THE HOTEL ON THE BRIDGE

TECHNISCHE UNIVERSITÄT WIEN
Vienna | Austria

DIPLOMARBEIT

The Hotel on the Bridge

ausgeführt zum Zwecke der Erlangung des akademischen Grades eines Diplom-Ingenieurs
unter der Leitung

William Alsop
O.Univ.Prof.Dipl.-Ing.
E253/4
Institut für Architektur und Entwerfen, Hochbau und Entwerfen

eingereicht an der Teschnischen Universität Wien
Fakultät für Architektur und Raumplanung

von

Dragan Jovanovic
1127279
Schwarzspanierstraße 18
1090 Wien

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The greatest gratitude goes to my parents for their support, patience and encouargement.

CONTENT

1

ABSTRACT

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One of the most popular locations for gathering people (especially young people) in Vienna, Donaukanal, with its position and absolute harmony between nature and the urban context, does not cease to inspire. The location between Augartenbrücke and Salztorbrücke is especially attractive due to several locations for popular gathering and the idea for designing another bridge comes from this very reason. Every bridge is a story for itself. The bridge not only connects the two shores but actually does much more: it brings people together, thus becoming part of their everyday life. The idea of the "hotel on the bridge" is completed with the concept about Ringturm, a building that makes this location even more valuable. This first skyscraper on this site, built as a symbol of peace and as a window into the future, fully defines this concept by deconstructing its façade. The form of the façade is leans on the old mole and is attached to the bridge. In this way, the coasts are connected through 3 segments: THE BRIDGE, THE HOTEL AND THE DOCK, creating an interesting game between public and private space and creating a unique passage across the bridge. The old pier, besides functioning as the foundation of the building, is revived by its role as the dock and the terrace of the hotel. In this way, Donaukanal will become even more attractive, giving the possibility to potential visitors of the Bridge-Hotel to reach their favorite corner of the city in a new way.

KURZFASSUNG

Einer der beliebtesten Orte für das Zusammentreffen aller Wiener (vor allem von Jugendlichen) ist zweifellos der Donaukanal. Mit seiner Lage und absoluter Harmonie zwischen Natur und dem urbanen Kontext, hört es nicht auf, Menschen zu begeistern. Die Lage zwischen Augartenbrücke und Salztorbrücke ist wegen mehrerer Orte fürs Zusammentreffen besonders attraktiv und eben aus diesem Grund entstand die Idee, eine weitere Brücke in diesem Bereich zu designen. Jede Brücke ist eine Geschichte für sich. Eine Brücke verbindet nicht nur zwei Ufer, sondern sie tut viel mehr: sie bringt die Menschen zusammen und dadurch wird sie zu einem nicht wegdenkbaren Teil ihres alltäglichen Lebens. Die Idee über das „Hotel auf der Brücke" wird mit dem Konzept von Ringturm vervollständigt, der diesen Ort noch wertvoller macht. Dieser erste Wolkenkratzer auf diesem Ort, der als Symbol des Friedens und als Fenster in die Zukunft errichtet wurde, definiert dieses Konzept vor allem durch die Dekonstruktion seiner Fassade. Die Form der Fassade stützt sich auf den alten Pier und ist an der Brücke befestigt. Auf diese Weise werden die Ufer durch drei Segmente verbunden: die Brücke, das Hotel und das Dock, die eine interessante Mischung von privatem und öffentlichem Raum sowie eine einzigartige Passage über die Brücke schaffen. Der alte Pier, der als Fundament des Gebäudes fungiert, wird durch seie Rolle als Dock und als Terrasse des Hotels wiederbelebt. Auf diese Weise wird der Donaukanal noch attraktiver, indem er den potentiellen Besuchern des „Hotels auf der Brücke" die Möglichkeit bietet, ihre Lieblingsecke der Stadt auf eine neue Art und Weise zu erreichen.

“Of everything that man erects and builds in his urge for living nothing is in my eyes better and more valuable than bridges. They are more important than houses, more sacred than shrines. Belonging to everyone and being equal to everyone, useful, always built with a sense, on the spot where most human needs are crossing, they are more durable than other buildings and they do not serve for anything secret or bad.”

Ivo Andrić

2

TOURISM

2.1 TOURISM

The meaning of word tourism (by William F Theobald, 1994): Latin: *Tornarei* Greek: *Tornosi*
meaning: movement in a circle or around a central axis.
Tourism is a set of relations and occurrences that arise from the travel and stay of visitors of some place, if such a stay is not based on permanent residence and if with such a stay no economic activity is associated. (Hunziker and Krapf, 1942). Tourism includes recreation, travel and holidays.
Today tourism is one of the main sources of income in many countries, and in 2012 world tourism has recorded over one billion tourists globally, with China as the world's largest consumer in terms of consumption its citizens for tourism purposes, inside and outside of the country.

Tourism brings significant revenue to the local economy in the form of payments for "goods and services" used by tourists, accounting for 30% of the total world consumption of "services" and 6% of total "exports" of "goods and services". Tourism also creates new employment opportunities in the service sector of the economy that relies on tourism. Service activities closely related to tourism are: transport services, accommodation, entertainment and thematic sites, souvenir production etc.

2.2 HISTORY OF THE TOURISM

Long ago tourism was considered as a special luxury reserved exclusively for a rich people who traveled to learn foreign languages, to visit sights of world culture or to learn something and transfer new knowledge to other people.
Modern tourism can be linked to the former term "Grand Tour", which represented the way to Europe (especially Germany and Italy) organized by members of the rich European elite (especially from Western and Northern Europe) and later by travelers from South America, and other parts of the world.
This custom was very popular since the 1660s until the expansion of the railroad network in the mid 1840s, and was associated with the established schedule.

In the 18th and 19th centuries the "Grand Tour" became a status symbol among the richer students. The main destinations at the "Grand Tour" were Italy, France, Spain and Portugal, where rich young people could find rare examples of classical history and art.
Along with the industrial revolution in the UK, tourism has also begun to live as a form of entertainment. Great Britain is thus the first European country that uses tourism to increase the working-age population and begins to offer tourist content for entertainment and recreation. Initially, this was primarily referred to the owners of manufacturing plants, factory owners, and wealthy traders. They formed a new middle layer. Cox & Kings were the first official service provider in the field of tourist travel and were founded in 1758.

Mass tourism has evolved in parallel with the advances in technology that has enabled fast transportation of large numbers of people to places of tourist interest, and hence a greater number of people could enjoy travel to a place of their own interest.

In the last few decades a new trend is emerging in tourism, short tourist trips, especially in Europe. Tourists have different budgets and tastes, and a large number of hotels and resorts are adapting to the modern way of tourism.

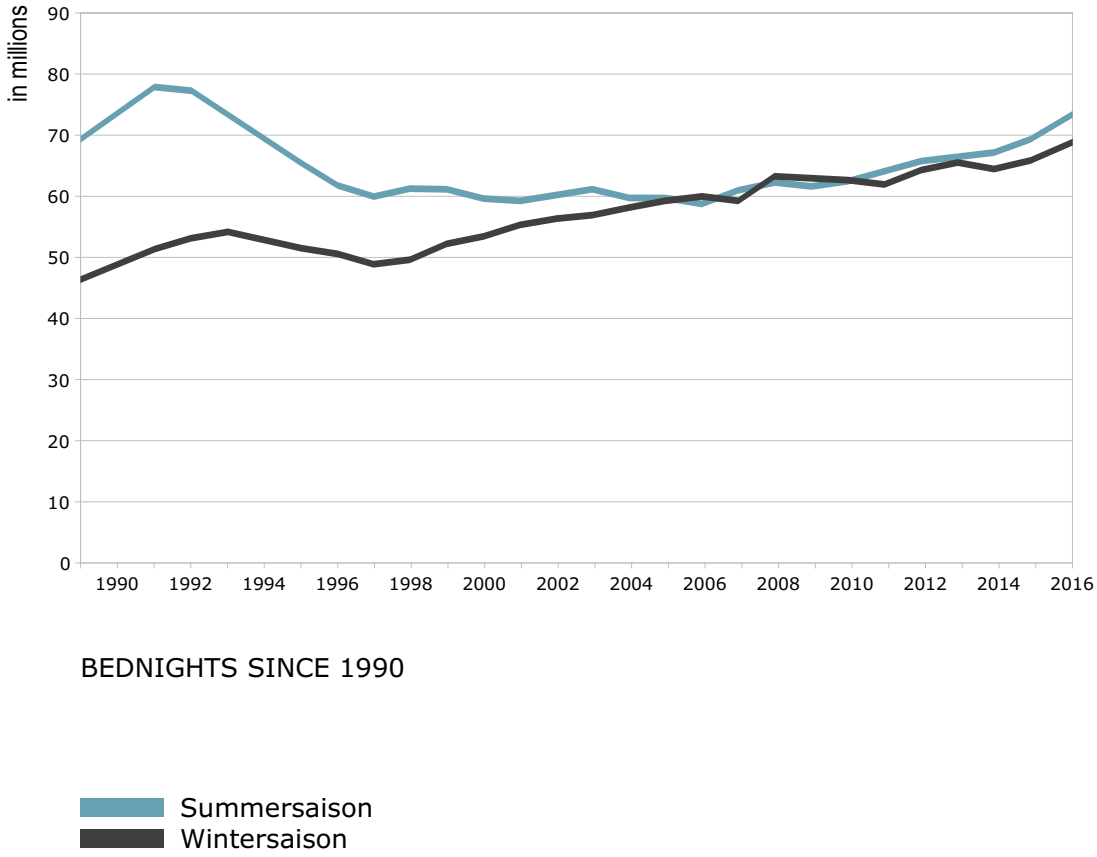
The development of technology and transportation (large aircrafts or low-cost air companies) made many forms of tourism more accessible to a greater number of potential users.
The Internet has particularly influenced on the development of tourism, especially by selling and offering tourist arrangements. Some web sites now offer dynamic arrangements specifically tailored to each guest with a total cost per customer request.

2.3 TOURISM IN AUSTRIA

Tourism is an important segment of the Austrian economy and its share in gross domestic product is 9%. Austria as a state is equally interesting to tourists in summer and winter. The most visited city is Vienna, which attracts tourists from all over the world all year round. During the summer, Salzburg is the second most visited place after Vienna, with about one-fifth of tourist overnights of Vienna. During the summer, Salzburg is the second most visited place after Vienna, with about one-fifth of tourist overnights of Vienna. Salzburg, apart from its cultural and historical offer, is particularly interesting for tourists because it is the birthplace of Mozart. The visit of his birth house is an inevitable tourist route.

Apart from the rich cultural and historical heritage, the tourists are interested in a rich gastronomic offer of the whole of Austria, a very rich tradition of making wine and cheese. Austria is especially famous around the world for its natural resources, so there are a number of recreational offerings in the entire tourist offer of Austria: climbing in the beautiful Alpine mountains, visits to numerous lakes, family recreation, hiking, and especially skiing. Numerous ski resorts in the mountain peaks attract many tourists with their modern equipment and untouched nature.

The most prominent sight in Austria is the Schönbrunn Palace with 2,590,000 visitors per year, and some of more attractive locations outside of Vienna in Austria are: the capital of Tyrol, surrounded by Alps - Innsbruck, Hallstatt, Seefeld in Tyrol, Grossglockner Alpine Road, Mirabell Palace etc.



1 Schonbrunn Palace
2 Hallstatt
3 Grossglockner Alpine Road
4 St Anton am Arlberg
5 Innsbruck Altstadt
6 Hofburg Imperial Palace
7 Hohensalzburg Castle
8 Seefeld in Tyrol
9 Melk Abbey
10 Zell am See
11 Hohenwerfen Castle
12 Schafberg
13 Mirabell Palace
14 Vienna State Opera
15 Eisriesenwelt Cave
16 Krems
17 Hochosterwitz Castle

TOP TOURIST ATTRACTIONS IN AUSTRIA

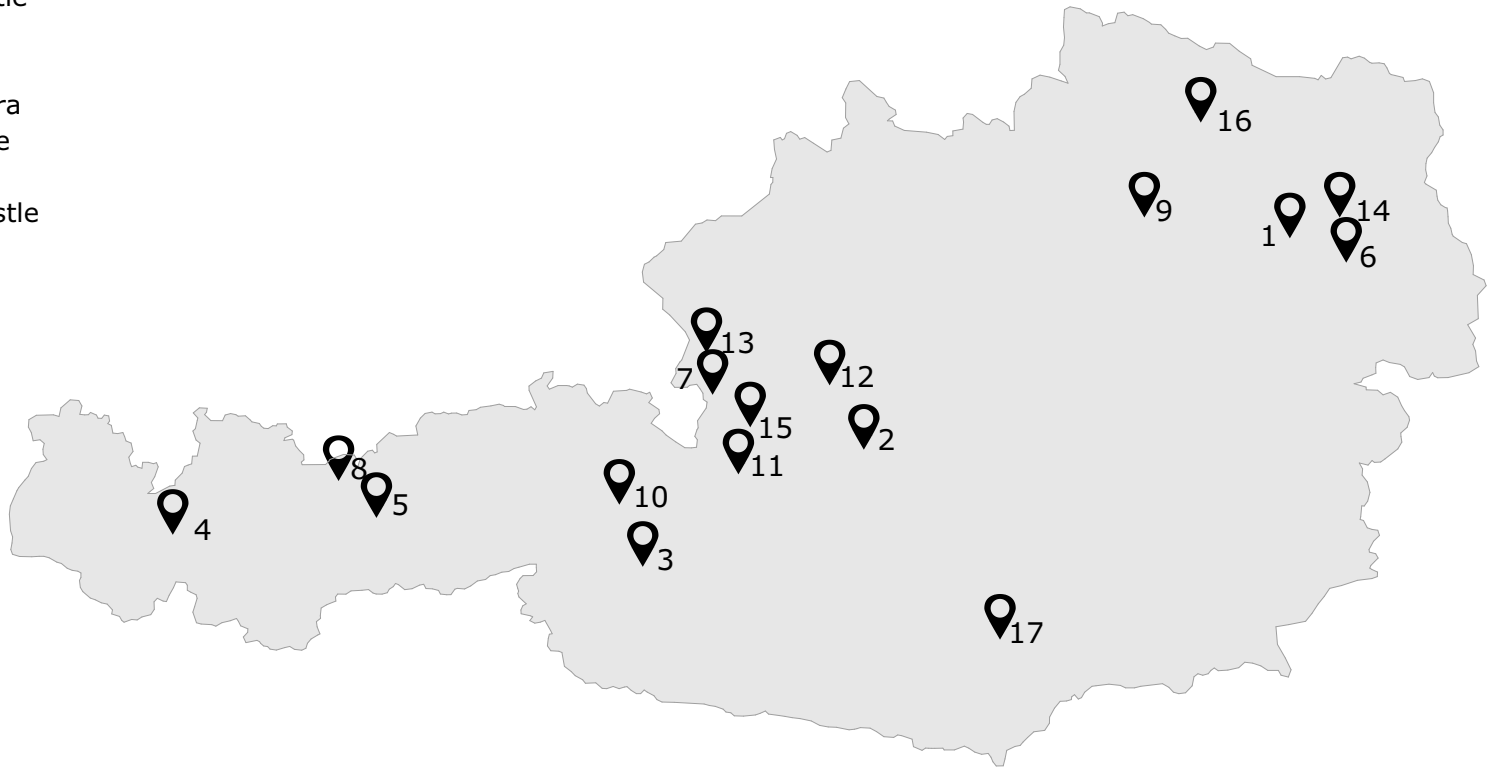


Fig. 2.1 - Hallstatt

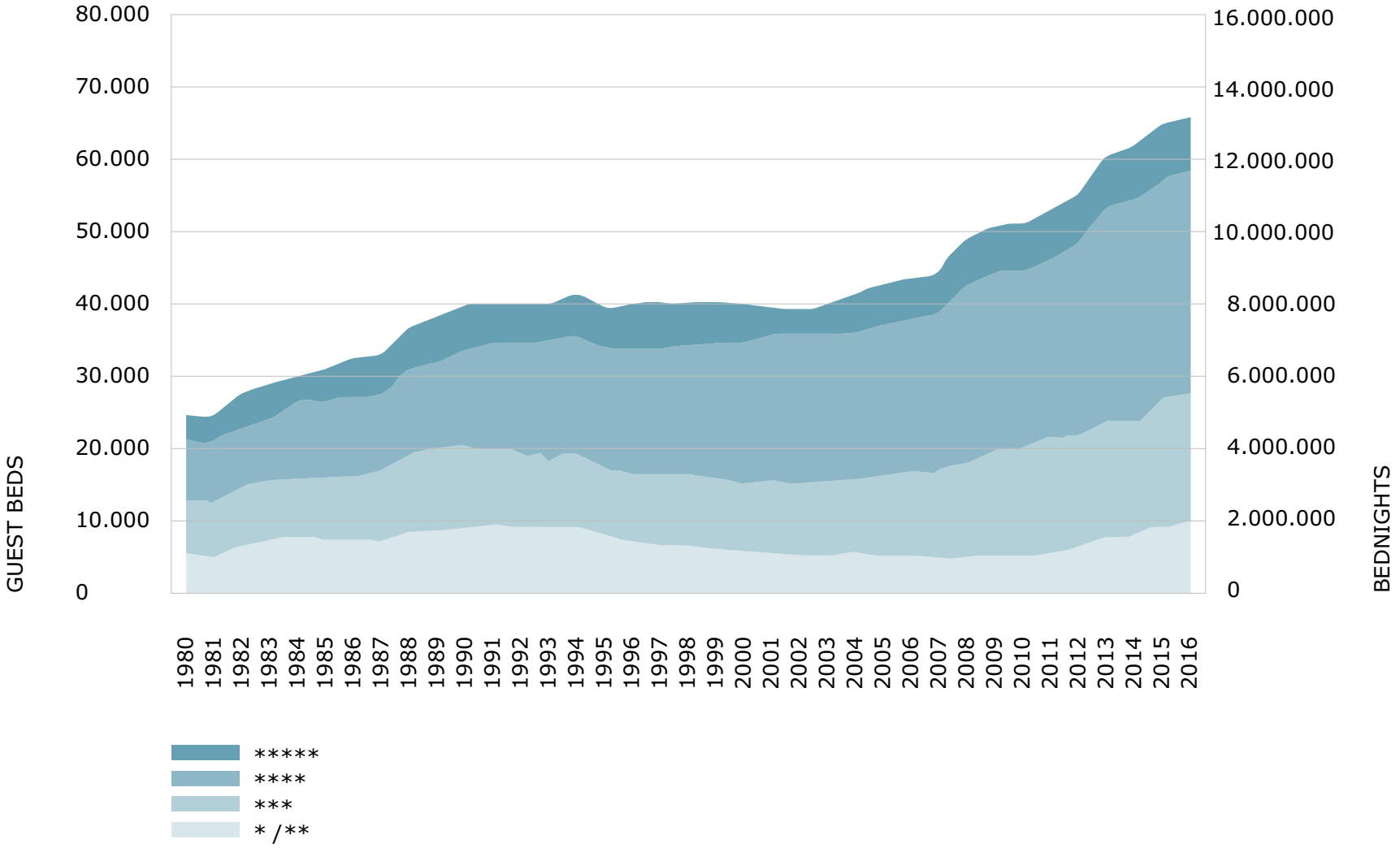
Fig. 2.2 - Grossglockner Alpine Road

2.4 TOURISM IN VIENNA

Vienna is one of Europe's oldest metropolis, cultural center, river port on the Danube, industrial and shopping center. Thanks to its diverse cultural offerings, the architecture, famous composers and acclaimed position in the field of congress tourism, Vienna is one of the favorite and most popular European destination for tourists from all over the world. It is known as a capital of music. As a city in witch were creating Mozart, Beethoven, Schubert, Brahms, Strauss, Haydn and many others world-famous composers, Vienna still cherishes culture of classical music, balls and operettas that specifically attracts a large number of music lovers. The city is full of numerous cultural and historical monuments, palates, and various events, festivals, concerts and other cultural events are organized throughout the year. Among the many attractions, stand out Vienna State Opera, Schönbrunn Palace, Hofburg, Austrian National Library, St. Stephen's Cathedral, baroque palace Belvedere, Albertina, Prater, Museumsquartier, Karlsplatz, Secession building etc. One of the most famous city avenues is the Ring, which surrounds only the historical core of the city, with its many representative buildings and parks, also important tourist attractions (Parlament, Burgtheater, Uni Wien, Rathaus, etc).

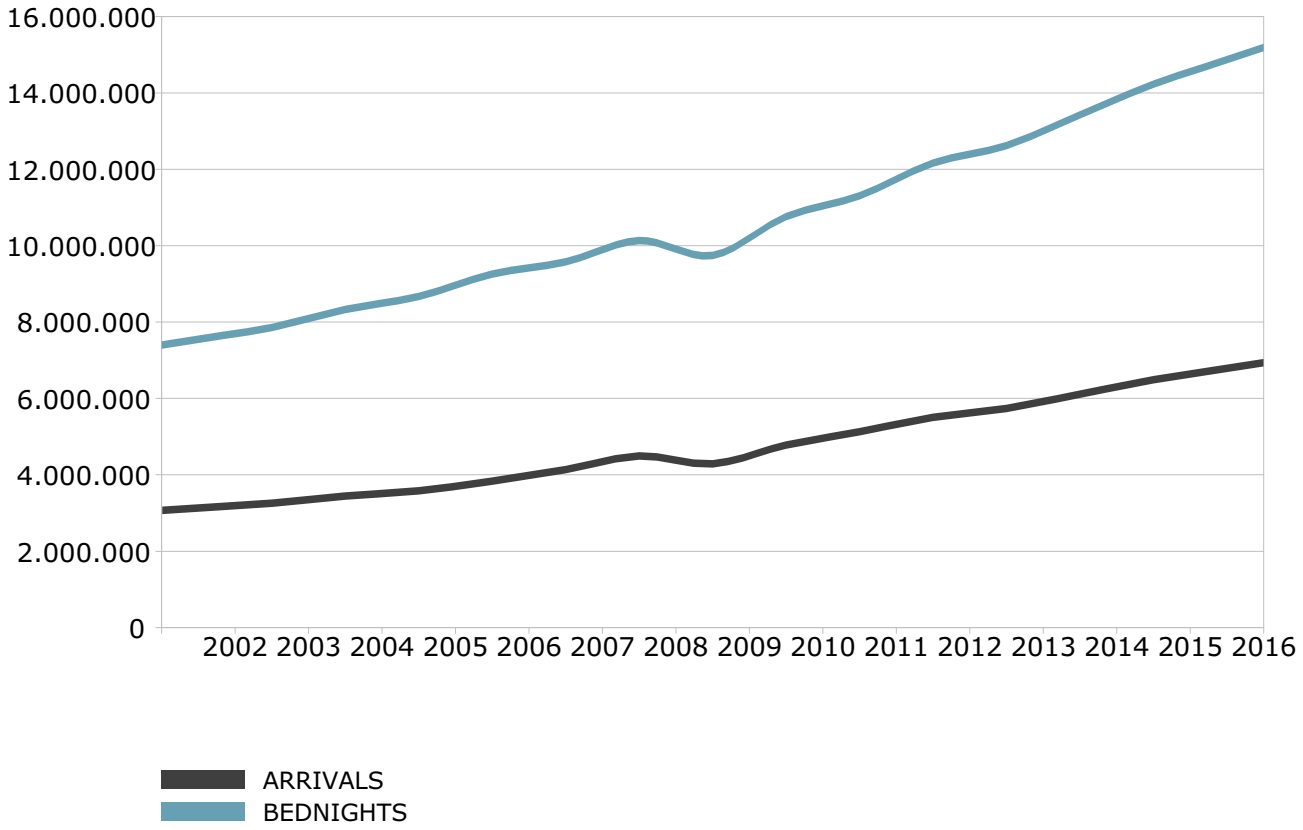
Art and culture have a long tradition, and tourists are specially attracted to a large number of galleries and museums, over 100 theaters, the New Year's Concert of the Vienna Philharmonic, the lavish balls etc.
The most important museum exhibits are kept in Hofburg: the treasury of the Habsburg dynasty, the crown of the Holy Roman Empire and the crown of the Austrian Empire. The Kunsthistorisches Museum (*English: "Museum of Art History")* contains an extensive collection of paintings from Renaissance painting (Rembrandt, Titian, Rubens). The Belvedere Museum, located in the baroque palace of the same name, attracts tourists with its rich artistic offer, especially with works of Gustav Klimt and Egon Schiele. The visitors are also attracted by Mozart's house in which he composed the famous opera "The Marriage of Figaro".
By exploring tourism statistics in Austria, it is concluded that Vienna is surely the most popular destination, and that the number of tourists in the city itself is steadily rising, and in 2016 it amounted to almost 15 millions. With the growth in the number of tourists and overnights, the need for accommodation increases, and the number of hotels and beds in all types of accommodation is in constant growth as well. Thanks to all of this, Vienna annually realized huge revenue from tourism (over 4 billion euro), making it one of the most important economic branches of the city.

