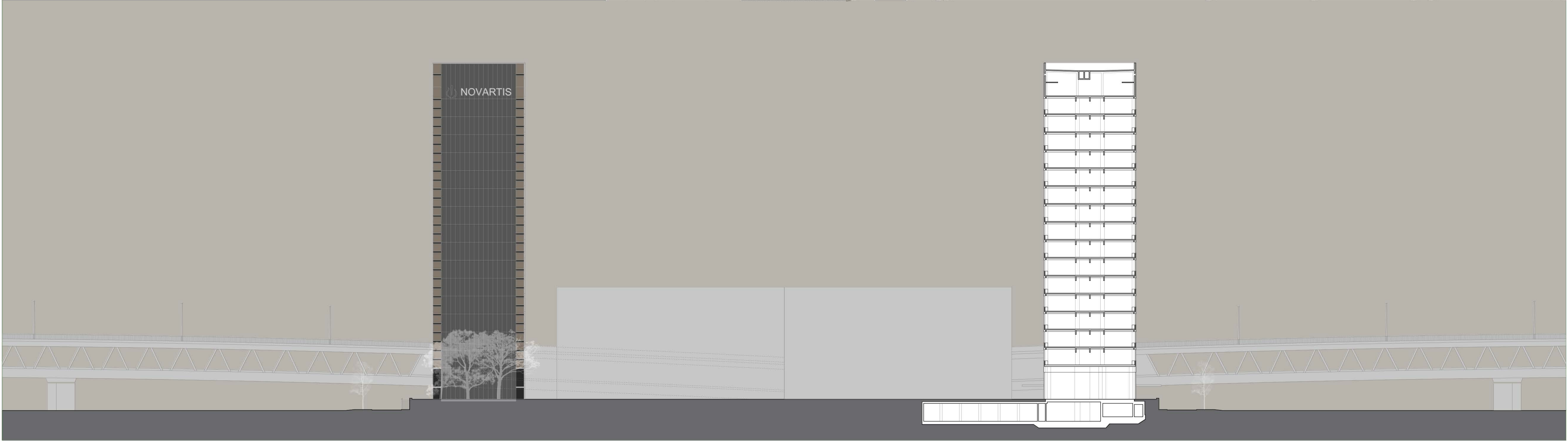


# THE EXISTING

Unterer Rheinweg 180

A 75-metre-high laboratory building for biological research placed  
at the junction of river and highway.





