

Mijnbouwstraat

Structural Design

BG6781-RHD-XX-XX-PP-S-0001

Project related

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Mijnbouw

- Former Mining Faculty
- Built from 1908-1910
- National Monument
- 4000 wooden piles
- Masonry walls up to 660 mm thick
- Concrete floors (one of the earliest in NL)
- In combination with wooden floors
- Composite steel beams and columns

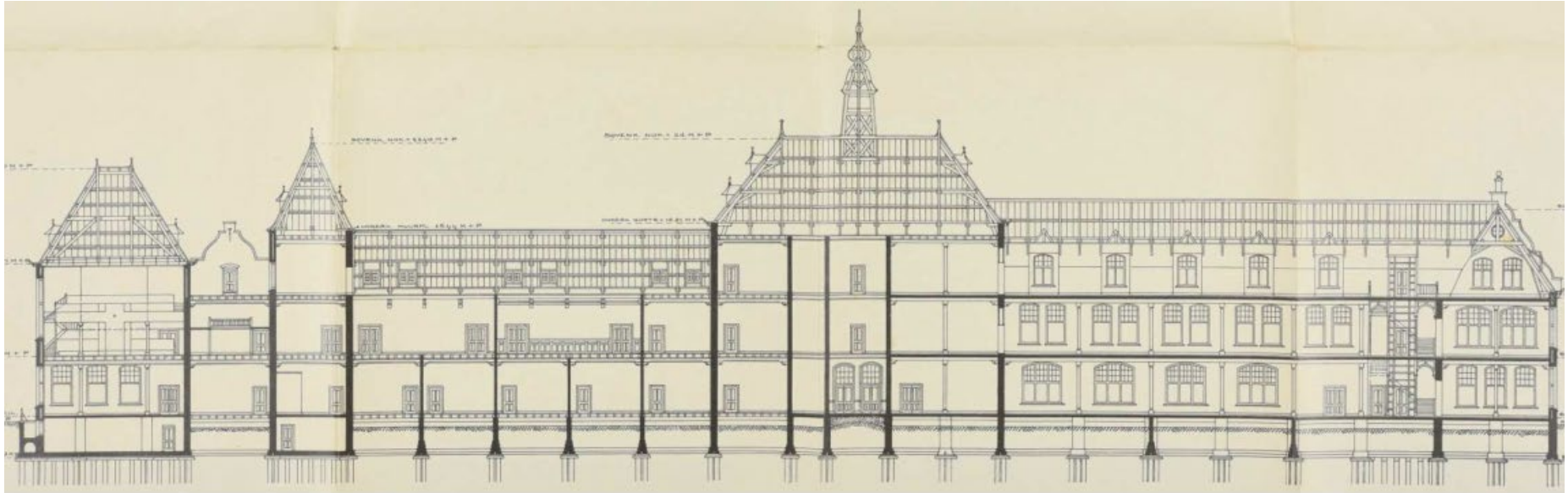


History

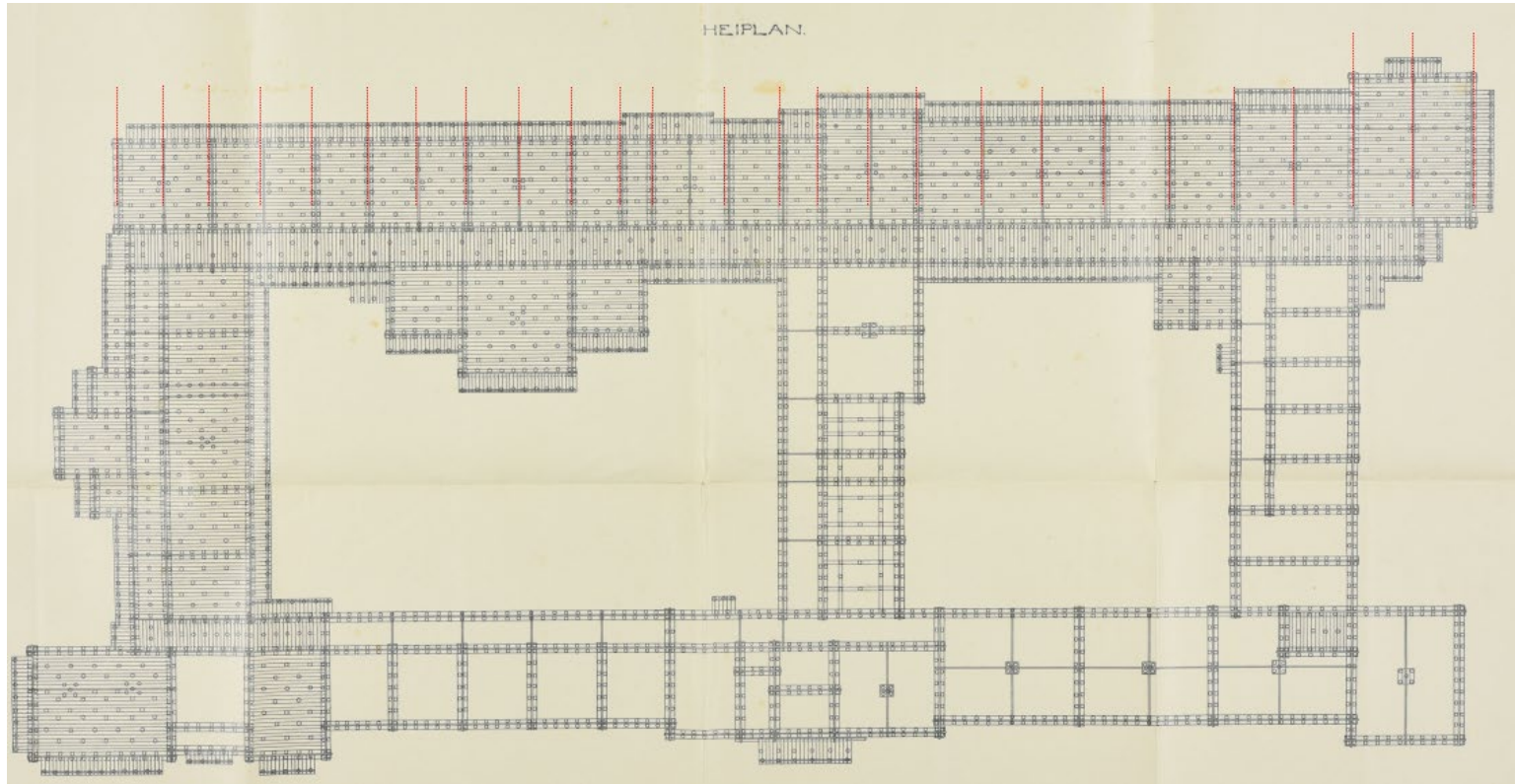


De westelijke open plaats in gebruik als tabaksplantage, ca. 1945. Bron: Gedenkboek 1992.

