Multi-speciality Paediatric Hospital

Project report submitted to
Visvesvaraya National Institute of Technology, Nagpur
In partial fulfilment of the requirements of the award of
The degree

Bachelor of Architecture

by
Syed Mohammad Asim BA16ARC059

Under the guidance of

Dr. Pankaj N. Bahadure

Department of Architecture and Planning
Visvesvaraya National Institute of Technology
Nagpur 440 010 (India)

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Declaration

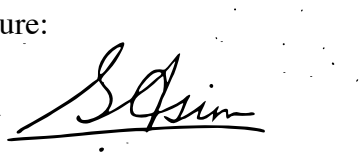
I, **Syed Mohammad Asim**, hereby declare that this project work titled **"Multi-speciality Paediatric hospital"** is carried out by me in the Department of Architecture of Visvesvaraya National Institute of Technology, Nagpur. The work is original and has not been submitted earlier whole or in part for the award of any degree at this or any other Institute / University.

Date: 4th May, 2021

Enrolment No.: BA16ARC059

Name: Syed Mohammad Asim

Signature:



Department of Architecture and Planning
Visvesvaraya National Institute of Technology, Nagpur

Certificate

This is to certify that the project titled **"Multi-speciality Paediatric Hospital"**, submitted by **Syed Mohammad Asim** in partial fulfilment of the requirements for the award of the degree of **Bachelor of Architecture,** VNIT Nagpur. The work is comprehensive, complete and fit for final evaluation.

Dr. Pankaj N. Bahadure
Department of Architecture and Planning,
VNIT, Nagpur

Dr. Akshay Patil
Head of Department,
Architecture and Planning
VNIT, Nagpur
Date:

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Introduction

Multi-speciality Paediatric hospitals are the facilities that provide healthcare services specifically to the children with the provisions of a wide range of super-specialities. This makes it crucial for the design to be catered such that it takes into consideration the effects of architecture on the young children. Furthermore, the sensitivity of children towards the environment they live in, makes it a necessity to study the impact of architectural design and apply the concepts related to it.

This project report deals with the design process of a proposed Paediatric Hospital located at the city Karanja, Maharashtra, India. The Hospital would cater to the people of the villages and towns around Karanja as well.

Existing Context

Karanja is located between Nagpur and Amravati on the National Highway 53. Since it falls in the middle of the two major cities, it becomes an important town for the needs for the surrounding villages. Karanja itself is not a developed city, so it does not have any hospital specialized for the treatment of the children. There are no train station in 10 km radius of the town. The nearest stations are located near Wardha and Katol.

Climate is hot and dry during summers, humid during rainy season and moderately cold and dry during winters. Wind speed is calm at 1-4 m/s towards North-East direction.

The site is located abutting the highway at the outskirts of Karanja. It is a vast open land, with a very gentle slope of 3% slop towards the West direction.

Area Calculations

(As per Indian Public Health Standards)

Annual rate of admission = 1 per 50 population
Average length of stay in hospital = 5 days
Population catered to:

Village / Town	Population
Karanja Taluka	2,13,800
Katol	43,000

Village / Town	Population
Kurkheda	15,000
Kondhali	11,400
Talegaon	56,400
Thanegaon	3,000
Borgaon	13,000
Bajargaon	3,200
Paradshinga	2,500
Sawanga	5,300
Manikwada	3,000
Sahur	4,000
40 more villages	1,50,000
Total Population	5,23,600

Total number of admissions per year = 5,23,600 x 1/50 = 10,472

Bed days per year = 10,472 x 5 = 52,360

Total Number of beds required = 10,472 / 365 = 144

Beds provided = 150

Minimum land area requirement for 101 to 200 beds = 0.5 to 1 hectare

Land area provided = 2 hectare

Size of hospital as per number of beds

= 80 to 85 sq. m. per bed *(IPHS)* or 92.5 sq. m. per bed *(IS - 12433)*

= 92.5 x 150

= 13,875 m^2

= 3.5 acres (5 acres provided)

ICU beds requirement = 5 to 10% of total beds = 8 to 15 beds

ICU beds provided = 10 beds

Floor space for ICU bed (including support services) = 25 to 30 m^2 per bed

Total ICU area = 300 m^2

General hospital beds floor space requirement = 15 to 18 sq. m. per bed

Total floor space for general hospital beds = 140 x 18 = 2,520 m^2

Minimum waiting area = 40 m^2

OPD Layout:

- Enquiry
- Registration
- Waiting
- Sub-waiting
- Clinic
- Dressing room
- Billing
- Diagnostics
- Pharmacy
- Exit

