

BLIND SCHOOL IN THRISSUR

A THESIS

Submitted in partial fulfillment of the requirements for the award of
Bachelor of Architecture degree

By

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**DEPARTMENT OF ARCHITECTURE
SCHOOL OF BUILDING AND ENVIRONMENT**

SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

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NOVEMBER 2021



DEPARTMENT OF ARCHITECTURE

BONAFIDE CERTIFICATE

This is to certify that this Thesis Report is the bonafide work of Elton R.E. Subin (37210012) who carried out the Thesis entitled “Blind school at Trissur” under our supervision from July 2021 to November 2021.

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DECLARATION

I, **Elton R.E. Subin** hereby declare that the Thesis Report entitled “**Blind school at trissur**” is done by me under the guidance of **Ar.Rameshkumar**(Internal Guide), **Ar.Selvendrian**(Internal Review Member) and **Ar.Danasekaran** (External Guide) Sathyabama Institute of Science and Technology is submitted in partial fulfilment of the requirements for the award of Bachelor of Architecture Degree.

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Elton R.E. Subin

ABSTRACT

The word 'Blind' or 'visually impaired' creates a negative sense, a sense of loss. They have already suffered a lot due to their condition and when someone calls them blind it makes them much more uncomfortable, which results in their reduced interaction with people. The most important sense for a human body is visual perception. So, while they lack the sense of sight other senses like hearing, feel, touch and smell need to fill its place. Therefore it is very important that when we design a blind school that creates a connection between the user and the school through the other senses

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INTRODUCTION

1.1 INTRODUCTION

Blind school is a school for people who are visually impaired. The word blind or visually impaired creates a negative sense. The most important sense for human body is visual perception. So while they lack the sense of seeing, the other sense like hearing, feel, touch and smell needs to fill its place so that's the very important part when we design a blind school. It should create a connection between the user and the school through other senses the school with feelings by touch the school with feelings by touch, especially for the blind kids

1.2 BLINDNESS

Blindness is the condition of lacking visual perception due to physiological or neurological factors, Total blindness is the complete lack of form and visual light perception and is clinically known as "NLP" No Light Perception, these problems may cause Disorder in light perception partial blindness in worst as a total blindness. Most important sense for a human body is visual perception. So, while they lack the sense of sight other senses like hearing, feel, touch and smell needs to fill its place. Therefore it is very important that when we design a blind school that creates a connection between the user and the school through the other senses

There are no specific places for their comfort and special roads to their mobility, lack of rehabilitation and educational centers (there are only two schools in Jordan, first one in Amman while the second one in Irbid), on the other hand there are no entertainment places designed considering their special condition.

They are suffering from neglect, which lead to:

1. Ignorance,
2. Physical weakness,
3. Fright,
4. Unemployment/Poverty,
5. Pronunciation problems,
6. Aggressive behaviour,
7. Psychological problems ...

Disabled population in india (According to 2011 census) :-

Disabled Population by Type of Disability India : 2011			
Type of Disability	Persons	Males	Females
Total	26,810,557	14,986,202	11,824,355
In Seeing	5,032,463	2,638,516	2,393,947
In Hearing	5,071,007	2,677,544	2,393,463
In Speech	1,998,535	1,122,896	875,639
In Movement	5,436,604	3,370,374	2,066,230
Mental Retardation	1,505,624	870,708	634,916
Mental Illness	722,826	415,732	307,094
Any Other	4,927,011	2,727,828	2,199,183
Multiple Disability	2,116,487	1,162,604	953,883

WHO classified visual impairment in 5 different categories :-

Low vision - 1 Corrected visual acuity of 20/70

Low vision - 2 Starts at 20/200

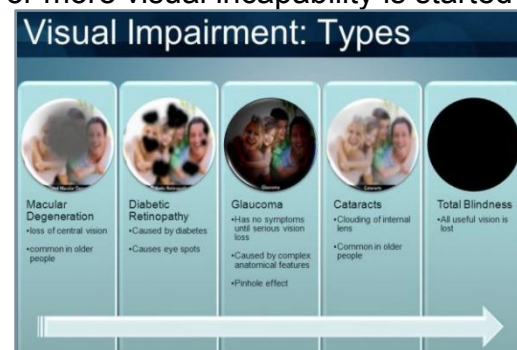
Blindness - 3 It is below 20/400 or visual field between 5 to 10

Blindness - 4 it is below 5/300 or visual field less than 5

Blindness - 5 No light perception

PWD Act

In India according to the pwd act (Person with disability act) an individual with 40% or more visual incapability is started as visuallyimpaired



Types of visual impairment



Normal vision

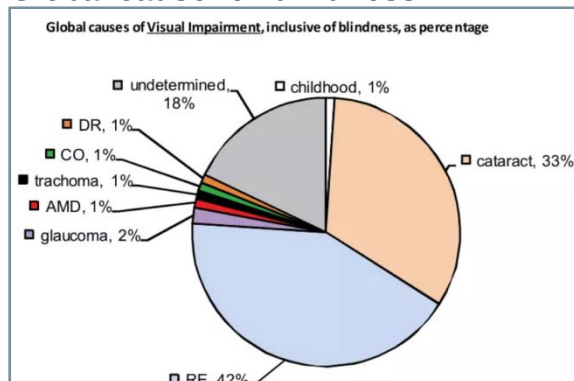


Loss of central vision



Possible effect of advanced cataract

Global cause for blindness:



Cataract - 33%

Childhood - 1%

Undetermined - 18%

Trachoma - 1%

CO - 1%

DR - 1%

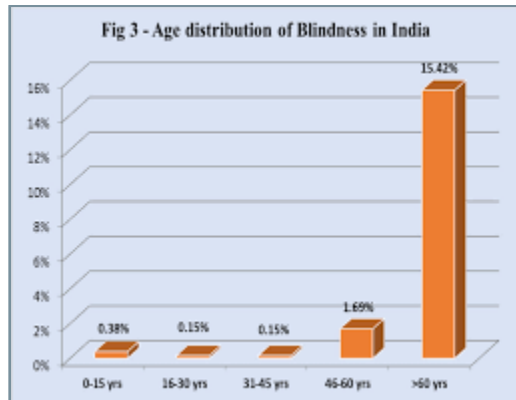
AMD - 1%

Glaucoma - 2%

Indian population in 2021- 1391.99 million

Indian blind population- In 2000 the number of blind people was estimated to 18.7 million (9.5) million cataract and (3) million refractive error related

If the same trends continued, in 2020 there will be 31.6 million blind people



Selected Project:

The blind people face many problems in conventional school, so it is important to build a school which suits their requirements and help them to learn and grow in their own way independently, to make them more confident about their future.

Need:

There is only 3 blind schools in [patna](#) together these three schools can accommodate only 168 students also the state has no school for visually impaired for girls, so currently there are lots of visually impaired childrens who didn't get proper education in bihar

Why this project :

- India being the home of one-third of the world's blind population has about 12 million visually impaired people.

- Four out of 1000 are found to be Visually impaired in India

- The number of disabled is highest in the age group 10-19years with 46.2 lakhs(17% of disabled population)

- Blindness is an disability which one can overcome by proper guidance and training.

- A normal human uses about 85% of his visual perception for his memory while visually Impaired people rely on their tactile, acoustic and olfactory senses.

visually impaired person should be given the opportunity of quality education, training, skills and employment.

- This user-specific design considers the sensory aspects more than the visual aspects.

- Different sensory systems interact to generate a representation of space and to navigate in them.

- Thus it is required to develop a space that helps in developing these sensory skills.
- Designing a space for visually impaired involves the study of their physiological aspects and perception of space.

Aim :

- To design a school campus and hostel for blind.
- To educate the blind so as to make them independent.
- To give them a peaceful environment in school.
- To help them emotionally, mentally, physically, psychologically and economically.
- To design the structure with touch and other senses that guide all the visually impaired students who are studying there.
- To make the student confident to carry out their own tasks.

Objective :

- MOBILITY-To design an infrastructure that helps them navigate effortlessly making them independent.
- To create an environment to improve the quality of life of blind.
- To create an environment that improves the perception of space that develops their sensory skills.
- To provide free lodging for the visually impaired students.

SOCIAL ISSUE:

Social issues that can be detected are the lack of community engagement of public people with the blind community. This happens because the facilities provided for the blind community such as schools and sensory gardens are not shared with public people and this creates a sense of separation in the community merging process.

ARCHITECTURAL ISSUE:

The architectural related issues that can be taken into consideration is the lack of academic facilities for the blind student community. Existing blind schools have only been prioritizing and focusing on academic studies more ,rather than towards the special facility needed. There are also limited spaces for the blind community to interact and share with the public in terms of academic and social engagement.

Existing facilities only focus on the usage for the blind community and do not

consider their interaction with the general public. Furthermore, the lack of universal design implementation and its focus on the building especially for the blind community is also one of the other issues that have been studied and looked into. Most of the services offered in the building do not reflect on the ergonomic value for the disabled community.

METHODOLOGY:

To know about the visually impaired people and the problems they are facing in their daily life through the articles on the internet, research papers and the books related to my thesis topic. I have taken interviews of the blind students.

HUMAN ANTHROPOMETRY:

PERSONS WITH IMPAIRED VISION

Persons in this category are totally blind or with impaired vision. Visually impaired persons make use of other senses such as hearing or touch to compensate for the lack of vision. It is necessary to give instructions conceivable through the sense of touch (hands, fingers or legs). While walking with a white cane to spot their feet near the tip of the cane the person may bump his or her head or shoulder against protruding objects. Persons with limited vision may be able to discriminate between dark and bright shades and differences in primary colors.

PROJECT SCOPE AND INTENT:

This thesis proposes a 'School for visually impaired', which would treat visually impaired people as someone with a different ability, instead of disability. The campus would integrating various functions related to the education and research of visually impaired with the following intent:

1. To create a facility which helps the Visually impaired not only in navigation and accommodation, but also has spaces and functions designed to take them beyond their limitations which the lack of visual imposes.
2. The idea is to bring together facilities which work towards the overall development of visually impaired.
3. The research facility would work towards developing various tools which aid visually impaired in enhancing their overall personality.
4. The Center works on the SEMI-INTEGRATED model of education for the visually impaired.

This would require the students to attend regular schools and use this center for bridging the gap between their disability and ability.

5. School design would be based on the PROGRESSIVE MODEL of schools, where spaces are more open and flexible unlike the traditional model. This would make the space more receptive to other sensory inputs and connect the students with the whole environment of the school.