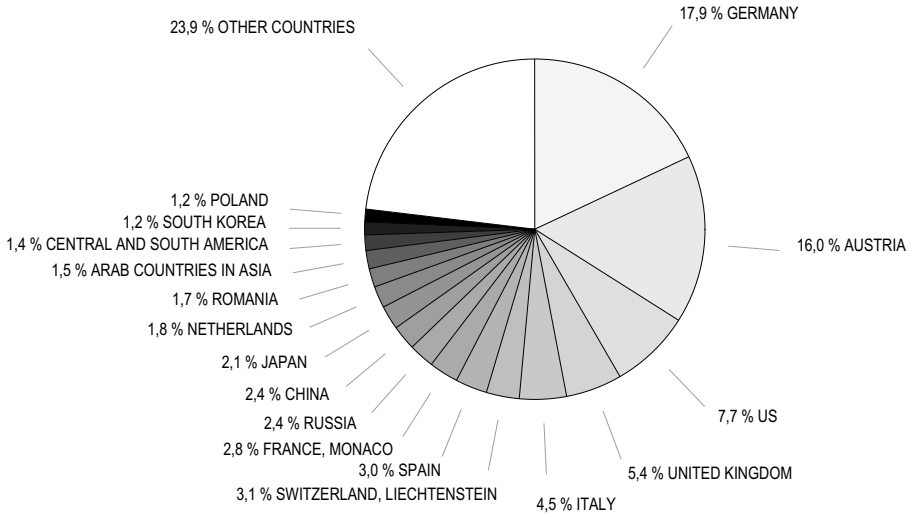
GUEST BEDS AND BEDNIGHTS ACCORDING TO CATEGORIES OF BUSINESS IN VIENNA



ARRIVALS AND OVERNIGHT STAYS IN VIENNA
ALL ACCOMMODATION

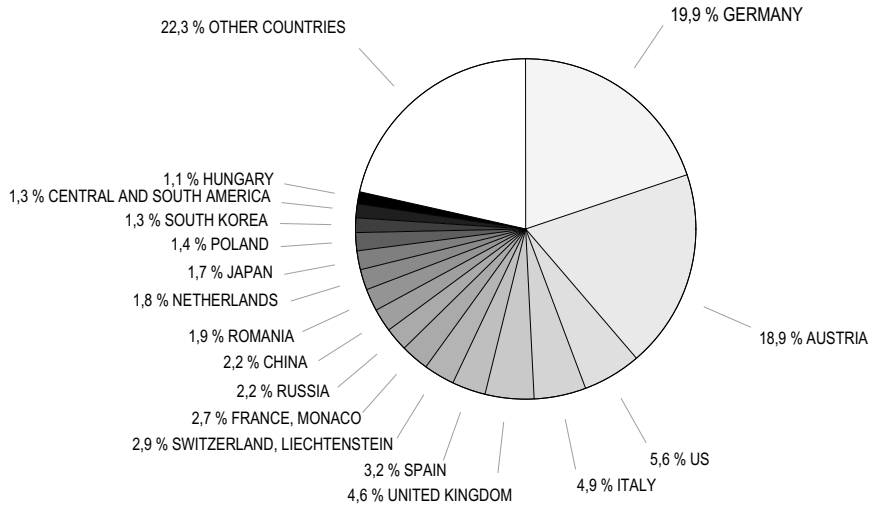
		+/-		+/-
Year	Arrivals	in %	Bednights	in %
2002	3.233.442		7.655.391	
2003	3.355.356	3,8	7.955.076	3,9
2004	3.543.610	5,6	8.429.398	6,0
2005	3.680.078	3,9	8.768.660	4,0
2006	3.933.814	6,9	9.356.044	6,7
2007	4.235.317	7,7	9.675.208	3,4
2008	4.593.960	8,5	10.232.472	5,8
2009	4.385.529	-4,5	9.842.827	-3,8
2010	4.878.654	11,2	10.860.126	10,3
2011	5.227.576	7,2	11.405.048	5,0
2012	5.604.522	7,2	12.262.828	7,5
2013	5.836.669	4,1	12.719.289	3,7
2014	6.210.888	6,4	13.524.266	6,3
2015	6.589.031	6,1	14.328.261	5,9
2016	6.883.512	4,5	14.962.438	4,4





ROOM REVENUES FOR ALL TYPES OF VIENNA ACCOMMODATION 2016 — € 738.5 millions = 100 %

*In 2016, Vienna's tourism industry put in an outstanding performance with another increase in bednights - for the seventh time in succession. This was a significant achievement, particularly when one considers the difficult geopolitical conditions under which this new record was achieved. With 14.962.438 bednights, Vienna recorded 4.4% more bednights than the previous year, just 38,000 shy of hitting the 15 million mark. Once again, Vienna's tourism and leisure industry has demonstrated its stability in a somewhat sticky market and has proved to be a reliable employer in Vienna, securing a wide range of jobs and offering some 90,000 people solid career prospects.



BEDNIGHTS IN ALL TYPES OF VIENNA ACCOMMODATION 2016 — 14.962.438 = 100 %

* www.b2b.wien.info

1 Schönbrunn Palace
2 Hofburg Imperial Palace
3 Hundertwasserhaus
4 Belvedere Complex
5 Ringstrasse
6 Burggarten
7 St Stephen's Cathedral
8 Graben
9 Spanish Riding School
10 Wiener Rathaus

TOP TOURIST ATTRACTIONS IN VIENNA

VIENNA

FIRST DISTRICT

Fig. 2.3 - Schönbrunn Palace

Fig. 2.4 - Rathaus

3

DONAUKANAL

3.1 HISTORY OF DONAUKANAL

Donaukanal was regulated as a water canal back in 1598. It is 17,3km long and unlike the Danube itself, passes by Vienna's city center ("Innenstadt"). The name Donaukanal has been in use since 1700. There werem, however attempts to change the name into "KleineDonau", but the proposal was rejected. Another name for Donaukanal: "Wiener Wasser" and "Wiener Arm".

The separation of Donaukanal from the Danube starts in the "Nussdorf" area, right before "NussdorferWehr 6" and "Schleusenanlage", on the border between the 20th and the 19th District, and the canal returns to the Danube at the "Alberner" harbor. That place is known as "Praterspitz" and is located on the border between the 2nd and the 11th Viennese District. With its position, Donauknal separates the island, created with the regulation of the Danube in 1875, from the city center and other districts on the right coast. The island is divided into two districts: 2nd ("Leopoldstadt") and 20th ("Brigittenau"). The river Danube in Vienna is divided into many smaller canals, which have been used before for trade between northern and southern parts of the city.

In the past it served primarily as a transport connection of the city with its surroundings. It was used for this purpose even during the Roman period, and especially in the Middle Ages. For example, salt was coming from the Gmunden and Hallein ("Salzmat") salt mines, building blocks and stone were coming from Mauthausen ("Roßau") area, fruits from the Tullnwerfeld area and wood from the Roßau and Leopoldstadt areas. The mainstream of the Danube was constantly changing during the Middle Ages due to frequent floods. The construction of the canal was proposed by Ferdinand Freiher von Noyos in 1598. In this way the canal was connected with the Vienna's main creeks, and the waterway from the Nussdorf area came to the city.

Fig. 3.1 - Donaukanal-Franz-Josefs-Kai

The Danube in Vienna was almost completely unregulated, until 1870. Besides that, the floods represented a constant problem. The first proposal for the construction of floods protection was proposed by Maria Theresia after the heavy flood of Leopoldstadt in 1744, but it was not implemented. Between 1776-1785 engineer Johann Sigismund Hubert built a defensive dam on the left coast of the Danube, but the dam had neither survived nor withstood the flood, which happened in 1787. The Hubertusdamm stands today as a reminder of him and his work.

Between 1870-1875 Vienna regulated the Danube for the first time. Along the left coast a 450m long area for a floods protection was made, together with the Hubertusdamm across the area of Donaustadt and Floridsdorf. The new main canal, 280m in width, served as a waterway. The old stream stayed under the name "AlteDonau". During the regulation of the Danube, between 1870-1875, Donaukanal was built in its current form with a total length of 17,3 km and during a regulation between 1868-1875 it was even more expanded.

In 1890, a light rail was built. Donaukanal was opened as the last station, in 1901. The railway extends along the canal and at its level. Four stations were made at that time:

1. Brigittabrücke (today- Friedensbrücke)
2.Elisabethpromenade (today- Roßauer Lände)
3.Schottenring
4.Ferdinandsbrücke (today - Schwedenplatz).

Since 1976 these stations have become a part of metro line U4. In 1996, metro station Spittelau (U4 and U6) was built.

WIENFLUSS

"Wienfluss" is a river that flows from the western part of Wienerwald at Rekawinkel and flows into the Donaukanal. It is 34km long and it occupies 230 km^2. Although the river flows through urban areas, it has an Alpine character. Afterwards, a riverbed was built, as one of the measures of flood protection. The design was made by Otto Wagner.

SCHÜTZENHAUS

"Schützenhaus" was built during the regulation of the Danube between 1904 - 1908 as a part of "Kaiserbad" according to Otto Wagner's plans, and has never been used for military defense purposes, for which it was destined. It is located on the left coast of the Donaukanal at the station Schottenring. The facade of the building is made of stone plates and blue cobalt ceramic tiles with corrugated ornaments. Today it is an attractive restaurant and part of the cultural heritage of the city of Vienna. It was reconstructed in 1976/1977.

3.2 DONAUKANAL TODAY

Important bridges on Donaukanalu from the north downstream:

- 1.Schemerlbrücke
- 2.Knoten Nußdorf - Klosterneuburger Hochstraße
- 3.Nußdorfer Steg
- 4.Heiligenstädter Brücke
- 5.Döblinger Steg
- 6.Gürtelbrücke
- 7.Friedensbrücke
- 8.Siemens-Nixdorf-Steg
- 9.Roßauer Brücke
- 10.Augartenbrücke
- 11.Salztorbrücke
- 12.Marienbrücke
- 13.Schwedenbrücke
- 14.Aspernbrücke

- 15.Franzensbrücke
- 16.Rotundenbrücke
- 17.Erdberger Steg
- 18.Stadionbrücke
- 19.Seitenhafenbrücke
- 20.Freudenauer Hafenbrücke

Pedestrian bridges on the Danube canal:

- Döblinger Steg, Gaswerksteg i Siemens-Nixdorf-Steg.

Due to its convenient location in the city, the Donaukanal has turned into a recreational and leisure area. It offers numerous touristic, entertaining, recreational and catering facilities:

- promenades, cycling trails, skateboard and running tracks
- bars and restaurants along the canal with a rich and diversified gastronomic offer
- areas foreseen for fishing
- sports grounds and outdoor gym
- outdoor swimming pool near Urania
- boat rides, a special attraction is the "Twin City Liner" line Vienna - Bratislava
- "Motto am Fluss" - a catering landmark within the "Twin City Liner" line
- beach bar "Herrmann" with sandy beach
- "Tel Aviv Beach" - founded in cooperation with the Embassy of Israel. 1400m^2 sandy areas with wooden terraces and one pavilion are one of the most popular places for young people during the summer
- "Flex" - a famous Vienna's club, favorite among the younger generation, with great choice of music
- collective urban garden, next to the promenade on the Danube canal, built in 2013 on the initiative of citizens, divided in eleven large flowerpots were vegetables, fruits and herbs are planted
- Vienna's biggest graffiti area, created in 1994, many international artists have left their graffiti on one of the walls
- Festival "Das Wawes"
- Outdoor art gallery "Agora": stages, paintings, sculptures. Every summer there are workshops, shows, concerts and reading of poetry
- Summer stage (near RoßauerLände) with a rich gastronomic offer and art program

GRAFFITI

Graffiti represent an artistic way of expression. They often deal with insurgency and political rebellion. This art is very popular among young people and although it is often abused, it is completely legitimate. Vienna is a city of cultural openness and tolerance and supports the diversity of artistic forms of expression, where, besides traditional cultural centers, young and creative people can express their thoughts and ideas in different ways. Donaukanal is one of the zones that the city of Vienna has foreseen for graffiti in the "Wienerwand" project and it also allows graffiti on the walls and bridges.
In the Donaukanal area, according to the project "Wienerwand", the following places for graffiti are allowed:

- 1st district: beside the club "Flex"
- 2nddistrict: ObereDonaustraße 43-45 b, between Roßauerbrücke and Augartenbrücke, a ramp on Donaukanal, ca. 90m x 2.50 m
- 9th district: Donaukanal out U4 metro station, ca.35m length
- 19th district: NussdorferLände near Donaukanal, ca. 150m long + bridge pillar

RECREATIONAL AREA

The area between Spittelau and Augartenbrücke, 2km long, is the best part of Donaukanal for recreation. This green oasis is an ideal place for jogging, walking, skateboarding or cycling. For the people from the city, who want to get off the city crowd and bustle and enjoy nature and silence, this is a favorite place. Although it is close to the city center, it is very green, without stores and crowd. The proximity of the metro station also enables people, who do not live nearby, to get there quickly. A completely isolated zone is available on both sides of the canal, which makes this place even more popular.

Fig. 3.2 - Donaukanal-Graffiti art

Fig. 3.3 - Ringturm

3.3 RINGTURM

Ringturm is one of the most representative buildings in Vienna, located on the Wiener Ringstrasse. It was built in between 1953-1955 according to Erich Boltenstern plans. It is 73m high (93 m with an antenna of 20 m). At the time of construction, this building represented innovation in architecture, being the first skyscraper in Vienna. The plan was to build one skyscraper on the both sides of the Ringstrasse, symbolizing "gate into the future", but the second skyscraper remained only as an idea. The Ringturm building is the main seat of Vienna Insurance Group. With its 23 floors and a 20m high illuminating tower it is the second highest building on Ringstrasse (after Gothic Stephansdom cathedral) and has 1200 m^2 of useful space. The facade was restored in 1996. Since 1998 the entrance zone has been used for the exhibition "Architecture in the Ring Road" about an architecture in Austria and central and Eastern Europe. Since 2006, Ringturm annually changes the look of its façade. It has become the base for the work of one of the many renowned artists.

DDSG Blue Danube / Twin City Liner / Motto am Fluss

The area between Marienbrücke and Schwedenbrücke serves as a city port for the DDSG Blue Danube and the Twin City Liner fleet. The boat station, with a very attractive look, has a bar and a restaurant on the terrace with a beautiful view and delicious food (Motto am Fluss). On the main platform of the ship station is the info center, where all the information regarding the touristic offer of Vienna and Bratislava as well as information about cultural events in both cities, can be obtained.

4

URBANISTICS ANALYSIS

GLOBAL CONTEXT

4.1 ABOUT LOCATION

After having analyzed the area of this part of Donaukanal, we can conclude that there are several key points where the concentration of the people is the biggest. Depending on the time of the day, these points change their role and importance for the users of this space, but their general gradation can be clearly identified. Although the whole area is recreational and cultural, the following points are the most important catering and tourist locations: Strandbar Hermann, Badeschiff, Motto am Fluss, Flex, Tel Aviv. Comparing the results obtained, the chosen location for the bridge-hotel is the most appropriate. At this location, the concentration of people is constantly high. Based on this analysis, it is to be concluded that the ideal location for another bridge would be near the Schottenring metro station.

An additional argument for this conclusion represents the old dock, which is abandoned and has no function. Placing the hotel on it, giving it the role of the harbor and connecting the bridge with it, the already established rhythm of people movement continues to be visible, which is clearly seen by the urbanistic observation of the site. Namely, it is easily noticeable that on this part of the canal exists a well-established line of, not just bridges, but also of different structures, that are positioned on the water: Partyschiff, Motto am Fluss, Badeschiff ... Taking into account the unique view at the sunset form this part of the canal, the mere idea of building the hotel as well as materializing it would create new opportunities for experiencing this part of the canal in another way, through enabling a unique view.

Fig. 4.1 - Donaukanal-Ringturm

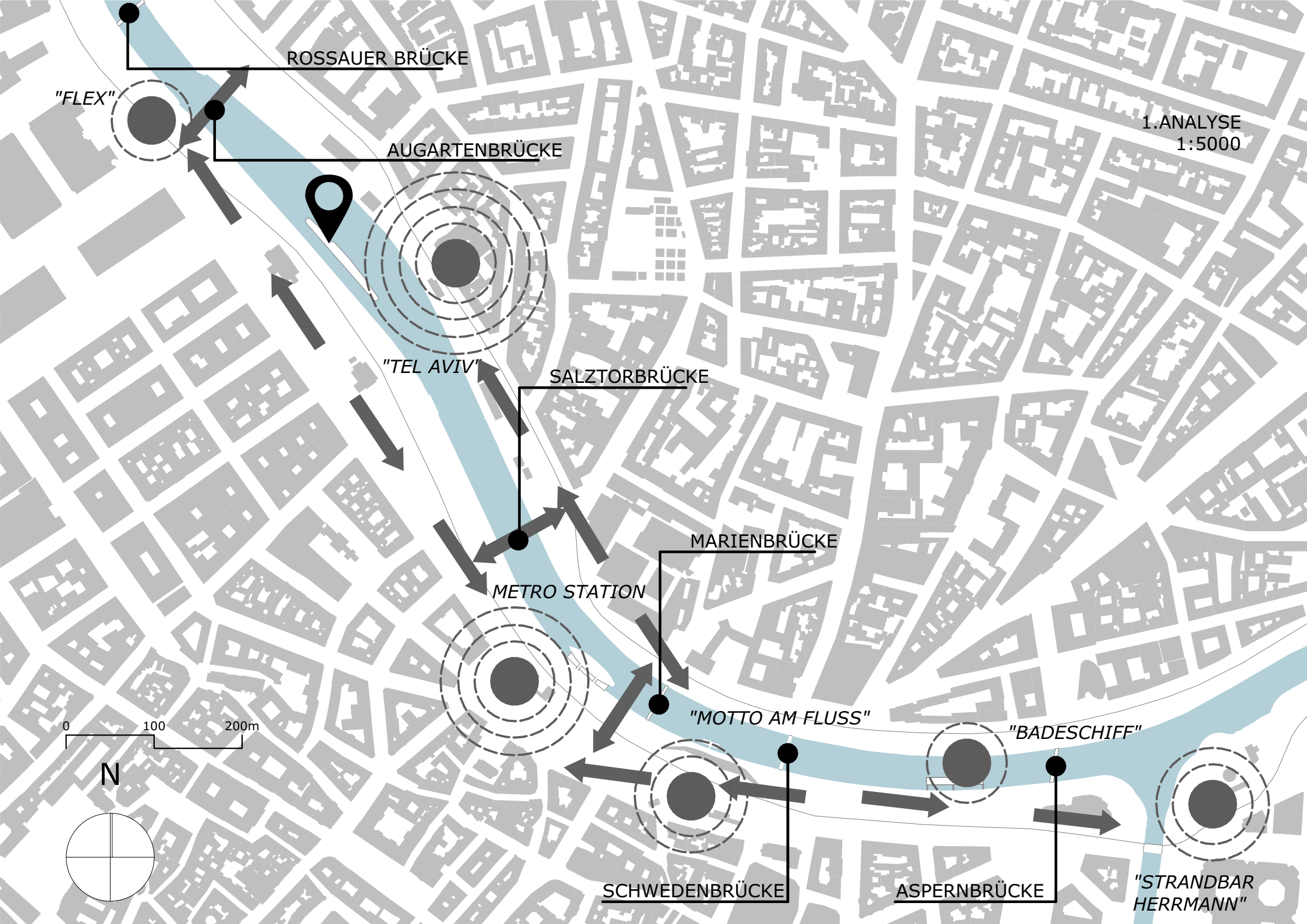
AMOUNT OF VISITORS

MOST POPULAR
DIRECTIONS

1.analyse shows amount of visitors and most popular directions of movement.

2.analyse shows diversity of contents.

