



School for Children who are Blind  
Alexandria, Virginia

“Alone we can do so little. Together we can do so much”  
-Helen Keller

STUDENT ENTRANCE



# **SCHOOL FOR CHILDREN WHO ARE BLIND**

**ILKER ALAN**

THESIS SUBMITTED TO THE FACULTY OF THE VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF

**MASTER OF ARCHITECTURE  
IN  
ARCHITECTURE**

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ALEXANDRIA, VA

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# **SCHOOL FOR CHILDREN WHO ARE BLIND**

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## **ABSTRACT**

ARCHITECTURALLY, MY THESIS PROJECT IS A NEW TYPE OF DESIGN FOR CHILDREN WHO HAVE VISUAL IMPAIRMENTS. MOST OF THE CHILDREN WHO HAVE VISUAL IMPAIRMENTS NEED MORE ATTENTION TO RECEIVE A FULL EDUCATION. WITH A PROPER EDUCATION THEY WILL BE ABLE TO START LIVING BY THEMSELVES WITHOUT ANY ASSISTANCE.

I DECIDED TO DESIGN A SCHOOL WHICH WOULD SUPPORT THE NEEDS OF THE CHILDREN AND THE ASPIRATIONS OF THEIR PARENTS; A PLACE OF SAFETY AND AMBITION THAT WOULD FREE INSTRUCTORS AND INSPIRE THE CHILDREN. THEN, I BEGAN TO SEEK AN ARCHITECTURAL SITE WHERE I COULD LOCATE MY DESIGN.

OLD TOWN ALEXANDRIA IS AN EXCELLENT LOCATION FOR THE PLANNED EDUCATION CENTER. OLD TOWN HAS ITS OWN URBAN CONTEXT WITH BOUNDARIES LIKE THE POTOMAC RIVER, TREES, OLD RAILROAD WAYS, A TUNNEL, AND OTHER LANDMARKS LIKE CHURCHES, LIBRARIES, MUSEUMS, ETC. THE CHILDREN IN THE EDUCATION CENTER HAVE AN OPPORTUNITY TO LEARN MORE AND SHOW THEIR LIFE SKILLS EASILY IN THE OLD TOWN. ALSO THE SITE SELECTION AND LOCATION WAS IMPORTANT DUE TO THE HISTORY OF THE TOWN, EASY TRANSPORTATION AND CONNECTIONS WITH SURROUNDINGS, BEING RIGHT NEXT TO THE POTOMAC RIVER AND MINUTES AWAY FROM THE WASHINGTON DC.

# **SCHOOL FOR CHILDREN WHO ARE BLIND**

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## **GENERAL AUDIENCE ABSTRACT**

AS FAR AS I REMEMBER, WHAT DO WE UNDERSTAND BY VISUAL IMPAIRMENTS? THIS DISABILITY IS NOT JUST LIMITATIONS FOR A FEW PEOPLE; ACTUALLY IT IS A PART OF HUMAN LIFE WHICH EVERYONE WOULD EXPERIENCE AT SOME POINT, TEMPORARILY OR PERMANENTLY. YOU MIGHT WONDER WHAT DISABILITIES HAVE IN COMMON WITH ARCHITECTURAL WRITING, BUT ISN'T ARCHITECTURE FOR HUMAN COMFORT? AND CLEARLY WHAT DOES ARCHITECTURE & DESIGN FOR THE DISABLED STAND FOR?

HOWEVER, EDUCATION IS IMPORTANT BECAUSE IT'S THE BASE OF OUR LIFE. DISABILITY (STUDENT WHO HAS AUTISM, PHYSICAL DISABILITY OR DOWN SYNDROME) IS ONE OF THE PROBLEMS WHICH EXIST IN ALL COUNTRIES OF THE WORLD. OF COURSE, HUNDREDS OF MILLIONS OF PEOPLE WITH SPECIAL NEEDS DON'T HAVE OPPORTUNITIES AND RESOURCES TO FULFILL THEIR BASIC HUMAN. DESIGNING AN INCLUSIVE ENVIRONMENT IN SCHOOLS IS THE BEST POSSIBLE OPTION TO ENROLL MAXIMUM NUMBER OF CHILDREN WITH DISABILITY IN EDUCATION. THEREFORE, IT IS AN ENVIRONMENT WHERE THEY CAN RECEIVE REAL ATTENTION, THE RIGHT SUPPORT, SPECIALIST ATTENTION AS WELL AS EXCELLENT EDUCATION FROM PRIMARY TO SECONDARY EDUCATION, SIDE BY SIDE WITH THEIR CLASSMATES.

## DEDICATION

THIS BOOK IS DEDICATED TO MY FAMILY WITH DEEPEST LOVE AND APPRECIATION;

TO MY FATHER HUSEYIN ALAN  
TO MY MOTHER PERIHAN ALAN  
TO MY WIFE GULSAH ALAN AND  
TO MY SWEETHEART SILA ALAN

## ACKNOWLEDGEMENTS

THE DESIGN PROCESS OF THIS PROJECT WOULD HAVE NOT BEEN POSSIBLE WITHOUT THE SUPPORT FROM MY INCREDIBLE FAMILY, PROFESSORS, FRIENDS AND WAAC COLLEAGUES.

TO MY COMMITTEE; PAUL, MARCIA, AND JAAN.

THANK YOU ALL FOR YOUR INCREDIBLE RECOMMENDATIONS AND THOUGHTFULNESS.

PAUL, HELPING ME TO FIND RIGHT WAYS TO PUT THE BAR HIGHER AND HIGHER ALL THE TIME WITH YOUR INCREDIBLE RECOMMENDATIONS, AND I WILL ALWAYS REMEMBER OUR NICE CONVERSATIONS.

MARCIA, YOU SHOWED ME TO LOOK AT ISSUES FROM DIFFERENT PERSPECTIVE AND YOUR ENDLESS ENCOURAGEMENT.

JAAN, I HAVE LEARNED A LOT ABOUT ARCHITECTURE FROM YOU. THANK YOU FOR BELIEVING IN ME FROM THE DAY I MET YOU UNTIL THE LAST DAY OF THE SCHOOL.

TO MY FAMILY; MY MOM & DAD, MY SISTERS, MY WIFE, AND MY DAUGHTER.

PROBABLY I COULD NOT HAVE FINISHED MY MASTERS THESE PAST TWO YEARS WITHOUT YOUR PRAYERS, ENDLESS SUPPORT AND ENCOURAGEMENT. THANK YOU FOR STANDING BEHIND ME DURING MY EDUCATION AND EMPOWERING ME TO PURSUE MY PASSION.

MY SISTERS; DEMET AND ILKAY, I WILL ALWAYS REMEMBER YOUR ENCOURAGEMENTS.

TO MY WAAC FRIENDS, THANKS TO EVERYONE I MET IN SCHOOL, INSPIRING EACH OTHER DURING THE DESIGN PROCESS.

THANK YOU ALL.

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## INTRODUCTION

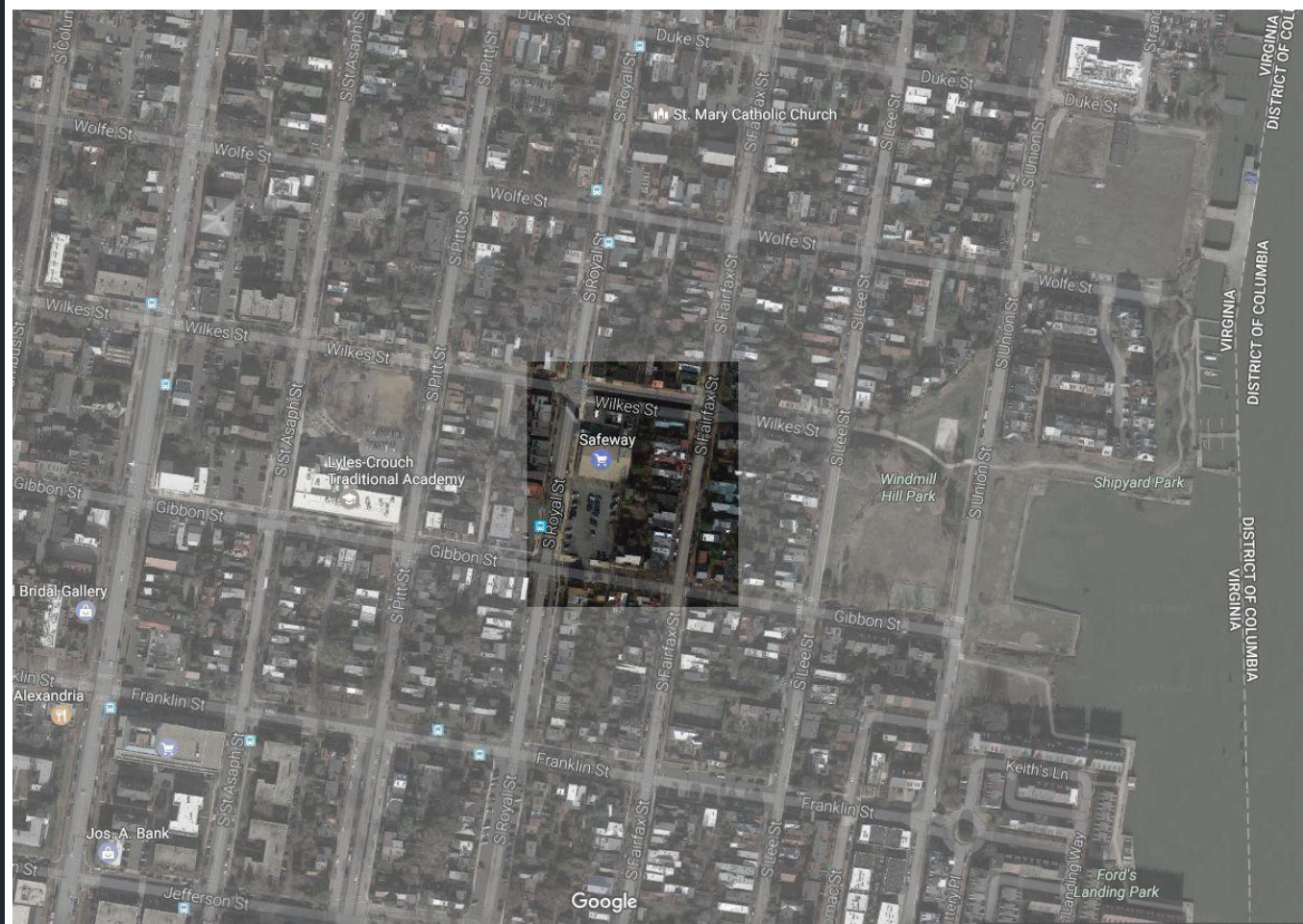
MY FIRST THOUGHTS WERE TO BUILD A BRIDGE BETWEEN HUMAN SENSES AND THE CHILDREN (THE CHILDREN RANGING FROM 6 YEARS TO 12 YEARS) WHO HAVE VISUAL IMPAIRMENTS. FURTHERMORE, THE DESIGN CONCEPT WAS IN ARCHITECTURE THAT IS ABLE TO GUIDE CHILDREN SIMPLY BY IT'S EXISTENCE, USING THEIR SENSES TO FIND OUT THEIR DIRECTION AND SPACES IN THE EDUCATION CENTER WITHOUT ANY ASSISTANCE. I THOUGHT OF AN EDUCATION CENTER THAT WILL EXCITE THE SENSES, WHERE TASTE, TOUCH, SMELL AND AN AWARENESS OF THE SURROUNDINGS COULD HELP PROMOTE A SENSE OF ABILITY AND COULD ACT AS SENSUAL CUES. THE IDEA WILL HELP TO CREATE A SENSUAL WALL ON A WELL DEFINED ROUTE TO EASY ACCESS FOR CIRCULATION AND TO FOLLOW THE ROUTES WITHOUT ANY ASSISTANCE.



GOOGLE IMAGERY

## URBAN CONTEXT

THE EDUCATION CENTER IS LOCATED AT THE INTERSECTION OF WILKES STREET AND S.ROYAL STREET. THE SITE IS KNOWN AS THE “OLD SAFEWAY” SITE IN OLD TOWN (IT IS THE OLDEST SAFEWAY IN THE UNITED STATES). THE DESIGN PROJECT TAKES ADVANTAGE OF SOME QUALITIES FROM THE URBAN SETTINGS, SUCH AS A HISTORICAL LANDMARK, AND AN OLD RAILROAD TUNNEL, WHICH IS LOCATED AT THE NORTH OF THE SITE. THE EDUCATION CENTER IS EXPECTED TO USE MOST OF THE AREA WITH A PROGRAM THAT INCLUDES ITS PUBLIC FACILITIES, SENSORY GARDENS, PLAYGROUNDS, ITS SURROUNDINGS NATURAL PARKS, TREES AND THE WATERFRONT FOR ITS ACTIVITIES. ALL THOSE FACILITIES IN THIS NEIGHBOURHOOD ARE WITHIN WALKING DISTANCE OF THE EDUCATION CENTER.



2016 Photographs, Google Map

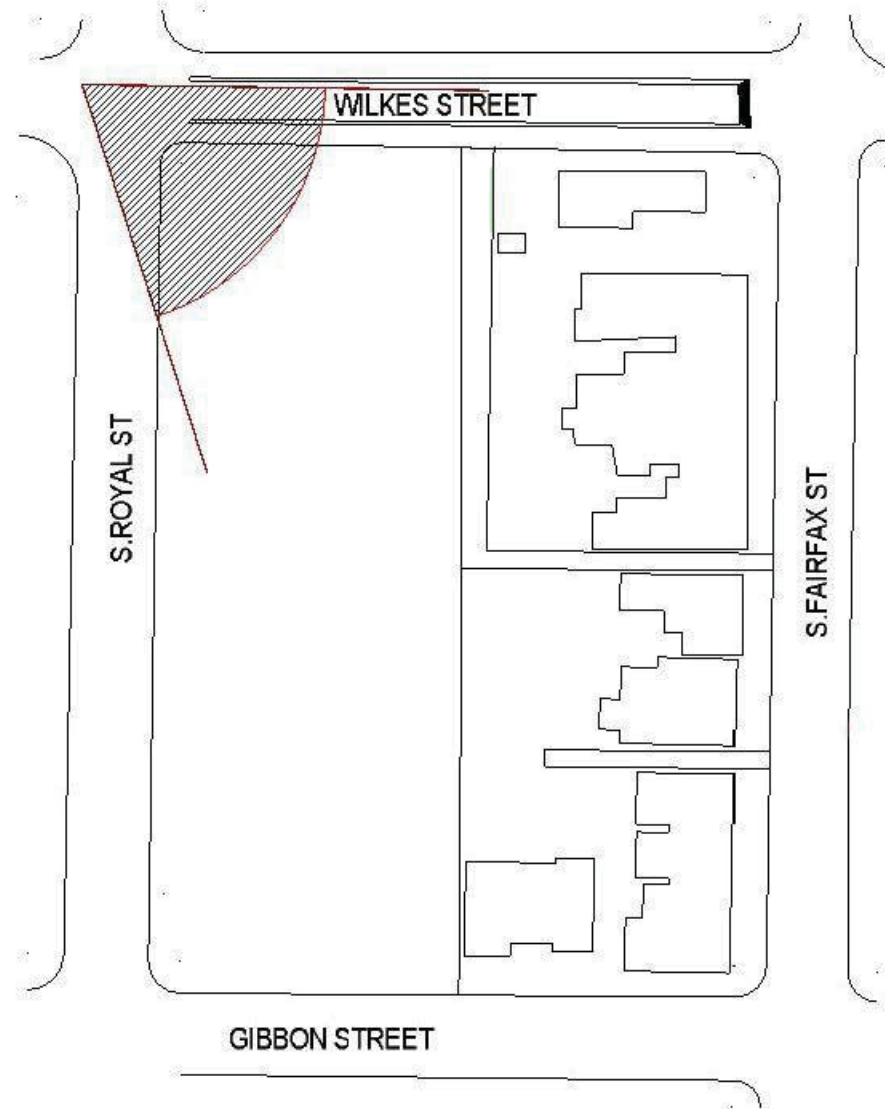


2016 Photographs, Google Map

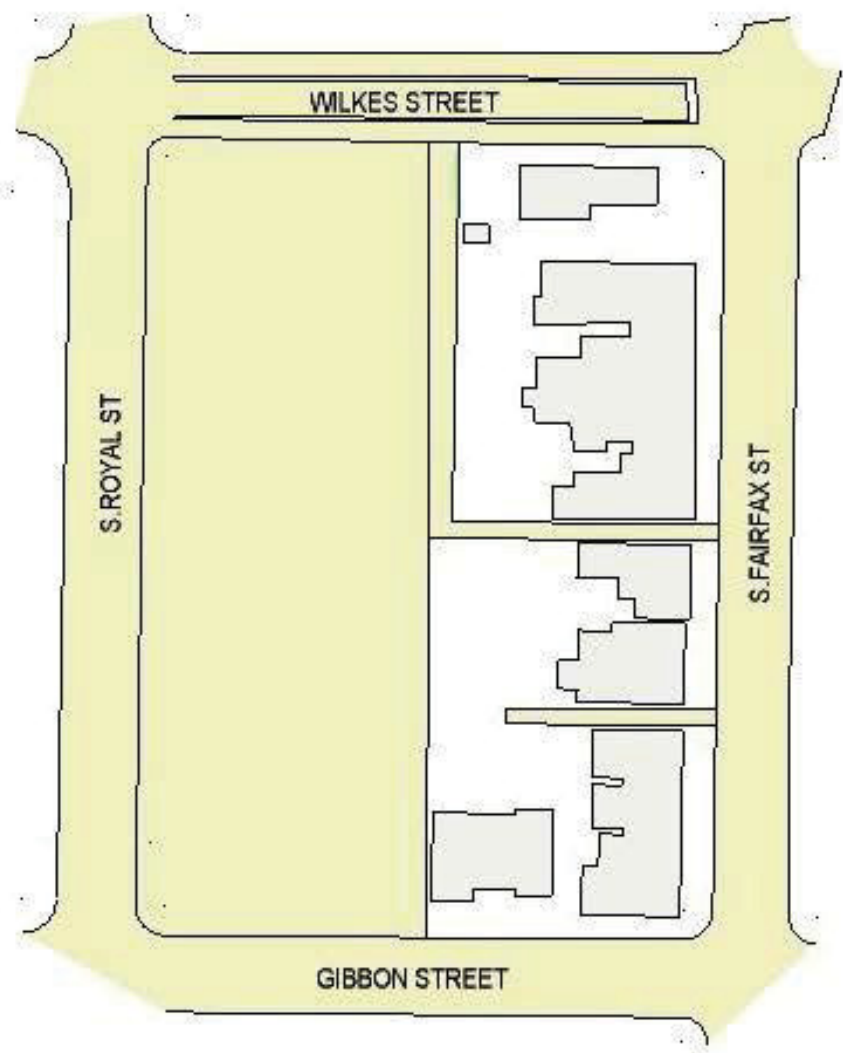
## SITE ANALYSIS

SITE ANALYSIS WAS NECESSARY TO UNDERSTAND THE LOCATION AND GUARANTEE THAT THE DESIGN OF THE EDUCATION CENTER WILL BE APPROPRIATE TO ITS URBAN CONTEXT SO THAT SITE AND DESIGN WILL BENEFIT FROM EACH OTHER. THE EDUCATION CENTER WILL BE LOCATED WHERE THE EXISTING SAFEWAY AND ITS PARKING LOT IS CURRENTLY LOCATED, WHICH IS ON SOUTH ROYAL STREET IN THE WEST OF THE SITE. THE SITE HAS EASY ACCESS FROM THE SOUTH ROYAL, WILKES AND GIBBON STREETS. THE BLOCK IS MOSTLY RESIDENTIAL AND AN OLD RAILROAD AND THE TUNNEL ARE THE MOST DOMINANT ARCHITECTURAL LANDMARKS WHICH ARE LOCATED ON NORTH OF THE SITE. THERE IS 8 FEET ELEVATION DIFFERENCE FROM WEST TO EAST AND THE SLOPE GOES UP TO THE EAST SIDE OF THE EDUCATION CENTER.

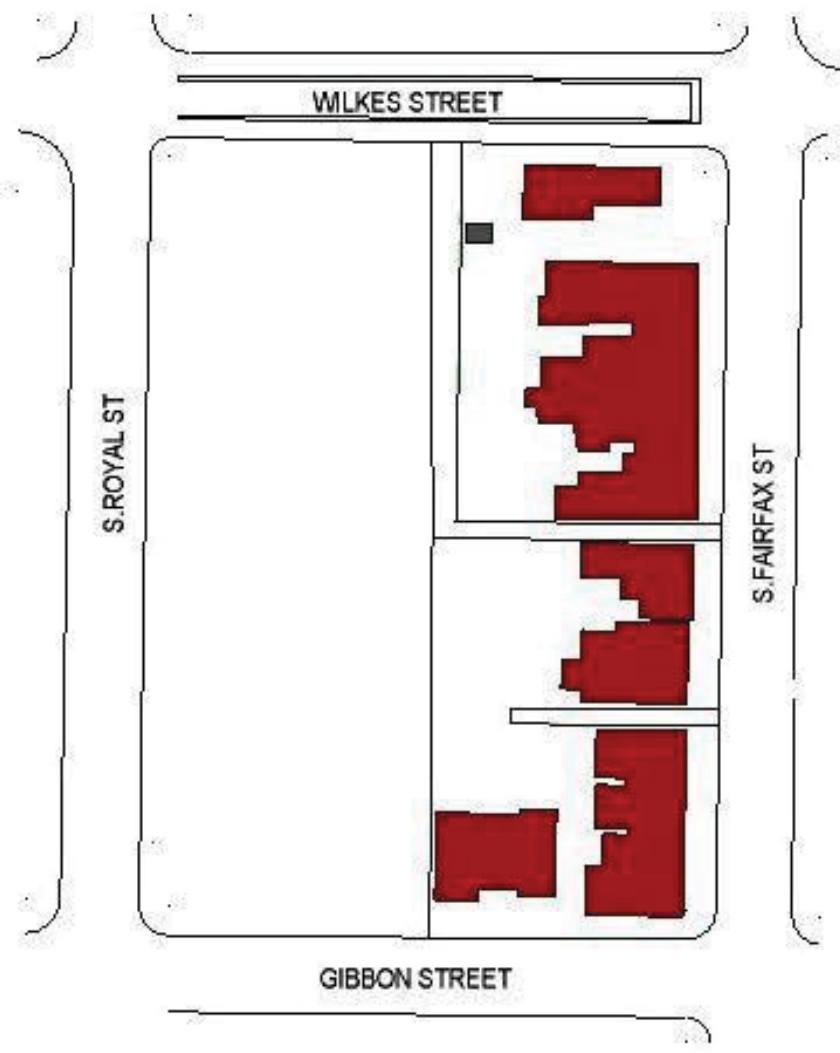
THE DESIGN OF THE EDUCATION CENTER WILL BE GUIDED BY THE OLD RAILROAD WAY AND THE TUNNEL AS AN OLD TOWN LANDMARK AND OUR DESIRE TO INCORPORATE THEM WITH THE SITE.



