

building d(emountable)



cepezed



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circular example project on own premises cepezed

Building D(emountable) is a modern, sustainable and fully demountable structure on the site of a historic, monumental building complex in the center of Dutch city Delft. This site is owned by cepezed, an agency with expertise in the development, the design and the realization of buildings.

creative cluster

cepezed acquired the complex with former laboratories from Delft University of Technology in 2012. It transformed the monumental buildings into a creative cluster with housing for various companies in the creative sector, including the office itself. However, the only non-monumental building on the site was in poor condition. It has now made way for the new construction of Building D(emountable). Again, this is a full-blown own development of cepezed and again it is intended for companies in the knowledge-intensive creative industry. It houses a the app and website developer 9to5 software and a game developer Triumph Studios.

circular prototype

The Netherlands has set itself the goal of rendering all construction activities fully circular by 2050, while cepezed has a long reputation for modular and demountable design and construction. Moreover, director Menno Rubbens of developer cepezedprojects is part of the national program committee to achieve the national circularity goals. Partly for those reasons, Building D(emountable) also had to become an example project on cepezed's own grounds. Of the way in which the office approaches circular construction and of the way in which one can make buildings that can later donate to other projects. Or even be reused elsewhere in their entirety.

lightweight, flexible and gas-free

Building D(emountable) has exactly the same footprint as the existing building that was no longer good and was demolished. It measures 11 by 21.5 meters and has four floors of about 200 square meters of lettable floor area each. In addition to being demountable and remountable, the structure is also super lightweight: the use of materials is kept to an absolute minimum. The building is also completely flexible in its arrangement, has no gas connection and is equipped with heat recovery. The ground floor is made of poured concrete, but otherwise all building components are modular and dry mounted. Supreme simplicity has been an important principle in the design.

steel, wood and glass

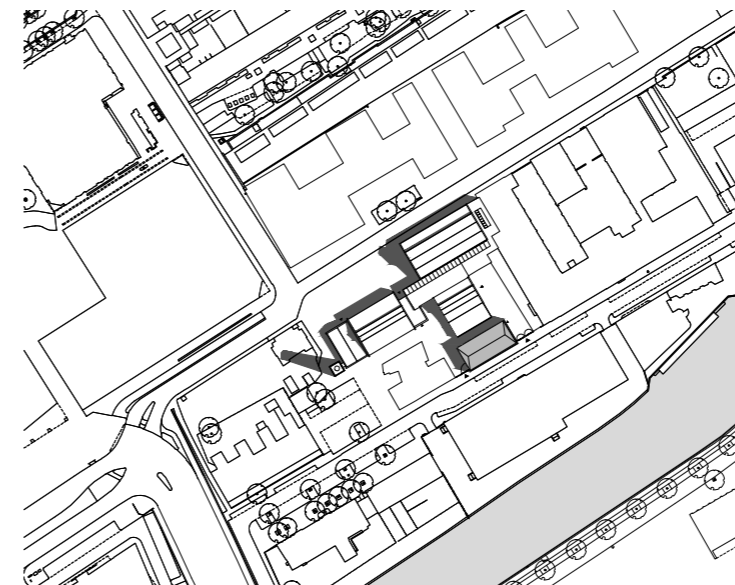
Building part D(emountable) consists of a rationally optimized building kit with a steel, prefabricated and extremely slender main supporting structure. The structural floors and roof are made of lightweight wooden Laminated Veneer Lumber (LVL) elements that are also prefabricated. These have a compact height and the installations are integrated in them. The ribs of the LVL elements remain fully visible and are part of the building's aesthetics. The screed is biobased and consists of gravel-like granules in a cardboard honeycomb structure with gypsum fiber boards on top. The entire screed is dry and easily removable again. The PVC finishing floor is made of partly recycled PVC. The building has no window frames: the double-layer insulating glass is mounted directly on the steel structure. For that reason, the steel construction is provided with welded screw profiles. The steel builder had to comply with the very limited tolerances of the façade builder, which was no small task. The façade is largely transparent, which makes for strong sight lines and relations between the inner and outer world. Vertical slat strips can be opened for natural ventilation. The down-to-earth, modern building strikingly and interestingly contrasts with the historic existing buildings. This also renders it illustrative for the way cepezed approaches the combination of new and historic construction.

climate

The entire building functions as one large fire compartment. As a result, little material was required for fire-resistant measures; only the stairwell has a fire-resistant partition. All climate control works on air. On each floor, air conditioners that also take care of heating are integrated in the ceiling. In addition, the building is equipped with a heat exchanger. Roller blinds provide sun and light protection.

integral process

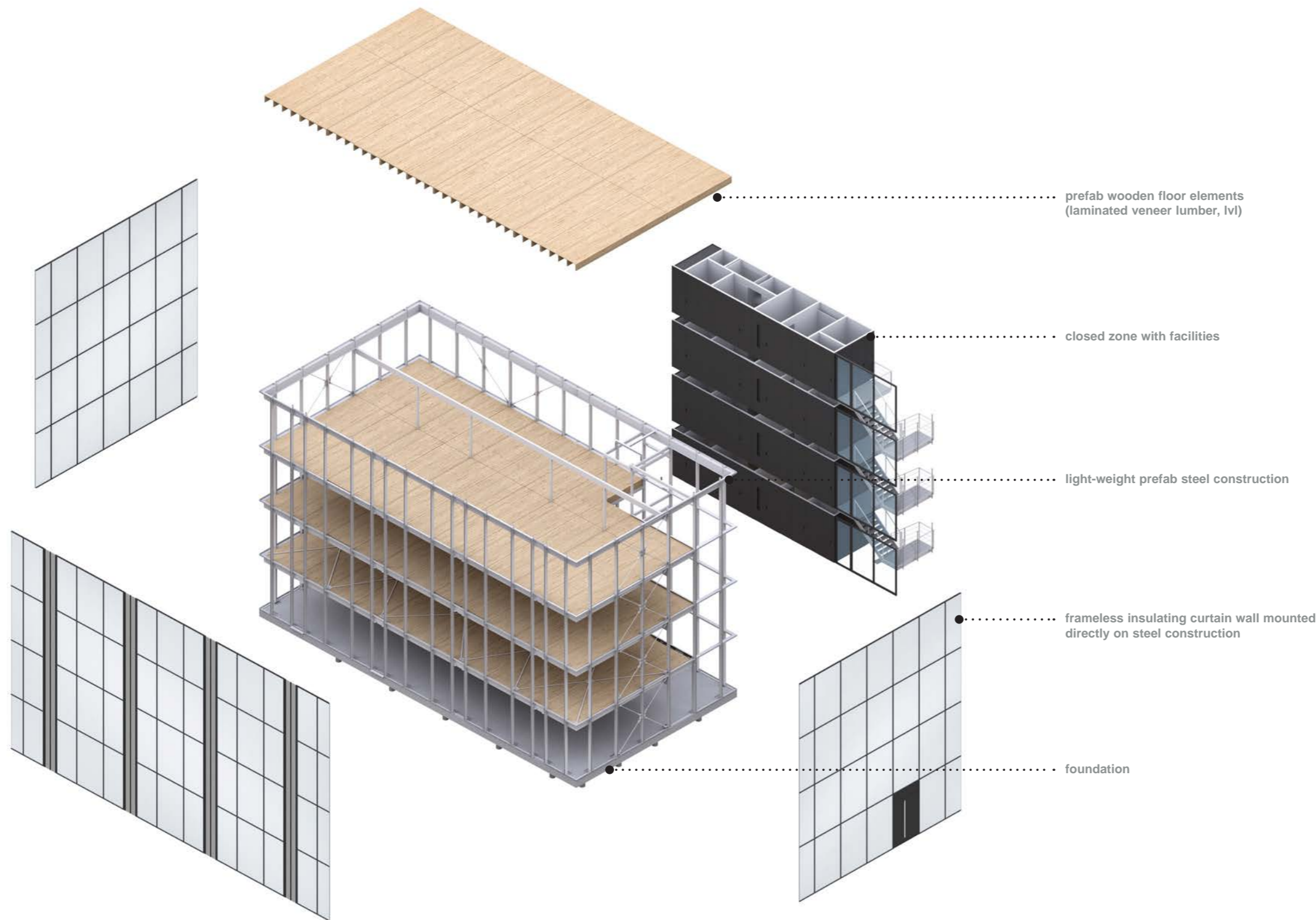
Construction took place in an extremely short period of just over half a year. With the positioning of the elevator shaft, the building even topped out in an hour after the works started. The complete structure of steel skeleton and wooden floors was put together in three weeks. This was possible, among other things, because of an integrated process with thoughtful prepa-



site

cepezed

kit-of-parts



ration and close, integrated cooperation between the various cepezed disciplines; from the project developers to the architecture and interior designers and of course the implementation coordinators. With short communication lines, all specialists are housed under one roof, which has not only improved the efficiency of the process, but also the level of coordination and thus the quality. cepezedprojects developed, cepezed and cepezed interior designed and cepezedbouwteam coordinated the construction. There was a close collaboration between the designers and the construction coordinator throughout the complete process, with key figures from the design also being part of the implementation team.

