

CHILDREN'S CAMPUS LAVENO MOMBELLO

**Design of an educational institution
and future place for Children of all ages.**

Katarzyna Anna Dembinska



Die approbierte Originalversion dieser Diplom-/Masterarbeit ist in der Hauptbibliothek der Technischen Universität Wien aufgestellt und zugänglich.

<http://www.ub.tuwien.ac.at>



The approved original version of this diploma or master thesis is available at the main library of the Vienna University of Technology.

<http://www.ub.tuwien.ac.at/eng>

Acknowledgements

I would like to express my gratitude to my supervisor Prof Arch DI Dr Manfred Berthold for the useful comments, remarks and engagement through the learning process of this master thesis. Also, I would like to thank the experts: Univ.Prof. Dipl.-Ing. Peter Bauer, Univ.Prof. Mag.art Christine Hohenbüchler, Dipl.-Ing. Dr. Karl Deix, Associate Prof. Dipl.-Ing. Dr.techn Alizera Fadai, who helped in my survey and have willingly shared their precious time during the process of the meetings.

Special thanks to my loved ones: my parents, sister and grandparents who have supported me throughout entire process and were motivating me until the end. Many thanks to my boyfriend for his patience during the last six months, given motivation and support every day.

Furthermore I would like to thank my friends:

Marija, Artemis, Laura for participating in the research and W. Neiger for helpful ideas.

Thank you!

Die approbierte Originalversion dieser Diplom-/Masterarbeit ist in der Hauptbibliothek der Technischen Universität Wien aufgestellt und zugänglich.

<http://www.ub.tuwien.ac.at>



The approved original version of this diploma or master thesis is available at the main library of the Vienna University of Technology.

<http://www.ub.tuwien.ac.at/eng>



MASTER-/DIPLOMARBEIT

Children's Campus Laveno Mombello

Kinder Campus Laveno Mombello

Design of an educational institution and future
place for children of all ages

Entwurf einer altersübergreifenden Entwick-
lungs-, Bildungs- und Zukunftsstätte für Kinder

**ausgeführt zum Zwecke der Erlangung
des akademischen Grades eines
Diplom-Ingenieurs / Diplom-Ingenieurin
unter der Leitung von**

Manfred Berthold
Prof Arch DI Dr

E253 - Institut für Architektur und Entwerfen

**eingereicht an der Technischen Universität Wien
Fakultät für Architektur und Raumplanung**

Katarzyna Anna Dembinska

Matr. Nr. 01128369

A 1200 Wien

Spaungasse 21/22

k.dembinska.arch@gmail.com

Wien, am _____

Unterschrift



FIG.01

ZUSAMENFASSUNG

Mit der „Kids Factory“ bekommt die vormalige, 27000m² große Karmikmanufaktur von Laveno Mombello im Norden Italiens einen neuen Nutzen.

Ziel des Projekts ist es dem Areal neuen Gebrauch zu verleihen und zugleich einen majestätischen architektonischen Komplex für die Kindheit zu erschaffen.

Es ist eine besonders faszinierende Herausforderung Gebäudekomplexe mit Hinblick auf deren Nutzung durch Kinder und unter der Rücksichtnahme der Bedürfnisse eben dieser zu designen, da Kinder Ihre Umgebung im Allgemeinen und die Architektur im Speziellen anders wahrnehmen als Erwachsene. In Anbetracht dessen ist es uns möglich unserer Vorstellung freien Lauf zu lassen, um einen Raum zu erschaffen, in welchem es Kindern möglich ist außergewöhnliche Erfahrungen, sowohl während Ihrer Schulzeit, als auch in den Sommerferien zu machen.

ABSTRACT

Kid's factory presents a new use of a former pottery of Laveno Mombello in the northern Italy with 27000m². The goal of the project is to give the area a new use and create a majestic architectural complex to childhood. Designing for children is a fascinating challenge for architects, because they see architecture different than us-adults, therefore we can let our imagination go and try to create a space where children can go through their extraordinary adventures during their school year as well as in the summer holiday.

CONTENT

01	Introduction	14
02	Situation Analysis	17
	2.1 Surroundment	23
	2.2 Welcome to Laveno Mombello	25
	2.3 Lake Maggiore	27
	2.4 Schools in laveno Mombello	28
	2.5 Children population in Laveno Mombello 2016-2018	30
	2.6 The Italian pottery, existing building	32
	2.7 Education in Italy	38
03	Aim	43
04	Methodology	45
	4.1 Functions	47
	4.1.1 Kindergarten	49
	4.1.2 Elementary school	51
	4.1.3 Lower secondary school	51
	4.2 International examples	53
	4.3 Outdoor learning	57
	4.4 Master plan development	61
	4.5 Building development	63
	4.6 Colours	65
	4.7 Functions in diagrams	71
	4.8 Materials	78
	4.9 Interior	80
	4.10 Drawing workshop; "how children see a perfect school"	82
05	Result	85
	5.1 Plans(Master plan, Floor plans, Elevations, Sections)	86
	5.2 3D Facade section and details	127
	5.3 3D Visualisations	130
	5.4 Structure	150
06	Assessment	149
	Area	
07	Conclusio	161
	7.1 Illustration directory	162
	7.2 References	163
	7.3 Plan directory	164
	7.4 Online ressources	165
	7.5 Literature directory	165
	7.6 Curriculum Vitae	167

“Childhood should be carefree, playing in the sun; not living a nightmare in the darkness of the soul.”

Dave Pelzer, A Child Called “It”

INTRODUCTION



FIG.02

1 INTRODUCTION

Dear reader,

in this book you are going through the journey of a new educational campus for children and youth in the former pottery in Laveno Mombello in Italy.

The reason why i chose this topic is my current interest in the architecture and interior design for the youngest group of our population-for children.

In the last years of studying i have been designing many different buildings with various functions from skyscraper to roof extension, where always the main group of the user were adults.

With this project i would like to show a suitable complex for children and youth in many different contexts starting at the function allocation, through the construction, materials, colors and equipment.

SITUATION ANALYSIS

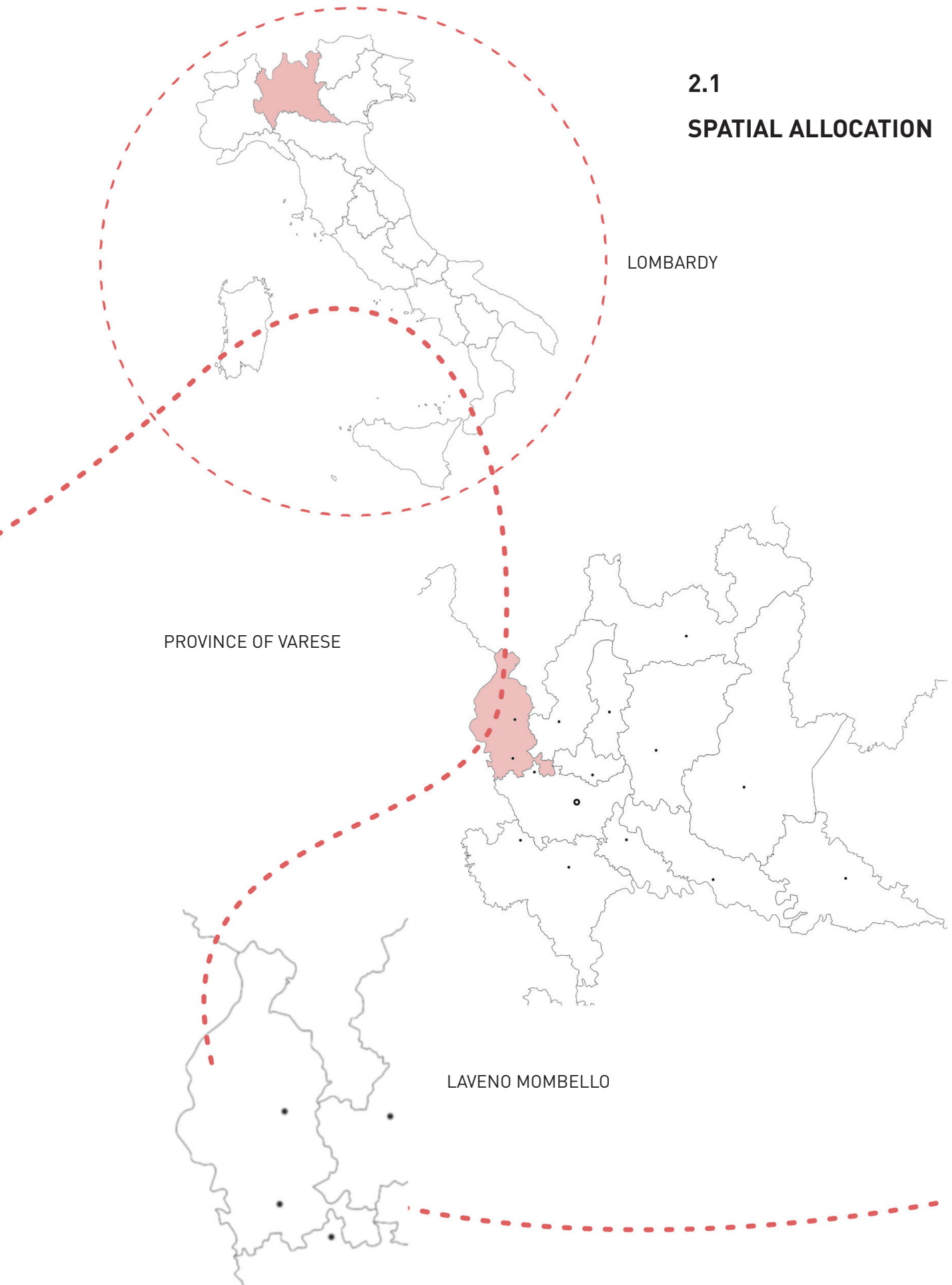


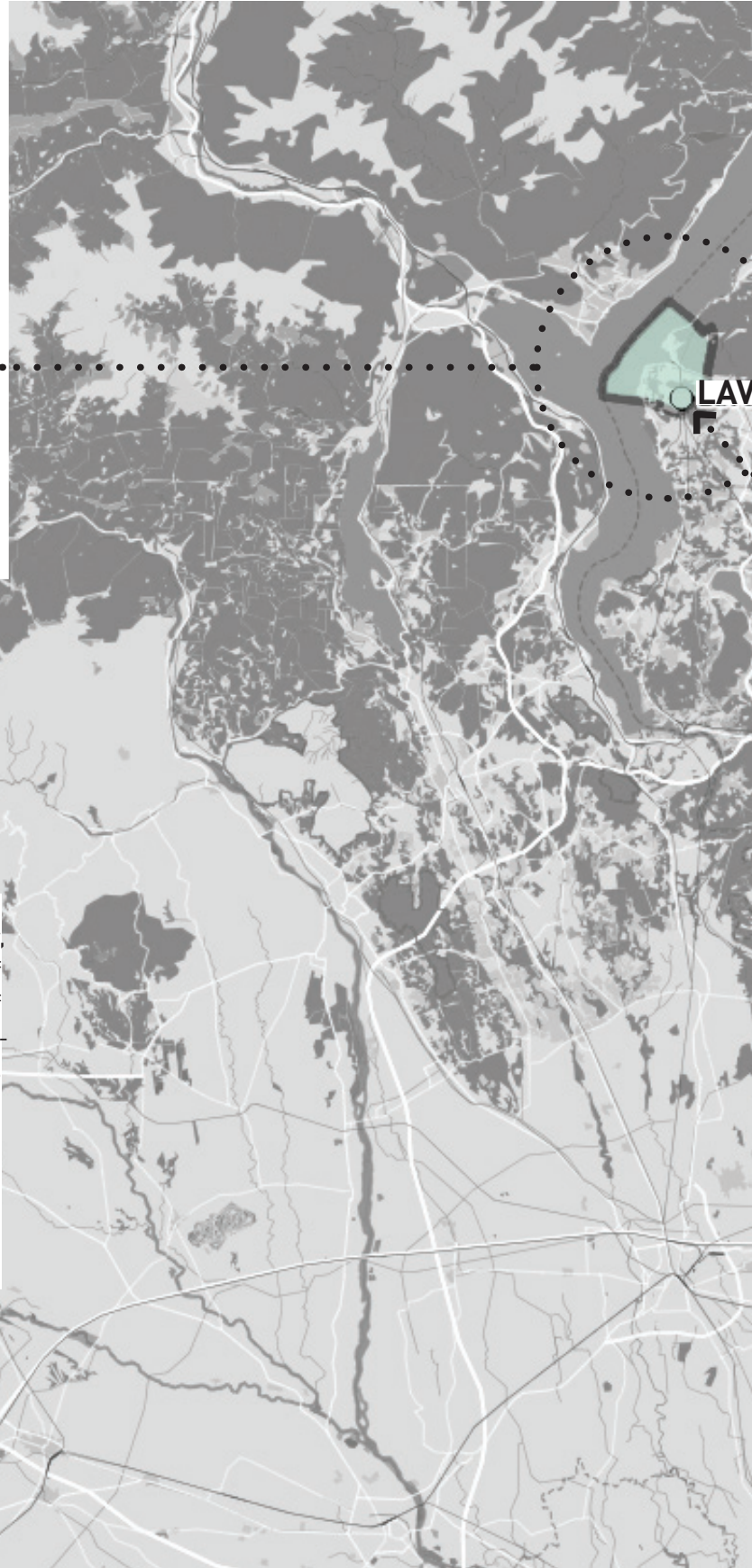
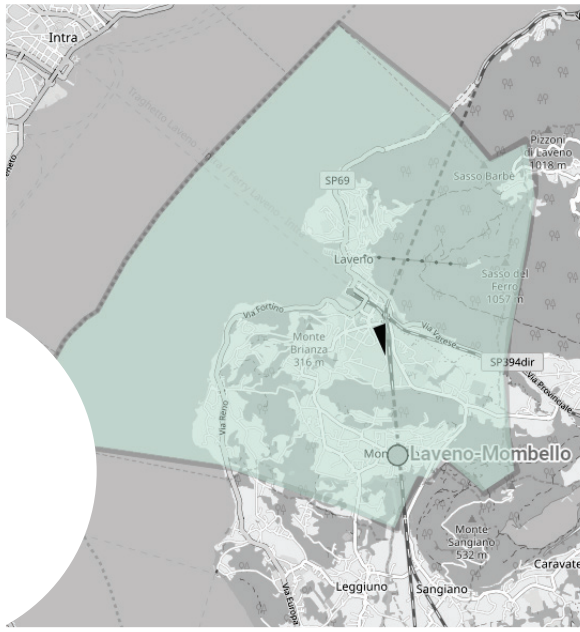
EUROPE

ITALY

FIG.03

2.1 SPATIAL ALLOCATION



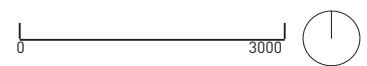


"Laveno-Mombello is a comune (municipality) in the Province of Varese in the Italian region Lombardy, located about 75 kilometres (47 mi) northwest of Milan and about 25 kilometres (16 mi) northwest of Varese. As of 31 December 2004, it had a population of 8,991 and an area of 25.9 square kilometres (10.0 sq mi)."²

It is located ca. 80 km from Milano to the north west and is reachable in around 2 hours by train.

The train station of Laveno-Mombello is situated directly next to the project location.

FIG.04



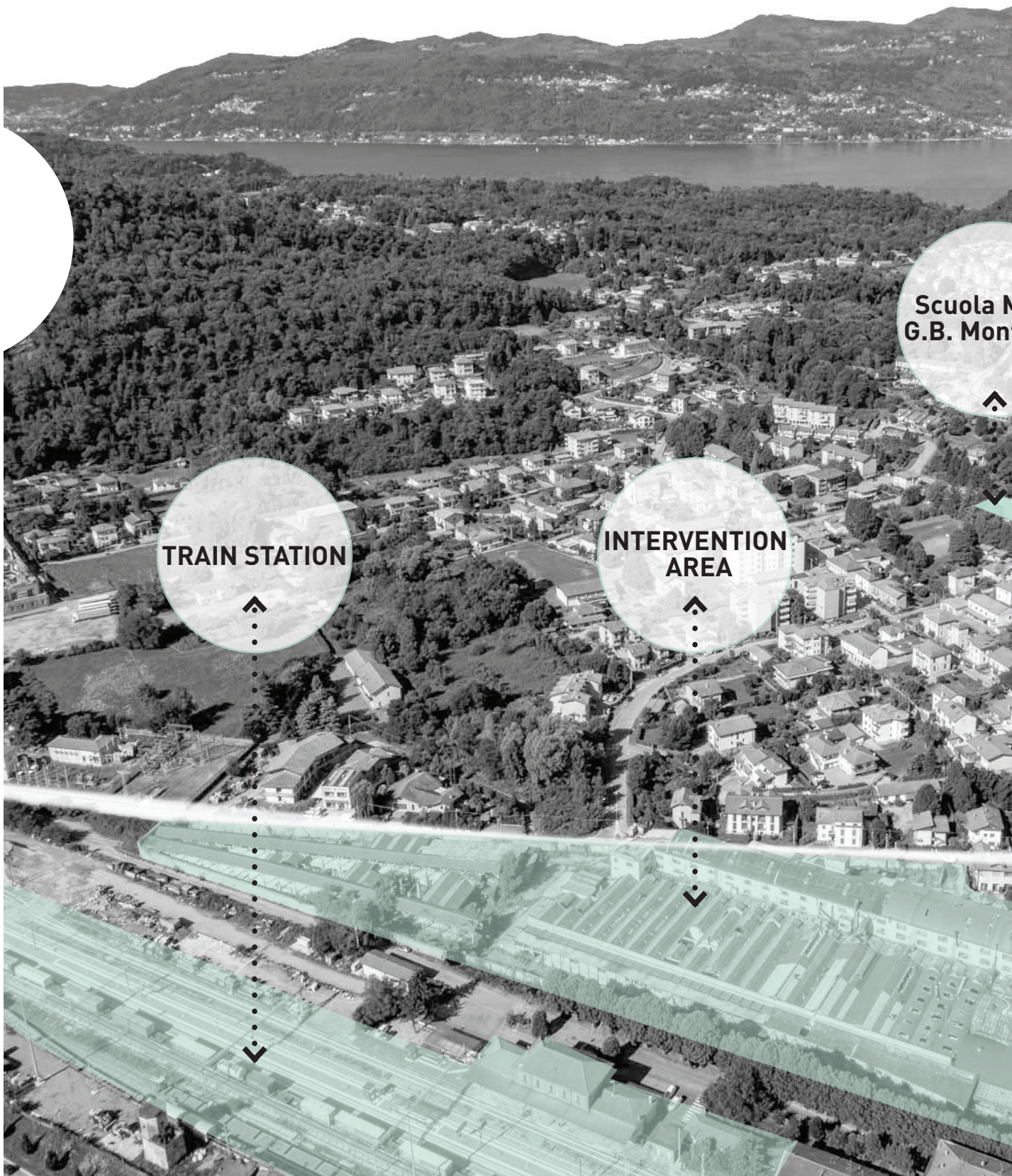


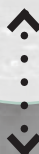
FIG.05



CENTER AND
HARBOUR



LAKE
MAGGIORE



Media
teggia

S32

2.1

SURROUNDINGS

Connection:

Intervention area is situated in the middle of Laveno Mombello next to the train station where with the regional trains in about two hours it is possible to reach Milano. In Laveno there are two train stations, the other one is located next to the harbour and is called "Laveno Mombello FN". Right next to the area two provincial roads S32 and S69 are crossing. In less than a 1km the Lake Maggiore and the harbour are reachable from the pottery. Around the intervention are located bus stops as well as big parking place on the opposite side of the street via Buozzi.

Other Schools:

The nearest school "Scuola Media G.B. Monteggia" is located around 550m and is reachable in 7 min by walking.

Surroundment

Area around consists mostly of housing building and single family homes. It is typical residential area with small houses, restaurants and a lot of greenery.



2.2

WELCOME TO LAVENO MOMBELLO

"It is situated between the two massive hills that create a small inlet close to the valley. Laveno Mombello is a remote and silent harbor. Yet, it is one of the main piers of Lake Maggiore.

The toponym evokes a past of war (Laveno comes from Lavinio. He was the historical Roman general who repeatedly confronted the Gauls at the mons belli. Mons belli is a Latin word meaning "the mountain of the war", which then became "Mombello"). However, today clear water lazily skims the stony coves, where pale and polished trunks shelter ducks and swans swimming in the lake with their chicks in small ordered fleets.

Moving inland, beyond the quiet banks, a constellation of churches, buildings and balconies create a series of historical and architectural valuable elements that evoke a remote tradition composed by art, devotion and culture. The town hall boasts a collection of more than 50,000 books. It is one of the main libraries of the area.

The pipe organ of the Church of Saint Philip and Saint James recalls an ancient musical tradition, which is currently honored by festivals and renowned expositions. Creating a new childhood center in the most important seaport of Lake Maggiore means supporting and implementing the natural tourist vocation of this charming area of Italy. It also means making this facility reachable by a vast number of users, who are the visitors of Lake Maggiore.

This will give the opportunity to provide them with an original recreational offer, which will be dedicated to the youngest segment of the audience too"¹

"This picturesque town is situated about 20 km from Varese, along the banks of Lake Maggiore, where the Boesio stream enters the lake. The commune includes the 3 centers of Laveno, Mombello Lago Maggiore and Cerro Lago Maggiore which were united in one commune in 1927.

The area is renowned for its ceramics production, and is today an important communications hub by road and railway, connecting Lombardy to Switzerland, and also on the lake, thanks to its ferryboats linking the many villages around Lake Maggiore.

Info

Population: ca. 10,000 inhabitants -- Zip/postal code: 21014 -- Phone Area Code: 0332 -- Frazioni & Località: Cerro, Monteggia and Ponte

History

The area was inhabited by man since prehistory, as shown by archeological findings in the area of Mombello, where traces of palafict huts were found going back to 3,000 years BC. According to the tradition the name Laveno was given to the place by Roman general Titus Labienus, who had his camp on the site at the time of the battle against the Gauls on the nearby hill, the "mons belli" (=mountain of war)."³



FIG.07



FIG.08



FIG.09

2.3 LAKE MAGGIORE

“Water and stone are lightened up by the sun. Its rays plough through the clouds bursting behind a zigzagged horizon. Majestic mountains turn blue at nightfall when the fog, as light as silk, brushes the rocky slopes and dissolves in the clear profoundness of the lake. This is the context of the intervention. It is a succession of gulfs, inlets, rocks and little islands. Each one of them is embellished by a different natural or architectural phenomenon. Castles, monumental trees, or ruins give a unique touch to every element of this highly valuable lacustrine archipelago decorating Lake Maggiore. It is an oneiric and enchanted landscape that fascinated painters, engravers and poets as

Flaubert and Stendhal who wrote about the lake: “If you have a heart and a shirt, sell the shirt and visit the surroundings of Lake Maggiore”.

As fragments of paradise, villas, castles and gardens with camellias and magnolias unexpectedly appear to the eyes of the incredulous visitor. Creating a children city in this corner of Italy not only means intervening in an area full of extraordinary naturalist opportunities but also enhancing the offer and the cultural routes of the kindergarten.

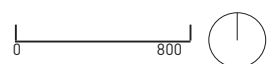
Therefore, games, initiatives and itineraries will not be exclusively in the former factory. On the contrary, they will extend to the surrounding area. The center will have the opportunity to become its access and knowledge platform. It will be the starting point to discover all the wonders of Lake Maggiore.”⁴

2.4

SCHOOLS IN LAVENO MOMBELLO



FIG.10



1.STAT.SC.MAT.PARROCCHIALE

Private kindergarten

2.SC.MAT.NON STAT.SCOTTI

Private kindergarten

3.SC.MAT.NON STAT.PONTE

Private kindergarten



FIG.13

4. Elementary school, M.Gianoli-Laveno
Fr.Mombello, 102Pupils, 5 Classesx20



FIG.11

5.Elementary school,L.Scotti
213Pupils, 10 classes x21



FIG.14

6.Lower secondary school,G.B. Monteggia 258 Pupils, 11 Classes, student/class 23



FIG.12

7. Upper secondary school.GALILEI, Istituto Tecnico Pupils 30, 5 classes x6



FIG.15

8. Upper secondary school_Liceo L. S.
LAVENO M. SEZ. STACC. SERENI LUINO,Pupils 245,
11 classes x22

2.5

CHILDREN POPULATION IN LAVENO MOMBELLO 2016-2018

Distribution of the population of Laveno-Mombello for age groups from 0 to 18 years as of 1 January 2018. Data processing on ISTAT data.

The graph below shows the potential users for the school year 2018/2019 the schools of Laveno-Mombello, highlighting the different school cycles with different colors (nursery school, kindergarten, primary school, secondary school of I and II degree).

Distribuzione della popolazione per età scolastica 2018

Età	Maschi	Femmine	Totale
0	20	16	36
1	30	27	57
2	34	19	53
3	27	22	49
4	31	17	48
5	33	26	59
6	35	29	64
7	25	30	55
8	43	28	71
9	27	36	63
10	37	30	67
11	43	40	83
12	32	40	72
13	40	45	85
14	46	48	94
15	34	50	84
16	42	43	85
17	35	34	69
18	36	34	70

FIG.16

Distribuzione della popolazione per età scolastica 2017

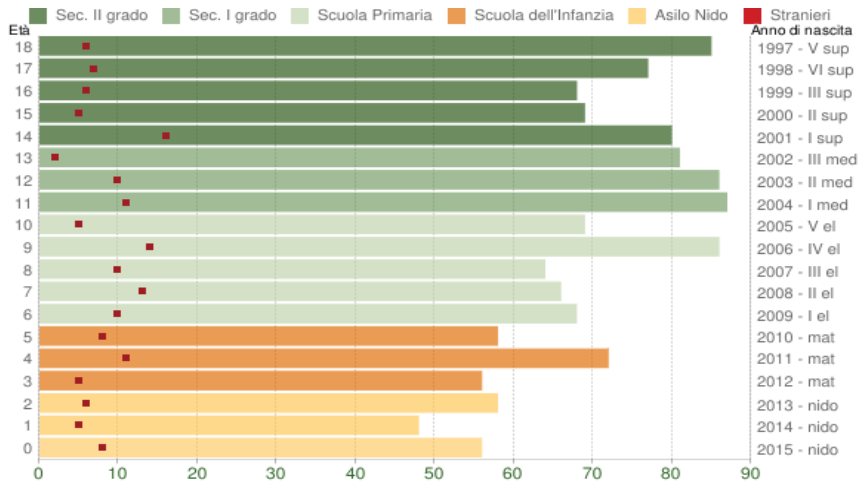
Età	Totale Maschi	Totale Femmine	Totale Maschi+Femmine	di cui stranieri			
				Maschi	Femmine	M+F	%
0	30	28	58	4	3	7	12.1%
1	36	19	55	5	2	7	12.7%
2	26	21	47	1	1	2	4.3%
3	39	16	55	3	2	5	9.1%
4	33	25	58	6	1	7	12.1%
5	39	29	68	5	5	10	14.7%
6	27	32	59	6	1	7	11.9%
7	40	30	70	7	2	9	12.9%
8	29	37	66	5	5	10	15.2%
9	34	30	64	3	5	8	12.5%
10	43	42	85	6	5	11	12.9%
11	32	40	72	6	1	7	9.7%
12	40	47	87	4	5	9	10.3%
13	43	46	89	8	2	10	11.2%
14	36	50	86	1	4	5	5.8%
15	44	42	86	10	5	15	17.4%
16	34	34	68	1	3	4	5.9%
17	36	34	70	4	2	6	8.6%
18	33	44	77	2	5	7	9.1%

FIG.17

Distribuzione della popolazione per età scolastica 2016

Età	Totale Maschi	Totale Femmine	Totale Maschi+Femmine	di cui stranieri			
				Maschi	Femmine	M+F	%
0	37	19	56	6	2	8	14.3%
1	25	23	48	2	3	5	10.4%
2	39	19	58	4	2	6	10.3%
3	31	25	56	4	1	5	8.9%
4	42	30	72	6	5	11	15.3%
5	26	32	58	7	1	8	13.8%
6	38	30	68	6	4	10	14.7%
7	31	35	66	8	5	13	19.7%
8	33	31	64	4	6	10	15.6%
9	43	43	86	9	5	14	16.3%
10	30	39	69	3	2	5	7.2%
11	39	48	87	5	6	11	12.6%
12	42	44	86	8	2	10	11.6%
13	34	47	81	0	2	2	2.5%
14	39	41	80	9	7	16	20.0%
15	36	33	69	2	3	5	7.2%
16	33	35	68	2	4	6	8.8%
17	35	42	77	2	5	7	9.1%
18	43	42	85	1	5	6	7.1%

FIG.18

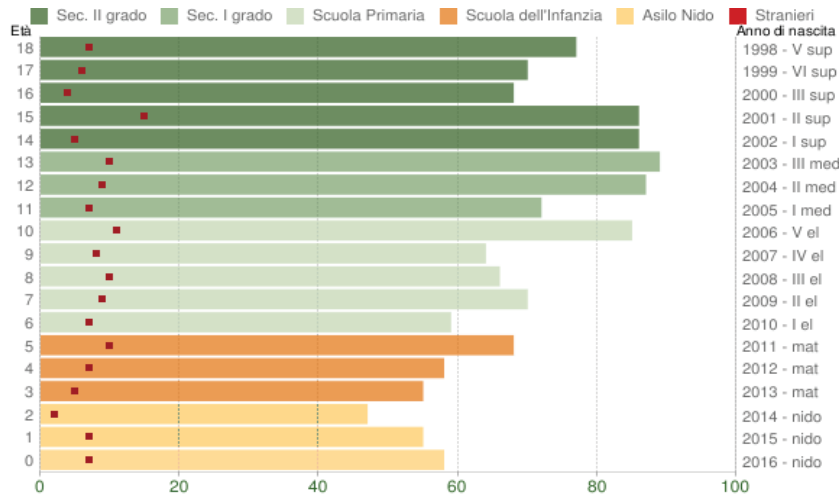


Popolazione per età scolastica - 2016

COMUNE DI LAVENO-MOMBELLO (VA) - Dati ISTAT 1° gennaio 2016 - Elaborazione TUTTITALIA.IT

FIG.19

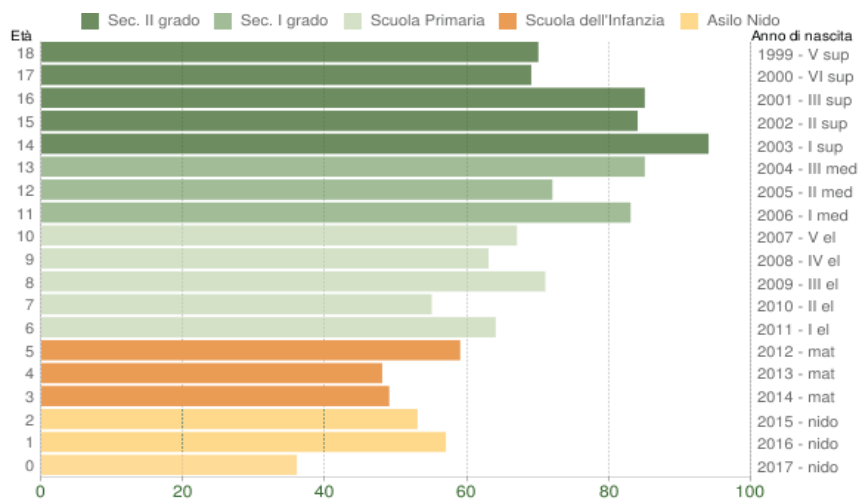
Distribution of the population by school age 2018



Popolazione per età scolastica - 2017

COMUNE DI LAVENO-MOMBELLO (VA) - Dati ISTAT 1° gennaio 2017 - Elaborazione TUTTITALIA.IT

FIG.20



Popolazione per età scolastica - 2018

COMUNE DI LAVENO-MOMBELLO (VA) - Dati ISTAT 1° gennaio 2018 - Elaborazione TUTTITALIA.IT

FIG.21



FIG.22

2.6

THE ITALIAN POTTERY, EXISTING BUILDING

“In the spring of 1856, three brilliant gentlemen saw in the former glassmaker of Laveno the opportunity to give birth to one of the potteries, which marked the history of the ceramic industry and design.

The area generously provided raw materials and infrastructures. It also offered the opportunity to succeed in that idea. The nearby woods and peat bog enabled the kilns to be properly stocked. They were crucial to cook products. The mills were the center for the processing of clay. The lake ensured water abundance and, above all, an easy connection to Milan and the overlooking industrial district. An adventure of innovation and technical evolution was born. Consequently, in 1935, Laveno hosted the largest electric oven of Europe. Such adventure also comprised artistic and design research, which involved liberty artists as Giorgio Spertini and the renowned creative geniuses of Antonia Campi and Guido Andlovitz among others.

The pottery of Laveno crossed the oceans and the continent conquering the Americas and reaching the tables of the most demanding aristocracies of

Sweden and France. This story influenced the development of the area by changing the pattern of roads, infrastructures and railways without affecting its artistic, social and cultural aspects. In fact, a summer camp for the employees of the facility was established.

Schools for decorators and ceramists thrived. They used to train young workers who were requested all over the world. In 1951, the pottery boasted more than 2,300 employees with branches in Argentina and agreements with the most distinguished industrial groups, among which the Bavarian Rosenthal stands out. However, history with its vagaries is often careless of human success. In 1965, Richard Ginori purchased the brands of the Italian pottery. They started to fade due to the lashing winds of an increasingly ruthless globalization. In 1997, the company permanently closed after 141 years of business.

As a fine dust of countless celestial bodies follows the collapse of a star, after the closing of such glo-

rious business, today a fragmentation of countless small handcrafted productions live on. They are the heirs of the knowledge that has been passed on from father to son for decades. A myriad of plants and factories live on too. They have witnessed the story that made this remote small port one of the protagonists of the global pottery production.

Today, this industrial story that lasted 141 years is told in the International Museum of the Pottery Design of Cerro of Laveno Mombello. It recalls the outstanding events of such remarkable business story. Therefore, carrying out an intervention in the factory of Laveno means handling the archaeologies of a story that is deeply rooted in the memory and identity of the area.”⁵

“One of the oldest and most renowned Italian ceramic manufacturer, i.e. SCI-Società Ceramica Italiana, was founded in 1883 in Laveno by a group of entrepreneurs. The first production site was a refurbished glass factory on the lakeshore. After a period of positive and continuous growth, in 1920s SCI invested in the construction of new factories still in Laveno town. One of these, built in 1925 and named as the nearby lake “Verbano”, was created in partnership with the German Porzellanfabrik Rosenthal to manufacture insulators. In 1935 the plant was equipped with electric tunnel furnaces and began to use national kaolins.”⁶



FIG.23



FIG.24



FIG.25



FIG.26



FIG.27



FIG.28



FIG.29

Photos of a former pottery with the surrounding area.

"Entrance building; this is a Pietro Portaluppi's architecture. The building is a remarkable example of the industrial architecture of the 20th century. For this reason, there is a restriction system that safeguards the appearance and conservation of this building. "⁷



FIG.30

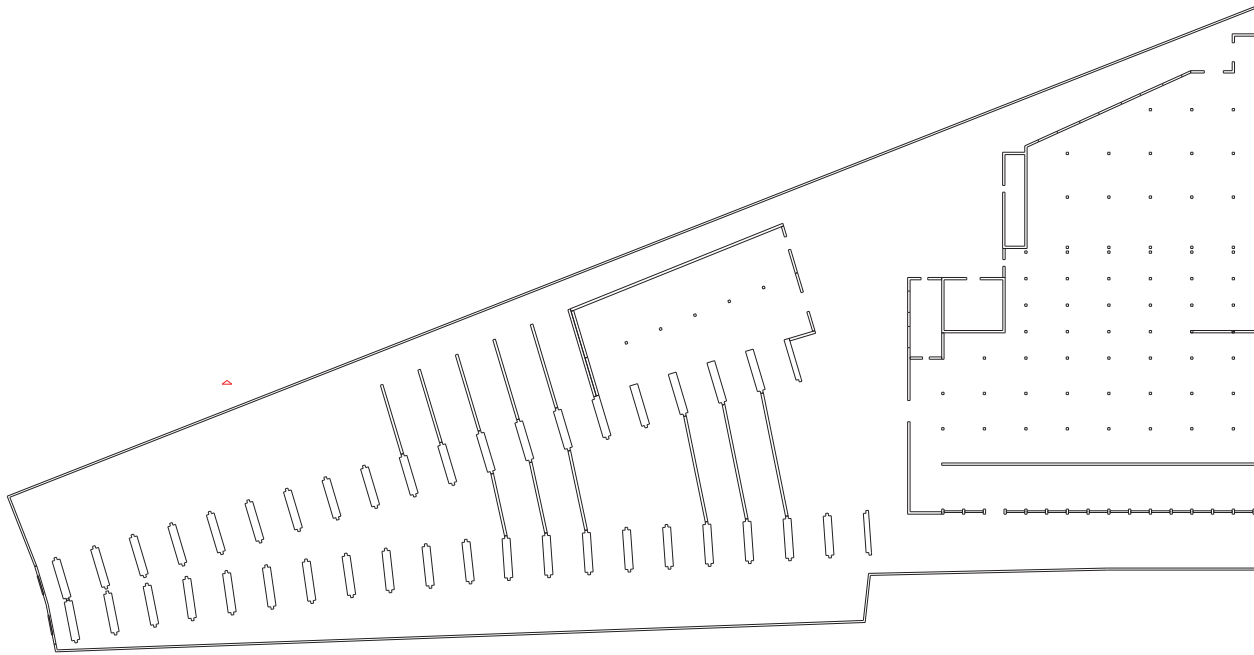
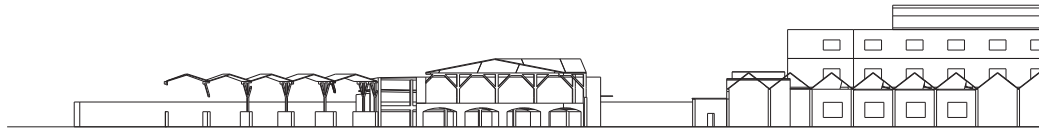
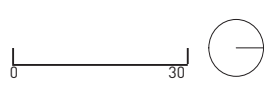
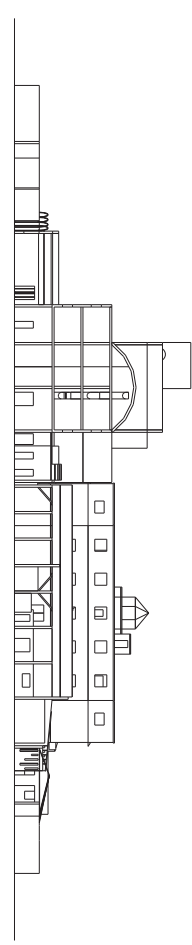
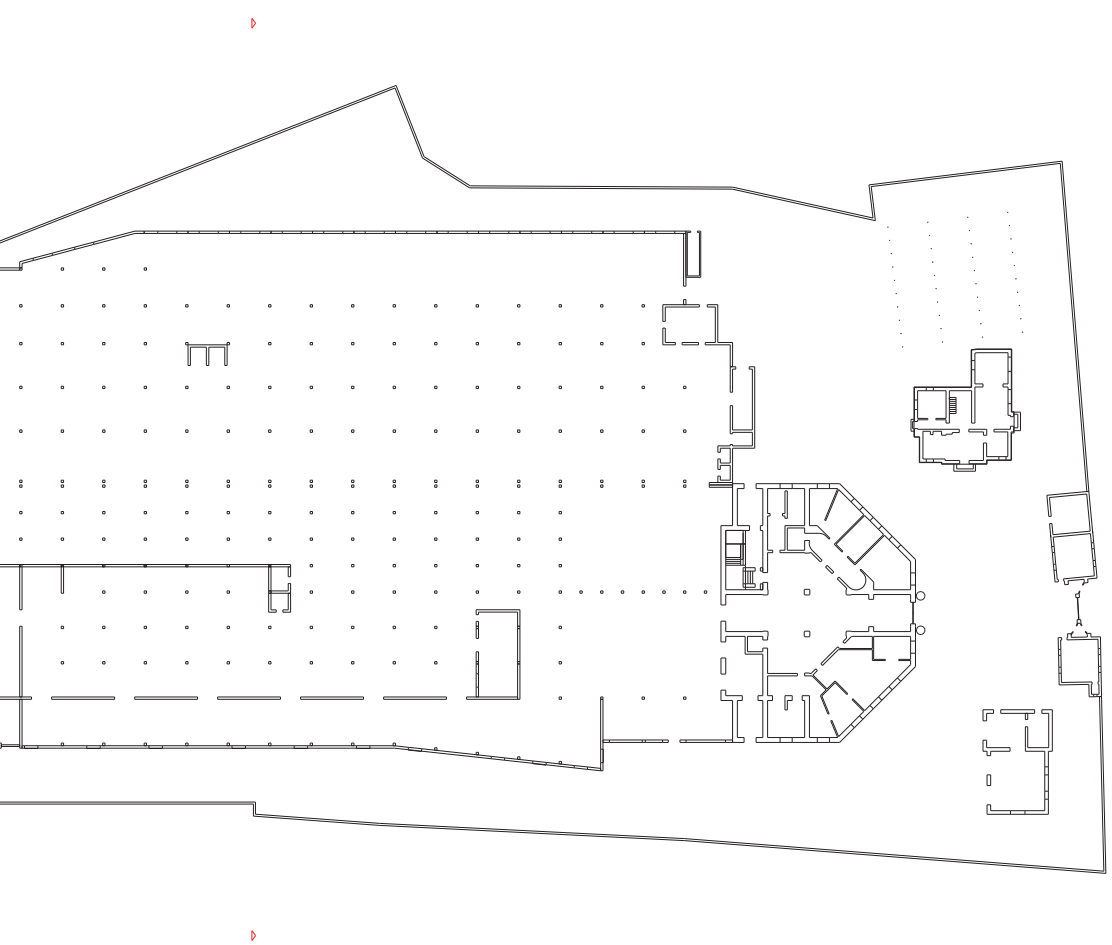


FIG.31



2.7

EDUCATION IN ITALY

PRE SCHOOL EDUCATION

Scuola dell'infanzia/
Nursery School
3 years (age: 3 to 6)

PRIMARY EDUCATION

Scuola Primaria/
Primary School
5 years (age: 6 to 11)

LOWER SECONDARY EDUCATION

Scuola secondaria di primo grado/
First grade secondary school
3 years (age: 11 to 14)



GENERAL INFORMATION

"Regardless of nationality, education in Italy is compulsory from 6 to 16 years of age, and is divided into five stages: kindergarten (scuola dell'infanzia), primary school (scuola primaria or scuola elementare), lower secondary school (scuola secondaria di primo grado or scuola media), upper secondary school (scuola secondaria di secondo grado or scuola superiore).