DESIGN REQUIREMENTS

- Use of guiding blocks for persons with impaired vision to guide them navigate within the campus. (Refer details of guiding/warning blocks).
- Installation of information boards in braille.
- Installation of audible signages (announcements).
- Absence of any protruding objects and sufficient walking space for safe walking.
- For persons with limited vision, use of contrasting color arrangements.

Users:

1. Blind and Visual impairment people,
2. Family and Public.

Aims according to users:

1. Blind and Visual impairment people:

- The main objective of this project is to create exterior and interior spaces for the blind and visually impaired with the purpose not only to provide them a good educational programme and service, but also to accommodate them into an integrated space design that ensure their safety, confidence and independence throughout the space by through sound, smell and touch sensorial built environment,
- Improve the quality of life and positive psychological traits such as optimism, confidence, and independence as individual
Establishing educational spaces, to teach the blind and visually impaired Self-dependence, life skills, Braille language, and basic sciences, so they will not feel like burden on society
- Creating entertainment spaces, outdoors and gardens for blind and visually impaired, to get the life pressures downstream and to make them active and physically fit.

2. Family and Public:

- The project plays with perceptions of people on the street to raise a public awareness about this category of society by constructing social spaces, make

them interact with community until the community will understand and accept them as part of it, which will go back for them psychological benefits,

- Make it easier for their families to communicate with them blind and visually impairment children, also understanding their needs and abilities, by engaging their family in some facilities.

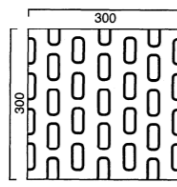
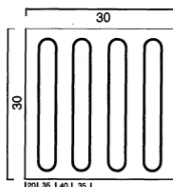
3. Employees:

- Creating an environment accessible and suitable for them that promotes a sense of ownership of their workplace.
- Choosing the site that is easily accessible.
- Construct conference rooms and lecture halls to keep them in touch with Sophisticated methods in the transaction and cooperation with blind and visually impaired people.

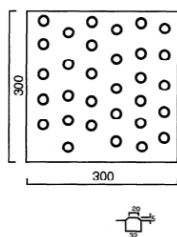
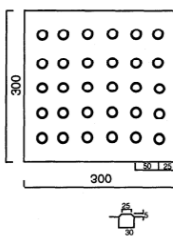
Guiding/Warning Floor Material

Shapes of guiding blocks for persons with impaired vision

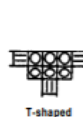
(1) Shape of liner block



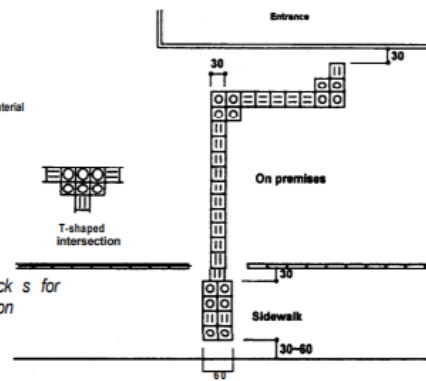
(2) Shape of spot block



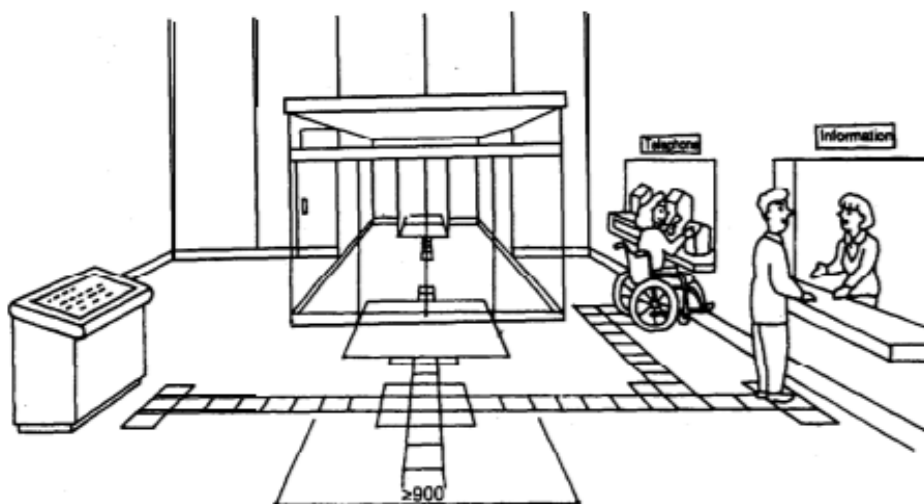
Example using 30 cm square flooring material



Arrangement of guiding blocks for persons with impaired vision



Guiding path and approaching sidewalk to the building



TILES WITH PARALLEL BLISTER LINES

- Tiles with embossed flat-topped blisters in a square pattern are used to indicate that there is a road crossing.
- The blister tactile surface should be installed in the absence of an upstand at both controlled and uncontrolled crossing points:
 - where the footway has been dropped flush with the carriageway; or
 - where the carriageway has been raised to the level of the footway.



TILES WITH OFFSET BLISTERS

- These tiles indicate that there is a train platform ahead. If one is not careful, she might fall into the ditch. Such tiles can be used to indicate a sudden level change.
- The platform edge warning surface is recommended for use at all off-street rail platforms including:
 - heavy rail platforms;
 - off-street light rapid transit (LRT)



TILES WITH ACROSS STRIPES

- Placement of these tiles show that there are stairs or some other hurdle ahead. Be careful. These tiles are also called corduroy hazard warning tiles.
- Places where these tiles are often used include:
 - The top and bottom of stairs;
 - At the foot of a ramp;



TILES WITH ALONG STRIPES

- These tiles indicate that it is safe to keep going ahead. The path has no hurdles and it's safe.
- The guidance path is recommended for use in the following circumstances:
 - where pedestrians need to be guided around obstacles (for example, in a pedestrian precinct): although care should be taken in siting street furniture to ensure that such problems are not created;
 - where a number of visually impaired people need to find a specific location.



A COMBINATION OF BOTH ACROSS AND ALONG STRIPES

- A combination of both across and along stripes is often used when there are two types of path laid together. One of these paths would be for pedestrians whereas the other side would be, for example, bikes. In such cases, tiles are laid along the bike path and across the pedestrian path.

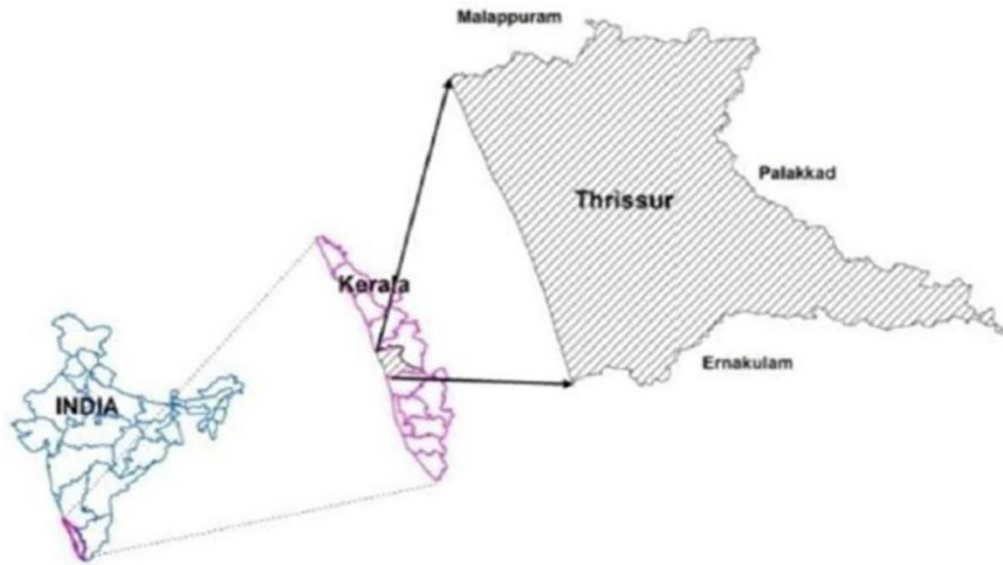


LOZENGE-SHAPED TACTILE TILES

- These tiles warn the blind people that they are approaching the edge of an on-street transit line (e.g. a tram line).
- The lozenge surface is recommended for use at all on-street LRT platform edges.

2.1 SITE ANALYSIS:

LOCATION:



LOCATION OF THE SITE :

- Thrissur is situated in 10° 10' and 10° 46' North latitude and 75° 55' and 77° 05' East longitude. The city is located 75 km north of Kochi, 133 km west of Coimbatore and 144 km south of Kozhikode. Thrissur District can be divided into three well-defined zones.

- Descending from the heights of western Ghats in the east, land slopes towards the west , forming three distinct natural division:

1. Highlands
2. Plains
3. Seaboard

- The highlands are thickly forested whereas the plains, which are fertile, are cultivated for food and cash crops.

- Thrissur has a tropical humid climate with an oppressive hot season and plentiful and fairly assured rainfall.

- The hot season from March to May is followed by southwest monsoon from June to September. October and November form the post monsoon or retreating monsoon season.

- The average daily maximum temperature in March and April, which are generally the hottest months , is 31° c in the coastal regions and 36° c in the interior.

Reason for choosing this site :

- Thrissur is known as the cultural capital of kerala. But lately it has developed a new recognition as “the academic hub of kerala”.
- I have chosen my site in thrissur as its growing to be the academic hub , there are very few residential schools in thrissur town. There are no well planned residential school in thrissur .
- The number of students coming from different parts of kerala and from abroad to study in thrissur have increased over the past few years.
- They come down for crash courses for a month and would stay in the entrance coaching centres.
- Providing a well planned residential school in the thrissur city would take the city to a next level in its evolution to be the academic hub of kerala.
- The site is located just outside the city boundary. there are a number of schools and Colleges coming up in this area.
- This area has lot of institutions and residential developments coming up.

Climatic conditions of the district :

• Thrissur city features a tropical monsoon climate. Since the region lies in the south western coastal state of kerala, climate is tropical . There is only a minor difference in the temperature between day and night, as well as over the years.

• Summer lasts from march to may and followed by the south west monsoon from june to september. October and november would be post monsoon season. followed by december to january a slightly cooler period.