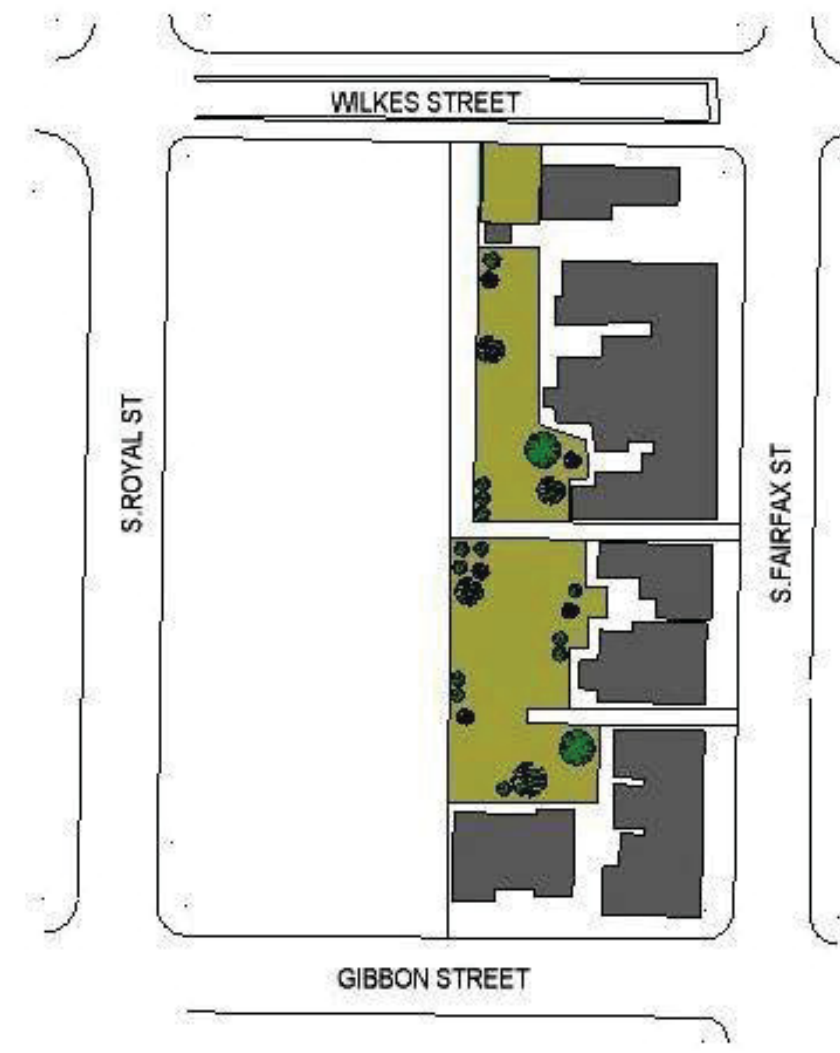
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Public Space



Residential density



Landscape



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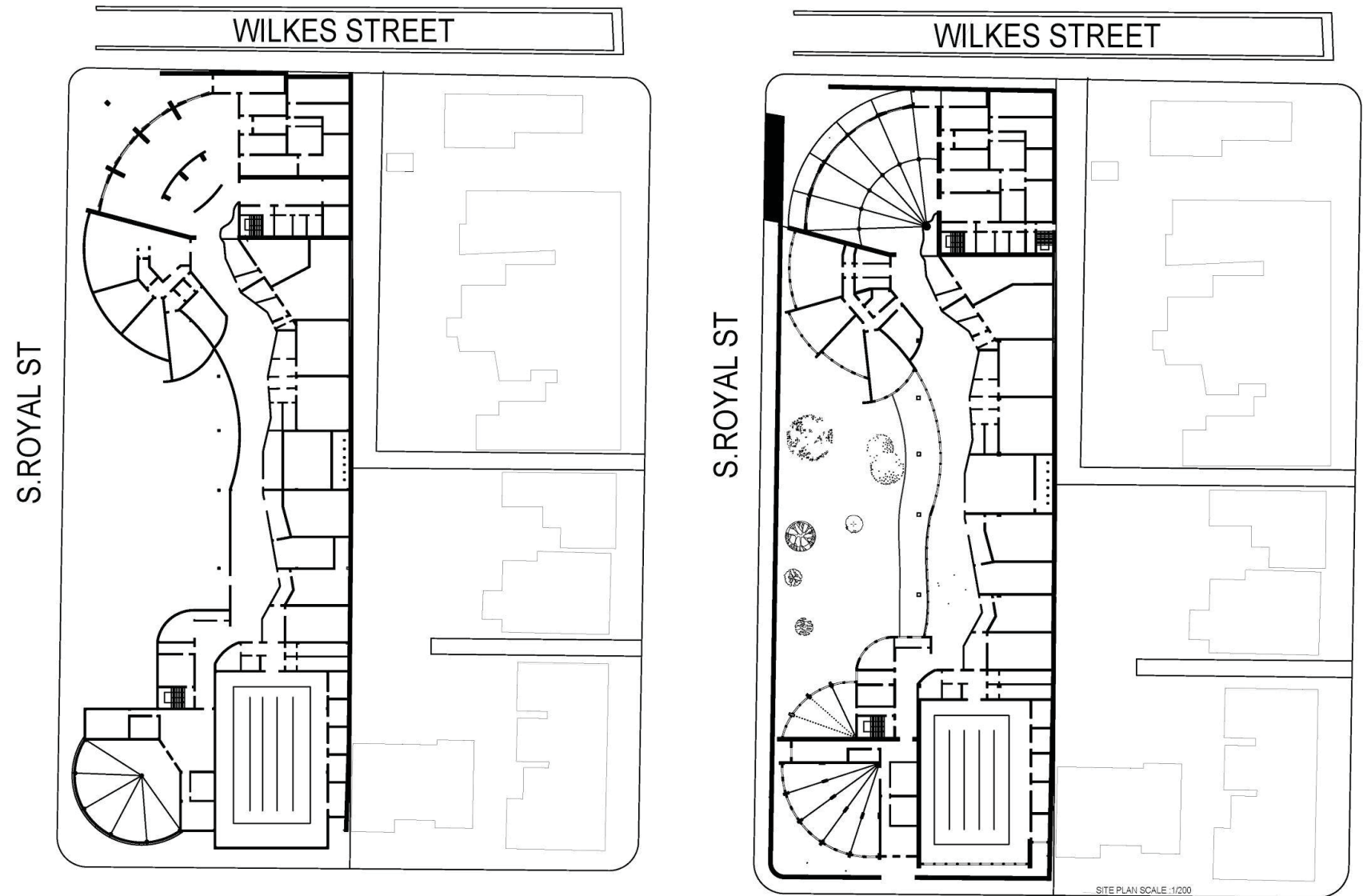


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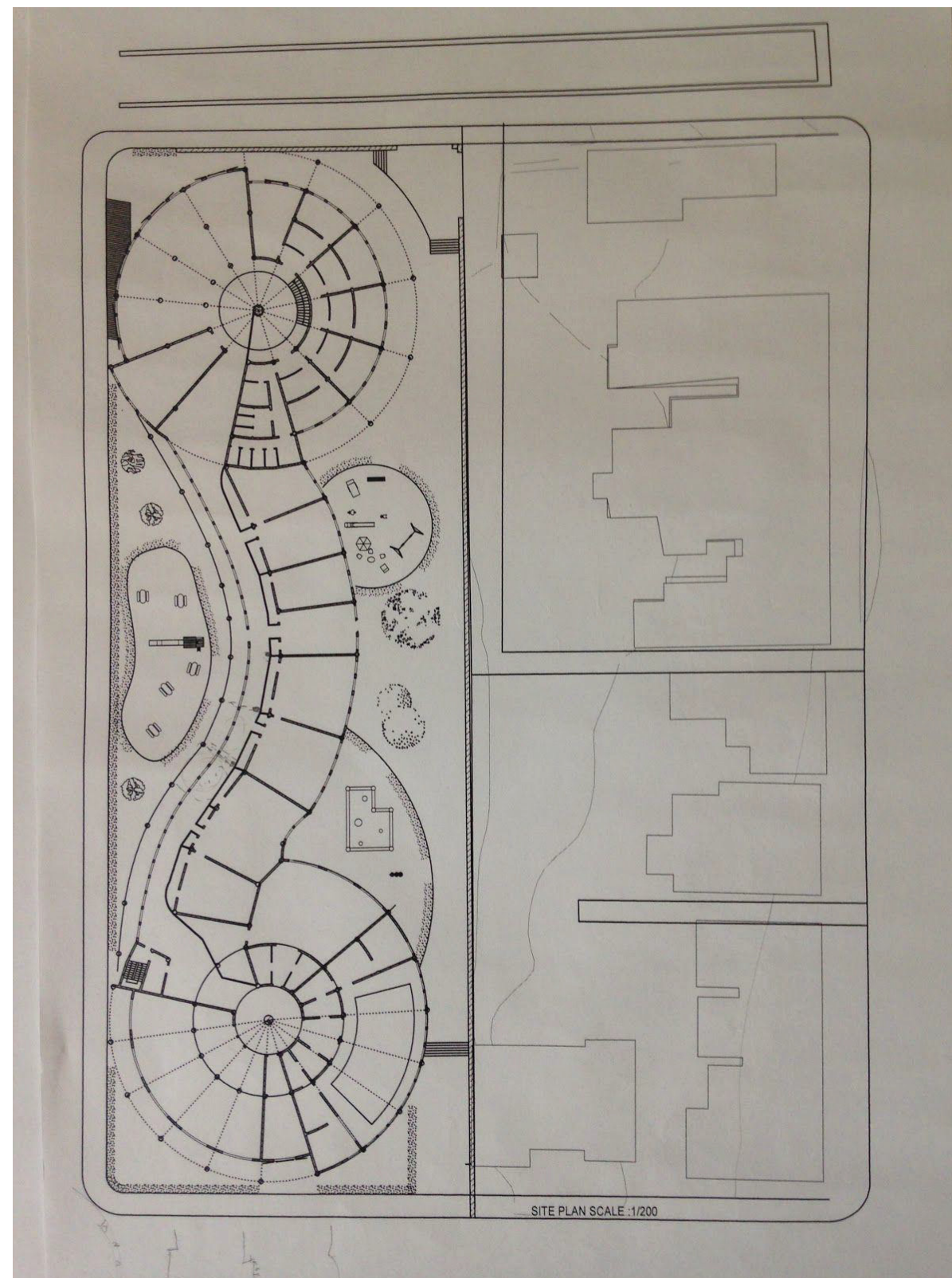
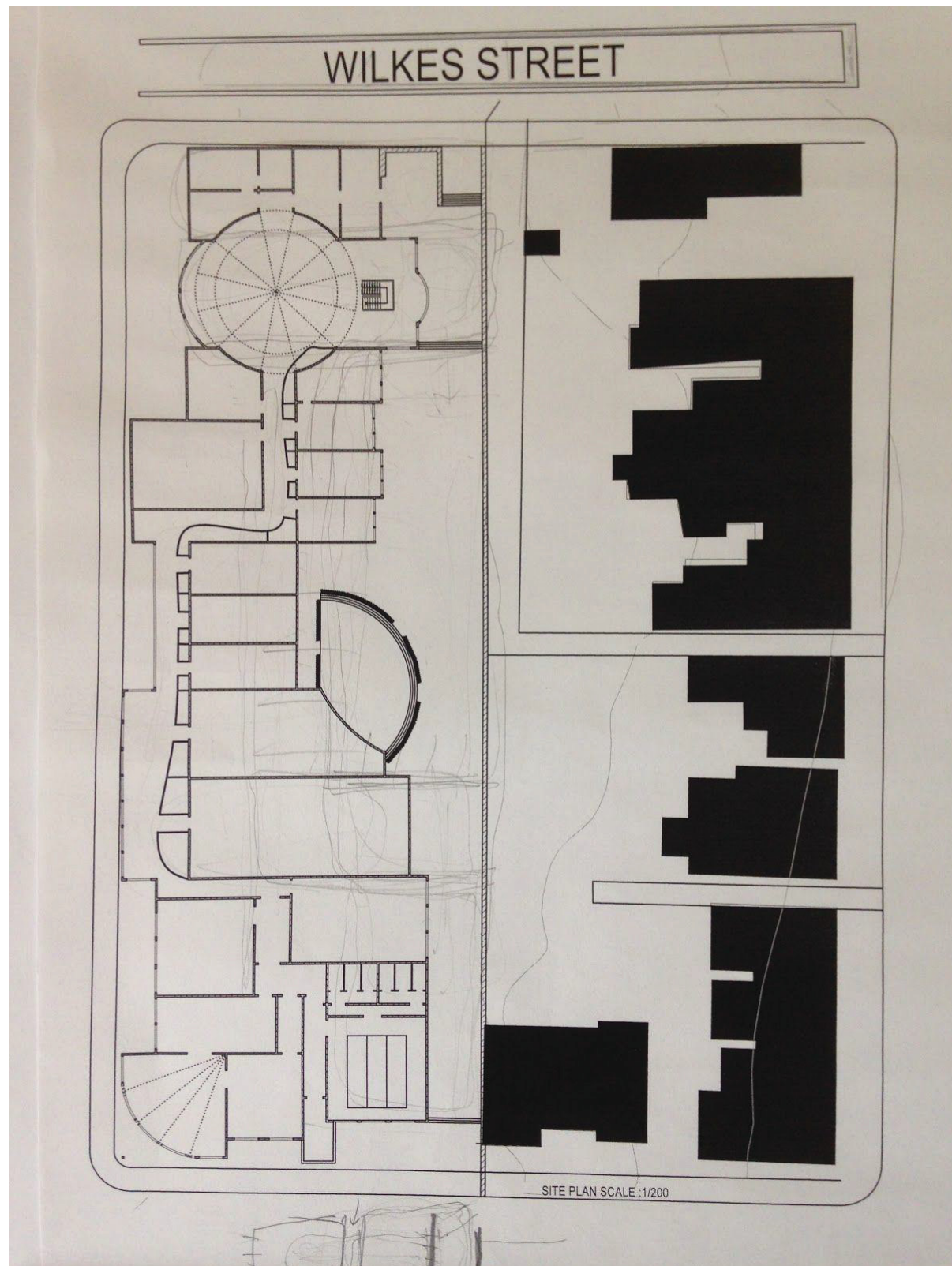
## BUILDING CONCEPTS

ALTHOUGH THE EDUCATION CENTER IS LOCATED ON THE INTERSECTION OF WILKES AND SOUTH ROYAL STREETS, THE CHILDREN / PARENTS ENTRANCE IS ALSO LOCATED ON THE SAME PROTECTED CORNER.

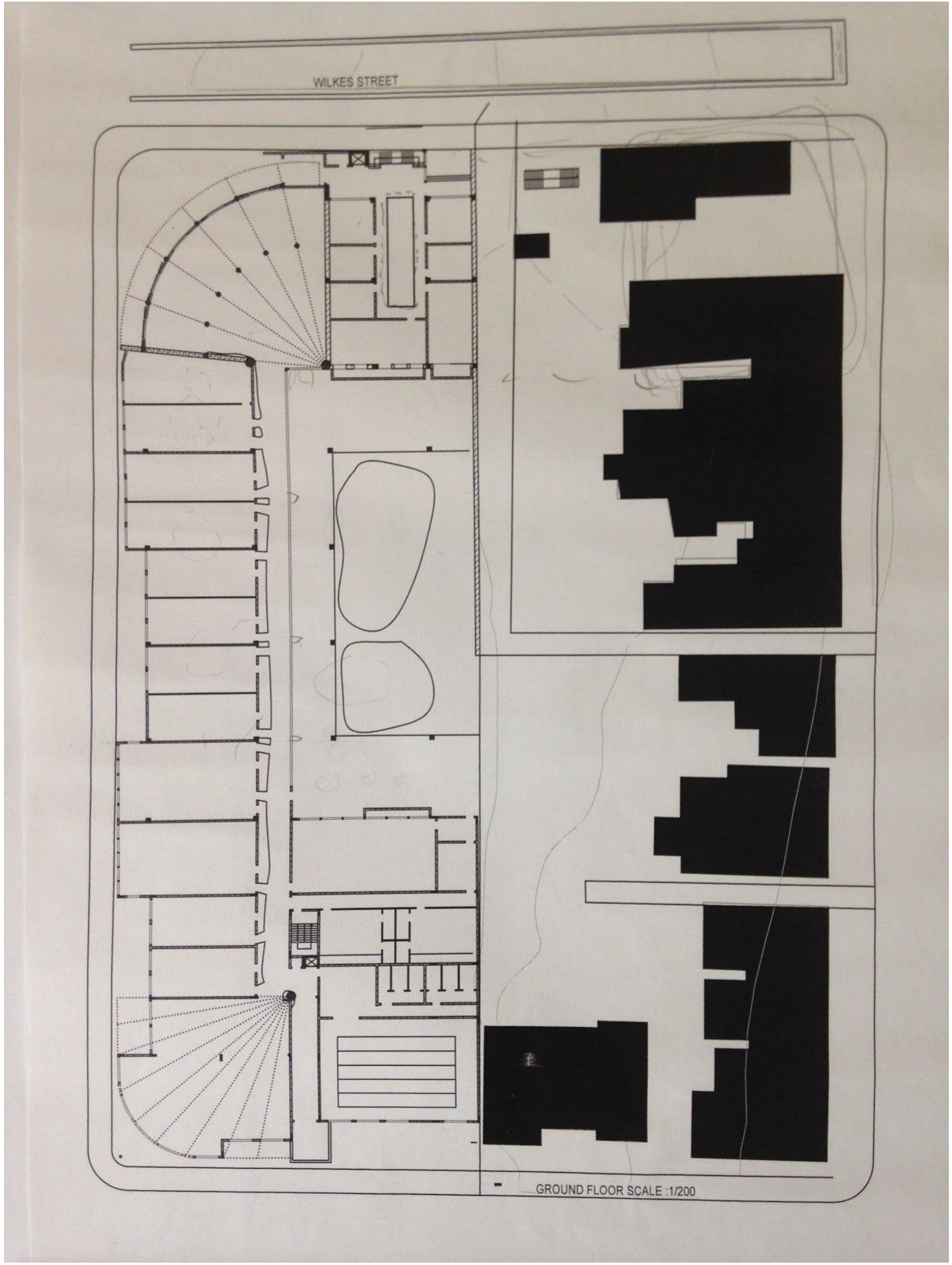
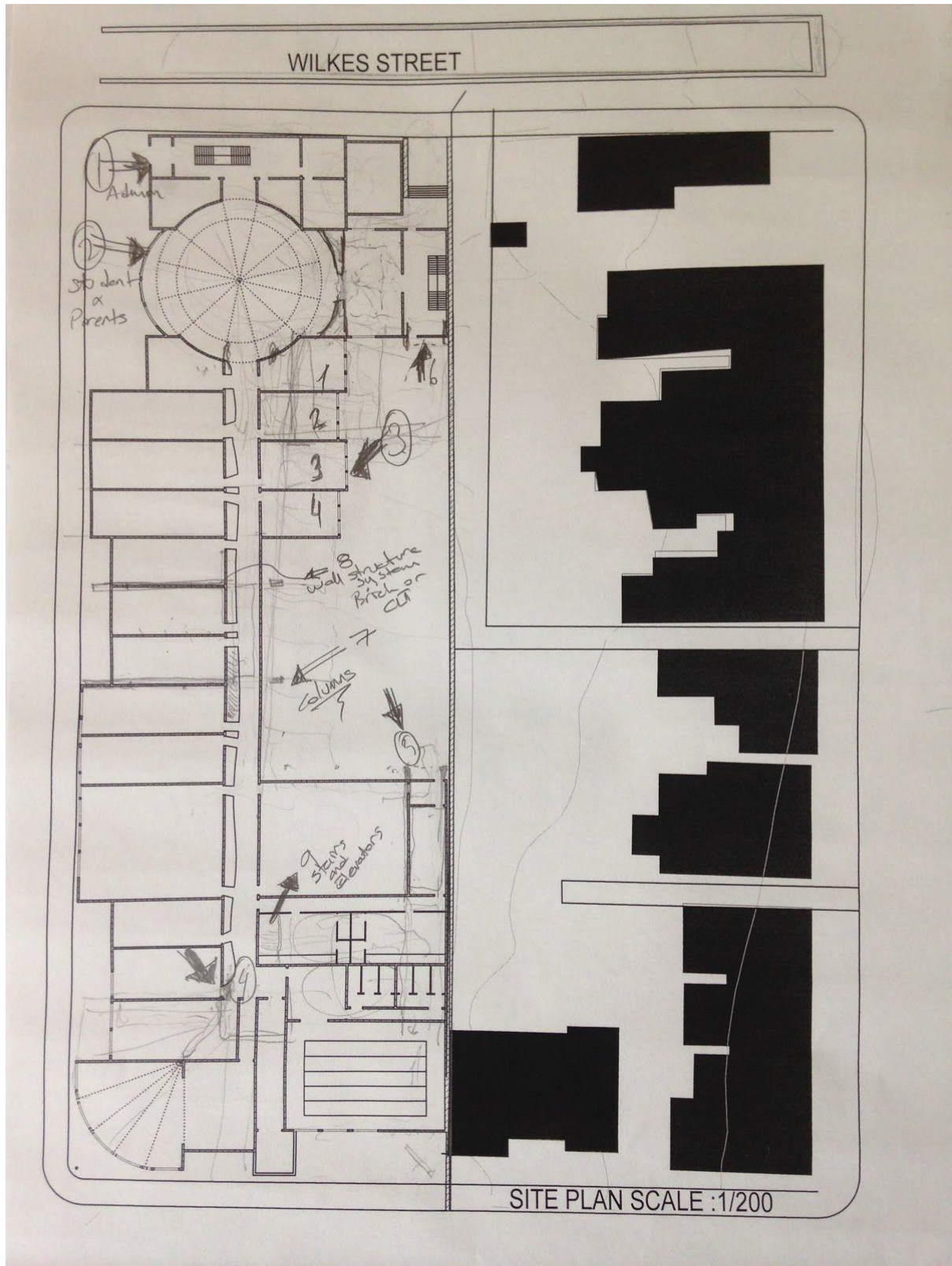
THE FIRST SCHEME AND DESIGN INCLUDED CLASSROOMS AND A SENSORY GARDEN, WHICH WERE LOCATED ON ROYAL STREET, TO THE WEST OF THE SITE. ALSO THE SKILL HOUSE AND ADMINISTRATION OFFICES WERE LOCATED ON NORTH AND SOUTH CORNERS. THE CHALLENGE WAS TO CREATE THE SENSORY GARDEN AND A PLAYGROUND IN A PRIVATE, ISOLATED COURTYARD. THE NATURAL SUNLIGHT AND HIGH LIGHT REFLECTION WERE OTHER FACTORS TO REORGANIZE THE SENSORY GARDEN AND PLAYGROUND IN THE ISOLATED COURTYARD WHICH IS LOCATED ON EAST SIDE OF THE SITE. THE ORIGINAL WESTERN LOCATION WAS NOT INCORPORATED NICELY WITH THE EXISTING SITE CONDITIONS. THE CLASSROOMS WERE NOT EFFICIENTLY CONNECTED WITH THE SENSORY GARDEN AND PLAYGROUND.