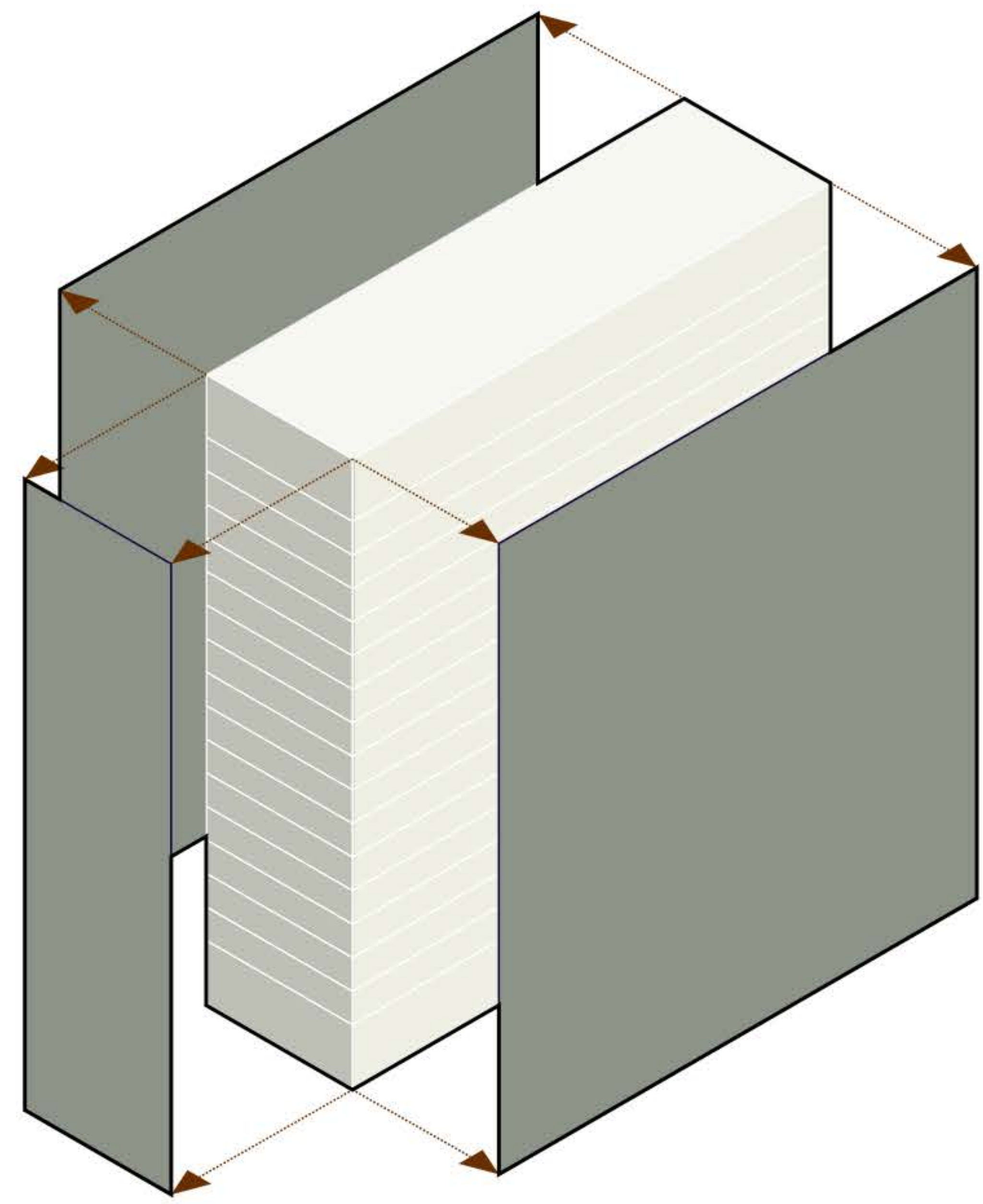


# PROPOSITION

From laboratories to affordable housing

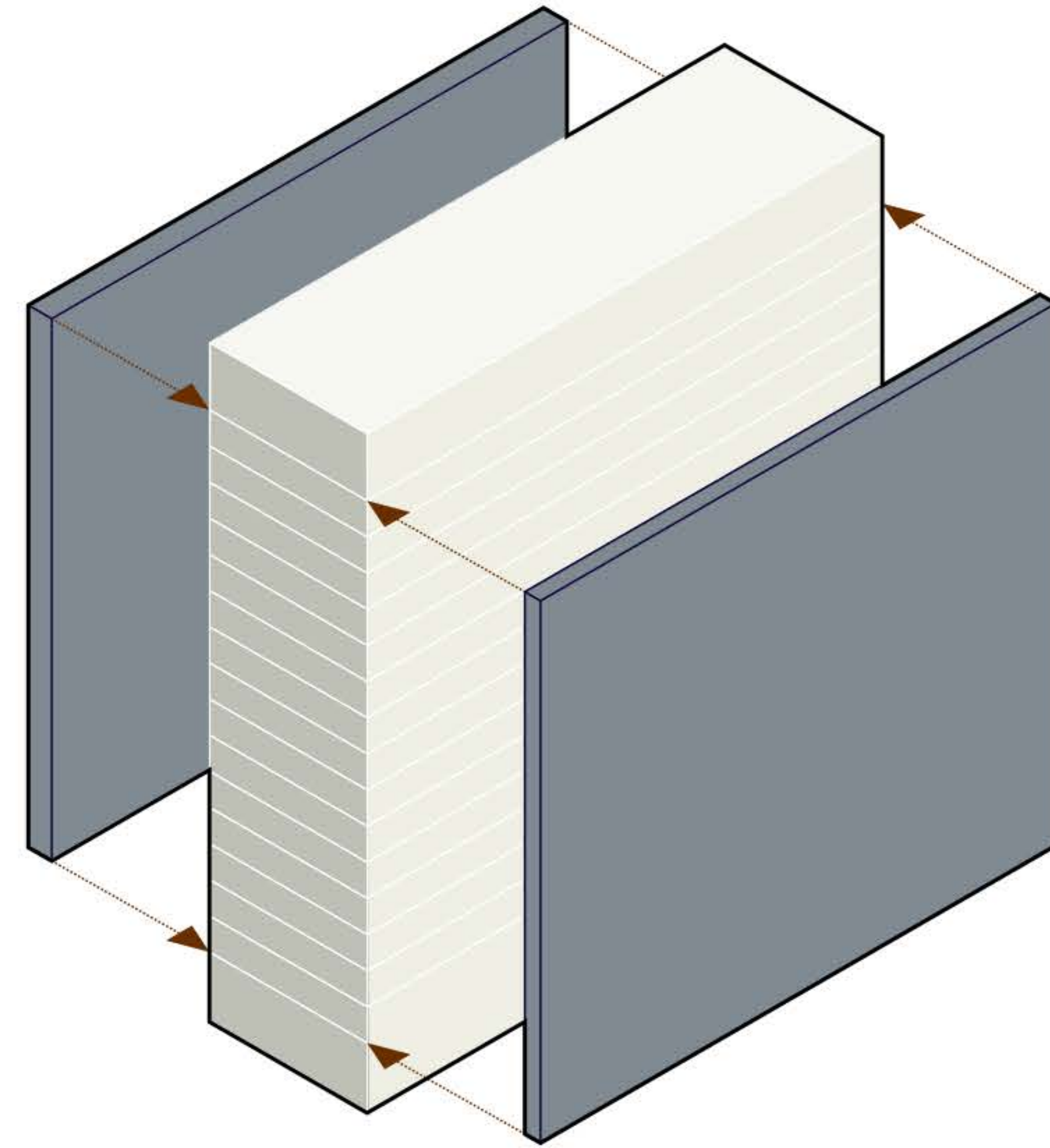
From the first to the 15th floor of the building, the ceiling height is 4m. The building enjoy a good exposure with an east-west orientation and has 2 blind facades allowing for extention. It present a good potential for housing as well as a privileged relation to the river and the parc. A mixed used is prioritized for the ground floor as well as for the 16th floor and the roof.





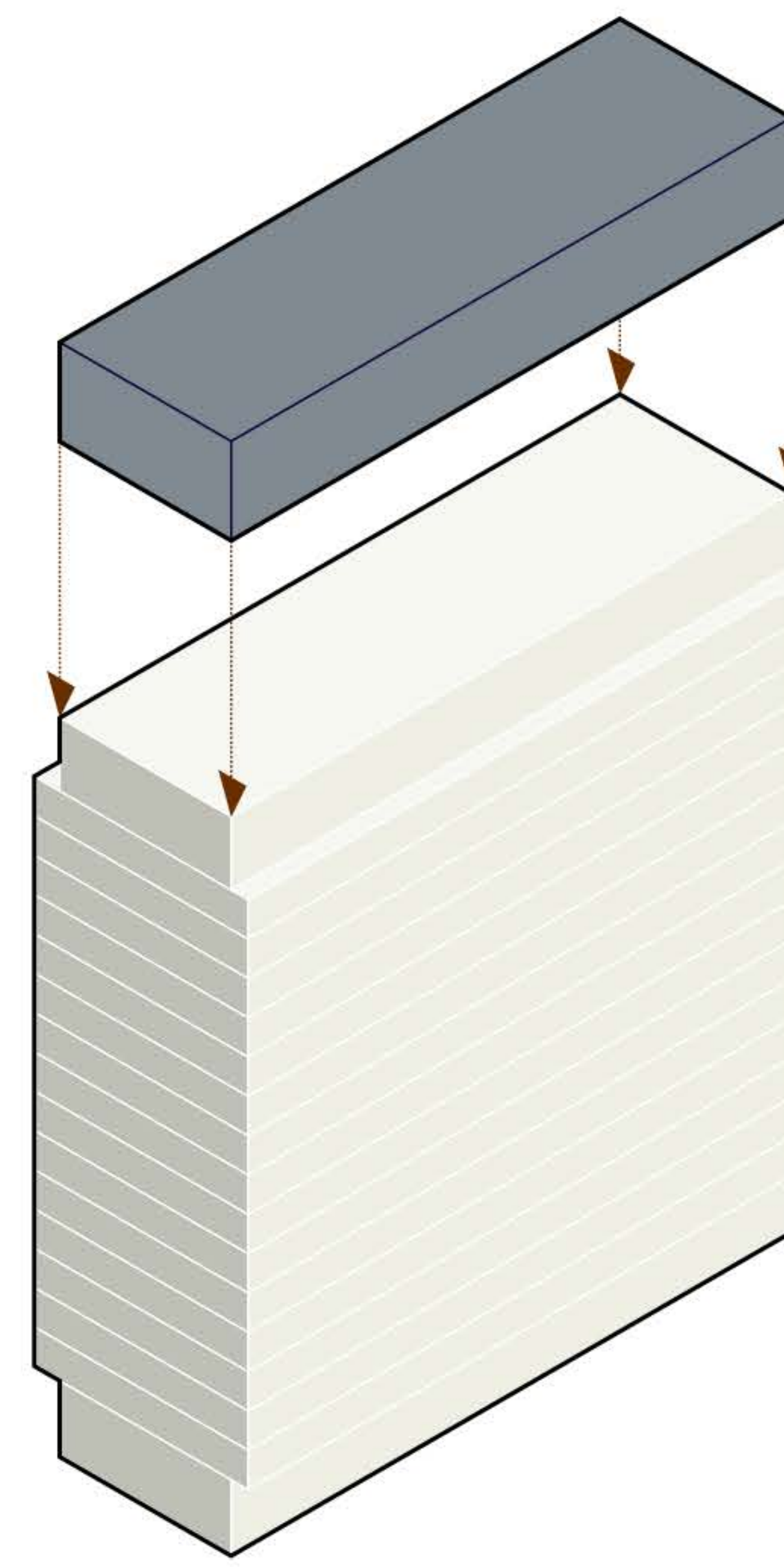
### 1 façade removal

the current glazing do not respond to current energetic standard and must be replaced