3.analyse shows the repetition of the similar projects on this part of the Donaukanal.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"FLEX"
AUGARTENBRÜCKE
1.ANALYSE
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"TEL AVIV"
SALZTORBRÜCKE
MARIENBRÜCKE
METRO STATION
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200m
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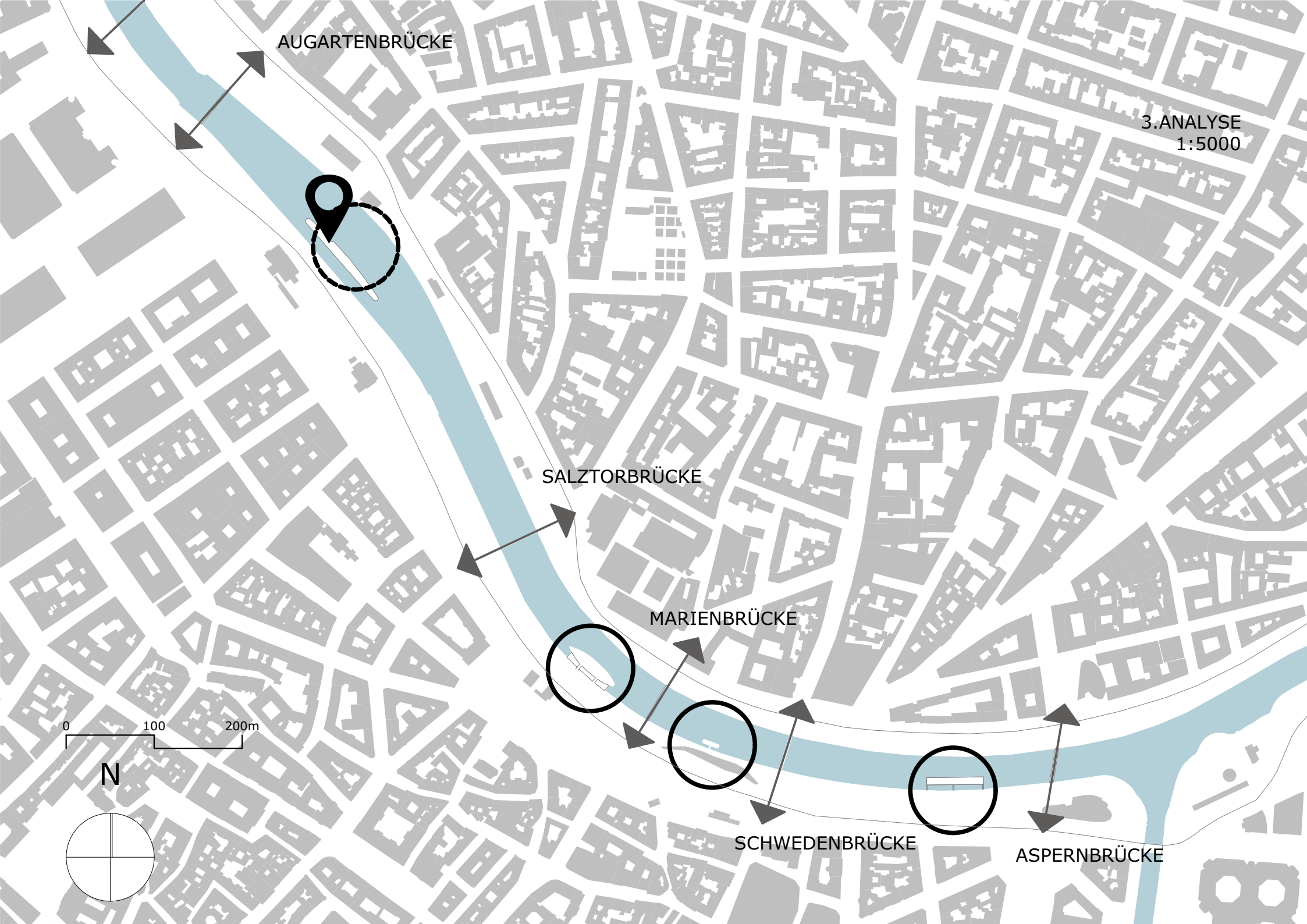
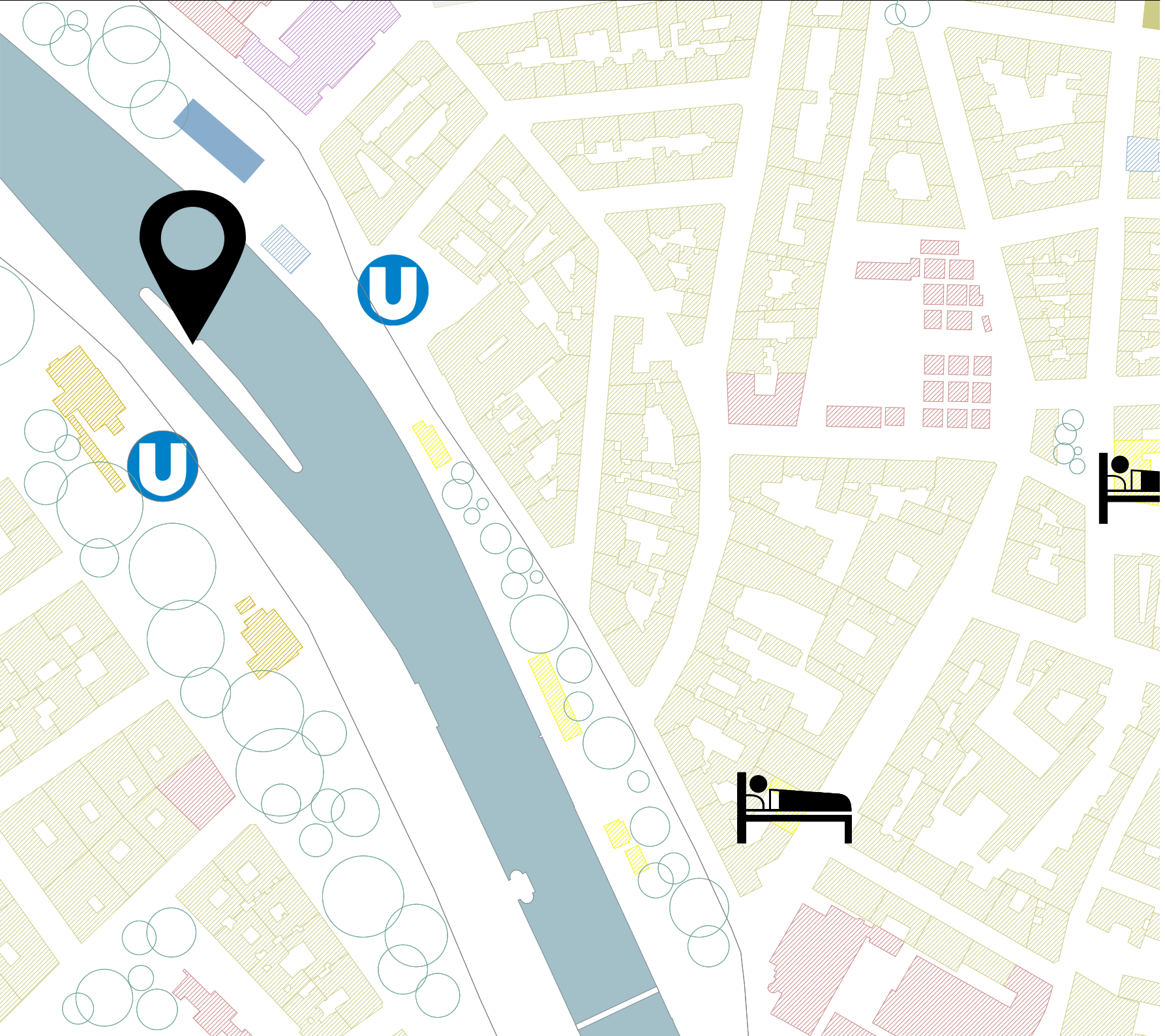

AUGARTENBRÜCKE
3.ANALYSE
1:5000
SALZTORBRÜCKE
MARIENBRÜCKE
SCHWEDENBRÜCKE
ASPERNBRÜCKE
0
100
200m
N



MAP OF DEDICATION
1:2500

- Residential buildings
- State institutions, hospitals and schools
- Office buildings
- Cultural buildings
- Hotels / Restaurants
- Metro

0 50 100m

N

5
PROJECT

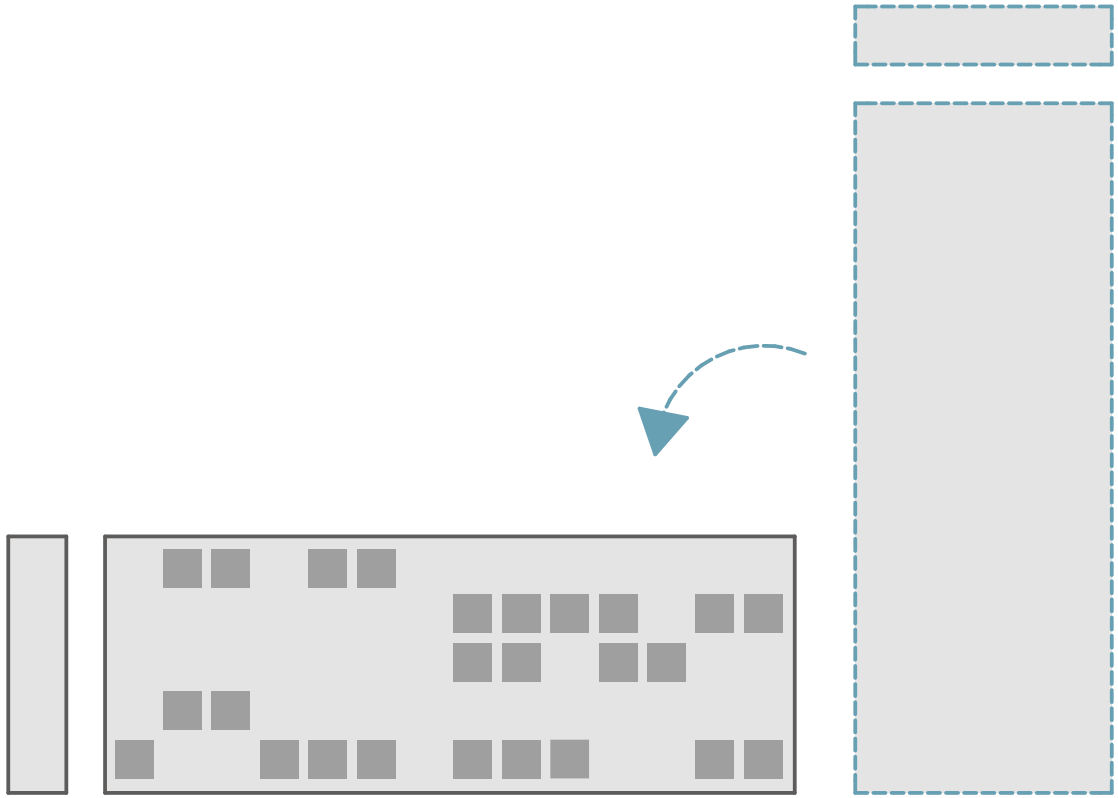
5.1 CONCEPT

Ringturm as a striking landmark of this part of Donaukanal, is the starting point of the architectural concept of this project. Its form and facade were used for the realization of connecting the two coasts of Donaukanal, and the need for that has emerged by analysing the concentration of users. Observing the environment and the use of the coast of this part of Donaukanal, it was concluded that there is a great concentration of pedestrians, recreationalists and street artists, and although in the neighborhood there are bridges Salztorbrücke and Augartenbrücke, the construction of another pedestrian bridge would undoubtedly be a great solution. Due to recreational demands for jogging, cycling, skateboarding or walking, the concentration of users is constantly high. Especially during pleasant temperatures, when additional visitors are attracted with outdoor cafes, sandy beaches and bars, and, in general, with the canal coast, suitable for escape from high temperatures.

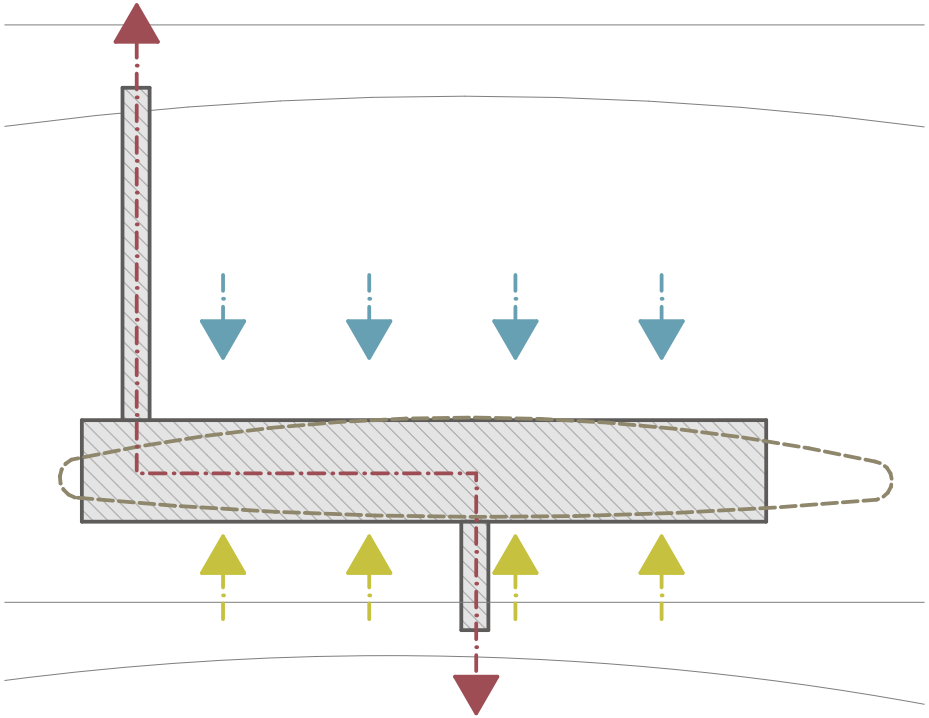
"Ringturm" with its symbolism defies other architecture in the environment, either older or more modern. It symbolises peace and the way to the future, so it is no wonder that it serves as a sort of canvas for art works, which is seen in the and the works of contemporary artists on its façade, that are changing every year. It is, therefore, very logical that this building served as an inspiration for this project. Its shape is "overturned" and set on an abandoned mole, and the light and easy construction of the bridge leans on it. The two coasts are, thus, once again connected, and the future users would be given the unforgettable sight of "Vienna on the Water".

The bridge, with crossing the canal and with passing through several floors of the hotel, would create a more interesting division between public and private space. In that way, an idea of combining the hotel, the bridge and the harbor, that is located below the surface of the hotel, would be achieved. The old abandoned pier would be revived again and would gain an incredibly important role in this project. It would literally be the main bearer and the foundation of this concept. It served as the foundation for the hotel, which, rising up, leaves the empty area of the mole and creates the possibility of using it for the dock of the shuttle boats that travel trough Donaukanal.

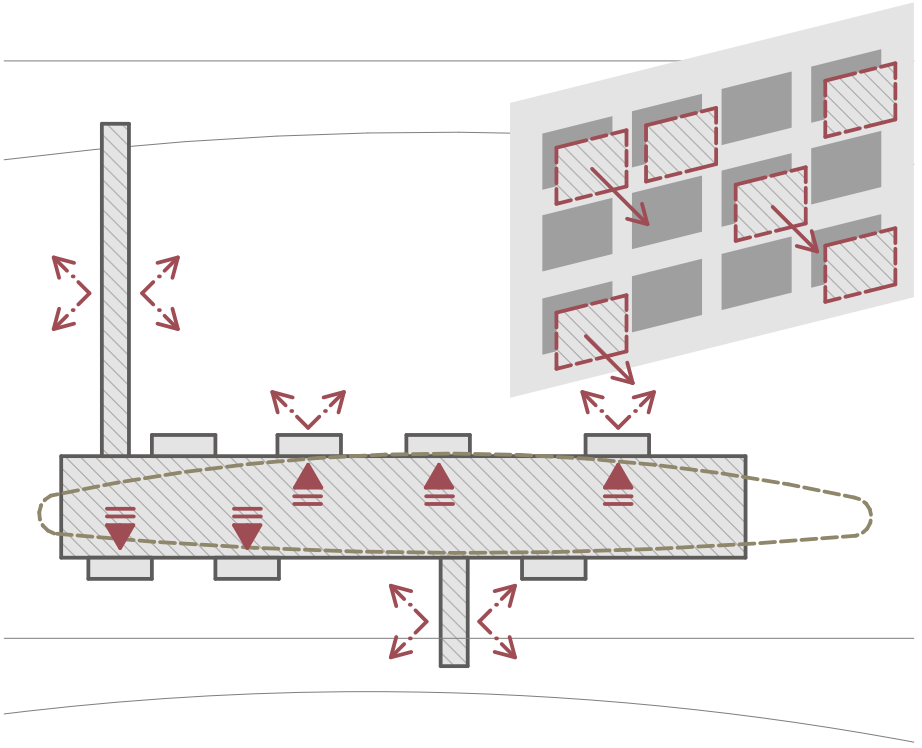
Considering all planned functions, we have come to the conclusion that users of the pedestrian bridge, hotel guests and passengers from the ships would be able to meet at 3 locations, where their roads would be crossed: bridge, hotel and dock. Pedestrians have the opportunity to cross from one coast to another through the public part of the hotel or through the surface of the mole intended for the dock. Guests of the hotel can absolutely enjoy the privacy of the hotel, but at the same time, have the opportunity to walk through the bridge or get down to the dock. They would also be able to meet in the public part of the hotel with other pedestrians, or in a cafe and hotel restaurant with an attractive location and a view.



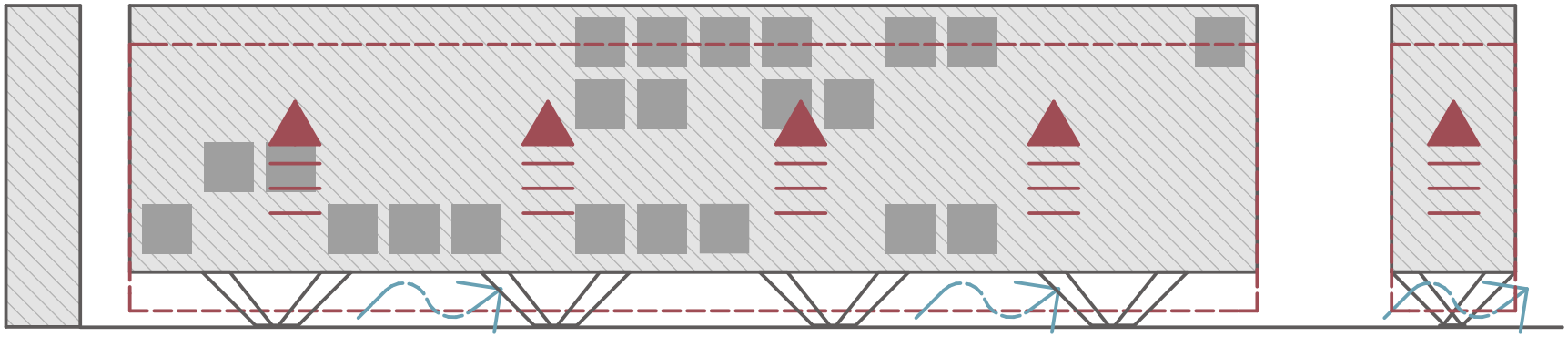
OVERTURNING AND SETTING ON THE PIER



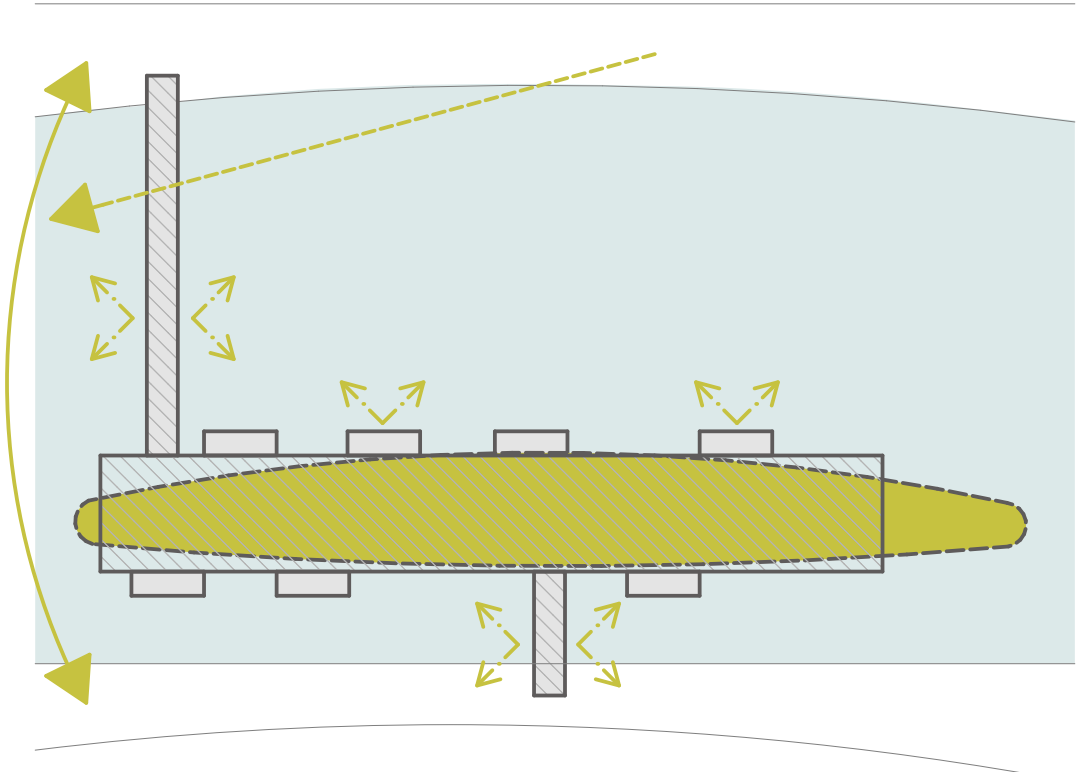
COMMUNICATION BETWEEN USERS OF THE BRIDGE, HOTEL AND THE PIER



EXTRUSION OF THE BOXES (GLASS ORIELS) AND CREATING THE VIEWPOINTS



REVIVING THE PIER



5.2 HUMANITY

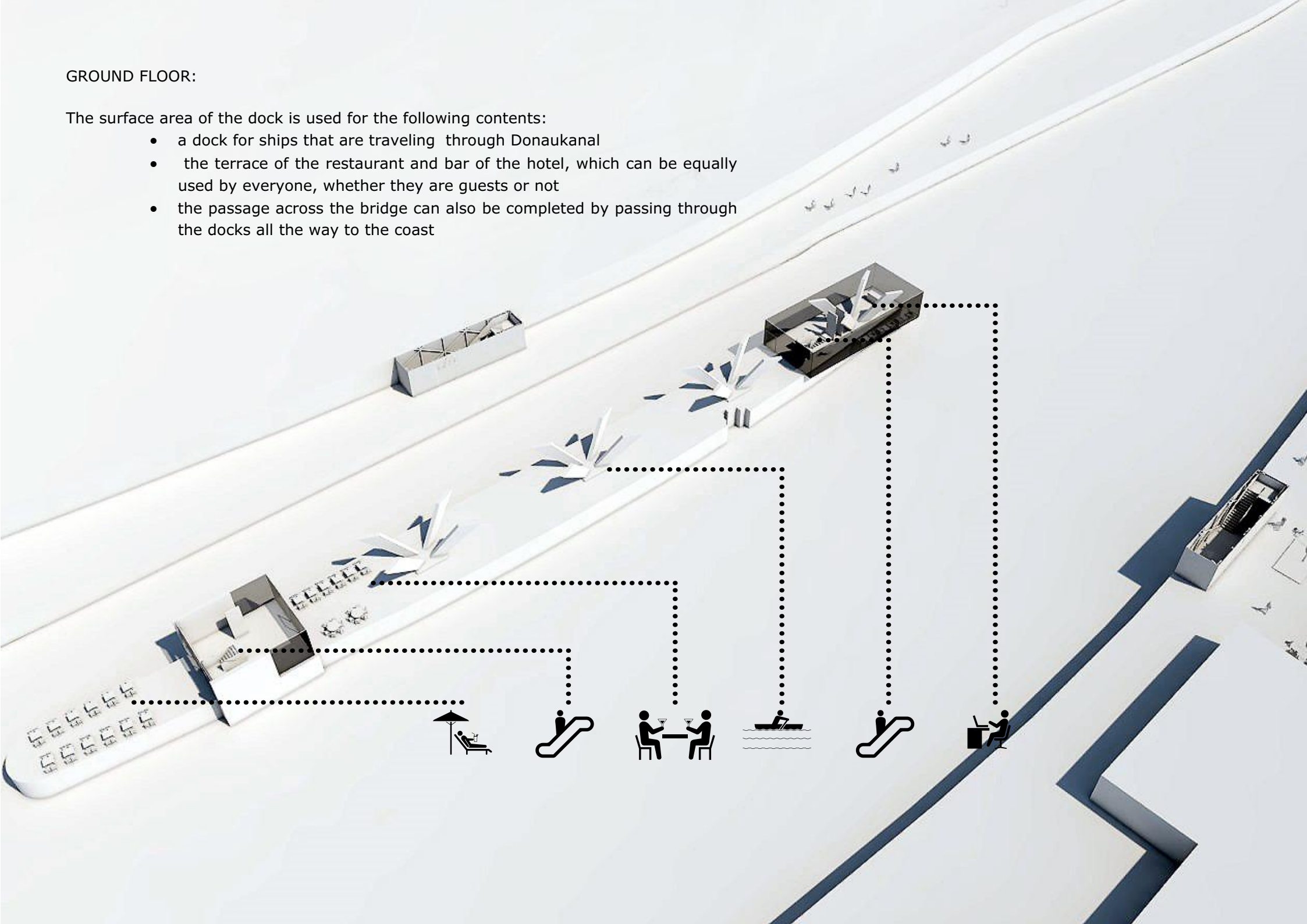
A special segment of this project's analysis is humanity. It simply pervades the entire story because it is not unilateral, but it has covered the whole story and has made the concept even better. Humanity has rounded the whole story into a one compact entirety. Humanity comes to the fore in a several segments:
Viewpoints / Brightness / Water / Connecting coasts

