Art Gallery of Nijmegen

Booklet Building Technology

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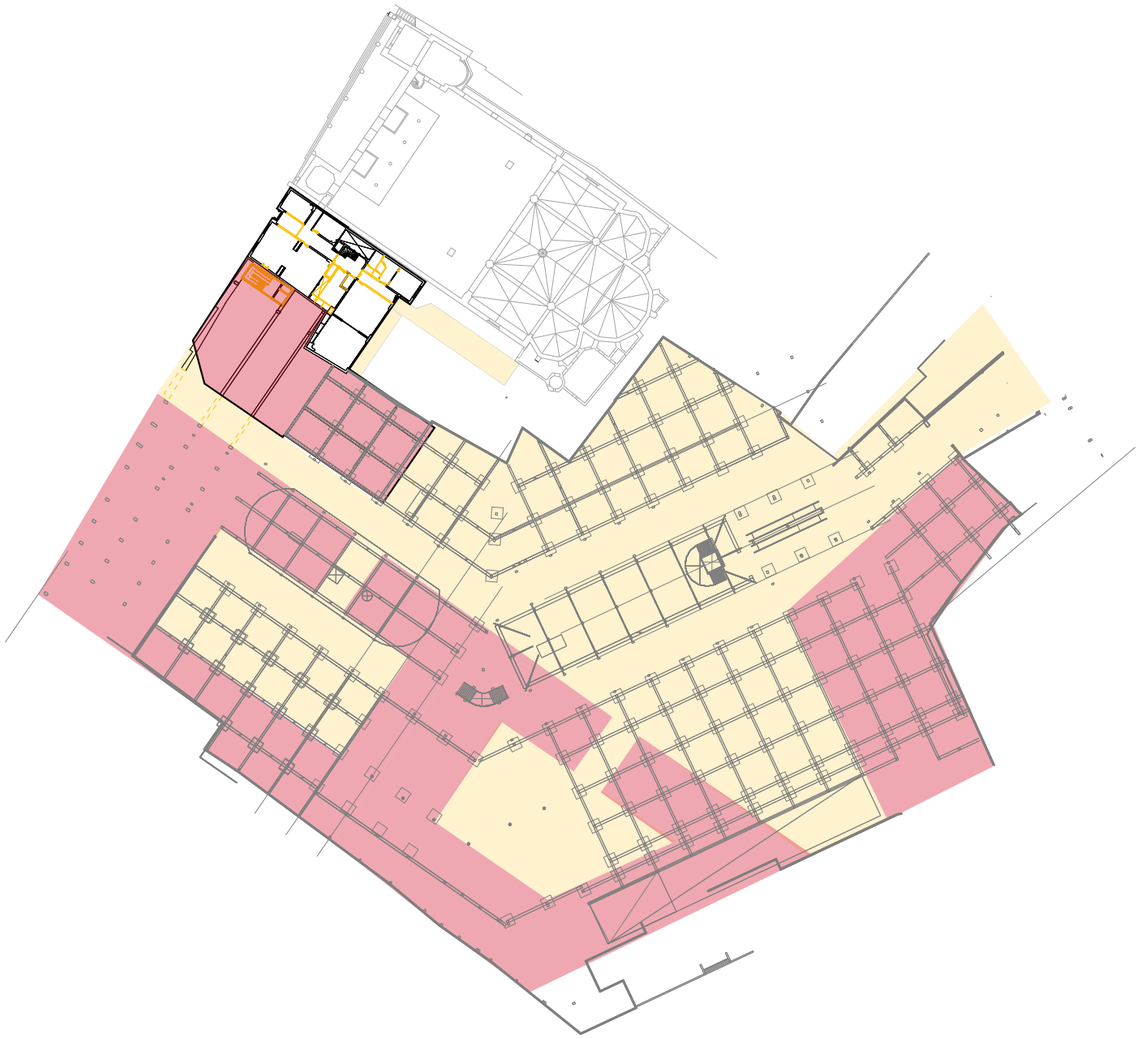
P5 Presentation
Urban Architecture Graduation Studio
November 5th, 2021

Structure to keep

Structure to demolish

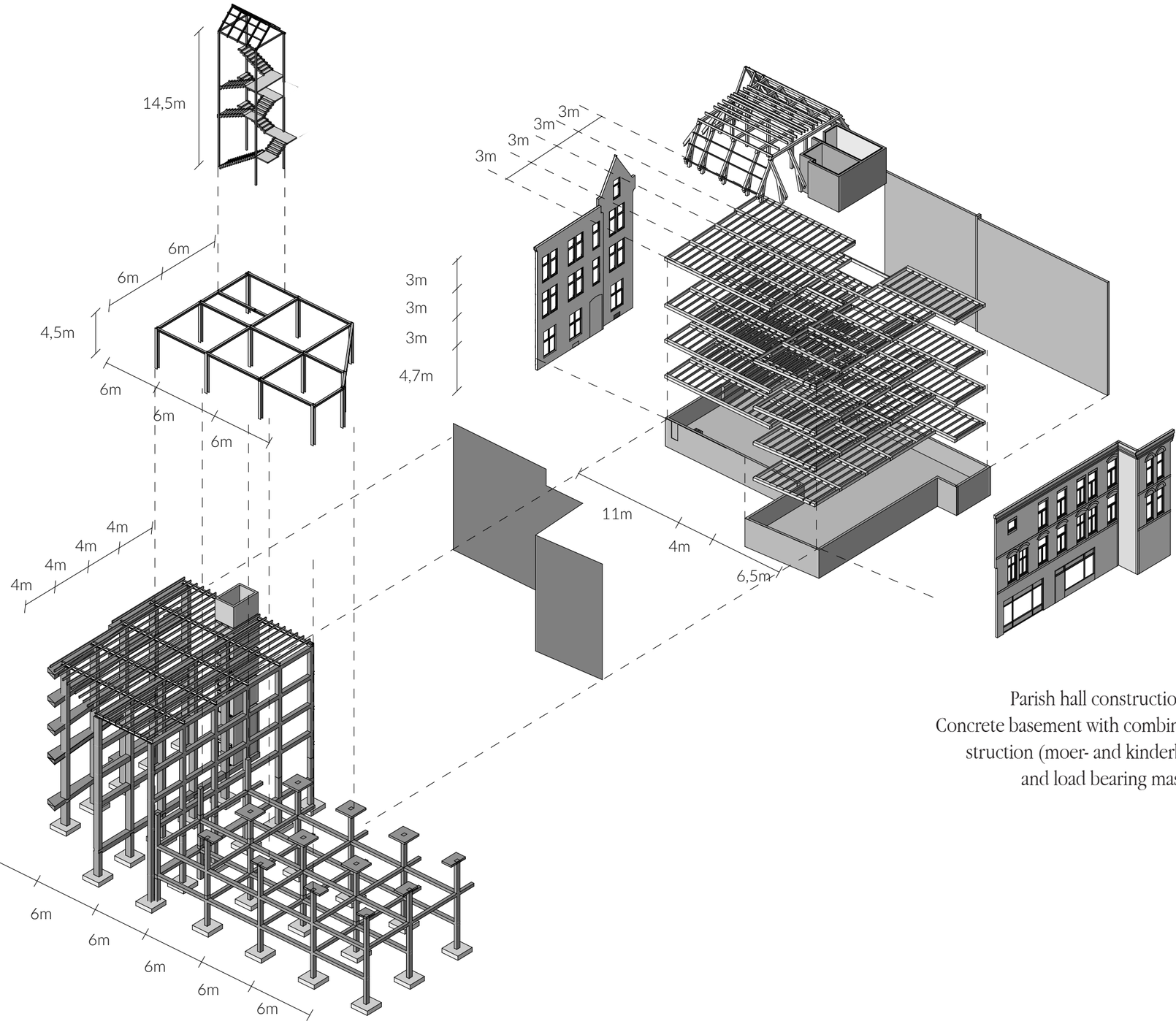


Demoltion plan

Addition of staircase in steel construction

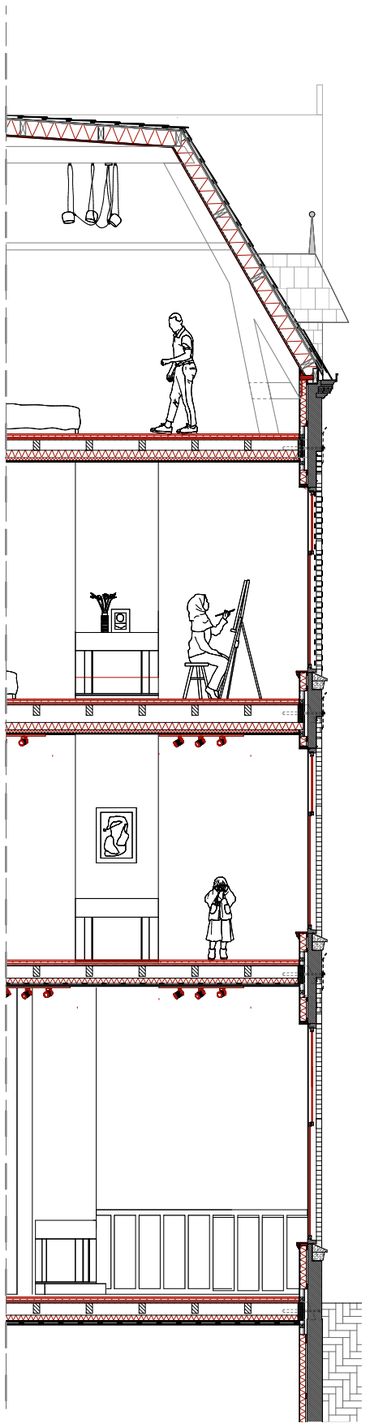
Addition of lightweight steel structure assembled to existing concrete structure of Molenpoort