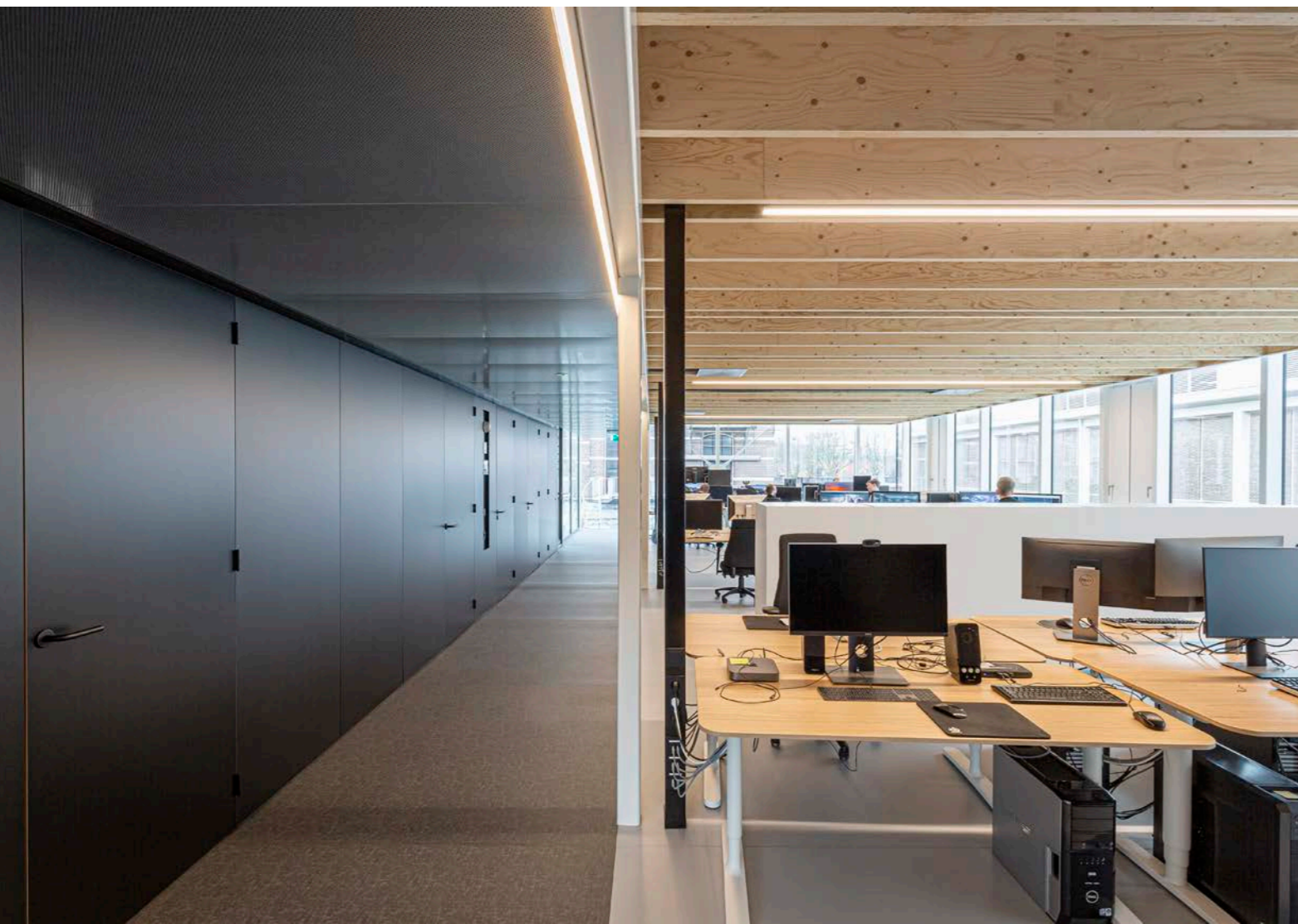
The cooperation with the external partners is also worth mentioning. With a lot of these, cepezed also often collaborates on other projects. As a result, all parties were already well attuned to each other. For example, the structural advice was provided by IMd and the advice in the fields of installations, building physics and fire safety was provided by Nelissen. The realization was tendered out to various parties such as Voortman, Metsä Wood, iFS, Kuijpers and Qbiq + Schelp Bouw & Interieur for respectively the steel construction, floors, facades, MEP/HAVAC and the fit-up package. This pragmatic approach meant that the implementing parties only had to concentrate on their own expertise. In terms of time, use of materials and financially, this has resulted in a high degree of efficiency.

example at home

With circular projects such as the Temporary Courthouse in Amsterdam and restaurant The Green House in Utrecht, cepezed previously realized other projects completely designed for circularity. These garnered a lot of publicity and various prizes, such as the Amsterdam Architecture Prize and the public award of the Sustainable Building Awards. With Building Part D (removable), cepezed now has a circular example of its own manufacture directly at home. Customers and partners only have to look out the window to see how cepezed shapes circularity.