Asilo (Kindergarten)

From the age of three to the age of six, children are sent to nursery school. This is non-compulsory, but most Italian families do send their kids 'all'asilo'. Children are looked after by two teachers per class, they play, start socialising and learn to recognize letters and numbers.

Scuola Primaria (Primary School)

Also known as 'scuola elementare, primary school lasts five years. The educational curriculum is the same for all students who are given a basic education in Italian, English, mathematics, natural sciences, history, geography, social studies, physical education, visual and musical arts.

There are three main teachers per class, plus an English language teacher who works with children across several classes.

Scuola secondaria (Secondary school)

Secondary education in Italy lasts 8 years and is divided into two phases: Scuola secondaria di primo grado (Lower secondary school), also broadly known as Scuola media, which corresponds to the Middle School grades, and Scuola secondaria di secondo grado (Upper secondary school), also broadly known as Scuola superiore or less formally as Le Superiori, which corresponds to the high-school level.

UPPER SECONDARY EDUCATION

Scuola secondaria di secondo grado/
Second grade secondary school
5 years (age: 14 to 19)

UPPER SECONDARY EDUCATION

Formazione professionale/
Vocational Education
3 or 5 years
(age: 14 or 17 to 19)

HIGHER EDUCATION

Bachelor's degree
Master's degree
PHD

The scuola secondaria di primo grado follows primary school and lasts three years (roughly from age 11 to 14). The scuola secondaria di secondo grado lasts five years (roughly from age 14 to 19). There are three types of scuola secondaria di secondo grado:

Liceo (lyceum) - the education received in a Liceo is mostly theoretical, with a specialization in a field of studies, for example humanities, science, or art; less attention is devoted to technical-practical education. Currently, most of the curricula have a similar structure and some subjects in common (such as Italian literature, history and mathematics), while some subjects are peculiar to a particular type of course (for example ancient Greek in the Liceo Classico, or scenography in the Liceo Artistico).

Istituto tecnico - offering both a theoretical education and a specialization in a particular field of studies (for example economy, humanities, admin-

istration, law, technology, tourism.)

Istituto professionale - this refers to vocational schools preparing people for specific trades, crafts and careers. Some schools offer a diploma after 3 years instead of 5.

Any type of secondary school that lasts 5 years grants access to the final exam, called esame di maturità or esame di stato which takes place every year between June and July and is necessary to be able to apply for admission to any university".⁸

Kid's factory creates a space for children, youth and adults without age limits. Kindergarten, Primary and Lower secondary school are ment for children between 0-14.

AIM



FIG.32

“Let us together create the new building of the future, which will be everything in one form: architecture and sculpture and painting.”

Walter Gropius

3.1

WHAT DO I WANT TO ACHIEVE?

The topic of my master thesis is a competition organised by YAC and Unipol in order to design “the biggest kindergarten in the world”.

I modified the requirements of the competition and adapted them to my interests and points that I want to extend.

Instead of preparing the whole masterplan and concentrating more on the spatial allocation of all the functions, my project will be mostly focused on the building of primary and lower secondary school with the consideration of other functions as well. The areas, volume and the room programme of the schools are my invention and were not given in any description. Based on the research and the amount of school and children in Laveno Mombello I developed the size of the building.

In the competition brief were described the main areas with 3-4 points as a description. (coming in the following chapter)

The aim of my work is to design an educational building for around 450 pupils. Primary and Lower secondary school including all the necessary facilities; classrooms, canteen, sport facilities, playgrounds, library and research area with the optimal connection to the bus and train station. The area is going to be used not just by the pupils but also by children in the summer holiday as well as adults during the whole year. It's going to be a multifunctional and innovative campus with educational purposes for children at all ages.

METHODOLOGY



FIG.33

4.1

FUNCTIONS

CAMPING*

- activities and holidays for children
- at least 200 beds + related functional facilities
- real temple of childhood able to attract groups of young people from all over the world
- summer or spring holidays being sure of finding an innovative architectural
- combines game, nature and manual activities

PLAYGROUND*

- main protagonist of the new facility
- perfect background for their adventures -Indoor or outdoor spaces, covered or uncovered gardens playing with shades, views, routes and connections
- age 0-16
- functional element both for the camping activity and the additional didactic/recreational functions the facility fulfills

SPORT FACILITIES*

- Football fields, basketball and tennis courts, swimming pools, climbing facilities and gyms where to practice several sports (fencing and judo among others) will make this place an appealing attractor
- appealing attractor for children from all over the world

CLASROOMS AND LABS*

- educational and laboratory activities -spaces where to nurture creativity and knowledge
- function of primary and secondary school for Laveno Mombello and the surrounding area
- library

RESEARCH CENTER*

- observatory for all the operators working in the childhood industry
- offices and laboratories where companies and associations dealing with childhood can find their natural workplace.

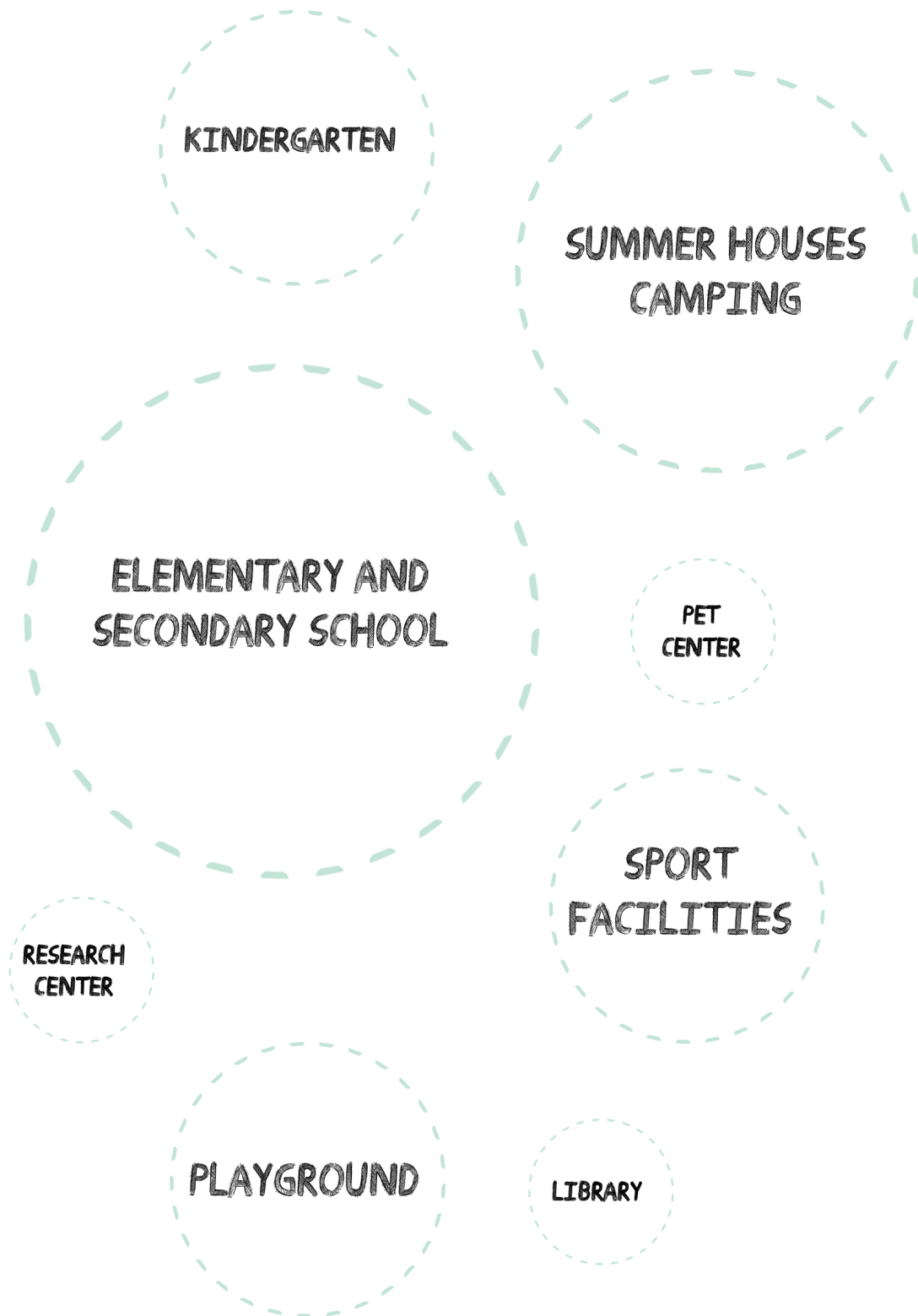
PET CENTER*

- game in all its forms
- interacion with animals
- spaces where to play and interact with these special childhood friends

GROUP OF PEOPLE:*

- children+youth -adults -tourists

*All the functions placed on the site 47 were given in the competition brief.



Functional programme of the competition is extensive and includes functions in four different categories:

1. Educational

- _ Kindergarten
- _ Elementary school
- _ Lower secondary school

2. Sport facilities & playgrounds

- _ Gymnasium
- _ Outdoor sport fields
- _ Outdoor and indoor playgrounds

3. Accommodation

- _ Summer houses & camping area

4. Other

- _ Research center
- _ Pet center

4.1.1

KINDERGARTEN

(it.scuola dell'infanzia)

Type: Kindergarten

Number of years: 6

Age: 3 months-6 years

Kindergarten is going to be located in the historical part of the pottery fabric, that has to remain as it currently looks and is not allowed to be demolished.

“Entrance building; this is a Pietro Portaluppi’s architecture. The building is a remarkable example of the industrial architecture of the 20th century. For this reason, there is a restriction system that safeguards the appearance and conservation of this building.”

The following criteria are to be taken into account:

“_It is not permitted to carry out demolitions affecting the external appearance of the building;

_Subdivisions and internal works aiming at redistributing the spaces (including small demolitions) are admitted;

_New architectures or volumes inside, outside,

adjacent or as raising elements on such architectures are admitted within the limit referred to in point b of this chapter;”^[1]

In the building are going to be placed kindergarten(it. asilo) and nursery school proper(it.scuola materna).

“Asilo nurseries take children from as young as three months. They’re primarily a facility for working parents who are unable to look after their children during the day. Costs vary according to the number of hours children attend and the particular nursery, but they’re generally lower when facilities are run by the local council (comune). Places in such nurseries are consequently in huge demand and priority is usually given to parents who are unemployed or with a low income (applicants must complete a form at the town hall stating their family income).

Materna schools are also both state and privately run (communal, religious and private establishments account for over 40 per cent of materna schools) and take children from the ages of three to six, before entry to primary school. Attendance at state nurseries is free, although a contribution is requested from families for transport and meals provided by the local council.”⁹

The building is going to be renovated and small changes inside are going to be carried out. In the building place for children between 0-6 will be designed. The capacity will be for around 80 children. In the ground floor are going to be located common rooms like a canteen, multi purpose room and the group for asilo, on the first floor will be located rooms for four groups, in each group ca. 20 children. In each unit there is designed a classroom, toilet, sittle kitchen and sleeping area. On the last floor of the building indoor playground is going to be placed. Common areas for all the children from the building are going to be accessed through the staircase and the elevator.



FIG.34

4.1.2

PRIMARY SCHOOL

Type: Primary school/Scuola Primaria

Number of years: 5

Age: 6-11_compulsory

Amount of pupils: 10 classes(2x5) x24=240

Scuola primaria (primary school), also known as scuola elementare, is commonly preceded by three years of non-compulsory nursery school (or kindergarten, "asilo"). Scuola elementare lasts five years. Until middle school, the educational curriculum is the same for all pupils: although one can attend a private or state-funded school, the subjects studied are the same (with the exception of special schools for the blind or the hearing-impaired).

The students are given a basic education in Italian, English, mathematics, natural sciences, history, geography, social studies, and physical education. Some schools also have Spanish or French, musical arts and visual arts. Scuola primaria (primary school), also known as scuola elementare, is commonly preceded by three years of non-compulsory nursery school (or kindergarten, "asilo").

4.1.3

LOWER SECONDARY SCHOOL

Type: Lower Secondary school I/Scuola Secondaria di primo grado

Number of years: 3

Age: 11-14_compulsory

Amount of pupils: 9 classes(3x3) x24=216

The Scuola secondaria di primo grado (lower secondary school, previously scuola media, middle school, by which it is still called) it is mandatory, lasts three years (roughly from age 11 to 14) and is the first stage in which different specialized professors teach different subjects. It provides further education on the subjects studied at the scuola primaria, with the addition of technology and a language other than English (typically French or Spanish).

It has a common programme for all pupils, and covers all the classical subjects (Italian language and literature, history, geography, mathematics, natural sciences, English language, a second foreign Language, technology, arts, music, and physical education).

At the end of the third year, students take an examination which enables them to continue their education.

4.2

INTERNATION EXAMPLES



FIG.35

DE: Gemeinschaftsschule in Konstanz

EN(translated): Gemeinschaftsschule in Konstanz

Architects: Broghammer Jana Wohlleber

_three floors with glass facades

_vertical wooden slats

_atrium with the sitting steps

_through the skylight falls the light into the school

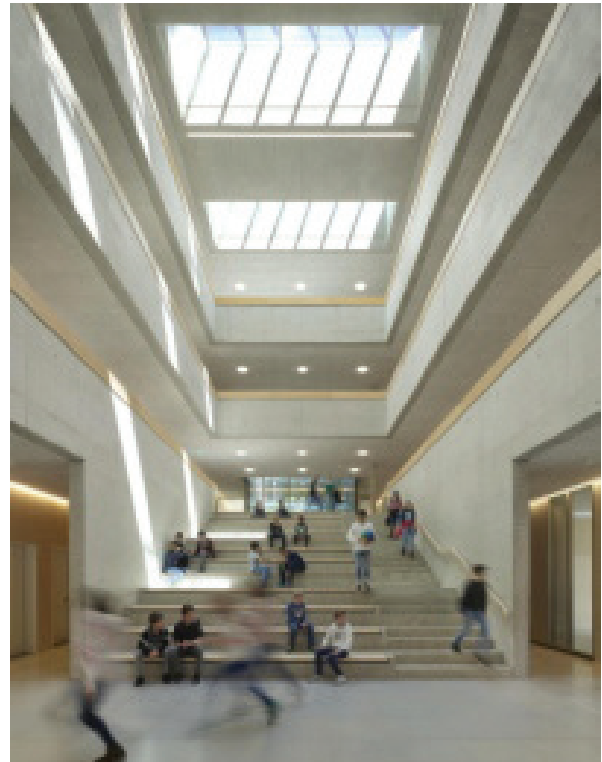


FIG.36



FIG.37

FR: Ecole Ary Payet

EN(translated):School Ary Payet

Architects: 2APMR

Location: LA REUNION, FRANCE

_ colorful irregular facade

_ playground in the groundfloor under the building

_ axis grid



FIG.38

INTERNATION EXAMPLES



FIG.39

EN:Playful Kukumuku Restaurant

Architects: Plazma Architecture

Location: Vilnius

_Light, warmth, colours and the positive overall atmosphere

_furnitures, materials

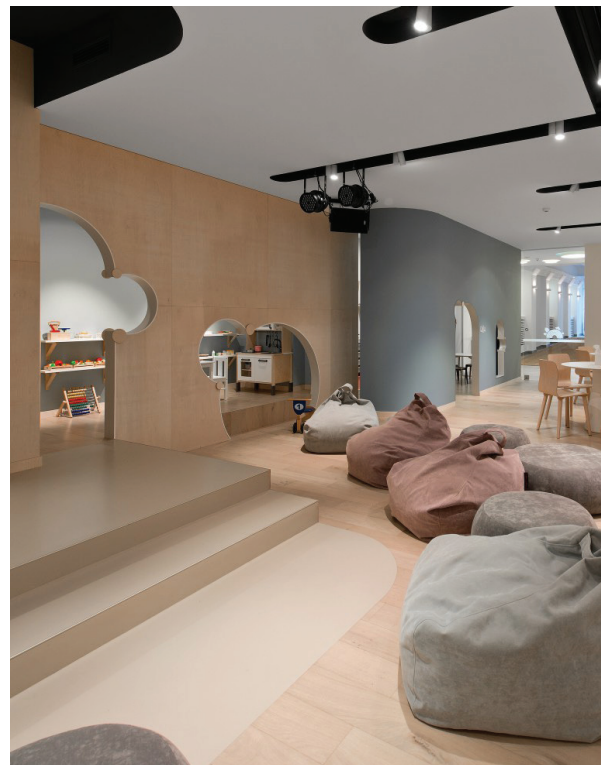


FIG.40

4.3

OUTDOOR LEARNING

One of the main points of my design are big terraces where children during the days have opportunity to have classes instead of inside the building, outside. Thank to the big glass folding doors the space between inside and outside creates multi-functional area with 120m² where groups of pupils can enjoy learning while being on the fresh air.

"Research suggests that there are many benefits from learning in the outdoors, including improved creativity and reduced stress. And a 1998 study concluded that when learning is hands-on and made relevant to students' surrounding environment, they are more engaged in the curriculum and perform better on academic tests.

According to leading education architects, some outdoor learning environments are simply spaces that facilitate learning—a group of benches, an amphitheater, or a partially covered workspace with amenities like Wi-Fi and supplies. Like classrooms, these outdoor spaces are designated for instruction, presentations, or independent and group work, but they provide a fresh perspective for students who spend most of the school days indoors."¹⁰

" Do you have memories from your school days of all the students going outside to look at trees or maybe examining different kinds of flora and fauna? Or were there times that you went outside because it was nearing the end of the school year and the teachers and students were restless or had cabin fever? If so, these rare trips outdoors

probably provided an interesting change of pace.

Although most public school children do get to go on a field trip away from school once or twice a year, it often isn't the norm for students to enjoy nature as a part of their school day. Unfortunately, students who don't have the opportunity to learn outdoors may be missing out on opportunities to excel both academically and socially.



FIG.41

Benefits of Outdoor Learning

Experts say that outdoor learning is quite beneficial to students because it makes them healthier and happier, and they do better academically. The various benefits include:



FIG.42

EN(translated):Annie Purl Elementary school

Architects: Corgan

Location: Georgetown, Texas

_ outdoor classrooms

_ playground in the groundfloor under the building

_ axis grid



FIG.43

EN:KM kindergarten

Architects: HIBINOSEKKEI + Youji no Shiro

Location: Osaka

_ Communal areas inside the school are expansive and open, with accordion-like walls that allow teachers to create indoor/outdoor spaces during pleasant weather, giving kids the opportunity to experience fresh air and sunshine during meals and class sessions

_ KM Kindergarten features indoor/outdoor areas with movable walls.



FIG.44

Students who get to experience an outdoor learning environment tend to be more attentive and, therefore, have a better recollection of the information that was shared.

Consistent exposure to nature decreases stress and anxiety, helps elevate mood, and helps with emotion.

Children often have too much exposure to digital screens via televisions, computers, and cell phones. This can result in a “nature deficit disorder,” which may lead to obesity and possible psychological and academic issues. Outdoor learning allows students to put their focus back on nature.

Outdoor environments naturally inspire children to be more physically active.

Exposure to bright sunlight found in nature is also healthy for vision. Bright sunlight is necessary for the eyes to develop properly, lowering the risk of nearsightedness.

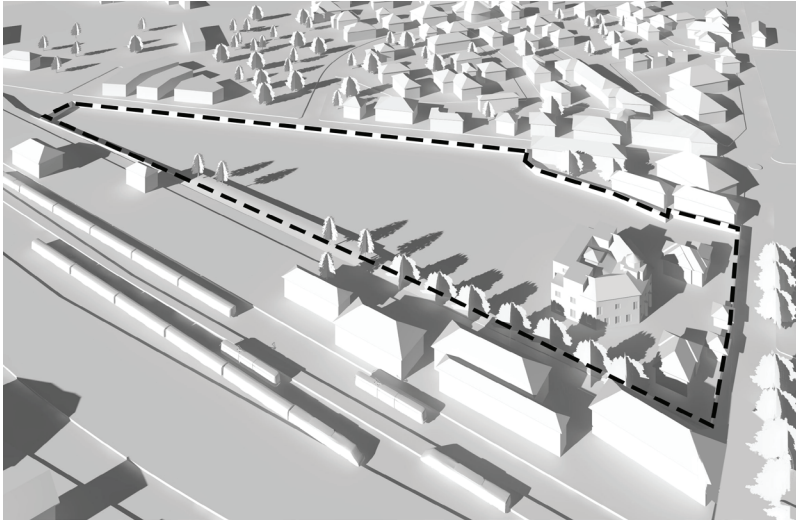
In outdoor settings, children are more motivated to work together in groups, which can improve their social skills. They learn to manage conflicts, communicate, and cooperate with their peers in a more effective manner.

Outdoor learning provides children with hands-on experiences in nature. Most children learn better by using their senses. Outdoor environments provide the perfect place to do this. Instead of viewing different types of plants or wildlife on a com-

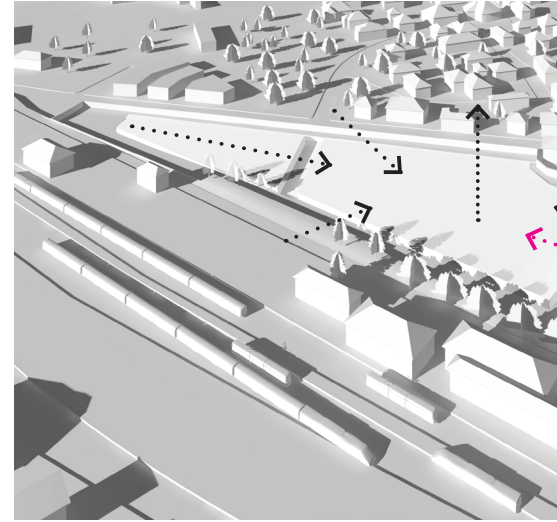
puter or TV screen, they can see, smell, hear and touch them in nature. Students can even start a garden and grow fruits and vegetables, which may have them wanting to sample their harvest. These hands-on experiences cultivate a love of nature and get them interested in our natural resources.

Considering all these benefits, outdoor learning may be something all schools should try to incorporate. If you’d like to see more outdoor learning opportunities for your child, consider speaking to the school leaders about incorporating nature into the lessons. Or talk with other parents of school-aged children about the benefits of outdoor learning and discuss ways to implement outdoor learning in your community.

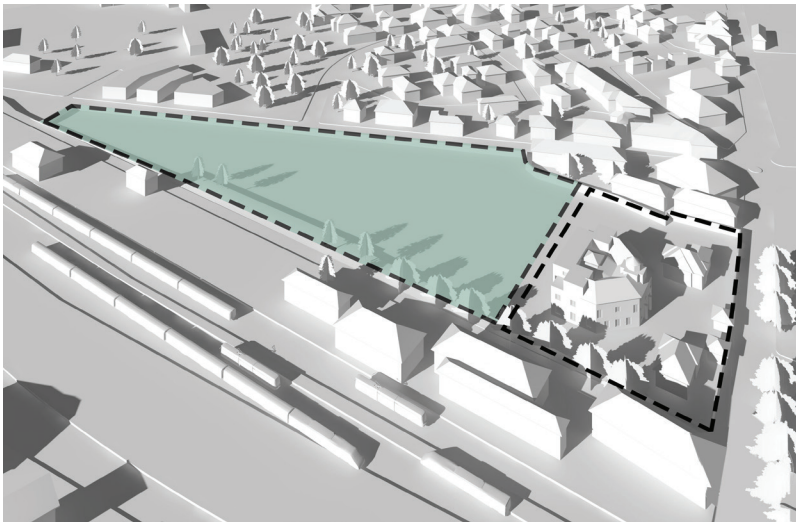
One of the benefits of online learning is the flexibility it allows parents in the learning day. Online students can take advantage of learning outdoors whenever it makes sense and their learning coaches can easily incorporate nature into the lesson plans.”



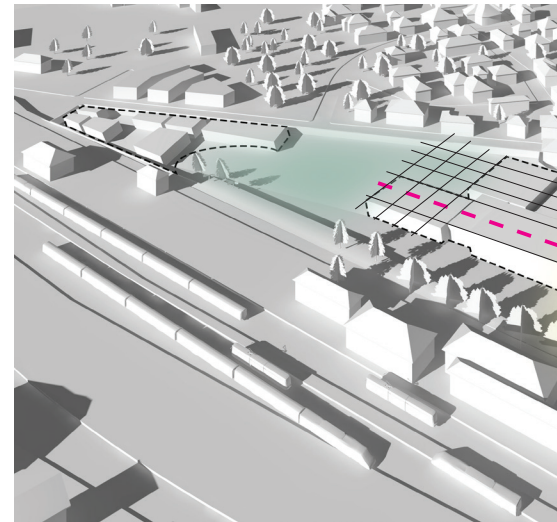
STEP 1



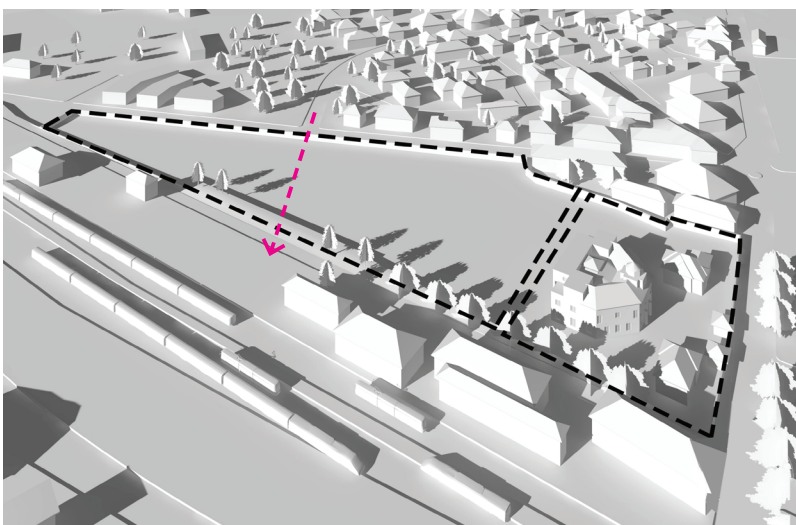
STEP 4



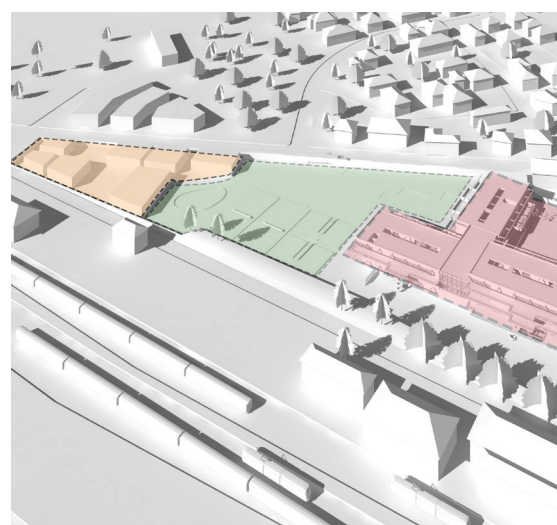
STEP 2



STEP 5



STEP 3



STEP 6

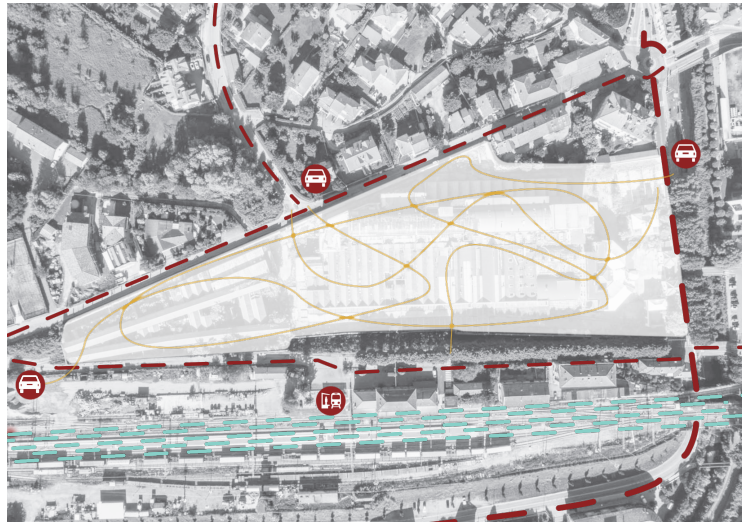
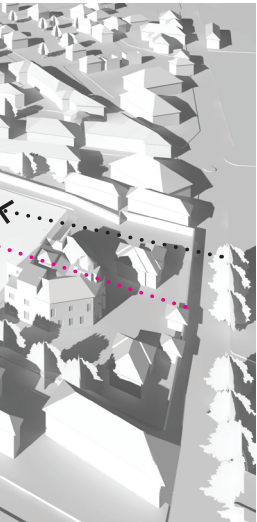
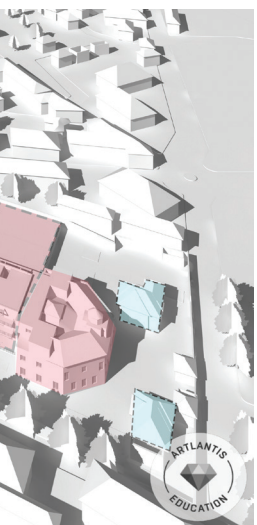
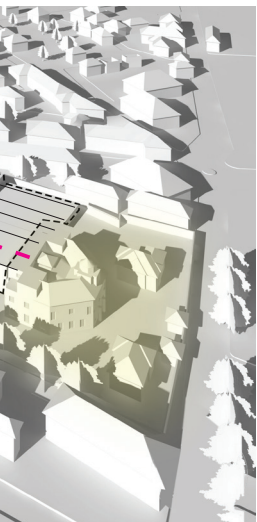


FIG.45



4.4

MASTERPLAN DEVELOPMENT

STEP 1_PLOT

Intervention area with already demolished factory building. 27000m² of a designing area including buildings that have to stay on the site.

STEP 2_EXISTING/NEU

Site divided into two parts. Buildings located on the right side of the small area can not be changed from outside. Small inner changes are allowed. Green area on the right shows maximal designing zone.

STEP 3_SURROUNDMENT

Surroundment has a big impact of the location of the different functions. Road marked with the pink arrow determines a division of the plot where on the right side will be placed school facilities and on the left accommodation for children during the summer. It is important to allocate buildings in context of the surrounding facilities.

STEP 4_ACCESS

Entrances to the project area are going to be located from all the sides of the plot.

_Path 1: Kindergarden

_Path 2: Train station

_Path 3: Summer houses

_Path 4: Schools

STEP 5_CONNECTION

Pink line shows the connection between existing building and the new designed schools. Two buildings are going to be connected and are relocated on the same axis.

STEP 6_FUNCTIONS

All the functions allocated in the plot.

Orange_Accommodation, summer housing

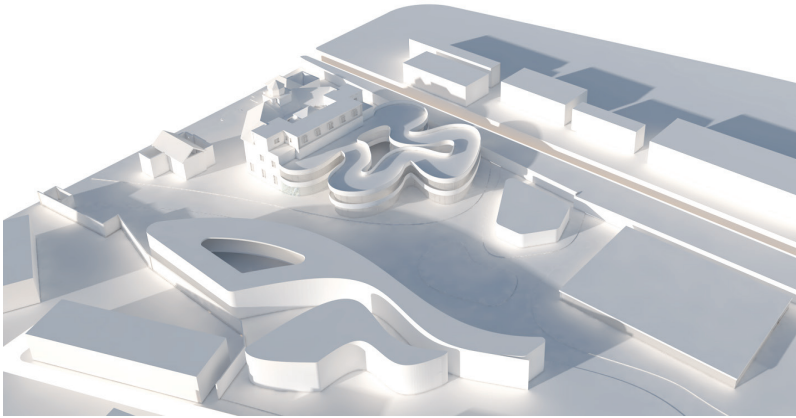
Green_Outdoor playground, outdoor sport facilities, outdoor classrooms (located in the nature)

Pink_Elementary and Secondary School, Kindergarden, Library, Research Center

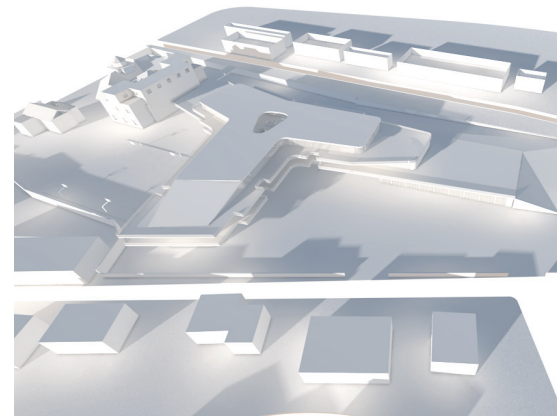
Blue_Pet Pavillions, Workshop area

STEP 7_TRANSPORT

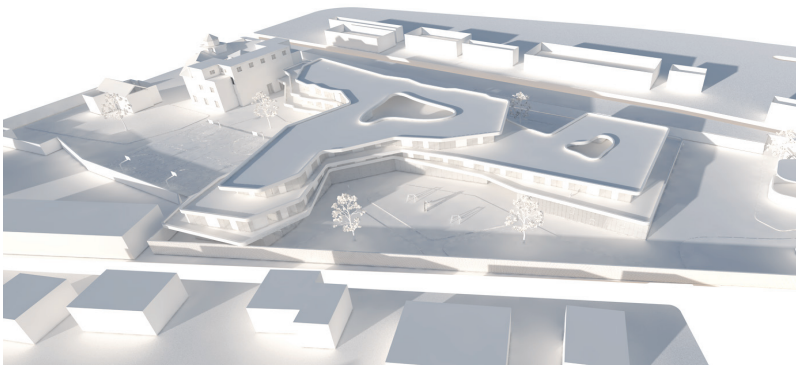
Bus stops and the train station allow children from neighbour village easily arrive to the new campus.



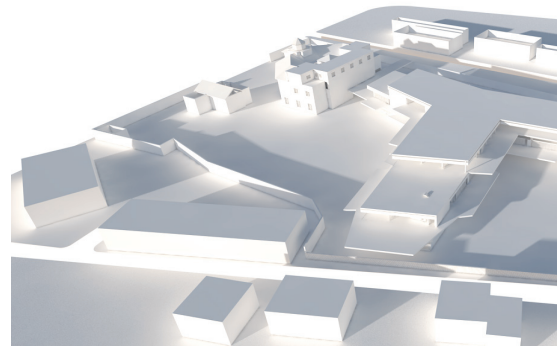
STEP 1



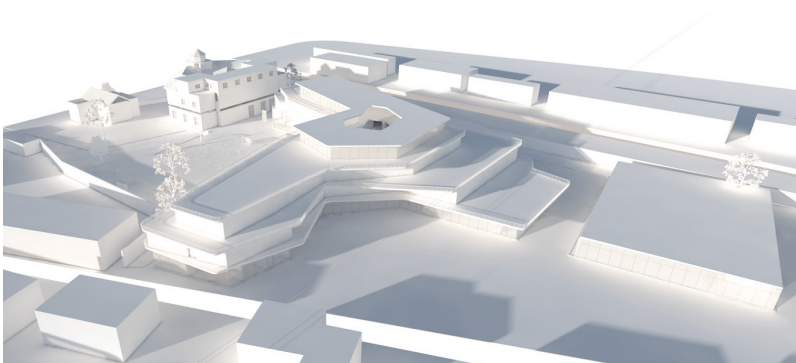
STEP 4



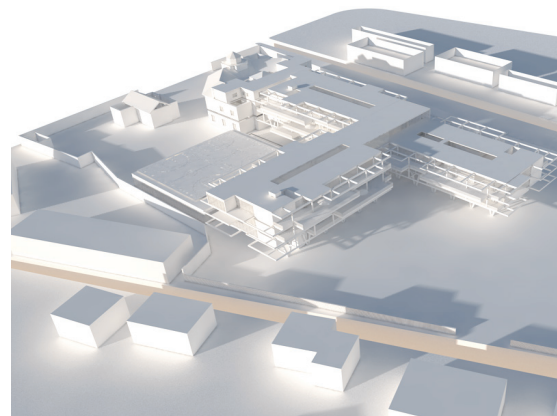
STEP 2



STEP 5

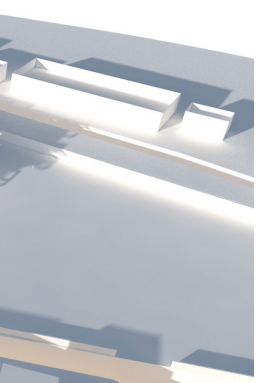
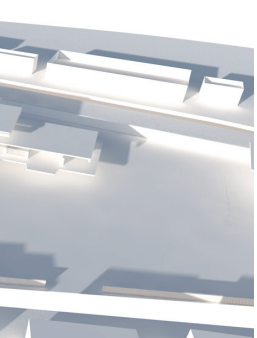
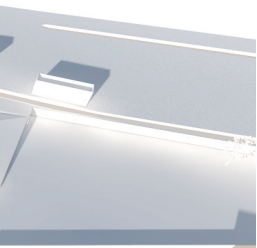


STEP 3



STEP 6

FIG.46



4.69

BUILDING DEVELOPMENT

STEP 1_October

Separate school buildings, gymnasium separate, classes located around the atrium. Too small for the spatial program.

STEP 2_October

Development of the shape with 3 wings. Wavy floor plan. Atrium in the middle. Size is fitting to the program. Difficult access to the Gymnasium.

STEP 3_November

Simplification of the floor plans, not so many breaking edges. Building is getting higher. Central part of the building stays as before. Gymnasium separated.

STEP 4_December

Floor plans start to have parallel walls. Trapezoid forms of rooms are going to be changed into the rectangular shapes. First idea of the terraces. Still no connection to the existing building

STEP 5_January

Different types of terraces surround the whole building. Long wings need a separation in the middle because of the size of the building. Gymnasium will be moved to the other side of the plot.

STEP 6_February

Construction matrix defines the structural support for the terraces. Additional building with separate construction stays in the middle. Floor plans with classrooms have rectangular shapes. Adding more light due to the openings in the roof and big glass facades.

Gymnasium integrated as a part of the building at the back part. Connection to the existing building by corridor and total height.

STEP 7_March

Simplification of the outer part of the construction. Reduced amount and sizes of the terraces due to lightning problem. On the gymnasium are added additional sport fields.

In front of the school are located green areas, tennis, volleyball fields and playground.

