

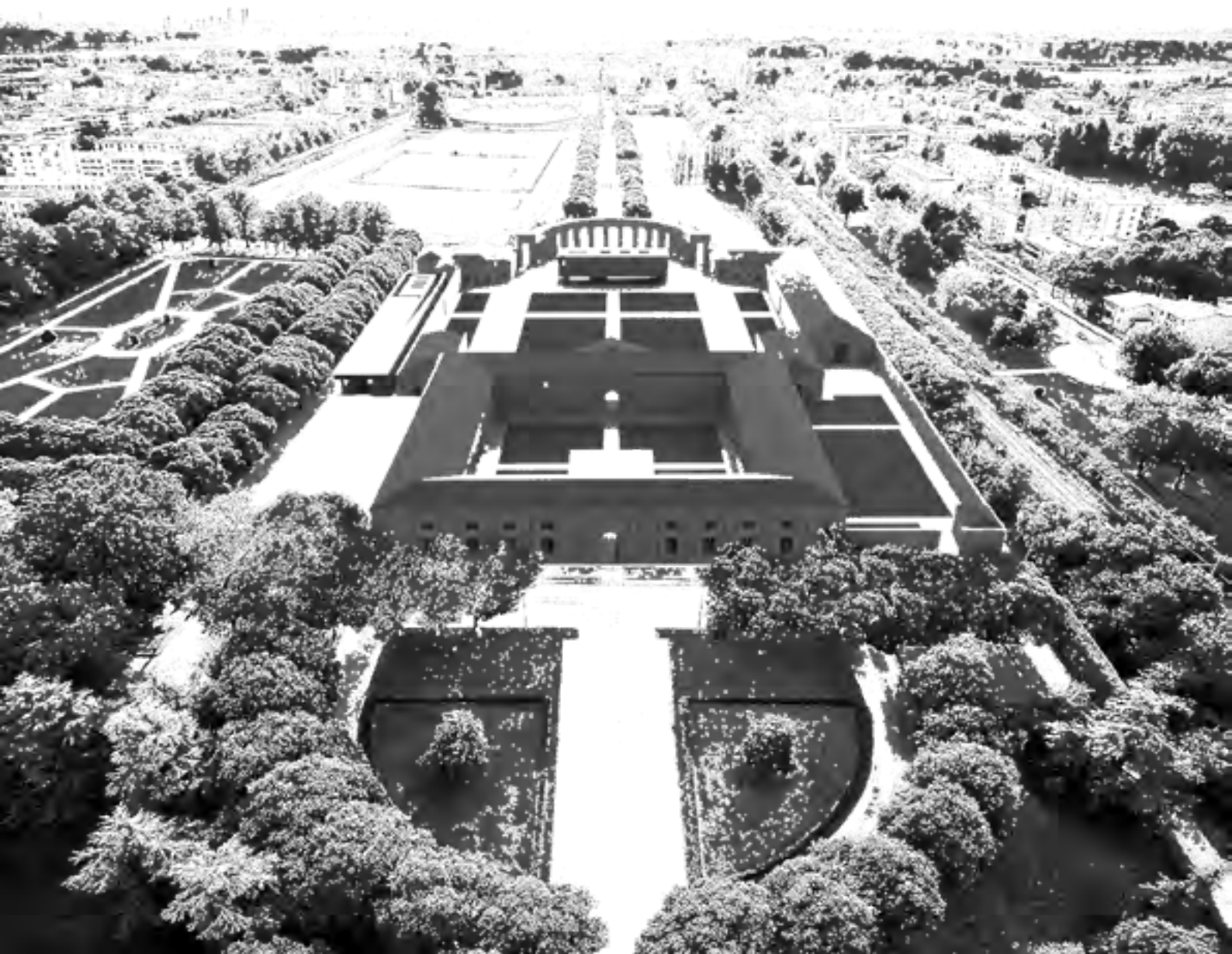


Two pavilions for Palazzo Te.

Welcome and exhibition between the evidence of the past and the presence of the contemporaneity.

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Index

4	Abstract	62	<i>II.1.2_Design considerations</i>
6	<i>Structure of the work</i>	66	<i>II.1.3_Main references</i>
8	CHAPTER I: Critical analysis	66	<i>Portuguese architecture</i>
10	I.1_The site	69	<i>Neue Nationalgalerie</i>
11	<i>I.1.1_Geographical transformations</i>	71	<i>Webb Chapel Park Pavilion</i>
18	<i>I.1.2_Historical background</i>	73	<i>II.1.4_Further case studies: pavilions</i>
20	<i>First phase</i>	74	<i>2018 Serpentine Gallery Pavilion</i>
21	<i>Second phase</i>	75	<i>Kube Pavilion</i>
22	<i>Third phase</i>	76	<i>Urban Room Pavilion</i>
24	<i>I.1.3_Following interventions and restorations</i>	77	<i>2012 Serpentine Gallery Pavilion</i>
24	<i>Bertazzolo and Sebregondi</i>	79	II.2_Design proposal
27	<i>From Gonzaga to contemporary age</i>	80	<i>II.2.1_Relation site-city</i>
34	I.2_Young history	82	<i>II.2.2_General concept</i>
35	<i>I.2.1_The method of the "Istituto Centrale di Restauro"</i>	82	<i>Alignments and Volumes</i>
37	<i>I.2.2_The interventions of Adolfo Poltronieri</i>	88	<i>Flows and accesses</i>
42	<i>I.2.3_“Centro Internazionale d’Arte e di Cultura di Palazzo Te”</i>	90	<i>Functions</i>
43	<i>The exhibition of 1989</i>	94	<i>II.2.3_Specific interventions</i>
46	I.3_Current management	101	<i>External volume</i>
47	<i>I.3.1_Competition notices and the creation of “Spazio Te”</i>	109	<i>Internal volume</i>
52	<i>I.3.2_Palazzo Te nowadays</i>	120	<i>II.2.4_Restaurant area</i>
54	<i>I.3.3_Future visions</i>	126	<i>II.2.5_Exhibition space (external volume)</i>
56	CHAPTER II: Project	134	<i>II.2.6_Exhibition space (internal volume)</i>
58	II.1_From analysis to project	146	Conclusions
59	<i>II.1.1_SWOT analysis</i>	147	<i>Technical sheets</i>
		152	<i>Bibliography and sitography</i>
		154	<i>Attached boards</i>

Abstract

The object of this master thesis' work is the intervention in the area of Palazzo Te, an important historical building, whose presence is connected to the anciently powerful family of Gonzaga. Currently, the building is a museum, whose management is entrusted to the "Fondazione Palazzo Te". With the aim to enhance the current cultural offer, the design proposal includes the design of two volumes, conceived as exhibition and service pavilions, connected to the palace activities. A careful preliminary historical analysis was essential for the identification of the intervention, configuring it as the result of a dialogue between the

evidence of the site's historical importance and the presence of contemporaneity. In this sense, through its volumes, the project expresses the main transformations suffered by the palace in the past and, at the same time, a new opportunity for citizens to experience it. The challenge was to compare modern techniques, materials and design approaches, with a building inserted in the UNESCO list of cultural heritage of Mantua. The solution combines elements of the past history, with techniques and needs which belong to the present, in the optic of a future definition of a new way to live the city and its heritage.

L'oggetto di questa tesi di laurea magistrale è un intervento progettuale nell'area di Palazzo Te, un importante edificio storico, connesso all'antica presenza della potente famiglia Gonzaga a Mantova. Attualmente, il palazzo è sede di un complesso museale, la cui gestione è affidata alla Fondazione Palazzo Te. Nell'ottica di un potenziamento dell'offerta culturale attuale, la proposta progettuale prevede il disegno di due volumi, concepiti come padiglioni espositivi e di servizio all'attività del palazzo.

Un'attenta analisi storica preliminare è risultata essenziale per la definizione e collocazione dell'intervento, configurandolo come risultato di un dialogo tra l'evidenza di

un'importanza storica del sito e la presenza della contemporaneità. In questo senso, il progetto ha come obiettivo quello di esprimere, attraverso le sue volumetrie, i momenti principali delle trasformazioni subite dal palazzo in passato, offrendo anche ai cittadini una nuova opportunità per viverlo. La sfida è stata quella di confrontare un nuovo intervento, caratterizzato da tecniche, materiali e modi di progettare moderni, ad un edificio inserito nel quadro generale di patrimonio UNESCO della città di Mantova. La soluzione mira a combinare elementi di una storia passata, con tecniche e necessità proprie del presente, nell'ottica di una definizione futura di nuovo modo di vivere la città e la sua storia.



Structure of the work

This master's degree thesis is focused on a cultural heritage building of the city of Mantua, Palazzo Te.

The choice of the design theme derives from the willing to apply all the skills and knowledge acquired during these academic years, in a context which is very close to us and part of our common life as students and residents. Among the various historical buildings available in the city of Mantua, Palazzo Te caught our attention because of its rich, controversial and twisted history, along with its continuous transformations along the centuries. The objective of this work was to understand better all the historical, geographical, cultural and management events which the palace has suffered, in the attempt of giving them a solution, in relation also to the needs of the current situation.

This thesis' work is divided into two main chapter, a critical analysis and the design solution elaborated.

Initially, a critical analysis was developed, in order to understand the geographical transformations of the "Island of Te", its connection with the rest of the city and the historical events related to Palazzo Te. This research was mainly developed through a deep bibliographic and sitographic analysis, which allowed us to identify the main historical events of the building, starting with its construction by the architect Giulio Romano. Subsequently, the thesis has analyzed the recent history of the palace, in terms of the definition of

new directives about the conservation of the monument and its current management, defined with the creation of the association "Centro Internazionale d'Arte e di Cultura di Palazzo Te" (today "Fondazione Palazzo Te") in 1989.

From the bibliographic and sitographic analysis, the research work involved discussions with the Vice Rector Federico Bucci and the staff of Palazzo Te, to clearly understand the current management of the palace and the program of future visions defined by the foundation.

Starting from this base, the second part of the thesis elaborates a design proposal which takes into account the past and recent history of the past, next to the current needs. The results produced by the critical analysis have produced conceptual schemes and drawings which describe the points of strength, weakness, opportunity and threat of the palace (SWOT analysis). They were considered in the elaboration of the project.

The design proposal consists in the realization of two main volumes. The first one is located in the internal big garden of the palace, in a straight contact with the exedra of Nicolò Sebregondi, while the other volume is located immediately outside and next to the northern wall of the palace. The justifications of volumes and locations are related to the historical-critical analysis already mentioned. The justification of the functions inserted are related to the needs, aims and future visions

expressed by the "Fondazione Palazzo Te" in books, publications and online interviews.

A personal critical vision added, led to the realization of a restaurant and two exhibition spaces, intended in a versatile way, in order to host the majority of possible events.

With the design proposal, Palazzo Te is intended to become a place for culture and a place to stay, which can be used all day, independently from the ordinary function of a civic museum.

Chapter I

CRITICAL ANALYSIS



I.1_THE SITE

Located in the south-east area of Lombardy, on the border with Veneto and Emilia Romagna, Mantua is one of the main Italian cultural cities. It was declared UNESCO world heritage in 2008 and in 2016 it was nominated as Italian capital of culture by the Ministry of Cultural Heritage.

The city is characterized by the presence of water, around and within its borders. In fact, the conformation of the city remembers the idea of a peninsula, surrounded by three artificial “lakes”, originally created as a defense for the city. These water basins, called “Lago Superiore”, “Lago di Mezzo” and “Lago Inferiore” were obtained from the Mincio river, emissary of the Garda lake.

Being UNESCO heritage, the city hosts a lot of monuments, like the “Saint George Castle”, the “Ducal Palace” and the “Church

of Sant’Andrea”. Most of them are located in the center of city and connected by historical narrow streets.

On the contrary, Palazzo Te is located on the southern side of the city, connected to the center by the famous “Percorso del Principe”. The location was chosen by Francesco II Gonzaga, and then Federico II Gonzaga, with the aim to create a kind of secondary villa, far from the issues of ordinary and political life.

So, the palace is located on the area which was anciently known as “Island of Te”. During the medieval age, this title referred to the huge prairie located along the southern walls of Mantua, and separated from the rest of the city by a river. The connections with the city and the conformation of the area itself changed along the centuries, determining always changes on Palazzo Te, which was host there.

I.1.1_Geographical transformation

The first transformations regard the urban layout of the city, even if the presence of water was always predominant.

From the original nucleus of the Roman Age, which correspond to the current Piazza Sordello, the city developed following the south direction. In this process, many buildings changes according to the needs of the times. During the 12th century, the hydraulic engineer Alberto Pitentino, commissioned by the Municipality, created the system to reorganize the course of the Mincio river and create four water basins: “Lago Superiore”, Lago di Mezzo”, “Lago Inferiore” and “Lago Paiolo”. The layout of the city was the one of an island. Water started to be seen as a defensive system, and this vision was strengthened with the Gonzaga family, who controlled Mantua from the 14th to the 18th century. The city was linked to the mainland with few connections

and water was also present within the borders. With the economical and commercial development, this vision had to give way to the needs of improving the infrastructure towards the main cities around the territory, like Milan. So, during the 17th century, the southern lake, “Lago Paiolo”, was dried up, consequently also to a reclamation action.

The presence of water in the southern area of Mantua remained only in the river which divided the city and the area of Palazzo Te. Nowadays, that river is substituted by a street, thanks to an operation of landfilling of the course of the river.

The current layout of the city is the one of the Renaissance Age, with some improvements caused by the changing of times.

The main axis which was created during the expansion of the city, the “Asse Gonzaghesco”, is still present nowadays.



That big street is also known as “Prince path” and its importance is due to its original function. It was the street which Federico II Gonzaga walked from the Ducal palace and the city center, to reach Palazzo Te. Along that path, many monuments developed through the years, like the “Temple of San Sebastiano”, the “Mantegna House”, the “Pescherie of Giulio Romano” and the “Church of Sant’Andrea”.

The second level of transformation regards the “Island of Te”. As the name said, Palazzo Te was built over a sort of island, separated from the rest of the city. That place was destined to agriculture and was originally surrounded by the river and few buildings.

The connection to the city was developed through the “Prince path” and the “access door” to the Te area was the “Porta Pusterla”. The configuration of this area remained substantially the same along the centuries, despite the changes that the city continued to suffer according to the needs of the time. The city expanded its limits towards Palazzo Te, until entering in contact with it. In that moment, the intervention of landfill the course of the river became essential.

So, for this reason, during the 1930s, the course of the river was closed and the “Viale Risorgimento” was created in order to improve the internal connections of Mantua.

Nowadays the area of Palazzo Te is part of the city and it is characterized by a great quantity of trees and green areas.

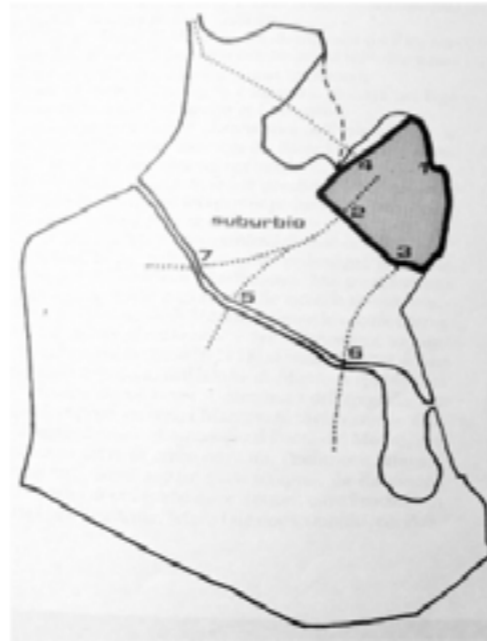


Fig. 1
From Carpeggiani and Pagliari, *Profilo di una città, Mantova*, 1976
Original nucleus of the city of Mantua and direction of expansion.



Fig. 2 (above)
Braun and Hogenberg, *View of Mantua*, 1575

Fig. 3 (under)
Various authors, *Die Gartenlaube*, Ernst Keil's Nachfolger, Leipzig, 1833



Fig. 4 (on the left)
Da Biblioteca Digitale Teresiana
Anonymous, *Plan de Mantoue
et de ses environs*



Fig. 5
Da Biblioteca Digitale Teresiana
Vallardi Pietro e Giuseppe,
Maps of Mantua, 1848



I.1.2_Historical background

There are many documents which certify the use of the "Teieto" area since the second half of the 15th century. But it was at the beginning of the 16th century when the Duke Francesco II Gonzaga decided to build there a villa with stables, in order to have a place for rest and to host his beloved purebred horses. In the interiors of the palace, a fresco is still visible, with the date 1502 and the initials of the owner.

The definitive reason which brought to the construction of the palace, was in the 1524, when the architect and artist Giulio Romano went to Mantua.

Federico II, son of Francesco II and Isabella D'Este, contacted him to transform the complex into a villa for pleasure, without completely demolishing the original stables. Palazzo Te became the center of the artistic and social interests of the Duke. To quote him:

"[...] vago e adorno de tutte quelle belle cose che potemo haver fatti per meni delli migliori et più eccellenti homini che si trovino [...]" 1

Moreover, some rumors still define the palace today as place of meeting between Federico II and his secret lover Isabella Boschetti.

In the panorama of the 16th century architecture, the construction of the palace is one of the best documented interventions, with hundreds of letters and payment receipts. But despite that, the interpretation of the constructive phases is controversial. It is thanks to Vasari

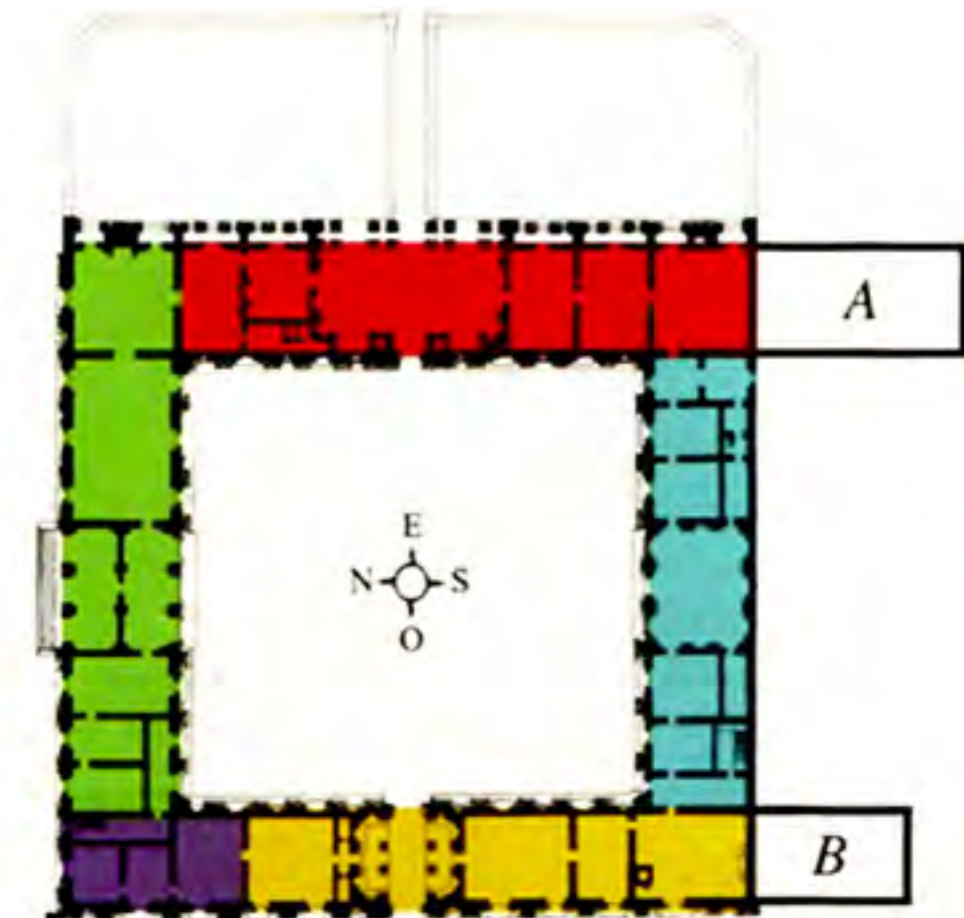
if we currently know that in a period of ten years, Giulio Romano modified several times the architectural structure and the decorative system of Palazzo Te.

Generally, the interventions which brought to the construction of the palace can be summarized into three main phases.



Fig. 6
From A. Belluzzi, *Palazzo Te a Mantova*, vol. II, Modena, 1998, p.599, fig. 1117
Detail of the frieze in the attic of the stables, with the date "1502".

1 Federico Gonzaga [1524]



- Palazzina padronale dell'ala nord
- Ala est
- Ala sud
- Ala ovest
- Intervallo tra la testata nord dell'ala occidentale e la facciata occidentale della palazzina
- A Il "gioco della baletta"
- B Casetta rustica

Fig. 7
From U. Bazzotti, *"Un luogo e certe stalle": sull'isola del Te prima di Giulio Romano*, "Civiltà Mantovana", 2006, p. 144
Plan of Palazzo Te with the indication of the preexistences

First phase

The construction of the palace began in 1526, with the restoration of the stables. Giulio Romano conserved many of the existing elements, even if it's almost impossible to know exactly what was preserved from the previous spatial system.

We can refer to the description of Jacopo Strada, written around the 1570s, about the quadrangular layout of the current palace and the image of a court of medium dimensions, with stables and places for pleasure. This illustration implies the construction of heterogeneous volumes, and it is possible that some parts of the perimeter were connected by a fence wall.

The intervention of Giulio Romano started from the northern side, with the "Psyche room" and the "Ovid's room". The important thing was to follow the directive of the Marquis and not ruin the existing walls.

In this first phase of works, the realization of an architectural order was not expected. Facades were painted and decorated following the geometrical patterns discovered on the north side, while the windows were located in the middle of the wall in each room, according to the internal construction needs.

If we look at the painting of the "Ovid's room", realized in 1527, we can see the palace under construction, showing the three arches of the loggia, as they were cut out from the pre-

existing wall. The missing elements are the attic, the pilasters and the ashlar, characteristic elements of the architecture of Giulio Romano.

Other interventions regarded the reorganization of the rooms at the ground floor and the introduction of a loggia at the center of an apartment, anticipating themes which will be then extended to all the palace and which qualifies the initial core as the real "villa". Later, with the construction of the eastern

facade, the architect decided to apply an architectural order to the entire palace.

To solve the problem of the absence of symmetry on the northern facade, due to the introduction of the "Loggia of the Muses" in an eccentric position, Giulio Romano decided to adopt an optical illusion by varying the rhythm of the pilasters. Palazzo Te is full of these expedients, so much so that it is also known as "palace of lucid deceptions".

Second phase

Next to the construction of the eastern side, Giulio Romano began the restoration of the western and southern buildings.

The external perimeter is respected. The main intervention provided a basement to the new complex, in order to avoid moisture infiltrations and to bring all the floors to the same level.

But the most important work of this phase regards the decorative system. During the 1528, the decorative activity became more intense. Particularly, it started the arrangement of the apartments on the upper floors and the rooms located at the first floor of the northern side. Next to it, another important intervention is about the staircase on the southern side. That was transformed and moved in order to have a direct connection with the adjacent spaces. In this way, Giulio Romano was also able to obtain the possibility to insert a



Fig. 8
From Gaetano Mettacodi, *le*
"Stalle del Te" [1690] (ASMn,
Archivio de Moll, b.44, cc. 11-12



Fig. 9
Anonymous, painting in "Ovid's
room" showing the palace under
construction, 1527

bathroom in the mezzanine, directly connected to the master rooms.

The following gaps in the documents about the interventions, probably correspond to less activity.

It can be assumed that the works focused on completing and making habitable the master rooms, located on the northern and eastern sides, up to the large loggia.

In 1528, there are documents that attested the beginning of the interventions on the secret garden. It is not known exactly when they finished, but it was probably around 1534.

Third phase

This phase began in 1530, when Palazzo Te assumed a new role: a residence for the Emperor Carlo V, who was hosted in Mantua by Federico Gonzaga. During this period, it is attested that Giulio Romano worked on the eastern side, creating a new facade towards the inner garden. The intervention provides a facade which is not architecturally connected to the one of the northern side, but which is characterized by the presence of large hollow pillars simply placed against the wall. That was because the new facade fits the program of the creation of an imperial apartment.

For this reason, the new “David’s Loggia”, opened in a central position in relation to the one on the northern side, has all the

characteristics of a royal loggia, with a triple opening of constant amplitude.

Nowadays, looking at the facade towards the garden, a tympanum can be seen, although it was realized by Paolo Pozzo at the end of the 18th century. About the possibility of the presence of a tympanum in the project of Giulio Romano there are two theories. The first one would argue that the tympanum falls within Giulio Romano’s linguistic repertoire and corresponds with extreme coherence to the symbolic connotations of the facade. The other one would support the absence of a tympanum in Giulio Romano’s project, following the oldest graphic descriptions of Palazzo Te, where the tympanum was not represented.

When the activity of Giulio Romano in Palazzo Te stopped, the complex was characterized by the presence of a main squared building with an inner court, which was flanked by a big garden, on the east side of the construction. The juxtaposition of the two empty spaces was at the base of the original idea of Palazzo Te, according to Giulio Romano. Moreover, looking at the map in the following page, we can notice the presence of some secondary buildings which enhanced the presence of the garden. Particularly, they consisted in a longitudinal building, maybe used as stables and barn, placed along the north side; and some small constructions which closed the side of the garden towards east. All of them were demolished along the centuries.

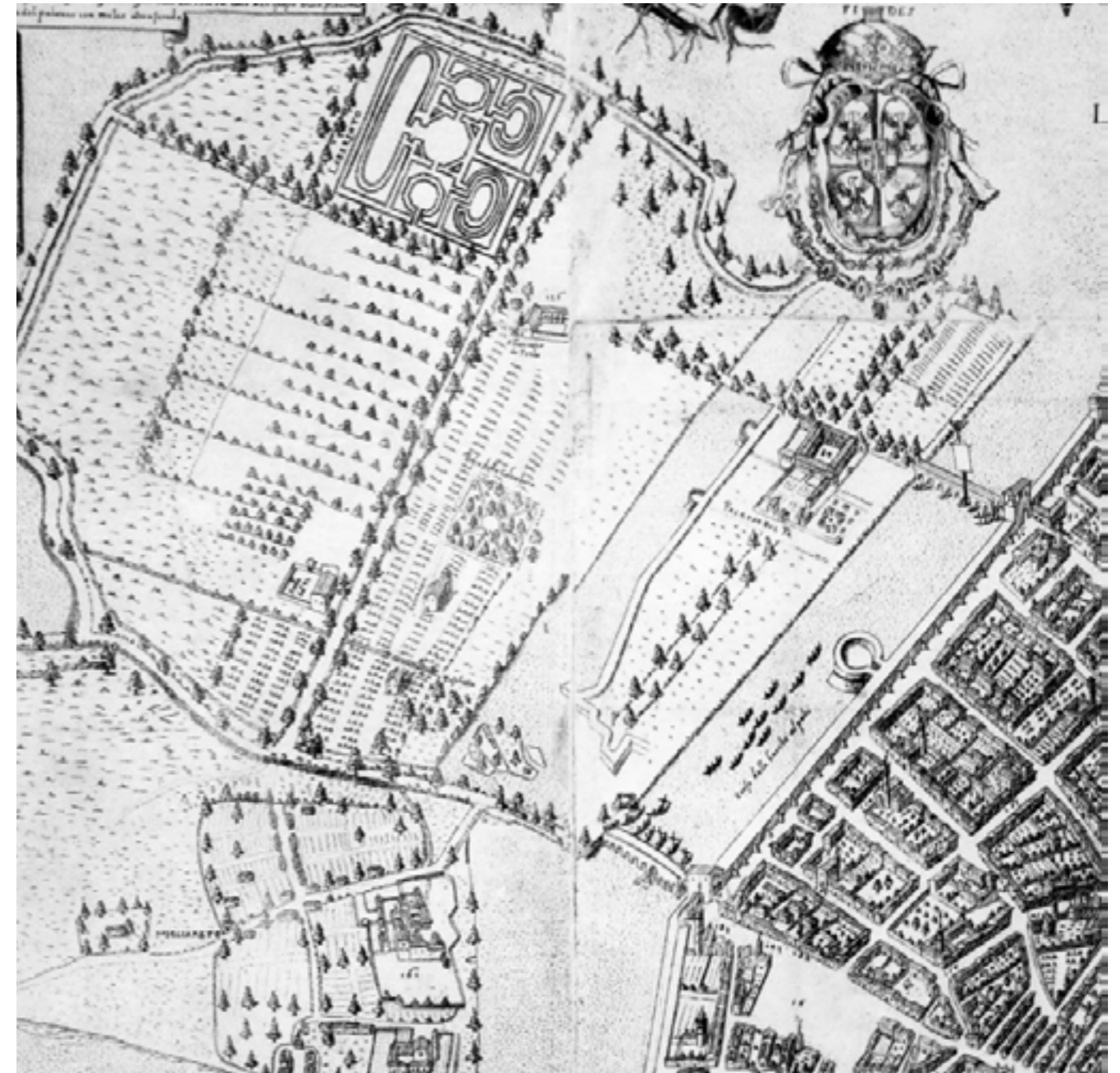


Fig. 10
From U. Bazzotti, “Un luogo e certe stalle”: sull’isola del Te prima di Giulio Romano, “Civiltà Mantovana”, 2006, p. 144
G. Bertazzolo, Urbis Mantuae Description, 1628, Mantova
Palazzo Te in Giulio Romano’s years. The engraving represents also the Pusteria bridge which anciently connected Palazzo Te and the city.

I.1.3_Following interventions and restorations

In occasion of Federico II's wedding, celebrated in 1531, the activity of the architect Giulio Romano and his collaborators was focused on the arrangement of the apartments inside the castle of "San Giorgio". The interventions on Palazzo Te proceeded slower, but the site remained with maintenance works, periodically joined by the construction of new elements and the disappearance of others. This fact led to a deep transformation of the architectural forms of the palace over the following years.

Bertazzolo and Sebregondi

Gabriele Bertazzolo² intervened on Palazzo Te at the end of the 16th century. He was known for his experience in the creation of water games and party equipment. In 1596 he drew the "Urbis Mantuae Descriptio", a cartographic engraving of Mantua, where he described the gardens of Palazzo Te, with the new big vegetal labyrinth.



Fig. 11
From U. Bazzotti, "Un luogo e certe stalle": sull'isola del Te prima di Giulio Romano, "Civiltà Mantovana", 2006, p. 144
G. Bertazzolo, Urbis Mantuae Description, 1628, Mantova

It is also probable that Bertazzolo built also the two buildings on the sides of the fishponds, especially the one next to the "Psyche room", which has to be intended to host the hydraulic machines to actuate the water games.

In the meanwhile, the southern loggia, remained incomplete, was transformed into a new closed room.

With the interventions of Bertazzolo, the physical transformations of the palace consisted in the superimposition of new decorative elements in the interiors and in the research for a close link between the building and the city around.

Palazzo Te became the center of a new ceremonial path among the built landscape and the Ducal palace. It was seen as the representative residence where guests were welcomed before entering the city.

In 1630, the conquest and plunder of Mantua by the army of the Holy Roman Empire led to the collapse of the fragile economic system of the Mantuan state. The growth of the city stopped and the morphological transformation assumed an involitional character. The most evident consequence was the disappearance of a large part of an organized landscape around the suburban villas.

Regarding Palazzo Te, they tried to contrast this tendency by restoring the existing structures and design new buildings. So, it was in the first half of the 17th century, when Nicolò Sebregondi³ built the exedra, placed as scenic backdrop of the garden. In this case, it is evident that the architectural language chosen by Sebregondi was completely different from the one of Giulio Romano, applied to the rest of Palazzo Te.

In 1651, Sebregondi also built the space of the "Fruttiere", on the south side of the garden. This space was conceived as winter shelter for plants and citrus.

The new buildings designed by Sebregondi, modified the space of the garden. Indeed, the initial idea for the construction of Palazzo Te was the combination of two similar elements: the squared courtyard building, and the empty space of the garden defined by the surrounding elements. Especially the construction of the exedra put the square composition on a second level, exalting the longitudinal axis and introduced a new dynamic perspective.

Sourced of 1655 documented the restoration of the suburban villas which escaped the plunder, Palazzo Te among them. The negative aspect of this period was that they focused on the image of the building itself, losing the connection with the context around.

² Gabriele Bertazzolo (Mantua 1570-1626) was an Italian engineer and cartographer, who worked for 35 years for the Gonzaga family. He is well known for his engraving about the city of Mantua.

³ Nicolò Sebregondi (Sondrio 1585-Mantua 1652) was an Italian architect. In Rome, he met Ferdinando Gonzaga, who later called him in Mantua.

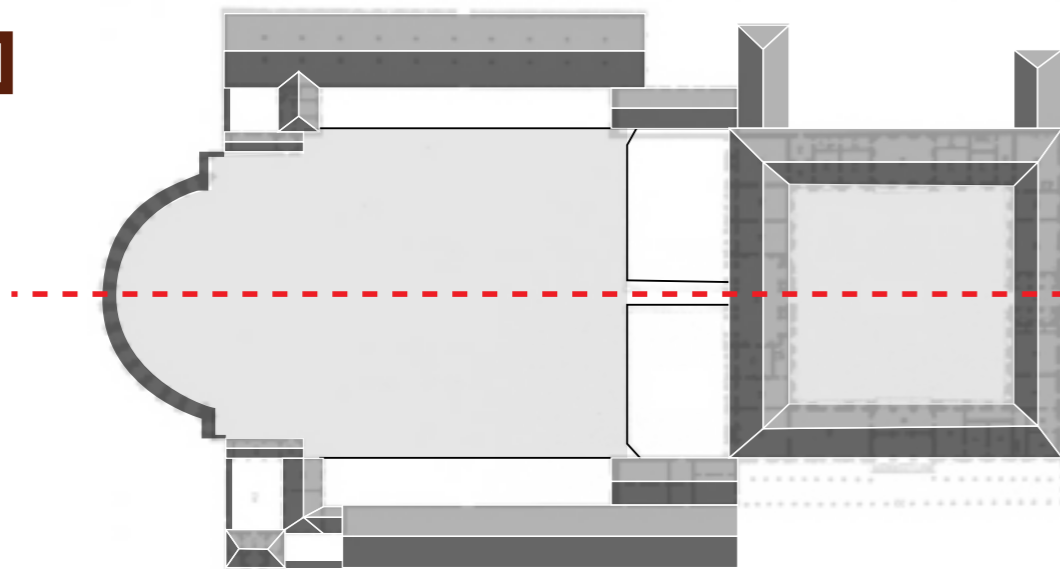
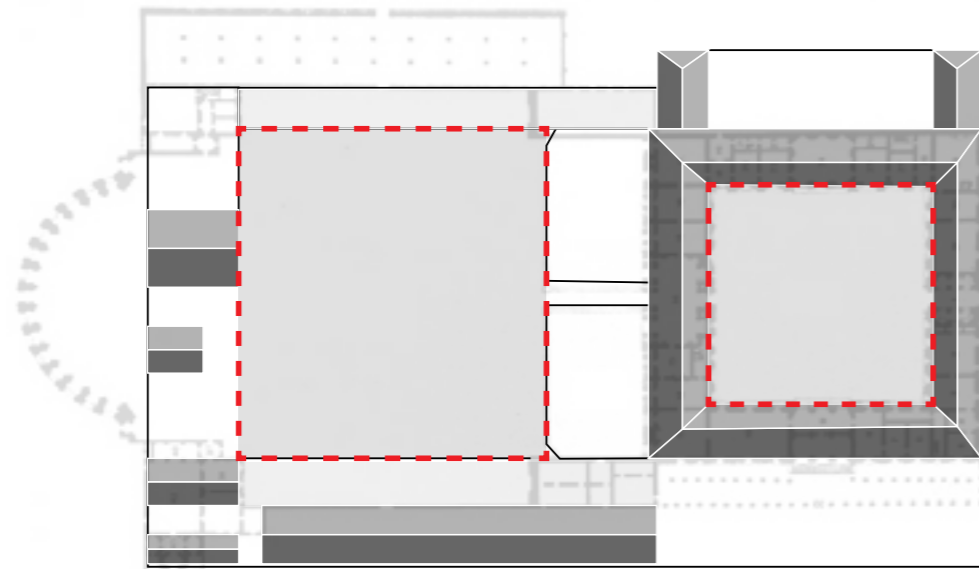


Fig. 12
Analysis of the evolution of the composition of the Palace.
Comparison between Giulio Romano's idea and Sebregondi's additions.
Personal elaboration

From Gonzaga to contemporary age

At the beginning of the 18th century, with the conquest of Mantua by the Austrian Empire, Palazzo Te lost the original functions conceived by the Gonzaga family. In Austrian's ideas, cities were seen as forts, and public buildings had to be destined to military purpose.

Particularly, Palazzo Te wasn't transformed permanently into a barrack, but in case of necessity, it was used as army housing.

The lack of a permanent destination, the contradictions in use and the damage caused by soldiers quickly deteriorated the construction and posed a pressing problem on the conservation of the palace.

So, in 1726, the president of the Senate Gianfranco Pullicani, instructed the Prefect of water Doriciglio Moscatelli Battaglia to restore the palace. He reactivated the fountains and the water games, he repaired roofs, floors, doors and windows, and finally he also arranged the wall decoration. The works finished in 1728, even if the work of a local authority wasn't enough to give new importance to the palace. Under the Austrian control, Palazzo Te returned to be used as deposit or army housing.

The most important restoration was made between 1774-1784, by Paolo Pozzo⁴ under the patronage of "Accademia Virgiliana". The intervention took care of the decorative system, but also the architectural structure and the surrounding environment.

Fig. 13 (on the right)
From www.palazzote.it
Particular of the fresco in "Giant's room".

⁴ Paolo Pozzo (Verona, 1741-Mantua 1803) was an Italian architect and an important exponent of the "Accademia Virgiliana", founded in 1767.

The restoration of Paolo Pozzo was based on a survey by Giambattista Marconi, and it is documented by plan and facades designed in 1783 by Antonio Campi. This intervention deeply transformed the external structure of the main building. Pozzo demolished the "belvedere" and built the tympanum on the east facade and, on the other hand, he modified the aspect of the facades, confirming the original laying of the plastered surfaces.

In the interiors, one of the most important interventions by Paolo Pozzo was about the "Giants' room". Among the operations, there were the infill of the fireplace compartment open on the wall, with the subsequent pictorial integration, the repainting of the entire plinth of the room and the upholstery of the two oriental French doors.



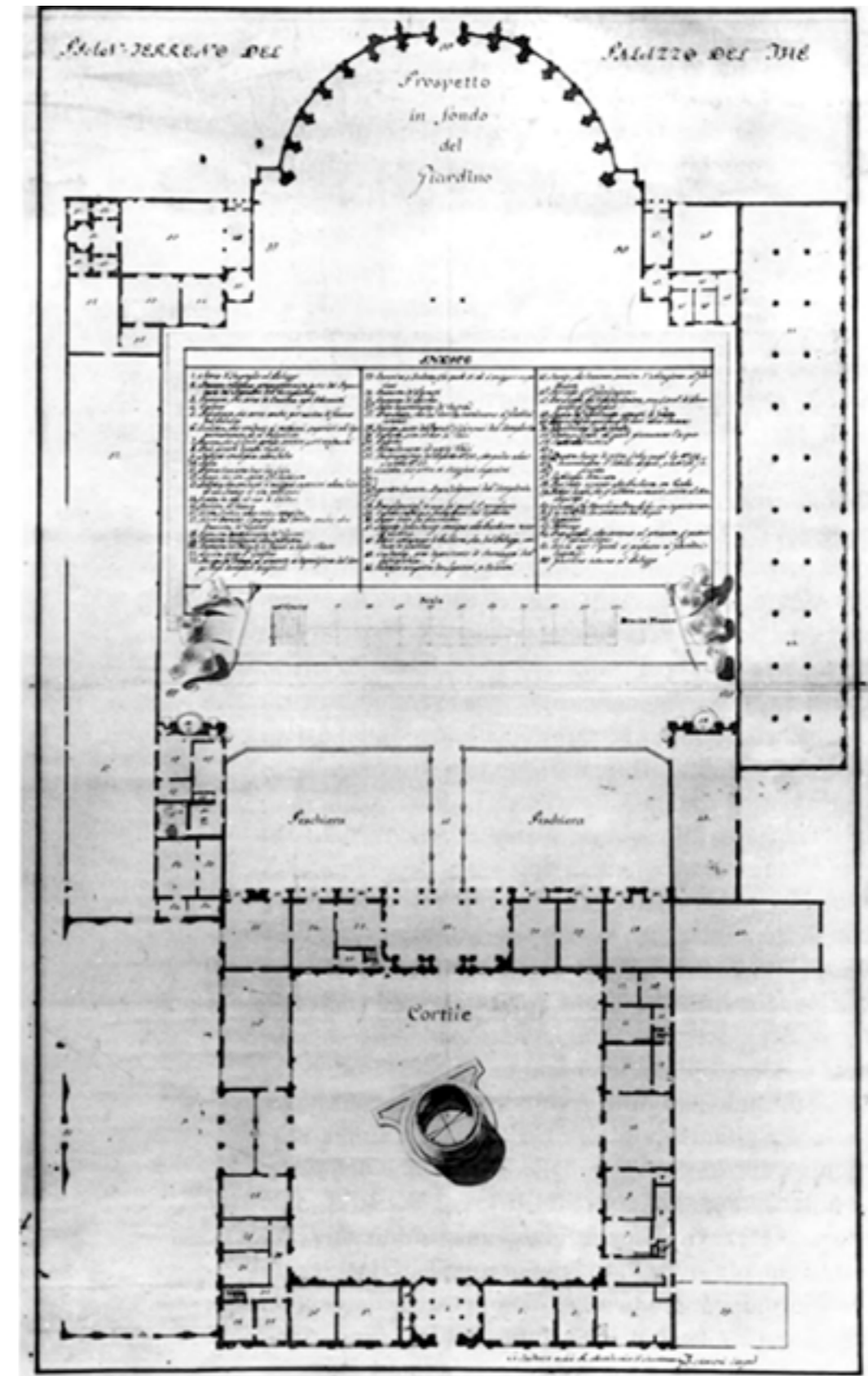
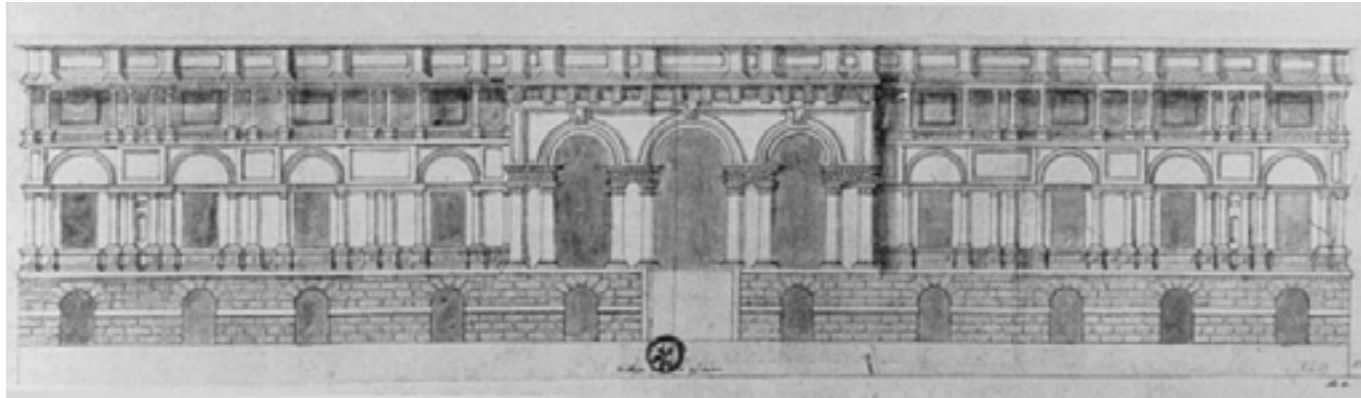


Fig. 14 (above)
 From A. Belluzzi, *Palazzo Te a Mantova*, vol. I, Modena, 1998, p. 33 fig. 19b
 Survey of the eastern facade of the palace, towards the "Peschiere", done by
 Campi Antonio Maria around 1780.

Fig. 15 (under)
 Form www.inexhibit.com
 Current aspect of the eastern facade, with the typanum added by Pozzo.

