

CENTRE FOR STREET CHILDREN

A THESIS

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

By

SHALINI M
(39210081)



DEPARTMENT OF ARCHITECTURE
SCHOOL OF BUILDING AND ENVIRONMENT

SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY) Accredited

With Grade “A” by NAAC

JEPPIAAR NAGAR, RAJIV GANDHI SALAI,
CHENNAI - 600 119

MAY 2024



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

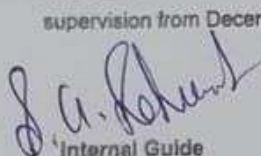
Accredited "A++" Grade by NAAC | 12B Status by UGC | Approved by AICTE

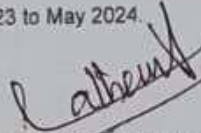
www.sathyabama.ac.in

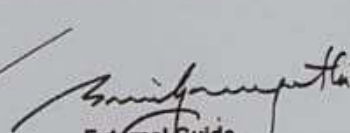
DEPARTMENT OF ARCHITECTURE

BONAFIDE CERTIFICATE

This is to certify that Thesis Report is the bonafide work of **SHALINI M (39210081)** who carried out the Thesis entitled "**CENTRE FOR STREET CHILDREN**" under our supervision from December 2023 to May 2024.

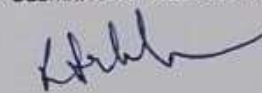

Internal Guide
Ar. Selvendiran


Internal Review Member
Ar. Catherine Selvaraj


External Guide
Ar. Sriram Ganapathy


Dean and Head of the Department
Dr. DEVYANI GANGOPADHYAY

Submitted for Viva voce Examination held on


Internal Examiner

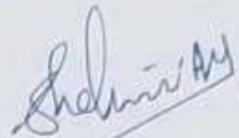

External Examiner

DECLARATION

I, **SHALINI M** hereby declare that the Thesis Report entitled "**CENTRE FOR STREET CHILDREN**" done by me under the guidance of **Ar.Selvendiran** (Internal Guide), **Ar. Catherine Selvaraj** (Internal Review Member) and **Ar. Sriram Ganapathy**(External Guide) Sathyabama Institute of Science and Technology is submitted in partial fulfillment of the requirements for the award of Bachelor of Architecture Degree.

DATE:

PLACE: Chennai



SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **Sathyabama Institute of Science and Technology** for their kind encouragement in doing this Thesis and for completing it successfully. I am grateful to them.

I convey my thanks to **Dr.Devyani Gangopadhyay**, Dean and Head of the Department, School of Building and Environment, Our Design Chair **Ar.Sarath C.Kanth**, Thesis Coordinator **Ar.Selvendiran** for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Thesis Internal guide **Ar.Selvendiran**, Internal Review member **Ar.Catherine Selvaraj** and External Guide **Ar. Sriram Ganapathy** their guidance, suggestions and constant encouragement which paved the way for the successful completion of my Thesis work.

I wish to express my thanks to all Teaching and Non-teaching staff members of the **Department of Architecture**, all my family members and also juniors Dinesh and Anushree helpful in many ways for completion of the Thesis.

SHALINI M

THESIS SYNOPSIS

Improving the lives of homeless children and at risk is the primary goal of the Centre for Street Children. According to statistics by an international children's charity, 4% (20 million) of India's children population are orphans, 95% of the old aged people live in private homes and nursing homes. In current statistics data,

India is home to world's largest population of street children, estimated around 18 million children work on streets of India. which examines street children from a sociological perspective, sheds light on the situation and addresses various methods designed to ensure their welfare.

The project's main objective is to provide the kids with the best care and support possible so they can grow up to be completely capable, independent adults to become financially stable, physically and psychologically healthy, and self-sufficient. The targeted group of children in this project is Purely orphans and abandoned children.

What Can be done for these children's?

Development of lifestyle, Informal education, Awareness ,Recreational space,Healthcare,Training centres,Home Shelters,Hygiene food.

Keywords

Destitute children; Underprivileged; Training; Education; Child development

TABLE OF CONTENTS

CHAPTER No.	TITLE	PAGE No.
	THESIS SYNOPSIS	v
	LIST OF FIGURES	viii
	LIST OF PLATES	x
1	INTRODUCTION	1
1.1	INTRODUCTION	1
1.2	NEED OF THE PROJECT	4
1.3	AIM AND OBJECTIVE	4
1.4	METHODOLOGY	5
2	LITERATURE CASE STUDIES	6
2.1	MANAVSADHNA ACTIVITY CENTER – AHMADABAD	6
2.2	ORPHANAGE, AMESTERDAM, NETHERLAND	33
2.3		12
		16
3	DATA COLLECTION AND STANDARDS	20
4	SITE STUDY AND ANALYSIS	26
4.1	SITE SELECTION	26
4.2	SITE JUSTIFICATION	26
4.3	SITE ANALYSIS	27
5	ARCHITECTURAL DESIGN	31
5.1	SPATIAL REQUIREMENTS	31

5.2	CONCEPT	31
5.3	DETAILED DRAWINGS	39
5.4	MODEL	47
6	REFERENCES	48

LIST OF FIGURES

FIGURE No.	TITLE	PAGE No.
2.1	Street children of various places	3
2.2	Child of the street living	4
2.3	Child of the street working	4
2.4	Part of a street family	7
2.5	Institutional care	8
2.6	Plan of Manavsadhna activity center	8
2.7	Built and open space of activity centre	9
2.8	Waste materials used in Manavsadhna activity center	9
2.9	Climate analysis of Manavsadhna activity center	12
2.10	Column detailing	13
2.11	Outdoor community space for surrounding people	13
2.12	Articulation of interaction and learning space between indoor and outdoor space	17
2.13	Outdoor community space used for learning, interacting, festivities, as well as social gathering space for slum residents.	22
2.14	Site cum Ground floor plan	22
2.15	Section of Manav sadhana activity centre	23
2.16	Axonometric view of activity centre	24
2.17	Day care block view	25
2.18	3d view of activity centre	25
3.1	The concept was made by hierarchy of age group with patterns.	26
3.2	The circulation pattern is based on hierarchy of people and spaces with cluster grid.	26
3.3	Hierarchy of space with age group	26
3.4	Site zoning with spaces	27
3.5	Brick wall material	28
3.6	Operable window	29

3.7	Operable window	30
3.8	Operable window	31
3.9	Operable window	32
3.10	Operable window	32
3.11	Operable window	33
3.12	Operable window	33
4.1	News Article 2010	34
4.2	News Article 2017	34
4.3	News Article 2019	34
4.4	News Article 2021	35
4.5	NGO organization structure	35
4.6	Literature study of service and auditorium	36
4.7	Literature study of spaces	36
4.8	Sanitary standards	37
5.1	Location of site	38
5.2	Site images	38
5.3	Site neighbourhood context	38
5.4	Site Proximity	39
5.5	Site access	40
5.6	Site section line	40
5.7	Site slope	40
5.8	Site vegetation	40
5.9	Sun path diagram	42
5.10	Average temperature chart	42
5.11	Average wind speed chart	42
5.12	Average Rainfall chart	42
5.13	Climate analysis on site	45
5.14	Site sensory	45
5.15	Site Views and Vistas	45

LIST OF PLATES

PLATE No.	TITLE	PAGE No.
2.1	Atelier school	5
2.2	Atelier school	6
2.3	Sustainable public school	10
2.4	Sustainable public school	11
2.5	Manavsadhna activity center	14
2.6	Manavsadhna activity center	15
2.7	Kadapa public school	18
2.8	Kadapa public school	19
3.1	Material study	20
3.2	Material study	21
5.1	Block – 1 (Pre primary school)	41
5.2	Block – 2 (Primary school)	43
5.3	Block – 3 (High school)	44
5.4	Library, Admin, Kitchen and Dining blocks	46

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Street children are poor or homeless children who live on the streets of a city, town, or village. Homeless youth are often called street kids.

India is home to world's largest population of street children, estimated around 18 million children work on streets of India.

Who?

The problem of Street children is an urban problem and directly linked to poverty, family disintegration, urbanization, inadequacy of resources and growing population.

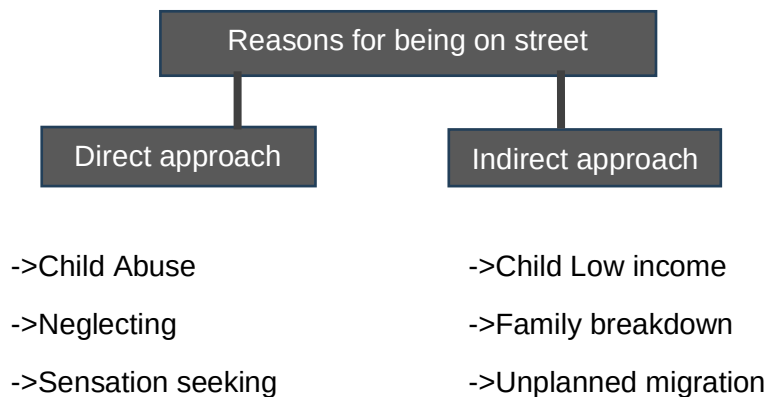


Fig 2.1(a),(b):Street children of various places

1.1.1 TYPES OF STREET CHILDREN

1. Child of the street living
2. Child of street working
3. Part of a street family
4. In Institutional care

1 Child of the street living

A 'child of the streets', having no home but the streets. The family may have abandoned him or her or may have no family members left alive. Such a child has to struggle for survival and might move from friend to friend, or live in shelters such as abandoned buildings.



Fig 2.2: Child of the street living

2 Child of street working

A child 'on the street', visiting his or her family regularly. The child might even return every night to sleep at home, but spends most days and some nights on the street because of poverty, overcrowding, sexual or physical abuse at home.



Fig 2.3: Child of the street working

3 Part of a street family

A part of a street family. Some children live on the sidewalks or city squares with the rest of their families. Families displaced due to poverty, natural disasters, or may be forced to live on the streets. They move their possessions from place to place when necessary.



Fig 2.4: Part of a street family

4 In Institutional care

In institutional care typology, children in this situation come from a situation of homelessness and are at risk of returning to a life on the street.



Fig 2.5: Institutional care

Children's of the street

- Vagrants
- Destitute
- Child labour
- Orphanage children's
- Age group(0-18 years old)

1.2 NEED OF THE PROJECT

- The need for the project is to sustain themselves from society and to be support, educate and provide basic facilities.
- This project will helpful to homeless and street children, creating new direction to develop their life standards.
- Therefore the street children's and families will get a chance to resume a new life.

1.3 AIM AND OBJECTIVE

- The aim of the project is to upgrade, develop and to evolve a design for street children as a liable citizens of nation
- To avoid children's living on street in cities.
- The project design would be providing space to street children where they are taken care and educated ,so that they can forget their past and resume their life with enthusiasm.
- The objective behind this project is to provide indigent children with a decent and healthy life.
- To provide education. recreation facilities, exploration and healthy life etc.
- To Make available a secure place where street children can play and enjoy their childhood.