Doctor chamber size = 12 m^2

Ward size = 7 m^2 per bed

	AREA PROGRAM			*(all areas are in m^2)*
	Name of space	**Area per bed**	**Area required for 150 bed hospital**	**Area provided**
1	Main Entrance	4.2	630	610
	- Entrance lobby - Reception - Dispensary			
2	OPD	1.75	262.5	
	- Entrance lobby - Reception - Control room			
3	Emergency Entrance	1.75	262.5	260
	- Entrance lobby - Reception - Control room			

	AREA PROGRAM			*(all areas are in $m^{2)}$*
	Name of space	**Area per bed**	**Area required for 150 bed hospital**	**Area provided**
4	Service/Staff entrance	0.7	105	
	- Landing bay - Staff utilities			
5	Clinics	9.31	1396.5	1533
	- General - Neonatal - Immunisation - Medical - Surgical - ENT - Obstetrics - Orthopaedic			
6	Nursing services	1.5	225	400
	- Nursing station - Diagnostics			
7	Diagnostic services	5.95	892.5	795
	- Reception - X-ray - Ultrasound - Support - Staff			
8	Clinical Laboratories	1.75	262.5	400
	- Reception - Laboratories - Support - Staff			
9	General wards	8.4	1260	1400
	- Nursing station - Patient beds - Patient conveniences - Day space - Staff accommodation			
10	Private wards	2.8	420	500
	- Nursing station - Patience beds - Staff accommodation			
11	Maternity wards			
	- Birth rooms - Waiting area - Education/yoga room - Nursing station - Dirty utility room			

	AREA PROGRAM			*(all areas are in $m^{2)}$*
	Name of space	**Area per bed**	**Area required for 150 bed hospital**	**Area provided**
12	Paediatric Intensive care unit	1.96	294	400
	- Emergency Triage Assessment and Treatment facility - Nursing station - Patient beds - Staff accommodation			
13	Critical care area	4.69	703.5	750
	- Nursing station - Resuscitation beds (6 no.) - Operating suite - Staff accommodation			
14	Operation theatre suite	4.41	661.5	700
	- Staff changing - Staff accommodation - Theatre supply - Nursing station - Patient beds - Sterile zone - Disposal zone			
15	High Dependency Unit			
	- Nursing station - Patient beds			
16	Physiotherapy	1.54	231	400
	- Reception - Staff accommodation and waiting area - Therapy rooms			
17	Hospital Services	7	1050	1200
	- Hospital Kitchen	1.54	231	
	- Central Sterile Supply Department	1.4	210	
	- Hospital Laundry	1.54	231	
	- Medical and general stores	1.82	273	
18	Engineering services	3.92	588	600
	- Electrical	0.98	147	
	- Mechanical	0.98	147	
	- Plumbing	0.56	84	

	AREA PROGRAM			*(all areas are in $m^{2)}$*
	Name of space	**Area per bed**	**Area required for 150 bed hospital**	**Area provided**
	- Medical gasses	0.49	73.5	
19	Administrative and Ancillary services	4.48	672	800
	- Hospital Administration	0.63	94.5	
	- Nursing Administration	0.49	73.5	
	- General Administration	0.84	126	
	- House keeping	0.17	25.5	
	- Library / Conference	0.98	147	
	- Medical records	0.7	105	

Note: Add 40% for circulation space

Sanitary Requirements

Appliance	Standard	Required for 150 beds	Provided
Water Closets			
Male	1 per 8 beds	19	35
Female	1 per 6 beds	25	35
Urinals	1 per 12 beds	13	20
Wash basins	1 per 12 beds	13	25
Baths	1 per 12 beds	13	20

Clinic size = 60 m^2

General wards = 25 m^2

Department or Functional Planning Unit (FPU)	Minimum Circulation %
Administration Unit	20
Allied Health Unit	25
Biomedical Engineering	20
Catering Unit	25
Clinical Information Unit	15
Coronary Care Unit	35
Day Surgery/ Procedure Unit	35
Dental Unit	25-35
Education & Training Unit	15
Emergency Unit	40
Engineering & Maintenance Unit	15
Housekeeping Unit	10
Inpatient Accommodation Units	32
Intensive Care Units	40
Laundry/ Linen Handling Unit	10
Medical Imaging Units	35
Mental Health Units	32
Mortuary Unit	20
Nuclear Medicine Unit	35
Obstetric Unit	35
Operating Unit	35-40
Outpatient Units	25
Paediatric / Adolescent Unit	32
Pathology Unit	25
Pharmacy Unit	25
Public Amenities Unit	10
Radiation Oncology Unit	35
Rehabilitation Unit	32
Renal Dialysis Unit	32
Staff Amenities Unit	10
Sterile Supply Unit	20
Supply Unit	10
Waste Management Unit	20

Design process

The impact of built spaces on children

Children, at their age are very absorptive to almost everything they encounter. Their personalities are shaped by their experiences unlike adults who are lesser susceptible to take things on face value. They lack the coping mechanisms which leads them to being very reactive to even small issues. It is because of this sensitivity that is becomes crucial to take into special consideration even the slightest levels of possible discomfort. Extra measures needs to be taken to conform the spaces according to the children's likings.