Vegetation and soil characteristics :**Soil characteristics :**

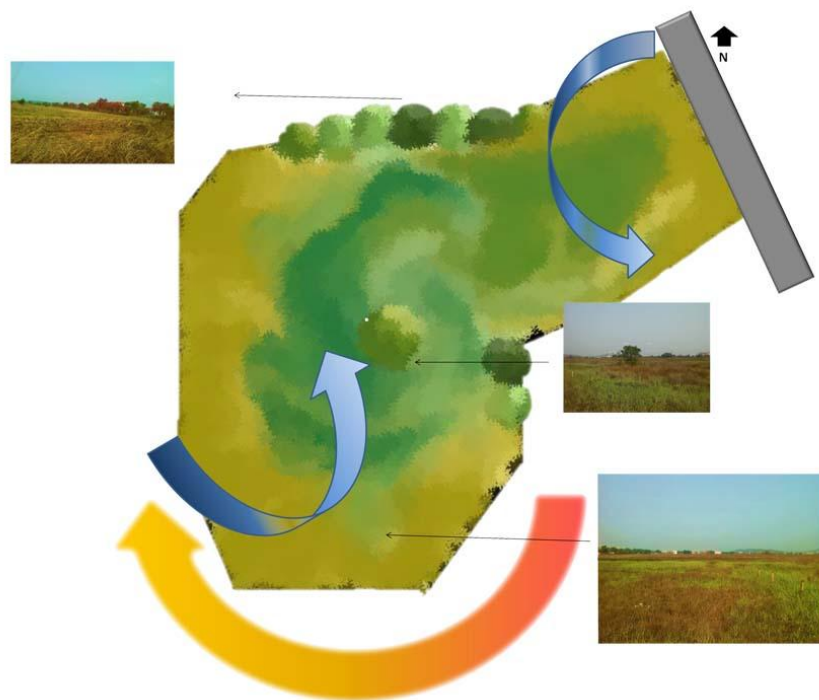
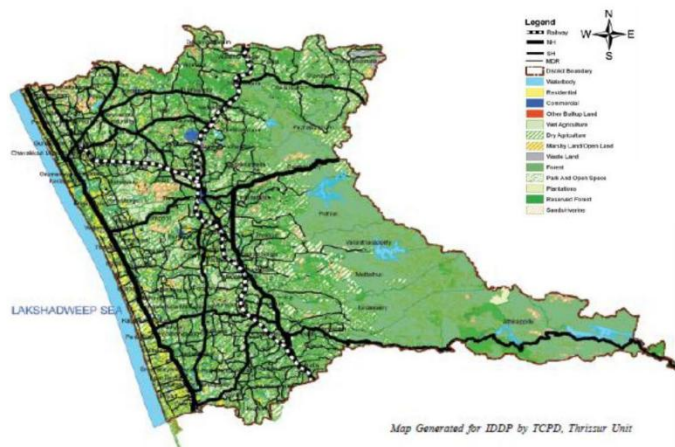
- The city is geologically composed of archaean gneisses and crystalline schists. Major part of the city would fall under archaean gneisses.
- The soil characteristics is laterite soil with much of ground covered with native grass.

Vegetation :

- Most of the site is covered with native grass and shrubs .
- Site has a lot of deciduous canopy trees and coconut trees.
- Trees are concentrated on the central region of the site and along the northern boundary.

	THRISSUR CITY DATA
GEOGRAPHIC COORDINATES	10° 31' 12" North Latitude & 76° 12' 36" East Longitude
AREA	3,032 KM SQ
POPULATION DENSITY	1026 PERSONS PER KM SQ
SEX RATIO	1109 FEMALES PER 1000 MALES
LITERACY RATE	95.32%

No	Land use	Area (sqkm)	% of total in the Dist.	Percentage of the corresponding area in the state
1	Forest	772.86	25.46	23.18
2	Water bodies	88.58	2.92	2.92
3	Marshy Land	32.62	1.07	0.28
4	Residential	31.53	1.04	3.45
5	Agriculture	353.65	11.65	10.17
6	Plantation	159.35	5.25	10.01
7	Res/Agr Mix	1544.90	50.89	41.38
8	Other Built up Land Use	19.67	0.65	0.48
9	Others	32.46	1.07	8.13



CLIMATIC ANALYSIS:



SWOT Analysis:



The site is located in a institutional area surrounded by schools. The site was located very near to the highway , so we have a easy access to the site by car, bus or any public vehicle



when the weather is summer it will be so hot,It is located near the normal school



Due to less blind schools in Thrissur, there is a scope for blind schools in that locality. The place is surrounded by other institutions, there is a good possibility of developing a community space around the school.



That is little interior from the roads , students have to walk or should hire a vehicle

Case study:

National Association for the blind school Delhi:



Site specifications:

Location: sector 5, RK Puram Delhi

Client :NAB

Site area: 3456 sq.m

Climate: Hot & Dry climate

Topology: Flat land

Ground coverage: 1053 sq.m

Built up area: 1912.5 sq.m

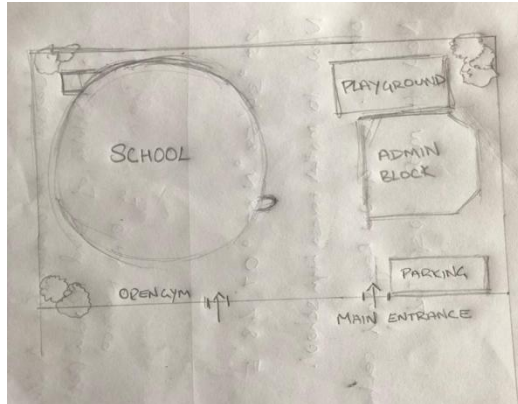
Circulation - 20%

School features:

This school incorporates circular planning. To know about the different requirements of the blind school, many activities are also held in outdoor spaces and this was climate oriented design, most of the school and municipal buildings are nearby to the site, other schools also help the students of NAB, and they also visit the school frequently.

From the main entrance parking is on the right side , the hostel is located in the school. Playground is also in the right side, there is also an open gym on the left from the entrance

Site zoning:



NAB delhi top view



Open gym

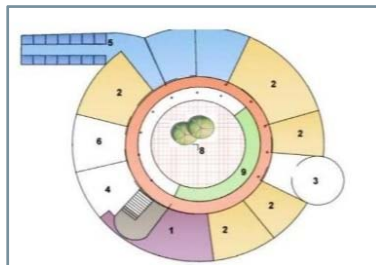


Main gate



Playground

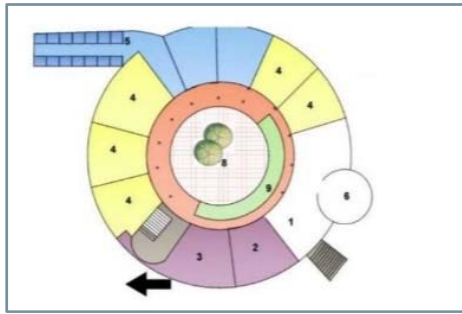
Floor Plans:



Ground floor plan

Legends:

1. Office(warden)
2. Dormitory
3. Entertainment room
4. Kitchen
5. Toilet
6. Dining
7. Stairs
8. Open court
9. Ramp



First floor plan

Legends:

1. Lobby
2. Principal office
3. Office
4. Classroom
5. Toilet
6. Library
7. Open court
8. Ramp



Classroom:

Teachers and students are in a ratio of 1:10

FACILITIES IN NAB :

CENTRE FOR MULTIPLE DISABILITIES	EDUCATIONAL	IT AND SERVICES
1. DeafBlind Unit 2. Visual Impairment and Additional Disabilities Unit 3. Regional Learning Centre for DeafBlindness/Multi Sensory Impaired Children	1. Pre Integration Unit 2. Integrated Education (IED) Unit 3. After School Resource Centre for Children studying in Mainstream Schools 4. Facilitating Education through NIOS and IGNOU	1. Computer Training Centre 2. E-Text Library 3. Audio Book Library 4. Braille and Large Print Unit 5. Helpline for the Visually Impaired

This school provides different facilities to the visually impaired students

1) Education:

- Preparatory school - age 4 - 14 years (95 children)
- Integrated education - students learn in more than 35 other school of delhi
- Centre for the multi-handicapped blind children
- Hostel facility- hostel have more than 200 boys and girls

2) Computer training and technology centre, special classes for blind students (12 trained teachers, mobility instructor, physical instructor).

3) Braille - they have braille printing press for students and every blind school should have a braille printer or printing press.



Circulation:

Radial planning reduces the circulation area and provides direct connections to all the functions.

HOSTEL FOR BLIND CHILDREN

In the year 2018-19, there were 150 children in the Hostel. There were 8 new admissions from the Preparatory Unit in the month of April 2019. The mothers stayed with the students for 2 to 3 days to enable the children to settle their wards in the hostel.

4 students of class 6th, 7th, 9th & 11th were admitted in mainstream schools and have joined the Hostel. During summer holidays, the hostel beds were repaired, new kitchenware was ordered and the water leakage from the bathrooms and the kitchen were repaired.

NAB has appointed a warden this year.

Activities in the Hostel:

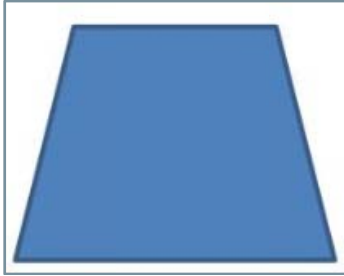
- Yoga Classes every Sunday
- Taekwondo classes in weekend
- Dance Classes in weekend



Inference:

- Circular planning is easy to remember to the student , hence makes movement easier.
- Central courtyard which is open to sky serves two purposes: natural light and ventilation and is also used as a playground for the students.
- Introverted planning reduces the risk of accidents.
- Class room and dormitory are in same building but well separated which also reduces the movement of the students.
- Separate vehicular and pedestrian entry reduces the chances of accidents..

- Provision of ramp inside and outside of the building.
- Sufficient open spaces.
- Guide rails and tactile pathway.
- Proper zoning of the blocks.
- Classrooms are fan shaped which reduces the echo and provides a better viewing angle for the partially blind.
- Size of the classrooms are too large and may cause problems in proper hearing for the students



This is the shape of the classroom to avoid echoes, and the size of the classroom is also too large

Hazelwood School, Glasgow



Architects: Gordon Murray + Alan Dunlop Architects

Location: Glasgow, Scotland

Architect: Gordon Murray, Alan Dunlop, Stacy Philips, Fergal Feeny

Landscape Architect: Richard East

Structure: Paul McCrorey

Area: 2660 sqm

Project Year: 2007

Client: Glasgow City Council Education Services

Hazelwood provides accommodation for a maximum of 60 pupils, aged 3-18 years. The school snakes through the parkland site, forming gentle curves around the existing mature trees. The single storey structure is built with natural materials.