1.4 METHODOLOGY



CHAPTER 2

LITERATURE CASE STUDIES

2.1 MANAVSADHNA ACTIVITY CENTER – AHMADABAD

Location - Ahmadabad

Architect - Yatin Pandya

Year - 2006

Area - 1100 sq.mts

Construction Time - one year (2005 – 2006)

2.1.1 INTRODUCTION

- Manav sadhana is a rehabilitation centre for street children as well as slum children residing by the centre. The activity Centre is located amidst the largest squatter settlement of Ahmedabad, and was created under the initiative of the social NGO, Manav Sadhna. It is located in highly dense slums, near Gandhi ashram road.
- On the slope of ramapirtekro roads lead to the institute.
- school for young children, while, in the afternoon it offers vocational training to women and young men from the settlement, helping them gain better employment opportunities.

2.1.2 SPACIAL ANALYSIS:

Manavsadhna has radial organization. Functional spaces are tend to open at the central court. The courtyard acts as a multipurpose space where children dance and play various outdoor games and also cultural programmers will be conducted. Ahmadabad is a kind of hot and dry climate. All the spaces are oriented towards the windward direction facing the open court for the cross ventilation.



Fig 2.6: Plan of Manavsadhna activity center

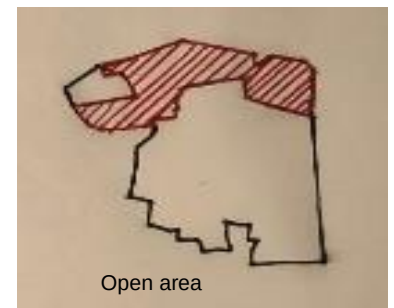
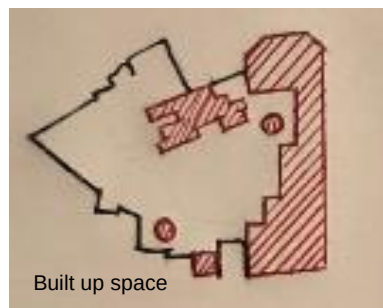
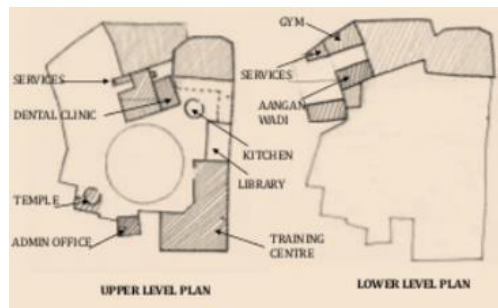


Fig 2.7(a),(b),(c): Built and open space of activity centre

2.1.3 MATERIAL ANALYSIS:

Manavsadhna is constructed as a live demonstration for the application of recycled waste as affordable, aesthetically pleasing and efficient building components. Materials are of municipal/domestic waste and prepared with simple hand operated tools by the local people

These recycle materials include –

- Cement bonded fly ash bricks,
- Mold compressed bricks made from landfill site waste residue,
- Stabilized soil block,
- Glass bottles,
- Plastic bottles filled with ash and waste residue,
- Vegetable crate wood paneling in the inner

- Partition walls



Fig 2.8 (a),(b): Waste materials used in Manavsadhna activity center

For reinforcement coated paper waste and for door panels uses shredded packaging wrapper. Vegetable wood crates as frames for the interior partition walls and oil containers as blades make the ventilation louvers in the toilet.

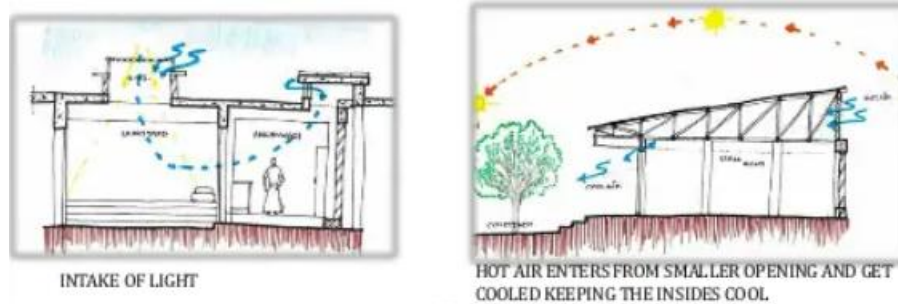


Fig 2.9: Climate analysis of Manavsadhna activity center

There are different types of waste materials and construction techniques used in making walls, and the roof and floor slabs are -

- Filler slab with glass bottles,
- Plastic bottles
- fly ash Bricks
- Stone slab
- Cement bonded particle clay tile cover
- Light conduit pipe truss with G.I. Sheet with clay tile roof

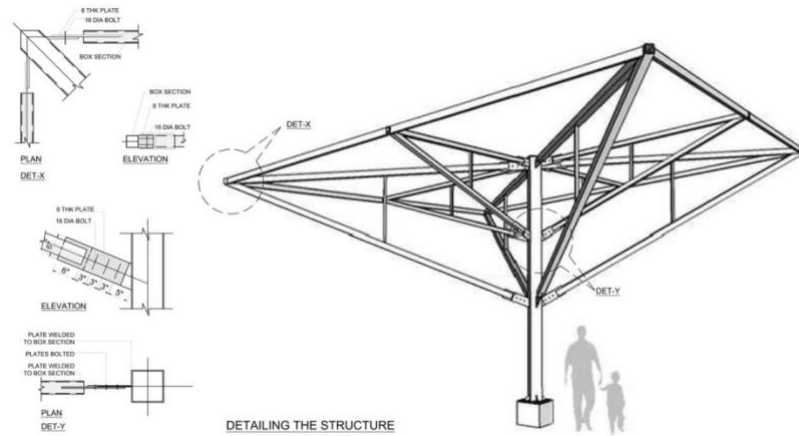


Fig 2.10: Column detailing

2.1.4 ACTIVITIES AND FUNCTION OF CENTRE



Fig 2.11: Outdoor community space for surrounding people



Fig 2.12: Articulation of interaction and learning space between indoor and outdoor space



Fig 2.13: Outdoor community space used for learning, interacting, festivities, as well as social gathering space for slum residents.

2.1.3 ARCHITECTURAL CHARACTERISTICS

- The plan is designed in “c” shaped with central courtyard acting as a major breathing and communal space for the people.
- Non programmatic spaces are deigned over shaped spaces around the tree.
- Extended plinth acts as a semi covered room for activities
- Windows are simple glass and metal
- Combination
- Types of doors used
 - 1) Doors with acrylic shutters
 - 2) Doors with wooden bottle shutters

2.1.3 PLAN AND SECTIONAL DRAWING

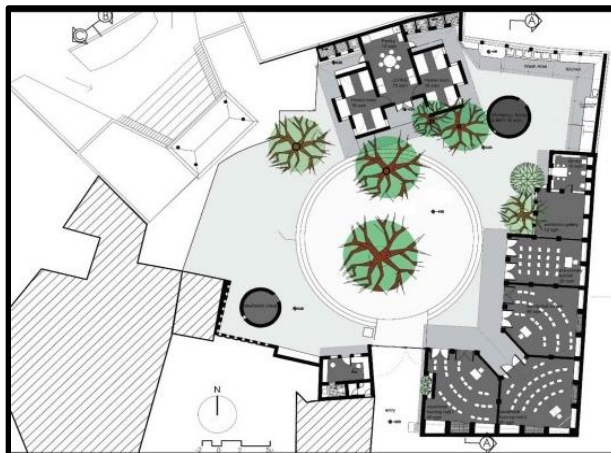


Fig 2.14: Site cum Ground floor plan



Fig 2.15: section of manavsadhana activity centre

2.1.2 ACONOMETRIC VIEW

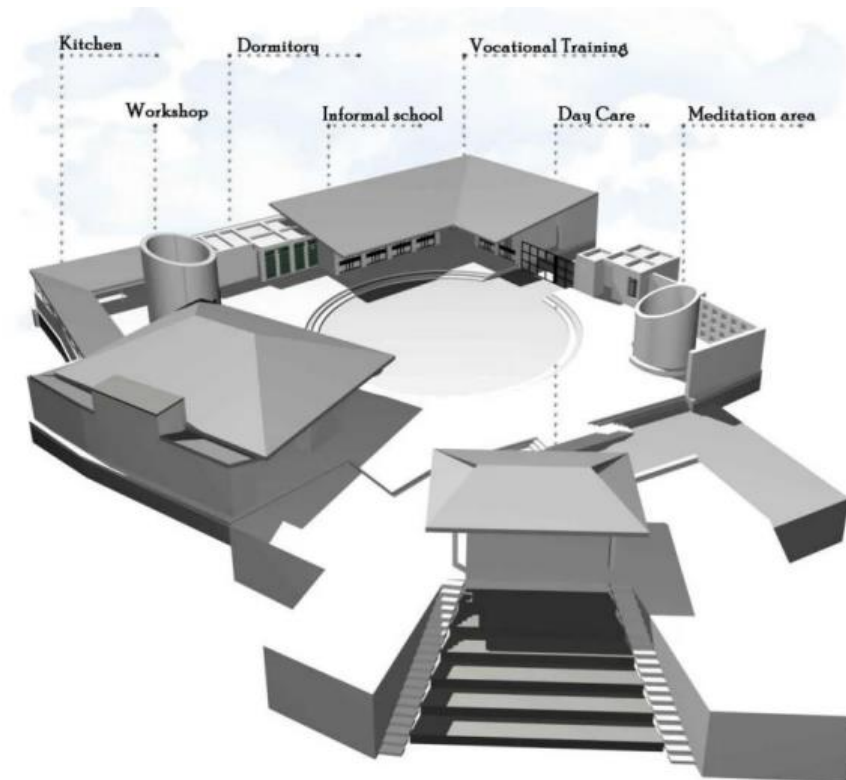


Fig 2.16: Axonometric view of acitivity centre



Fig 2.17: Day care block view

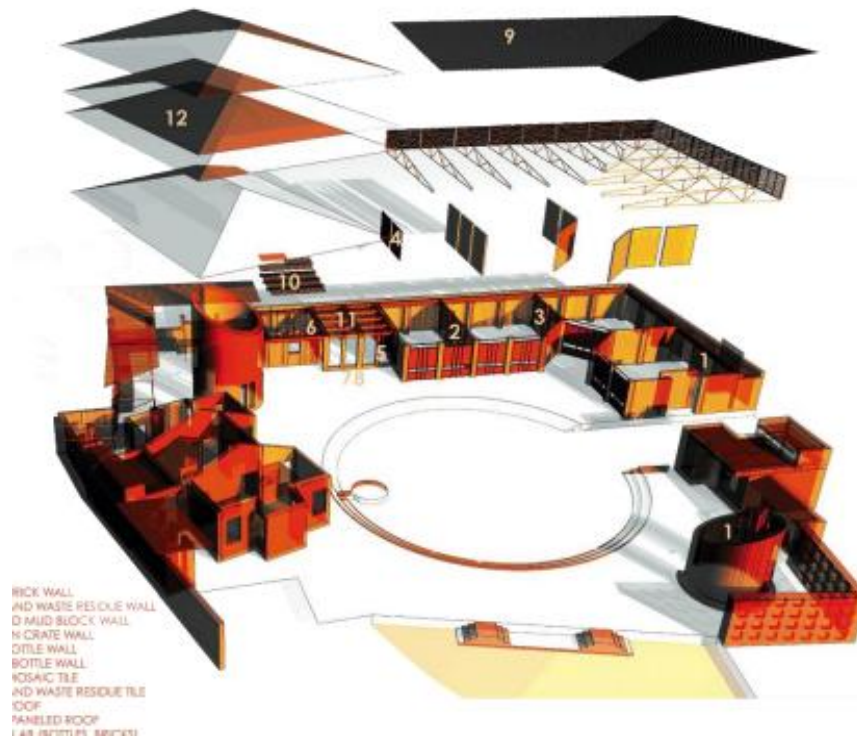


Fig 2.18: 3d view of activity centre

2.1.2 INFERENCE

This structure is a good example of an environment-friendly design that uses more waste products to construct. The design program is based on the site context of slum people and children. Mainly focused on spatial arrangements of heights on the level and radial circulation using existing trees of central courtyard, semi-opened corridors, and climatic approach of cross ventilation.