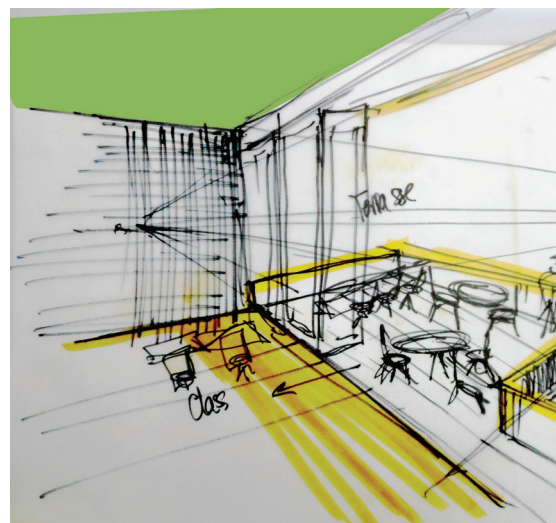
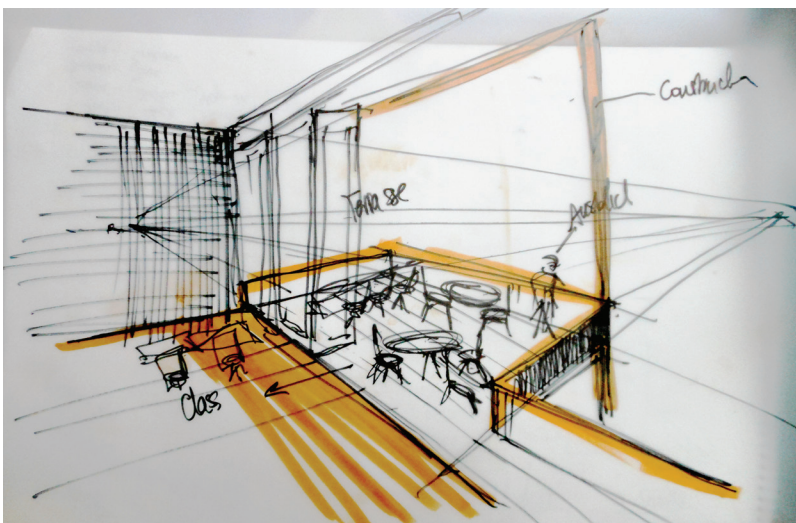
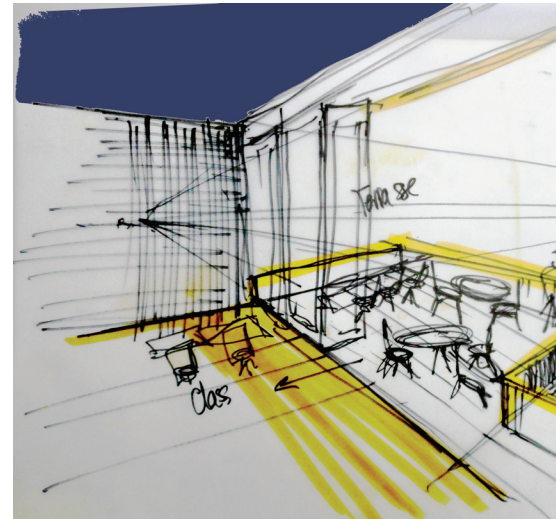
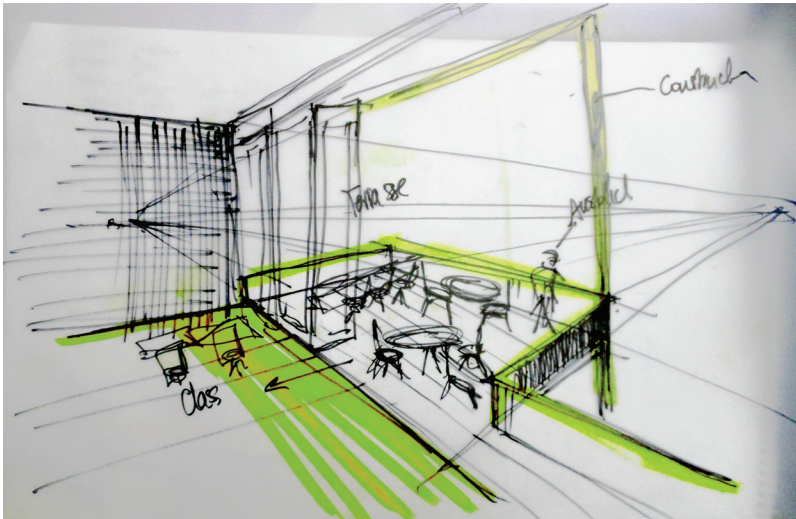
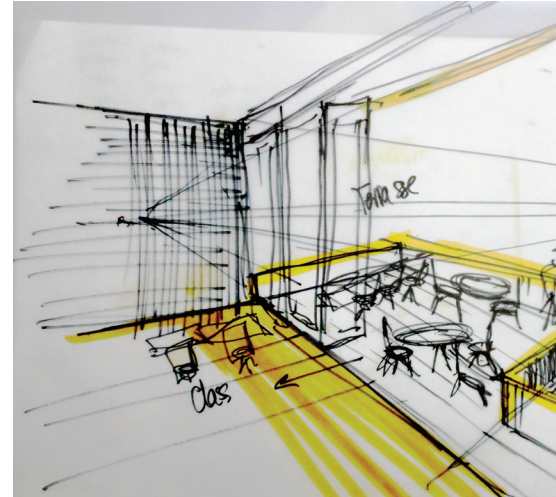
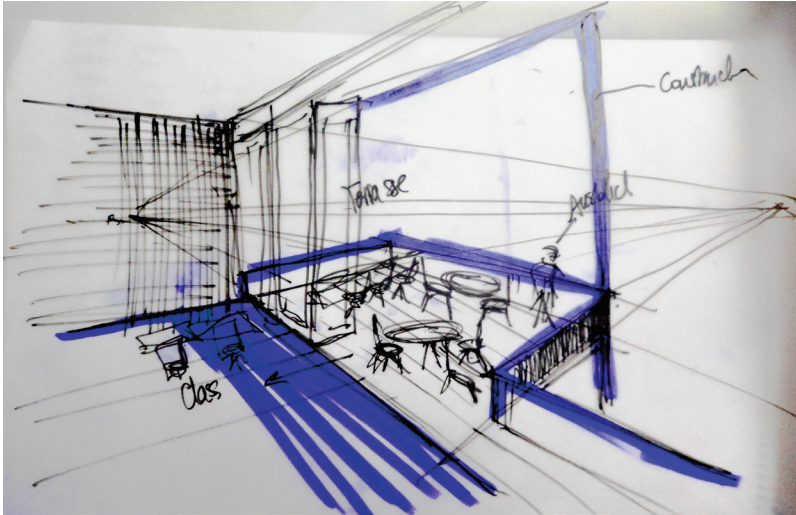
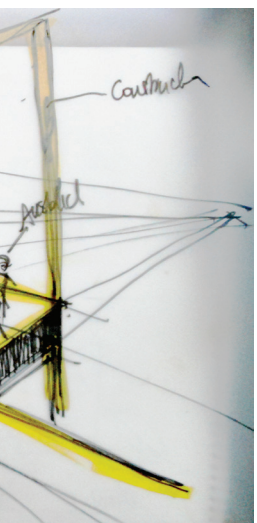
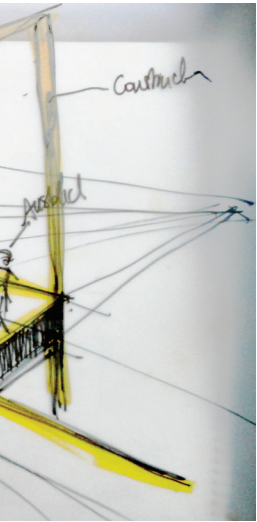
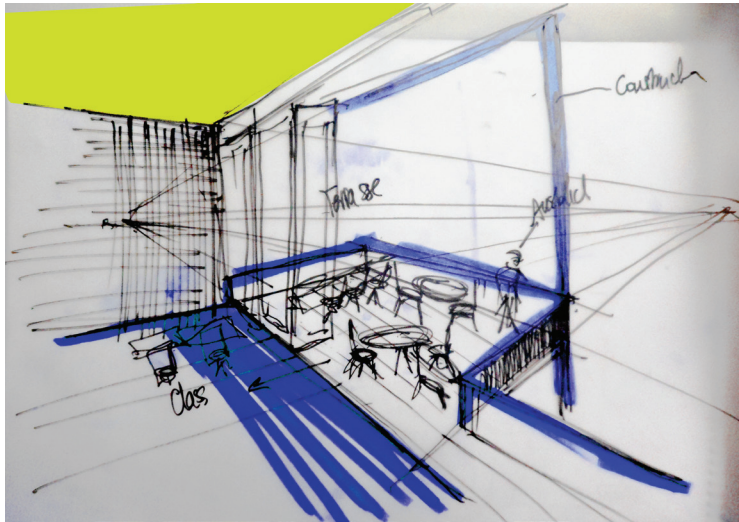
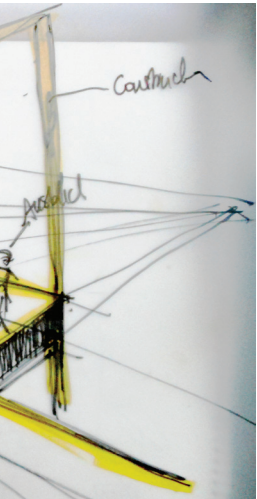


FIG.47



4.6

COLORS

Following sketches show a study of the colors concept for the school. Different accents in the whole building are marked with plain surfaces with strong tones. A way how to connect fitting colors of the ceilings and balustrade at the balconies by several tries brought me to the result of the combination of dark ceilings in the classrooms and white acoustic baffles or darker baffles and white ceiling.

Inside the classroom several accents and parts of the furniture are shown with the colors like yellow, green, mint or orange.

The balconies in the area where the classrooms are, are designed to be out of milk glass with a 30cm colorful stripe on the top. The color for this design will be yellow which corresponds well with wooden outer construction and white facade.

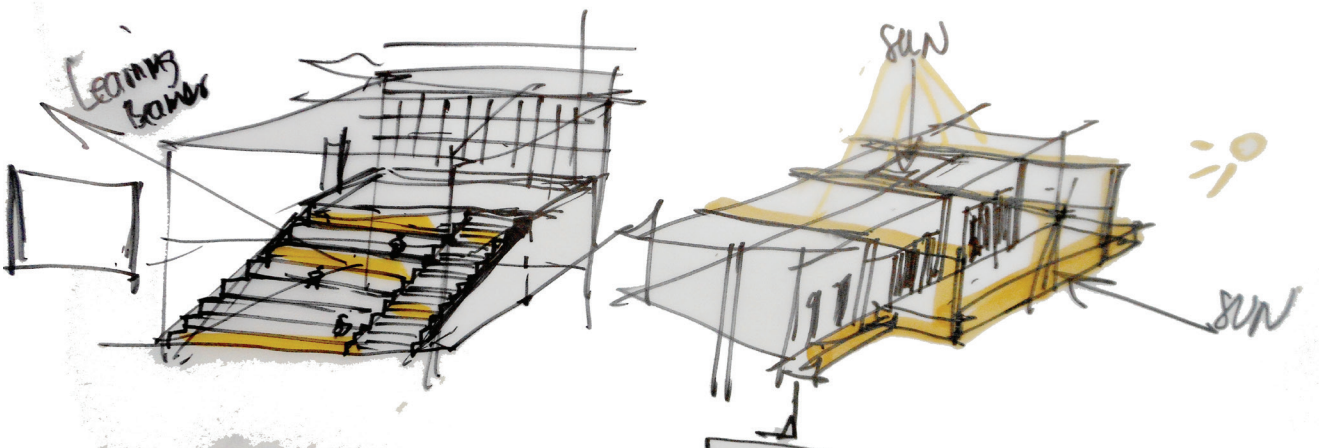
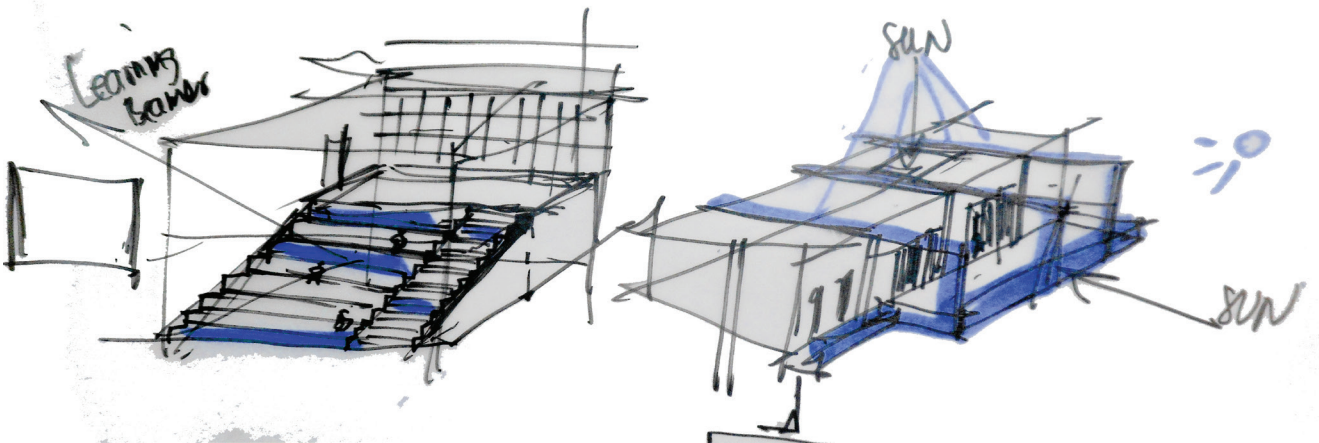
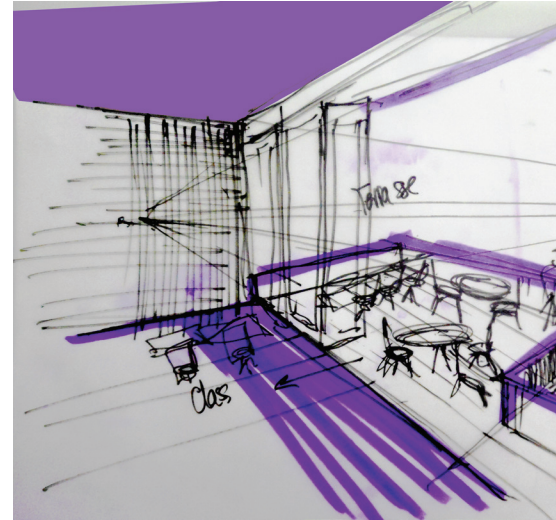
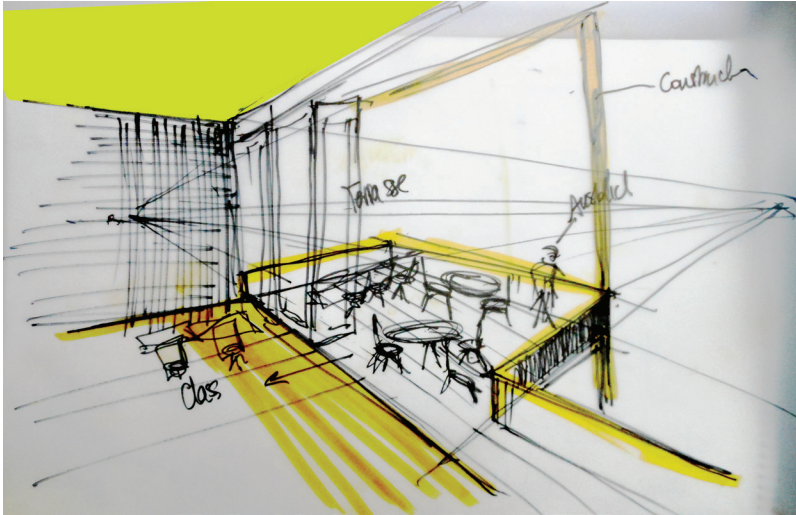
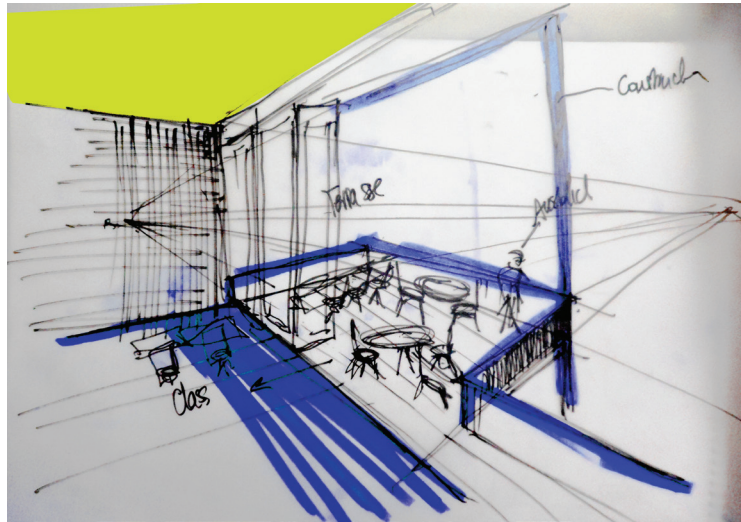
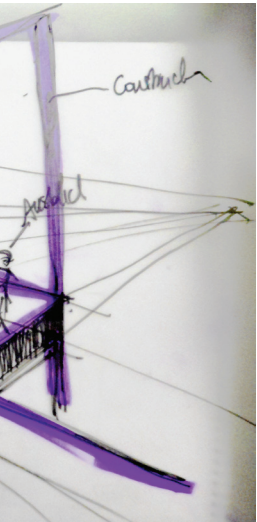


FIG.48



Learning stairs in the middle of the building next to the main entrance made out of wood and concrete will be equipped with sitting pillows. The balustrade and the pillows in orange, blue and yellow color will make the white big area eye-friendly.

Idea of the building, classes as well as corridors, is to be well exposed with light. Therefore big opening windows along all the rooms, windows in the ceilings along the corridor and glass elements above the corridor walls at 210cm are designed. Glass facades in the connecting building bring the light from all the sides to this area.

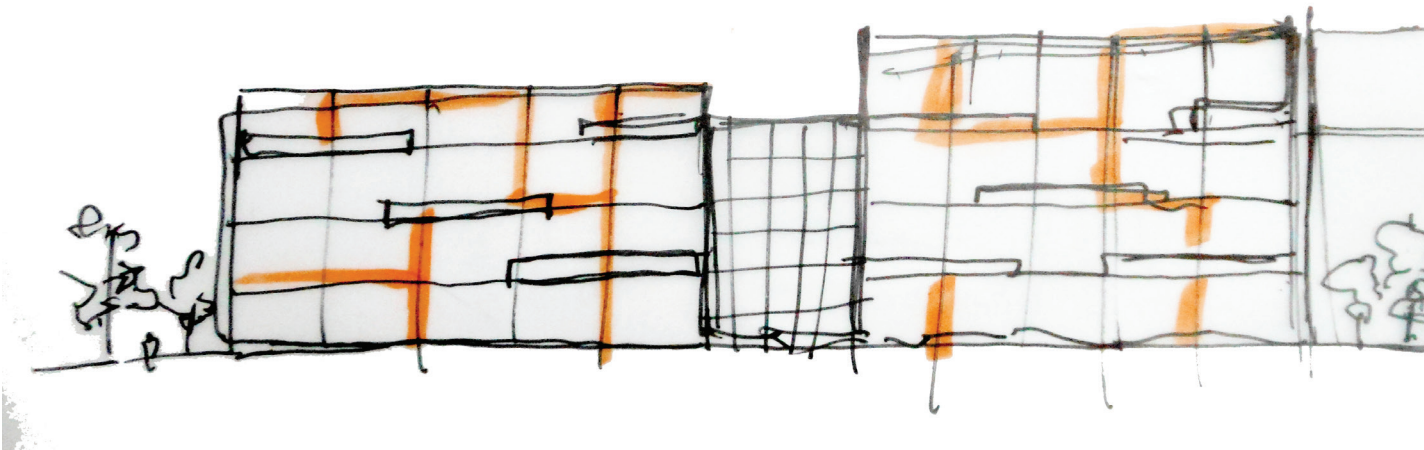
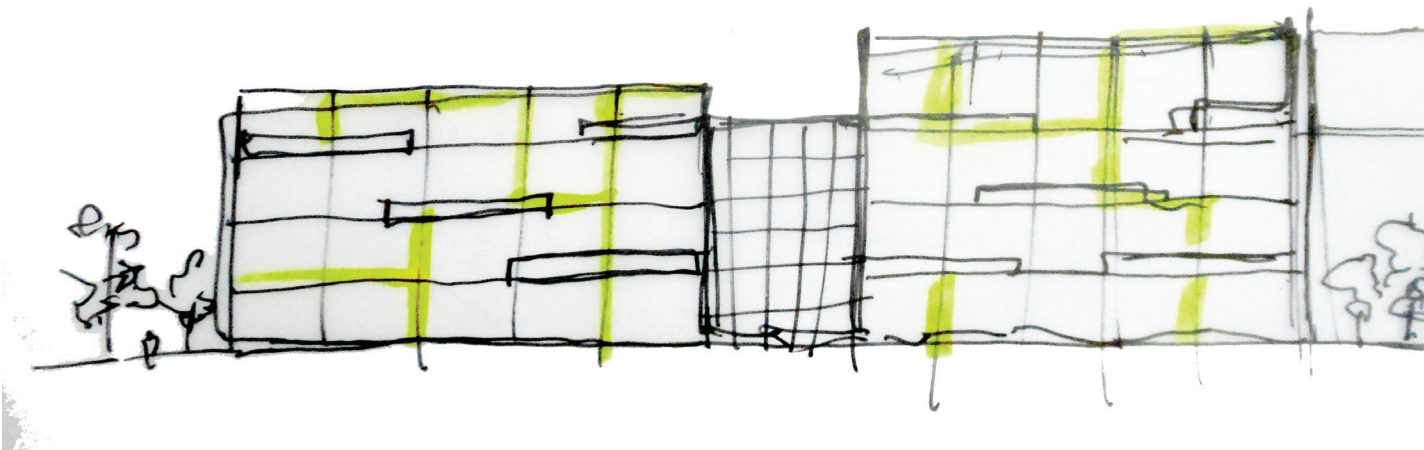
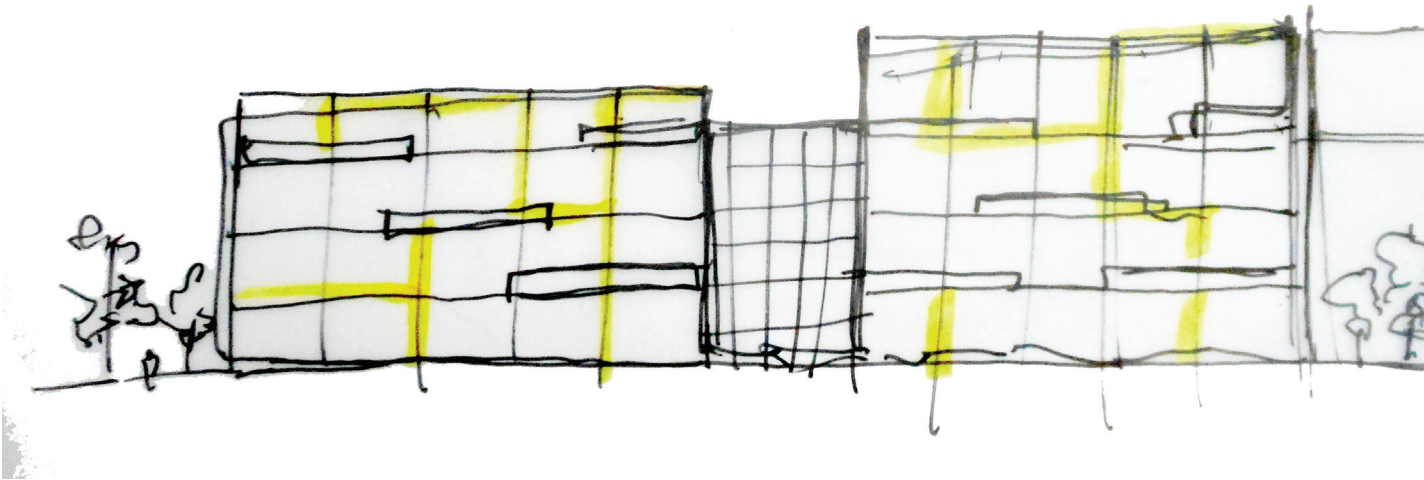
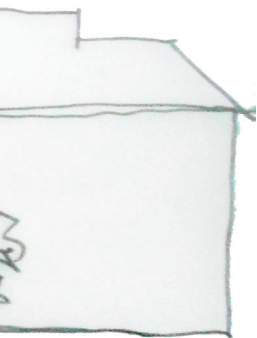
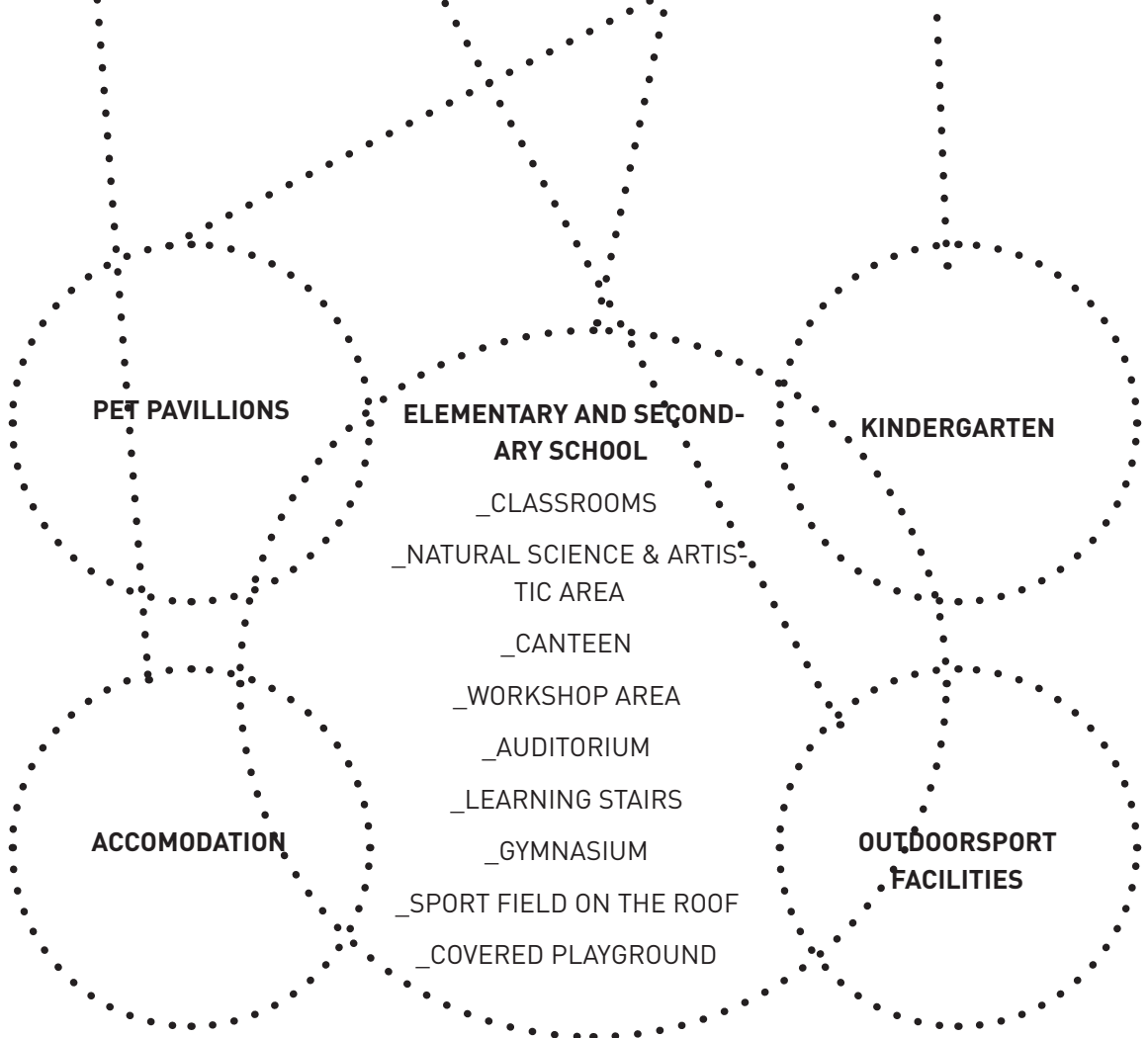
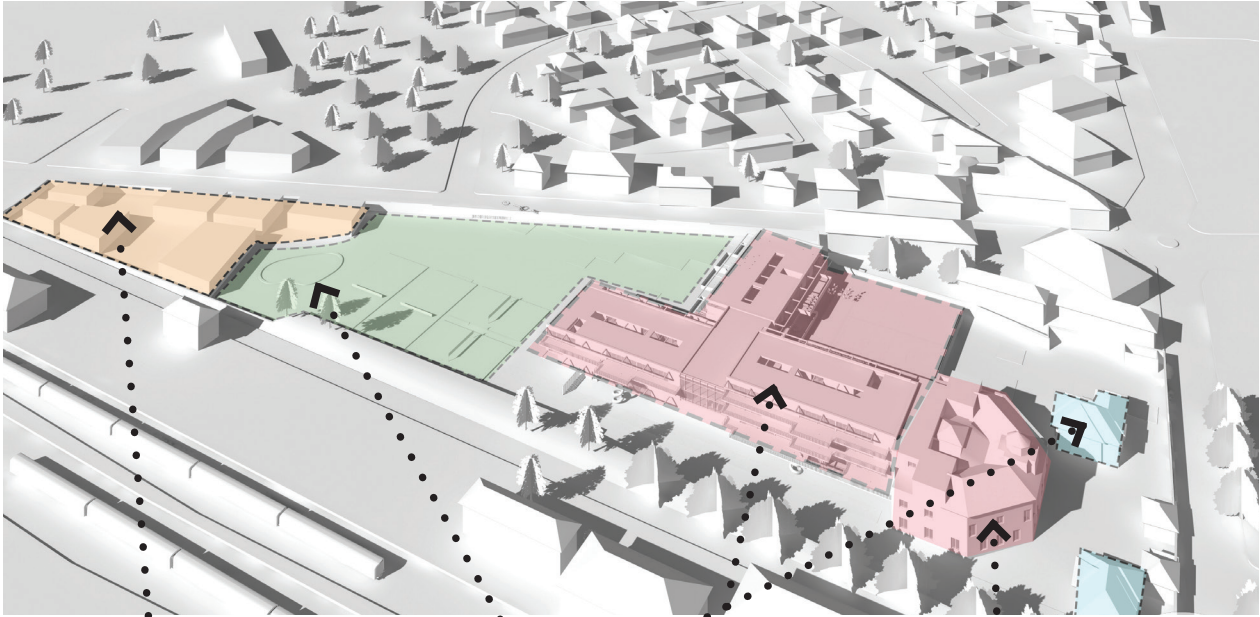


FIG.49



The idea of painting the facade pillars in different colours due to the colorful balustrades, panels in the glass facades and wood construction are going to stay natural in the bright tone of timber.



CHILDREN & YOUTH

ADULTS

TOURISTS

FIG.50

4.7

FUNCTIONS IN DIAGRAMS

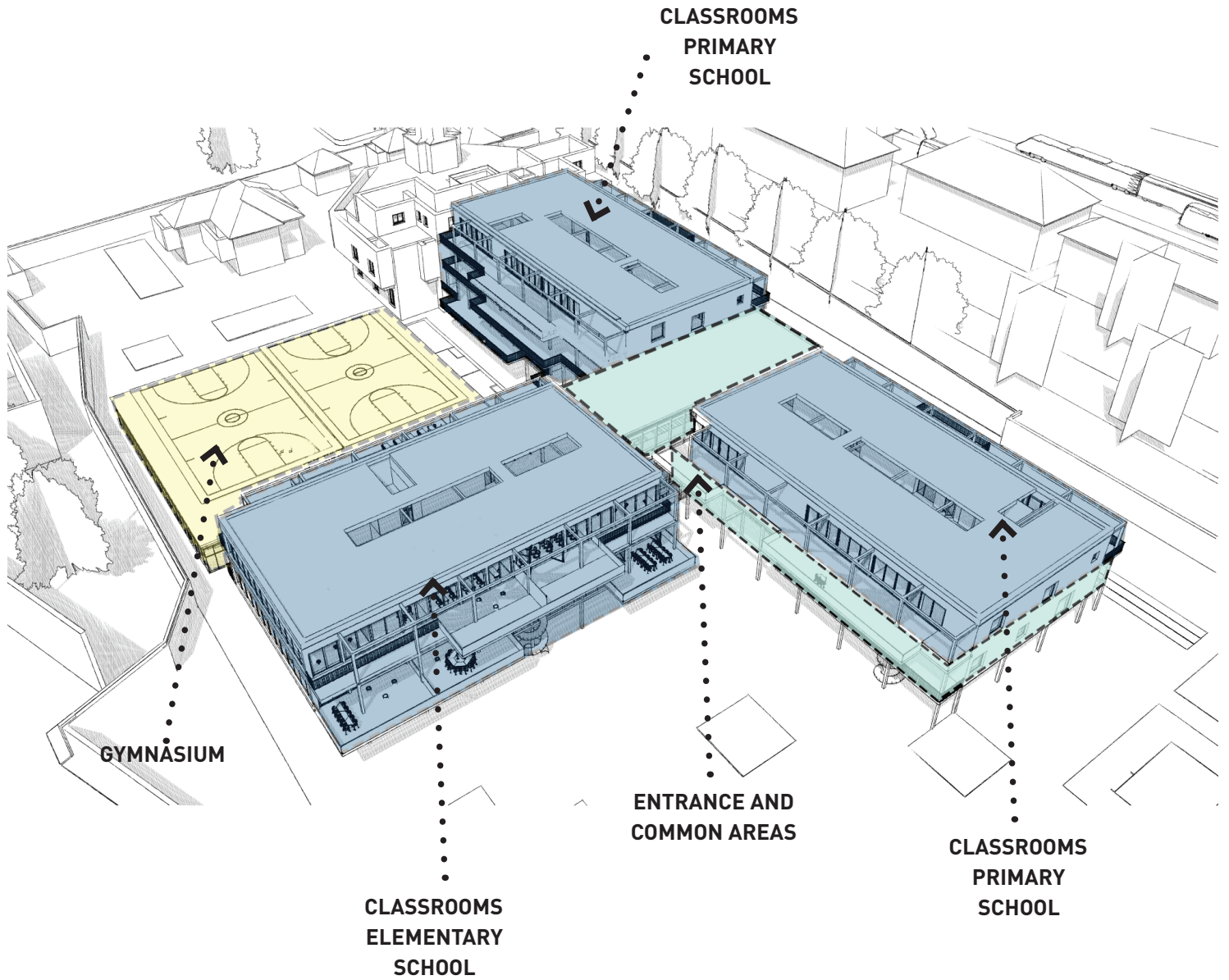
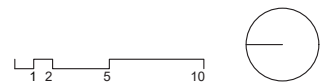
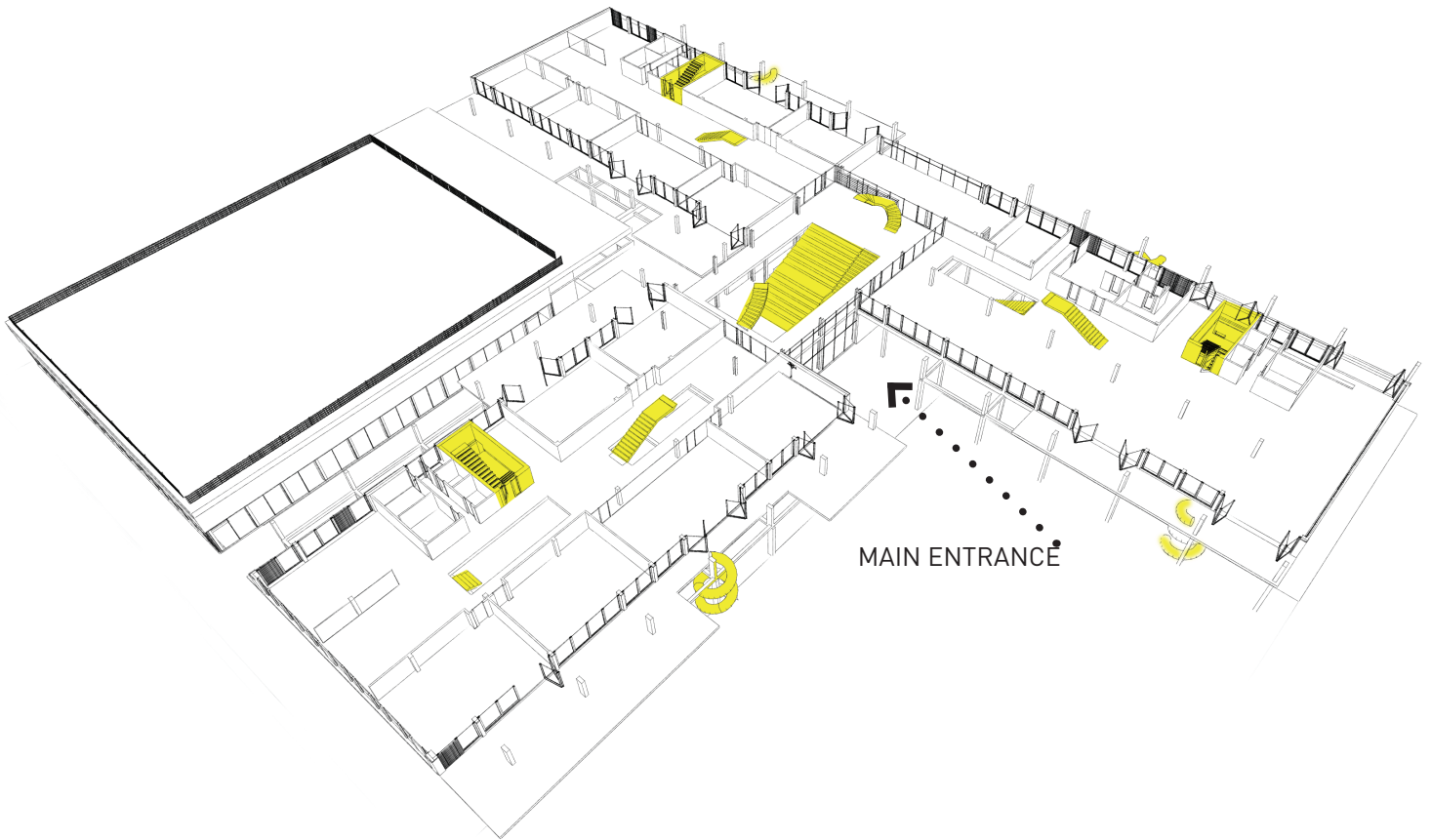


