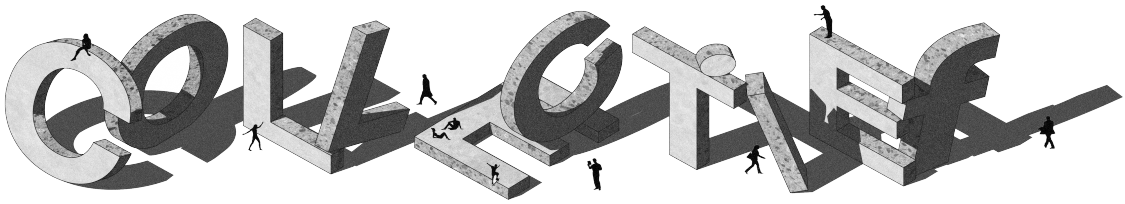
PUBLIC BUILDING

design journal



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Graduation Studio
"The Vertical Campus"

This booklet shows the development and design process of an educational faculty in the central station district of The Hague.

The content of this booklet is formed during the academic year of 2023-2024 during the Public Building Graduation Studio at The University of Technology in Delft.

The first chapter includes the graduation plan and research plan, which is followed by the research-by-design journal.

Floyd Jansen
5715458

COLLECTIEF

DECONSTRUCT REFINE RECONSTRUCT

The connection between my design and the specific studio topic of "The Vertical Campus" revolves around questioning the conventional approach to educational spaces in order to uncover the building's transformative potential as a solution to the ambition of densification. Unlike the monolithic architecture examples that are common today, my interpretation of the "Public Hub of the Future in The Hague" focuses on creating a multidimensional space that encourages exploration on architectural reconstruction.

The municipality of The Hague intends to continue densifying the Central Station District in spite of a saturated urban environment. The municipality suggests a method which calls for the construction of additional high-rise buildings, that would require the demolition and removal of existing ones. This strategy presents important questions, especially in light of the Netherlands present vacancy issues. Although vertical expansion is intended to accommodate more businesses and residents, there is a chance that this tactic will worsen already-existing issues with underutilized space and fail to address the fundamental need for a more cohesive urban environment.

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Personal information	
Name	Floyd Jansen
Student number	5715458

Studio		
Name / Theme	Public Building: Vertical Campus	
Main mentor	Paul Kuitenbrouwer	Project Design
Second mentor	Piero Medici	Technical Building Design
Third mentor	Gosia Golabek	Theory & Delineation
Argumentation of choice of the studio	The public building studio is set-up properly, but still gives room for a student's own interpretation. A public building plays a big part in the functionality of its context and is therefore influential to the built environment. It is a place of gathering and discovery which gives room to the architect to design such an important place.	

Graduation project	
Title of the graduation project	Collectief
Goal	
Location:	The Hague: Central Station District
The posed problem,	With the highest concentration of tall buildings in the city, The Hague's Central Station District is the political centre of the Netherlands. At the moment, the Central Station district's high-rises are mostly introverted structures. These buildings, which are more intended to be solitary features within the landscape, lack the sense of community and user interaction. Rather, they add to the separated urban fabric. The district's large infrastructure is one of its most defining characteristics. Being a transit hub, the area is largely defined by its streets and alleyways, which are intended to be routes for movement rather than places for stay. Because of this design ethos, there aren't many lively public outdoor spaces where people can congregate, mingle, or interact with their surroundings. Driven by functional needs, the buildings fulfill distinct and sometimes isolated functions, creating a district where isolated functions take precedence over integrated urban experiences.

	The Hague municipality intends to continue densifying the Central Station District in spite of these obstacles. The suggested remedy calls for the construction of additional high-rise buildings, which would require the demolition and removal of existing ones. This strategy presents important questions, especially in light of the city's present vacancy issues. Although vertical expansion is intended to accommodate more businesses and residents, there is a chance that this tactic will exacerbate already-existing issues with underutilized space and fail to address the fundamental need for a more cohesive urban environment. In contrary, the Central Station District has a lot of promise. It has many existing buildings and unique characteristics that, with the right approach, could make it into a more vibrant and integrated urban area. Reconstructing and enhancing the current built environment could be the focus of a more sustainable strategy as opposed to emphasising demolition and new construction. The district has the potential to develop into a more cohesive and dynamic urban centre through the improvement of public spaces, the promotion of mixed-use developments, and the encouragement of architectural designs that promote social interaction. A balanced approach that values the current structures while carefully incorporating new developments is needed to address the issues at hand. From a transit-oriented area to a vibrant, connected urban community, the Central Station District can be improved by placing an emphasis on connectivity, usability, and aesthetic appeal.
research questions and	**MAIN QUESTION** How can the reconstruction of a vacant building be optimized to both address urban densification, enhance the functionality and resilience (longevity) of the built environment? **SUB QUESTION** How does this reconstruction lead to new campus typologies in a dense urban environment?
design assignment in which these result.	The research goal is to develop a reconstruction strategy for an existing building in the Central Station District of the Hague to create a new campus building and stimulate sustainable urban development. This strategy should create exciting and inviting spaces and enhance the unique characteristics of an existing building. By employing reconstruction as a visual language, the project aims to transform these structures into dynamic environments. The proposal seeks to attract a diverse range of users, facilitating interaction and community engagement. Through thoughtful integration of existing and new elements, the project will demonstrate how adaptive reuse can address urban densification, using vacancy as a resource. This approach will improve sustainable urban development and ultimately transform existing structures into vibrant hubs of activity and connection.

Method description

This study will focus on reconstruction design approaches to address the use of vacancy during the urban densification in The Hague's central station district. The following methods will be used to completely develop a proposal.
The process starts by reviewing the academic literature and case studies on urban planning, the coexistence of public and private spaces, transformative design, and high-density situations. This phase will lay the foundation to understand fundamental ideas, recommended procedures, and probable difficulties.

The literature review will be followed up by a site analysis to fully understand the district's physical and socioeconomic aspects. This will involve an examination of existing reconstruction design approaches, methods used in these reconstructions or transformations alongside dealing with required program. To add useful insights and find adaptable strategies, transformative designs from comparable metropolitan areas will be compared.

Addition to the site analysis, architectural projects are visited which are similar to the case of the public building studio. These projects will be assessed to learn about different transformative design strategies which incorporate a variety of program. Findings will be collected and filtered to be able to use this information during the design phase as architectural references.

Based on the collected data, real-life or digital prototypes and design suggestions based will be created to show potential approaches to transformative design that balance public and private functions. The research will be concluded by summarizing the research's findings and suggestions for urban design approaches to successfully incorporate the use of vacancy during urban densification in The Hague's central station area, which will also show potential directions for additional studies.

Literature and general practical references

The academic literature review will mostly be focused on how spaces are conceived by the users. Alongside this academic literature, design projects will be used as references, where methods will be chosen to apply in the final proposal. Studio's like EPFL (n.d.) are a huge source of inspiration by using simple methods of reconstruction with their bridge made out of re-used concrete slabs. Lendager Group, which is one of the leaders in sustainable urban development, completes buildings which are reconstructed from existing building parts, like their project Resource Rows (2020).

Van Nes & Yamu (2021) call the degree of adjacency and permeability from buildings to public space, "constitutedness". They state that if all entrances of buildings in a street are not accessible from the street directly, this whole street is "unconstituted". This level of constitutedness comes from the spatial relationship between private and public space and influences the vitality of street life (Nes and López, 2007). Thresholds should not be seen as a burden.

The threshold can also be a space of its own and does not have to be a border which is defined in a certain way. Grosz (2001) describes this space as 'in-between', which lacks some sort of form and identity but can facilitate being, house multiple identities and is mysterious on itself. This definition is inspired by the vision of architect Aldo van Eyck who described the threshold as 'the meeting place' (Teyssot, 1970). In addition to that, Herman Hertzberger used the threshold as an extension of the private space into the public realm (Mixon, (2006).

Projects of architects like Van Eyck and Hertzberger will be used during this research to discover the identity of these type of 'in-between spaces' within the Public Building Studio to develop a more welcoming and inviting campus building.

Real Space. MIT Press. (p. 91)

École Polytechnique Fédérale de Lausanne (EFPL). (n.d.). RE:CRETE. Retrieved May 5, 2024, from https://www.epfl.ch/schools/enac/fr/recrete-2/

Lendager Group. (2020). Resource Rows. Retrieved May 10, 2024, from https://lendager.com/project/resource-rows/

Mixon, J. C. S. (2006). Thresholds. TRACE: Tennessee Research and Creative Exchange. https://trace.tennessee.edu/utk_gradthes/4459

Strauven, F. (1998). Aldo van Eyck: The Shape of Relativity. (p. 459-460)

Teyssot, G. (1970). Aldo van Eyck and the Rise of an Ethnographic

Paradigm in the 1960s. Joelho, 2. https://doi.org/10.14195/1647-8681_2_5

Van Nes, A., & López, M. J. (2007). MICRO SCALE SPATIAL

RELATIONSHIPS IN URBAN STUDIES: the relationship between private and public space and its impact on street life. Proceedings of the 6th Space Syntax Symposium. http://resolver.tudelft.nl/uuid:9356f6ae-24da-4108-9ef8-51dfca2d2ea2

Van Nes, A., & Yamu, C. (2021). Introduction to space Syntax in urban Studies. In Springer eBooks. https://doi.org/10.1007/978-3-030-59140-3

Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

The research tries to find methods to balance urban development and densification with the use of vacancy. This is essential in architectural design as a whole to stimulate more sustainable urban development while embracing existing structure and characteristics. Especially coming from a campus like TU Delft where faculties exist as separate identities instead of one society.
When designing public buildings, it is crucial to comprehend how different spaces are used, both privately and publicly. By maximizing program, the site analysis and research results enhance an existing building which nowadays functions as a monolith within the district.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

The research tackles the problem of combining urban densification with sustainable design, which results in a smaller carbon footprint and increases the longevity of existing structures. Thereupon, this research will encourage inclusive design that takes into account a range of social needs and preferences in public spaces by balancing a variety of program.
Its conclusion can provide useful information for architects, designers, and urban planners who are tackling difficult spatial problems in high-density urban settings.
The methodology offers a template for examining spatial harmony in various urban settings, as well as an organized approach that can be used in similar studies. Potential directions for further research in urban design approaches is given as a concept on its own, guiding future investigations into creating balanced hybrid buildings.

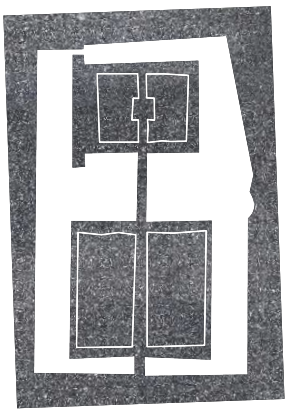
Planning

The majority of the project planning is provided by the studio schedule and will be executed accordingly.
During P3, further detailing of used program and acquired spaces will be explored. The chosen meaning of educational program shall be developed more and applied to the design assignment.

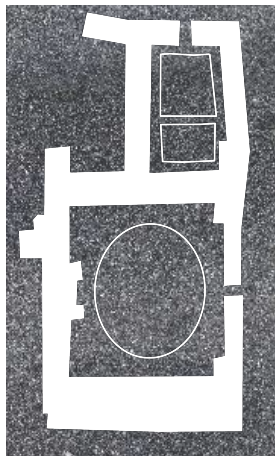
To include the research into the design assignment, literature concerning transformative design within architecture will be assessed and applied into the overall design. This information will be used to further develop the essence of the created spaces and how they will and can be used.

Into P4, the design continues its development towards the more detailed level. Detailing including façade fragments, corner detailing and construction are the result of previous research where reference projects and references can lead to inspire.

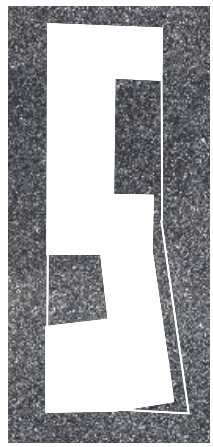
EXCURSION OXFORD TAKEAWAYS



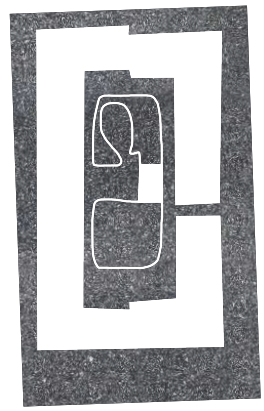
queens



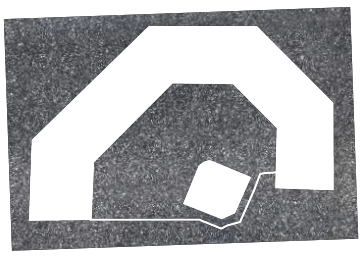
all soul



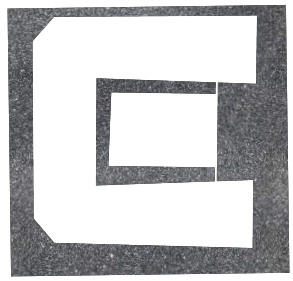
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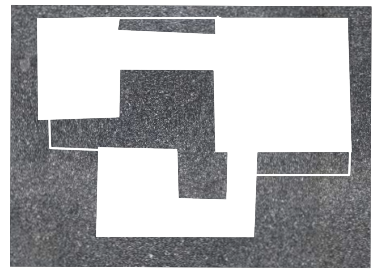
beecroft



florey



garden



st. cross

the forms of the analyzed buildings in Oxford show variations of the familiar shape; the quadrangle

these projects are good examples of how to include outdoor space in building design, whether it's centered like the Queens- and All Souls college or divided in two like the Exeter building

Beecroft shows how to define and use an atrium as space to meet and come together instead of only supply natural light







the Exeter showed how to include clear pathways alongside seating area or more private areas (top)

another interesting method of the Exeter is the way they seperated a seating area from the routing by lowering the floor (middle)

All Souls (bottom) shows a way of creating this threshold for the users by including a wide gap between the buildings

SITE ACCESSIBILITY IN 15MIN

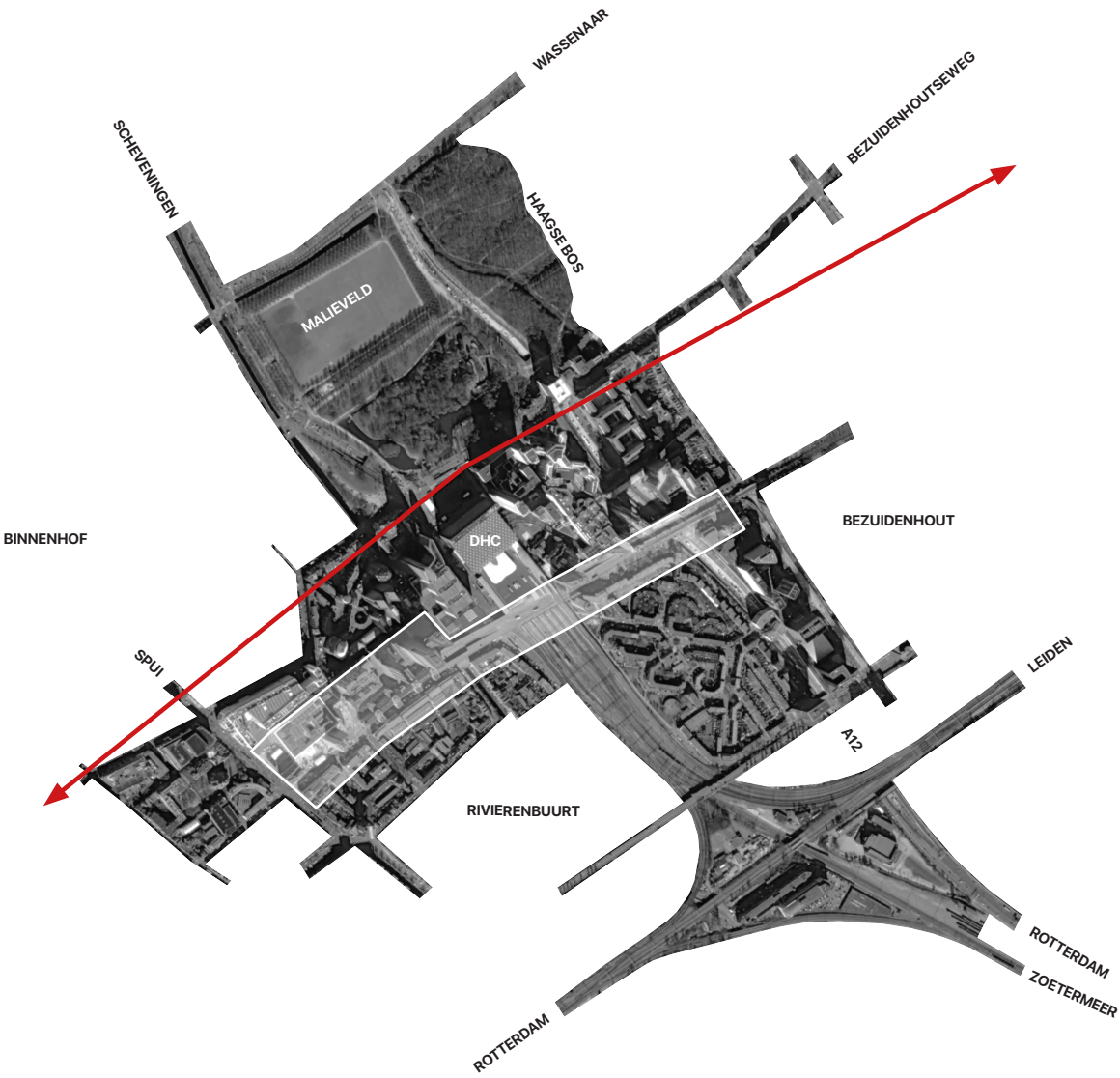


the area which is accessible from small to large; by foot (dark grey), by public transport (light grey), by bike (stripe) and by car (large crosshatch)

the hague shows to be a city of transition where people continue to move by other forms of transportation than train or car

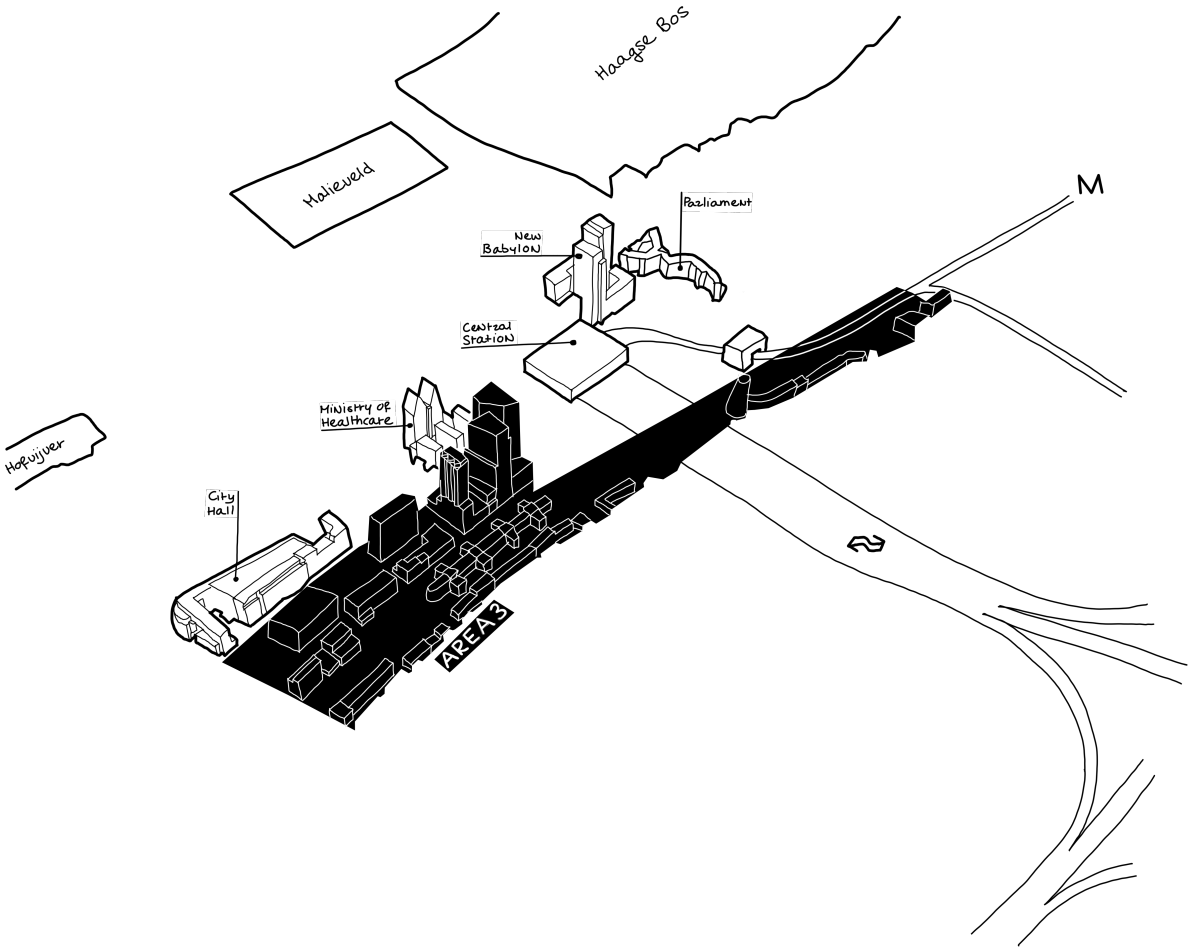
the city is more accessible by foot and bike than by train since the train station is the end of the track

people are better of moving by bike than by tram or foot since biking will offer a straighter line towards the destination

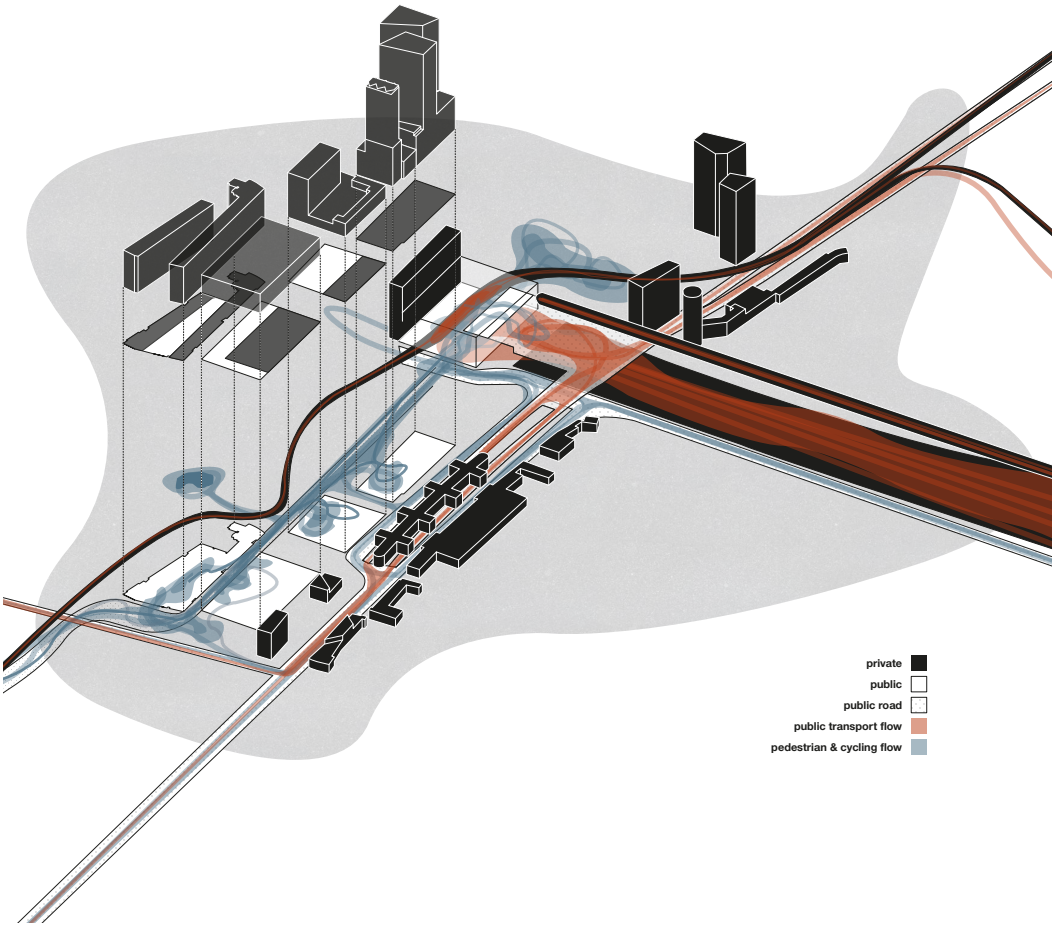


the accessiblity of area 3 “fly-over infrastructure” is clearly charaterized by the bus ramp on the east and west side (red arrow) which flows into the platform of several bus stops

AREA 3 FEATURES



landmarks arround the given area create
an enclosed and functional site



supression caused by the density of the urban fabric get visible in the flows of different forms of transportation

the given district seems to be very functionally layed out and the central station shows to have the stereotypical influence of forcing people to move and not stay

AREA 3 PSYCHOGEOGRAPHICAL SURVEY

to develop a psychogeographical map, we started by collecting data through a survey

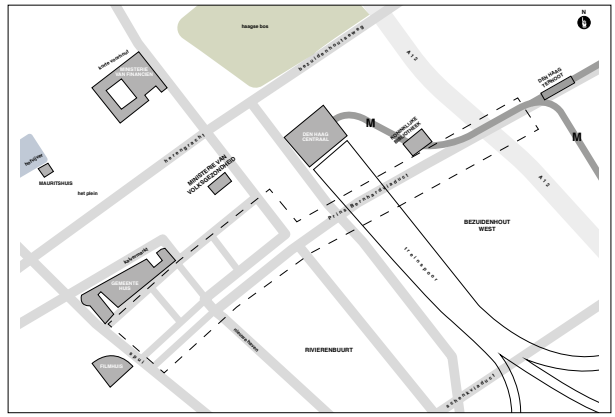
this survey was held by allowing people to draw their interpretation of the central station distric on a map supplied by our group (right)

the pshychogeographical map was in the end filled with the data collected through this survey

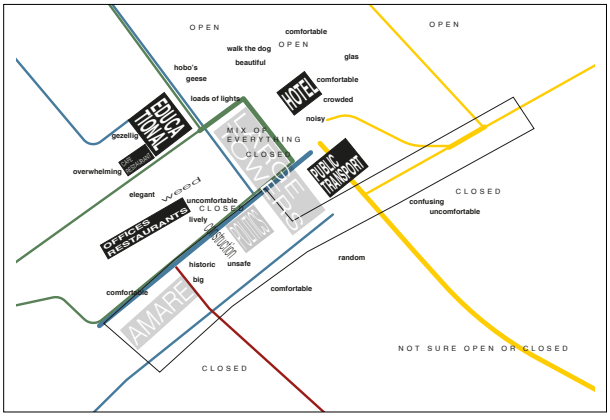
we categorized our data into four groups (bottom) which consisted of working class (top left), students (top right), elderly (bottom right) and architecturalists (bottom left)

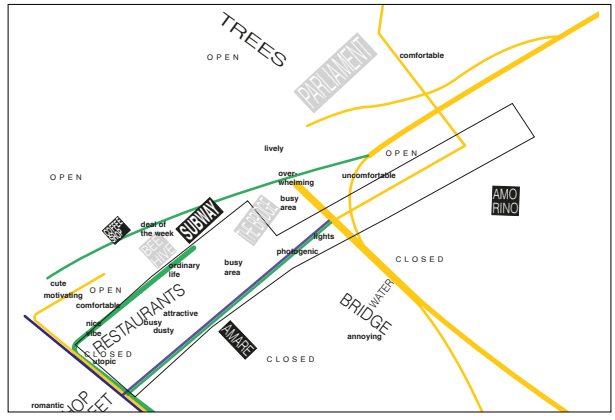
one of the most interesting thing to see is how each group experienced the district in a very functional way

each interviewee had their own commute and few of them could really express themselves or were disorientated

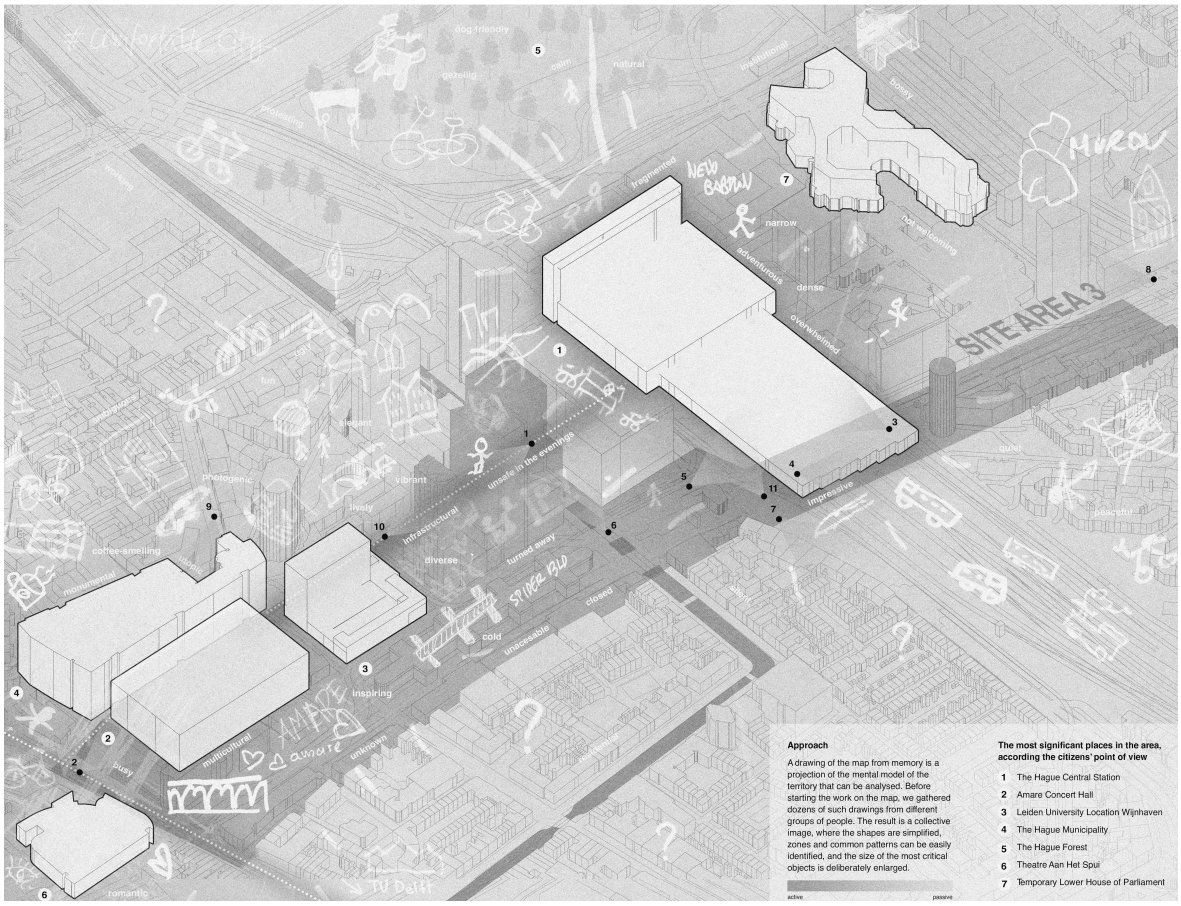


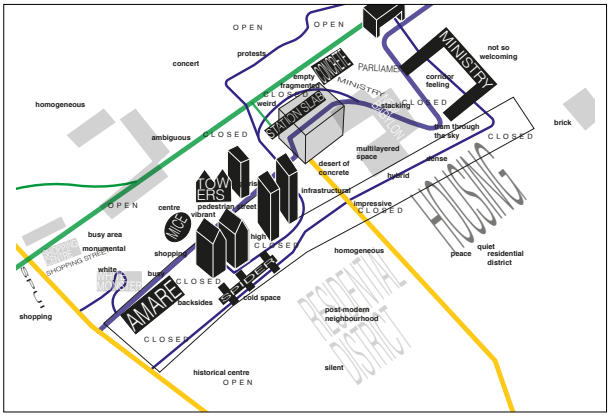
- public transport
- bike
- walking
- car

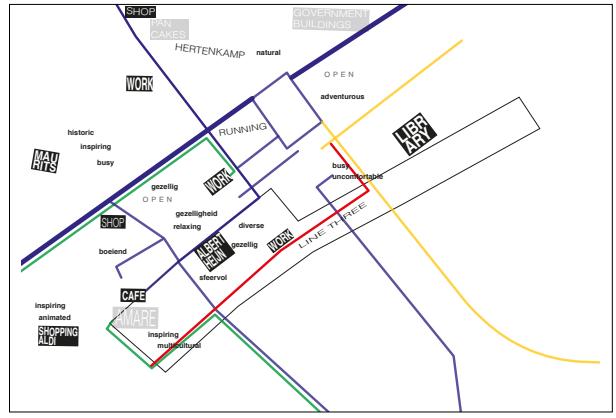




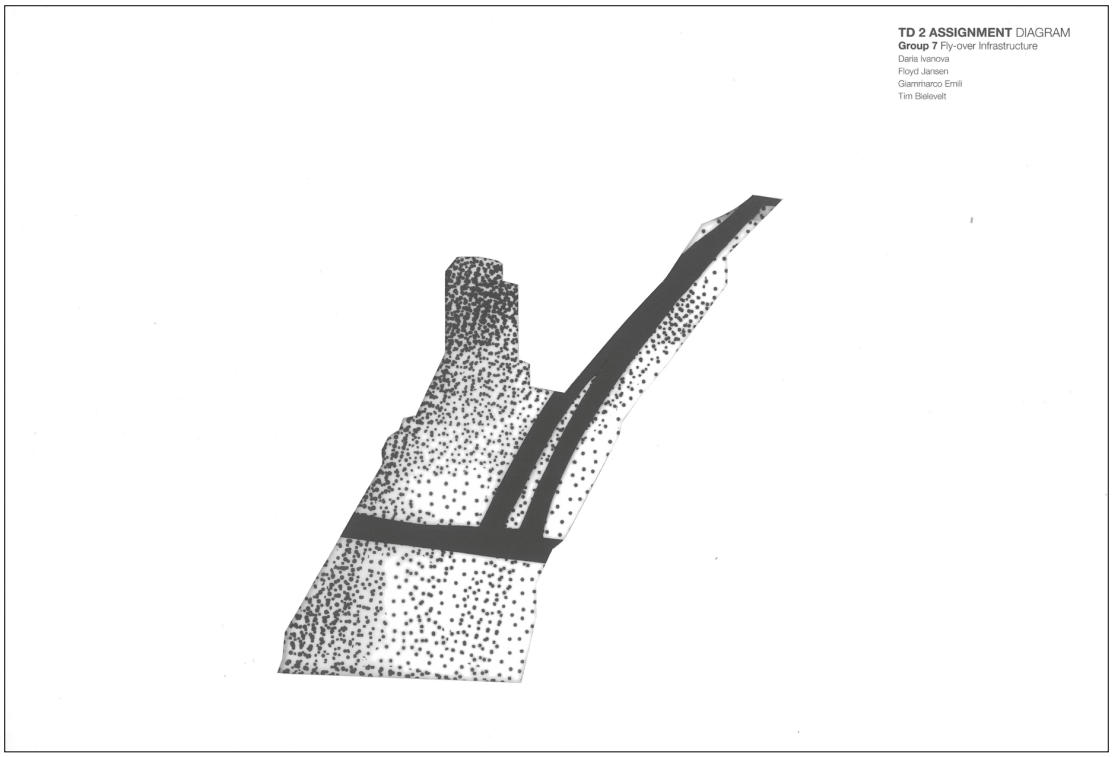
AREA 3 PSYCHOGEOGRAPHICAL MAP







AREA 3 2D DIAGRAM

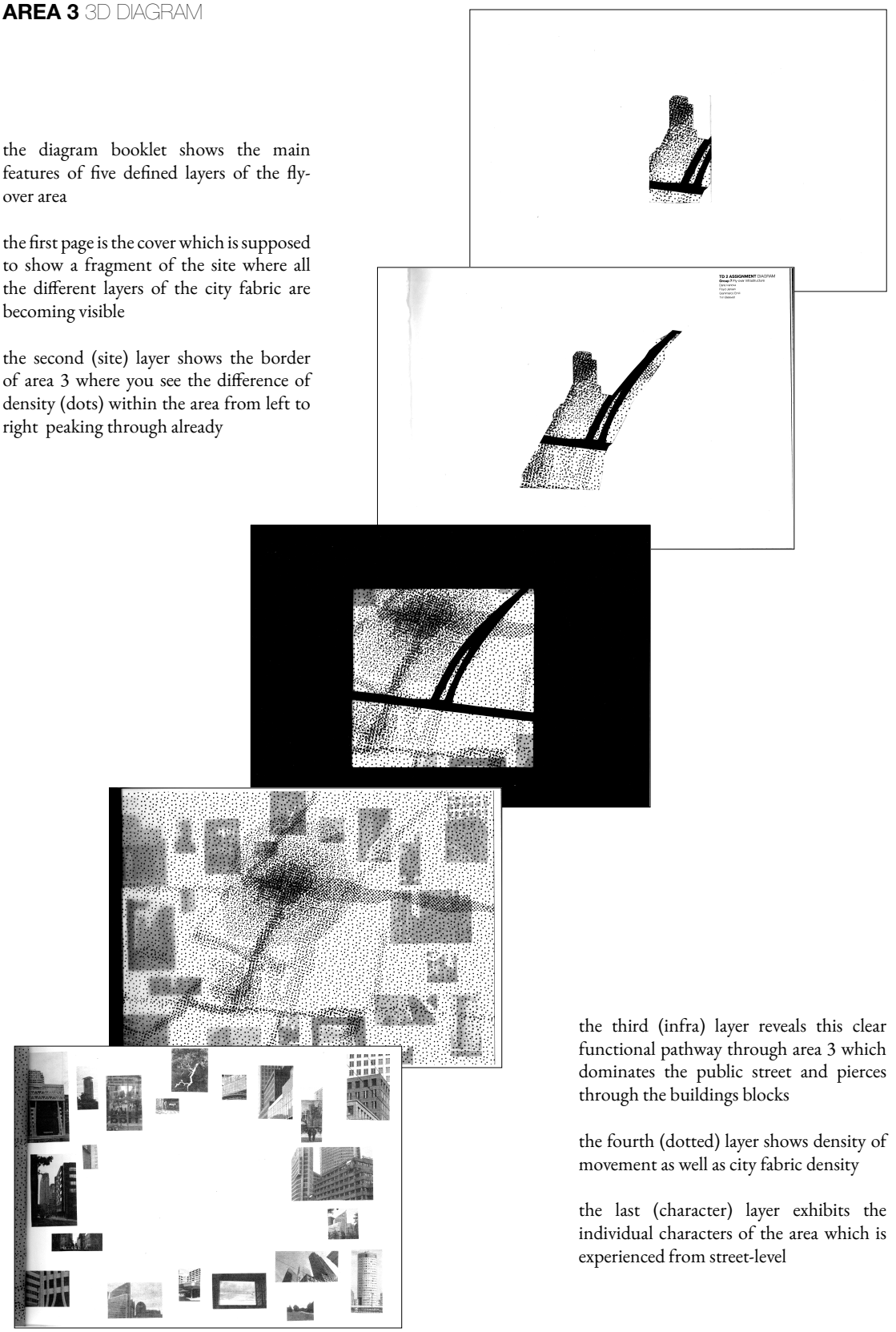


the final product of the 2D diagram assignment is the result of the 3D diagram which is a compressed and layered assemble of multiple layers within the urban fabric of area 3

the diagram booklet shows the main features of five defined layers of the fly-over area

the first page is the cover which is supposed to show a fragment of the site where all the different layers of the city fabric are becoming visible

the second (site) layer shows the border of area 3 where you see the difference of density (dots) within the area from left to right peaking through already

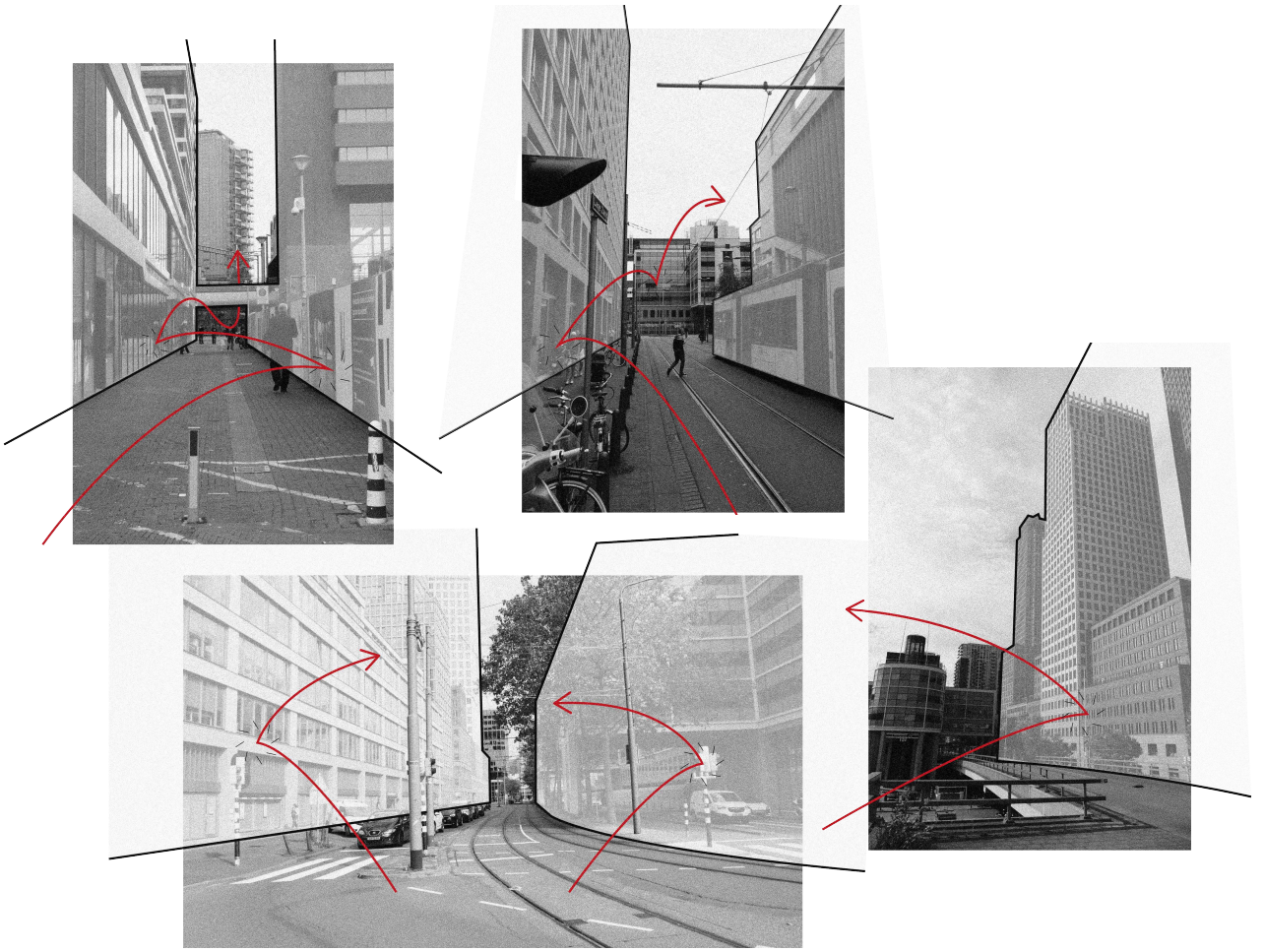


the third (infra) layer reveals this clear functional pathway through area 3 which dominates the public street and pierces through the buildings blocks

the fourth (dotted) layer shows density of movement as well as city fabric density

the last (character) layer exhibits the individual characters of the area which is experienced from street-level

CAPACITY PLAN BOUNDARIES

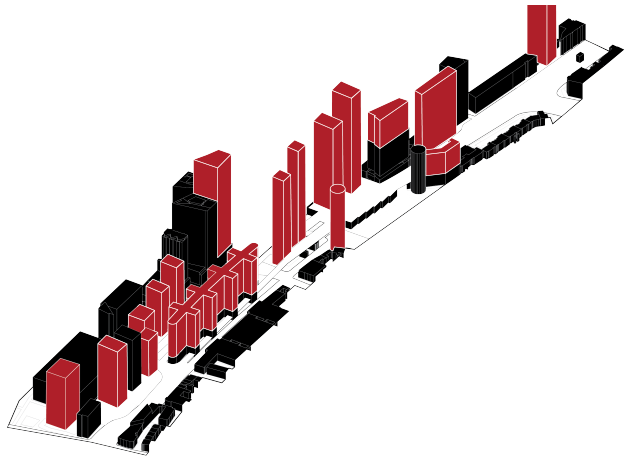


the district around the central station of The Hague is filled with volumes that form static boundaries where the user has to move through

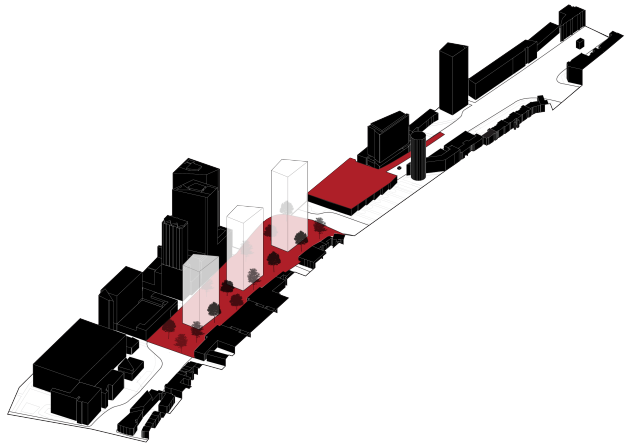
three scenarios are developed to test different outcomes of the capacity plan on the fly-over infrastructure

the first scenario is based on adding volume where this is still possible without interfering too much with the existing structures and using open sites

the scenario shows the capacity that the area can hold which can be spreaded out quite evenly

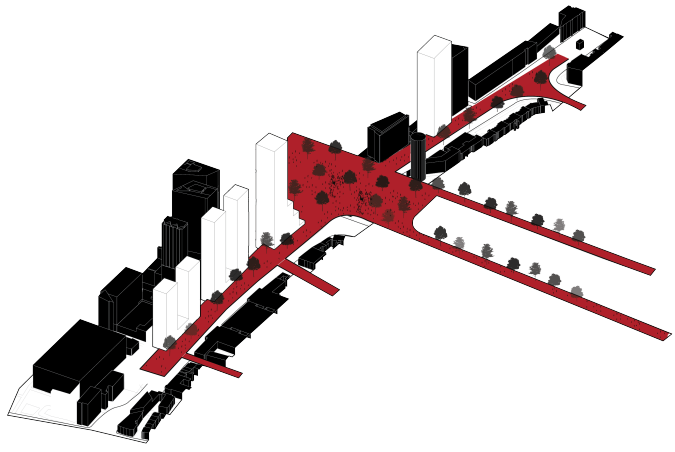


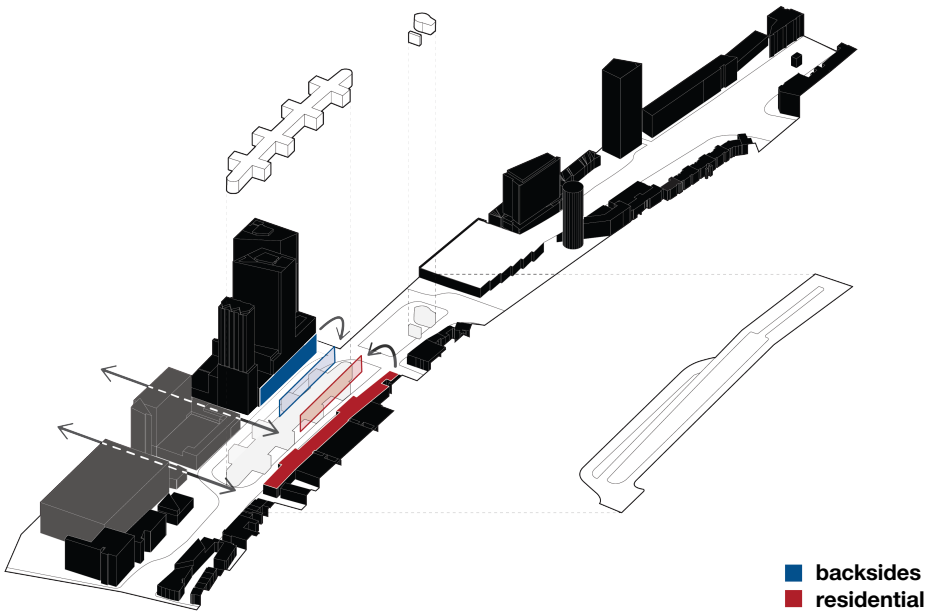
in the second scenario the existing ramp of the fly-over infrastructure is completely removed which allows for new development to take place and gives room for open public places to stay

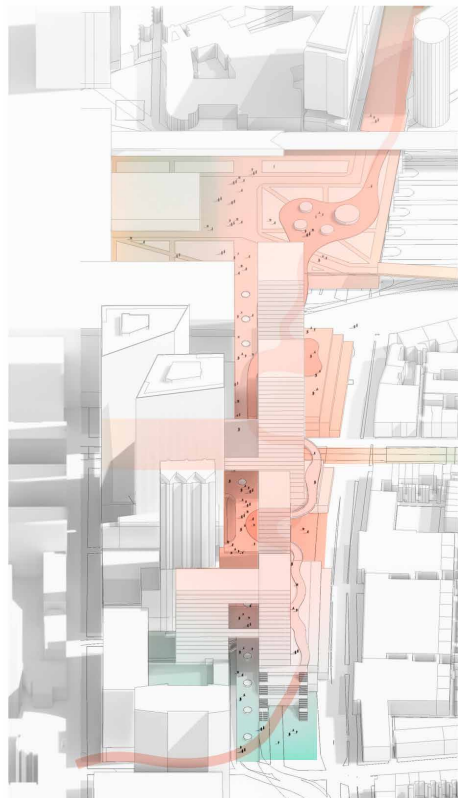


the third scenario takes on the 'fly-over everything' character by adding onto the existing fly-over and extending ramps towards all orientations

this allows for better mobility and gives room for an urban park within the dense urban area





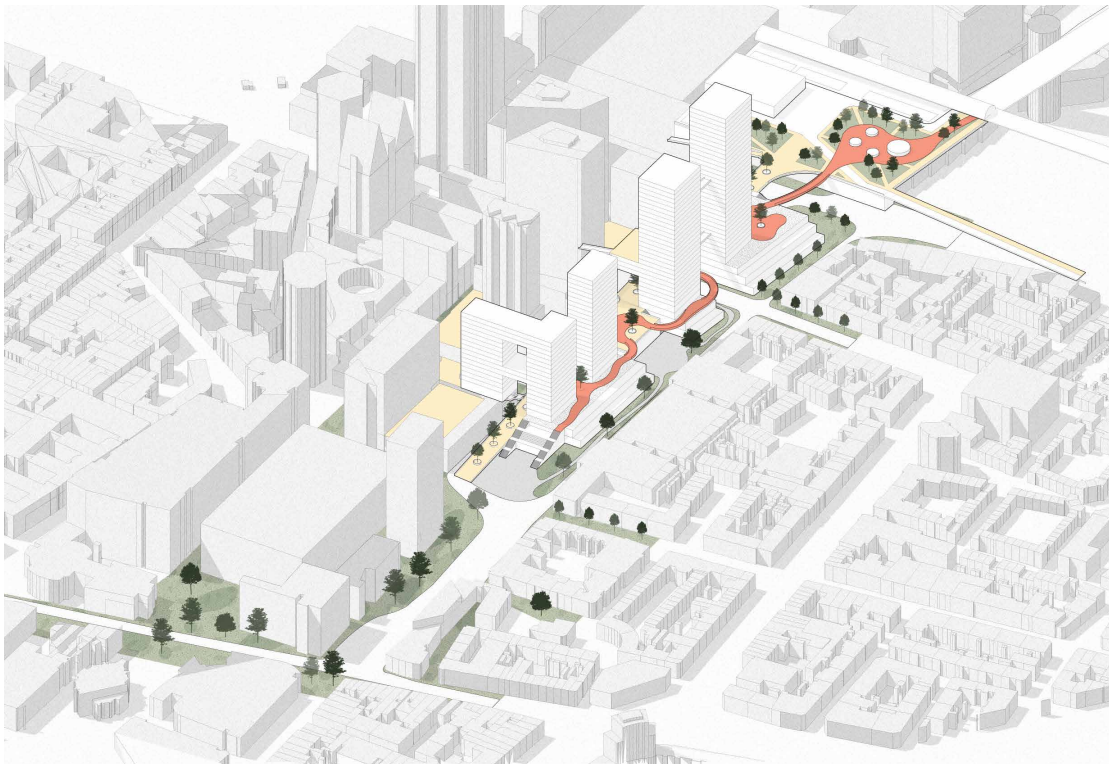


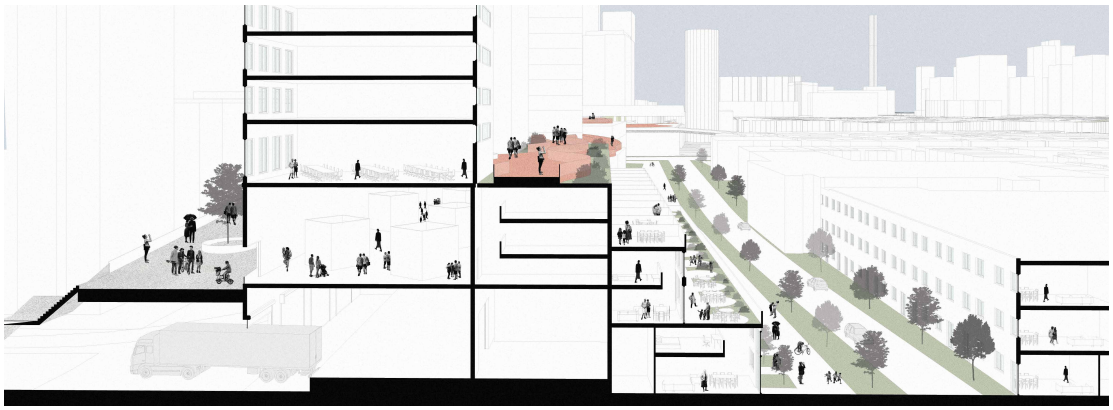
the final capacity plan is formed around the concept (top) of mirroring the backsides of the existing high-rise and the residential facades on the south-side

our intervention penetrates the boundary between Turfmarkt and the fly-over infrastructure

the added volumes are intended to connect to the existing structures through skybridges and ramps

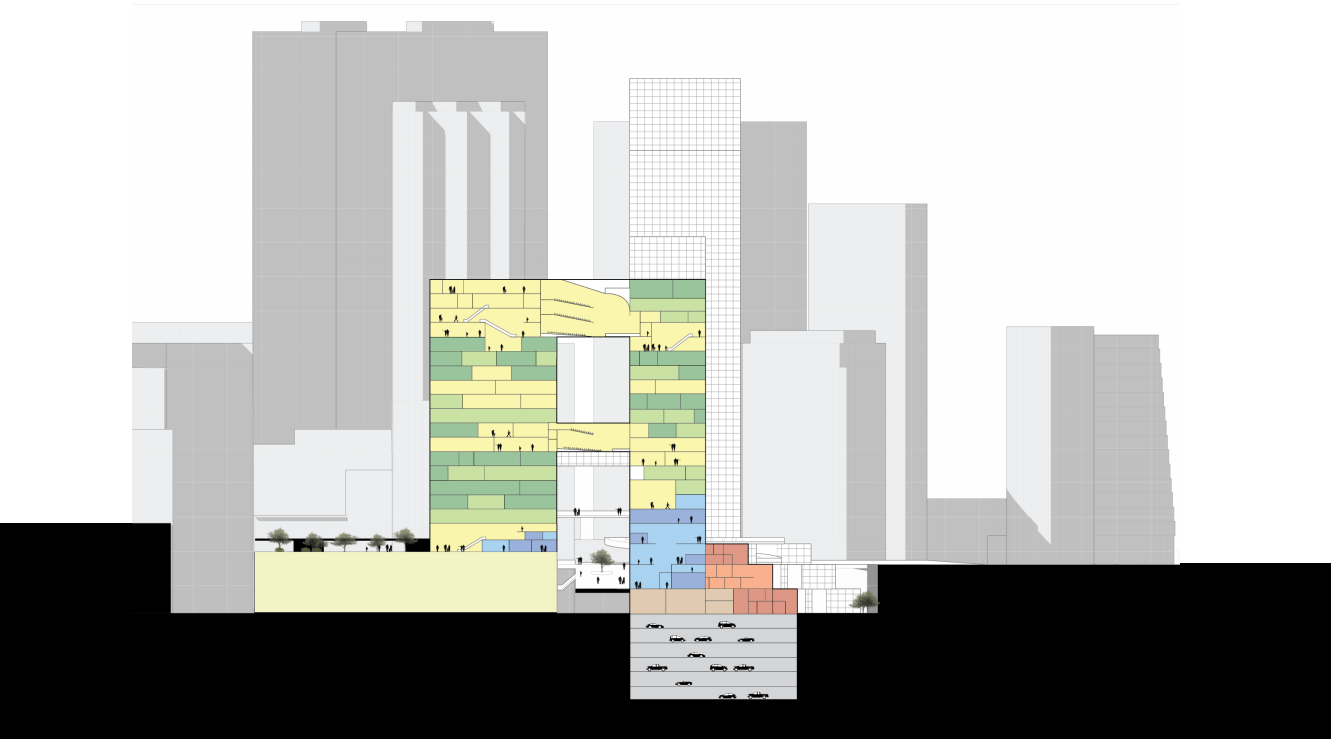
the routing on street level is divided into two streams; the fast (yellow) bike ramp and the slow (peach) pedestrian walk

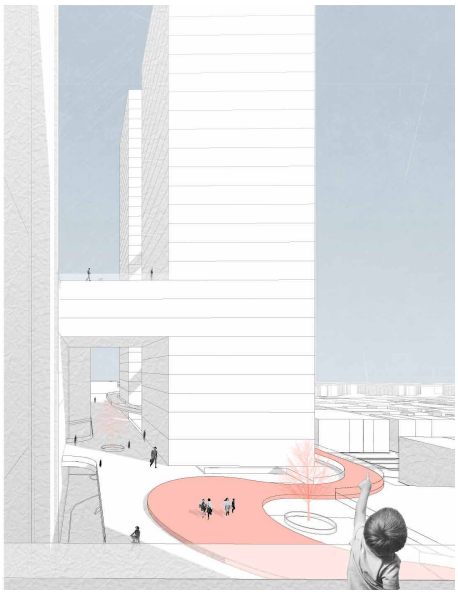




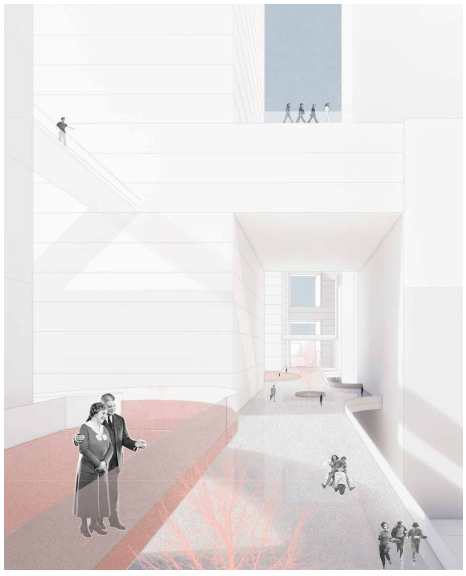
P1













P1 GROUP TAKE-AWAYS



group 1 focuses on an interesting concept of pushing the existing green space from the north to the south of the area

this will allow for more intertwining of places to be instead of keeping the existing (hard) contrast between vegetated and built

GROUP 1

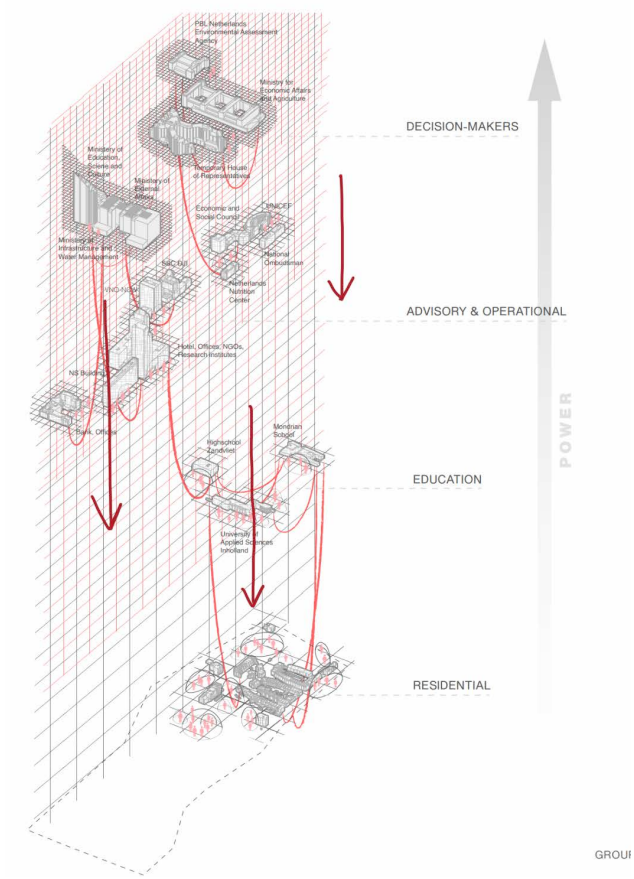


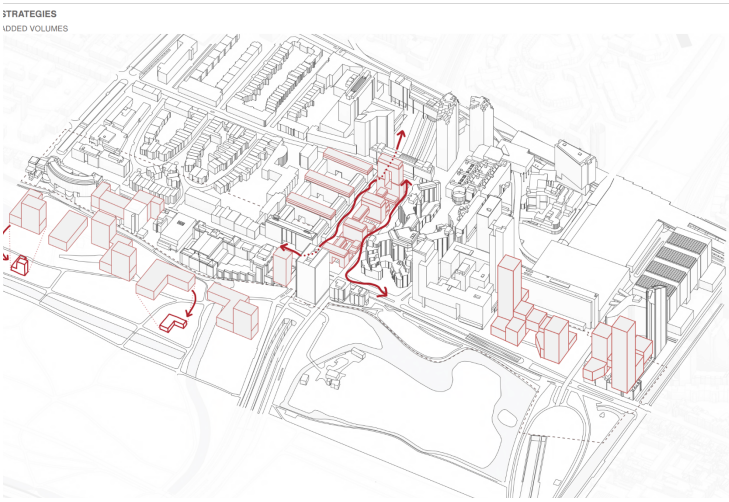
illustration of the reflection of power upon the area of the hague

something that needs to be respected is privacy of governmental functions

having said that this graph shows and even confirms the top-down approach which also is proven to not be flawless

something that needs to be looked further into is to blend members of society without creating a world of compromises

GROUP 2

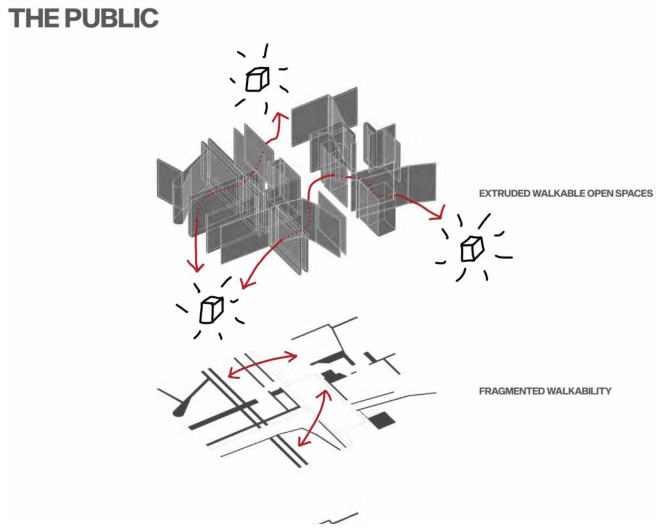


this product lacked different layers of scale which allows for a more approachable design towards the public

the spreading of buildings does not specifically leads to a vibrant area

this intervention moves borders without breaking them

GROUP 2



specific routing in between existing buildings to lead towards a certain destination is something very interesting on the urban scale

it does need tangible destinations to actually make it work

GROUP 5



routing for humans is often misconcieved since we like to take our own routing

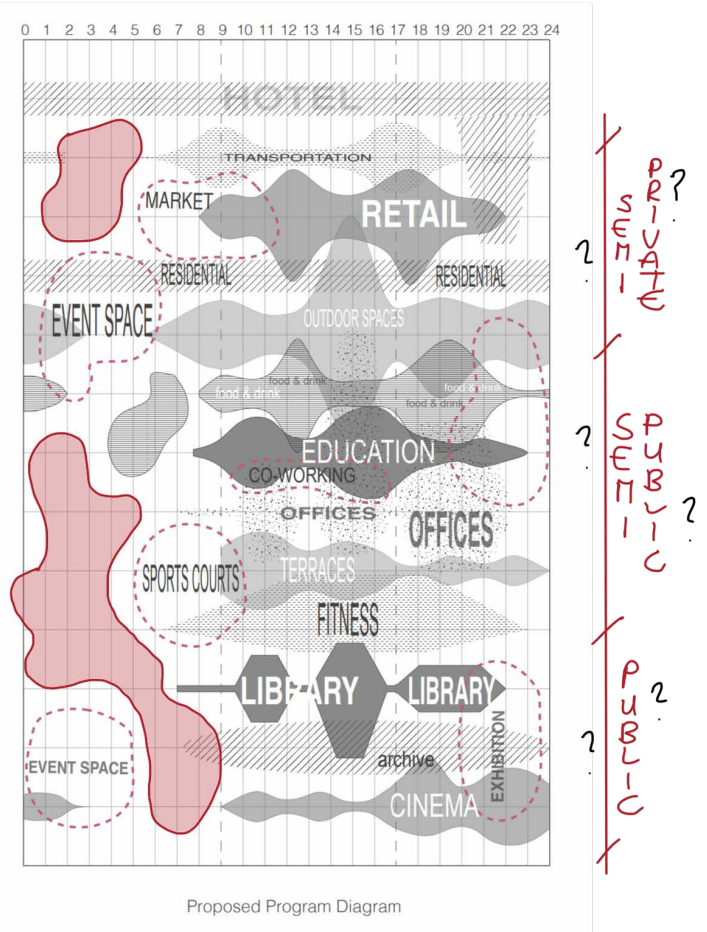
this “forced” pathway does steer towards a specific direction but also should be intertwined more into the urban fabric, mostly more towards the east

GROUP 5

to fill the gaps between non-traffic hours with program, is a smart idea

thething that could be more researched on, is how to include levels of privacy within this graph

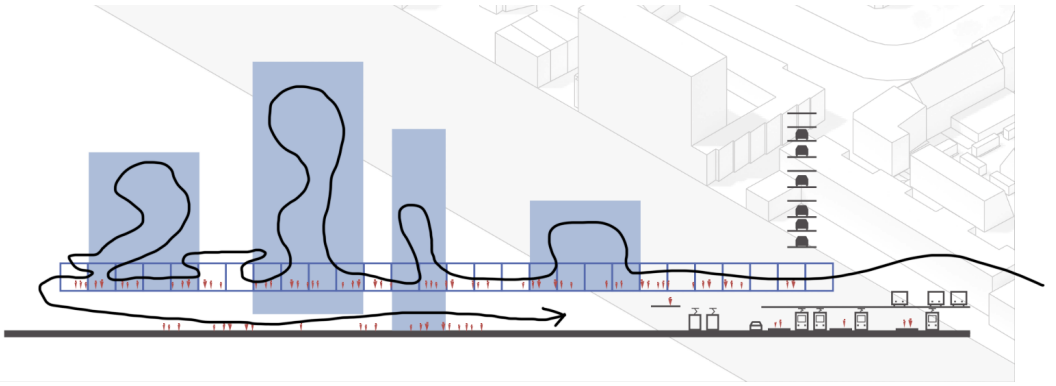
if you transform a certain function into another, it should maybe match in privacy level and also in supply of demand



THEOS GROUP

to offer a horizontal connection in between vertical structures is something more architects should do

this layer of spaces is also exiting for the user and helps with change of direction

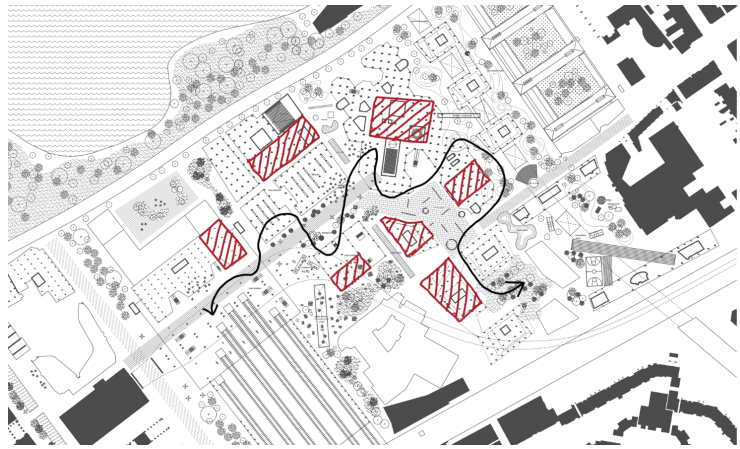


GROUP 6

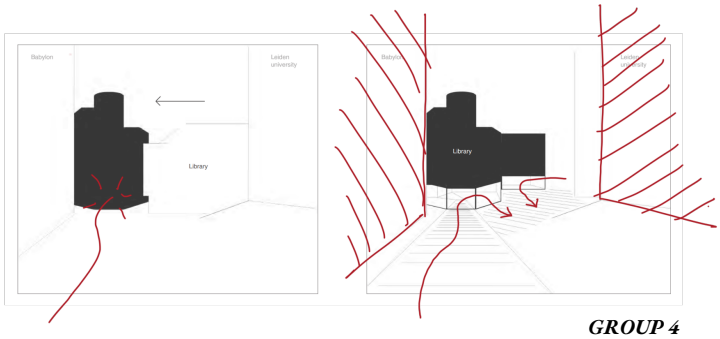
an overall strong concept where all of the plinths become public street

it only misses definition and contrast

public needs private, darkness needs light, openess needs closeness



GROUP 4

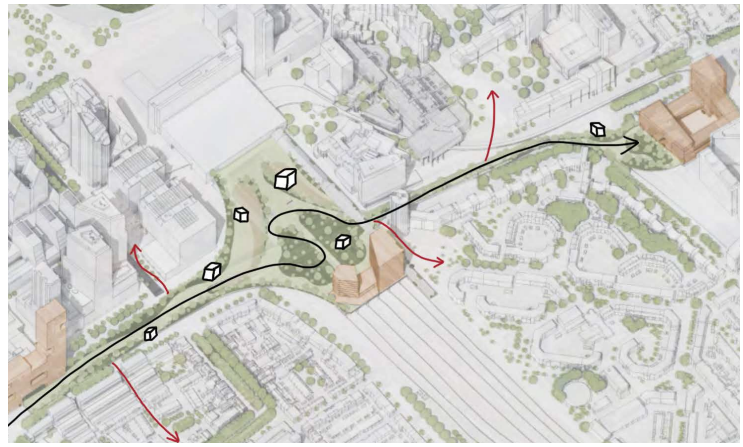


GROUP 4

to take away a plinth which normally blocks the movement and view of an user, is something “simple” which creates the wanted porosity

long routing requires small scale elements or buildings

the openess again also needs closeness, open space without scale becomes untangible