2.2 ORPHANAGE, AMESTERDAM, NETHERLAND

Location – Amsterdam, Netherlands

Architect – Aldo Van Eyck

Area - 14000 sq.mts

Construction Time - 1955-1960

Category – Orphanage

Childrens : 125 of all ages

2.2.1 INTRODUCTION:

The orphanage Amsterdam Netherlands is designed by Dutch Architect **Aldo van Eyck** in 1960. His design focused on a balance of forces to create both a home and small city on the outskirts of Amsterdam. The Orphanage is both house and city, compact and polycentric, single and diverse, clear and complex, static and dynamic, contemporary and traditional; rooted as much in the classical as in the modern tradition. The classical tradition resides in the regular geometrical order that lies at the base of the plan. The modern one manifests itself in the dynamic centrifugal space which traverses the classical order. The archaic tradition shows up in various aspects of the building's formal appearance. Due to the soft, biomorphic cupolas which cover the entire building, the first impression it evokes is that of an archaic settlement, reminiscent of a small Arabic domed city or an African village.

2.2.1 DESIGN APPROACH:

The Amsterdam orphanage is designed based on the modern architecture. The design mainly focusing on massing of orthogonal grids in two different sizes for kids and teenagers, and hierarchy of people with sizes. The building is constructed out of two sizes of modules, a smaller size for the residences, and a larger size for community spaces.

It is designed Within the Orphanage, units of program are laid out on an orthogonal grid.

2.2.1 CONCEPT:

Massing of municipal orphanage reflected the effort to use a radial system. The repetition of standard module meant to an orthogonal grid modules. Design created decentralized urban node with many points of interaction and pockets of courtyard. There are about 328 modules with the size of 3.36 x 3.36 x 3.90m which connects small to big modules depending on functions of spaces.

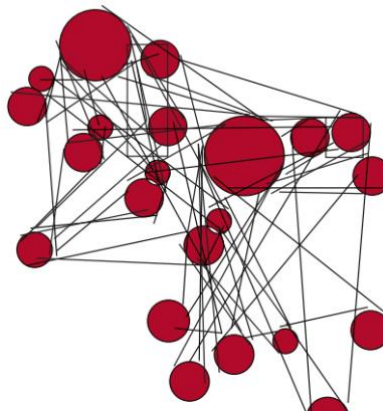


Fig 3.1: The concept was made by hierarchy of age group with patterns.

2.2.1 CIRCULATION :

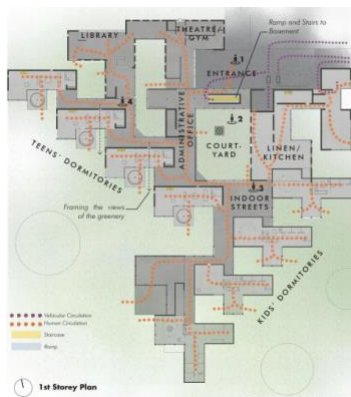


Fig 3.2: The circulation pattern is based on hierarchy of people and spaces with cluster grid

2.2.1 DESIGN PROGRAM :

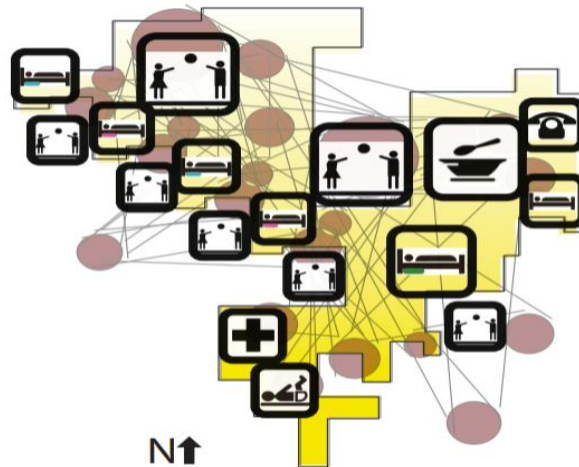


Fig 3.3: Hierarchy of space with age group

2.2.1 SITE ZONING :

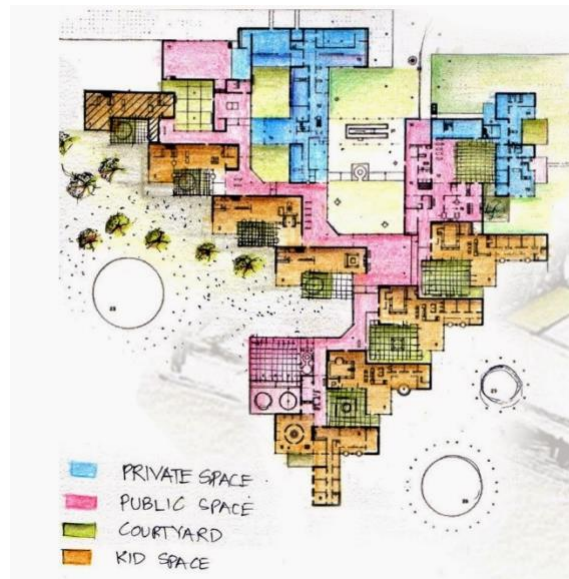


Fig 3.4: Site zoning with spaces

The zoning diagram shows the allocation of space with 4 categories and which connected to small courtyards.

Private space

Public space

Courtyard/opening

2.2.2 MATERIAL ANALYSIS:

construction is made up of these following materials

- Glass façade
- Precast concrete wall
- Brick wall
- Operable windows



Fig 3.5: Brick wall material



Fig 3.6: Operable window

2.2.2 STRUCTURAL ANALYSIS:

A SHIFT FROM FUNCTIONALISM

Apart from providing light and ventilation, the structural roof domes create aesthetic emphasis on the otherwise regular rectangular plan. The building loses its rigidity because of the roofing element that shows fluidity and horizontality.

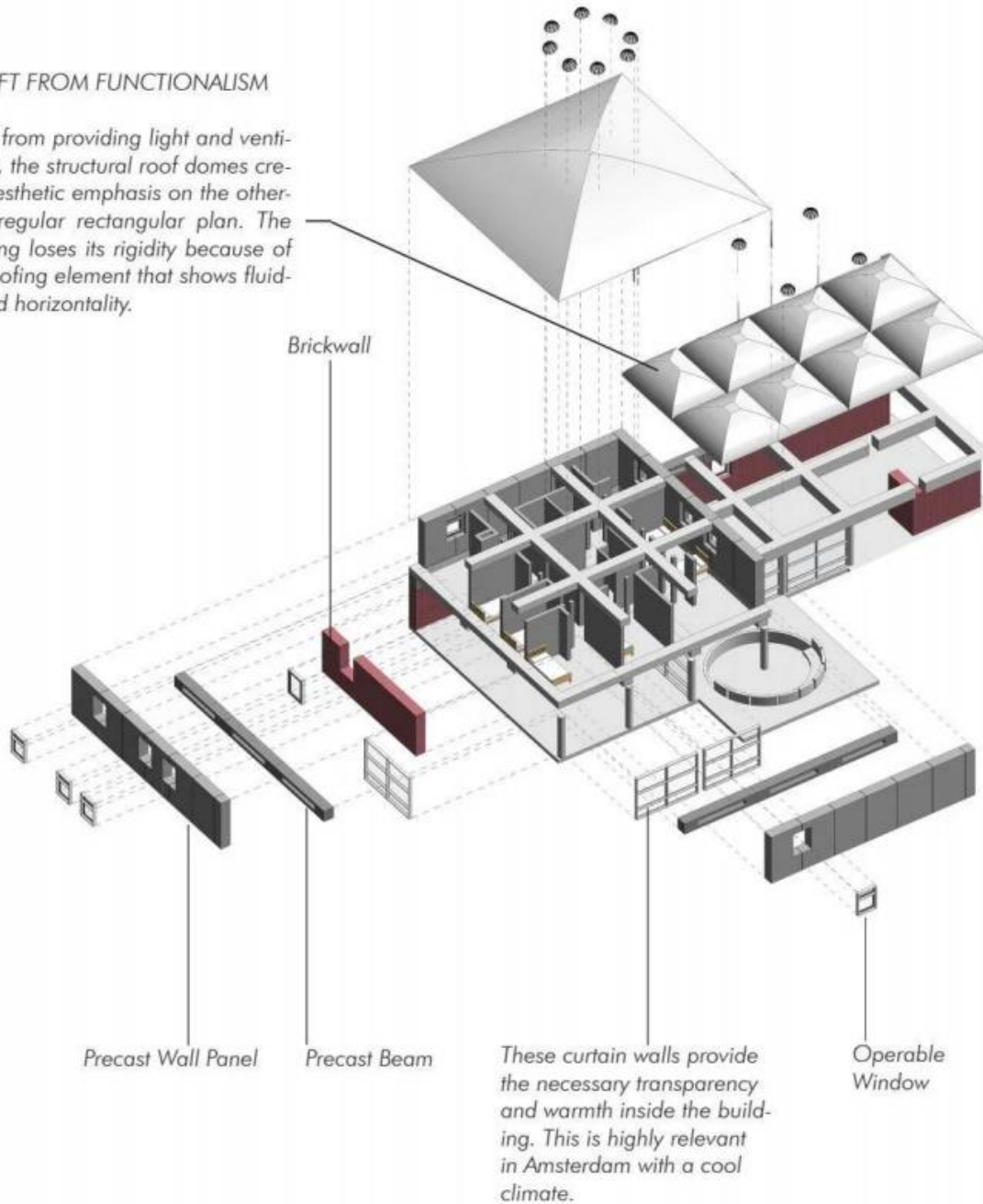


Fig 3.7: Operable windows

BEAMS AND LATERAL FORCES

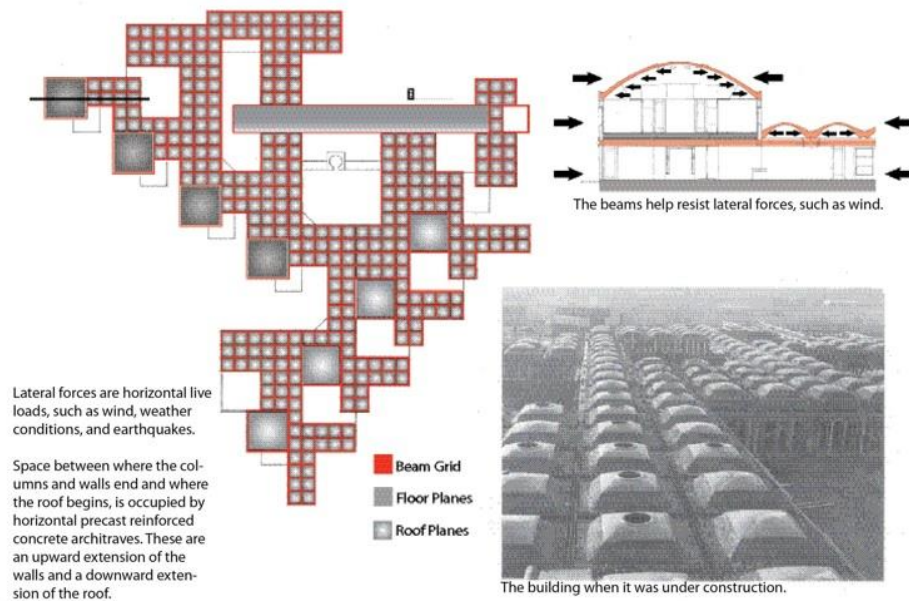


Fig 3.8: Operable windows

The modules consist of four round columns at the corners with a domed roof of pre-cast concrete on top. The floor is also concrete. The many facades in the building are either a glass wall or a solid wall made with dark brown bricks. Designed for both a home for the children, as well as the plan of a small city. He created a decentralized urban node with many points of interaction within the plan.