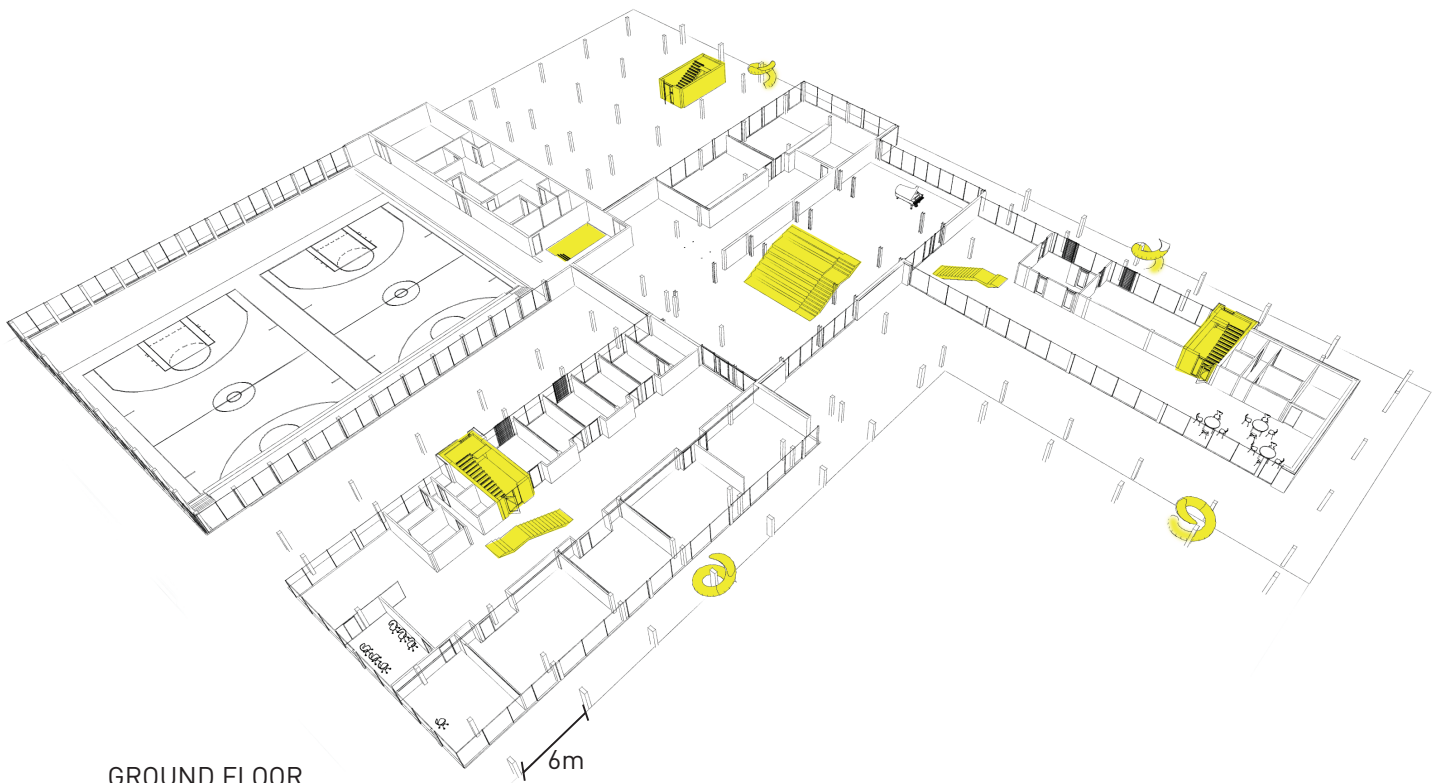
FIG.51



VERTICAL CIRCULATION

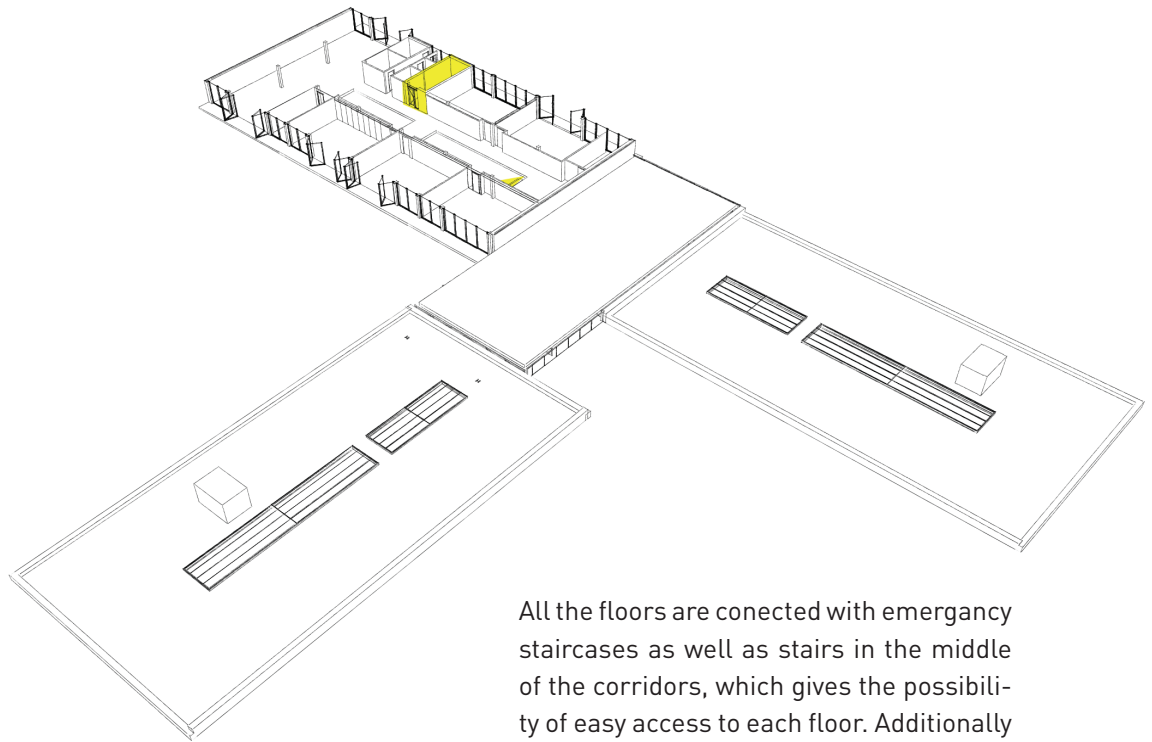


FIRST FLOOR



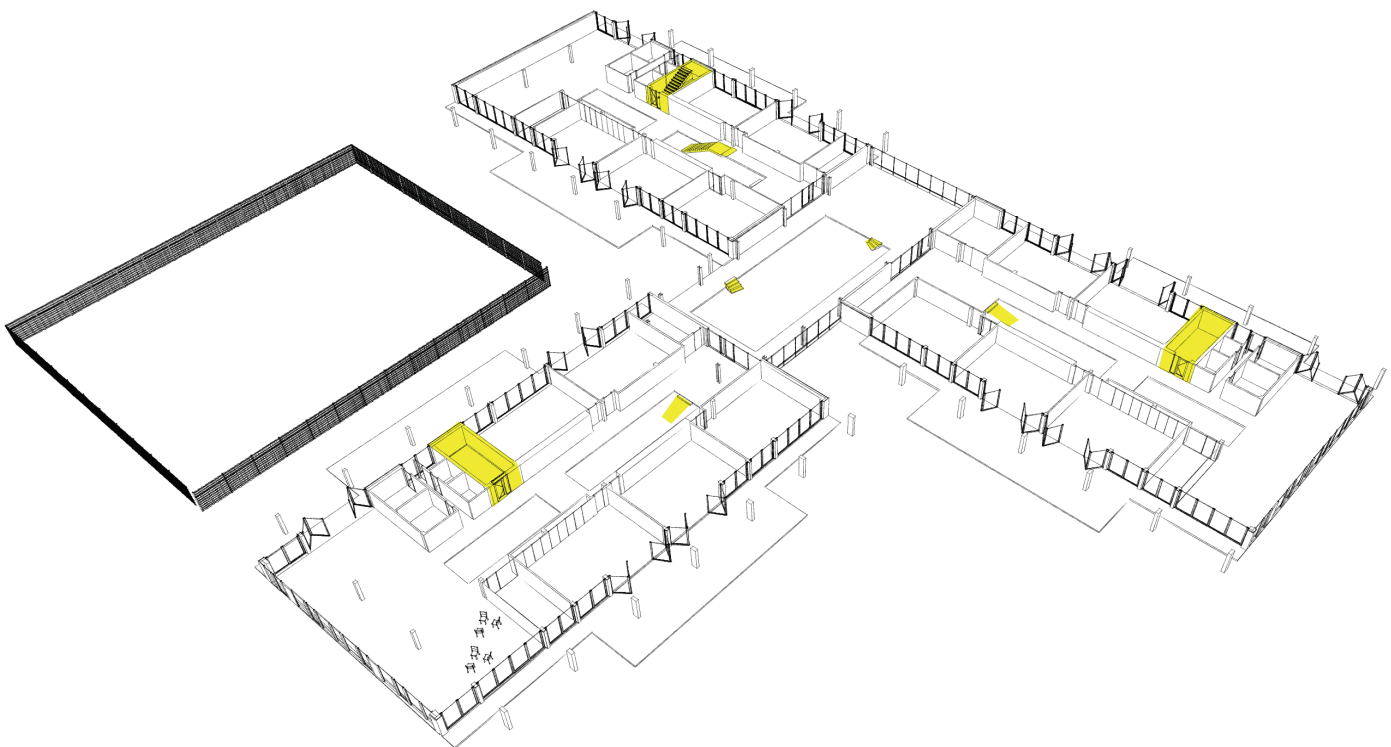
GROUND FLOOR

FIG.52



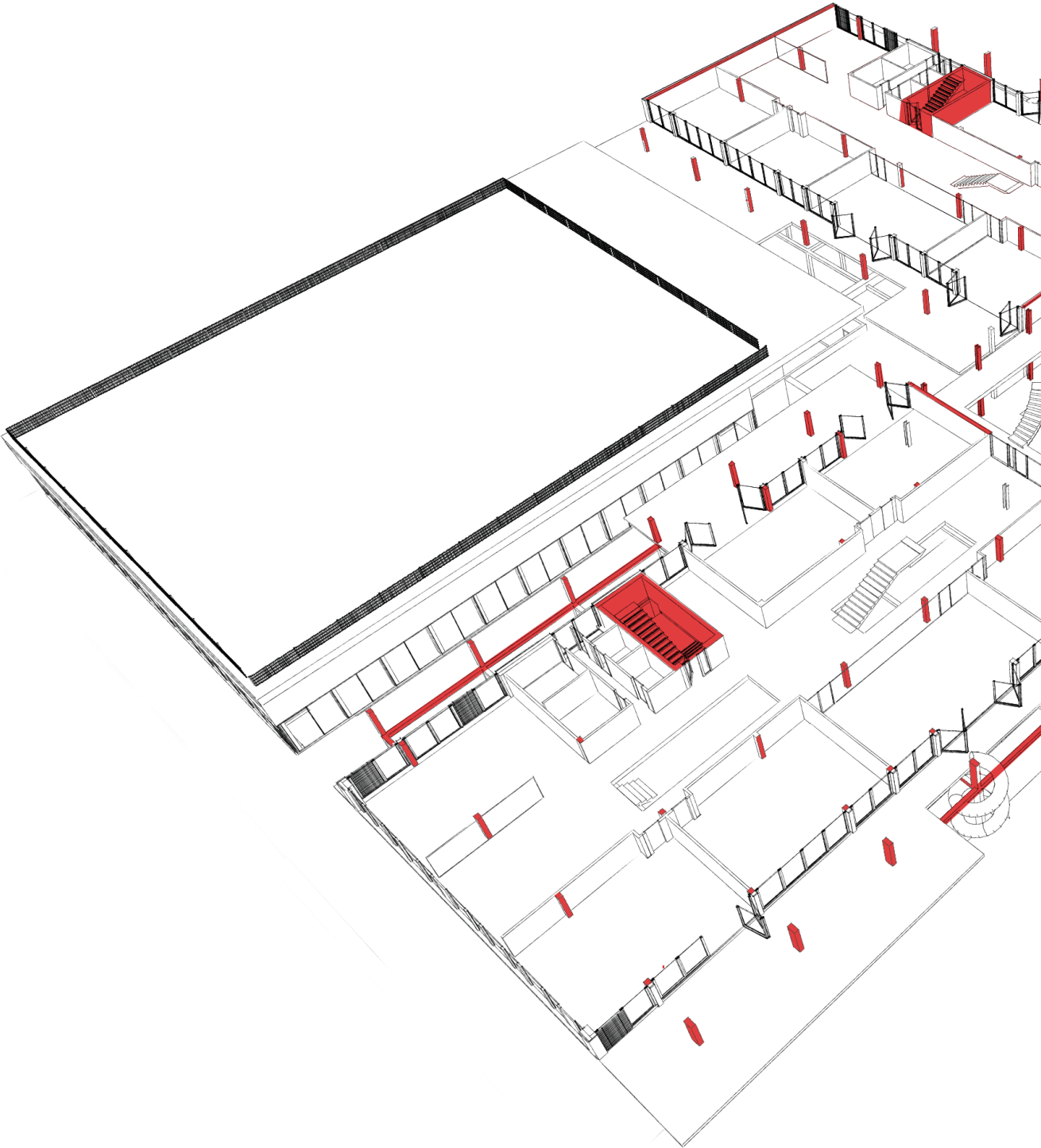
THIRD FLOOR

All the floors are connected with emergency staircases as well as stairs in the middle of the corridors, which gives the possibility of easy access to each floor. Additionally in the middle building are located learning stairs for the children to spend their free time and have group classes.

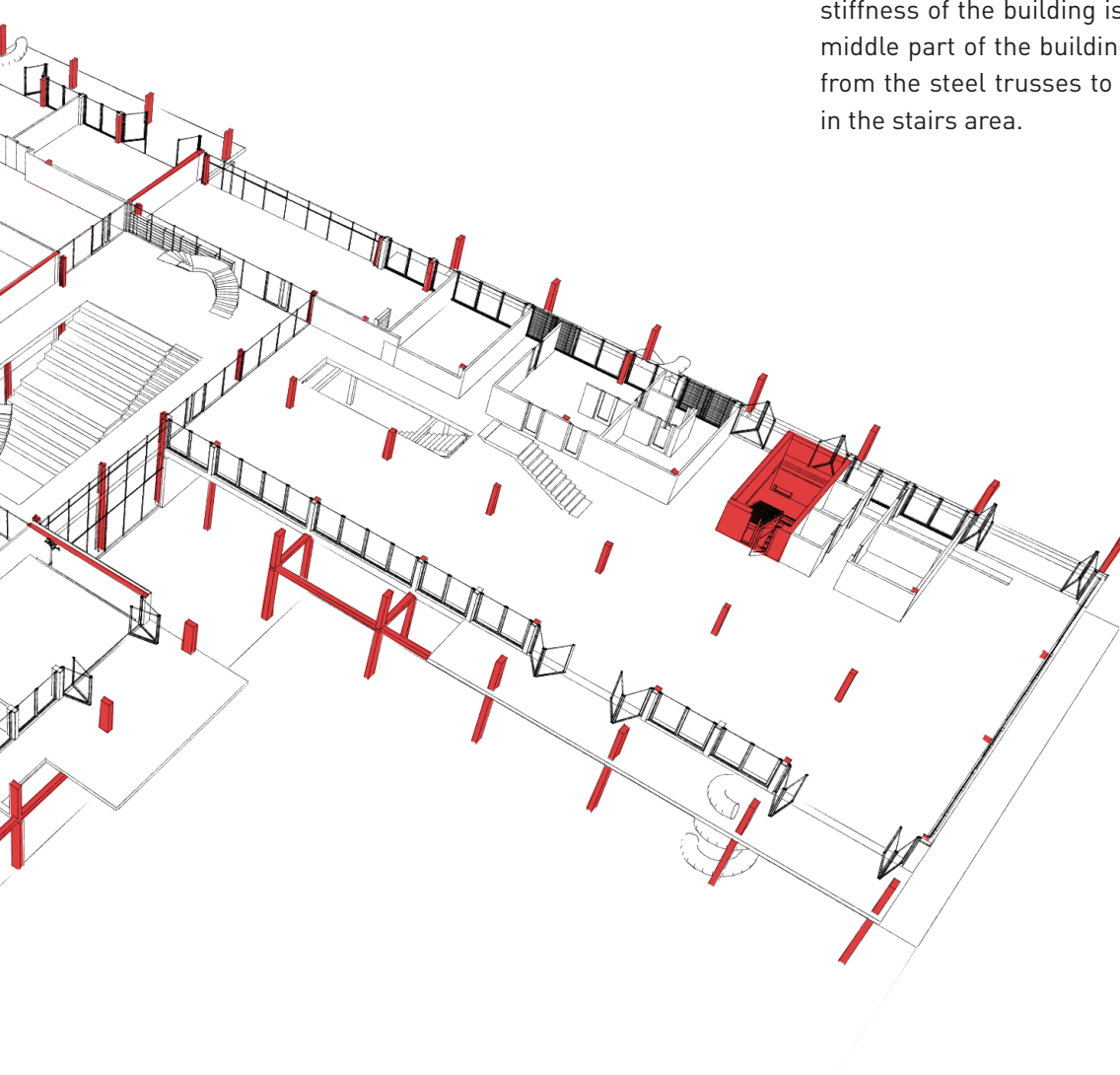


SECOND FLOOR

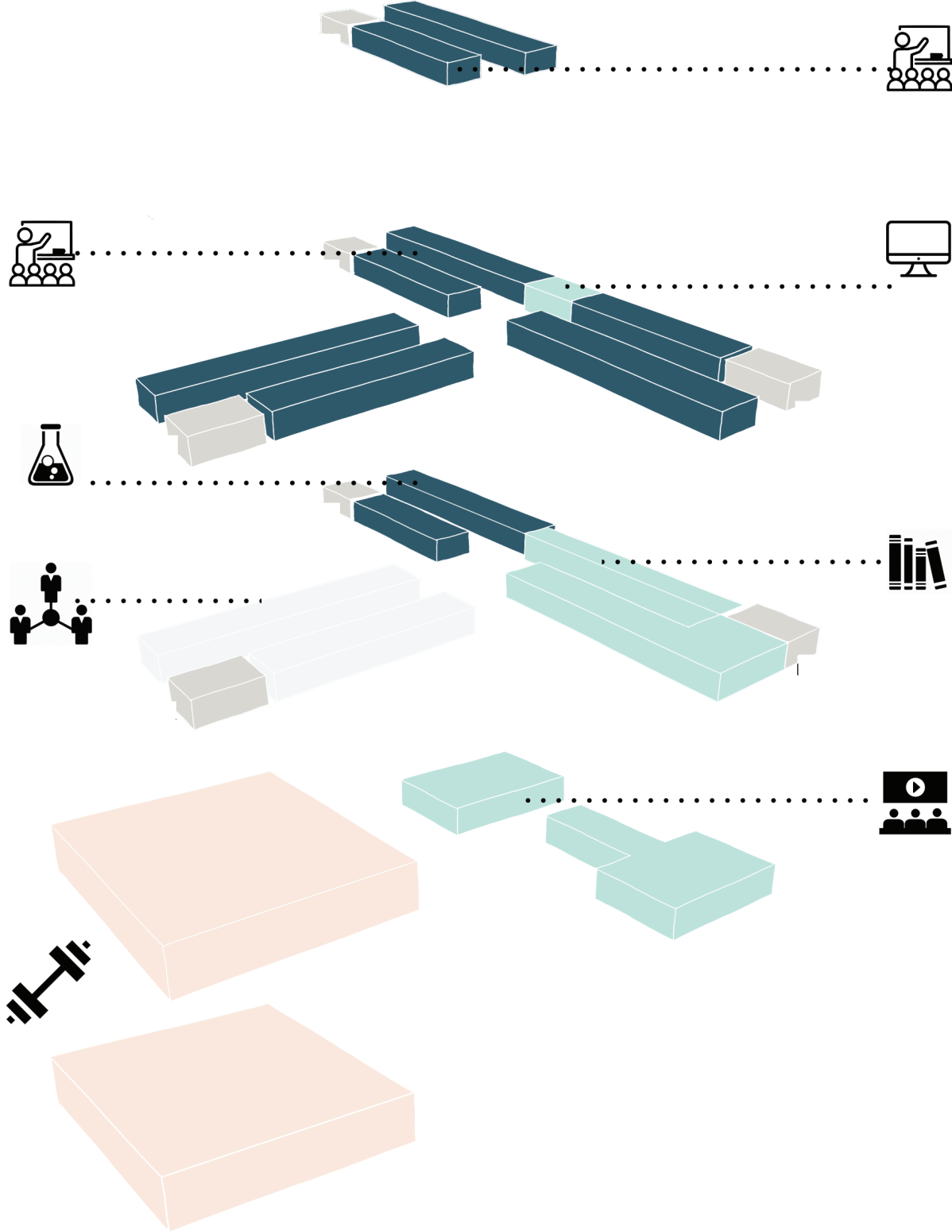
CONSTRUCTION



Open construction in the matrix of concrete columns 6x6,5 enable the building flexibility und easily changable room allocations. Emergency staircases are part of the construction system, therefore the stiffness of the building is preserved. The middle part of the building is constructed from the steel trusses to enable big span in the stairs area.



FUNCTIONS



THIRD FLOOR +12.10	Research center
SECOND FLOOR +8.30	Learning zone, classrooms
FIRST FLOOR +4.50	Canteen, Library, Natural Science classes, classrooms
GROUND FLOOR 0.00	Entrance Hall, Lockers, Coffee Point, Auditorium, Art classes, Offices
BASEMENT -4.00	Gymnasium, Sport facilities, Changing rooms, Technical rooms

4.8

MATERIALS

A harmoniously designed environment that allows for different forms of instruction, takes users' needs into account and has been designed to engage users, not only enhances well-being but can also promote the health of teachers and learners. This is how learning spaces become living spaces for the future. An important aspect in the design of the rooms is the color scheme.

In most classrooms, the walls have been kept completely white. White makes rooms seem bigger, but otherwise seems rather sterile. Children in particular have no relation to abstract white. The use of color in the classroom can therefore positively change the sense of space.¹

Color design, when approached from a functional standpoint rather than aesthetics, can prevent eyestrain and increase attention span and productivity. Monotone, poorly designed and poorly lit classroom conditions can cause irritability and inattentiveness and exacerbate behavioral problems.¹ In addition to visual ergonomics, age groups and their developmental stages have to be considered. A kindergarten student processes information very differently than a sixth grader.

Just as schools are taking a more holistic approach to learning by nurturing many learning styles and experiences, so too should this theory be extended to the physical school environment,

one that enhances student learning. Spaces dominated by gray, beige and a variety of whites simply don't cut it.

Psychological color studies have shown that sociable, energetic preschool and elementary grade-level students react favorably to the stimulation of warm colors such as yellow-orange and peach, whereas older children in middle school and above function better in cooler hues, enabling them to concentrate more effectively.

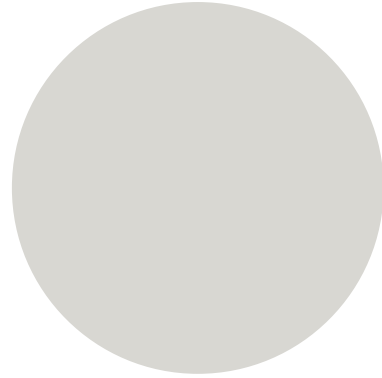
<https://www.sichere-schule.de/lernraumunterrichtsraum/farbgestaltung>

<https://www.sherwin-williams.com/architects-specifiers-designers/education/project-profiles/sw-article-pro-fullspect-school>

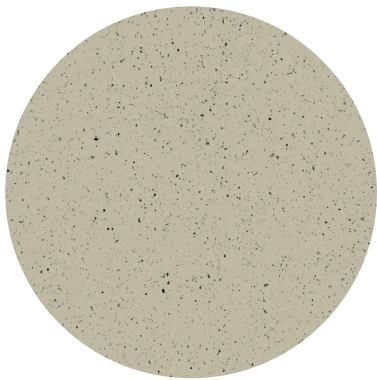




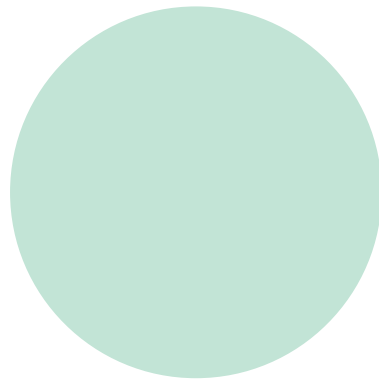
TIMBER



COLORS



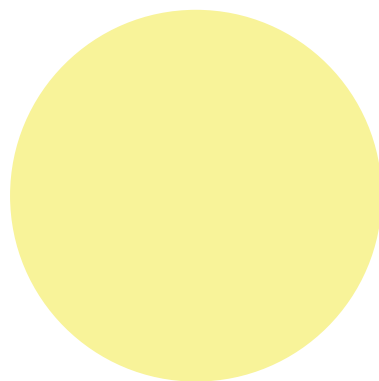
RUBBER/TIMBER FLOORING



COLORS



ACOUSTIC CEILINGS



COLORS



4.9

INTERIOR

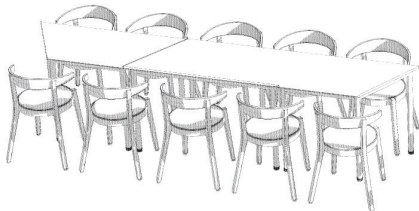
Creating flexible learning area in a classroom brings many configurations, due to innovative system furnitures which can be connected with each other creating many shapes and working places for big and small groups.

School furniture supports the concept of a flexible class. The original concept, according to which everything in the room is flexible and in which design goes hand in hand with ergonomics.

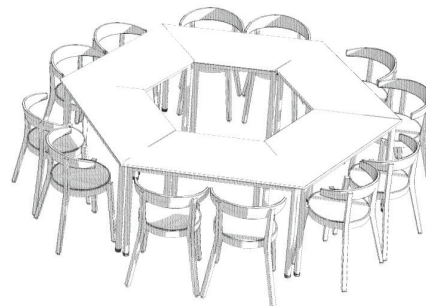


SINGLE TABLE

ROW



ROW



GROUP

FIG.54

FURNITURES

"Tables give a lot of flexibility in order to make different combinations. From a single place without a problem a group places up to 10 places can be formed. The tables are adjustable and the height can be adapted to the age of the children. For different sizes of classes row, circle combination can be formed.

SCHOOL OF THE FUTURE

The essential features of the school of the future should be contributing to a positive educational quality of the learning environment. Children should be stimulated to engage in individual investigation and exploration through an appealing design of spaces, with workshop- little classrooms and a variety of materials. This will create a variety of forms of learning. The environment should stimulate children's sense and provide the opportunity for a playful engagement and experience with the elements, earth, water, fire, air. Active interaction with environment can be achieved through creative activities. For this, too a variety of materials should be made available.

The school should be not only for learning in the mornings, but one where children would want to stay for play with friends in their free time. It is therefore important that especially outside areas offer multiple opportunities for play and romping, with different surface materials and elevations and areas equipped with play equipment.

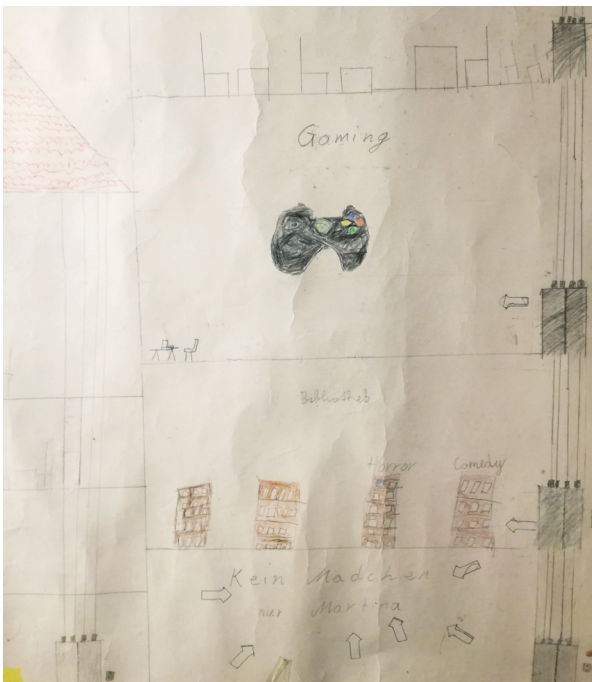
SPATIAL CONDITIONS

A space is much more than four walls, floor and ceiling. The spatial conditions that should be considered for human well-being include color scheme, lighting, heating, cooling and ventilation, acoustics, smells and furnishing. All these aspects can significantly influence the sense of well-being and readiness to learn and therefore also learning performance.

COLORS

There are no universally valid rules for the use of colors. Too often, we are taken by overly fashionable color choices. For this reason, it is also risky to let children choose the colors. It is also very difficult to reach agreement because personal tastes are so different. Color perception is a matter of very subjective sentiments. Regarding the choice of colors for school spaces, Frieling and Sonntag (1999) recommend consideration of the basic age specific color preferences. Studies have revealed statistically significant changes in the preferences for colors that correlate with age. A sequence according to the order of rainbow colors, respectively the sequence of Goethe's color wheel, appears to be appropriate (cf. Peter Busmann, 2005)."¹²

FIG.55



DRAWING WORKSHOP

Drawing workshop in one of Viennese elementary school organised by a teacher-my friend.

I asked her to make a workshop where children formed in small groups were supposed to draw their perfect school.

Interesting how the children divided in the groups were drawing details like, toilets, lamps , sport equipment or clock on the wall.

Easily recognisable are the colors of the posters. Girls were choosing stronger colors, pink red, where the poster of the boys groups were mostly monotonous, sometimes with some cold colors.

Big rooms, round staircases, glitter and pets in school were often shown in the drawings.

RESULT

5.1 PLANS
MASTER PLAN, 0=200 atl

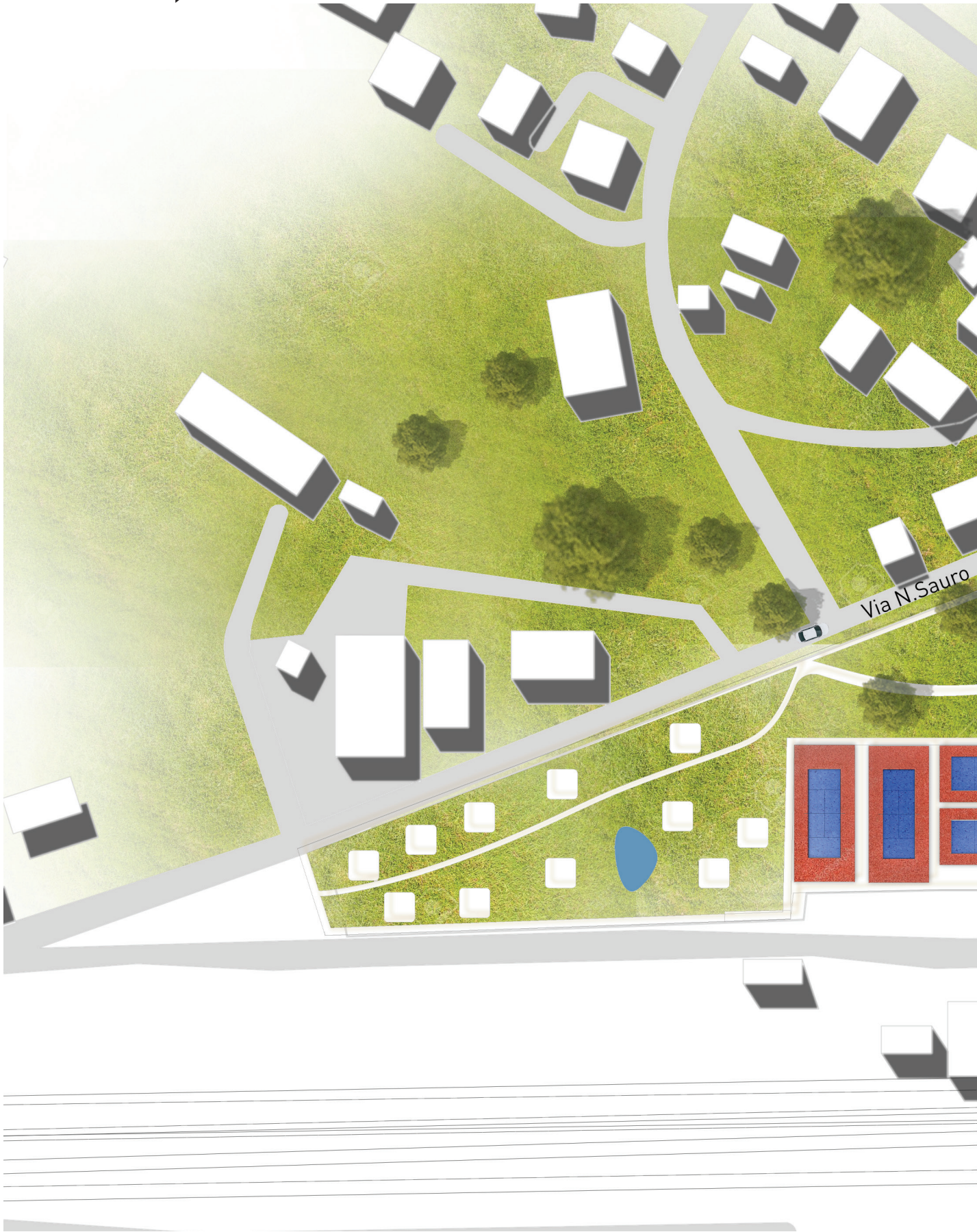
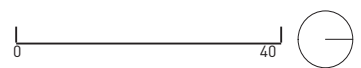
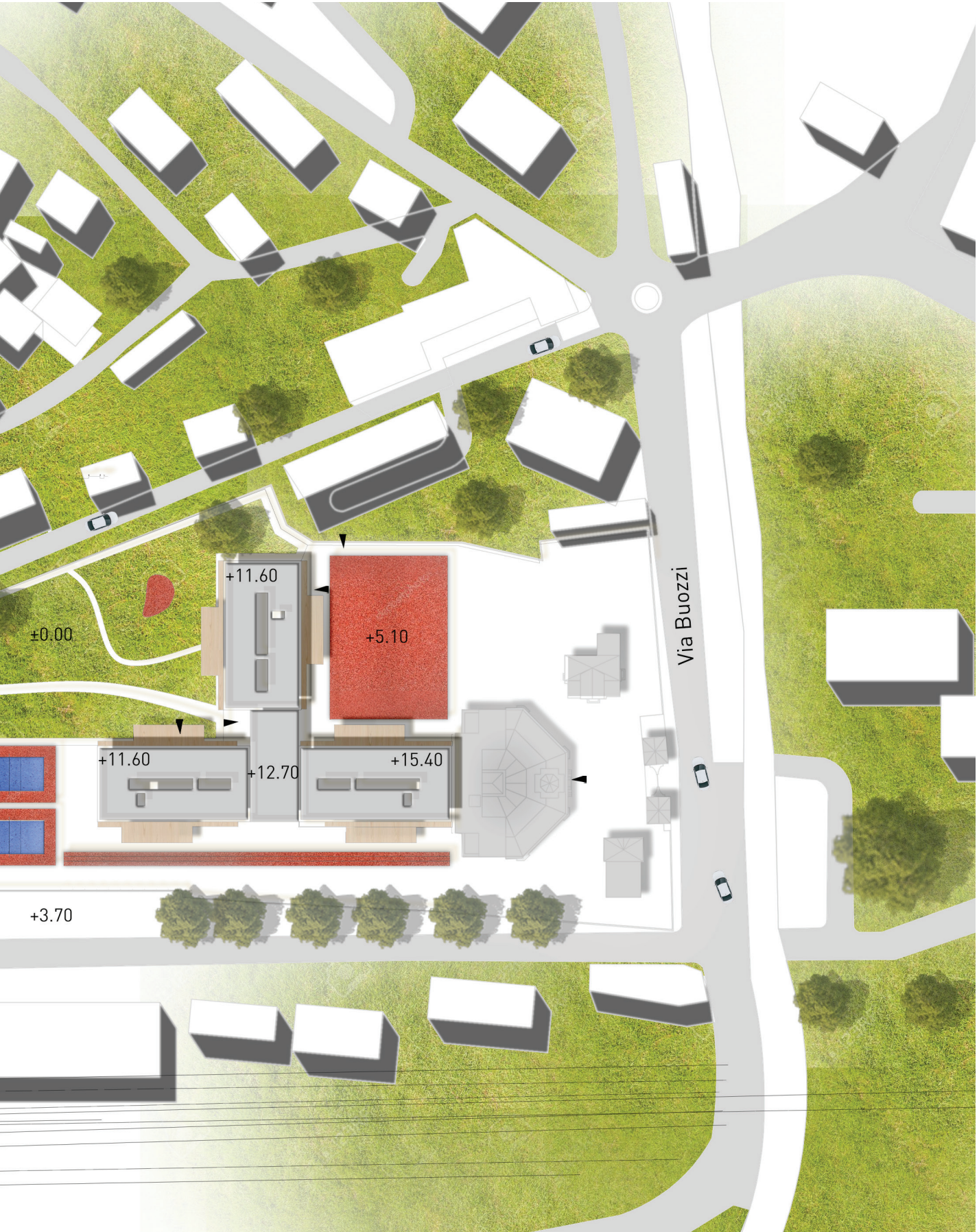


