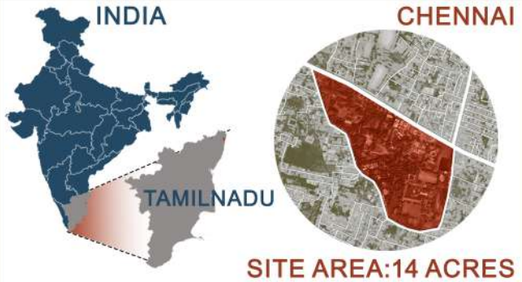
# 01 ABLESPACE

## TRANSFORMING TOUCH INTO VISION FOR VISUALLY IMPAIRED

## SITE LOCATION




SITE AREA:14 ACRES


**VICTORIA MEMORIAL BLIND SCHOOL, POONAMALLEE, CHENNAI, TAMILNADU.**

## INTRODUCTION

The Victoria Memorial Blind School, is the oldest blind school in India, set up by the British rulers. The idea of a blind school was suggested by **Eric Conran Smith in 1931.** This school began functioning as Asia's first High school for the blind. It now stands **UNDERUTILIZED, neglected, and outdated.**

1892 — British Rule — For Visually Impaired — Colonial Architecture

## VALIDATION CRITERIA

- Preserves colonial architectural features with minimal interventions, maintaining historic significance.
- A structurally feasible building, financially funded by the government, to be designed with local materials and sustainable strategies to ensure cost efficiency.
- The existing building lacks features for the visually impaired; redesigned to incorporate inclusive utilities that empower them through accessible education, skill development, and community services.
- Design to be rooted in Chennai's century-long legacy, empowering visually impaired through inclusive spaces.

### Project Statement

**Structure**- G+1
**Height**- 14M
**Access Road within site**- 4.5M

### Aim:

Restore and repurpose the HERITAGE structure to meet modern educational and accessibility standards for visually impaired.

### Need:

Preserve architectural heritage building for visually impaired, to promote contemporary learning and increase its utility.

### Objective:

- Retain heritage value.
- Improve functionality of the building for visually impaired people.
- Incorporate sustainable goals for longevity of the building.

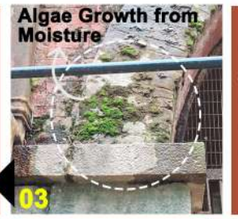
### Methodology


## DEFECTS WITH CONSERVATIVE METHODS


Carefully remove the damage and apply lime based plaster and rework like exposed brick structure


- Inject lime-based grout
- stabilize structure
- repair surface plaster

- Clean algae deposit using soft brushing
- Repair the damage with compatible methods




- Assess structural stability,
- reinforce timber
- treat decay
- fill cracks.



- Remove corrosion
- Repair pipe
- Apply protective coating.


- Remove damage ,restore door with linseed oil
- Loose rust mechanically,apply tannic acid,Seal with wax/clear lacquer

- Repair with matching timber
- Protect with Linseed Oil

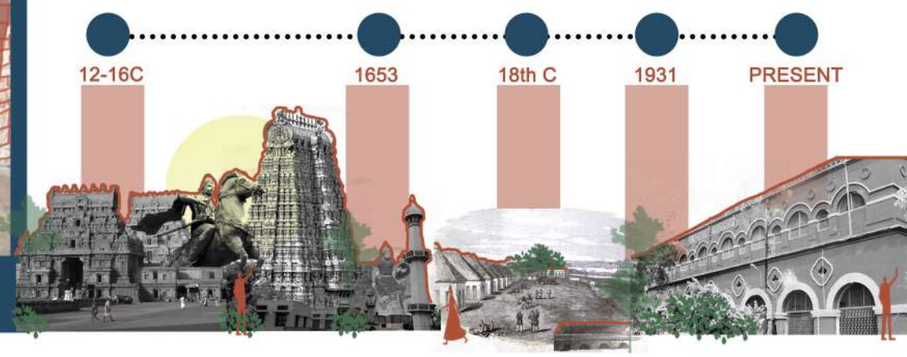

- Replace only missing pieces with historically matching glass.


Locations of defects are indicated in condition mapping mentioned in following sheet.

## COLONIAL STYLE – INDO-SARACENIC INFLUENCE


## HISTORY TIMELINE

- **12th–16th C.** – Pandyas, Cholas, Nayaks; cultural and architectural heritage.
- **1653** – Arabic mosque built by General Rustam.
- **18th C. (late)** – British fort with barracks, stables, infirmary.
- **1888–1896** – Military complex built for 500 soldiers, with prison and infirmary.
- **1931** – Converted into Victoria Memorial Blind School; later added Braille press & women's rehab center.
- **Present** – From ~950 students (1930s) to ~200–250 today; building now in decay



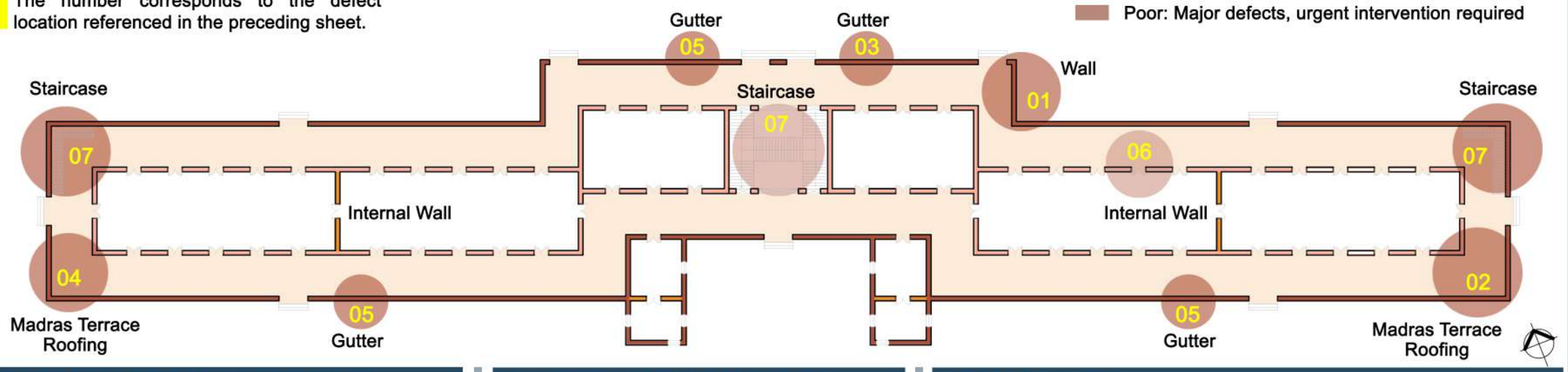
# 02 ABLESPACE

## TRANSFORMING TOUCH INTO VISION FOR VISUALLY IMPAIRED

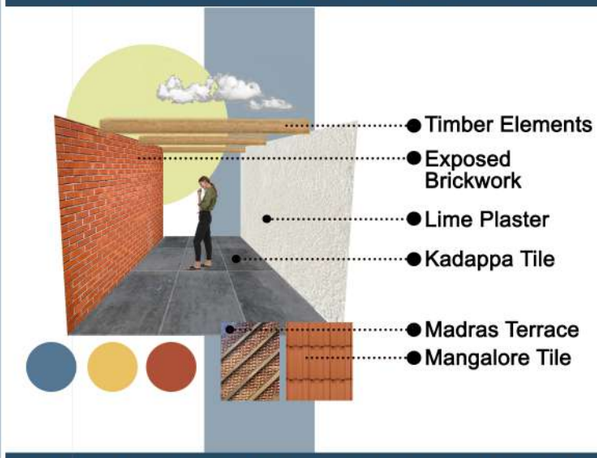
## CONDITION MAPPING

The number corresponds to the defect location referenced in the preceding sheet.

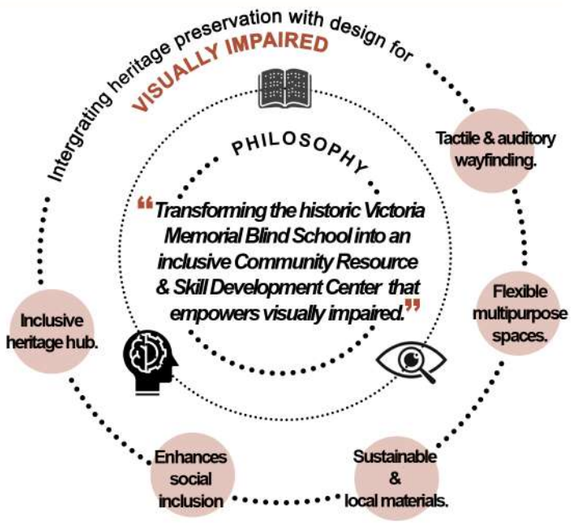
Good: Negligible defects, Less Intervention.
Fair: Minor defects, needs monitoring or minor repair.
Poor: Major defects, urgent intervention required




## EXISTING MATERIAL BOARD




## DESIGN PHILOSOPHY




## DESIGN PROPOSAL

**Braille Library with Lab**

Provides Braille books, audio books, and digital resources in an accessible space with tactile signage and ergonomic seating.

**Kids' Learning Hub <12yrs**

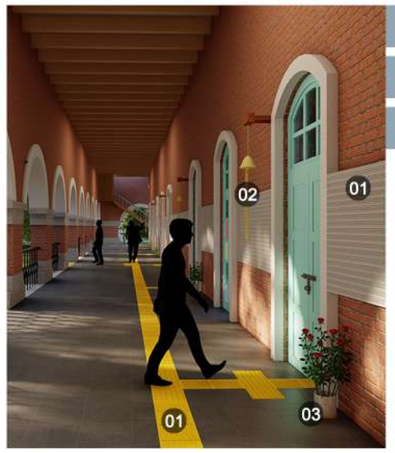
Engaging students up to 12 years old with hands-on learning tools, including tactile alphabet pins, shape puzzles, and word formation activities.

**Workshop For Adults**

Discover art and independence: workshops for visually impaired adults in sculpting, knitting, weaving, embroidery, and more.

## CONCEPT

### "Navigating Legacy Through Sensory Design"



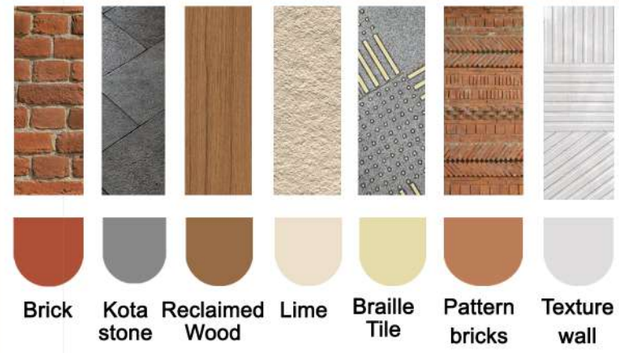

**01) TOUCH**

**02) SOUND**

**03) SMELL**

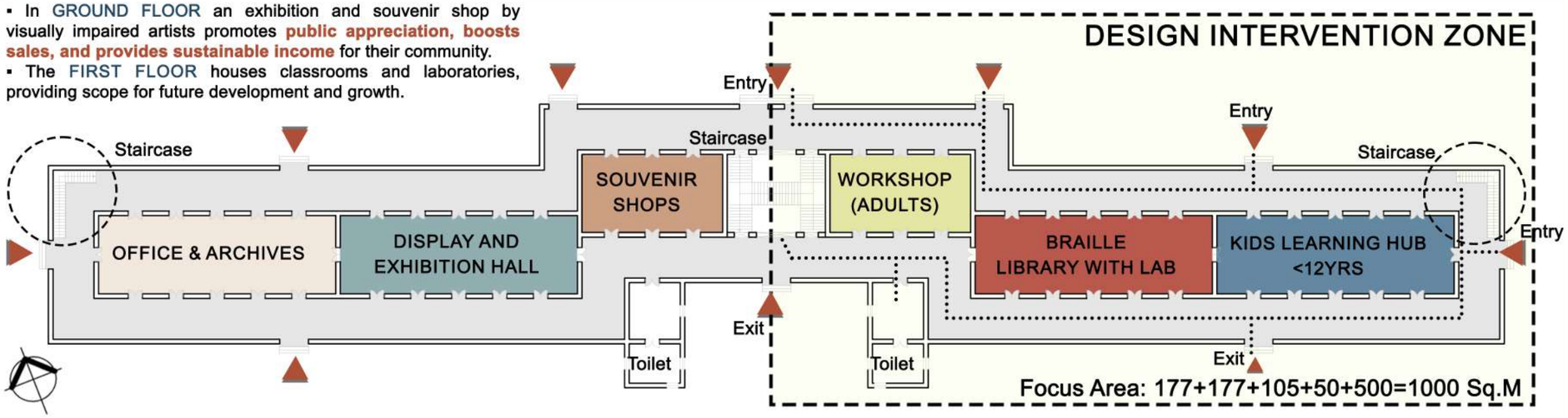
Reimagining spaces as a tapestry of scent, sound, and texture where **history is not just seen, but felt.** By weaving cultural narratives into **tactile surfaces, ambient sounds, and fragrant cues**, the design empowers visually impaired individuals to explore heritage through immersive, intuitive experiences that honor memory and awaken the senses.

## PROPOSED MATERIAL BOARD

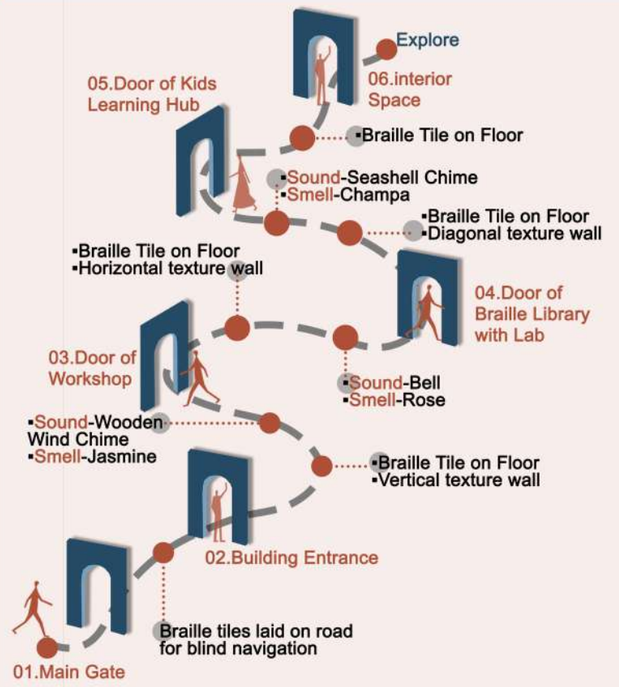



## PROPOSED ZONING

- In GROUND FLOOR an exhibition and souvenir shop by visually impaired artists promotes **public appreciation, boosts sales, and provides sustainable income** for their community.
- The FIRST FLOOR houses classrooms and laboratories, providing scope for future development and growth.




## WAYFINDING INSIDE THE BUILDING

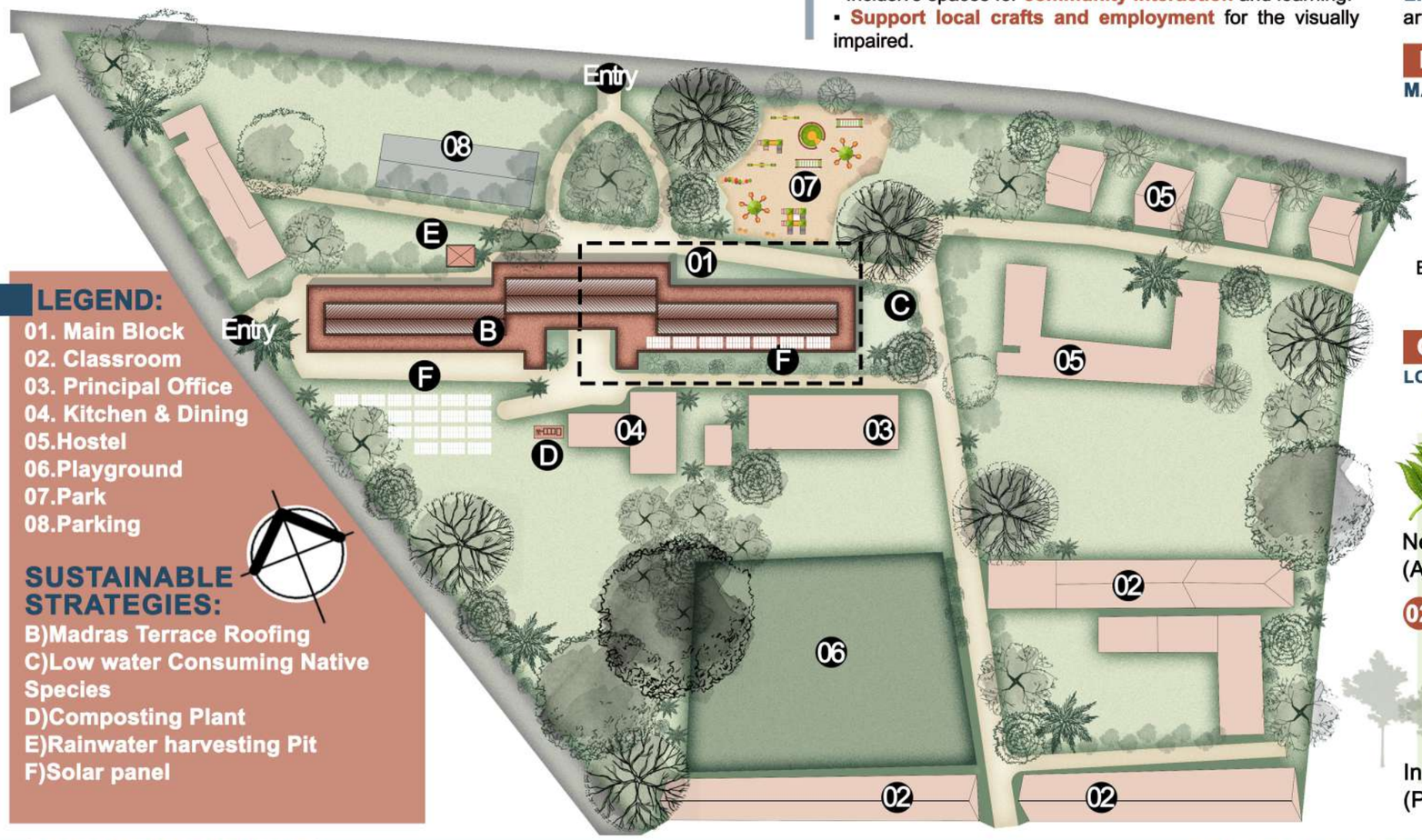


# 03 IGBC SUSTAINABLE STRATEGIES

***"REDUCE - ELECTRIFY - ADAPT"***

## Social Responsibility

- Barrier-free design with **tactile and auditory guidance** for the visually impaired.
- Inclusive spaces for **community interaction** and learning.
- **Support local crafts and employment** for the visually impaired.




**LEGEND:**

01. Main Block
02. Classroom
03. Principal Office
04. Kitchen & Dining
05.Hostel
06.Playground
07.Park
08.Parking

**SUSTAINABLE STRATEGIES:**

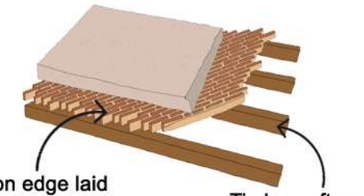
B)Madras Terrace Roofing
C)Low water Consuming Native Species
D)Composting Plant
E)Rainwater harvesting Pit
F)Solar panel

## A) Energy Efficiency

Oriented along the **NORTH–SOUTH AXIS**, the building enjoys **ABUNDANT NATURAL LIGHT** and ventilation, reducing reliance on artificial lighting and mechanical systems.

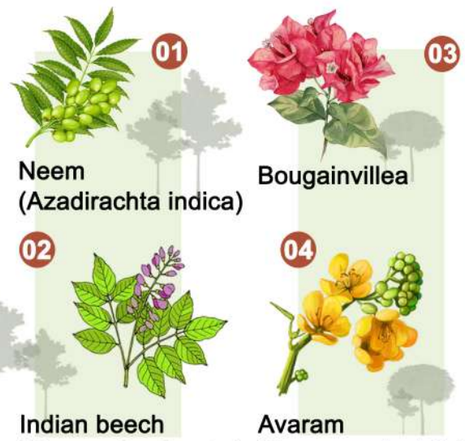
## B) Materials & Resources

**MADRAS TERRACE ROOFING**



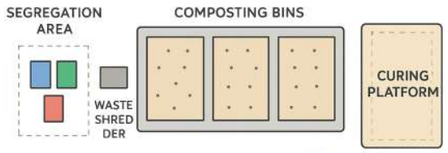

## C) Efficient Landscaping

**LOW WATER CONSUMING NATIVE SPECIES**




## D) Waste Management

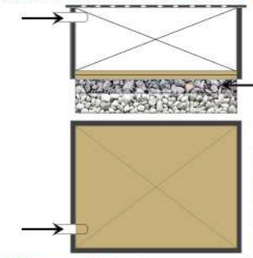
**INTEGRATING COMPOSTING PLANT**




Area needed for this plant: 30 sqm for composting the food waste segregated from the kitchen.

## E) Water Conservation

**RAIN WATER HARVESTING PIT**




130 cu.m needed

7.5x5.8x3m placed within 3m from the building

10 cm dia pipe runs from the roof to the percolation pit has been **RETAINED**

## F) Use of Renewable energy

**INTEGRATING SOLAR PANELS**




Energy Comsumption: 36.8 kwh/day

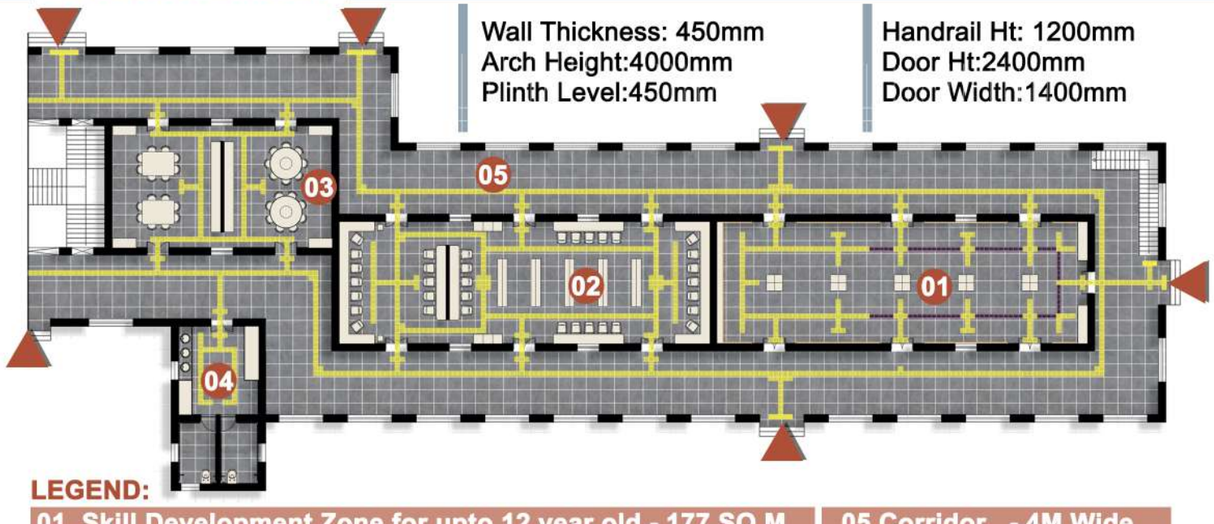
55 Nos of Solar panels of size 2.4Mx-1.3M needed to produce 680W each panel to meet the requirement.

Energy produced: 37.4 kwh/day

## GENERAL LAYOUT

Wall Thickness: 450mm
Arch Height:4000mm
Plinth Level:450mm

Handrail Ht: 1200mm
Door Ht:2400mm
Door Width:1400mm

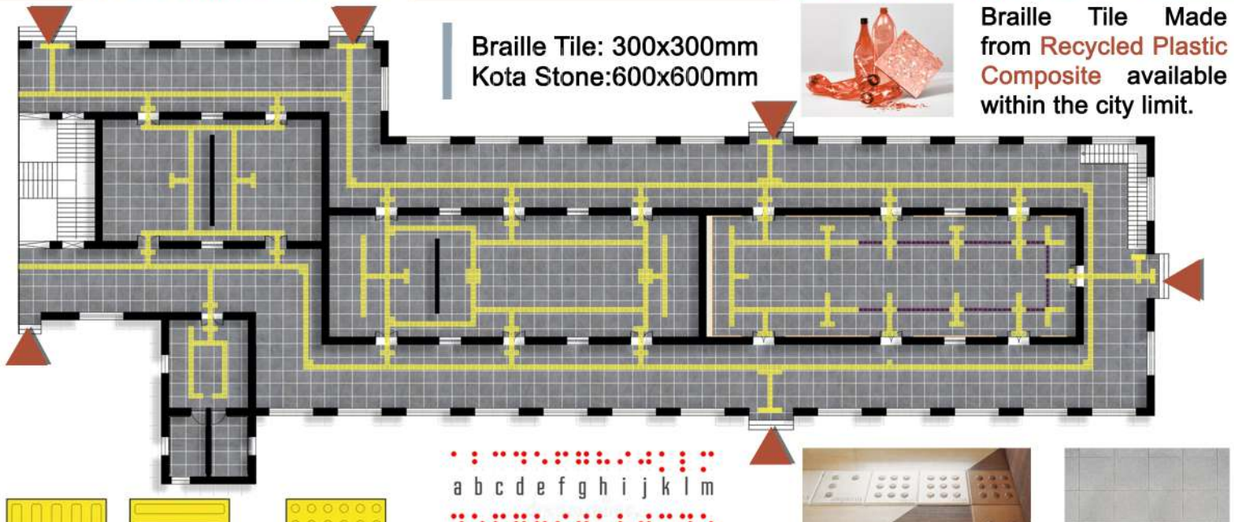


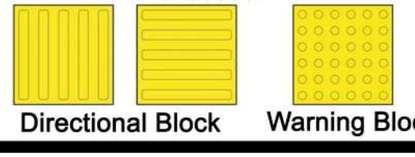

**LEGEND:**

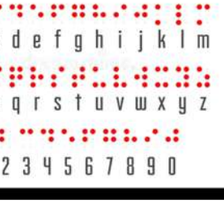
| | |
|---|---|
| 01. Skill Development Zone for upto 12 year old - 177 SQ.M | 05.Corridor - 4M Wide |
| 02. Braille Library with Lab Facility - 177 SQ.M | 06.Staircase -1.2/2.2M |
| 03. Workshop for Adult - 105 SQ.M | 07.Entry Arch-2.8M |
| 04.Toilet with Wash area and Janitor Closet - 50 SQ.M | |

## FLOORING LAYOUT

Braille Tile: 300x300mm
Kota Stone:600x600mm





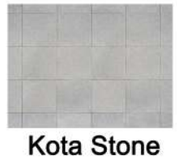




## G) Use of Recycled Materials



Braille Tile Made from Recycled Plastic Composite available within the city limit.

Alphabet & Number Floor Tile

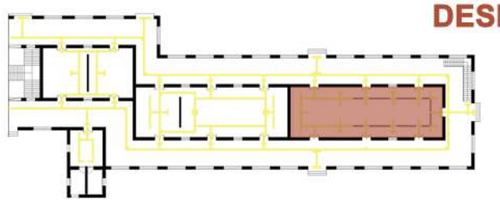


Kota Stone

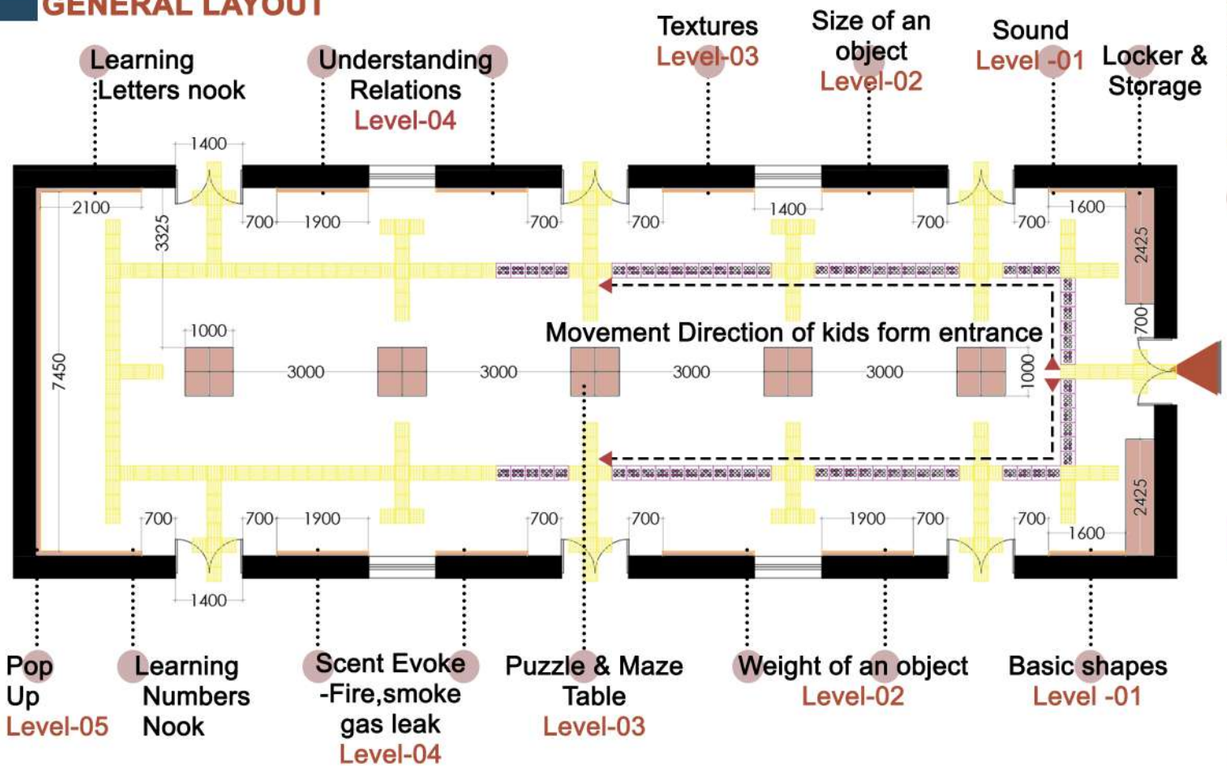
# 04 KIDS LEARNING HUB

## <12 YRS OLD

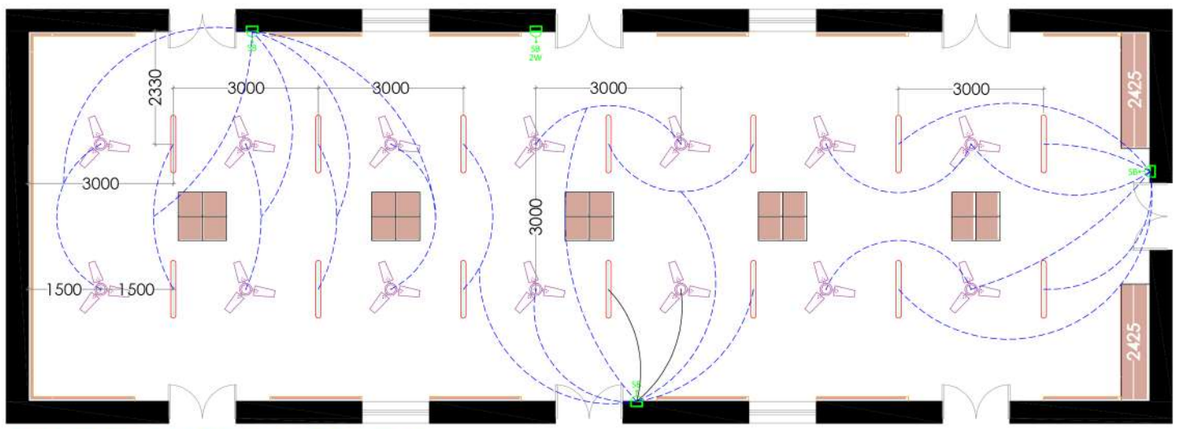
Unlike the **"Conventional Teaching Methods"** for visually impaired children under 12 years, this design introduces an innovative **LEARNING PINS METHOD**.



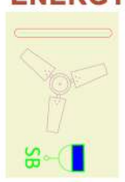
## GENERAL LAYOUT




## ELECTRICAL LAYOUT



## ENERGY-EFFICIENT LIGHTING



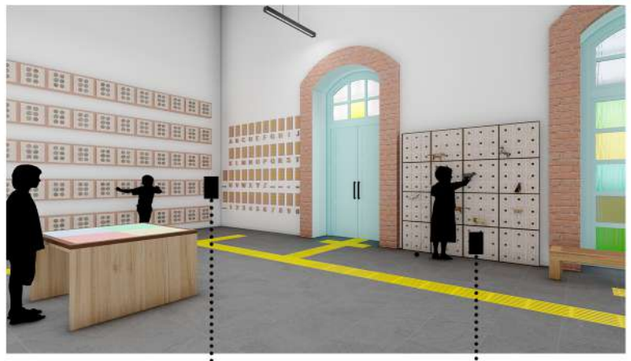
- Philips – GreenPerform / CoreLine Suspended LED-24W/h
- BLDC Ceiling Fan(Atomberg-Renesa)-32W/h
- 6A with 3 pin socket with switches

Low-energy lighting fixtures equipped with Braille-coded controls are provided for accessibility by visually impaired users, powered by solar energy sources.

**DESIGN INNOVATION-** Provides Pin Boards with holes can be inserted with objects called "Learning Pins"

Reclaimed Wood Pin boards

Maze-Way Finding Tactile Table

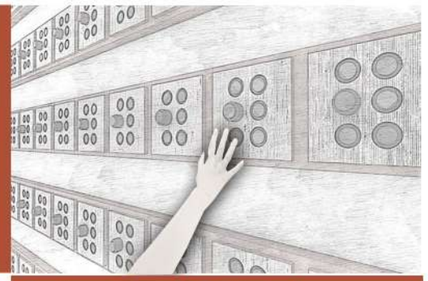


Pop-up Letters for word formation

Understanding Characters

Basic Shapes Learning Pin

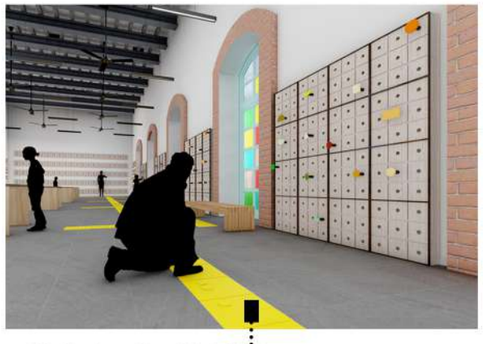
Character Learning Pin



Letters Pop-Up Pin to form word

Learning Pins

Tactile Braille tiles with letters and numbers installed on the floor to aid blind individuals in understanding.



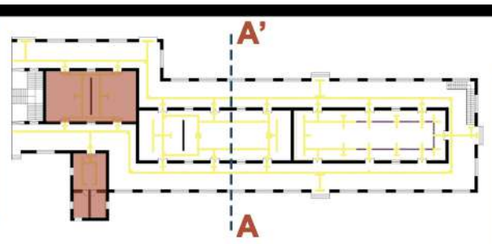
Alphabet BrailleTile

Tactile Puzzle table

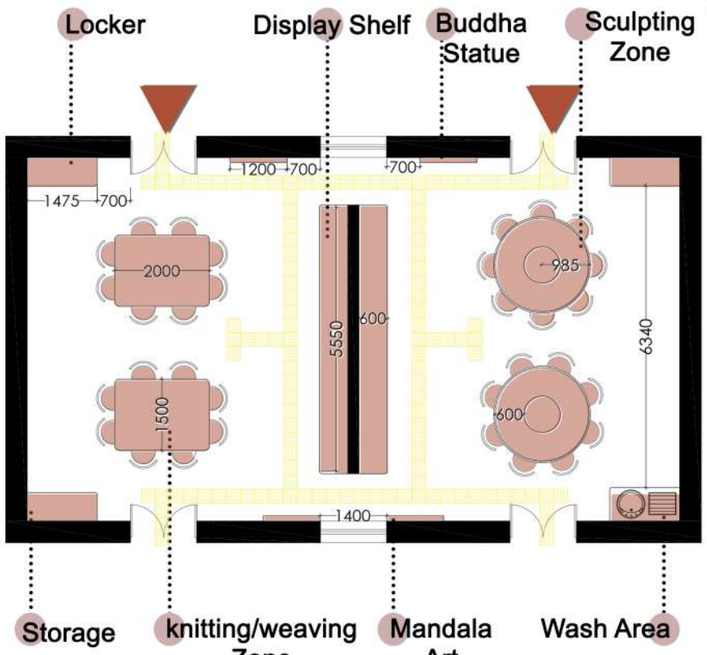
Stained Glass

# 05 WORKSHOP FOR ADULTS
## SCULPTING & WEAVING

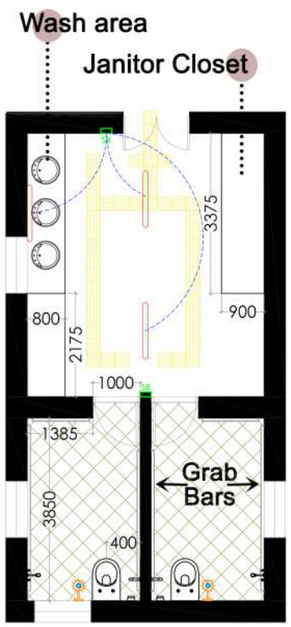
Since **Looms (thari)** were used in the building prior to its abandonment, their traces are **Preserved** and represented by **Incorporating Looms** within the workshop space.



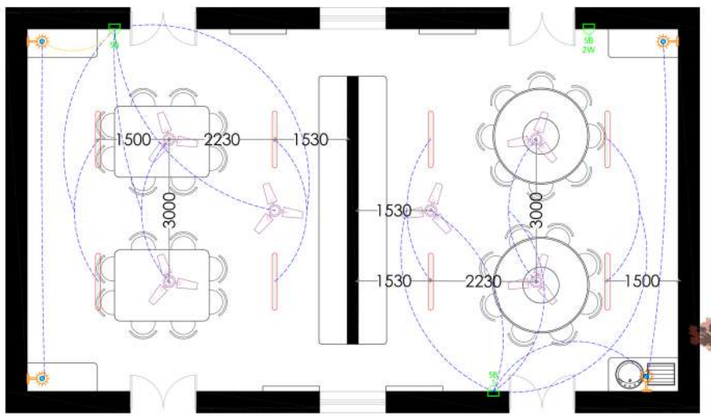

## GENERAL LAYOUT



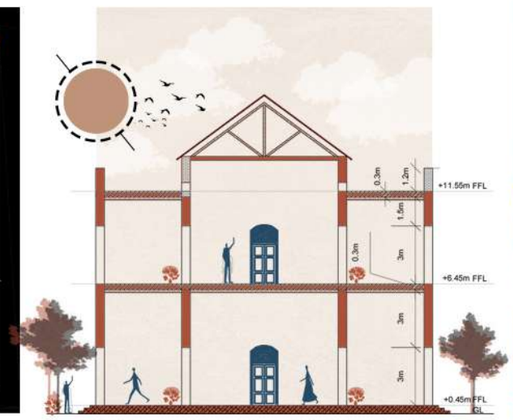

## RESTROOM LAYOUT




## ELECTRICAL LAYOUT




## SECTION-AA'



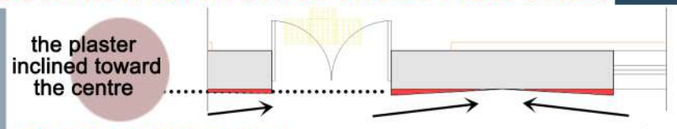

## ENERGY-EFFICIENT LIGHTING

- Philips – GreenPerform / CoreLine Suspended LED-24W/h
- BLDC Ceiling Fan(Atomberg-Renesa)-32W/h
- 6A with 3 pin socket with switches
- Philips CoreLine Wall (9–12 W)
- Hansgrohe Logis Single Lever Basin Mixer 100 LowFlow -Greenly's 3 LPM spray/foam aerators

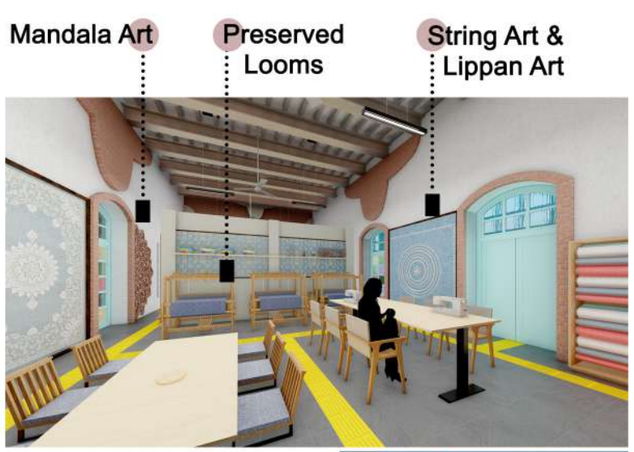
Low-energy lighting fixtures equipped with Braille-coded controls are provided for accessibility by visually impaired users, powered by solar energy sources.

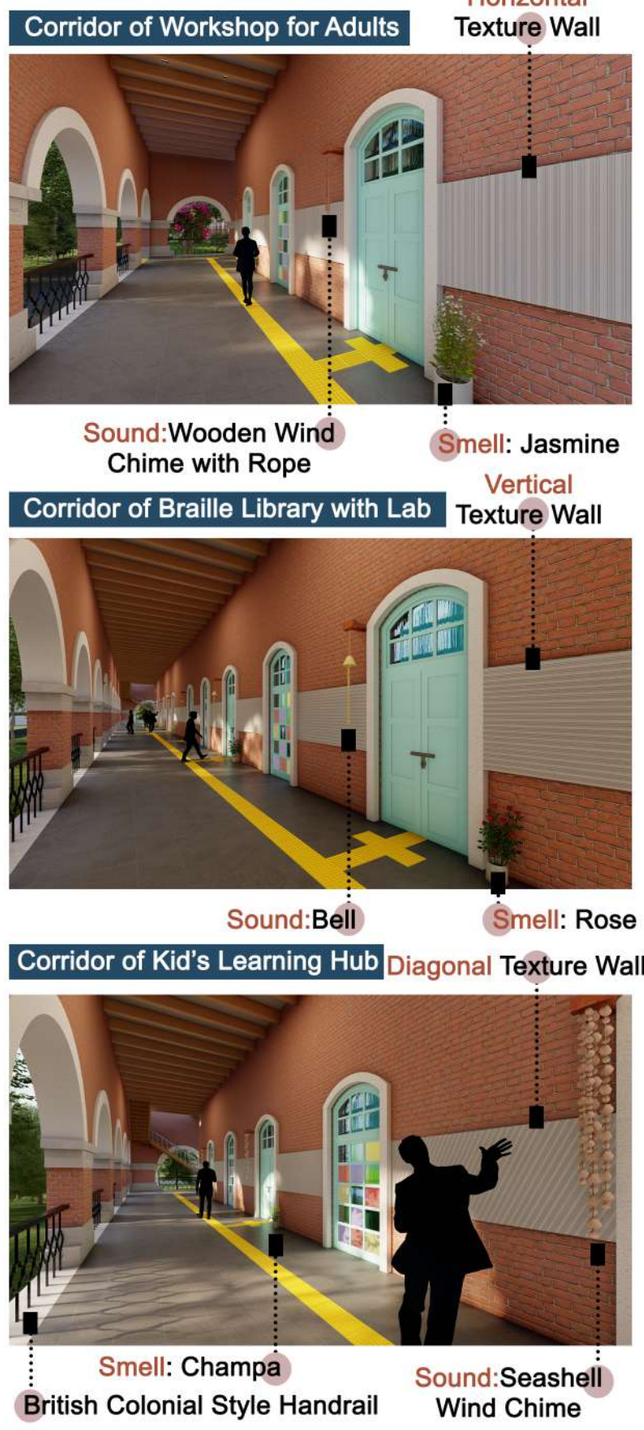
## GUIDED BY TOUCH: NAVIGATIONAL WALL TEXTURES

Horizontal, Vertical and Diagonal Textured Lime plaster, At 1000mm from Finished Floor Level of height 1000mm applied on corridor wall.




**Distinct tactile patterns** are assigned to each space for easy recognition, with slight **plaster inclinations** near doors and windows helping users **sense wall openings** through **touch and movement**.

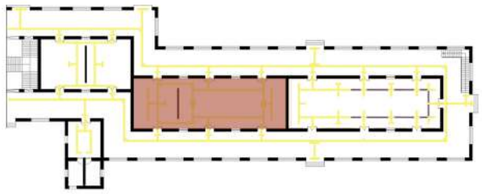


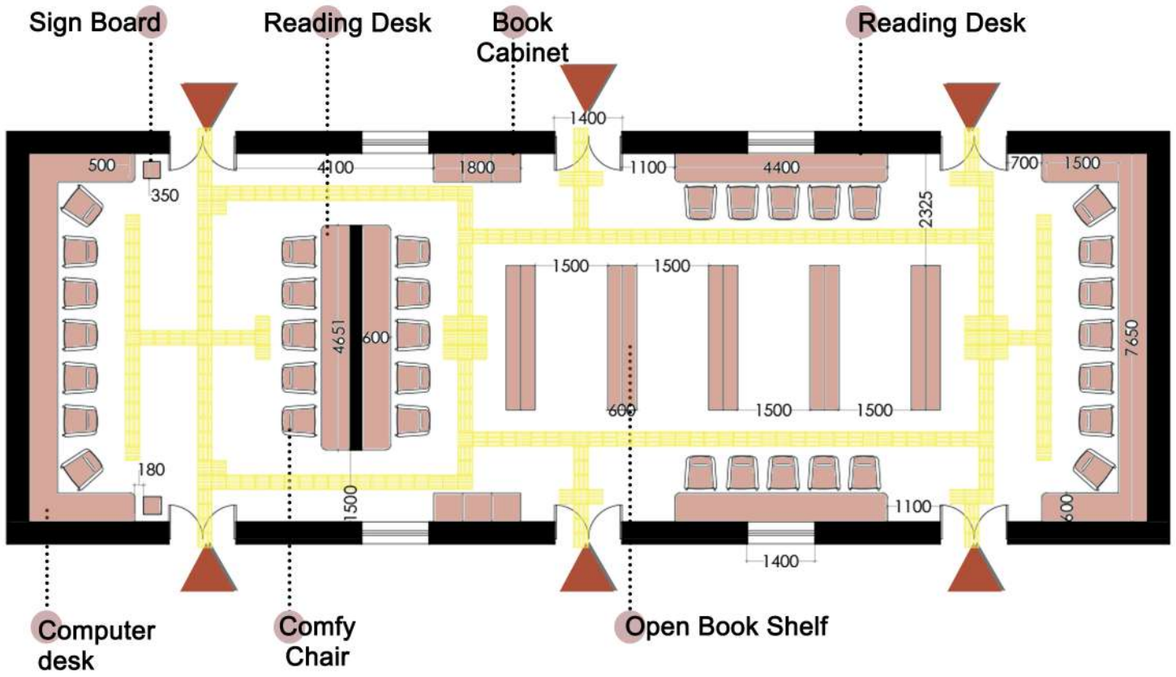
# 06 BRAILLE LIBRARY WITH LAB-OPEN TO ALL

**Reading Fundamental**

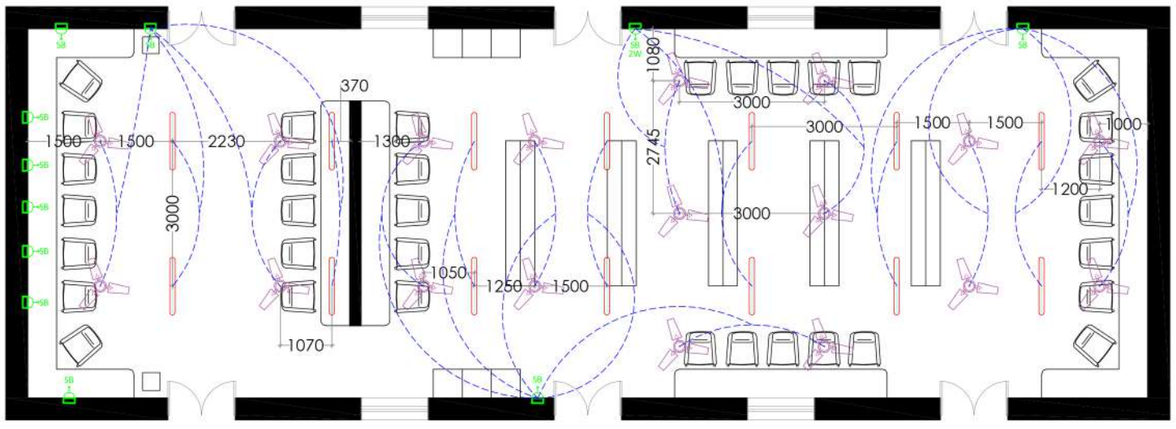
Provides comfy chair and desk for reading and computer facility for adults to "Explore the World"



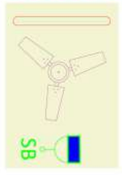
## GENERAL LAYOUT




## SERVICE LAYOUT



## ENERGY-EFFICIENT LIGHTING




- Philips – GreenPerform / CoreLine Suspended LED-24W/h
- BLDC Ceiling Fan(Atomberg-Renesa)-32W/h
- 6A with 3 pin socket with switches

Low-energy lighting fixtures equipped with Braille-coded controls are provided for accessibility by visually impaired users, powered by solar energy sources.

## DESIGN INNOVATION

Arched Doorways

Stained Glass

Reclaimed Wood furniture with Blunt edges for Safety

Tactile Plan of the building

Navigation Aid

Brick Textured Wall

Lime Plaster textured wall