

**FS 21**

# **ERHALTEN VERDICHTEN WEITERBAUEN**

**Assistierende:**

**Kathrin Sindelar**

[sindelar@arch.ethz.ch](mailto:sindelar@arch.ethz.ch)

**Moritz Holenstein**

[holenstein@arch.ethz.ch](mailto:holenstein@arch.ethz.ch)

**Stefan Jos**

[jos@arch.ethz.ch](mailto:jos@arch.ethz.ch)

**Ania Tschenett**

[tschenett@arch.ethz.ch](mailto:tschenett@arch.ethz.ch)

**3-D Renderkurs:**

**Studio David Klemmer**

[info@davidklemmer.com](mailto:info@davidklemmer.com)

**Leitung FS21:**

**Mike Guyer**

[guyer@arch.ethz.ch](mailto:guyer@arch.ethz.ch)

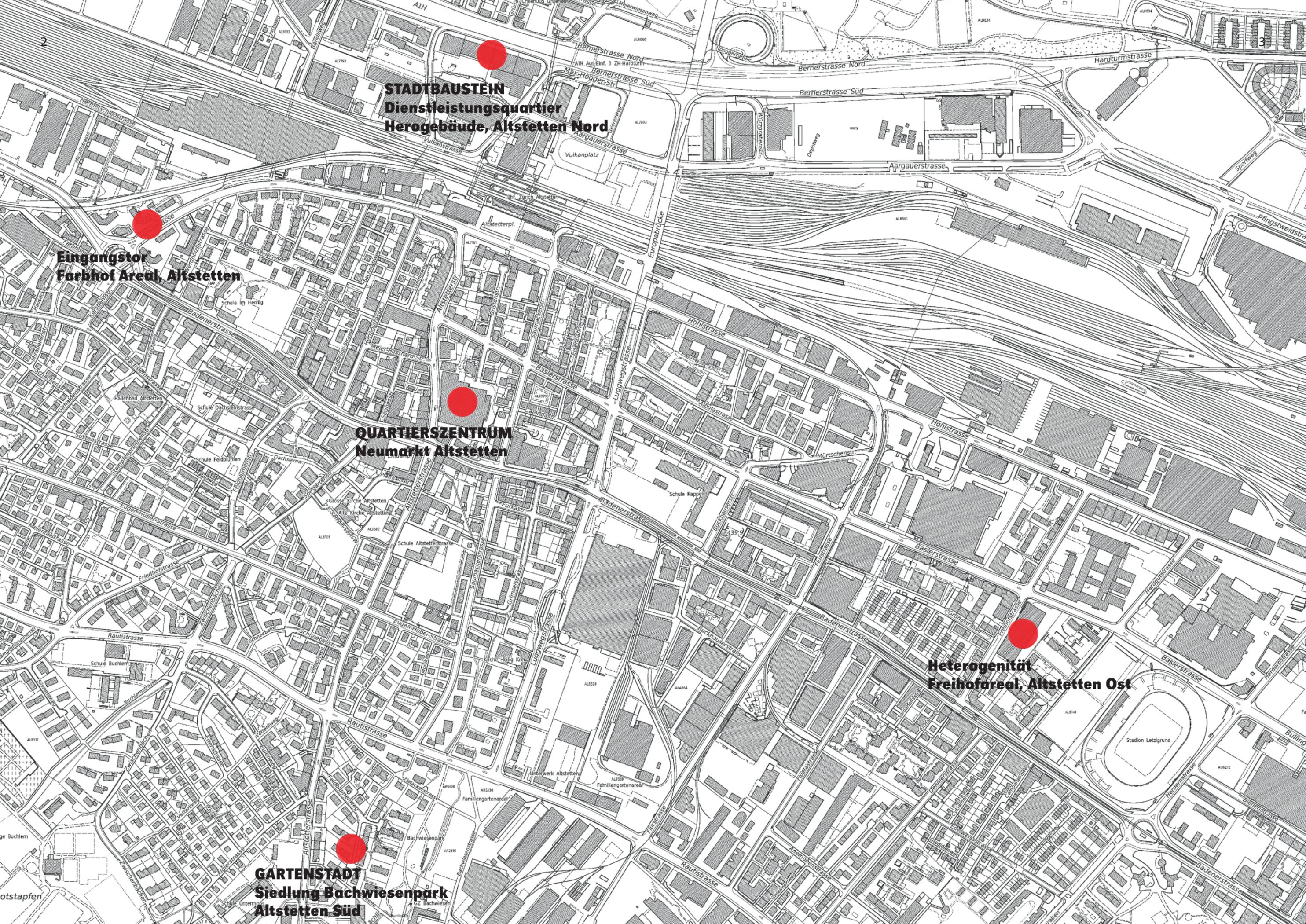
**STADTBAUSTEIN**  
**Dienstleistungsquartier**  
**Herogebäude, Altstetten Nord**

**Eingangstor**  
**Farbhof Areal, Altstetten**

**QUARTIERSZENTRUM**  
**Neumarkt Altstetten**

**Heterogenität**  
**Freihofareal, Altstetten Ost**

**GARTENSTADT**  
**Siedlung Bachwiesenpark**  
**Altstetten Süd**



# ZUM SEMESTER «ERHALTEN - VERDICHTEN - WEITERBAUEN»

Zürich ist in einer aussergewöhnlichen Situation: die Stadt hat seit Jahren ein kontinuierliches Bevölkerungswachstum und eine damit einhergehende, dynamische Bauentwicklung. Momentan leben 420'000 Menschen in der Stadt, 2040 könnten es nach vorsichtiger Schätzung 520'000 sein. Gleichzeitig mit dem Bevölkerungswachstum steigen auch die Arbeitsplätze. Heute gibt es kaum noch Flächen, die neu überbaut oder umgenutzt werden können. Freihalte- und Erholungsgebiete sollen auch in Zukunft erhalten bleiben und die Transformationen der ehemaligen Industriegebiete ist beinahe abgeschlossen. Um die Herausforderung der stetig wachsenden Bevölkerungszahlen zu meistern, hat die Stadt im Richtplan 2040 ein räumliches Konzept einer inneren Verdichtung erarbeitet, das Gebiete mit möglichen Verdichtungspotentialen aufzeigt und Strategien beschreibt, wie man diese nachhaltig und qualitativ umsetzen kann.

In diesem Zusammenhang hinterfragten wir die gängige Praxis der Verdichtung mit Ersatzneubauten und geben dem Bestand im Sinne einer nachhaltigen Stadtentwicklung mehr Gewicht. Wir suchten nach Lösungen, wo auch unter dem Druck einer Verdoppelung der Ausnutzung der Bestand erhalten bleibt, indem er umgedeutet und neu belebt, renoviert und umgebaut, erweitert und aufgestockt wurde. Der Bestand als Teil der Geschichte der Stadt wurde vermehrt als wichtige kulturelle Ressource für die Gestaltung der Zukunft gesehen und das gespeicherte, soziale, strukturelle, räumliche und bildhafte Potential für die neuen Projekte aktiviert. Oft lieferte die Sperrigkeit bestehender Bauten Denkanstösse für neue Lösungen und Entdeckungen. Es galt, die richtige Balance zwischen Alt und Neu zu finden und Heterogenität, Gegensätze, Massstabssprünge als Teil der zukünftigen Stadt zu akzeptieren.

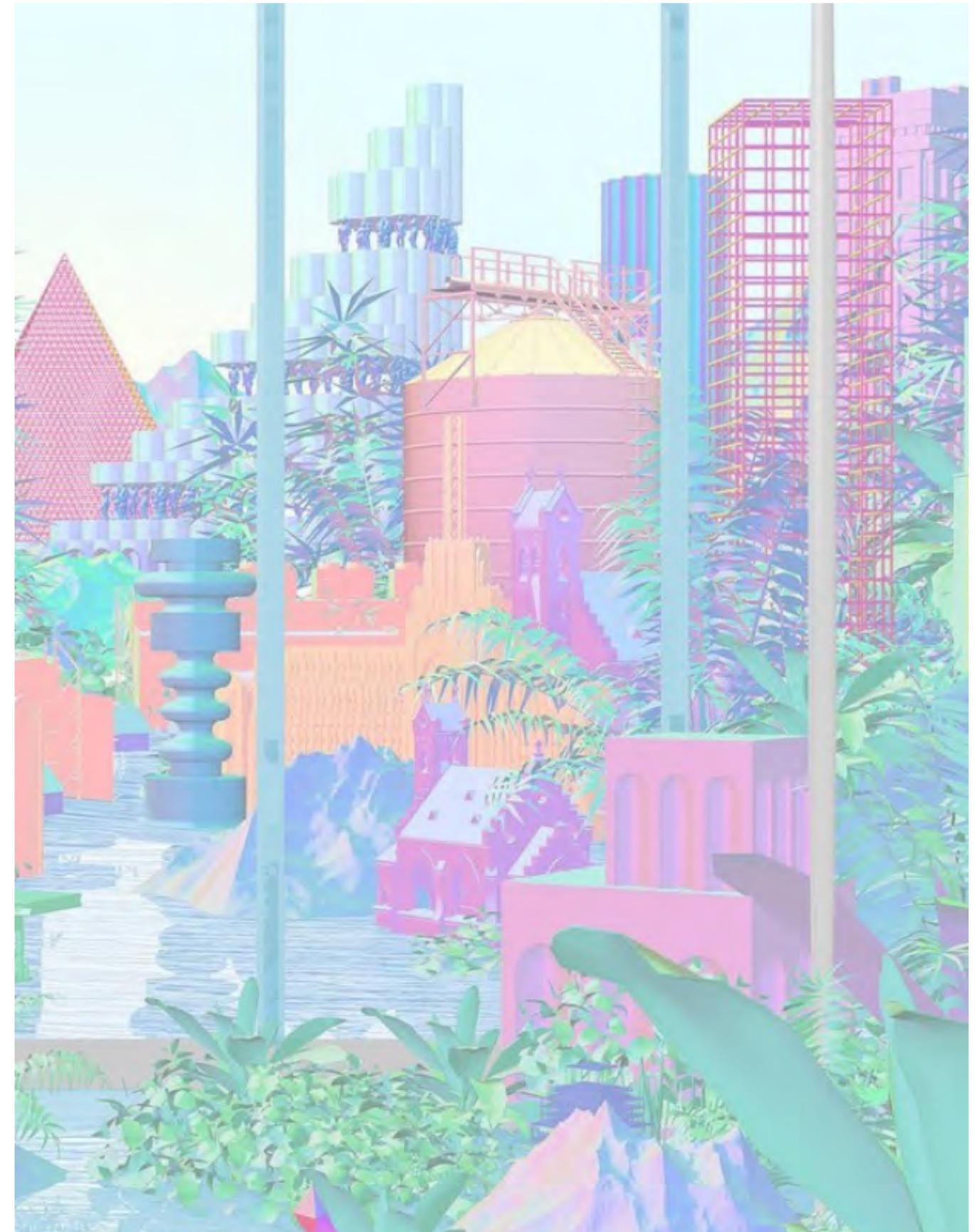
Der Fokus richtete sich auf Altstetten, das im Richtplan als das Quartier mit hohem Verdichtungspotential im Westen Zürichs ausgewiesen ist. Es ist gemessen an der Bevölkerung und Fläche das grösste Quartier der Stadt und hat die meisten Arbeitsplätze. Mit dem kleinsten Anteil an Gründerzeitbauten und dem grössten Anteil von Neubauten seit 1990 ist es ein sehr heterogenes Quartier, das sich dynamisch entwickelt hat. Fünf unterschiedliche Areale wurden als Entwurfslabors ausgewählt, jedes mit einer eigenen städtebaulichen Zielsetzung. Der Neumarkt Altstetten sollte das Quartierzentrum um den Lindenplatz stärken, das Farbhofareal eine Platzsituation als westliches Tor zu Altstetten schaffen, das Hero Gebäude ein weiterentwickelter Stadtbaustein im Dienstleistungsquartier des Bahnhofs werden, das Bachwiesenareal die Gartenstadtvision trotz Verdichtung beibehalten, das Freihofareal die qualitätsvolle Heterogenität eines städtischen Gevierts aufzeigen. Die Areale zeigen die Unterschiedlichkeit des Quartiers: das Farbhofareal befindet sich im Westen, das Freihofareal im Osten der Badenerstrasse, das Bachwiesenareal im Süden, das Heroareal im Norden der Altstetterstrasse. Am Kreuzungspunkt der beiden Hauptachsen liegt der Neumarkt Altstetten.

In Anbetracht der heutigen stadträumlichen Defizite zwischen neueren Arealüberbauungen wurden nicht nur die Übergänge von öffentlichen, halbprivaten und privaten Aussenräumen innerhalb der Areale, sondern auch die Beziehung der Areale zur Umgebung und zum Stadtkörper behandelt. Da die Qualität des Freiraumes bei der Verdichtung wesentlich war, sollten Höfe und Räume zwischen Gehsteigen und Hauskanten nutzbar und zugänglich gemacht werden und der Öffentlichkeit und den Eigentümern gleichermaßen von Nutzen sein.

Sinnvolle Nutzungsmischung, neue Arbeits- und Wohntypologien, geeignete Erdgeschossnutzung, neue Tragstrukturen, intelligente Gebäudehüllen, Begrünungen, innovative Energiekonzepte und Reuse/Recycle/Upcycle Konzepte waren für den Entwurf entscheidend. Diese Themenschwerpunkte wurden mit Vorträgen, Workshops und Besichtigungen vertieft. Eine Kollektion von Texten und Referenzbeispielen wurde während des Semesters fortlaufend erweitert und steht als Dokument allen zur Inspiration zur Verfügung.

Mit der Einstiegsübung «Bild – Form» wurde dem Bestehenden spielerisch intuitiv nachgespürt und das richtige sehen gelernt, in der ersten Kritik wurde das Konzept in einer prägnanten Darstellung zusammengefasst. Diese Resultate wurden kontinuierlich weiterbearbeitet und waren Teil der Schlussabgabe. Die Projekte wurden an den Schlusskritiken mit Gästen und dem Lehrstuhl in der Bandbreite von Konzeptidee, städtebaulicher und architektonischer Präsenz, Umgang mit dem Bestand sowie der Qualität der Aussen- und Innenräume besprochen.

Das Semester wurde von Mike Guyer geleitet.



Dichtelust - (ab)normal, 2019

# 01 FARBHOF AREAL, ALTSTETTEN WEST

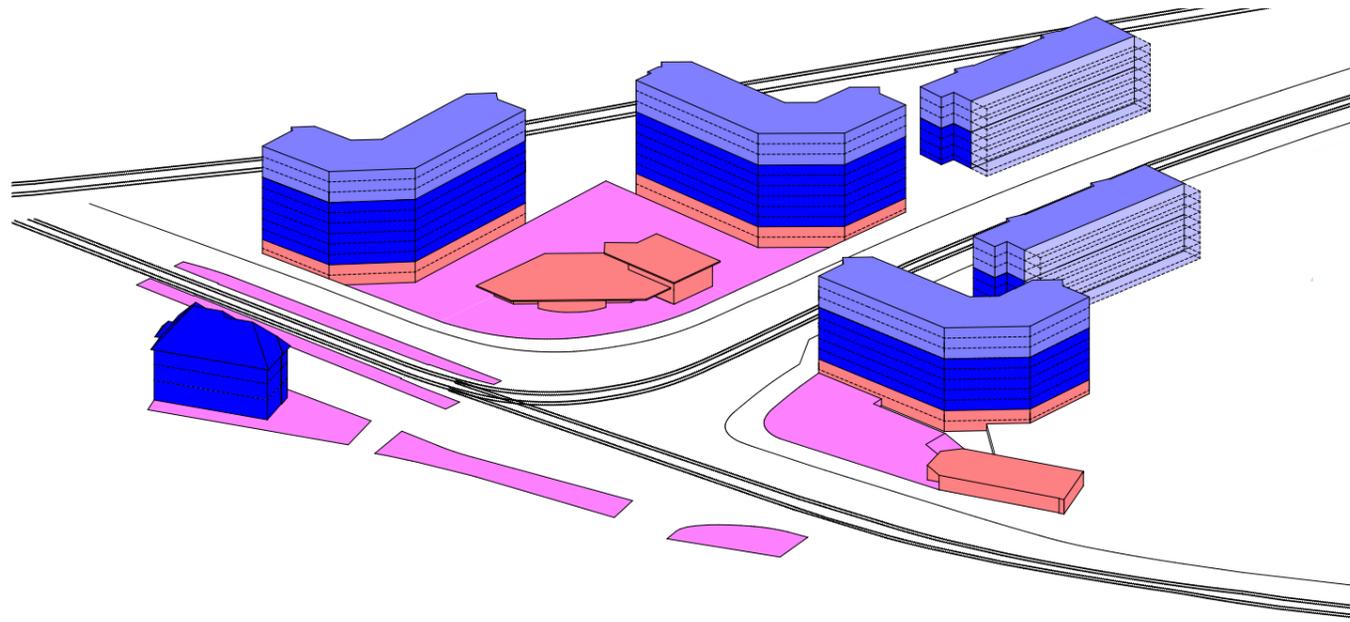


Luftbild



M 1:2000



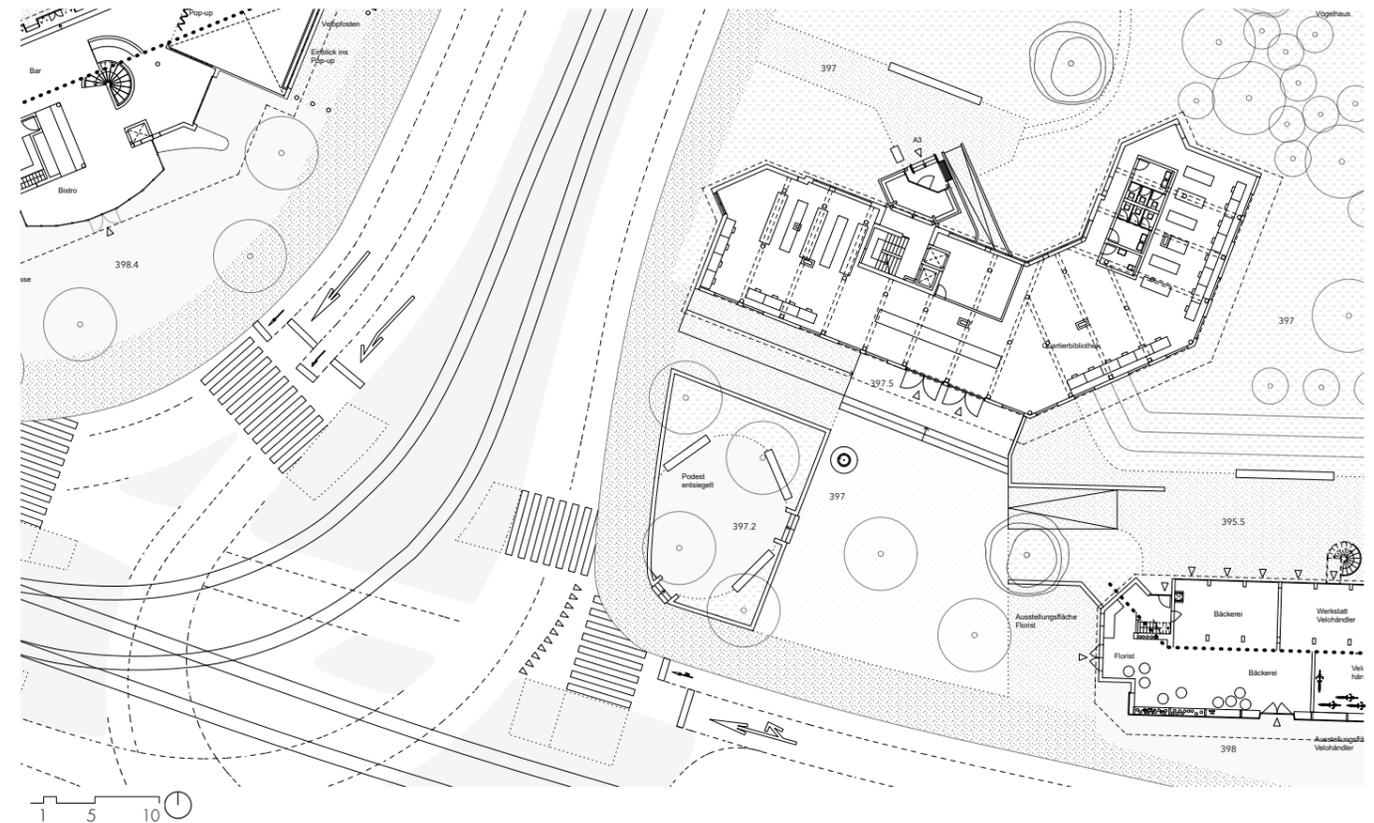
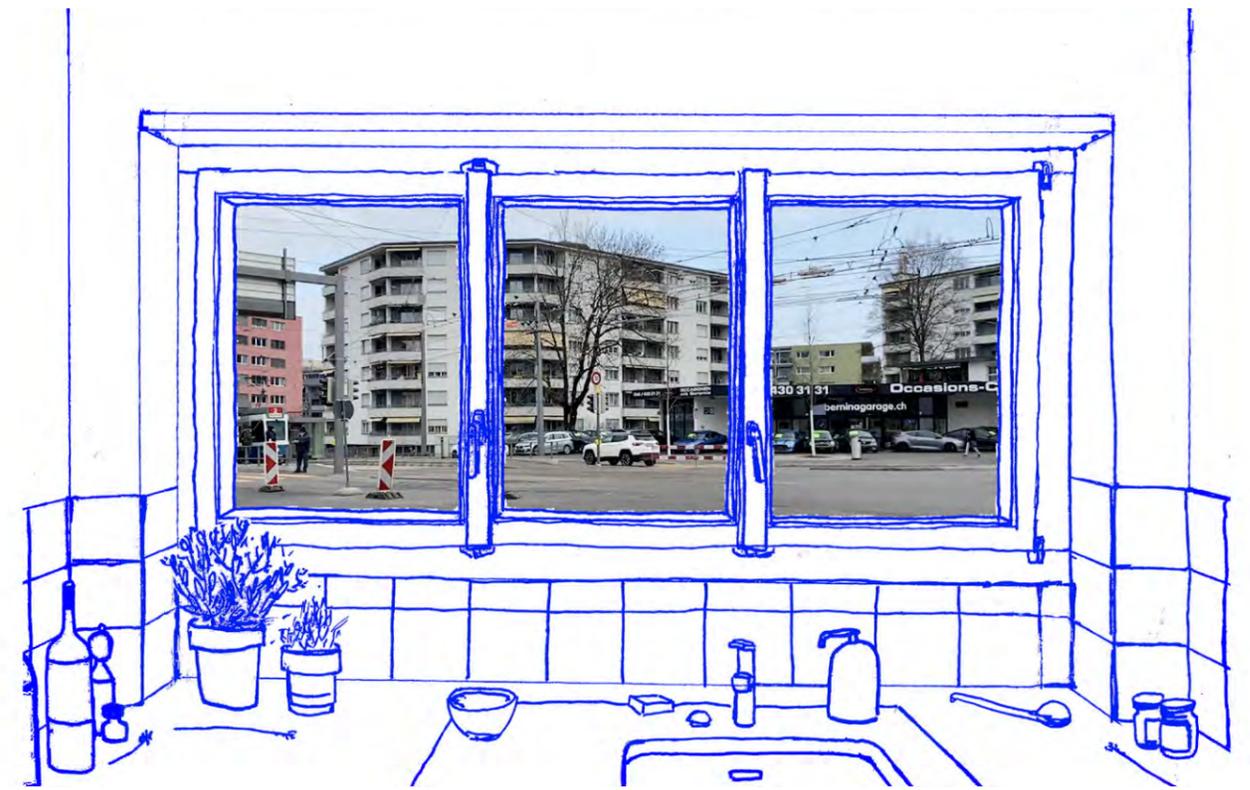
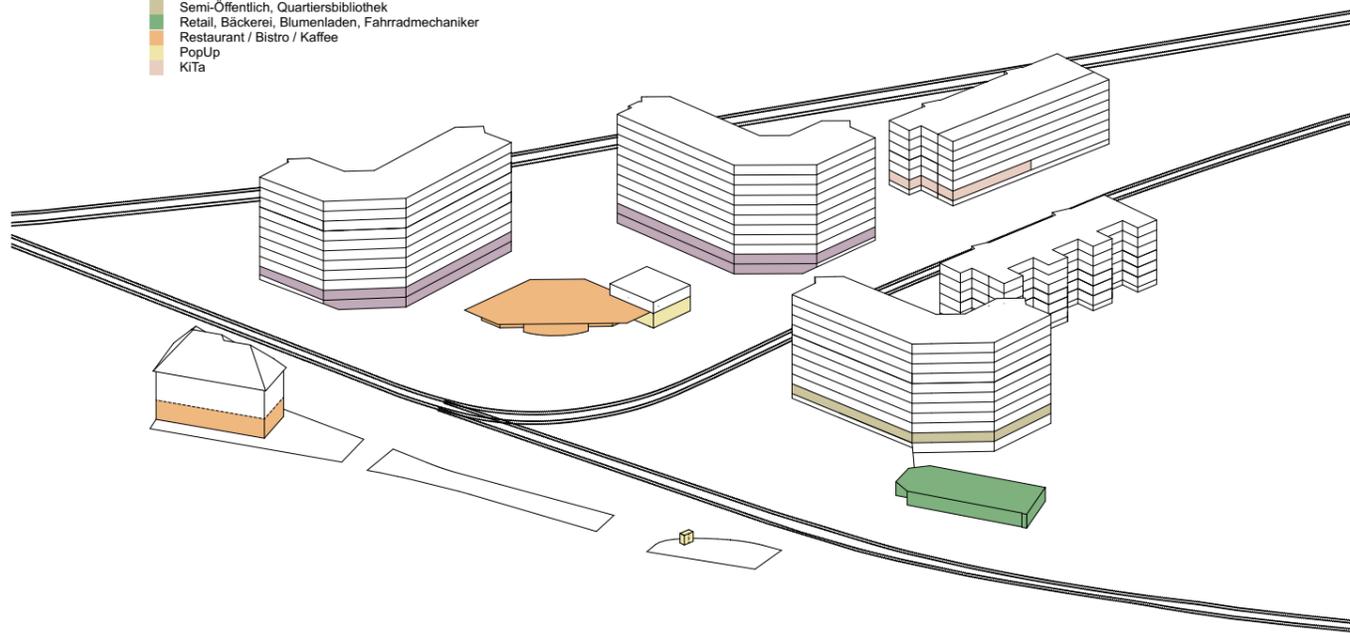


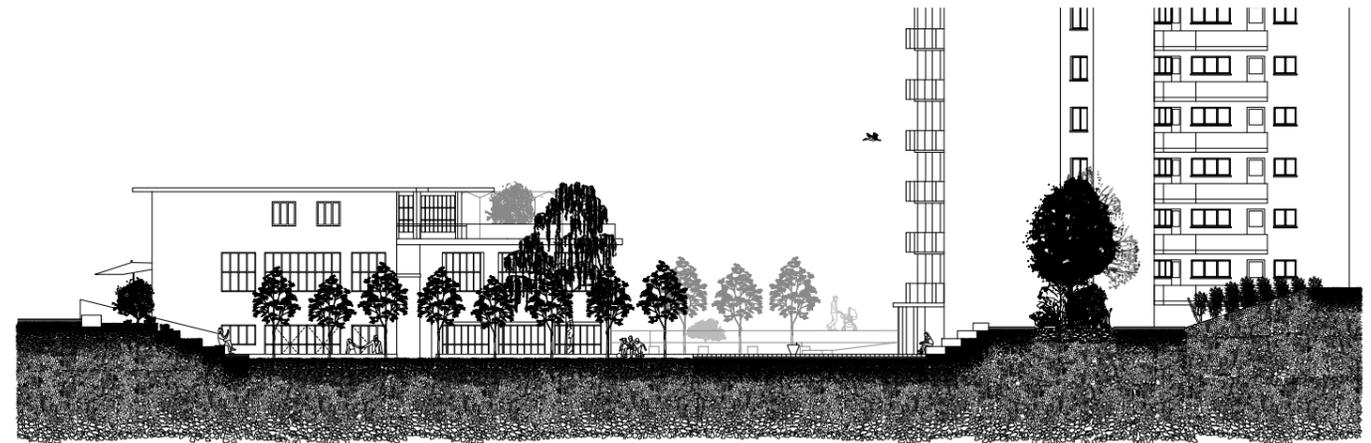
**Umgang Bestand**

	Nutzung erhalten	50 % der gesamten Bausubstanz
	Aufstockung	29 % Neubauvolumen (inkl. Balkonschicht)
	Addition Balkonschicht	
	Umnutzung Bestand	21 % der gesamten Bausubstanz
	Freiraumgestaltung	

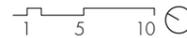
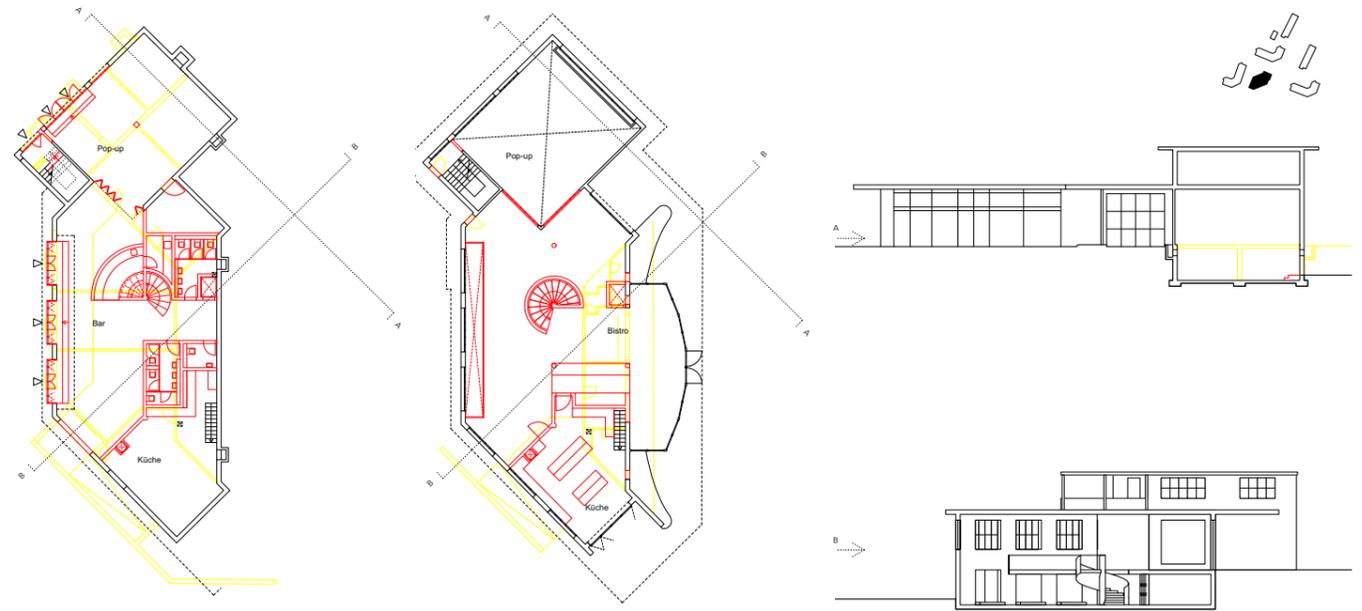
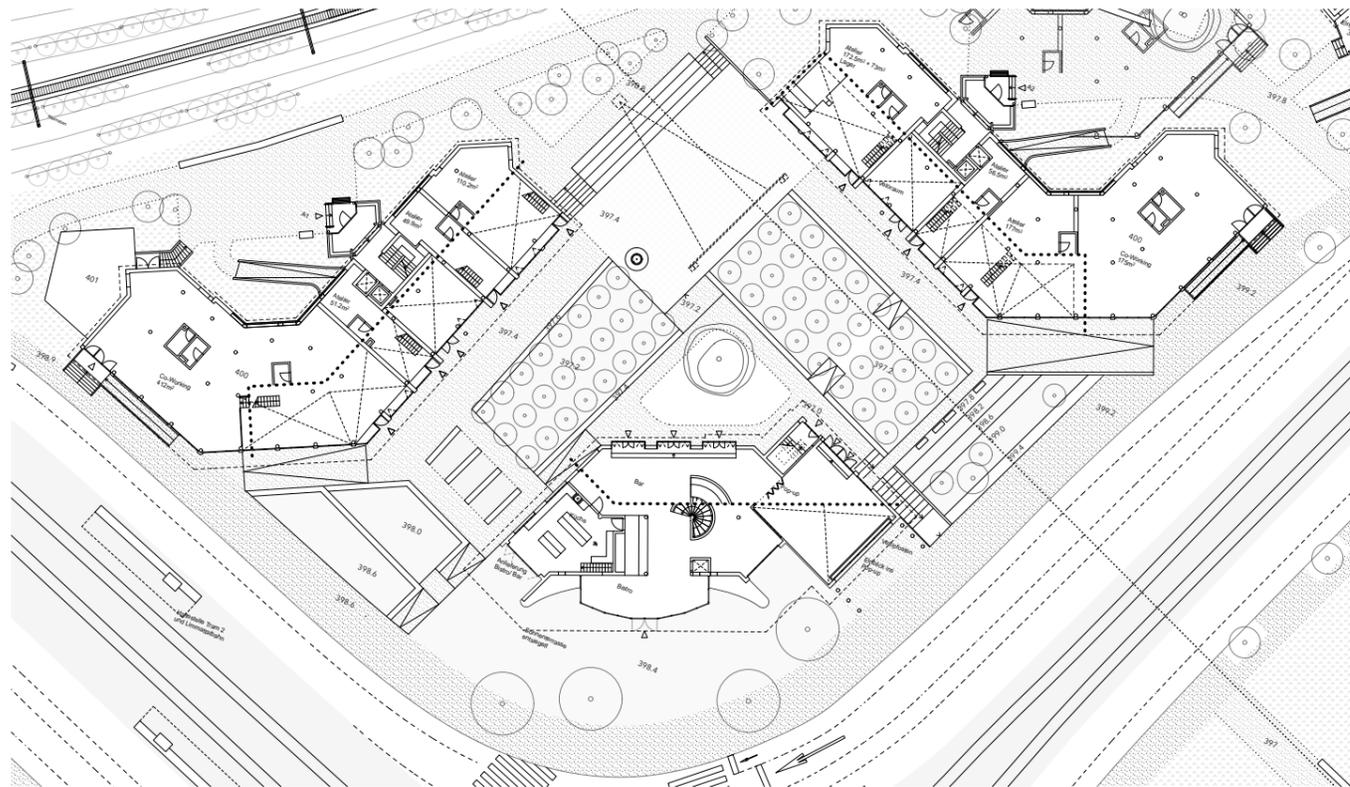
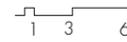
**Erdgeschossnutzungen**

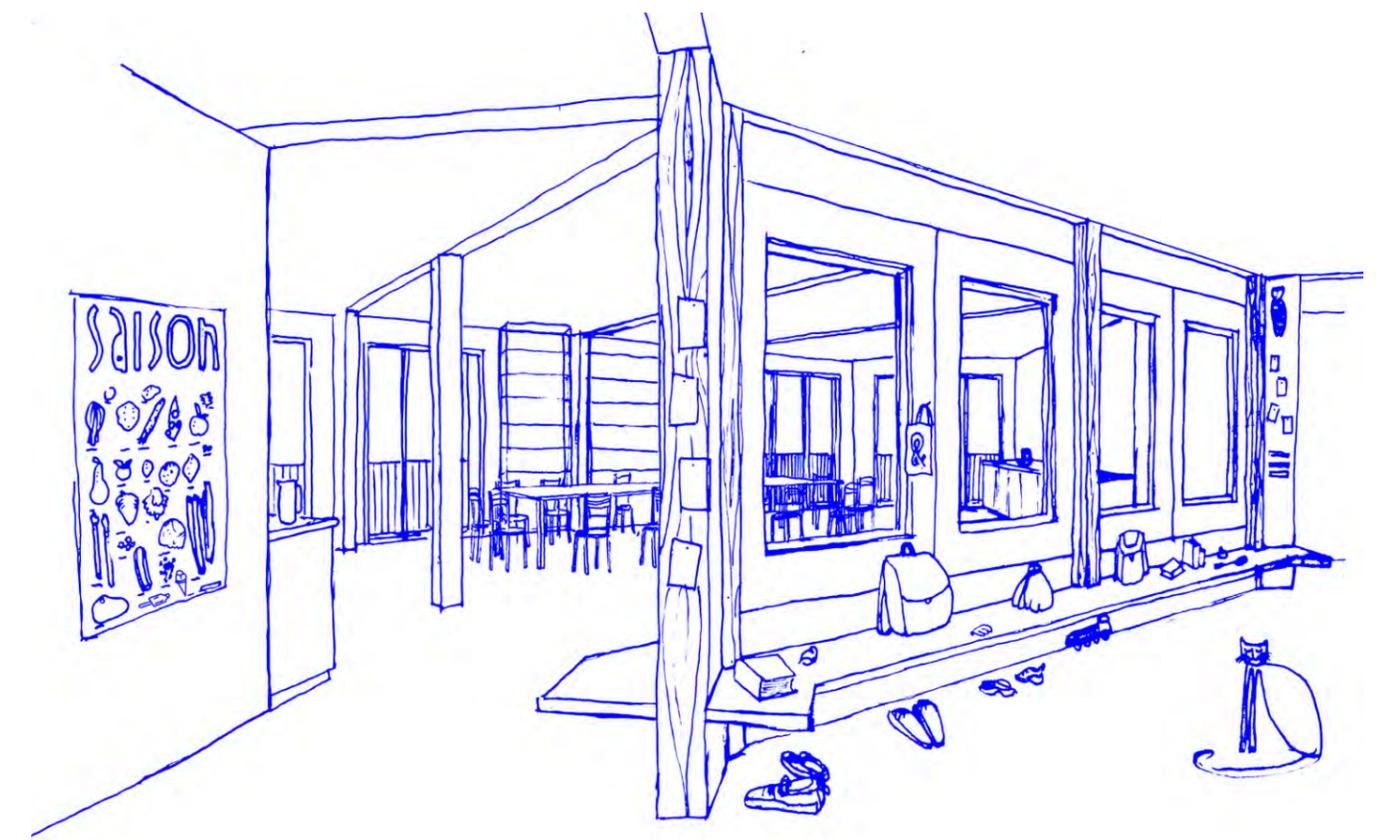
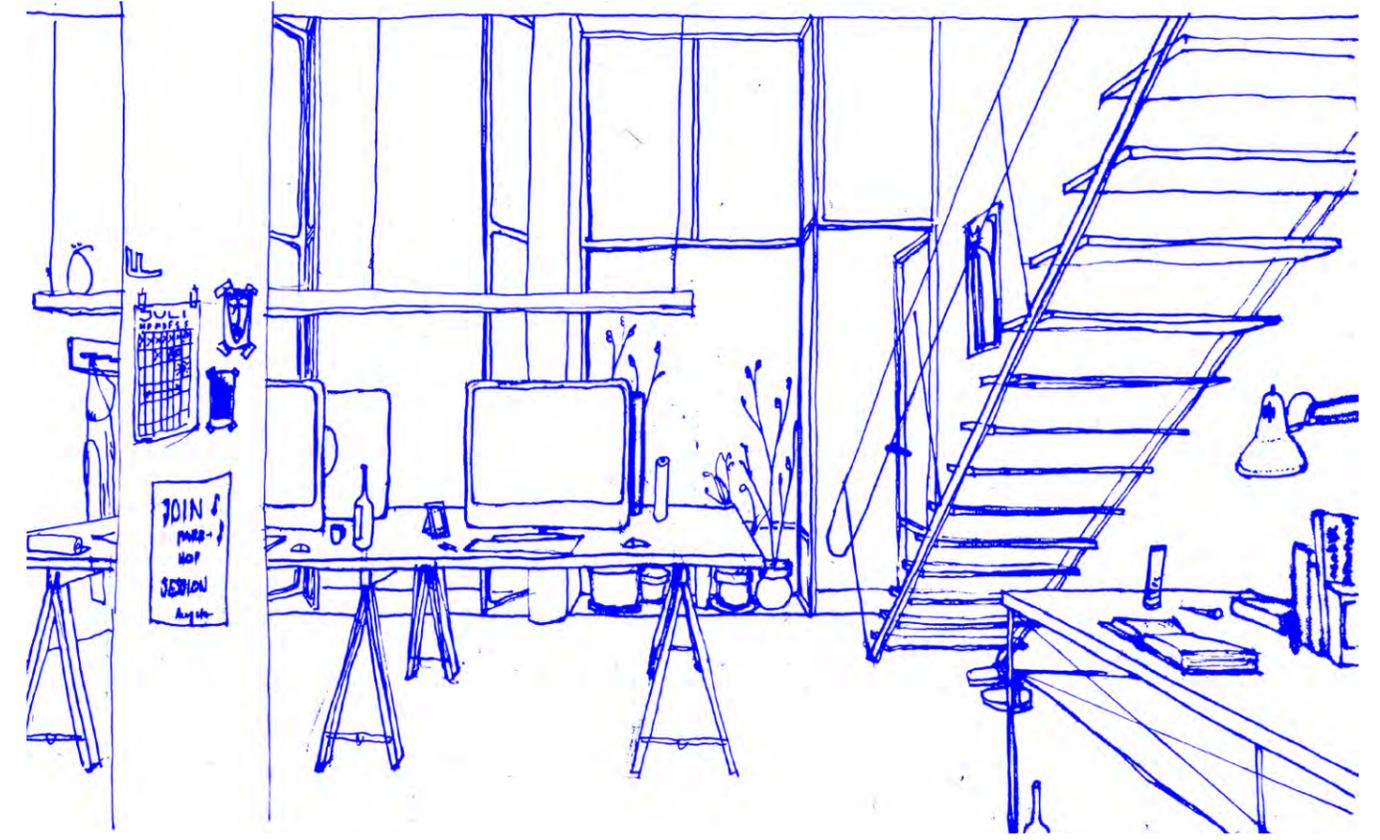
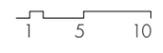
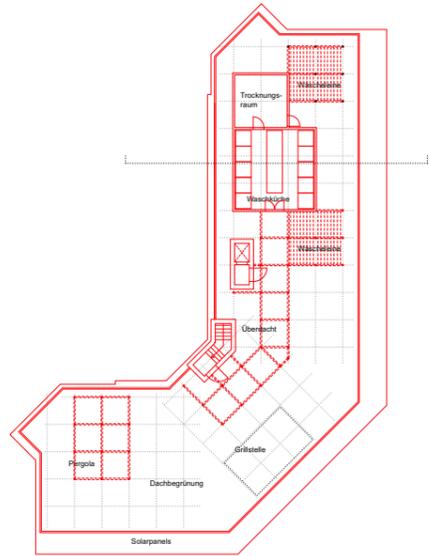
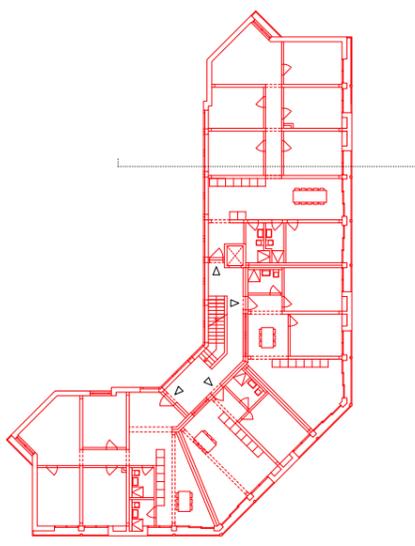
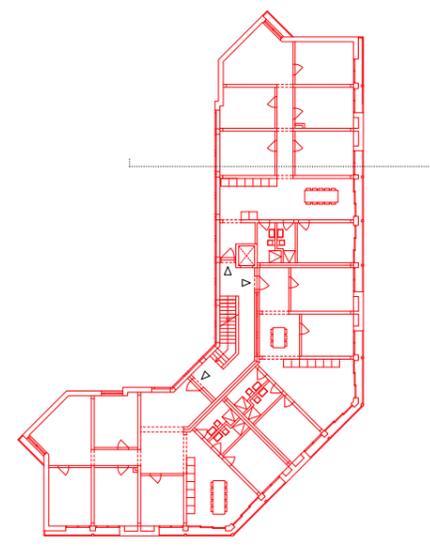
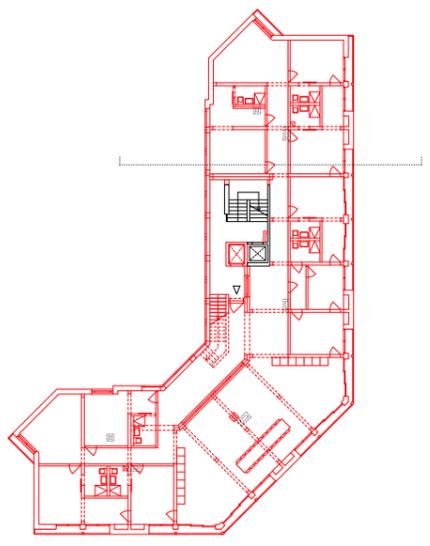
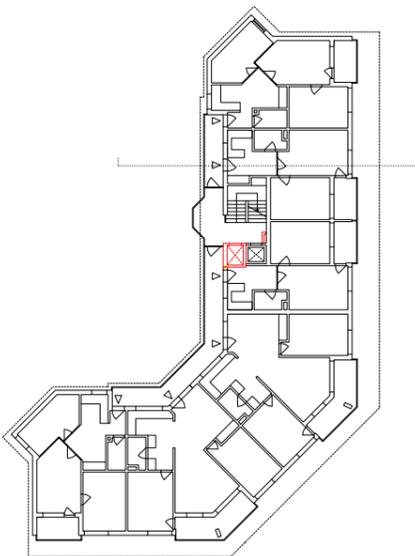
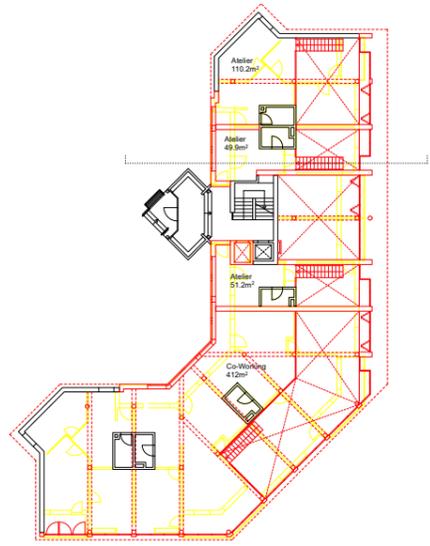
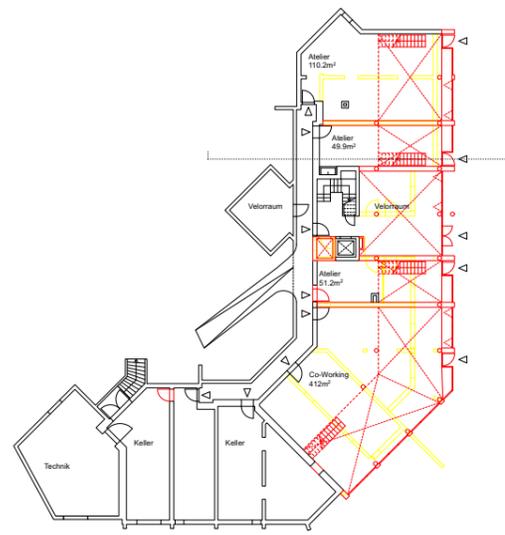
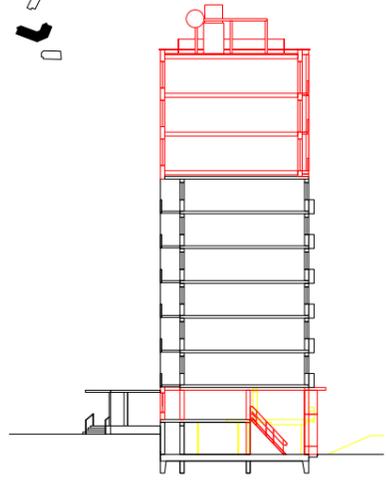
	Ateliers / Werkstätten / Co-Working
	Semi-Öffentlich, Quartiersbibliothek
	Retail, Bäckerei, Blumenladen, Fahrradmechaniker
	Restaurant / Bistro / Kaffee
	PopUp
	KiTa

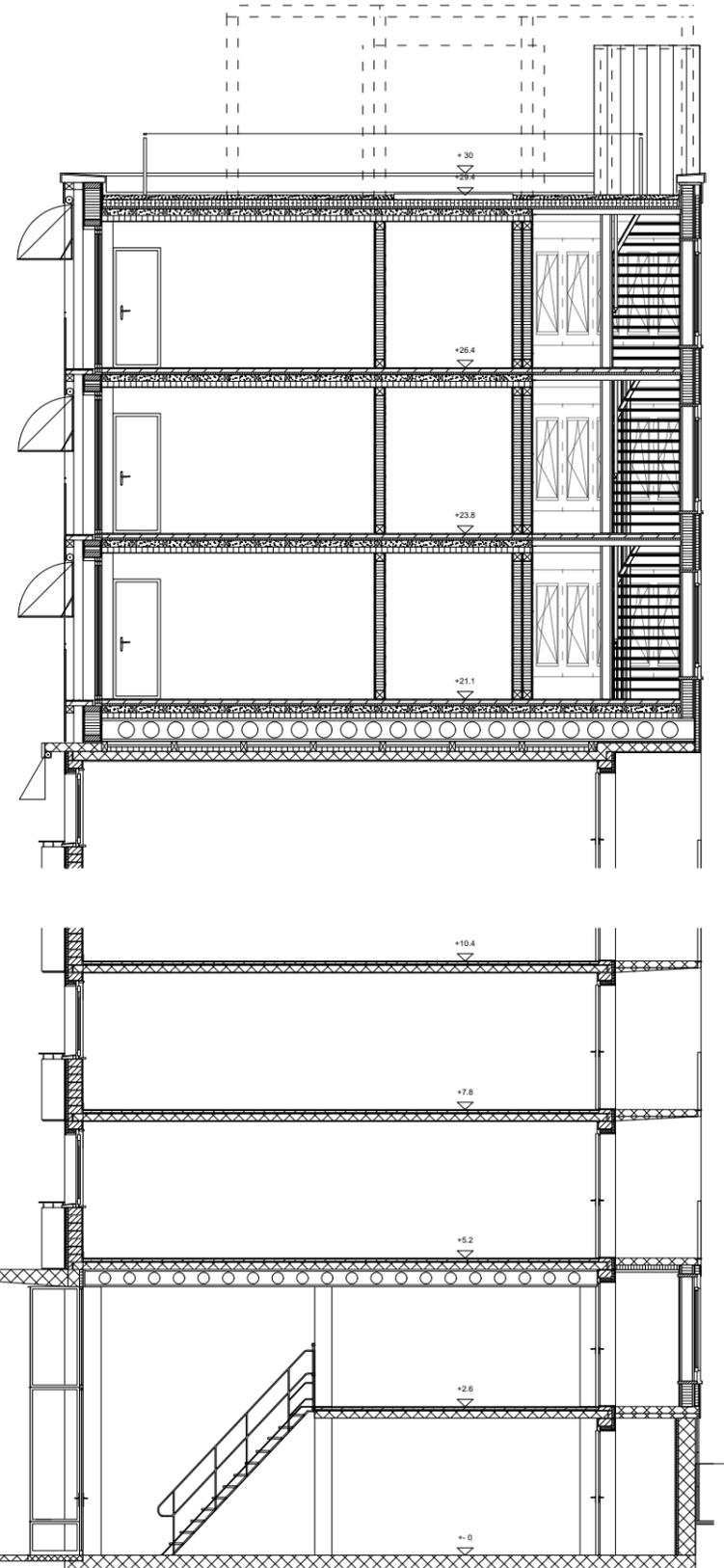
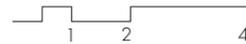
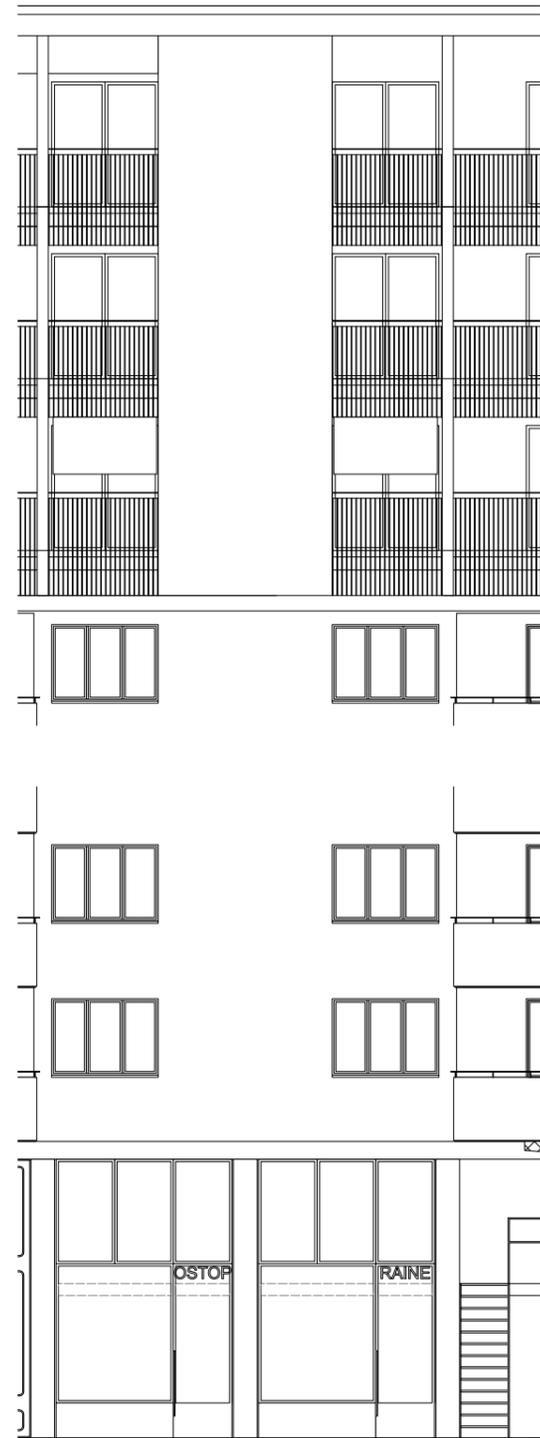
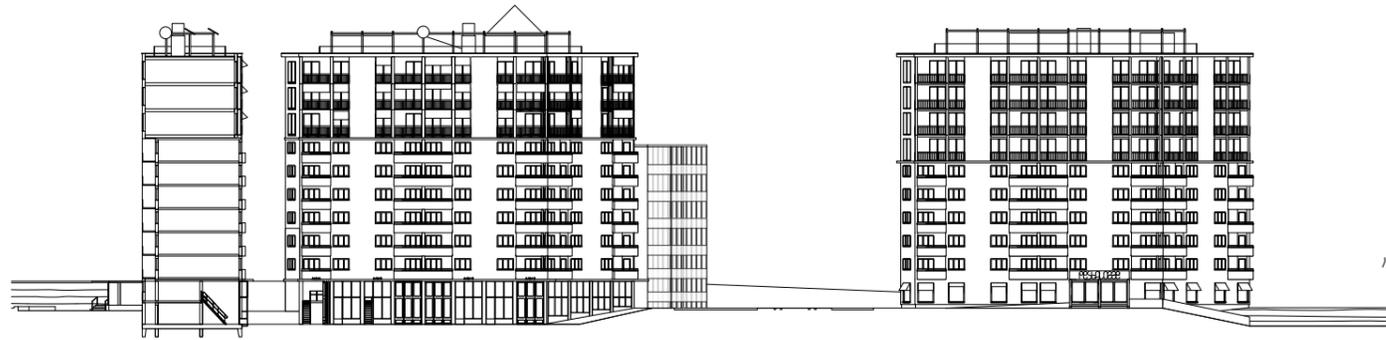
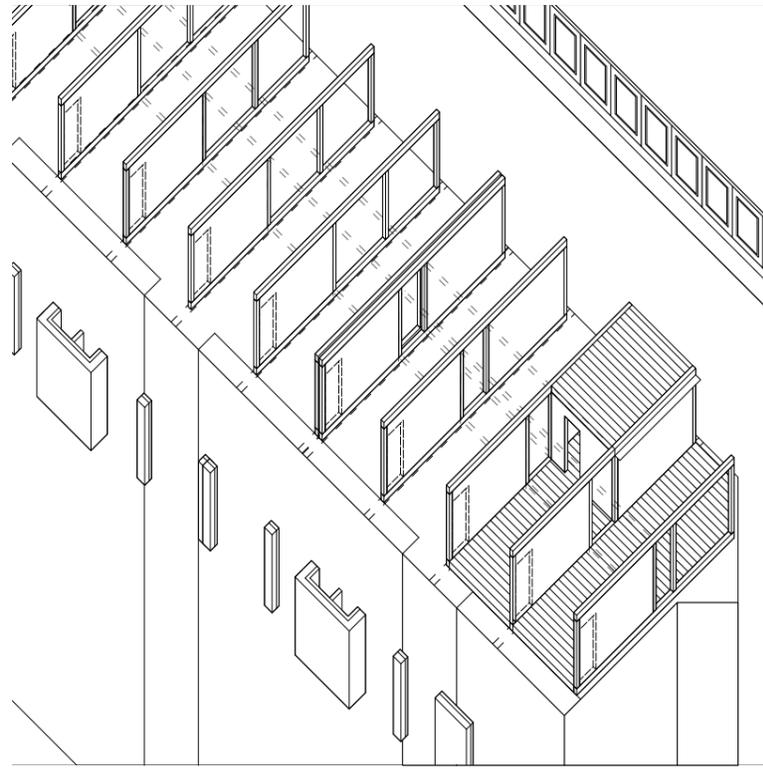