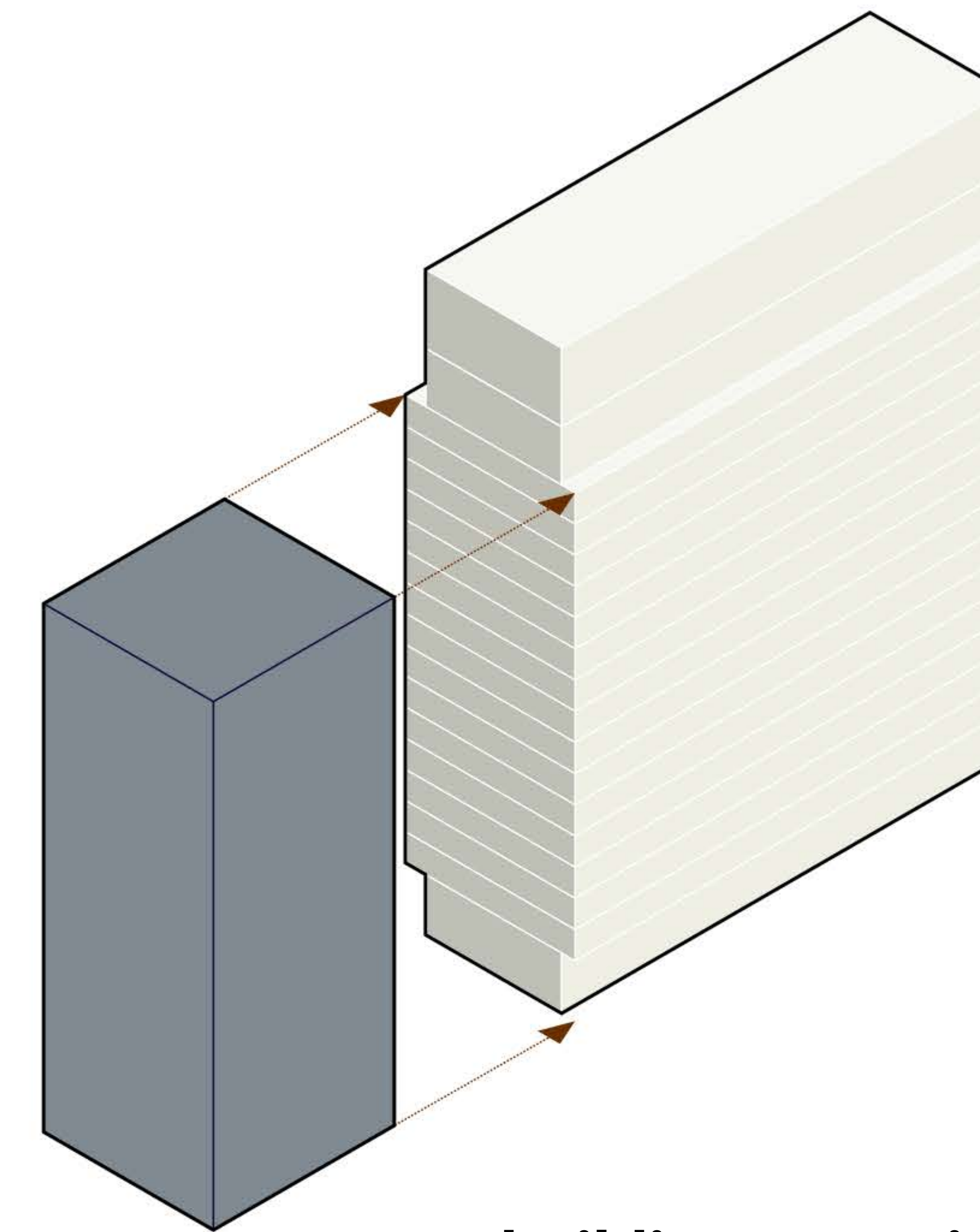
### 2 façade replacement

the replacement of the facade is a good opportunity to increase the livable floor area in a logic of generosity of space



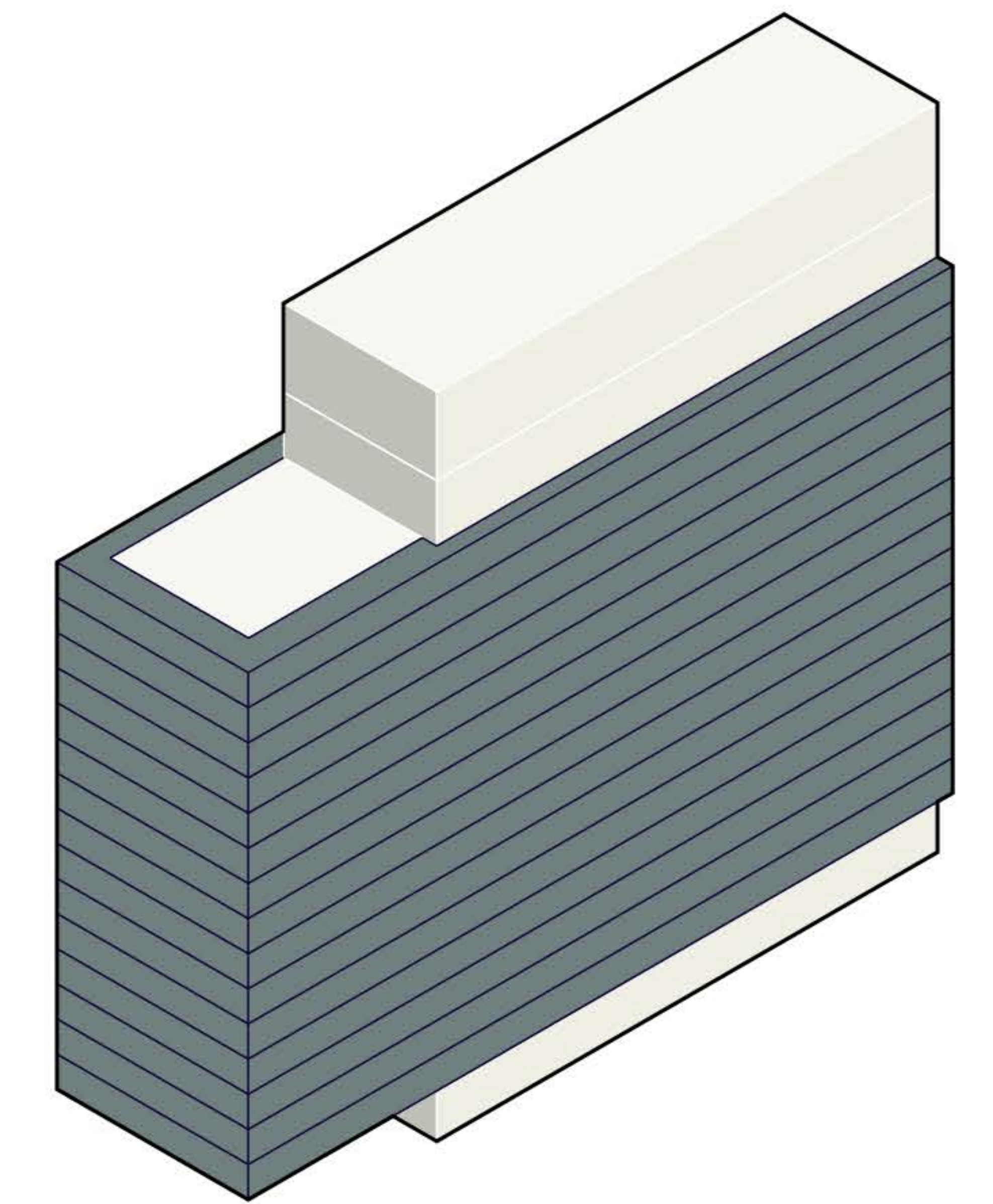
### 3 roof extension

the roof enjoy a privileged view on top of this 75m high building surrounded by the industrial area, the river and the highway



