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MARITIME MUSEUM

Kotor, Montenegro

Diplomarbeit

ausgeführt zum Zwecke der Erlangung des
akademischen Grades einer Diplom-Ingenieurin

unter der Leitung von
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Institut für Architektur und Entwerfen
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Wien, am

to my family

Bay of Kotor

A clinker tumbled
in the sea
tucked among the mountains.

A stone sound
touched by the sun
and the wind.

The scent of green sea,
the echo of islets in a dark mirror
returns through you.

I drink from that soil,
and i plunge deep
my hands and my face.

I am not afraid
reaching the bottom,
I take and I take
you
and you take me.

Let the stone hurt
and be dewed by my blood.

Cata Dujšin Ribar 'Bay of Kotor' - 'Parting without saying goodbye'

Boka Kotorska

Gromada survana
u jezičac mora
uvučena među planinama.

Kameni zvuče
rastočen suncem
i vjetrovima.

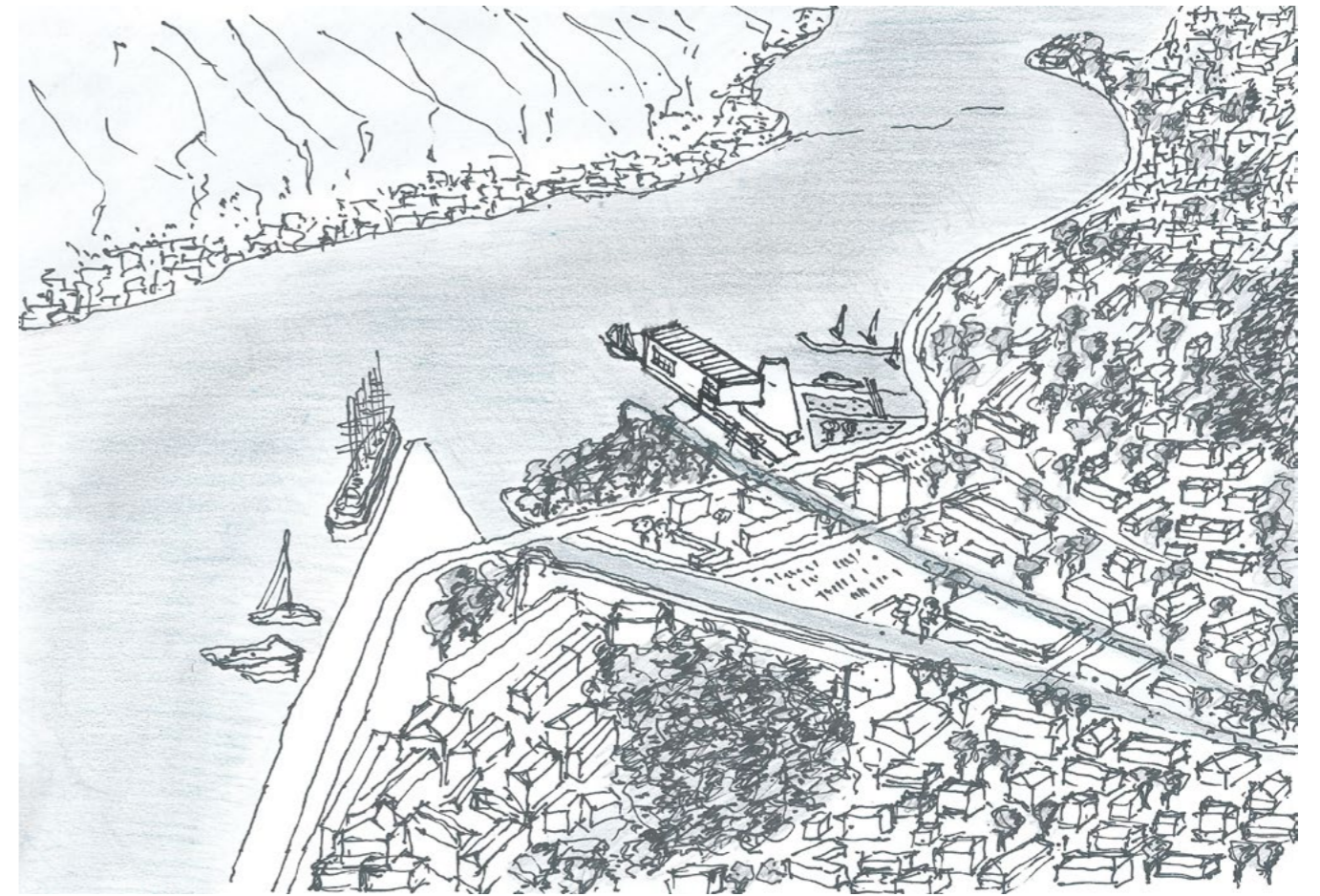
Mirisu mora zelenog,
kroz tebe se jeka vraća
otočića na ogledalu tamnom.

Iz tog ja sišem tla,
ruke i lice
zaranjam duboko.

Ne bojim se
dosegnuti dno,
uzimam i uzimam
ja tebe
a ti mene.

Neka kamen boli
i krvlju se orosi mojom.

Cata Dujšin Ribar 'Boka Kotorska' - 'Rastanci bez rastanka'



III. 01 Drawing - Bay of Kotor

abstract

This thesis includes the design of a new Maritime Museum, for the town of Kotor, 'there where the sea hits the mountains', in country called Montenegro.

Maritime in Montenegro is developed from medieval period, which was the fact that made my thesis go in direction of sea, sailing ships and their sailors. Furthermore, this fact made exactly clear the location of my Museum, which is on the sea coast. Following terrain topography of that location, whole town itself, also form of sailing ships and sails themselves, I got the form of the museum, which has been separated into two parts. Those two parts are separated also through function, structure and materialization. The first part, which is located on the water, enables entrance for sailing ships and thereby makes them movable exhibits, and at the same time becomes their temporary habitat. In the second part are exhibits "on land", which also have temporary character.

Die vorliegende Diplomarbeit beinhaltet den Entwurf einem neues Meeresmuseum, für die Stadt Kotor, 'dort, wo das Meer trifft die Berge', in das Land, namens Montenegro.

Seewesen in Montenegro ist aus Mittelalter entwickelt, das war die Tatsache, dass meine Diplomarbeit in Richtung Meer, Segelschiffe und ihre Seefahrer gehen gemacht habe. Darüber hinaus machte diese Tatsache ganz klar die Position meines Museum, das an der Küste ist. Nach Geländetopographie dieser Stelle, ganze Stadt, auch Form von Segelschiffen und Segel, ich habe die Form des Museum erhalten, das in zwei Teile getrennt wurde. Diese beiden Teile werden auch durch Funktion, Struktur und Materialisation getrennt. Das erste Teil, das auf dem Wasser kommt, ermöglicht der Eintritt für Segelschiffe, und macht sie dadurch beweglich Exponate, und gleichzeitig wird zu ihrem temporären Lebensraum. Und im zweiten Teil sind Exponate "am Land", die auch vorübergehende Charakter haben.

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montenegro

historical and geographical description

Montenegro, a country especially blessed with beautiful countryside, lies in the southernmost part of the Balkan side of the Adriatic Coast, south of Dubrovnik, tucked away between Croatia and Albania on the already Mediterranean Adriatic coast, and between Serbia and Kosovo and up to 2000 meter high mountains, still snow-covered into early summer, on the inland side.

Contrasting sharply with the strip of land along the sea we find the mountainous areas, which for centuries were the true Montenegro, where the clans of southern Slavic tribes had the final say. This landscape of mostly macchia-covered karst, deeply crevassed by wild streams, almost uninhabited save a few small towns such as Kolašin, Mojkovac or Žabljak and a few mostly small villages, opens up from time to time to views, quite unimpeded by built-up reality, that bring to mind the ideal landscapes of Caspar David Friedrich or, more dramatically, of Turner.

Name of Montenegro to the Montenegrin areas first appeared in 1296 in the charter of Serbian King Stefan Uros II Milutin from dynasty Nemanjić. It appears in the context of the area around Crmnica and monasteries of Lake Skadar. That Montenegro is one of many areas in the medieval Serbian empire that bears the identical name. Name Montenegro is probably derived from the fact that in the Middle Ages Lovcen and areas of old Montenegrin mountains were covered with thick forests. The meaning of the name lies in the Slovenian toponym for large and thick brown up or wooded areas.

Diversity of geological base, landscape, climate and soil, as well as the very position of Montenegro on the Balkan peninsula

and Adriatic sea, created conditions for formation of biological diversity with very high values, that puts Montenegro among biological “hot-spots” of European and world’s biodiversity. Number of species per area unit Index in Montenegro is 0.837, which is the highest index recorded in all European countries.

On the climate in Montenegro affect large areas of water of the Adriatic Sea and Skadar Lake, deep entering the Bay of Kotor in the mainland, the mountainous hinterland near the coast (Orjen, Lovcen and Rumija) and mountains Durmitor, Bjelasica and Prokletije.

The coast has a Mediterranean climate, with hot, dry summers and mild and rainy winters. During the winter, from the land blow dry and cold wind, while in autumn from the sea blows wind *Jugo*, bringing warm air from northern Africa, and large amounts of rainfall.

Creativity of Montenegro and folk music during the centuries were formed under various influences, maintaining all the elements of specific musical expression. Folklore and tradition of Montenegrin people played a crucial role, but also the style orientation and modern understandings of the music expression were accepted under the influence of the achievements of the European and music of South Slavs, especially. Montenegrin artistic music is with idea connected with the South Slav creativity and it is determined with the folklore, which thematically and with content is necessary for the development of the artistic musical creativity. Montenegrin folk melodies are patriotic songs, songs of pride, sorrow, and joy, and they themselves make a strong confirmation of the tumultuous history.



III. 02 Map of Europe

Montenegro is a small Mediterranean country with rich architectural and cultural heritage, diversity of landscapes and climates, and well preserved natural environment. Naturally well-suited for development of all kinds of tourism, Montenegro is focused on becoming an elite tourist destination. Montenegro is considered one of the fastest-growing tourist destinations. In 2007, over a million tourists visited Montenegro, making some 7.3 million overnight stays (23% increase, compared to 2006).

The Montenegrin Adriatic coast is 295 km (183 mi) long, with 72 km (45 mi) of beaches, and with many well-preserved ancient old towns. National Geographic Traveler (edited once in decade) features Montenegro among the “50 Places of a Lifetime”, and Montenegrin seaside Sveti Stefan was used as the cover for the magazine.

The coast region of Montenegro is considered one of the great new “discoveries” among world tourists. In January 2010, The New York Times ranked the Ulcinj South Coast region of Montenegro, including Velika Plaza, Ada Bojana, and the Hotel Mediteran of Ulcinj, as among the “Top 31 Places to Go in 2010” as part of a worldwide ranking of tourism destinations.

The northern region is the centre of Montenegrin mountain tourism. It has ski resorts, and is popular for its untouched nature. The entire area of Durmitor mountain and the Tara river canyon is protected as a national park, and listed with UNESCO world heritage sites.



III. 03 Kotor bay

1.2

bay of kotor

historical and geographical description

Roman era

The name, probably from the ital. bocca (mouth, opening), stands in the beginning. Later the entire bay with surrounding land was replaced after the collapse of Risan with old name. The natives of Boka were the Illyrians, probably part of the tribe Pirusta. Around 250 BC. Cr. was founded by the Illyrian tribe Ardians under King Agron independent state along the southern Adriatic based in Shkodra. Clashes with Greek colonies on the Adriatic gave rise to interfere Romans, who were not looking with good eye establishment of the Illyrian state. To liberate the Greek settlers on Vis from the Illyrian pirates and to avenge the death of the Roman deputies, the Romans stepped into war with Queen Teuta, Argon's widow, and force her to come up with a few of her followers withdrew to the fortified Risan. Peace, concluded 228, did not last long, as 168, in the third Illyrian War, the Romans conquered the Illyrian state and brought the last king Gentius in triumph to Rome.

The Middle Ages

During the invasions of Goths, Avars and Slavs, Croats and Serbs, in the early 7th century cities Risan and Acruvium were destroyed, of which the second probably lay at the foot of Grbalj field. The only stayed Decadaron, today Kotor, in which were hid the remains of Romans, survived the catastrophe. Kotor, autonomous municipality, it became the capital of Boka, which mainly consisted of the external area (Comitatus). Kotor in the northwest formed Slavic area Travunia, in southeastern Duklja. According to the narrative Doclean priest and several Byzantine

sources (Porfirogenet Scylitzes, Cedrenus, Choniates, Zonaras) those area belonged to the period from the 8th to the 10th century to Red Croatia, from which it concludes that Croats are among immigrant Slavic tribes were the dominant ethnic group.

By the 12th century Kotor belongs, and probably the entire Boka in the narrow sense, to the eastern empire as "thema Dalmatia." Neighboring rulers of Doclea and Travunije for some time had an impact on Brad, or part of the Bay. It was at a time when *Tinti* were ruling incompetent emperors and the surrounding Slavic chiefs provided an opportunity for independence. In the middle of the 9th century the Saracens plundered and burned Kotr at the entrance to Kotor Bay.

After the death of Emperor Manuel (1143 - 1180) Kotor and the coast were taken by Stefan Nemanja. Bay of Kotor thus became an integral part of the Serbian state and remains in this part of the death of the Nemanja dynasty 1371. In the Serbian state, Kotor had important position as a link with the West. Kotor have gained great influence at the court as the head of finance, customs and tenants MPs on the outer courts. Nemanjići did not interfere with the autonomy of the city, but were satisfied with placing the city of Prince. Uros II. gave the fertile parish Zeta, Stefan Dusan parish Bijela, Musevice and Ledenice.

Kotor is mastered in 1371 by the Hungarian-Croatian king Louis the Great. In the war between the Venetians and Ludovik (1378 - 1381), Kotor was destroyed by a rush of Kotor Venetian admiral Vittorio Pisani. After the death of Ludovik (1382) the queen and mother Jelisava donated the city in 1385 to Bosnian King Tvrtko I.



III. 04 Map of the bay of Kotor with Dubrovnik (Ragusa), Herceg Novi and the city of Kotor.

Short mastery of King Tvrtko is important, for the establishment of Herceg Novi, which was the export port for the Bosnian trade. Otherwise he would be like a military point in the enemy's hand threatened the Bay. Pressed by Balšića brothers, who ruled Zeta, and not obtaining any assistance from other Bosnian kings, who after the death of King Tvrtko mastered Bosnia, Kotor asked in 1395. for Venetian patronage. Rejected by the Venetians, people of Kotor admitted in 1403 patronage of Ladislav of Naples, who during his stay in Zadar confirmed them old privileges. Still people from Kotor don't give up the desire for Venetian protection. When in 1409 Ladislav of Naples sold Venice his rights on Dalmatia, under the Venetians, to Kotor belonged part of the Bay in 1420. Northwestern part remains in power Sandalja, and after his death in the hands of his nephew Duke Stephen Vukčića, which changed the Turks. They took in 1497 and the parish Zeta.

New era

In 1539 Herceg Novi won the combined Navy, Spain, the Papal States and Venice, but by the following year the Turks under Admiral Barbarossa Hajredin took it from Spanish, who have heroically defended under the command of Don Ferrante Gonzaga. The Candian war pushed the Venetians in 1687, the Turks from Herceg Novi and the northwestern part of the Bay, and in 1725 merged under their own power finally and Zeta.

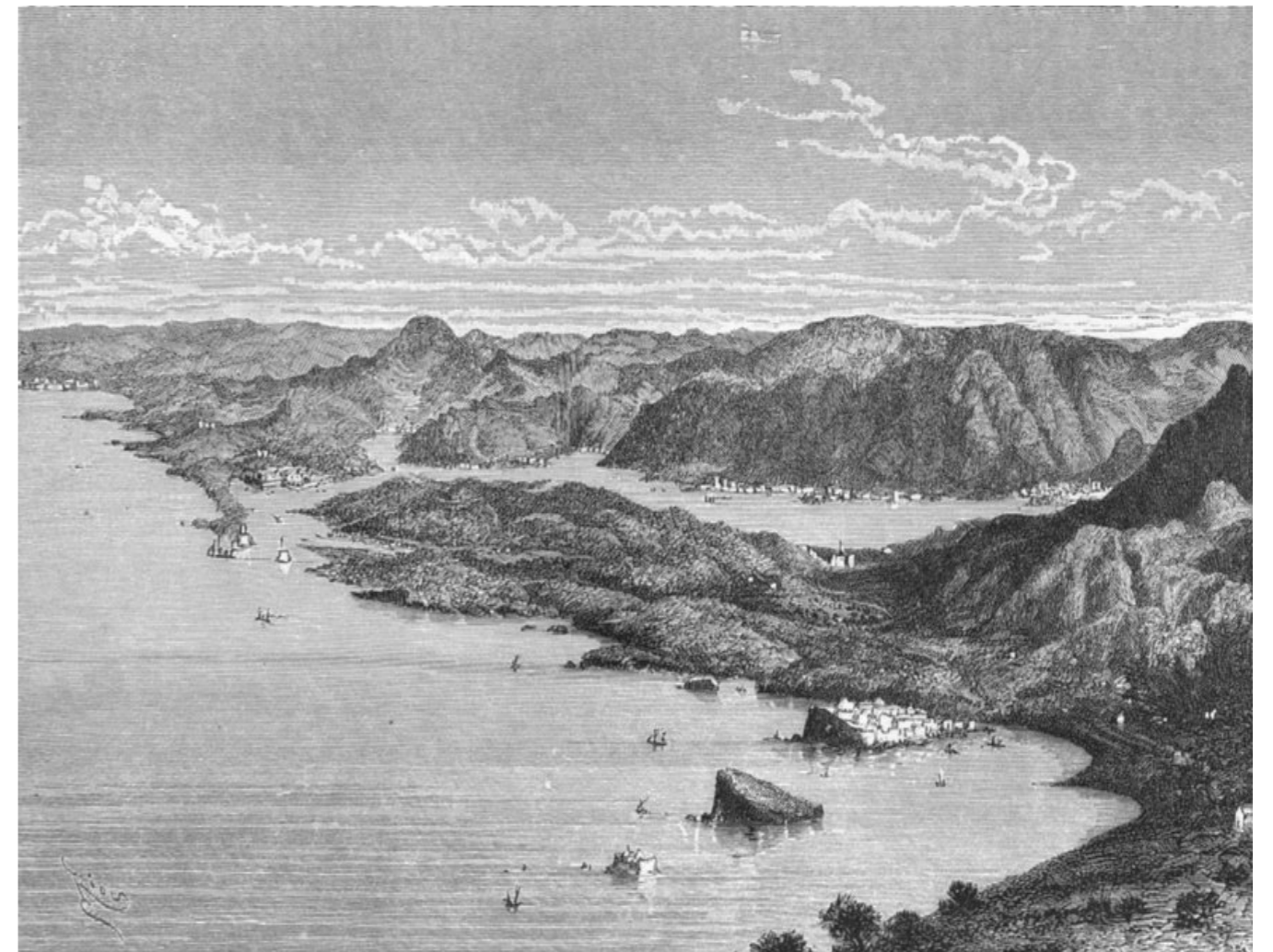
Peace in Campoformio in 1797 in Bay of Boka devolved to Austria. Matthias Baron Rukavina came in as the leader of the Austrian armies in Kotor, on 24 August same year. Because of the peace in Pressburg in 1805, Austria had to cede the Bay to the French.

Because of the peace in Pressburg in 1805, Austria had to cede the Bay to the French. But on March 4, 1806, Russians possessed the Bay of Kotor under Admiral Sinjavina and they stayed in it until the 12th of August 1807, when it was taken by French. After the defeat of Napoleon at Leipzig in 1813, Bokelji and Montenegrins stand up against the French.