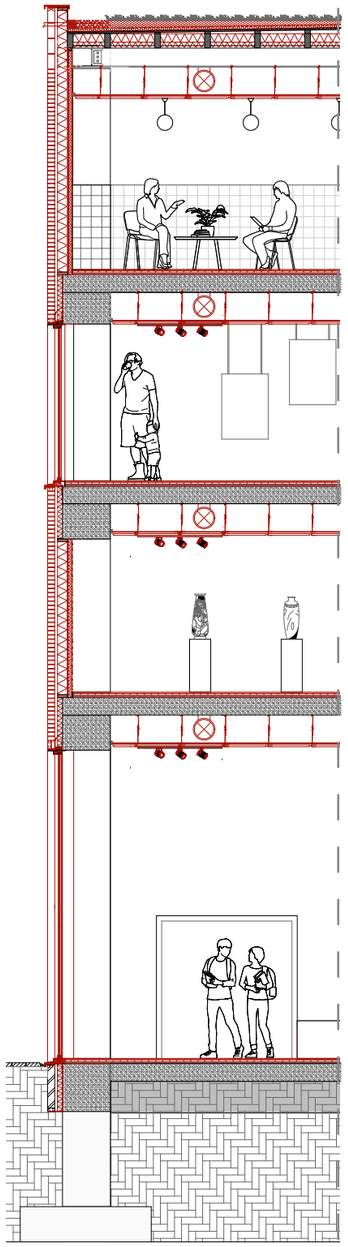
Existing Molenpoort structure



Parish hall construction existing of
Concrete basement with combined wooden floor construction (moer- and kinderbalk construction)
and load bearing masonry walls

Structure assembly

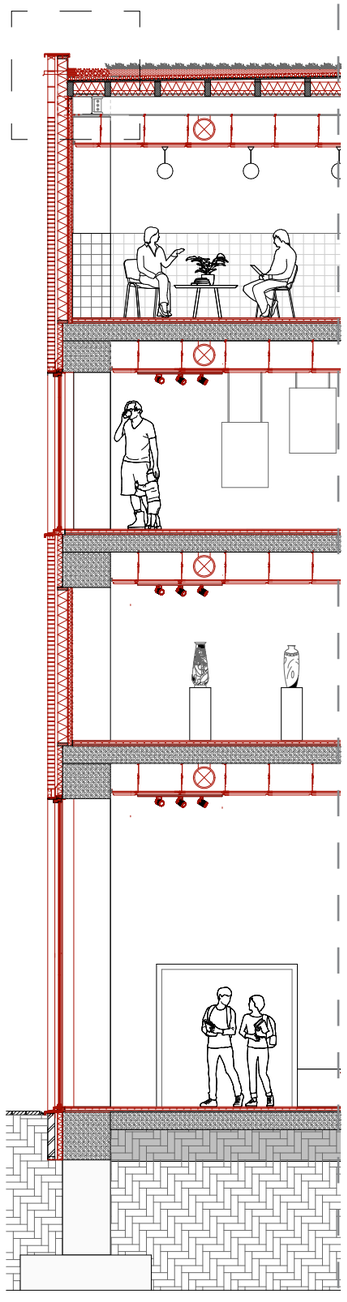


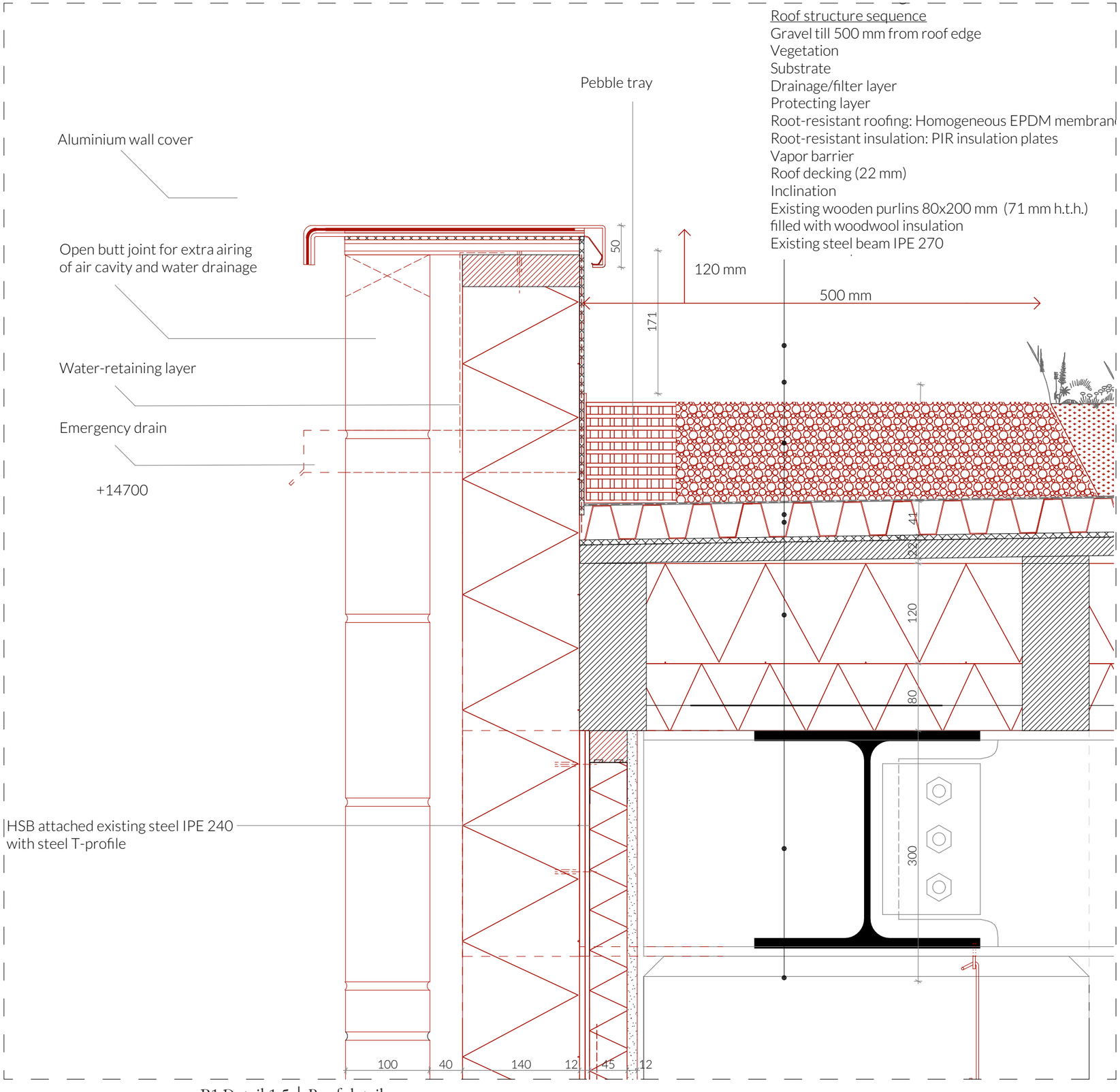


Detailing - ‘Differing in necessities’