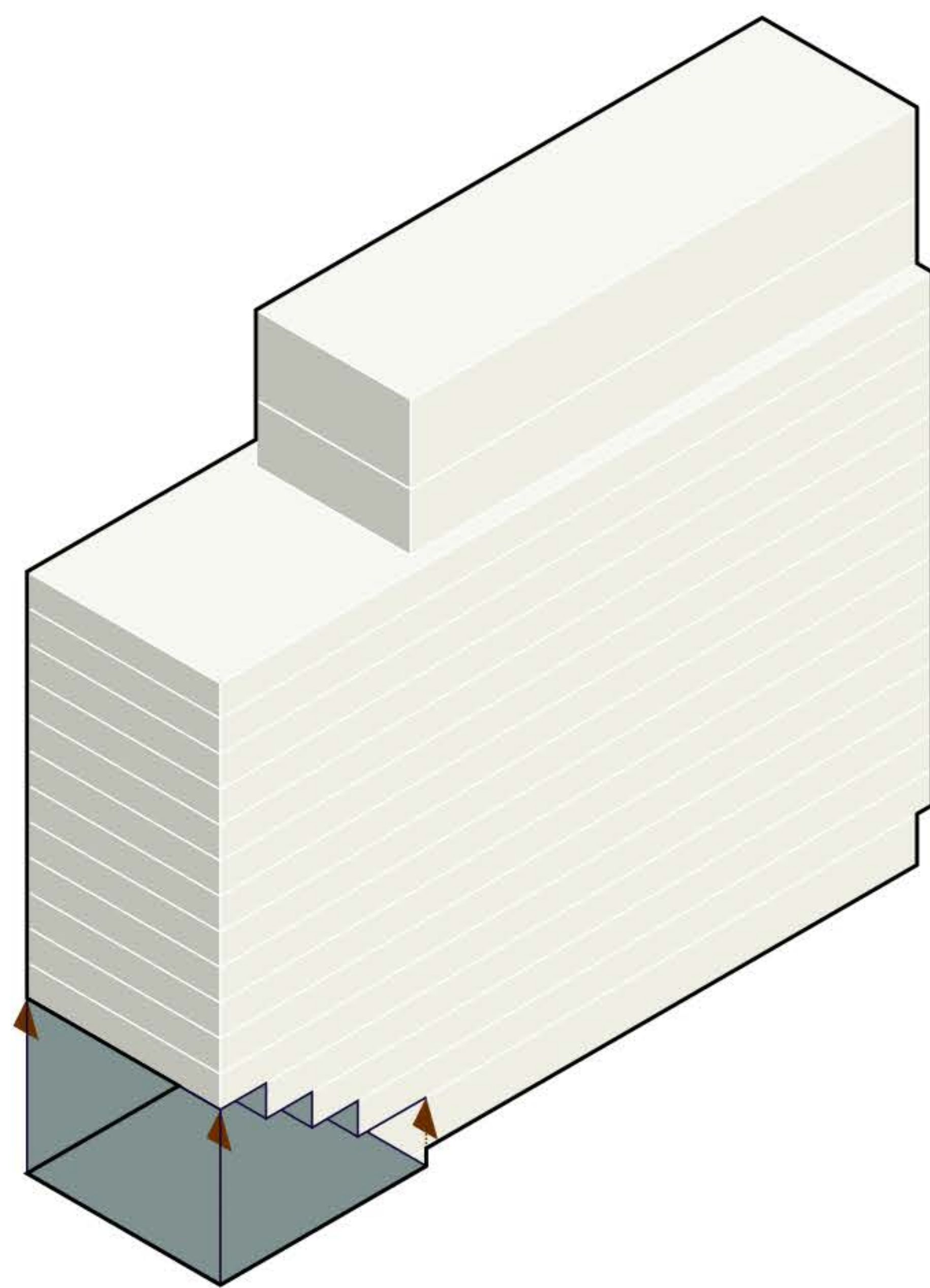
### 4 building extension

the blind southern facade is an opportunity to extend the building and utilize the maximum potential of the plot



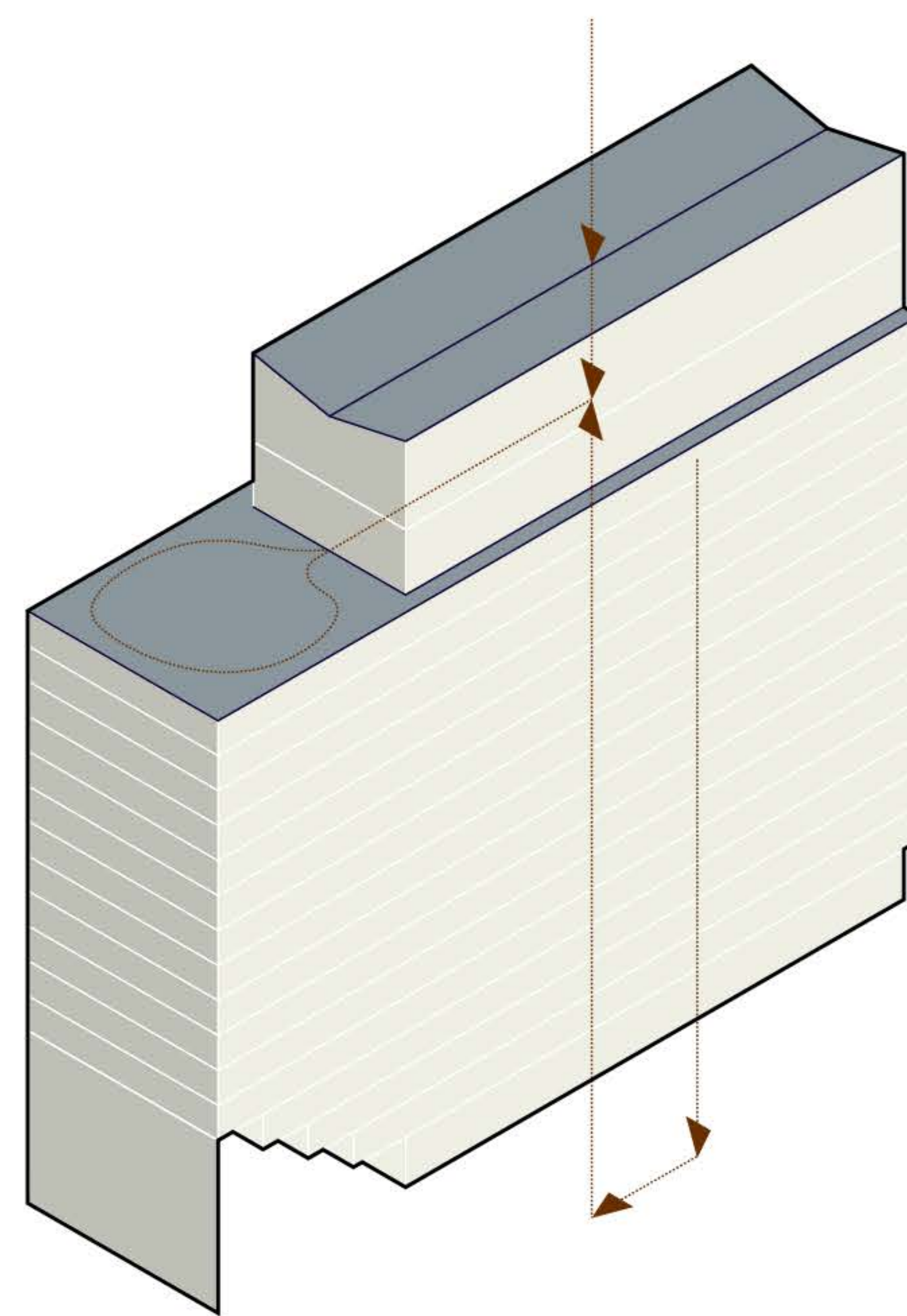
### 5 wintergardens

a continous stretch of wintergarden are added in order to give thermic and acoustic insulation as well as extra living space