Features of the School:

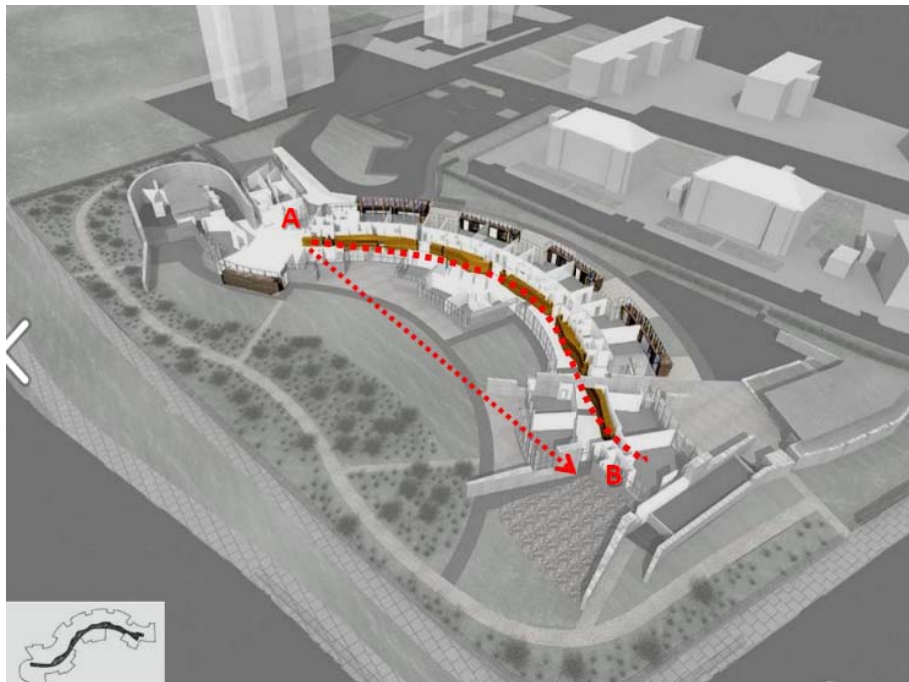
- The realization that the project was all about light, not darkness, "Because the children can distinguish light and dark, as well as colours. So contrast and colour play an important role in the design.
- The school contains eleven (11) classrooms in a single story structure, providing nursery through secondary education.
- The distinctive curving interior spine meets the complex demands for an intuitive wayfinding system.
- Design of the games hall, trampoline area, and hydrotherapy pool created opportunities for children to explore, extend their skills, and gain confidence.

Design features :

- The unique sensory "trail rail wall" weaves throughout the school and enables children to practice mobility and orientation skills.
- The trail rail wall is clad in cork, and has a warm feel.
- It provides signifiers or tactile cues to assist children with orientation and navigation through the school.
- Within two weeks of exposure to the trail wall system, they were successfully moving around the building independently.



FLOOR PLANS:



Sensory wall



•High-level windows are used to reduce distraction.

•Classrooms are oriented north and open onto the quietist part of the grounds, the classroom garden spaces

•The structural glulam* timber frame casts shadows within the building to establish a clear pattern along the internal street of the school

- The Architect also creates hindrance, to train the students better.
- Corridors are designed as streets, which also assist with orientation and mobility.



Distinctive Features:

- The playground and playground furnishings enable children the freedom to play and take risks at their own level.
- A sensory garden attributed with walkways, play-yard, swings create a park-like setting for the school grounds.



The Focus-Learning Room

The focus-learning rooms offer viewing for staff and visitors without disturbing the children. These areas also offer quiet time as needed.



Life skill house:

A separate residential unit is used to teach the children, basic life skills but also provides respite accommodation



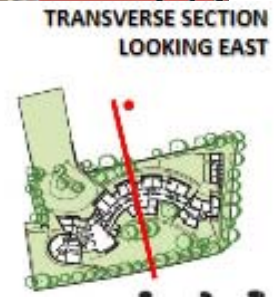
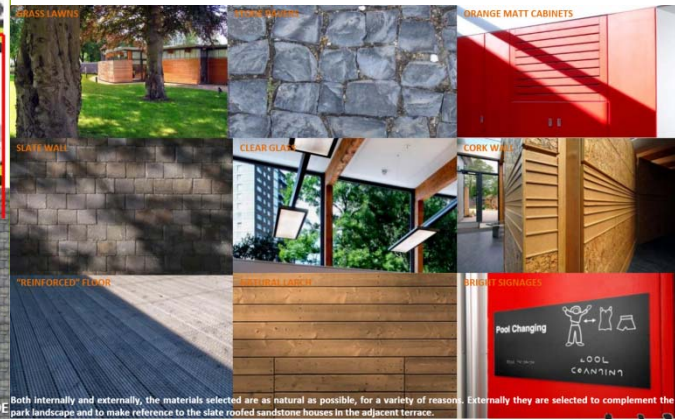
NORTHERN ELEVATION



EASTERN ELEVATION



NORTHERN FACADE



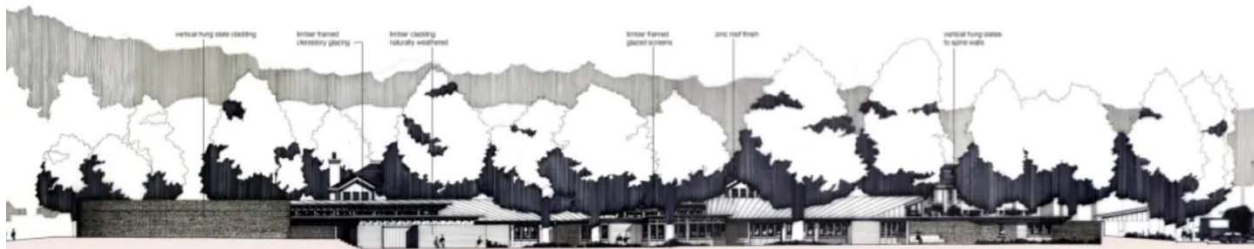
Elevation:



SOUTHERN ELEVATION



Section:



Voice of world (blind school in kolkata):



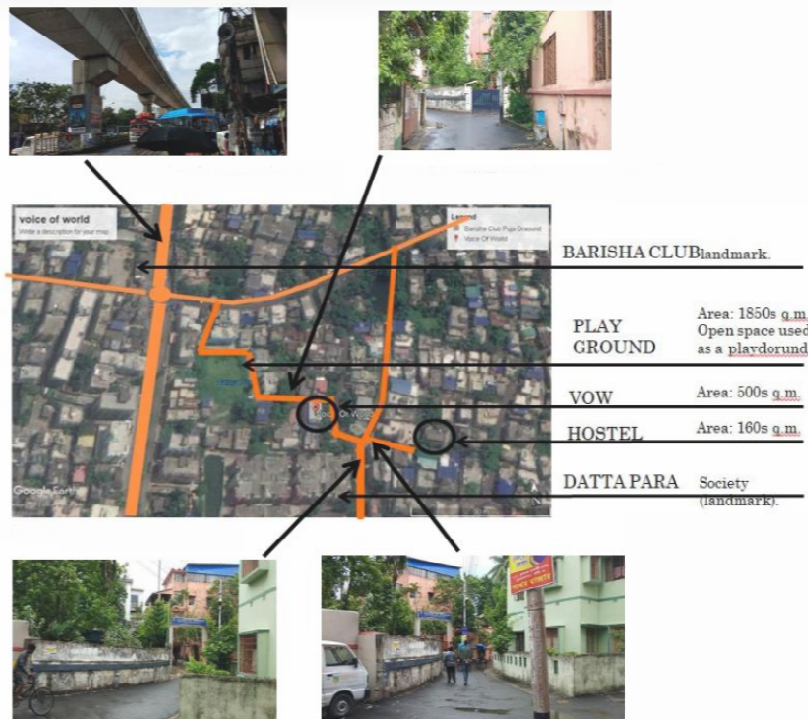
Voice of World is a multi-unit ,non-profit Social Welfare Organization working for underprivileged, differently-abled children and adults since 1992. It has got the registration, recognition, sanction, and license of various Government Departments- both Governments of West Bengal and India.

Currently, we have around 300 residential beneficiaries under our care. In the last 27 years, we have set up 25 centres in different parts of West Bengal and one each in Delhi and Puri.

Objectives of the school:

- To understand the requirements of the visually impaired students.
- To know how they are traveling to their residential block , when it is in outside the campus.
- This school is made by the experience that is gained by serving the visually impaired students.

Site:

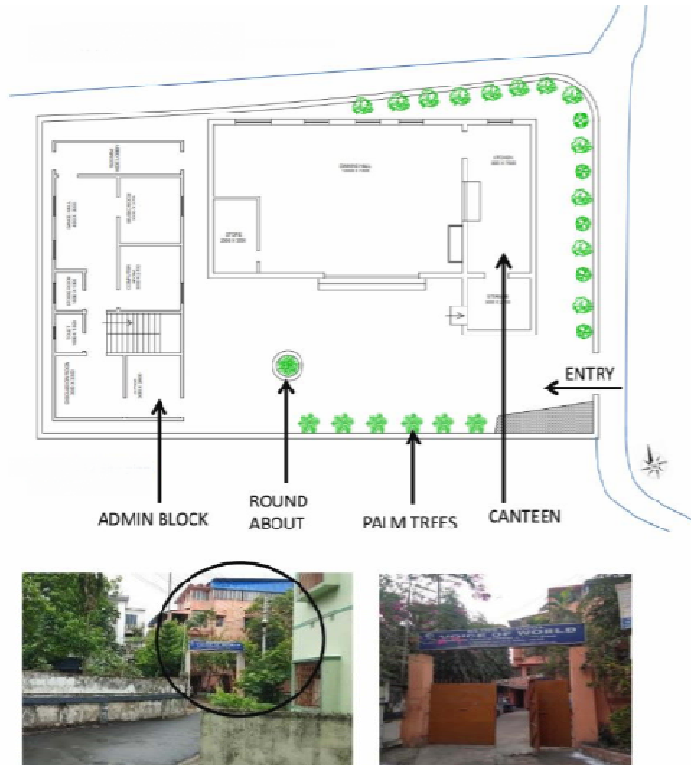


Site is located in south kolkata , so there is no direct road.