Fig. 16 (on the right)
 From A. Belluzzi, *Palazzo Te a Mantova*, vol. I, Modena, 1998, p.234, fig.141
 Survey of the plan by Giambattista Marconi, 1774, ASMn, Mapped Acque, n. 1994.

Because of the lack of precise documentations about all the operations done on Palazzo Te between the 18th and the 19th century, it is impossible to determine the precise years of demolition of some ancillary buildings of the palace. For instance, it was probably around the second half of the 18th century, when the big volume which developed along the north side was demolished. The same fate happened to the smaller building of the "Gioco della palla" and the rustic building located in the small south court. All of them were presented in the original project of Giulio Romano and still represented in the 1774 plan, drawn by Giambattista Marconi. Unknown are the causes of their demolitions.

The restoration works stopped in 1796, until Giovanni Antonio Antolini⁵ became the architect director. So, from 1805, the interventions on Palazzo Te, restarted in alternate phases. They probably focused on the external facade oriented west and on the willing to create a kind of "walking garden" in the external spaces. Looking at the documented interventions on the west facade, done in this period, it is evident the desire for approval, according to the need of "regularize the irregularities", of the executive team. They intervene on the palace changing connections, aligning rustic bosses and adding plaster to unify the surfaces. The attempt was to follow the original idea of Giulio Romano in the creation of Palazzo Te, which consisted in the creation of an image of regularity but characterized by artifices and optical illusions, placed in strategic point of the

building.

Examples are the famous "falling triglyph" and the changing of the module of the pilasters on the facades. Looking at the general image of the palace, it is not immediately evident, but once the visitor notices it, he starts to discover and appreciate better the architecture.

In 1874, the Italian State sold Palazzo Te to the Municipality of Mantua, who started to rent some parts of the building to private. In this way, a situation of progressive deterioration was favored by the co-presence of different uses, sometimes not compatible with the pre-existence.

It was only from the beginning of the 20th century that the Municipality started to think about the conservation of the palace. For this reason, they started to recollect in the municipal archive, some documents about the past interventions, even if in a fragmented and incomplete way. On the basis of this research and what was found out, the Municipality started to intervene on Palazzo Te. The first verifiable operation regarded the eastern facade, towards the "Peschiere": they produced a metric calculation, dated 1901, which was followed by the planning of a unique intervention on the entire front. The conservative approach results from the description of the works which consists in the revision of the windows and the system of discharge of rainwater, next to the rearrangement of the entire plastered surface.

In 1935, some estimates were made and they regarded a huge program of ordinary

maintenance, extended to the entire complex. In the documents, the operations were described in a simple way, but it is evident that the conservative approach was predominant. Indeed, they describe partial remaking of plaster, brushing with color matching, limited integration of frames, bosses, capitals and metopes, coloring of all windows and iron works. In the exteriors, the occasional interventions made regarded the surrounding walls, the ancillary buildings and structures. In 1939, some restoration works were executed on the west facade, while in 1941, the operations on the "Cortile d'Onore" were finished. They regarded a unique intervention on all the facades, the almost complete renovation of the access portal to the "David's Loggia" and the partial reconstruction of bosses and parts of trabeation. Apart from the complete reconstruction of the base of the columns, the interventions on plasters were restrained, limited to the integration of the missing and deteriorated parts.

After the Second World War, in 1962, a general program of conservative intervention was planned, even if it was only partially executed. What was done is the complete restoration of the eastern facade and the bosses of the "Peschiere", the consolidation of the balustrades on the bridge, the creation of waterproof tanks for water with refueling system and drain pipes.

From the 1970's, some interventions led to important internal modifications, mostly in the not-decorated rooms and the apartments on the upper floors. This was because of a general project not really compatible with the pre-existence and some occasional interventions directed by the Municipal Technical Office. As far as the insertion of the technological systems is concerned, it can be observed that in order to hide the pipes, some floors, walls and foundations have been replaced". On the south side, the insertion of the thermal power plant led to the construction of a new small building leaning against the facade.

In conclusion, at the end of the 1970s, the Municipality of Mantua decided to promote a general plan for the preservation, conservation and restoration of Palazzo Te, considering the inefficacy of the interventions done. The Municipality understood that only precise guidelines and a unique conservation plan could contrast the condition of deterioration where Palazzo Te was. That project was planned and entrusted to studio of the architects Adolfo Poltronieri, Claudio Bassani and Alfonso Galdi. Due to economic issues and a slow bureaucracy, the works lasted all the 1980s.

⁵ Giovanni Antonio Antolini (Castel Bolognese, 1753 - Bologna, 1841) was the inspector of the Royal Palace of Mantua, in the years when he started to intervene on Palazzo Te.

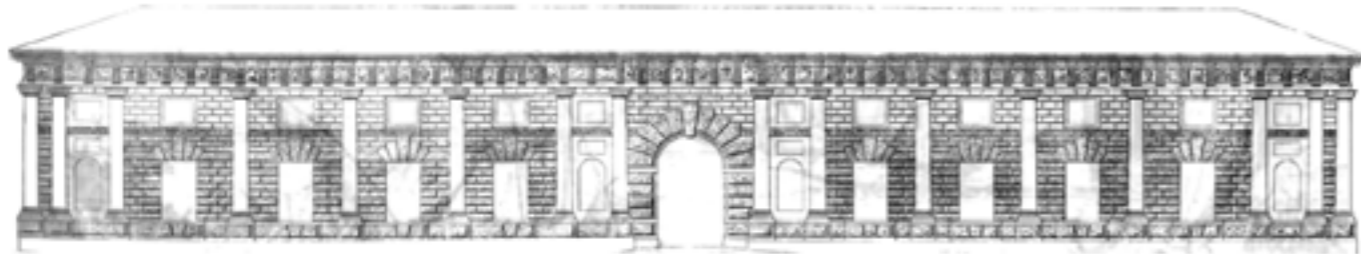


Fig. 17
 From Bollettino d'Arte Beni Culturali, Pietro Baldi, *Il Restauro architettonico dei prospetti del Cortile d'Onore di Palazzo Te*.
 Pietro Biaggi, copper engraving of the western facade of Palazzo Te, 1817.
 Grazia Sgrilli, maquette of the original project of Giulio Romano for the eastern facade.

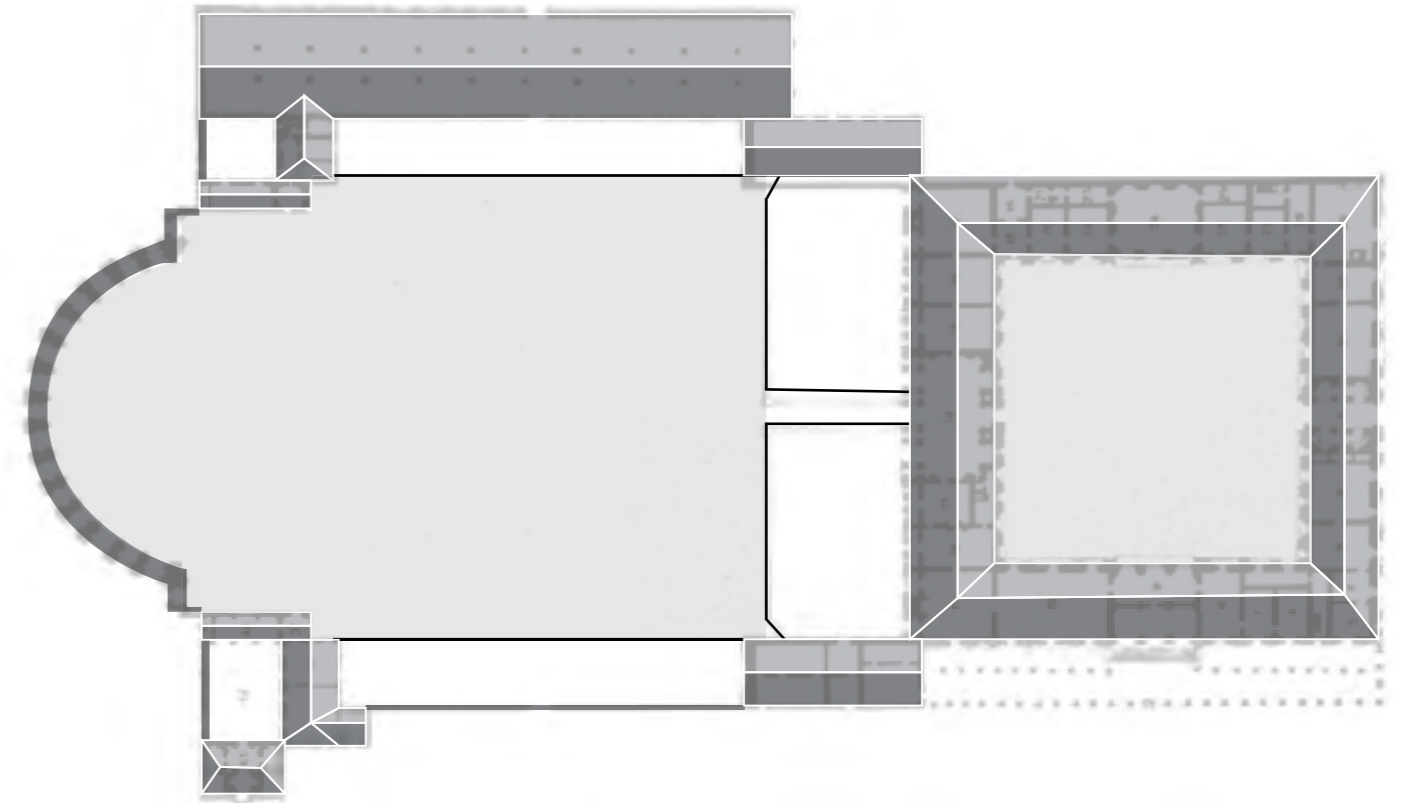


Fig. 18
 Analysis of the evolution of the composition of the Palace.
 Situation after the demolition of the ancillary buildings.
 Personal elaboration

I.2_YOUNG HISTORY

The “young history” of Palazzo Te could be defined from the intervention of restoration executed from 1984 to 1989 by the architecture studio of Poltronieri, Bassani and Galdi. The considerations made at the base led to the foundation of the association “Centro Internazionale d’Arte e di Cultura di Palazzo Te” and to the beginning of a conservative policy and cultural campaign to preserve Palazzo Te, open it to tourists and convert it into a museum.

After the restoration works, between 1st September 1989 and 12th November 1989, an exhibition focused on Giulio Romano was organized, in order to reconsider and show to people the origin of the palace and its architect.

All these reflections were the consequence of a policy of occasional and not fully compatible interventions and uses of the palace from the era of the Gonzaga family until the second half of the 20th century. As said, during the 1970s, the functional aspect prevailed over the conservative one and many rooms of Palazzo Te were sacrificed to obtain office spaces or service rooms. Moreover, the plant adaptation, and in particular, the insertion of the heating system in Palazzo Te, seriously damaged the building, removing part of floors and blocking passages.

Serious static problems emerged in many secondary spaces, such as the area of the “Fruttiere”, the buildings on the sides of the “Peschiere” and the not-decorated apartment, corresponding to the space of the cave.

Next to the static problems, they were interested by a compositional issue which led to the solution of intervene and reopen them towards the big central space of the garden. The space of the “Fruttiere”, in particular, was used as stables and, for this reason, some partition walls were constructed between the existing pillars, in order to obtain many spaces for the boxes.

So, a conservative line of intervention appeared to be necessary. This was planned at the beginning of the 1980s, when the Scientific Committee about Giulio Romano was present in Mantua, under the direction of Manfredo Tafuri⁶. The aim of the committee was to promote the use and the valorization of Palazzo Te, through a campaign of analysis, conservations and promotions of activities which had to follow a unique plan. The mix among scientific, technical and material knowledges was fundamental as concrete and solid base to define the interventions.

In this way, in 1984, the Scientific Committee asked for the presence of the “Istituto Centrale di Restauro” in Mantua, to better define the approach that has to be follow.

The operations guided by Adolfo Poltronieri followed the sequence of historical and material analysis, project and interventions.

⁶ Manfredo Tafuri (Rome, 1935-Venice, 1994) was an Italian architecture historian. He was very important in the political and architectural debate after the Wars.

I.2.1_The method of the “Istituto Centrale di Restauro”

The “Istituto Centrale di Restauro” was founded in 1939, following the suggestion of Giulio Carlo Argan⁷ and it was directed until 1959 by Cesare Brandi⁸. The “ICR” is still important nowadays in the definition of the guidelines to approach an intervention of restoration. From the beginning, the aware of interdisciplinarity as base of a correct and precise practice of restoration, was the main approach.

The most peculiar character is the uniqueness of an organism where research, formation and systematic and active restoration activity were developed at the same time.

Inside the system of the “Istituto Centrale di Restauro”, there are art historians, architects, archeologists, physics, experts on environmental issues, chemicals, restorers,... The current activity of this institution still follows the guidelines of Cesare Brandi, developing and focusing on some aspects. For instance, the importance of the preventive conservation, which was defined by Brandi in 1956; the technological and scientific updating applied to the works of art; the importance to realize not-destructive proofs before definitely intervene.

⁷ Giulio Carlo Argan (Turin, 1909-Rome, 1992) was an art critic, politic and professor. With Cesare Brandi defined the project of the “ICR”. He also wrote for the review “Le Arti”.

⁸ Cesare Brandi (Siena, 1906-Vignano, 1988) was important in the debate of the theory of restoration, in the definition of the concepts of “creative process” and “patina” of the historical monument.

As said, the “Istituto Centrale di Restauro” was invited in Mantua by Manfredo Tafuri during the 1980s, to provide scientific advices and technical direction to the restoration works on Palazzo Te, entrusted to Adolfo Poltronieri and its architecture studio. The intervention of the institute was coordinated by the “Servizio per i beni architettonici”, in particular by Pio Baldi and Giuseppina Fazio.

Following the methodological guidelines of the “Istituto Centrale di Restauro”, the operations on Palazzo Te were preceded by a deep and careful campaign of analysis and study of the state of art of the buildings. This analysis started by the recollection of many historical-critical data that were already available.

Particularly, the methodological approach necessary to intervene in historical building like Palazzo Te asked for two types of preliminary assessments. The historical assessment consisted in the analysis of literary and archive sources, related to the constructive process and development of the palace, next to the recollection of the photographic documentation. Project drawings, surveys, printings, paintings, historical photos were important to understand some steps not very well described in written documents. From this analysis, a very rich documentation of interventions and restoration approaches on Palazzo Te was found.

The second type of assessment consisted in the analysis of the state of art of the materials. It was based on the punctual analysis of the

1.2.2_The interventions of Adolfo Poltronieri

conservation state and the physical-chemical features of the elements of the facades. This study wasn't related only to the surface, but it was carried on in a deep way, in order to understand all the traces of overlaid wall paintings, with the related tools and techniques applied.

A consequent chemical analysis was able to define the microscopic structure and the mineralogical composition of all the materials present.

Through this complex methodology, it was possible to reconstruct most of the transformation that Palazzo Te suffered during the centuries. The hypothesis of Palazzo Te seen as the result of a long process of transformations, adjustments and changes was confirmed, as explained in the previous chapters. Its facades only partially maintained the original design and finishing as in Giulio Romano's project, because of reinterpretations made during the 18th, 19th and 20th centuries.

The traces of the reconfiguration of the external aspect of Palazzo Te, probably dated to the Neoclassical age, emerged with evidence. In that period, many imaginative licenses of Giulio Romano were corrected because they were considered unacceptable. Asymmetrical bosses, straggled frames and off-leads walls were lined up.

Another important point of strength that this intervention had, was the great coordination between the team of experts and technicians,

and the political class which ruled the city. The debate was constructive and led to a deep acknowledgment of the palace, as base before intervening.

With the intervention of the "Istituto Centrale di Restauro", the original design of Giulio Romano was restored in specific points where the makeover layers were deteriorated and no more conservable.

However, following the theory of restoration of Cesare Brandi and considering the additions and reinterpretations on historical buildings as important as the building itself, they were kept as valuable documents.

Following the guidelines of the "Istituto Centrale di Restauro" it was clear to have a diagnostic approach to investigate the state of conservation and deterioration of the building, before choosing the methods and aims of the project.

Documents and photographic sources led to a wide range of formal and technical solutions, in order to respect the historical building, without sacrificing the distributional aspect and the unity of the architectural language after the intervention. The on-going discovering during the operations made the architects reflect on different solutions from the original ideas. Moreover, every materials and techniques applied to the manufactures were deeply investigated, through the use of test plugs on walls and surfaces.

The team guided by the architects Bassani, Galdi and Poltronieri intervenes in a "soft" way, according subsystems, such as roofs, under roofs, structural strengthening, installations...

In that way, they were able to obtain a great grade of coherence and rationality in the recovering of the physical consistency of the buildings. Due to this deep analysis and careful approach to the building, the restoration works lasted almost a decade.

About the transformative operations, related to the reorganization of the distribution system, they were limited to the valorization of the original paths, removing partition walls, closing and opening spaces which were constructed in recent years. In that way it was possible to restore the perceptual itinerary which could

correspond at the original design principal of the palace.

This thing is still perceivable nowadays: the organization of the palace and its spatial reality transmit a virtual atmosphere of the palace, which hide some small subsystems, perceivable only when entering the palace itself and not visible from its volume or external facades. The interventions of Poltronieri helped to enhance all those peculiarities of Palazzo Te.

The restoration project took also into account the compatibility among ancient and new functions. On a first level, the analysis showed the differences of the main apartments of the palace from the ancillary rooms and services, next to their relations with the vertical connections. Starting from this, the design project was based on the use of the apartments at the ground floor as spaces of free uses, while the service rooms were intended to host the civic collections.

Once the coincidence of new and old functions was assessed, the project focused on the intervention of the main rooms. They were considered as complex and autonomous spatial entities. What was done is the recovery of the original perception of the space, cleaning the surfaces, repairing walls and ceilings that were damaged, enhancing the view towards the rich decoration of Palazzo Te.

The design proposal of the ancillary buildings of the late 16th century was directed to obtain spaces of cultural participation or temporary exhibitions, especially in the area of the

“Fruttiere”. The smaller buildings around the big central garden were conceived as technical rooms, like administration offices, ticket office and bookshop.

So, entering more in deep in the description of the architectural project on Palazzo Te, it can be said that it was based on the recovery strategy of the pre-existences as main principle. This kind of approach suffered some variations in some cases, according to the new functions and the specific equipment that had to be inserted to ensure the use of the palace.

Those equipment were realized using the same materials (iron, wood, crystal). In this way, the same language gave recognizability and uniqueness to the intervention, adapting itself to the needs of the existing building. For instance, simple furniture were realized following the same concepts and materials of structures designed to solve nodal points of vertical and horizontal connections; or the exhibition system which defined the new space of the “Fruttiere”.

The important feature of this concept was the complete visibility of the original layout and aesthetic of the rooms where they were conceived. They were completely separated from the walls around, following the principles of reversibility and flexibility of the intervention. Moreover, in the space of the “Fruttiere”, the abolition of the partitions, with the insertion of this new system for the public use, had the result to enhance the architecture of the space, based on the succession of pillars and trusses.

In the definition of criteria and methods of intervention, the historical analysis was combined with the scientific analysis on the materials, applied on site. This combination was able to allow the identification of the different interventions and the time where they were realized.

The first idea was to favor the design of Giulio Romano at the expense of the others. This kind of approach, as said in the paragraph before, was against the principle of Cesare Brandi and the “Istituto Centrale di Restauro” because of two main reasons:

- The definitive loss of the interventions done in the past, even if considered in contrast with the original design, is not acceptable. Those particular choices made in specific times has to be preserved as part of the history of the building.
- By removing entire parts of 19th century additions, there would have been the necessity to reconstruct them again, configuring the intervention as a further reinterpretation.

In the cases where the state of art of the monument required the reintegration of parts or additions, the criteria followed was to redo them according to the language and style they were conceived. In this way, the design team was able to avoid the creation of a new “modern” language and the consequent damaging of the reading of the facade.

Within the context of a single design idea,

different operations were aimed at the conservation of the surfaces. In detail, different methods of approach were chosen:

- The preventive consolidation was limited to
- very damaged areas, before an intervention of cleaning.
- Chemical cleaning on inconsistent superficial deposits and incrustations.
- Removal of restoration plaster additions, when really damaged and deteriorated.
- Removal of the biological patina.
- Reinstatement of gaps
- Grouting, with lowering of the tone of the new paints, to differentiate the intervention.
- Surface protection to ensure durability.

Those operations were applied in the interventions of consolidation of vertical and horizontal structures, restoration of roof, restoration of external and internal floors, adjustment of internal frames of windows, protection of the external finishes of the facades, with their decorations. In the operation of preliminary cleaning, traces of the original color of Palazzo Te were discovered. Indeed, under a layer of yellowish paint, the architects found the original white-pink color of Giulio Romano. This color was obtained thank to a special drawing up of plasters and stuccos, which imitated a stone cladding by using poor materials. The traces of the original color have been left exposed, after a specific consolidation.

An important aspect of this complex design process regarded the arrangement of the “Cortile d’Onore”, the south court and the big central garden. In these spaces, a careful excavation work and the consequent findings made, suggested materials, dimensions and adequate functions for the intervention. The return of water to the Peschiere, with the mirroring effects of the east facade, was able to recall the original image of an island of the site.

Concluding, the intervention of restoration guided by Adolfo Poltronieri and his architecture studio was the first one which has a clear program of approach and the intention of respecting as much as possible Palazzo Te, its original design and following transformations. The gentleness of the intervention, in the phases of analysis, cleaning and reinterpretation, was ensured by the availability of a capable and specialized manpower.

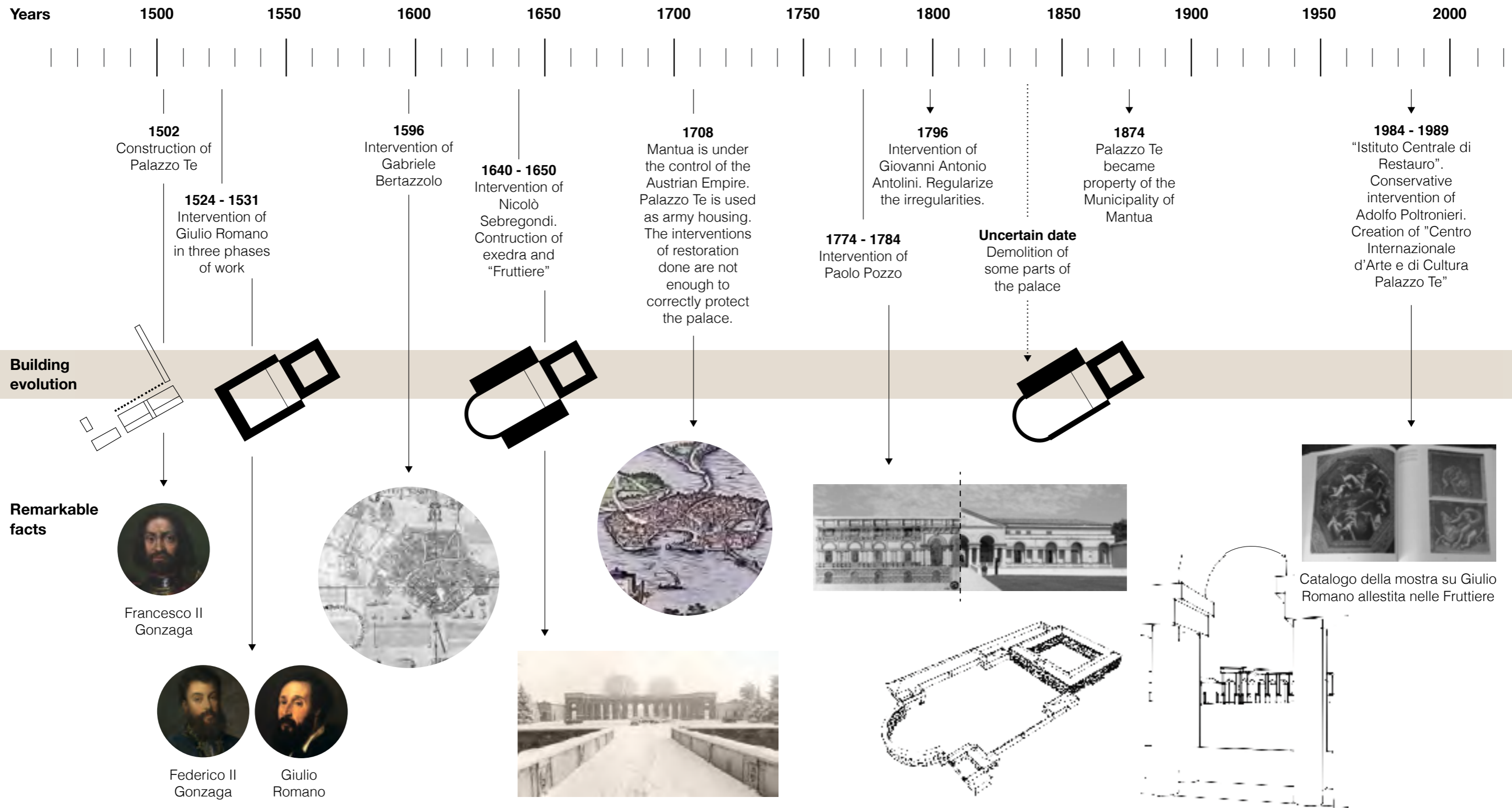


Fig. 19
Building transformations timeline, personal elaboration

1.2.3_”Centro Internazionale d’Arte e di Cultura di Palazzo Te”

Most of the interventions of restoration guided by Poltronieri were finished at the beginning of September 1989. The few works which remained were executed by the first half of the 1990s. As first result of the conclusion of the campaign of intervention, the association “Centro Internazionale d’Arte e di Cultura di Palazzo Te” was founded.

In the context of the city of Mantua, the creation of this authority consisted in the first collaboration between a public authority and a private, for the protection of a cultural heritage. All the partners involved were:

- Municipality of Mantua as public founding partner.
- Banca Agricola Mantovana as private founding partner.
- Alvise di Canossa and Prima Services as supporting partners.
- Province of Mantua.
- Chamber of Commerce, Industry, Crafts and Agriculture of Mantua.
- IES.
- Skira.
- TEA.
- Verona 83.
- Ansauto.
- Fashion District Mantova Outlet.

Renzo Zorzi was nominated as first president of the association.

With the creation of the association, next to the ordinary management of the palace, in charge of the Municipality of Mantua, Palazzo

Te began to be divided into two different souls. From a first point of view, it is still a museum, so a public cultural institution, property of the Municipality of Mantua. This authority has the responsibility to administrate the historical cultural heritage building, ensuring its durability and public use. The Municipality deals with conservation and protection of the complex. From 1989, another authority plays an important role in the management of the historical monument. The “Centro Internazionale d’Arte e di Cultura di Palazzo Te” has the objective to organize cultural events and open the historical site, beyond the museum activities. The association is in charge of what concern the valorization of the palace.

Both the authorities report their activity to the Public Administration, who takes care of the economic issues and the definition of management guidelines. All the operations are carried out in accordance with the current legislation. In turn, the Public Administration is under the control of the regional and local Superintendence and the Ministry of cultural heritage and activities.

Summarizing, the Municipality fulfills the functions related to the cultural heritage which is its property. The presence of the association allows to ease decision-making procedures, contributing to obtaining more human and economic resources too. For this reason, the assignment of additional services is given to privates.

In Palazzo Te, the main owner is the Municipality. It entrusts the management of the cultural

heritage to the administrative offices of the palace, and the cultural-social enhancement and valorization of the site is responsibility of the public-private partnership association.

Next to the conservation of the palace, the main aim of the new association was to promote the knowledge of Palazzo Te and its importance in the history of the city of Mantua. The general ideas were to organize events, initiatives of ancient, modern and contemporary art, cultural initiatives like cultural conferences, meetings, publications and researches.

Palazzo Te was seen as a place where to spread culture, where people could meet and share points of views about their own history. Through the knowledge of places like Palazzo Te, people could be more aware about what surround them.

The “Centro Internazionale d’Arte e di Cultura di Palazzo Te” was transformed into a foundation “Fondazione Palazzo Te” in 2018. Despite of that, the ideals of the association still remain. In transforming the association in a foundation, the members hoped to give a strong character to the institution and to solve some problems that emerged in the past. In particular, the “Centro Internazionale d’Arte e di Cultura di Palazzo Te” suffered the lack of a qualified staff, which could have given a clear development direction to the palace. Moreover, other problems were the use of the association as a political instrument by the Public Administration and a problem of communication between the museum and the association.

However, the association was able to organize a lot of exhibition, mostly in the space of the “Fruttiere”, which was reformed with the intervention of Poltronieri. In 1989, to inaugurate the creation of the “Centro Internazionale d’Arte e di Cultura di Palazzo Te”, a temporary exhibition about Giulio Romano was organized in the space of the Fruttiere. The curator of the exhibition was the architecture studio Bassani, Galdi and Poltronieri.

The exhibition of 1989

By the end of the 1980s, the building of the “Fruttiere” has been chosen as ideal place to host temporary exhibitions.

As general consideration, it is important to notice that the value of the place chosen to host a permanent or temporary exhibition should never be underestimated. The limits of the container imply certain choices as principles of conformation of the communicative and sensorial system. The reinterpretation of the “genius loci” becomes decisive in the definition of the conceptual and material reference system of the exhibition. In this sense, the space of the “Fruttiere” of Palazzo Te represents a peculiar architectural place, steeped in history, even if always considered an ancillary building. In fact, originally built to host an orangery, it was used as an equestrian shed, barrack and warehouse.

The choice to organize temporary exhibition in that space can be connected to the

complementary relation that it has with Palazzo Te. Indeed, the main building of the palace, with its exuberant character, is a museum of itself, intended in a permanent sense. The space of the “Fruttiere”, on the contrary, shows a direct and easily understandable architecture, which lends itself to the lively spirit of a temporary function. Moreover, the limits imposed by the impossibility of mutation of the geometric and compositional rules of a strictly defined space, paradoxically multiply the possible expositive declinations.

The “Fruttiere” consists in a rectangular open space, divided into three naves by nine couples of pilasters. The external walls are made in plastered bricks, while the roof structure shows exposed wood trusses. The central part of the space assumed more importance due to the more height and perspective reasons. The natural light is almost absent, making it an ideal space for exhibitions where the study of light is essential. Moreover, the big windows opened along the south side, have been covered since the first organization of the performance.

The apparent simplicity of the space allowed the organization of almost 40 different exhibitions from the 1989 until nowadays, all characterized by a different interpretation of the container.

The current situation has been made possible by the interventions of restoration ended in 1989. As said, in that occasion, the space of the “Fruttiere” hosted the first temporary exhibition, whose theme was Giulio Romano

and his architecture work.

The exhibition was opened on 1st September 1989 and it was closed on 12th November 1989. The approach followed, which will also be used in the subsequent temporary exhibitions organized, is to obtain a perfect combination between contained exposed object and container. For the exhibition of the 1989, Adolfo Poltronieri created an equipped room on the side of the southern courtyard entrance, which is now called “Sala Poltronieri” and used as conference room. This space became part of the exhibition system, which had to be characterized by the fundamental feature of flexibility. For this reason, to avoid any interference with the other activities of the palace, the room was equipped with an autonomous entrance and a direct link with the exhibition area.

About the design approach for the definition of the exhibition system, Poltronieri assumed the space of the “Fruttiere” as an exhibition machine, able to offer the maximum flexibility in the organization of any kind of exhibitions. The explicit relation with the container is fundamental, so that the project took into account the theme of the exposition of the architectural container, next to the contained objects. The visibility of the internal space is a constant presence to consider and not to reject. The showing machine became a narrative supra-structure and an autonomous functional system which confirms the visual and sensorial presence of the context where it is inserted.

Considering these ideas, the exhibition system created was based on light elements. Retractable glass showcases and pins to make the equipment rotate were displayed in the architectural existing space.

Another important idea at the base of the design approach was to obtain a kind of theatrical perception of the exhibition and the architectural space around. The classical static idea of the exhibition was abandoned, favoring the interactivity among contained objects, container and visitors.

From the organization of the first exhibition in 1989, until nowadays, the space of the Fruttiere hosted a lot of temporary exhibition whose main approach was the one originally applied by Poltronieri. The themes of the performances were different, ranging from local subjects to international fields. The participation of tourists and citizens was large, confirming the idea of the “Centro Internazionale d’Arte e di Cultura di Palazzo Te” of transforming the area of Palazzo Te into a new cultural area for the city. Nowadays the current “Fondazione Palazzo Te, who substituted the association in 2018 is moving in this direction. Cultural events have been organized in the ancillary spaces of the palace, in order to open it, beyond the museum facilities.

I.3_CURRENT MANAGEMENT

In 2018, the association “Centro Internazionale d’Arte e di Cultura di Palazzo Te” was converted into a foundation, called “Fondazione Palazzo Te”. All the objectives and ideals expressed with the creation of the association in 1989 have been handed down to the new institution. By the way, the main aim of the current management of Palazzo Te is the reduction of the musealization of the palace. Indeed, looking at the use of Palazzo Te in the recent past, its main building was used as ordinary museum by tourists, while the ancillary buildings have been rent for temporary events or exhibitions. In this panorama, those who have been overshadowed were the citizens of the city of Mantua. Indeed, by considering the palace just as a monument and, therefore a museum, it has inevitably caused the loss of residents as public and cultural users of the space.

The new objective of the “Fondazione Palazzo Te” is to open the building to the majority of possible consumers. Give the possibility to the territory to enrich knowledge and skills through its history.

The headquarter of the foundation remains the area of the “Fruttiere”, place intended to continue to host the temporary exhibitions. In this sense, the current management of the palace undertakes to promote continuative initiatives, strictly connected to the urban scale of the city of Mantua. The link with the territory is a prerogative which is considered, differently by what was done in the past.

Being aware of what has been implemented in

the past, once analyzed the errors, the failures, the points of strength and the positive aspects, the “Fondazione Palazzo Te” has drawn up those general guidelines to have a general plan of aims.

The concept of intellectual modernity and cultural commitment defined the organization as production center where the exhibition activities are enhanced, next to the expansion of the cultural offer. Its diversification in the direction of a better use of the cultural heritage is a base principle. Publications, conferences and scientific researches are developed too, as integral part of a general planning that wants to be open to the territory and its community.

The current president of the foundation is Enrico Voceri. The director is Stefano Baia Curioni. Their activities are developed always in coordination with the administration of the Municipality of Mantua and the mayor Mattia Palazzi.

I.3.1_ Competition notices and the creation of “Spazio Te”

The activity of the “Centro Internazionale d’Arte e di Cultura di Palazzo Te” and then of the “Fondazione Palazzo Te”, was aimed to the conservation and the public use of the palace. In this sense, the organization, in collaboration with the Municipality of Mantua, promoted different competition notices on Palazzo Te. The majority of them were closed even before the proclamation of the winner because of the lack of money or the changing of the Public Administration. Two of them are noteworthy.

The first one is about an intervention of restoration and improvement of the situation of the facades of the main building, in relation with the proclamation of Mantua as “Italian capital of culture” in 2016. It was won by the architecture studio of Monica Nascig, architect in Mantua. This competition notice led to the intervention of restoration of the “David’s Loggia” and the facade towards the Peschiere. The main problem was the detachment of the materials on the plastered surfaces and the biological attacks. Following the guidelines principles defined by the “Istituto Centrale di Restauro”, the intervention started from a solid analysis of the materials and techniques applied at the facade, in order to avoid any operation which could be not compatible with the building. Even if some criticities were underlined during the works, the choices made were always in line with the general approach of not damaging Palazzo Te. At the end of the intervention, a rich documentation about the methodology of approach and the subsequent design was drawn up.

The second focus of the competition notices promoted by the association and, in recent times, by the “Fondazione Palazzo Te” is about the introduction of a new function to be inserted in the palace. Particularly, the function of a bar-cafeteria and a bookshop.

The willing to improve the ancillary facilities of the museum was manifested since the creation of the “Centro Internazionale d’Arte e di Cultura di Palazzo Te” in 1989. Many reflections and competition notices about this topic were formulated, but they have never been executed. Before arriving to a definitive decision, it was necessary to wait until the creation of the foundation and the creation of a strong relation and communication with the new Public Administration. Indeed the competition notice announced in 2018 finally ended up in 2019 with the creation of a new space for a bookshop and a cafe area, which is now called “Spazio Te”. The collocation chosen is the small building built along the northern side of the palace.

The construction works were executed by the temporary association created for the occasion and composed by “Lithos” and “Fbf Impianti” from Venice. The project of recovery and enhancement of the two spaces which compose the building was realized by “Studio Isolarchitetti Srl”, in collaboration with “Icis Società di Ingegneria Srl”, “Rinetti Barbara Conservazione e Restauro Opere d’Arte Srl”, “Studio Ingegneri Associati Cadacademy and Bim Engineering” and the architect Luca Fornero.

The project, as conceived, is in line with the general methodology of approach promoted by the Municipality of Mantua and the foundation. The valorization of the spaces of Palazzo Te is a prerogative, verifiable also in the necessity of a greater openness of the palace and sharing of its spaces with the community. The intervention included also some demolition works of plasterboard walls and false structures added over the years. Then, the main theme was about the consolidation, restoration and cleaning of the surfaces, the refurbishment of the systems, bathrooms, doors, windows and finishes, which were deteriorated by use and time. The construction of a new mezzanine,

with a direct access from the bar, is also planned. The project involves the creation of toilets dedicated to the disabled, in order to create a space where the accessibility is one of the most important requirements. The realization of the interventions, differently from what happened in the past years, was made possible thanks to the insertion of the project in the general strategic plan called "grandi progetti beni culturali", funded by the Ministry of cultural heritage and activities.

"Spazio Te" was opened to the public in September 2019, with the new space of bar-cafeteria and bookshop. Next to this basical

activities, the new space was conceived as a space for reading, connected to the realization of many social and creative activities, to be realized in a context where art and history are the main characters. In this sense, "Spazio Te" is conceived to expand its limits also in the big garden of the palace which host the hemispherical structure of the exedra. In this moment, any temporary structure has been imagined in that place, and the temporary events organized by the "Fondazione Palazzo Te" leave people free to walk in the garden. Focusing more in deep in the new space created, it is the result of a project strongly desired by the local administration and the

foundation itself. As explained by the director of the foundation Stefano Baia Curioni and the president Enrico Voceri, "Spazio Te" is actually a small library, with many books about the arts, which can be consulted in a free way. It is an open and free space where to think, design and stay together. In this sense, the aim of the space is to strengthen the sense of community and collectivity of people.

Thinking about the general aims of the "Fondazione Palazzo Te", "Spazio Te" can be considered as a first small step to open the museum to the city. The advantages of a place like that is the location and the suggestive atmosphere evocated by a place which smell of history. Moreover, the external area of the palace allows people to study, relax, stay together, in a quite place, contemplating what surround them at the same time.

Concluding, "Spazio Te" is hoped to become a place both for tourists and people from Mantua. The firsts could use the space as an occasion to elaborate on some themes of the palace, discovered during their visit. The citizens could use the space to participate at the cultural events proposed by the foundation or to propose cultural activities by themselves, in the general willing to give legitimacy to the cultural production of Mantua.

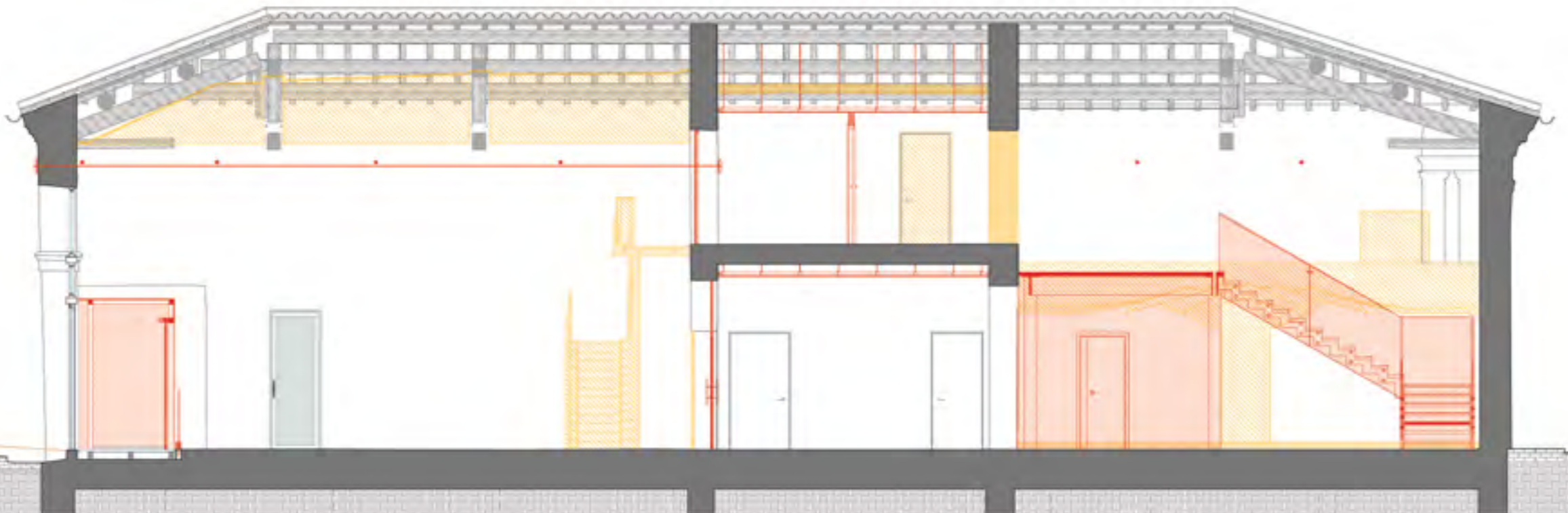


Fig. 20
From area documentale, www.comune.mantova.gov
Extract of the project boards concerning the creation of the new "Spazio Te". Longitudinal section.

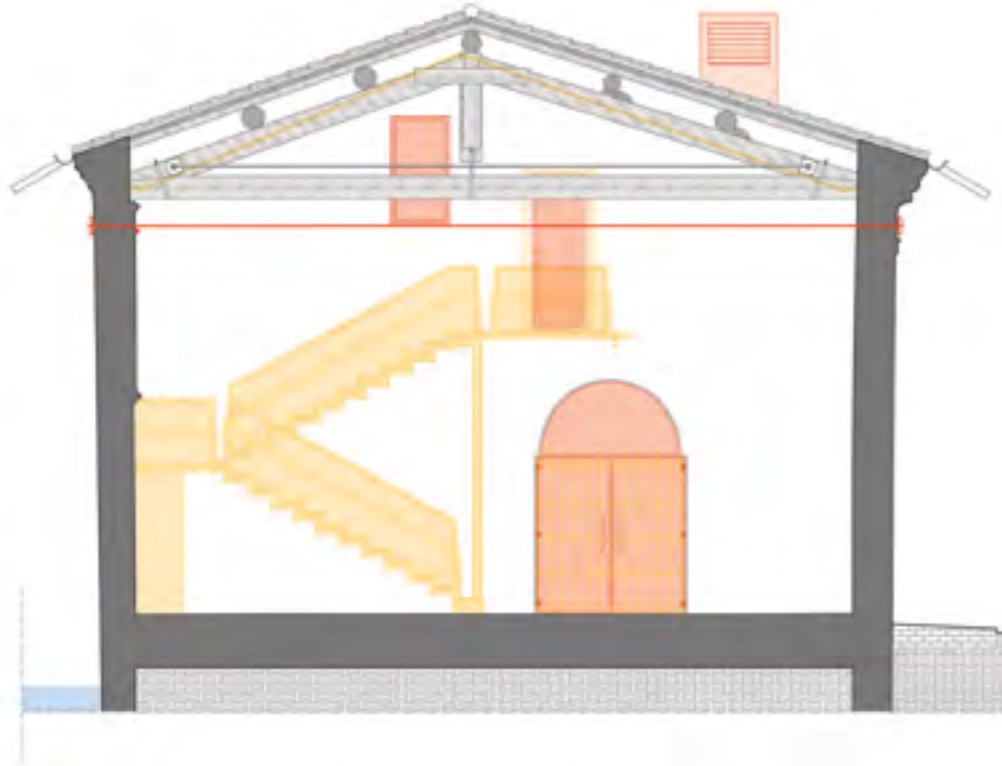


Fig. 21 (above)
 From area documentale, www.comune.mantova.gov
 Extract of the project boards concerning the creation of the new "Spazio Te". Transversal section.