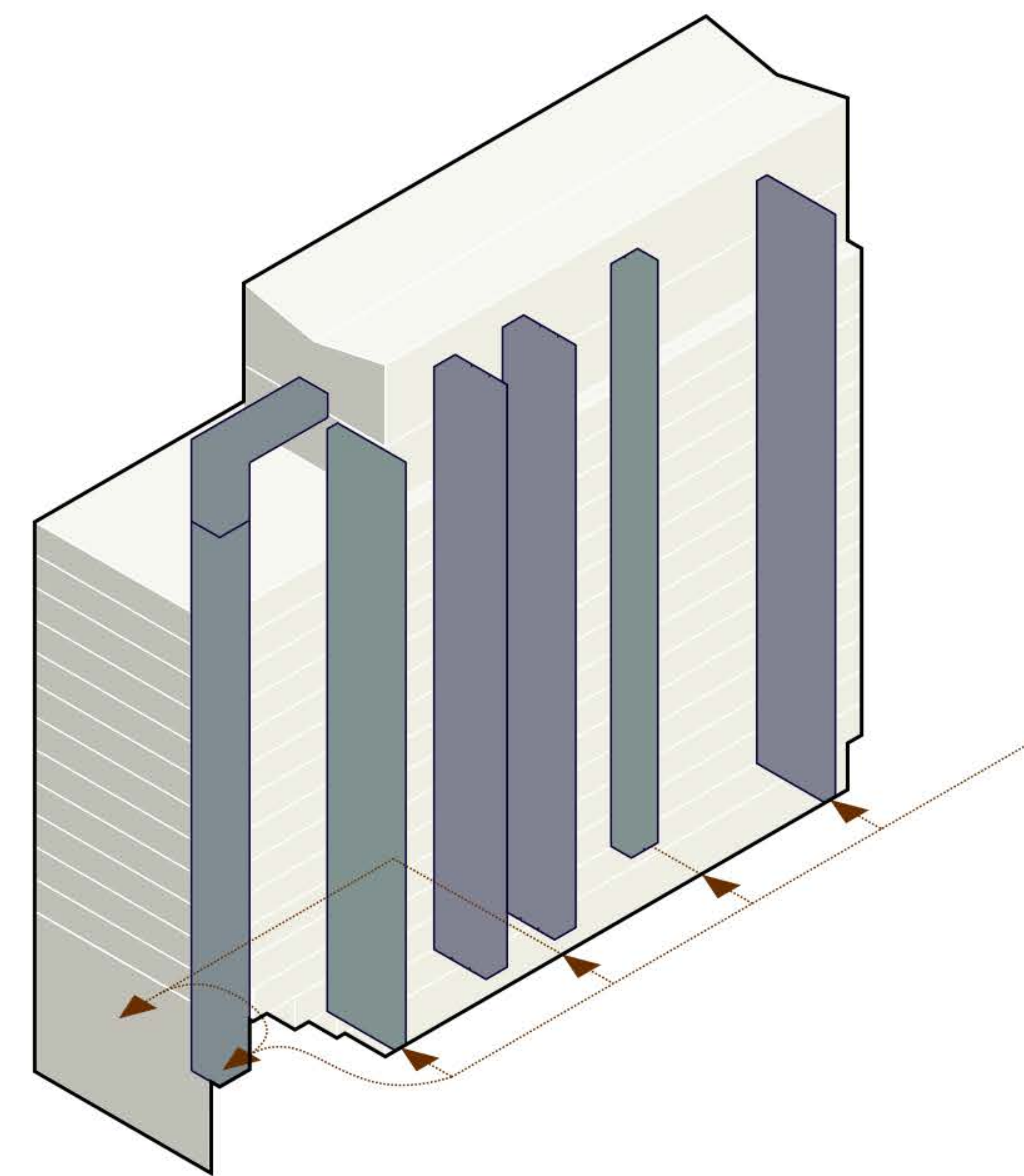
### 6 void

the area directly in front of the highway remains empty and is protected by sounds barrier, preserving the trees and buffering the space behind