Molenpoort

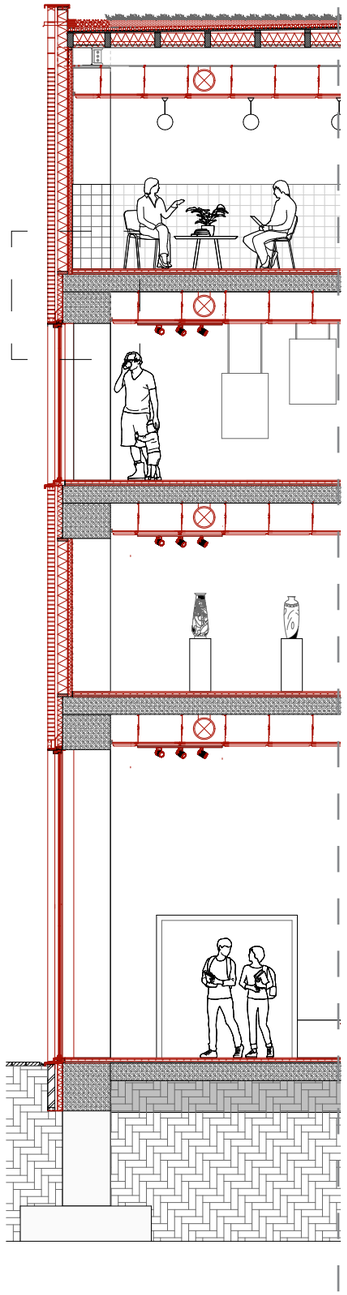
B1

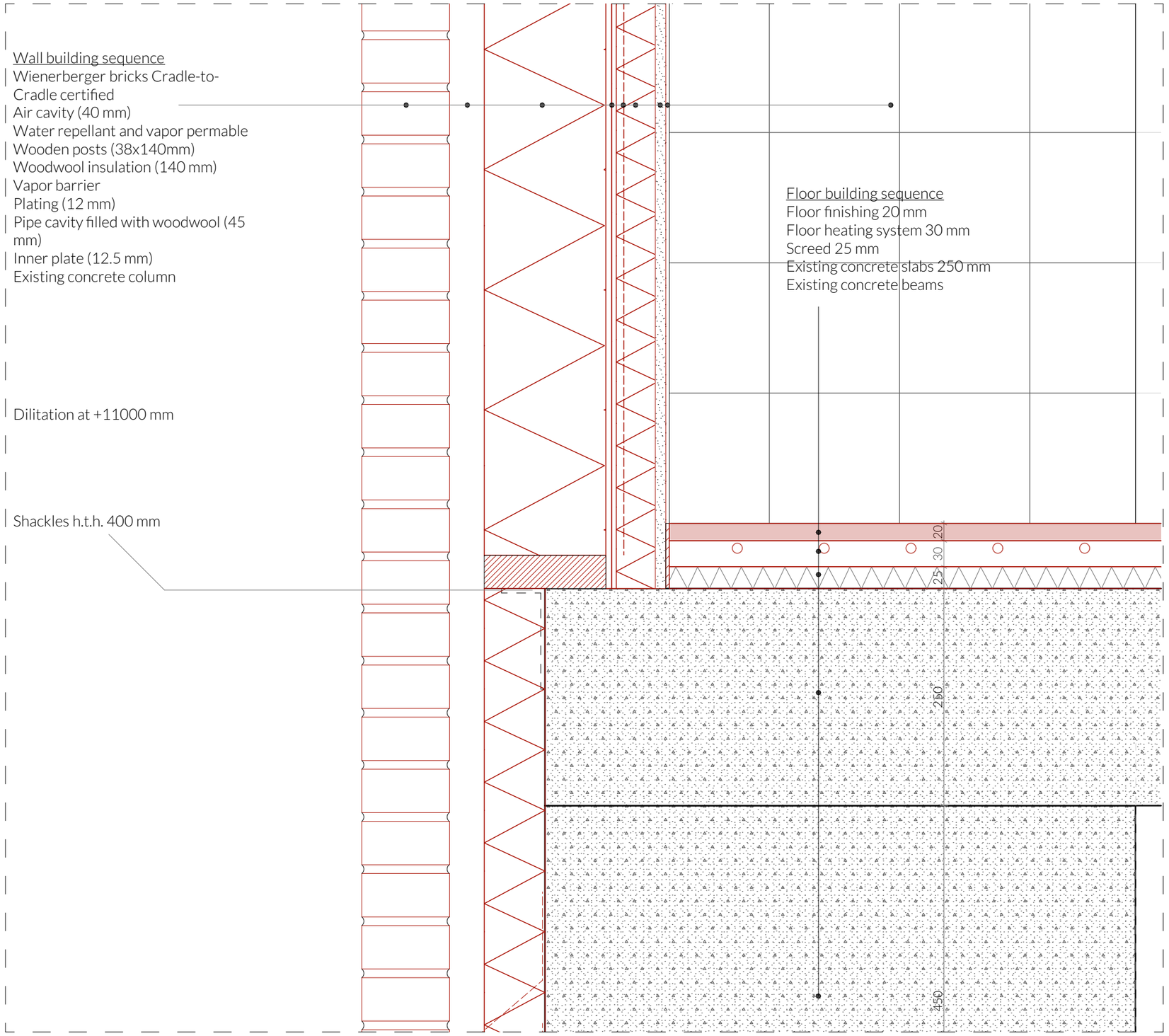




B1 Detail 1:5 | Roof detail

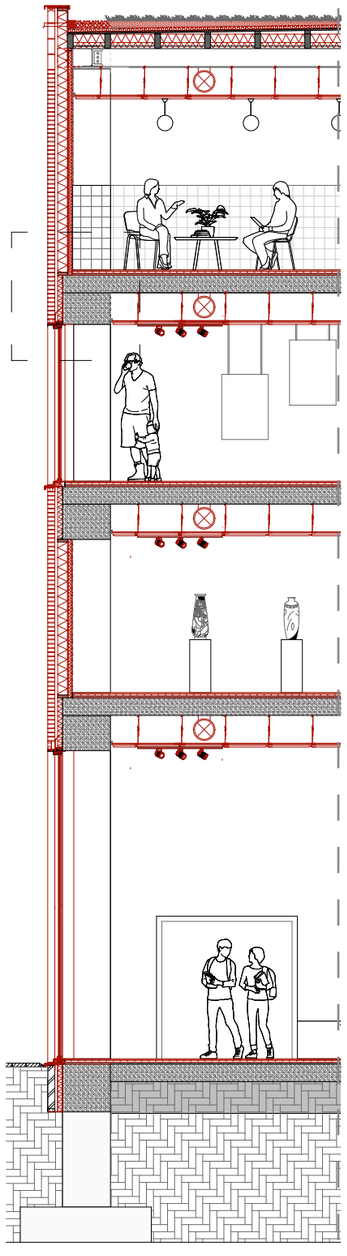
B2

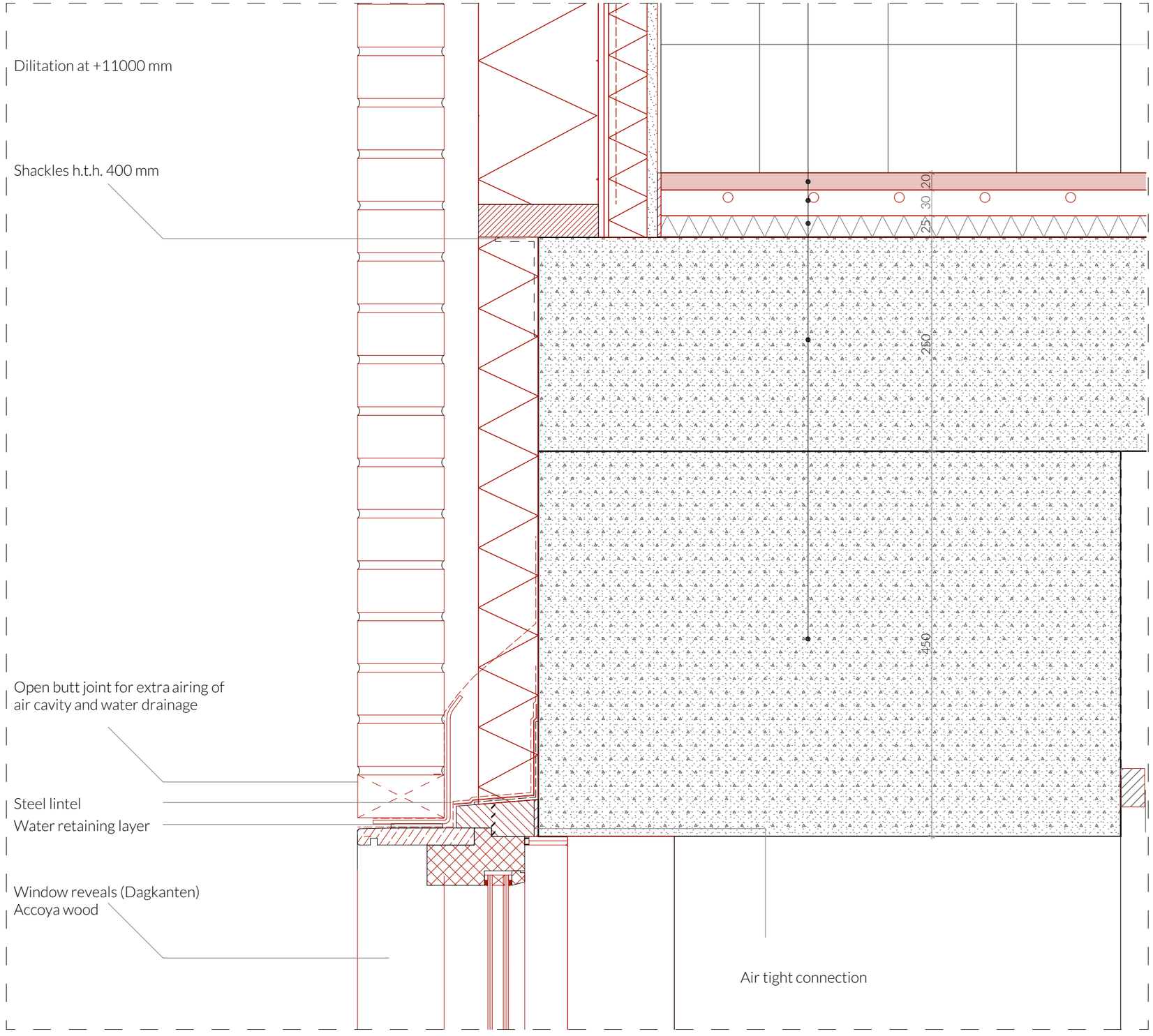




B2 detail 1:5 | Third Floor

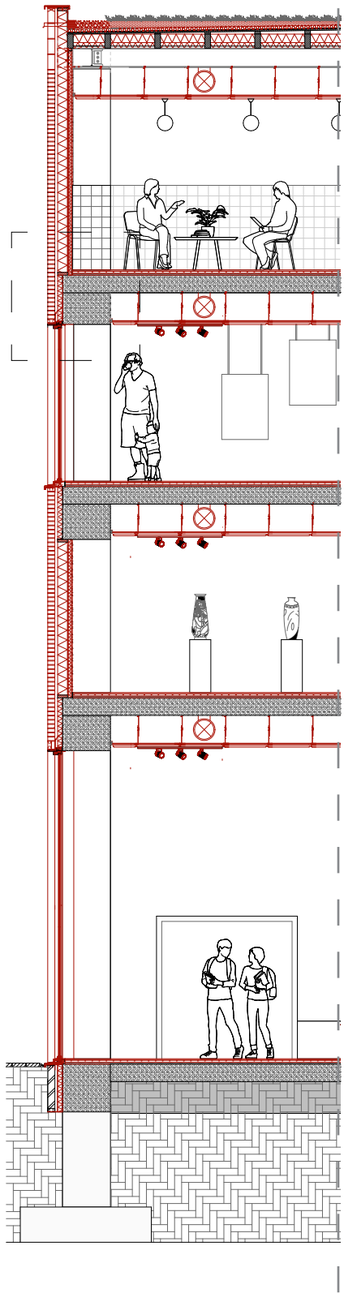
B2





B2 detail 1:5 | Top window frame

B2



Window opening
Dagkanten Accoya wood
Hardwood window frames 67x114 mm
HR++ insulating glass
Dagkanten
Wall finishing stucco