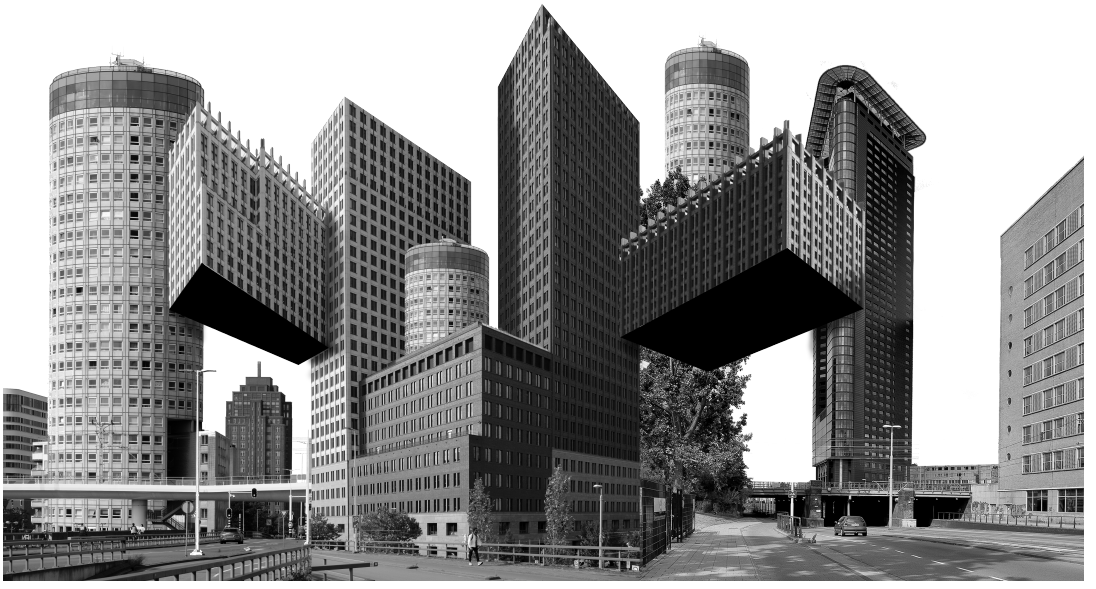


GROUP 8

CONCEPT RETHINKING HIGH-RISE



current high-rise typologies in The Hague which are isolated from one another and from street-level



how high-rise maybe should be? connected and closer to street-level



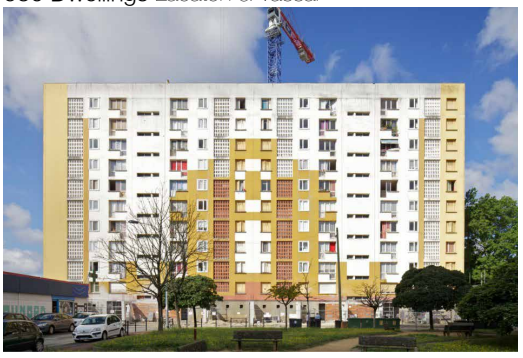






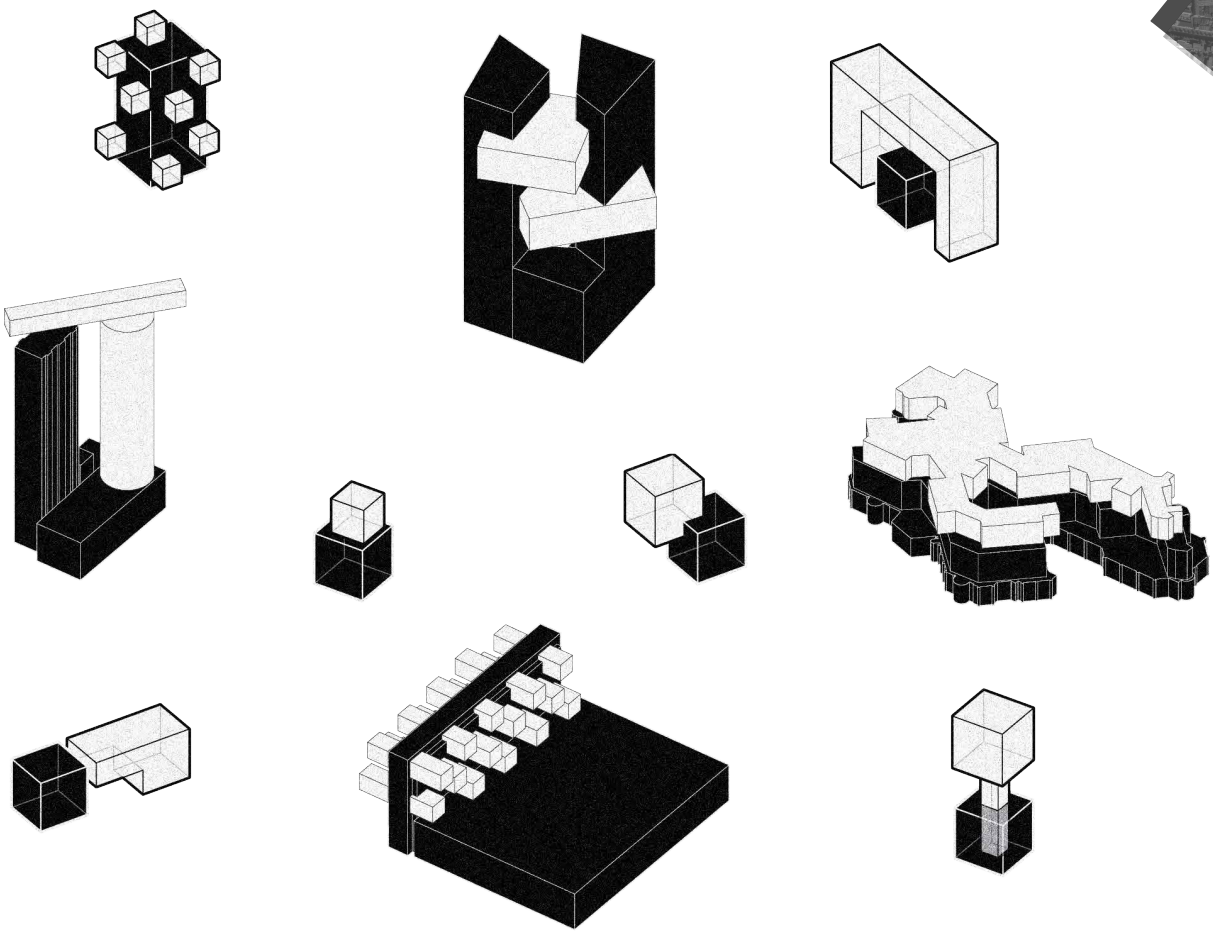
the building approach should be changed into more transformation including existing structures

530 Dwellings Lacaton & Vassal

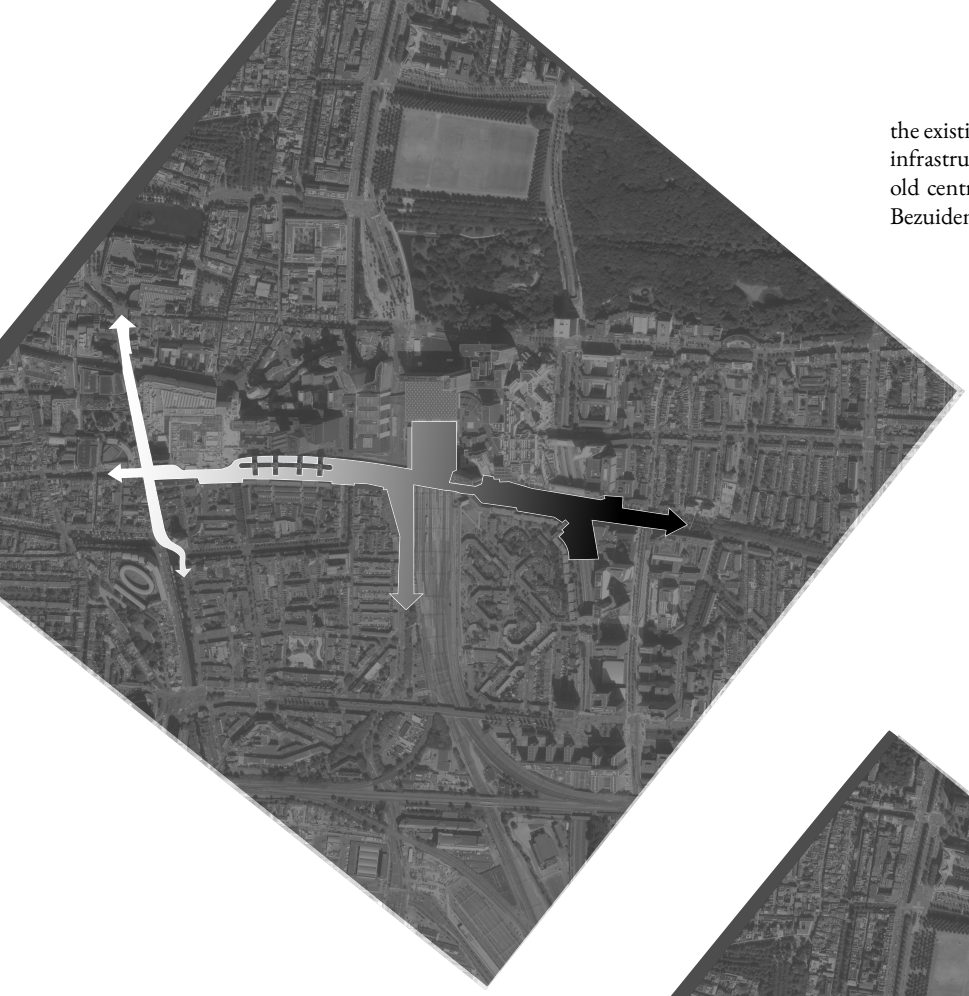




CONCEPT USE OF SYMBIOSIS



different forms of symbiosis; parasitism, commensalism and mutualism, can help to sculpt new typologies



the existing flows within the fly-over infrastructure are more towards the old centre (white) and less towards Bezuidenhout (black)



the intervention should focus on the neglected (east) side of the area to form more unity with the whole district

CONCEPT SCULPTING THE EXISTING







the use of symbiosis brings the danger of separating the new and the existing even more

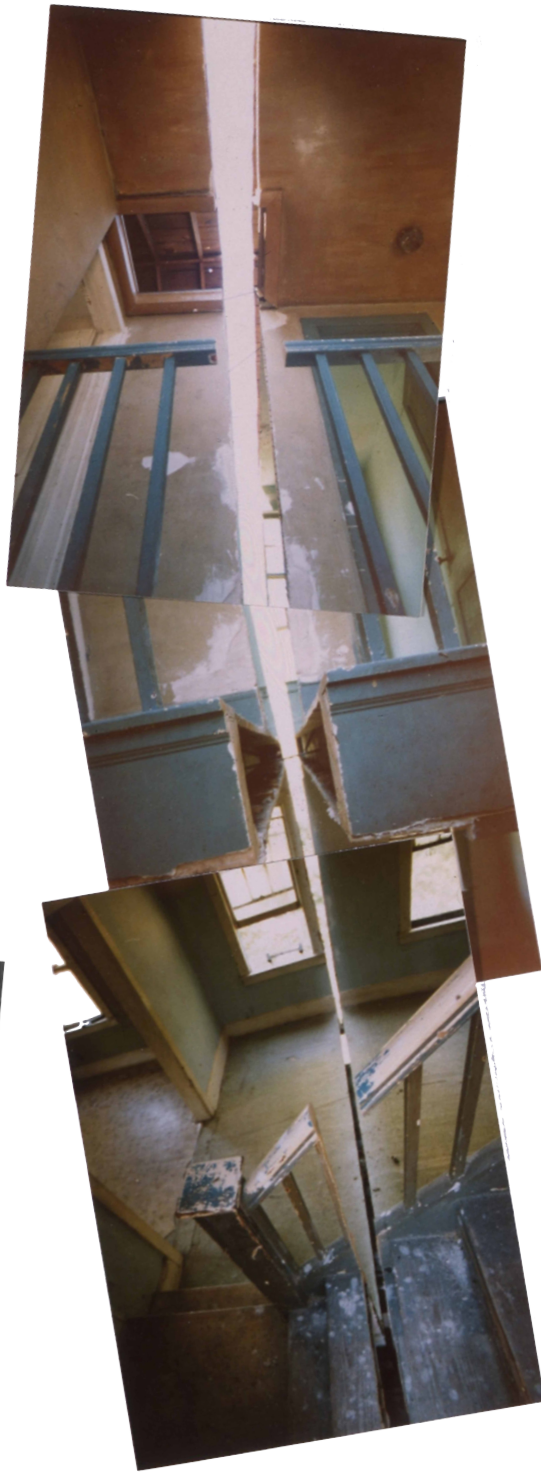
to enhance the relationship between new and existing, the existing should be transformed or sculpted to match its new identity

a huge source of inspiration is the work of Gordon Matta-Clark

to create his sculptures, he breaks out voids into existing structures which completely transform the identity of the used spaces

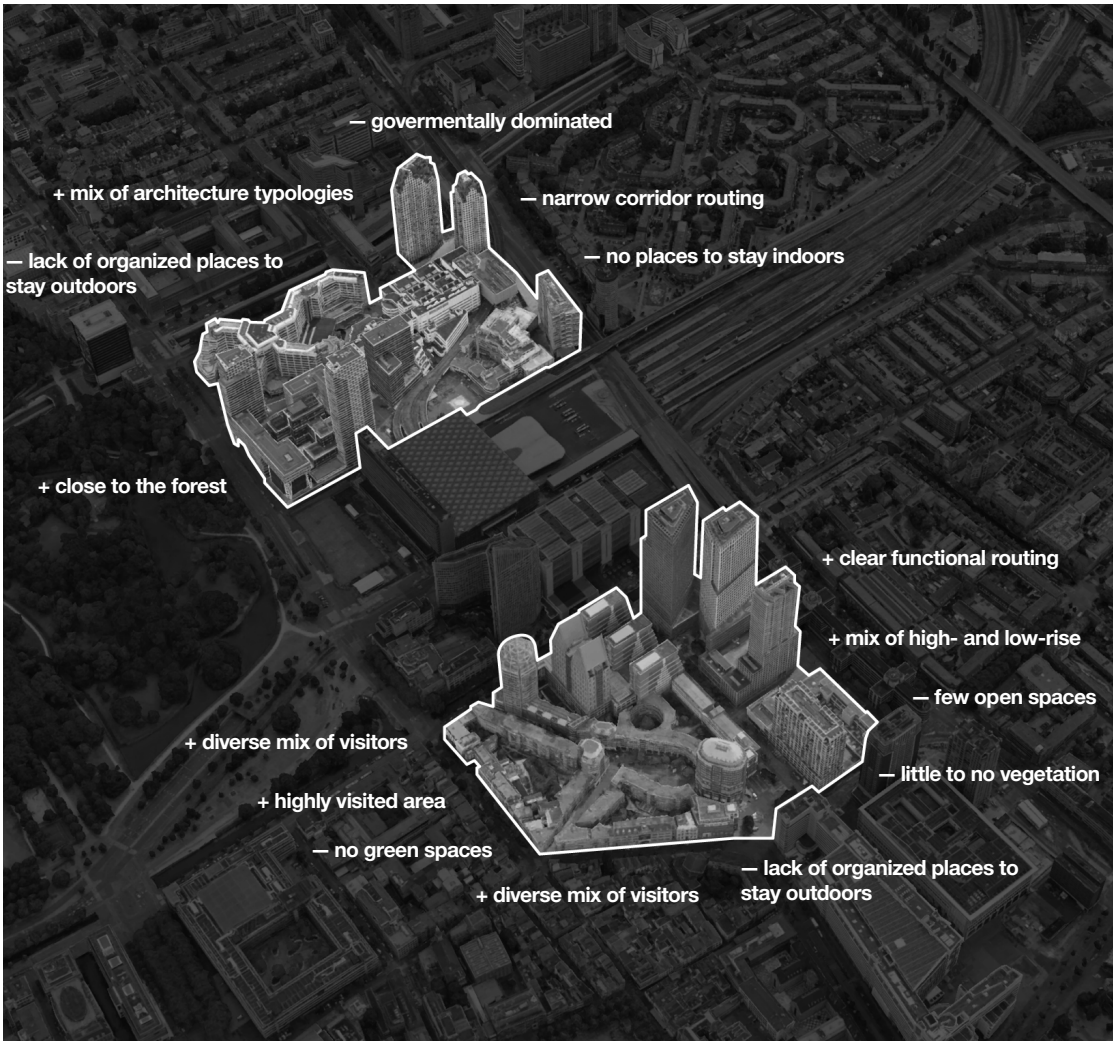








CONCEPT SITE ASSIGNMENT

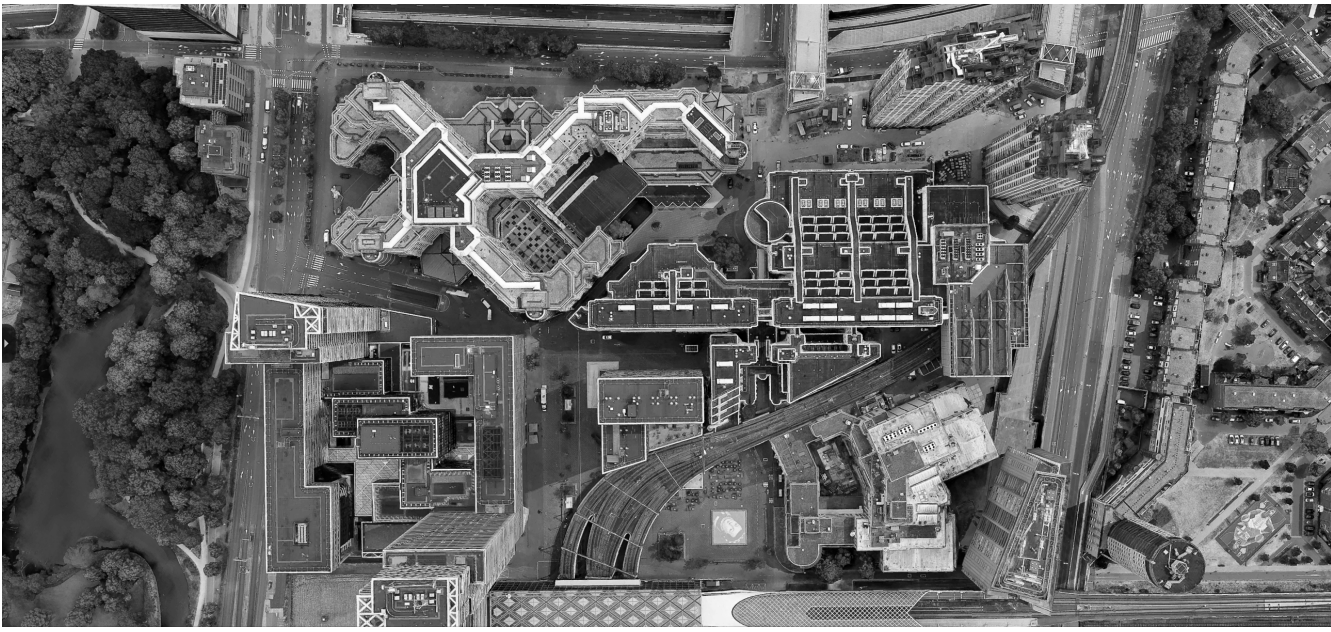


to use existing structures, there must be structures available to re-use

the two most dense areas within the districts are highlighted

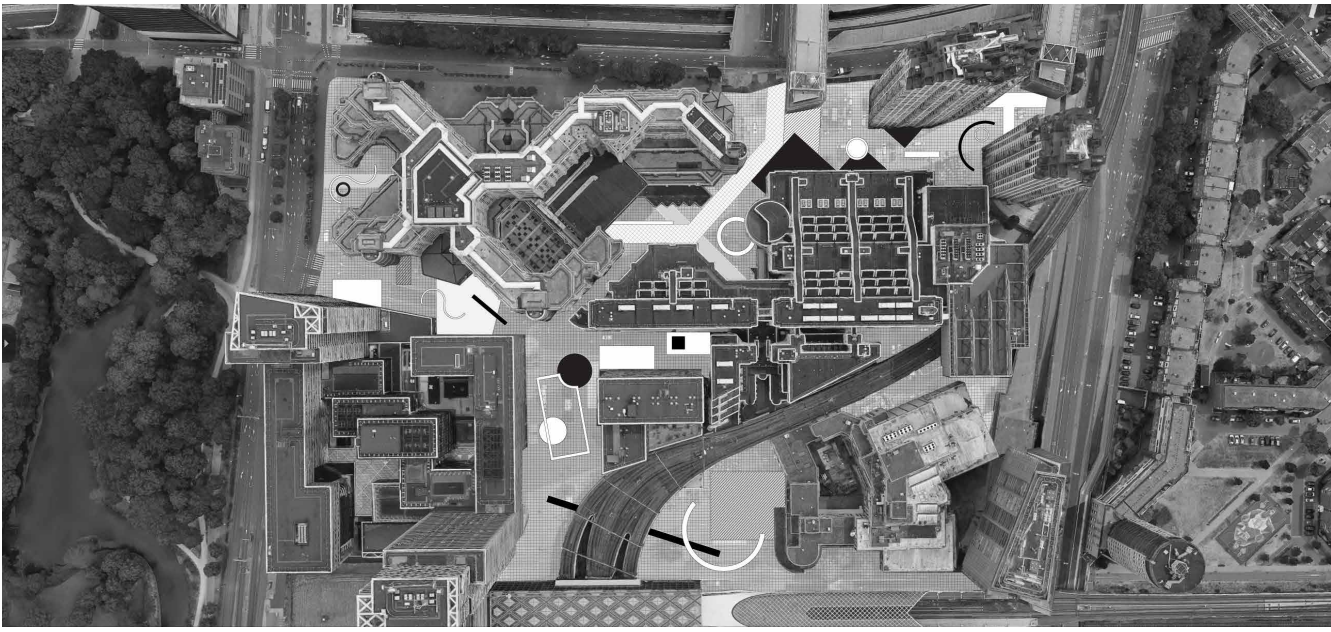
the lower area seems to already be developed to a certain level where it allows the user to move and stay within that area

the top area, around the monkey rock, shows to be less developed and



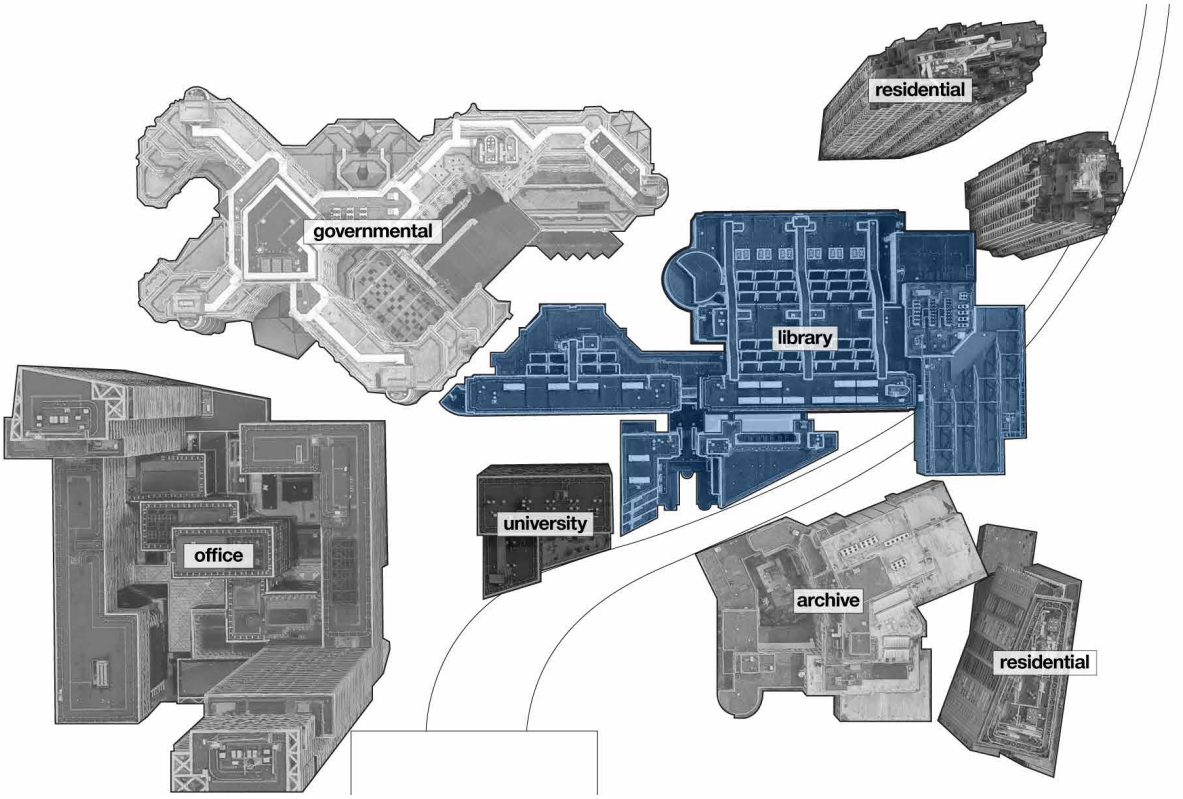
"If they [cities] are not meant for children, they are not meant for citizens either."

— A. Van Eyck



The Hague needs more 'acts of play' to bring back the playfulness of architecture like Aldo van Eyck talks about

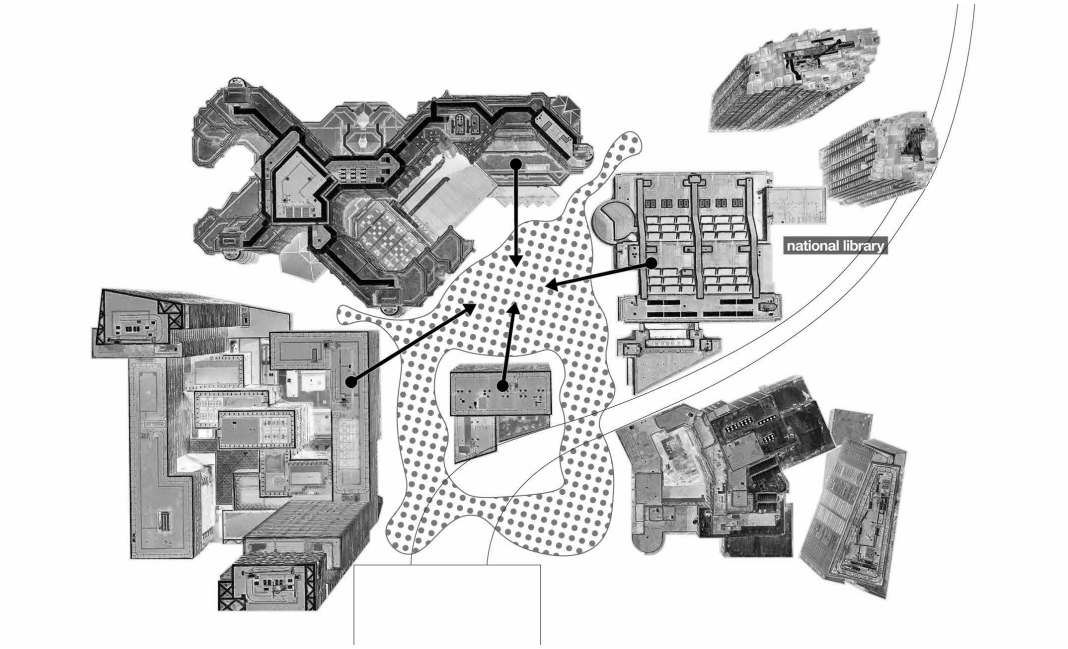
CONCEPT MICRO CITY CAMPUS



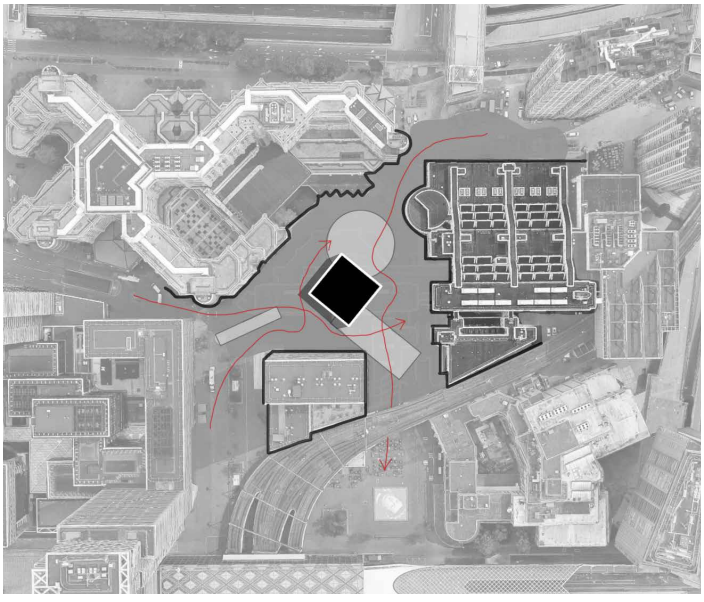
the chosen area within the station district forms this micro city within the city itself which is actually a very powerfull (given) quality

the national library is chosen to be the to be transformed building, due to the connecting and gathering nature of a library within a urban context

the nothern part of the library is demolished, which allows the emerged square to play the role of place to gather on a larger scale



the emerged square focuses the attention more on the existing buildings while giving room for new activities to form outdoors



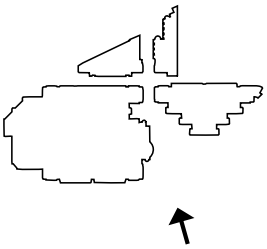
a newly placed volume or structure can become the connecting element within the area, where people from different functions can meet and stay

ROYAL LIBRARY EXISTING



© Gemeente Den Haag

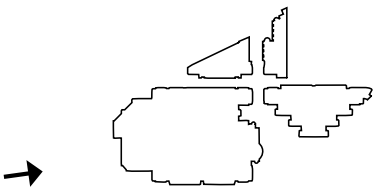
East Side Just After Completion





South Side

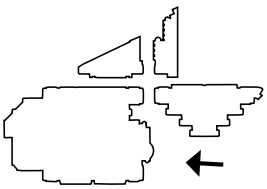
© Flying Holland



ROYAL LIBRARY EXISTING

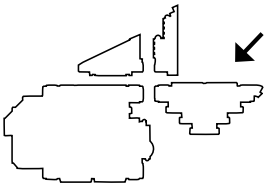


North Entrance Prinses Irenepad





Northern Wing Anna Van Buerenplein

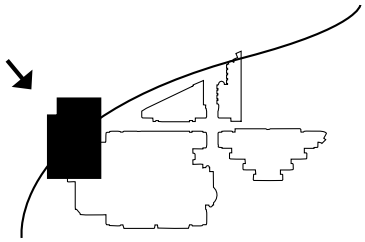


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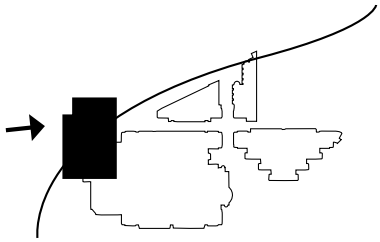
© Codart

South-West Side



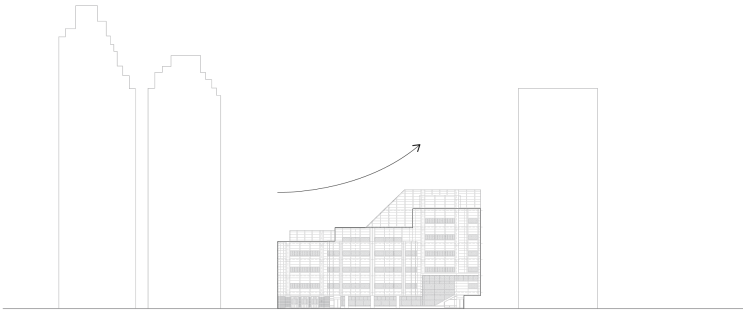


Tram Infrastructure

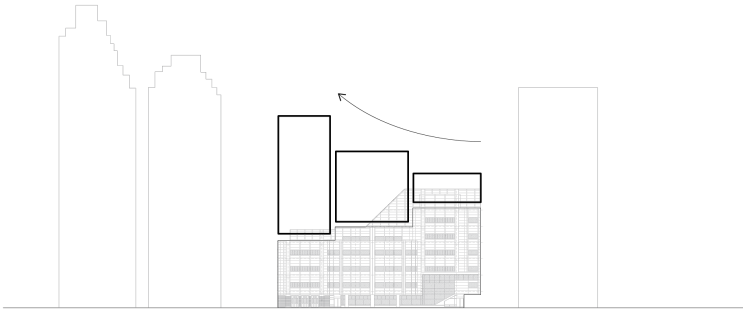


CONCEPT SKYLINE LANGUAGE

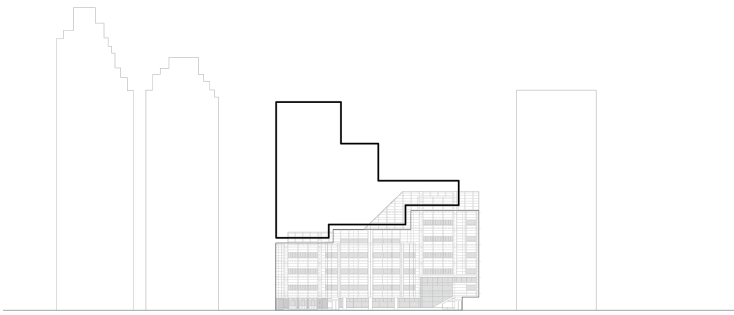
the existing library shows to be a terraced building towards the university of leiden (western side)



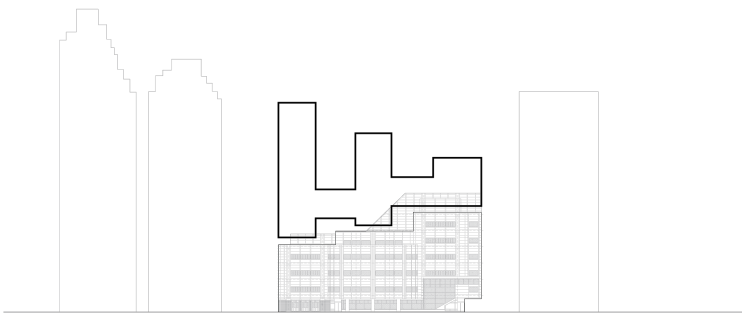
the addition could contradict this language en mirror the stepped form to ascend towards the grotius towers

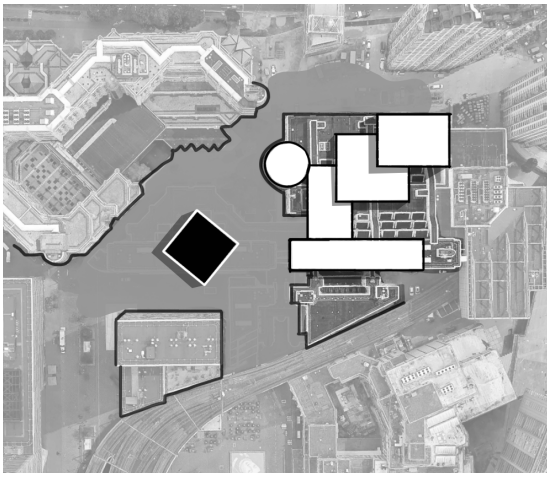


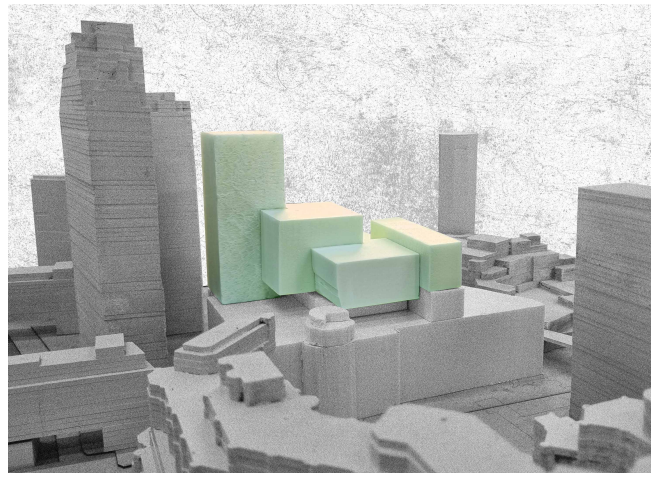
concept I is a solid mass of four main volumes which allow for a better connection which the existing building



concept II contains cutouts of building which allow for more outdoor space like courtyards in between volumes





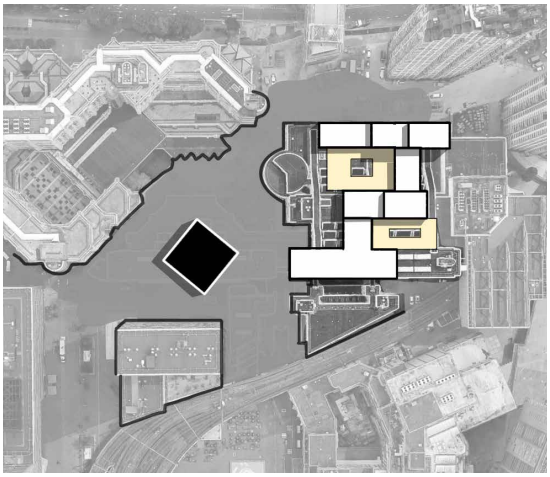


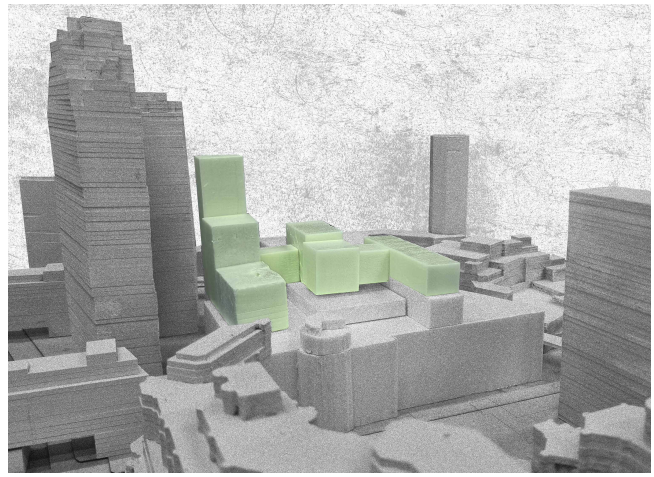
concept I consisting of four main functional volumes stepping up towards the grotius towers

the added volumes feel to random and suggest to be in relationship with the existing while they are not really doing that

concept II carves out pieces of concept I which gives room to its atriums and courtyards

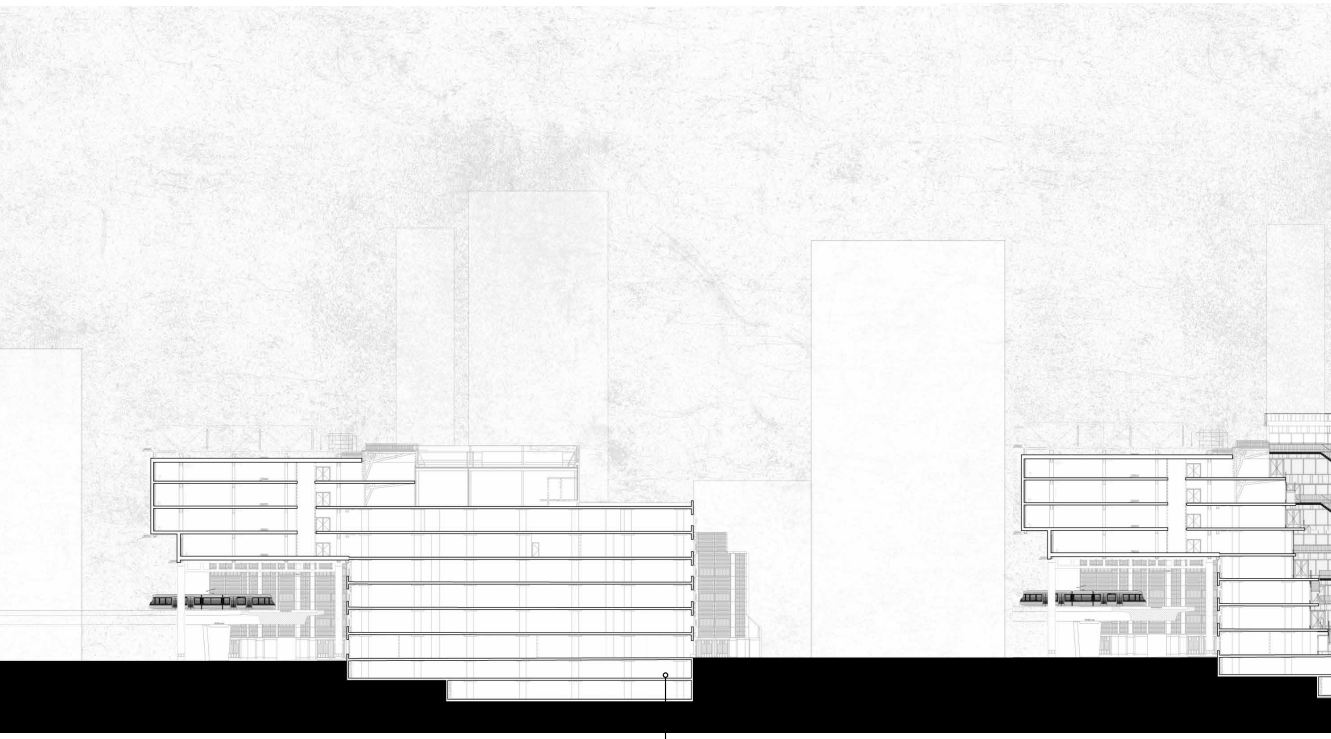
the scale of the volumes is still too small compaired to the existing and its surroundings



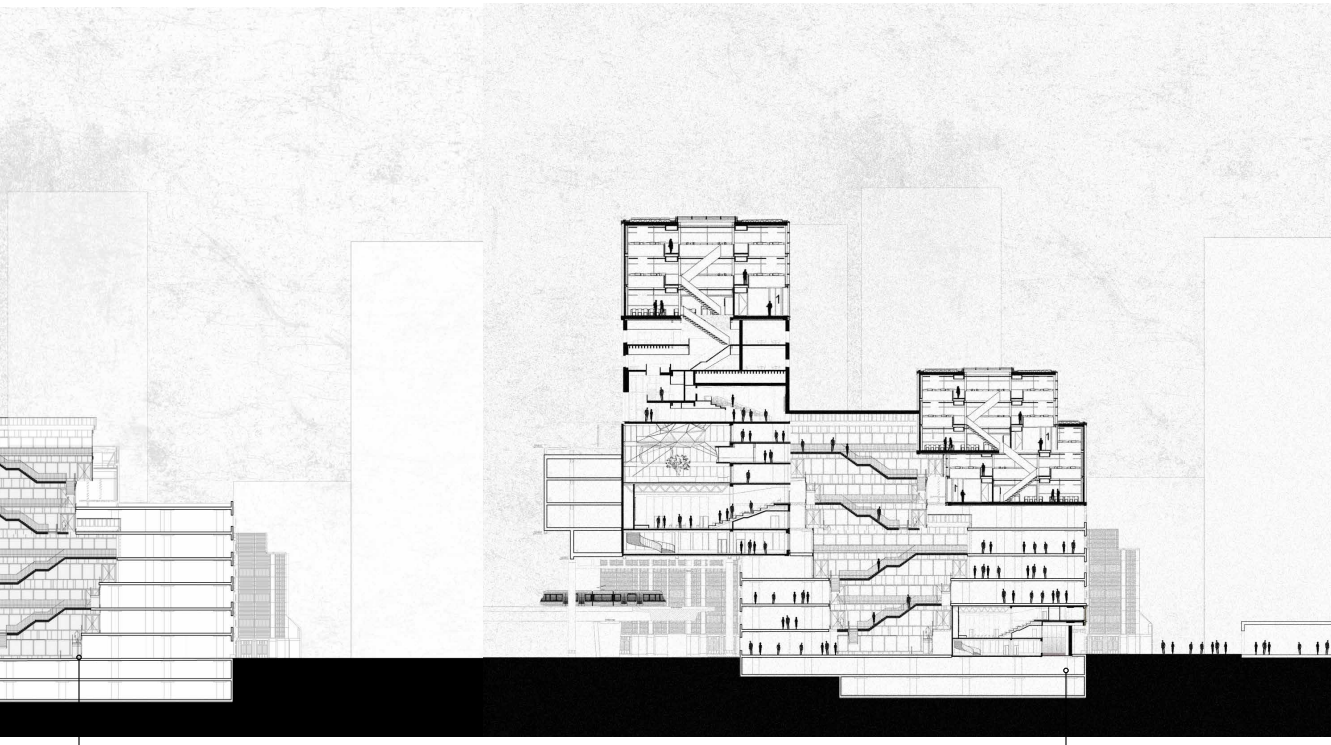


CONCEPT ENHANCING THE EXISTING

testing the section of the library
in order to see how it responds to
intervention



the existing volume forms a solid base for intervention due to its orthogonal nature and concrete structure



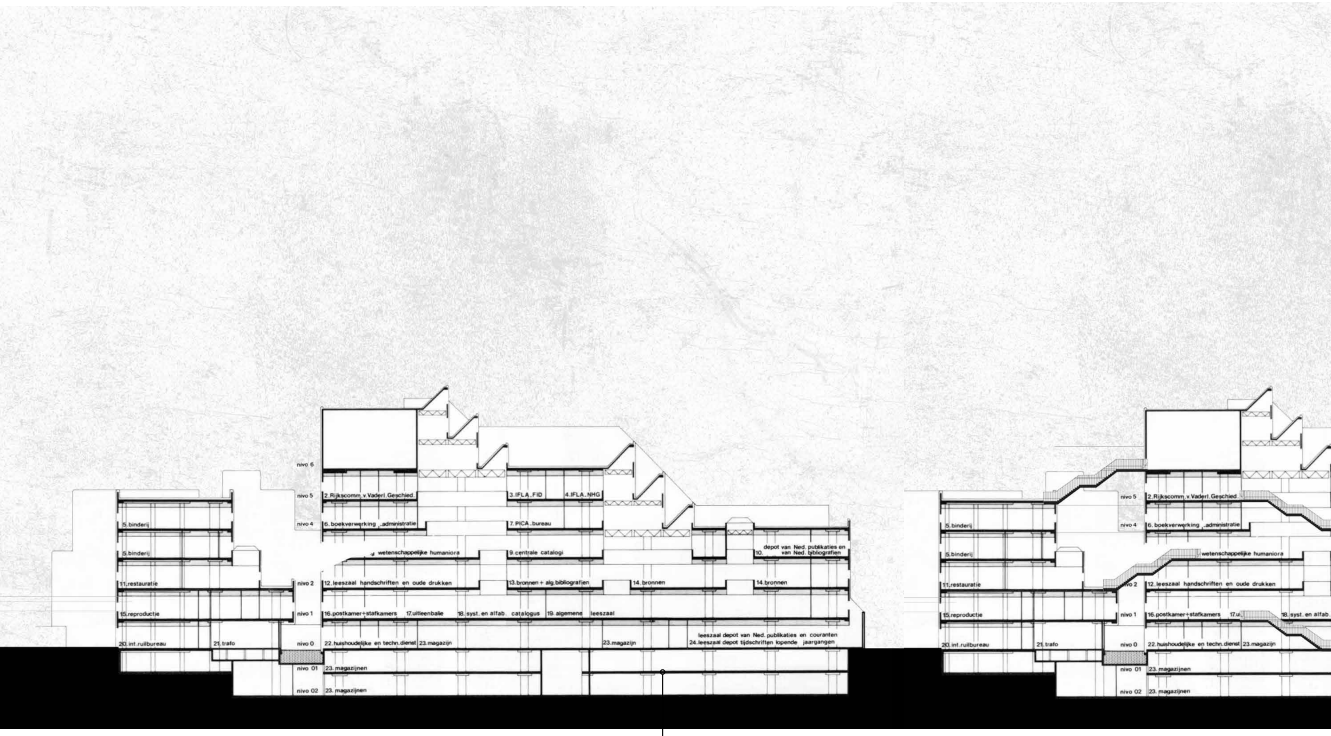
adding an atrium already creates a completely new element within the structure which pulls people more vertically through the building besides supplying the natural light within more enclosed areas

when adding program, the building instantly comes to life

multiple added volumes scattered on the roof of the existing building can become one with the existing

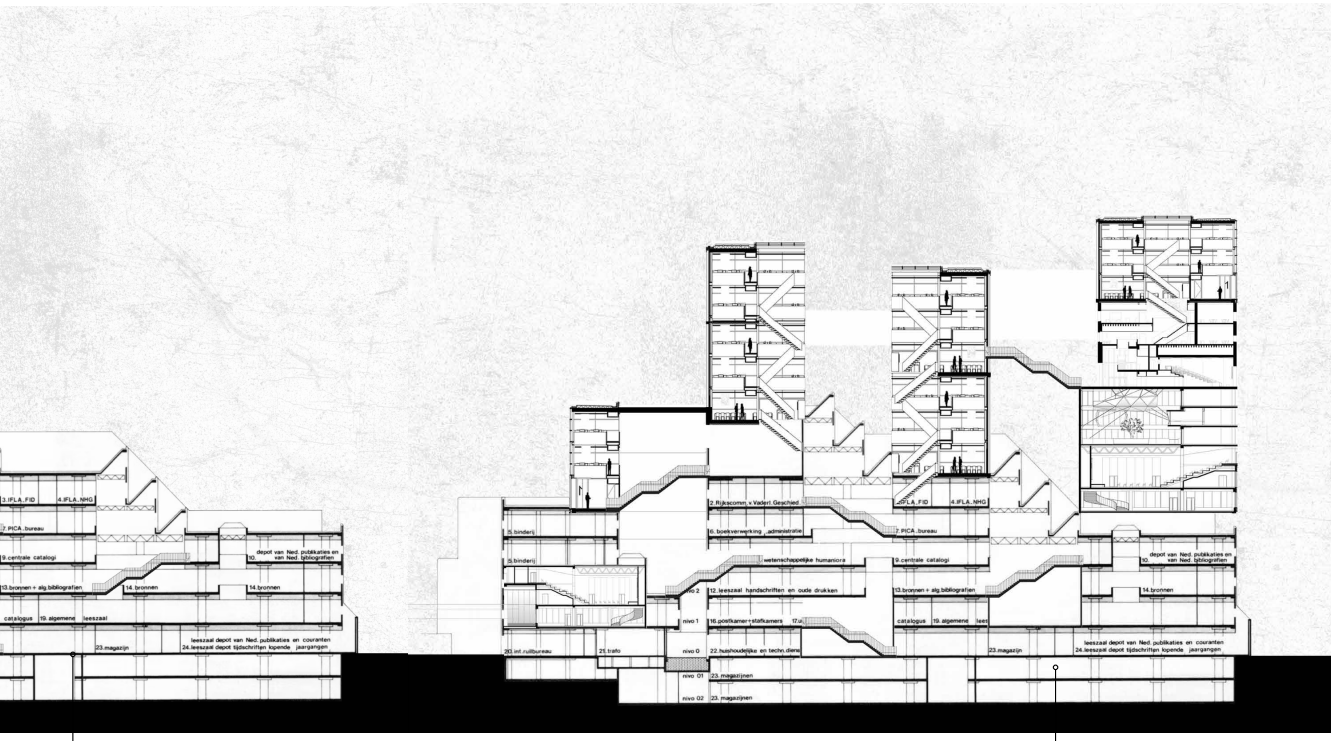
CONCEPT ENHANCING THE EXISTING

testing the cross section of the library in order to see how it responds to added volumes



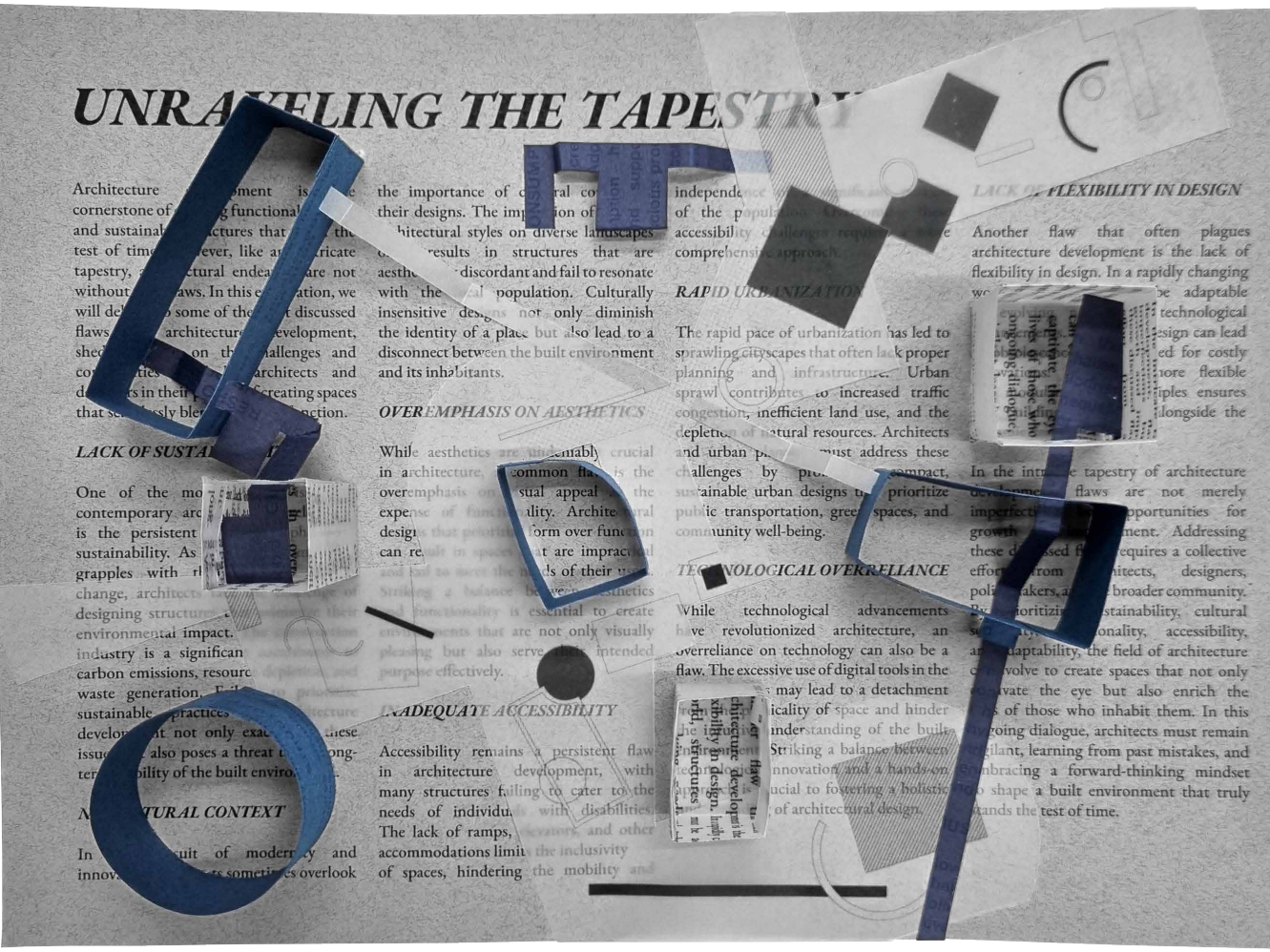
the existing volume shows to include qualities like layering multiple stories which come together as a whole in one volume

the two atriums supply exciting depth due to the composition of the roof

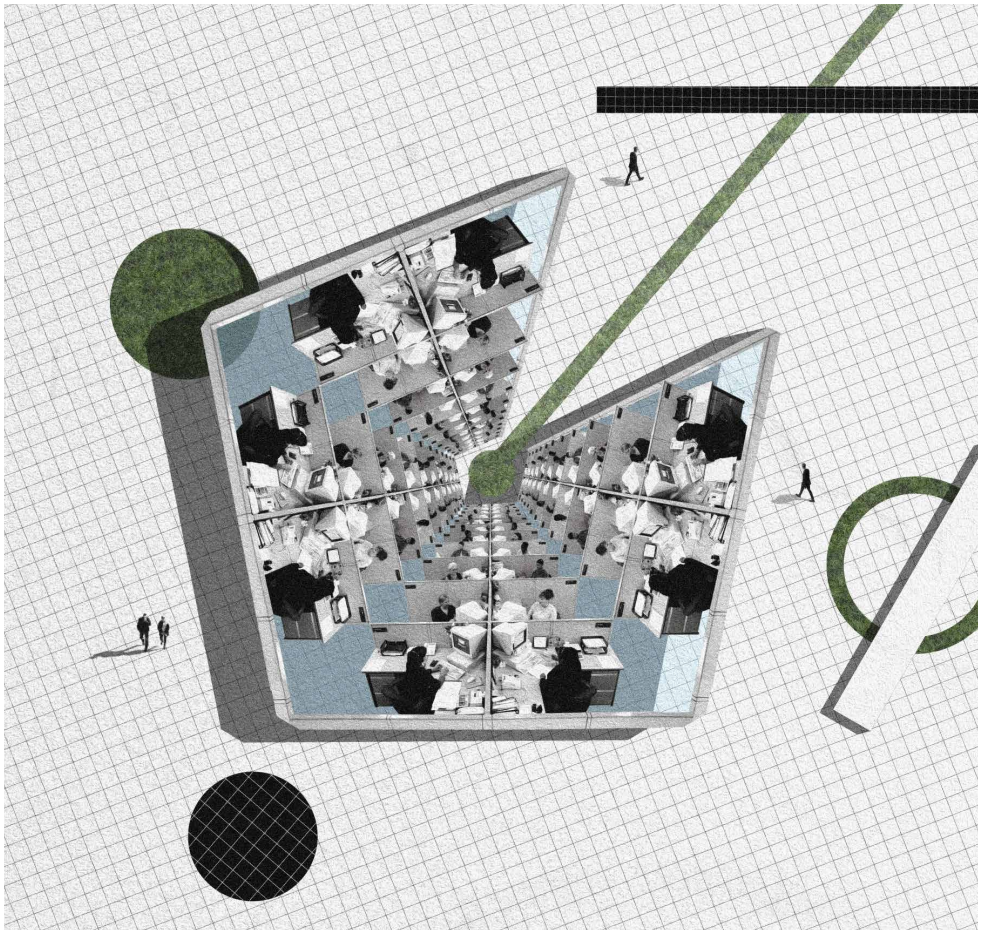


enhancing these atriums by adding connections in between different spaces of different stories can lift the connectivity and accessibility

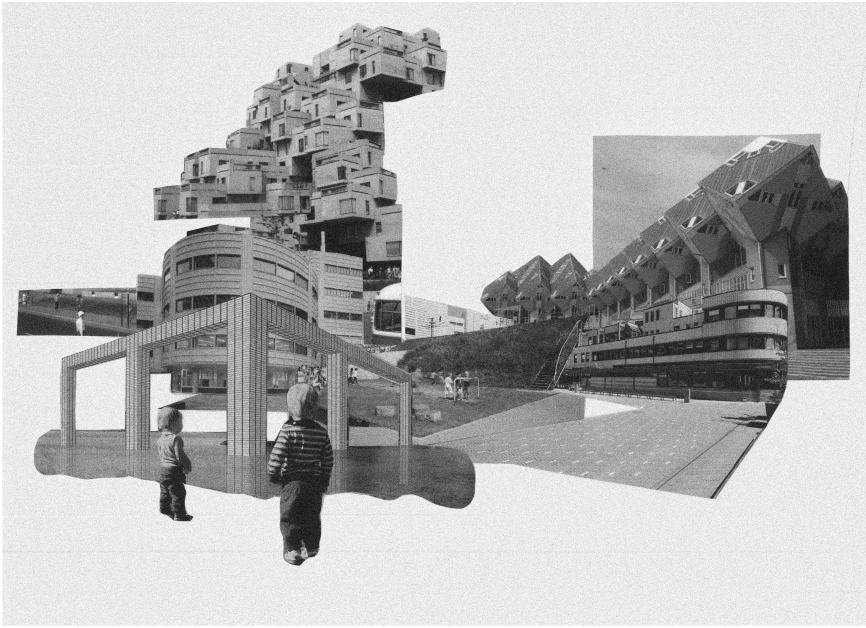
again, more volumes and program added allow for a transformation where the volume becomes its own micro city



a story about difficulties within current society (grey) functions as a restricted platform where outdated structures are trapped on an act of play layer (white sketchpaper) forms the foundation for change by adding irregularity more inclusive structures (blue) tell a story of difficulties to adress and are placed in the same irregular manner to encourage more play



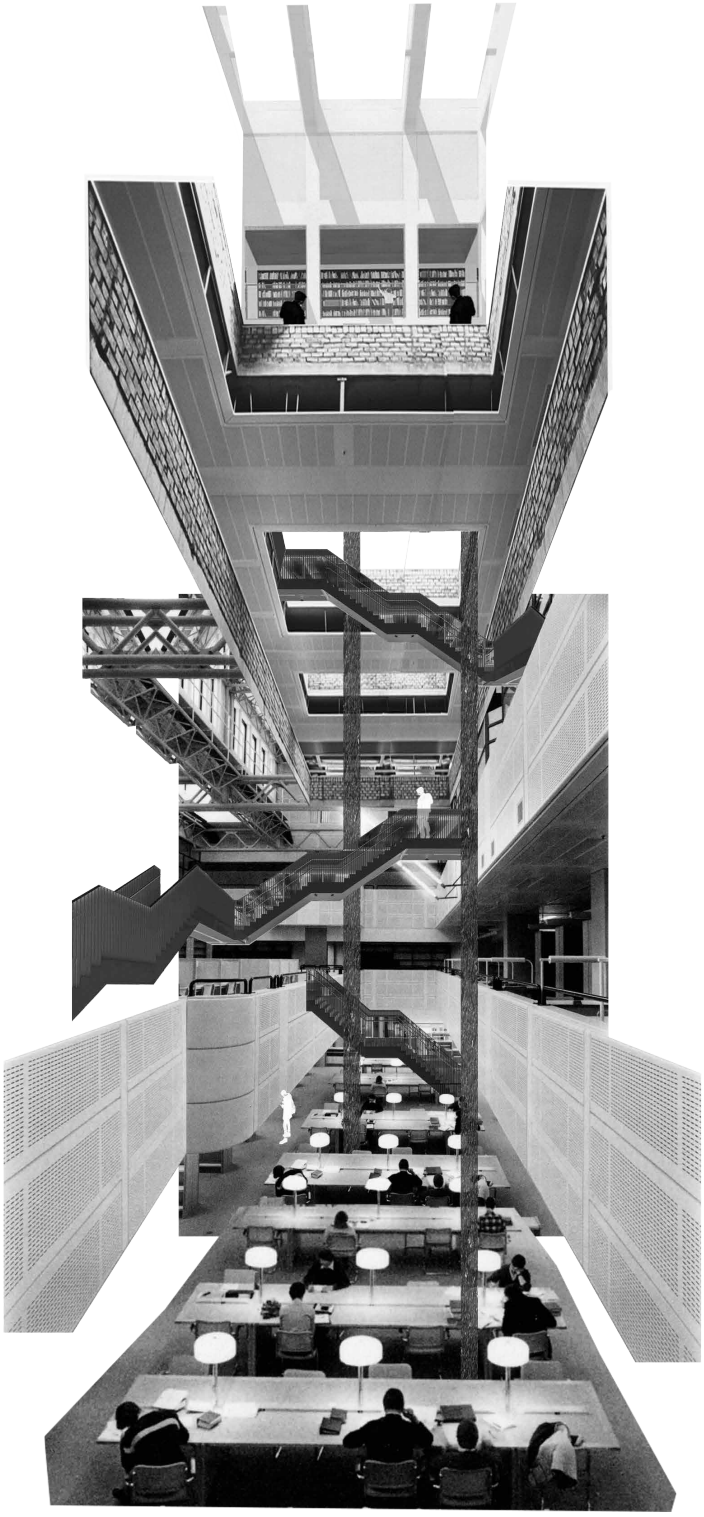
a sculpture of digital power arises in a landscape where beings are lost in its remains refering to a digitale age where we constantly grow further apart and communicate less and less



the city as a canvas for artists which becomes a playground for children to discover and explore

he notices the changes in the city where he grew up in and imagines a place where his grandson can play outside like he used to





MONTAGE ZINE

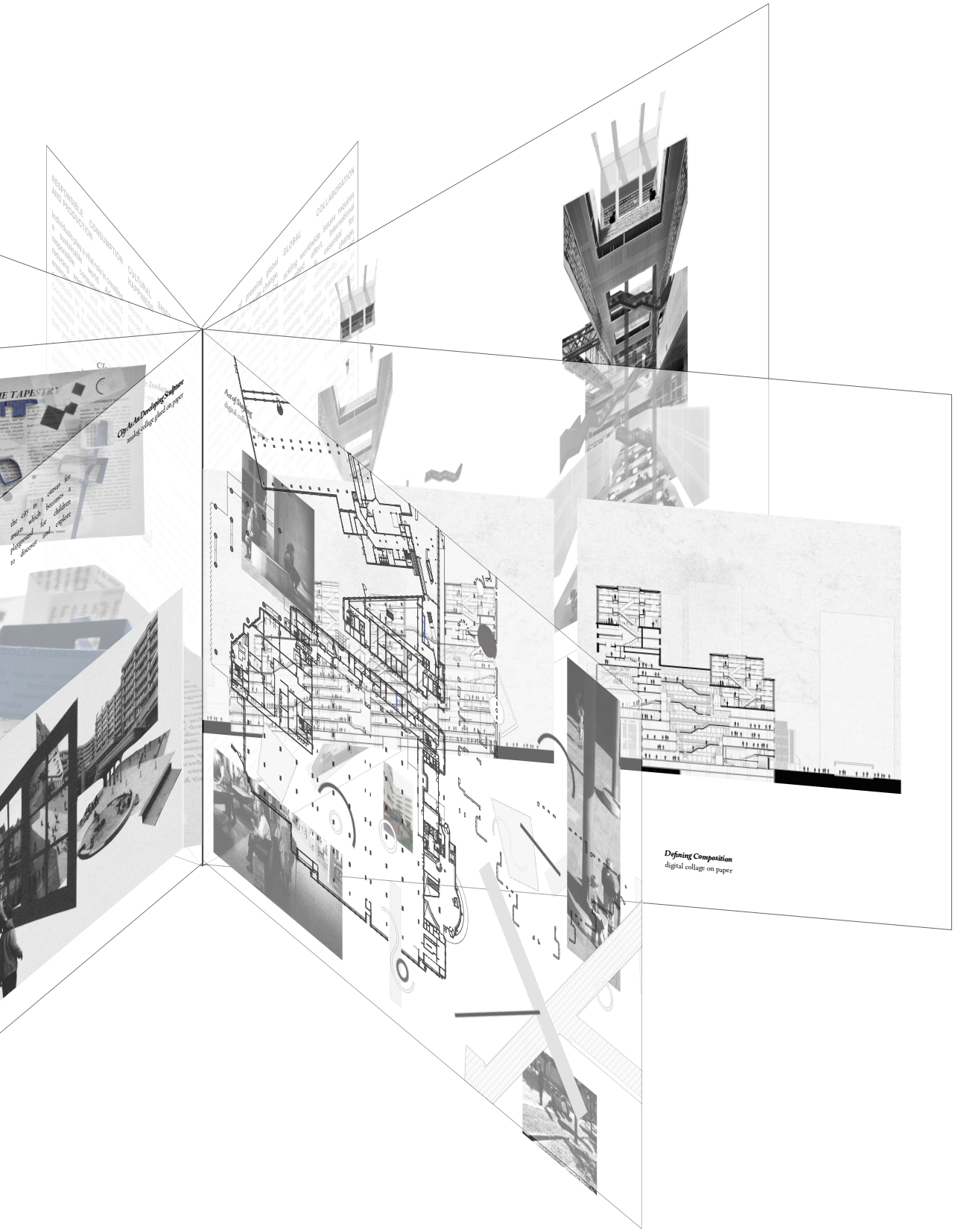
the montage zine is a collection of multiple montages and meant to show a part of the design thinking during the concept development

the continues use of layers reflects the approach towards the existing building by layering program and enhancing qualities

the zine starts by adressing the conflict of structures, the built environment, opposite to the unbuilt environment, creating isolated units within a neglected landscape

followed by multiple interrpetations of handling with issues of exclusivity, the zine ends by sketching an image of a multi-layered proposal within the library building




Defining Composition
digital collage on paper

REFERENCE ACT OF STAYING

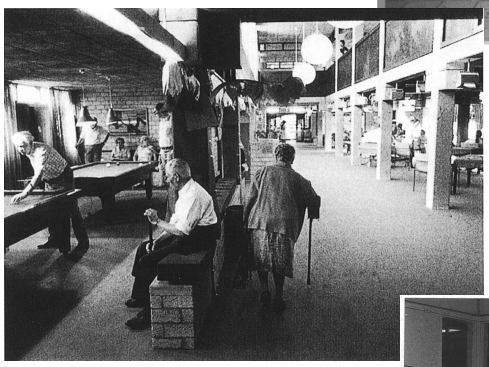


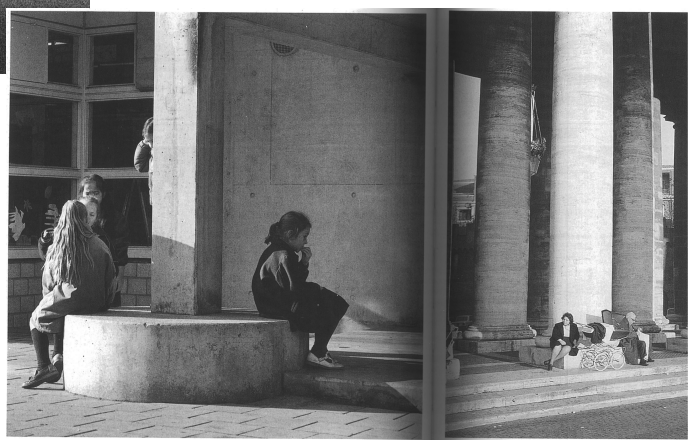
to get more definition and meaning behind my design choices, I looked at some examples of known architects to sketch an image about how I want to continue and define my vertical campus

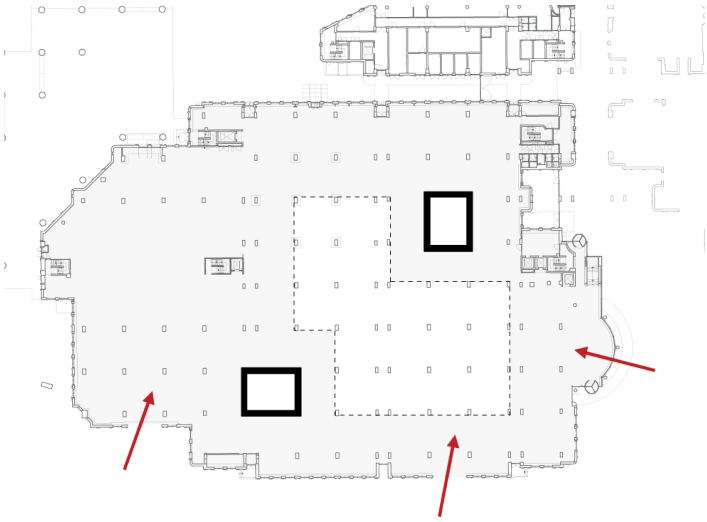
Herman Hertzberger and Aldo van Eyck both envisioned this act of staying in and around the built environment







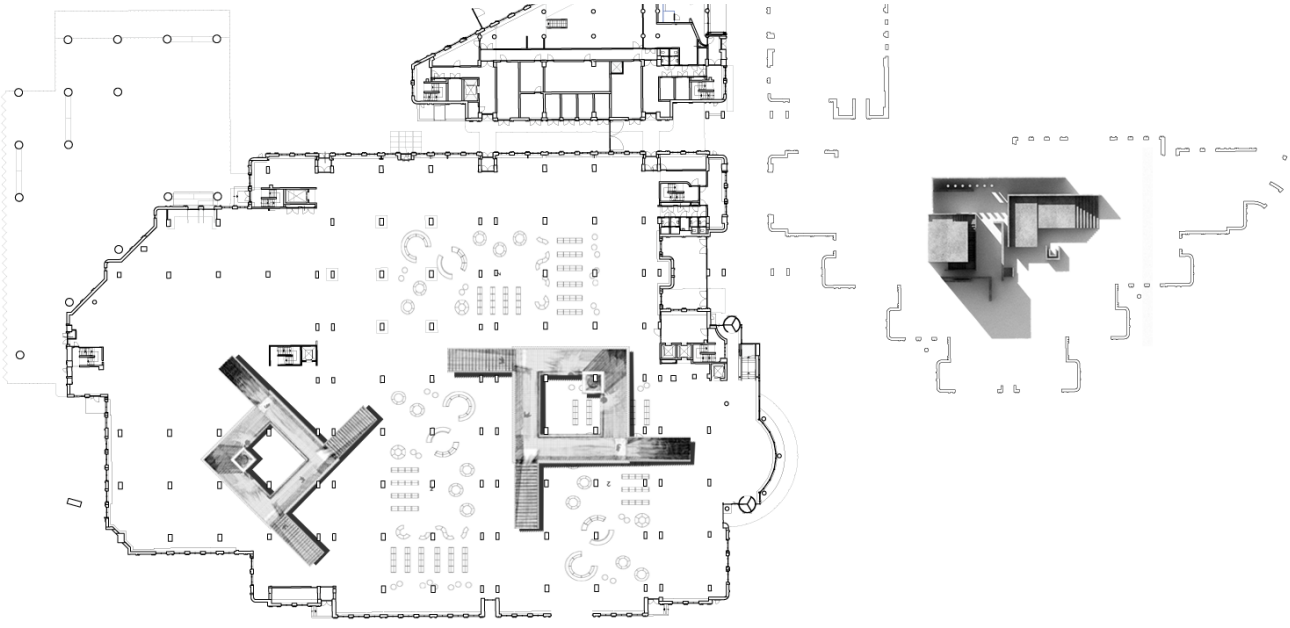




concept on the use of two main cores to support the added volumes which only ask to make small changes into the existing construction of the library

multiple entrees stimulate more than one routing and allows for a focussed destination to choose for

testing the floor plan through collage by inserting two stairwells into the ground floor together with generic library furniture



ROYAL LIBRARY ARCHIVE

© Haags Gemeentearchief



view from the Maria Stuartplein towards the central station



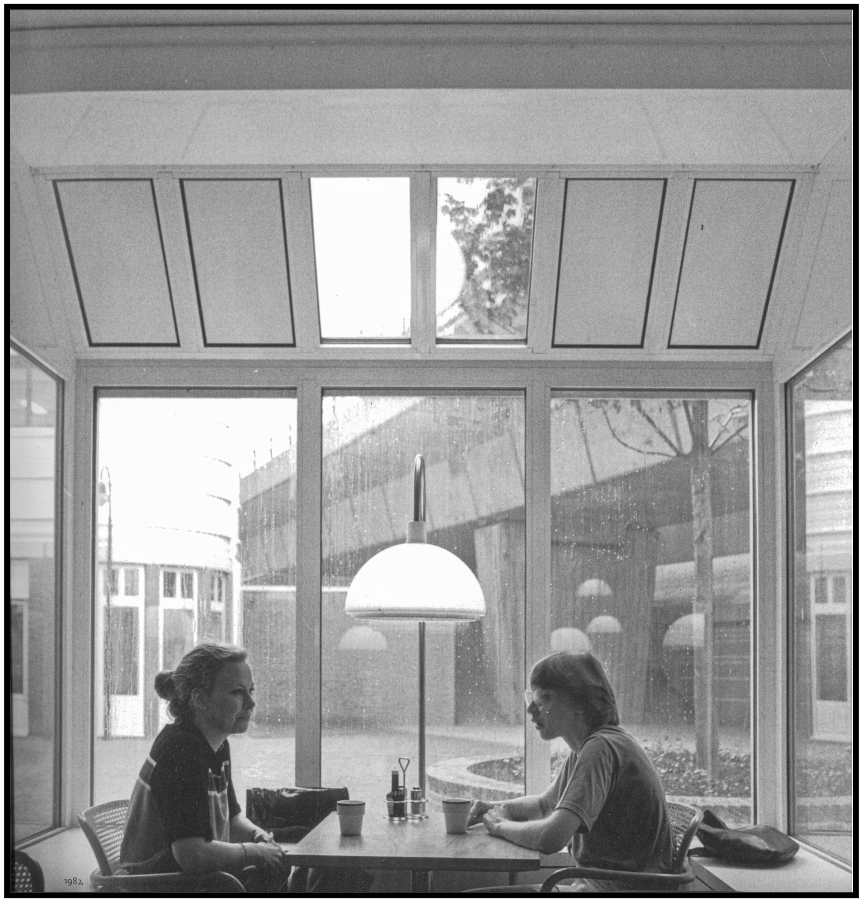
photo taken during the construction
of the brick balusters

ROYAL LIBRARY ARCHIVE

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a couple walking towards the north wing on the Pr. Irenepad



employees having a lunch break in one of many nooks poking out of the building

ROYAL LIBRARY ARCHIVE

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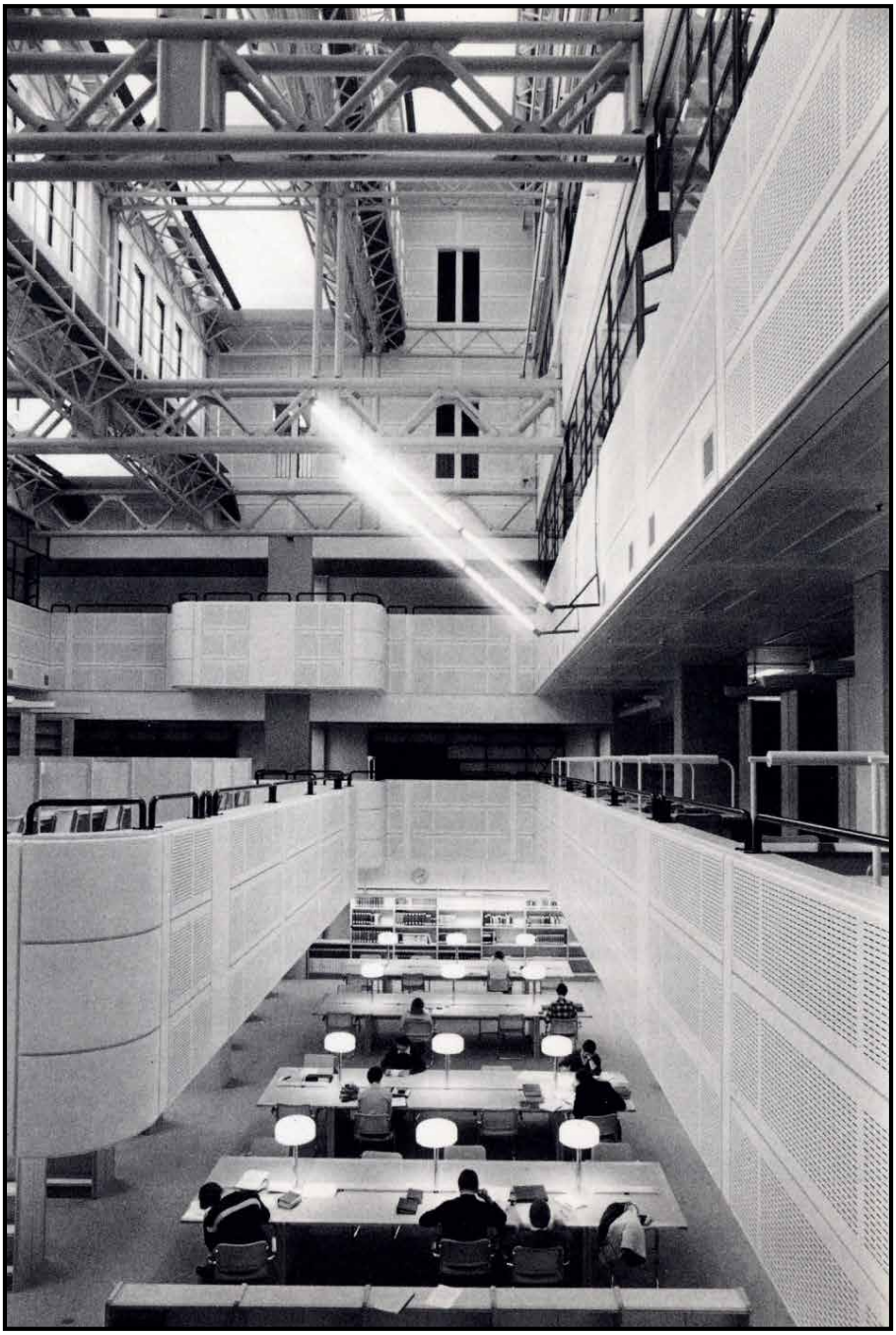
photo shows why the building got
it's nickname "the iceberg"



aerial photo just after completion of the library without the existing depot extension

ROYAL LIBRARY ARCHIVE

© Haags Gemeentearchief

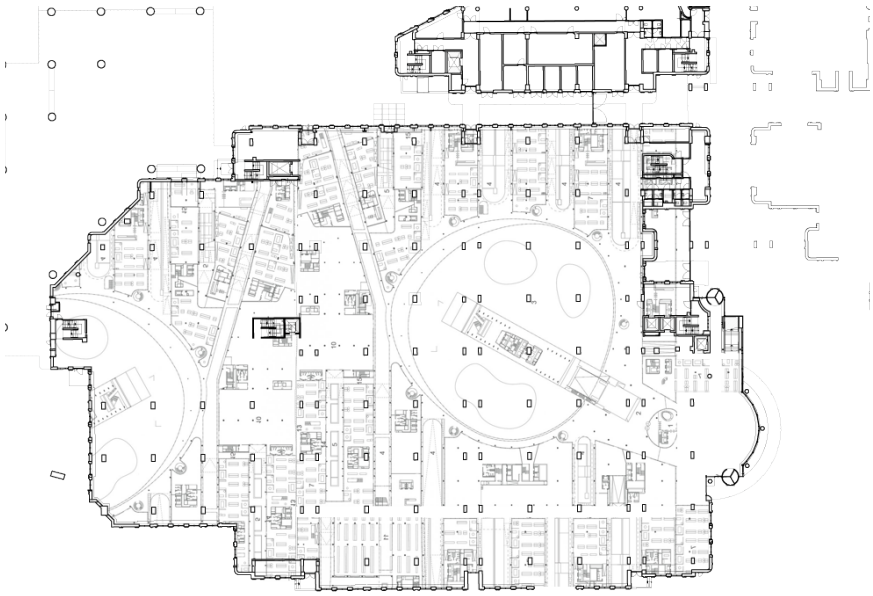


one of the original voids which allows for visual connection and more daylight



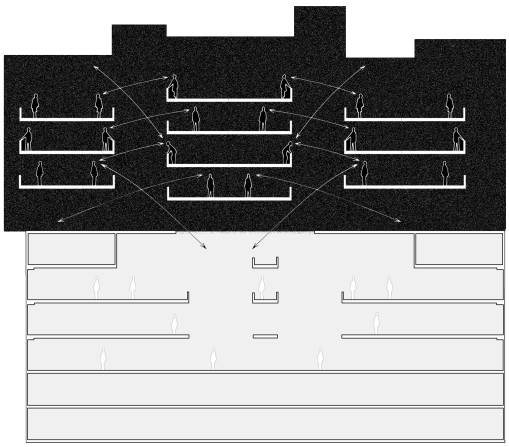
brick balusters cladded by white aluminium sheets create the horizontal lines within the vertical world

CONCEPT FLOOR PLAN TESTING



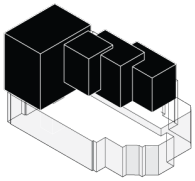
collage of a floor plan from architecture office Herzog & De Meuron inserted into the ground floor of the library

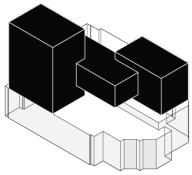
the positioning of the atrium which creates this flow from the main entrance is very appealing

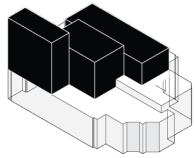


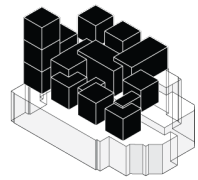
I looked into how it could look like from the inside (left)

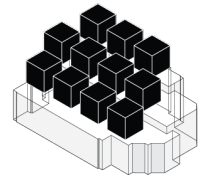
different floor levels could enhance interaction like Hertzberger used in his buildings

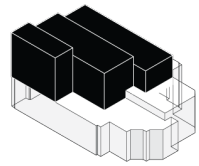


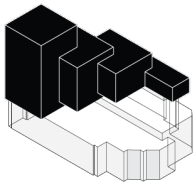


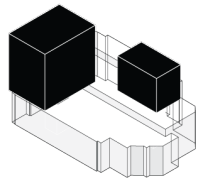


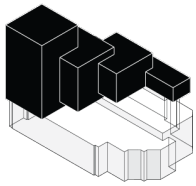






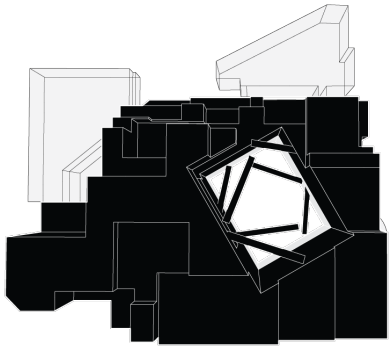


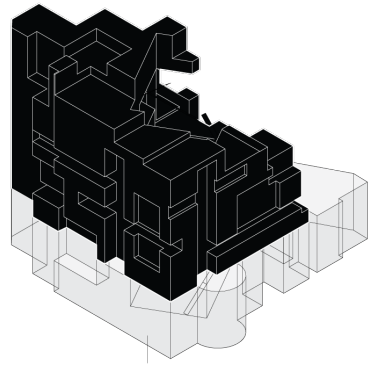




after the two concept models I tried to create more definition into the added volumes

I tried to play with scale but still not satisfied



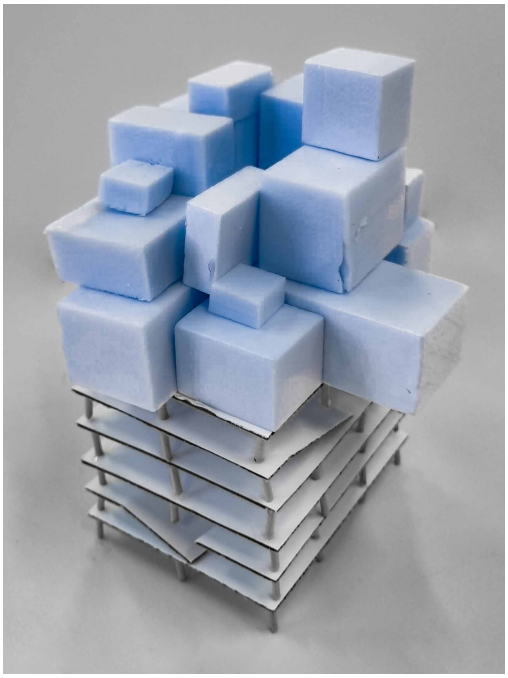


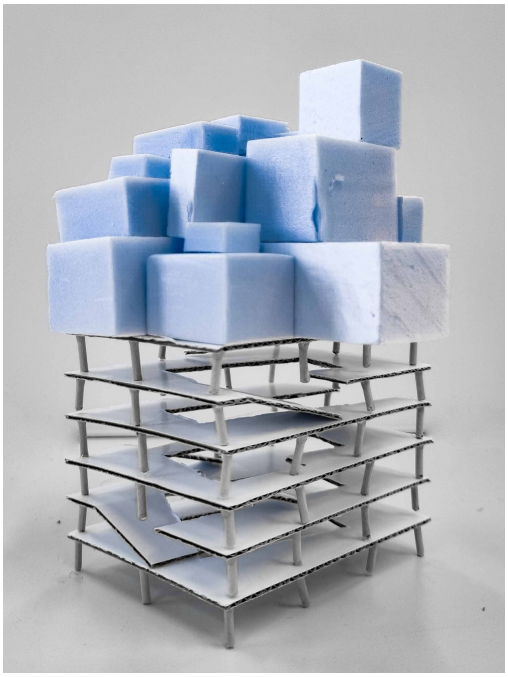
the added volumes can be a solid block which is manipulated taking out volume

the volume shows to include smaller and bigger scale into one volume

it still looks a bit undefined, but goes into the right direction

CONCEPT MASS MODEL





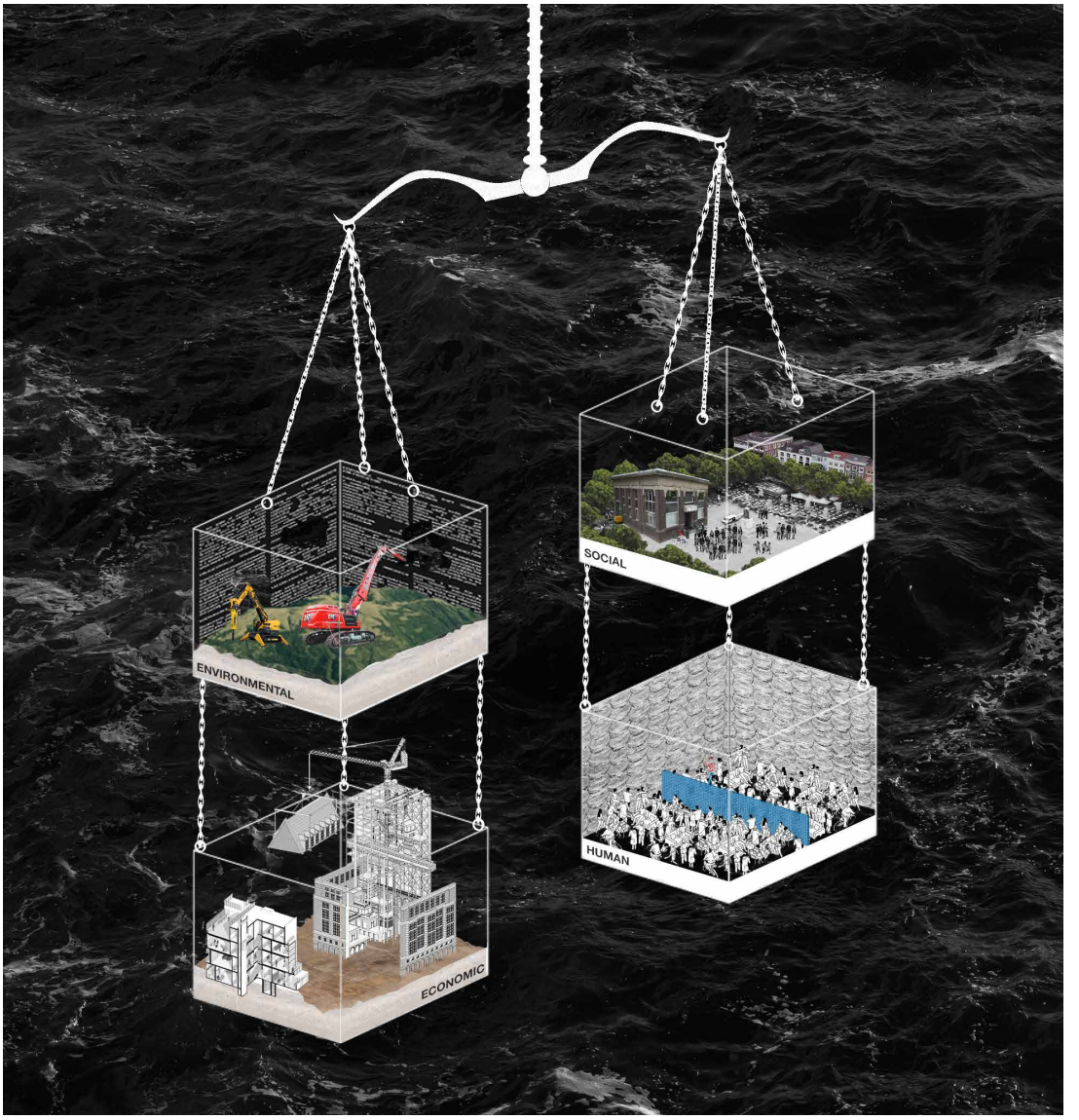
mass model testing of the manipulated volume, consisting of multiple cubes, on top of the existing slabs of the library

added volumes can become an educational village where different kind of spaces in a variety of sizes create this exiting ensemble





TD CIRCULARITY SPHERES



I used the diagram more as a design principle exercise to show my way of thinking during this design studio

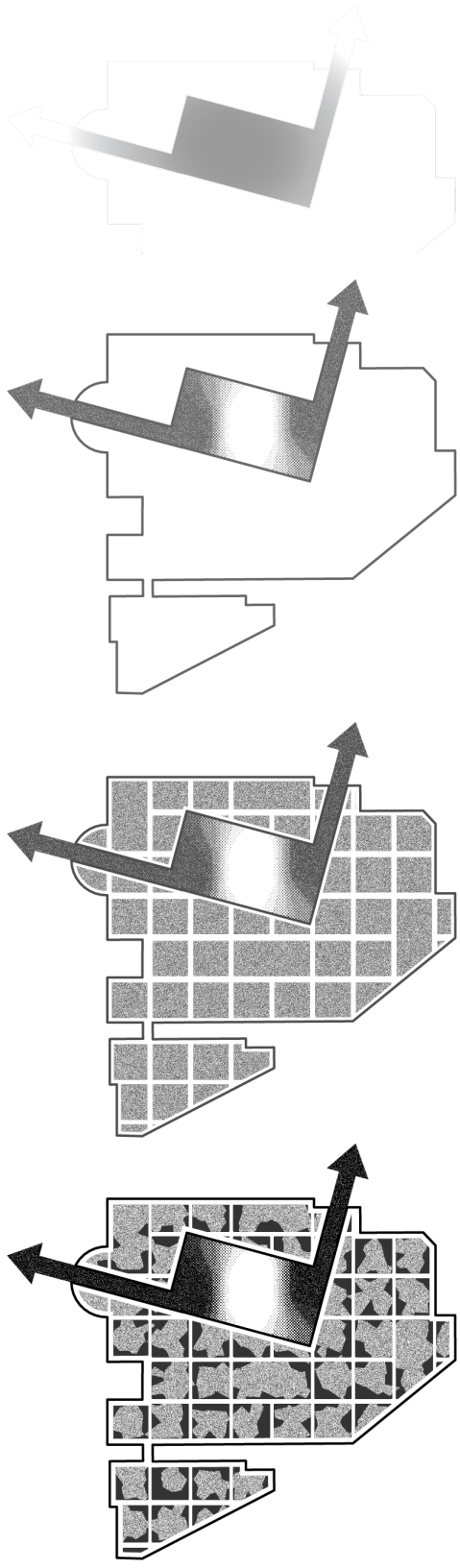
the environmental sphere demolished the soil we need toghether with the solutions we give

the economic sphere illustrates how you want to built something great and economic friendly but in the end the system decides

the weight of these two spheres are greater than the social and human spheres, which reflects the current way of society

the social sphere visualizes our most minimalistic example on the campus; the bouwpub. a place to come together is given and formed by the user

the human sphere shows our focus on our own selves while not even realizing there is something or someone like you on the other side



the atrium can be used as a connector within the existing library structure

when an user is deeper within the building, it can always come back to the atrium to get a sense of direction

a grid around the atrium is easily formed

the grid can be made more porous if necessary

CONCEPT TYPOLOGY COLLAGE

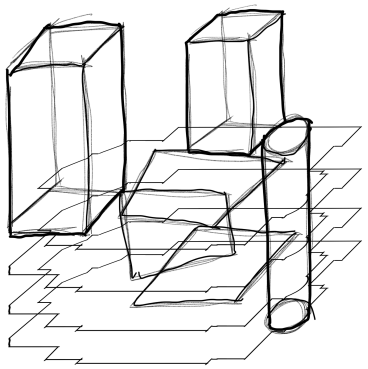


I made another collage to still use conceptual thinking in my advantage

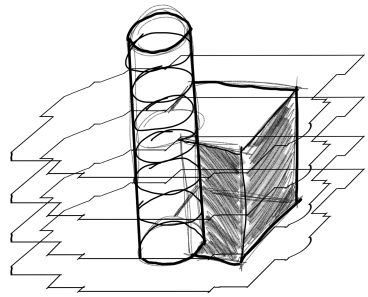
I created this using the famous superstudio as a reference where you can plug into a grid and adding program if wanted

the orange volumes suggest a specific function which is repeated throughout the building

this inspired me to use these recognizable boxes in my additional volume as lecture halls or event spaces which are visible from the outside

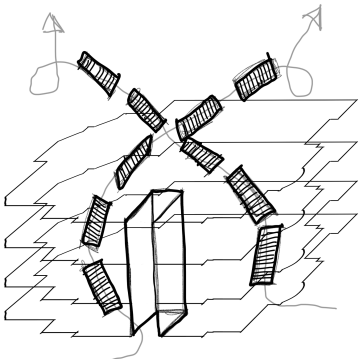


volumes are stacked on the building surrounding an atrium



a cilinder could be placed into the building which functions as this tower of studying and reading

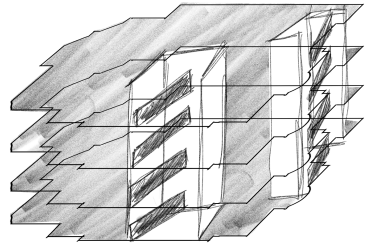
all levels are visible from the atrium (dark)



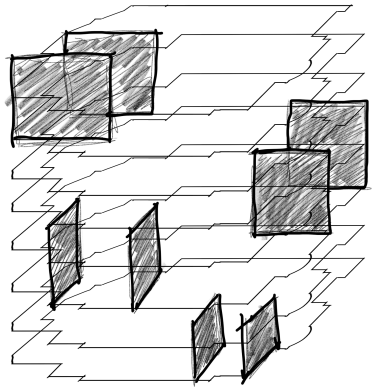
two spiral connections can lead the way to the “new world”

stairswell form the heart of the building

the building can be carved out to become a point of entrance

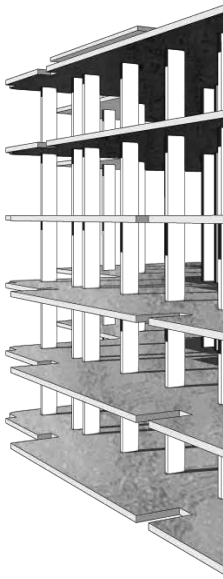


the existing building can be carved out to add routing to the building which is visible from the exterior



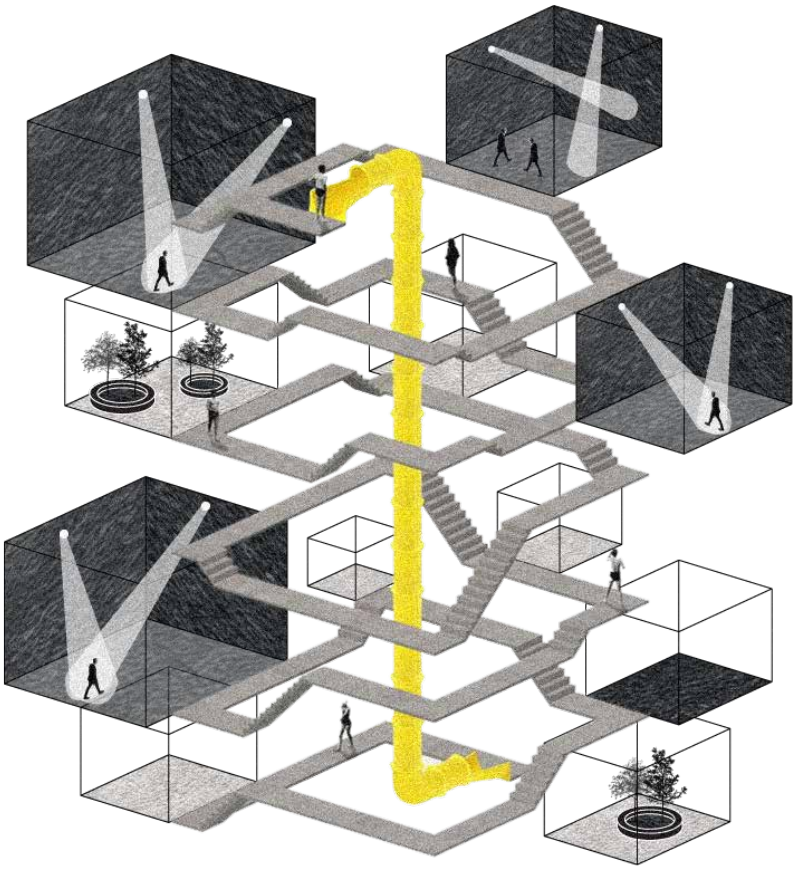
slabs perpendicular to the existing slabs can form the base of gathering spaces

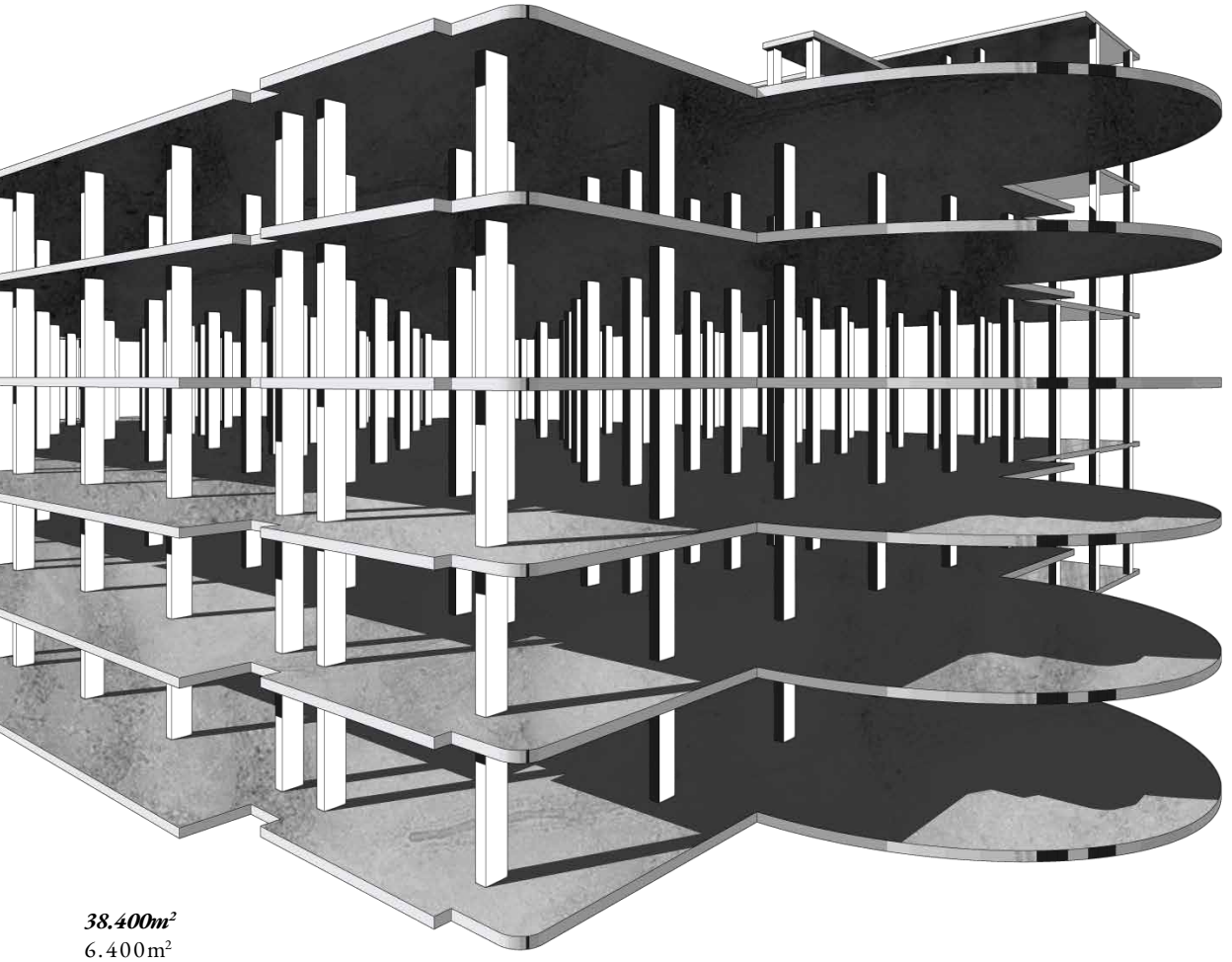
CONCEPT PROGRAM



the boxes cannot only be connected by straight-forward connections, but also by this path which runs along different functions

a split-level stairwell can connect different boxes (program) and allows for the user to be able to have a complete journey inside the buidling



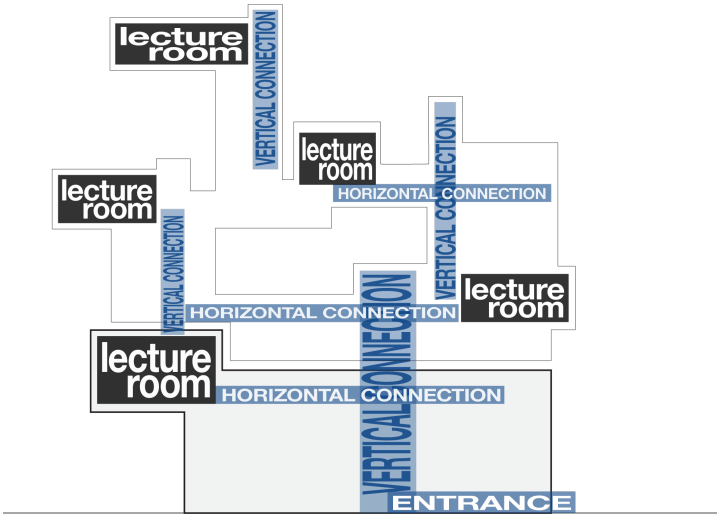


38.400m²
6.400m²
6 layers

the current library can house already more than enough program to make up for the entire project

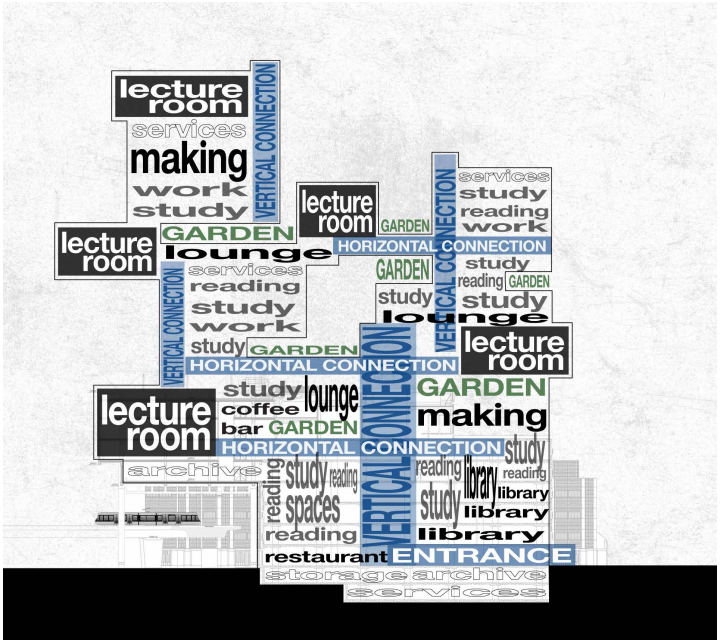
nevertheless, this will be used to implement public functions to continue the gathering function of the library

the floors should become the base of the vertical campus and serve as a pedestal



to implement these visible boxes alongside additional program, they can be stacked on top of the existing building

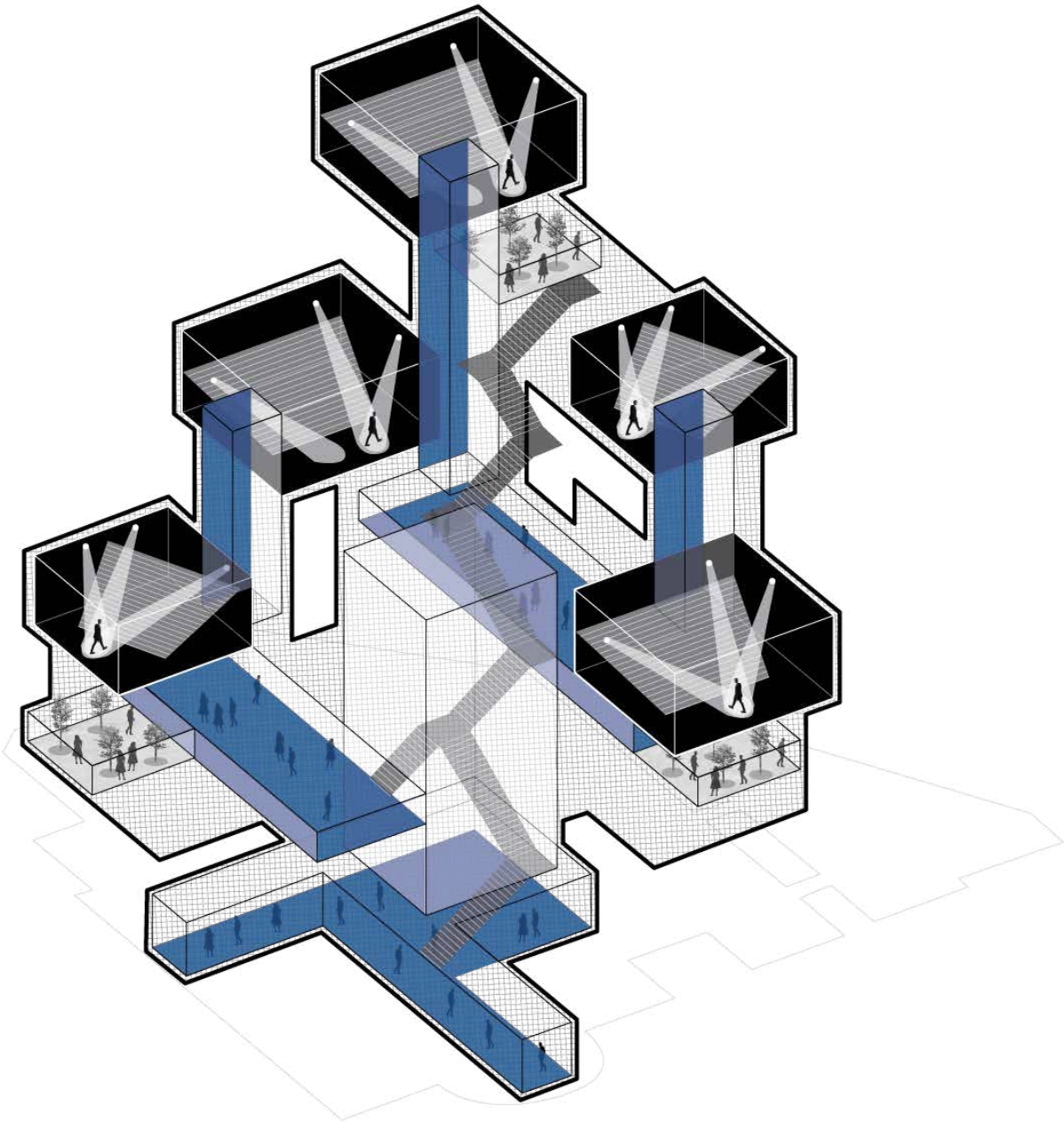
the rooms can be connected by physical connections like stairwells or visible connections like atriums



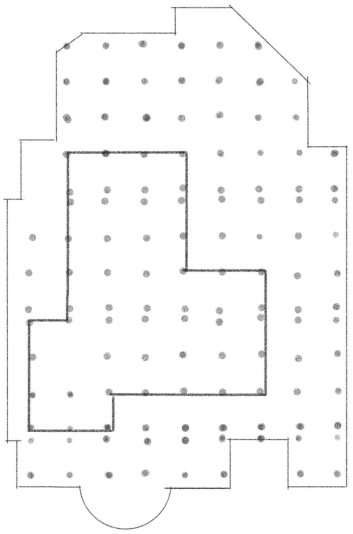
the remaining space can simply be filled with corresponding program

spatial view on how the boxes form the new organs of the building

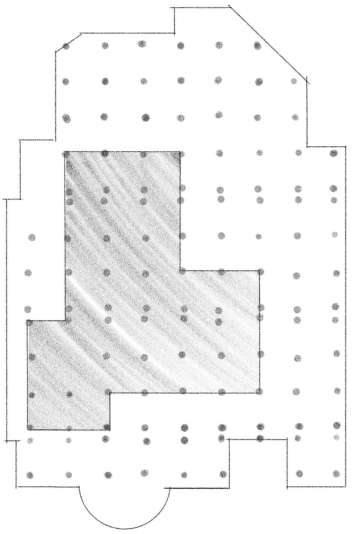
the lecture rooms (/theatres/event spaces) can be multiple hearts within one building

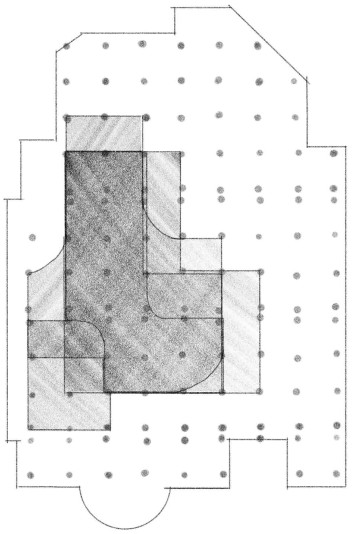


CONCEPT INTERVENTION IDEOLOGY

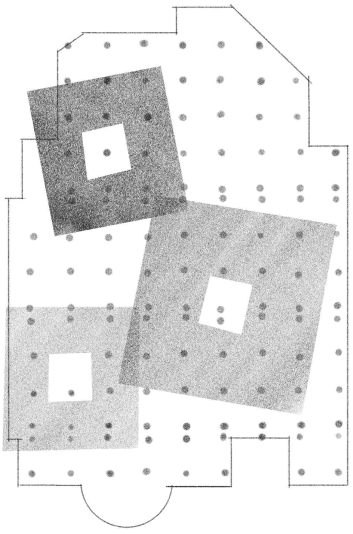


the floors of the existing library can simply be cut-out

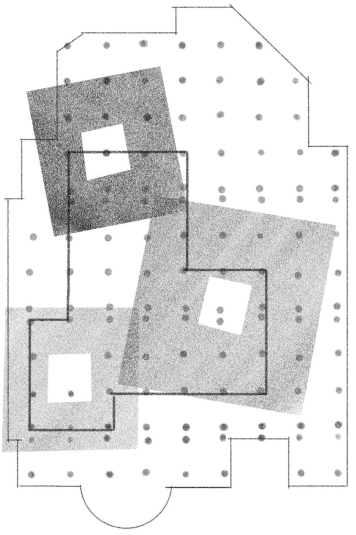




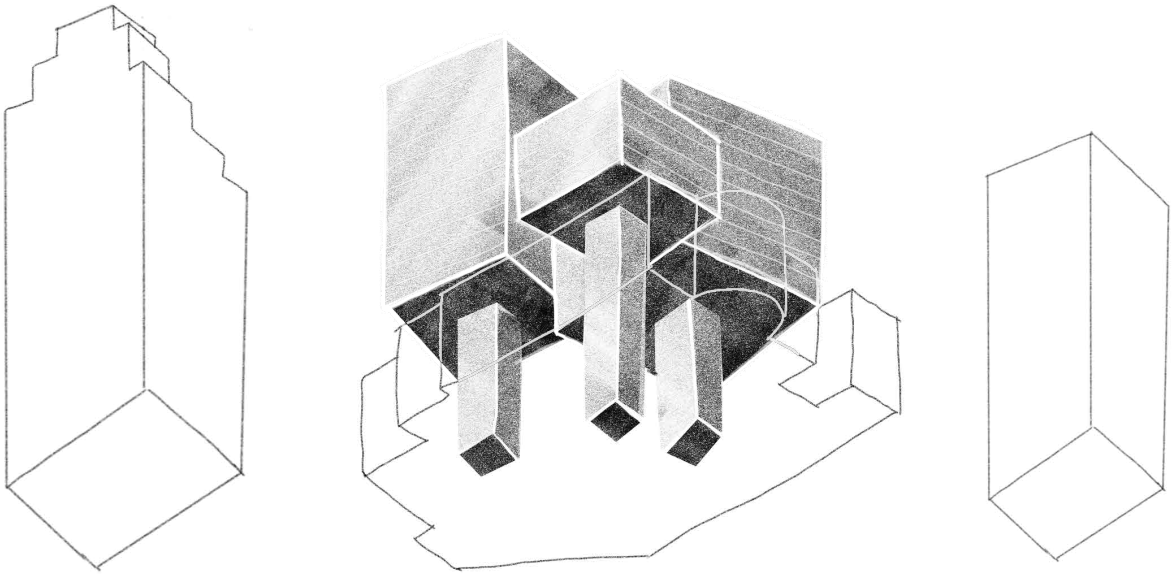
cut-outs can overlap in a different manner and form one exciting atrium



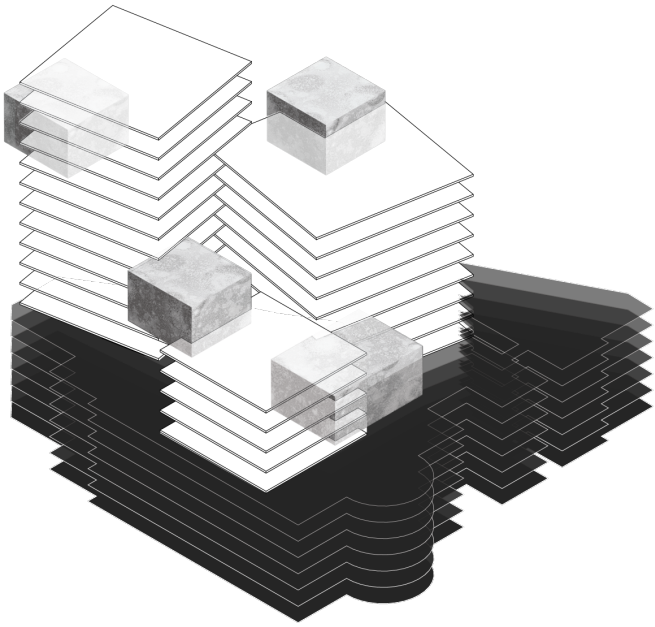
three volumes hover over the existing structure and are held up by its own cores



the cores are placed randomly inside the cutouts



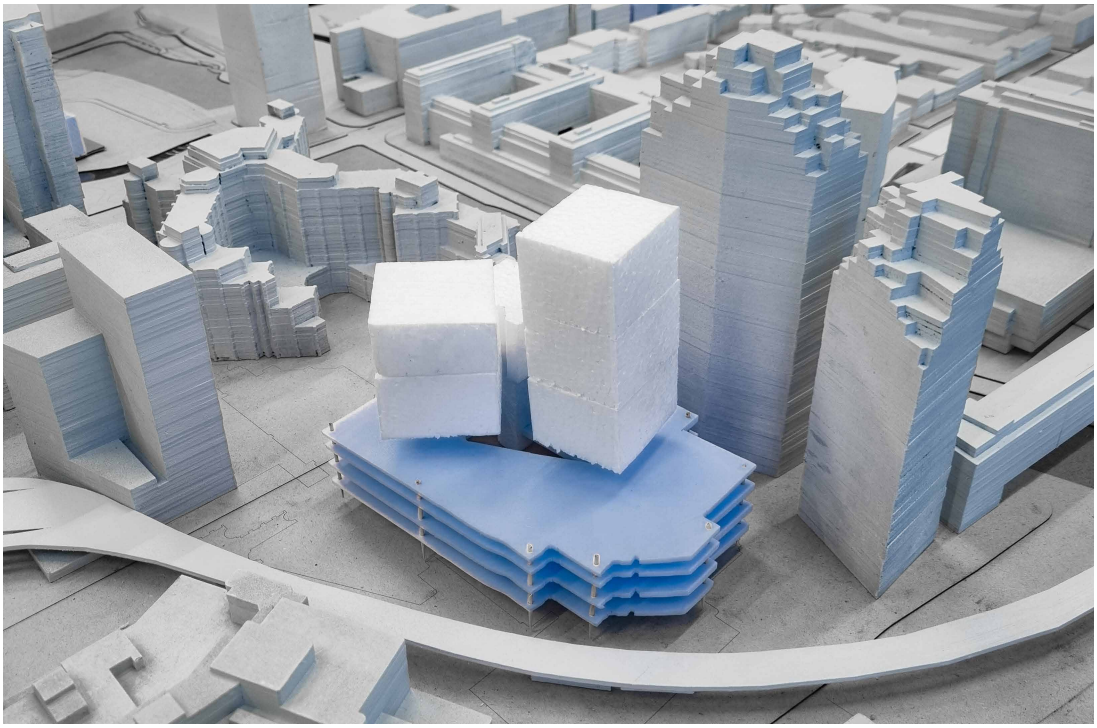
three volumes hover over the existing building resting on their own cores



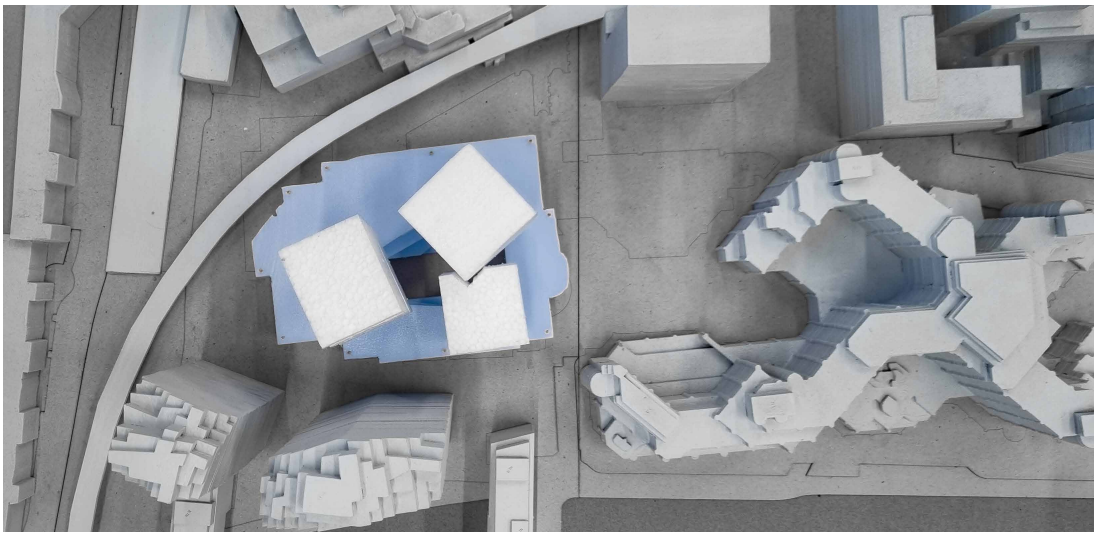
the volumes can be connected by the concept boxes

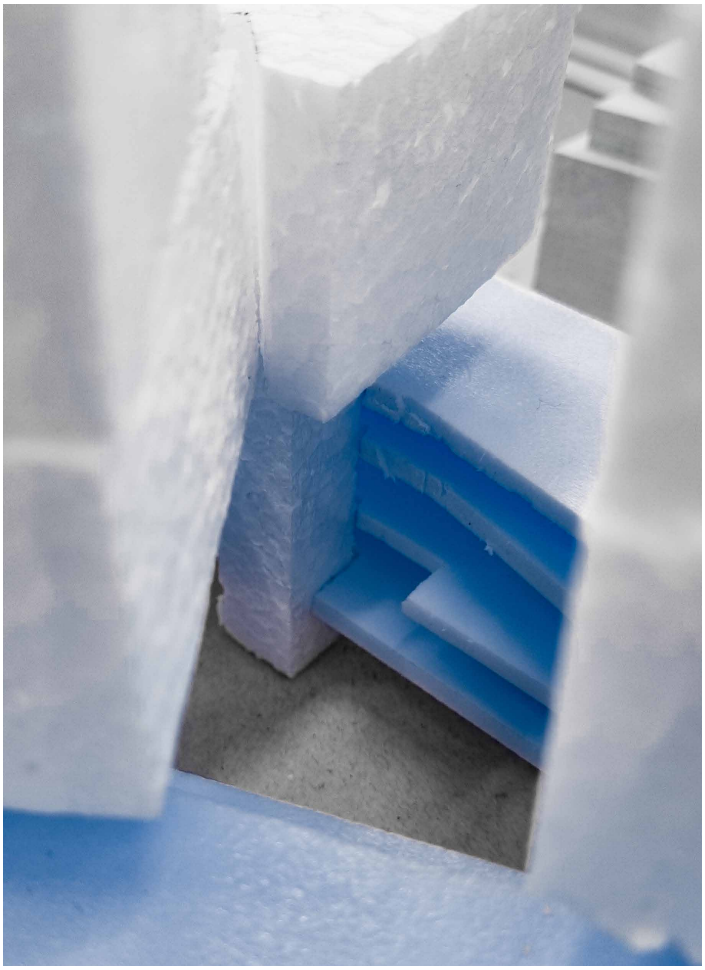
they can functions as a gathering space to make people come together

CONCEPT MASS MODEL



mass model of the three mushrooms volumes on top of the library in its context

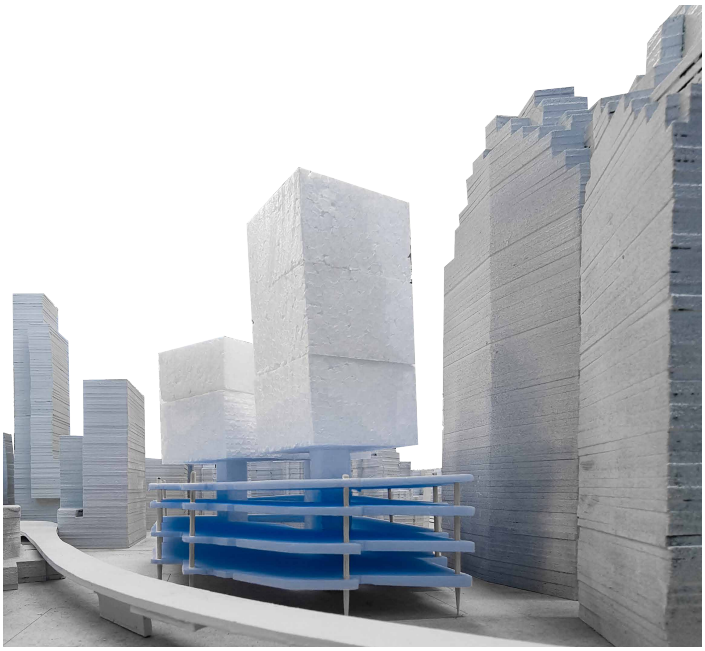




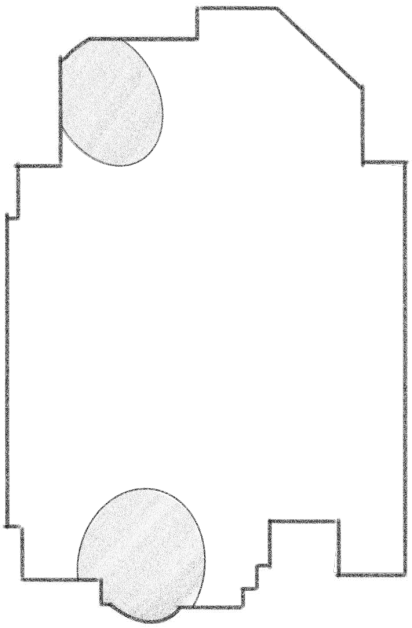
the carved out atrium and places volumes on their pedestals interact in a very interesting way

the layers of the library become visible

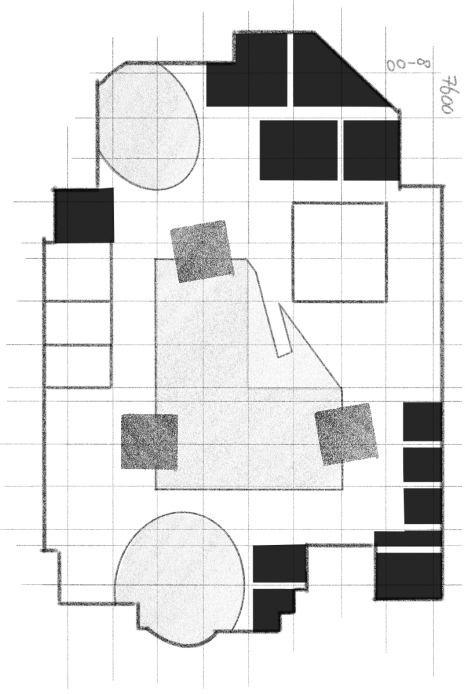
horizontal meets vertical



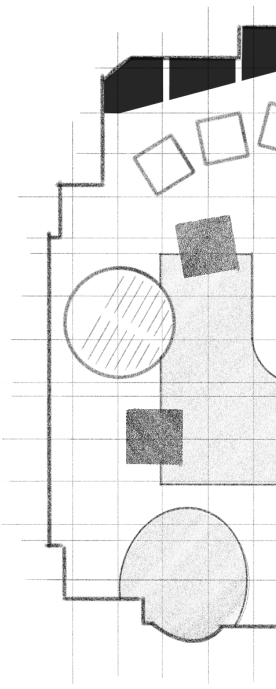
CONCEPT CARVED OUT LIBRARY



ground floor



first floor

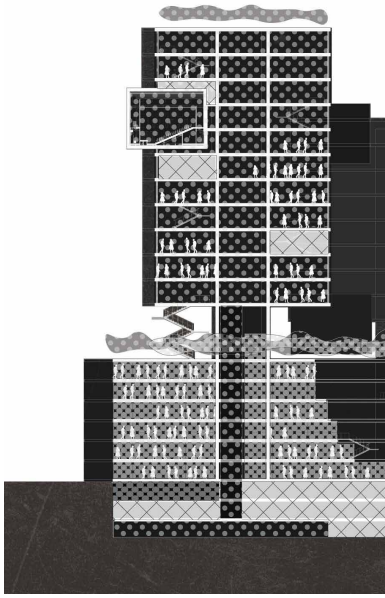


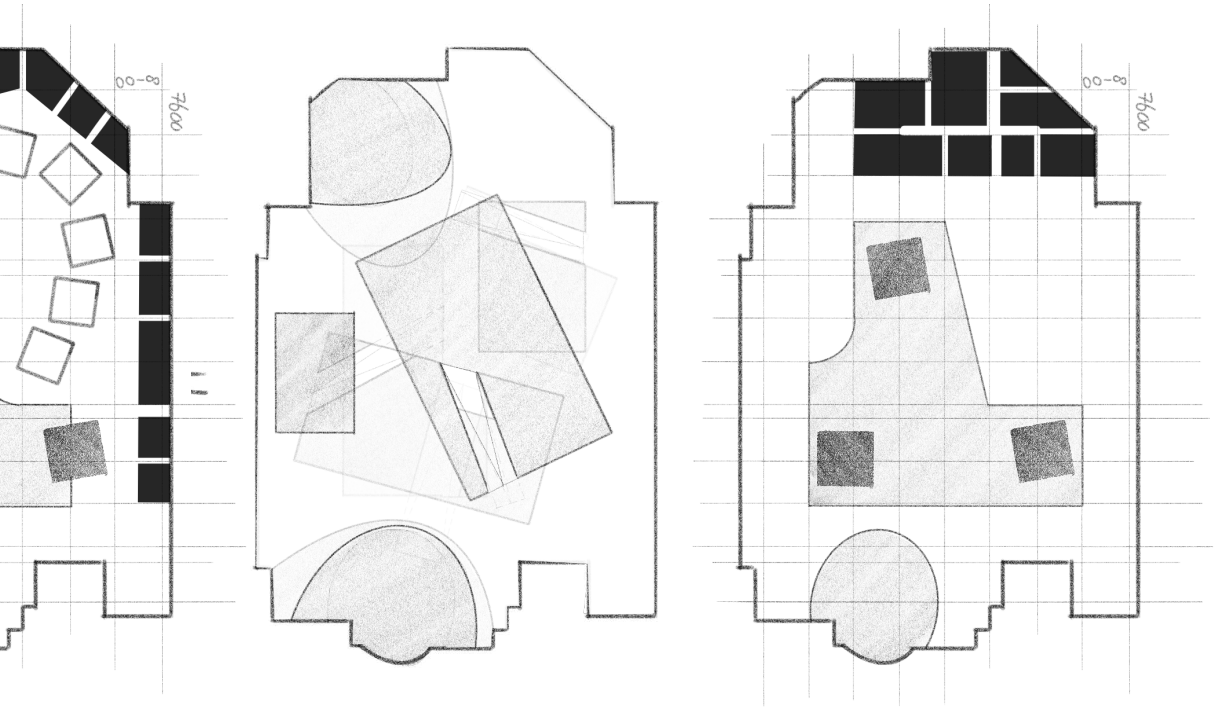
second f

floor plan concept on how the atrium can move upward in different directions

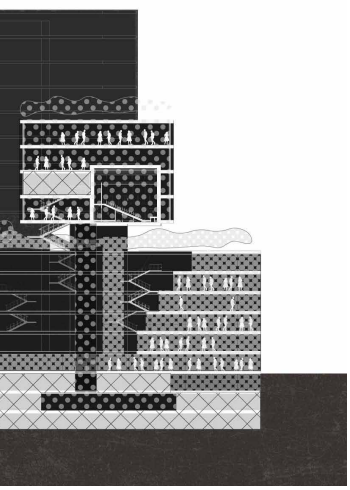
black spaces can become private spaces within the building to still serve the library workers

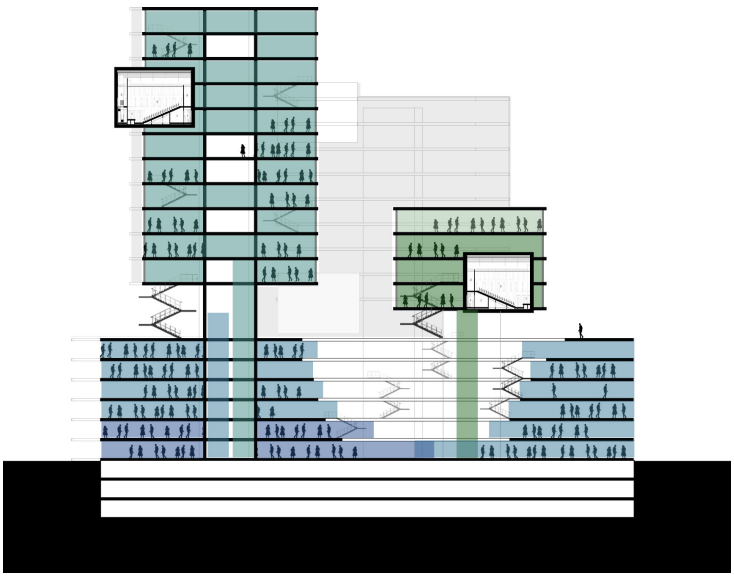
when to be thought of program and private spaces, different levels of privacy alongside each-other can be easily maintained



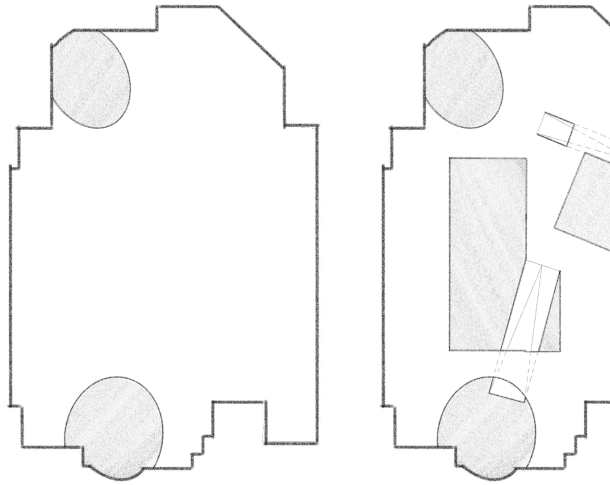


floor *third floor* *fourth floor*



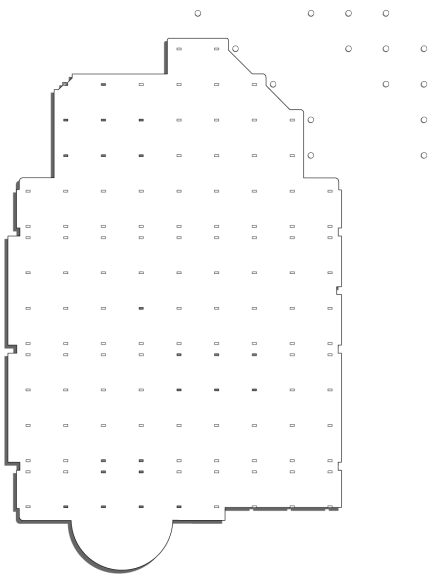


CONCEPT CARVED OUT LIBRARY

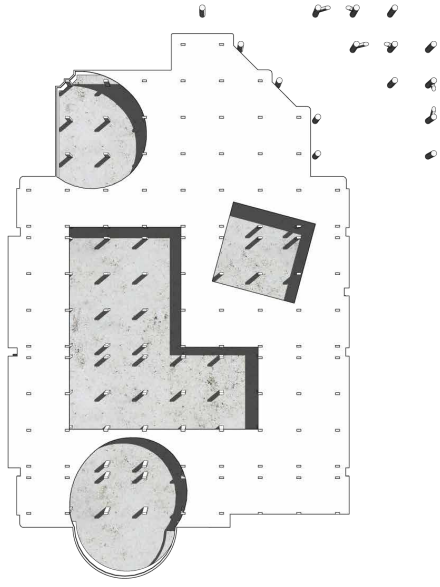


the final proposal for P2 consists of four (excluding the ground floor) floors which are carved out in an alternating manner to create this overlay of different floors

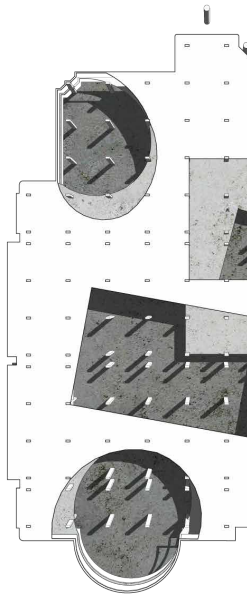
the different lines inside the cavity create movement and make an exciting space



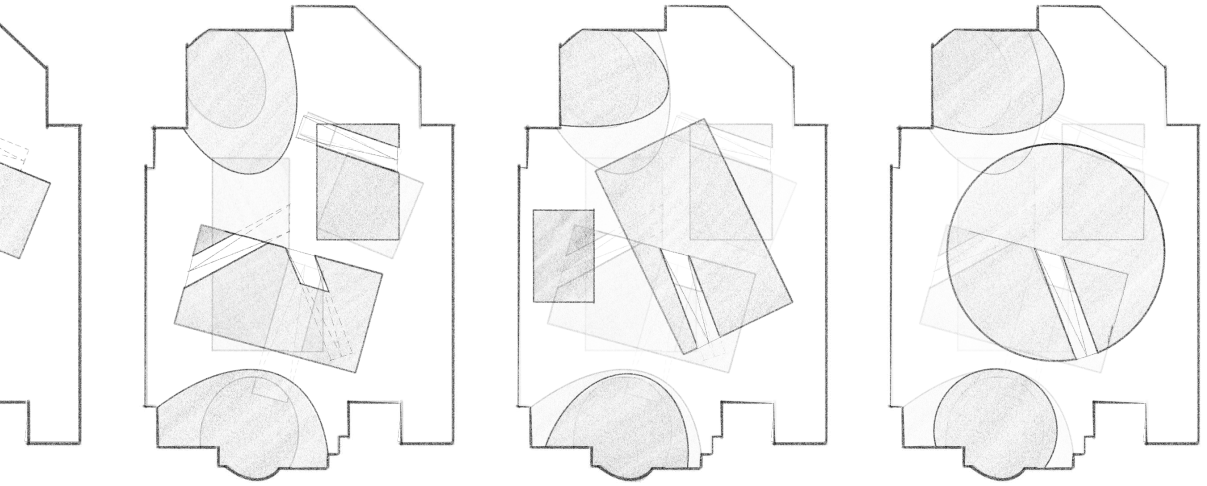
ground floor



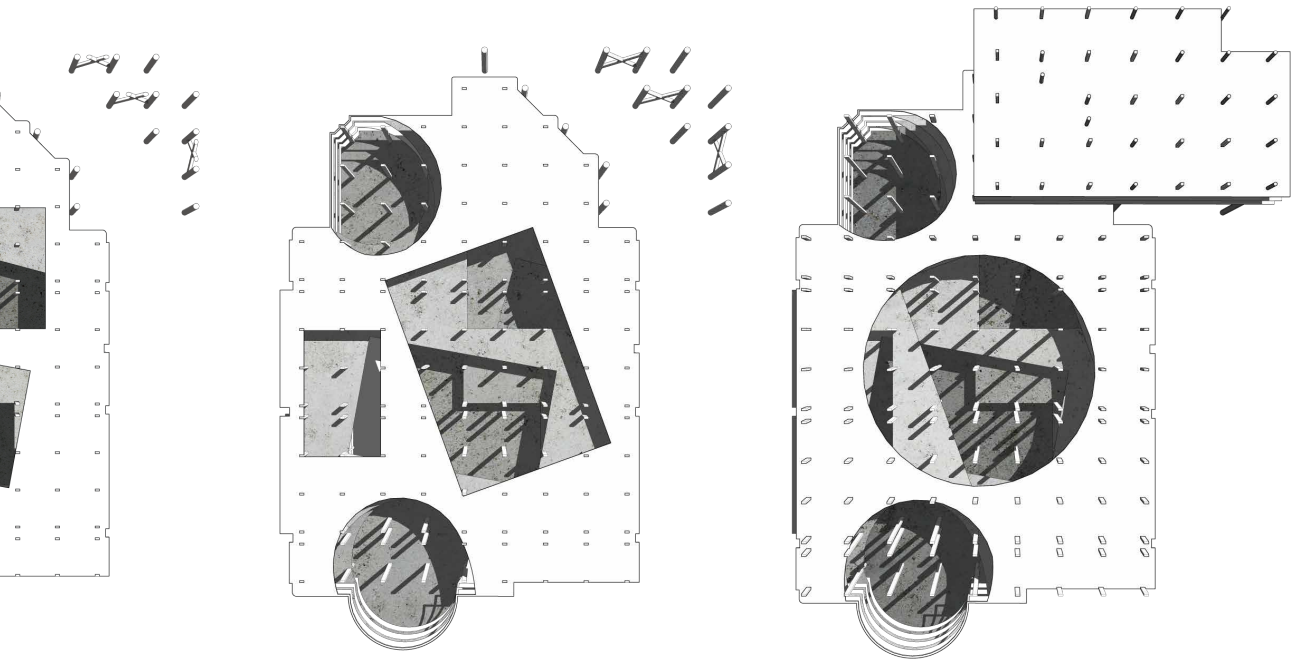
first floor



secon



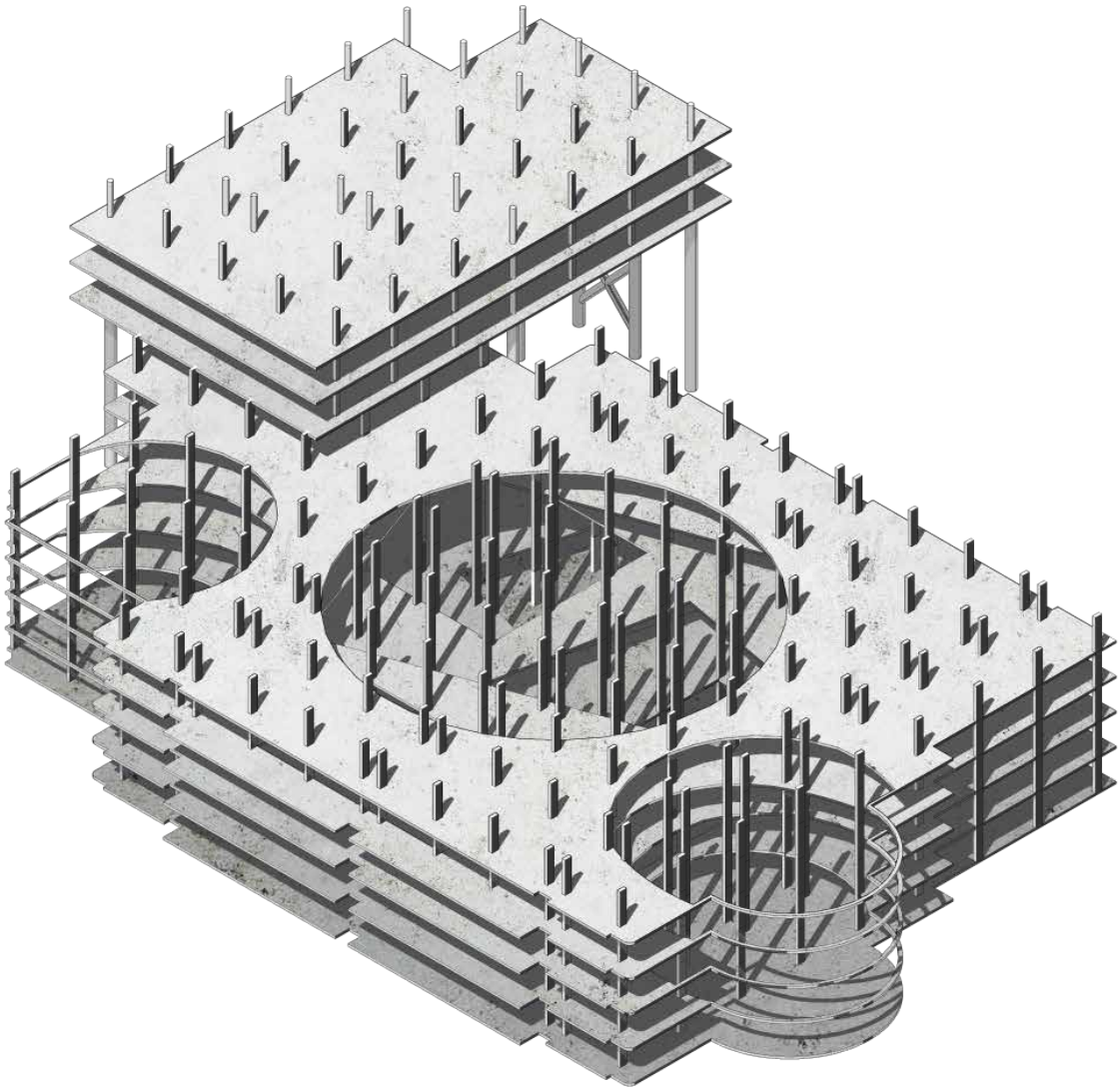
sketches to redesign the moving atrium



d floor

third floor

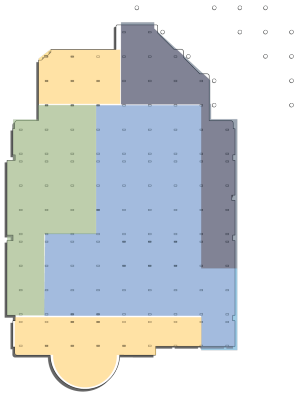
fourth floor



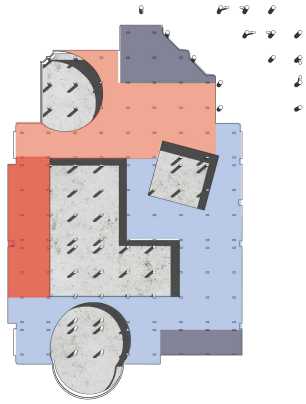
when the floors are cutout, a lot of columns lose their function

this requires more action in the future to research on which column can be taken away or be used in a different way

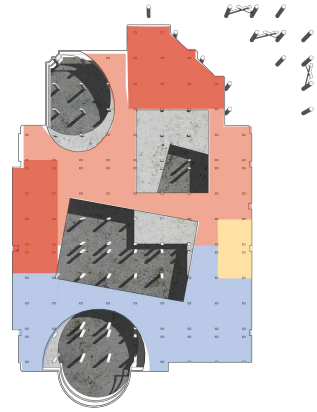
for now the column that are not used, will be left out and removed



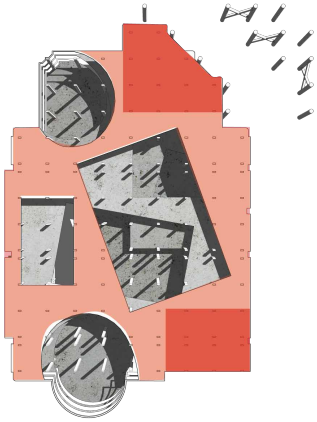
ground floor



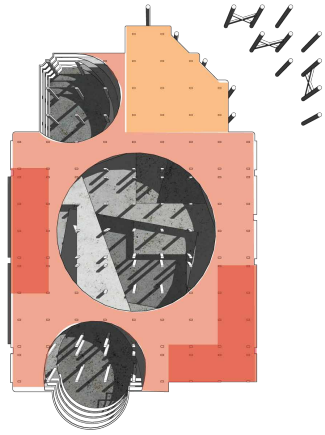
first floor



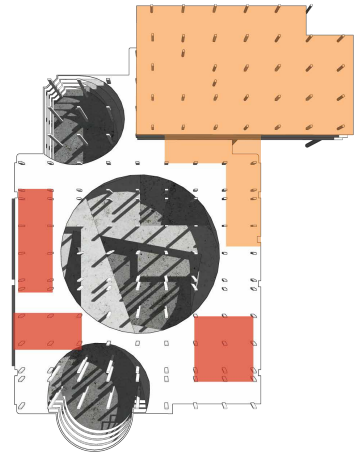
second floor



third floor



fourth floor



fifth floor

the program of the building will be different on the ground level than the following levels

the library is positioned on the ground floor and continues partly on the first and second floor which later is taken over by educational program

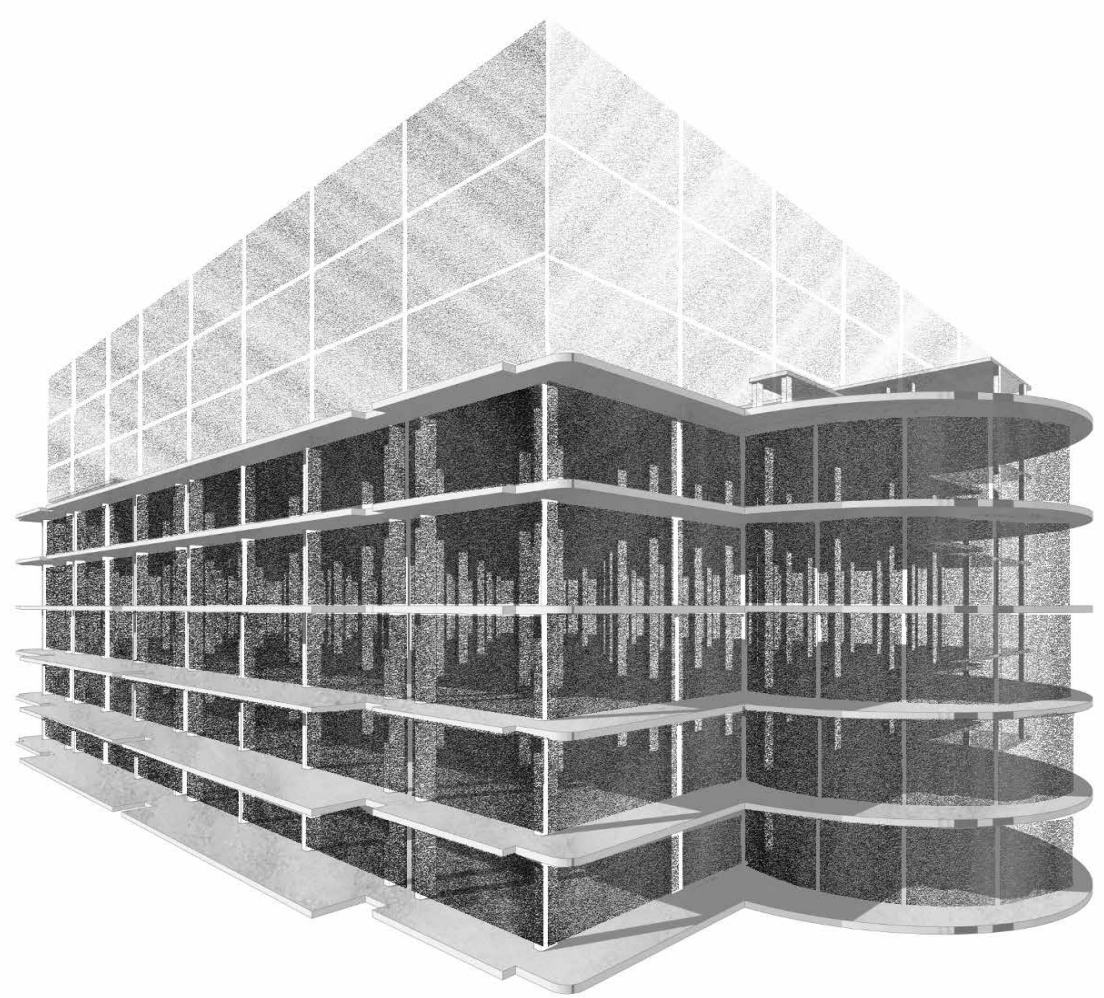
the first concept includes a workshop 'landscape' and is positioned in the extension of the library (orange)

this gives the posibility to have an interesting view upon the city over the metro

library
service / private
entrance / desk
restaurant cafe
class-/lecture room
study / read / work
workshop / making

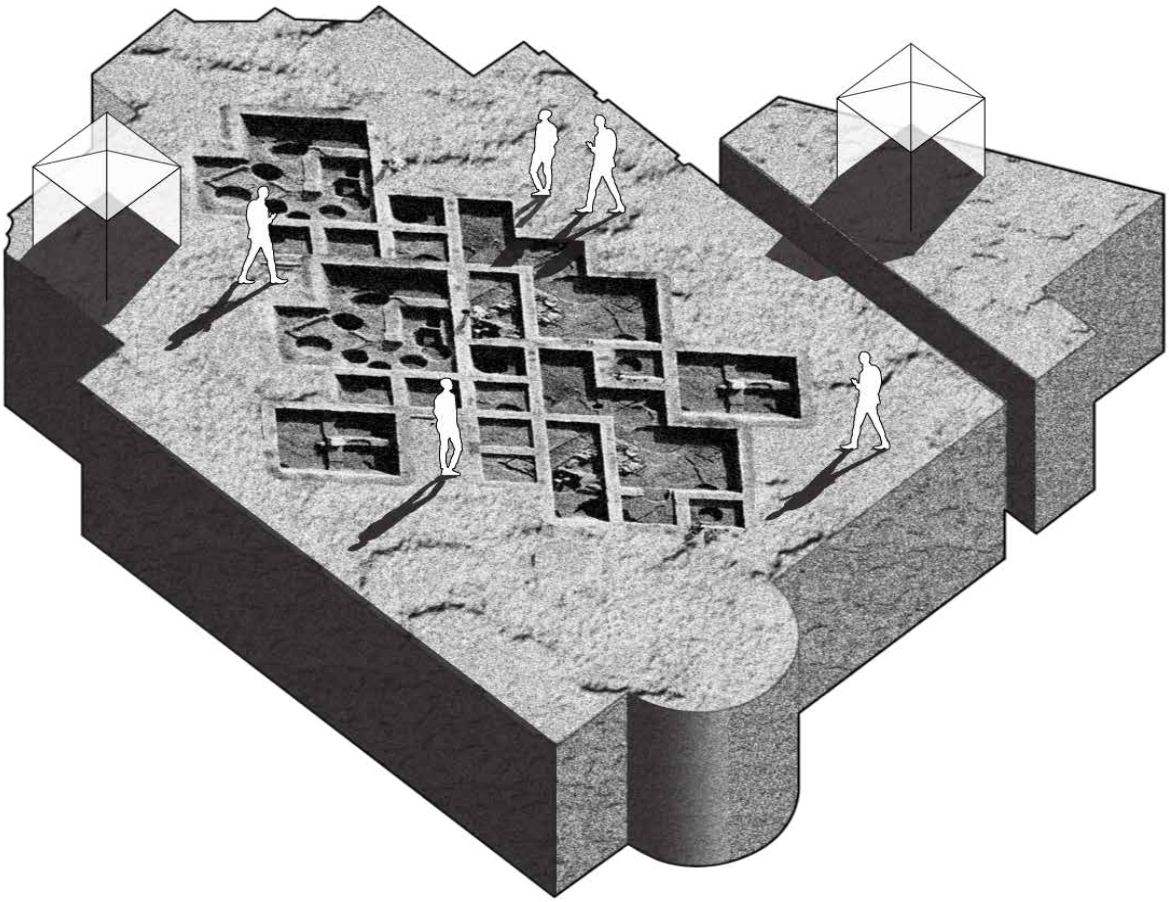
added volume can function as an ‘etalage’ to showcase the existing building with its carved out floors

this simple form tries to not distract from the original structure



the newly added box has to give the illusion of an archeological digging site where all the attention goes to objects which are brought back to the surface

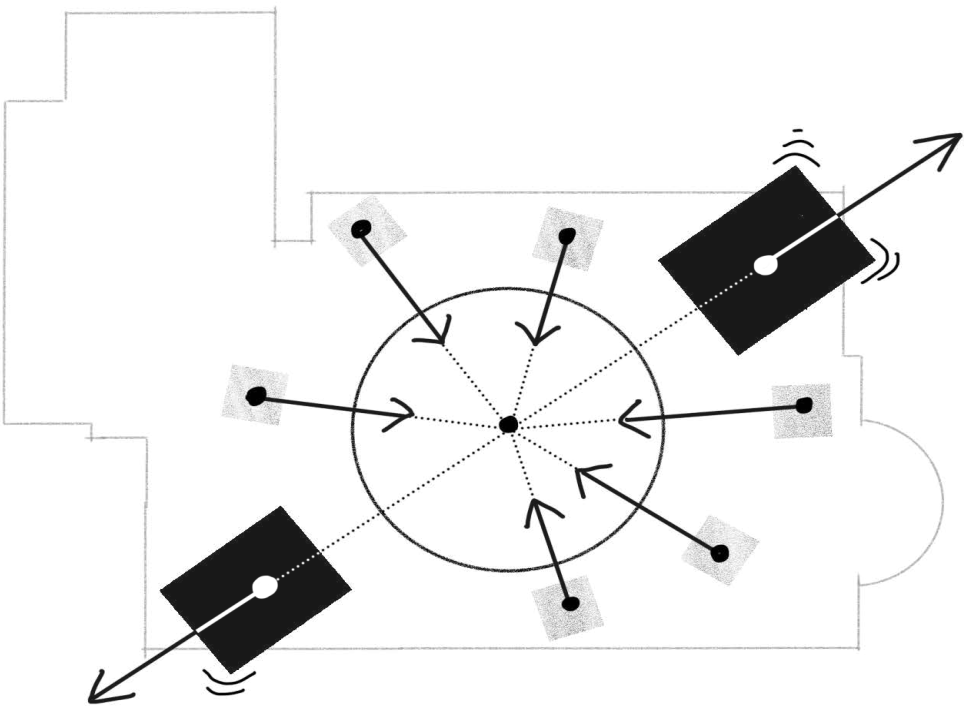
the carving of the library strives to achieve such a thing



CONCEPT PRIVACY & OPENESS

to differientate the “first new floor” (4th floor) from the floors below, inserted volumes are rotated around the looking glass opening

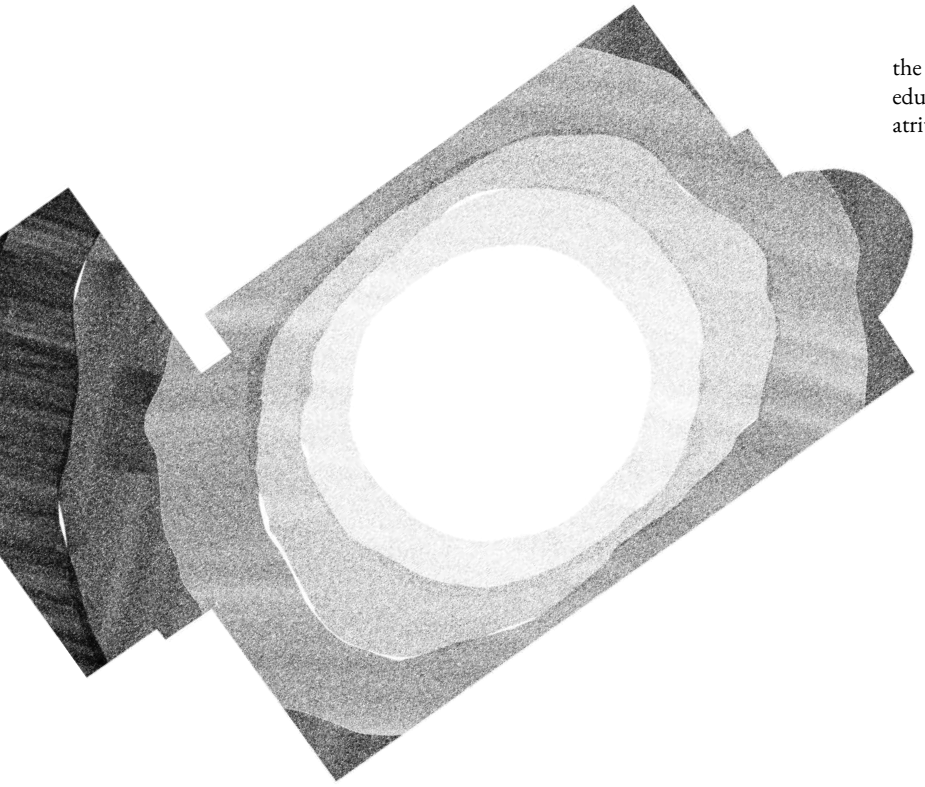
two types of volumes (to use as rooms) are characterized by its internal focus



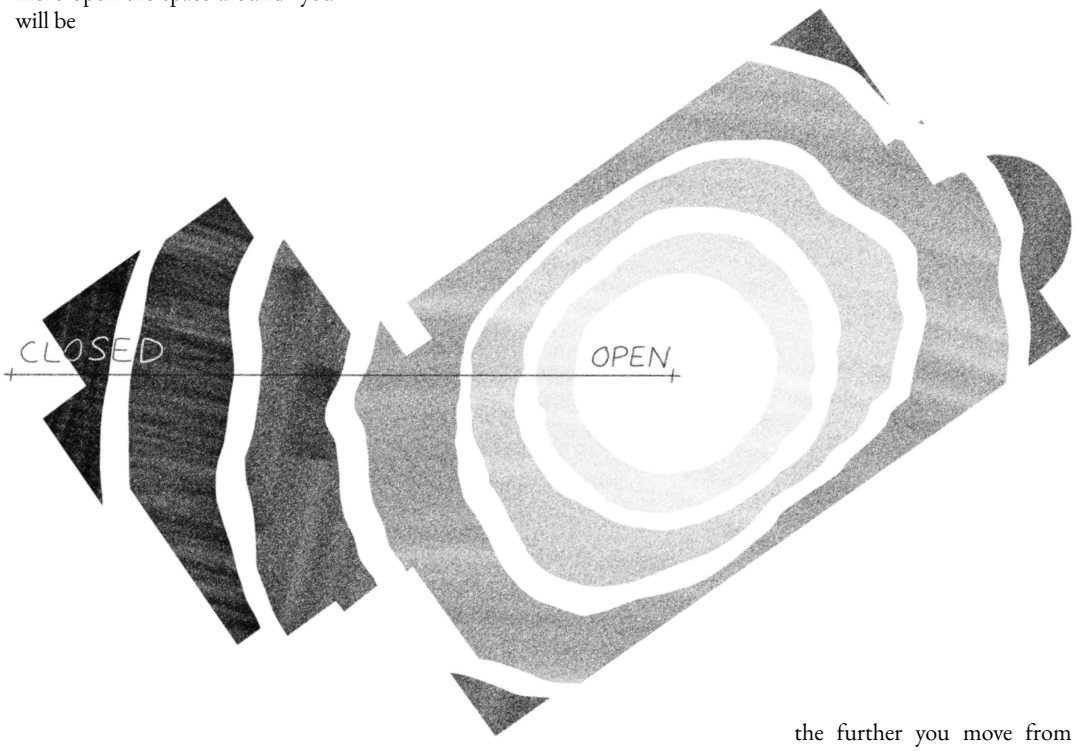
smaller rooms are focused inward by having mostly openings towards the atrium

two large lecture rooms are pushed out of the added ‘etalage’ volume which makes them more present all around the building

the intimacy levels of the educational floors are based on the atrium in the heart of the building

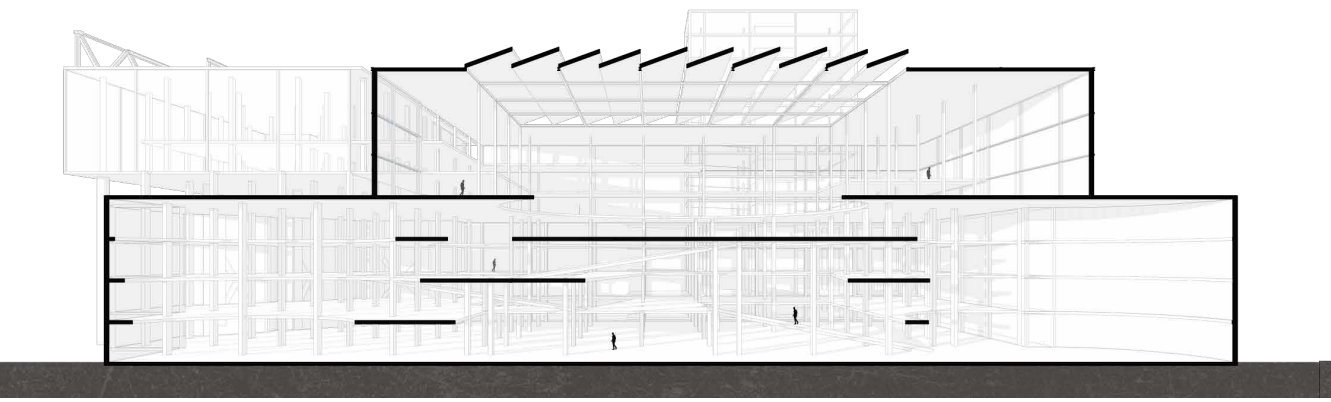


the closer you get to the atrium, the more open the space around you will be



the further you move from the atrium, the more intimate you can be

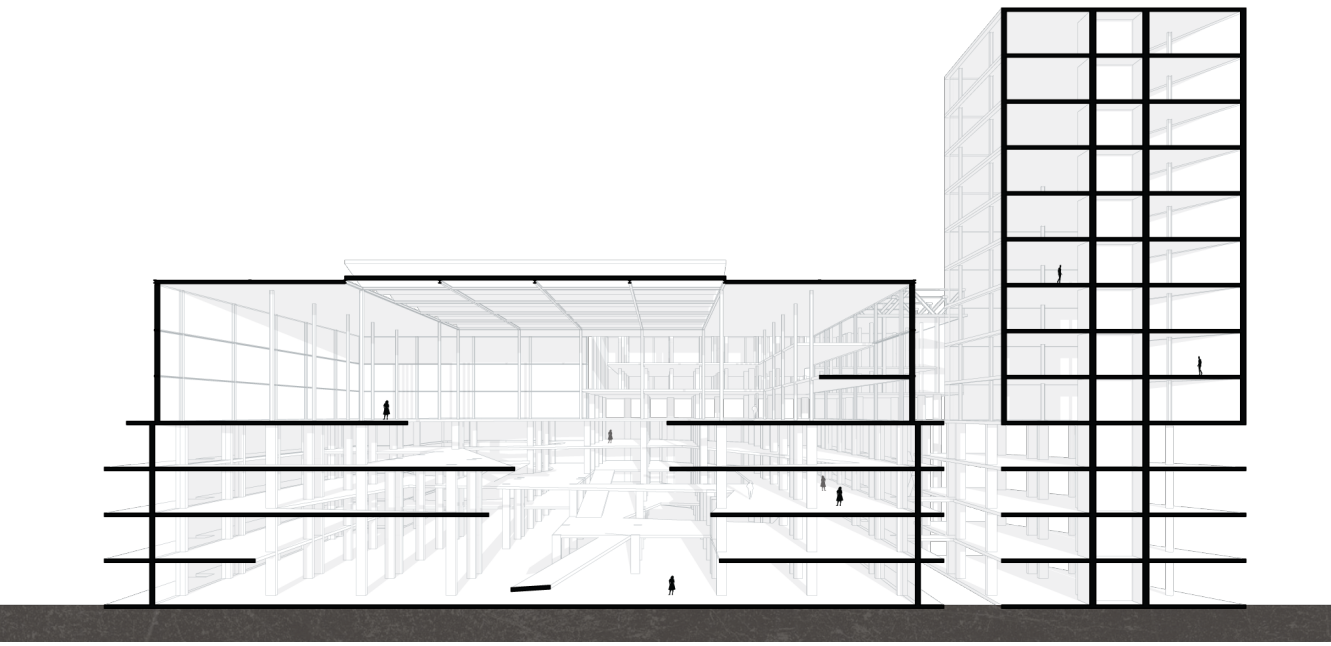
CONCEPT SECTIONS



concept sections of the proposal for the P2 pin-up which shows the hovering volume of the student housing

the etalage box cover the heart of the building

horizontal movement is a huge quality in the existing building and the atrium allows for the vertical connection to take place

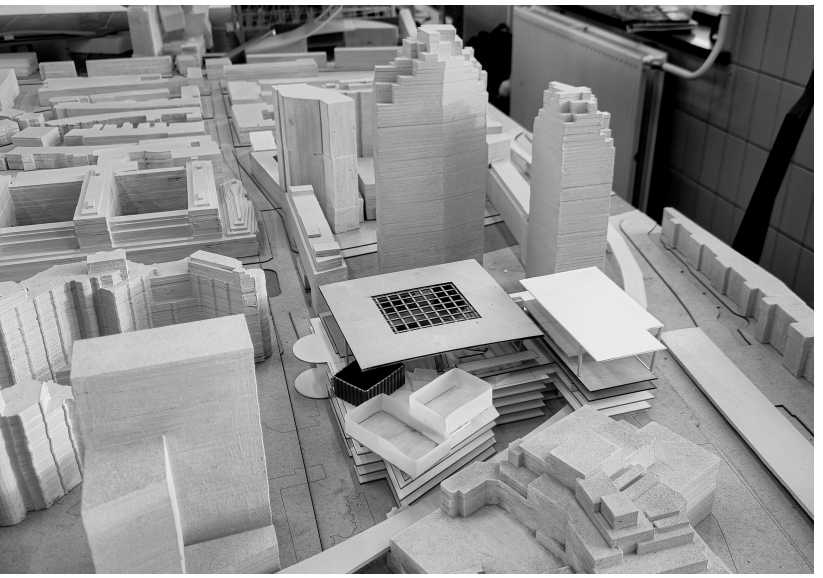


the vertical element, the tower, does not enhance the whole complex

in contrary, it becomes this alien alongside the volume on top of the library

other than giving an opportunity for supplying housing, the vertical volume does not do the whole justice

CONCEPT DESIGN MODEL

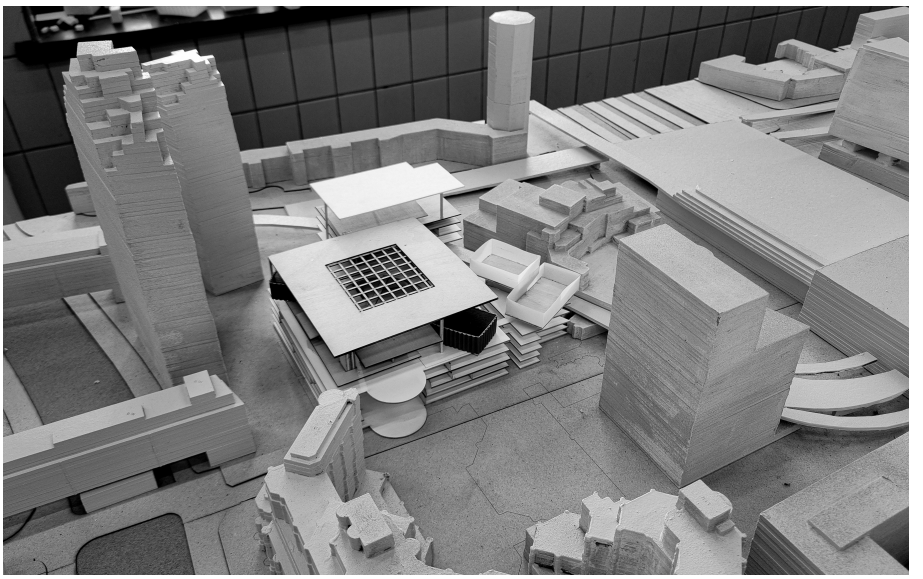


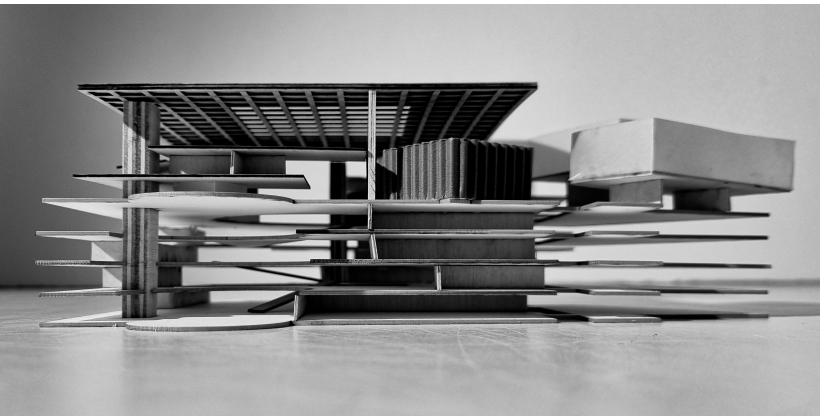
the final proposal consists of an added volume on top of the existing floors of the library

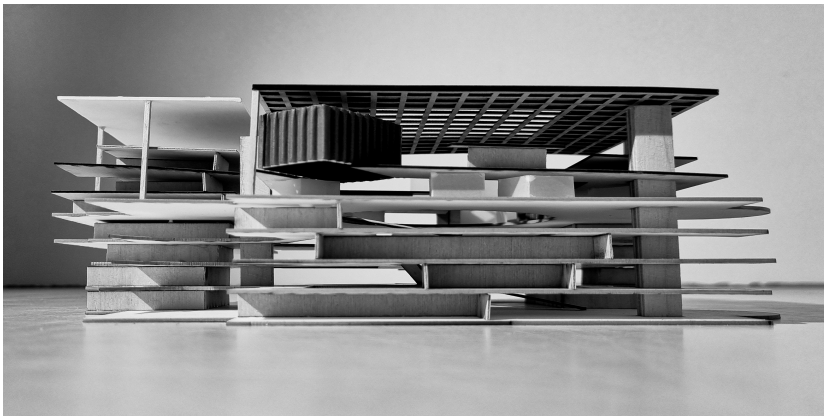
the existing facade is removed completely and replaced by a curtain wall of polycarbonate

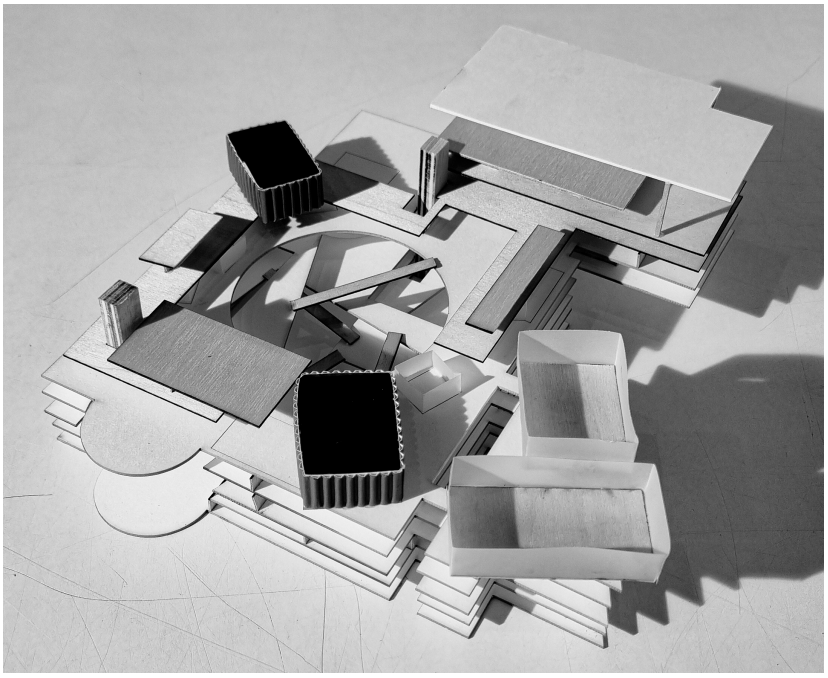
two cores pierce through the existing floors to lead the users into the new volume of the upper floors

the roof consists of a grid structure covered by a slab, except for the centre where the grid is filled with glass to give light to the atrium

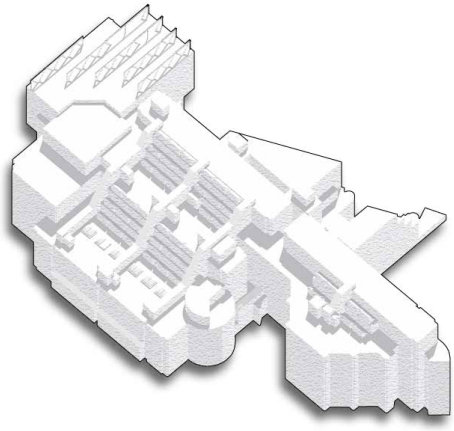




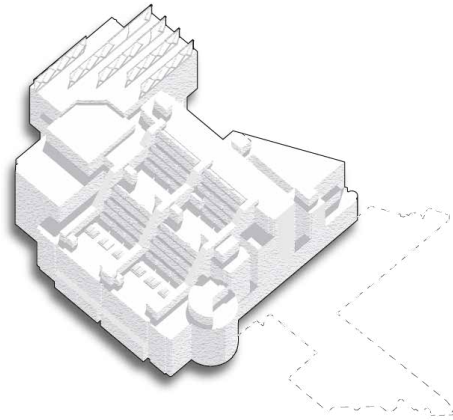




P2



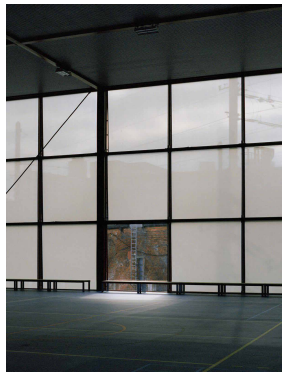
EXISTING



REMOVAL



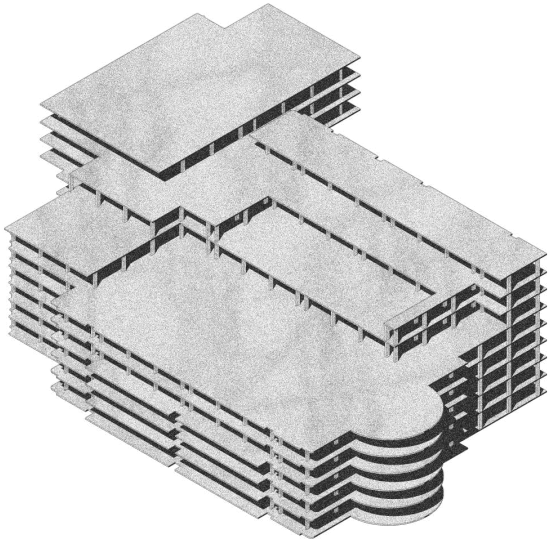
Melopee School
Xaveer De Geyter Architects



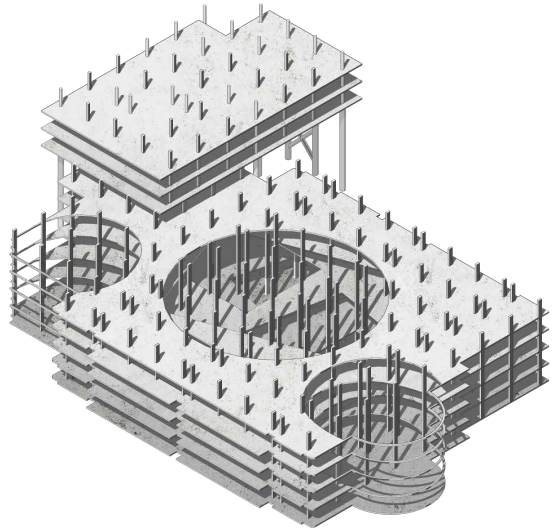
Terre-Neuve
MDW Architecture



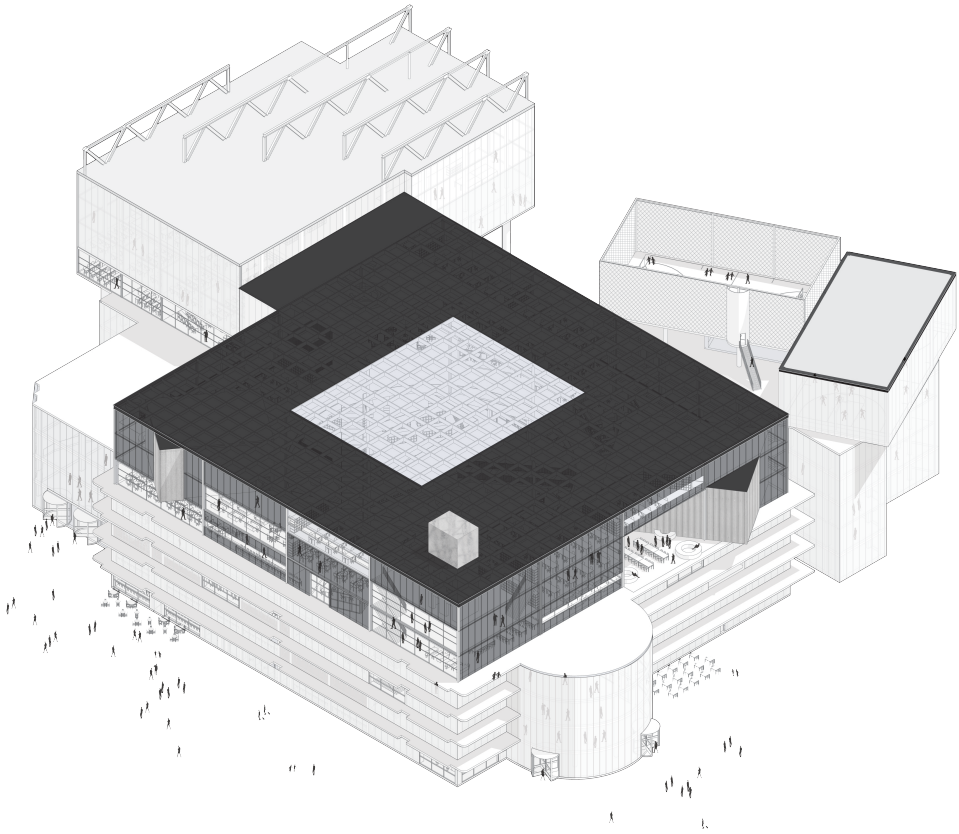
Theater Gutersloh
PFP Architekten



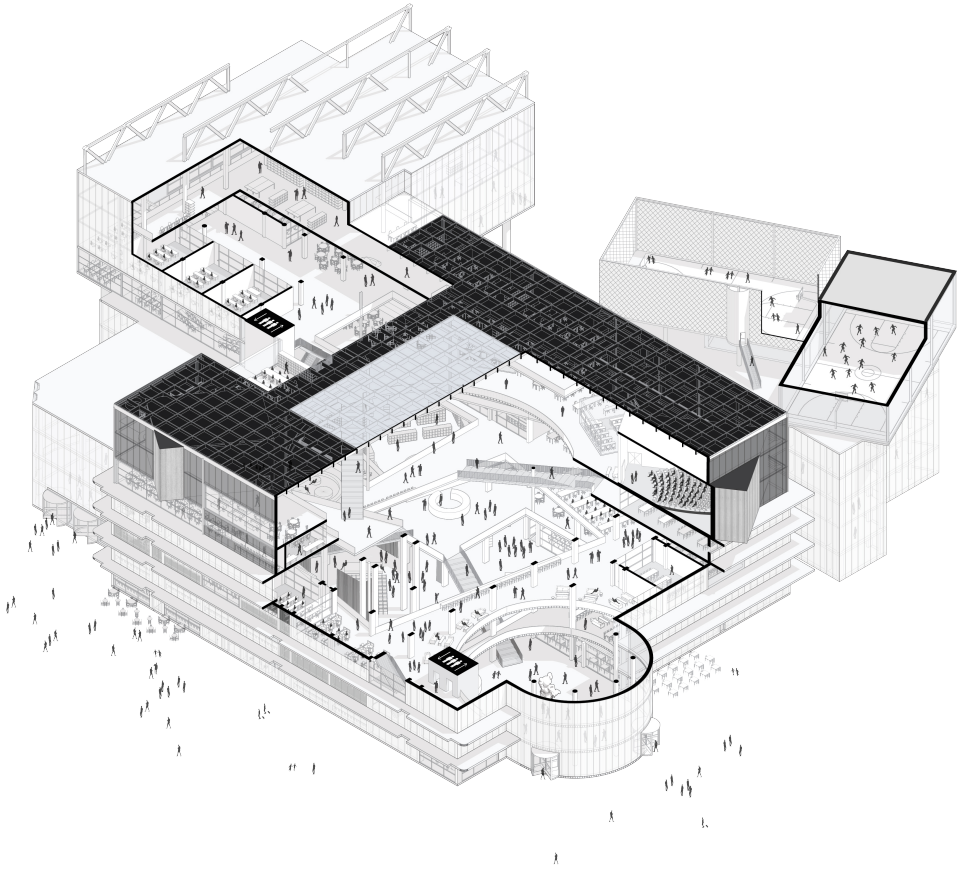
STRIPPED FLOORS



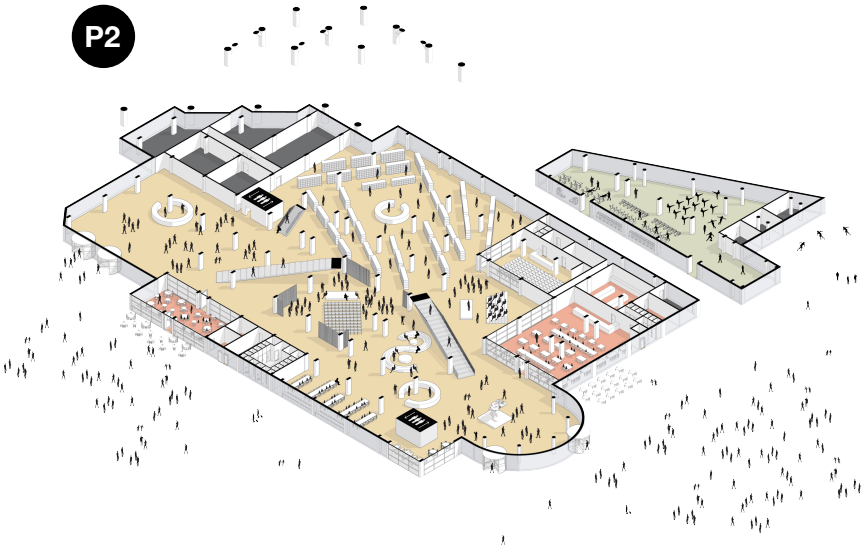
CARVING THE EXISTING



P2 PROPOSAL

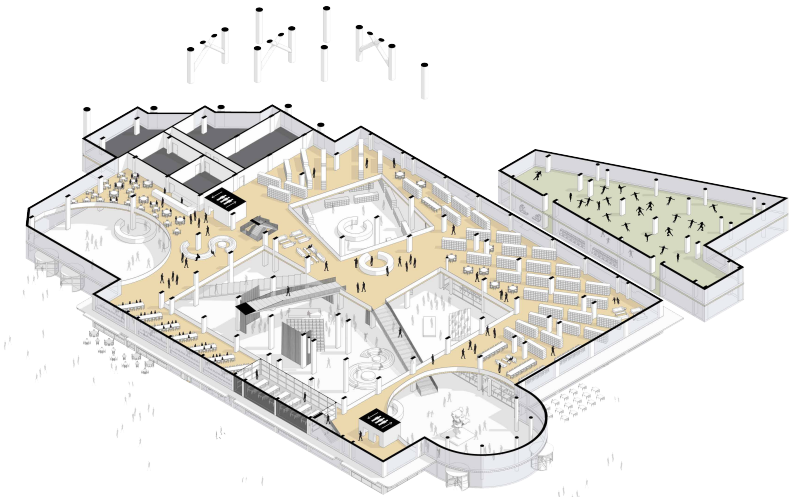


P2



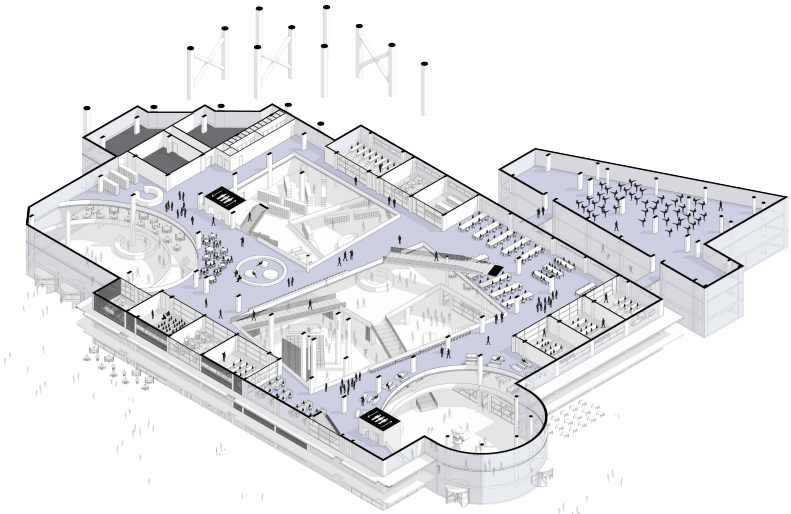
LEVEL 00

RESTAURANT / BAR	695 m²
SERVICE / STORAGE	625 m²
SPORTS	800 m²
LIBRARY	2611 m²



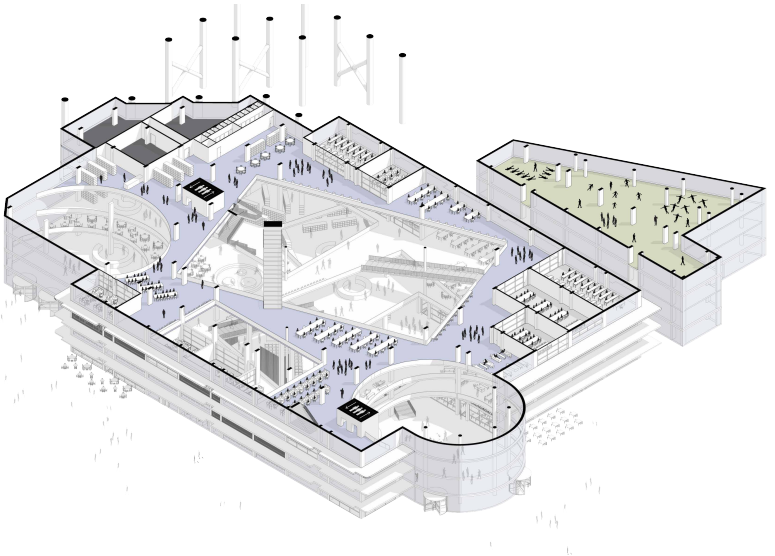
LEVEL 01

SERVICE / STORAGE	510 m²
SPORTS	800 m²
LIBRARY	2611 m²



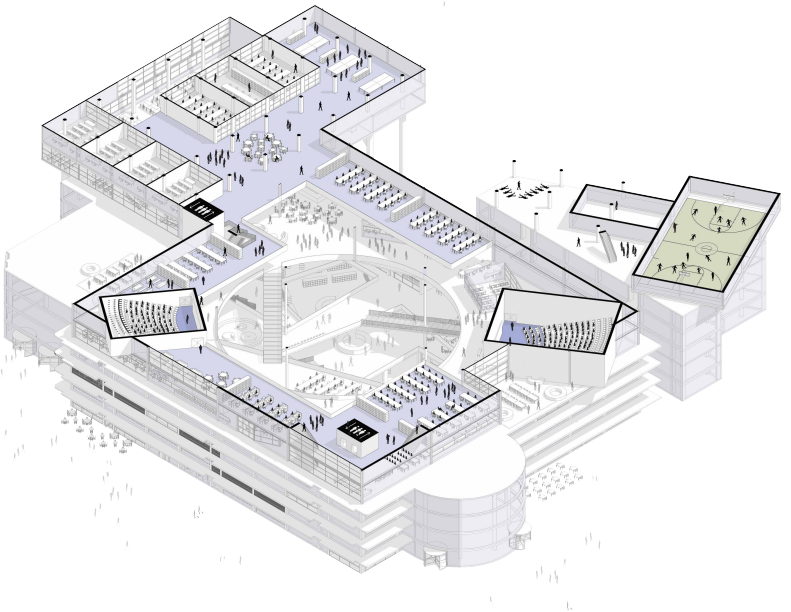
LEVEL 02

EDUCATIONAL	3520 m²
SERVICE / STORAGE	365 m²
SPORTS / EVENTS	800 m²



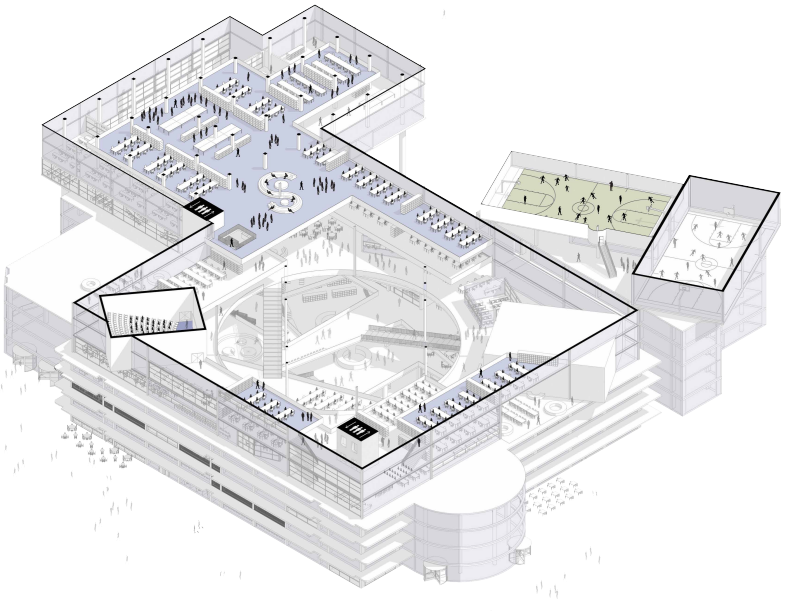
LEVEL 03

	SERVICE / STORAGE	365 m²
	SPORTS	800 m²
	EDUCATIONAL	3210 m²



LEVEL 05

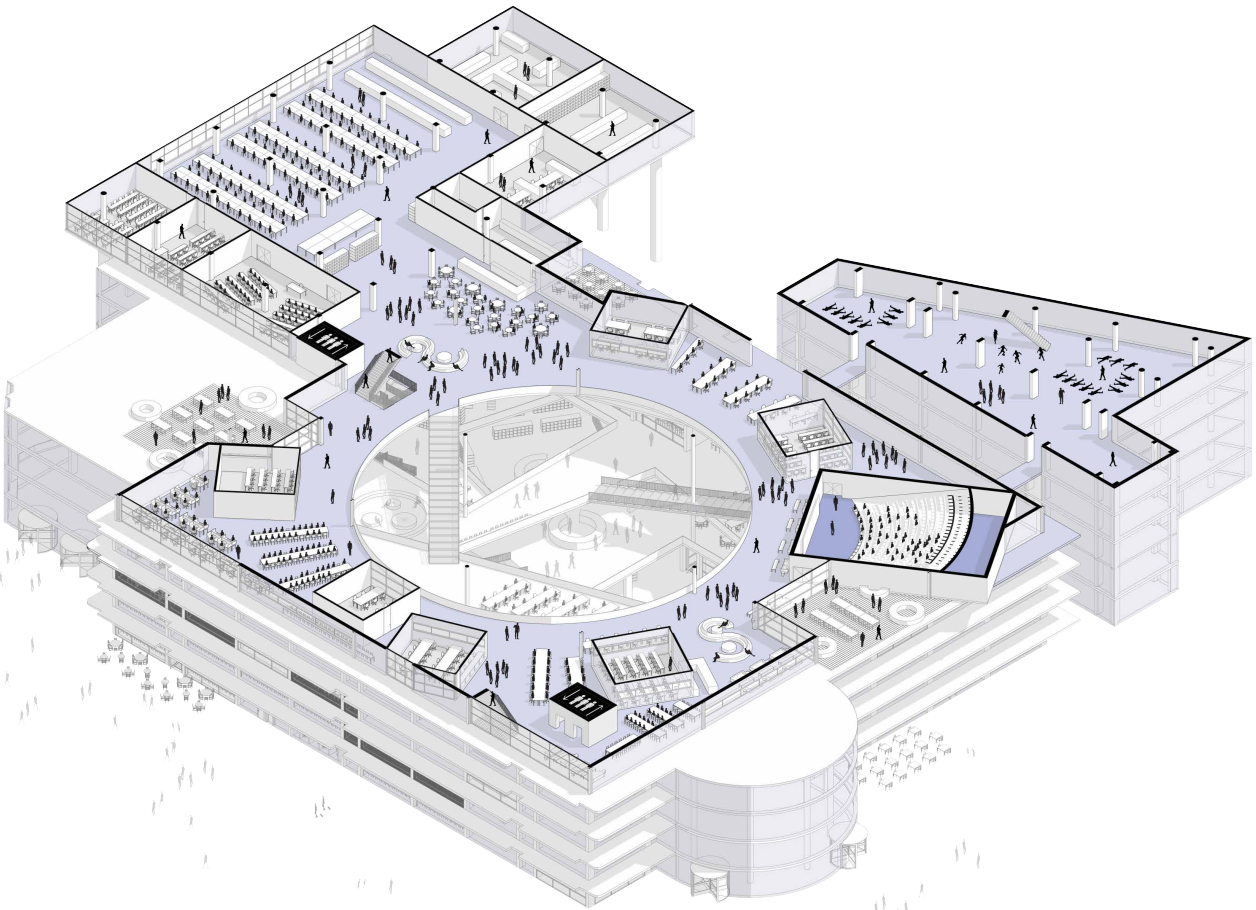
	SPORTS	800 m²
	LECTURE HALL	205 people
	EDUCATIONAL	3300 m²



LEVEL 06

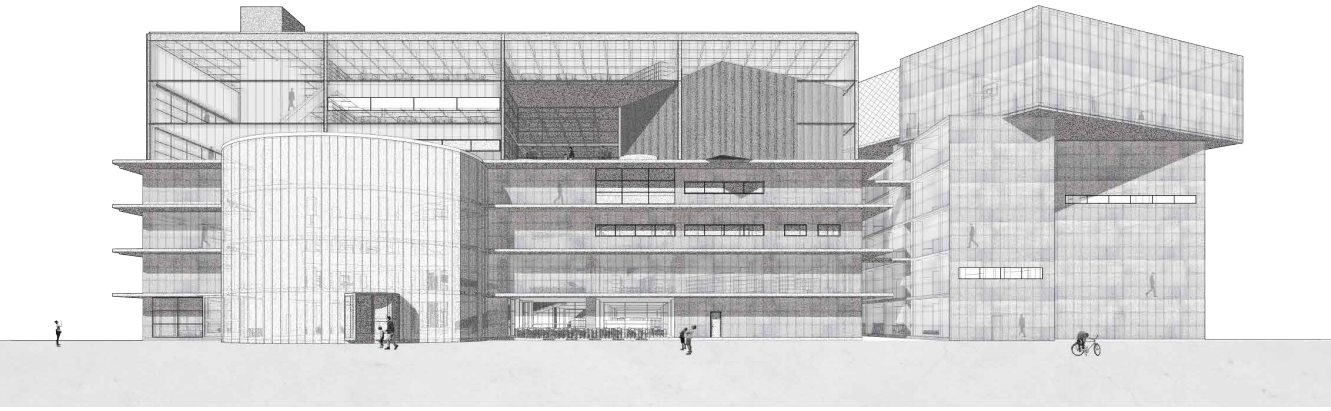
	SPORTS	800 m²
	LECTURE HALL	205 people
	EDUCATIONAL	2095 m²

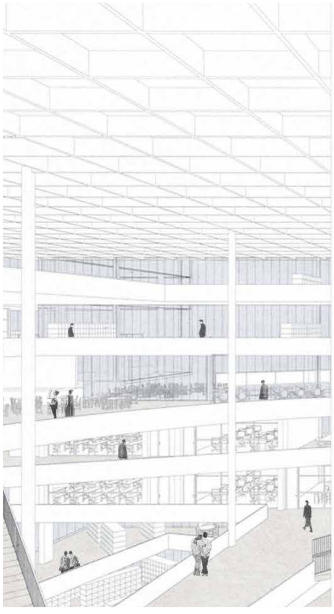
P2



LEVEL 04

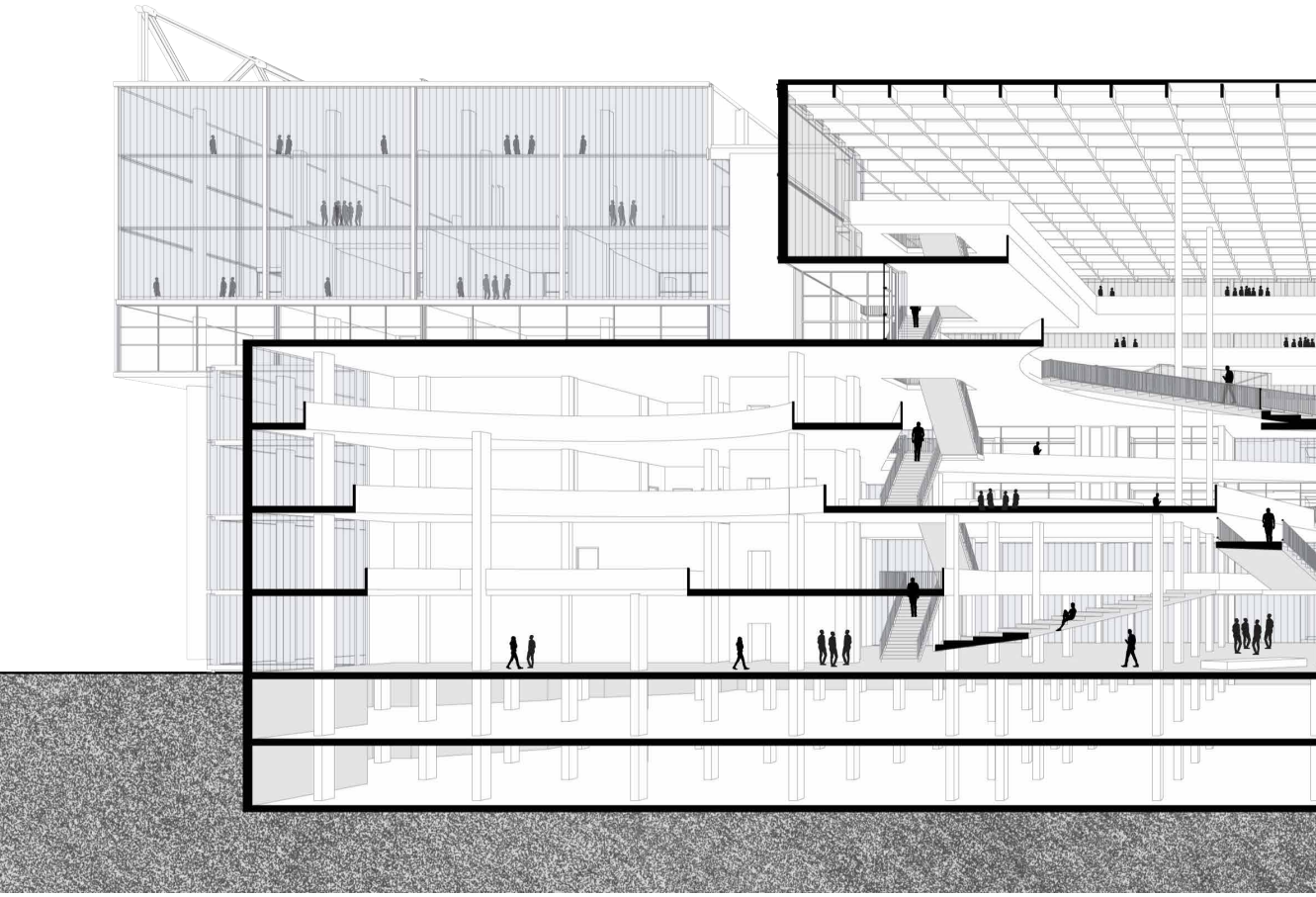
LECTURE HALL	360 people
EDUCATIONAL	6070 m²
SERVICE / STORAGE	110 m²
SPORTS / EVENTS	800 m²

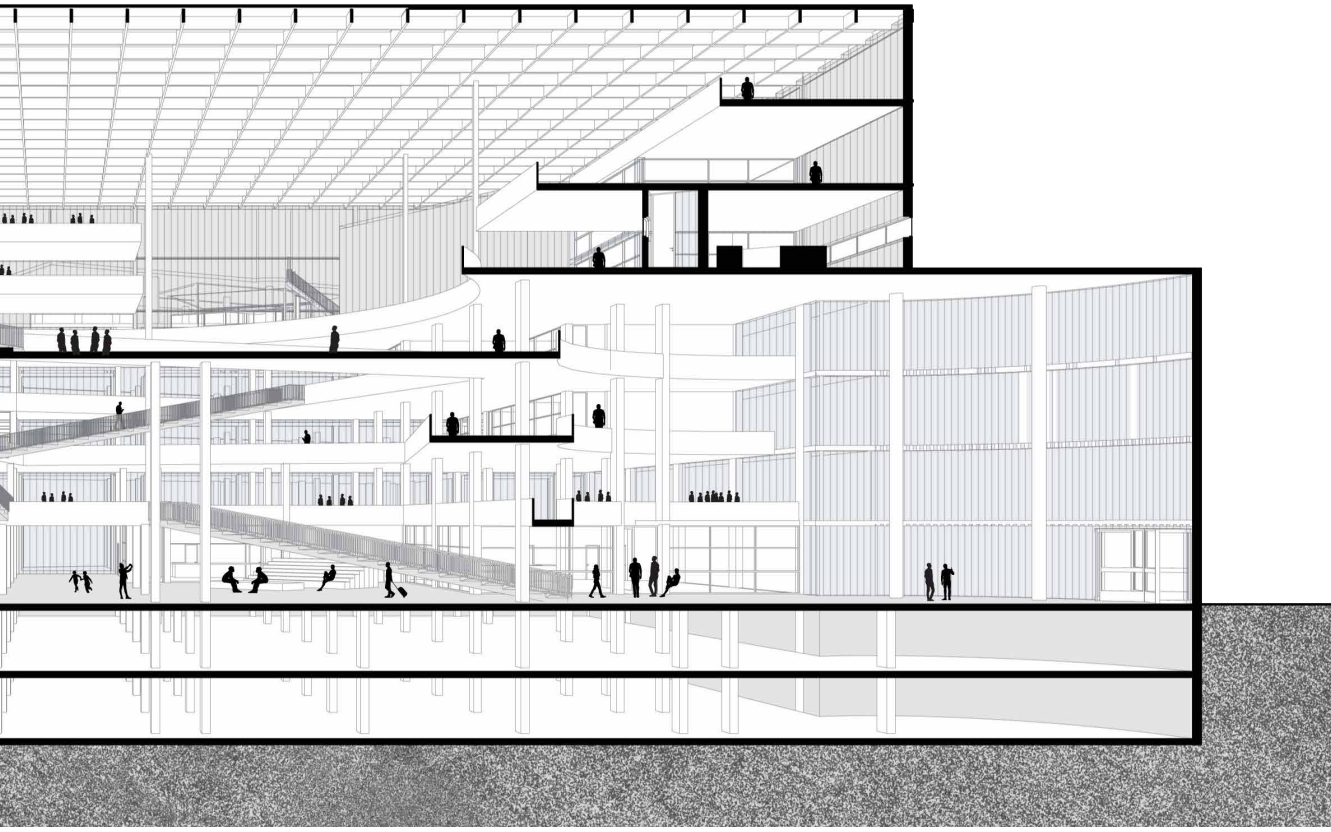






P2





VALUES OCCUPANCY + VACANCY

a key aspect of my design proposal is the use of vacancy within the city of The Hague

as shown by studio RAAAF in their Venice Biennale exhibition, an enourmous amount of objects in the Netherlands are vacant

the city of The Hague wants to become the 'new manhattan of The Netherlands' as a result of the need to densify the cityscape

the use of land becomes more and more profit-led which also results in more high-rise as this uses less land but allows for more appartments to be sold and rented-out

I do understand the need for high-rise and am concience of the fact that economic drivers are incredibly dominant in this day and age

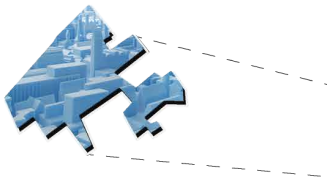
nevertheless, this does not mean existing buildings should be demolished to make place for high-rise development

existing buildings, up until a certain scale, can be re-used so materials are not going to waste, which is also a source of income

in addition, my architectural design principles do not match the high-rise culture, due to its lack of character as well as the dominant stance taken by these objects

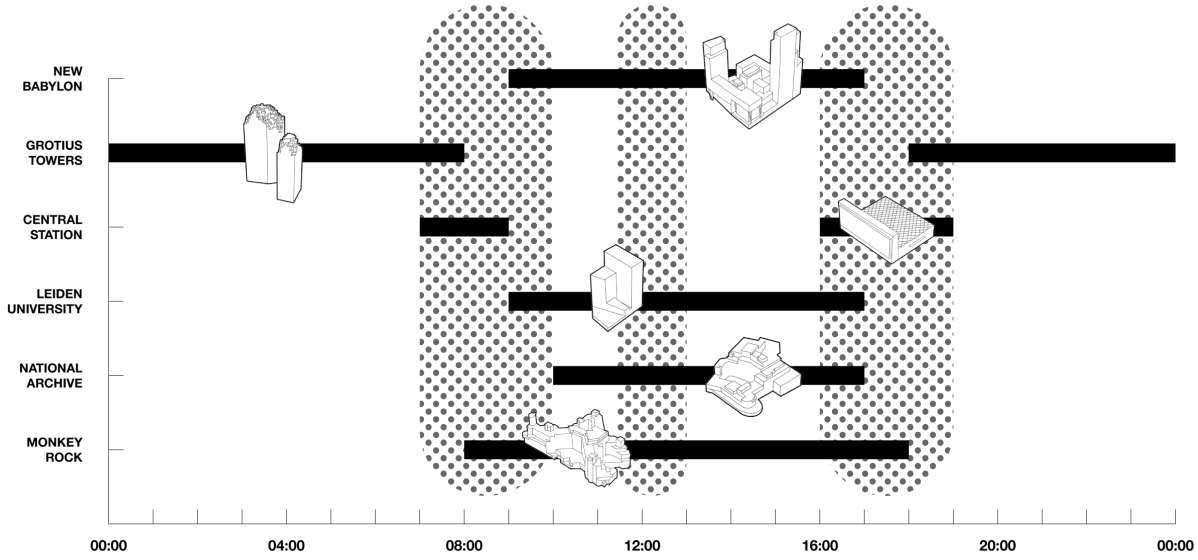
another property of high-rise which does not match my vision of a 21st century campus, are the small floor areas used compaired to low-/mid-rise buildings

larger floor areas allow for better interaction due to the possibility of housing more variated program on one floor, which I think is crucial for a healthy study environment



THE HAGUE		
%	100	2
objects	297.930	4160
m²	37.760.650	688.790

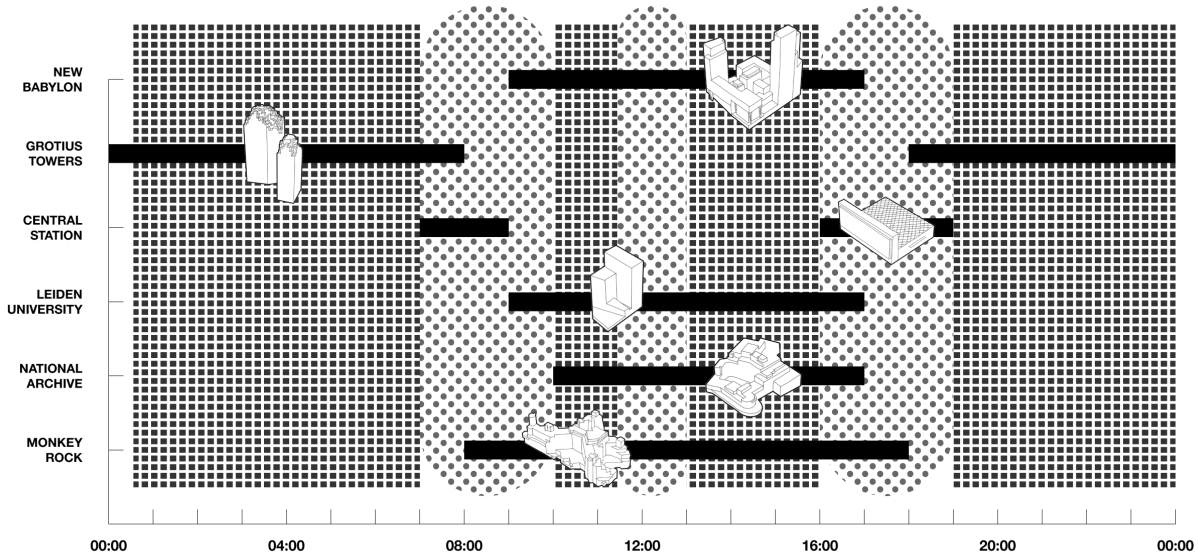


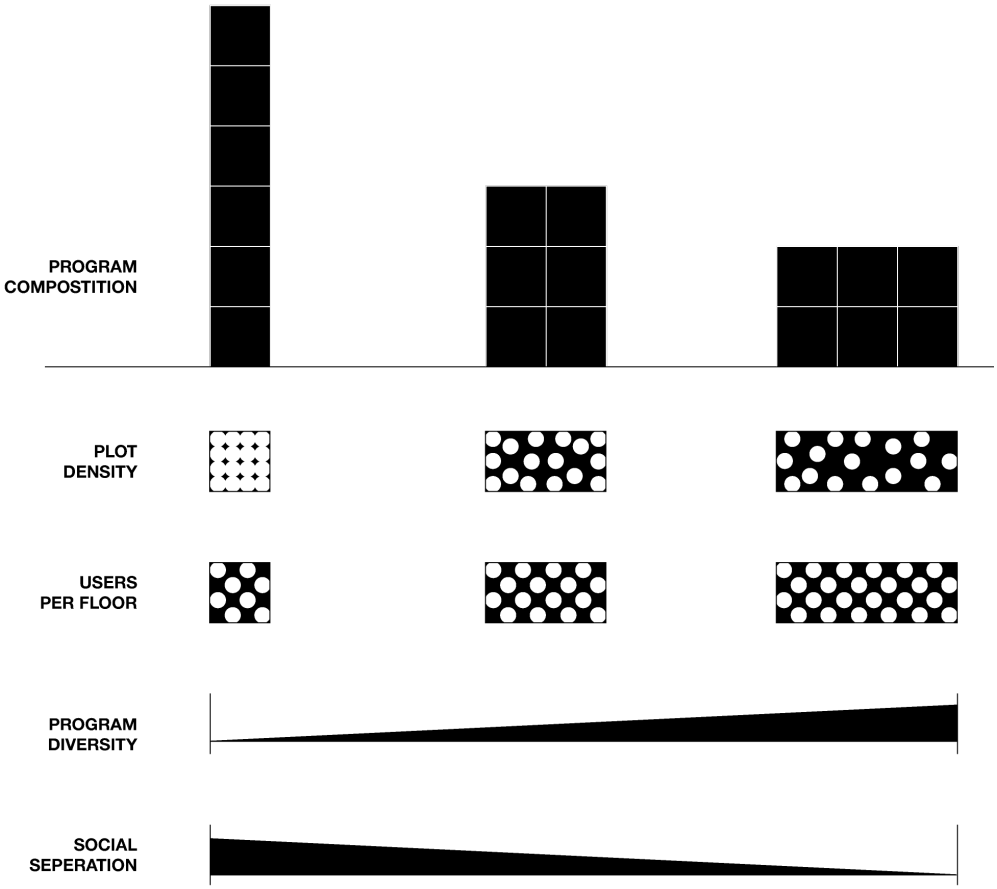


draft diagram of current (estimated) occupancy within the area around the library

the moment throughout the day where the outdoor spaces can/are used in the area are indicated in dots

the squared fills show the most empty moments throughout the day of the outdoor spaces which have potential to be used more often by adding specific program

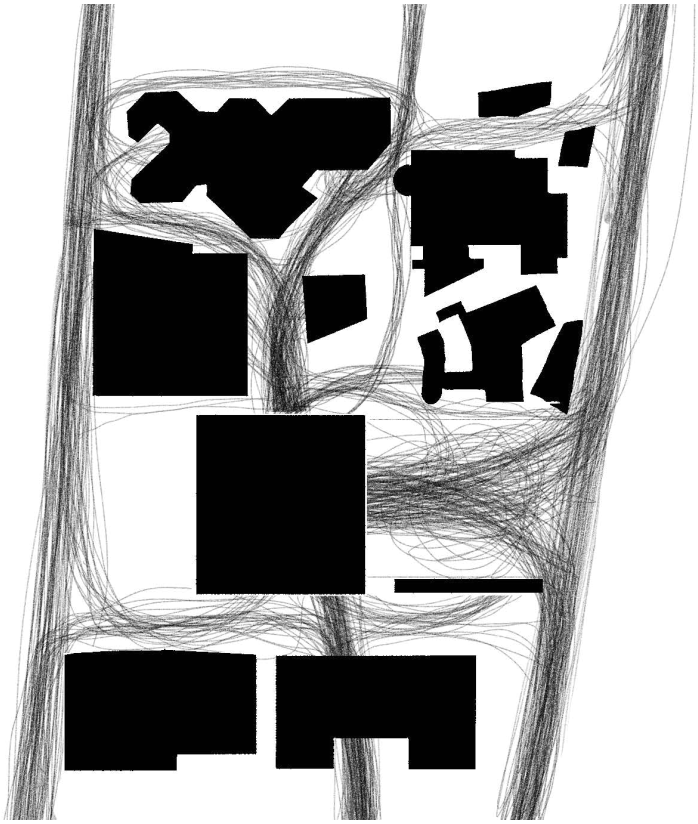




draft of diagram to show how my contradictory approach (to the design brief) enhances key aspects of the campus

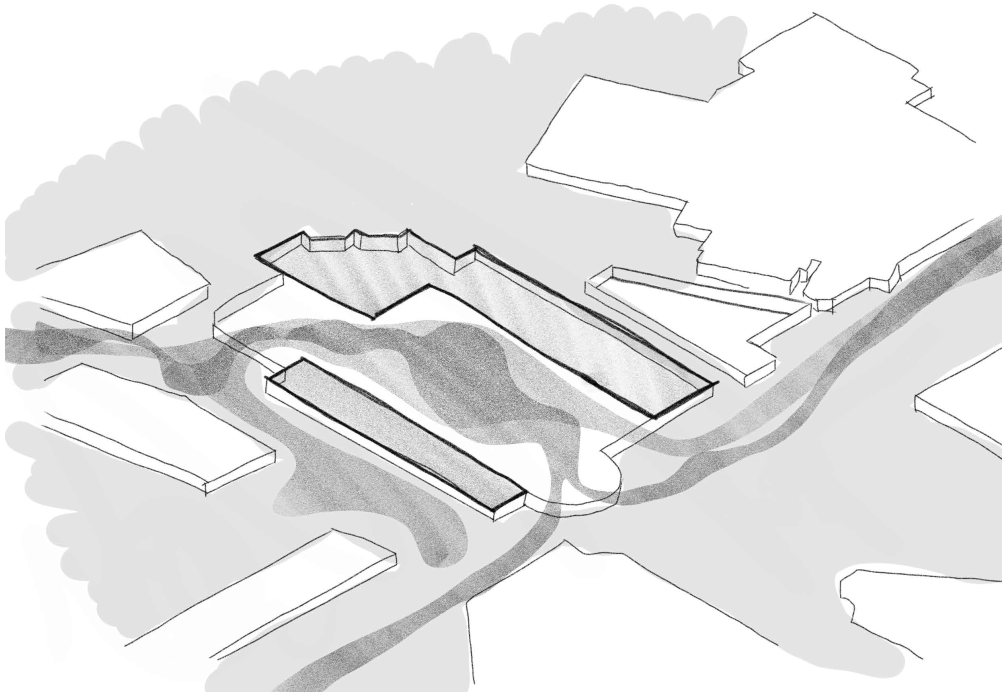
program diversity is followed by more users per floor and stimulates more social interaction

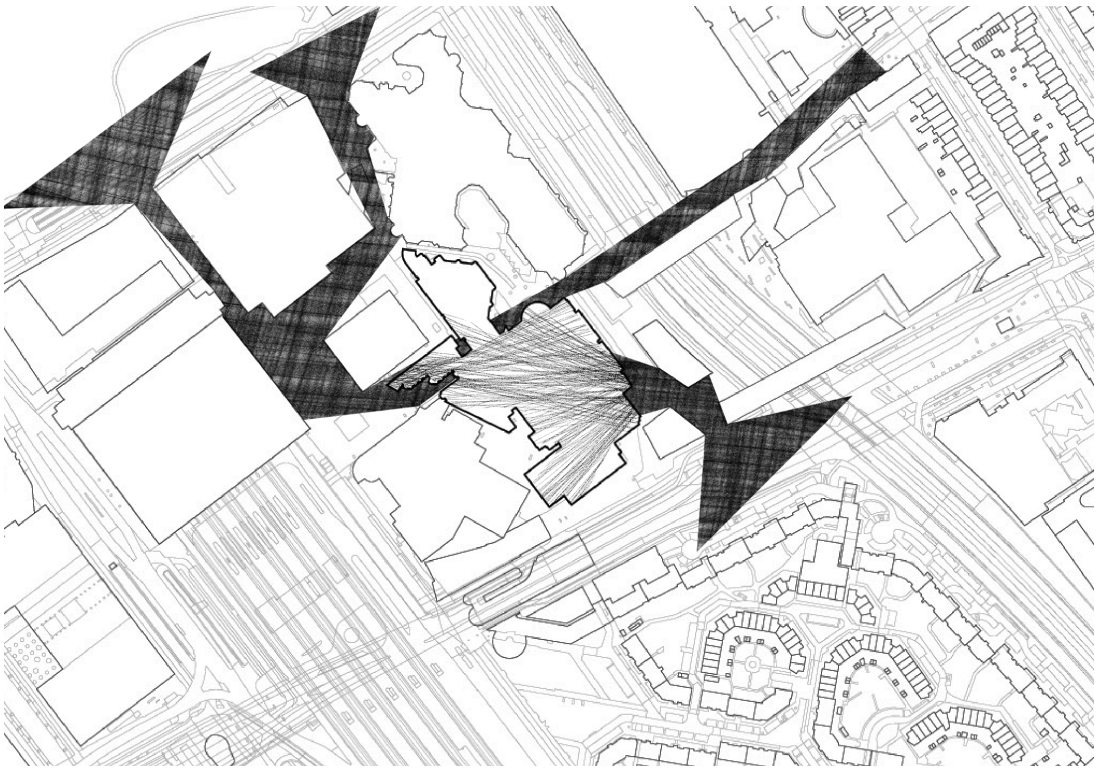
CONCEPT USER FLOWS



concept drawings trying to catch the essence of the user flow that needs to be created on the ground floor

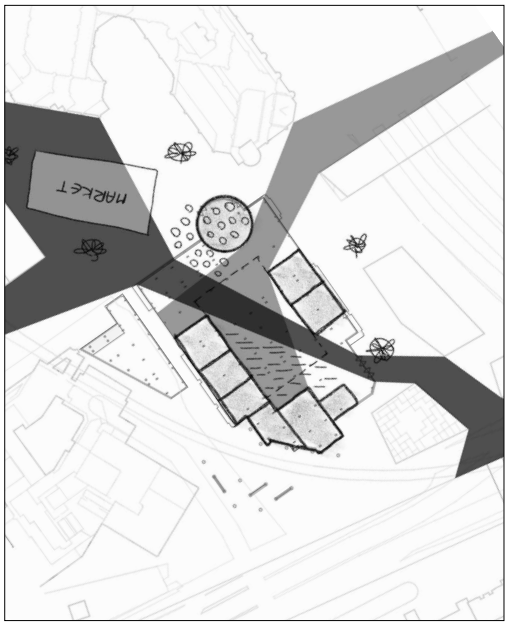
the ground floor can be an extension of the street where inside and outside become less clear

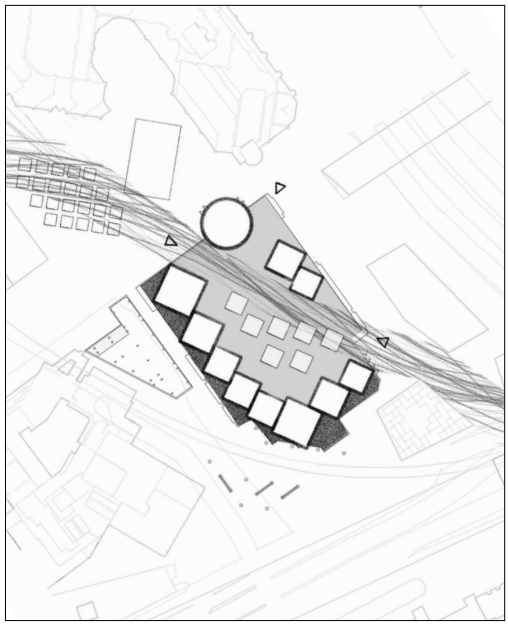




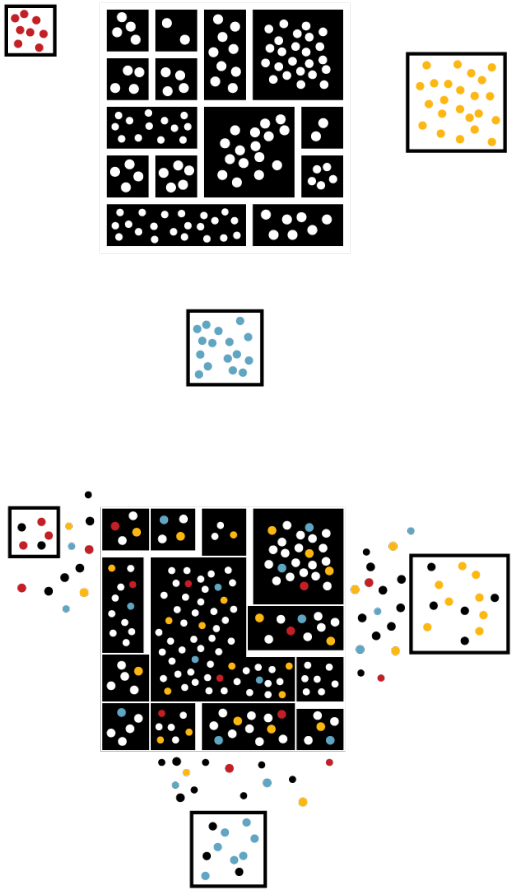
the main two flows from Bezuidenhout and central station can be intertwined within the building by adding spaces alongside these two flows

the spaces/volumes within the building can be rotated according to the stream of people going in- and outward





CONCEPT POROSITY & ACCESSIBILITY

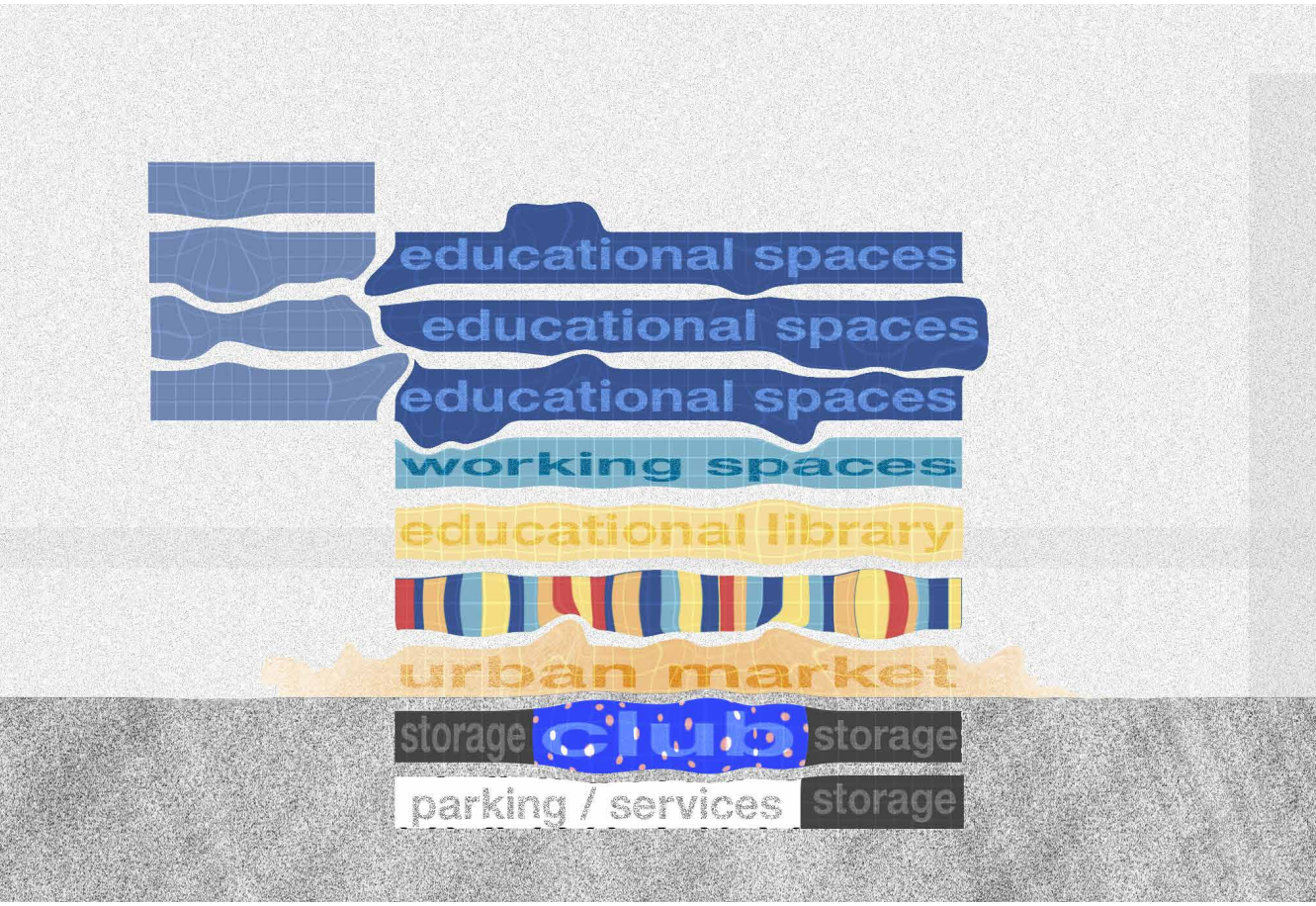


the library should be a place to come together not only on the surface but deeply rooted into its nature

despite housing more than one function, a hybrid building (top) shows to still be a monolith within the cityscape
functions are not molding together enough

a social condenser (bottom) shows to already penetrate this border which is present in the hybrid buiding
people come together from different functions to use this building

a transmitter (centre) is supposed to really blend its inner and surrounding functions to make an interacting village of multiple buildings
it is there to not house its own program, but also to support and enhance the others



concept program section of the building with the urban market on the ground floor, followed by the educational library, working spaces and educational spaces

in the transition from urban to more private, you can find a mixed (multi-colored layer) program floor which is supposed to bring program together

FACADE



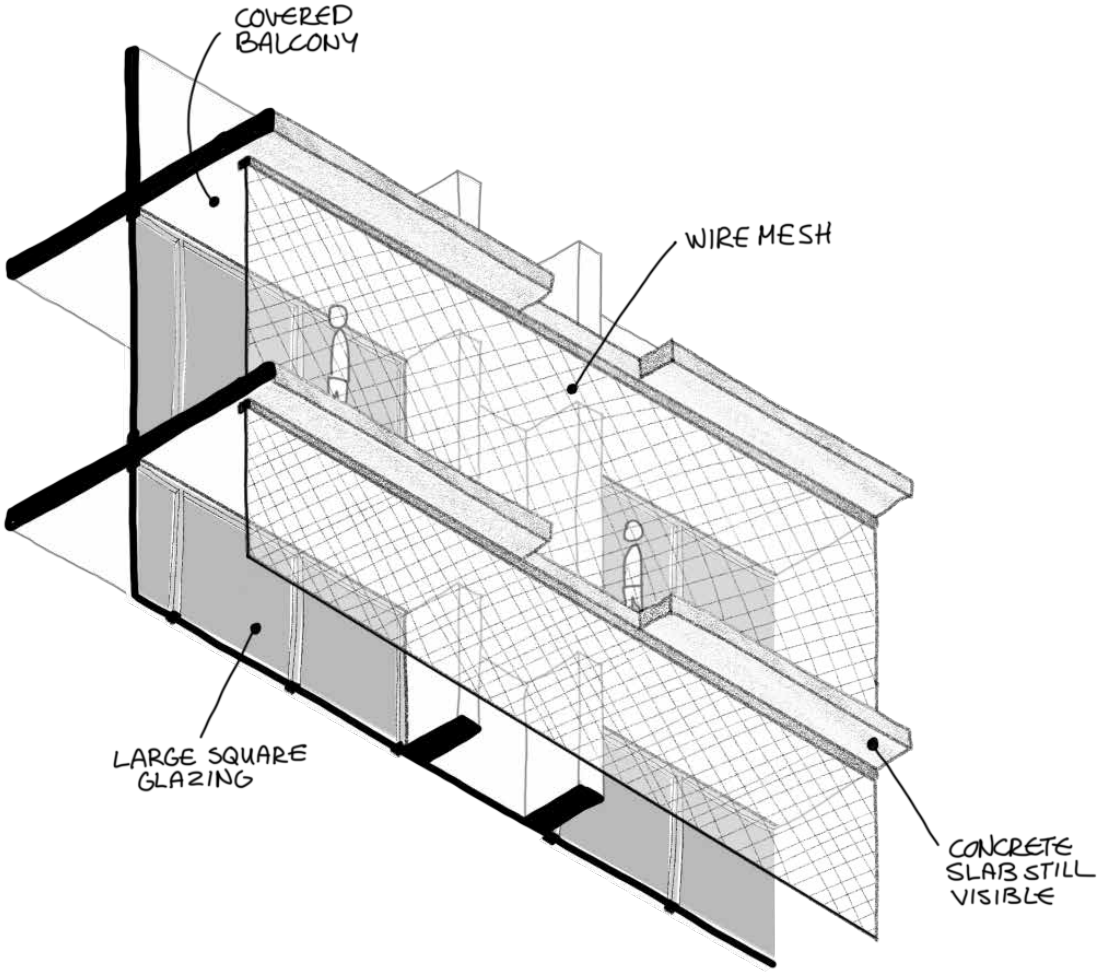
existing **opportunity**

to test the opportunities of the eisting building and facade, I tried to visualize a more heritage approach to transform the building

on the left we see the existing building with its white facade

on the right, a variant which manipulates the ratio between open and closed by using twice the amount of window panels

it does show how the building can change with a small intervention

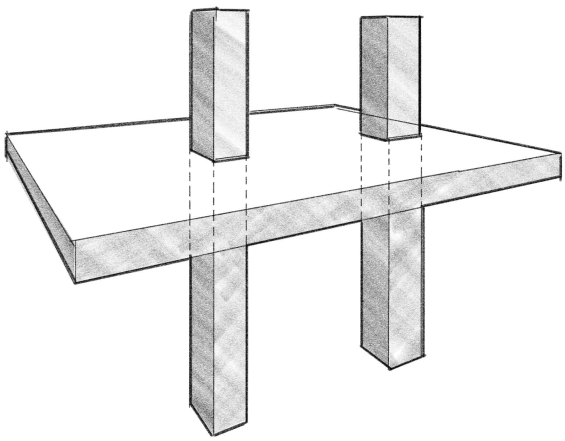


a test of an entirely new facade including only the existing columns and slabs

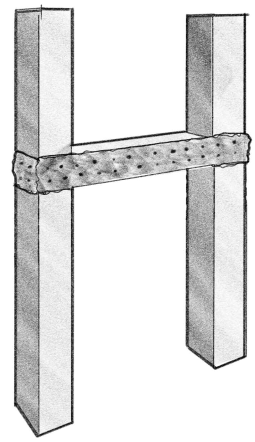
by simply adding window- and door frames in between these slabs, the interior of the building instantly will transform due to increase of daylight

a second skin creates a balcony on the outer edge of the building which gives peope the opportunity to get some fresh air

STRATEGY EXISTING CONSTRUCTION

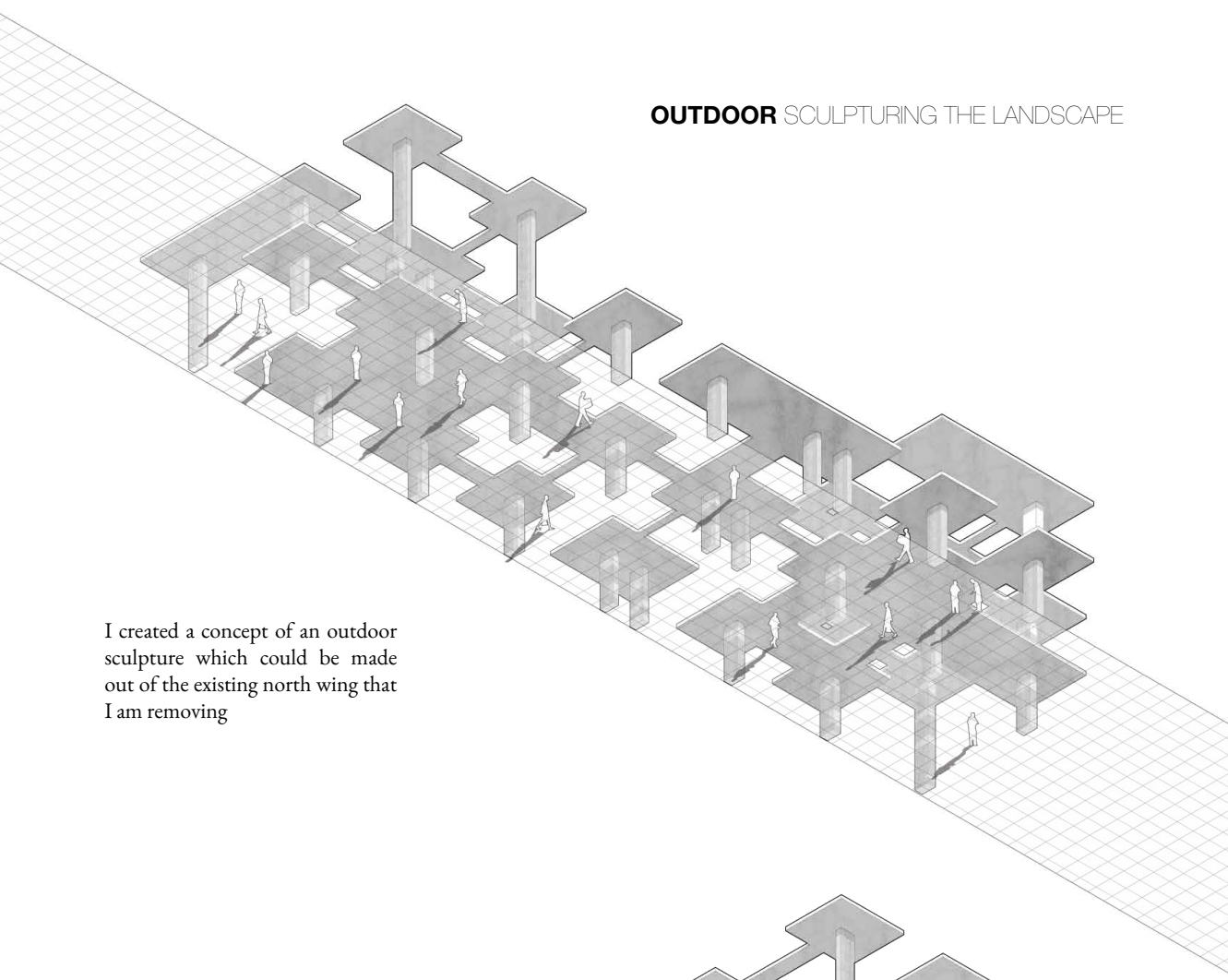


if some floors are cut-out to make way for the created atrium, some columns are kept to keep the stability of the existing construction

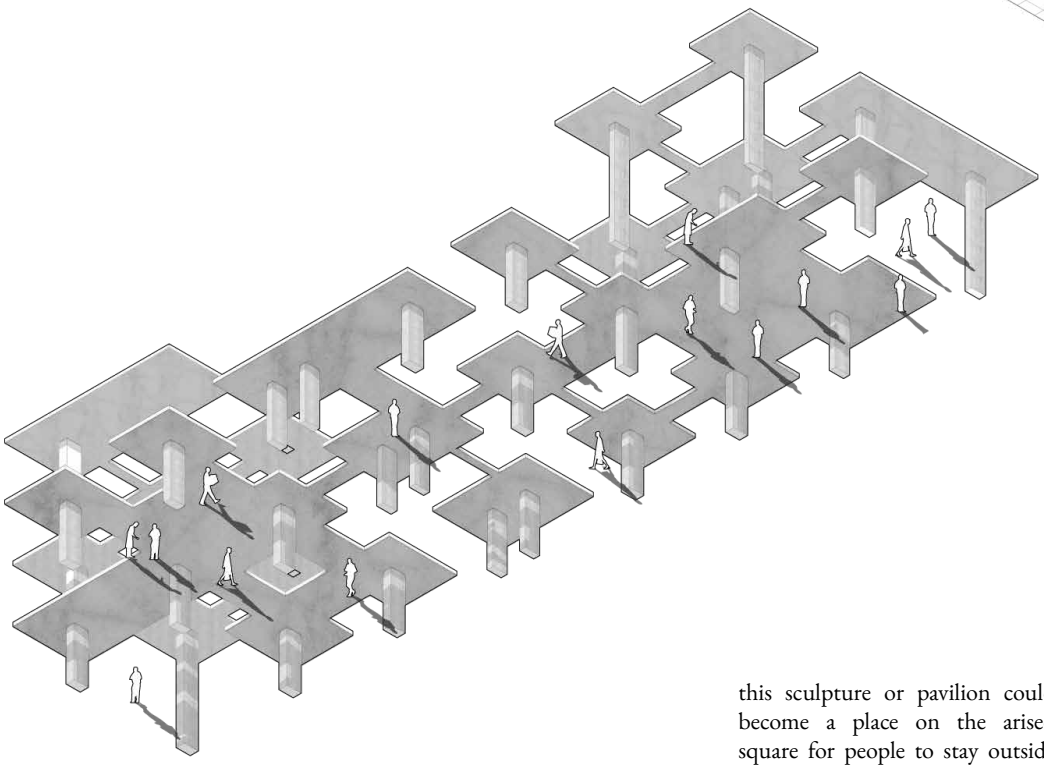


if existing slabs are cut out, the columns that are kept become longer than initially intended by the constructional engineer, so they need to be reinforced if possible

this could be done not by adding additional reinforcement but just by using the existing floors as a beam in between two columns

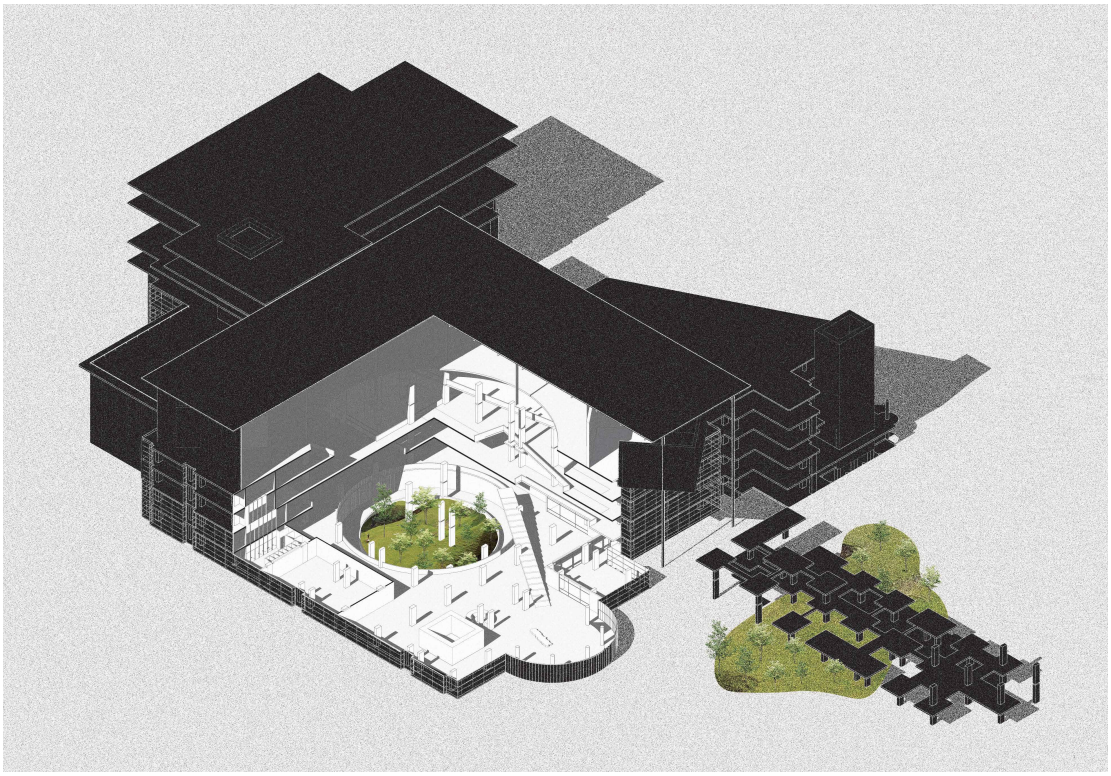


I created a concept of an outdoor sculpture which could be made out of the existing north wing that I am removing



this sculpture or pavilion could become a place on the arised square for people to stay outside and experience the tectonics of the existing building

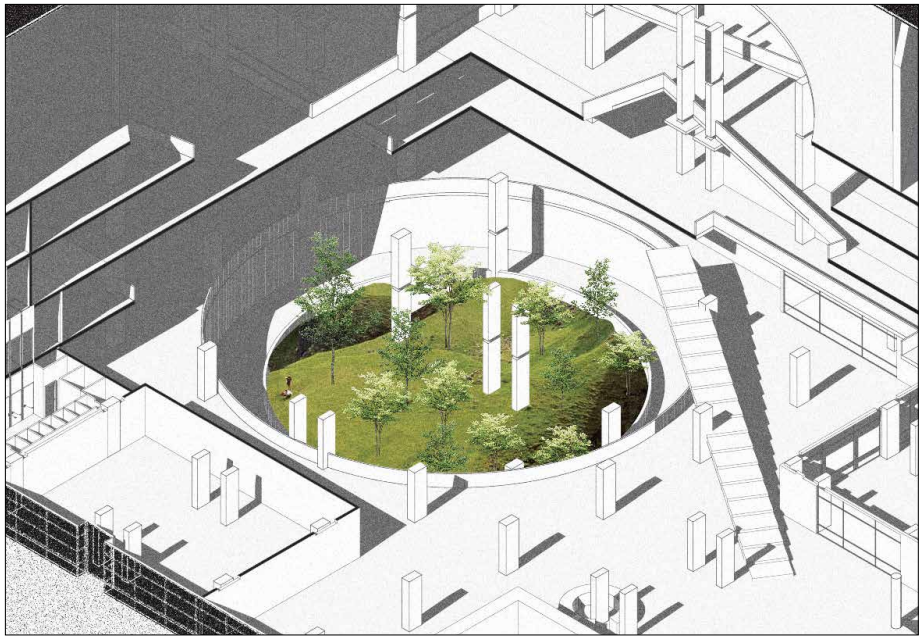
LANDSCAPE INTERIOR MEETS EXTERIOR

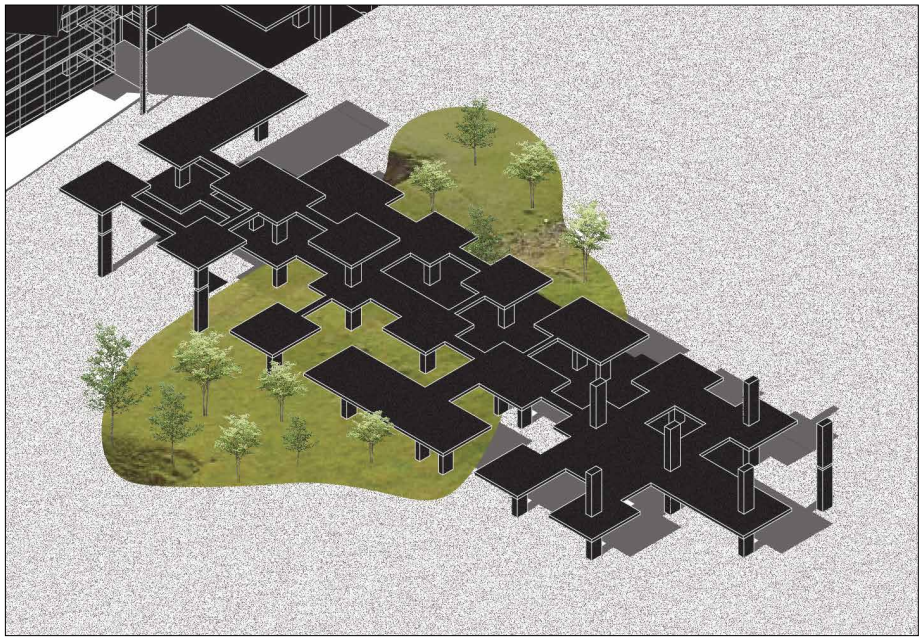


to make the ground floor more exciting to experience, I tried to create a pit garden which is sunken into the existing basement

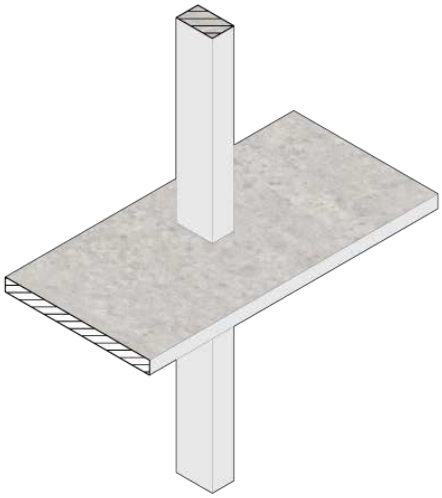
this garden is the start and therefore heart of the building's atrium

the garden allows for the atrium to even feel more open and gives this feeling of a sunken volume

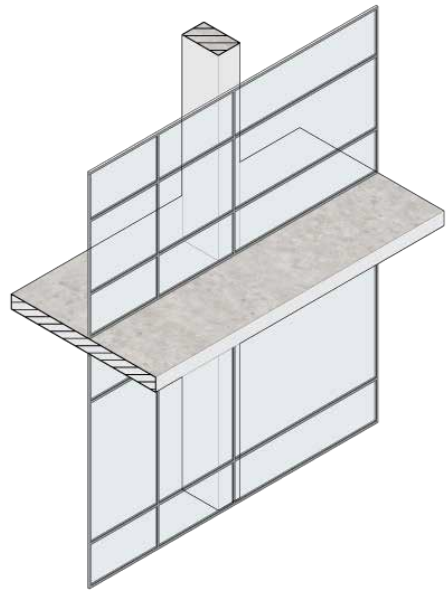




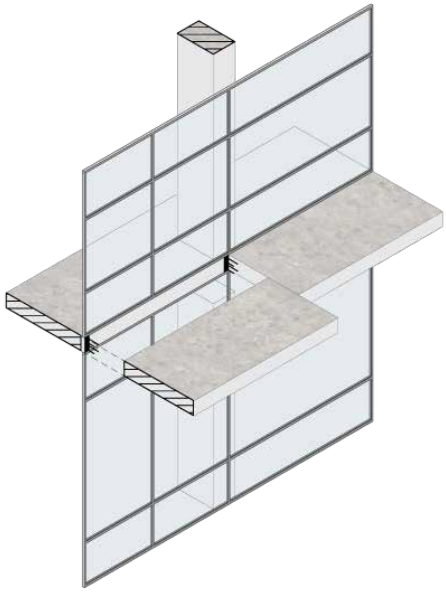
STRATEGY FACADE STRATEGY VARIANTS



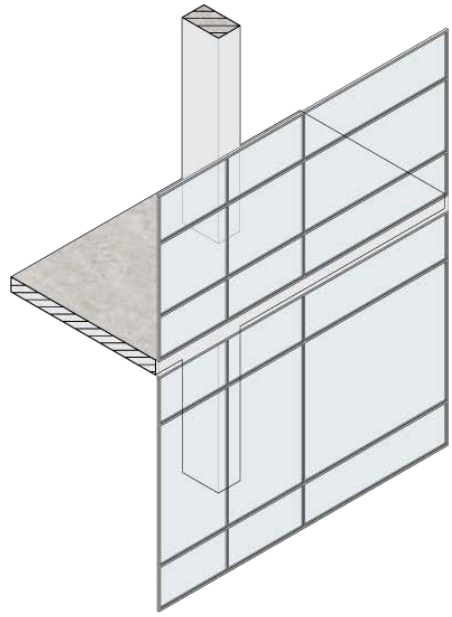
existing



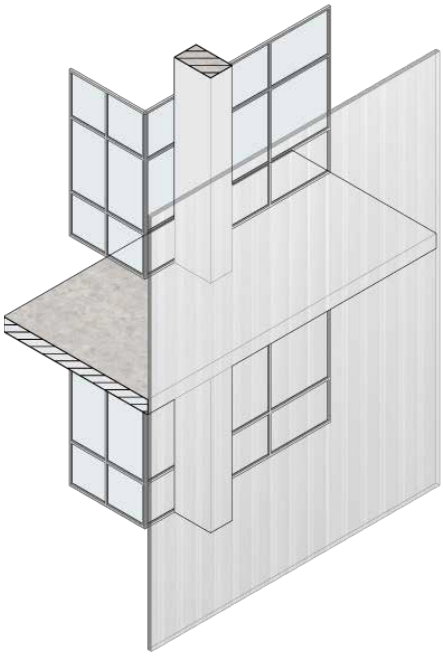
setback facade
- thermal bridge
+ visibility of the existing slabs



isokorf
- less thermal bridge
+ visibility of the existing slabs
- labor intensive



insulated skin
+ no thermal bridge
- zero to no visibility of the existing slabs

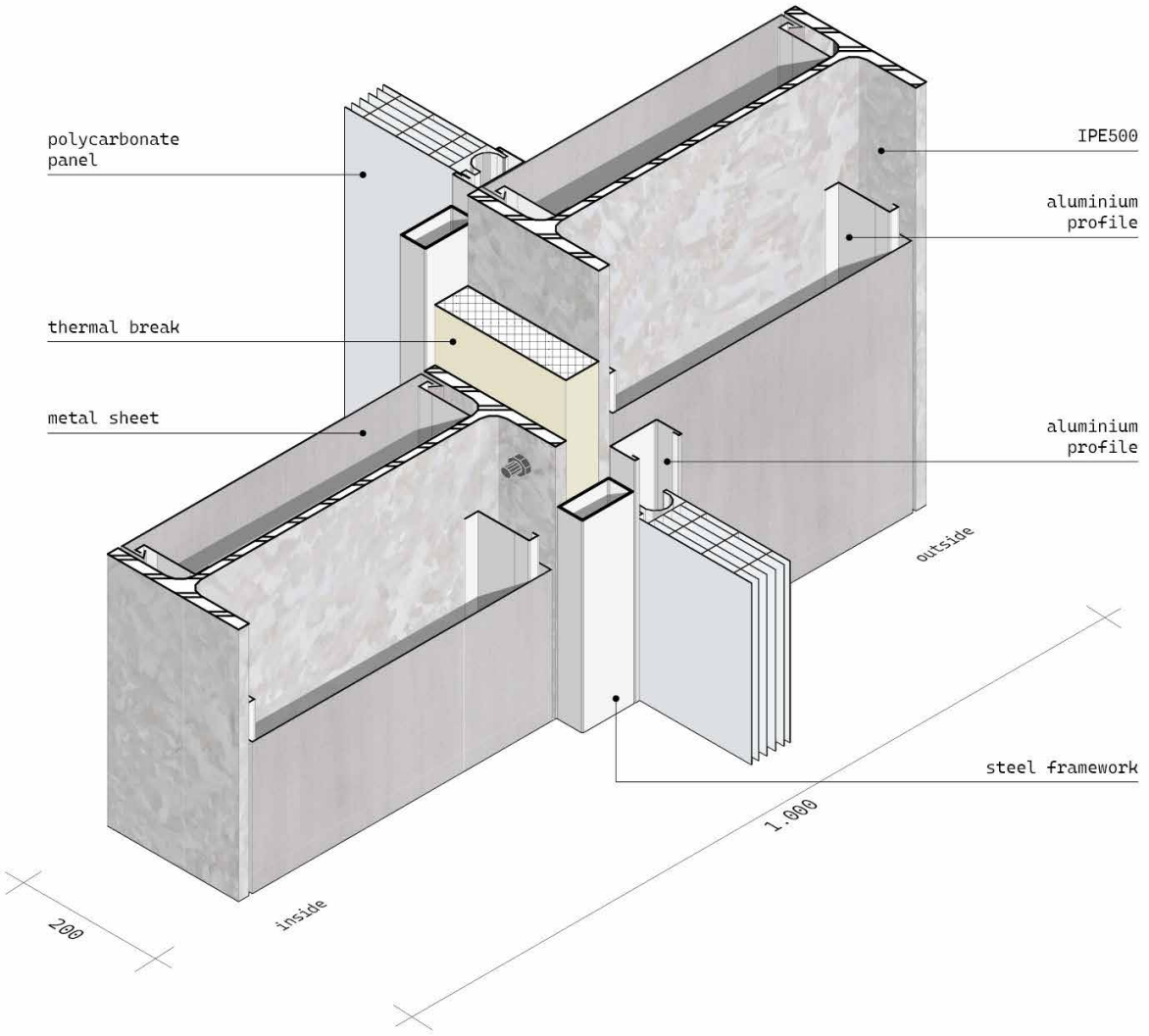


translucent skin

\+ no thermal bridge

\- possibility to see existing slabs

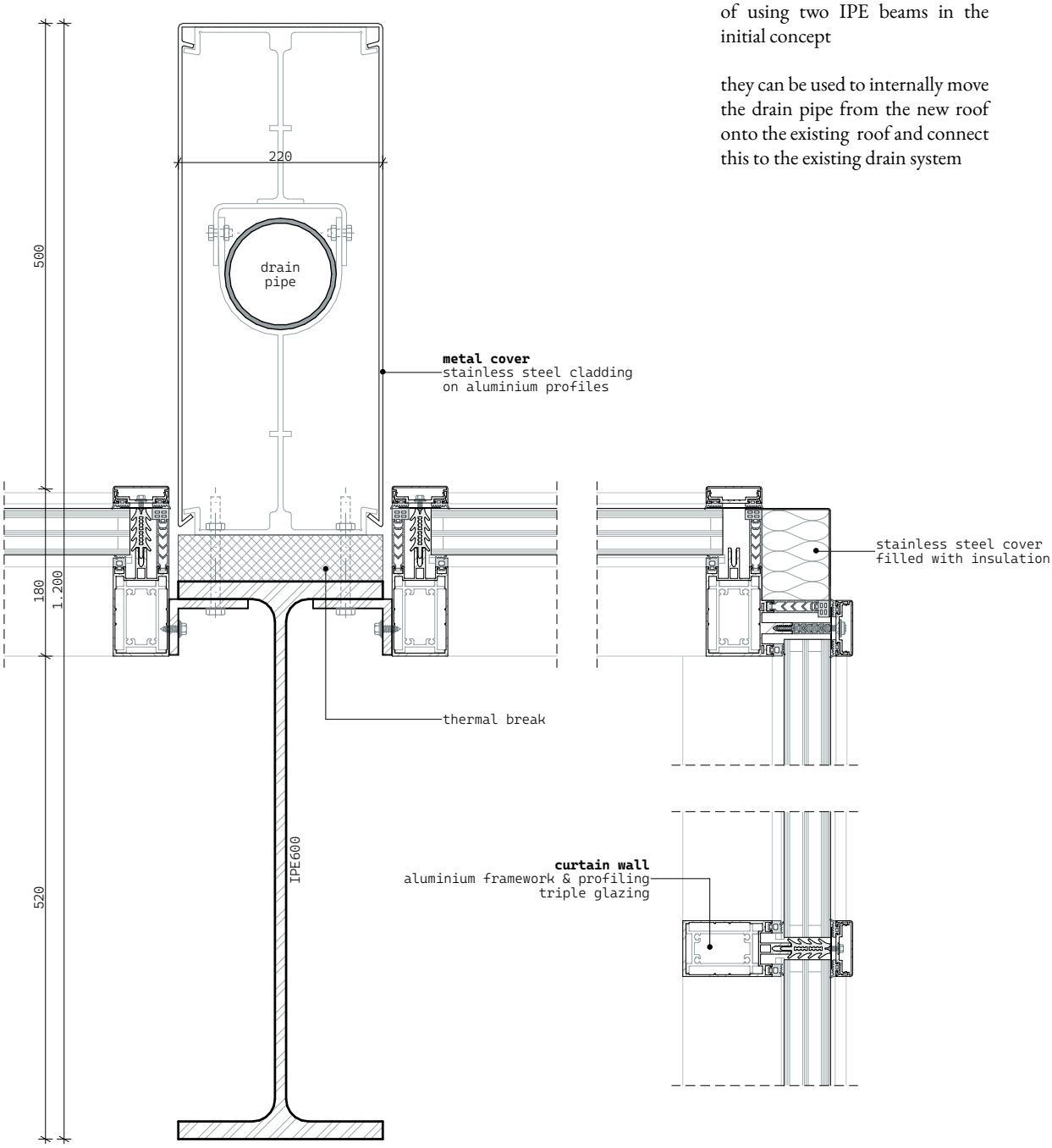
DETAILING COLUMNS ADDITION



concept

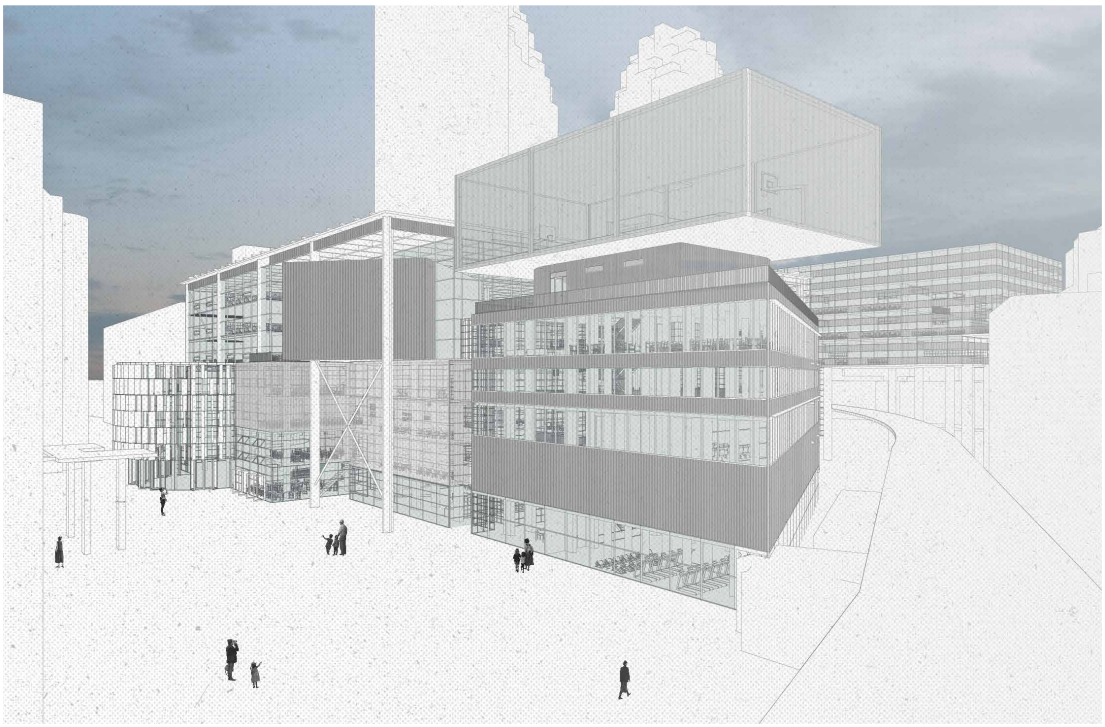
metal covers are used to create more depth into the curtain wall facade of the roof addition instead of using two IPE beams in the initial concept

they can be used to internally move the drain pipe from the new roof onto the existing roof and connect this to the existing drain system

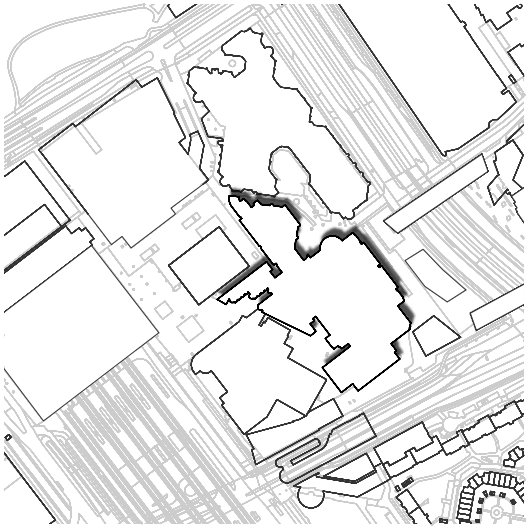


optimisation

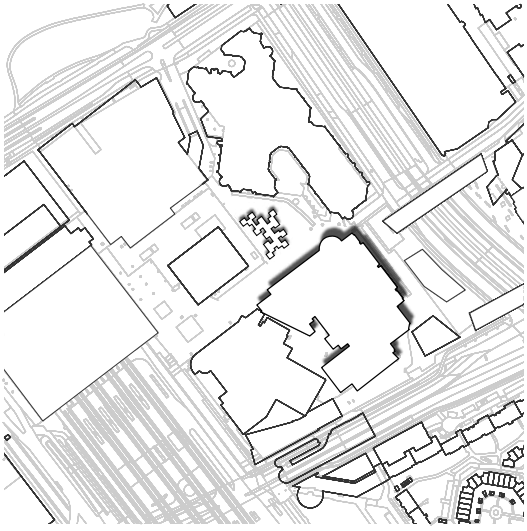
P3



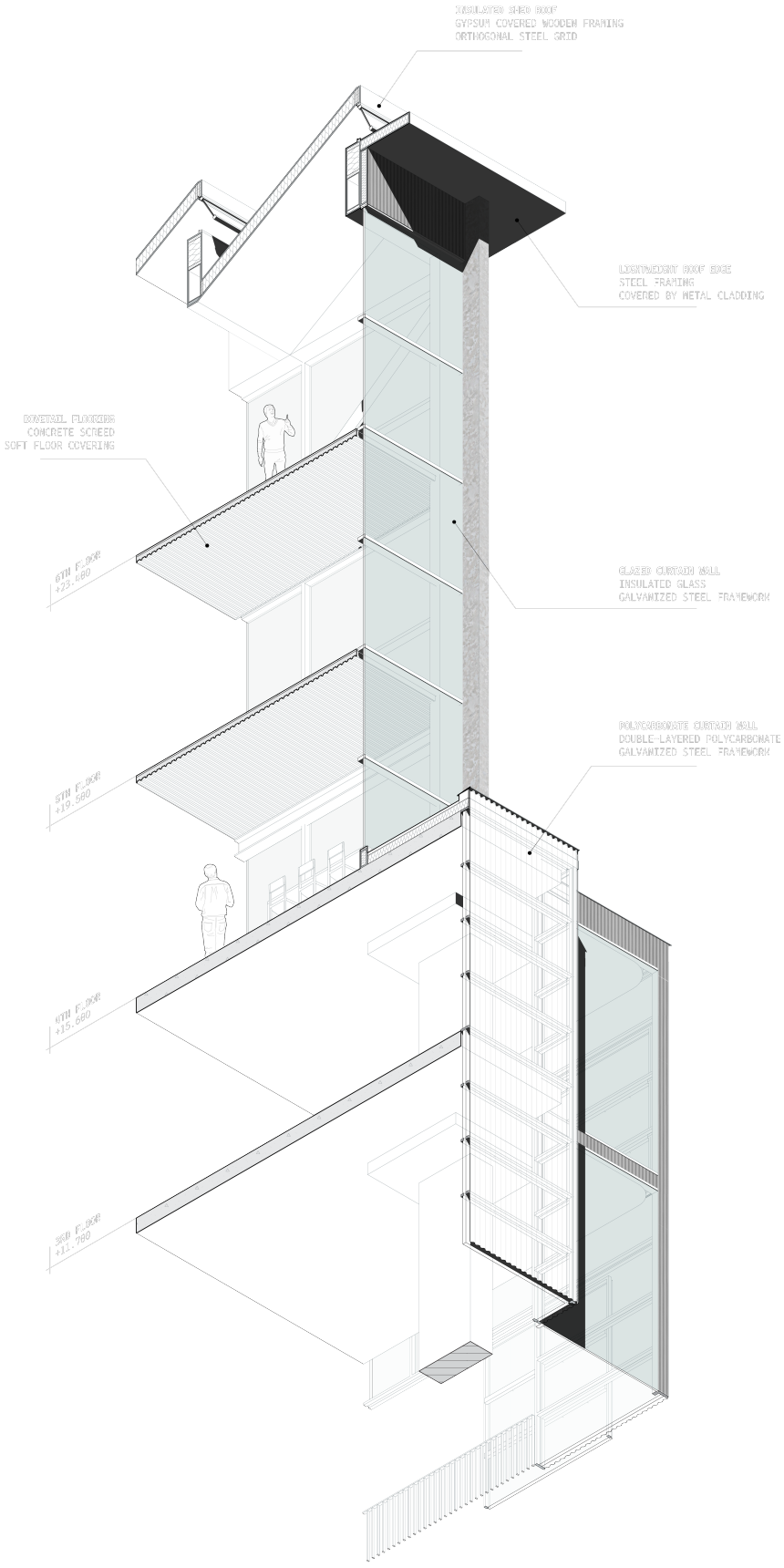
EXTERIOR EAST SIDE



CONTEXT EXISTING



CONTEXT NEW



FACADE FRAGMENT

P3

STUDIOS

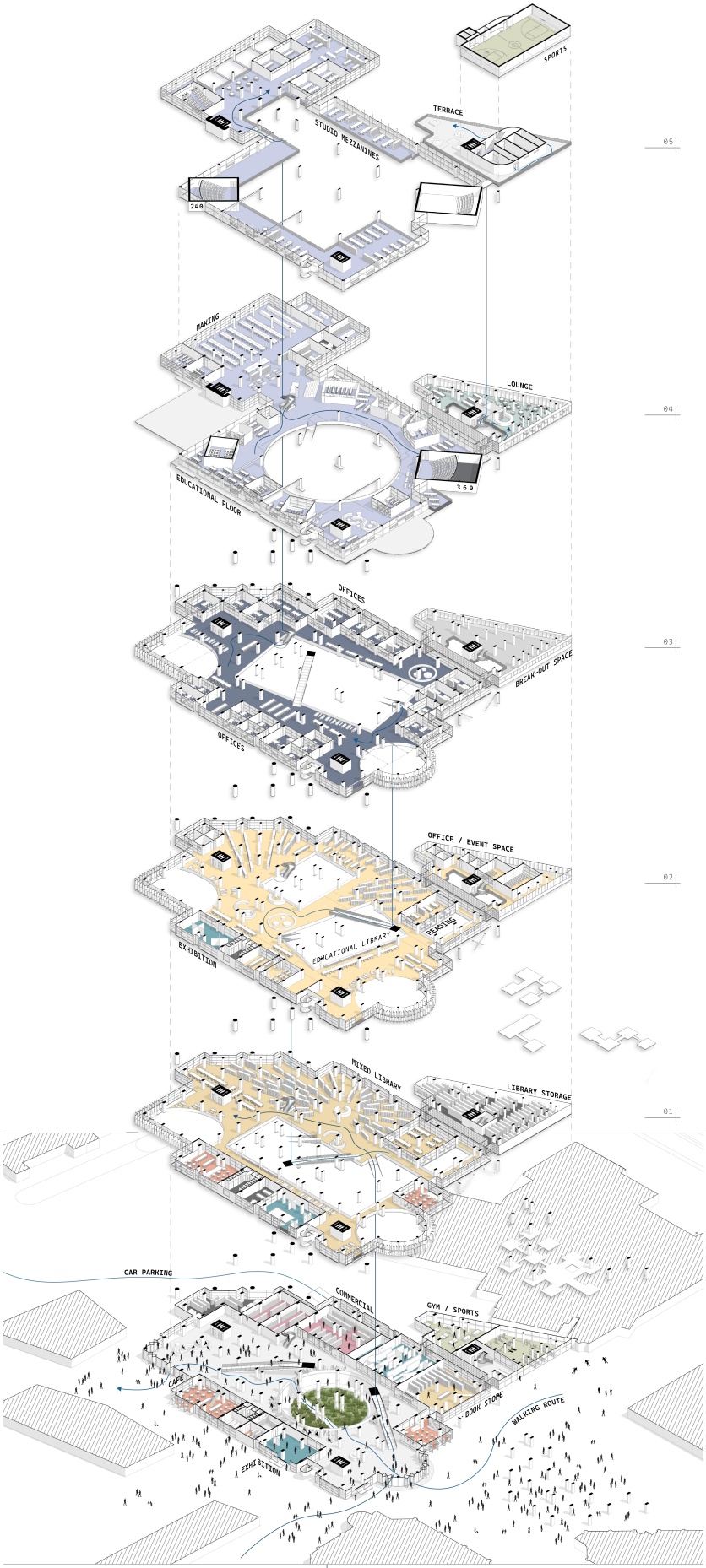
MIXED EDUCATION

OFFICES CLASSROOMS

LIBRARY

LIBRARY

MIXED



05

04

03

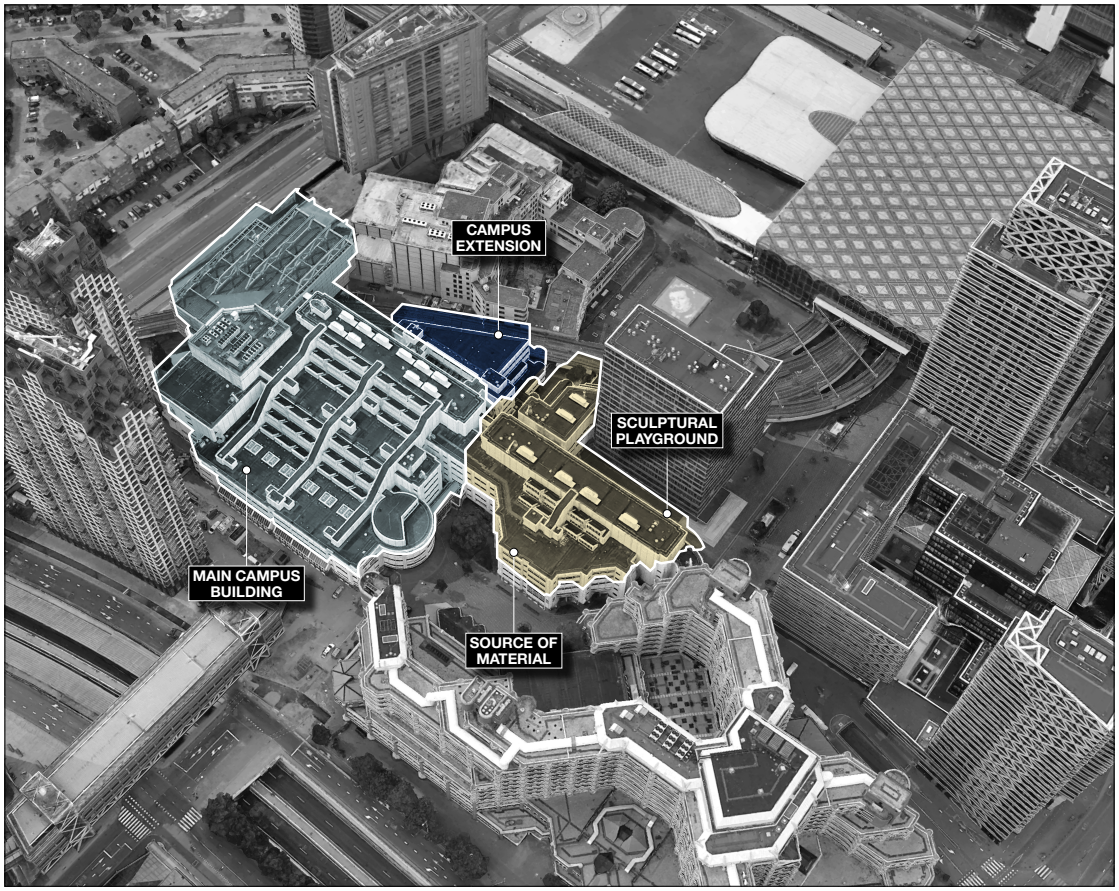
02

01

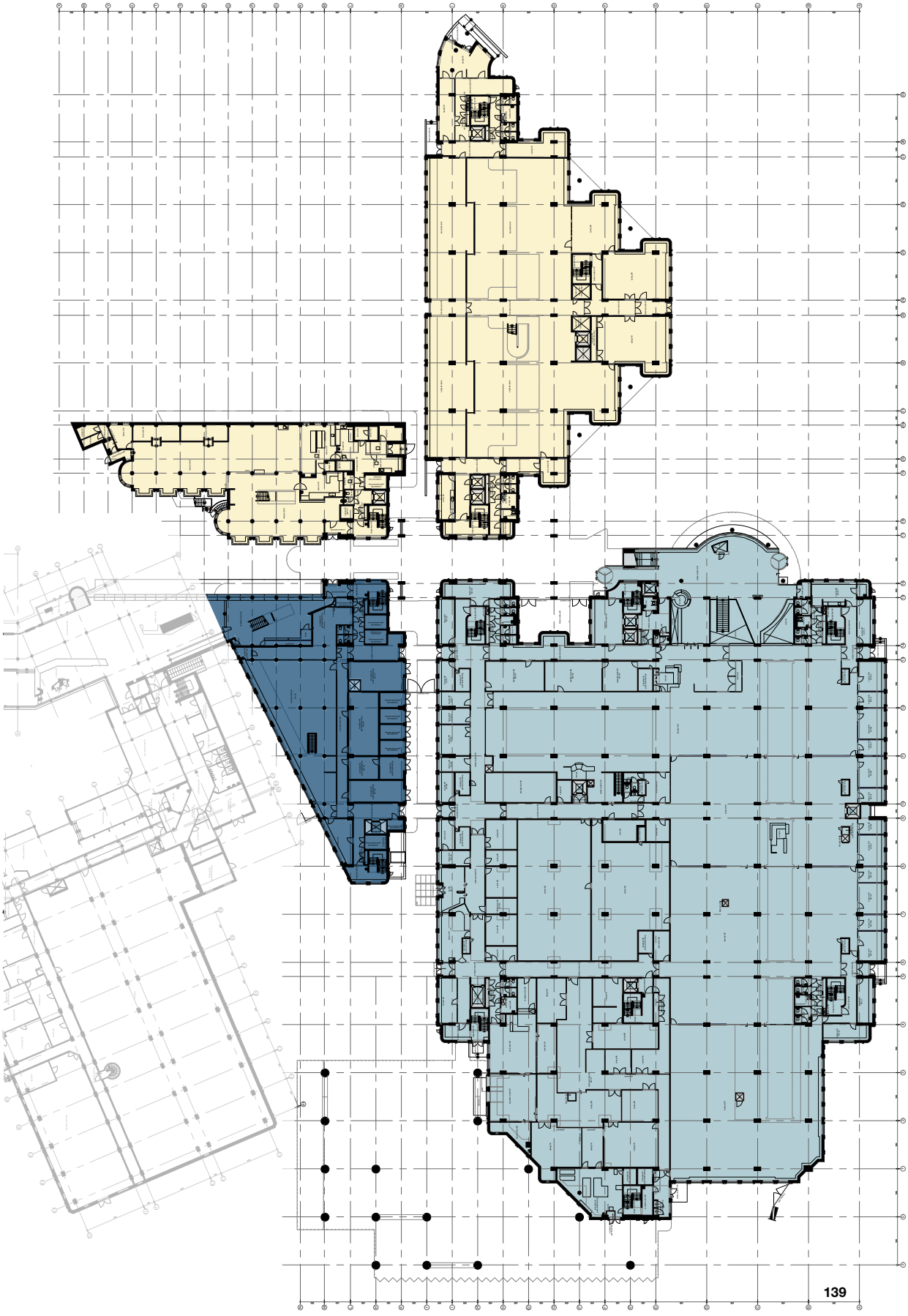
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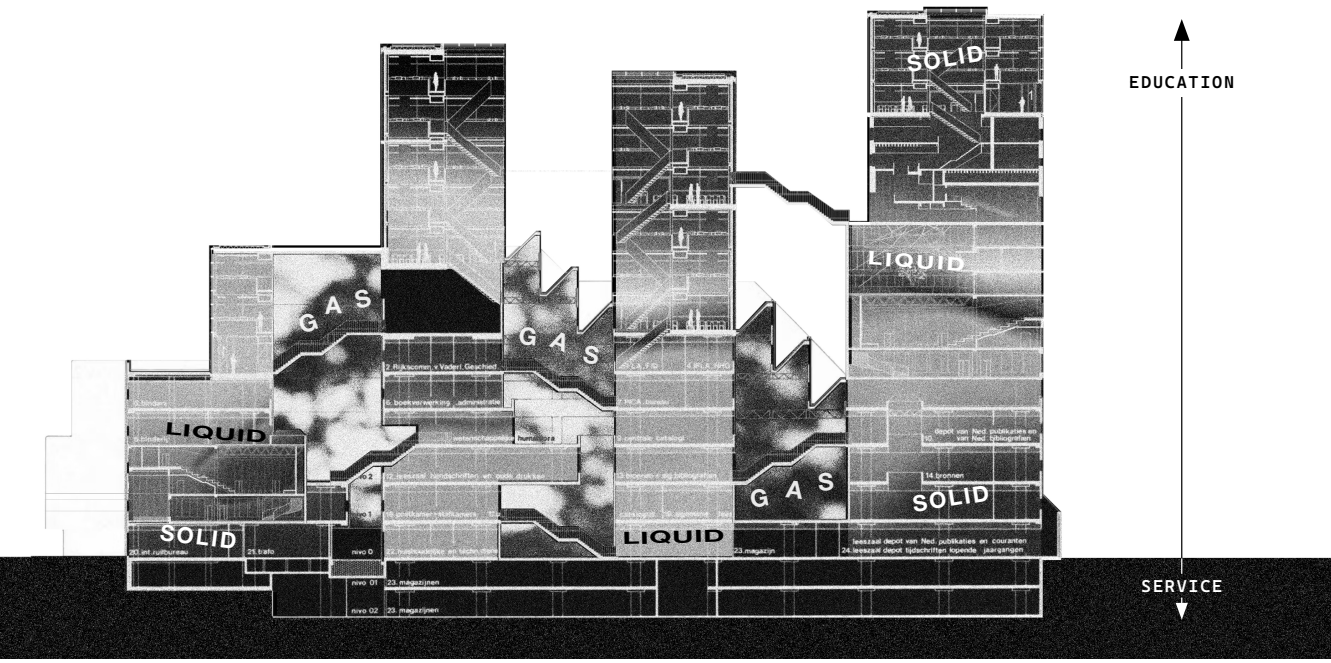
INTERVENTION GENERAL STRATEGIES



	RECONSTRUCT	REFINE	DECONSTRUCT
GOALS	recomposition existing elements enhance functionality increase resillience	foster existing esthetics increase daylight enhance facade	increase outdoor space to stay sculpture existing elements showcasing intervention methods
METHODS	cut existing floors reconstruct & re-use brick re-use facade cladding & windows insert climatised spaces increase accessibility	volume abstraction increase facade porosity insert climatised spaces roof accessibility	fully deconstruct North-West wing store deconstructed elements to re-use reconstruct North wing

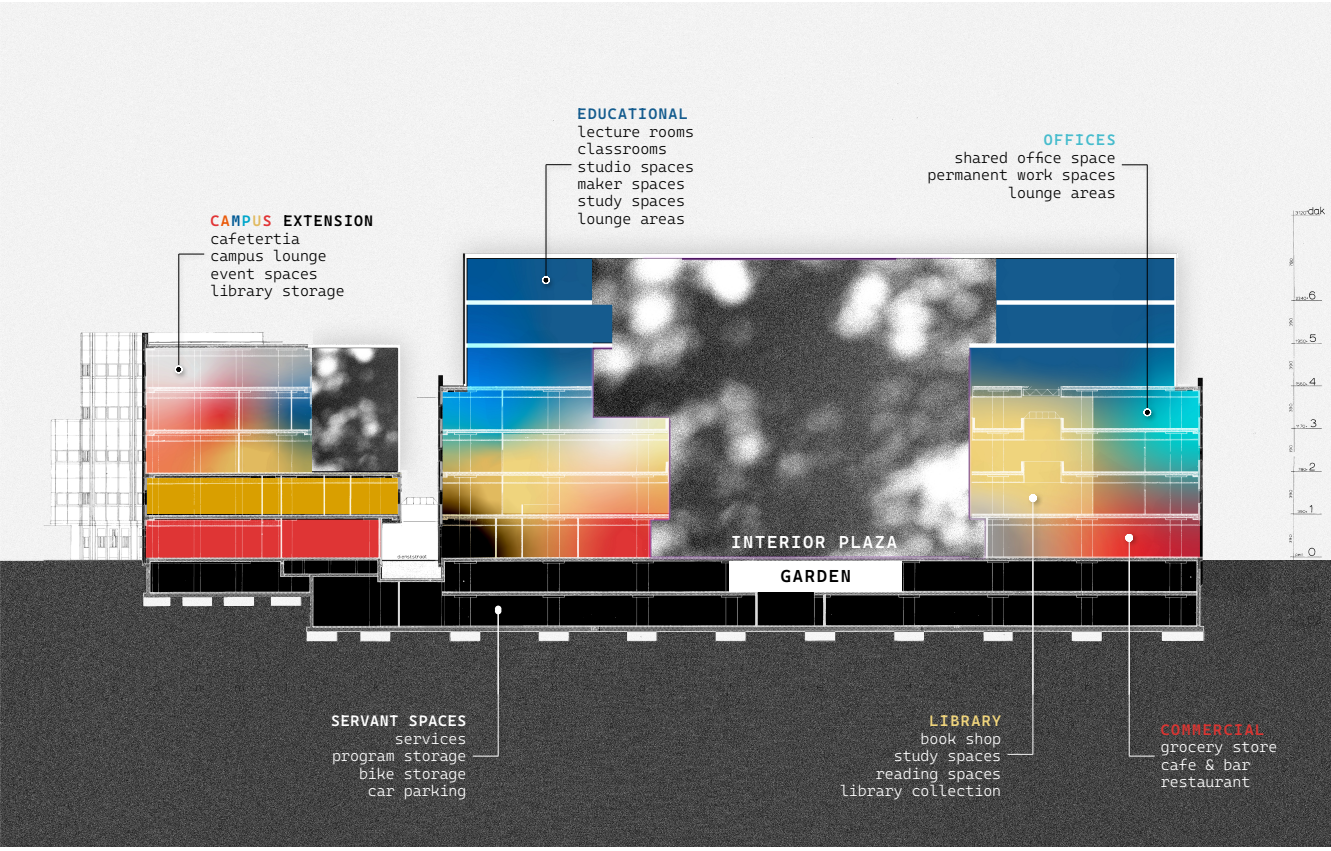


PROGRAM CONCEPT



concept of the SOLID LIQUID GAS program was based on the idea of using defined spaces and program as solid functional parts within the campus building

the theory of GAS is then used to incoorporate a more free working environment, in this case the atrium and the space around it



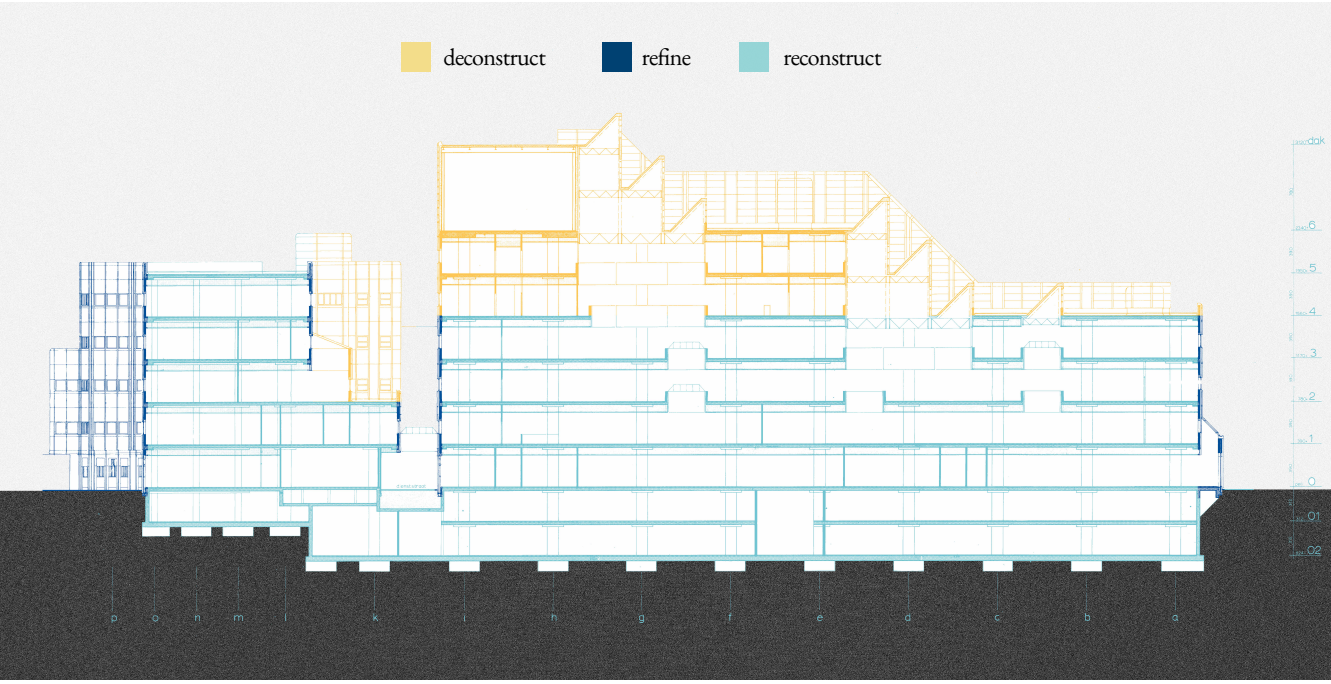
this lead to the program composition as seen above

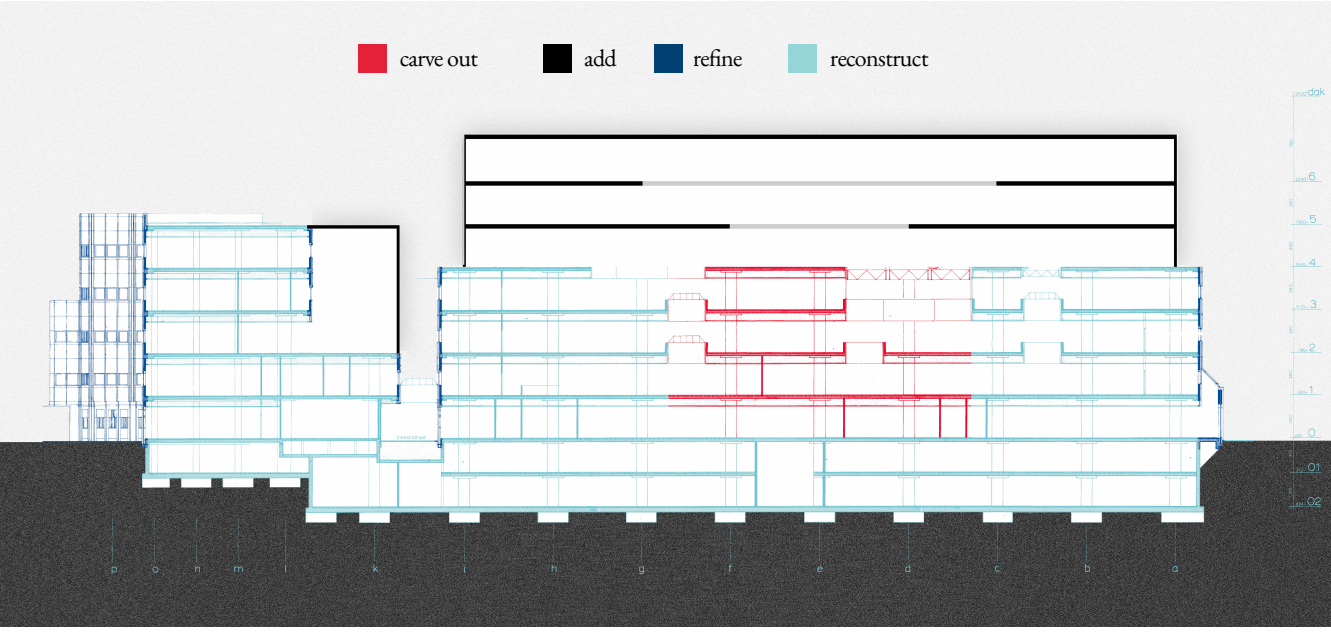
the educational space at the top to be the leading function together with additional privacy on the top floors

in the middle the heart of the building; the library, with its study and reading spaces alongside the educational collection

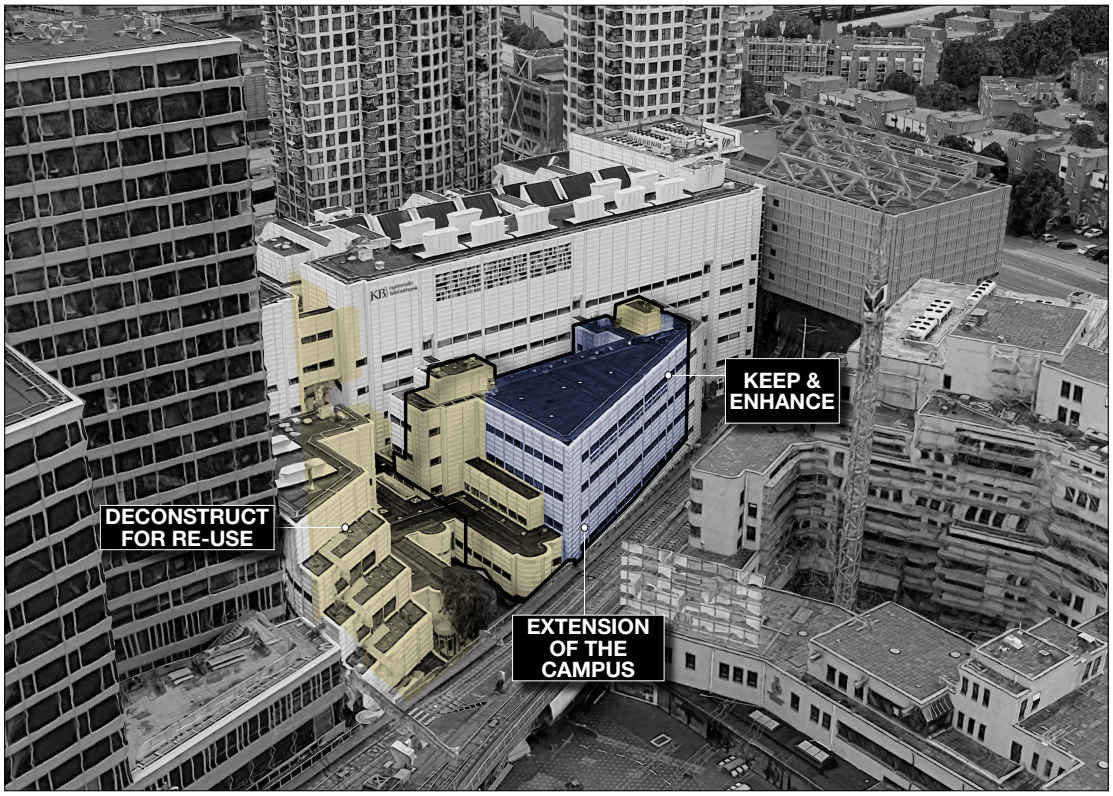
at the plinth some more commercial functions like a grocery store, together with cafe's and a restaurant

INTERVENTION MAIN BUILDING STRATEGY

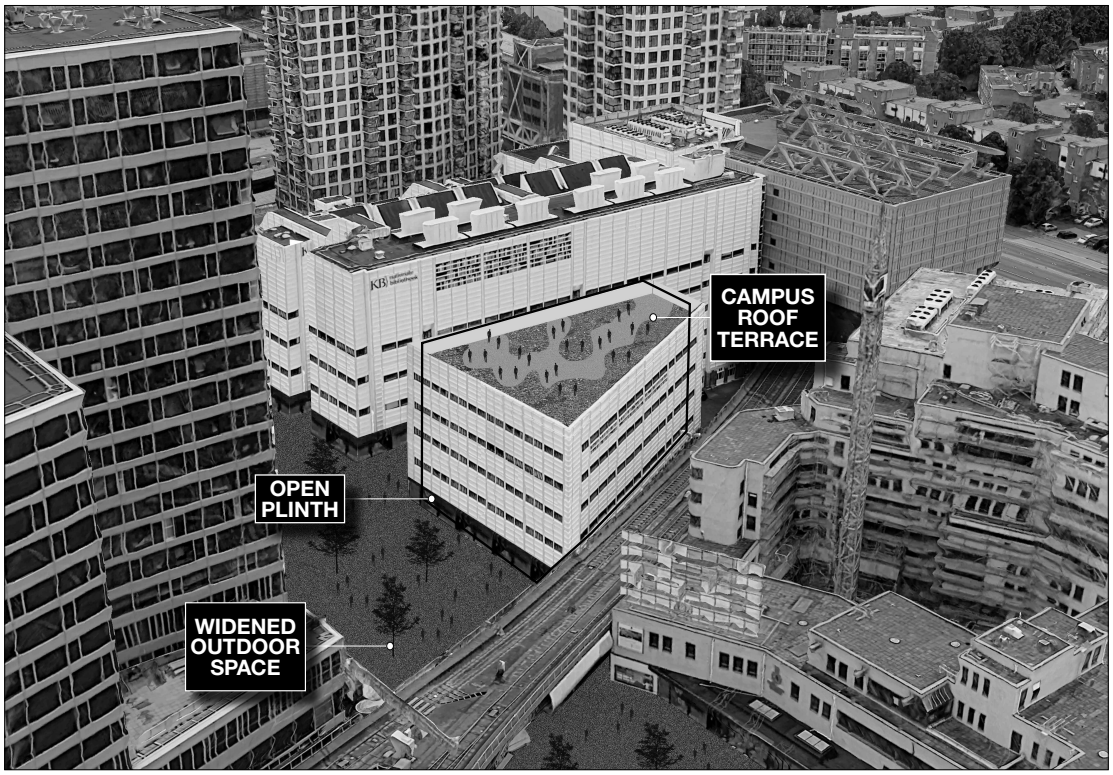




INTERVENTION WEST WING STRATEGY

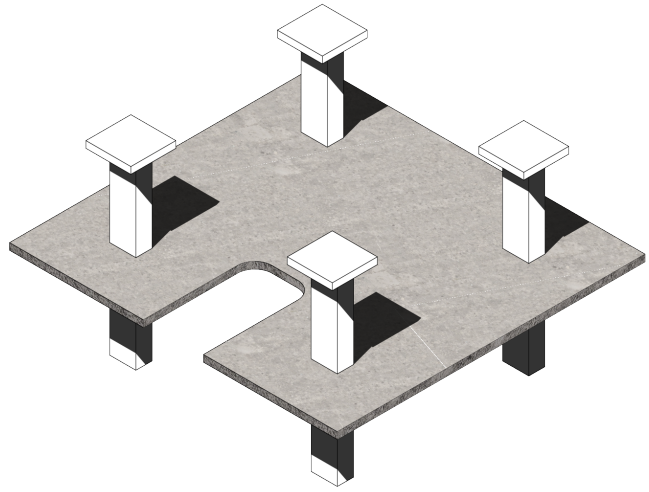


deconstruct refine reconstruct

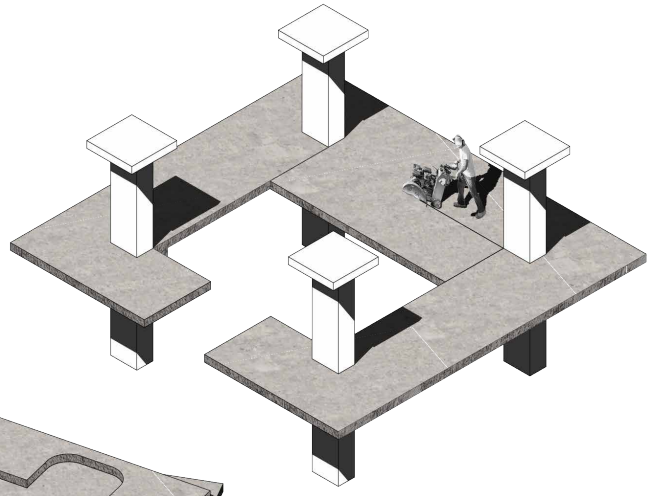


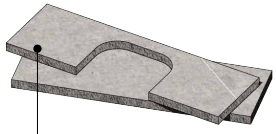
INTERVENTION BASIC CUT-OUT

existing floor with cut-out



new cut-out

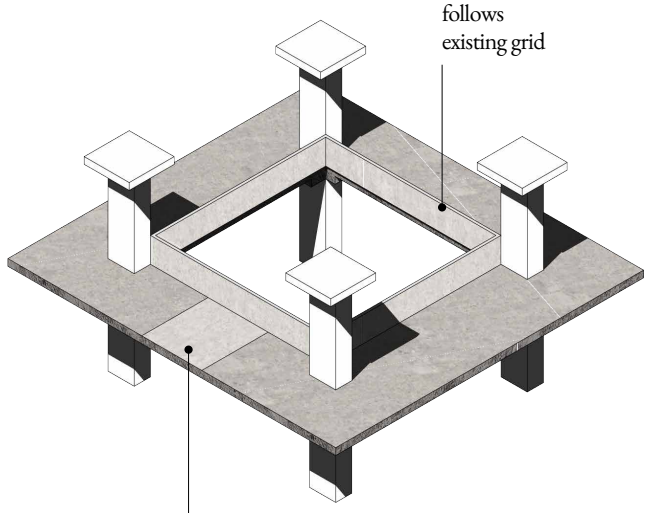




keep slabs intact to re-use

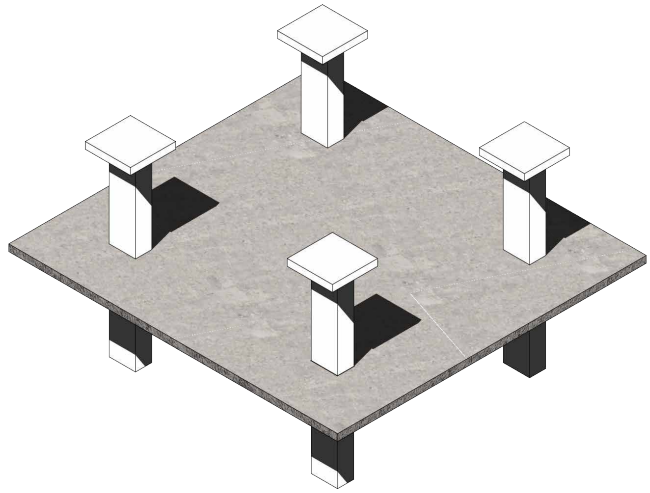
follows existing grid

baluster + infill

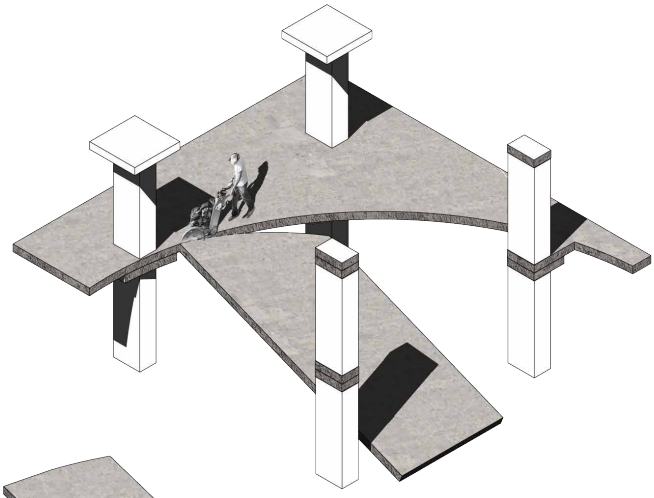


previous cut-out remains visible

existing floor



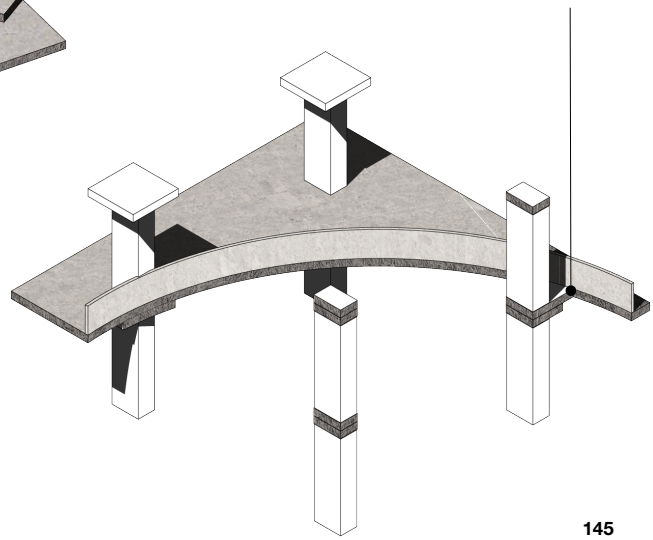
new cut-out





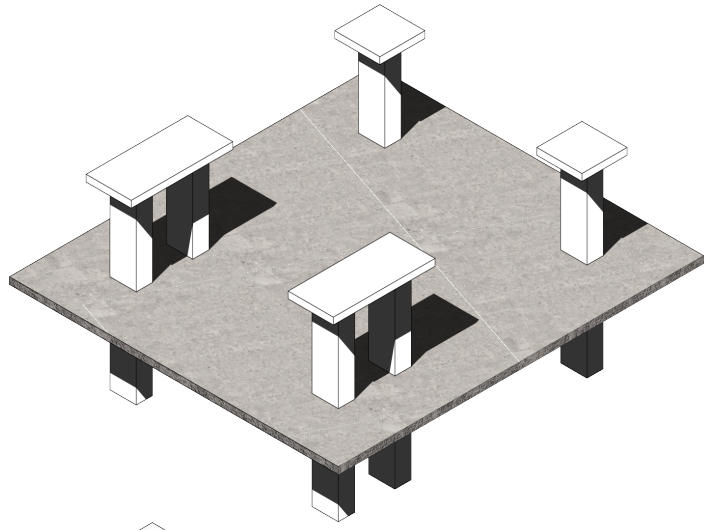
keep floor as support where needed

baluster + infill



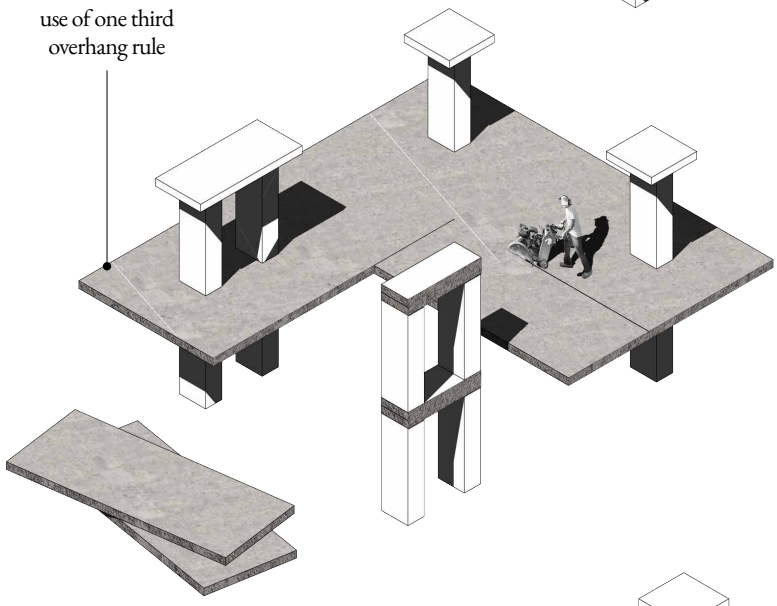
INTERVENTION CUT-OUT EXCEPTION

existing floor with cut-out

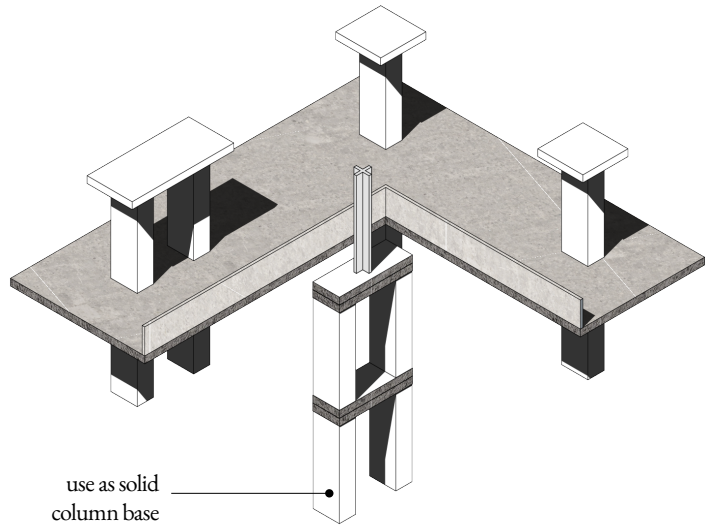


use of one third overhang rule

new cut-out



baluster + infill



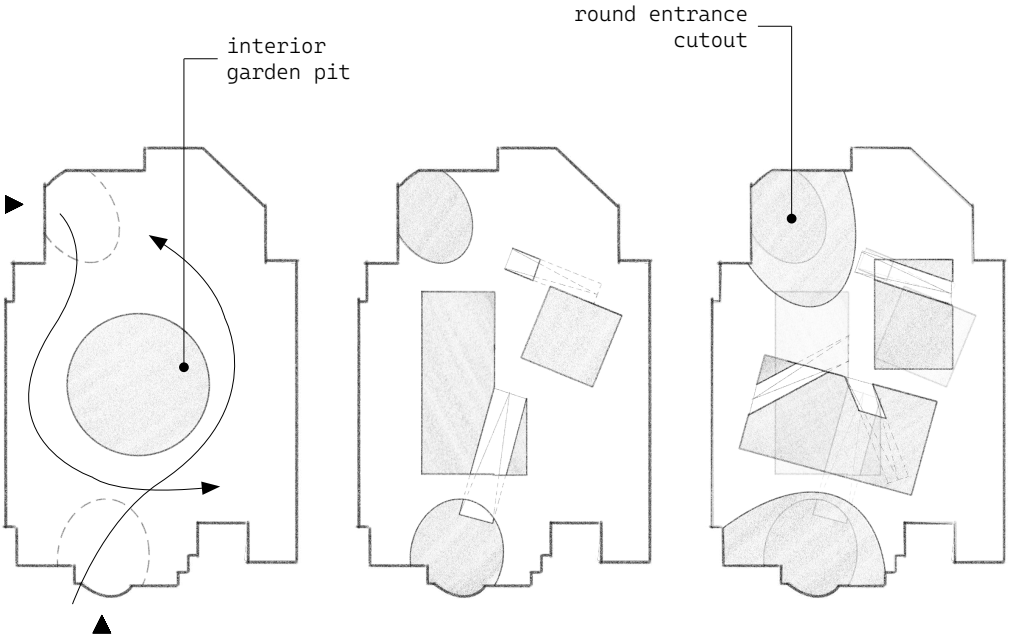
use as solid column base



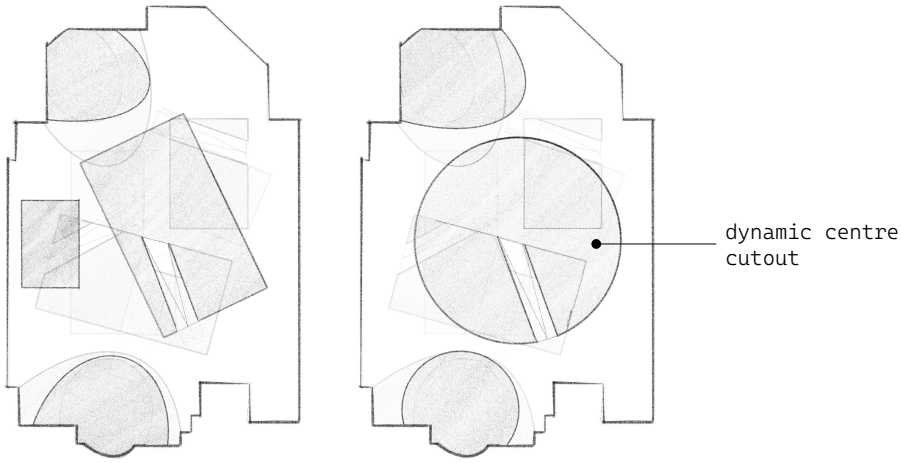
the leftover pieces of concrete slabs can be use in a variety of ways in and around the building

it can become an object for people to sit on, move around and even play on

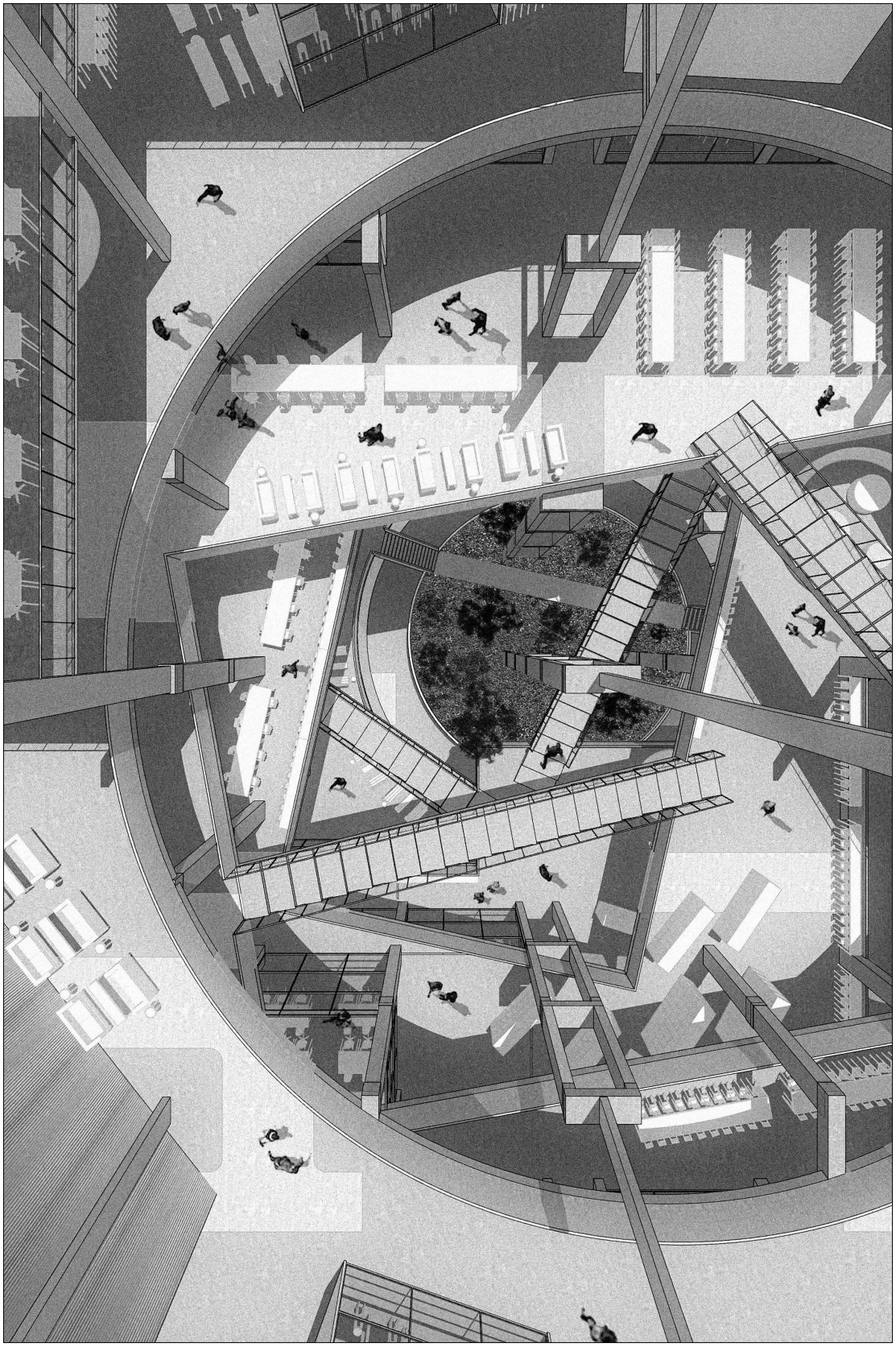
MAIN ATRIUM IMPRESSION



ground floor **first floor** **second floor**



third floor **fourth floor**

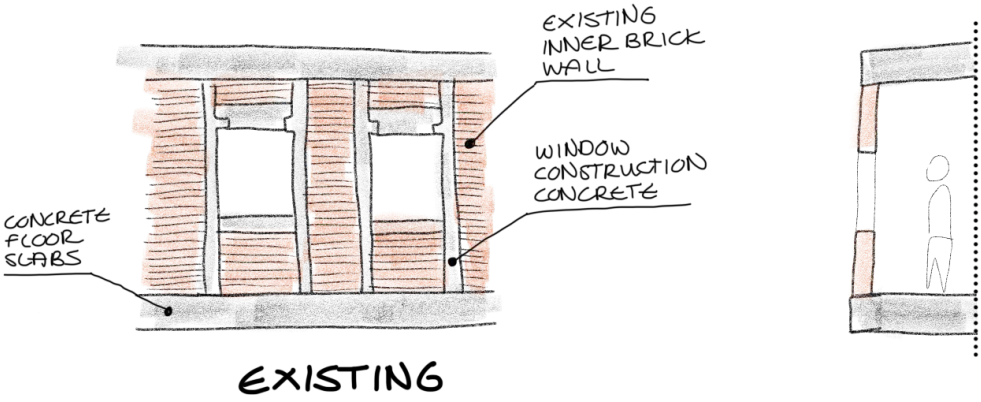


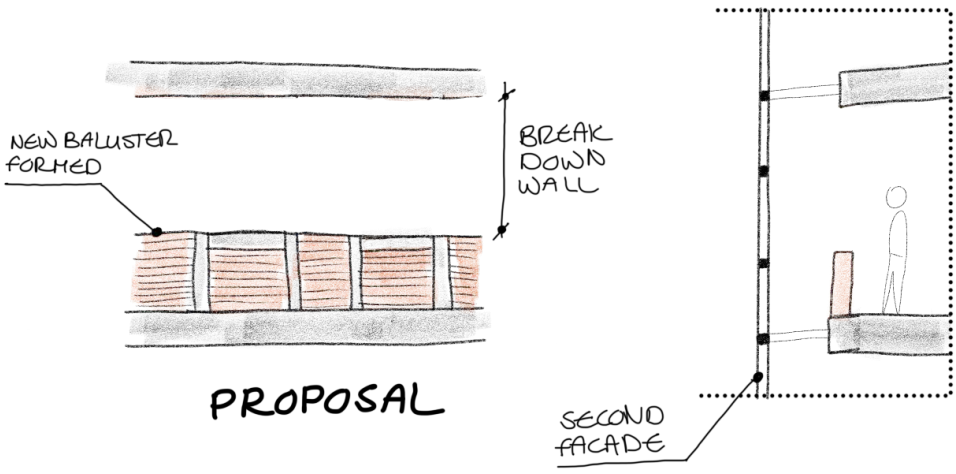
FACADE USING EXISTING BRICK

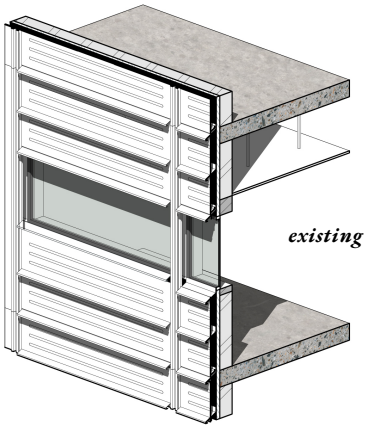


the existing inner wall consists of heavy brick inside a concrete frame this brick could be used to give more character to the transformed building

if a second translucent skin (bottom-right) would be added, the brick could be visible from the outside while at the same time form a baluster onto the existing slab



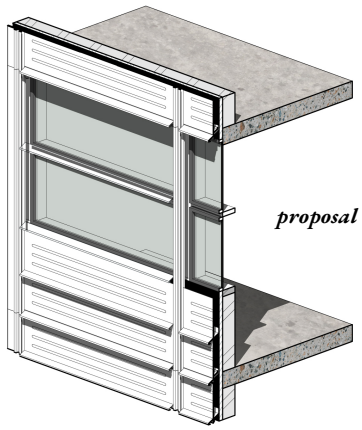




existing

to keep the integrity of the building and use the effort put in by the original architects, I chose to refine the existing facade

this refinement is is mostly focused on increasing the building's porosity in terms of letting more daylight into the building as well as increasing the accessibility

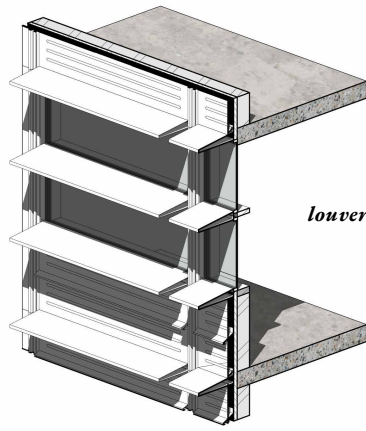


proposal

the existing facade is quite flat, which is a strength but also can cause a repetitive language which is not very exciting

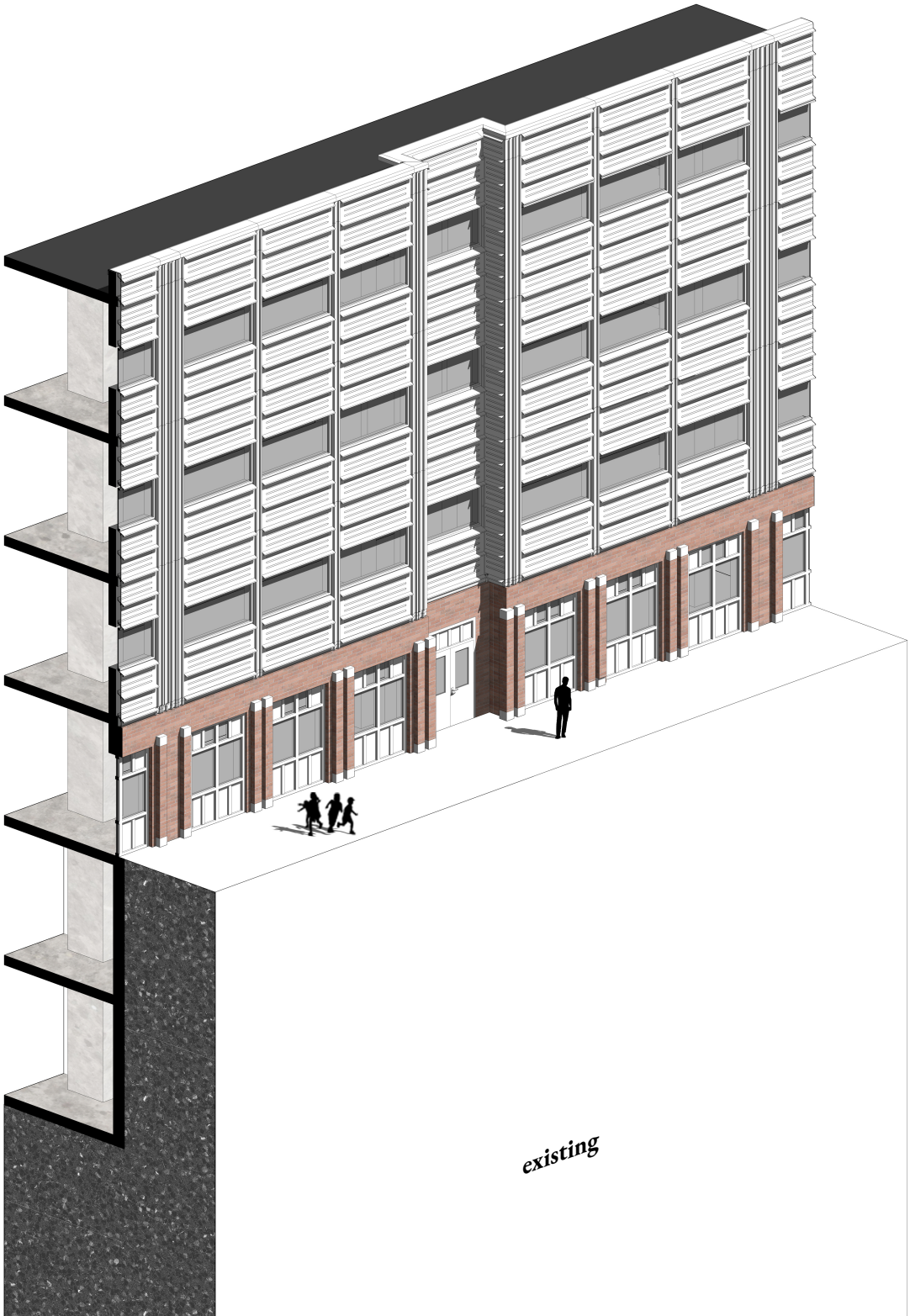
therefore, I want to introduce some texture to the building by adding louvers to the south and west elevations of the building

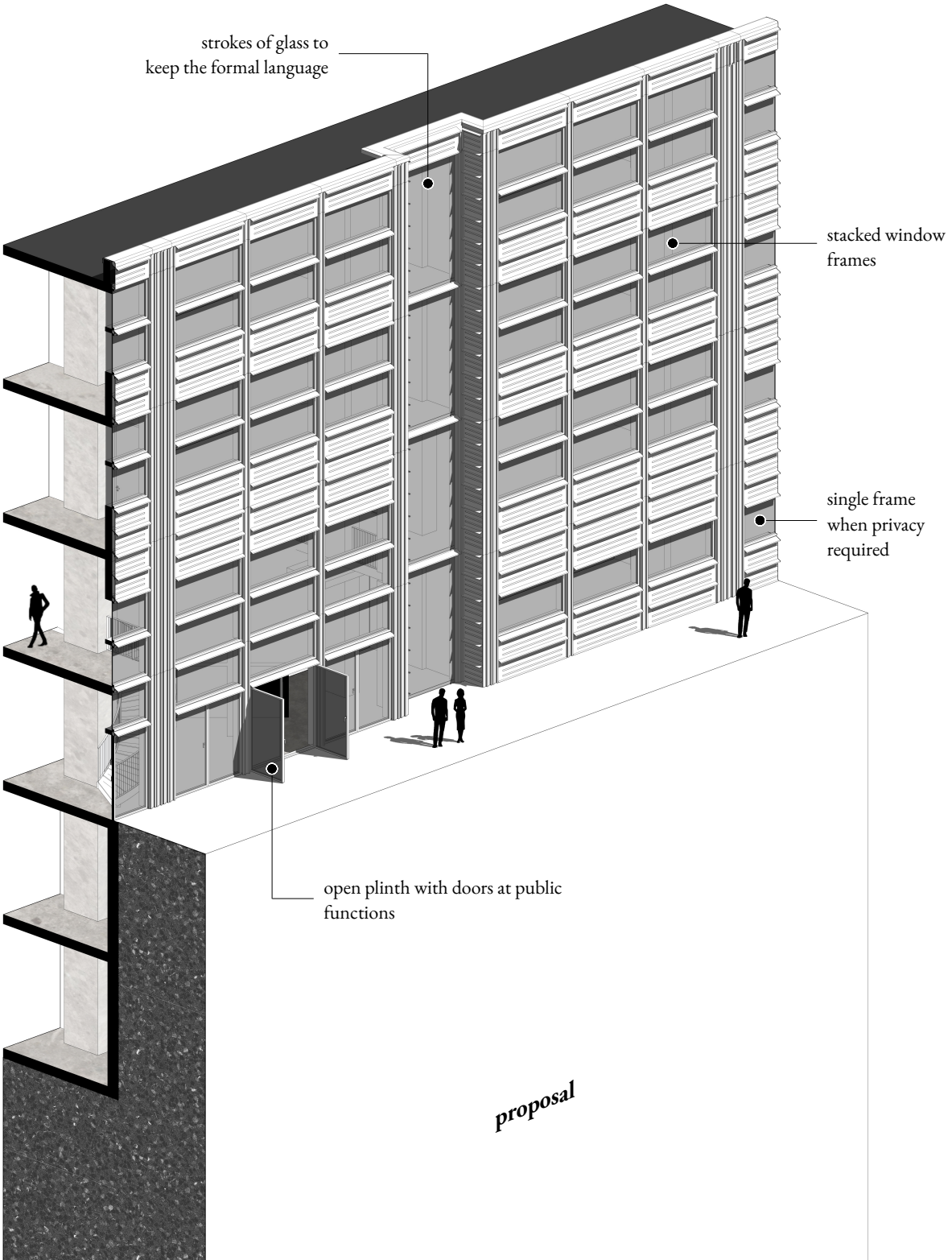
this decreases the amount of direct sunlight onto the facade which would positively affect the indoor climate



louvers proposal

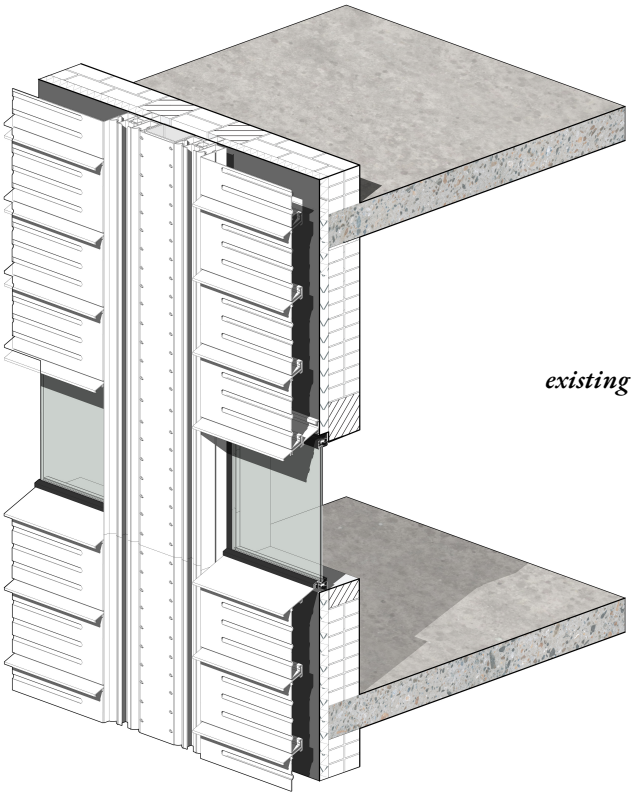
FACADE MAIN BUILDING REFINEMENT



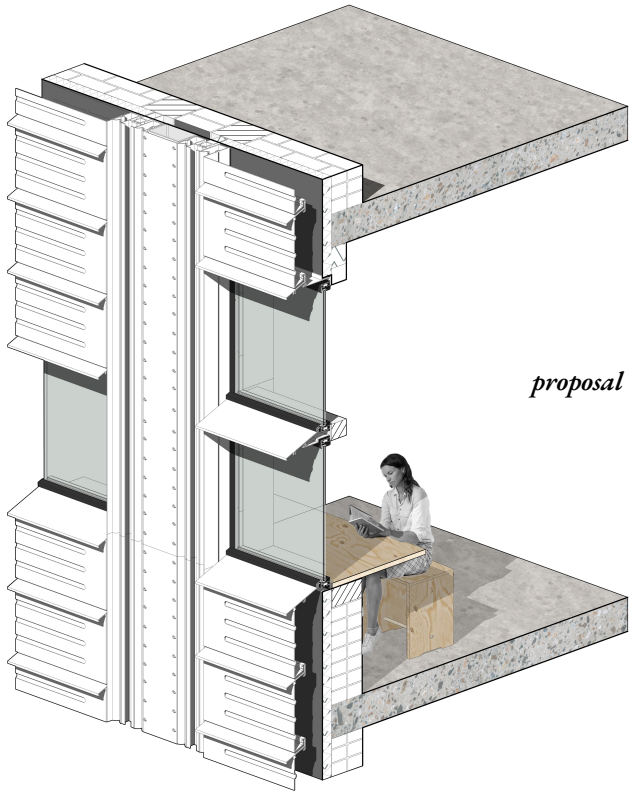

strokes of glass to
keep the formal language
stacked window
frames
single frame
when privacy
required
open plinth with doors at public
functions

proposal

FRAGMENT FINAL REFINEMENT

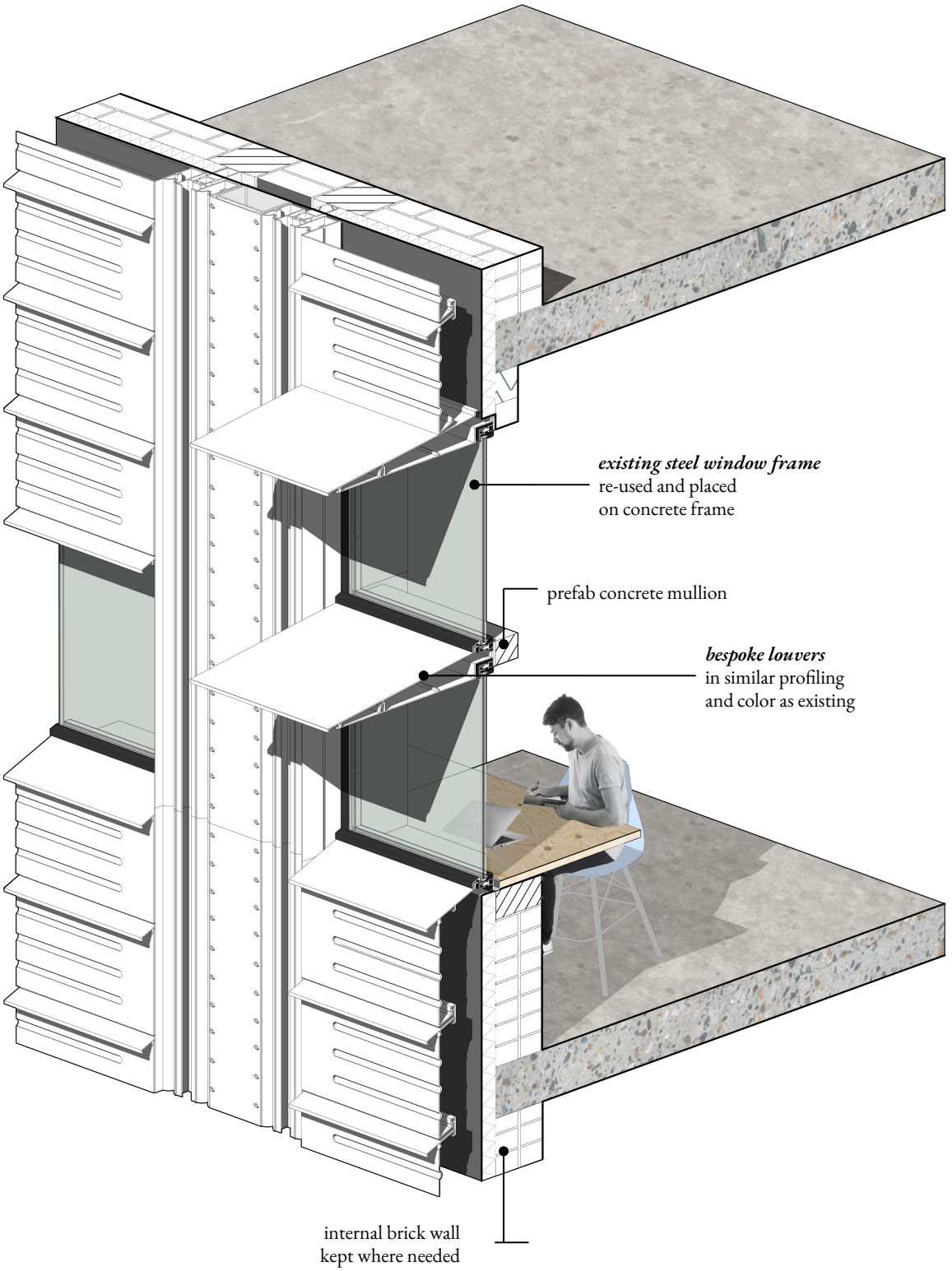


existing

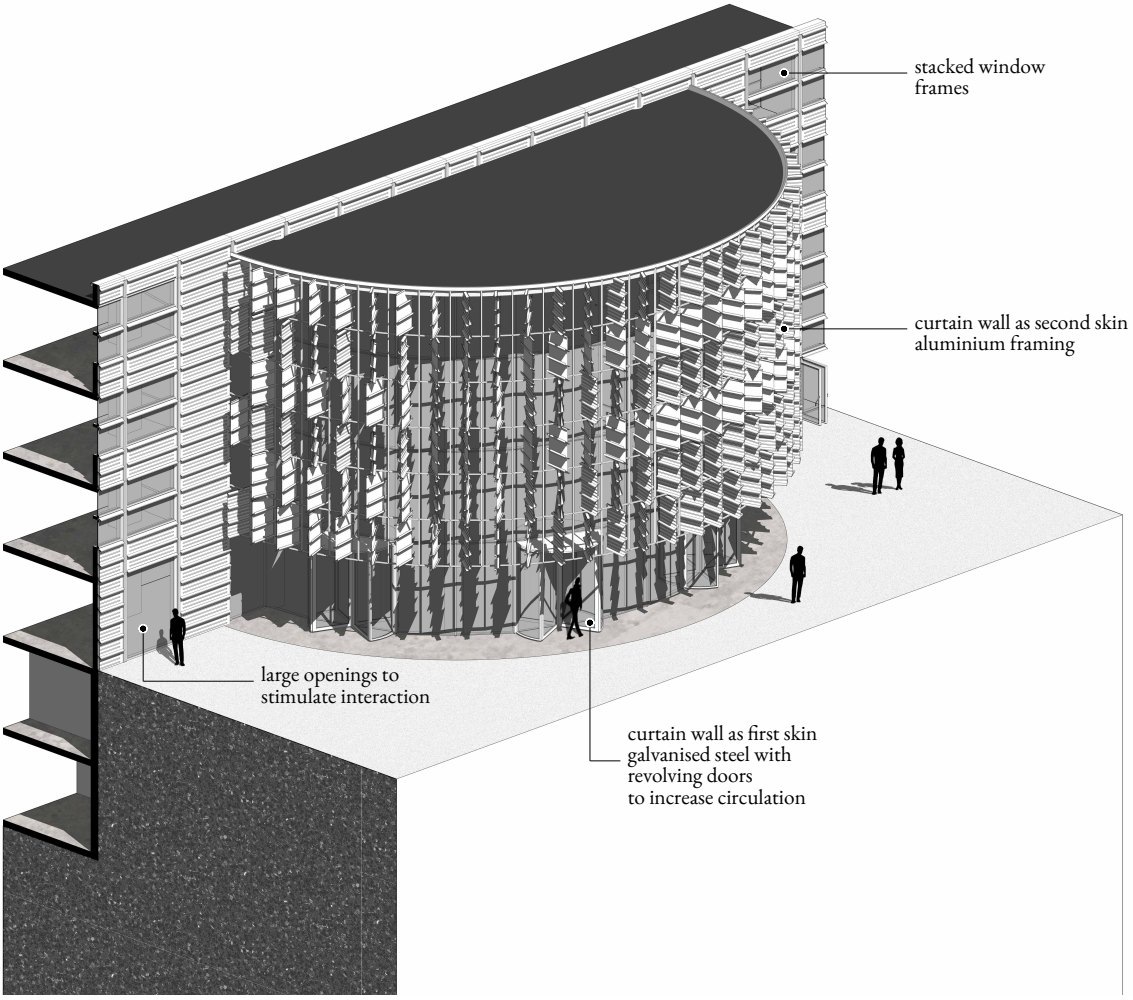


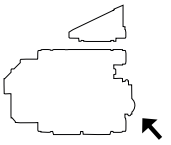
proposal

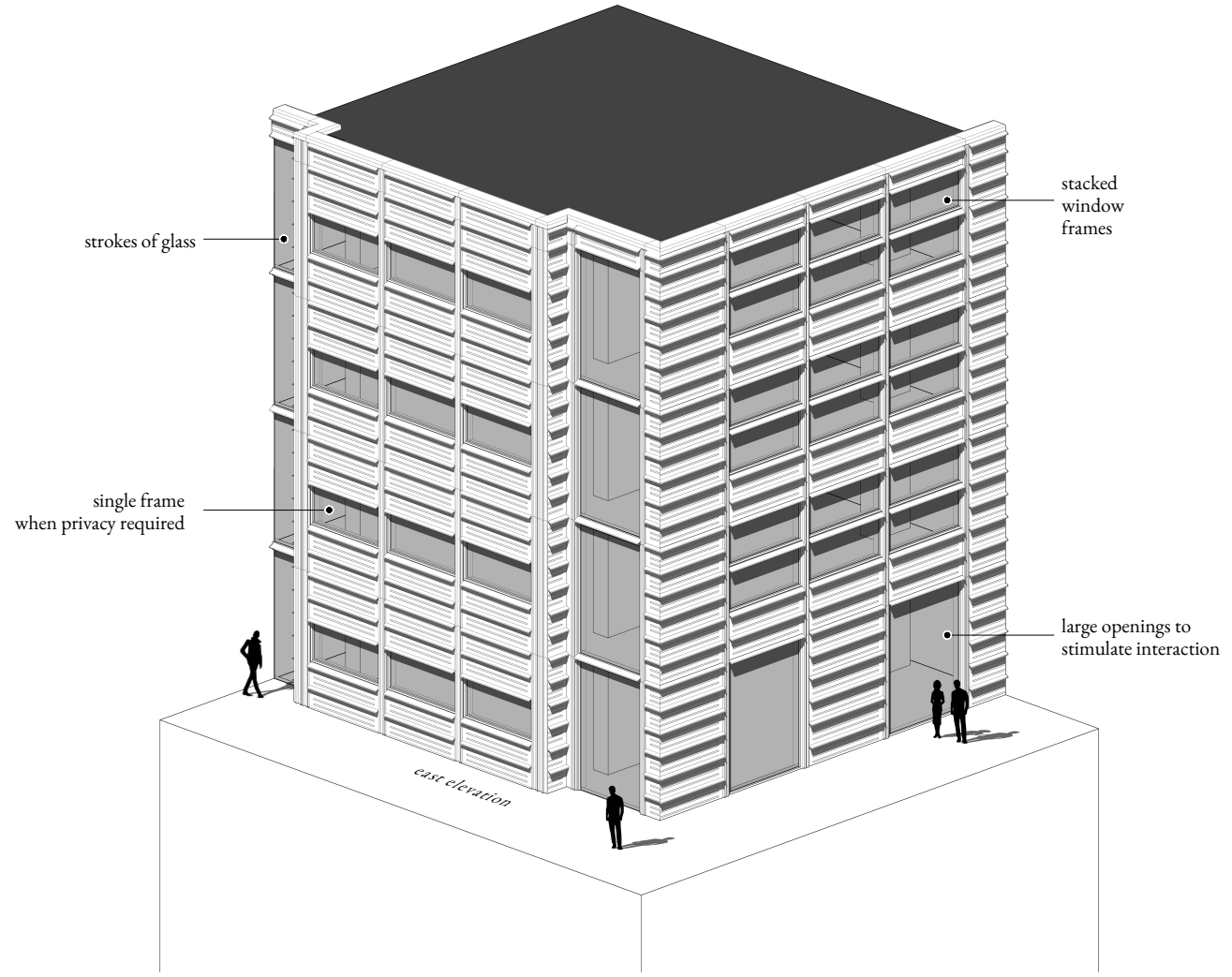
louver proposal

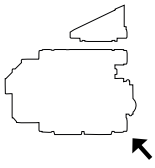


FACADE ENTRANCE EXCEPTION

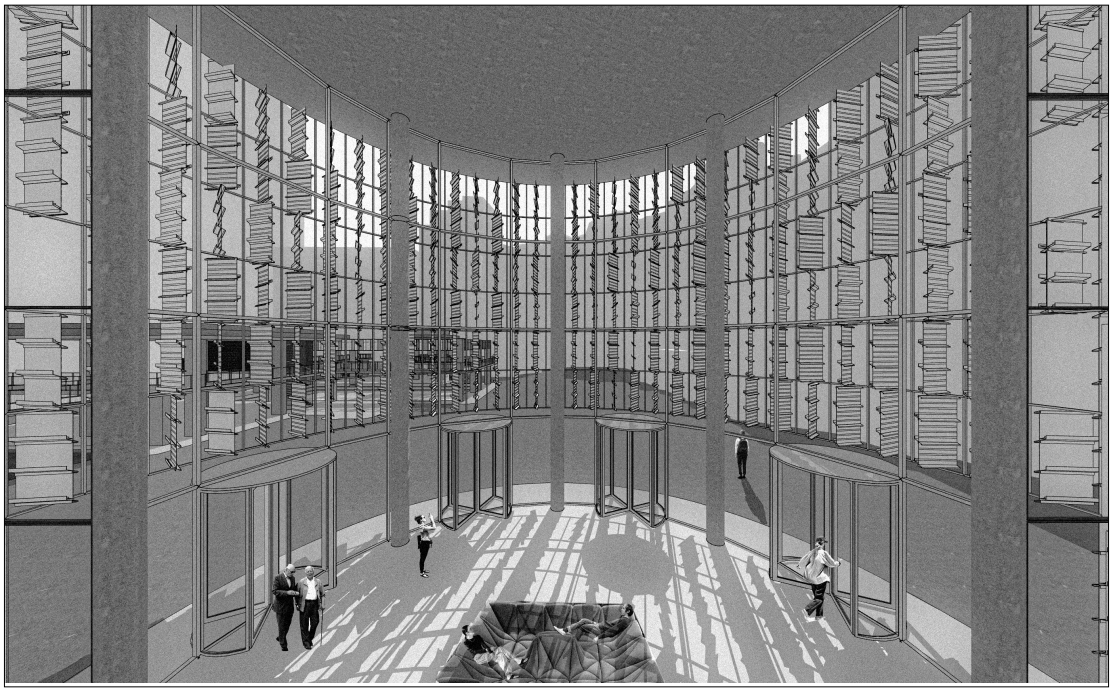


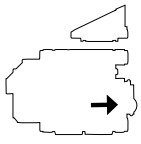



strokes of glass
single frame
when privacy required
stacked
window
frames
large openings to
stimulate interaction
east elevation

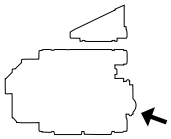


ENTRANCE IMPRESSIONS

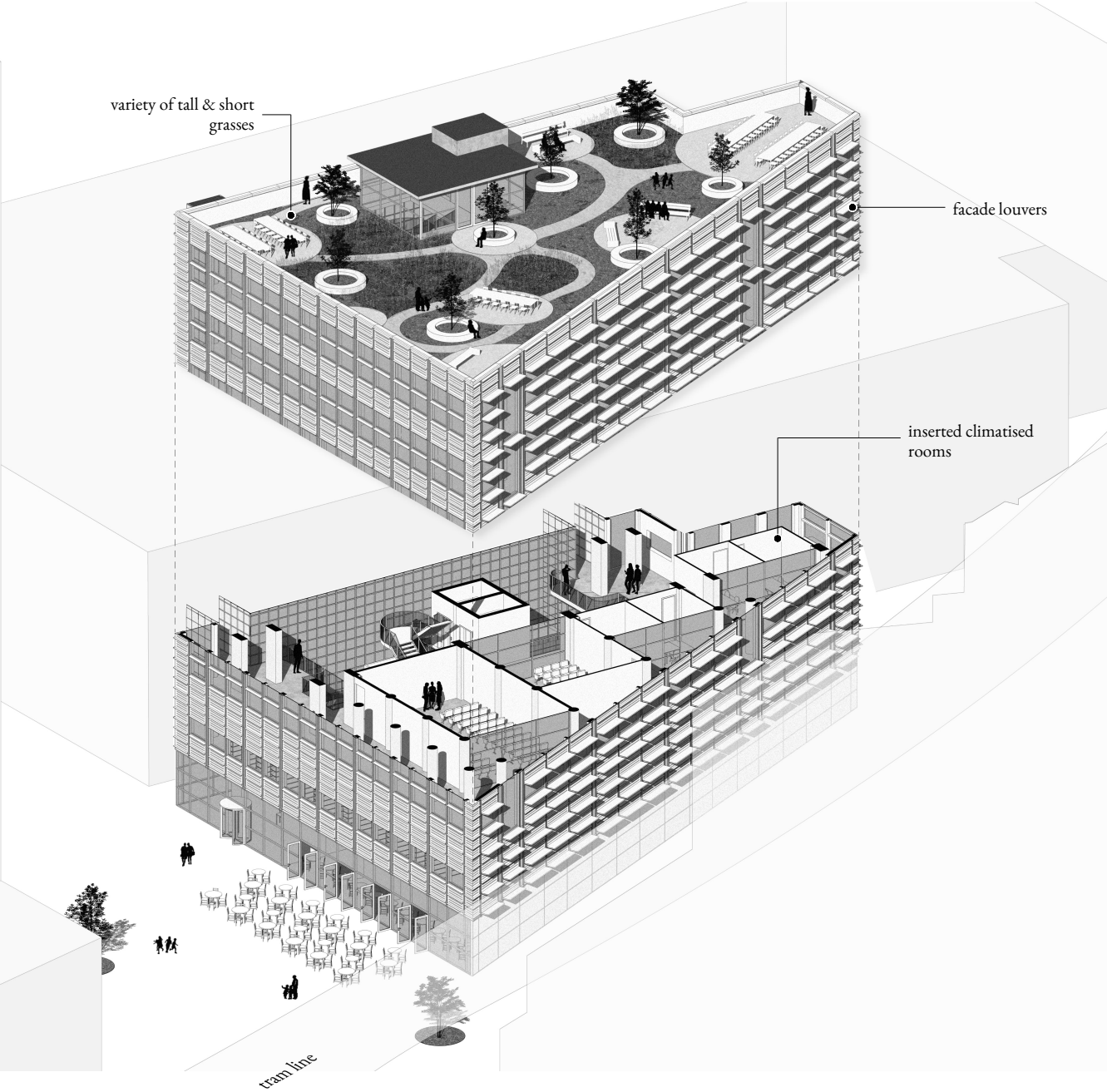


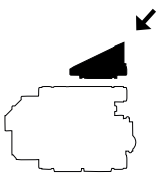


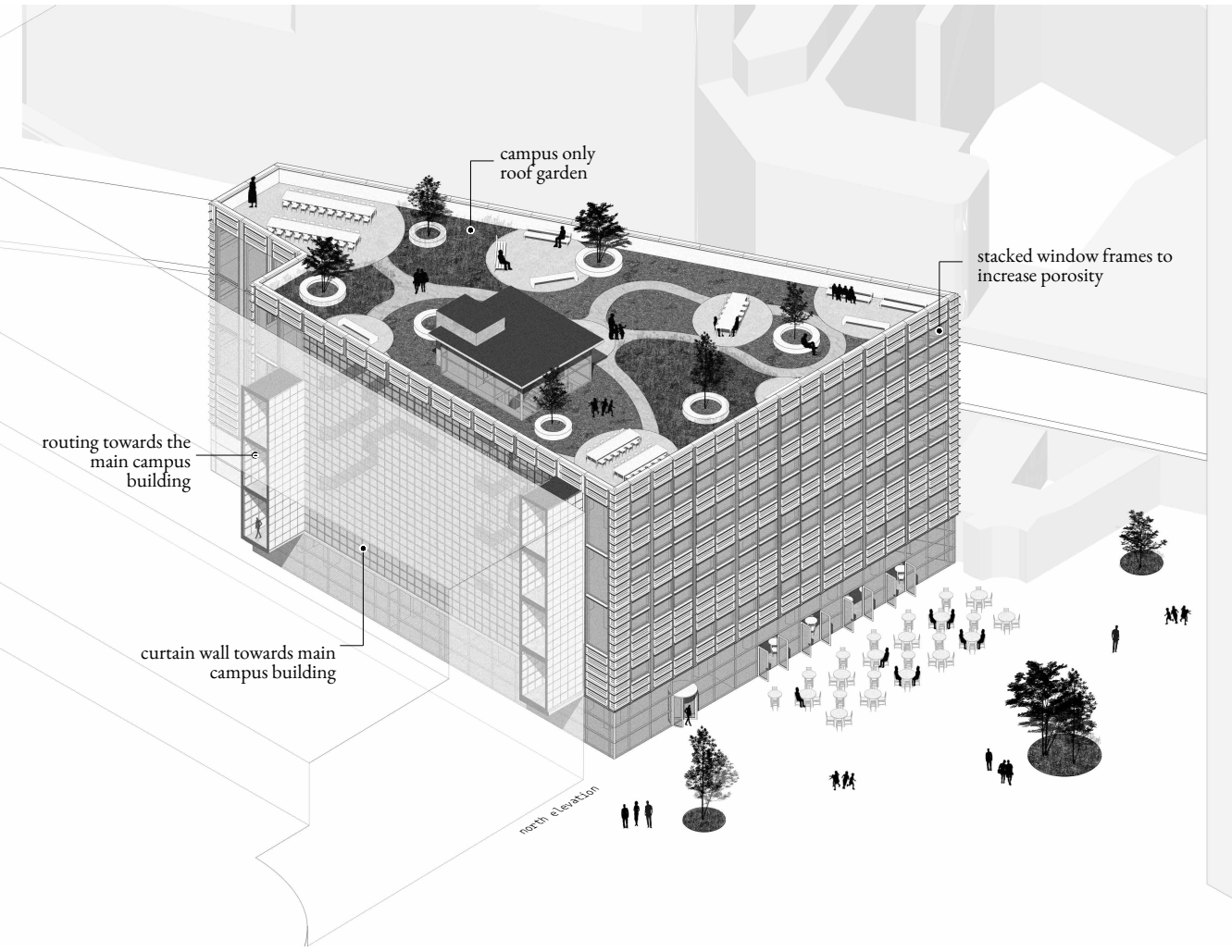


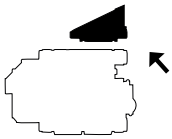


FACADE WEST WING REFINEMENT

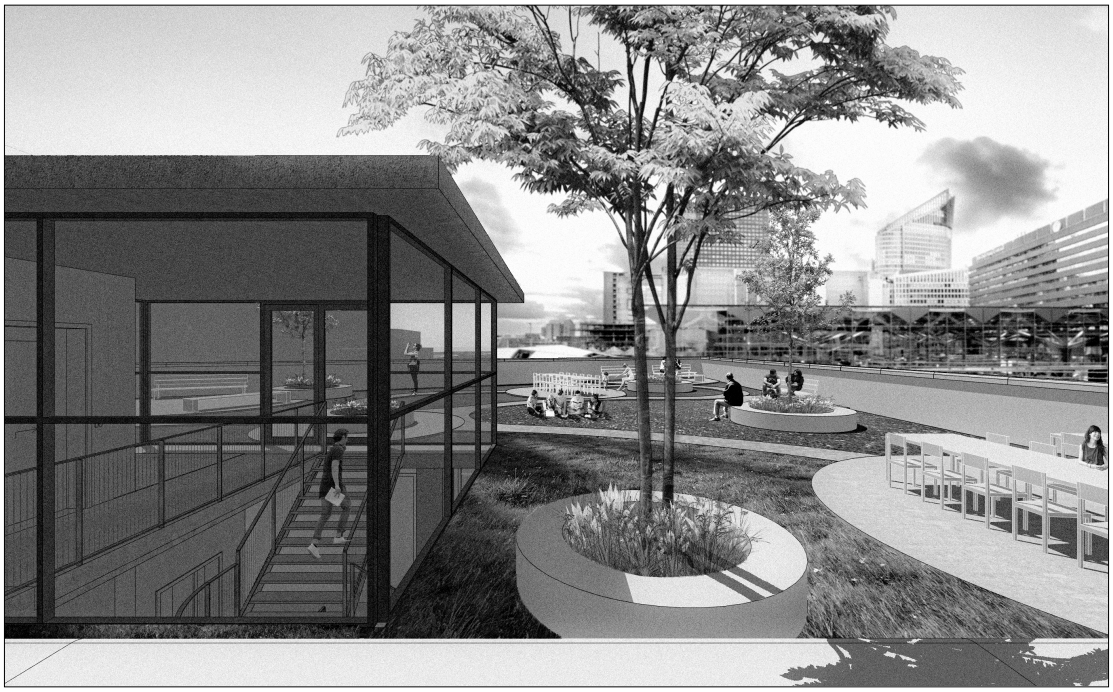


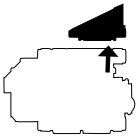


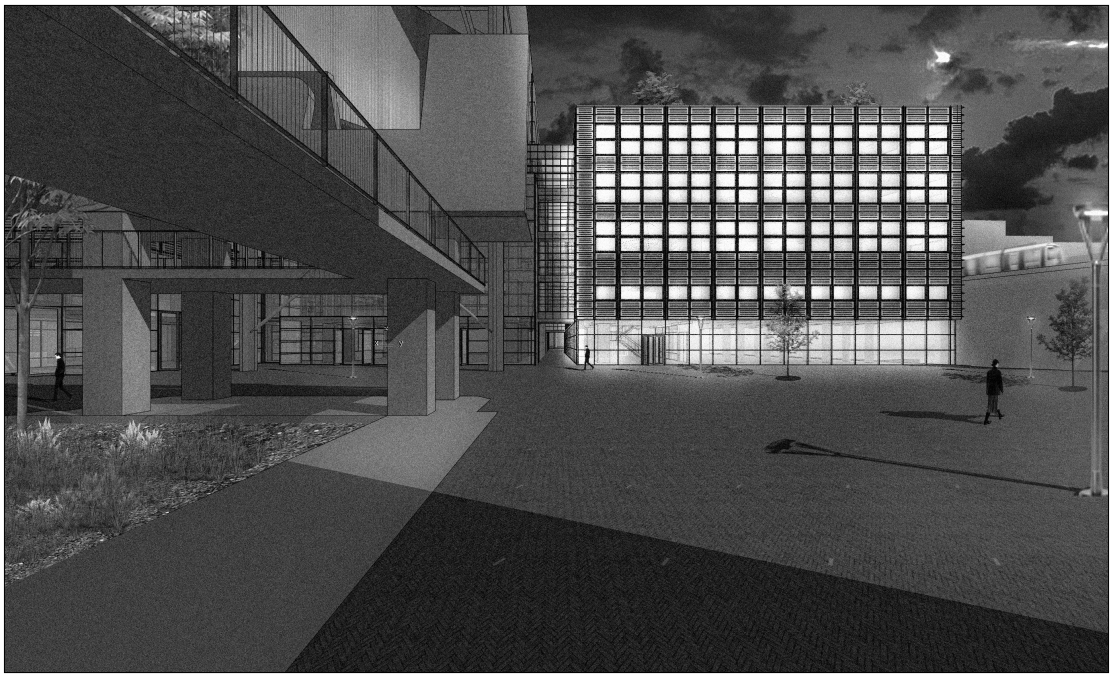

campus only
roof garden
stacked window frames to
increase porosity
routing towards the
main campus
building
curtain wall towards main
campus building
north elevation

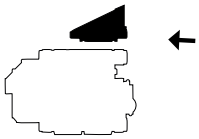


WEST WING IMPRESSIONS









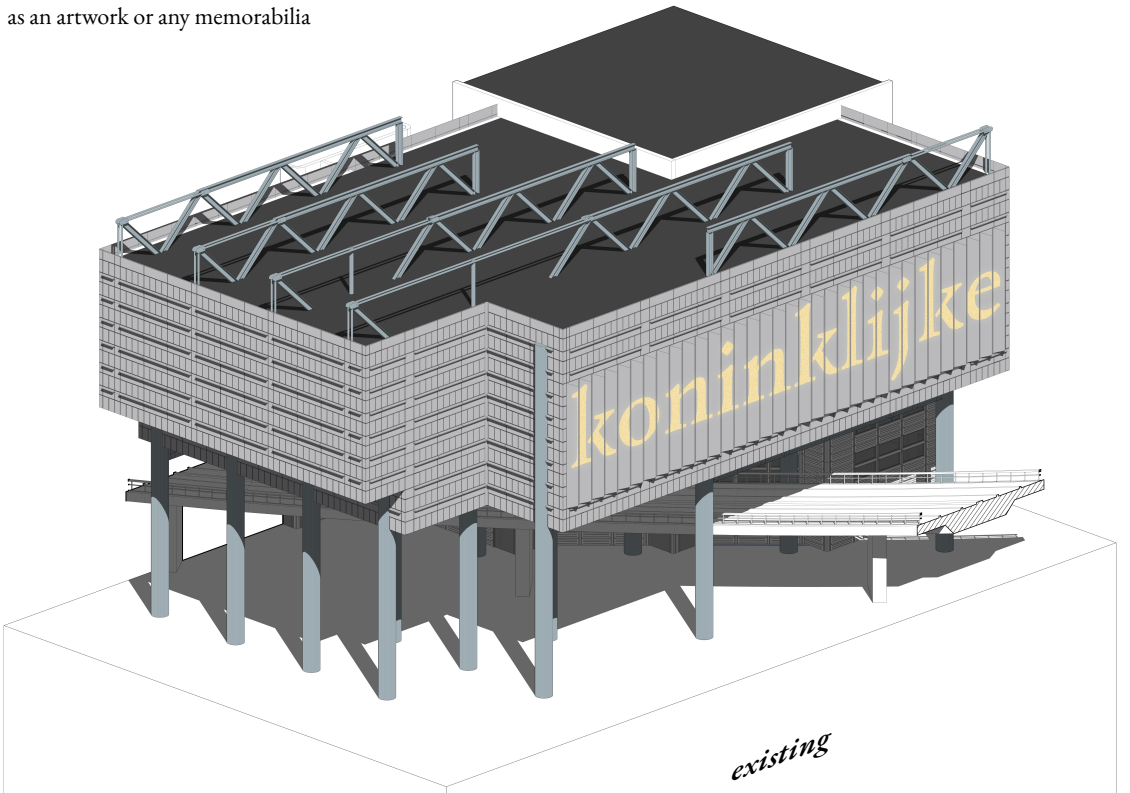
DEPOT INTERVENTION

the existing depot hovers over the tram track and creates an immergence between infrastructure and building

the golden letters, which characterizes the extension, are made as a reflection of the existing function, a library depot

to increase the porosity of the building, these letter would have to be partially removed

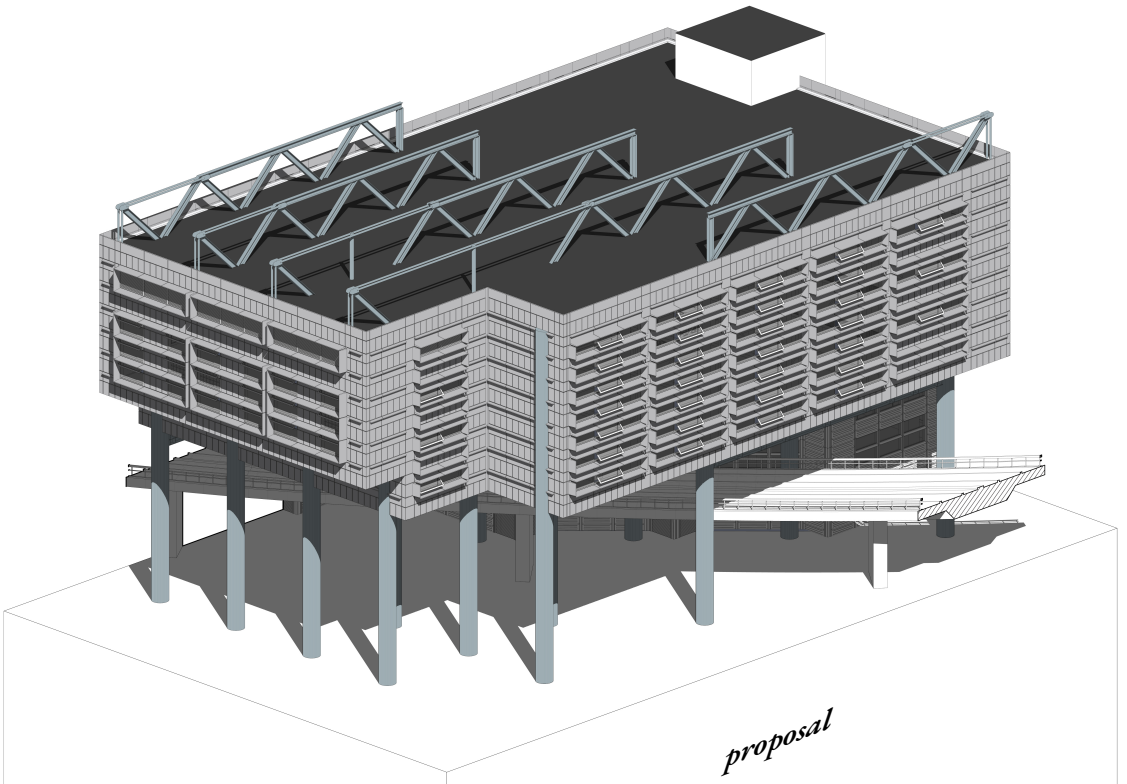
therefore I decide to completely get rid of the letters, which allows for the royal library to use them in their new location as an artwork or any memorabilia



existing

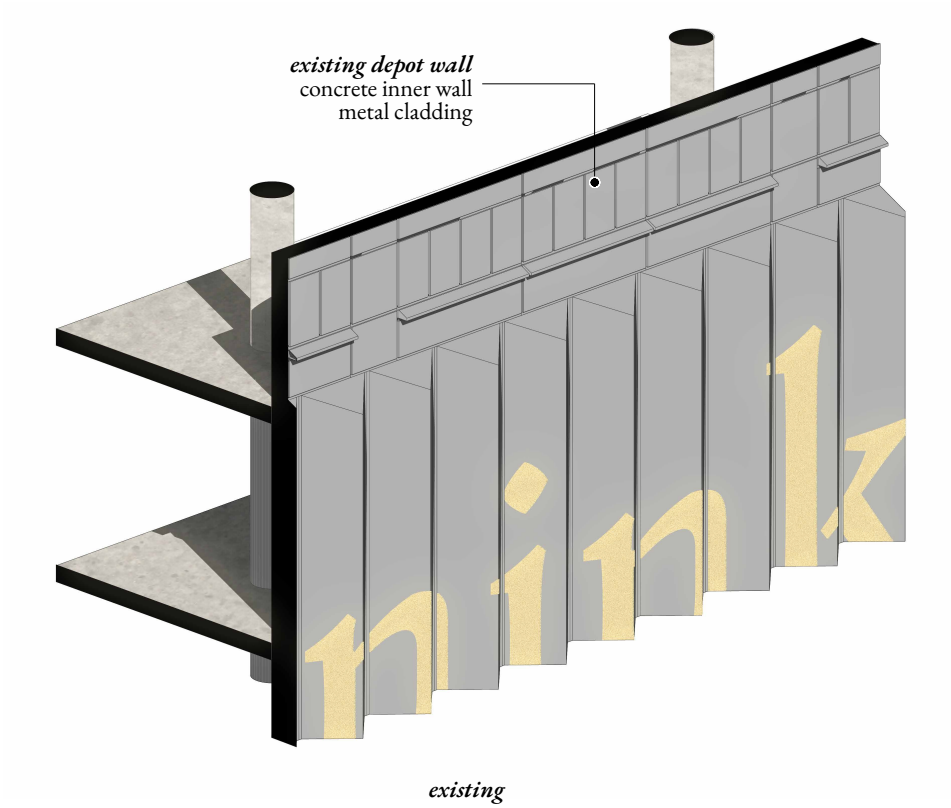
the depot is reconstructed by inserting window frames into the existing grid

the window frame will be enclosed by louvers in similar profiling and color as existing

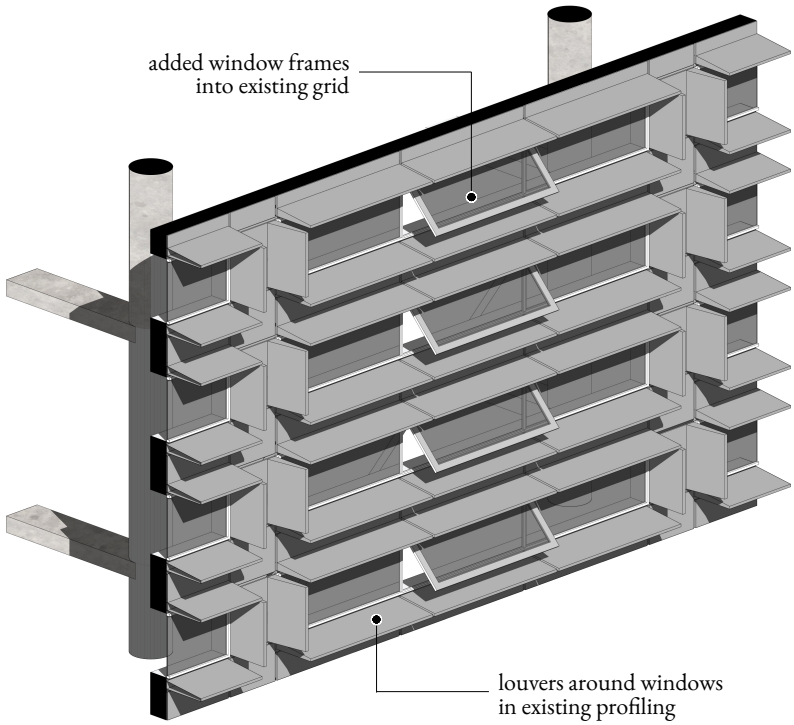


proposal

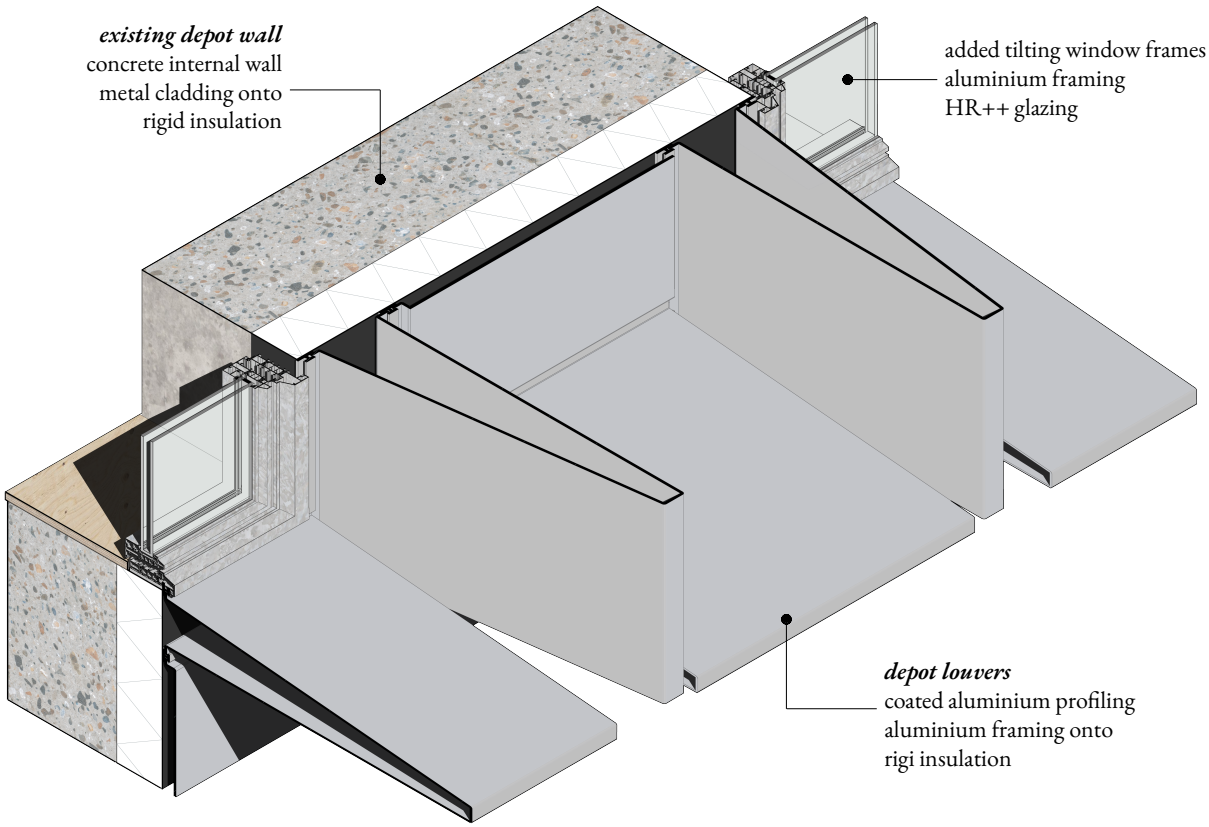
DEPOT FACADE DETAILING



existing



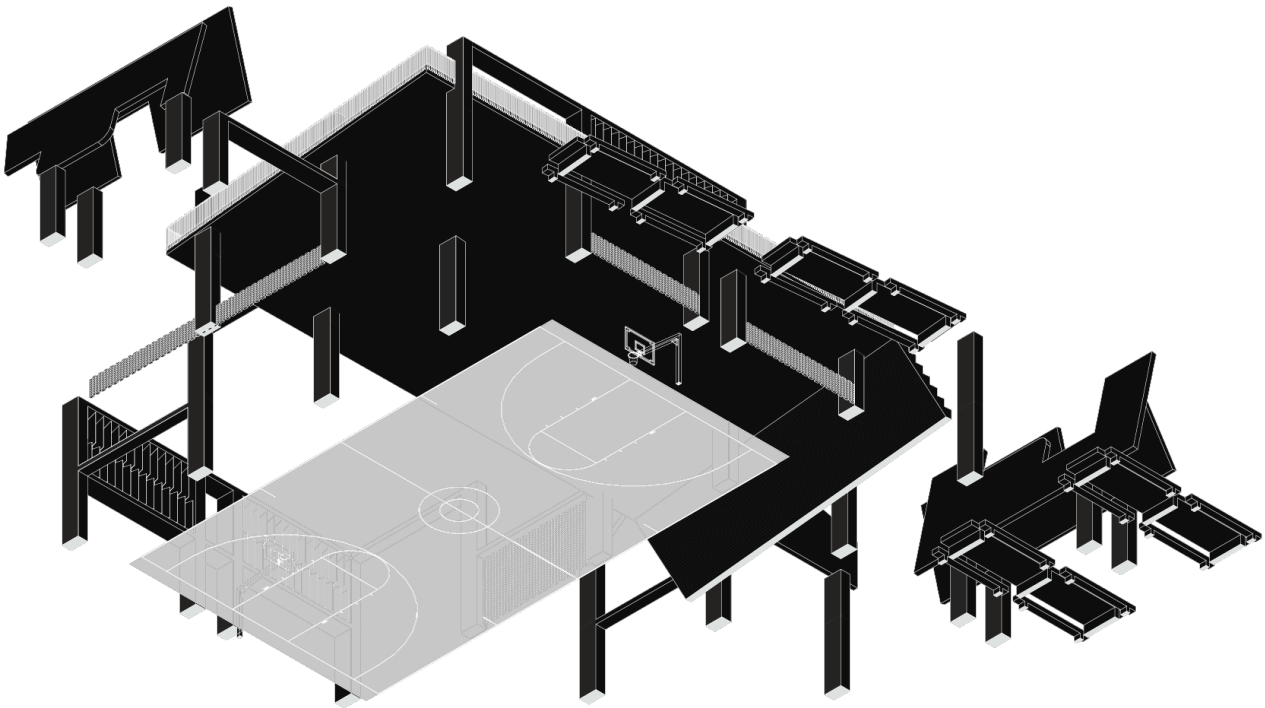
proposal

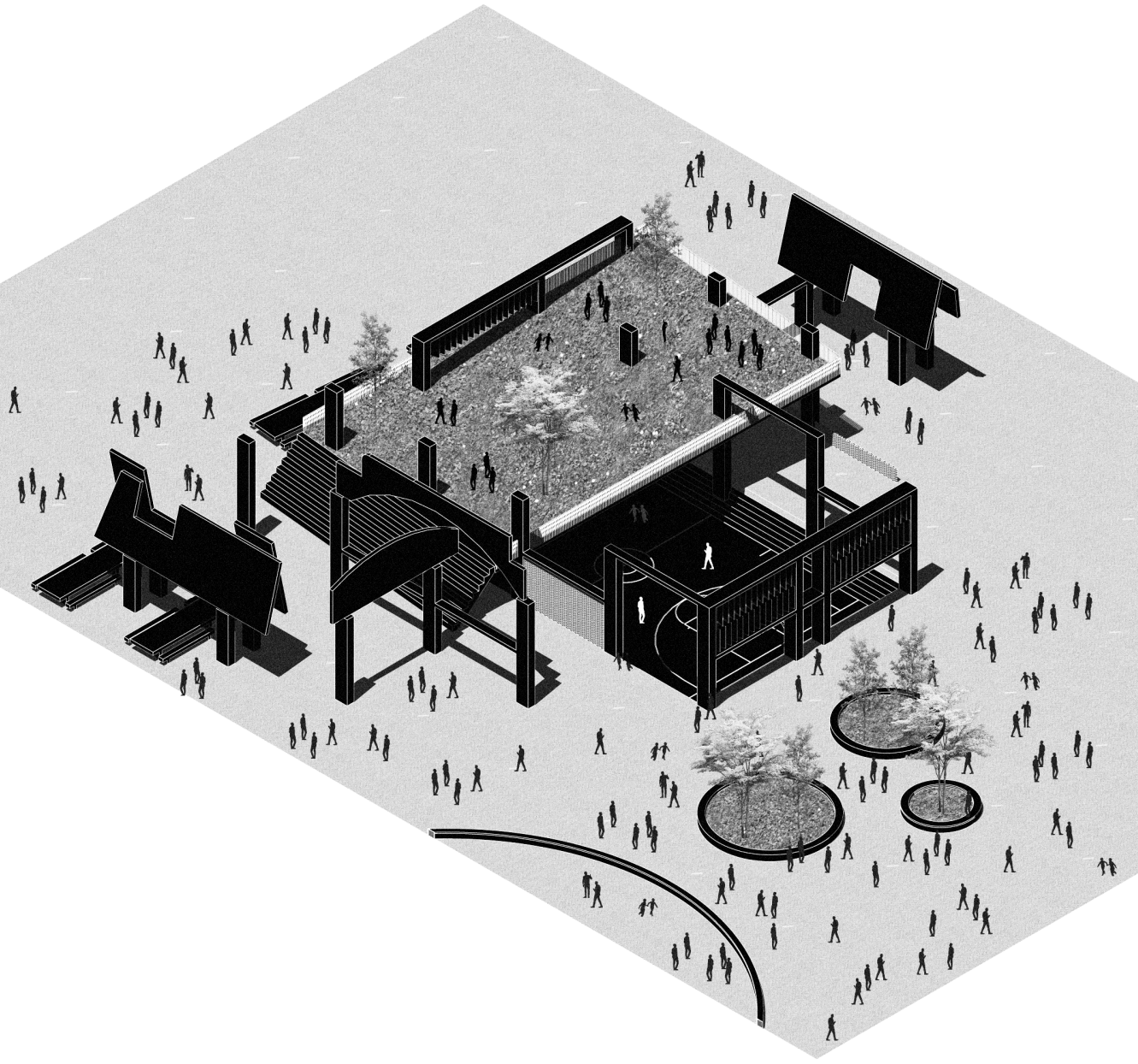

existing depot wall
concrete internal wall
metal cladding onto
rigid insulation
added tilting window frames
aluminium framing
HR++ glazing
depot louvers
coated aluminium profiling
aluminium framing onto
rigi insulation

URBAN PAVILION CONCEPT

atmospheric drawing of the first pavilion variant with a sunken basketball court and raised vegetated floor

pieces of concrete floor, which are cut-out from the main building, are used to construct a pavilion that is playfull and tectile

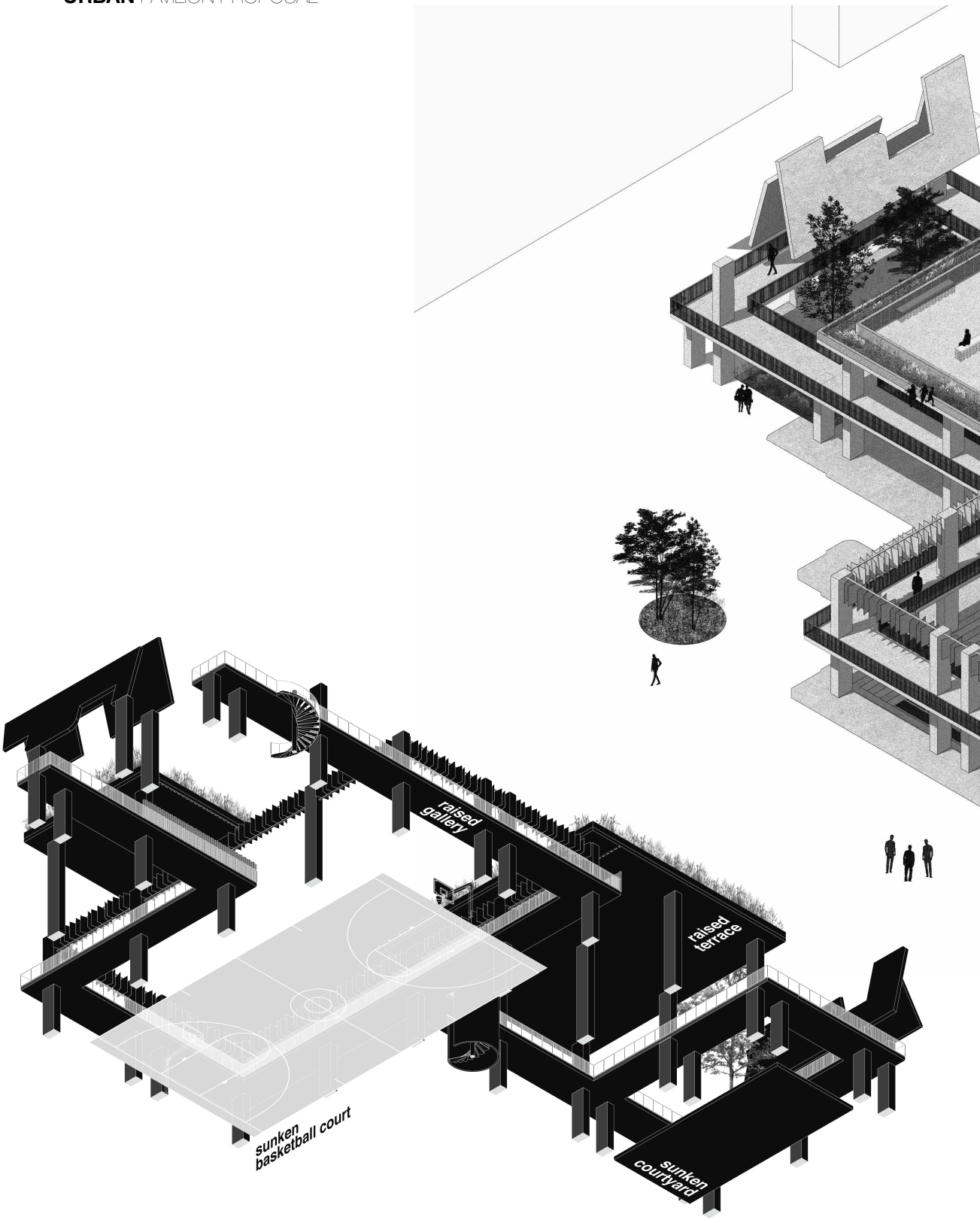


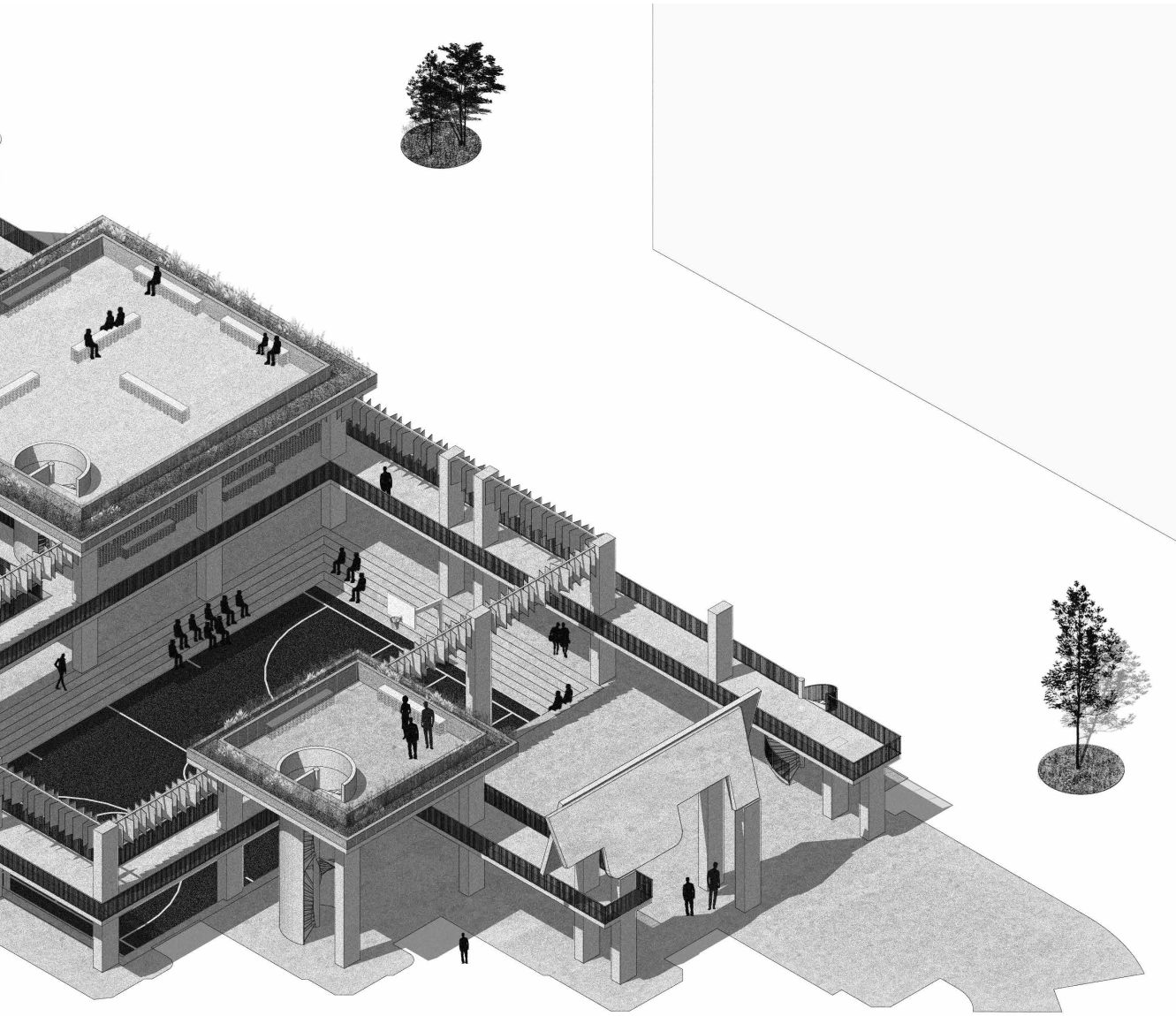


half of the court is covered which also protects the users from the weather elements

the patch of grass with extra vegetation creates a space for people to come together, relax and enjoy the outdoors

URBAN PAVILION PROPOSAL





an optimisation of the pavilion uses the existing first floor of the west wing as a raised gallery where people can move around and experience the different layers of the pavilion

they meet pieces of slabs which are cutout from the west wing and existing building and existing facade cladding re-used as an added texture to the pavilion

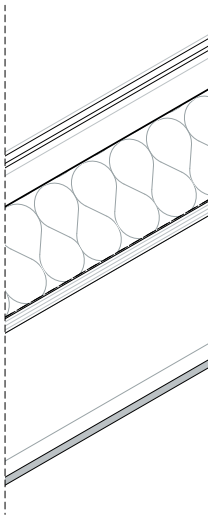
URBAN PAVILION IMPRESSIONS







DETAILING ROOF EDGE ADDITION

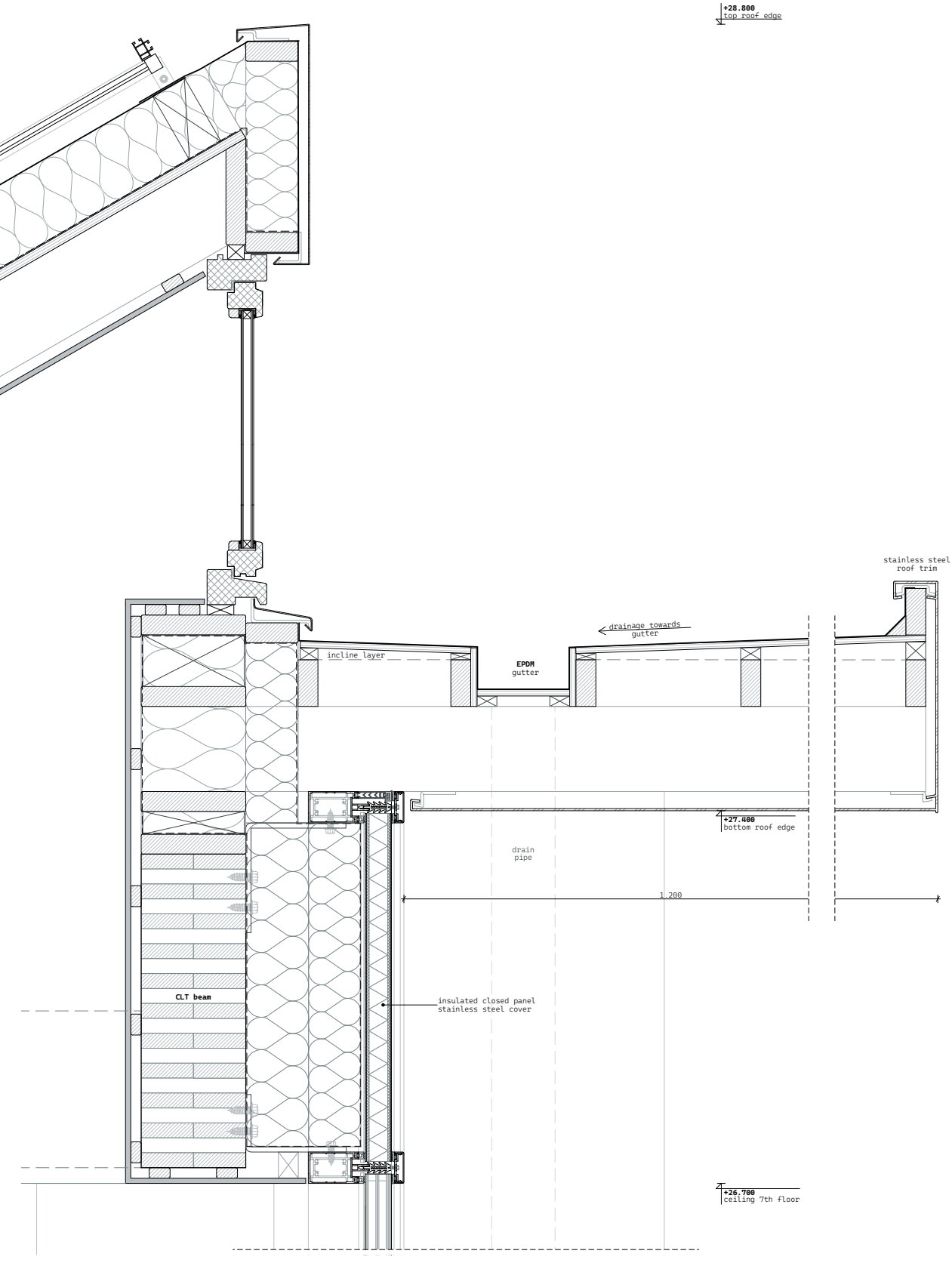


to create even more depth into the added volume on top of the existing building, a small canopy is introduced as a roof edge

the main structure consists of CLT beams and steel columns

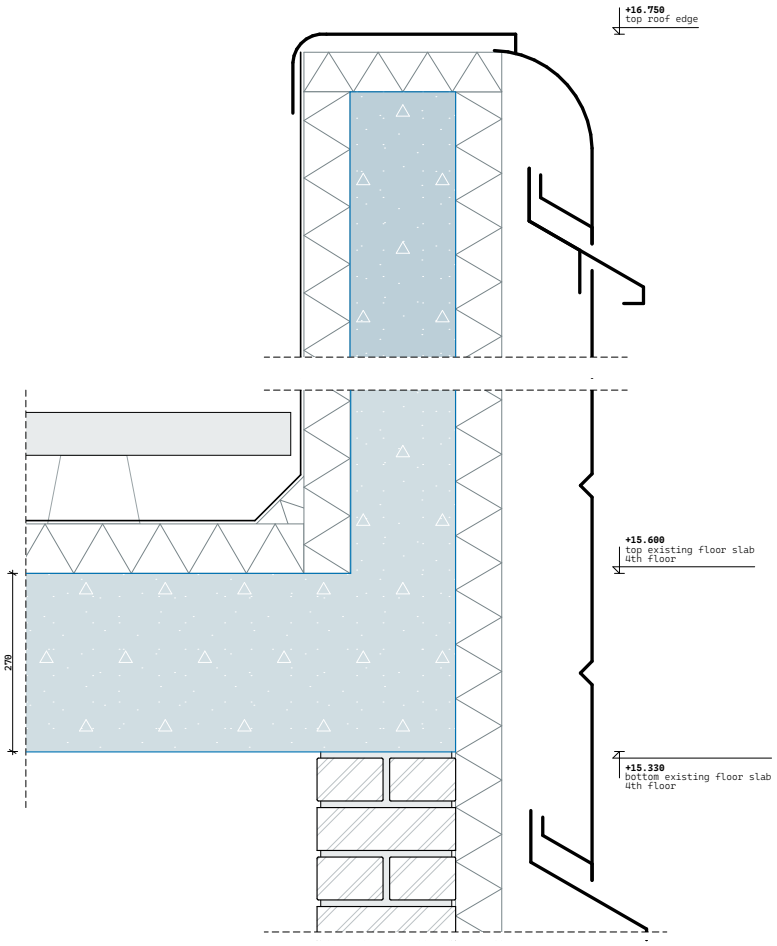
the substructure are only wooden frameworks filled with wood-fibre insulation



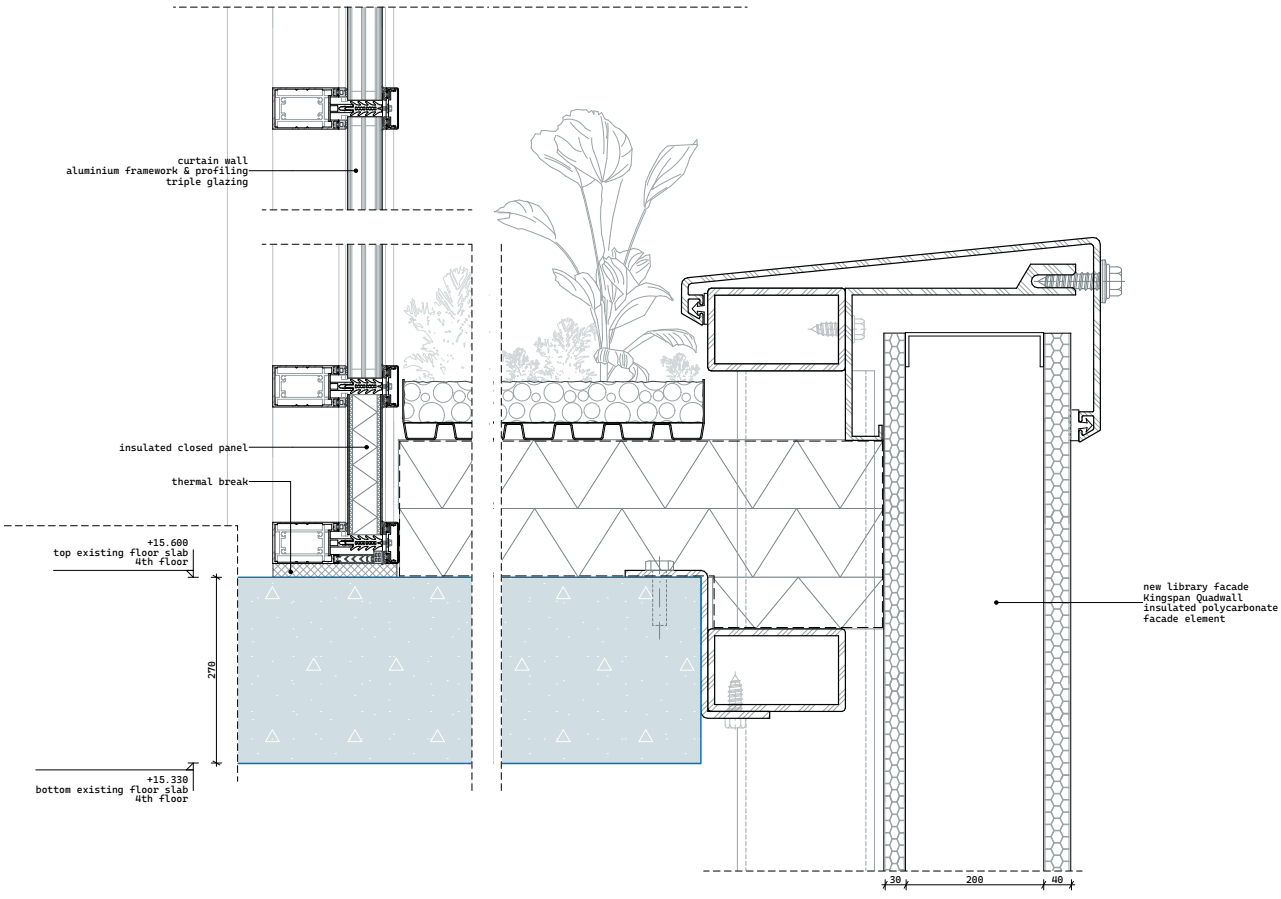

+28.800
top roof edge
stainless steel
roof trim
drainage towards
gutter
incline layer
EPDM
gutter
+27.400
bottom roof edge
drain
pipe
1.200
CLT beam
insulated closed panel
stainless steel cover
+26.700
ceiling 7th floor

DETAILING ROOF EDGE CONCEPT

existing



proposal concept

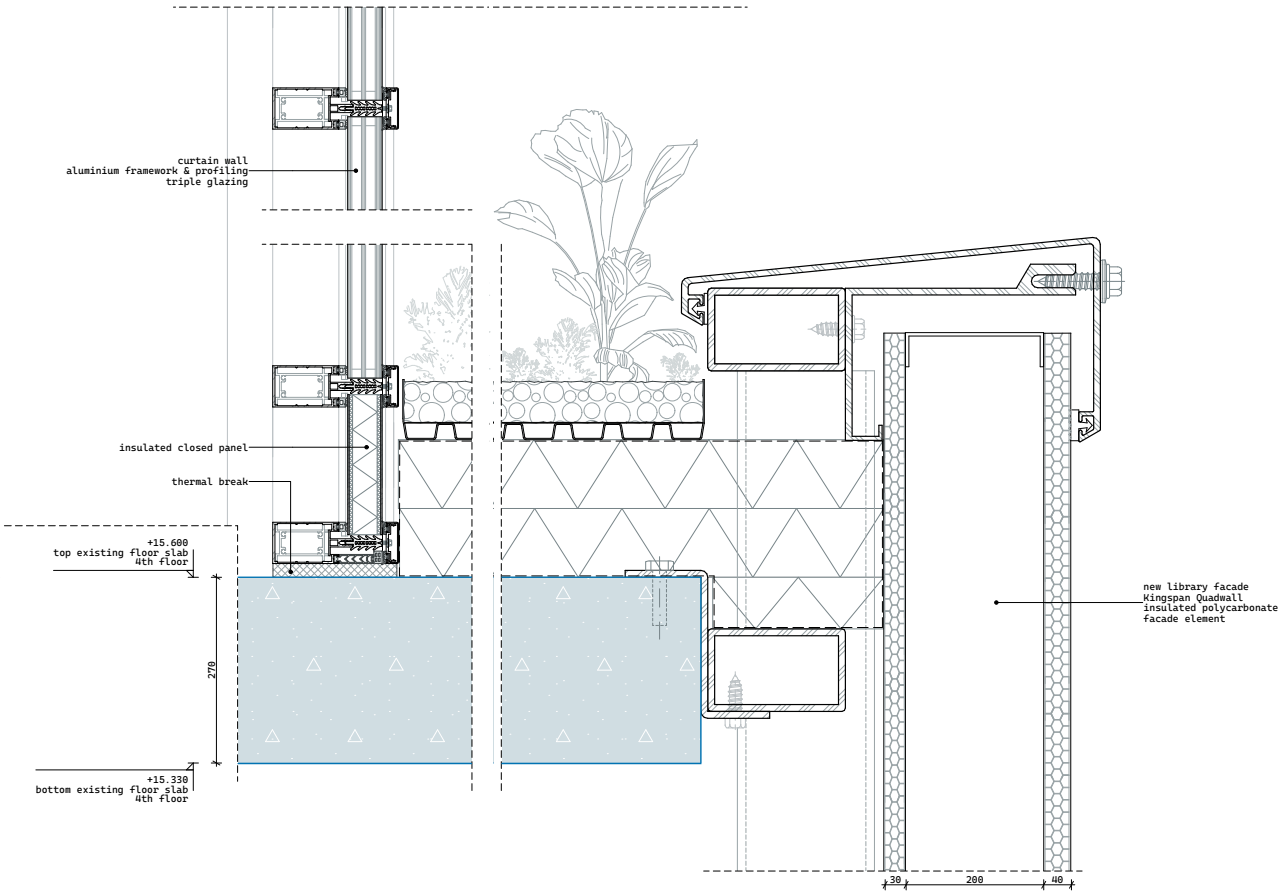


the initial idea was to use an insulated polycarbonate facade for the existing library building (ground-, first-, second-, third- & fourth floor)

the fourth floor would be the floor where old transitions into the newly added volume

this added volume consists of a steel construction grid which is cladded by a aluminium curtain wall with triple glazing

proposal concept

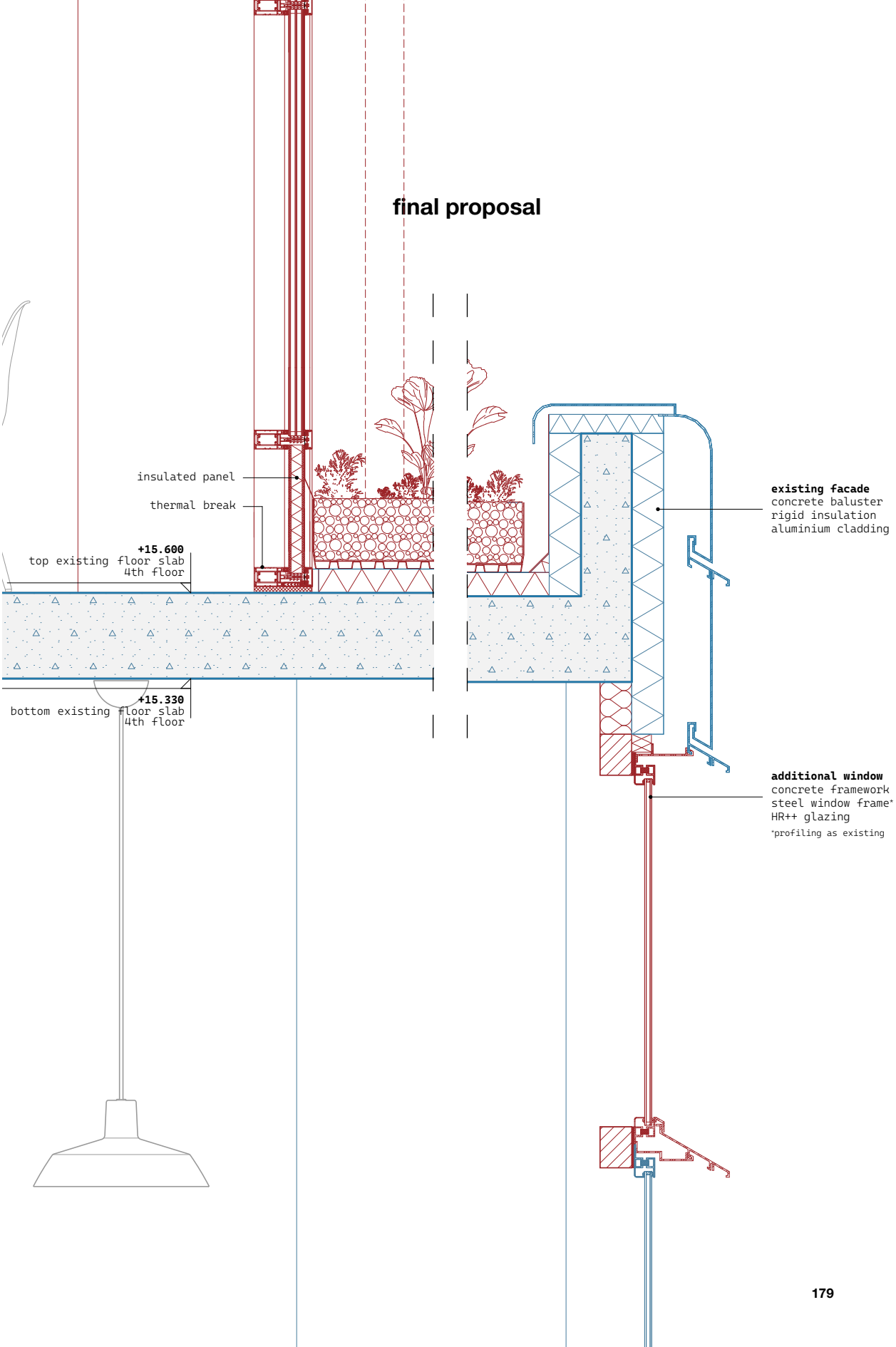


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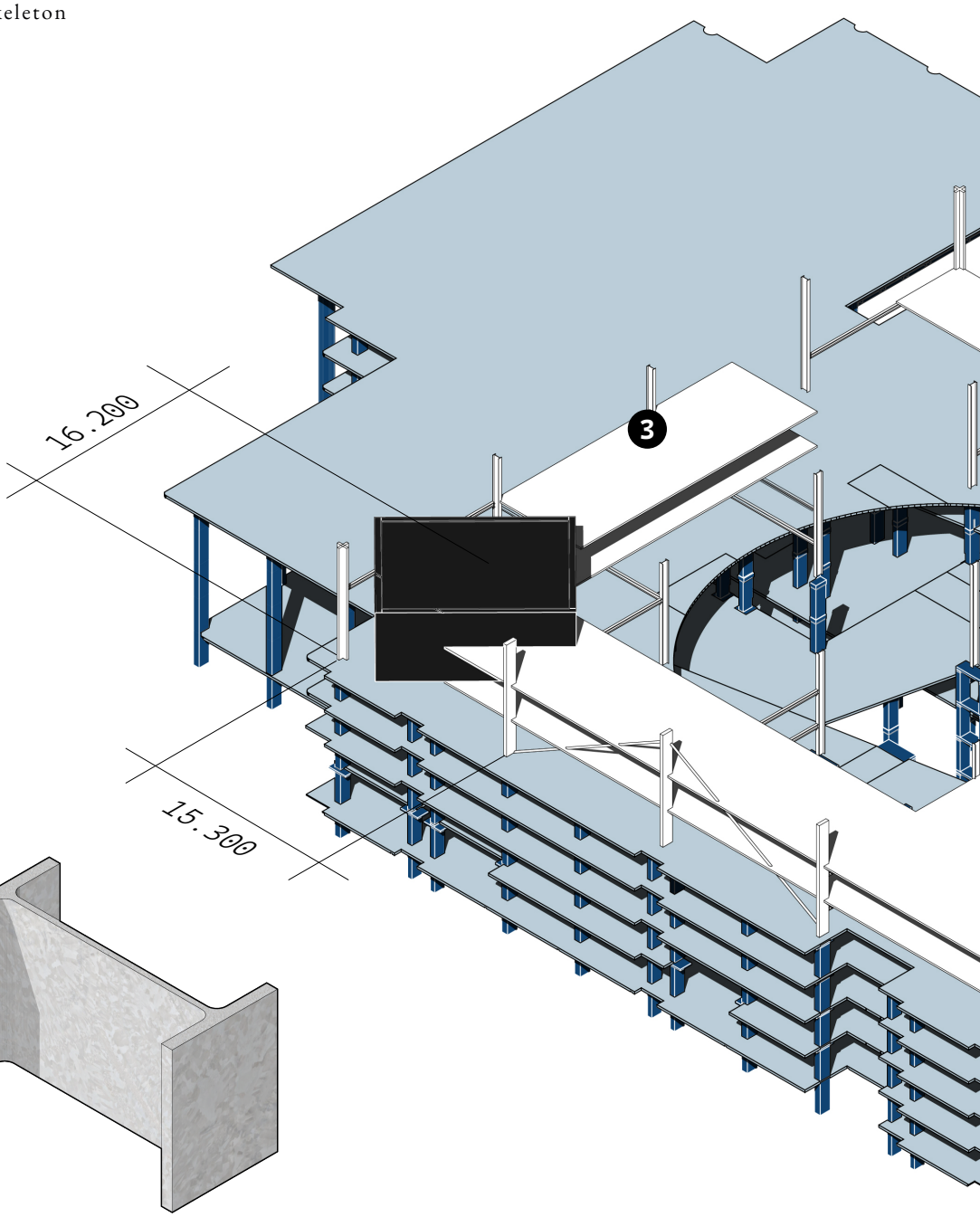
this added volume consists of a steel construction grid which is cladded by a aluminium curtain wall with triple glazing

final proposal

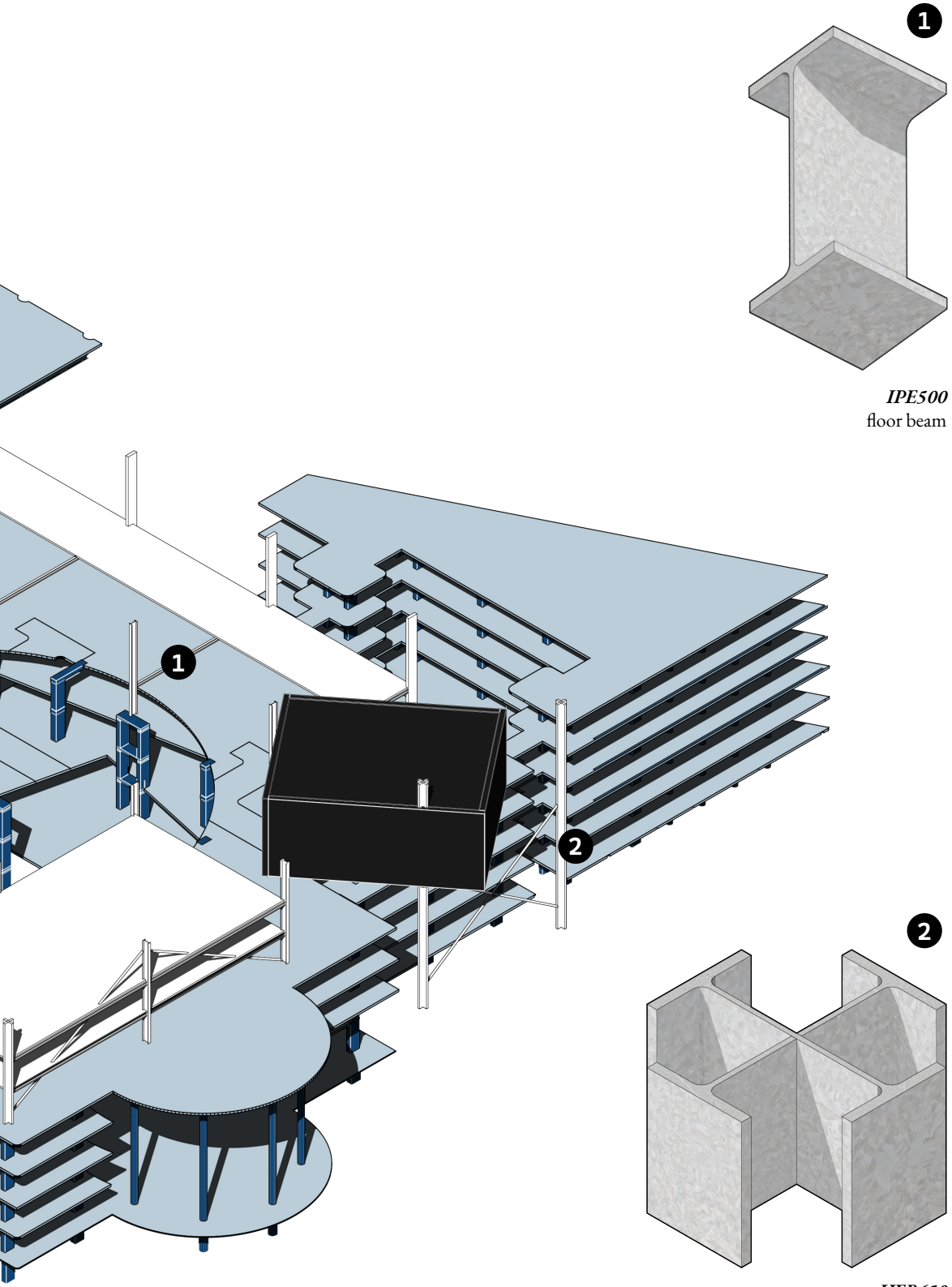


CONSTRUCTION ROOF ADDITION

existing concrete floor slabs
existing concrete columns
corrugated steel floors
CLT skeleton



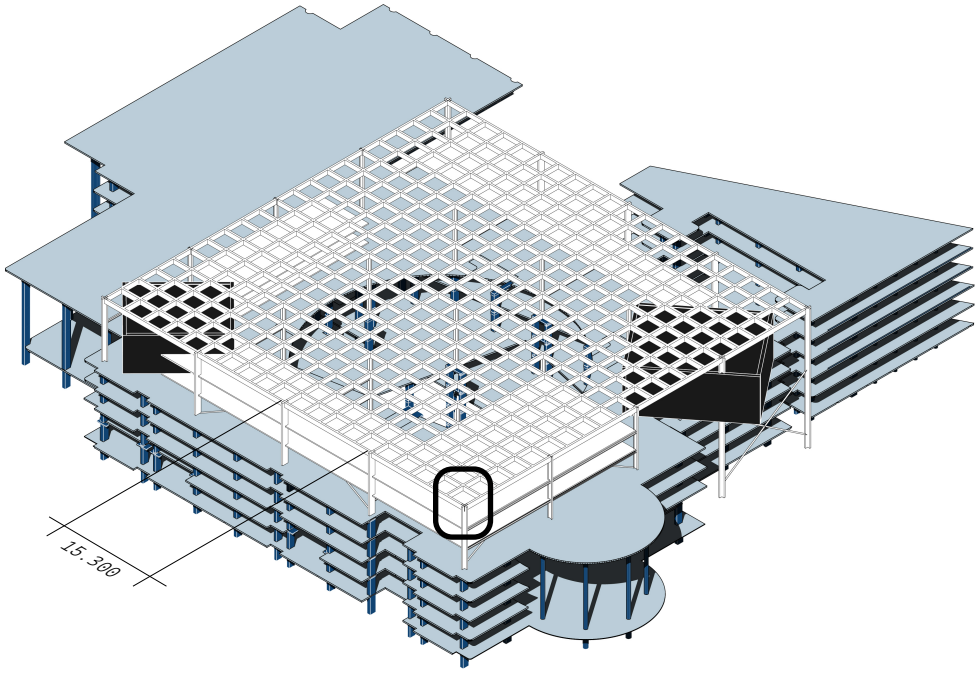
HEB650

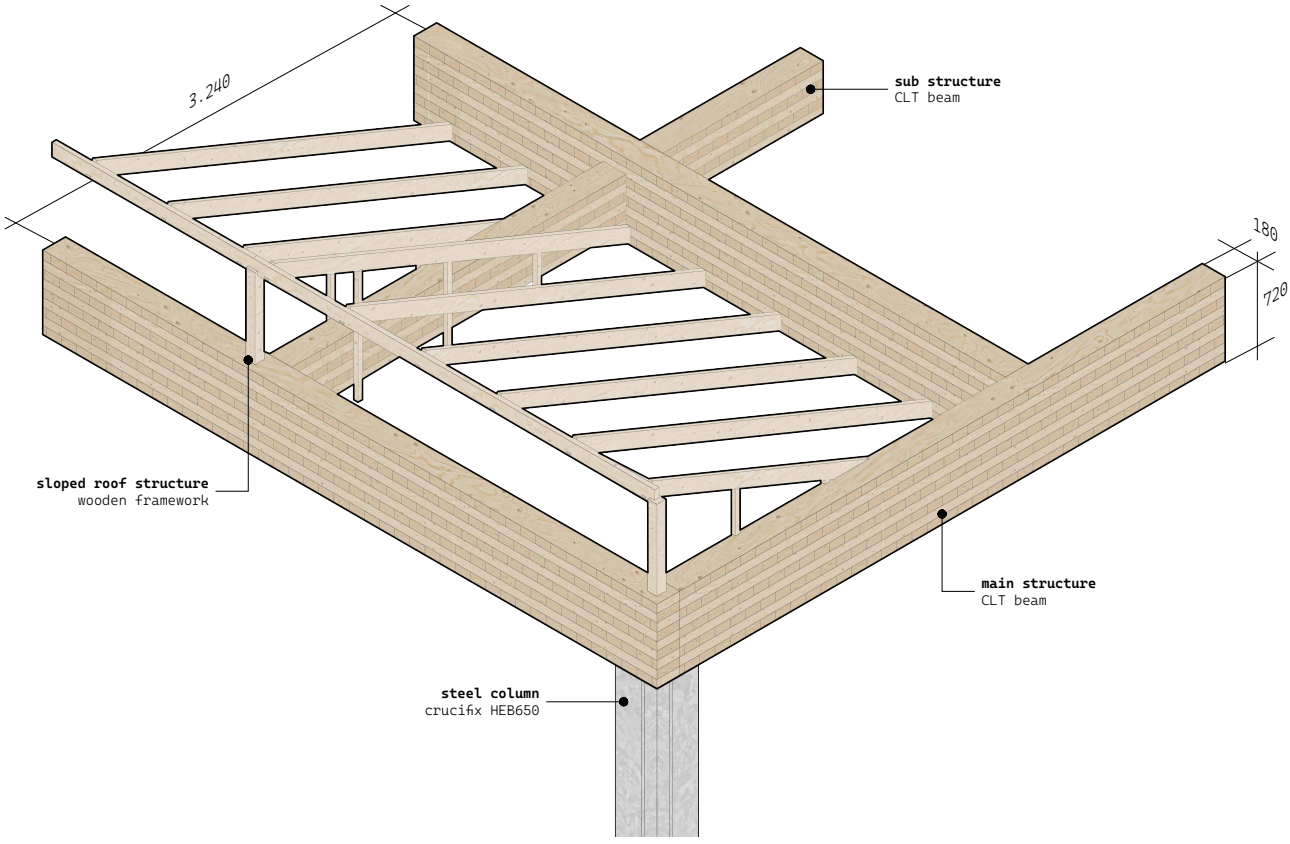


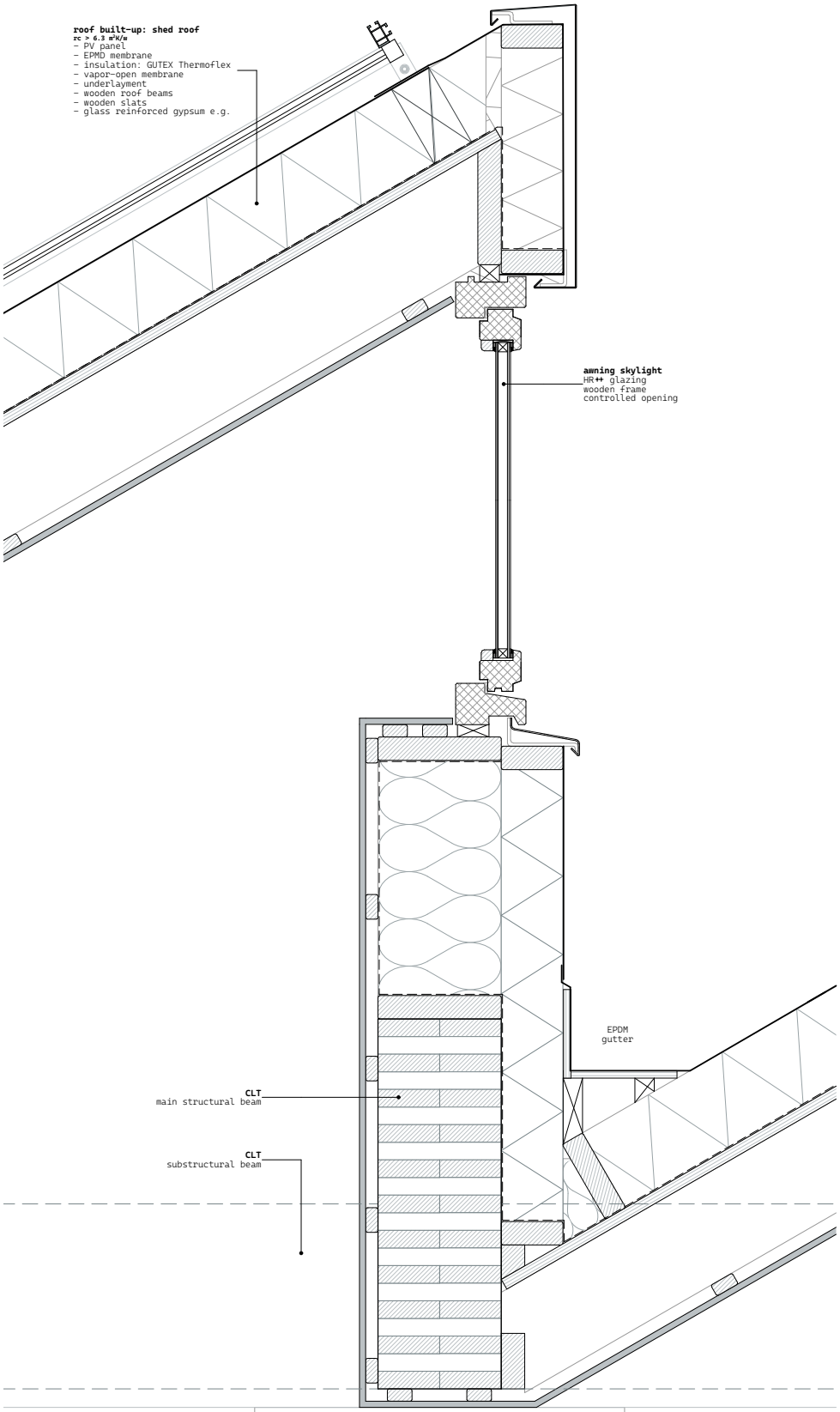
IPE500
floor beam

HEB650
cruciform

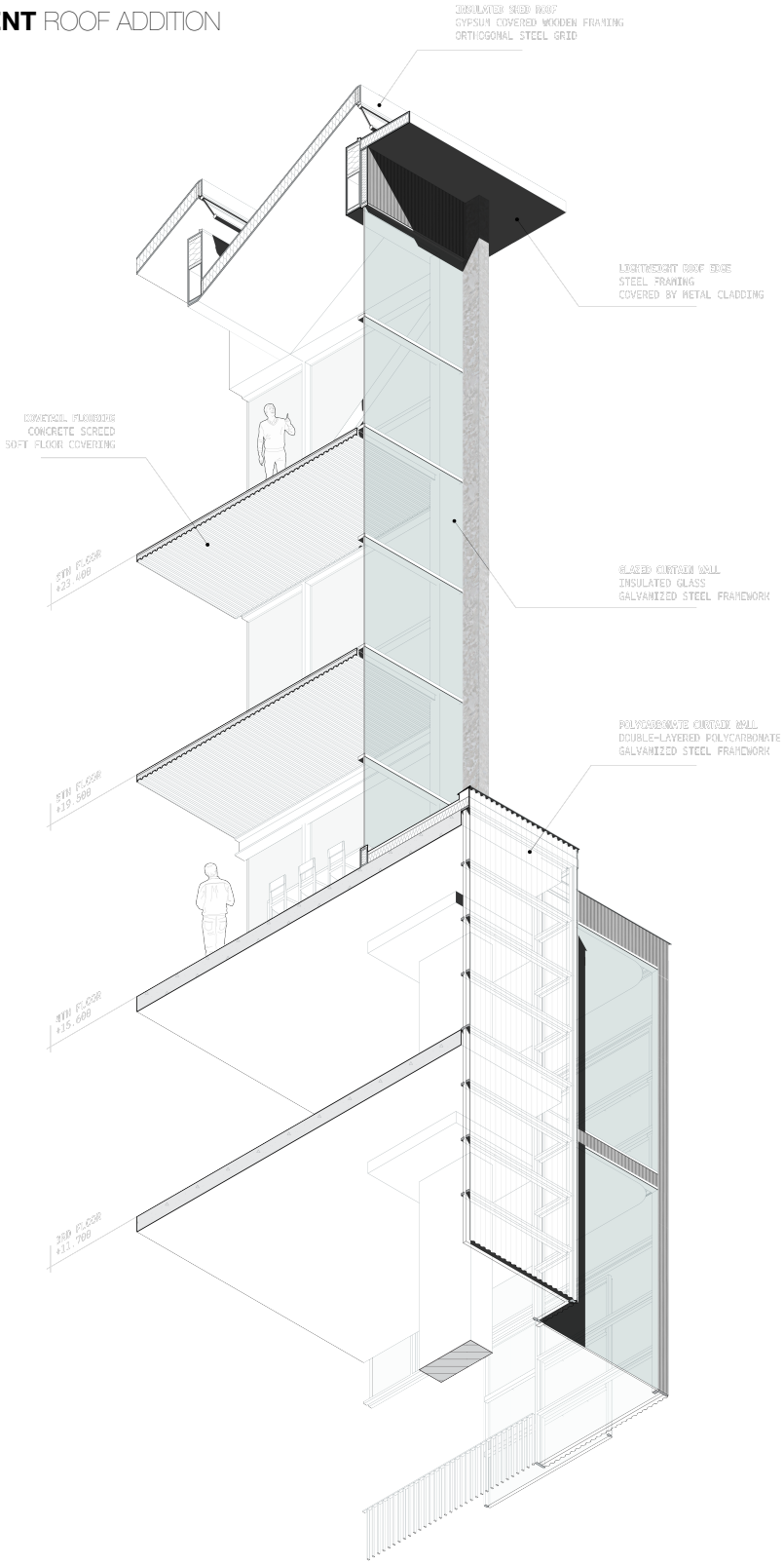
DETAILING SHED ROOF



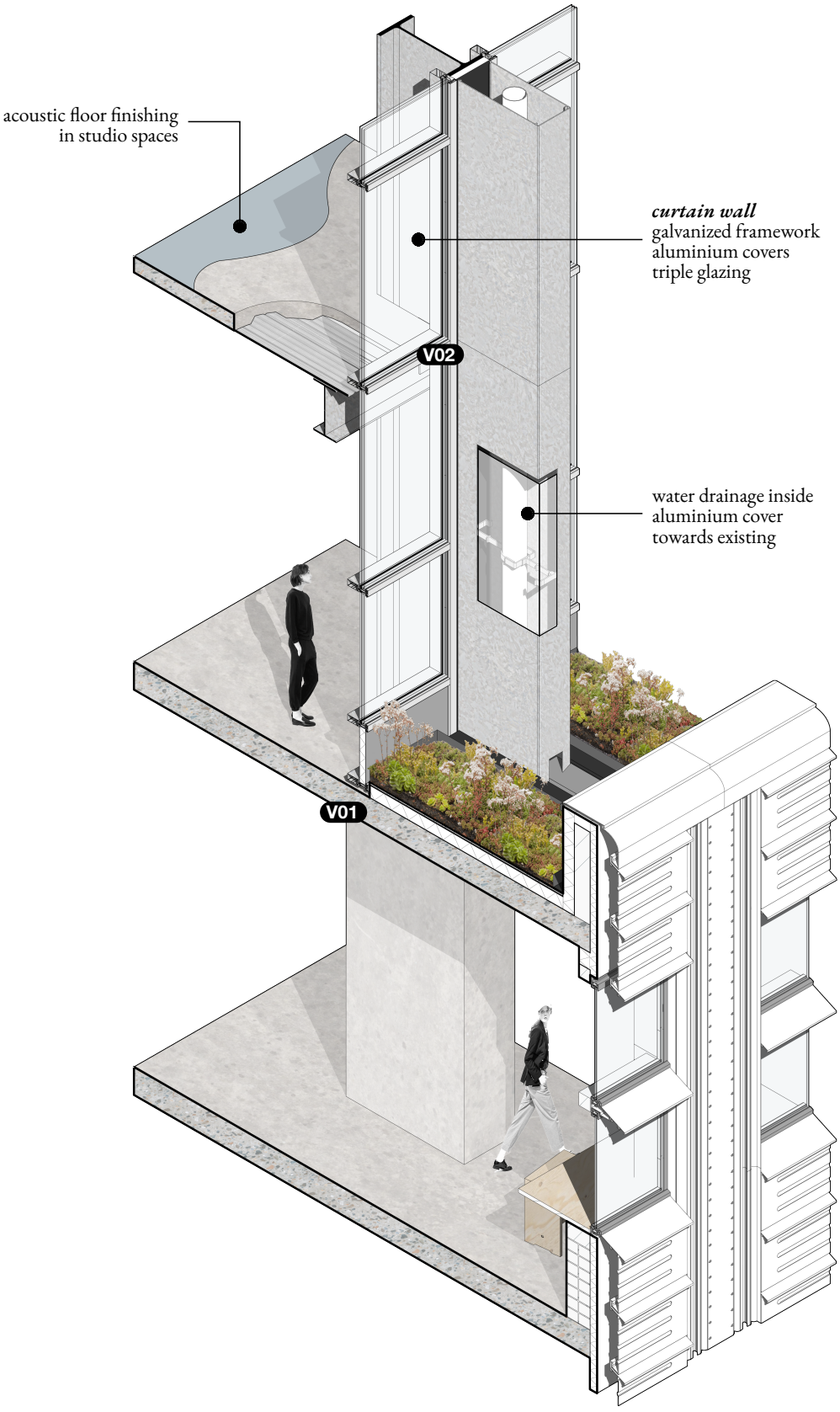



roof built-up: shed roof
rc > 6.3 m²K/w
- PV panel
- EPMD membrane
- insulation: GUTEX Thermoflex
- vapor-open membrane
- underlayment
- wooden roof beams
- wooden slats
- glass reinforced gypsum e.g.
awning skylight
HR++ glazing
wooden frame
controlled opening
EPDM
gutter
CLT
main structural beam
CLT
substructural beam

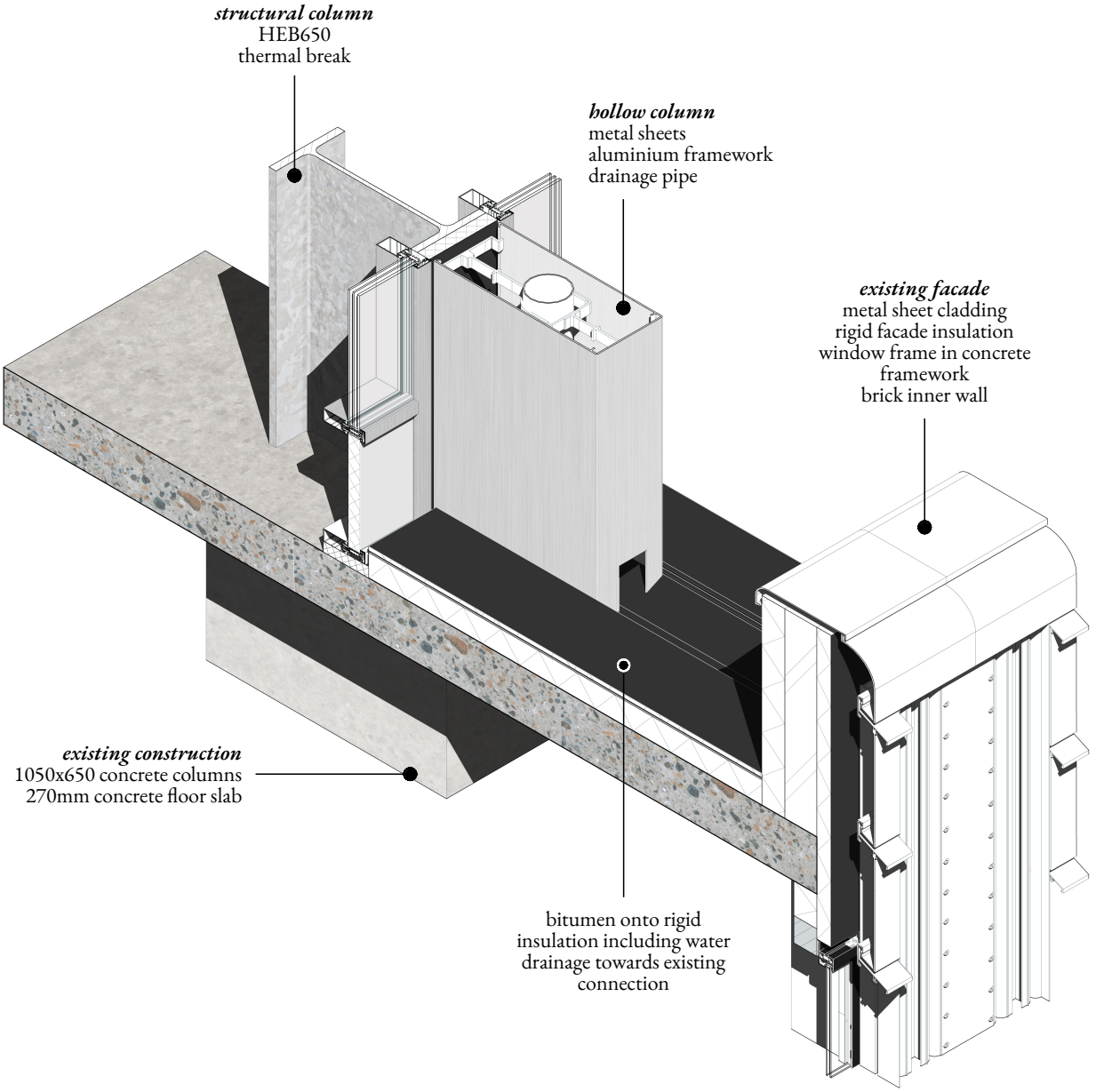
FRAGMENT ROOF ADDITION



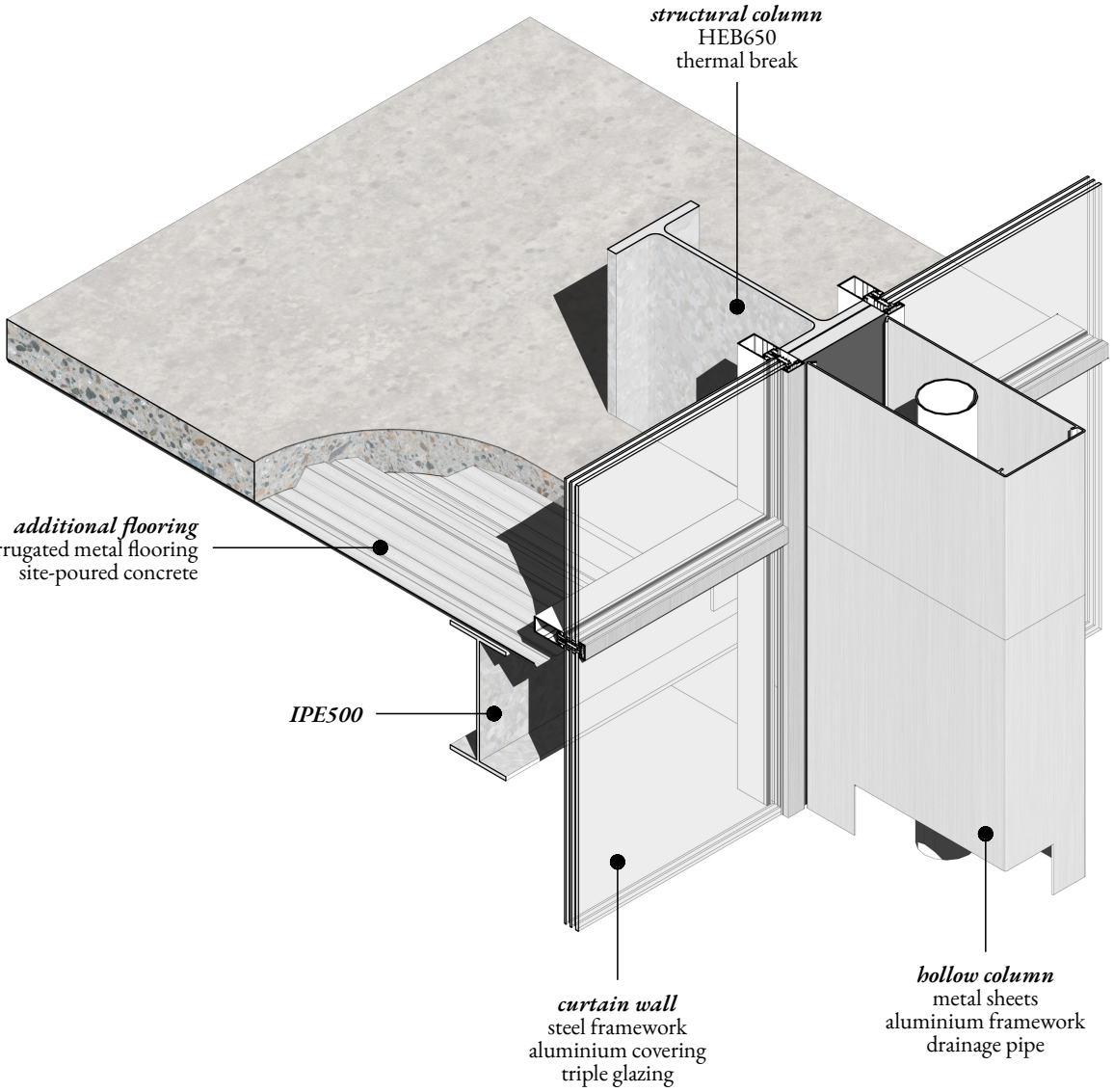
concept


acoustic floor finishing
in studio spaces
curtain wall
galvanized framework
aluminium covers
triple glazing
V02
water drainage inside
aluminium cover
towards existing
V01