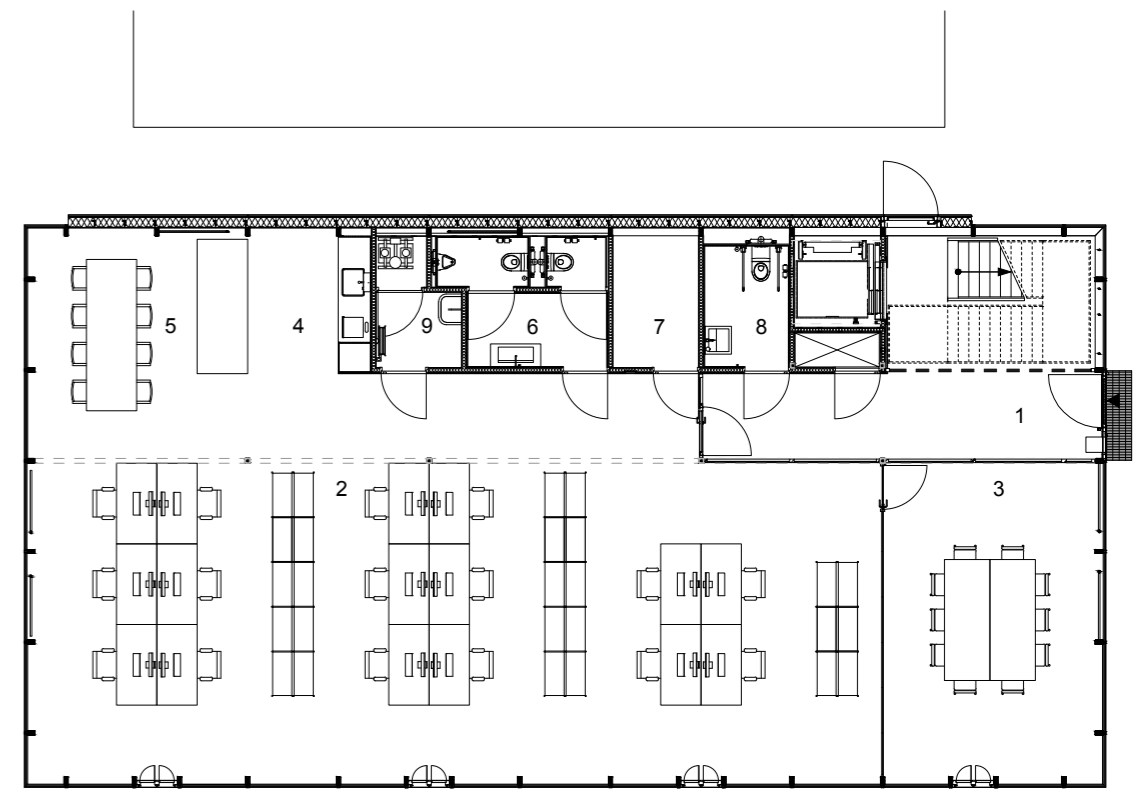




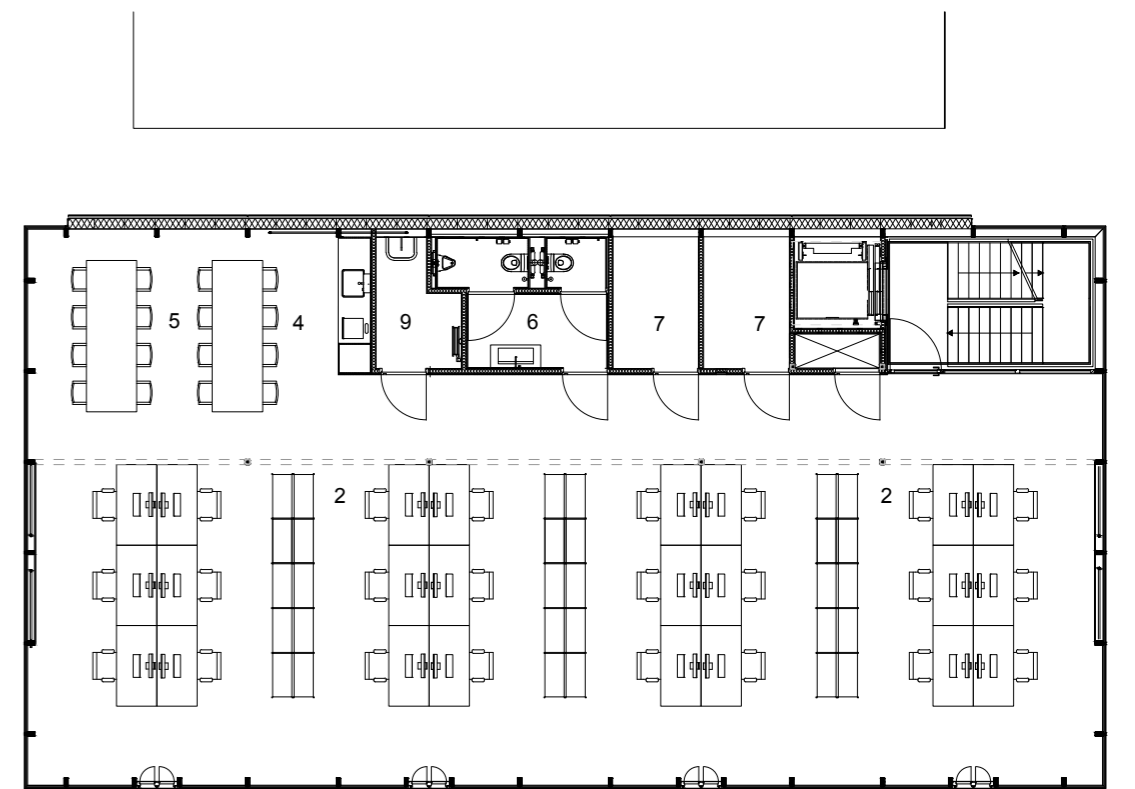
floor plans

1:150

1. entrance hall
2. office space
3. meeting room
4. pantry
5. lunch space
6. toilets
7. storage space
8. accessible toilet
9. utility room