Roval-Elegance water hammer

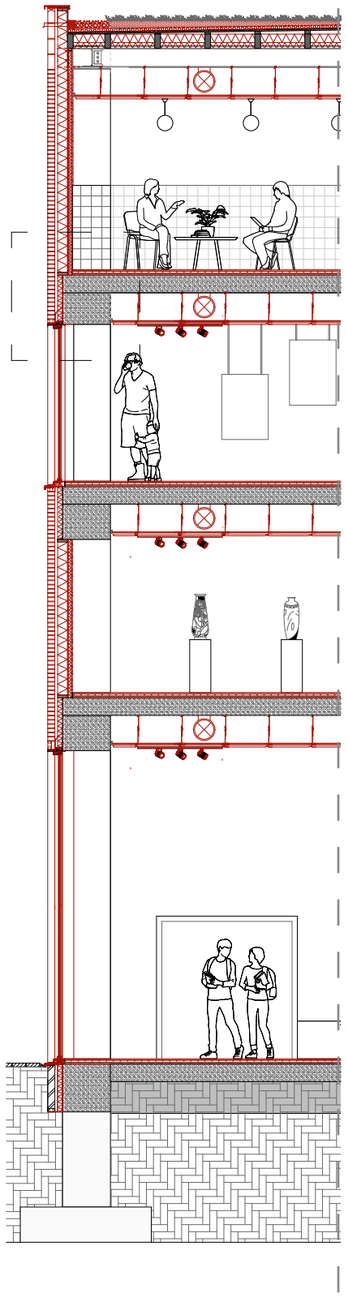
Water repellant layer

Shackles for
wood skeleton structure

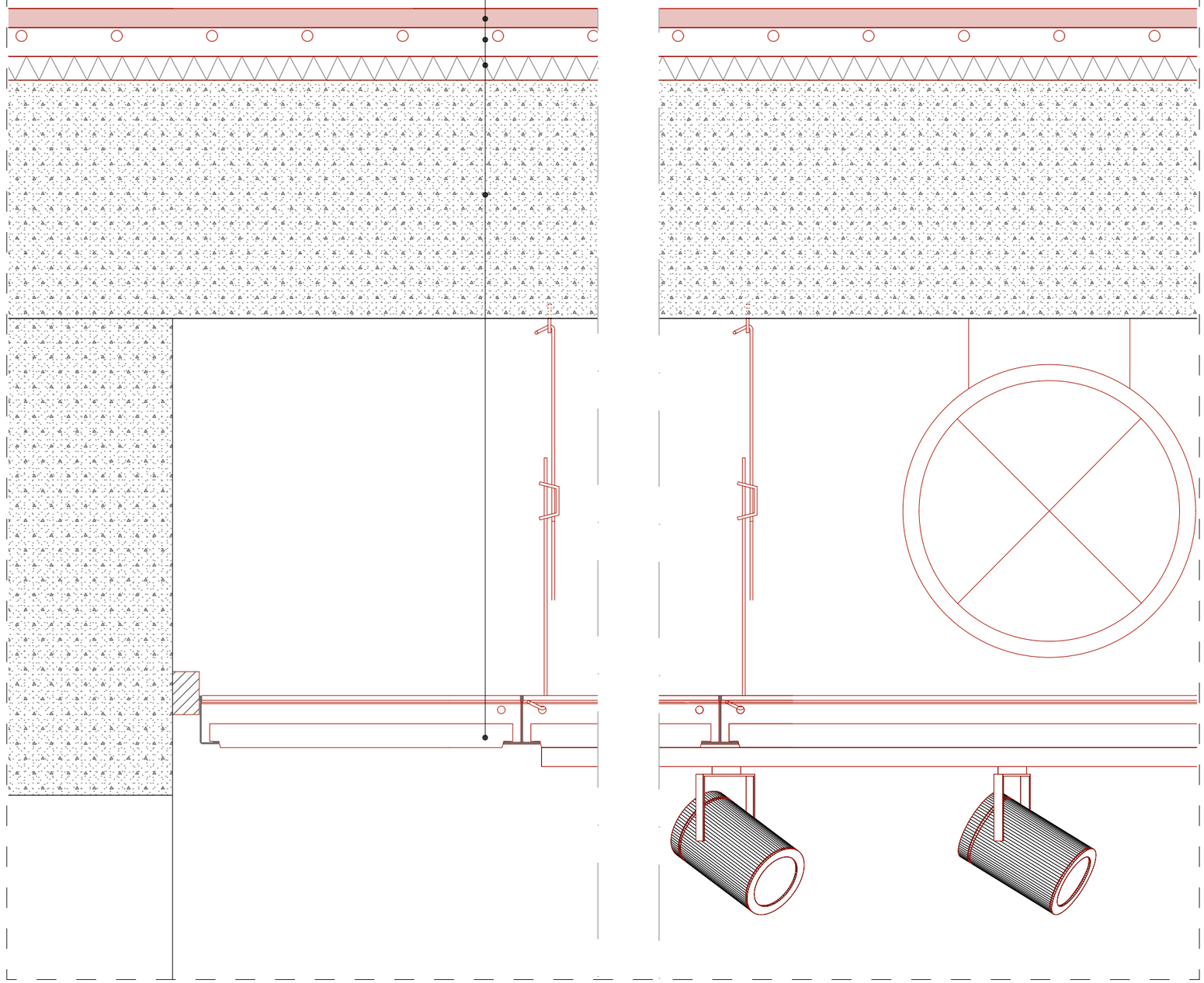
Floor building sequence
Floor finishing
Screed
Floor heating
Existing concrete slabs
Existing concrete beams