Location:

4, Nrisingha Dutta road ,Duttapara, Barisha, kolkata - 700008, West bengal, India
Area: Main campus- 561 sqm, Residential - 500 sqm, Total area - 660sqm .Mainroad
Road to school
Other roads from residence block Pillars help them to navigate easily

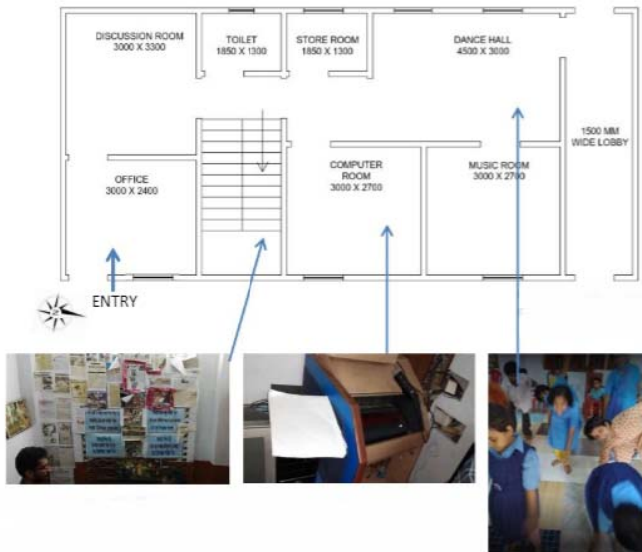
Site plan:



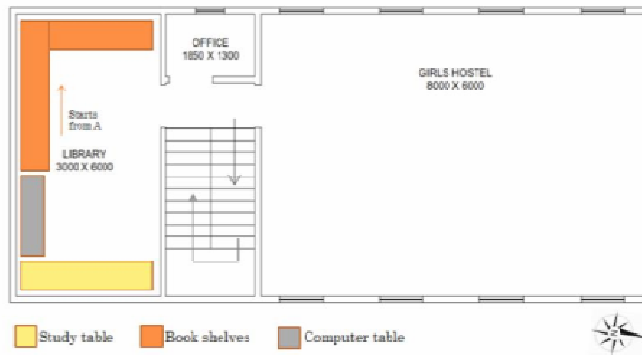
Design programs

FLOOR	FUNCTION
GROUND	Office, Discussion room, Dance studio, Music room, Computer room, common toilet & store
FIRST	Girls hostel, Library and office
SECOND	Kitchen, multipurpose hall, storage
THIRD	Class room, play room, storage

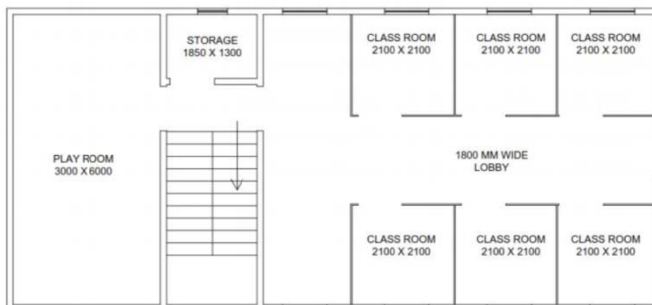
Ground floor plan



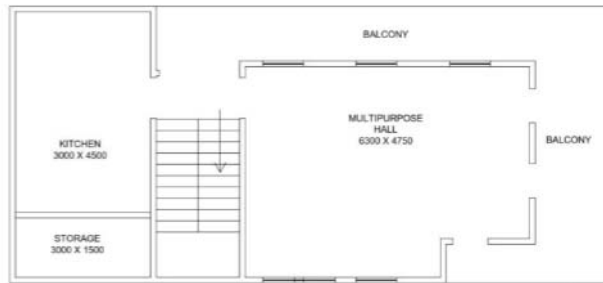
Staircase wall 1st floor plan: Braille printer Dance studio



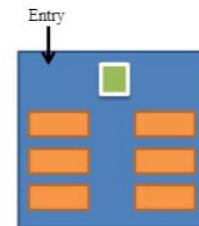
2nd floor plan:



3rd floor plan:



There are 6 classrooms with same size 2100mm x 2100mm, 1 teacher chair and 6



studentsdesk, so almost 15 students can be easily listen to the teacher.

1- teacher chair

6- student desks

Inference :

- Building is divided into 2 parts, one for staffs and other for students.
- Small rooms for class helps students in hearing .
- Simple movement and it is easy to remember.
- Dance and music room is necessary.

LIVE CASE STUDY - SCHOOL FOR THE BLIND, ALUVA, KERALA

He aluva bund school is located in keezhmaad, 1,2km away from kuttamasseri junction at aluva-perumbavoor highway. also 64 km away from aluva

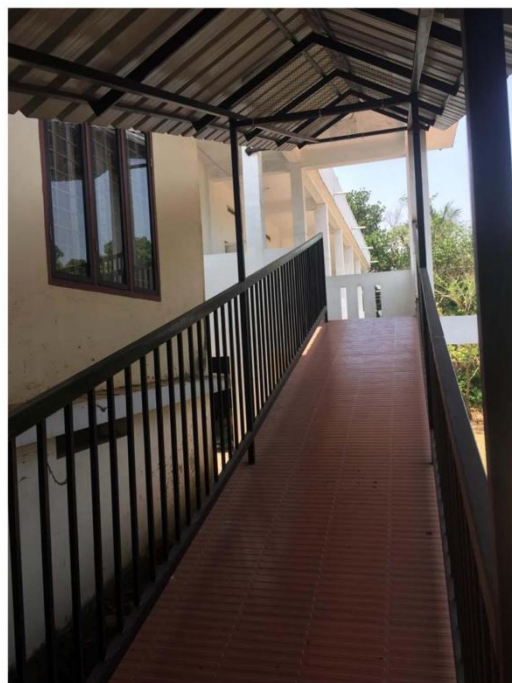
- This blind school is working under the kerala blind school society.
- The minimum teacher student ratio in the school is 15.
- 1:14 1s the maximum ratio of teacher and students. 1st to 7th standards are in this School with one nursery for blind children.
- teaching is following by the kerala syllabus education.
- blind sports and other cultural programmes are conducting Annually in the school.
- many of the extra curriculum activities areconducting in the school apart of Normal curriculum
 - * sensory training programmes.
 - * daily living skills improving.
 - * orientation and mobility identiacation training.
 - * craft making experiences etc.

The craft making, Includes paper crafts, umbrella making, Chalk carving, chair caning, bamboo work,

Plastic caning. Waste material management. Beeds work, straw board work etc.

- Multiple disabled students are studying in the school.
- 12 teaching staffs and 10 non teaching staffs are working here.
- Total strength of the school is 51 now.
- The school is promoting inclusive education for 'the blind students after 7th Standard.
- This school is not designed for blinds: So, many of the problems are happening Due to pillars. Steps. Orientation of doors and windows playing equipments etc.
- No tactile floors are there in the school.
- There & no other identification marks or signages placed for blinds.
- Building is completely fail in the context of blinds







COMPONENTS

- NURSERY CLASS ROOM © GIRLS HOSTEL
- 1st TO 7th CLASS ROOMS * GENTS HOSTEL
- DIRECTOR'S ROOM
- PRINCIPAL'S ROOM
- QUARTERS FOR FACULTIES
- PLAY AREA WITH
- STAFF ROOM EQUIPMENTS
- ADMINISTRATION BLOCK * OPEN STAGE
- SECURITY CABIN * AUDITORIUM
- VISITORS ROOM
- PRAYER HALL
- MESS HALL
- KITCHEN
- MUSIC CLASS ROOM
- LIBRARY
- LABORATORY
- COMPUTER LAB
- TOILETS FOR STUDENTS AND STAFFS
- PHYSIOTHERAPY CENTER
- SCHOOL GROUND

BYE LAWS:

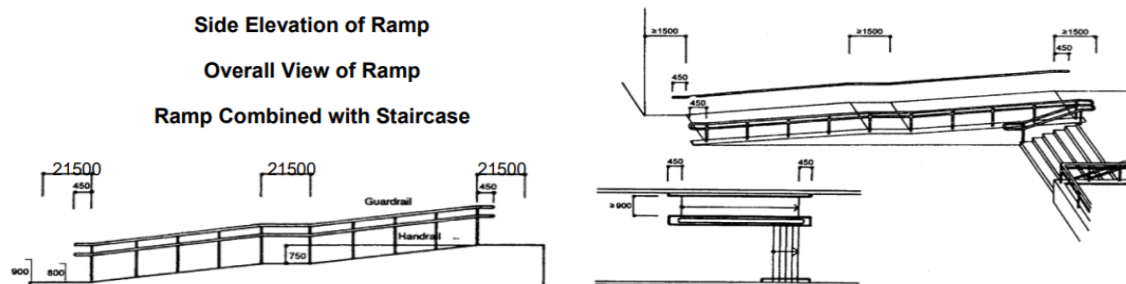
Indian standards:

- Class room size up to 20 students, 1.3 sqm per student .
- Occupant load per 100 sqm.
- Minimum width of staircase is 1.5m.
- Minimum width of corridor is 1.5m.
- Minimum land requirement is 3 acres.
- Parking should be 150mm higher than average road level.
- Plinth level minimum 450 mm.
- Maximum height permissible for all the components of the building mentioned above is 4m.

Places to install guiding blocks for persons with impaired vision:

- Immediately in front of a location where there is vehicular traffic.
- Immediately in front of an entrance/exit and from a staircase or multilevel crossing facility.
- Entrance/exit to and from public transportation terminals, or at boarding areas.
- Sidewalk section of a guiding or approaching road to the building.
- Path from a public facility which is frequently visited by persons with impaired Vision (e.g. a city hall or library) to the nearest railroad station (to be installed at intervals)
- Other places where installation of a guiding block for persons with impaired vision is considered effective (e.g. locations abruptly changing in level or ramp).

RAMPED APPROACH

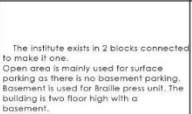
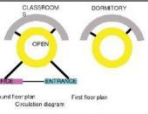
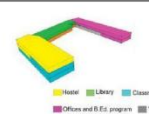
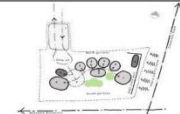
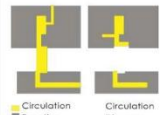
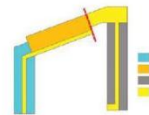
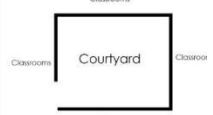


properly trained blind men and women work successfully as farmers and factory workers, machinists and maintenance men, college professors, public school teachers, chemists and other scientists, attorneys, mechanics, insurance or real estate agents, business men and women of all types, cooks, dishwashers and laborers, and legislators.

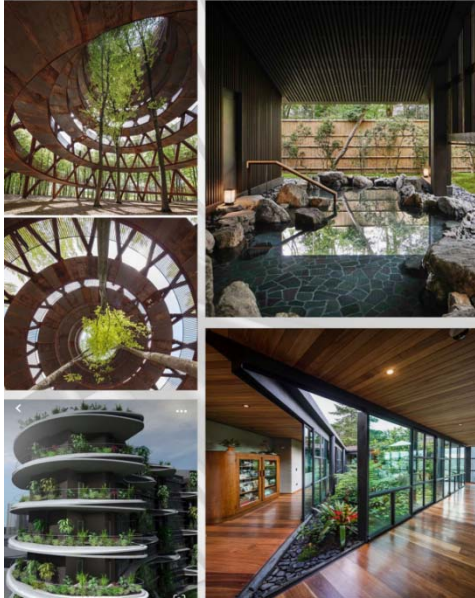
Blindness can be reduced to the level of a physical nuisance or inconvenience.