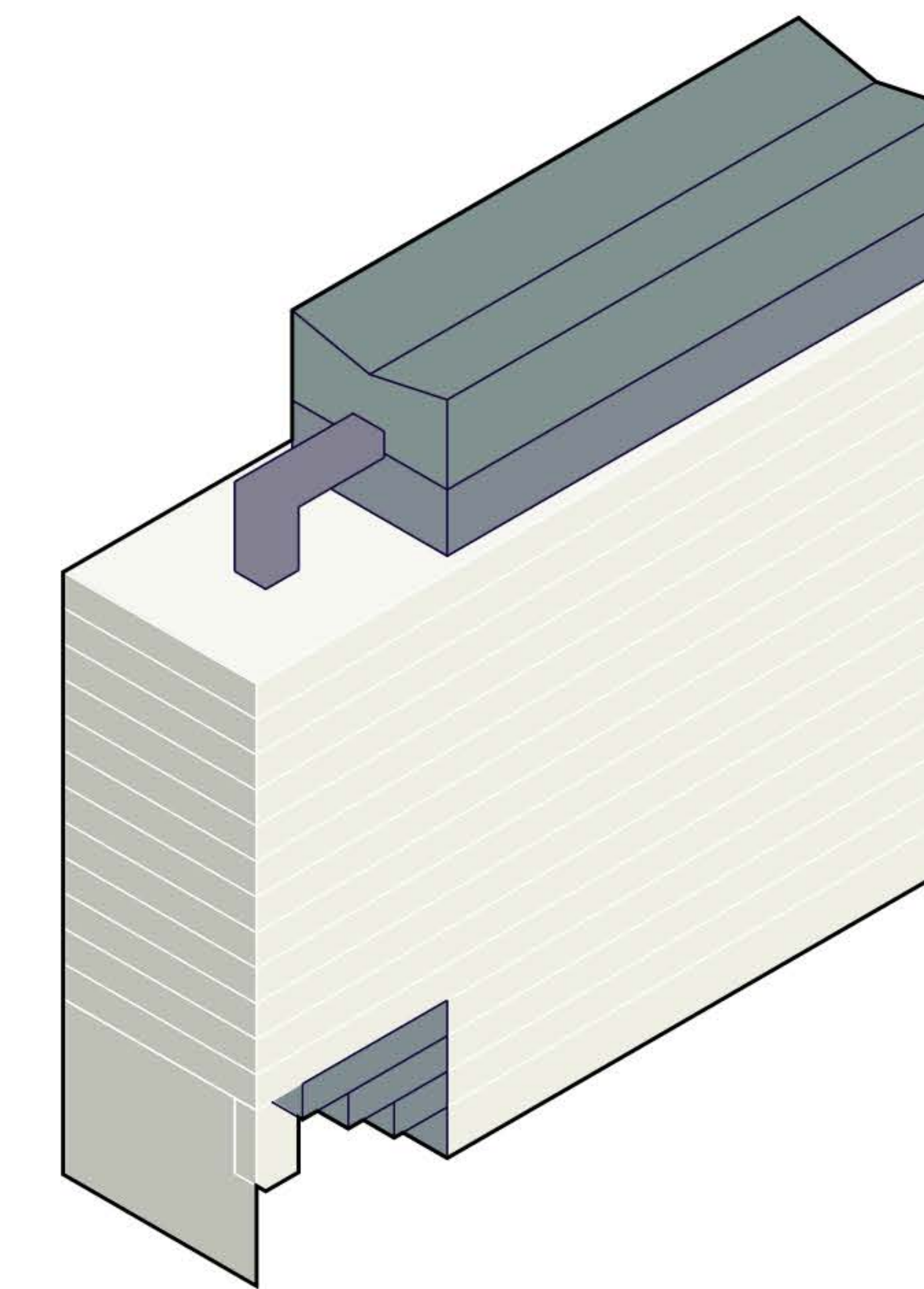
### 7 water cycle

a holistic approach to water use is integrated to the building, collecting rainwater and processing greywater in a constructed wetland on the roof



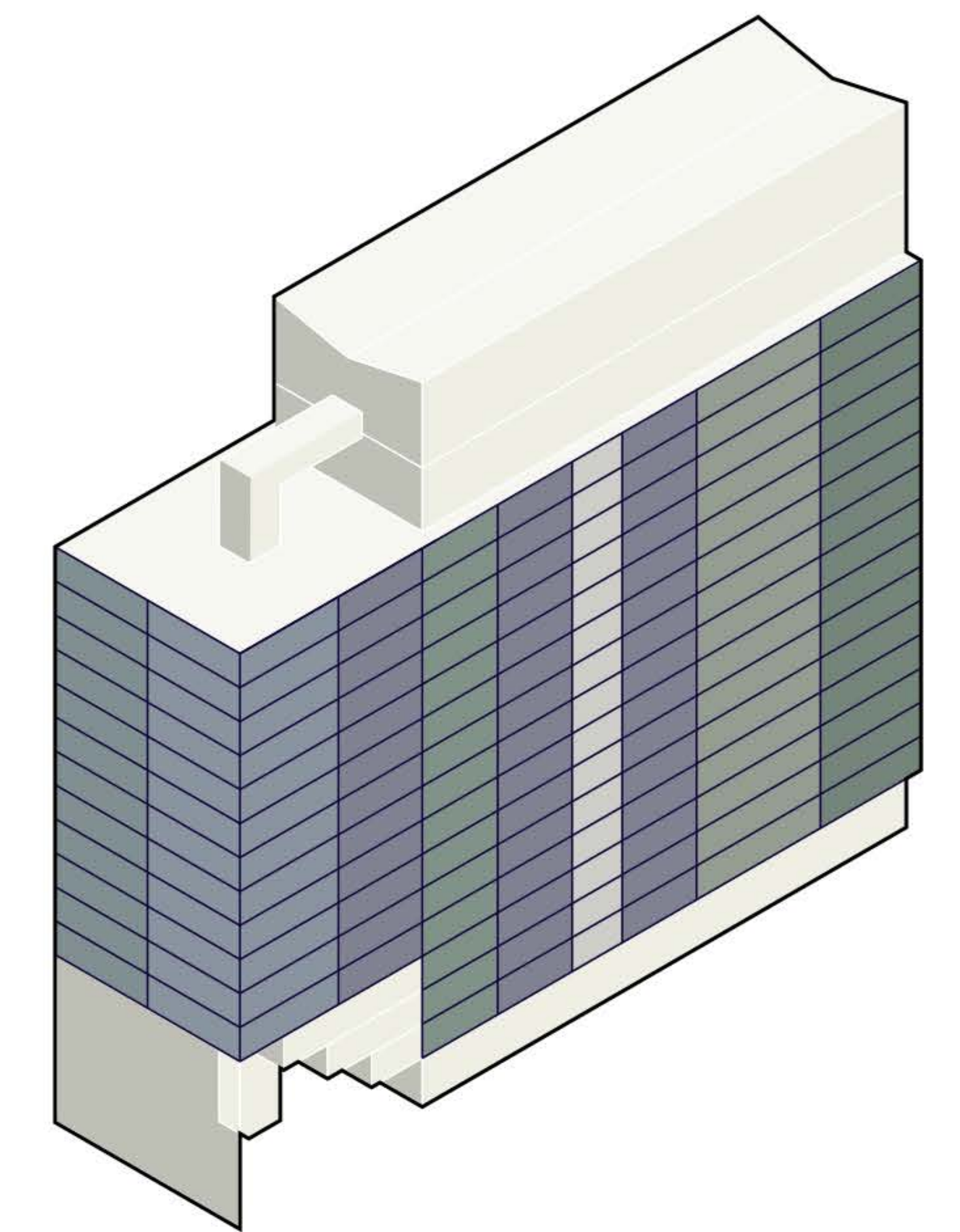
### 8 distribution

the circulation system utilize the existing structure while converting 2 shafts, adding 3 elevator and 4 staircase