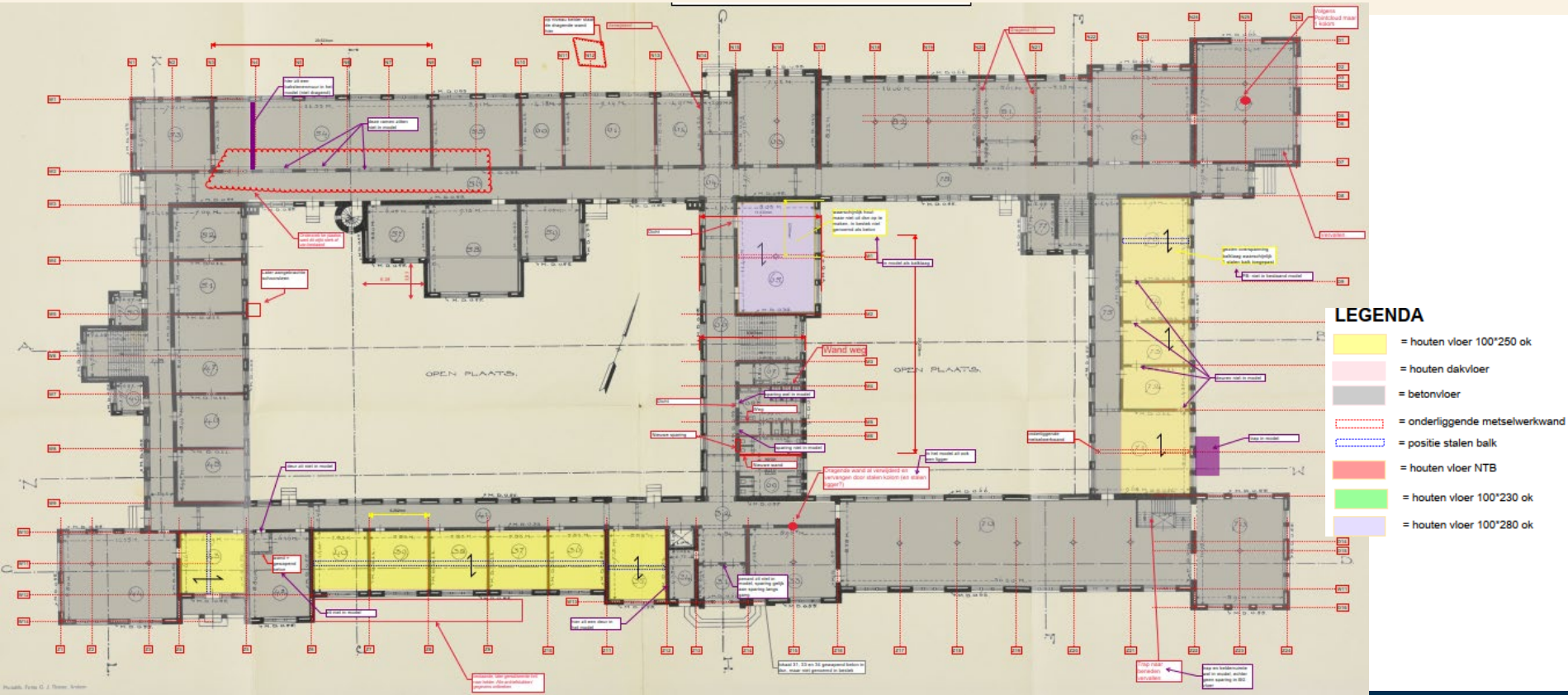
Typical cross section



Pile plan



Floor plan ground floor + notes inspection

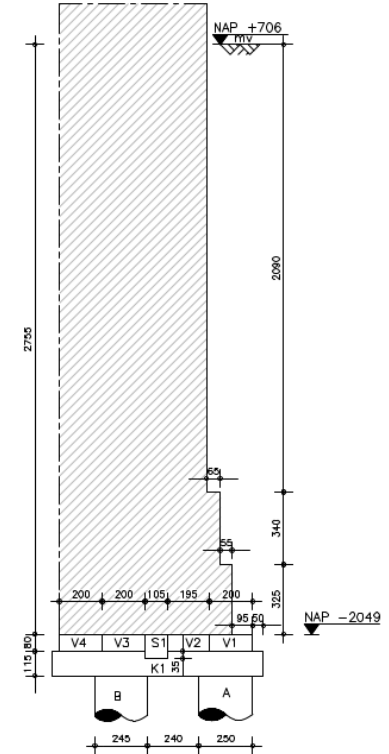


Research

- Archive: 8 drawings and specifications (bestek)
- Point cloud model
- Wareco inspection foundation



Overzicht inspectiegat

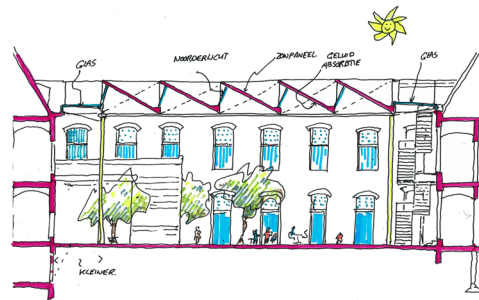
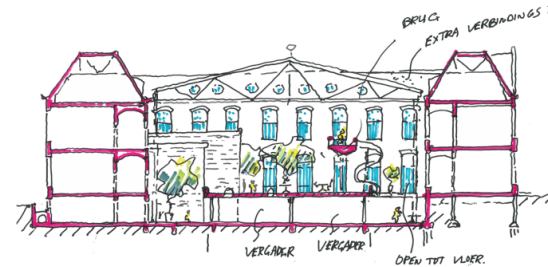