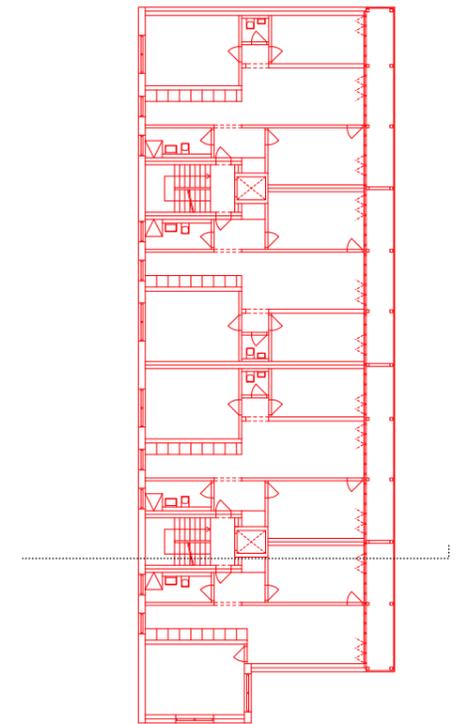
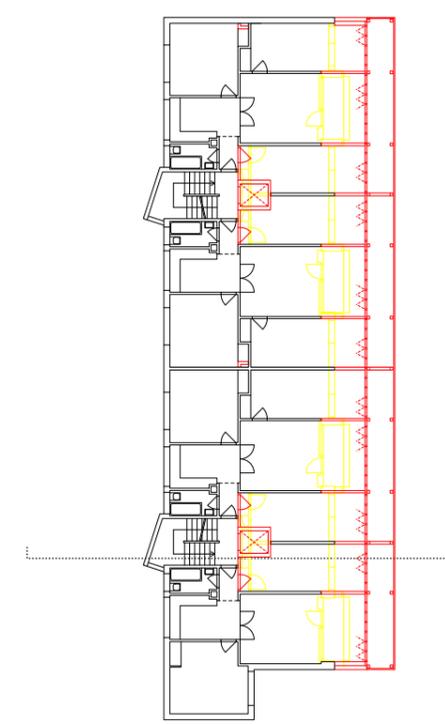
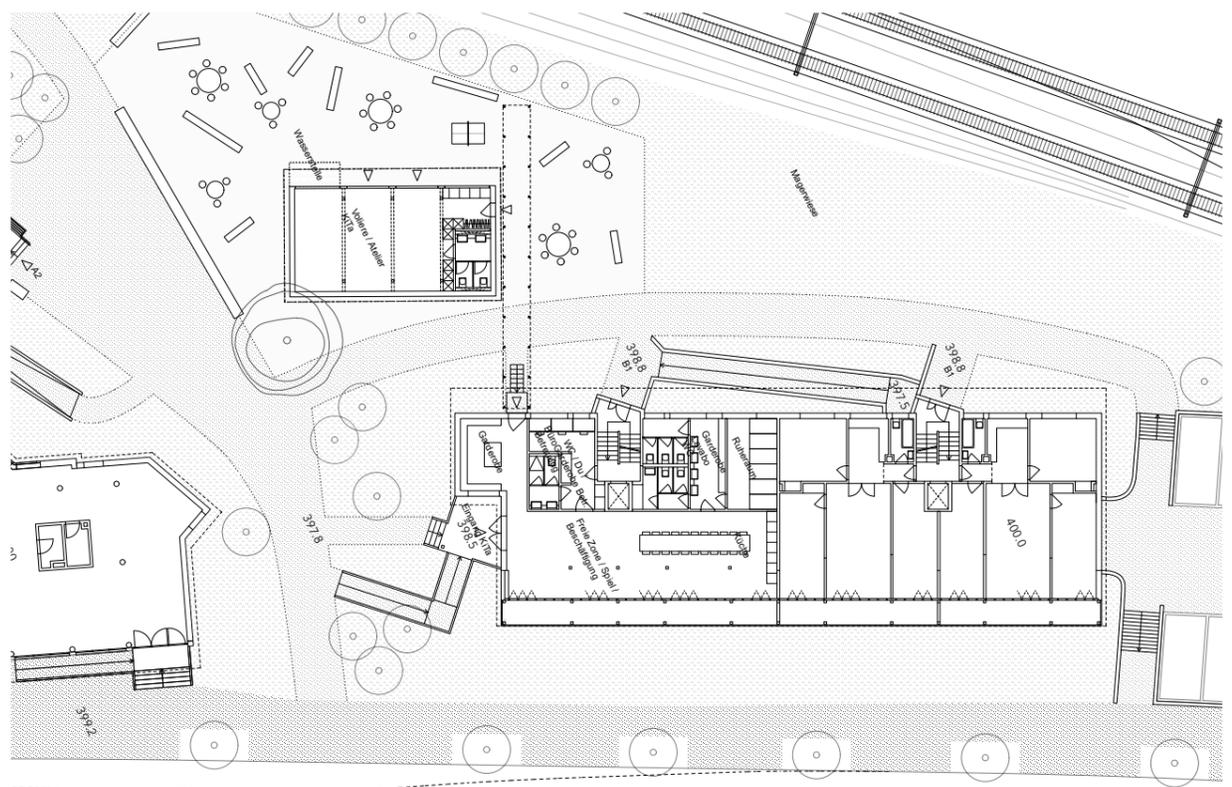
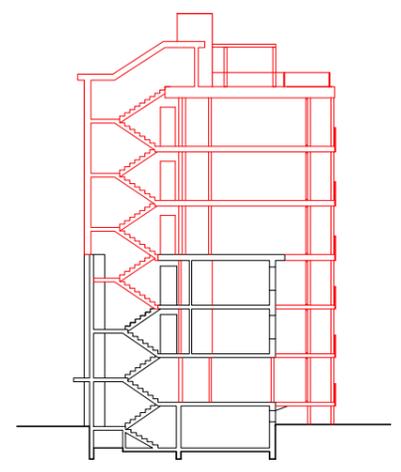
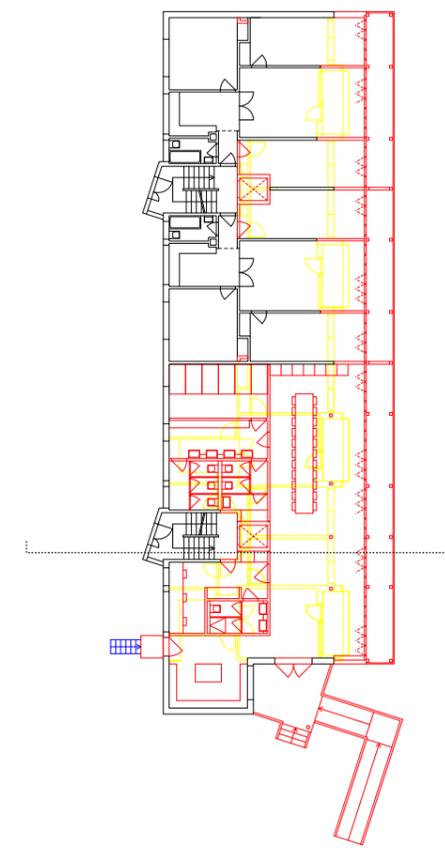
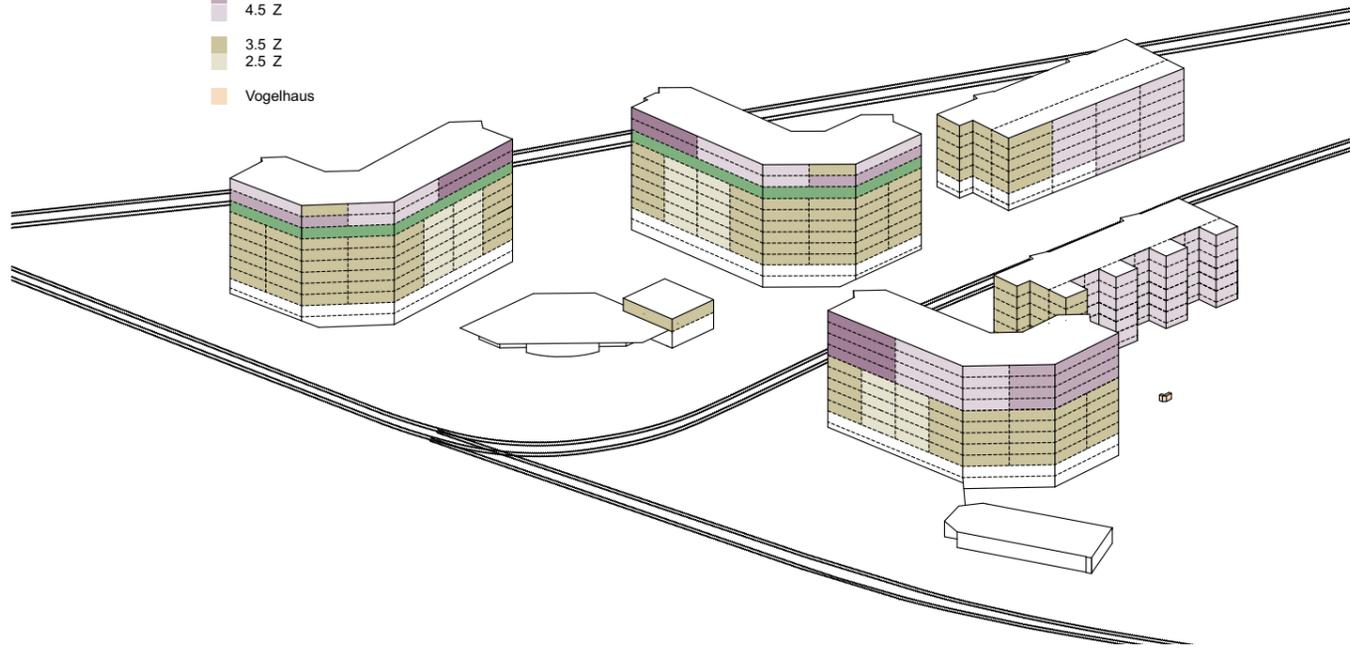
Trottoir Bestand	Treppe	Retentionsfläche/ Sickerungsfläche	Pflasterung	Chaussierung	Sickerfläche	Trottoir Bestand	Bahnrasse
	Kies - leicht begrünt	Kies mit leichter Begrünung Regelmäßige Bepflanzung zum Beispiel mit Ahorn	Pflastersteine 8cm Splitt 3cm Straßenkies 30cm Recyclingkies 30cm	Gartenkies 1cm Flickschotter 5cm Recyclingkies 30cm	Wider-Wische 1cm 5cm 30cm		Reifen

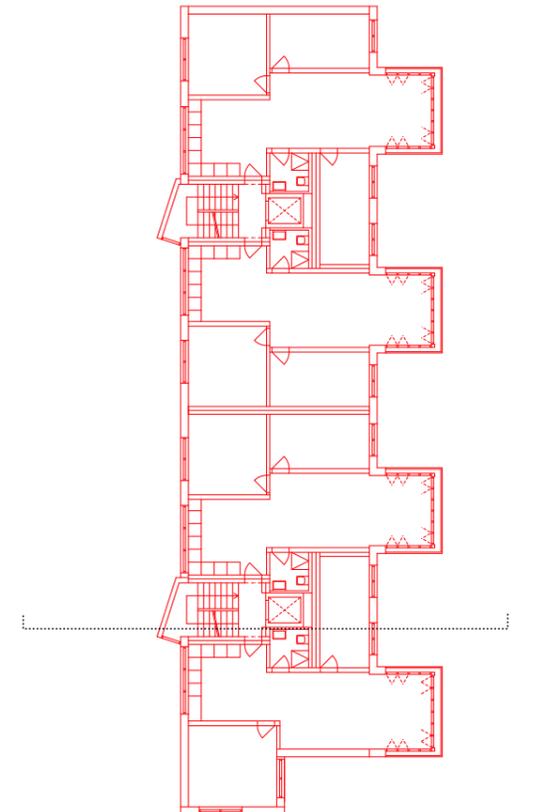
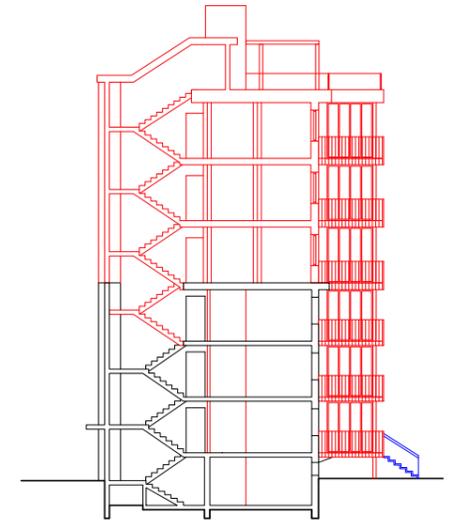
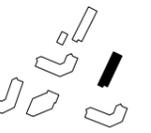
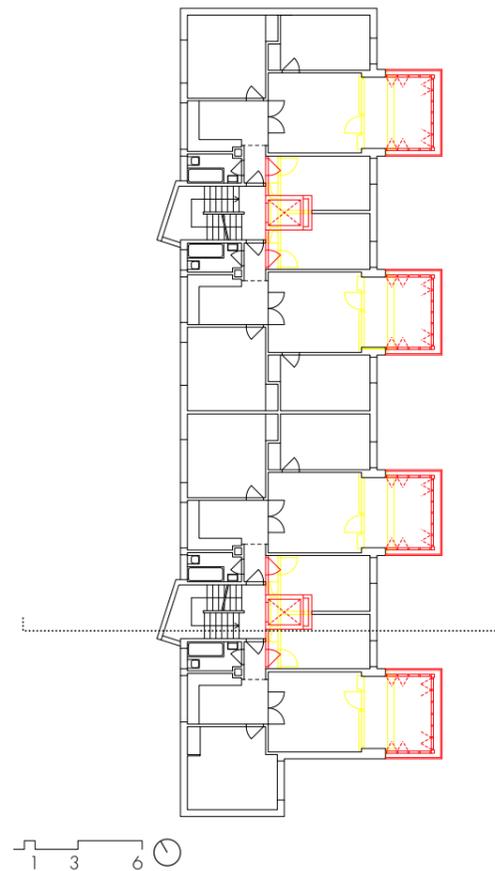
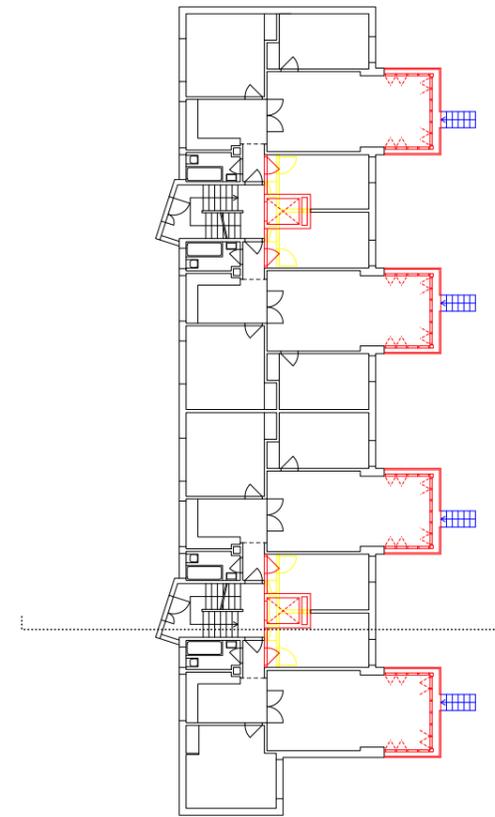
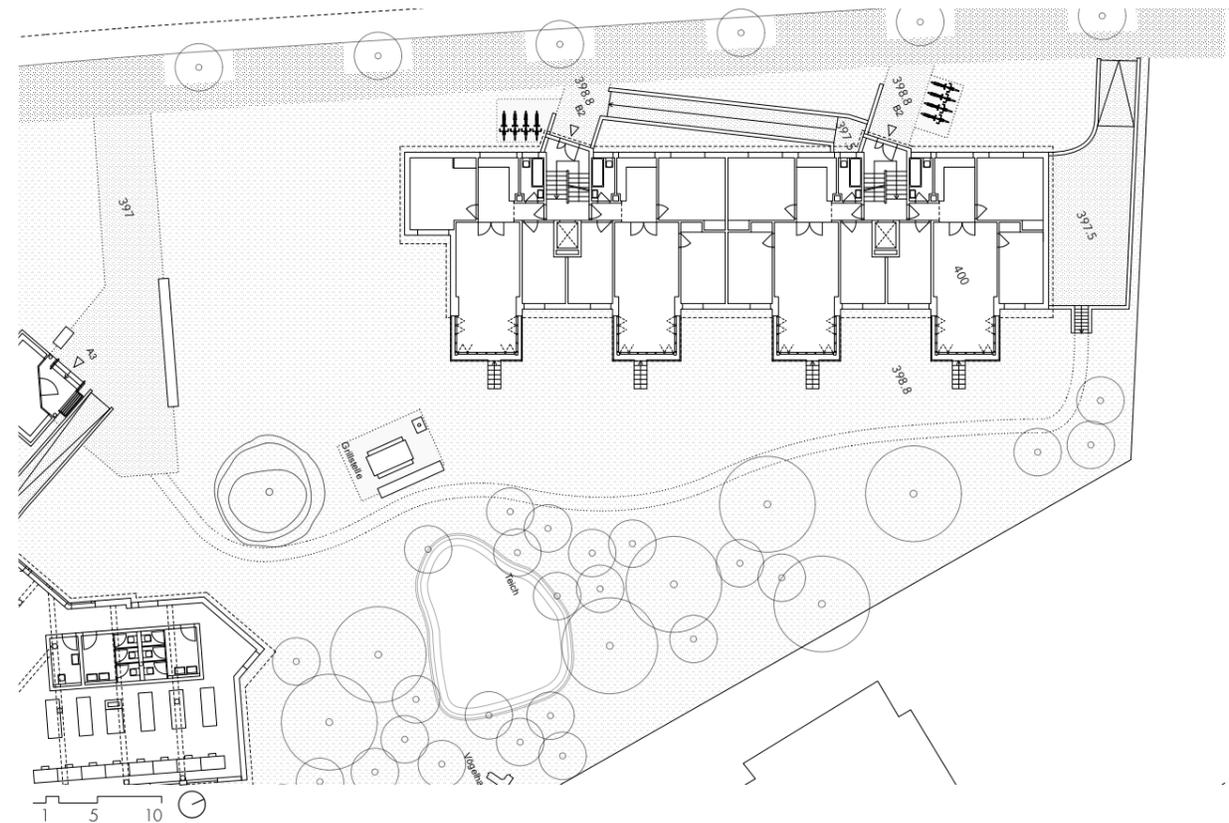
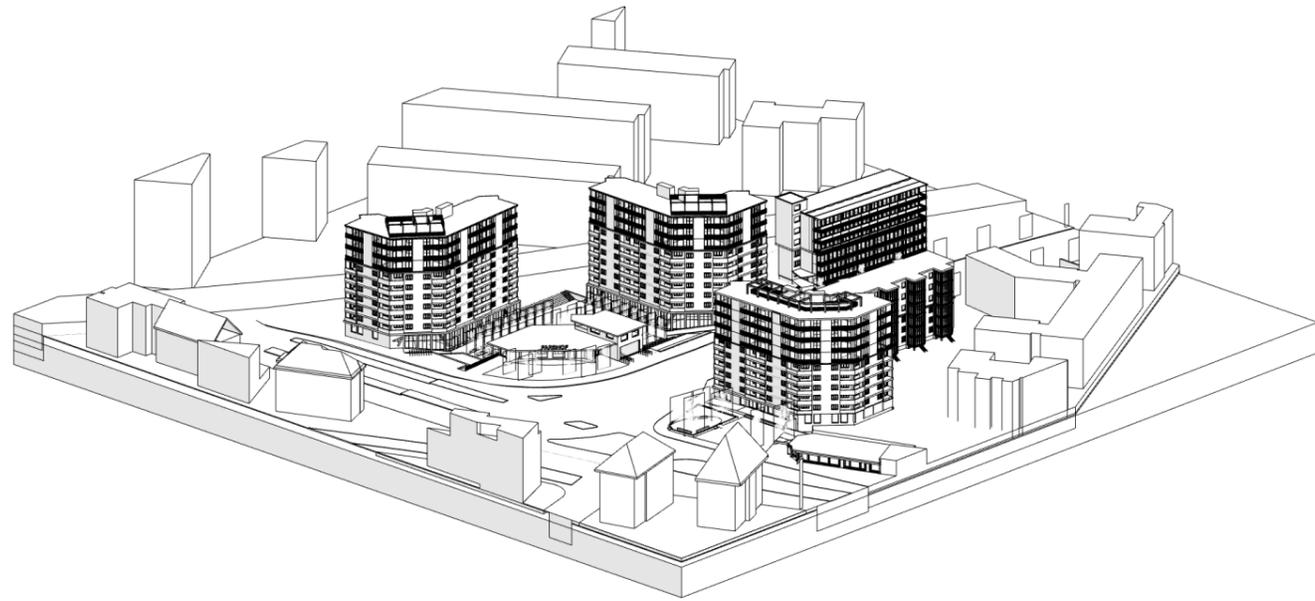


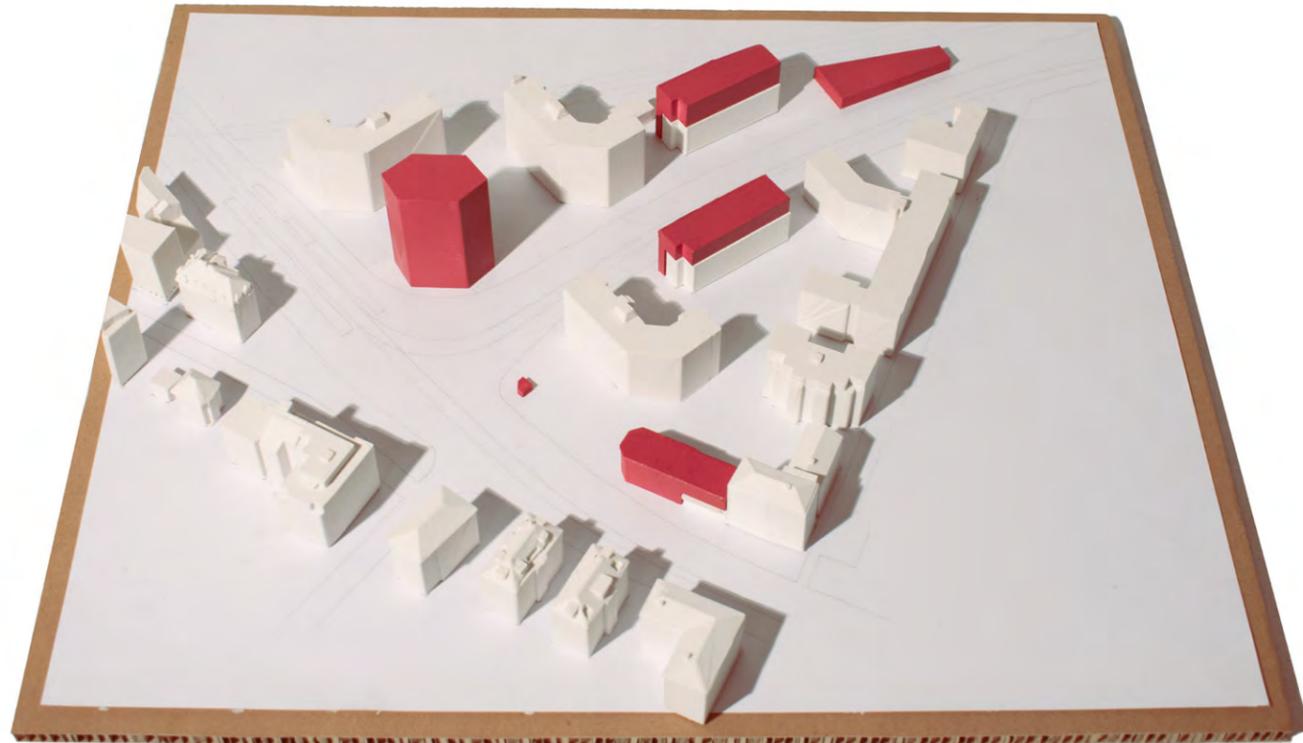


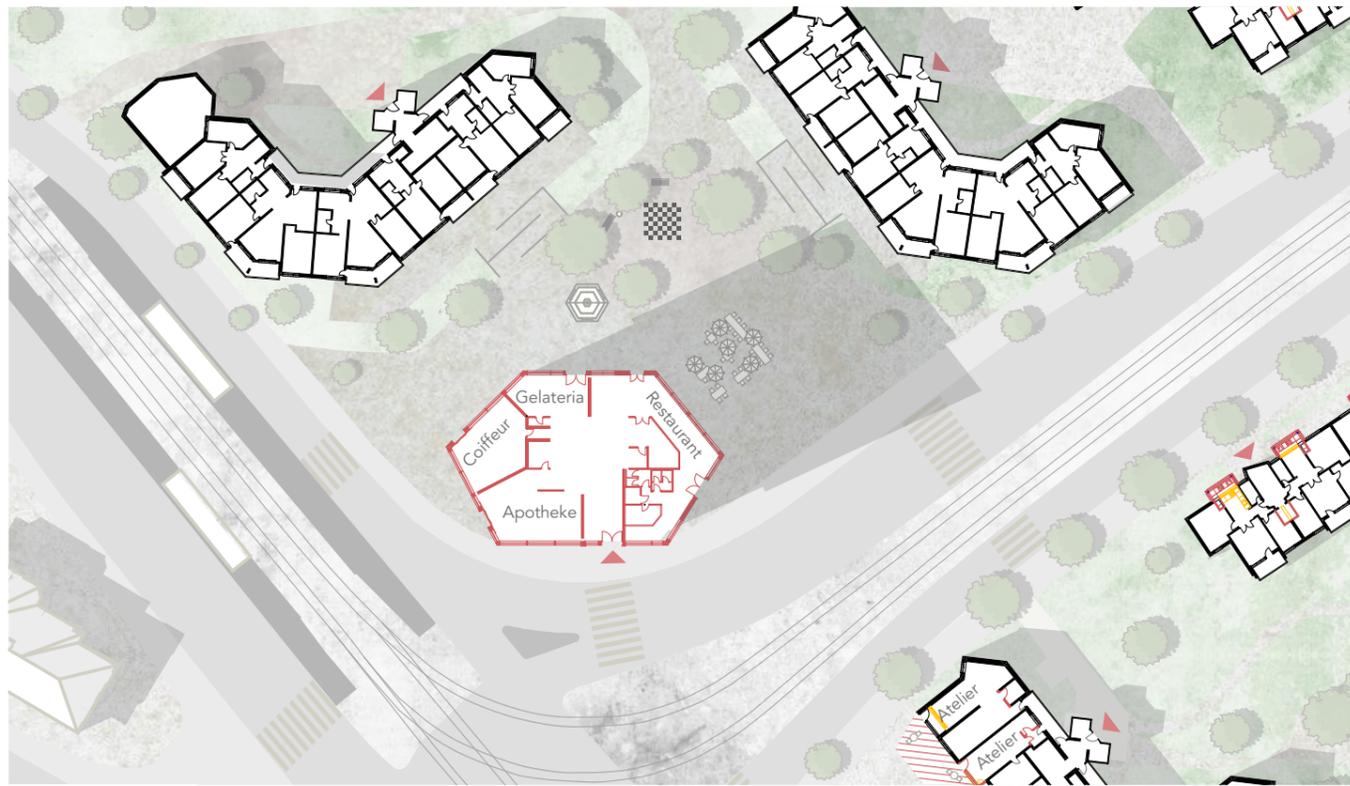


- Wohnungsspiegel
- Clusterwohnung  
16 Z
  - 8.5 Z
  - 6.5 Z
  - 4.5 Z
  - 3.5 Z
  - 2.5 Z
  - Vogelhaus

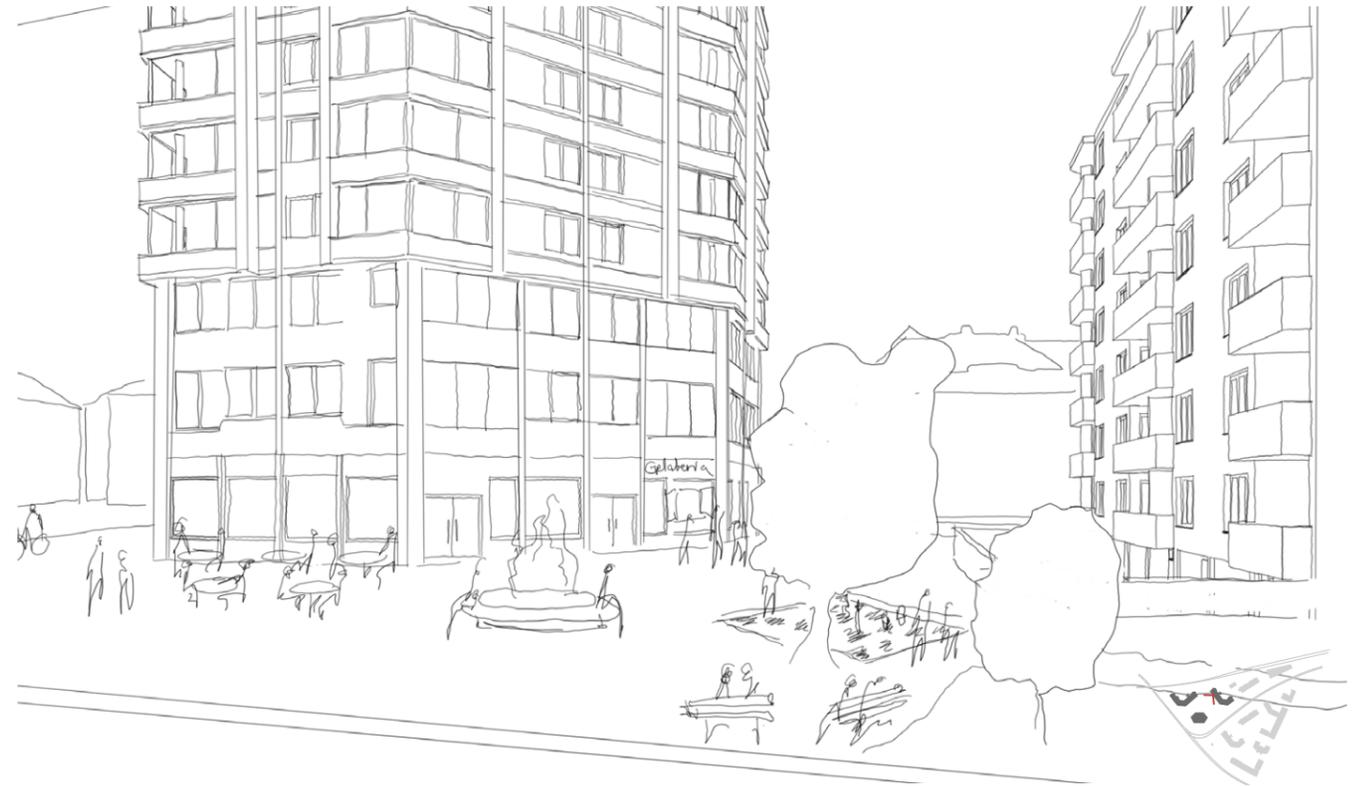


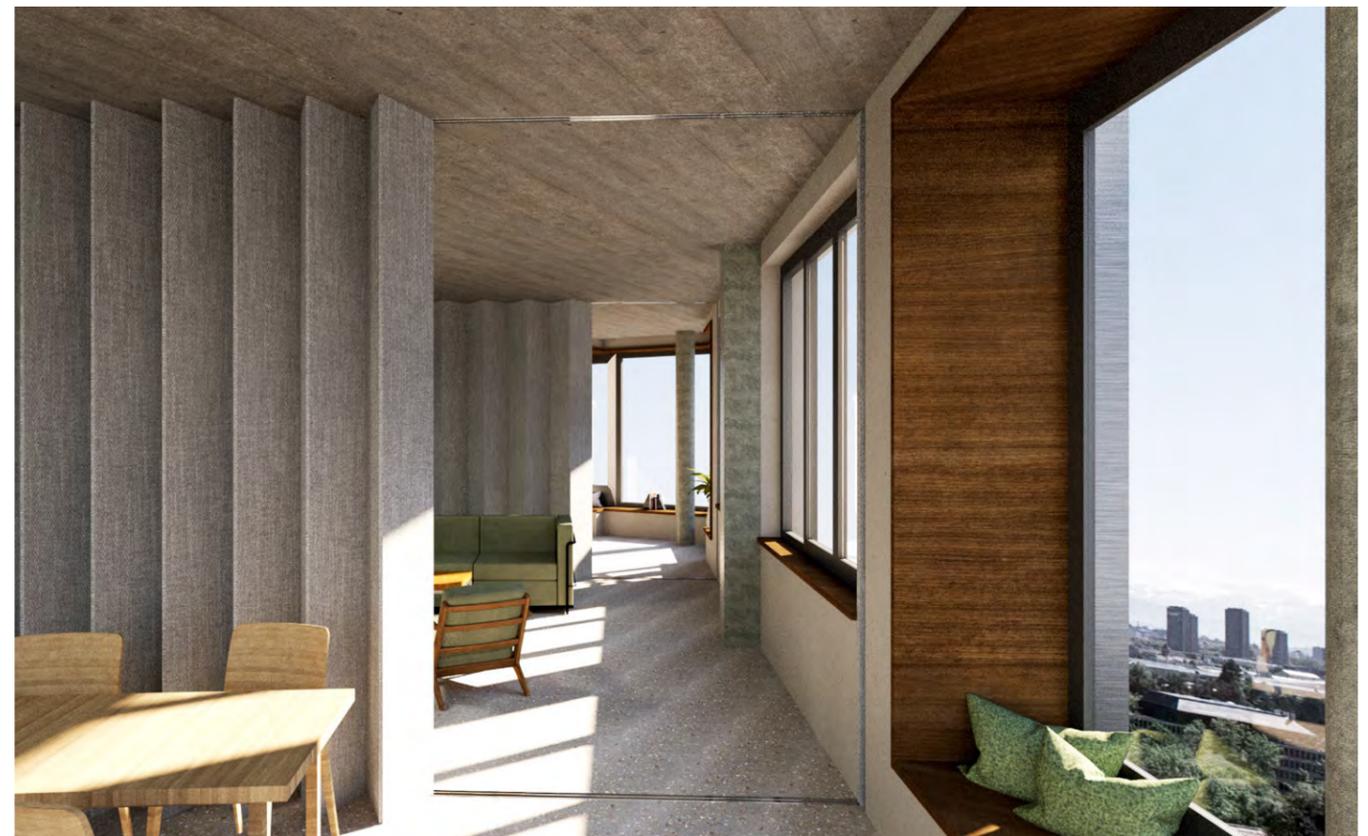
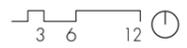
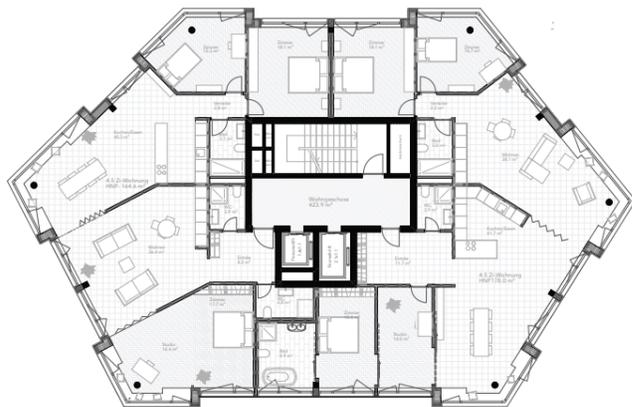
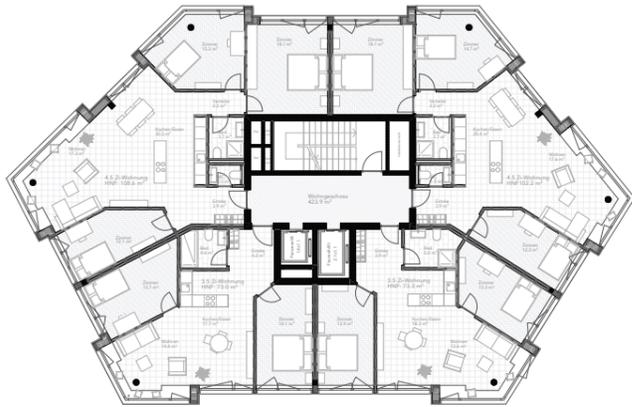
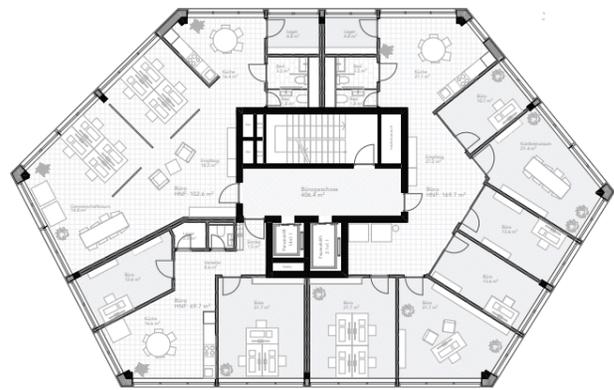
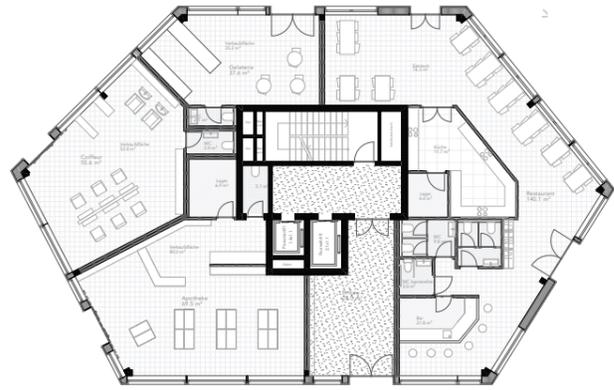


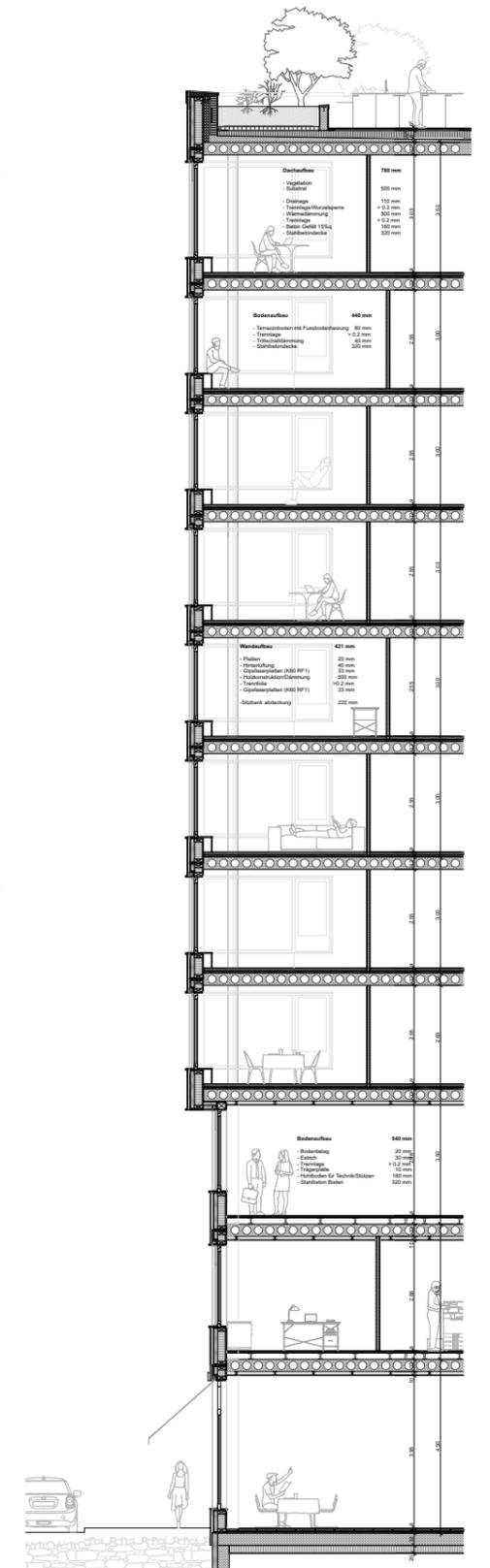
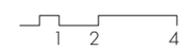
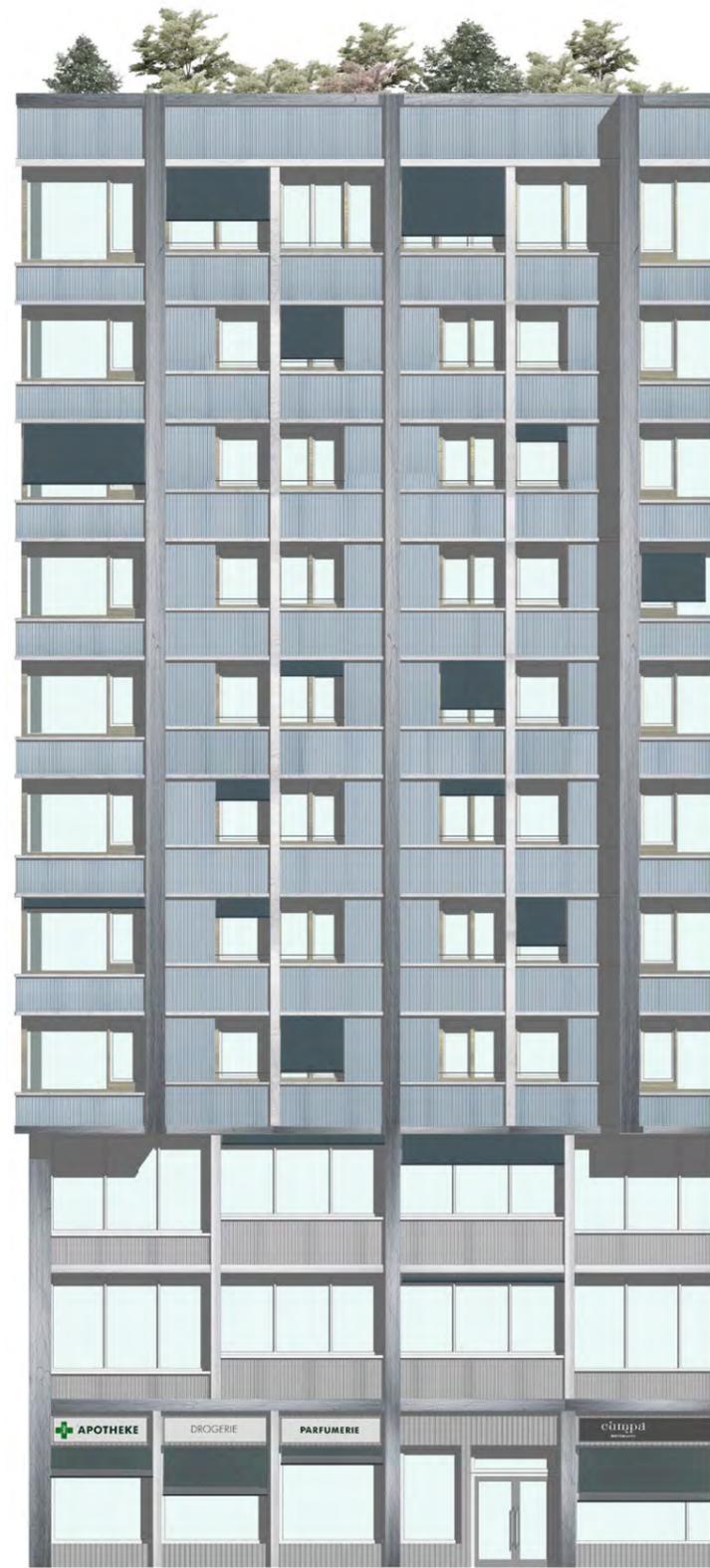
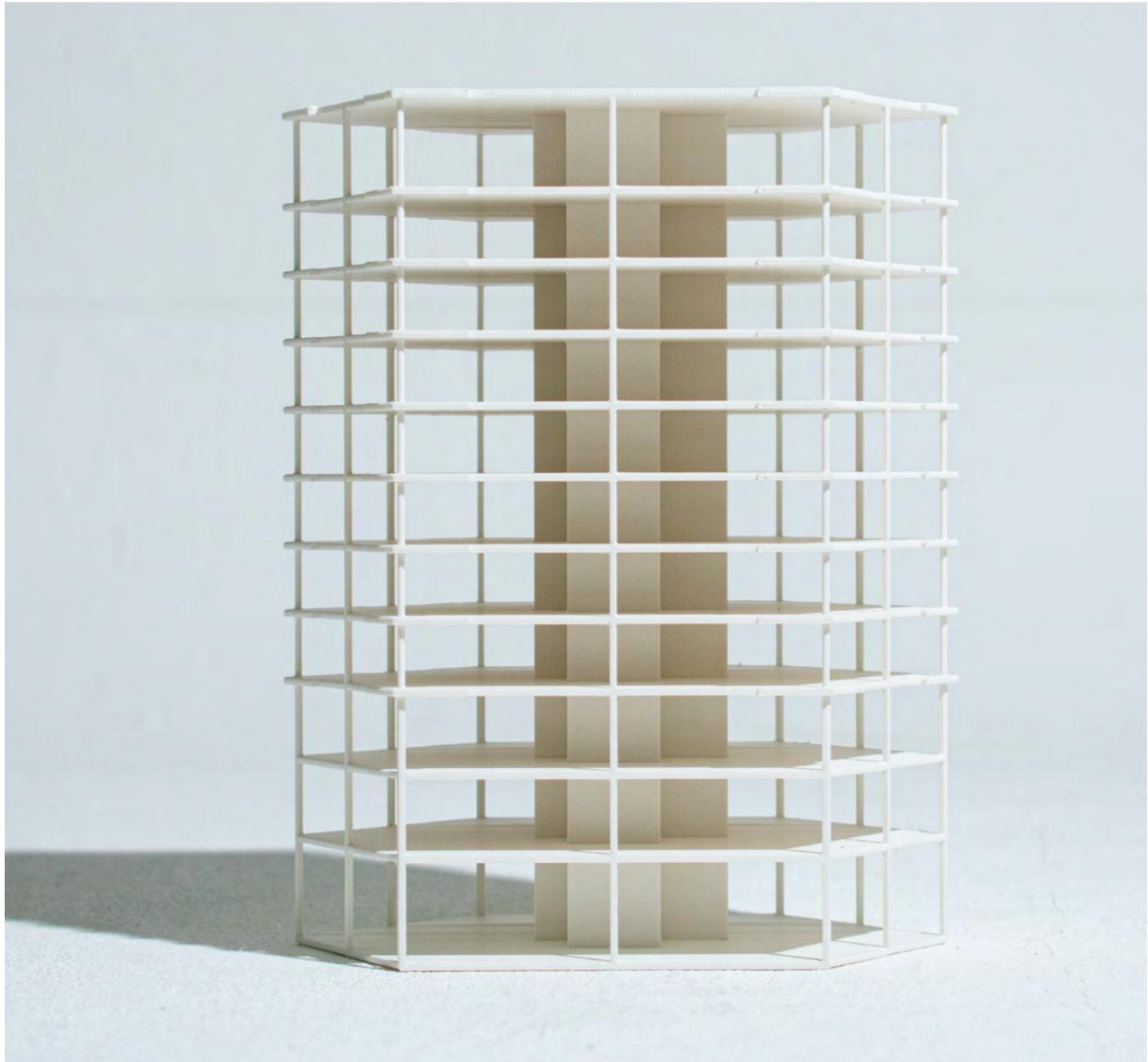




1 10 20

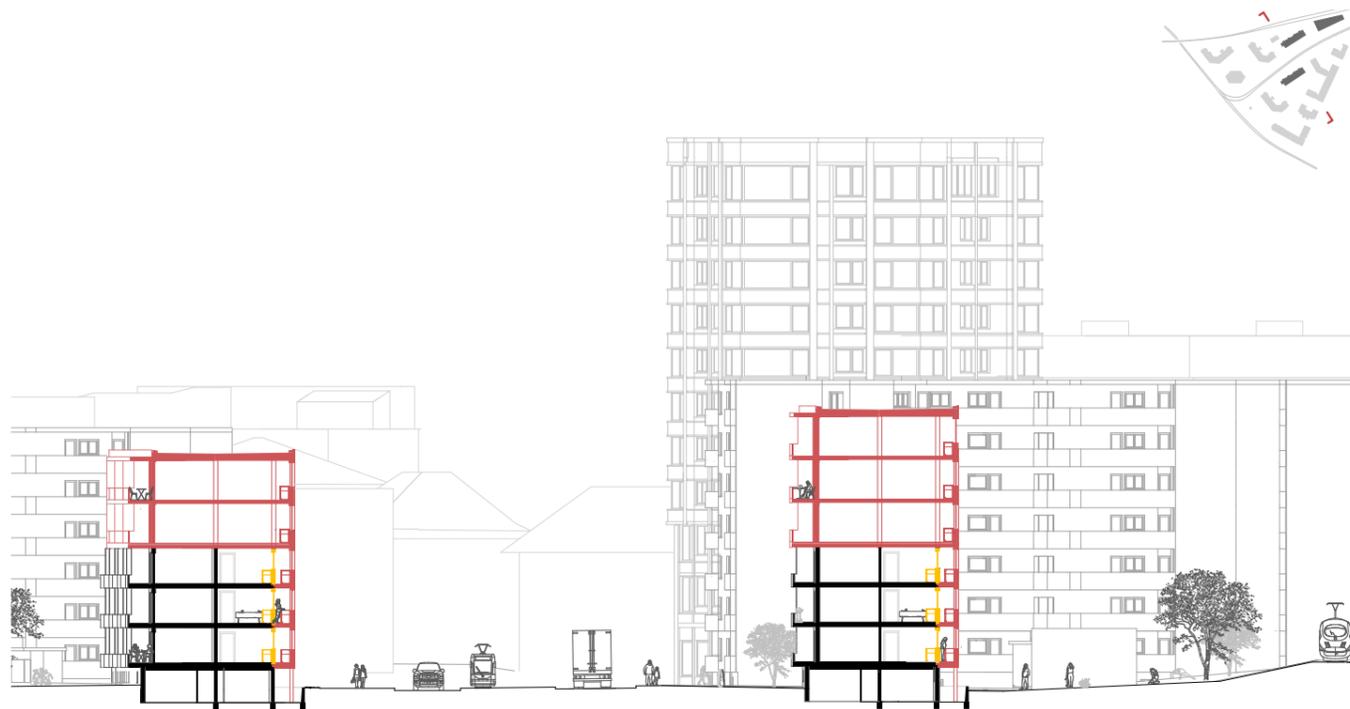






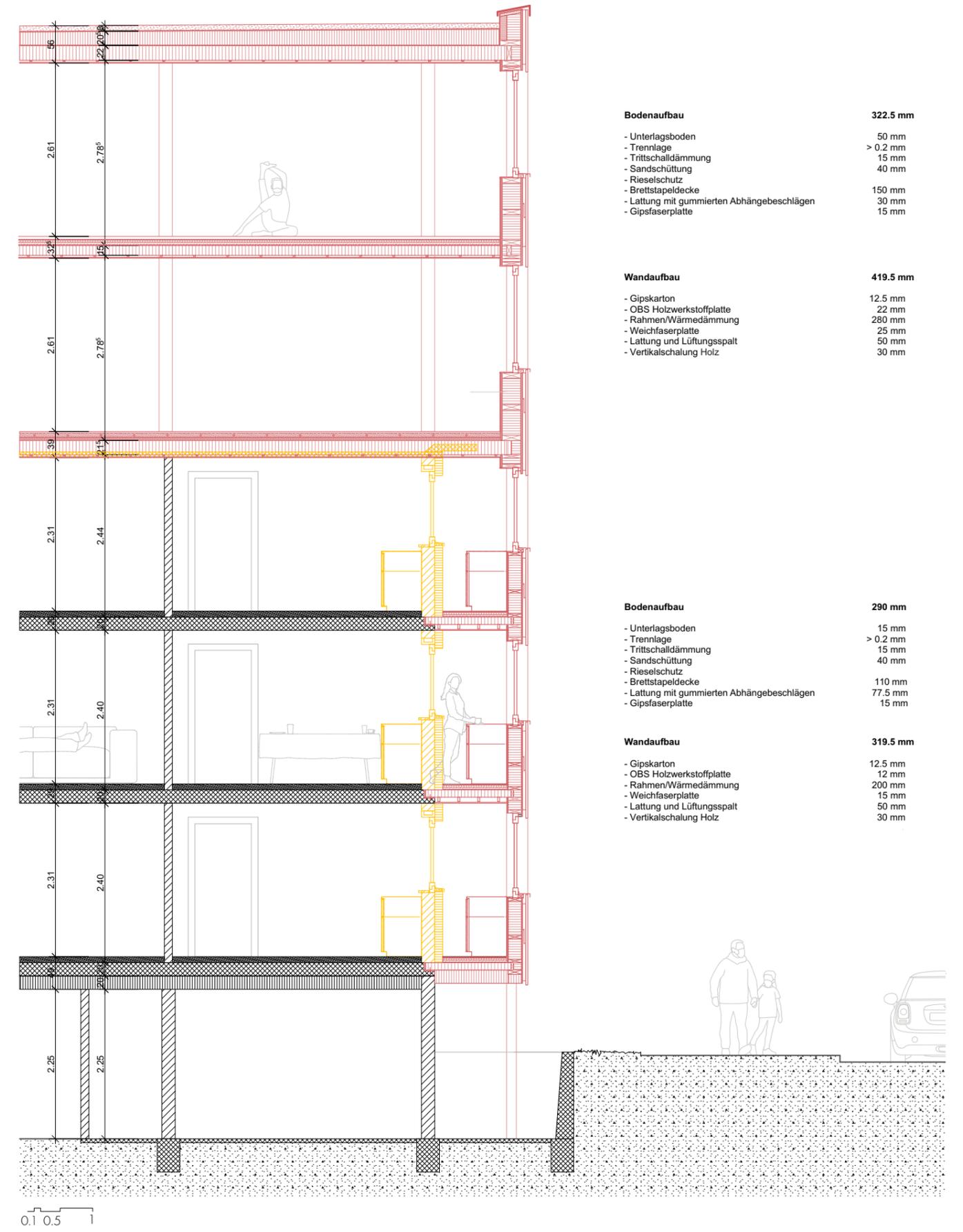
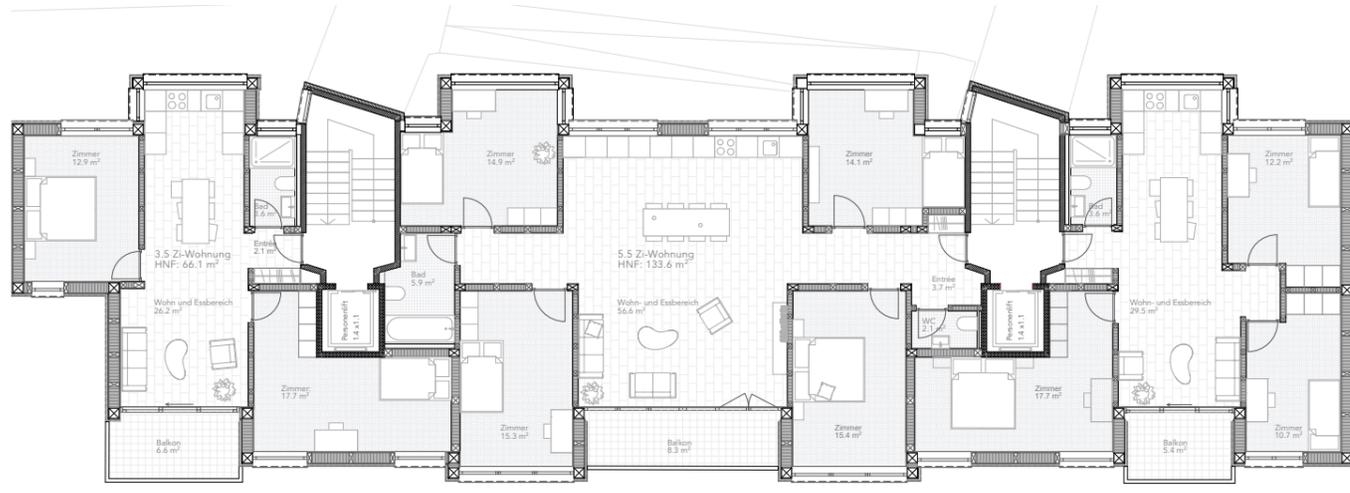
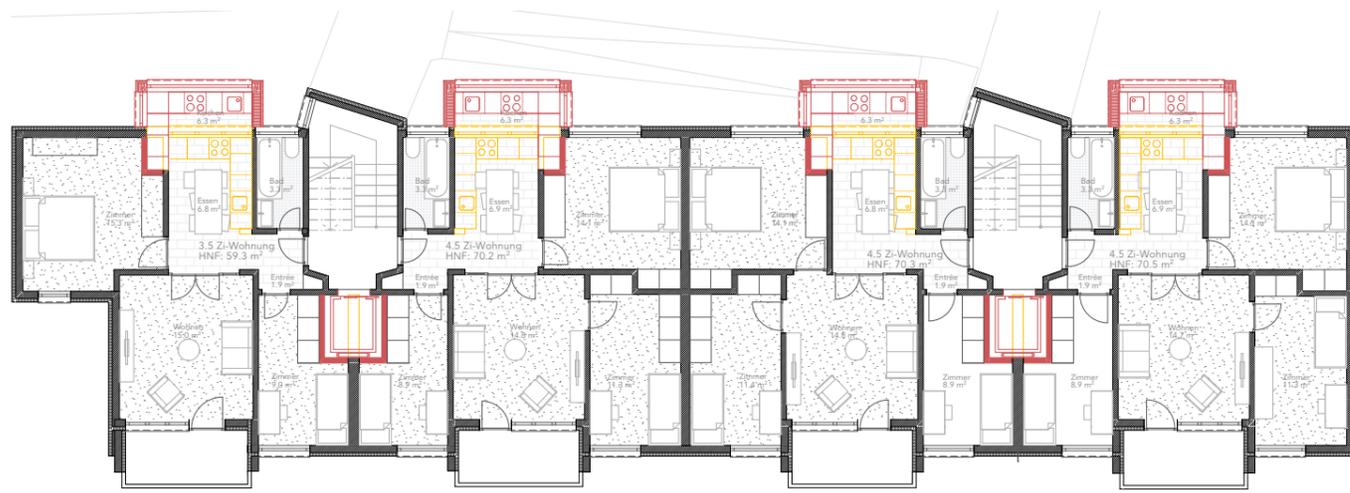
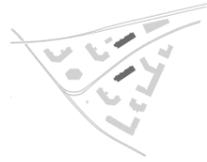


1 10 20



1 5 10





**Bodenaufbau** **322.5 mm**

- Unterlagsboden 50 mm
- Trennlage > 0.2 mm
- Trittschalldämmung 15 mm
- Sandschüttung 40 mm
- Rieselschutz
- Brettstapeldecke 150 mm
- Lattung mit gummierten Abhängebeschlägen 30 mm
- Gipsfaserplatte 15 mm

**Wandaufbau** **419.5 mm**

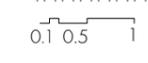
- Gipskarton 12.5 mm
- OBS Holzwerkstoffplatte 22 mm
- Rahmen/Wärmedämmung 280 mm
- Weichfaserplatte 25 mm
- Lattung und Lüftungsspalt 50 mm
- Vertikalschalung Holz 30 mm

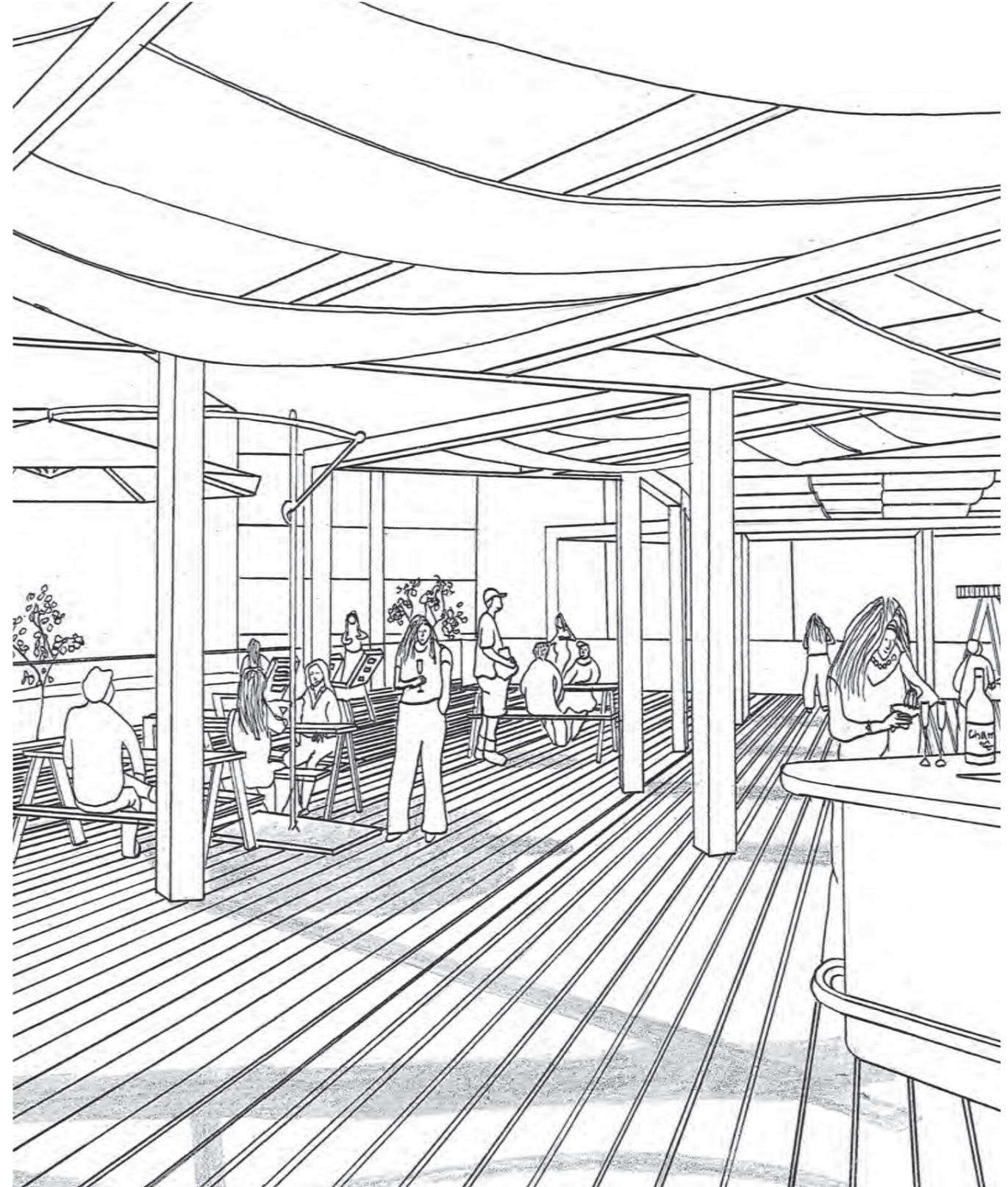
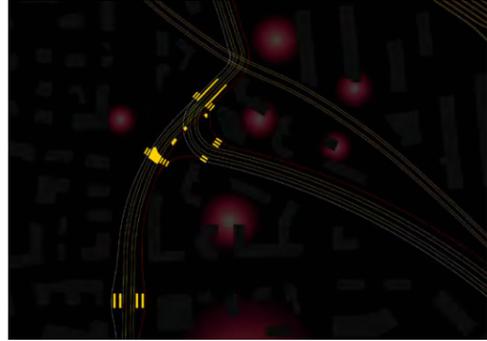
**Bodenaufbau** **290 mm**