### 9 public and communal

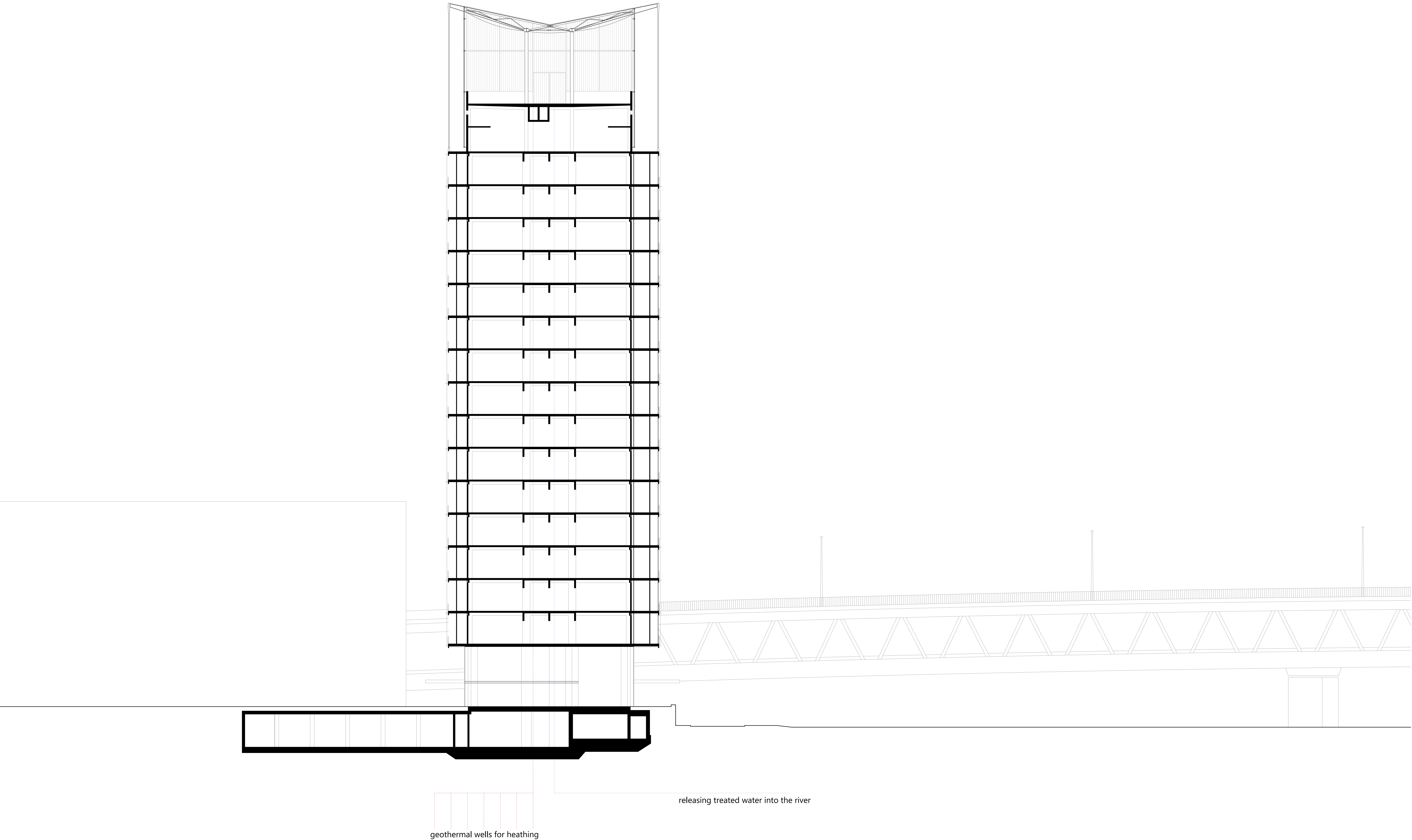
the 16th floor and the roof are dedicated to urban agriculture, the area facing the highway into workplaces and a belvedere makes the junctions of it all