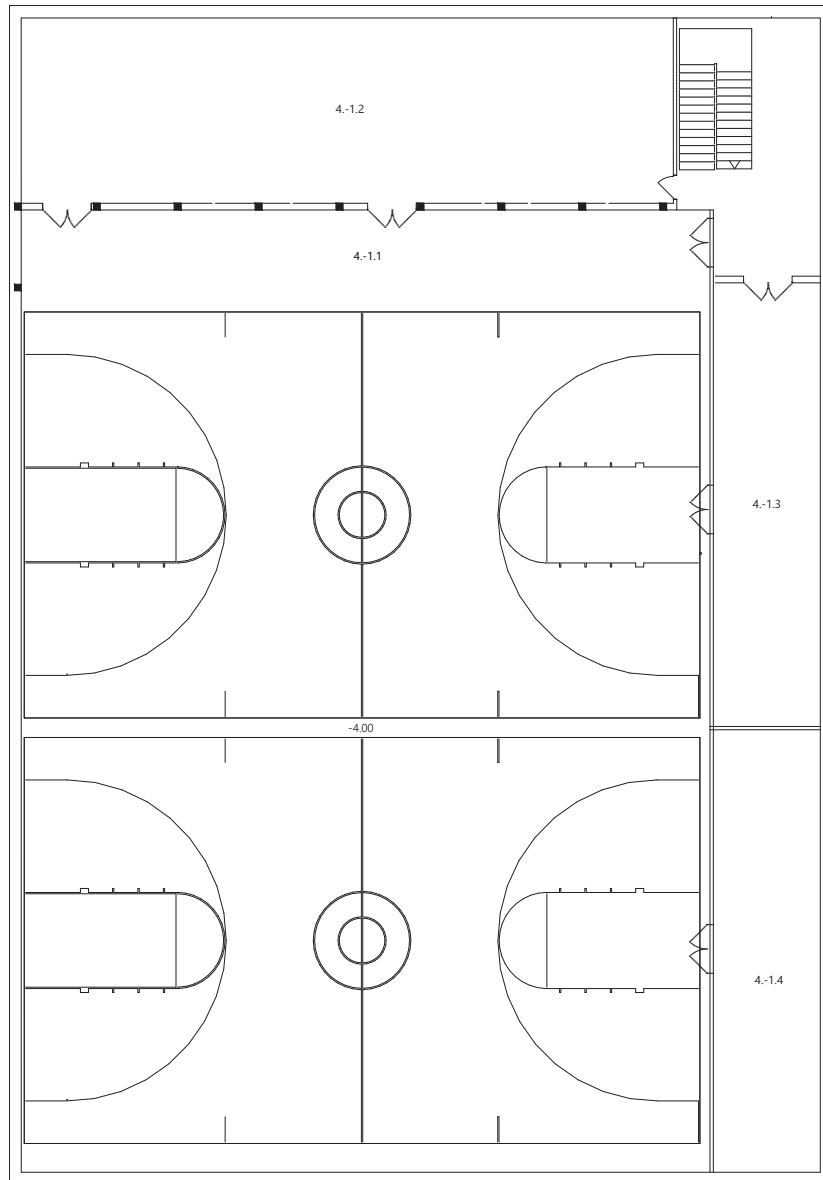
FIG 5.01



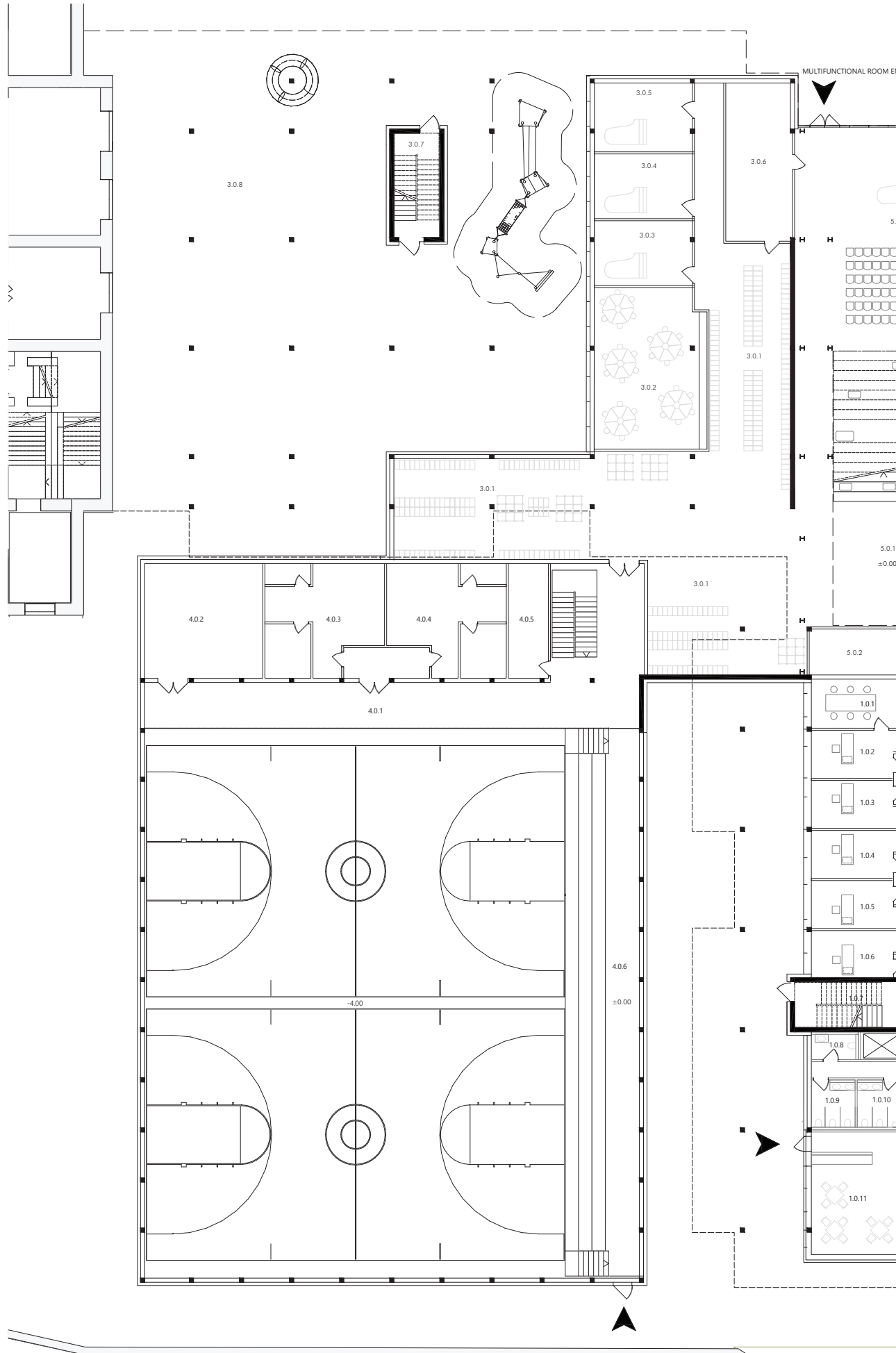
BASEMENT

BASEMENT		AREA m2
4.-1.1	Gymnasium	900
4.-1.2-4	Storage	349

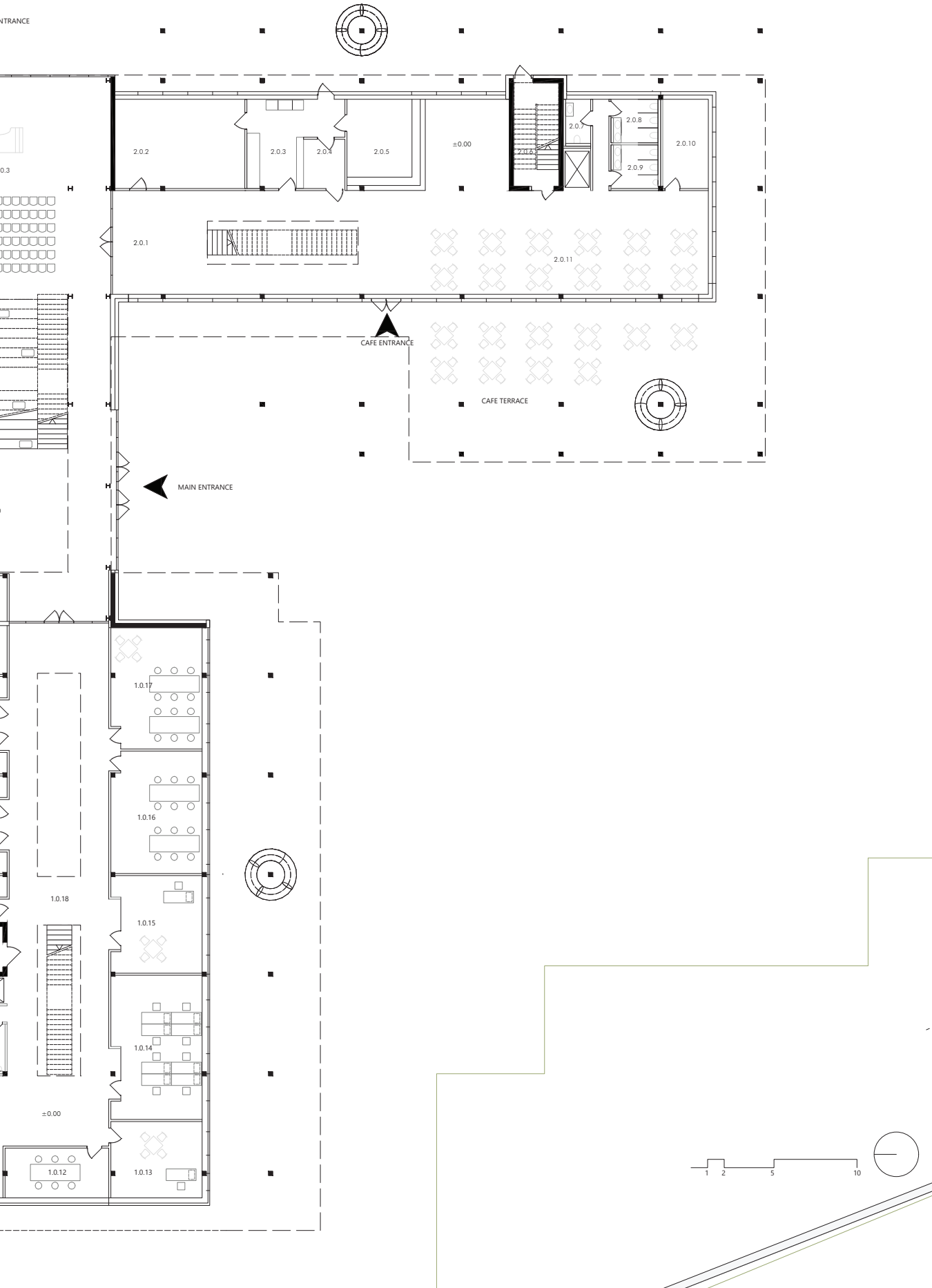
FIG 5.02



GROUND FLOOR



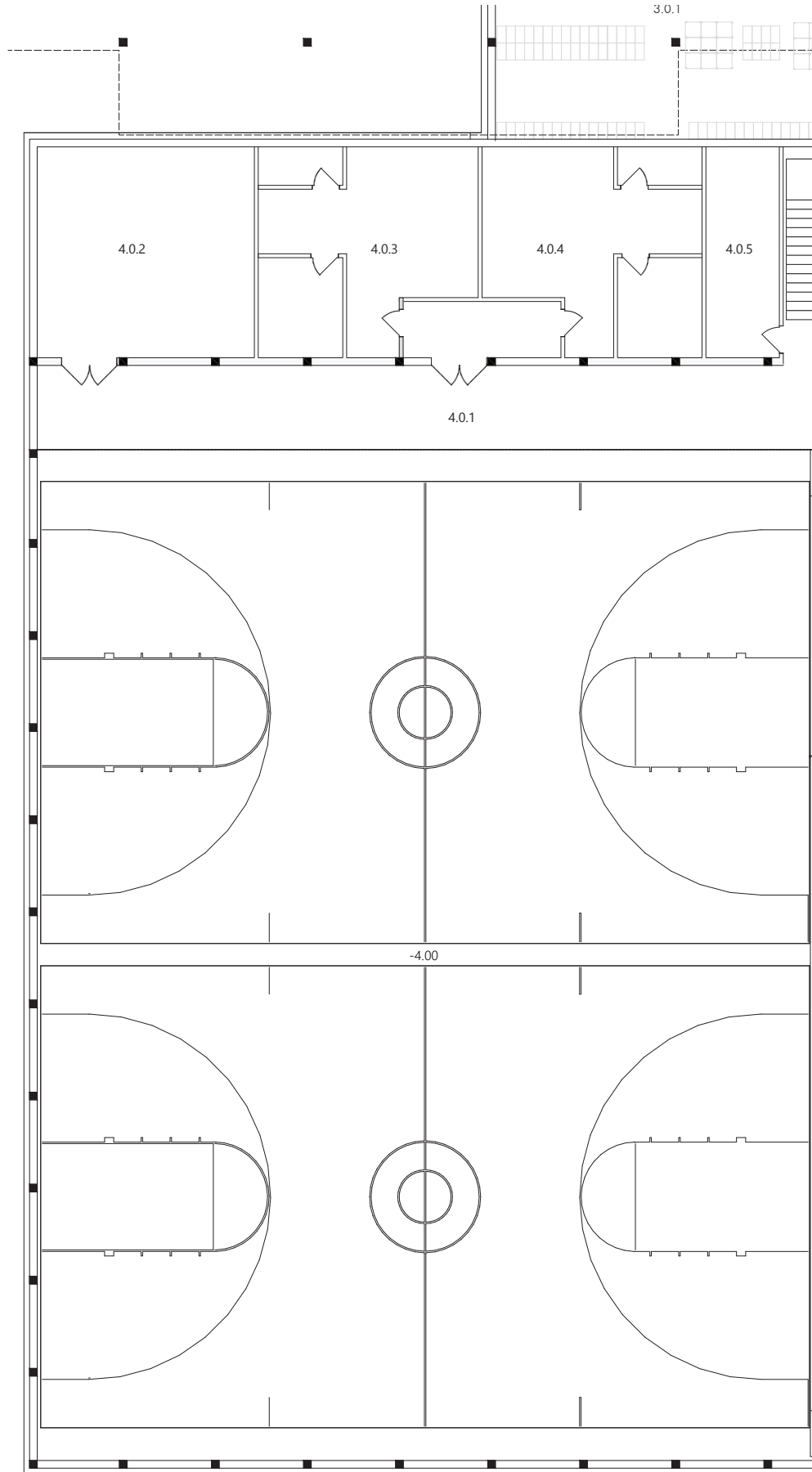
ENTRANCE

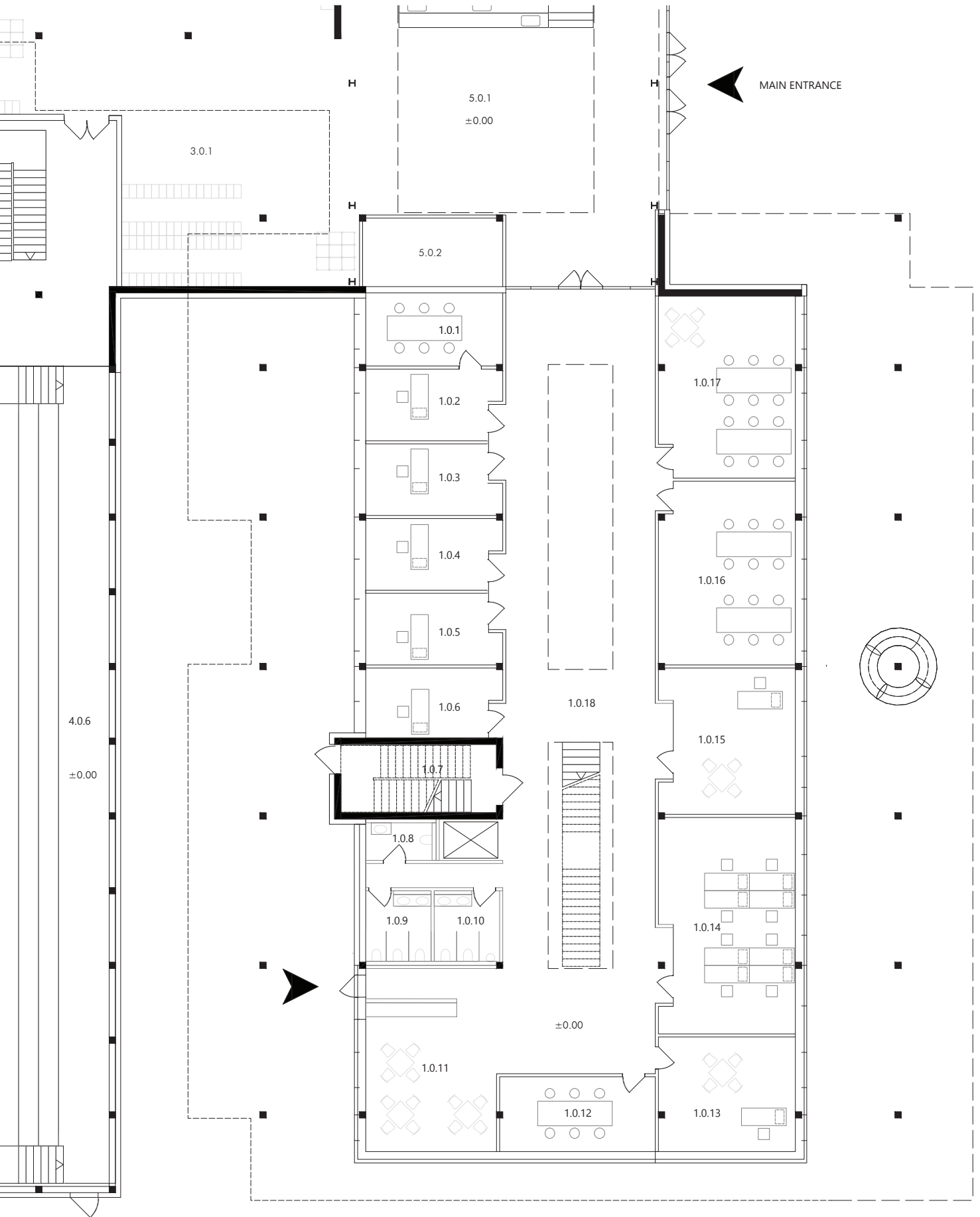


GROUND FLOOR PART A

- 1.0.1 Parents room
- 1.0.2 Psycholog
- 1.0.3 Doctor 1
- 1.0.4 Doctor 2
- 1.0.5 Administration 1
- 1.0.6 Administration 2
- 1.0.7 Emergency staircase
- 1.0.8 Employee toilet
- 1.0.9 Girls toilet
- 1.0.10 Boys toilet
- 1.0.11 Tee kitchen with social room
- 1.0.12 Meeting room
- 1.0.13 Head 1
- 1.0.14 Office
- 1.0.15 Head 2
- 1.0.16 Teacher's room 1
- 1.0.17 Teacher's room 2
- 1.0.18 Printing area

- 4.0.1 Floor
- 4.0.2 Gym
- 4.0.3 Changing room Girls
- 4.0.4 Changing Room Boys
- 4.0.5 Storage
- 4.0.6 Audience seats





GROUND FLOOR PART B

- 2.0.1 Floor
- 2.0.2 Kitchen Workshop for Pupils
- 2.0.3 Cafe extra room
- 2.0.4 Cafe extra room
- 2.0.5 Cafe Bar
- 2.0.6 Emergency staircase
- 2.0.7 Toilet employee
- 2.0.8 Toilet girls
- 2.0.9 Toilet boys
- 2.0.10 Storage
- 2.0.11 Cafe

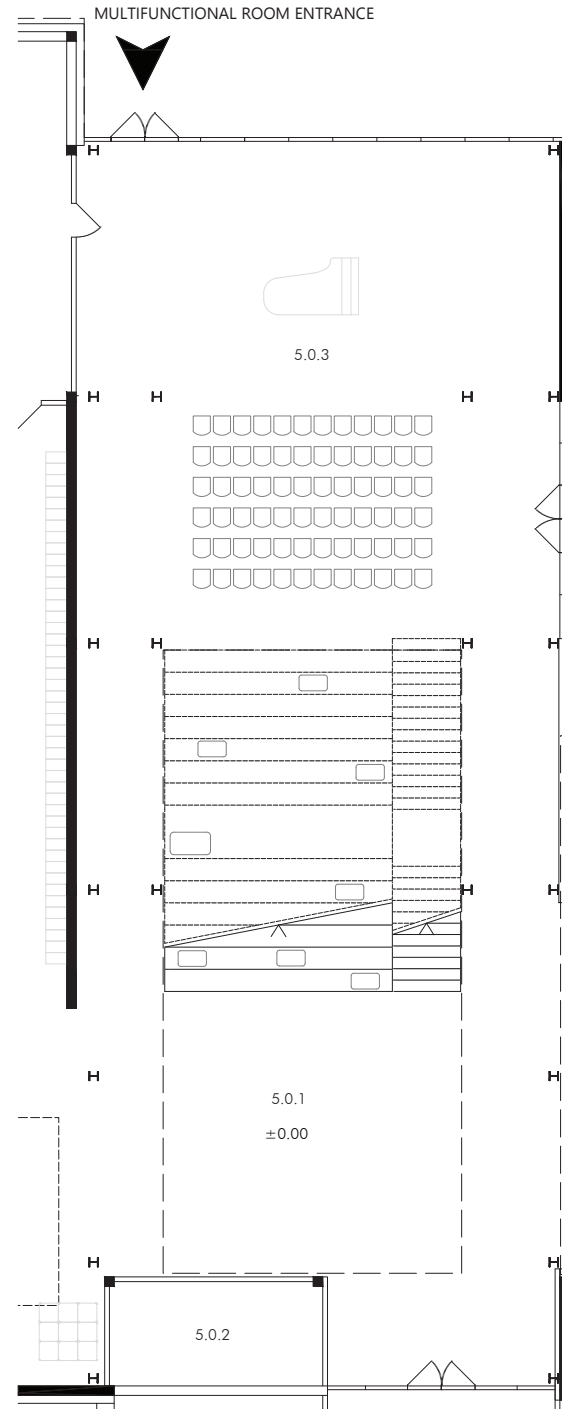
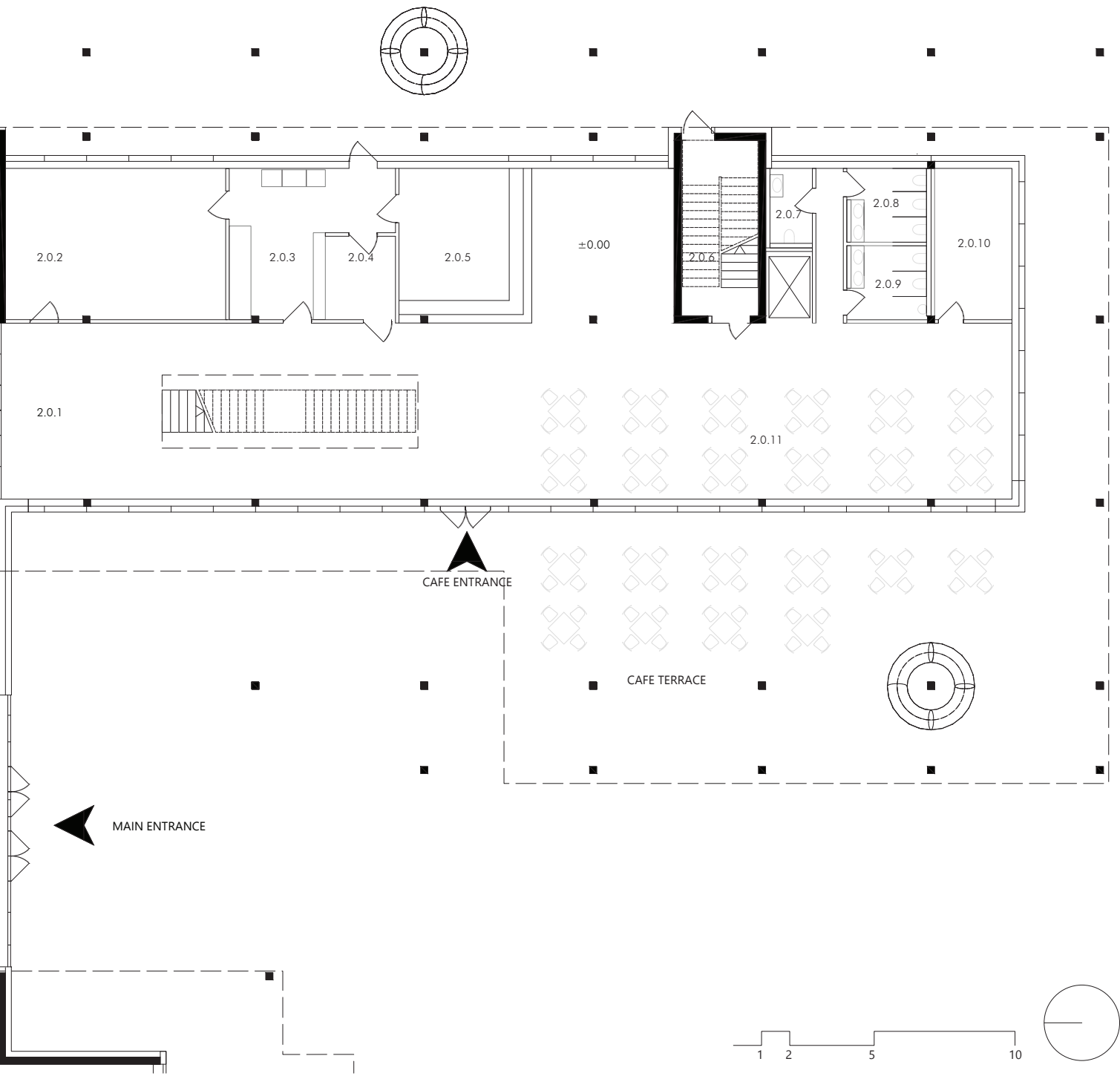


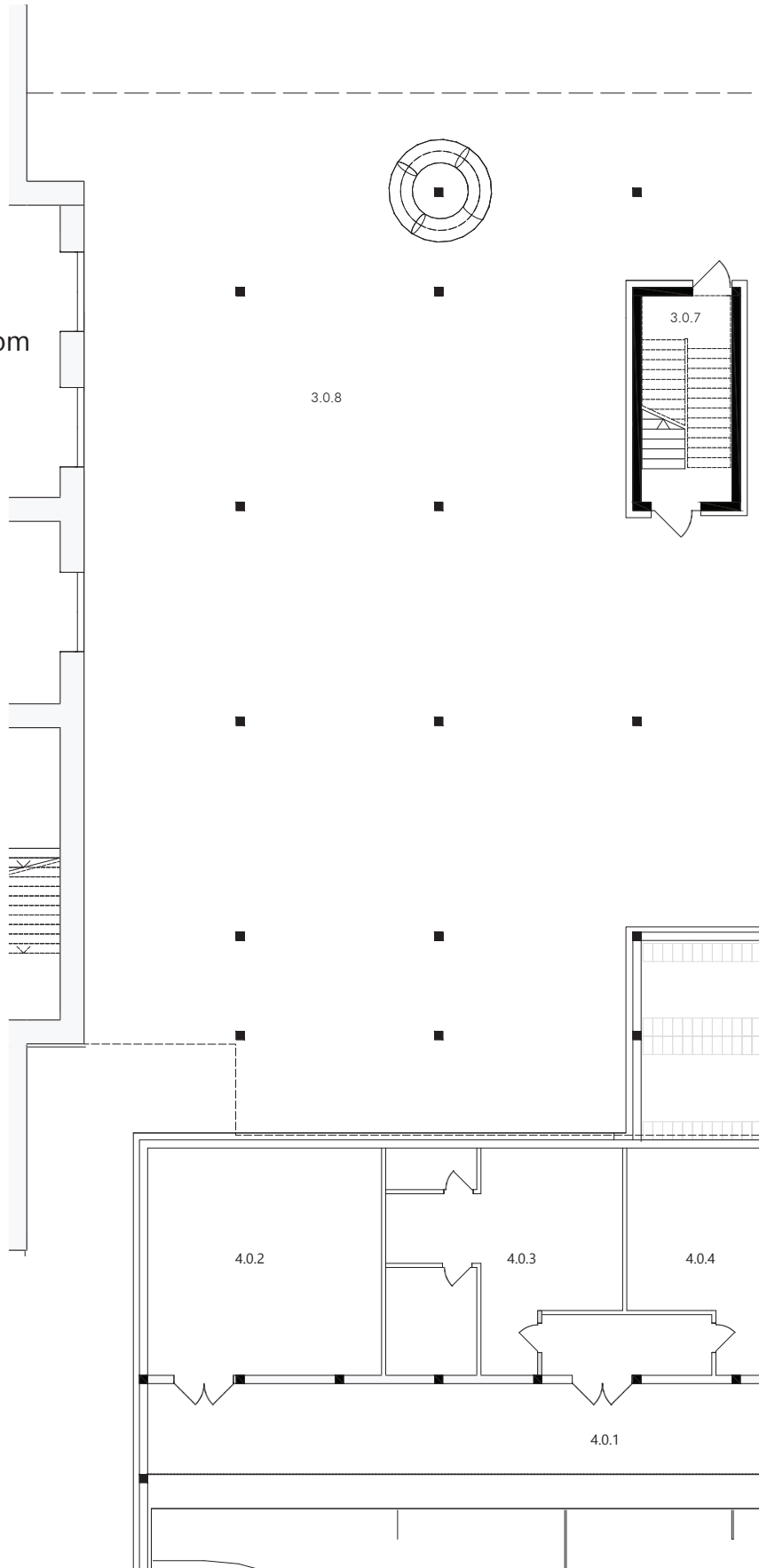
FIG 5.05

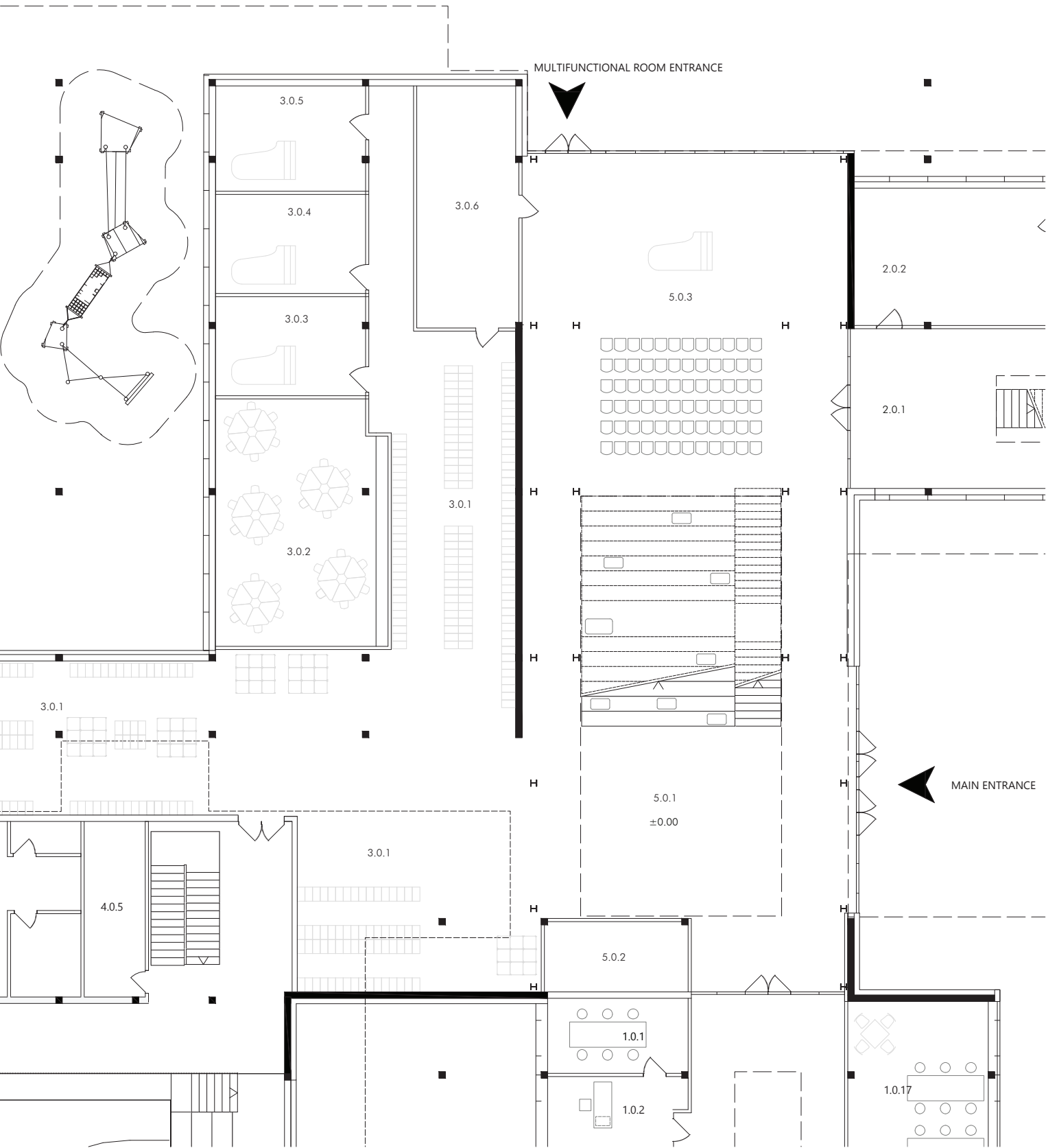


GROUND FLOOR PART C

- 3.0.1 Lockers
- 3.0.2 Art Workshop Area
- 3.0.3 Music room
- 3.0.4 Music room
- 3.0.5 Music room
- 3.0.6 Storage for Multi functional room
- 3.0.7 Emergency Staircase
- 3.0.8 Covered Playground/Storage

- 5.0.1 Atrium with learning stairs
- 5.0.2 Guard
- 5.0.3 Multi functional room





FIRST FLOOR

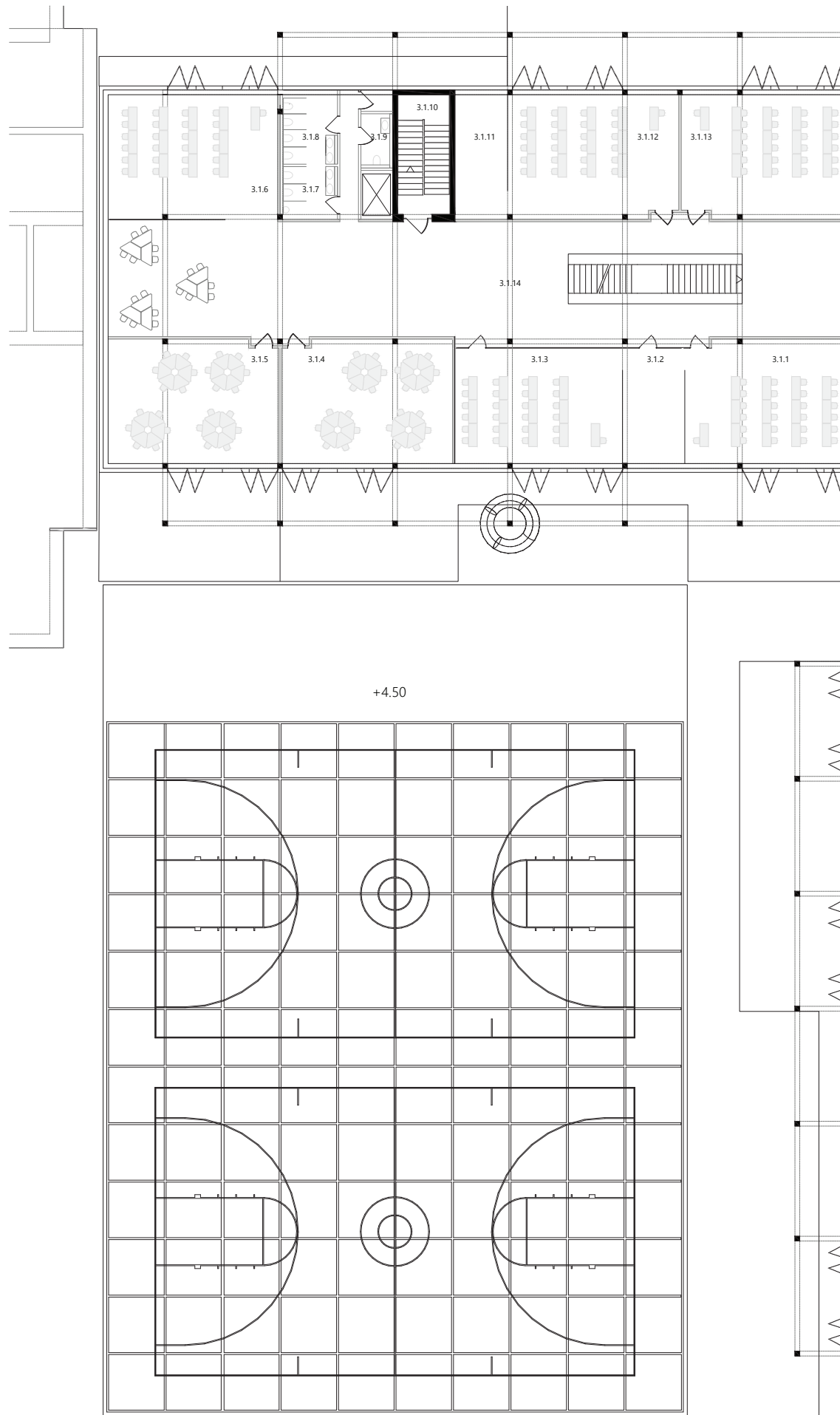
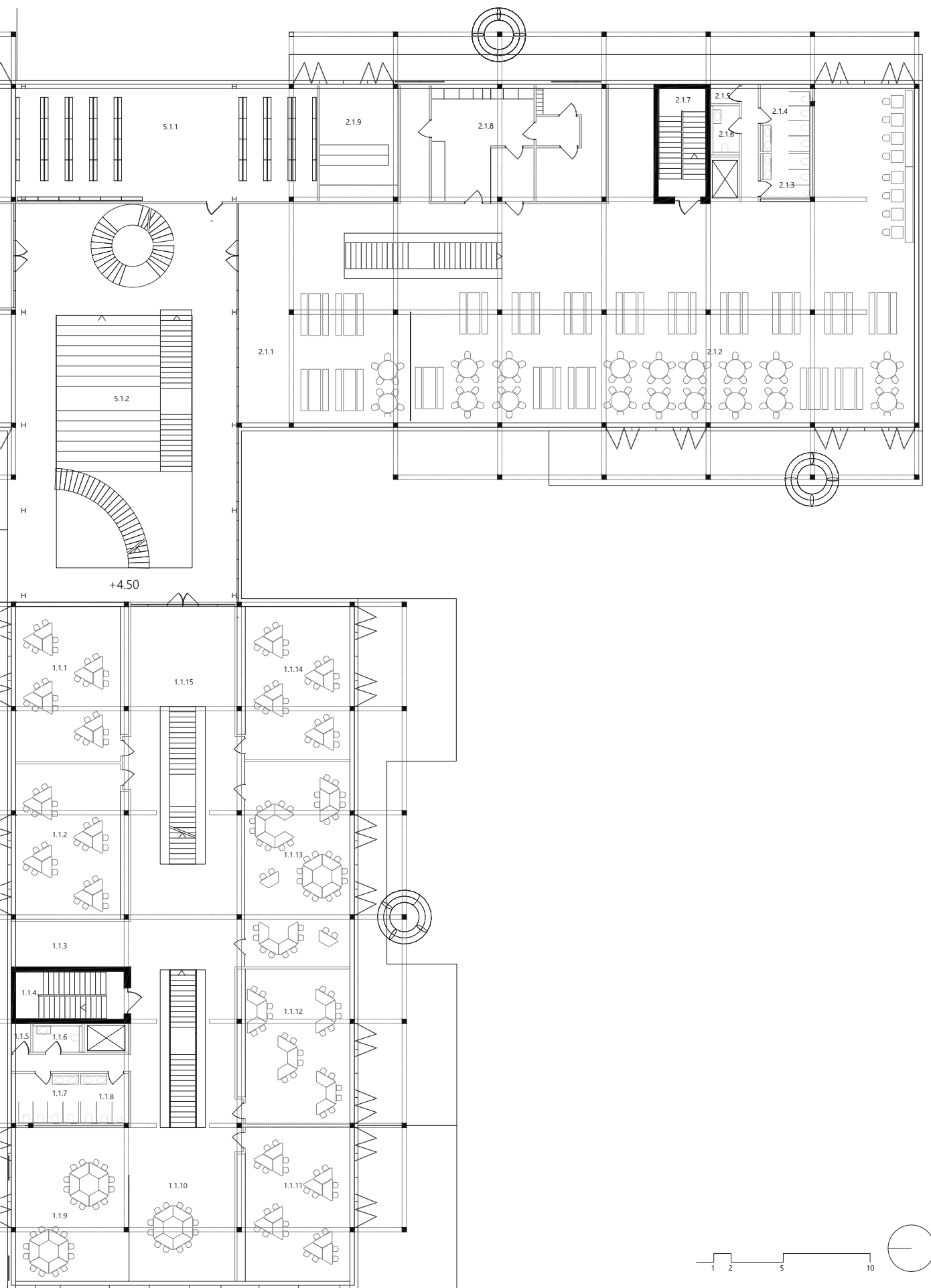
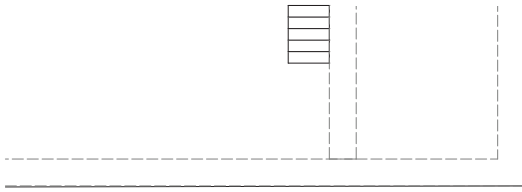


FIG 5.07





FIRST FLOOR PART A

		AREA m ²
1.1.1	Classroom	57
1.1.2	Classroom	57
1.1.3	Teacher's room	18
1.1.4	Emergency staircase	16
1.1.5	storage	2
1.1.6	Teacher's toilet	4
1.1.7	Girls toilet	11
1.1.8	Boys toilet	8
1.1.9	Open area	54
1.1.10	Open area	58
1.1.11	Classroom	57
1.1.12	Classroom	57
1.1.13	Group room	71
1.1.14	Class room	57
1.1.15	Pause area	-

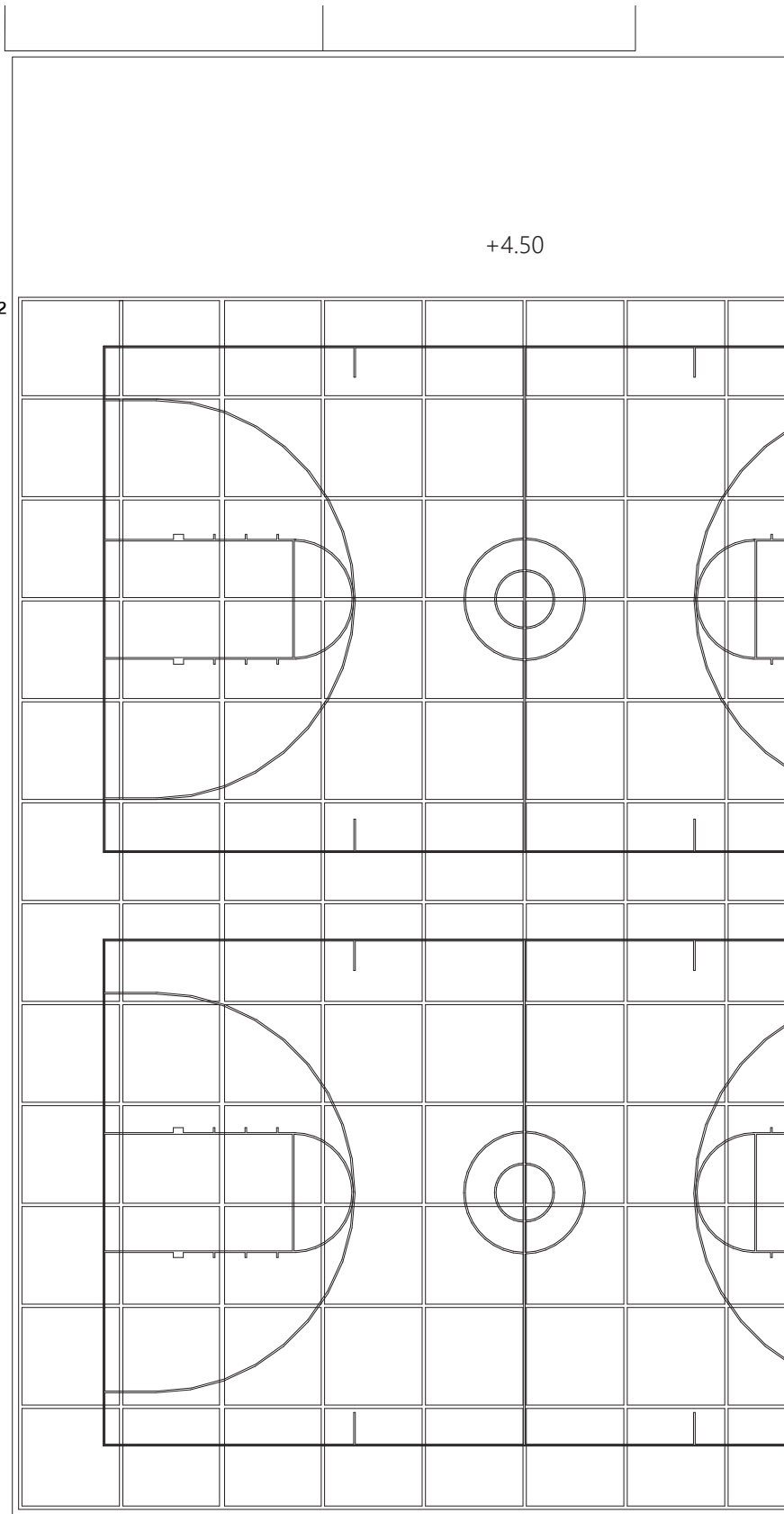
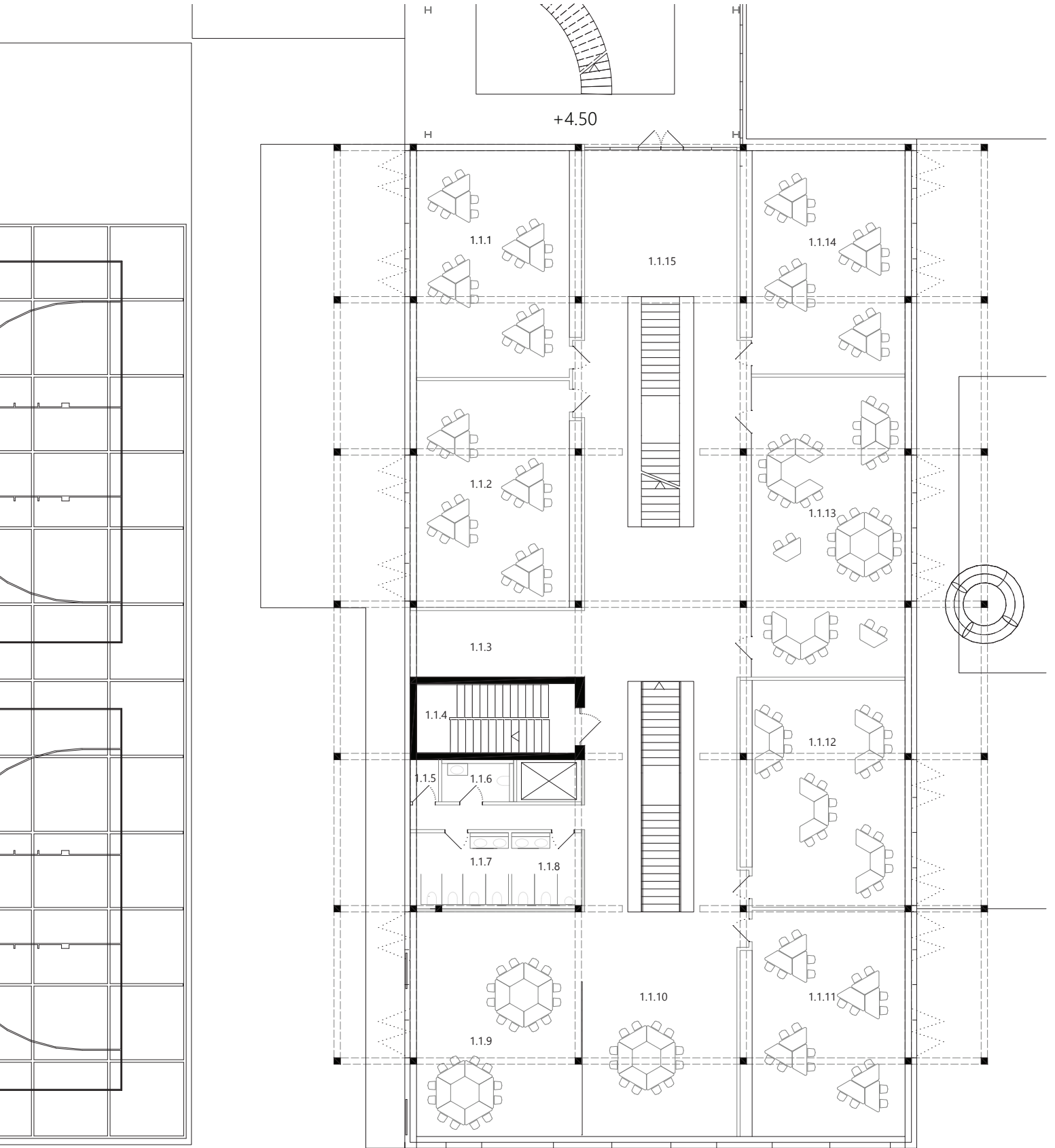


FIG 5.08



+4.50



FIRST FLOOR PART B

AREA m²

2.1.1	Canteen-employee	68
2.1.2	Canteen pupils	308
2.1.3	Boys toilet	8
2.1.4	girls toilet	11
2.1.5	Storage	2
2.1.6	Teacher's toilet	4
2.1.7	Emergency staircase	16
2.1.8	kitchen	66
2.1.9	kitchen	30

