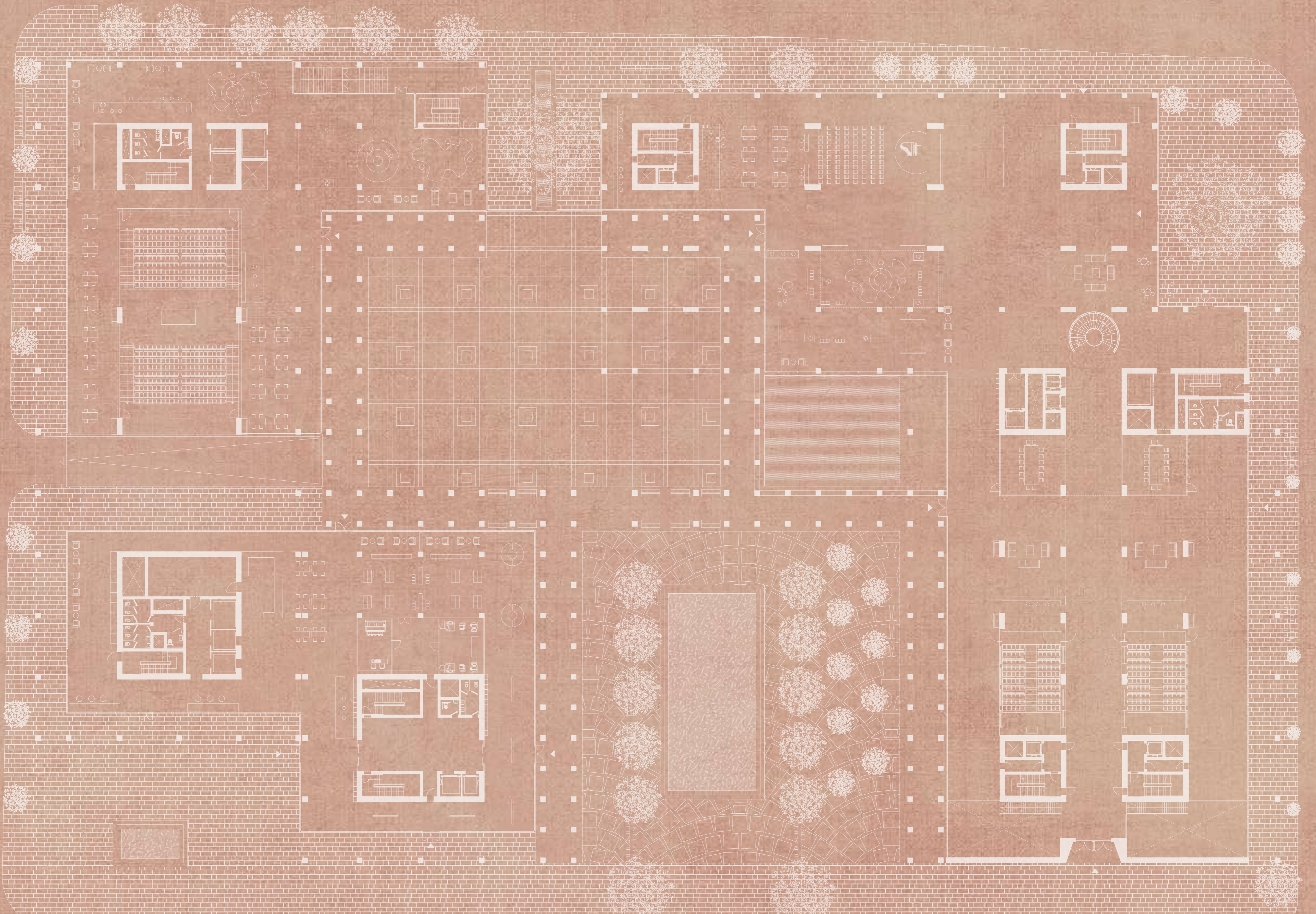


BASEL SCIENCE FORUM

POLITECNICO DI MILANO | SCHOOL OF ARCHITECTURE, URBAN PLANNING AND CONSTRUCTION ENGINEERING | ACADEMIC YEAR 2019/2020
MASTER OF SCIENCE THESIS | STUDY PROGRAMME ARCHITECTURE - BUILDING ARCHITECTURE

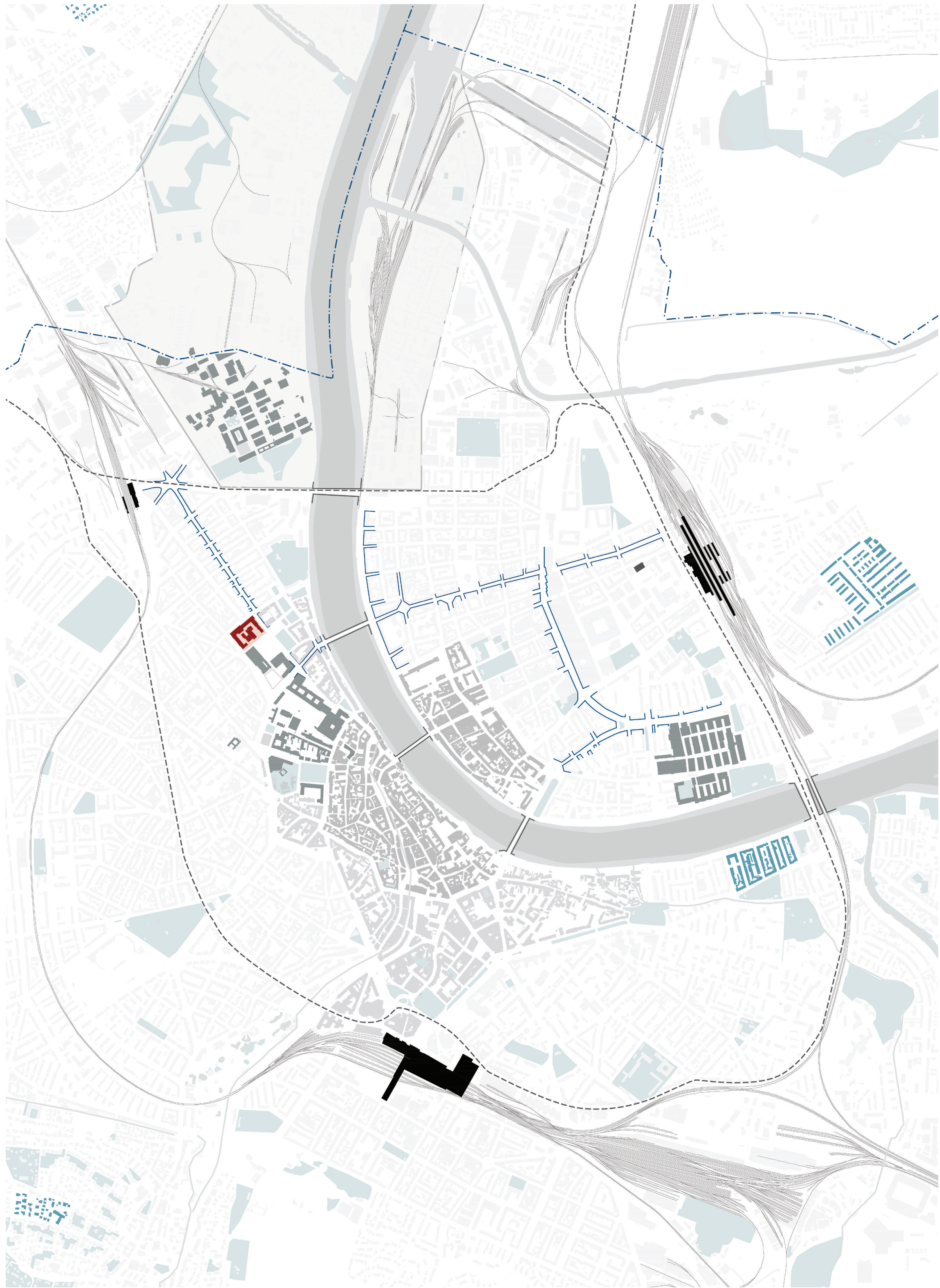


BASEL SCIENCE FORUM

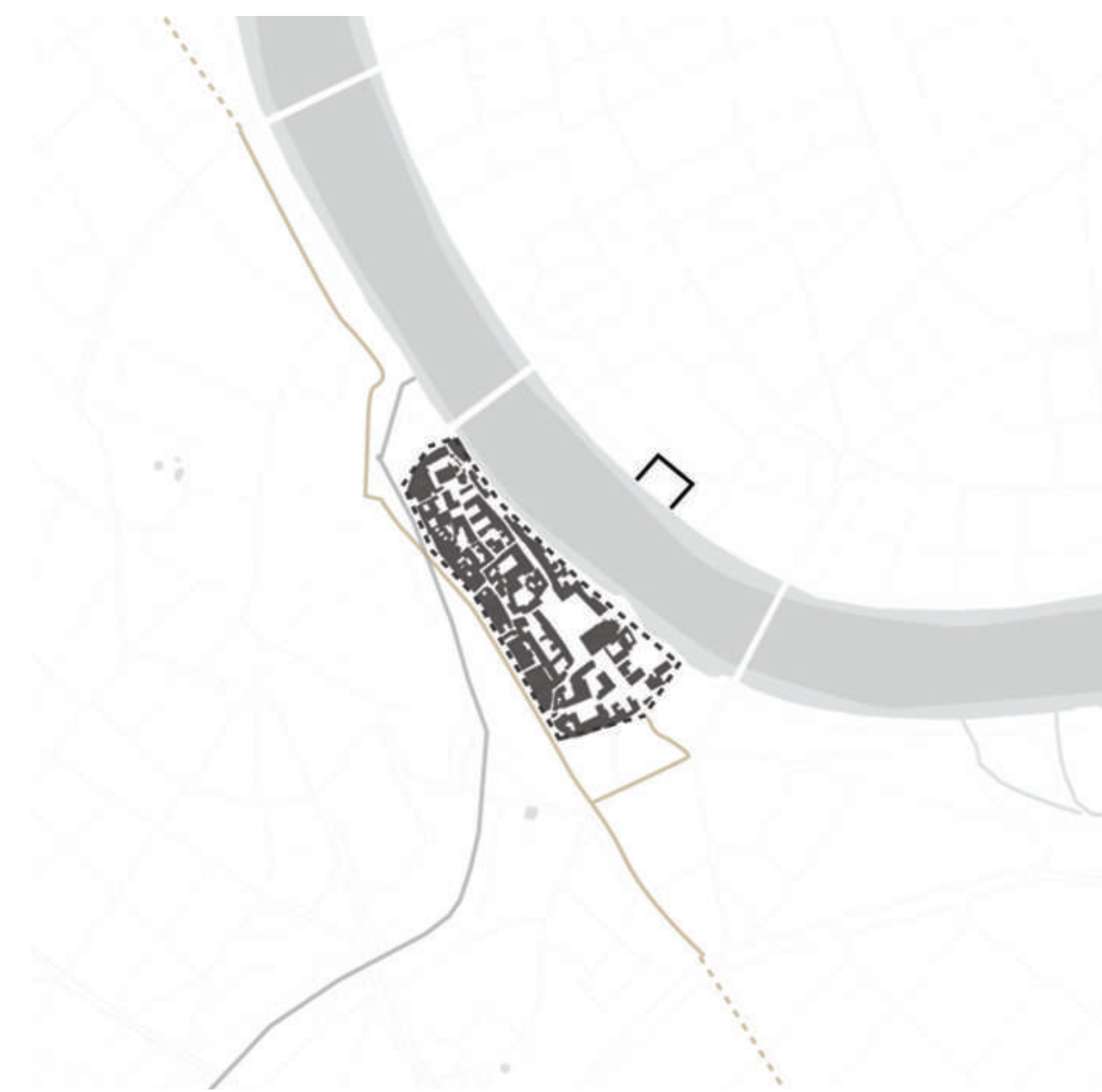
CEREN BINGÖL & BEATRICE TOSINI

SUPERVISOR: PROFESSOR FRANCESCA BATTISTI

PROFESSORS: FRANCESCA. BATTISTI | GRIGOR ANGJELIU | LAVINIA CHIARA TAGLIABUE | FRANCESCO ROMANO | GIOVANNI DOTELLI



■ TRAIN STATION
 ■ LIFE SCIENCE CAMPUS
 ■ GREEN AREA
 ■ HISTORICAL CITY CENTER
 ■ EXISTING SITE BUILDINGS
 CITY HIGHWAY
 BASEL CITY BORDER
 3LAND PROJECT AREA