Hospitalisation could easily become a traumatising life changing experience for the children. The most prominent cause for such ill-effects has been identified to be stress. Thus, certain considerations need to be taken into account while designing the hospital that contribute to the reduction of stress-inducing scenarios. These are as follows:

- Easy way finding

It is seen that difficulty in finding the route to the required destination leads to increase in anxiety.

- Positive Distraction

Creating a connection between indoor spaces and the outdoor environment can also be a successful positive distraction. Windows provide a view to the outdoors but also help remove patients from the often-clinical feeling of the hospital environment. This helps to restore homeostasis by providing the horizon as a reference and also has a positive impact on the healing process.

- Privacy

The benefits of private rooms tend to vary based on a number of factors. Pediatric cancer patients, for example, might benefit from and desire the companionship of a roommate with a similar diagnosis and care plan. Patients recovering from an injury, on the other hand, may prefer healing alone. This should be taken into account when designing patient rooms for potential flexible and adaptable configurations, based on the care population and care model.

Guidelines from "Operational Guideline for Strengthening of Paediatric Health Services at District Hospitals" - *GoI, Ministry of Health & Family Welfare*

Play areas guidelines

- The room should be located preferably adjacent to ward but not inside the ward.
- A play activity room for not more than 24 children with an unobstructed floor area of 2.8 mt square per child aged 4-6 years is required.
- The shape of the room is important. Rooms with sharp or acute angles that limit program flexibility should be avoided.
- Rooms that are “L” shaped can be difficult to supervise and long narrow rooms may limit natural light.
- Room with provision of natural light is preferred.
- Every doorway window or other opening that is used to provide ventilation for children must be screened to prevent pest infestation.
- Children’s play should not be interrupted by others passing through.
- Just inside the door & near the wall place should be provided for removal of shoes.
- Space should be kept uncluttered so that it improves the movement from one activity to another.
- Rooms is designed with flexibility to accommodate a variety of activity settings.
- For a group of 15 to 30 children ages 3 to 10 years located in one space, it is recommended that the room be set up to provide separate activity areas to promote a small group activity environment, privacy and a sense of order.

Wards bed layout

A) 4-6 or more beds in cubicles separated by low partitions with nursing station either on one side or in the centre. The disadvantages are the lack of direct observation and requirement for more nursing staff although this arrangement may provide privacy to patients with less risk of transmission of infection.

B) The current arrangement is such that paediatric beds are organised in a number of small adjacent rooms with nursing station is located in the corridor outside, often at a distance. This arrangement should be avoided since the patients are not in direct view of the staff and this makes monitoring and nursing care more difficult, especially when the number of staff on duty is few.

It is thus preferable to select the first layout of bedding. A 4 bedded cubicle requires about 30 sq. m. of space and 6 bedded 40 sq. m. The nursing station requires about 6 x 6 m with sisters' changing room and toilet, cupboards or lockers.

Staffing

One Nurse per 4-6 beds are required during every shift.

DTU (Diarrhoea Treatment Unit)

In a large hospital where treatment of diarrhoea cases is a major activity, the Diarrhoea Treatment Unit (DTU) should be assigned a permanent area in the health facility, close to the paediatric ward and with the possibility of expansion in the high season for diarrhoea. The space in DTU is arranged such that there are three areas for management of diarrhoea cases.

Reception & triage area: Here cases are assessed and classified for treatment. Mothers of children without signs of dehydration are educated on management of diarrhoea.

ORS area: Here benches with side tables are provided, with space for movement of staff and mothers. Children with diarrhoea are given ORS by parent/attendant, under supervision. There is adequate ventilation and access to toilet and washing facilities in the vicinity.

Diarrhoea ward: where cases with severe dehydration and cases with complications are managed as inpatients. The mother/parent can stay next to the patient's bed.

Isolation Rooms

An isolation room is a specially constructed area in a hospital designed for housing patients in order to prevent patients with an infectious disease from infecting others (source isolation) and/or prevent susceptible patients from being infected (protective isolation).
The door of the room or cubicle should be kept closed at all times. An extraction fan may be fitted. Any unnecessary furniture should be removed; room may be equipped with special items needed to nurse the patient eg. pedal bins, plastic bags etc.