In September 1813, Petar I Petrović Njegoš and his Montenegrins were destroyed by French troops in the Bay of Kotor, with the exception of fortress in Kotor. He freed Perast, Risan, Herceg Novi, over which could be seen Montenegrin Alaj-banner, and he arrived with the combined forces of Montenegro and Boka under Dubrovnik where the French were established.

French General Gauthier defended Kotor till 4 January 1814. Montenegrins and people from Boka could not take the city, because they did not had guns. On it floated in front of Kotor English warship and began beating him with cannons. Gauthier lay down arms. In June the same year, Austria re-occupied the Bay of Kotor.

Napoleon's arrival in the Bay left a mark that is the Bay took the Venetian Republic, and with it "all these political, economic and cultural meanings given to it under the Venetian Republic and provided meaning and prosperity." Napoleon brought a little something: something kilometers of roads, several fortifications, a theater with Masonic Lodge, the spirit of revolution, anti-clericalism, a new civil code, a new political perspective. With the fall of Napoleon, the Bay is a little of that left, and destroyed were many. After that, the Bay of Boka has become the only one boundary region. It was worth the new Habsburg rulers only as a secondary deposit warships, which was insufficient to recover and secure.



III. 05 Bay of Boka, antique print, 1876

It was worth the new Habsburg rulers only as a secondary deposit warships, which was insufficient to recover and secure. Unification of Montenegro and Boka 'was declared on 29 October 1813 in Dobrota, near Kotor. But the Congress of Vienna in 1814 - 1815, decided that Bay of Kotor belongs to Austrians. Russia was not in conformity with the requirements that Bay of Kotor remain part of the Montenegrin state. Even Russia has threatened Montenegrins in the case of organized armed defense of the Bay of Kotor and has been abolished and financial aid to Montenegro. In the late 19th and early 20th century was marked by the abrupt disappearance, a drop of valuable works of literature and other art objects and gradually dying cultural and spiritual life of Kotor.

By the end of World War I, Austria ruled the Bay. From 1918 became part of the Kingdom of Serbs, Croats and Slovenes (from 1929 Kingdom of Yugoslavia). Between 1918 and 1922, was a special region, and from 1929 to 1941 Zeta Banat. The Italians occupied the Bay of Kotor in April 1941 and was under their authority till September 1943.

Since 1944, is a part of the Republic of Montenegro within Yugoslavia. In 1979, a strong earthquake destroyed or dangerously damaged numerous cultural monuments. That year, Bay of Kotor was included in the UNESCO list of World Heritage Sites. After the breakup of Yugoslavia, the Bay of Kotor in Montenegro was part of the Federal Republic of Yugoslavia (1992 and 2003a.), respectively Serbia and Montenegro (2003 to 2006). Montenegro declared independence in June 2006. Since 1944, is a part of the Republic of Montenegro within Yugoslavia.

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The structure and geological history

Bay of Kotor has two longitudinal bays: Toplana-Tivat and Kotor-Risan. These bays are each connected to the open sea with narrow transverse sale. From the open sea enters to the Toplana-Tivat bay through penetration of the limestone ridge *Obost-nik-Kobila*. The width in the narrowest part of the Strait is 1.25 km, a minimum depth of 28 m. Through this narrow strait, 2,325 m long and 350 m wide, is entered from Toplana-Tivat in internal, Risan-Kotor bay. Strait in the Middle Ages closed with chain, by which is named after. Both longitudinal bay spread in the Gaza flysch (marl, sandstone and clay) and transverse penetrations are cut into the limestone. Limestone ridge Vrmac-Devesile lying close to the flysch grbljansko-Sutorina zone, but the boundary between the inner flysch kotorsko-Morinje belt and neighboring Montenegro limestone plateau, at least in part Kotor Orahovac fault, along which any vertical movement of the land. Traces of terrace on the sides of the Verige, and relationship to tectonic structure shows that the incursions could become only the river erosion. This erosion work performed in the youngest geological past, during Diluvial, when the sea level was much lower (over 100 m).



III. 06 Perast, one of the oldest cities in the Kotor bay

The bay is composed of several smaller broad bays, united by narrower channels, forming one of the finest natural harbors in Europe.

During a number of foreign Orjen's low descended glacial tongues, also Lovcen was covered with a thick blanket of snow, flowed the bottom of today's Bay of Kotor river, where the main arm were flowing above Risan valley Ledenice-Vrsno. The river flowed and the water, which was ice and snow, melted. In resistant limestone valleys of Boka, river was the gorge, and the softer flysch sediments had extensions, from which it is received and less fluent. In depressions, which are becoming erosion deposits, lagged resistant limestone hills - today Boka islands. Finally, the river flow is interrupted by stone process. Through a limestone reef, where the water was penetrating deep in sediments, created a closed depression, where we can see the bathymetric maps of Boka Kotorska. Rising sea levels, which occurred after the ice age, created the complex flooded valley Boka River and formed today's bay. Beauties of this young bay are in sharp opposites, bordering the wilderness. Bare limestone cliffs rise abruptly and sharply, particularly over the inner bay. Orjen and Lovcen, as guardians of rare beauty, stand out over the entire area. Slightly sloping and wooded foothills of the flysch is the exact opposite of wild and deserted limestone rocks. It is best to visit the Bay of Kotor from the sea. Walk through the bay is full of variety and surprises. Only close range again we see that the bay does not stop and there, at the Straits expansion into the new bay, is where the bare limestone ridge is hidden. Landscapes are constantly and rapidly changing, and each has its own peculiarities, beauties and charms. The richness and variety of images is one of the main features of the Bay of Kotor.

Bay of Kotor has a Mediterranean climate, the sweltering summer heat, rainy winter and mild weather. Neighborhood of this climate difference often comes to the fore: storm of Risan and strong Levant sensitively lowering the temperature in the coastal area and disturbing the sea in the more open parts of the bay. Sheltered places, eg. Herceg-Novi, feel less cold winds and has a very mild climate. Wet autumn brings clouds from the sea and forces them to the slopes of Orjen and Lovcen distil the largest European volume of precipitation (*Crkvice* 4640 mm). However, even with large amounts of rainfall, surrounding reefs arid place, the water quickly disappears through cracks in the limestone. In flysch foot springs, a river occurs (*Škurda* near Kotor).

Unfortunately, marine qualities of the Bay of Kotor did not come until more permanent and fuller expression. Permanent and important role in maritime trade can have only one port, which has good connections with its hinterland, and it primarily harbors on the high seas. This explains why the Bay of Kotor had no commercial meaning of less suitable dock and why its prominent sailors migrated to more favorable trade port. Much of the development and importance of modern maritime traffic looks for certain military strongholds to maintain the freedom and power at sea. In military terms the Bay of Kotor has the best position in the Adriatic, and very important in the Mediterranean Sea. From the Bay of Kotor is very easy to control the entry and conduct attacks throughout the southern Adriatic, and can be easily compromised in the middle of the Mediterranean Sea. On the other hand high and steep mountains make it easier to defend and make it almost any attack impossible, whether it was from the sea either from land or from the air.



III. 07 Church 'Our Lady of health', bay of Kotor

1.2
bay of kotor



III. 08 Bay of Kotor

kotor

historical and geographical description

Kotor

At the Congress of Vienna in 1814, Kotor became part of the Austro-Hungarian Empire and remained under Austrian rule until 1918, when this area belongs to Yugoslavia, and shared the fate of its people until today.

In Kotor are preserved traces of past epochs. Because of the unique mixture of different cultures Kotor in 1979 entered the list of world cultural heritage under UNESCO protection. The most developed industry in this area was trade and maritime affairs. Seafarers used to bring different products from overseas and traded them for their supplies. In that way Kotor became one of the most important trading centers on the Adriatic.

Historical resources, as of the earliest period, which are connected to Kotor, mention the antique period as time when the first lodgment in Kotor was founded. According to some other data, Kotor is 2 millenniums old, and its name stems from the word DEKATERA (from the old Greece word KATAREO – meaning *hot*).

Kotor lies at the foothill of the huge Lovcen, in the Bay of Kotor, which is in its beauty and appearance unique in the Mediterranean. The old town of Kotor is one of the best preserved medieval towns in this part of the Mediterranean. Persisted in preserving its original medieval appearance, was typical for towns built between the 12th and 14th centuries. Asymmetric organization of narrow streets and squares of Kotor, along with numerous valuable monuments of medieval architecture, contributed Kotor to become a part of the UNESCO World Natural and Cultural

Heritage. Cultural heritage of Kotor is enriched by the unique architectural styles and the ambient atmosphere. The established system of Kotor, which protects it from the sea, in fact are walls 4.5 km long, 20 meters high and 15 meters wide, preserved as one of the world's historical entirety. The construction of these protective walls of Kotor started in the Illyrian period, and they're been upgraded and renovated in the 18th century. The oldest entrance gate of Kotor, from the three existing ones is South Gate, partly built in the 9th century. North gate and the main gate of Kotor were built in the Renaissance style in the first half of the 16th century.

In the sixth century of our era, Kotor already has his episcopal basilica, while in the Middle Ages became a highly developed coastal city. Then, as well as now is the Balkan door for international connections, spiritual and material enrichment and elevation. Powerful medieval economic boom effects on the remarkable development of education, culture, art, civil engineering. At the beginning of the XIV century the Kotor art school was created, and also Kotor architectural - masonry school reaches remarkable range. Concerning civil engineering, 1195 was built picturesque church of St. Luka, in 1221 the church of St. Mary of the River, in 1263, the church of St. Pavle and later on begins building of 4.5 km long city walls, built for several centuries.

The main resources are remarkable geostrategic position, good transport links (highway, airport, port), a unique cultural and historical heritage, dynamic landscape, the sea and the environment, diversity of climate in a small area, an oasis of high-quality land for processing and an old settlement of high ambient values.



III. 09 Map of Montenegro

Culture

The culturo-historical region of Kotor has exerted considerable influence, over a span of time and within a cultural area of the world, on developments in architecture and human settlement. Kotor and its neighbours were main bridgeheads of Venice on the southern Adriatic coast. Its art, goldsmithing and architecture schools had a profound and durable influence on the arts of the coast. It is among the most characteristic examples of a type of structure representing important cultural, social and artistic values. It is considered to possess outstanding universal value by the quality of its architecture, the successful integration of its cities to the Gulf of Kotor and by its unique testimony to the exceptionally important role that it played in the diffusion of Mediterranean culture in the Balkan lands.

Founded by the Romans on the Adriatic coast in Montenegro, Kotor developed in the Middle Ages into an important commercial and artistic centre with its own famous schools of masonry and iconography. Throughout the centuries, many empires battled for control of the city. In the 10th century, it was an autonomous city of the Byzantine Empire. From 1186 to 1371, it was a free city of medieval Serbia.

In the end of XII century, special school of building is formed in Kotor, which originate on the basis of Romanic Architecture, which was brought by Benediktis from Italy, during Bysantine influence. That school built many churches in this city, of which 5 of them is still preserved. This school of architecture is present in region of west Balkan. The most significant building (edi-

fice), built by *Majstori* of Kotor is monastery "Visoki Decani" It was under Venetian and Hungarian control for brief periods, an independent republic from 1395 to 1420, and then returned to Venetian control once again. French occupation from 1807 to 1914 was followed by Austrian rule until 1918, when Kotor finally became part of Yugoslavia. Throughout its turbulent history, a variety of buildings have been erected. The largest and most impressive of these is the St Tryphon Cathedral. The original church was constructed in the 8th century, according to the annals of the Byzantine Emperor. A new church, built in 1166, was subsequently damaged during the 1667 earthquake and then restored.

The limits of the World Heritage site coincide approximately with the crests of the natural sinkhole formation. At both ends, the site is bordered by the national parks of Orjen and Lovcen, making a vast protected natural area. The Gulf of Tivat (formerly part of the approaches to Kotor) is omitted because of the authenticity of its settlements, which has been downgraded by recent industrialization (shipyards, harbour equipment).

Most of Kotor's palaces and houses, many Romanesque churches, all of Dobrota's palaces, and Perast's main buildings have all suffered from earthquakes, and some have been partly destroyed. The city was evacuated by all its inhabitants after the most recent, on 15 April 1979. An intensive restoration and reconstruction programme has now been completed and the city is flourishing again.



III. 10 Kotor, old town

maritime

historical description

History

Already, in the period of the Romans, Kotor had the most important marine industry in the Bay. In the Middle Ages, Kotor continued the old traditions, enhanced commercial efforts for Duklja, Raska, Bosnian and Herzegovinian rulers and princes, to come over to Kotor, Perast, Herceg Novi and other places in the Bay to form the best possible relations with the countries of the Adriatic, Ionian, Aegean and the Mediterranean Sea. Quick Boka caravels had urged trade with Constantinople, Venice and Alexandria, a mid-16th century were settlements in the North Sea and in the Indian Ocean. Due to the risk of pirates, merchant ships were armed. Kotor was also supporting ship warfare, so when it came under the rule of the Venetians (1420), the Kotor galley (galea Catharina) was included in the Venetian navy.

At the end of the 15th century the Bay of Boka comes in direct contact with the Turks, who ruled Herceg-Novi color ranges along the coast. Risan and Morinj were Turkish. Likewise, Glogovac of Perast, Orahovac and Zeta, while Luštica, Durići, Strp, Lipci, Perast, Dobrota, Vrmac and Škaljari were ruled by the Venetians. Kotor was also under Venetian rule, but managed autonomously by its municipal statute.

From the 16th century Kotor began to lose meaning commercial center. Then they picked up the place Perast, Dobrota and Prčanj. Perast had 1512 merchant navy of 60 ships. Prčanj sailing boats were famous because of their speed.

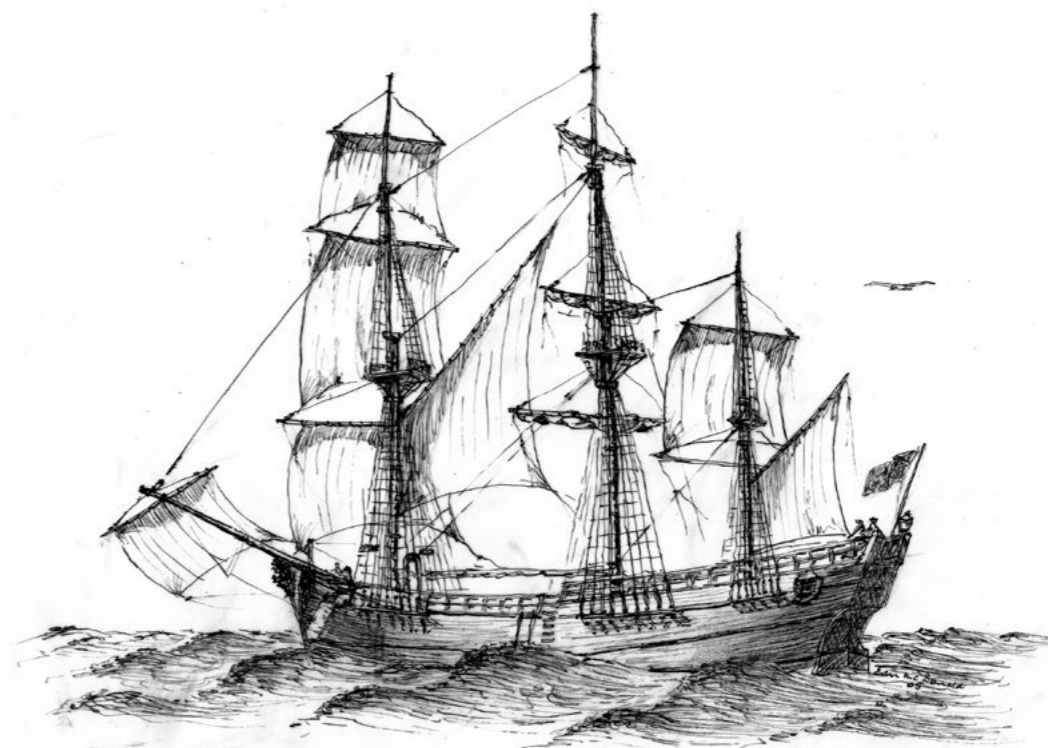
When combined Venetian, Maltese, Toskan and Papa navies in 1687 freed Herceg-Novi from the Turks had distinguished them-

selves in the battles of Dobrota and Prčanjani under Nikola Sbutega and Peter Djurovic and people of Perast. Boka sailors celebrated in 1687 in the conquest of Risan.

When the entire Boka was united under Venetian rule, Boka trades gained strength again. At the end of the 18th century the vessel was about 300 Boka's ships in almost all the seas, bringing the annual income of about 130,000 Venetian ducats.

Maritime expert Anthony Grubas from Perast, was the first who described the Adriatic Sea and compiled the first nautical charts for navigation in the Adriatic Sea, and large Venetian ships were built by Augustinović from Perast. Peter (Smecchia) from Perast opened its nave commercial traffic with Denmark, Prussia and Russia. When Austria, after the fall of the Venetian Republic came to the Bay, widely used Boka craft and its brave sailors, the names of excellent Croatian sailors passed the virtues of our maritime affairs all over the world. All of these are excellent sailors learned maritime vocation in their domestic private nautical school in Dobrota, Herceg Novi, Kotor, Perast and Prčanj until the mid 19th c., as of the Venetians, who during their lordship, did not establish any such school in Dalmatia.

There is a significant event in the history of Boka shipping around the world, which Captain Ivan from Perast made (from 1852 – 1859), with his Brik of barely 300 tons with the greatest difficulty and scarcity of food and water. He was awarded by the Austrian emperor, white honor flag "Merito navali", which is now kept in the parish church in Prčanj. This flag was neither before nor later divided any seafarer for naval and commercial credit.



III. 11 'Endeavour'

Culture

Maritime hit the fundamental characteristics of the culture and the Bay of Kotor, because its inhabitants had developed their skills in this direction. Because they did not have, from their hard ground, enough fruits for export, they were mainly engaged in intermediary trading. In the Middle Ages, leather was transmitted, wool, grain, and cloth, fabrics and decorative items were imported (for the home and personal accessories). Later on, in particular through Albania and the Ionian Islands, leather, grain, wine, oil, salt, wood, *rujevine* (wood with Perast hills, which contained a yellow and green), salted meat and salted fish, caviar, grapes, cotton, tobacco, sugar, ashes from Sicily, tallow candles (they worked mostly in Prčanj), wool, rice, millet, mill grindstones, lentils and toast (served especially for the military in wartime) were mainly transported to Venice and the rest of Italy (particularly in trade fairs in Foggia in Puglia). People from Prčanj were particularly engaged in the transfer of government records.

The social conditions were in blooms trade well decorated. Boka sailors used to associate the brotherhood of sailors under the patronage of St. Nicholas. Such exemplary fraternity was organized in Kotor and in the Kotor metropolitan area already in the early Middle Ages. The Brotherhood has gained enormous credit for religion, culture and status reciprocity. Social welfare was so arranged for the members of this fraternity and their families, to be somewhat more carefully organized, that there was no need for it to change. At the head of his Gastaldi were procurators and Sindici. It is considered the oldest fraternity maritime society in Europe.