PRELIMINARY GROUND FLOOR PLANS



PRELIMINARY GROUND FLOOR PLANS



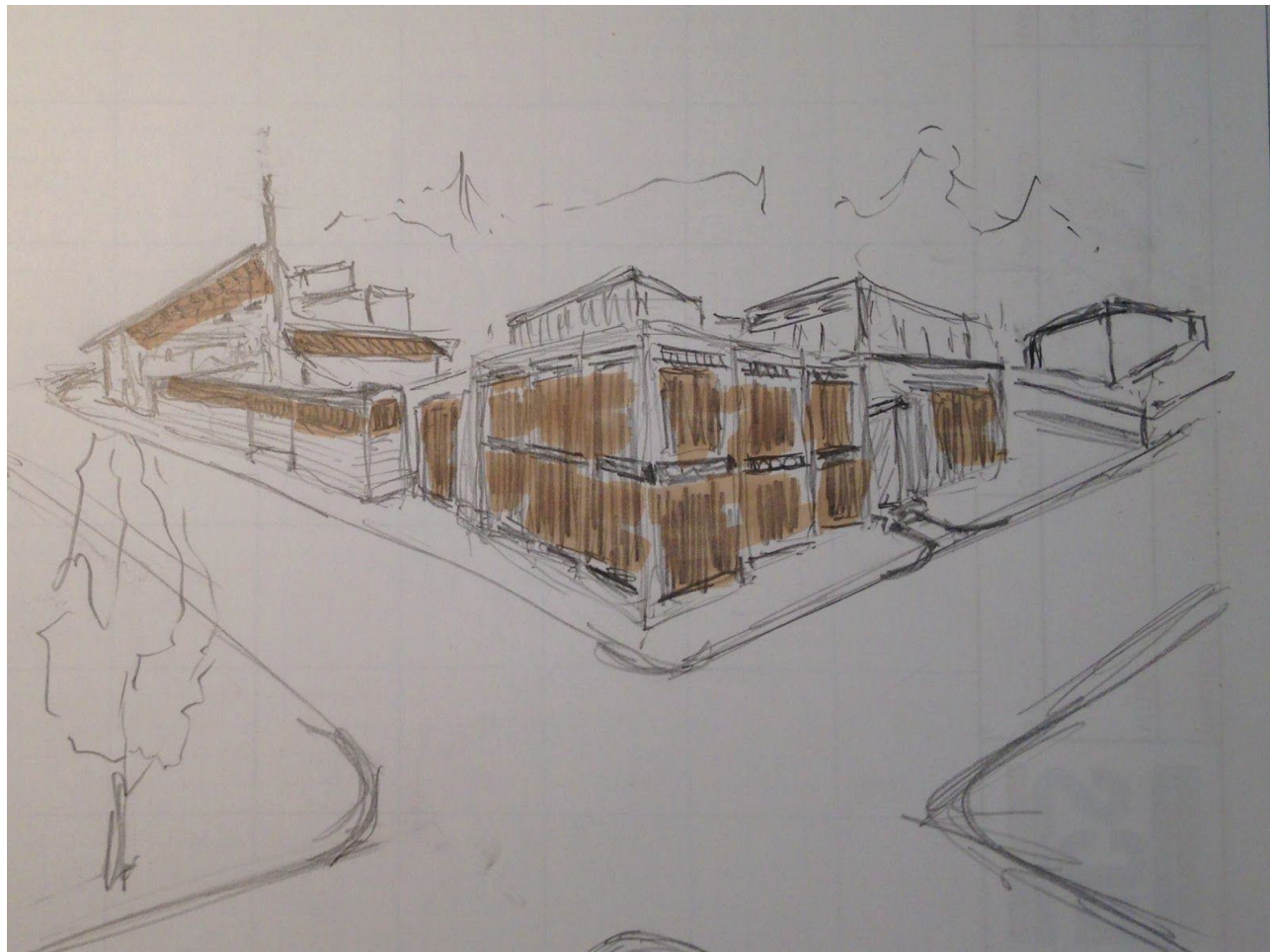
PRELIMINARY GROUND FLOOR PLANS

## **BUILDING DESIGN**

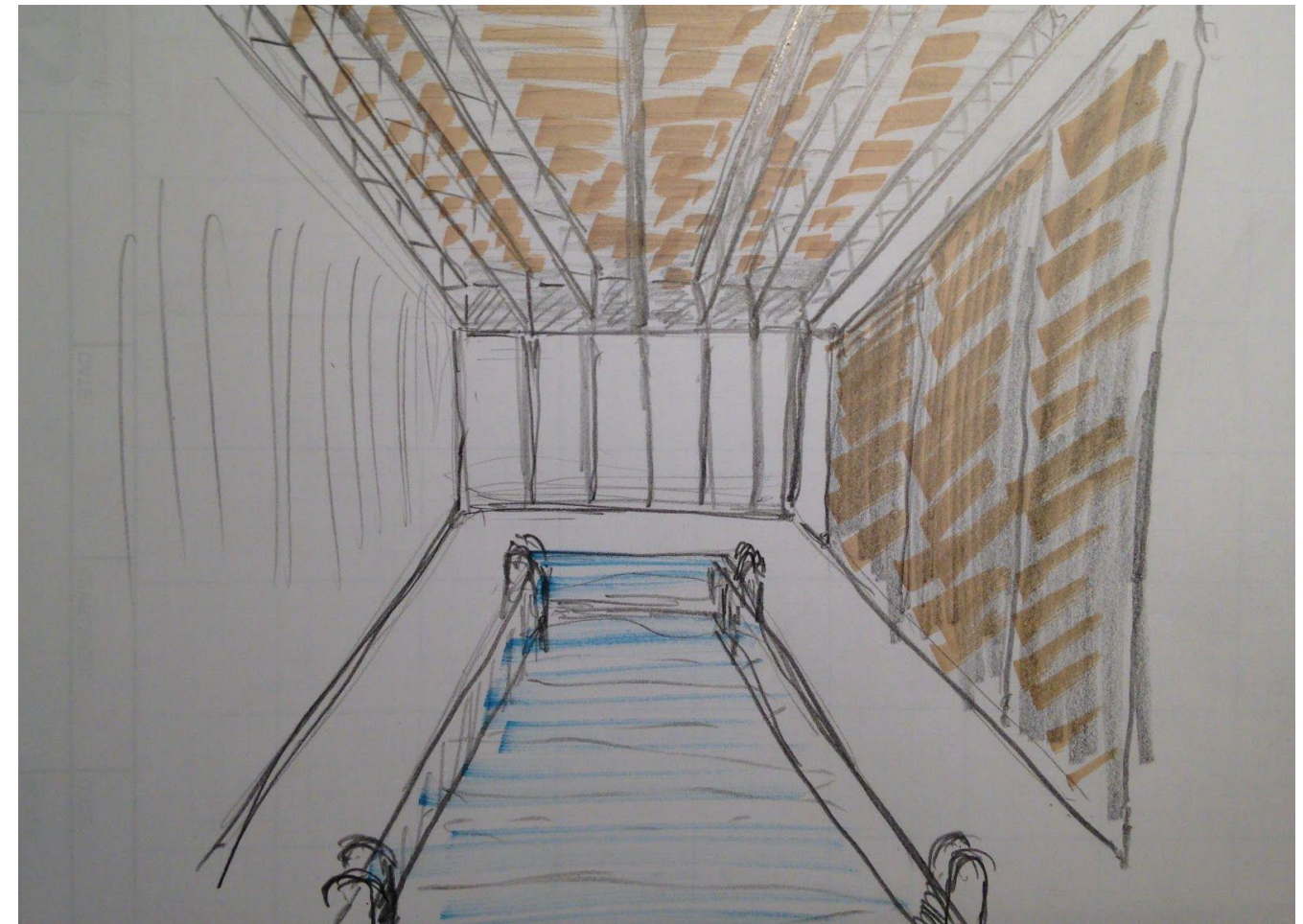
THE EDUCATION CENTER HAS FIVE DIFFERENT PARTS, ADMINISTRATION, CLASSROOMS, SKILL HOUSE, THERAPY POOL, AND THE COURTYARD. THE MAIN IDEA IN THE EDUCATION CENTER WAS TO CREATE A SENSORY / CUE WALL TO HELP CHILDREN WHO HAVE VISUAL IMPAIRMENTS TO WALK AND FIND THEIR ROOMS AND CLASSROOMS IN THE EDUCATION CENTER WITHOUT ANY ASSISTANCE. A BIG CHALLENGE WAS TO CREATE THIS WALL IN A WAY THAT IT DID NOT BLOCK OTHER SPACES, DISTURB OR CAUSE CONFUSION OF THE SPACES, RATHER TO CREATE HARMONY THROUGHOUT THE SCHOOL. THE CUE WALL MOSTLY KEPT ITS POSITION ( NORTH TO SOUTH ) THROUGHOUT THE DESIGN PROCESS. THE ENTRANCE / LOBBY SPACE GIVES NICE IMPRESSIONS AND IS WELCOMING TO NEW STUDENTS AND THEIR PARENTS. THIS SPACE ALSO CAN BE USED BY ALL EVENTS THROUGHOUT THE YEAR SUCH AS PUBLIC MEETINGS OR ORGANIZATIONS, DISCUSSIONS, E.G. ELECTIONS. THE TWO THICK WALLS DEFINE THE SPACE, AND COLUMNS IN THE CENTER HELP TO SUPPORT THE ENTIRE ROOF. THE COLUMN GRIDS ALSO HELP TO DEFINE THE HUGE COMMON SPACE. THE THINNER LOAD BEARING WALLS DEFINE THE REST OF THE EDUCATION CENTER AND HELP THE STRUCTURAL SYSTEM (COLUMNS AND BEAMS) TO BEAR THE LOAD OF THE ROOF.

THE CLASSROOMS ON THE GROUND FLOOR LEVEL ARE ALMOST TWO STORIES HIGH AND ARE CONNECTED TO A ROOF TERRACE WITH A LARGE COMMON ROOF GARDEN. THE ROOF GARDEN OFFERS ENOUGH SPACE FOR ANY KIND OF ACTIVITIES FOR THE KIDS. THE MAIN CHARACTER OF THE BUILDING MAKES THE ORIENTATION FROM INSIDE TO OUTSIDE. THE COURTYARD IS ALSO LOCATED AT THE EAST OF THE SITE. THE CLASSROOMS ARE VERY EFFICIENTLY CONNECTED TO EACH OTHER, FURTHERMORE, CHILDREN HAVE EASY ACCESS TO SENSORY GARDEN AND PLAYGROUND THROUGH THE CORRIDOR. THE COURTYARD BECOMES PART OF THE CLASSROOMS AND HELP CHILDREN'S EDUCATION. SENSORY GARDEN AND PLAYGROUND ARE LOCATED AT THE CENTER OF THE COURTYARD. THE SIDEWALKS WHICH ARE STONE PAVEMENTS AND DIFFERENT KIND OF LANDSCAPE FEATURES LIKE A STONE WALL WITH HOLES, GRAVELS, GRASS AND SAND POOLS INVITE THE CHILDREN TO EXPLORE AND DISCOVER THE SPACE, GUIDING THROUGH THEIR SENSES. GLASS DOORS CAN BE OPEN UP THROUGH THE CORRIDOR AS WELL AS TO THE OUTDOOR GARDEN AND CAN CREATE A UNIQUE OUTDOOR-INDOOR SPACE AND CAN BE USED FOR SPECIAL EVENTS LIKE, HAVING BIRTHDAY PARTIES, OR CREATING MORE SPACE FOR THE KIDS TO ENJOY THE WEATHER THROUGH THEIR EDUCATION PROCESS. THE LIFE SKILL HOUSE IS ALSO LOCATED ON THE SOUTH WEST OF THE BUILDING WHICH IS AT THE CORNER OF SOUTH ROYAL AND GIBBON STREET. IT IS TWO STORIES HIGH AND HAS BIG WINDOWS TO HAVE SOUTHERN LIGHT TO THE SPACE. IT CAN BE USED FOR ANY OTHER ACTIVITIES INCLUDING STUDENTS' GATHERING SOCIAL ACTIVITY PLACE. ADDITIONALLY, THE STUDENTS BEGIN TO PRACTICE THEIR SKILLS UNDER THE EYES OF THEIR TEACHERS AND INSTRUCTORS AT THE SKILL HOUSE. THE LAST PIECES OF THE EDUCATION CENTER IS THE THERAPY POOL WHICH IS LOCATED ON SOUTH EAST CORNER OF THE EDUCATION CENTER. ALSO THE SPACE WHICH HAS TWO LOAD BEARING WALLS AND THINNER WALLS DEFINE THE POOL. BIG TRUSTS ARE LOCATED IN THE EAST - WEST DIRECTION ON THE LOAD BEARING WALLS. AND THE SPACE GETS THE NATURAL LIGHT FROM ITS SKYLIGHTS AND SOUTH WINDOWS. THE

THERAPY POOL HELP THE KIDS TO GAIN THEIR SELF ESTEEM, SELF REGULATION, SPEECH, MOTOR PLANNING, STRENGTH, ORAL MOTOR CONTROL, AND COORDINATION. THESE ARE JUST FEW AREAS THAT ARE LIKELY TO IMPROVE AS A RESULT OF THERAPY IN THE WATER.



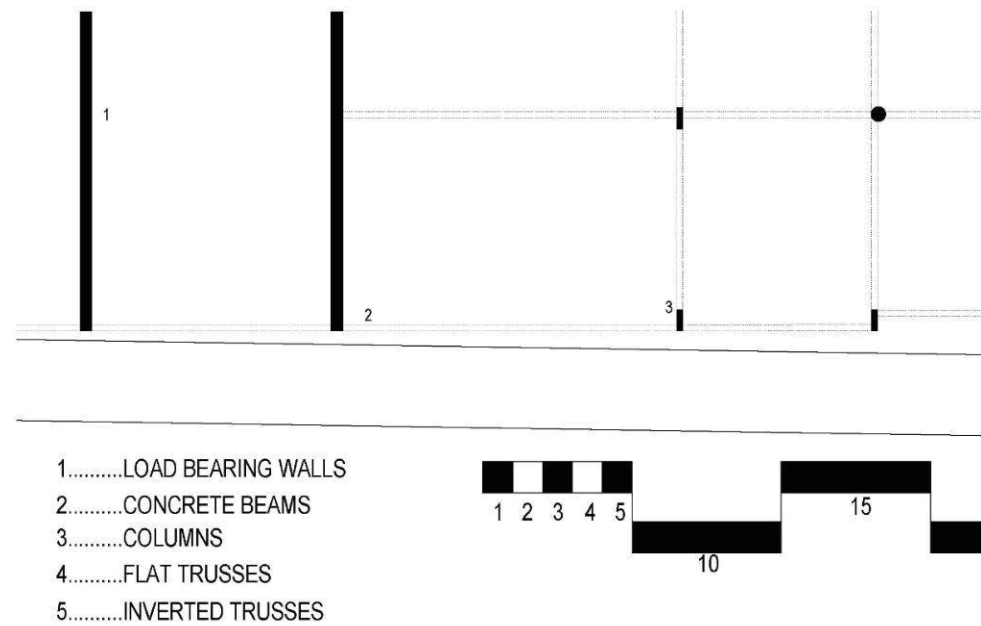
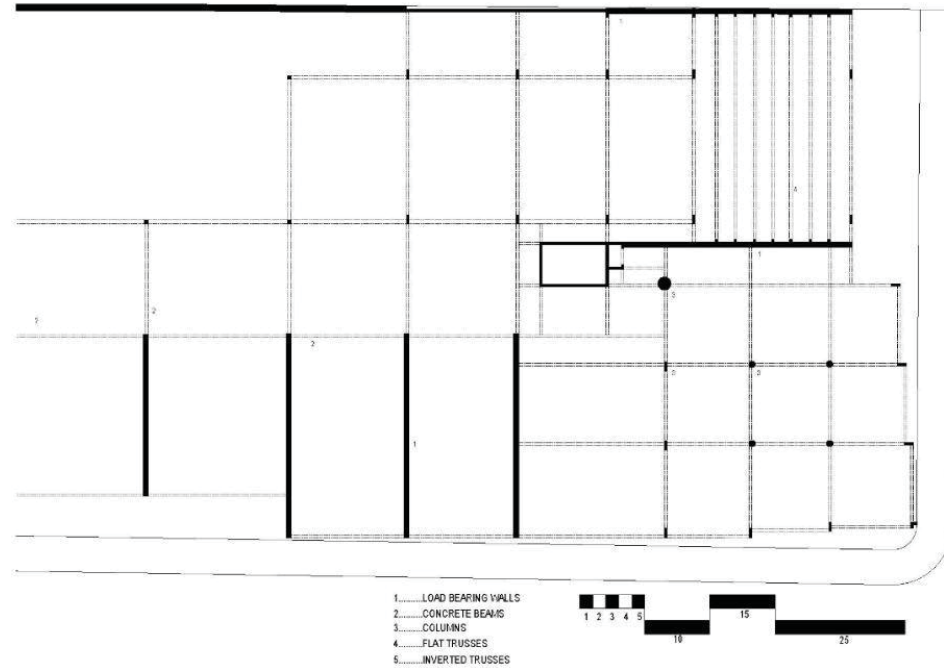
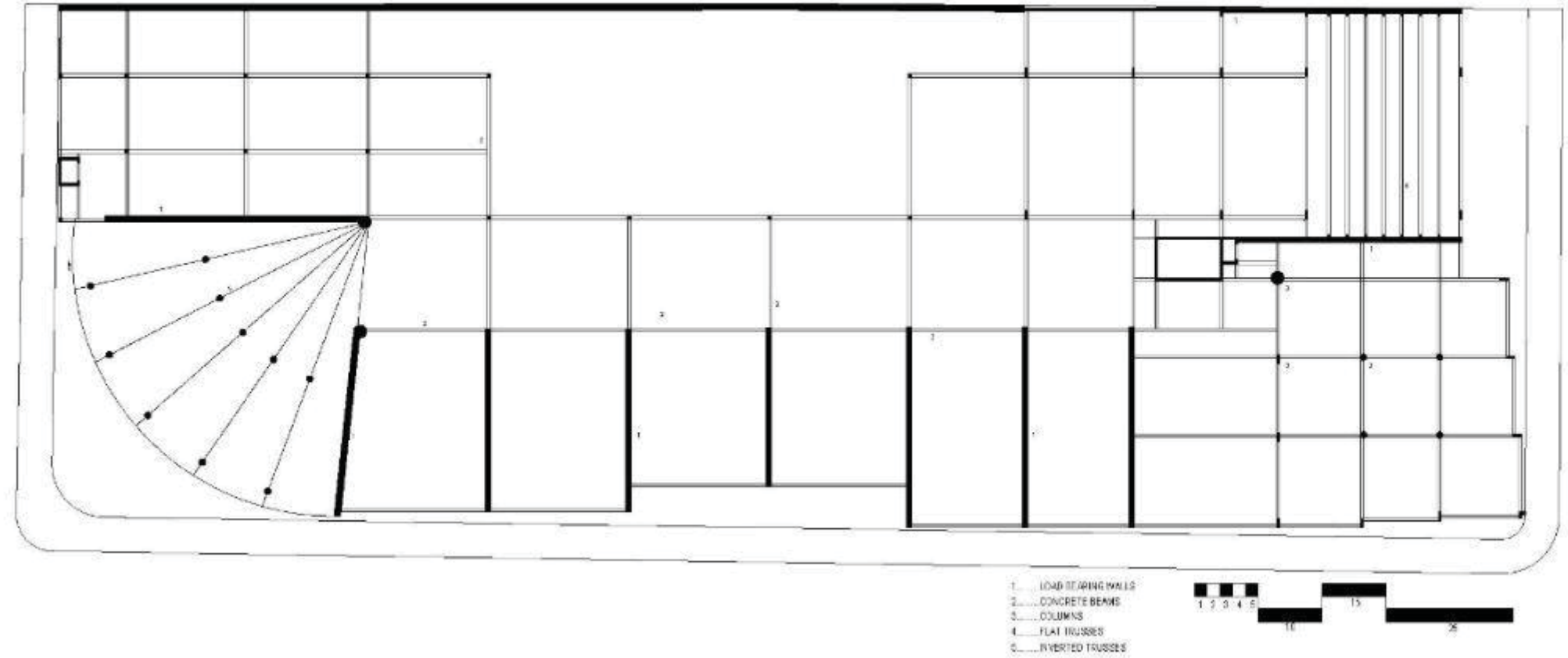
SKETCH 1



SKETCH 2

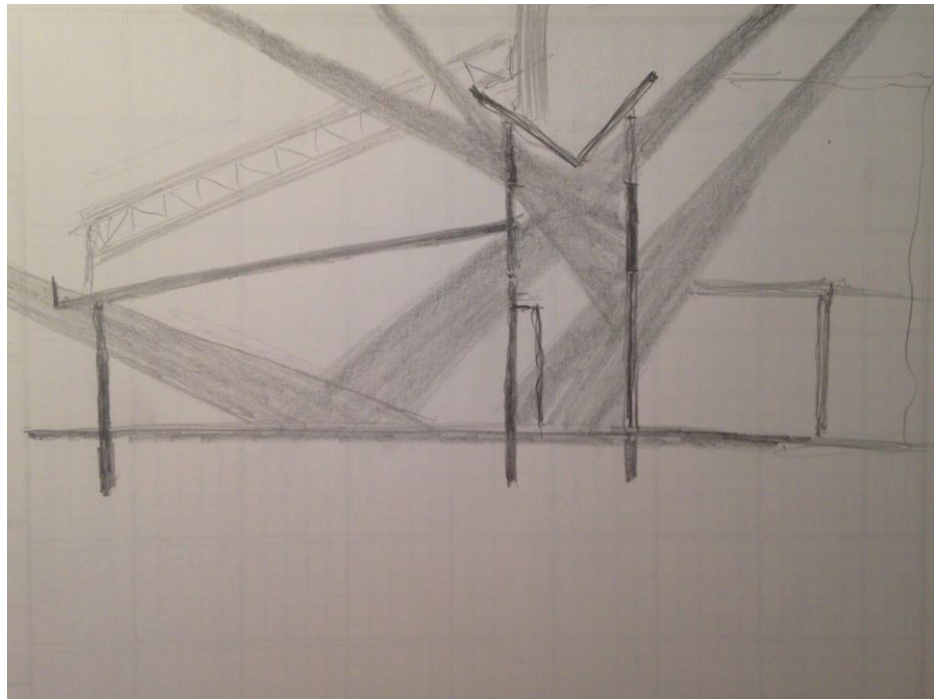
# BUILDING STRUCTURE

THE ROOF OF THE ENTRANCE AND COMMON SPACE AREA, IS SUPPORTED BY COLUMNS AND TWO LOAD BEARING WALLS ON EACH SIDE. INVERTED TRUSSES ARE PLACED ON THE COLUMNS AND FLAT TRUSSES ARE PLACED ON THE LOAD BEARING WALLS. BETWEEN THE ROOF AND LOAD BEARING WALLS TRUSSES CREATE OPENING TO GET LIGHT INSIDE THE SPACE AND CHANGES THE ENVIRONMENT AMBIANCE DEPENDING ON THE TIME AND WEATHER DURING THE WHOLE YEAR. THE THERAPY POOL HAS TWO LOAD BEARING WALLS ON EACH SIDE (WEST AND EAST) AND THINNER WALLS DEFINE THE POOL AREA. FLAT TRUSSES WHICH ARE PLACED ON LOAD BEARING WALLS SUPPORT THE SKYLIGHT AND THE ROOF. THE REST OF THE PROJECT HAS REGULAR COLUMN AND BEAM STRUCTURES TO SUPPORT THE FLOORS AND THEIR ROOFS.