HDU (High Dependency Units)

The High Dependency Unit (HDU) provides specialist care for children requiring more observation, intervention or monitoring than can be safely provided on the general wards.
It acts as a 'step up' from the wards and a 'step down' from our Paediatric Intensive Care Unit.
HDU at District Hospital is envisaged as a specially staffed and equipped four to six bedded unit that provides patients with expert medical and nursing care and monitoring facilities.
Once the patient has made sufficient recovery, s/he can be shifted to paediatric ward.

Location of HDU

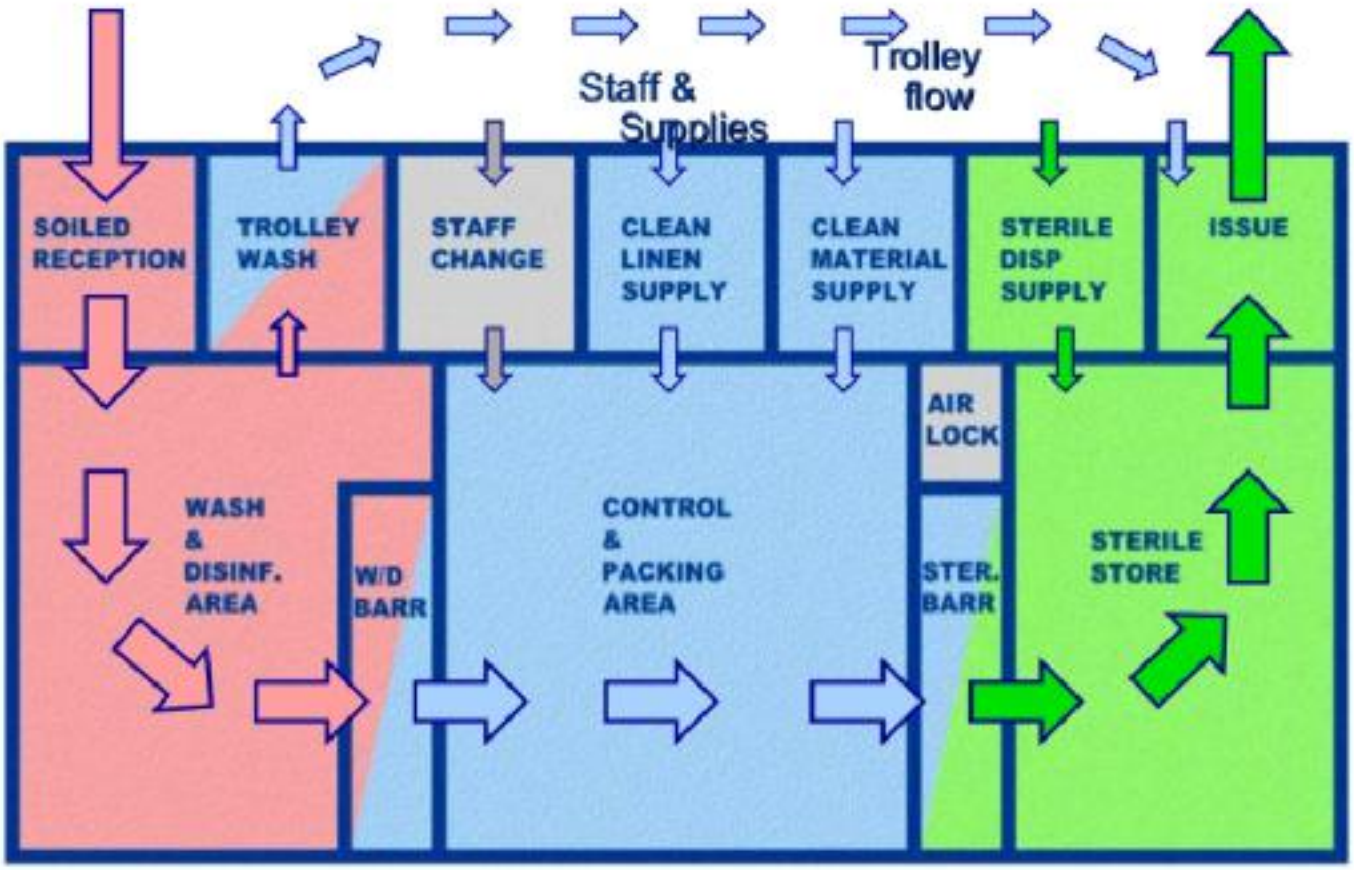
1. HDU can be located within or adjoining emergency area so that the patients who have been instituted emergency treatment can be placed here under direct supervision of trained health provider till the patient is stabilised.
2. Second option is to establish HDU within or adjacent to the paediatric ward. It is preferable to allocate a separate room for HDU. However if it is located within the ward, it should be partitioned off from rest of the ward area and located close to the nursing station.