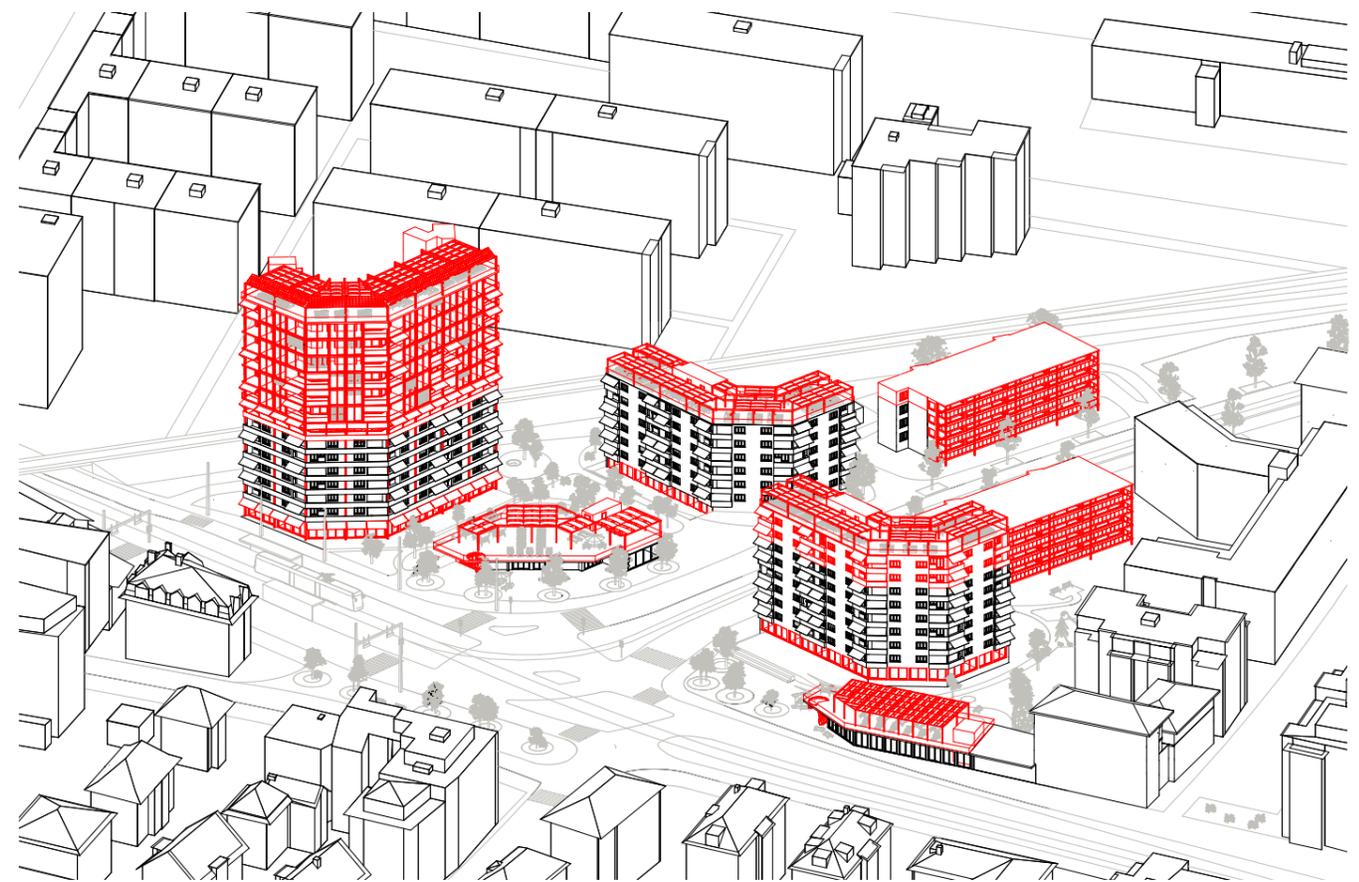
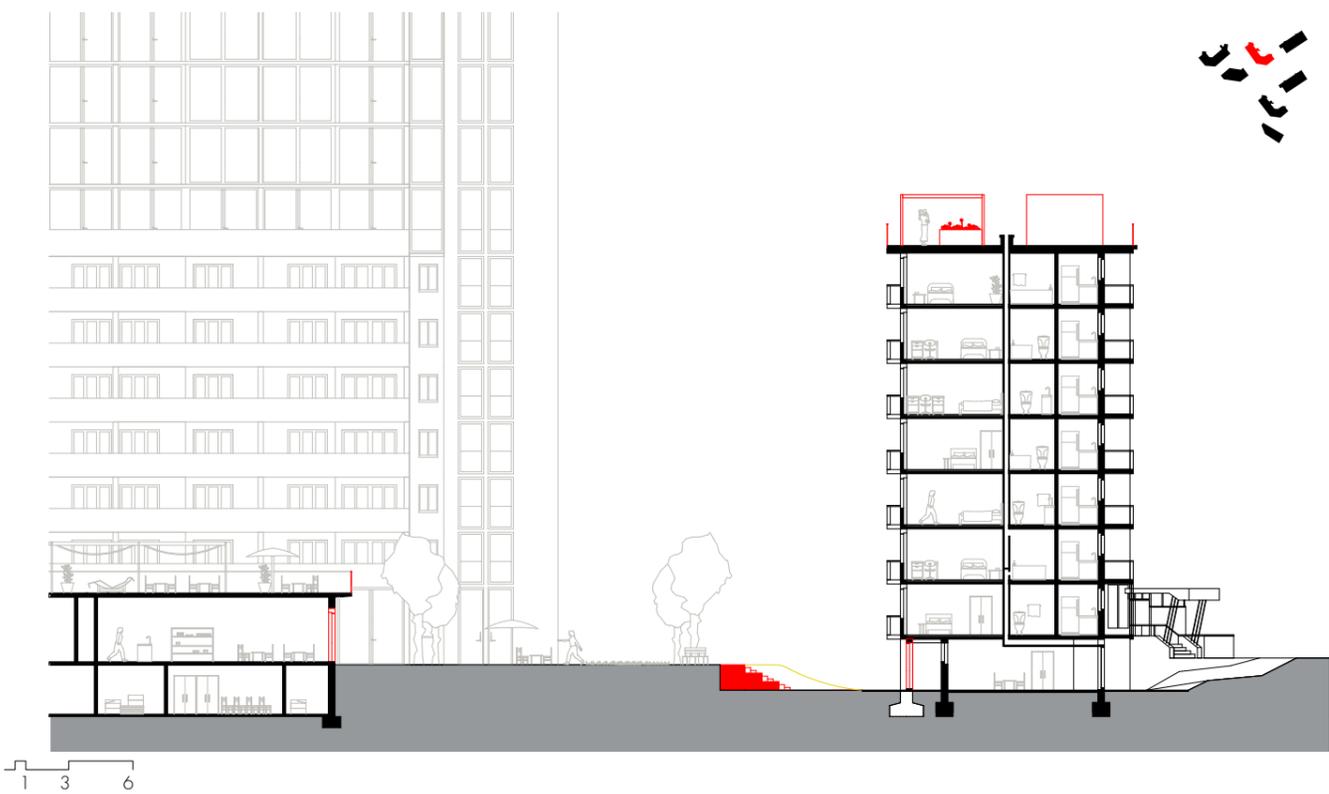
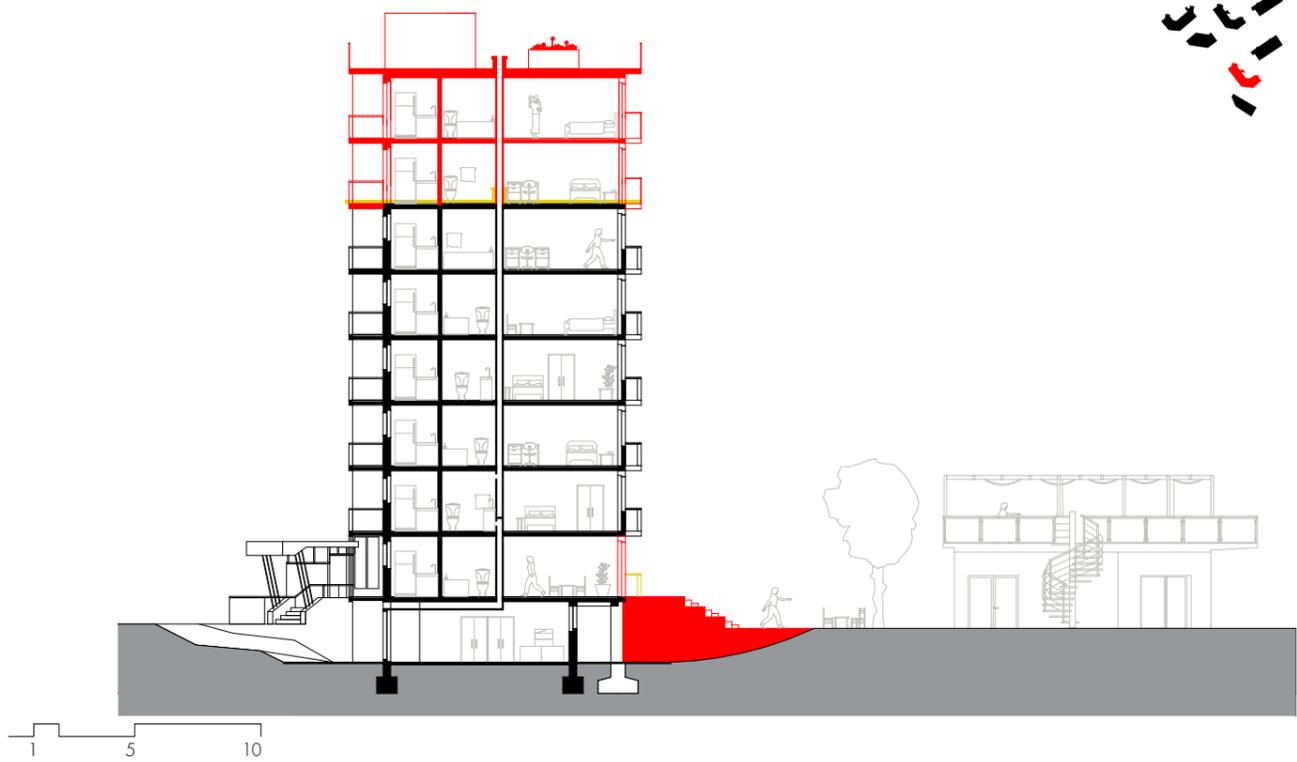
- Unterlagsboden 15 mm
- Trennlage > 0.2 mm
- Trittschalldämmung 15 mm
- Sandschüttung 40 mm
- Rieselschutz
- Brettstapeldecke 110 mm
- Lattung mit gummierten Abhängebeschlägen 77.5 mm
- Gipsfaserplatte 15 mm

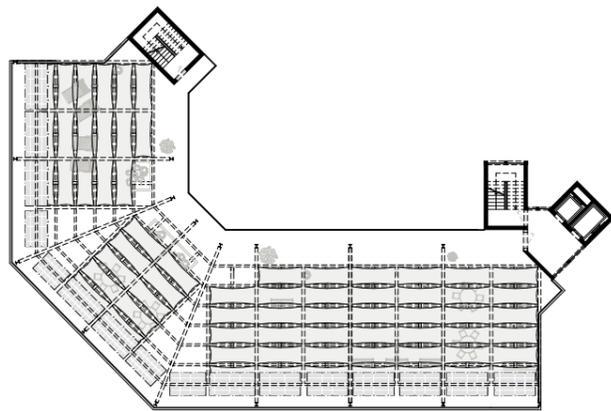
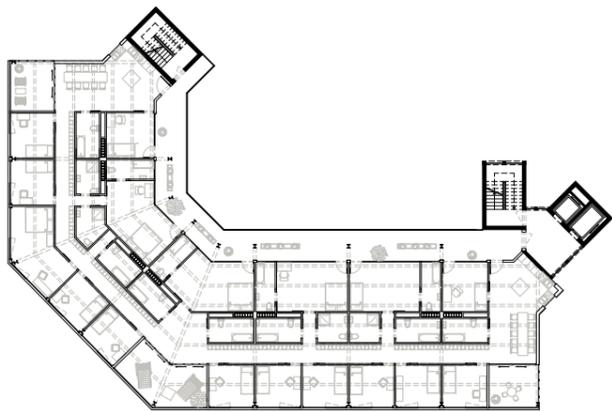
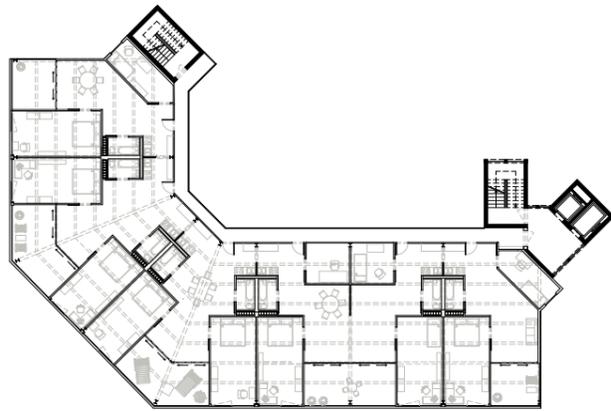
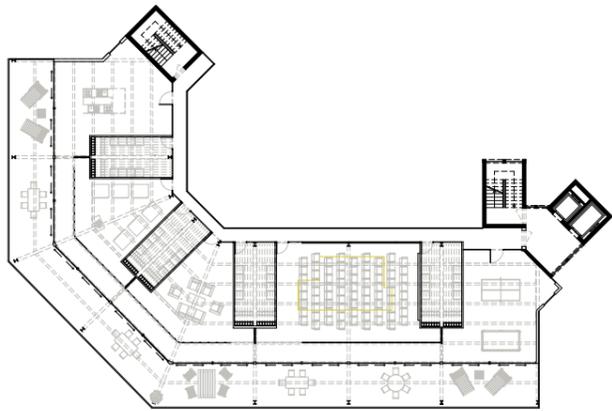
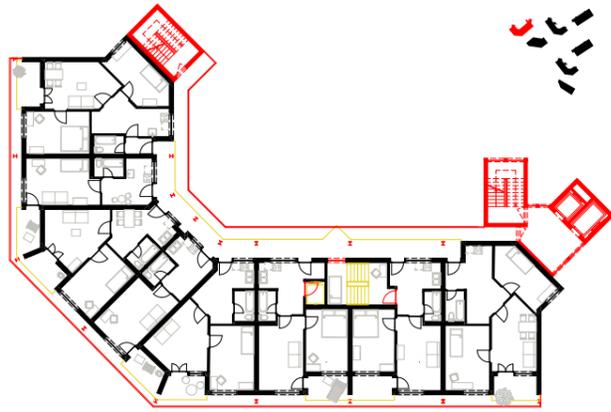
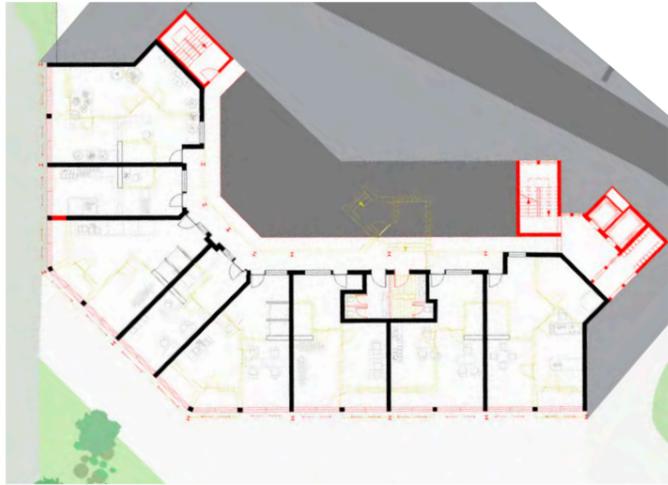
**Wandaufbau** **319.5 mm**

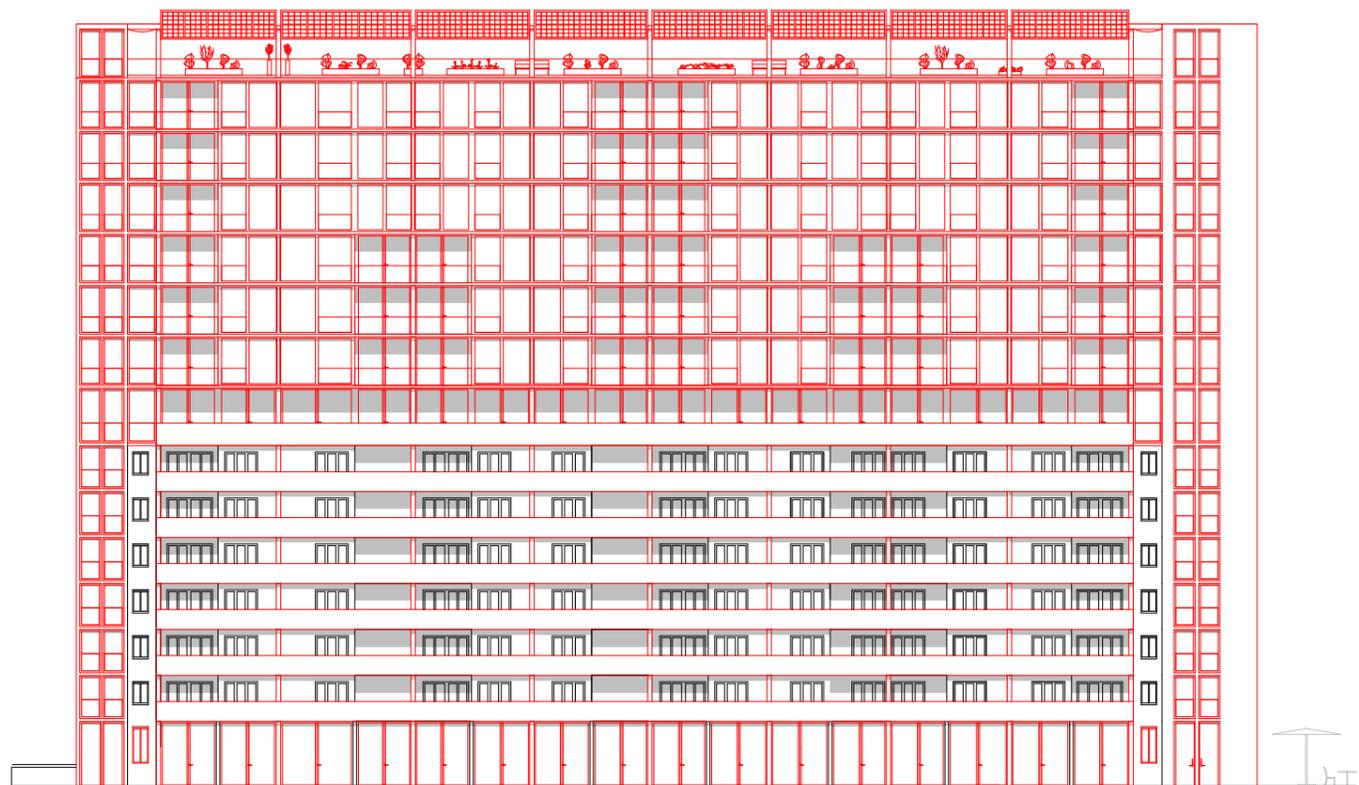
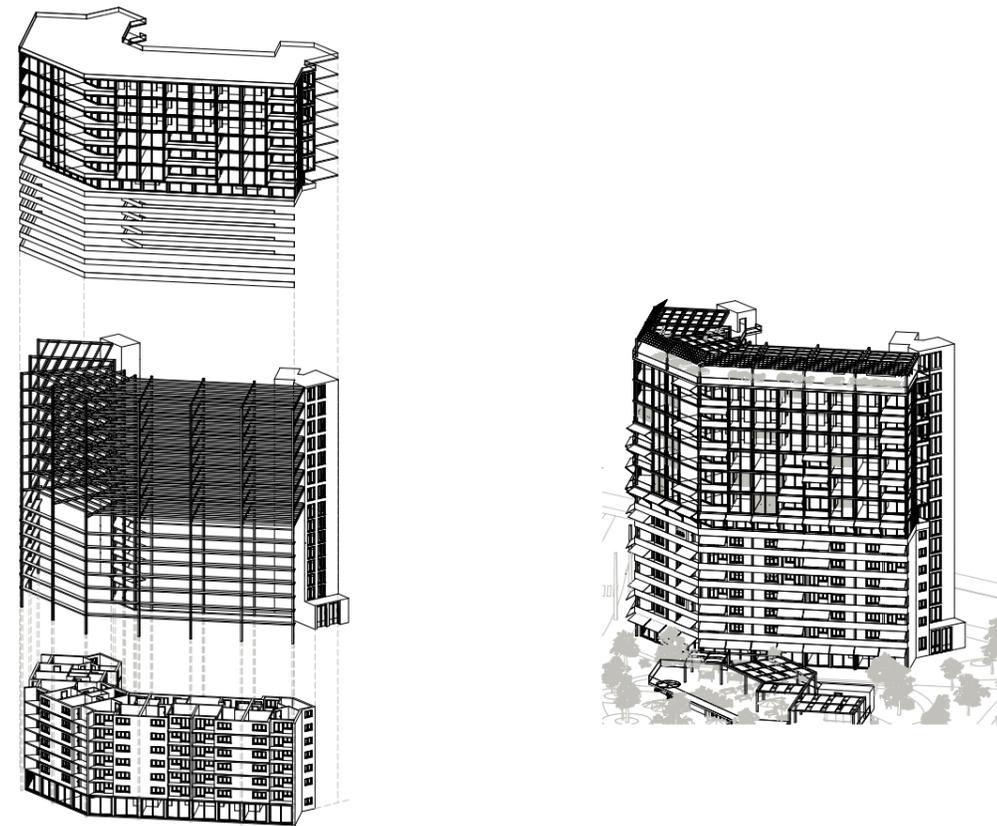
- Gipskarton 12.5 mm
- OBS Holzwerkstoffplatte 12 mm
- Rahmen/Wärmedämmung 200 mm
- Weichfaserplatte 15 mm
- Lattung und Lüftungsspalt 50 mm
- Vertikalschalung Holz 30 mm



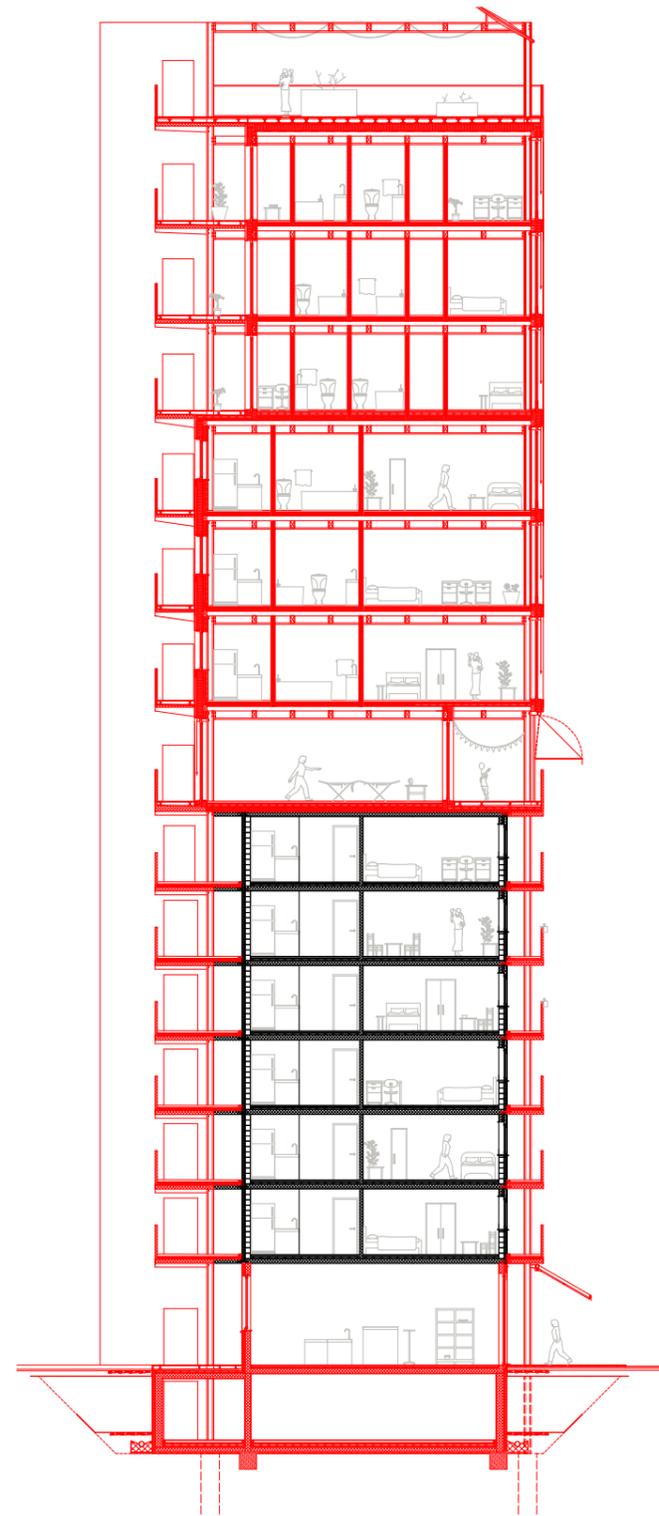








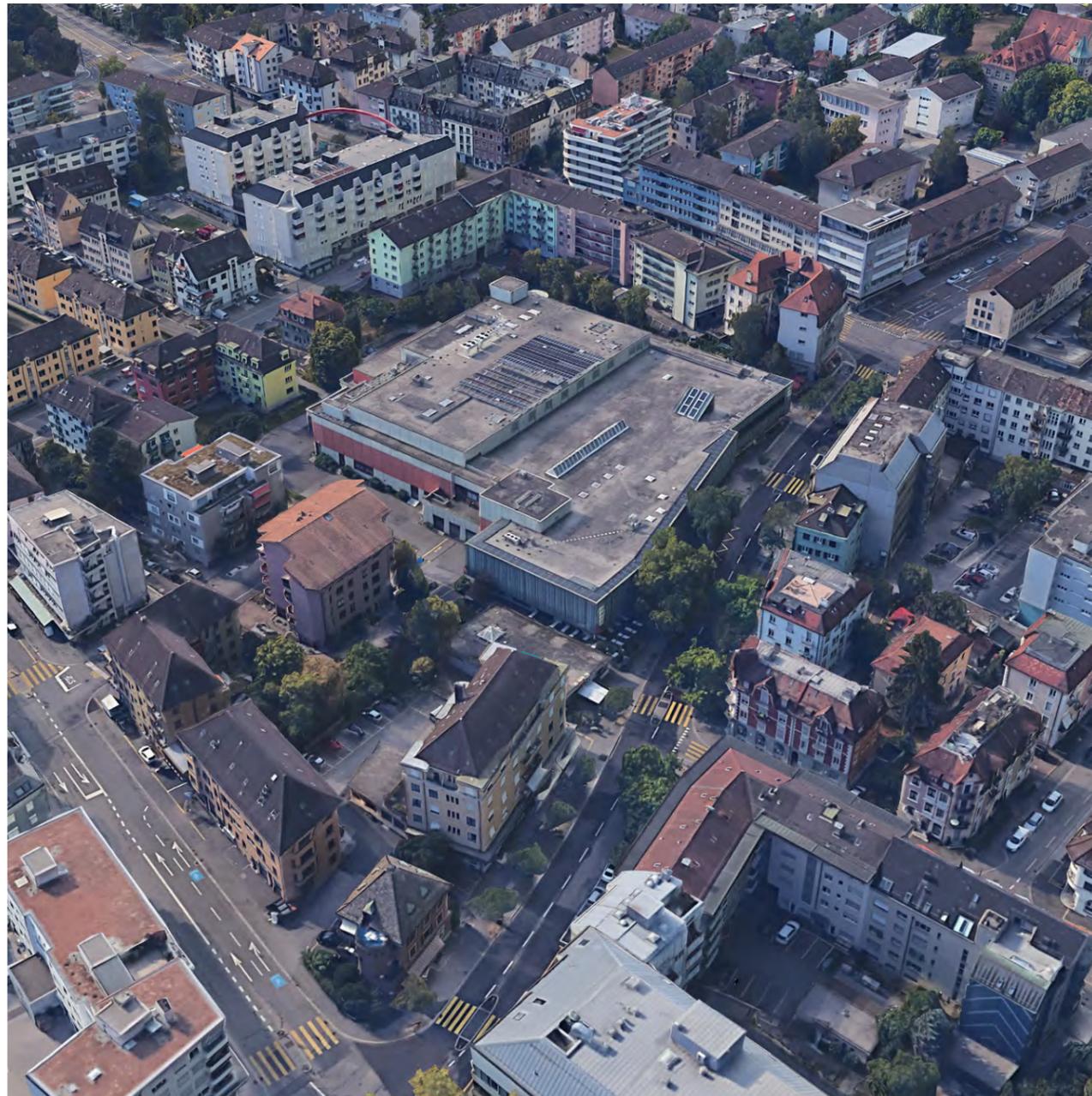
1 5 10



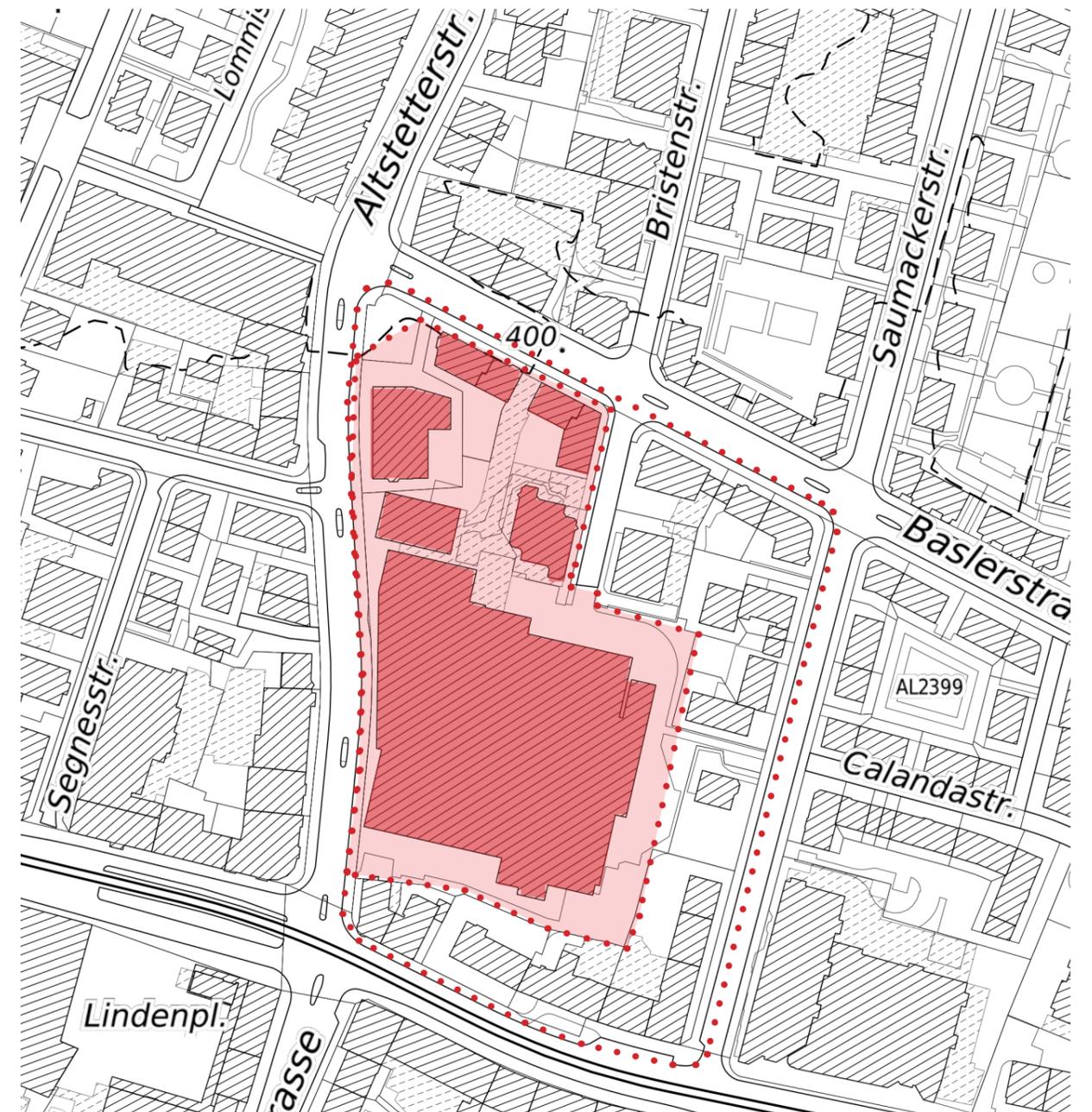
1 2 4



# 02 NEUMARKT ALTSTETTEN

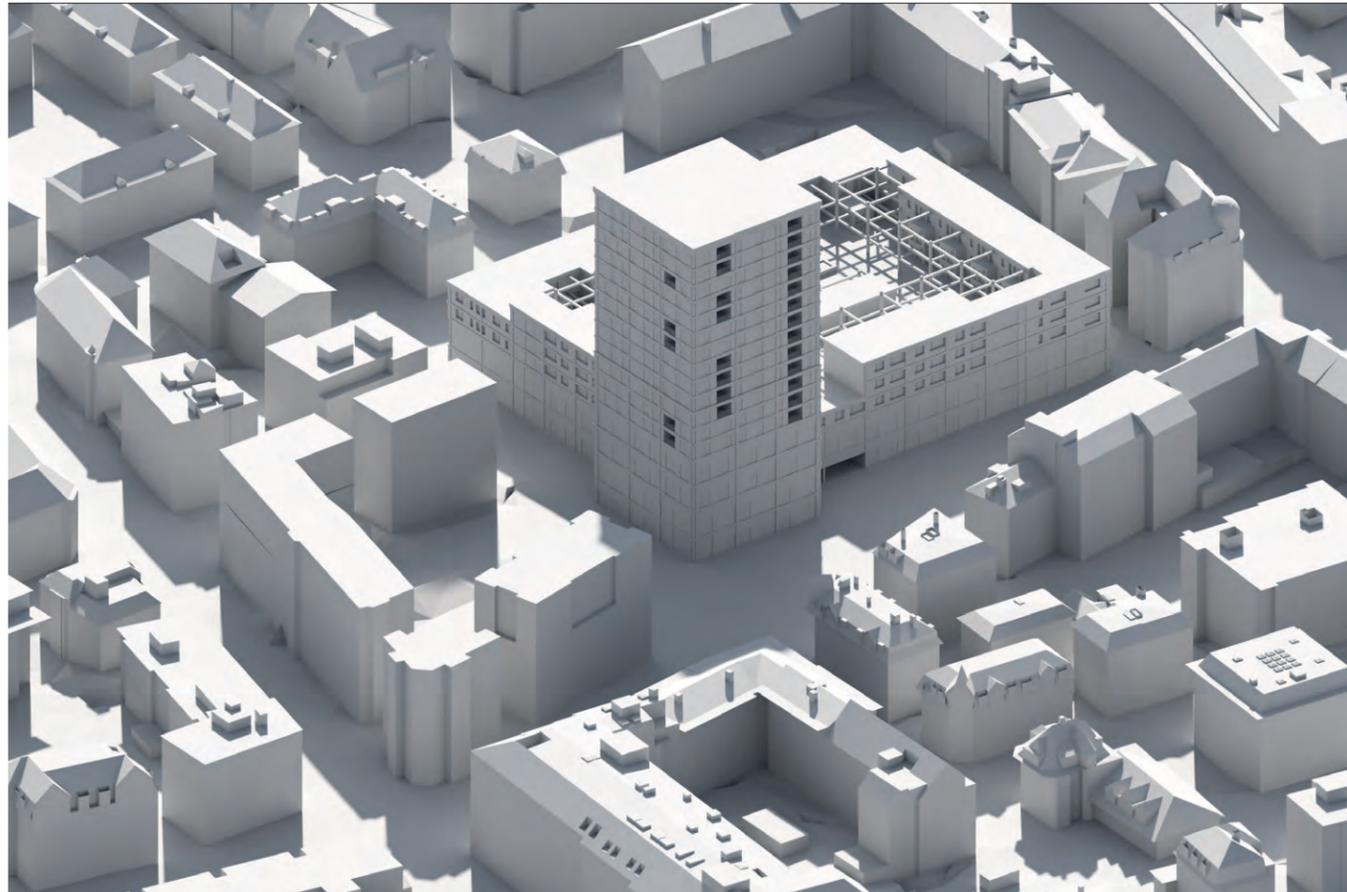
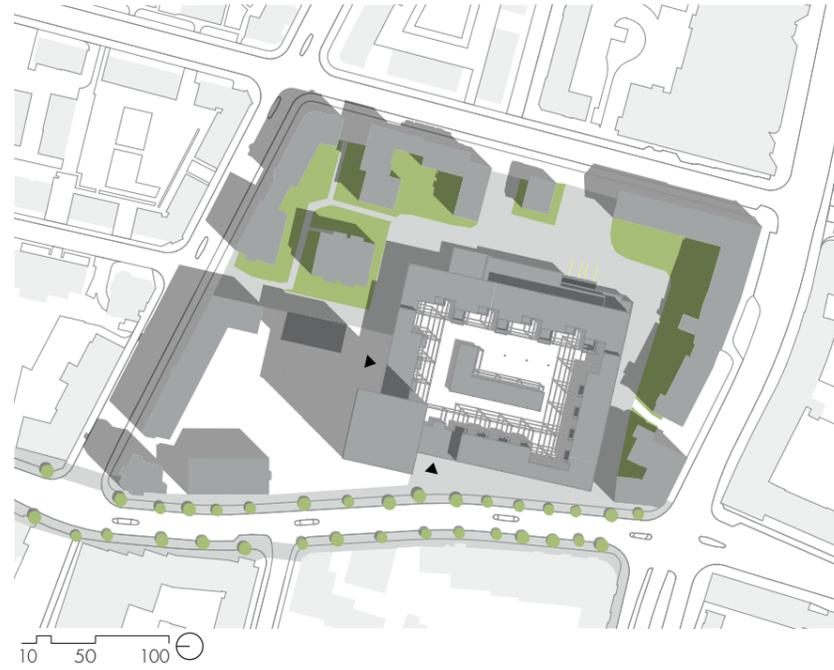
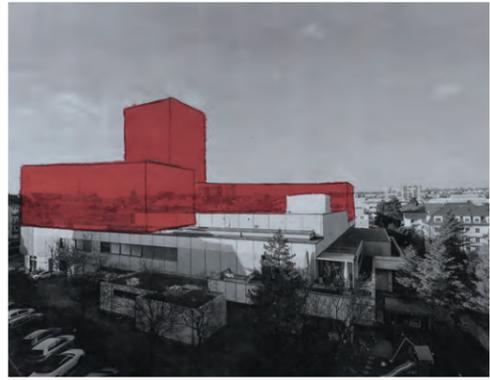


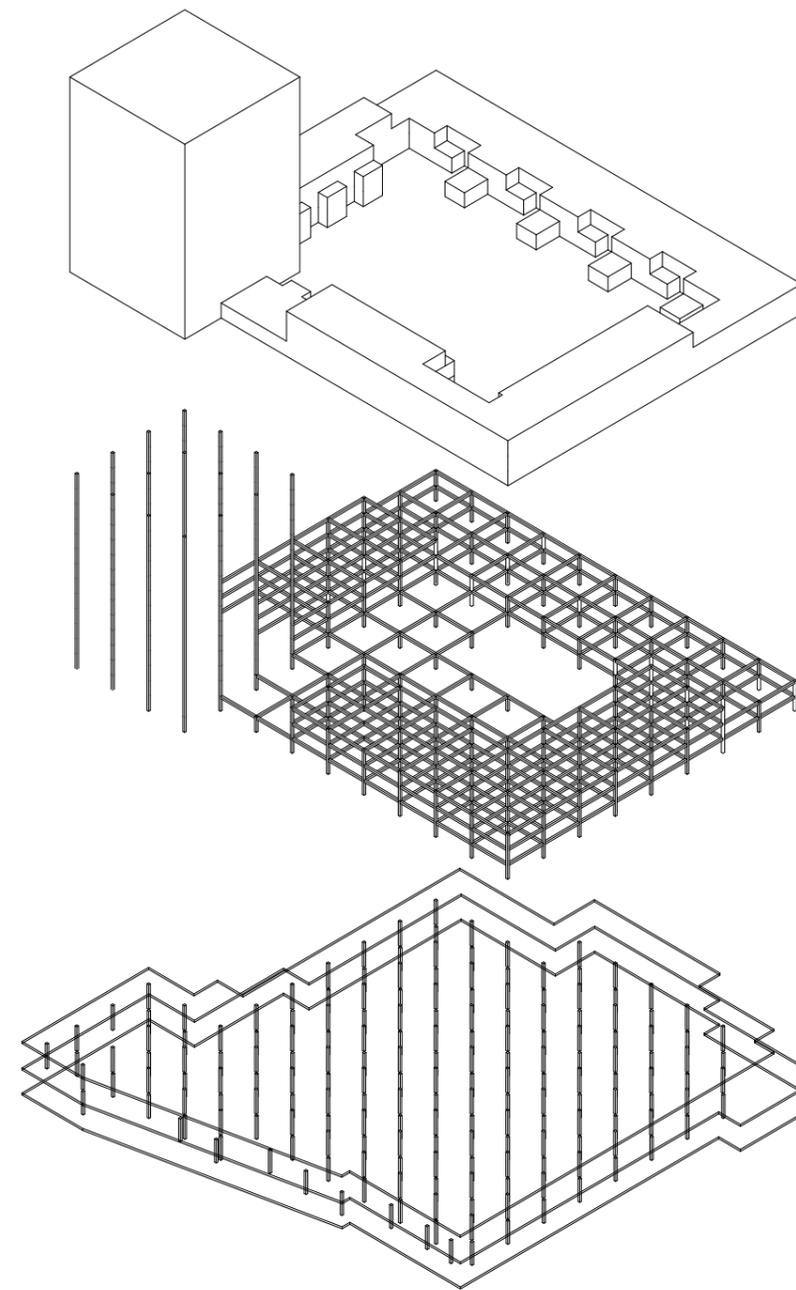
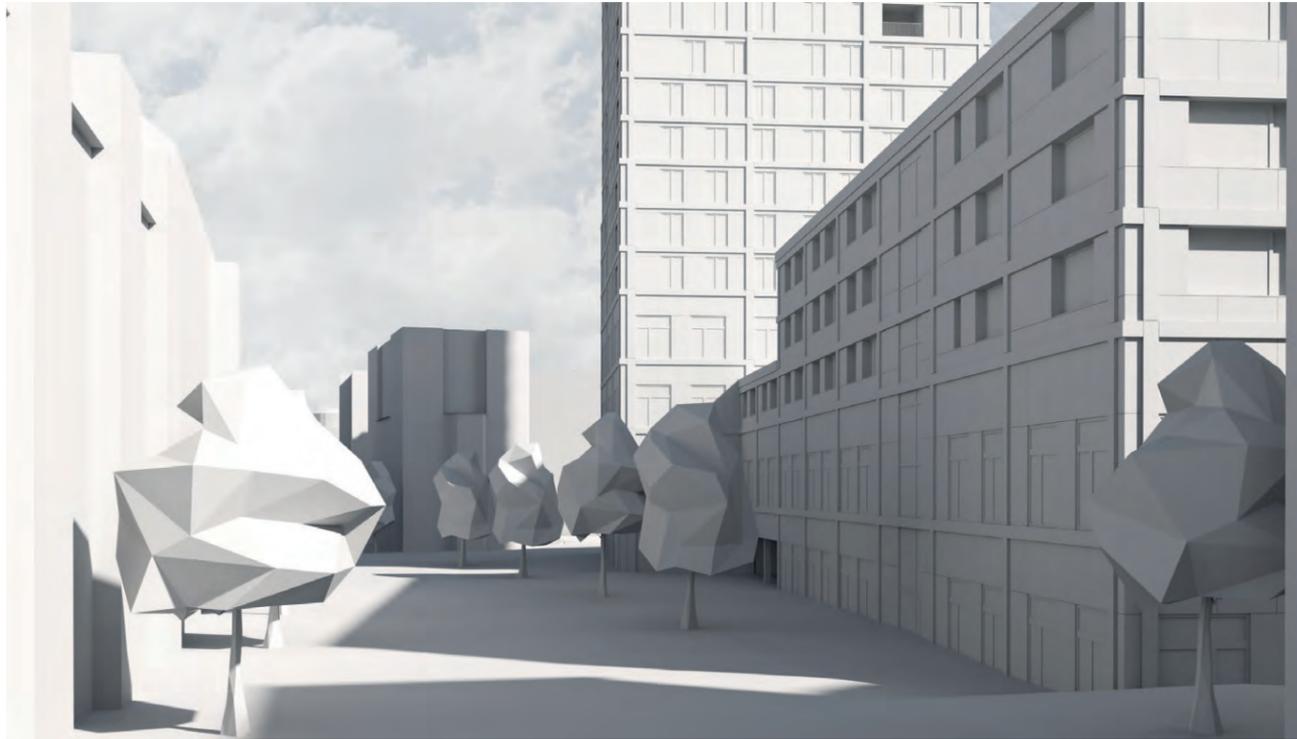
Luftbild



M 1:2000

STUDENT\*INNEN: ANDRIN ZUMSTEG, TOLGA TOMEL  
BAUPLATZ: NEUMARKT

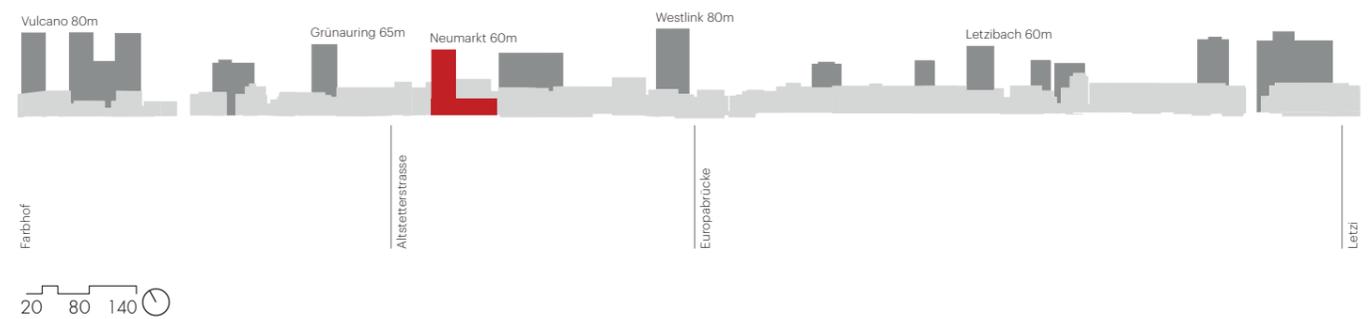


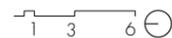
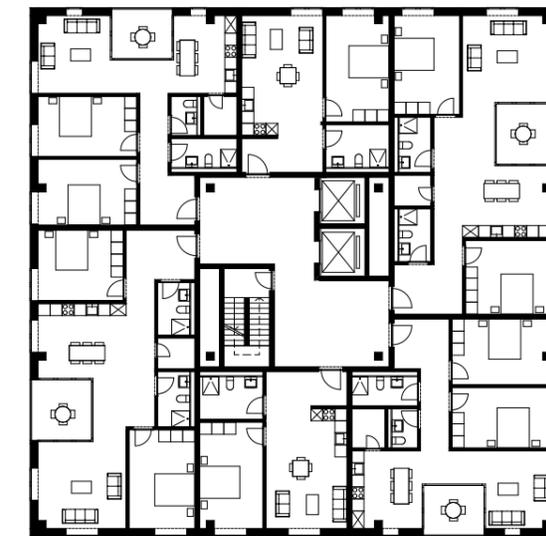
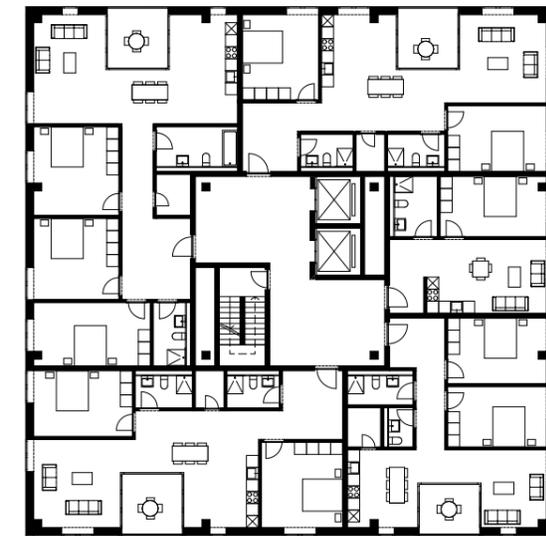
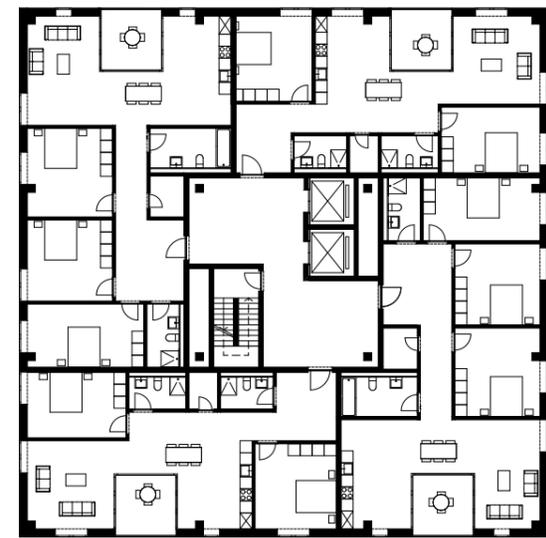
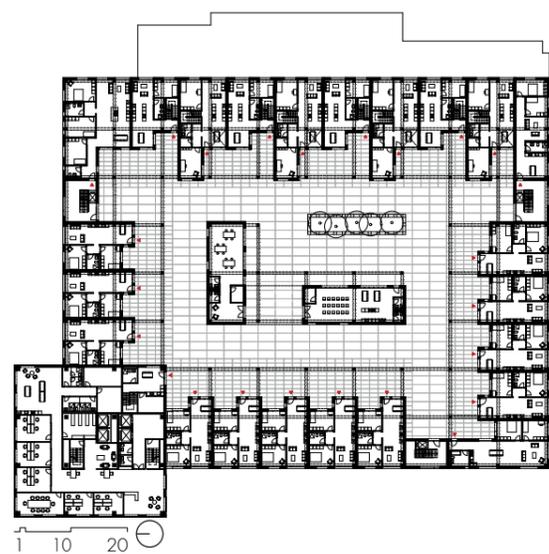
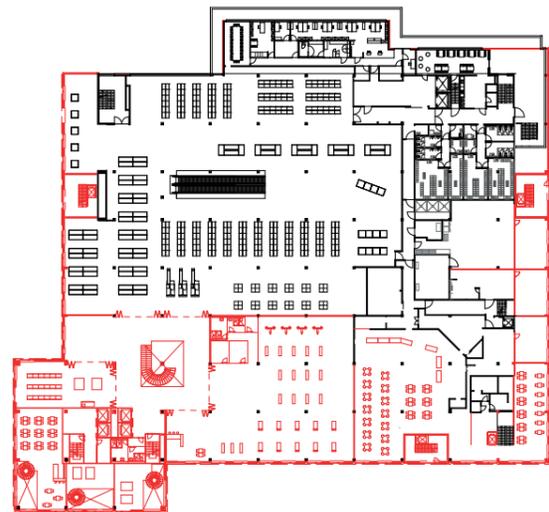
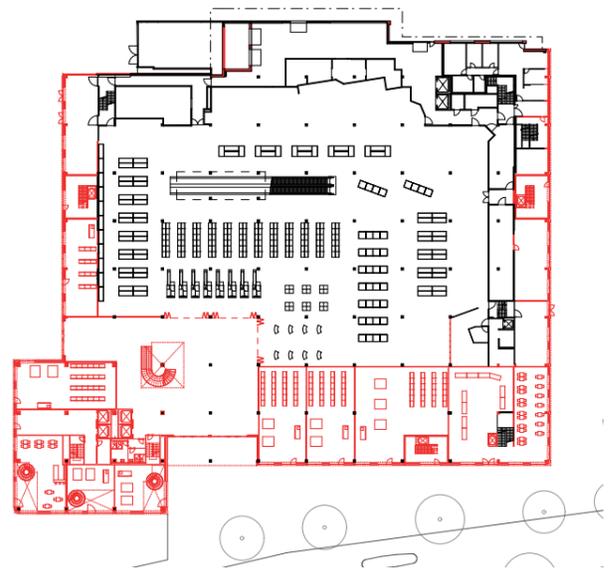
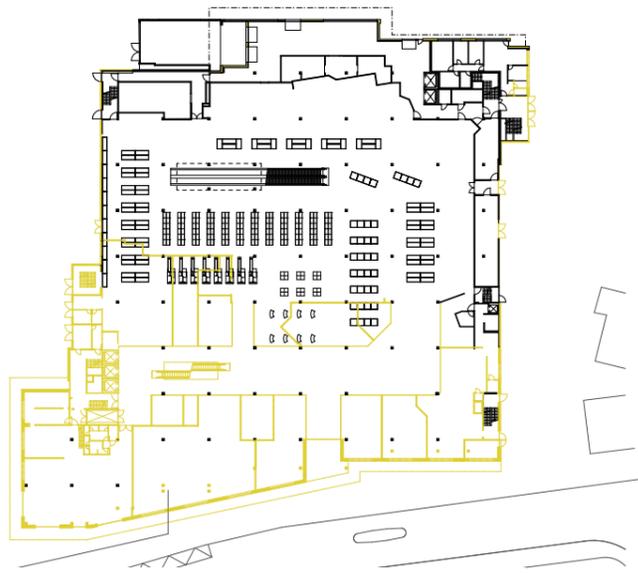


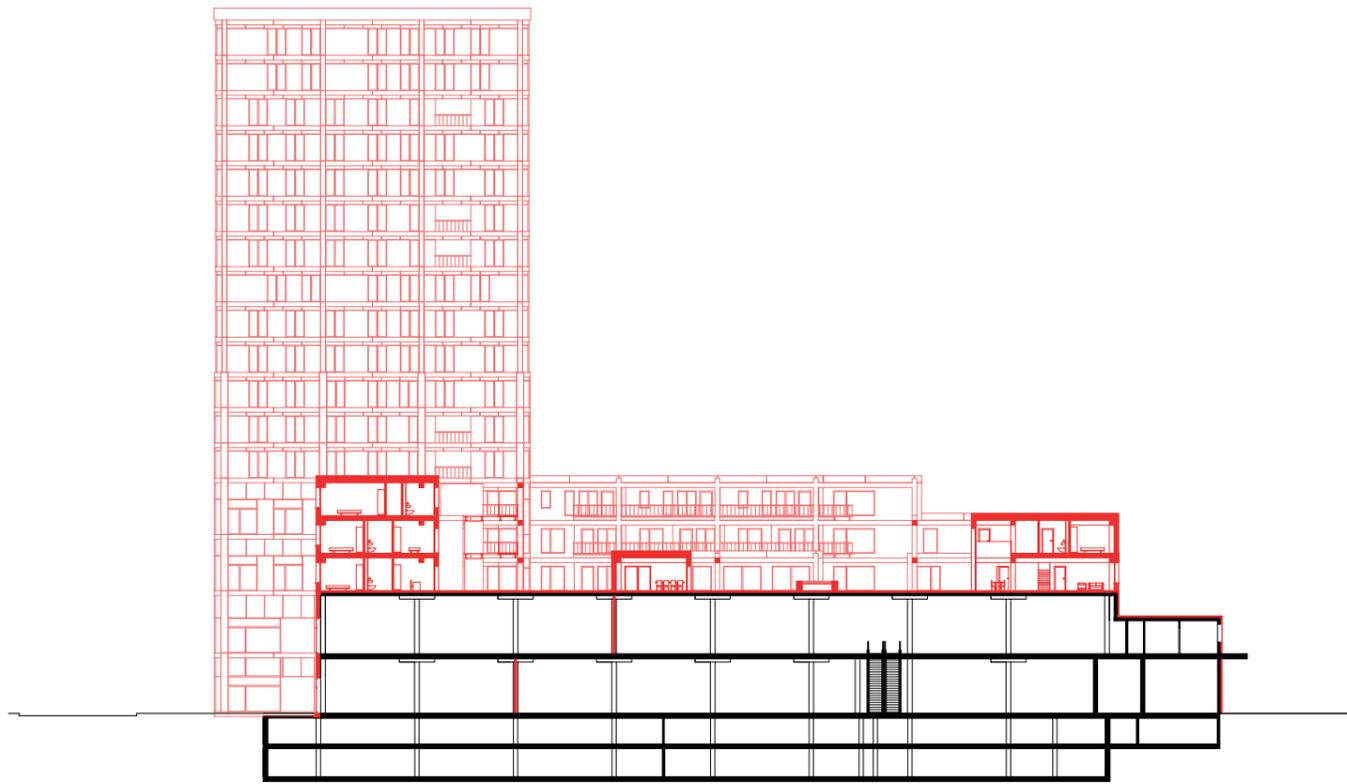
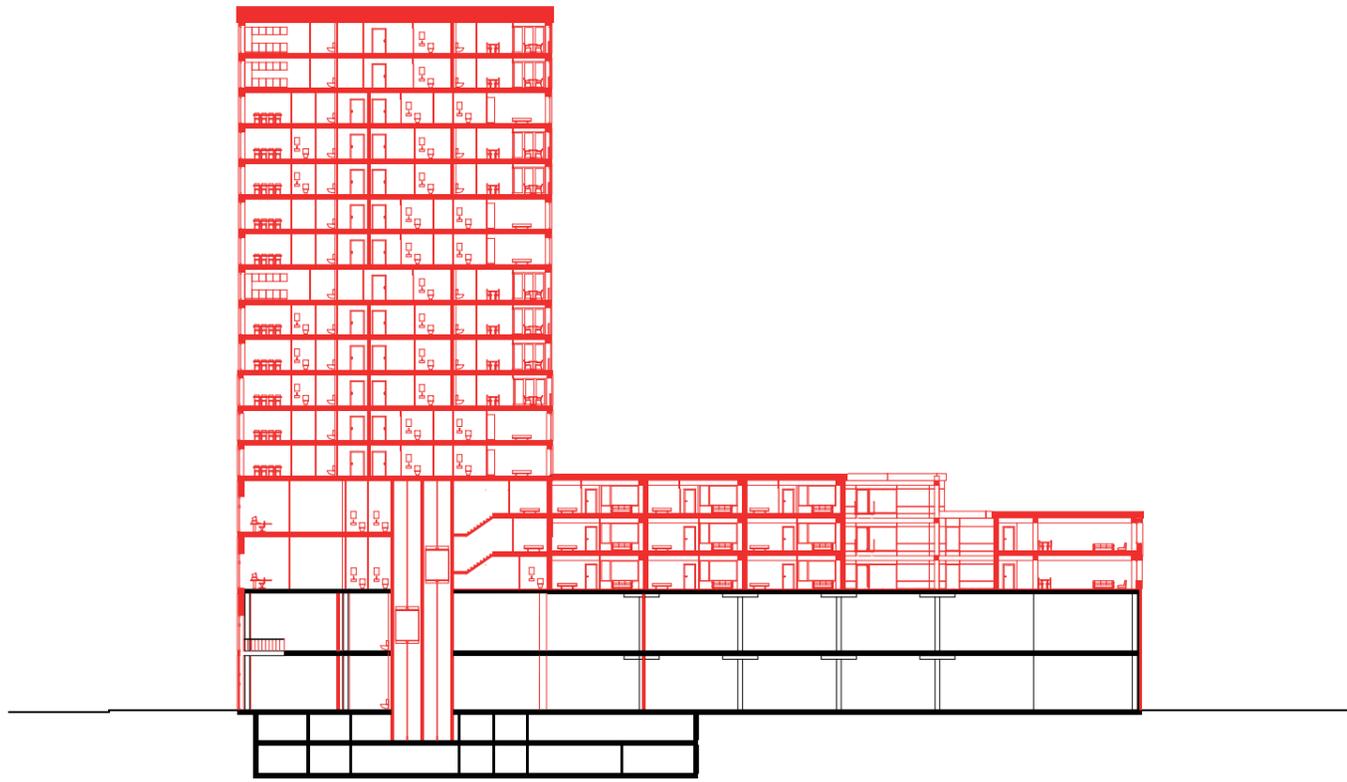
Volumensetzung