B2 Detail 1:5 | Bottom window frame

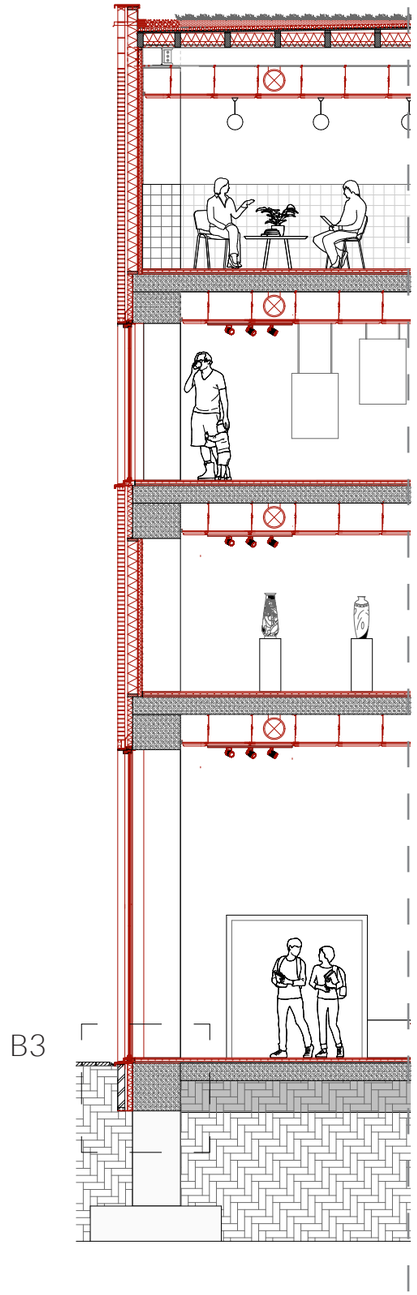
B2



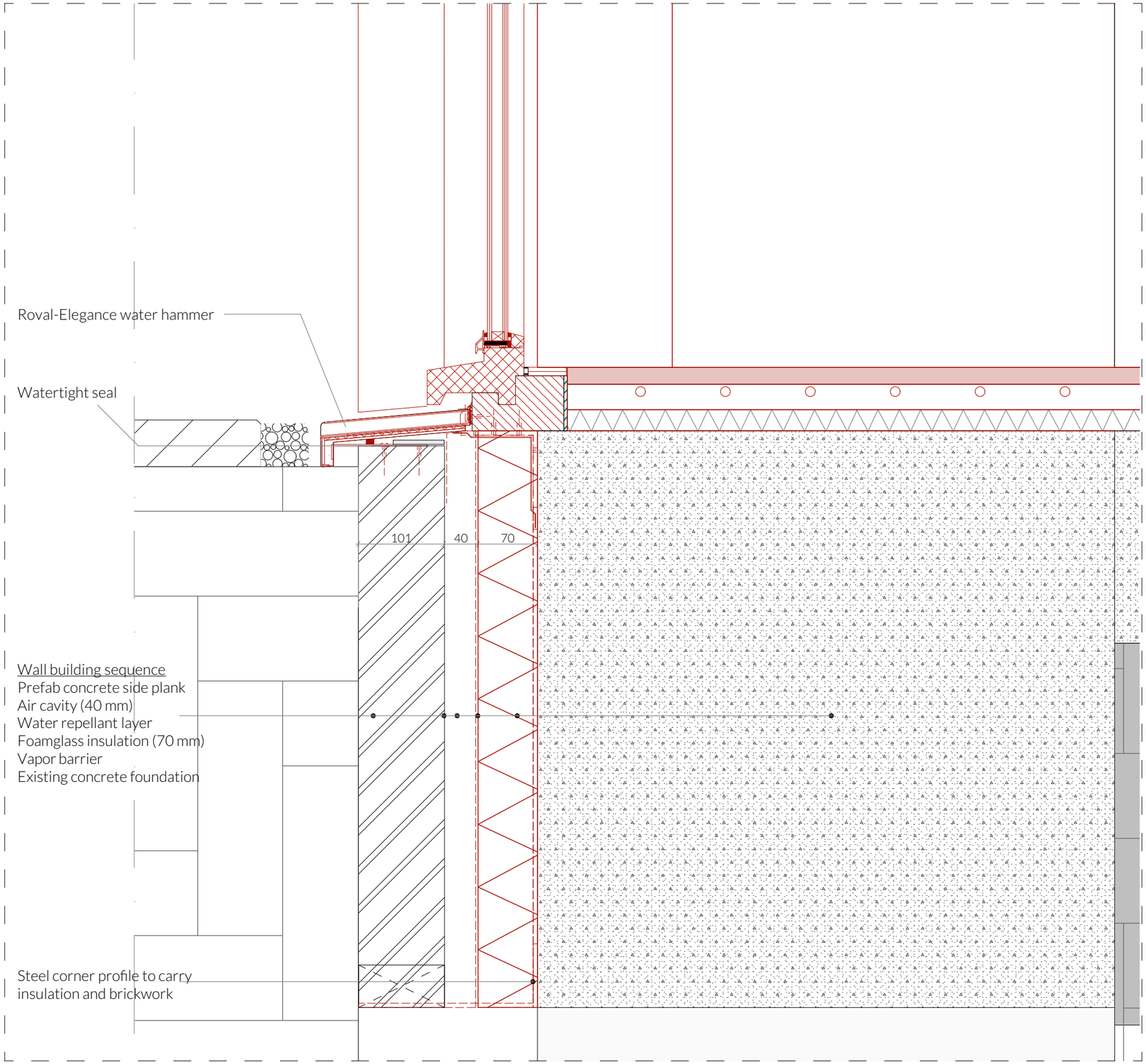
Floor building sequence
Floor finishing
Screed
Floor heating
Existing concrete slabs
System ceiling for installations and attachment of light railing