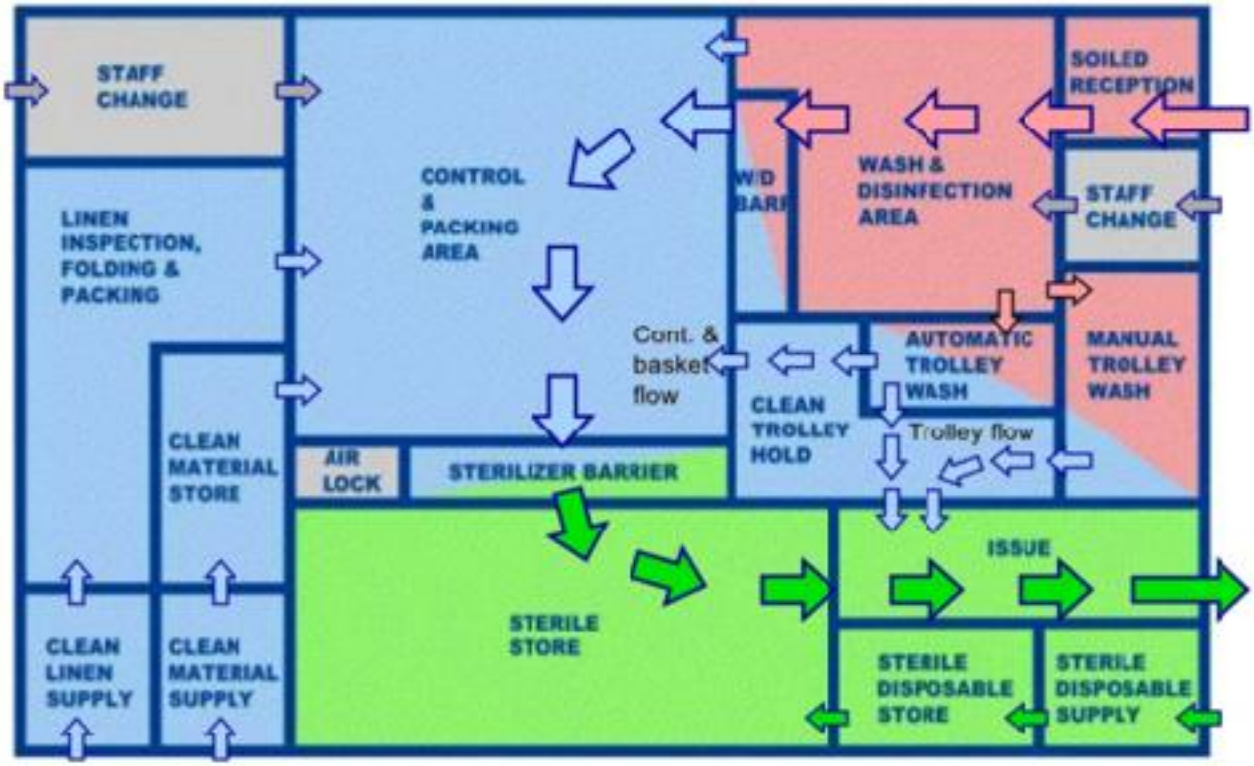
HDU Requirements

HDU will require 425-500 square feet (46 sq. m.) of space in order to accommodate 4 beds, equipment, hand washing and toilet facilities. Additional space will be required for nursing station, doctors and nurses rooms and toilet if these are not available in the adjoining ward or emergency area.

CSSD (Central Sterile Store Department)