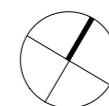


begane grond

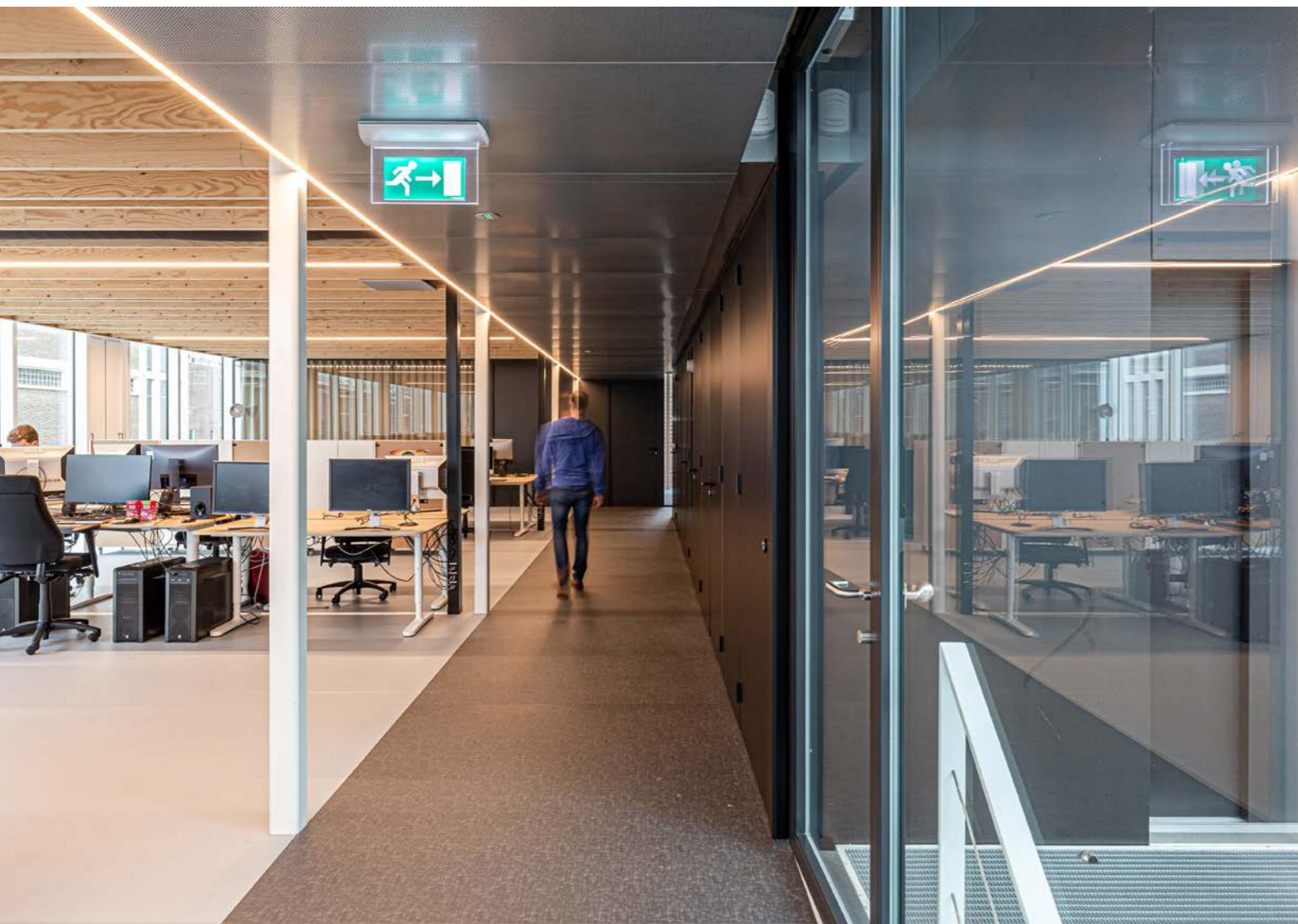


1e verdieping

0m 5m



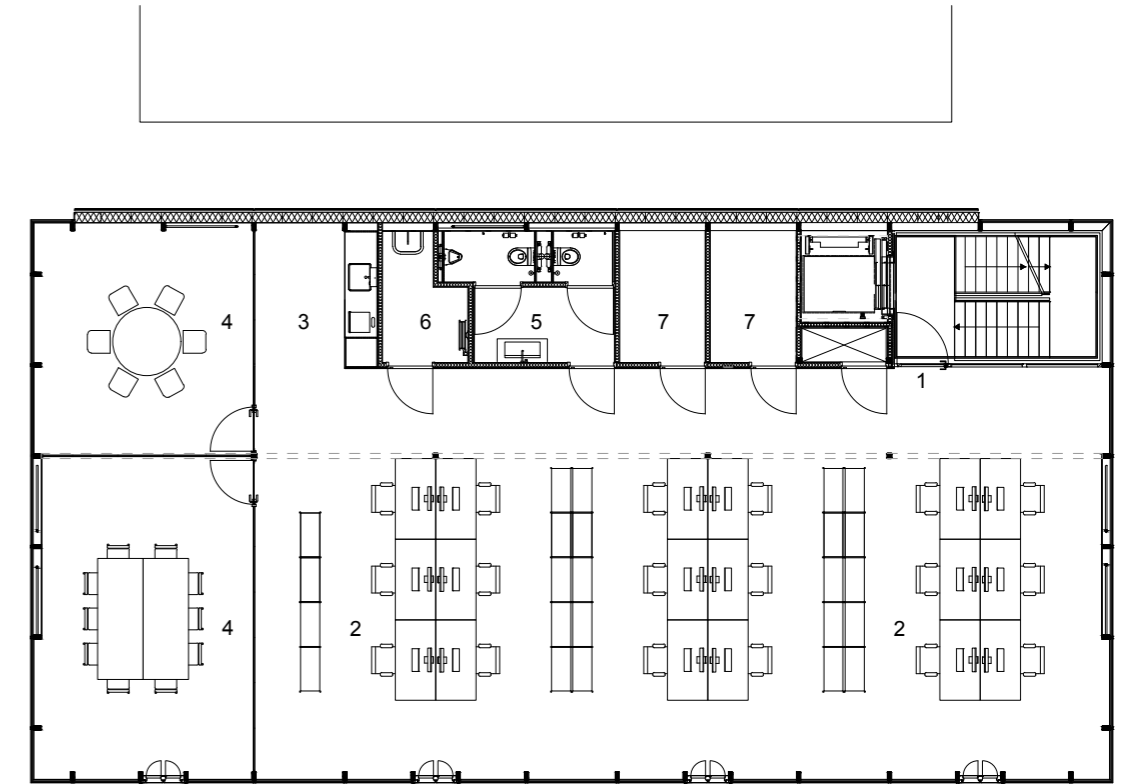
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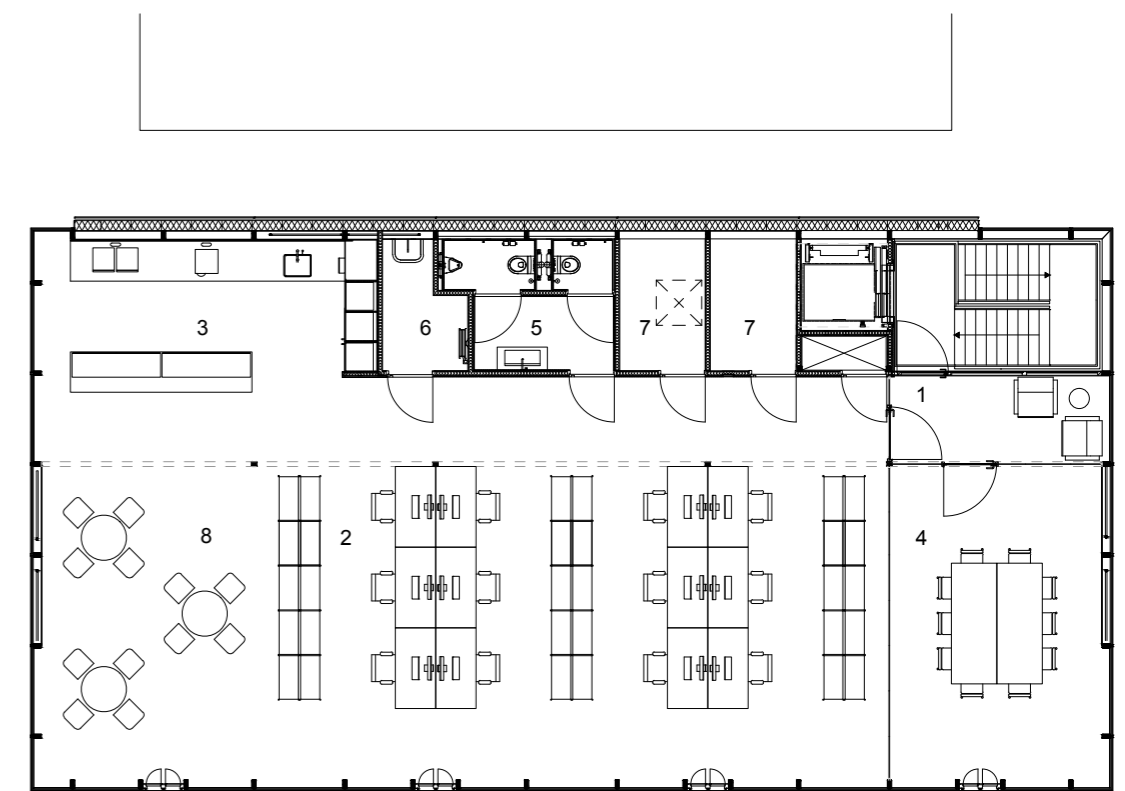
floor plans

1:150

- 1. entrance
- 2. office space
- 3. pantry
- 4. meeting room
- 5. toilets
- 6. utility room
- 7. storage room