" No matter how you state it, though, it must be understood that the word "proper" is the operative concept in this fundamental truth.

Comparative Analysis:

	NAB MUMBAI	NAB DELHI	BLIND RELIEF ASSOCIATION DELHI	HAZELWOOD SCHOOL	SCHOOL FOR THE BLIND ALUVA
LOCATION	MUMBAI	DELHI	LAL BAHADUR SASTRI MARG, DELHI	GLASGOW, SCOTLAND	ALUVA, KERALA
ACCESSIBILITY	Very well connected to bus depot and taxi stand	The site is situated in one of the major areas of south delhi with the bus depot 2kms away	The site is situated in the intersection of Nizam-ud-din basti and lodhy colony	Near to Dumbreck road in the Maspark Boulevard	Located in keezhmad, 1.2kms away from kuttamassen junction
PARKING	Taken deep inside the site	Restricted right at the entrance of the site	Taken deep inside the site	Restricted right at the entrance of the site	Restricted right at the entrance of the site
PEDESTRIAN/VEHICULAR CIRCULATION	Mixed Circulation	Pedestrian Friendly	Mixed Circulation	Pedestrian Friendly	Pedestrian Friendly
ZONING	The institute exists in 2 blocks connected to make it one. Open area is mainly used for surface parking as there is no basement parking. Basement is used for Braille press unit. The building is two floor high with a basement. 				There is no specific zoning done by keeping the visually impaired students in mind.
PLAN/FORM					
CIRCULATION					
USER SPECIFIC FEATURES	Braille Signage installed	Tactile materials Different Flooring	Tactile paving to guide them	Central movement has continuous tactile wall made of cork. Timber to damper sound.	No specific design detailing
LIGHT & VENTILATION	Some passages and areas are left with no natural lighting, increasing the dependency of artificial lighting	Courtyard is the main source of light and ventilation	Some passages and areas are left with no natural lighting, increasing the dependency of artificial lighting	Well lit lobbies, corridors and classrooms and no glare what so ever	Well lit lobbies, corridors and classrooms through windows
MATERIALS USED	RCC Structure and Brick wall Plaster finish	RCC Structure and Brick wall Plaster finish	RCC Structure and Brick wall Plaster finish	Wooden Structure and Exterior Glazing	RCC Structure and Brick wall Plaster finish

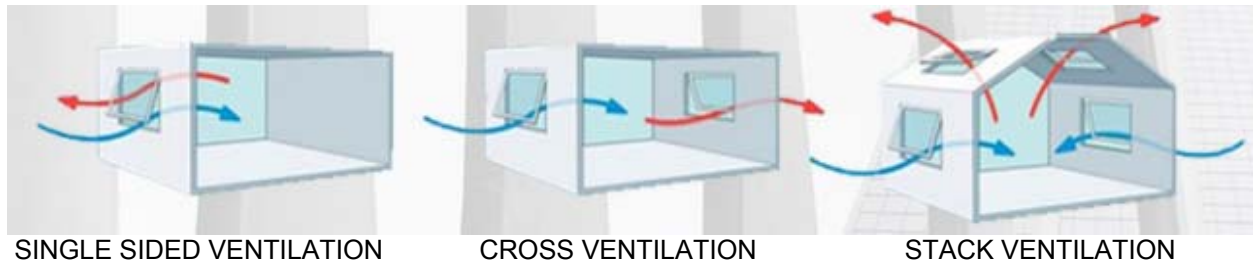
CONCEPT -NATURAL VENTILATION



In architecture, ventilation is bringing in outdoor air and distributing it into a space. It is mostly known in three different types: mechanical, natural, and mixed-mode. Managing the air exchange and circulation with the outdoors is crucial for a comfortable atmosphere.

Natural ventilation definition: the process of pulling fresh air into a building from the outside which in turn helps force the warm, dirty air inside of the building out through the opening in the roof .This is done without mechanical assistance.

Cross Ventilation :Wind moving past a building will create different areas of high and low pressure .The windward side of the building is an area of high pressure while the leeward side & roof are low pressure Strategically placing different [sizes and](#)



Ventilation is necessary in buildings to remove 'stale' air and replace it with fresh air

This helps to moderate internal temperatures, reduce the accumulation of moisture, odours and other gases that can build up during occupied periods. Create air movement which improves the comfort of occupants. Very broadly, ventilation in buildings can be classified as 'natural' or 'mechanical'.

Mechanical (or "forced") ventilation tends to be driven by fans.

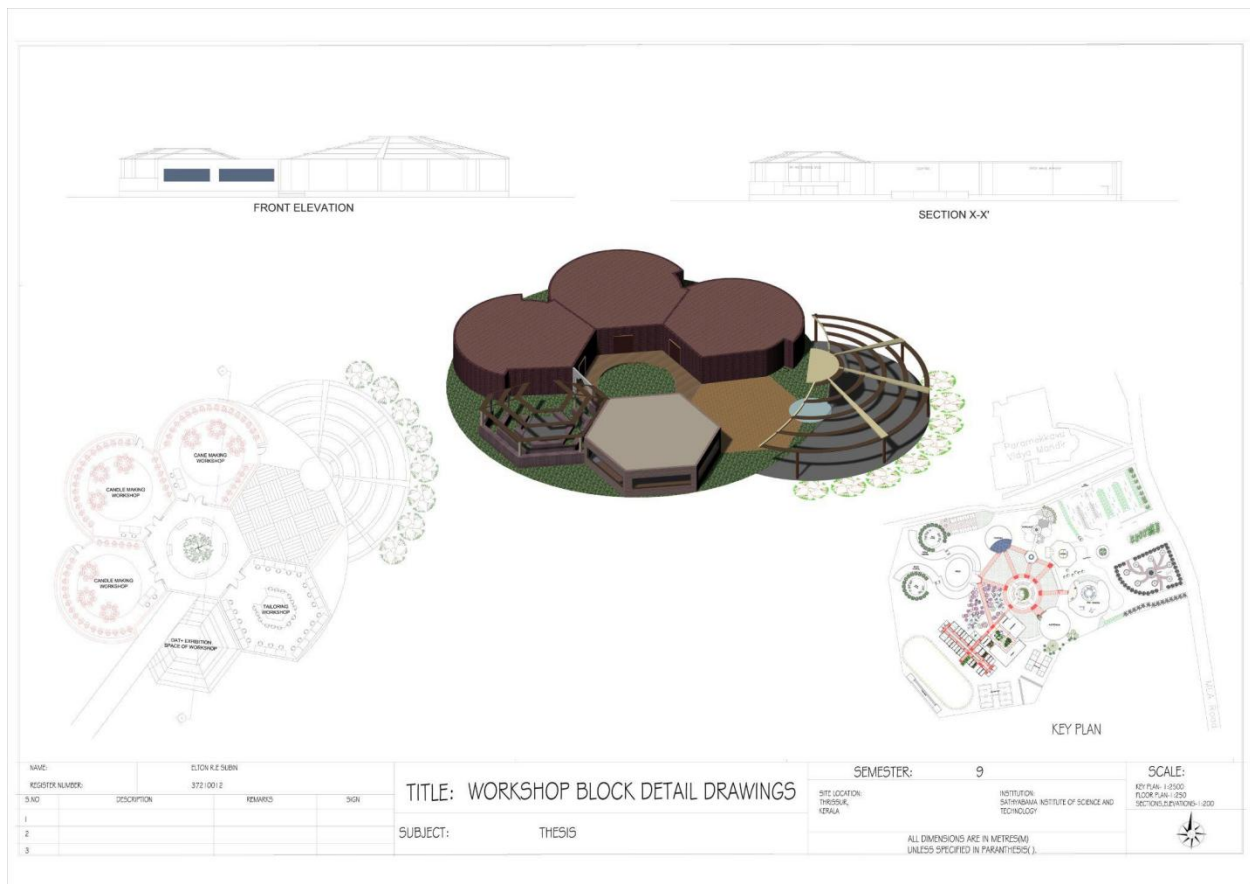
Natural ventilation is driven by 'natural pressure differences from one part of the building to another. Natural ventilation can be wind driven, or buoyancy driven. For more information, see Natural ventilation Whilst natural ventilation may be preferable, mechanical ventilation may be necessary where.

When a building is too deep to ventilate from the perimeter, local air quality is poor. For example, if a building is next to a busy road, because of local noise levels windows cannot be opened. The local urban structure is very dense and shelters the building from the wind. Air cooling or air conditioning systems mean that windows cannot be opened. Privacy or security requirements prevent windows being opened. Internal partitions block air paths. [The creation of draughts adjacent to openings.](#)