ROMAN CELTIC CITY 300 AD



ROMAN CELTIC CITY 300 AD



ROMAN CELTIC CITY 21st CENTURY

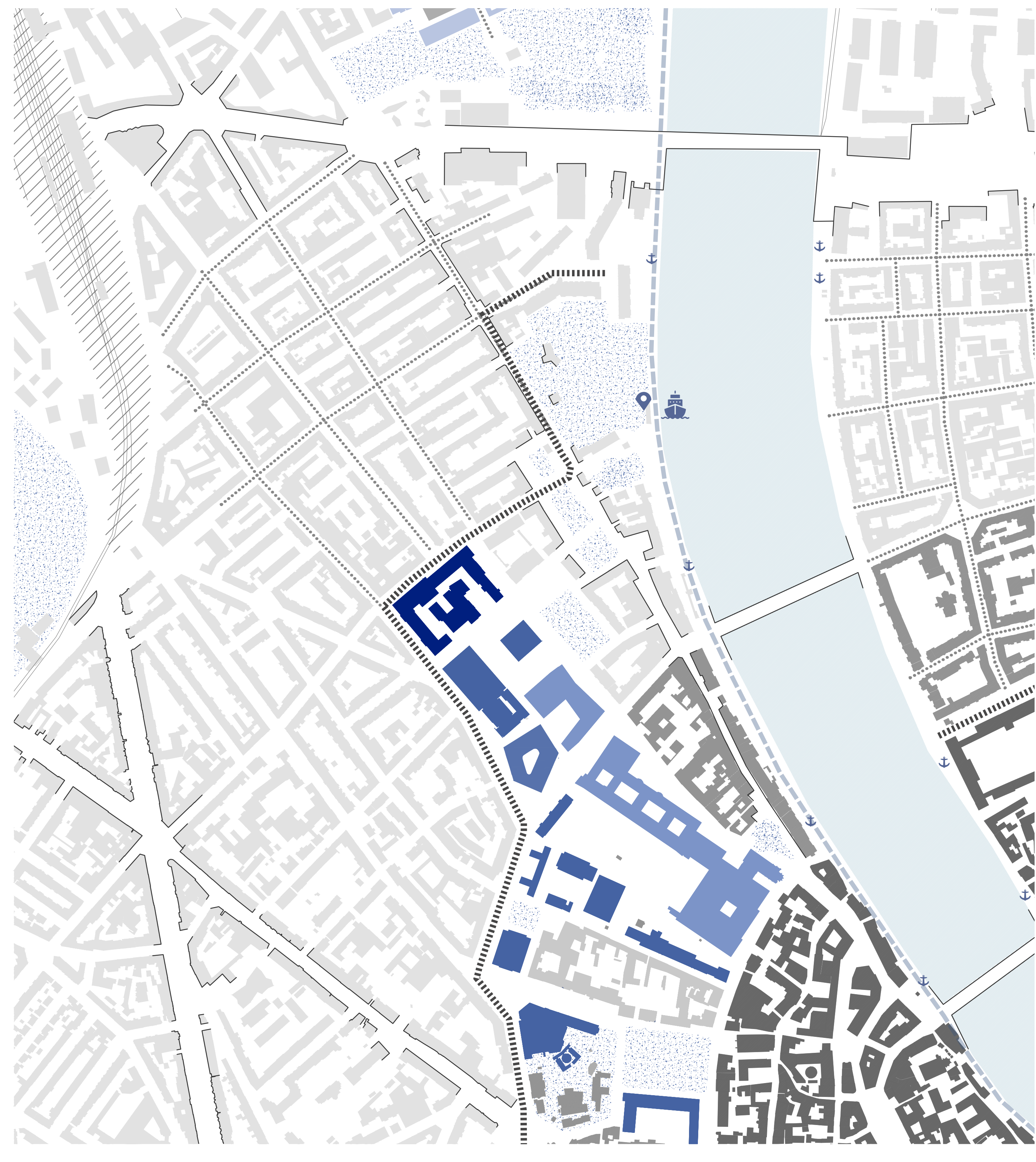


1862

1905

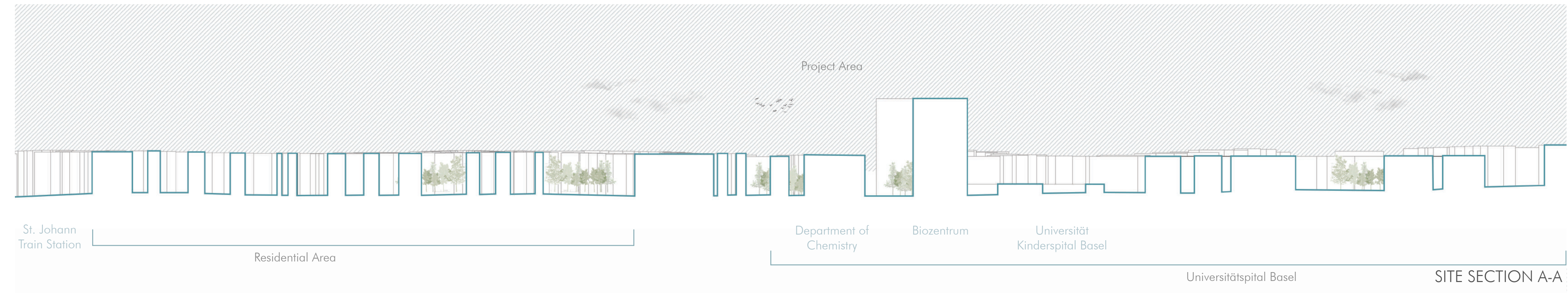
1961

2017

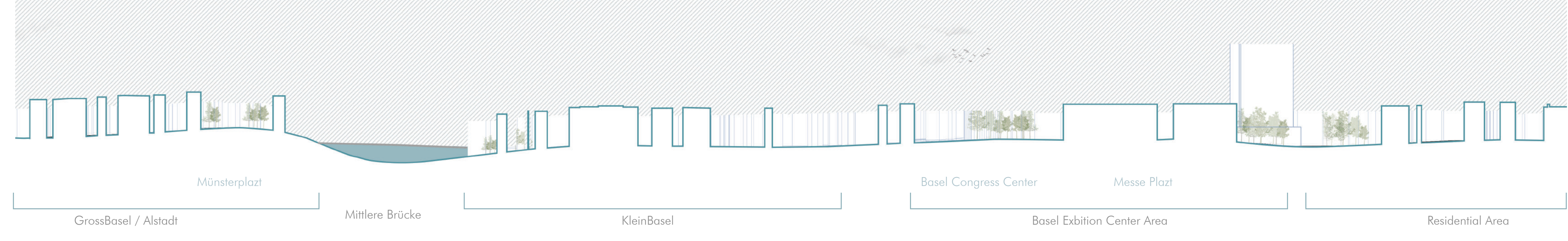


■ EXISTING SITE BUILDINGS
 ■ EDUCATION
 ■ UNIVERSITY HOSPITAL
 ■ HISTORICAL CENTRE
 RAILWAY INFRASTRUCTURE

ROMAN CELTIC CITY 21st CENTURY

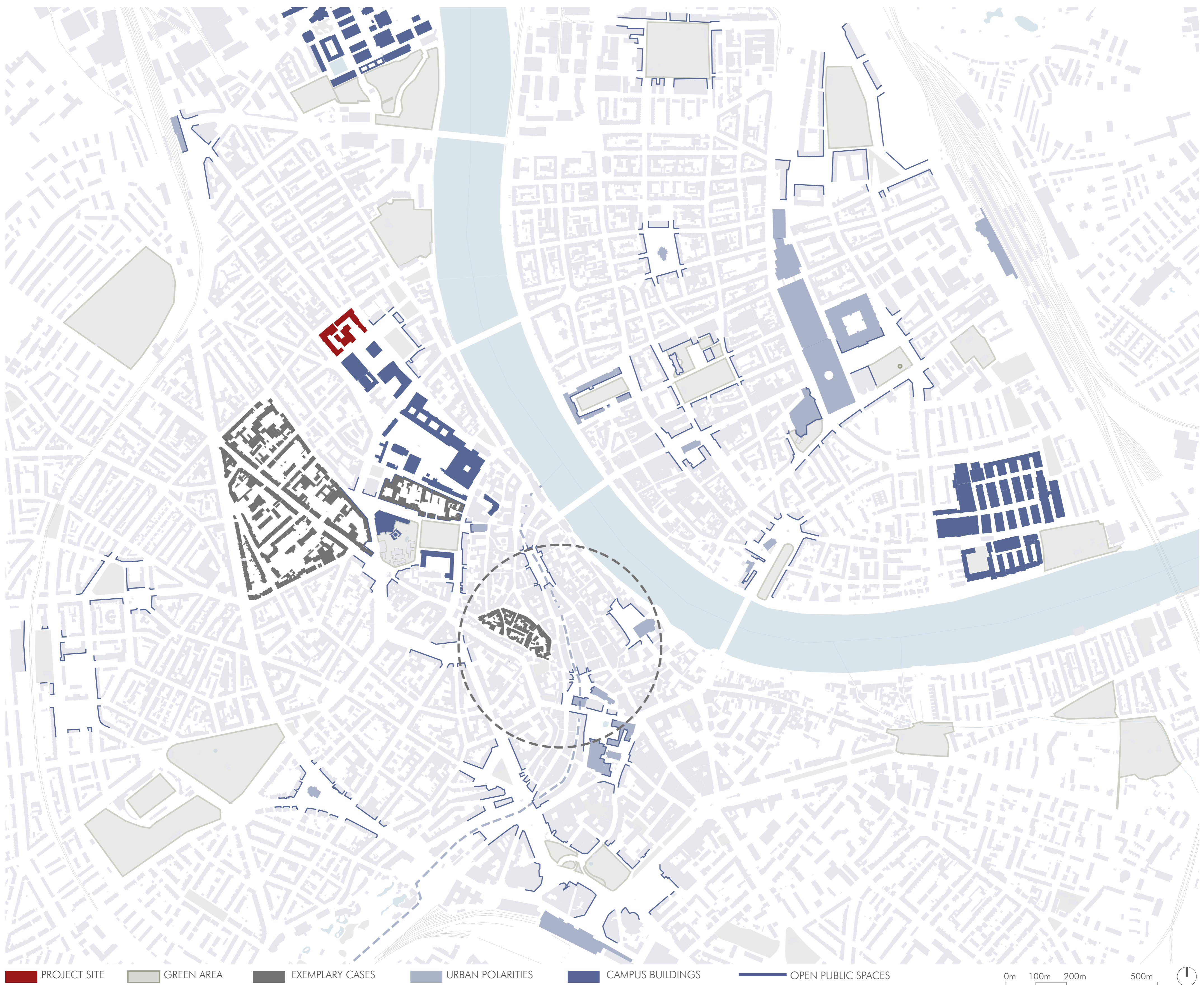


SITE SECTION A-A

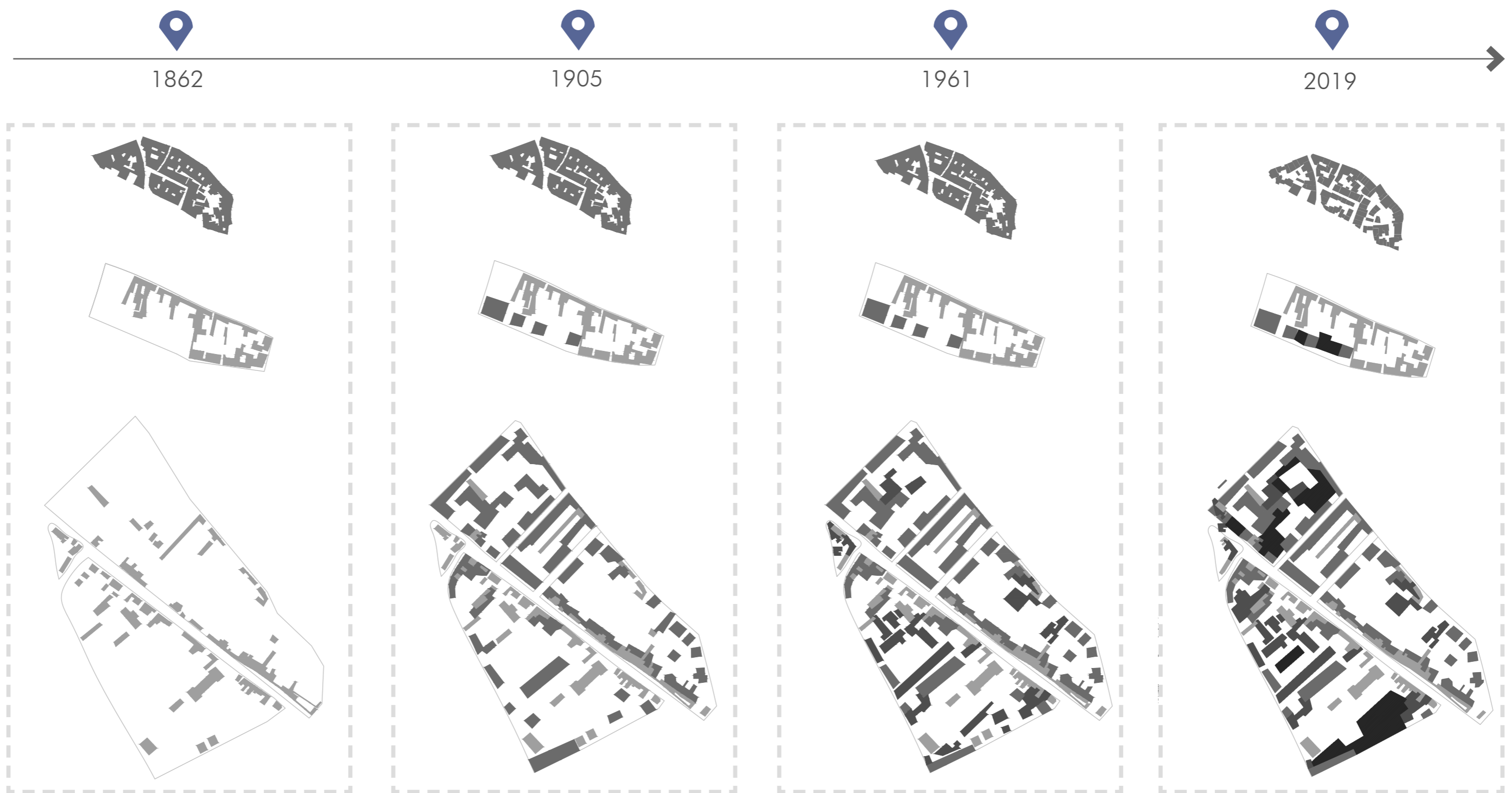


SITE SECTION B-B

SCALE 1/2000



IDENTIFIED RULES
Continuity of street façades
Articulation of full and voids



URBAN FABRIC EVOLUTION

Complex Irregular blocks
- Continuous street façade
- Medium-scale block formed by several small-scale blocks
- Organic internal streets

Complex Regular blocks
- Continuous street façades
- Medium-scale closed block formed by small scale building fabric along the perimeter.
- Internal courts, open spaces, green areas.

Mixed Blocks
- Continuous street façade
- Outer shape of urban block defined by infrastructure
- Gradually bigger blocks composed by small scale urban fabric
- Inner voids
- Irregular internal street layout

UNIVERSITY URBAN CAMPUS

NOVARTIS CAMPUS

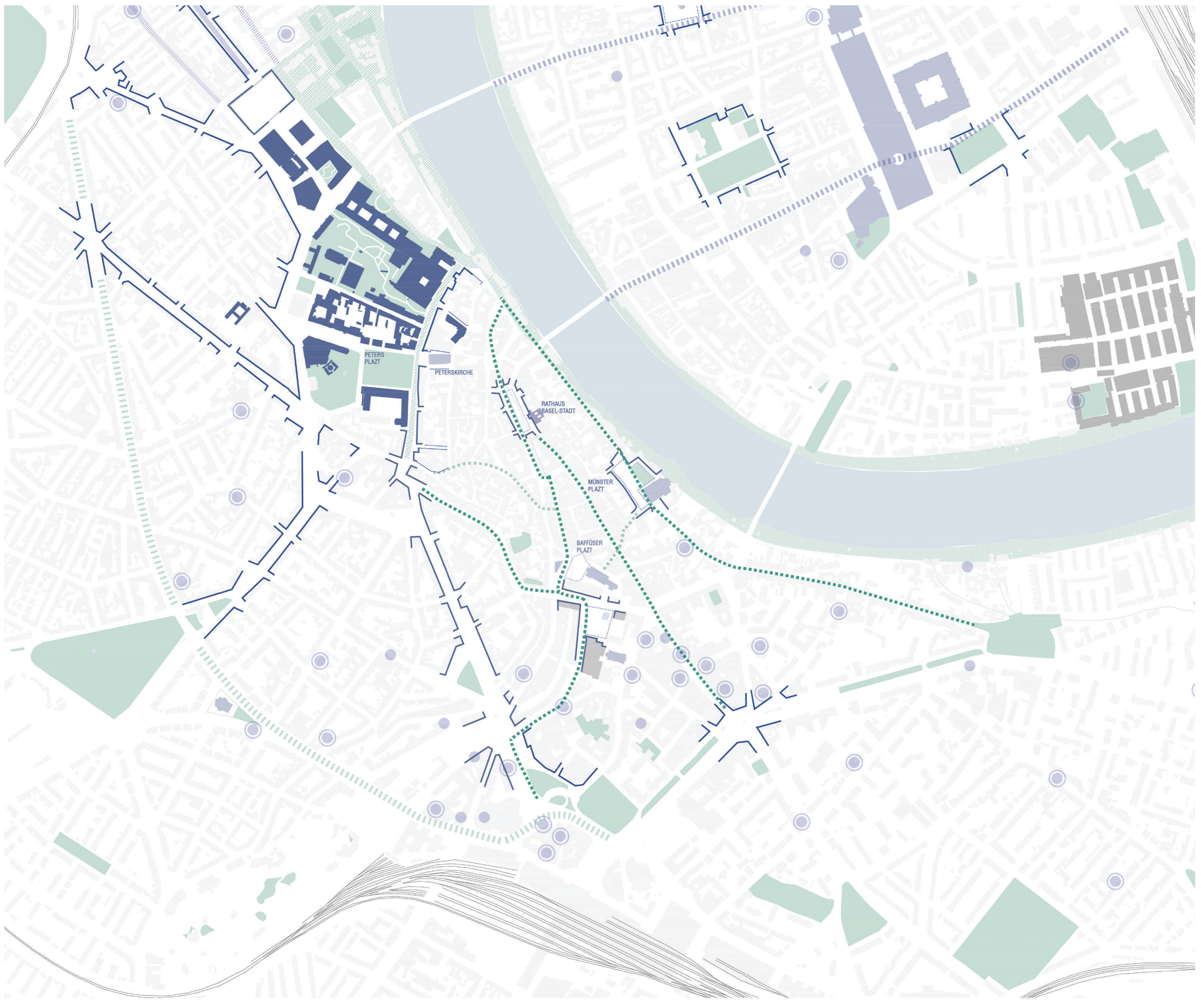
ROCHE CAMPUS

VITRA CAMPUS

CAMPUS TYPOLOGIES



Comparison between different campus typologies, especially counterposing the traditional campus in the historical city with the more recent approach of the "city within the city", setting completely new rules within a specific area in the city. Three different interpretations of the same concept are presented, allowing to reason on the differences between the new rules and the old town's ones.



TRAIN STATION
 LIFE SCIENCE CAMPUS
 GREEN AREA
 HISTORICAL CITY CENTER
 EXISTING SITE BUILDINGS
 CITY HIGHWAY
 BORDER OF BASEL
 3LANDPROJECTAREA



SECTORS IN BASEL CITY

The organic arrangement of the campus is mostly the result of specific geographic features of the plots. Open ground allows transferring the internal knowledge through all city with the help of social and economic interaction between different sectors.

- LIFE SCIENCES - CHEMICAL SECTOR
- MUSEUM



DYNAMIC INTERLOCKED SPATIAL CORRIDORS

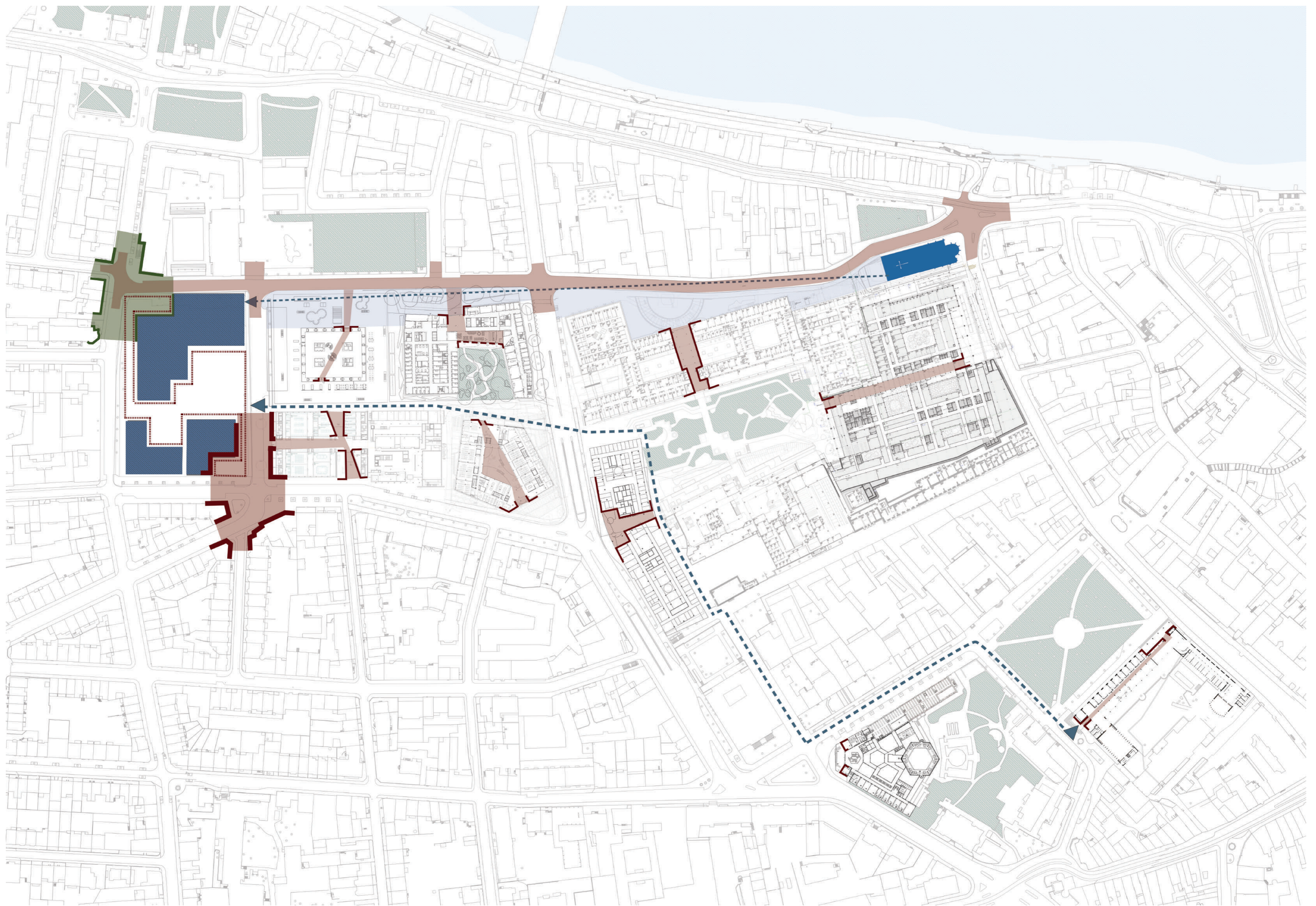
Diagonally interlocked spatial corridors from important connection points define the interaction network of campus in an urban context. Porous campus identity that includes social activities and spatial varieties can be associated with each principal sector, spaces of intensities, interactions, and exchanges strengthen the up-and-coming technological research community.



PROPOSED GREEN URBAN BELT

Social interaction route that is defined by plazas and curvilinear road scheme, connected with an green urban route. Dynamic open space integration that spread around the campus, enhance the importance of the urban catalyzer.

- GREEN AREA
- UNIVERSITY BUILDINGS
- PROPOSED GREEN ROUTE



NODE 1 : HOUSING
 INTERPENETRATION OF URBAN SPACE
 NODE 2 : SCHOOL & HOUSING
 STRATEGIC BUILDING SET-BACK
 CORRESPONDING ELEMENT - CHURCH
 PROPOSED INNER ROUTE



1. REAL ESSENCE OF URBAN FABRIC - 3 NODES
 Relationship of campus buildings with the existing context



2.1 MAIN ARTERY - SPITALSTRASSE
2.2 UNDERGROUND LOGISTIC TUNNEL



3. SPATIAL INTEGRATION
 Building organizations with the urban context



3. INNER PATH
 Campus organization in urban sequence



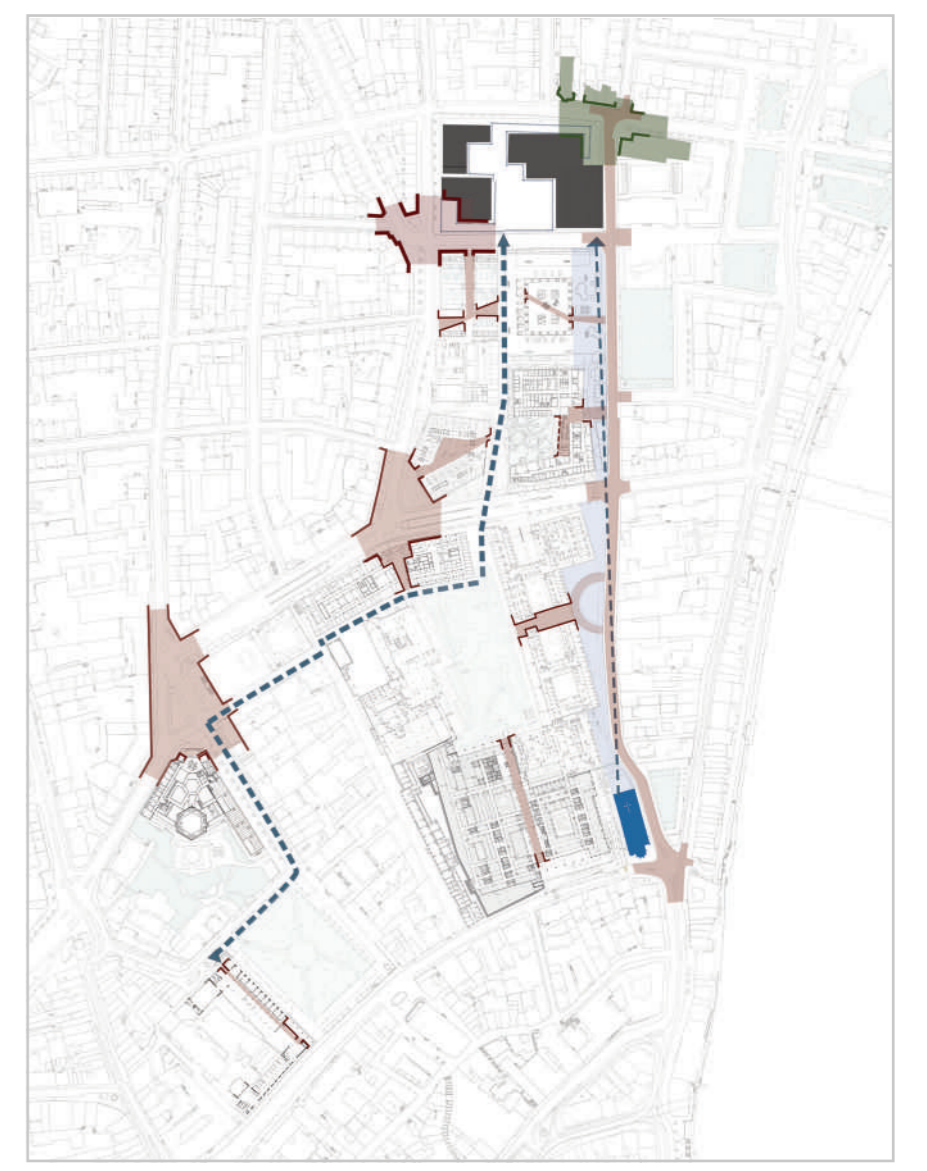
5. PROPOSED PATH - CONTINUOUS FLOW
 Defining a new path to relate the existing buildings of the campus by enhancing a continuous flow through the campus.



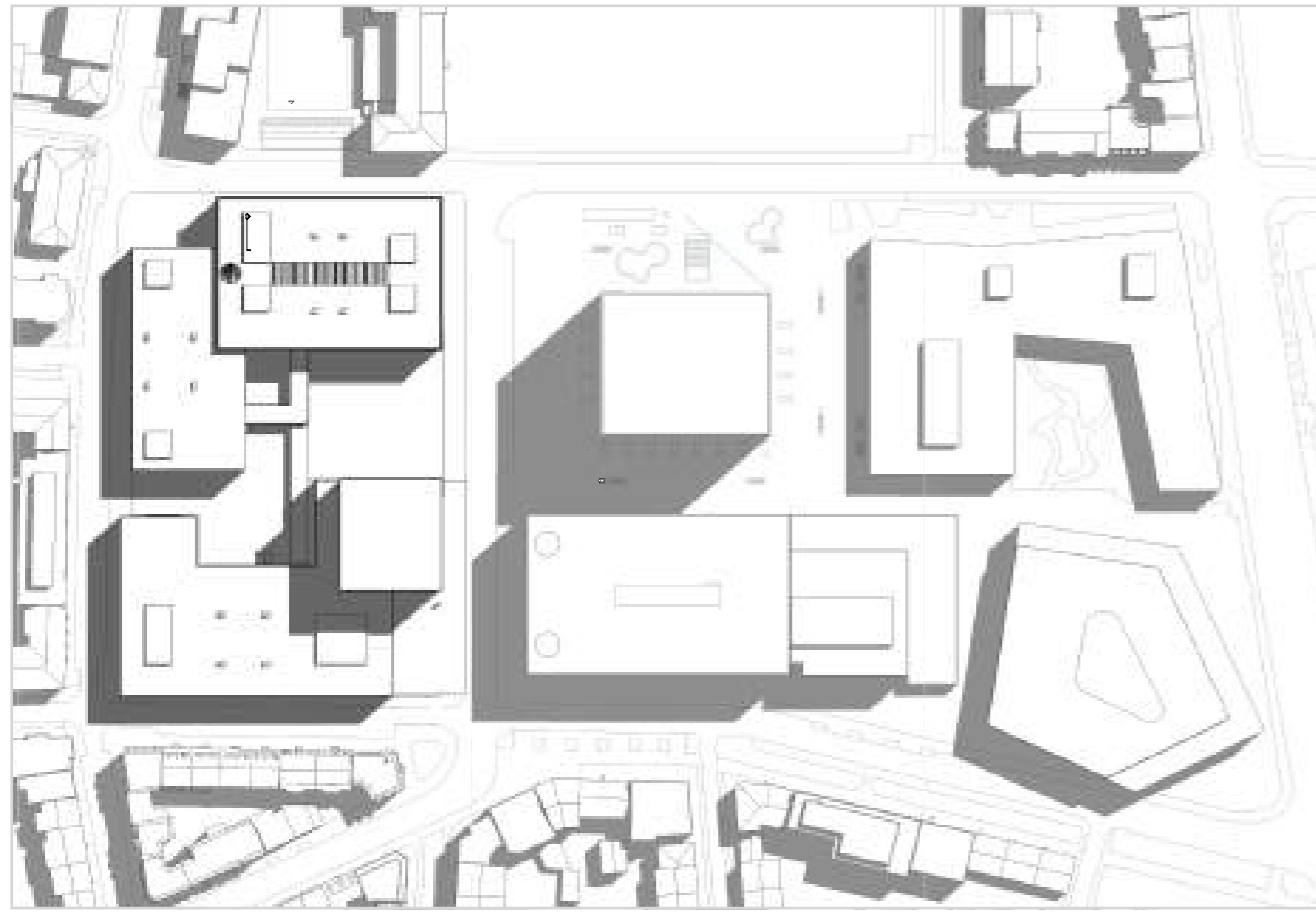
6. STRATEGIC SET-BACK - PREDIGERKIRCHE
 Different role of mixed-use buildings and spatial interpretations.



7. DESIGN PROPOSAL
 Subdividing into blocks of the building to give the idea of public relation with the rest of the city.



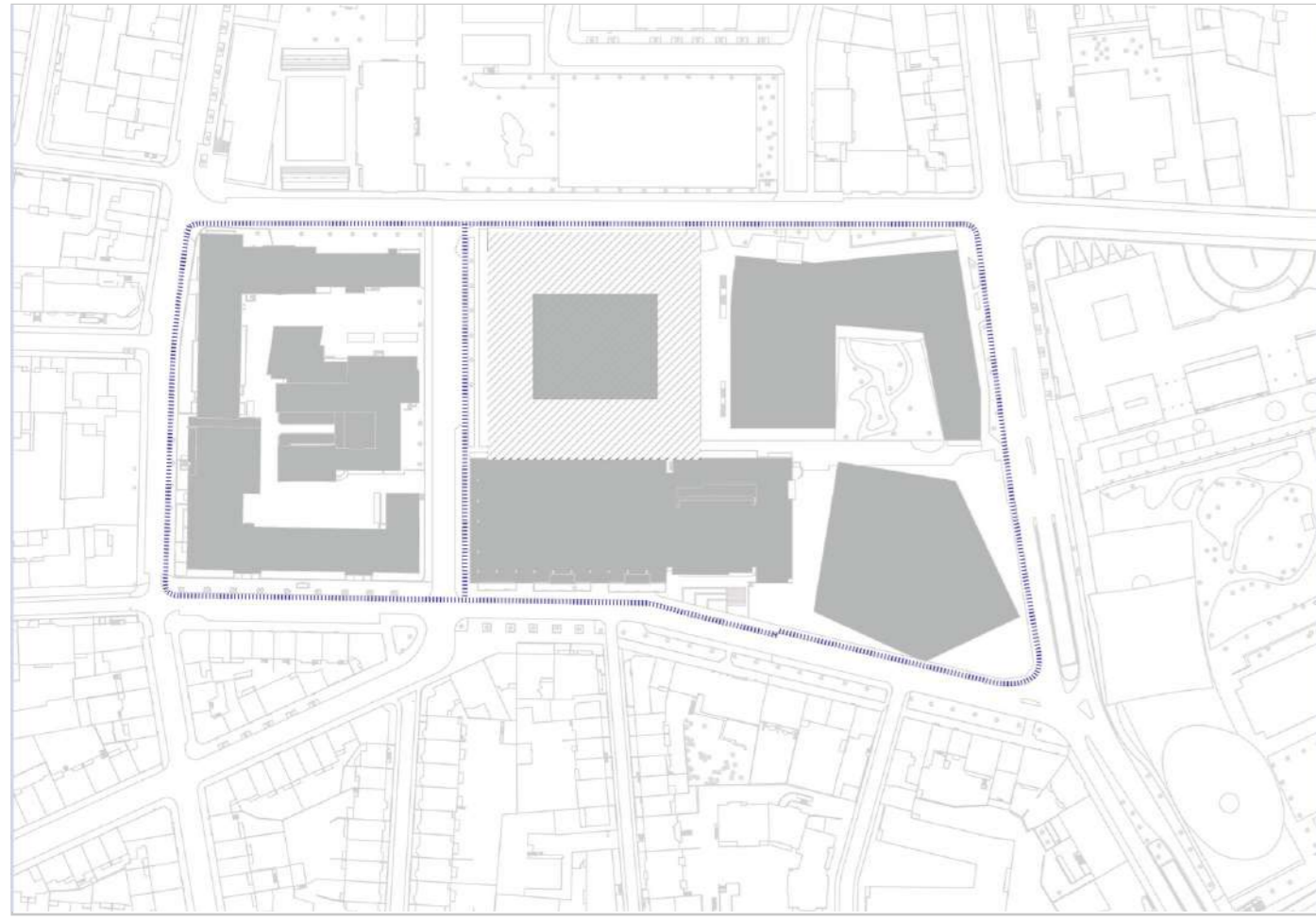
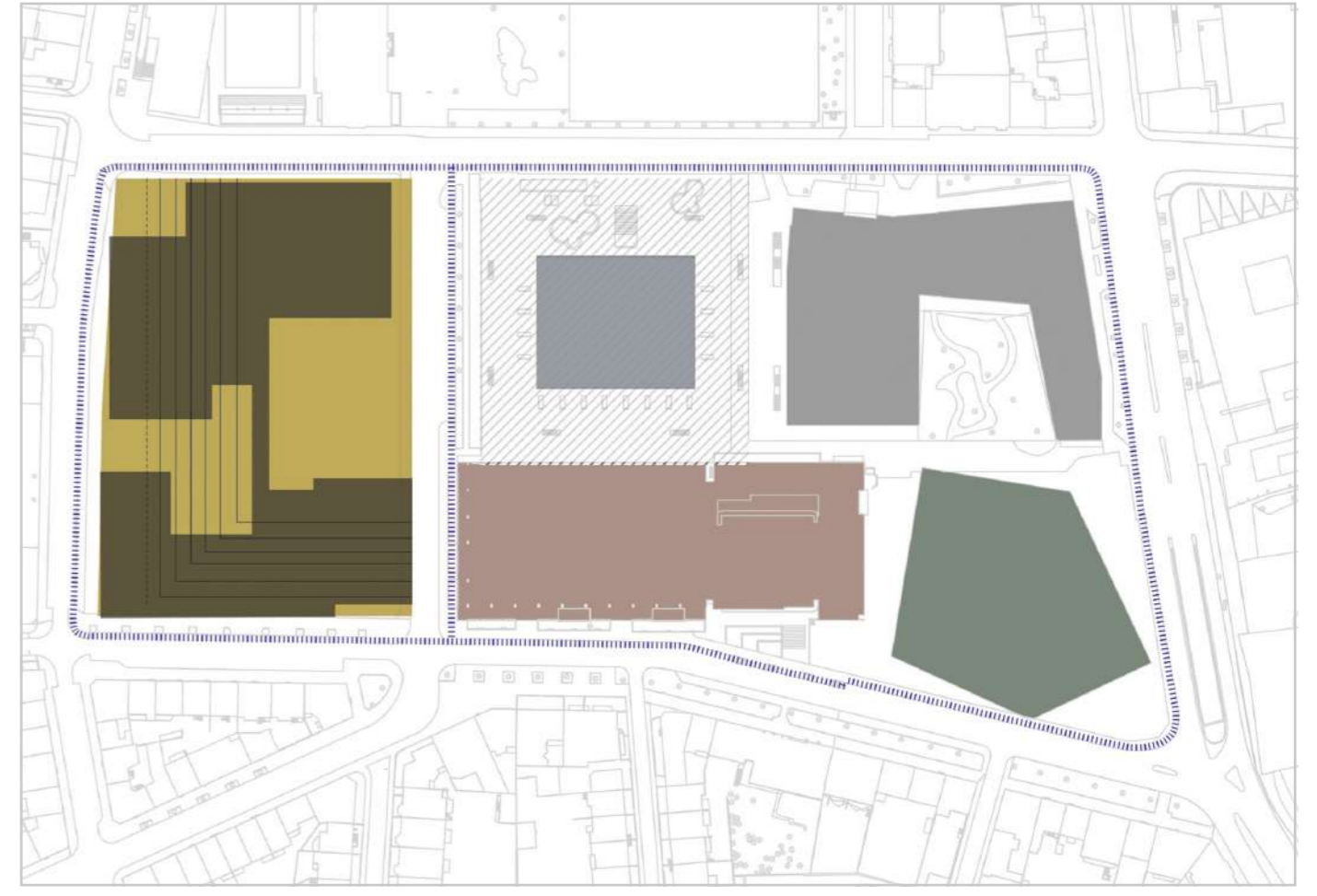
8. GREEN BELT INTEGRATION



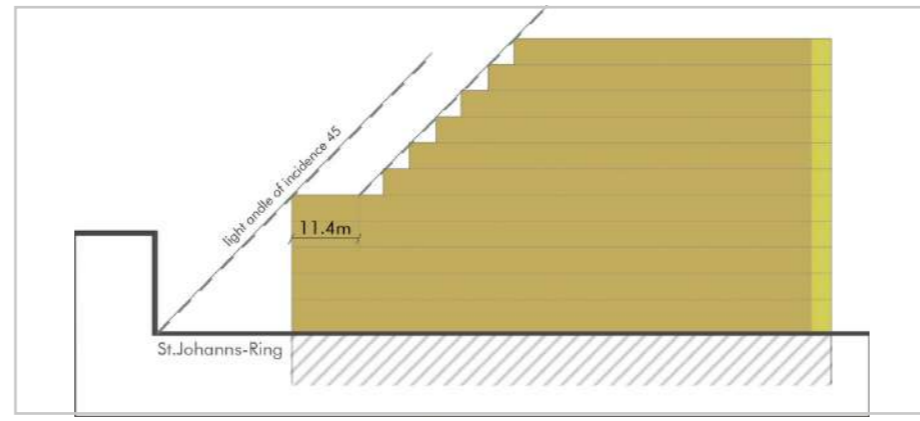
DESIGN PROPOSAL INTEGRATION



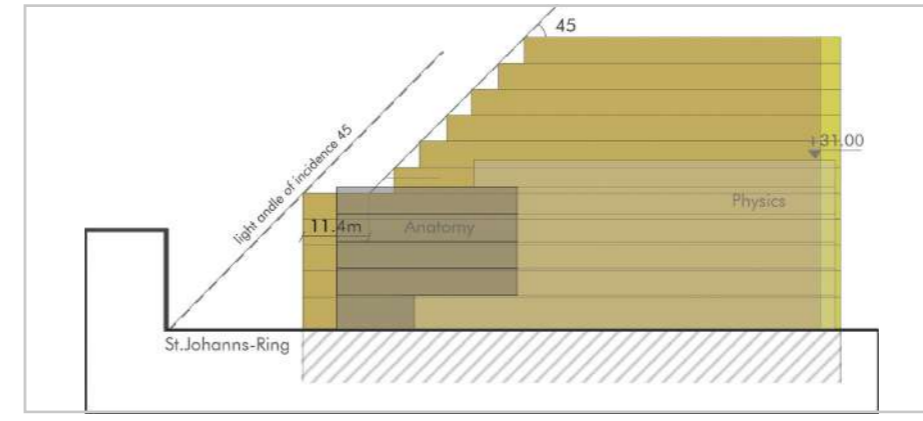
NEW BIOZENTRUM ETH BUILDING PHARMAZENTRUM UKBB BUILDABLE AREA PARAMETERS PROPOSED DESIGN



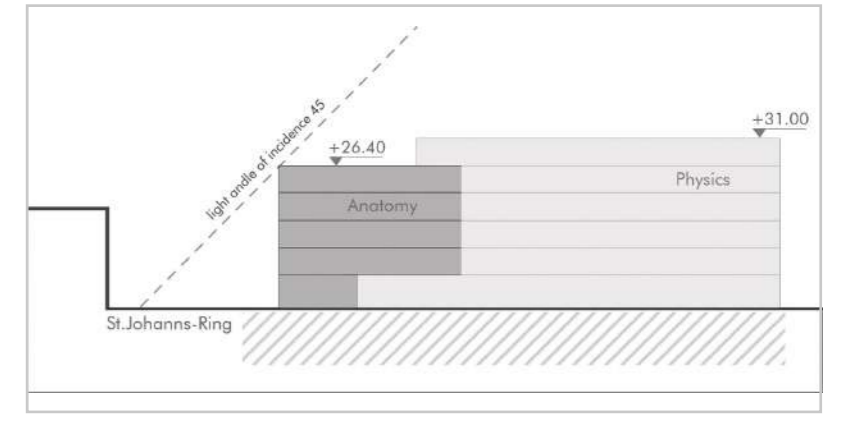
EXISTING BUILDINGS - CHEMISTRY | PHYSICS | ANATOMY



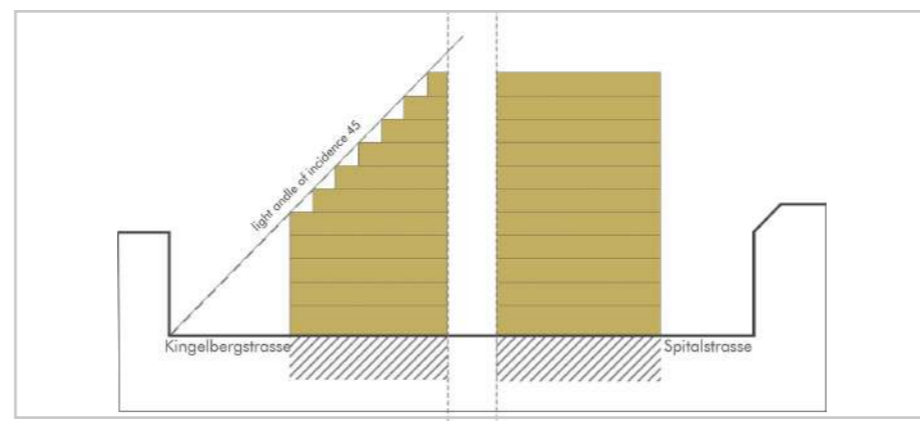
GIVEN VOLUME PERIMETER



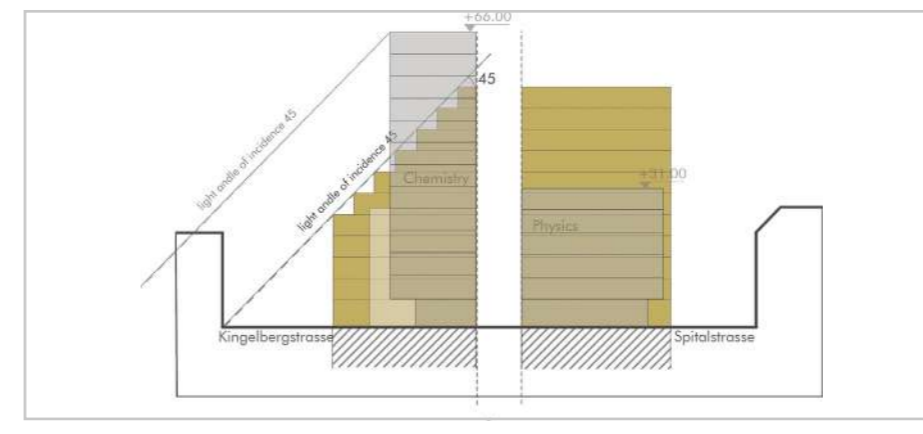
VOLUME PERIMETERS COMBINATION DESIGN



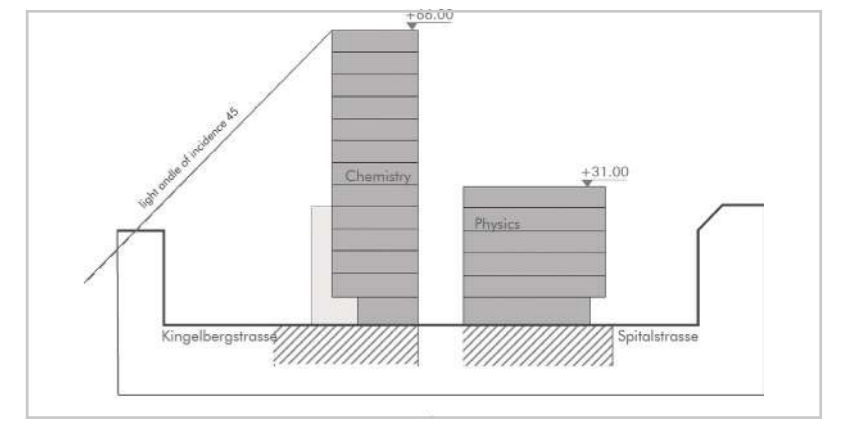
DESIGN PROPOSAL



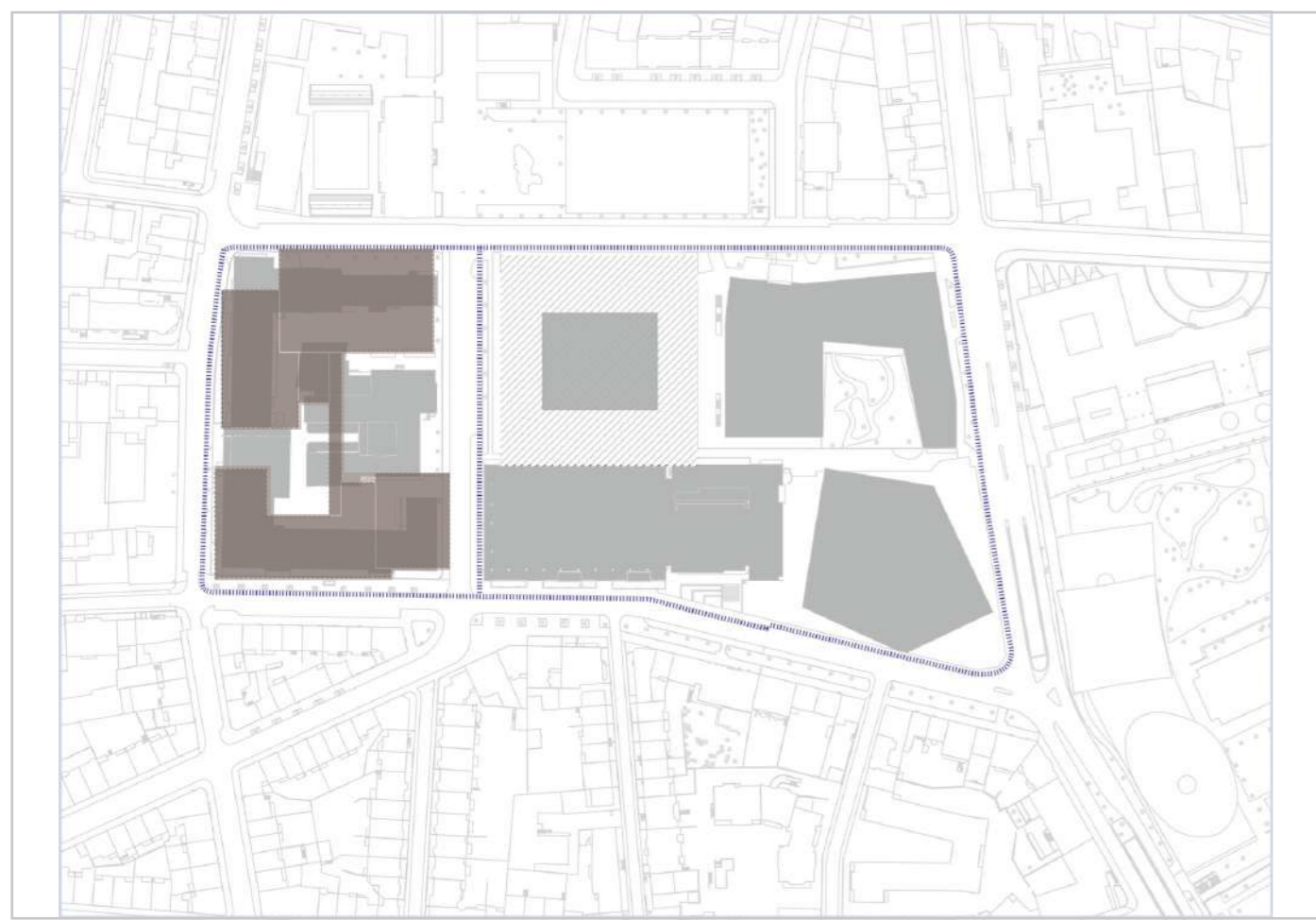
GIVEN VOLUME PERIMETER



VOLUME PERIMETERS COMBINATION DESIGN



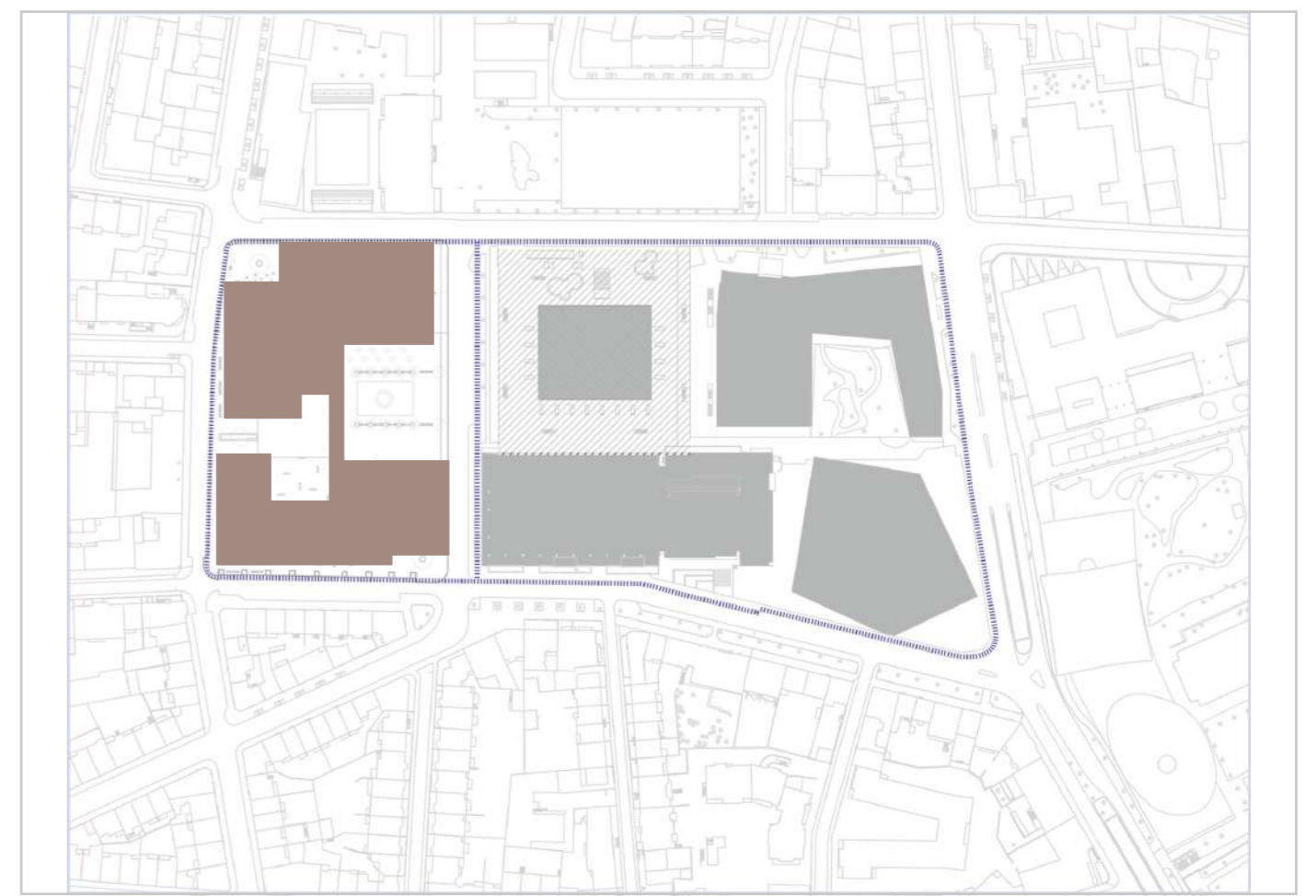
DESIGN PROPOSAL



NEW DESIGN PARAMETER OVERLAPPING WITH THE EXISTING SITUATION



PHASE I - TOP VIEW



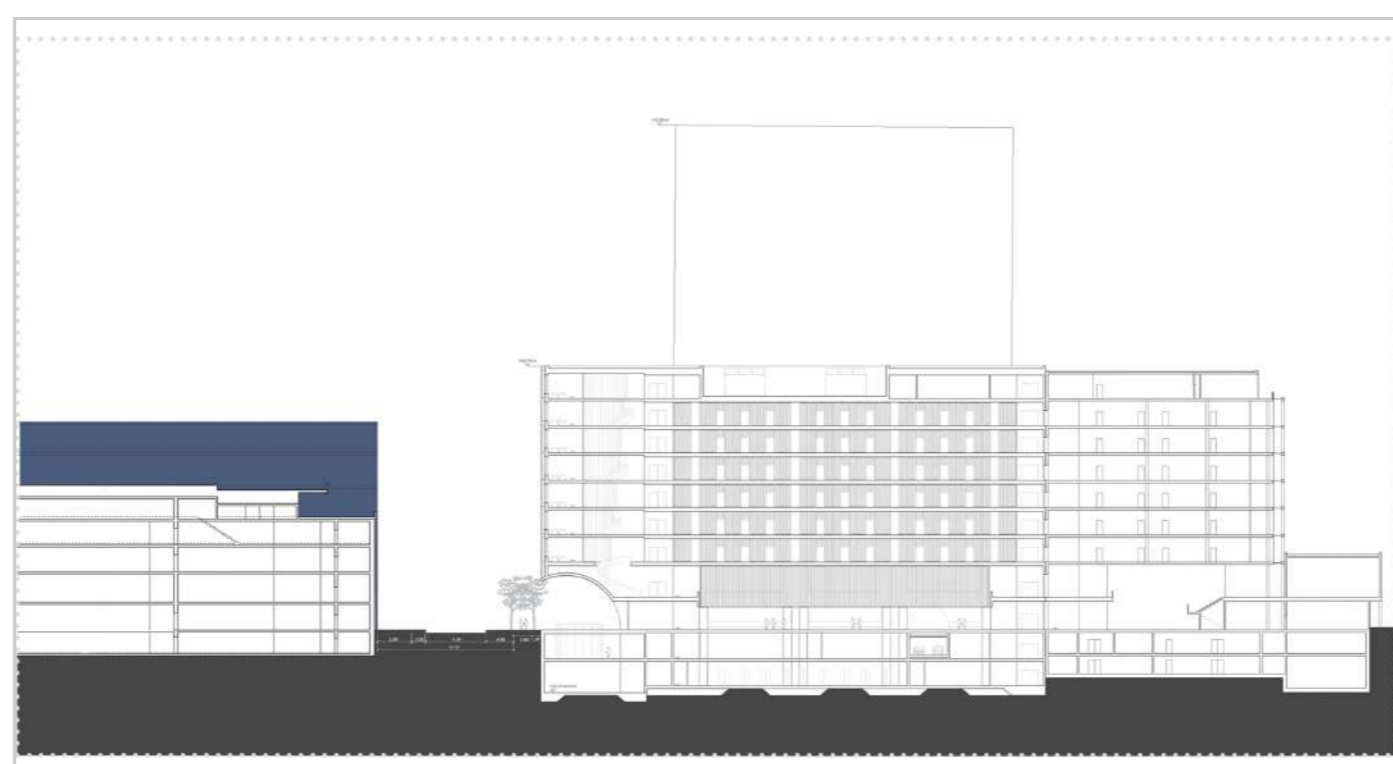
PHASE II - TOP VIEW

PHASE 1

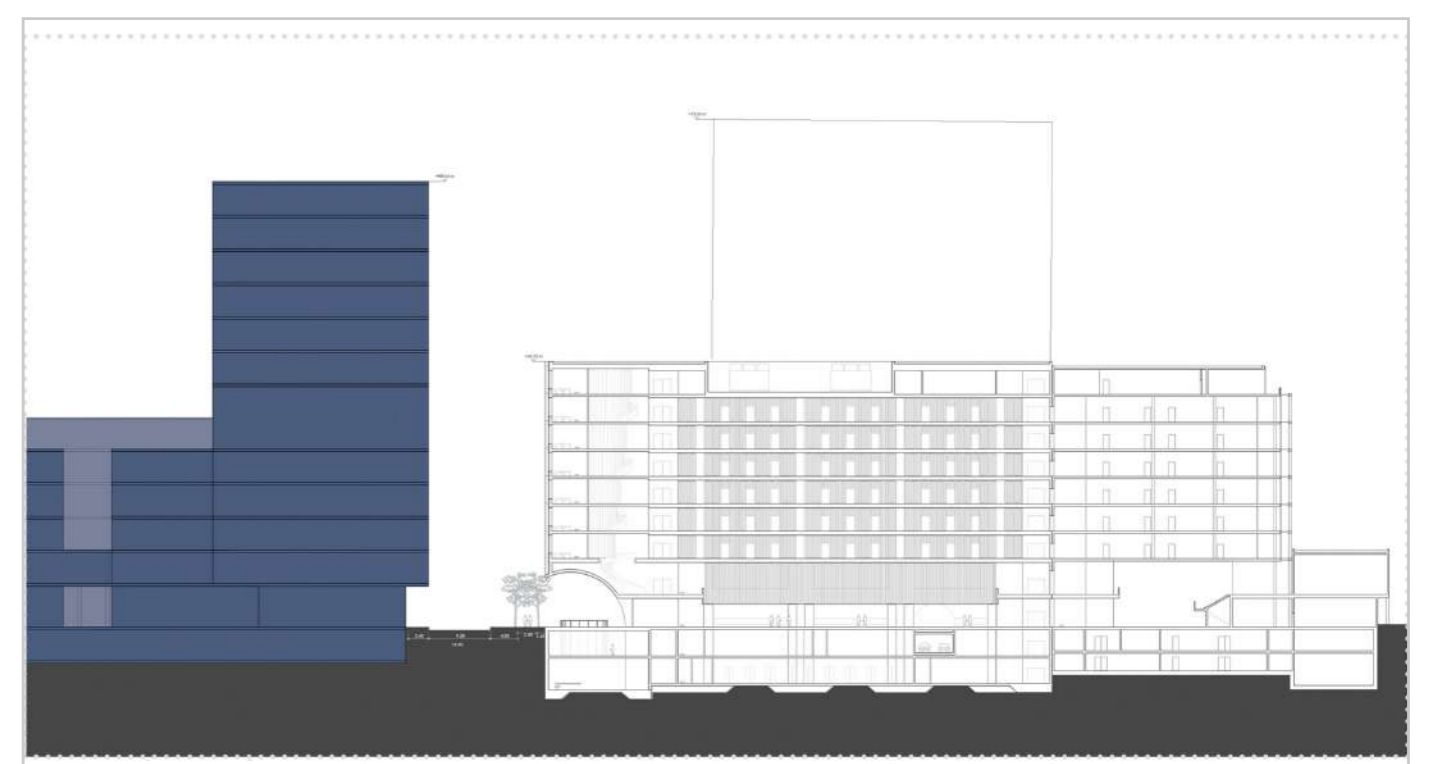
The existing physics building is located by new physics building which consists of L-shaped competitive perimeter comes with two built on contiguous buildings. The 6-story high part at the crossroads Pestalozzistrasse-Spitalstrasse includes the physics and the anatomy and part of the central area. The part at the crossroads St. Johannis-Ring - Spital Strasse includes Anatomical Museum which is open to the public an Anatomy on the upper floors. A facade part of the Pestalozzistrasse gives reference to the church and a cantilever over the sidewalk of the Spitalstrasse gives reference to strategical set-back.

PHASE 2

After moving to the buildings of stage 1, all remaining buildings will be demolished. The second phase includes some levels of functionally connected buildings and underground logistics. At the corner of Kingelbergstrasse and St. Johannis-Ring, a five story central area building will be built in the basement of which the animal station will be located. The 66 m high tower which includes the chemistry department and research labs, is located at the corner of Pestalozzistrasse and Kingelbergstrasse. It is 12 m away from Kingelbergstrasse and has a total of 12 stories.



PHASE I - PESTALOZI STRASSE



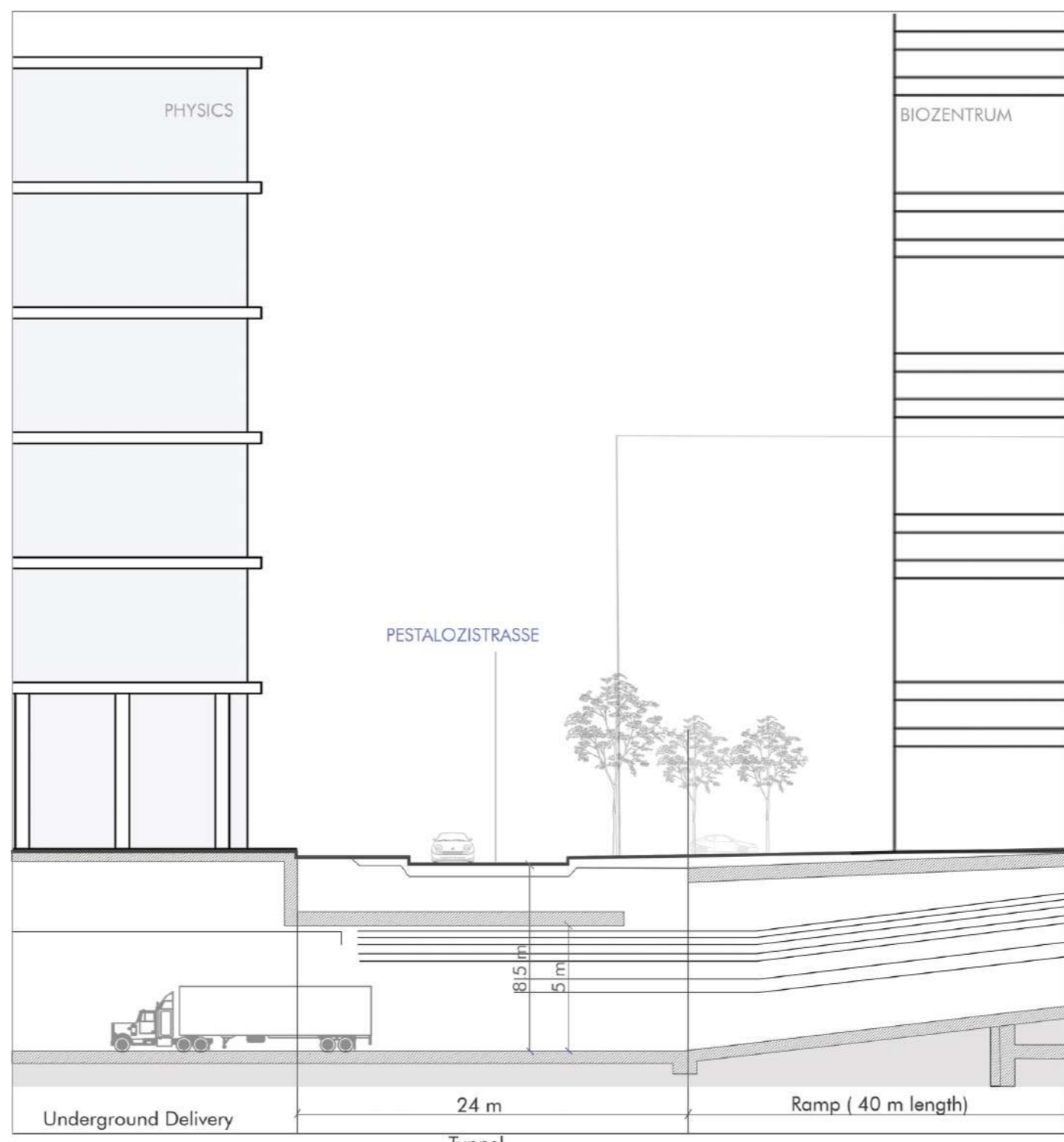
PHASE II - PESTALOZI STRASSE



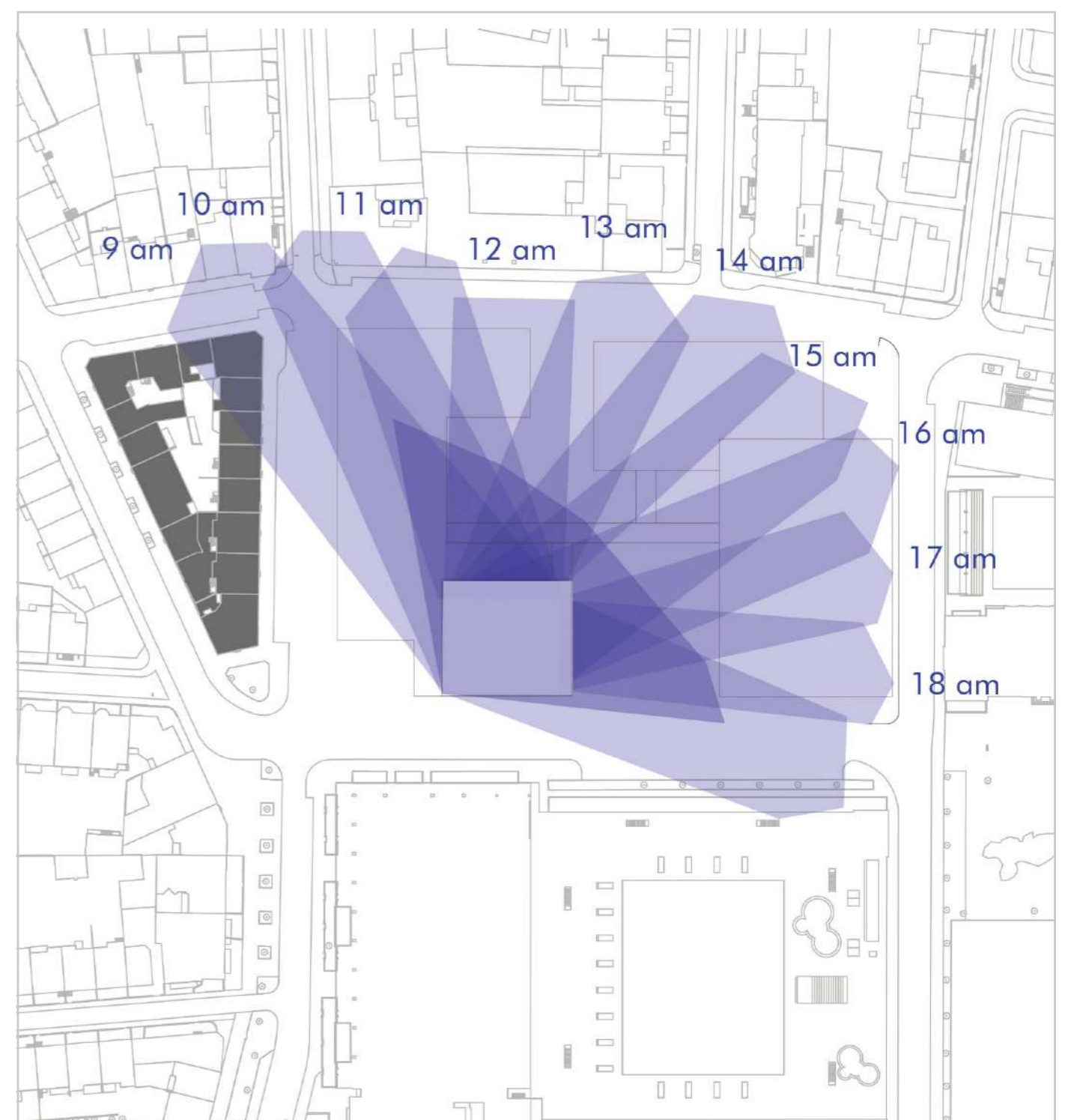
BUS LINE 31-36-38 UNDERGROUND TUNNEL

CONTINUOUS LOGISTIC TUNNEL

The exit of the continuous logistics tunnel that passes through all construction sites is located on the Kingelbergstrasse and the height of the tunnel is defined as 8.5 m in total and 50m away from Pestalozzistrasse.



UNDERGROUND SECTION - PESTALOZI STRASSE

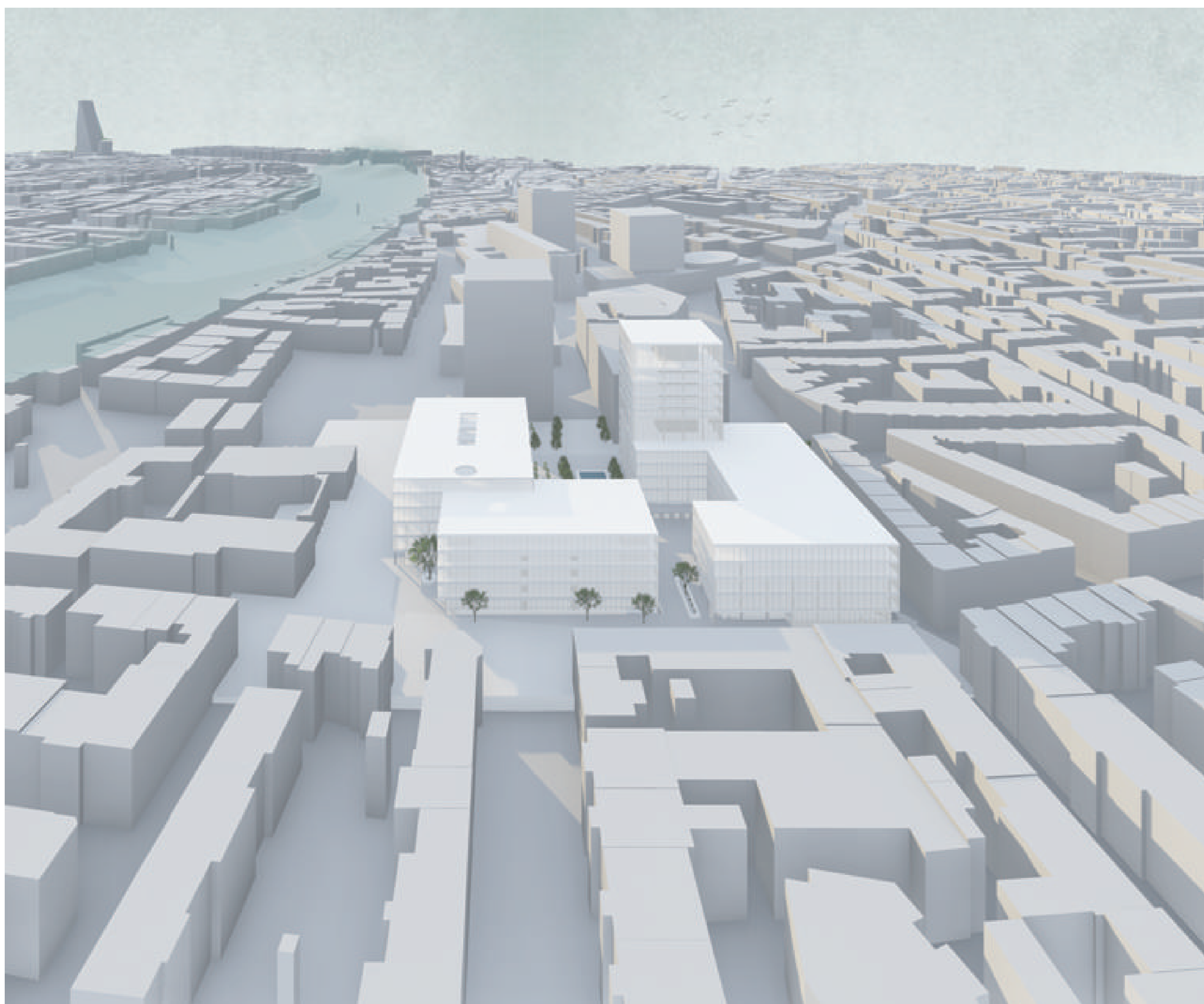


2h SHADOW OF FACILITY TOWER

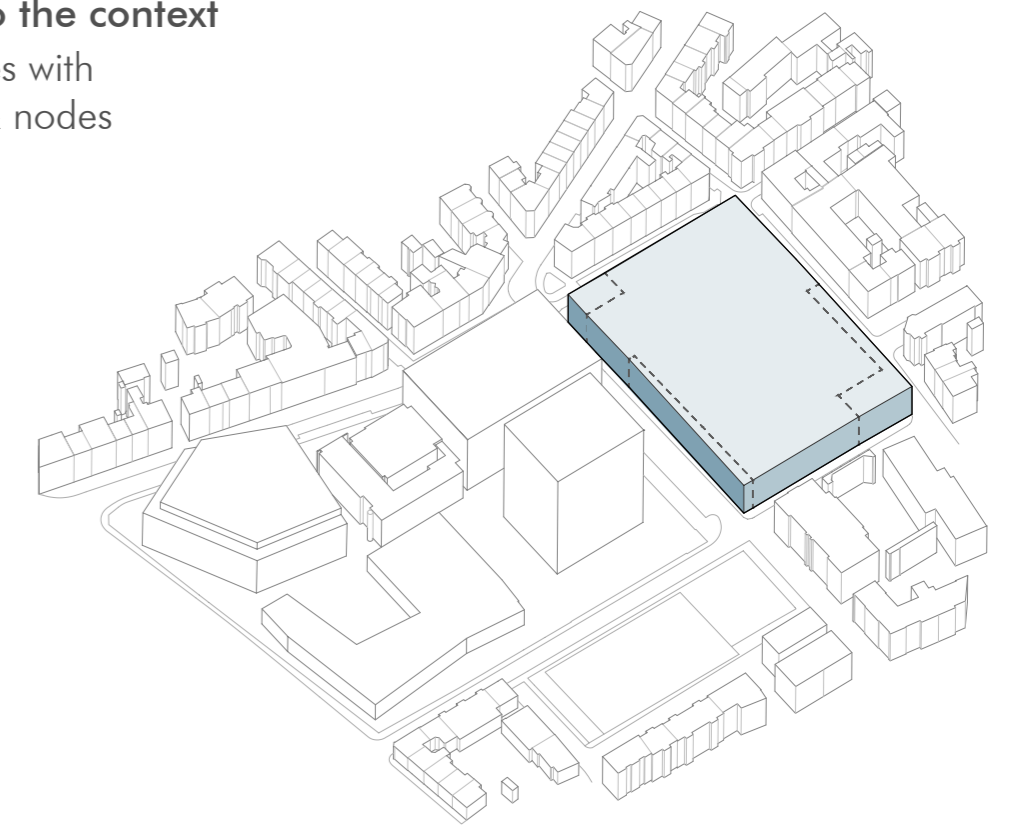
MASTER PLAN PRINCIPLE



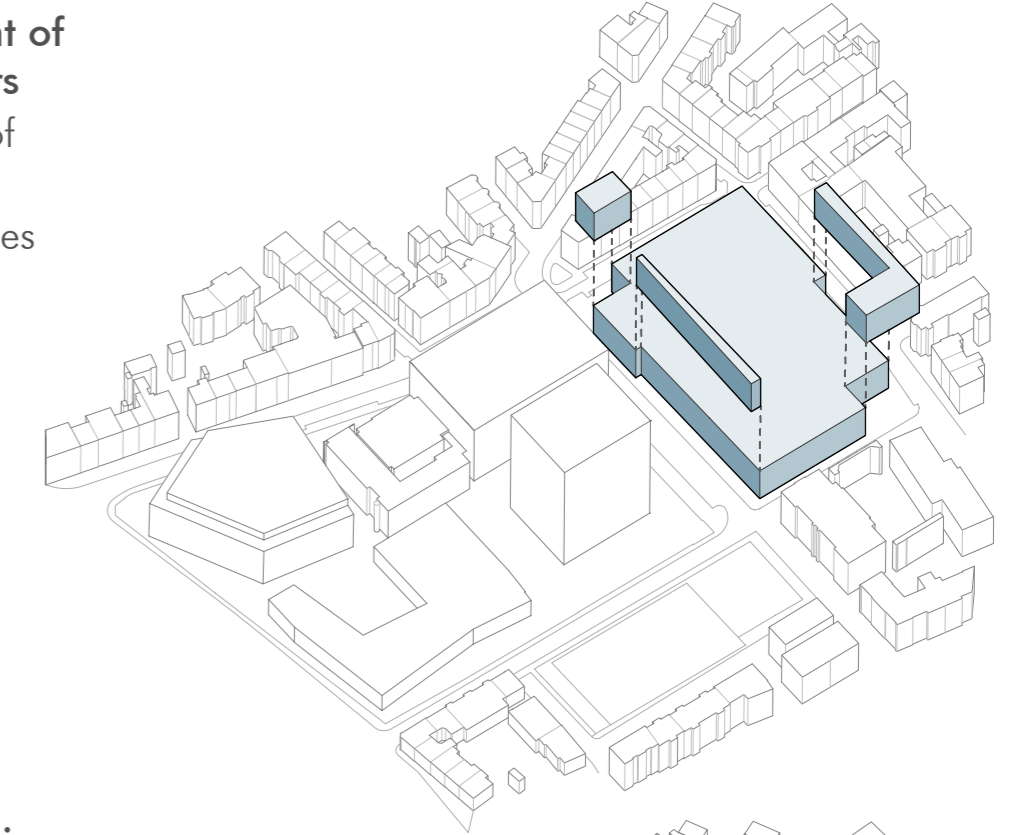
MASTERPLAN WITH SHADOWS



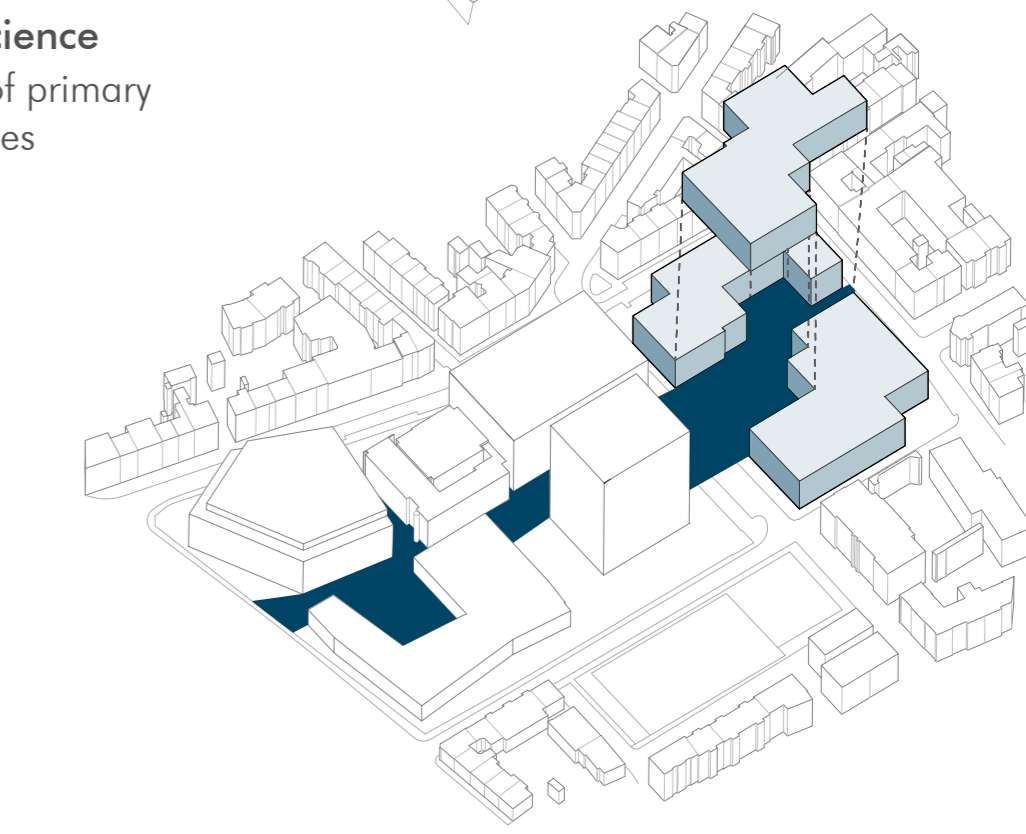
Plot definition & reaction to the context
Full volumes with set-backs & nodes



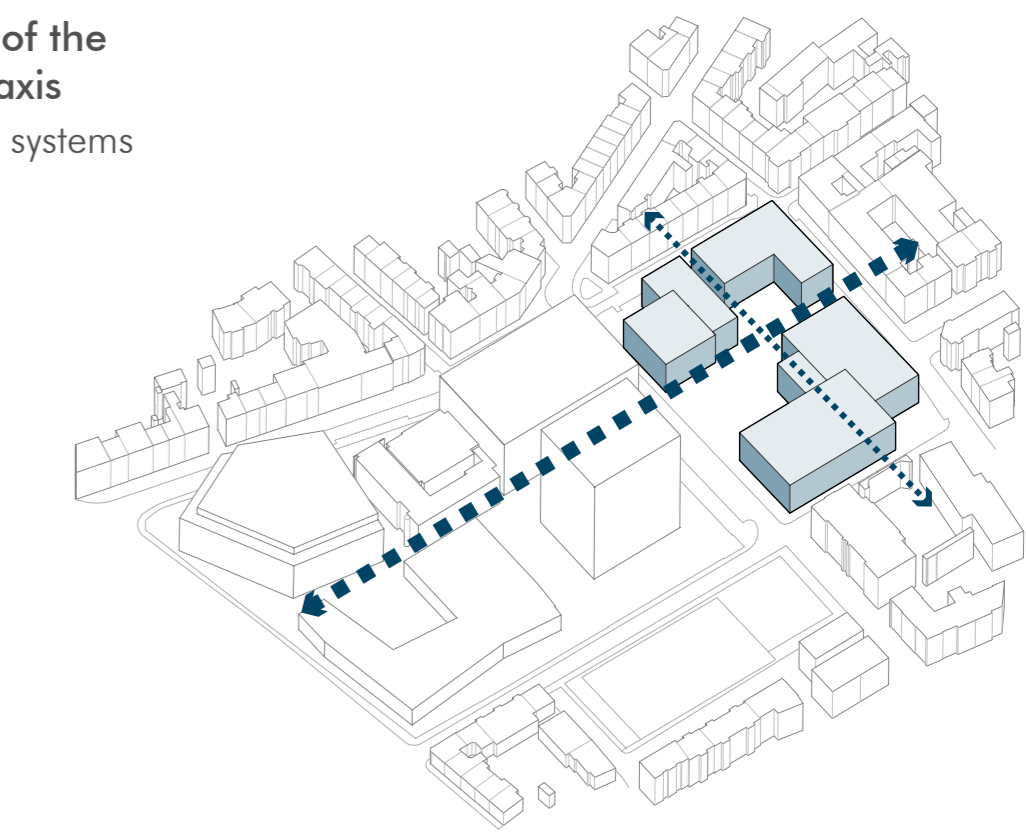
Refinement of the borders
Definition of secondary public spaces



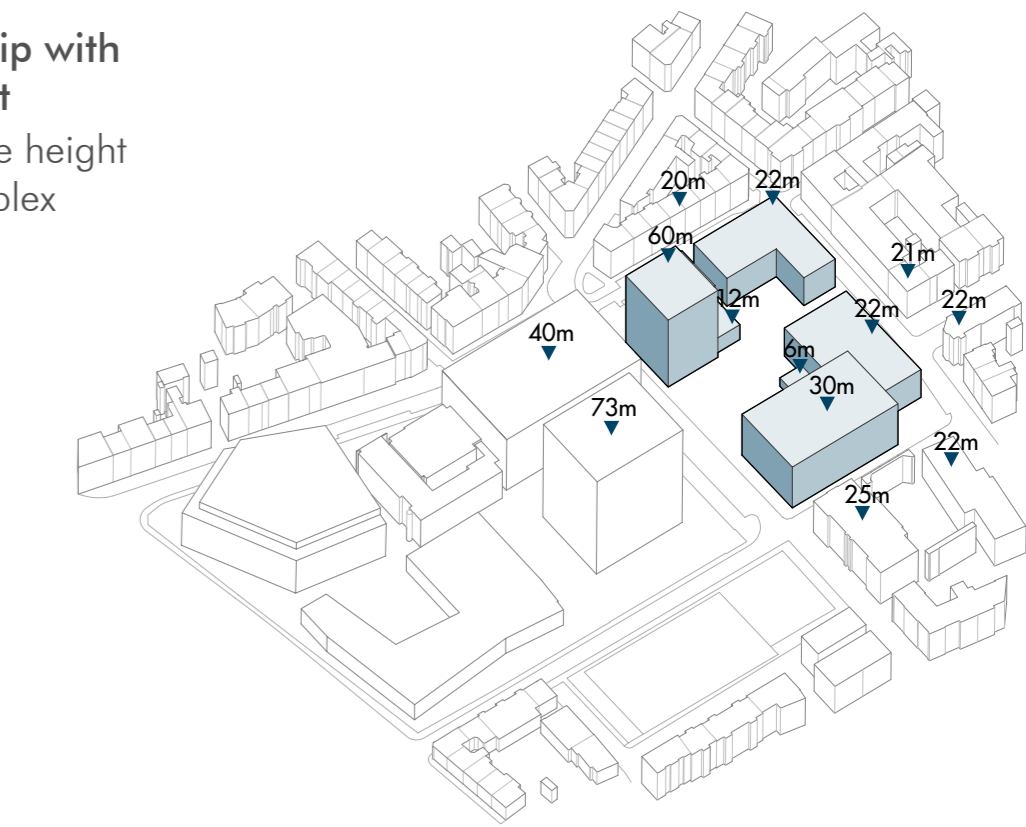
Plaza of science
Definition of primary public spaces



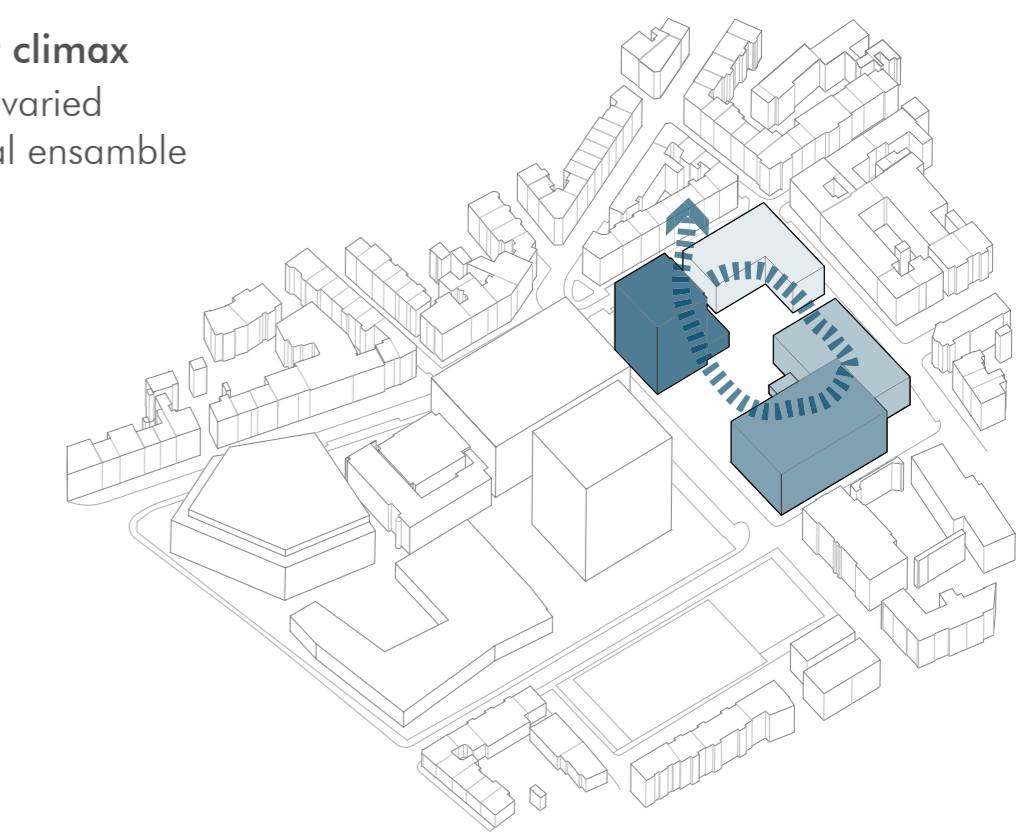
Definition of the two main axis
Intersecting systems



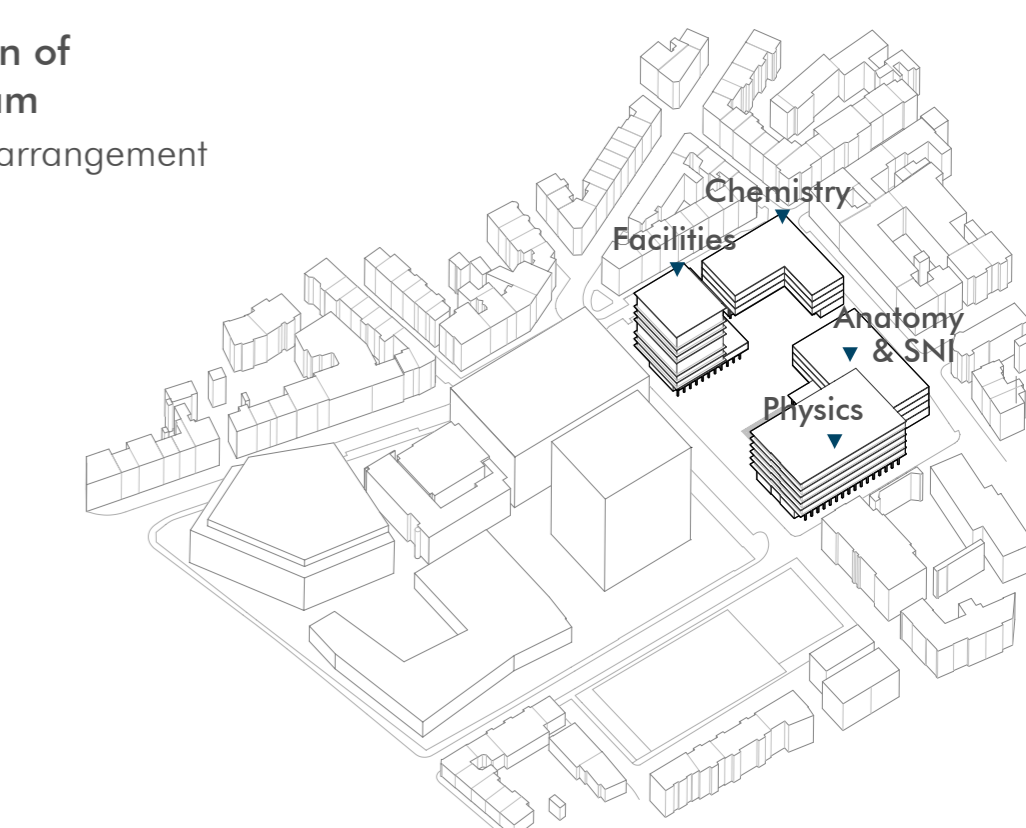
Relationship with the context
Defining the height of the complex

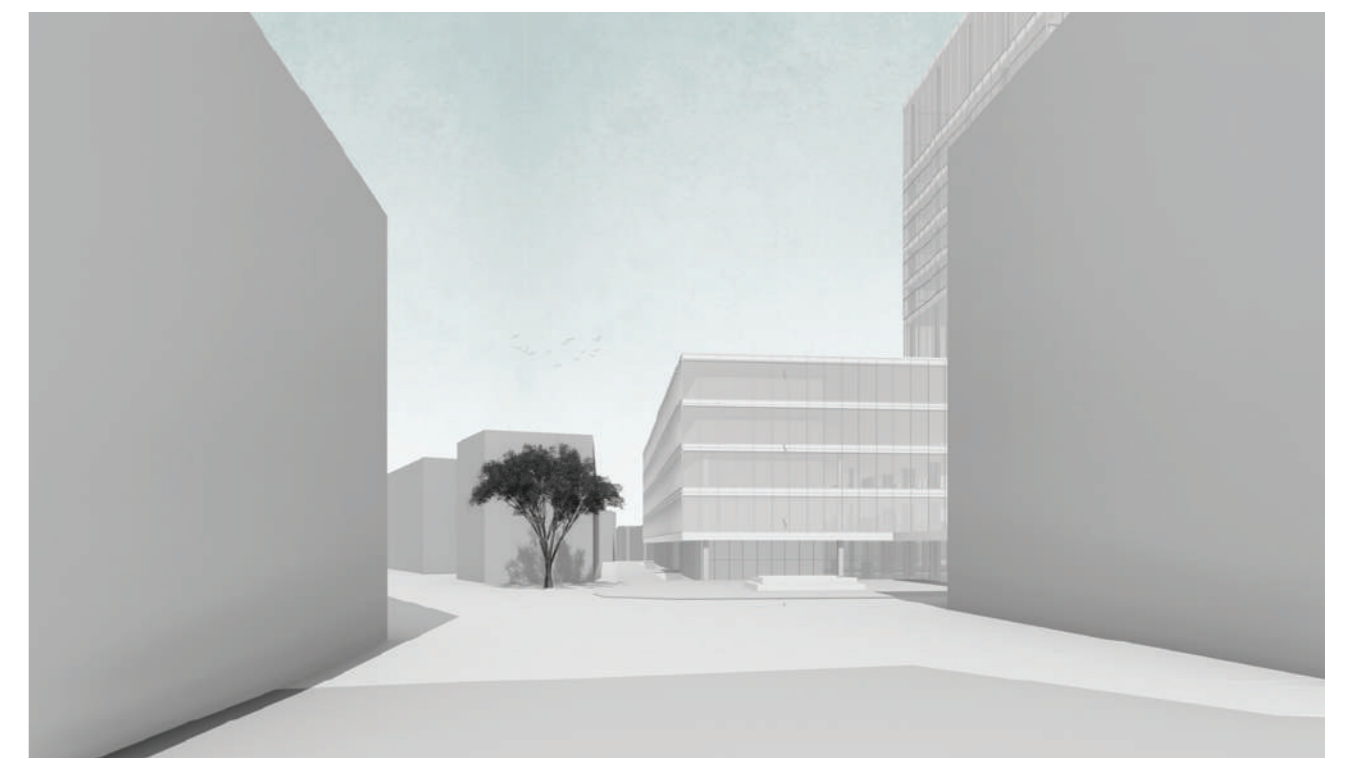
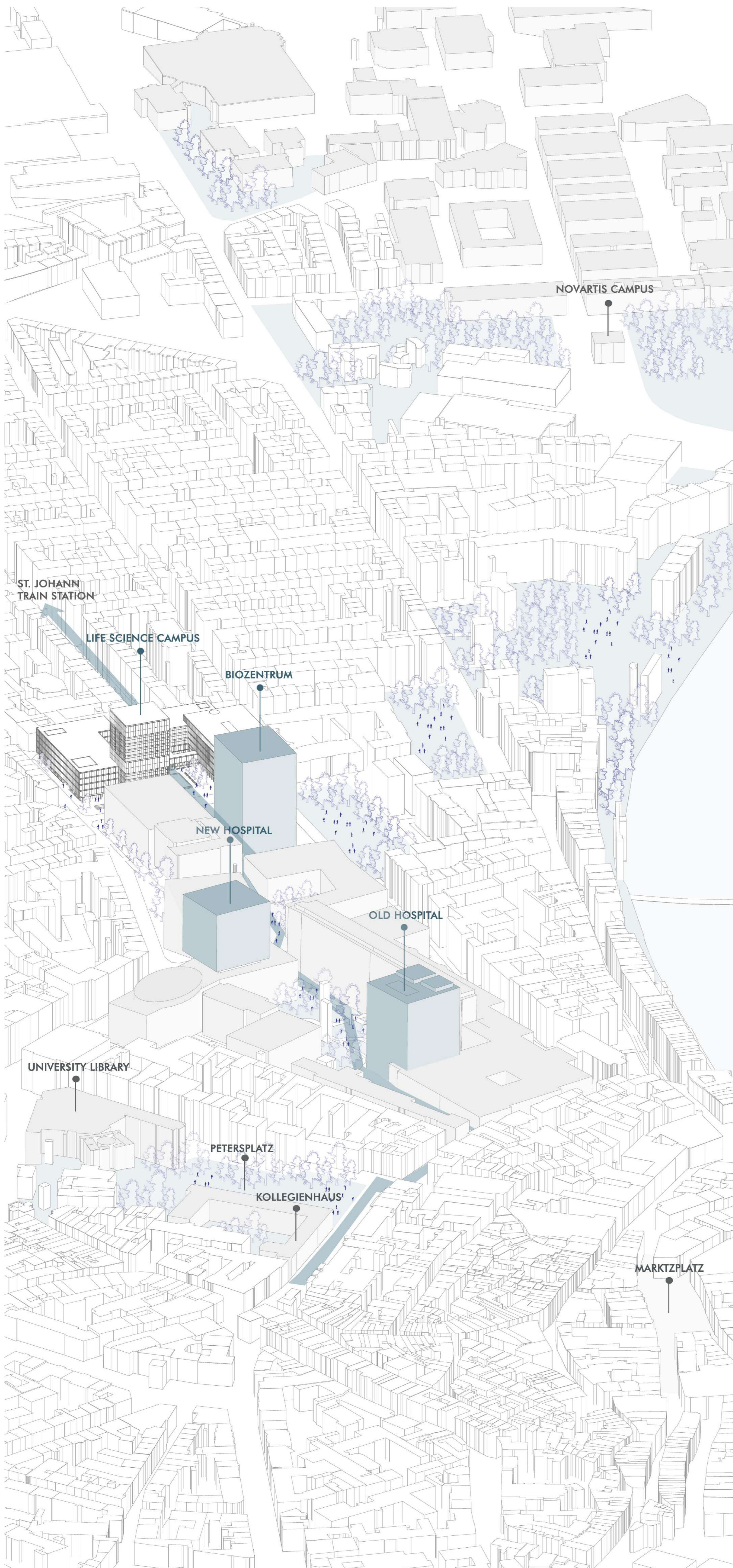


Ascendant climax
Linking the varied architectural ensemble

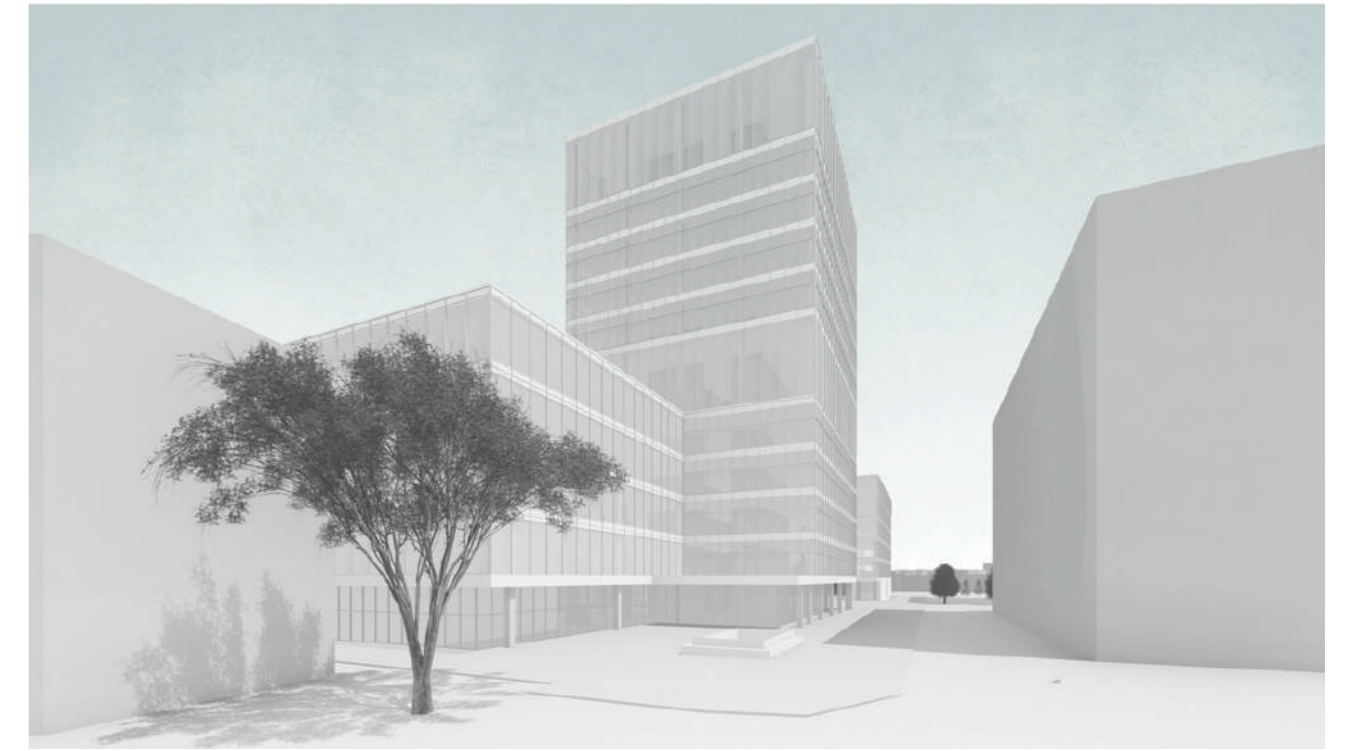


Distribution of the program
Functional arrangement

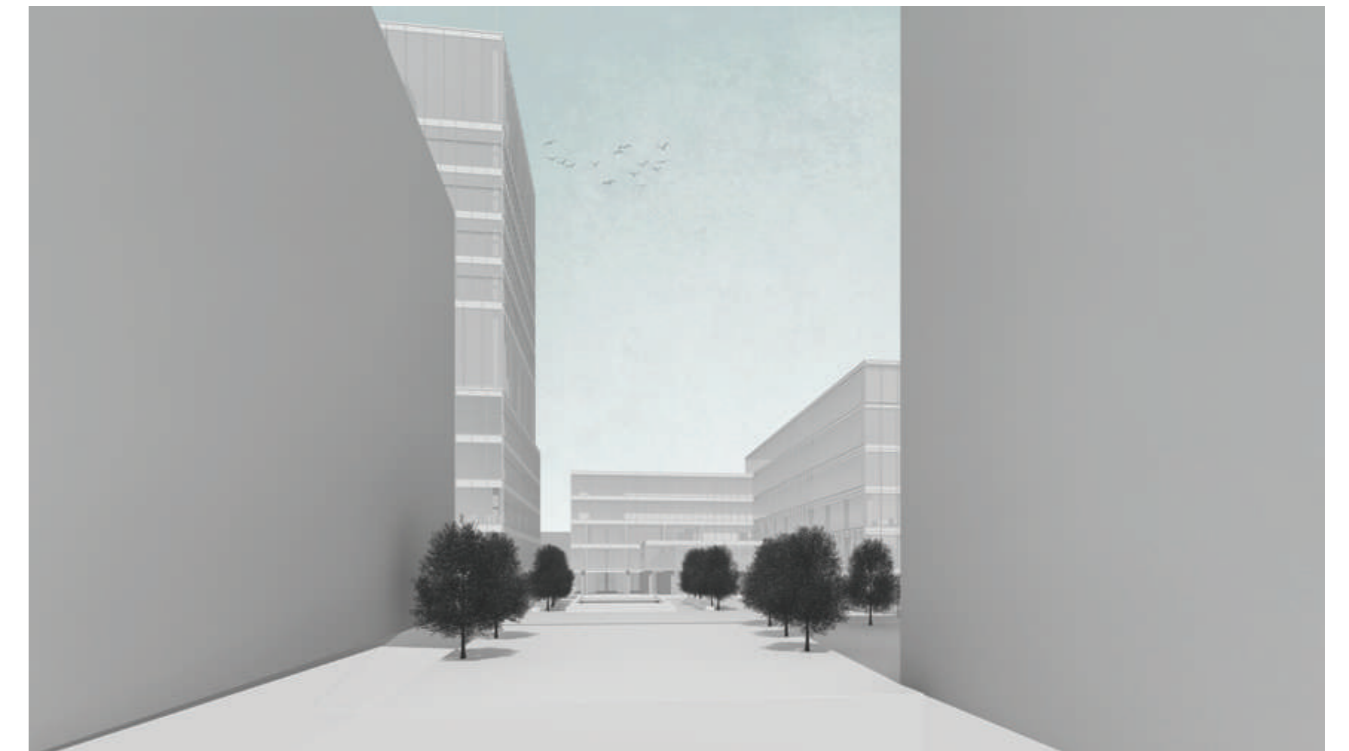




APPROACH THE SITE FROM KLINGELBERGSTRASSE



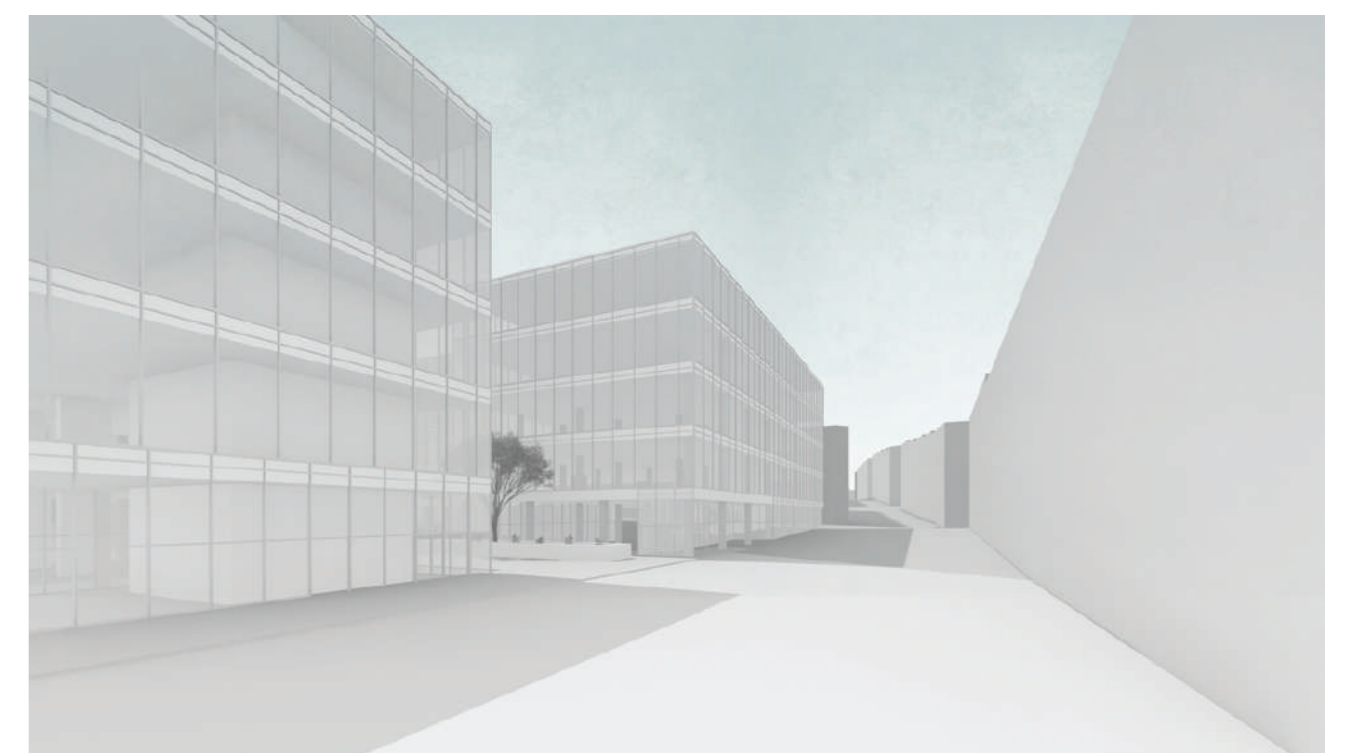
NODE BETWEEN KLINGELBERGSTRASSE AND PESTALOZZISTRASSE



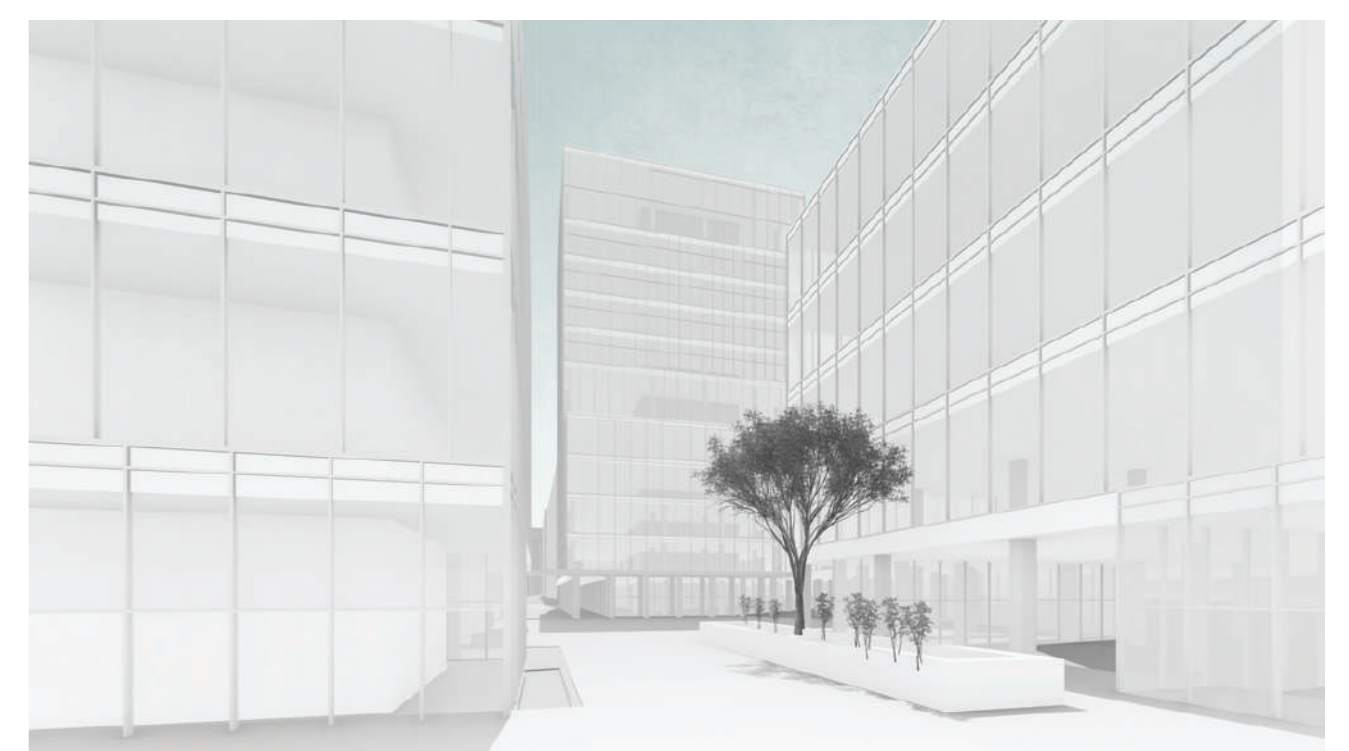
APPROACHING THE SITE FROM THE INTERNAL CAMPUS PATH



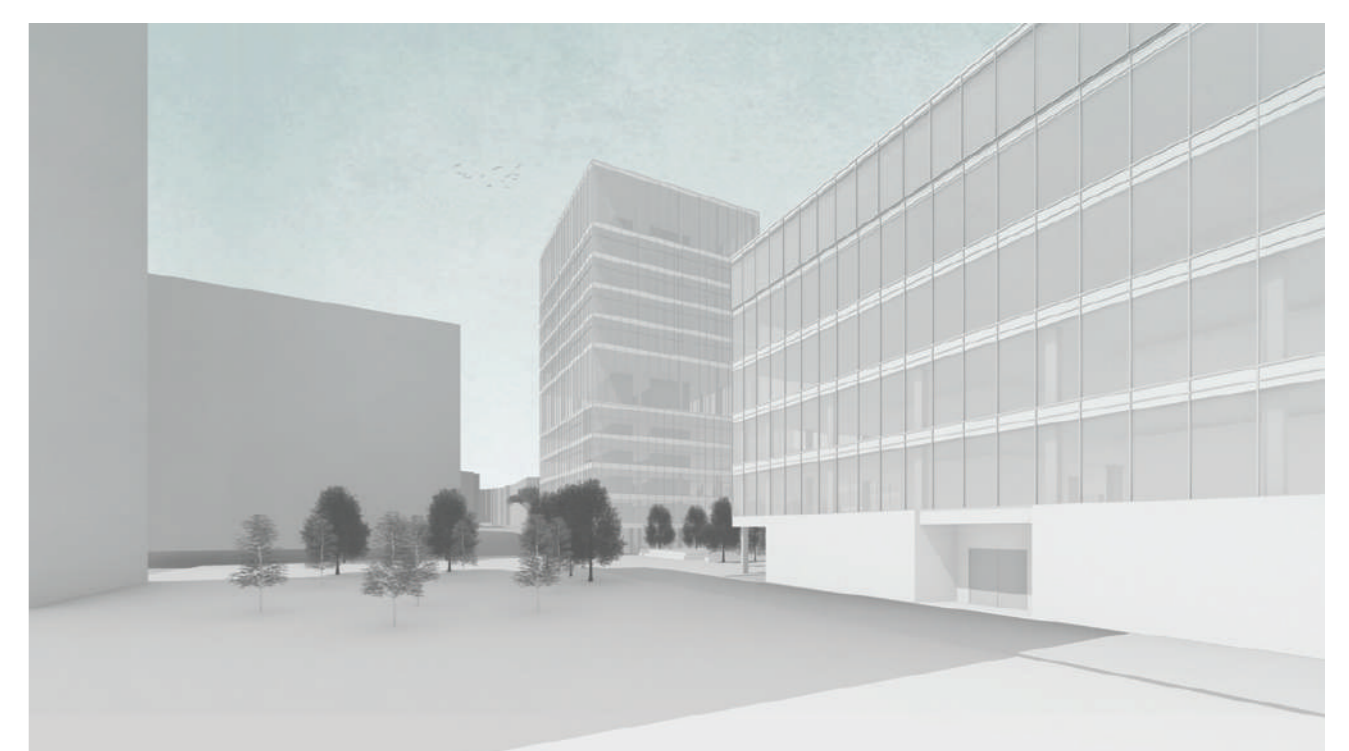
ENTRANCE TO SITE FROM THE CAMPUS PATH, ACROSS PESTALOZZISTRASSE



APPROACHING THE SITE FROM VOGESENSTRASSE



ENTRANCE TO THE SITE FROM VOGESENSTRASSE



APPROACH TO SITE FROM PESTALOZZISTRASSE