DETAILING TRANSITION OLD & NEW

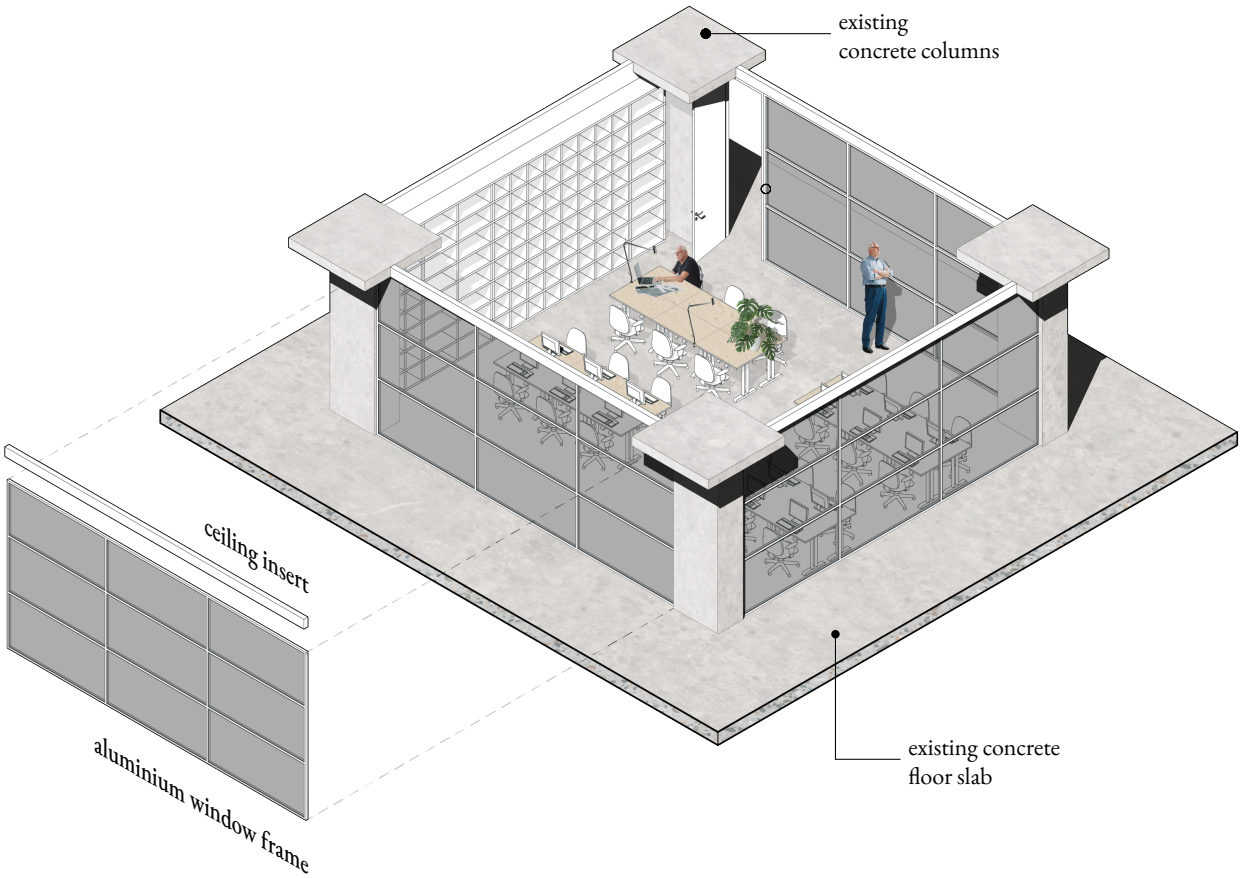


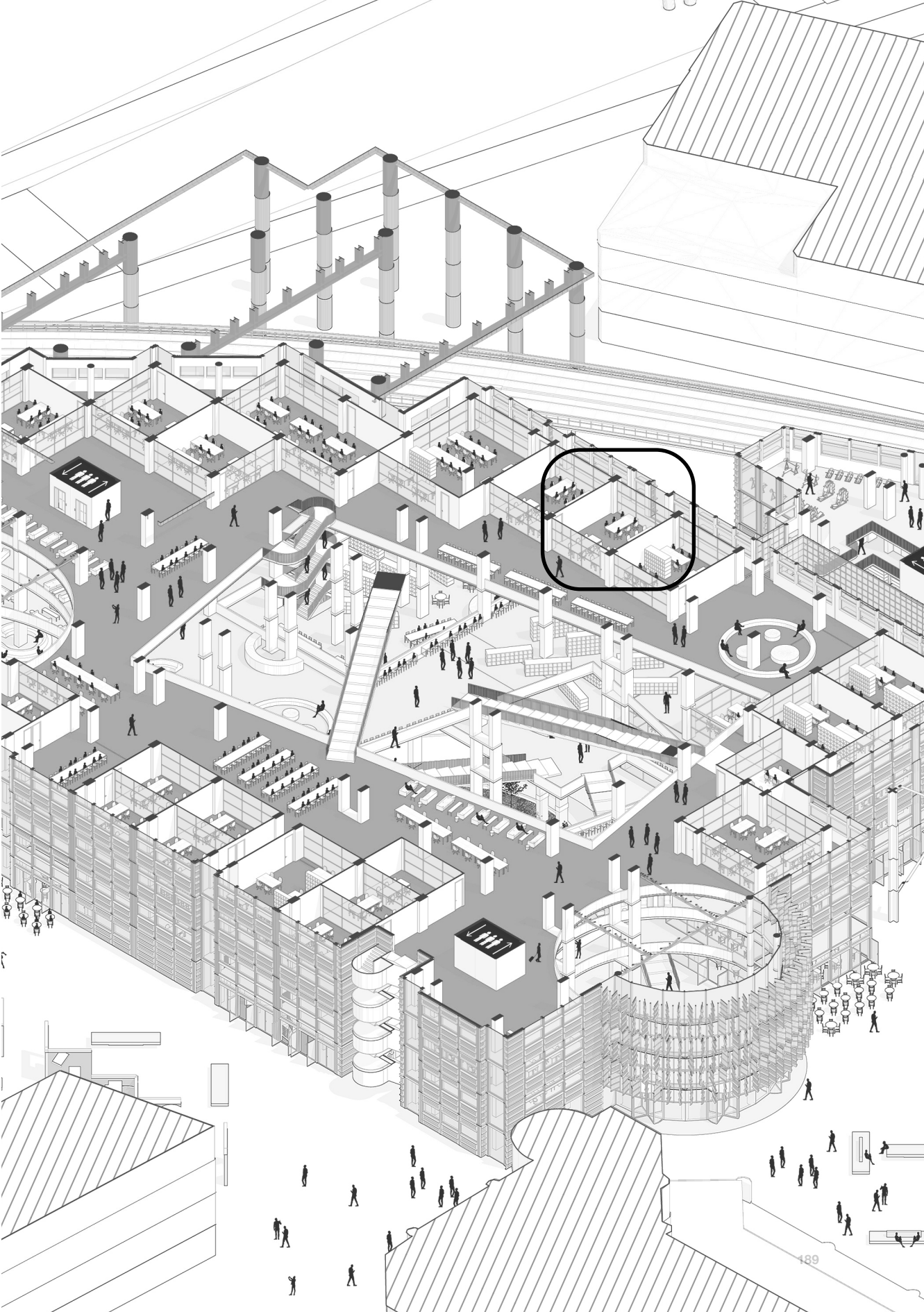
V01


structural column
HEB650
thermal break
additional flooring
corrugated metal flooring
site-poured concrete
IPE500
curtain wall
steel framework
aluminium covering
triple glazing
hollow column
metal sheets
aluminium framework
drainage pipe

V02

DETAILING INSERT OF PROGRAM SPACES





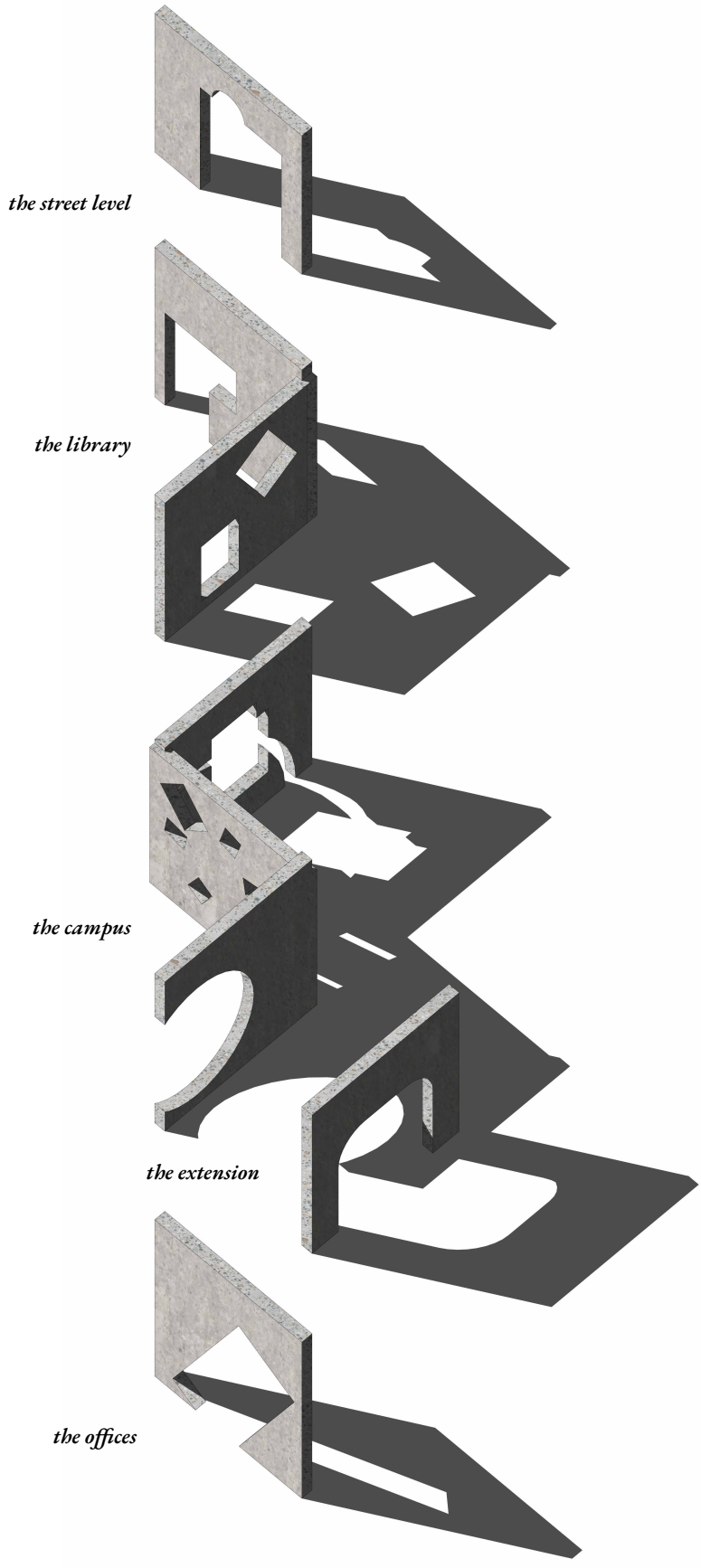
to also enhance the east side of the existing building, I thought about using the cut-out slabs again to form a sculpture which can lift and extend the exhibition space on the ground floor

this sculpture represents the different layers of the building:

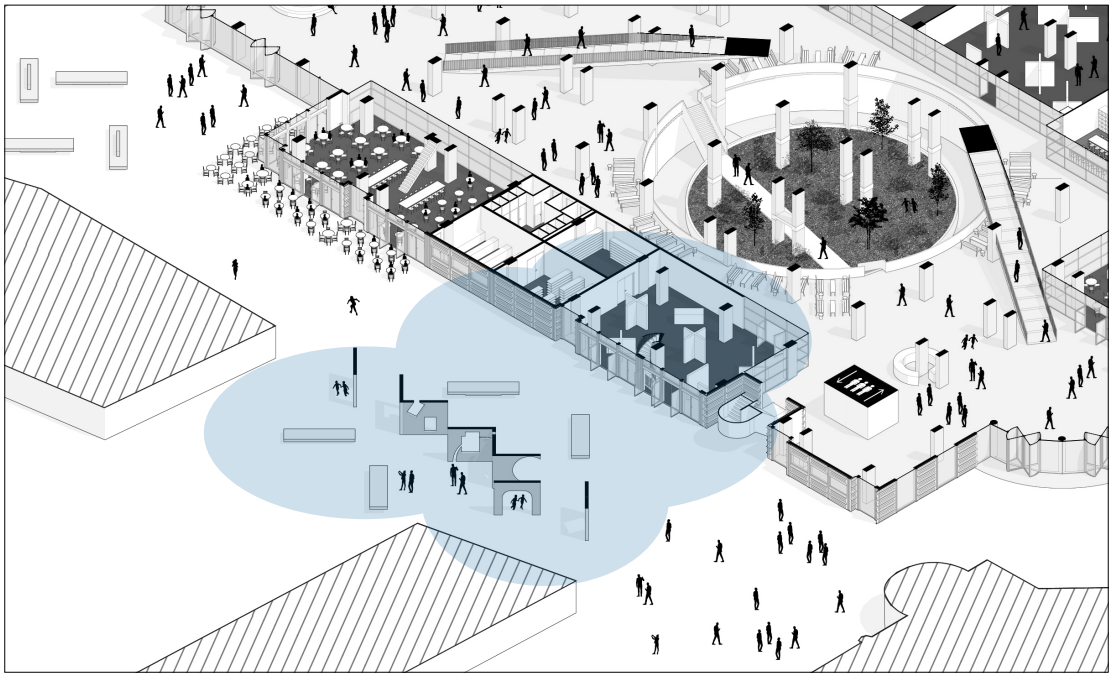
- the street level
- the two storeys of the library
- the three campus storeys
- the west wing as the extension
- the offices

this sculpture can be used by the adjacent spaces to extend the program more towards the outdoors

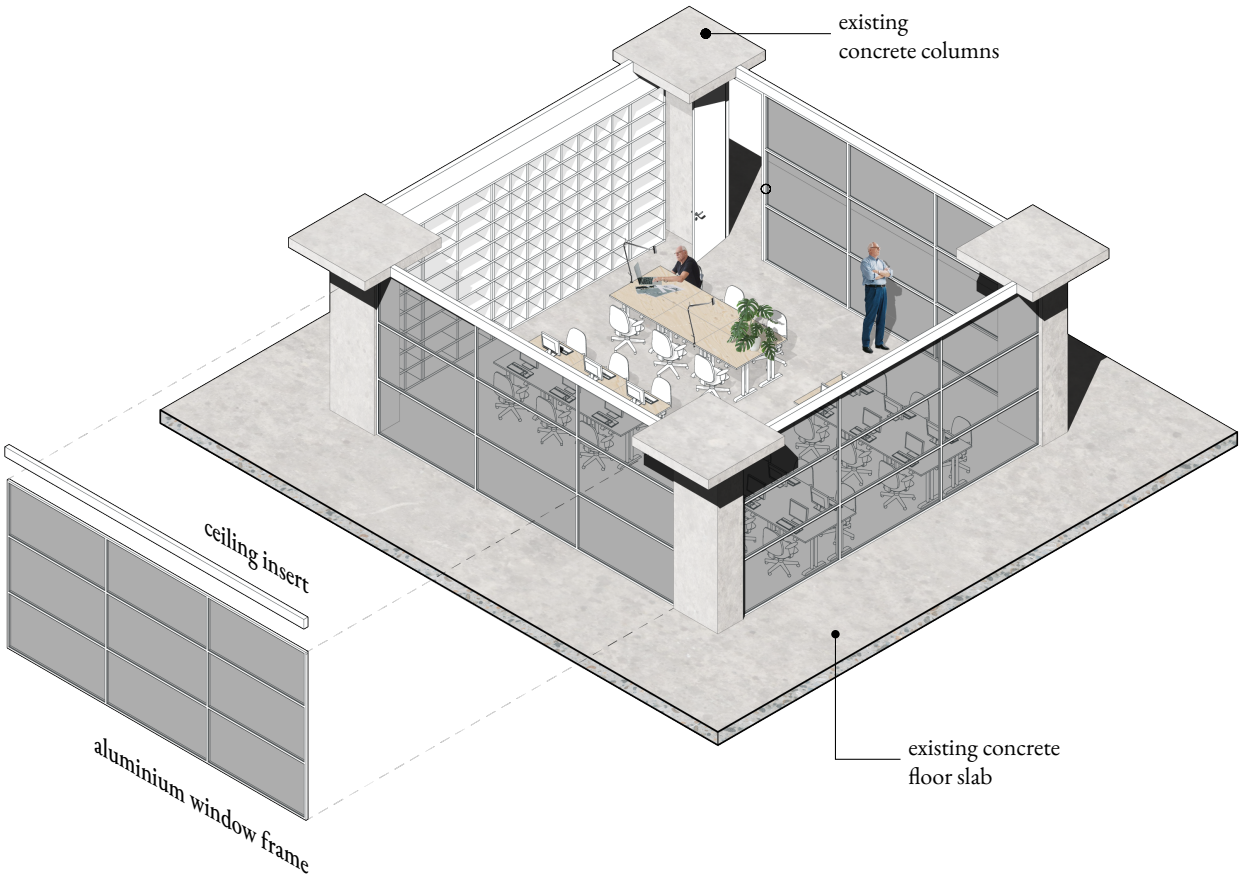
if there is no activity held specifically for the sculpture, I can be a stand-alone object where people can move around and experience the scale, material of and techniques used in the campus building

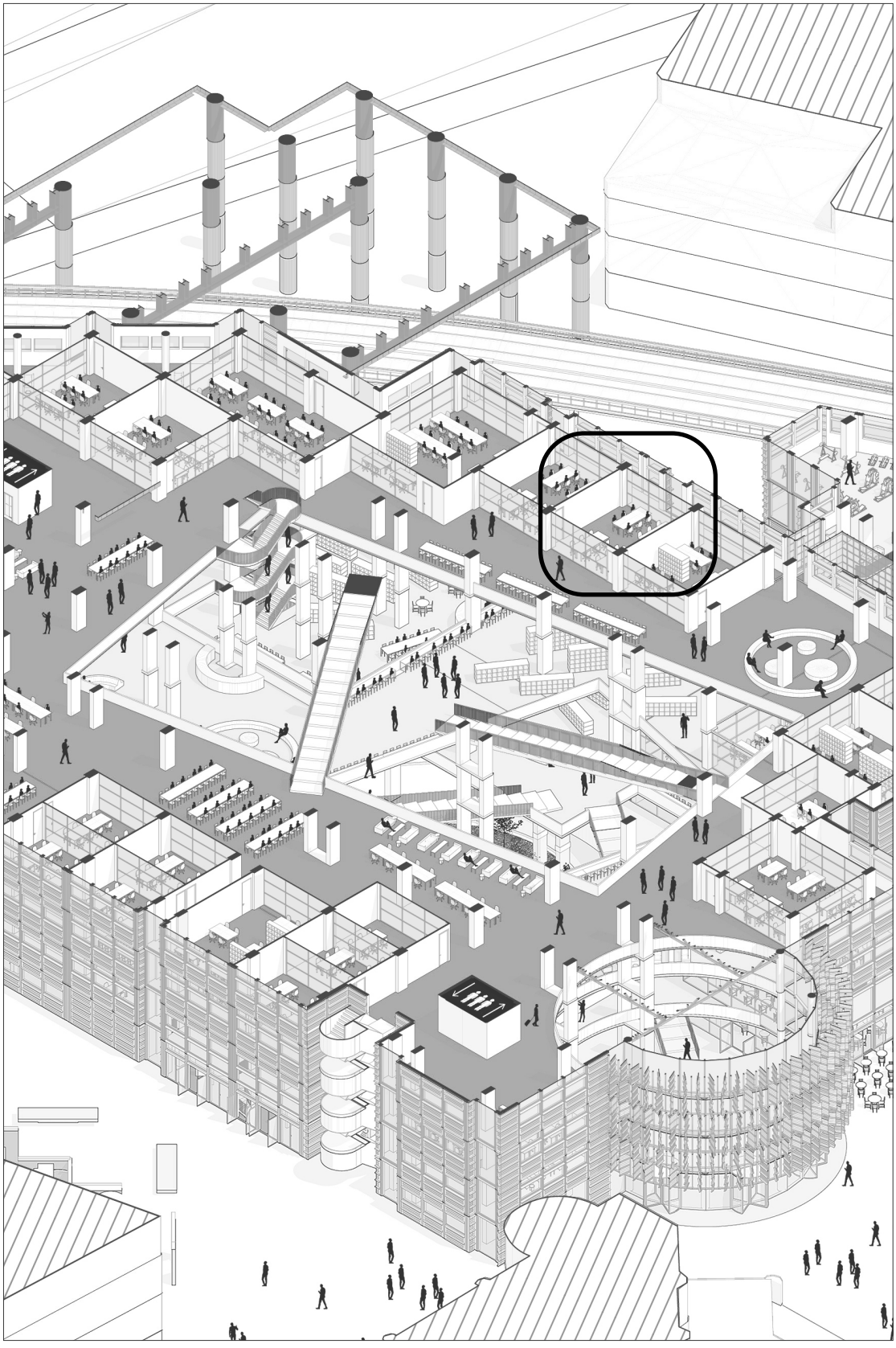




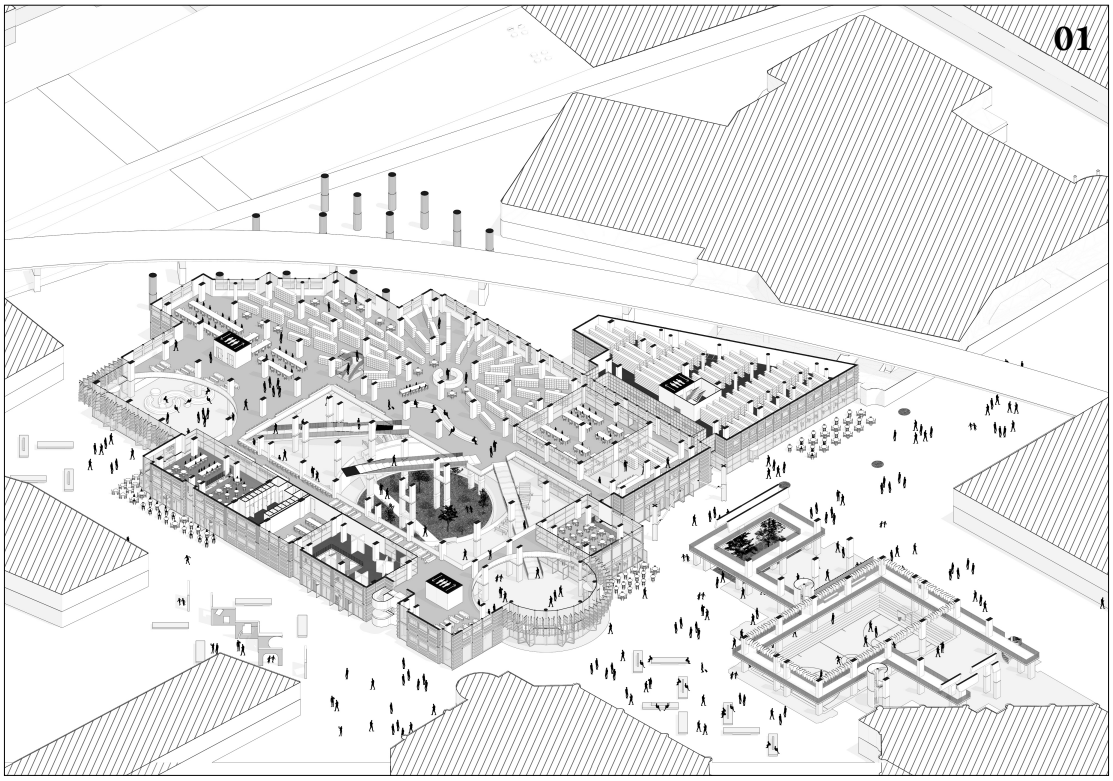


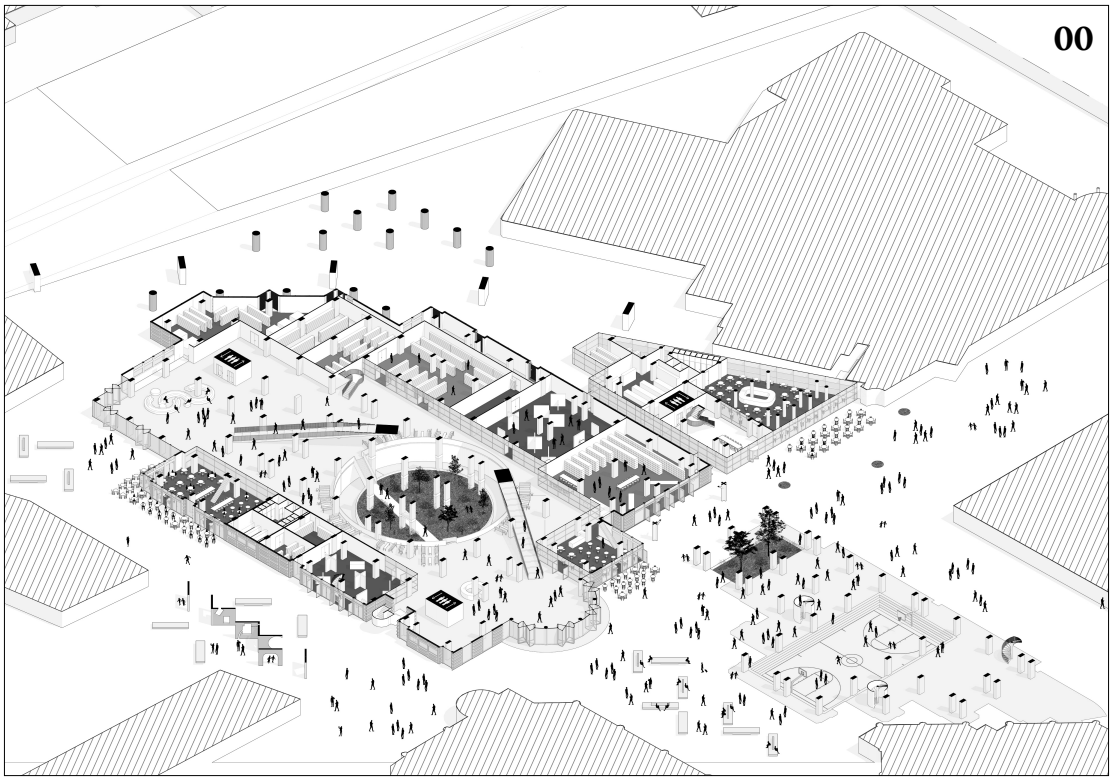
DETAILING INSERT OF PROGRAM SPACES

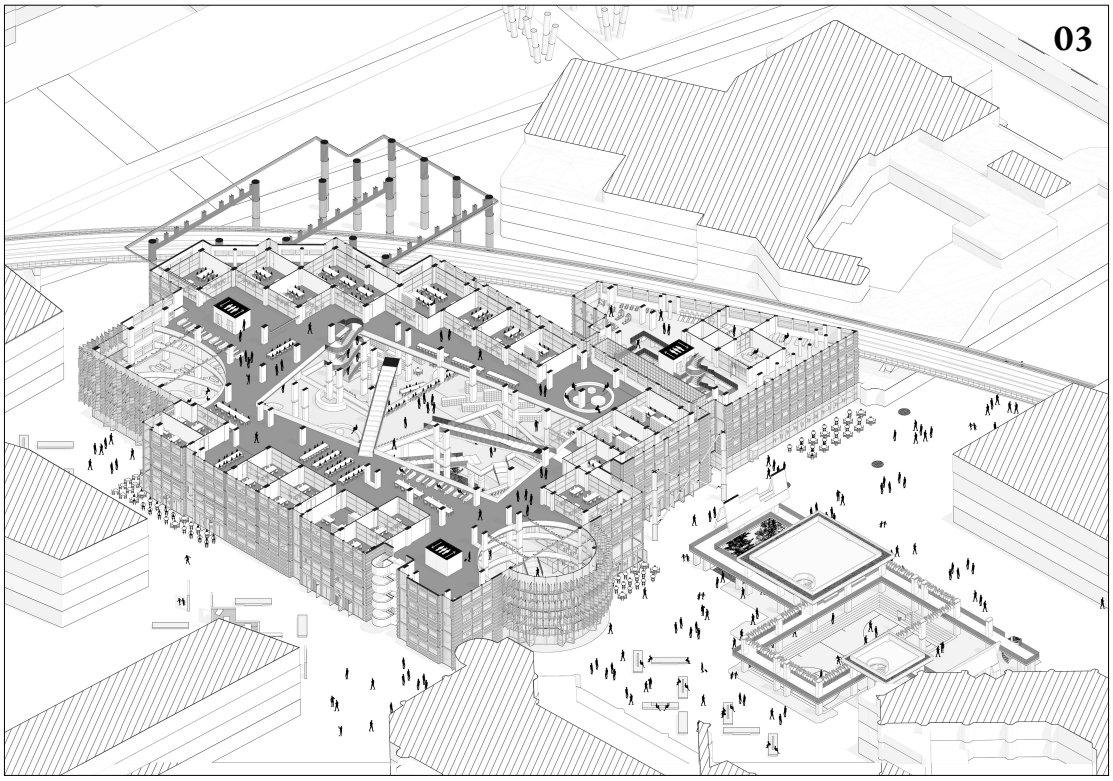


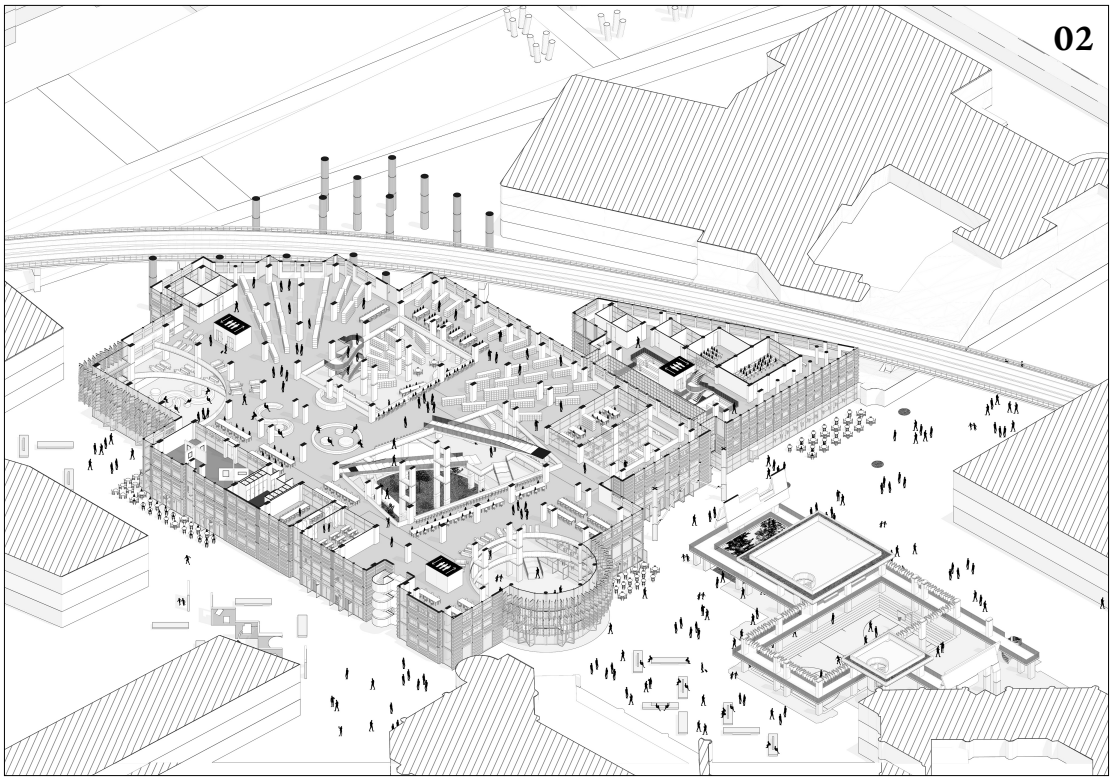


P4 FINAL FLOOR COMPOSITION

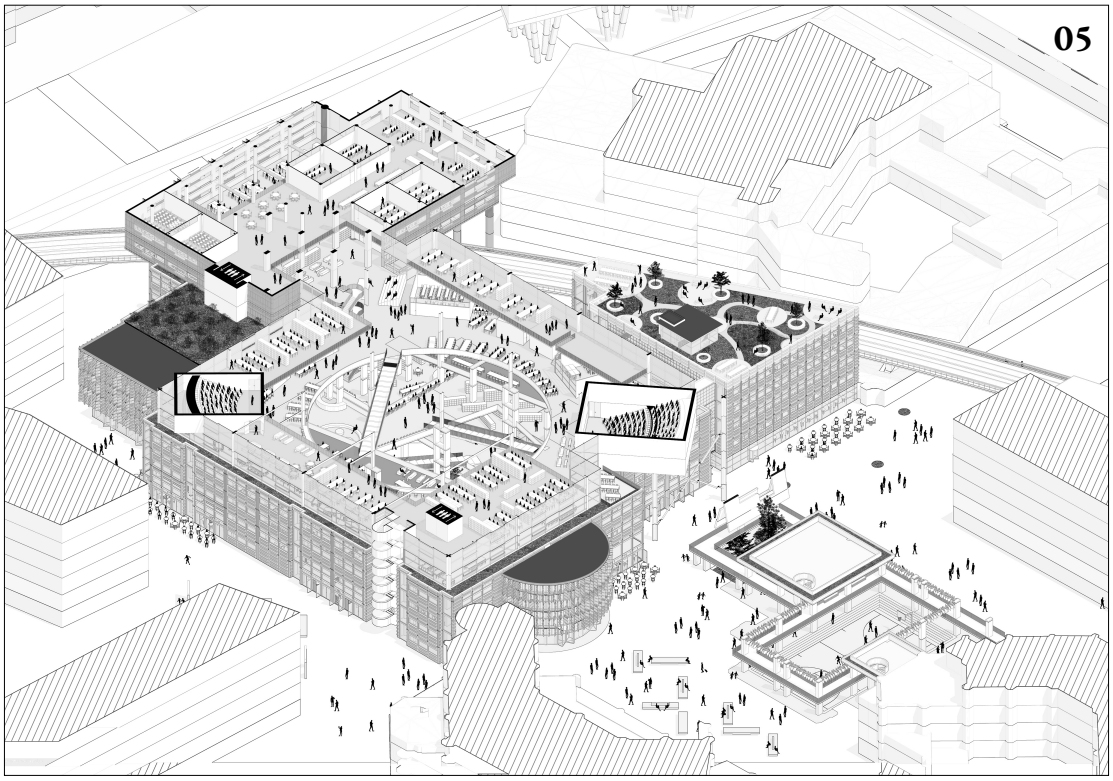


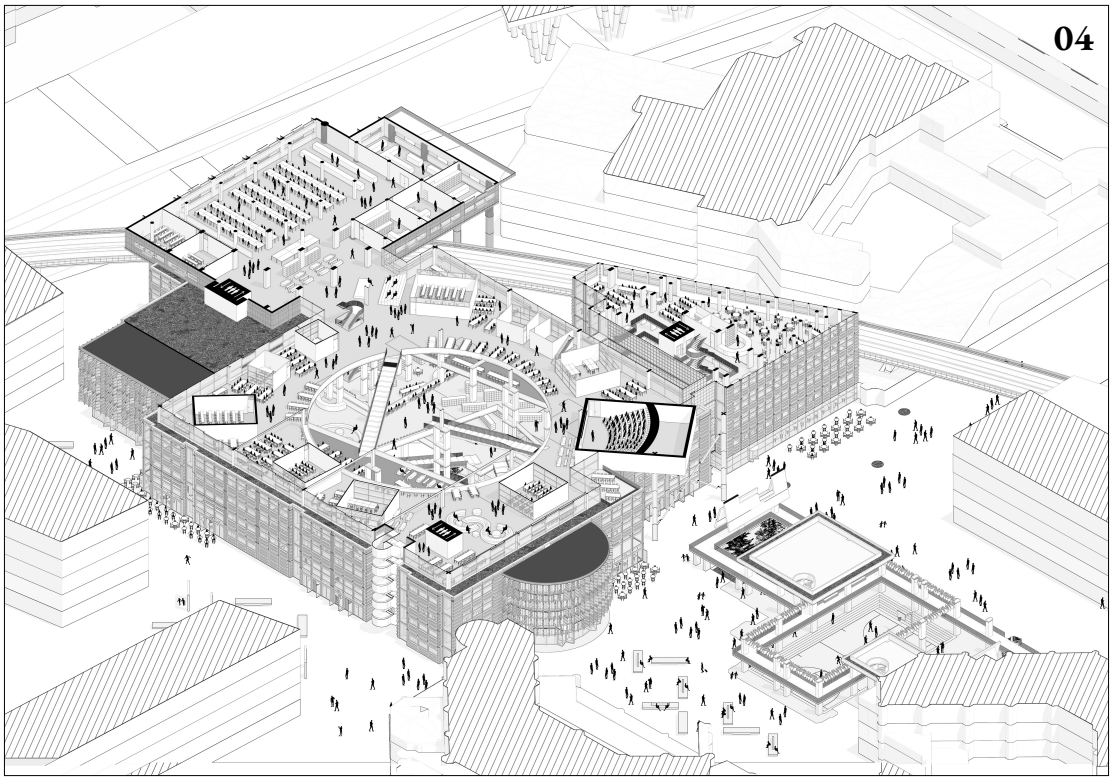


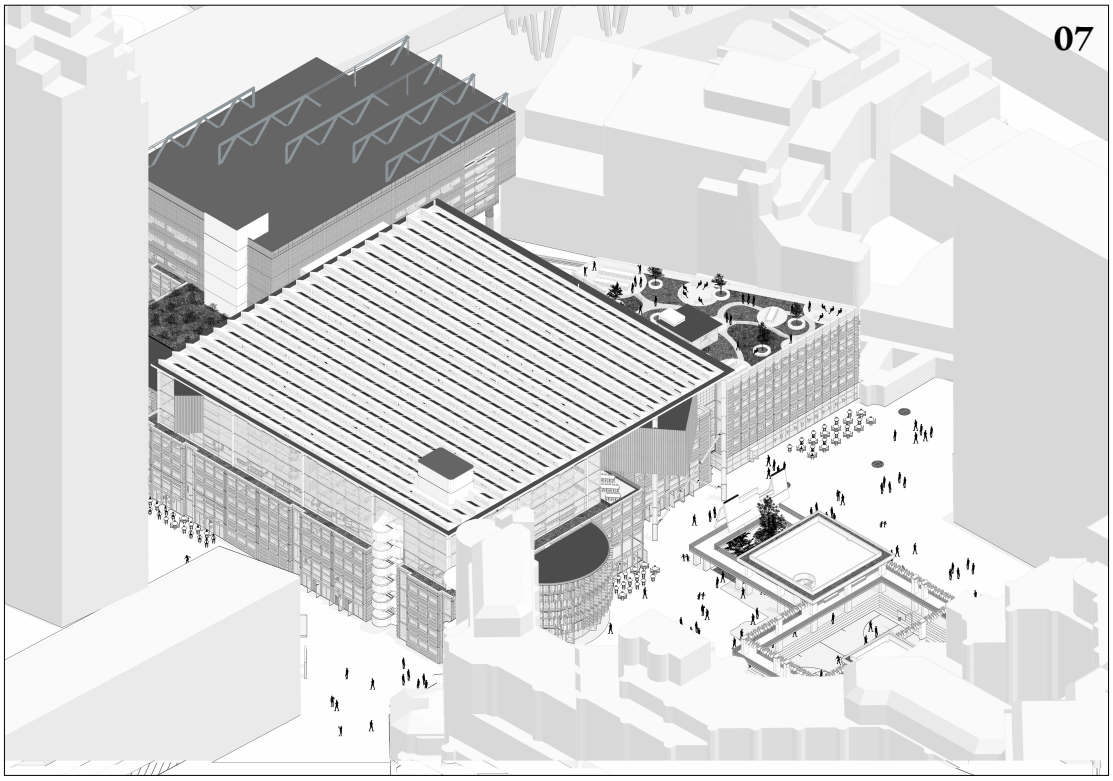

03

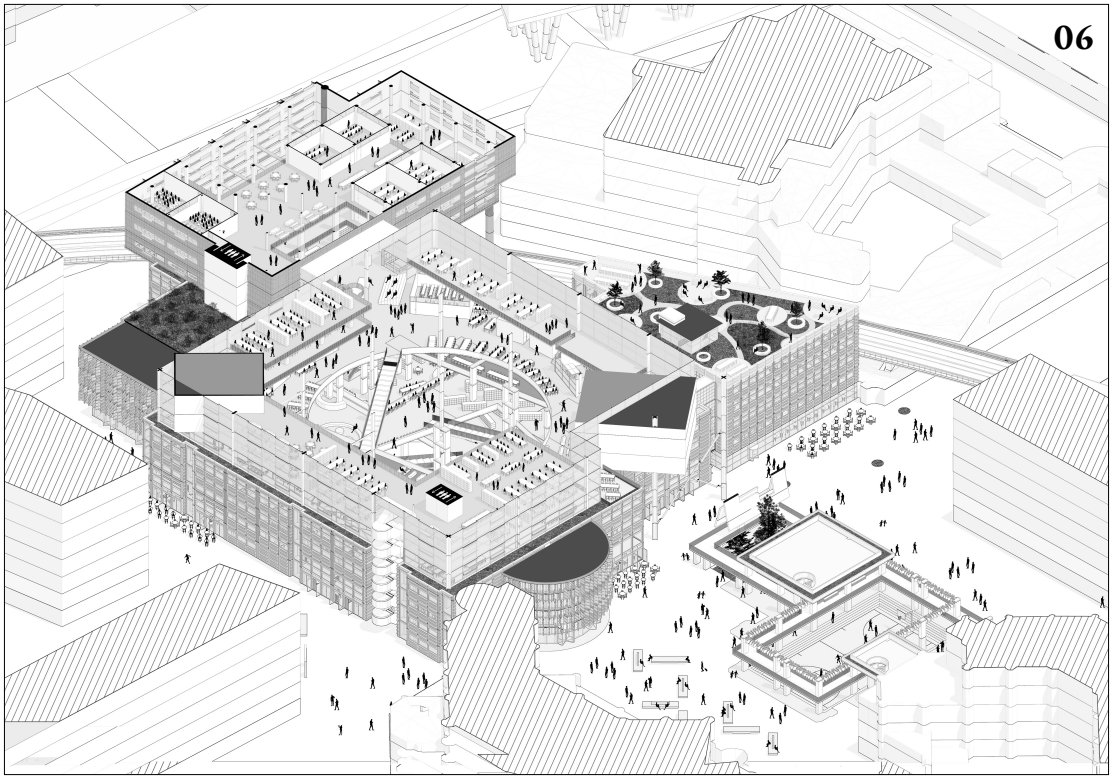

02

P4 FINAL FLOOR COMPOSITION






07

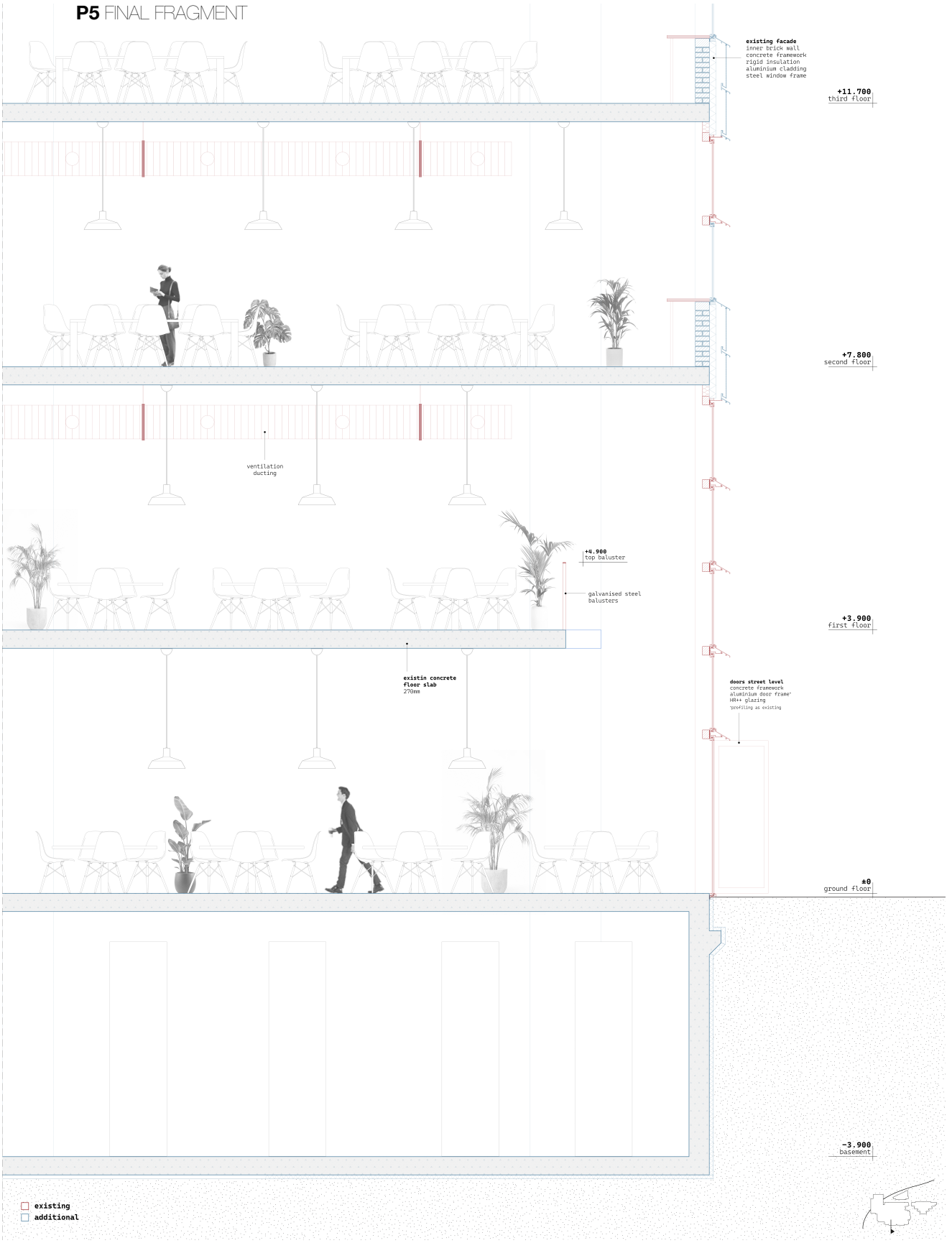

06

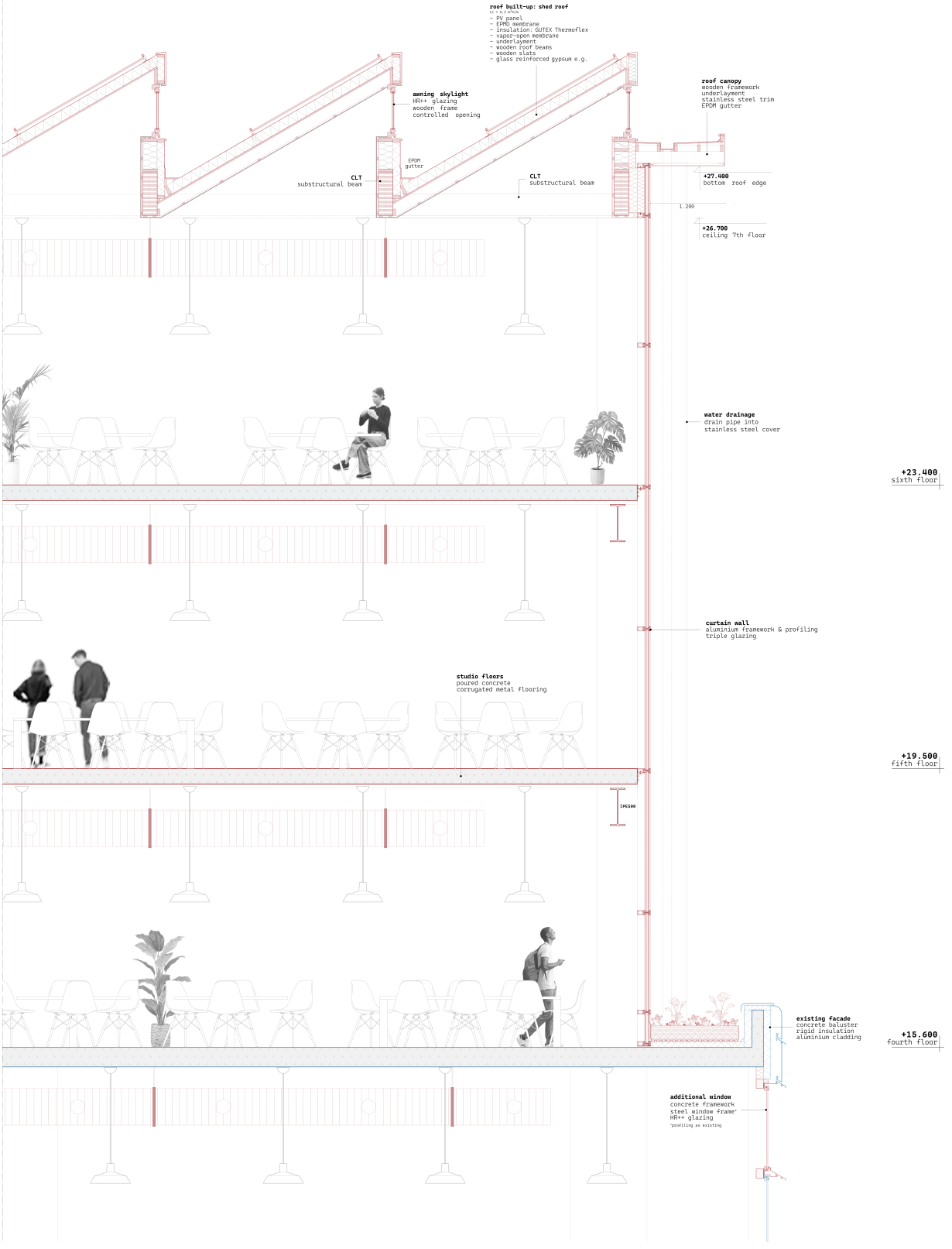






P5 FINAL FRAGMENT




roof built-up: shed roof
n.t.s.e.n.a.
- PV panel
- EPMD membrane
- insulation: GUTEX ThermoFlex
- vapor-open membrane
- underlayment
- wooden roof beams
- wooden slats
- glass reinforced gypsum e.g.
awning skylight
HR++ glazing
wooden frame
controlled opening
roof canopy
wooden framework
underlayment
stainless steel trim
EPDM gutter
EPDM gutter
CLT
substructural beam
CLT
substructural beam
+27.400
bottom roof edge
1.200
+26.700
ceiling 7th floor
water drainage
drain pipe into
stainless steel cover
+23.400
sixth floor
curtain wall
aluminium framework & profiling
triple glazing
studio floors
poured concrete
corrugated metal flooring
+19.500
fifth floor
IPE500
existing facade
concrete baluster
rigid insulation
aluminium cladding
+15.600
fourth floor
additional window
concrete framework
steel window frame*
HR++ glazing
*profiling as existing

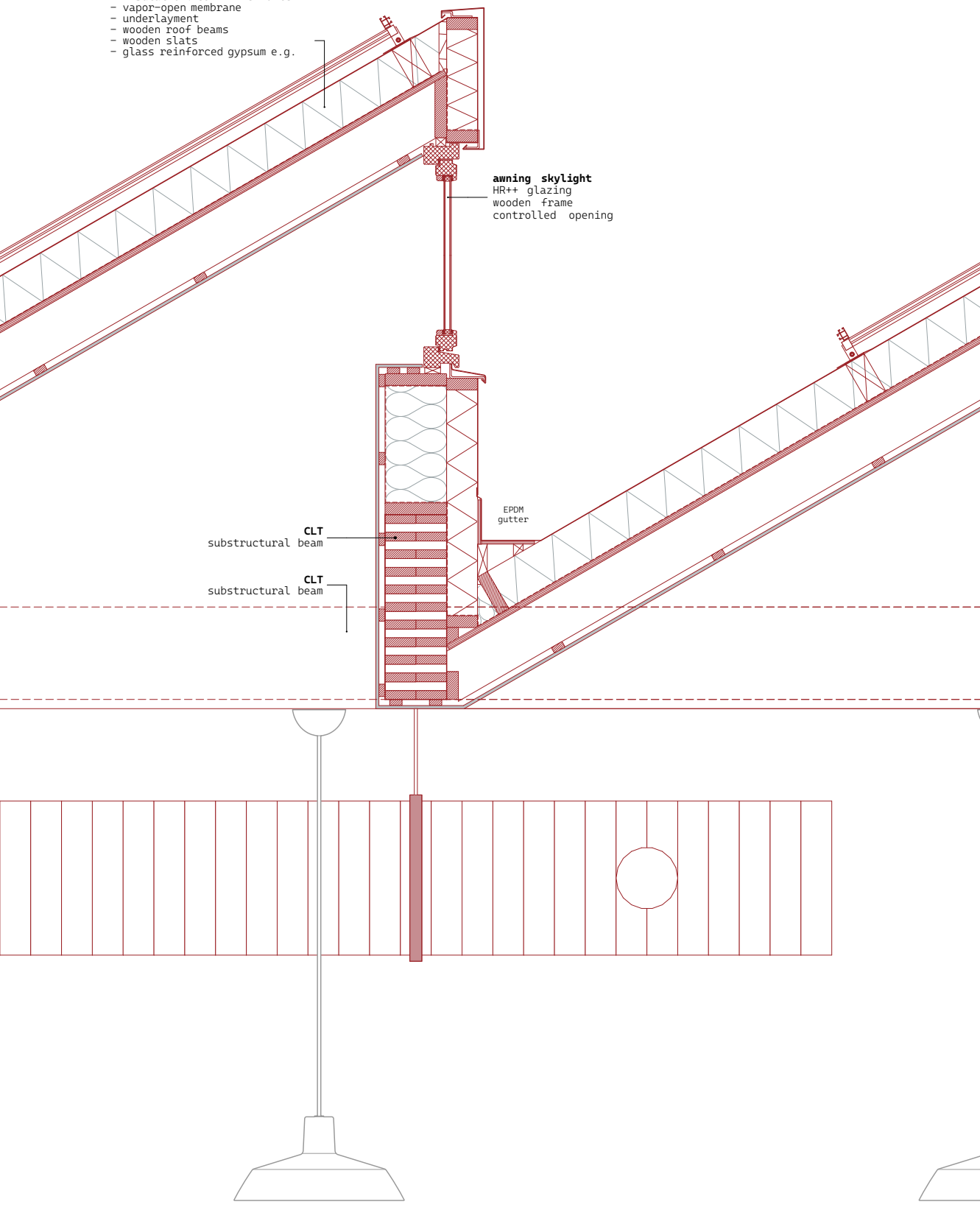
roof built-up: shed roof
rc > 6.3 m^2K/W
- PV panel
- EPMD membrane
- insulation: GUTEX Thermoflex
- vapor-open membrane
- underlayment
- wooden roof beams
- wooden slats
- glass reinforced gypsum e.g.

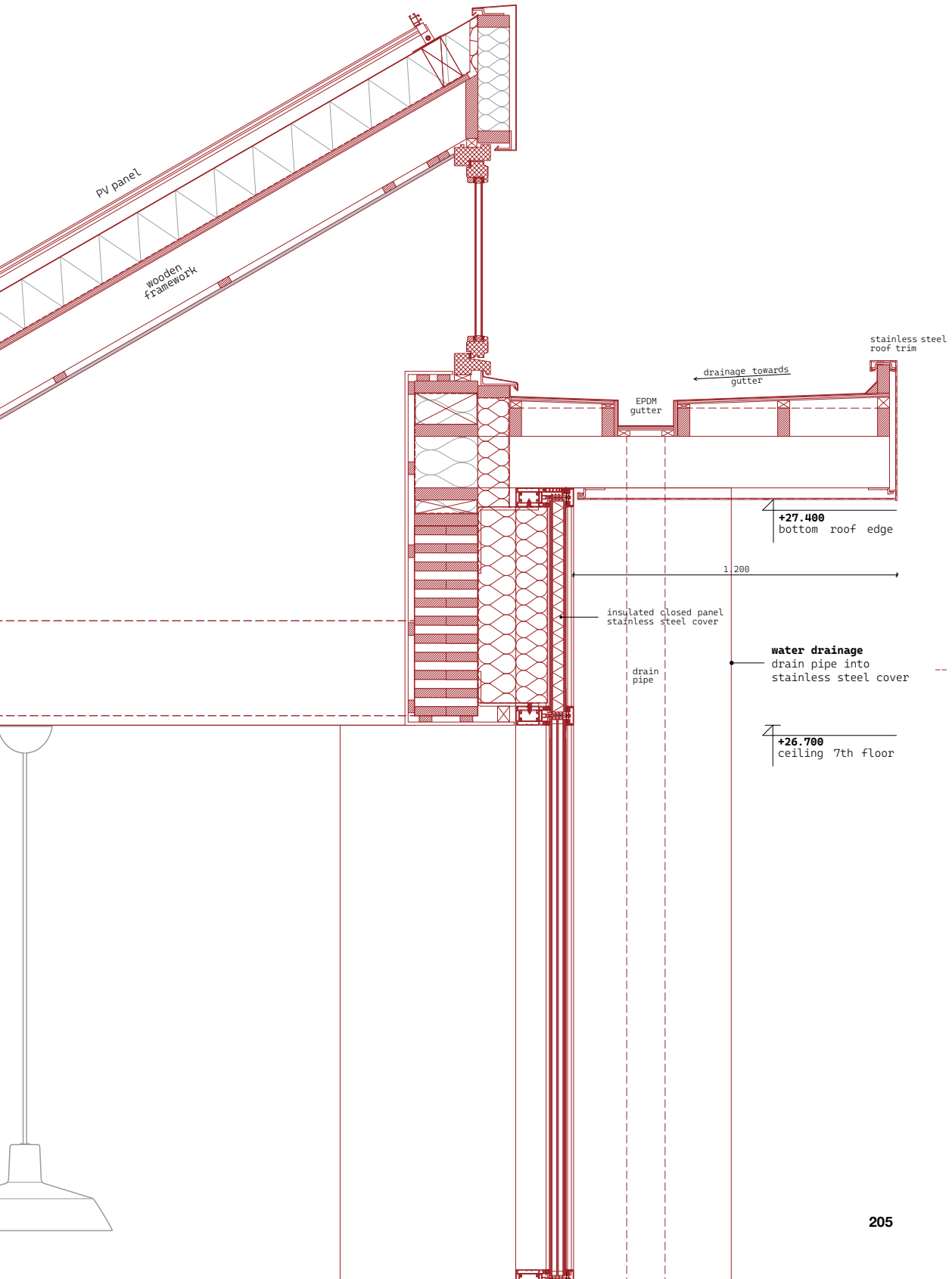
awning skylight
HR++ glazing
wooden frame
controlled opening

EPDM
gutter

CLT
substructural beam

CLT
substructural beam




PV panel
wooden framework
stainless steel roof trim
drainage towards gutter
EPDM gutter
+27.400
bottom roof edge
1 200
insulated closed panel stainless steel cover
water drainage
drain pipe into stainless steel cover
drain pipe
+26.700
ceiling 7th floor

P5 P4 P3 P2 P1

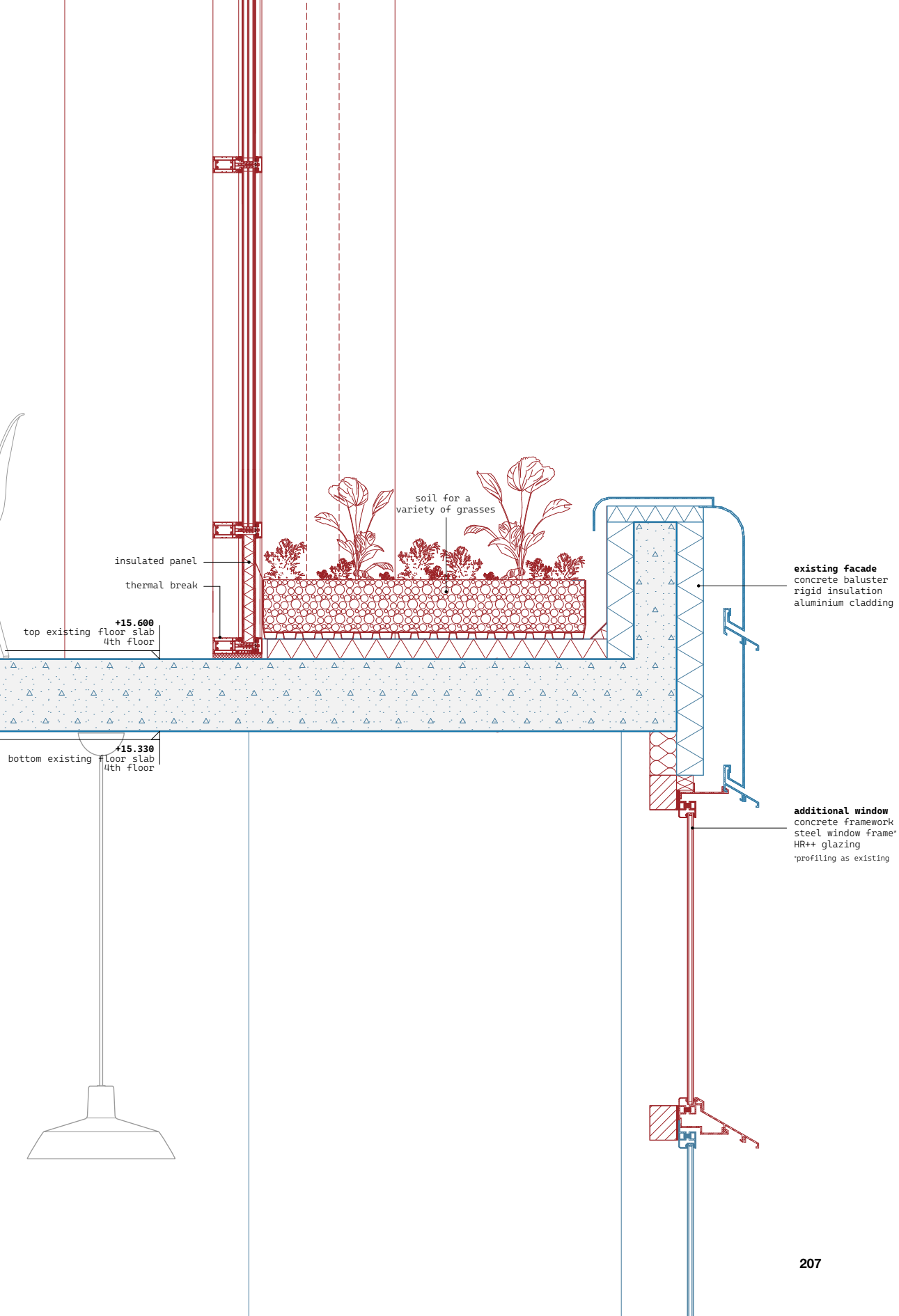
curtain wall
aluminium framework & profiling
triple glazing



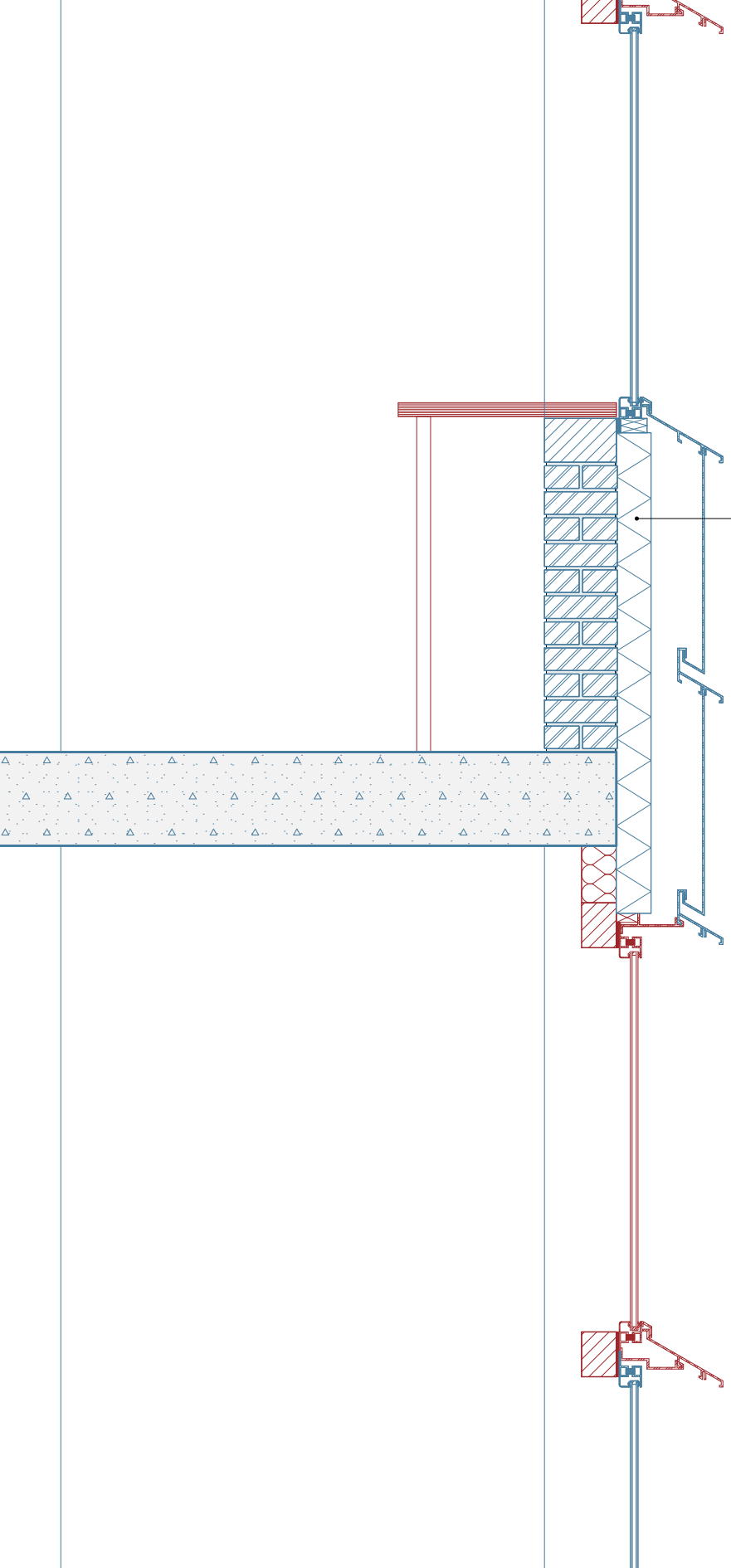
studio floors
poured concrete
corrugated metal flooring

+19.500
fifth floor

IPE500


soil for a
variety of grasses
insulated panel
thermal break
+15.600
top existing floor slab
4th floor
+15.330
bottom existing floor slab
4th floor
existing facade
concrete baluster
rigid insulation
aluminium cladding
additional window
concrete framework
steel window frame*
HR++ glazing
*profiling as existing

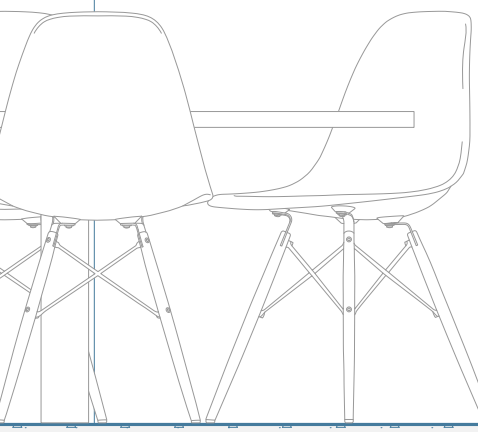
P5 P4 P3 P2 P1

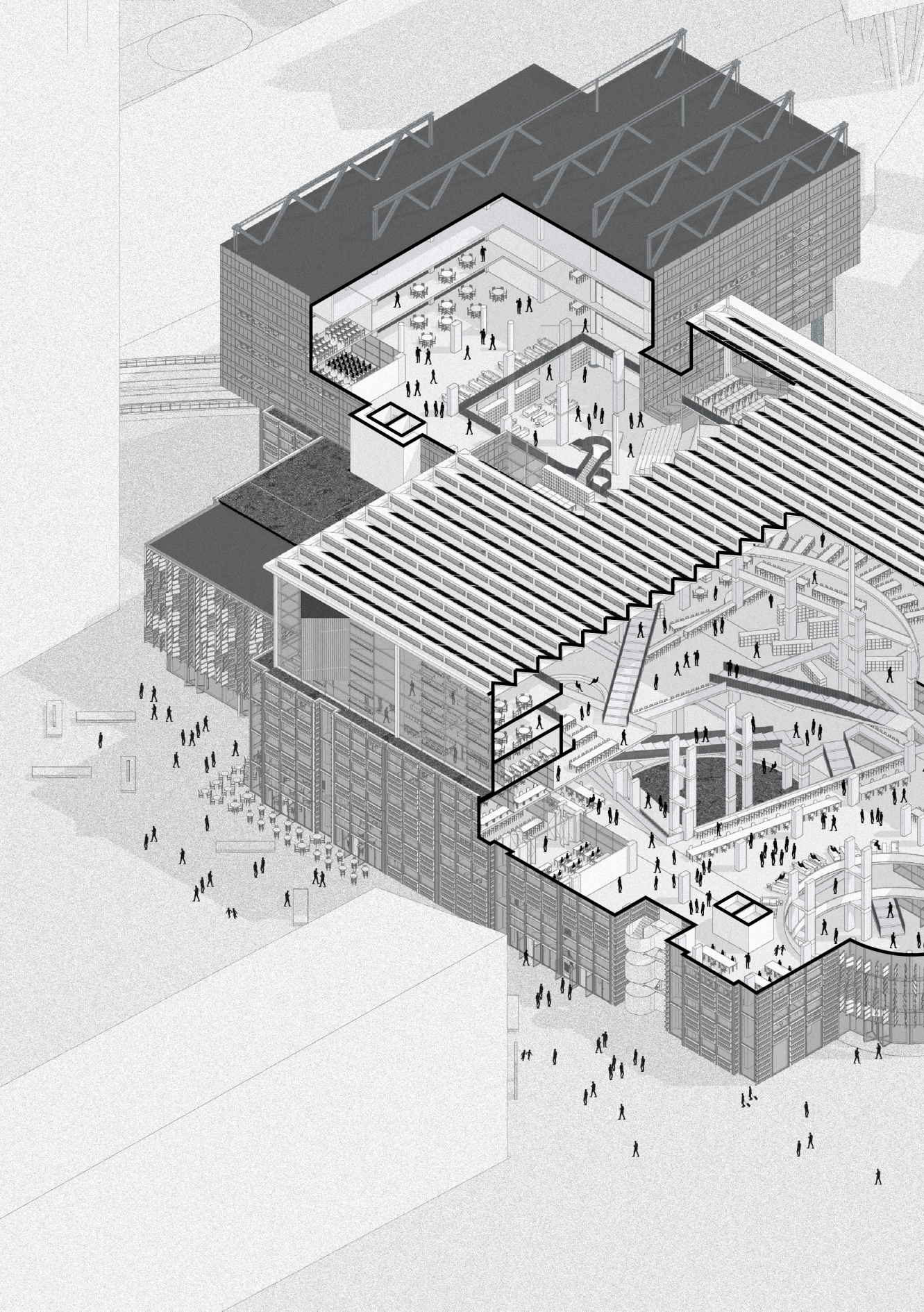


existing facade
inner brick wall
concrete framework
rigid insulation
aluminium cladding
steel window frame

doors street level
concrete framework
aluminium door frame*
HR++ glazing

*profiling as existing







to conclude

Rather than completely reforming an existing building's architectural identity, my aim in this design was to amplify building characteristics and potential of its structure in a way that resonates more with the approach of sustainable urban development. My proposal touches upon the issue of vacancy within the city of The Hague through the application of adaptive reuse and therefore improving a building's longevity. My proposal breathes new life into its context and revitalizes a potentially vacant property, making it more adaptable to the changing needs.

Incorporating existing materials and components is a leading factor of this design, aligning with my goal of fostering the tactile core and grid system of the building. This goal emphasizes a sustainable method of designing buildings, where the need for reuse is recognized. The strategy of the additional voids uses absence of building to accentuate the existing building. These voids produce non-hierarchical spaces which support environments that are open and dynamic to the campus users. The design enhances the free flow of people and ideas and increases the exchange of knowledge by placing these voids in a overlapping order. This method makes sure that the architecture promotes communication and cooperation among its users in addition to fulfilling its functional role of letting light into the existing building.

My design incorporates the communal aspect of the existing library, which is already seen as a gathering space and offers an extensive historical base for a future campus. The conversion of the library into a campus preserves its function as a centre for instruction while broadening its scope to accommodate more social and interactive activities, thus facilitating a wider variety of public events. With this modification, the library serves as a connecting element for the various community members alongside being a place of learning. The campus building functions as a playground for the district, extending the street level to breathe new life into the strict urban environment.

The proposal demonstrates that architectural transformation is not limited to maintaining a building's historical and aesthetic qualities by rethinking the usage and interaction within the space. By demonstrating that contemporary interventions can live with and enrich the historical environment, this method broadens the scope of how we conceive about and carry out architectural alterations, resulting in creative spaces that are also reflective of their heritage.

appreciation to

Anthony
Astrid
Daria
Floriaan
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Mom
Mur
Paul
Piero
Stefano
Theo

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University of Technology Delft