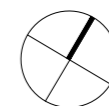


2e verdieping



3e verdieping

0m 5m

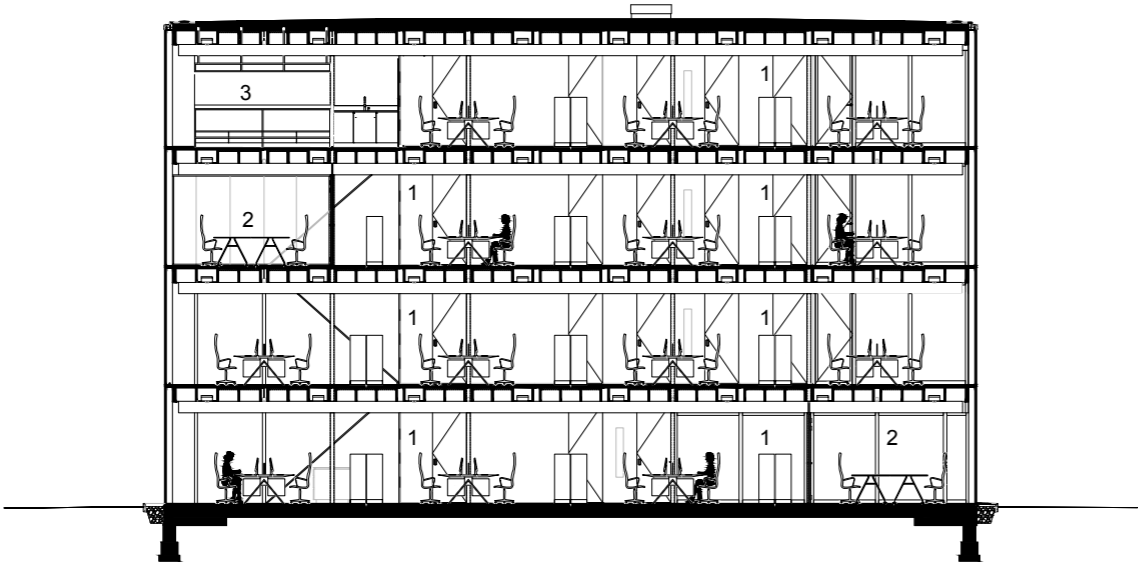


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sections

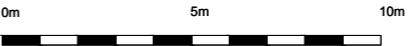
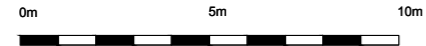
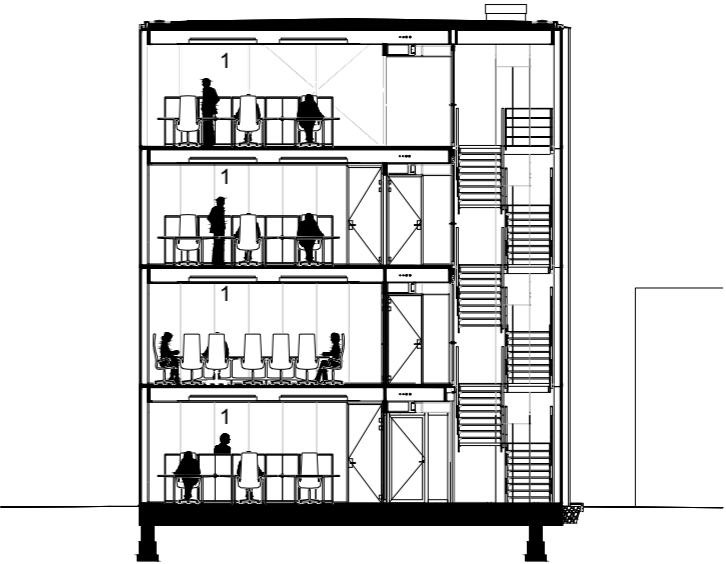
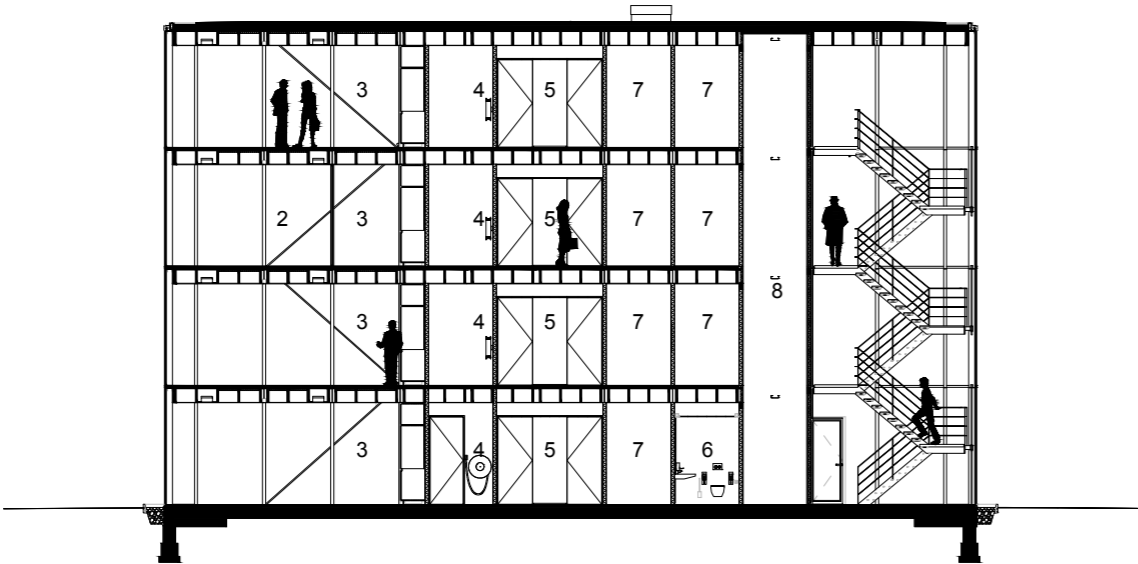
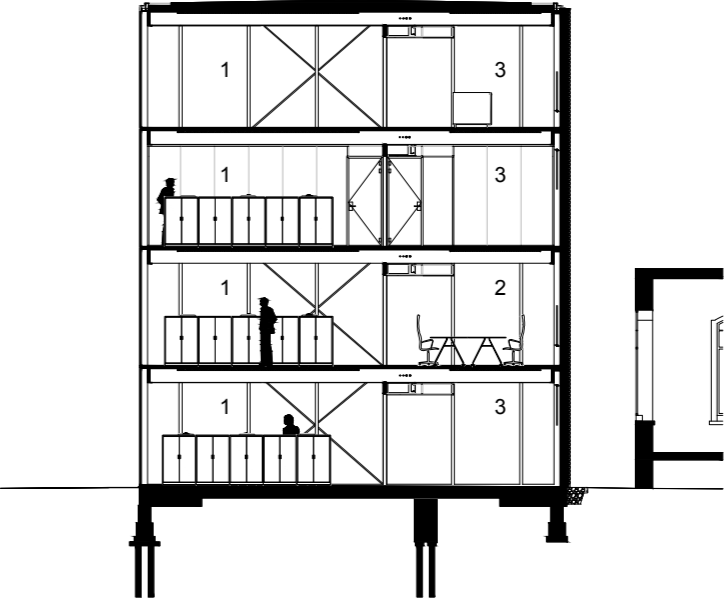
longitudinal sections
1:200

- 1. office space
- 2. meeting room
- 3. pantry
- 4. utility room
- 5. toilets
- 6. accessible toilet
- 7. storage space
- 8. technical shaft



cross sections
1:200

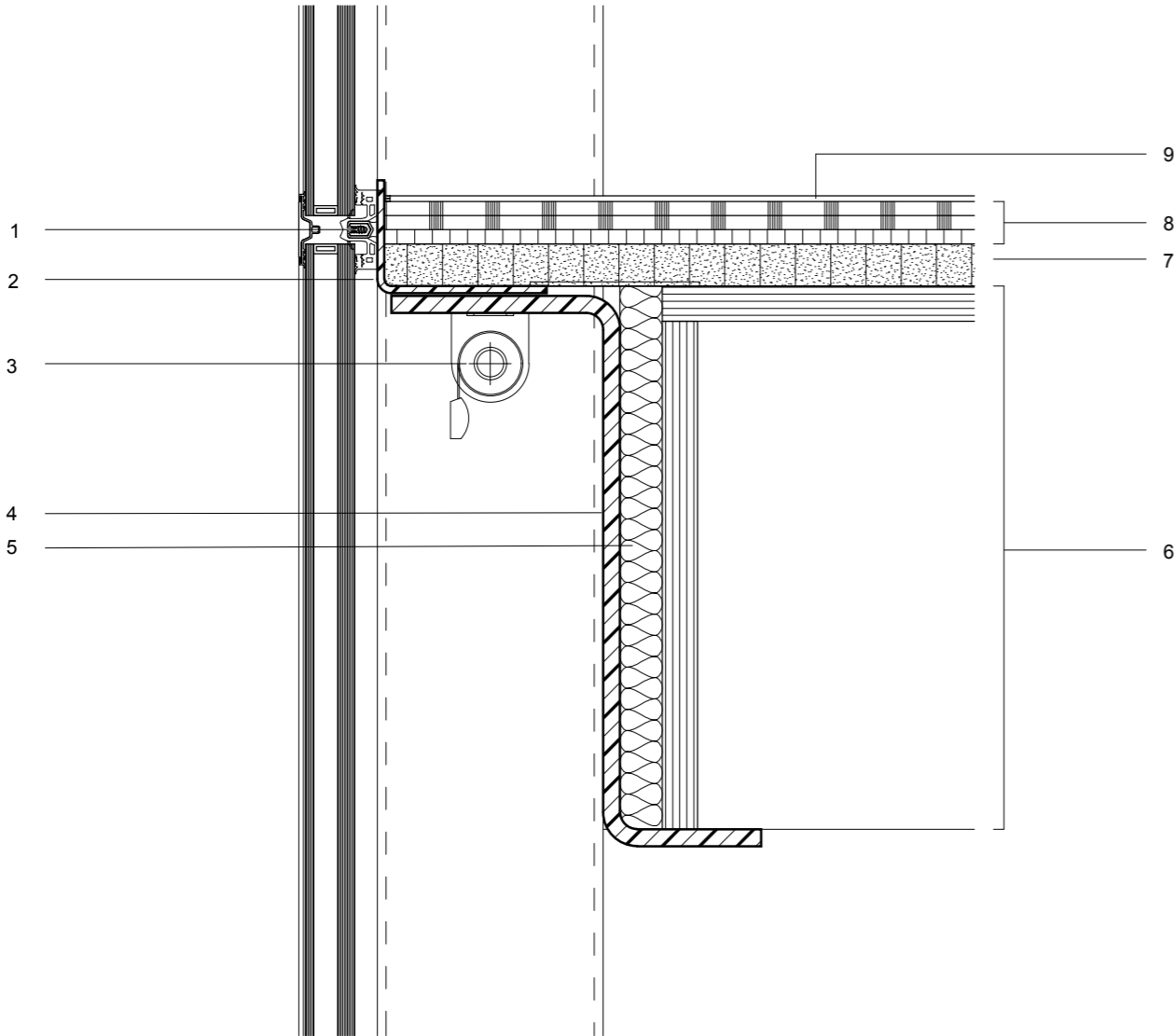
- 1. office space
- 2. meeting room
- 3. pantry