## LIGHTING

FOR LIGHTING TO EXIST IN A VISUAL SENSE AND CONTRIBUTE TO THE INCLUSIVE DESIGN AND MANAGEMENT OF A SPACE OR ENVIRONMENT, THREE KEY COMPONENTS NEED TO ACT TOGETHER. FIRST, A SOURCE OF LIGHT, SECOND, A SURFACE AND A MEANS OF SEEING THE LIGHT-THE EYE. LIGHT MIGHT BE NATURAL OR ARTIFICIAL. THE REFLECTIVE PROPERTIES OF A SURFACE ARE INFLUENCED BY ITS COLOUR, SURFACE -TEXTURE AND THE NATURE OF THE LIGHT THAT FALLS ON THE SURFACE. WHAT WILL ACTUALLY BE SEEN IS DEPENDENT ON HOW THE EYE IS ABLE TO ACCURATELY DETECT ANY INFORMATION AVAILABLE. NATURAL LIGHT IS A GOOD SOURCE OF ILLUMINATION, BUT WHERE IT CAUSES SHADOWS IT CAN CREATE A DIFFICULT ENVIRONMENT OR IMPOSSIBLE FOR BLIND AND PARTIALLY SIGHTED KIDS TO USE INDEPENDENTLY. BRIGHT LIGHT SOURCES, SUCH AS SUNLIGHT THROUGH WINDOWS CAN CAUSE GLARE AND CREATE HARD EDGED SHADOWS. THIS CAN BE CAUSE SIGNIFICANT DIFFICULTIES FOR ALL USERS AND ESPECIALLY SO FOR THOSE WITH VISUAL IMPAIRMENTS OR PARTIALLY SIGHTED KIDS. BECAUSE OF THE HIGH GLARING AND HARD EDGED SHADOWS, CLERESTORY WINDOW DESIGN WAS USED IN THE CLASSROOMS ESPECIALLY ON THE WEST SIDE OF THE BUILDING. THE MAIN STUDENT ENTRANCE IS THE FIRST PLACE FOR STUDENTS AND THEIR PARENTS TO USE WHEN THEY ENTER THE BUILDING IN THE MORNING. THE ATMOSPHERE AND ILLUMINATION OF THE SPACE CHANGES DURING THE DAY BECAUSE OF THE SUN PATH. THE SPACE IS ALSO ILLUMINATED BY SOUTHERN AND EASTERN SUN LIGHTS DUE TO CLERESTORY WINDOWS ON LOAD-BEARING WALLS. SKYLIGHT AND WINDOWS PROVIDE SUFFICIENT ILLUMINATION AT THE ADMINISTRATION OFFICE BUILDING. EASTERN LIGHTS AND ADDITIONAL BUTTERFLY WINDOWS LIGHTS PROVIDE THE CORRIDOR WITH MORE ILLUMINATION WITHOUT ANY GLARING OR SHARP EDGED SHADOWS.

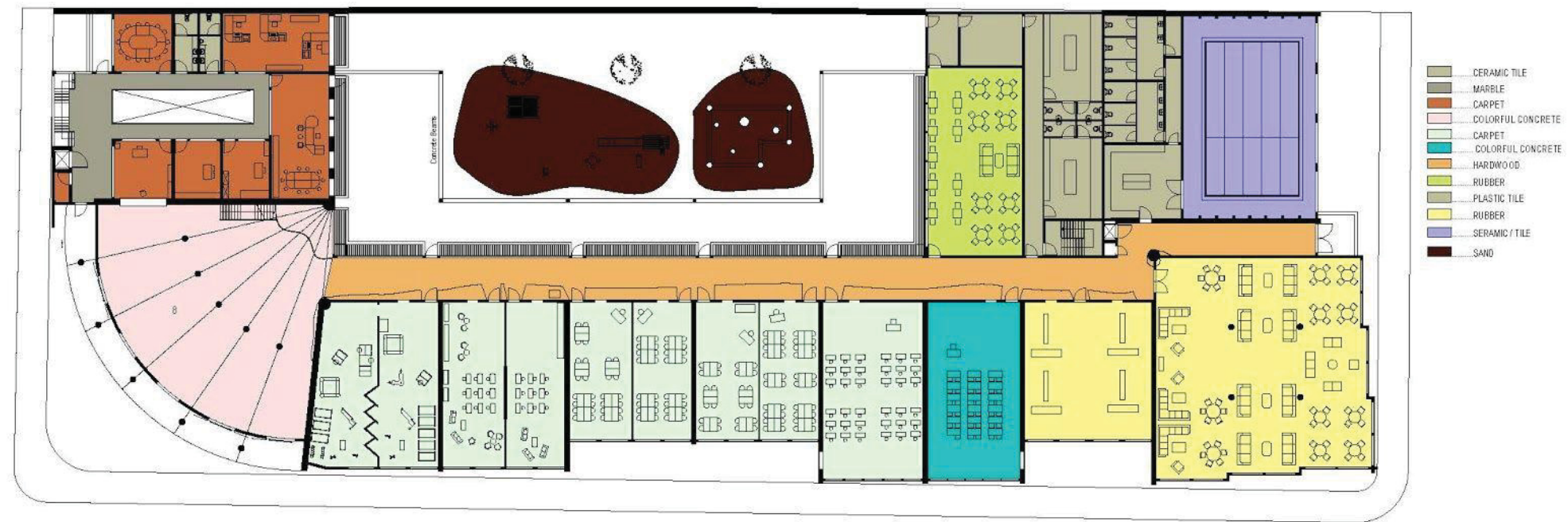


SKETCH 3

## INTERIOR / MATERIALS

WHILE THE CONCRETE STRUCTURE WOULD SUPPORT THE CLASSROOMS AND PRIMARY PUBLIC SPACE ROOF I DESIGNED CORRIDORS, GYMNASIUM, CAFETERIA, COURTYARD AND THERAPY POOL TO PROVIDE MORE OPEN SPACE. THE STRUCTURE OF THE BUILDING IS CONCRETE AND LOAD BEARING WALLS. COLUMNS, ROOF AND SLABS WILL BE STRUCTURAL CONCRETE MATERIAL. THE CONCRETE ALWAYS RETAINS ITS COLD, HARD AND ROUGH CHARACTER WHEN YOU TOUCH IT BUT IT IS ALWAYS DURABLE FOR ANY CONDITION. FLOORING MATERIALS MOSTLY IMPACT A RANGE OF HUMAN FACTORS. WE RUN, STAND, WALK, EXERCISE, OR LIE DOWN ON IT. SOMETIMES ACCIDENTLY WE DROP SOMETHING OR WE SLIP AND FALL ON IT. ESPECIALLY, IN THIS INSTITUTE I WANTED TO USE MATERIAL TO INDICATE WHERE WE ARE AND AT THE SAME TIME TO KEEP US SAFE AND COMFORTABLE. THE CORRIDORS WILL BE WARMER MATERIAL SUCH AS WOOD MATERIALS CONTRAST TO THE CONCRETE. WHEN CHILDREN SCAN THEIR ENVIRONMENT THEY START USING THEIR SENSES, THEY SMELL IT, TASTE IT OCCASIONALLY, THEY TOUCH IT WITH THEIR BODY AND HEAR THE SOUND WHEN THEY WALK OR TOUCH IT. THIS IS ALSO NECESSARY AS IMPORTANT AS PART OF THE LEARNING PROCESS TO DISCOVER THE ENVIRONMENT IN THE INSTITUTE.

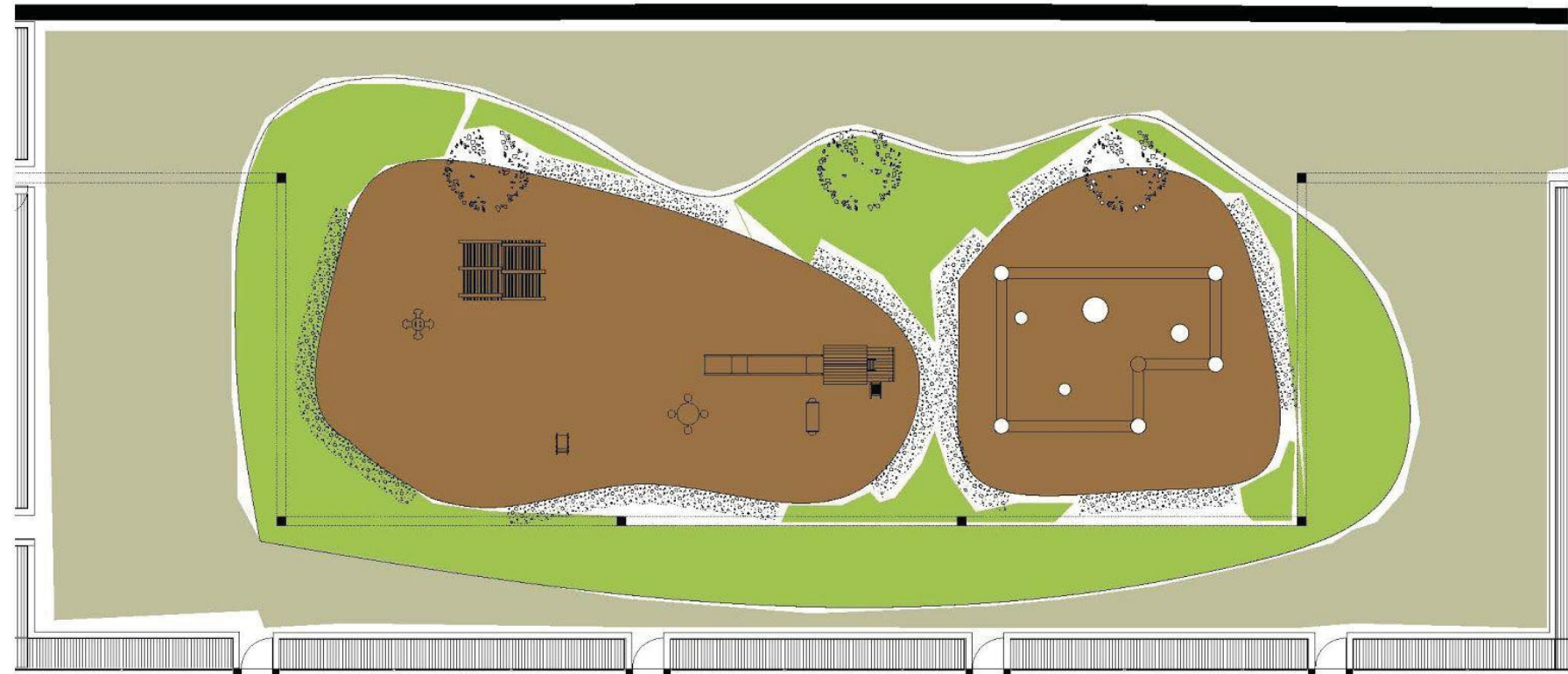




CARPET, RUBBER, WOOD, AND HARD SURFACE MATERIALS WILL BE USED IN CLASSROOMS, AND PUBLIC SPACES IN ACCORDING TO SPECIFIC CONDITIONS ON ITS SPACE.

## THE COURTYARD

THE COURTYARD IS CONNECTED VISUALLY AND SPATIALLY TO THE CLASSROOMS. LARGE GLASS DOORS AND WINDOWS SUPPORT THE IDEA IN VISUAL AS WELL AS FUNCTIONAL TERMS. IT IS MOSTLY PART OF THE EDUCATION AND SUPPORTING THE CLASSROOMS. IF THE WEATHER PERMITS DOORS AND WINDOWS CAN BE OPENED AND BRING THE NATURAL FRESH AIR AND FLOWER SMELLS TO CIRCULATE INSIDE OF THE SCHOOL. SENSORY PARK AND PLAYGROUND ALSO COMPLETES THE COURTYARD ITSELF. CHILDREN LEARN TO USE THEIR SENSES WHILE THEY ARE PLAYING AND EXPERIENCING THE OUTDOORS. SOME DETAILED FINISH MATERIALS SEPARATE THE AREAS FROM EACH OTHER IN THE COURTYARD. SAND POOLS GIVE SOME STRENGTH TO THE KIDS AND HELP THEM AVOID FALL OR SLIP INJURIES. THE MATERIAL RANGE CHANGES FROM SAND TO GRASS, TO SLATE OR CONCRETE FINISH. TREES AND BUSHES PROVIDE SOME SHADES AND COOL SPACES FOR THE KIDS DURING THE SUMMERTIME IN THE COURTYARD. ALSO BUSHES AND TREES DEFINE THE AREAS WHICH TRANSITION TO DIFFERENT MATERIALS SAND TO GRASS OR GRASS TO SLATE OR CONCRETE.



THE COURTYARD, SENSORY GARDEN AND PLAYGROUND

## THE ROOF GARDEN

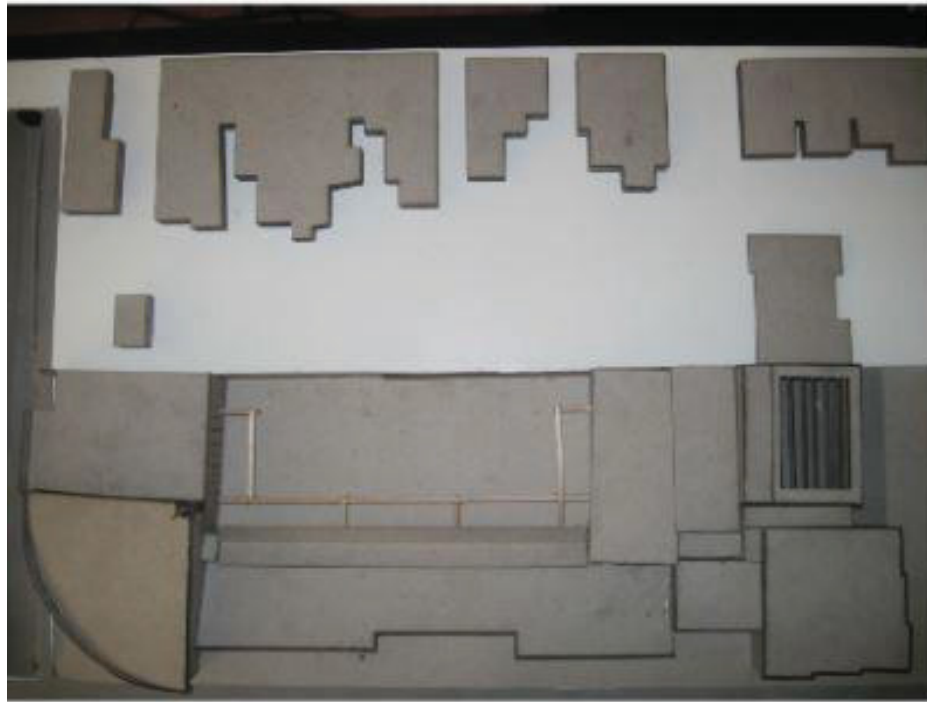
THE ROOF GARDEN IS THE SPACE FOR KIDS TO HAVE DIFFERENT EXPERIENCES, PLAY ACTIVITIES OR ANY OPEN AIR ACTIVITIES IN THE SUMMER TIME. ALSO ROOF GARDEN SUPPORTS THEIR EDUCATION SYSTEM TO UNDERSTAND HOW TO GROW THE VEGETATION AND WHAT ARE THE OTHER BENEFITS FOR THE ENVIRONMENT. THE ROOF GARDEN WILL COLLECT THE RAIN AND KEEP IT IN THE GARDEN. IF THE RAIN IS EXCESSIVE AND GARDEN CAN NOT HOLD IT THEN IT WILL RELEASE THE WATER INTO GUTTERS, AND WATER WILL BE RELEASED TO WEST GARDENS AND THE COURTYARD. THE MAIN MATERIALS FOR THE ROOF GARDEN ARE SAND, STONE, CONCRETE AND WOOD. THE ROOF GARDEN ALSO PROVIDES SOUND ISOLATION FOR THE CLASSROOMS. THE ROOF GARDEN IS CONNECTED TO GROUND LEVEL BY THE STAIRS AND ELEVATORS.