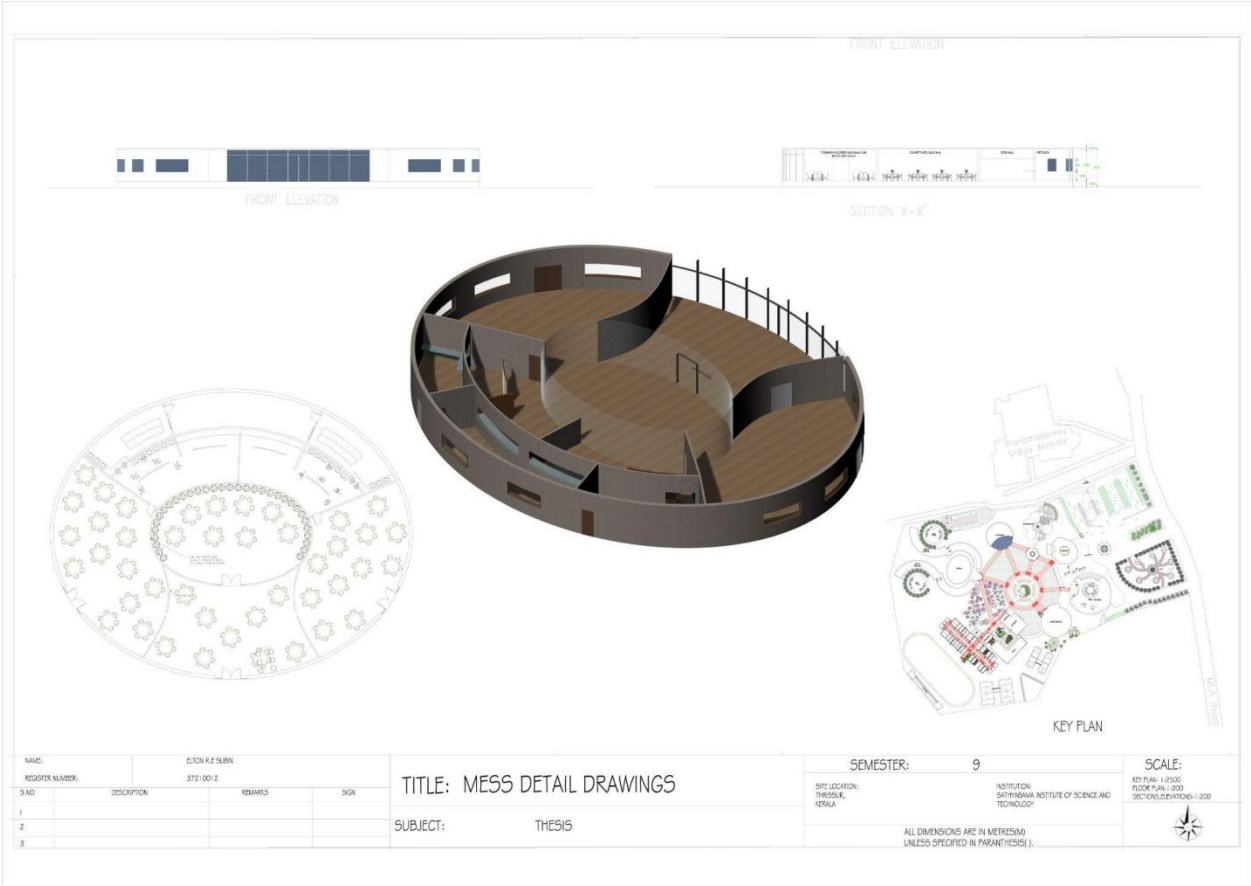
SITE PLAN:



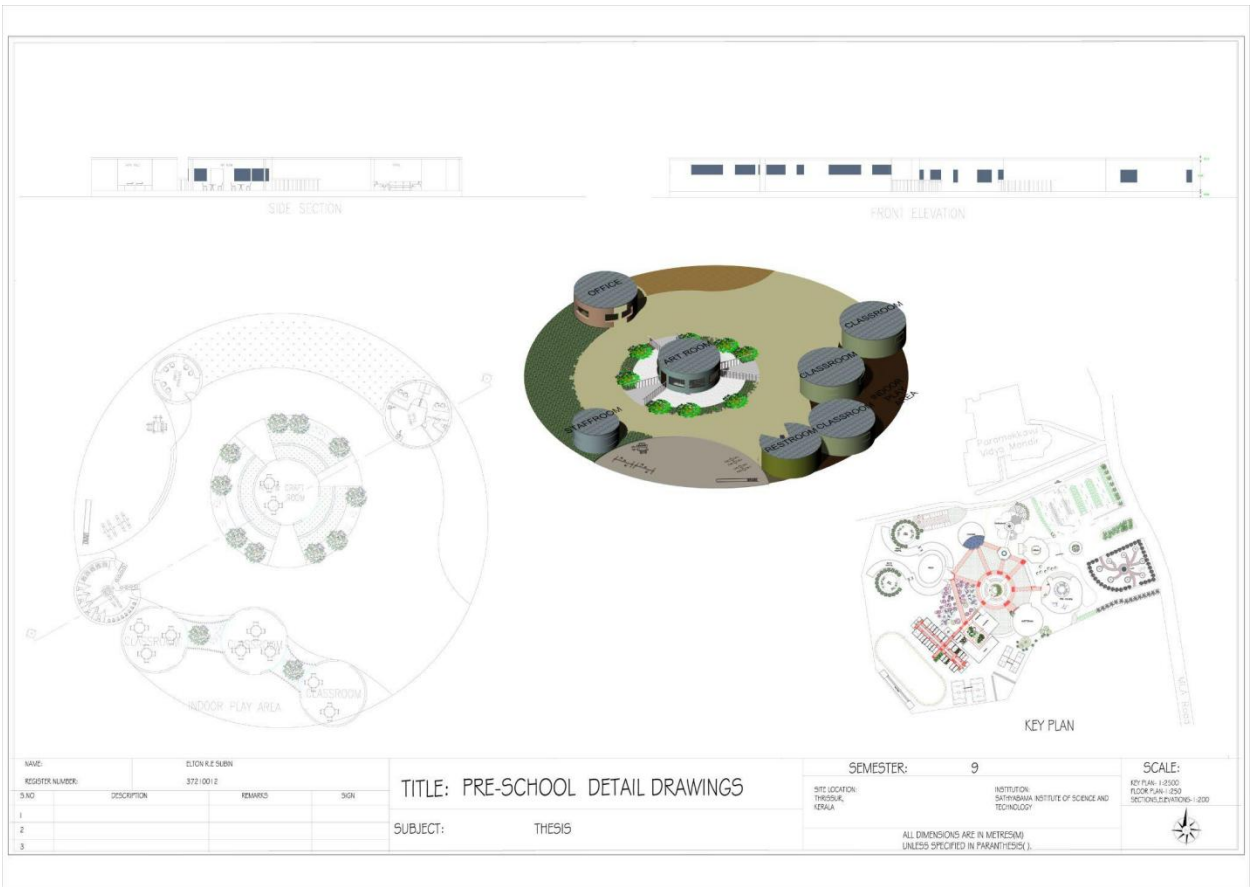
WORKSHOP:



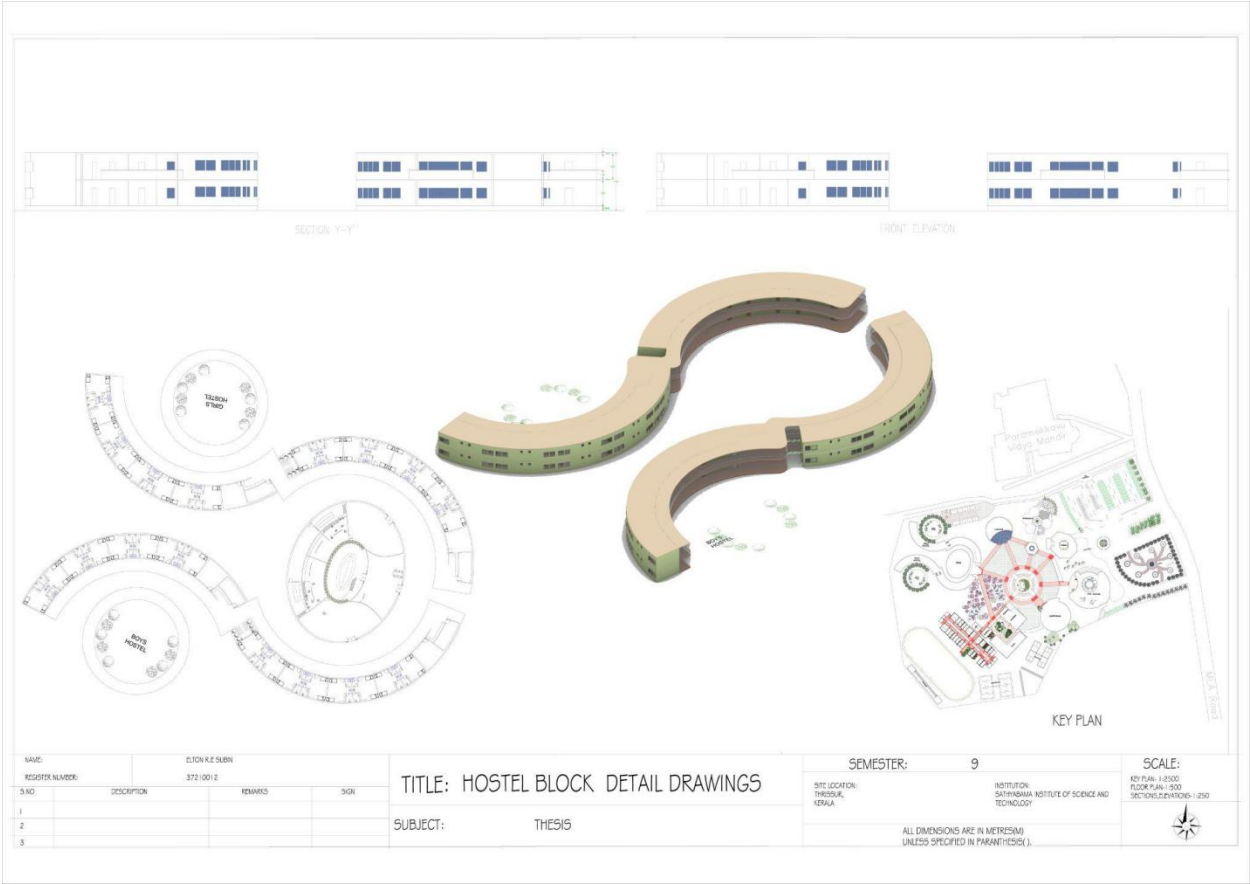
MESS:



PRE SCHOOL:



HOSTEL BLOCK:



HIGH SCHOOL:

SECTION BB'

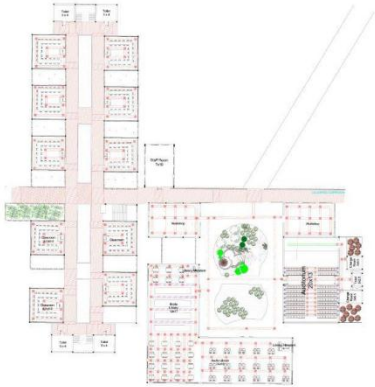


SECTION BB'

SECTION AA' (ACROSS CLASSROOM)