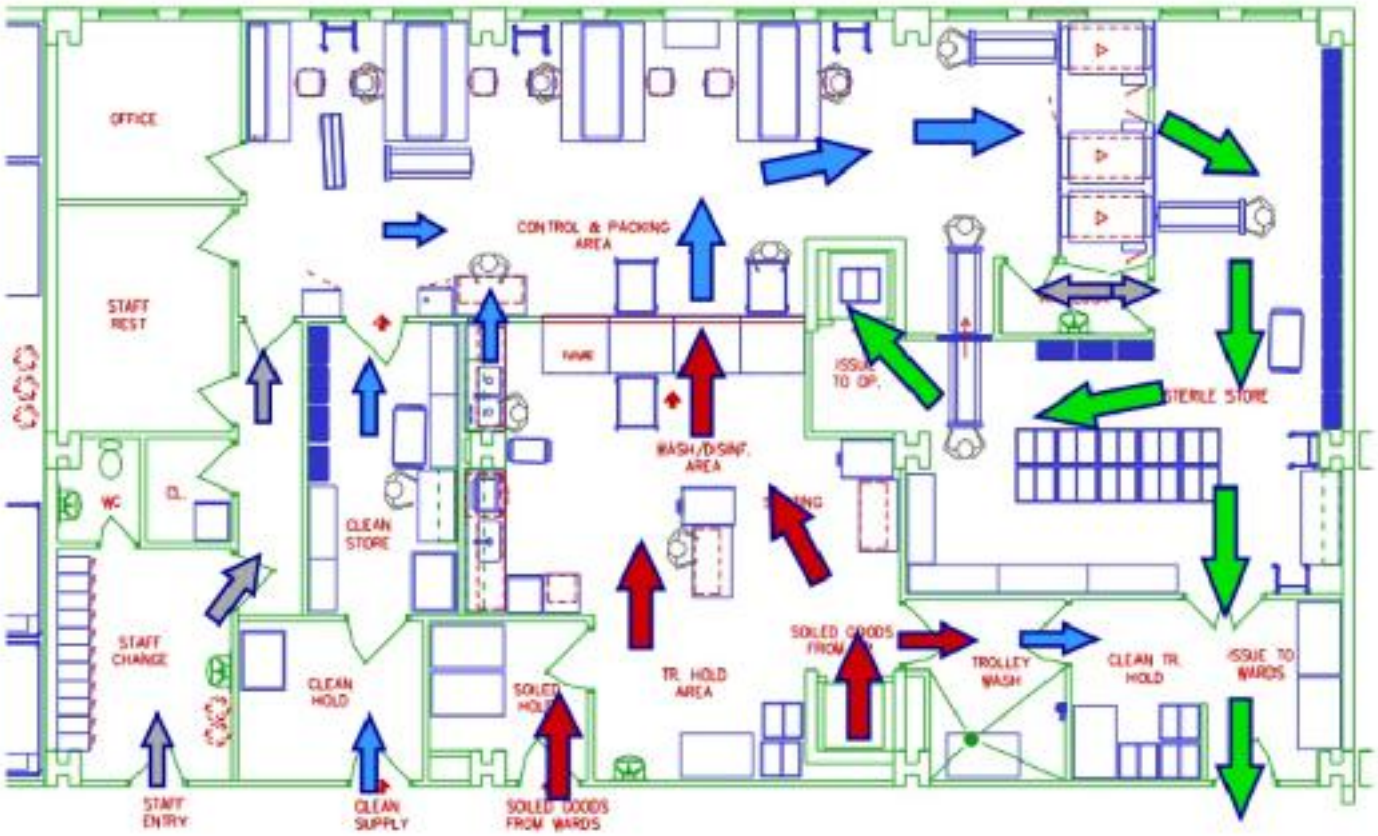
- CSSD is an independent Department in hospital with facilitates to receive, clean, pack, disinfect, sterile, store & dispute contaminated material as well as instruments.
- For minimizing distance for transportation & also for saving time, CSSD should be located as near main user areas as possible like Operation Theatres, intensive care areas etc. Therefore, CSSD should be on the same floor or the floor immediately above or below.
- While planning location, supply location i.e. linen store, laundry & general store can be planned in the vicinity of CSSD.





TYPICAL CSSD DESIGN

An actual design of a CSSD – plan drawing



Operation Theatre Suite

Operation theatre is the area in which surgical operating work is carried out. This area is also known as ‘operating department’ or ‘operation suite’. It is a centralised block in which all the operating rooms are situated.

Location of OT should consider following points:

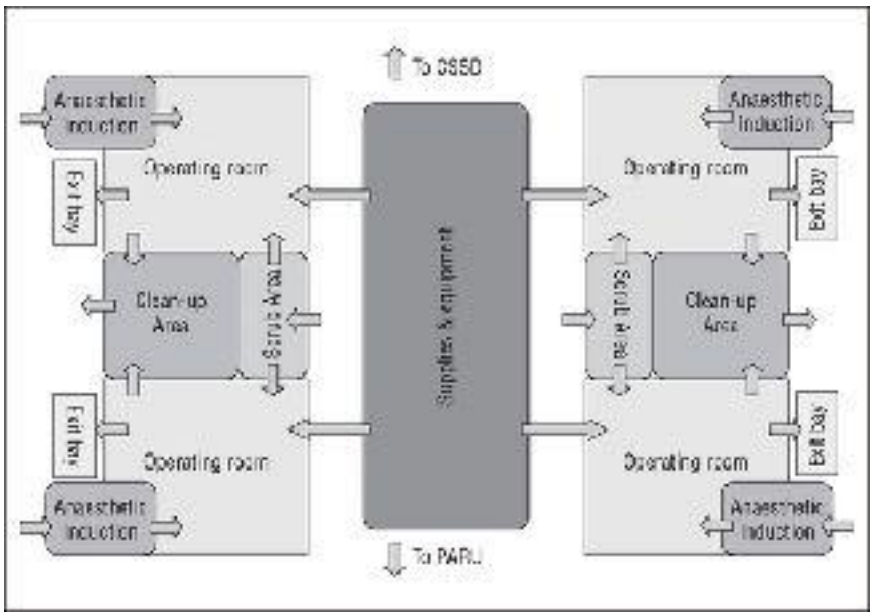
- Easy approachability, whether it is horizontal traffic or vertical traffic in high rise building.
- Proximity of central sterile supply department. If that is not possible, it should at least have Proper regional sterile supply section.
- Proximity to intensive care areas.
- Proximity to interventional laboratories of super specialty departments