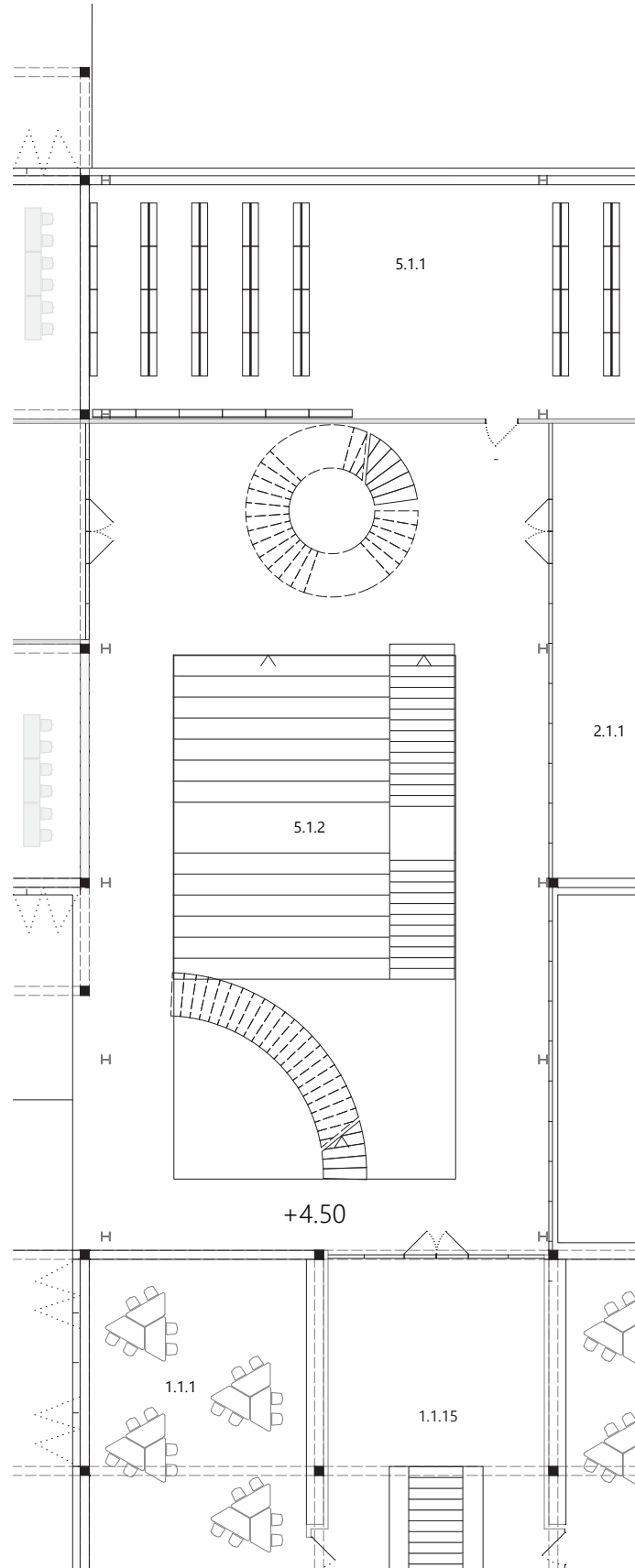
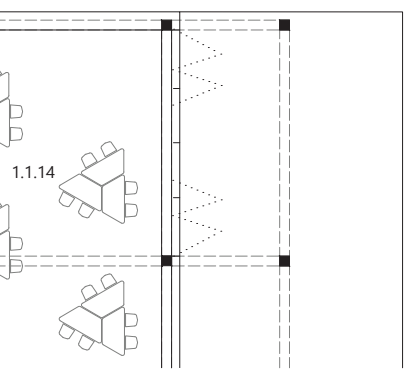
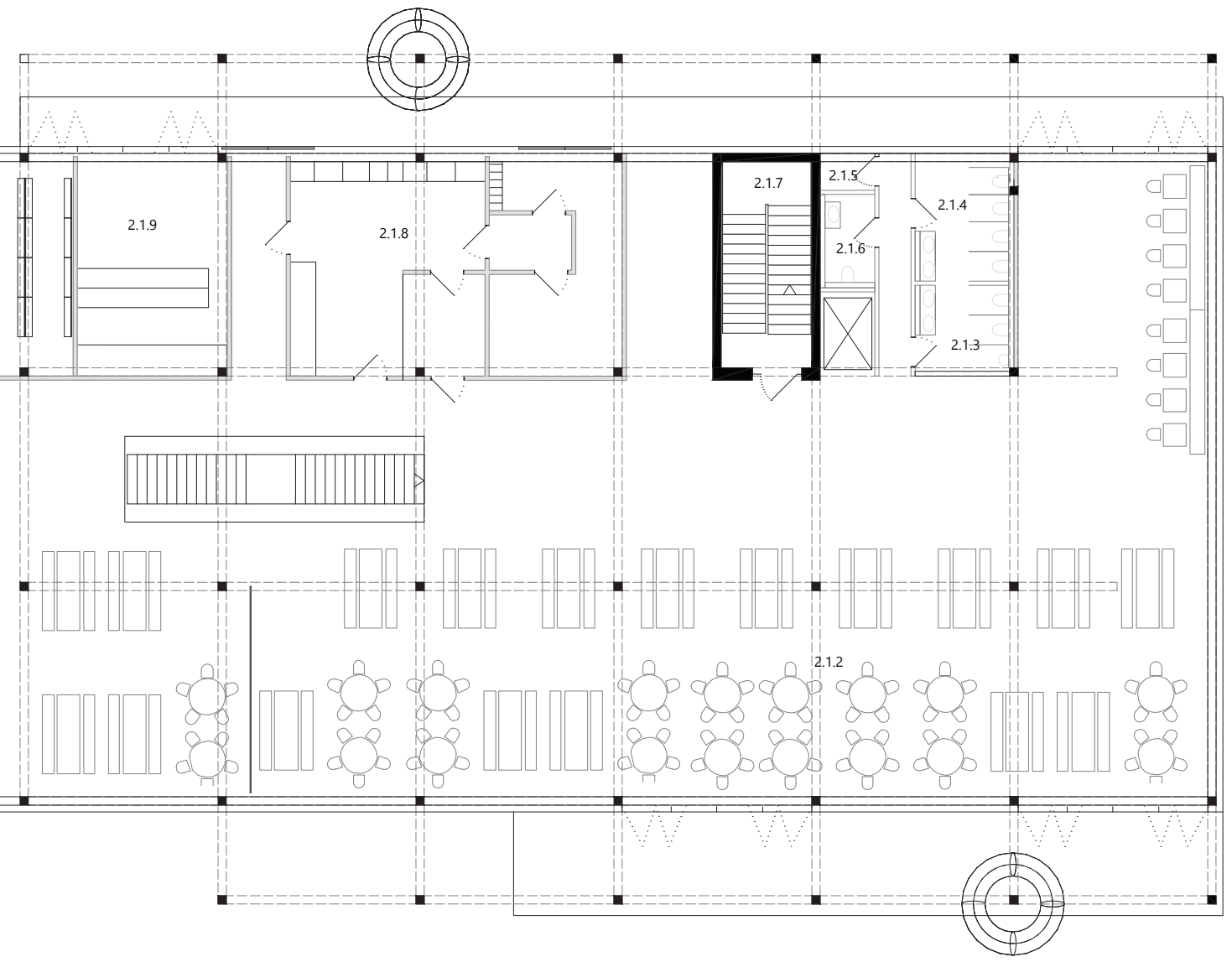


FIG 5.09



FIRST FLOOR PART C

AREA m²

3.1.1	Physics	52
3.1.2	extra room	20
3.1.3	Phyics	52
3.1.4	Biology	52
3.1.5	Biology	58
3.1.6	Computer room	58
3.1.7	Boys toilet	8
3.1.8	Girls toilet	11
3.1.9	Teachers toilet	4
3.1.10	Staircase	16
3.1.11	extra room	20
3.1.12	Chemistry	58
3.1.13	Chemistry	58
3.1.14	Pause area	-
5.1.1	Library	112
5.1.2	Learning stairs	-

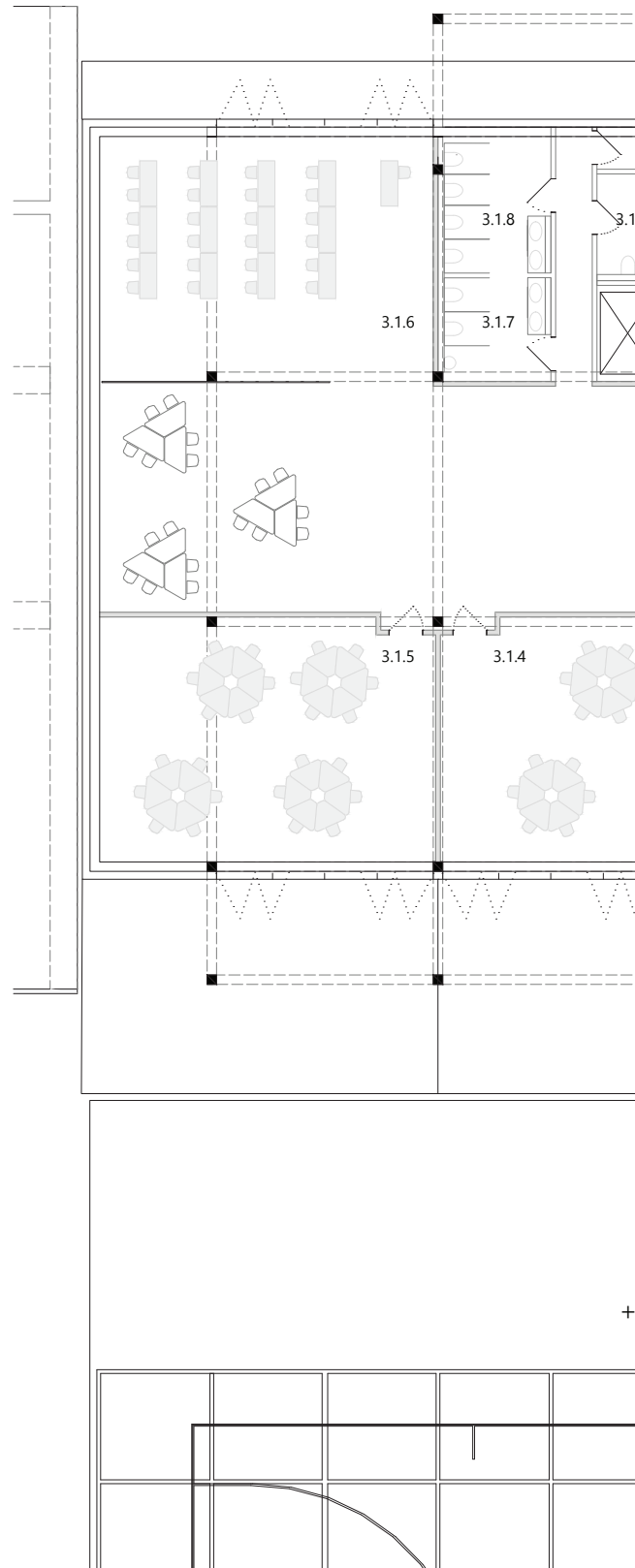
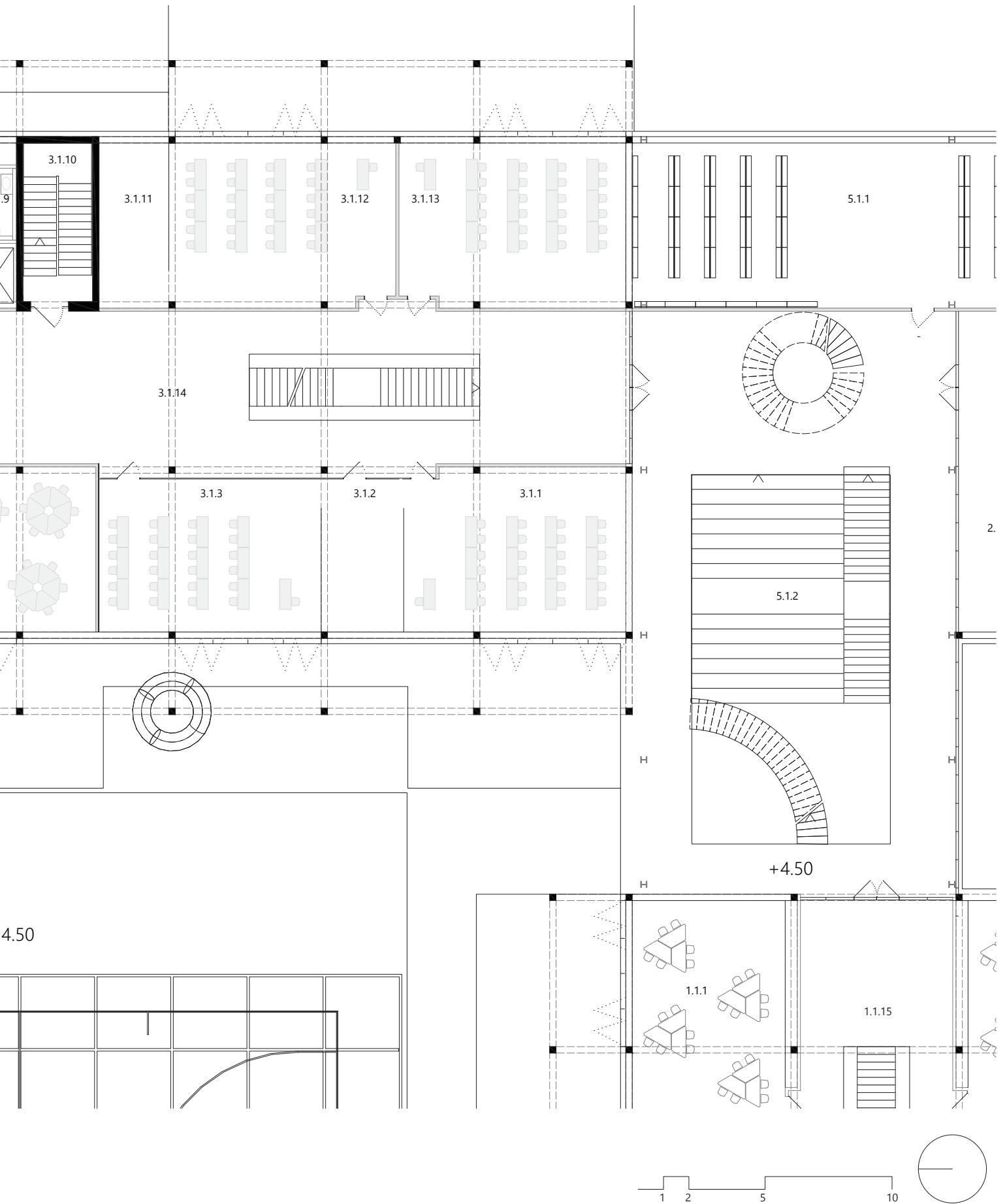
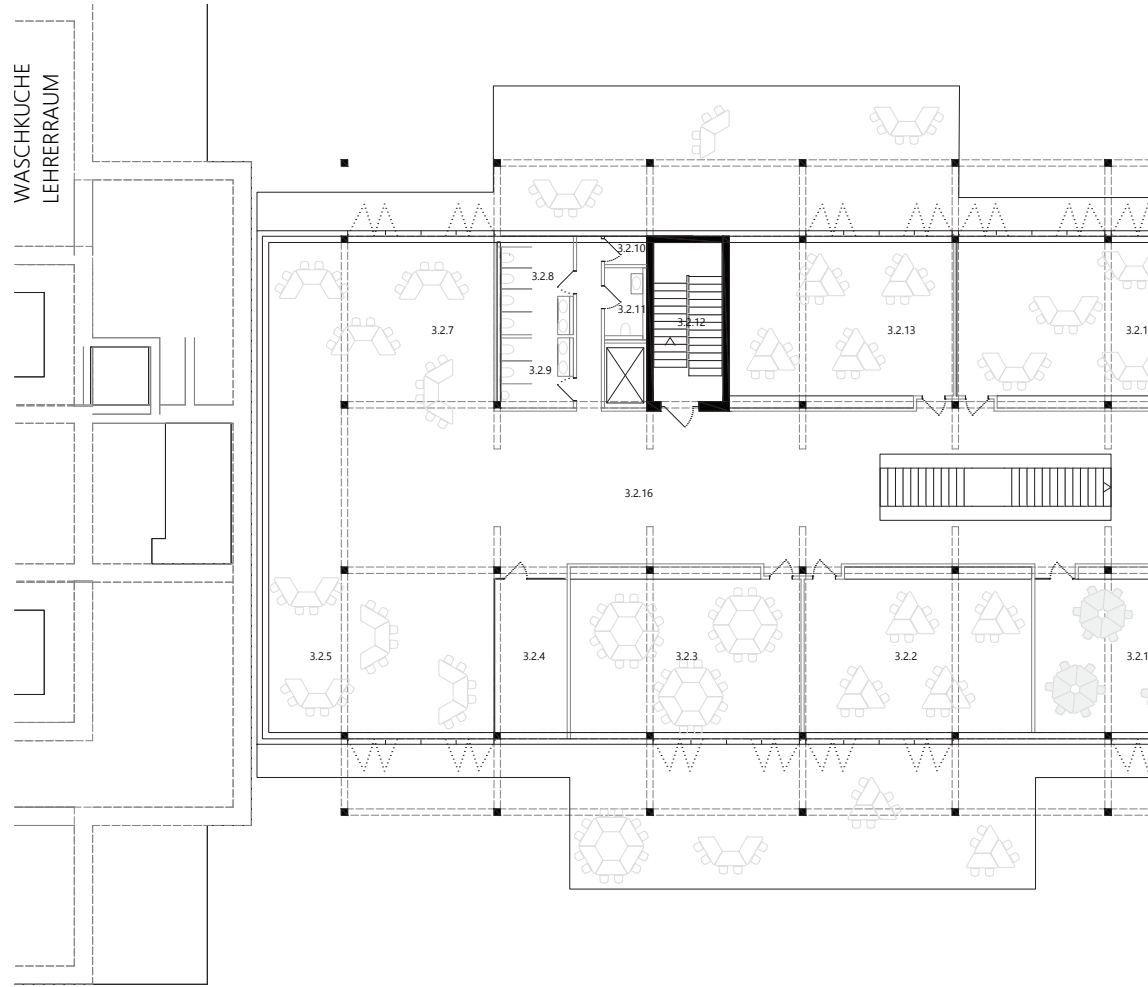
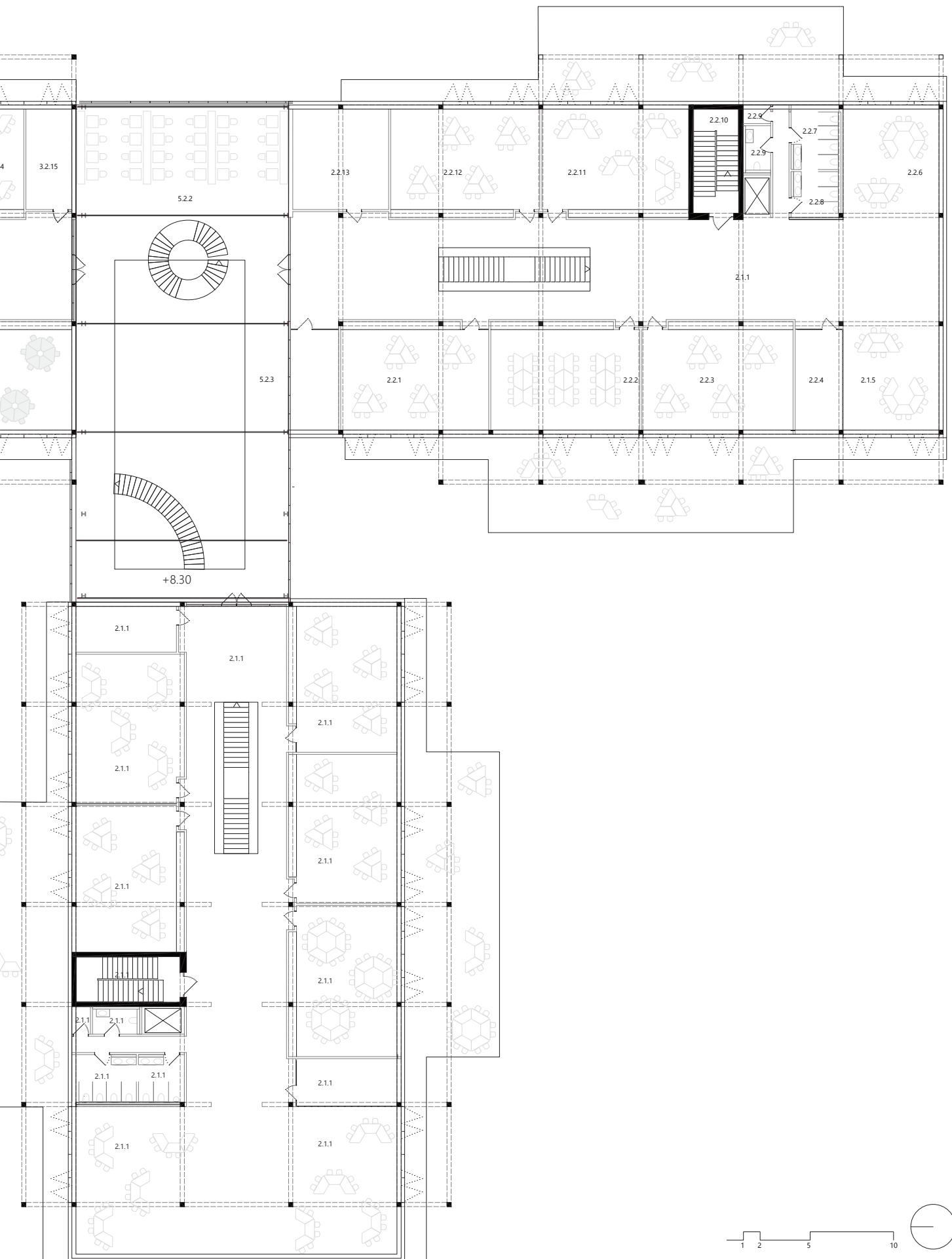


FIG 5.10



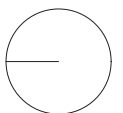
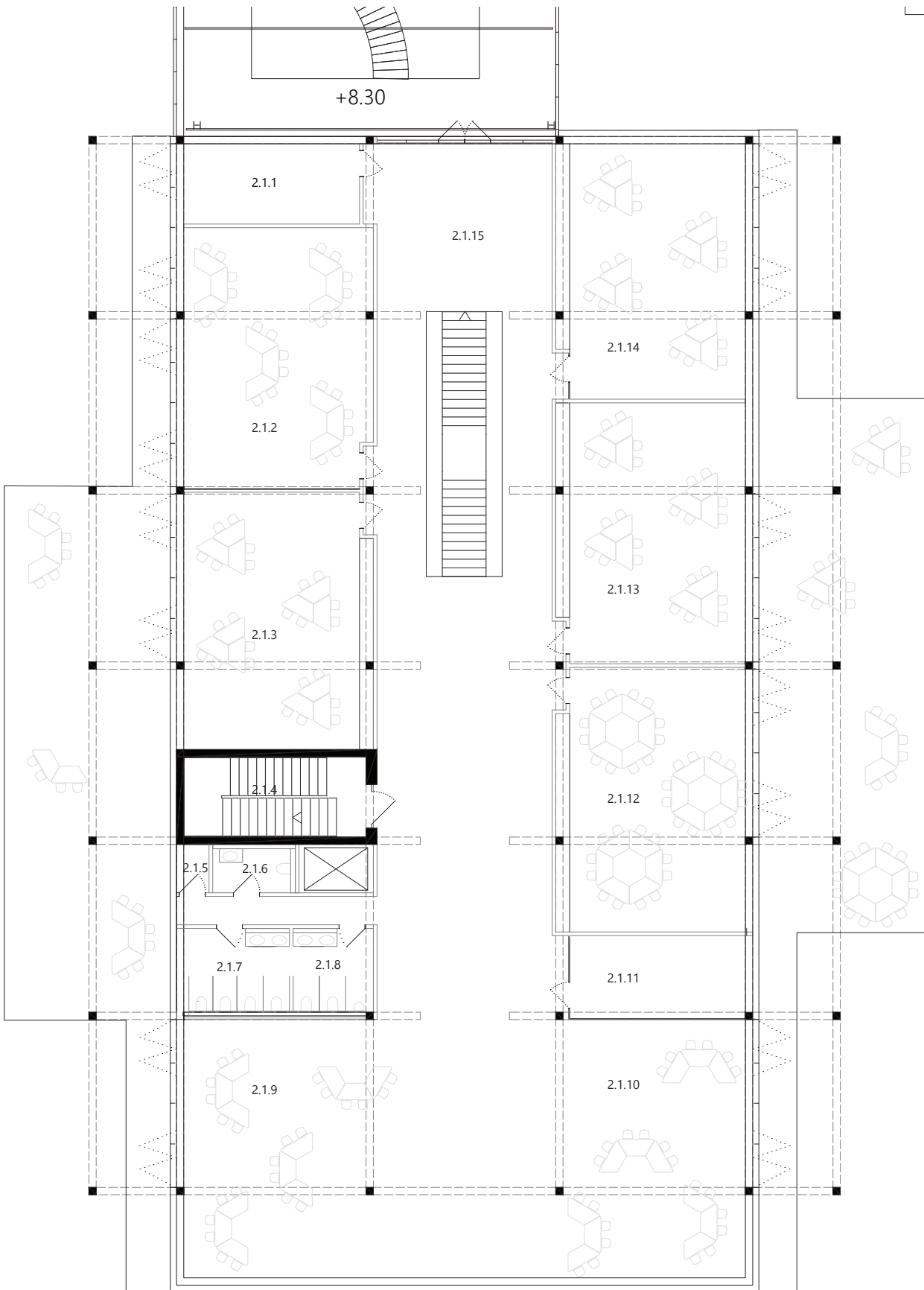
SECOND FLOOR





SECOND FLOOR PART A		AREA m ²
2.1.1	Teacher's room	20
2.1.2	Classroom	57
2.1.3	Classroom	57
2.1.4	Emergency staircase	16
2.1.5	Storage	2
2.1.6	Teacher's toilir	4
2.1.7	Girls toilet	11
2.1.8	Boys toilet	8
2.1.9	Open learning area	57
2.1.10	Open learning area	57
2.1.11	Quiet room	20
2.1.12	Group room	57
2.1.13	Classroom	57
2.1.14	Classroom	57
2.1.15	Pause room	57
		-

FIG 5.12



SECOND FLOOR PART B		AREA m ²
2.2.1	Teacher's room	20
2.2.2	Classroom	57
2.2.3	Classroom	57
2.2.4	Emergency staircase	16
2.2.5	Storage	2
2.2.6	Teacher's toiler	4
2.2.7	Girls toilet	11
2.2.8	Boys toilet	8
2.2.9	Open learning area	57
2.2.10	Open learning area	57
2.2.11	Quiet room	20
2.2.12	Group room	57
2.2.13	Classroom	57

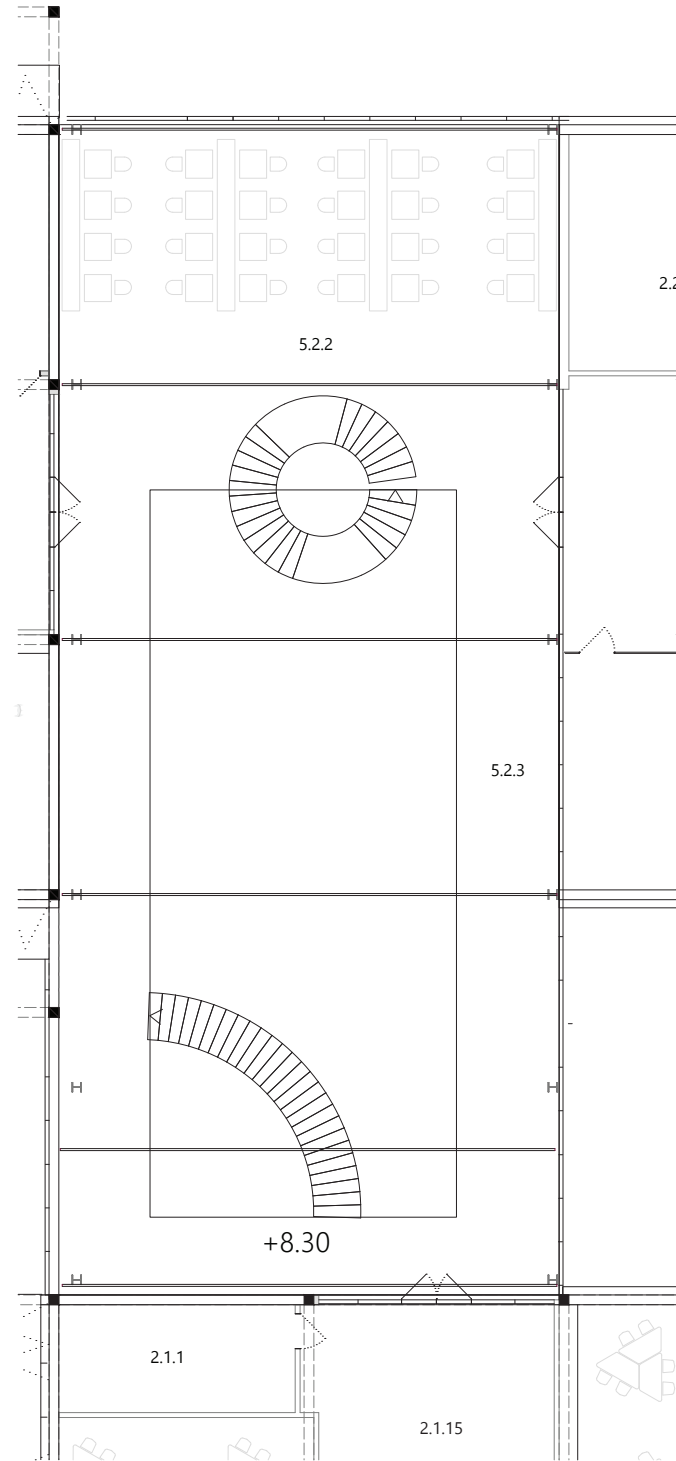
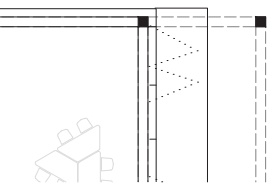
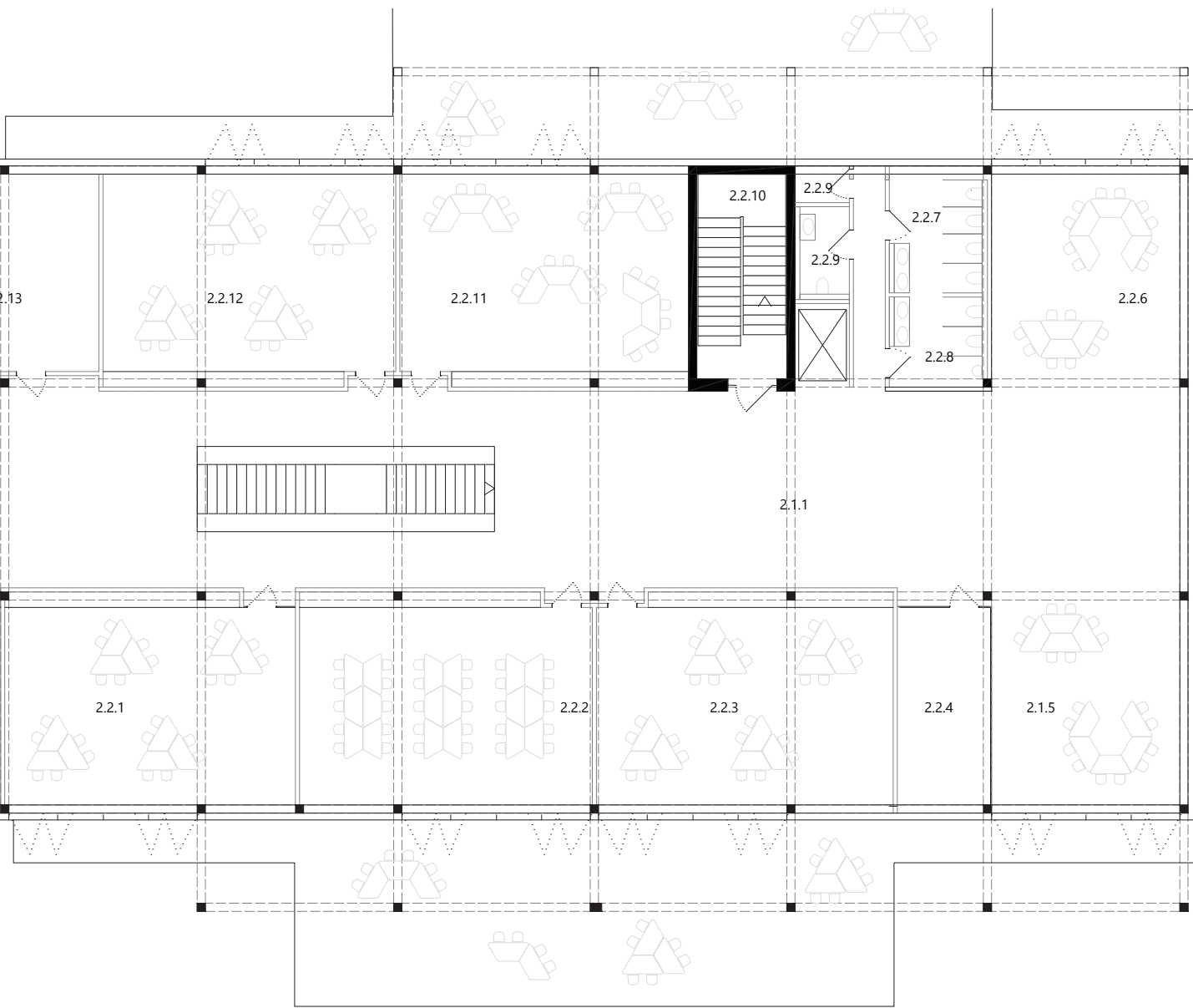


FIG 5.13



SECOND FLOOR PART C

		AREA m ²
3.2.1	Classroom	57
3.2.2	Classroom	57
3.2.3	Group room	57
3.2.4	Quiet room	20
3.2.5	Open area	57
3.2.6	Pausen area	-
3.2.7	Open area	57
3.2.8	Girls toilet	11
3.2.9	Boys toilet	8
3.2.10	Storage	2
3.2.11	Teacher's toilet	4
3.2.12	Emergency staircase	16
3.2.13	Classroom Classroom	57
3.2.14	Classroom	57
3.2.15	Teacher's room	20
5.2.2	Learning zone, computers	83

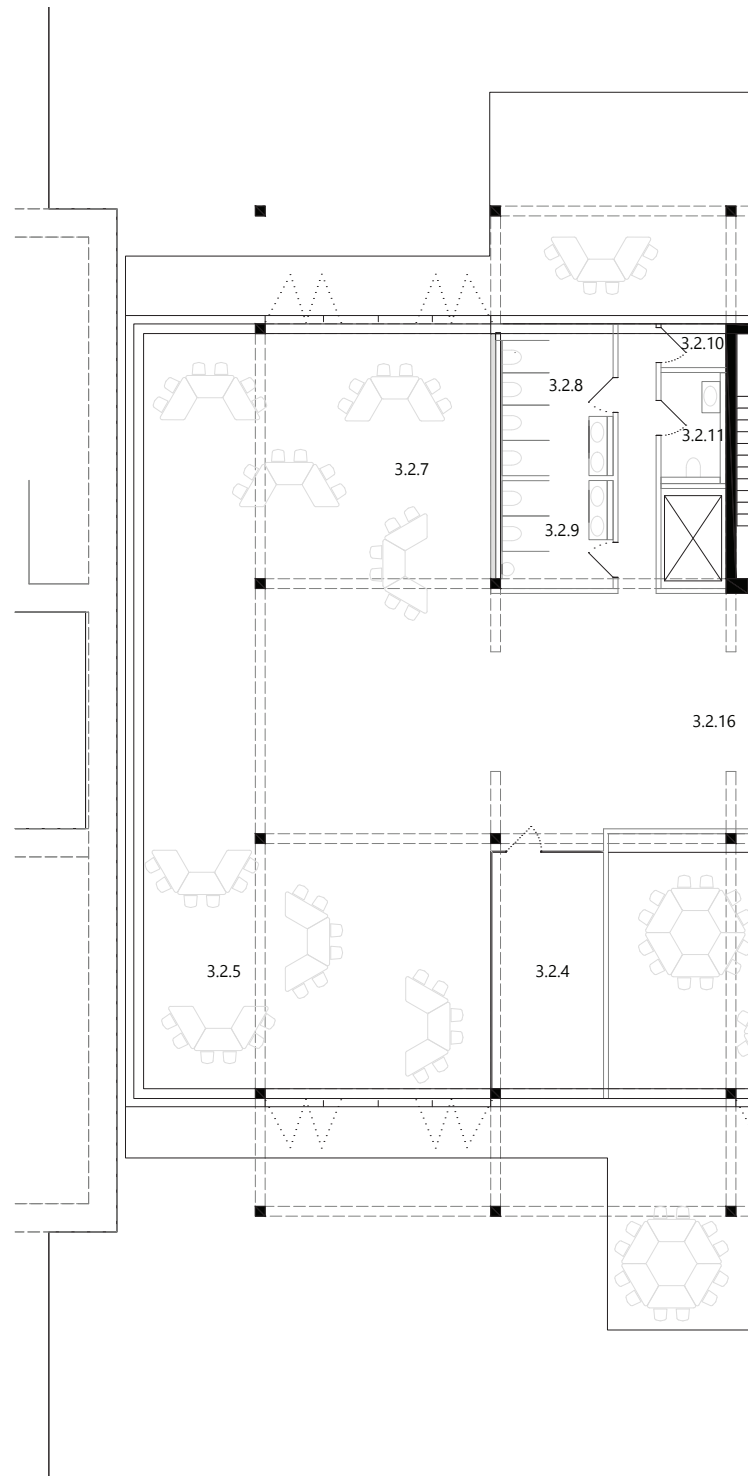
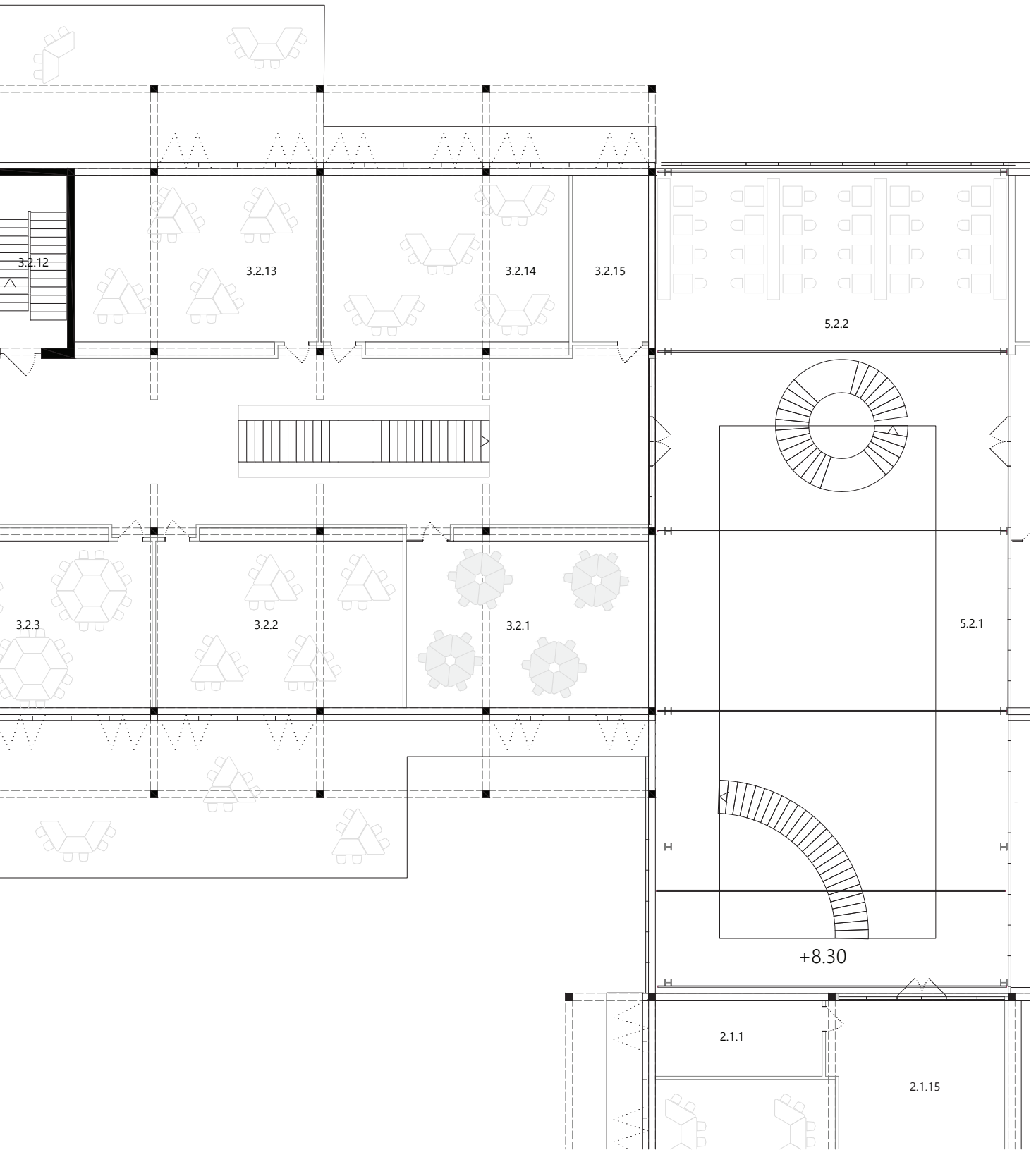