Mariner from Boka realized long time ago, that the country without tradition is country without value and people without tradition are people without future. So he jealously guarded his old memories. In his communication to the outside world he used foreign languages, which had general European significance, but at home he used a Croatian word and Croatian folk costumes. Acts of his first sons, especially on the battlefield, were sung by folk singers, artists and poets. Then arise whole cycles of *Bugarštice*, who were sang by people from Boka. Some of the collections *Bugarštice* were preserved for centuries in the manuscript collections of famous Boka's family. These songs are often evidence of local rivalries, but their main feature is a permanent celebration of honesty, heroism and loyalty, regardless of whether they're talking about "hard Kotor", "noble Kotor", or "Perast acclaimed", "Perast famous" or about any other place in the Bay of Kotor.

Temples of Bay of Boka are not only museums cultural and artistic treasures, but also monuments of Boka spirit and views. The inner beauty of artistic decorations all overlooking the beautiful Perast Shrine of *Gospa od Skrpjela*, artificially erected since the 15th century, while still on the rocks, out of which the eponymous island developed. At the part of brilliance and beauty raised the seaman in his shrine monument to their faith and culture, and decorated it in the right picture gallery skillful brush of the great painters Tripa Kokolja from Perast and refined by it, by the works of other excellent masters of the Venetian and Genoese school, in the realm of light baroque. Nowhere was a seaman brought to the religious-cultural work of this kind. Even the women of mariners in household utensils showed an unusual sense of taste, having direct and indirect links with overseas regions.



III. 12 'Gospa od Skrpjela' and 'Sveti Djordje'

legends

Legend about three sisters (Tre Sorelle)

Legend says that in this palace lived three sisters - Nera, Roza and Bjanka. It is assumed that they were from the noble family Buća. The sisters were known for their beauty and kindness throughout the Bay. But their misfortune was that all three were in love with the same young man - Jerko Novljanin. He could not decide which of the sisters he likes, and he decided to go on a long voyage to reconsider everything. A sister who would wait for his return, he would take her as wife.

The years passed, the sisters sat in their palace, in their rooms, in addition to their windows, watching the sea and eagerly awaited the return of the beloved one. The youth passed and they were waiting and waiting. When the eldest sister died, others walled up her window, because there was one else to wait. Then, the second sister died without seeing her sailor, - the third sister, with tears in her eyes sealed off her window too. When the youngest, Roza, left this world, there was no one, who could wall up her window, and it remained open. Jerko was forever lost ... And in Prčanj, a palace with two closed windows, is still preserved. This palace, the locals still call "Tre Sorelle" (Three Sisters).

Legend about the origin of Kotor

According to one legend about the origin of Kotor, mighty emperor Stefan originally started to build the city into a large cave above the present Kotor. However, the fairy did not let him do that, by whose advice he raised the city by the bay.

When the city was finished, the emperor invited many distinguished guests to the banquet, the fairy among others, who wisely advised him. However, sadly he was wrong when he began to boast that he made a beautiful city, without mentioning help and advice of the fairy. It was because of that selfish gesture the fairy was offended and in revenge poisoned all water resources in the new town of Kotor, and all the guests to feast driven into madness. When he saw what he did he pray the fairy for forgiveness, and she eventually took a pity of him and release guests of insanity, but she left the entire Kotor with only one source of drinking water.

In Kotor there really was only one source of drinking water, which was located in the Old Town and from which Kotor drew drinking water. This fountain is known as Karampana, and on the same piazzetta were women from Kotor gathered, who carried the water to palaces and mansion.



III. 13 Palace 'Tre Sorelle' dates from the fifteenth century and is one of the few monuments of architecture in the Gothic style in the Bay of Kotor

boka navy

historical description

'Boka Navy' is the newer name of feudal medieval brotherhood of mariners. In 1859, it was restored only as a memorial organization for keeping tradition („Noble body of Boka Navy „). Before that, she, by tradition but with no documentation, is dating even from the ninth century. Over the centuries the Navy changed names, but the first known document dates from the XIV century, while the first preserved statute is from the fifteenth century. Confraternity of Mediterranean type (Confraternitates, Frataglie, Scuola), are professional organizations, over which the commoners, craftsmen, sailors and merchants protected their interests. In the name from the fourteenth century „Pia soladitas navicularum Catharensium „ (1353) clear terms are taken from the Roman naval Corporation (soladitas, navicular) which is understandable, because even then in the town of Kotor, very Romanesque class citizens were present. As mentioned, fraternities in the meantime received a gift at the Church of St. Nicholas in Kotor, during the adoption of the Statute. In 1463, they changed its name to the „Brotherhood of St. Nicholas sailor in Kotor „ („Fraternitas Divi Nicolai marinariorum de Cathar „). The manuscript of this Statute on 72 pages, reflects the structure of organs (Assembly, procurators, syndicate) and their competence, characteristic humanitarian activity (assistance to the poor, giving dowry, transportation of a deceased mariners outside the city, burial), as well as maintenance of the church and Franciscans in it.

The most important role of the Kotor Navy was in organizing maritime economy, in particular the acquisition of certain privileges in the Mediterranean ports and exemption from customs and other duties, especially in obtaining the right to permanent place of port and market area (eg. in Venice in „Piazza dei Schiavoni „,

and in other ports). From 1420, those privileges were from the Venetian Republic periodically confirmed. After weakening medieval corporate economic centralism and light strengthening liberal economics and capitalism, already at the end of the sixteenth century Kotor Navy loses its central location and management in the organization of the maritime economy of Boka, and Venice awarded to city of Perast municipal autonomy and their own organization of the Navy.

The historical prestige and luster of the Kotor Navy is acquired especially through mentioned military and executive competency of an Admiral. For an admiral during the centuries, naturally, a maritime person with special maritime professional competence was selected, and since the conversion to the Memorial organization, a person of social prestige, who, while, in another profession, dealt with some of the key issues of the past, or of the present of Navy. In addition to the admiral, in the Boka Navy a „small admiral „, was elected, a small child of ten years, who in all public performances accompanied the admiral, and represent a symbol of generational continuity in the organization, with the duty that eight days before the feast of St. Tryphon says 'lode'. It is a praise to patron saint, whose medieval Latin text was not preserved.

And at a time when the modern state took over all the the functions that previously had craftsmen brotherhoods, mentioned Memorial organization under the modern name „Boka Navy „, today holding traditions, performing with major detachment in traditional costumes, with antique weapons, and play their dance with elements of medieval symbolism, during a celebration of the city of St. Tryphon.



Ill. 14 Boka Navy (Marinerezza Bocchese)

typical boka navy ships

Feluka

Model ship, the type FELUKA, made from wood by Miroslav Štumberger from Baošići in 1952. It represents a pirate variant light and slender ship that was used during the 17th and 18th centuries. He sailed by two Latin sails and with more pairs of oars, if necessary. Model ship has six guns on their hips and multiple tags belonging to the Turkish Empire. The attack on the Boka ships usually involved 2-3 FELUKA on 1 boat.

Gajeta Falkusa

Gajeta falkuša "Comeza-Lisboa" is a replica of the historic type of fishing boat from Komiža, on the island Vis. It is 9 m long, 2.55 m wide. It has a Latin sail and jib total of 90 m². It is built based on many years of research by group of researchers from cultural institutions ARSHALIEUTICA. It was launched in the St. Nicholas Day on December 6, 1997. In Brest, France, from 11. to 17. July 2008., the world's biggest maritime festival, Croatia had the status of "special guest" because Gajeta Falkuša which was 2000. chosen among the ten most interesting traditional boats of the world.

Bracera

Bracera or Brazzera was the typical traditional craft of the Adriatic which could meet with whole Dalmatian and the Istrian coast to the Gulf of Venice. Bracera "Our Lady of the Sea" open boat, length 9.75 m, width 3.53 m, with a draft of 1.06m and a long mast 10 m. This solid and highly mobile boat was especially appropriate for trading and communication among numerous islands of the Adriatic and between its neighboring coasts. During 19th and 20th centuries Bracera in Dalmatia was one mast sail-

boat "at both ends" (sharp stern and bow) with characteristic curved stem. In Istria the name Bracera was used for twomast sailing ships which were very similar to Dalmatian Bracera. There are at least two theories about the origin of the name Bracera. According to some, name Bracera and his other local variants as Brazzera, Brasero, Bracijera, is derived from the fact that the ship for drive uses paddles or muscle strength hand (ital. Forza di braccia). Since Bracera were not the only boat with manual controls, it is believed that its name comes from the name of the island, Brac.

Leut

Leut was barge with very widespread use. It was widespread across the Adriatic and a part of the Mediterranean. It is usually used for fishing and coastal freight. Leut served for fishing blue fish with trimmers. The stern was wearing trimmers and at a convenient time when the fish was attracted to light, first several crew members landed on one side of the bay, then Leut would encircled the bay and landed several crew members on the other side of bay. Fishing groups of people with one and the other end drew of the network toward the coast, and when tightened network, the network was eventually transferred to the lute family who would then began pouring fish from the clamped network into the interior of ship.



III. 15 'Gajeta Falkusa'

Trabakul

Trabakul, also trabakula, is Adriatic sailing ship similar to Bracera; appeared in the 18th century; the rounded hull, bow loom bent back ends oblong apple; has a very strong camber; most of the cargo space occupies a warehouse (big crater in the middle); in the forward part of the dwelling, stern house with helm, cabin and kitchen; large and comfortable steering wheel; length up to 30 m, width up to 6 m, cargo draft 2 m; two masts, gaff sail (original gaff and gaff sail, long boom with bars); since 1920. It runs on a diesel engine. Italian Trabakul has a larger roach, and shorter steering wheel; Stern circumference exceeds the low fence. It is claimed that Trabakul is the Illyrian-Dalmatian-Venetian type of merchant ship. For a long time was the backbone of the coastal shipping.

Galleon (Eng. Galleon, Fran. Galion)

Galleon is a war and merchant ships on sail from the 16th and 17th centuries and one of the most appreciated ships in the world. It is a transitional type between galleons (Galeas) and passenger ship. At the beginning Galleon (primarily as warships) had two decks.

Prow Caracci was held in some places up to 1590. The main features of the boat and shape are steep boom, three-masts (round baskets), under the bowsprit sail, foremast and mainmast cross sails. Weapon of galleon made guns (them 5-7 large caliber), the same number of light guns on the upper deck, and four smaller tops. Galleons were in the 17th century frequently built without a bow and liners have just then received an inheritance, a bow galleon.

Dubrovnik and Spanish galleons were the most famous. Galleon

crew members, and full expression occurs after the disappearance of galley. People of Dubrovnik were building galleons on local and the other people shipyards in their own special "Dubrovnik" way. Dubrovnik galleons were usually three-masts, had characteristically door for cannon barrels-holes on the sides of the ship. People of Dubrovnik did not decorate them lavishly, and the size of Dubrovnik galleon could reached over a thousand tones.

Karaka

Types of sailing boats called carrack, built in Dubrovnik shipyards in the period from 15th till beginning of 17th century, belonged to the largest merchant ships in the world at that time. Karaka were transporting costly burden. They had the weapons up to 40 guns, to defend against pirates. Dominican monastery in Dubrovnik preserves the most valuable sample of Dubrovnik Karaka from the 15th century. Crews were up to 140 people. Dubrovnik Karaka had three masts, of which the highest is median. It has two sails. Mast at the bow has a cross sail and stern Latin sail. Sails were tough and were lifted with manual winches. The main mast carrying the Dubrovnik flag with the image of St. Vlahakoji can be seen at the crown of his hair. In the central area of Karaka was a ceiling with pictures of painting masters. In some there were blacksmith and carpentry workshop, a well vault also.



III. 16 'Karaka'

building references

Kursaal Congress Centre and Auditorium

The old building (with a casino and a theater on the inside) of the Kursaal was demolished in 1973. Later, a contest was called to award the contract for a new auditorium and a palace of congresses. "Two Rocks Stranded" by Rafael Moneo won the contest, and he was the architect who executed the work between 1996 and 1999.

The Kursaal Congress Centre and Auditorium is a complex comprising several spaces: a great auditorium, many-use halls and exhibition halls. It is located in Donostia-San Sebastian. (Basque Country, Spain). It consists of several spaces, including the 1,800-seat concert hall, the Palacio de Congresos-Auditorio Kursaal, and is the home of the biggest film festival in Spain, the San Sebastian International Film Festival, in existence since 1953.

The project for the Kursaal Auditorium in San Sebastian is situated on the right side of the mouth of the Urumea, on land reclaimed from the sea, so the site is exceptional for the building.

The International Congress of San Sebastian (Kursaal Auditorium) is composed of two huge glass cubes. The same architect describes it as a "stranded rock" next to the Cantabrian, some areas of 7,000 m² connected underground, sheltering in their bowels two multipurpose auditoriums, an exhibition hall, a restaurant and parking. The Kursaal is composed of two large translucent glass cubes deformed and oriented with the east. These blocks, with their unbalanced geometry, seem to assume the scale and nature of the bay.

In the first of the "stranded rocks," is the auditorium, with dimensions of 60x48x27 meters and a maximum capacity of 1,806 spectators. The room has a rectangular shape with a flat deck and around the ground floor there are the additional services: counseling, telephones, and toilets. Access to the top of the room is via ramps and stairs, made with stainless steel panels on the outside and wood on the inside. In the gap between the chambers and the housing are lobbies, which offer views of the surroundings and magnificent scenery of the beach. It also has a stage of 350 square meters equipped with camera and concert demountable stagehands, in addition to serving as a bar.

The second "rock" contains the House Chamber, consisting of a prism of 43x32x20, with a metal structure and a complimentary double wall with pieces of glass, and a capacity of 624 persons. There is also a stage of 120 square meters equipped with an acoustic ceiling and detachable stagehands.

The construction is resolved with a metal structure that leads to the formation of a double-walled complement, interior and exterior, with a block of pressed glass.

The beauty of San Sebastián is largely due to its environment, to its landscape. Few cities are endowed with more favorable natural conditions. The site of the Kursaal Auditorium and Congress Center at the mouth of the Urumea River is a geographical accident and must remain as such.

Hence, Moneo proposed to erect a building that would not violate the presence of the river in the city. The auditorium and the



III. 17 Facade of Kursaal Congress Centre

congress hall, the key programmatic elements of the scheme, are conceived as separate autonomous volumes, as two gigantic rocks stranded at the mouth of the river forming part of the landscape rather than belonging to the city. All other facilities like exhibition halls, meeting rooms, offices, a restaurant, and musicians' services are located in the platform, the base that gives due importance to the cubic volumes.

Site

A large part of Moneo's design addresses the Kursaal sites an area of "geographical accidents". In San Sebastian, the Cantabrian Sea eddies in La Concha Harbor, reproducing all the accidents of geography to be found in textbooks: bays, islands, beaches, and hills."

Moneo refused to erect any building that violated the natural landscape and the presence of the river.

Program

The primary functions of the Kursaal Centre are contained within the two prismatic volumes. The larger of the volumes contains the auditorium, and the smaller of the volumes contains congress hall, which is suitable for small musical performances. The larger of the halls seats 1,828 people, and the smaller seats 624 people.

The secondary functions of the building are contained in its low, wedge like base. The platform at the base of the prisms contains exhibition halls, meeting rooms, offices, restaurants, retail, banquet halls and musicians' services. The area also contains information and ticket booths. In the sub-basement, a 720 car parking

structure provides public parking for the small operas and musical performances within, as well as for surfers who visit the Playa de la Zurriola.

Facade System

The steel system which supports the facade is made of box columns and angled box beams, welded at the joints. The module for the spacing of the bays is six meters, large enough to allow tempered air circulation and service access. The concave glass tiles are attached to the steel structure using struts and two steel mounting clips. The corner joints of the glass, which are beveled to meet cleanly, are repeated or simply inverted at every corner to re-duce the need for custom details. The horizontal joints between the glass have a custom V-shaped channel made of cast aluminum.

The roof is supported by trusses which span freely from one side to the other. The mechanical systems are suspended from the trusses and hang above the auditoriums, transmitting no vibrations during performances and allowing the roof to share the translucent glass aesthetic of the facade. The gravity load of the facade, roof trusses, and mechanical systems is transferred to the steel columns and box beams. The building resists the lateral load created by the strong salt laden winds through structural repetition, lateral bracing in the trusses, and deep piles which anchor the building to its concrete foundation.



III. 18 Interior of Kursaal Congress Centre

Vasa Museum

The Vasa Museum (Swedish: Vasamuseet) is a maritime museum in Stockholm, Sweden. Located on the island of Djurgården, the museum displays the only almost fully intact 17th century ship that has ever been salvaged, the 64-gun warship Vasa that sank on her maiden voyage in 1628. The Vasa Museum opened in 1990 and, according to the official web site, is the most visited museum in Scandinavia. Together with other museums such as Stockholm Maritime Museum, the museum belongs to the Swedish National Maritime Museums (SNMM).

From the end of 1961 to 1988, Vasa was housed in a temporary structure called Wasavarvet ("The Vasa Shipyard") where she was treated with polyethylene glycol. Visitors could only view the ship from two levels and the maximum distance was only 5 m (17 ft). In 1981, the Swedish government decided that a permanent Vasa museum was to be constructed and an architects' competition for the design of the museum building was organized. A total of 384 architects sent in models of their ideas for the most suitable building to house the Vasa and the final winners were Marianne Dahlbäck and Göran Månsson with Ask ("box"). The construction of the new building began on and around the dry dock of the old naval yard with an inauguration ceremony hosted by Prince Bertil on 2 November 1987. Vasa was towed into the flooded dry dock under the new building in December 1988 and during the summer of 1989, when visitors were allowed onto the construction site, 228 000 people visited the half-finished museum. The museum was officially opened on 15 June 1990. So far Vasa has been seen by over 25 million people. In 2008 the muse-

um had a total of 1,143,404 visitors.

The main hall contains the ship itself and various exhibits related to the archaeological findings of the ships and early 17th century Sweden. Vasa has been fitted with the lower sections of all three masts, a new bowsprit, winter rigging, and has had certain parts that were missing or heavily damaged replaced. The replacement parts have not been treated or painted and are therefore clearly visible against the original material that has been darkened after three centuries under water.

The new museum is dominated by a large copper roof with stylized masts that represent the actual height of Vasa when she was fully rigged. Parts of the building are covered in wooden panels painted in dark red, blue, tar black, ochre yellow and dark green. The interior is similarly decorated, with large sections of bare, unpainted concrete, including the entire ceiling. Inside the museum the ship can be seen from six levels, from her keel to the very top of the stern castle. Around the ship are numerous exhibits and models portraying the construction, sinking, location and recovery of the ship. There are also exhibits that expand on the history of Sweden in the 17th century, providing background information for why the ship was built. A movie theatre shows a film in alternating languages on the recovery of the Vasa.



III. 19 Ship inside of Vasa Museum

Cutty Sark Museum

History of the Ship

The ship was constructed in Dunbarton, England for Captain "Jock" Willis. It was designed by Hercules Linton, a well-known ship architect of that era. The ship has a composite wrought iron frame structure covered by wooden planking and weighs 921 tons. It is 65 meters (212 feet) long.

At the time Cutty Sark was built, the tea trade between China and London was at its peak and the ship was meant to be quick so that Willis could beat his competitors across the ocean. In 1871 it won the yearly clipper competition from China to London in 107 days.

However, the Cutty Sark didn't always win. Its most famous race was against the Thermopylae the next year, in 1872. The two ships left from Shanghai on the same day but Cutty Sark lost its rudder in the middle of the journey. However, the captain continued the trip and arrived only a week after the Thermopylae. It was that race that gave the famous ship its reputation as a hearty vessel.

A Museum Ship

Today the ship serves as a museum celebrating its illustrious maritime history. Visitors can go below deck to see artifacts and nautical memorabilia, or explore the cabins that once belonged to Cutty Sark crew.