Fig. 22 (under)
 From area documentale, www.comune.mantova.gov
 Photorealistic image of the project. Bookshop area.



Fig. 23 (above)
 From area documentale, www.comune.mantova.gov
 Photorealistic image of the project. Bar-cafeteria



Fig. 24 (under)
 From negrettiarreda.it
 Atmosphere of the new "Spazio Te" as realized.
 Furnished as space for study and reading.

1.3.2_ Palazzo Te nowadays

Currently, Palazzo Te is mainly organized as museum of itself. The decorated rooms attract thousand of tourists every years. Unfortunately, the guided path allows a partial visit of the palace. Many spaces are closed or temporary inaccessible, and the open areas of

the museum complex are not exploited to the maximum. The following diagrams show the main rooms and visit path through the most important spaces of the palace, which is also combined with a secondary path in connection with the ancillary spaces.

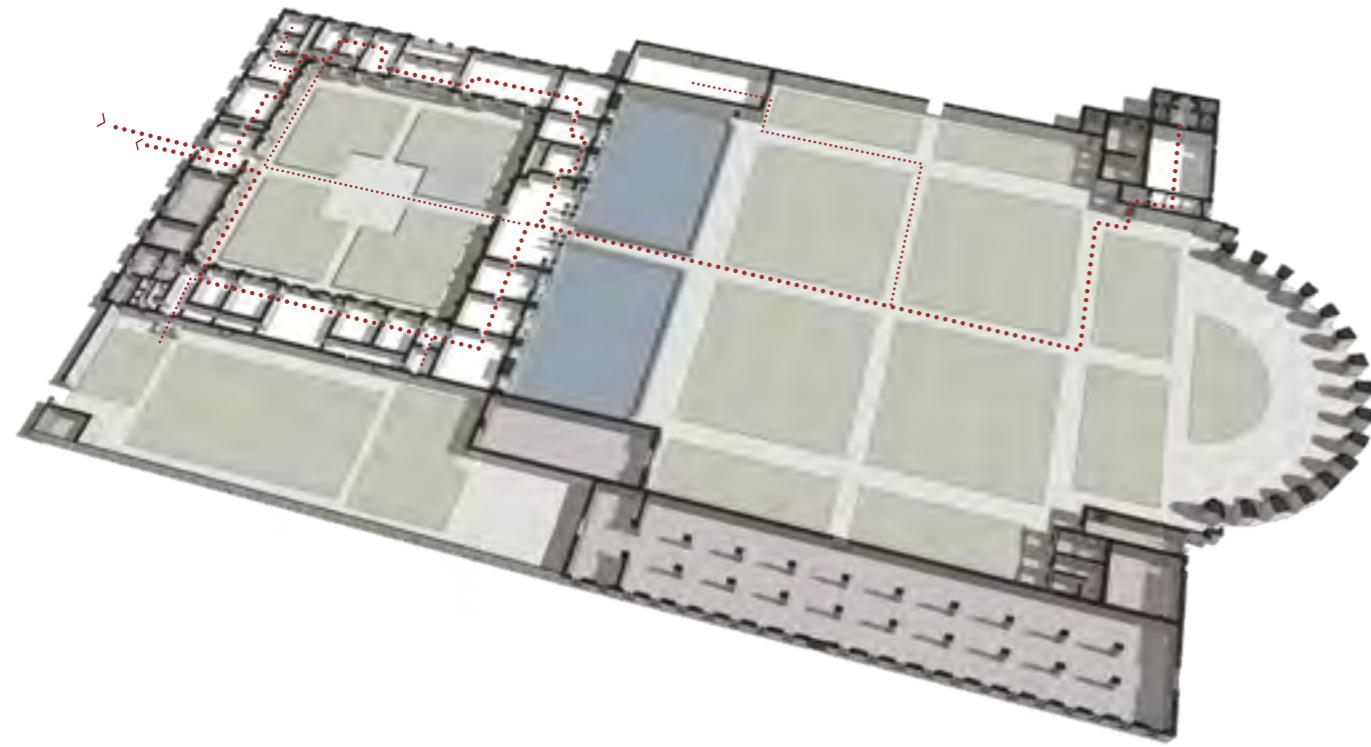


Fig. 25
Diagram of closed (in grey) and open (in white) spaces, with the identification of the visit paths. Personal elaboration.

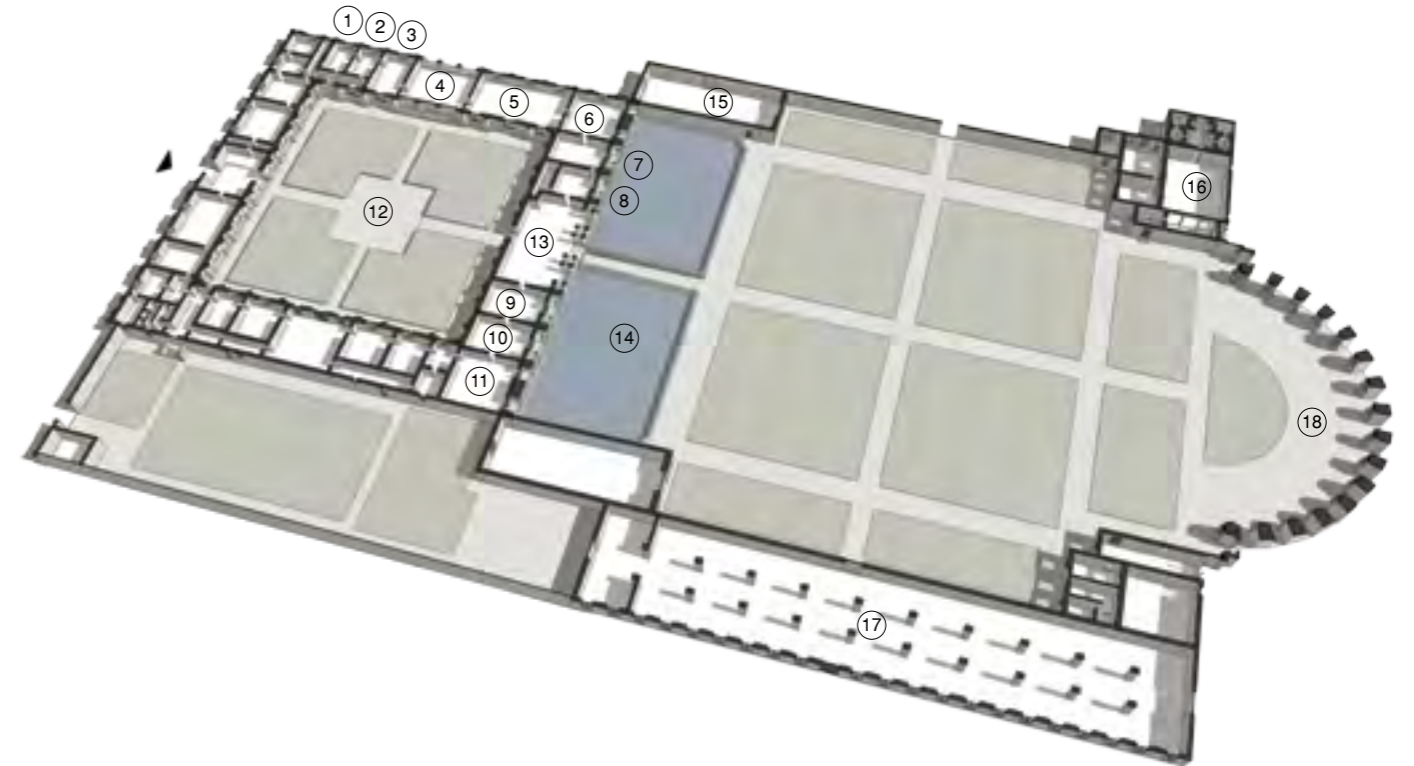


Fig. 26 (on the right)
Diagram with the main spaces of Palazzo Te. Personal elaboration.

I.3.3_ Future visions

The main objective of the “Fondazione Palazzo Te” is to transform the palace into a place for culture. Following this vision, according to the director Stefano Baia Curioni, the focus of the current management of Palazzo Te should regard the ways which could improve and strengthen the relation between heritage, history and modern culture.

The idea is that the palace would not become just a simple attractive element for tourists through the function of the museum, but most of all, it should be a place for citizens, for their thoughts, memories and aspirations. A common place where to stay together and which is able to offer its beauty and history, next to the willing of doing something new. This means imagining productions and events which should avoid the run-up to the “epochal” event. Therefore, it was decided to produce exhibitions that the budget allows and to integrate their presence with multidisciplinary, theatrical, musical and intellectual productions. Another idea is the one of a contemporary culture oriented towards experimentation, doing and training. What counts is seeing, saying and listening, but also what hands and bodies do. Summarizing the idea of the foundation is a 360-degree cultural experience, collected in a unique place.

All those reflections were already manifested during the event “Città d’Arte 3.0”, organized in Mantua on the 11th and 12th November 2016, in occasion of the year of the nomination of the city as “Italian capital of culture”. The conference was hosted in Teatro Bibiena

and Palazzo Te, with the participation of the President Sergio Mattarella and the Ministry of cultural heritage and activities Dario Franceschini. The theme was a reflection on the art cities, like Mantua, and how to intervene on their historical heritage with new interventions and programs. The thread of the speech was the quotation of Sergio Cordibella, one of the founders of the “Centro Internazionale d’Arte e di Cultura di Palazzo Te”:

“Il problema è come si progetta una città; riprogettare una città significa intervenire su un patrimonio che c’è, prevedere un patto tra istituzioni pubbliche e soggetti privati, dando vita ad un investimento capace di generare occupazione”⁹

Cordibella was convinced by the fact that the problem for a new design program of an art city was related to an inevitable intervention on it through a strict collaboration among public and private institutions, with the aim to increase occupancy.

The topic of how to connect present and past has been always at the base of the design process in historical context and it has become a prerogative of the “Fondazione Palazzo Te”. There are many initiatives organized by the foundation, even if they currently remain at a small scale of intervention, directed to open the past heritage of the city to the present life. For instance, the already mentioned “Spazio Te” was the result of the collaboration between the Mantua Campus of the Politecnico of

Milan, with the intervention of the Vice Rector Federico Bucci, along with the Municipality and the Councilor of the University and research Adriana Nepote. The result of this collaboration was a place where the heritage is conserved but also become a place for development and for the increasing of culture through activities and educational experiences.

In this space, the “Fondazione Palazzo Te” has organized also the project “Scuola di Palazzo Te”. The objective was to make people learnt directly from the presence of artists, artisans, poets, writers,... through their words and personalities. It is a school dedicated to everyone which feel they could become part of social and cultural project for their city.

This is an experimental project which is getting some positive feedback and hopefully one day would need a bigger space where to organize the cultural meetings.

To mark the beginning of the cultural events organized by the foundation, an exhibition about Giulio Romano was organized, to recollect the memory of the first exhibition organized in 1989 by the “Centro Internazionale d’Arte e di Cultura di Palazzo Te”. After this exhibition opened in 2019 and closed in 2020, the objective of the foundation is to use the spaces of the museum every day in the years, by organizing events of less importance. The palace is seen as a place where to create relations among people.

⁹ Sergio Cordibella, in “Città d’Arte 3.0” , Mantua, 11th November 2016

Chapter II

PROJECT



II.1_ FROM ANALYSIS TO PROJECT

The critical analysis about the historical evolution of the palace and its management has been taken as base for the definition of approach and focus areas for the design proposal.

The methodology provided the recollection of all the data obtained, in order to define a kind of guideline to follow. Starting from this base, the elaboration of schemes and diagrams about the historical transformations and the subsequent design reflections, was useful as starting point. Moreover, a SWOT analysis was produced, in order to identify critical issues and potentialities of the area of intervention.

In this way, the project is intended to valorize the points of strength and opportunities offered by the area and the context around, while the points of weakness and threats are intended to be decreased by working on them.

A second level of reflections about the results of the analysis, was the choice of the specific areas of intervention and functions which the project has to deal with. Particularly, the choices of the volumes inserted with the design proposal, are strictly connected with the palace transformations along the centuries and the willing to take a part of its history and put it into the present.

About the functions chosen, they are related to the needs derived from the current life and modernity. But the most important aspect considered was the compatibility of the new uses in the context of a cultural historical heritage building, as Palazzo Te is.

In this sense, the criteria followed are the contemporary ideas of preservation and conservation of the cultural heritage monument, with the assurance of its durability and public use along the years.

In the following paragraphs, the first results of the analysis, base for the design proposal, are explained in detail.

II.1.1_ SWOT analysis

The SWOT analysis is a widespread methodology for the evaluation of projects and objectives. It is a logical procedure, which provides important systematic and usable information about a specific topic. It also provides fundamental issues for the definition of policies, methods of approach and lines of action. Through the SWOT analysis it is possible to identify strengths and weaknesses of a project, in order to underline those which are deemed capable of favoring, hindering or delaying the achievement of certain objectives.

Particularly, the SWOT analysis is categorized into two main groups, the internal influencing factors and the external influencing factors. The common terminology distinguishes the former into strength and weaknesses of the project, while the latter are divided into opportunities and threats.

Internal influencing factors consist of all those variables which are an integral part of the object of the design proposal and the system where it is inserted. Among the external influencing factors, on the contrary, there are all the variables which come from the outside of the object considered but could influence it anyway, positively or negatively.

Resuming, this analysis takes its name from the subcategories which is divided into.

S. Strength (Internal positive factor)

W. Weakness (Internal negative factor)

O. Opportunity (External positive factor)

T. Threat (External negative factor)

In the specific case of a project on Palazzo Te, the internal influencing factors arrive from the palace itself, with its important historical and cultural values. The external influencing factors are related to the immediately adjacent context and the connection with the other important focal points of the city of Mantua.

In anticipation of the realization of an intervention on Palazzo Te, a point of strength which has to be certainly considered is the attractiveness of the palace itself. Destination of many Italian and international tourists every year, the building is a masterpiece of the city of Mantua and a project inserted in this kind of context would certainly benefit from this variable. At the same time, a design proposal which would take into account the citizens, would enrich the flow of visitors already present. Therefore, the positive aspects of the design proposals would affect both the pre-existence and the new additions. In parallel, another important point of strength of the design proposal would be the presence of the "Fondazione Palazzo Te". Indeed, the functional program of the new buildings could be related to the ideas and objectives of the organization, in line with the general program of transforming the simple civic museum into a place for culture. The spaces of the new intervention could host temporary events linked to the activity of the foundation, which could expand itself.

Unfortunately, as a new design proposal, it has to deal with some points of weakness that are specific to the area. Indeed, if on a first level,

Palazzo Te would be a benefit as important attractive element, on the other hand, precisely because it's an historical masterpiece, it places some limits to the design choices, in term of temporality of the intervention and definition of the volumes. Moreover, it is evident that the action to attract citizens in a place that has always been conceived mainly for tourists has to deal with some difficulties. To make it possible, the functions inserted with the proposal have to be related to the cultural and social life of the city, promoting the public interest through a good program and communication. Another important point of weakness which has to be taken into account is the weak connection of the area from the city center and the other monuments of interest of the city. For this reason, the project will take into account the provision of the creation of some attractive elements and focal point along the main axis, the "Prince's path", in order to anticipate the future functions inserted in the area of Palazzo Te.

Analyzing the external influencing factors, some opportunities and threats have been identified. Among the opportunities which the project could take advantage of, there is the wide availability of historical documents which describe the main steps about the evolution of the palace. Following those sources, the project could get a strong link with the past, providing justifications for the design solutions. Another opportunity offered by the context where Palazzo Te is inserted is the availability of a wide open-air area within the walls of the

place and just outside them. In this sense, the flow of people which could be hosted in the new cultural pole, is large. Finally, the location outside the city center is a strategic point of opportunity, easily accessible by people coming from outside Mantua. Coming with public transport, it is well connected with the city bus service.

As last point of the analysis, there are also some threats which could affect the design proposal and have to be considered. In detail, the distance of the area from the city center, characterized by a weak connection as explained before, would limit the flow of visitors to the area. Moreover, moving around the city of Mantua, the location of Palazzo Te is signed just with simple direction signs, which sometimes couldn't even be noticed. In this sense, the provision of a stronger connection of the palace with the city center, following the Gonzaga's idea in past times, would be a point of the design proposal. The presence of the railway station which has been built along the southern side of the palace, is an element which has to be taken into account.

In the following page, a resume of the SWOT analysis is schematically represent.

SWOT

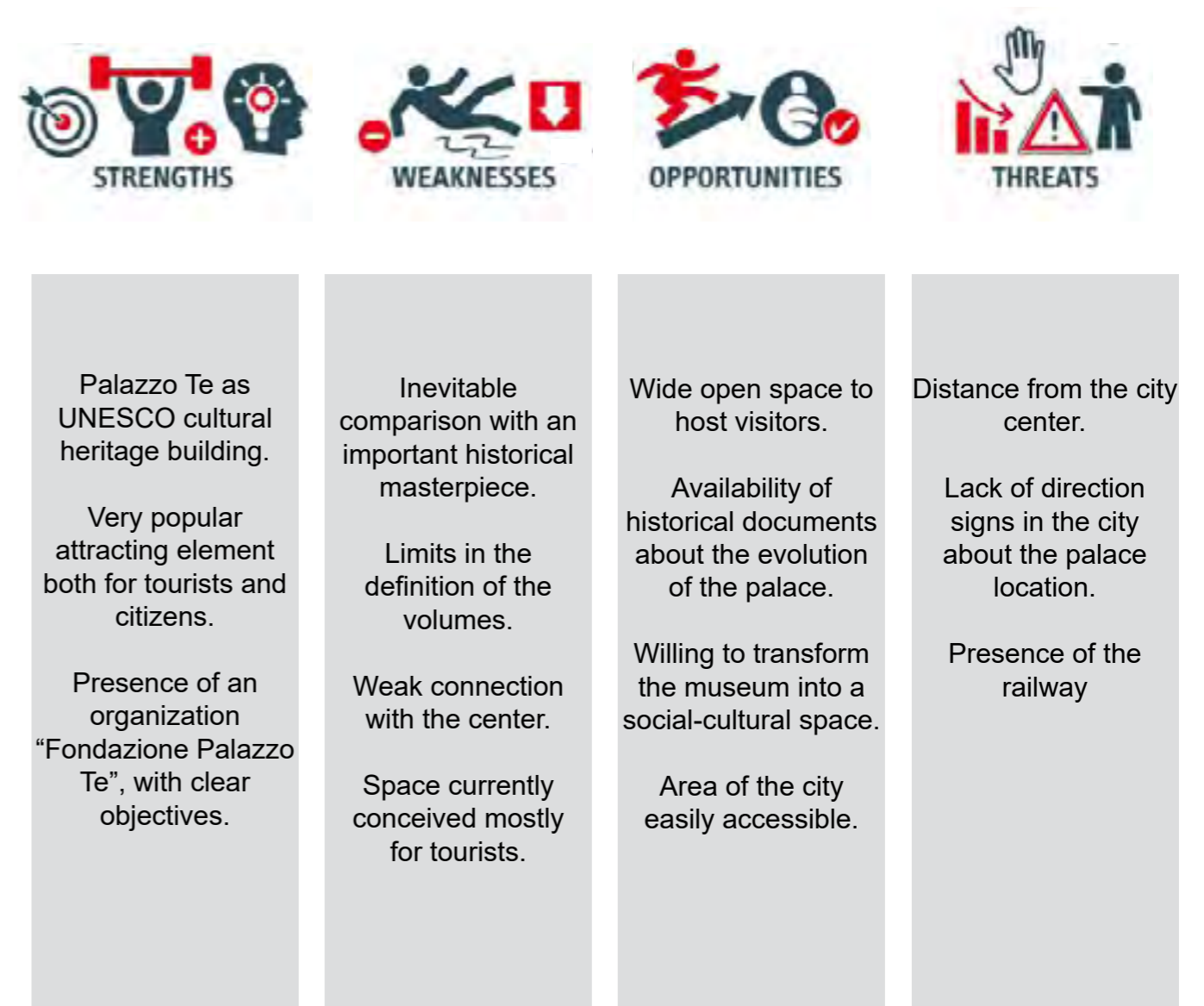


Fig. 27 (on the right)
SWOT analysis diagram of the project. Personal elaboration

II.1.2_ Design considerations

The first design consideration was about the definition of the focal areas where to define the new structures. In this process, the historical evolution of the area and the palace itself were considered. Indeed, as shown in the previous chapter, the distribution layout of the volumes which composed Palazzo Te at the end of Giulio Romano's activity was very different from what can be seen nowadays.

This thesis considers Palazzo Te as a cultural heritage machine which has always been under transformations. All those operations have been lost with the passing of the years, resulting with the complete loss of the perception of the original Giulio Romano's project spaces. Therefore, the aim of this thesis is to create new volumes in order to bring into present times what Palazzo Te originally was. In the specific, two areas of intervention were chosen.

Looking at the historical map "Urbis Mantuae Description" of Gabriele Bertazzolo, already illustrated, the situation after the intervention of Giulio Romano is clear. Next to the main building, a long rectangular building was designed along the northern side of the palace. The function of that building was probably stable or warehouse. Moreover, the eastern side of the internal garden of the palace, which now hosts the exedra, was concluded with some little volumes in the attempt to follow the design idea to create the sensation of a closed but open space. Looking at that project, the succession of full and empty spaces created

the sensation of a concatenated sequence of courts (the "Cortile d'Onore" and the big garden). Giulio Romano's idea was lost firstly with the construction of the exedra by Nicolò Sebregondi, and then with the demolition of the northern volume probably during the 19th century. As evident in the schematic analysis of the evolution of the palace and its area represented in the following page, those demolitions and new construction have profoundly changed the volumetric structure of Palazzo Te. The abolition of the northern volume also created a situation of asymmetry which have been conquered since some years later the construction of the palace, after Giulio Romano's death.

Considering all those analysis results and historical sources, the objective of this master's thesis project is to transmit the first design idea of Giulio Romano by defining the construction of volumes which could recollect the idea of the original structures subsequently disappeared.

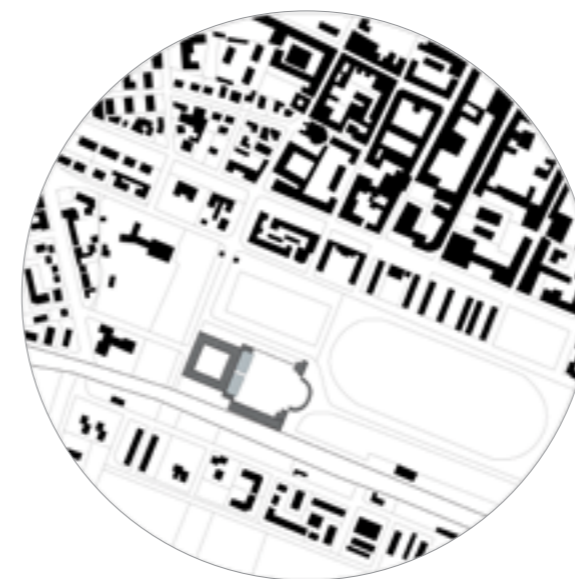
The schematic diagrams represented in the following page illustrate the different situation along the centuries.



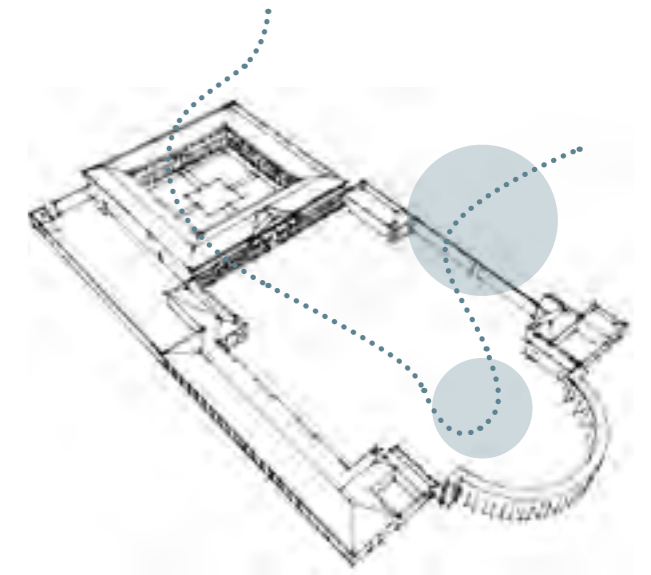
1531, Giulio Romano's project



1651, the exedra and the "Fruttiere"



2020, Palazzo Te nowadays



The definition of the specific points of insertion of the new volumes considered also the existing alignments and main axes which derive from the structure of the palace itself. The buildings designed to complete and strengthen the presence of the big garden followed those limits and guidelines.

Particularly, a volume placed along the northern wall of Palazzo Te takes its limit from the perimeter walls of the small buildings next to it. Longitudinally, the visitor has the perception of the slipping of the existing wall towards the space of the external garden which faces Palazzo Te. According to the historical reconstructions, the limit line defined is coherent with the location of the outermost wall of the building demolished during the 19th century. In this way, the project is aimed

Fig. 28-29 (on the right)
Schemes of the evolution of Palazzo Te and the nearby area. Design consideration scheme with the identification of the focal points.
Personal elaboration.

to generate the same perception that people would have experienced with its permanence nowadays. Another important line which has been taken into account for the design proposal of this external volume is the existing arched opening which is present along the northern wall which closes the garden. This arch is in line with the opposite door of the space of the Fruttiere, in such a way as to generate a strong transversal axis. In the general program based on the objective of opening the palace beyond its function as museum, this axis would define a potential new access which could connect the project spaces. Moreover, it could also function in times when the museum is closed, allowing anyway the organization and participation of people to events.

In this sense, another volume planned inside the frame of the garden which host the exedra, can be intended as a temporary structure to host events to support the museum activities. Its location, chosen to metaphorically close the project of Giulio Romano, considered the presence of the strong longitudinal axes which comes from the "David's Loggia". To fulfill this goal, the longitudinal development of the building is symmetric in respect to it.

Moreover, in order to anticipate the presence of the exedra to the visitors who come from the museum, and to avoid the definite interruption and negation of this main axis, the design proposal oriented itself towards the possibility to create a kind of temporary structure which is elevated from the ground. In the specific, coming from the main body of the museum complex, the perception of the presence of this

new elevated volume and the space around would change in relation to the position and distance of the observer in the area.

Speaking about the exact location of the pavilion, the transversal axes which are considered, come from the two ancillary building, transversally positioned in the area of the exedra. Their width defines also the width of the new volume inserted.

Once defined the main alignments and areas where to insert the two volumes, a first consideration about the functional aspect was made. Indeed, despite the two volumes are both related to Palazzo Te, their internal and external positions in relation to the spaces of the palace have to be considered.

Indeed, the external volume, since its location, is conceived as main occasion to open the palace and its surrounding to the citizens and the social-cultural life of Mantua. For this reason, the functions planned are more related to the ordinary public use, considering also the activities promoted by the "Fondazione Palazzo Te". The functional program which concerns the internal volume designed is related to the one of the external building but considering also the presence of the exedra and its insertion in the internal garden.

Finally, the design proposal has to deal with the choice of new materials to apply. The two main methodologies considered for the approach were directed in opposite directions, considering the use of modern materials and innovative techniques which could be in contrast or in accordance with the pre-existence. For the

evaluation of the path to follow, two basic criteria for an intervention on historical heritage are taken into account. Particularly, the criteria of the aesthetic compatibility and the recognizability. According to the first criteria, the external materials which characterize the design proposal of the two volumes are in chromatic harmony with Palazzo Te, configuring the new intervention as part of the palace itself and its transformations. On the other hand, the criteria of the recognizability led to the necessary difference from the existing, through the modernity of the material itself and of the techniques applied.

The path followed for the development of the design choices was based on a previous analysis of the materials present in Palazzo Te and their original colors. Then, a research on the current marketplace was carried out, to identify the modern materials which could be aesthetically compatible, but recognizable as new interventions.

The general aspect promoted in the design proposal, both in the exterior and interior spaces of the project, is oriented to show the idea of Palazzo Te as an eternal and continuous construction site, where simple materials are combined and used in different ways: rustic ashlar, smoothen surfaces, simple travertine,... The following conceptual scheme shows the material analysis of the facade of Palazzo Te, with the identification of this kind of composition and color matches. The results will be taken as references for the project proposals.



Fig. 30
Analysis of the existing materials and colors on Palazzo Te facades.
Personal elaboration.

II.1.3_ Main references

Considering the insertion of the new volumes within the complex of a historic building characterized by many architectural details, to avoid the prevarication on the existing, the main design references consist of stereometric structures, defined by simple geometries.

The main case studies analyzed which became bases for the development of design considerations, are basically two. The first one, the Portuguese architecture, defines a general character of approaching in the definition of the masses and the relationship between the simple volume and its manipulation. The second one, the “Webb Chapel”, designed by Studio Joseph identifies a way to relate the new building with the context around and the ground. Moreover, it provides some suggestions to be examined for the interior spaces of the volumes.

Portuguese architecture

In the panorama of the contemporary Portuguese architecture, the main references derive from the concepts of the “School of Oporto”. The father of this school, Fernando Távora¹⁰, was the first one who criticized the Portuguese architecture of his time, considering it as false, artificial and redundant. The main issue was the forcing of the presence of history, subjecting contemporary architecture to bizarre architectural motifs and archaeological artifices. According to Távora’s ideas, the true Portuguese architecture is an

architecture which is able to identify itself with the reality of the current times, representing current necessities and lifestyles. Indeed, one of the main principles of the contemporary architecture promoted by the “School of Oporto” is the comprehension of what is happening at a local and international level, preserving the historical roots at the same time. Contemporary architecture is a connection between past and contemporary issues linked to present life. For this reason, the theme of the context and the research of a strict relation with the new intervention is fundamental. Contemporary architecture deals with the landscape around, extrapolating its main characters. The basic question lies in seeing history and the place as an accumulation of signs, of meanings that continually ask for an actualization. The project presents itself as a new possibility, a new condition. The relation of the new volumes with the historical and natural context around is much more important than the formal aspect. That is why the majority of the results of the Portuguese architectural researches is the identification of pure volumes and shapes. The evolution of a project starts from the reduction to the essential, in order to arrive at a gradual approach to the substance. The result is freed and reveals the essential conditions of the project.

From the basic concepts of the “School of Oporto”, this thesis’ work considers the strict relation with history and the profound analysis of the context, to understand the conditions to design a new proposal. Moreover, the

reduction to the essentiality is an important aspect considered with this project, given the architectural values of Palazzo Te.



Fig. 31 (above)
From www.archiportale.com
Alvaro Siza, Capela do Monte, Algarve, 2018.

Fig. 32 (under)
From www.smellof.design
Fernando Távora, Casa des Ferias, Ofir, 1957-1958.

¹⁰ Fernando Távora (Oporto, 1923 - Matosinhos, 2005) was an architect and professor, one of the main exponent of the “School of Oporto”, along with Alvaro Siza and Edouardo Souto de Moura.

Next to the “School of Oporto”, the other Portuguese influence for this thesis’ work derives from the architect Manuel Aires Mateus¹¹. His architecture is characterized by the presence of the purity of shapes, conceived at the same time as a set of full and empty, where the empty itself becomes space. This concept is the fusion between the architecture ideas of the Portuguese “School of Oporto”, with the influence of Peter Zumthor, mostly regarding the importance of the pure forma and the coatings.

The architecture of Aires Mateus is elegance, purity and functionality, collected in volumes which dialogue with the past and future visions of a city. The buildings designed have a sculptural character. In the geometric shapes, usually white, clear cuts stand out, as if to let the light pass, and at the same time give access to these architectures-sculptures. The use of stone wall coverings is also very frequent.

From the architecture principles of Aires Mateus, the design proposal takes the physical presence of stereometric volumes, geometrically defined. Moreover, cuts and deformations of the volume’s purity are studied and located in strategic points, in relation with the context around. Another concept followed is the idea of an architecture which is expression of a research which recognize the mass as basic principle, but at the same time it aims to cancel its weight.



11 Manuel Aires Mateus (Lisboa, 1963) is a contemporary Portuguese architect, founder of the studio Aires Mateus and Associados in 1988.

Fig. 33 (above)
From www.archdaily.com
Aires Mateus, Grândola Meeting Center, 2016

Fig. 34 (under)
From www.archdaily.com
Aires Mateus, Santo Tirso Call Center, 2009

Neue Nationalgalerie

Architect: Mies Van Der Rohe
Location: Berlin
Year: 1962-1965

The building designed by Mies Van Der Rohe is taken as reference for its precise relation among the architectural elements. Particularly, the combination between glass, pillars and coffered ceiling is able to increase the value of the project, which is actually based on the primordial concept of the trilithic system.

In its exterior aspect, the building shows its classical references, standing on a podium like a Greek temple overlooking the street. The structure is characterized by the presence of a giant floating roof, which is 1,8 m thick. This steel roof plate is supported by 8 cruciform

steel pillars, placed in a way to leave the corners of the building free. The position of the glass closing walls is backward in relation to the perimeter of the building. In this way, the steel structure emerges a lot.

Moreover, the presence of the glass creates a continuity between the interior space and the exterior.

The exhibition area is developed on two levels, one at the ground floor and the other excavated underground. The realization of the space beneath is made possible thanks to the realization of the external podium. The interior space is free from constraints, due to the structure chosen.

Finally, the lighting system is designed as punctual lights placed on an aluminum grid between the beams of the roof structure.



Fig. 35
From www.inexhibit.com
Mies Van Der Rohe, Neue Nationalgalerie, Berlin, 1962-1965



Webb Chapel Park Pavilion

Architect: Cooper Joseph Studio
 Location: Dallas
 Year: 2012

Once defined the general architecture idea for the volumes to be designed, a specific case study research was made for the internal building, located in the internal garden of Palazzo Te, in front of the exedra.

The main reference for the creation of this new structure, is the Webb Chapel Park Pavilion, designed in Dallas by the New York-based Cooper Joseph Studio. The points in common with the design proposal of this thesis' work is the elevated position of the pavilion from the ground level, the disposition of an underneath area as space for performances and the

simplicity of the external shape, in contrast with the detailed interior.

The Webb Chapel Park Pavilion was designed for the city of Dallas, to give a place to stay to the citizens. The final result is a pure geometric volume, which consists in a concrete canopy of exaggerated depth, which is sustained by a simple structure of minimal concrete supports. In this way, the architects were able to create a continuous views towards the surrounding site. Inside the pavilion, the heavy external structure reveals the presence of four skylight characterized of different sloping walls. This system is interesting for the natural ventilation and the plays of light which are created all over the day. The use of raw concrete is strictly connected with the city of Dallas, being a material available in site. Moreover, this material choice makes the shape both expressive and efficient in terms of ventilation.



Fig. 36-37
 From www.inexhibit.com
 Mies Van Der Rohe, Neue Nationalgalerie, Berlin, 1962-1965

Fig. 38
 From www.archdaily.com
 Cooper Joseph Studio, Webb Chapel Park Pavilion, Dallas, 2012
 Frontal perspective view.

II.1.4 Further case studies: pavilions

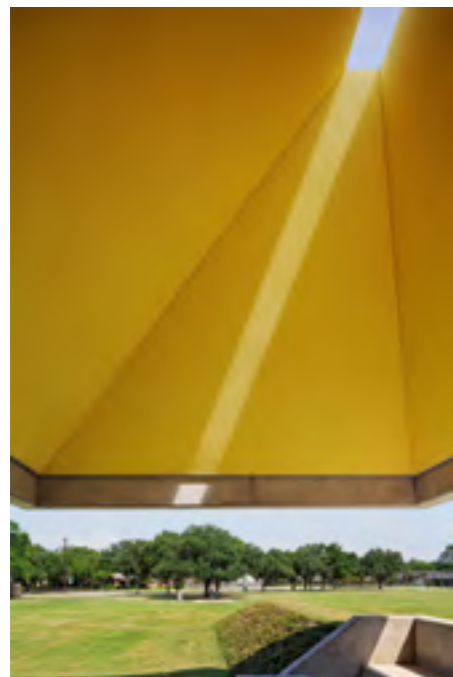


Fig. 39 (above)
From www.archdaily.com
Cooper Joseph Studio, Webb Chapel Park Pavilion, Dallas, 2012.
Relation among the pavilion, the excavated performance space underneath and the context around.

Fig. 40 (under)
From www.archdaily.com
Cooper Joseph Studio, Webb Chapel Park Pavilion, Dallas, 2012.
Light directed by the skylight with sloping walls.

Starting from one of the main references chosen, the Webb Chapel Park Pavilion, a further analysis on the architectural concepts of pavilions was developed. The aim was to understand the characteristics of this architectural typology of building and apply them to the project. The main constructive concepts pointed out are:

1. Permeability of the space

The pavilion is poised between a state of openness and a tension towards closure. In it, air, light and sound travel uninterrupted, creating a permeable space, which can be freely discovered by the visitor.

The pavilion is a special place of discovery, intimacy and meditation. The space is accessible from different directions, identified in relation to the pre-existing building it is adjacent to.

2. Tension between ancient and new

The pavilion is a structure in constant tension towards the pre-existing building. There must be no clear separation between what is modern and what is ancient. A pavilion must be able to enact a dialogue between the architectural elements.

3. Experience

The pavilion is a new space that offers a different experience within the historical context in which it is inserted. Through the use of certain materials, the pavilion could have a characteristic of mutability, also in relation to

the movements of the visitor who wants to discover it.

4. Definition of a system

The pavilion is not a single object in the space, but it becomes part of a system, along with the historical and natural context where it is placed.

All these features can be found in the exemplificative case studies taking into account what this work.

In the following pages, they are described in detail.

2018 Serpentine Gallery Pavilion

Architect: Frida Escobedo
Location: Serpentine Gallery, London
Year: 2018

The pavilion is characterized by walls made up of concrete tiles, a curved reflective roof and a triangular body of water. The goal was to highlight the presence of the court, a typical element of Mexican architecture, and reinterpret the concept of “jealousy”, that is a wall-filter that allows air and light to filter freely. In addition, the creation of walls that are not completely closed to the outside favors dialogue with the surrounding context and the

main building of the gallery. Furthermore, the tiles are positioned in such a way as to create a complex pattern, with decorative details in the corners. The walls are then reflected both from the water and from the mirrored ceiling, creating a series of distorted reflections. With the changes in light, the passing of the hours and the different position of the observer, the observer’s perception of space changes, especially thanks to the presence of reflective surfaces. The interesting aspect of the pavilion is the fact that the enclosed space is not visible from the outside, creating a kind of “surprise-effect” to the visitors who enter in.



Fig. 41
From www.archdaily.com
Frida Escobedo, Serpentine Pavilion, 2018

Kube Pavilion

Architect: OMA
Location: K11 Museum, Hong Kong
Year: 2019

The pavilion is basically a cube, a primary form that stands out in the complexity of the context in which it is inserted. Through the simple form, the designers wanted to highlight the possibility of creating an intimate and distinctive space, where people can meet.

The golden kiosk has the function of hosting a bar dedicated to the sale of a local artisan coffee, and is flanked by the arrangement of stone blocks of different sizes, which become chairs and tables. The anodized aluminum panels, specially created by the studio, are also designed to reflect light in a different way, depending on the external conditions. The versatility of the Kube’s aesthetics is revealed at night, when the closed pavilion evokes the image of a minimal sculpture, illuminated along its sides.



Fig. 42
From www.archdaily.com
OMA, Kube Pavilion, 2019

Urban Room Pavilion

Architect: Invisible Studio, Reading University
Location: University of Reading, England
Year: 2019

The urban Room Pavilion defines a new architectural space related to the University of Reading, but without really setting limits on it. In fact, the wooden structure of the pavilion, organized diagonally, rests on the ground at the four corners, leaving the possibility to permeate the space in every direction. The upper section of the pavilion, on the other hand, is covered with corrugated fiberglass, in order to protect the space below and facilitate

its use as an exhibition space.

The pavilion is inserted as an element in harmony with the context, thanks to the choice of using non-impacting materials, such as larch wood and fiberglass. In particular, the structure is made up of 75x50 mm wooden pieces, which can be easily dismantled. The temporary nature of the Urban Room pavilion, also used as an exterior classroom, is limited to six weeks. It was later dismantled and rebuilt in the courtyard of the Badgemore primary school. Even if it is not properly an architectural closed space, it is interesting for the permeability of the space which it continues to assure despite its presence.

2012 Serpentine Gallery Pavilion

Architect: Herzog & De Meuron
Location: Serpentine Gallery, London
Year: 2012

The 2012 Pavilion took visitors beneath the Serpentine's lawn to explore the hidden history of its previous pavilions. Eleven columns characterizing each past pavilion and a twelfth column representing the current structure supported a floating platform roof 1.5 meters

above ground. The Pavilion's interior was clad in cork, a sustainable building material chosen for its unique qualities and to echo the excavated earth. Taking an archaeological approach, the architects created a design that inspired visitors to look beneath the surface of the park as well as back in time across the ghosts of the earlier structures. The interesting feature is the creation of an open space underground, covered by the structure of the pavilion itself, where people could meet and seat, in contact with history.



Fig. 43
From www.archdaily.com
Invisible Studio, Urban Room Pavilion, 2019



Fig. 44
From www.deezen.com
Herzog & De Meuron, Serpentine Pavilion, 2012

Scape pavilion

Architect: NAS Architecture
Location: Montpellier, France
Year: 2015

The pavilion was built on the occasion of the Lively Architecture Festival, which was to be organized in the central square of a historic building.

The structure is divided into different moments: starting from the ground, the pavilion is divided into a multitude of random steps, which can serve visitors as reading spaces, places to relax or stages for the various events of the festival. Next to this space, the other branch of the pavilion becomes a penetrable space,



conceived as a reception for the public. The shape is also created by placing the new structure alongside the ancient columns of the square in which it is inserted. The structure is made of wood, painted black on the outside and white on the inside, in order to create a sort of contrast. Inside, in fact, the atmosphere is very bright and comfortable, in order to facilitate communication with the public. On the outside, the choice of a dark color and square surfaces contrasts with the surrounding context, as if to underline the refinement and majesty of the context. The main features is the realization of a unique structure which describes different spaces, providing different experiences to the visitors who come in.



Fig. 45
From www.archdaily.com
NAS Architecture, Scape, 2015

II.2_ DESIGN PROPOSAL

Given all the considerations described in the previous paragraphs, it is deductable that the main objective of the design proposal is to create a new opportunity for the citizens to discover Palazzo Te, beyond the museum activities.

In doing this, the improvement of the connection of the area of Palazzo Te with the city center is essential. The historical analysis underlined the importance of the “Prince’s Path” as main axis of development of Mantua and street traveled by Federico II Gonzaga to reach Palazzo Te. The strengthening of this connection would be realized with punctual intervention located in correspondance of the other important monuments of the city, along this path.

Still considering the historical analysis, the project is aimed to bring to the present some peculiar steps of the transformations suffered by the palace. By introducing new volumes, the objective of the design proposal is to make people perceive the sensations and perceptions of the spaces which belonged to those particular times.

Moreover, another important aspect at the base of the design proposal is the willing to make Palazzo Te available as much as possible, introducing new functions which could be independent from the palace itself. The new opportunity for both tourists and citizens could be to live the palace in present times, remembering simultaneously its history,

thanks to the recreation of important volumes which have been demolished over the years.

The following paragraphs will explain the design proposal, beginning from the general connection with the city of Mantua, passing from the conceptual ideas for the volumes, and concluding with the specific explanations of the architectural spaces created.

II.2.1_ Relation site-city

Starting from the geographical analysis about the location of Palazzo Te in respect to the layout of the city of Mantua, the project is aimed to strengthen the connection of the project area with the Ducal Palace, the Church of Sant'Andrea, the Pescherie of Giulio Romano, the Temple of San Sebastiano and the other monuments of the city.

From a general overview of the monuments of the city, this thesis considers the differences among the different use and versatility of the cultural sites. Indeed, there are cultural sites which are now organized and considered as simple museums, while some others are opened to a more versatile use, hosting temporary exhibitions and events.

Palazzo Te has the potentiality to be set as a new cultural pole, with a wide changing of functions. Currently, the temporary events and demonstrations are less than what could be expected. The aim of the project is to potentiate this aspect, creating a kind of ending point to the cultural offer of the city of Mantua, which starts with the complex of Palazzo Ducale. In this way, the Prince's Path assumes also a cultural and social character, beyond the historical one.

In the following drawing, the analysis of the most important buildings with the identification of their current functional systems.