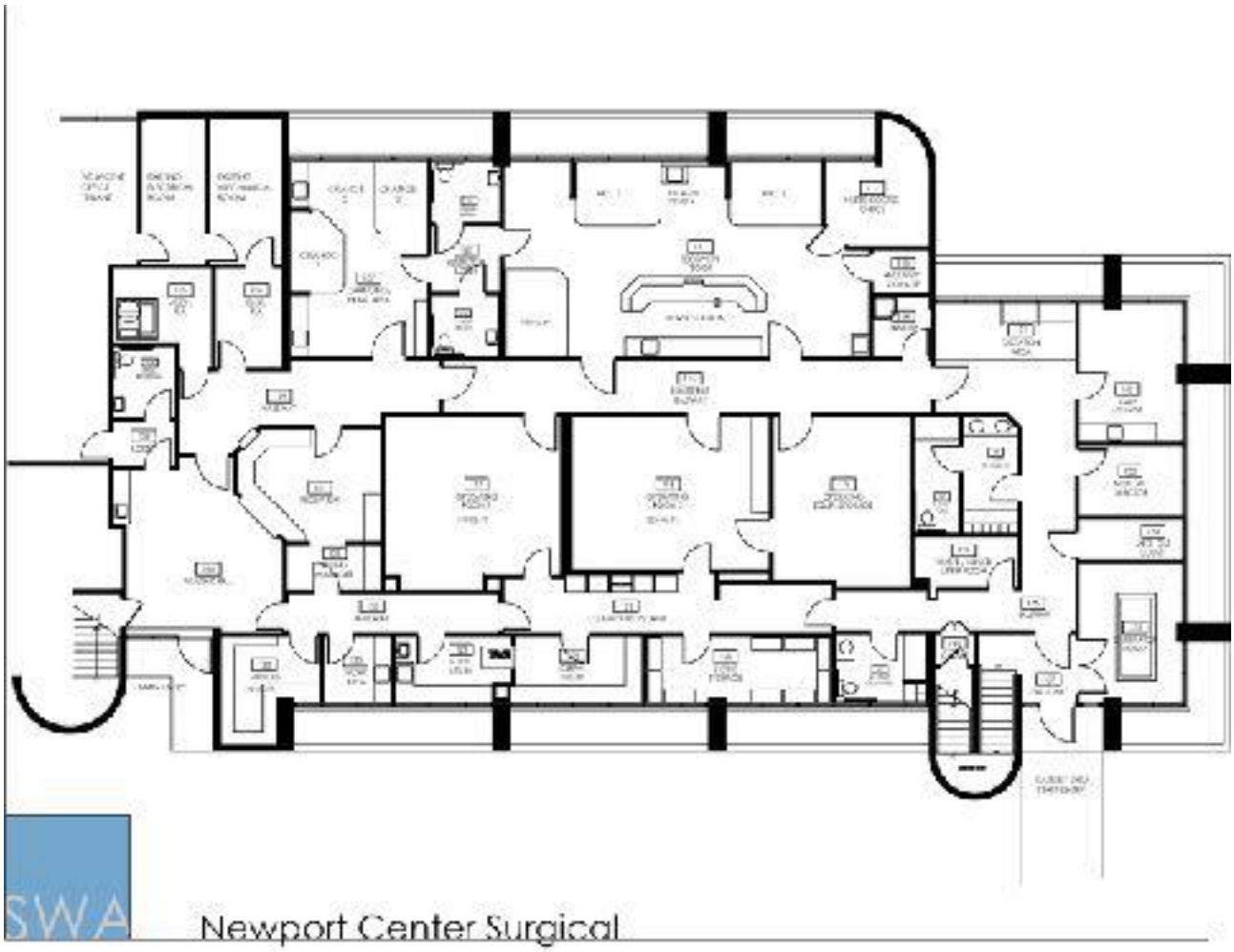
OT can be divided into clearly demarcated four zones to indicate specific precautions to be practiced before crossing the border of each zone. This zones indicate