Tended by the Cutty Sark Trust, the vessel is a wonderful testament to the fine ship building of the nineteenth century and attracts tons of visitors who can get an idea of what life must have

been on board of a clipper ship. There is also a unique collection of more than eighty ships' figureheads on display at the museum. The ship suffered a devastating fire in May 2007 during restoration, though some of it was spared because important parts had been taken off-site for repairs. After a five year long, £50 million restoration project the nineteenth century museum ship was reopened again on April 25, 2012 by Queen Elisabeth II. Permanent collections

Cutty Sark has been raised over three meters allowing visitors the unique experience of walking underneath. This area is also used as a gallery, which holds the world's largest collection of ships' figureheads, donated to the Society by Sydney Cumbers in 1953. Included are representations of Florence Nightingale, Elizabeth Fry, William Wilberforce, Disraeli, Hiawatha and Sir Lancelot, most of which date from the 19th century and originate from all different types of merchant vessels.

Also in the collection, a wide range of paintings and drawings, archival documents, navigational tools and memorabilia connected to Robert Burns who wrote the poem 'Tam O'Shanter' from which Cutty Sark got her name.

Cutty Sark epitomizes the great age of sail; she is the last surviving tea clipper. Here makeable story is tangible evidence of the centuries long importance of sea-trade to this country and to the growth of London as the world's pre-eminent port and trading center. Built as a tea clipper, where speed to market was critical, it is the combination of sail and hull form which gave Cutty Sark her edge.



III. 20 Cutty Sark Museum outside

maritime museum

project description

Location

Characteristic topography, with mountains touching the sea, river flowing next to the walls of the old town of Kotor, and coming into the sea; a long dock for the ships, with direction towards the town, are all pointing at the location of my project, which is located on the coast of the Adriatic sea. A big part of the location is surrounded by water. Next to it is a small green area, as a park, which in one way protect the location from the noise of the city. Although located on the coast, depth of the sea in this area is high, enough for the big cruisers that are coming throughout the year. Because the town lays down in the foothills of the mountain, in the heart fo the Bay, it is protected from the strong winds and tide.

Formerly, on this loacation was hotel 'Fjord', which had his own beach, but unfortunatly did not have so good faith, and was crashed. Today, it still wait for its destiny, lays down as an empty and unused place, with a temporary function as a parking place.

Concept

As the water surrounds almost the whole area, ships are the crucial things that are placed in the foreground. They were starting point in the process of the design, concernig the form of the ship itself. Following the line of one regular sailbot, which is a little bit skewed, the project was going in that direction. The other thing that led me was terrain configuration, with river which is flowing exactly next to my location, and the dock with its expressed trajectory. They were guiding axis. By intersecting them i got triangle

shaped spaces, which later on i combined into different compositions.

Design

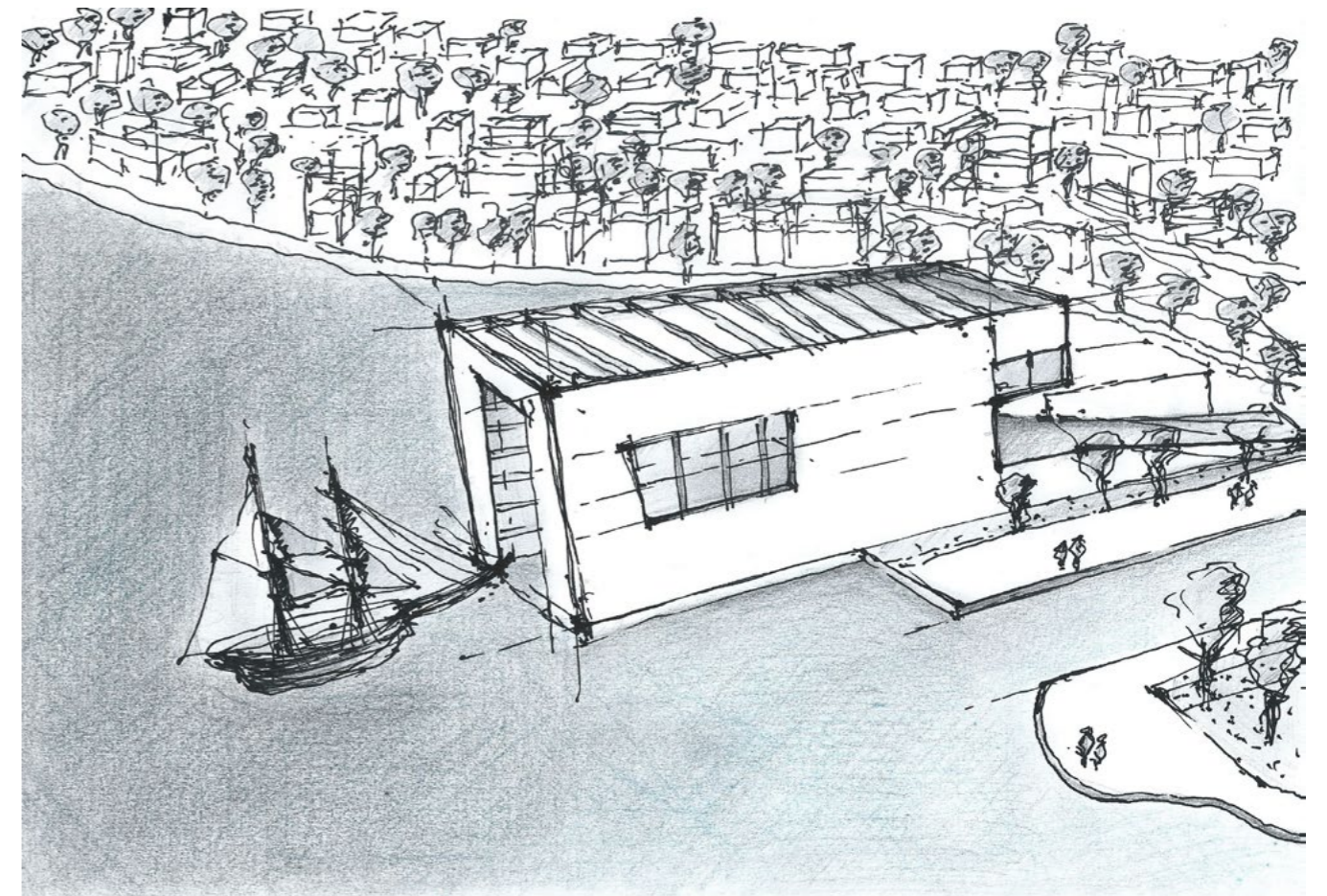
The project consist of two arms, two parts, which differs by function, structure, form and materialisation. The first part, which is 6.46m high, contains two small entrances. One is for the guests of the museum and the other is used as an entrance to the restaurant, which can work also seperately, even when the museum is closed. From the restaurant there is an exit to the terrace, and then through stairs which leads to the roof. The roof provides an interesting view of the bay.

The other part, which is 25m high, serves mainly for the exhibitions, which have temporal character. Besides maritime exhibits, in the upper part, guest can also enjoy some of the small ship replicas, which were used for Boka Navy needs. This part, also allows entrance of the sailing ships, and at the same time becomes their temporary habitat. This part goes under the water, and gives people the opportunity to see also the lower parts of the ships.

The whole museum is covering an area of 15483m², and has his small port, so it can be reachable also from the seaside.

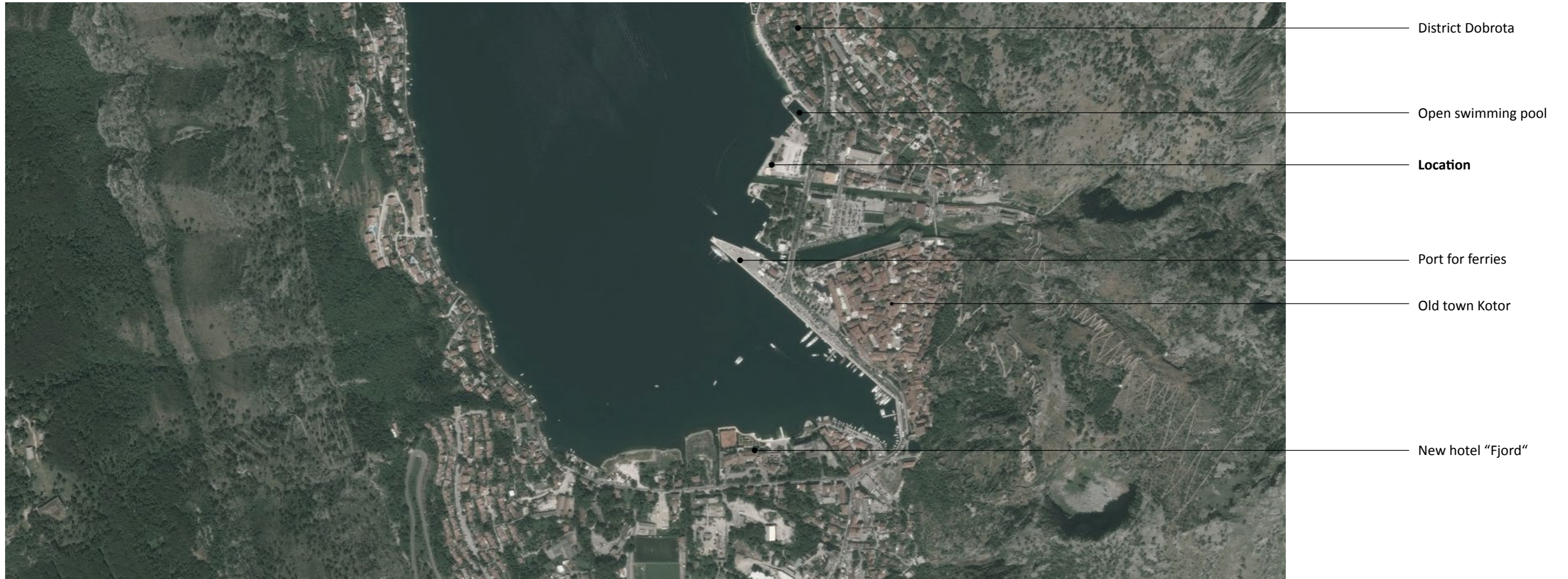
Materialization

The whole building is covered with semi-transparent glass, in a shape of horizontal plates, with a length of 6.60m. Concerning facade, whole museum consists of three sequences. First are openings which are not covered with the glass, the second are completely closed parts with walls inside and third are parts only coverd with the same semi-transparent glass.



III. 21 Drawing - Maritime Museum

4.2
location



III. 22 Bay of Kotor, satellite image

photo documentation



III. 23 Bay of Kotor, site plan

4.3
photo documentation



1



2



3



4

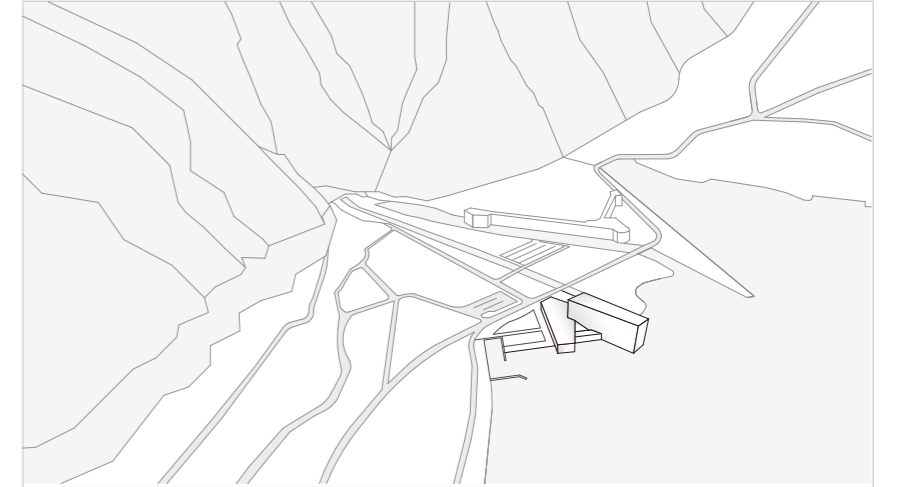
III. 24 Photos of location

4.4

concept



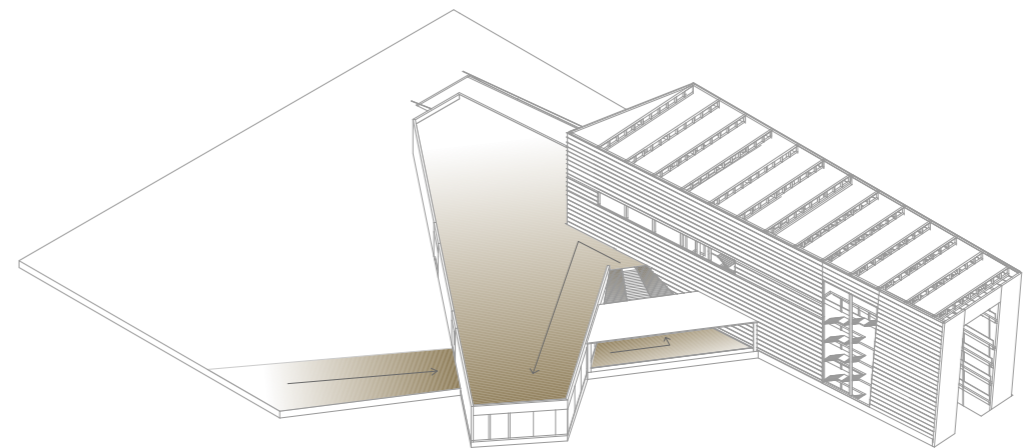
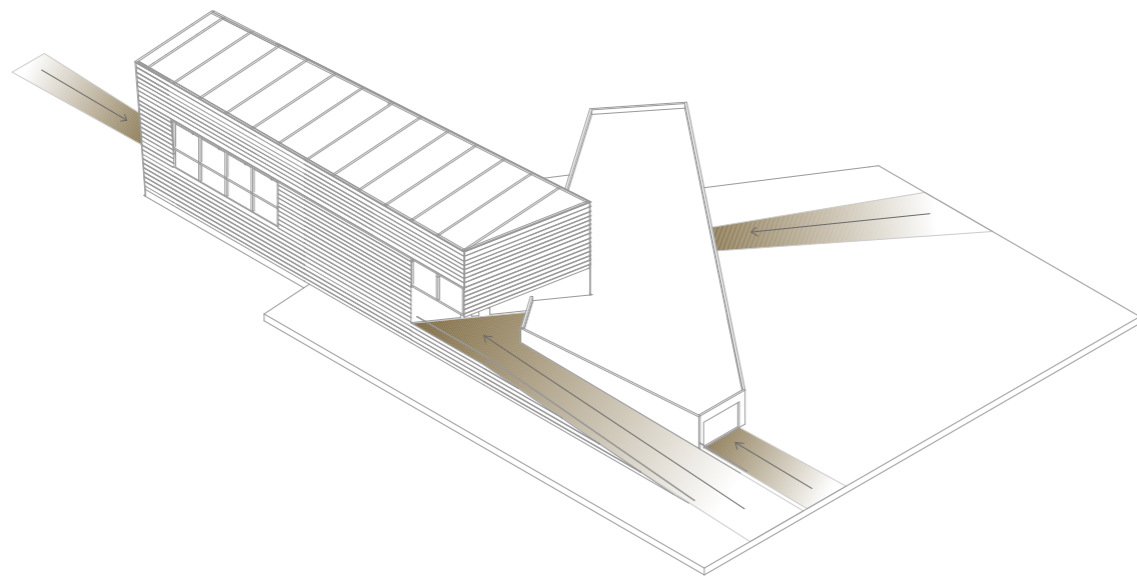
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concept