Green-Roofed Paul Chevallier School

**FINAL DESIGN: A CHILDREN SCHOOL WHO ARE BLIND IN OLD TOWN ALEXANDRIA**

MODEL



AREA PLAN

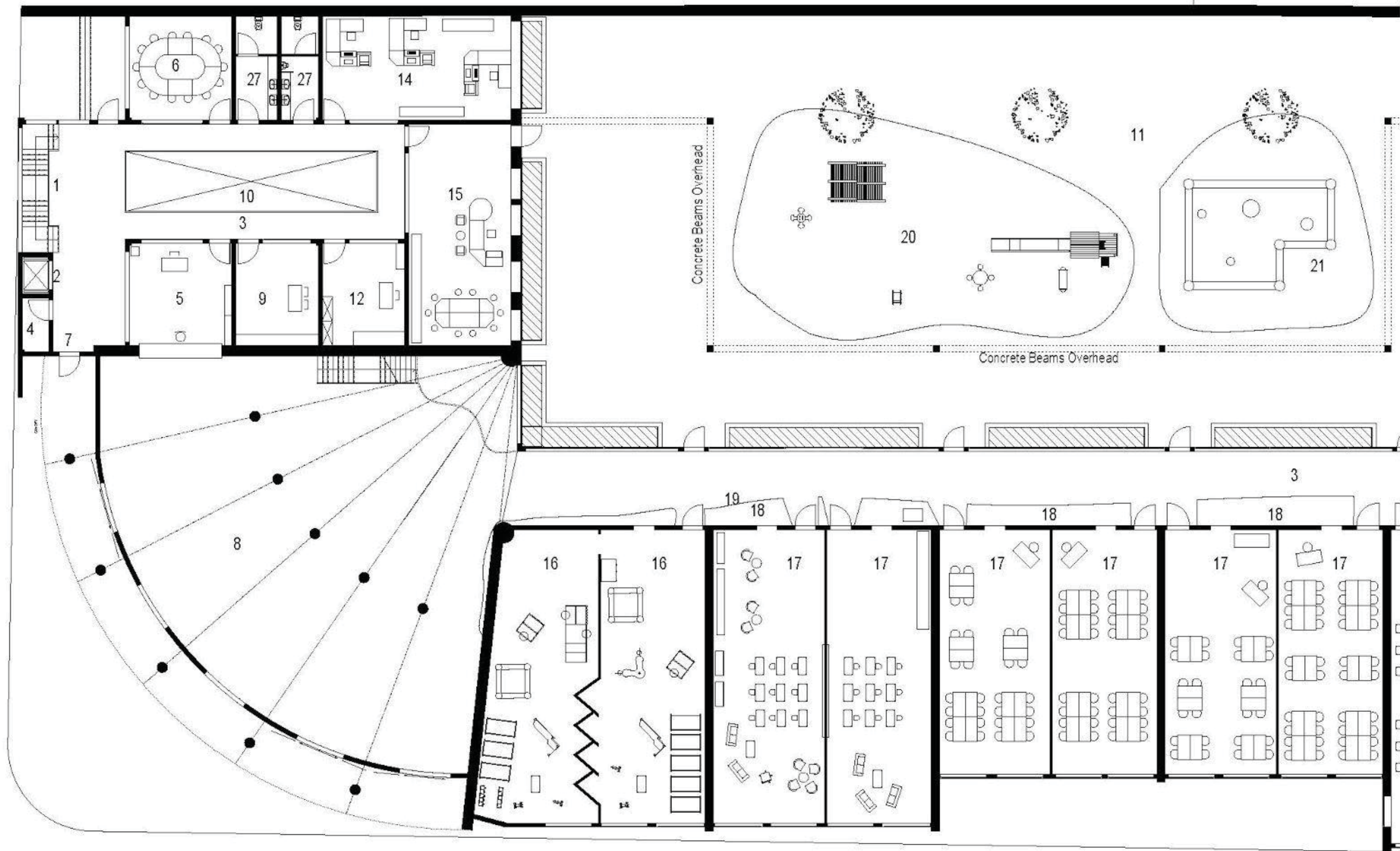


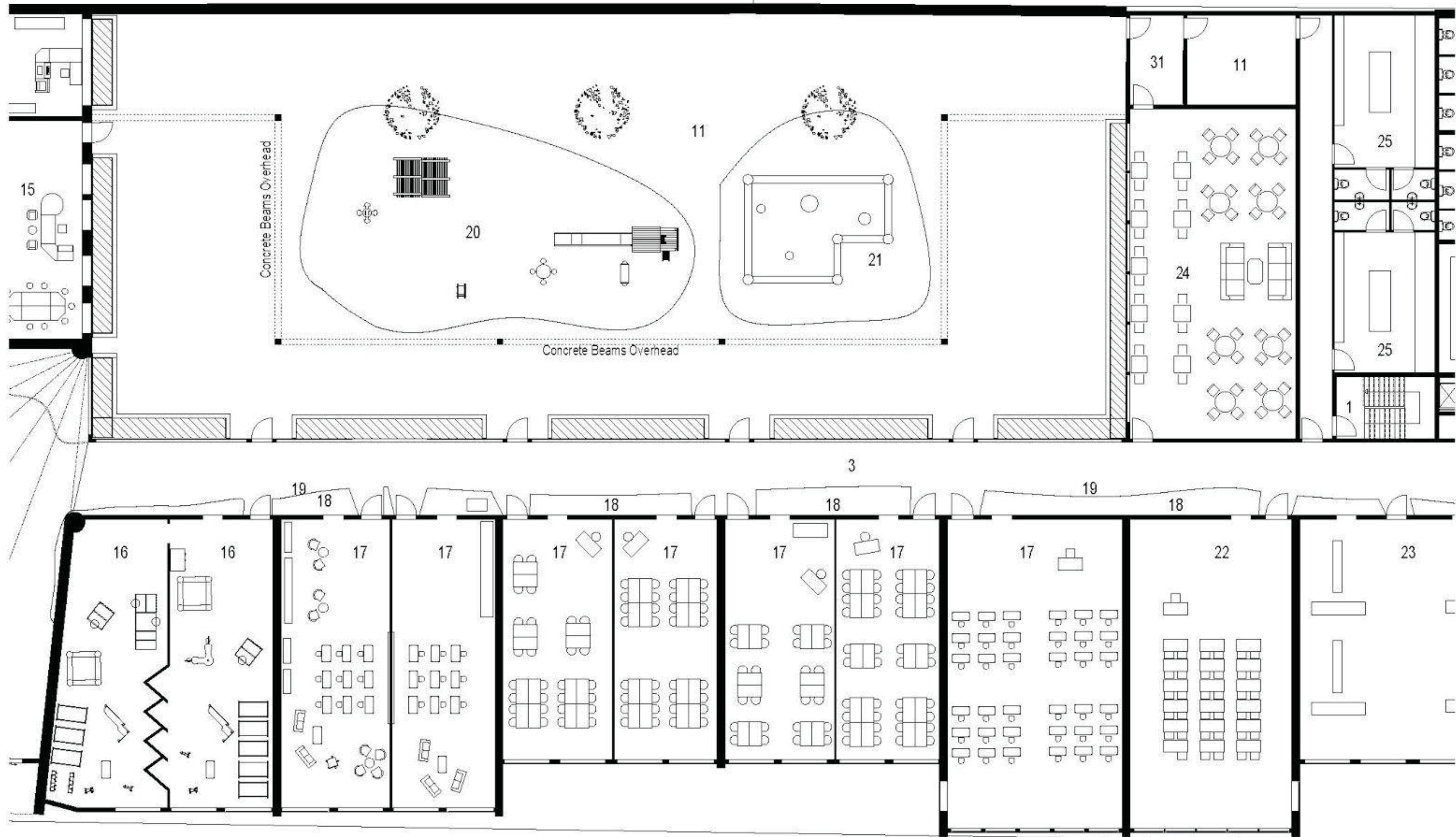


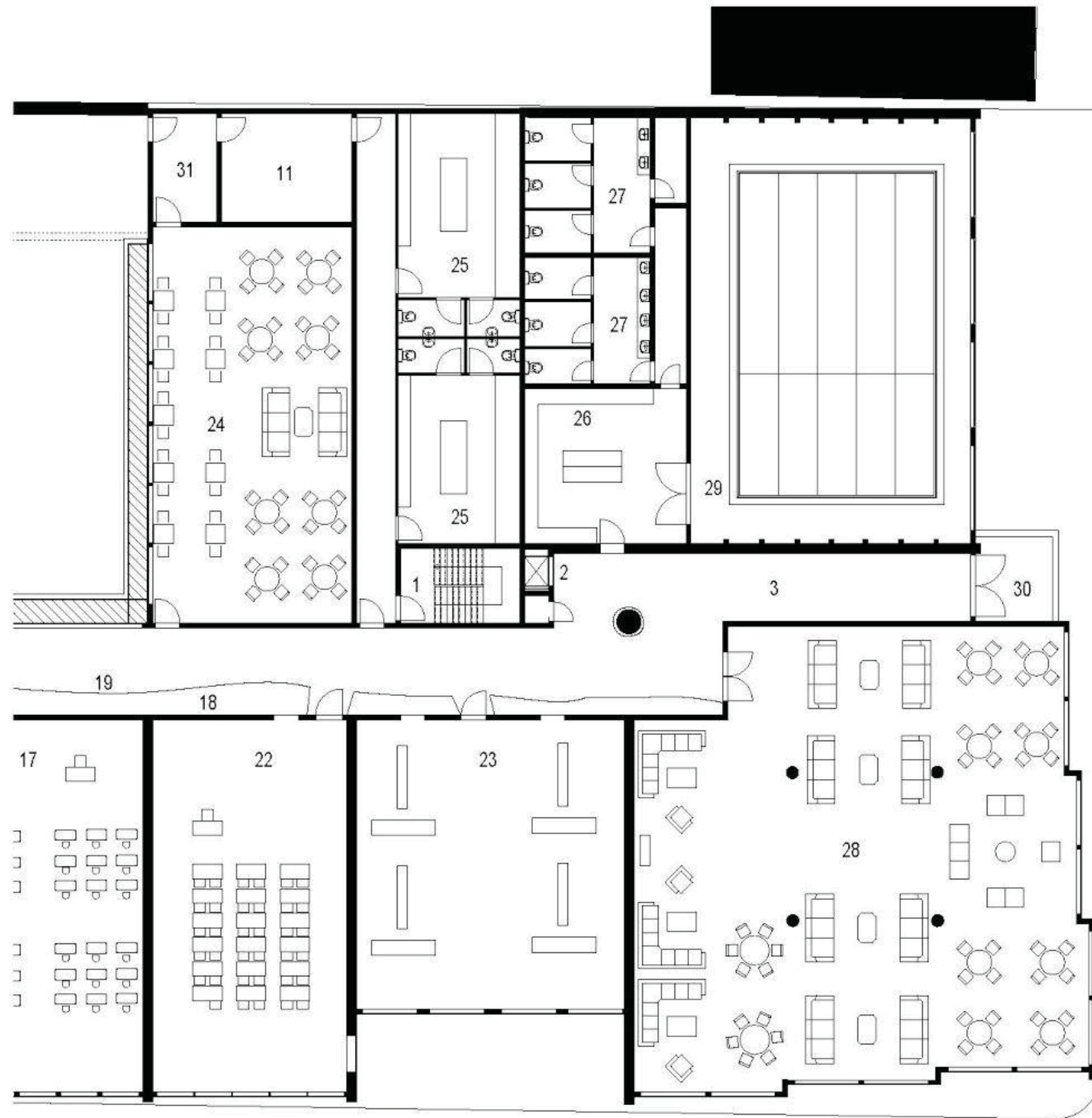
# PLAN DRAWINGS

## GROUND FLOOR LEVEL









WILKES STREET

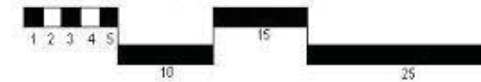
- |                         |                            |
|-------------------------|----------------------------|
| 1.....STAIRS            | 17.....CLASSROOM           |
| 2.....ELEVATOR          | 18.....STORAGE             |
| 3.....CORRIDOR          | 19.....CUE WALL            |
| 4.....SECURITY          | 20.....SENSORY GARDEN      |
| 5.....SECRETARY         | 21.....PLAYGROUND          |
| 6.....TEACHERS          | 22.....TECHNOLOGY LAB      |
| 7...ADMIN ENTRANCE      | 23.....GYMNASIUM           |
| 8.....STUDENT ENTRANCE  | 24.....CAFETERIA           |
| 9.....ASSESSMENT OFFICE | 25.....CHANGING ROOM       |
| 10.....GALLERY          | 26.....LOCKERS             |
| 11.....COURTYARD        | 27.....RESTROOMS           |
| 12.....ADMIN OFFICE     | 28.....GREEN ROOM          |
| 13.....CORRIDOR         | 29.....HYDRO THERAPY POOL  |
| 14.....ACCOUNTING       | 30.....LIFE SKILLS HOME    |
| 15.....PE OFFICE        | ENTRANCE                   |
| 16.....CLASSROOM KG     | 31.....COURTYARD ENTERANCE |

BASEMENT FLOOR LEVEL

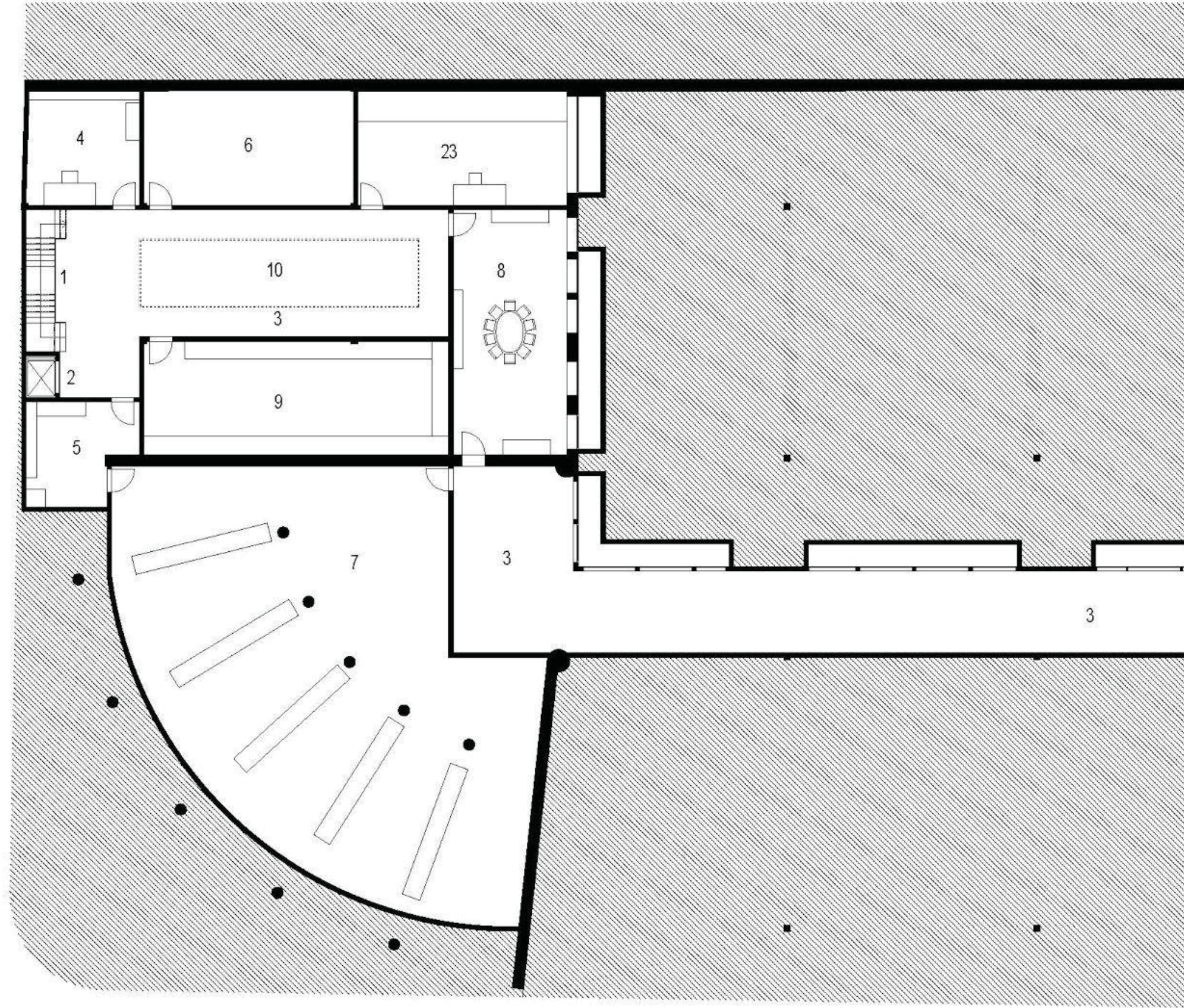
THE OLD RAILROAD TUNNEL

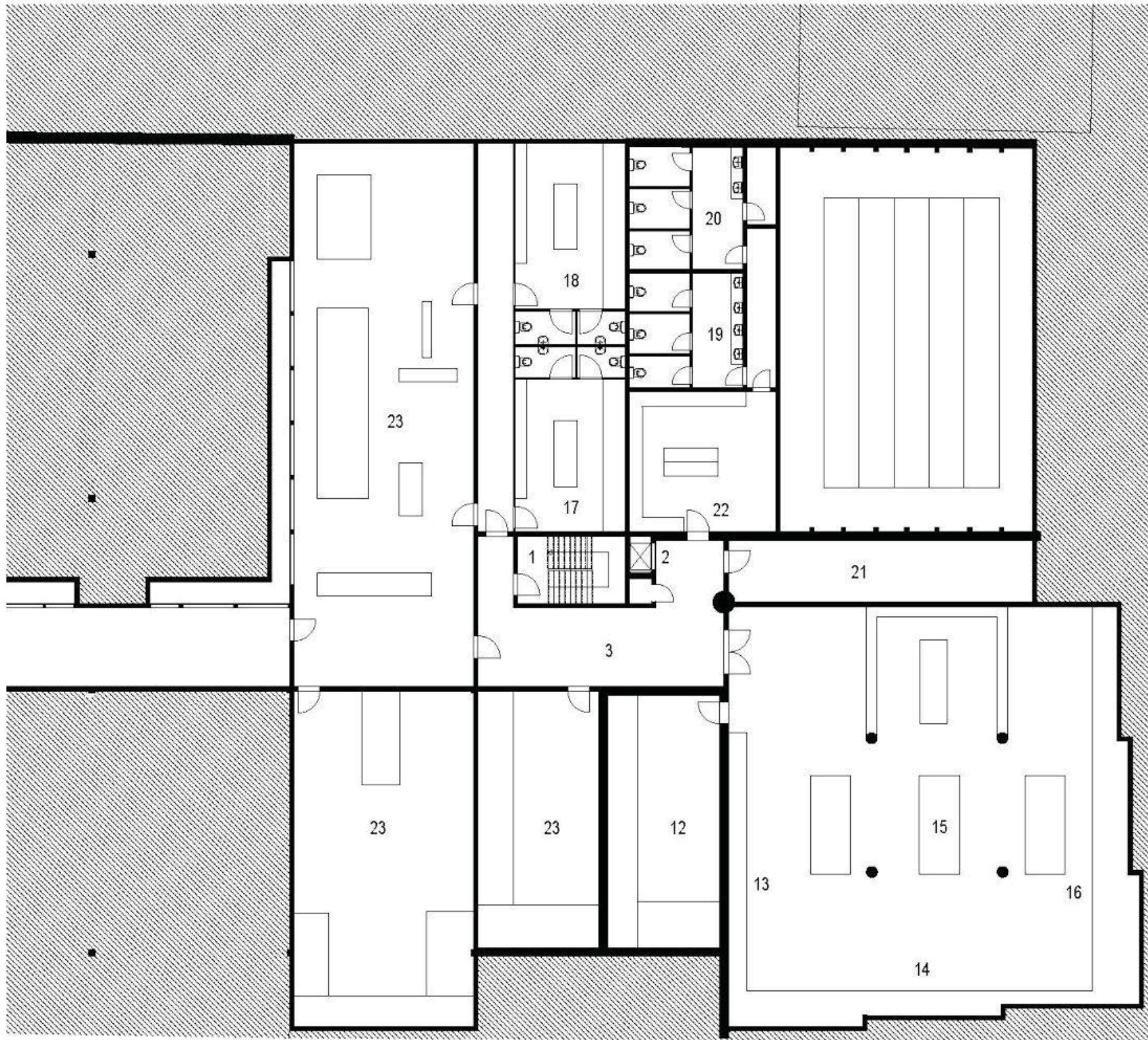


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|---------------------|------------------------|
| 1.....STAIRS        | 12.....DEEP FREEZE     |
| 2.....ELEVATOR      | 13.....PREPARATION     |
| 3.....CORRIDOR      | 14.....MEAT            |
| 4.....SECURITY ROOM | 15.....KITCHEN         |
| 5.....TECHNICAL     | 16.....VEGETABLES      |
| 6.....PERSONNEL     | 17.....PERSONNEL MEN   |
| 7.....ARCHIVES      | 18.....PERSONNEL WOME  |
| 8.....MEETING ROOM  | 19.....MEN             |
| 9.....FILES         | 20.....WOMEN           |
| 10.....GALLERY      | 21.....MECHANICAL ROOM |
| 11.....COURT YARD   | 22.....LOCKERS         |
|                     | 23.....STORAGE         |

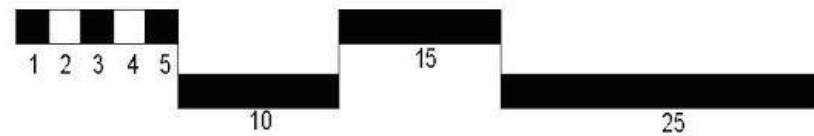


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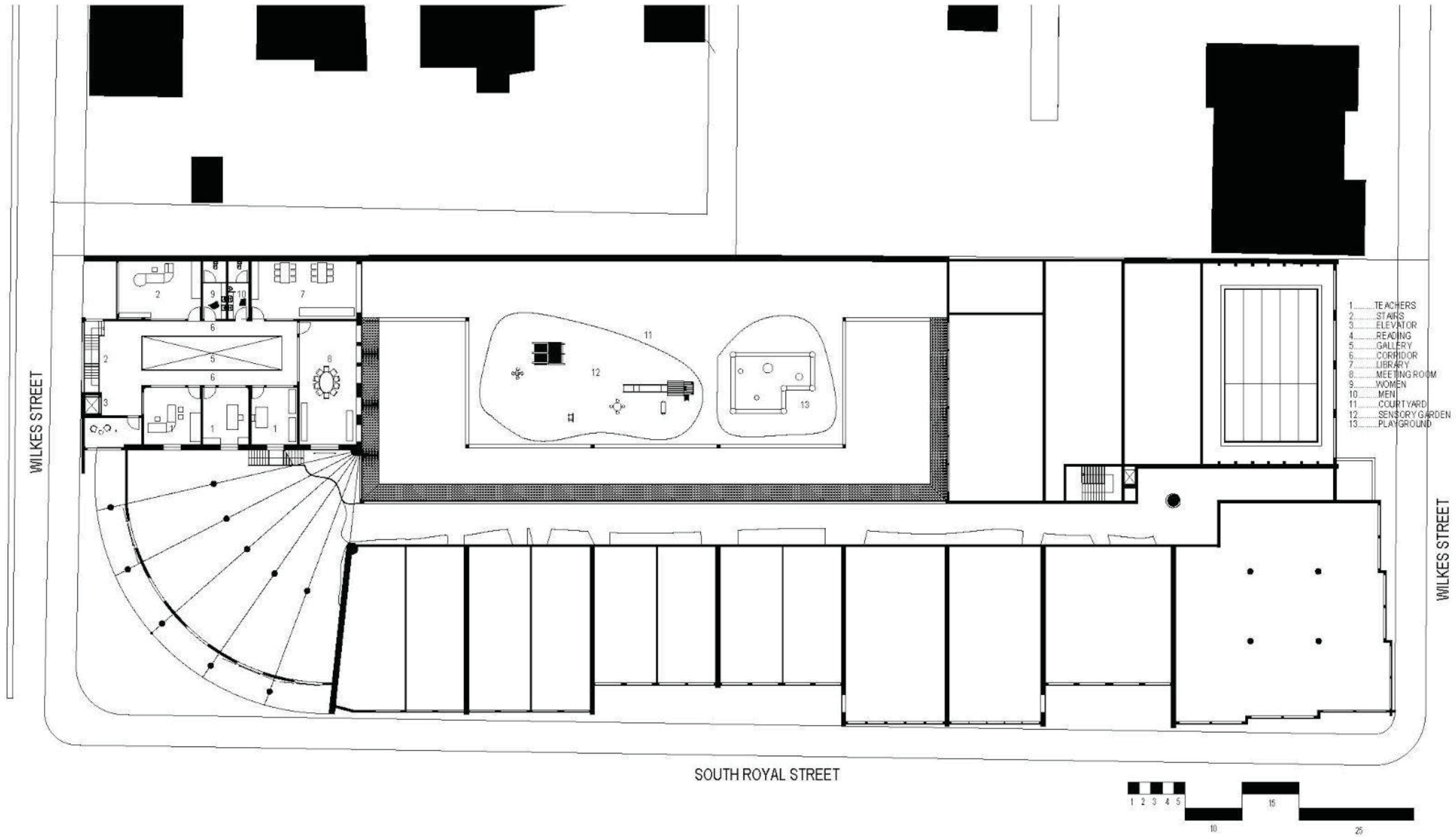


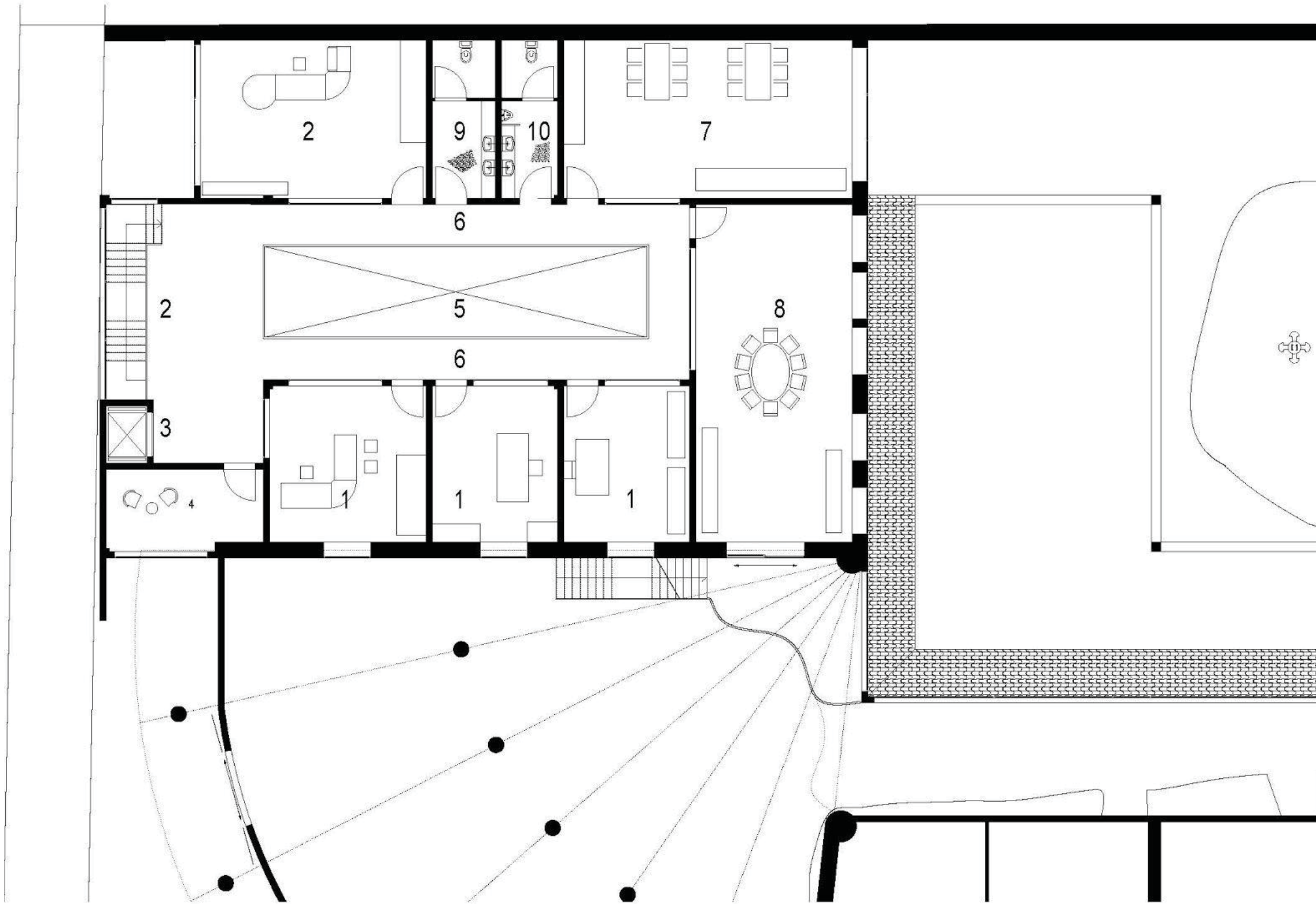


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|---------------------|------------------------|
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| 2.....ELEVATOR      | 13.....PREPARATION     |
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| 6.....PERSONNEL     | 17.....PERSONNEL MEN   |
| 7.....ARCHIVES      | 18.....PERSONNEL WOMEN |
| 8.....MEETING ROOM  | 19.....MEN             |
| 9.....FILES         | 20.....WOMEN           |
| 10.....GALLERY      | 21.....MECHANICAL ROOM |
| 11.....COURTYARD    | 22.....LOCKERS         |
|                     | 23.....STORAGE         |

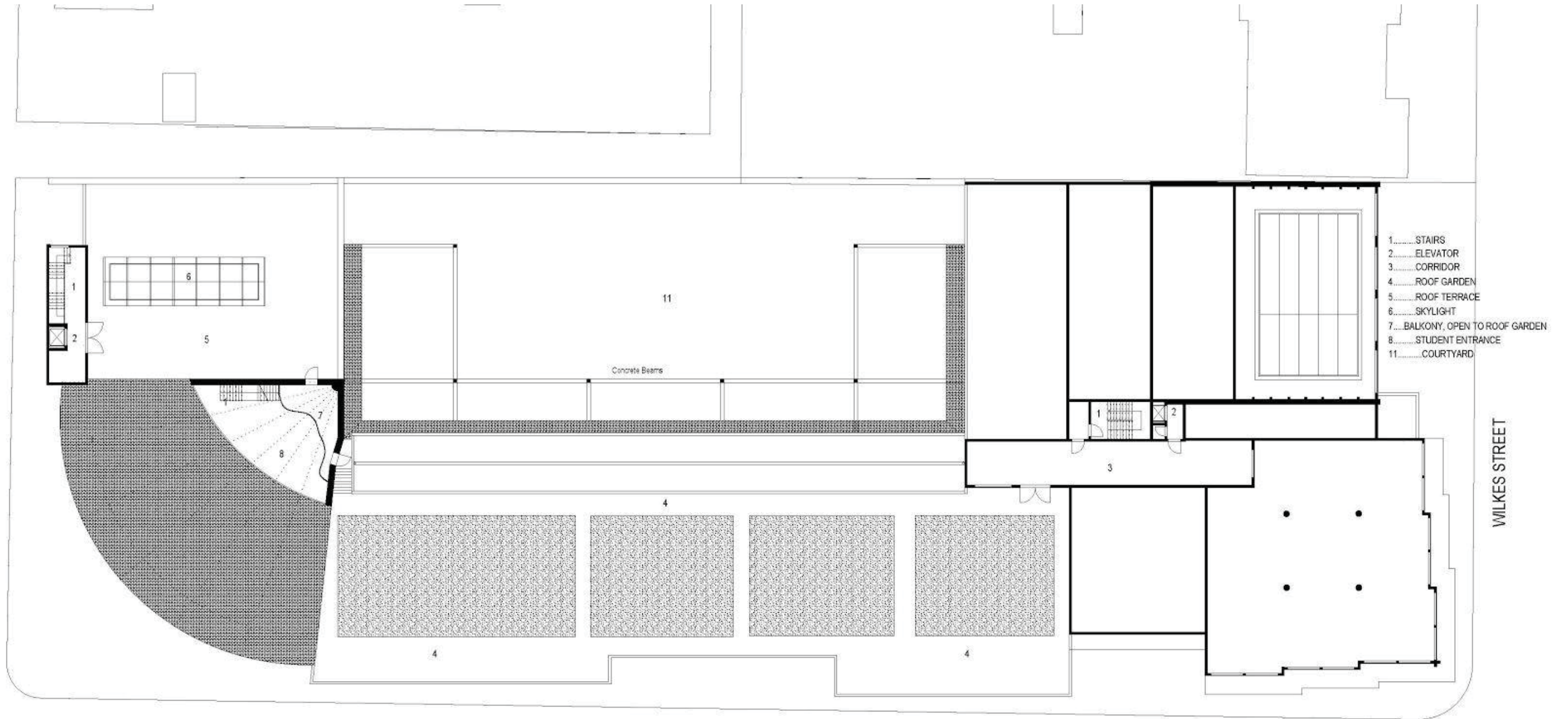


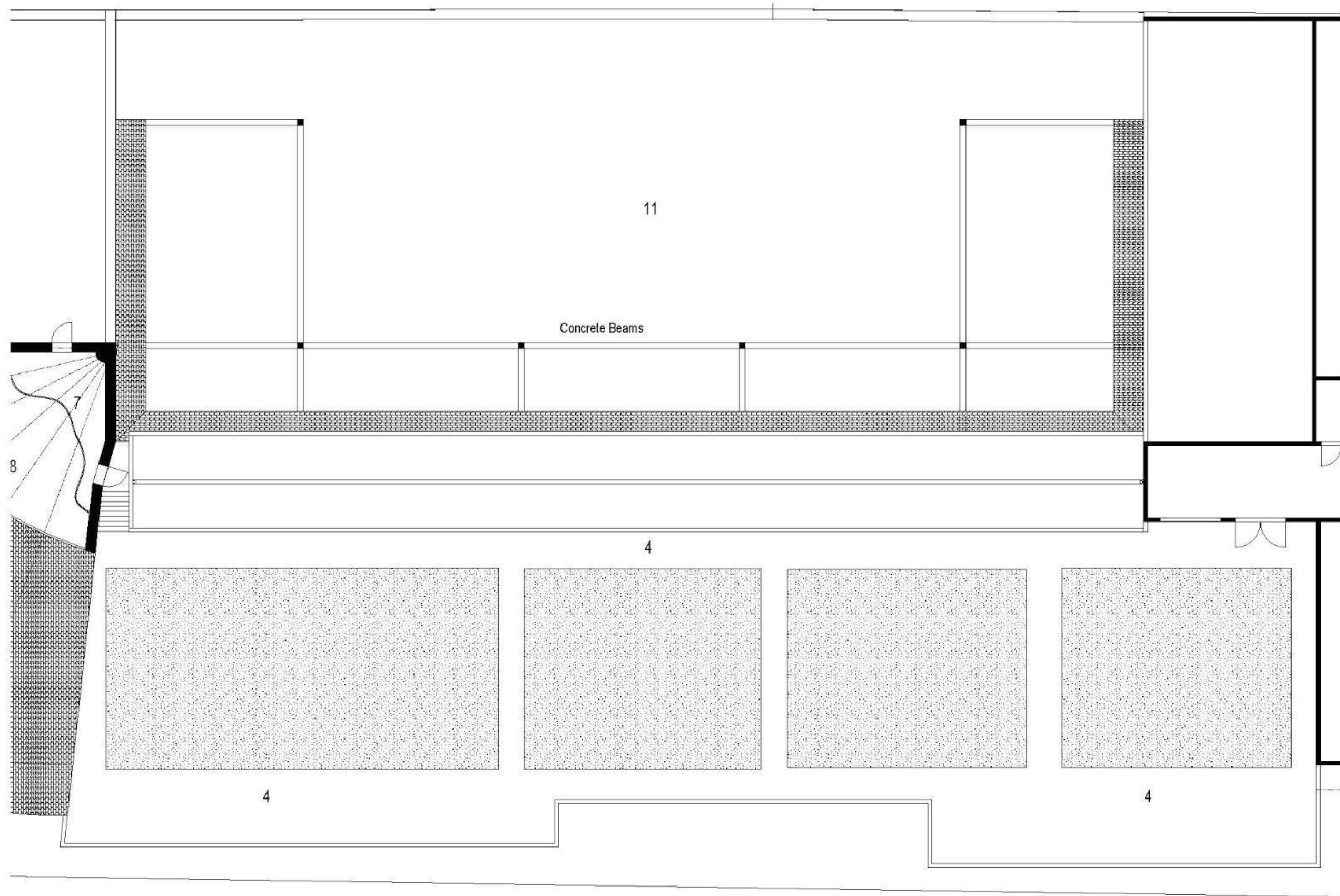
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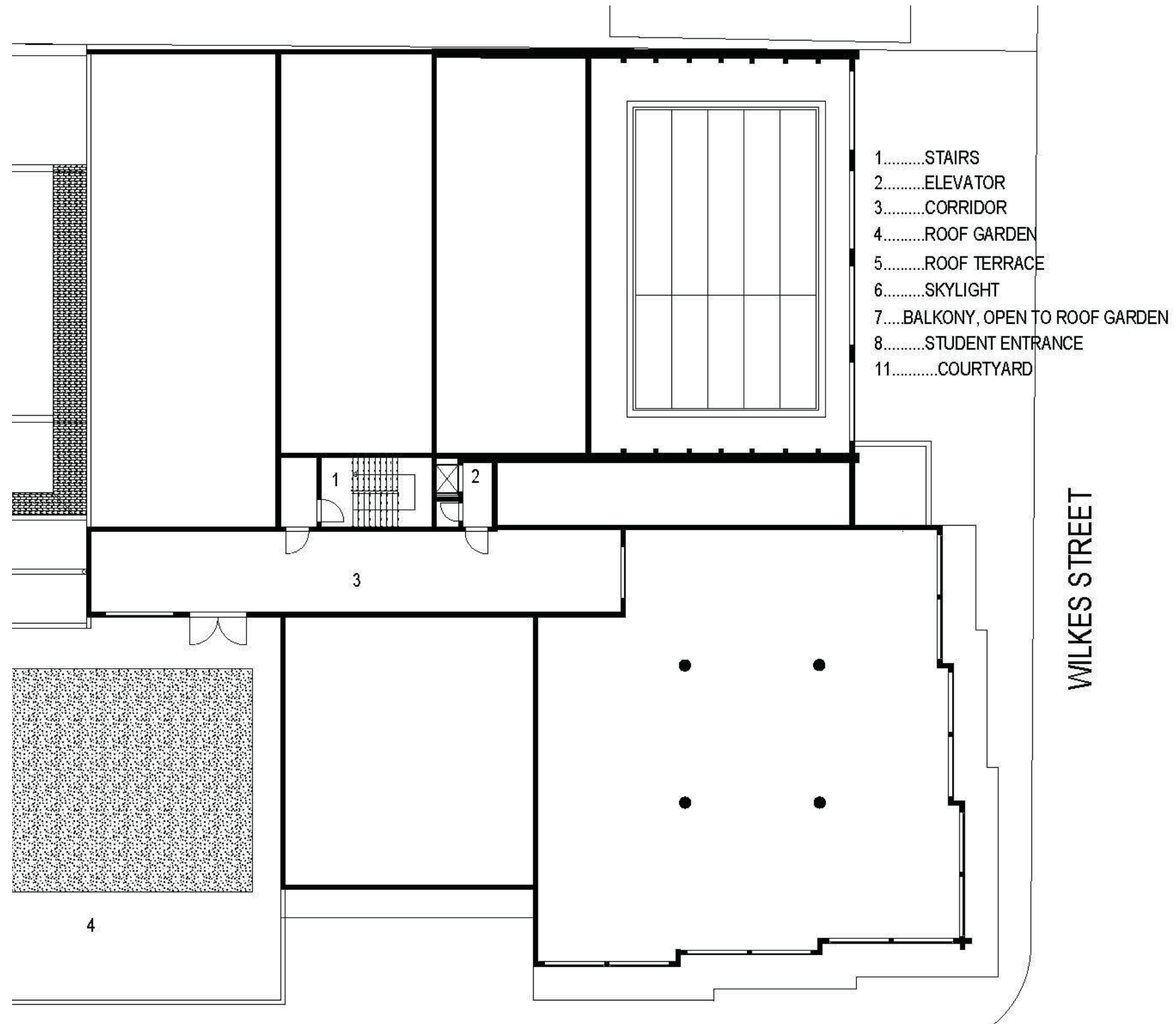




ROOF LEVEL

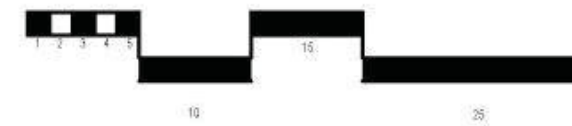
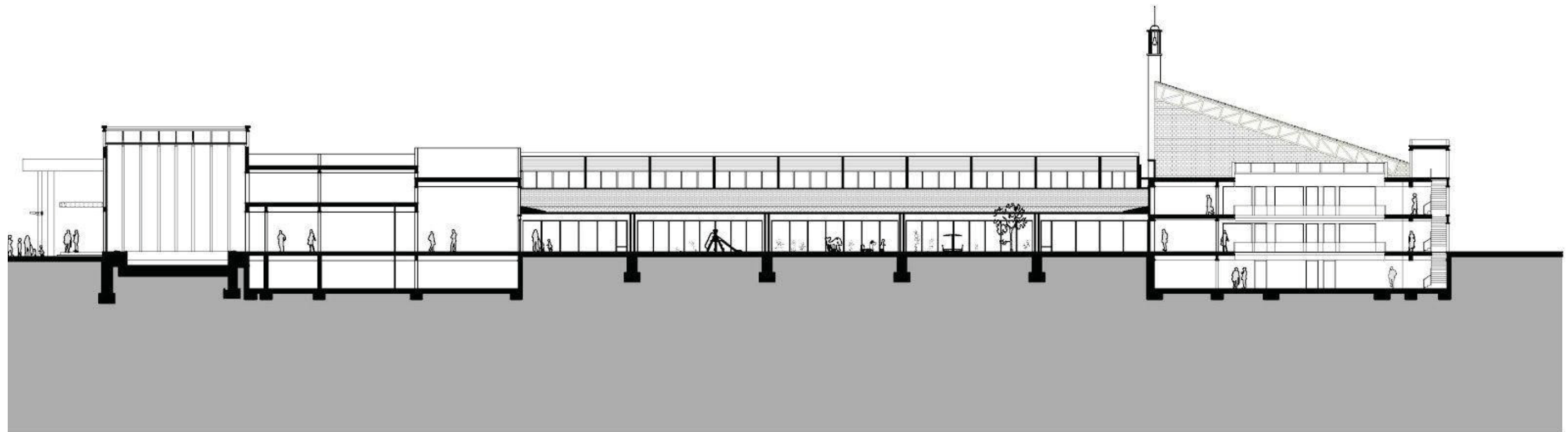


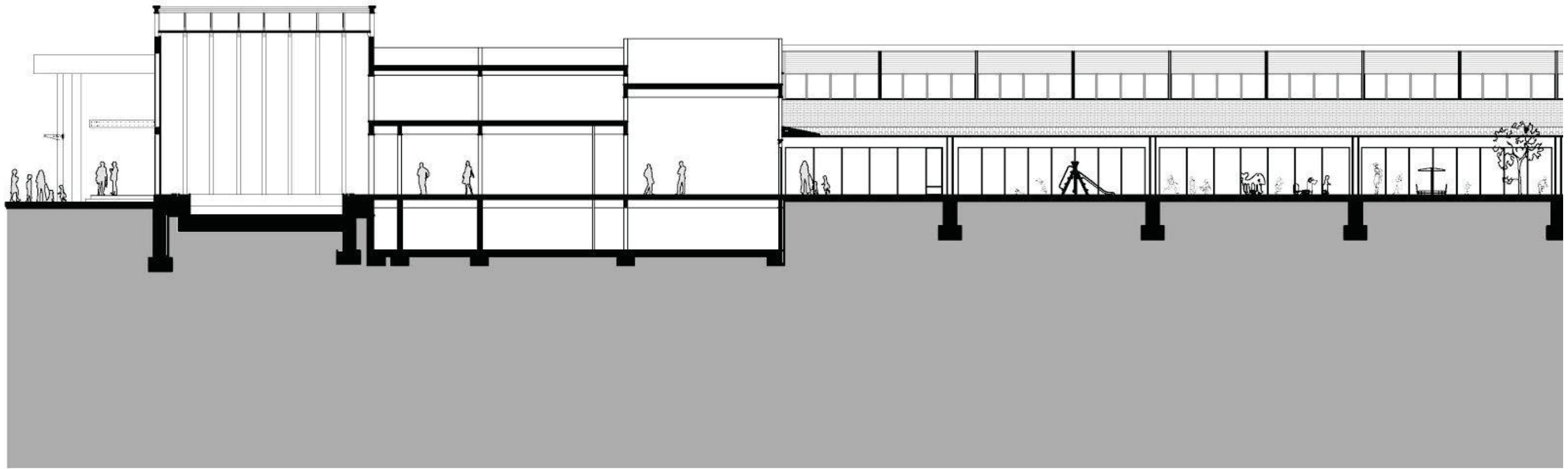


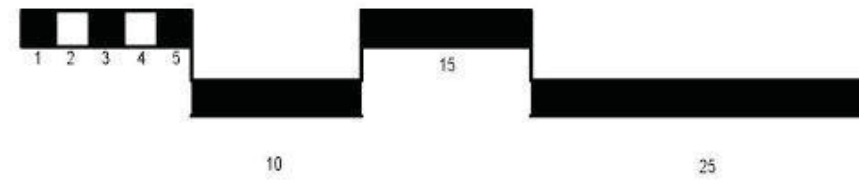
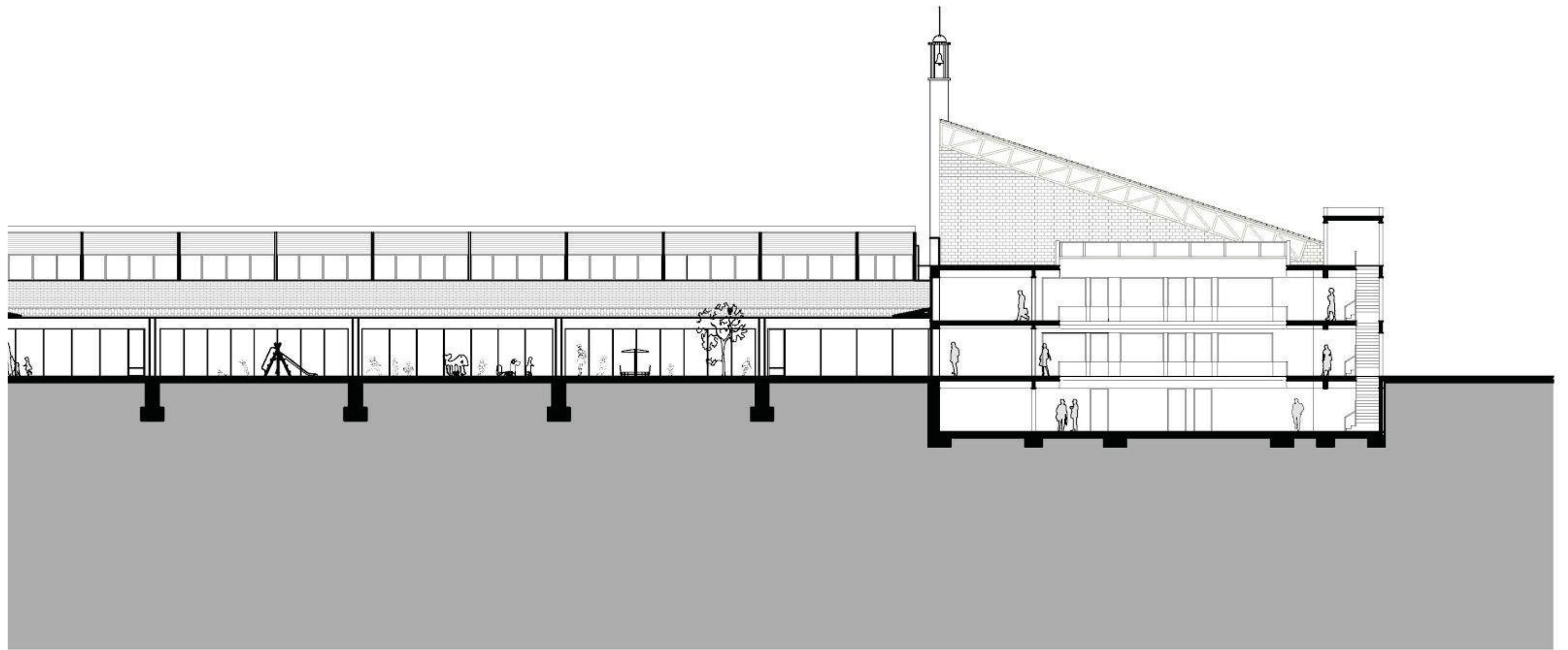


# SECTIONS

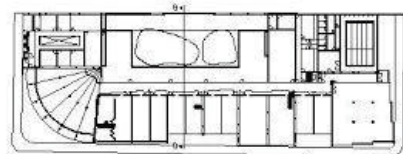
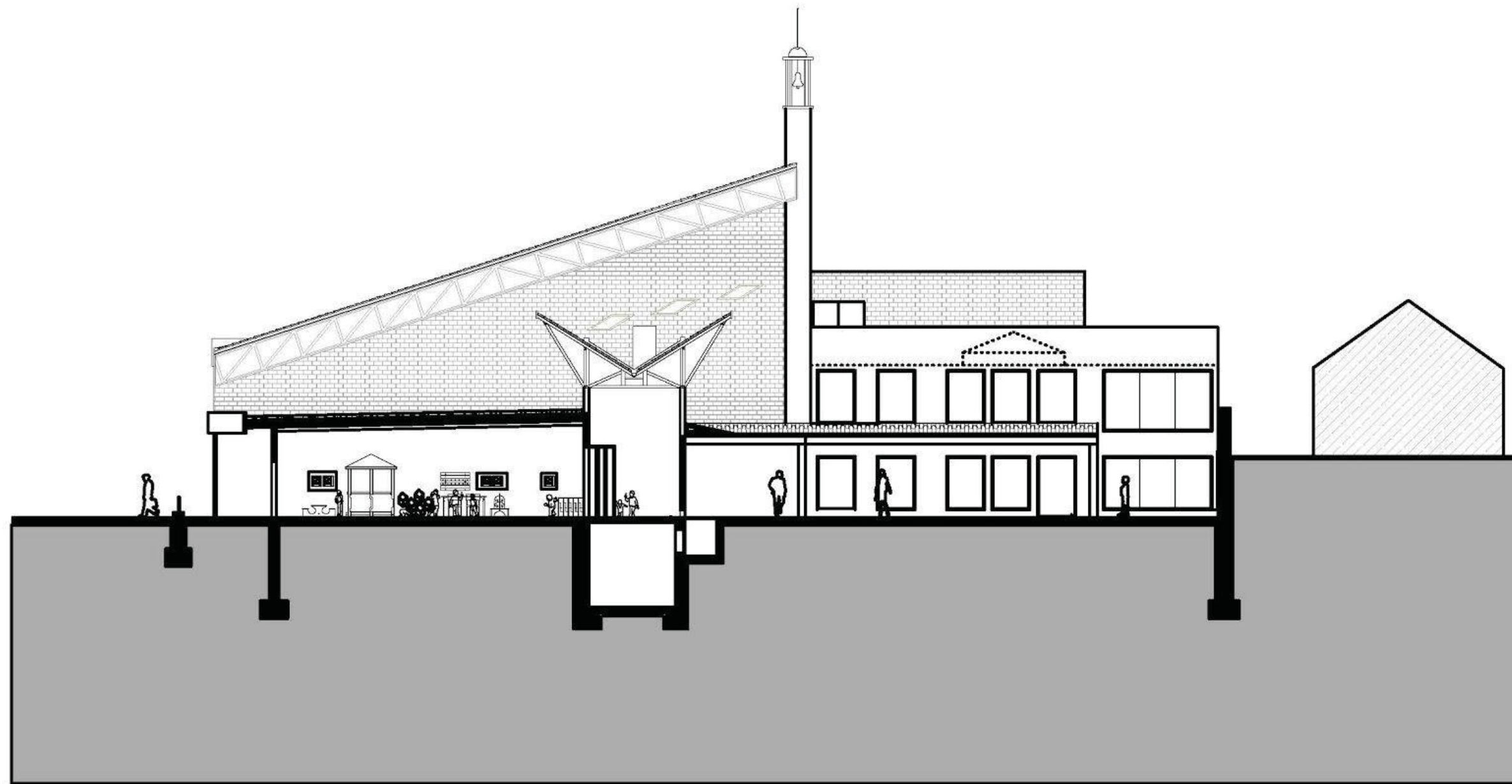
A-A SECTION



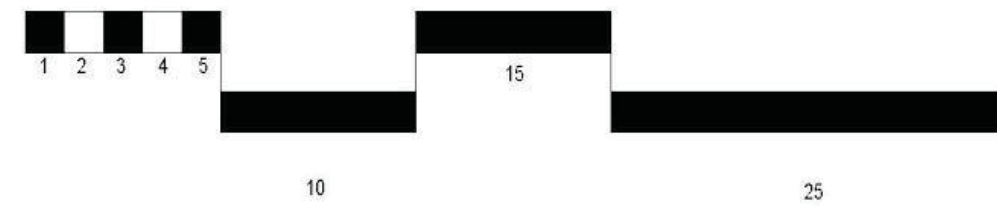
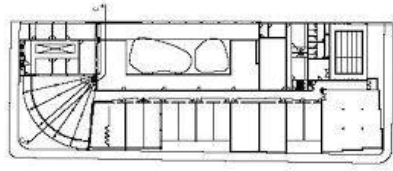
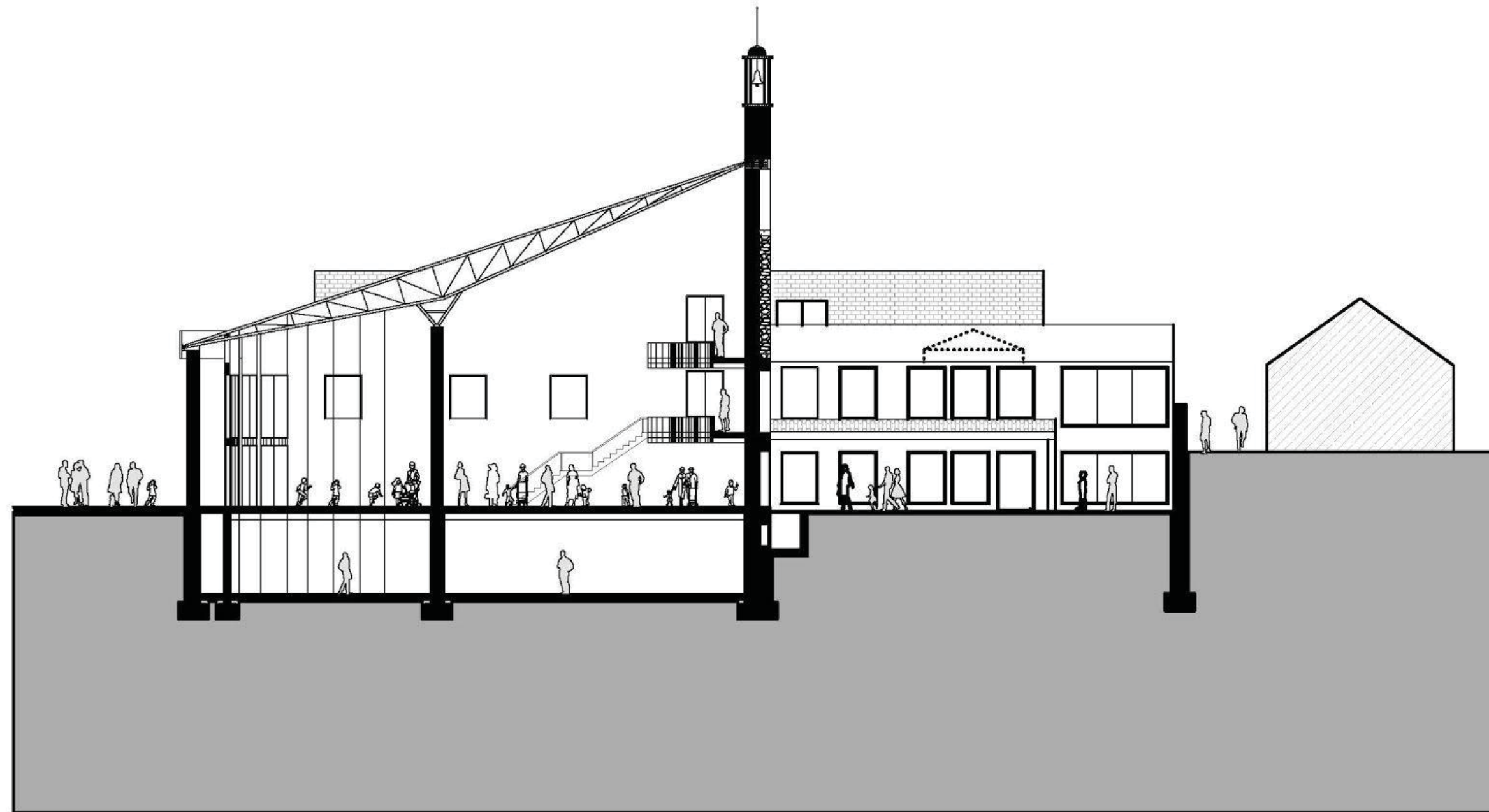




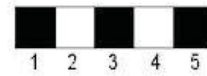
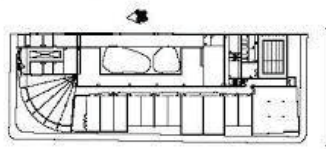
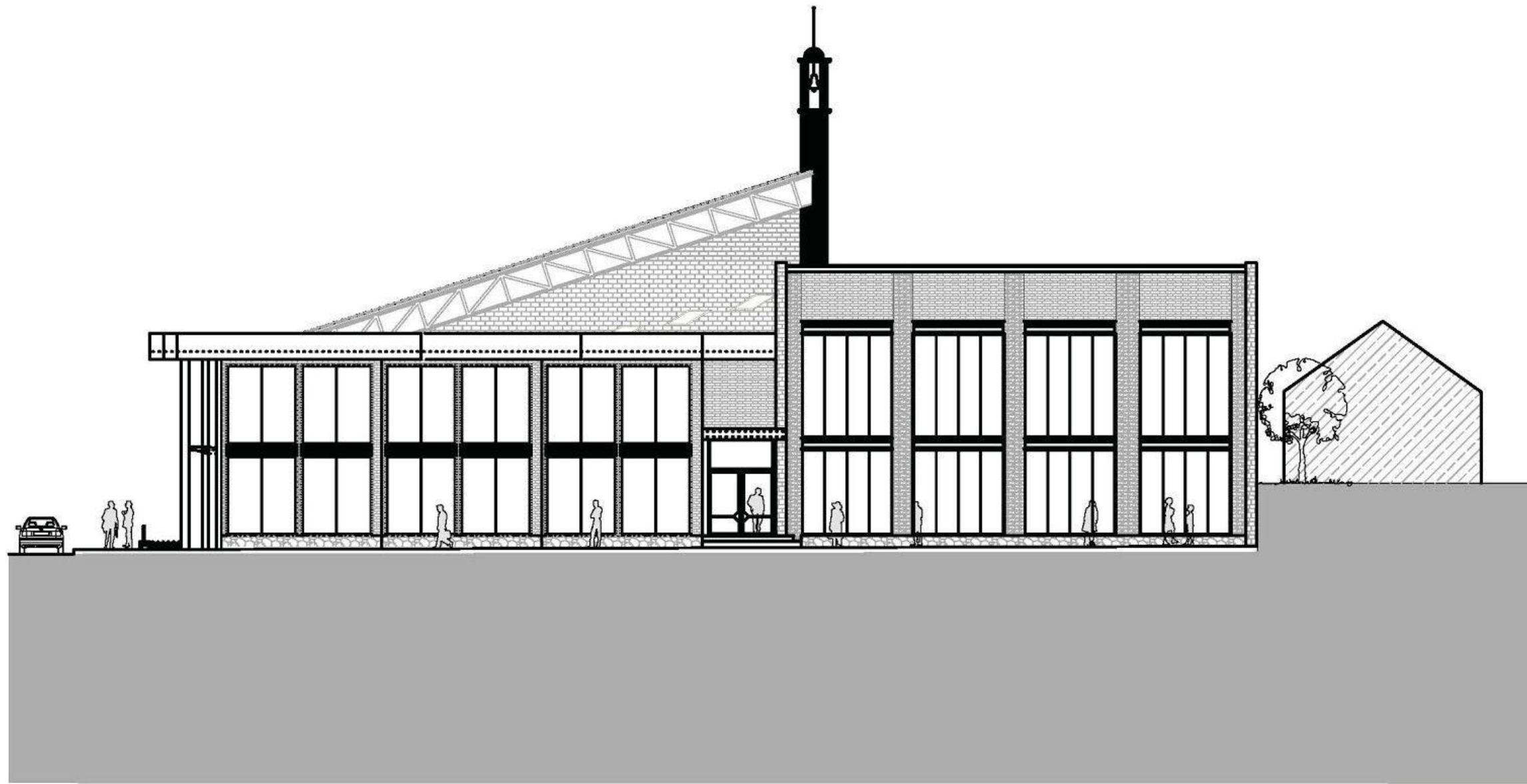
B-B SECTION



C-C SECTION



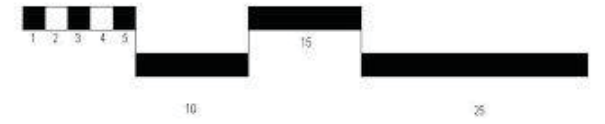
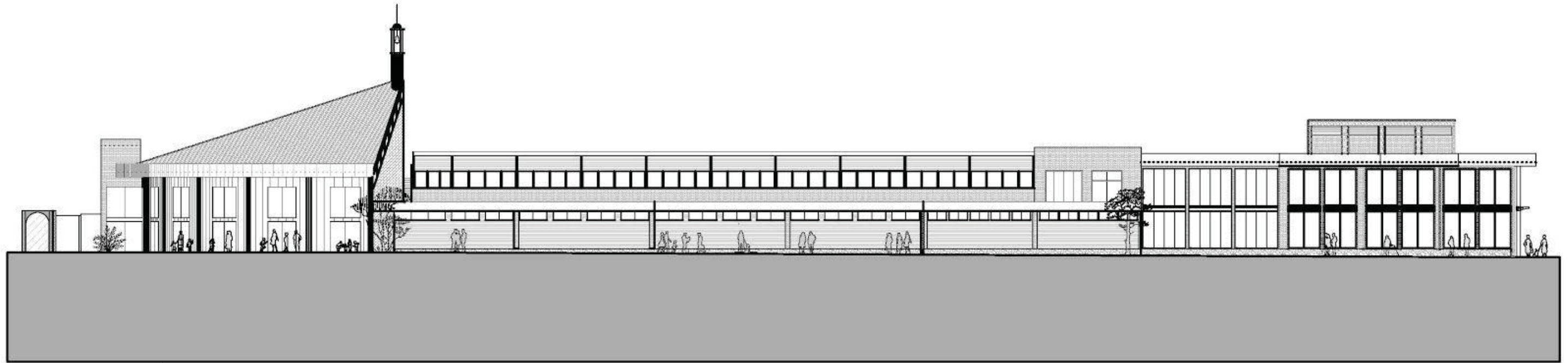
**ELEVATIONS**  
SOUTH ELEVATION

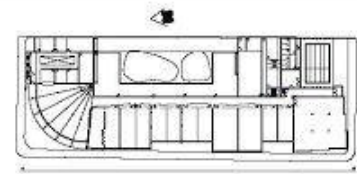
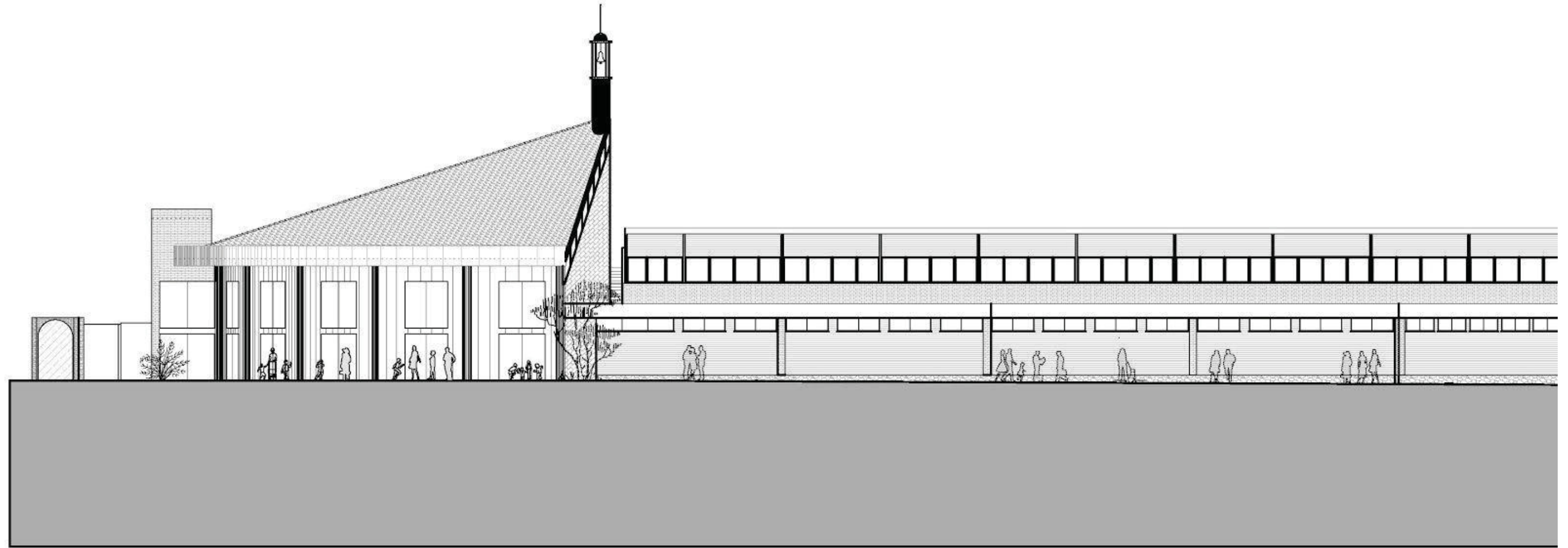


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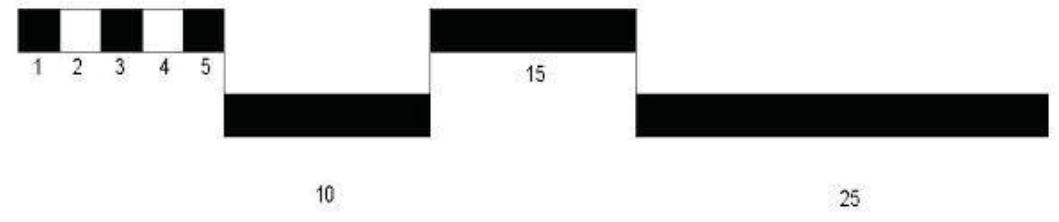
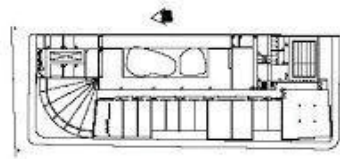
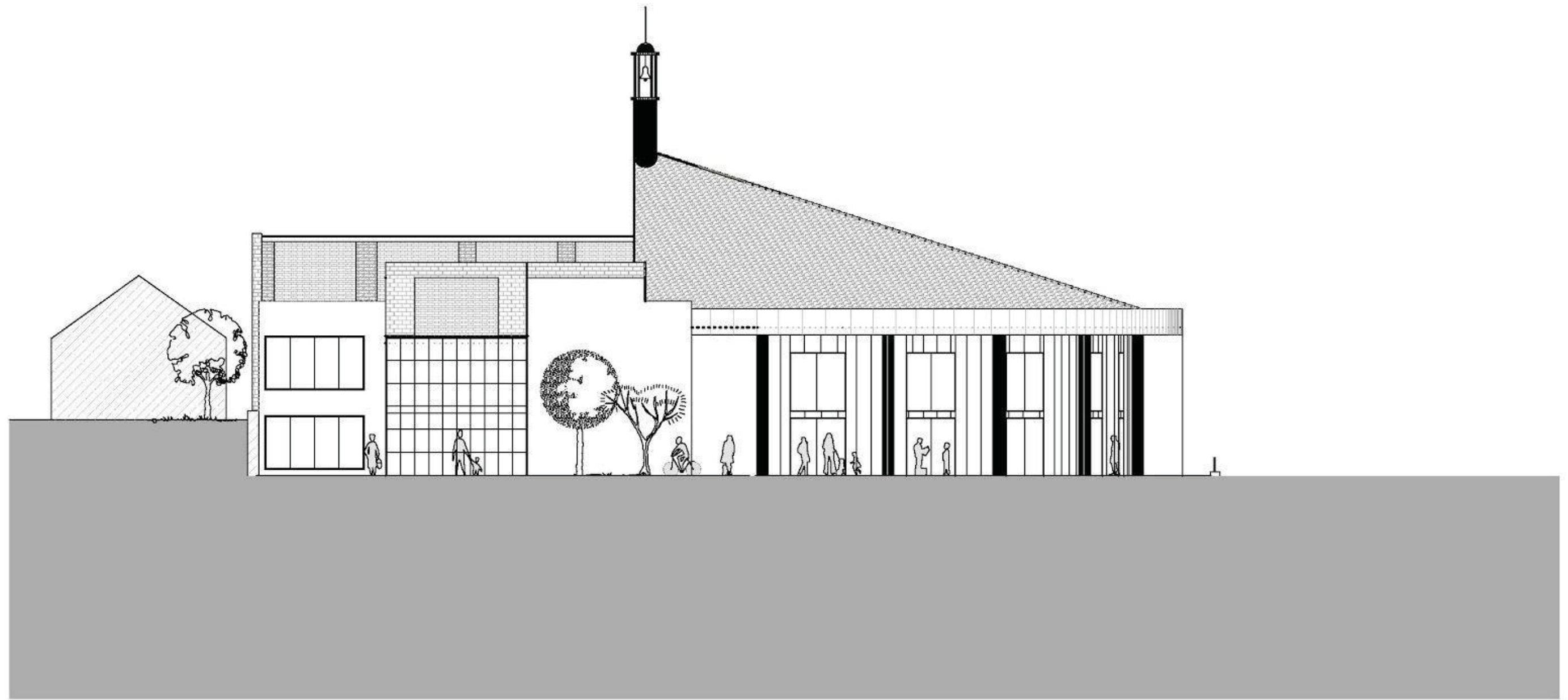
WEST ELEVATION