The project provides viewpoints to the Donaukanal, interesting architecture, as well as to the natural landscapes of this part of Vienna. Water is a symbol of life and has a huge role for and in the architecture. It has a soothing effect on man, whether it is in the environment or in the interior. In this case, users of the whole object would have the opportunity to enjoy the sight of water everywhere they look. Especially interesting is the sunset on this part of the canal, but also the night itself creates a special spell of city lights and bridges in the water. Particularly important is the role of materialization in this project, because it is the glass that opens the possibility to enjoy the viewpoints. Therefore, absolutely every user and worker of the hotel would have access to daylight, and in some places the room is extended into the glass oriels. These glass oriels improve the ambience, created by the closeness of the water. The user, exiting from the cube room, would have the feeling of hovering over the water. The bridge has always been a symbol of joining and each bridge carries a dose of humanity in itself. Joining the two coasts, connecting people, giving them a chance to meet and socialize, is an undeniable reward for every builder.

GROUND FLOOR:

The surface area of the dock is used for the following contents:

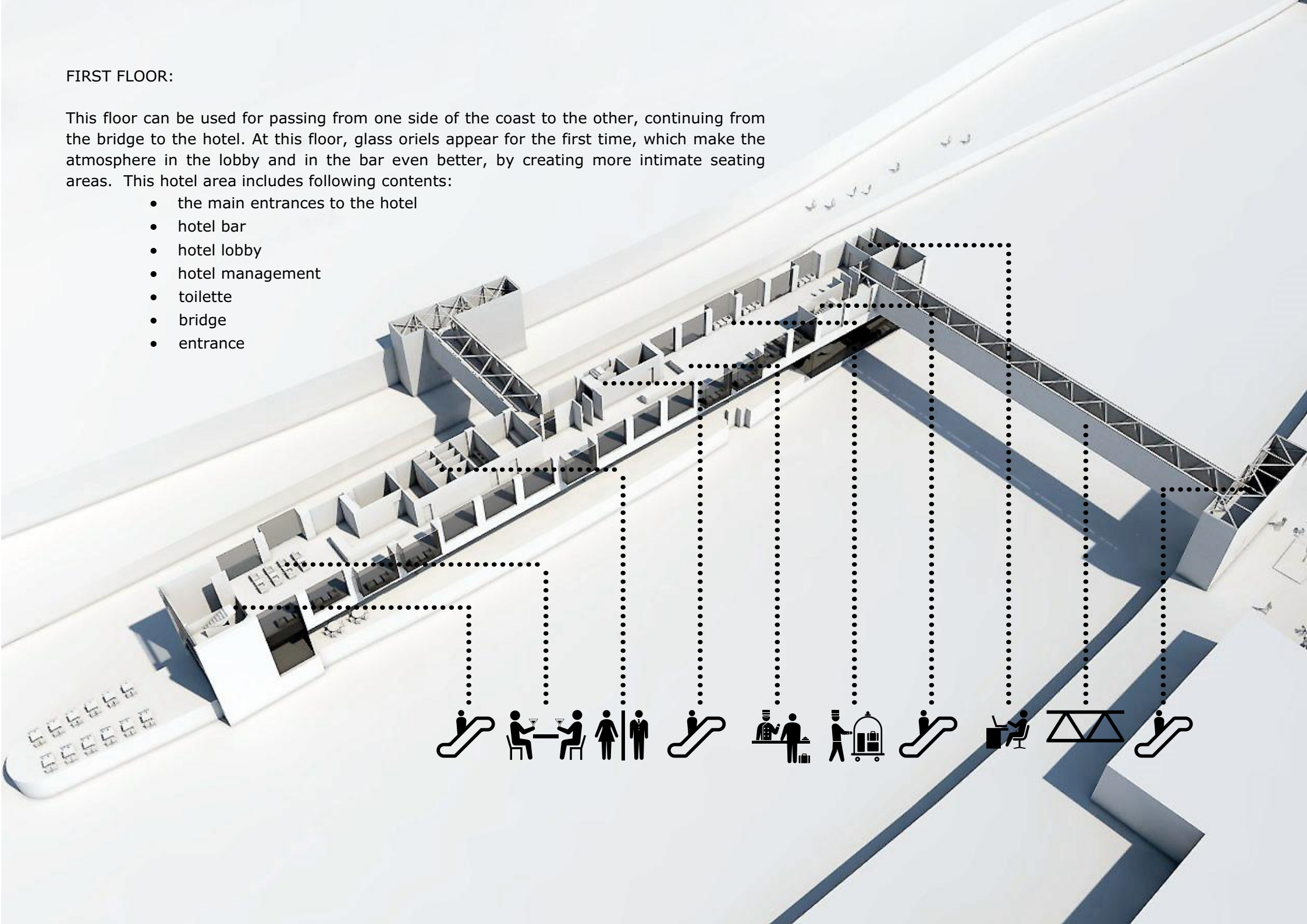
- a dock for ships that are traveling through Donaukanal
- the terrace of the restaurant and bar of the hotel, which can be equally used by everyone, whether they are guests or not
- the passage across the bridge can also be completed by passing through the docks all the way to the coast



FIRST FLOOR:

This floor can be used for passing from one side of the coast to the other, continuing from the bridge to the hotel. At this floor, glass oriels appear for the first time, which make the atmosphere in the lobby and in the bar even better, by creating more intimate seating areas. This hotel area includes following contents:

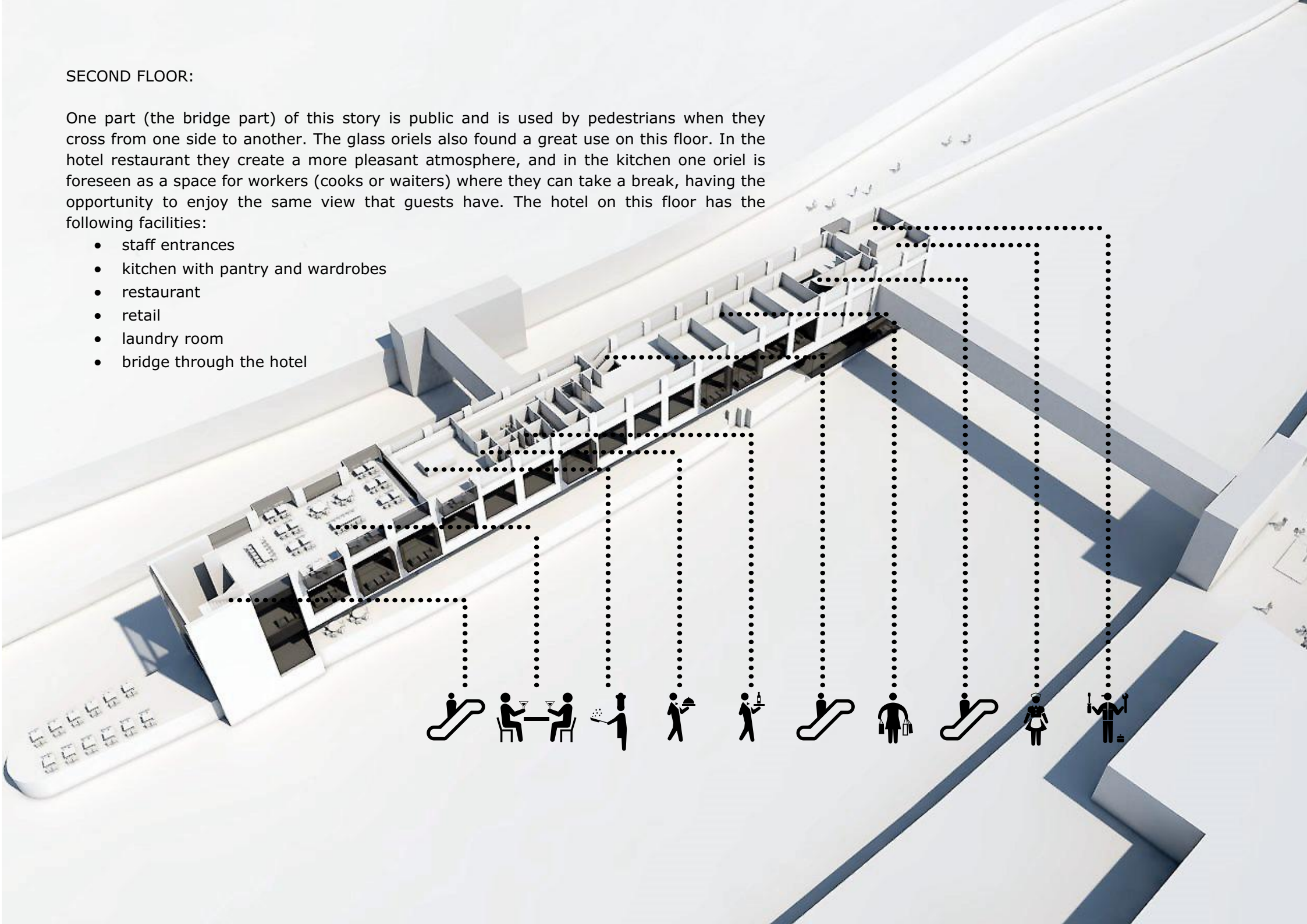
- the main entrances to the hotel
- hotel bar
- hotel lobby
- hotel management
- toilette
- bridge
- entrance



SECOND FLOOR:

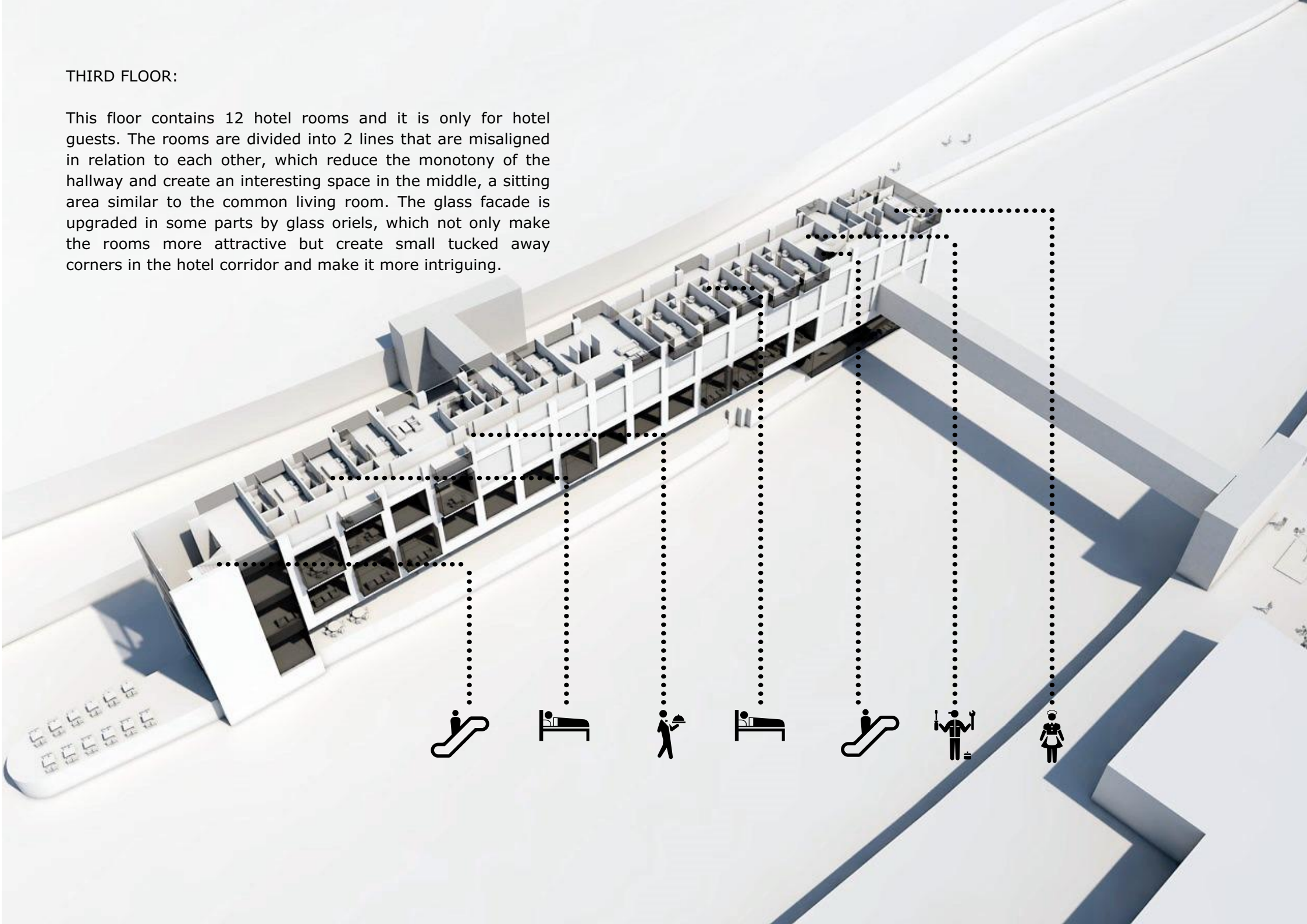
One part (the bridge part) of this story is public and is used by pedestrians when they cross from one side to another. The glass oriels also found a great use on this floor. In the hotel restaurant they create a more pleasant atmosphere, and in the kitchen one oriel is foreseen as a space for workers (cooks or waiters) where they can take a break, having the opportunity to enjoy the same view that guests have. The hotel on this floor has the following facilities:

- staff entrances
- kitchen with pantry and wardrobes
- restaurant
- retail
- laundry room
- bridge through the hotel



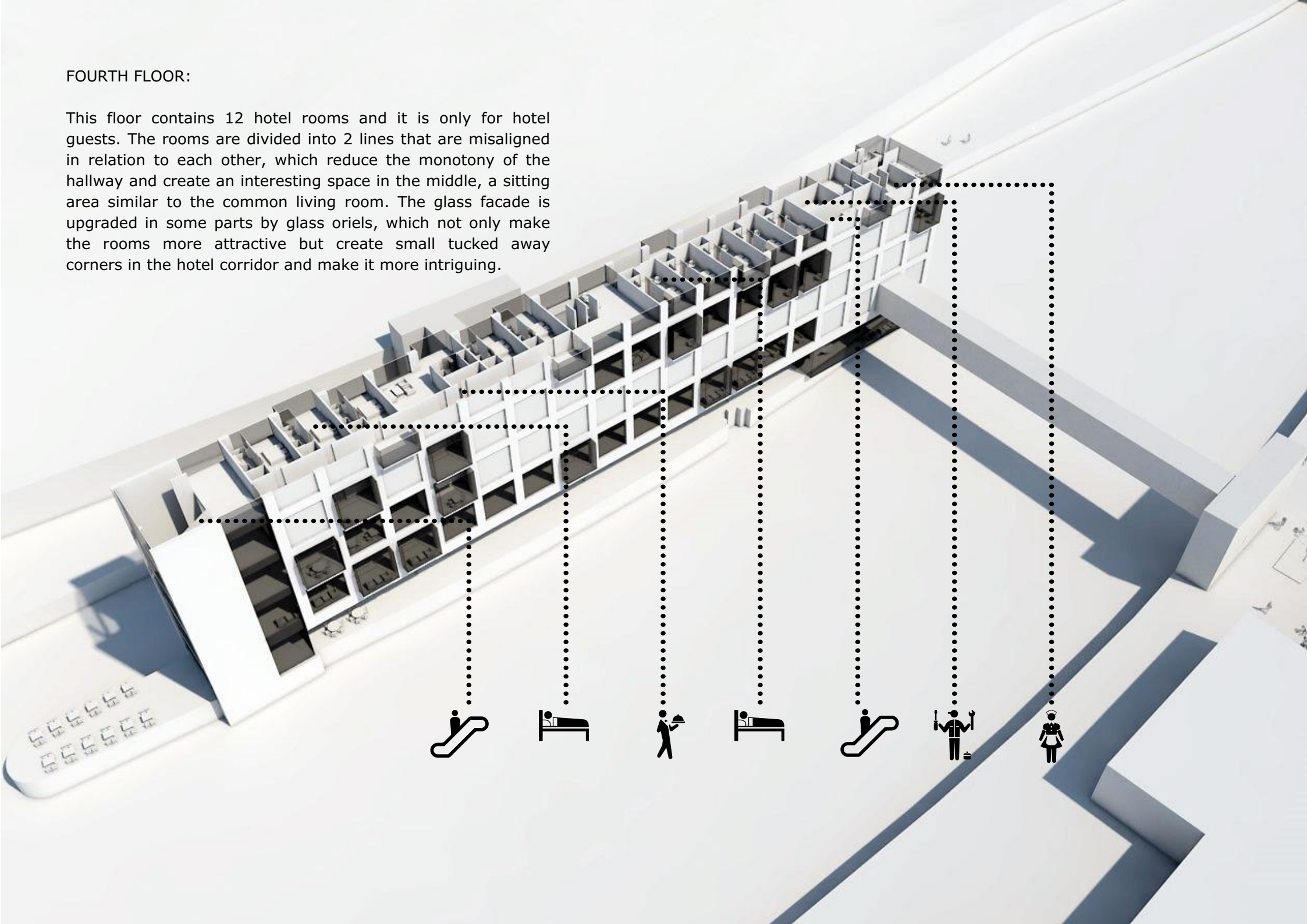
THIRD FLOOR:

This floor contains 12 hotel rooms and it is only for hotel guests. The rooms are divided into 2 lines that are misaligned in relation to each other, which reduce the monotony of the hallway and create an interesting space in the middle, a sitting area similar to the common living room. The glass facade is upgraded in some parts by glass oriels, which not only make the rooms more attractive but create small tucked away corners in the hotel corridor and make it more intriguing.



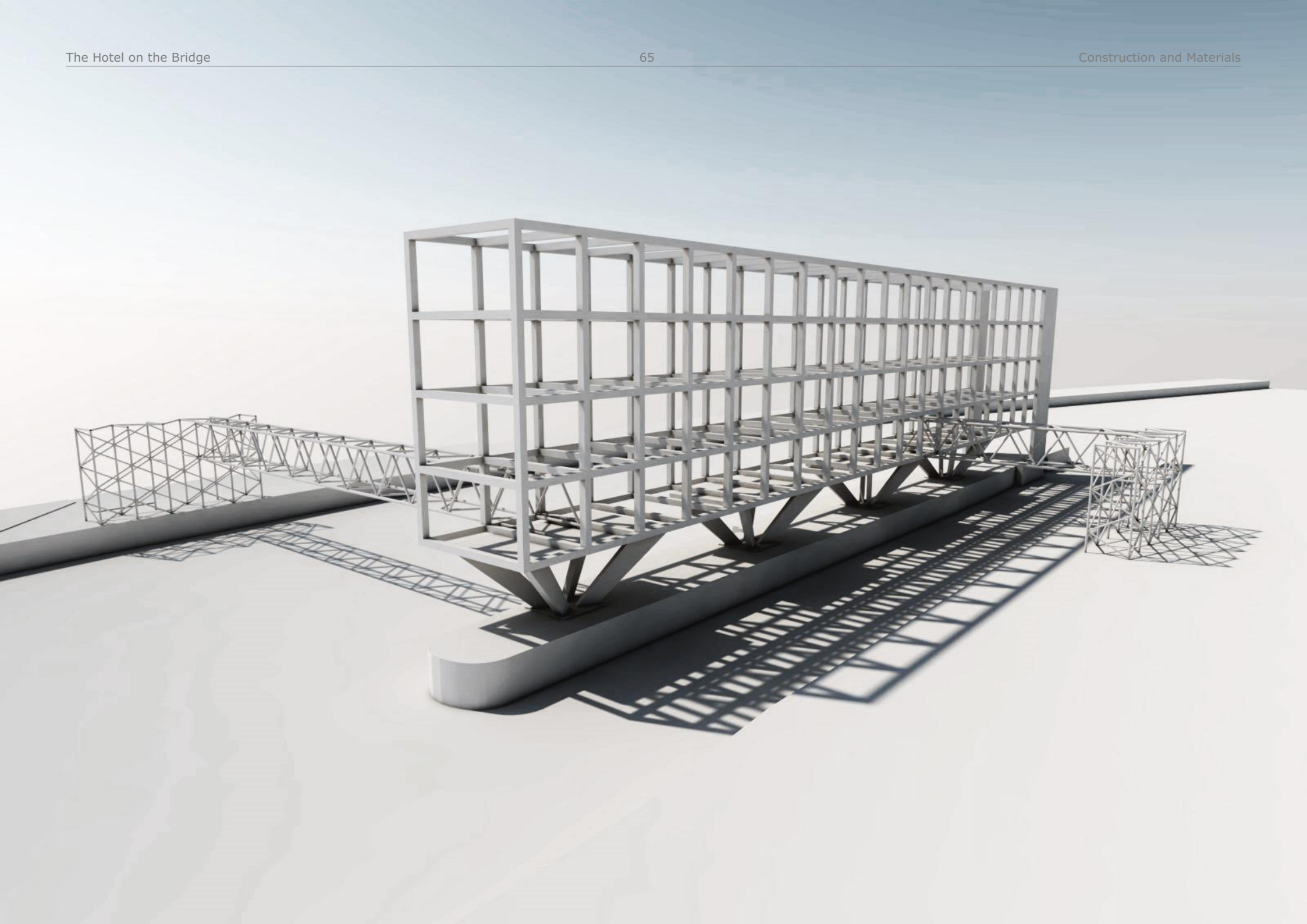
FOURTH FLOOR:

This floor contains 12 hotel rooms and it is only for hotel guests. The rooms are divided into 2 lines that are misaligned in relation to each other, which reduce the monotony of the hallway and create an interesting space in the middle, a sitting area similar to the common living room. The glass facade is upgraded in some parts by glass oriels, which not only make the rooms more attractive but create small tucked away corners in the hotel corridor and make it more intriguing.