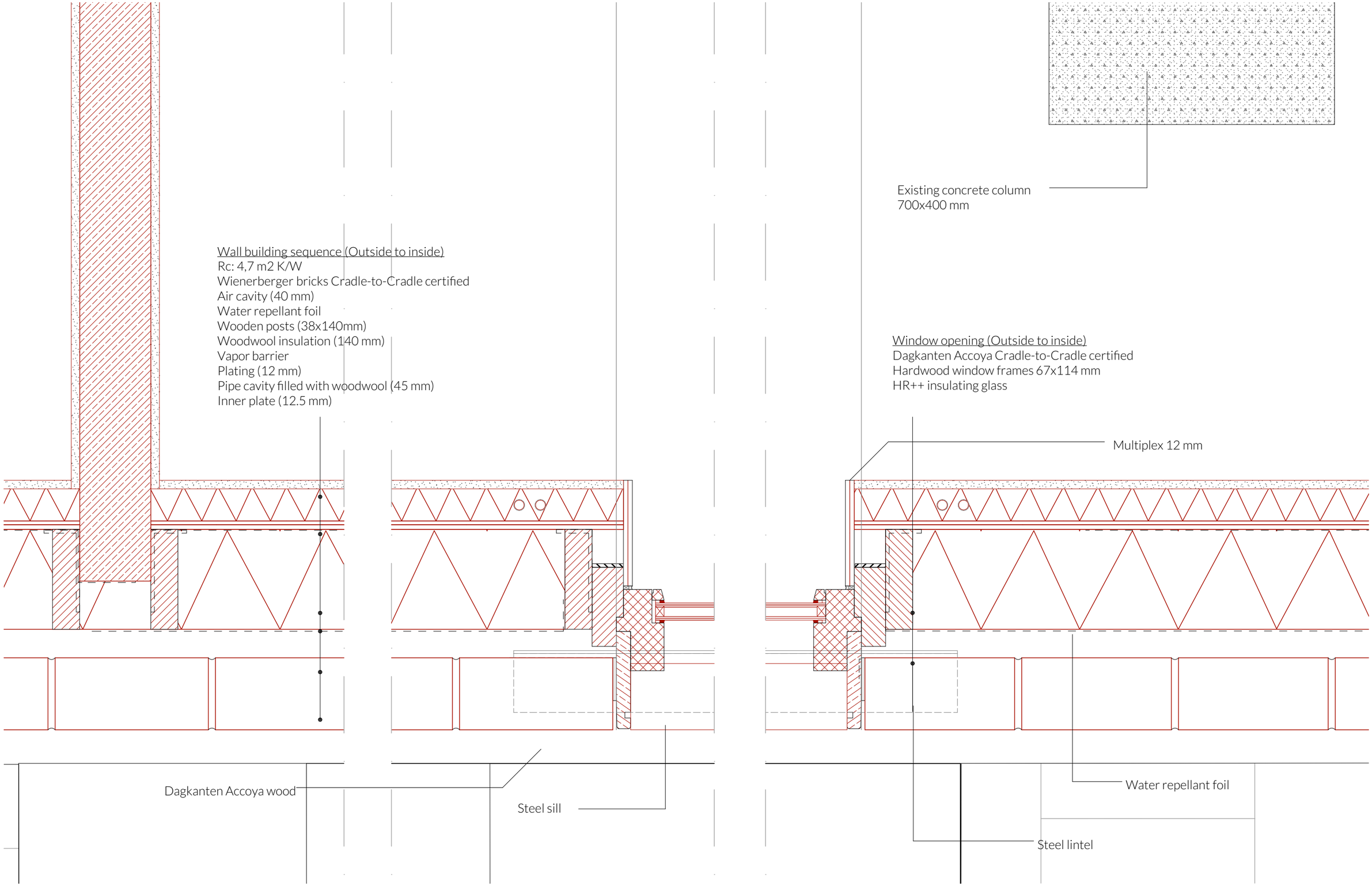
B2 detail 1:5 | Ceiling



B3



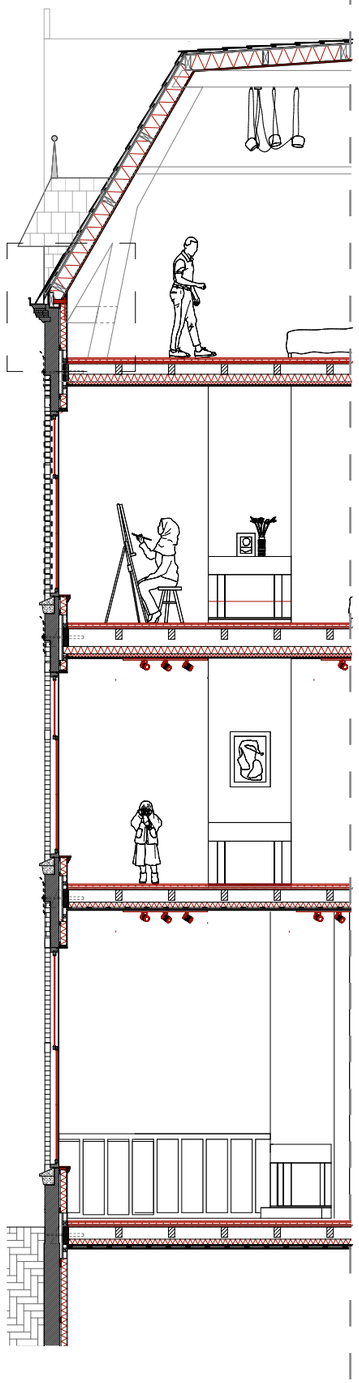
B3 detail 1:5 | Foundation

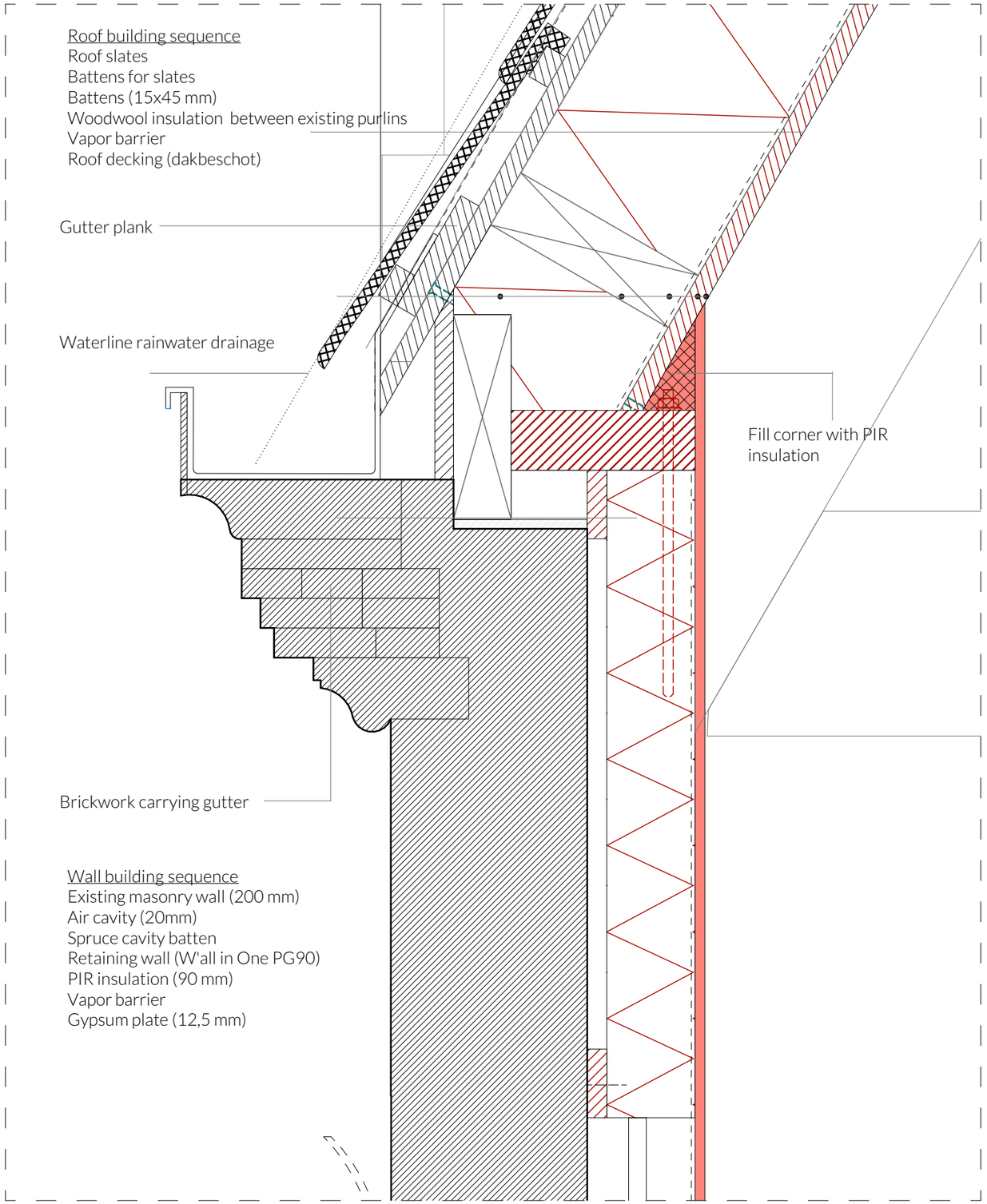


Horizontal detail 1:5

Parish Hall

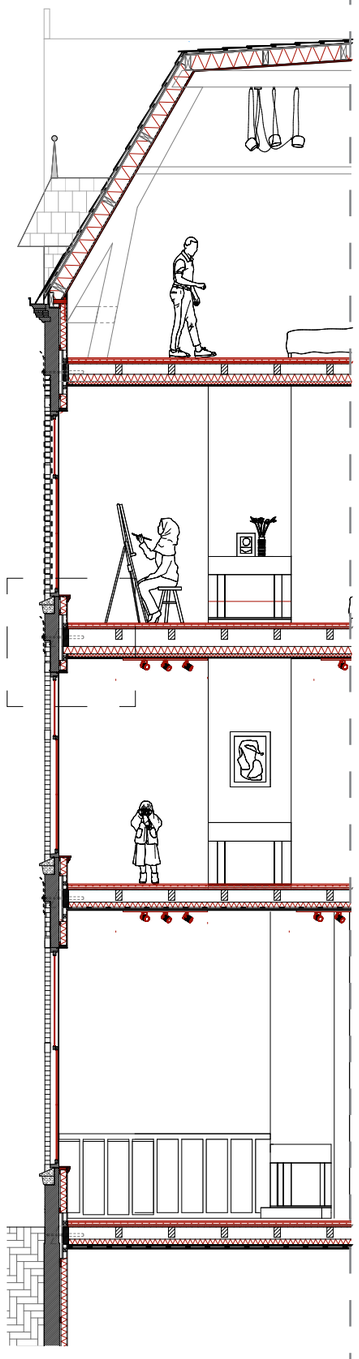