New roof structure atriums – Variant studies

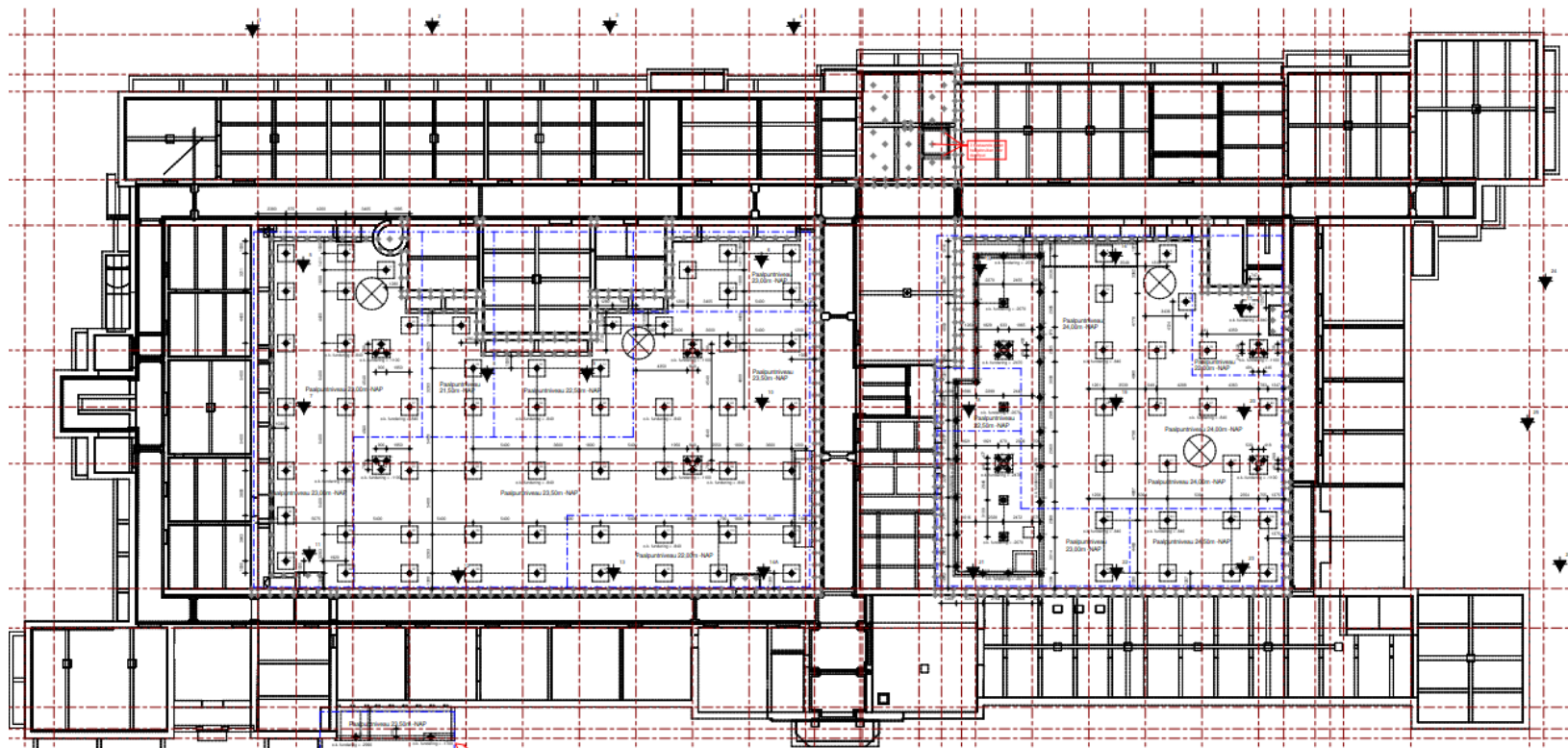
- Building was missing large spaces
- Façade courtyard became inside
- Towers and roof had to remain visible



Mogelijke Nieuwe Situatie - Principedoorsnede over Atrium

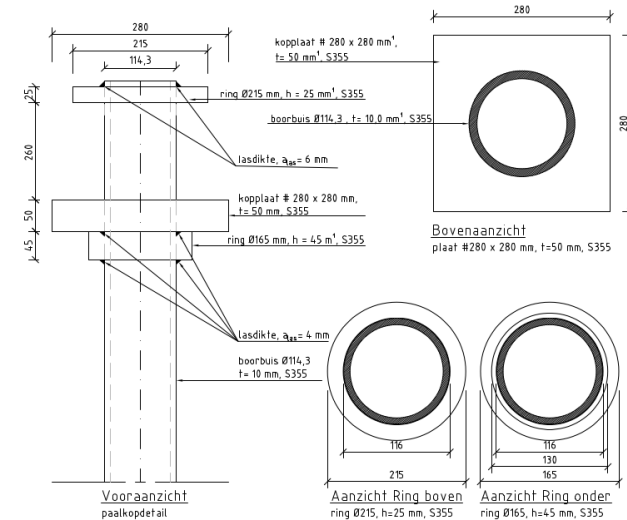
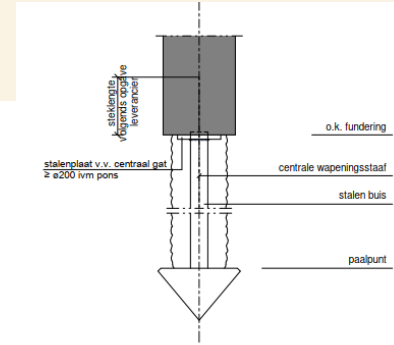


Foundation - new

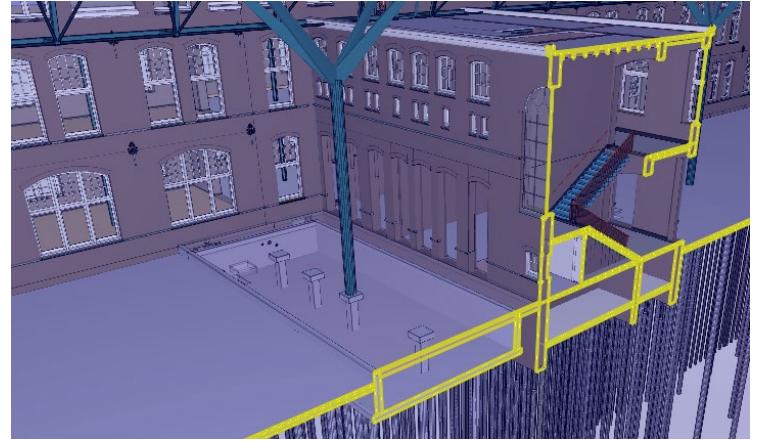
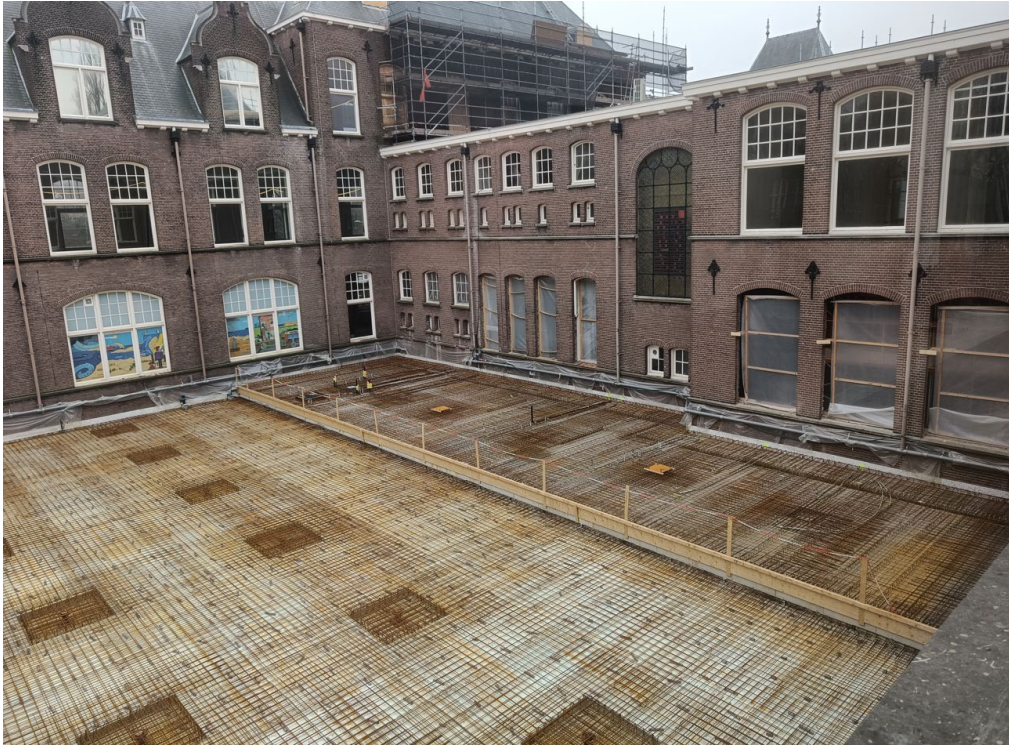


Foundation

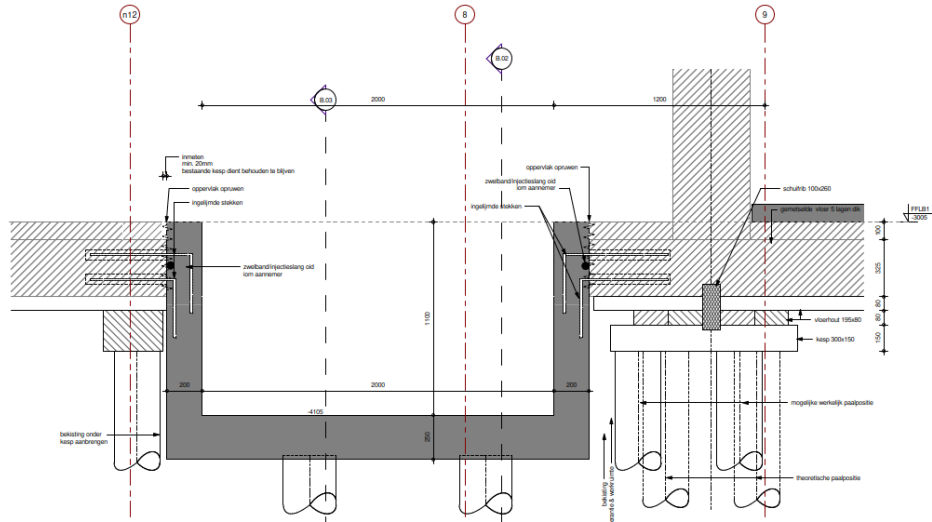
- Schroefinjectiepaal (screw injection pile) De Waal
- Steel tubes of 1 meter
- Supervision on reaching sand layer