2.2.2 CIRCULATION:

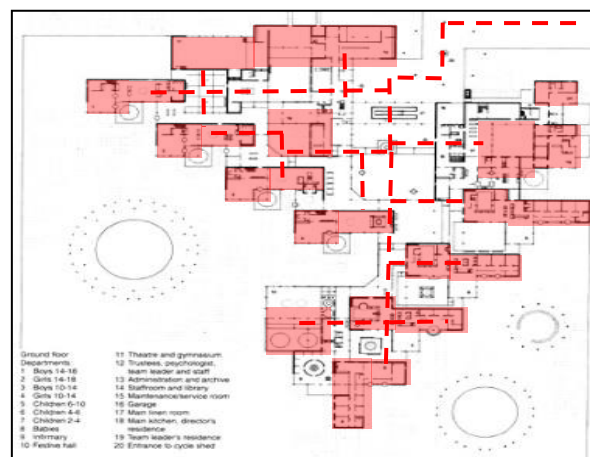


Fig 3.9: Operable windows

2.2.2 SECTION :

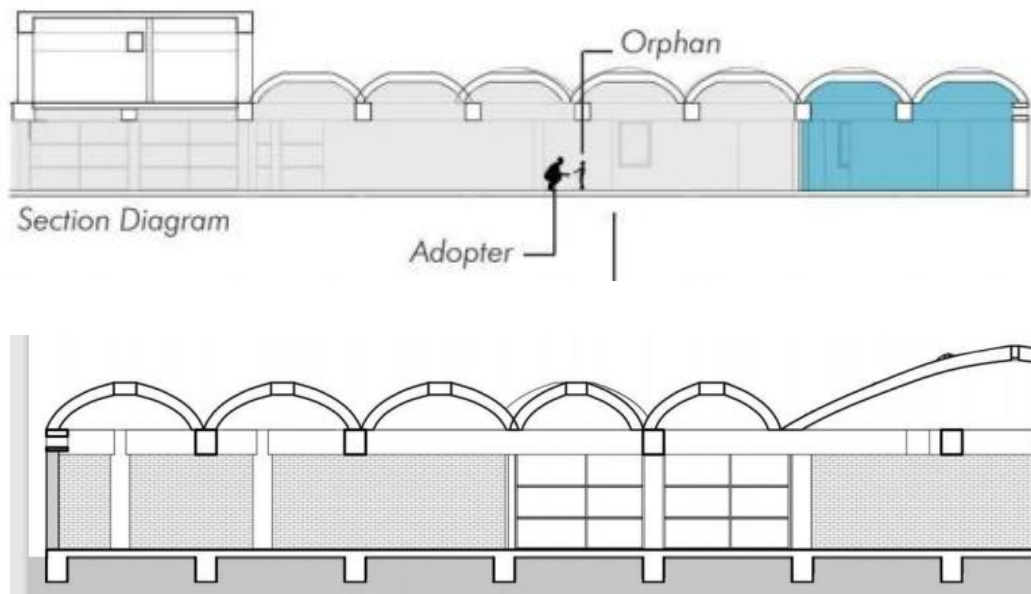


Fig 3.10: Operable windows

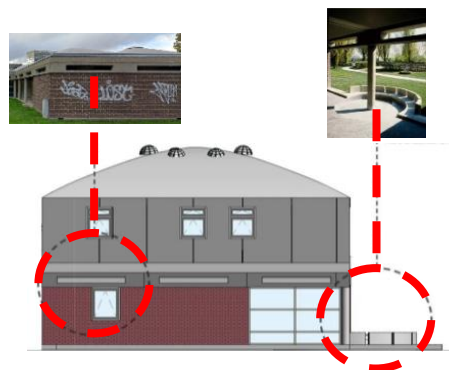


Fig 3.11: Operable windows

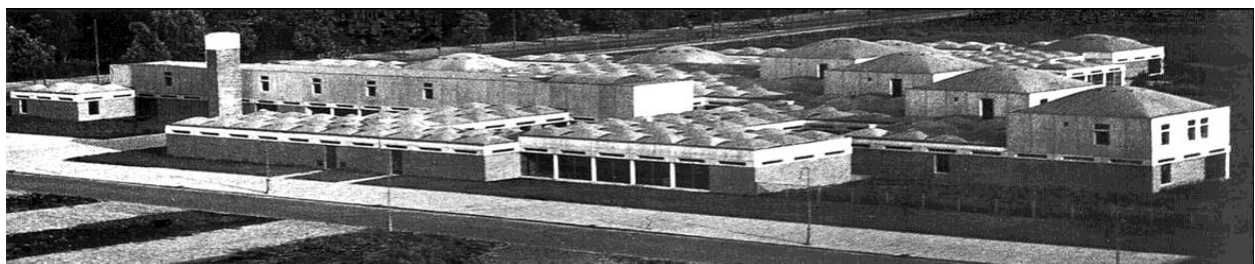


Fig 3.12: Operable windows

2.2.1 INFERENCE:

This orphanage is arranged in grid circulation and created more than 300 modules of dome to intimate series of small courtyard for kids at the age of 2-10. it has promoted human centric ,self-originate and open ended architecture. mainly incorporated the hierarchy of space at two different age groups 1) Kids 2) Teenagers and connectivity with neighborhood residence to create small city. It has incorporated the connectivity with both inside and outside.

2.3 SOS CHILDREN'S VILLAGE, BANGALORE

Location – Bangalore, Karnataka

Architect –Mistry Architects

Site Area – 44515.4 sq.mts

Build up Area – 2851.1 sq.mts

Construction Time – 1989 started

Category – Orphanage

Population : 161 of all ages

2.2.1 INTRODUCTION:

SOS CHILDRENS VILLAGE in Bangalore was started its construction at 1988 and the first family started their new life in this village at 1989. They have 16 family houses with the population of 161 children's in the village lies 16 KMS from the central of the Bangalore city. The youth hostel was started in 1993 inside the city for the youth who finish their life in the village.

CHAPTER 3

DATA COLLECTION AND STANDARDS

3.1 STATISTICAL DATA

News Article 2010

1/26/24, 4:38 PM

Highest number of urban homeless in TN - Times of India

Printed from

THE TIMES OF INDIA

Highest number of urban homeless in TN

TNN | Dec 23, 2010, 12:47 AM IST

CHENNAI: Tamil Nadu has the highest number of urban homeless, almost 7.3% of the total homeless population in the country and Chennai houses a three fourths of these, according to the 2001 census.

A recent study on the living conditions of the homeless in Chennai was conducted by the Indian Community Welfare Organisation (ICWO) and supported by the ministry of external affairs in select pockets of the city like Parrys, Royapuram and Wall Tax Road among others. "The study was conducted as a follow up of a more detailed study done in 2003 and we selected habitations from highly populated zones for a comprehensive follow up. Most of the homeless people we identified, almost 53%, are from Zone 2 or Basin Bridge," said Vanessa Peter, program director of Action Aid, an international anti-poverty agency. According to the study which was conducted in 2003, there were over 40,000 homeless in the city and this did not include the migrants. The numbers would have gone up by now, said Peter.

"In spite of a Supreme Court order which states that every city with a population of more than 5 lakh should have at night shelters in the ratio of at least one lakh per population, only one shelter exists in the entire city which is run by an NGO," said A J Hariharan, founder secretary of the ICWO.

"The homeless or the city makers are the backbone of the city and contribute to the urban local economy and no one would survive without the support of unorganised labour. The government ought to build shelters for them at a place which will not affect their livelihood," said Peter, releasing the sample report on the condition of the homeless in the city. She also said that shifting all the homeless to Kannagi Nagar would rob them of their livelihood and affect the population dependent on them.

Speaking at the event Indu Prakash Singh, technical advisor of Indo-Global Social Service Society, said there was

<https://timesofindia.indiatimes.com/city/chennai/highest-number-of-urban-homeless-in-tn/articleshowprint/7147803.cms?val=3728>

1/26/24, 4:38 PM

Highest number of urban homeless in TN - Times of India

shortage of 24.7 million homes in the country and it was the extremely poor who did not have a house. "The homeless must assert their rights for proper housing. Poverty is a creation of the system and the structure of the society and not the fault of the poor. The homeless must be included in mainstream development by the government," he said.

The report prepared by Action Aid identified 2,545 families and 9,156 individuals practising 196 different forms of informal occupation who were living without a roof over their heads.

Fig 4.1: News Article 2010

1/26/24, 4:40 PM

62,000 kids orphaned in Tamil Nadu, just 5 get a 'home' in 5 years - Times of India

Printed from

THE TIMES OF INDIA

62,000 kids orphaned in Tamil Nadu, just 5 get a 'home' in 5 years

TNN | Sep 25, 2017, 07:41 AM IST



CHENNAI: Only five of the around 62,000 children in child care institutions in the state were placed under foster care in the last five years, show records maintained by the directorate of social defence, even as the government recently came out with new rules to give impetus to de-institutionalisation of orphaned kids. Under the foster care programme, children who were abandoned by their biological parents, can be sent to new families for a temporary stay on the orders of the child welfare committee (CWC) based on the recommendation of the probation officer or the district child protection officer.

Foster care method was mooted for abandoned children and those from dysfunctional families. It was aimed at placing these

children with families, who already have children, on a voluntary basis without going through the legal hassles and the long wait for adoption.

Officials in the department said there could be more children placed under foster care by NGOs, but the state had "no record".

In August, the state government came out with Tamil Nadu Juvenile Justice (Care and Protection) Rules, 2017,

<https://timesofindia.indiatimes.com/city/chennai/62000-kids-orphaned-in-tn-just-5-get-a-home-in-5-yrs/articleshowprint/60821177.cms?val=3728>

1/26/24, 4:40 PM

62,000 kids orphaned in Tamil Nadu, just 5 get a 'home' in 5 years - Times of India

which outline the roles of various stakeholders, including the CWC, the district child protection units, and the alternatives to institutionalisation - adoption, foster care and sponsorship.