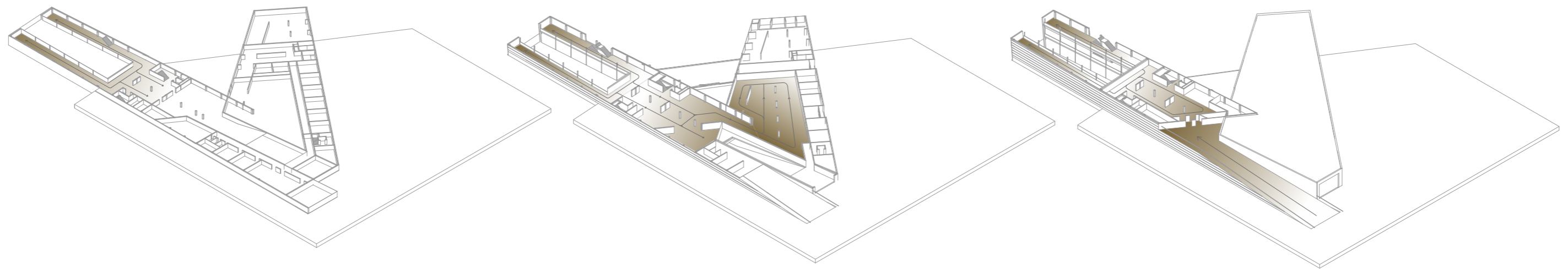
4.5

scheme

entrance / exit

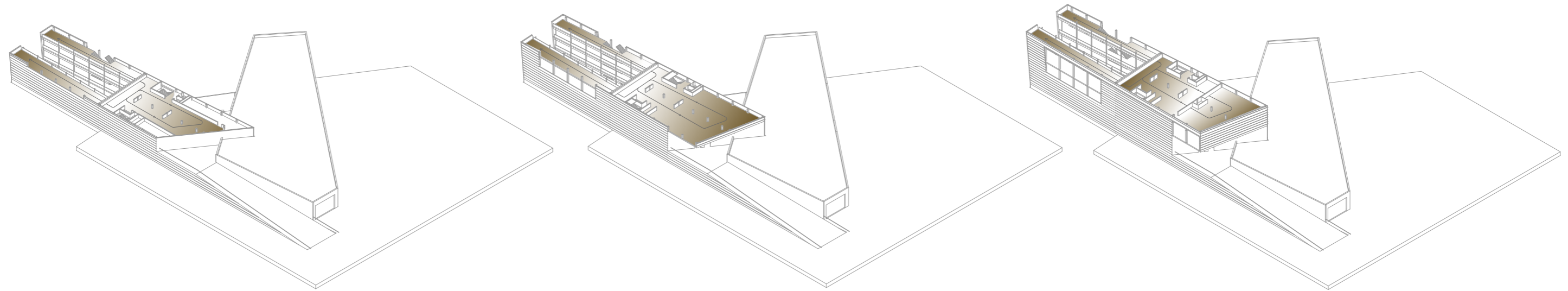


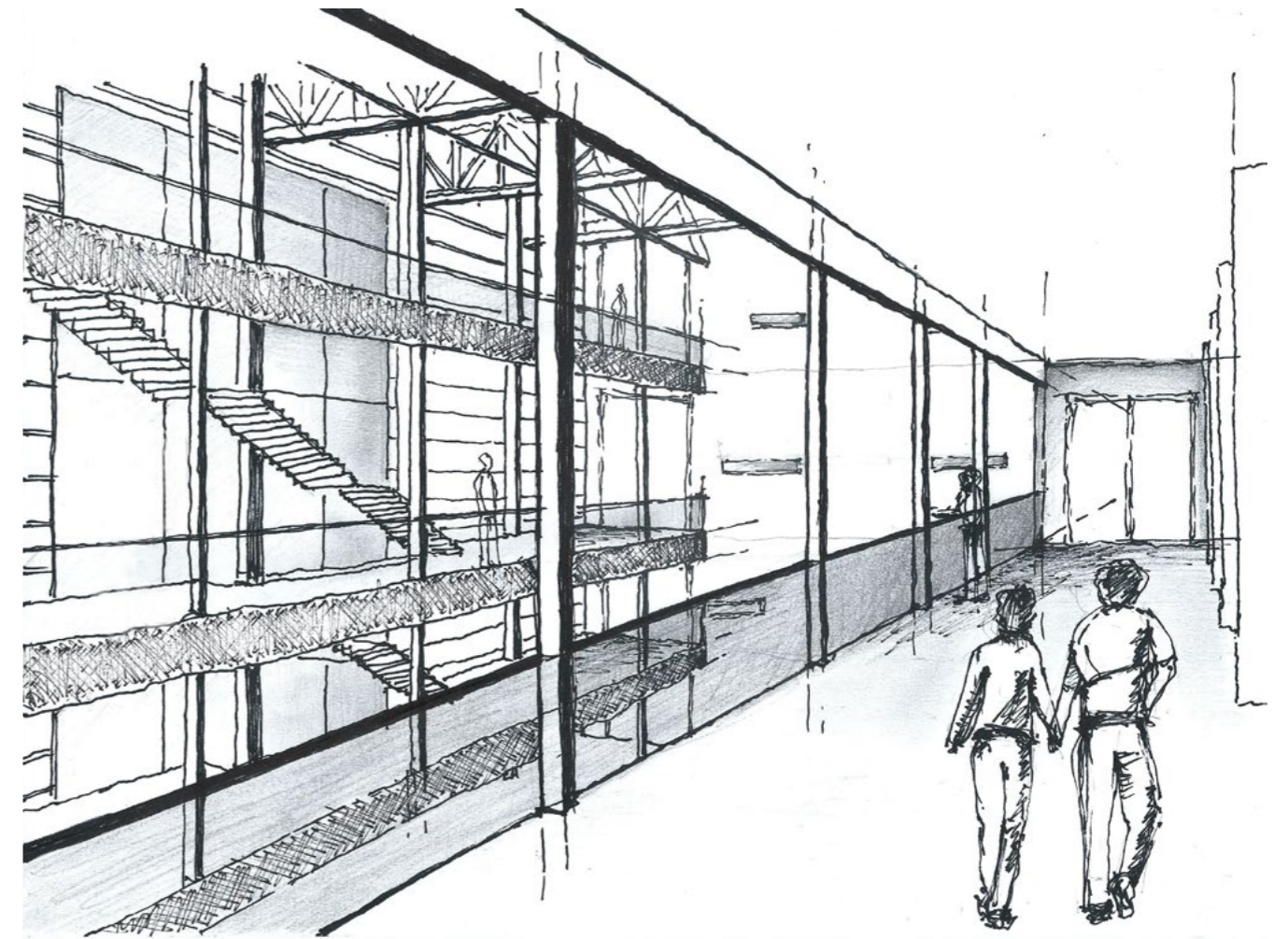
4.5
walk line | scheme



4.5

walk line | scheme





III. 25 Drawing - Interior - Maritime Museum

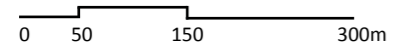
5.1

site plan drawings

figure ground plan



1:5000



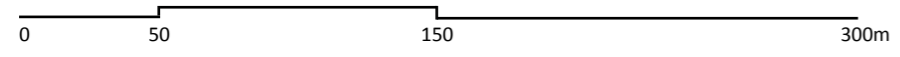


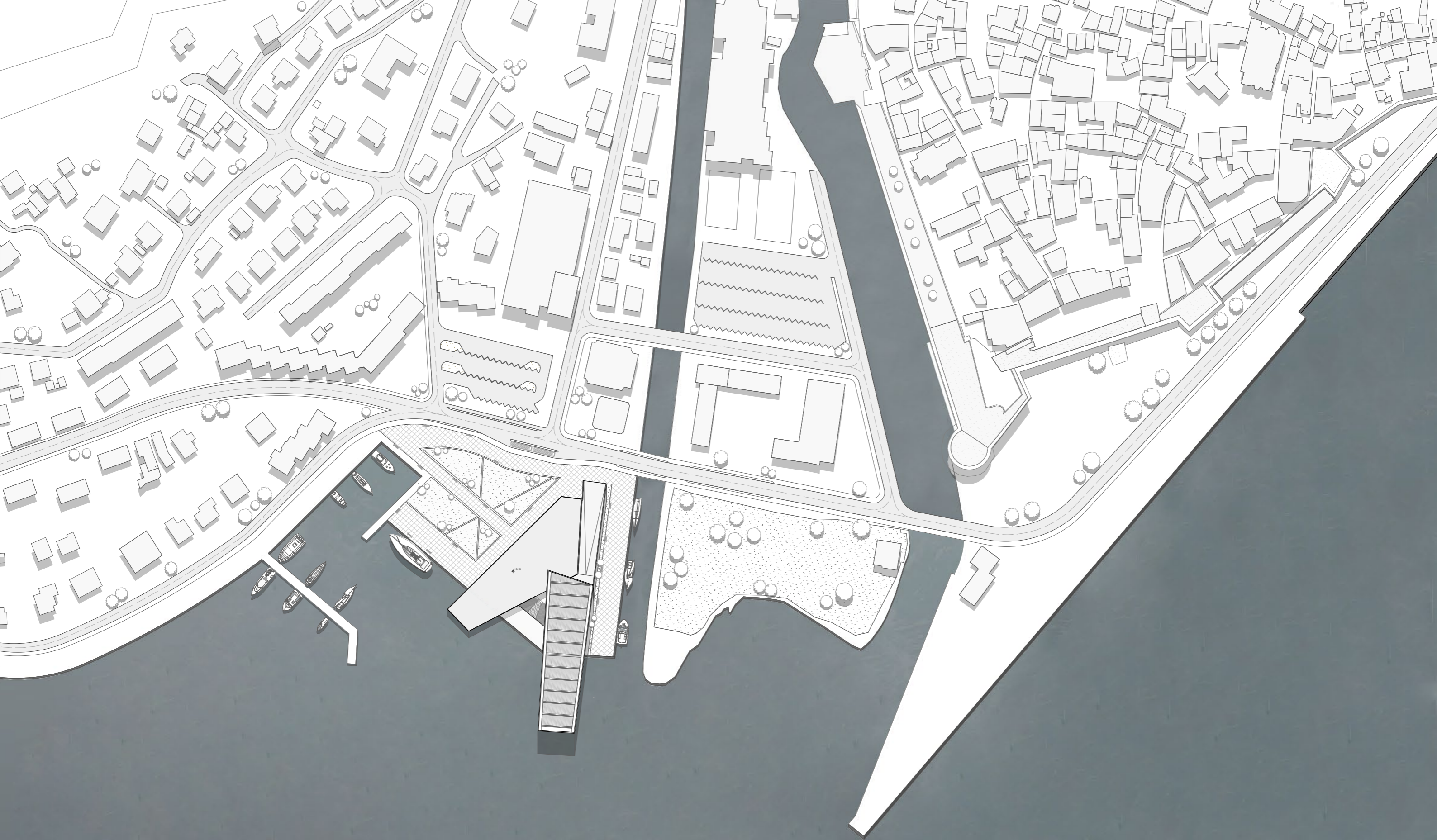
5.1

site plan drawings

site plan

1:2000





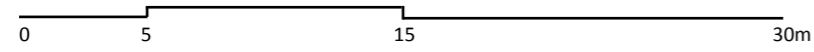
5.2

plan drawings

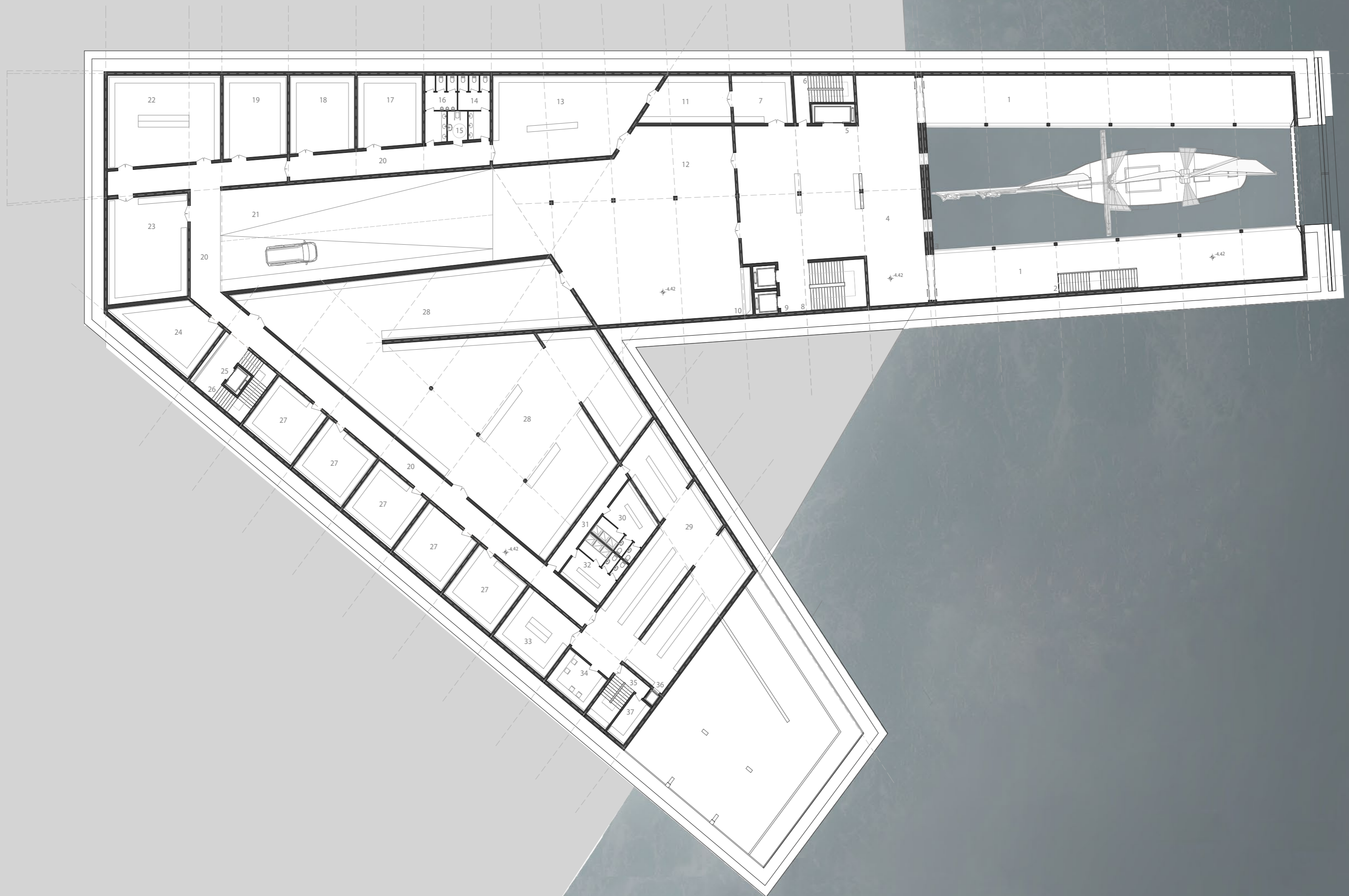
basement floor



1:333



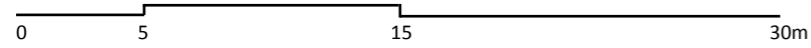
1. Exhibition Space (Part with Sailboat)	372m2	19. Storage Room	54m2
2. Stairs	15m2	20. Passage	270m2
3. Atrium	440m2	21. Ramp	255m2
4. Exhibition (Reception) Room	325m2	22. Storage Room	105m2
5. Economic Elevator	8m2	23. Storage Room	90m2
6. Economic Stairs	12m2	24. Storage Room	45m2
7. Storage Room	30m2	25. Economic Elevator	4m2
8. Stairs	25m2	26. Economic Stairs	18m2
9. Elevators (x2)	10m2	27. Storage Room (x5)	200m2
10. Installation	5m2	28. Storage (Workshop, Repair) Room	705m2
11. Storage Room (Passage)	39m2	29. Restaurant Kitchen	225m2
12. Technical Entry	400m2	30. Wardrobe - Women	28m2
13. Storage	125m2	31. Passage	18m2
14. Toilet - Women	16m2	32. Wardrobe - Men	25m2
15. Accessible Toilet	6m2	33. Garbage Room	42m2
16. Toilet - Men	16m2	34. Staff (Smoking, Eating) Area	20m2
17. Storage Room	48m2	35. Restaurant Stairs	6m2
18. Storage Room	51m2	36. Restaurant Elevator	2m2
		37. Storage	10m2
		Total Area	4065m2



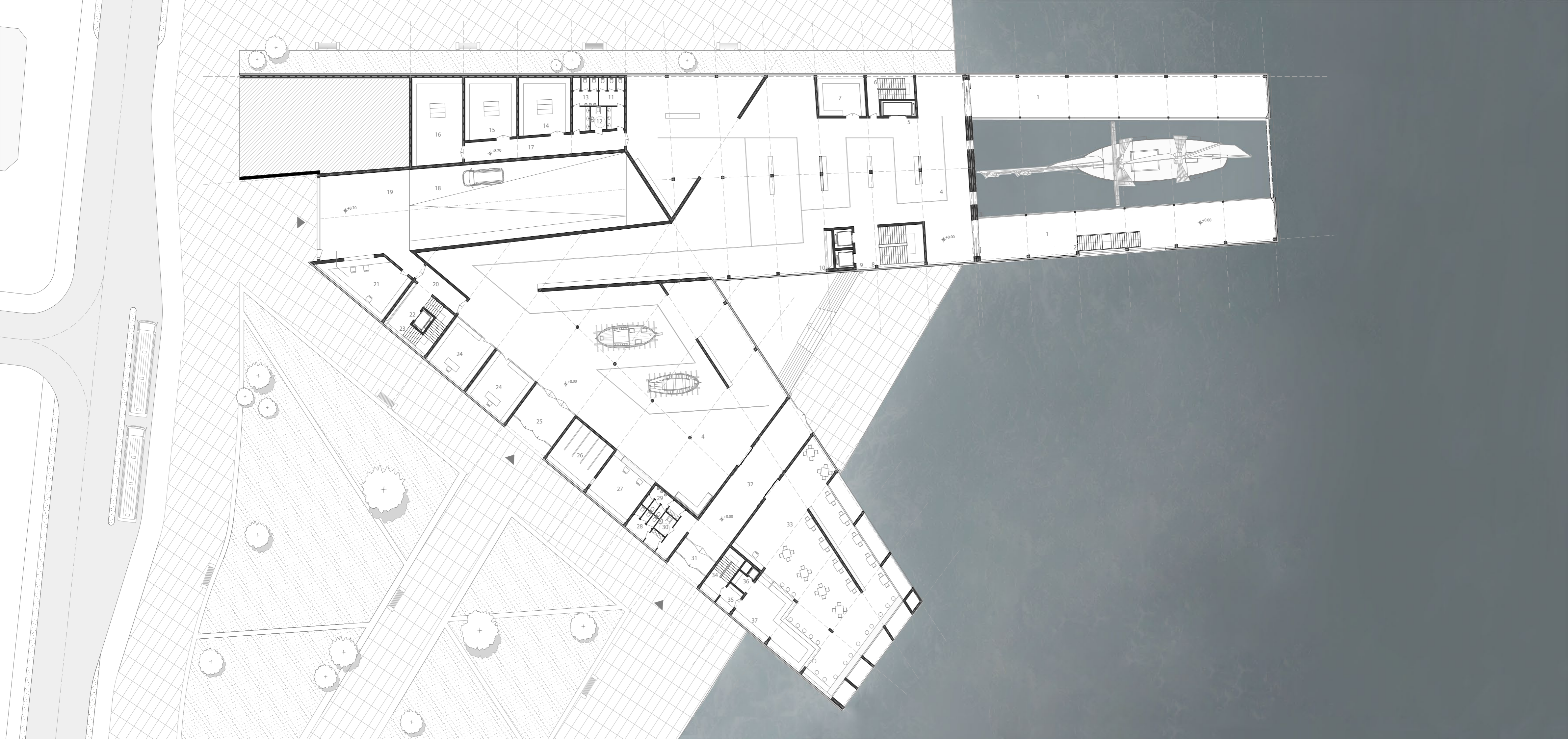
ground floor



1:333



1. Exhibition Space (Part with Sailboat)	372m2	19. Car Entry	125m2
2. Stairs	15m2	20. Passage (Entry)	25m2
3. Atrium	440m2	21. Information (Control) Room	45m2
4. Exhibition Room (Lobby)	1830m2	22. Economic Elevator	4m2
5. Economic Elevator	8m2	23. Economic Stairs	18m2
6. Economic Stairs	12m2	24. Museum Store (x2)	80m2
7. Storage Room	30m2	25. Museum Entry	30m2
8. Stairs	25m2	26. Wardrobe	40m2
9. Elevators (x2)	10m2	27. Reception	40m2
10. Installation	5m2	28. Toilet - Women	11m2
11. Toilet - Women	16m2	29. Toilet - Men	11m2
12. Accessible Toilet	6m2	30. Accessible Toilet	5m2
13. Toilet - Men	16m2	31. Restaurant Entry	10m2
14. Storage Room	48m2	32. Passage (Exit)	120m2
15. Storage Room	50m2	33. Restaurant	320m2
16. Storage Room	54m2	34. Restaurant Stairs	6m2
17. Passage	68m2	35. Restaurant Elevator	2m2
18. Ramp	255m2	36. Passage (Stairs Exit)	5m2
		37. Restaurant Bar	60m2
	Total Area		4210m2



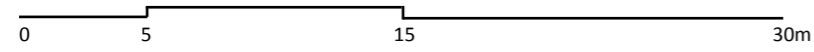
5.2

plan drawings

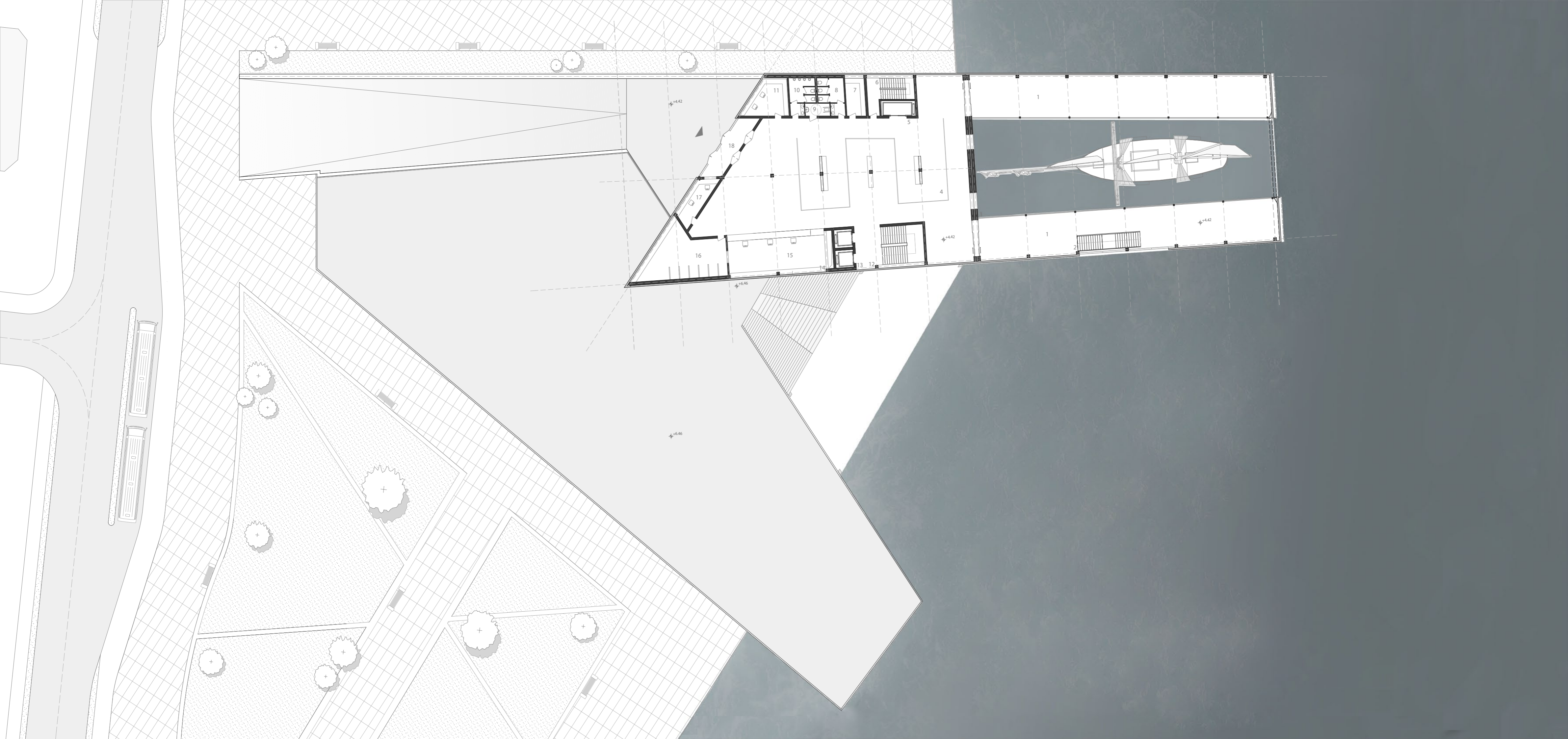
1st floor



1:333



1. Exhibition Space (Part with Sailboat)	376m ²
2. Stairs	15m ²
3. Atrium	440m ²
4. Exhibition Room (Lobby)	565m ²
5. Economic Elevator	8m ²
6. Economic Stairs	12m ²
7. Storage Room	12m ²
8. Toilets - Women	13m ²
9. Accessible Toilet	5m ²
10. Toilet - Men	12m ²
11. Security Room	18m ²
12. Stairs	25m ²
13. Elevators (x2)	10m ²
14. Installation	5m ²
15. Reception	70m ²
16. Wardrobe (Storage Room)	65m ²
17. Information Room	15m ²
18. Main Entry	20m ²
Total Area	1685m²

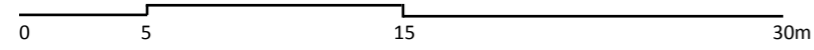


5.2
2nd floor

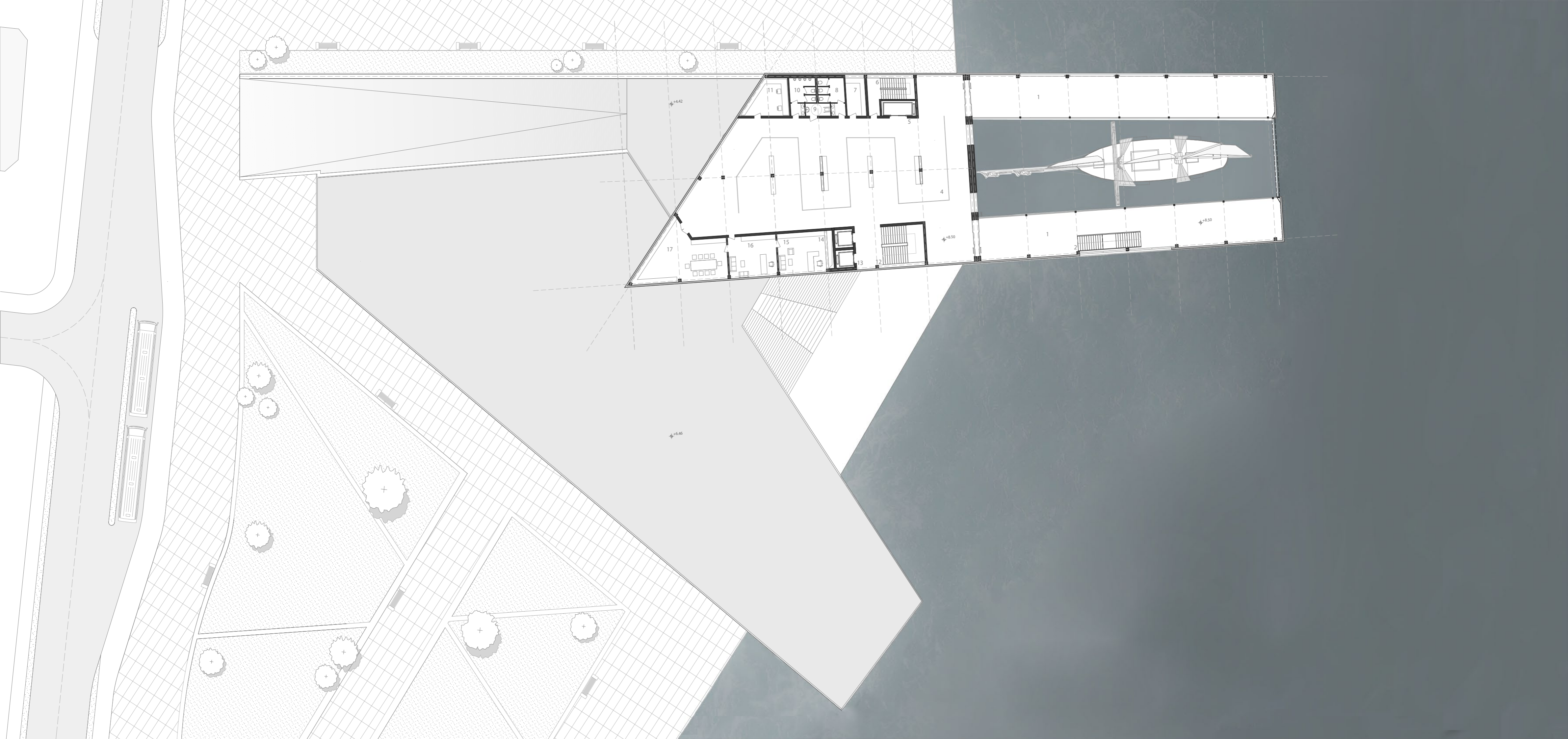
plan drawings



1:333



1. Exhibition Space (Part with Sailboat)	376m ²
2. Stairs	15m ²
3. Atrium	440m ²
4. Exhibition Room (Lobby)	600m ²
5. Economic Elevator	8m ²
6. Economic Stairs	12m ²
7. Storage Room	12m ²
8. Toilets - Women	13m ²
9. Accessible Toilet	5m ²
10. Toilet - Men	12m ²
11. Security Room	24m ²
12. Stairs	25m ²
13. Elevators (x2)	10m ²
14. Installation	5m ²
15. Office	33m ²
16. Secretary's Office	33m ²
17. Conference Room	65m ²
Total Area	1685m²



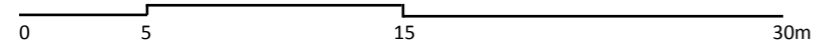
5.2

3rd floor

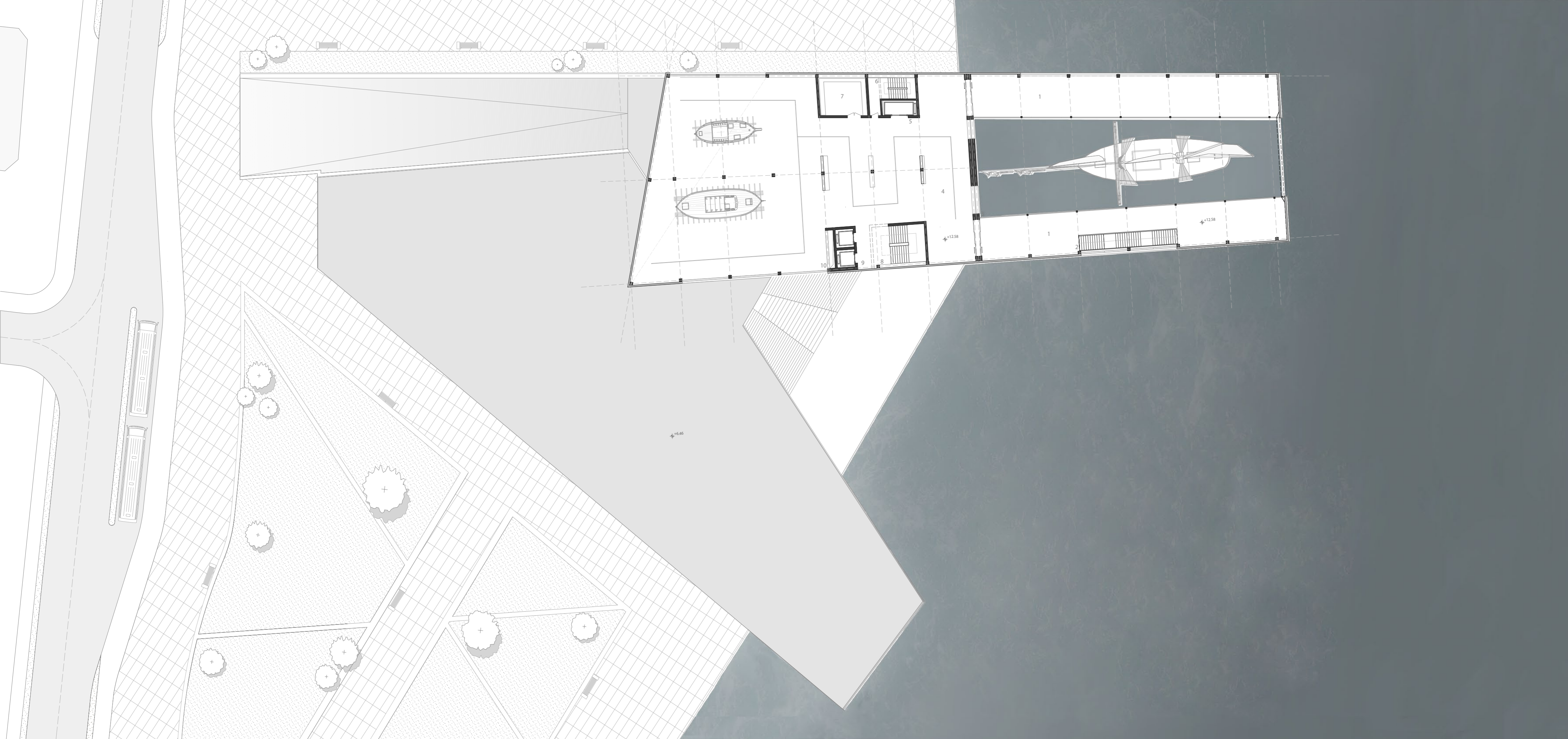
plan drawings



1:333



1. Exhibition Space (Part with Sailboat)	375m ²
2. Stairs	24m ²
3. Atrium	440m ²
4. Exhibition Room (Lobby)	990m ²
5. Economic Elevator	8m ²
6. Economic Stairs	12m ²
7. Storage Room	30m ²
8. Stairs	25m ²
9. Elevators (x2)	10m ²
10. Installations	5m ²
Total Area	1919m²



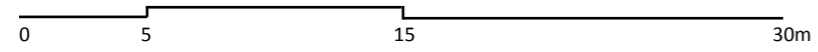
5.2

4th floor

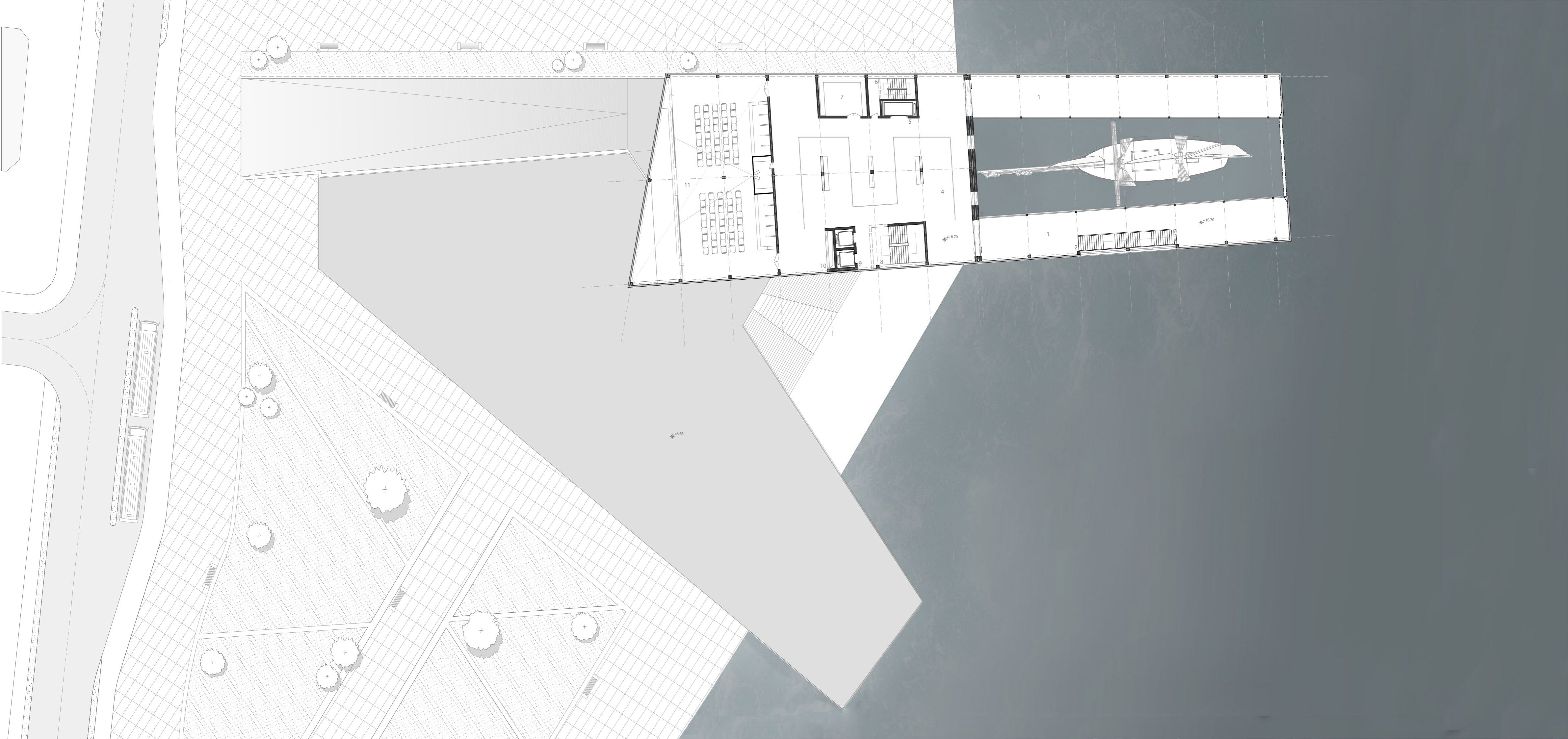
plan drawings



1:333



1. Exhibition Space (Part with Sailboat)	375m ²
2. Stairs	24m ²
3. Atrium	440m ²
4. Exhibition Room (Lobby)	610m ²
5. Economic Elevator	8m ²
6. Economic Stairs	12m ²
7. Storage Room	30m ²
8. Stairs	25m ²
9. Elevators (x2)	10m ²
10. Installation	5m ²
11. Auditorium	380m ²
Total Area	1919m²

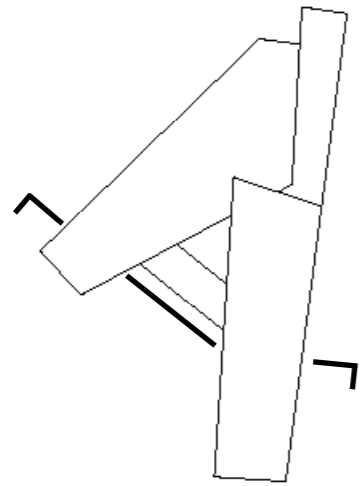
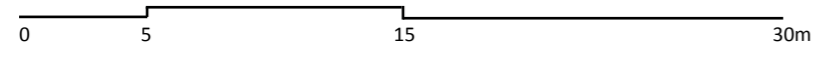


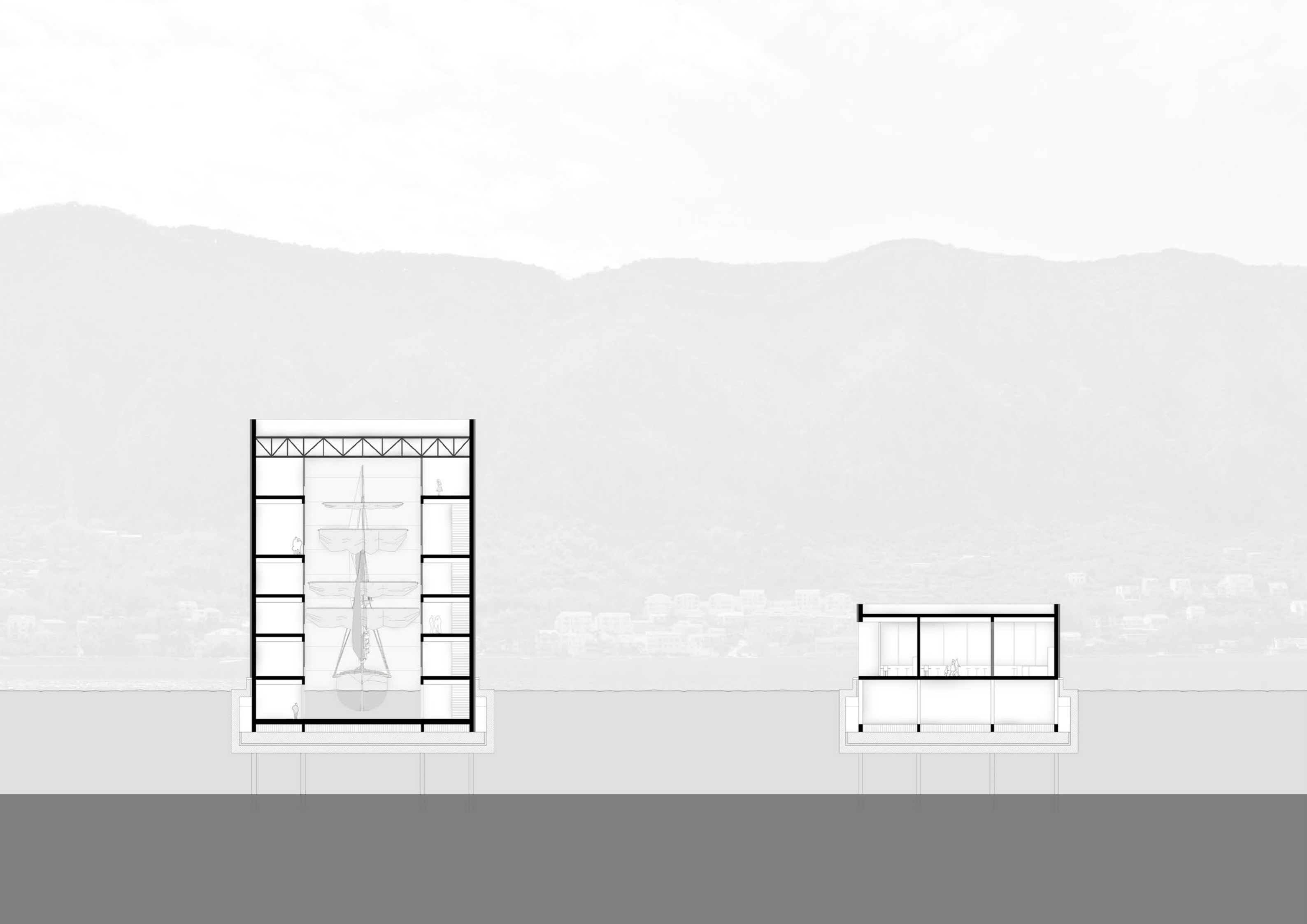
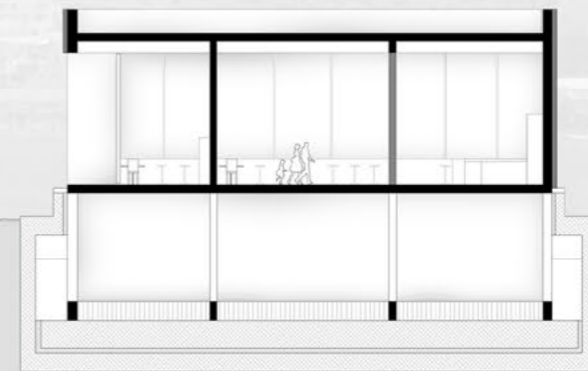
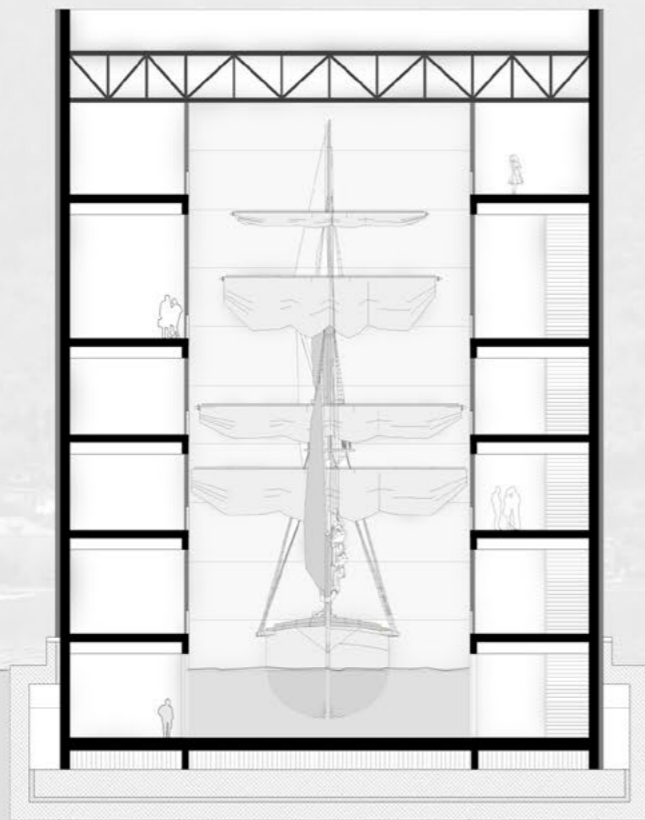
5.3

section drawings

section 1-1

1:333



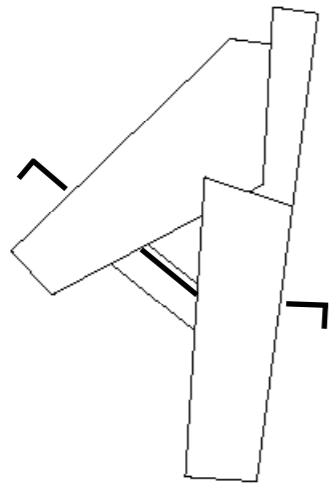
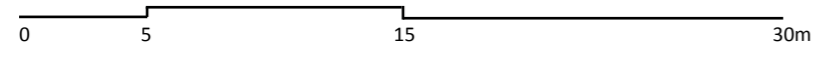


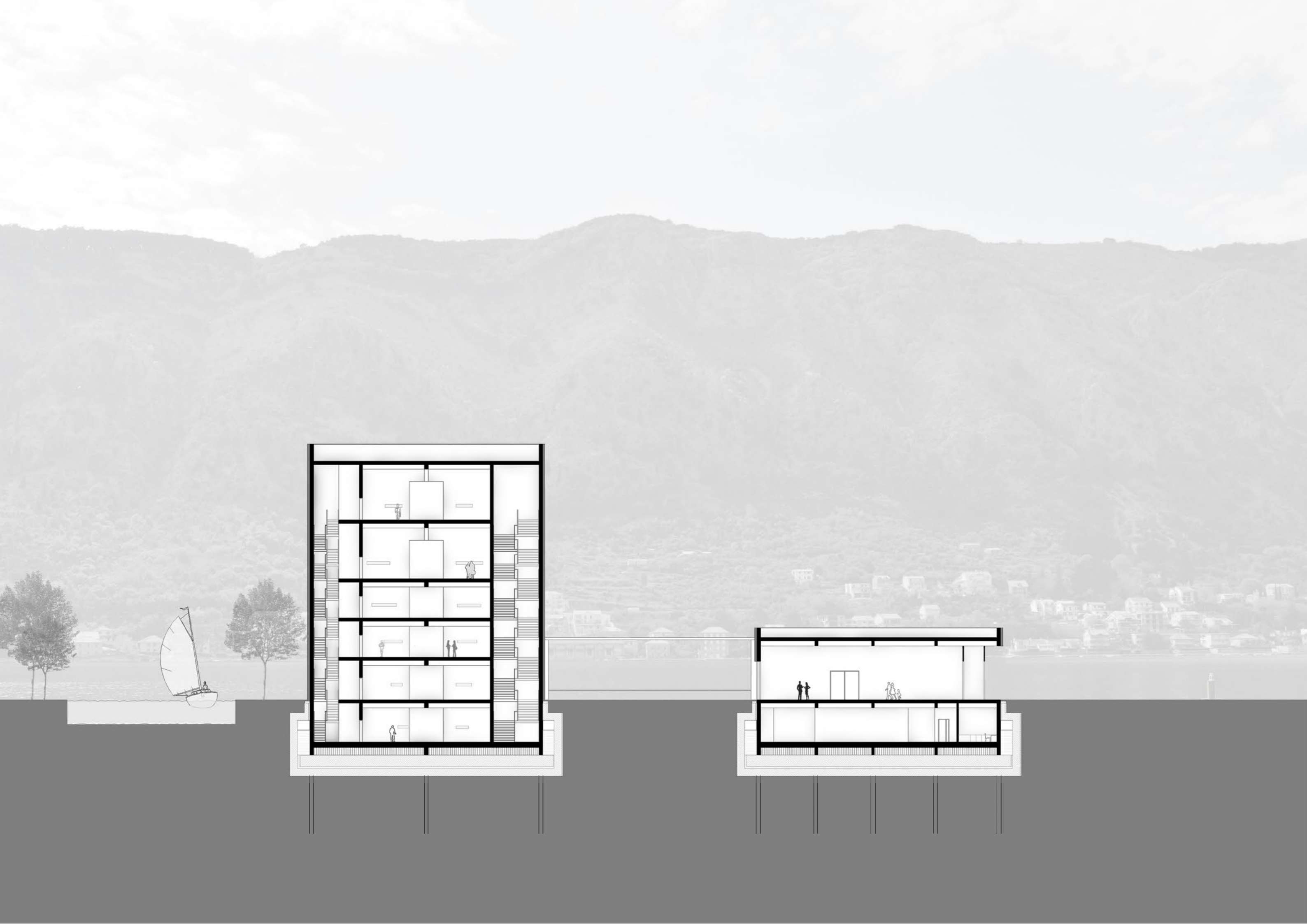
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section drawings

section 2-2

1:333



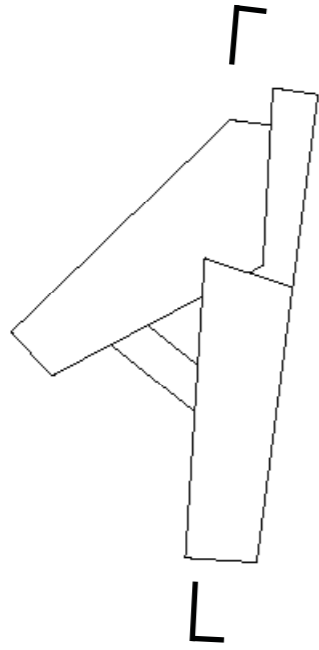
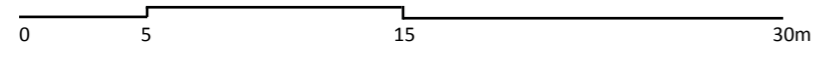


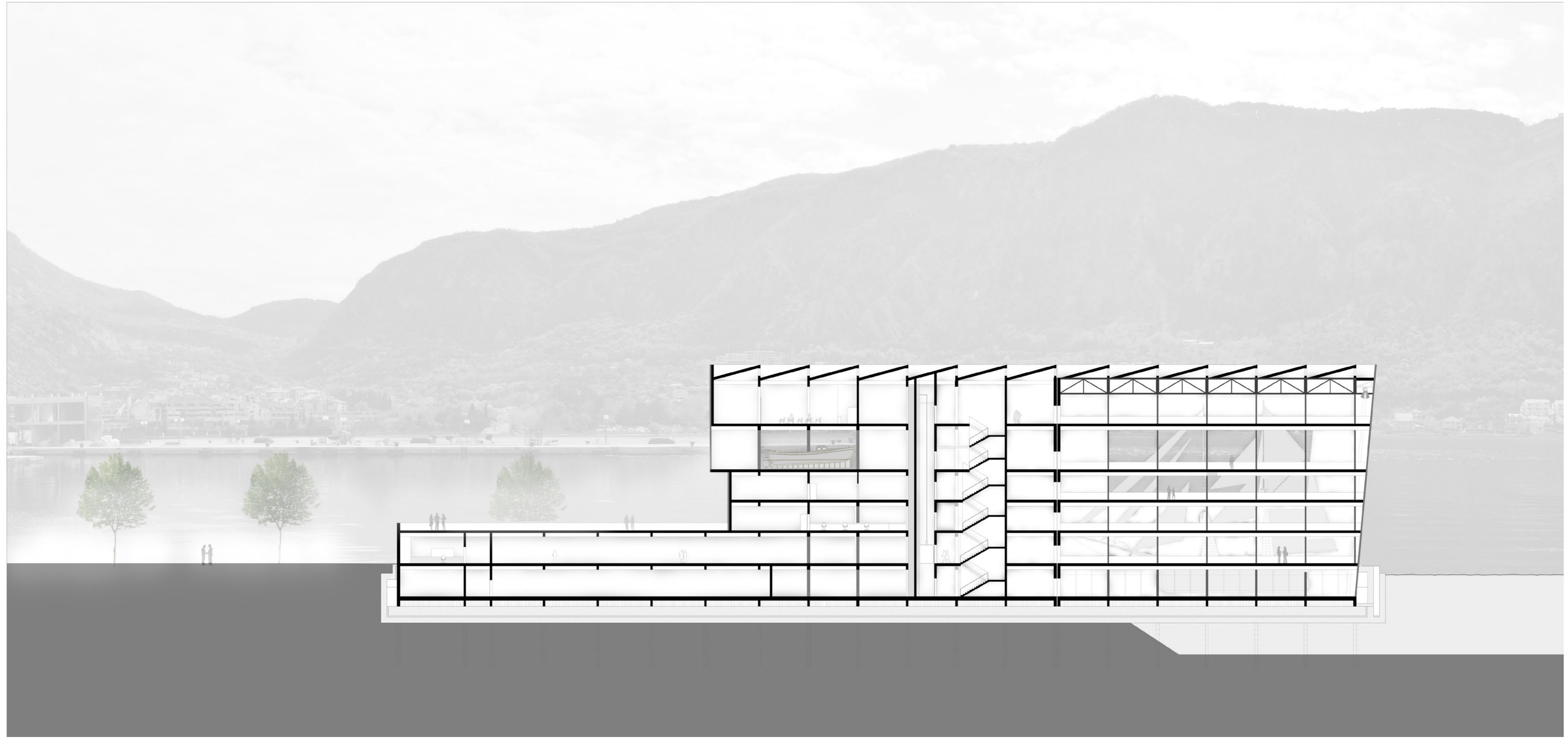
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section drawings

section 3-3

1:333



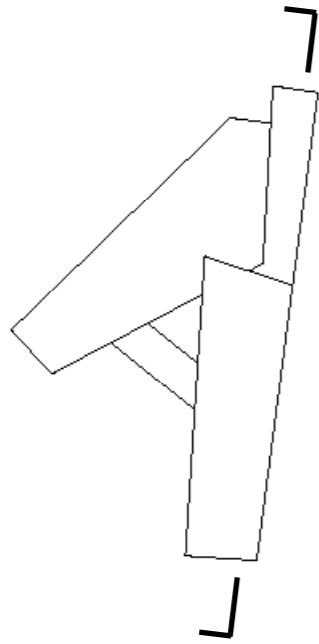
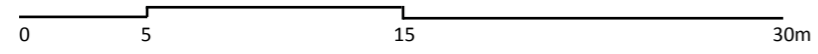


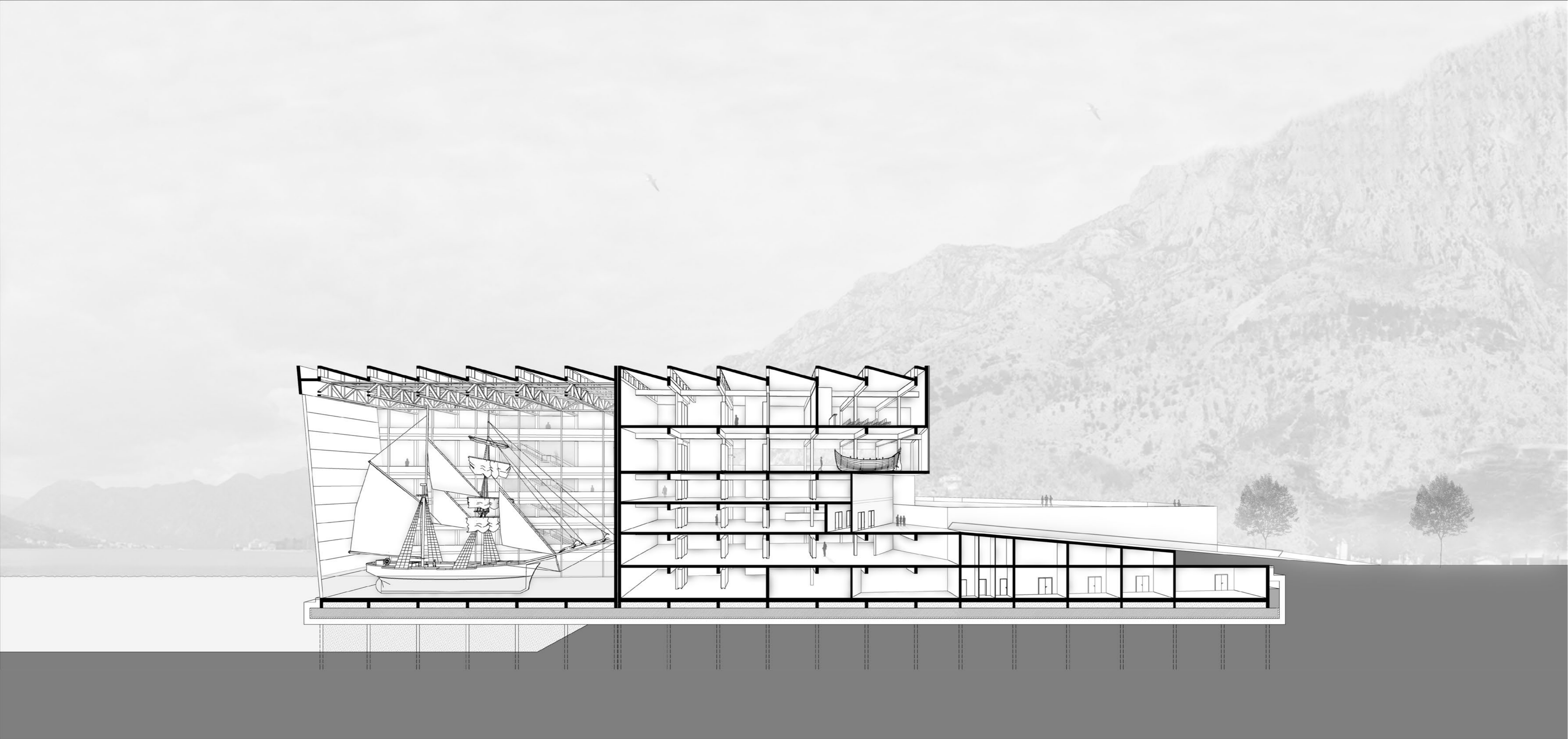
5.3

section drawings

section perspective 4-4

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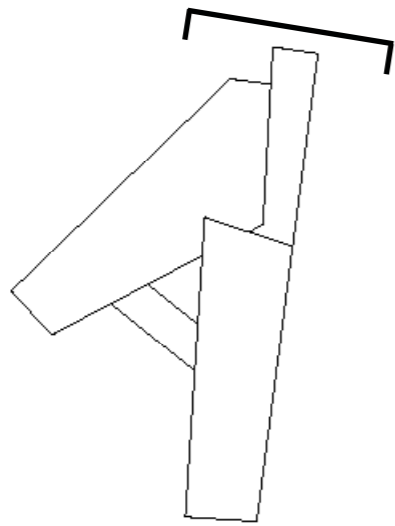
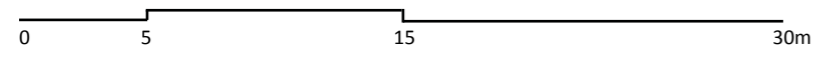


5.4

views

facade east

1:333



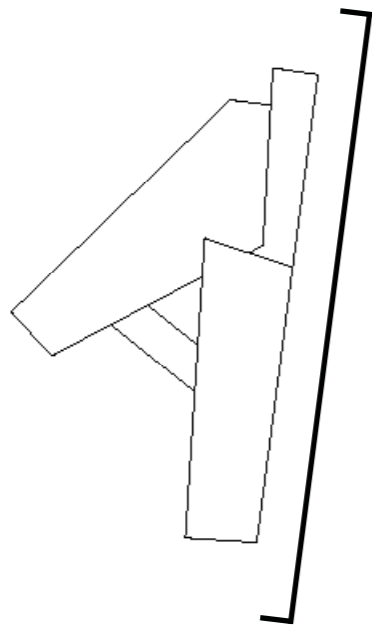
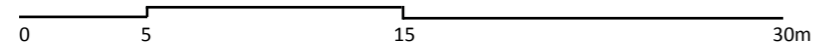


5.4

views

facade south

1:333



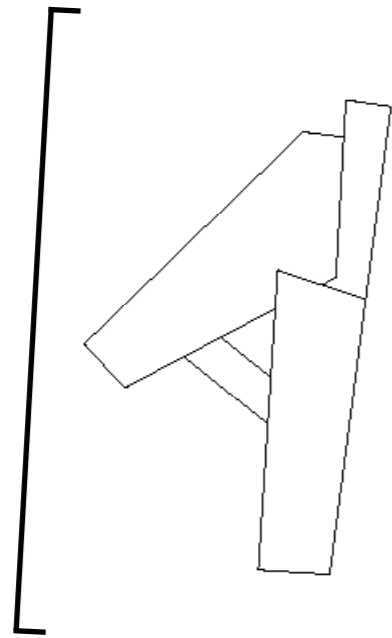
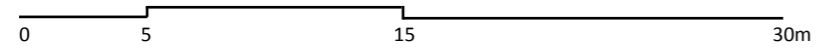


5.4

views

facade north

1:333

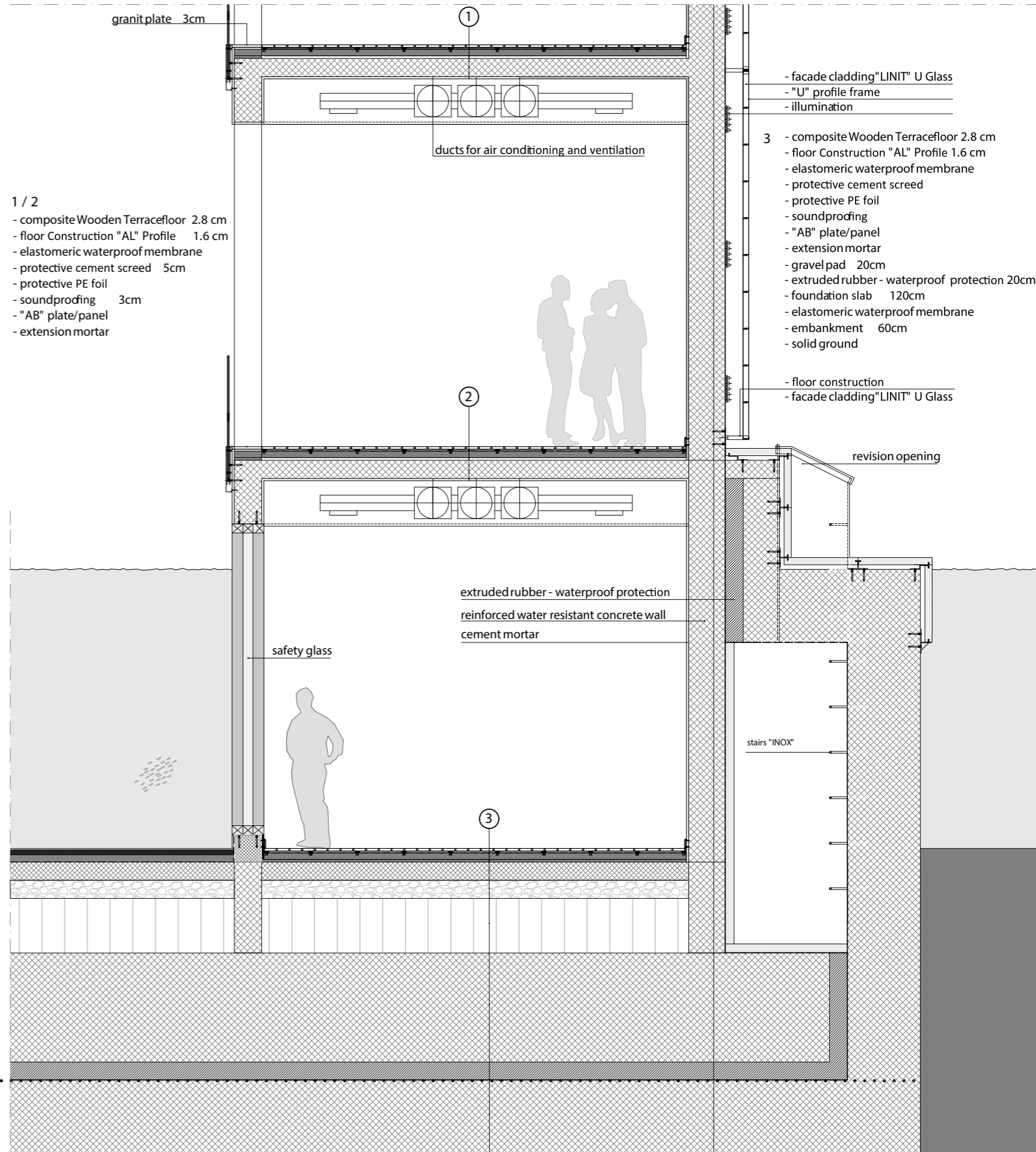
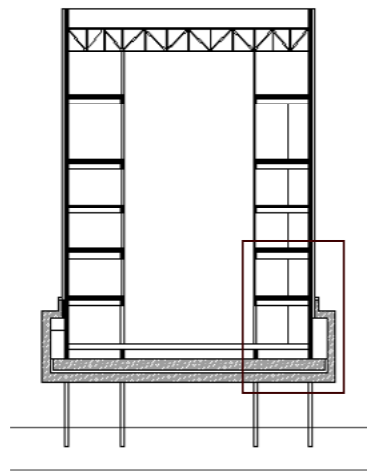




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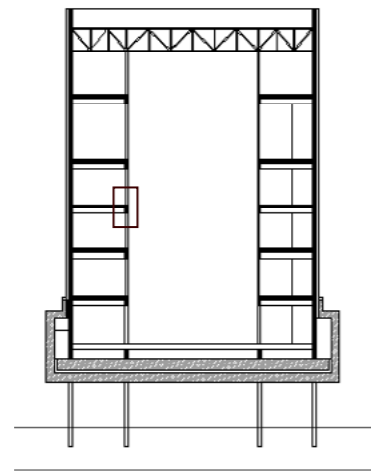
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1:50

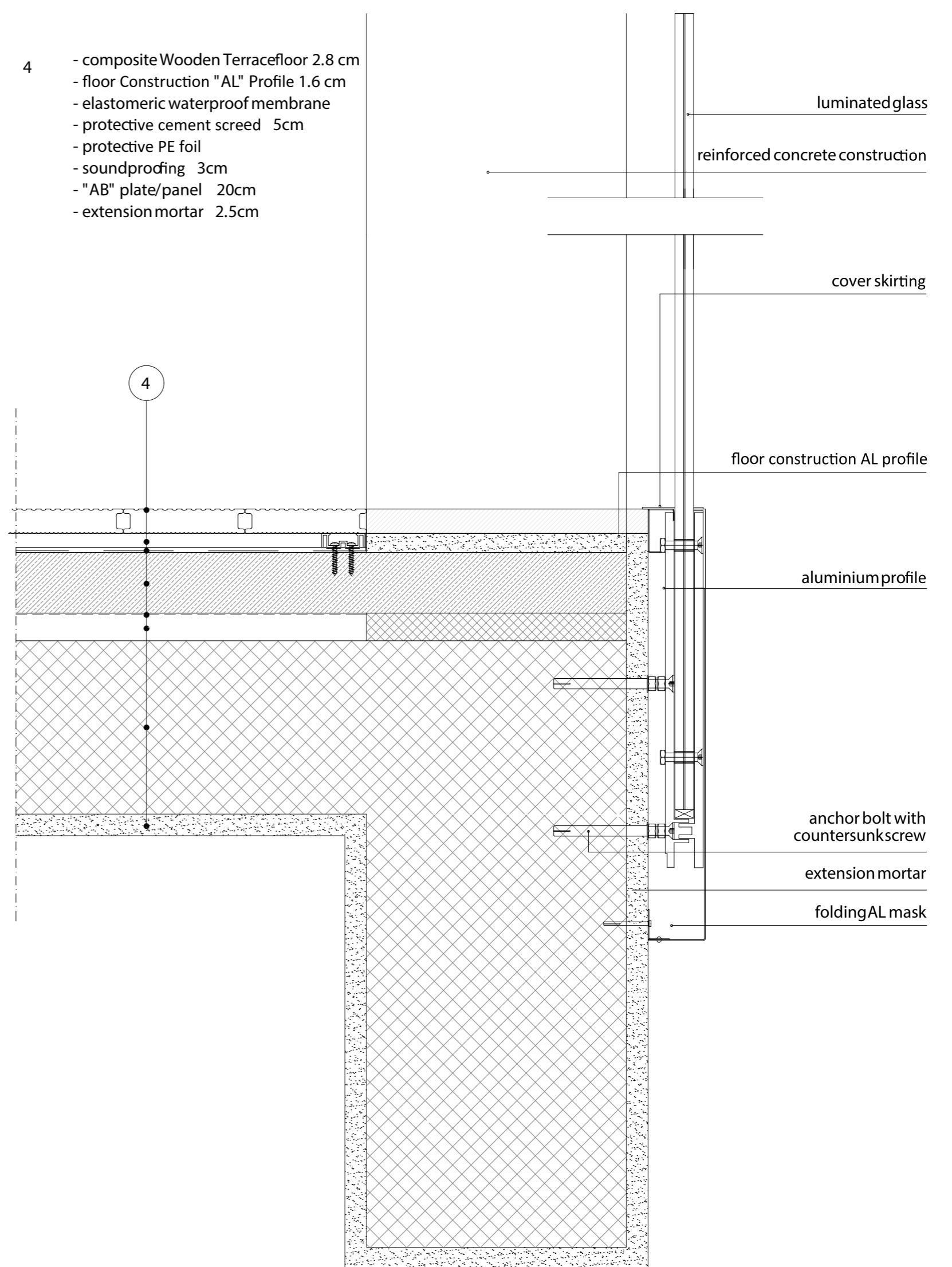


5.5
details | d2

1:5



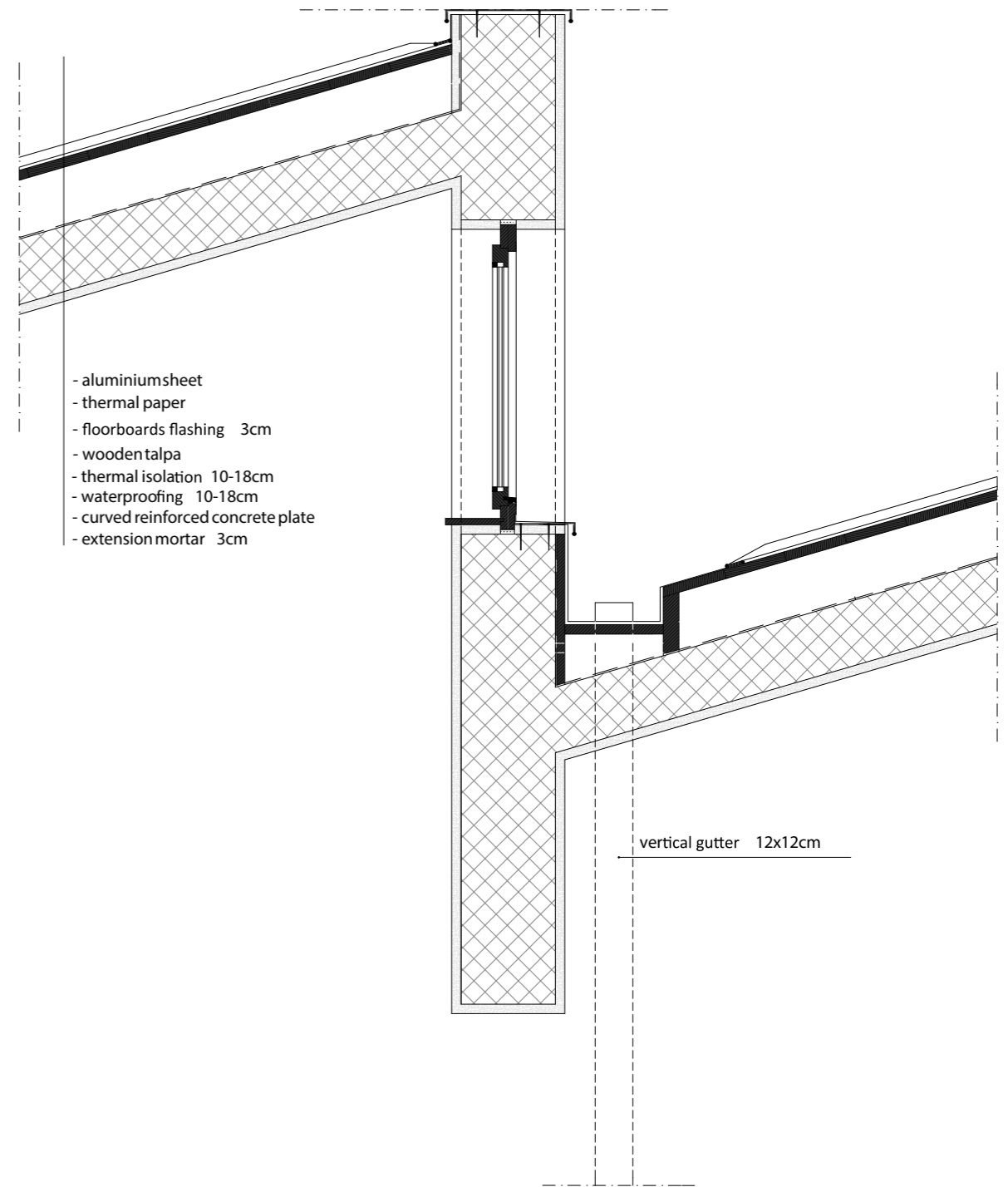
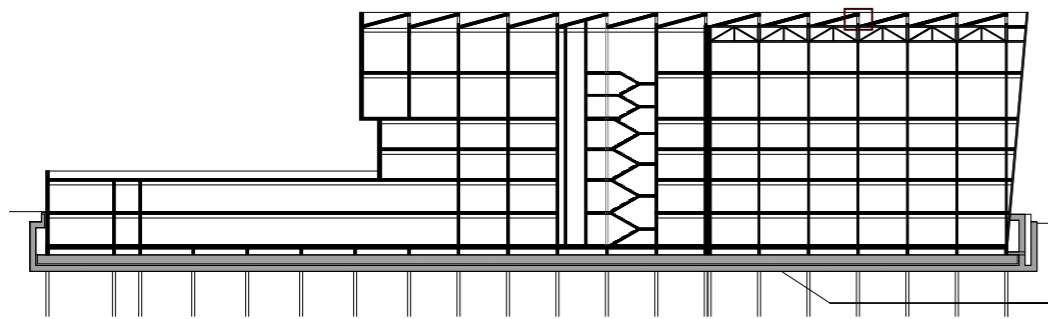
- 4
- composite Wooden Terracefloor 2.8 cm
 - floor Construction "AL" Profile 1.6 cm
 - elastomeric waterproof membrane
 - protective cement screed 5cm
 - protective PE foil
 - soundproofing 3cm
 - "AB" plate/panel 20cm
 - extension mortar 2.5cm



5.5

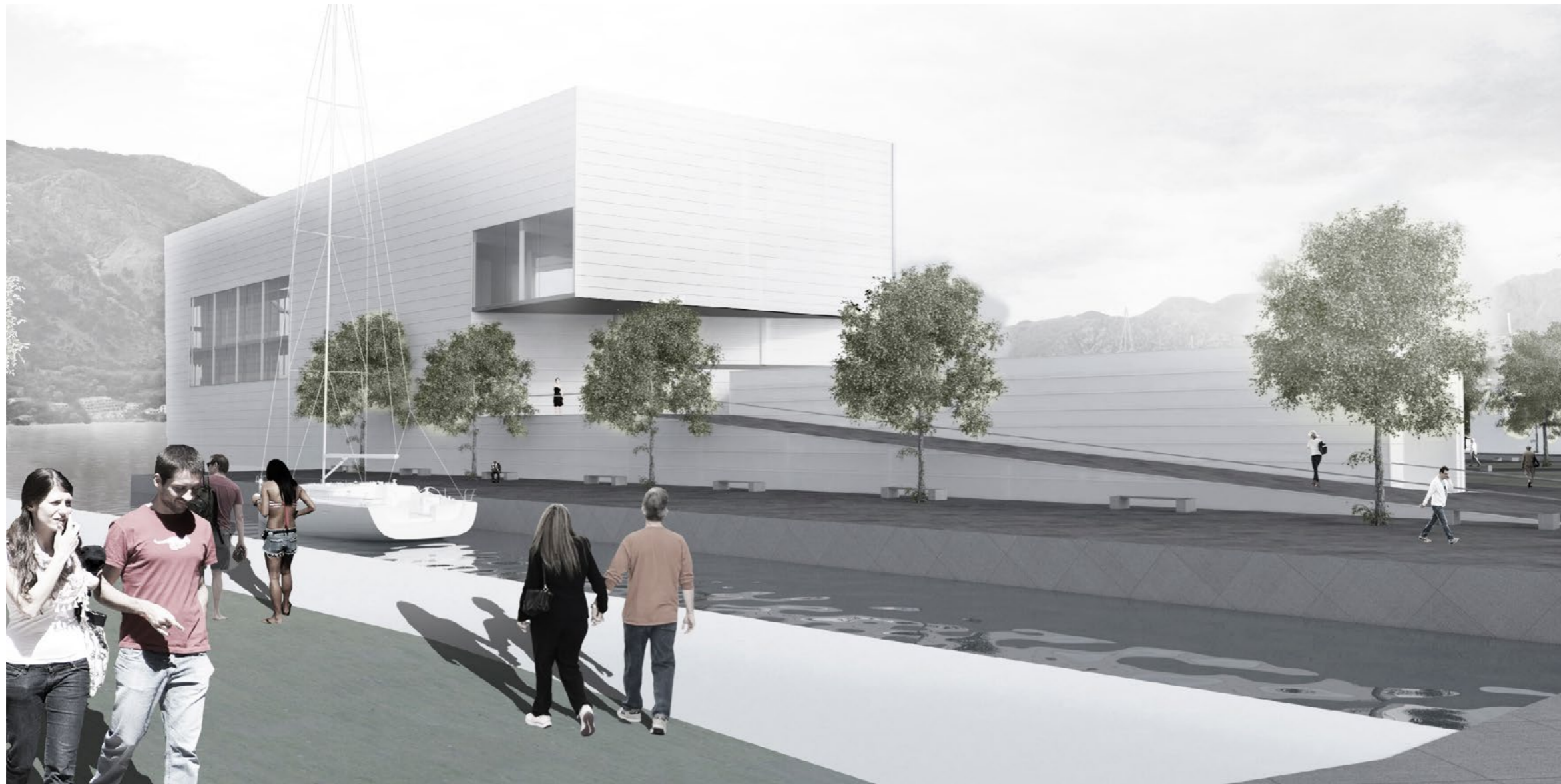
details | d3

1:20



5.6

visualization



5.6
visualization



5.6
visualization



references

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- Ill. 18 *Interior of Kursaal Congress Centre* | <http://singlefin.com/?m=201301>
- Ill. 19 *Ship inside of Vasa Museum* | <https://www.google.com/search?q=vasa+museum&sa=X&ei=BddrVc6pCsi9Ucz9gp-gL&ved=0CB0QvQ4oAA&biw=1600&bih=731>
- Ill. 20 *Cutty Sark Museum outside* | <https://www.google.com/search?q=cutty+sark&sa=X&ei=ONdrVaXsBcX2UJnag6g-M&ved=0CB0QvQ4oAA&biw=1600&bih=731>
- Ill. 21 *Drawing - Maritime Museum* | Drawing Jovana Djurdjenovic
- Ill. 22 *Bay of Kotor, satellite image* | https://www.google.at/search?q=kotor+google+earth&espv=2&biw=1777&bih=812&source=Inms&tbn=isch&sa=X&ei=OtdrVeKWLYOqU_mNg-pAM&ved=0CAcQ_AUoAg&dpr=0.9
- Ill. 23 *Bay of Kotor, site plan* | Plans of Kotor
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- Ill. 25 *Drawing - Interior - Maritime Museum* | Drawing Jovana Djurdjenovic

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