vertical façade detail

1:5

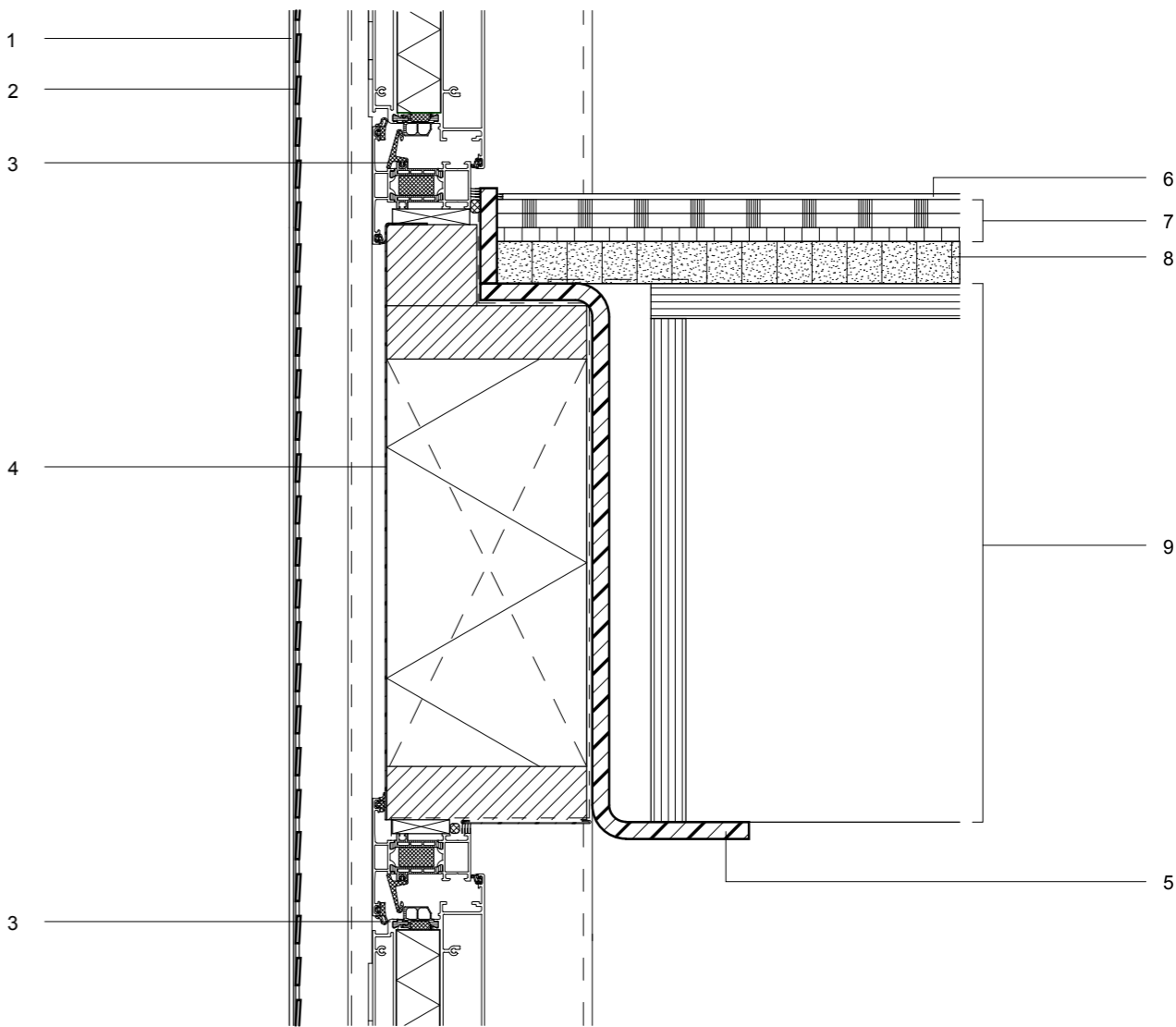
- 1. curtain wall system, welded to steel structure
- 2. folded sheet metal mullion, adjustable
- 3. roller blind
- 4. folded sheet metal beam
- 5. rock wool
- 6. prefabricatedLVL(laminated veneer lumber) floor element
- 7. cardboardhoneycombfilledwithdry levelling compound, 30mm
- 8. gypsum fiber composite floor element, 30 mm
- 9. pvc floor finishing



vertical window detail

1:5

- 1. curtain wall profile in view
- 2. metal profile grating mounted on window frames
- 3. aluminium window
- 4. coated sheet metal
- 5. folded sheet metal beam
- 6. pvc floor finishing
- 7. gypsum fiber composite floor element, 30 mm
- 8. cardboardhoneycombfilledwithdry levelling compound, 30mm
- 9. prefabricatedLVL(laminated veneer lumber) floor element

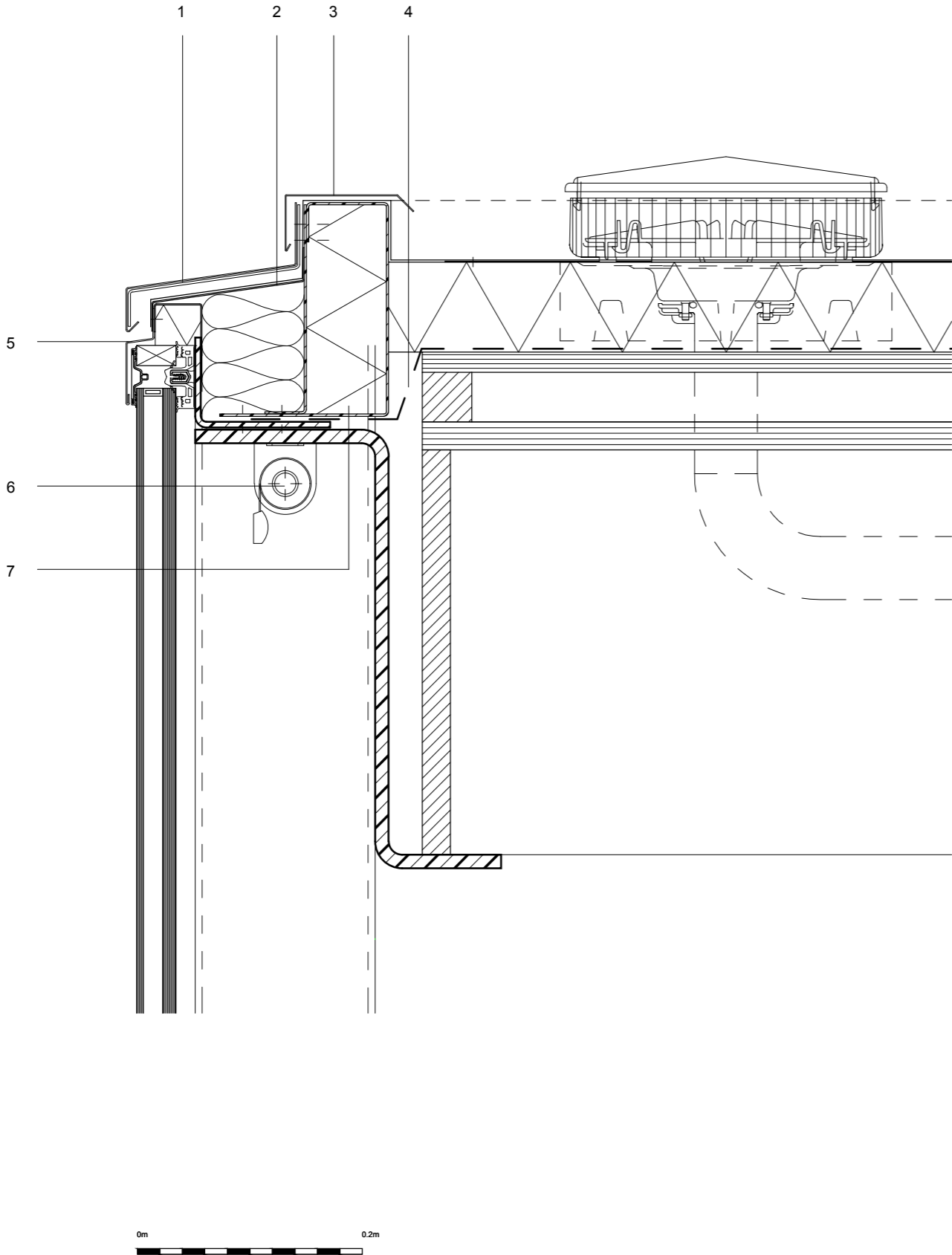




vertical roof edge detail

1:5

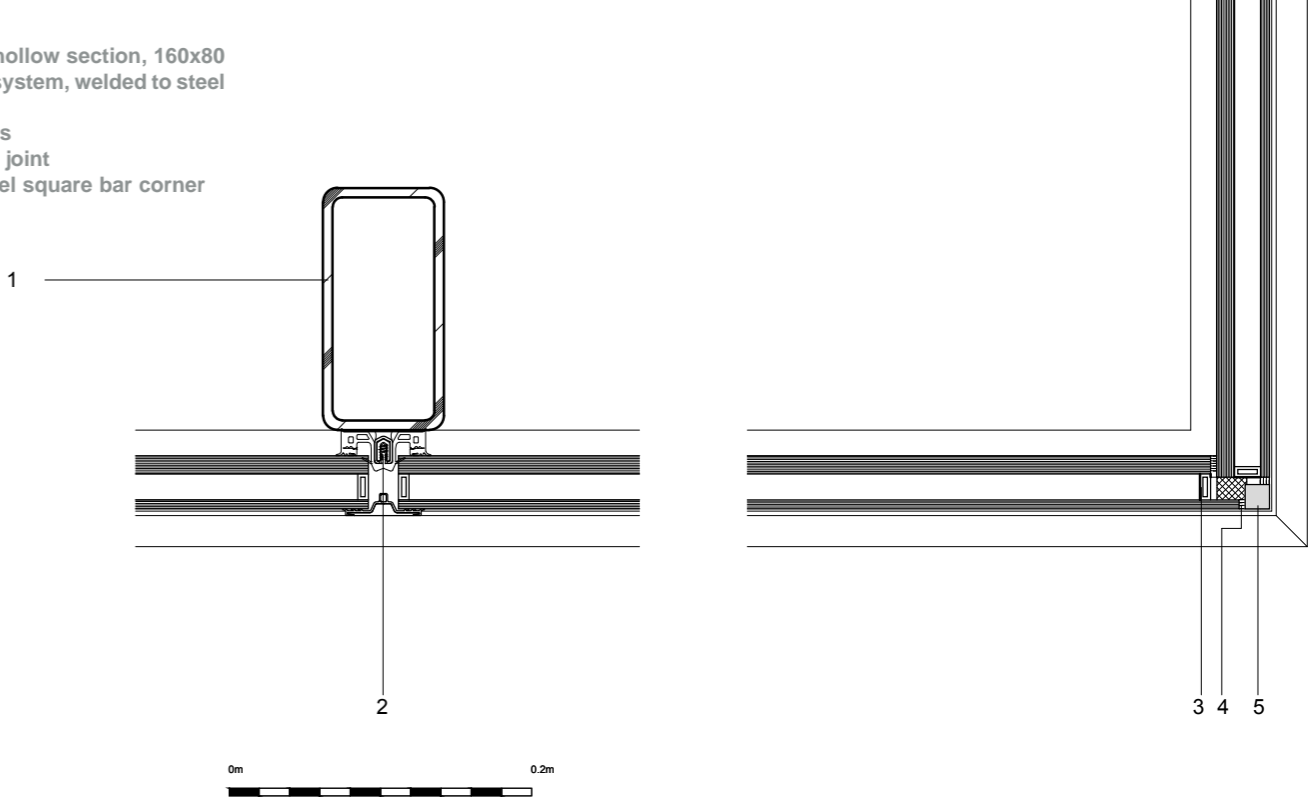
- 1. folded sheet metal cover profile
- 2. roofing extended across roof curb
- 3. folded sheet metal cover profile
- 4. vapor seal
- 5. folded sheet metal finishing profile
- 6. roller blind
- 7. folded sheet metal roof curb)