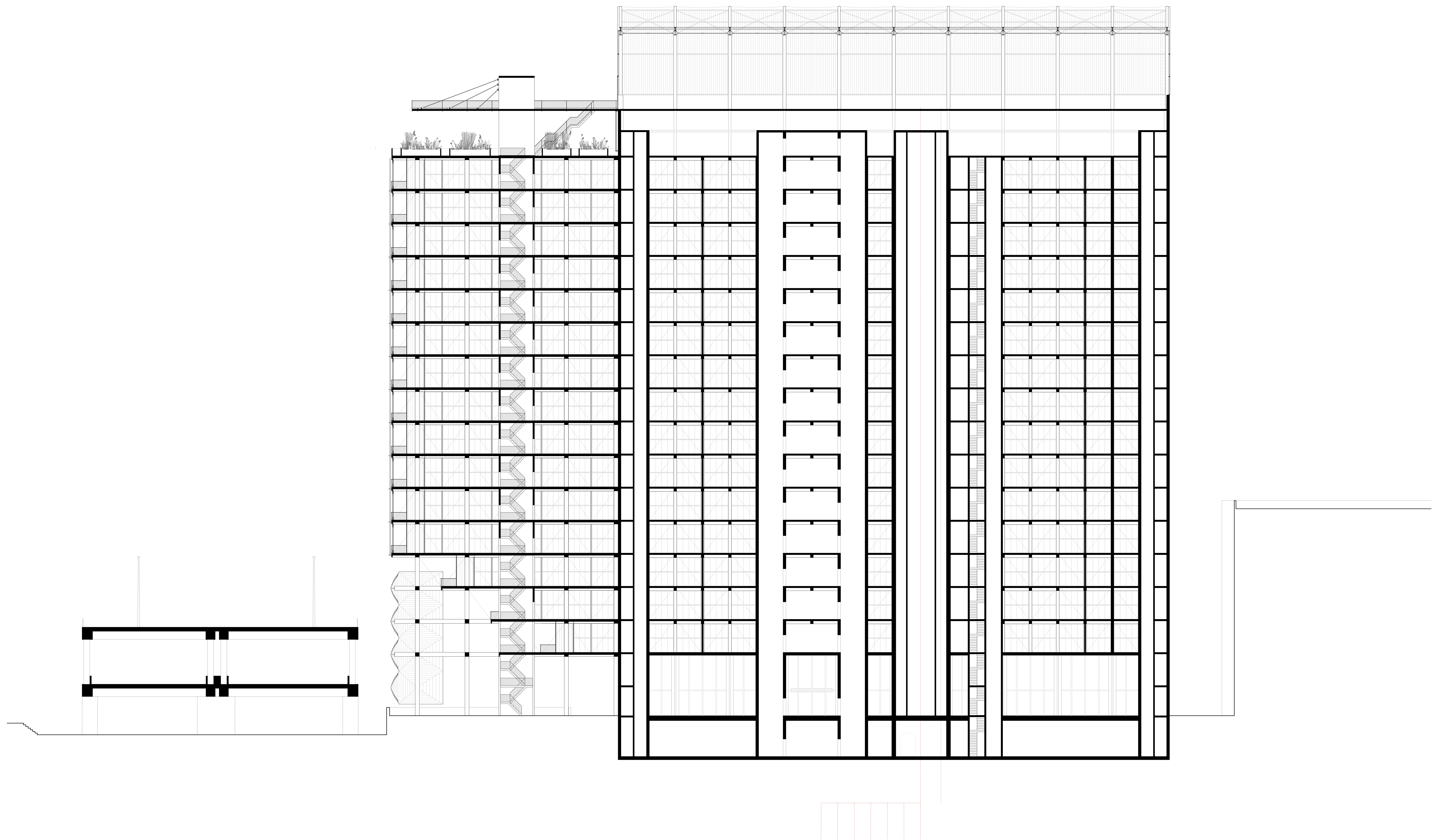
### 10 residential typologies

A diversity in term of typologies is put forward to allow maximal flexibility

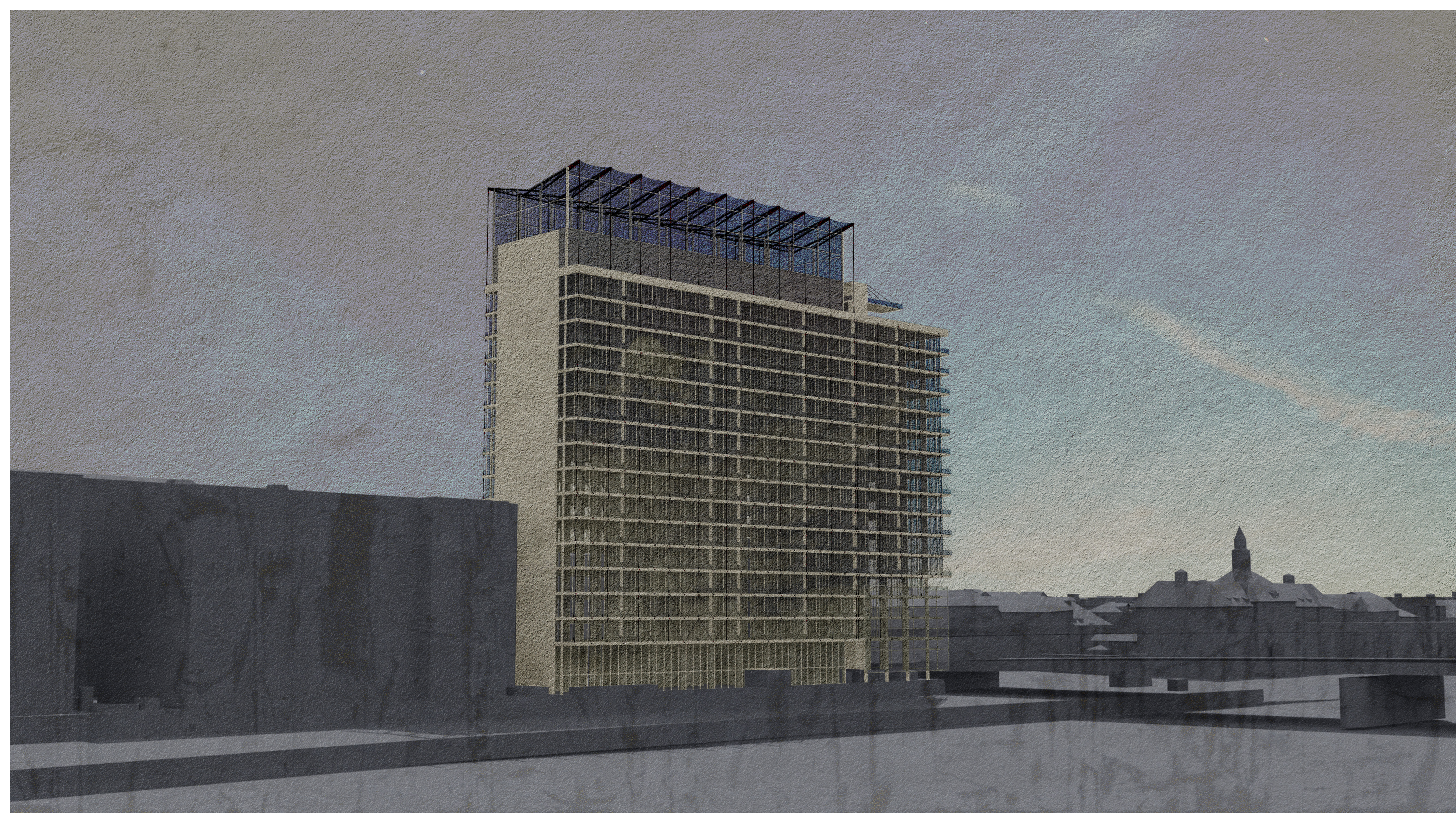




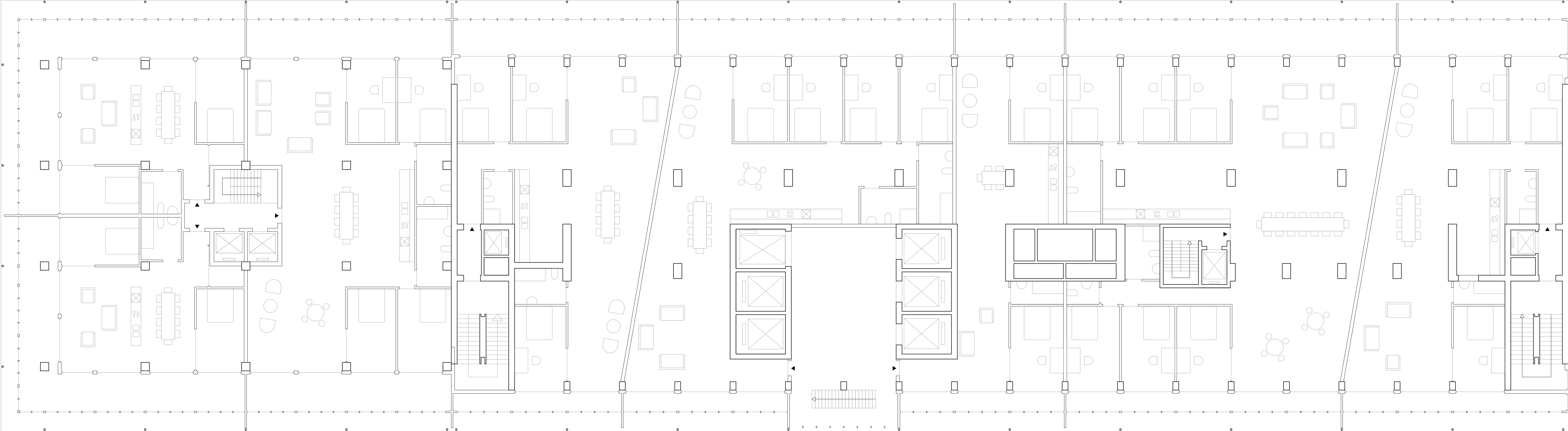










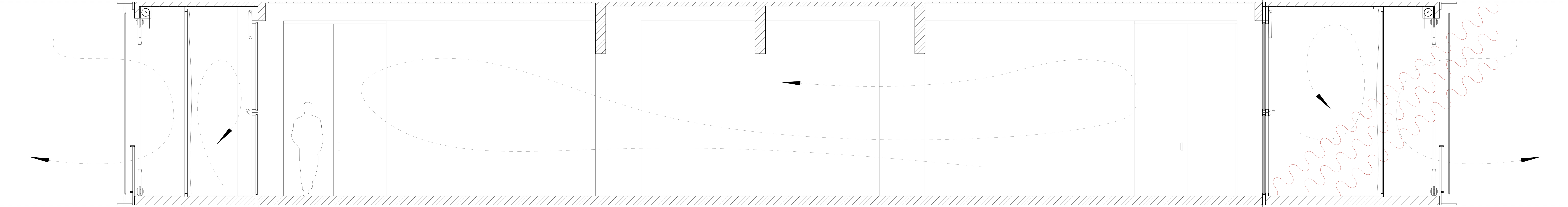
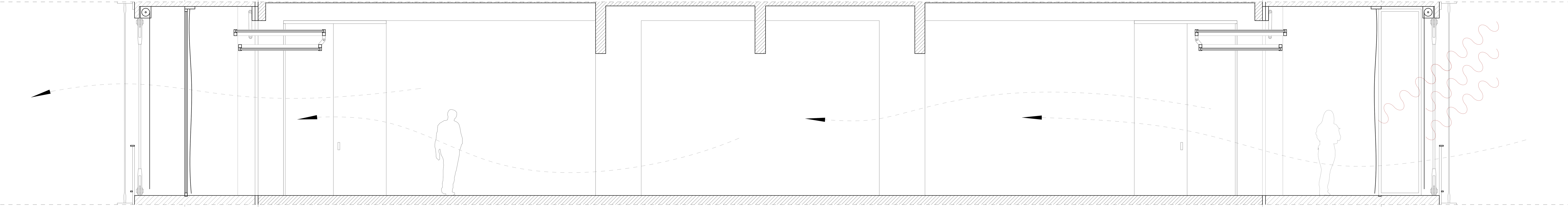


**First to 15th floors**  
residential



**Section in summer**

Double facing appartement allow unobstructed cross-ventilation



**Section in winter**

wintergardens as climatic buffers