An RTI filed by CHANGEindia showed that 2,854 children were provided funds by the state. However, sources said "10 lakh given by the government to the department is allotted erratically and periodic "vulnerability surveys" to identify children in need are not done. The government is now planning a series of campaigns to spread awareness on the programmes and rope in individuals and corporate houses who can assure these children a home and a family.

Andal Damodaran, president of Indian Council of Child Welfare, said there were fewer takers for foster care here as unlike in countries like the UK - where nearly 70% of children in need of protection are in foster care. "We need a regularized programme that ensure close monitoring of the scheme right from choosing the parent," she said.

Fig 4.2: News Article 2017

1/26/24, 4:39 PM

At 1,550, Tamil Nadu has most no. of abandoned kids, says survey - Times of India

Printed from

THE TIMES OF INDIA

At 1,550, Tamil Nadu has most no. of abandoned kids, says survey

TNN | Jan 7, 2019, 11:59 AM IST



CHENNAI: Tamil Nadu has the highest number of abandoned children — 1,550 from the ages of 7 to 18 — living in child care institutions across the state, revealed a recent report released by the Ministry of Women and Child Development.

The report, Mapping of Child Care Institutions under the Juvenile Justice Act, 2015, was conducted by Childline India Foundation and the National Commission for Protection of Child Rights (NCPCR), followed a survey of 9,589 children's homes across the country. Tamil Nadu is followed by West Bengal, with 933 abandoned children, and Karnataka, which has 729 such children.

The report said most of these children belonged to single parents. R Vidyasagar, former child protection specialist, UNICEF, says state authorities should take remedial steps as Tamil Nadu also has a large number of unwed mothers, a situation that causes children to be abandoned.

The pan-India survey also covered homes that look after children in need of care and protection and those in conflict with the law. There are currently 7,422 children in conflict with the law and more than 3.7 lakh children in need of care and protection living in these homes across India.

1/26/24, 4:39 PM

At 1,550, Tamil Nadu has most no. of abandoned kids, says survey - Times of India

Tamil Nadu alone has more than 87,000 children living in 1,647 homes. Of them, 5,994 children are orphans, and 217 had been surrendered. Of the 1,550 who were abandoned, 743 were girls.

Child welfare activists say one reason these numbers are so high is because Tamil Nadu has the highest number of childcare homes.

"But, despite all child protection schemes and welfare programmes, it is unfortunate that we continue to be plagued with these issues in this day and age," Vidyasagar said.

As most of these children belong to single parents, "We also need to start teaching our children, both boys and girls, their reproductive rights right from school. We have found that children who are well aware of these rights are more mature and make responsible decisions. We also need to curb the growing child marriages reported in the state. There is no short term solution for this problem, we need to deal with it meticulously," said Vidyasagar.

Fig 4.3: News Article 2019

News Article 2021

1/26/24, 3:51 PM

75% of migrant children from within state, reveals survey - Times of India

Printed from

THE TIMES OF INDIA

75% of migrant children from within state, reveals survey

Feb 12, 2023, 08:07 AM IST

Chennai: A survey on migrant children in Chennai, Tiruvallur, Chengalpattu and four other districts revealed that 75% of them were from within the state and moved to cities along with their parents in search of work. The remaining 25% of the children were from various states including Andhra Pradesh, Bihar, Jharkhand, Karnataka, West Bengal, Maharashtra, Uttar Pradesh and Rajasthan.

Centre for Child Rights and Development (CCRD) has conducted a survey on status of children on the move in Tamil Nadu from July 2022 to February 2023. As part of the survey, 210 migrant children from Chennai, Tiruvallur, Chengalpattu, Nagapattinam, Villupuram and Kallakurichi districts were interviewed.

A majority of children (66%) are in the age group of 15 to 18 years and 29% of them are in the age group of 12 to 14 years. Except for one child, all other children were school dropouts. While 46% of them studied only up to Class VIII, 31% dropped out in Classes IX and X. About 8% of these children did not have any formal schooling.

Only 7% of the children ran away from home and most of them moved with their family members in search of work

"When we think of migrant children, we imagine they are from outside the state. This study shows a majority of children migrated within the state along with their parents in search of livelihood," said Stegana Jency L T, director, CCRD.

1/26/24, 3:51 PM

75% of migrant children from within state, reveals survey - Times of India

Around 82% of these children are working in service sector including commercial establishments such as Aavin parlour, bakery, book shops, fruit shops, grocery shop, petty shops, tea shops, besides seat cover selling, supermarket job, water can distribution and domestic work. Next to the service sector, 15% of children are working in building construction, painting and brick kilns.

"Around 60% of children have said they have faced abusive situation in one form or the other including 2% reporting sexual abuse. And 26% said they face verbal and physical abuse from their employers," Jency said. About 10% of the children said they have an addiction to drugs and alcohol.

The survey also revealed 26% of the migrant children screened for the survey are homeless and were living on platforms and streets. Activists said they are vulnerable to drug abuse and physical abuse.

"There is an urgent need to conduct a detailed survey on migrant children in Tamil Nadu. The state government should create a database on the number of migrant families including children and evolve a policy for them," said R Vidyasagar, former child protection specialist with Unicef.

He also urged the state government to set up mobile schools for migrant children.

Fig 4.4: News Article 2021

GOVERNMENT SCHEMES AND EFFORTS ?

- **Integrated Child Development Services (ICDS):** A comprehensive package for children ages 0-6 that includes supplementary nutrition, hot meals, health care, and pre-school education
- **Integrated Child Protection Scheme (ICPS):** A centrally sponsored scheme to build a protective environment for children in difficult circumstances
- **Saksham Anganwadi & Poshan 2.0:** Nutrition support for children, adolescent girls, and pregnant women and lactating mothers, as well as early childhood care and education
- **Special Incentive Scheme for Girl Students:** Girls studying in grades 3-5 receive an incentive of Rs 50 per student for 10 months in a year
- **Mission Shakti:** For the safety, security, and empowerment of women
- **Mission Vatsalya:** For the protection and welfare of children

STATE/UT	NO.OF.ORPHANS	SINGLE PARENT	ABANDONED	TOTAL
Odisha	1617	24697	4	26318
Maharastra	718	19707	4	20429
Guarat	1210	13724	0	14934
Tamilnadu	339	11567	2	11908
Uttarpradesh	554	9784	15	10317

What Is an Example of a Non-Governmental Organization?

A non-governmental organization, or NGO, typically is established to work toward public or social welfare goals. For instance, an NGO could focus on human rights, voters' rights, healthcare, helping the poor, and preventing cruelty to animals. NGOs can be funded by donations and grants. One example of an NGO is Greenpeace International. It was founded in 1971 to protect the environment and the Earth.

ORGANIZATION OF STRUCTURAL LAYOUT OF NGO

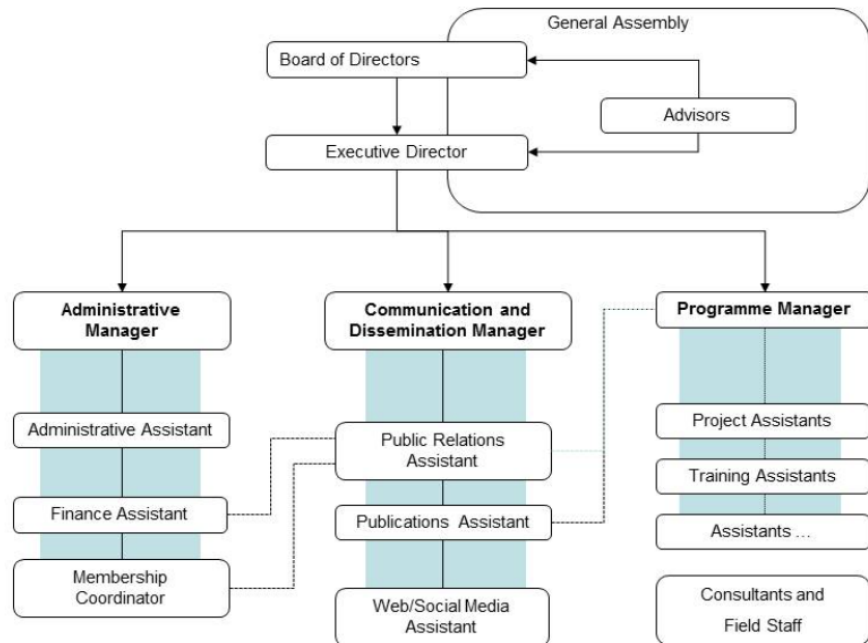


Fig 4.5: NGO organization structure

How Are NGOs Funded?

NGOs rely on a variety of sources for funding, including:

- Membership dues
- Private donations from individuals, private sector businesses, and philanthropic organizations
- The sale of goods and services
- Grants
- Funding from foreign governments and organizations

Despite their independence from governments, some NGOs rely heavily on government funding. Large NGOs may have budgets in the millions or billions of dollars.

How Does an NGO Work?

NGOs can be formed by any group of people that wants to carry out missions in the public interest. They can have staff and budgets. NGOs can operate internationally. The government has no influence over them and no say in their activities or tax-exempt status. They can be non-profit, and usually are. They rely on donations, grants, and membership dues for funding.

Types of NGOs:

- Charitable Orientation
- Service Orientation
- Participatory Orientation
- Empowering Orientation
- Community-based Organizations (CBOs)
- Citywide Organisations
- National NGOs
- International NGOs

Charitable Orientation

NGOs with a charitable orientation focus on providing assistance to those in need. This may include providing food, shelter, healthcare, education, or other basic needs. These NGOs typically rely on donations and fundraising to support their work, and often partner with government agencies, corporations, and other organisations to provide assistance to the communities they serve.

Examples of NGOs with a charitable orientation in India include HelpAge India, which focuses on providing assistance to the elderly, CRY, which works to improve the lives of underprivileged children, and Goonj, which collects and distributes clothing to those in need.

Service Orientation

NGOs with a service orientation focus on providing specific services to their target communities. This may include healthcare, education, vocational training, or other services. These NGOs typically have a more structured approach to their work, with clear goals and objectives for the services they provide

Fundraisers

To support the NGO's purpose, fundraisers persuade individuals to provide funds and other assets. They may make calls to potential contributors, disseminate information to the general

3.2 STANDARDS:



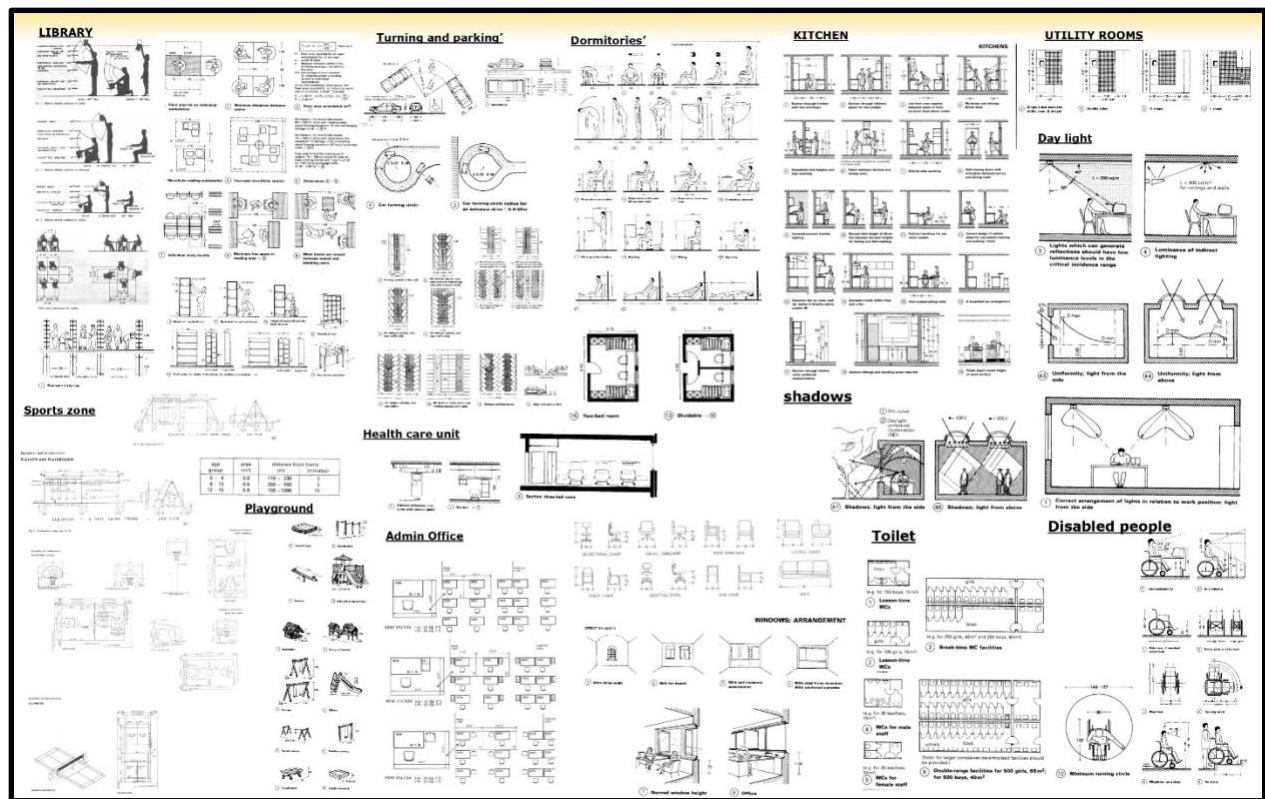


Fig 4.7: Literature study of spaces

3.3 Ramps:

- (a) Ramps shall not be allowed in the mandatory setbacks including building line, however ramps may be permitted in the side and rear setbacks after leaving minimum 7m of setback for movement of the fire-fighting vehicles.
- (b) The ramps to basement and parking floors shall be with at least two ramps each with a minimum of 3.6m wide or one ramp with a minimum of 5.4m wide, provided with gradient of 1:8 for cars and 1:15 for heavy vehicles. At curved portions of the ramp the slope should not be more than 1:12.

3.4 Corridors:

- (a) Exit corridors and passageways shall be of width not less than the aggregate required width of exit doorways leading from them in the direction of travel to the exterior.
- (b) The minimum width of a corridor in a residential building shall be 1.2m for single loaded and

2.0m for double loaded and in all other buildings shall be 1.5m.

(c) Where stairways discharge through corridors and passageways, the height of corridors and passageways shall be not less than 2.4m.

3.5 Pathways:

(a) Public walks should be at least 1200mm wide and should have a gradient not greater than 1 in 20

(b) A walk shall have a level platform at the top which is at least 1500mm long, if a door swings out onto the platform or towards the walk. This platform shall extend at least 300mm beyond each side of the doorway.

(c) A walk shall have a level platform at least 900 mm deep, if the door does not swing onto the platform or towards the walk. This platform shall extend at least 300 mm beyond each side of the doorway.

3.8 Sanitary fittings:

Table:4 Sanitation Requirements for Educational Occupancy

Sl. No.	Sanitary Unit	Boarding Institutions		Other educational Institutions	
		Boys	Girls	Boys	Girls
1.	Water Closet (W.C.)	One for 8 boys or part thereof	One for 6 girls or part thereof	One for 40 boys or part thereof	One for 25 girls or part thereof
2.	Ablution Taps	One in each W.C.	One in each W.C.	One in each W.C.	One in each W.C.
3.	Urinals	One per every 25 pupils or part thereof	--	One per every 20 pupils or part thereof	--
4.	Wash Basins	One for every 8 pupils or part thereof	One for every 6 pupils or part thereof	One for every 40 pupils or part thereof	One for every 40 pupils or part thereof
5.	Baths	One for every 8 pupils or part thereof	One for every 6 pupils or part thereof	--	--
6.	Drinking Water Fountains	One for every 50 pupils or part thereof	One for every 50 pupils or part thereof	One for every 50 pupils or part thereof	One for every 50 pupils or part thereof
7.	Cleaner's Sink	One per Floor minimum	One per Floor minimum	One per Floor minimum	One per Floor minimum

Fig 4.8: Sanitary standards

CHAPTER 4

SITE STUDY AND ANALYSIS

4.1 SITE STUDY:

Site is located in Thiruneermalai, Chennai.

LOCATION:Thiruneermalai, Chennai

ORGINATES:12°57'43.77"N, 80° 7'12.43"E

SITE AREA: 16 acres

64746.7m²

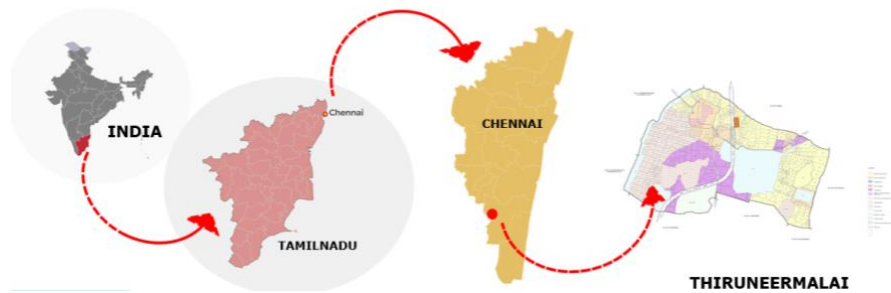


Fig 5.1: Location of site

Site is selected in Thiruneermalai, Chennai district. it is an industrial area of suburban space. The site includes environments with low traffic, low-density conditions, and generally low ambient noise conditions.

4.2 SITE JUSTIFICATION AND FEASIBILITY:

Site is selected in Thiruneermalai, Chennai district. it is an industrial area of suburban space. The site includes environments with low traffic, low-density conditions, and generally low ambient noise conditions.



Fig 5.2 (a),(b): Site images

- Near public food bank where homeless frequent
- Suburban Area to avoid pollution, Traffic Noise and Green spaces
- Easily approachable by homeless
- Immediate need of hands reach
- 2.62kms. From chromePET Railway Station

AREAS OF HIGH DENSITY HOMELESS POPULATION IN CHENNAI CITY

- Teynampet
- Broadway
- Saidapet
- Egmore
- Alwarpet
- Mylapore
- Tondiarpet
- Parrys
- Royapuram

Thiruneermalai is a neighbourhood in the city of Tambaram, situated within the Chennai Metropolitan Area, Tamil Nadu, India. Originally a town panchayat in Chengalpattu district, Thiruneermalai is now a part of Pammal Zone under Tambaram Municipal Corporation.

4.3 SITE ANALYSIS:

4.3.1 Neighborhood Context:

Site has One access is main highway road. There is a water body of Adyar river facing towards north. On rear side of site has G+4 structure of Jain housing apartments. Opposite to the site is empty land. In the west there are electrical lines of the main NH road.



Fig 5.3: Site neighbourhood context



AIRPORT: Chennai International Airport :5km radius from site.



BUS STOP: Thiruneermalai Bus stop 400m from site, 5min walk distance.



RAILWAY STATION: Chromepet Railway station-2.5km distance from site, Tambaram Railway station-3 km distance from site.



BUS DEPOT: Pallavaram Bus depot -3.6km distance and Tambaram Bus depot 3.45km distance from Chennai.



FOOD BANK: Indian store

More supermarket

Saravana store

Grocery vegetable shop -500 meter distance.

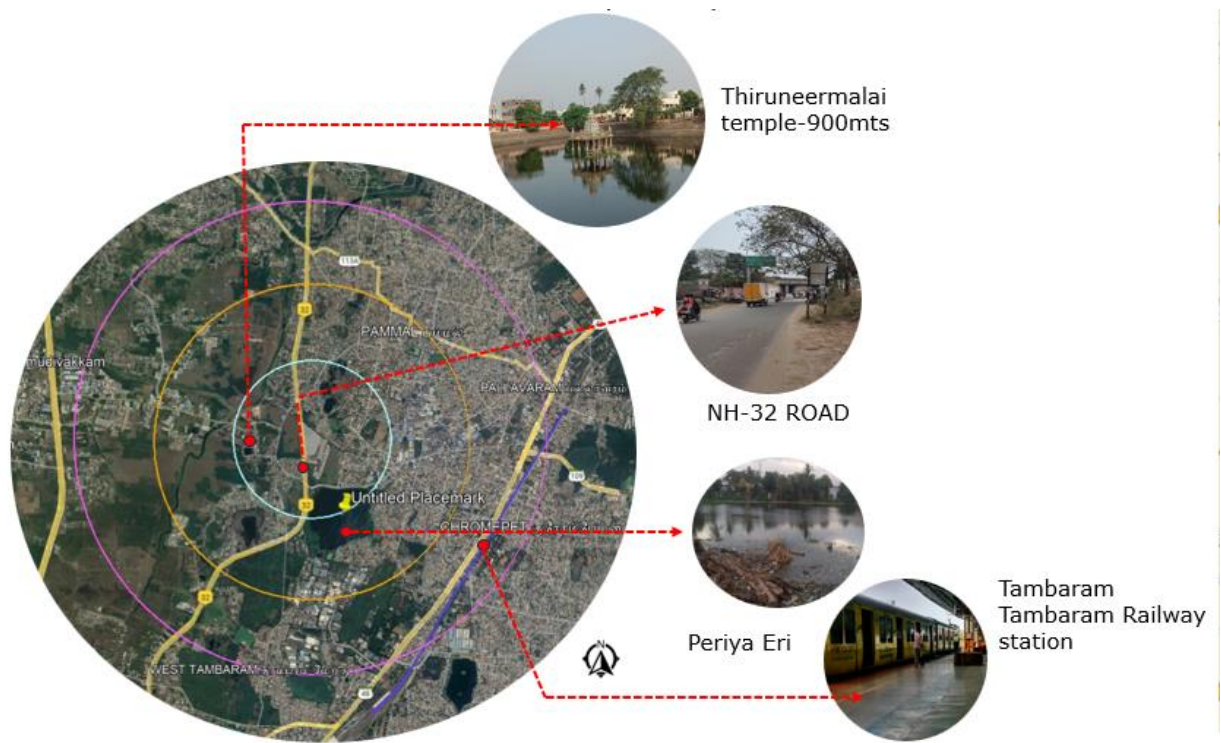


Fig 5.4: Site Proximity

4.3.2 Site and Zoning:

Setbacks – South (Front) - 7m
East - 7m
West - 7m
North - 7m

Height restriction - 18m

Parking 10% of the site for orphanage

4.3.3 Circulation:

Site has only main road access which is NH 32 towards Trichy main road. Bus stop is located to the site at a distance of 400m of 5 minutes walkable distance.



Fig 5.5: Site access

4.3.4 Man Made Features:

There are no Man made features in the site. Power poles are standing in main NH road in the west side. There are residential buildings in the east and south side.

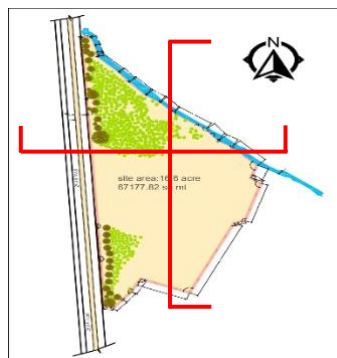


Fig 5.6: Site section line

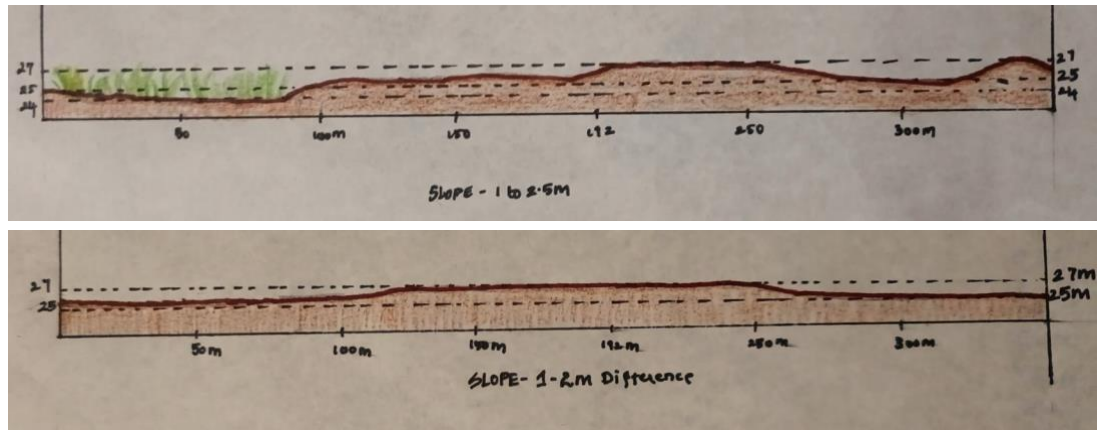


Fig 5.7: Site slope

4.3.5 Natural Physical Features:

Site has more vegetation of large dense tree on the main NH road facing west side. it has more vegetation of green surrounding of sites.



Fig 5.8(a),(b): Site vegetation

4.3.6 Climate Analysis:

Climate of Chennai falls under Hot and humid. The average ambient **temperature remains 28.2°C**, varies from 19°C to 36.7°C. The average **relative humidity remains around 74.6%**, varies from 41.7% to 96.9%. The average **wind speed** in Chennai is 3.7 m/s with the maximum wind speed of around 11 m/s. The most prevailing winds in Chennai is the South west direction between the end of May to end of September and the Northeasterly during the rest of the year. The greatest amount of precipitation occurs in November, with an average of **228 mm | 9.0 inch**.

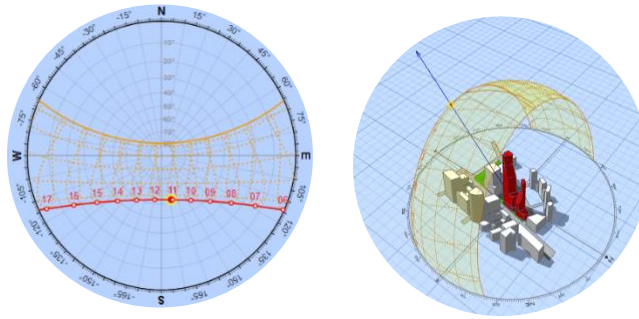


Fig 5.9: Sun path diagram

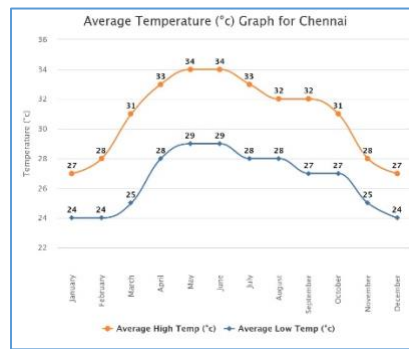


Fig 5.10: Average temperature chart

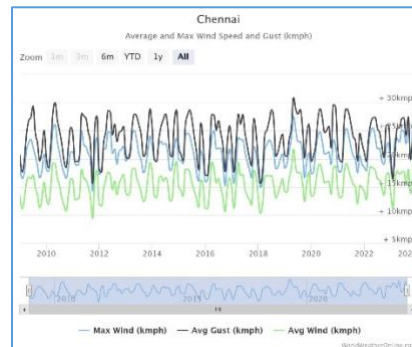


Fig 5.11: Average wind speed chart

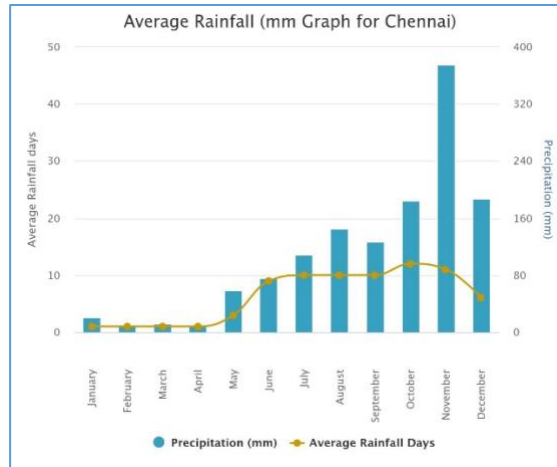


Fig 5.12: Average Rainfall chart

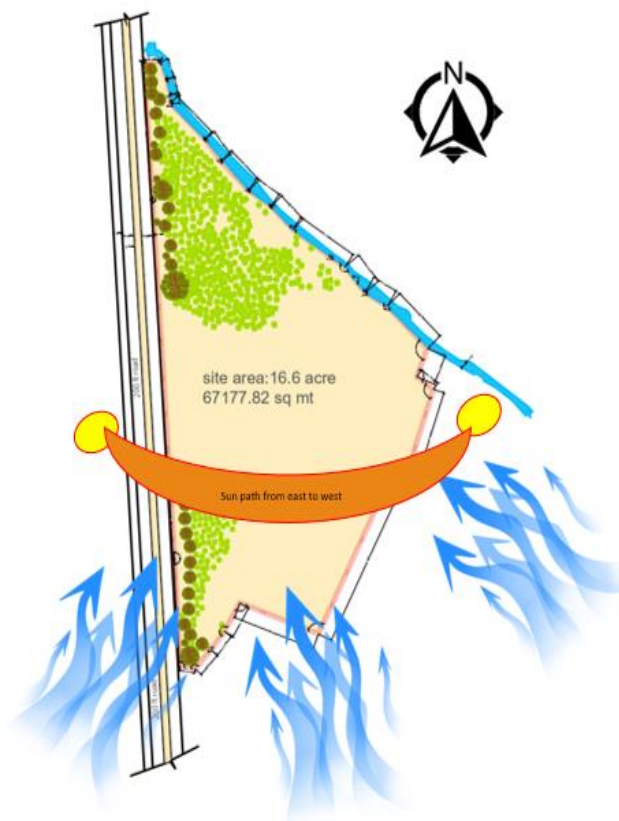


Fig 5.13: Climate analysis on site

4.3.6 SENSORY

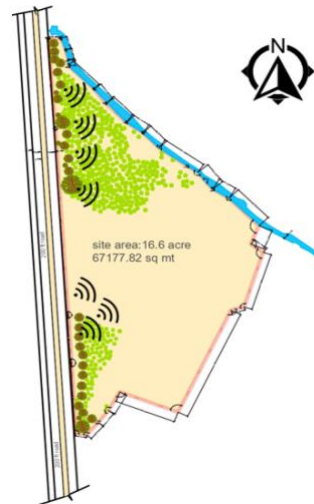


Fig 5.14: Site sensory

4.3.6 VIEWS AND VISTAS

West side has both (+,-)
North side view has +
South side view has +
East side view has +



Fig 5.15: Site Views and Vistas

CHAPTER 5

ARCHITECTURAL DESIGN

5.1 SPATIAL REQUIREMENTS

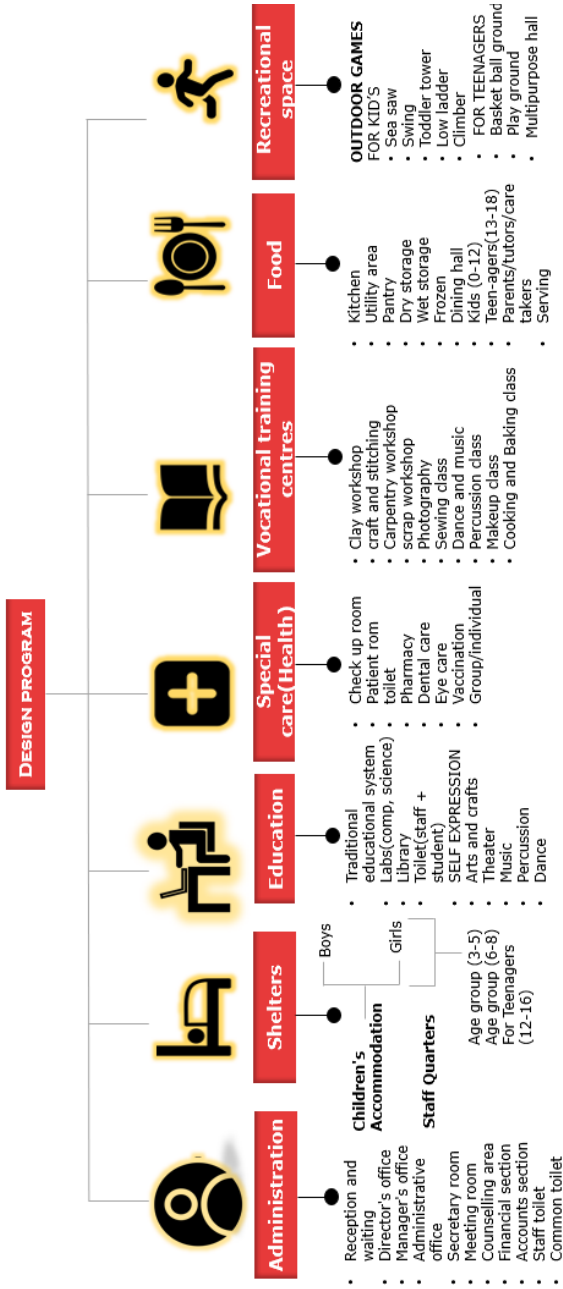


Fig 6.1: Spatial requirements

5.1 AREA STATEMENT

NO OF USERS -300	STAFFS-70						
Space	Number of	Number of users	Area Per person	sub area(m2)	Circulation(20%)	Services(10%)	Total Area (m ²)
ADMINISTRATION BLOCK							
Lobby	1	60	1sqm/per person x 60 people	60	12	6	78
Reception and waiting lounge	1	40	1.2sqm/per person x 40 people	80	16	8	104
Office room	1	30	1.5sqm/per person x 30 people	45	9	4.5	58.5
store room	1	10	2sqm/per person x 10 people	20	4	2	26
common toilet	1	50	60 sqm	60	12	6	78
Director's room	1	8	1.2sqm/per person x 8people	27.5	5.5	2.75	35.75
Manager room	1	8	5.5sqm/per person x 3people	16.5	3.3	1.65	21.45
Secretary	1	8	5.5sqm/per person x 2people	12	2.4	1.2	16
conference room	1	25	2sqm/per person x 25people	60	12	6	50
Accounts room (Financial sec)	1	10	1.2sqm/per person x 10 people	10	2	1	12
Records room (Financial sec)	1	10	1.2sqm/per person x 10 people	10	2	1	12
guest room	1	3	20sqm x 1rooms	20sqm+10sqmtoilet	0	0	35
Staff toilet	1	25		25	5	2.5	32.5
ACCOMODATION							
Tv /Living Room	70	1.2 sqmt per block	70sqm x 8	560			560
kitchen	5	1.2 sqmt per block	20sqm x 8				80
Storage	8	8 sqmt per block	8sqm x 10				80
Age (3-5)	2	12 sqmt per person	12sqm x 30	360	72	36	468
age (6-8)	2	12 sqmt per person	12sqm x 60	720	144	72	936
age (9-12)	2	12 sqmt per person	12sqm x 90	1080	216	108	1404
age (13-16)	2	12 sqmt per person	12sqm x 90	1080	216	108	1404
Children's Toilet	each block 2		25x 8	200			200
Staff toilet	1	10sqmt					15
care taker	70	15 sqmt per person	60staff x 10sqm per person	600	120	60	780
EDUCATION							
Vocational training							
Lobby/Assembly hall	1	300	2sqm/per person x 300 people	600	120	60	780
Reception/waiting lounge	2	60	2sqm/per person x 60 people	120	24	12	156
Sewing Class	1	15	6sqm/per person x 15people	90	18	9	117
Music class	1	15	2sqm/per person x 25people	30	6	3	39
Theatre dance class	1	15	4sqm/per person x 25people	60	12	6	78
Percussion	1	15	4sqm/per person x 25people	60	12	6	78
computer training lab	1	15	4sqm/per person x 25 people	60	12	6	78
Cooking and baking classes	1	15	2.5sqm/per person x 25people	45	9	4.5	58.5
Makeup and beaution training	1	15	2sqm/per person x 25people	30	6	3	39
Mobile, laptop and computer repair training	1	15	4sqm/per person x 25people	60	12	6	78
Plumbing, masonry and electrical training	1	15	6sqm/per person x 25people	90	18	9	117
Library	1	250	1.5sqm/per person x 100 people	150	30	15	195
Toilet	2	0		65	13	6.5	84.5
Workshop							
Clay workshop	1	15	4sqm/per person x 15people	60	12	6	78
craft and striching workshop	1	15	4sqm/per person x 15people	60	12	6	78
carpentry workshop	1	15	4sqm/per person x 15people	60	12	6	78
scrap workshop	1	15	4sqm/per person x 15people	60	12	6	78
Photography	1	15	4sqm/per person x 15people	60	12	6	78
CLINIC							
Lobby	1	100	1.5sqm/per person x 100 people	150	30	15	195
Reception and waiting lounge	1	30	1.5sqm/per person x 30people	45	9	4.5	65
General Check up room	1	100	1.5sqm/per person x 100 people	150	30	15	20
pharmacy	1	10	1.5sqm/per person x 10people	15	3	1.5	20
Emergency ward	1	25	2sqm/per person x 25 people	50	10	5	65
Observation	1	10	1.5sqm/per person x 10people	15	3	1.5	20
Doctor's Room	1	10	1.5sqm/per person x 10people	15	3	1.5	20
Patient/vaccination room	1	10	2sqm/per person x 10people	15	3	1.5	20
Pediatrician	1	12	2sqm/per person x 12people	18	3.6	1.8	25
Neurologist	1	12	2sqm/per person x 12people	18	3.6	1.8	25
Psychologist	1	12	2sqm/per person x 12people	18	3.6	1.8	25
Nutritionist	1	12	2sqm/per person x 12people	18	3.6	1.8	25
Oxygen storage	1	2	2sqm/per person x 2people	10	2	1	13
Janitor's closet	1	10	1sqm/per person x 10people	15	3	1.5	22
Dental care	1	12	1.5sqm/per person x 10people	15	3	1.5	22
Handwash area	1		1 for 8 boys/1 for 6 girls				30
common toilet	1		1 W.C for 8 boys/1 W.C for 6 girls				65
GATHERING SPACE - MULTIPURPOSE HALL							
Lobby	1	200	1sqm/per person x 200people	200	0	0	200
pre finction area	1	3	20sqm/per person x 3people	60	12	6	81
Main stage	1	60	2sqm/per person x 40people	80	16	8	100
seating hall	1	250	2sqm/per person x 200people	280	56	28	364
Boys-Green room	1	10	2sqm/per person x 10people	40	8	4	54
Girls-Green room	1	10	2sqm/per person x 10people	60*2			40
Public Toilet	1						60
Storage	2	10	1sqm/per person	25			50
MESS							
kitchen			5sqm/per person x 20people	120	24	12	127
utility area			15	30	6	3	70
Pantry			5	10	2	1	40
Dry storage			5	10	2	1	20
Wet storage			5	10	2	1	20
Frozen			5	10	2	1	20
Dinning hall(Mess)			300	900	180	90	1170
Hand Wash/ Toilet			1 for 8 boys/1 for 6 girls				100
TOTAL AREA							
30% CIRCULATION							
TOTAL AREA + 30% CIRCULATION							

5.2 CONCEPT

5.2.1 Biophilic concept of connecting space between indoor and outdoor

(a) Orientation -

The built forms longer facades can be oriented facing the east and west directions. The east and north side orientations can have the larger window open it helps in avoiding the direct exposure to sunlight and also allows the interior to receive ample amounts of indirect natural light and help preventing solar heat gain



Fig 6.2: Site view

Fig 5.3: View of mutual shading of buildings

(d) Vegetation -

Vegetation and landscaping can play a major role in changing the microclimate of a site. Each and every block is connected with a common gathering space which plays a major role in the school.



Fig 5.8(d): Gathering

5.3 DETAILED DRAWINGS

5.3.1 Site plan:

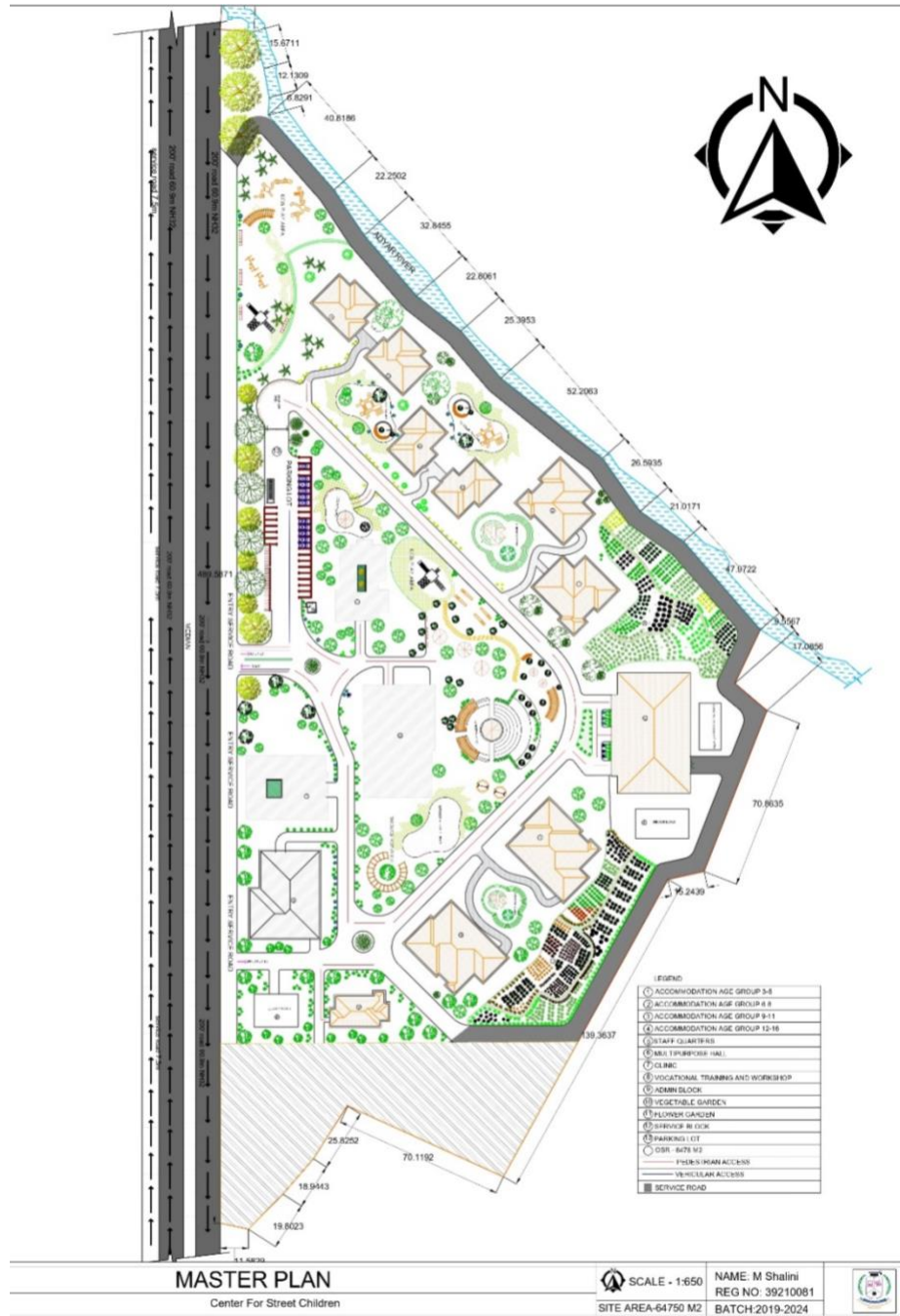


Fig 5.2.9 : Master plan

5.3 MODEL VIEW :



Fig 5.30: model view

CHAPTER 6

REFERENCES

6.1 Websites:

1. <https://www.giveindia.org/all-ngos/tamil-nadu/chennai/>
2. <https://timesofindia.indiatimes.com/city/chennai/at-1550-tn-has-most-no-of-abandoned-kids-says-survey/articleshow/67412361.cms>
3. <https://rentechdigital.com/smartscraper/business-report-details/india/tamil-nadu/orphanages>
4. <https://pib.gov.in/PressReleaseframePage.aspx?PRID=1802393>