A1

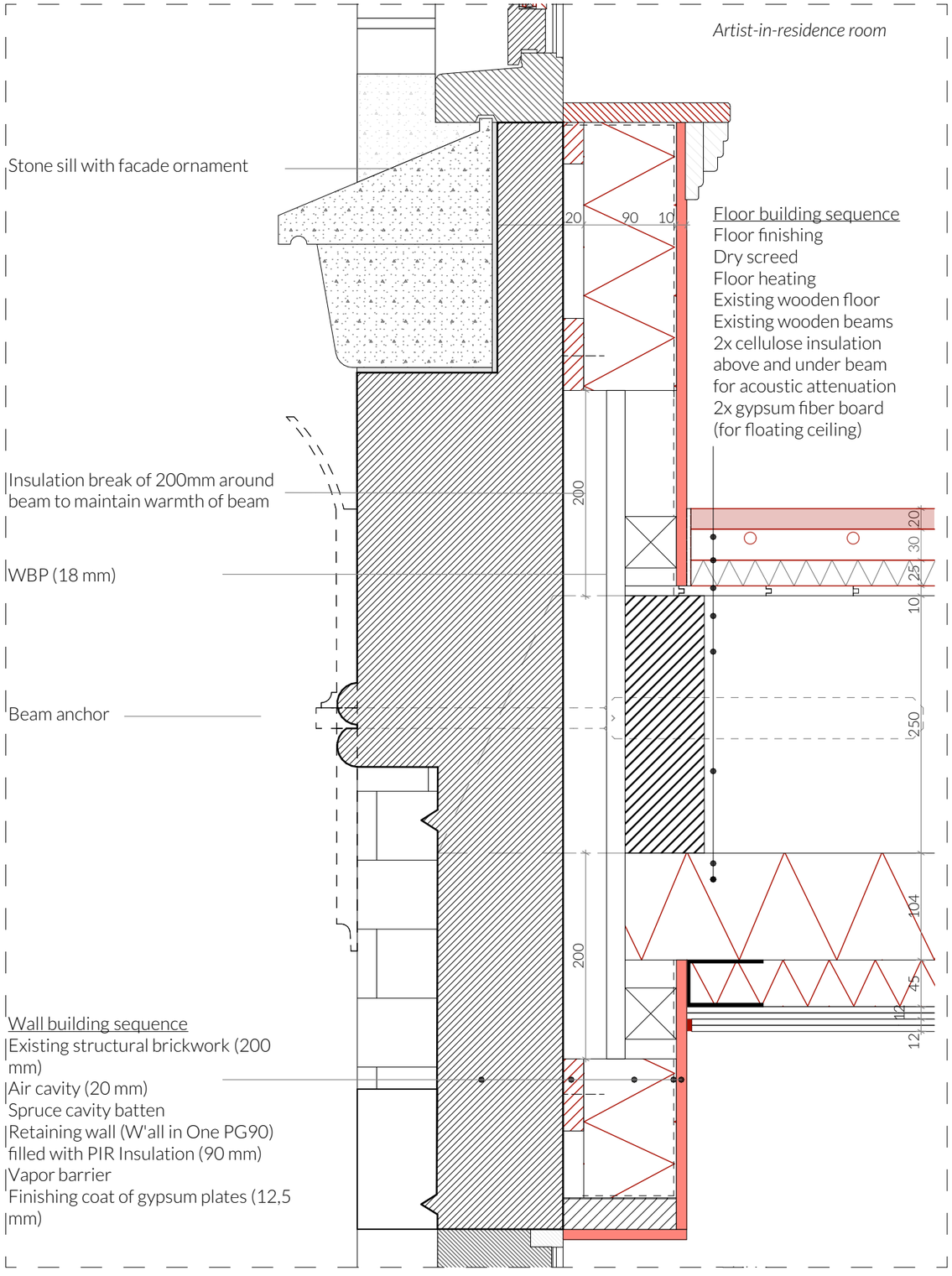




A1 detail 1:5 | Roof

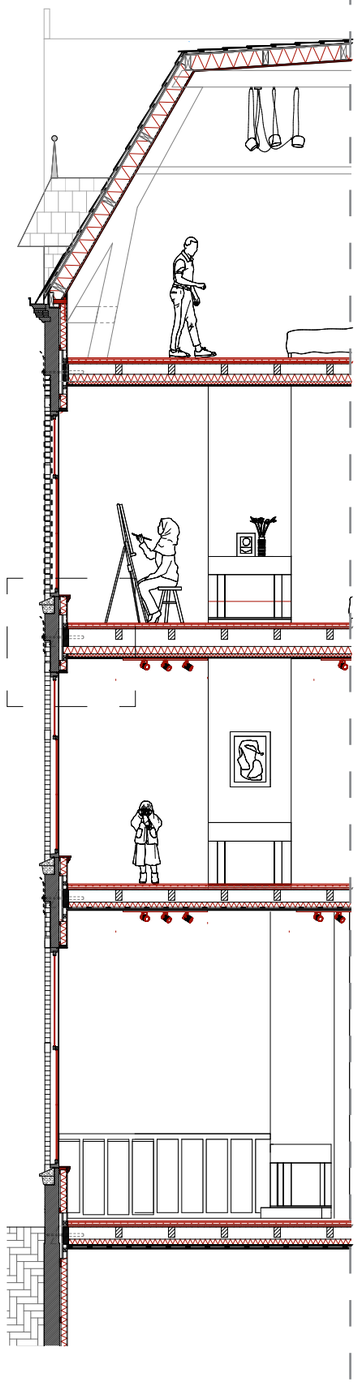
A2

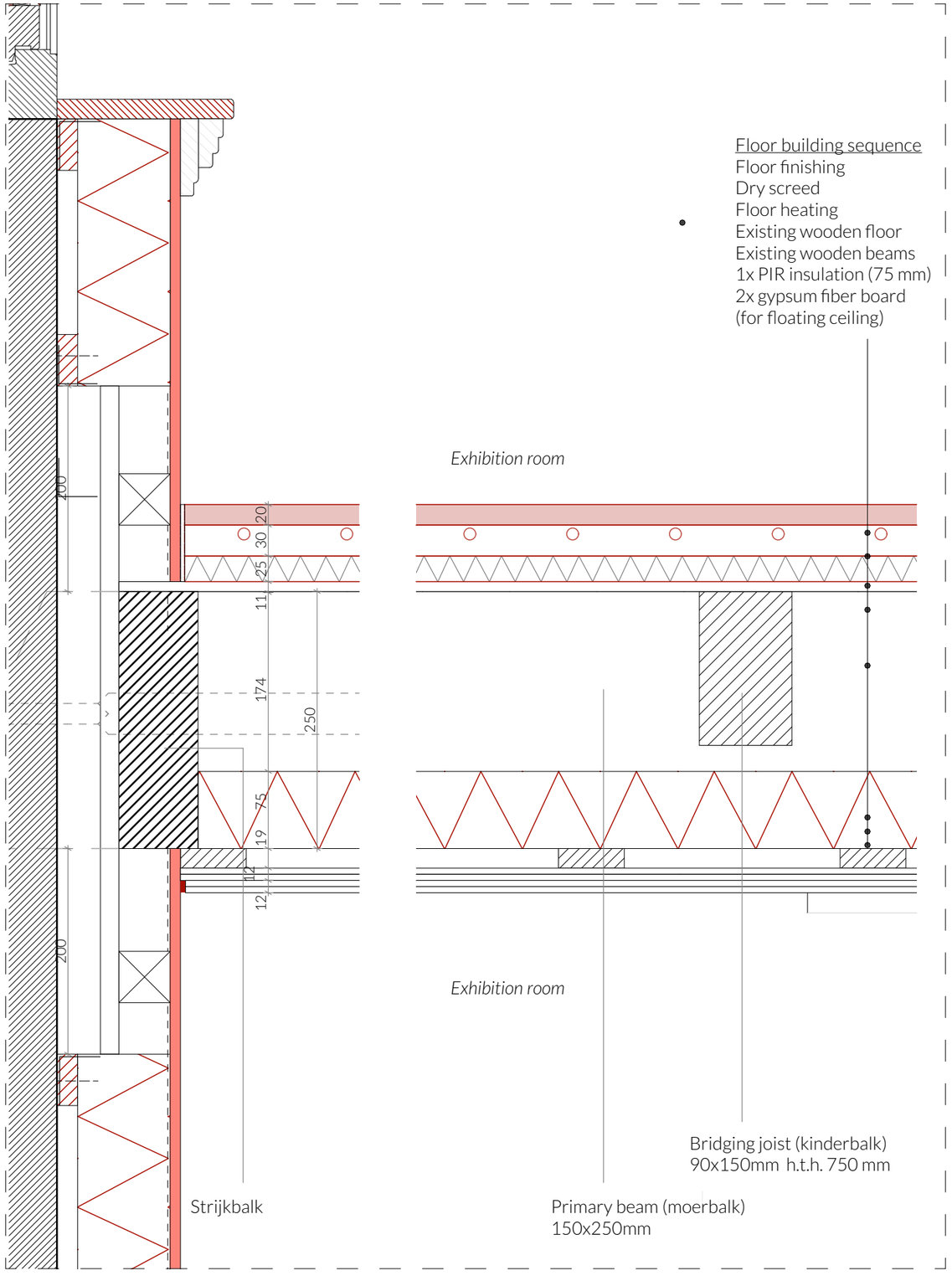




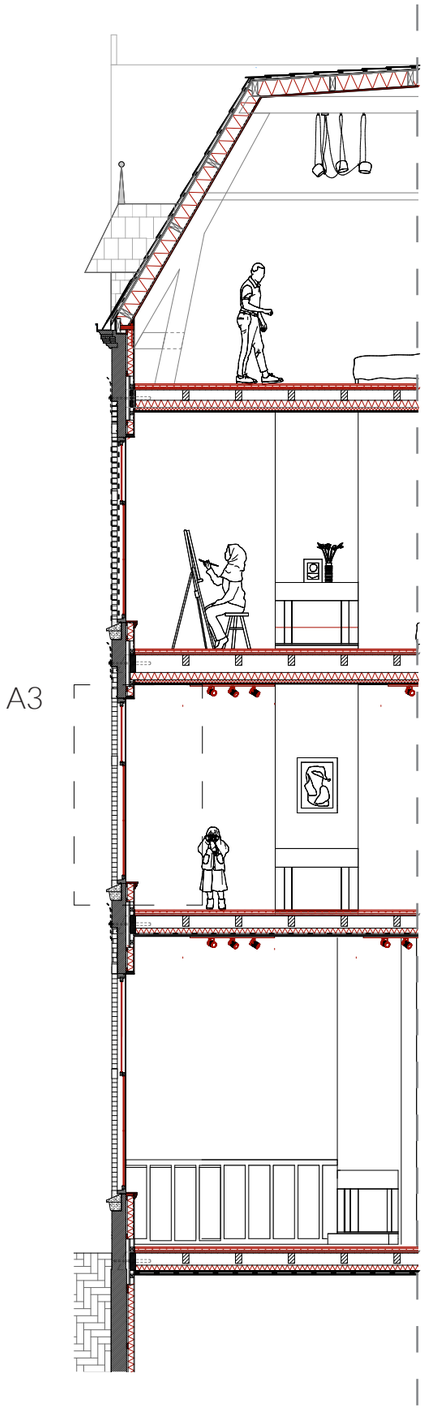
A2 detail 1:5 | The critical point of the beam