6

CONSTRUCTION MATERIALS



6.1 CONSTRUCTION AND MATERIALS OF THE BRIDGE

Bridges were always impressing people, whether small or big. It is therefore understandable the eternal desire of the bridge builders to apply such a solution and materials that give them the ability to bridge the obstacle in the easiest way. Steel is a material whose application in bridge constructions is very long. The first use according to some data is related to the land of China. Wrought chains have been used for the production of suspension bridges. The technological revolution of the modern era provided new opportunities for bridge constructors. In the 1779, the first steel bridge over Severn river has been built in the UK. It is 30m long and has an arch static system. This bridge still exists today and serves for cycling and pedestrian traffic.

In the general case, the supporting structure of a steel bridge consists of the following elements: main carriers, carriageway, roadway carriers, transverse carriers, upper and lower horizontal bracings, anti-lateral bracings, portals and bays. These elements are also known as a superstructure. Substructure of a bridge consists of supports and pillars.

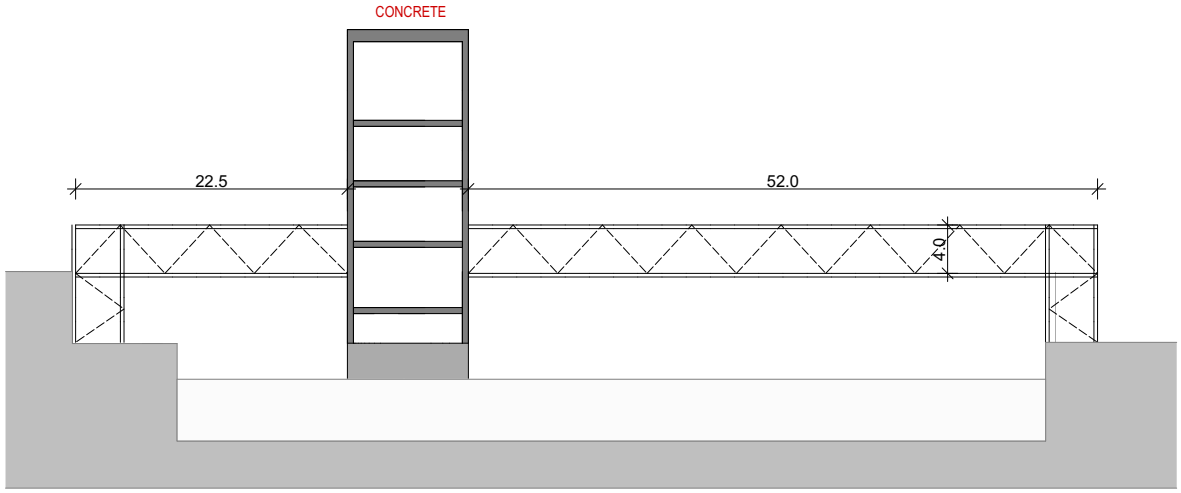
When making a bridge solution, it is of the utmost importance to make the optimal choice of a constructive system, with regard to the span that needs to be bridged, traffic and load on the bridge, traffic under the bridge, montage, location of the bridge, aesthetic works and taking into account the economic criteria. The constructive system of steel bridges can be classified into several basic groups according to the static system and type of main carriers.

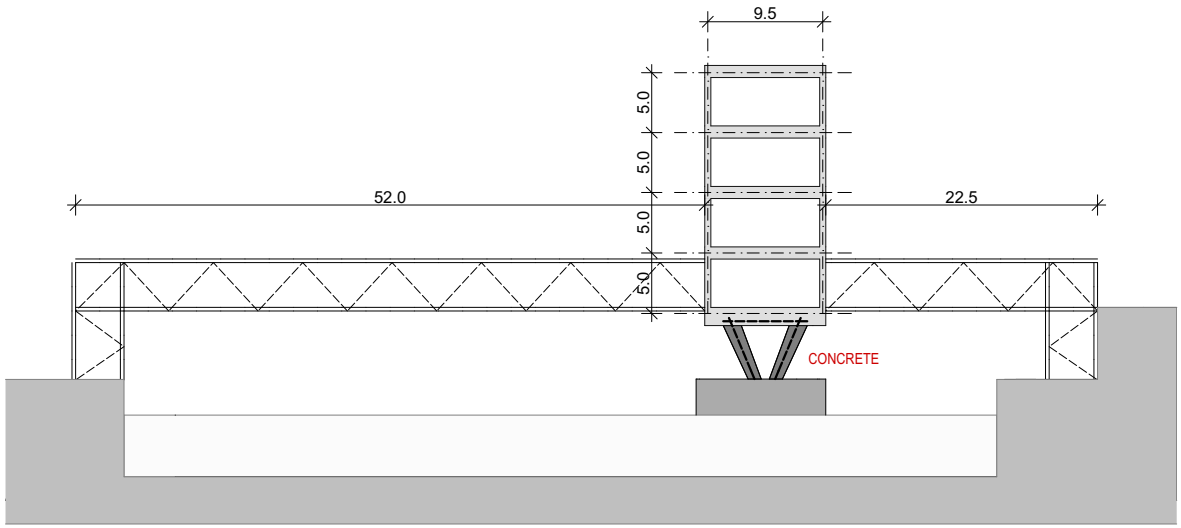
- beam systems (truss and compact girders)
  - simple beam girders
  - continental girders
  - cantilever girders
  - Gerber girders
- arch systems
- cable - stayed systems
- suspension systems
- systems with diagonal abutments

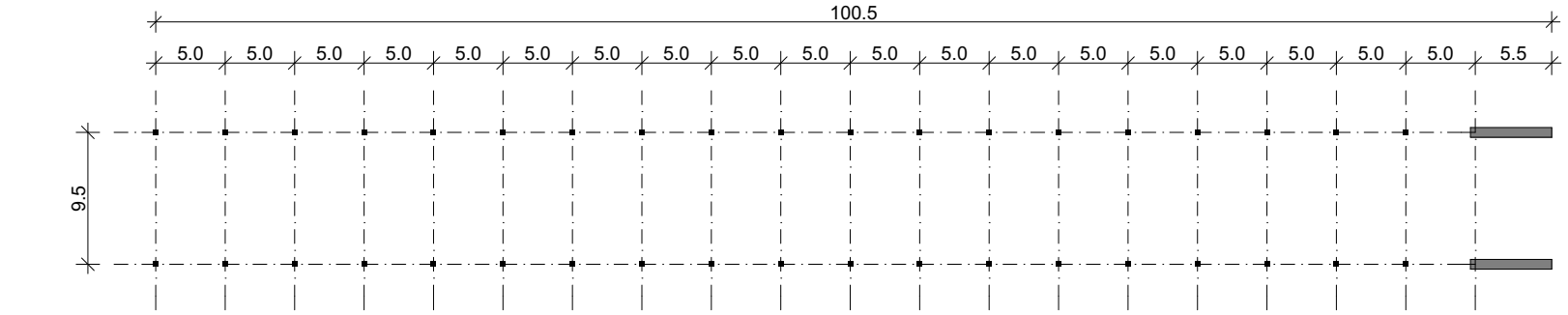
According to the purpose, the bridges are divided into road, rail, pedestrian and industrial bridges, aqueducts and combined bridges. Pedestrian bridge or a footbridge is a bridge designed especially for pedestrians. Sometimes, it can be also used by cyclists but it is forbidden for motor vehicles. Besides their functionality they are often well-integrated in the environment. Many pedestrian bridges have decorative and aesthetically pleasing design and thus they enrich the landscape.

The pedestrian bridges in this project are designed as a light and simple truss constructions, with a static systems of a simple beam. A load-bearing superstructure of a truss bridge is made of elements which are connected in the nodes. Elements are exposed to compression or tension, depending on their position in truss.

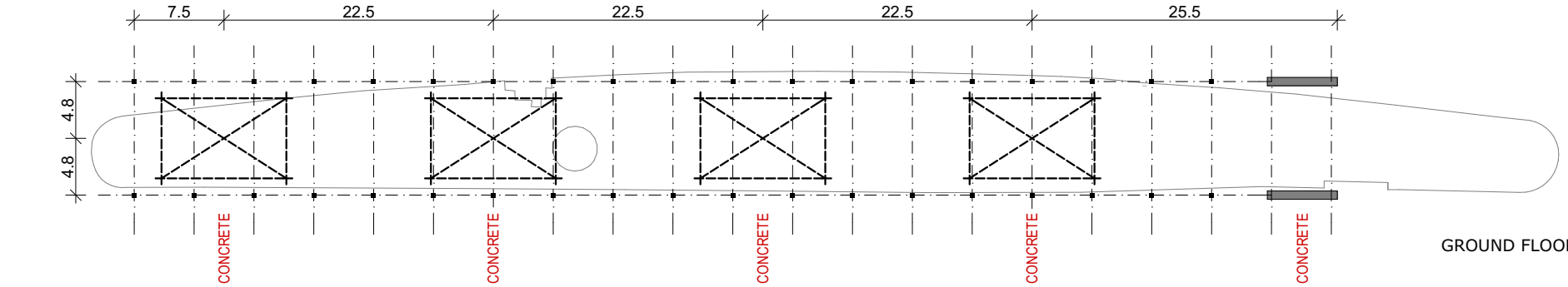
The length of the longer bridge is 52,0m and of the smaller one is 22,5m. Superstructure of both bridges is a 4,0m wide and 4,0m high. Bridges are positioned at the height of neighboring bridges so that they do not interfere with the waterway and ships. Superstructure is made of a CHS (Circular Hollow Sections) steel tubes. From an architectural perspective they provide a smooth surface with a clean aesthetic lines. Such a profiles have even greater resistance to corrosion because they are completely closed. They are interconnected by welding and have no cavities for water penetration. The entire superstructure is covered with a thin perforated metal sheet which emphasizes the whole bridge and gives it a lightness and transparency. Underneath the metal sheet are glass panels which provides that hotel guests and pedestrians will not be exposed to an atmospheric influences.



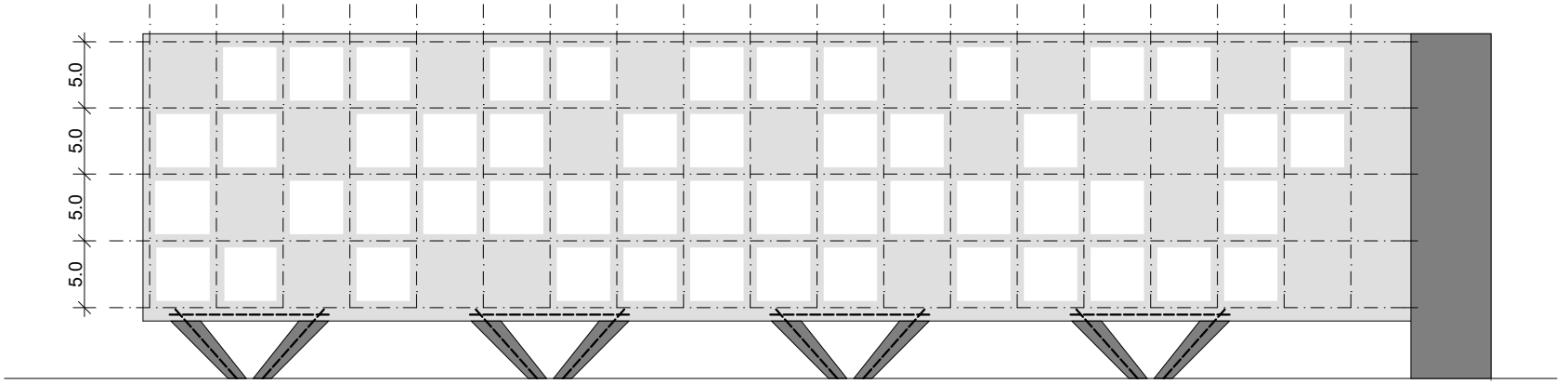




FIRST FLOOR



GROUND FLOOR



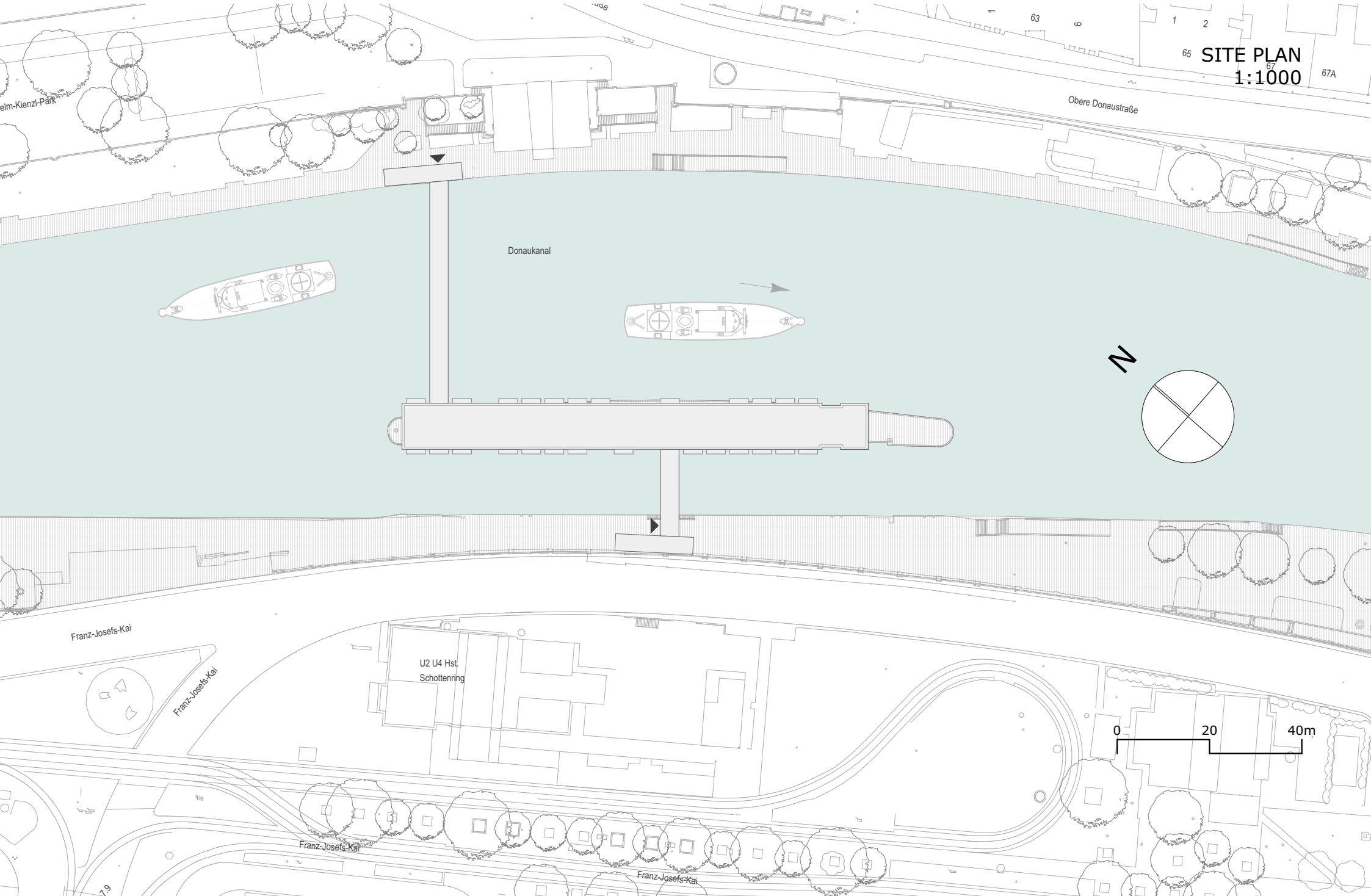
6.2 CONSTRUCTION AND MATERIALS OF THE HOTEL

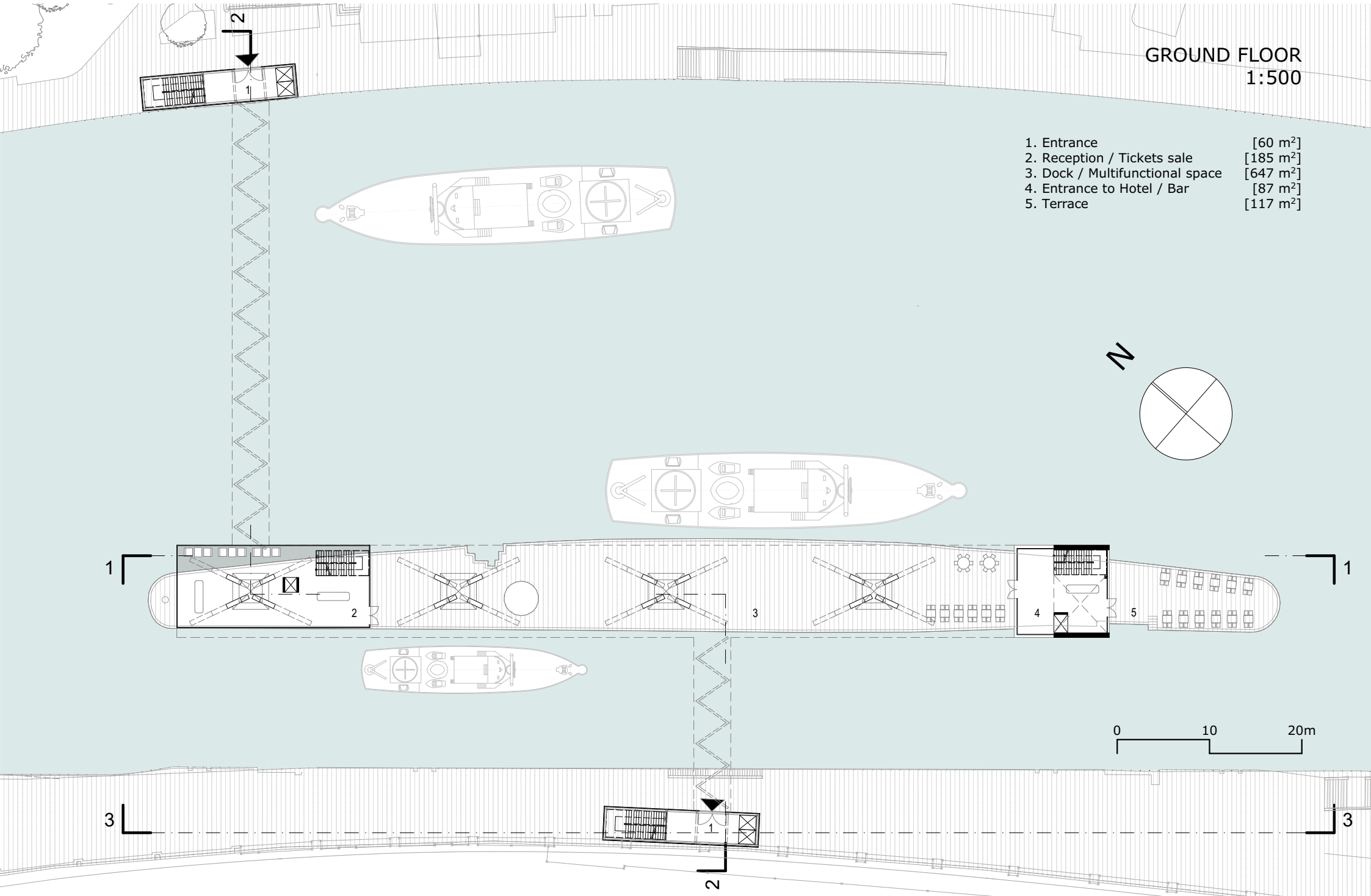
The hotel stands on 4 main pillar groups, which are based on the existing dock. Each of the 4 pillar groups consists of 4 pointed reinforced concrete columns which are connected on the top with a prestressed concrete ring to form a compact and static stable system. On the left side of the building, seen from the direction of Schützenhaus, there are two massive reinforced concrete walls extending over the entire height of the hotel and further reinforcing the building. They provide lateral stability of construction and secure the building in case of an earthquake. These elements are the only concrete parts of the building. The rest of the building is the steel frame structure composed of a vertical columns and a horizontal beams. For columns were used HEB steel beams whose cross section has an equal dimensions in a both orthogonal directions. For horizontal beams were used IPE beams which have a greater stiffness to bending due the bigger height of a cross section.

The main structure, which gives the facade modular division, is covered with gray aluminum panels. The modules are mostly filled with large glass oriels so that users would have the ideal lighting and illumination. The bridge in the hotel area is covered with a perforated sheet in its entire length. In this way, it is visually defined that the bridge goes through the hotel.

7

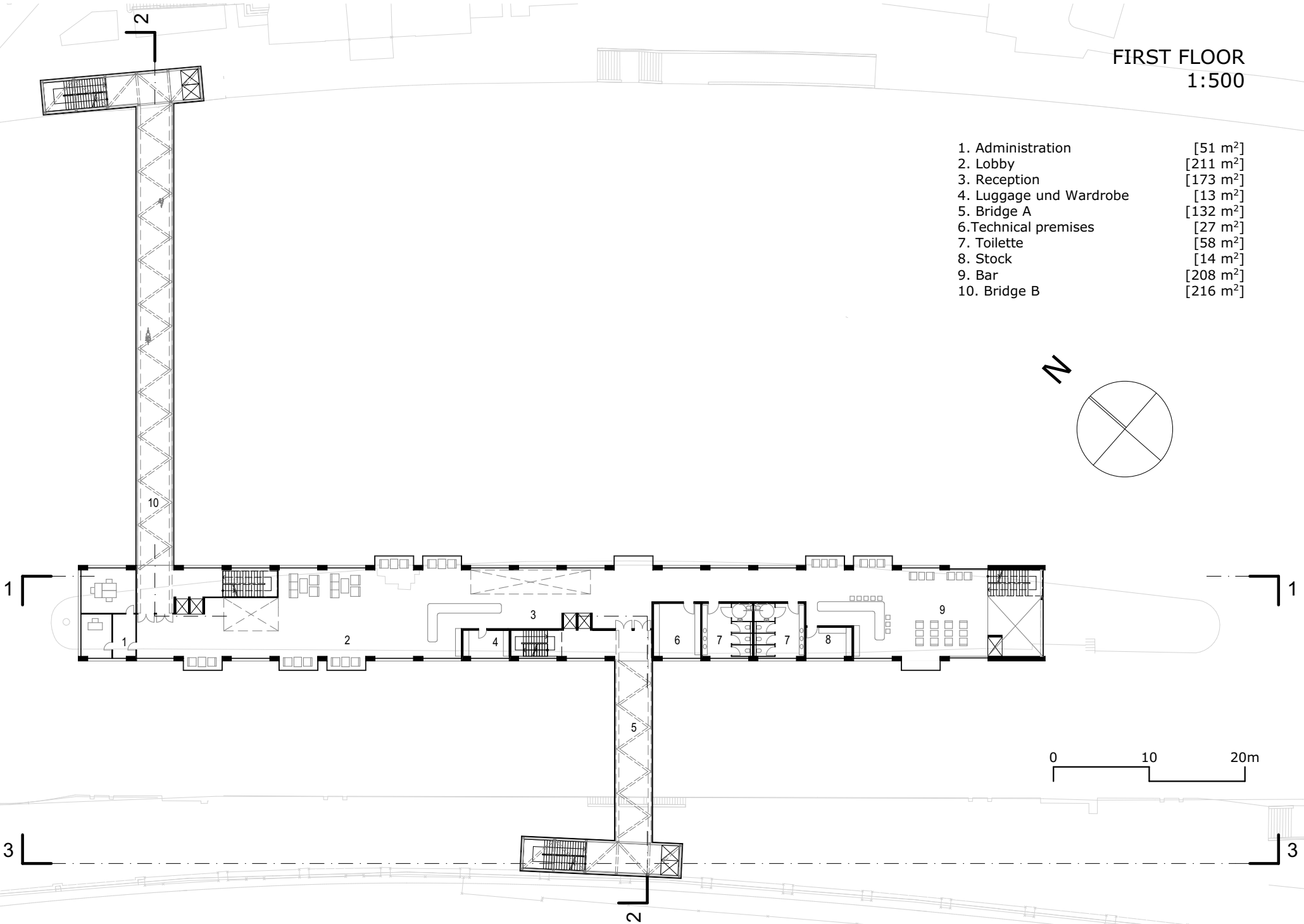
DRAWINGS


SITE PLAN
1:1000
Obere Donaustraße
Donaukanal
Franz-Josefs-Kai
U2 U4 Hst.
Schottenring
N
0
20
40m


GROUND FLOOR
1:500
1. Entrance [60 m²]
2. Reception / Tickets sale [185 m²]
3. Dock / Multifunctional space [647 m²]
4. Entrance to Hotel / Bar [87 m²]
5. Terrace [117 m²]
N
0
10
20m
1
2
3
4
5
1
1
2
3
3
2

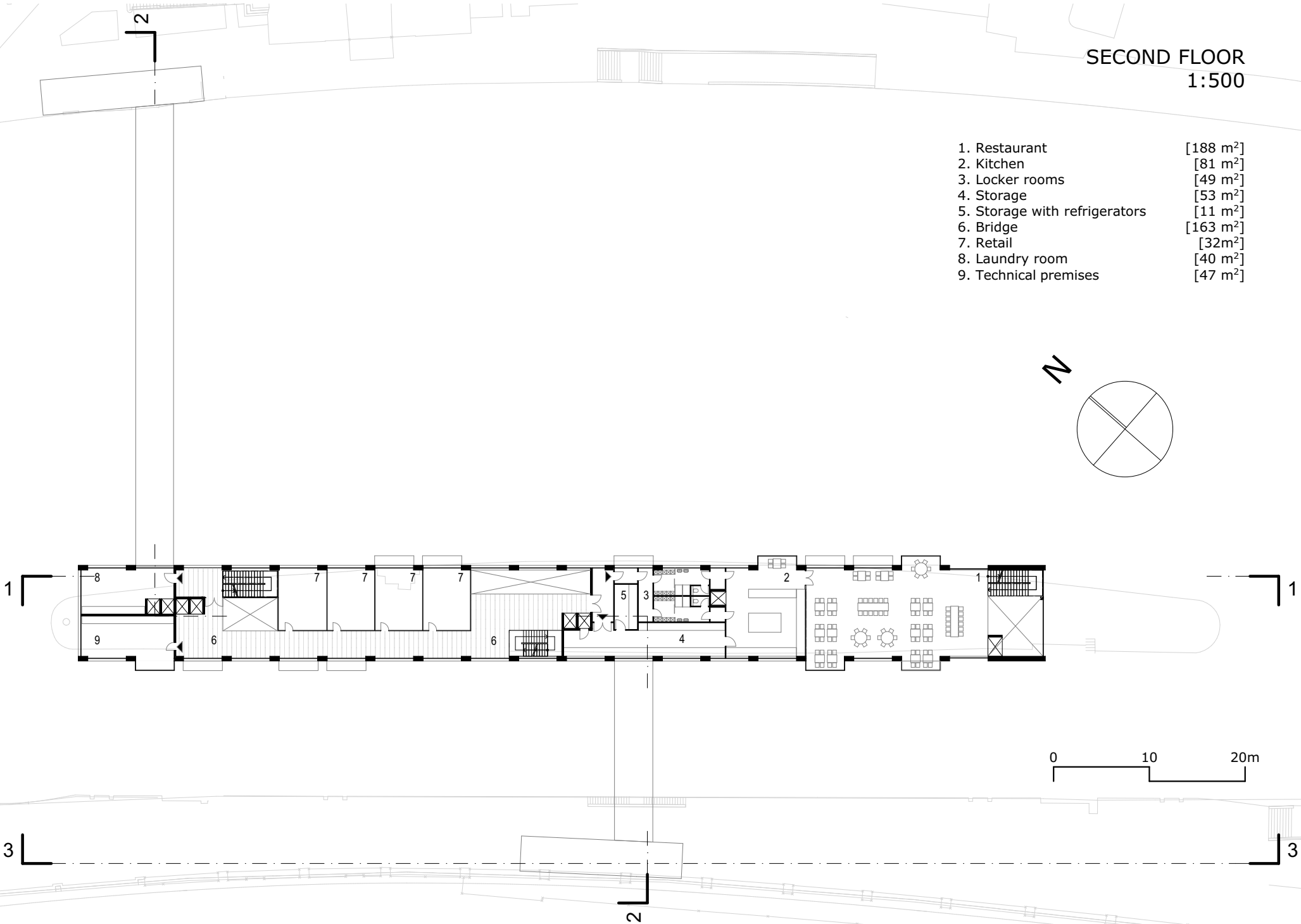
FIRST FLOOR
1:500

1. Administration	[51 m²]
2. Lobby	[211 m²]
3. Reception	[173 m²]
4. Luggage und Wardrobe	[13 m²]
5. Bridge A	[132 m²]
6.Technical premises	[27 m²]
7. Toilette	[58 m²]
8. Stock	[14 m²]
9. Bar	[208 m²]
10. Bridge B	[216 m²]



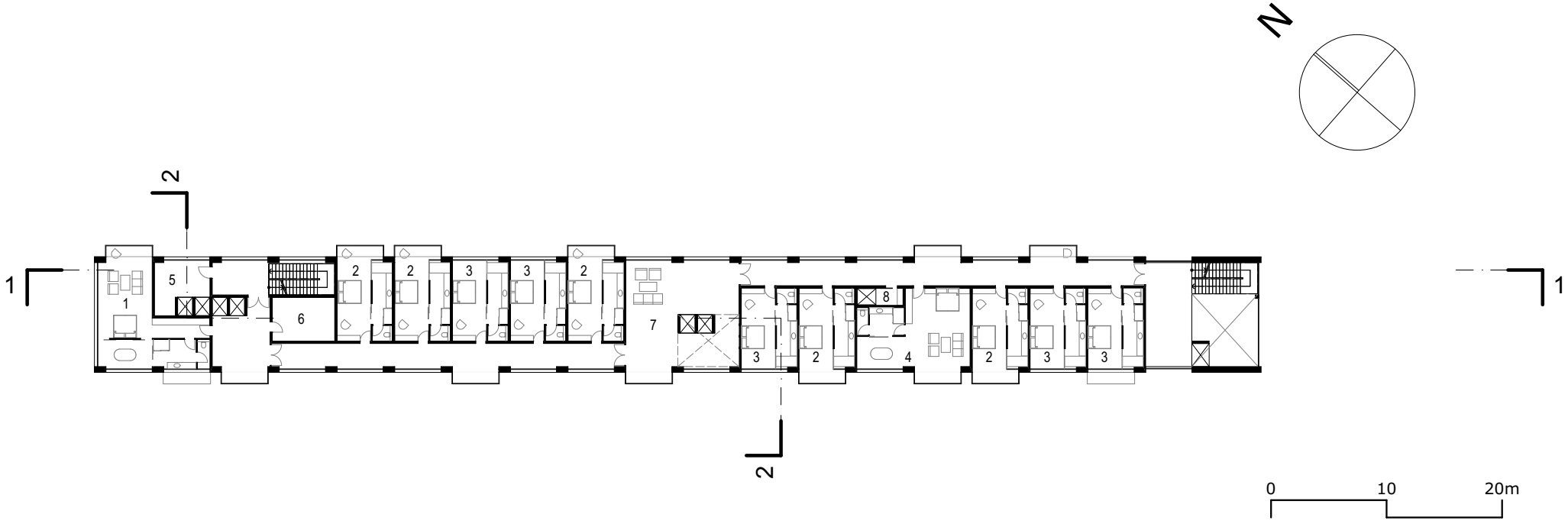
SECOND FLOOR
1:500

1. Restaurant [188 m²]
2. Kitchen [81 m²]
3. Locker rooms [49 m²]
4. Storage [53 m²]
5. Storage with refrigerators [11 m²]
6. Bridge [163 m²]
7. Retail [32m²]
8. Laundry room [40 m²]
9. Technical premises [47 m²]



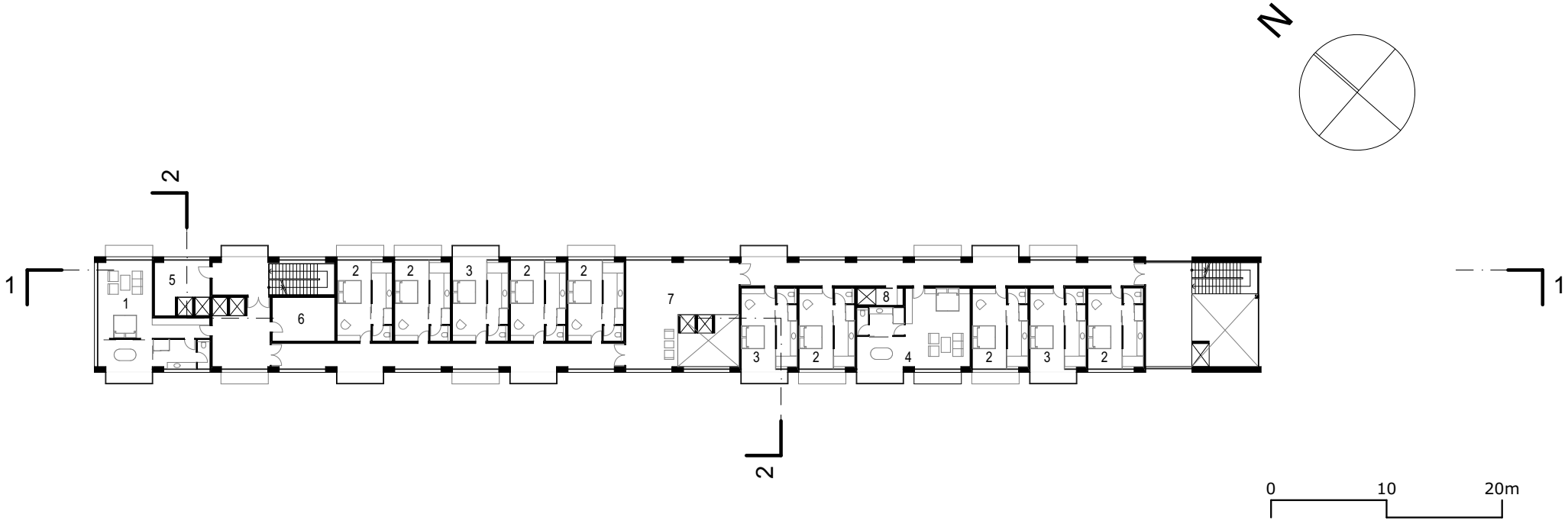
THIRD FLOOR
1:500

1. Room Type B1 [69 m^2]
2. Room Type A1 [38 m^2]
3. Room Type A2 [33 m^2]
4. Room Type C1 [72 m^2]
5. Cleaning [22 m^2]
6. Technical premises [21 m^2]
7. Foyer [94 m^2]
8. Waiters / Room service [6 m^2]

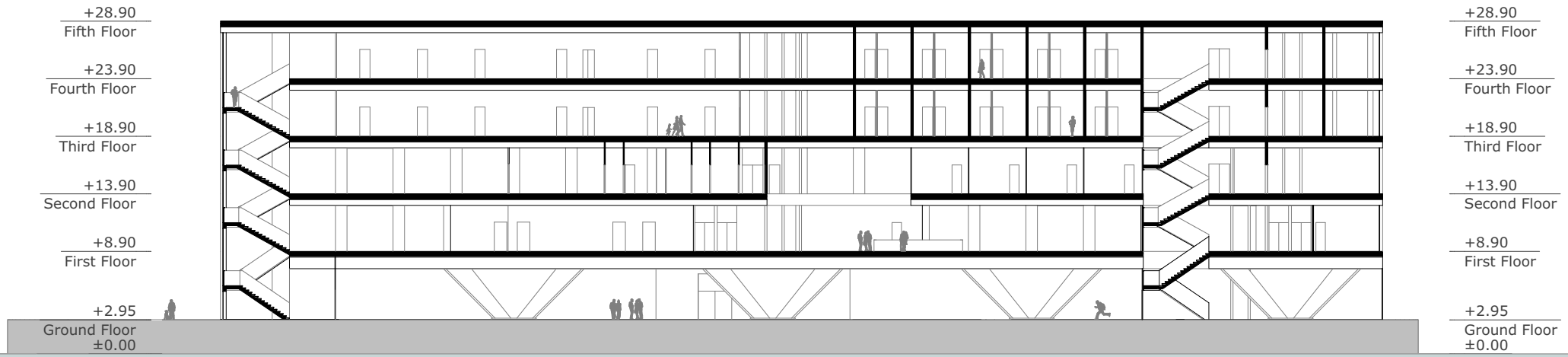


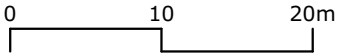
FOURTH FLOOR
1:500

1. Room Type B2 [69 m^2]
2. Room Type A2 [33 m^2]
3. Room Type A1 [38 m^2]
4. Room Type C2 [72 m^2]
5. Cleaning [22 m^2]
6. Technical premises [21 m^2]
7. Foyer [64 m^2]
8. Waiters / Room service [6 m^2]



SECTION 1-1
1:500





SECTION 2-2
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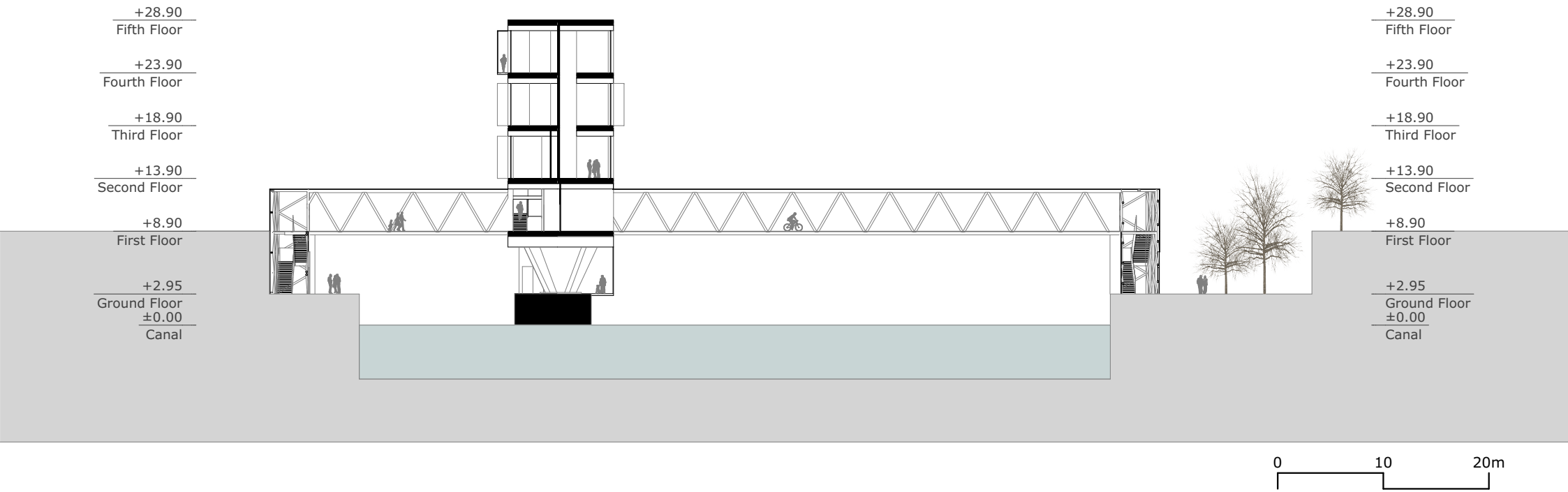
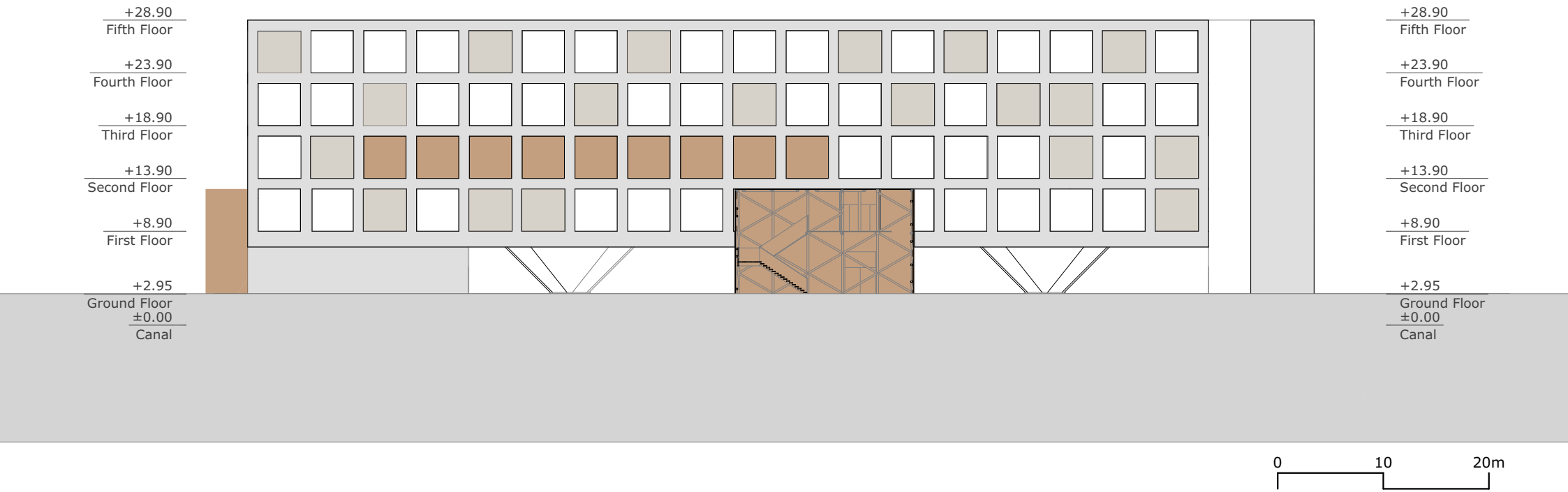


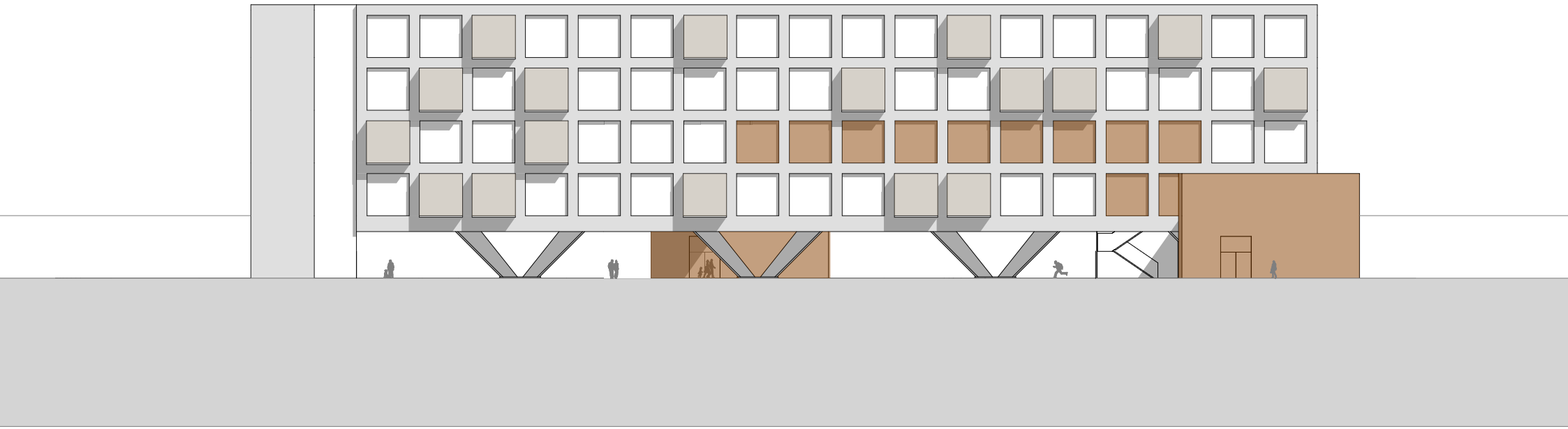
0 10 20m

SECTION 3-3
1:500



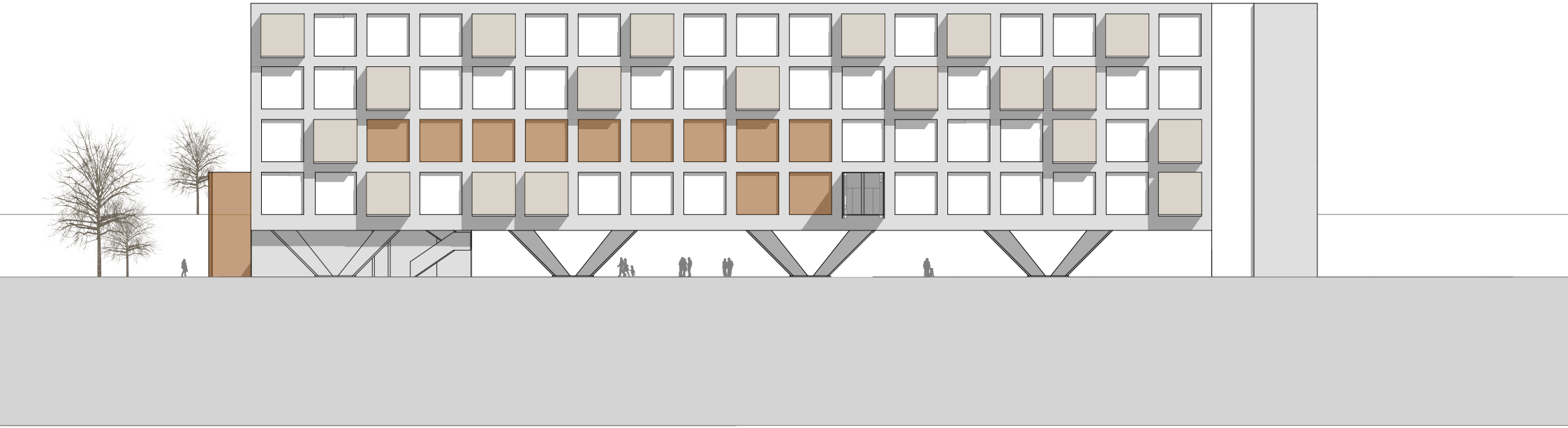
0 10 20m

NORTHWEST ELEVATION
1:500



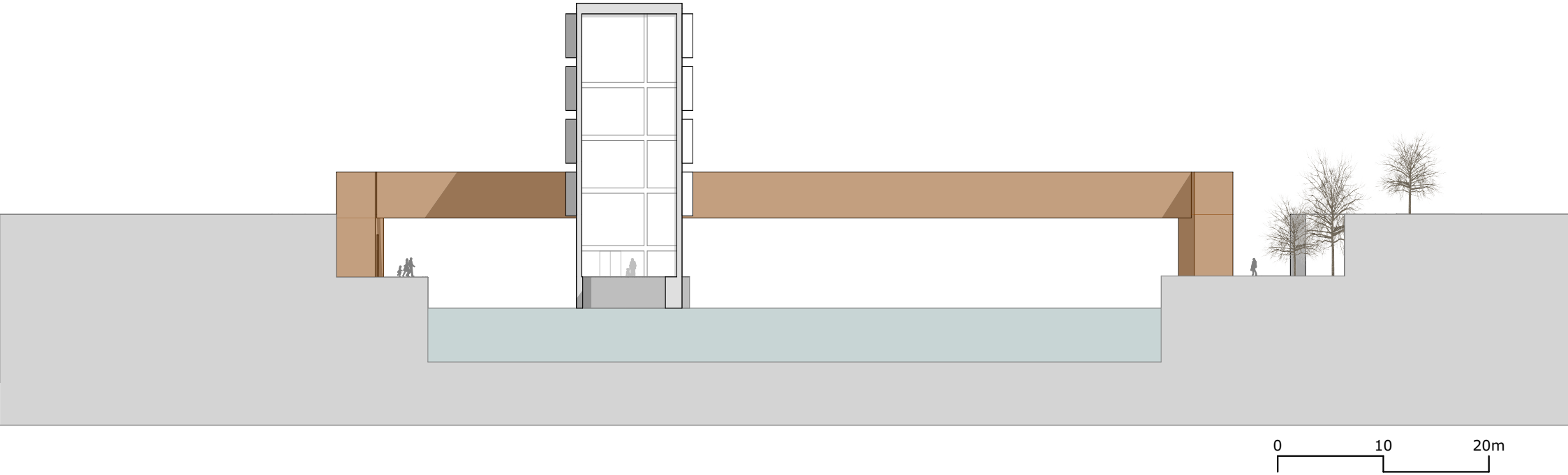
0 10 20m

SOUTHWEST ELEVATION
1:500



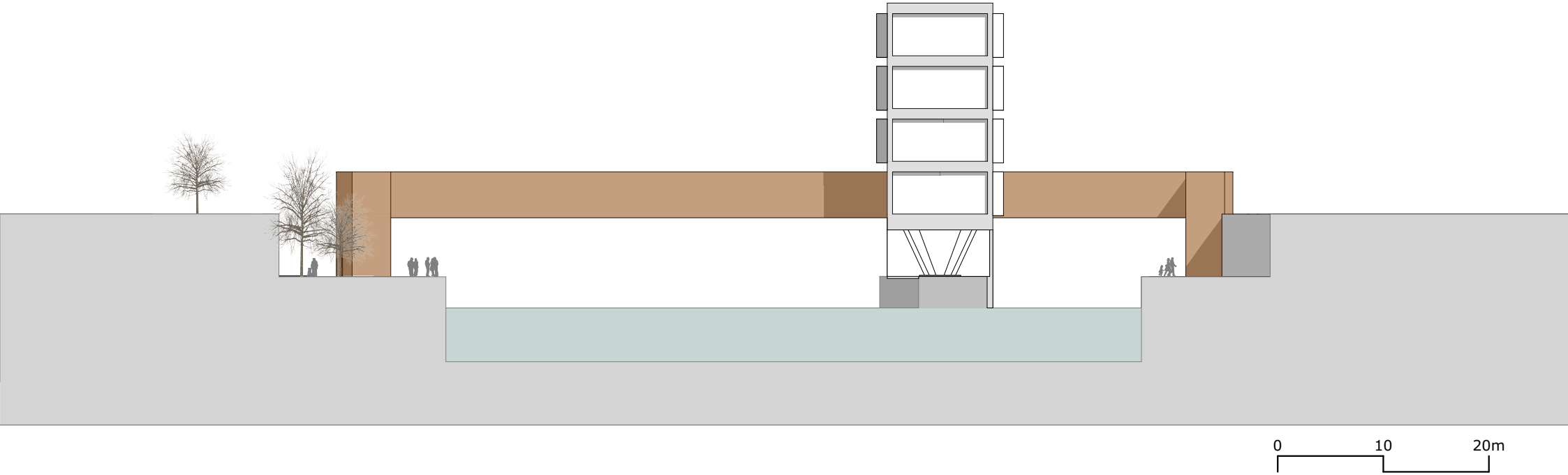
0 10 20m

SOUTHEAST ELEVATION
1:500



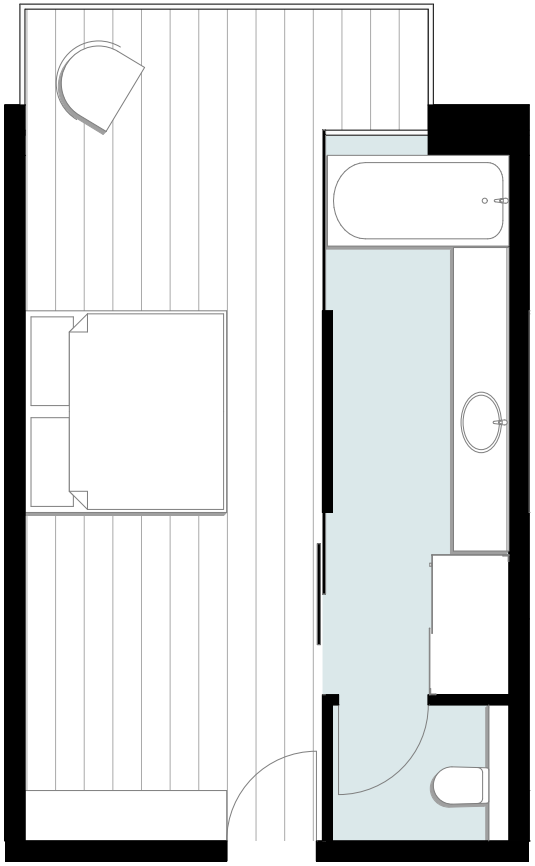
0 10 20m

NORTHWEST ELEVATION
1:500



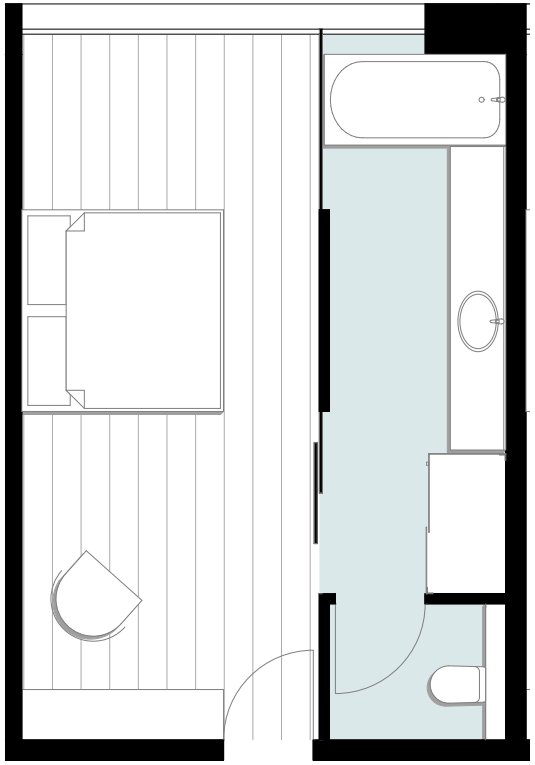
0 10 20m

ROOM TYPE A
1:50



ROOM TYPE A1

SURFACE [38 m^2]
NUMBER [8]



ROOM TYPE A2

SURFACE [33 m^2]
NUMBER [10]

ROOM TYPE B
1:50

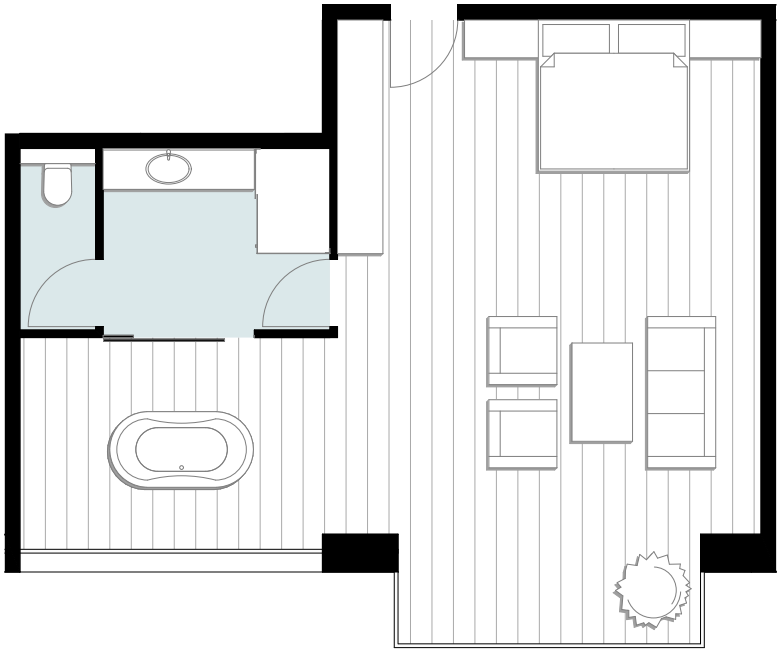
ROOM TYPE B1

SURFACE [69 m^2]
NUMBER [1]

ROOM TYPE B2

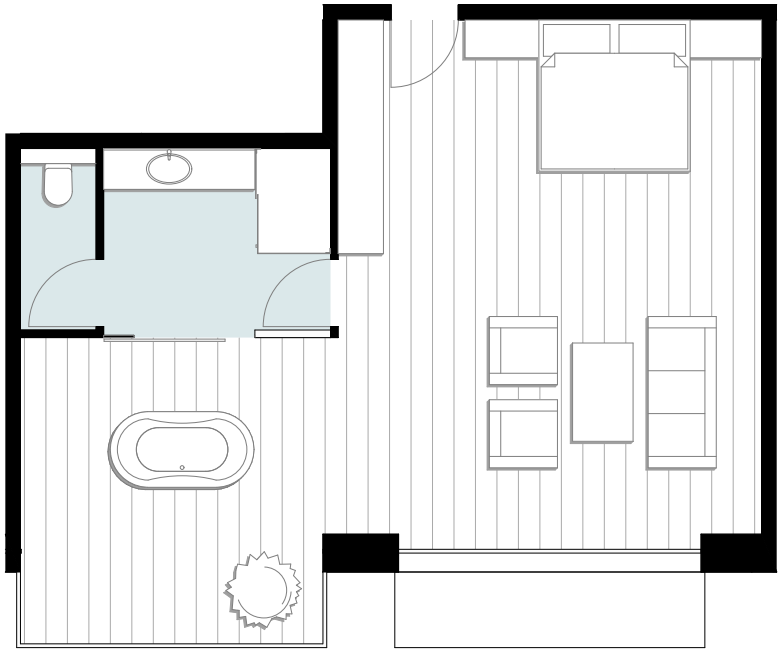
SURFACE [69 m^2]
NUMBER [1]

ROOM TYPE C
1:50



ROOM TYPE C1

SURFACE [72 m^2]
NUMBER [1]



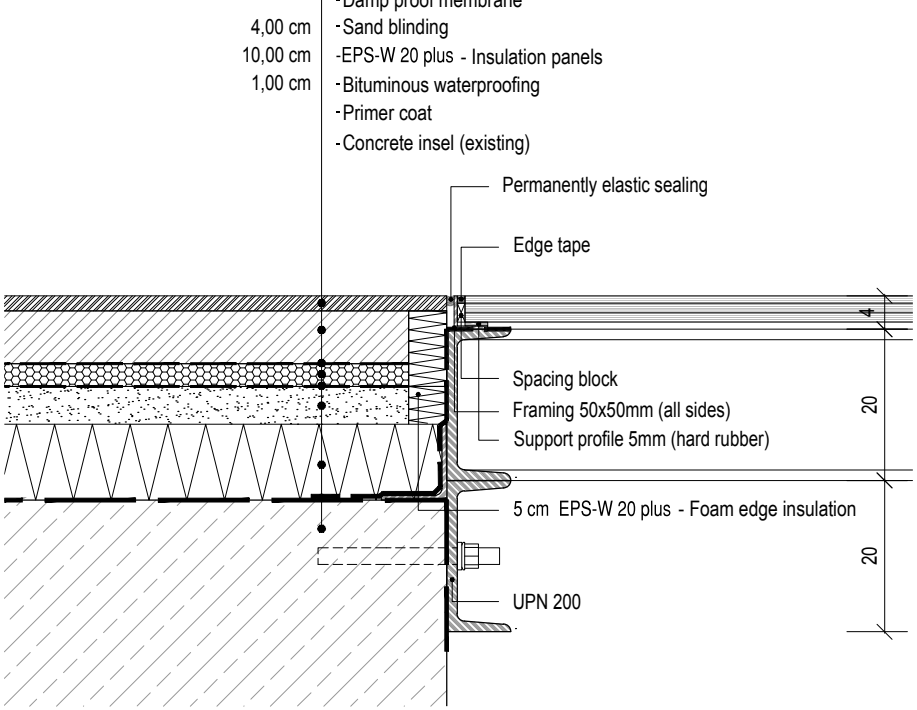
ROOM TYPE C2

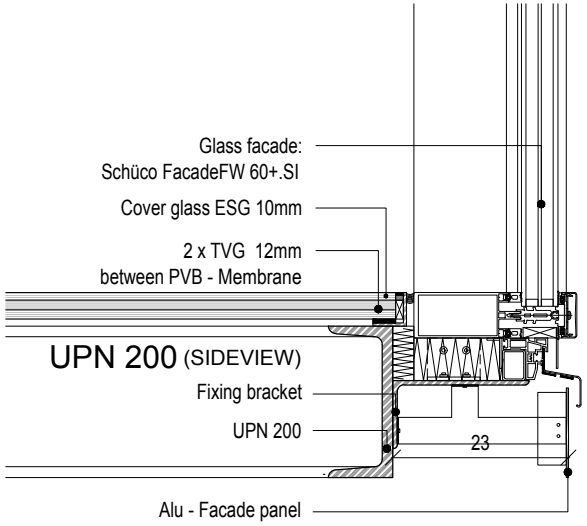
SURFACE [72 m^2]
NUMBER [1]

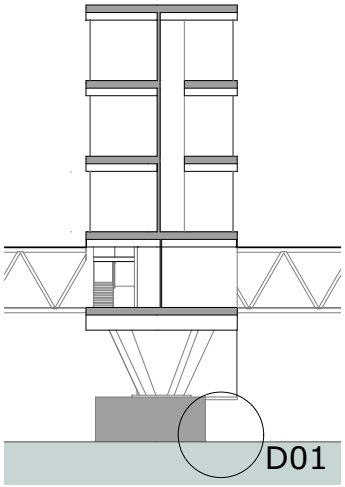
DETAIL D01
1:10

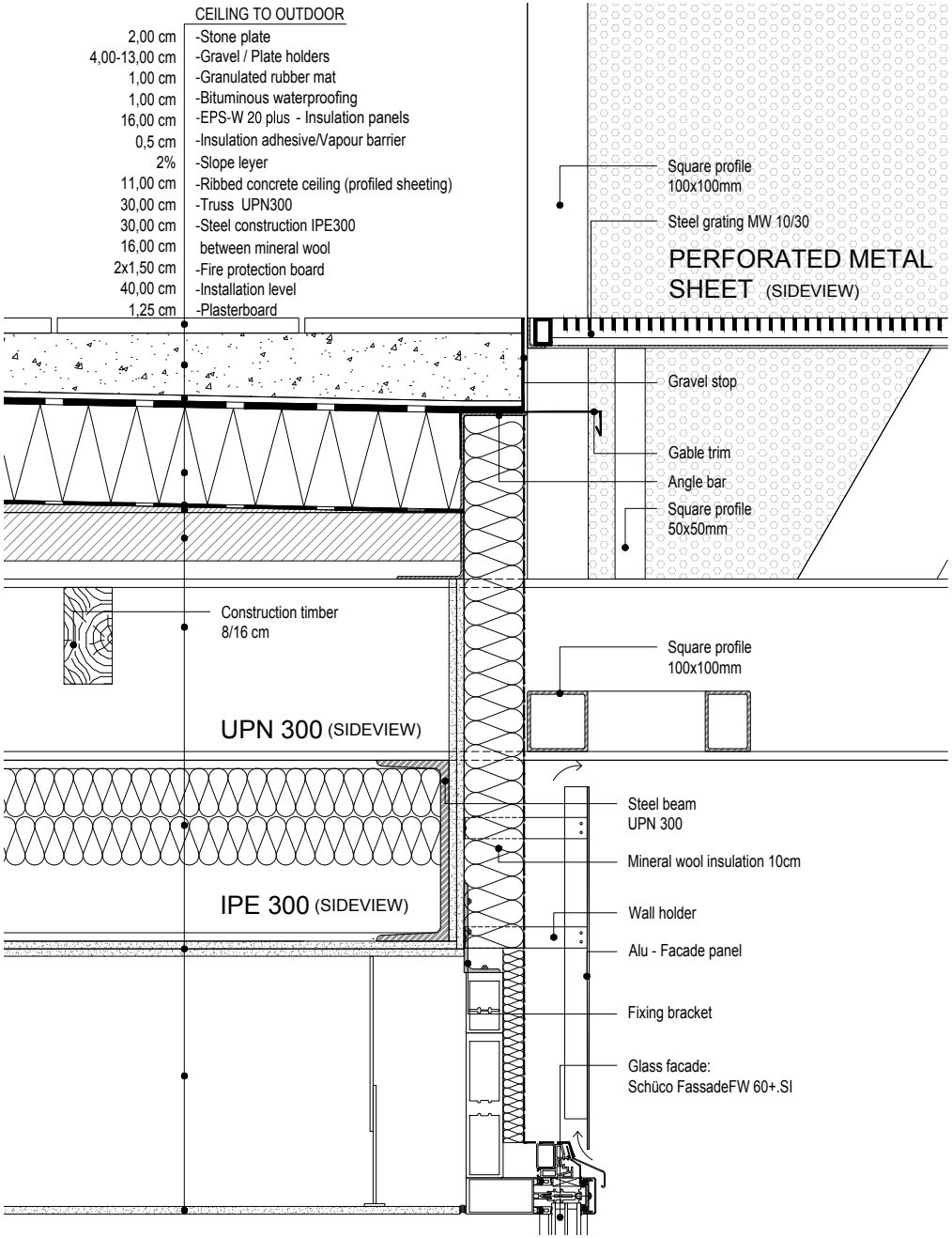
FLOOR - CONCRETE ISLAND

2,00 cm	-Porcelain tiles
7,00 cm	-Sand-cement screed
	-PVC - Membrane
3,00 cm	-Isover TDPT 30/30 - Insulation panels
	-Damp proof membrane
4,00 cm	-Sand blinding
10,00 cm	-EPS-W 20 plus - Insulation panels
1,00 cm	-Bituminous waterproofing
	-Primer coat
	-Concrete insel (existing)









DETAIL D02
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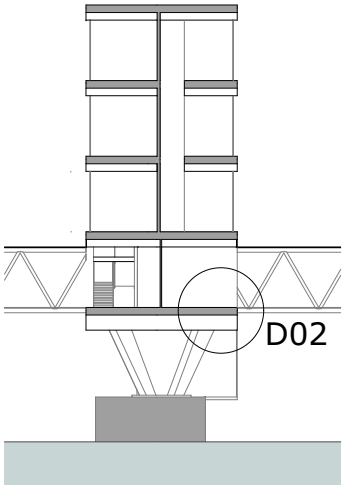

DETAIL D03
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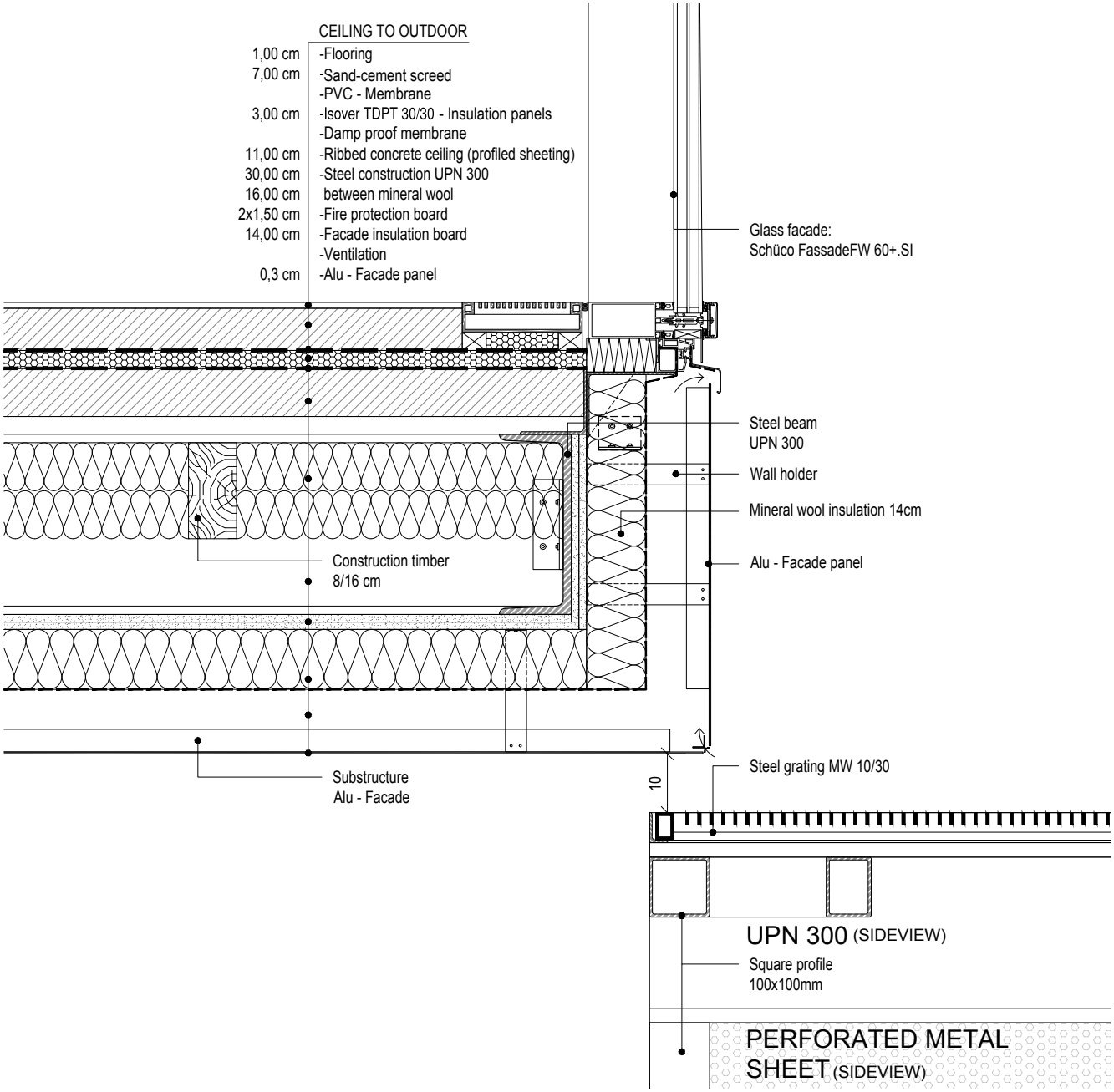

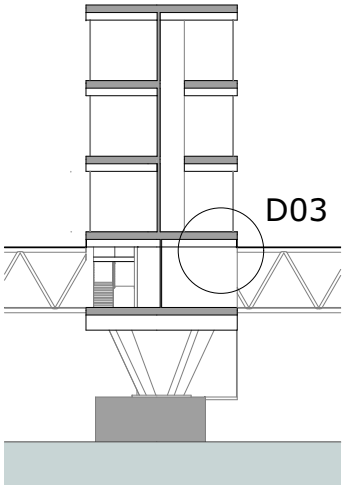

DETAIL D04
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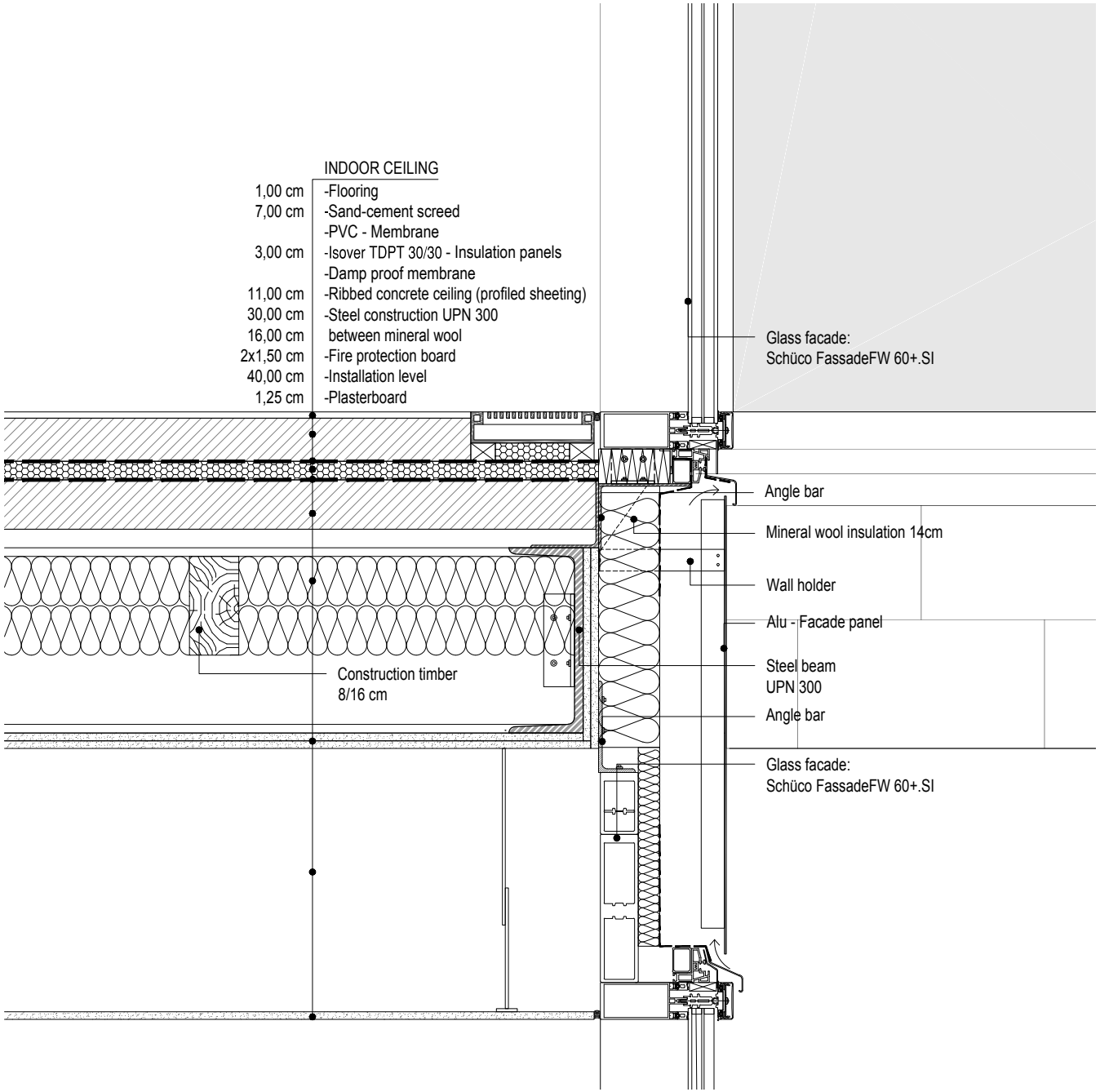
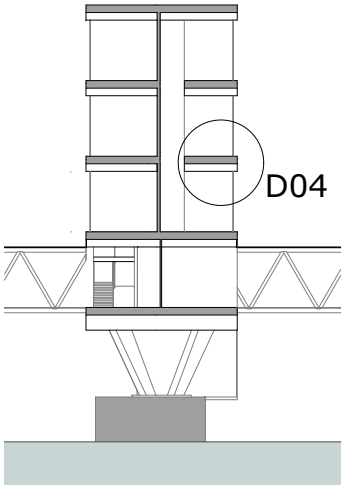




SURFACE EVALUATION

GROUND FLOOR

1. Entrance	[120 m^2]
2. Reception / Tickets sale	[185 m^2]
3. Dock / Multifunctional space	[647 m^2]
4. Entrance to Hotel / Bar	[87 m^2]
5. Terrace	[117 m^2]
	[1156 m^2]

FIRST FLOOR

1. Administration	[51 m^2]
2. Lobby	[211 m^2]
3. Reception	[173 m^2]
4. Luggage und Wardrobe	[13 m^2]
5. Bridge A	[132 m^2]
6.Technical premises	[27 m^2]
7. Toilette	[58 m^2]
8. Stock	[14 m^2]
9. Bar	[208 m^2]
10. Bridge B	[216 m^2]
	[1103 m^2]

SECOND FLOOR

1. Restaurant	[188 m^2]
2. Kitchen	[81 m^2]
3. Locker rooms	[49 m^2]
4. Storage	[53 m^2]
5. Storage with refrigerators	[11 m^2]
6. Bridge	[163 m^2]
7. Retail	[128 m^2]
8. Laundry room	[40 m^2]
9. Technical premises	[47 m^2]
	[760 m^2]

THIRD FLOOR

1. Room Type B1	[69 m^2]
2. Room Type A1	[190 m^2]
3. Room Type A2	[165 m^2]
4. Room Type C1	[72 m^2]
5. Cleaning	[22 m^2]
6. Technical premises	[21 m^2]
7. Foyer	[94 m^2]
8. Waiters / Room service	[6 m^2]
9. Corridors	[230m^2]
	[869m^2]

FOURTH FLOOR

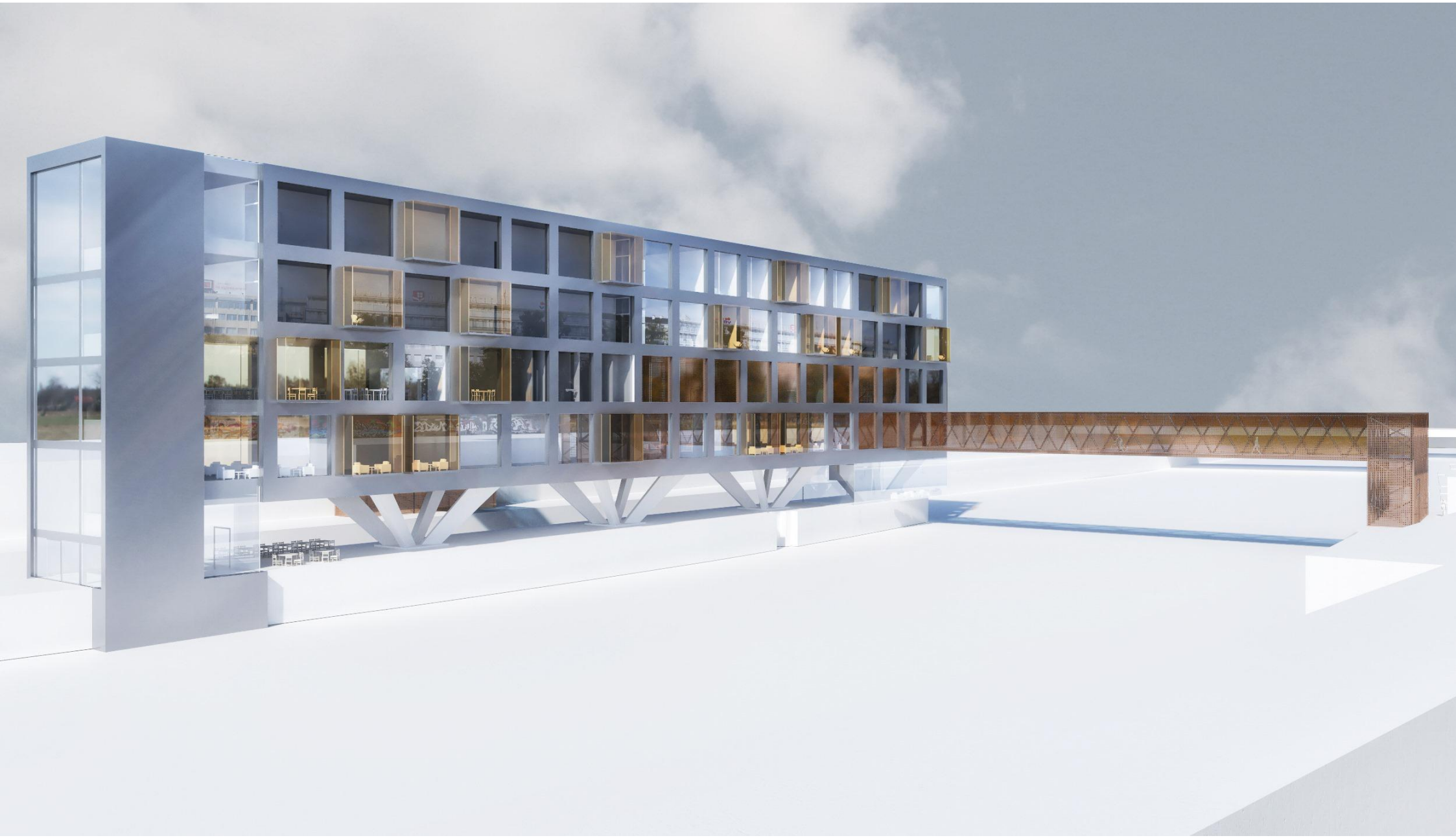
1. Room Type B2	[69 m^2]
2. Room Type A2	[231 m^2]
3. Room Type A1	[114 m^2]
4. Room Type C2	[72 m^2]
5. Cleaning	[22 m^2]
6. Technical premises	[21 m^2]
7. Foyer	[64 m^2]
8. Waiters / Room service	[6 m^2]
9. Corridors	[230m^2]
	[829m^2]

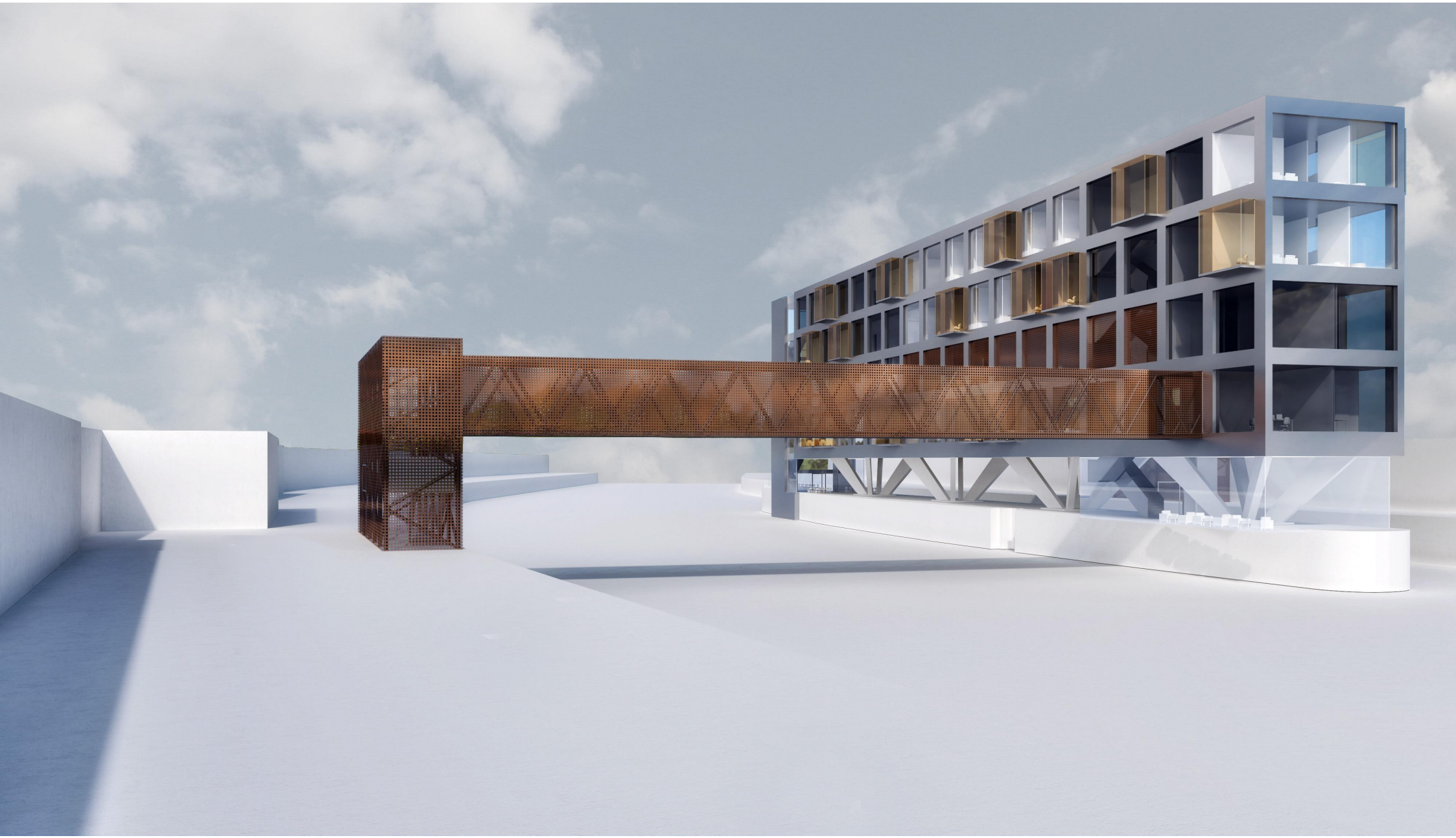
TOTAL [4717m^2]

8

RENDERINGS


RESTAURANT · WEINBAR





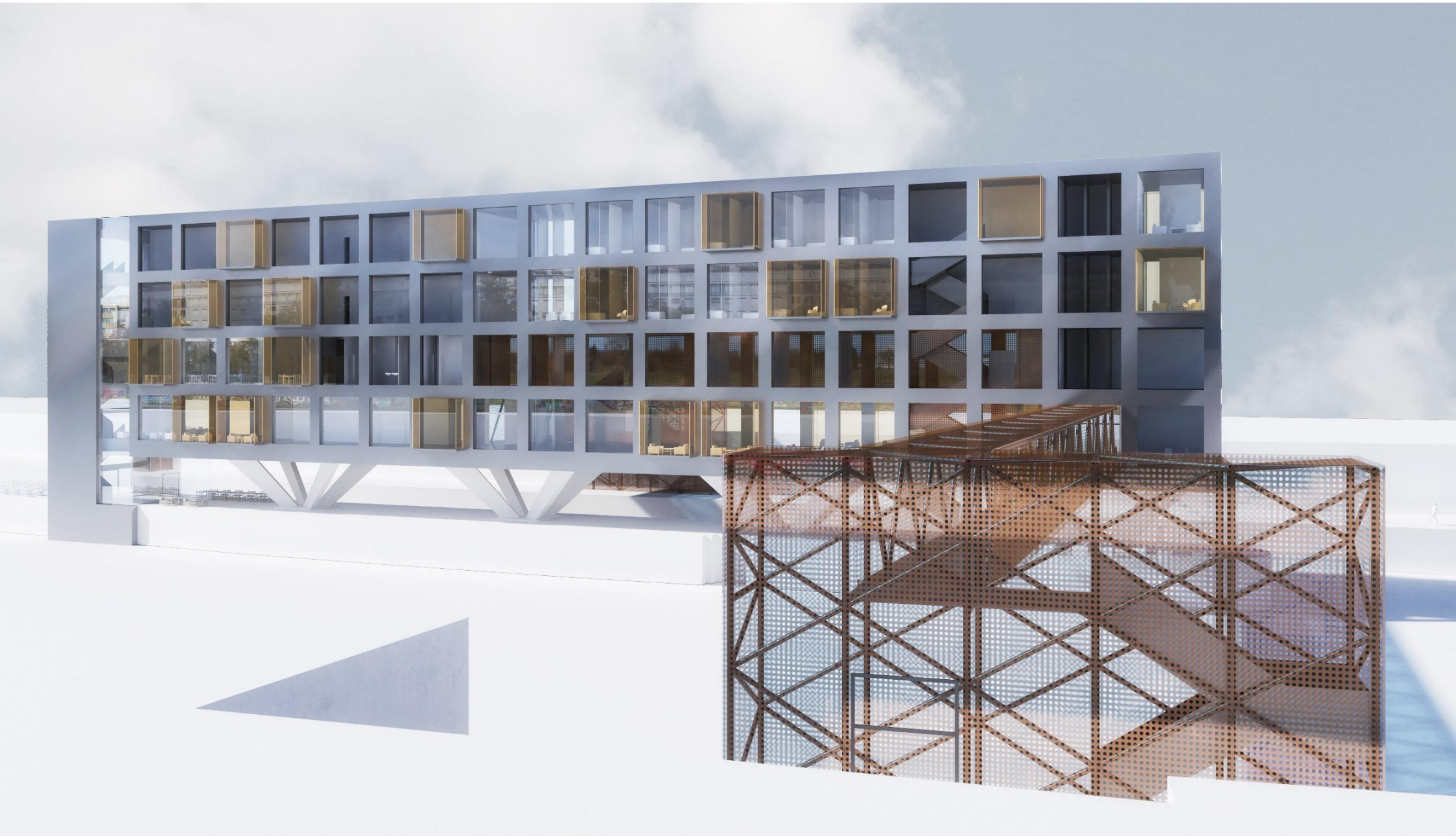


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Fig. 2.4 - Rathaus www.bundesheer.at
Fig. 3.1 - Donaukanal-Franz-Josefs-Kai de.wikipedia.org
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Fig. 3.3 - Ringturm www.wienerstaedtische.at
Fig. 4.1 - Donaukanal-Ringturm www.meinbezirk.at