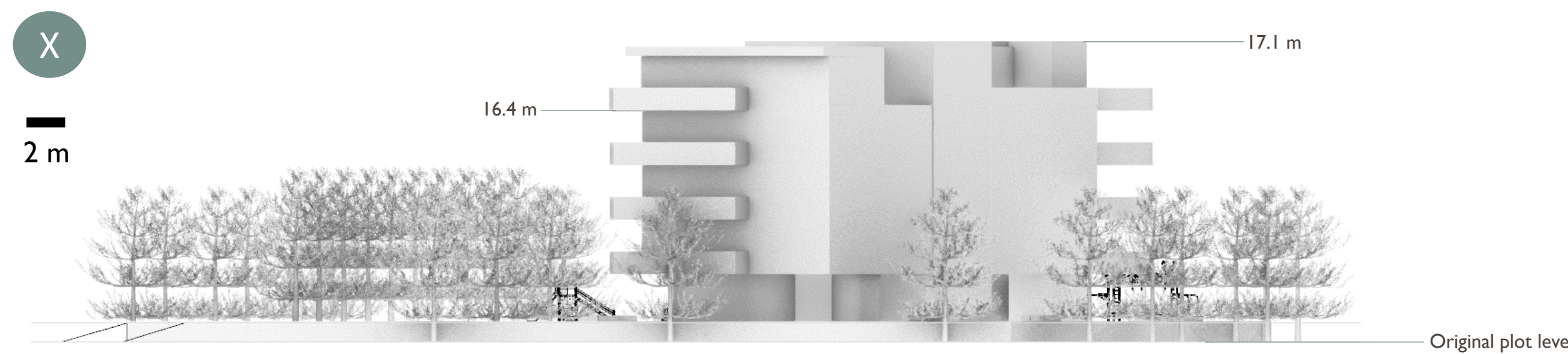
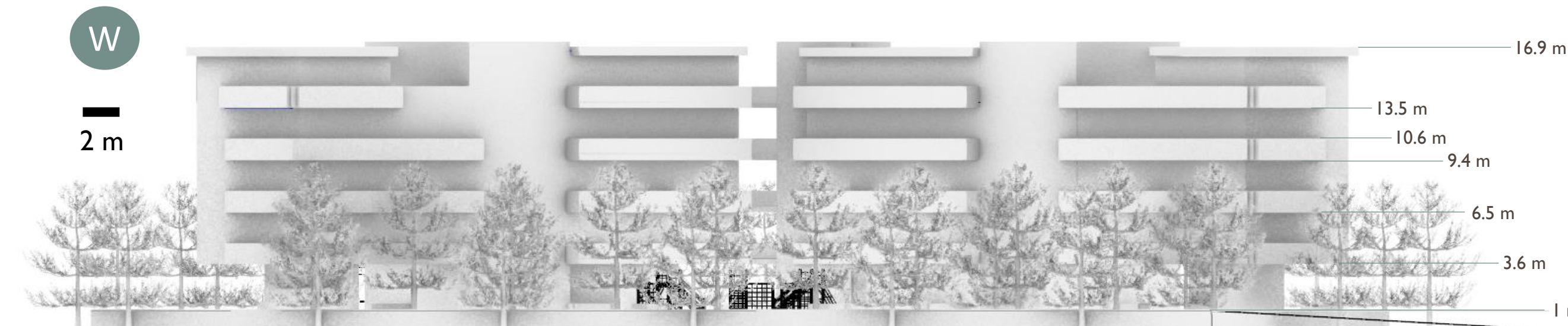
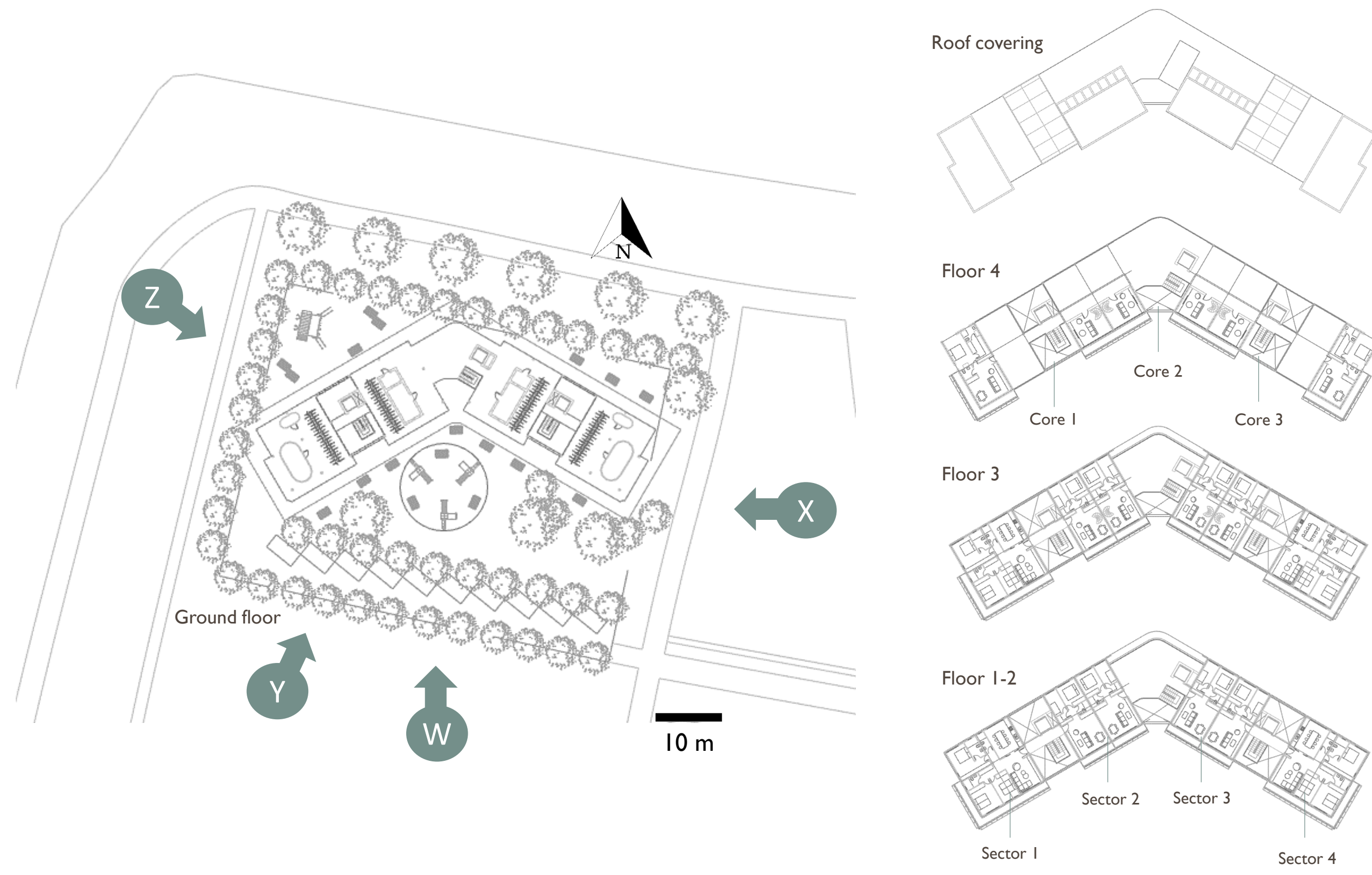


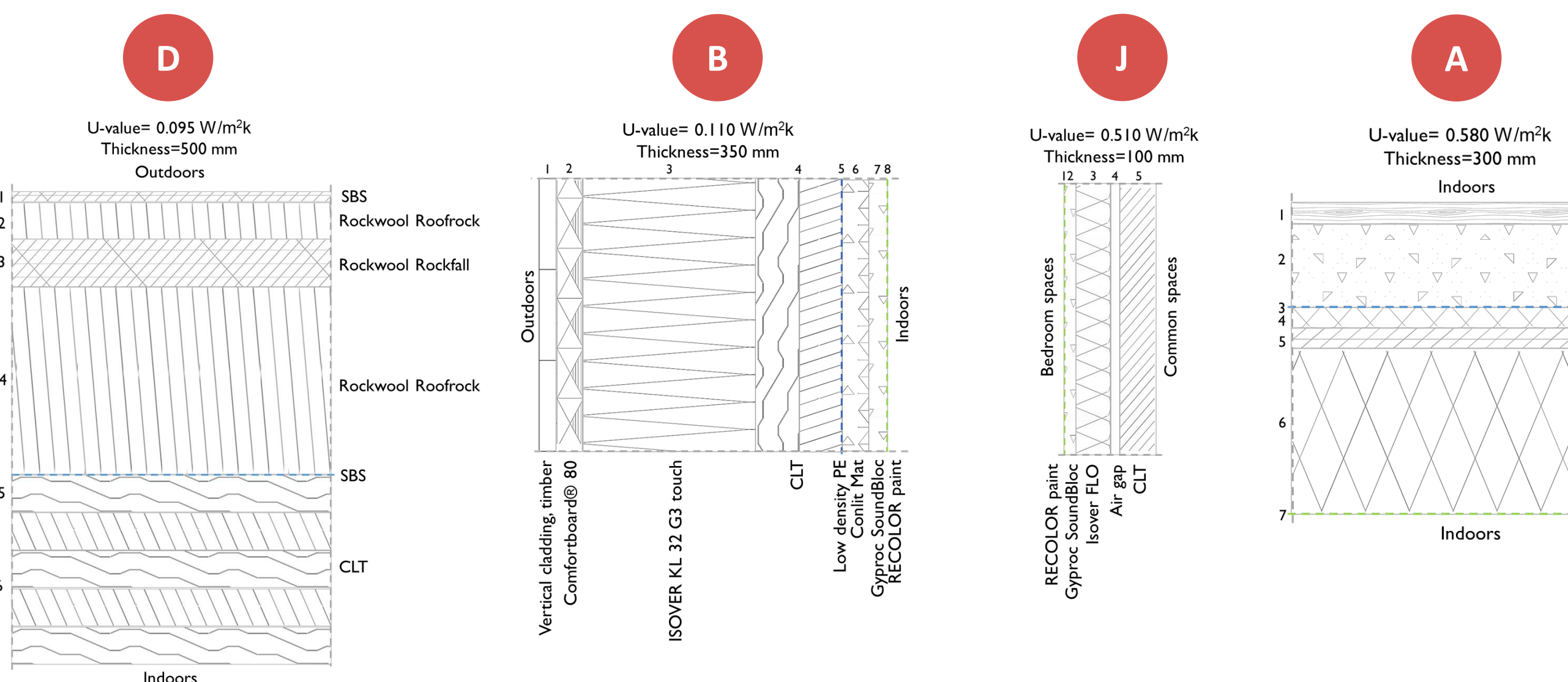
Vistamadera apartments

Highcomft (HHDC097): Abel Sepúlveda Luque, Roman Smirnov, and María Dolores Donaíre Galiano

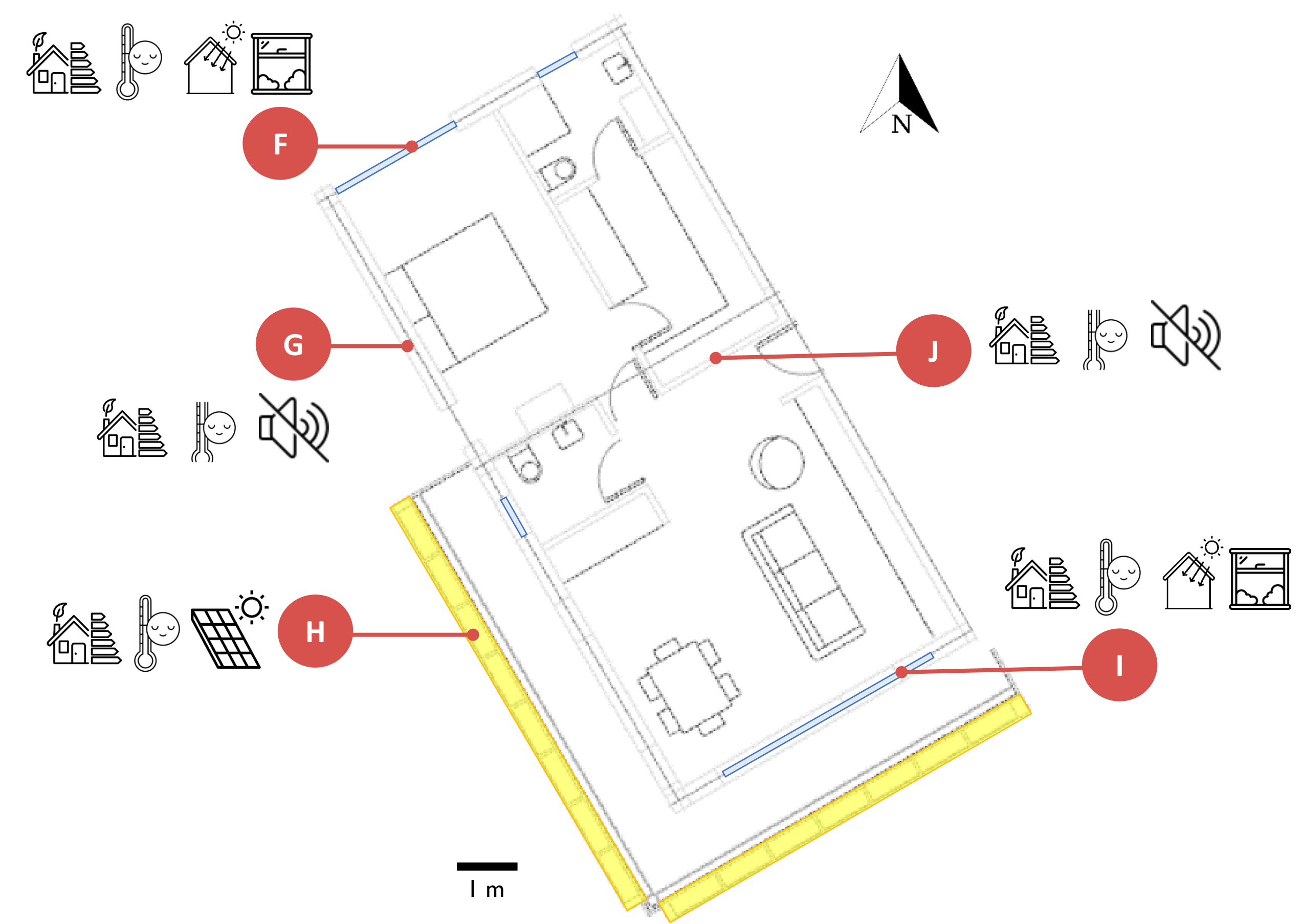


Human health, sustainability, and resilience were merged to create a 20-apartment complex called “Vistamadera apartments”. Located at one corner surrounded by nature in Pernis, Rotterdam, Vistamadera apartments look like a natural conjunction between different color wood stems surrounding by a family of already existing trees. The V-shape building footprint allows future occupants to keep an eye to the children park (south side) from each apartment and enjoy the view towards the Nieuwe Maas river (north side). All the apartments have good daylight provision, view contact to the outside, excellent protection against noise, efficient ventilation system to ensure a good indoor air quality, sustainable construction materials that provide excellent protection against external noise, and energy efficiency. In addition, residents and guests would have available lots of bike parking, communal terraces, street workout park, communal garden, terraces, and easy walkable outdoor areas that would support wildlife circulation through our residential complex.

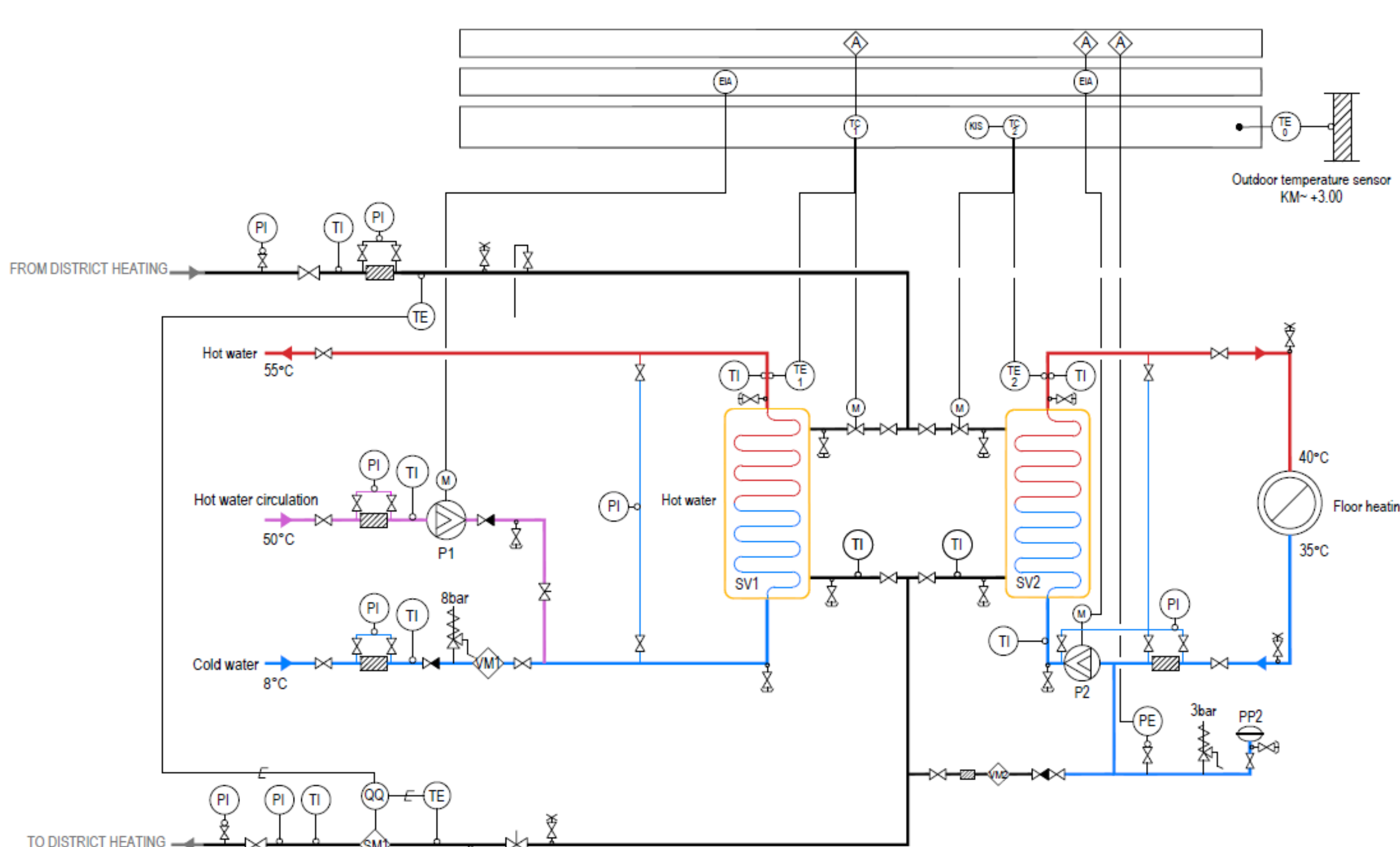
- Natural ventilation
- Energy efficiency
- Thermal comfort
- Acoustic comfort
- On-site energy generation
- Daylight provision
- View out



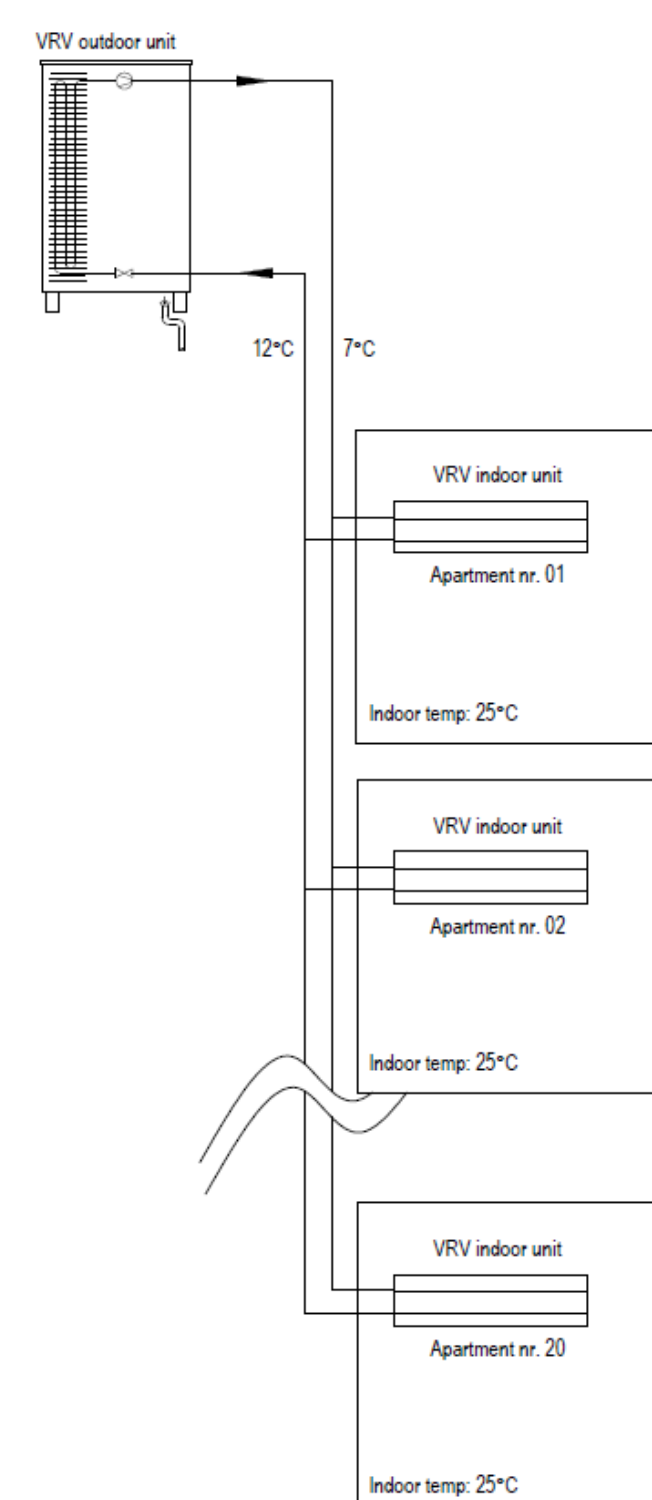
- C** Openable core roofs to reduce overheating and energy consumption through natural ventilation
- E** Opaque south facades and full-glazed north facades for cores
- F** Large glazed areas with medium g-value and no fixed shading
- H** High-efficient PV modules (195 m²) as 45° tilted backwards shading systems of south facades
- I** Large glazed areas with low g-value for SE/SW facades



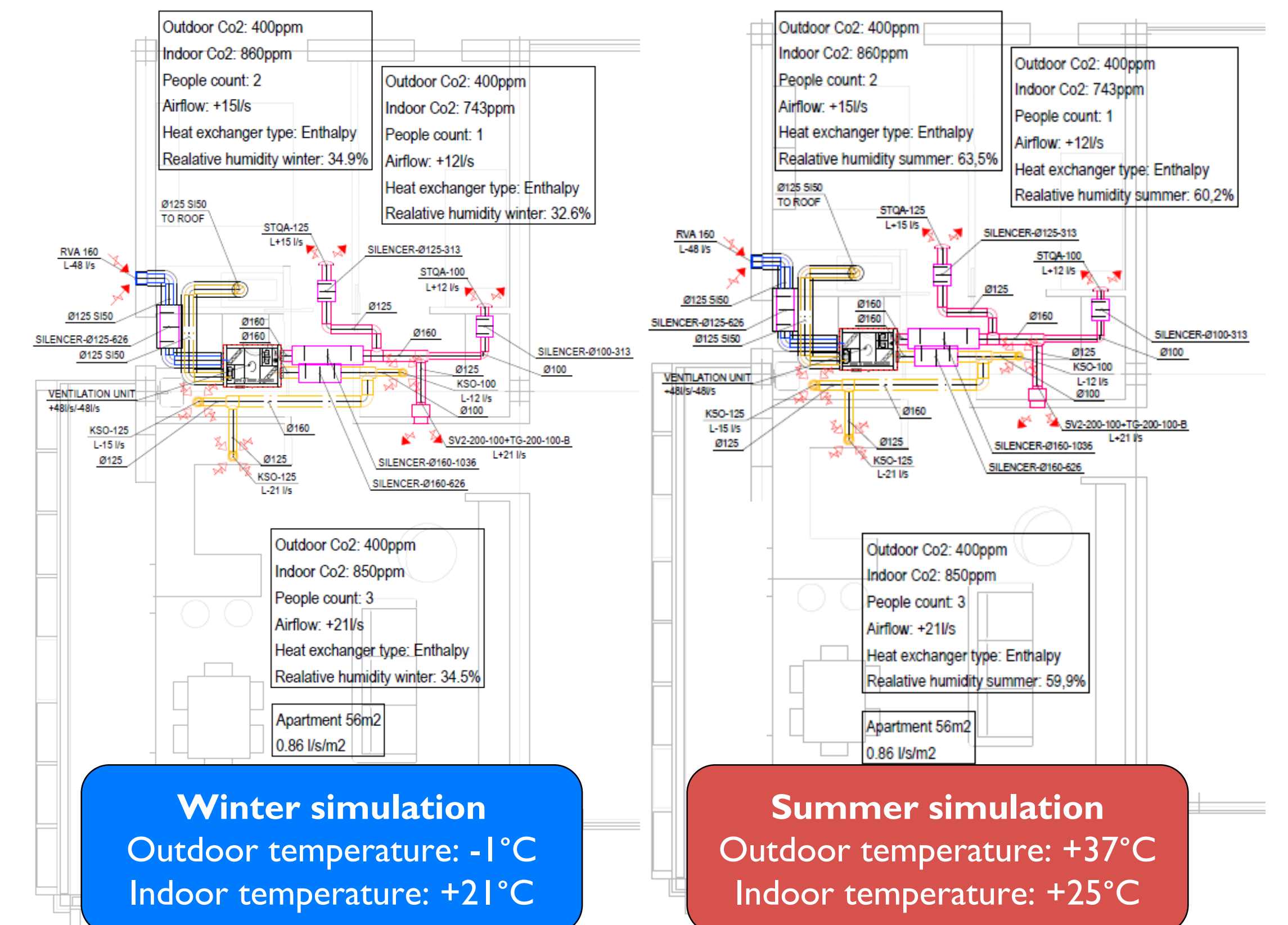
Heating concept and water system



Cooling concept



Ventilation concept



Winter simulation
Outdoor temperature: -1°C
Indoor temperature: +21°C

Summer simulation
Outdoor temperature: +37°C
Indoor temperature: +25°C