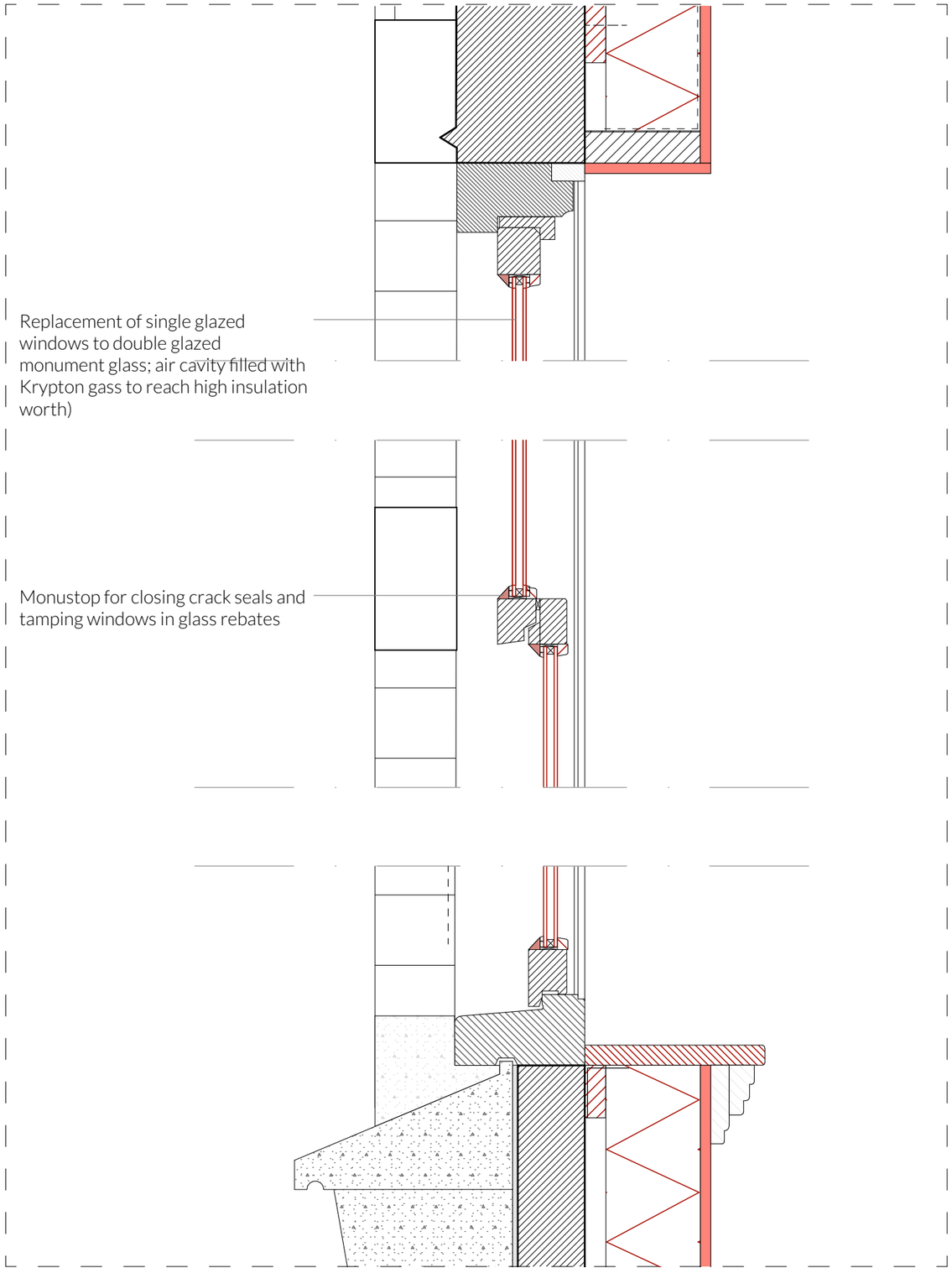
A2





A2 detail 1:5 | Second Floor

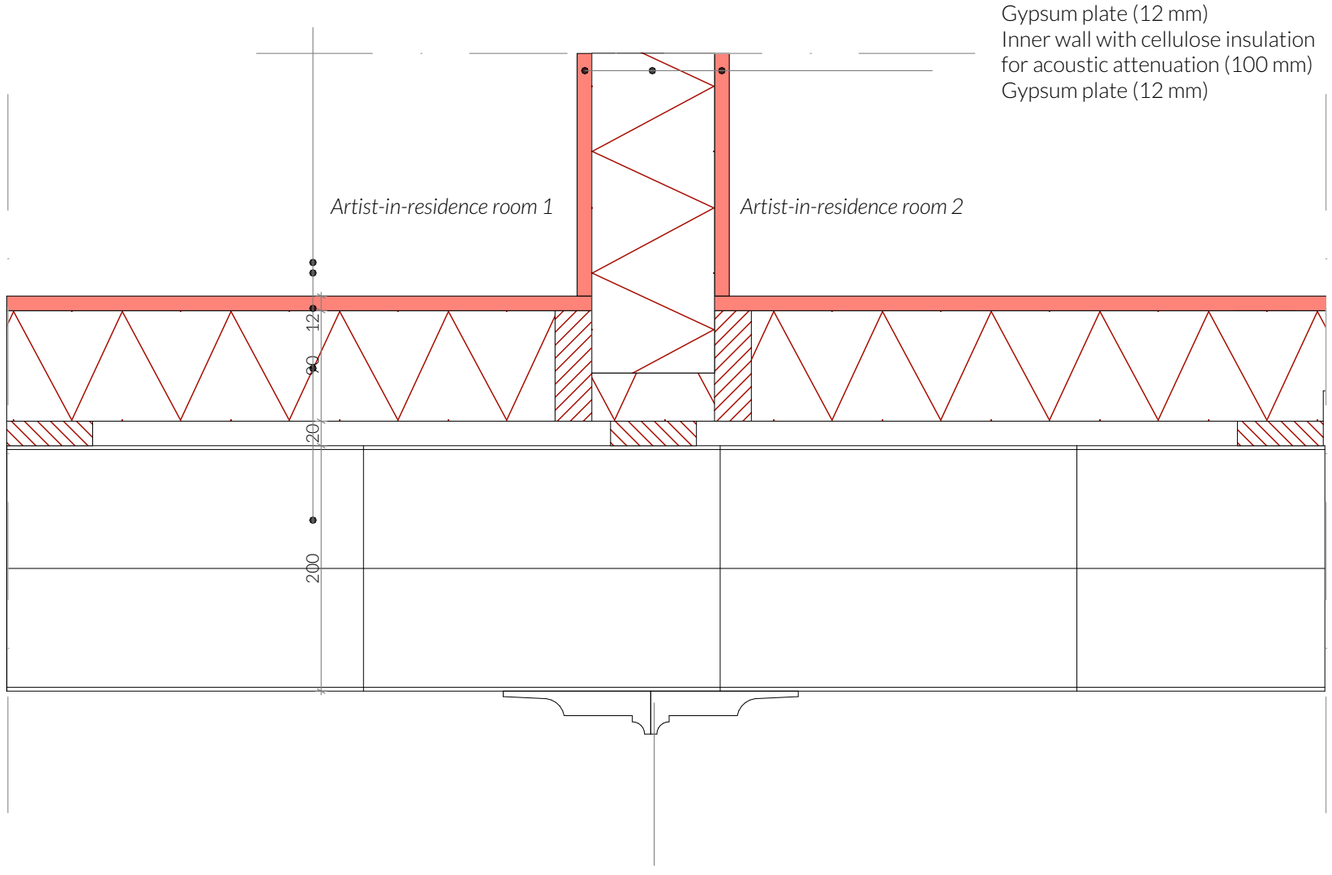




A3 Detail 1:5 | Monument-glas

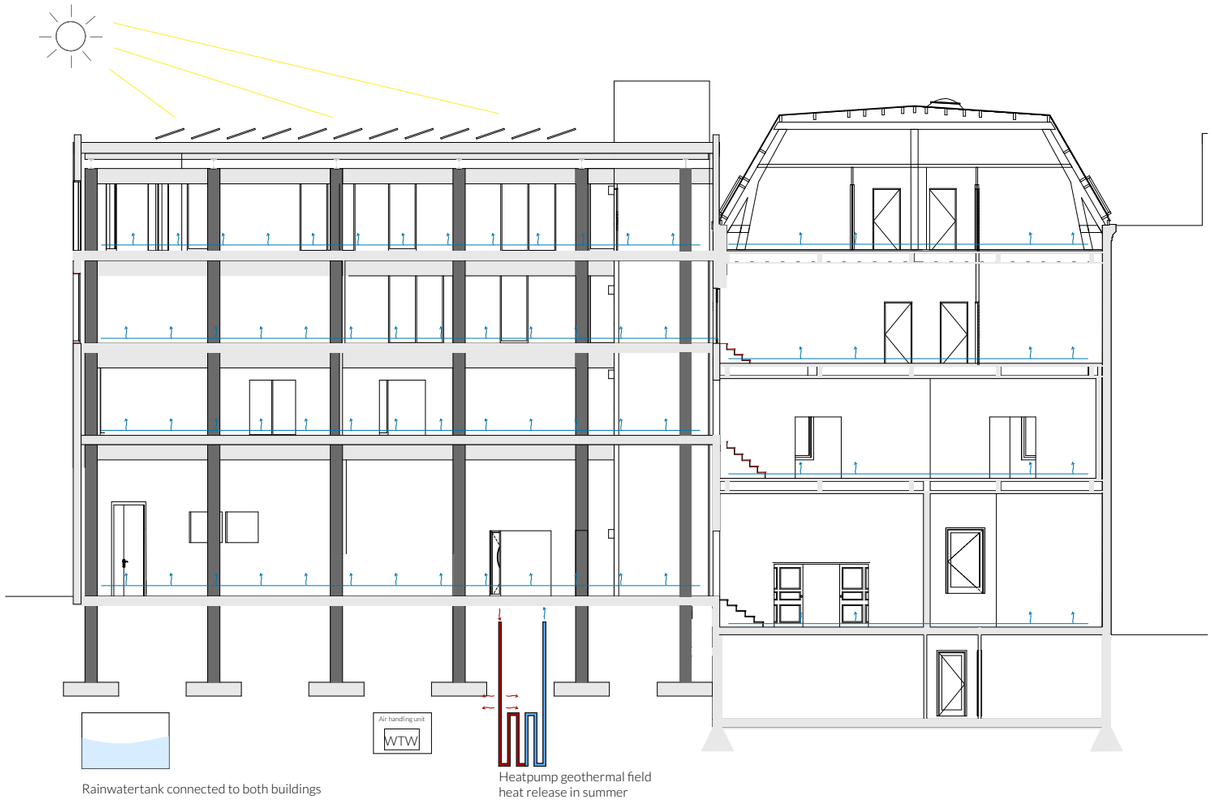
Wall building sequence
Existing structural brickwork (200 mm)
Air cavity (20 mm)
Spruce cavity batten
Retaining wall (W'all in One PG90)
filled with PIR Insulation (90 mm)
Vapor barrier
Finishing coat of gypsum plates (12 mm)

Wall building sequence
Gypsum plate (12 mm)
Inner wall with cellulose insulation
for acoustic attenuation (100 mm)
Gypsum plate (12 mm)



Horizontal detail 1:5

Climate Design



Section Climate principle Summer | 1:200

Section Climate principle Winter | 1:200

Mechanical ventilation in Molenpoort 1:200