

"the urban leftover"

open corner situations in the downtown area of berlin

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History

effecting the "open corner" in Berlin

A synopsis of the Berlin Block and the phenomenon of the open corner:

In the 18th century Berlin's urban layout was dominated by a block-grid, the so-called "Gruenderzeitblock". The functional characteristic of this Block was a the mix of dwellings and commercial uses.

During the period of industrialization at the beginning of the last century, many people migrated to the urban setting of Berlin. The high demand for places to live required that space was used as efficiently as possible. An extremely high density was reached by organizing the block in sequences of up to nine courtyards in a row.

In the beginning of the 19th century, the "IV Construction Regulation Plan" ("Bauordnung") and "General Zoning Plan" ("Bebauungsplan") tried to regulate the construction boom in Berlin. The maximum height of buildings was then limited by the width of the street to a maximum of 22m (66 feet) space. The aspects of light and sun became important only in apartments facing the street, typically occupied by upper income families. Regulations for the lower quality courtyard apartments were less concerned with sanitary issues but primarily fire regulations.

04



Typical courtyard condition in a "Gruenderzeitblock" in Berlin

Picture of a "Garden-city" idea

After the First World War new ideas in art, architecture, and urbanism emerged in Europe. In Berlin for example, large scale projects were developed, based on a new social aesthetic relieved from tradition. A new type of dwelling typology was proclaimed, rejecting the historical block structure and "Mietskaserne" portraying the blocks as a bleak and inhuman environment with substandard living conditions.

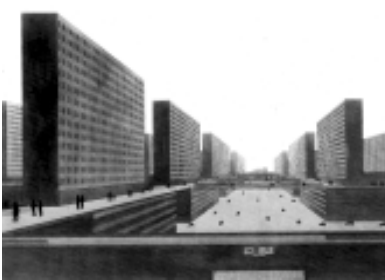
One new of the types of urban housing favored a linear arrangement "Zeile". Through its linearity maximization of light, sun and air and the establishment of public green spaces promised a significant improvement over the traditional block structure.

Combined with indoor plumbing, each apartment received the same amount of daylight, setting completely new standards of living. These early projects, with high architectural standards, offered radical innovations for their time, which the later rapidly constructed postwar housing projects -although similar in their premise- rarely could accomplish.

05

After World War II, Berlin was almost completely destroyed, and reconstruction of the city's infrastructure was necessary. One year after the war, the first reconstruction plan was developed under the direction of Architect Hans Scharoun. He based the project on the modern ideas developed in the 1920ies combined with the recommendations of the "Congress Internationaux d' Architecture Modern" (CIAM), which focused on new strategies of urban and social development.

In Berlin, the urban situation was strongly characterized by the political separation of the city and the attempt to deny visual associations with recent history. This new urban ideal refused the traditional block structure. Several urban competitions took place to find new strategies for the reconstruction of the city.



City Ideal of Hilbersheimer
Hufeisensiedlung by Bruno
Taut, Berlin

Common to these proposals was to reduce the allowed percentage of lot coverage, so that more open space was provided. No distinction was made between the lots following the street and the lots located at a corner position. This undifferentiated rule and combined with fact of constructing new linear building types is responsible for many "open corner" conditions in Berlin. In addition to this rule, Mrs. Klegin a government official in the building administration of Berlin, enforced this law strictly and promoted the "open corner" condition on which this project is focussed.

The previous activities can not be isolated from the fact that during the war, buildings located at intersections were the most damaged due to the pressure waves of bomb explosions. As buildings along in the street were reconstructed, the corner often remained empty. The corner lots, therefore, became the starting point for the "Zeile". The old "Gruenderzeitblocks" which remained were considered temporary, to be substituted by the "Zeile" in the future.

The "Zeilen" constructed during the 1950s became dwellings only, no longer evincing functional diversity in the differentiation of the design of the elevation. The entrance was located on the back side, and the courtyard was used as a parking lot. The floor plans and ceiling heights were reduced

Urban "Zeilen" proposal

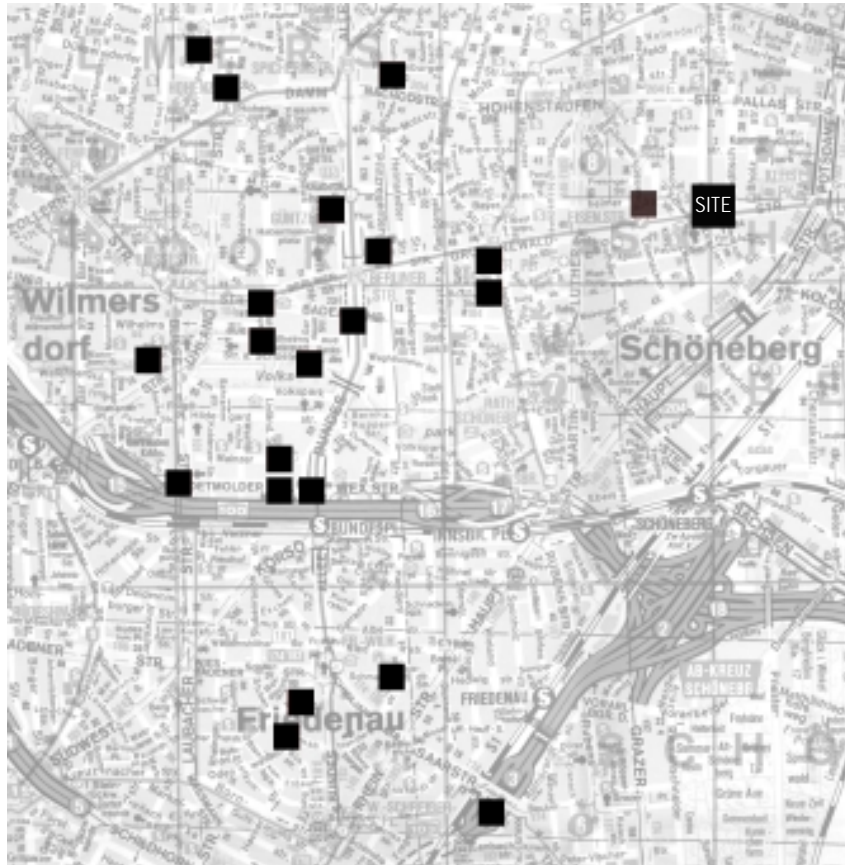
Picture before World War

Same corner situation



Open corners in Berlin

selected open corner conditions in downtown Berlin near the project site



07

Selected "open corner" conditions in Schoeneberg and Wilmersdorf indicating their frequent presence in the parts of the former West Berlin.

- Uhland Street
- Detmolder Street / Weimarsche Street
- Bamberger Street / Regensburger Street
- Guenzel Street / Jenaer Street
- Berchtesgadener Street / Apostel Paulus Weg
- Berliner Street / Babelsberger Street
- Babelsberger Street / Badensche Street

Open corners in Berlin

example of some "open corner" conditions in downtown



08

Schimjan Street

Hedwig Street / Frege Street

Holsteinsche Street / Feuerbach Street

Feuerbach Street / Koerner Street

Bruchsaler Street / Durlacher Street

Wex Street / Bruchsaler Street

Prinzregenten Street / Waghäusler Street

Hohenzollner Damm / Fasanen Street

Haupt Street / Frege Street

Fasanen Street / Pariser Street

Prinzregenten Street / Durlacher Street

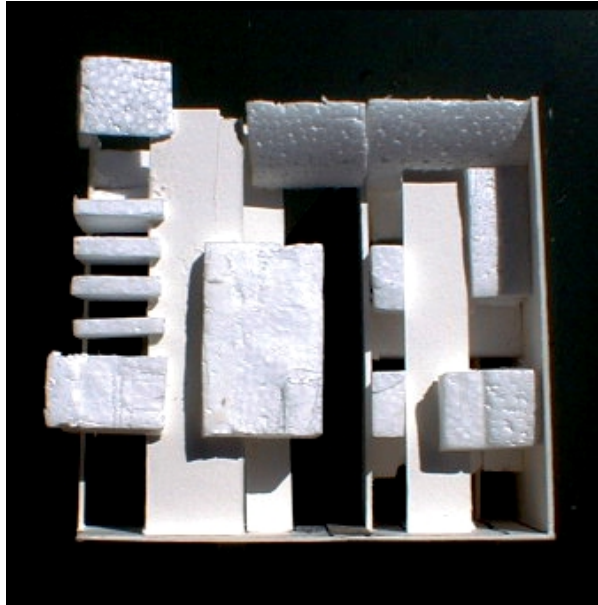
Bundesallee / Wilhelmsaue

Grunewald Street / Berchtesgardener Street

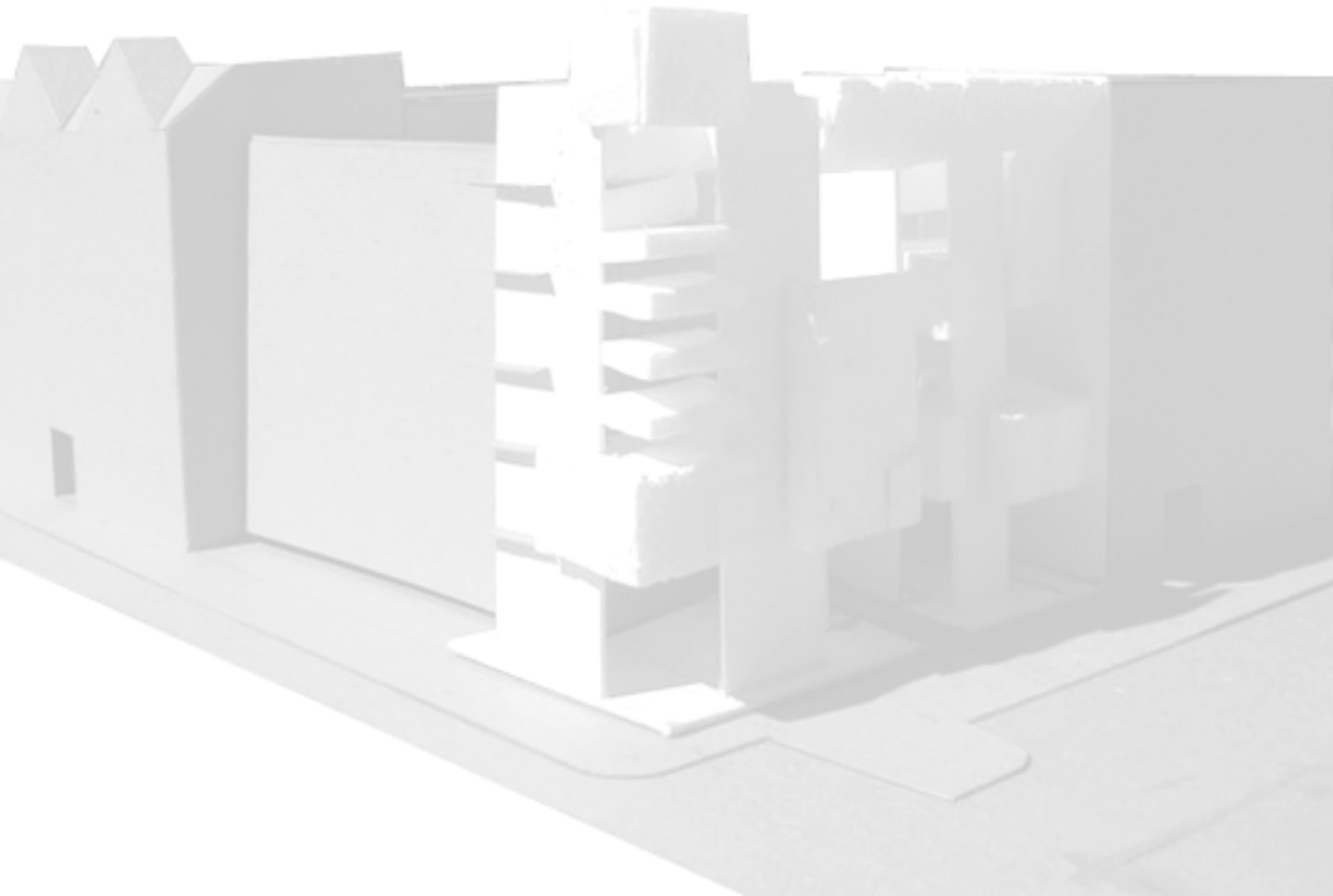
Gneisenau Street / Zossener Street

Reclaiming "Urban Leftover" ?

The situation of the "Urban Leftover" is evident in over 100 locations in the former West Berlin. These open corner conditions can be found especially in Schoeneberg, Tiergarten and Charlottenburg. The radical urban concepts under which the Zeile was erected were never realized completely. This design project demonstrates different ideas for dealing with this leftover today. Recent discussions have placed blame on the architecture of the 1950s regarding its inappropriate urban qualities. A typical "solution" would be to demolish the "Zeile" and revert to a new building in the outlines prior to World War II.



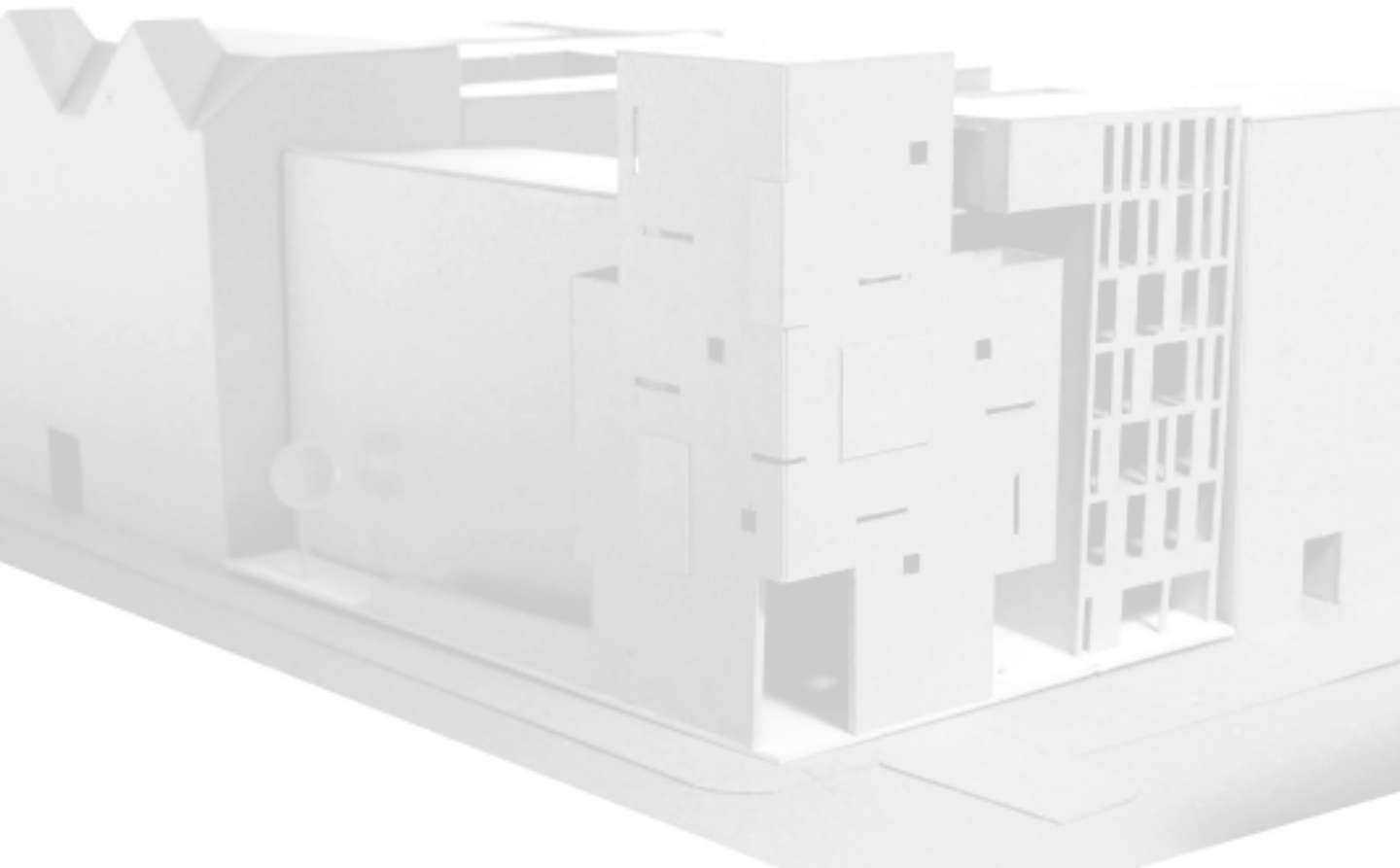
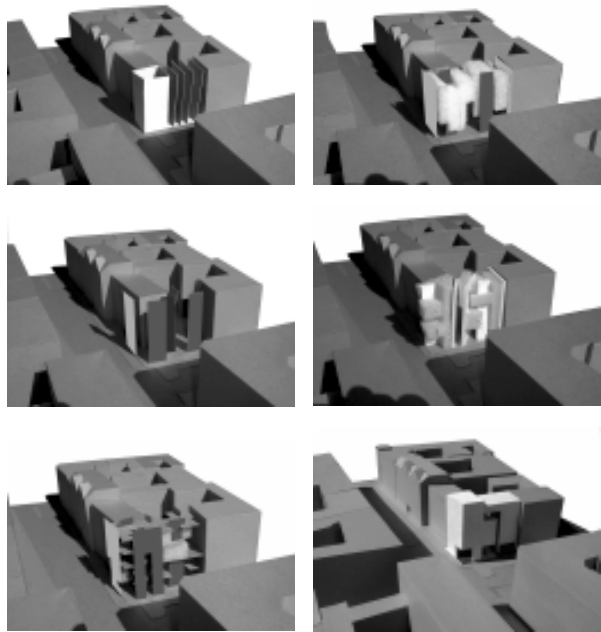
early study model "working with planes & small volumes"



This project operates with the following premise:

Both typologies, the Block and the Zeile, should be respected. The aim is not to promote the Block or the "Zeile", but to preserve the essential qualities of both types, and revive the compelling ideas of Congrès Internationaux d'Architecture Moderne (CIAM), namely to design dwellings with same amounts of sun and natural light, air and green areas. In addition the project seeks to embrace the contradiction of preserving the open corner, respecting the city's complex historical layers, and at the same time to grant the left over a new contemporary urban identity.

right: study models of various preliminary design ideas



Photographic documentation of the neighborhood of the project site, hinting the atmosphere and context in which the proposed project is located.



Site

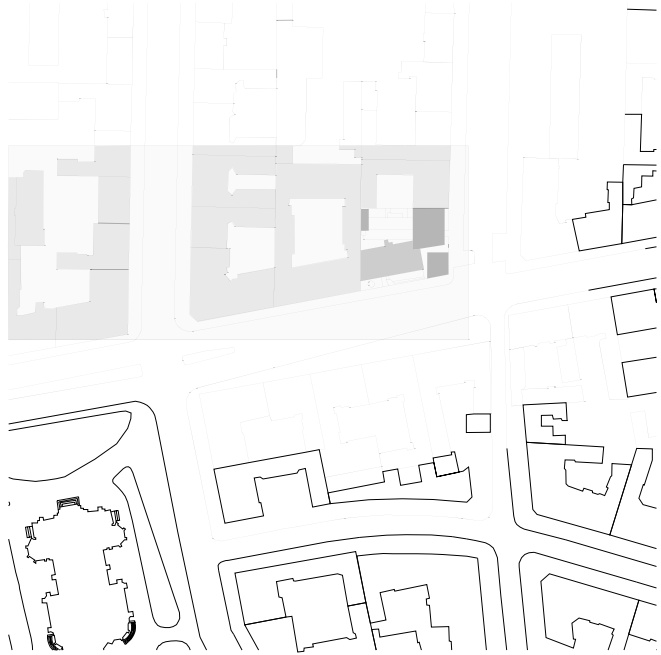
the development of the site during the past hundred years



historic



the site today

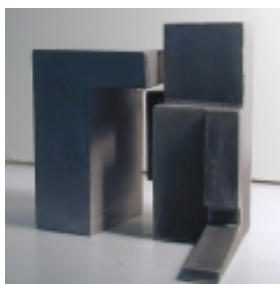
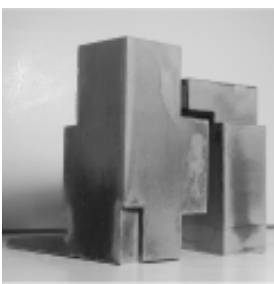


proposed project

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elevation sketch of Volume I & II



model from the street side

model from the back side

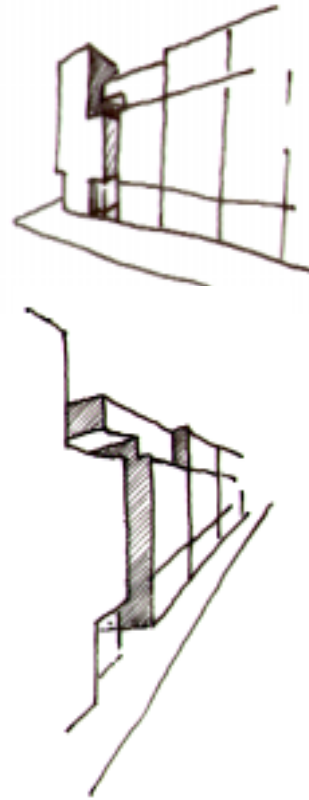
Street elevation

This photomontage gives an idea of the public approach to the new defined urban situation and the proposed building on the corner lot.



Building

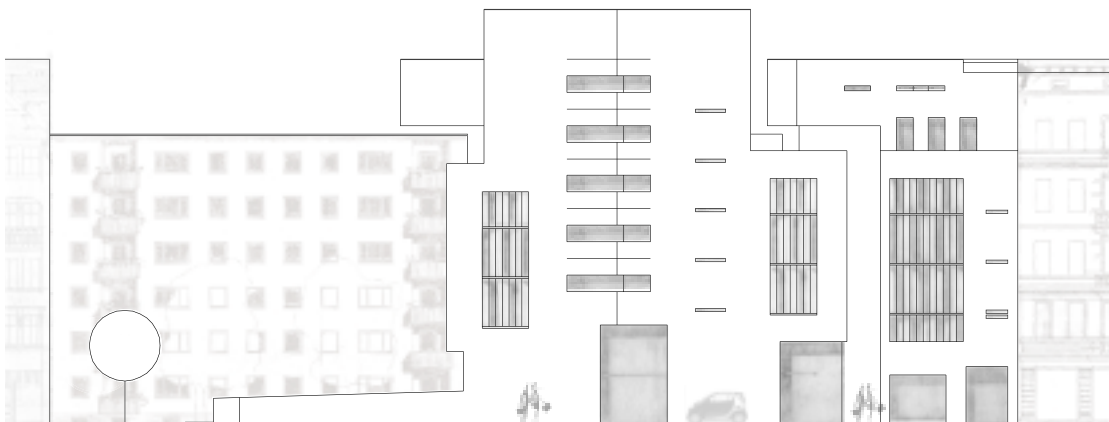
street elevation and lines of elevation



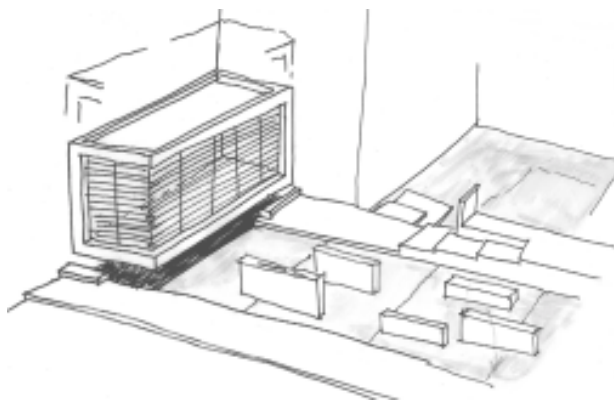
Perspectival Lines:

Sketches indicate the elevation lines of the new building in relation to the existing surrounding buildings.

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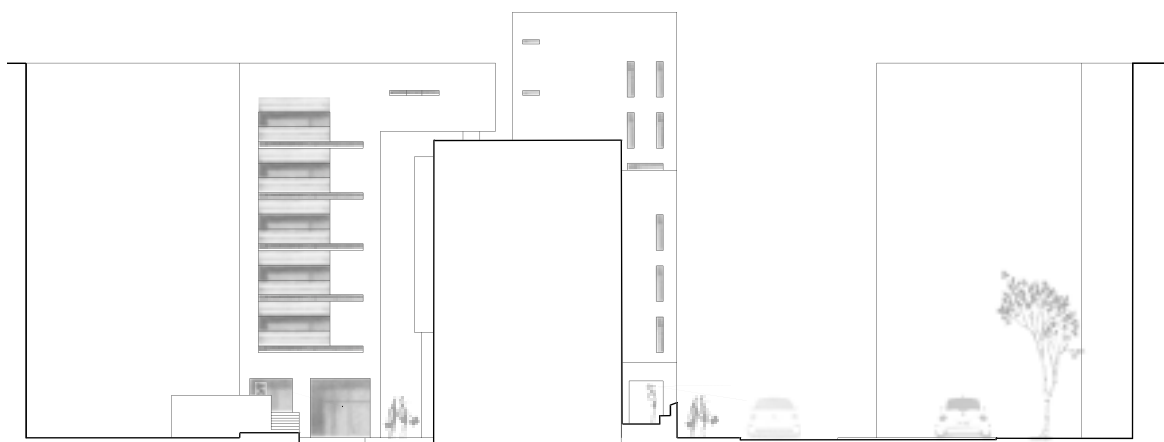


street elevation (unfolded) of the corner situation



Sketch of the courtyard idea:

The semipublic courtyard with
space for small businesses

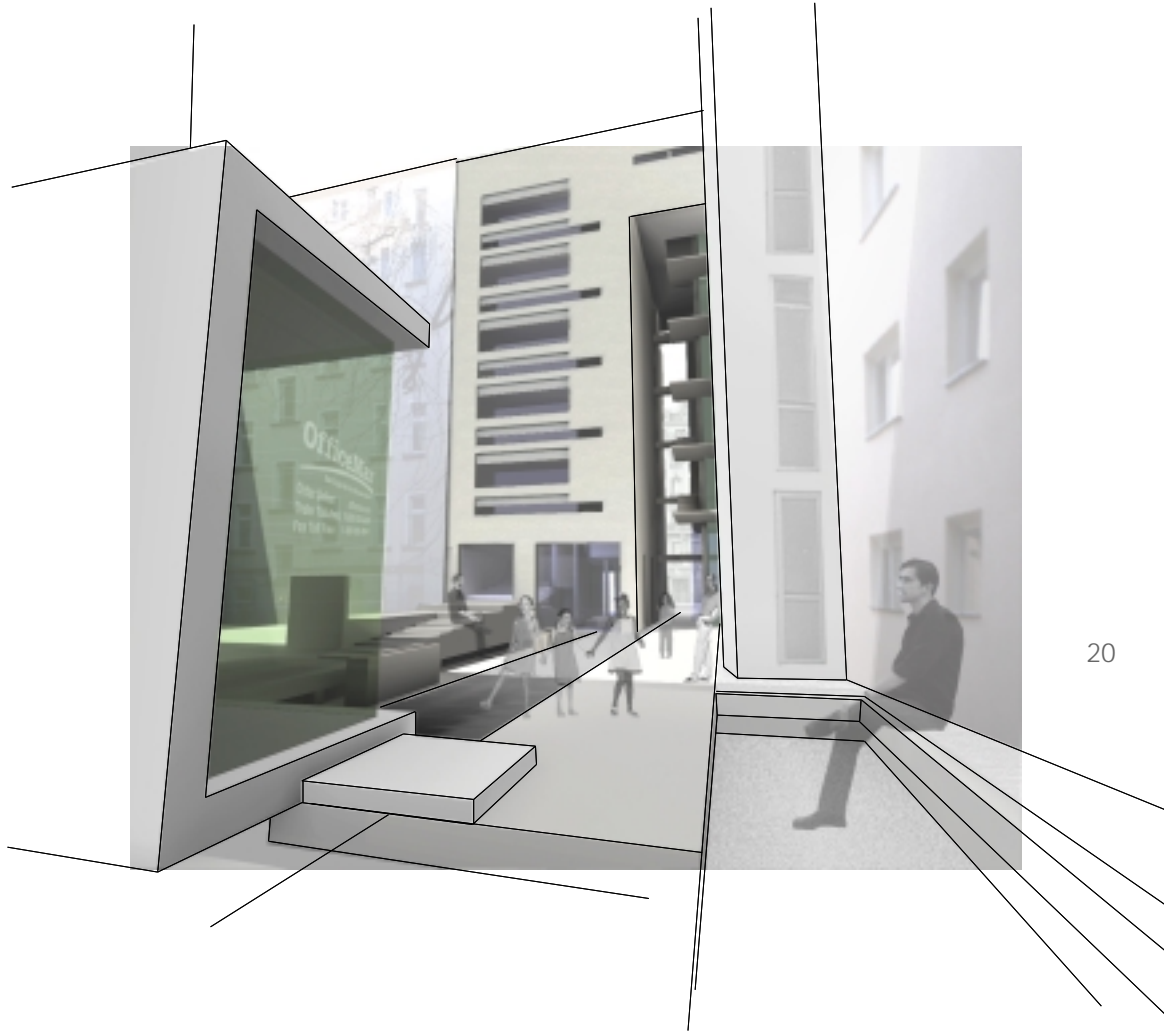


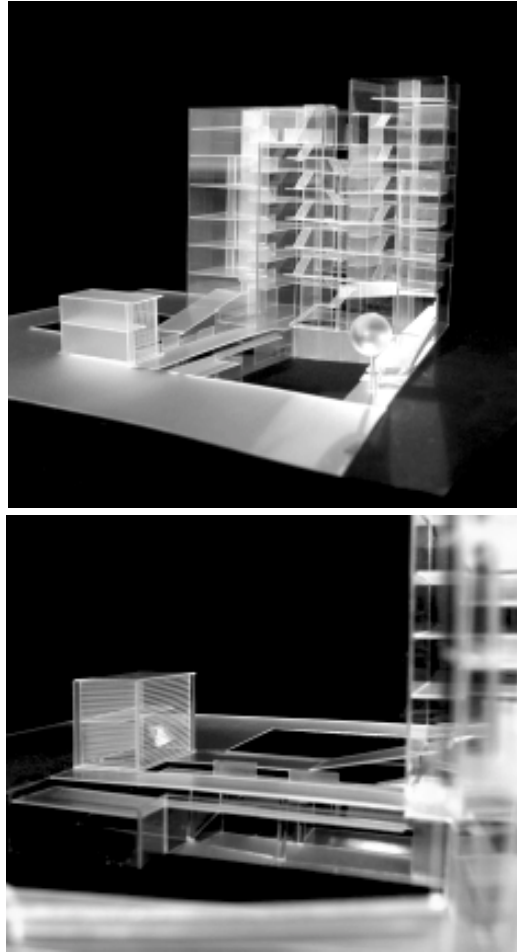
adjacent elevations

elevation courtyard

The Atmosphere of the courtyard

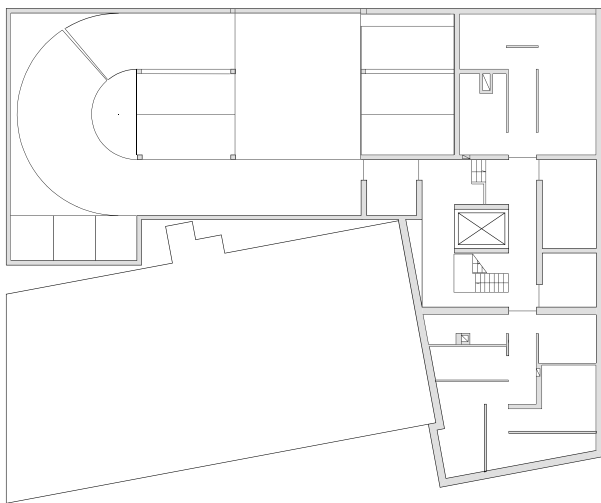
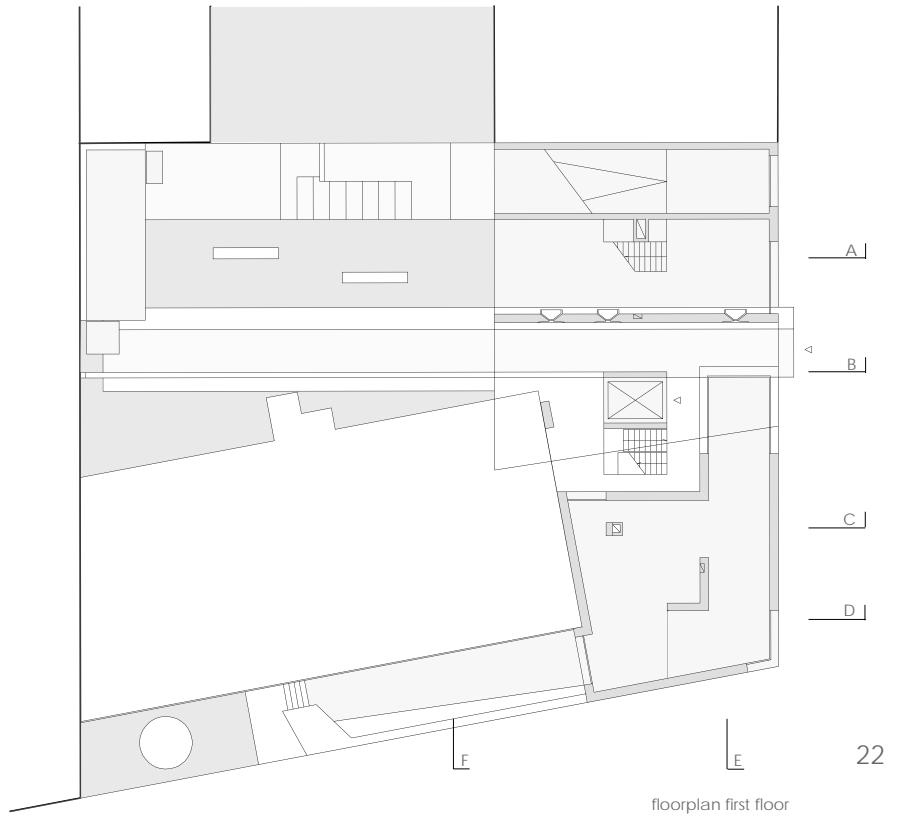
Photomontage of the semipublic courtyard illustrating the connection to the street through the "large door" - entrance axis -.



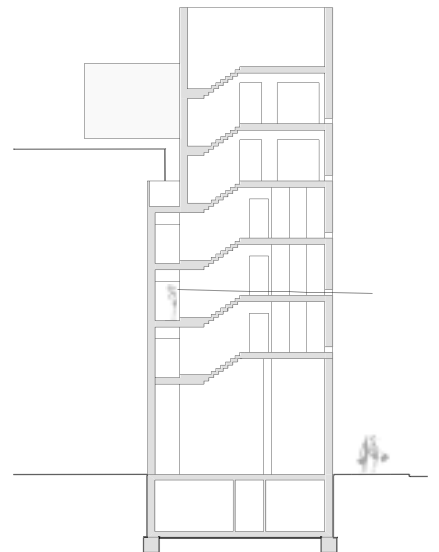


Courtyard

Along the passage small illuminated showroom windows are guiding into the semipublic courtyard. The courtyard is designed with various levels to differentiate the space and its use. This conditions also allows illumination and circulation of air to the underground parking garage.



floorplan underground parking & cellar

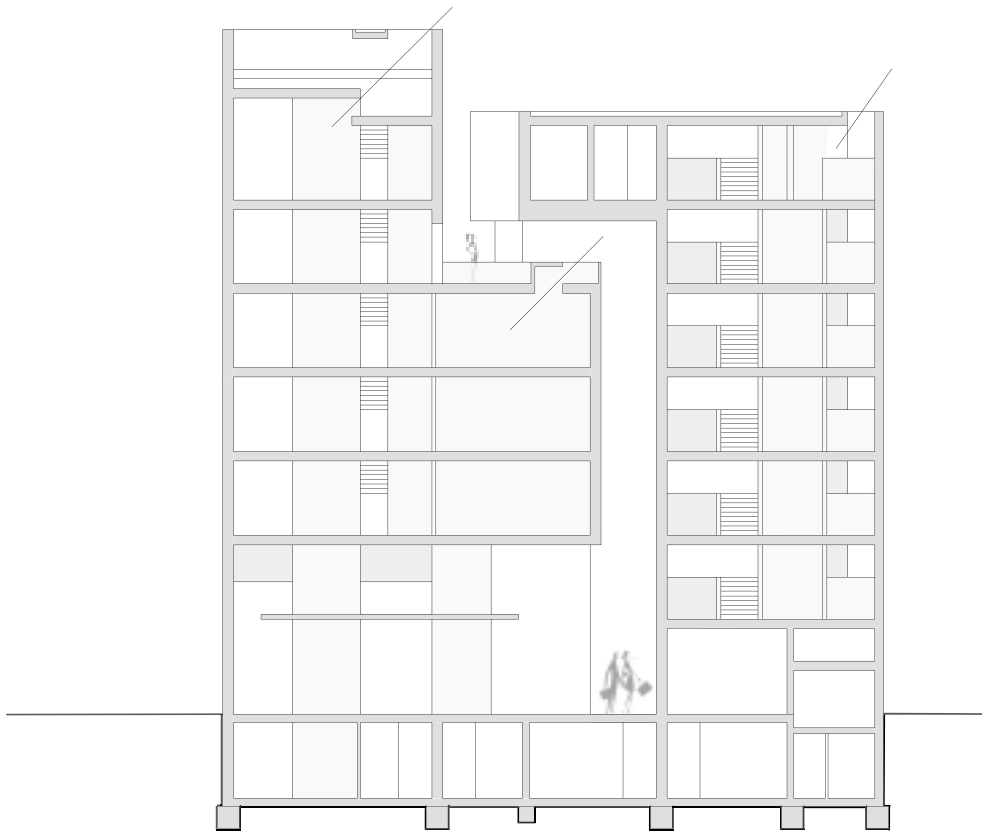


section C: Volume I

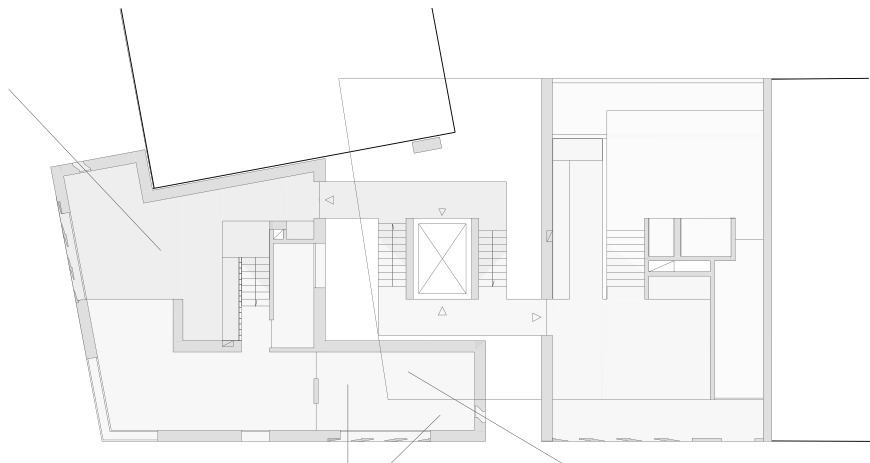


Large Door

This design proposes two major volumes with different treatments. The interlocking space creates a large door to the courtyard. This door is the entrance to the Zeile and courtyard. Also, it is the main entrance to the new building, and it houses the vertical circulation device.



Section E: Volume I & II



typical floor plan level 1-4

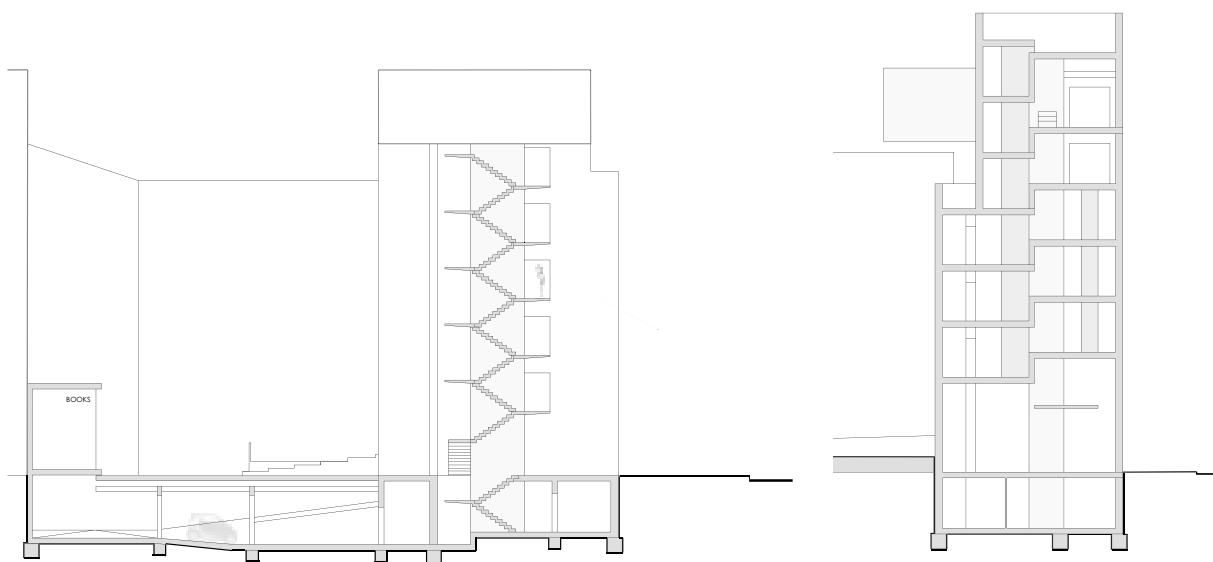


Split Level

The project offers twelve two and three room apartments with flowing spaces. All units are organized in a split level system. The different level organization offers various connection of rooms and allows different qualities of spacial conditions.

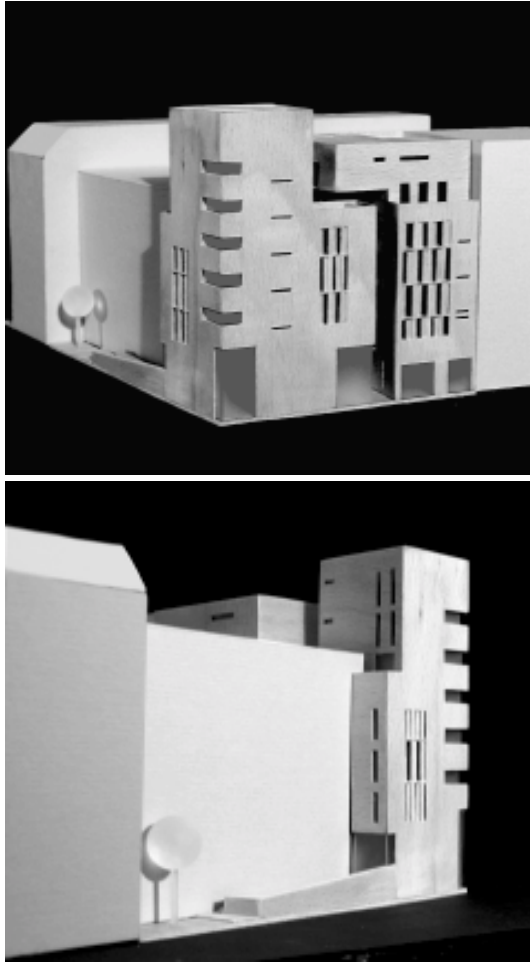


Section A: Volume II -apartment split level and courtyard with underground parking



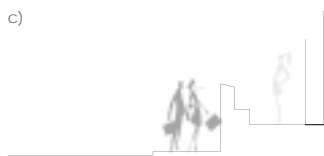
Section B: Staircase, Courtyard and underground parking

Section D: Volume I



Setback

In front of the Zeile the setback is used to separate the apartments on street level and give them a space of privacy. In the remaining parts of the project, spaces on street level contain commercial areas, with dwelling units above.



a) level difference, low railing

b) level difference, high railing -
creating a terrace in front of the
apartments

c) level difference and bench

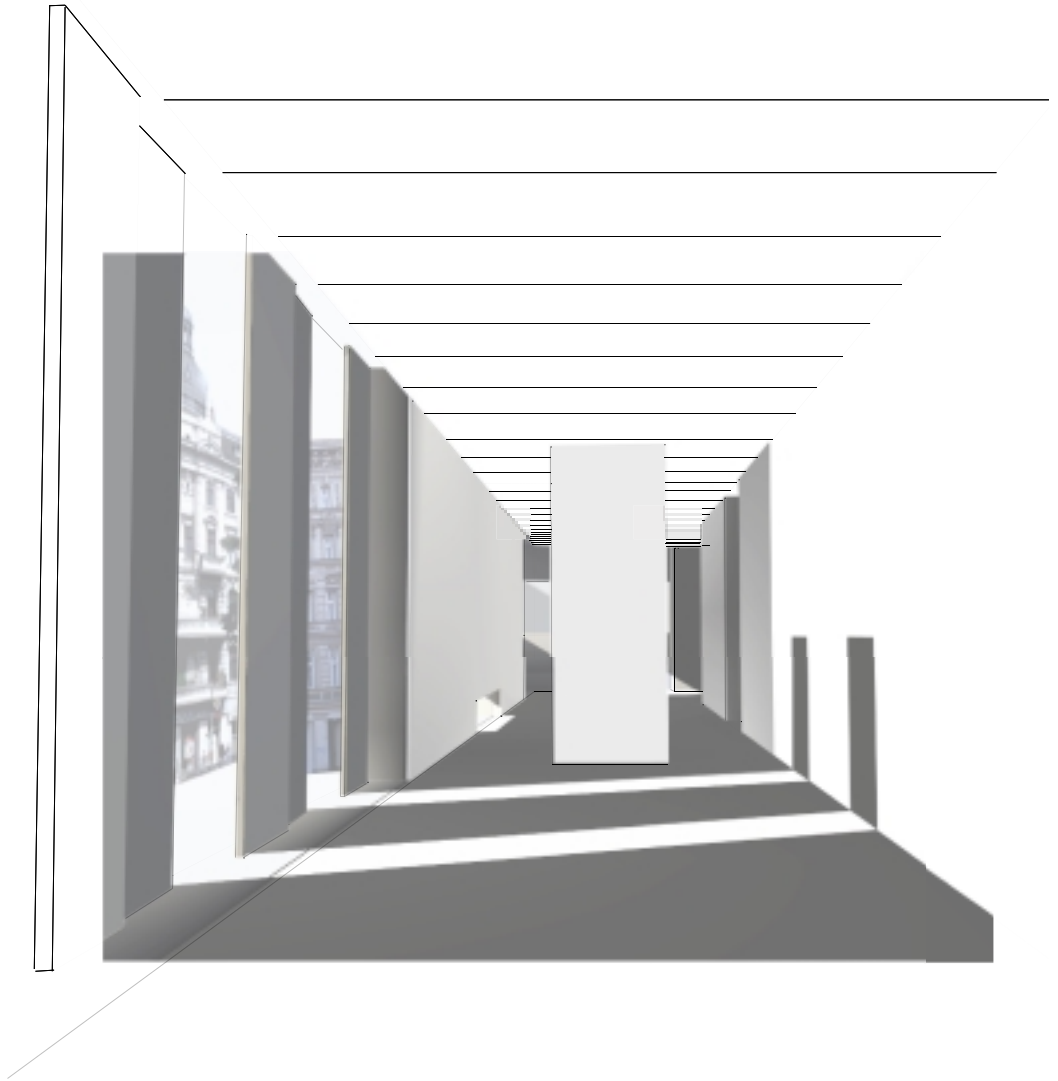
d) integration of planters



section F: Setback, existing building and courtyard with underground parking

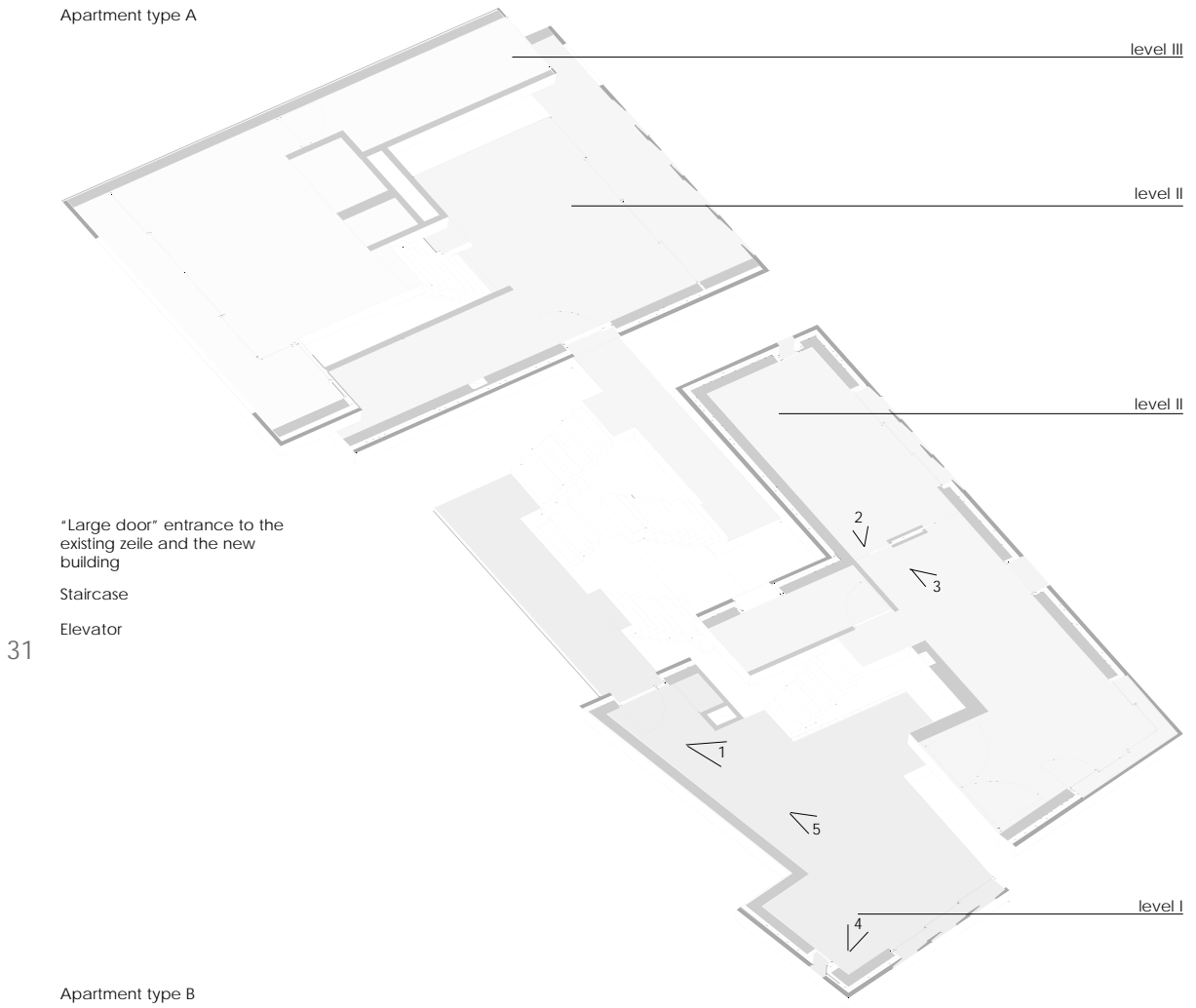
The Interior of an Apartment

Illustration of the qualities of the interior of an apartment. The vertical louvers frame views to the surrounding buildings.

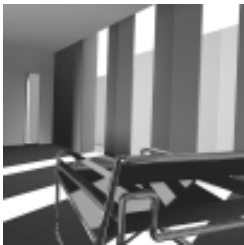


Split-level

circulation possibilities in volume I and volume II of the building

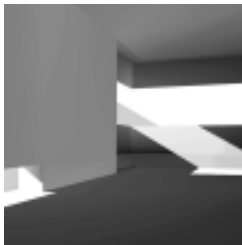


②



window type I&II -level III

③



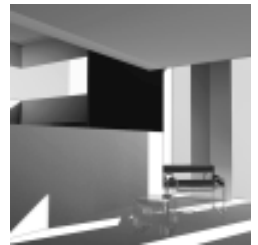
corner window -level III

④

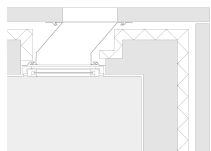
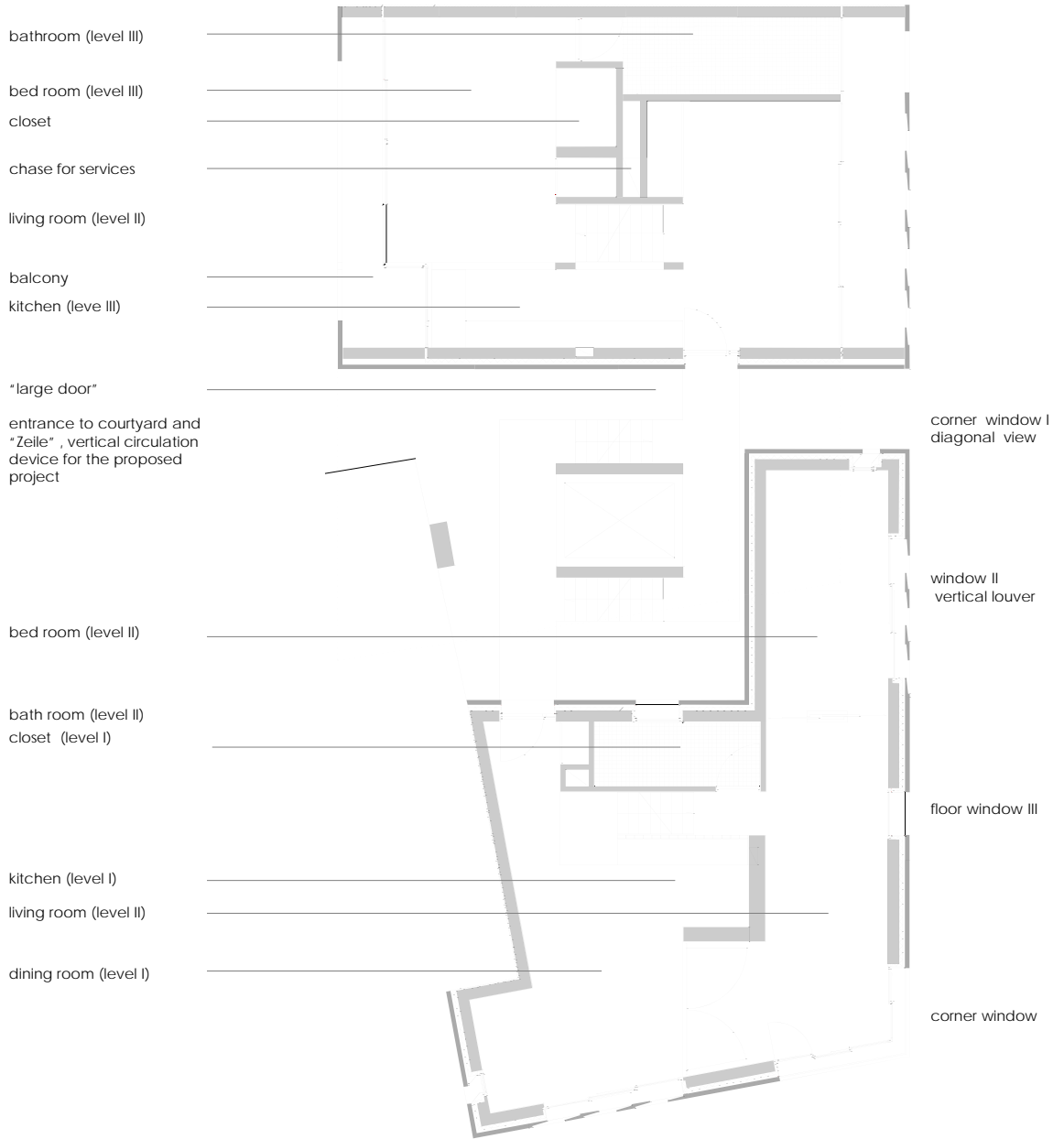


window III -level I

⑤



split level - level I & II



window I "diagonal corner"



window II - "the vertical louver"

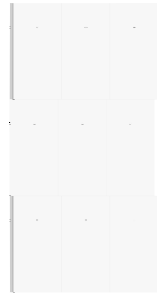


window III - "the floor"

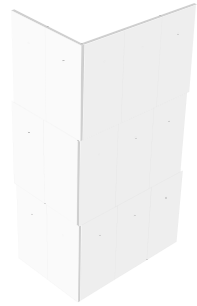
Apartment

Facade

principle of elevation assembly



panel position at corner



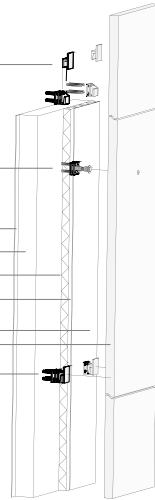
panel corner isometric

principle of anchoring the panels

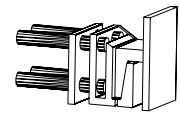
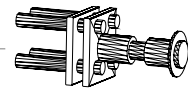
top panel anchor (preventing tip over of panel, free adjustable)

interior plaster
10" concrete load bearing wall
4" rigid insulation
proof water membrane
2" air circulation gap

bottom panel anchor (load carrying device, anchor-plate free adjustable, wedge mechanism)

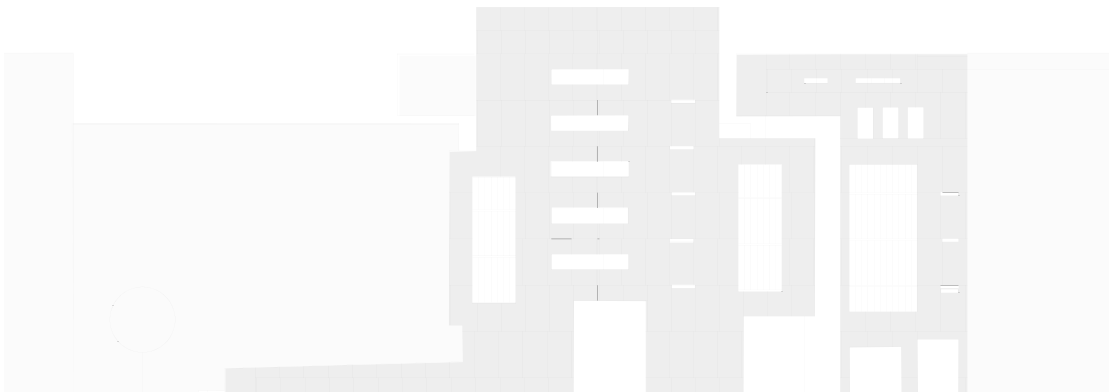


top panel anchor



bottom panel anchor

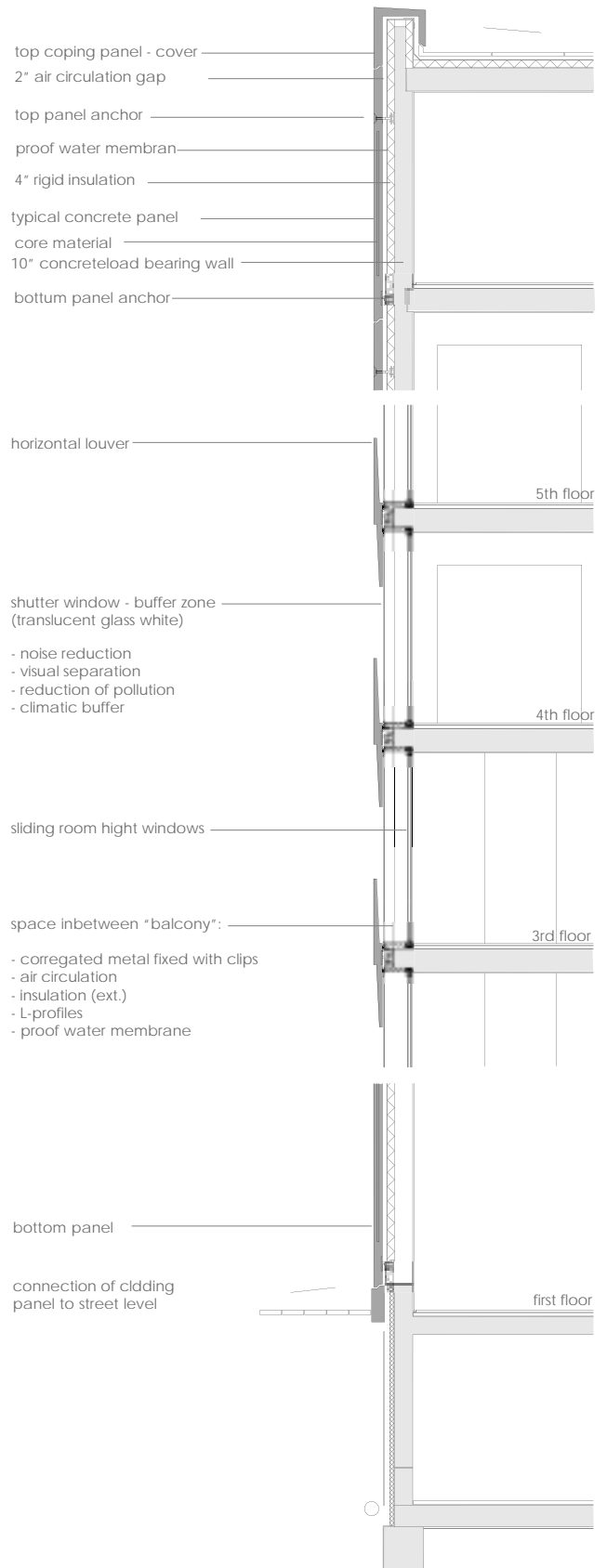
35

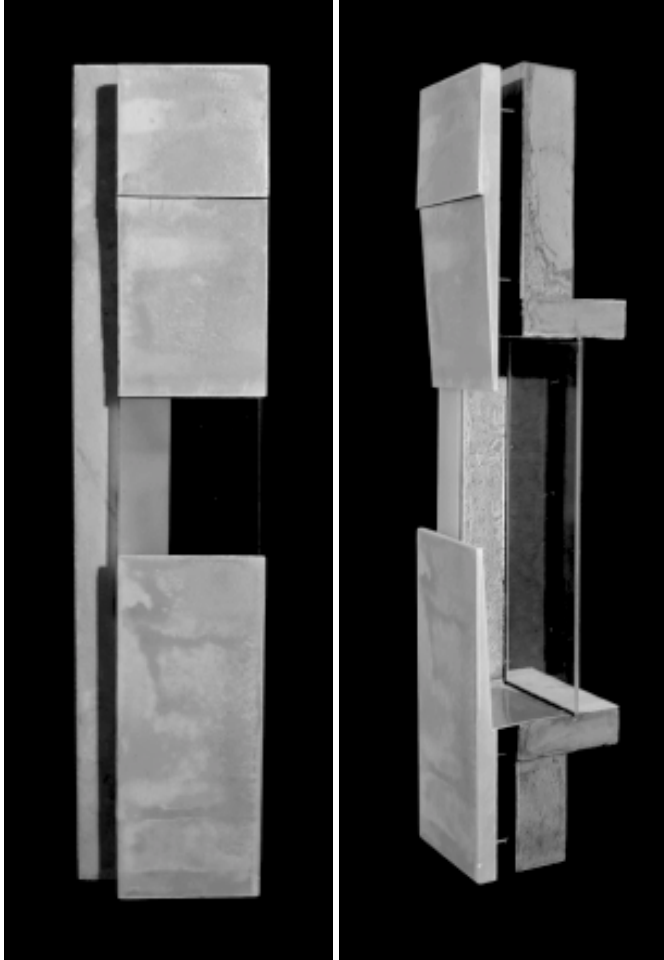


principle of panel positioning on elevation

Facade

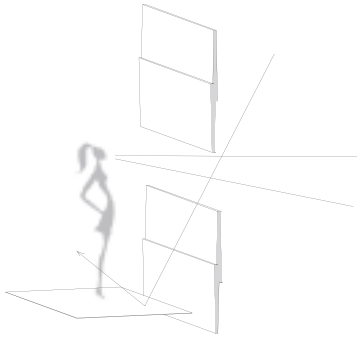
wall section and louver idea





“Horizontal Louver”

The louver-panel is used horizontally in the corner volume I at the edge only, creating a balcony space. The horizontal line of the window is distorted to manipulate the inside outside perspective of the opening. The opening appears as a big volume penetrating the living room.



double insulated glass
woodframe sliding windows

shutter panel

metal cover and L-profile fasteners

insulation, airgap

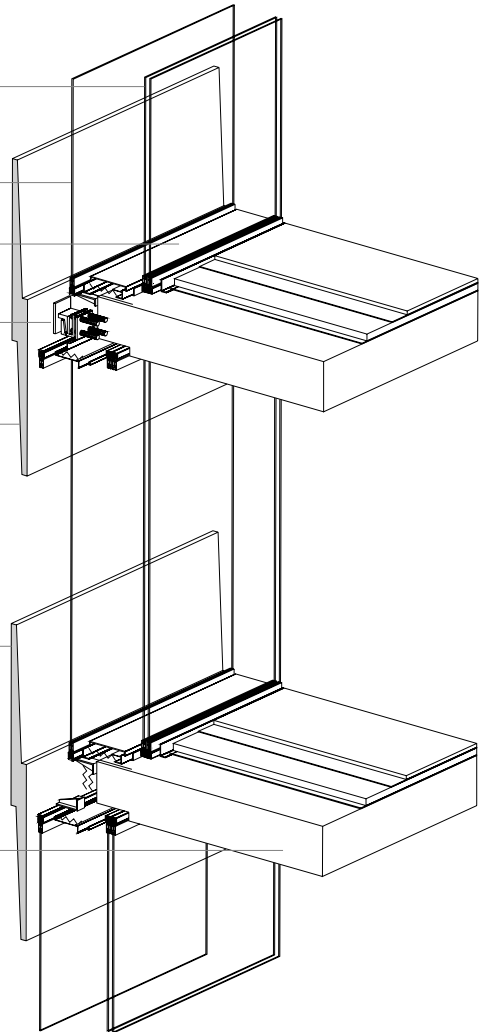
panel anchor

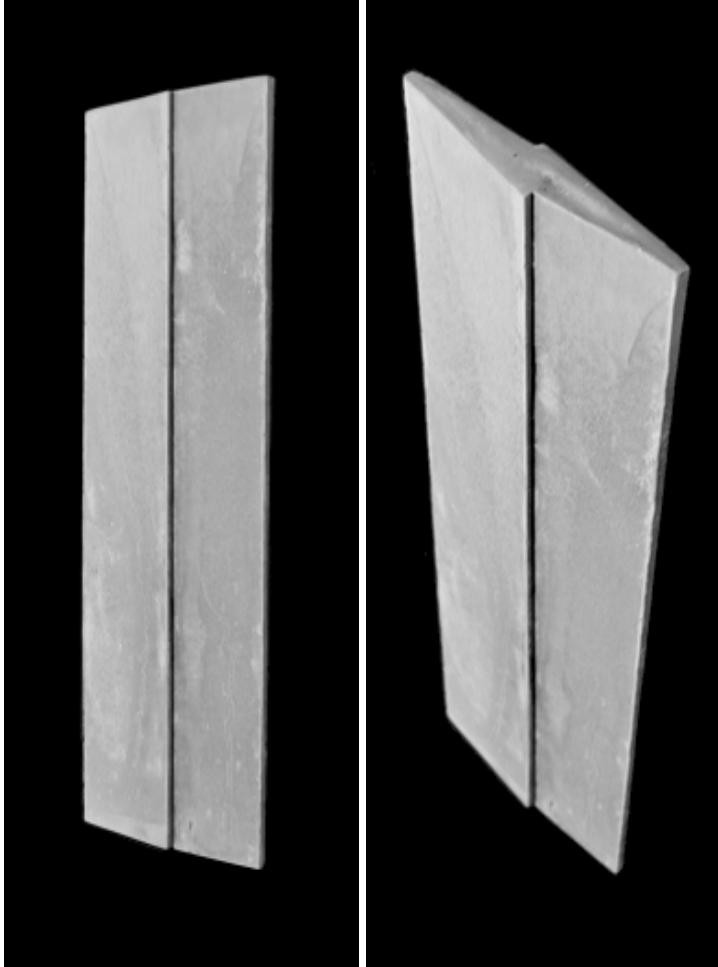
upper louver panel (precast)

louver panel - balustrade

hardwood flooring
seperation layer
topping slab
seperation layer

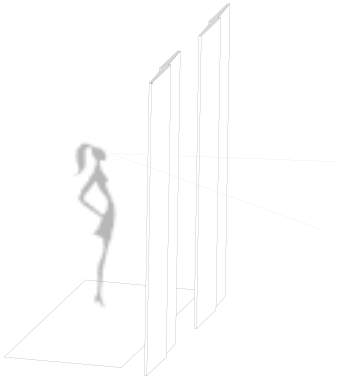
loadbearing concrete slab





“Vertical Louver”

The louver-panel is used vertically in volume I & II of the project controlling the transparency of the elevation depending on the elevation depending on the viewer position from the street as well controlling the view from the inside to the outside. The space in between the load bearing structure and the panel becomes a balcony.



double insulated glass
woodframe sliding windows

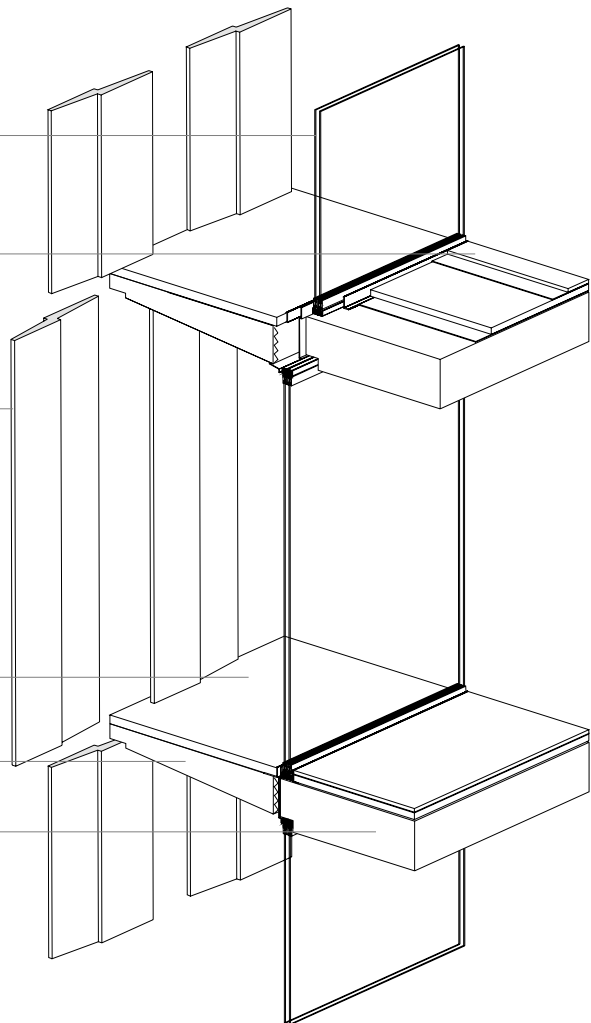
hardwood flooring
separation layer
topping slab
separation layer

vertical precast louver

balcony space

thermally separated
concrete slab

loadbearing concrete slab



CORNER

the point or place where lines or surfaces join and form an angle

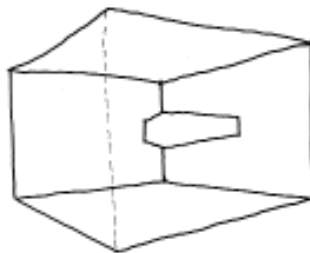
any of the angles formed at a street intersection

place where converging sides, edges, streets, etc., meet

recess formed by meeting of two internal sides of a room



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The importance of the urban corner condition is also emphasized in side the rooms by providing an stripwindow opening with a balcony space.

The horizontal window is used to manipulate the perspective of the opening. With this manipulation an illusion of a volume penetrating the living room is created. This effects supported by white semitransparent glass shutter elements integrated in the outside construction of the concrete elevation panel.

The Zeile:

wrapping facades are creating two volumes

the volume is creating a head of the Zeile

interlocking volumes creating an opening

a door to existing and to the new building

as well

an inviting access to the courtyard.

The Block:

redefining the corner by introducing a cornerstone,

giving an identity to the context

and

serving as a starting point for the block.

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As an embodiment of time and its respective culture, the physical presence of architecture has traditionally been an excellent source for the further development of our environments. In this proposal, an attempt is made to respect two almost contradictory forms of urban housing, the Block and the Zeile, which are simultaneously present and overlaid at this site in Berlin. Three primary conditions, the general historical context, the building volumes, and the facade modularity are examined to assist in the development of new architectural corner which retains essential qualities of both Block and Zeile.

Acknowledgements

I would like to dedicate this work to my parents who supported me always on my way in life and education.

Special thanks to Mrs. Myriam Menzel, Prof. Raimund Fein and Prof. Karl Plastrotmann from the FHLausitz, University of Applied Science, Germany - who were supporting my work the last years. I would also like to thank the Fulbright Commission and the Virginia Polytechnic Institute and State University, the Department of Architecture and my thesis committee Prof. William Galloway, Prof. William Brown and Prof. Heinrich Schnoedt who offered me the great possibility to study in their Master of Architecture program.

Thanks to all friends and to the March2 Studio for the nice times we spent working together in the past years.

Christian KIENAPFEL

education	05/01	Master of Architecture
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	06/99	Master Degree in Architecture at FHLausitz University of Applied Science, Germany
experience	98/99	T.R. Hamzah&Yeang Sdn.Bhd. Architects Kuala Lumpur, Malaysia
	97/98	Gregotti Associati International Milan, Italy
	94/95	Betow Architects Berlin, Germany
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