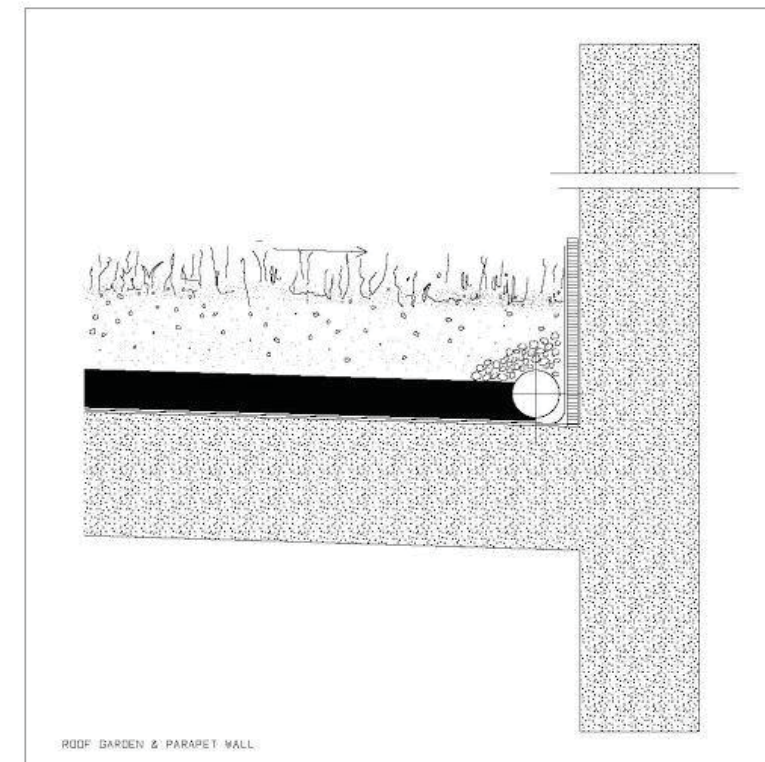
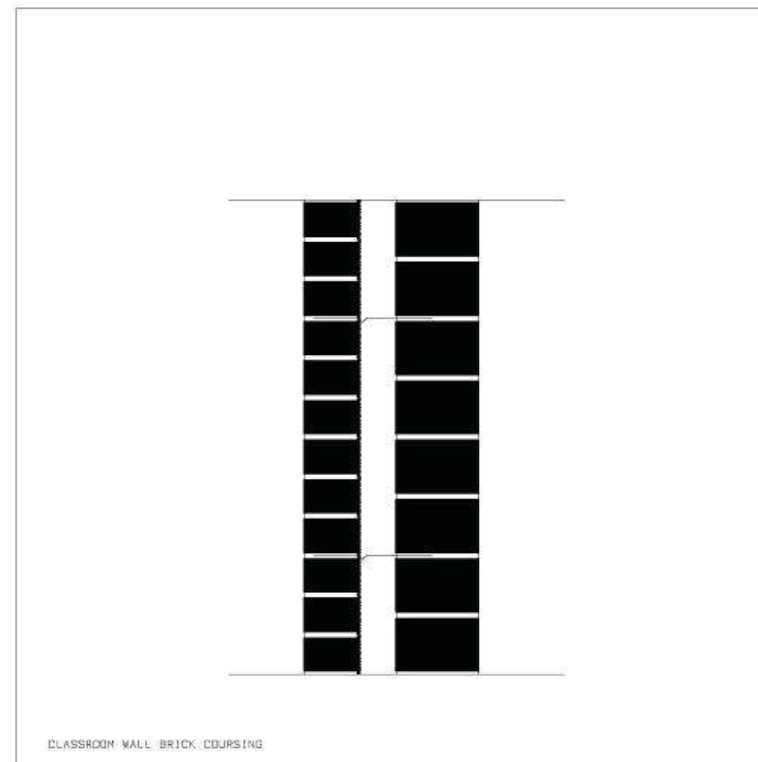
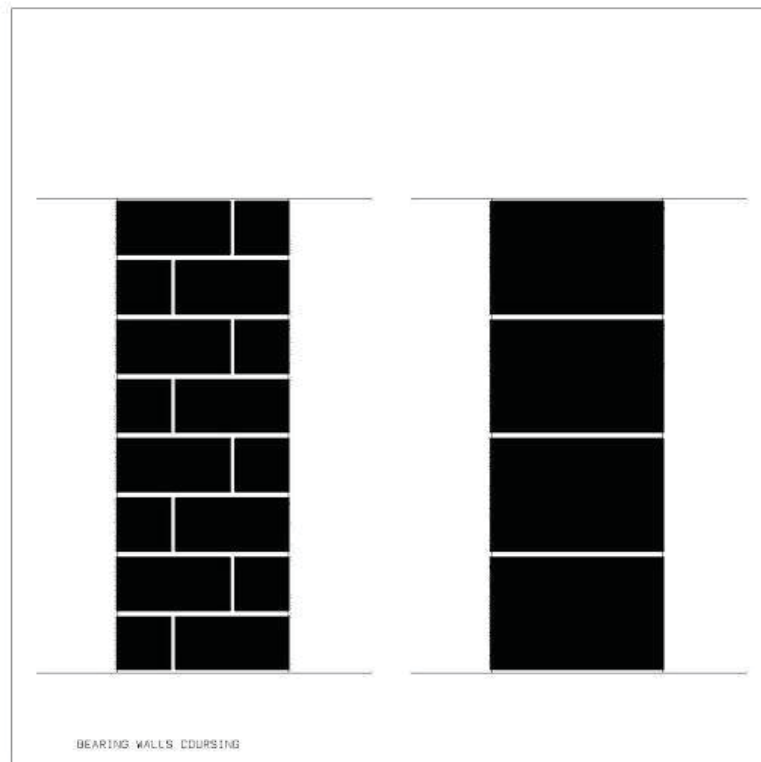
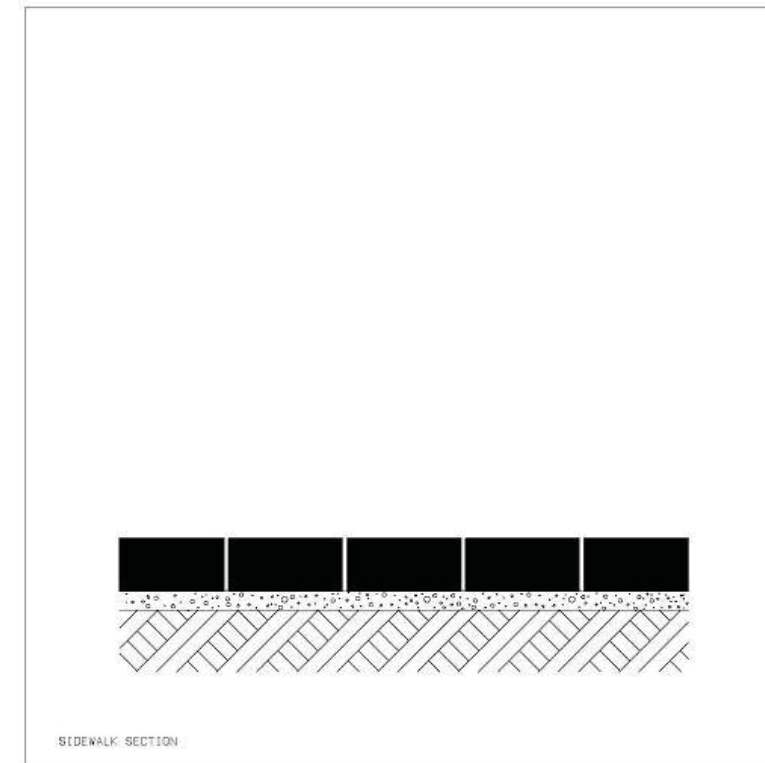
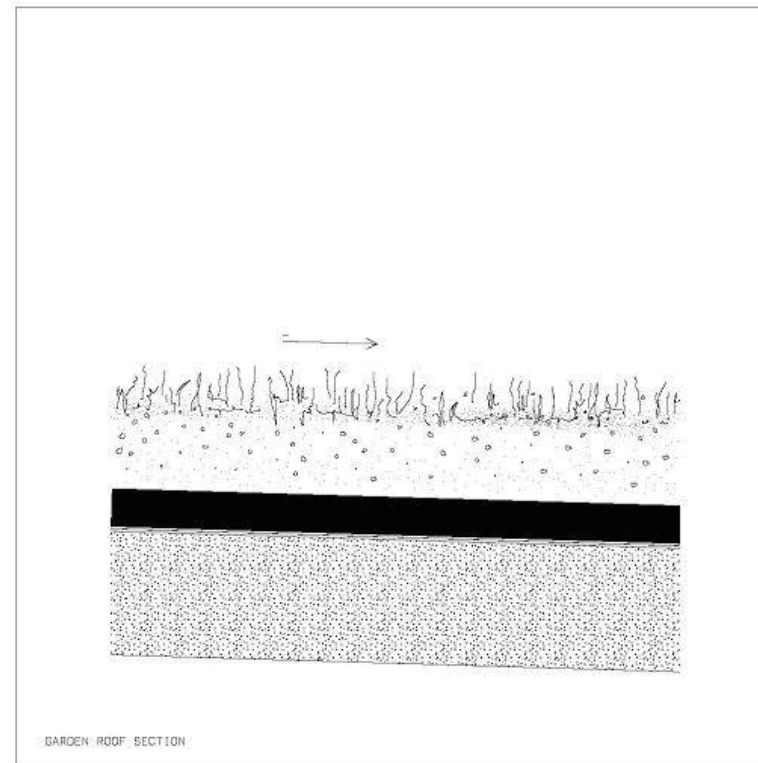
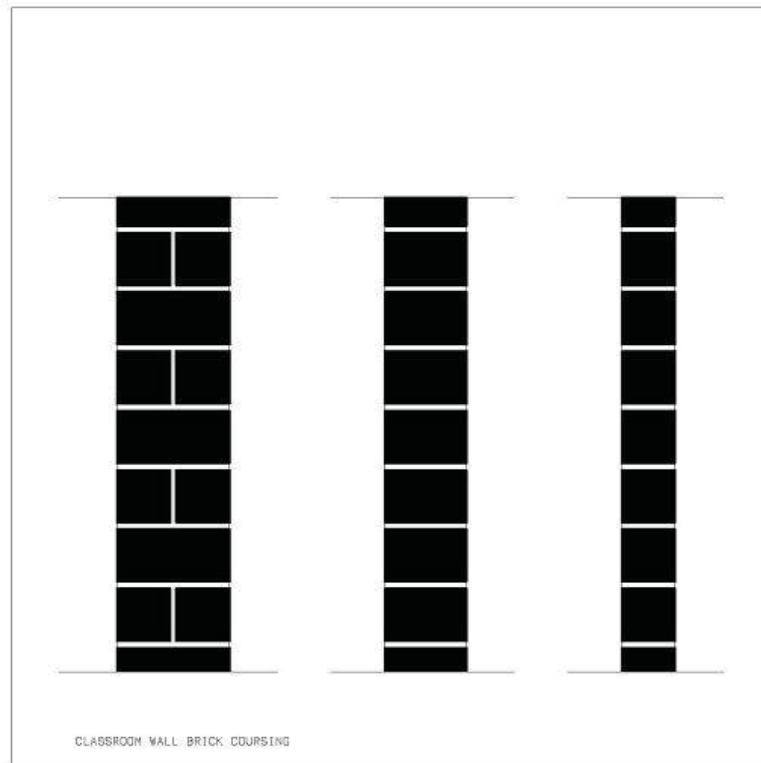




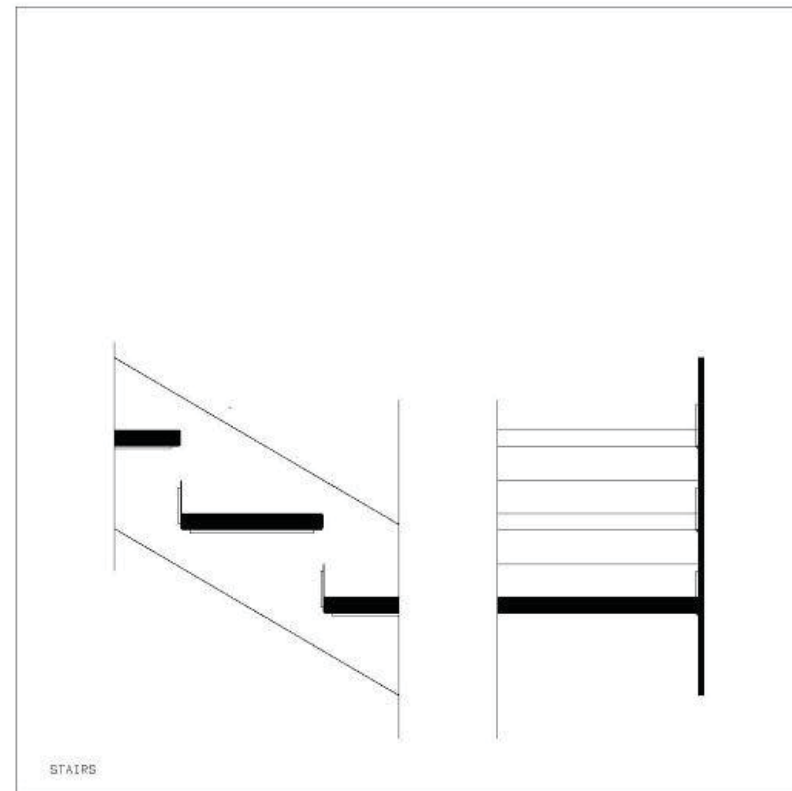
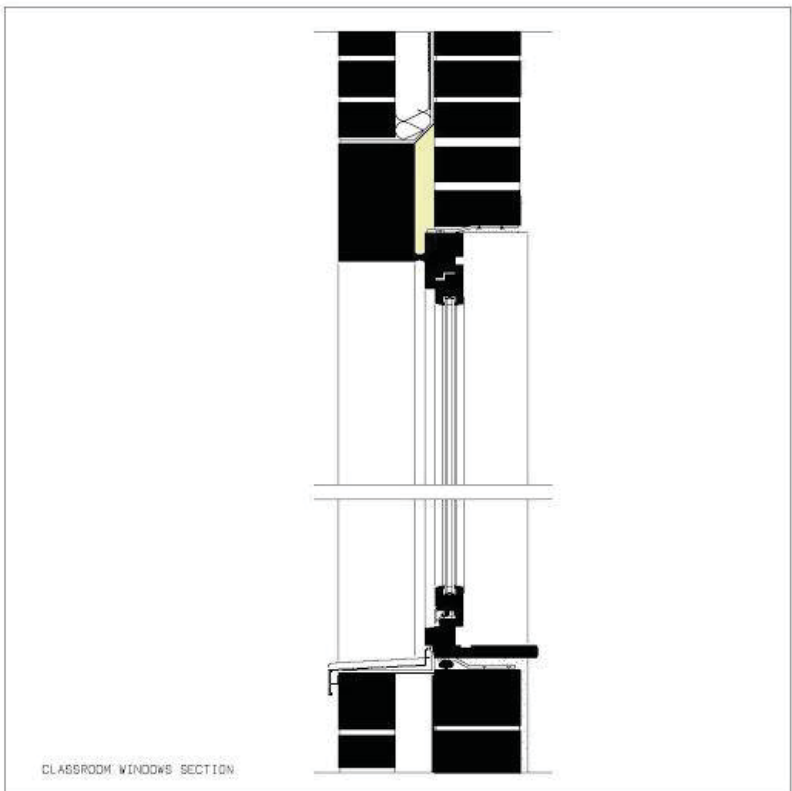
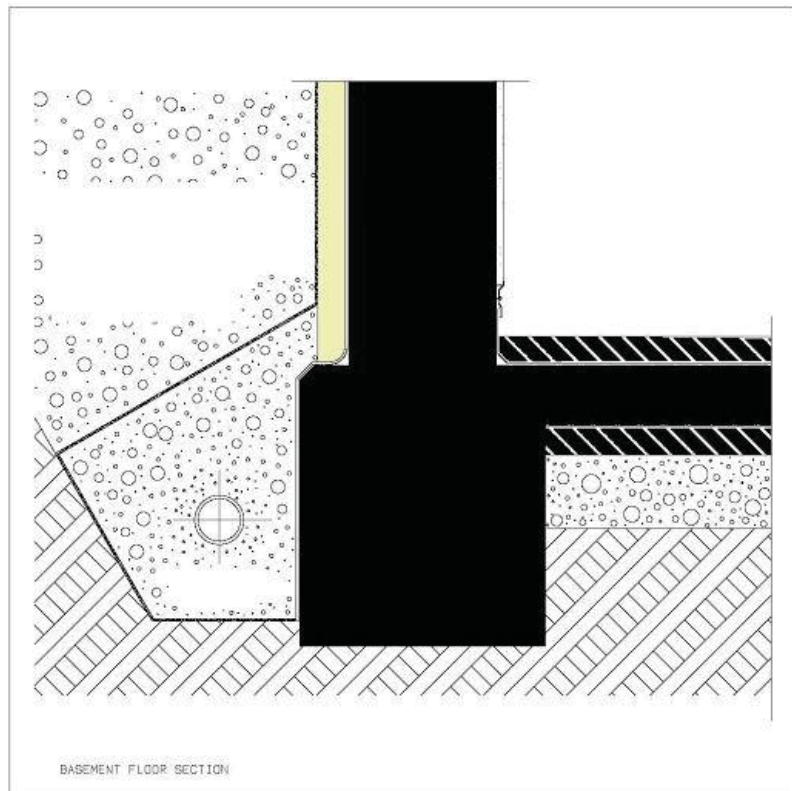
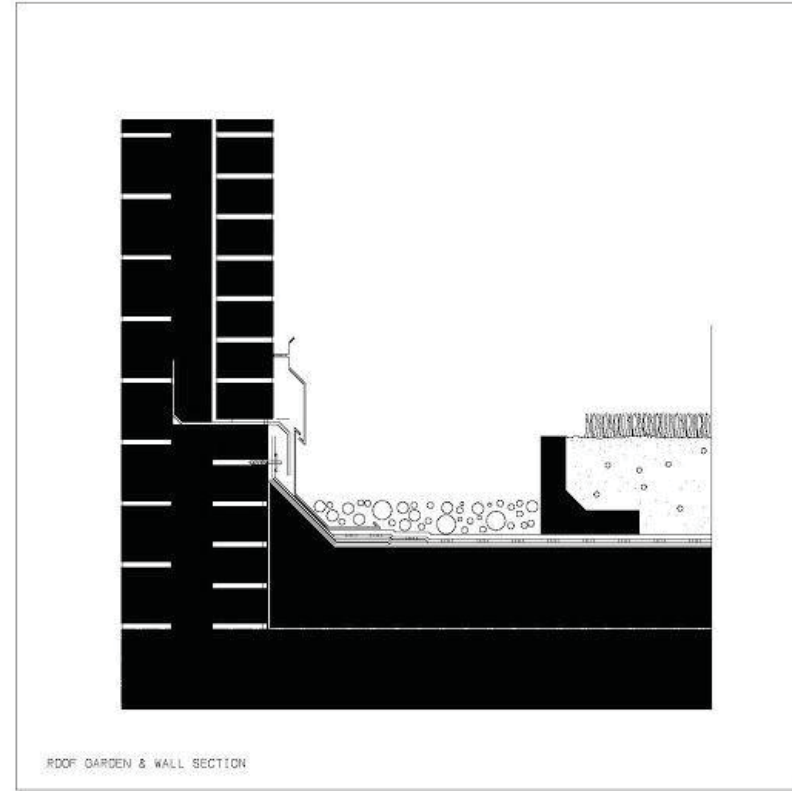
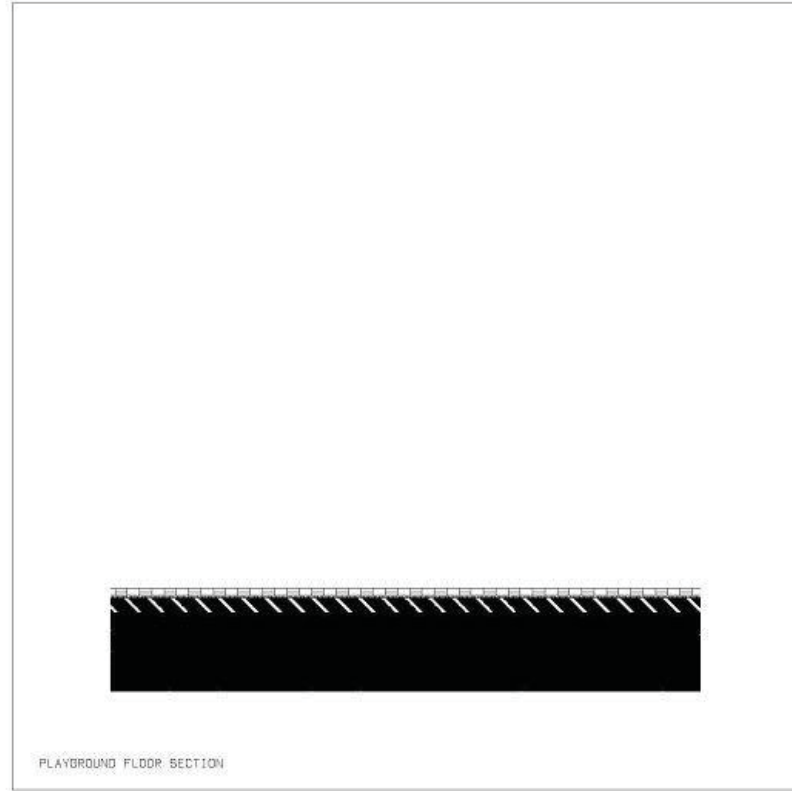
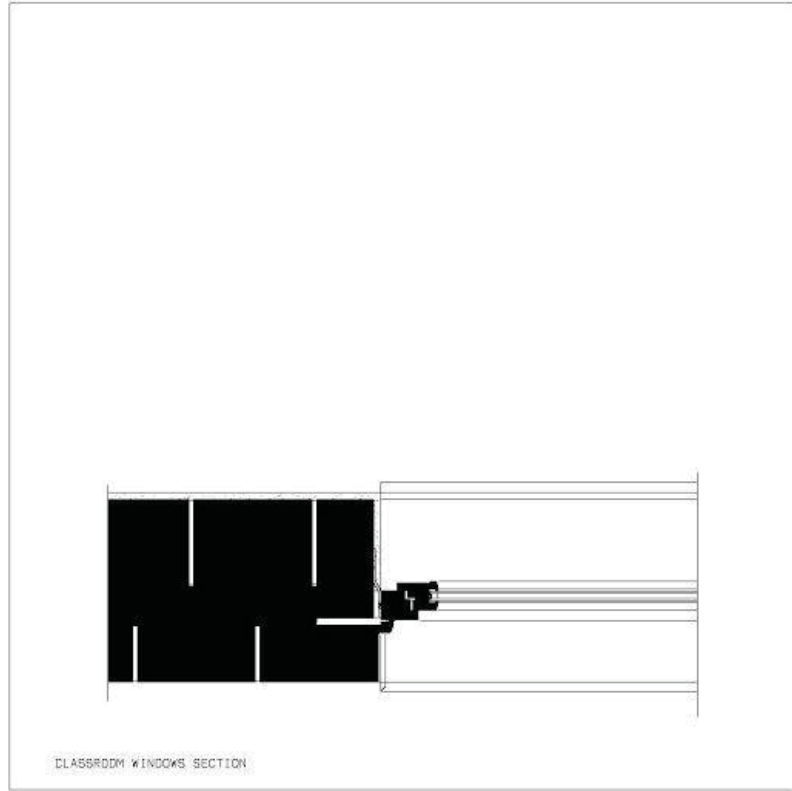


NORTH ELEVATION





**DETAILS**



# RENDERINGS

## CUE WALL







THERAPY POOL



ADMINISTRATION  
OFFICES





THE COURTYARD

THE SKILL HOUSE



THERAPY POOL



STUDENT ENTRANCE



## CONCLUSION

EDUCATION IS ALWAYS IMPORTANT, ESPECIALLY FOR THE CHILDREN WHO HAVE VISUAL IMPAIRMENTS. FIRST STEP IS LEARNING BY USING THEIR SENSES AND EXPERIENCES. BEING A GOOD CITIZEN DURING THEIR LIFESPAN AND BEING PRODUCTIVE IN SOCIETY DEPENDS ON HOW THEY START THEIR EDUCATION IN THEIR CHILDHOOD. MY THESIS IS PART OF THE EDUCATION PROGRAM FOR THEM. AND MY DESIGN IS NOT JUST TO HELP THEM USE THEIR SENSES BUT ALSO HELP THEM LIVE IN A SCHOOL WITHOUT ANY ASSISTANCE TO GAIN MORAL POWER AND SELF ESTEEM.

“ IN FACT WE HAVE A MORAL DUTY TO REMOVE THE BARRIERS TO PARTICIPATION, AND TO INVEST SUFFICIENT FUNDING AND EXPERTISE TO UNLOCK THE VAST POTENTIAL OF PEOPLE WITH DISABILITIES”

– Professor Stephen Hawking.



Photograph, google imagery

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<[https://www.google.com/search?q=kids+with+disabilities+in+playground&source=lnms&tbm=isch&sa=X&ved=0ahUKEwil7eHewsrUAhVIXD4KHbAnBj8Q\\_AUIBigB&biw=240&bih=1245#tbm=isch&q=blind+kids+in+playground+imgdii=6B1ZJ8VBaJId6M:\\_&imgrc=cbPUn\\_QZ-PSowM:&spf=1497896352277](https://www.google.com/search?q=kids+with+disabilities+in+playground&source=lnms&tbm=isch&sa=X&ved=0ahUKEwil7eHewsrUAhVIXD4KHbAnBj8Q_AUIBigB&biw=240&bih=1245#tbm=isch&q=blind+kids+in+playground+imgdii=6B1ZJ8VBaJId6M:_&imgrc=cbPUn_QZ-PSowM:&spf=1497896352277)>.

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