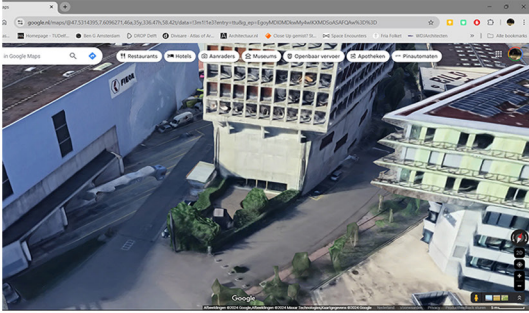




# Journal

Jiarui Xing

# WEEK 1.1



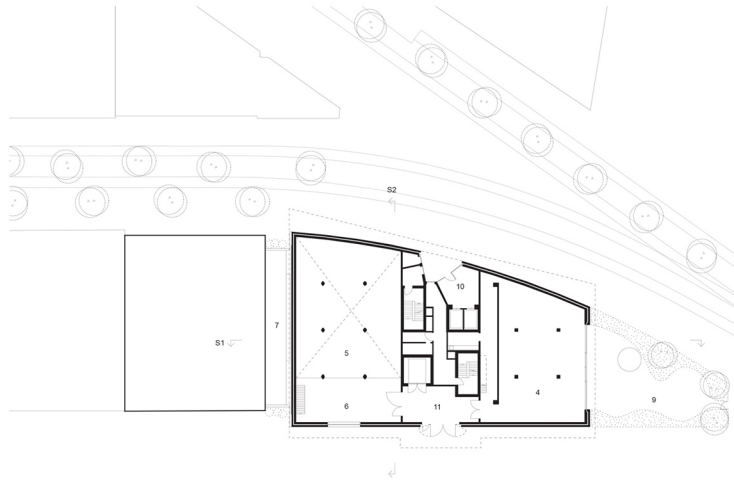
The first week was mainly about analyzing the site. Helsinki Dreispitz is close to the Academy of Art and Design, which provides a potential target audience and makes it easier to visit the archive. Through the analysis of the building, its functionality, that is, the combination of residential area and archive is also very interesting.

At the same time, we also thought about what materials to use to express the interior space effect and the corresponding scale. Since the kabinett is small in scale and has more details, we decided to use a larger scale to restore the scene.



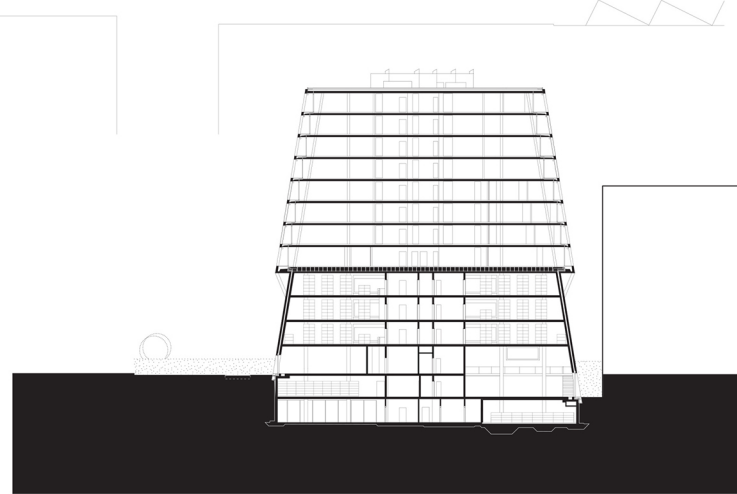
# WEEK 1.1

Helsinki Dreispitz  
Plan  
4 Open Workspace  
5 Workshop (1st Basement)  
6 Workshop Mezzanine  
7 Workshop Courtyard (1st Basement)  
8 Garden  
10 Entrance for Apartments and Office  
11 Entrance for Archive



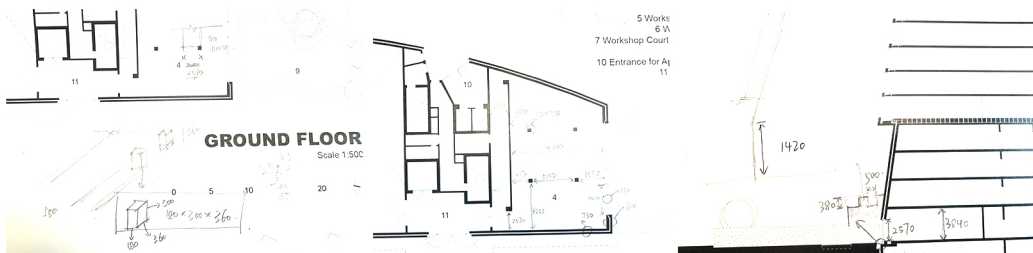
**GROUND FLOOR**  
Scale 1:500

0 5 10 20



**SECTION S1**  
Scale 1:500

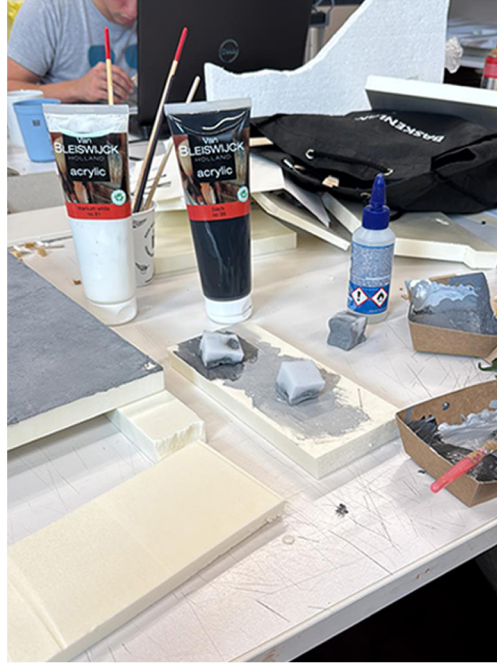
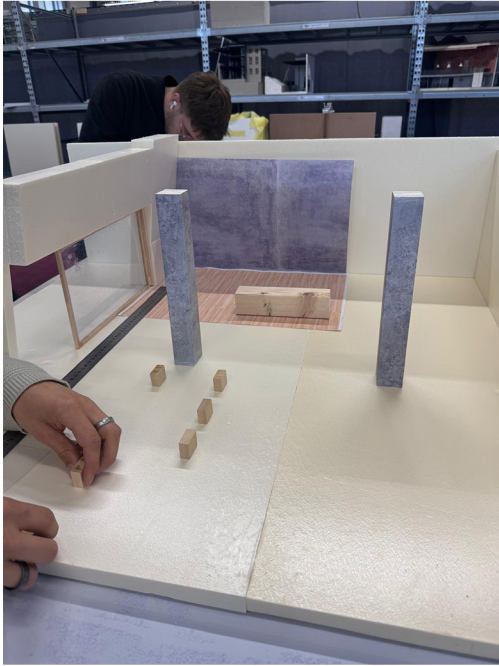
0 5 10 20



We found the relevant drawings of Helsinki Dreispitz and the plan and section drawings of the scene shown in the photo.

At the same time, according to the floor plan, section and their corresponding proportions, the specific dimensions of the photo space and the structure of the detailed nodes, including columns, floors, glass and doors, were calculated.

## WEEK 1.2



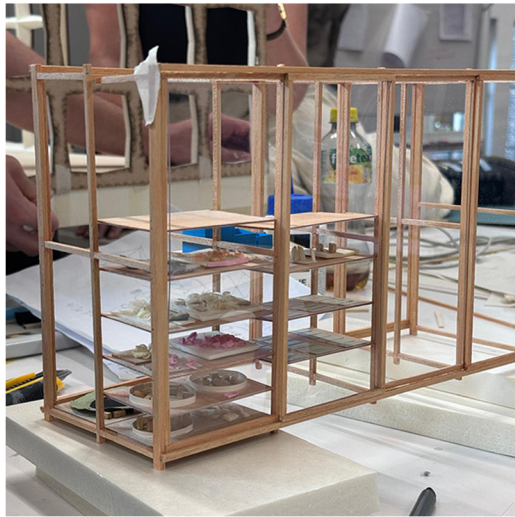
Based on the calculation results of the first week, we determined the specific placement of the booth and furniture such as kabinett, and placed them in the space to compare with the photos of the physical scene to obtain a more accurate position.

At the same time, we chose foam board as the main body of the exterior wall, which is thick and easy to operate, and can more realistically simulate the effect of concrete material. We used paint to color the foam and repeatedly superimposed different grayscale colors to simulate the effect of concrete in reality.





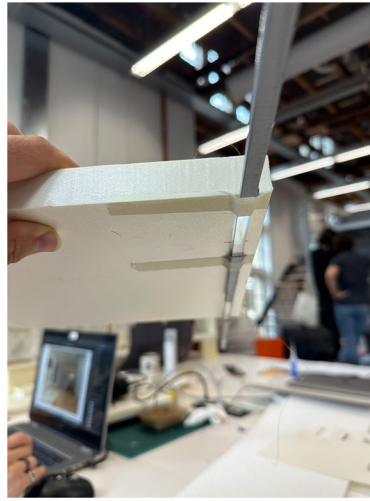
## WEEK 1.2



One of the most difficult parts of the model making was undoubtedly the cabinet. The various small models inside were the main reason why we chose a larger scale. This also made us spend a lot of time on the production and assembly of the small models inside the cabinet. We tried to determine its size based on the proportions of the kabinett in the photo, and put the model into the scene repeatedly to estimate its exact size.



## WEEK 1.2



When we finished making the kabinet, we placed it into the model scene for positioning. We checked it repeatedly and determined the size and placement of the small models in the kabinet after some modifications.

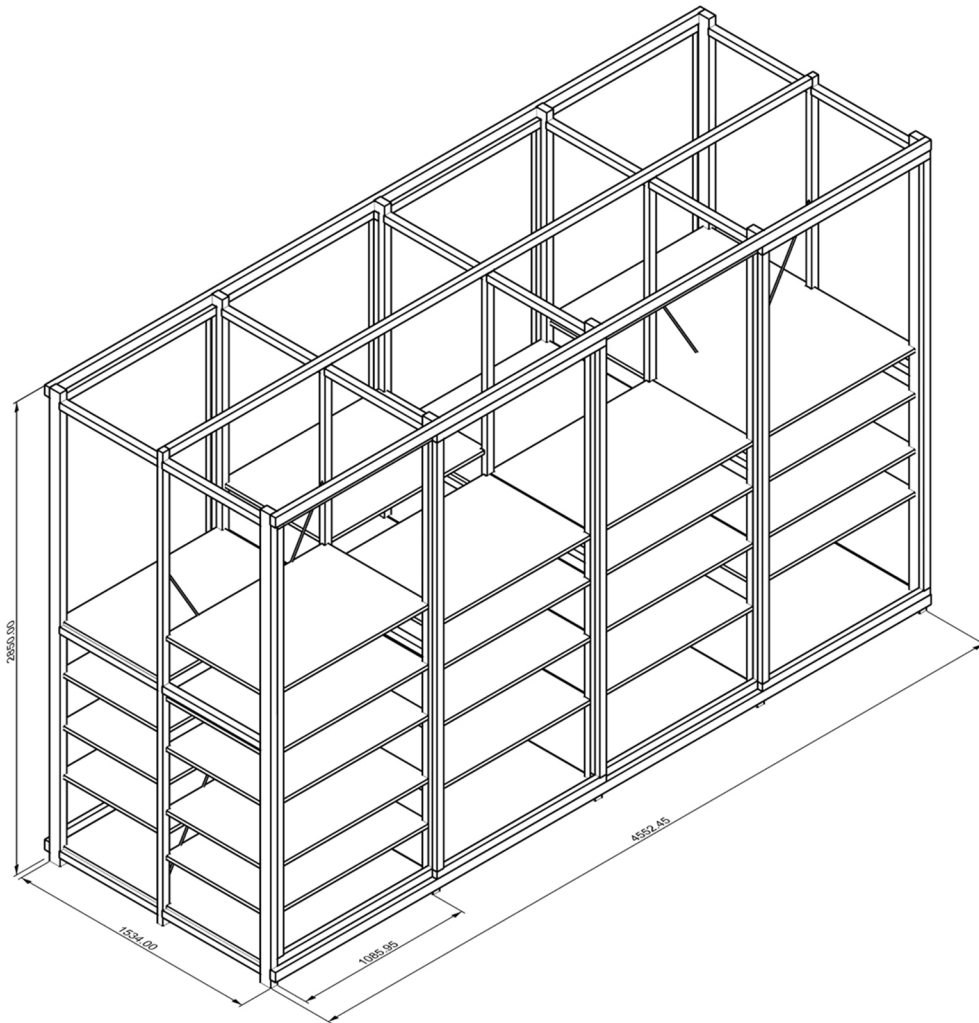


For indoor lighting, we first tried to use acrylic as a lamp post and light it up, but the effect was not as expected. The light transmitted by the flashlight beam could not penetrate the acrylic plate, so we are still considering other luminous materials and methods in the future.





## WEEK 1.2



We speculated and simulated the position of the kabinet in the scene, and built an electronic model to effectively turn our speculation into reality. After obtaining the specific data of the kabinet, the process of manually making a physical model for secondary verification is undoubtedly meaningful.

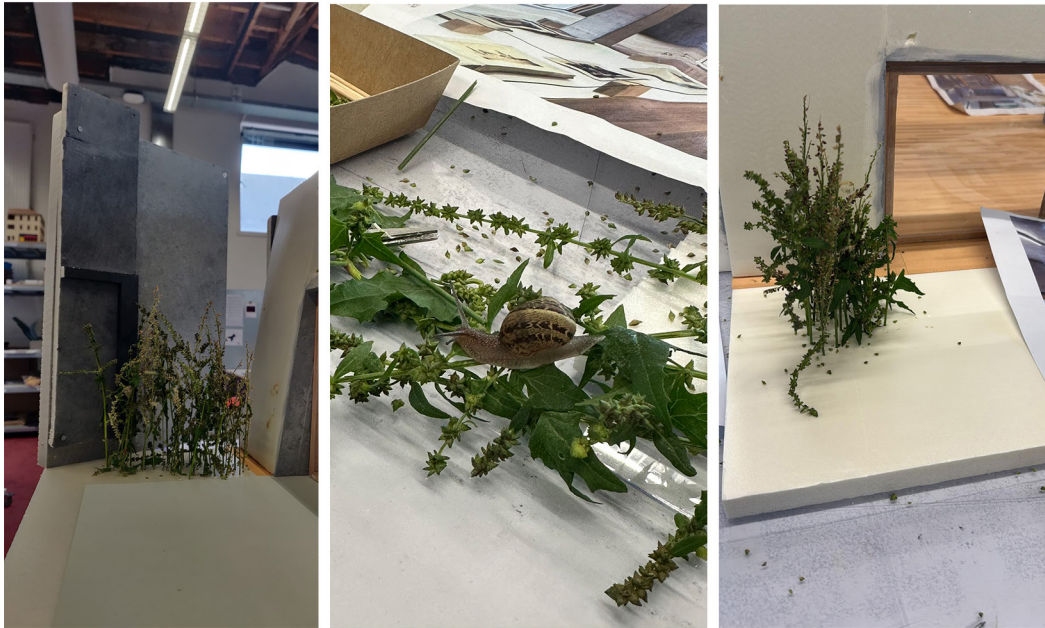
## WEEK 1.2



It is worth mentioning the lighting problem of the ceiling.  
In order to simulate the lighting effect in the real scene, we tried many methods.  
At first, we used a flashlight to hit the acrylic column.  
After the effect was not ideal, we bought luminous paint and tried to solve the lighting problem by looking for luminous materials. However, the luminous amount of luminous paint is very low and the waiting time is long. We finally chose to use paint to restore the divergence of light and use the contrast of white to set off the light.



## WEEK 1.3



This week our focus is mainly on considering floor materials and setting up outdoor green plant scenes.

We picked fresh green plants as outdoor backgrounds. Since the color of dry plants is dull, we prefer fresh leaves, which also means that we have to shoot quickly to ensure that the plants do not dry up and die. Interestingly, we also found snails on the picked plants. If it were not for the requirements of the photo, it would probably have become part of our photo results.

## WEEK 1.3



The treatment of the floor was a tricky problem. We once thought about filling the floor with veneer, but the texture of solid wood was not proportional to the model, and it was difficult to create a wood grain effect with cardboard, so we used orange cardboard as the background, used spray paint to make a masking template, and repeatedly experimented with different colors, and finally achieved good results.



## WEEK 1.4



Our main task this week was to take photos of the models. We built a simple photo studio in the studio and tried to focus on different objects at the same angle of view to get clearer photos. After a long period of angle calibration and lighting adjustment, we took multiple photos for comparison and selection.



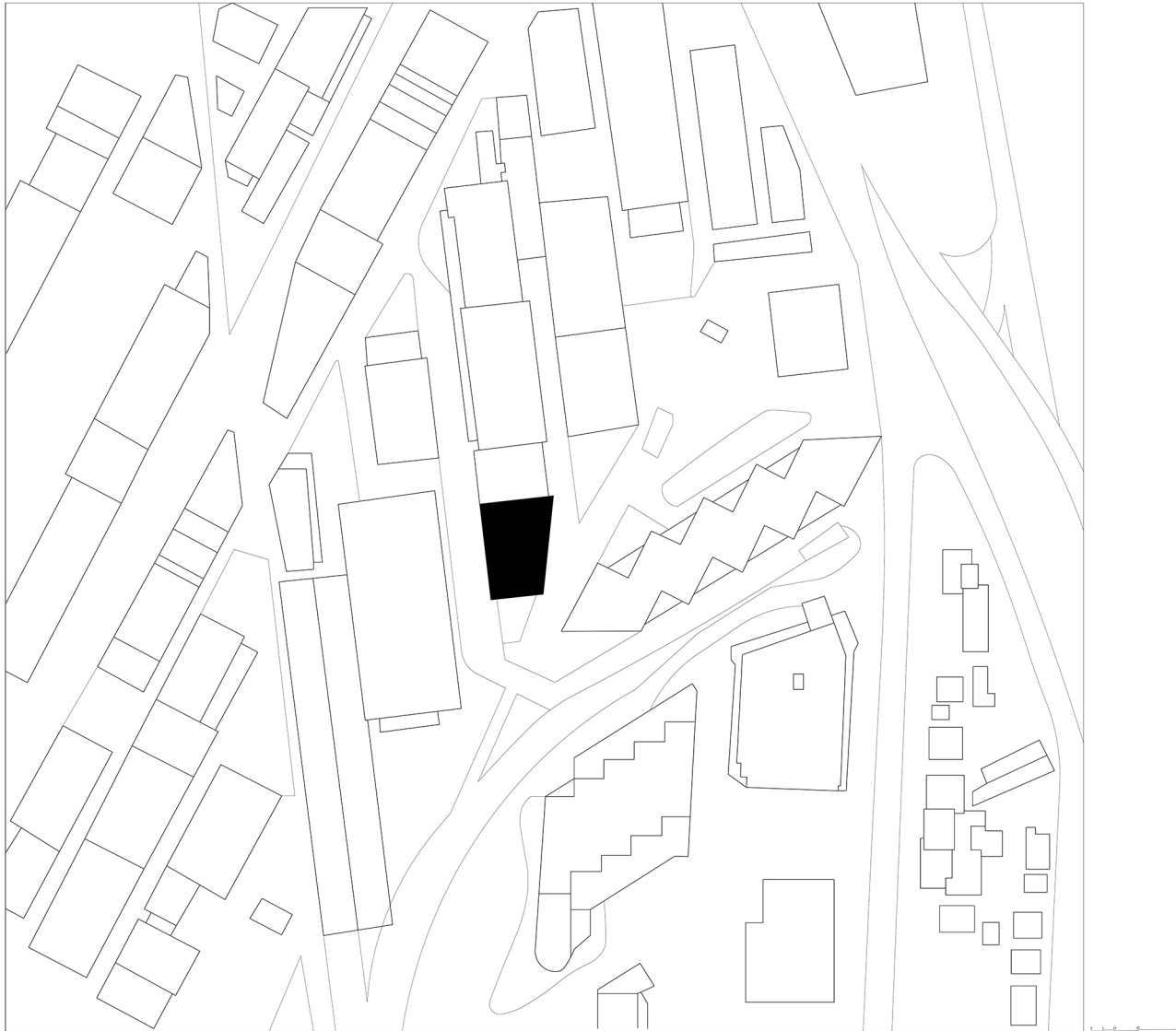
## WEEK 1.4



Finally, we captured photos with different focuses at the same angle, stitched them together in PS and made minor adjustments, and finally got a relatively perfect photo.



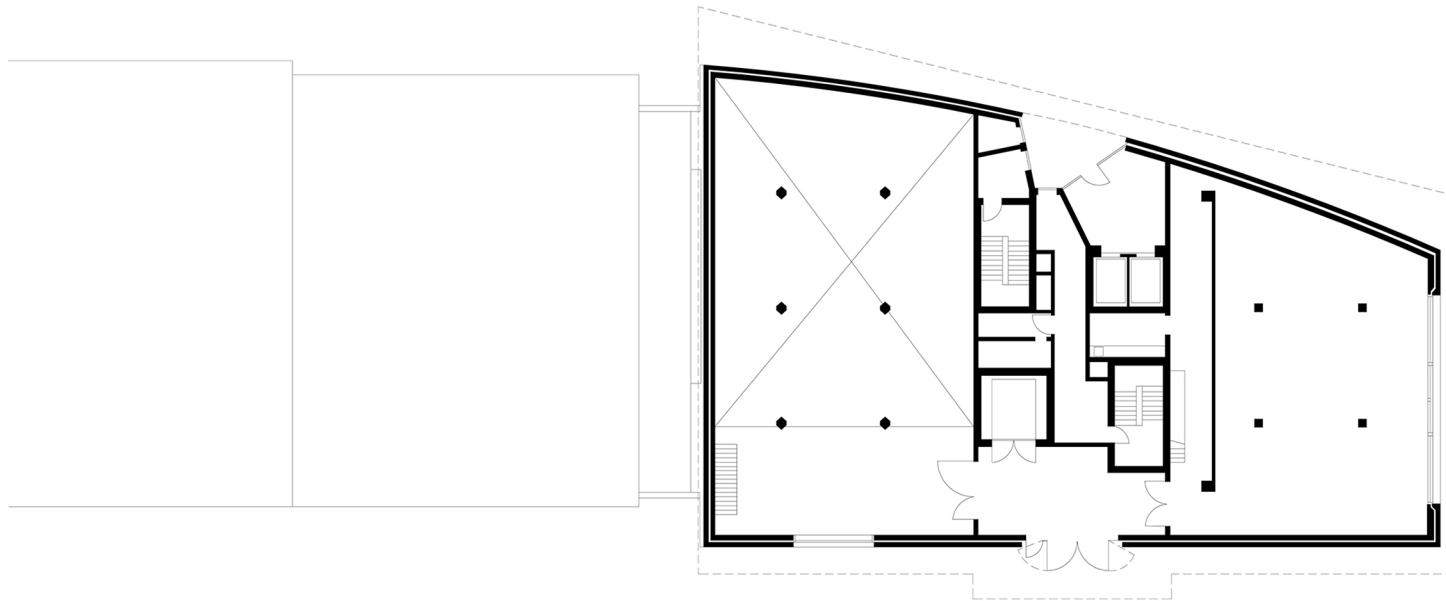
While obtaining beautiful photos, there are also drawings



Site plan



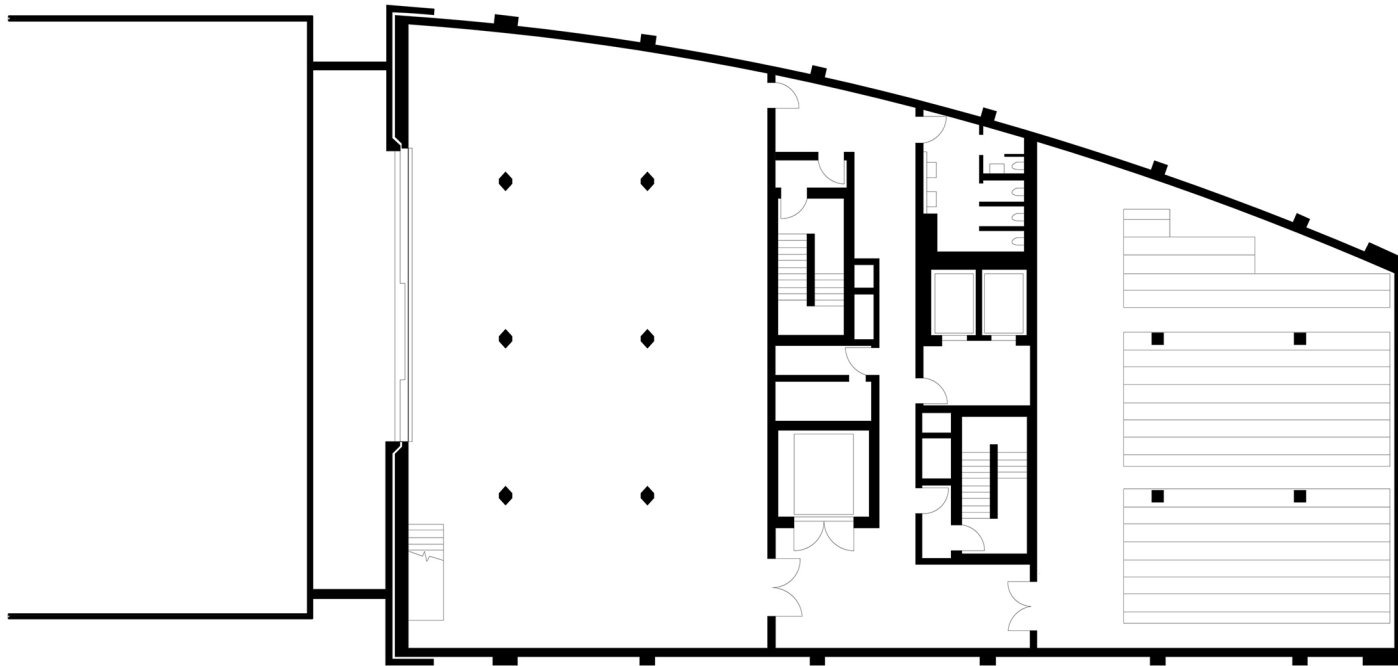
While obtaining beautiful photos, there are also drawings



0 5 10 20

Ground floor

While obtaining beautiful photos, there are also drawings

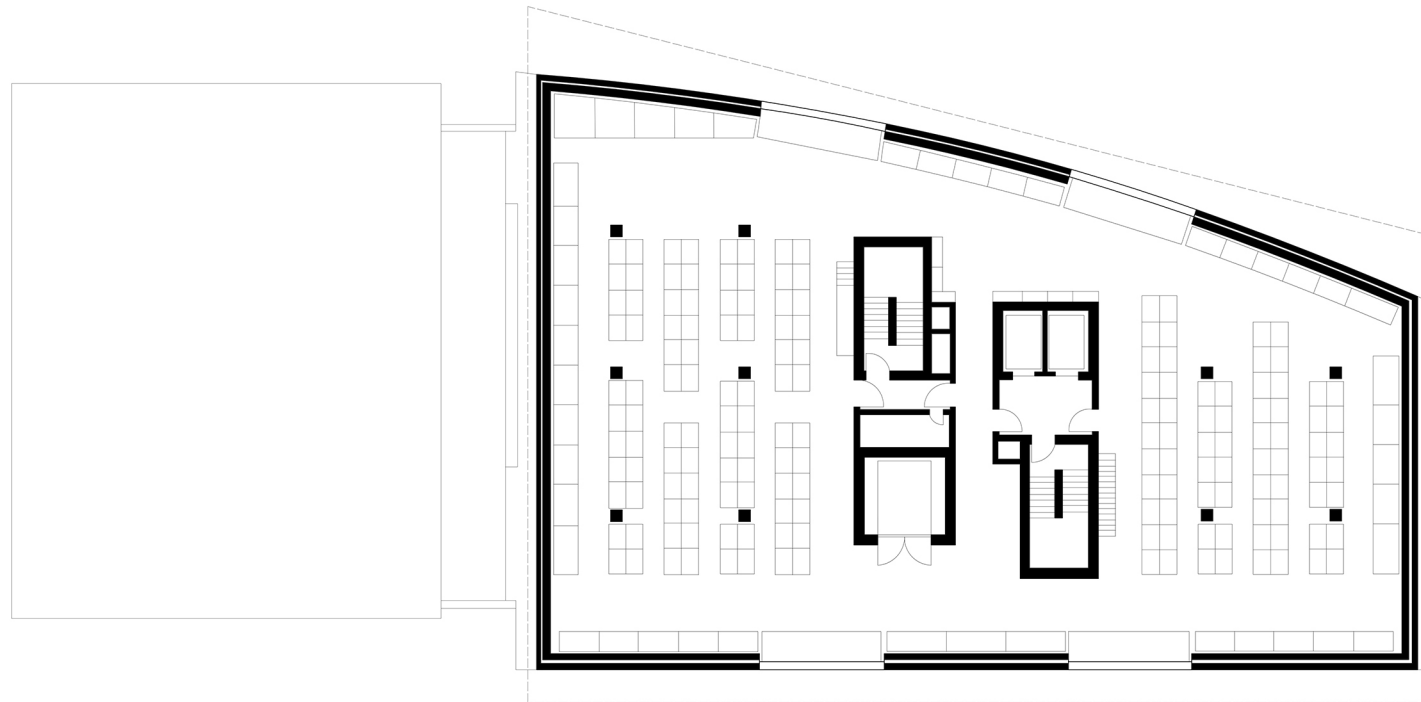


Basement



While obtaining beautiful photos, there are also drawings

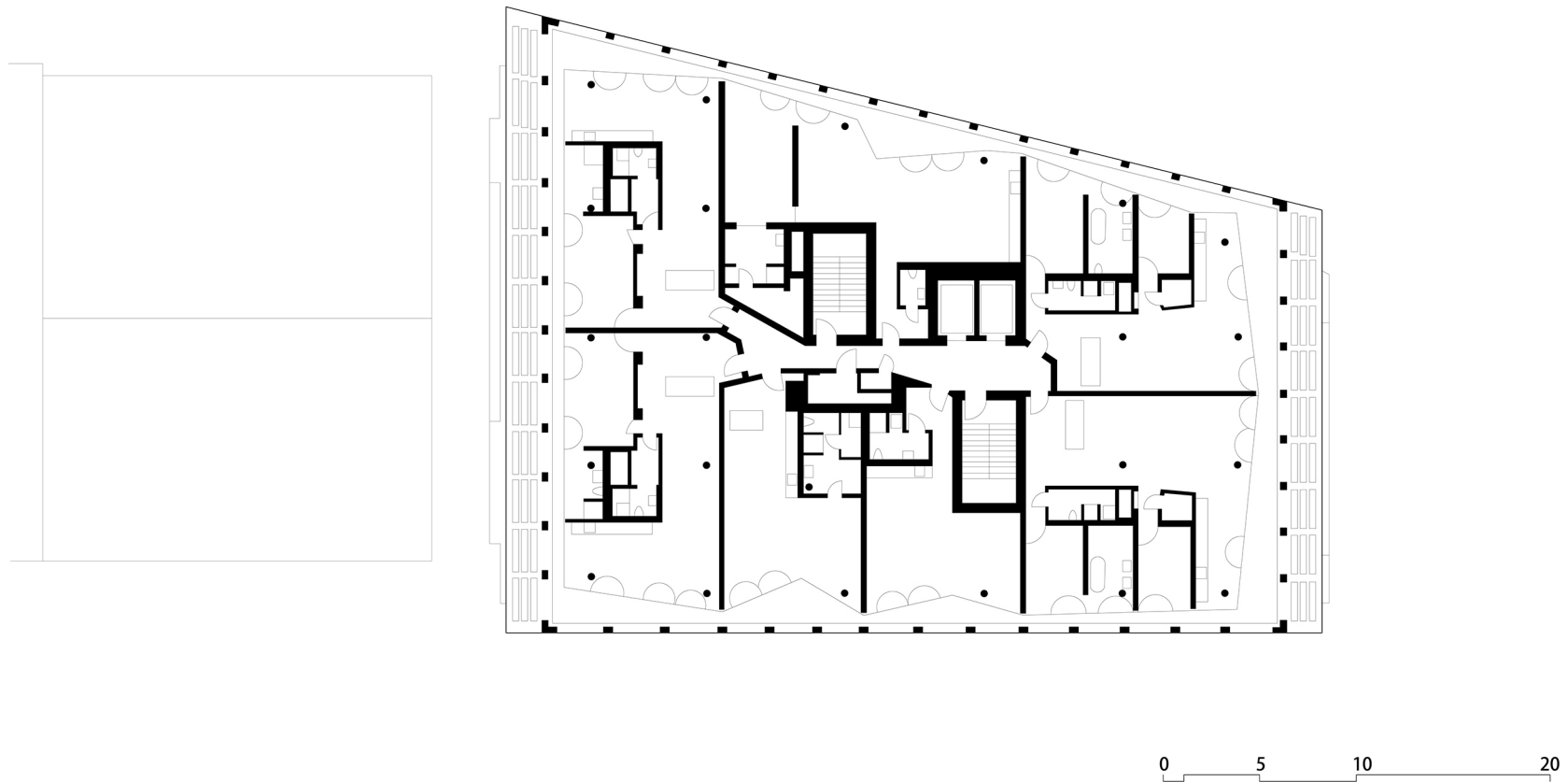
## WEEK 1.4



0 5 10 20

First floor

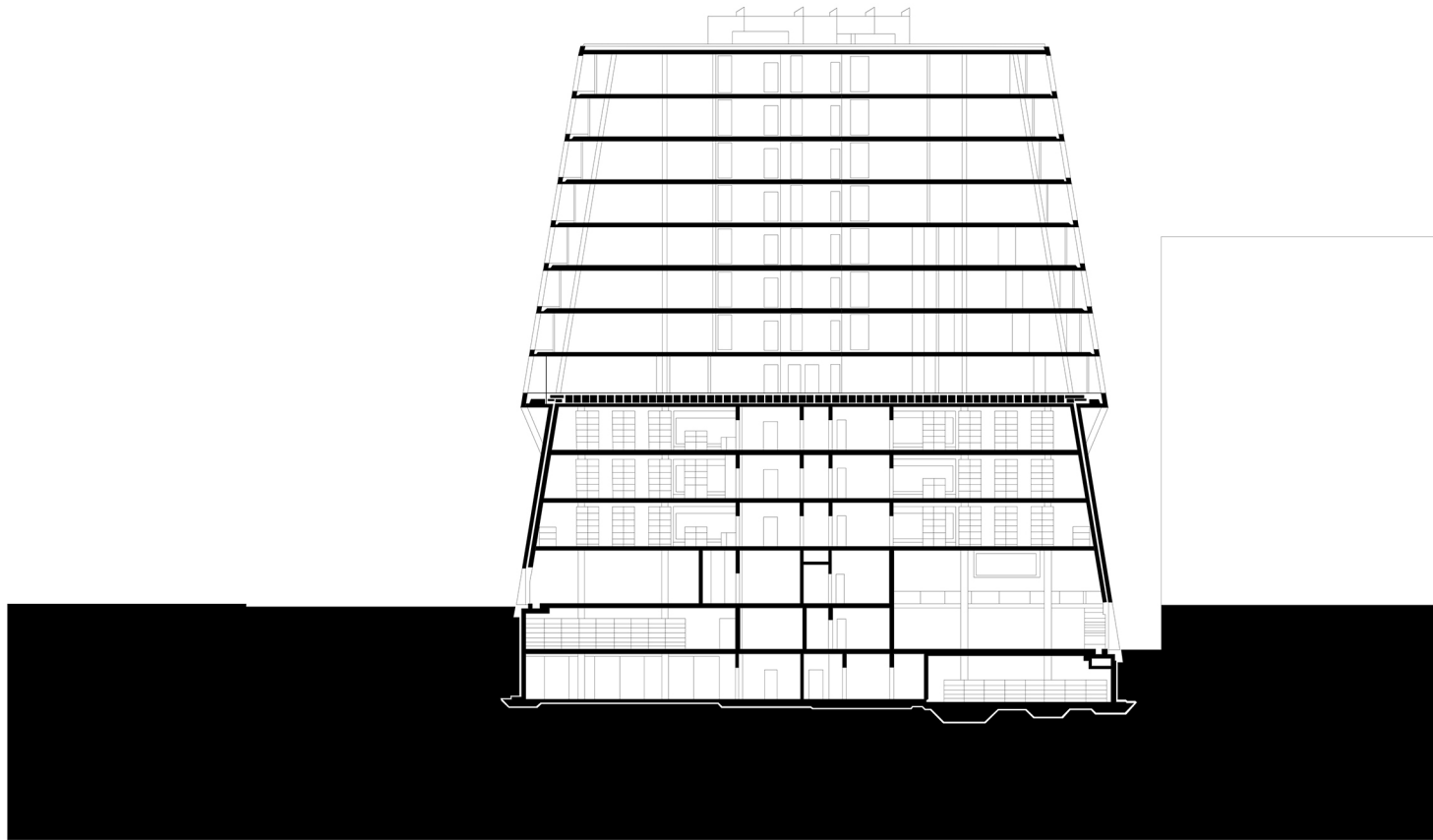
While obtaining beautiful photos, there are also drawings



Seventh floor



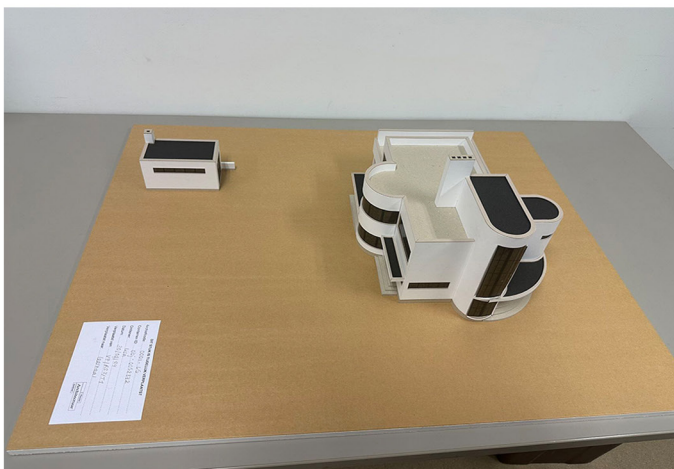
While obtaining beautiful photos, there are also drawings



0 5 10 20

Section

# WEEK 1.5

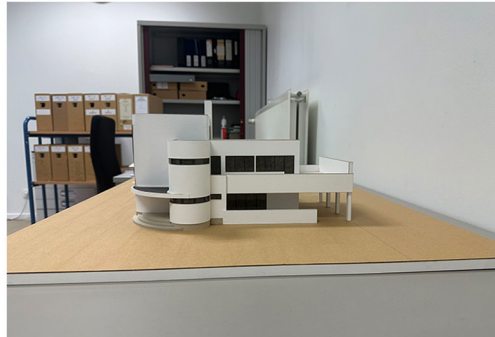


The excursion in the fifth week was the most exciting. Under Dirk's guidance, we visited some offices in Antwerp, saw some urban planning models and houses, and learned about Antwerp's urban planning logic and related knowledge.

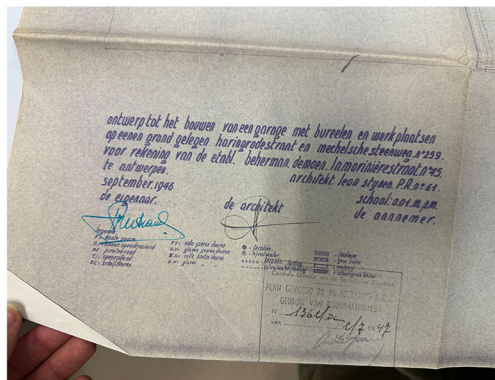
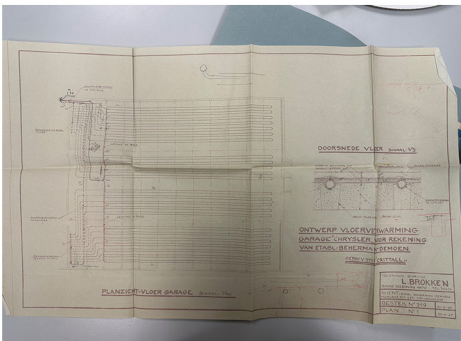
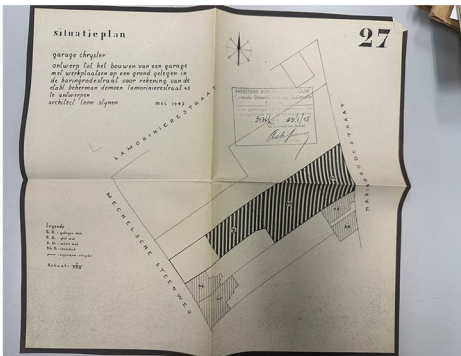
At the same time, we also visited the archive, and experienced the experience of visiting and looking up materials in the archive for the first time. Due to time constraints, I was a little at a loss in front of the heavy archive boxes. The feeling of touching these documents and drawings for the first time is indescribable.



# WEEK 1.5



The materials I consulted included Leon Stynen's design drawings, renderings, and some receipts, and the materials my teammates consulted also included letters and photos, etc. These valuable materials also brought me some inspiration and allowed me to have a deeper understanding of Leon Stynen.



## WEEK 1.5



This was undoubtedly a wonderful experience for me. Before this, I had never been to an archive to search and read materials. Facing these antique-like documents and drawings, I felt as if I were doing archaeological research wearing gloves and holding a candle in the past. This is a rare opportunity for architecture students.



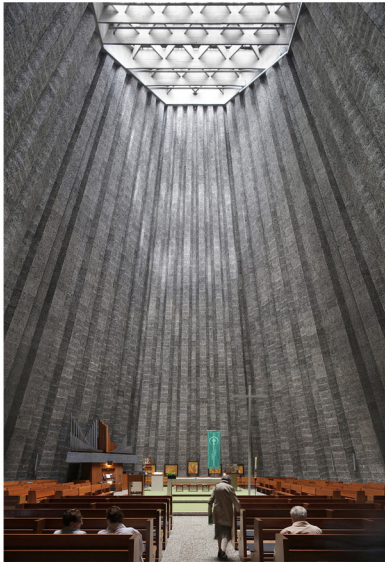
# WEEK 1.5



The old photos also fully reflect the architectural environment and details of the time

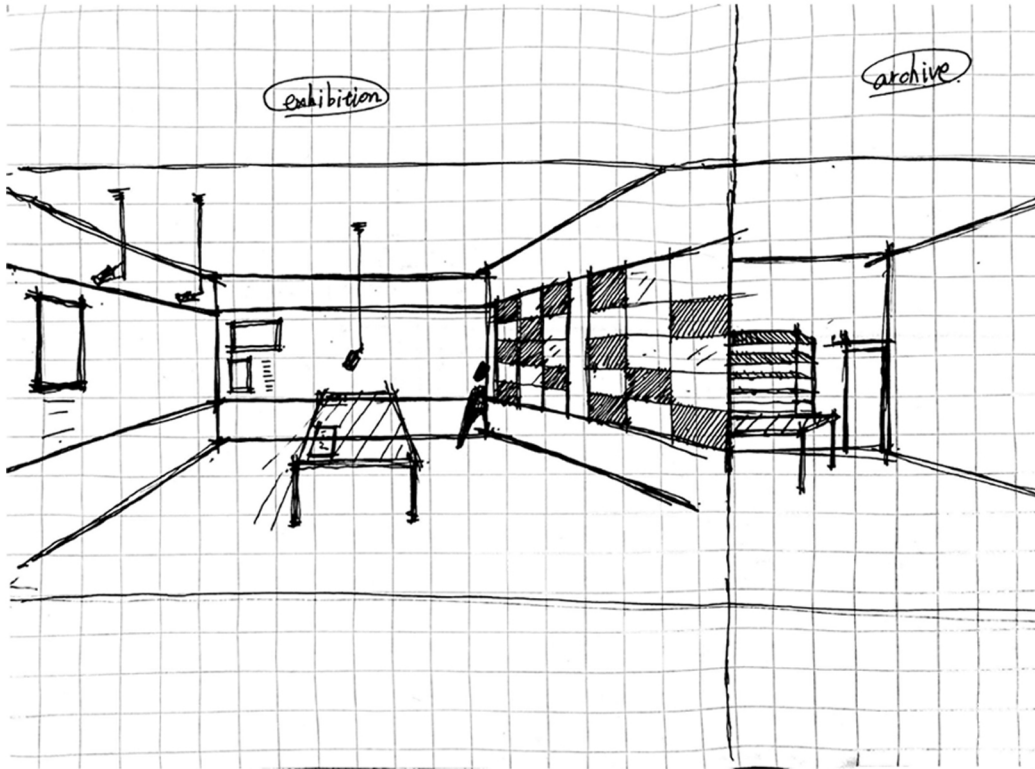


## WEEK 1.6

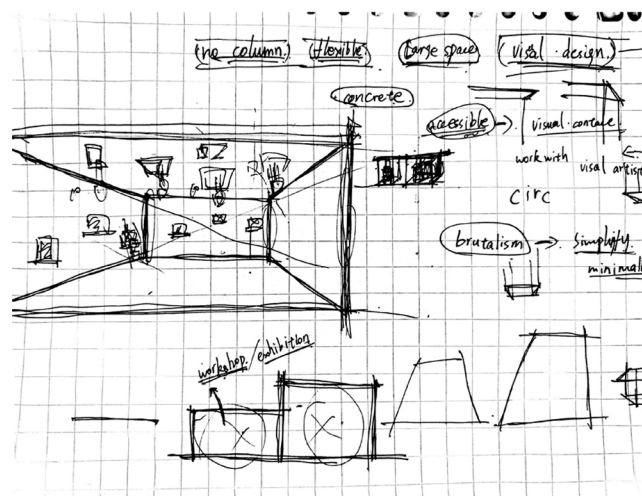
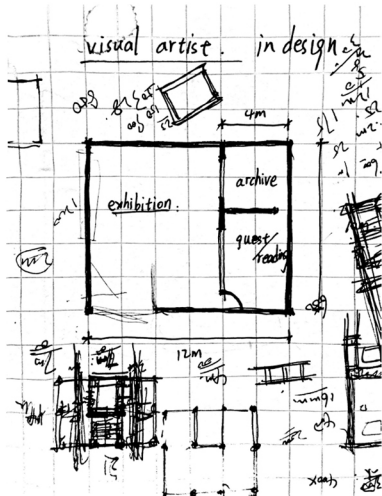


I tried to find cases and information to get the architectural style and characteristics of Leon Stynen. Leon Stynen's interior spaces are mostly column-free and flexible, just like the de singal and BPbuilding he designed. Secondly, he also pays attention to visual design and collaborates with visual artists in most of his works to achieve a minimalist spatial effect.

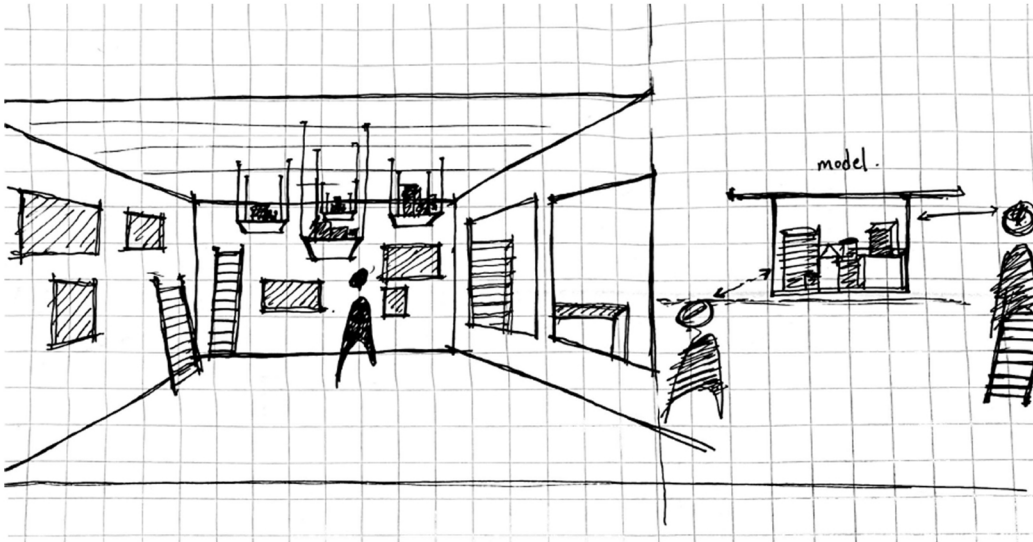
# WEEK 1.6



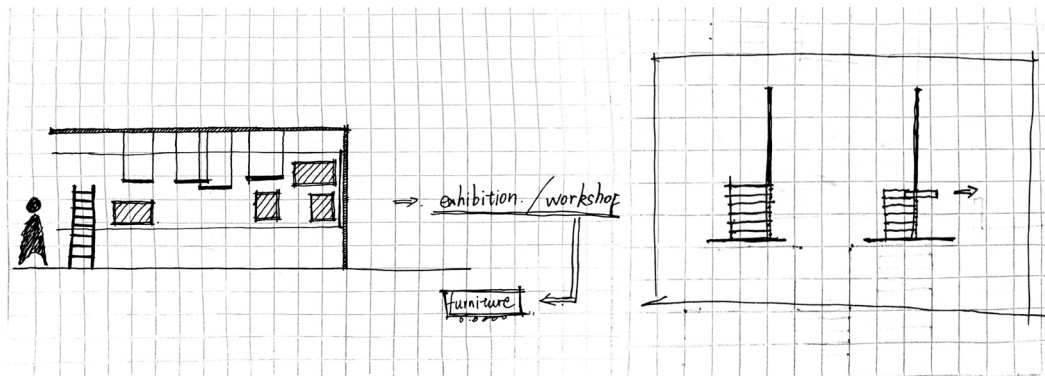
In the preliminary design of the archive space, I tried to build an exhibition space at the same time as the archive space as an extension of the archive. Taking visual accessibility and tactile accessibility into consideration, the exhibition space was separated from the archive space, and glass was used to establish a visual connection between the two.



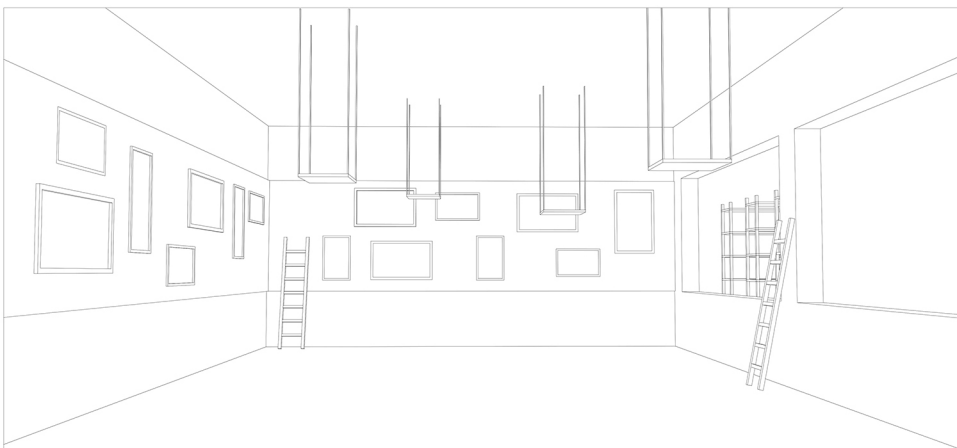
# WEEK 1.7



This week I explored more possibilities, trying to create a purer space and increase interest. I hung the model from the ceiling, used ladders to enrich the viewing experience, and turned the space below into a large workshop for flexible use.

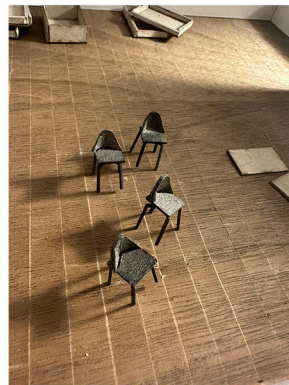
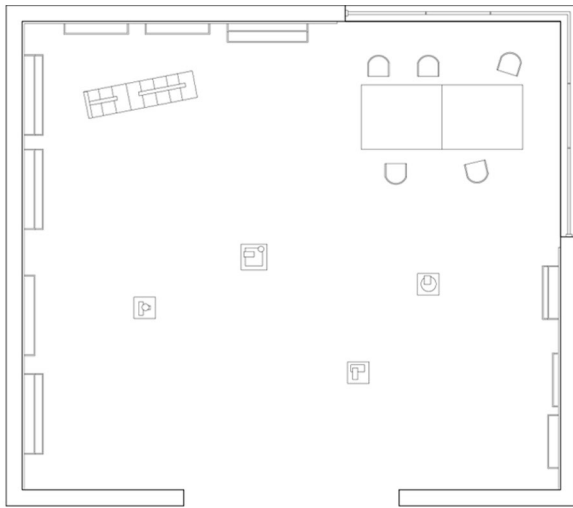
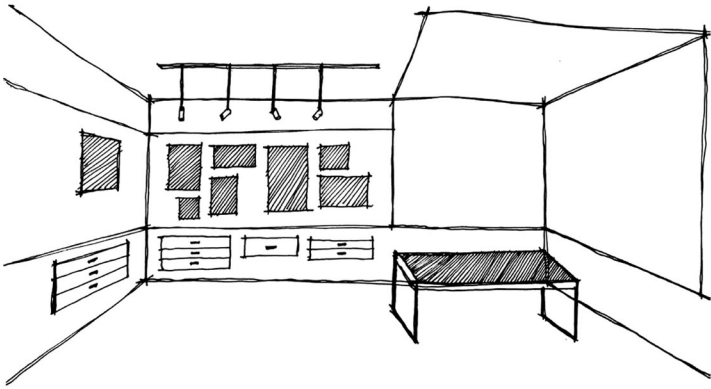


But to a certain extent, the accessibility of the space was destroyed. The ladder deprived the elderly and children of the opportunity to view the exhibition, and the visual effect of looking up at the model could not achieve the assumed visual experience.





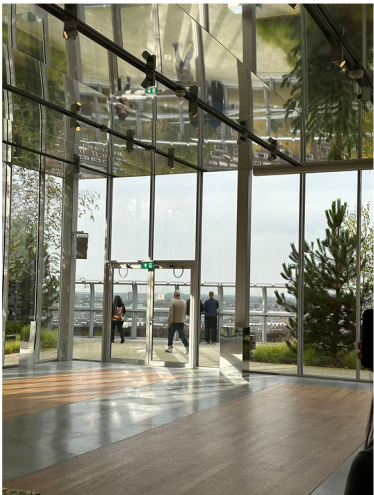
## WEEK 1.8



After receiving feedback last week, I decided to combine exhibition and archive. The drawer space is part of the wall thickness and can be used as archive space. At the same time, this thick wall also provides more possibilities, such as corridors and other storage spaces. At the same time, a glass corner is opened to divide the space and serve as a reference and reading space. The glass box can also balance the natural light and artificial lighting of the entire space to achieve a balance.



## WEEK 1.9



This week's excursion took us to the Depot of Museum Boijmans, where we had a guided 'back-of-house' tour by one of the conservators, where I saw the glass surfaces and effects needed to extend the space. I also entered the archive space and learned how to create visual connections with the outside world, which provided inspiration and reference for my subsequent design.



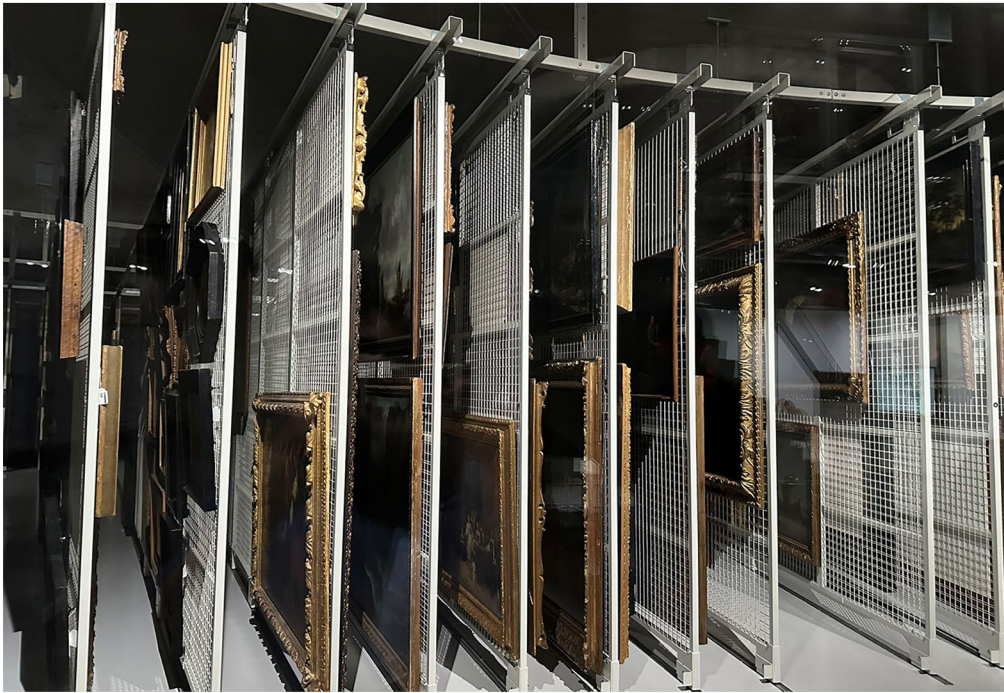
# WEEK 1.9



The electric archive shelf left a deep impression on me. The shelf moves slowly along the track on the ground, expanding the storage space and utilization efficiency, and also making it easier for people to find collections. This also reminded me of the case I saw before, the hand-cranked storage rack, which has a similar principle, the only difference is that the stored items are mostly lighter files, which gave me a lot of inspiration for my design.



## WEEK 1.9



Classification and storage of materials is also an important part. We can see that different installations for paintings and crafts ensure storage efficiency and diversity. For archive space, the starting point of the design may also be the types of exhibits or collections and their storage methods, which may be more helpful.





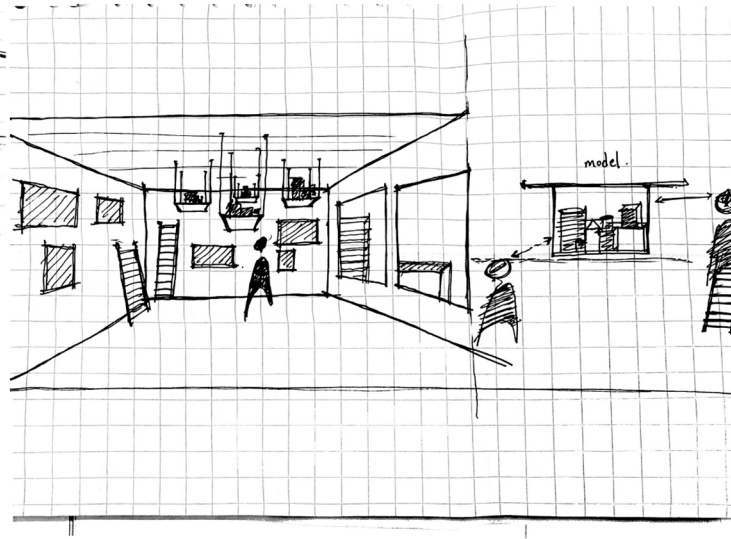
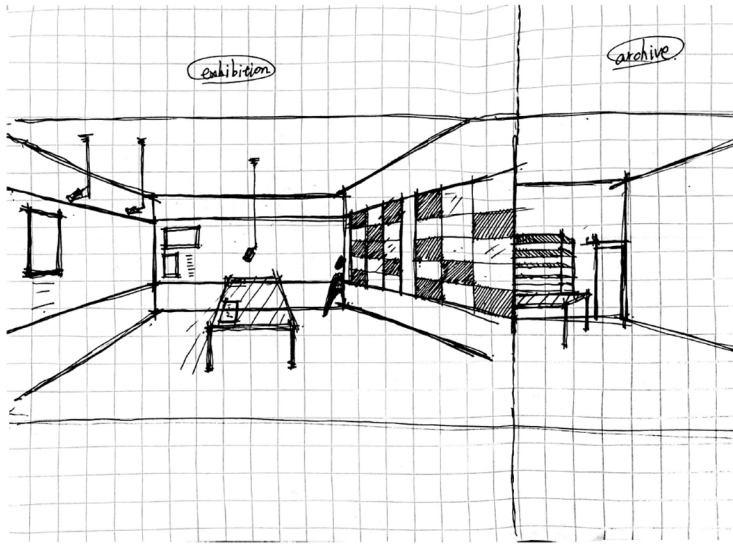
## WEEK 1.10



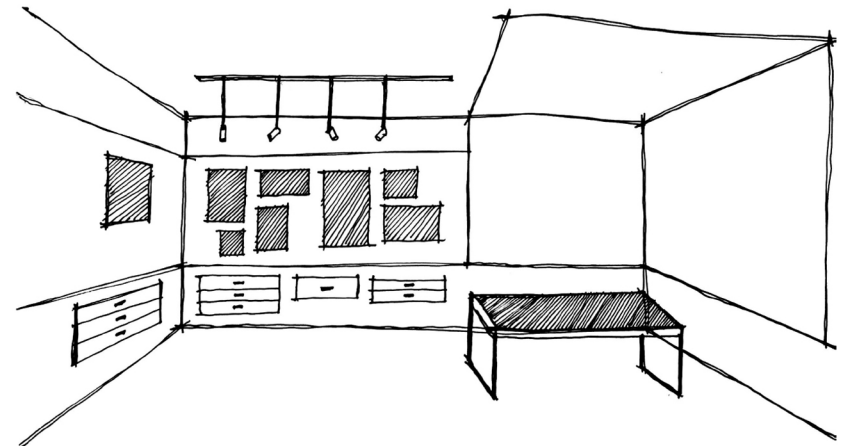
The final model was created in the ninth and tenth weeks.  
After two rounds of revisions, the archive space was created in a modular way, which is universally applicable and efficient.



# Design proposal

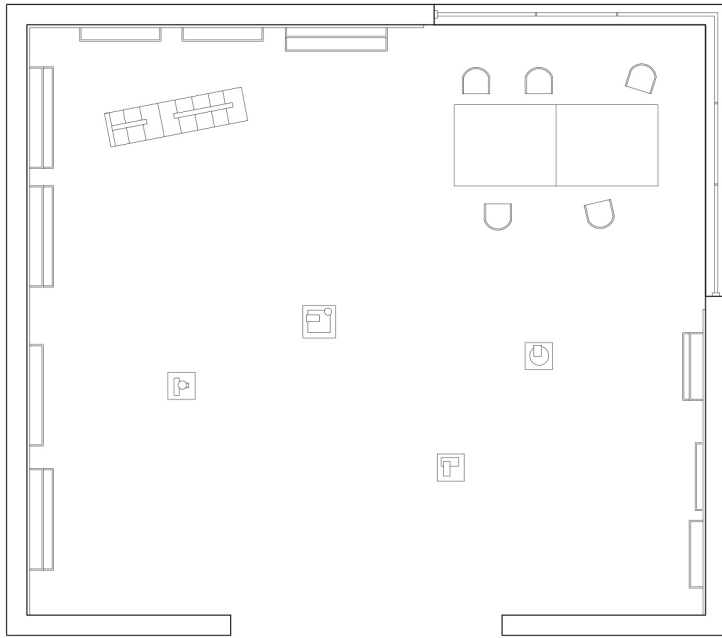


The design was adjusted twice, and finally different schemes were referred to and new elements were added.



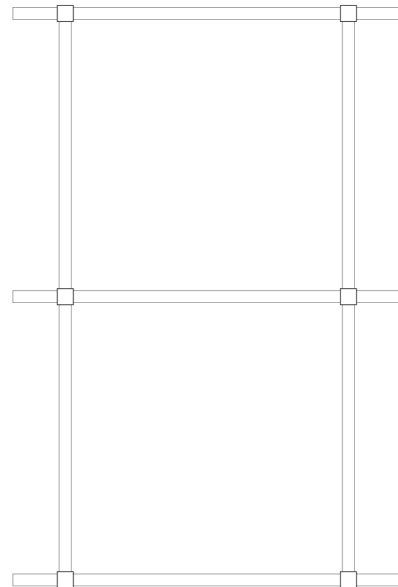
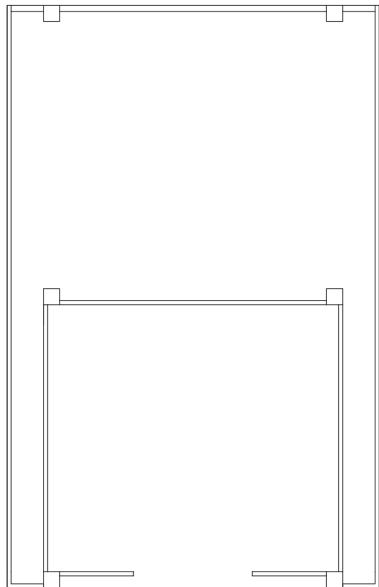


# Design proposal

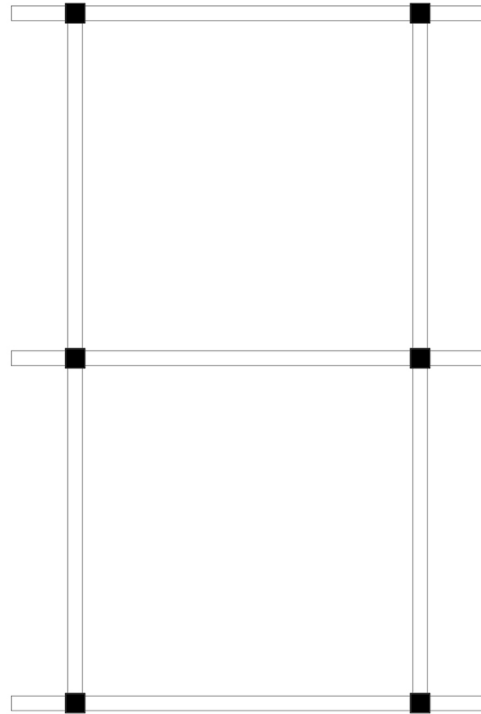
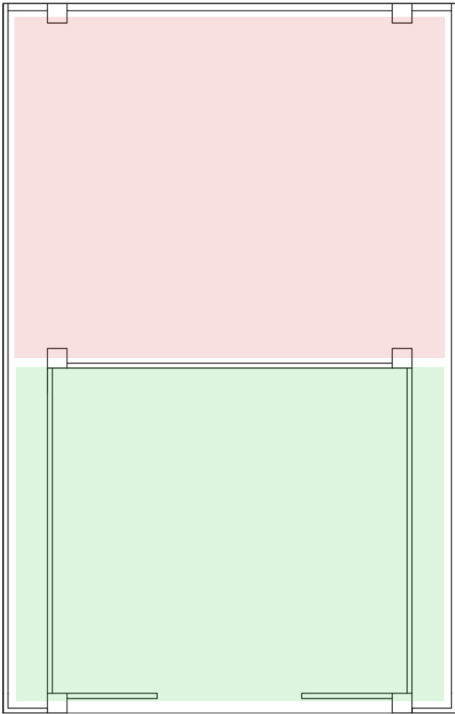


Since the archive area of the previous design was large, it could not be fully utilized and lacked logic, I decided to arrange the rooms according to the column grid and further modularize it.

In this way, archives can be exhibited in different unit compartments according to different themes or attributes, and archive storage spaces can be interconnected and share protection facilities.



# Design proposal



Different column grid units divide different functional areas, separating the exhibition and storage space, while the use of glass connects the two areas.

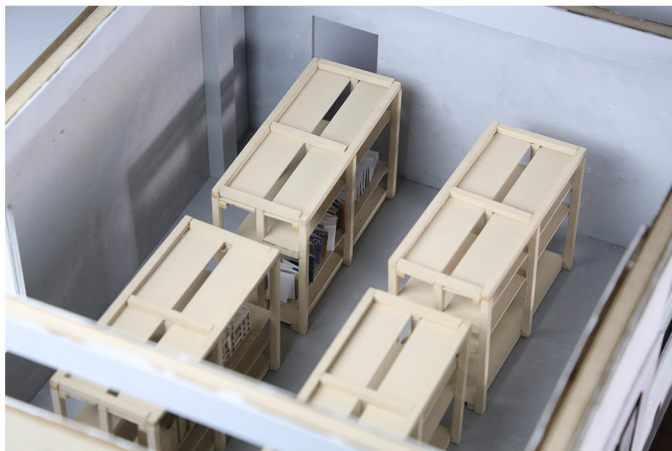
# Furniture



For the choice of interior furniture, i drew inspiration from leon stynen's use of furniture in other buildings, such as de singal and BP building. influenced by the previous model training, i decided to continue using kabinet as archive storage space.



# Furniture

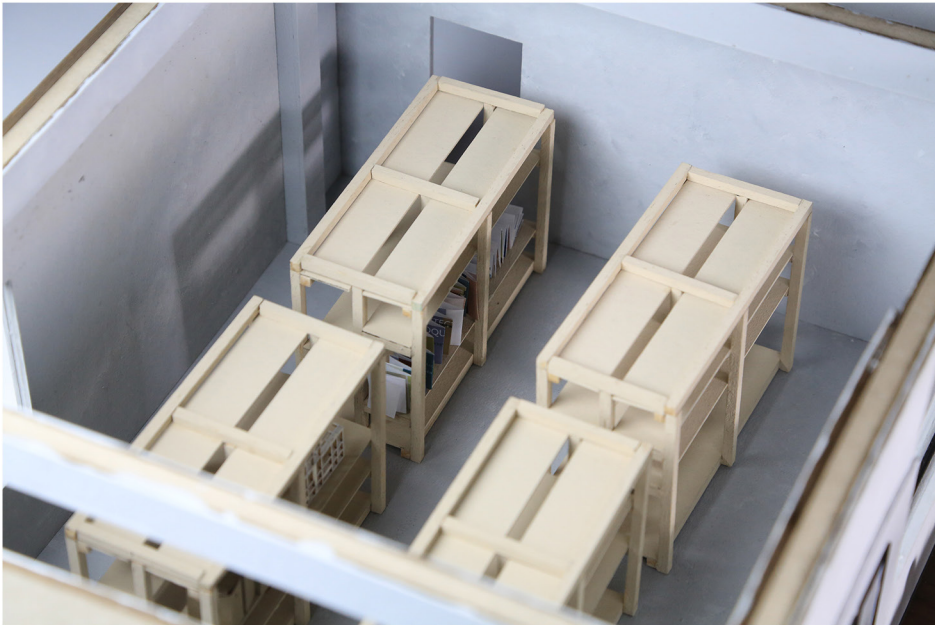


In the final design, the furniture is mainly a large square table, a human body functional chair, drawers for storing drawings and shelves for placing models. The archive storage space is flexibly displayed through kabinett

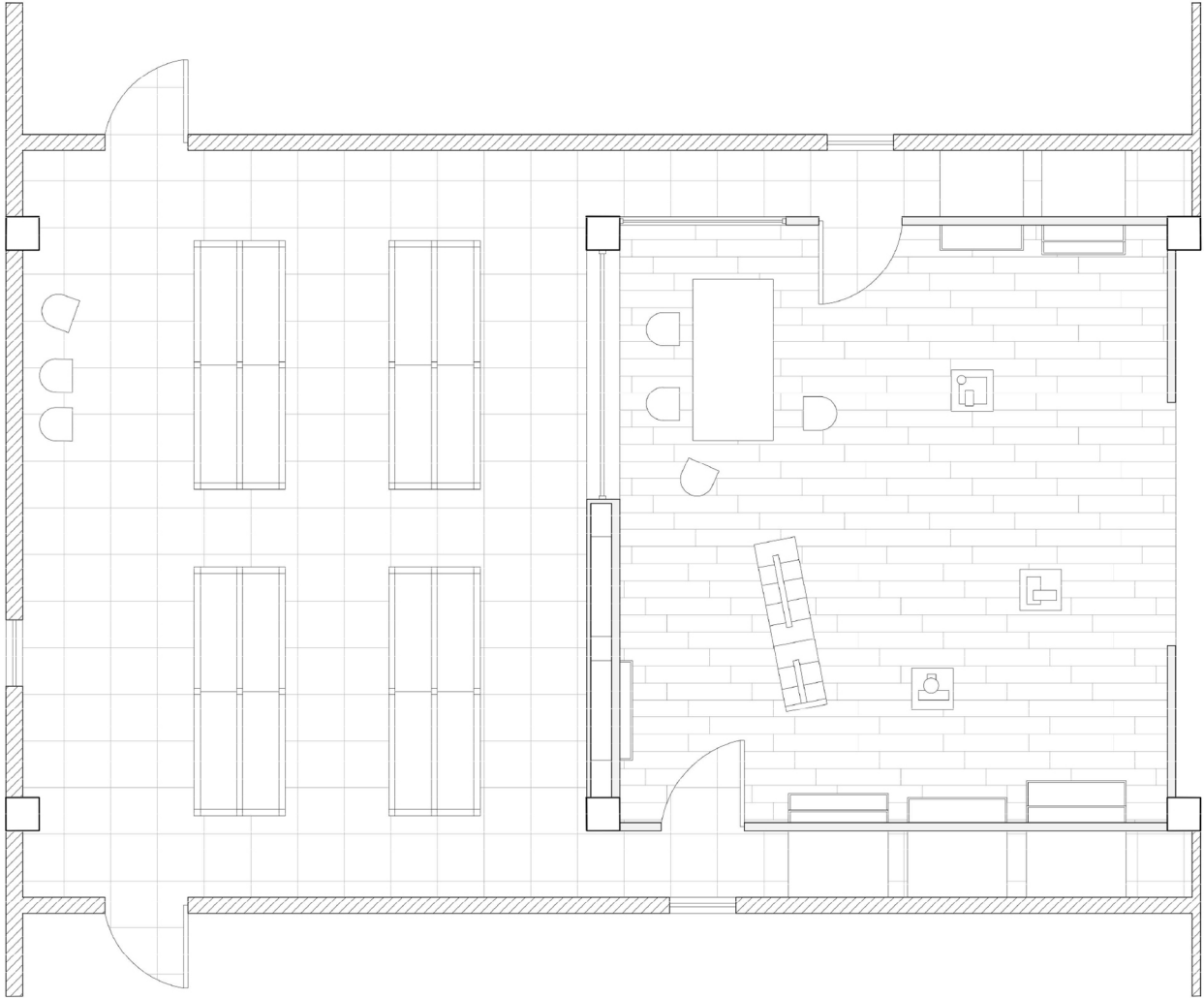
# Material



The main materials are concrete and wood. The wooden floor of the exhibition area can create a better viewing atmosphere. The walls are mainly white, creating a purer and more pure space and distinguishing it from the archive, with a clear sense of contrast.

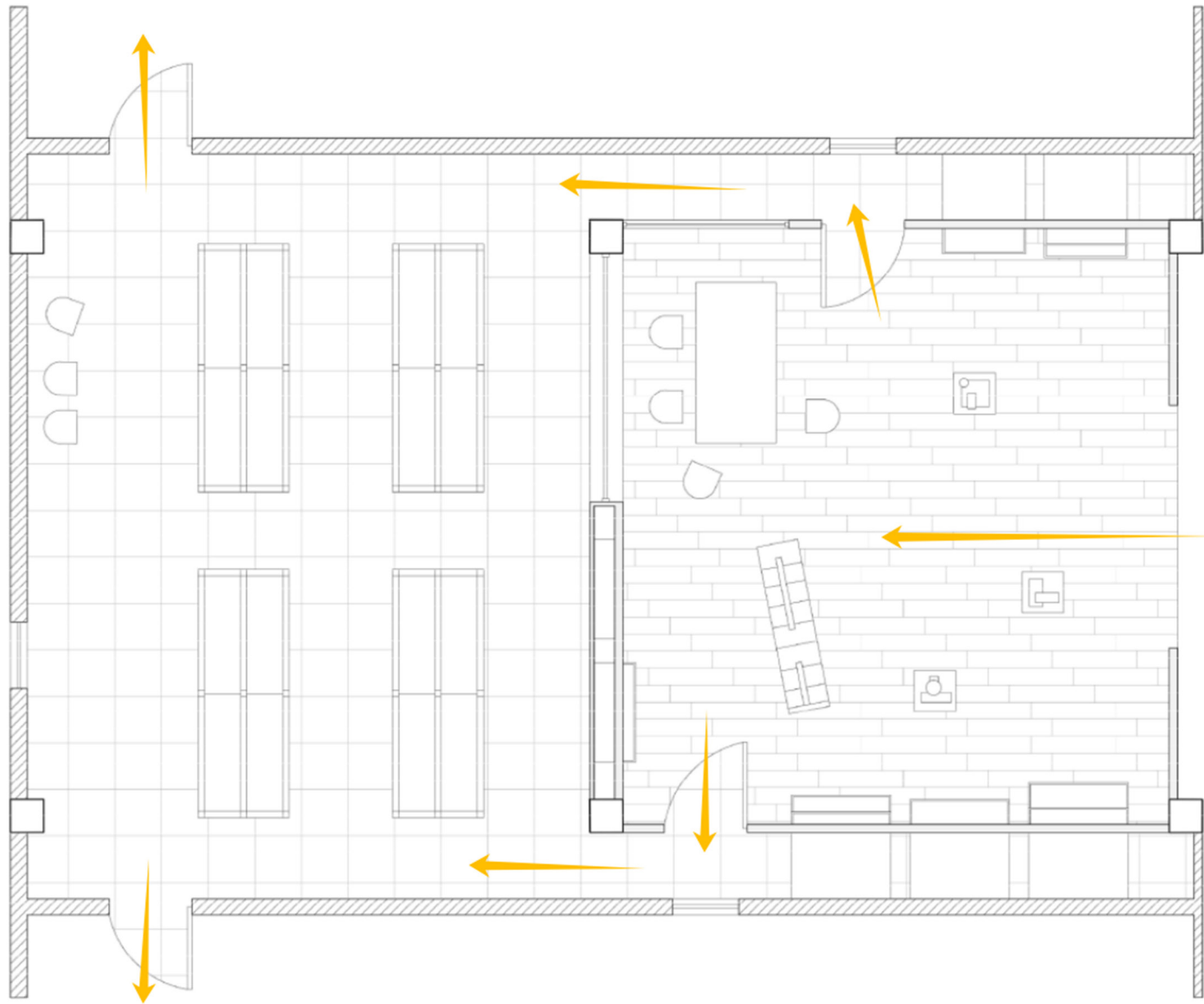


# Plan





# Circulation



# Photo



Model photos can reflect the atmosphere and sense of scale of a space to a certain extent, and are also one of the effective means to consider plans and deepen designs.



The axonometric perspective makes the relationship between spaces and the connecting elements clearer. The only regret is that as part of a module, there is no time to consider how it is connected to other modules or the transition space.





Final picture

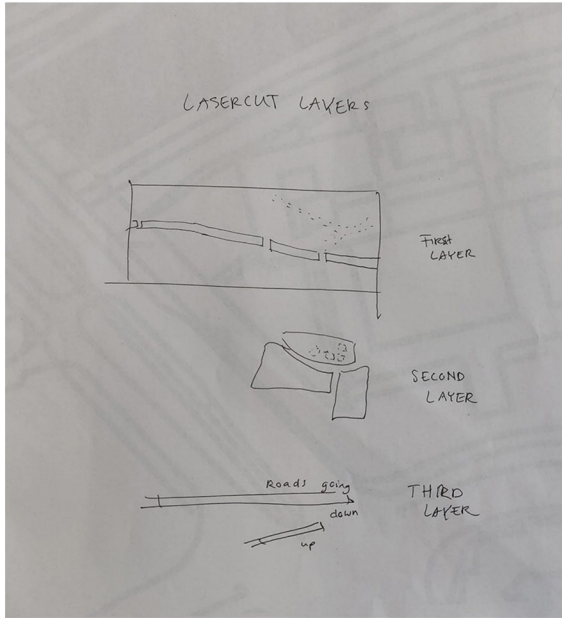


Final picture

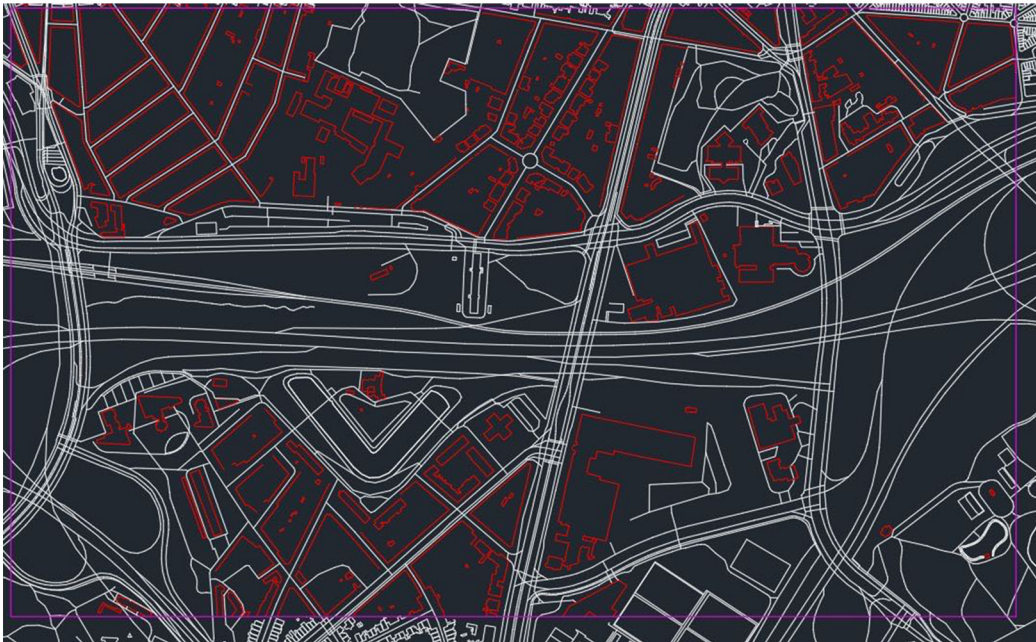




## WEEK 2.1



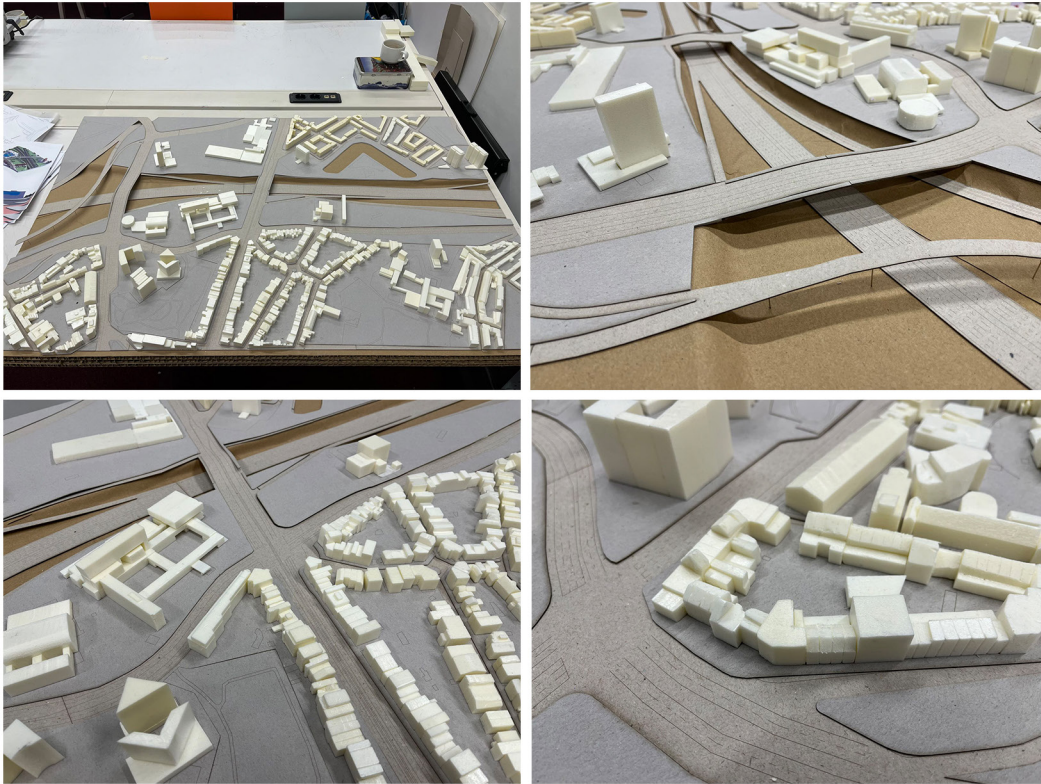
Using foam blocks to represent the residential areas within the site, and to distinguish the materials from the roads and ground layers, is also more conducive to the division of labor and cooperation within the principal group according to different residential areas.



The site model was produced after discussion with the architectural model team, and the site model scale was determined to be 1:1250. Laser cut files were drawn based on the different height difference elements such as highways, railways and bridges in the site.

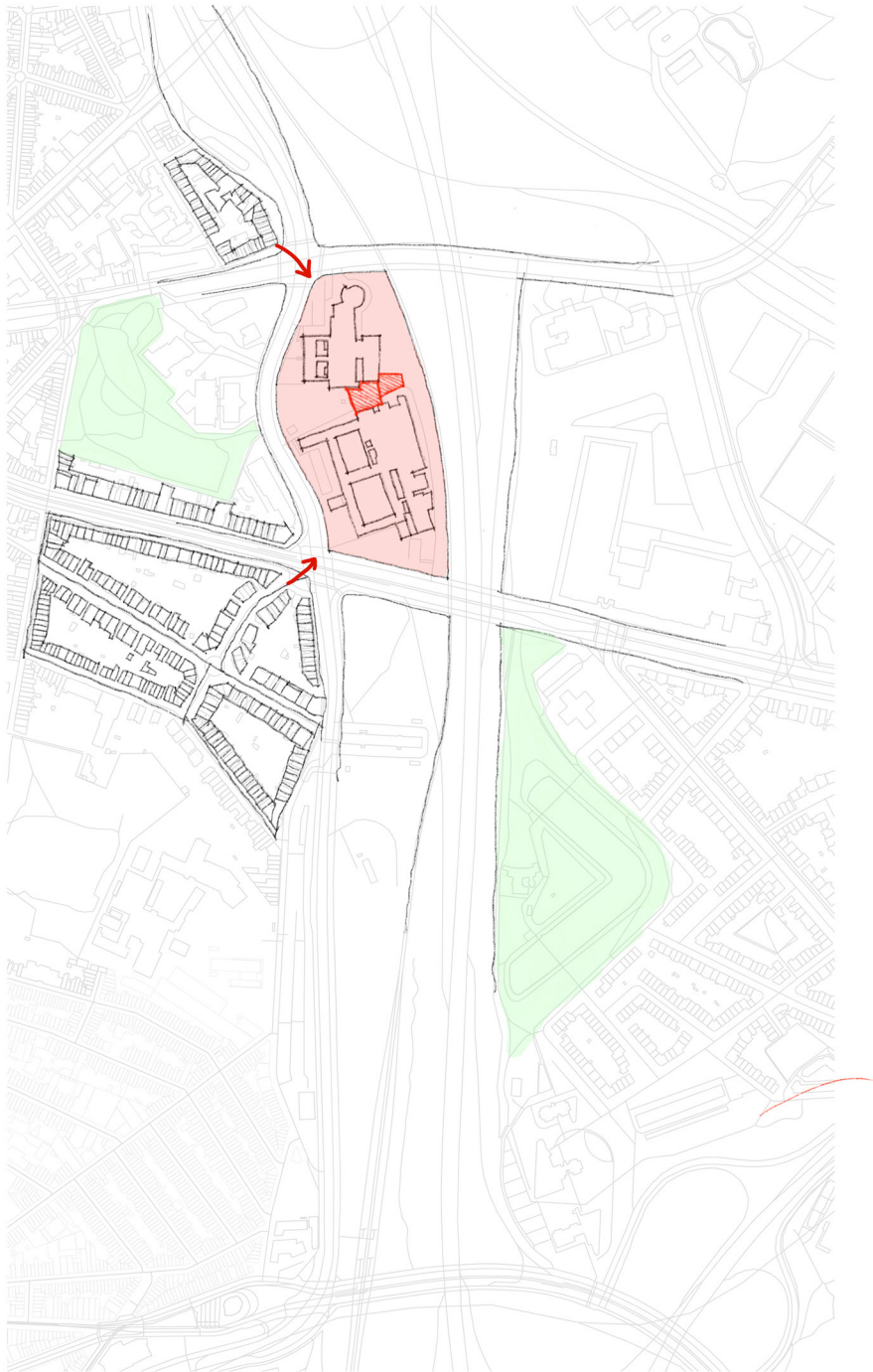


## WEEK 2.2



The site model took about a week to complete. Different materials were used to distinguish different functional attributes. For the sunken parts of the site, namely the highway and the railway, we hollowed out the cardboard and naturally bent the surface to form a slope, which is our proud and innovative approach.

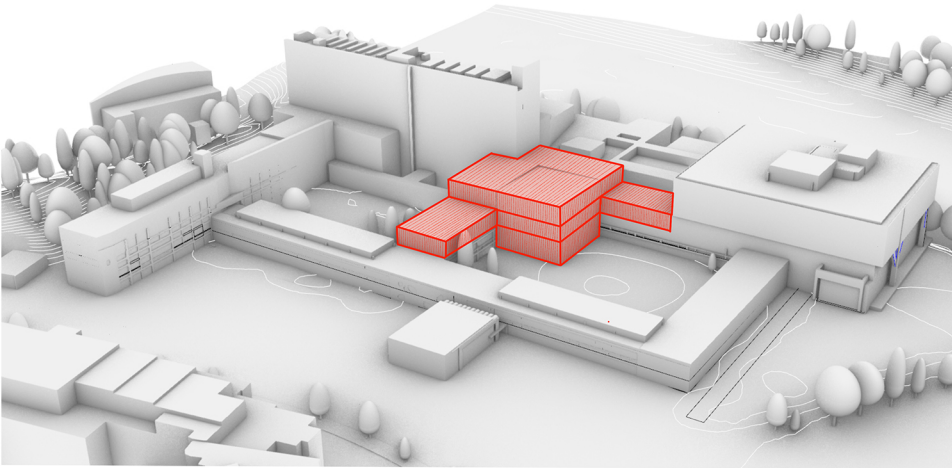
## WEEK 2.2



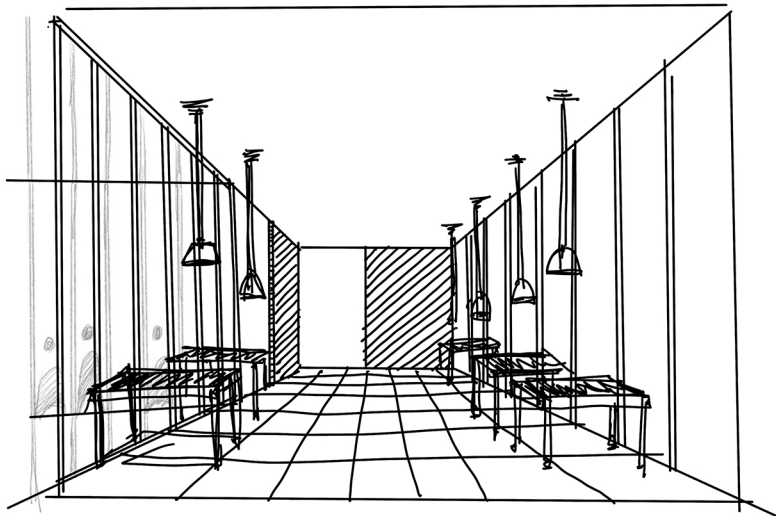
The initial idea was based on the city's perspective. DE SINGEL is located in a relatively fragmented state in the city, like an independent island, and the main entrances to the surrounding area are located in the northwest and northeast. Therefore, the initial concept was to stimulate vitality.

DE SINGEL is an art center, and the Olympic swimming center Wezenberg next to it is mainly a place for sports activities. Therefore, my main idea is to connect the two functional areas, stimulate regional vitality and enrich public space.

## WEEK 2.3



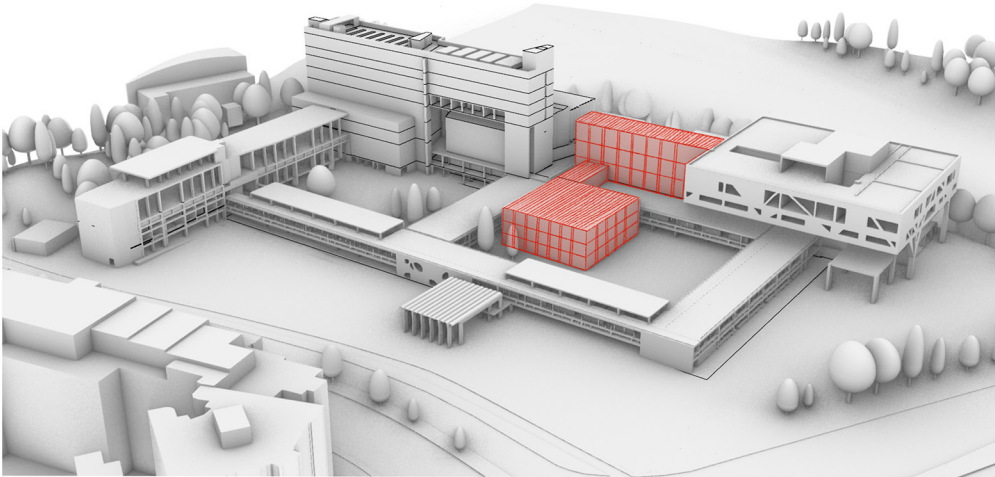
Starting from the DE SINGEL building itself, there is little connection between the east and west sides, and the theater, work space and exhibition space occupy most of the public area. There is a lack of public space to attract more people to gather. At the same time, the glass box of the courtyard can form a balance in space and is also the main space of the archive.



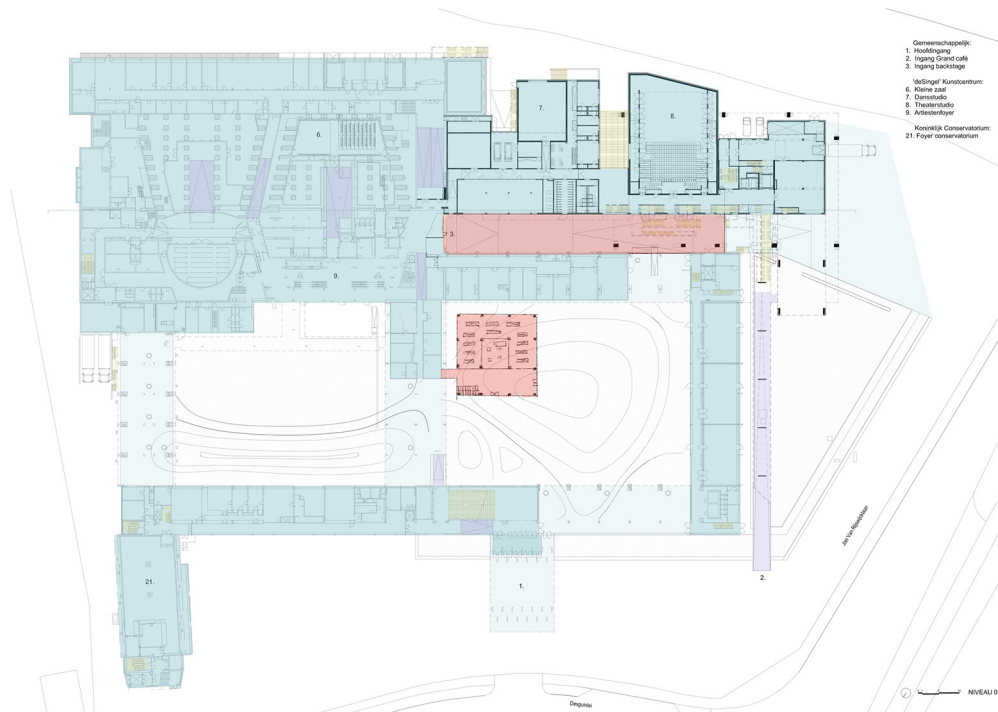
The main structure of the added part is made of glass, which not only makes the building more transparent but also increases the lighting, while also contrasting with the entire concrete material of DE SINGEL.

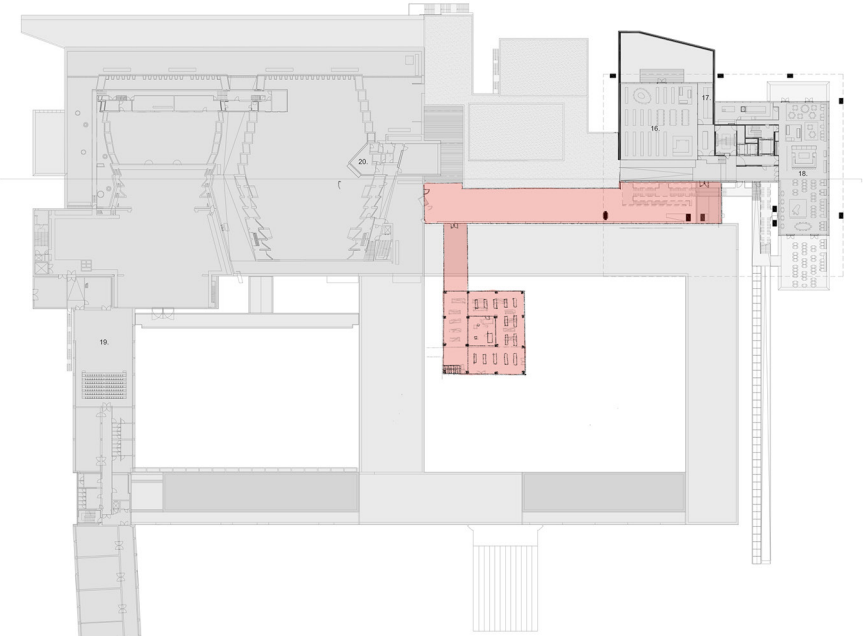


## WEEK 2.4



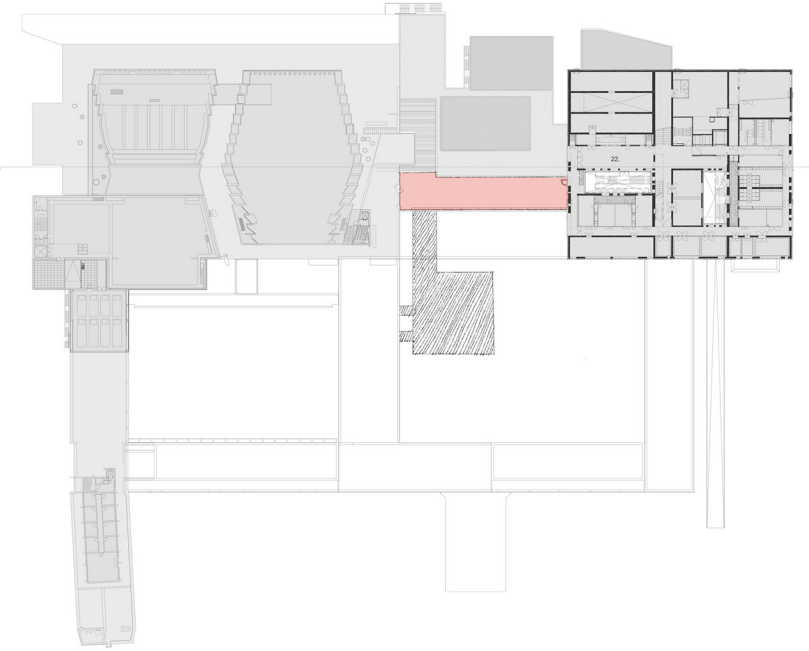
In the new round of program adjustments, the newly built part on the upper floor of the office area was moved to the top of the outdoor atrium area. In this way, a light renovation can be carried out without changing the original structure, filling the original hollow area as a public space, and continuing to retain the original archive space treatment strategy for the courtyard. On the ground floor, the road is still reserved so that cargo can reach the theater and archive space.





- 'deSingel' Kunstcentrum:  
16. Bibliotheek leestafel  
17. Shop Tickets  
18. Grand café  
19. Zwerfke zaal  
20. Koninklijke loge

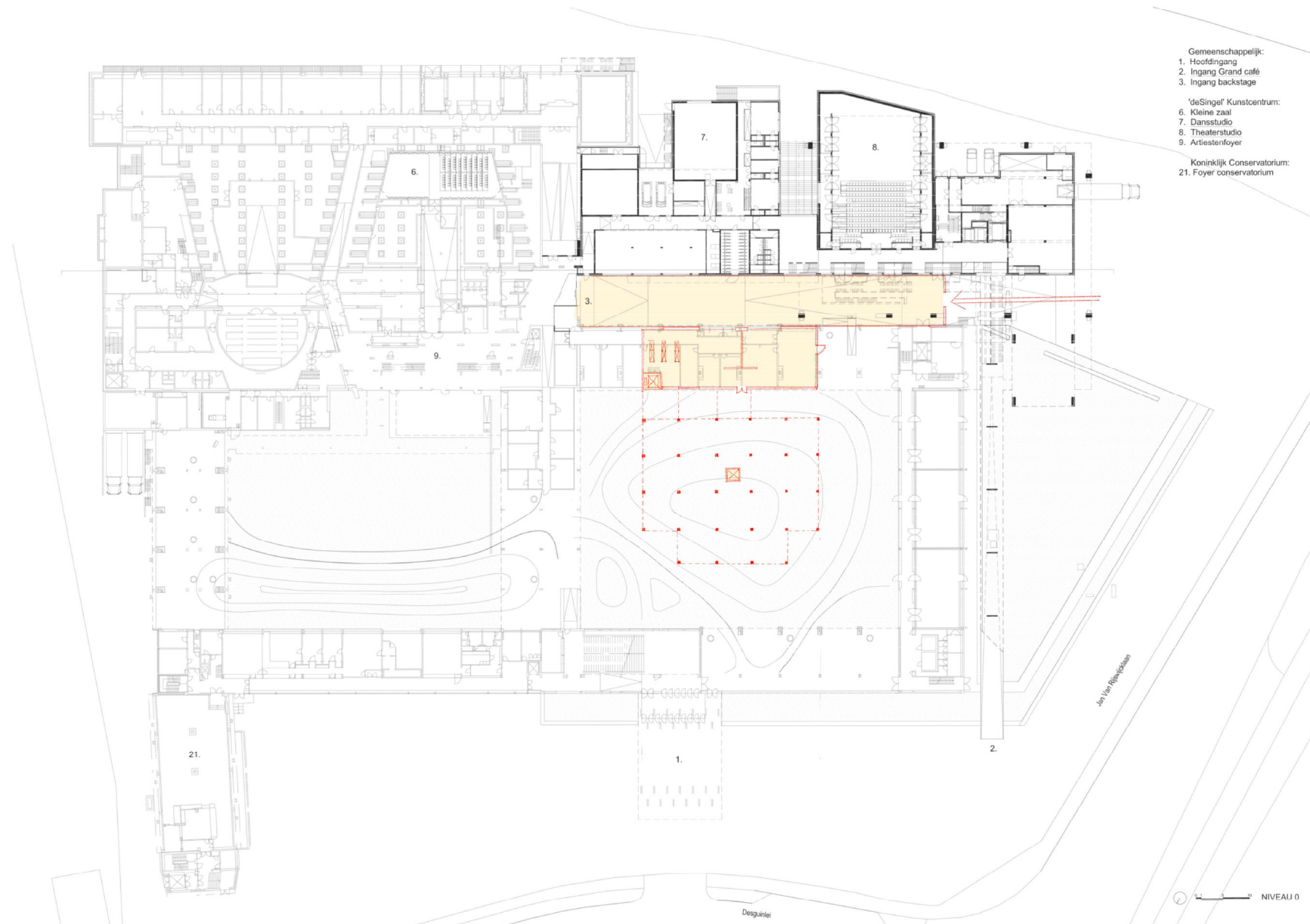
NIVEAU 2



- Koninklijk Conservatorium:  
22. Vrijta Sijer

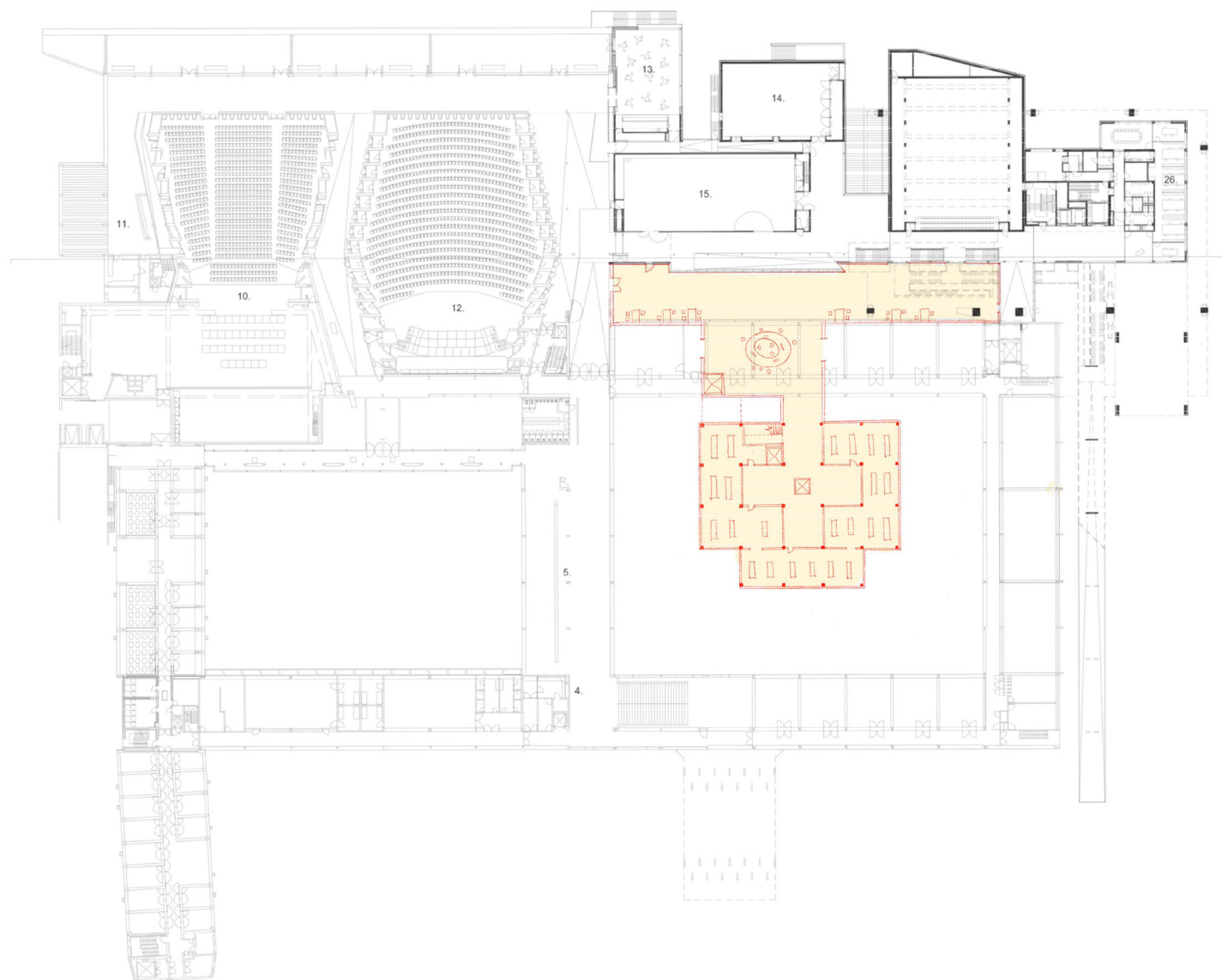
NIVEAU 3

# WEEK 2.5



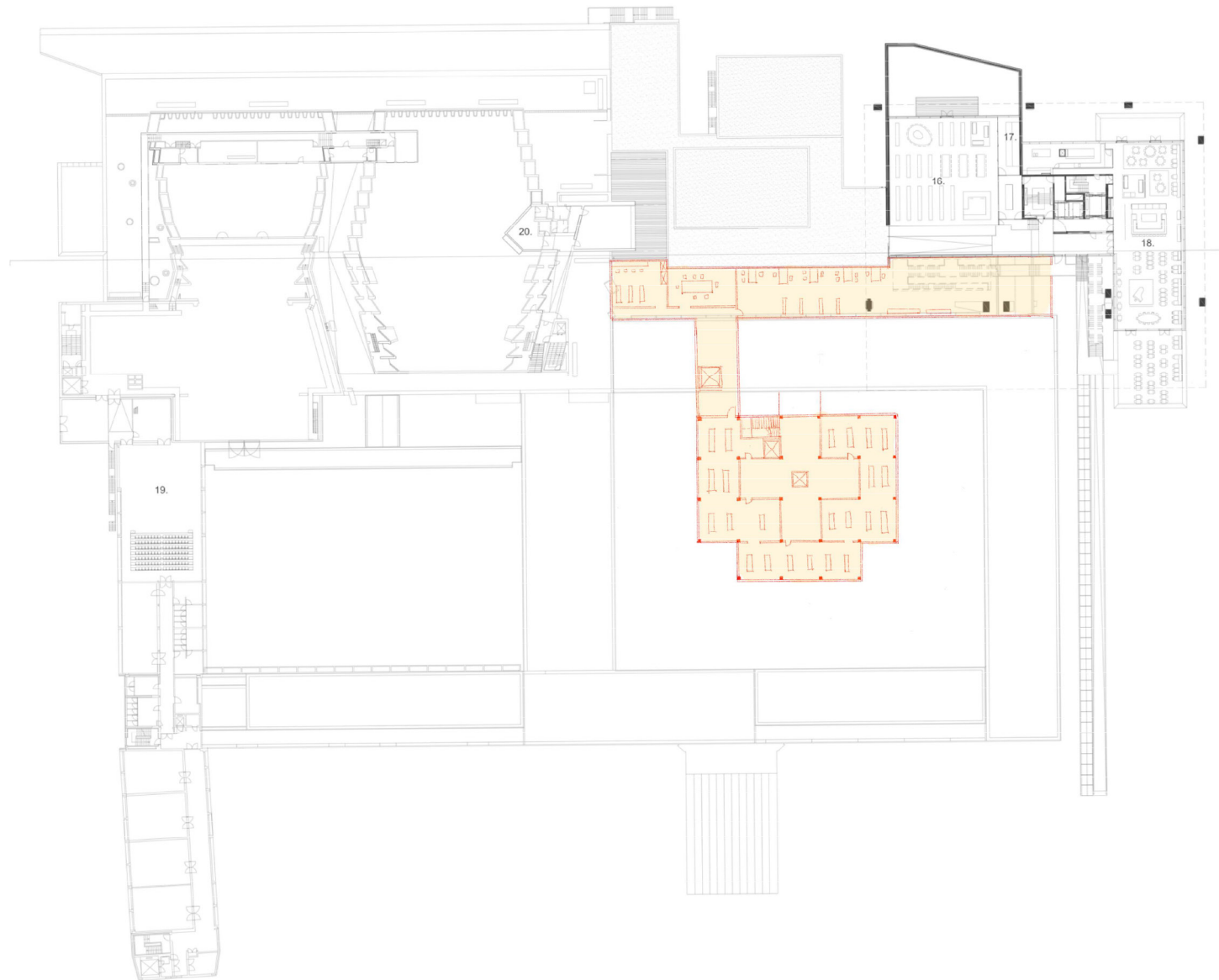


# WEEK 2.5



- Gemeenschappelijk:  
 4. Onthaal  
 5. Vestiaire
- 'deSingel' Kunstcentrum:  
 10. Rode zaal  
 11. Rode foyer  
 12. Blauwe zaal  
 13. Blauwe foyer  
 14. Muziekstudio  
 15. Expo
- Vlaams Architectuurinstituut:  
 26. Kantoren VAI

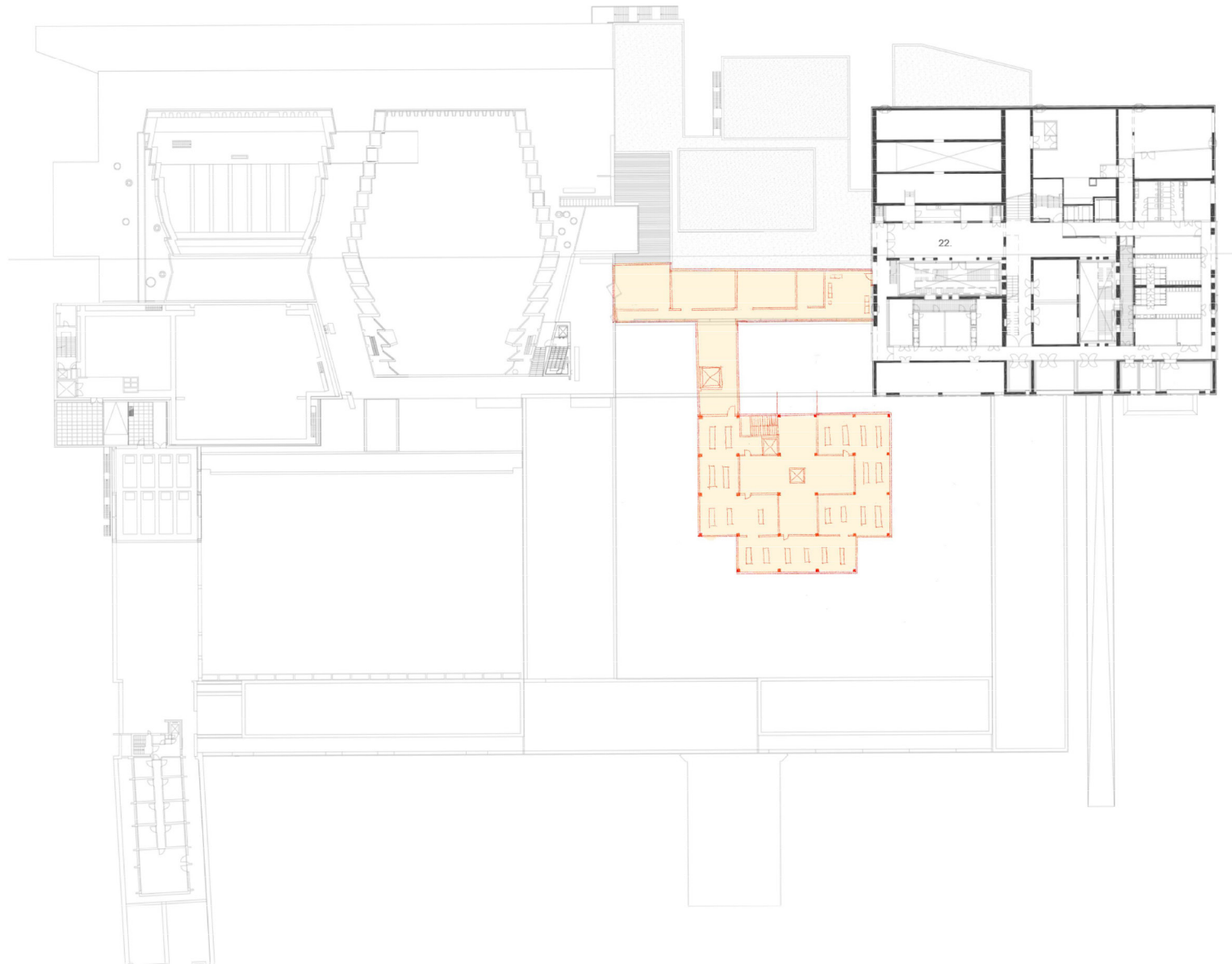
# WEEK 2.5



- 'deSingel' Kunstcentrum:  
16. Bibliotheek leeszaal  
17. Shop-Tickets  
18. Grand café  
19. Zwarte zaal  
20. Koninklijke loge

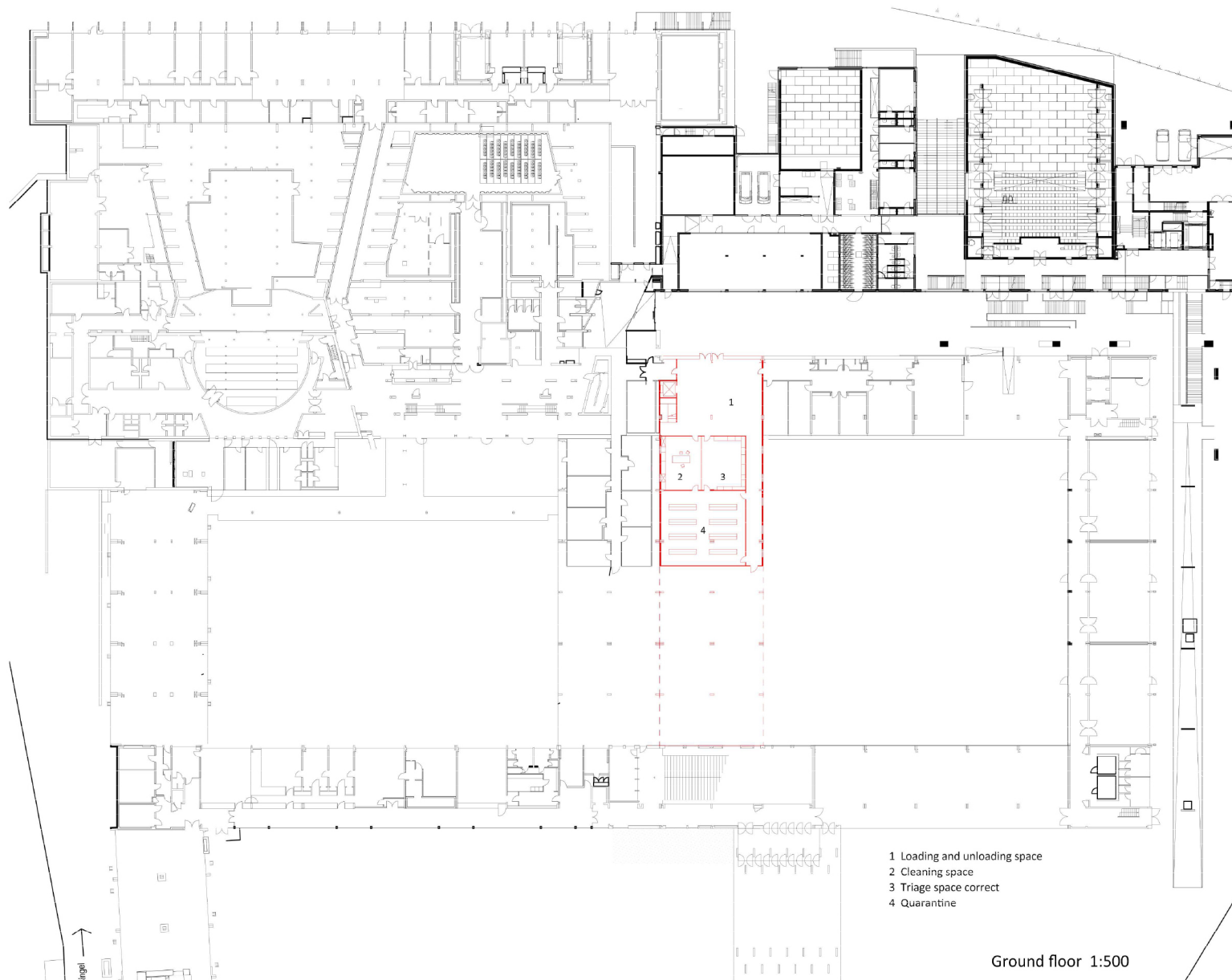
# WEEK 2.5

Koninklijk Conservatori  
22. Witte foyer

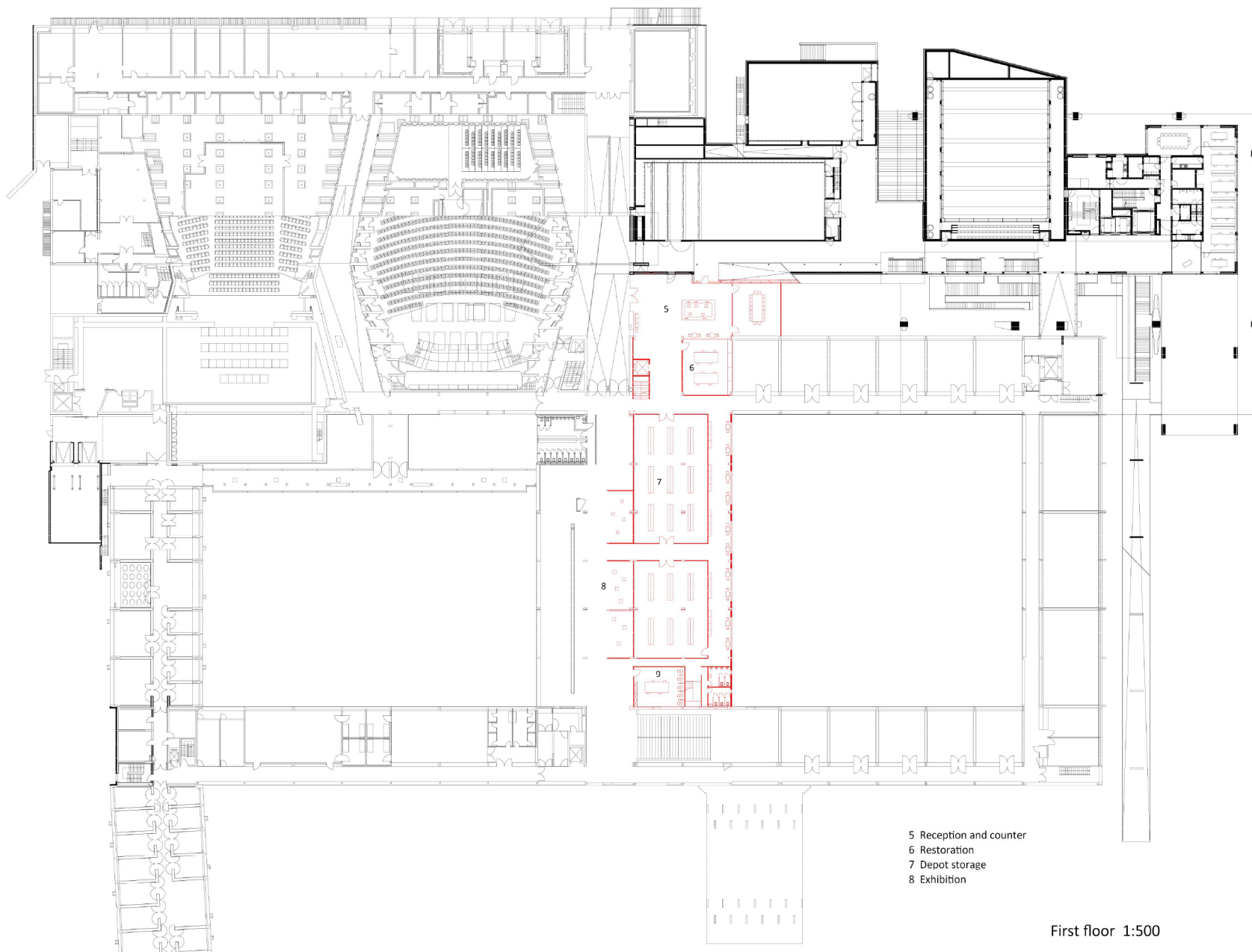




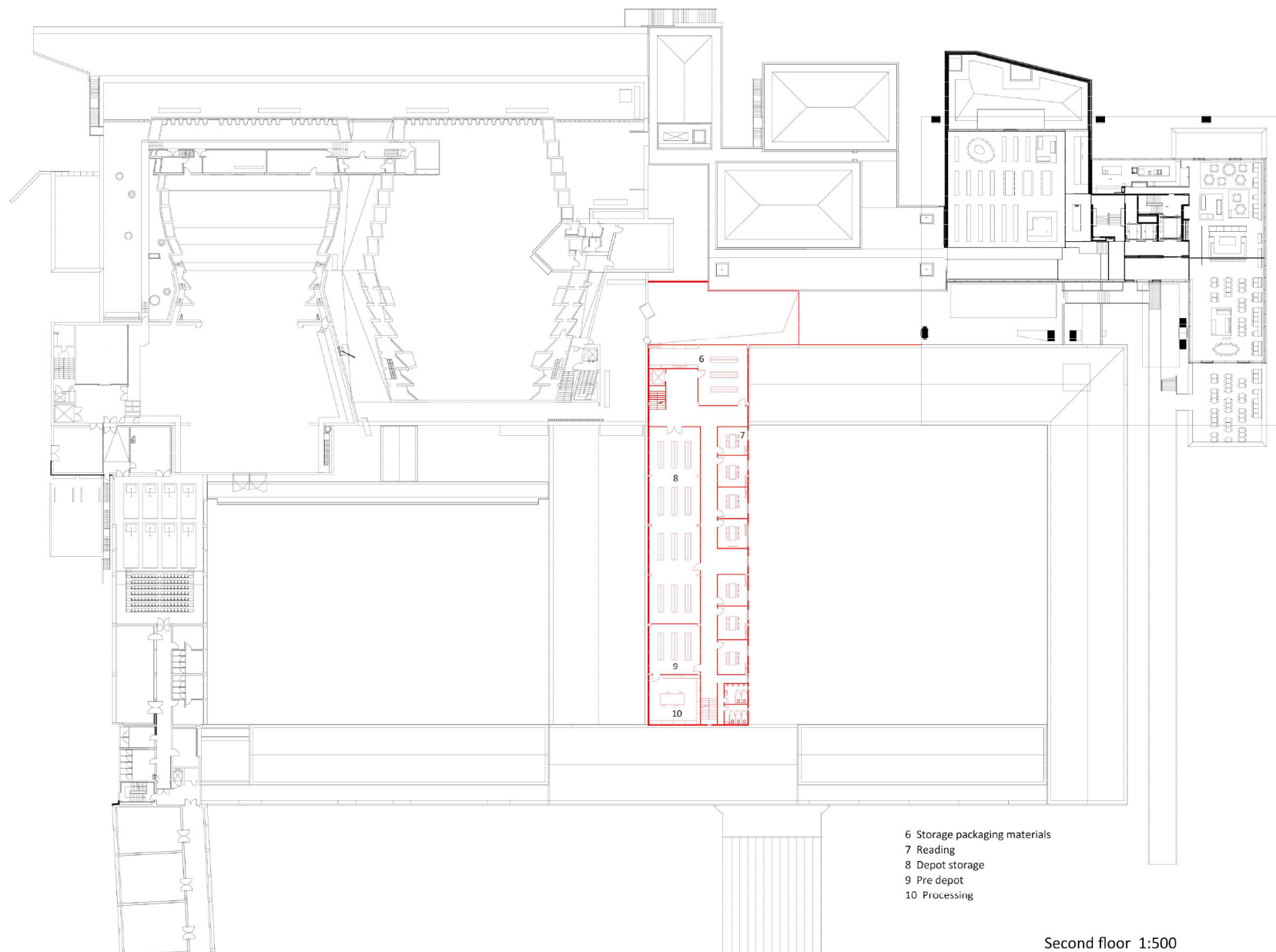
# Pre-crits



# Pre-crits



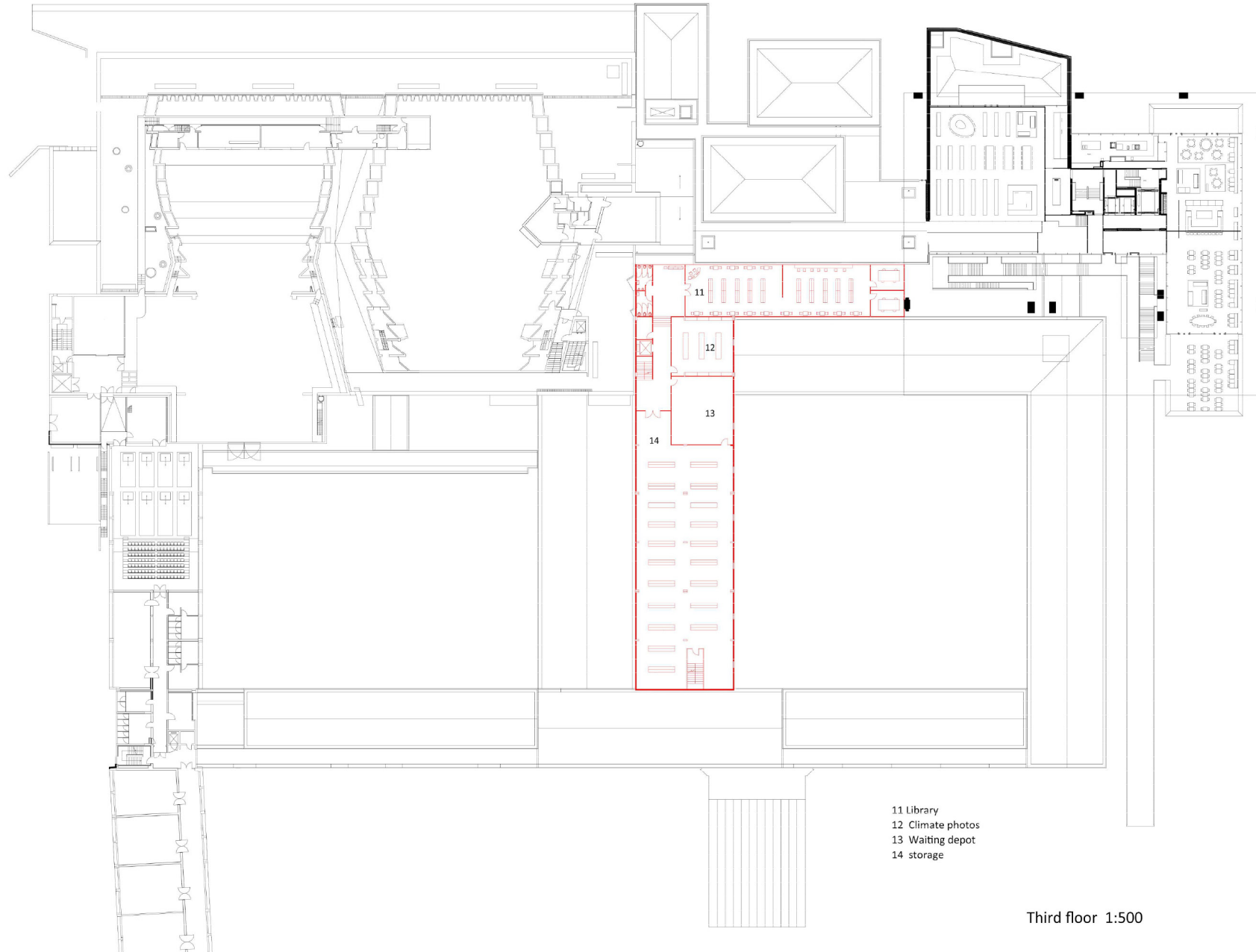
# Pre-crits



Second floor 1:500

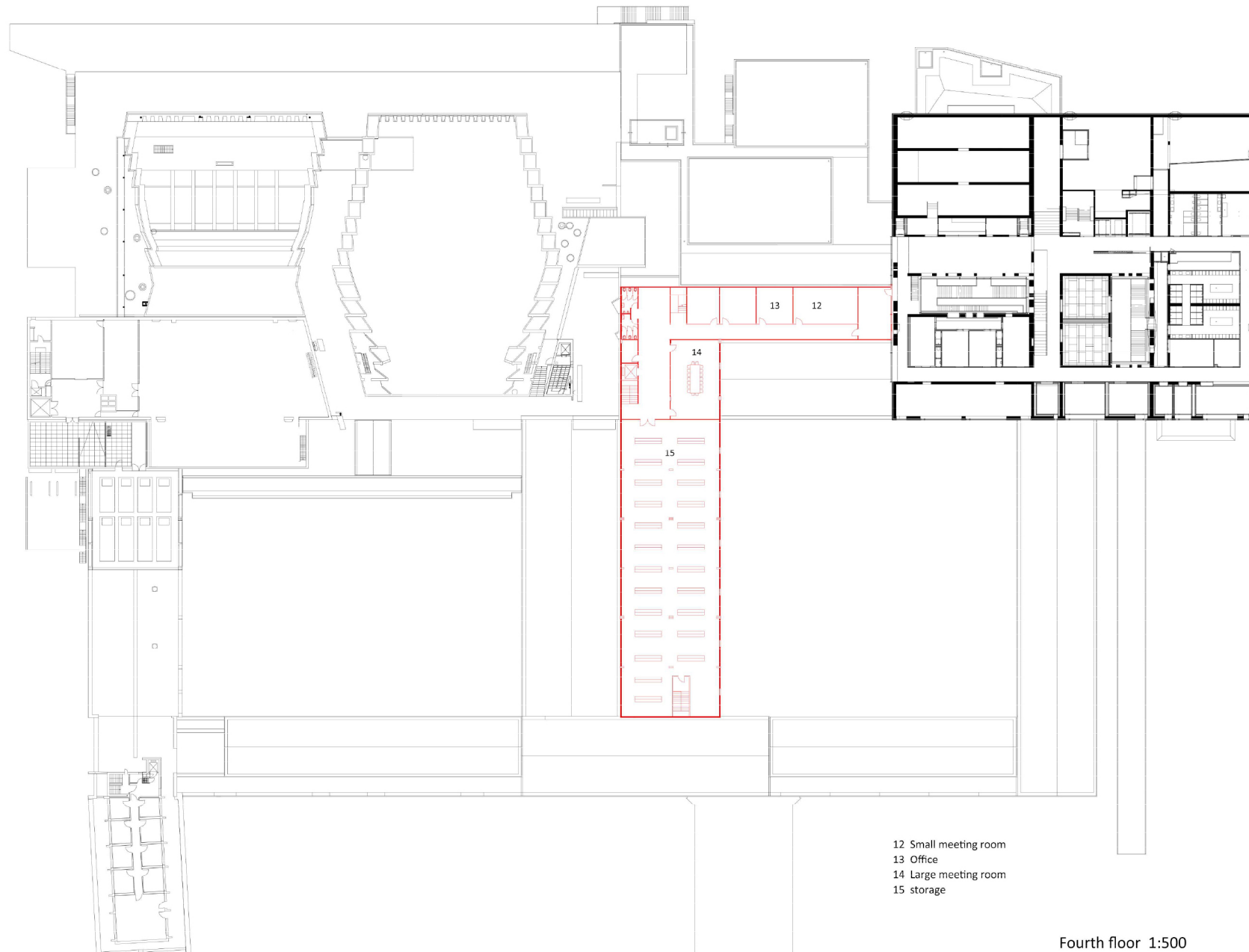


# Pre-crits



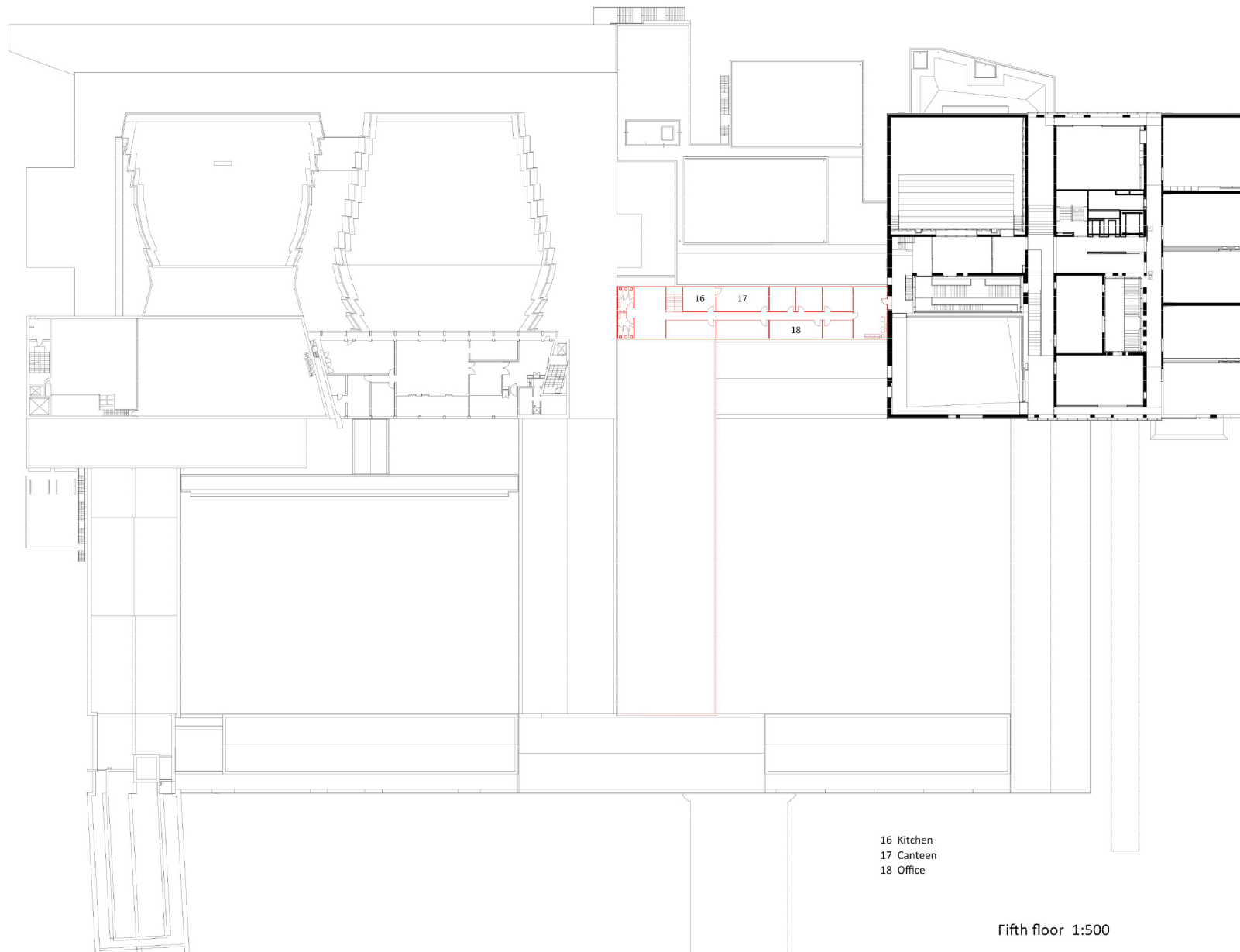
Third floor 1:500

# Pre-crits



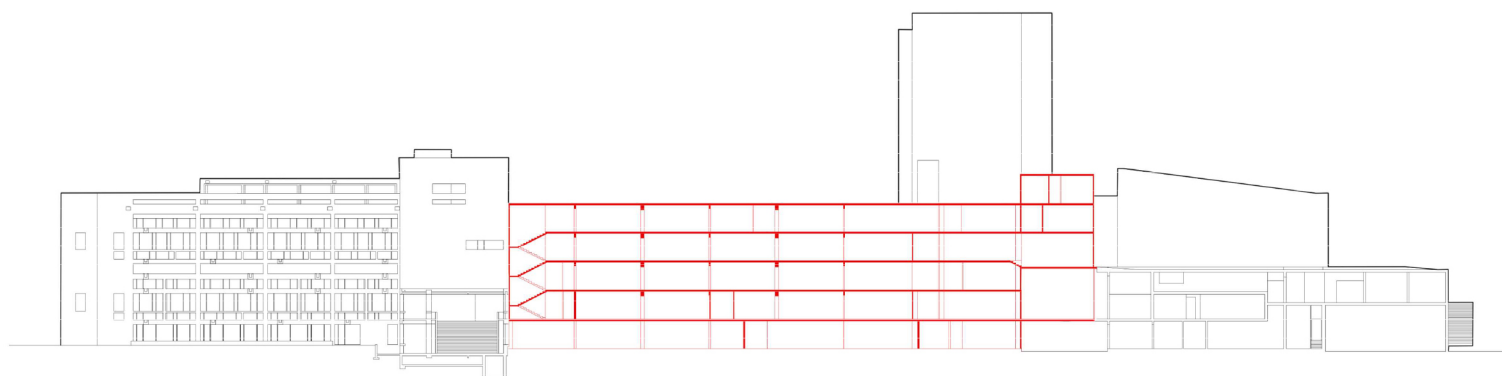
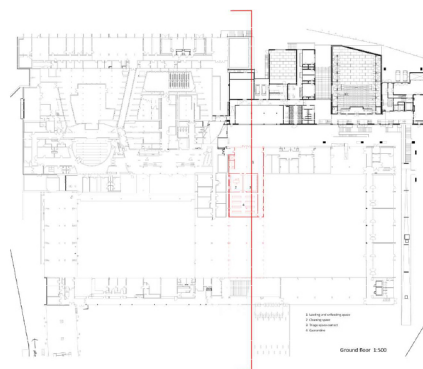
Fourth floor 1:500

# Pre-crits



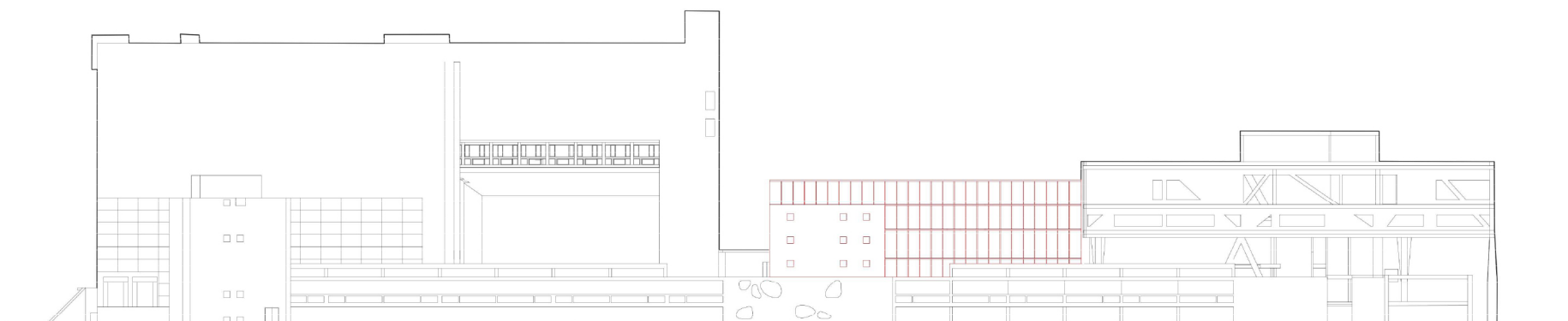


# Pre-crits



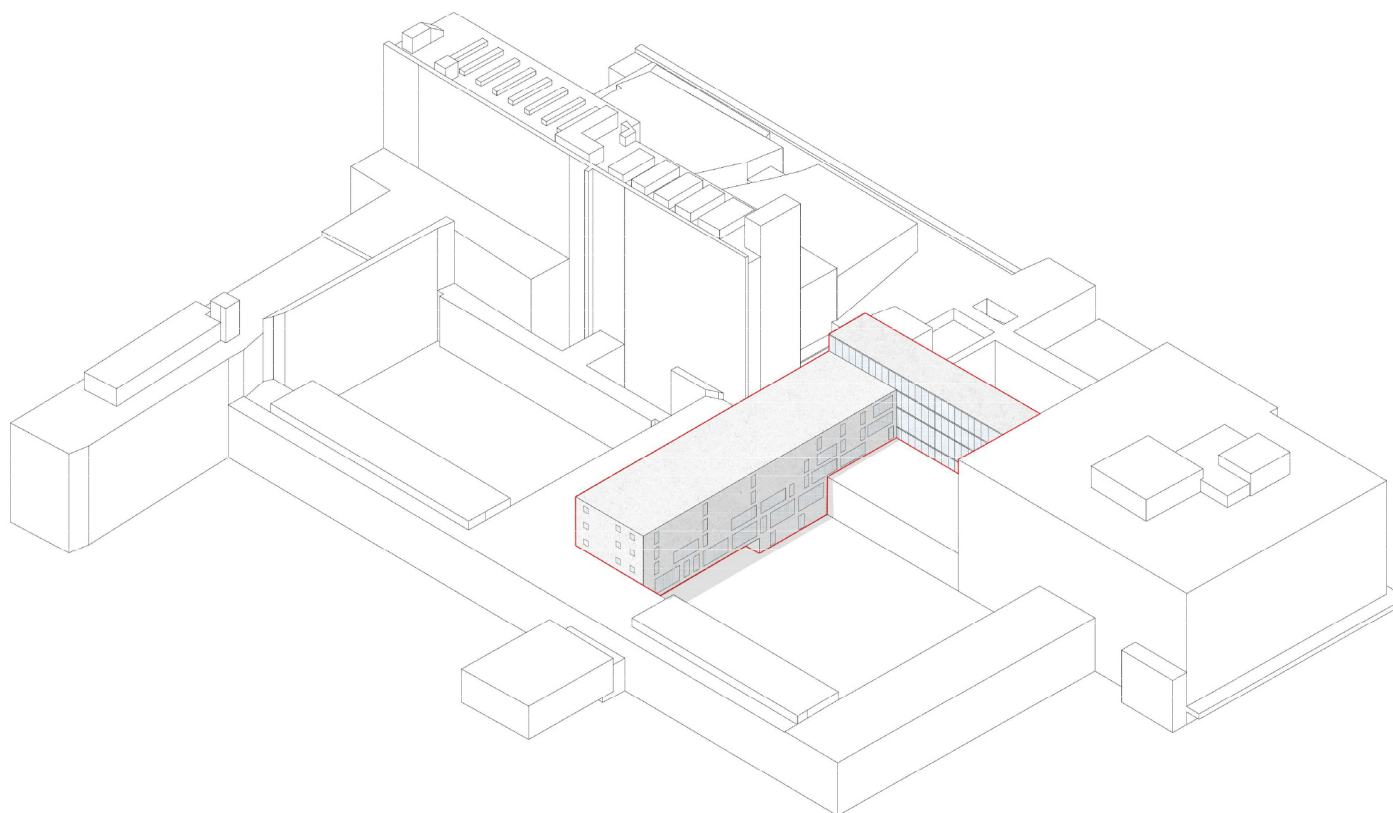
Section 1:500

# Pre-crits



Elevation 1:500

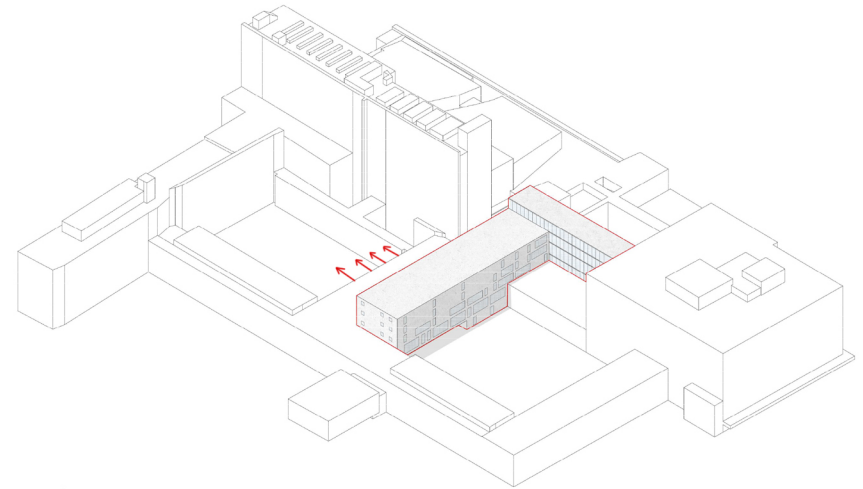
# Pre-crits



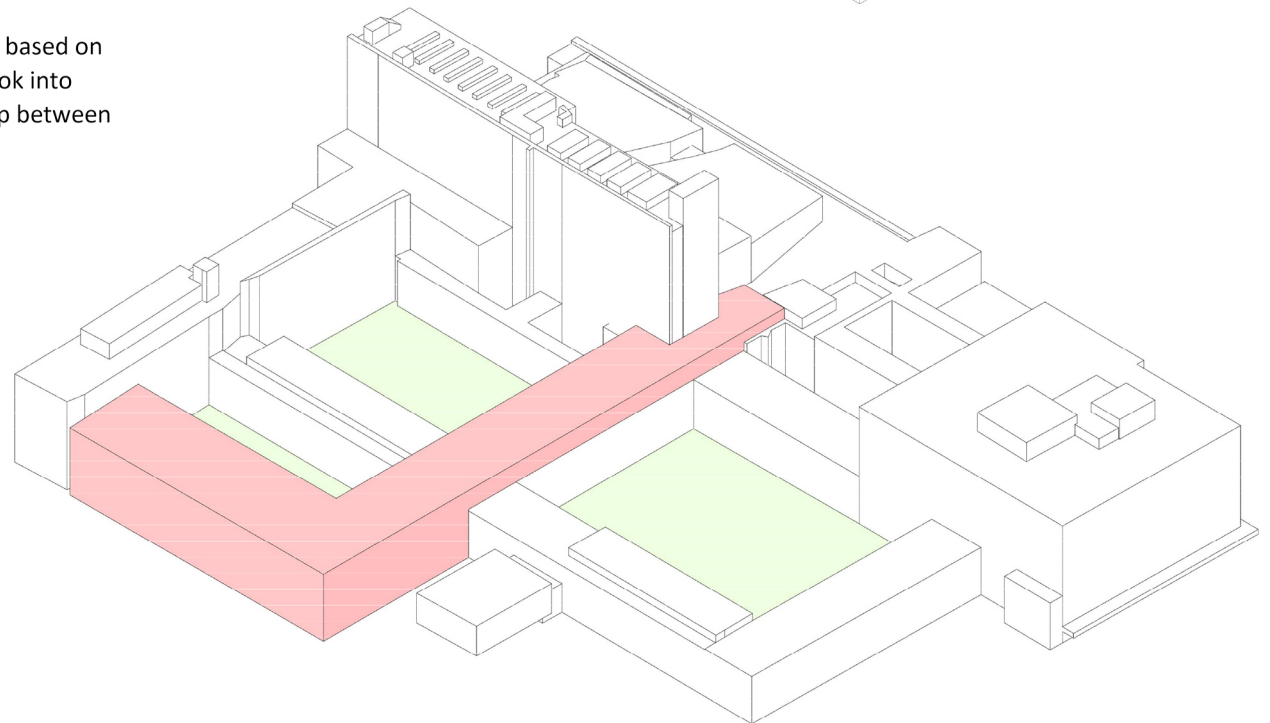


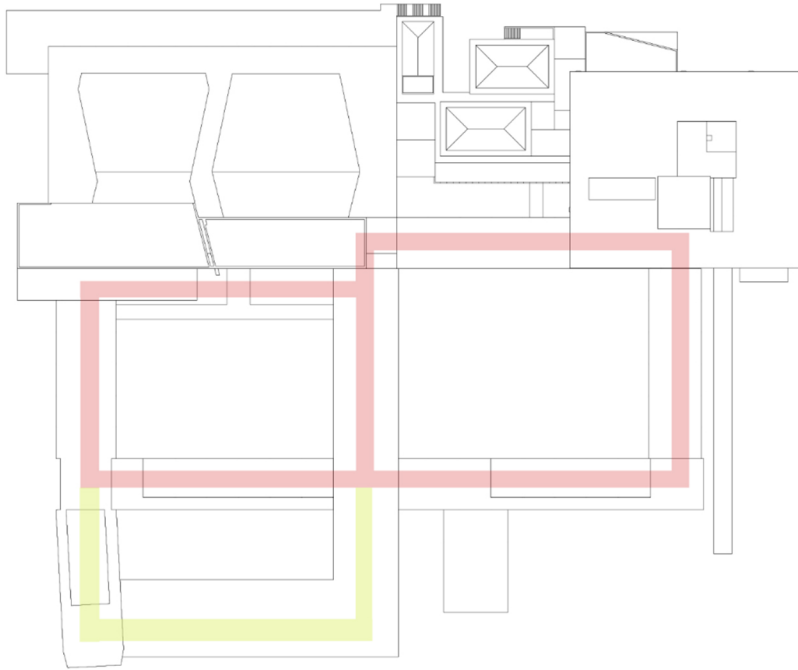
# Pre-crits

The feedback we received in pre P2 was about the damage to the historic building of De Singel and the obstruction of sight caused by the new building. The middle corridor on the second floor is flanked by courtyards, which is also the feature created by Leon Stynen for De Singel. Therefore, the new building cannot damage its sight, and a new solution is imperative.

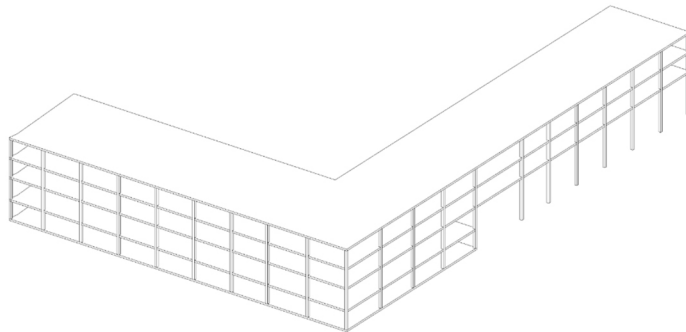


Therefore, the new solution is more about considering the new design based on respect for De Singel. Different from the previous design, this time I took into account the formal language of Leon Stynen's loop and the relationship between the new building and the original historic building.

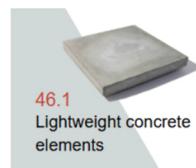


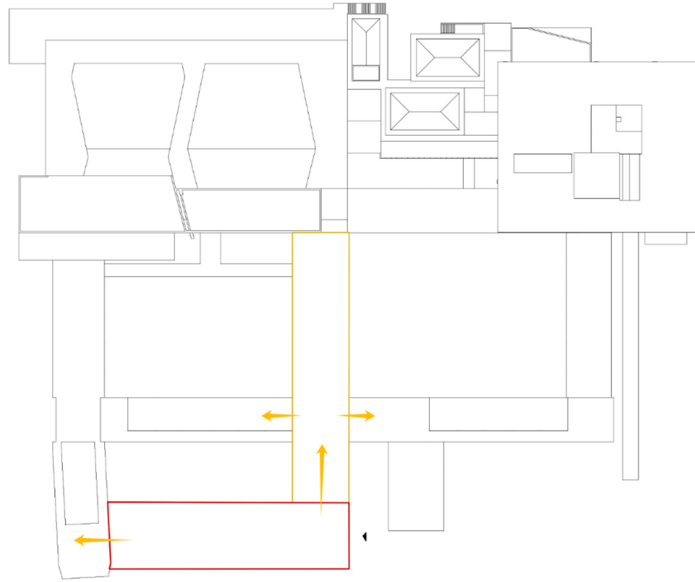


The proposal continues the language form of loop, forming a new loop based on the original building, while also creating more connections.

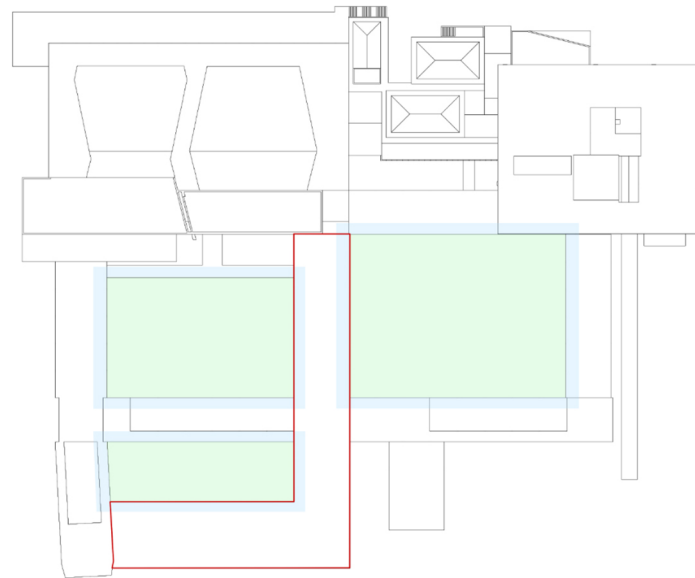


The use of an independent structural system can minimize damage to De Singel. At the same time, the use of lightweight materials such as wood and steel can be effectively recycled and reused, and modular production is conducive to sustainability.





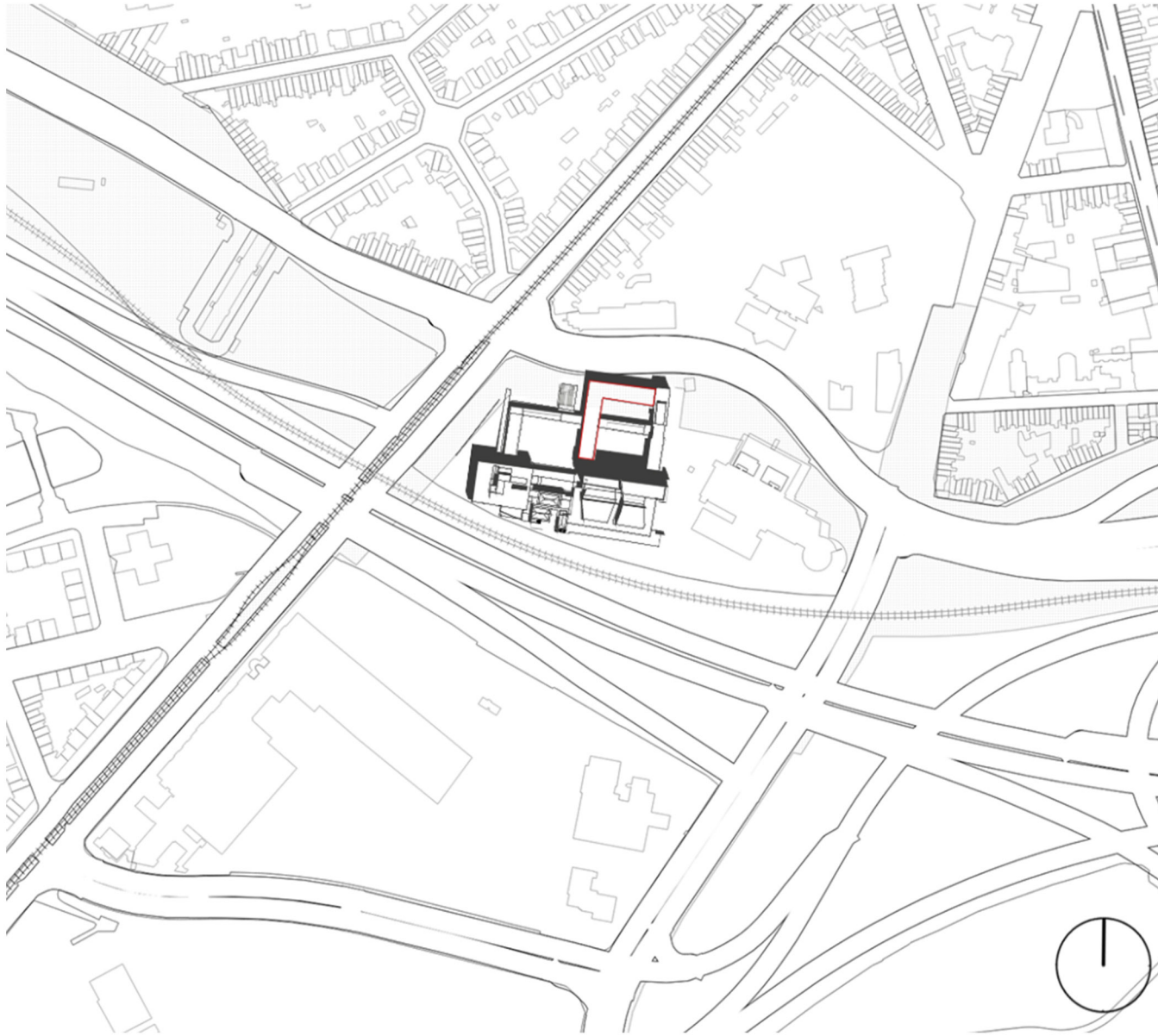
One of the starting points of the concept was to create a relatively independent building for VAI, while being part of De Singel and connecting with De Singel, maintaining a balance between the two.



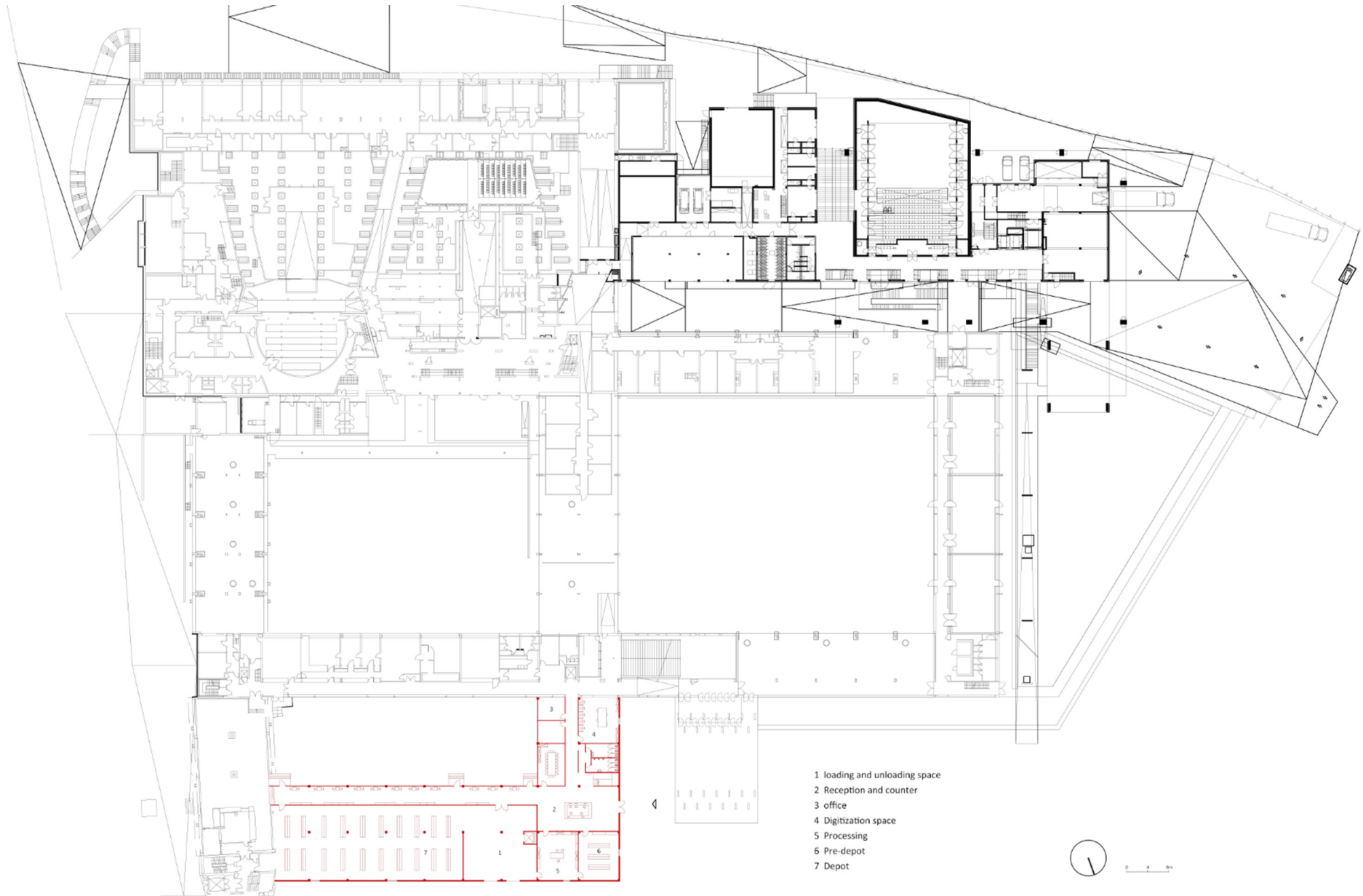
The plan forms a new courtyard and makes the traffic flow around the courtyard, which can not only meet the daily lighting requirements but also add scenery.



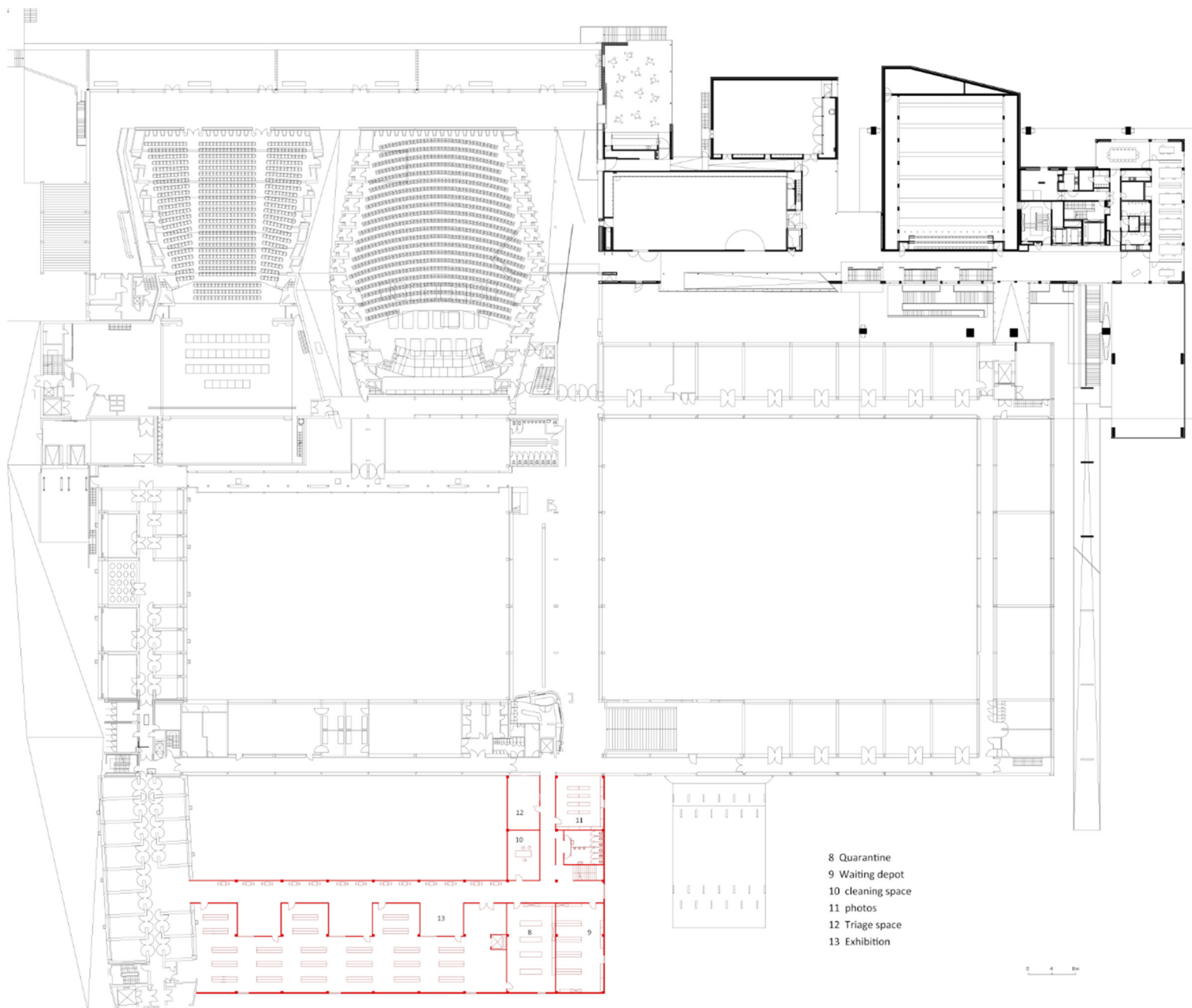
# Site plan



# Ground floor

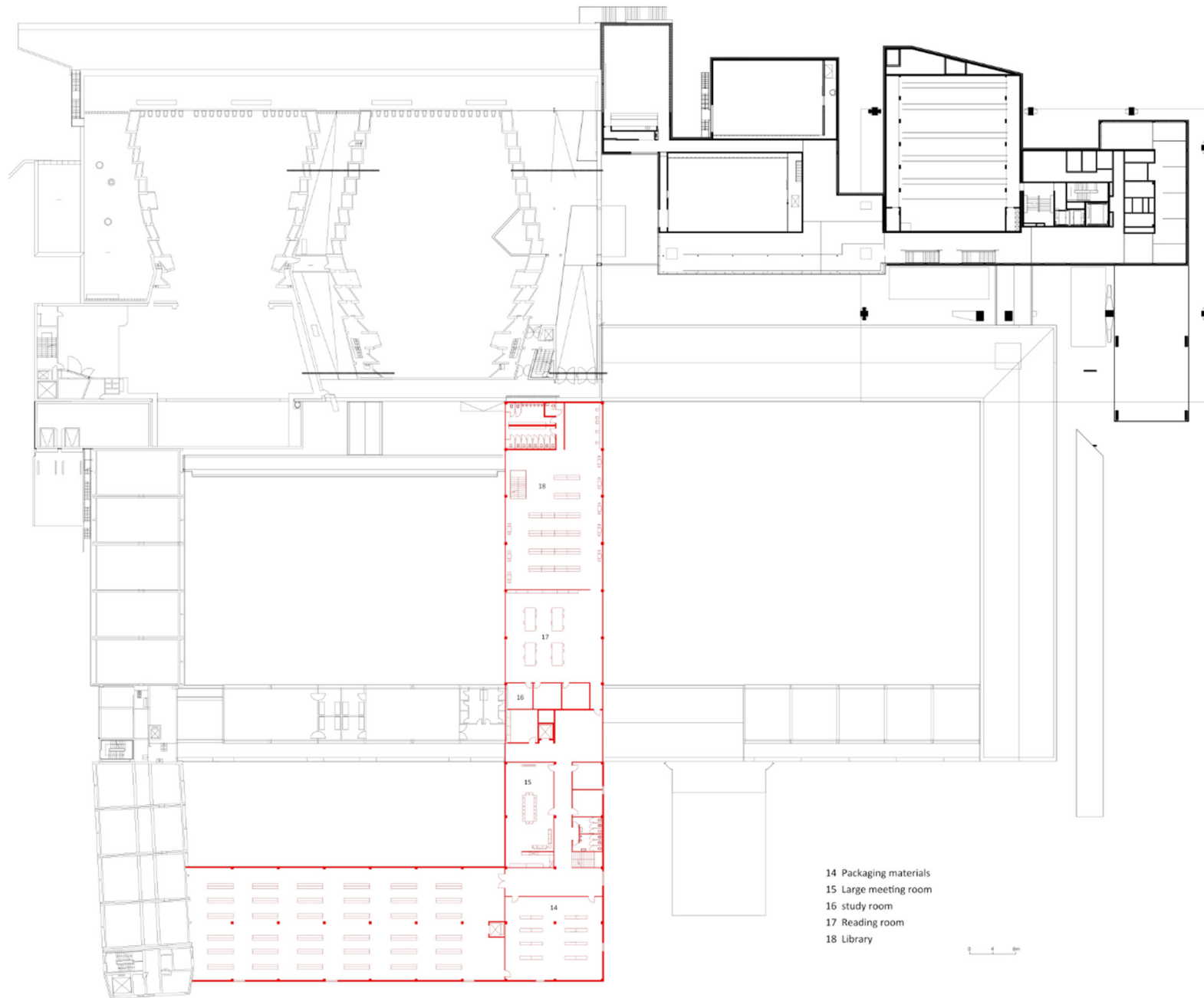


# First floor

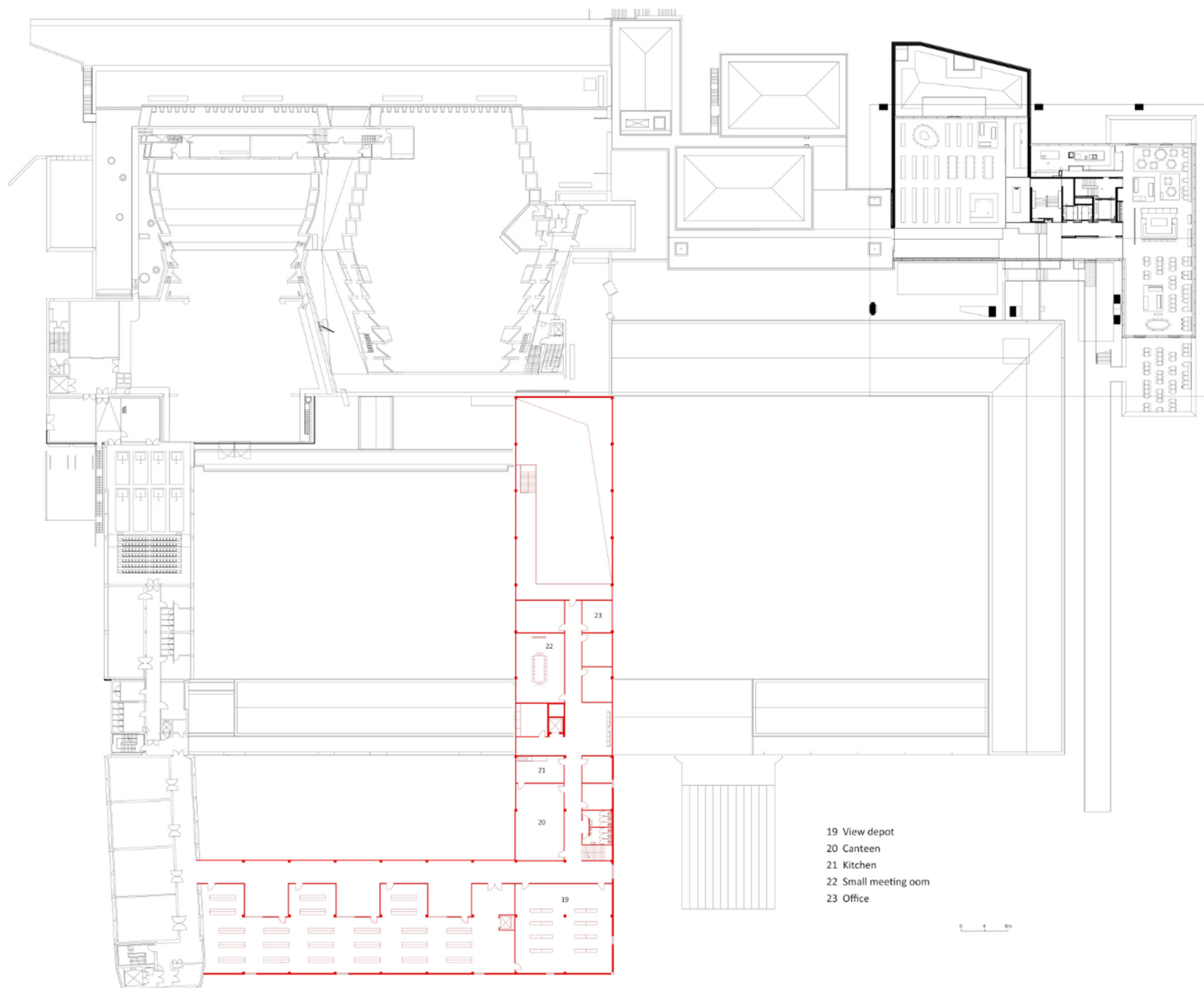




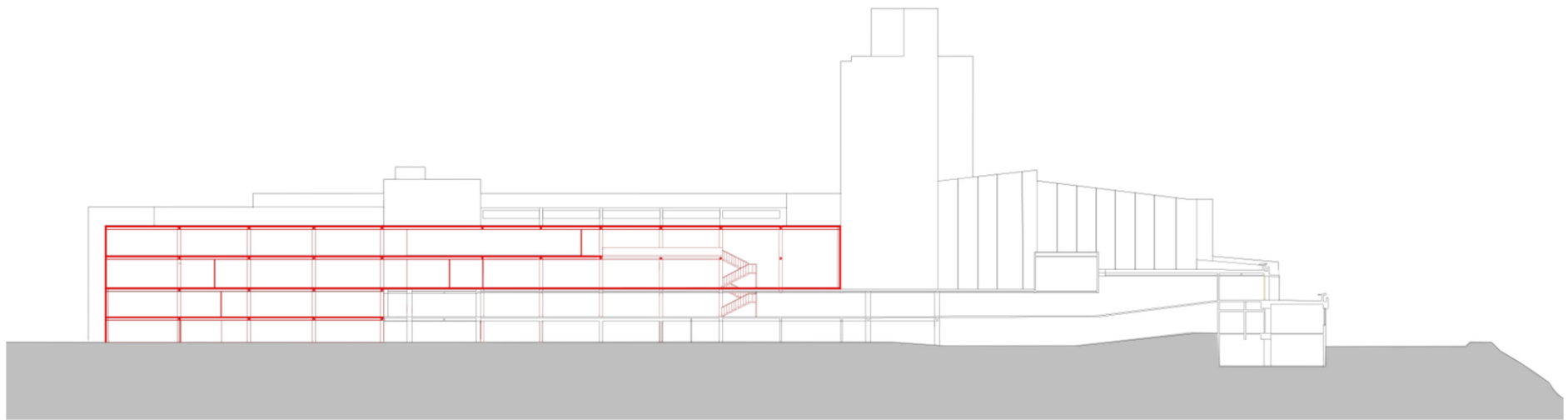
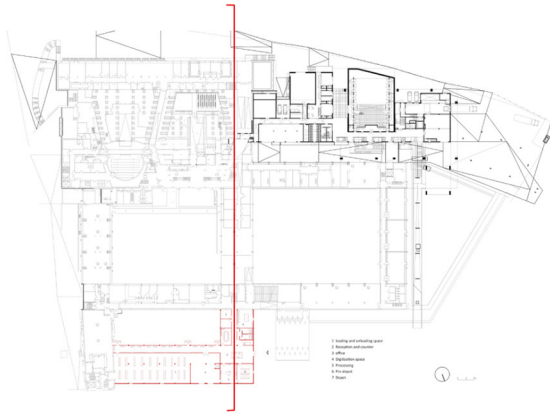
# Second floor



# Third floor

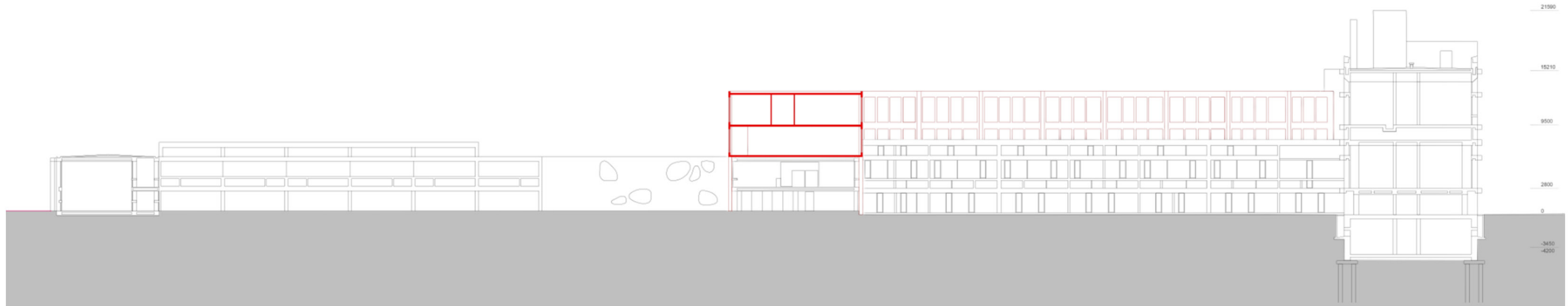
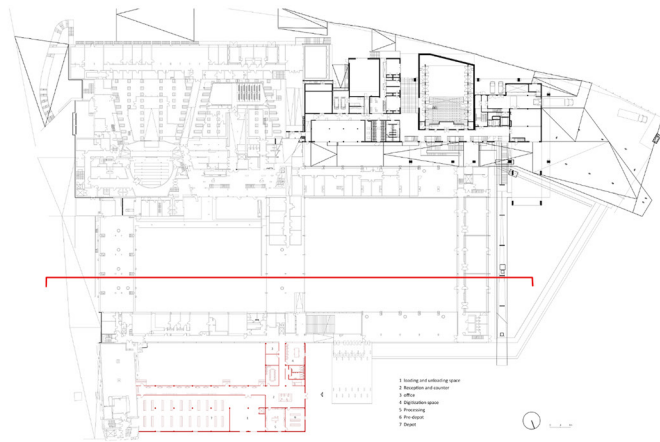


# Section A



0 4 8m

# Section B





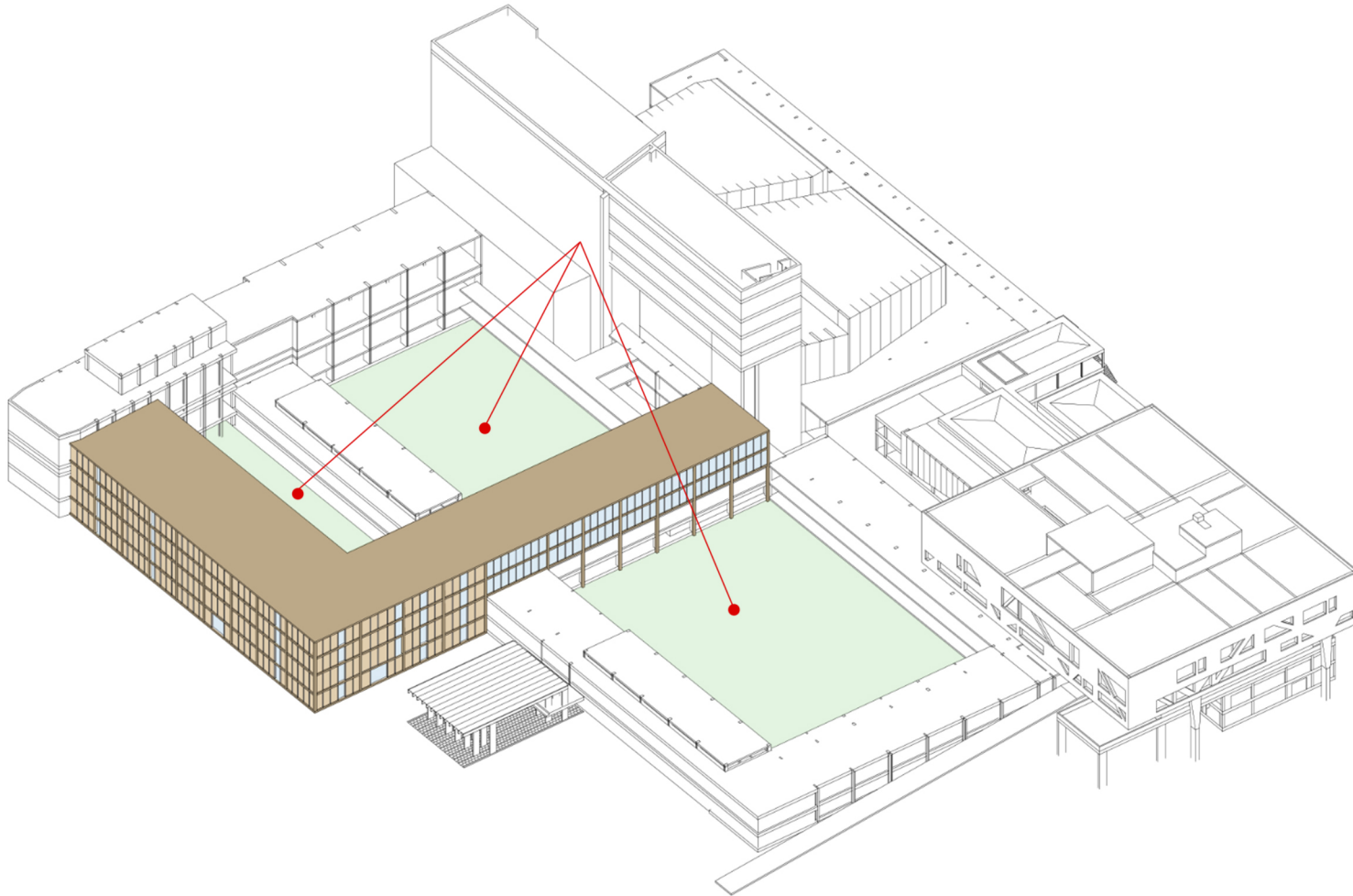
# Elevation



0 4 8m

From the axonometric view, the new building, the newly enclosed courtyard of De Singel and the original courtyard are the highlights. While continuing the formal language of Leon Stynen's loop, a new built-in landscape is formed, enriching the space, and there is a visual connection with the tower of De Singel.

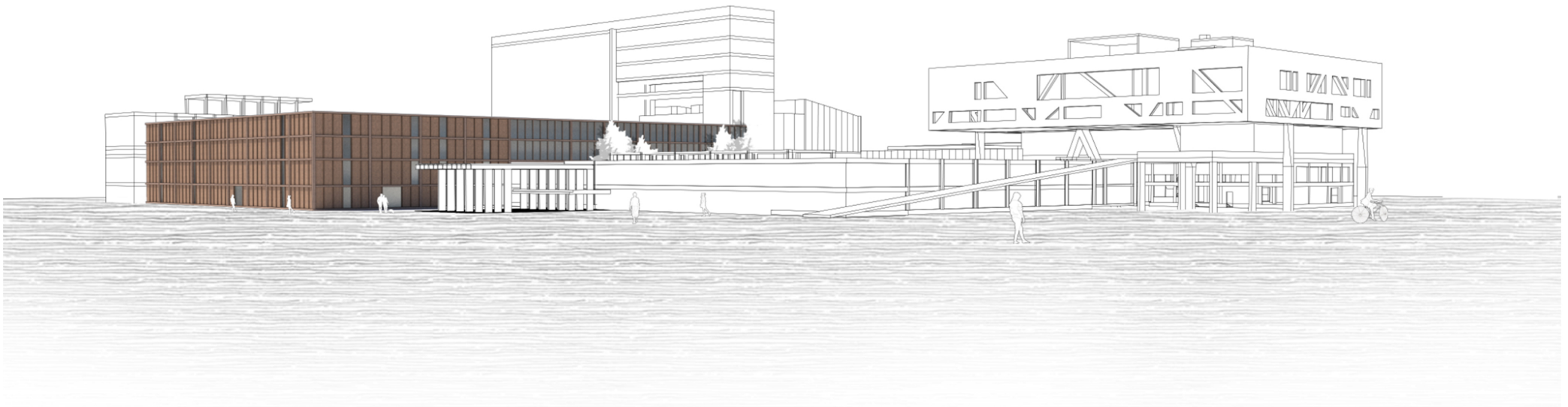
Axo



# Perspective

In the design, I hope that the new archive space can be built on the basis of respecting the historical architecture of De Singel, including the visual relationship between the newly formed courtyard and the original courtyard and the tower, as well as the visual obstruction of De Singel from a distance.

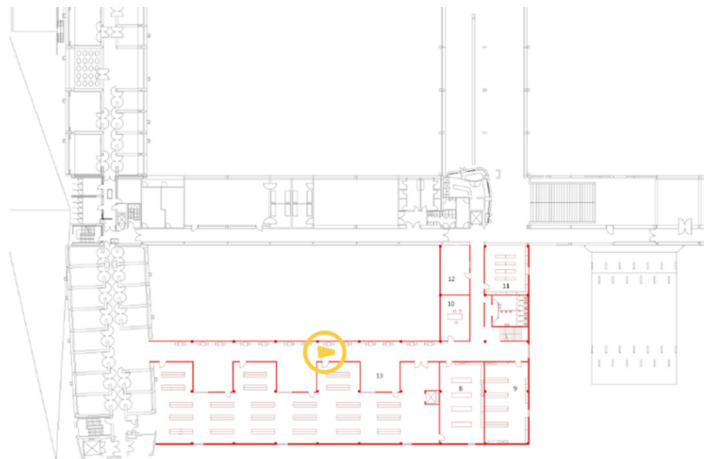
At the same time, the street facade is more based on the spatial function itself. The archive space facing the street requires more temperature and humidity control, and the facade is mainly closed, which is in contrast to the original facade of De Singel.



# Perspective

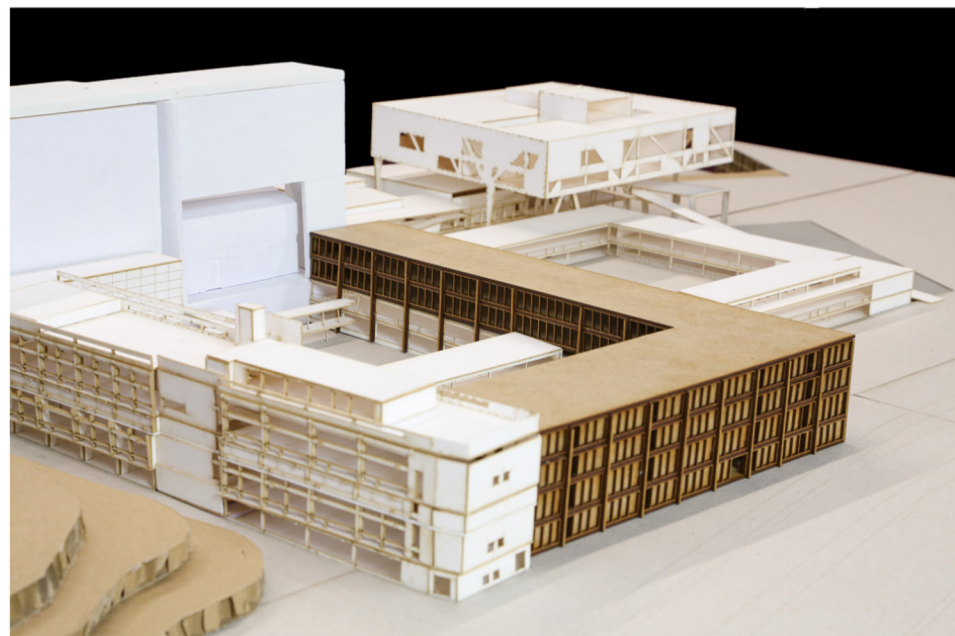
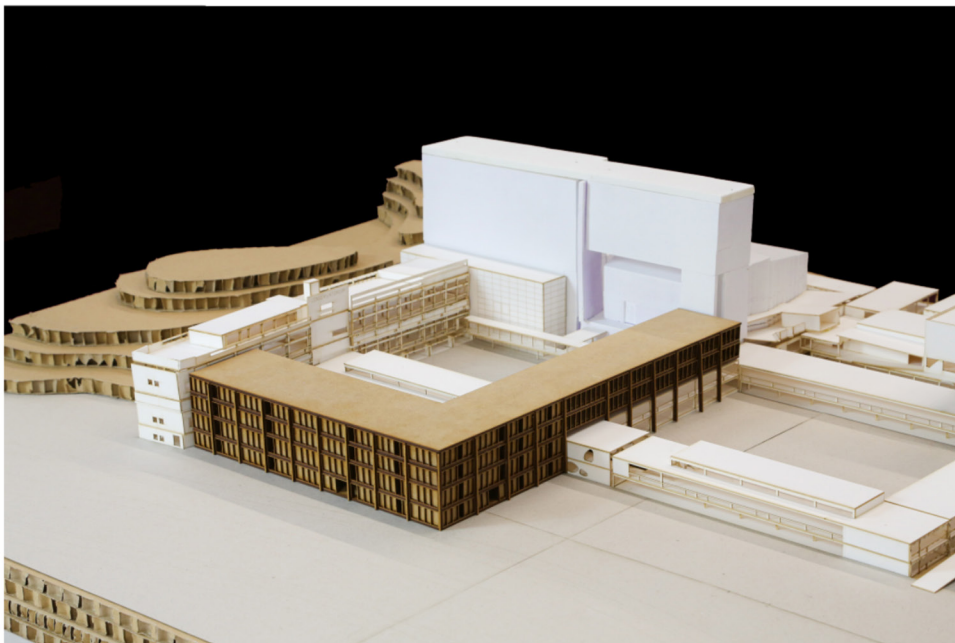


People can enjoy the exhibition and the view outside the window at the same time. As we learned in the group study case, the combination of garden and exhibition enriches the visual space.



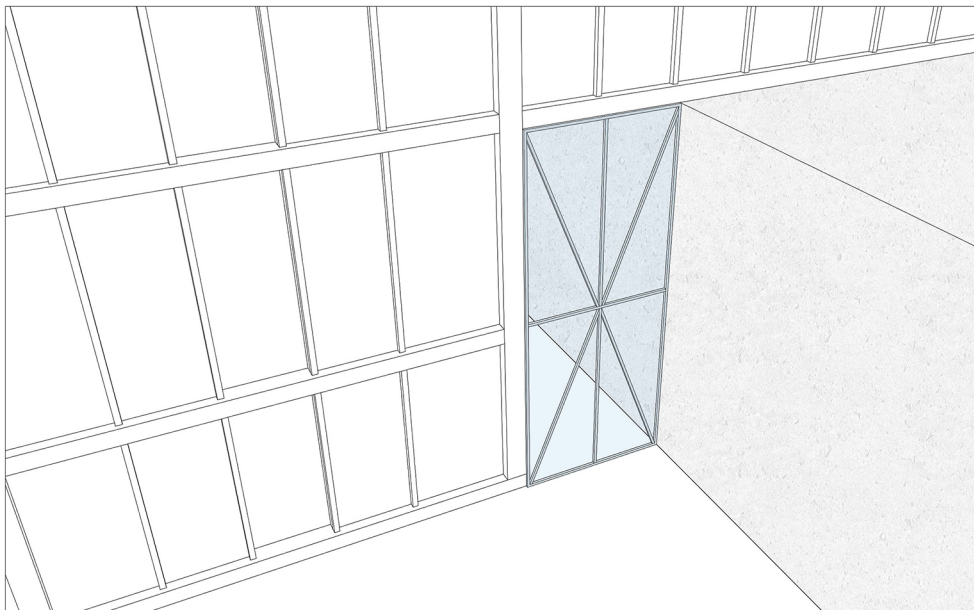
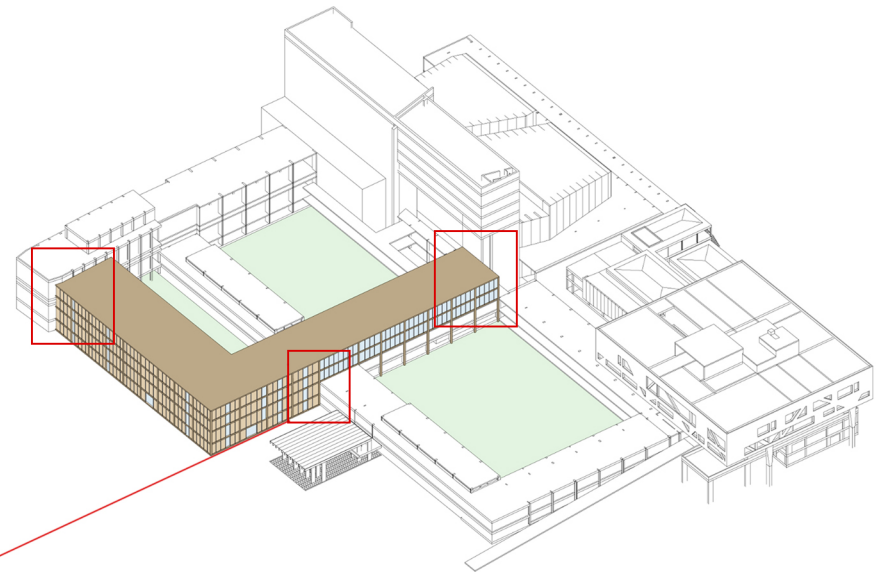


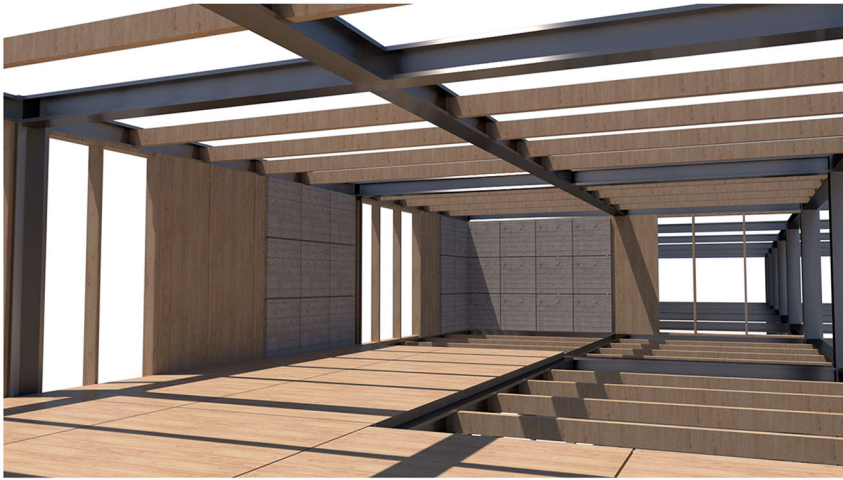
# Photos



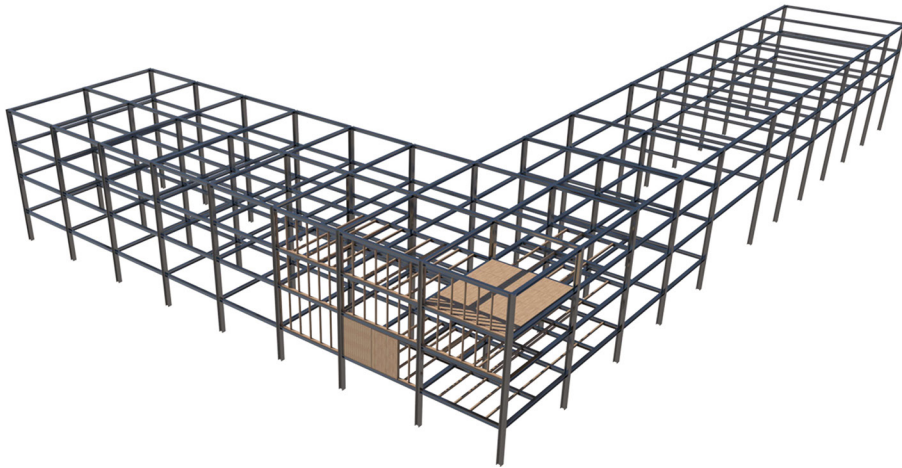
I received some very helpful feedback in P2's report. The main thing that needs to be considered is the connection problem of the nodes. For the main connection between the new building and De Singel, it is necessary to consider the protection of the original building, as well as technical issues such as insulation and waterproofing.

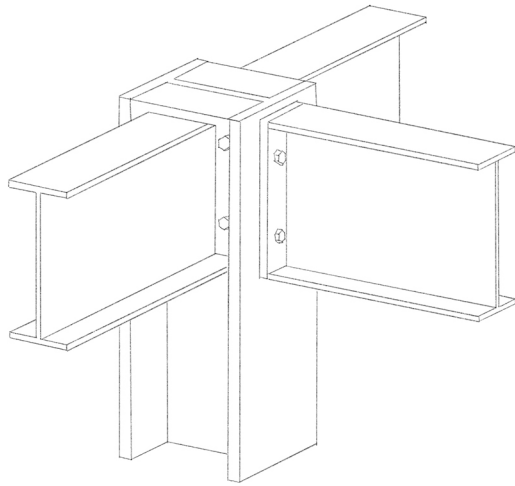
Initially, I considered using glass to deal with the node problem, using a light structure, glass and steel, which is detachable and easy to assemble, but there are certain problems with insulation, so I used the gray space treatment method.



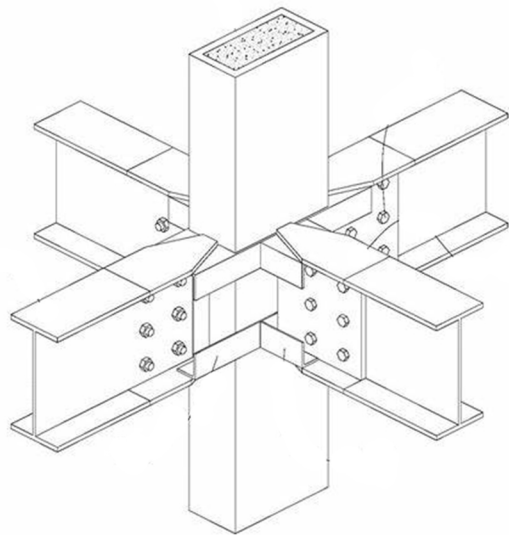


For the structure, I would like to consider the whole life cycle of the building and adopt a detachable method so that it can be recycled in the future. The overall structure is a steel-wood hybrid structure, and prefabricated concrete slabs are used to pave the archive space to ensure the control of temperature and humidity in the archive space.



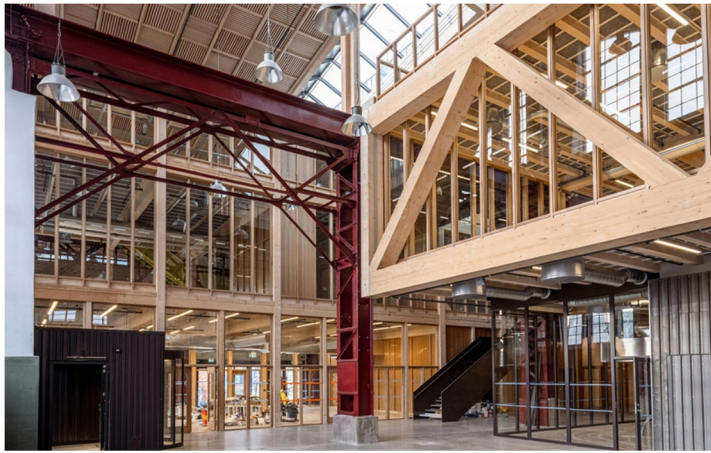


The overall frame of the structure adopts a steel structure, giving full play to the advantages of steel structure such as large span, light weight, and easy assembly. The steel nodes are analyzed and rigidly connected with rivets and steel sheets. The combination of wood and steel needs to take into account the use of rivets and related connecting components. The use of a mixture of steel and wood reflects the environmental protection and easy assembly characteristics of the scheme.





# Reference



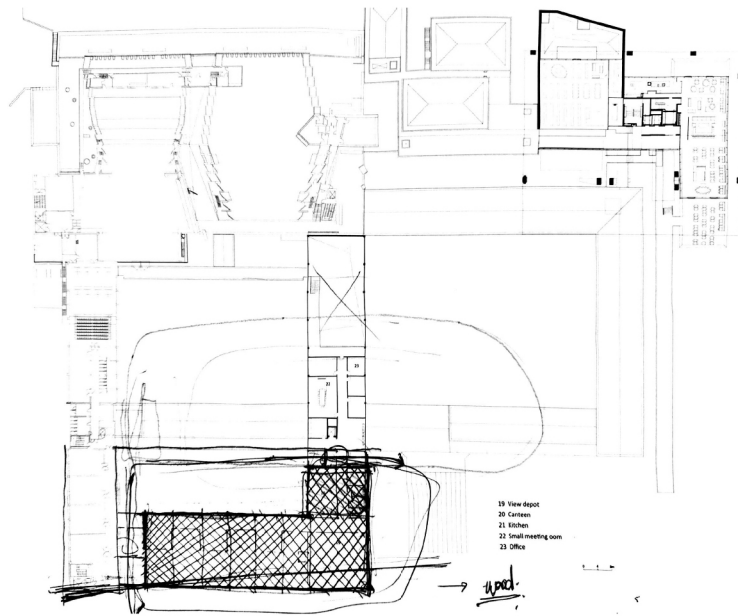
Gjuteriet Renovation / Kjellander Sjöberg



Historical Archive of Cologne / Waechter + Waechter Architekten

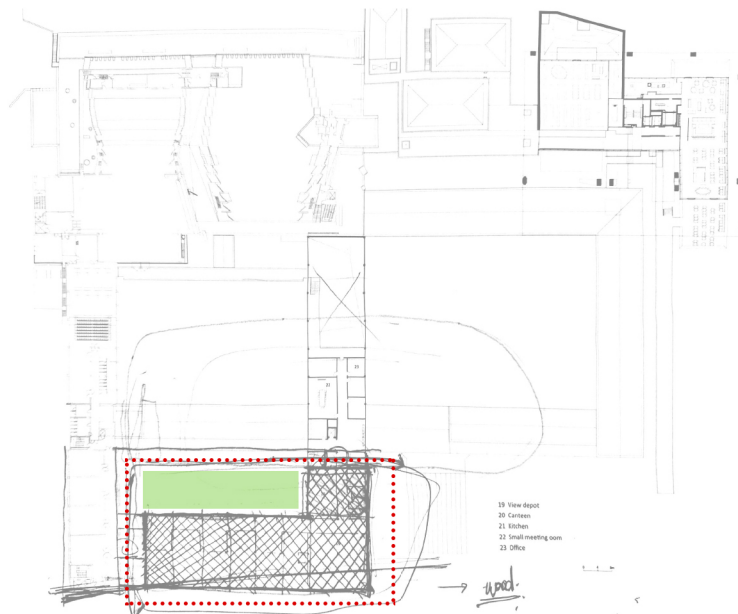
For the selection of reference cases, I chose the renovation case of Gjuteriet Renovation, which also adopts a detachable architectural expression form, using a steel-wood hybrid structure as the main structural support, and thinking about the problem from the whole life cycle of the building in a sustainable form.

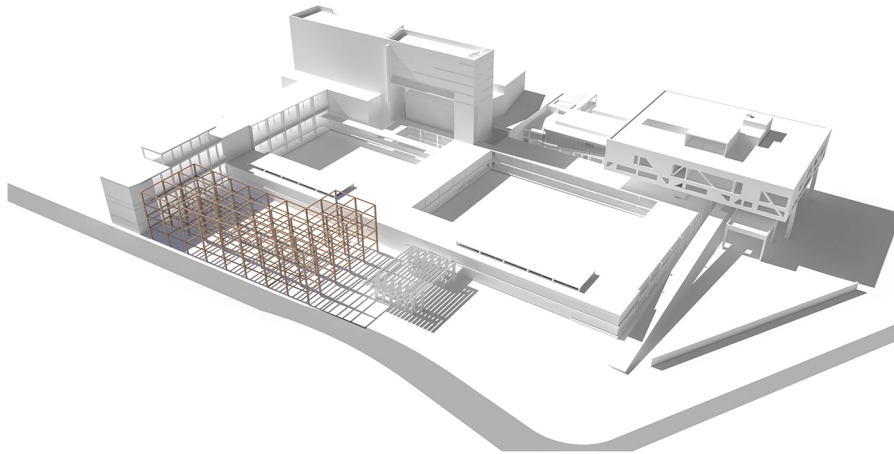
At the same time, the facade of Historical Archive of Cologne is also my main object of study. The facade with a sense of hierarchy and regularity and the connection with the external environment, I also tried to express certain functional space attributes through the facade characteristics.



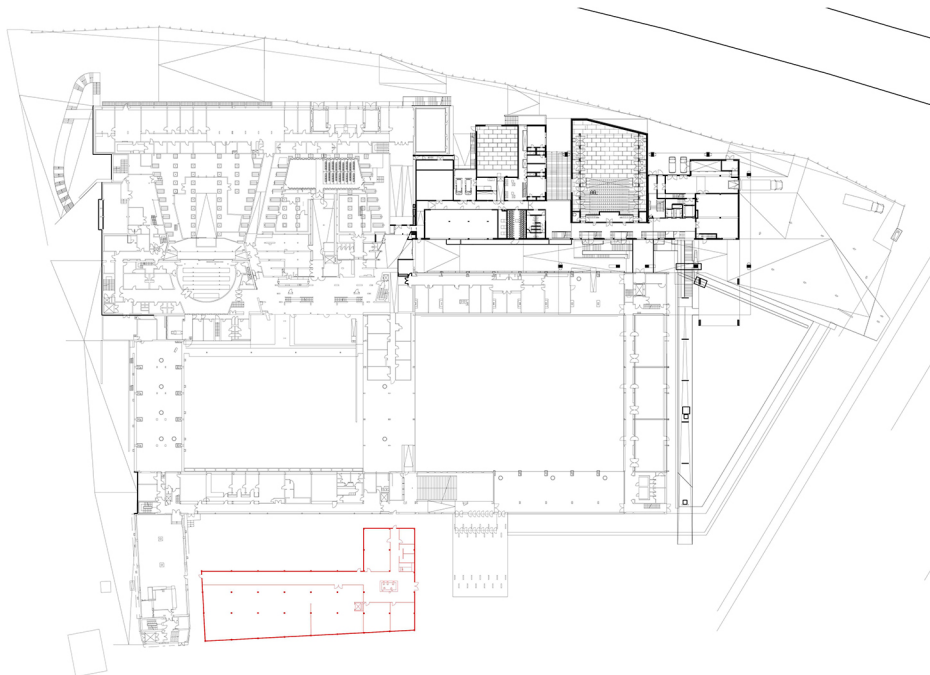
As the plan progressed, the connection between the new building and the original building gradually became a thorny issue, and I gradually realized that the original intention of the entire architectural form design, that is, to continue the formal language of Leon Stynen's loop, seemed to have become less meaningful.

Therefore, for the connection between the new building and De Singel, I used an interruption method to form a channel. While reflecting flexibility, it also retained the connection trend between the new building and De Singel, forming an independent and detachable industrial building.

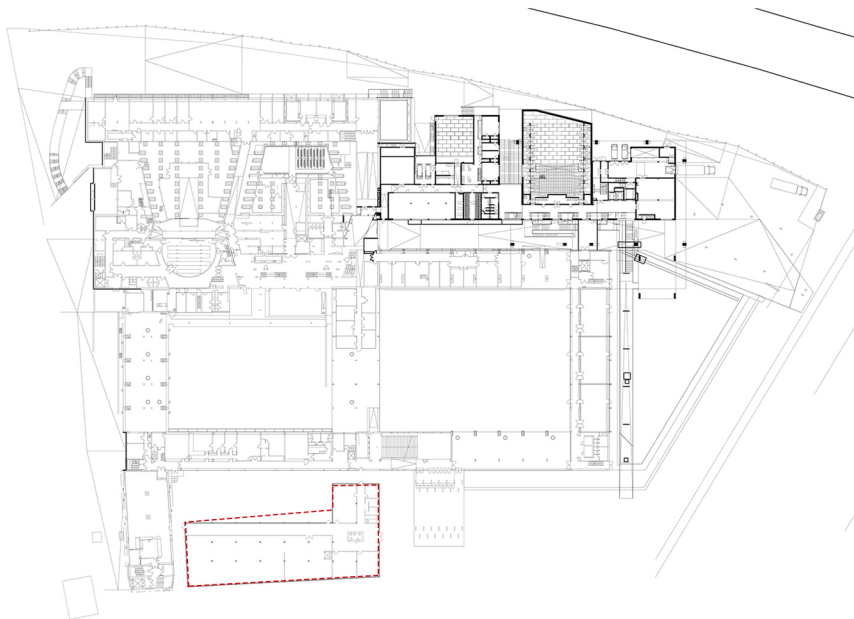




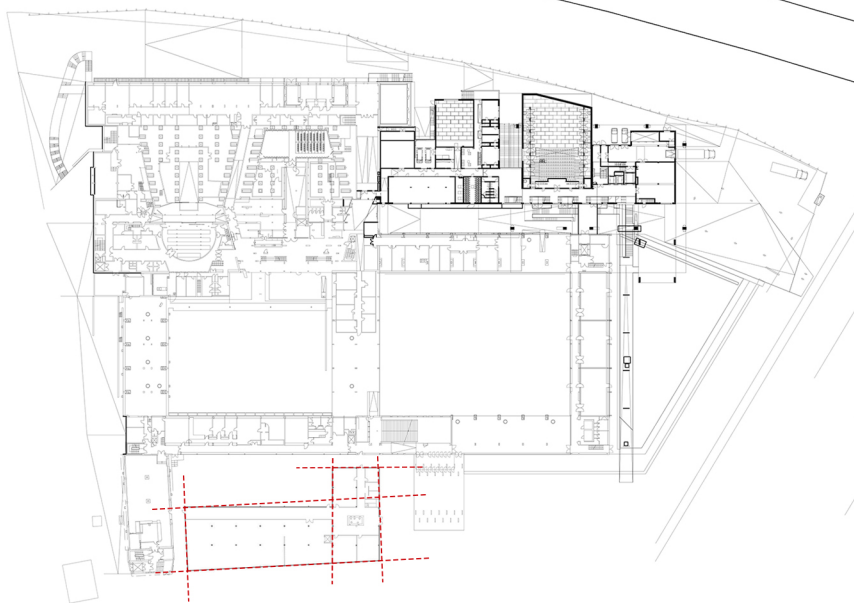
Since the new plan got rid of the structural problem of a large span, the entire material and structure are mainly wood, with some steel nodes. The street-side part of the building on the north facade continues the street flow of the original building of De Singel, forming a unity, and the courtyard maintains the original area and layout, forming a trumpet-shaped new architectural plane layout.



At the same time, the functional layout of the original plane has also changed. Due to the area problem, the floor height has been changed to 5 floors to expand the building area. The top floor is set as a public space, and the four floors below are more archive space and office area to achieve static and dynamic separation.



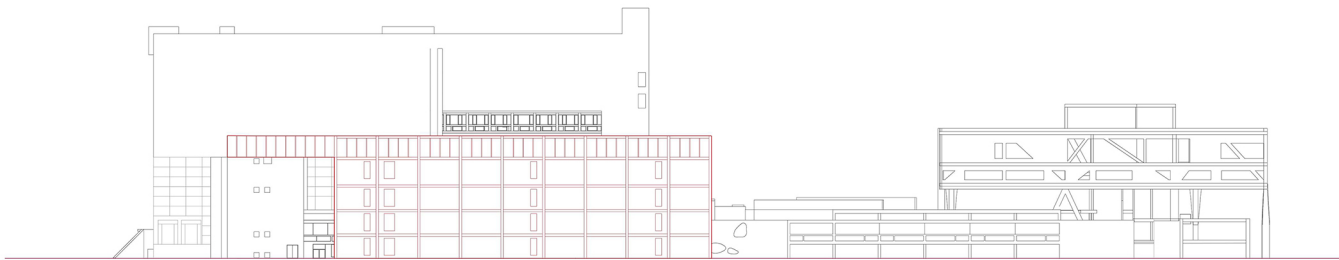
The next step was to adjust the details of the plan. The east wing of De Singel was tilted at an awkward angle to the street, which also affected the plan composition of the new building. Therefore, I adjusted the plan to use a more integrated and square plan composition to increase space utilization and the independence of the new building.



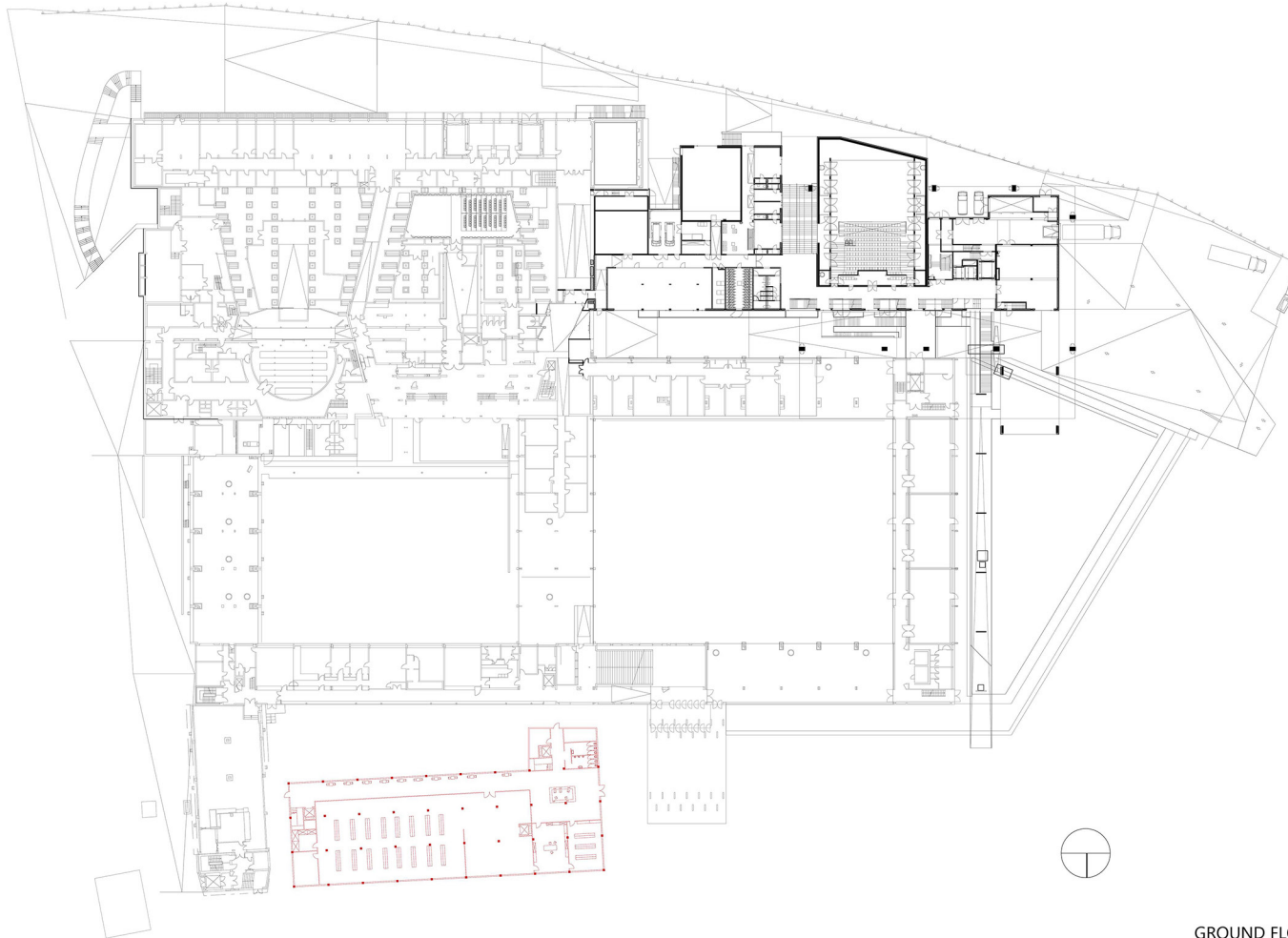




From the section of the building, the main part of the building is 5 floors, and the top floor is a public space, including a library and reading space. At the same time, the height of the five floors can provide visitors with a better viewing platform and viewing view.

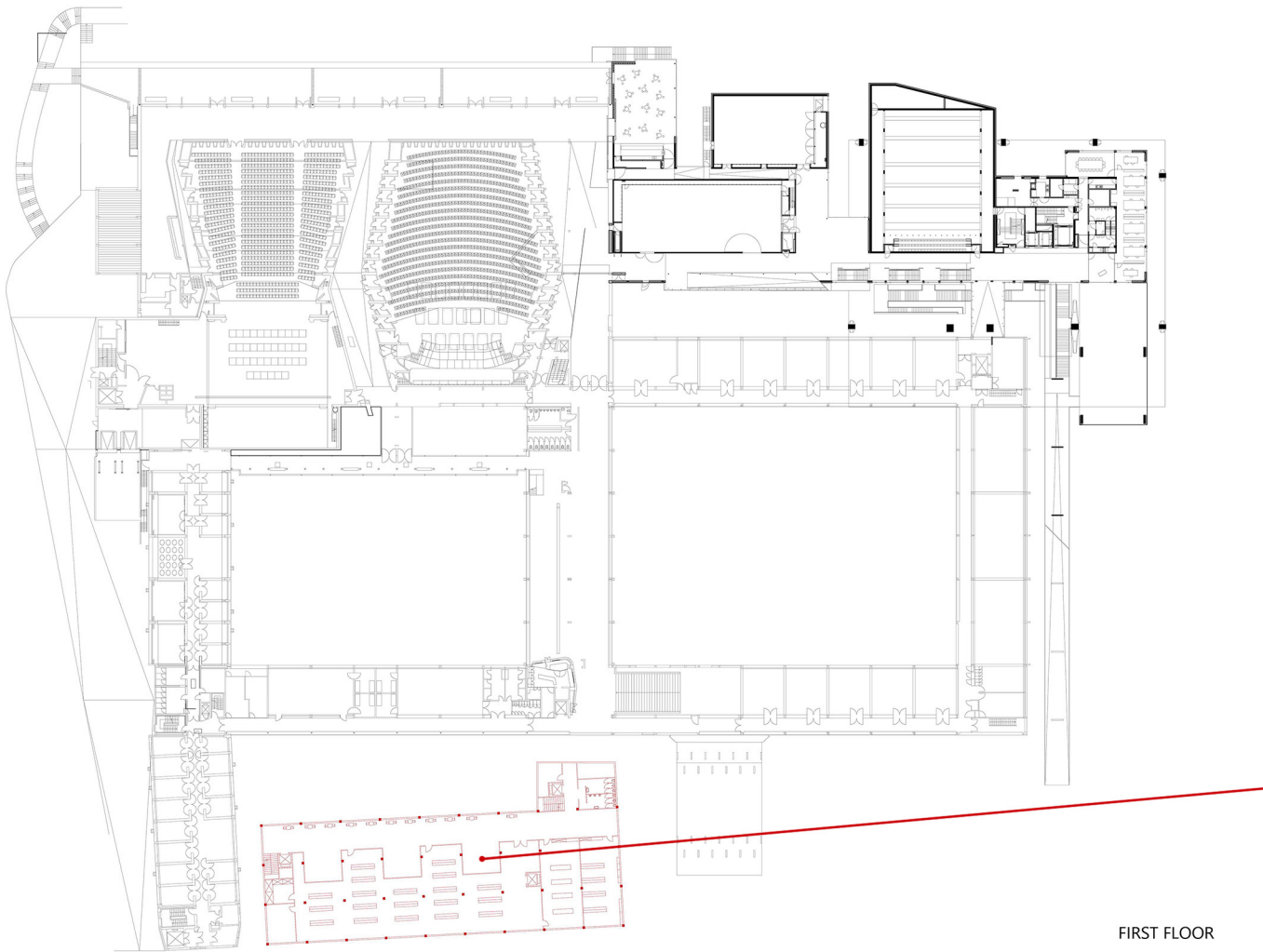


The main functional space of the north facade is archive, so the facade is more of a closed element and has a certain pattern, but I am still trying to figure out the relationship between the facade and the surrounding environment and even the entire street and what it expresses.



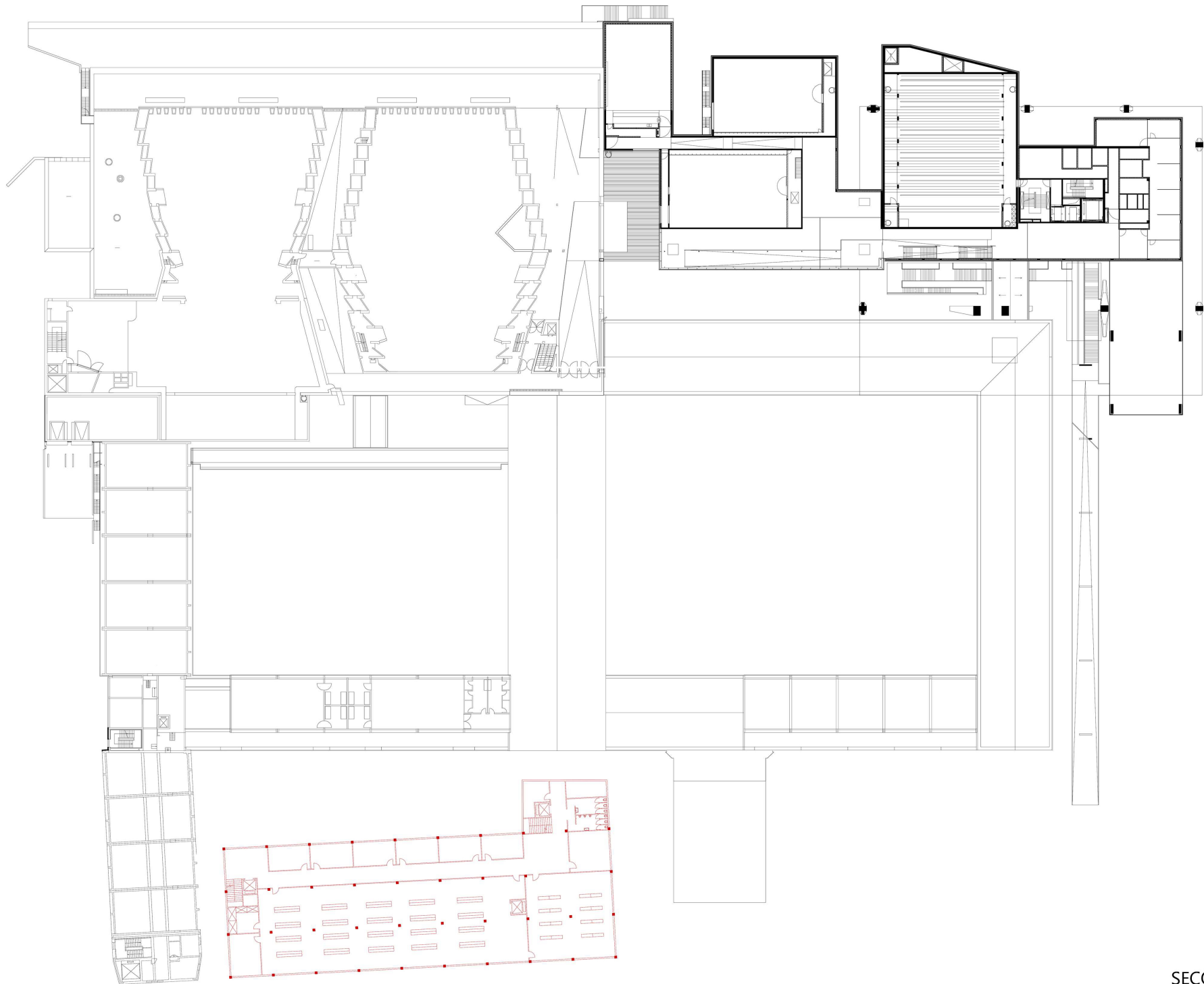
GROUND FLOOR

The main functions of the first floor of the plan are mainly the lobby, archive space and multi-functional corridor. Leisure seats can be provided along the courtyard side to enjoy the courtyard scenery.



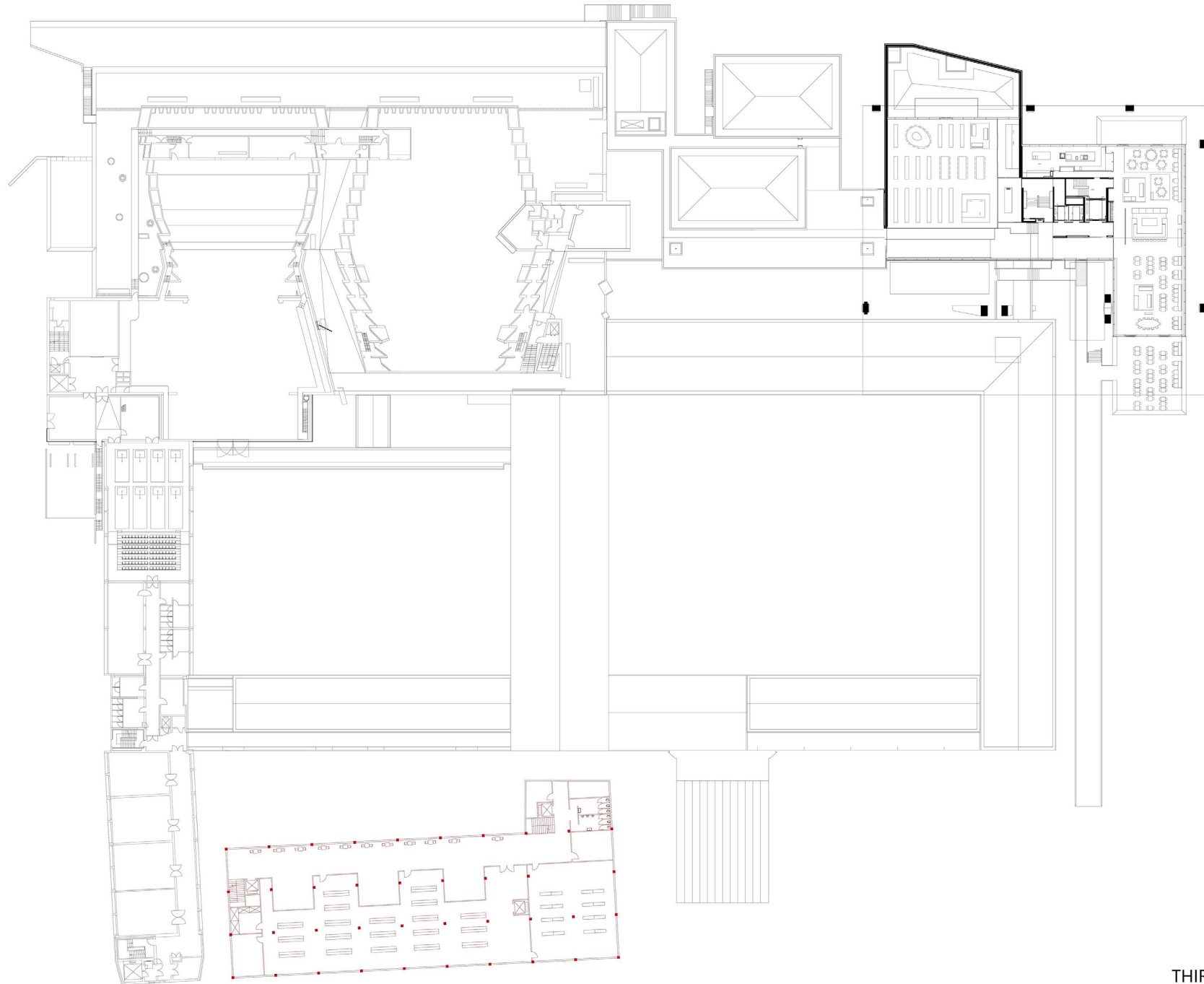
The second floor space is mainly exhibition space and archive space, and some work space is also distributed. The combination of exhibition space and archive reflects many views and definition of archive in the P1 project.



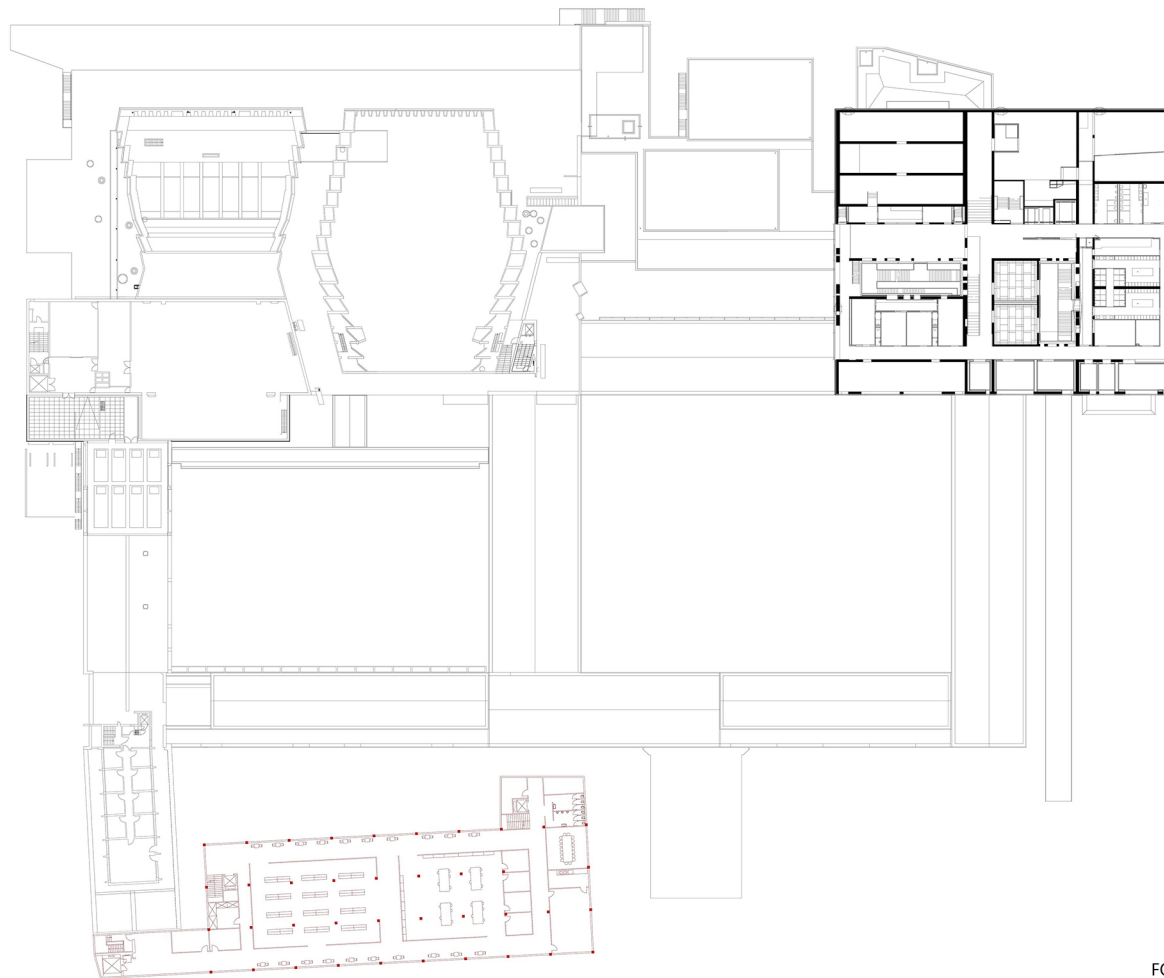


SECOND FLOOR



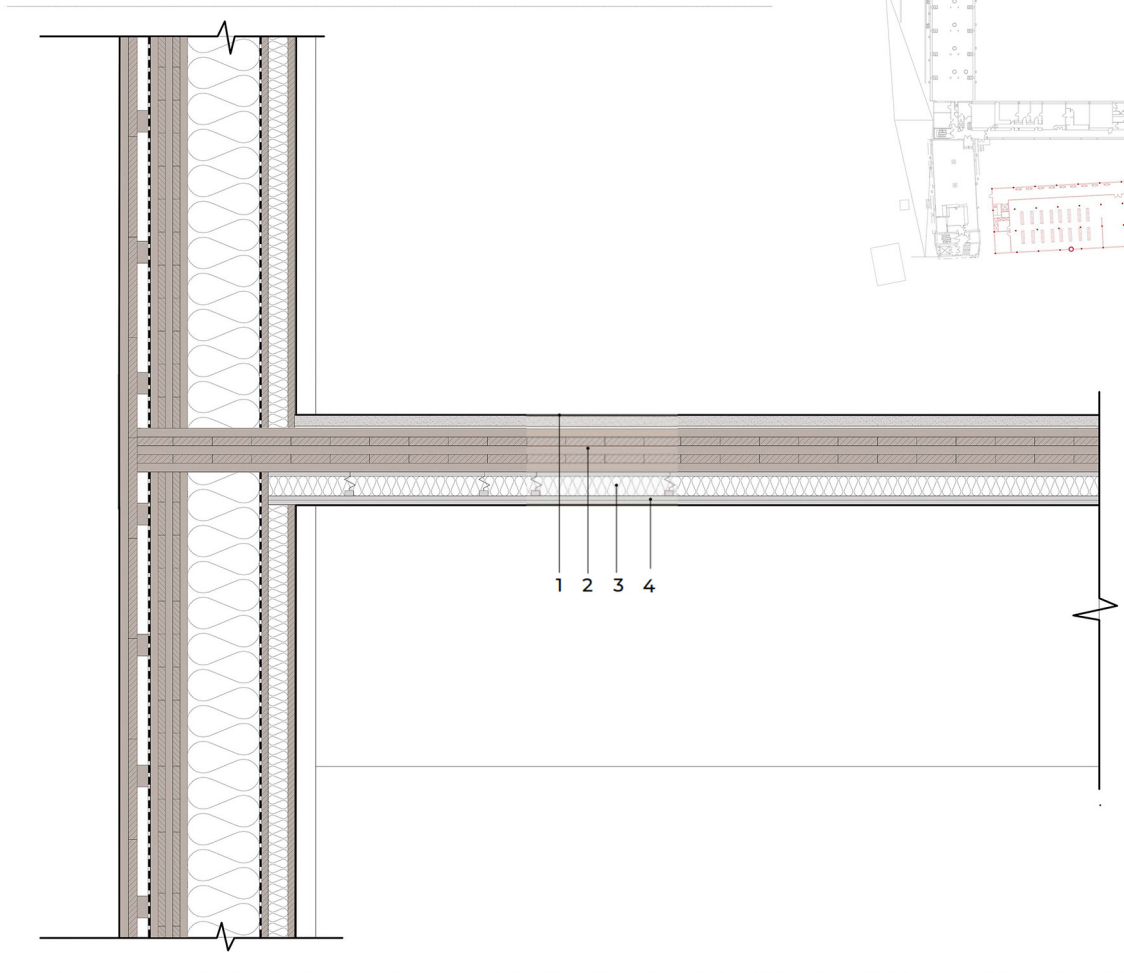


THIRD FLOOR



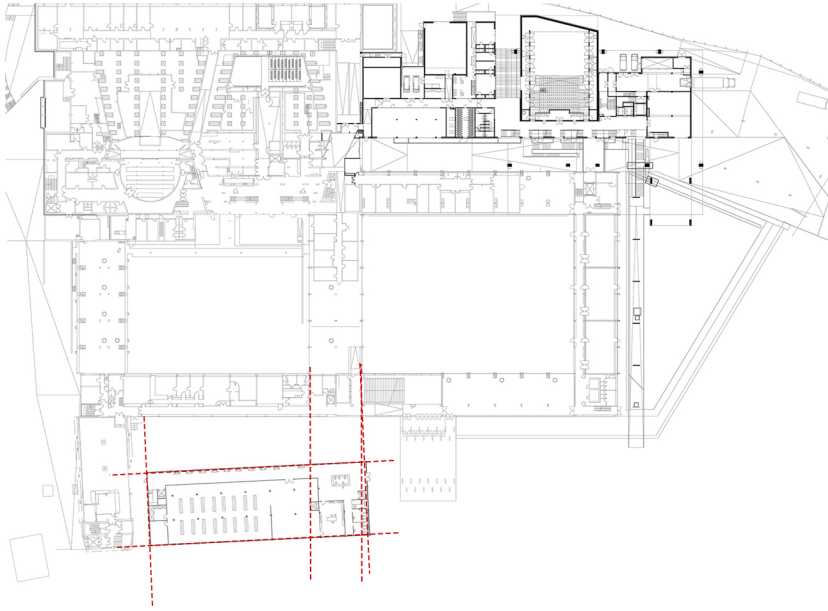
FOURTH FLOOR

The top floor is mainly public space including restaurants, libraries, reading rooms, etc. The overall facade design is also mainly glass, which can maximize the appreciation of the outside scenery and the overall view of De Singel. At the same time, setting the public space on the top floor also achieves the separation of movement and static.

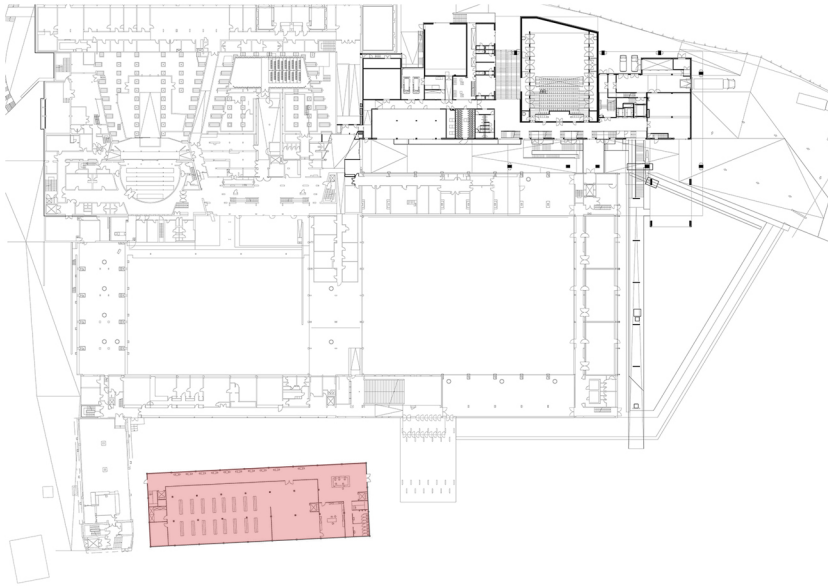


The wall structure is made of clt wood, which comprehensively considers the insulation and facade decoration.

- 1 Gypsum wall board 25 mm
- 2 CLT SLAP 100 mm
- 3 Acoustic insulation 45 mm
- 4 Plasterboard 20 mm



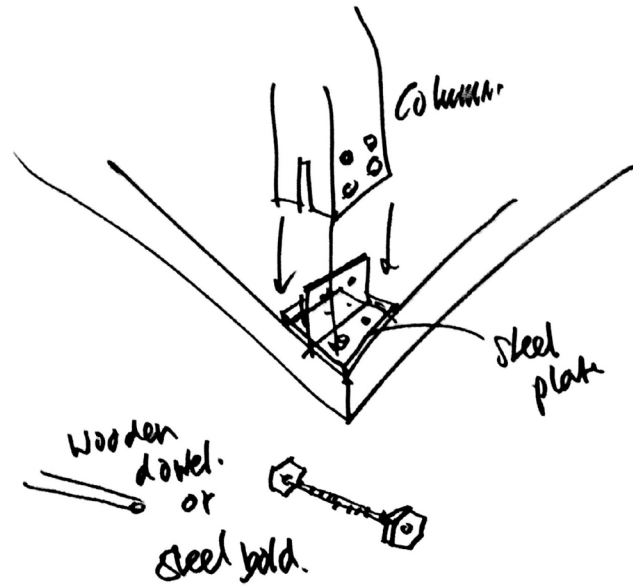
The new scheme is more holistic and gets rid of some fragmented forms and spatial functions, which better reflects the characteristics of the new building itself. The overall formal language continues the previous loop language, trying to create more connection points and influence spaces.



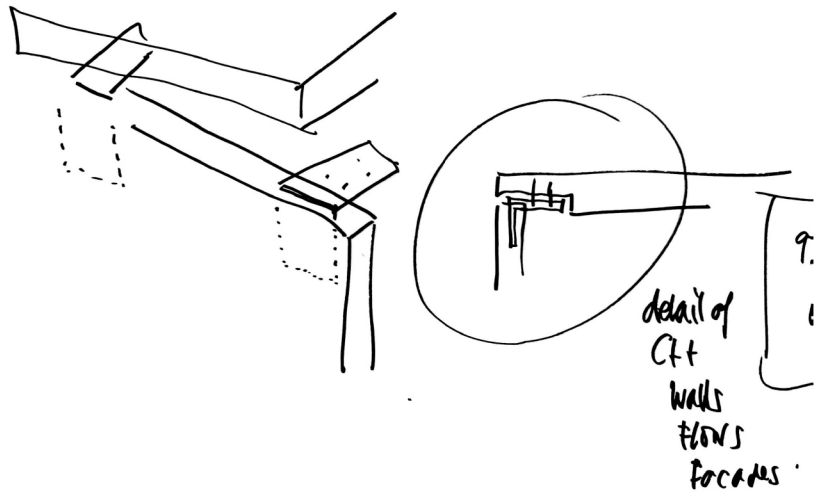
After continuous adjustments and changes, the scheme finally formed a relatively independent architectural layout from De Singel. From the initial partial transformation of De Singel to the final relatively independent architectural layout, it has undergone multiple stages of adjustment.



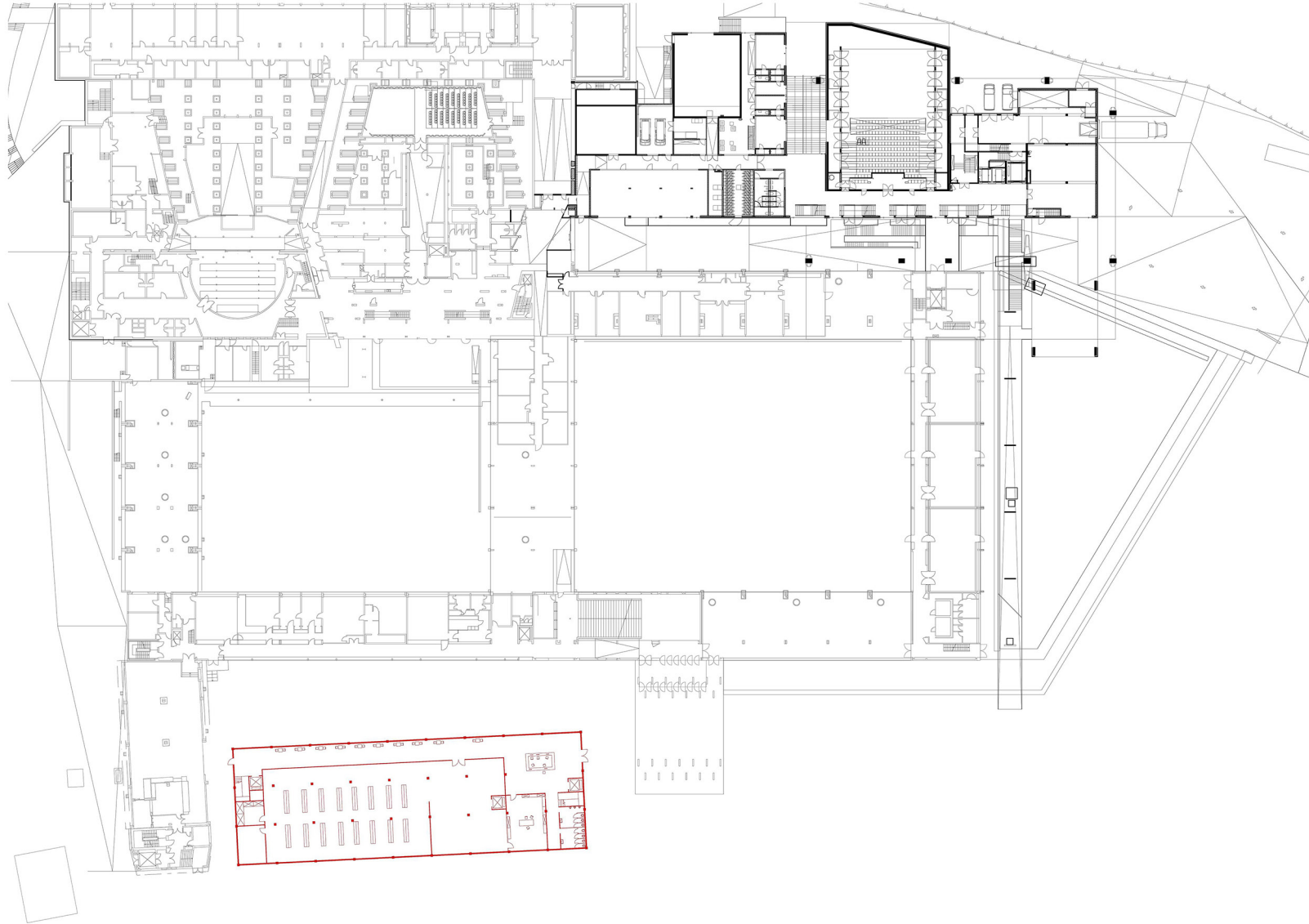
# Structure



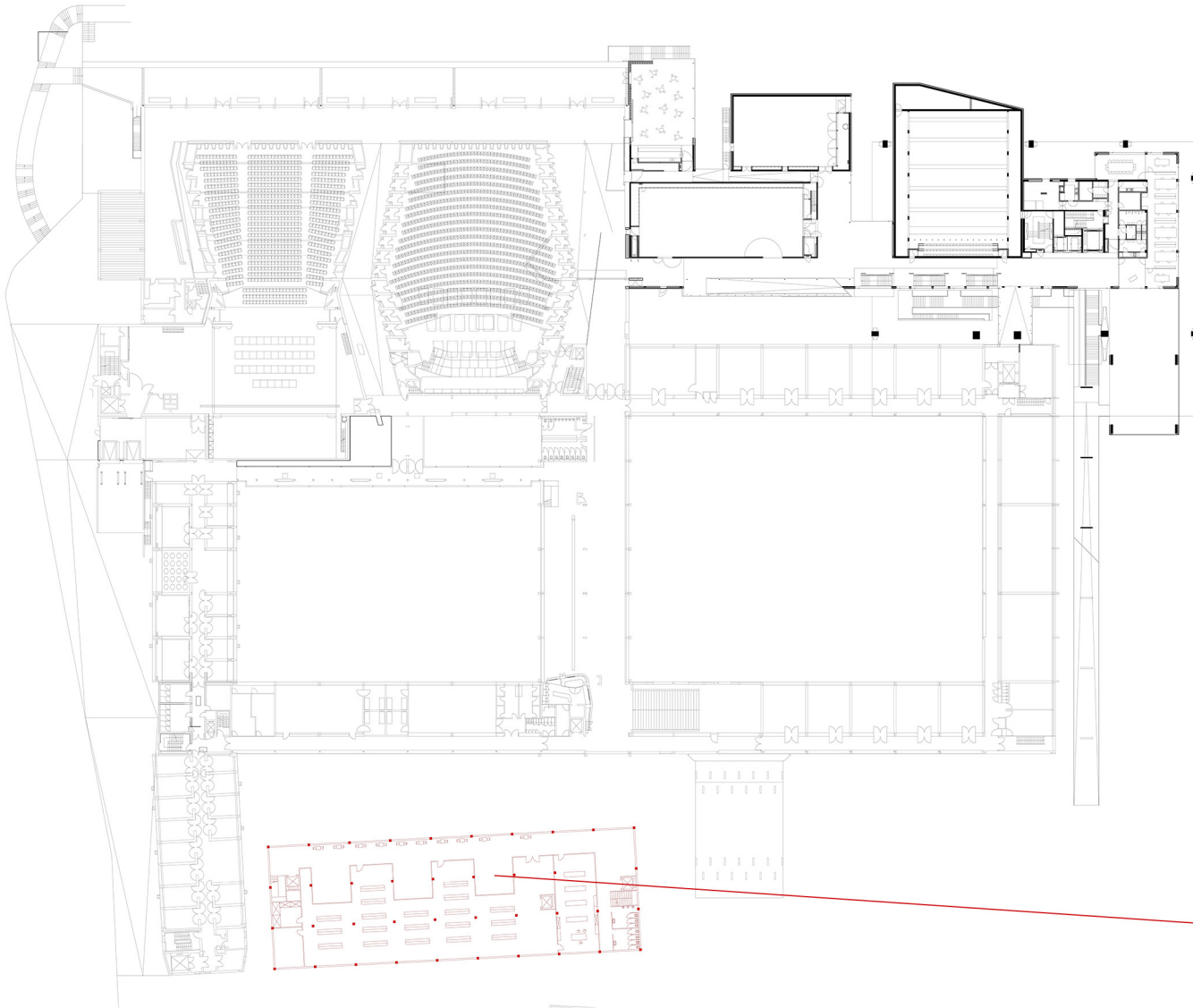
The overall structure takes into account the connection between the foundation and the column and the connection between the wall, and adopts wooden structure and steel sheet nodes, as well as the construction and connection of CLT.



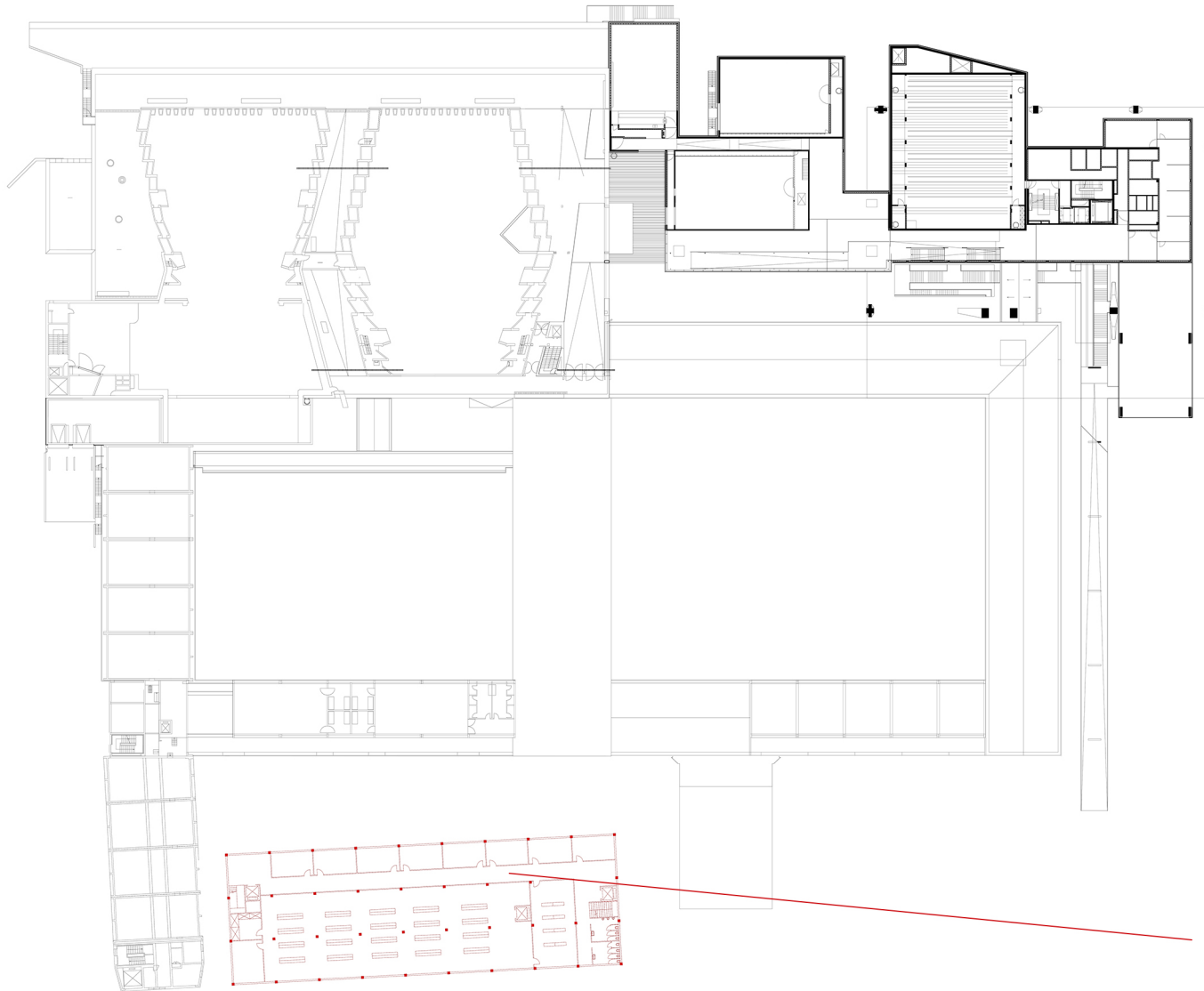
# Ground floor



# First floor

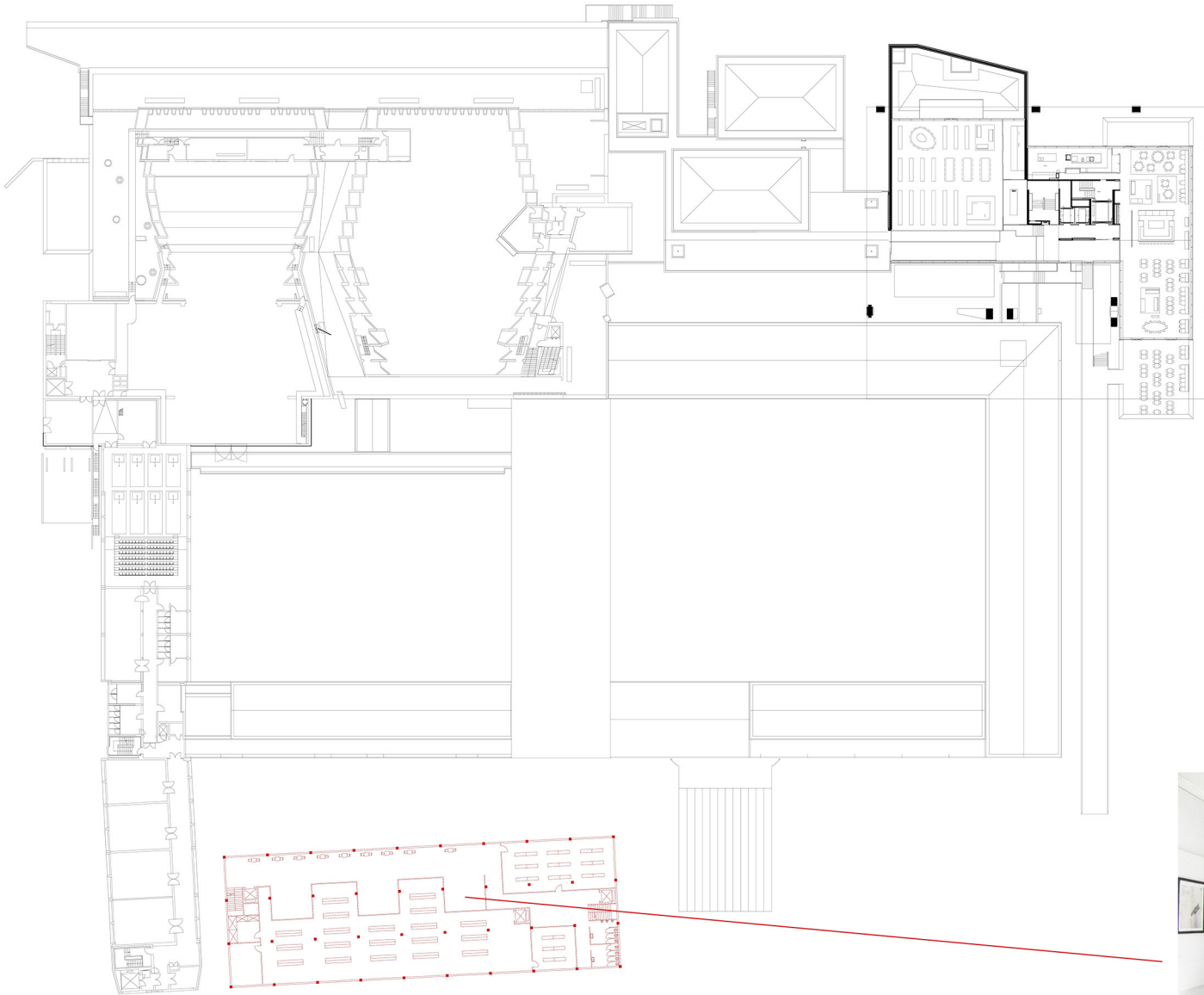


## Second floor

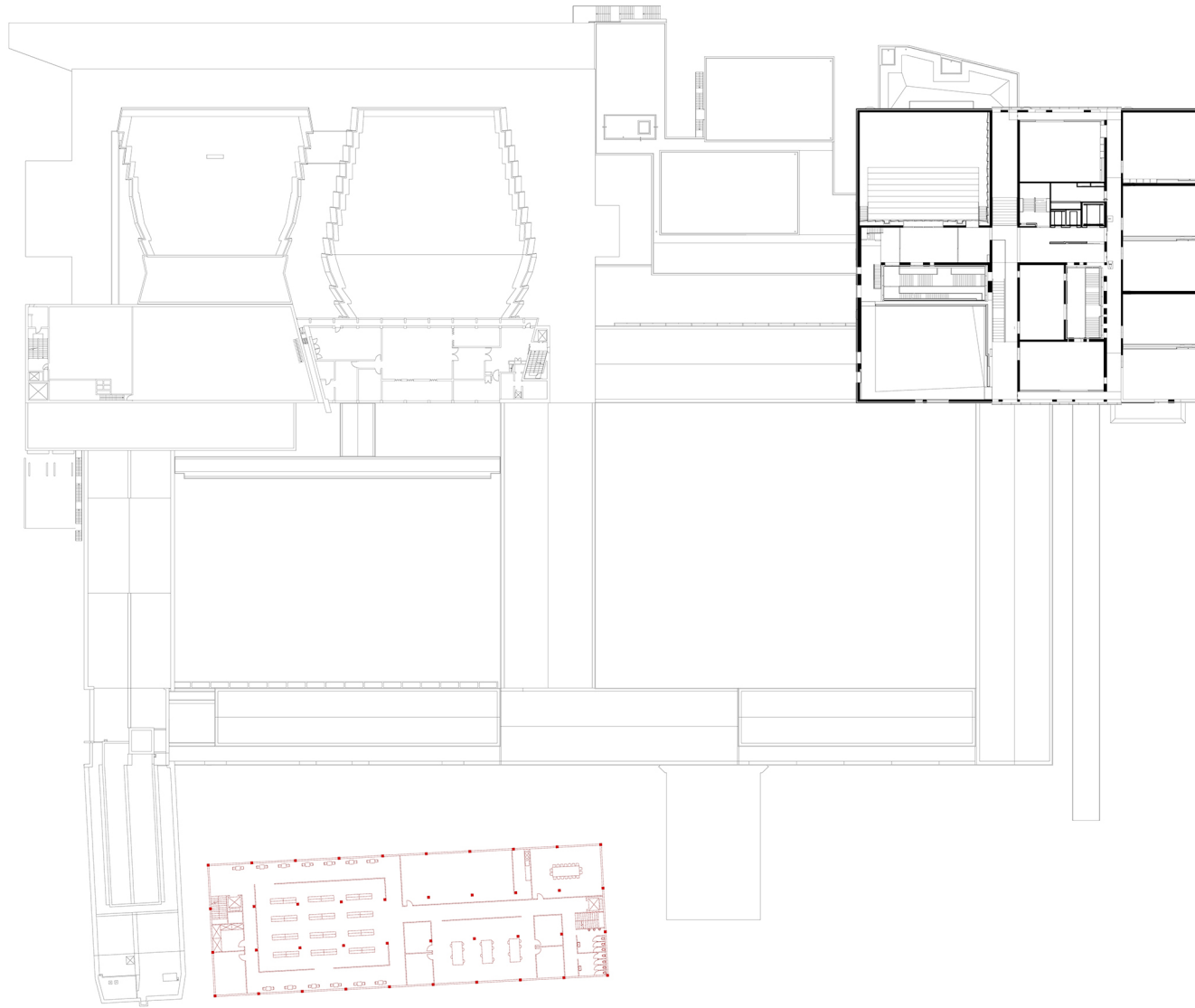




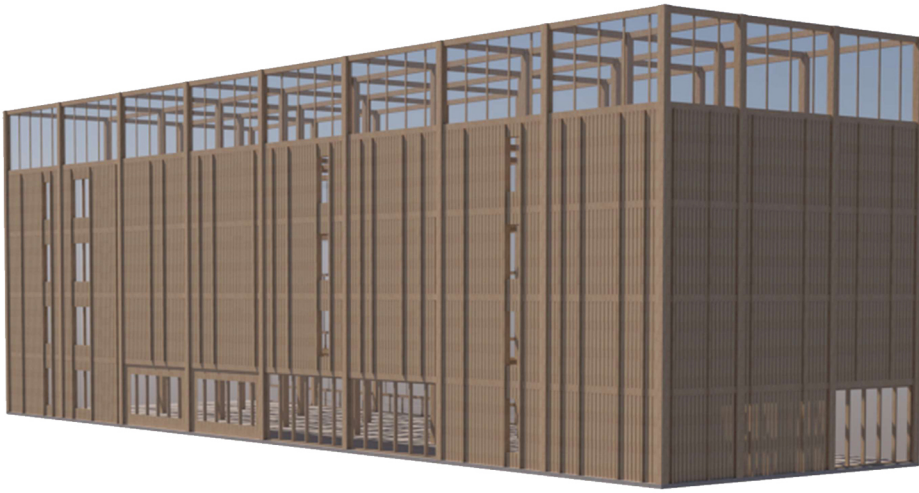
## Third floor



# Fourth floor



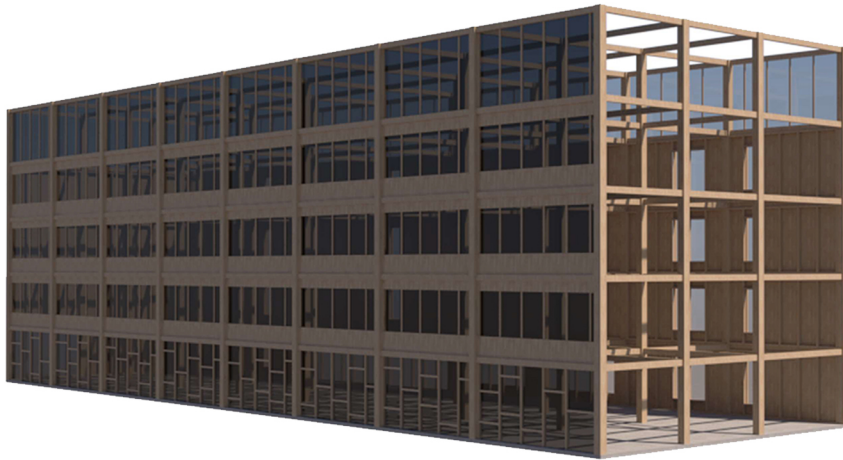
# Facade(north)



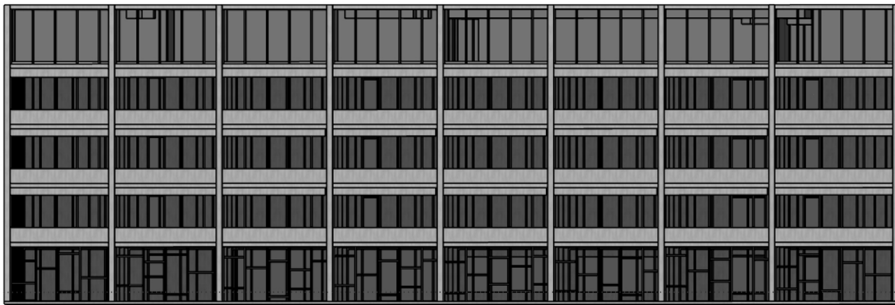
Taking into account the functional attributes of the north facade of the building (mainly archive function), the north facade of the building is mainly closed. At the same time, the first floor facade takes into account the interaction with the surroundings. Passers-by can see the archive space through the glass. The top floor facade is a transparent glass design. The main space is a public space, providing a good view.



# Facade(south)



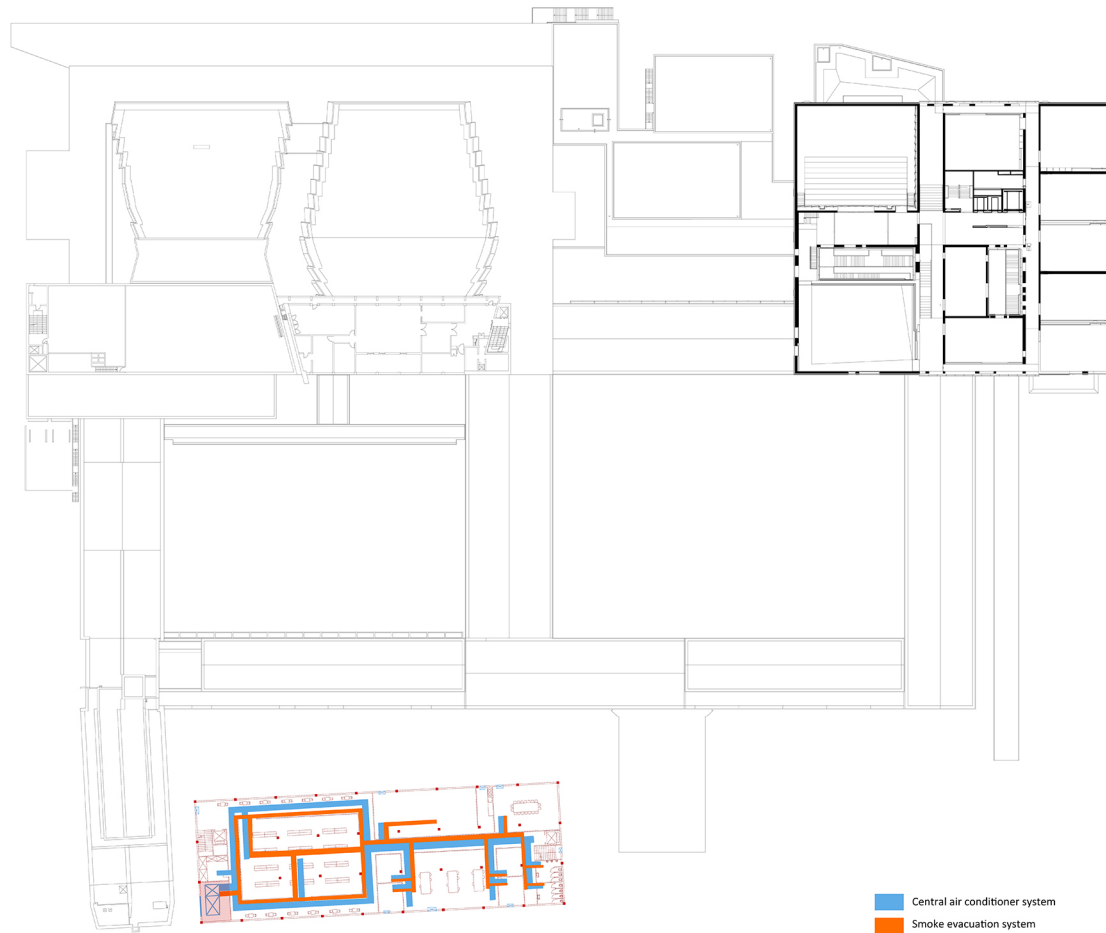
The south facade faces the courtyard, so I use a more open facade method to create a good landscape experience and lighting experience. The overall facade adopts horizontal design elements, which is completely different from the north side, reflecting the facade expression effect affected by different functional spaces. At the same time, shading issues and daily changes in light should also be considered.



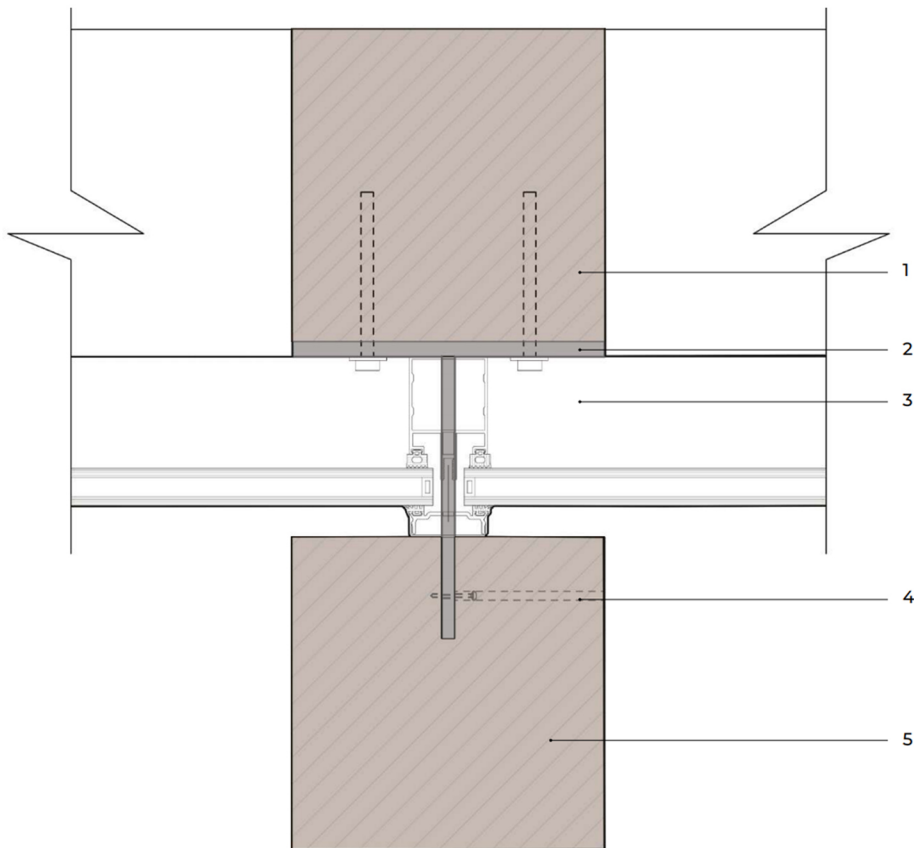


# Climate design

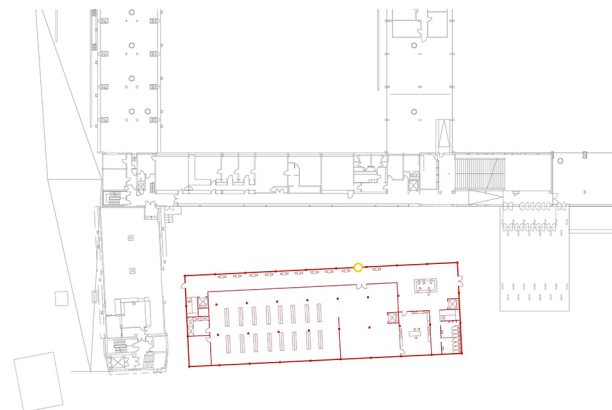
The climate design mainly involves the smoke exhaust duct and the fresh air duct, as well as the layout of the air conditioning system. I set up equipment rooms on each floor plane in an attempt to integrate equipment resources and integrate the air conditioning system and the fresh air duct into a central air conditioning system.



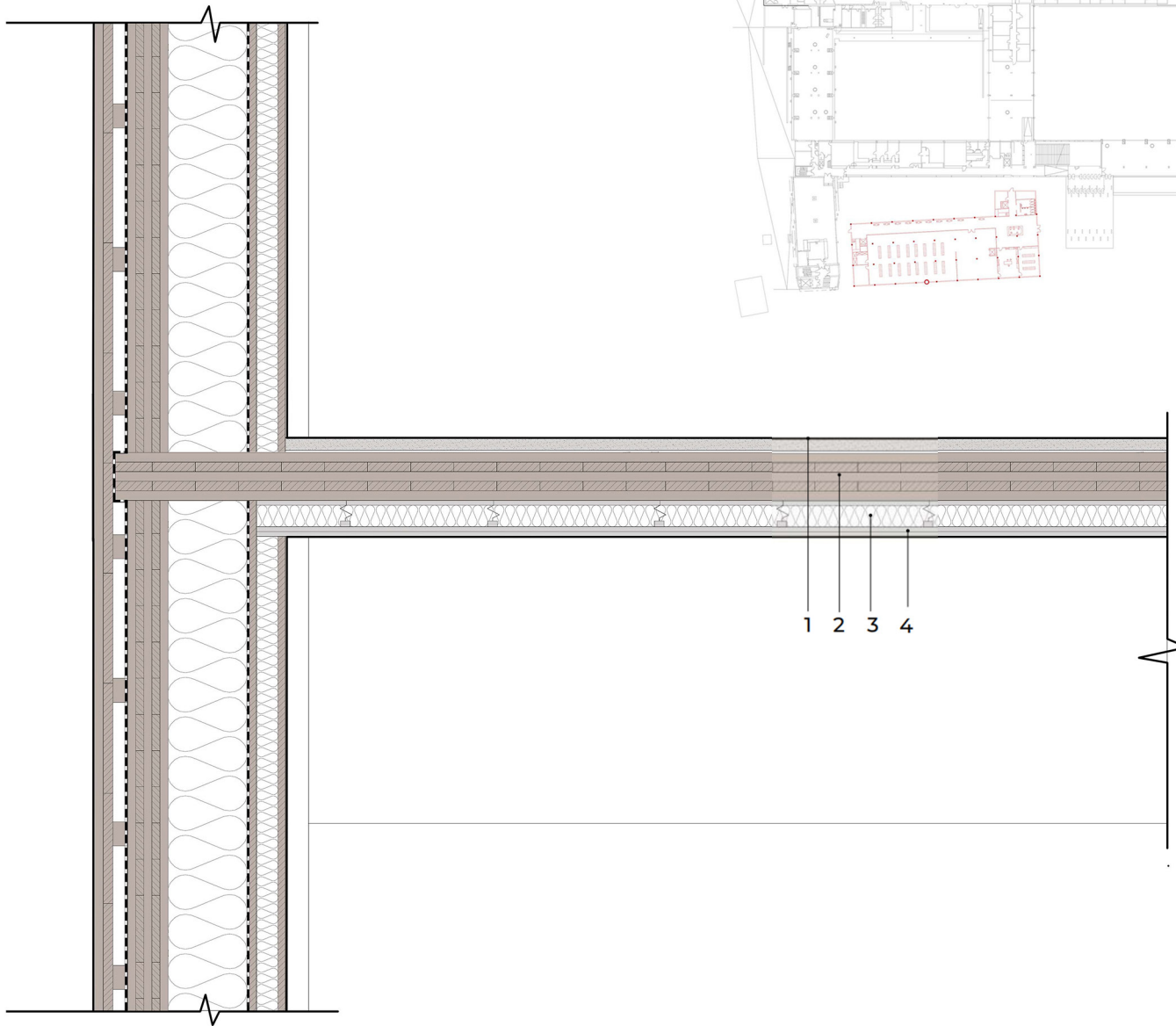
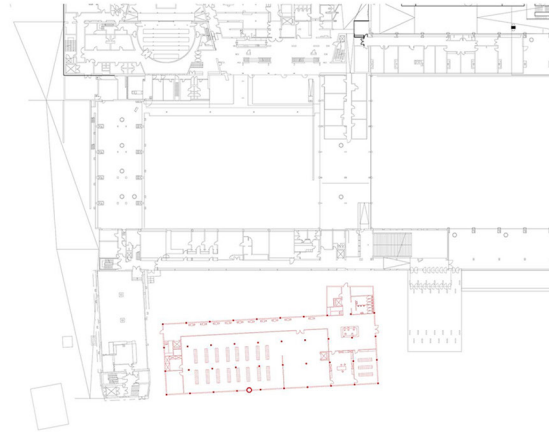
# Structure



For the construction of the south glass system, I tried to use the form of glass curtain wall, and at the same time, I used steel nails to connect the decorative wooden columns on the facade to play the role of the overall facade rhythm and rhythm, but due to limitations such as the insulation system, I am still considering other glass systems.



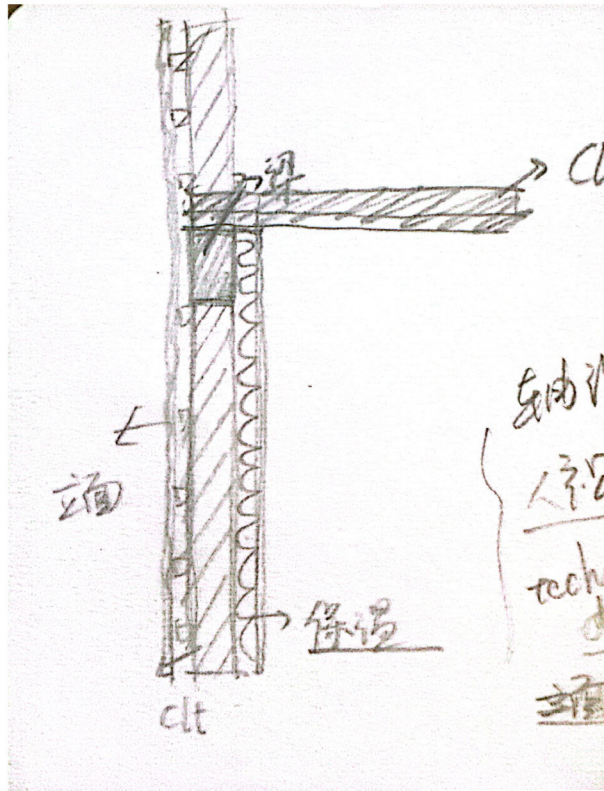
- 1 Interior load bearing timber column (200x200)
- 2 T plate connecting both columns
- 3 Curtain wall attached to the Interior column
- 4 Screw to fix the plate
- 5 Exterior aesthetic timber column (200x200)



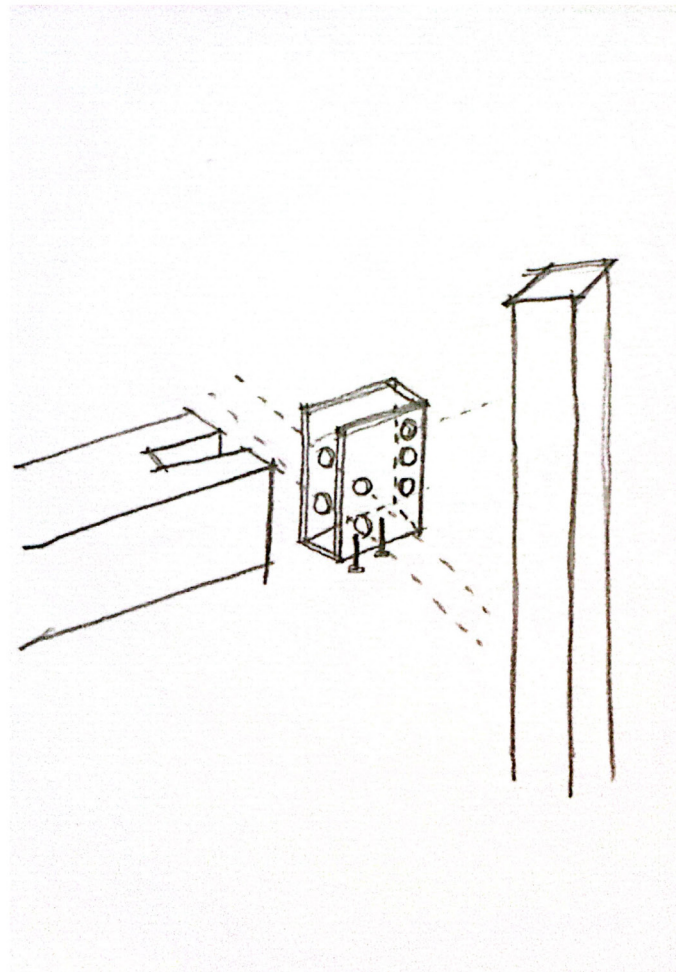
The details of the wall are more concerned with the connection method of CLT, the relationship between the facade and the overall wall structure, as well as the relationship with the ceiling and the space.

- 1 Gypsum wall board 25 mm
- 2 CLT SLAP 100 mm
- 3 Acoustic insulation 45 mm
- 4 Plasterboard 20 mm

# Construction diagram



Construction sketch

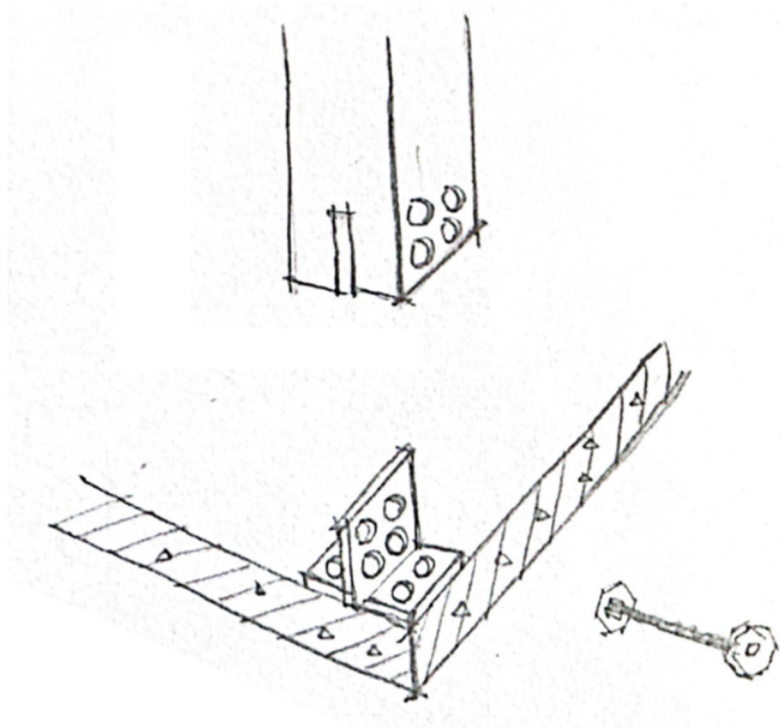


Wood column and beam

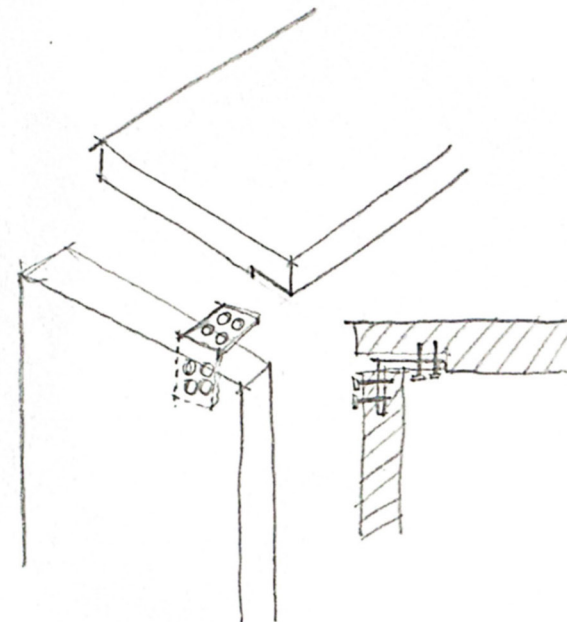
The structure mainly adopts wooden structure, with CLT and beams as the main load-bearing methods. The wooden columns and beams are connected by components to form a unit.



# Construction diagram



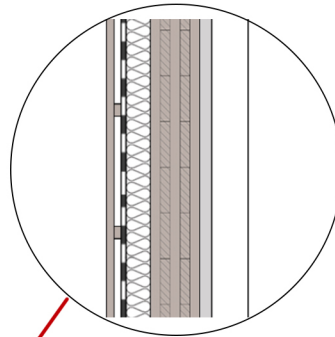
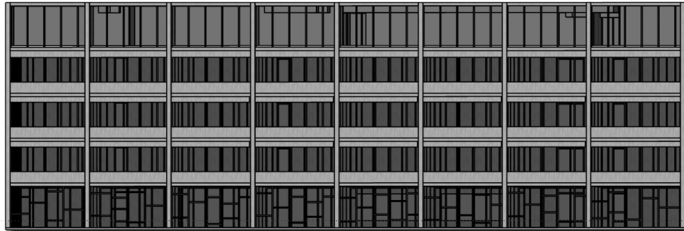
T connector specimen



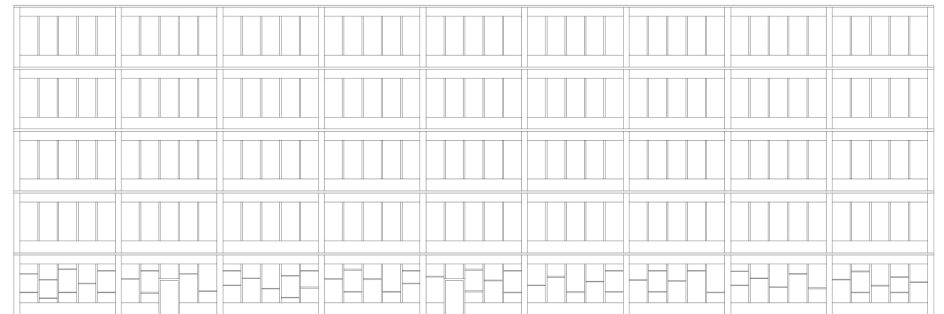
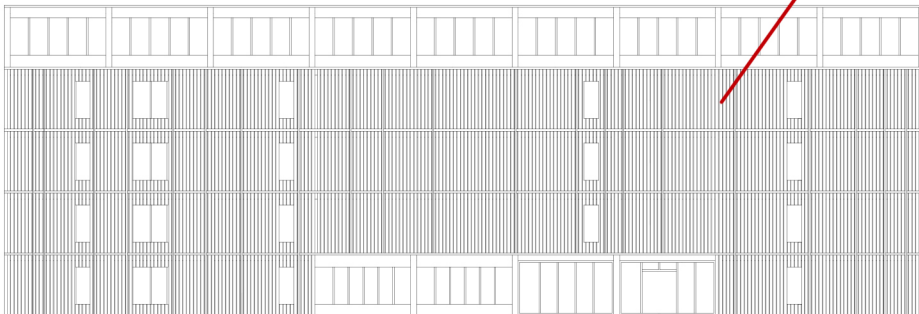
CLT connection

I chose the T connector specimen for the connection between the wooden column and the concrete foundation, and used bolts to fix them. The CLT connection was constructed in L shape and fixed with screws.

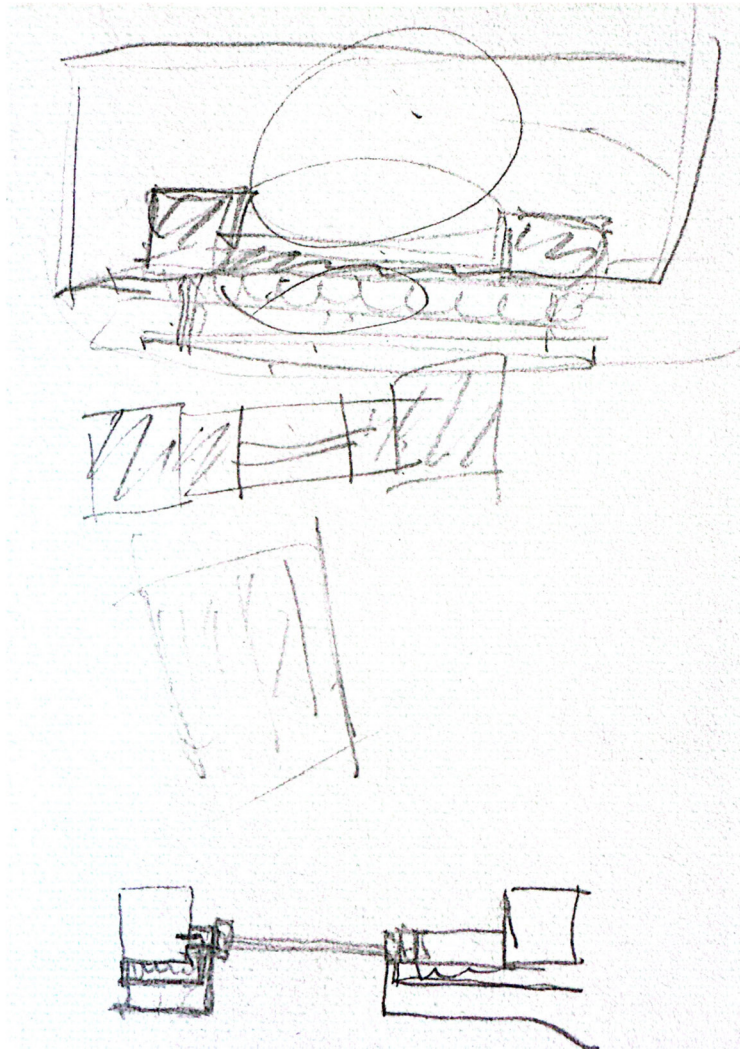
# facade diagram



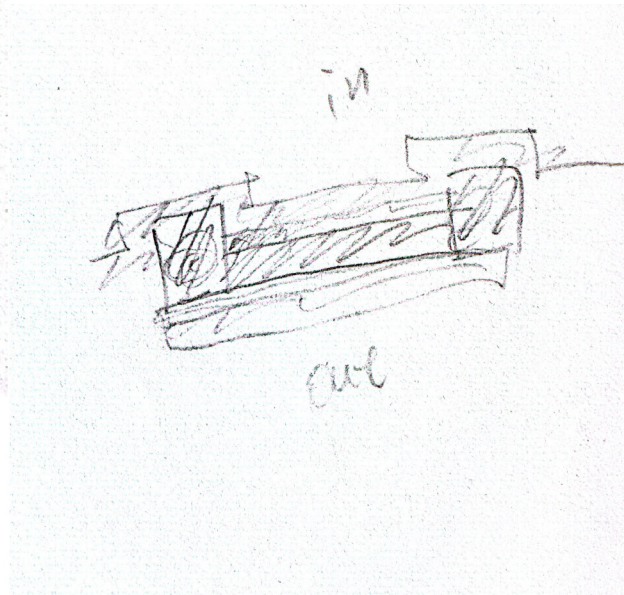
The facade of the building forms a different rhythm between the north and the south due to elements such as light and scenery. Compared with the facade logic of the last time, I changed the structure of the facade and adopted external insulation to improve the utilization rate of the internal space. Therefore, the facade adopts an integrated design to hide the columns and other structures.



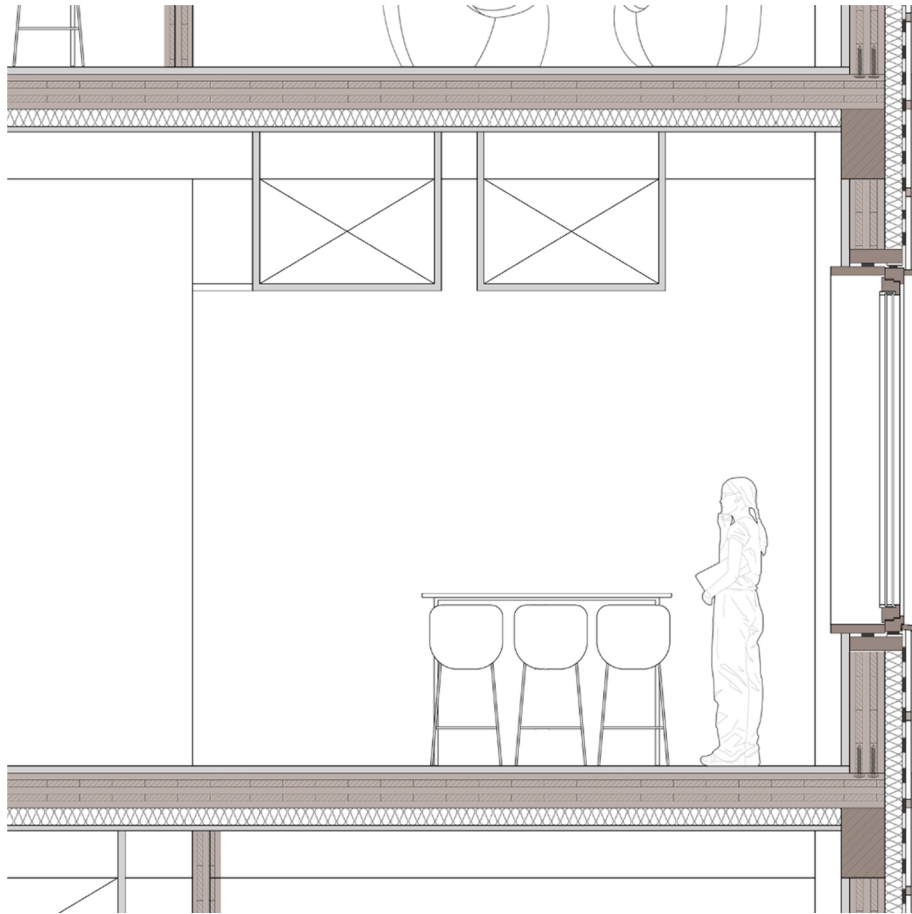
# Window system



The window system on the south side of the building is one of the key points of the south facade expression. In my initial idea, I used a glass curtain wall to express the structural form of the facade while realizing the open space function. However, considering the western exposure problem and the feasibility of the structure, I finally adopted the traditional window form.



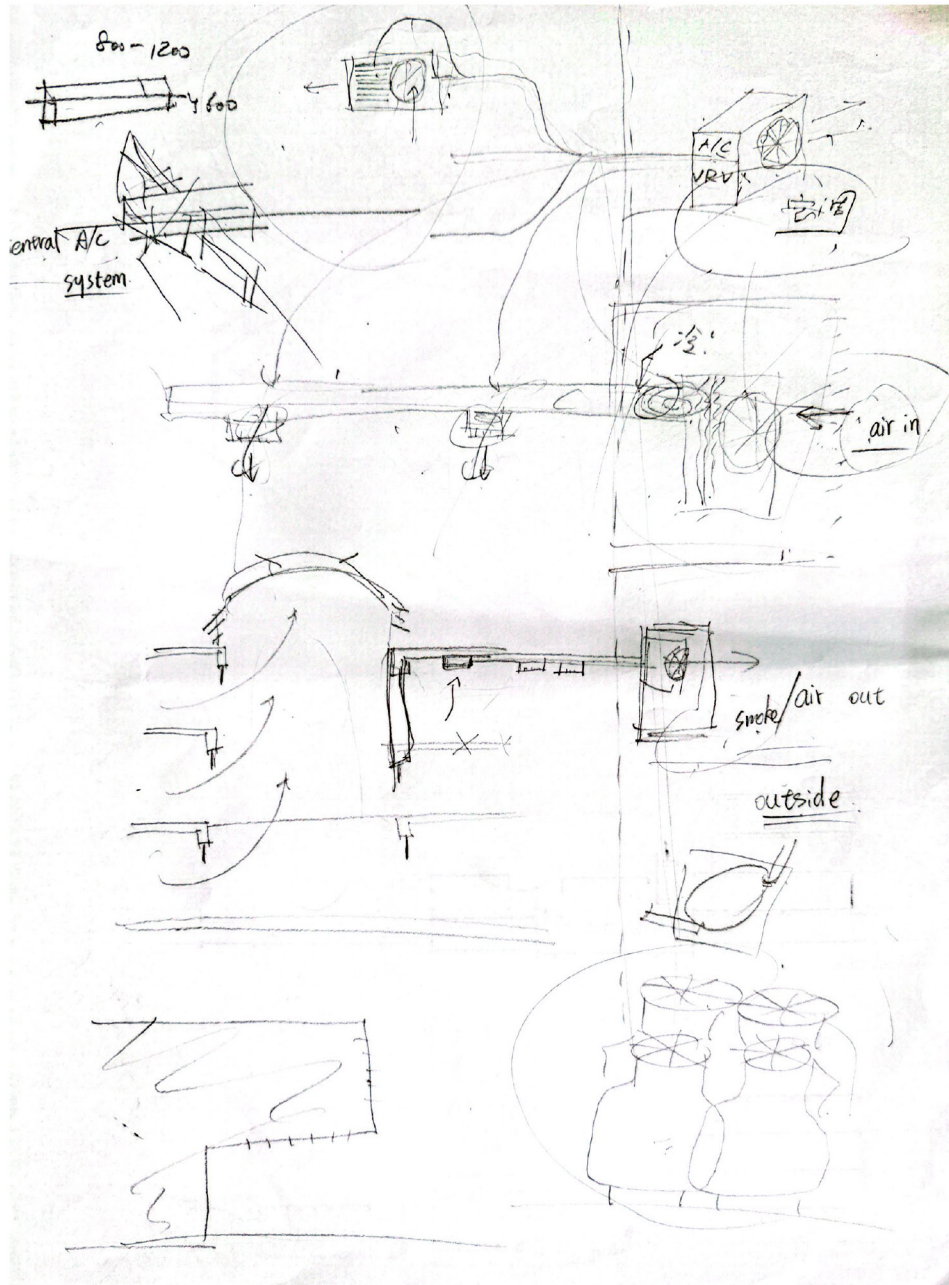
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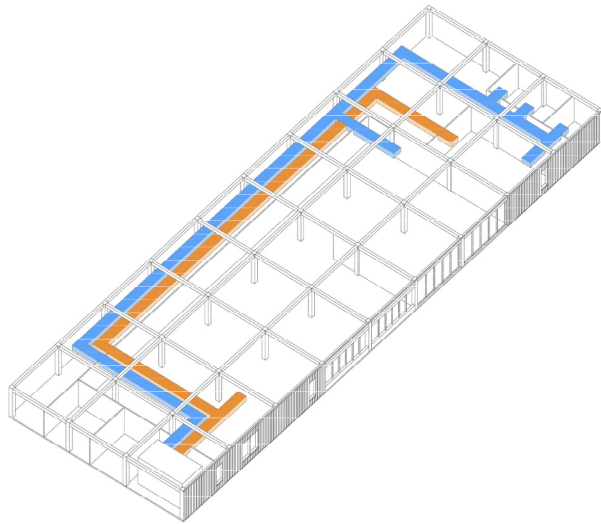


# Climate diagram

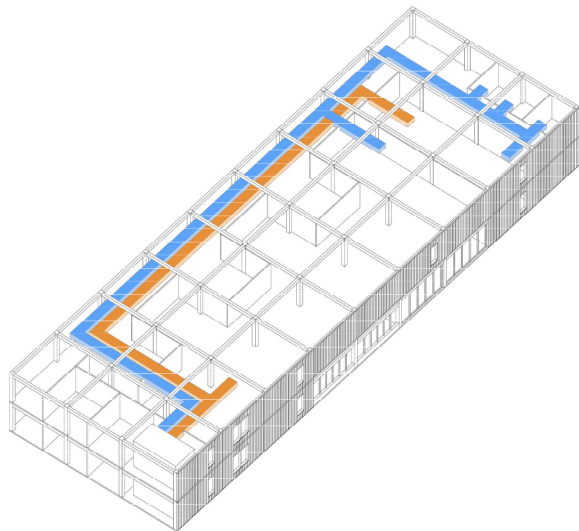


The climate design includes air conditioning system, fresh air system and smoke exhaust system. In order to simplify the climate design in the limited building space, I combined the air conditioning system with the fresh air system to form a central air conditioning system, and unified control between the equipment.

# Climate diagram

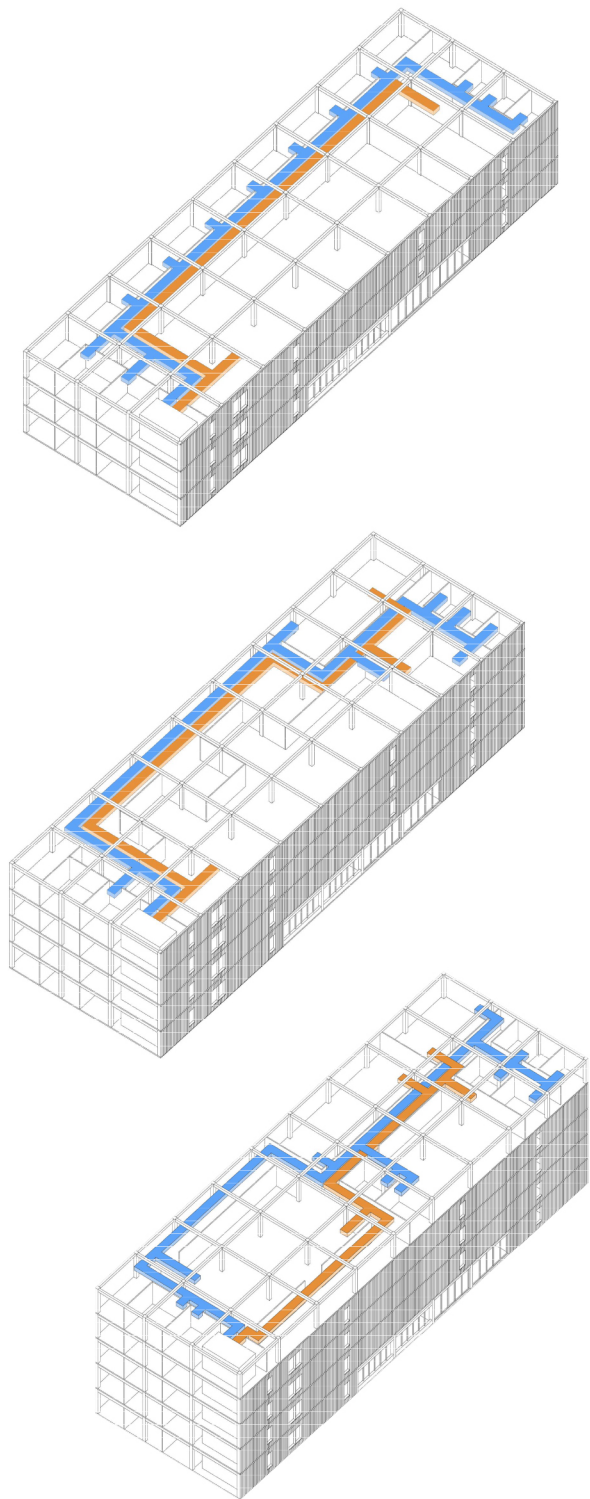


The streamline design of the climate system is consistent with the pedestrian streamline. The first and second floors of the building are mainly used for storage and exhibition functions, and are also the main service objects of the climate system.



- exit ventilation
- incoming ventilation

# Climate diagram

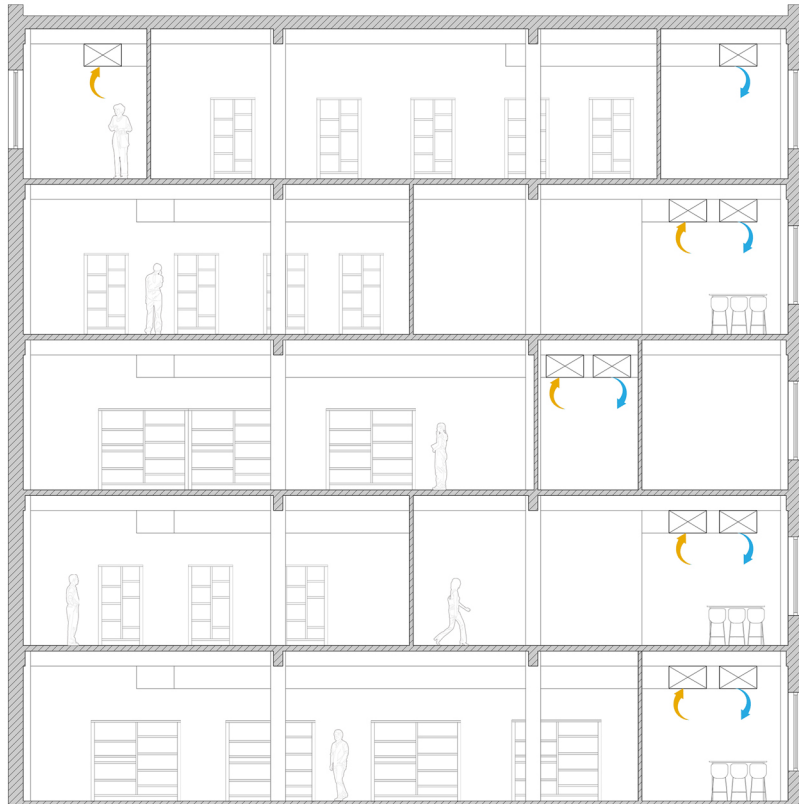


The climate streamlines of the third and fourth floors are basically the same as those of the first and second floors, with more small spaces such as offices. For some small spaces, exhaust valves are installed to simplify the smoke exhaust system. The fifth floor is a public activity space, and the climate system adopts a ring routing form to maximize the efficiency.

exit ventilation  
incoming ventilation

# Climate diagram

- exit ventilation
- incoming ventilation



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# Climate diagram

- exit ventilation
- incoming ventilation

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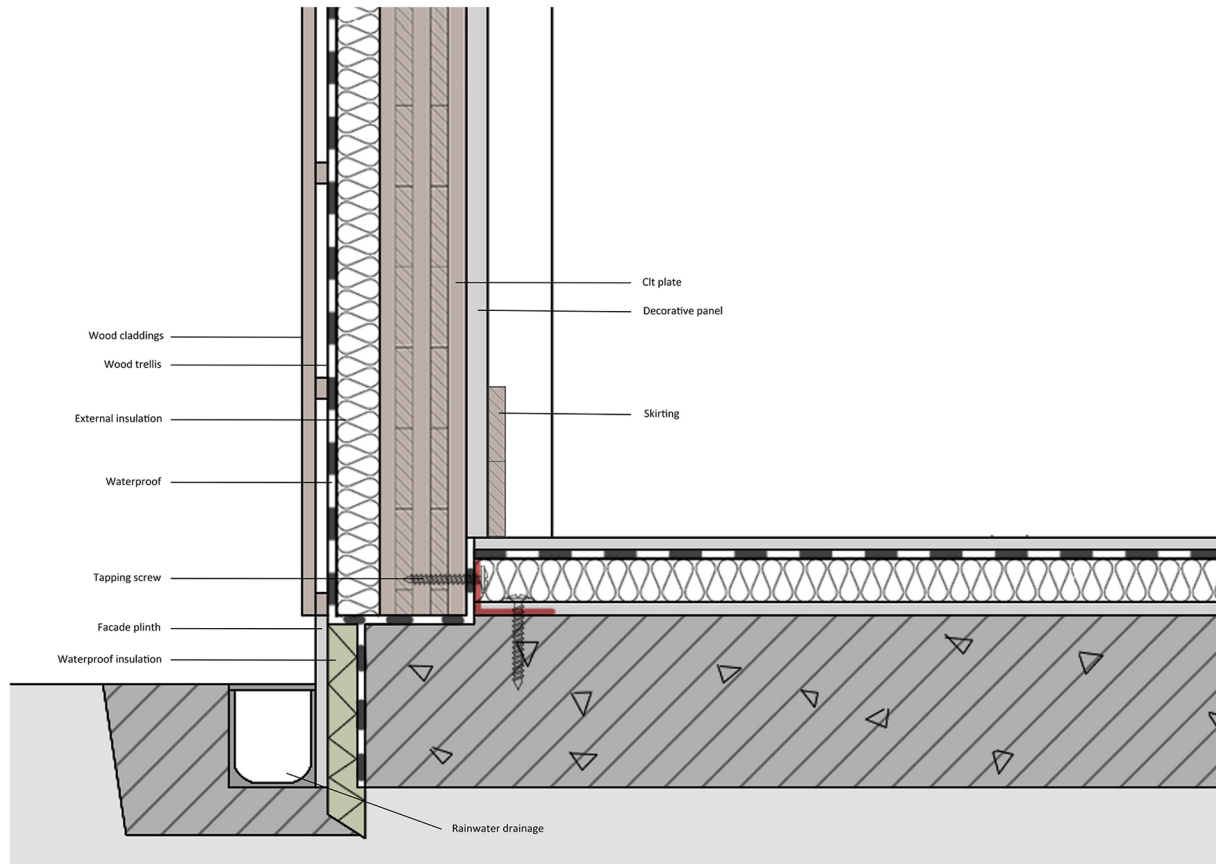
# Section diagram



The detailed section drawing is mainly composed of foundation, floor, windows, parapet and other parts. It is combined with the climate analysis to better show the relationship between building structure, climate design and space design.

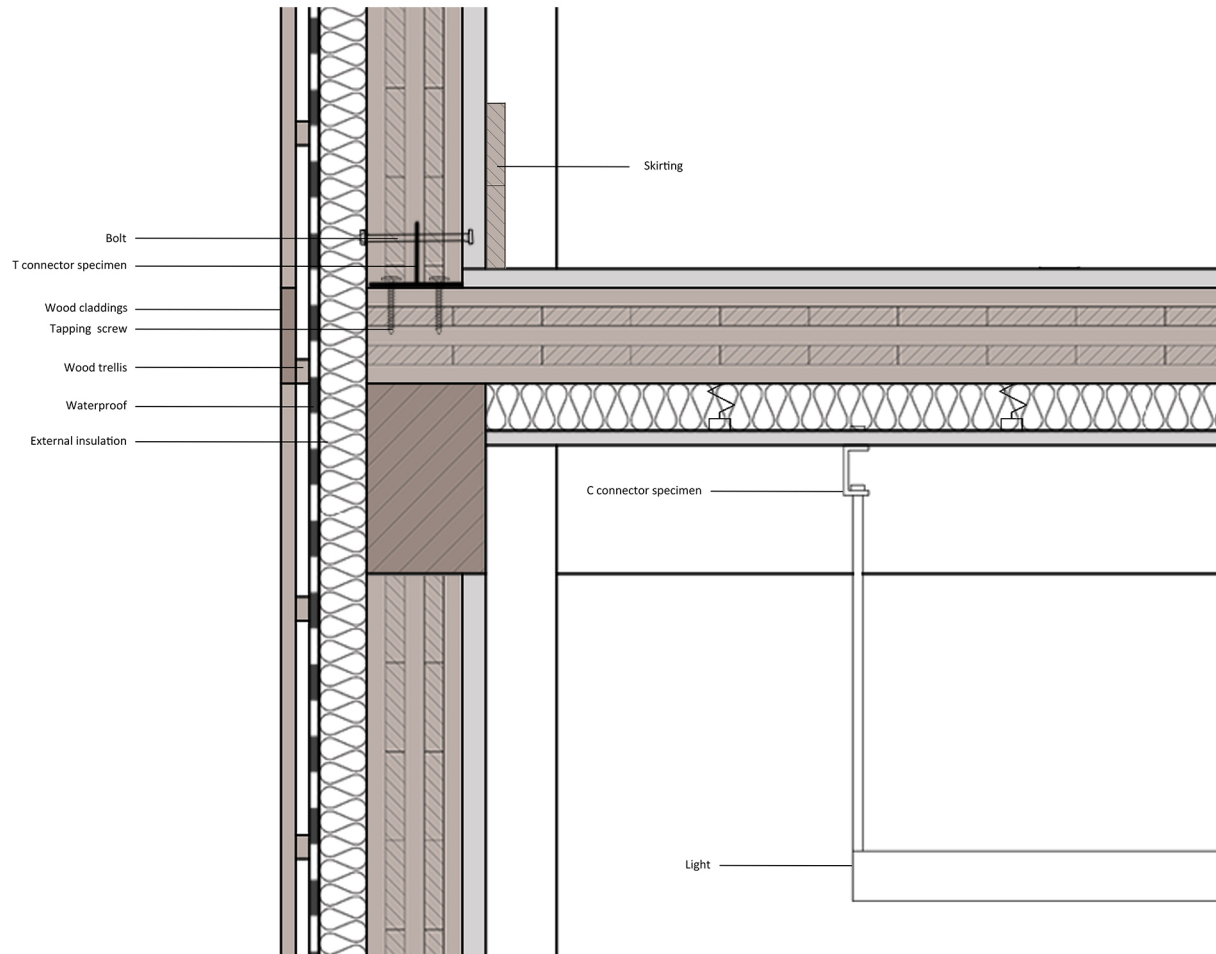
- exit ventilation
- incoming ventilation

# Technical drawings



The technical drawings of the foundation mainly reflect the connection method between CLT and concrete and the connection and connection between the facade and the building. At the same time, the rainwater system, such as rainwater drainage and the application of waterproof layer, should also be considered.

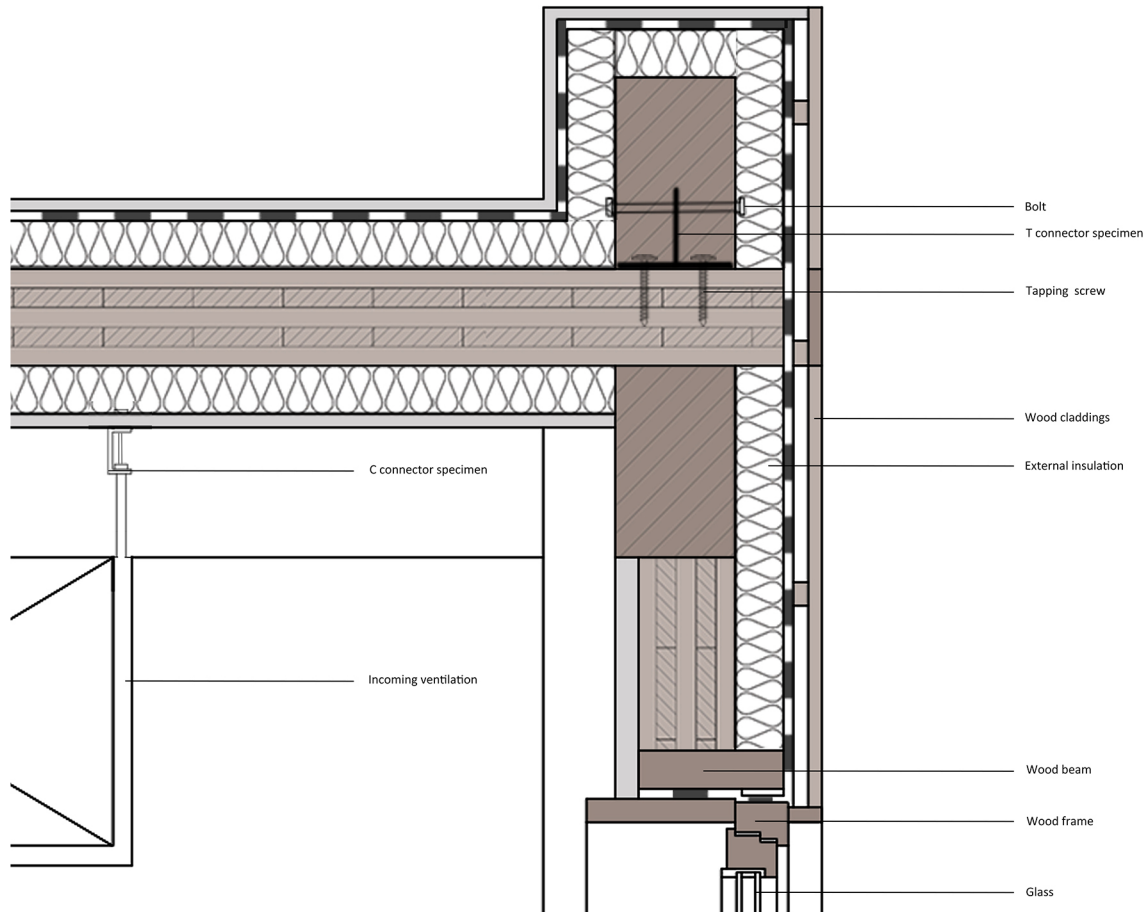
# Technical drawings



The wall part mainly reflects the connection method between CLT, including the use of T-type connection construction, the use of bolts and self-tapping screws, as well as the baseboards of the interior space and the connection between the lamp and the ceiling.

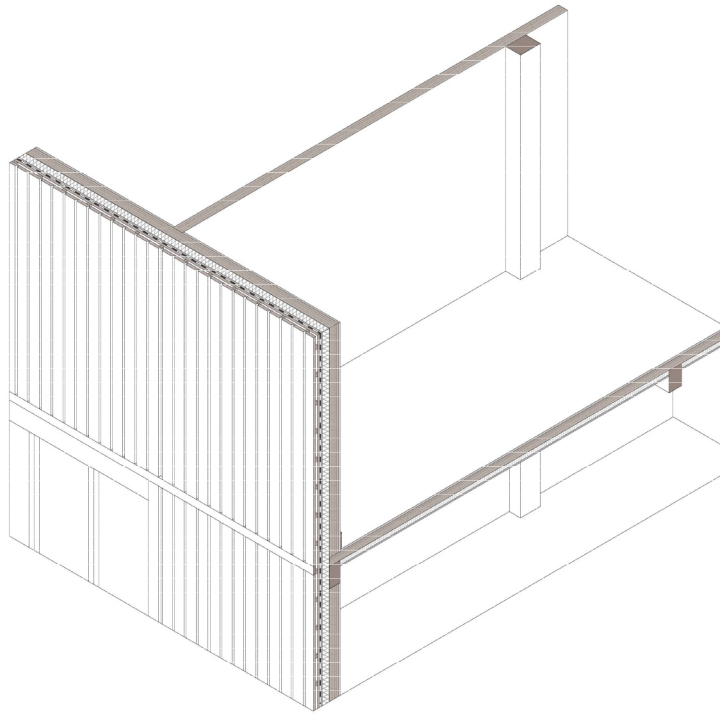
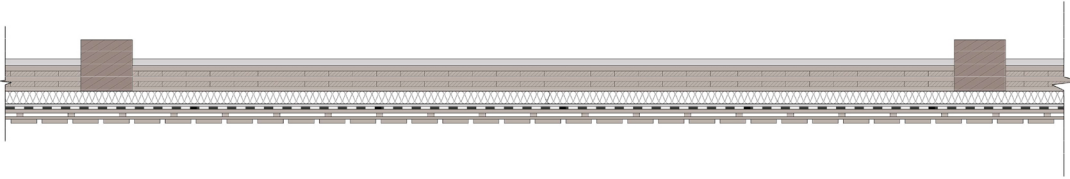


# Technical drawings



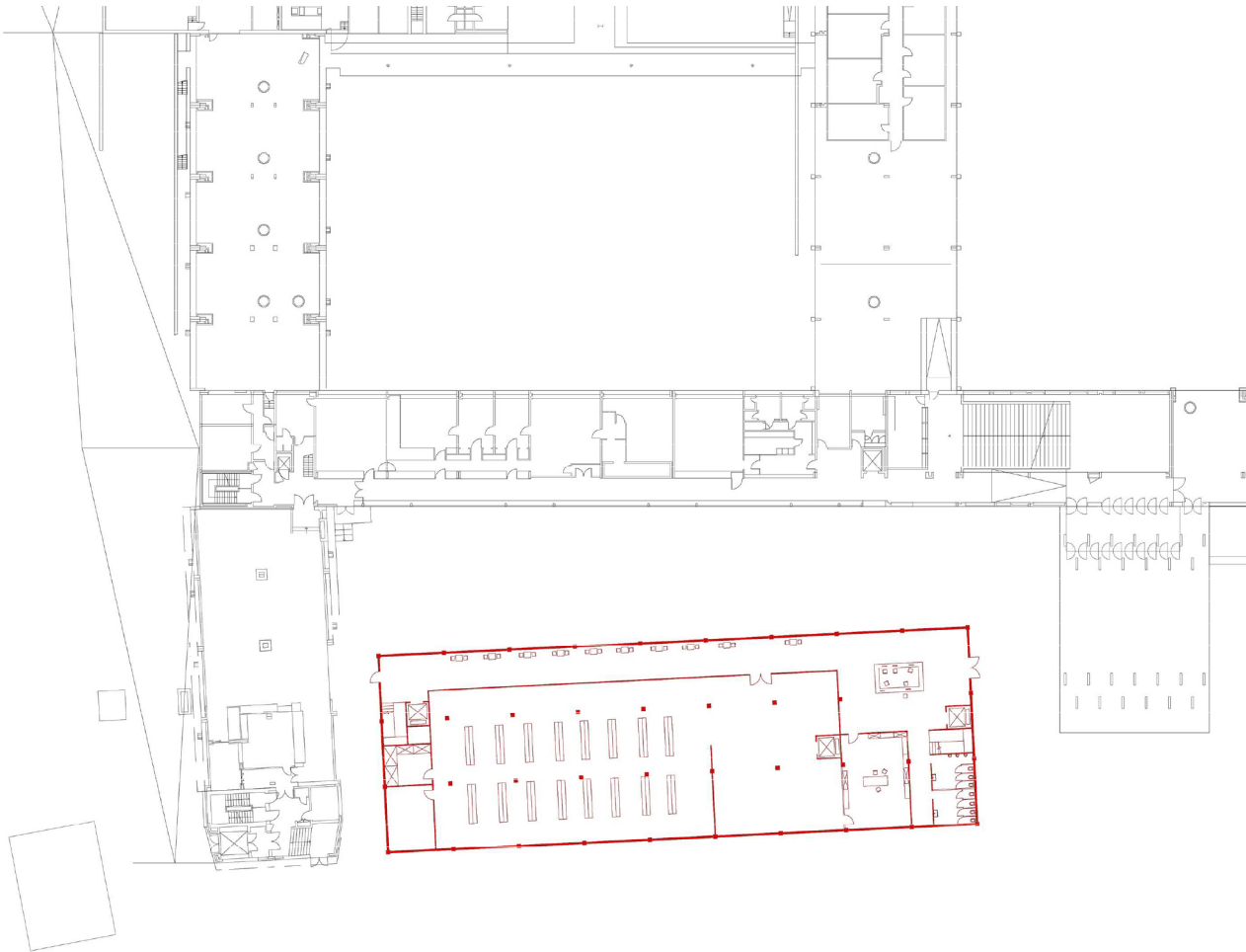
The parapet part also uses T-type connection components, and the parapet and roof are fully surrounded by waterproof and thermal insulation materials. The window structure is also mainly made of wood.

# Technical drawings



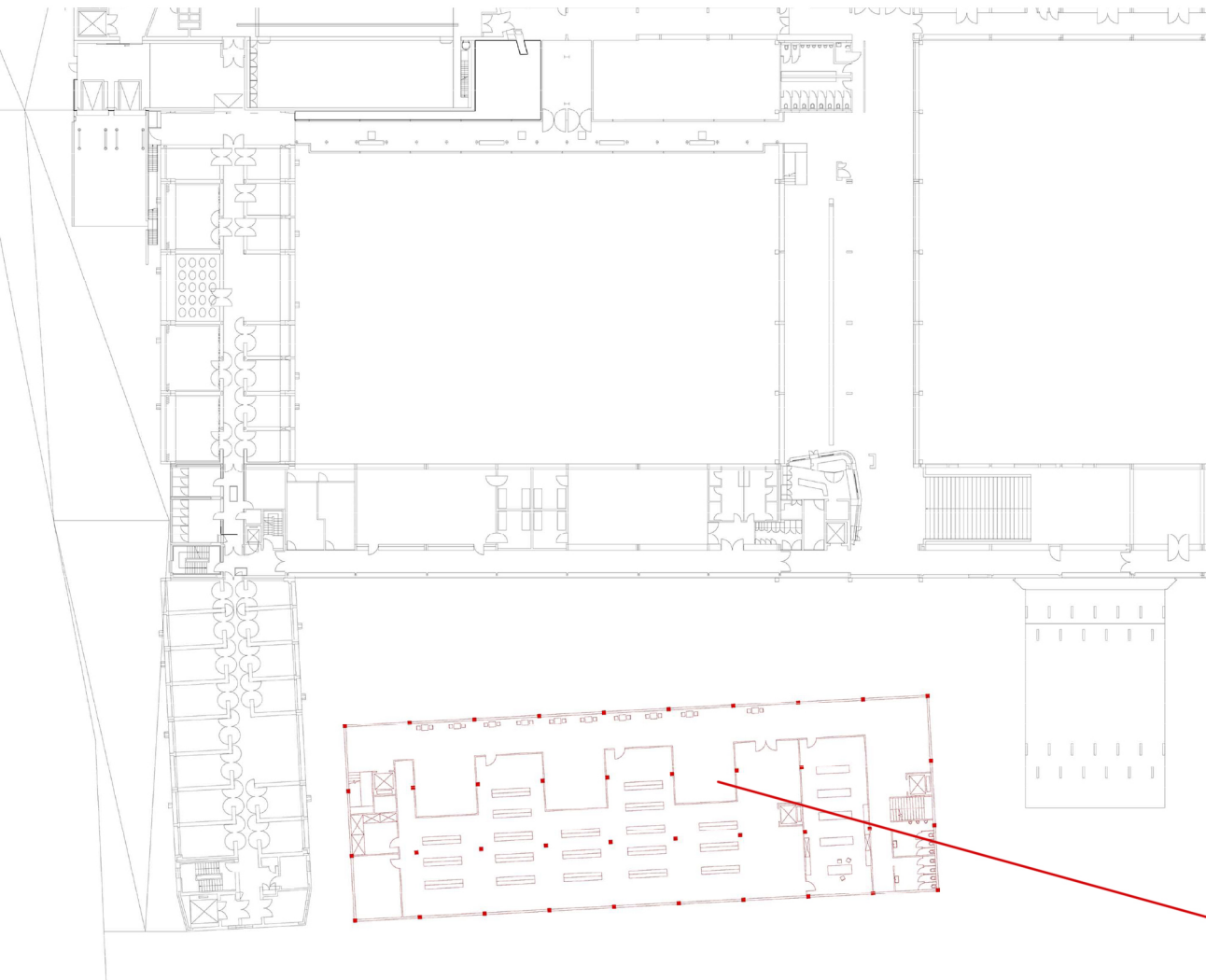
From the cross-section of the wall, I used a waterproof and thermal insulation structure that fully surrounds the column. Through external thermal insulation, the indoor space can be maximized, which is also more convenient for the construction and assembly of the building.

# Ground floor



The main functions of the first floor are the hall, archive storage space and unloading area, which also provides De Singel with more connection points and outdoor space, including the formation of a new yard.

# First floor

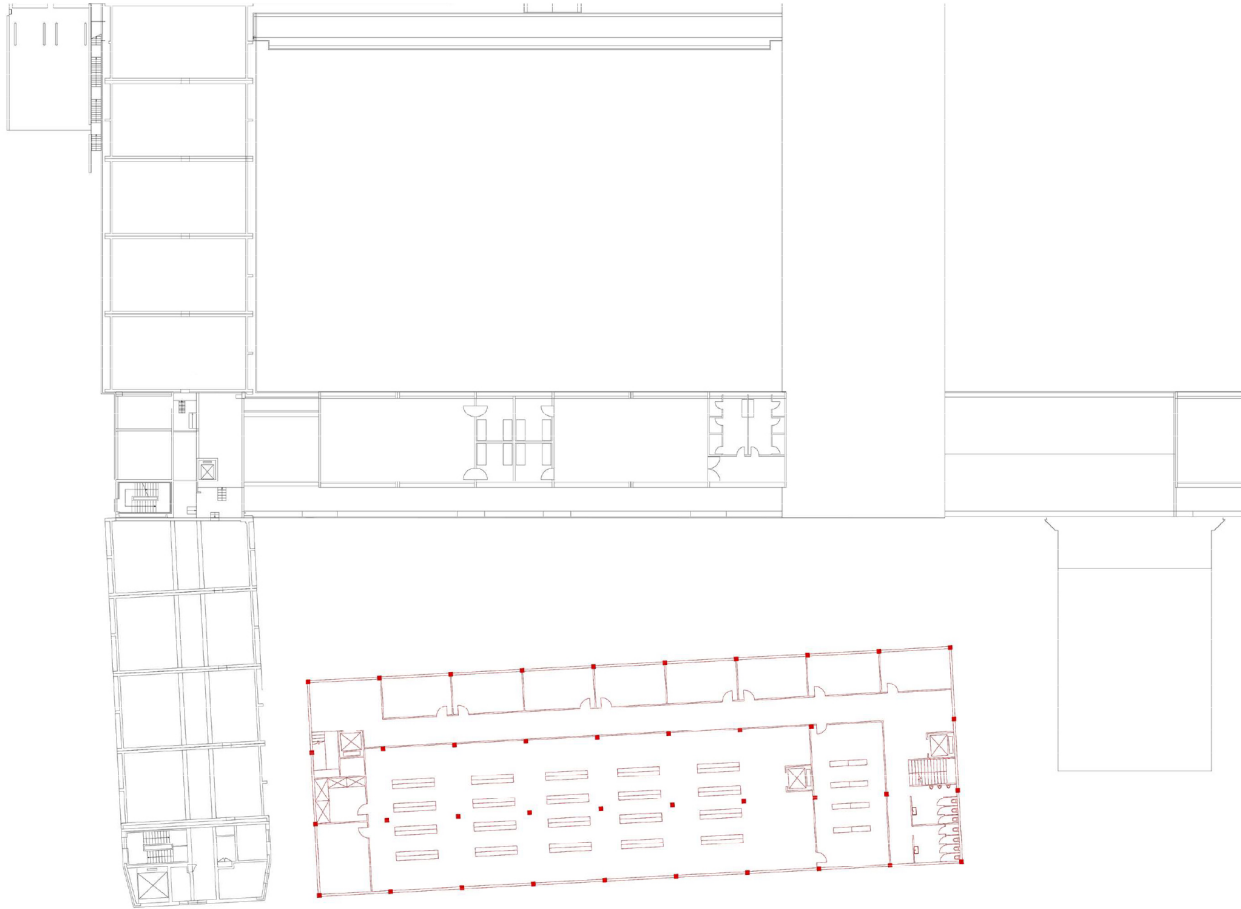


The first floor plan reflects my view on archive. I combined the archive space and the exhibition space, reflecting my ideas in P1, combining different functional spaces together through visual relationships to form a new spatial experience.





# Second floor

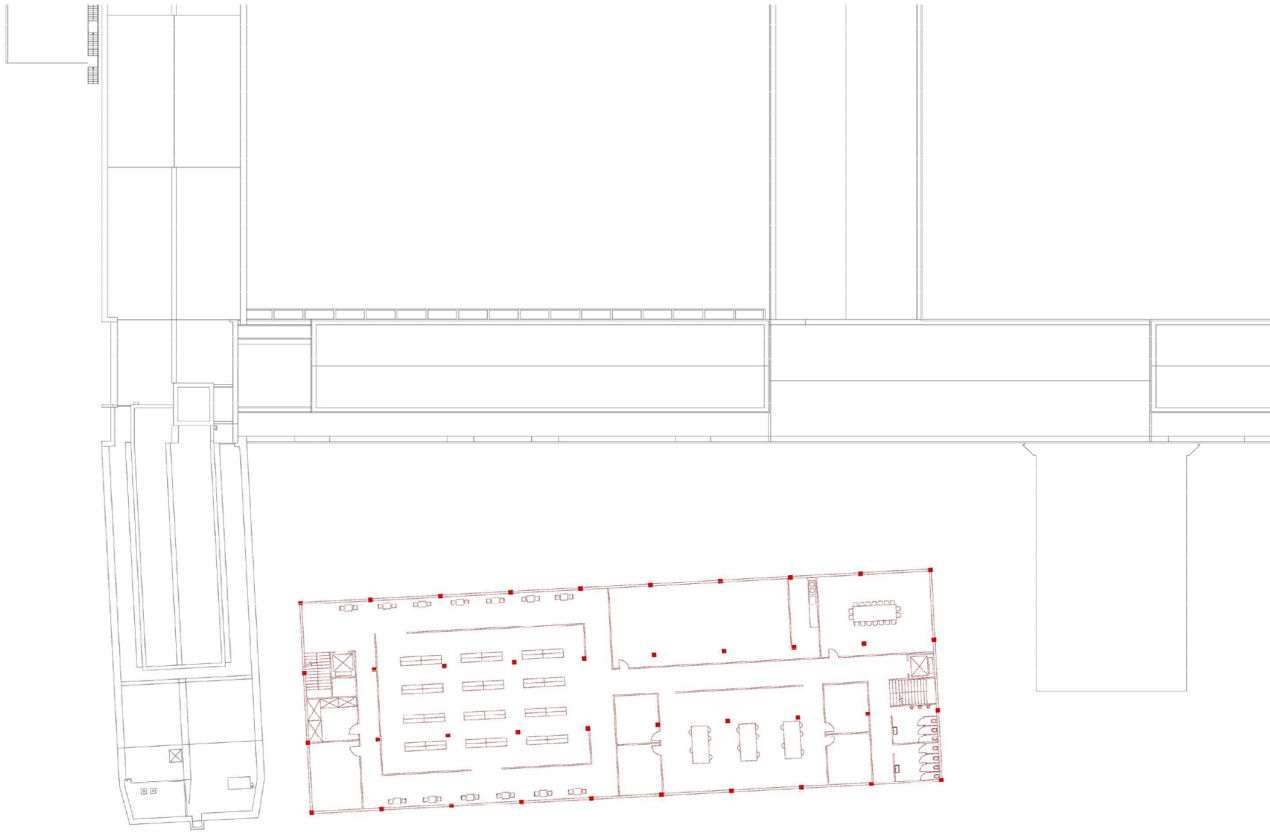


The second floor plan combines the archive space and the office area, and is the most closed and private floor of the entire building

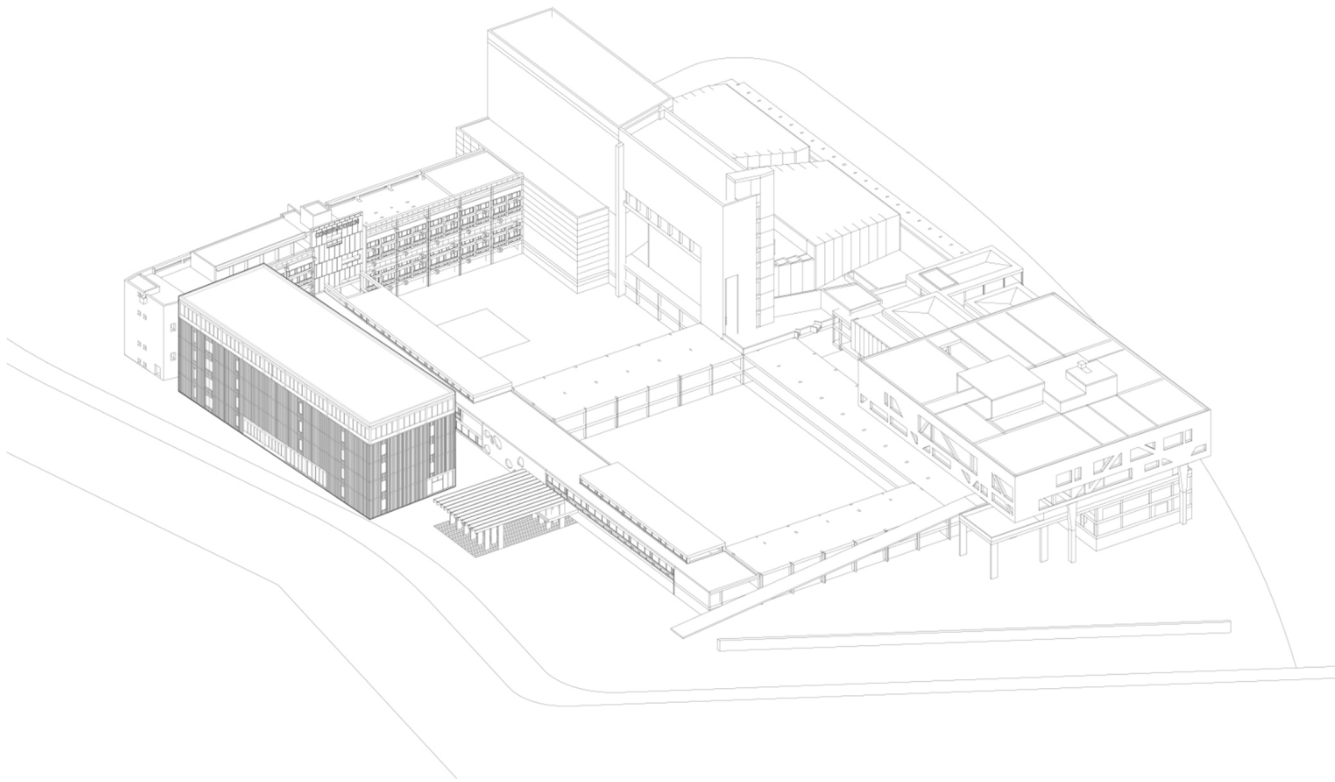
# Third floor



# Fourth floor



The fourth floor plan is mainly public areas. The spatial functions include libraries, reading spaces, and restaurants. The entire building also separates movement and stillness to form a better spatial experience



Part of the conception of the building comes from the team's research on cabinets, which made me realize the comprehensiveness, flexibility and detachability of cabinets. At the same time, it is also an important carrier for storage. The new building stands next to De Singel like an industrial cabinet as an archive space.





# Perspective

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