Strukturerweiterung

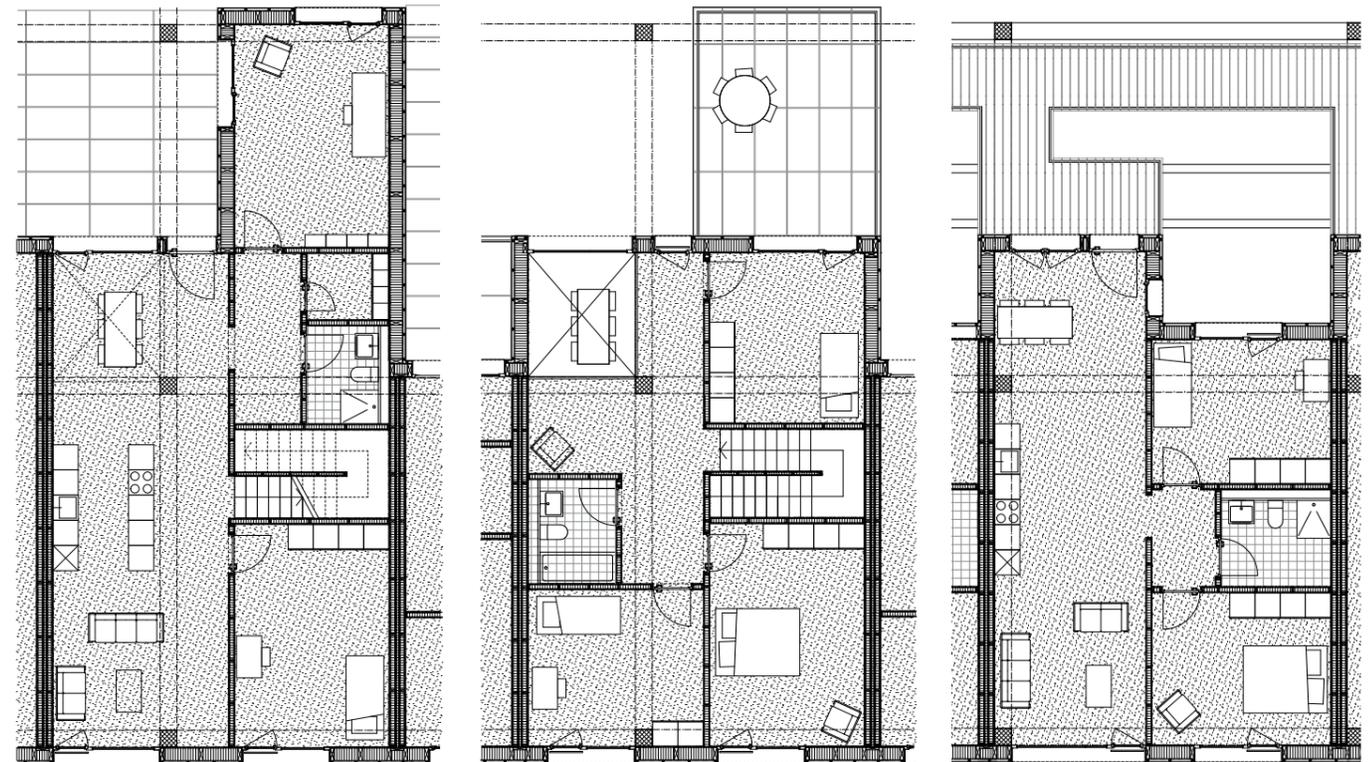
Bestand



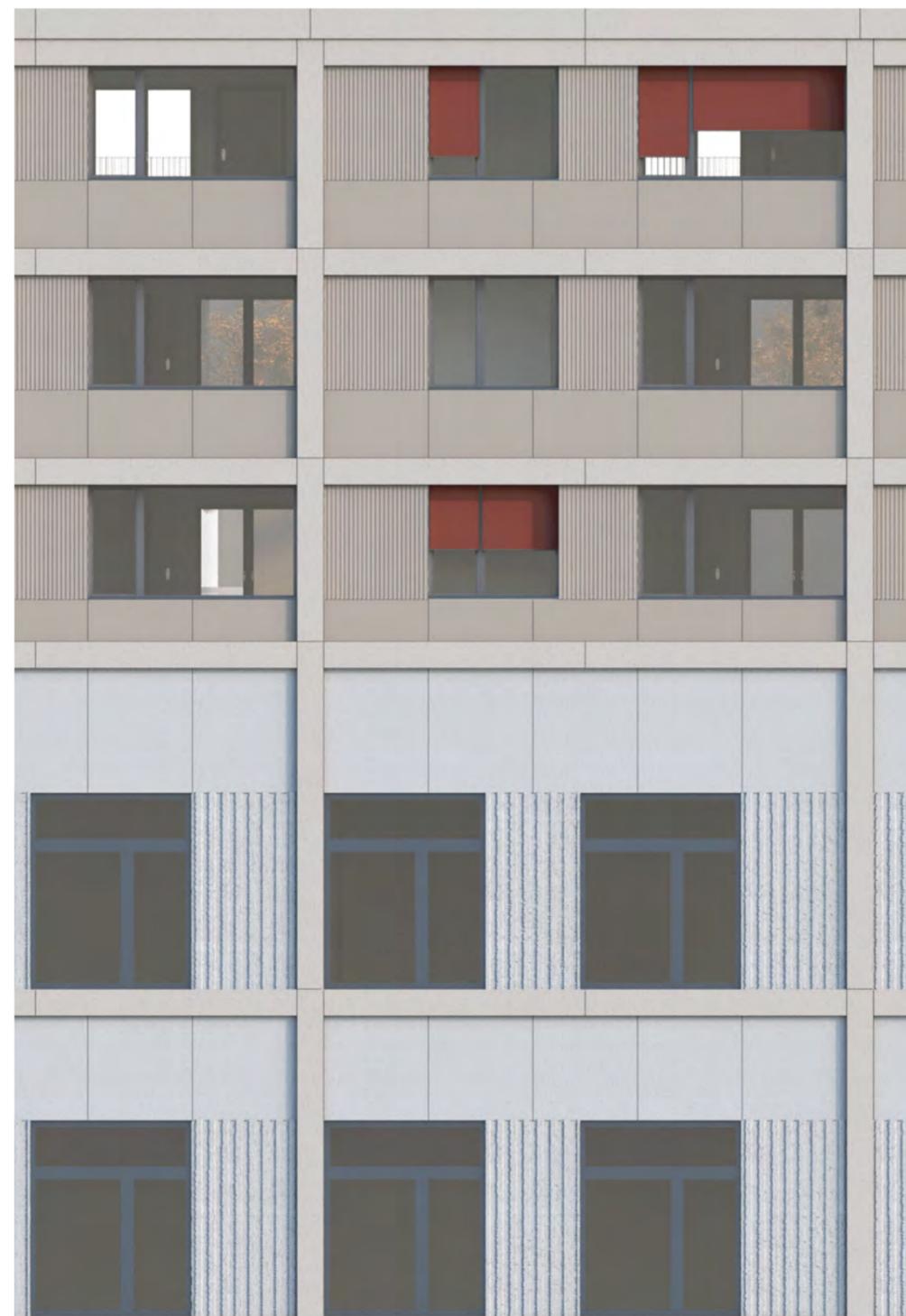
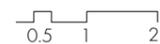
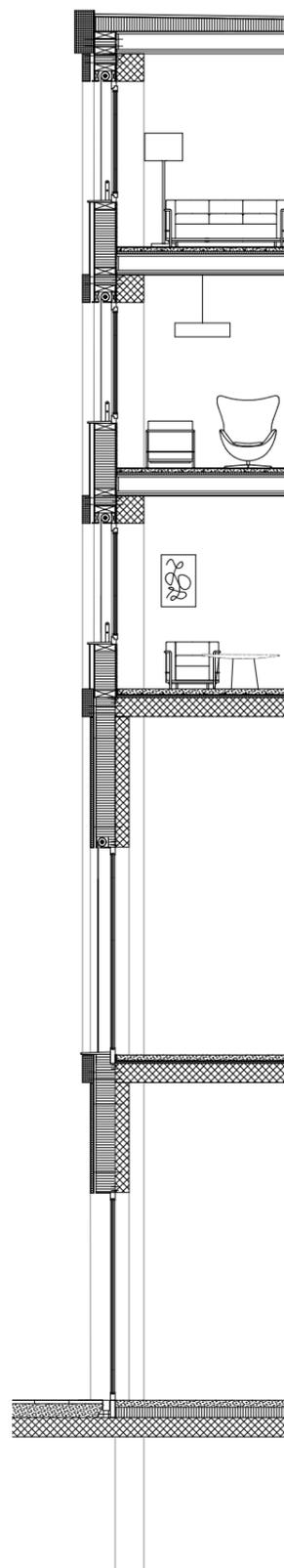
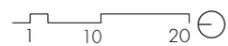
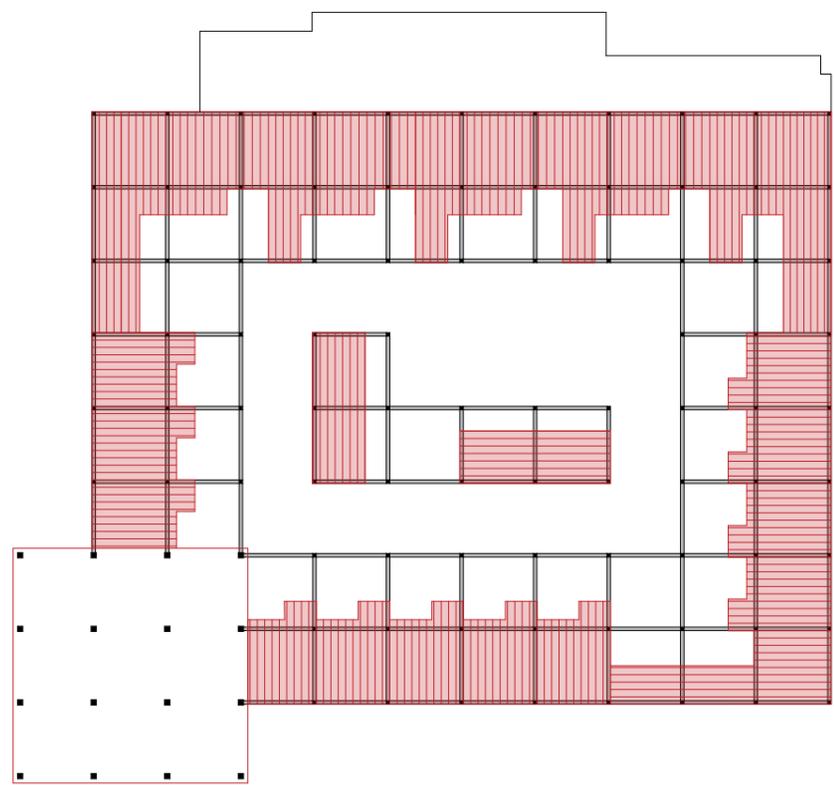


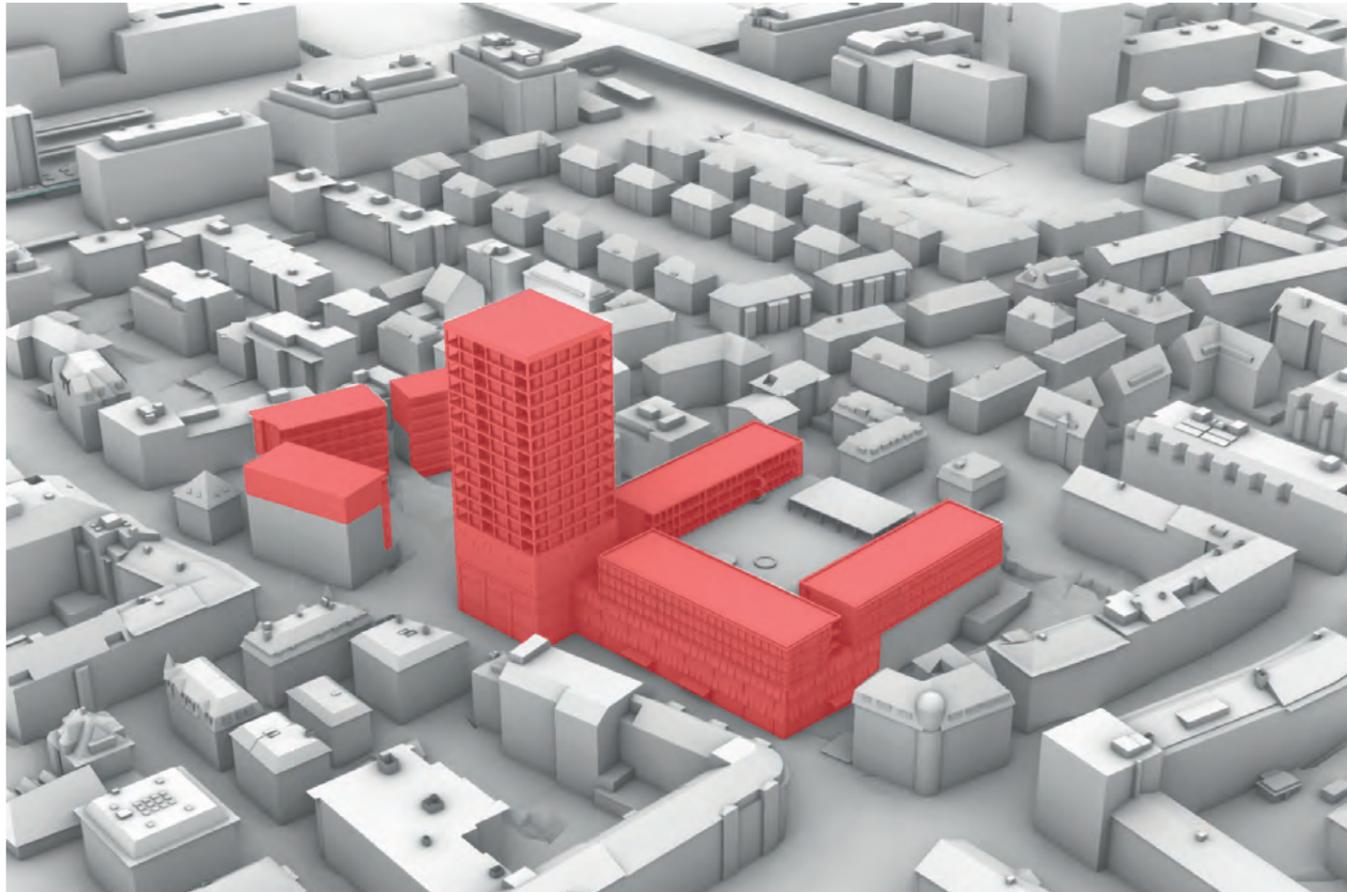
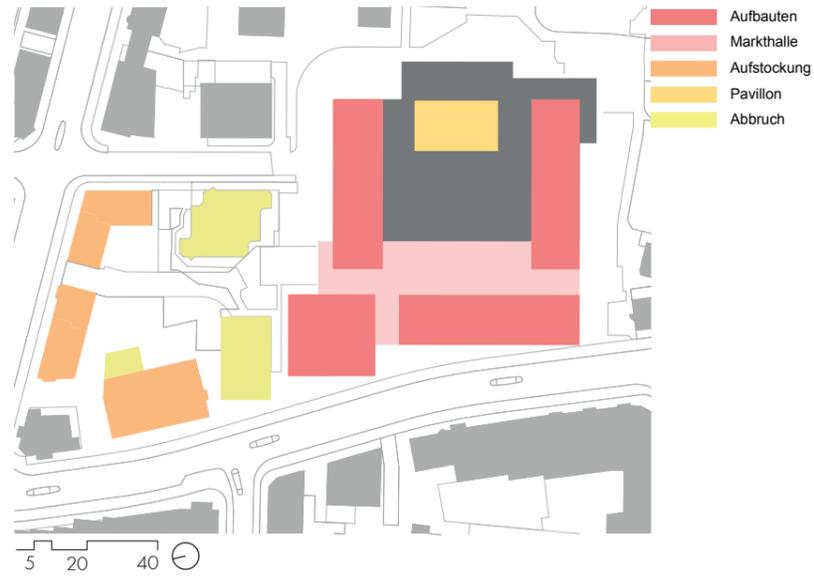
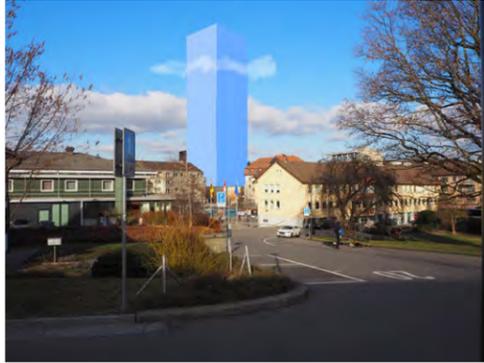


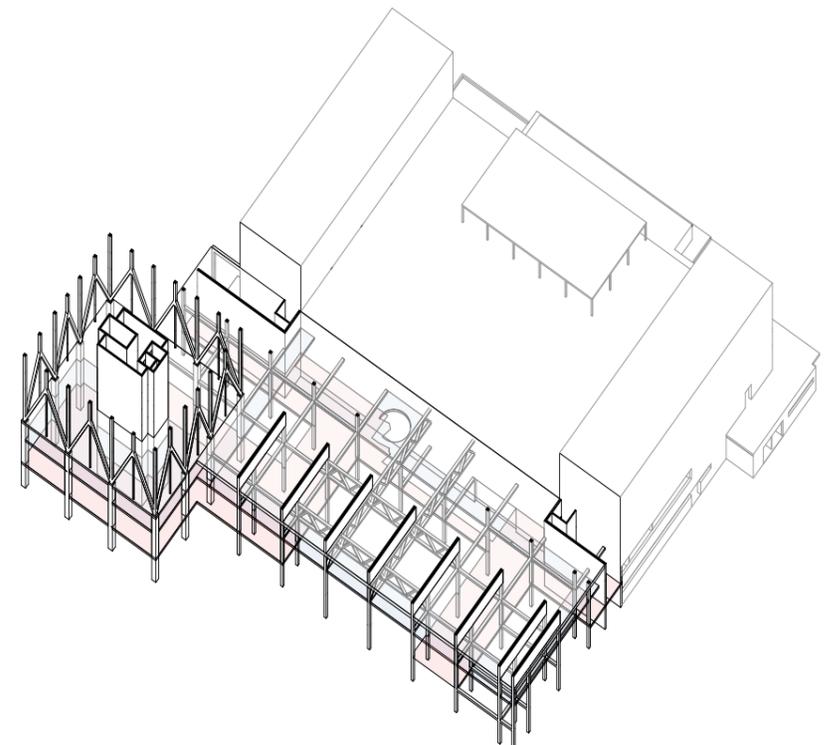
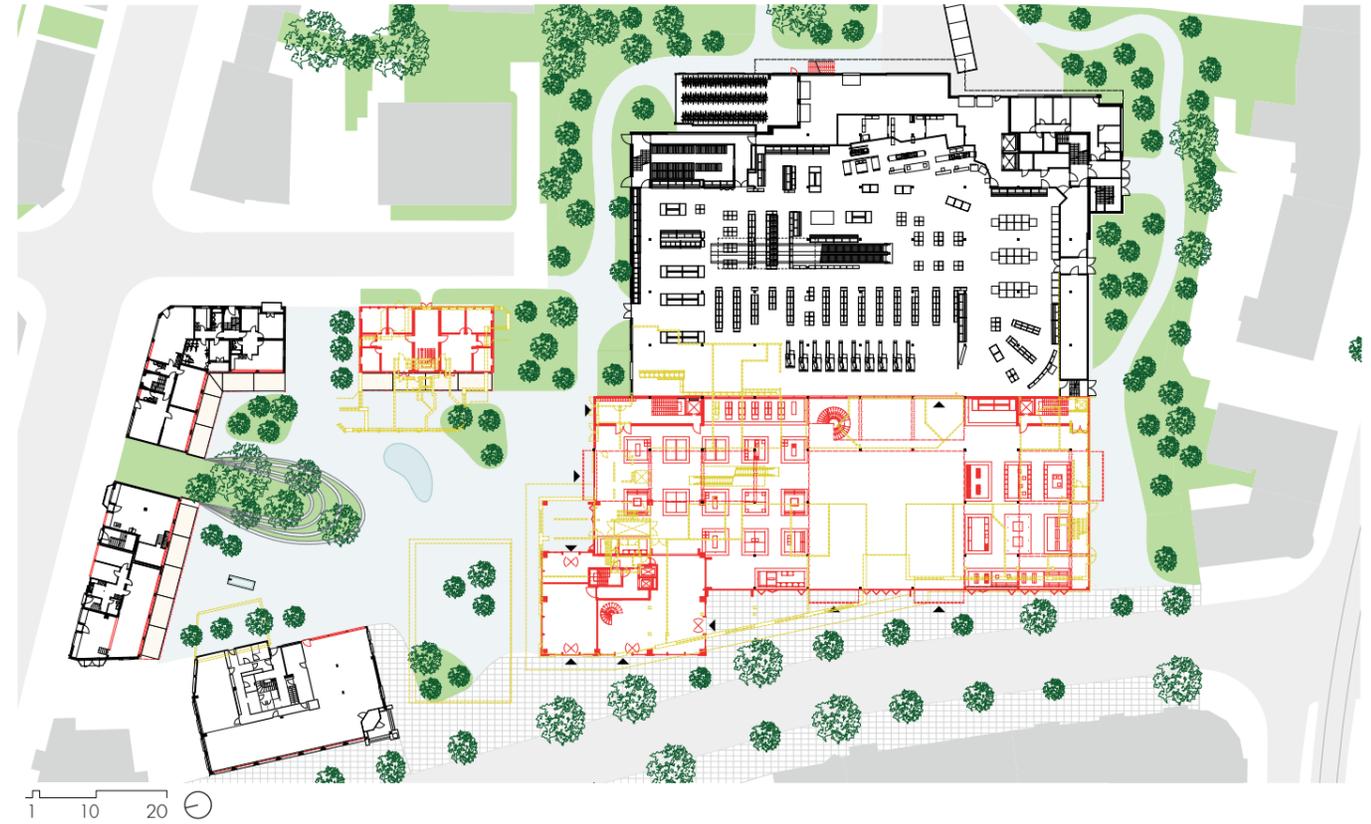
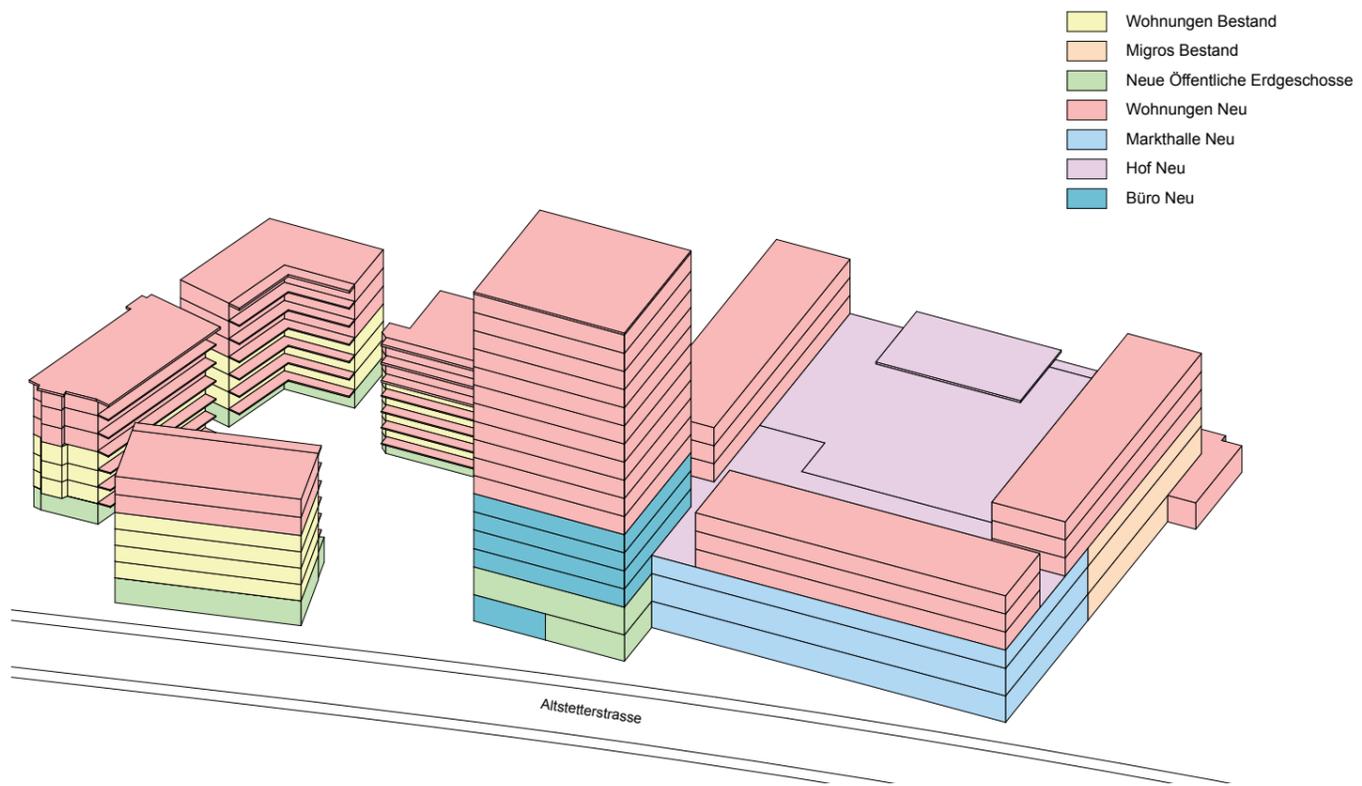
1 5 10

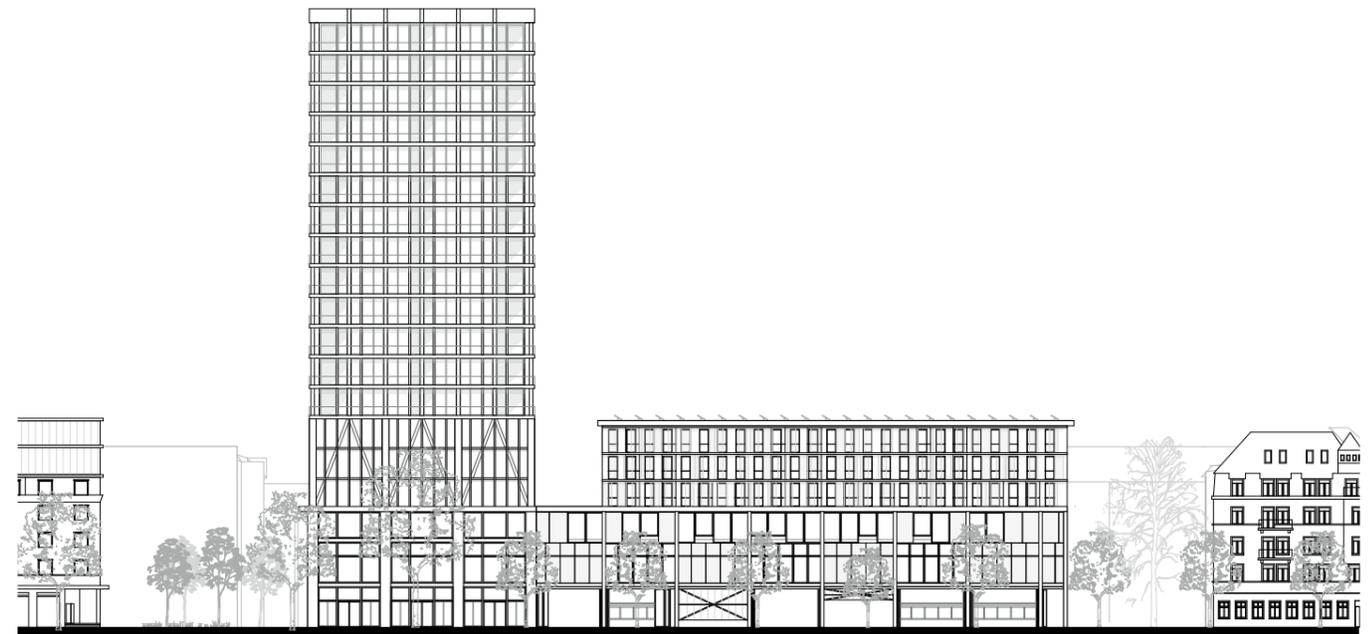
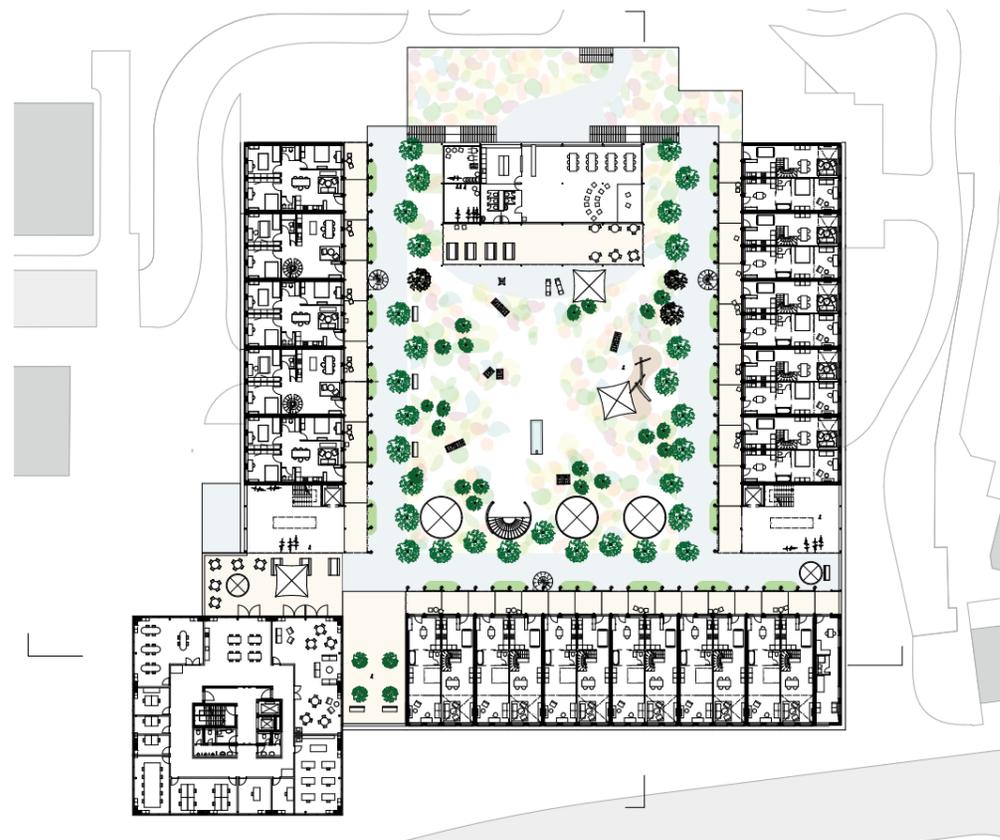
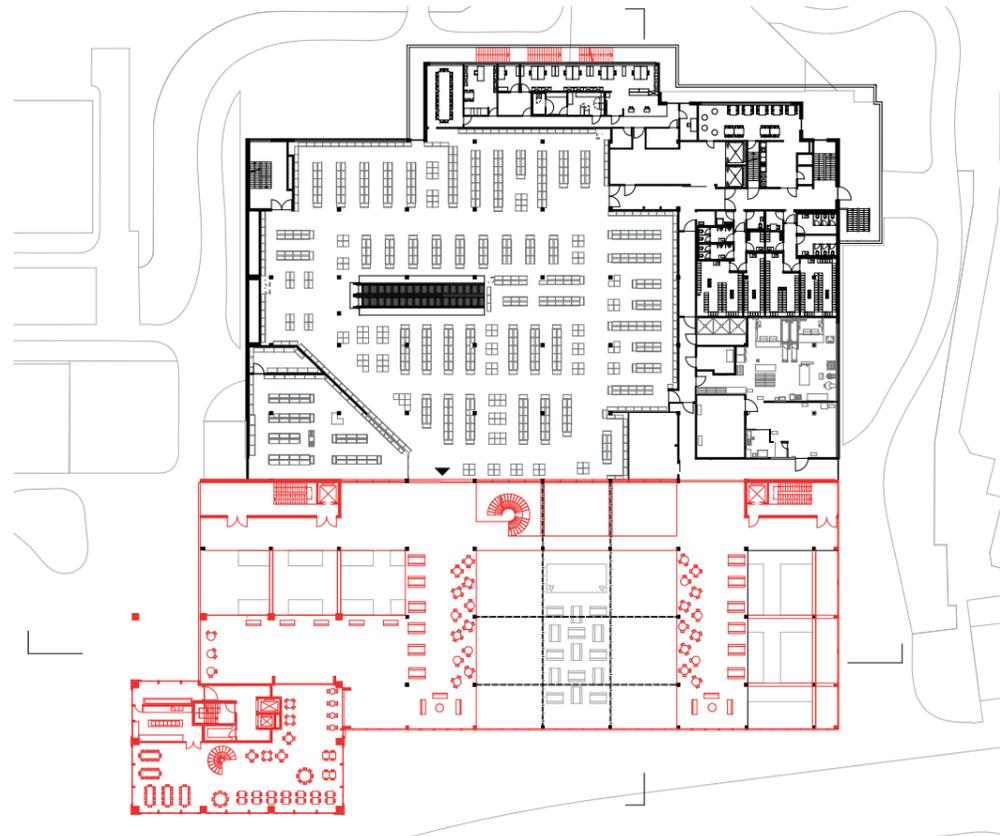


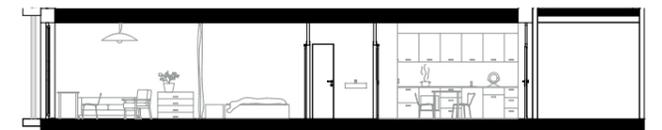
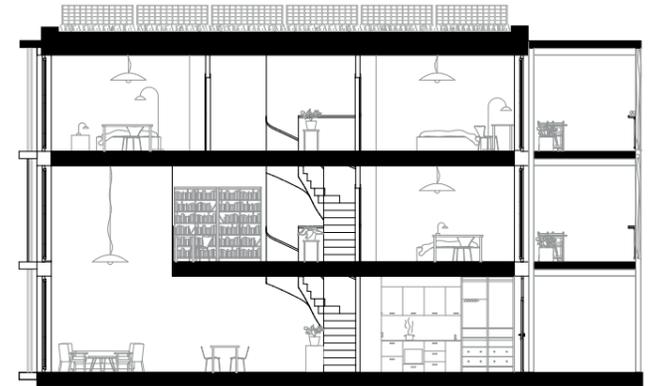
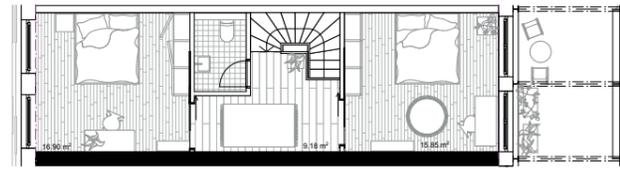
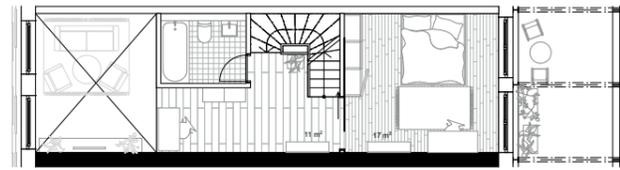
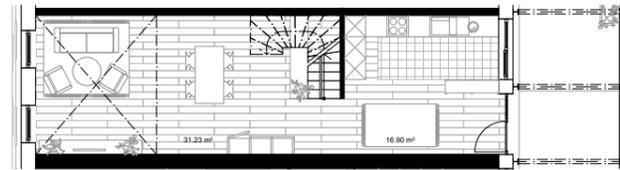
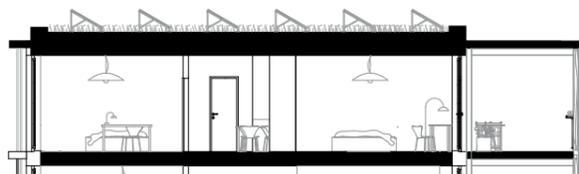
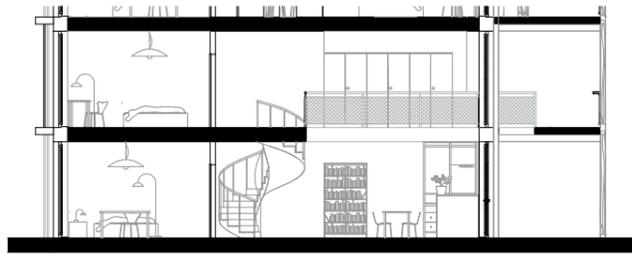
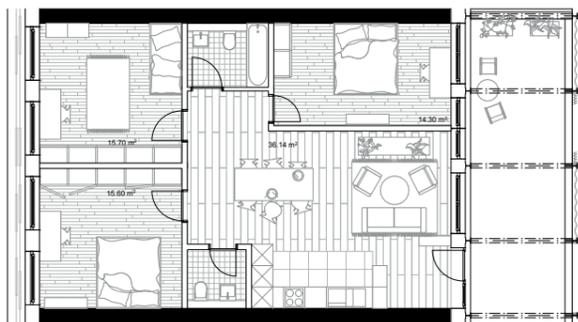
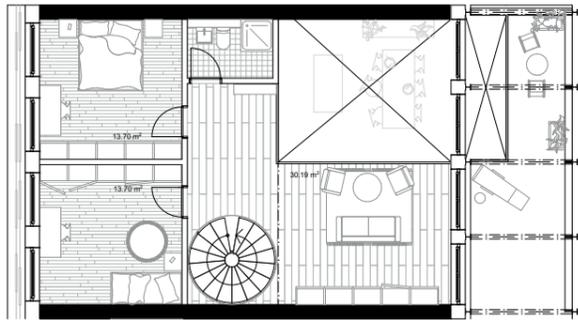
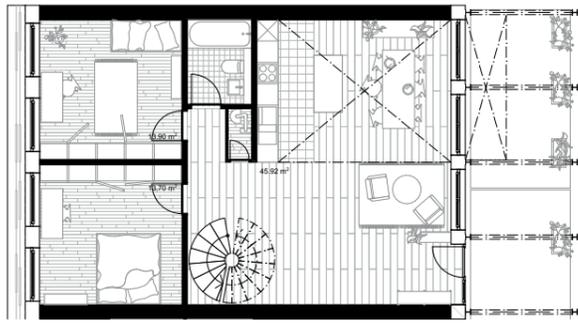
1 2 4

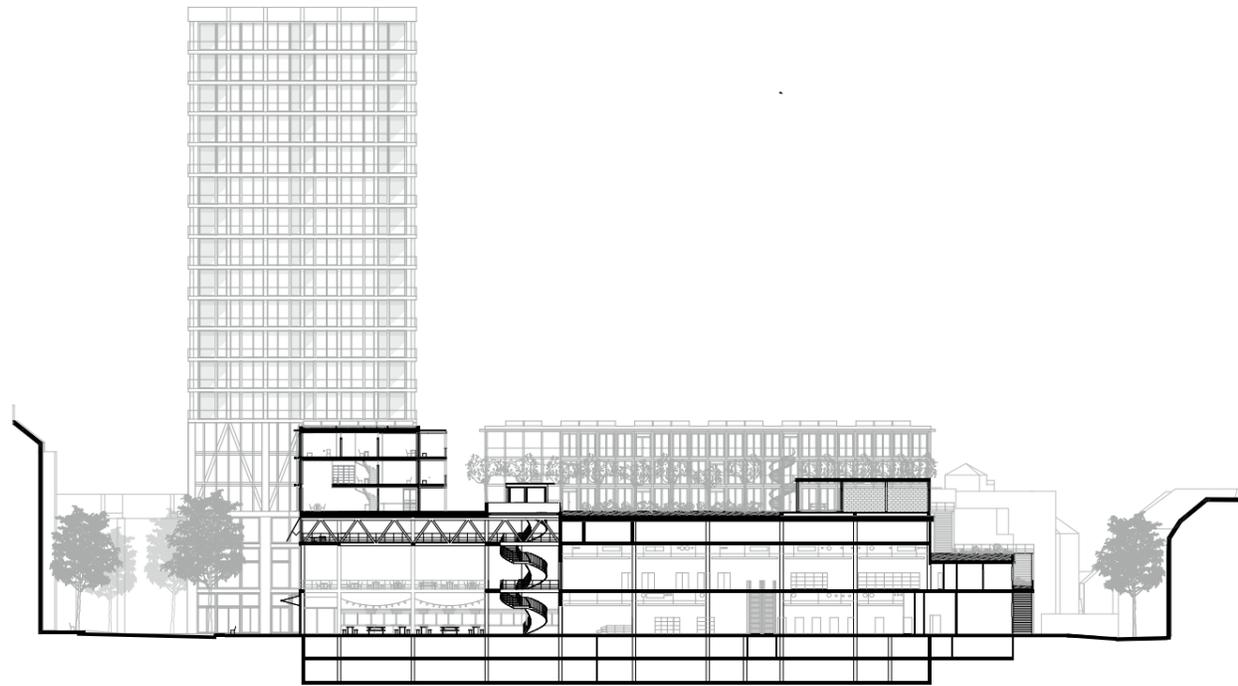








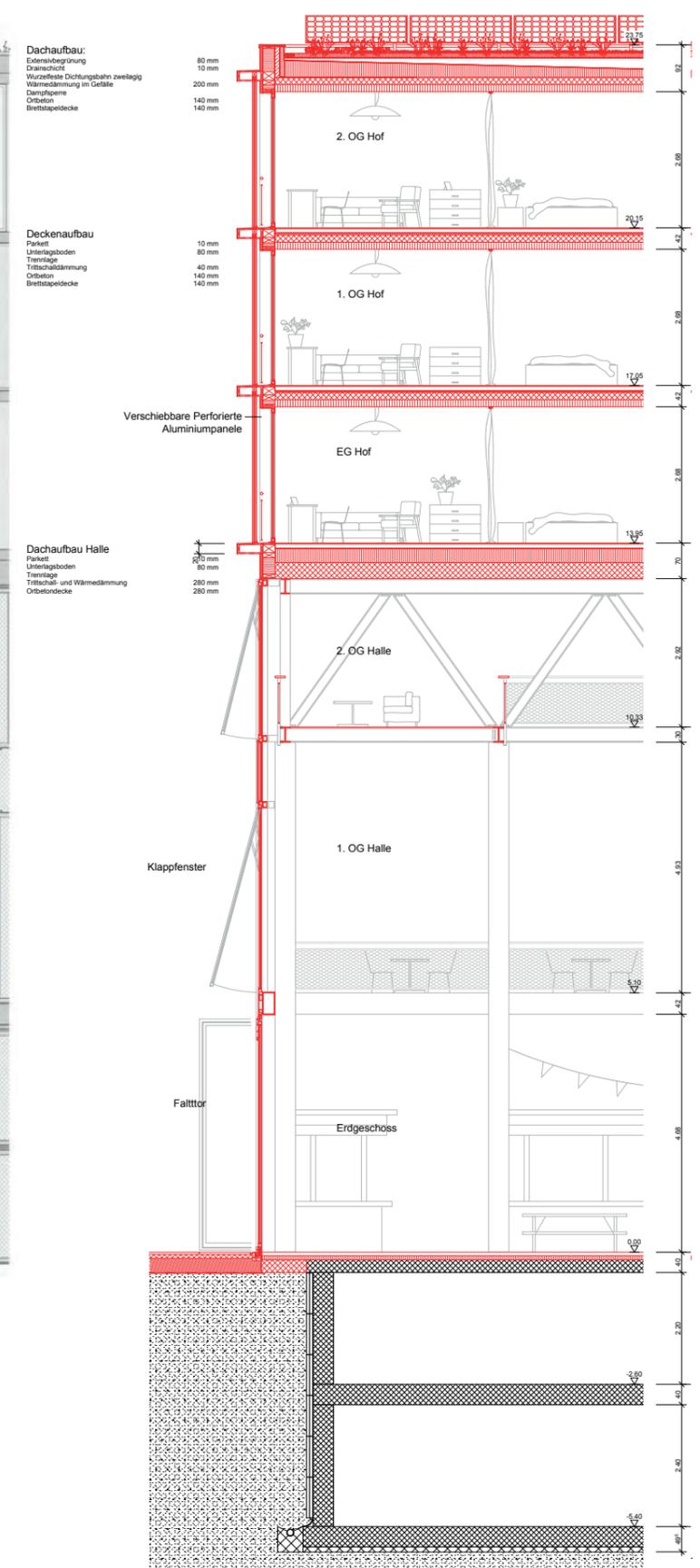




1 10 20



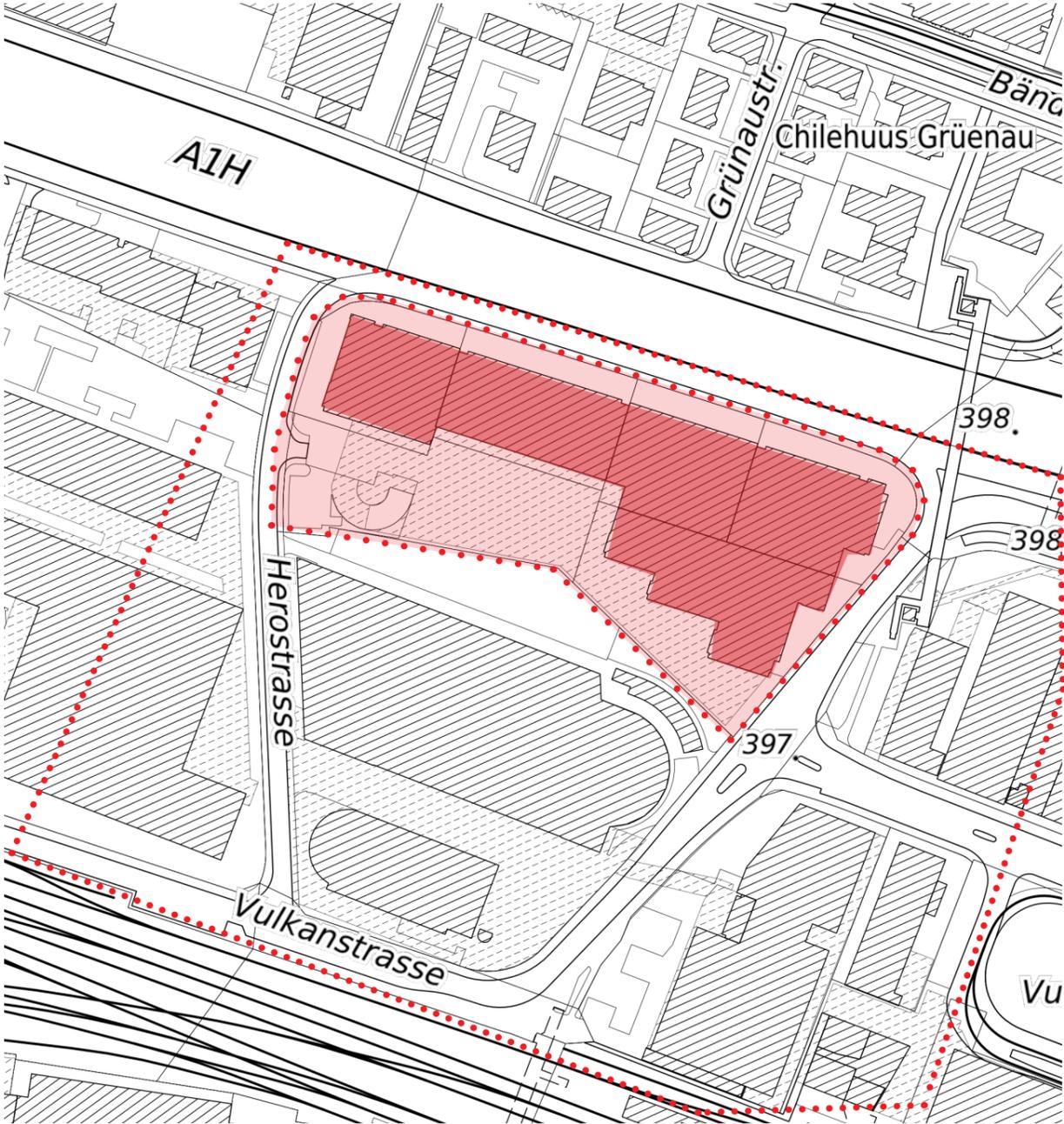
1 2 4



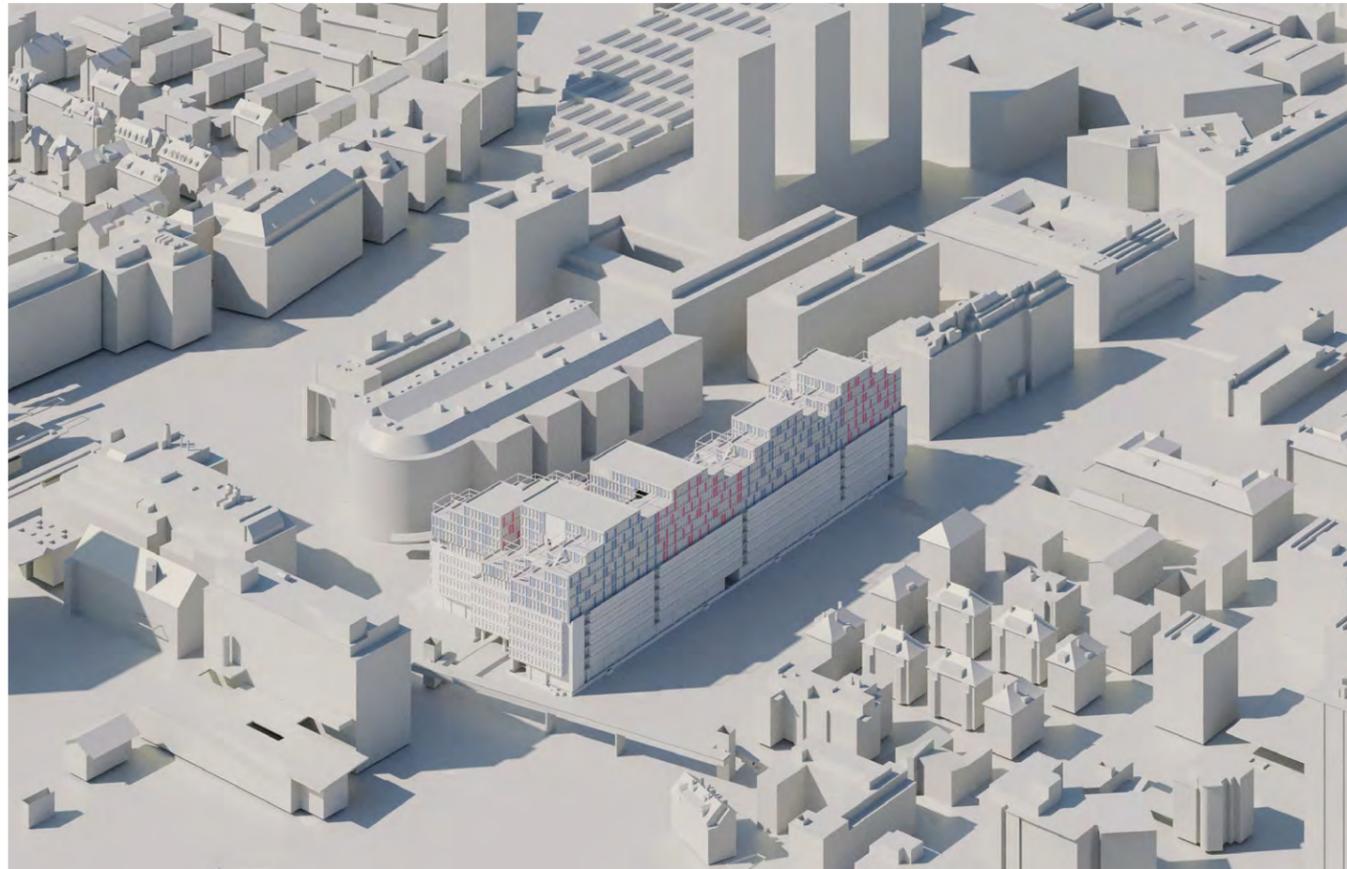
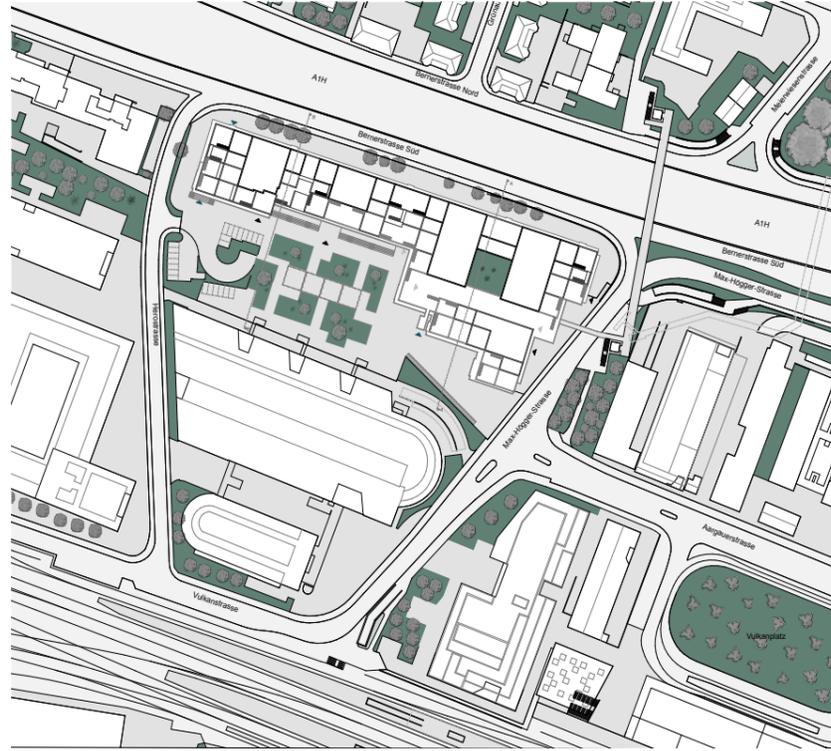
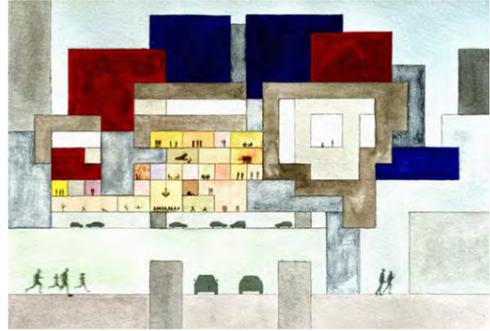
# 03 HEROGEBÄUDE ALTSTETTEN NORD



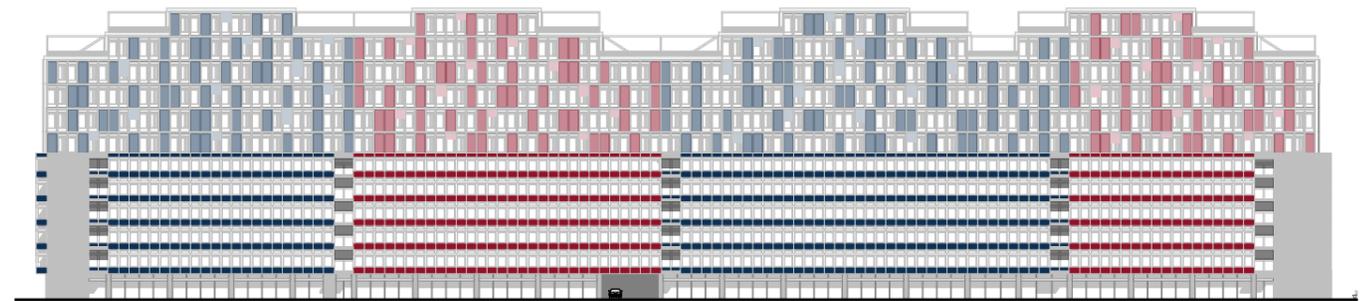
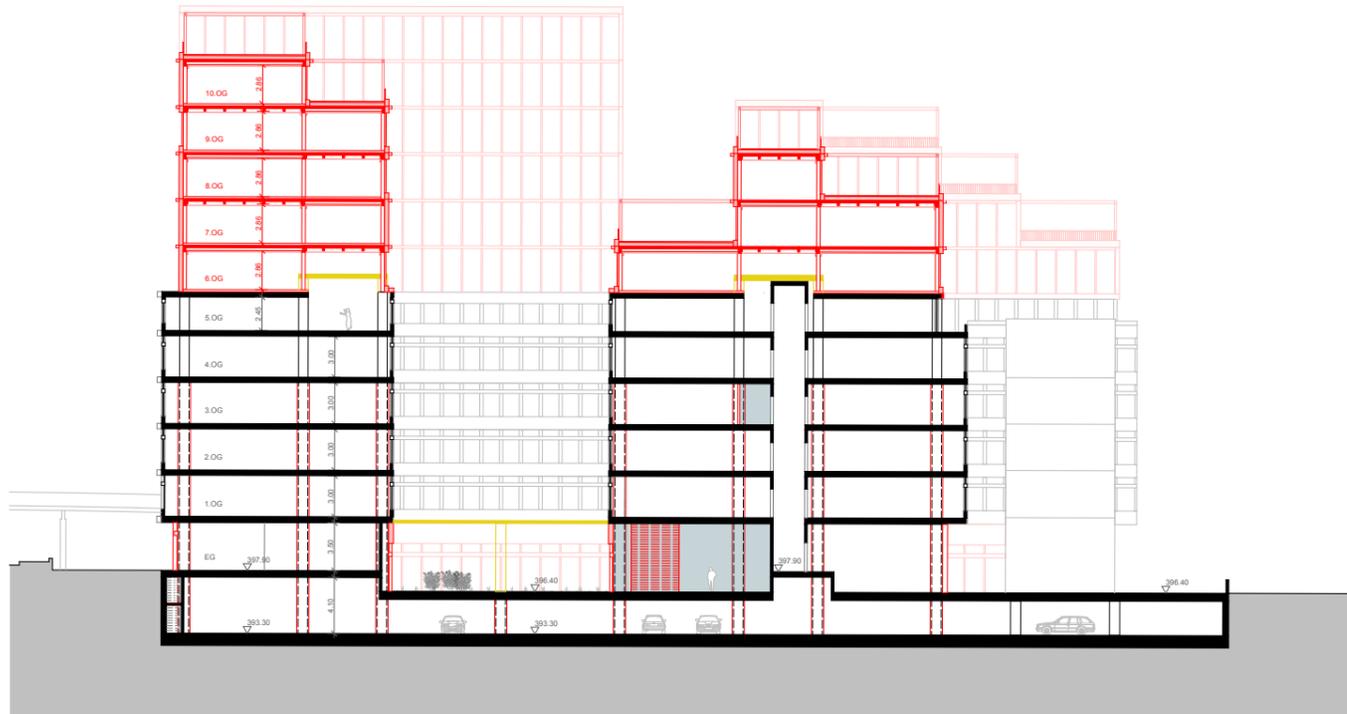
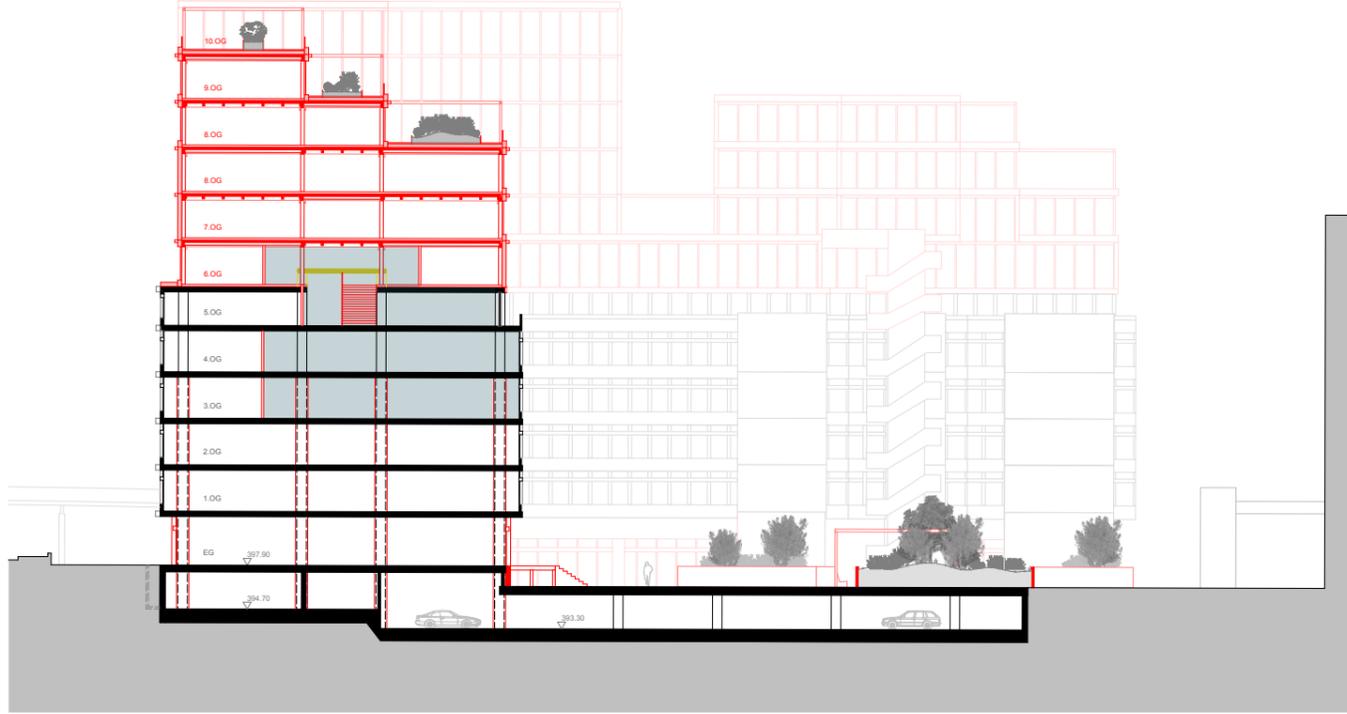
Luftbild

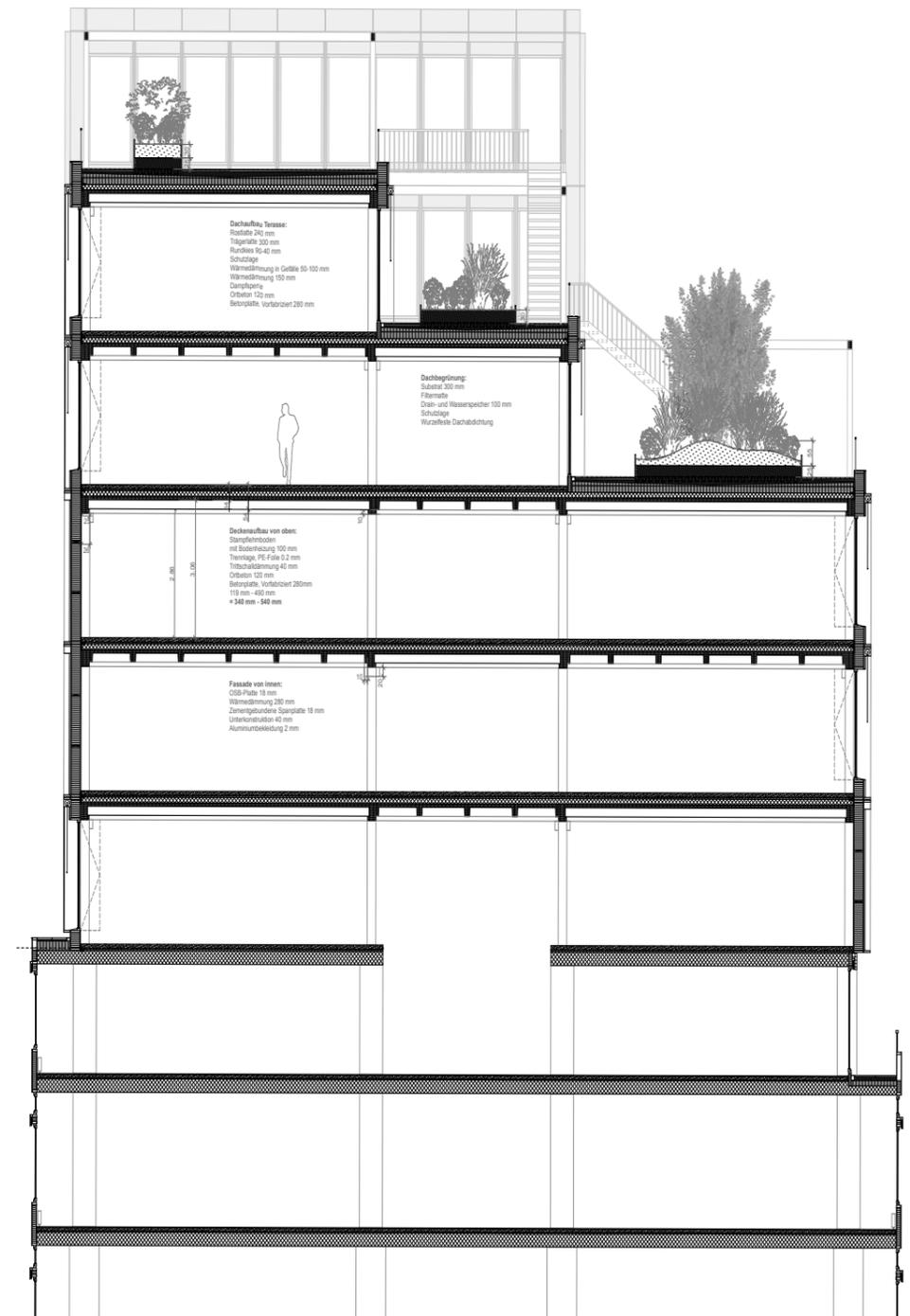
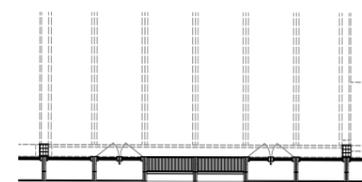
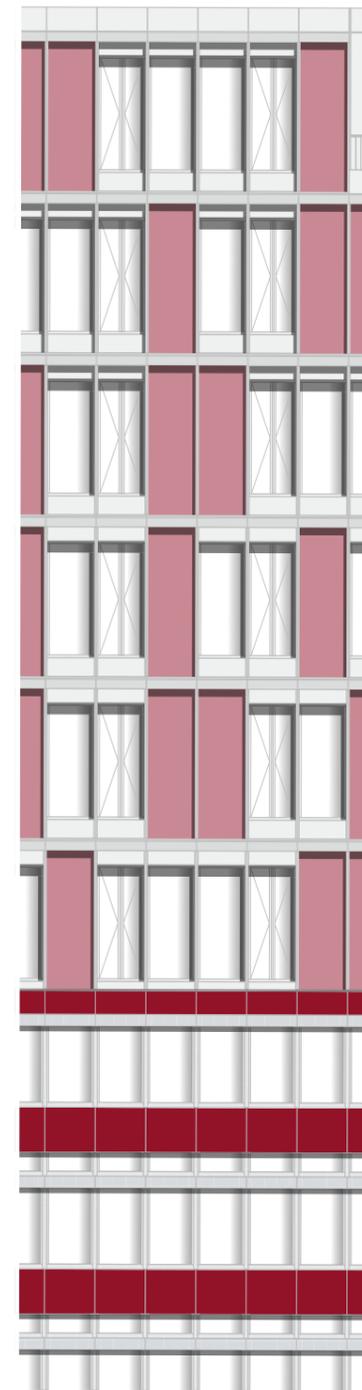
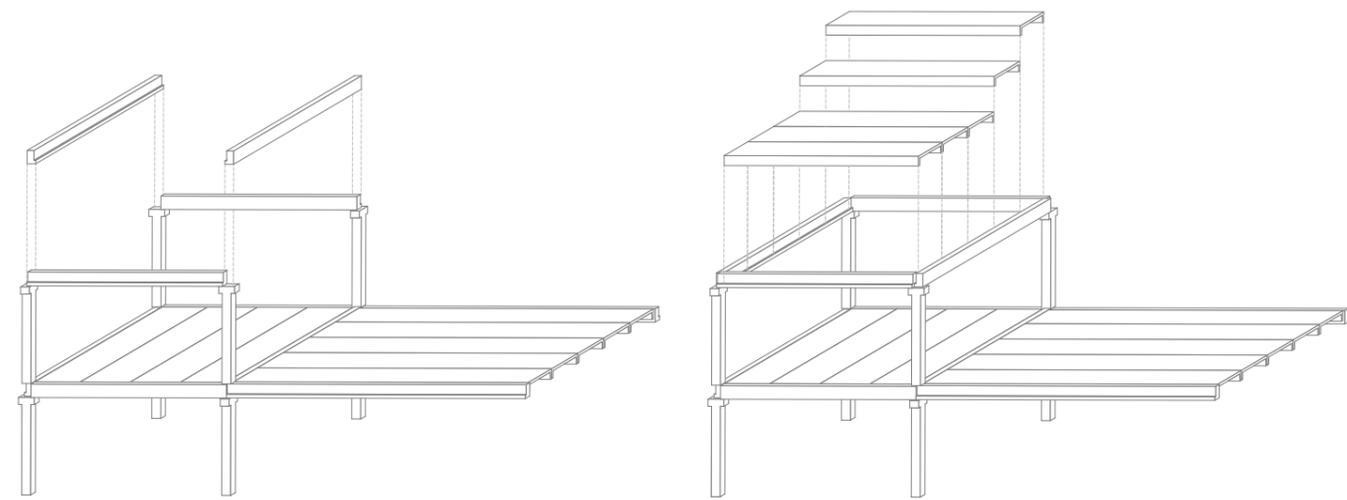


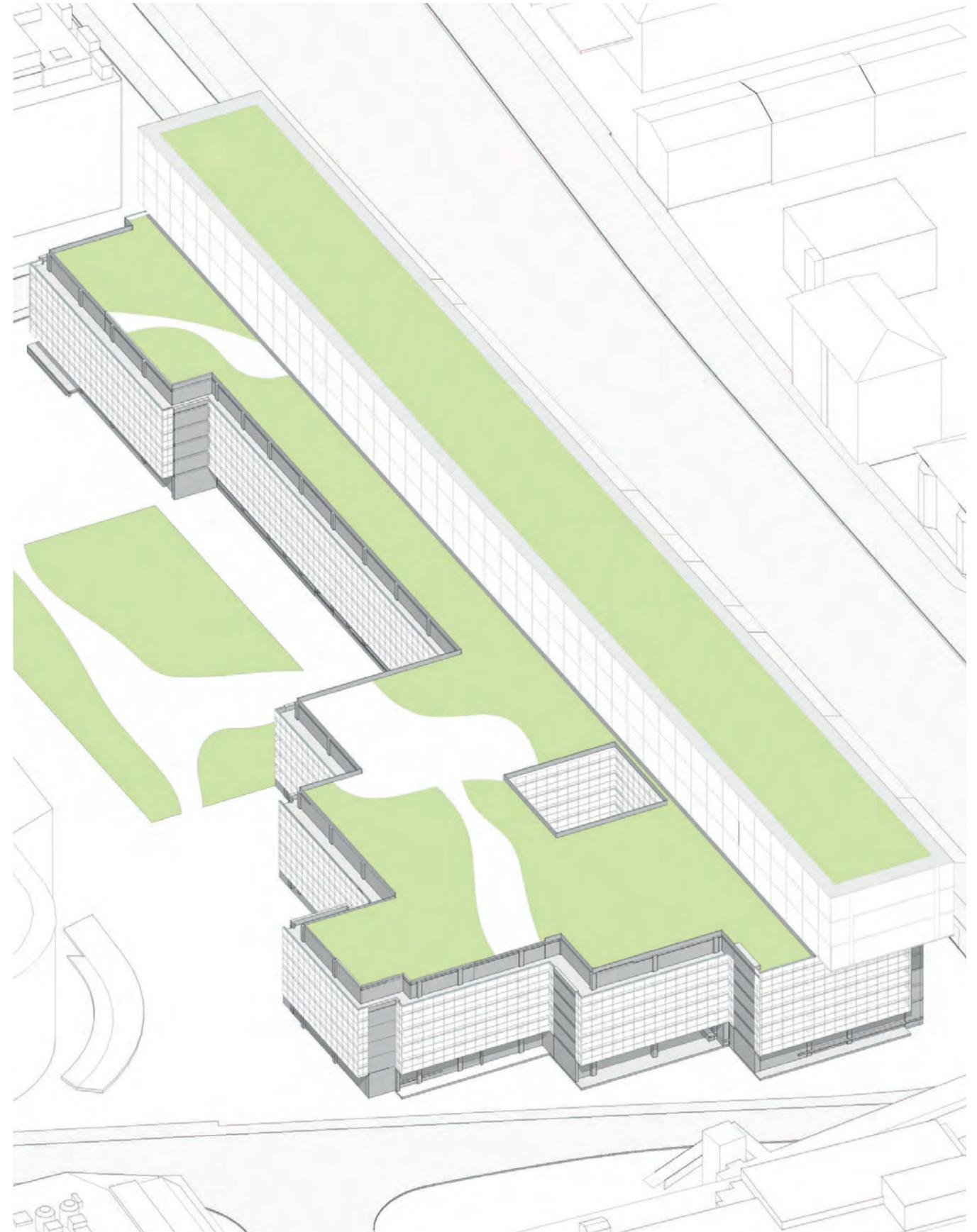
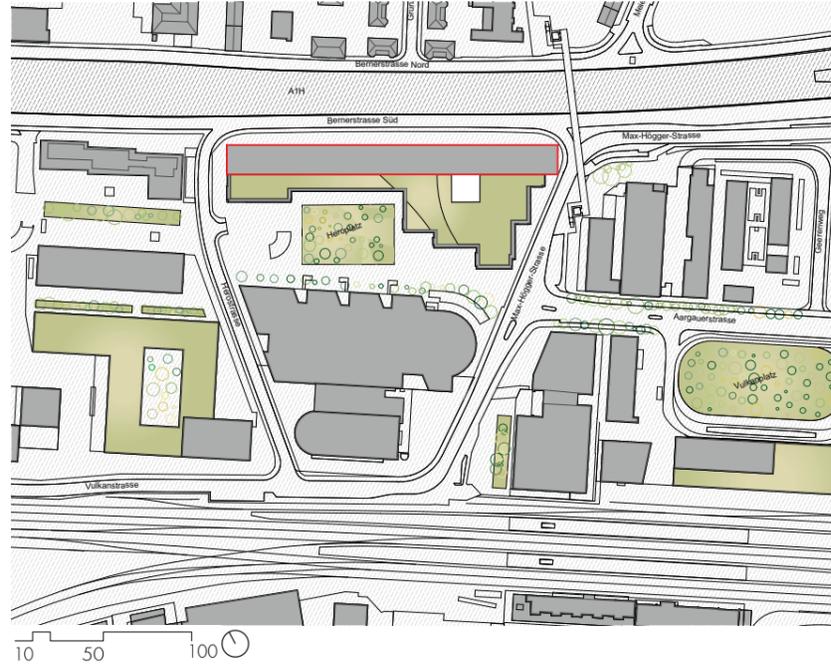
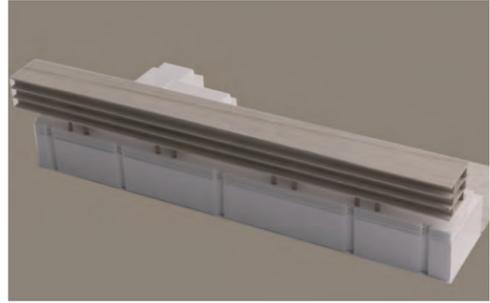
M 1:2000

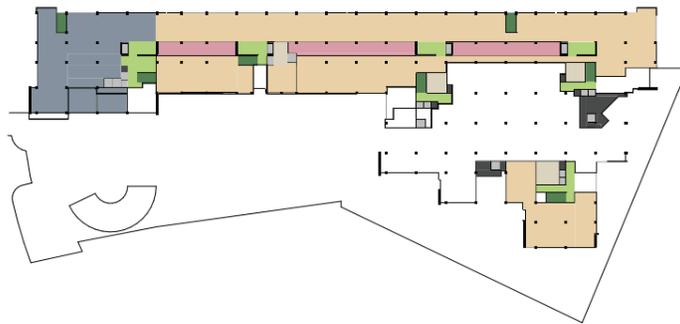




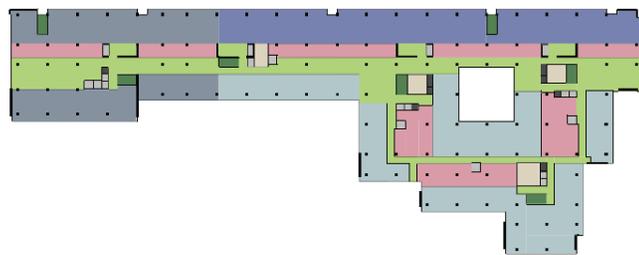
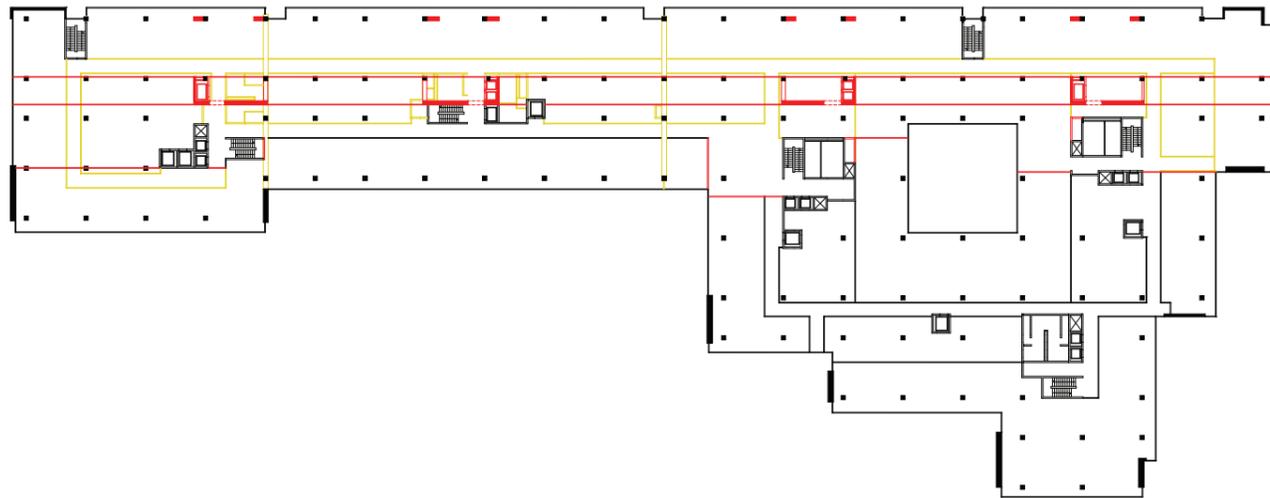




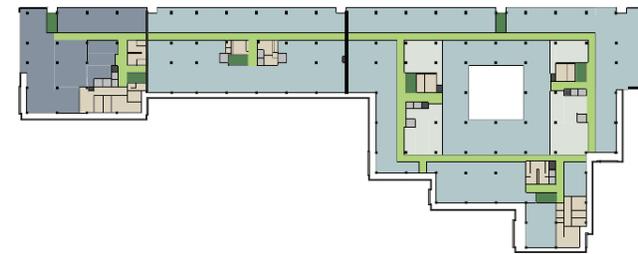
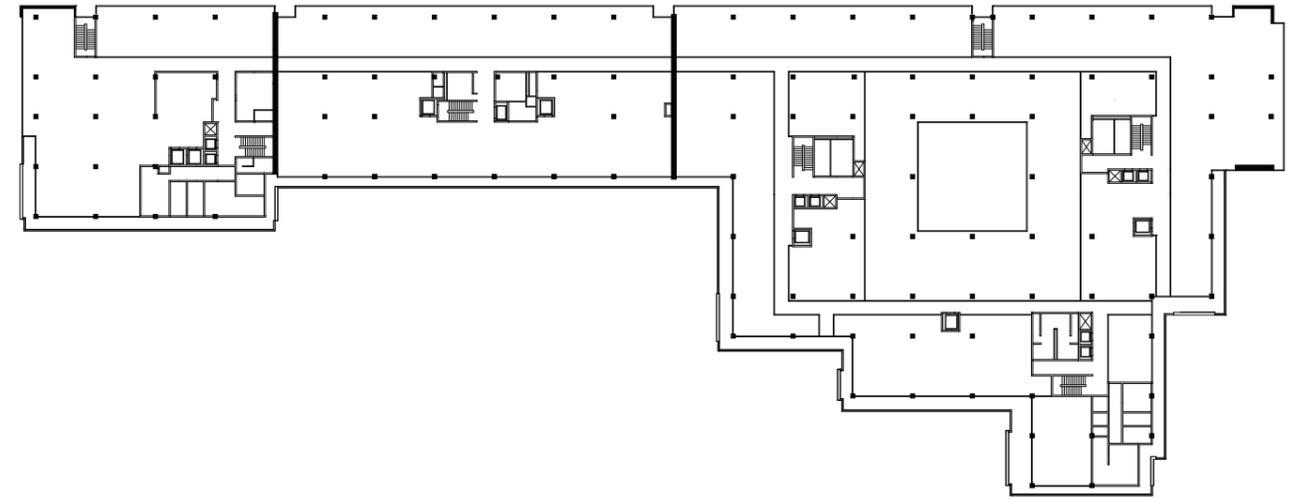
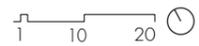




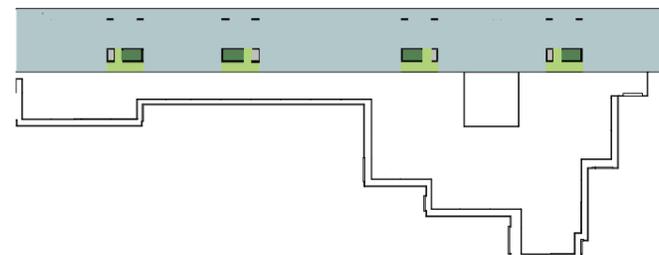
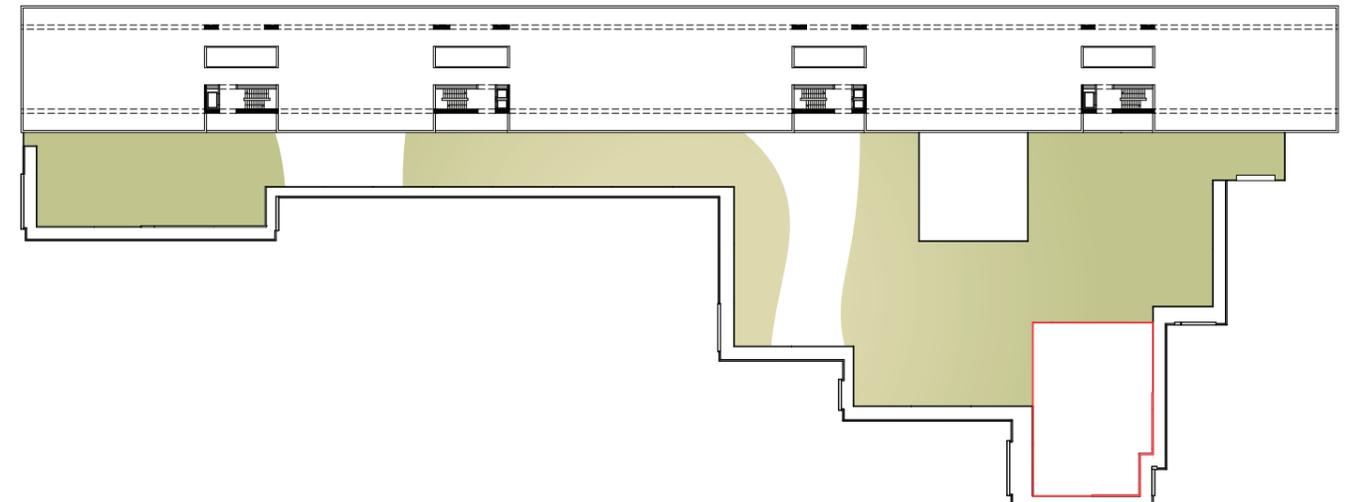
- BÜRO
- GEWERBE
- SCHULE
- FUNKTIONSSCHICHT
- VERKEHRSFLÄCHE
- TREPPENHAUS
- NASSZELLE / PUTZRAUM
- AUFZUG
- TECHNIK



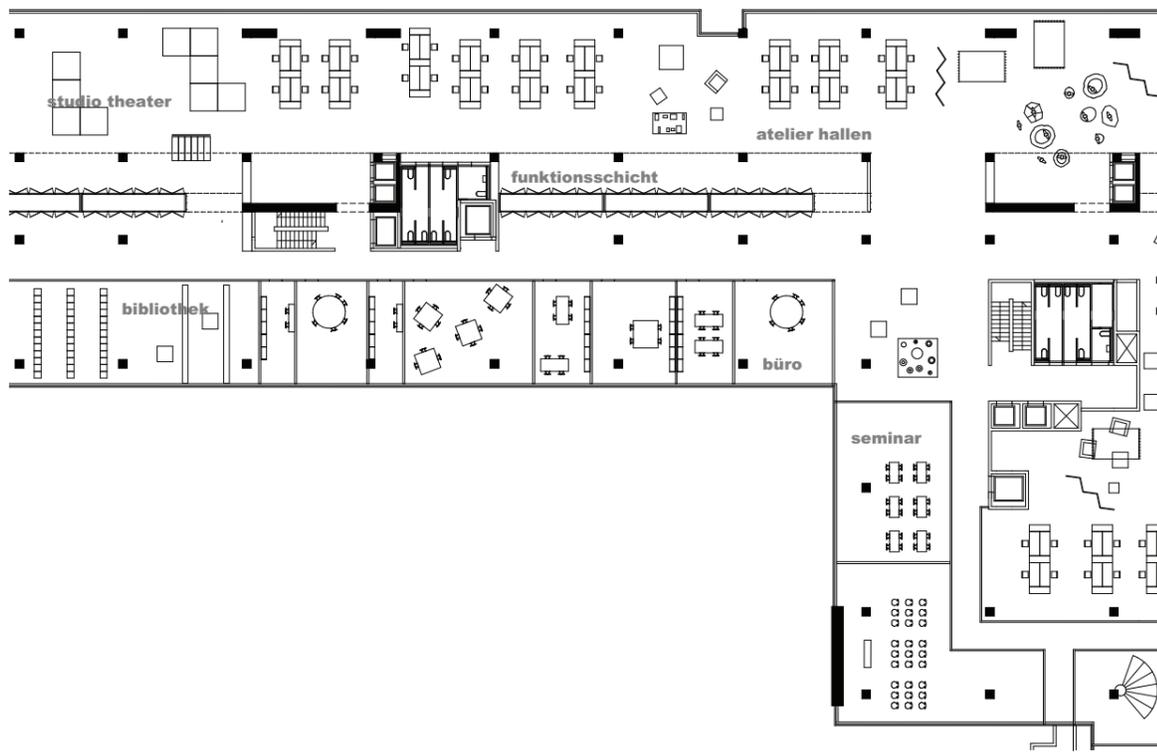
- BÜRO
- ATELIER HALLEN
- SCHULE
- FUNKTIONSSCHICHT
- VERKEHRSFLÄCHE
- TREPPENHAUS
- NASSZELLE / PUTZRAUM
- AUFZUG
- TECHNIK



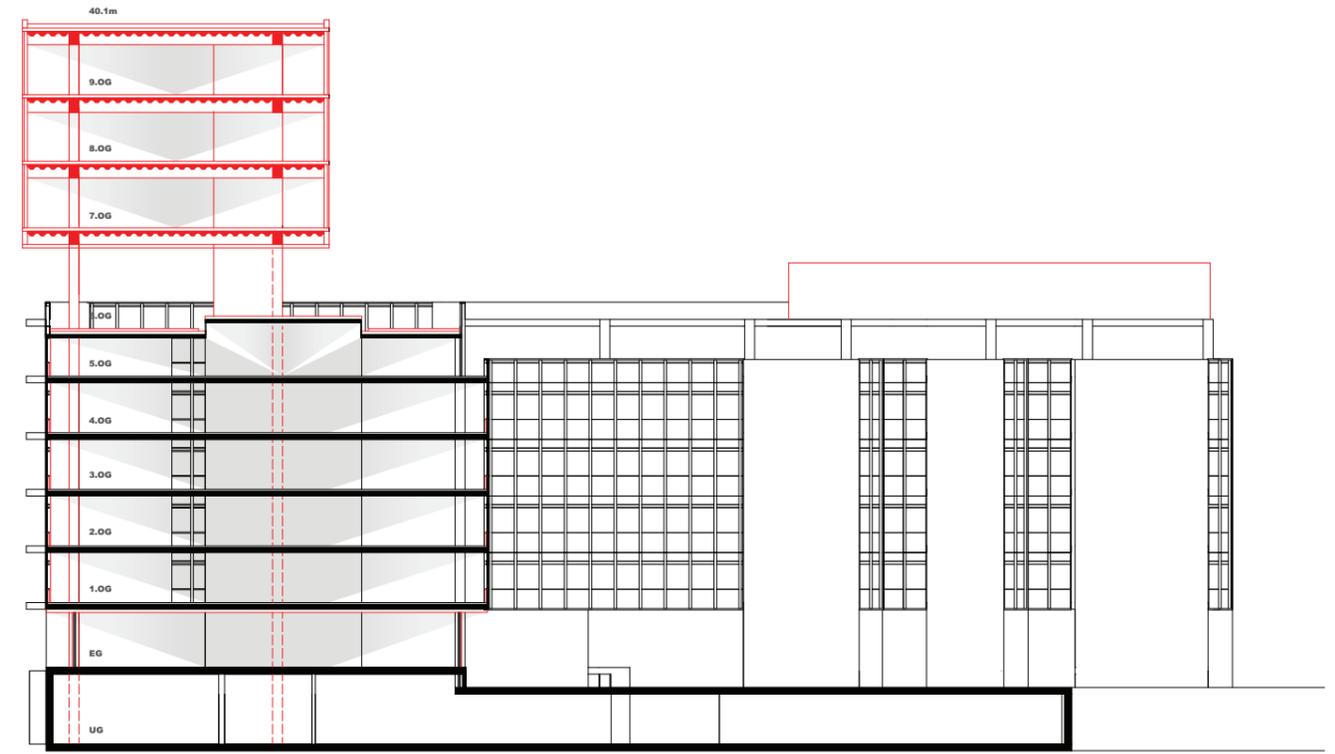
- BÜRO
- FABRIKATION
- SCHULE
- ARCHIV
- VERKEHRSFLÄCHE
- TREPPENHAUS
- NASSZELLE / PUTZRAUM
- AUFZUG
- TECHNIK



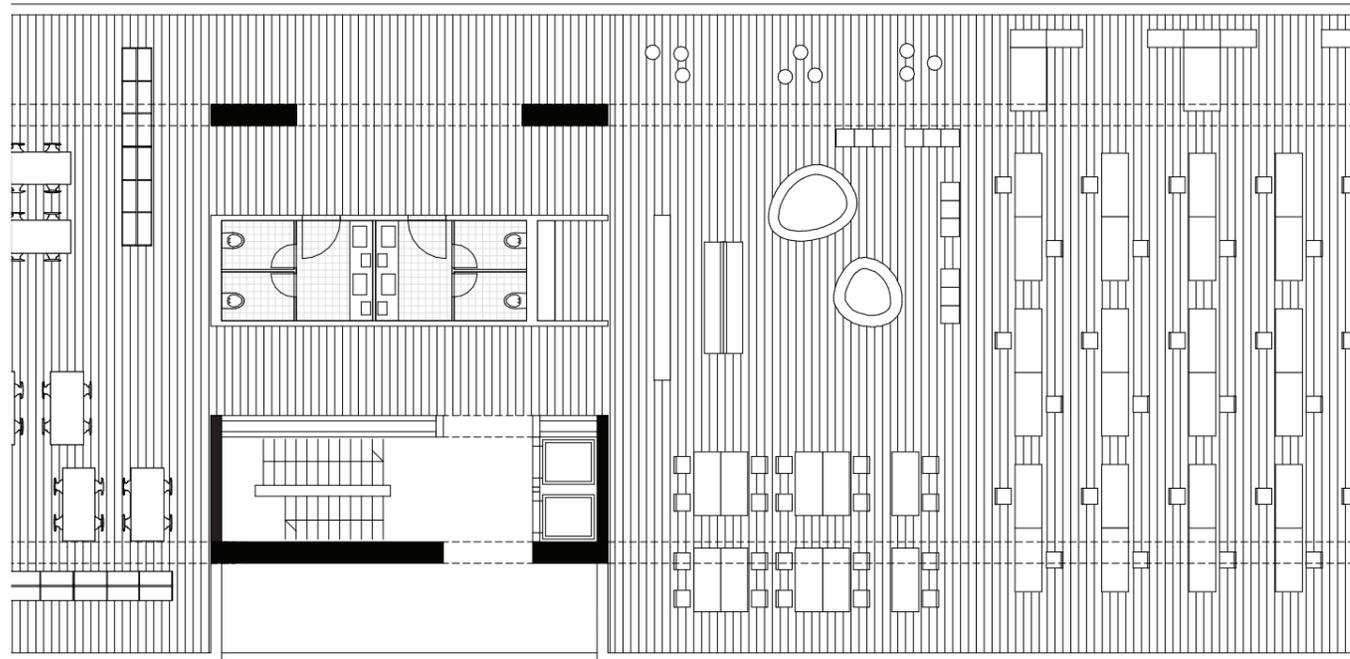
- BÜRO
- ATELIER HALLEN
- SCHULE
- FUNKTIONSSCHICHT
- VERKEHRSFLÄCHE
- TREPPENHAUS
- NASSZELLE / PUTZRAUM
- AUFZUG
- TECHNIK



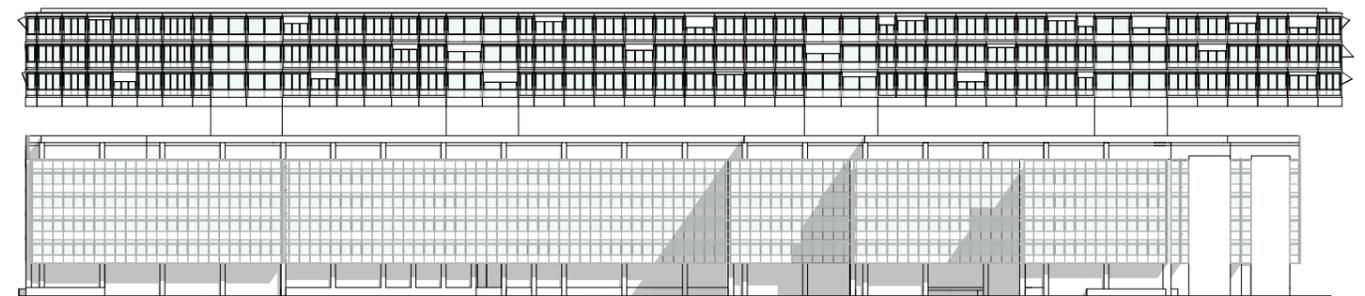
1 5 10



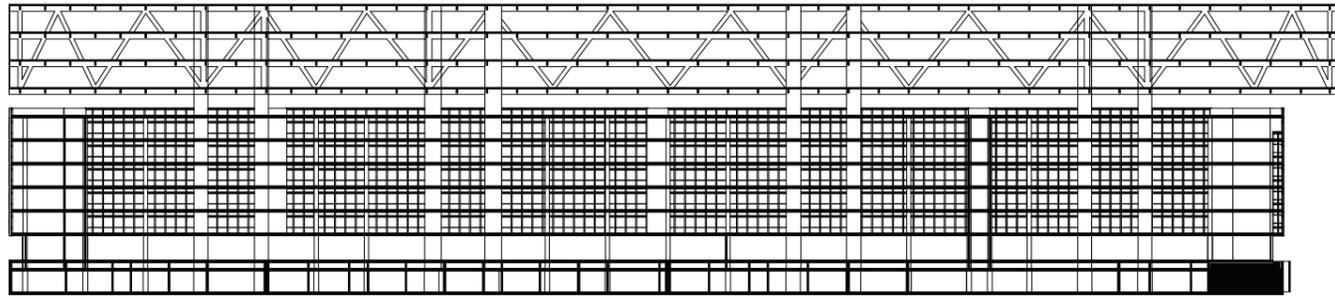
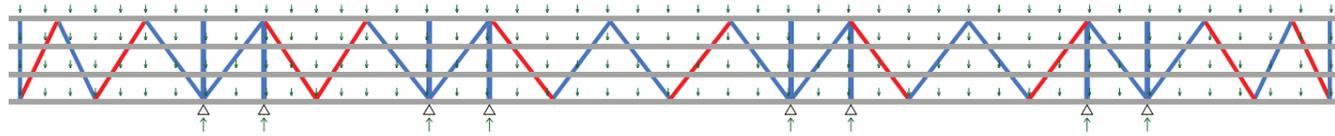
1 5 10



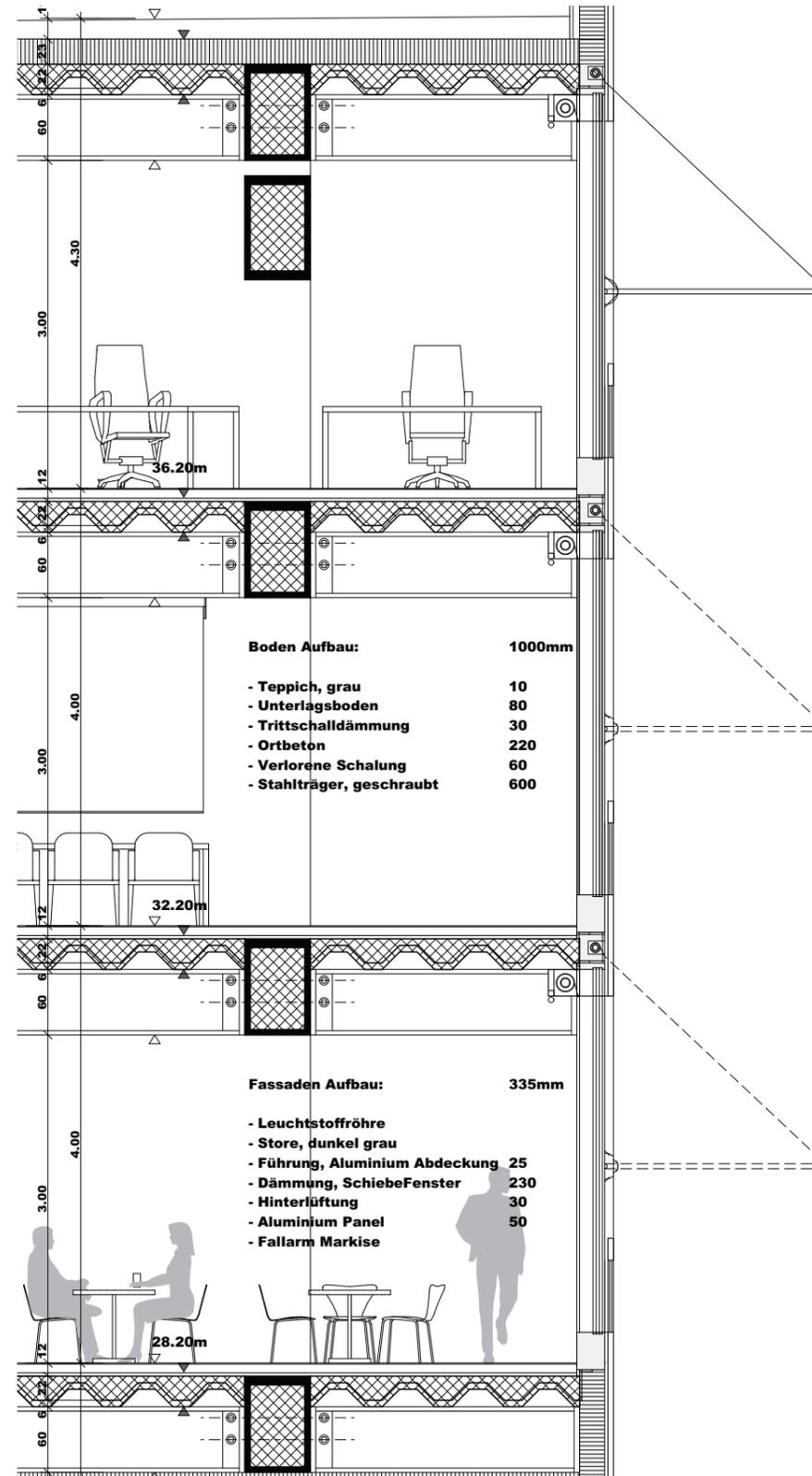
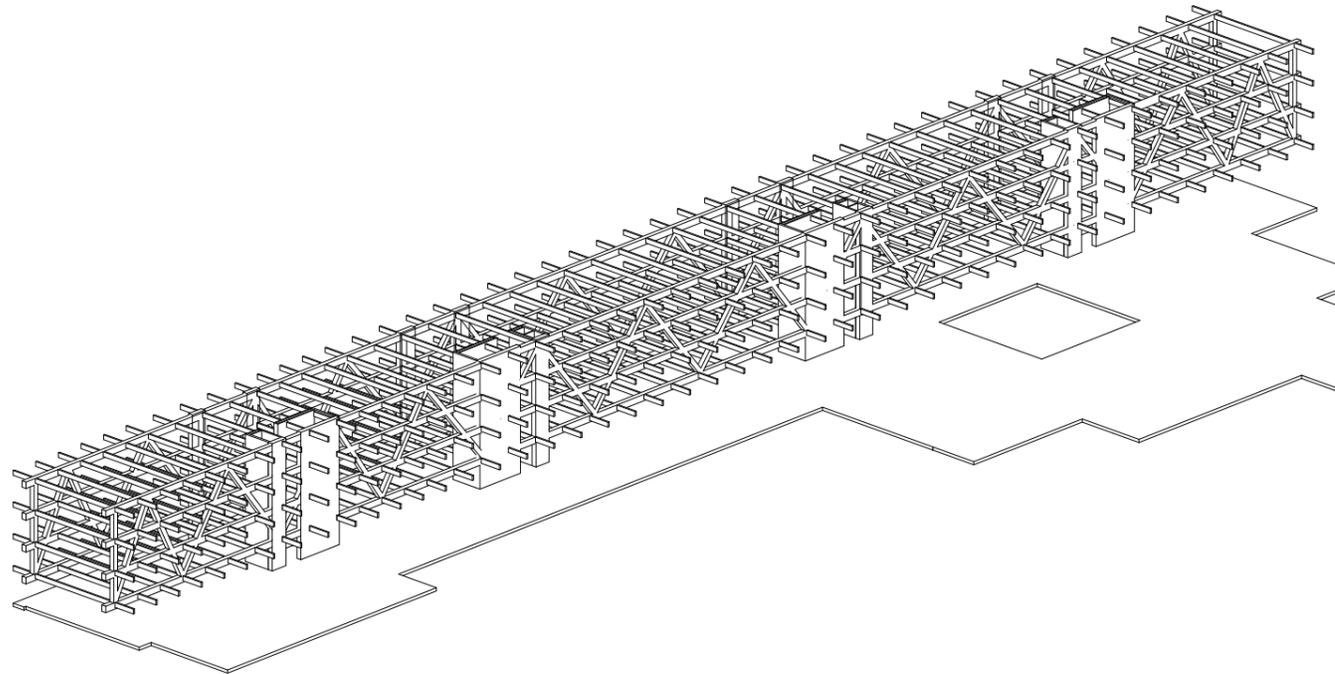
1 2 5



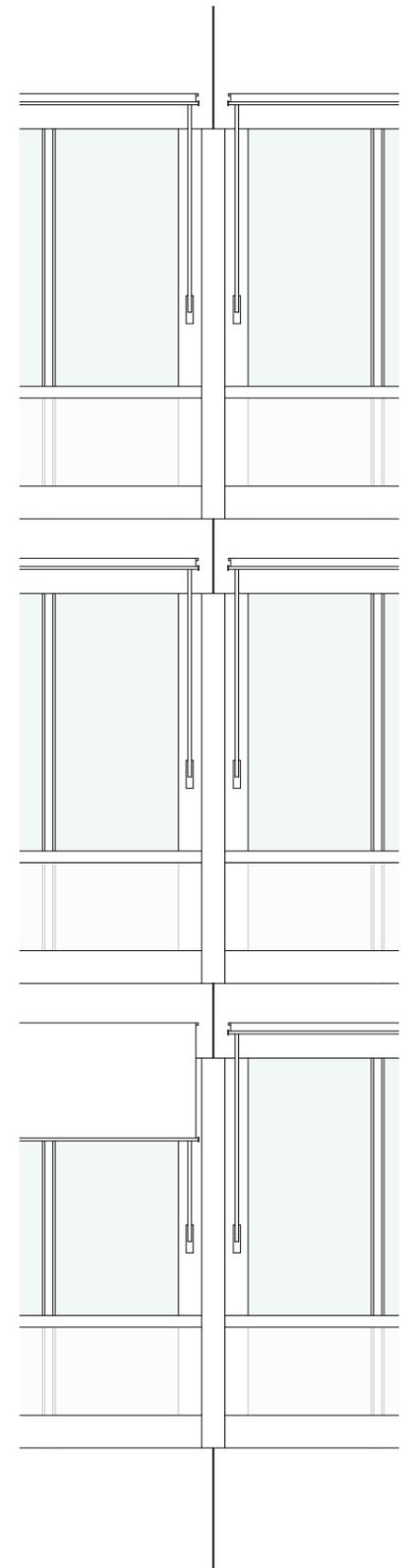
1 10 20



1 10 20



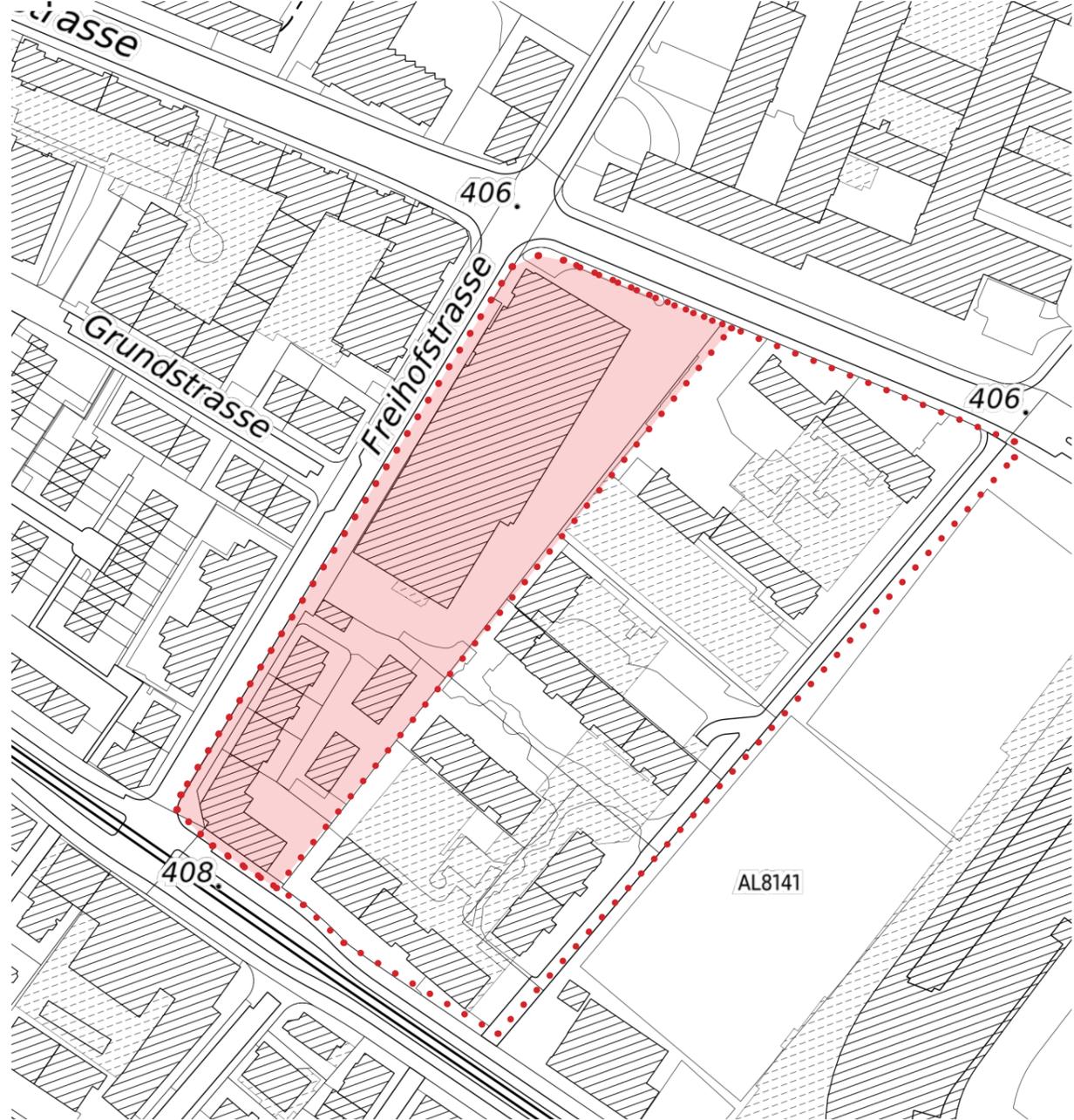
0.1 0.5 1



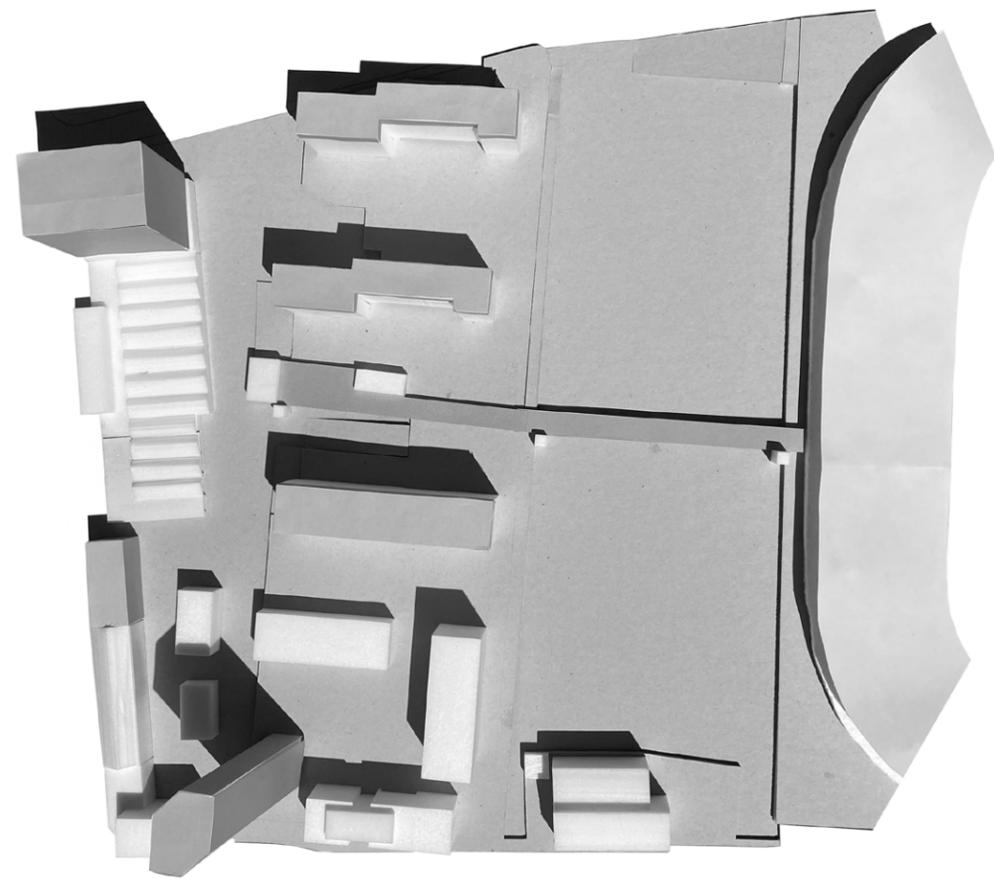
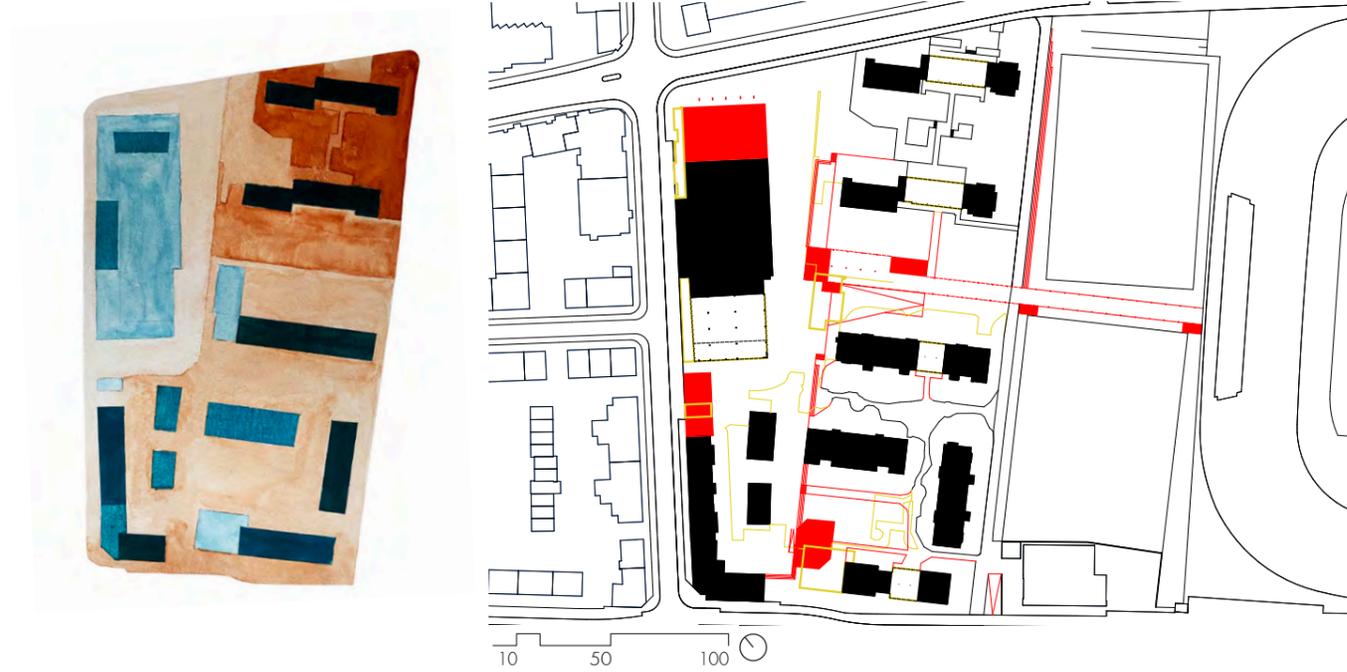
# 04 FREIHOFAREAL, ALTSTETTEN OST

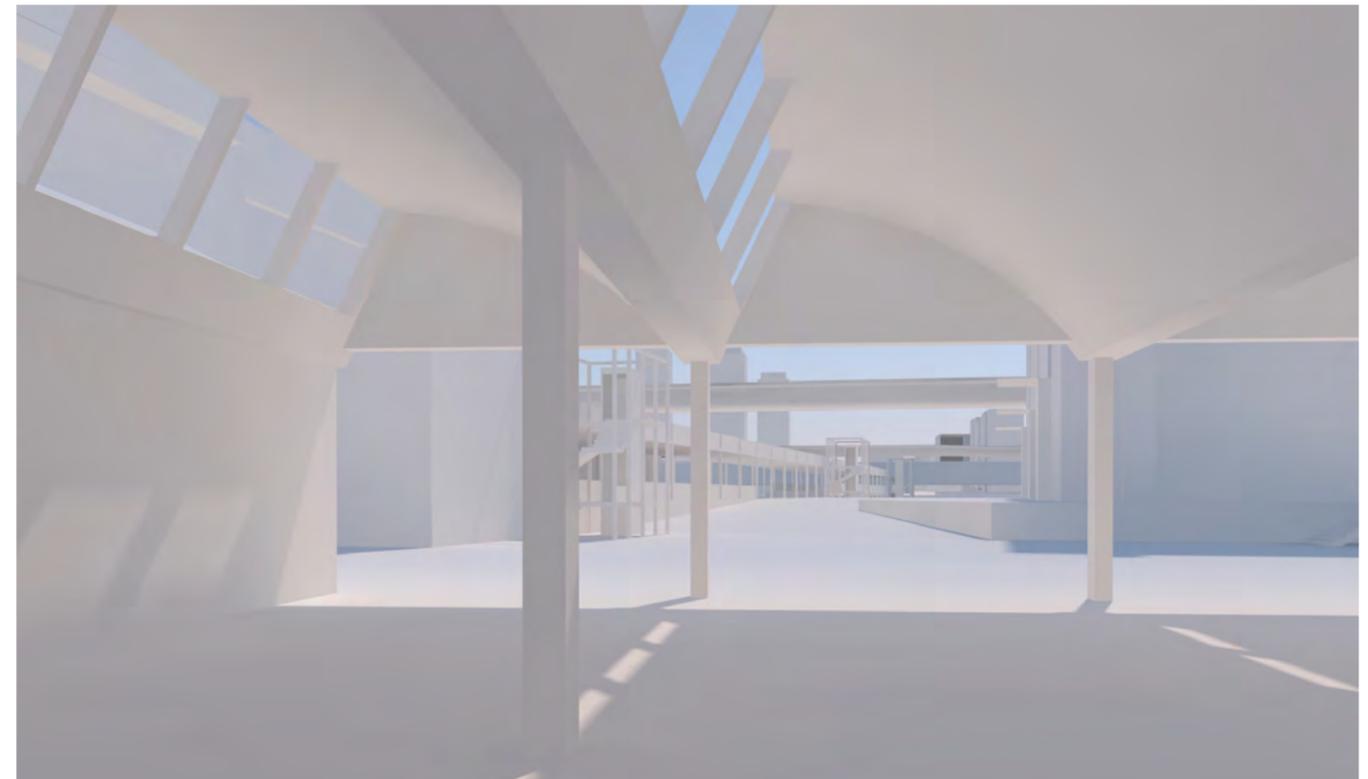
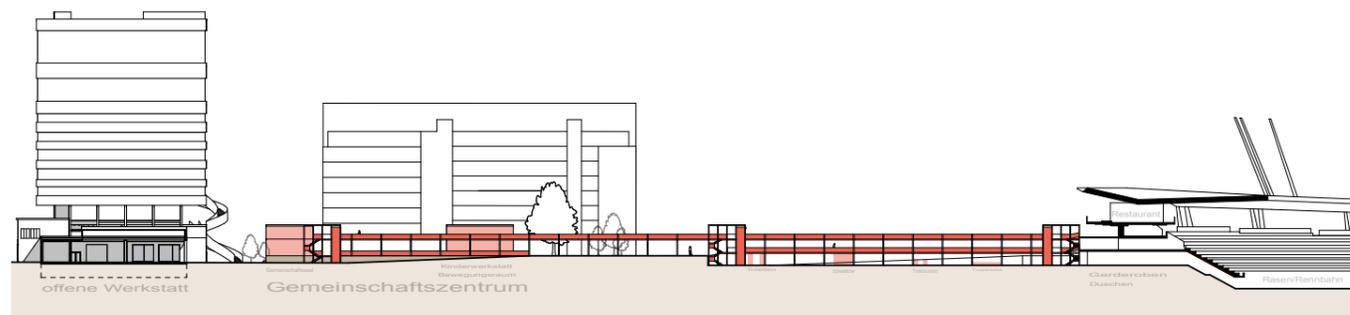
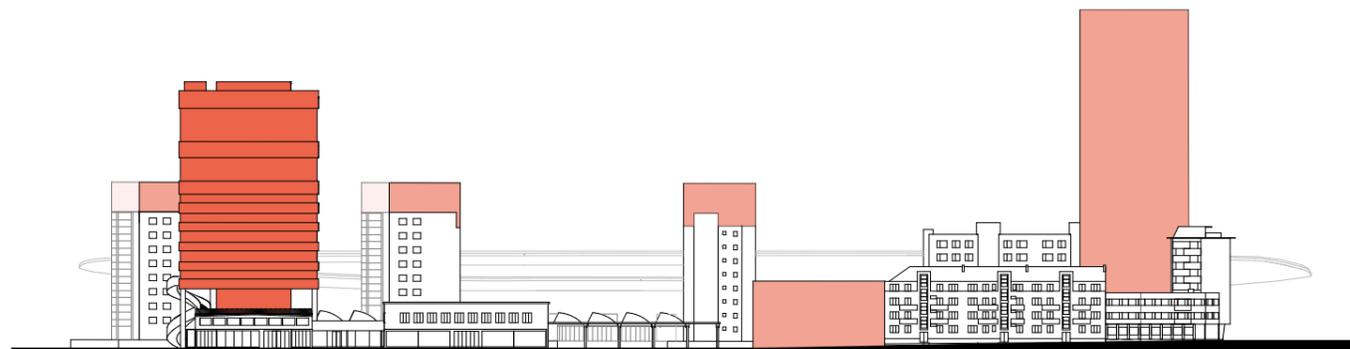
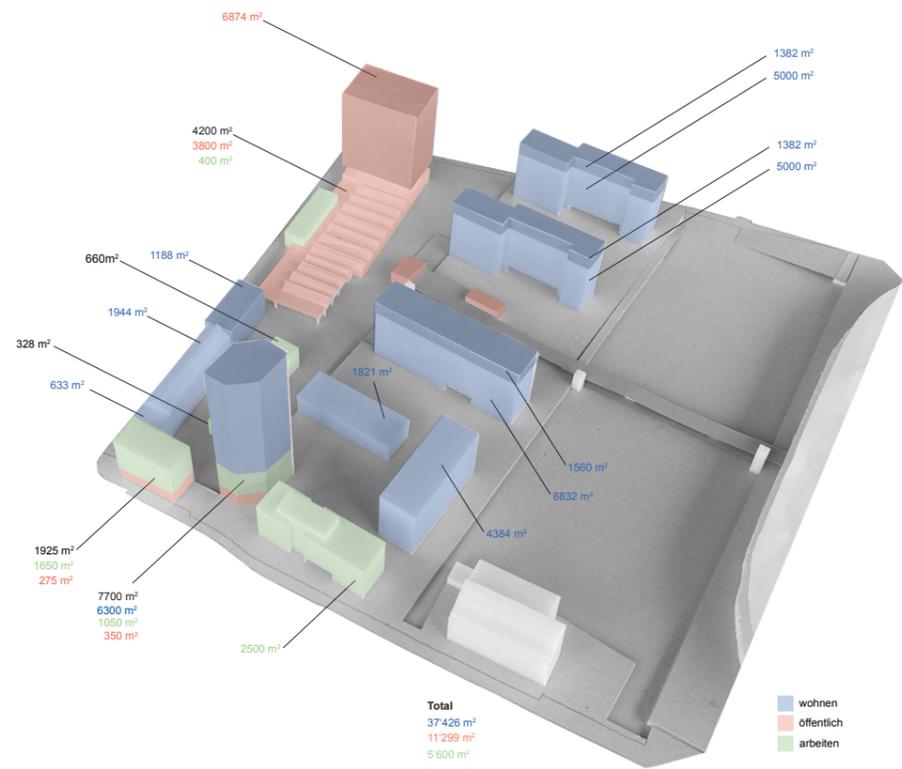


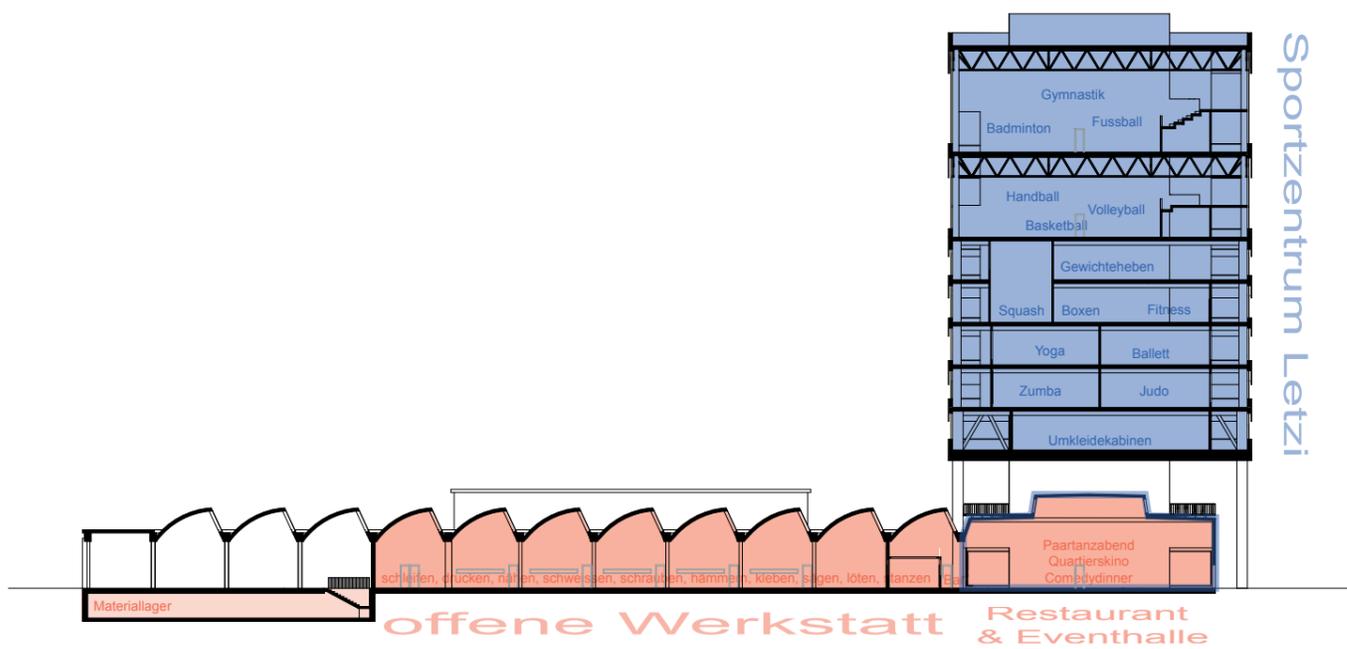
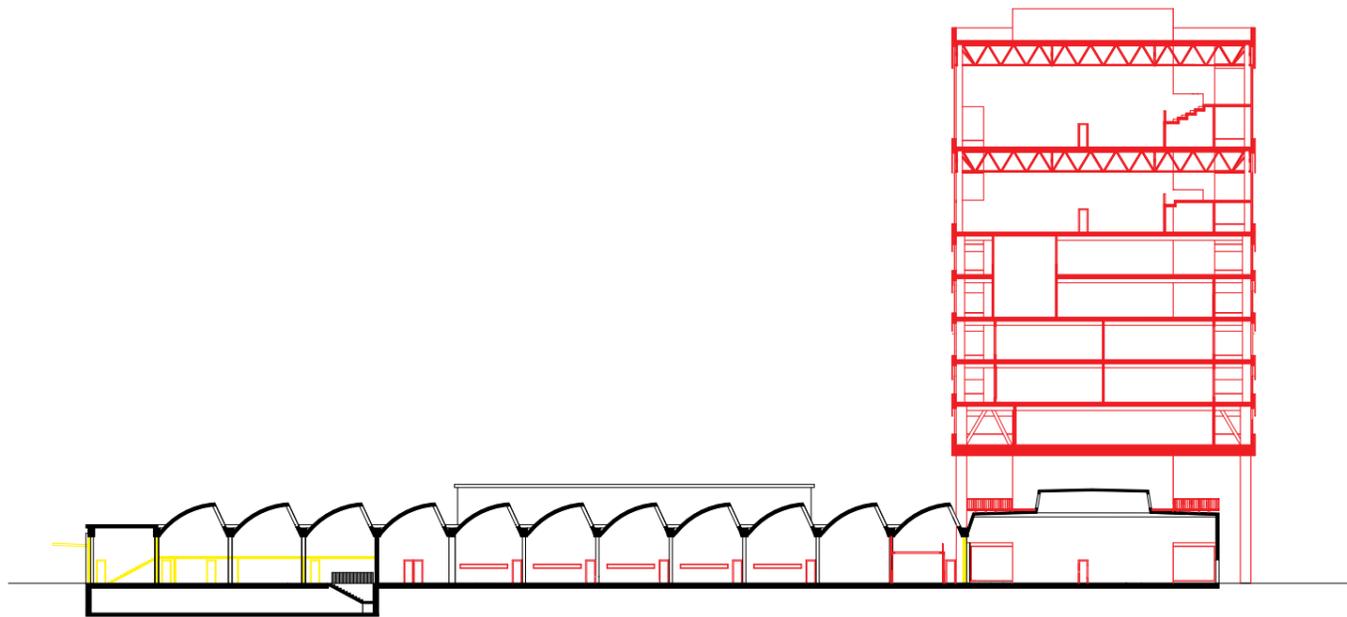
Luftbild



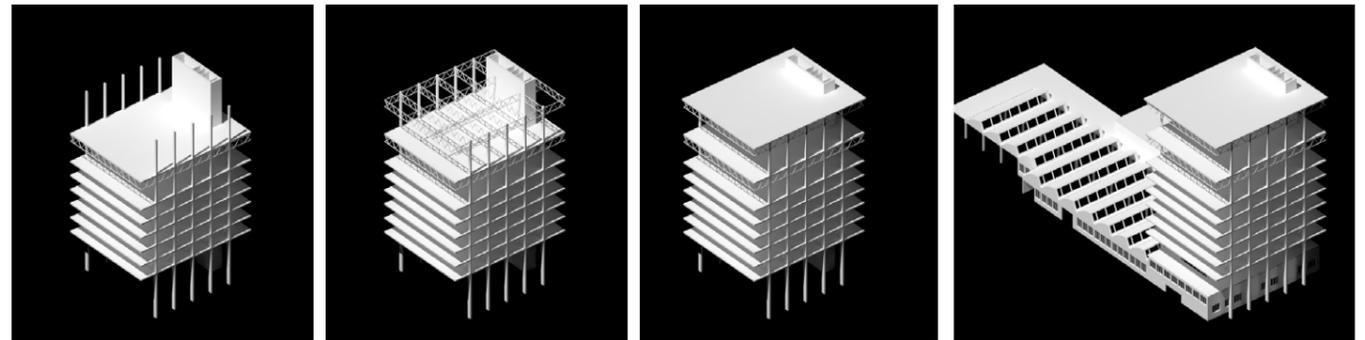
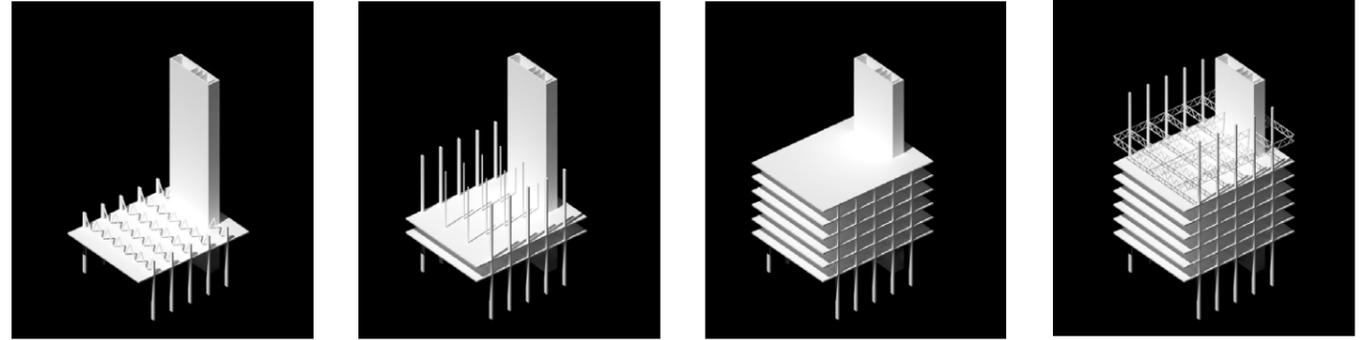
M 1:2000

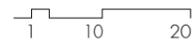
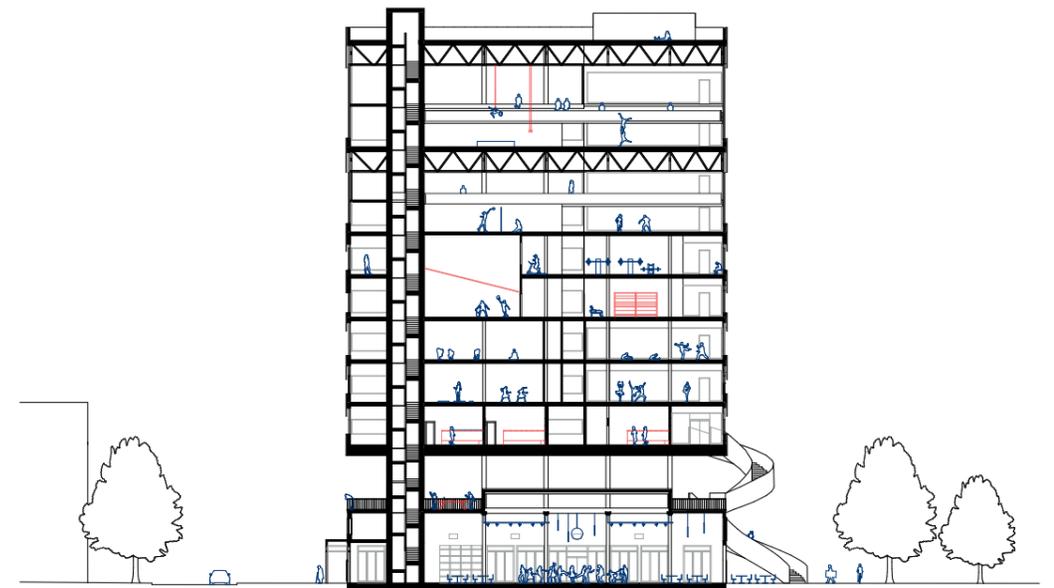
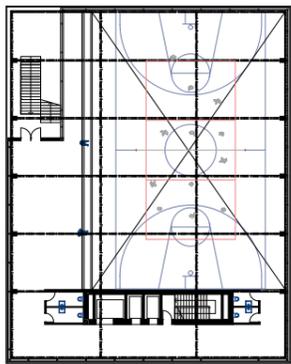
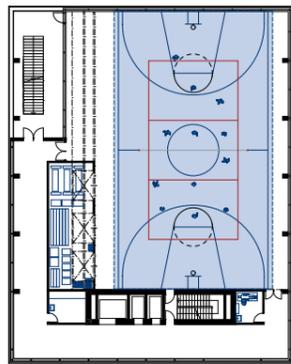
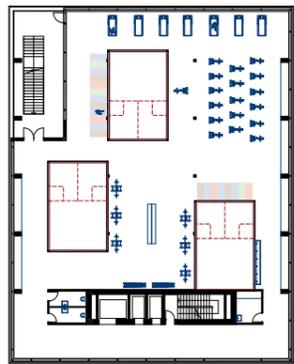
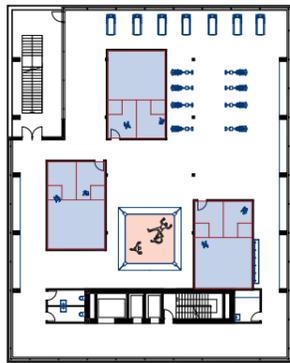
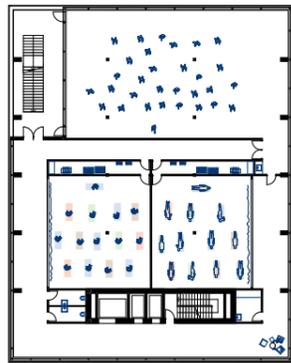
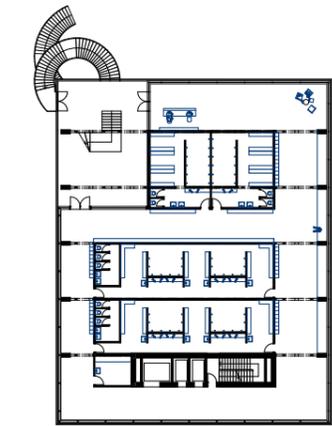
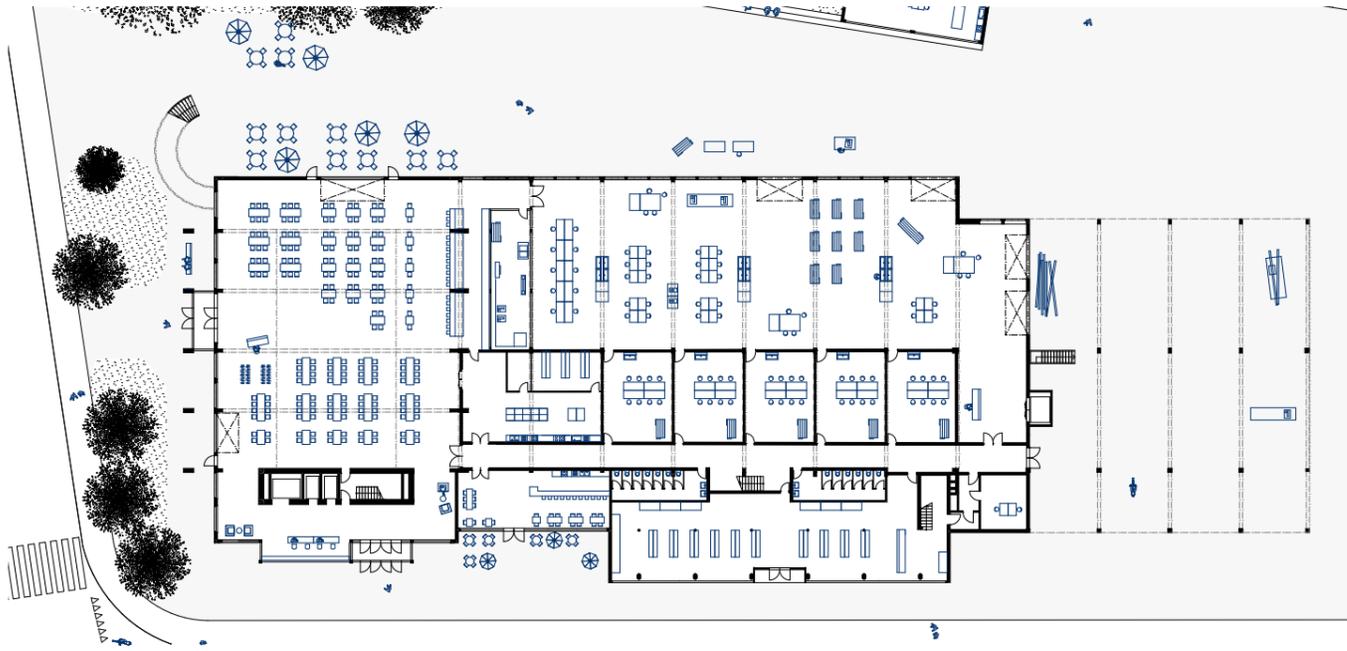






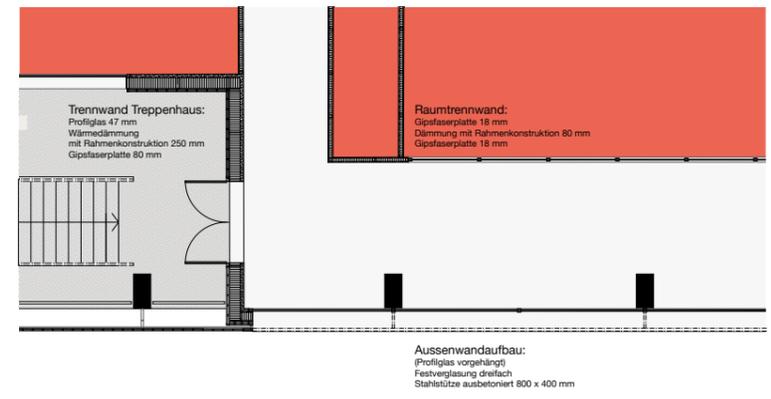
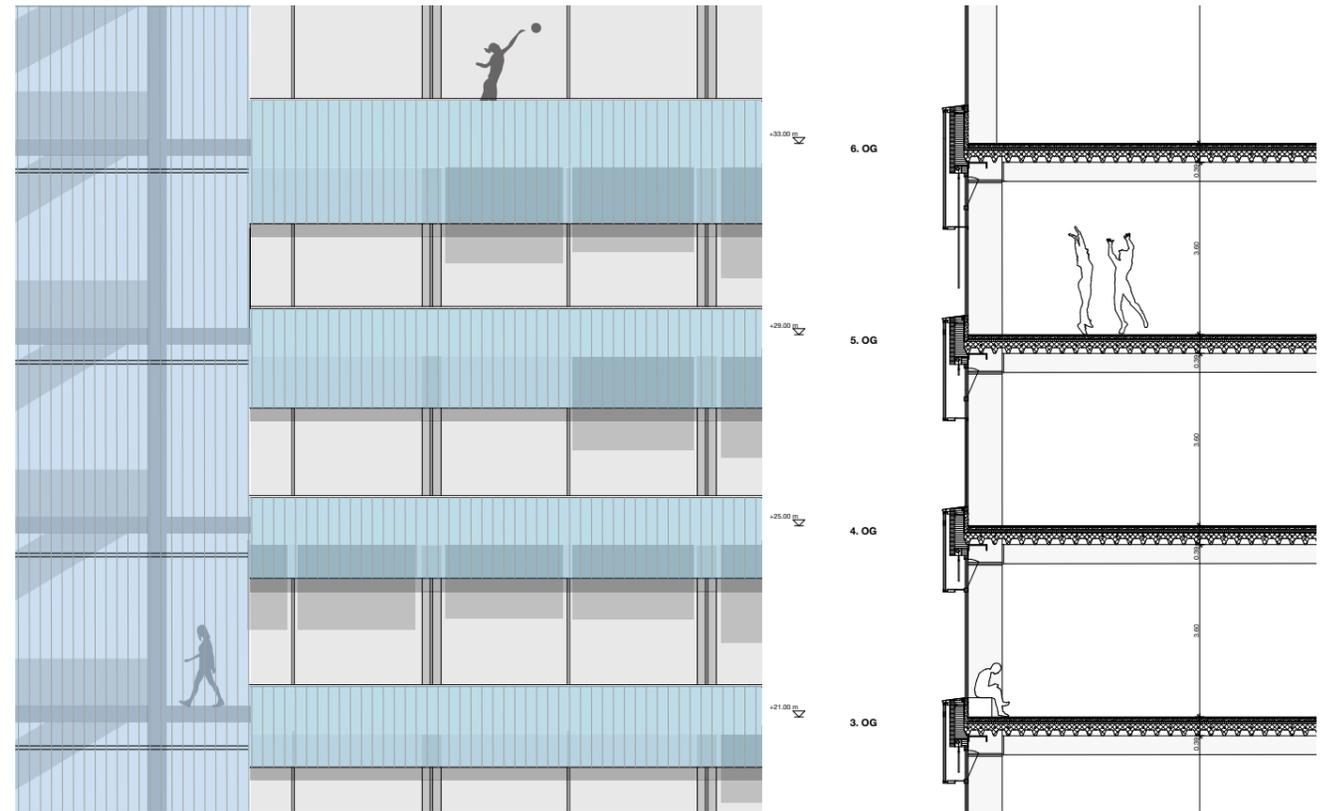
1 5 10



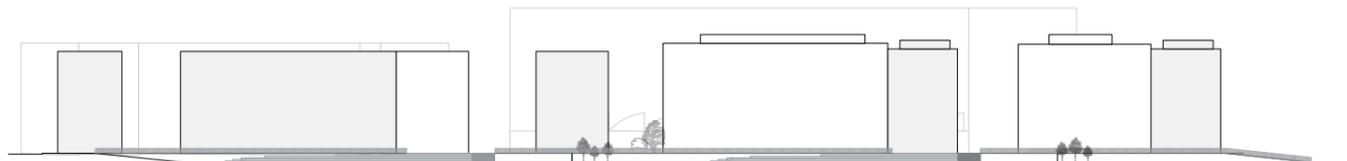
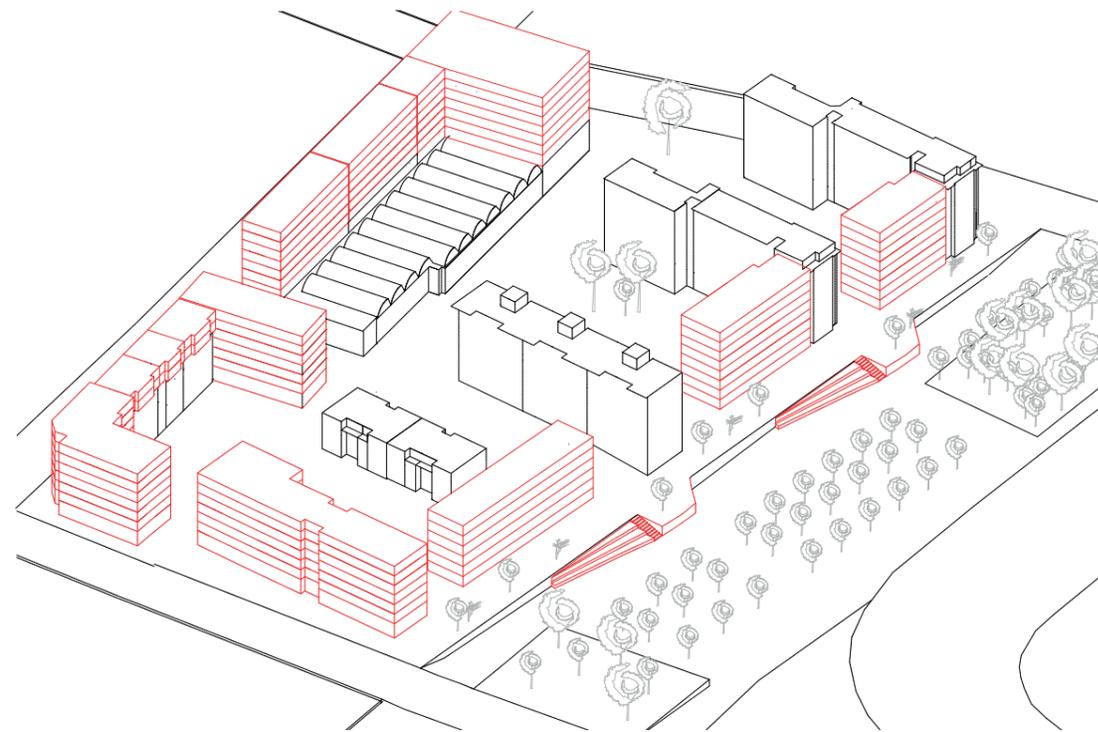
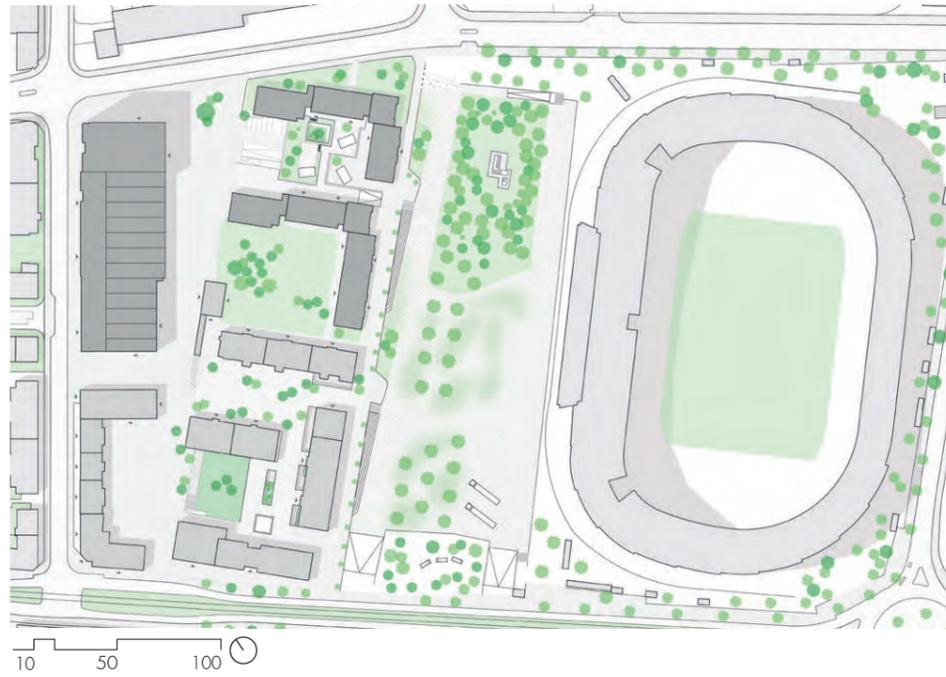


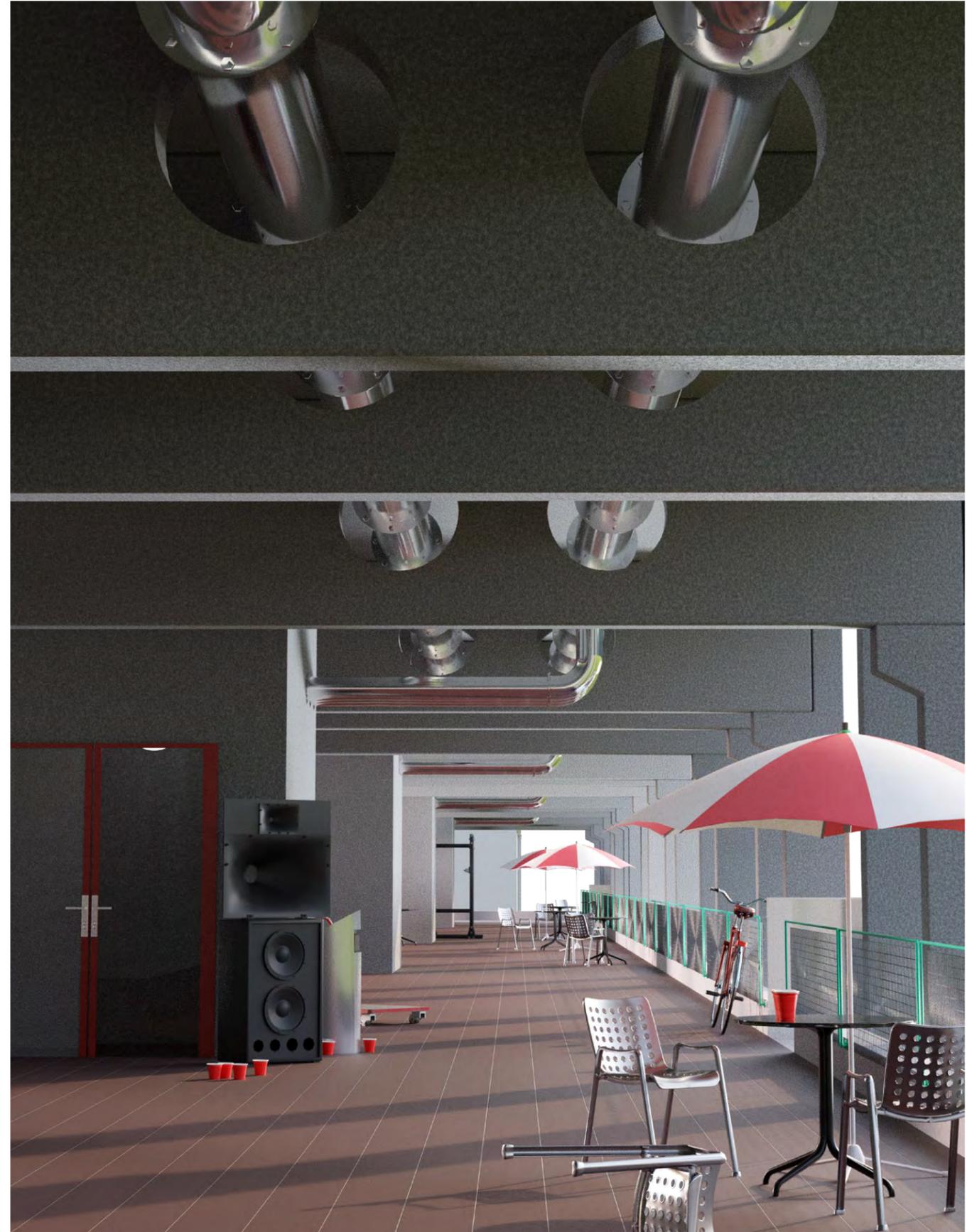
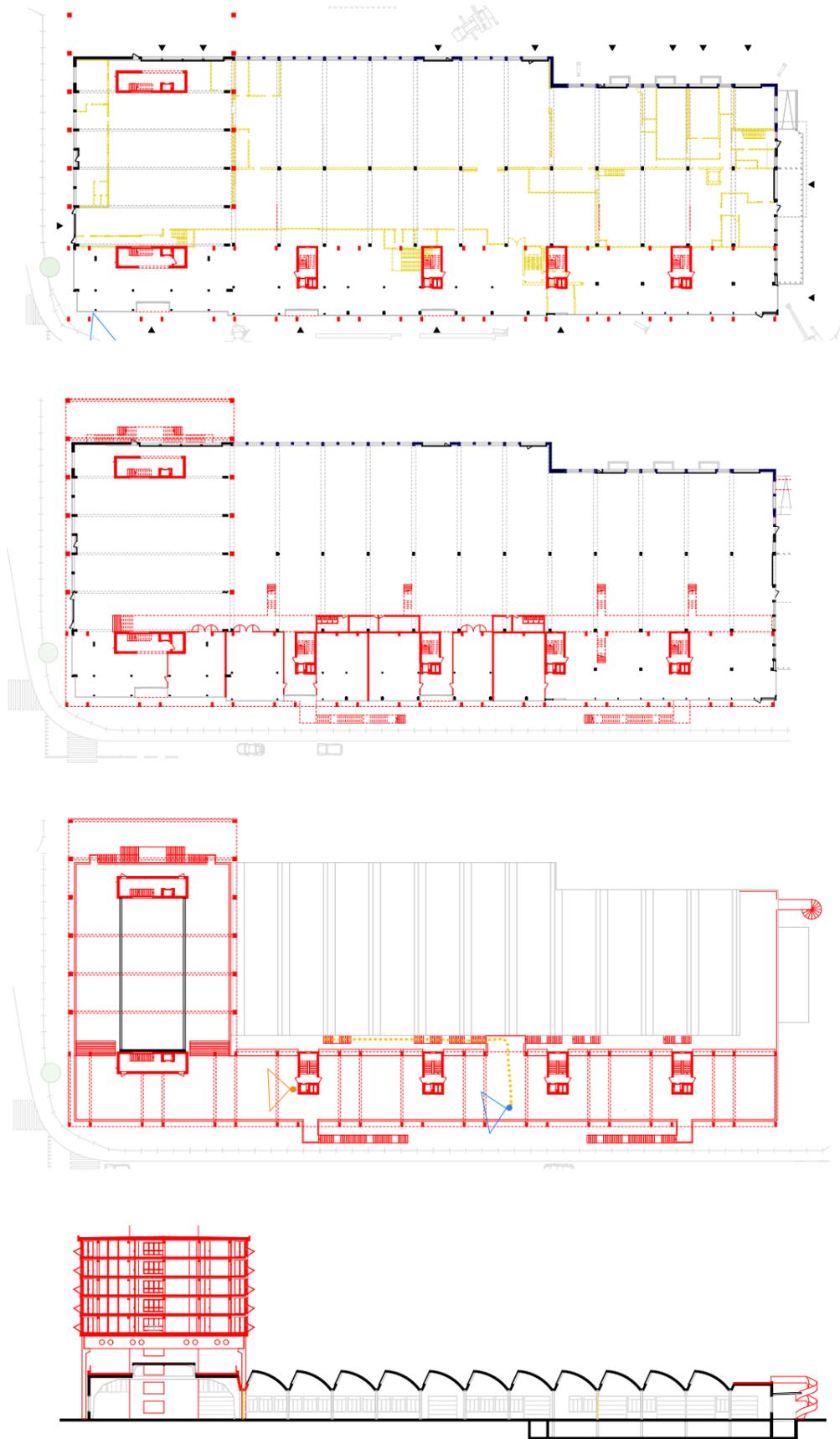


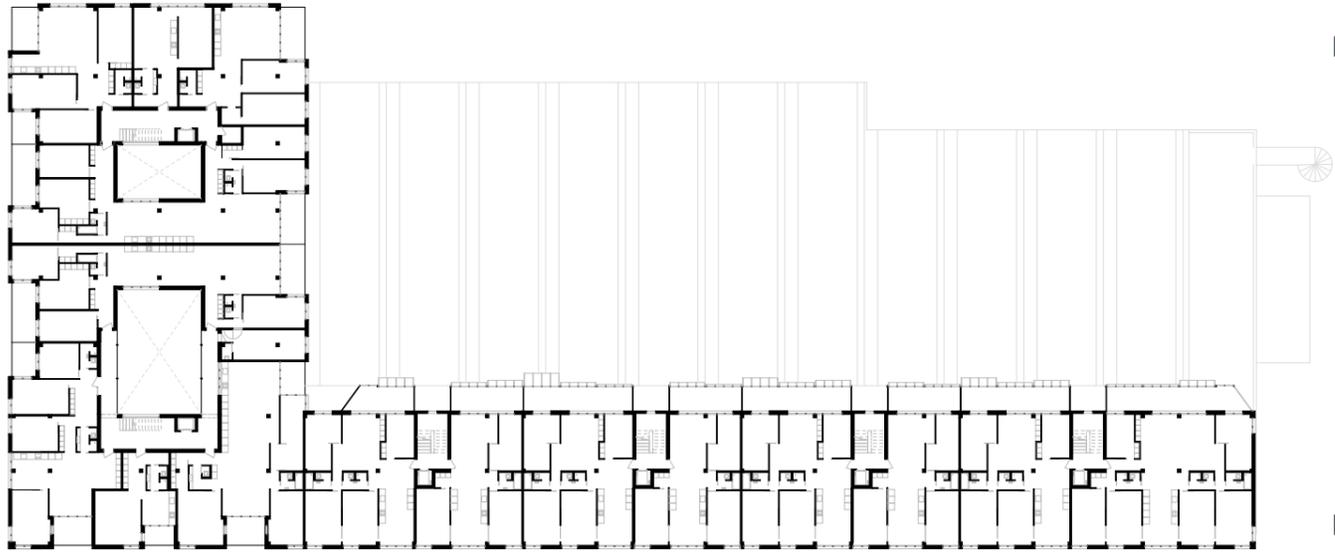
1 10 20



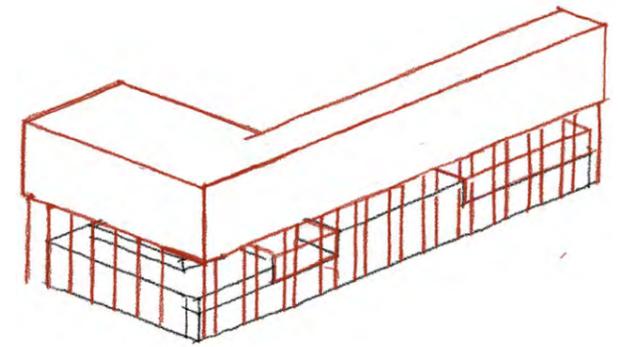
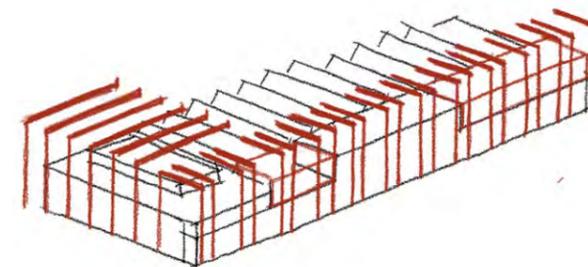
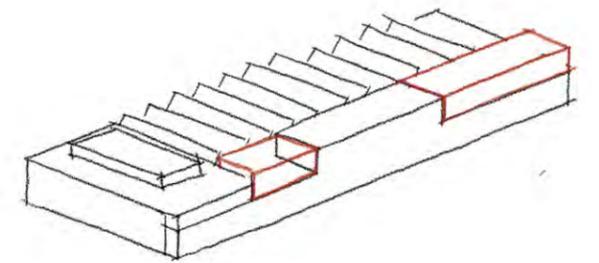
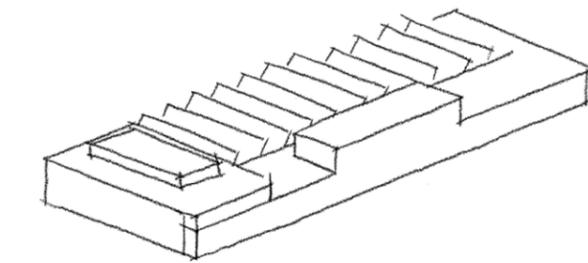
1 2 4

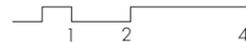
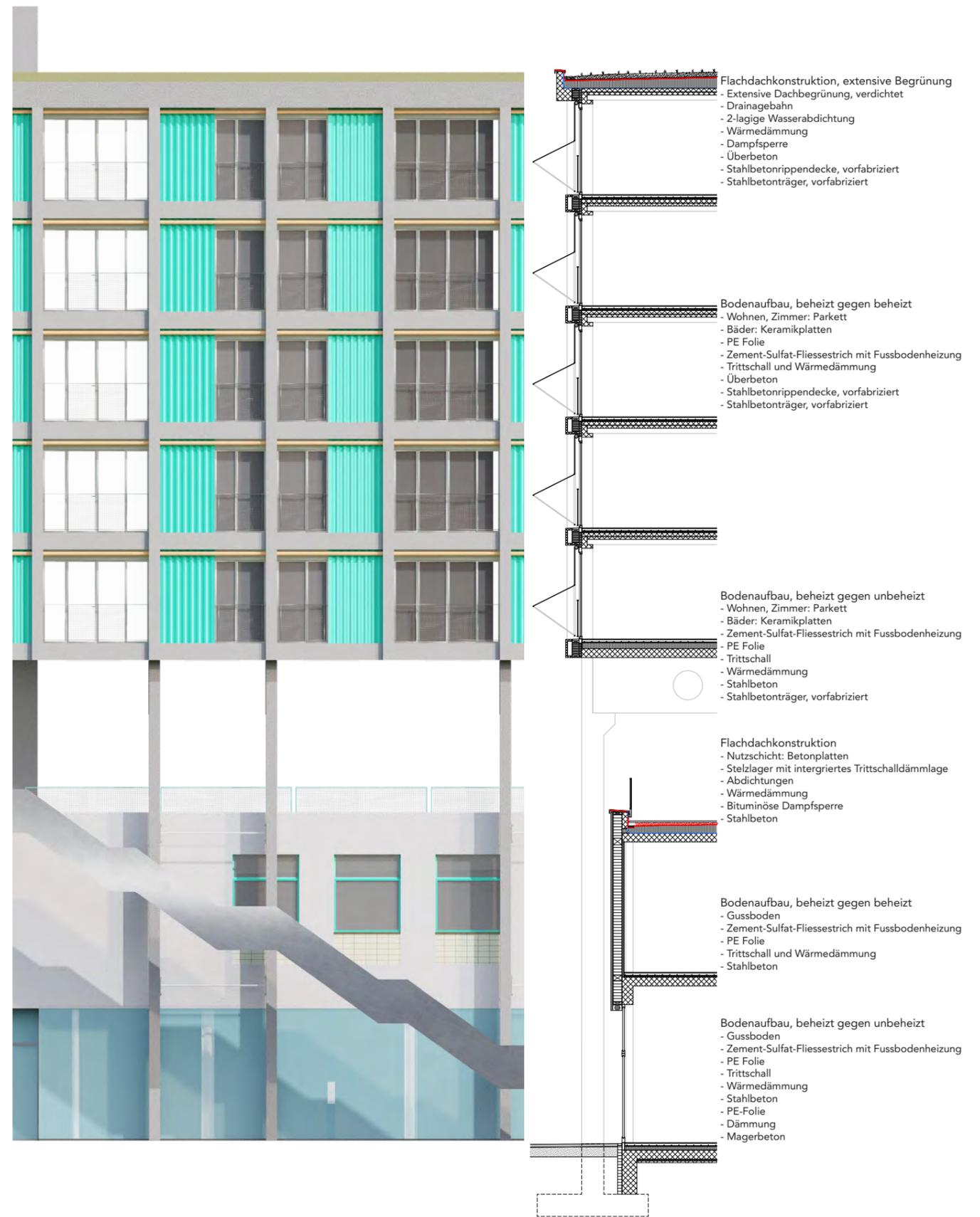


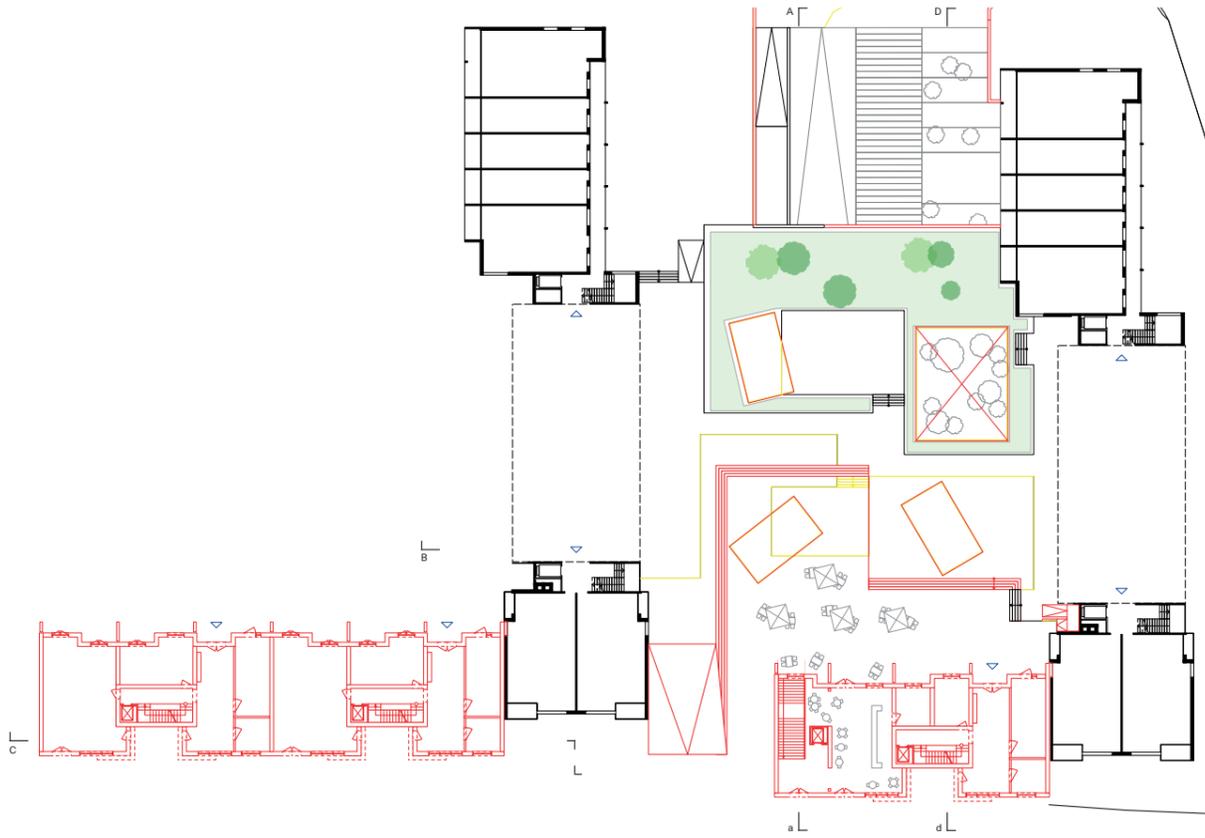




1 5 10

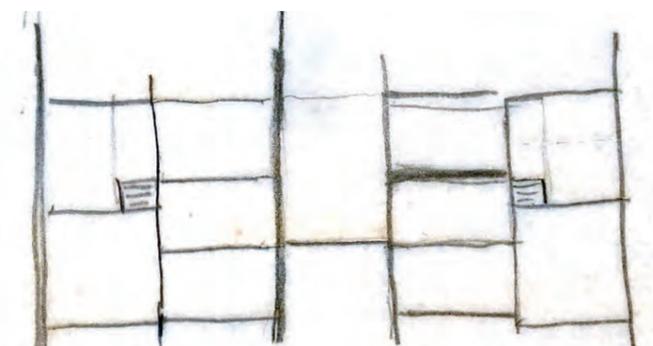
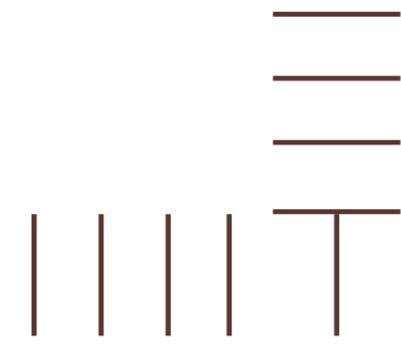






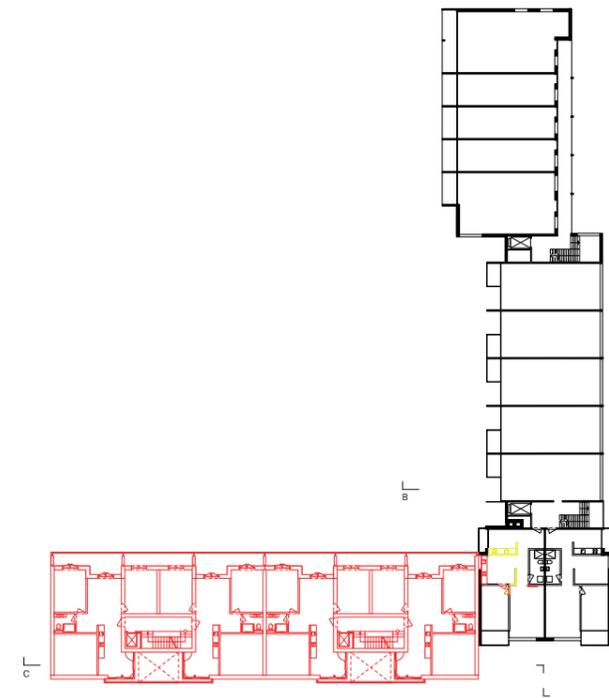
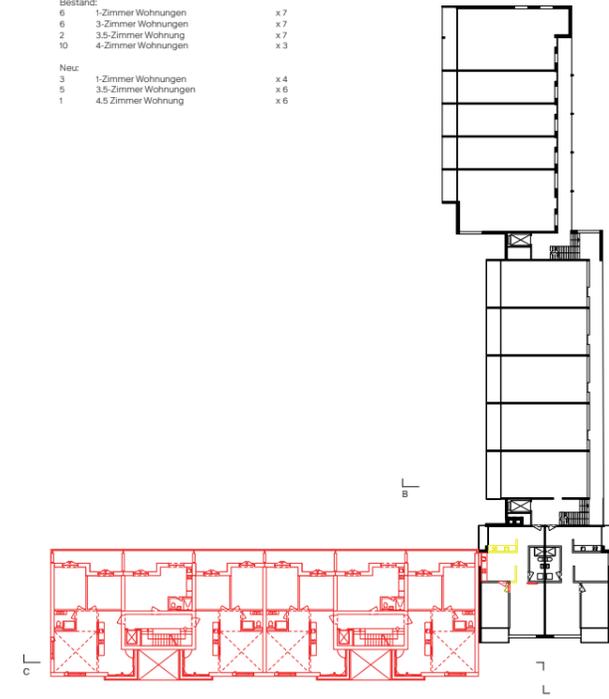


1 5 10

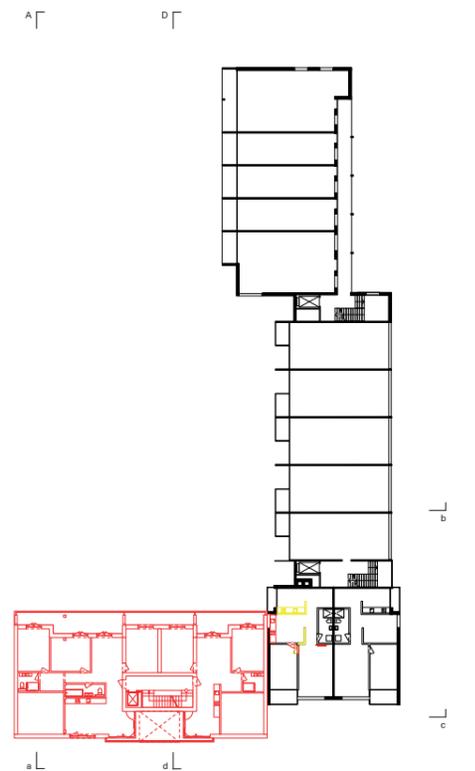
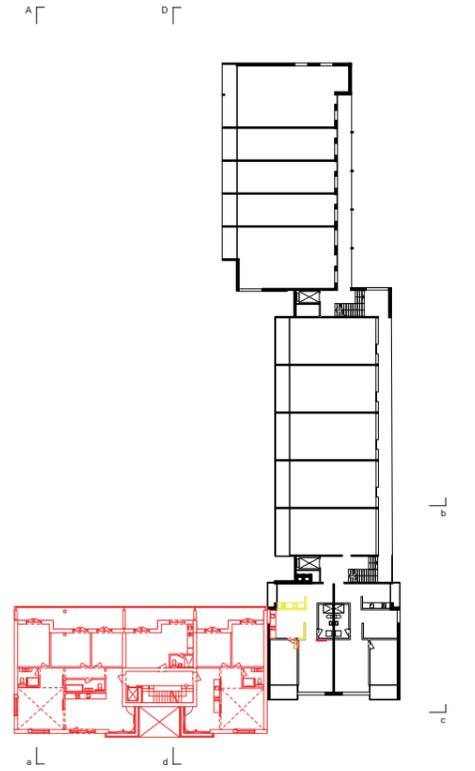


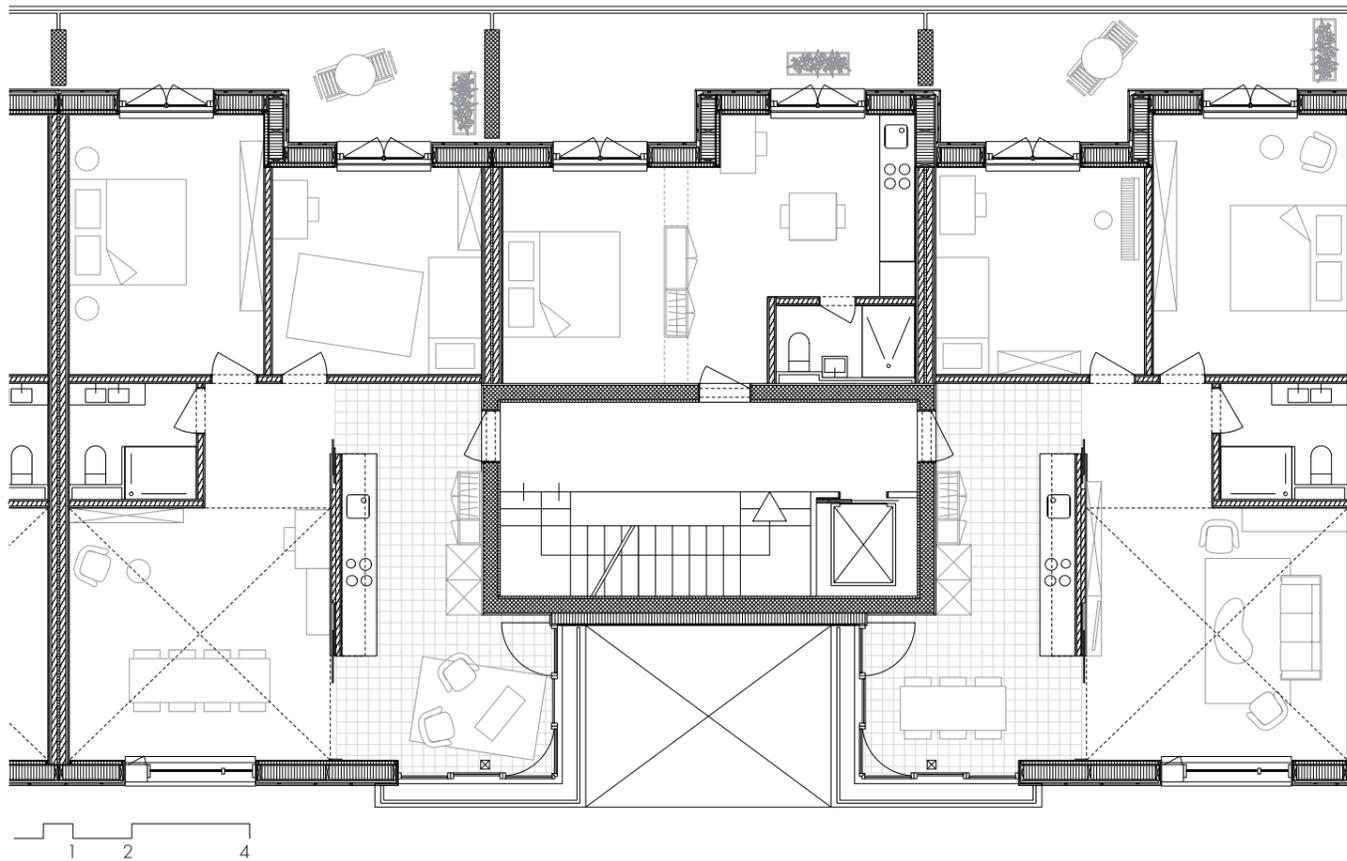
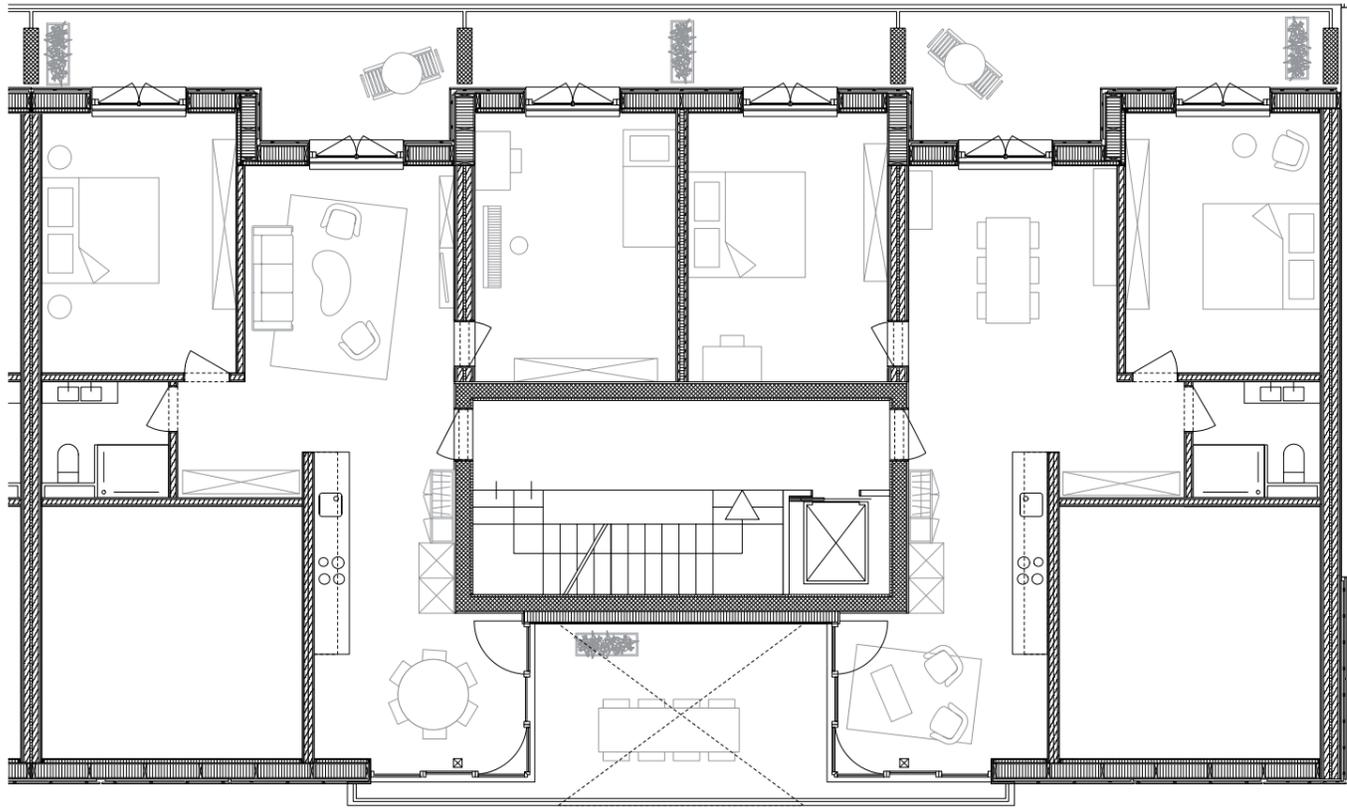
WOHNUNGSSPIEGEL

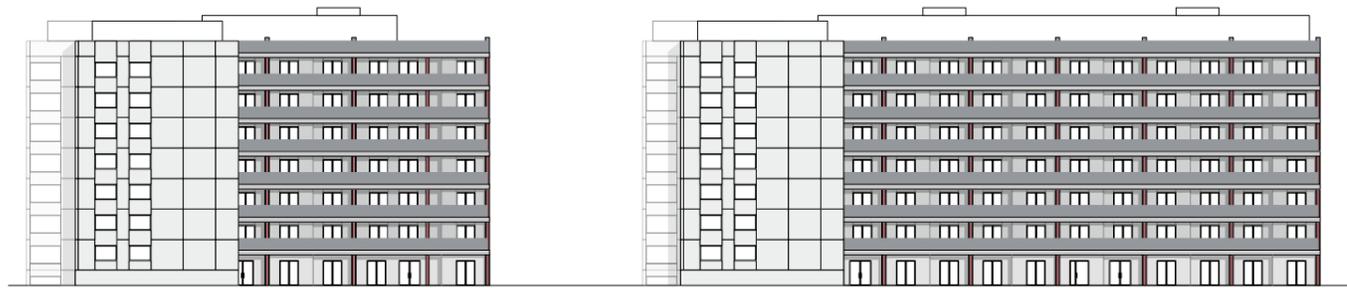
Bestand:		
6	1-Zimmer Wohnungen	x 7
6	3-Zimmer Wohnungen	x 7
2	3.5-Zimmer Wohnung	x 7
10	4-Zimmer Wohnungen	x 3
Neu:		
3	1-Zimmer Wohnungen	x 4
5	3.5-Zimmer Wohnungen	x 6
1	4.5 Zimmer Wohnung	x 6



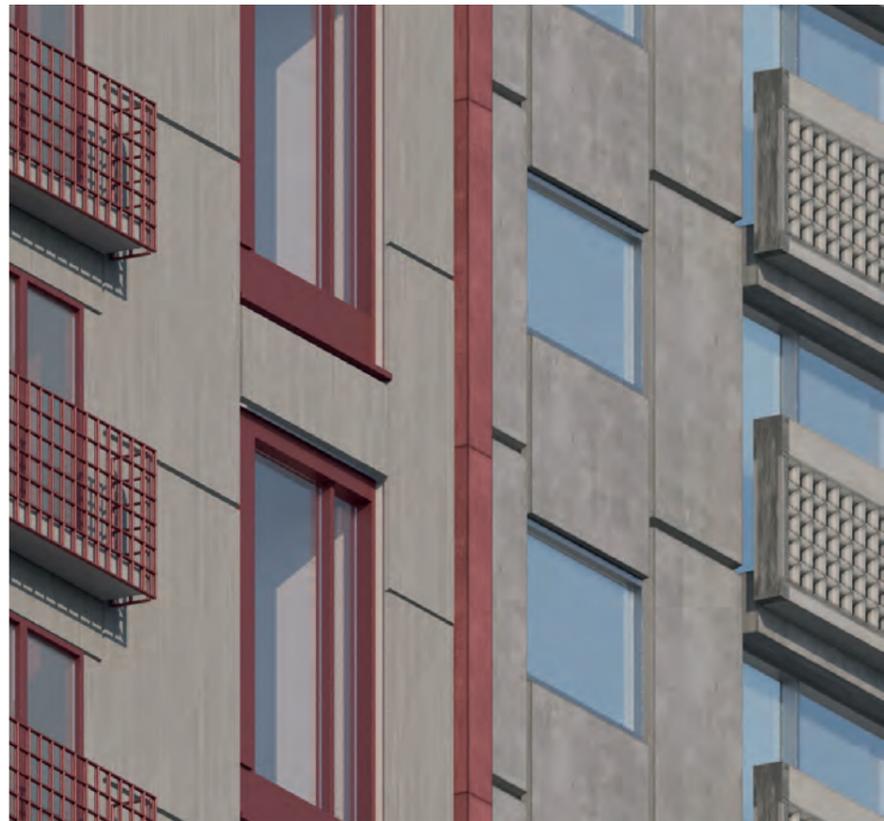
1 5 10







1 5 10



1 2 4

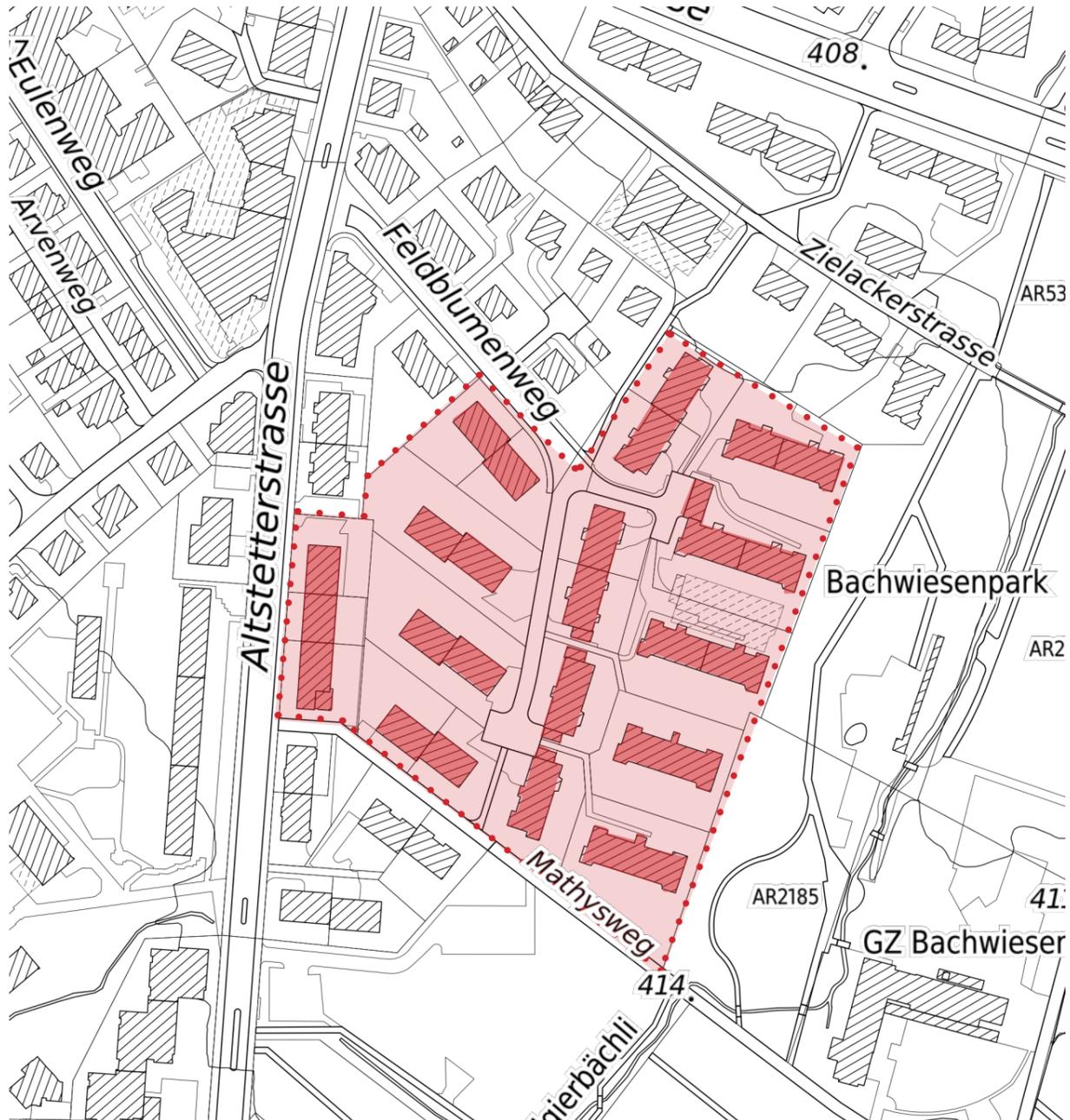
- DACHAUFBAU**
  - 54 mm Platten
  - Wasserführende Schicht
  - 250 mm Dämmung
  - 100 mm Beton
  - 130 mm Brettschichtplatte
- AUSSENWANDAUFBAU A**
  - Alufensterrahmen vorgefertigt mit Sandwichelement
  - Sonnenschutz
  - 5 mm Alubeschlag
  - 140 mm Dämmung
  - 5 mm Alubeschlag
  - 18 mm Gipsfaserplatte
- AUSSENWANDAUFBAU B**
  - 24 mm Weißtanne vorvergraut
  - 24 mm Lattung
  - 40 mm Hinterlüftung
  - Holzrahmenelement vorgefertigt:
    - Windsperre
    - 2x 18 mm Gipsfaserplatte
    - 240/80 mm Pfosten Buchen-Furnierschichtholz, dazw. 240 mm Mineralwolle
    - 2x 18 mm Brandschutzplatte Gipsfaser
  - Installationsschicht:
    - 15 mm Gipskartonplatte
    - Stahlprofil C 60, dazw. 60 mm Mineralwolle
    - Dampfsperre
- GESCHOSSECKENAUFBAU**
  - 15 mm Belag
  - 55 mm Estrich
  - 40 mm Trittschalldämmung
  - 100 mm Beton
  - 160 mm Brettstapeldecke
- DECKENAUFBAU EG**
  - 15 mm Belag
  - 55 mm Estrich
  - 70 mm Trittschalldämmung
  - 250 mm Beton
- BODENAUFBAU EG**
  - 15 mm Belag
  - 55 mm Estrich
  - 180 mm Dämmung
  - 350 mm Beton
- BODENAUFBAU KELLER UNBEHEIZT**
  - 30 mm Zementüberzug
  - 200 mm Betonbodenplatte
  - 50 mm Magerbeton

# 05 SIEDLUNG BACHWIESEN-PARK

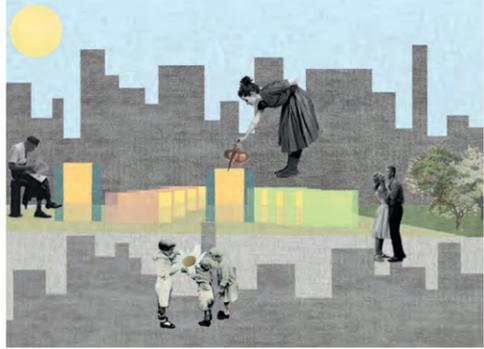
## ALTSTETTEN SÜD

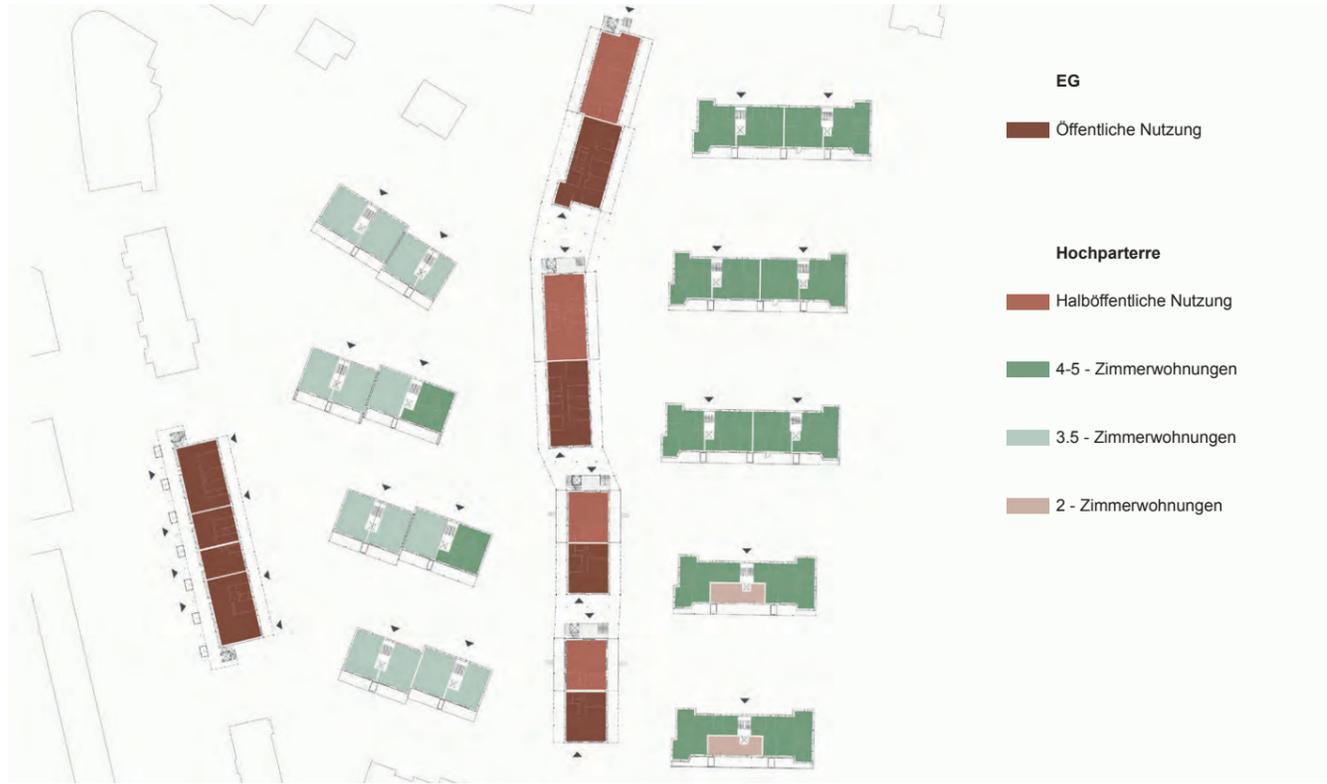


Luftbild



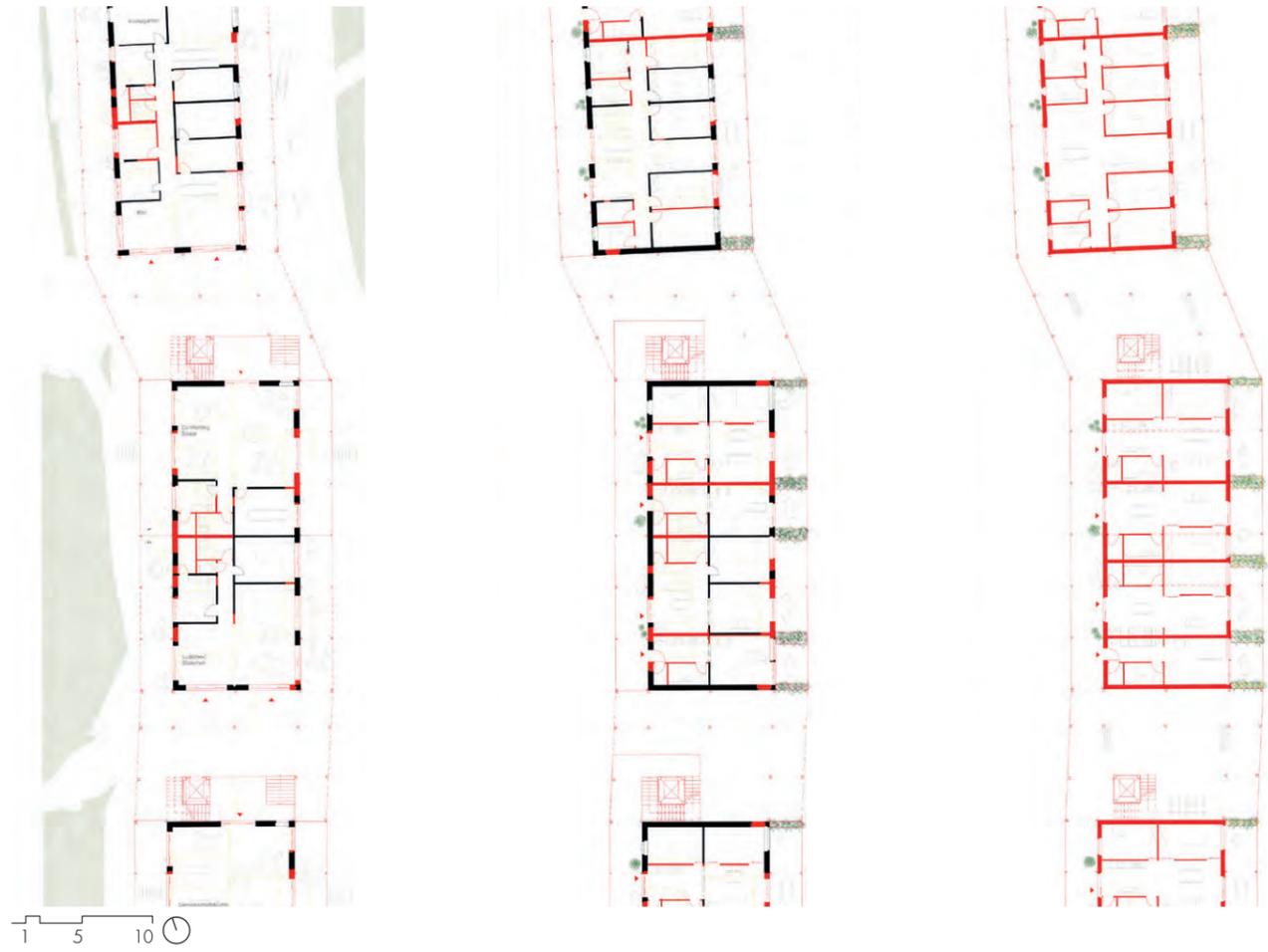
M 1:2000

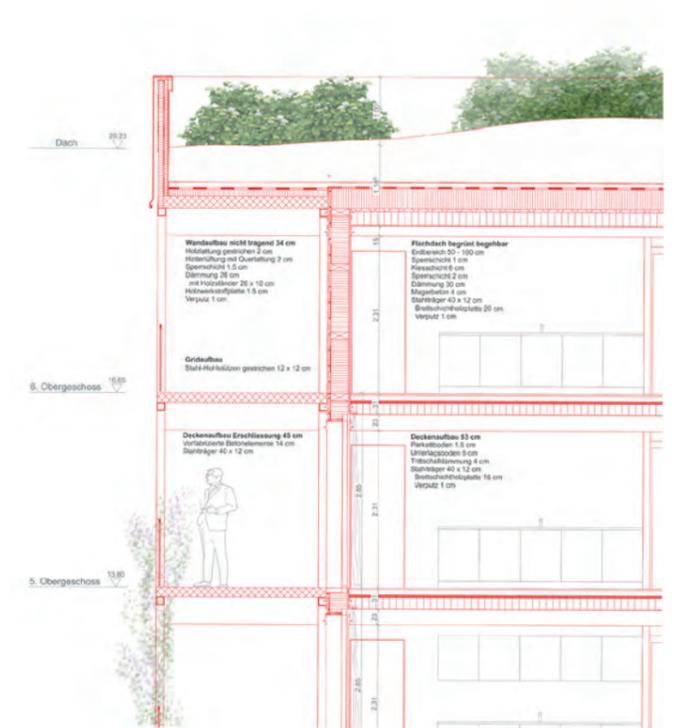
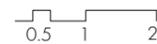
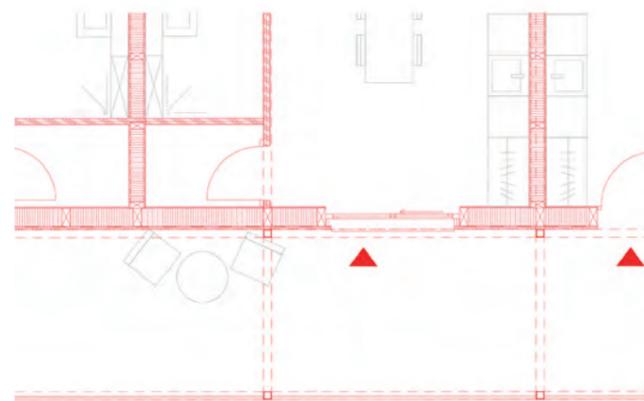
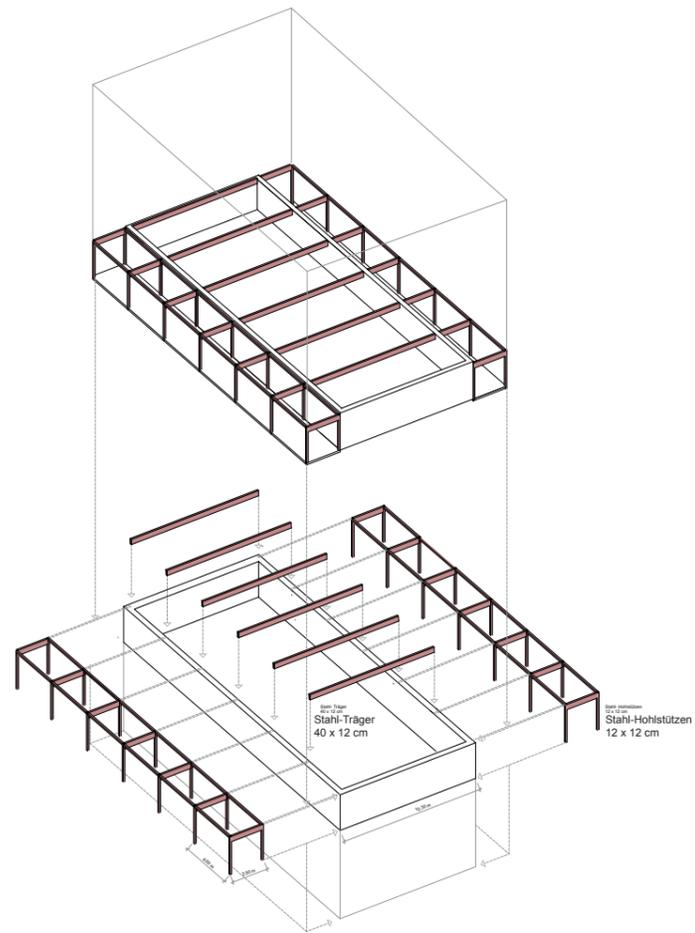
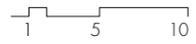


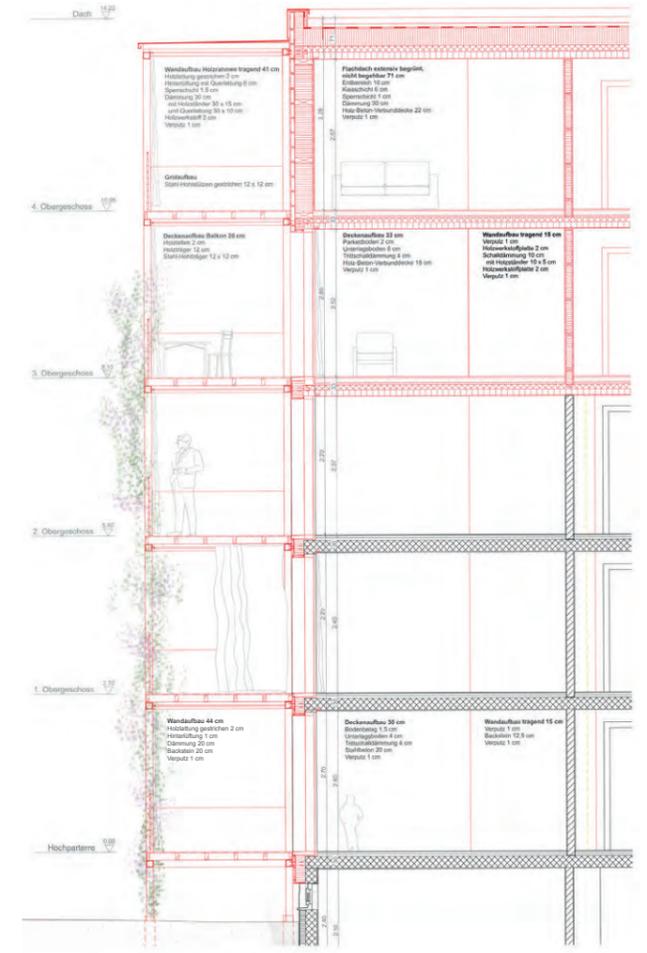
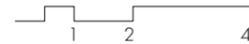
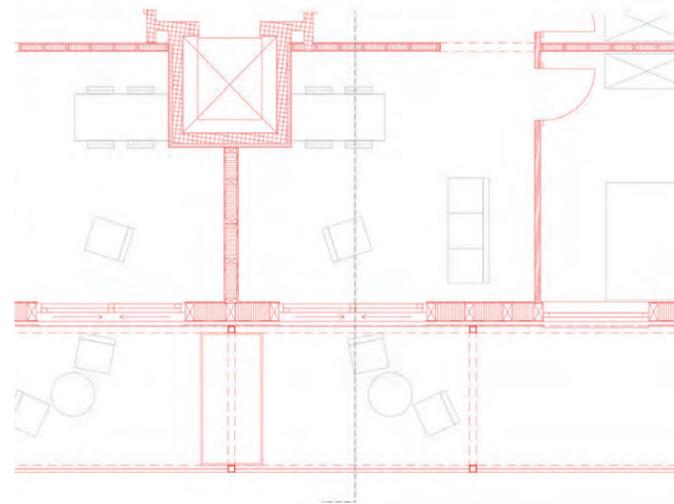
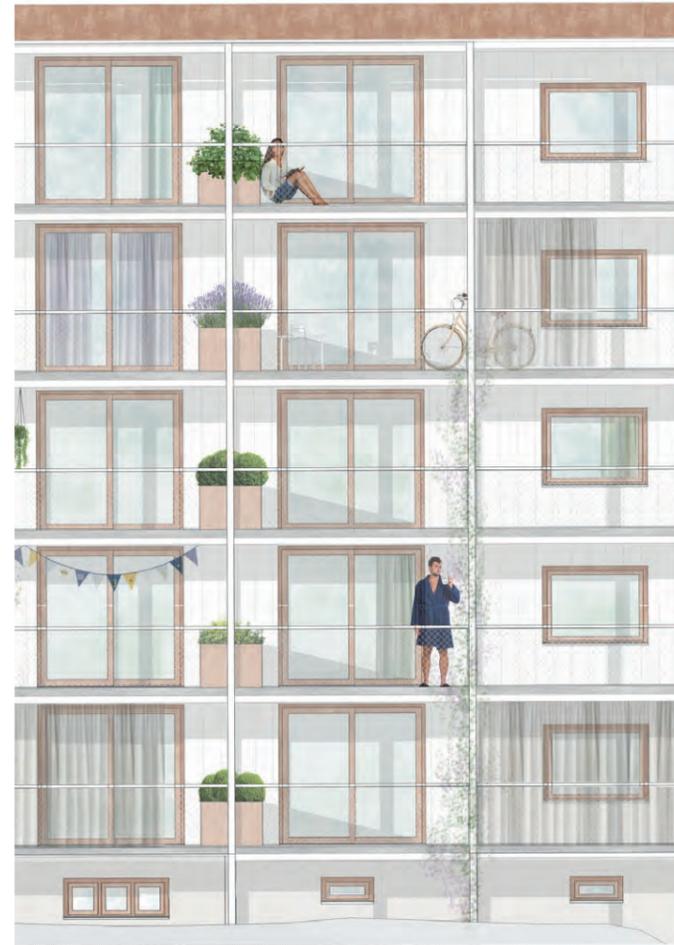
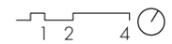
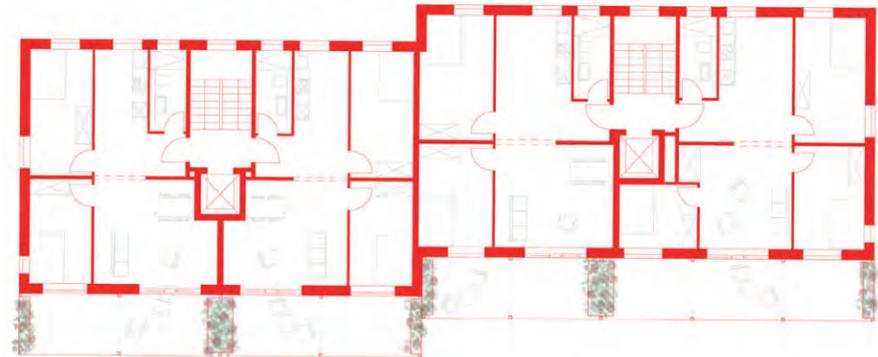
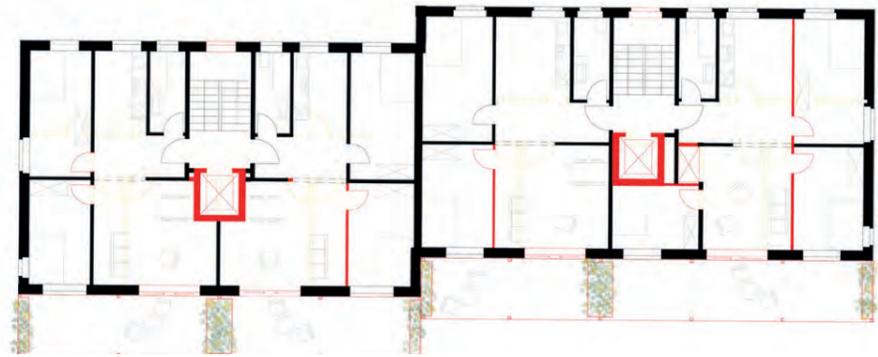


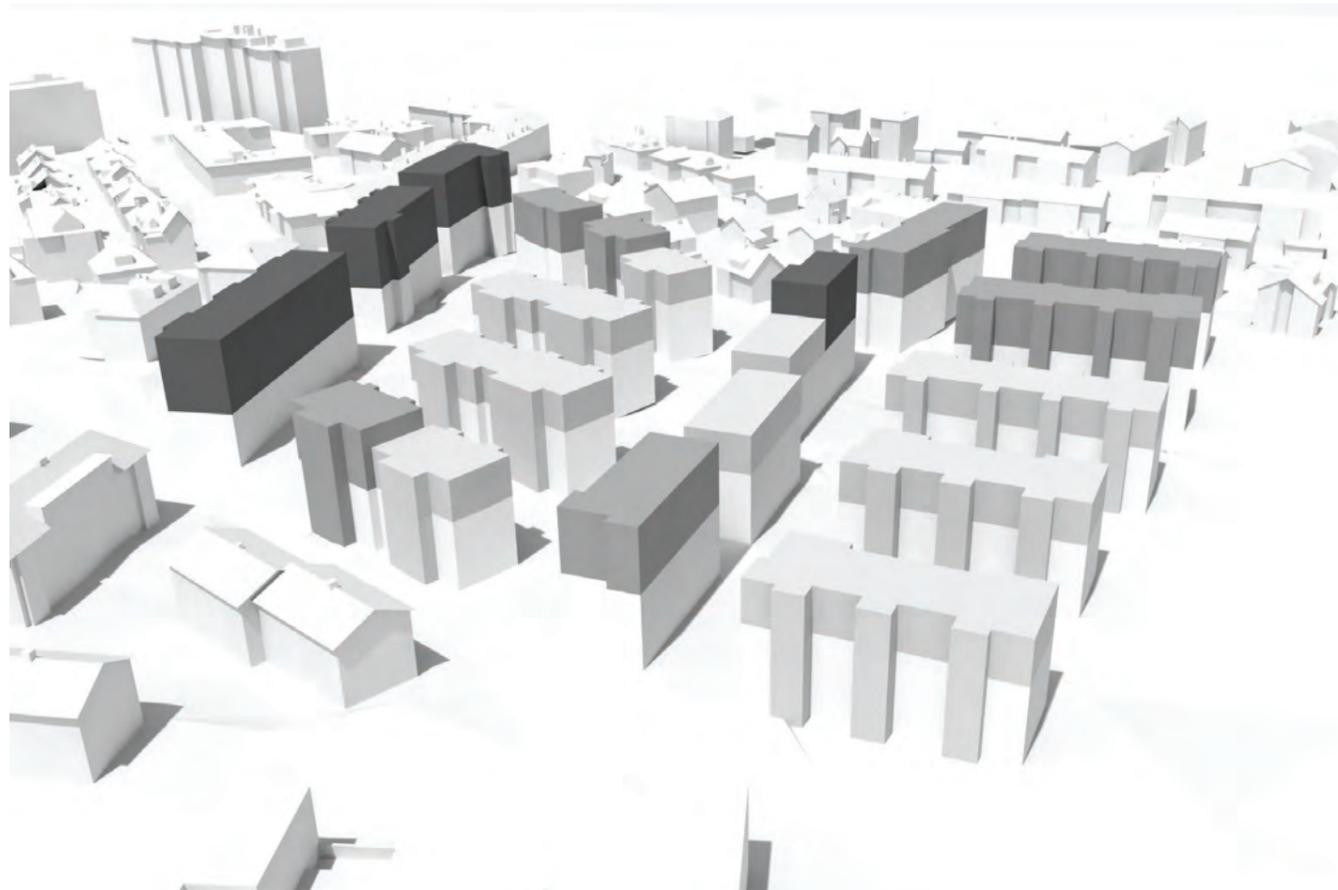
1 10 20

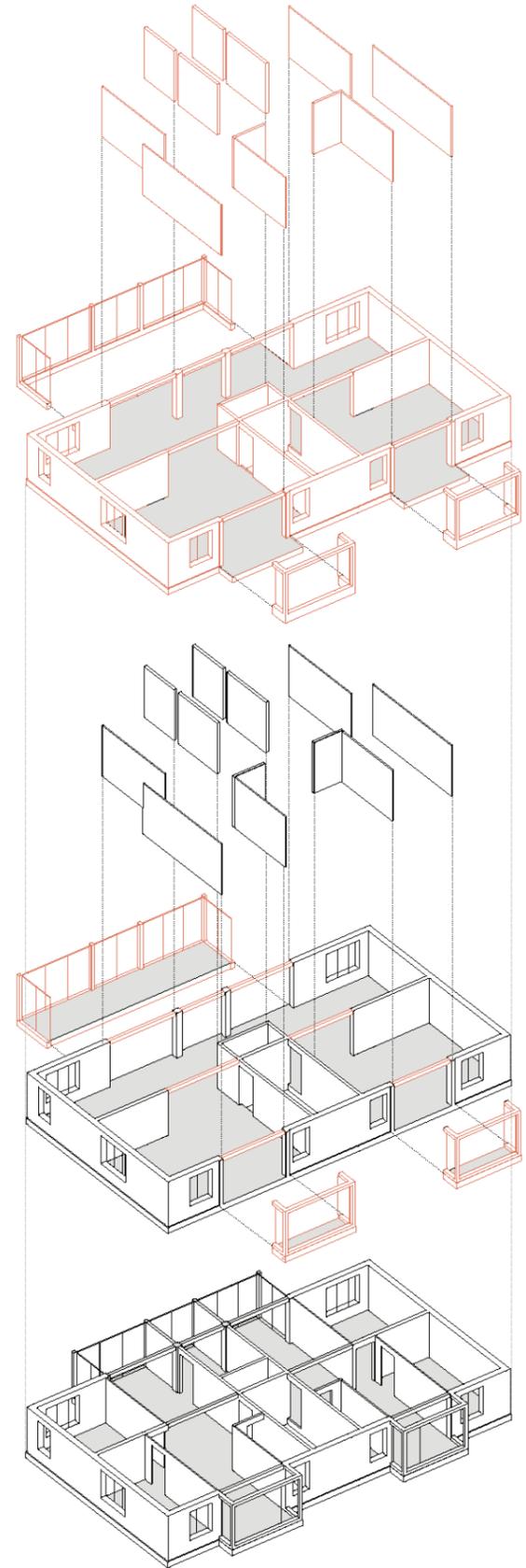


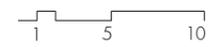
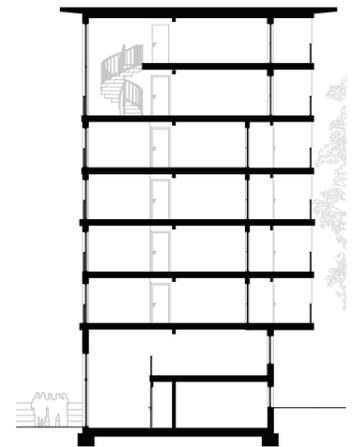
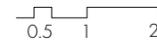
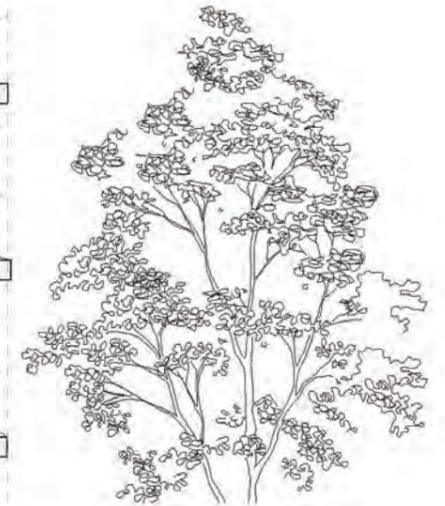
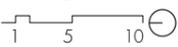
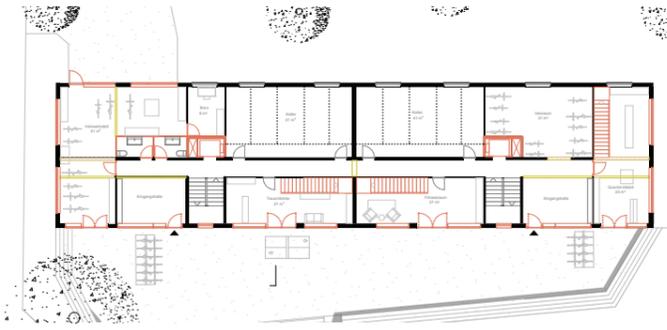


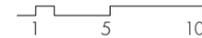
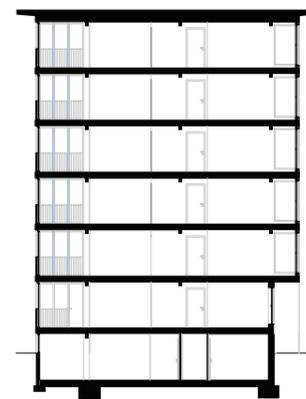
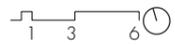
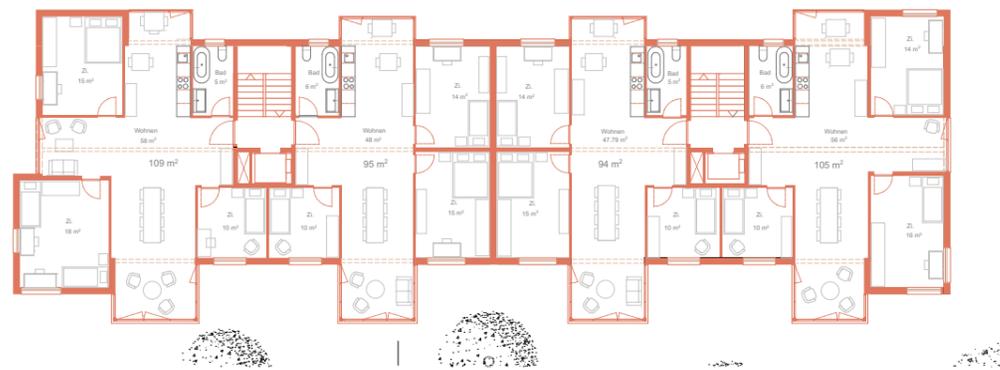
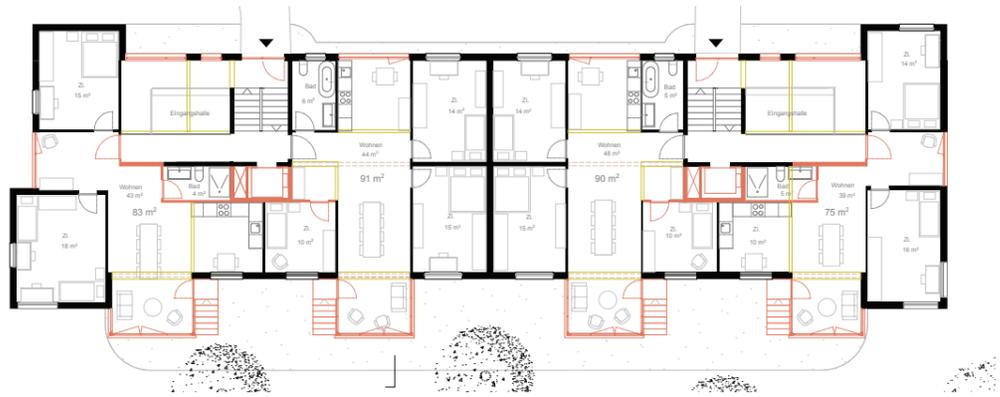
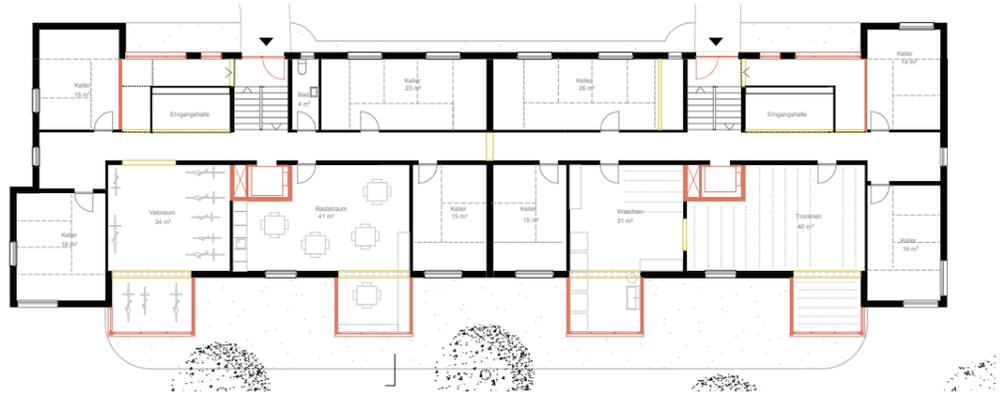


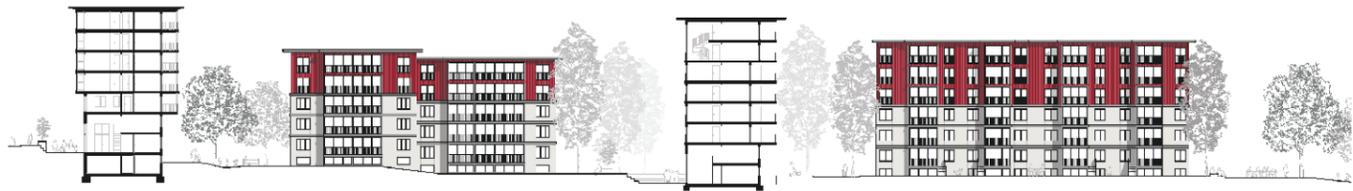




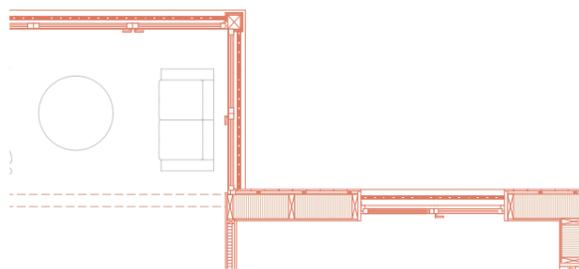
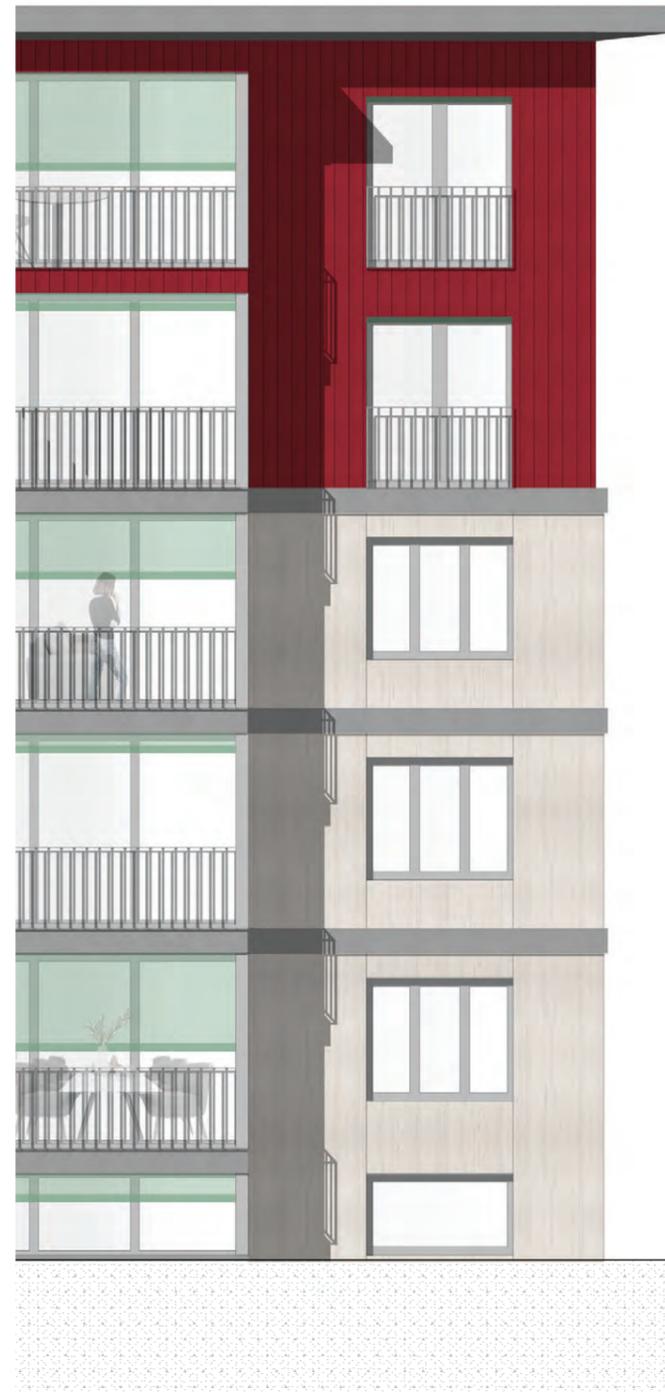




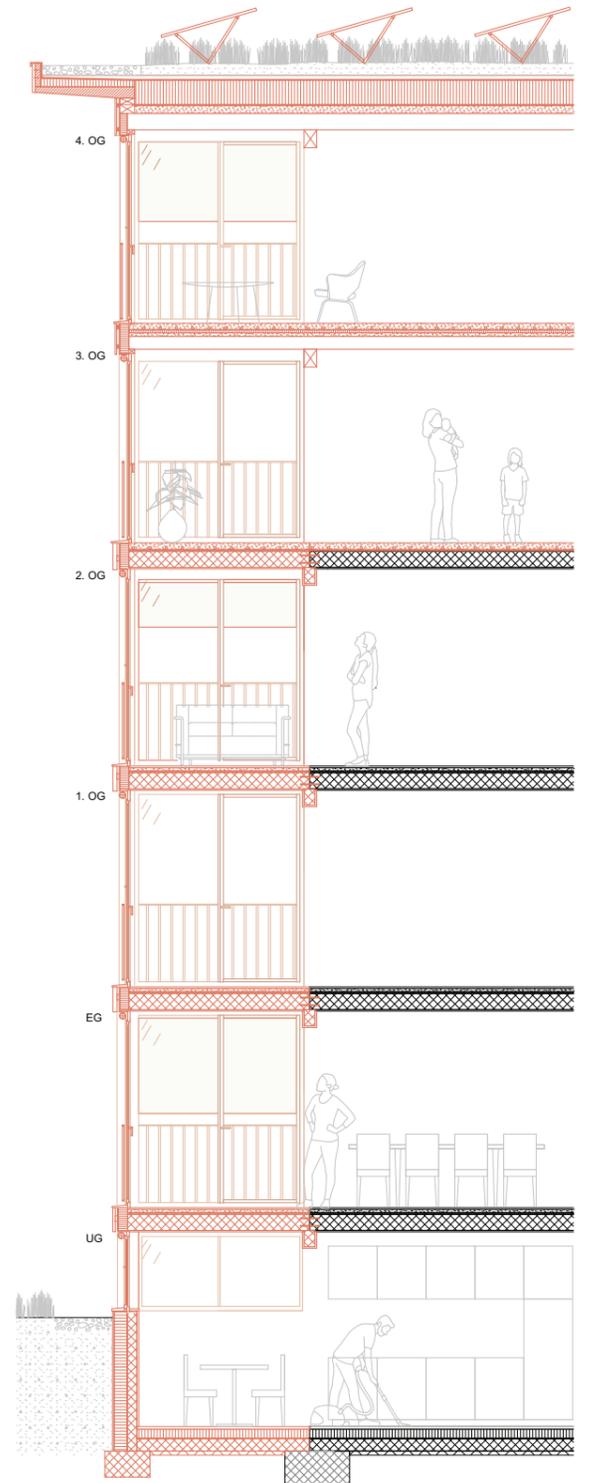


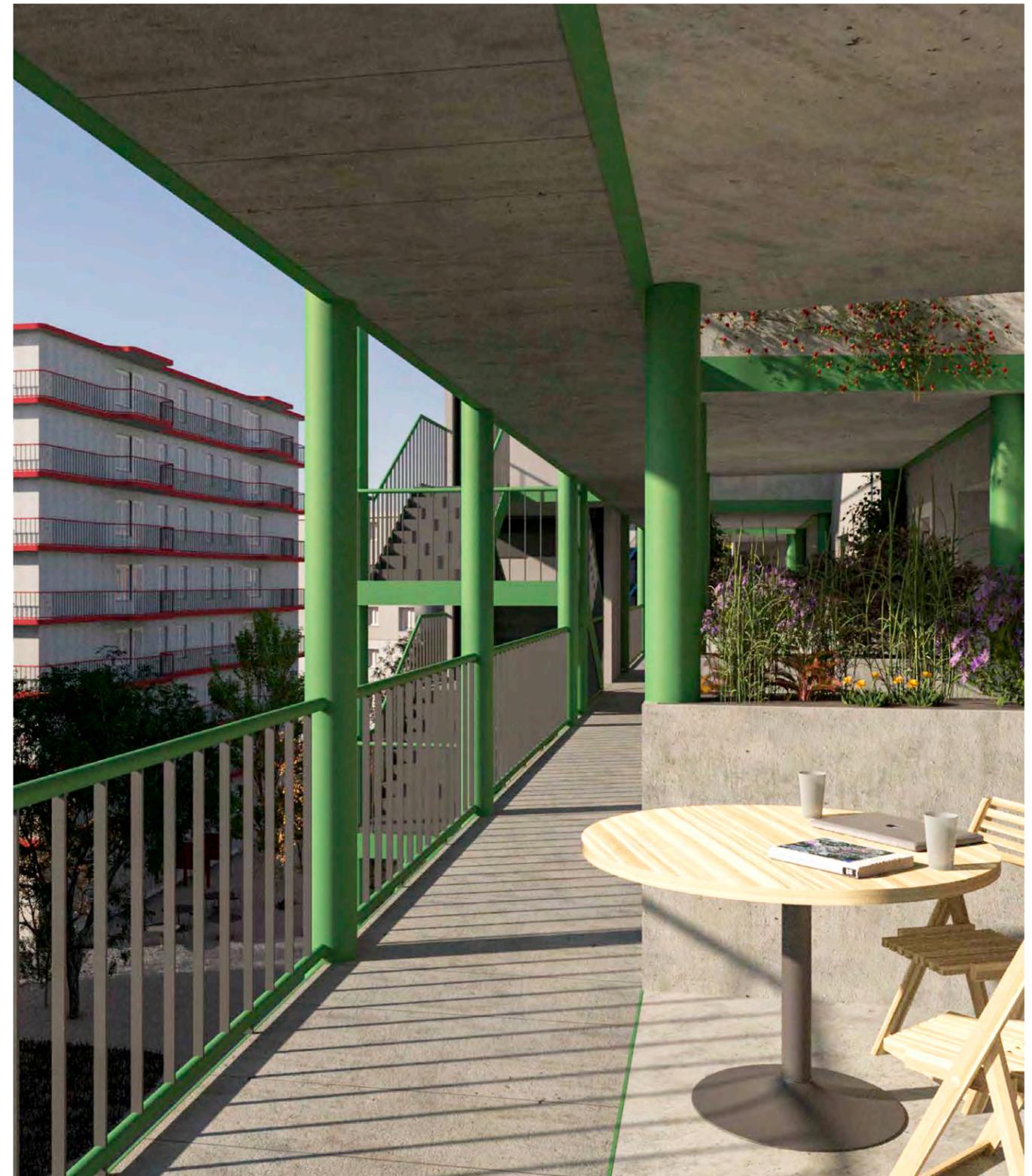
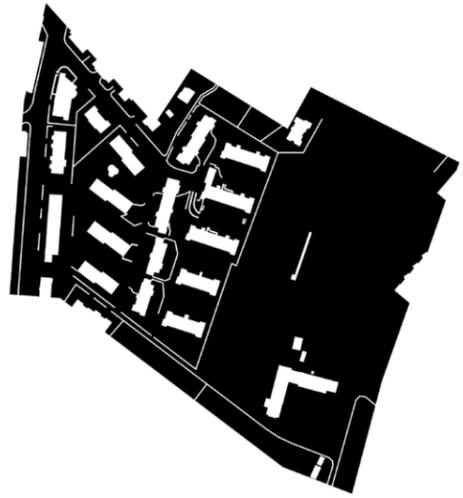


1 5 10



0.5 1 2





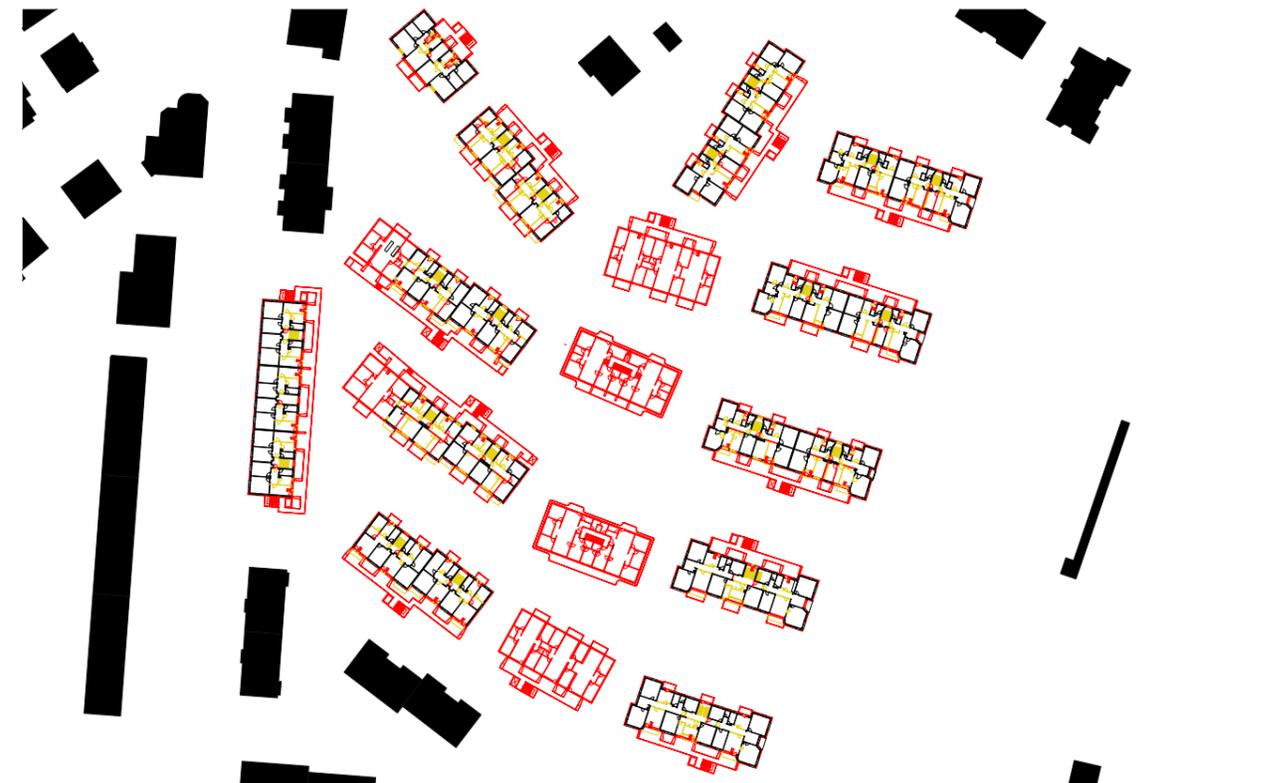
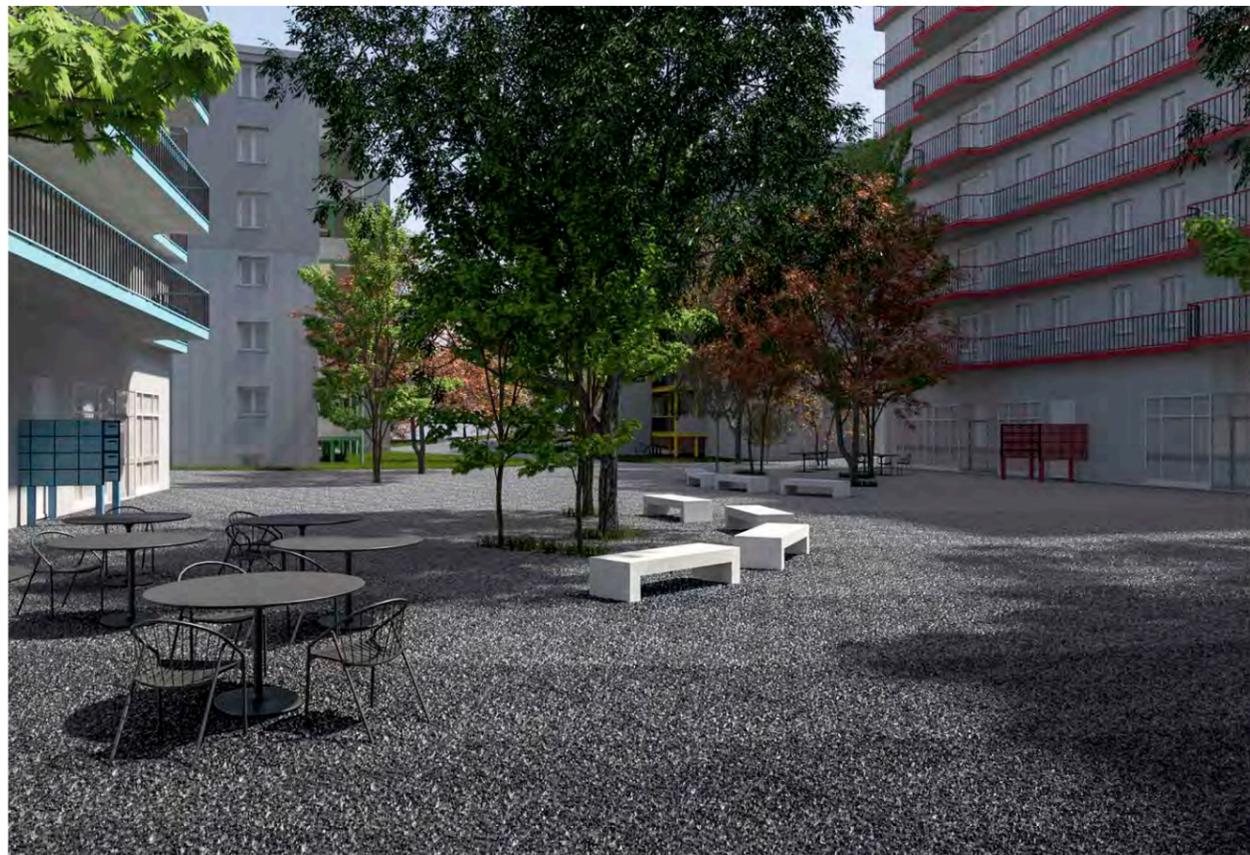


5 20 40

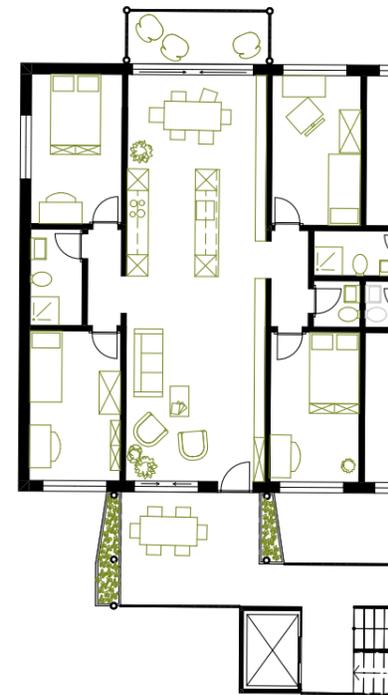
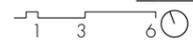
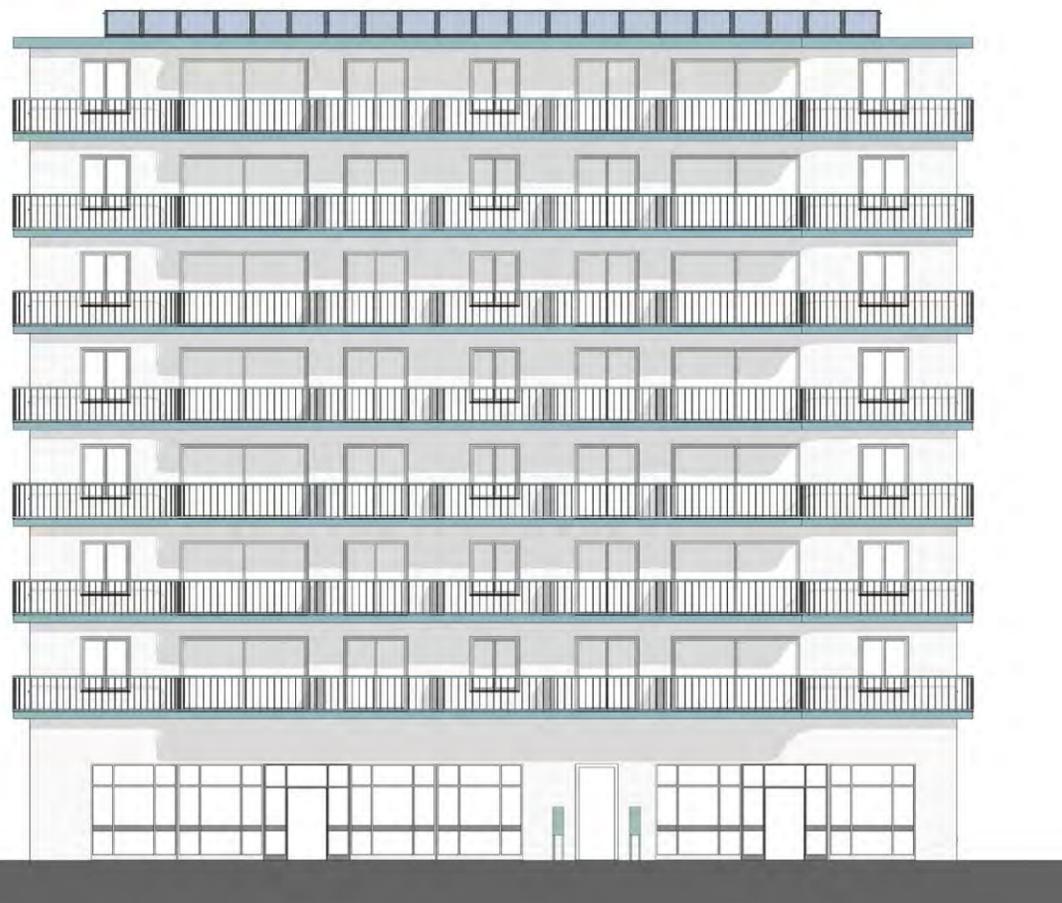
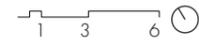
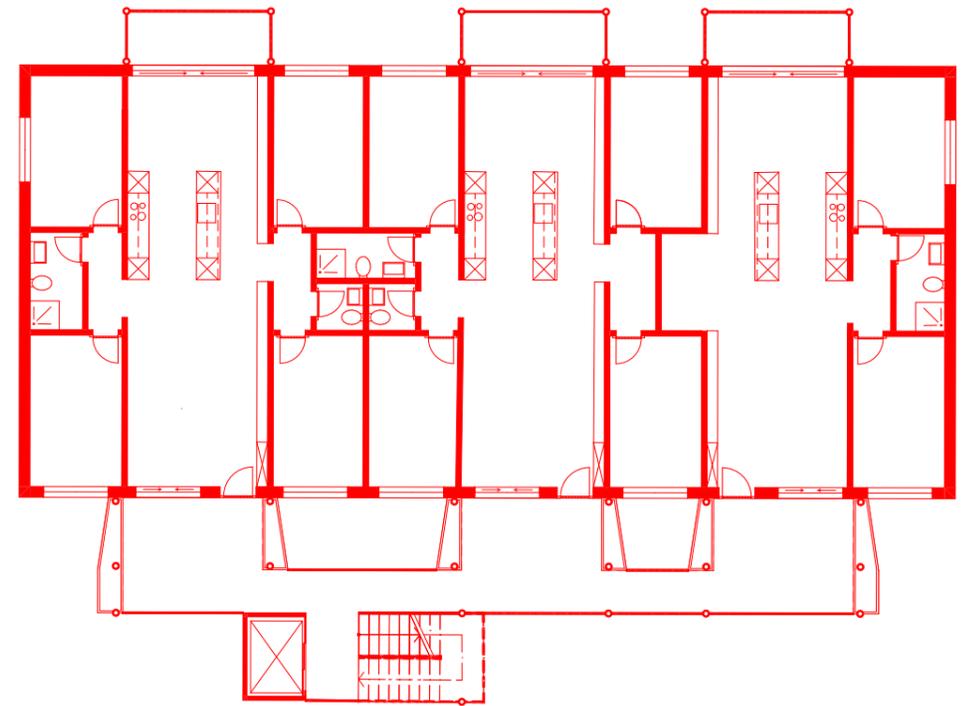
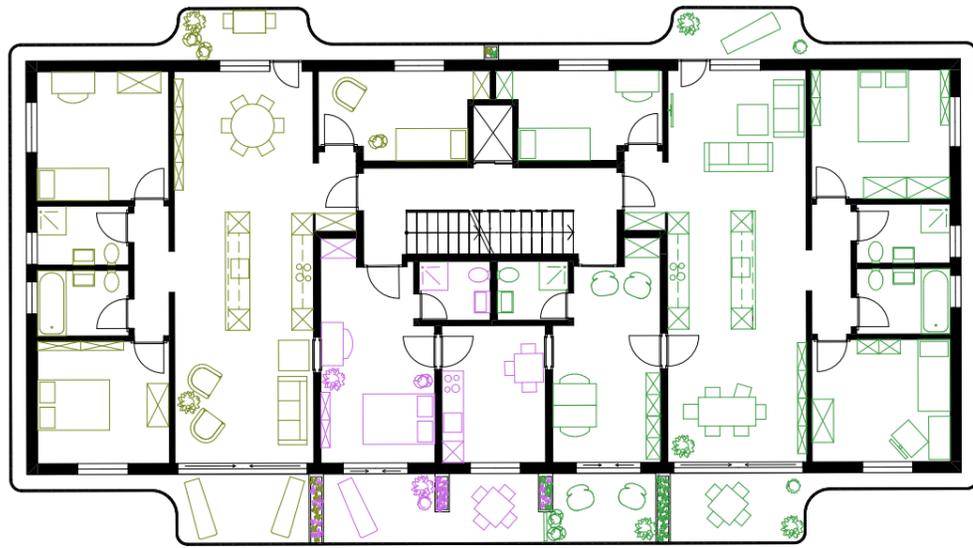


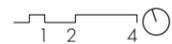
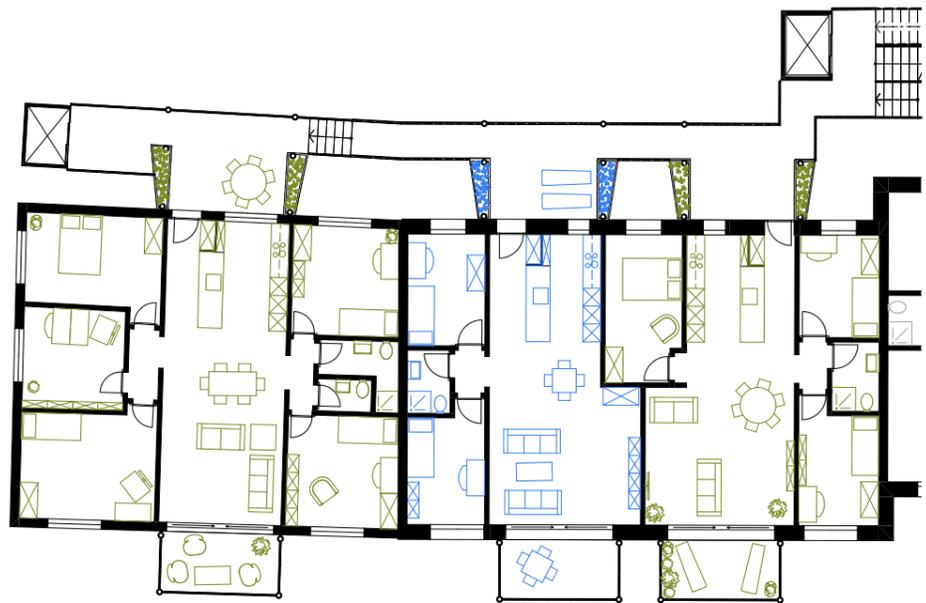
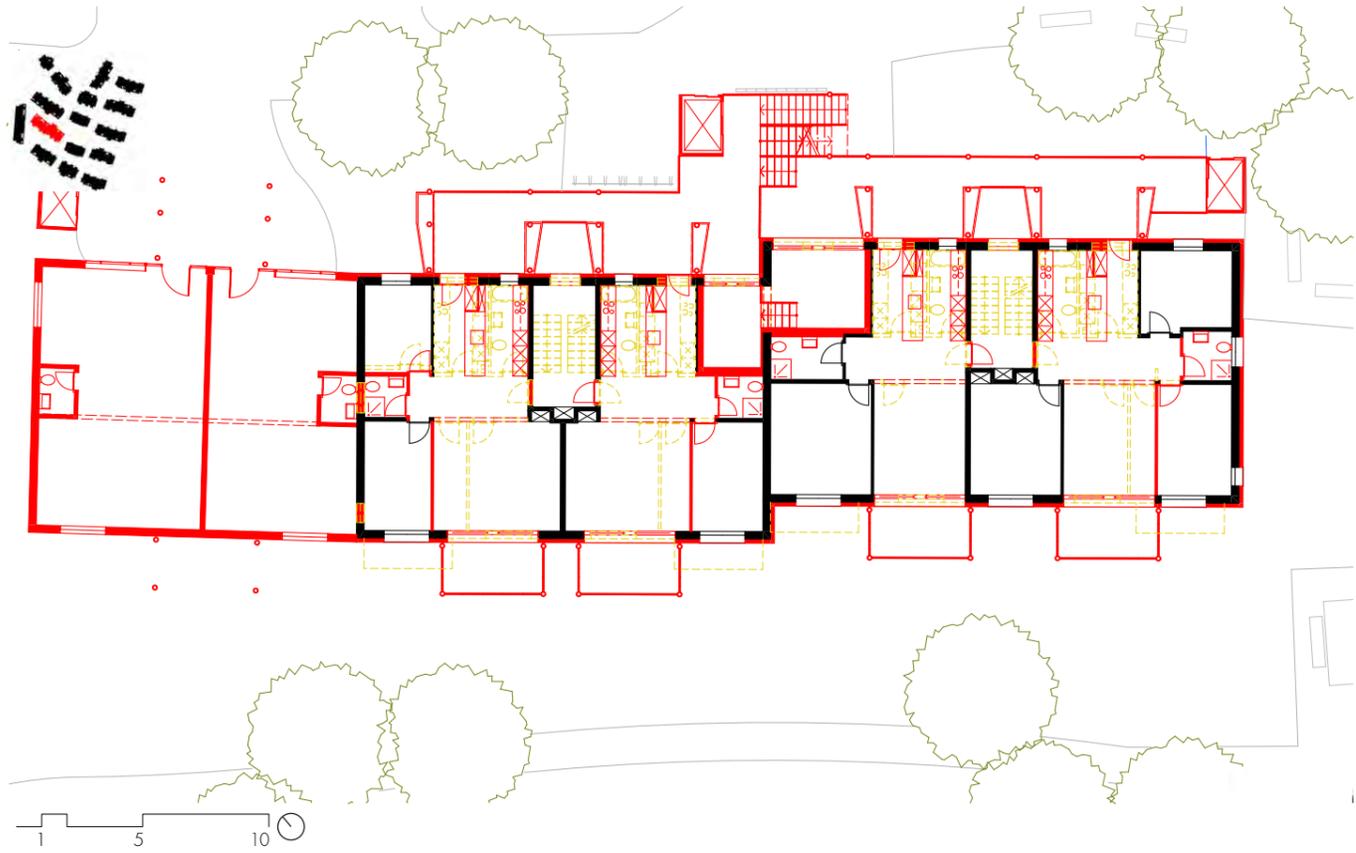
stilles Gewerbe Bistro Gemeinschaftsraum Kindergarten

5 20 40



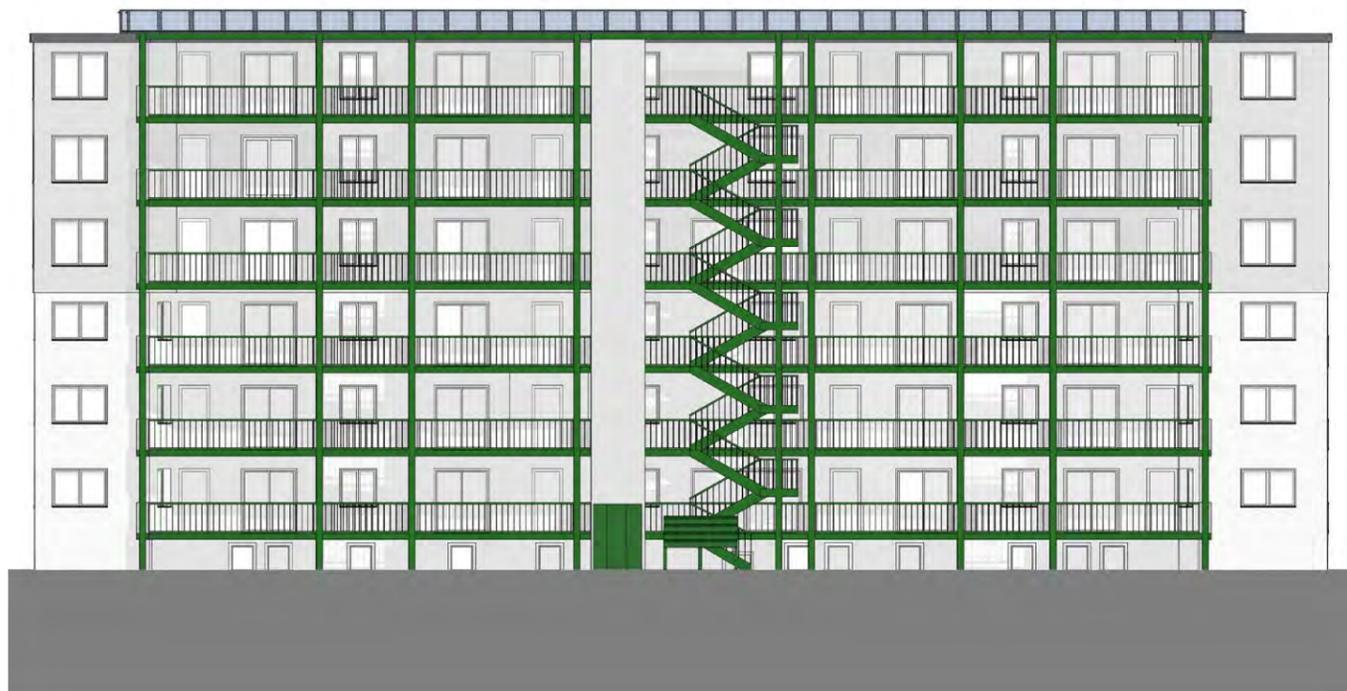
5 20 40



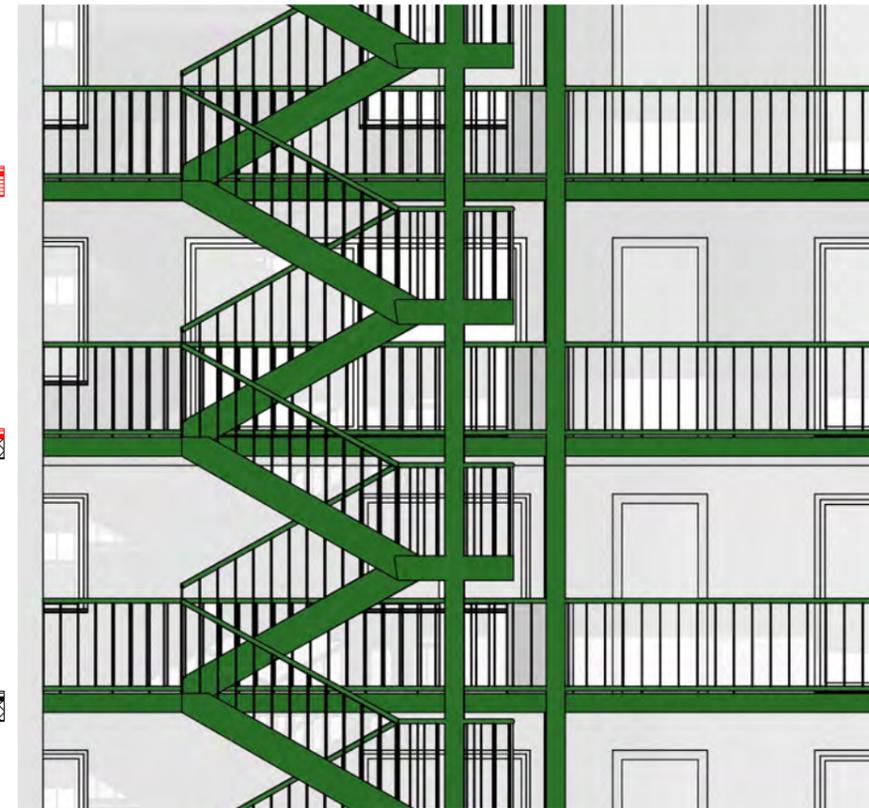
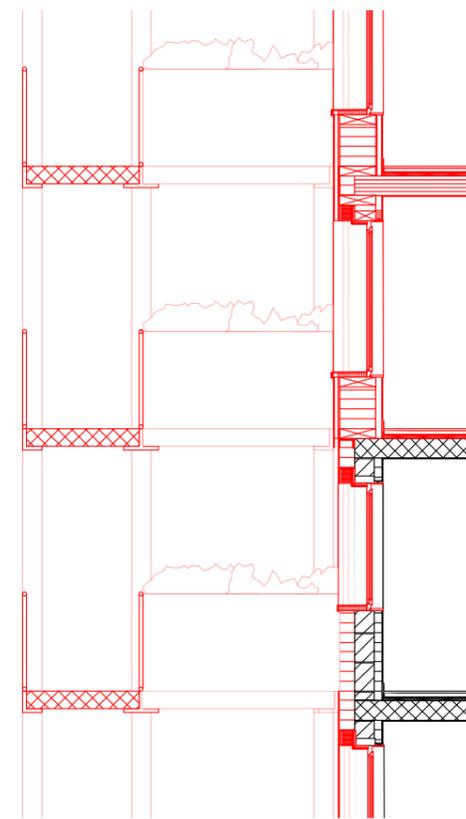




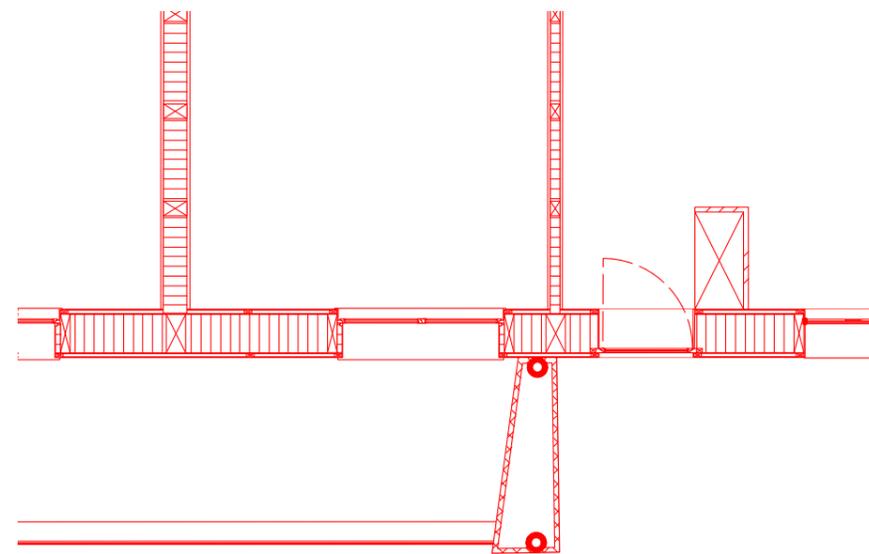
1 2 4



1 2 4



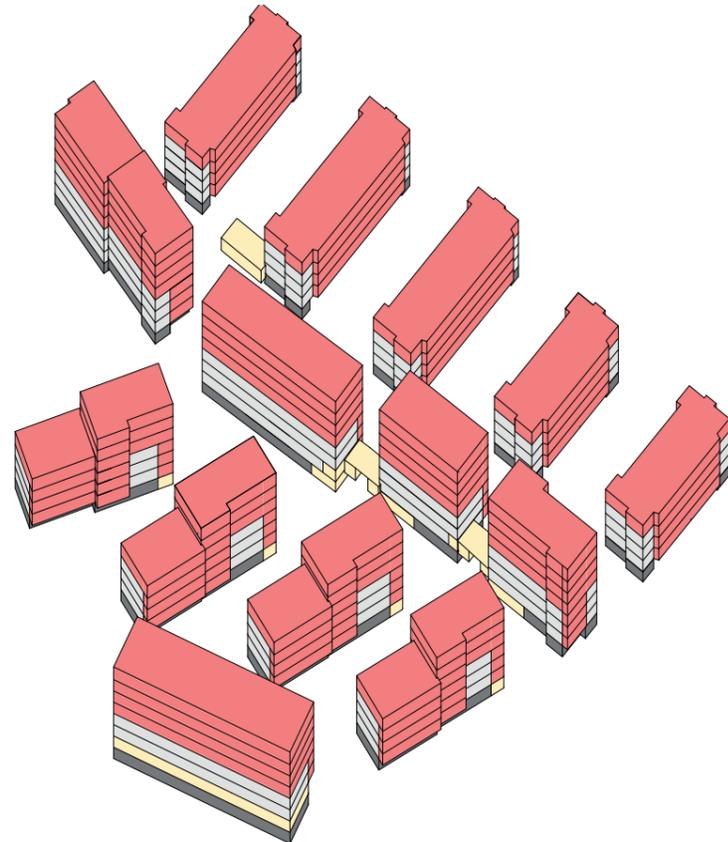
0.1 0.5 1





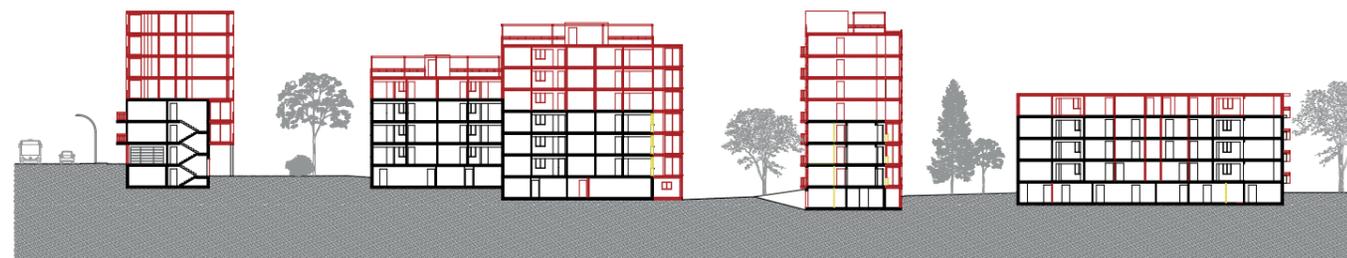
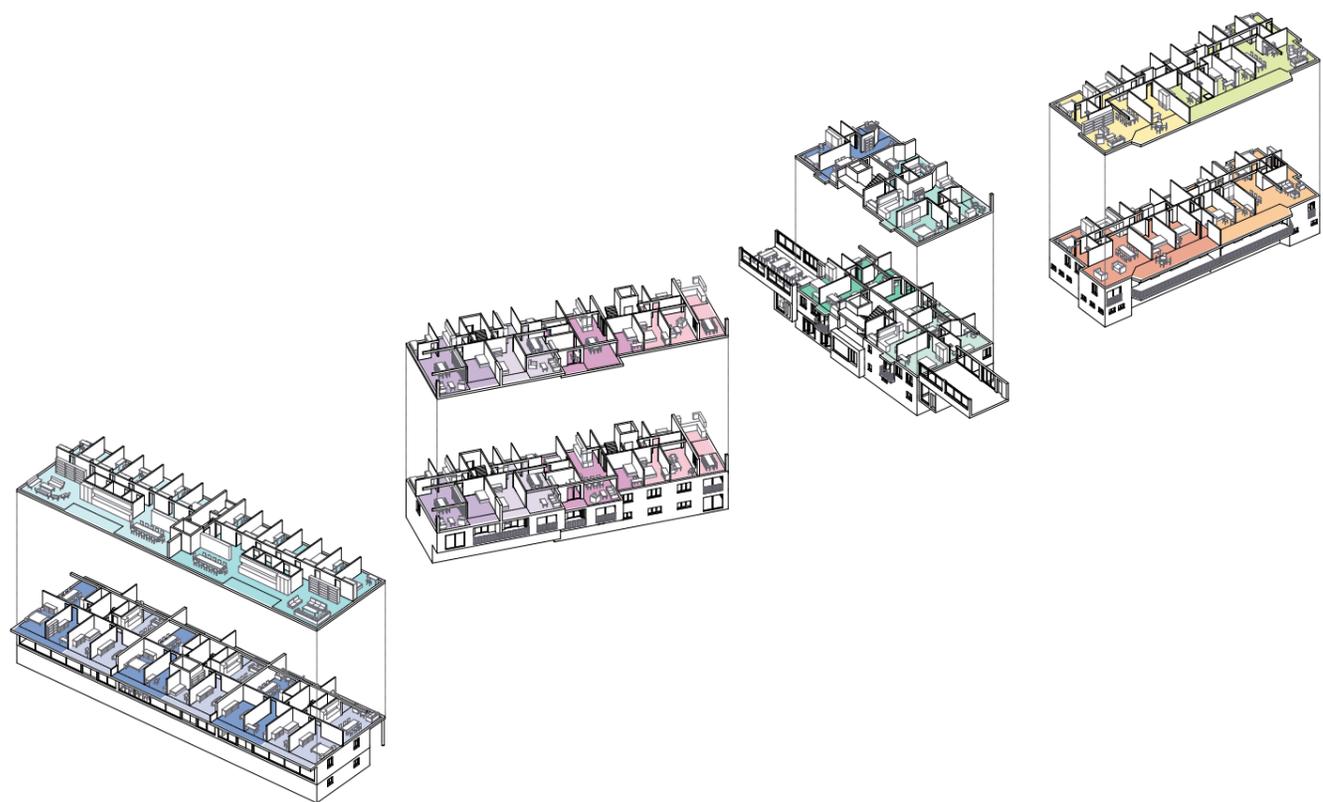
5 20 50 ⌚

- Öffentliche Verkehrsstrasse
- Privater Erschliessung hin zum Hauseingang



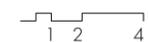
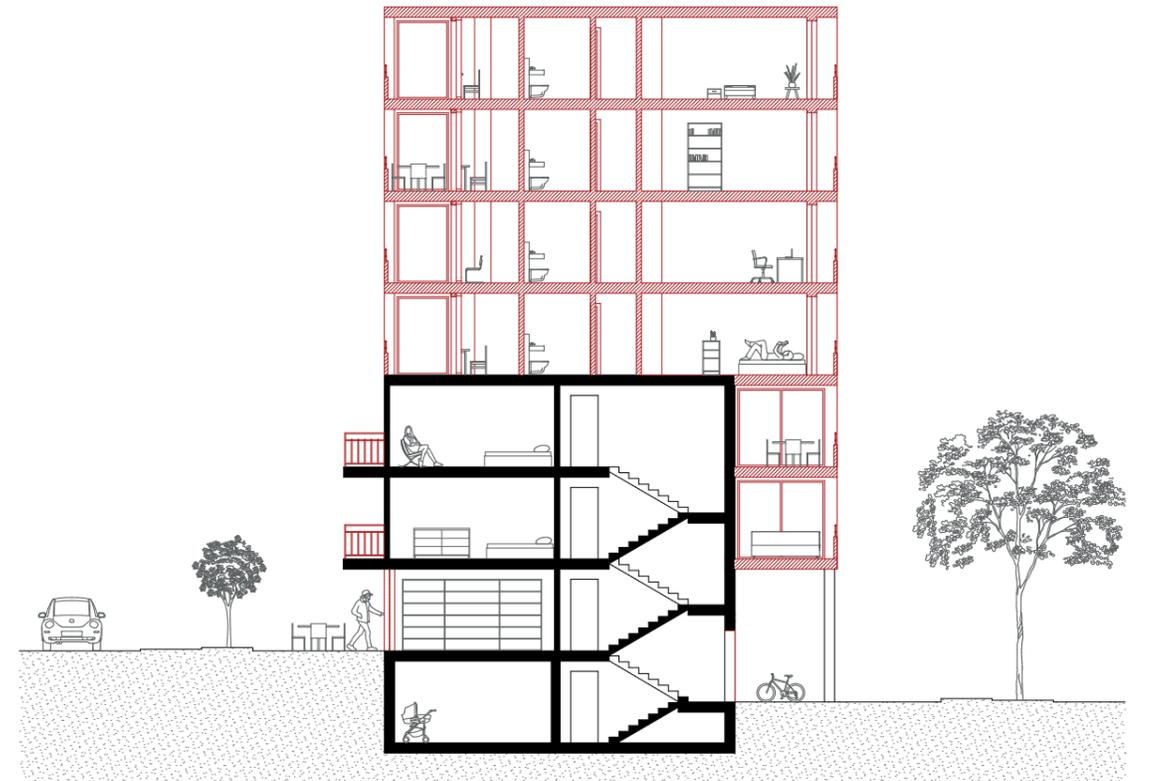
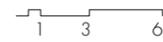
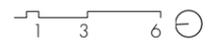
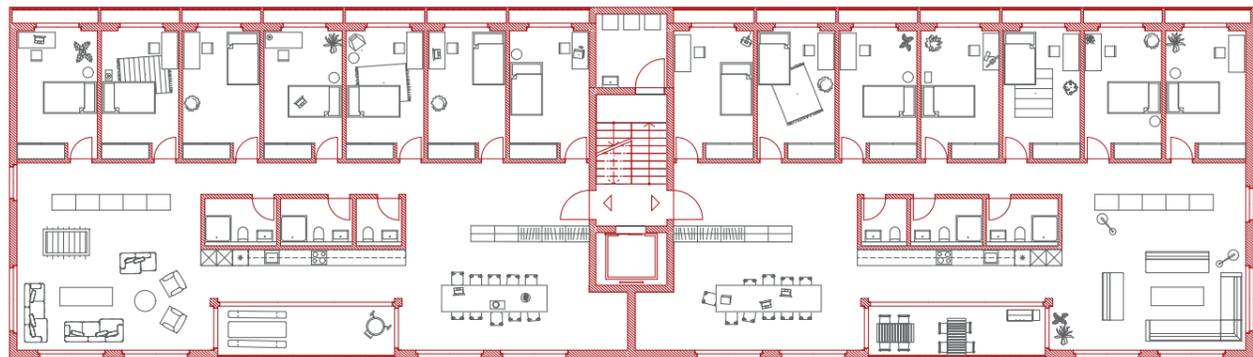
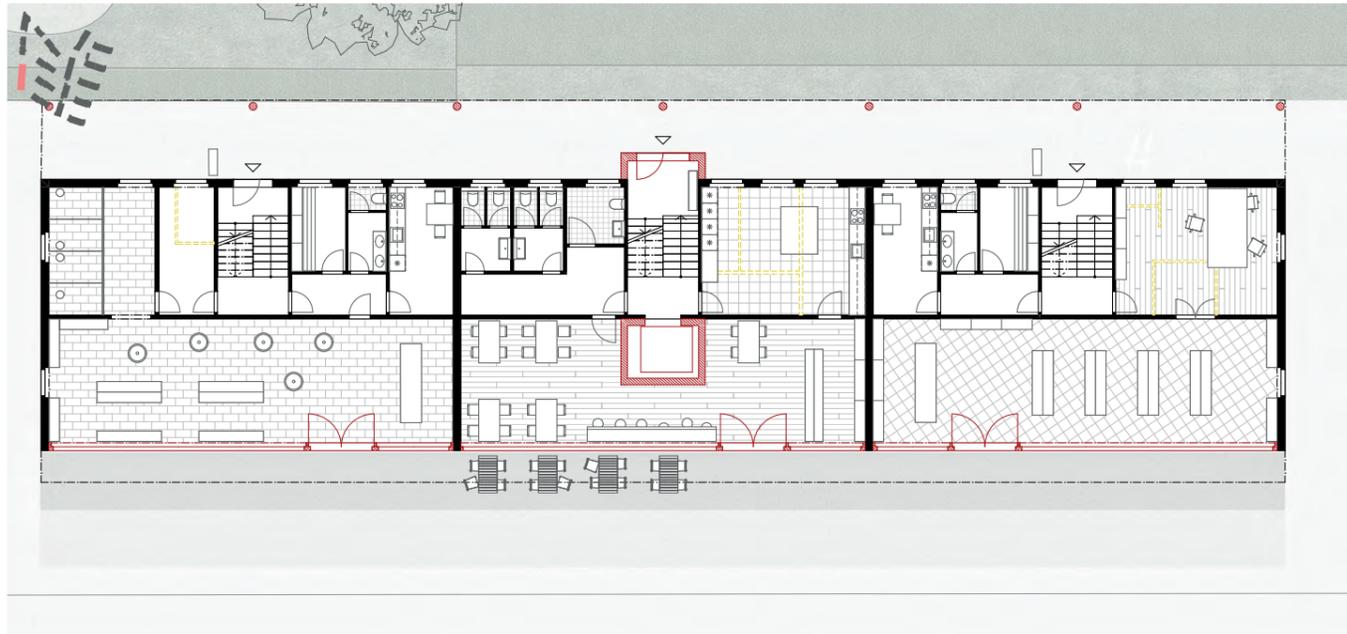
- Bestand:  
ca. 15'721 m<sup>2</sup>  
AZ: ~75%
- Neubau:  
ca. 32'135 m<sup>2</sup>  
AZ: ~140%
- Grundstücksfläche:  
ca. 22'261 m<sup>2</sup>
- Öffentliche Nutzung
- Bestand Wohnen
- Bestand Keller
- Neubau, Wohnen  
Aufstockung, Erweiterung

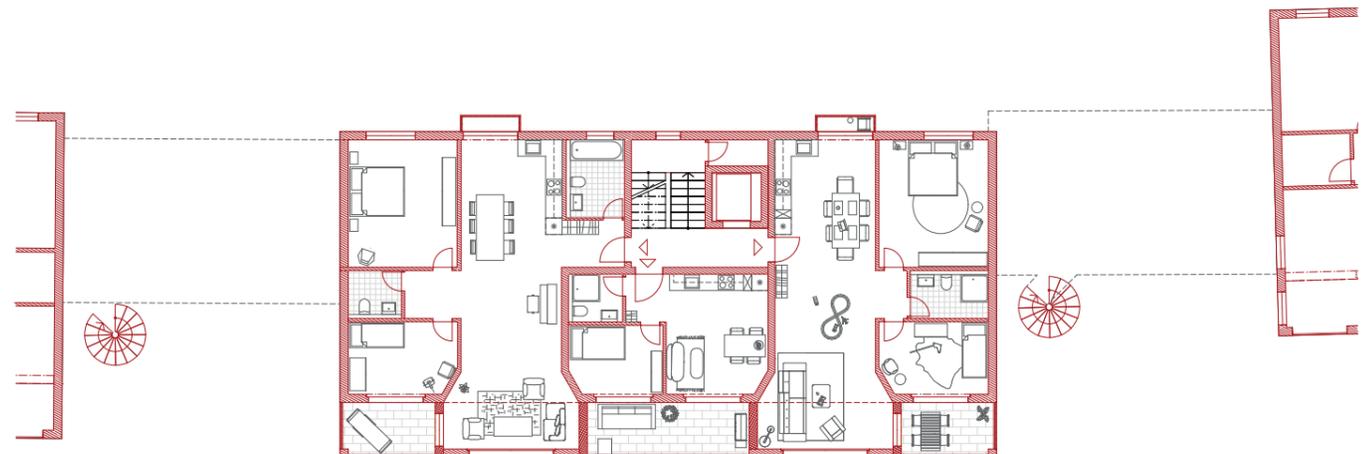
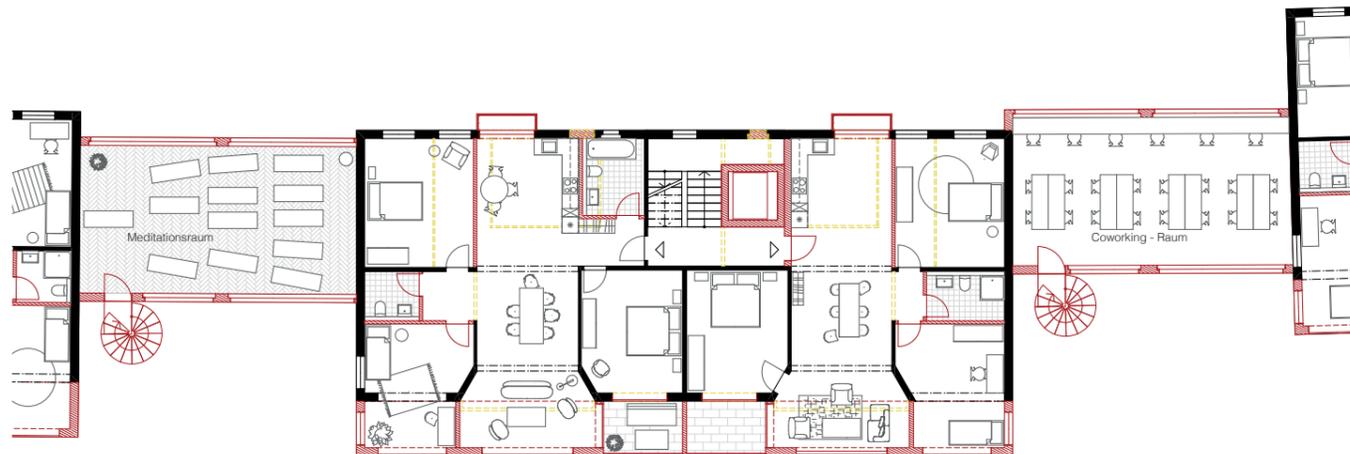
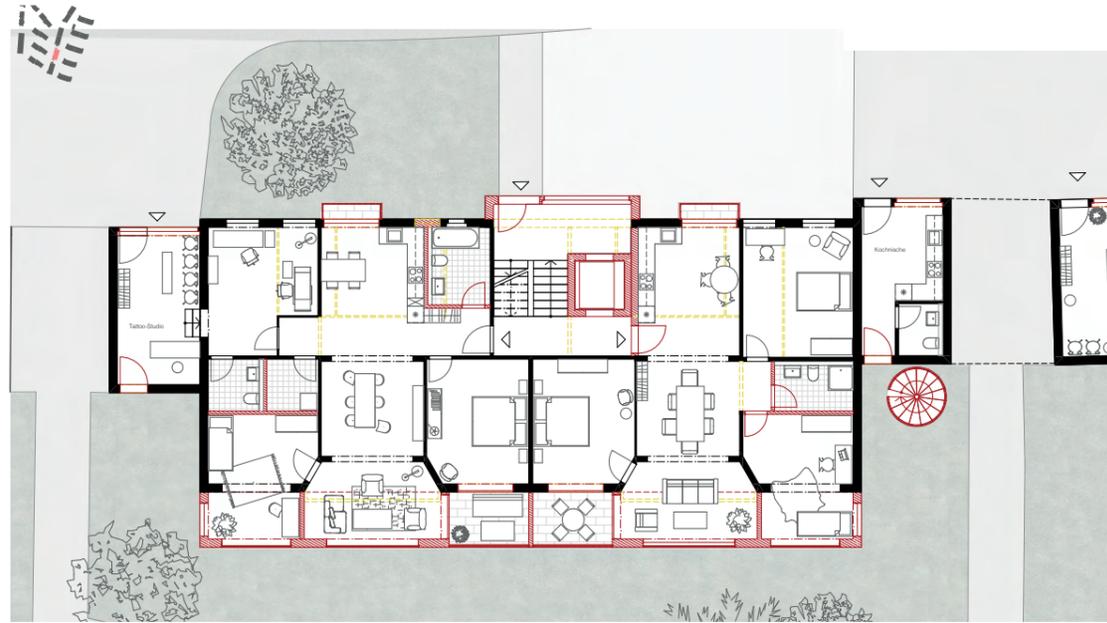




1 5 10

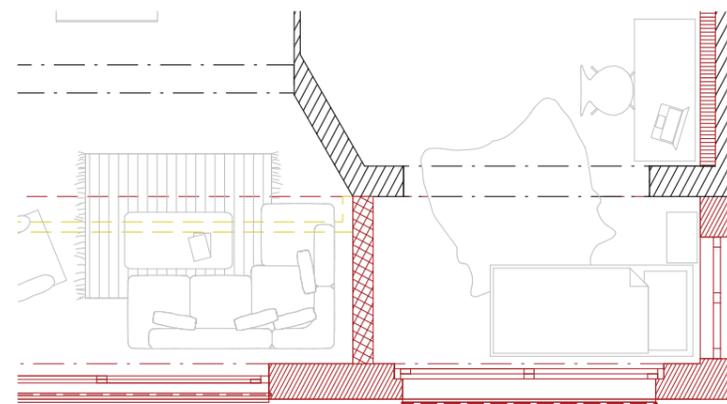
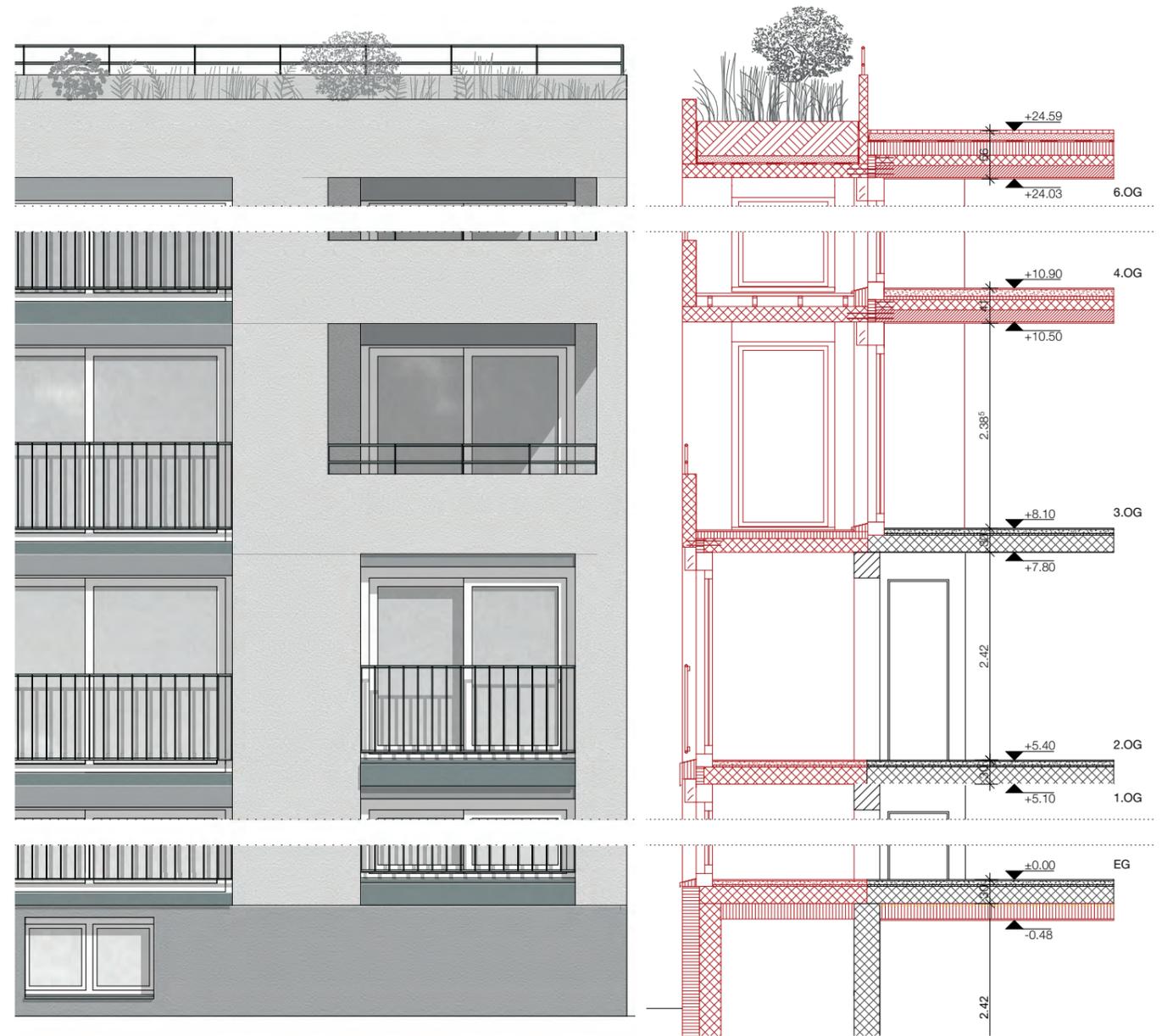








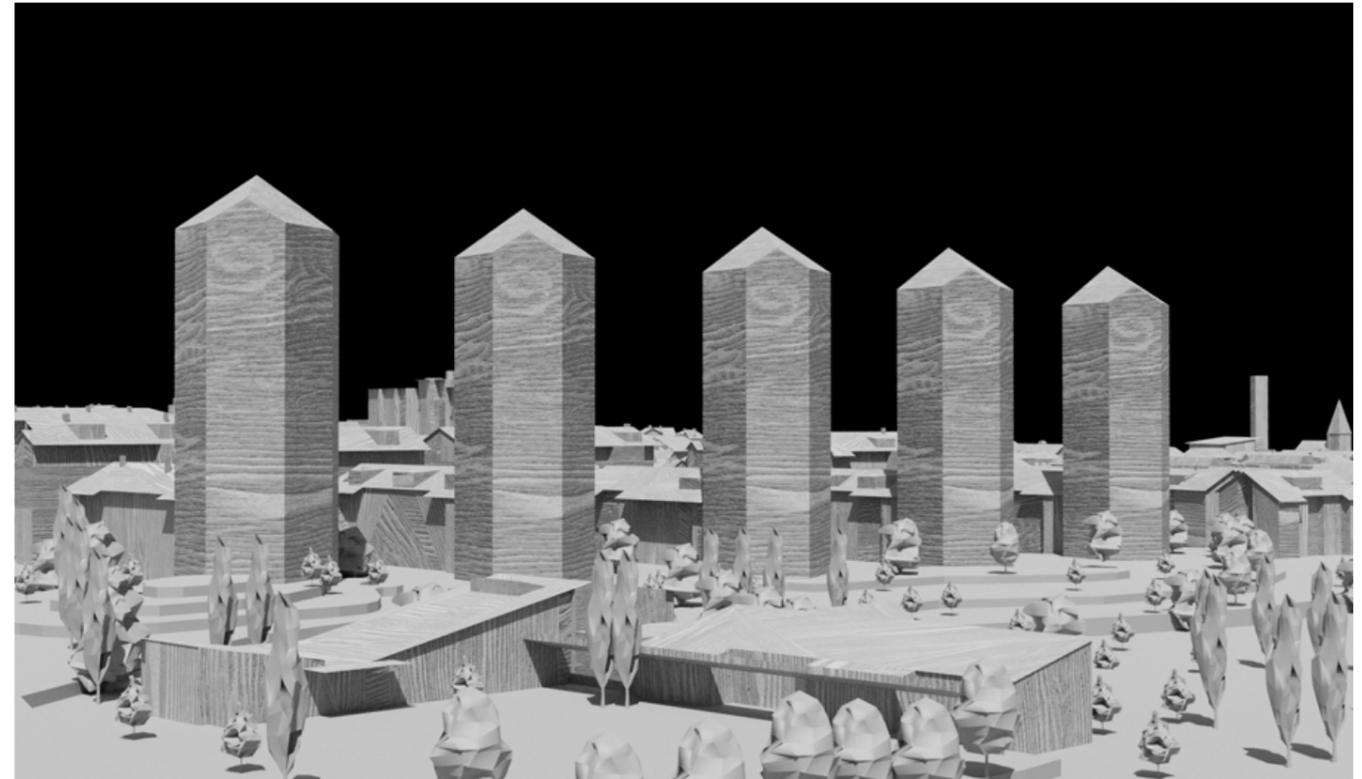
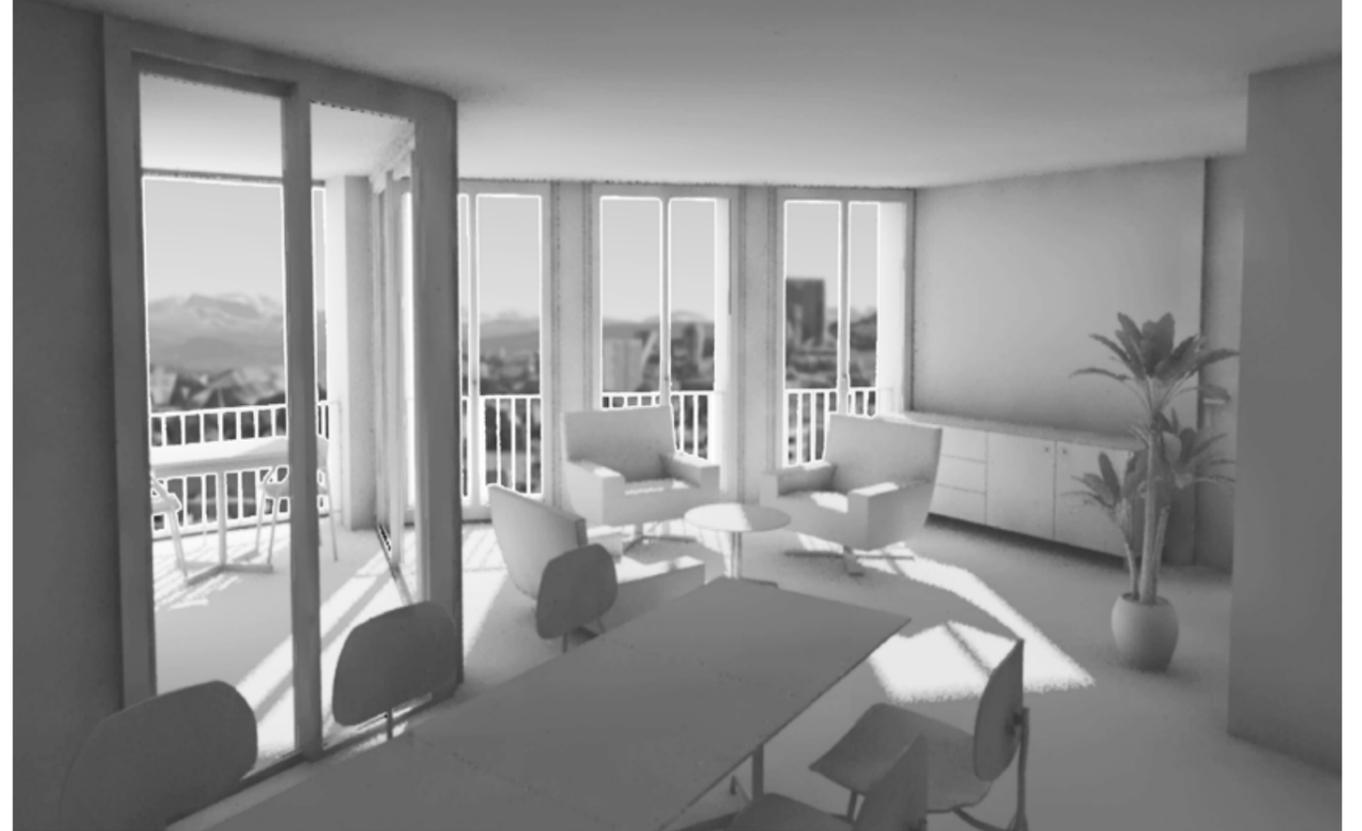
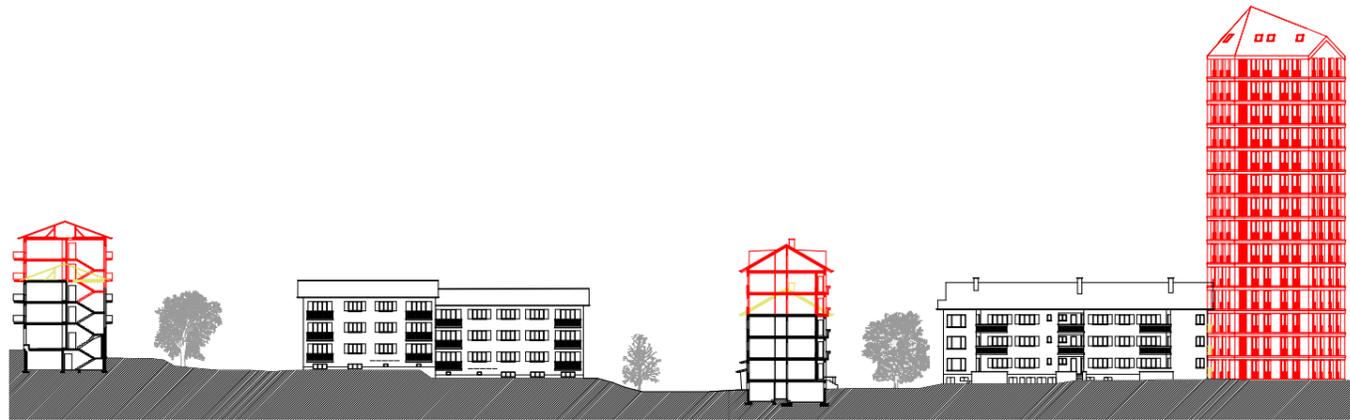
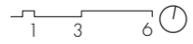
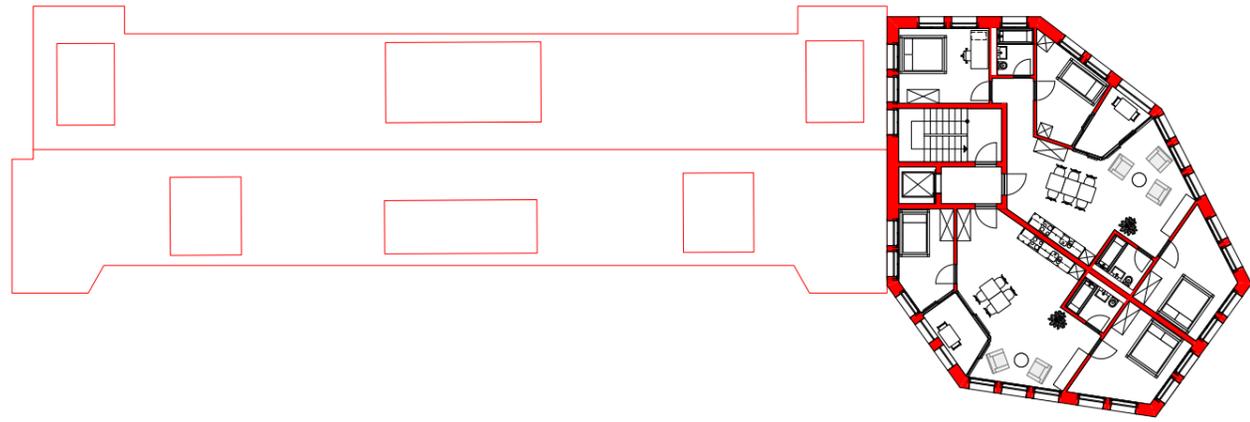
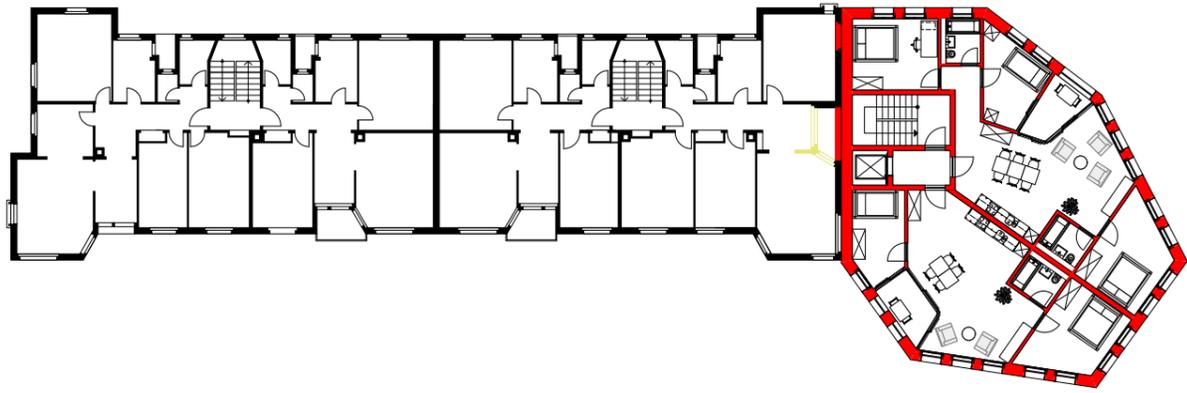
1 3 6

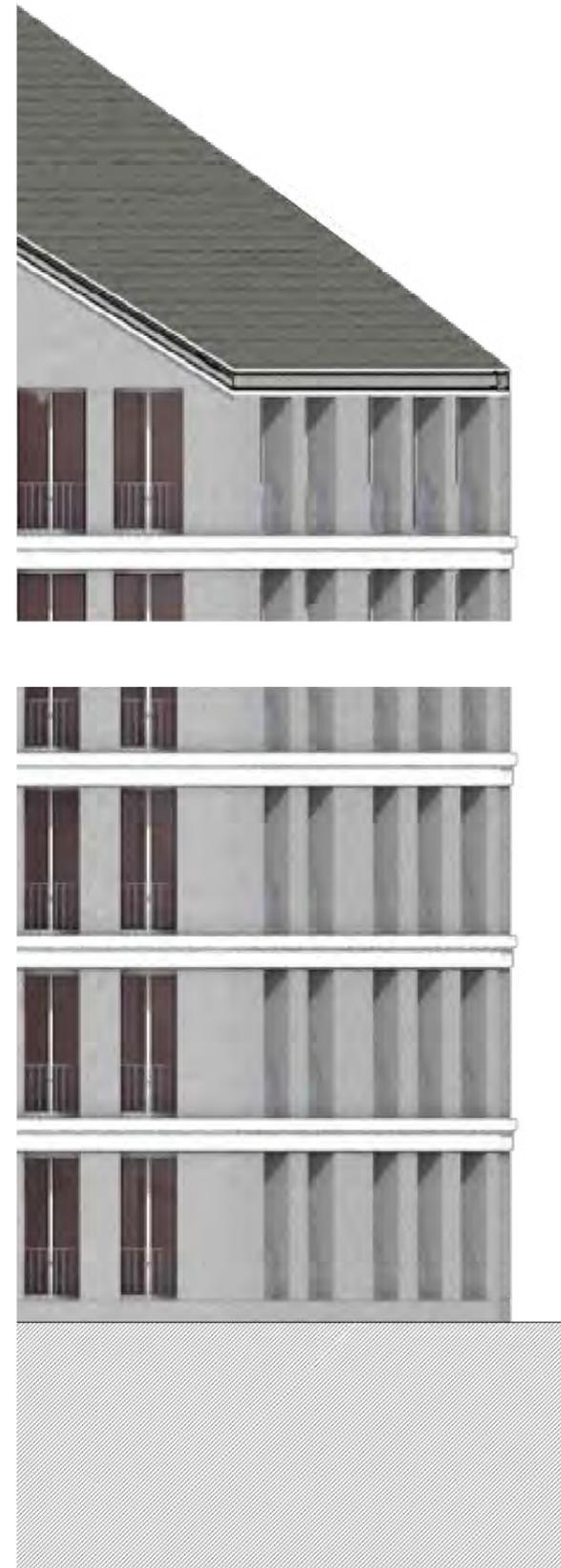


0.5 1 2

STUDENT\*IN: ALESSANDRO CANONICA  
BAUPLATZ: BACHWIESEN







0.5 1 2