Basilica of Sant'Andrea



House of the Merchant



Church of San Cristoforo



House of Mantegna



Palace of San Sebastiano



PALAZZO TE



DUCAL PALACE



Cathedral



Palazzo della Ragione



Rotunda of San Lorenzo



Pescherie



Church of San Sebastiano

Fig. 46
Geographical analysis. Identification of the Prince's Path and functions
of main cultural monuments along it.
Personal elaboration.

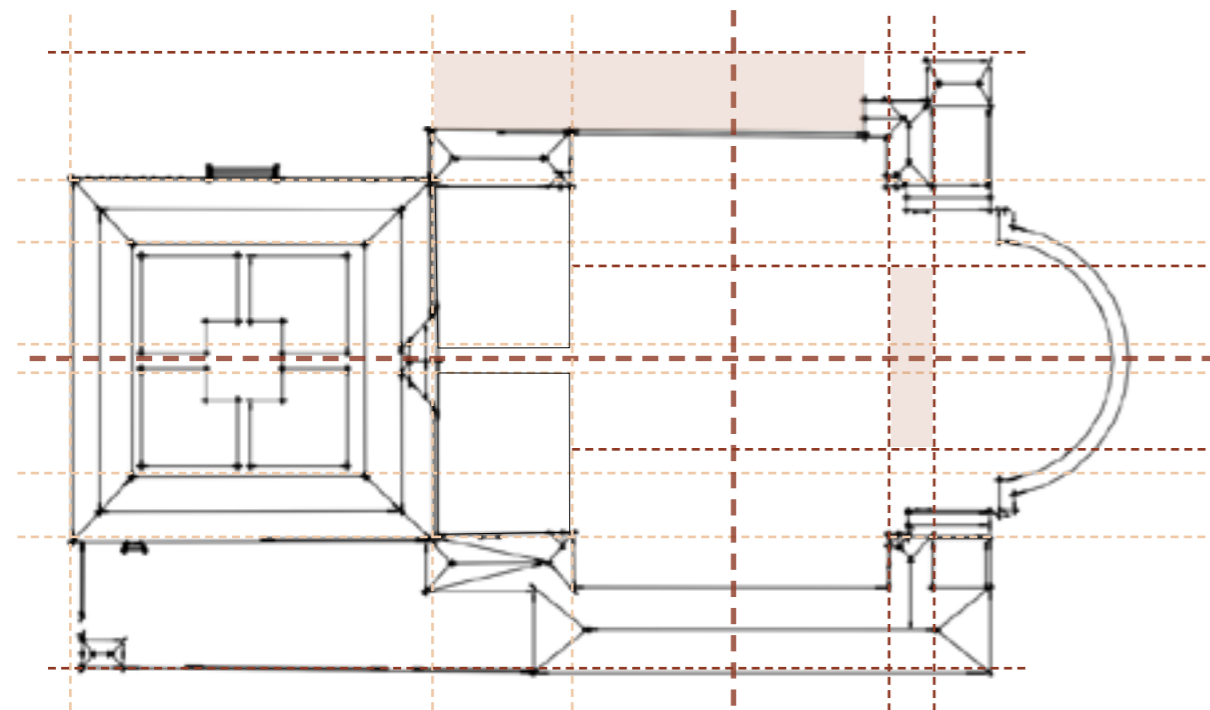
II.2.2_ General concept

Alignments and volumes

The analysis of the site, on both historical and urban level, defined the starting point for the identification of the focal areas of intervention. The consequent operation was to understand how to behave in those focal areas, in terms of alignments, dimensions and volumes to be placed. As said, this thesis focused on two areas: the one along the external northern side of the existing palace, and the other one in correspondence of the exedra, in the interior garden. The closeness to Palazzo Te asked for a careful analysis of the correct relations among the old and new elements. Firstly, the

alignments classification according to different levels of importance was essential. Palazzo Te determines three different categories of directives, which are linked to the organization of the palace, the different importance of the single building and the historical evolution of the palace itself. Following this distinction, the project proposal rises from the main axes, taking into account the secondary ones to adapt the shapes and dimensions of the volumes.

The following scheme shows the planimetric relations among Palazzo Te and its main alignments, with the identification of the two volumes of the project.



- Main axes
- - - Secondary axes considered
- - - Other alignments

Fig. 47
Classification of the alignments of Palazzo Te.
Personal elaboration.

Once defined the main alignments, the following operation was to understand the exact proportion in plan and section for both the volumes designed.

Starting from the volume placed along the external northern side of the palace, considering the historical analysis, it appears to be more bound to the historical traces, being also quite well documented by the sources analyzed. For this reason, the degree of freedom of the design proposal in the definition of the specific perimeter was limited. The project provides the introduction of a respect band along the northern existing wall of the palace, for which

the volume is slightly slipped towards north. This respect band becomes a service road, organized and equipped as garden wall. In the longitudinal direction, the volume starts on the western side, in alignment with the small ancillary building of Palazzo Te. The eastern perimeter, being more flexible, ends with the presence of the other ancillary building, always keeping the same respect band created on the north side. In the empty space, which is created, a small external garden with trees and benches could be organized as temporary exhibition area. About the height, the volume recovers the height of the nearby existing wall, which is about 5,90 m.

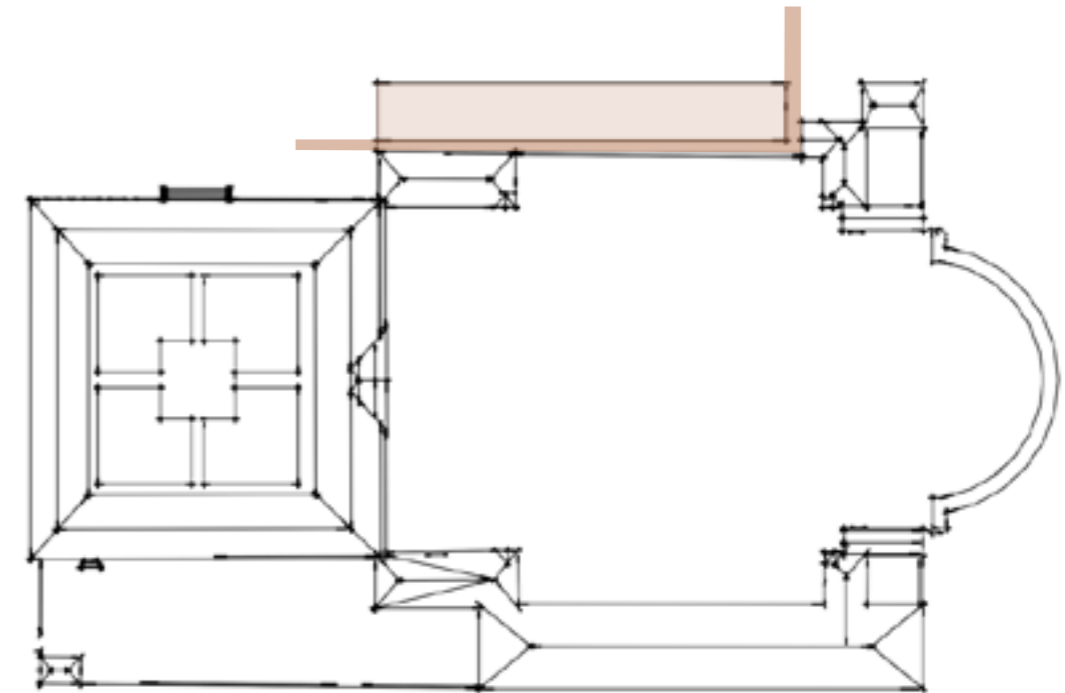


Fig. 48
Sketch of the planimetric definition of the external volume.
Personal elaboration

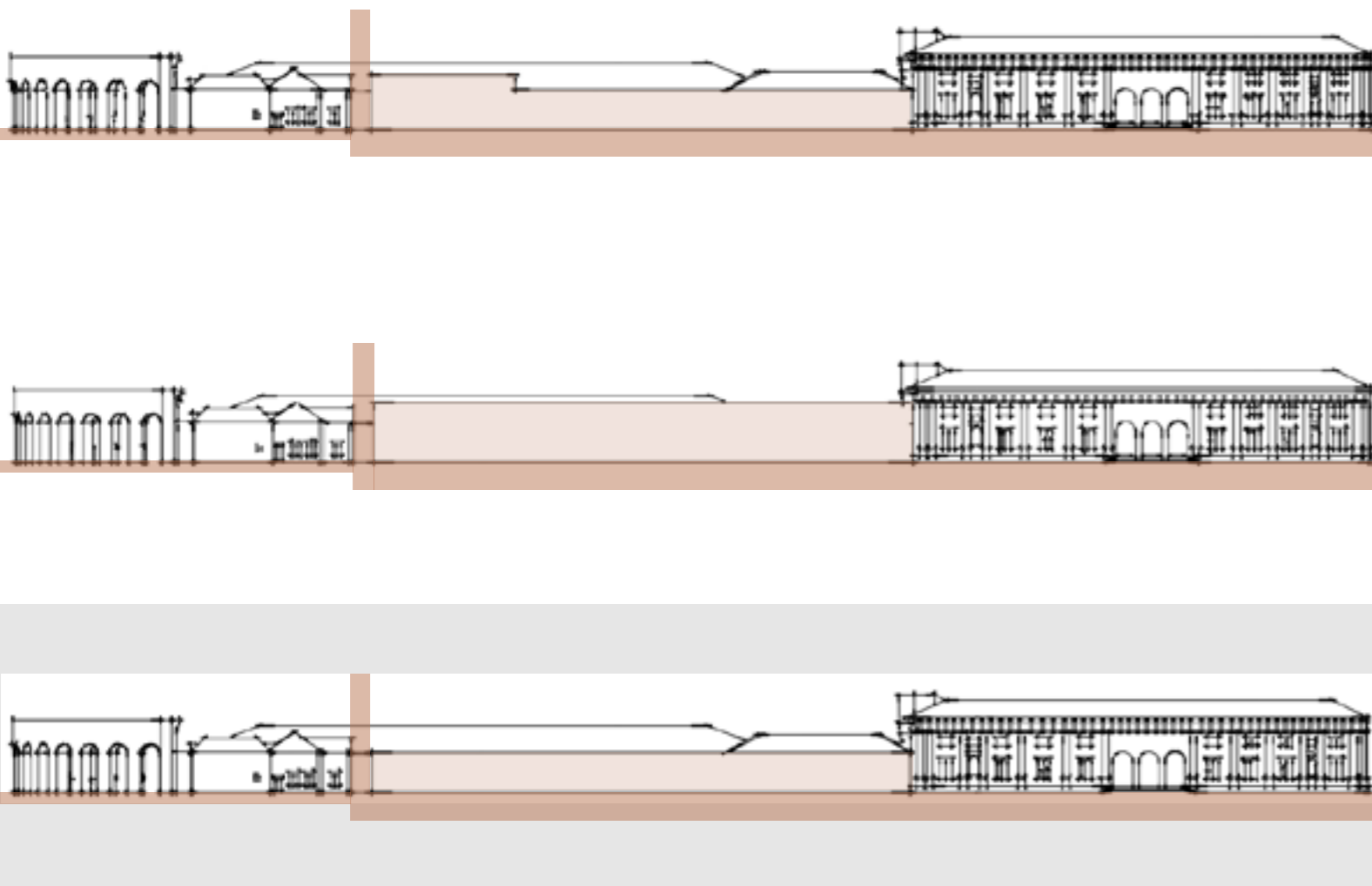


Fig. 49
 Sketches of the elevation of the external volume for the definition of the heights. Identification of the final solution in grey.
 Personal elaboration.

Considering the volume created inside the palace's garden, it is freer from specific constraints, even if it required a detailed study for its location.

Generally, the volume is bound to the presence of the two ancillary lateral building, for which the new structure could be considered a kind of extension from them. Speaking about the longitudinal development, some study schemes were made, in order to identify the more suitable proportion. The only constrain was the central position in respect to the garden axis deriving from the David's Loggia and reaching the exedra.

Another level of analysis was developed considering the altimetric position. Indeed, the first consideration of a structure directly placed on the ground creates the sensation of a blocked view towards the exedra. Referring also to the case study of the "Webb Chapel Park Pavilion" analyzed, the idea of an elevated structure provides the possibility to maintain a permeable space, keeping the perception of the limit identified by the exedra. Below the space of the pavilion and in the surrounding area, in order to create a kind of performing space, the ground is excavated. The idea of the performing space is developed in relation to the presence of the exedra, which is interpreted as a scenic background.

The choice of the typology of the supporting structure is based on a previous research and study. Pillars and linear walls were considered and placed in different ways to identify the most

suitable condition. The result of these studies is the application of two thick supporting walls, placed perpendicularly one in respect the other. The disposition responds to the exigence to articulate the space in a dynamic way.

In defining the exact thickness of the volume, the architecture features of the exedra were considered for the alignments. To reach the elevated plan, a ramp conceived as "architectural promenade" is designed.

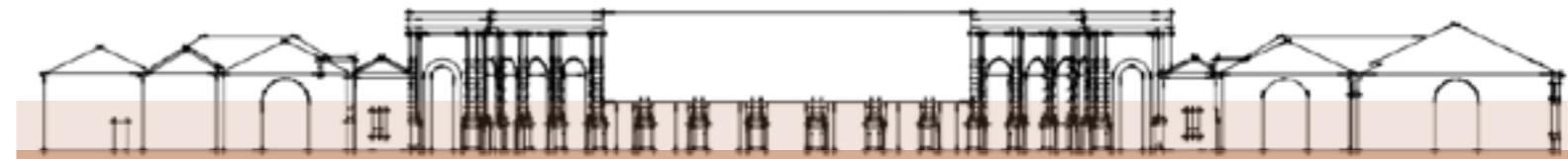
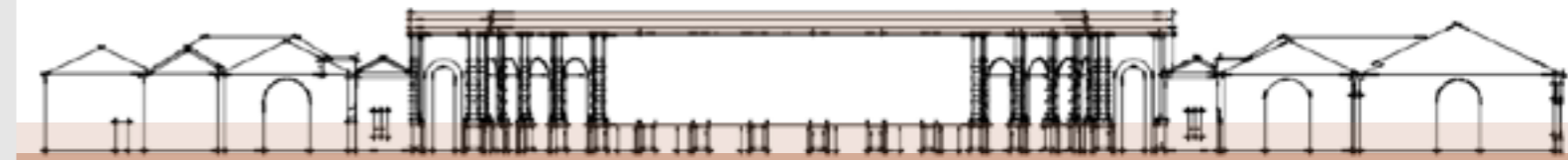
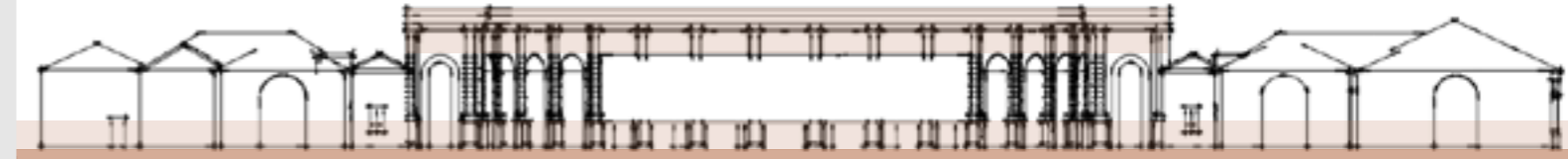
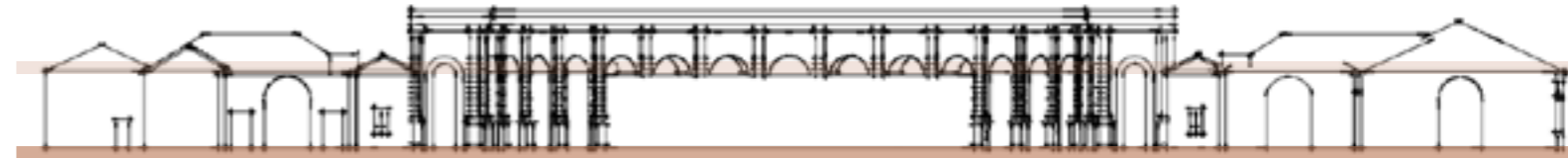
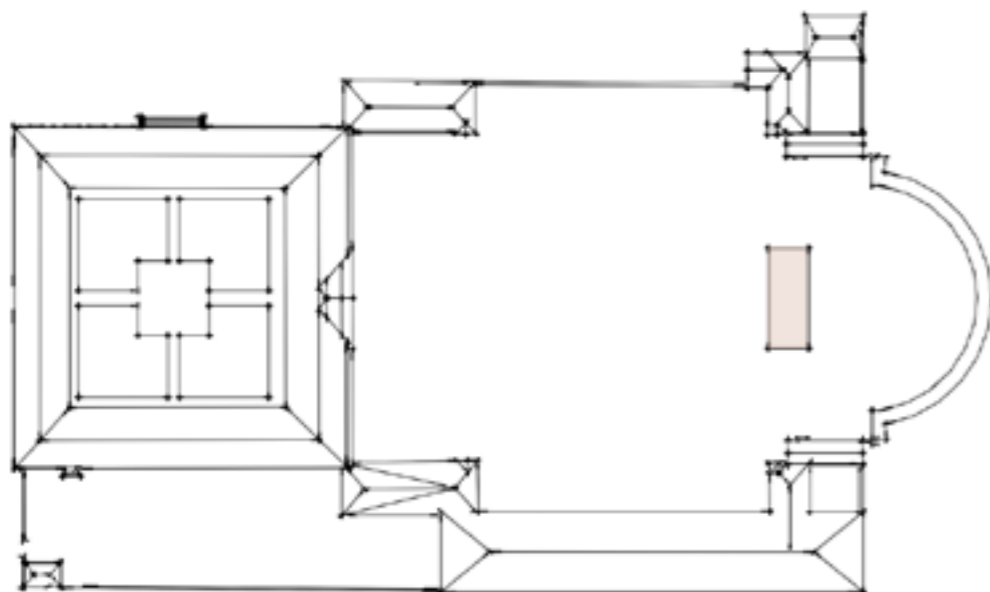
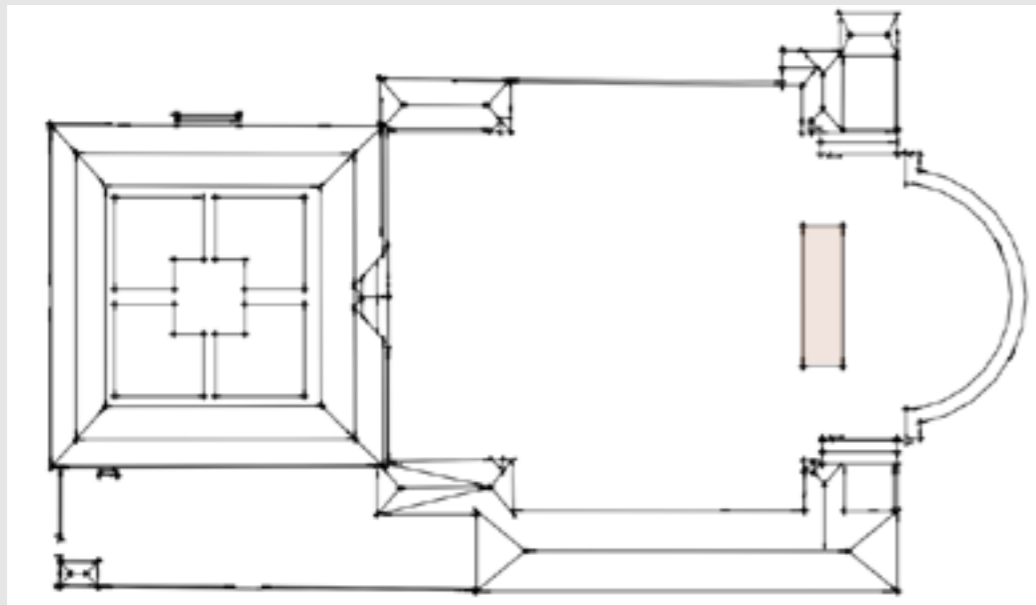
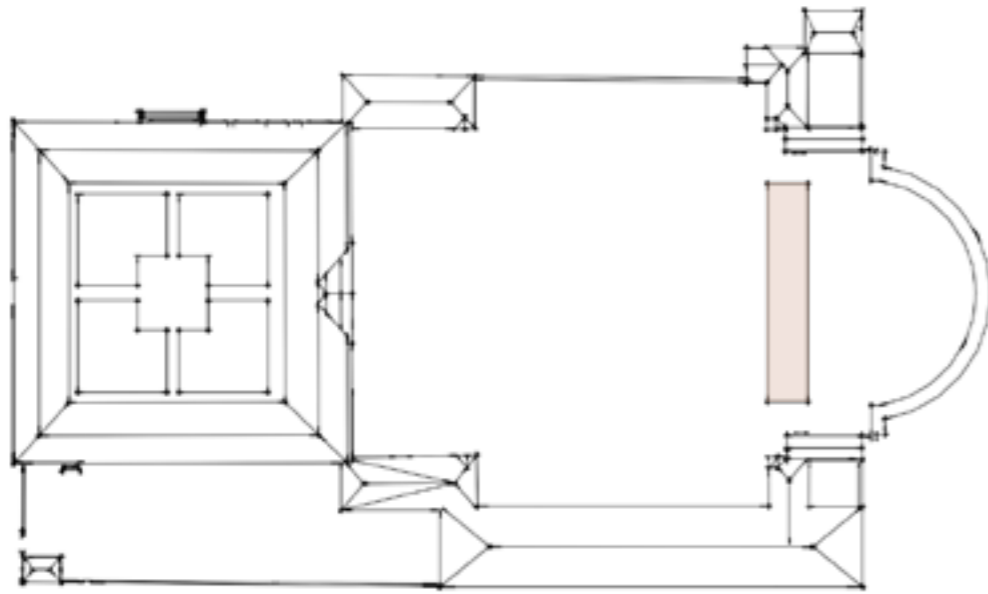


Fig. 50 (on the left)
 Sketches of the planimetric definition of the internal volume.
 Identification of the final solution in grey.
 Personal elaboration

Fig. 51 (above)
 Sketches of the elevation of the internal volume. Analysis of the relation
 with the exedra and identification of the final solution in grey.
 Personal elaboration.

Flows and accesses

Due to the objective of the design proposal to open Palazzo Te to the city and use the spaces beyond the opening times of the museum activities, an analysis about the main and secondary accesses and flows of people has been carried out. In developing the study, the first operation was to make the considerations in relation to two main moments of the palace life: the opening and the closing hours of the museum function. Indeed, the typology and flow of people who would visit the complex of Palazzo Te could change enough. Then, a secondary different evaluation has been made according to the presence or absence of temporary events, next to the permanent museum activity.

The result of the analysis of flows and accesses underlined the importance of the main transversal and longitudinal axes which describe the internal garden of the exedra. In the specific, the existing accesses, which are now closed, have been recovered and used in the design proposal. In doing this, the project deals with the activation of the entire system of the palace, considering ancient spaces now demolished and original axes and accesses which are now closed and unused.

Particularly, the main access which the project is activating, is the arched opening which is present along the northern wall of the garden of the exedra. By reactivating it, the project provides the opportunity to enter and live the space of the big central garden, in

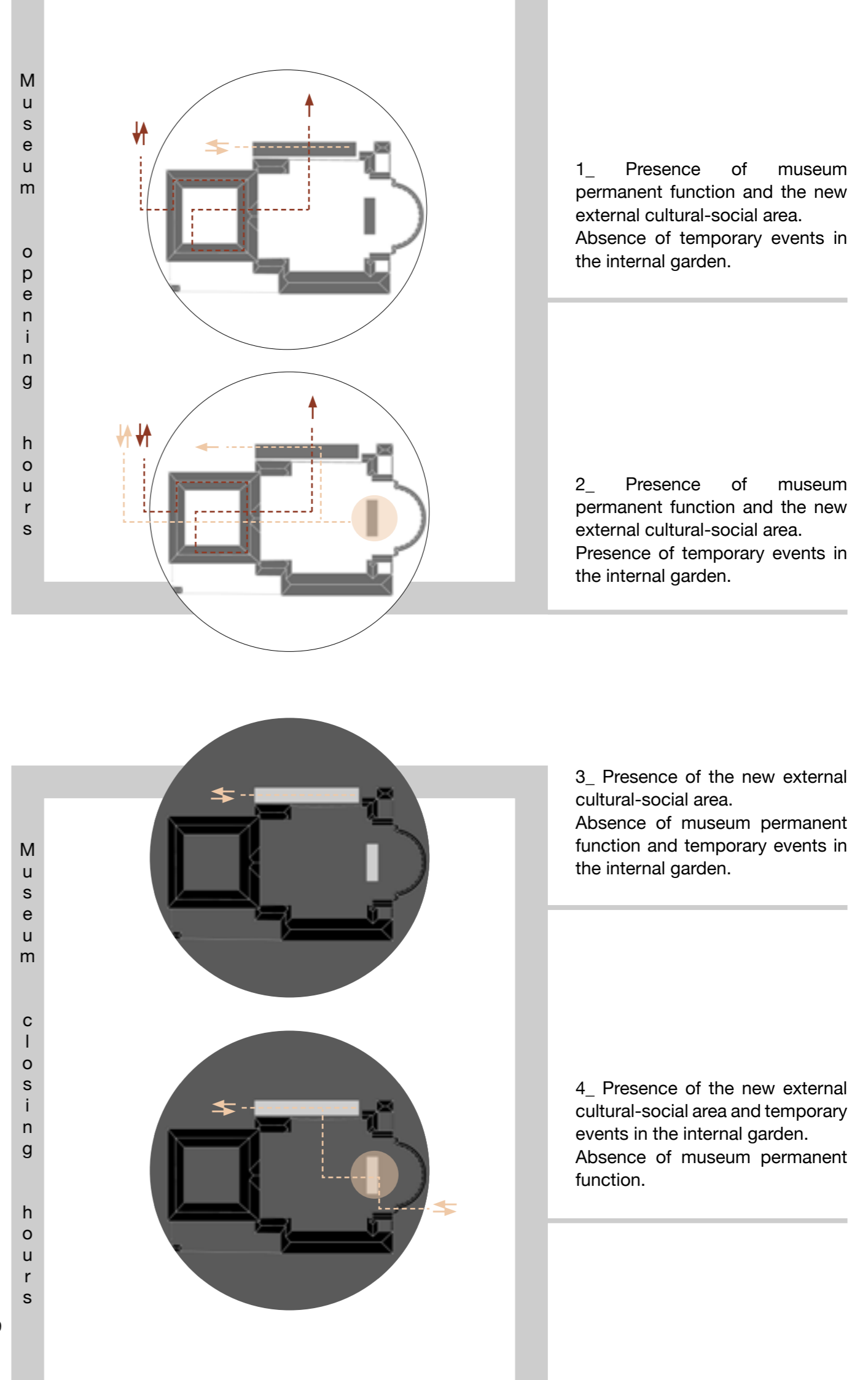
an independent way from the civic museum. Therefore, the open-air space is intended to be used to host some temporary events, linked to the design proposals and the cultural promotion activity of the “Fondazione Palazzo Te”. Following the design concepts, the space becomes open to the visitors in a larger period of time along the day.

On a second level, the activation of the access explained above, influences the internal distribution and organization of the functions inserted in the external volume. Indeed, in correspondence of the arched opening, the project provides the insertion of a void between the different functions, which is considered a kind of pause in the exploration of the palace and an invitation to enter in, for people coming from the city. The design proposal also provides another access to the external volume, in correspondence of the small building, just next the north facade of the main body of Palazzo Te. The aim of this access is strictly connected to the new function which is expected to be designed there and which is the most independent from the museum activities. The disposition of this entrance to the new volume is designed in order to receive people who come from the “Prince’s Path” and enter the area from the ancient “Porta Pusterla”.

Another access which is intended to be open with the new intervention, is a small “service-door” present among the arches of the exedra. This little entrance is useful in relation to the temporary function provides by the proposal of the internal volume.

Fig. 52 (on the right)
Conceptual schemes about flows and accesses in different conditions of functions and times. Personal elaboration.

Legend:
--- Museum
--- New cultural area and temporary events



1_ Presence of museum permanent function and the new external cultural-social area. Absence of temporary events in the internal garden.

2_ Presence of museum permanent function and the new external cultural-social area. Presence of temporary events in the internal garden.

3_ Presence of the new external cultural-social area. Absence of museum permanent function and temporary events in the internal garden.

4_ Presence of the new external cultural-social area and temporary events in the internal garden. Absence of museum permanent function.

Functions

As explained in the previous paragraphs, the identification of the functions is strictly connected to the position of the two volumes. The external volume provides the design of spaces more linked and open to the city, while the internal volume is connected to temporary functions, considering the palace activity.

In the specific, the external volume hosts the function of a restaurant and a versatile exhibition space, which could host cultural events, connected to the exigences of the "Fondazione Palazzo Te". For instance, the organization of the "School of Palazzo Te" could be organized there.

The internal volume hosts an exhibition space as well, but more related to the exigences of the civic museum. Next to it, the space underneath the elevated structure is conceived as a theatrical space, which has the exedra as main scenic background.

Analyzing the functions in a detailed way, some considerations have to be pointed out. For instance, the choice to subdivide the external volume into two main functions is related to the necessity to consider the new designed access towards the internal garden. The presence of the void, as mentioned above, splits the volume in two parts, keeping at the same time a connection among the different spaces of the project.

The importance of this point is also underlined by the presence of the starting point of an external ramp, which allow people to reach

the roof of the external building and have a new point of view on Palazzo Te. The ramp is enclosed between two perimetral walls, so that it is not visible until reaching its beginning.

About the internal functions, the restaurant area provides the design of two entrances. One receives people from "Porta Pusterla" and the city center, while the other is a link with the other new exhibition functions introduced. As place to stay and eat, the presence of light is important. To ensure it, a long glass wall is opened towards the garden which currently faces Palazzo Te. During summer, the project provides the possibility to completely open this transparent surface, in order to enhance the contact with the historical and natural context around. The interior space of the restaurant is described by a combination of materials which recollect the materic composition of Palazzo Te, following the considerations pointed out by the previously mentioned analysis of existing materials. In addition, the works of the architects Nisi Magnoni and Maurizio Lai, about the realization of bar and restaurants, have been taken as main references for the creation of the space atmosphere.

In the specific, the restaurants designed by the two architects were considered for their excellent use and combination of different materials, aimed to obtain a specific and sophisticated atmosphere. The disposition of different tables and furniture is also optimal to create a dynamic space, which change in relation to different typologies of eating.



Fig. 53 (above)
From www.nm-architetti.it
Nisi Magnoni, Kandoo restaurant, Milan. Interesting for the use of contrasting materials and the use of light integrated in ceiling.

Fig. 54 (under)
From www.laistudio.com
Maurizio Lai, Iyo Aalto, Japanese Gourmet Restaurant, 2019, Milan. Interesting for the exposed structure of the ceiling and the atmosphere created with light and materials

The exhibition space designed in the external building is conceived as an empty space, articulated according to a complex structure. Indeed, this area develops on two level, one at the ground floor and the other excavated underground. The ground floor is also conceived as a kind of terrace, with a squared area which faces on the level underneath. The connection between those two levels is realized by a staircase, designed in a way to make people perceive the space in a continuing different way.

Particularly, the internal space is connected to the presence of the external ramp, so that the vertical connection is realized in the same area. The creation of different levels inside and outside is related to the idea of the “architectural promenade”, which allows people to perceive the space in a dynamic and always different way. An architectural example is the Guggenheim Museum, designed by Frank Lloyd Wright in New York.

In fact, along the external slope, some windows are opened in strategic points, to give different sensations to people, towards the interior space or the context around.

Finally, the natural light of this exhibition space, is provided by a system of skylight with inclined sloping walls. The artificial light is designed to reach an almost blurred atmosphere, but which could allow at the same time, the organization and view of an exhibition.

The other exhibition space, located in the internal volume, recovers the same system of natural and artificial light which is designed in the external building. The exhibition area is flanked by the presence of a patio, which is not visible from the outside, but which could be discovered once ascending to the elevated level. In this way, a simple parallelepiped elevated from the ground could reserve to people new elements by exploring it, such as the system of skylights, the patio and the continuous slope designed with the same principle of the external one.



Fig. 55
From www.floornature.it
Frank Lloyd Wright, Guggenheim Museum, 1943, New York. Taken
as reference for the development of the museum collection along a
continuous ramp.

II.2.3_ Specific interventions

CURRENT MUSEUM PATH

1. Current entrance of the Place
2. Ticket office
3. Hall of introduction to museum path
4. Camera di Ovidio
5. Camera delle Imprese
6. Camera del Sole
7. Northern Loggia delle Muse
8. Sala dei Cavalli
9. Sala di Psiche
10. Camera dei Venti
11. Camera delle Aquile
12. Eastern David Loggia
13. Sala degli stucchi
14. Sala di Cesare
15. Sala dei Giganti
16. Temporary exhibition
17. Southern Loggia
18. Ending space

NEW FUNCTIONS

- A. Restaurant
- B. Exhibition area
- C. Exhibition area

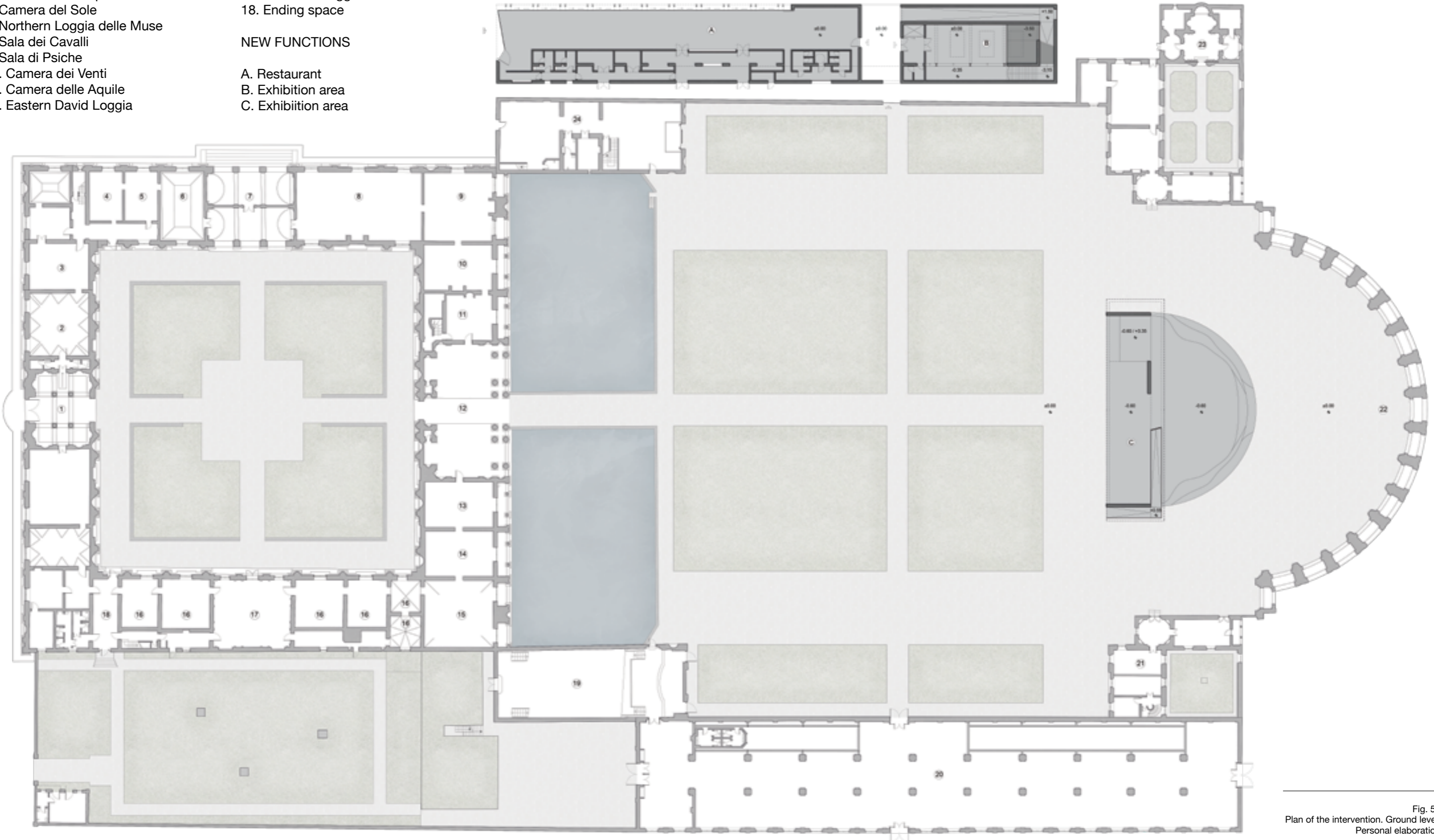


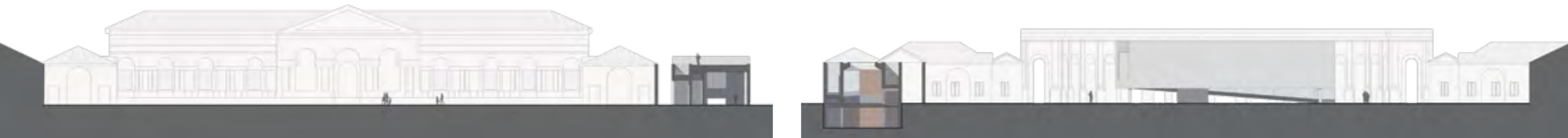
Fig. 56
Plan of the intervention. Ground level.
Personal elaboration



North Facade



AA'



BB'



CC'

DD'

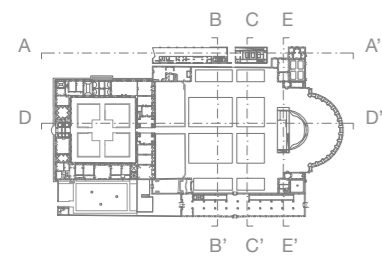


Fig. 57
Sections of the intervention. Internal and external pavilions.
Personal elaboration



EE'

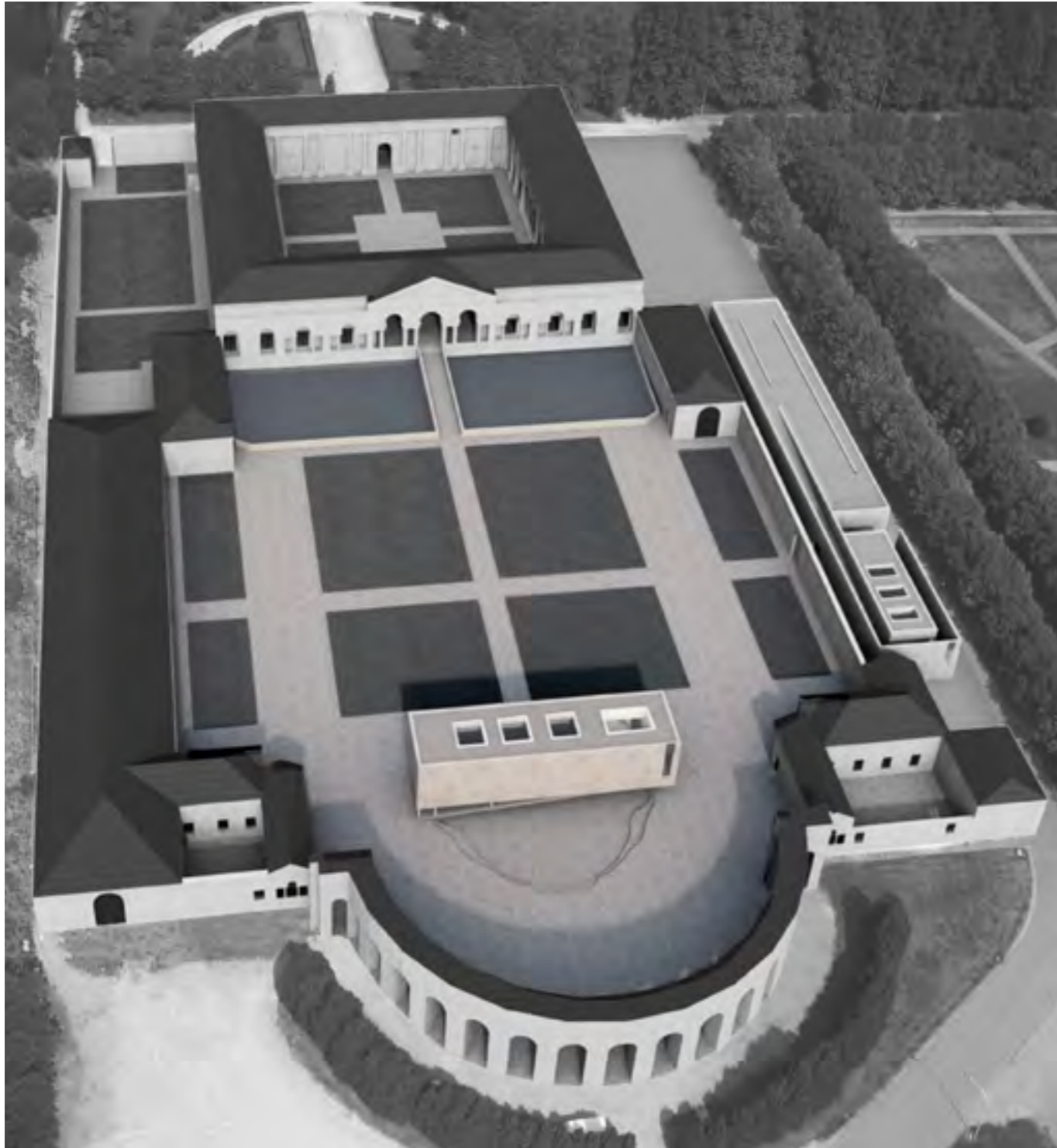


Fig. 58-59-60
Photorealistic images of the interventions. Personal elaboration.



External volume

The architectural references of the Portuguese architecture led to the creation of a geometric volume. Its purity of shapes is interrupted by the presence of the perimetral glass wall, marked by the presence of pillars and an upper entablature band.

The volume is deformed in correspondence of the two main entrances, one placed next to the palace northern facade, and the other located along the transversal axes of the internal garden, in correspondence of the arched entrance. The closer access to the facade of Palazzo Te is designed with sloping walls, as invite to enter in.

The building presents openings according to the functions designed. In the specific, the restaurant area provides a big glass wall, whose rhythm is related to the nearby facade of the palace. A careful study about the rhythm of the center distance of the pillars was made in order to obtain the better correspondence in proportion with the existence.

To reach the visual continuity between interior space and exterior, the glass wall of the restaurant doesn't present frames and it is possible to open it during cool seasons. In this way, the project provides the possibility for the costumers to get more in touch with the history and natural context where they are.

The glass area relates to an overlying wall band, which is intended to define the volume and whose dimension was developed according to different solutions. The idea is to recollect the

idea of the trabeation, present also in Palazzo Te.

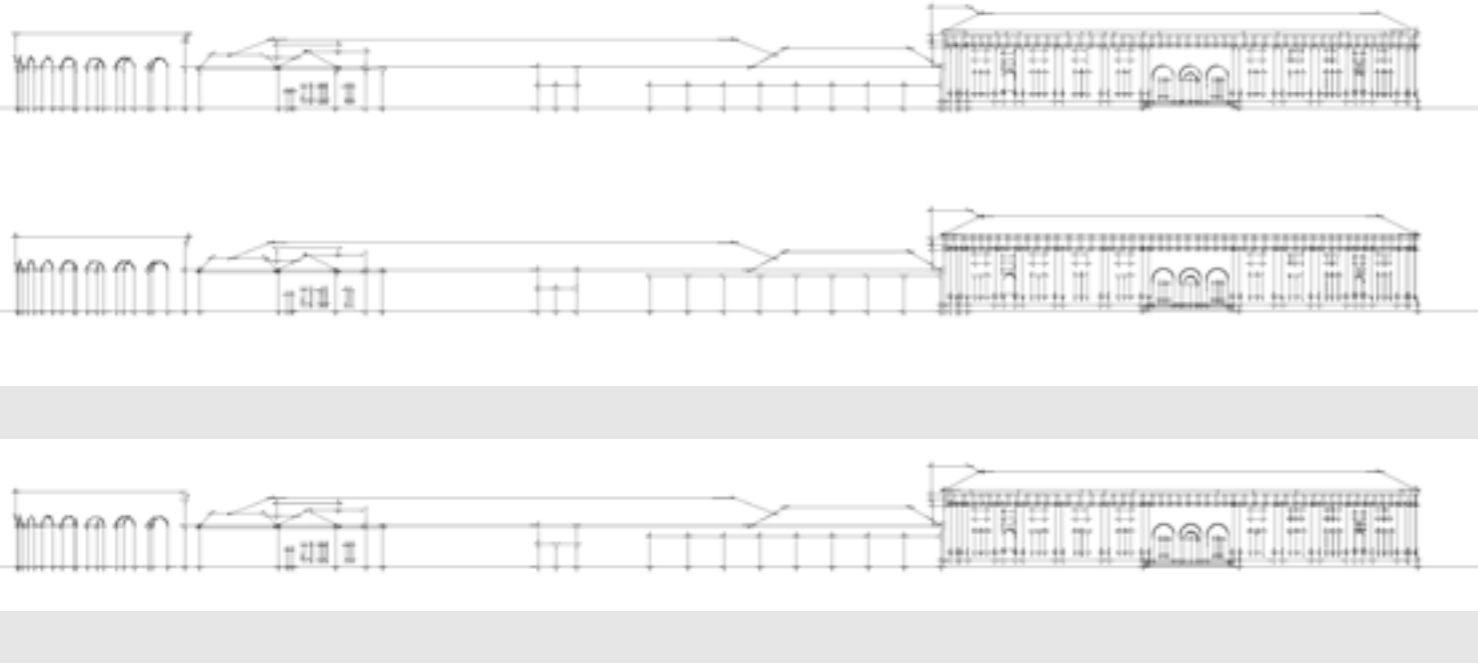
The analysis developed on the facade of Palazzo Te started with the identification of the rhythm of the existing pilasters. Giulio Romano, following perspective and deceptive principles, introduced 8 different steps between the elements. The project focused on the most repetitive ones, trying to apply the proportioned rules to the main facade of the volume considered.

Once determined the most proportioned and adequate rhythm, a further analysis was made, focusing on the relation among the architectural elements: pillars, glass and trabeation. By placing the glass behind or in front of the pillars, the effects obtained on the facade are different. Moreover, the combination with the characteristics of the wall band changes the relation with the facade of the palace. The hypothesis considered provides the use of a truss beam or a coffered system, whose main reference is the architecture of Mies Van Der Rohe in Berlin.

All those project variables are explained in the following schemes.

Fig. 61 (on the left)
Photorealistic images of the interventions. Personal elaboration.

Proportions



Rhythm

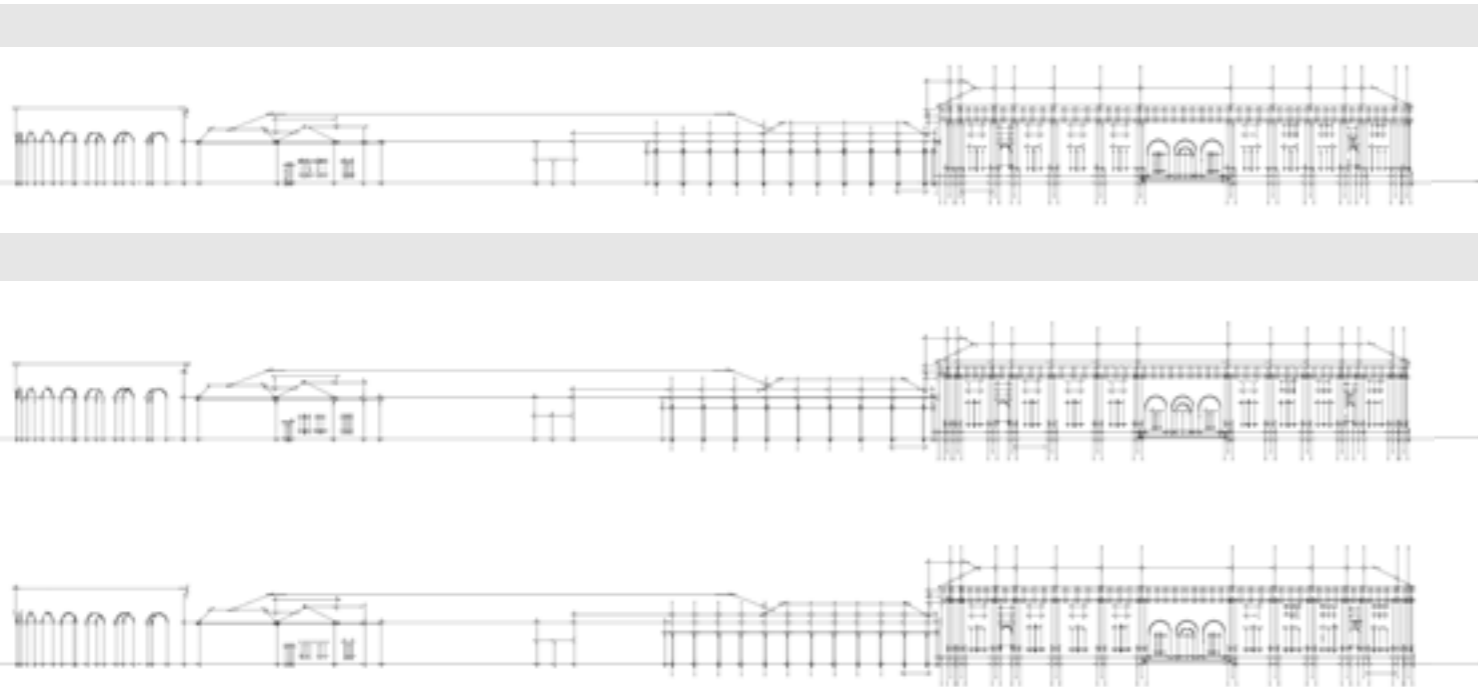


Fig. 62
Sketches about the relation among opaque and transparent surfaces, considering the presence of Palazzo Te. Personal elaboration.

Fig. 63 (under)
Analysis of the rhythm of the pillars, in relation to Palazzo Te. Personal elaboration.

Project variables

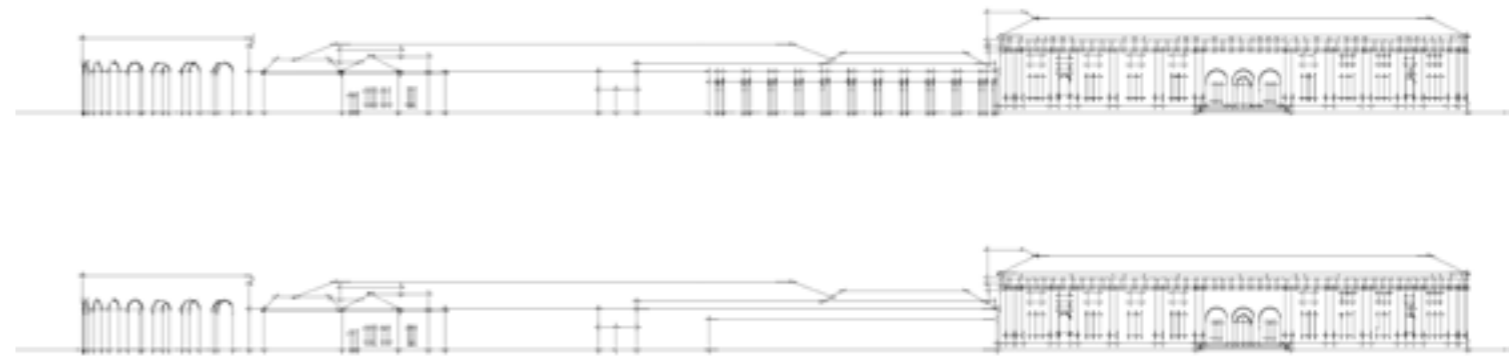
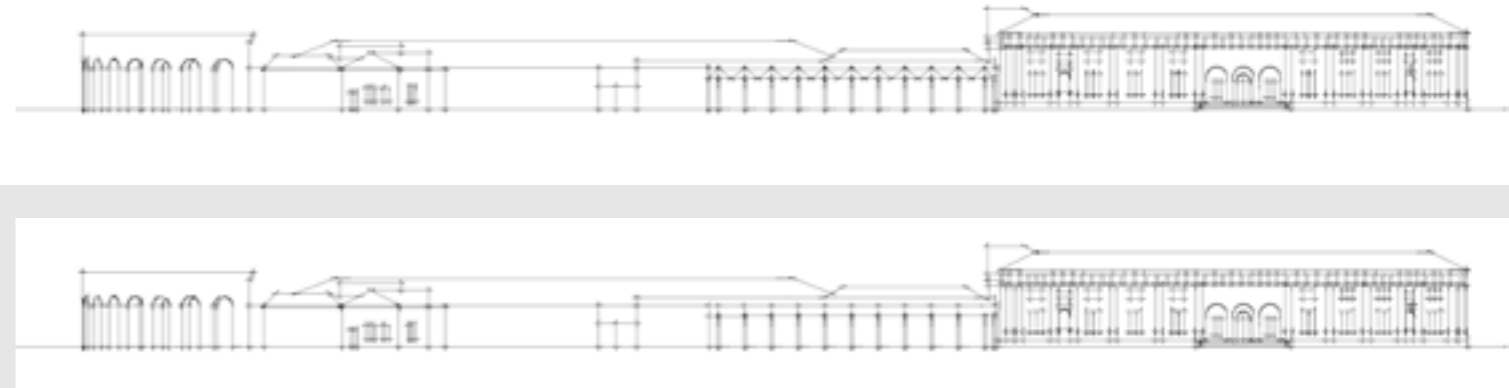


Fig. 64
Studies about the characterization of the upper wall band. Final solution in grey. Personal elaboration.

In correspondence of the exhibition area, the pure volume is cut by the presence of a ramp, which surrounds it externally and is aimed to bring people to the roof level of the building. The ramp has a width of 2.00 m and is completely surrounded by walls on both sides. The idea is to give the sensation of discovering a new space once reached the top. Along the path, cuts are displayed in order to define specific glimpses over the context around. An opening is also planned to have a new point of view towards the interior exhibition space designed. The walkable roof is aimed to give the opportunity to discover the new space through different sensations and points of view. The visual connections are also allowed by the application of a glass railings, with a minimum visual impact. The walkable area is located just on the top of the restaurant area, while the exhibition spaces is ruled by the presence of three rectangular skylights, with sloping walls, which are able to orient the light inside in different directions.

Speaking about the exhibition space, its peculiarity is the presence of an underground floor. This level can be reached through a staircase. Then, the internal organization of the space is set to make people perceive the space in a dynamic and changeable way, from different points of view. The underground level is also reachable by using a mechanic platform. It has the objective to bring sculptures and works pieces underground, and allow the visit to disabled people too. The structure of the building is composed by a system of pillars

and load-bearing walls, combined with a roof and false ceiling, which host installations. The metallic structure of the pillars is showed in front of the glass wall and it is in contrast with the smooth surface of the cladding panels applied in the exteriors. The reason is to enhance the presence of the pillars, and so, the link with the facade of the historical palace. As said, the main reference of this compositional layout is the Neue Nationalgalerie, designed by Mies Van Der Rohe in Berlin. The main finishing chosen consists in a cladding system composed by panels in smooth concrete. The color is a pinkish beige, to remember the original color of the travertine chosen by Giulio Romano for the construction of Palazzo Te.

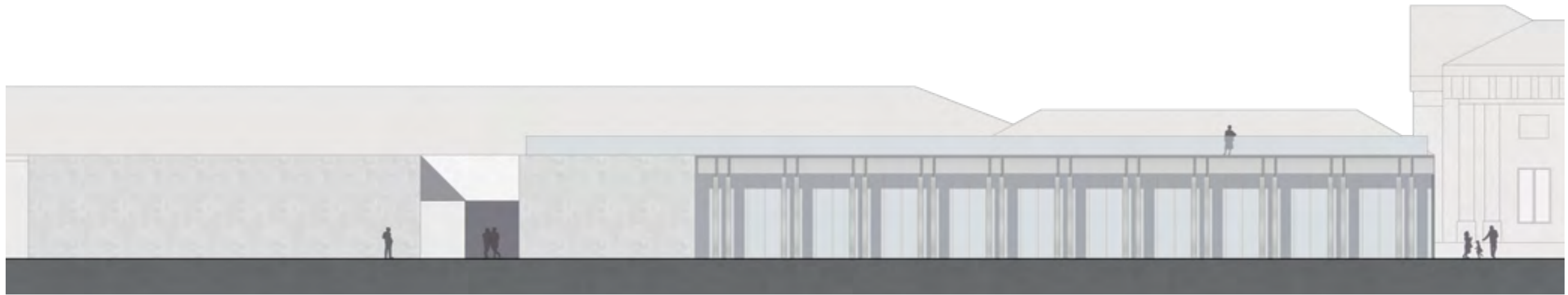


Wood, glass and metals are the materials chosen to define the project details, both in exterior and interior spaces.

The same materials are applied to the volume designed in the interior garden, in order to give continuity to the design proposal and reach the same level of connections with the palace.

Fig. 65-66-67-68
Photorealistic images, approaching in sequence the external volume.
Personal elaboration.





RESTAURANT AREA

1. Restaurant public area
2. Women's locker room
3. Men's locker room
4. Warehouse
5. Cold rooms
6. Kitchen
7. Waste depot
8. Toilets



EXHIBITION AREA

- Ground Floor:
9. Exhibition entrance
 10. Elevator
 11. Toilets
 12. Exhibition space
 13. Exhibition space
 14. Exhibition space
 15. Ramp leading to the roof

- Basement:
1. Exhibition space
 2. Exhibition space
 3. Elevator arrival
 4. Elevator
 5. Deposit

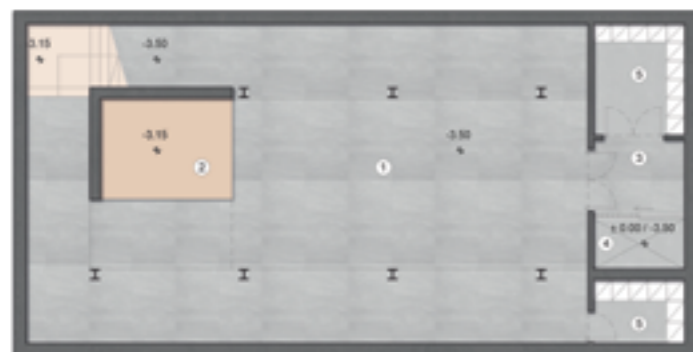


Fig. 69-70-71-72-73
External volume, plans and sections.
Personal elaboration.

The steel structure of the external volume is composed by a combination of pillars and beams, which are exhibit in a portion of the main longitudinal facade, facing north. The main structure is also connected to the secondary

one, which characterized the development of the external perimetral ramp. The bracing is positioned so as to avoid structural movements due to wind loads and earthquakes.

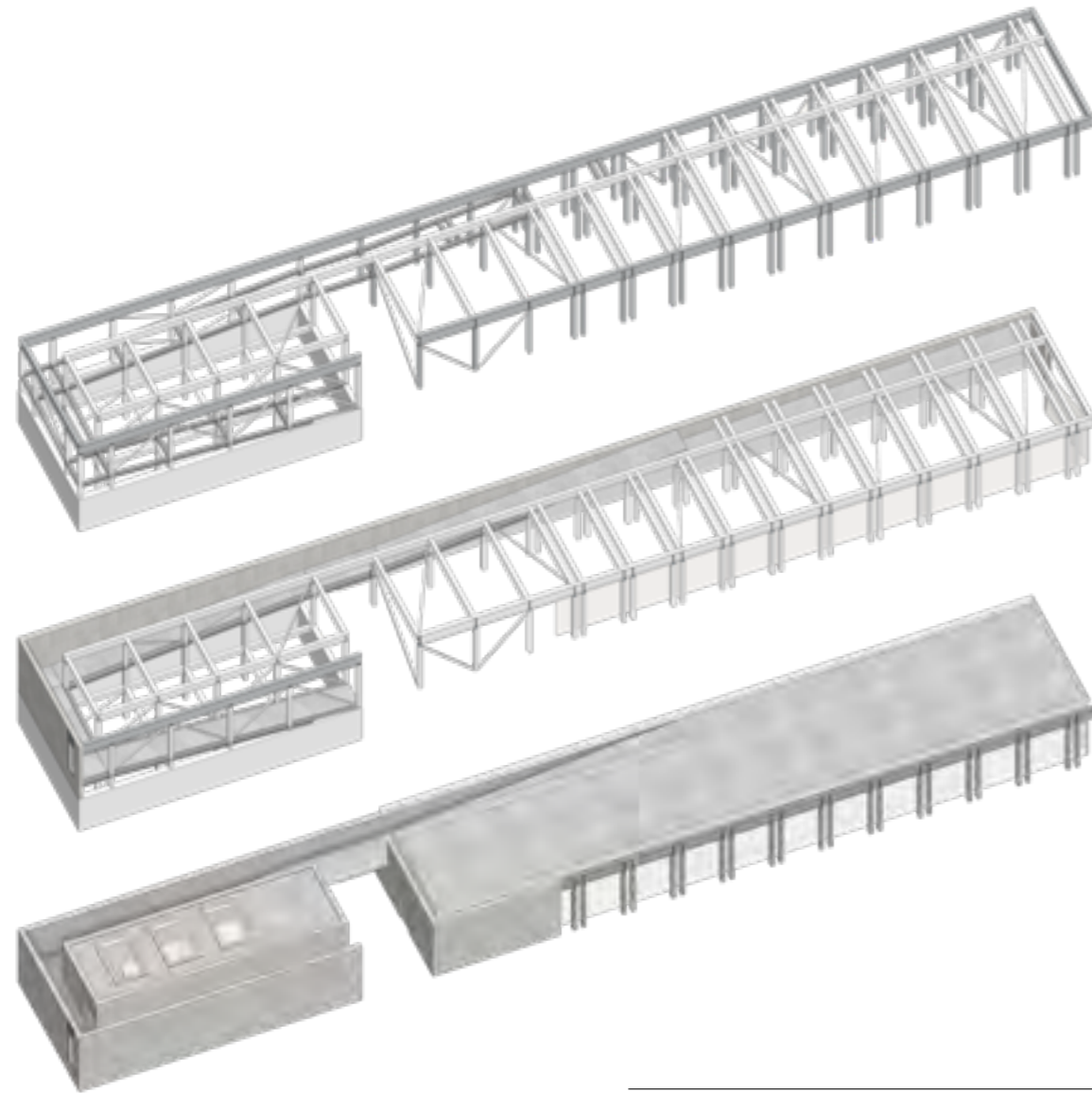


Fig. 74
Sequence of isometric views of the structural composition.
Personal elaboration.

Internal volume

As said, the architectural choices of the external volume are the same which describes the building designed in the area of the garden of the exedra.

The geometric volume which defines the elevated exhibition space is surrounded by a ramp which describes its perimeter. In its final stretch, it identifies the space of a patio, a kind of surprise element of the composition, which is not visible from the exterior. The ramp is also characterized by the presence of a glass wall, which substitute the classic railings, providing a better visible relation with the context. Along the longitudinal wall of the volume, in correspondence of the left transversal stretch of the ramp, two openings are defined. In this way, people could have a new perception of the relation between the exedra and the main facade of Palazzo Te, through the new intervention itself. In this point, the glass walls which contain the space of the patio creates a kind of well of light, which increases the suggestiveness of the space. The space of the patio is also conceived to convert itself into an extension of the exhibition space. Indeed, an elevating platform, equal to the one designed for the other exhibition space, is provided there. By reaching the level of the exhibition area through a piston underneath, it could bring works of art or stay at level to simply extend the space in particular occasions.

The main character of the interior space is the presence of the same system of skylights conceived for the external building, which

provides always new light sensations through the days. The light will be filtered by dark or opaque glasses, in order to avoid the entrance of direct light.

The hetero character of the structure is also highlighted by its suspension from the ground, through the design of three massive support structures placed perpendicularly one to the others. The materials applied for the load-bearing walls is the concrete, to enhance their structural function.

The position of the three supporting elements was object of a careful study which asked to both structural exigences and perspective reasons. Indeed the main point of the project of this pavilion is to realize a structure which could make possible the continuity of the main longitudinal axis of the composition of Palazzo Te. This axis starts with the current entrance of the museum, passing from the David's Loggia and ending with the new elevated volume and the exedra. The following sketches show the results of the analysis of those considerations.

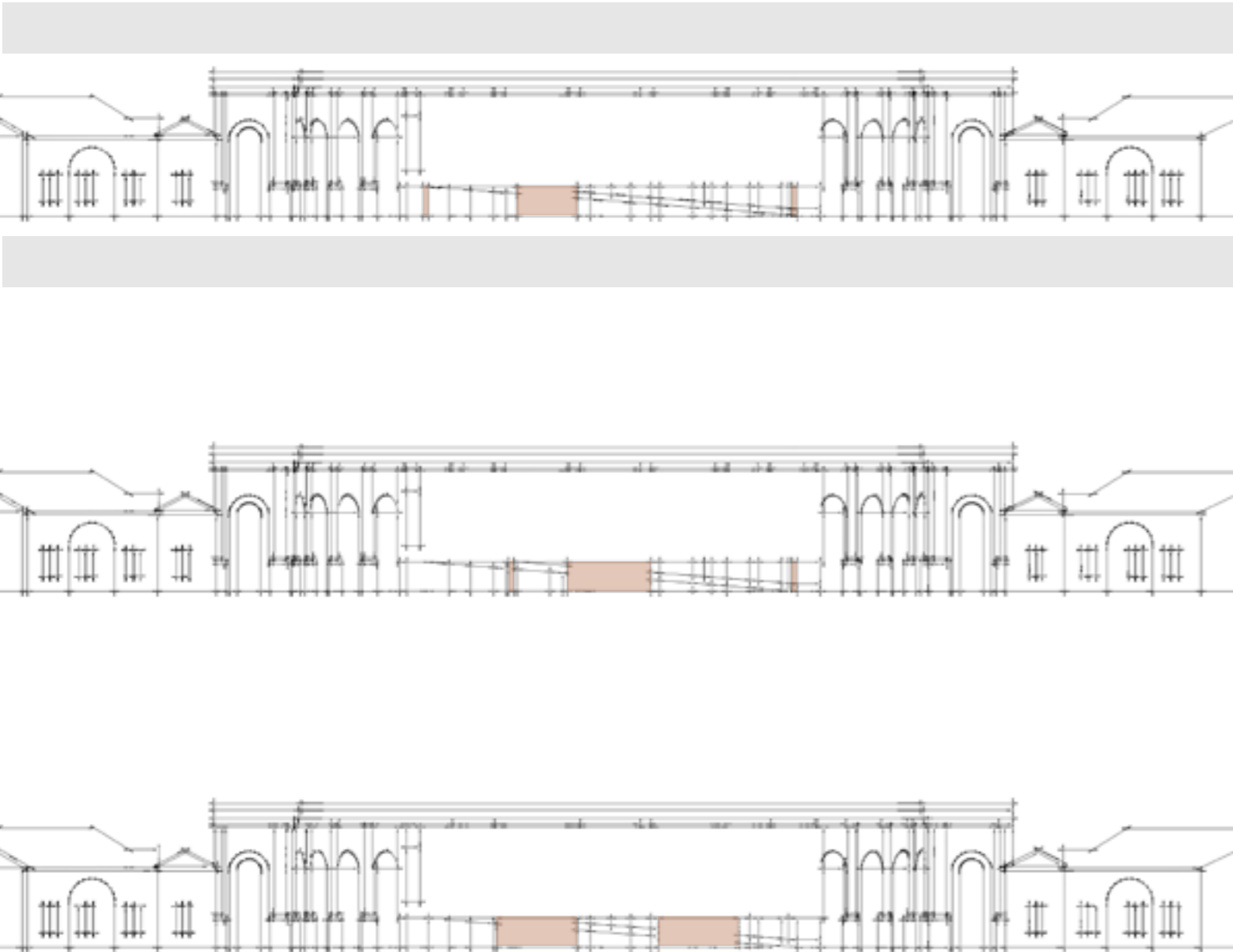


Fig. 75 Results of the study of the load-bearing walls, according to structural and perspective reasons. Personal elaboration.

The lower level of the elevated floor of the pavilion is placed at 2.10 m from the ground, so that it is intended to be a kind of giant door which introduces new spaces and functions in the pre-existing complex of the palace. The new volume becomes a space of performance, theatrical events and exhibition both at the level of the ground and inside it. In this sense, the presence of the exedra is essential as scene background.

Indeed, an analysis was carried out about the relations and proportions between the dimensions and heights of the pavilion, with the position of the visitor in the garden of the exedra. The aim was to create a space which has to be discovered step by step, when approaching it. The results led to the creation of an excavated area under the pavilion, which is not visible until being close to the volume. This covered performance space is at -0.60 m and is connected to the space of a "theatre". This functional area is realized in curvilinear shape, between the space of the pavilion and the exedra. Two lines of bleachers are realized in order to allow people to take a seat and enjoy performances or temporary events. The existing access located on the right side of the exedra can be used by actors and performers as service or scenic entrance.

The functional connection between the level of the interior space of the pavilion and the area below is physically realized by the movement of the mechanic platform. According to the different exigences of the event organized, the

platform could remain at the ground level or it can be moved until the level of the internal exhibition space. Following this idea, the performance and exhibition space is conceived as a continuously changeable space, able to provide always different sensations to people.



Fig. 76
Photorealistic image of the internal pavilion, from the David's Loggia.
Personal elaboration.



Fig. 77-78
Photorealistic image of the internal pavilion, starting to approach the building. Personal elaboration.



Fig. 79-80-81-82
Photorealistic image, approaching in sequence the internal pavilion.
Personal elaboration.

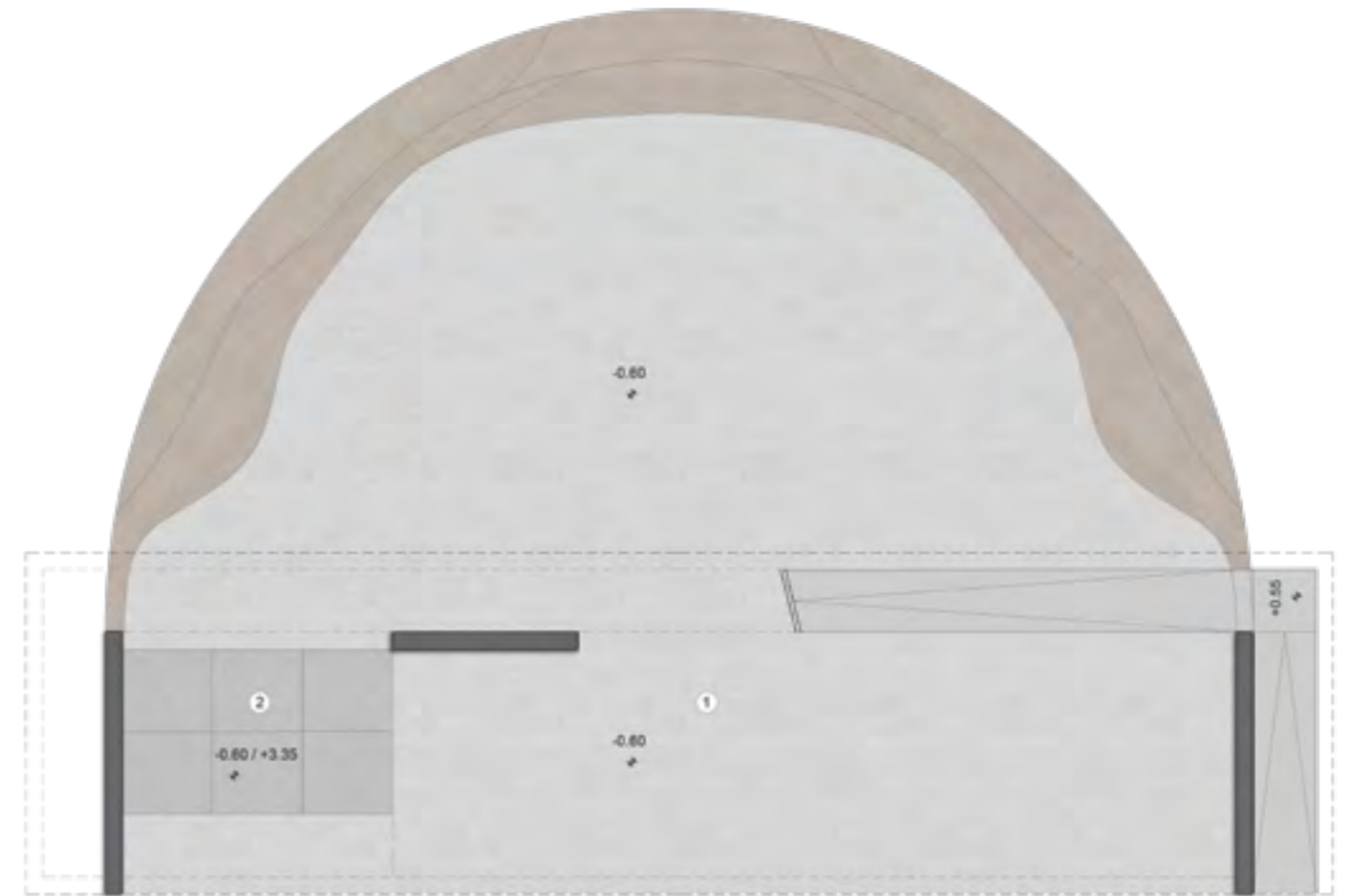


Fig. 83-84
Ground floor of the internal pavilion. Connection with the external performance area. Personal elaboration.

Ground Floor:
1. Usable space under the pavilion
2. Mechanic platform

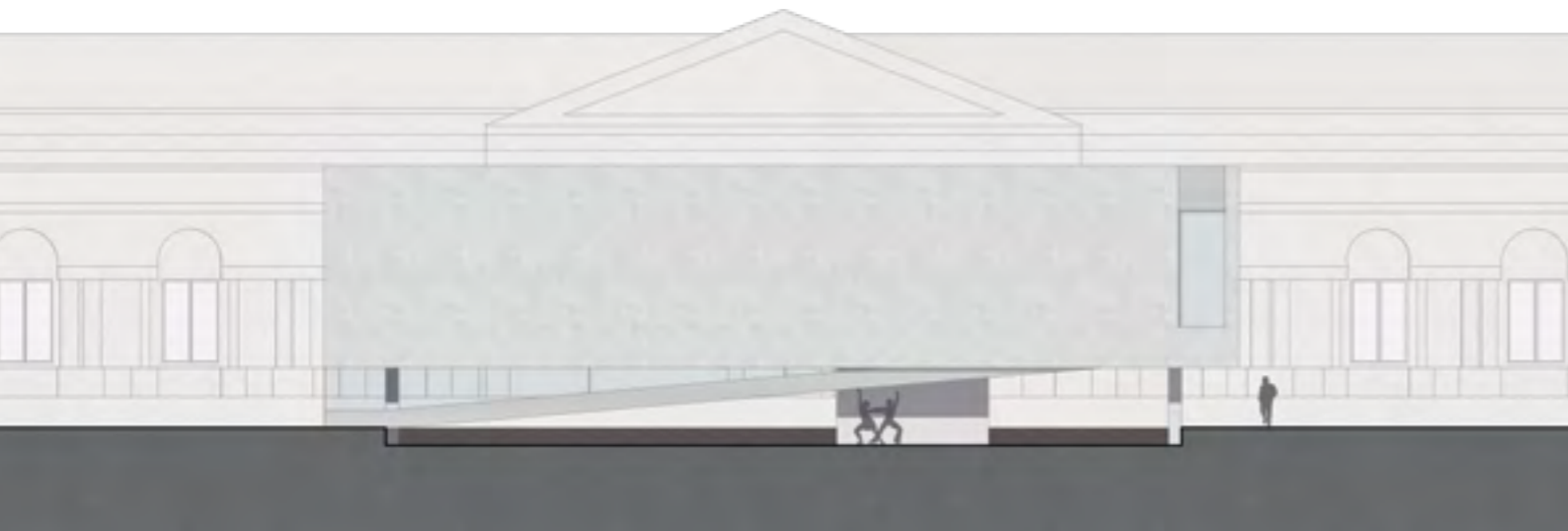


Fig. 85-86 (above)
Internal volume, east and west facades. Personal elaboration.



The steel structure of the internal volume works as a suspended structure from the roof, unloading its load on the three load-bearing concrete walls realized. The cantilever beams realized at both roof and floor levels are HEB

Fig. 87
Sequence of isometric views of the structural composition. Personal elaboration.

1000, in order to guarantee the stability of the suspended volume. The structure is also combined to the structure of the suspended ramp and the realization of skylights and patio.

II.2.4_ Restaurant area

Considering the project of Nisi Magnoni and Maurizio Lai as main references, the atmosphere which the project is intended to create in this space is the one of a simple space, but characterized by a careful study of materials, light and specific details. The space is divided into two parts. The bigger one is the main dining room, while the other is the complex of service areas, which are in relation 1:3 with the main space. The dimensions of the spaces are:

- Restaurant - 362.36 m²
- Wardrobe area and cash desk - 15 m²
- Public toilets - 50 m²
- Kitchen - 68 m²
- Dressing room for female staff - 10 m²
- Dressing room for male staff - 10 m²
- Deposit - 18 m²
- Cold storage rooms - 15 m²
- Washing area - 10 m²
- Technical and rubbish area - 7 m²

The service area provides the kitchen as central space, which correspond to the presence of the bar counter in the main space. The main function of the restaurant develops in a longitudinal way, defining different areas, according to the typology of dining.

Starting from the main entrance, located near the northern facade of the main building of Palazzo Te, the first area is destined to people who are looking for a sophisticated place where to eat, without being disturbed by the other customers. Indeed, the project proposals provides the disposition of circular areas with

wooden slats suspended from the ceiling. Moreover, they are able to give a kind of privacy to those who need it while eating. The seats consist in simple chairs, articulated around a squared wooden table.

The second typology of eating area consists in little table of two or four people, articulated in curvilinear succession in front of the bar counter. This area is conceived to be more destined to people who could use the space for a drink, after dinner or after having visited an exhibition.

The third and final area is characterized by the presence of more conventional tables, organized according to the development of a wooden elements which defines the flow of people.

The three areas conceived are linked by the use of the same materials. Tables are designed with a metallic support and a wooden plane. The system of lighting is defined by a linear design concept, painted in black, and articulated in a different and dynamic ways. The presence of wood is recovered also in the design of the partition walls which defined the area of the public toilet and the wardrobe. Those walls are also connected with the lighting design and a specific source of light which is generated from the ground. The floor is in stoneware, while the material is a kind of stoneware which imitates a concrete texture with exposed formwork. The ceiling shows the metallic structure in browned steel, which is the same material of the pillars.

The use of wood is also present in the definition of the bar counter. As sideboard to place bottles and drinks, a structure made of wooden slats is designed. This structure, with a depth of 30 cm, is embedded in the wall which divides the kitchen and the main restaurant areas. The slats continue also in the false ceiling, creating a game of lines.

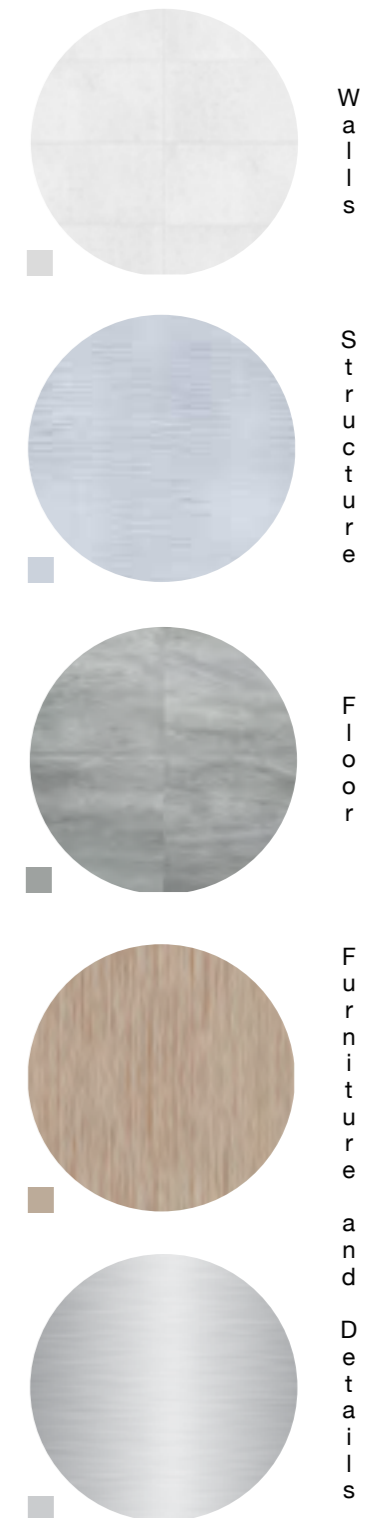


Fig. 88
Main materials applied in restaurant area. Personal elaboration.

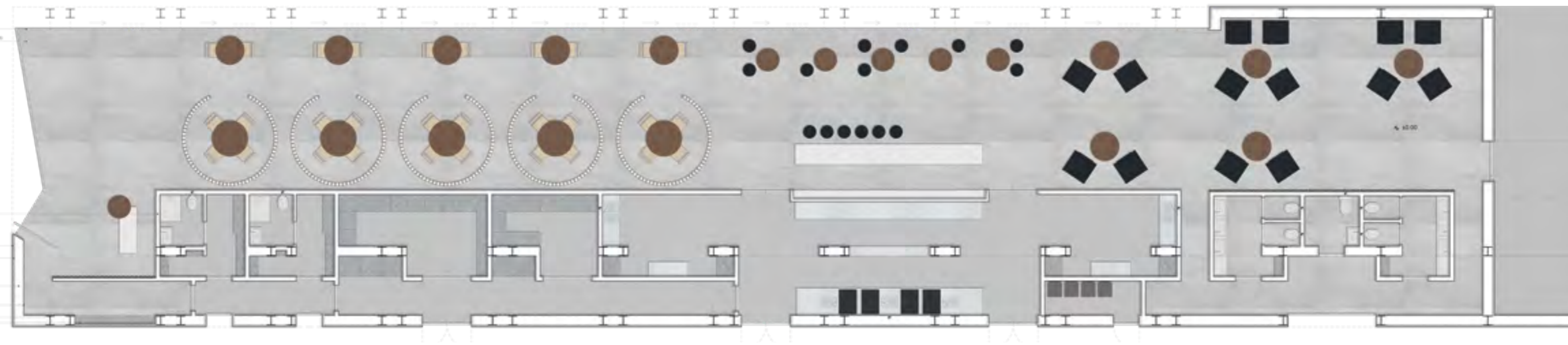
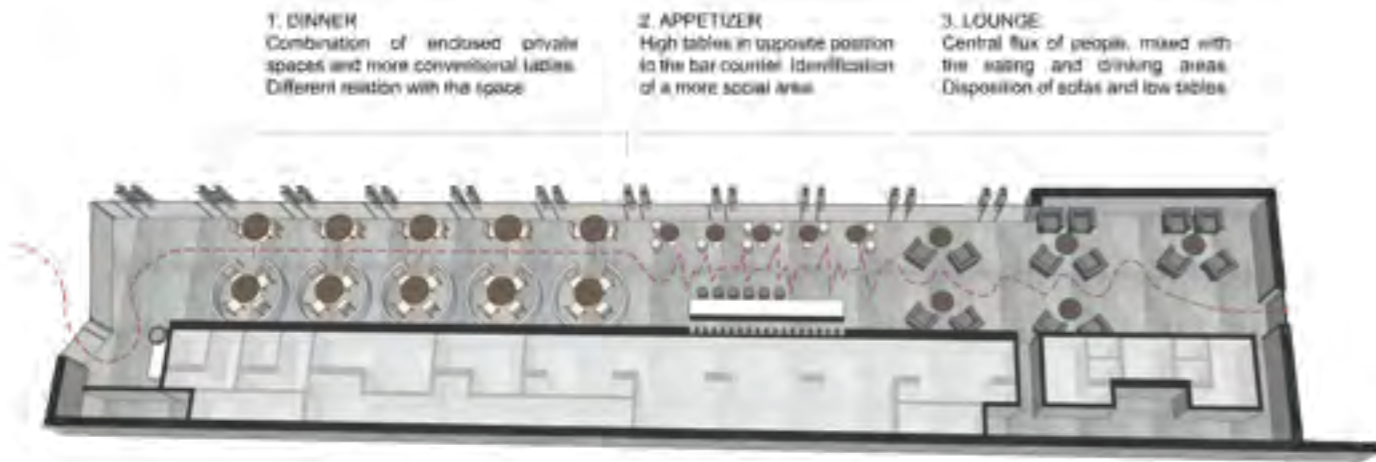
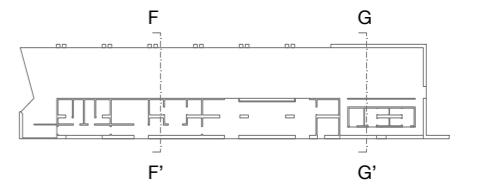


Fig. 89 (above)
Scheme of the areas and flows of restaurant. Personal elaboration.

Fig. 90 (under)
Constructive plan of restaurant area. Personal elaboration.

Fig. 91 (above)
Constructive section of restaurant area. Personal elaboration.





GG'



Fig. 92 (above)
Constructive section of restaurant area. Personal elaboration.

Fig. 93-94-95
Photorealistic images of the interior space. Personal elaboration.

II.2.5_ Exhibition space (external volume)

The main concept followed for the creation of the exhibition areas is the versatility of the space itself. The container is conceived as a kind of “blackbox”, whose real characteristics could be perceived once entering in. Another issue taken into account is the possibility of people who visit the exhibition to live it from different points of view, with different sensations. So, the exhibition paths are designed in order to give different rhythm to the development of the exhibition and to open glimpses towards focal points.

The access to the exhibition area located in the external building, is realized through a void. The role of this space is fundamental for the connection of the different areas of the project, along with the central space of the internal garden.

Before entering in the main exhibition room, an additional filtering space of 20 m², defines the area for the location and realization of the mechanic platform, useful to bring pieces of art and disabled people to the underground level of the exhibition. In opposite position, respect to the platform location, the project proposal provides an info-desk area managed by the staff of the exhibition or a keeper. Behind the desk, a service space with dressing room and toilet is destined to the staff.

The main exhibition space is 67 m² at the upper floor and 135 m² at the lower level. It develops on a ground floor and an underground level, excavated 3,50 m under. The space of the

ground level is backward and defined an overlooking area on the space underneath. In this way, people could have more than one point of view towards the same point.

In correspondence of this double height space, a skylight with sloping walls is designed. Through it, the natural light is filtered and directed towards a raised platform, located at the underground level. This platform is 0,40 m high from the floor and is realized in continuity with two perimeter walls which have the function to contain and divide it from the vertical connections behind.

The raised platform has a central role for the exhibition space, with the function to enhance the works of art which would be located there. To strengthen this idea, it is composed by a layer of plaster painted in orange, and it is related to a studied system of artificial light.

Next to the two main level of the exhibition, the project identifies lowered area, placed at -0.35 m, in correspondence of the space below the external ramp. This area, in connection with the staircase, is conceived as the “architectural promenade” displayed in the ramp of the Guggenheim of New York. Indeed, the main function of this area is to host pieces of art and provides at the same time, new points of view towards the rest of the space.

Along the shorter side of the building, the staircase end with a closed corridor, which led to the real underground space and the focal area of the exhibition composition.

The effect is to increase the tension towards the “surprise-effect” which a visitor could have

by exploring the building.

The exhibition space plays on the presence of structural pillars, realized in browned steel and located both on the ground floor and the level - 1. Beyond having structural purposes, they are aesthetically and ideologically connected with the pillars of Palazzo Te and the ones introduced in the restaurant area.

As conclusion to them, a solid wall is designed, in continuity with the angular wall which defines the space of the platform. Moreover, the solid wall is inclined on its lower line, following the same slope of the ramp (8 %).

The materials which define the exhibition space are related to the specific functions of the elements designed.

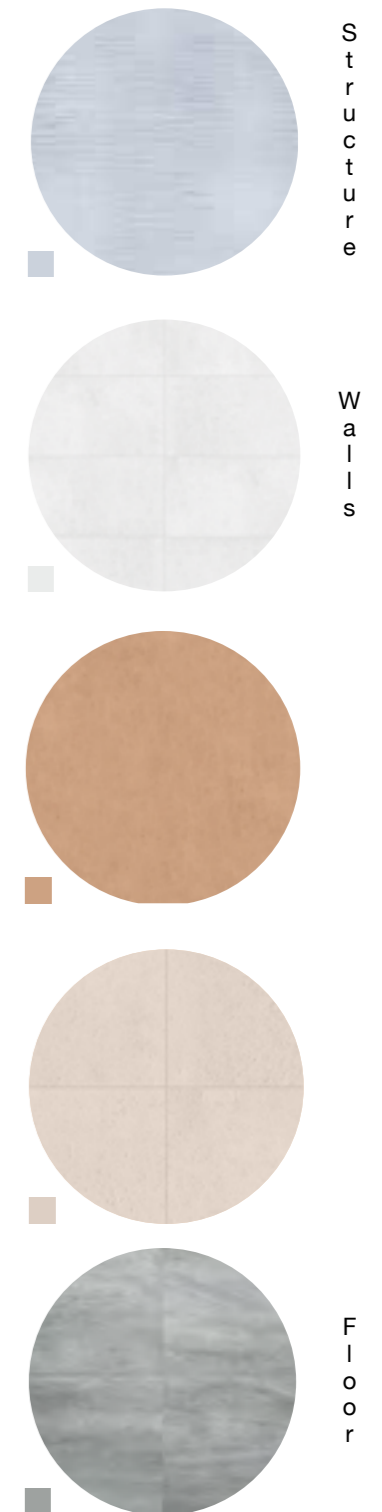


Fig. 96
Main materials applied in exhibition area. Personal elaboration.

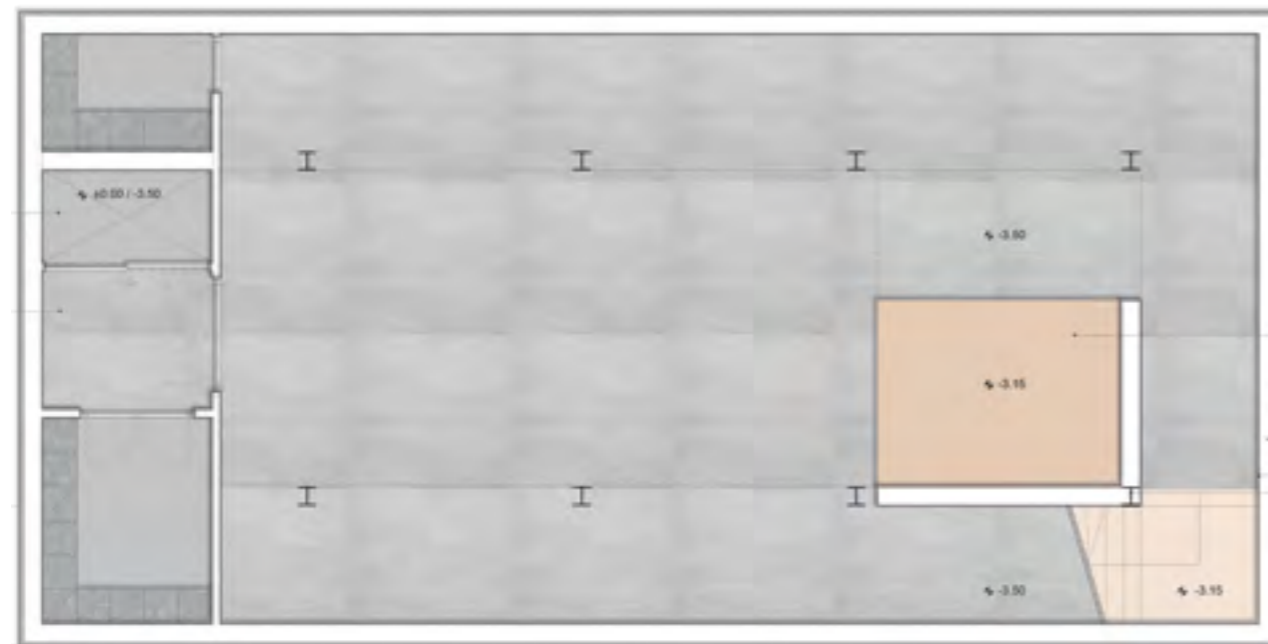
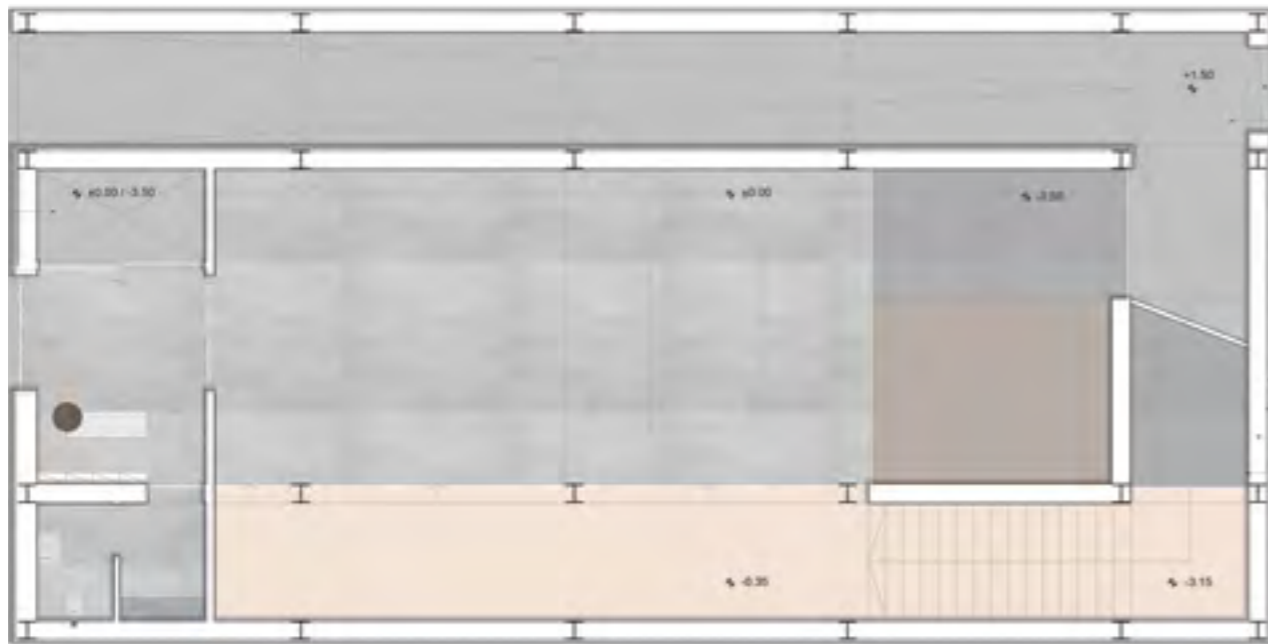


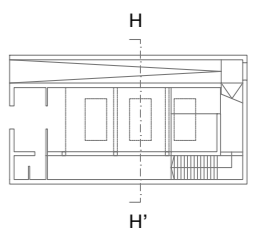
Fig. 97 (above)
Ground level of the exhibition area, located in the external building.
Constructive plan. Personal elaboration.

Fig. 98 (above)
Underground level. Constructive plan. Personal elaboration.



HH'

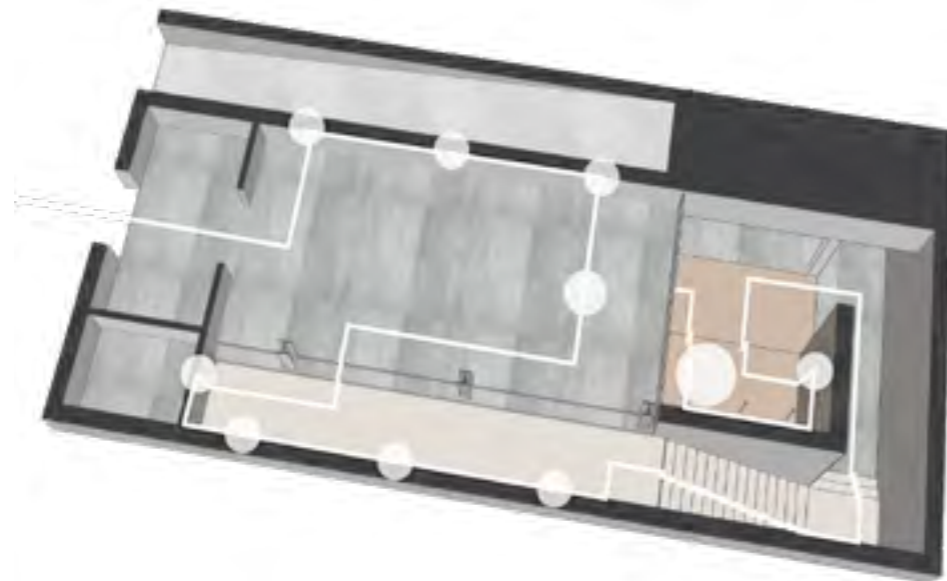
Fig. 99
Constructive transversal section. Personal elaboration.



Classical Art
Sculptures about the main
characters of Mantuan history



Architecture
Monuments of Mantua



Contemporary Art
Michelangelo Pistoletto

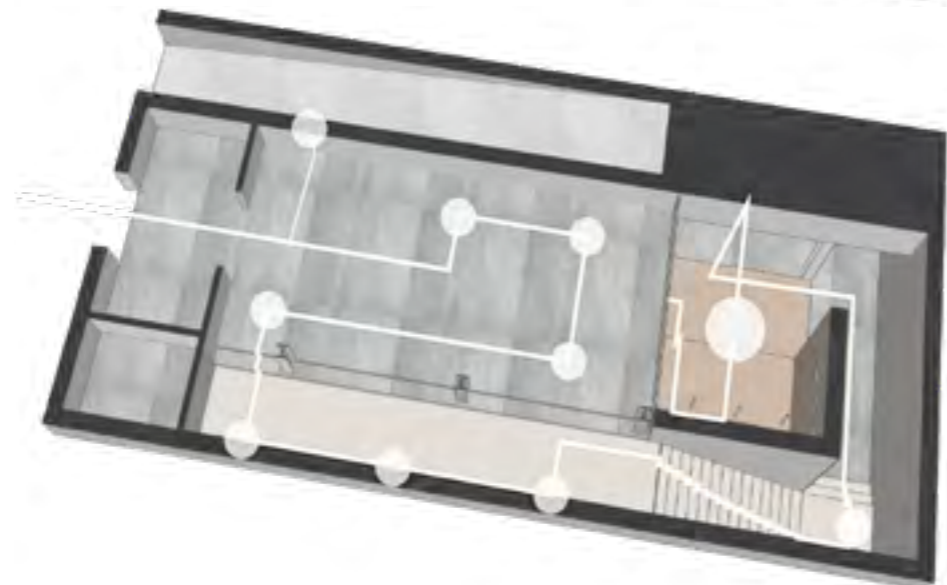


Fig. 100
Sequence of diagrams and photorealistic images, showing the
possibility of different organization of the space. Personal elaboration.



Fig. 101
Photorealistic images of the exhibition space. Personal elaboration.

II.2.6_ Exhibition space (internal volume)

The design principles which define this exhibition space are the same of the other exhibition area located in the external building. Therefore, the main exhibition room is versatile and free to be organized according to the different typologies of events to be hosted. The main idea is to reserve this space for events and activities which could enhance the history which Palazzo Te has lived in the past. In fact, if the external exhibition space is conceived as more related to let people know more about the history and the evolution of the city of Mantua, the exhibition space designed in the internal pavilion, is more connected to the knowledge about the palace.

The dimensions of the exhibition space of 108 m² could be expanded by involving the presence of the mechanic platform, in the moment when it is activated and located at the same level of the elevated exhibition floor, so at 3,35 m over the ground.

The interior architecture space is defined by three massive walls and one glass side, located in correspondence of the presence of the patio. The glass wall hosts the entrance door, designed as a pivoting door which opens automatically.

As succession to the opening placed in correspondence of the presence of the space of the patio, three skylights with sloping walls are designed in order to filter and direct the natural light inside the main exhibition room.

The architectural space is simple, in a way to be as much customizable as possible, according to the different typologies of exhibitions hosted. The materials applied to the interior space are used and treated in the same way of the exhibition area located in the external volume. As connection with this space, an orange-painted wall is located there too. In this case, it consists in a painted area of the surface of the wall, which is excavated and located 0,30 m backward, in respect to the alignments of the wall box. A system of light and projectors is integrated and pointed towards it, in order to define a space for video showing or multimedia experiences.

The lighting system of the main exhibition space is characterized by the use of metallic spotlights, painted in white and attached to a structure which goes from one wall to the opposite one. Along the perimetral ramp which encloses the space, the lighting system refers to the one of the restaurant area, being characterized by the presence of vertical cylindrical elements suspended on a metallic wire. Next to the presence of the artificial light, the space of the ramp is enlightened by the natural light which comes from the transparent glass wall which encloses it in its first stretch. Then, it is also enlightened by the patio area and two windows opened symmetrically in correspondence of the last stretches.

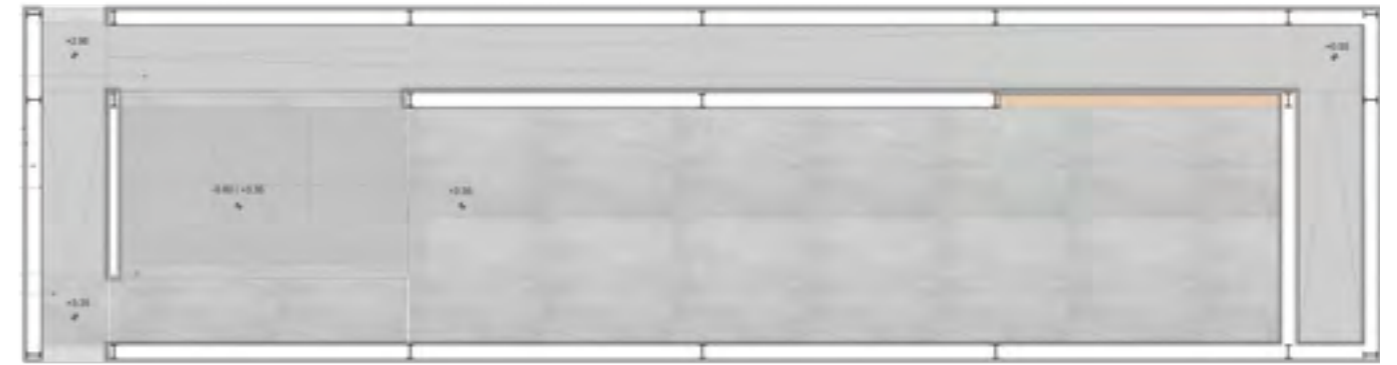


Fig. 102 (above)
Internal volume, constructive plan of the ground level.
Personal elaboration.

Fig. 103 (under)
Internal volume, constructive plan of the first level.
Personal elaboration.

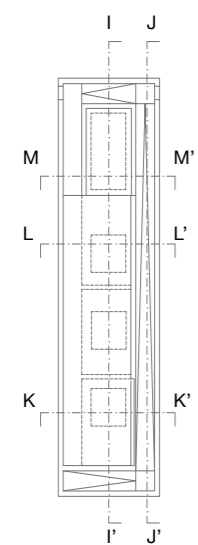
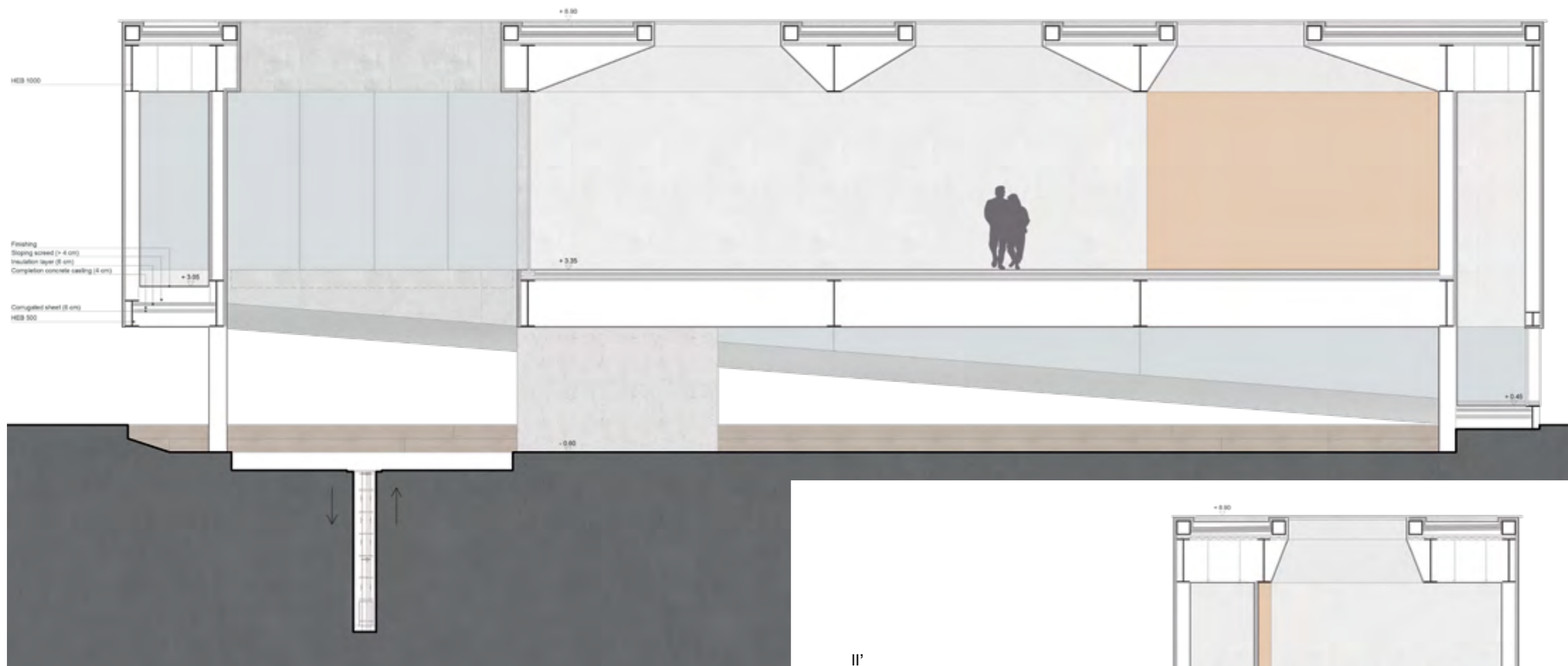


Fig. 104 (above)
Constructive longitudinal section. Personal elaboration.

Fig. 105 (on the right)
Constructive transversal section. Personal elaboration.

II'



KK'

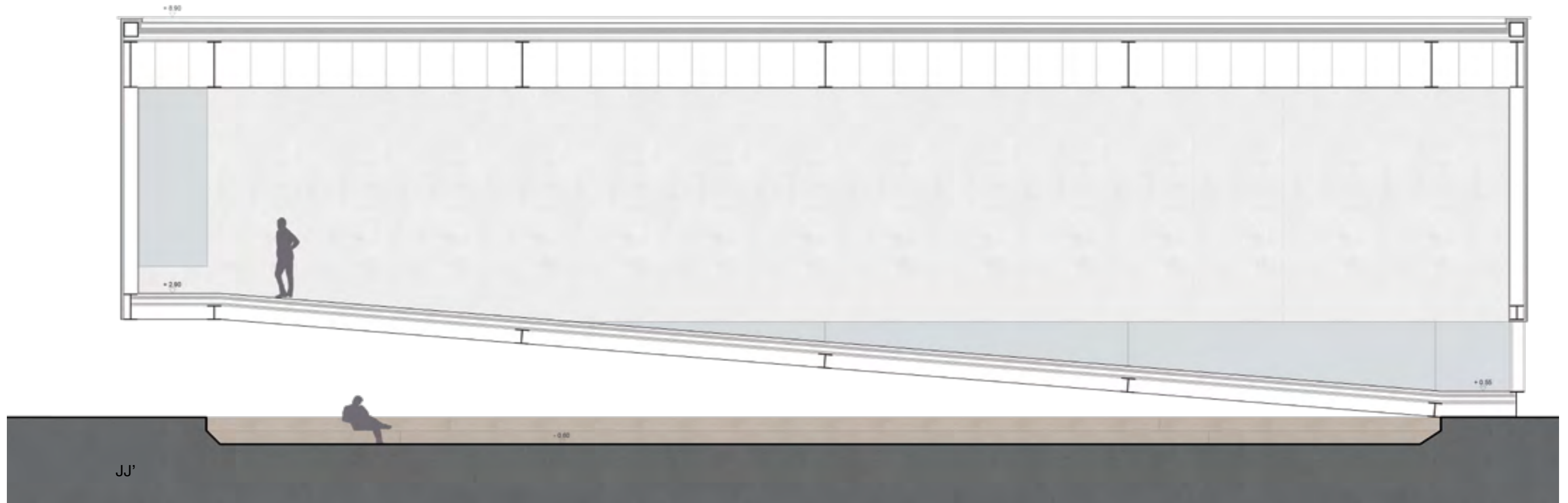
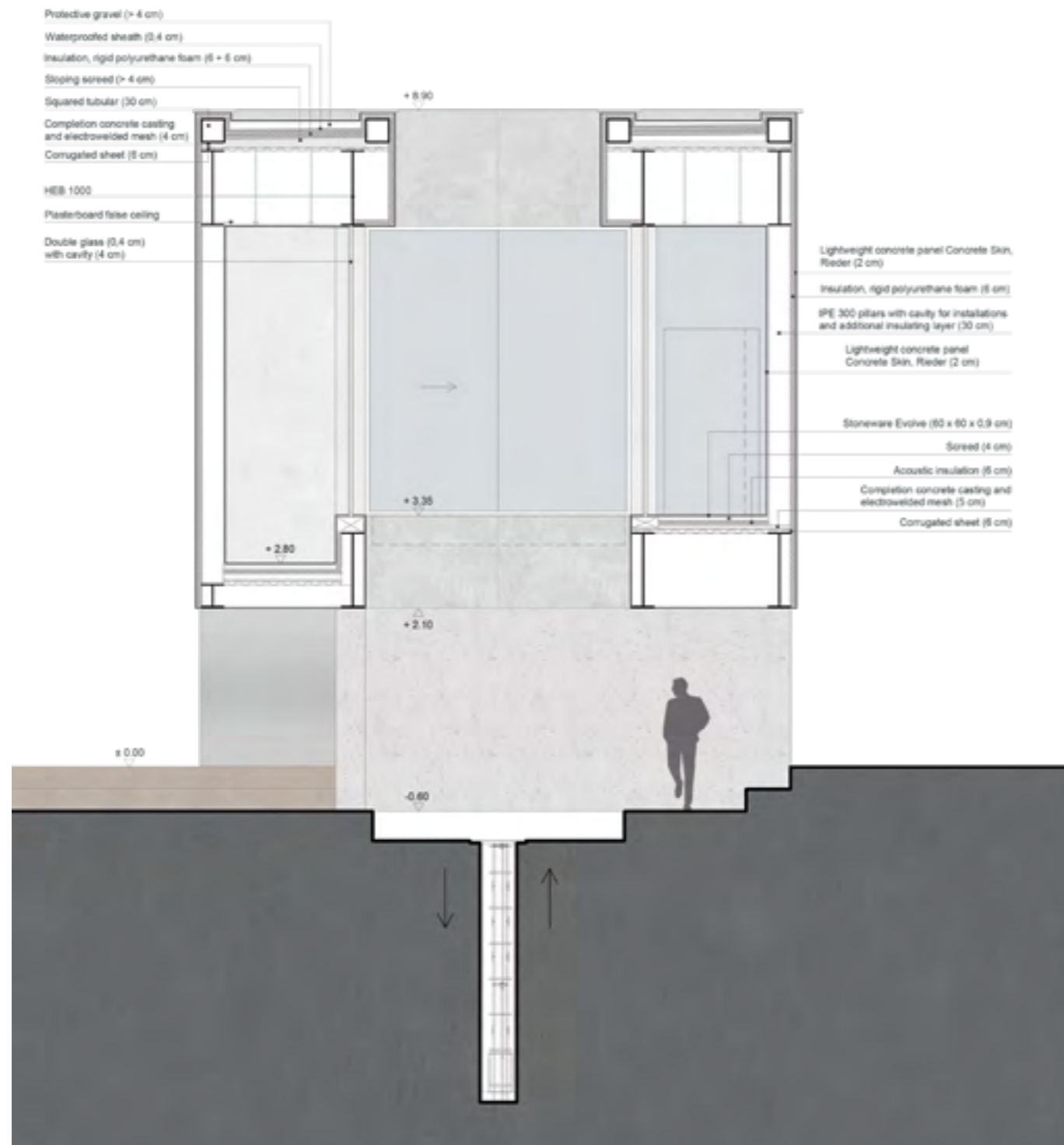


Fig. 106 (above)
Constructive longitudinal section. Personal elaboration.

Fig. 107 (on the right)
Constructive transversal section. Personal elaboration.



LL'



MM'

Fig. 108
Constructive transversal section. Personal elaboration.

Photography
Marco Introini, about Palazzo Te



Fig. 109-110
First hypothesis of exhibition, photorealistic images.
Personal elaboration.

Contemporary Art
Francesco Vezzoli

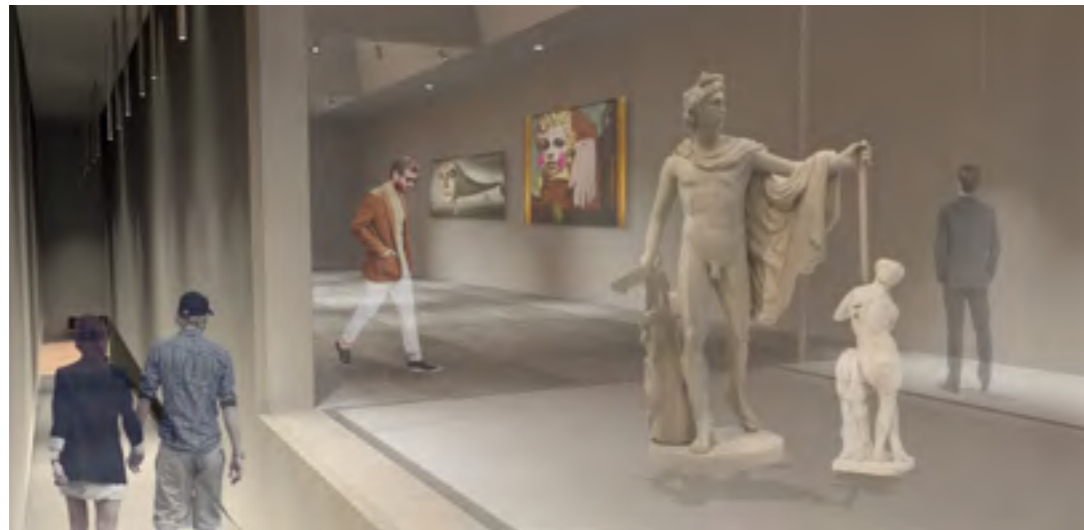
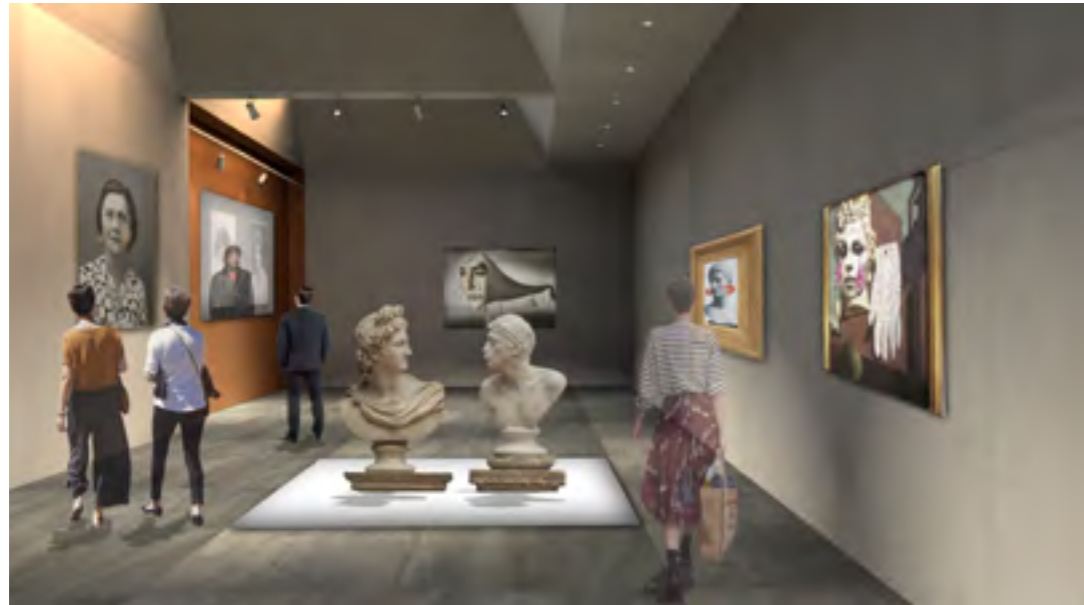
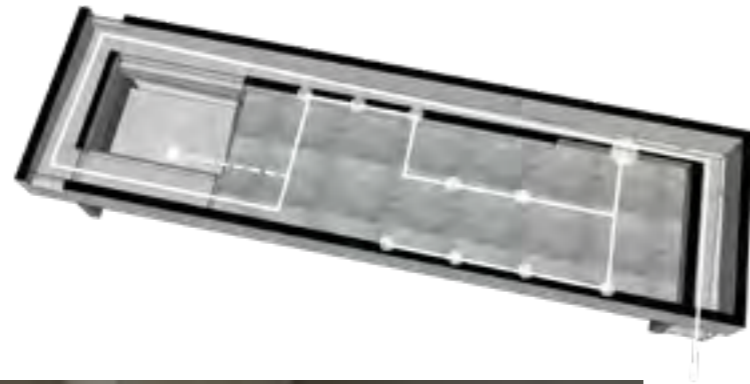


Fig. 111-112
Second hypothesis of exhibition, photorealistic images.
Personal elaboration.

Architecture
The evolution of Palazzo Te

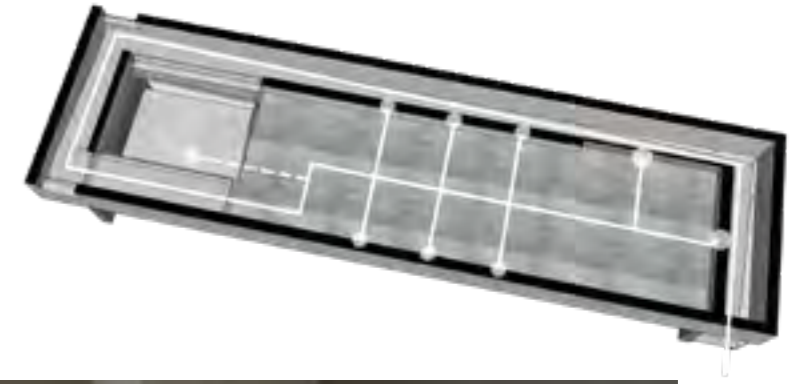


Fig. 113-114
Third hypothesis of exhibition, photorealistic images.
Personal elaboration.



Fig. 115
Photorealistic image of the exhibition space.
Personal elaboration.

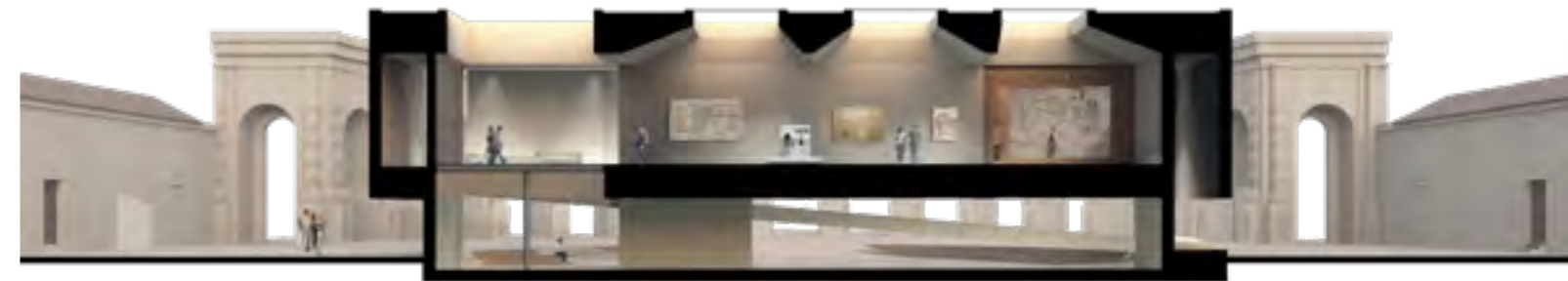
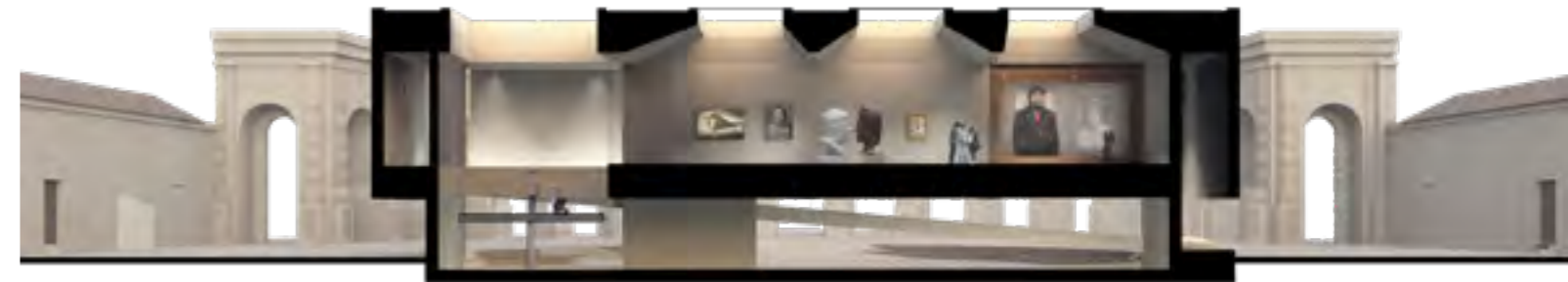


Fig. 116
Sequence of different uses of the mechanic platform and exhibition area.
Personal elaboration.

CONCLUSIONS

The new complex generated with the design proposal insert itself in the optic of opening cultural heritage building to the present life, beyond the canonical management as museum, which functions in relation of what is exposed. A building like Palazzo Te should be placed more in contact with people who live it daily and who could learn from the history those places transmit.

The position of the two main volumes finds a justification on the historical and cultural analysis developed. The materials applied are in chromatic harmony with the pre-existence, avoiding attempts to overcome the presence of the palace.

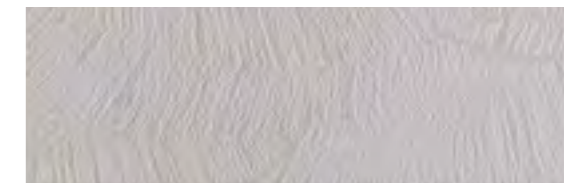
The architecture space designed are aimed to get a strong link with the historical and urban context around, putting the present life exigences as main guideline. People could take advantages of the new spaces by finding a place where to meet people, learn from what is organized in the two exhibition areas and have a social-cultural experience in different times during the day. Palazzo Te would become a new cultural and social pole for the city, helping people to be more aware about what surround them, involving history also in their current life.

Technical sheets

RASICO, Ideal Work - Resin floor for outdoors

Norma Standard Nome Norm	Risultato Result Resultat Ergebnis
 <p>Determinazione della resistenza all'usura BCA Determination of abrasion resistance BCA Détermination de la résistance à l'usure BCA Bestimmung des Verschleißwiderstandes nach BCA</p>	UNI EN 13892/4 Classe / Class / Klasse / Klasse ARQ,5 max 50g (50µ ± 0,08 mm)
 <p>Adesione al calcestruzzo Determination of bond strength Adhérence au béton Messung der Haftfestigkeit im Abriebversuch</p>	UNI EN 13892-5 2,9 N/mm²
 <p>Determinazione della Resistenza a Flessione Determination of flexural strength Détermination de la résistance à la flexion Bestimmung der Biegezugfestigkeit</p>	UNI EN 13892-2-2005 9,34 N/mm²
 <p>Determinazione della Resistenza a Compressione Determination of compressive strength Détermination de la résistance à la compression Bestimmung der Druckfestigkeit</p>	UNI EN 13892-3-2005 38,67 N/mm²
 <p>Resistenza allo scivolamento Determination of the slip resistance Méthode d'essai pour mesurer l'adhérence d'une surface F-essai au pendule Bestimmung der rutschhemmenden Eigenschaften</p>	DIN EN 12813/2011 Rasico Scheda 2/1 + Ideal Stone R11 11 (coefficient of friction) / 0,11 (coefficient of friction) R12 Rasico Touch Scheda 2/1 + Ideal Stone R10 EN 14231-2004 Rasico Scheda 2/1 + Ideal Stone S1 (coefficient of friction) / 0,11 (coefficient of friction) S1 (coefficient of friction) / 0,11 (coefficient of friction) Rasico Touch Scheda 2/1 + Ideal Stone R9 (coefficient of friction) / 0,09 (coefficient of friction) R9 (coefficient of friction) / 0,09 (coefficient of friction)

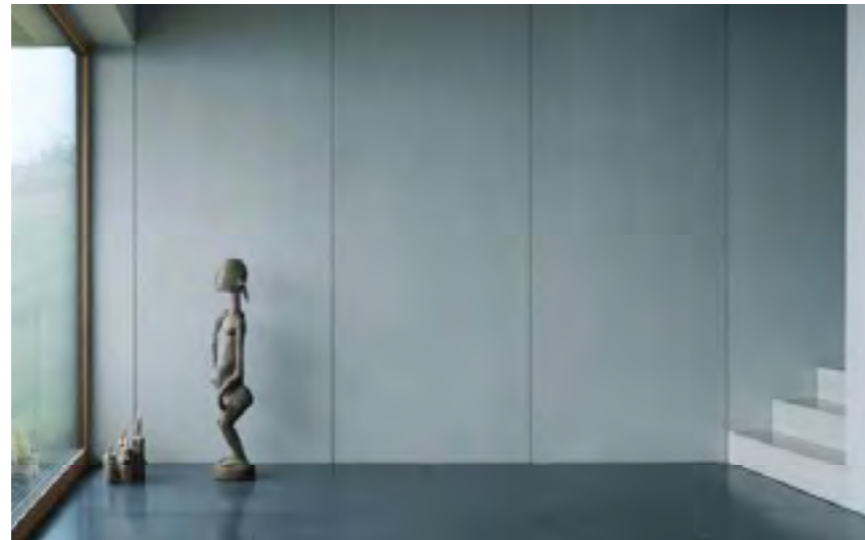
Color



CONCRETE SKIN, Rieder - Wall lightened concrete panel, used for exteriors and interiors.

Pattern

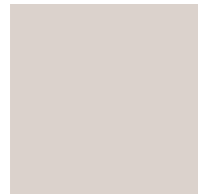
MATT



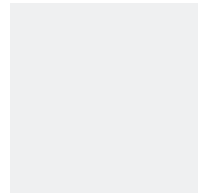
concrete skin for interior design

Colors

Exteriors



Interiors of exhibiton spaces



Technical data

Sizes

2500 x 1200 x 13 mm | 3100 x 1200 x 13 mm | 3600 x 1200 x 13 mm

Fixing systems

Substructure: aluminium, steel
Visible: rivets, screws
Concealed: Rieder Power Anchor, undercut anchor, adhesive

Product characteristics

Building material class A1 (according to DIN 4102), non-combustible
Dead load / mass per unit area 26 - 31.5 kg/m²
Bending tensile strength > 18 N/mm²

Colours and surfaces

12 colours, through-coloured
3 surface textures: FE ferro (sandblasted), FL ferro light (finely sandblasted) and MA matt (brushed)

More colours and sizes are available on request.

EVOLVE, Atlas Concorde - Stoneware panels, used for floors.

EVOLVE



GRES PORCELLANATO COLORATO IN MASSA.
CARATTERISTICHE TECNICHE - CONFORME ALLA NORMA EN 14411 (ISO 11006)
APPENDICE G GRUPPO Bg



Forma	60x60 cm 23 1/4" x 23 1/4"		30x60 cm 11 3/4" x 23 1/4"		Emissione coefficiente	
	± 0.5 mm		± 0.5 mm			
Caratteristiche di qualità	Caratteristica tecnica	Metodo di prova	Requisiti per dimensione nominale N			Emissione coefficiente
			7 cm ≤ N < 15 cm (mm)	N ≥ 15 cm (mm)	N ≥ 15 cm (mm)	
Lunghezza e larghezza	± 0.5 (*) Non-rect. ± 0.4 (*) Rect.	ISO 10545-2	± 0.6 (*) Non-rect. ± 0.3 (*) Rect.	± 2.0 (*) Non-rect. ± 1.0 (*) Rect.	Suitable for floor	
	± 0.5 (**)		± 5 (**)	± 0.5 (**)	Suitable for floor	
Spessore						
Regolarità degli spigoli						
Ortogonalità (Misurazione da condurre solo sui lati corteggiando L1 e 3)			± 0.8 (***) Non-rect. ± 0.4 (***) Rect.	± 0.5 (***) Non-rect. ± 0.3 (***) Rect.	± 1.5 (***) Non-rect. ± 0.8 (***) Rect.	Suitable for floor
			± 0.8 (***) Non-rect. ± 0.4 (***) Rect.	± 0.5 (***) Non-rect. ± 0.3 (***) Rect.	± 2.0 (***) Non-rect. ± 1.5 (***) Rect.	Suitable for floor
Peschatura			c.c. ± 0.8 Non-rect. c.c. ± 0.6 Rect.	c.c. ± 0.5 Non-rect. c.c. ± 0.4 Rect.	c.c. ± 2.0 Non-rect. c.c. ± 1.8 Rect.	Suitable for floor
			e.c. ± 0.8 Non-rect. e.c. ± 0.6 Rect.	e.c. ± 0.5 Non-rect. e.c. ± 0.4 Rect.	e.c. ± 2.0 Non-rect. e.c. ± 1.8 Rect.	Suitable for floor
			w. ± 0.8 Non-rect. w. ± 0.6 Rect.	w. ± 0.5 Non-rect. w. ± 0.4 Rect.	w. ± 2.0 Non-rect. w. ± 1.8 Rect.	Suitable for floor



Evolve Porcelain Tiles / Gres Porcellanato

COLORADO BODY PORCELAIN TILES - RECTIFIED MONOCALIBRE
GRES PORCELLANATO COLORATO IN MASSA - RETTIFICATO MONOCALIBRO

Sizes	Thickness	Surface finish
60x60 cm - 23 1/4" x 23 1/4"	± 0.5 mm	Matta R9 A
30x60 cm - 11 3/4" x 23 1/4"	± 0.5 mm	Matta R9 A

VISIO FLOW, Protezioni - Glass openings without frames

Info Tecniche



STRUTTURA

Alluminio estruso senza profili verticali, lega primaria, verniciata a polveri epossidiche a base di resina poliestere, resistente ai raggi UV.

PANNELLI

Vetro temperato 8-10-12 mm

ALTEZZA MASSIMA

3.000 mm

LARGHEZZA SINGOLO PANNELLO

min. 800 mm / max 1.000 mm

APERTURE

50% - 66% - 75% - 80%

COMPENSAZIONE INFERIORE

5 mm

PERNI E VITI

Acciaio Inox

CARRELLI IN METALLO

a doppia ruota con regolazione

TAPPI

in metallo pressofuso verniciati in tinta



EASY GLASS, Q Railings - Glass railings



KNAUF - Plasterboard wall system applied

Dati tecnici	Dati tecnici - Misure				Fono- isolamento R_w $dB^{(2)}$	Strato Isolante Spessori/ densità mm / kg/m ³	Rapporto di prova	
	Spessore Parete D mm	Profilo (Intercep.) h mm	Rivestimento Spess. d mm	Tipo				Peso ⁽¹⁾ (ca.) kg/m ²
Sistema W 111 Parete Knauf a singola orditura metallica con singolo rivestimento 	75	50	12,5	GKB (A) GKF (F) GKI (H)	25	45	40 ⁽³⁾	81991
	100	75				37,8	-	21546
						46	60/40 ⁽⁴⁾	18652
	125	100				47	60/70 ⁽⁴⁾	18651
52			60 ⁽⁵⁾	56779-8				
						54	50 ⁽⁶⁾	51278-2

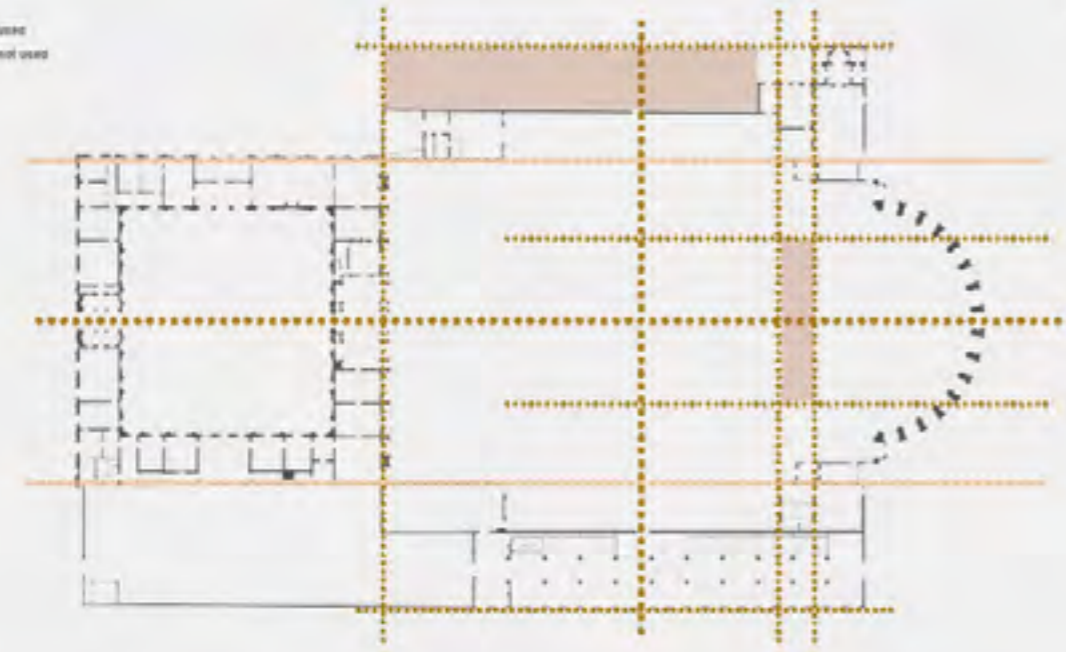
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AREAS OF PALAZZO TE AND STUDY OF THE VISIBILITY FROM AROUND

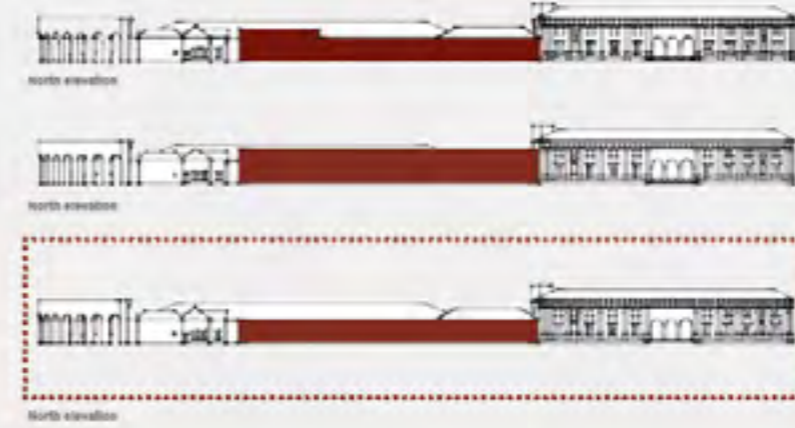
- Main area
- Secondary area used
- Secondary area not used



STUDY OF THE VISIBILITY OF THE TWO PAVILIONS

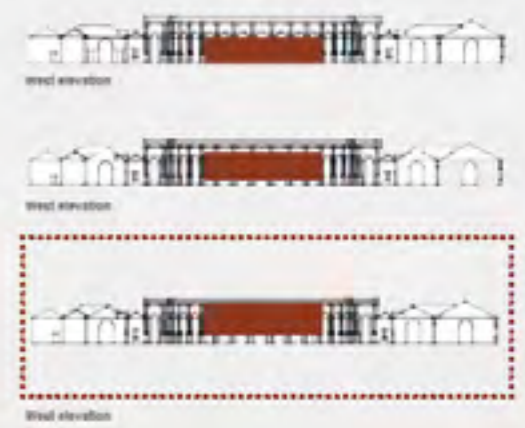
EXTERNAL PAVILION

Plan



INTERNAL PAVILION

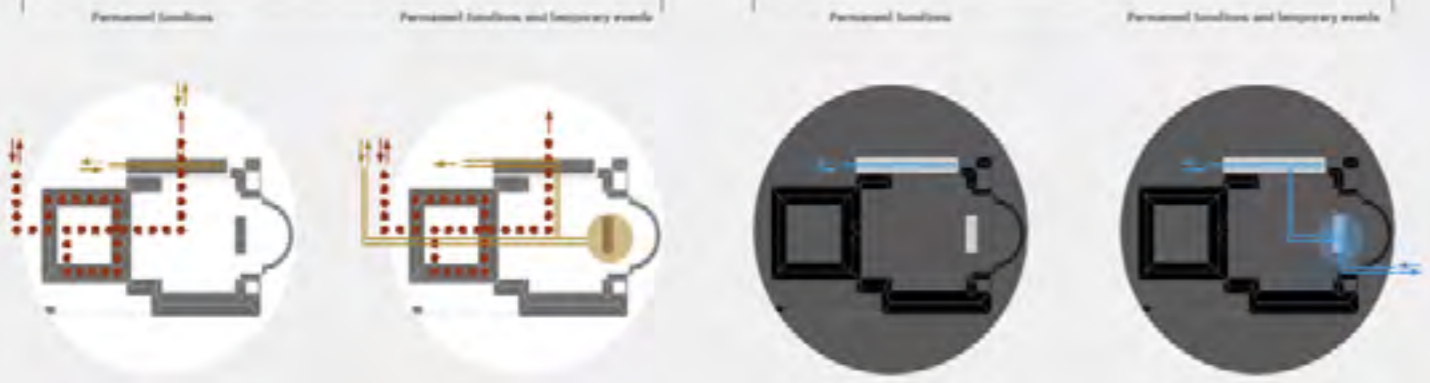
Plan



ANALYSIS OF VISUAL AND DYNAMIC ON THE 1 FLOOR

Museum opening hours

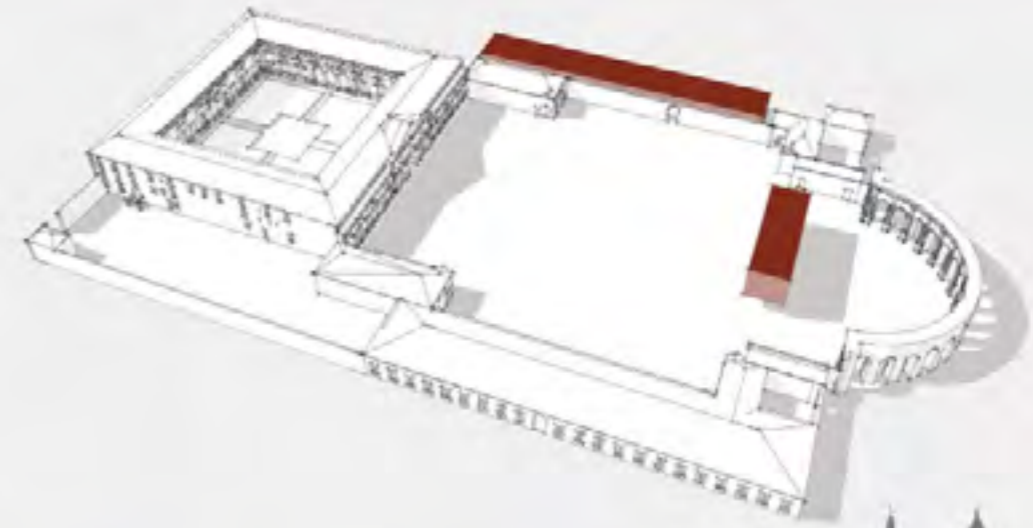
Museum closing hours



- Museum
- Temporary events and new cultural visit area

- Temporary events and new cultural visit area

ANALYSIS OF THE VISIBILITY OF THE TWO PAVILIONS



POLITECNICO DI MILANO - Master Course
 A3C - School of Architecture, Urban Planning and Construction Engineering
 Architectural Design and History

Master's Degree Thesis - 10th December 2020
 Supervisors: Prof. Marco Bonaldi, Prof. Anselmo Lorenzi

DOTTORANDA VALENTINA NEMMI
 DOTTORANDA ANDREAZZA BIANCHI

TWO PAVILIONS FOR PALAZZO TE
 REVISITING THE PAST THROUGH THE LANGUAGE OF THE PAST
 AND THE PRESENCE OF THE CONTEMPORANEITY

Analysis of areas of Palazzo Te
 Evaluation of the problem and scenario of the project

LAYOUT OF INTERNAL FUNCTIONS



CURRENT MUSEUM PATH

1. Current entrance of the Place
2. Ticket office
3. Hall of introduction to museum path
4. Camera di Ovidio
5. Camera delle imprese
6. Camera del Sole
7. Loggia delle Muse
8. Sala dei Cavalli
9. Salotto di Palestr

NEW FUNCTIONS

10. Camera del Venit
11. Camera delle Aquile
12. Loggia di Davide
13. Saletta degli stocchi
14. Saletta di Cesare
15. Sala dei Giganti
16. Camere
17. Loggia Sud
18. Anfite

- A. Restaurant area
- B. Exhibition area
- C. Exhibition area



Plan



SECTIONS AND ELEVATIONS OF THE PAVILIONS



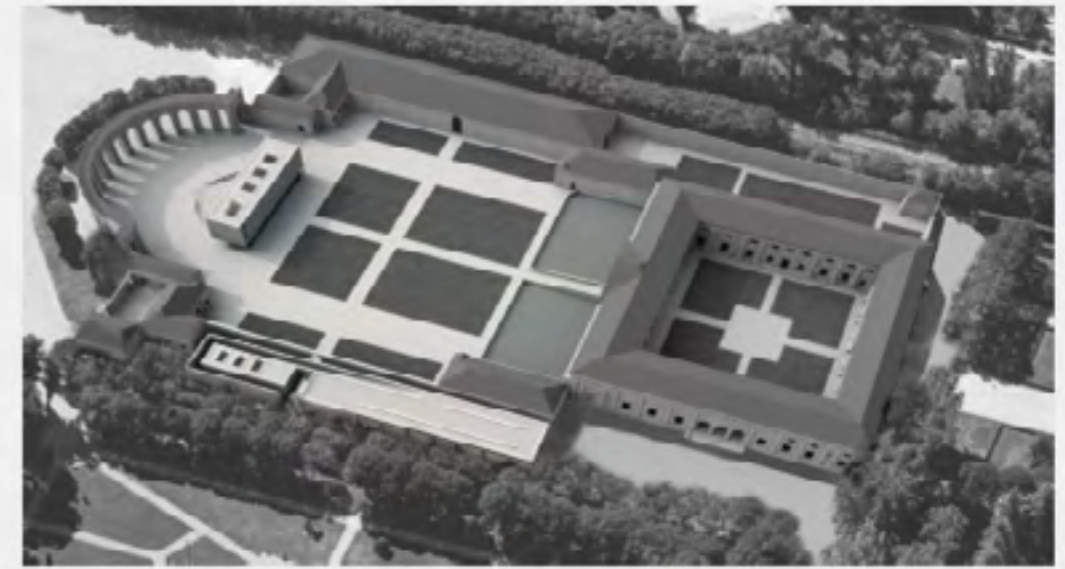
North elevation



Section AA'



section BB'



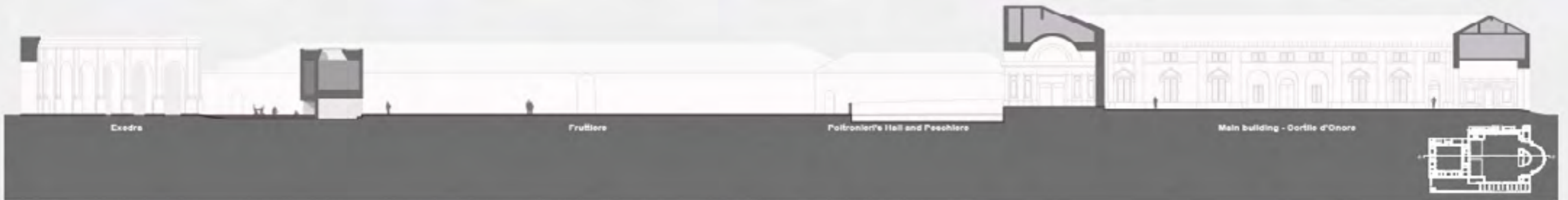
SECTIONS AND ELEVATIONS OF THE PAVILIONS



Section CC'



Section DD'



Section DD'



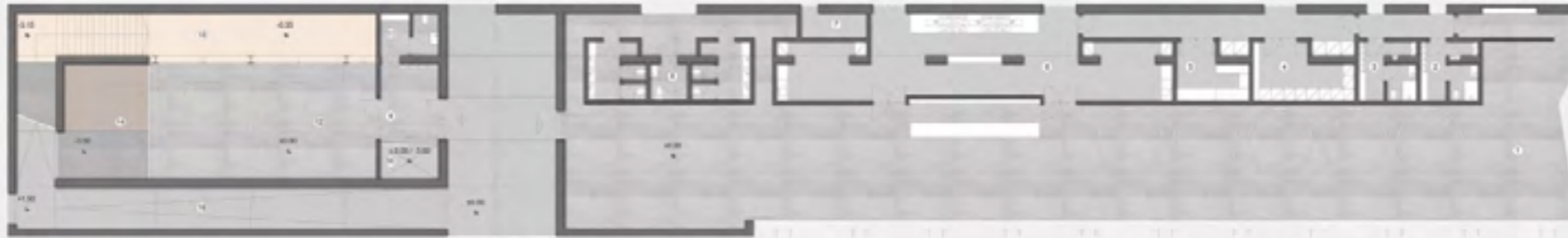


EXTERNAL PAVILION

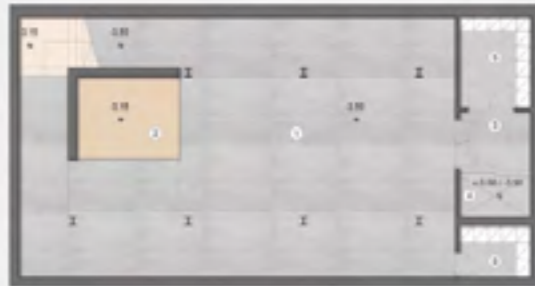
Roof plan



Ground floor plan



Underground floor plan



RESTAURANT AREA

1. Restaurant public area
2. Women's locker room
3. Men's locker room
4. Warehouse
5. Cold rooms
6. Kitchen
7. Waste depot
8. Toilet

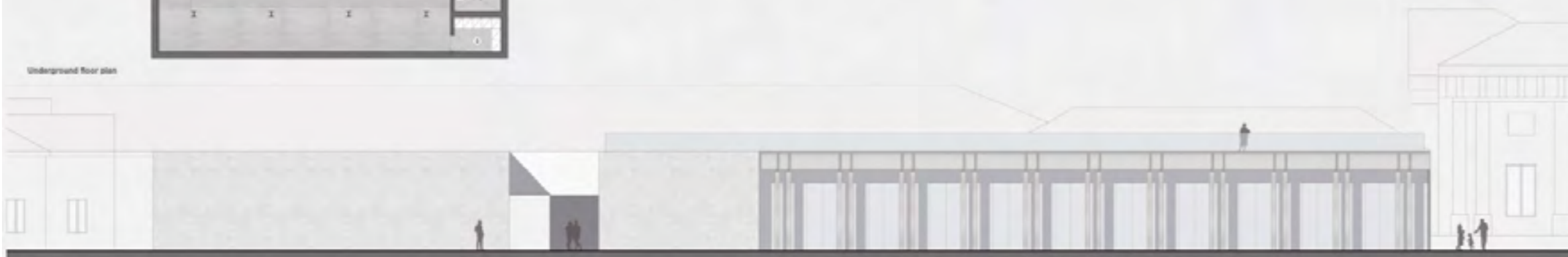
EXHIBITION AREA

- Ground floor:
9. Exhibition entrance
 10. Elevator
 11. Toilet
 12. Exhibition space
 13. Exhibition space
 14. Exhibition space
 15. Exhibition space
 16. Ramp leading to the roof

UNDERGROUND FLOOR

1. Exhibition space
2. Exhibition space
3. Elevator arrival
4. Elevator
5. Lobby

North elevation



West elevation



POLITECNICO DI MILANO - Master Degree
 A.U.C. - School of Architecture, Urban planning and Construction Engineering
 Architecture Design and History

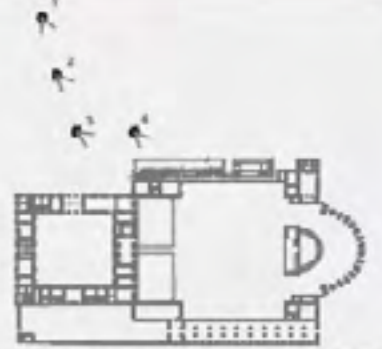
Master's degree thesis - 1st December 2020
 Supervisors: Prof. Marco Bazzani, Prof. Angelo Lorenzi

CATTANEO VALENTINA 09091
 VENTURA SABBATINI 09075

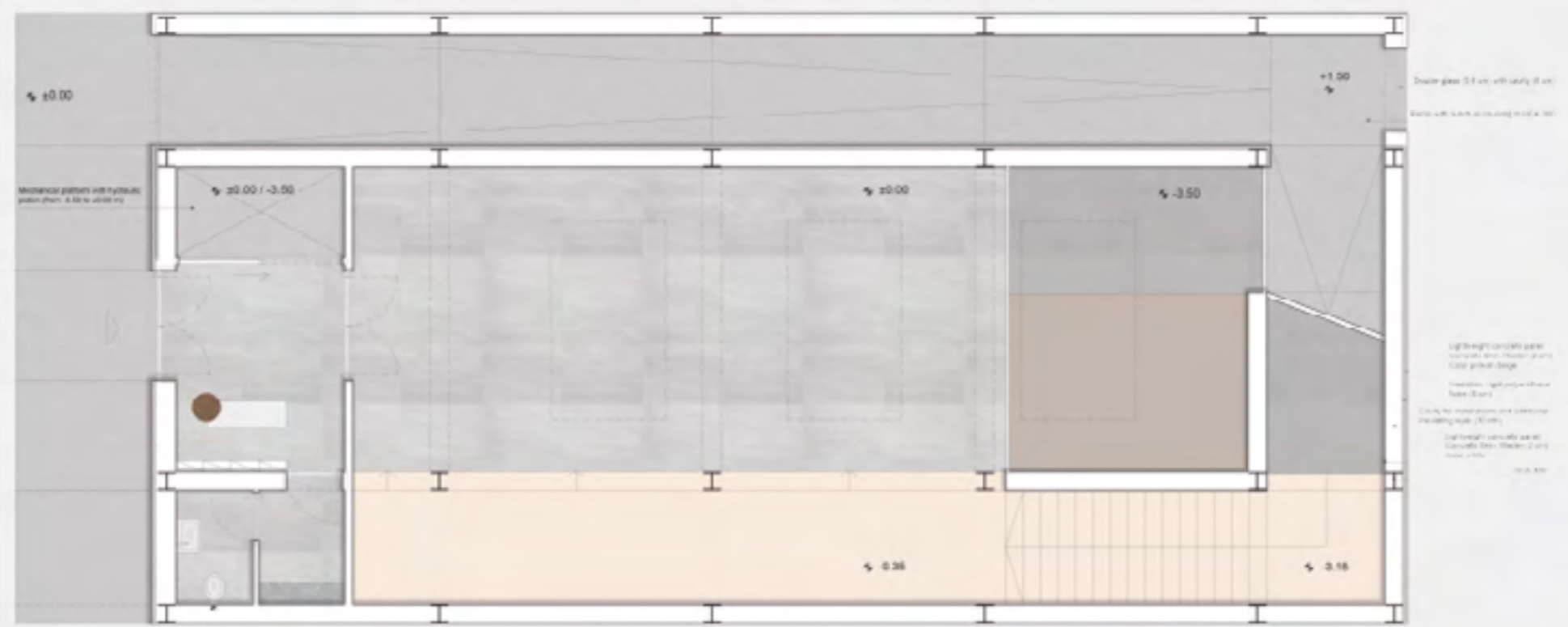
TWO PAVILIONS FOR PALAZZO TE
 AND THE RECONSTRUCTION OF THE SURROUNDING OF THE PAST
 AND THE PROSPECTS OF THE CONTEMPORARY

Plans and elevation of EXTERNAL PAVILION
 Scale 1:100

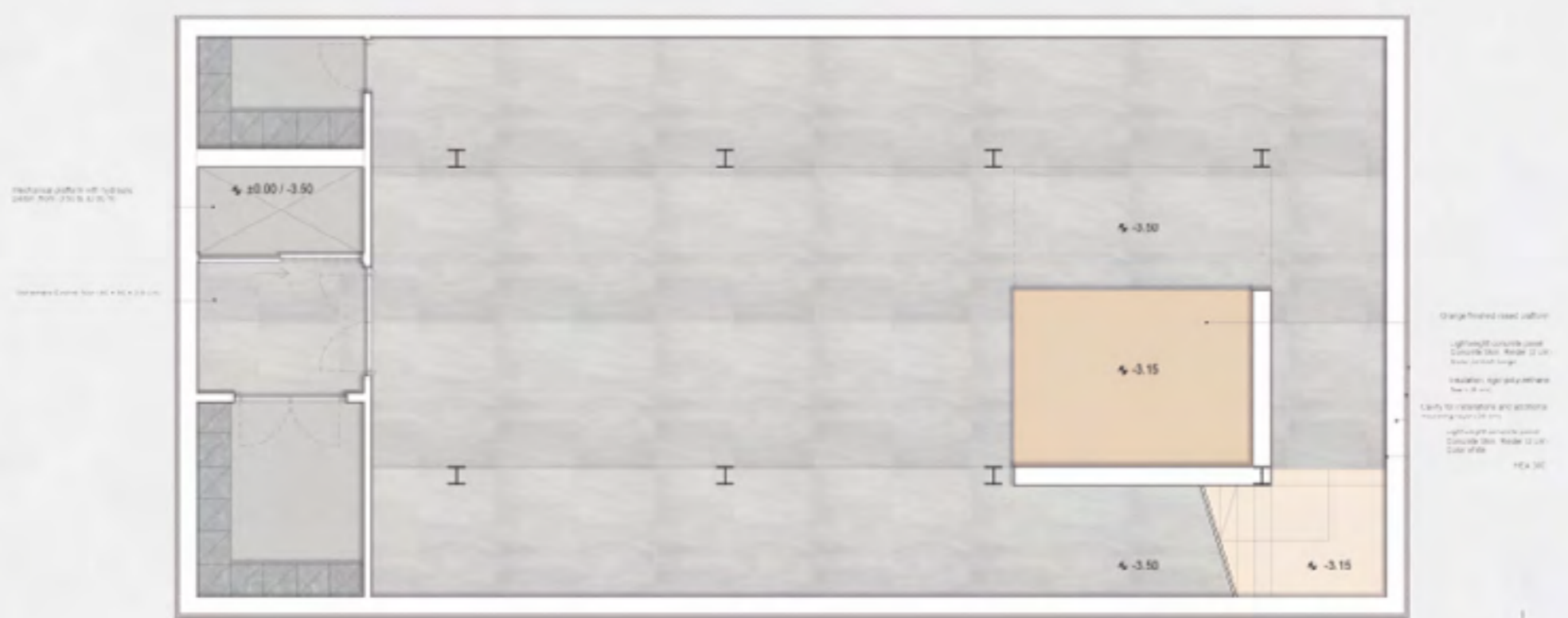
PHOTOREALISTIC IMAGES OF THE PROJECT AREA



EXTERNAL PAVILION | Exhibition Area



Ground floor plan

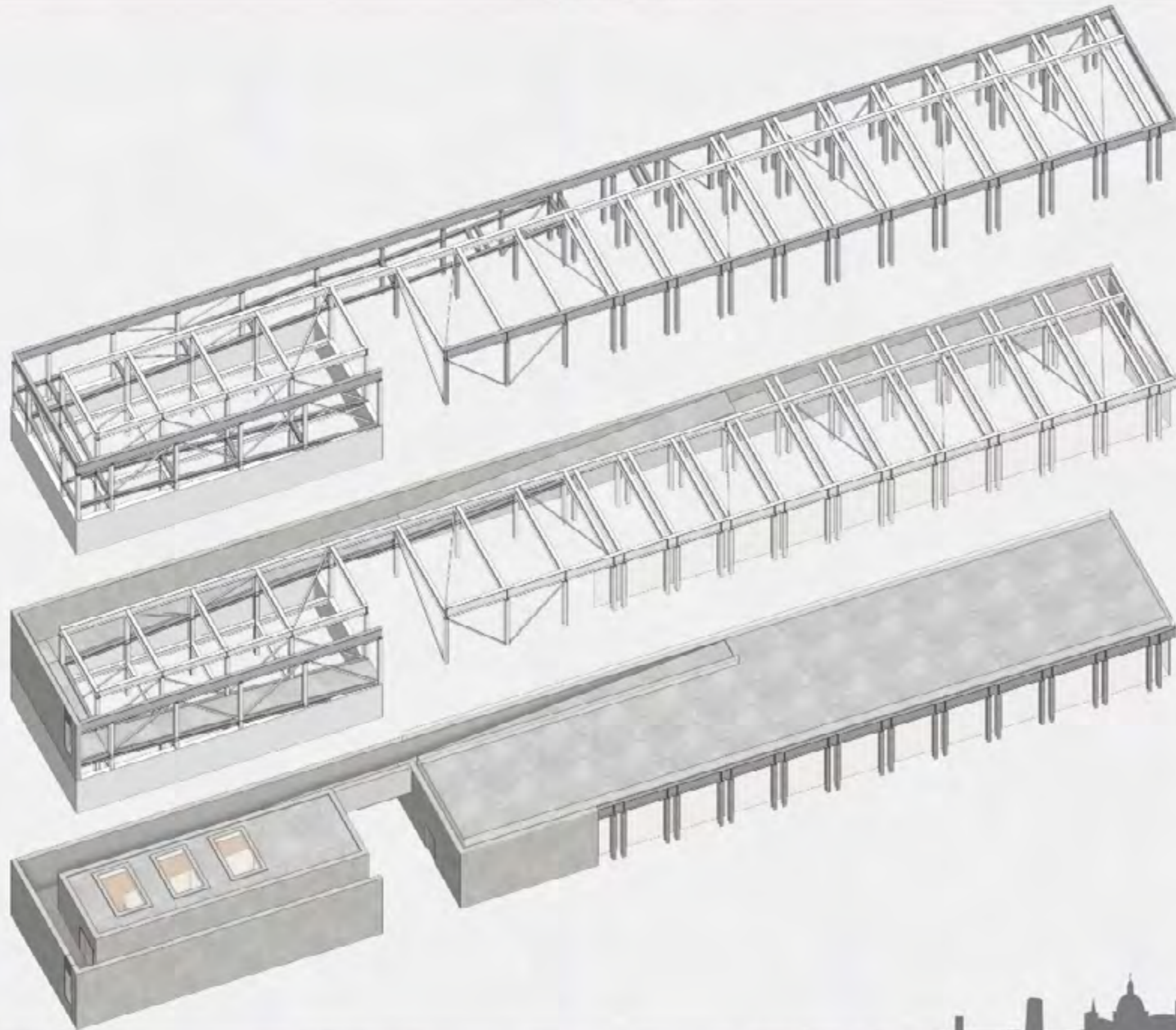


Underground floor plan

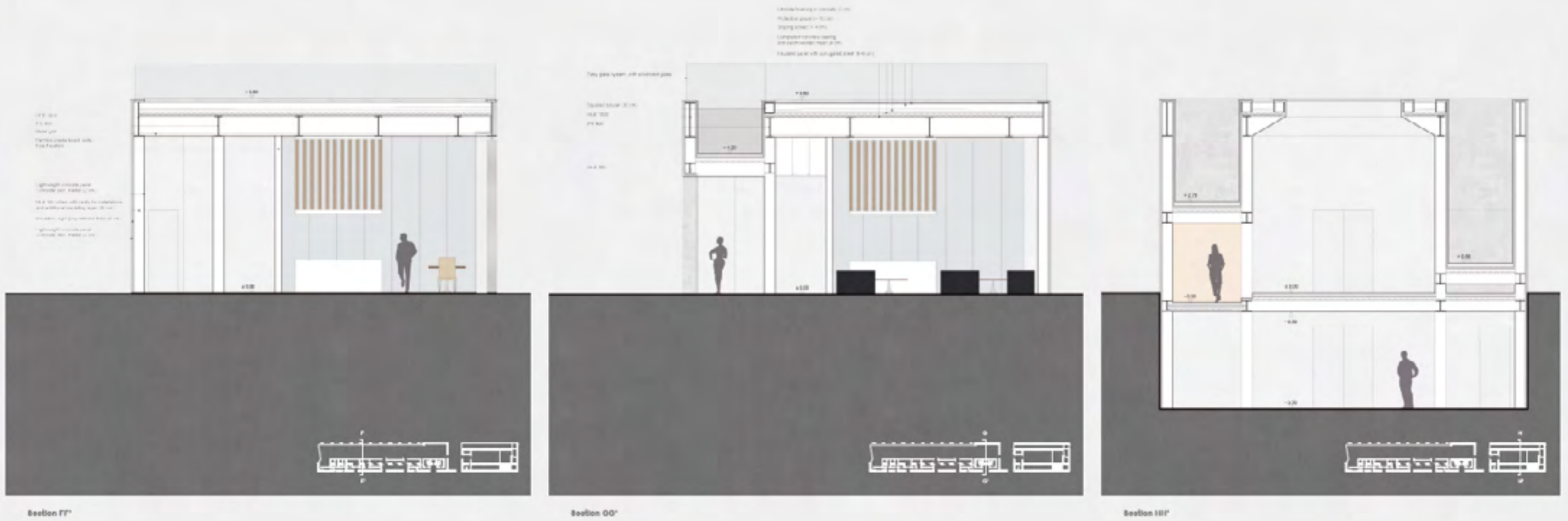
Axonomy

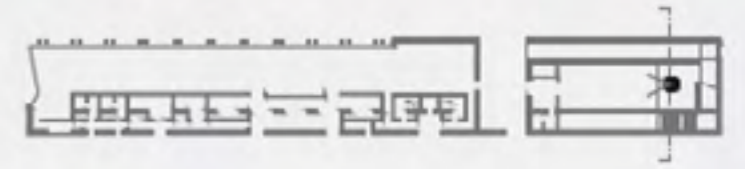
Axonomy

Axonomy



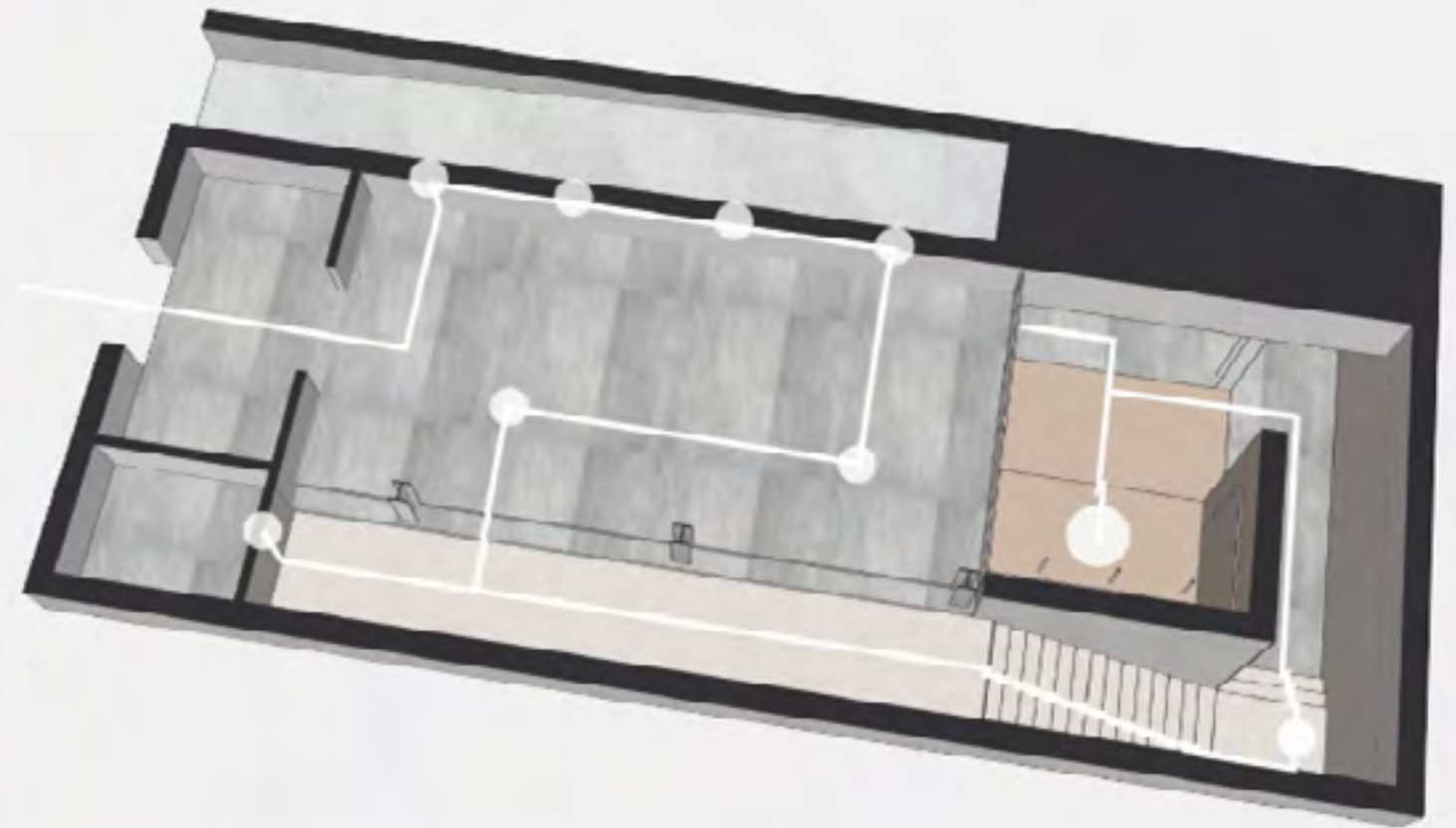
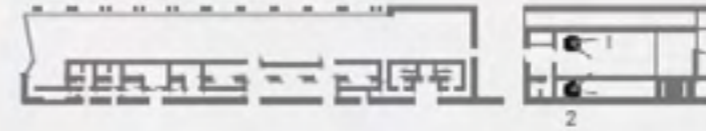
EXTERNAL PAVILION








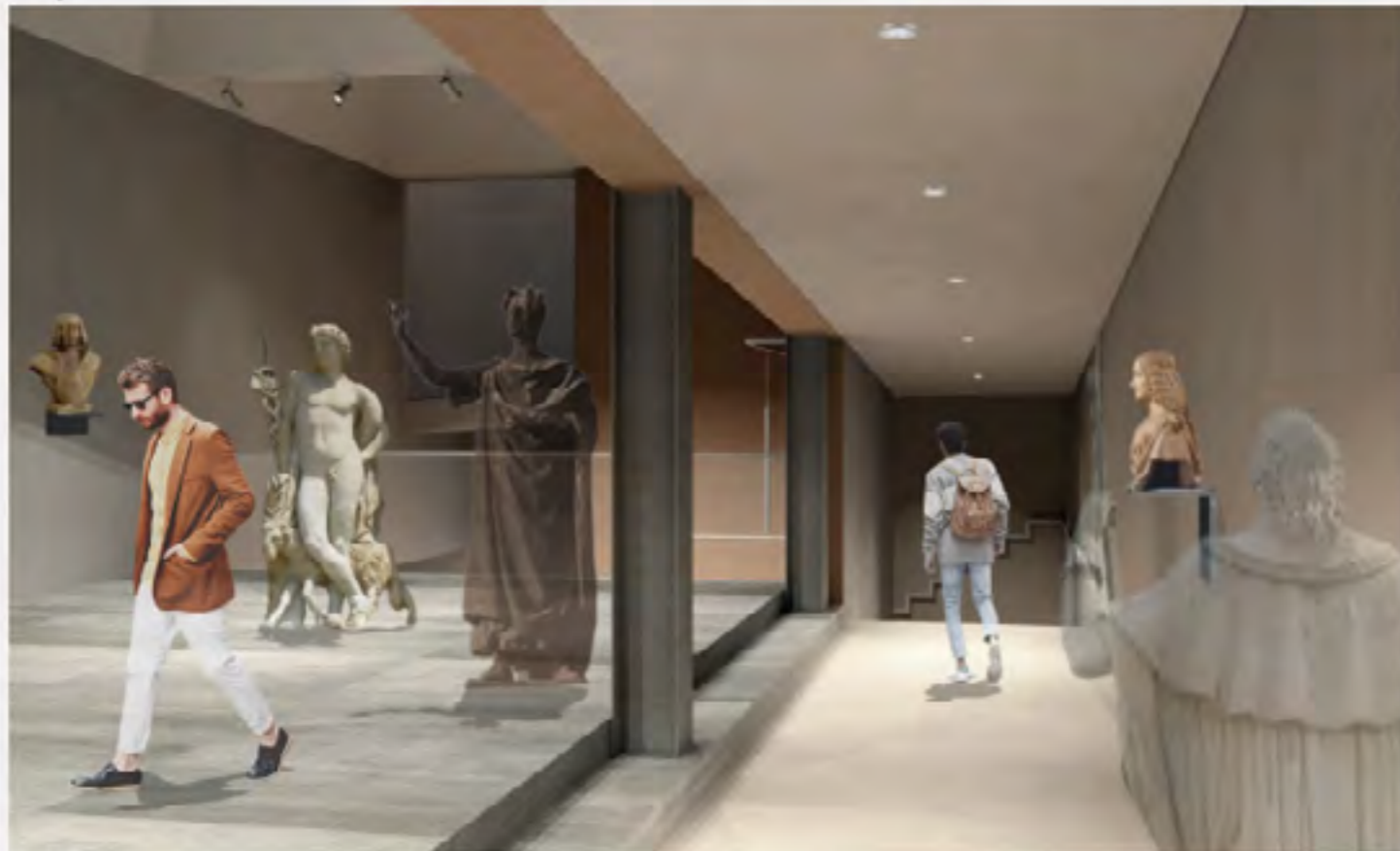
Overview

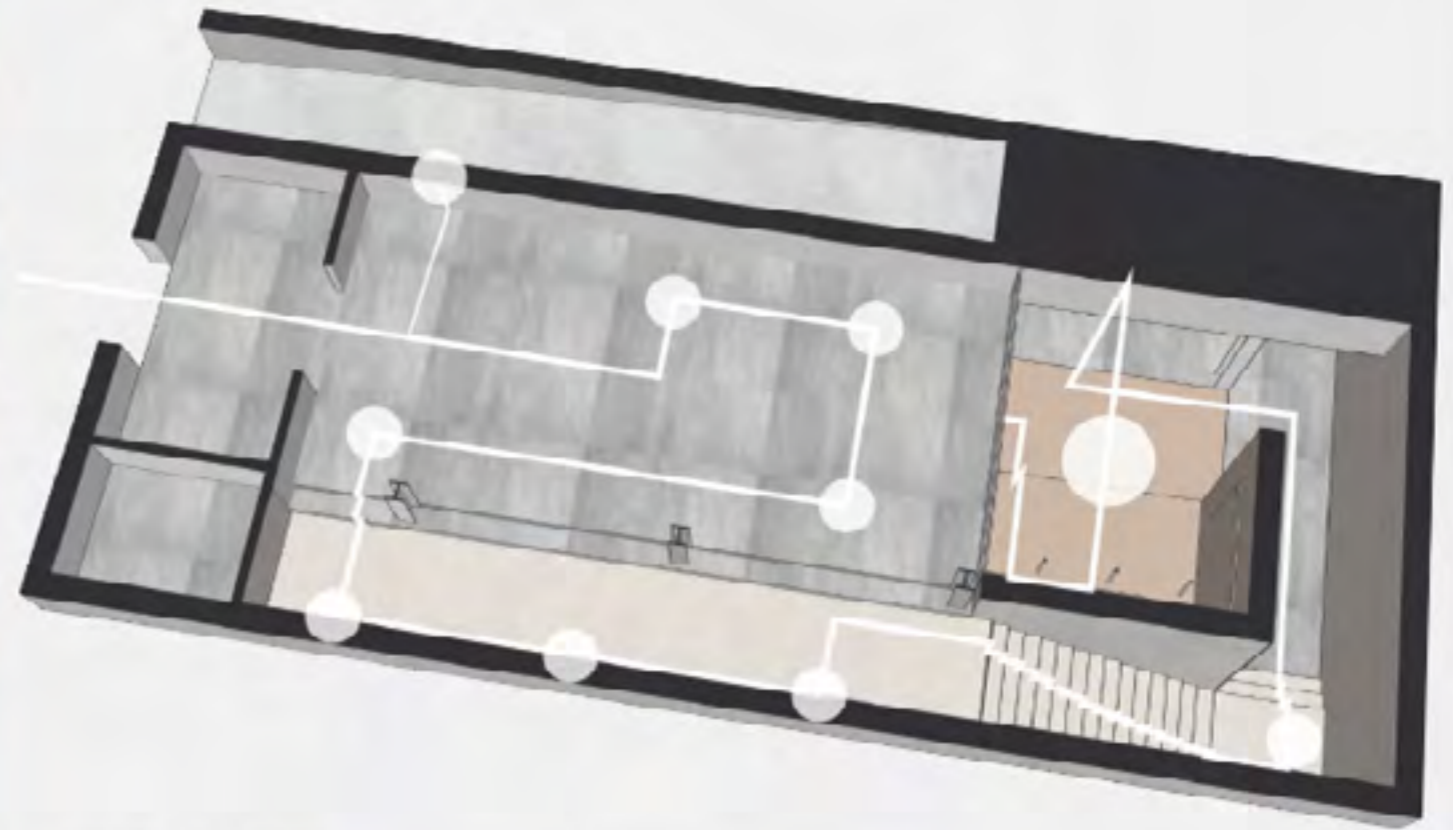
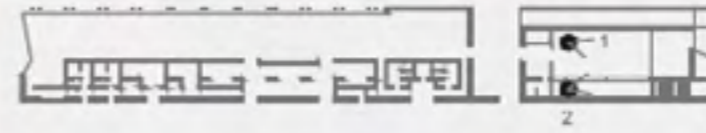







Axonometry of the flow scheme.
Hypothesis of location of the works and exhibition path based on the content of the exhibition in question.

-  Location of the main works of art
-  Location of the works of art
-  Exhibition path

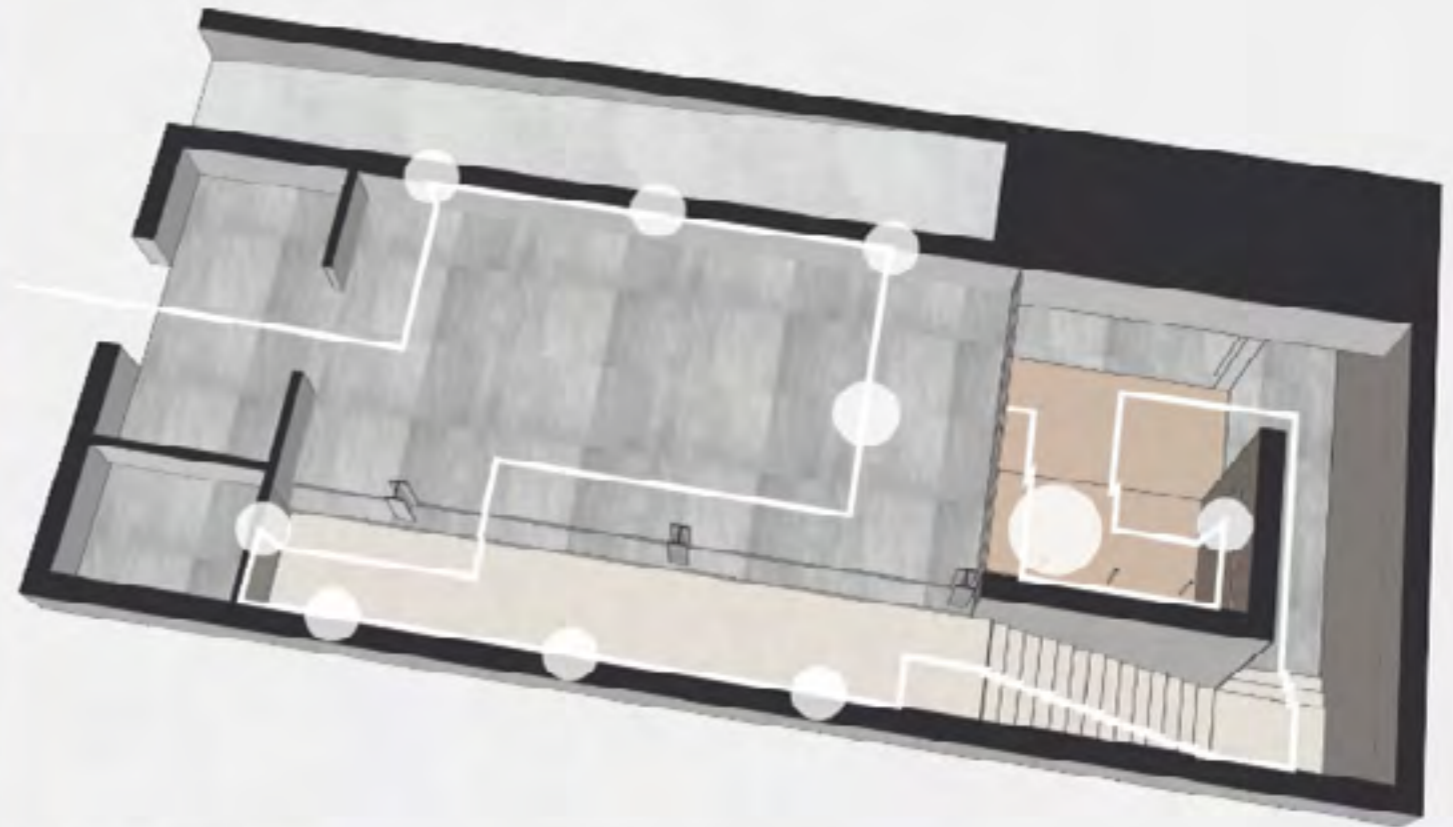
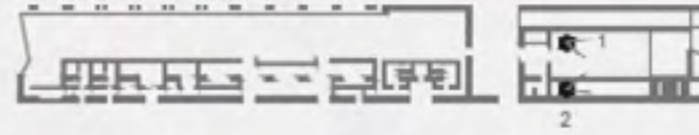







Synonymy of the flow scheme
Hypothesis of location of the works and exhibition path based on the content of the exhibition in question.

-  Location of the main works of art
-  Location of the works of art
-  Exhibition path





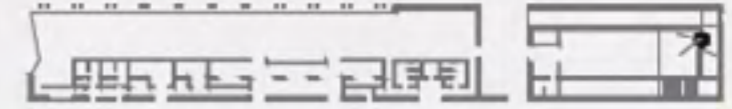
Assumptions of the flow scheme.
Hypothesis of location of the works and exhibition path based on the content of the exhibition in question.

-  Location of the main works of art
-  Location of the works of art
-  exhibition path



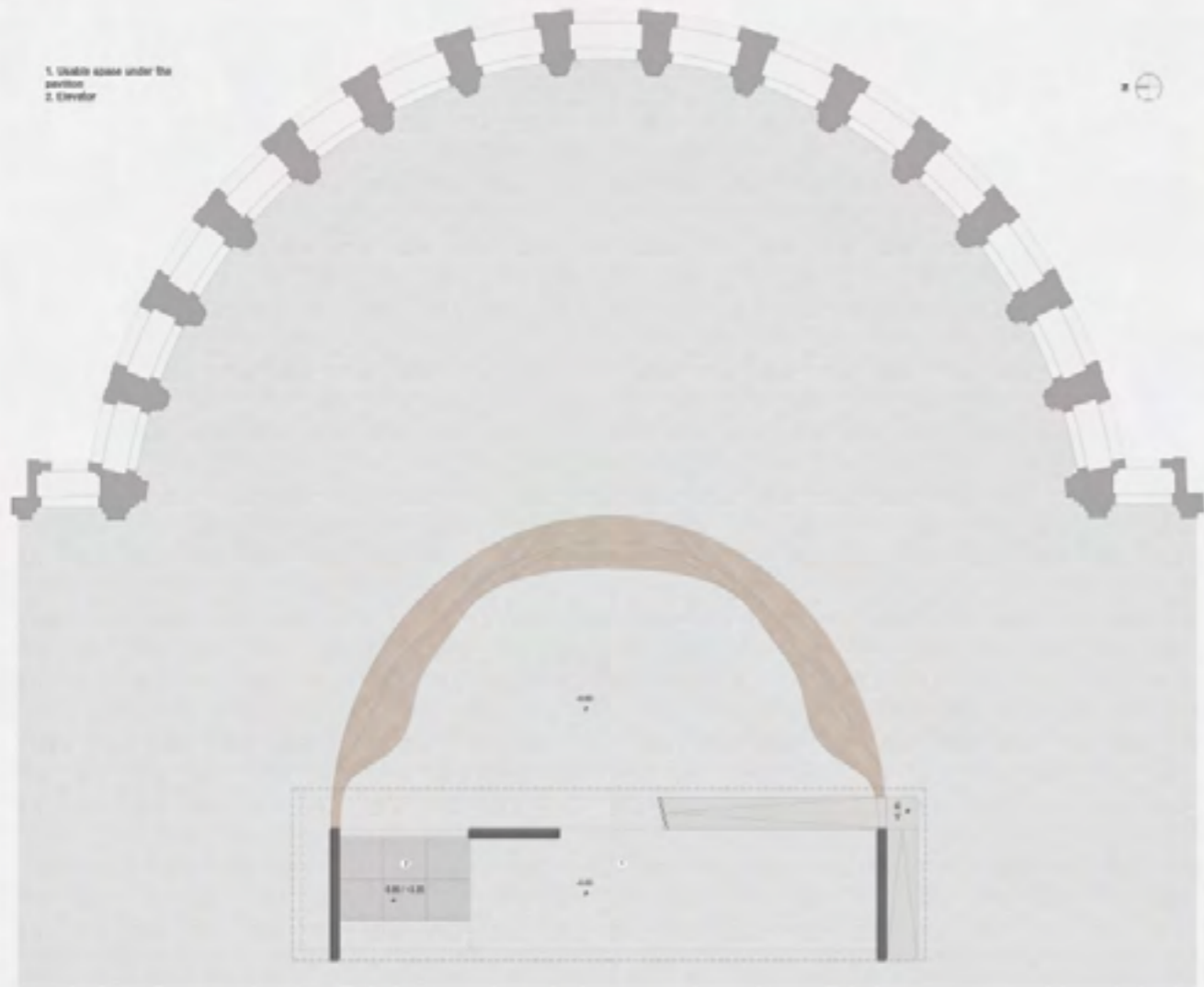
2





INTERNAL PAVILION

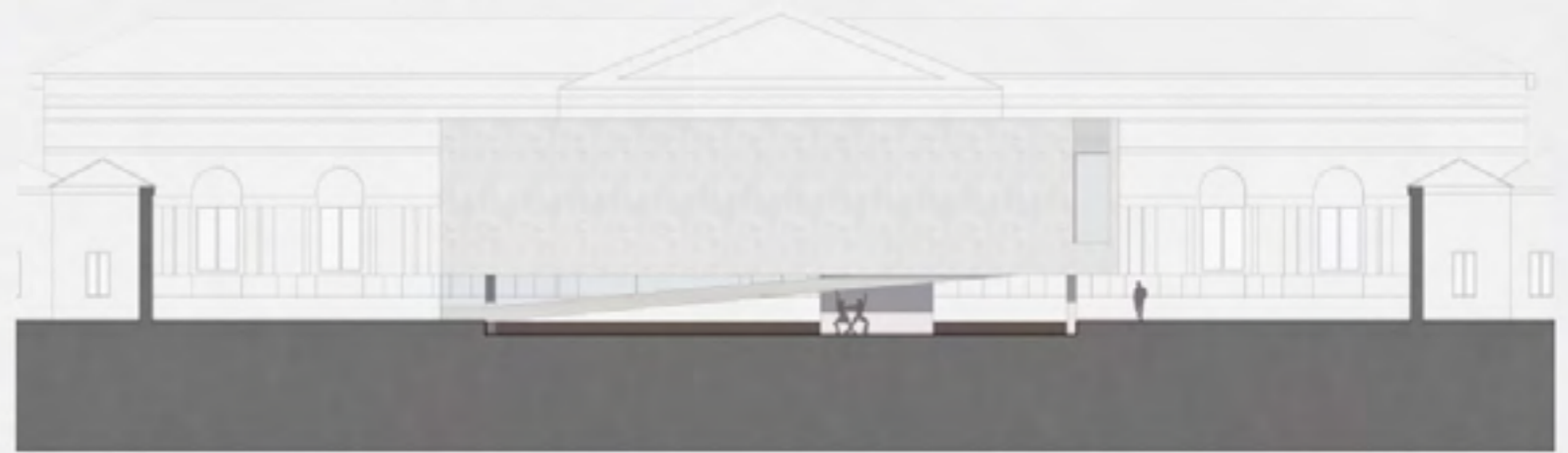
1. Usable space under the pavilion
2. Elevator



Ground floor plan



West elevation



East elevation



POLITECNICO DI MILANO - Stella Centre
AEC - School of Architecture, Urban planning and Construction Engineering
Architectural Design and History

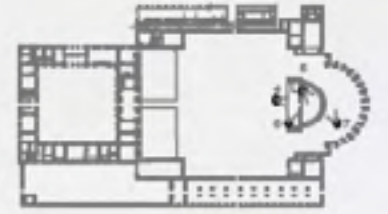
Master's degree thesis - 1st Semester 2020
Supervisors: Prof. Marco Santini, Prof. Angelo Lomazzi

CATTANEO VALENTINA GIANI
VENTURINI BARBARA GIANI

TWO PAVILIONS FOR PALAZZO TE
AND THE PROBLEMS OF THE CONTEMPORANEITY

Plan and elevation of INTERNAL PAVILION
Scale 1:100

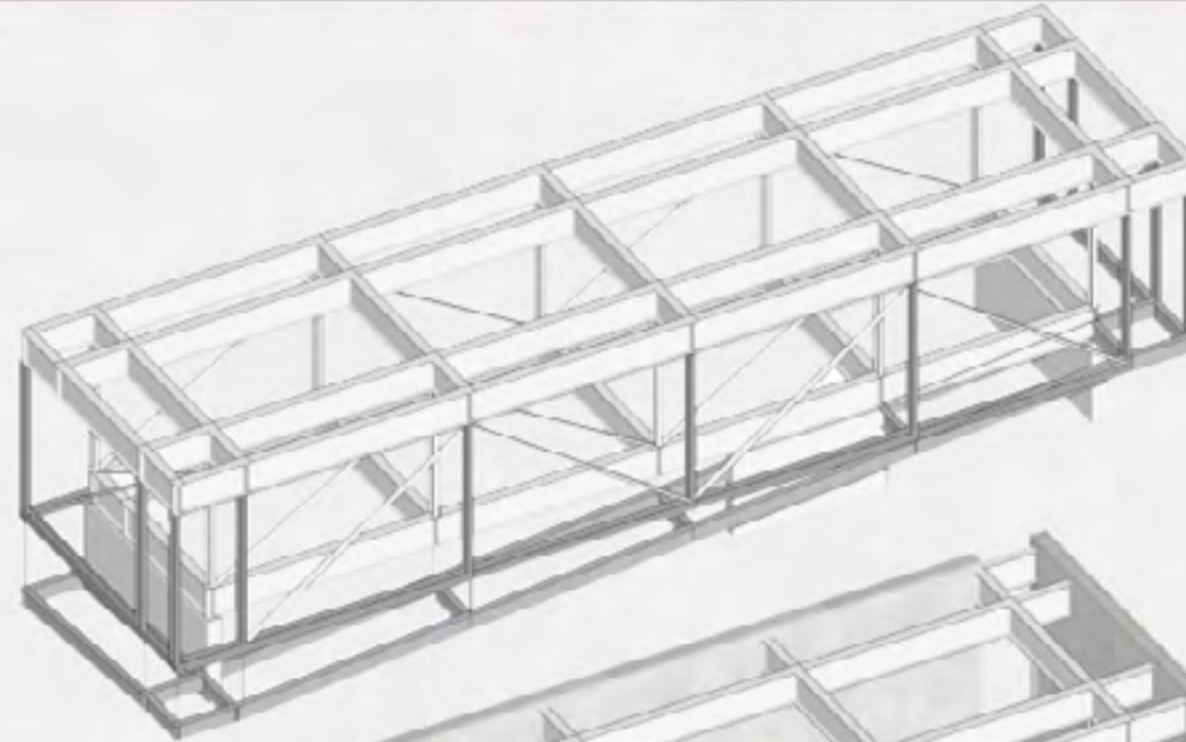




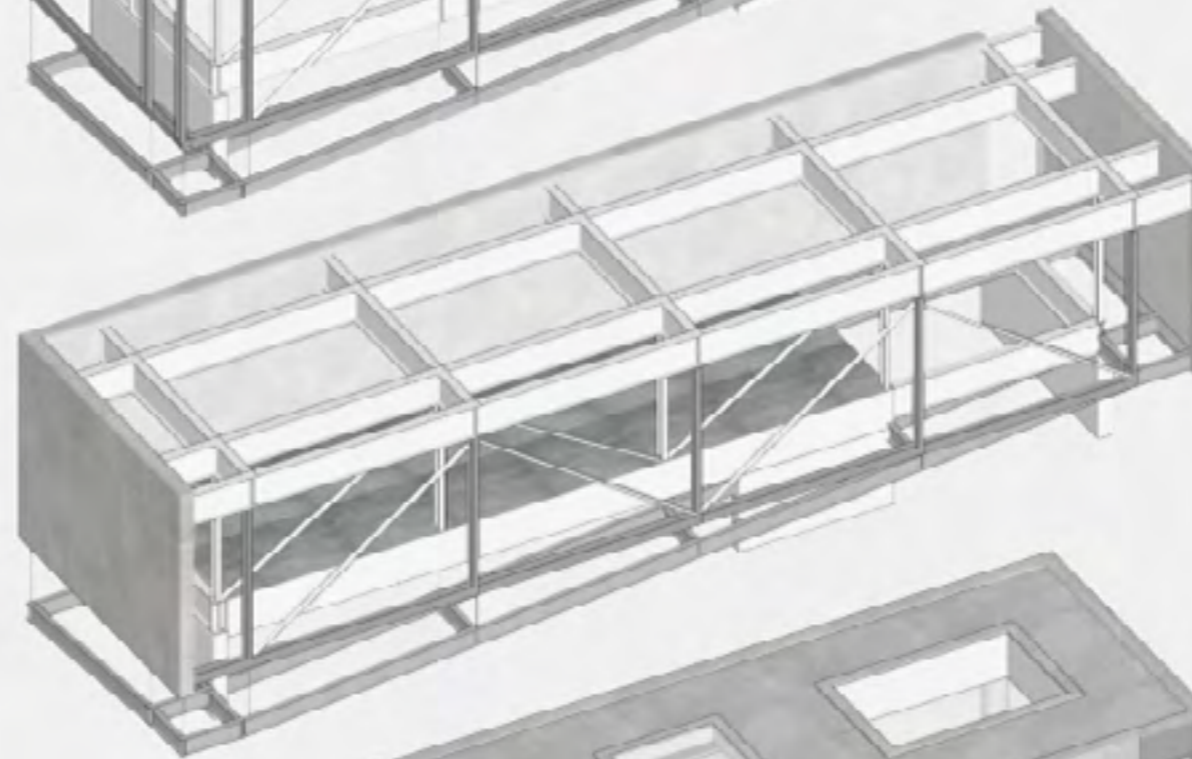
INTERNAL PAVILION



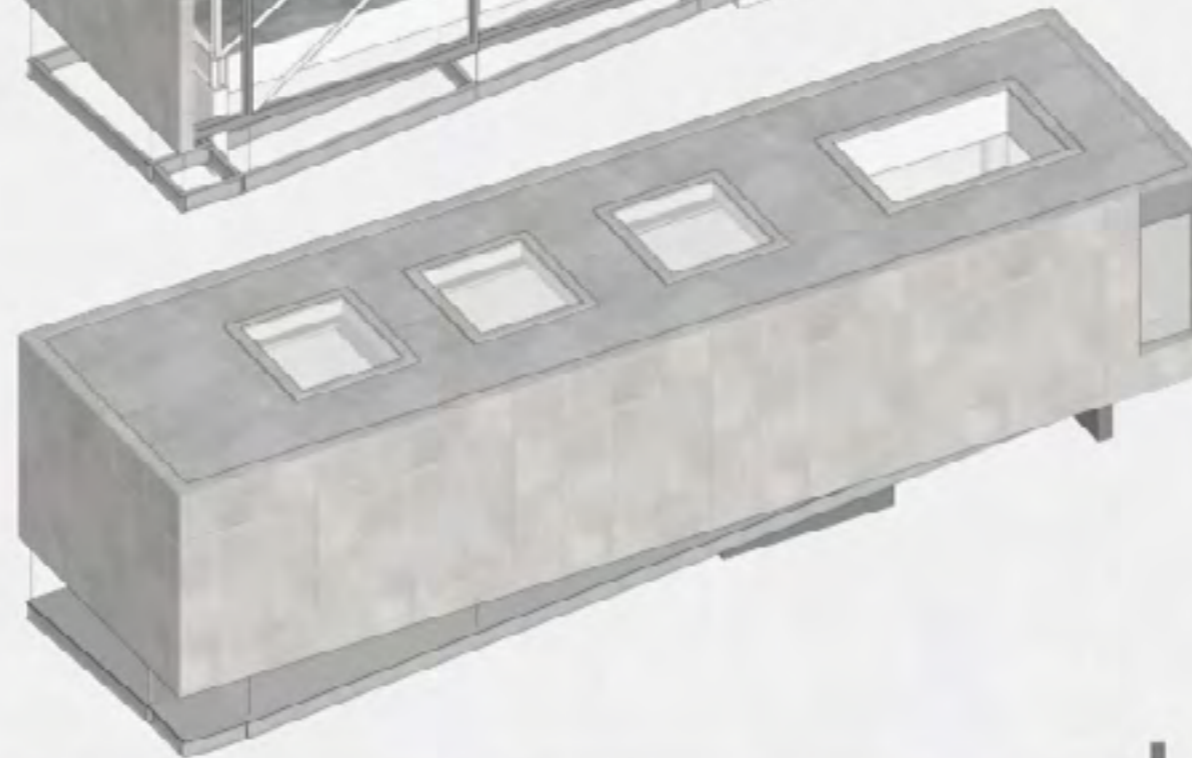
Axonometry



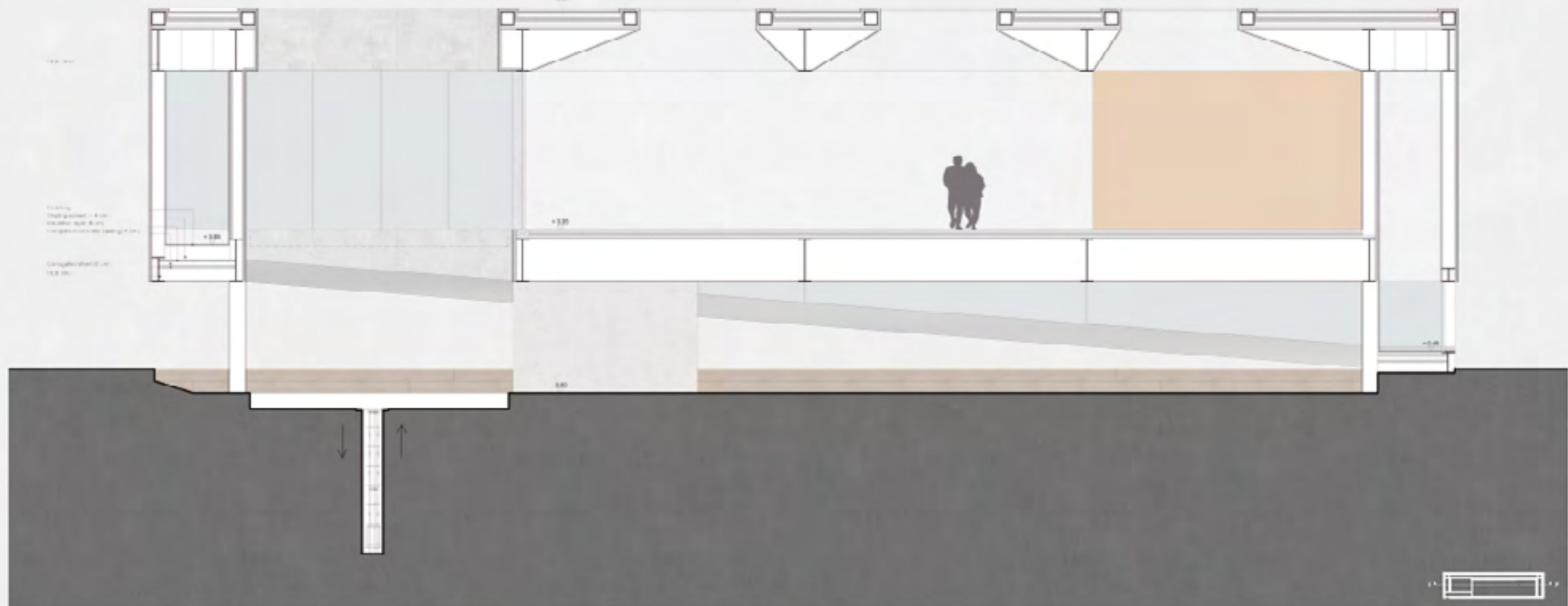
Axonometry



Axonometry

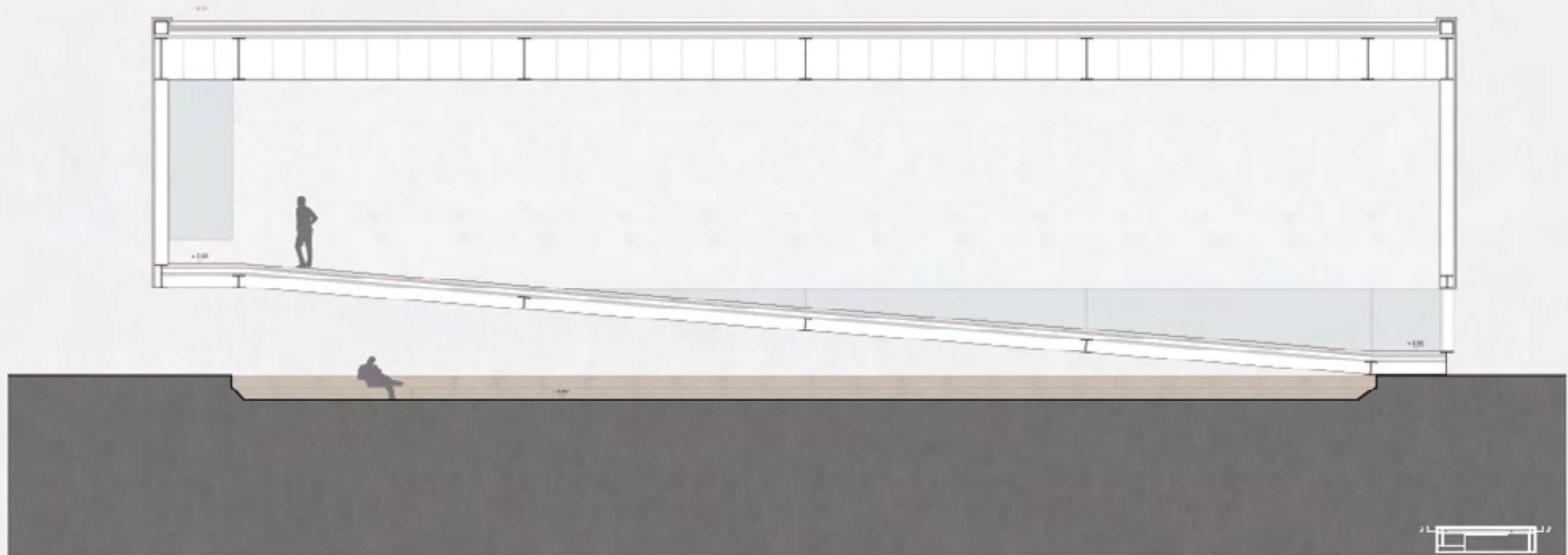


INTERNAL PAVILION



Section II'



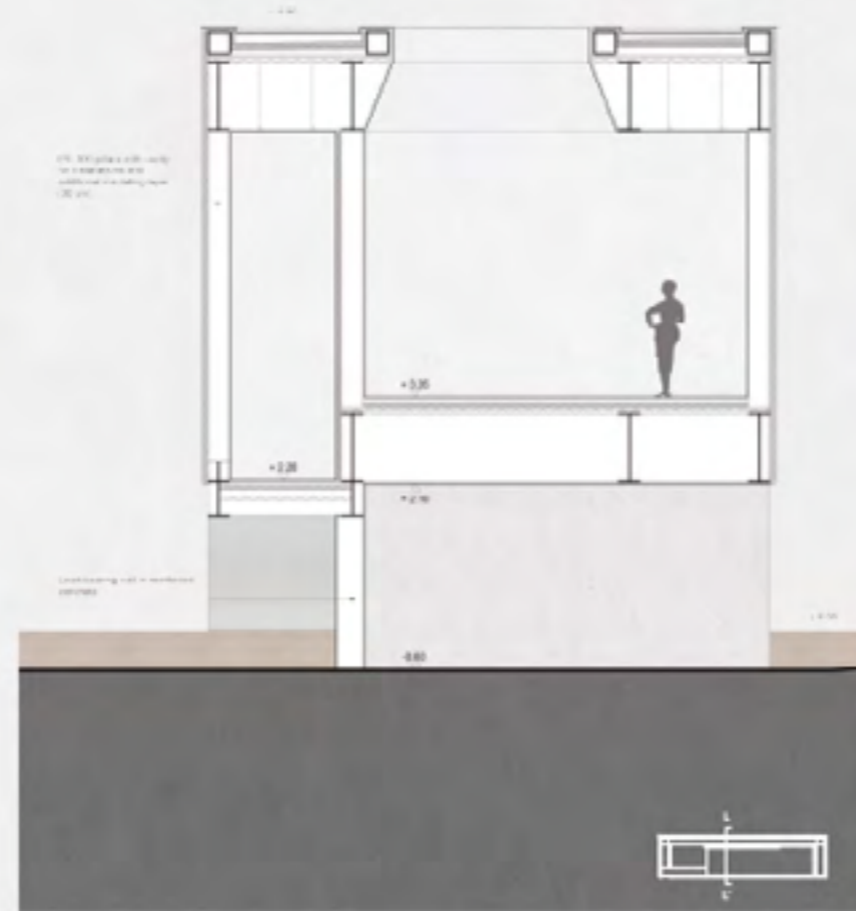


Section J-J'

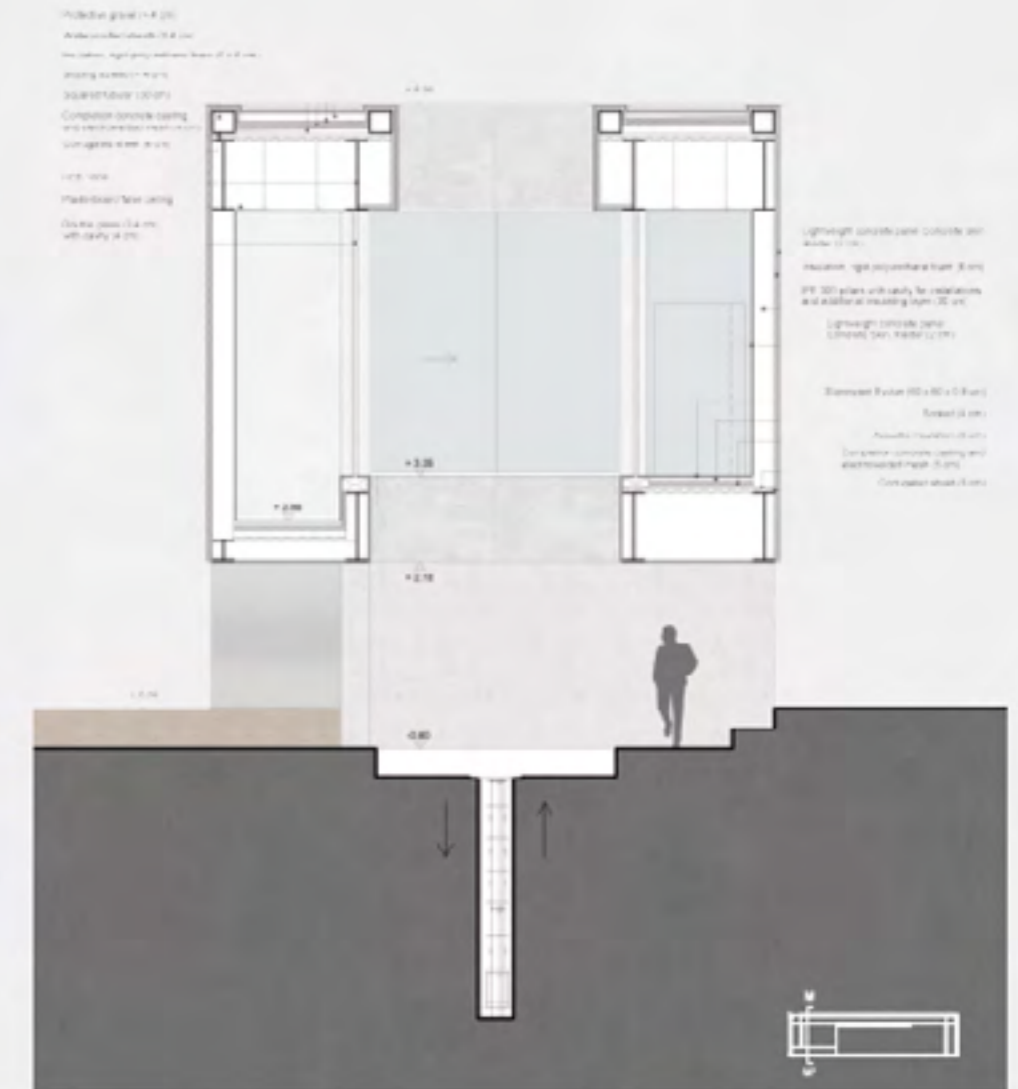
INTERNAL PAVILION



section KK'



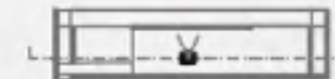
section LL'



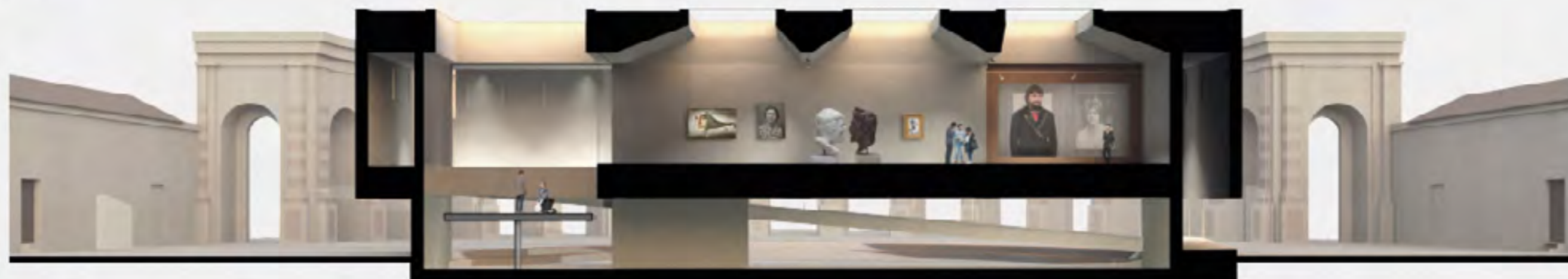
section MM'

Prefabbricated (4.00)
 Anhydrous concrete (2.00)
 The ceiling height is 2.10 m from the floor of the pavilion.
 Sliding window frame
 Separation (1.00 m)
 Complete concrete ceiling and mechanical ceiling
 Composite steel (4.00)
 100% glass
 Prefabbricated floor ceiling
 Glass panel (2.40 m x 4.00 m) with depth (4.00)

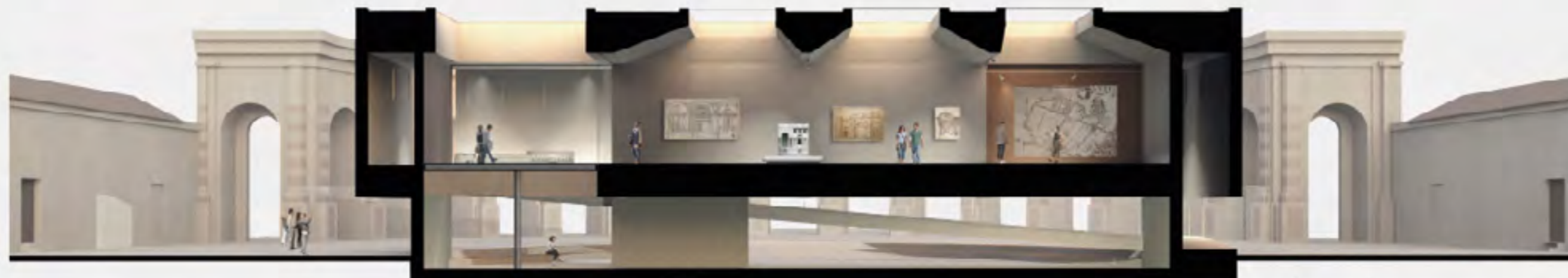
Lightweight concrete panel (colored and white) (2.00)
 Insulation (rigid polystyrene foam) (3.00)
 200 mm glass with cavity for insulation and additional insulating layer (2.00)
 Lightweight concrete panel (colored and white) (2.00)
 Reinforced concrete (100 x 100 x 1.00 m)
 Steel (2.00)
 Prefabbricated floor ceiling
 Complete concrete ceiling and mechanical ceiling (2.00)
 Composite steel (4.00)



Overview with lift completely lowered

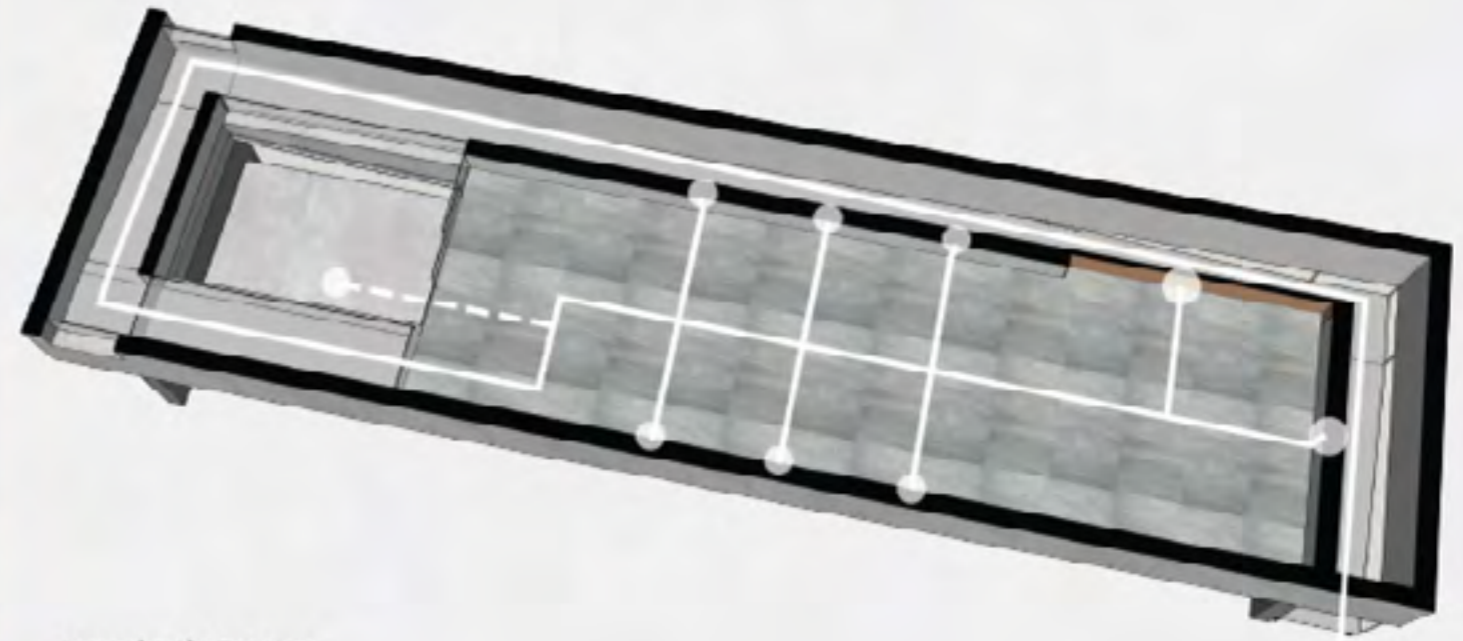
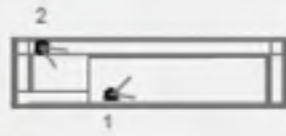






Overview with lift lifted in half



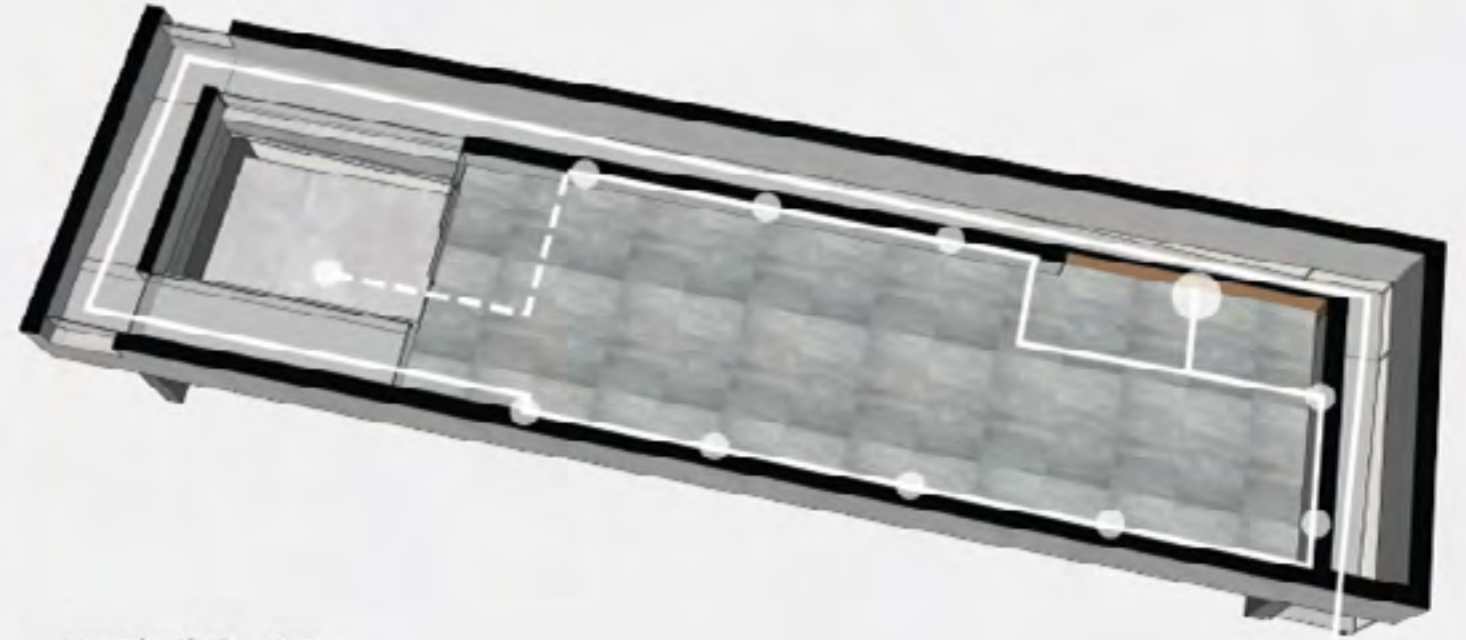
Overview with lift completely lifted









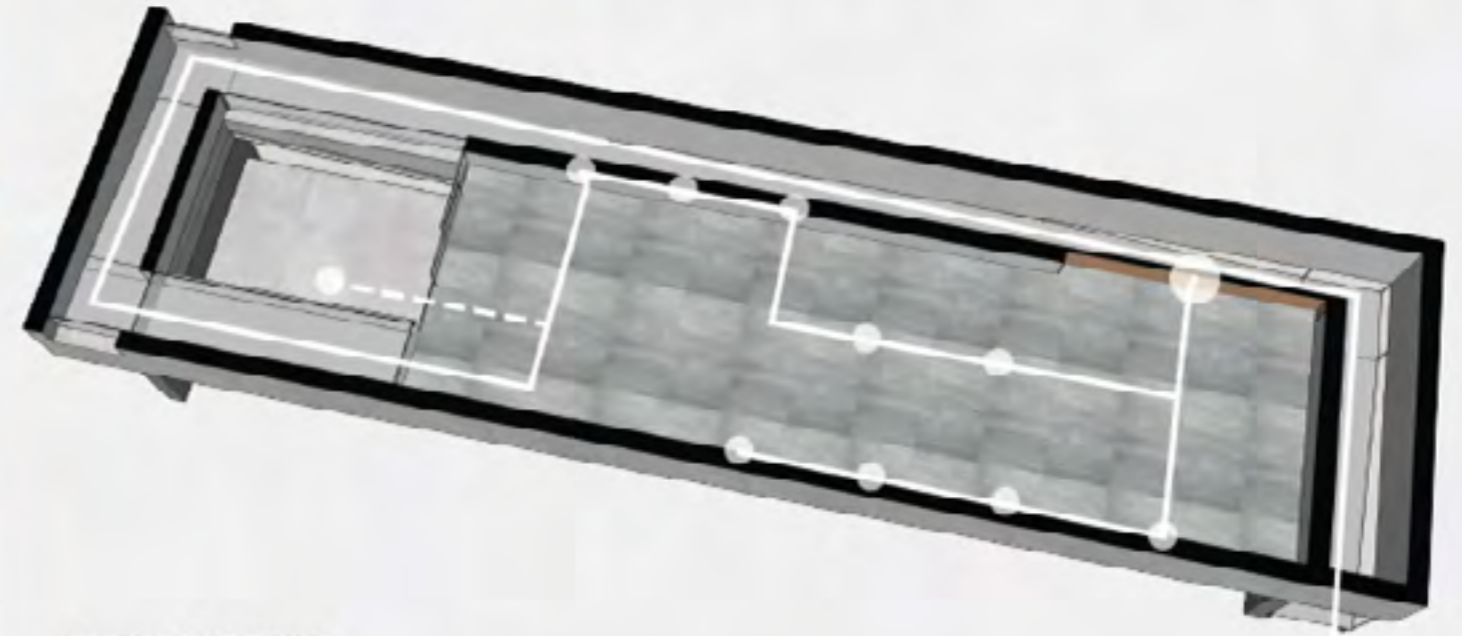
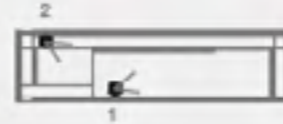
- Axonometry of the flow scheme**
-  Location of the main works of art
 -  Location of the works of art
 -  Exhibition path
 -  Variable route depending on the position of the lift









Axonometry of the flow scheme

-  Location of the main works of art
-  Location of the works of art
-  Exhibition path
-  Variable route depending on the position of the lift



Axonometry of the flow scheme

-  Location of the main works of art
-  Location of the works of art
-  Exhibition path
-  Variable route depending on the position of the lift