FIG 5.14



THIRD FLOOR

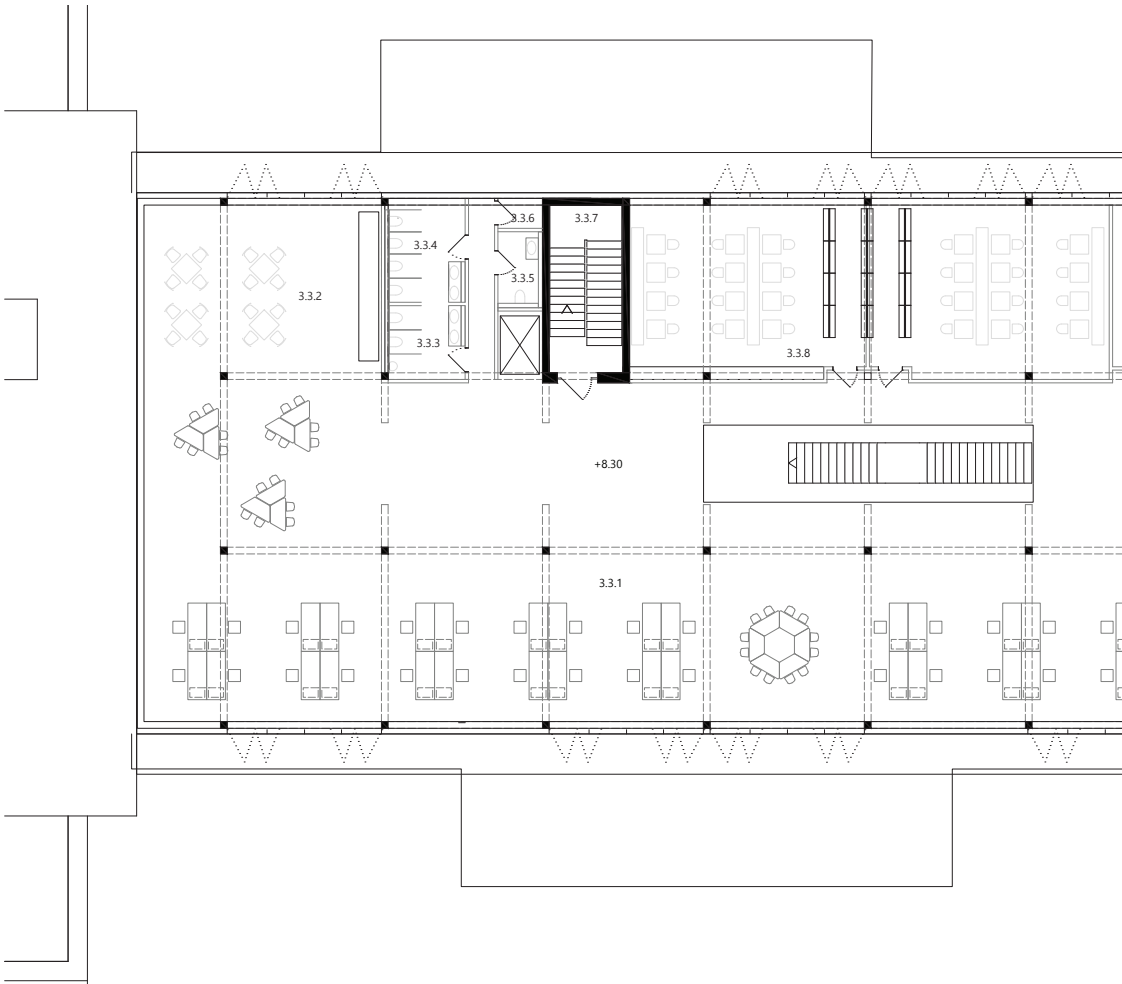
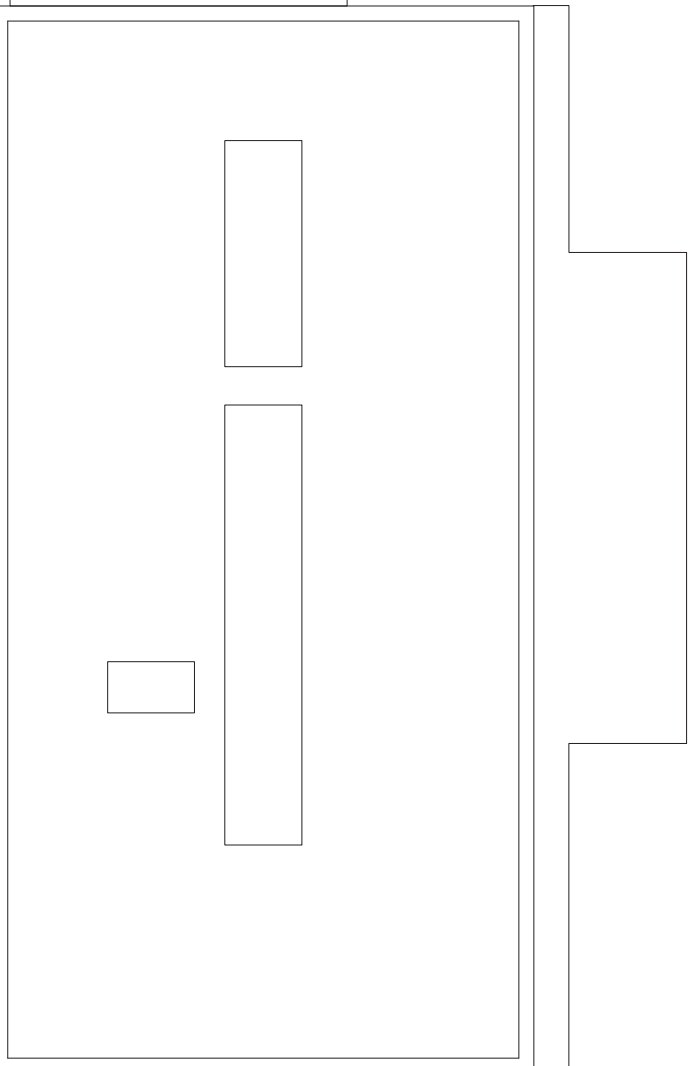
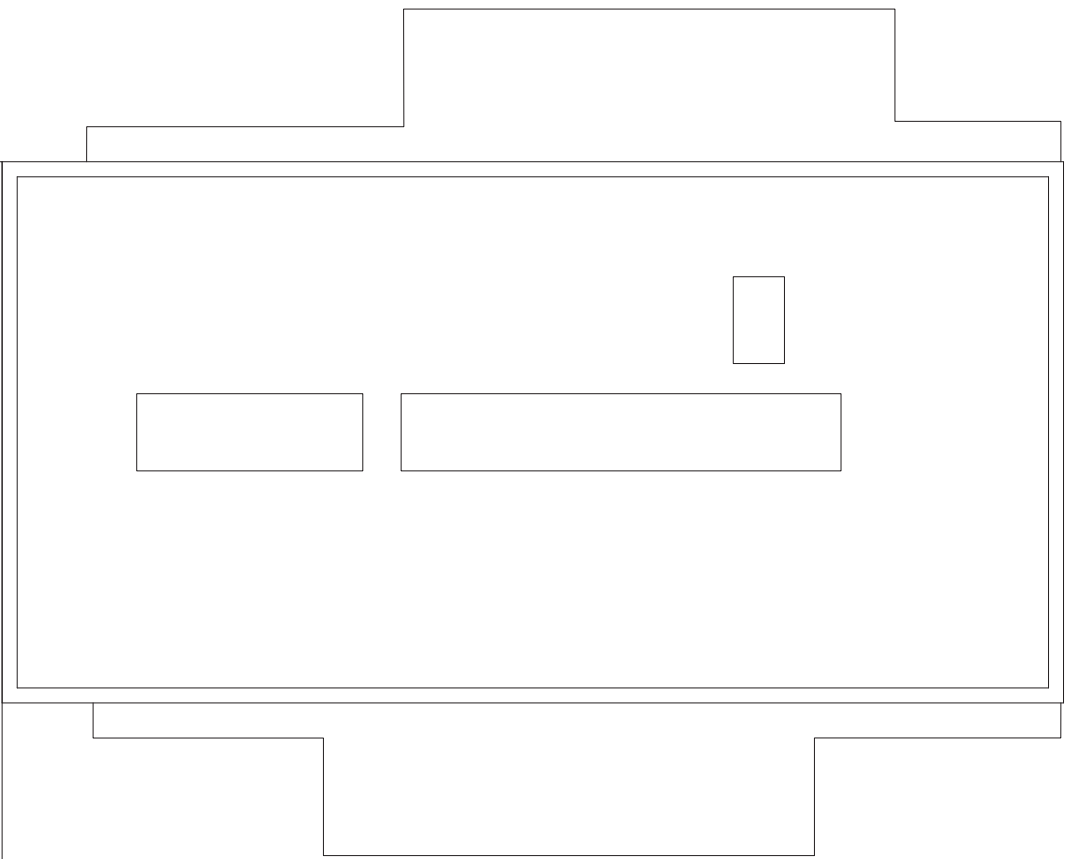
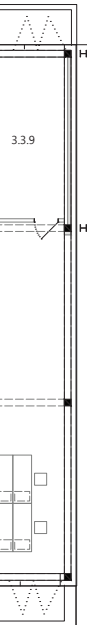


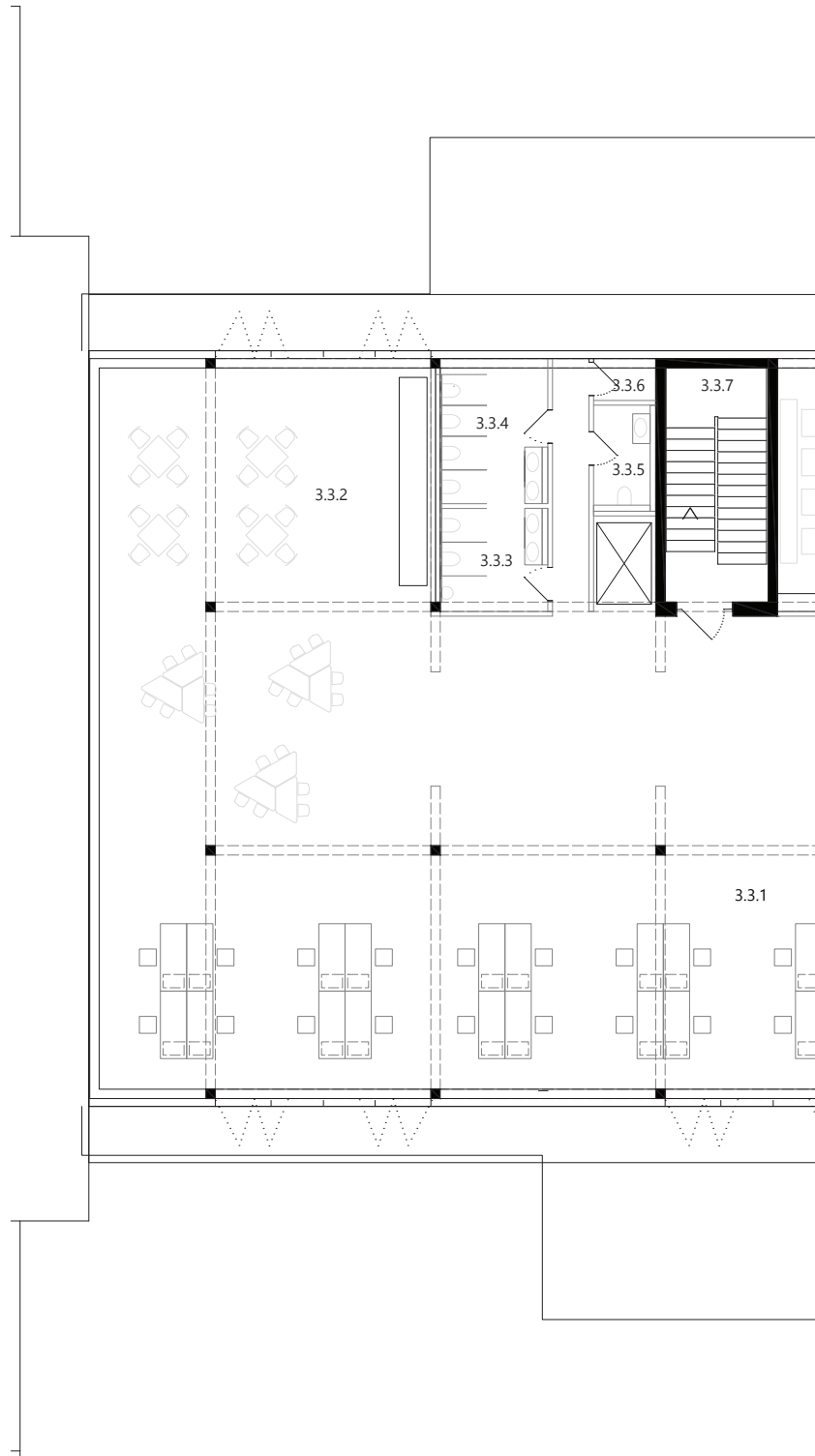
FIG 5.15



THIRD FLOOR PART C

AREA m²

3.3.1	Open space	422
3.3.2	Tee kitchen	58
3.3.3	boys toilet	8
3.3.4	girls toilet	11
3.3.5	teacher's toilet	4
3.3.6	storage	2
3.3.7	staircase	16
3.3.8	computer room	92
3.3.9	quiet room	18



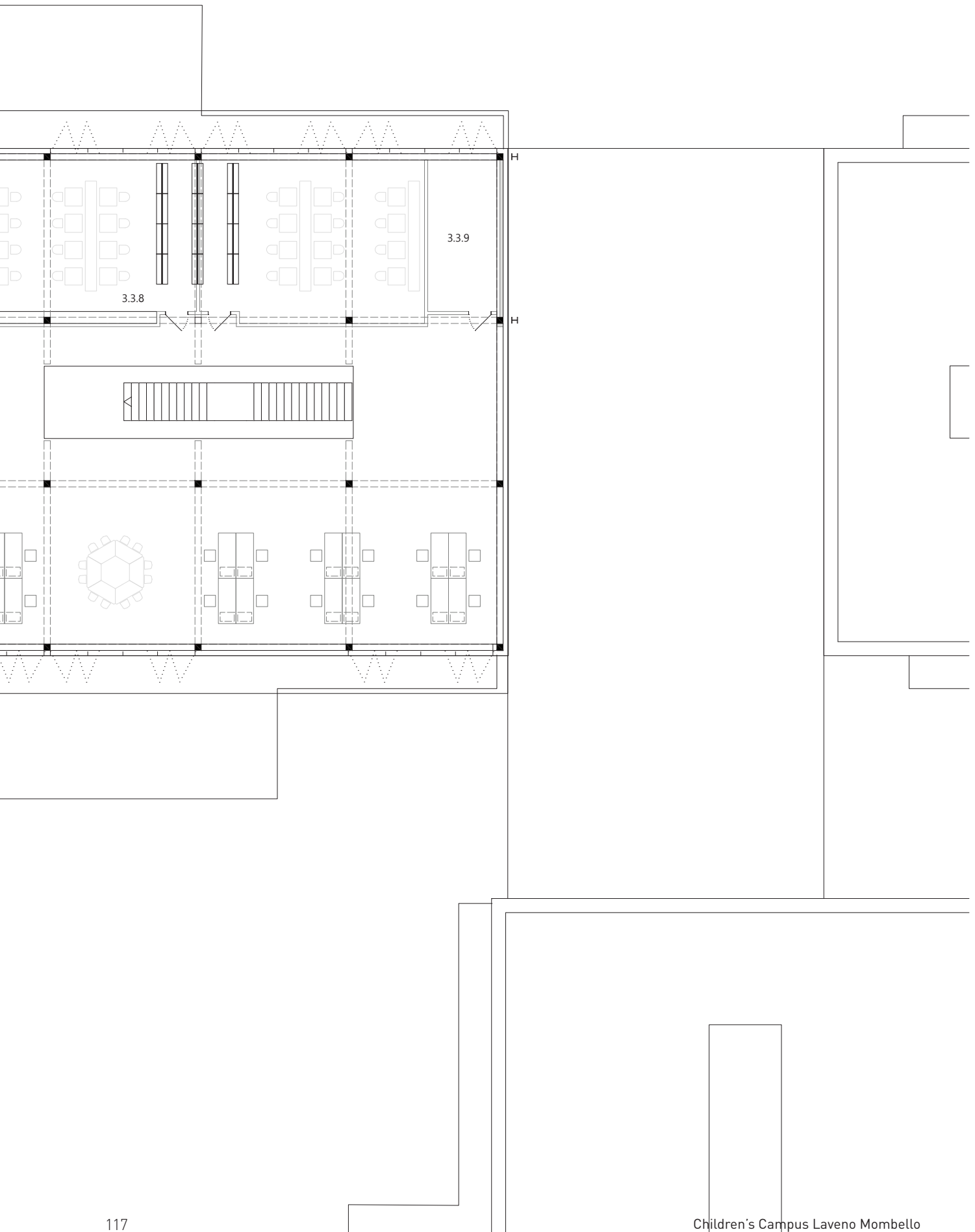
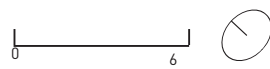
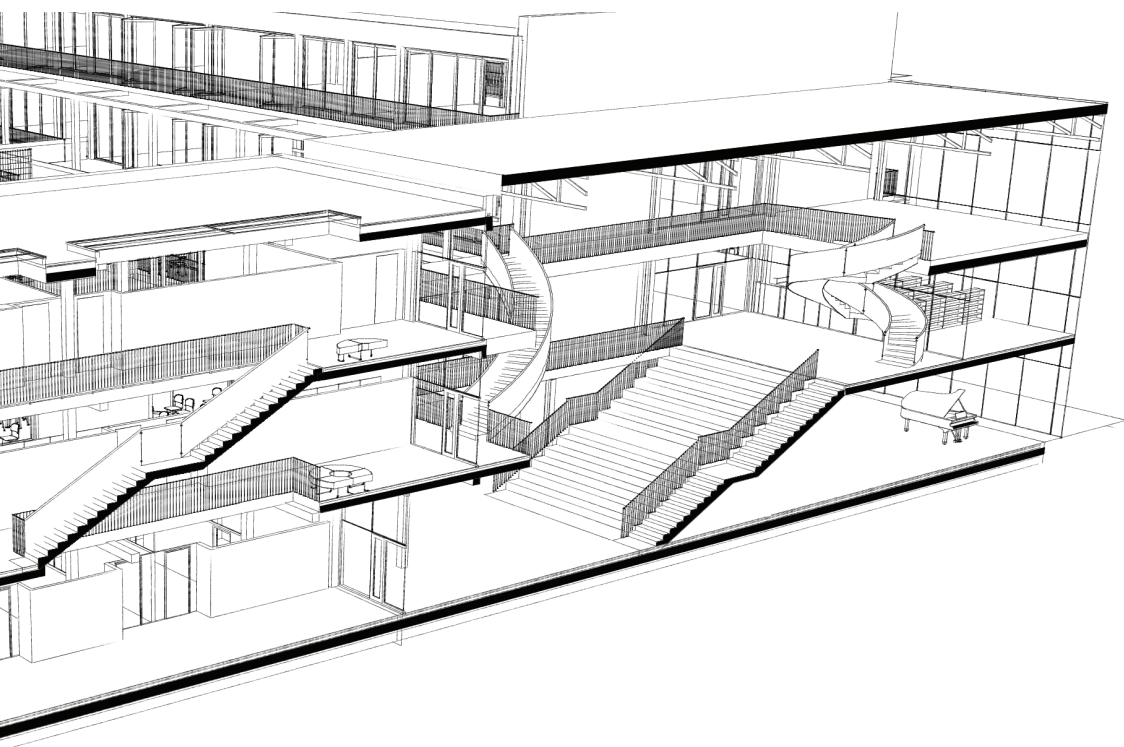




FIG 5.17



SECTION 2

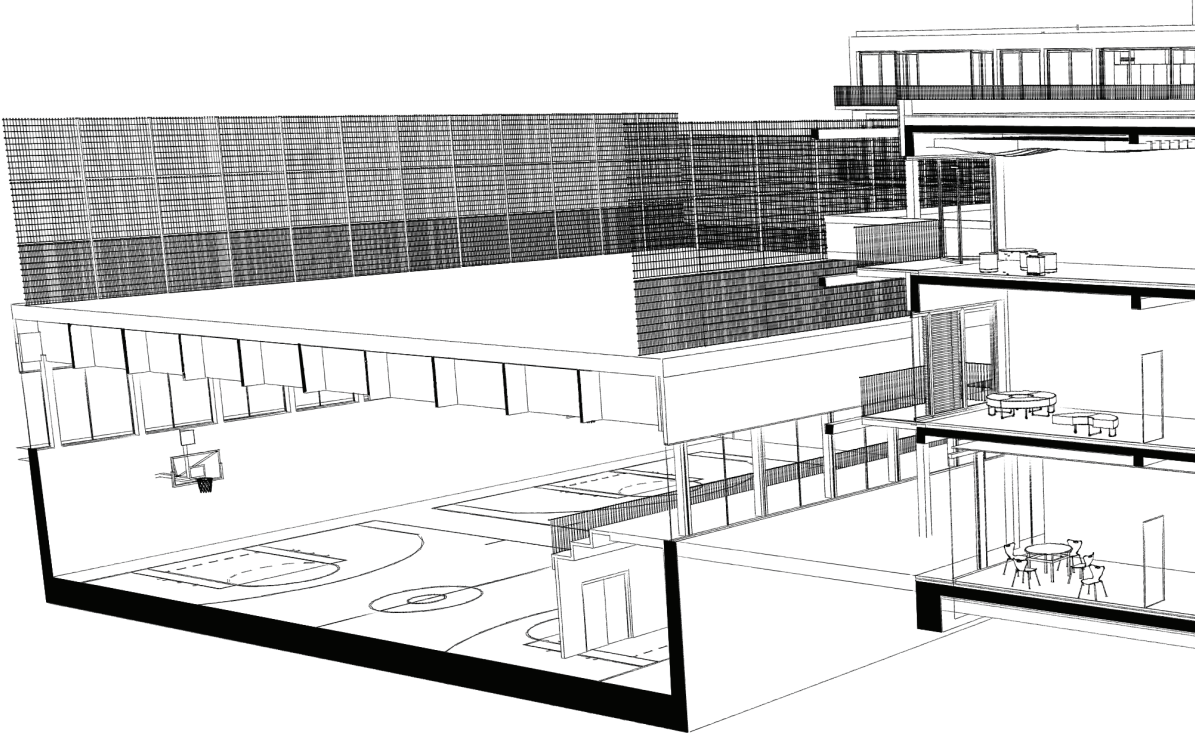


FIG 5.18



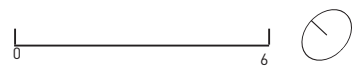
+15.40

+11.60

+7.80

+4.00

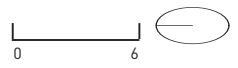
0.00



ELEVATION 1

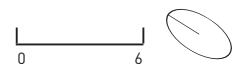


FIG 5.19



ELEVATION 2

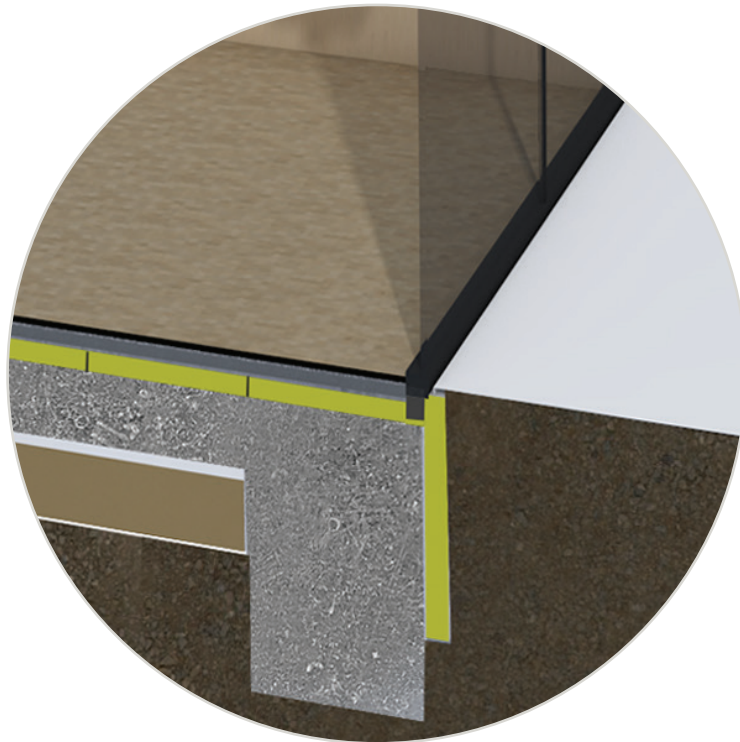






5.2

3D FACADE SECTION AND DETAILS

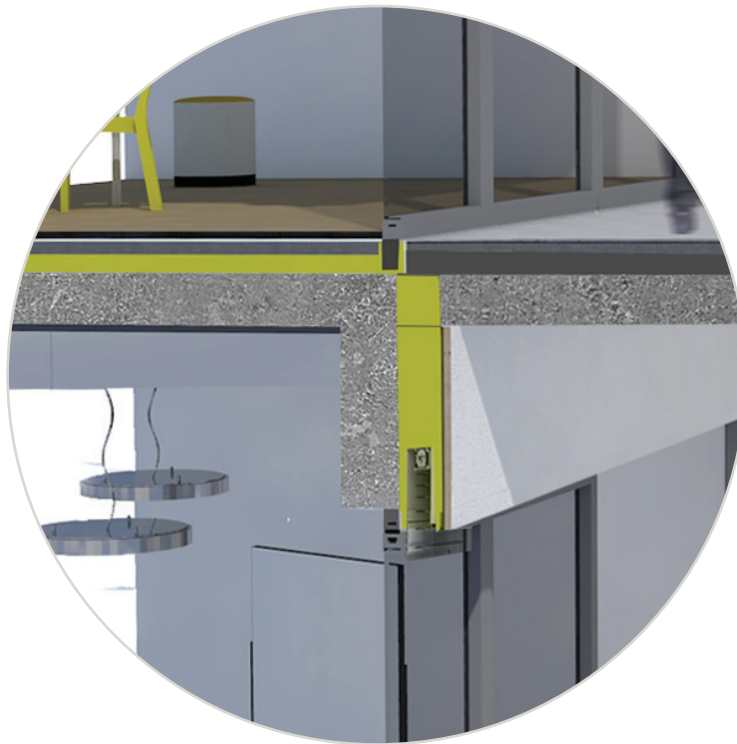


DETAIL A

F01

Flooring/Belag	5
Screed/Estrich	50
Isolation/Trennlage	
Supporting plate/Trägerplatte	
Double floor plate/Doppelbodenplatte	
hollow insulated/hohlraum gedämmt	70
insulation/abdichtung	
Floor panel/Bodenplatte	300
granular sub-base /Sauberkeitsschicht	
Gravel/Rollierung	

FIG 5.22



DETAIL B

F03	
Flooring/Belag	5
barrier layer/EP-Sperrschicht	
gradient concrete/ Gefällebeton	
Reinforced concrete/Stahlbetondecke	230

DETAIL B

F02	
Flooring/Belag	5
Screed/Estrich	50
Isolation/Trennlage	
Sound insulation/Trittschalldämmung	70
Reinforced concrete/Stahlbetondecke	230

FIG 5.23



DETAIL C

R01		
gravel cover/Kiesdeckung	5	
2 lagige Abdichtung/ 2- barrier layer		
thermal insulation/Wärmedämmung	200	
vapor barrier on separation layer/ Dampfsperre auf trennschicht		
Reinforced concrete/Stahlbetondecke	230	
suspended ceiling/ Abgehängte Decke		

DETAIL C

W01		
plaster/Putz	10	
Reinforced concrete/Stahlbetonwand	25	
vapor layer/Abdichtung		
thermal insulation/Wärmedämmung	200	
Facade with air layer/Vorgehängtefassade	50	

FIG 5.24

5.3 3D VISUALISATIONS

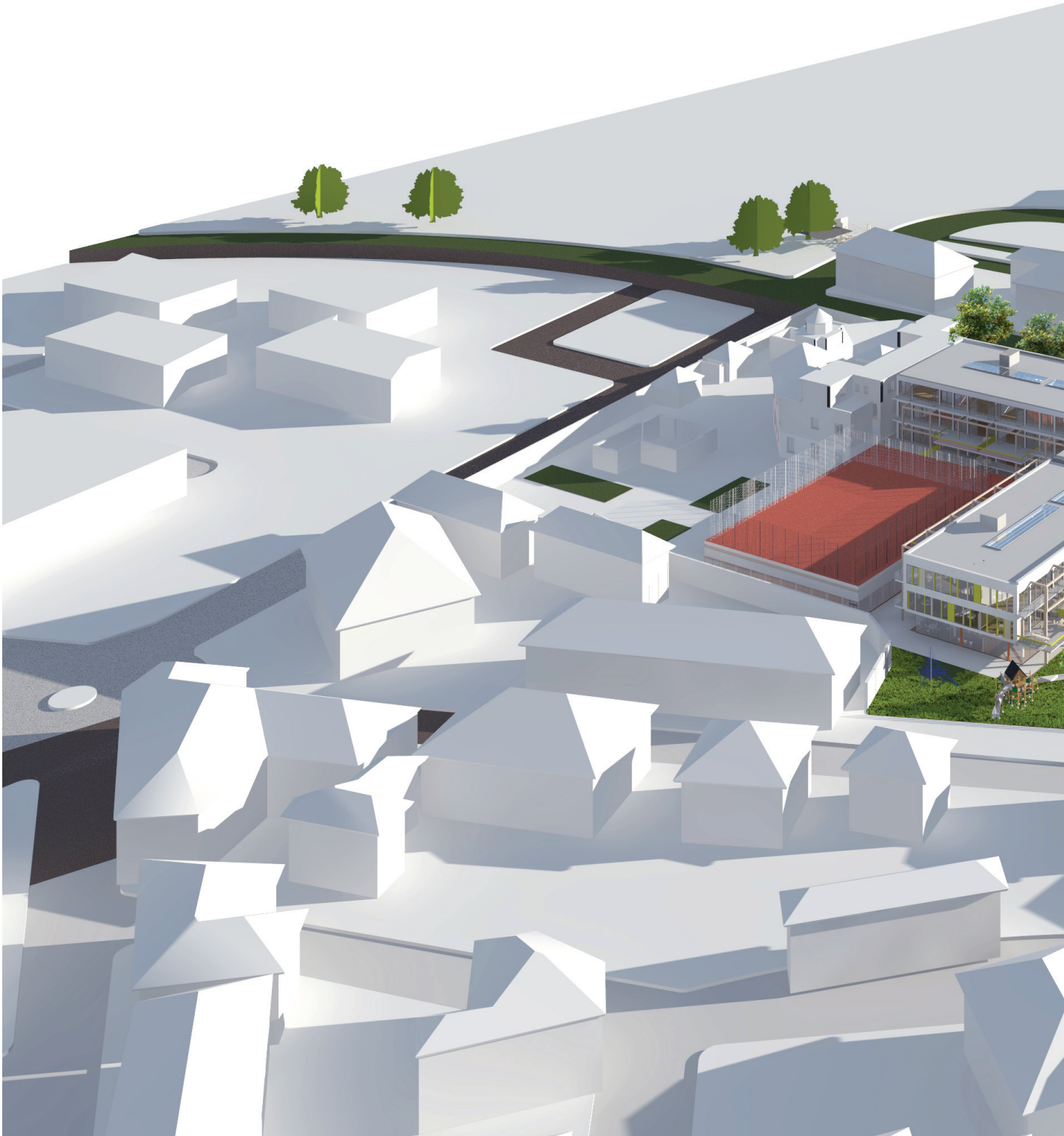


FIG 5.25

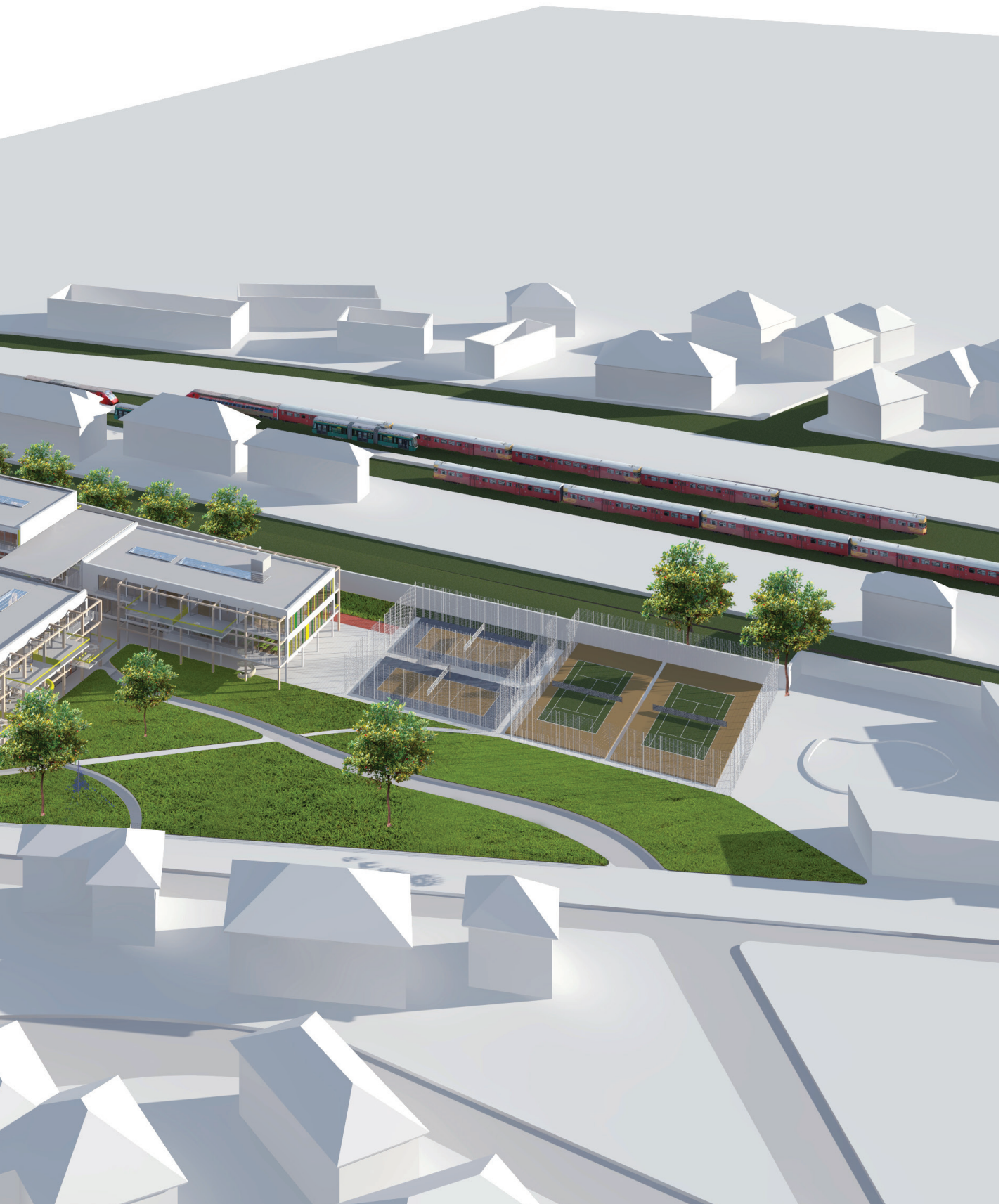




FIG 5.26





FIG 5.27





FIG 5.28



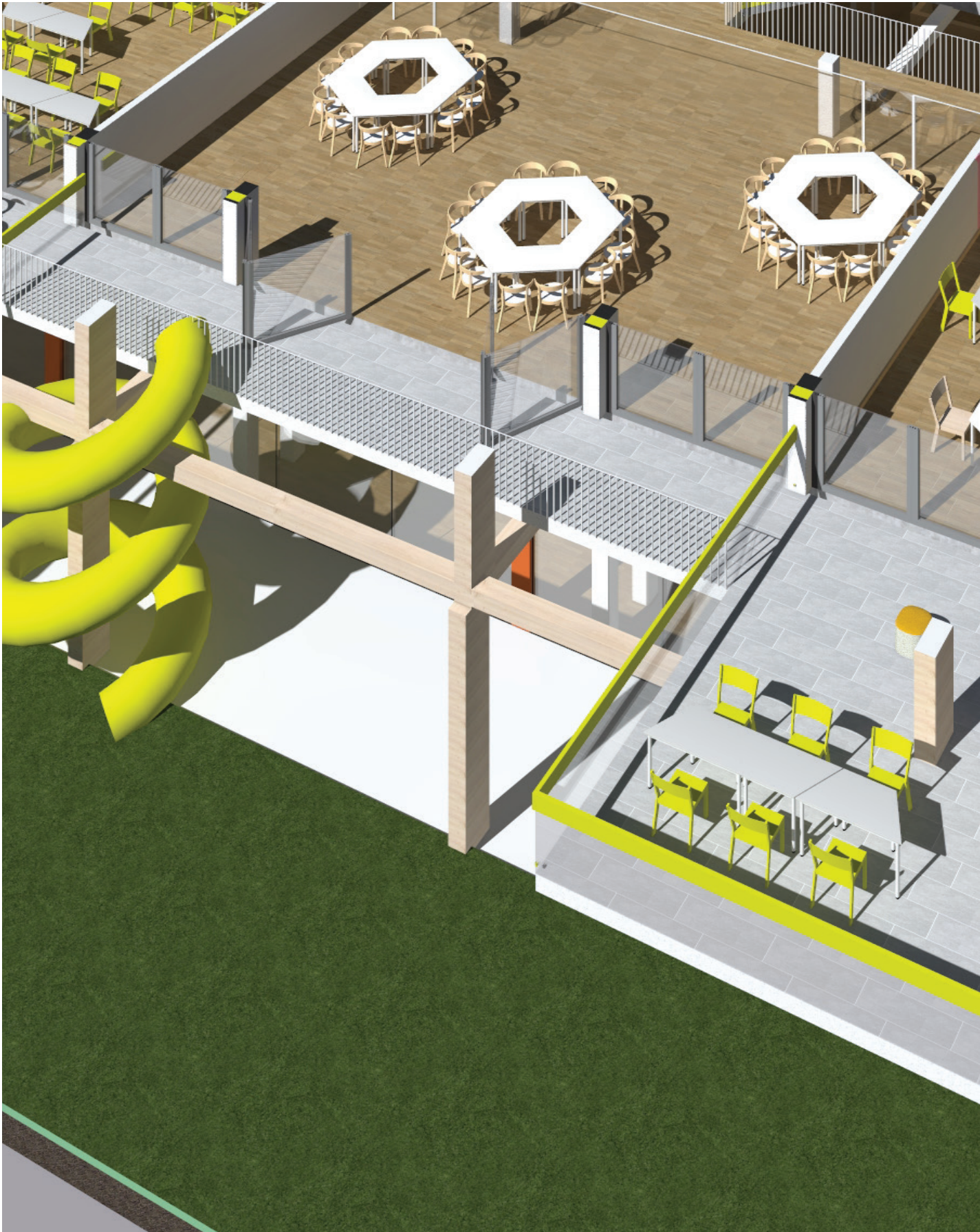


FIG 5.29





FIG 5.30





FIG 5.31





FIG 5.32





FIG 5.34



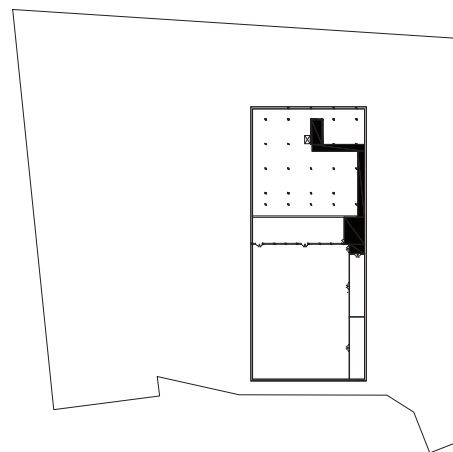
ASSESSMENT



PLOT 20 266m²



OPEN SPACE 18 015m²



CIRCULATION AREA 121m²

BASEMENT

PLOT

OPEN SPACE (OS)

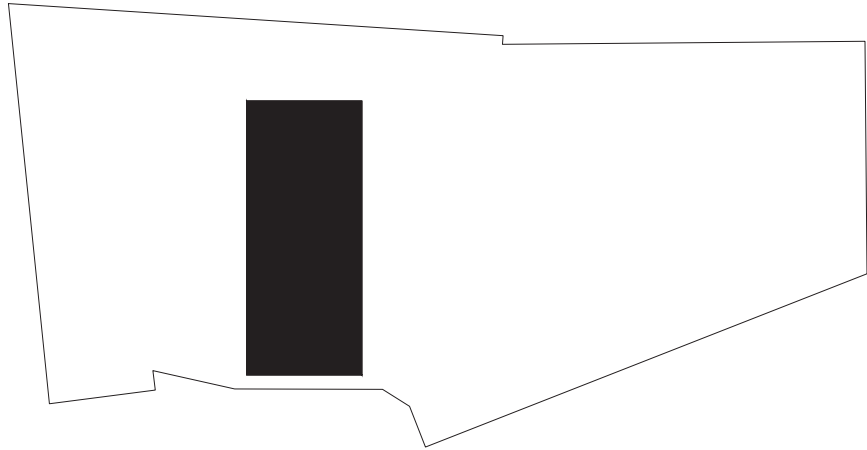
GROSS FLOOR AREA(GFA)

BASEMENT

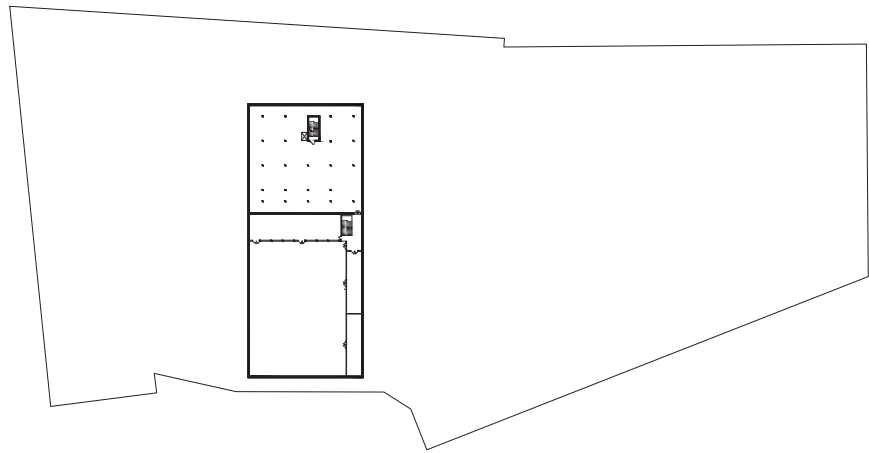
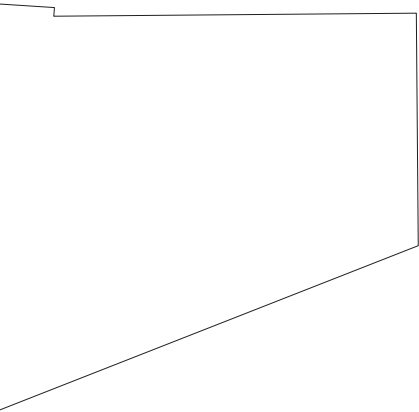
USABLE AREA (UA)

CIRCULATION AREA (CIA)

CONSTRUCTION AREA (CA)



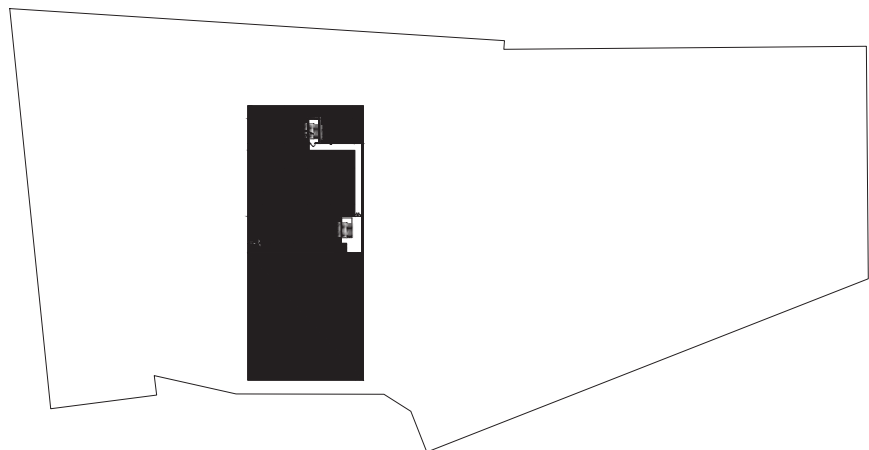
GROSS FLOOR AREA 2211m²



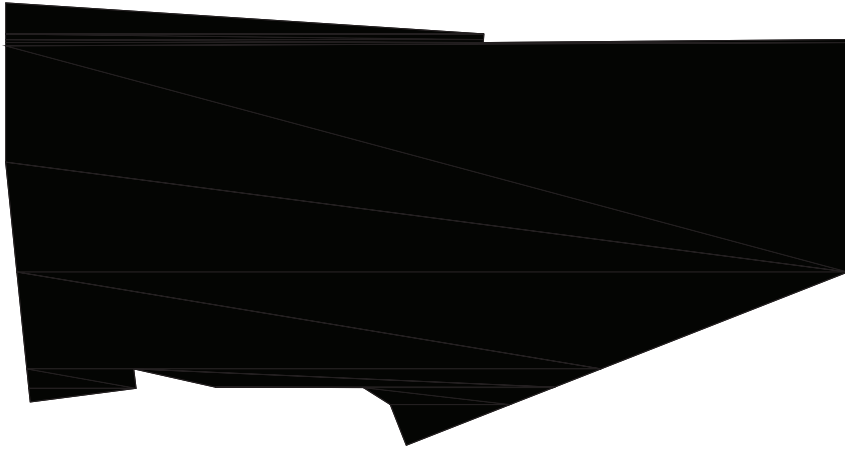
CONSTRUCTION FLOOR AREA 100m²

m ²	%
20 226	100%
18015	89%
2211	11%

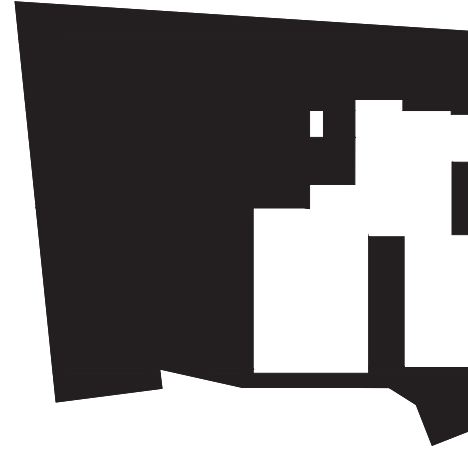
m ²	GFA %
2 010	90%
121	6%
80	4%



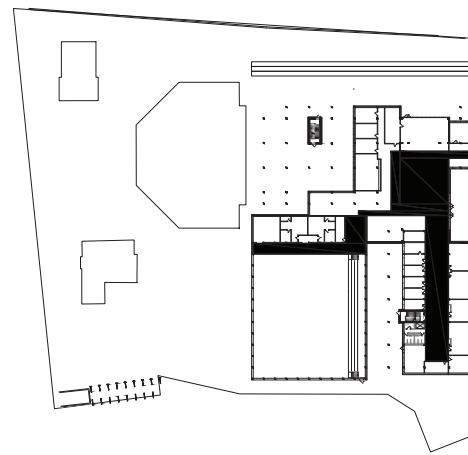
USABLE AREA 2656m²



PLOT 20 266m²



OPEN SPACE 16 831m²



CIRCULATION AREA 690m²

GROUND FLOOR

PLOT

OPEN SPACE (OS)