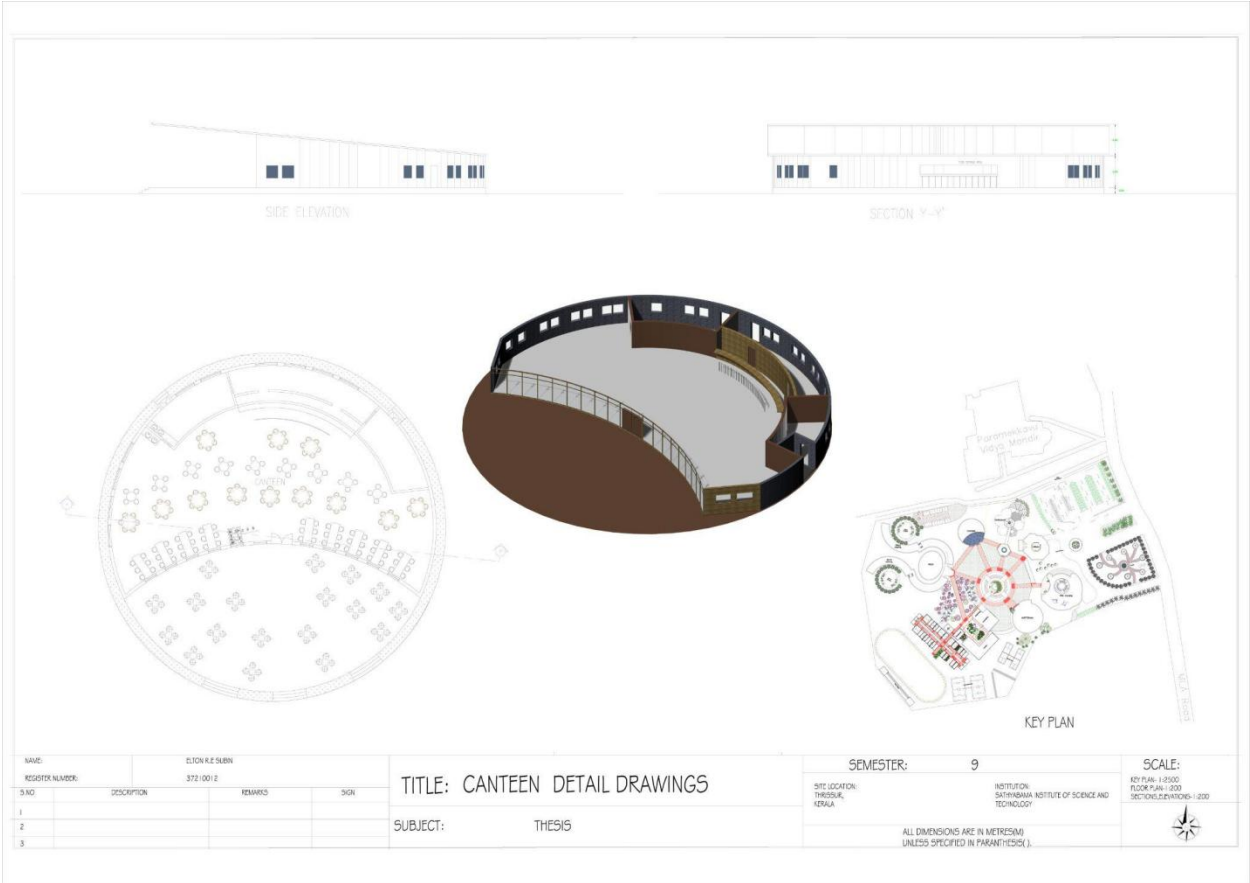
SECTION AA' (ACROSS CLASSROOM)



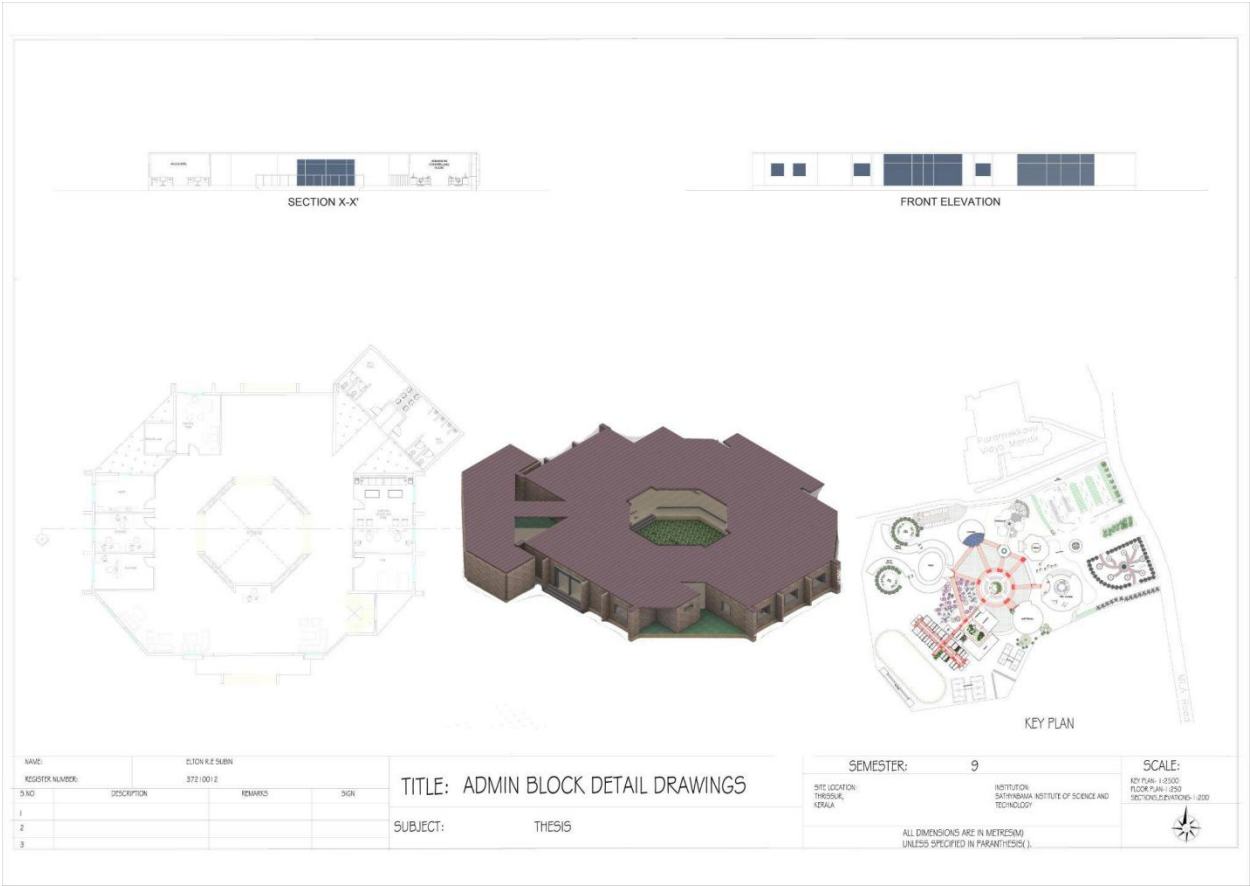
KEY PLAN

NAME:		ELTON K E SUBIN		TITLE: HIGH SCHOOL DETAIL DRAWINGS		SEMESTER: 9		SCALE:	
REGISTER NUMBER:		372 001 2				SITE LOCATION: THIRUVARUR, KERALA		INSTITUTION: SRIYENKAMA INSTITUTE OF SCIENCE AND TECHNOLOGY	
1	DESCRIPTION	REMARKS	SIGN	SUBJECT: THESIS		ALL DIMENSIONS ARE IN METRES(M) (UNLESS SPECIFIED IN PARENTHESES ().			
2									
3									

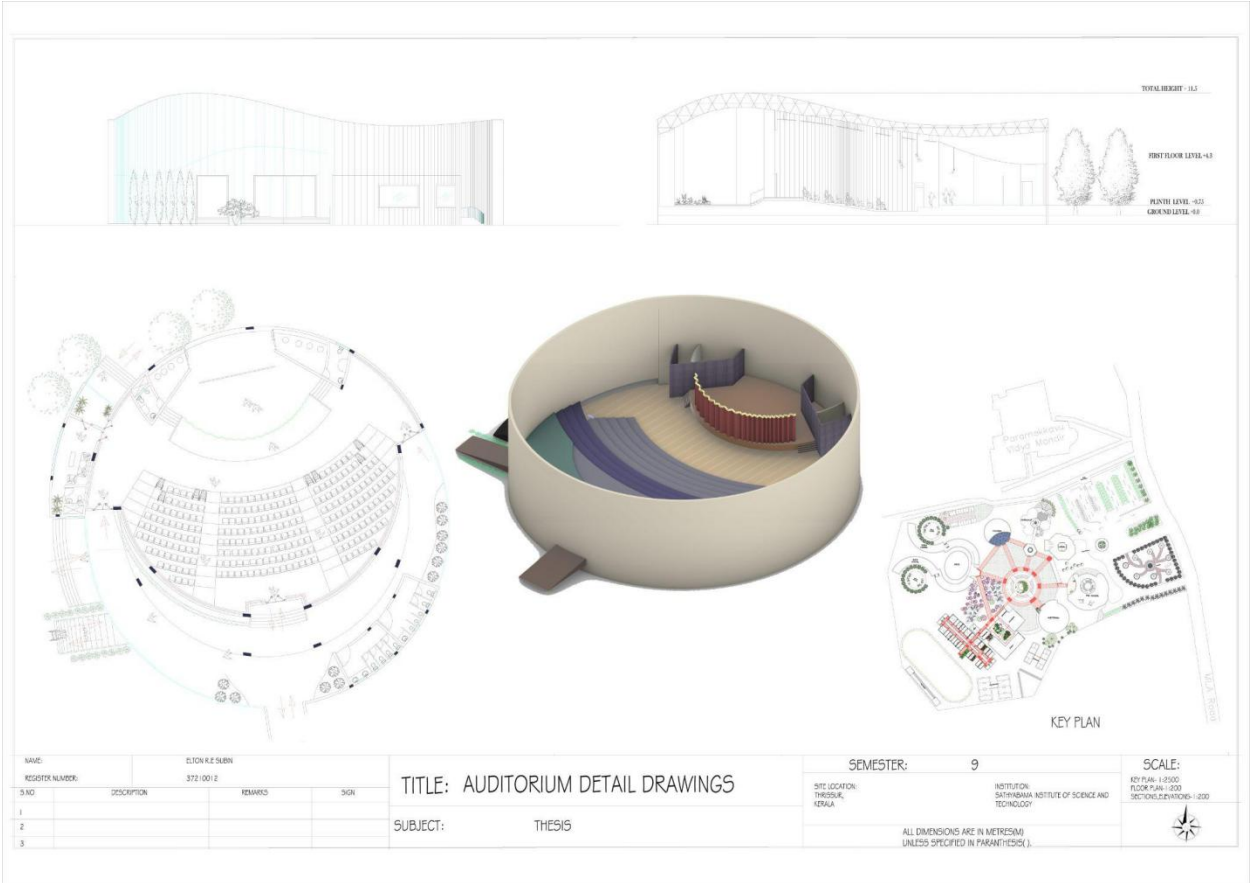
CANTEEN:



ADMINISTRATIVE OFFICE:



AUDITORIUM:



ACADEMIC BLOCK:

