

TU Delft Graduation Studio

Design for Health and Care

M A D W

T O O L

M O W W

Research by Bo Kuiper

Design Booklet

MADE TO MOVE



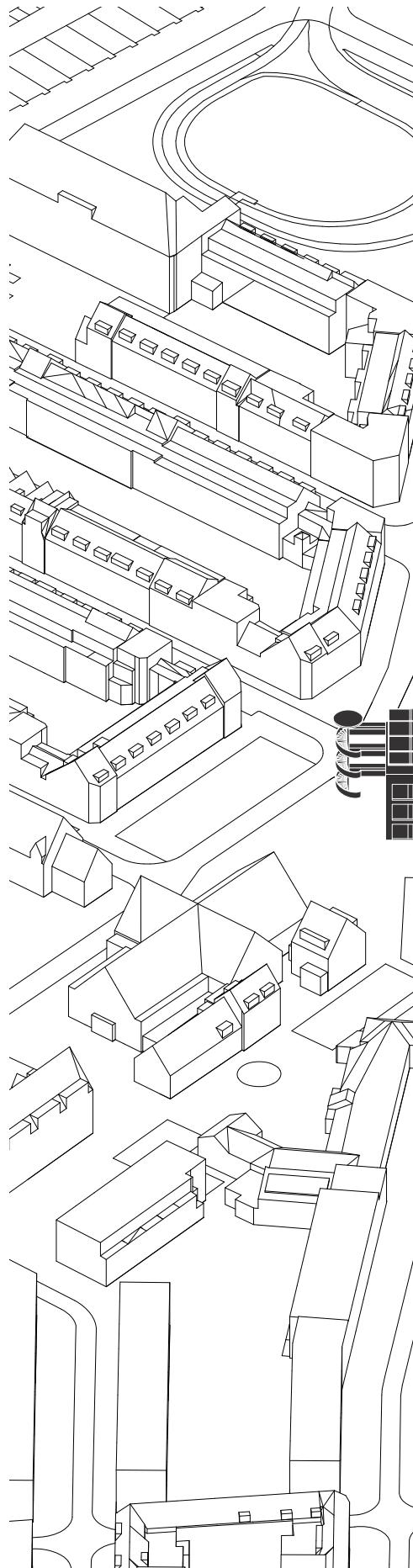
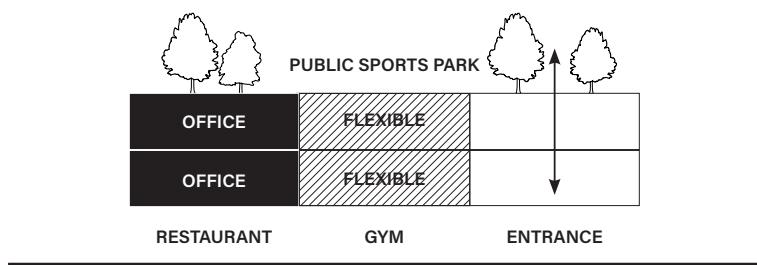
Rotterdam, The Netherlands

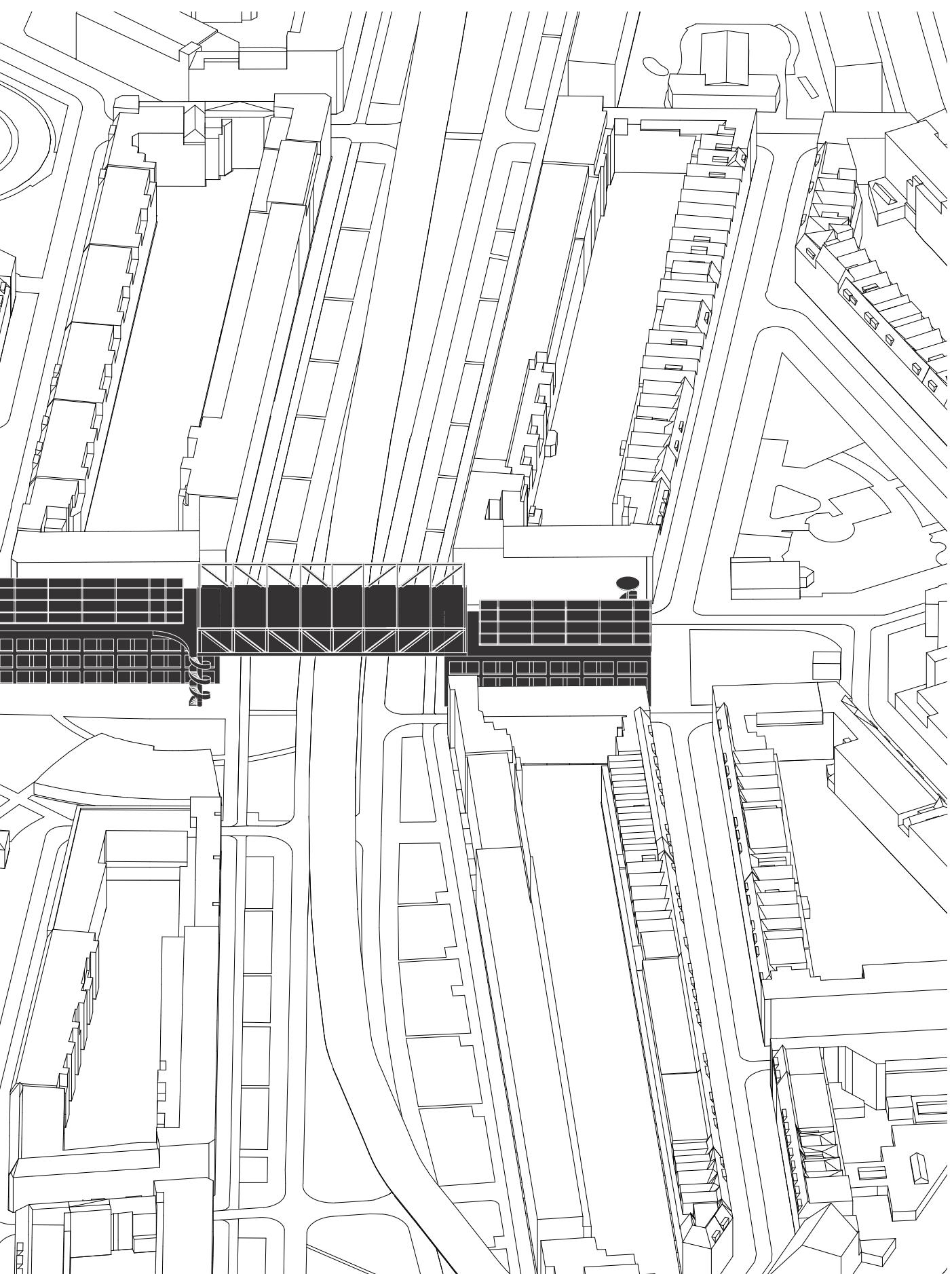
MADE TO MOVE is a design that addresses the growing health issues caused by inactivity, especially in neighborhoods like Tarwewijk in Rotterdam-Zuid. Worldwide, and particularly in lower-income areas, physical activity is decreasing, leading to negative impacts on our health. This project offers an innovative solution: an office design that encourages employees to join sports sessions after work. Additionally, the building's roof, accessible to local residents, provides free sports and social facilities. In a city like Rotterdam, where space for sports facilities is becoming increasingly scarce, this concept offers a smart way to create more opportunities for movement without taking up additional space.

ENVIRONMENT

The design is situated on a site currently occupied by open space and public playgrounds. It integrates seamlessly with the surrounding environment, guided by the layout of nearby streets, paths, and existing buildings. From these structures, a building envelope has emerged, within which the design fits naturally. This ensures the project aligns with the existing public space structure, the flow of movement, and the volume of the surrounding architecture. The design rises deliberately to a height of 3 to 4 stories, offering a stunning scenic view of Rotterdam's skyline from above.

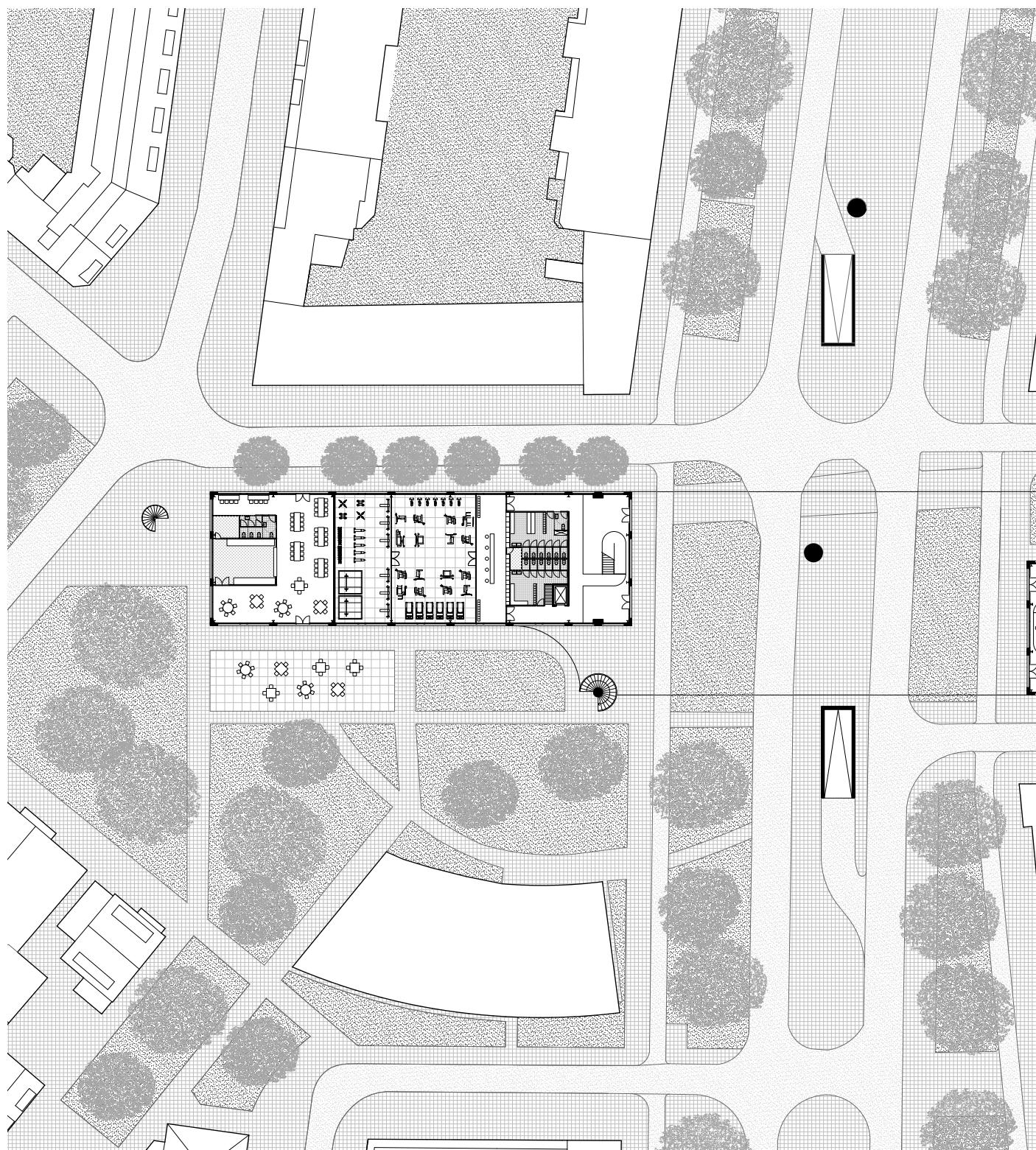
The municipality aims to introduce more small-scale office spaces into the neighborhood, creating a perfect opportunity for a design that combines office and sports facilities. The project is tailored to this concept, divided into three sections: a dedicated office space, a flexible area that can serve both as office and sports facilities, and a part that is consistently used during both office and sports hours. This layout allows the building to serve multiple functions, enabling employees to effortlessly join a sports class after their workday, with no time or logistical barriers.



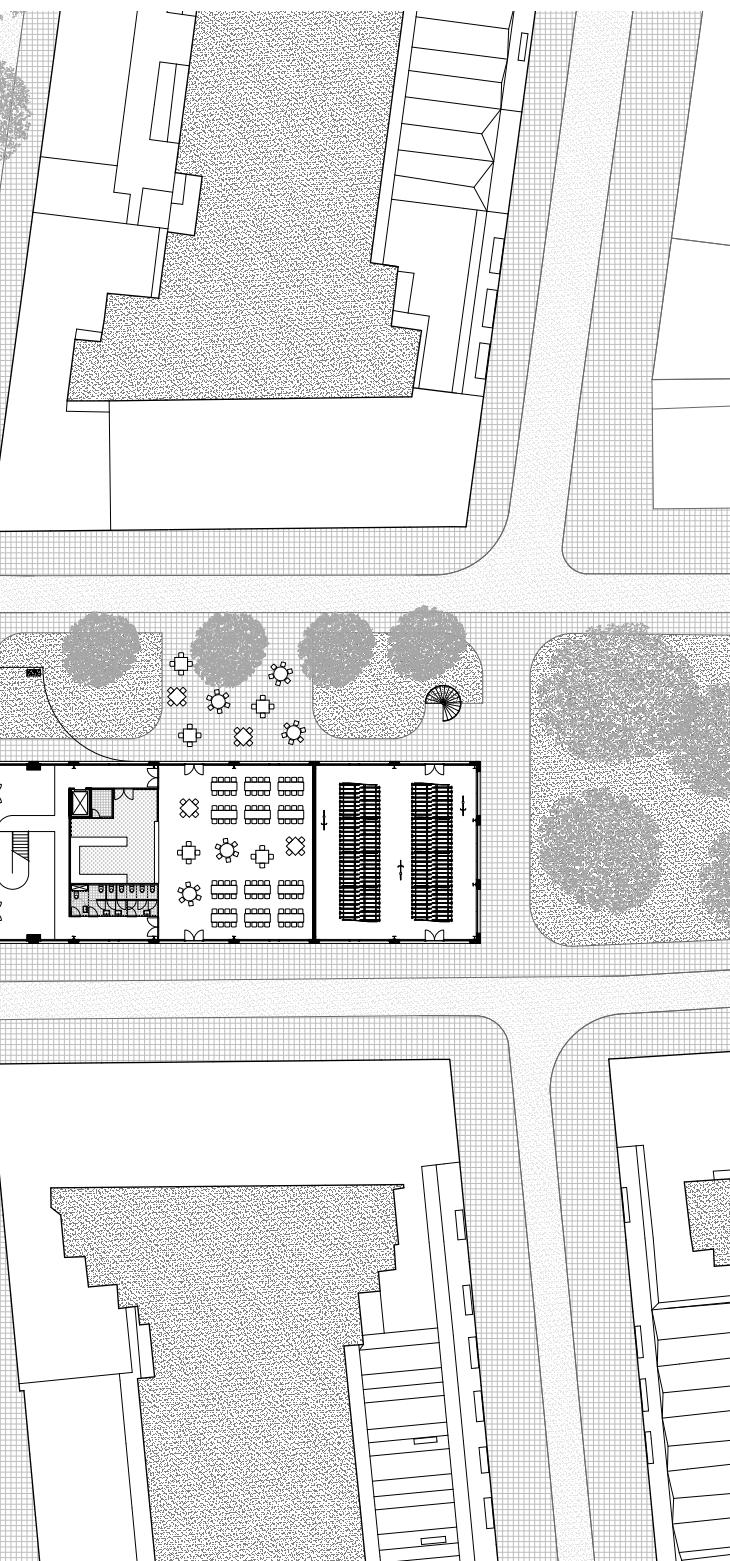








⌚ SITE PLAN 1:500



PUBLIC PLINTH

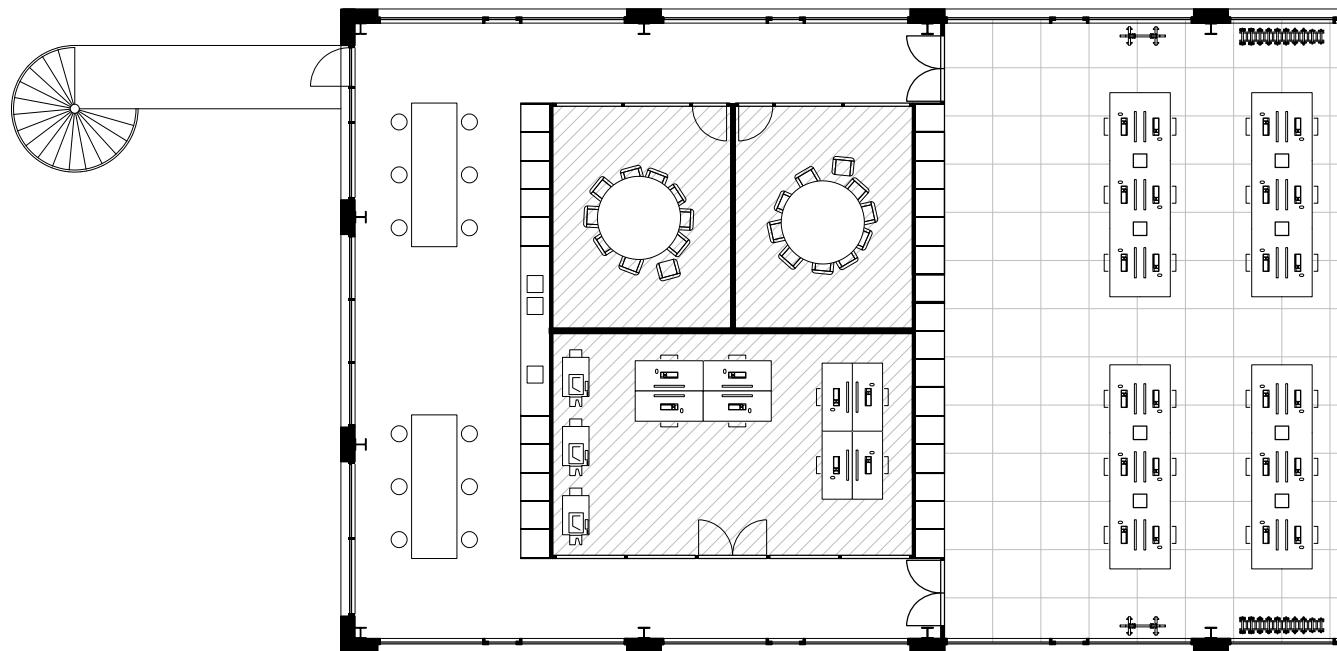
The design features a public plinth that encourages interaction with the surrounding environment, ensuring the building remains vibrant and active throughout the day. The area around the building sees significant foot traffic, with nearby functions such as small supermarkets, a church, a healthcare center, and more. The project enhances this by incorporating social spaces like a coffee bar and a small restaurant, further enriching the local atmosphere. A secure bicycle parking area is also included, promoting cycling as a sustainable mode of transport.

On the ground floor, a gym serves as a permanent fitness space for both employees and local residents. This gym becomes an integral part of the building, blending seamlessly with the flexible spaces outside office hours. As a result, nearly the entire building is dedicated to the sports facility after working hours, yet a large portion remains office space during the day. This dual-use approach ensures that the building serves both professional and recreational needs.

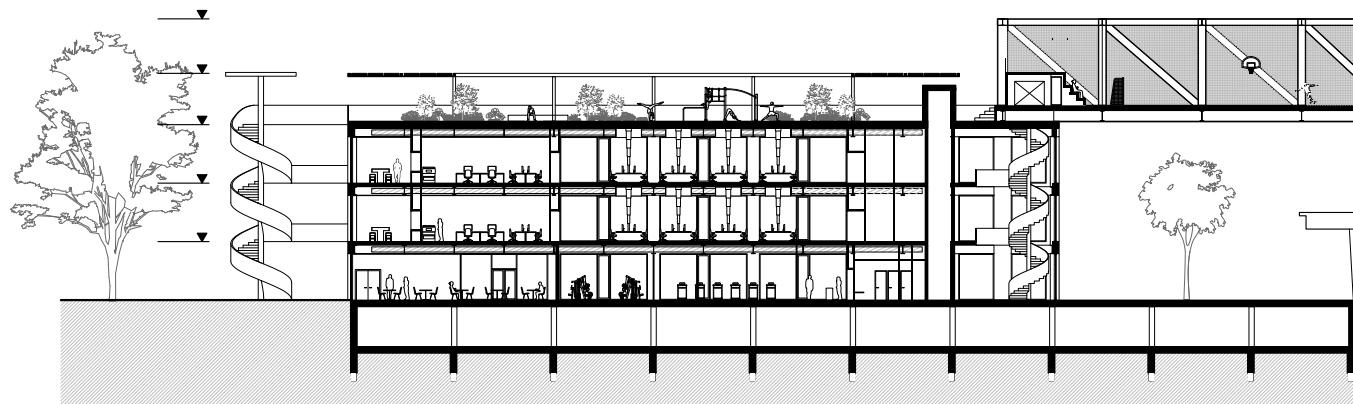
On the metro side, the interior of the two buildings is connected by a large entrance hall, which serves as a welcoming space for visitors. The central staircase plays a key role in this design, while the hall also acts as a sound barrier, separating the office spaces from the noise of the metro. This thoughtful integration of public and private spaces ensures the building remains functional and connected to its immediate surroundings, offering a dynamic environment for both work and recreation.



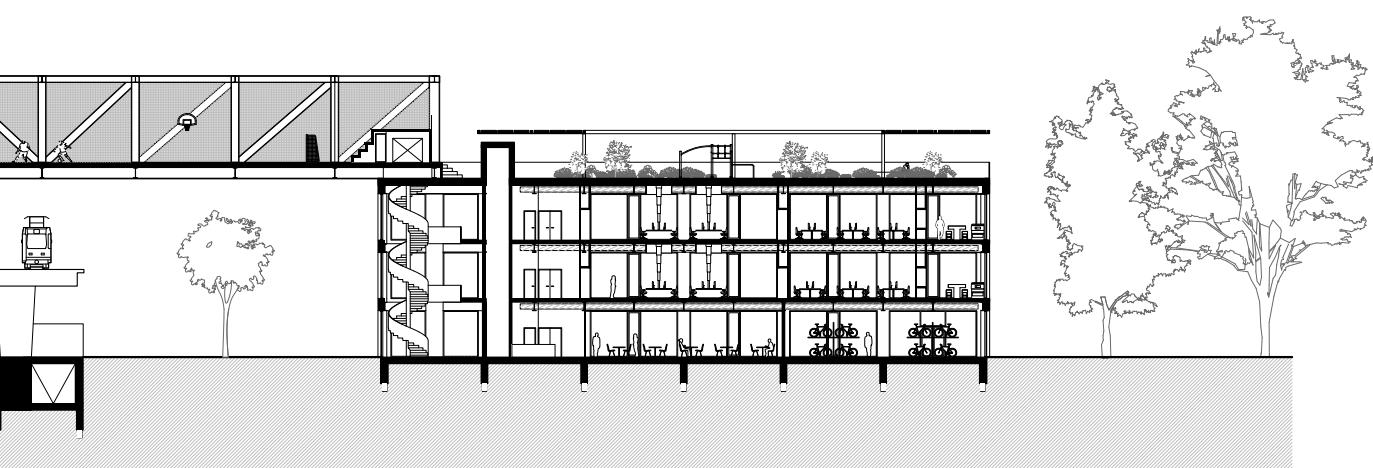
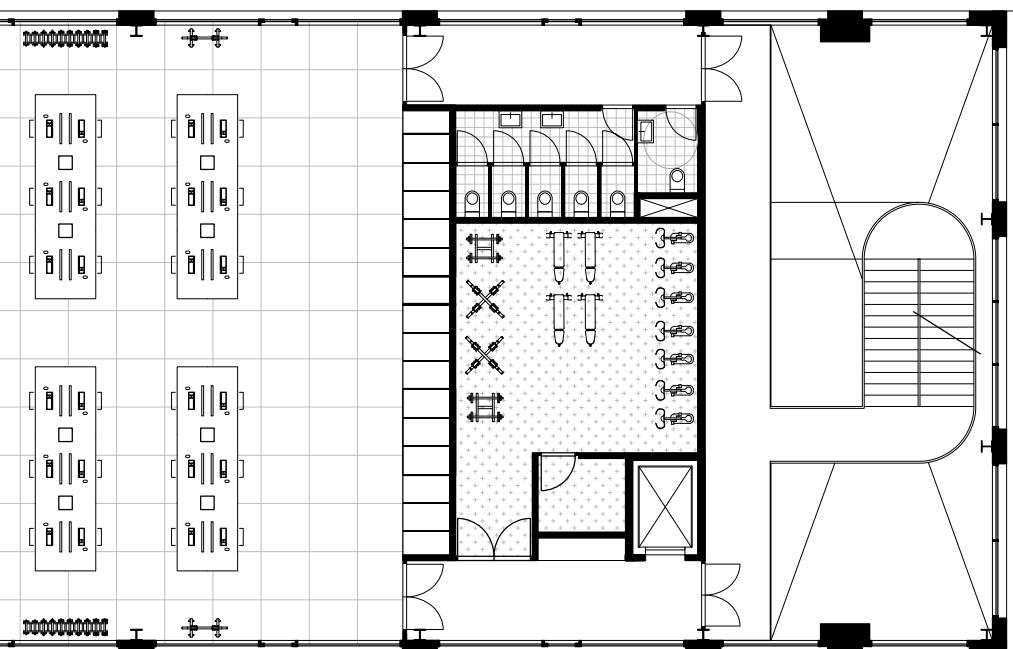




TYPICAL OFFICE FLOORPLAN 1:200



LONGITUDINAL SECTION 1:400

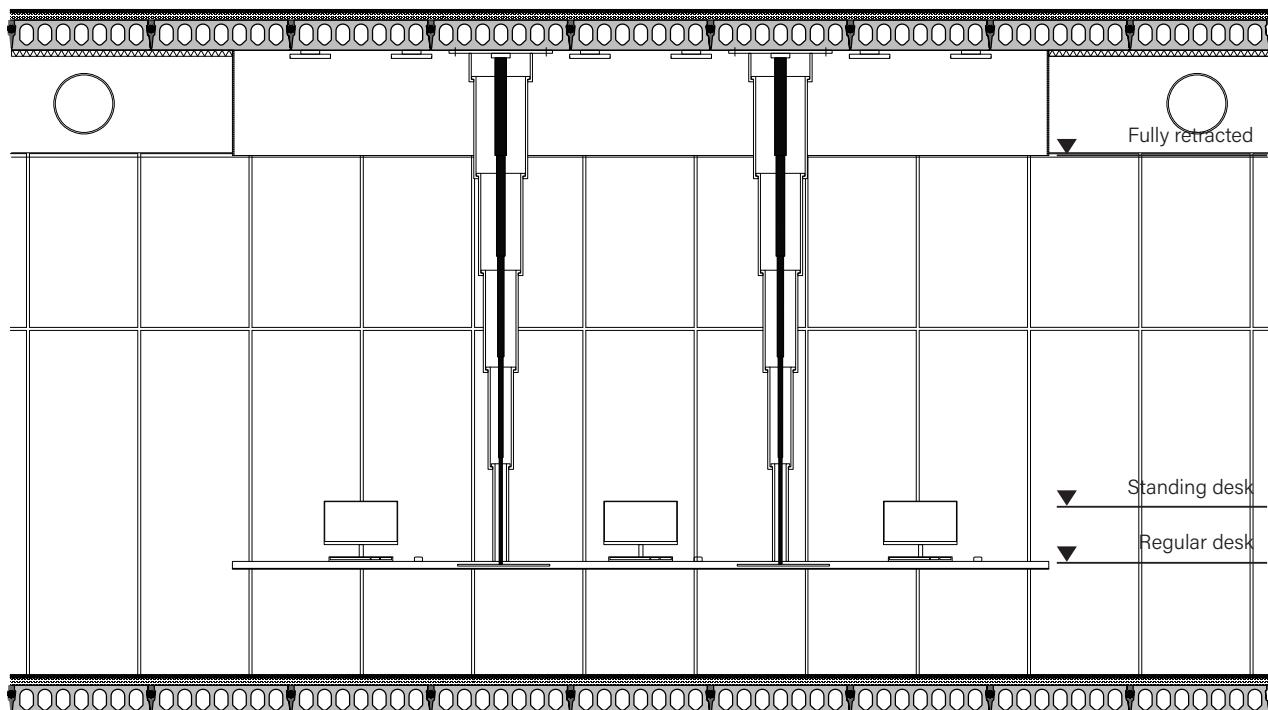




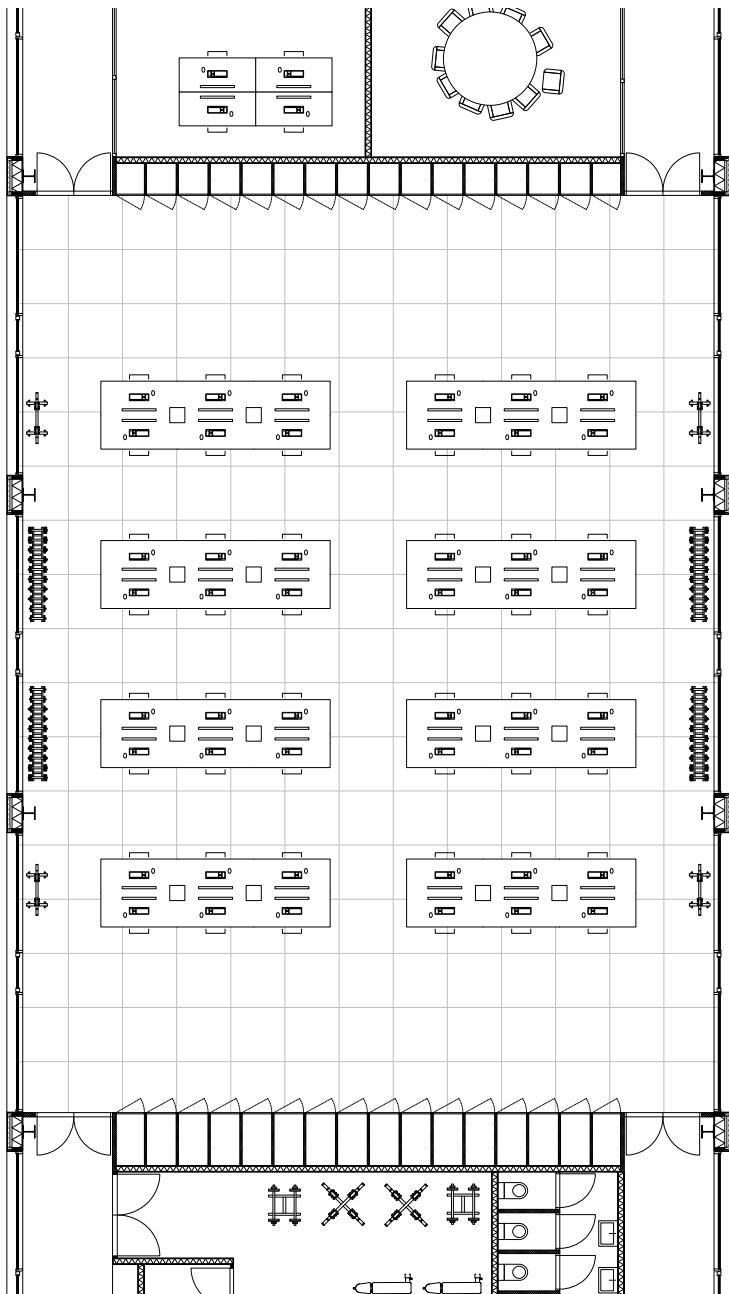
MADE
TO
MOVE

PLAN

The layout of the office area is designed to create a pleasant, bright, and open working environment, with a more private section for focused work or meetings. A small kitchen is included for short breaks, along with auxiliary functions such as toilets and storage. The central part of the office can be entirely cleared using a specialized system that lifts the desks, along with all electronics, to the ceiling. This system, based on existing technologies from sit-stand desks, makes it economically feasible and can also be used as a standing desk. This system allows standing desks to be the standard option, encouraging standing at the start of the day, as the office chair is stored away. When employees feel the need to sit, they can switch to a regular sitting desk. Additionally, each employee has their own personal storage space for their chair, allowing the entire area to be easily and automatically cleared with minimal effort. This flexible design enables the office to be quickly adapted for various functions, from focused work to group activities or events.



DESK SYSTEM DETAIL 1:50

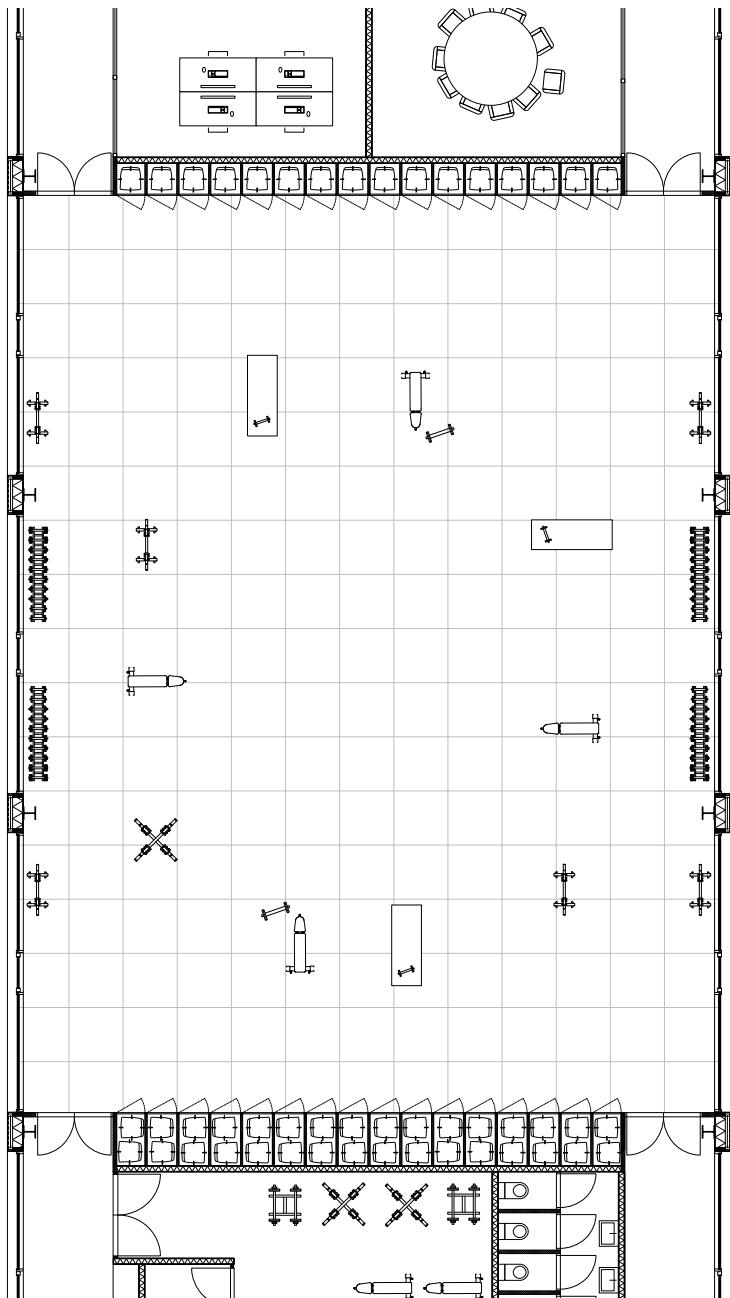


FLEXIBLE SPACE PLAN 1:50







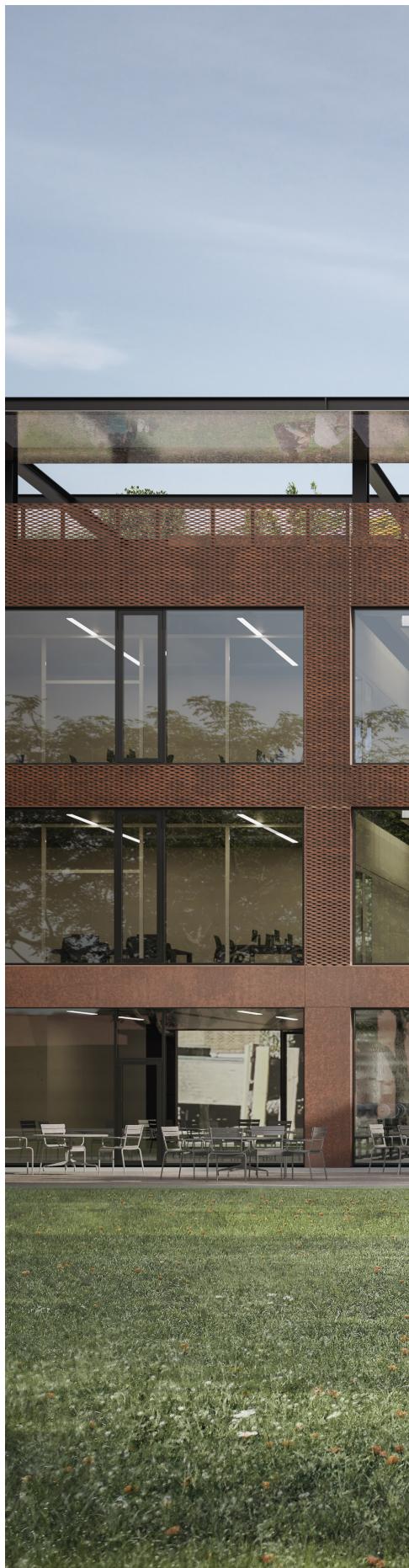


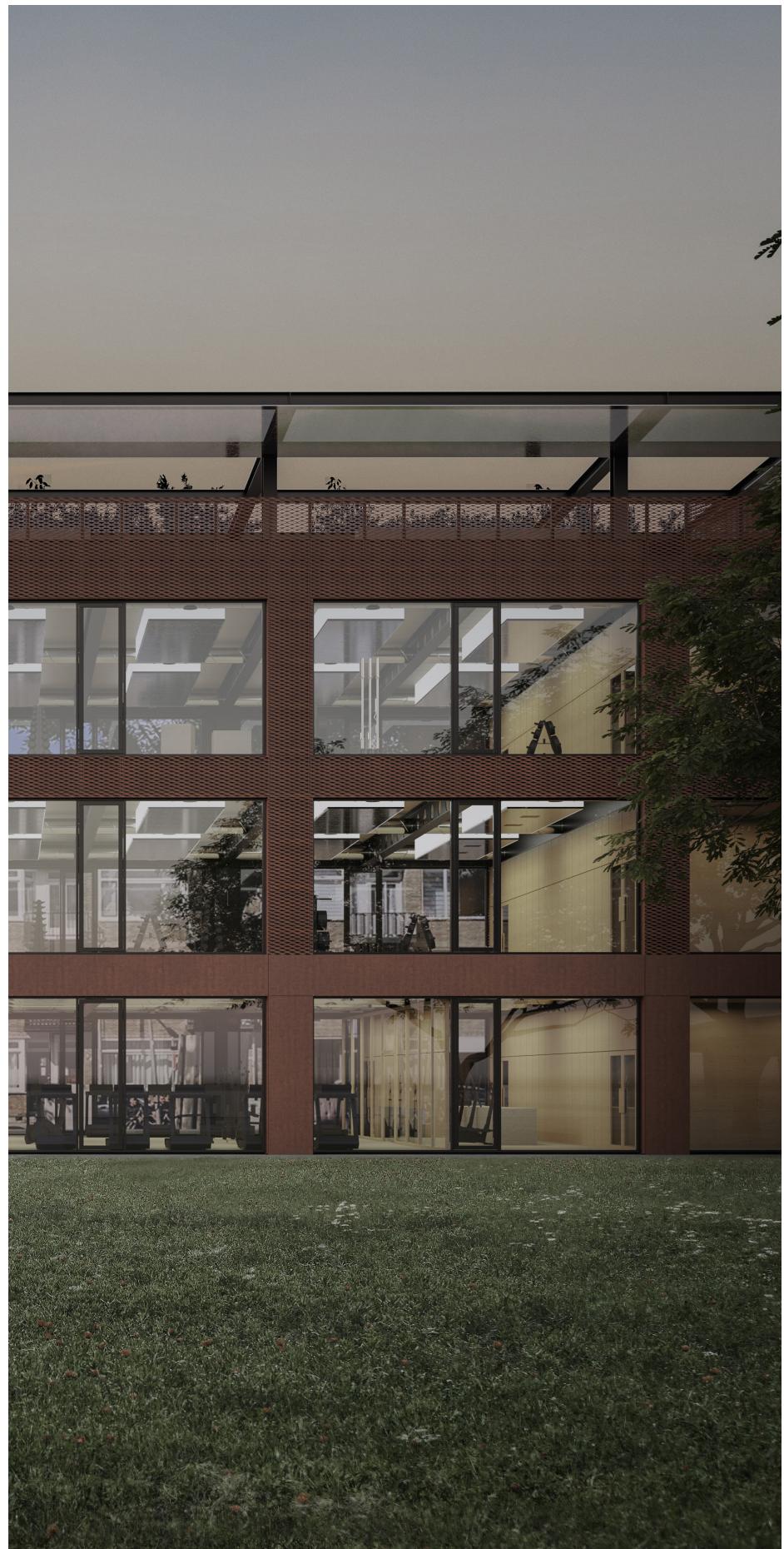
FLEXIBLE SPACE PLAN 1:50

FACADE

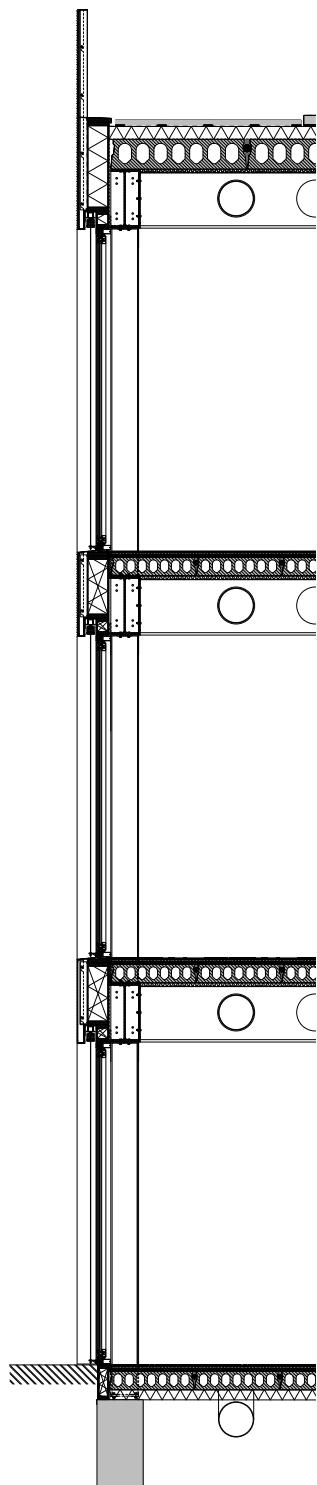
The flexibility of use calls for a certain anonymity in the façade. Instead of trying to convey both sport and office functions through the exterior, the façade adopts a more restrained approach with a relatively high level of transparency. This allows the activities inside to speak for themselves, with the strong grid and large windows highlighting the dynamic use of the space rather than the façade itself. This design also allows for future functional changes, as the façade does not project a specific building type. As a result, the building comes to life in the evening, unlike a typical empty office building, thanks to the sports or other activities taking place inside.

The materialization of the façade combines the prominent red brick of the Tarwewijk area with the fully demountable steel structure of the building. Just like the main structural frame, the façade is entirely made of steel—Corten steel—making it fully disassemblable. This gives the building an honest and sustainable identity, reflecting its materials. The use of Corten steel not only emphasizes the building's authenticity but also ties it visually to its surroundings. The rough, red tones of the Corten steel blend seamlessly with the red brick façades of the neighboring buildings.

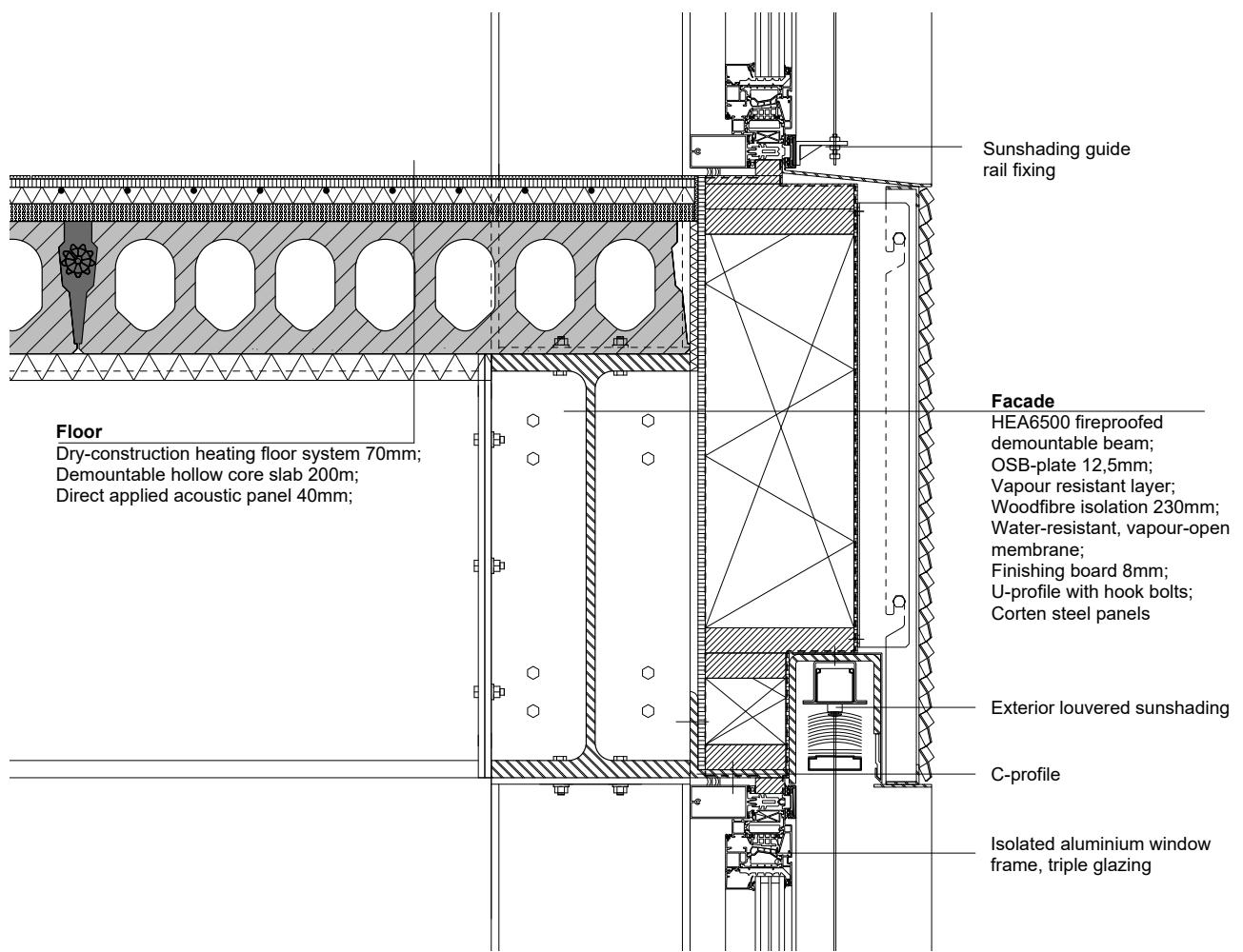








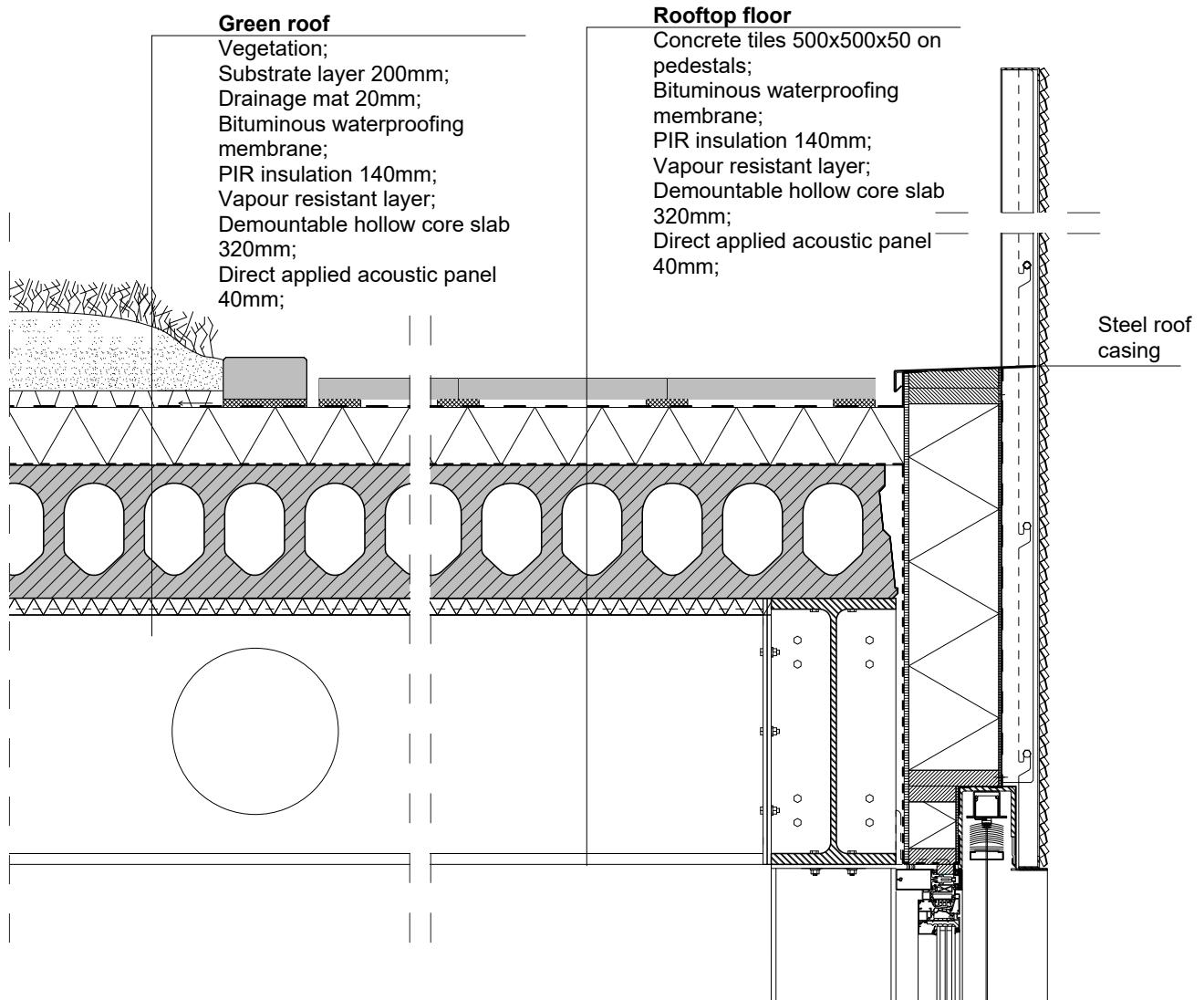
FACADE FRAGMENT 1:50



FACADE DETAIL 1:10





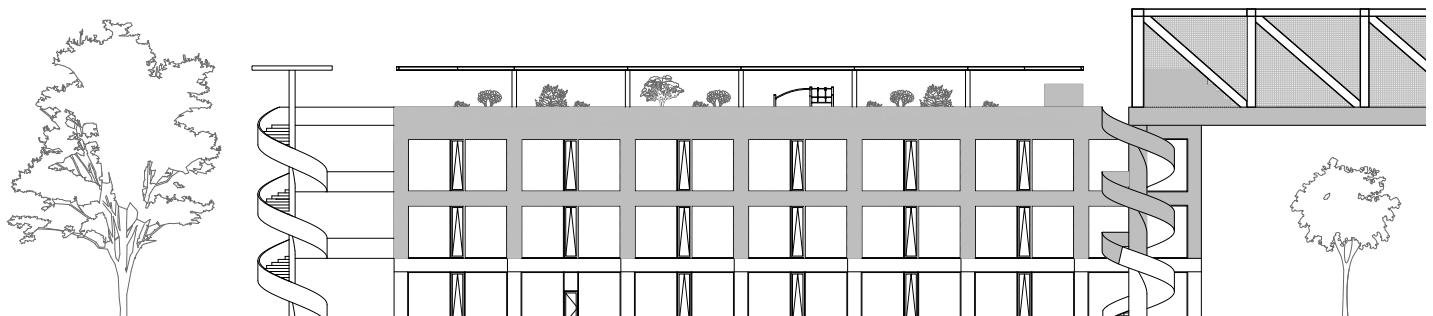


FACADE DETAIL 1:10

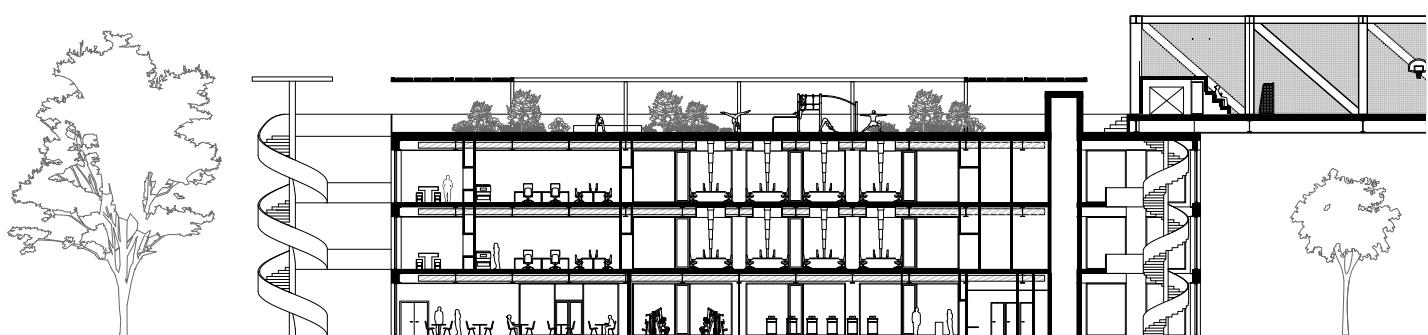
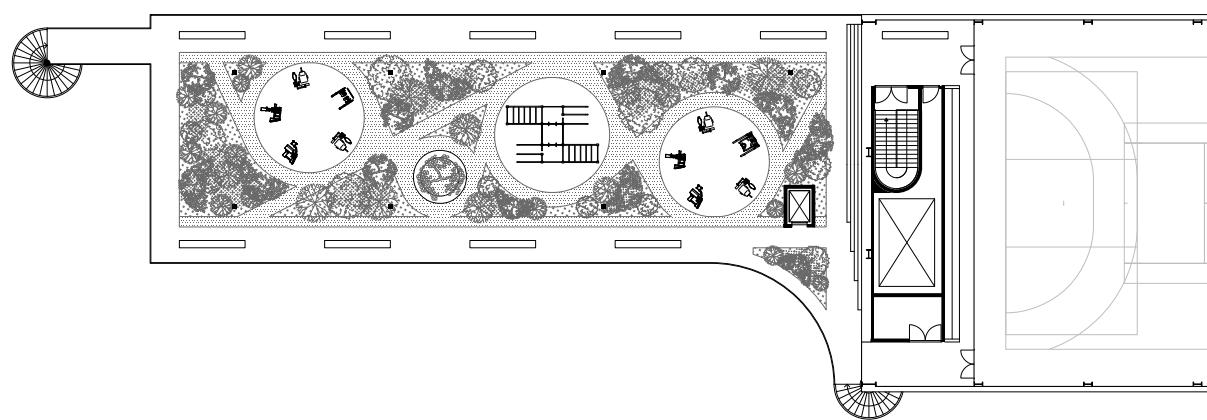


ROOFTOP

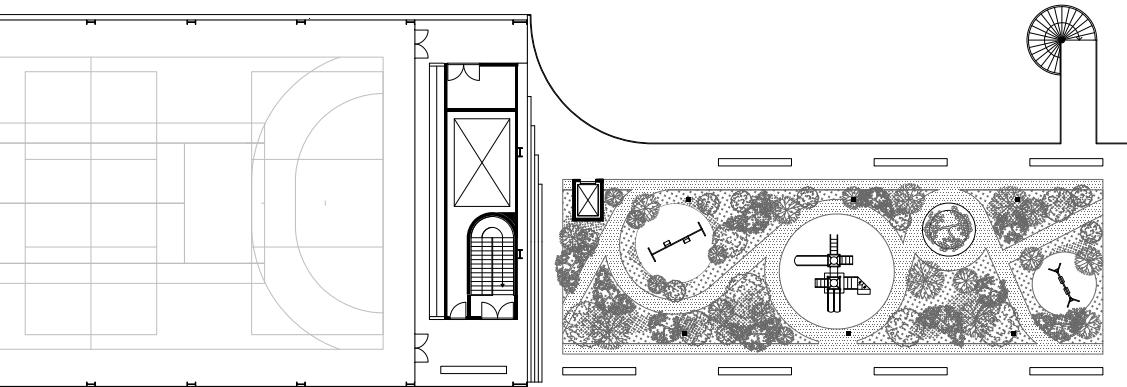
The rooftop is freely accessible, offering local residents a space for free sports facilities, relaxation, and social interaction. The roof provides a stunning panoramic view, including a glimpse of Rotterdam's skyline, creating a pleasant environment that attracts people. It offers the Tarwewijk a place to gather and something to be proud of. The rooftop features benches, free sports facilities, and a multifunctional sports field suitable for basketball, handball, football, tennis, and badminton. There are also bleachers for games and a playground for children, ensuring activities for multiple generations. The rooftop is particularly spacious due to the span over the metro viaduct, transforming it into a small sports park rather than just a traditional rooftop terrace.



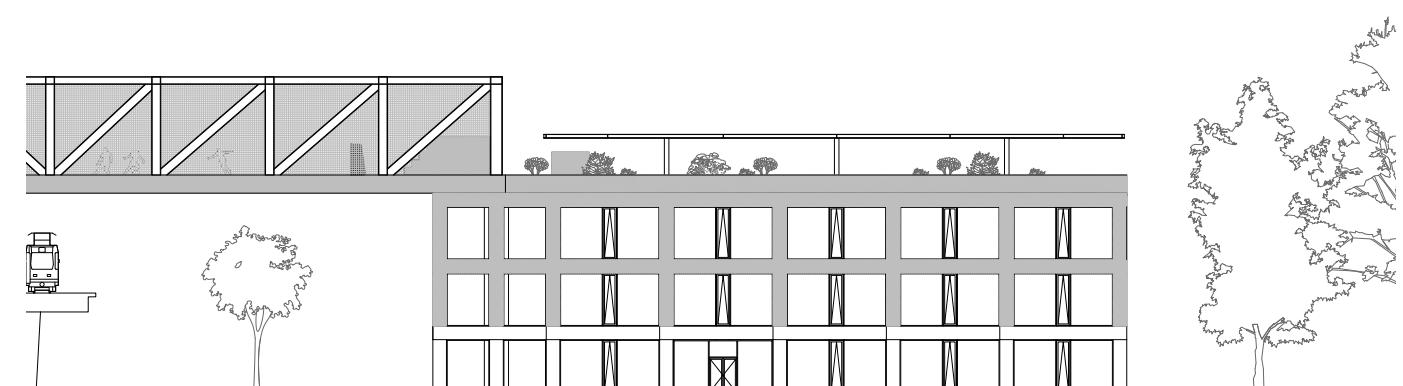
SOUTH ELEVATION 1:400



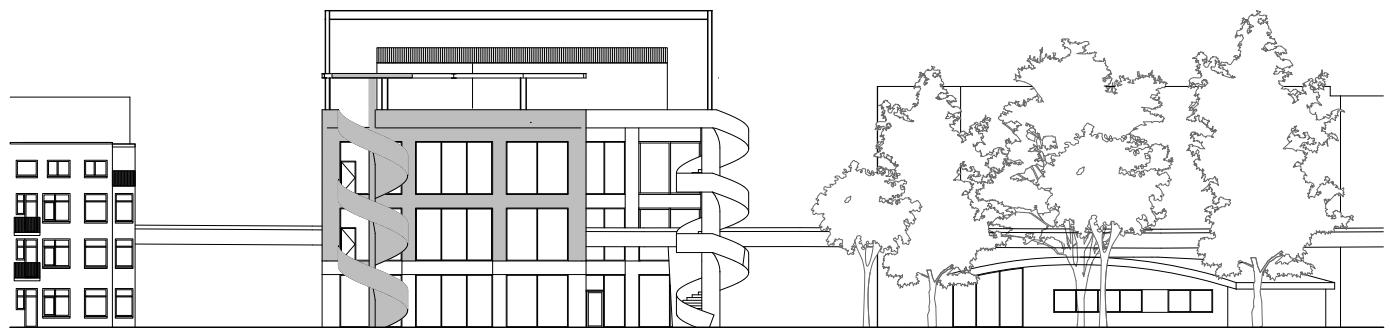
LONGITUDINAL SECTION 1:400



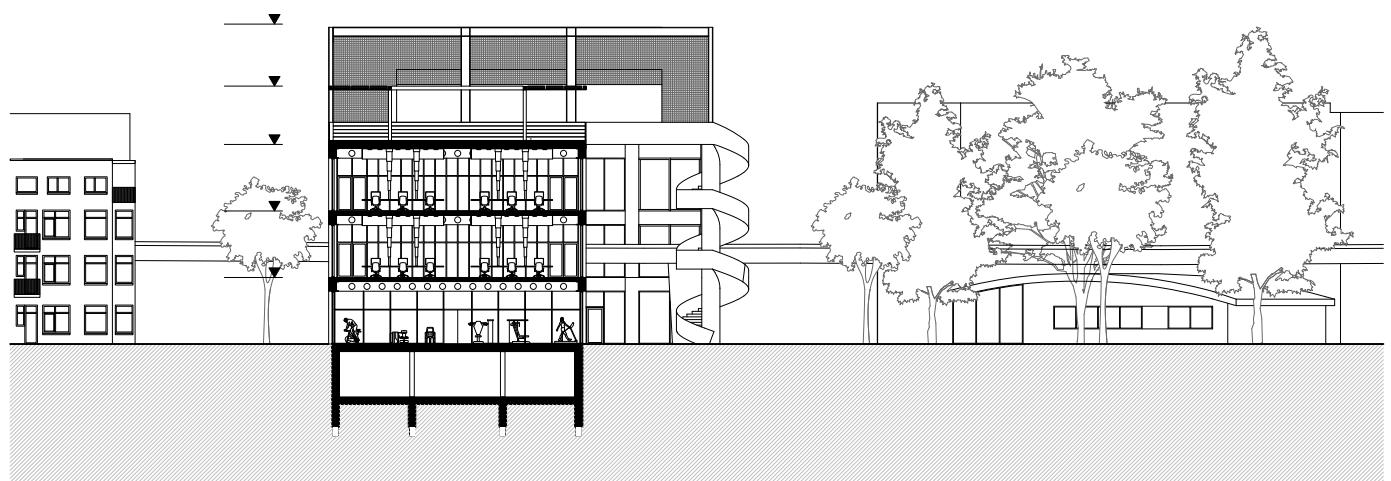
ROOF PLAN 1:400



SOUTH ELEVATION 1:400



WEST ELEVATION 1:400

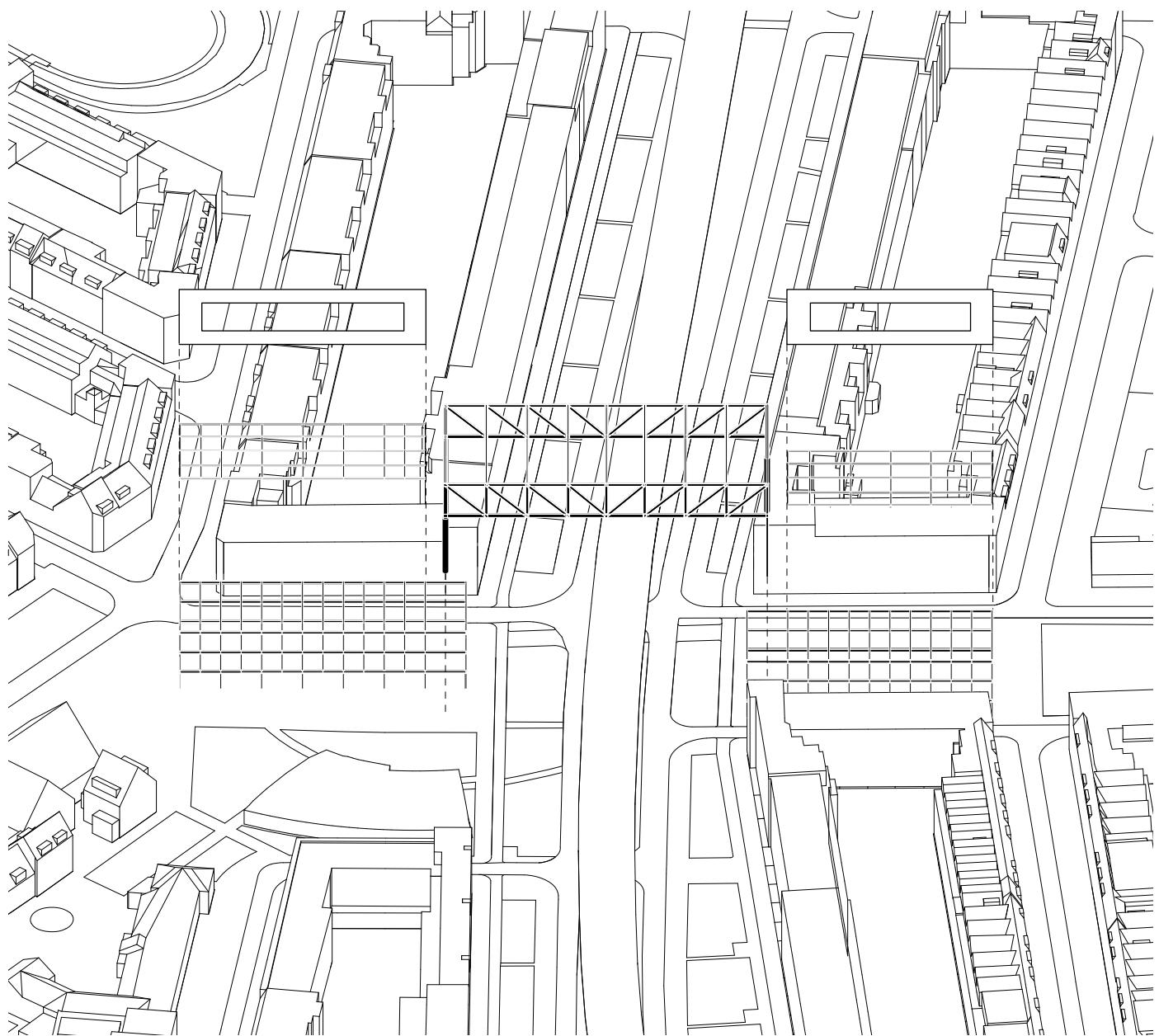


CROSS SECTION 1:400



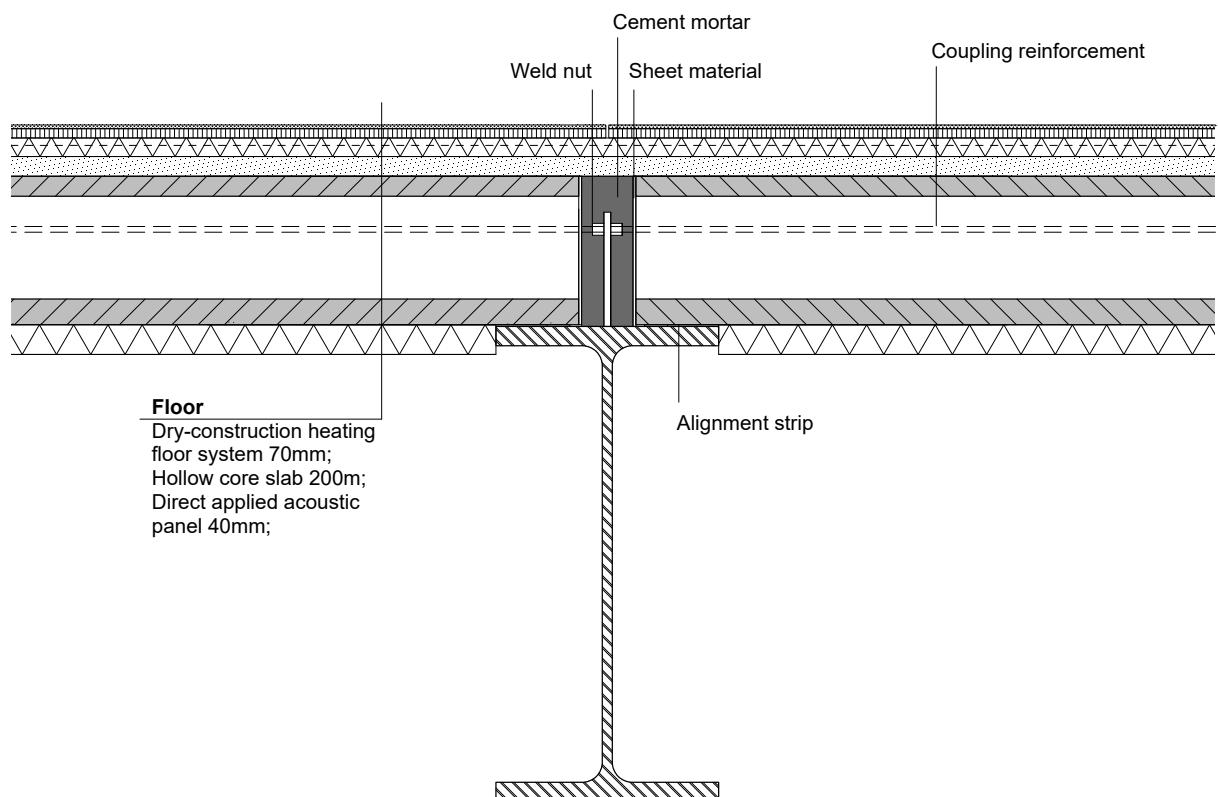






STRUCTURE

The large spans required for the flexible floor plan necessitated a steel structure. To ensure the construction remains sustainable, the entire structure has been designed to be fully demountable, including the concrete slab floors. As a result, the building, including both the structural frame and the façade, is entirely disassemblable and recyclable. Despite its high CO₂ footprint, the building is still designed with sustainability in mind. The structure also features a clear grid of 7.5m by 5-6m, which is based on the required support for the underlying parking garage, ensuring that the space can be adapted for different uses in the future. With this in mind, the entire interior of the building is made of wood. This not only provides a warm interior glow behind the façade but also allows for easy removal or modification in the future, should the use of the building change.



DETAIL 1:10