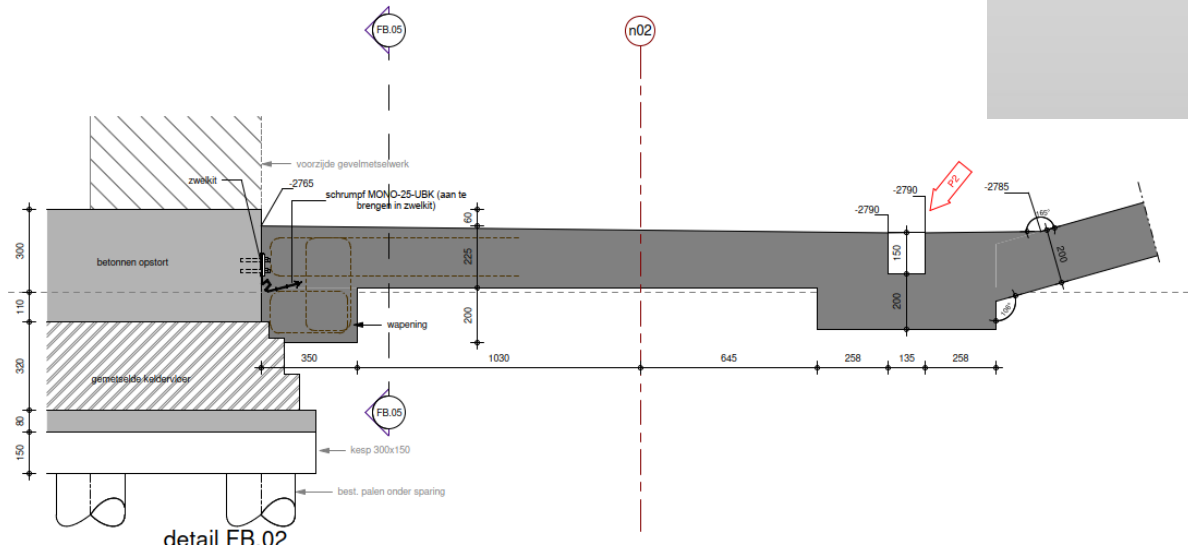
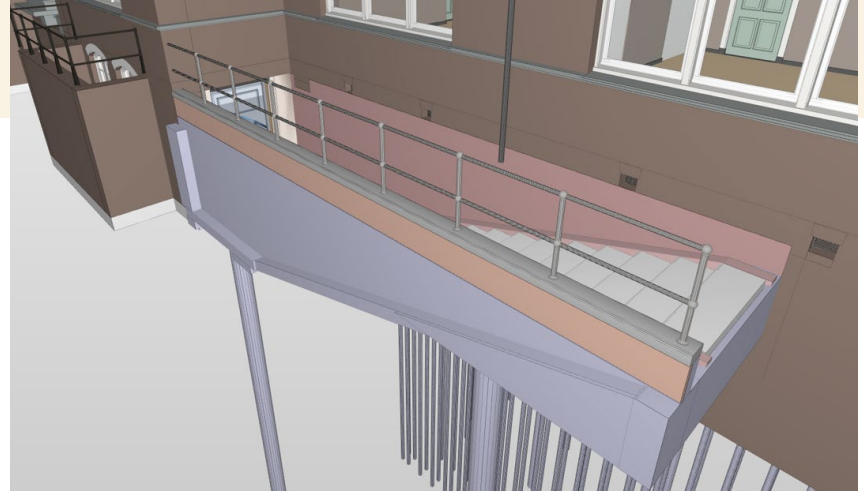
Courtyard east



Elevator pit



Bicycle ramp



Wood decay



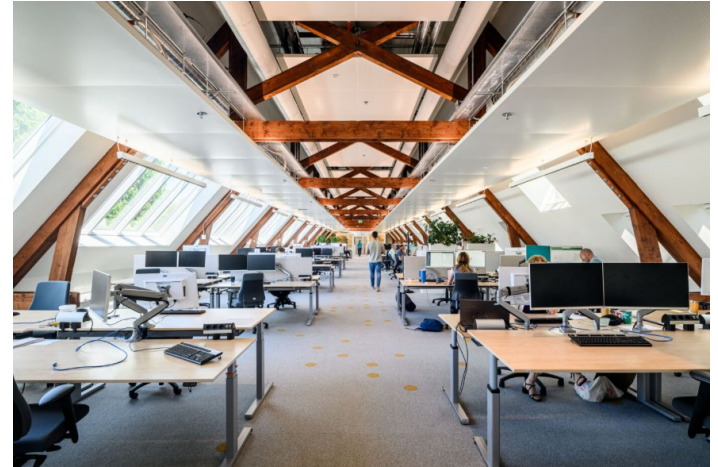
Ruimte 2B Kelderzwam



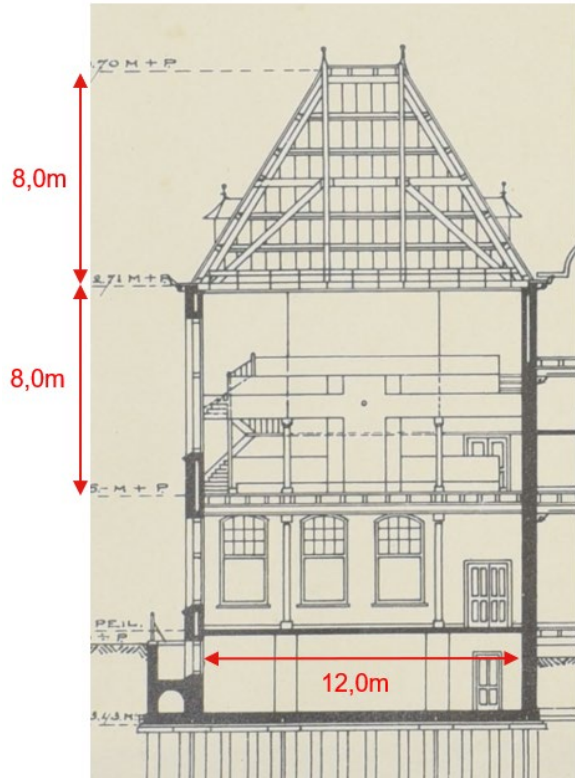
Ruimte 2A Kelderzwam



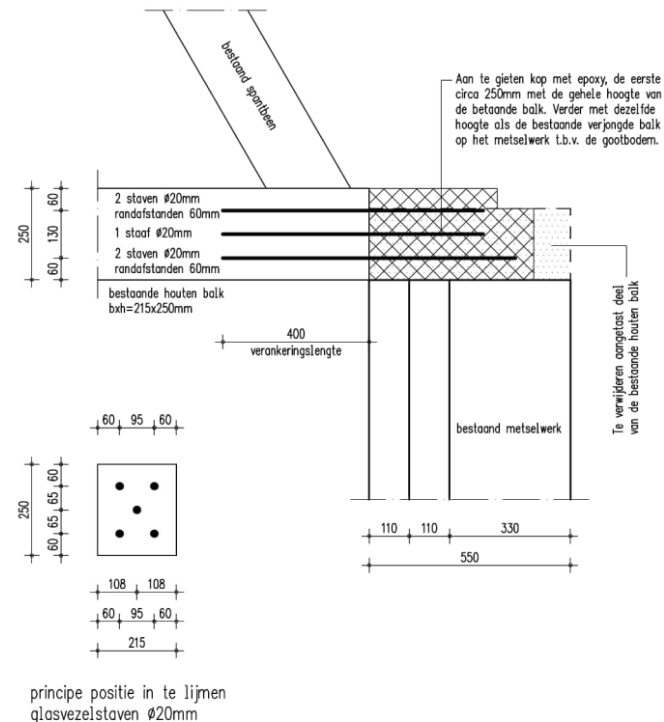
Failure wooden truss



Support wooden truss library

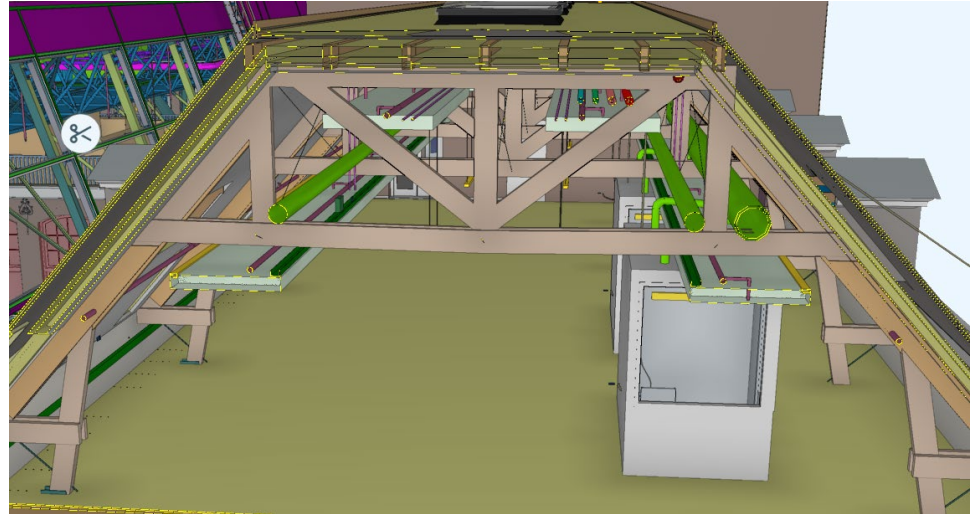
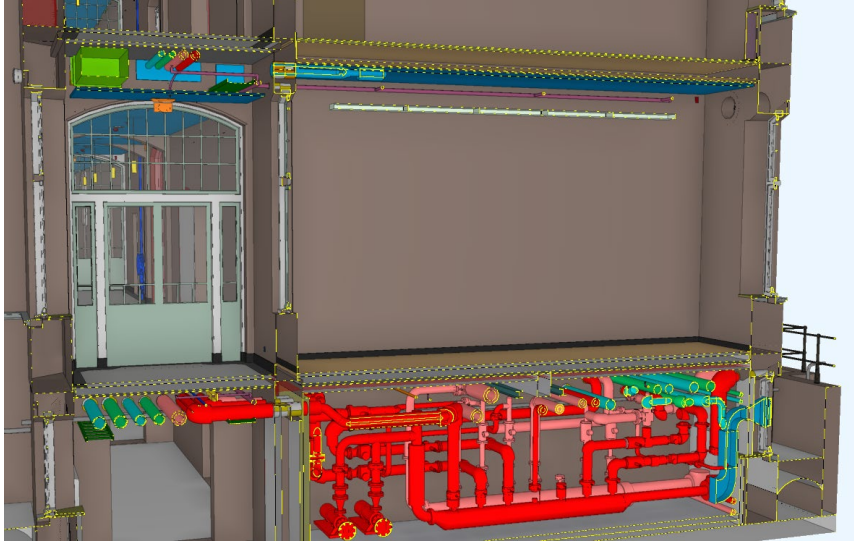


Support wooden truss library



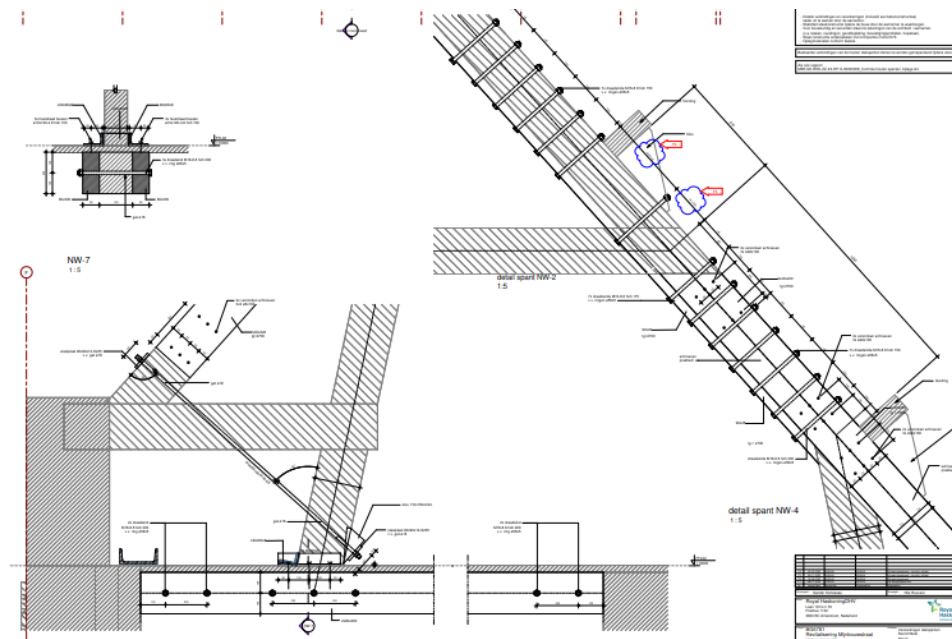
Installations

- Very limited space for a large number of installations
- Too heavy for existing concrete floors and wooden trusses
- Large number of openings in masonry walls and arches



Strengthening roof trusses

- 800 kg of installations per wooden truss



Drilling holes installations



Question?