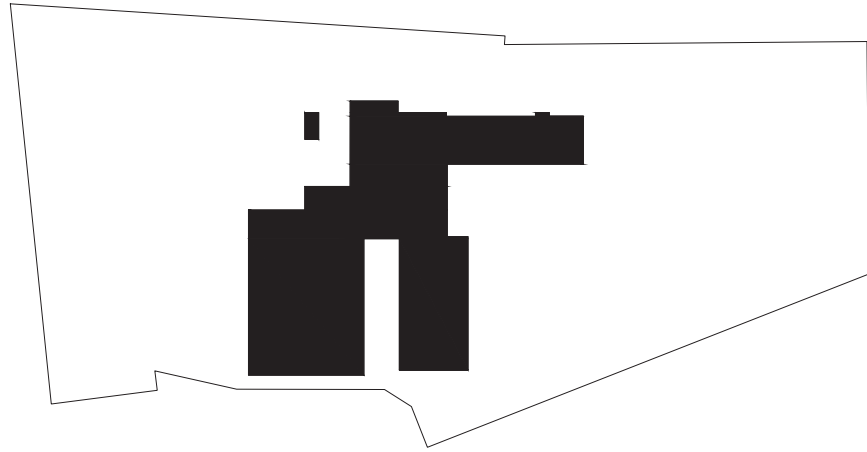
GROSS FLOOR AREA(GFA)

GROUND FLOOR

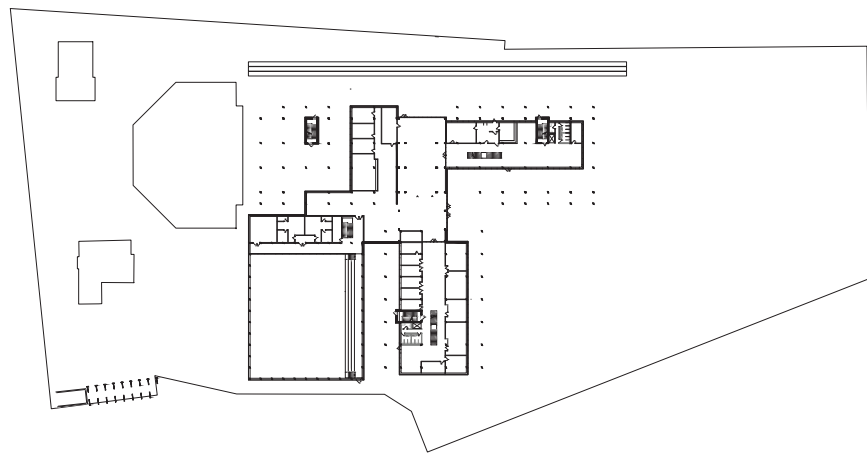
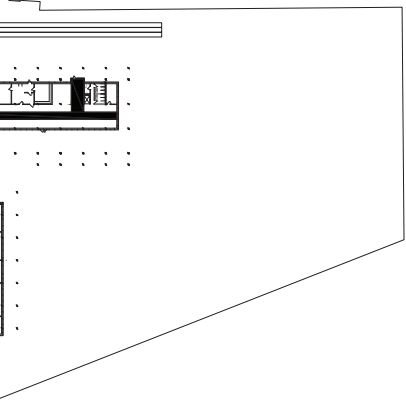
USABLE AREA (UA)

CIRCULATION AREA (CIA)

CONSTRUCTION AREA (CA)



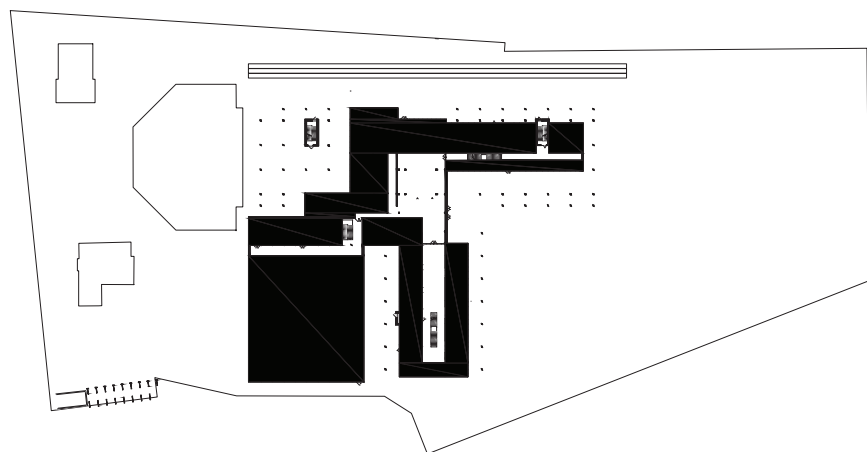
GROSS FLOOR AREA 3395m²



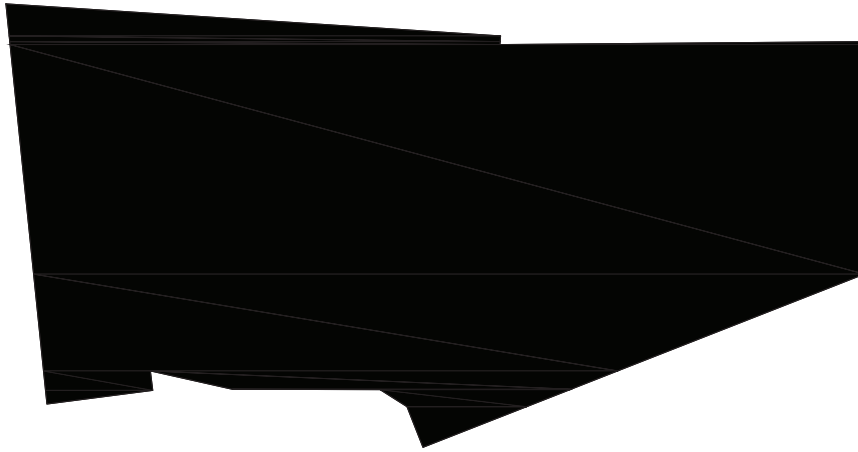
CONSTRUCTION FLOOR AREA 125m²

m ²	%
20 226	100%
16 831	83%
3395	17%

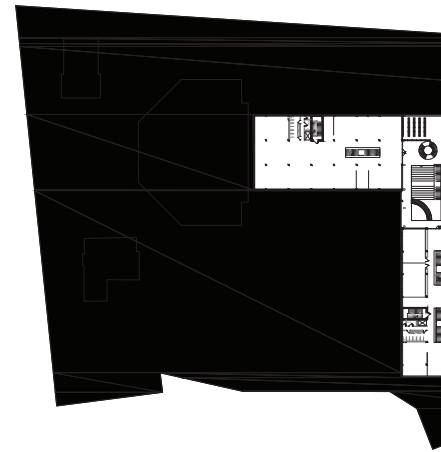
m ²	GFA %
2580	76%
712	20%
100	4%



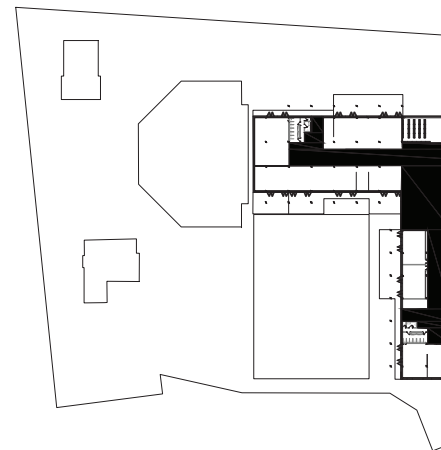
USABLE AREA 2580m²



PLOT 20 266m²



OPEN SPACE 17 486m²



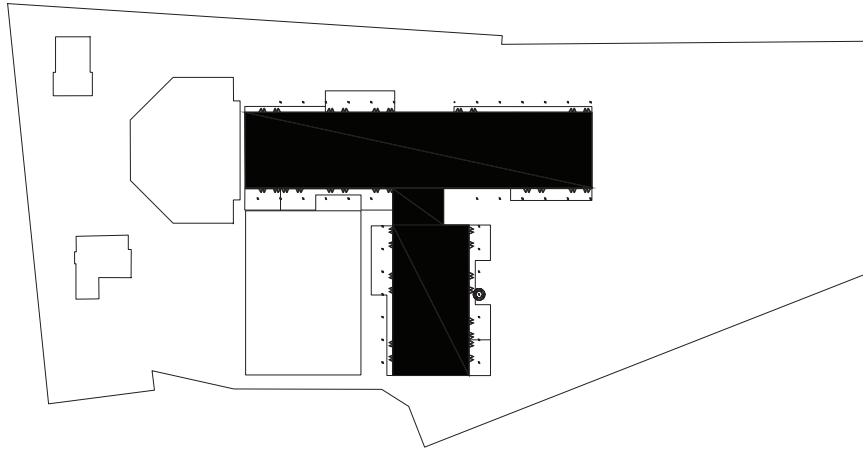
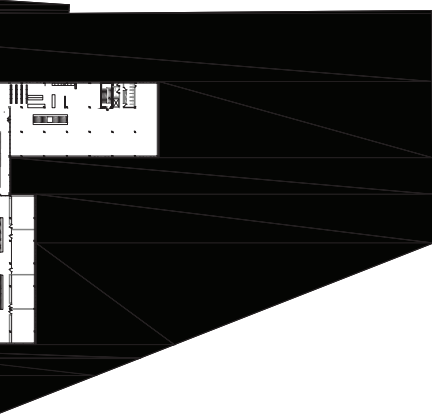
CIRCULATION AREA 884m²

FIRST FLOOR

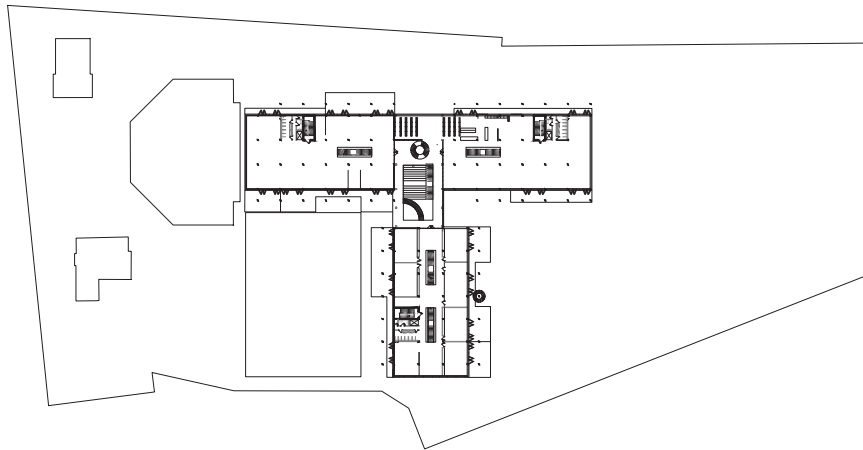
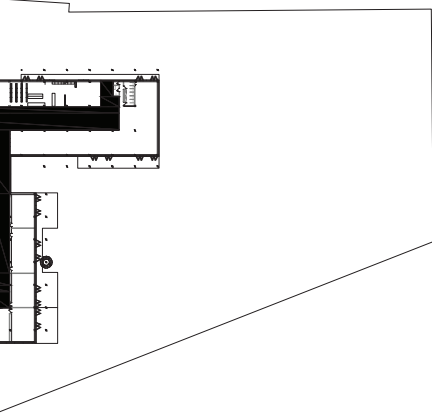
PLOT
 OPEN SPACE (OS)
 GROSS FLOOR AREA(GFA)

FIRST FLOOR

USABLE AREA (UA)
 CIRCULATION AREA (CIA)
 CONSTRUCTION AREA (CA)



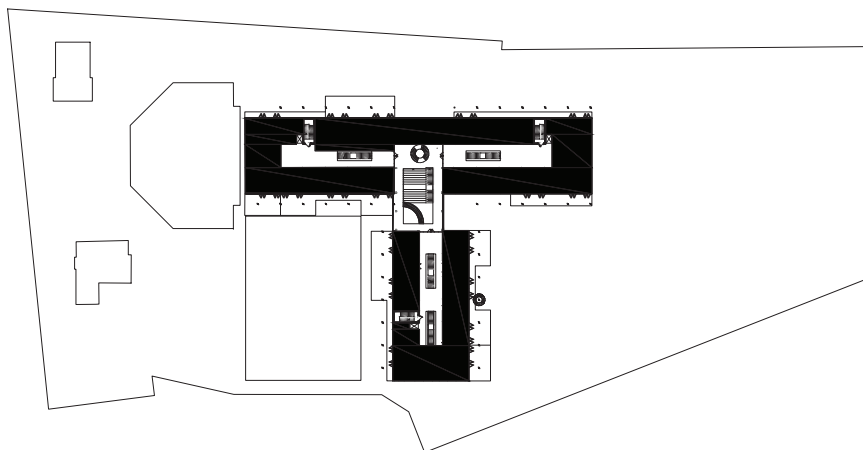
GROSS FLOOR AREA 2780m²



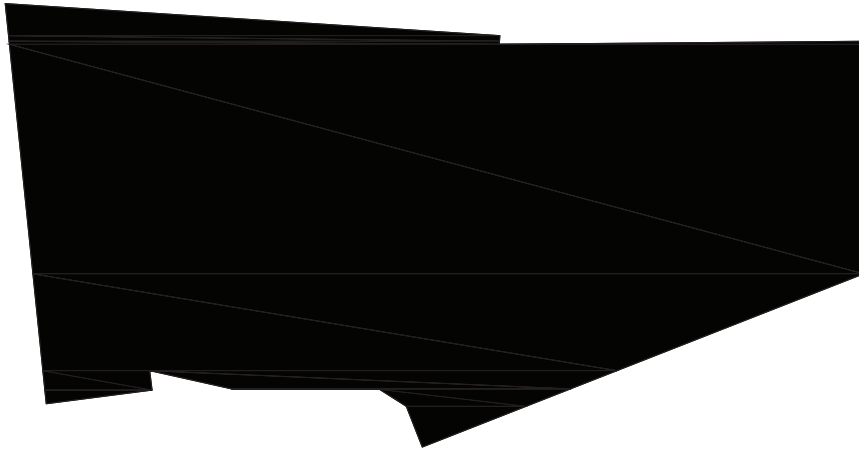
CONSTRUCTION FLOOR AREA 95m²

m ²	%
20 226	100%
17 486	86%
2780	14%

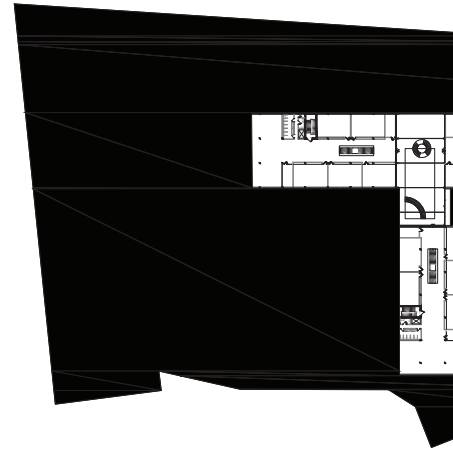
m ²	GFA %
1801	65%
884	31%
95	4%



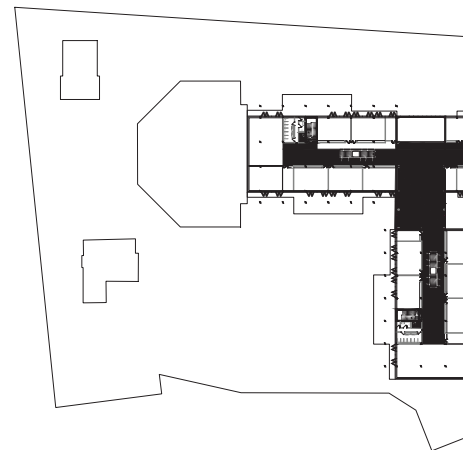
USABLE AREA 1801m²



PLOT 20 266m²



OPEN SPACE 17 486m²



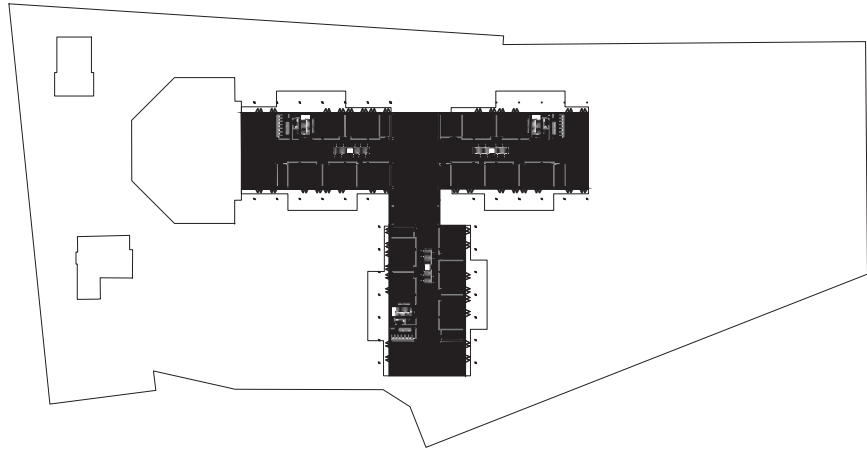
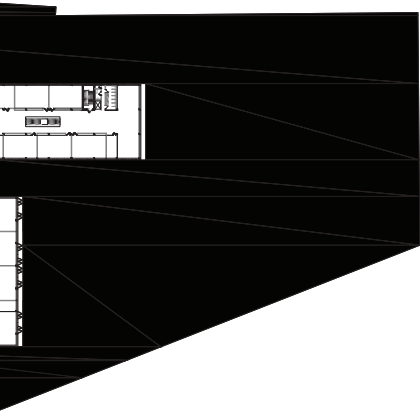
CIRCULATION AREA 884m²

SECOND FLOOR

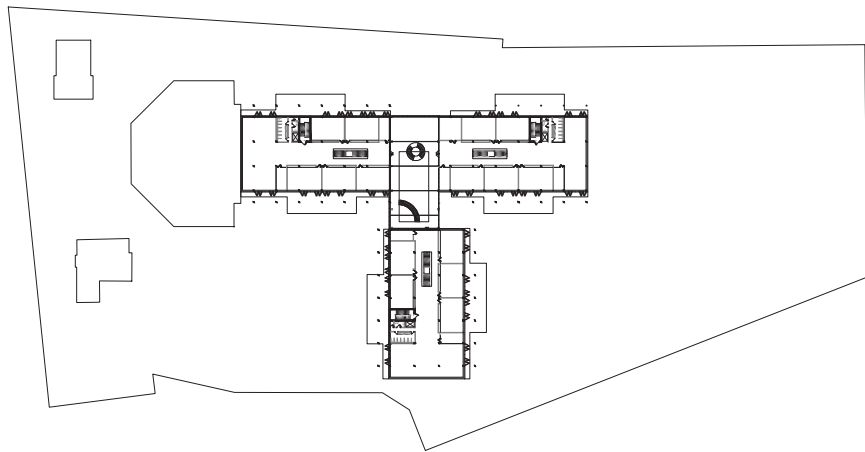
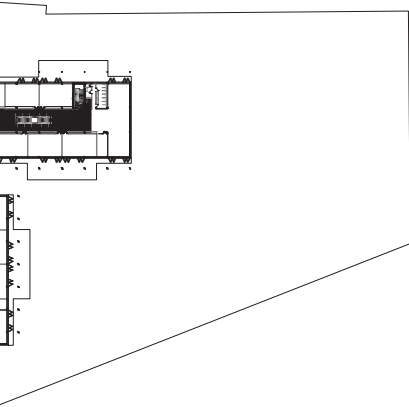
PLOT
OPEN SPACE (OS)
GROSS FLOOR AREA(GFA)

SECOND FLOOR

USABLE AREA (UA)
CIRCULATION AREA (CIA)
CONSTRUCTION AREA (CA)



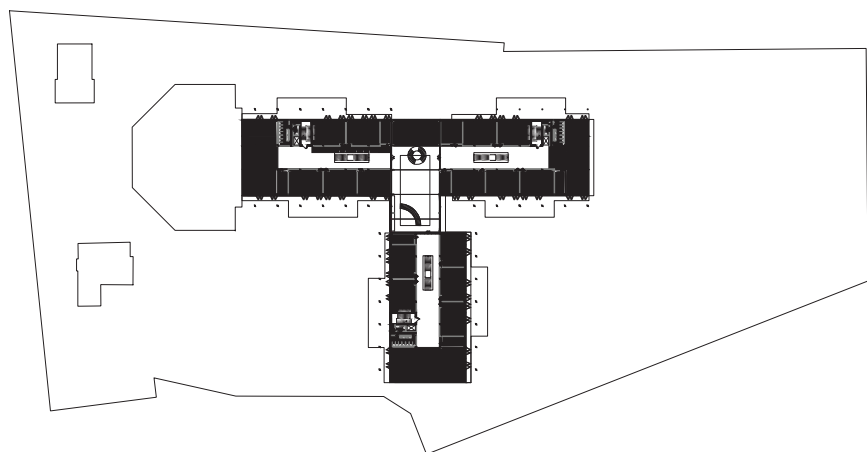
GROSS FLOOR AREA 2780m²



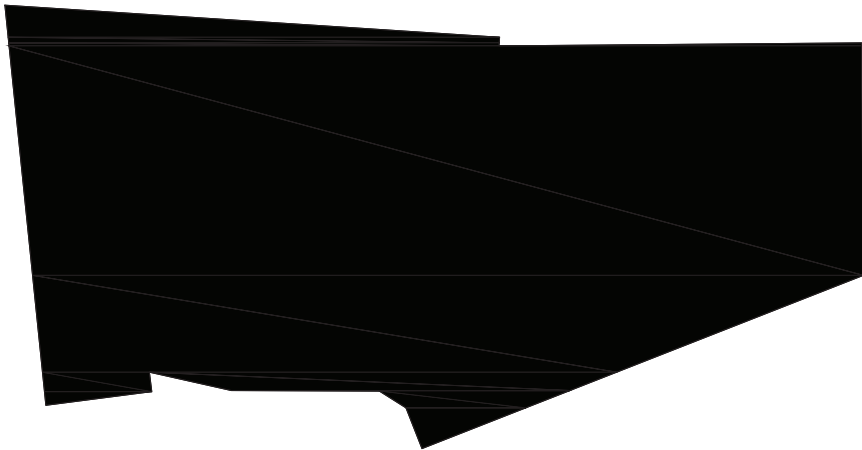
CONSTRUCTION FLOOR AREA 95m²

m ²	%
20 226	100%
17 486	86%
2780	14%

m ²	GFA %
1801	65%
884	31%
95	4%



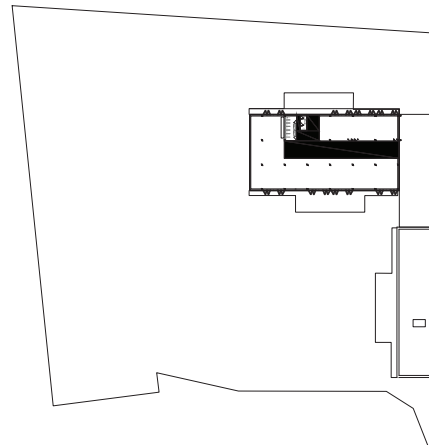
USABLE AREA 1801m²



PLOT 20 266m²



OPEN SPACE 19 428m²



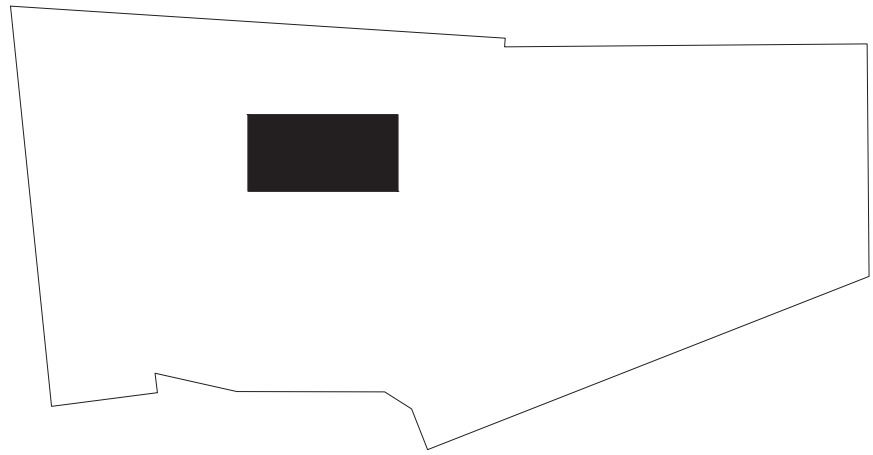
CIRCULATION AREA 171m²

THIRD FLOOR

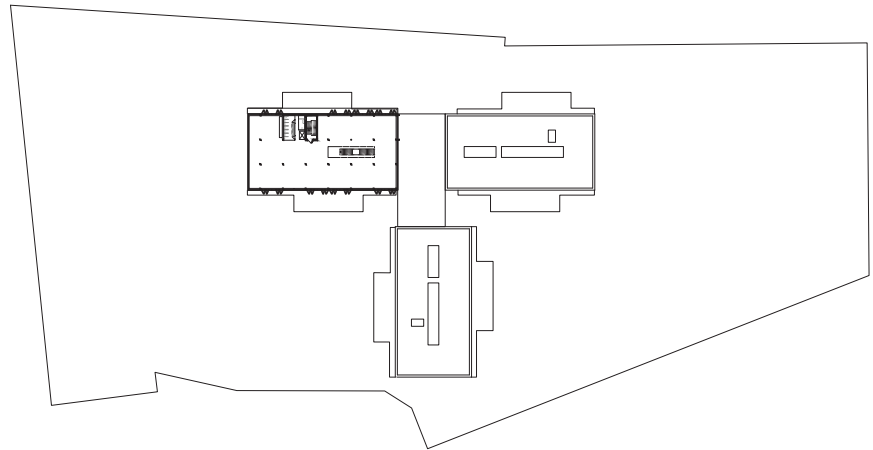
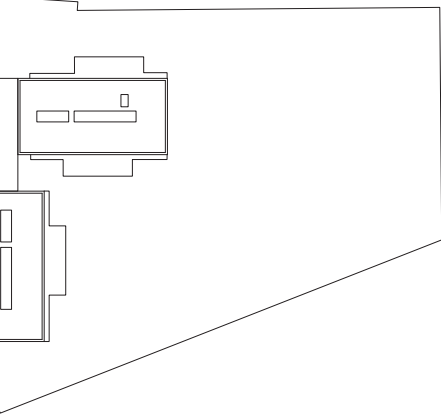
PLOT
OPEN SPACE (OS)
GROSS FLOOR AREA(GFA)

THIRD FLOOR

USABLE AREA (UA)
CIRCULATION AREA (CIA)
CONSTRUCTION AREA (CA)

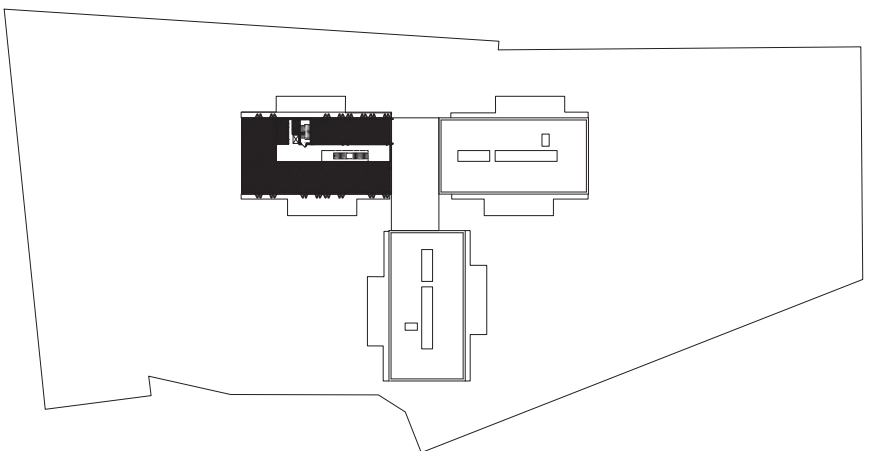


GROSS FLOOR AREA 798m²



CONSTRUCTION FLOOR AREA 24m²

m ²	%
20 226	100%
19 428	96%
798	4%



m ²	GFA %
601	75%
171	21%
26	4%

USABLE AREA 601m²

CONCLUSIO

ILLUSTRATION DIRECTORY

FIG.01

www.archiproducts.com/en/news/the-children-s-bedroom-becomes-a-magic-world_66459

FIG.02

www.archiproducts.com/en/news/the-children-s-bedroom-becomes-a-magic-world_66459

FIG.03

map 1, Katarzyna Dembinska, Photoshop

FIG.04

map 2, Katarzyna Dembinska www.google.at+photoshop

FIG.05

map 3, Katarzyna Dembinska www.youngarchitects.com+photoshop

FIG.06

map 4, Katarzyna Dembinska www.google.at+photoshop

FIG.07

collage, Katarzyna Dembinska, Photoshop

FIG.08

https://www.123rf.com/photo_71873025_laveno-mombello-located-in-an-natural-gulf-on-the-east-bank-of-lake-maggiore-in-the-provinces-of-var.html

FIG.09

FIG. 10

map 5, Katarzyna Dembinska, www.google.at+Photoshop

FIG. 11-15

www.cercalatuascuola.istruzione.it/cercalatuascuola/ricerca/risultati?rapida=laveno+mombello&tipoRicerca=RAPIDA&gidf=1

FIG. 16-21

<https://www.tuttitalia.it/lombardia/31-laveno-mombello/statistiche/popolazione-eta-scolastica-2018/>

FIG. 22-24

<http://www.st-al.com/archive/verbano/scheda.html>

FIG. 25-30

Photos from competition package, www.youngarchitects.com

FIG. 31

Plan of existing plot, www.youngarchitects.com

FIG. 32

<https://rhema-scotland.com/childrens-church>

FIG. 33

www.archiproducts.com/en/news/the-children-s-bedroom-becomes-a-magic-world_66459

FIG. 34

<https://playtimepreschool.net/kid-left-png/>

FIG. 35-36

https://www.baunetz.de/meldungen/Meldungen-Gemeinschaftsschule_in_Konstanz_von_Broghammer_Jana_Wohlleber_5254740.html

FIG. 37-38

<http://ebook.technal.com/en/school-ary-payet/>

FIG. 39-40

<https://freshome.com/2014/05/14/playful-kukumuku-restaurant-vilnius-specially-designed-families-kids/>

FIG. 41

<https://www.journaldequebec.com/2018/06/18/faire-la-classe-en-plein-air>

FIG. 42

<https://www.facebook.com/edutopia/photos/a.108957049916/10156373941264917/?type=1&theater>

FIG. 43-44

<https://inhabitat.com/japanese-kindergarten-features-awesome-green-courtyard-where-kids-can-run-and-climb/km-kindergarten-by-hibinosekkei-youji-no-shiro-%0a03/>

FIG. 45

masterplan development, Katarzyna Dembinska, Archicad, Artlantis, Indesign

FIG. 46

building development, Katarzyna Dembinska, Archicad, Artlantis

FIG. 47-49

sketches with different colours for the design, Katarzyna Dembinska, Archicad, Artlantis

FIG. 50

Perspective 1-masterplan functions, Katarzyna Dembinska, Archicad,Artlantis,Indesign, Photoshop

FIG. 51

Perspective 2, Katarzyna Dembinska, Archicad,Artlantis,Indesign, Photoshop

FIG. 52

Perspective 3-connections, Katarzyna Dembinska, Archicad,Artlantis,Indesign, Photoshop

FIG. 53

Perspective 4, Katarzyna Dembinska, Archicad,Indesign, Photoshop

FIG. 54

furniture system, Katarzyna Dembinska, Archicad,Artlantis,Indesign, Photoshop

FIG. 55

furniture classrooms, Katarzyna Dembinska, Archicad,Artlantis,Indesign, Photoshop

REFERENCES

- ¹ <https://www.youngarchitectscompetitions.com/competition/kids-factory#download>
- ² <https://en.wikipedia.org/wiki/Laveno-Mombello>
- ³ <https://www.enchantingitaly.com/regions/lombardia/varese/laveno-mombello.htm>
- ⁴ *Kid's Factory-eng.pdf*, competition flyer from <http://www.youngarchitectscompetitions.com>
- ⁵ *Kid's Factory-eng.pdf*, competition flyer from <http://www.youngarchitectscompetitions.com>
- ⁶ <http://www.st-al.com/archive/verbano/scheda.html>
- ⁷ *Kid's Factory-eng.pdf*, competition flyer from <http://www.youngarchitectscompetitions.com>
- ⁸ <https://www.italymagazine.com/featured-story/back-school-10-things-you-should-know-about-italian-school-system>
- ⁹ <https://www.justlanded.com/english/Italy/Italy-Guide/Education/Pre-school-education>
- ¹⁰ <https://www.edutopia.org/article/architecture-ideal-learning-environments>
- ¹¹ <https://www.learningliftoff.com/the-surprising-benefits-of-outdoor-learning/>
- ¹¹ <https://www.learningliftoff.com/the-surprising-benefits-of-outdoor-learning/>
- ¹² *Schools for the future, Design proposals from Architectural psychology, Rotraut Walden, 2015*

PLAN DIRECTORY

FIG. 5.01

Masterplan, Katarzyna Dembinska, Archicad 21

FIG. 5.02

Basement, Katarzyna Dembinska, Archicad 21

FIG. 5.03

Ground floor, Katarzyna Dembinska, Archicad 21

FIG. 5.04

Ground floor part A, Katarzyna Dembinska, Archicad 21

FIG. 5.05

Ground floor part B, Katarzyna Dembinska, Archicad 21

FIG. 5.06

Ground floor part C, Katarzyna Dembinska, Archicad 21

FIG. 5.07

First floor, Katarzyna Dembinska, Archicad 21

FIG. 5.08

First floor part A, Katarzyna Dembinska, Archicad 21

FIG. 5.09

First floor part B, Katarzyna Dembinska, Archicad 21

FIG. 5.10

First floor part C, Katarzyna Dembinska, Archicad 21

FIG. 5.11

Second floor, Katarzyna Dembinska, Archicad 21

FIG. 5.12

Second floor part A, Katarzyna Dembinska, Archicad 21

FIG. 5.13

Second floor part B, Katarzyna Dembinska, Archicad 21

FIG. 5.14

Second floor part C, Katarzyna Dembinska, Archicad 21

FIG. 5.15

Third floor, Katarzyna Dembinska, Archicad 21

FIG. 5.16

Third floor part A, Katarzyna Dembinska, Archicad 21

FIG. 5.17

Section A-A, Katarzyna Dembinska, Archicad 21

FIG. 5.18

Section B-B, Katarzyna Dembinska, Archicad 21

FIG. 5.19

Elevation 1, Katarzyna Dembinska, Archicad 21

FIG. 5.20

Elevation 2, Katarzyna Dembinska, Archicad 21

3D PERSPECTIVE DIRECTORY

FIG. 5.21

3D Section, Katarzyna Dembinska, Archicad 21, Artlantis, Photoshop

FIG. 5.22

3D Section-Detail A, Katarzyna Dembinska, Archicad 21, Artlantis, Photoshop

FIG. 5.23

3D Section- Detail B, Katarzyna Dembinska, Archicad 21, Artlantis, Photoshop

FIG. 5.24

3D Section- Detail C, Katarzyna Dembinska, Archicad 21, Artlantis, Photoshop

FIG. 5.25

Perspective 1, Katarzyna Dembinska, Archicad 21, Artlantis, Photoshop

FIG. 5.26

Perspective 2, Katarzyna Dembinska, Archicad 21, Artlantis, Photoshop

FIG. 5.27

Perspective 3, Katarzyna Dembinska, Archicad 21, Artlantis, Photoshop

FIG. 5.28

Perspective 4, Katarzyna Dembinska, Archicad 21, Artlantis, Photoshop

FIG. 5.29

Perspective 5, Katarzyna Dembinska, Archicad 21, Artlantis, Photoshop

FIG. 5.30

Perspective 6, Katarzyna Dembinska, Archicad 21, Artlantis, Photoshop

FIG. 5.31

Perspective 7, Katarzyna Dembinska,
Archicad 21, Artlantis, Photoshop

FIG. 5.32

Perspective 8, Katarzyna Dembinska,
Archicad 21, Artlantis, Photoshop

FIG. 5.33

Perspective 9, Katarzyna Dembinska,
Archicad 21, Artlantis, Photoshop

FIG. 5.34

Perspective 10, Katarzyna Dembinska,
Archicad 21, Artlantis, Photoshop

ONLINE RESSOURCES

https://volksschulbildung.lu.ch/-/media/Volksschulbildung/Dokumente/unterricht_organisation/planen_organisieren/schulbauten/empfehlungen_schulbauten.pdf?la=de-CHhttps://en.wikipedia.org/wiki/Education_in_Italy

<https://www.lifeinitaly.com/moving/school-system-in-italy>

<https://www.educations.com/study-guides/europe/study-in-italy/education-system-6657>

<https://www.vs.de/de/>

<http://www.mayrschulmoebel.at/>

<https://www.raumbausteine.de/>

https://hindernisfreie-architektur.ch/wp-content/uploads/2017/01/MB_062_Schulbauten.pdf

https://www.baunetz.de/meldungen/Meldungen-Schulbauten_ueberall_5280531.html

<https://www.schule.at/bildung/paedagogik-didaktik/detail/unterrichtsmethoden.html>

http://methodenpool.uni-koeln.de/frameset_uebersicht.htm

http://wwwg.uni-klu.ac.at/iff/schule/pfl/ws01/Seminar2_HP_Unterrichtsmethoden_BK.pdf

<https://de.wikipedia.org/wiki/Klassenunterricht>

<https://www.wien.gv.at/wirtschaft/auftraggeber-stadt/gebaeudemanagement/raumbuch-schule.html>

<https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrBgld&Gesetzesnummer=10000209>

<https://en.wikipedia.org/wiki/Laveno-Mombello>

<https://www.youngarchitectscompetitions.com/>

<https://www.forrefs.de/sekundarstufe/unterricht/unterricht-vorbereiten/laengerfristige-vorbereitung/unterricht-im-freien.html>

<https://www.silviva.ch/draussen-unterrachten/>

<https://www.erstenachhilfe.de/blog/Raus-aus-dem-Klassenzimmer-Die-Vorteile-vom-Unterricht-im-Freien>

<https://www.pentagonplay.co.uk/products/outdoor-classrooms>

<http://www.communityplaythings.com/resources/articles/2013/what-is-the-outdoor-classroom>

LITERATURE DIRECTORY

Rotraut Walden; Schools for the Future, Design Proposals from Architectural Psychology; 2015

Silvia Steuer; Schulprojekt Durchblick, Analyse, Konzept, Entwurf; 2008

Prue Chiles, Leo Care; Building Schools, Key Issues for Contemporary Design; 2015

Helga Öttl-Präkelt, Balkone und Terrassen, 2010, Köln



Dipl.-Ing.

KATARZYNA DEMBINSKA

ABOUT

born:01.09.1990, Warsaw
nationality: polish

CONTACT

- k.dembinska.arch@gmail.com
- www.linkedin.com/in/katarzyna-dembinska-776b71163
- www.xing.com/profile/Katarzyna_Dembinska/cv

EDV



LANGUAGE



EDUCATION

MASTER OF SCIENCE

- 2013-2019** **Technical University of Vienna, Austria**
Architecture
- 2014-2015** **Politecnica De Madrid, ETSAM, Spain**
Architecture (ERASMUS+)

BACHELOR OF SCIENCE

- 2009-2013** **Technical University of Bialystok, Poland**
Architecture and Urban Planning
- 2011-2012** **Technical University of Vienna, Austria**
Architectute (ERASMUS)
- 2009** **High school, Warsaw, Poland**
Matura

WORK EXPERIENCE

WORK EXPERIENCE

- 2017- today** **Architekt Neiger ZT GmbH, Vienna, Austria**
Project Coordinator, Junior Architect
full time
- 2015-2016** **Lakonis Archiekten ZT GmbH, Vienna, Austria**
Junior Architect & 3D designer
full time
- 2013-2015** **A01 Architects**
Internship
full time
- Oliver Sonnblighler ZT GmbH,**
3D designer, Junior Architect
- Dreer&Sommer, Vienna, Austria**
Site supervision, WU Campus WIEN
part time

KATARZYNA ANNA DEMBINSKA

Children's Campus Laveno Mombello, Design of an educational institution and future place for children of all ages.