horizontal façade detail

1:5

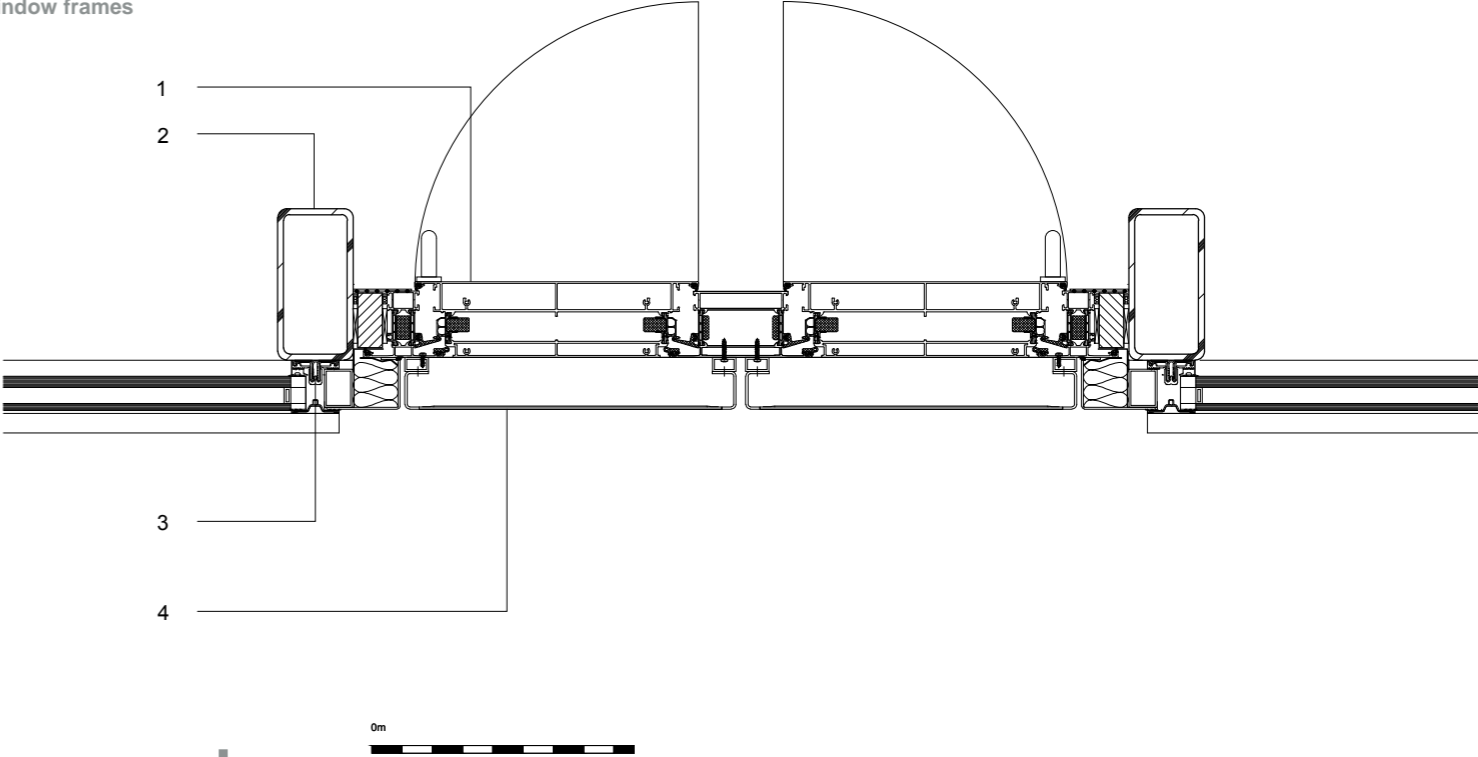
- 1. rectangular hollow section, 160x80
- 2. curtain wall system, welded to steel structure
- 3. black spacers
- 4. black silicon joint
- 5. stainless steel square bar corner protection

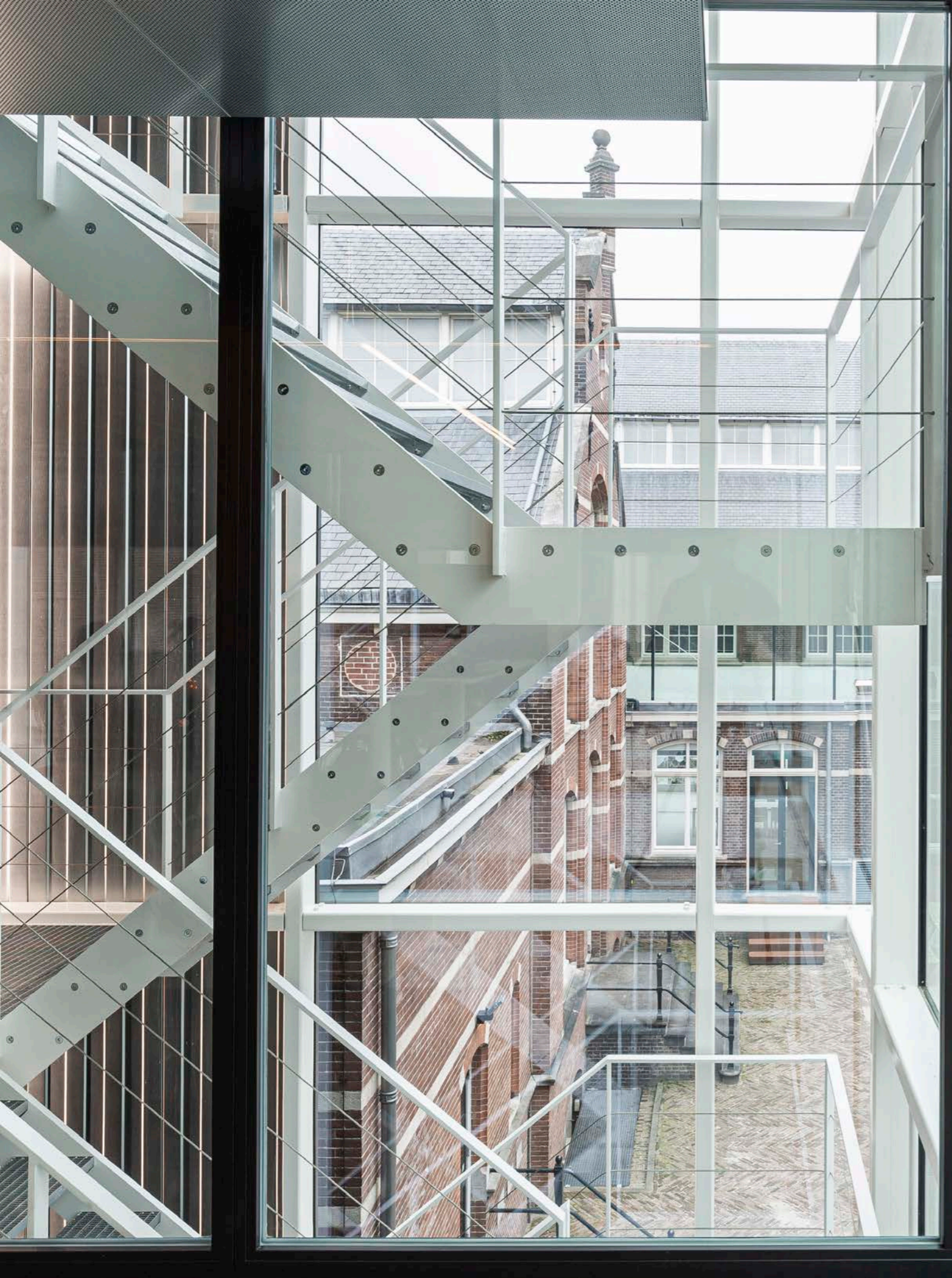


horizontal window detail

1:8

- 1. aluminium window for natural ventilation
- 2. rectangular hollow section, 160x80
- 3. curtain wall system, welded to steel structure
- 4. metal profile grating mounted on window frames

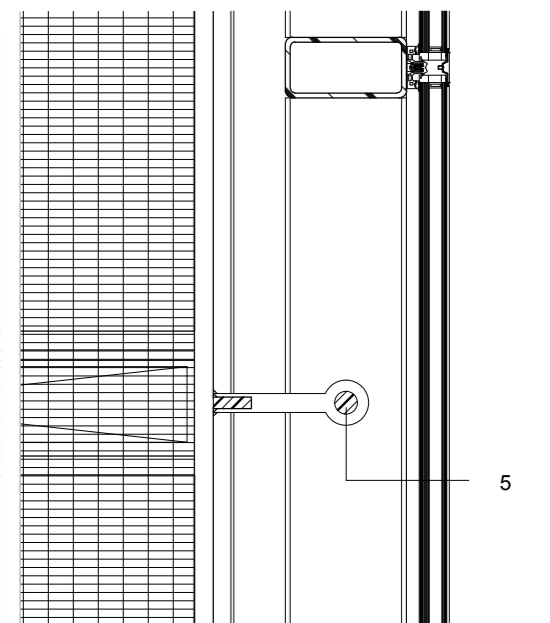
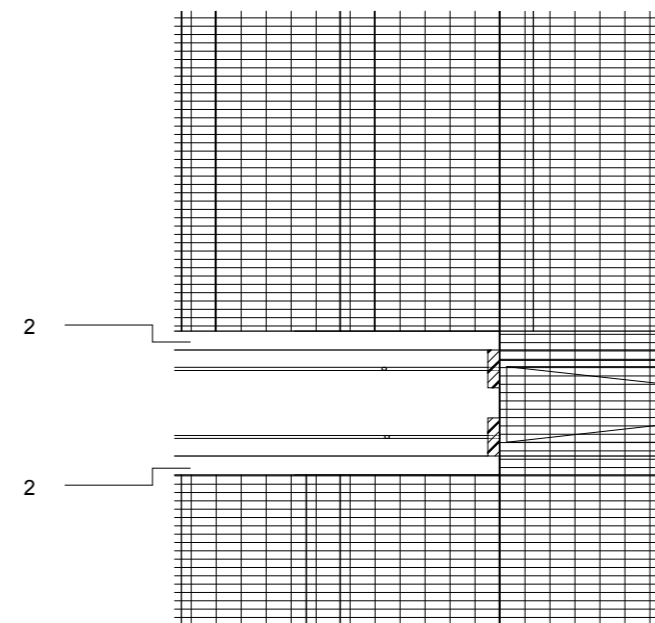
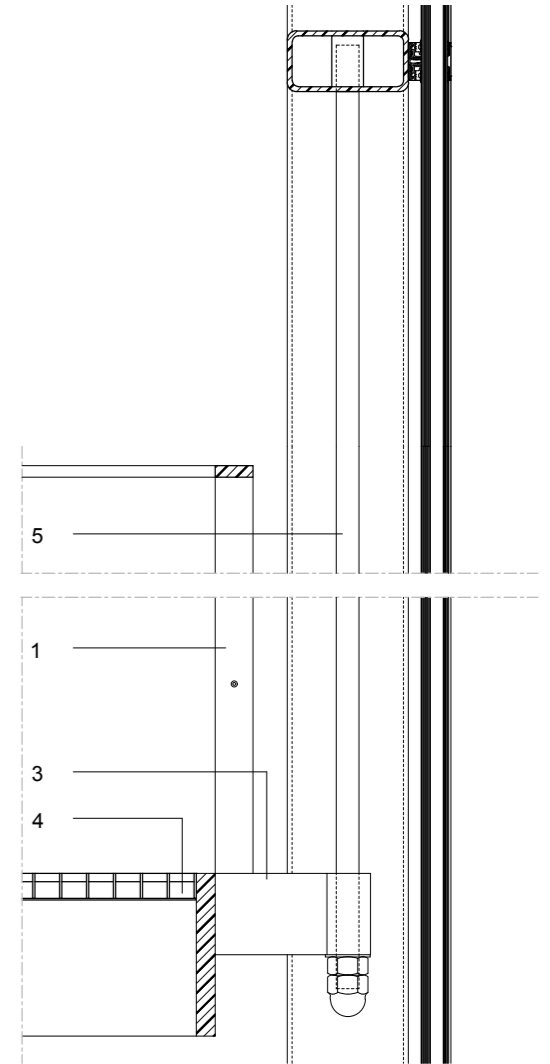
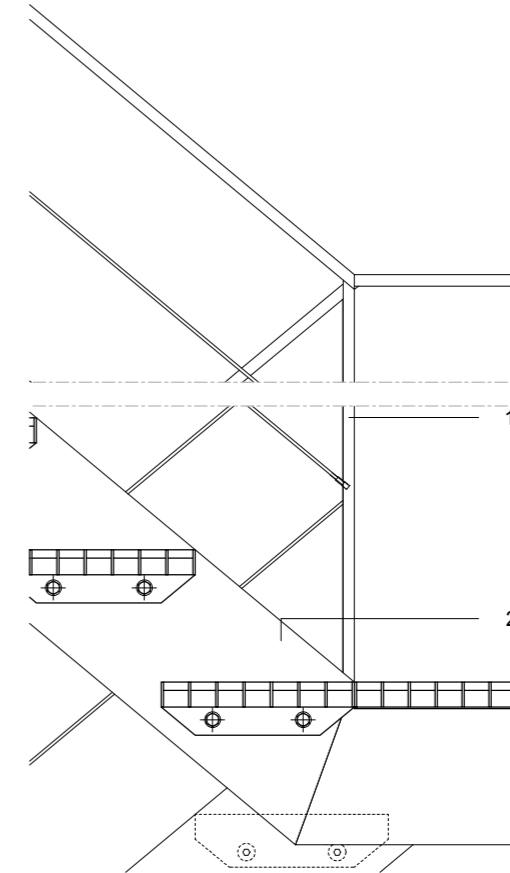




stairs and balustrade

1:10

1. steel flat bar balustrade with stainless steel tension wires
2. solid steel stringer
3. stringer console
4. galvanised steel grating (landing)
5. suspension rod



0m 0.5m

cepezed

colophon

project

building d(emountable)

project address

Nieuwelaan 72 , Delft, Netherlands

client

Jan Pesman

project development

cepezedprojects, Delft

architect

architectenbureau cepezed, Delft

interior design

cepezedinterieur, Delft

structural engineering

IMd Raadgevende Ingenieurs, Rotterdam

consultant mechanical & electrical engineering, consultant building physics, sustainability, acoustics and fire safety

Nelissen ingenieursbureau, Eindhoven

construction coordination

cepezedbouwteam, Delft

contractor steel construction

Voortman Steel Construction, Rijssen

contractor electrical and mechanical installations

Kuijpers Utiliteit Midden-Noord B.V, De Meern

wood flooring

Metsä Wood / De Groot Vroomshoop

contractor glass façades

iFS Building Systems, Waddinxveen

contractor roof

Roof Protection, Arkel

stairs

EeStairs, Barneveld

contractor ceilings and custom interior walls

Schelp Bouw & Interieur, Eersel

wall systems

Qbiq, Alphen aan de Rijn

pantries

AS Projectinrichters, Poeldijk

project duration

September 2016 – December 2019

building area / plot area

968 m² gfa / 242 m²

photography

Lucas van der Wee | cepezed

drawings

architectenbureau cepezed

note for the editor

For high resolution images and/or more information on the project please contact Dicky Meijer, public relations;
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www.cepezed.nl