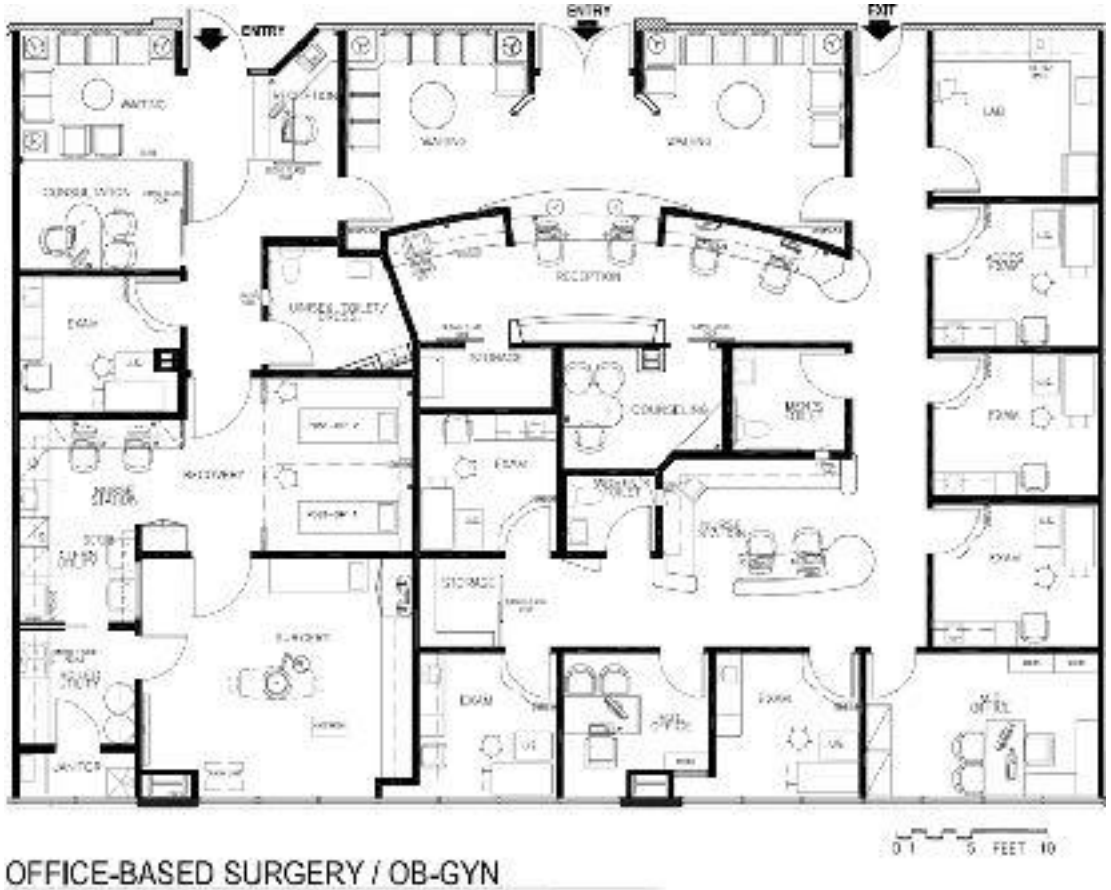
1. Relatively clean area
2. Absolutely clean area
3. Absolutely clean & aseptic area
4. Unclean area

Outermost Zone: This zone is called as protective zone. This zone is clean, but not sterile area.
Intermediate Zone: This zone is clear, but not sterile. Entry for people bringing supplies, patients etc. can be permitted after changing foot-wear. However, people who have not scrubbed or changed should not be allowed to go to inner zone.

Inner most zone: This area is kept absolutely clean & sterile. No one other than persons actually involved in doing surgery or assisting in surgery should be allowed to enter. In teaching hospitals 4 to 5 students are permitted after changing.



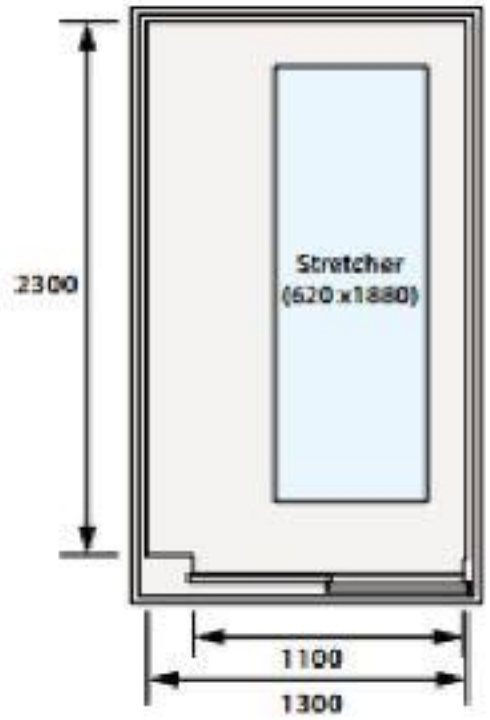


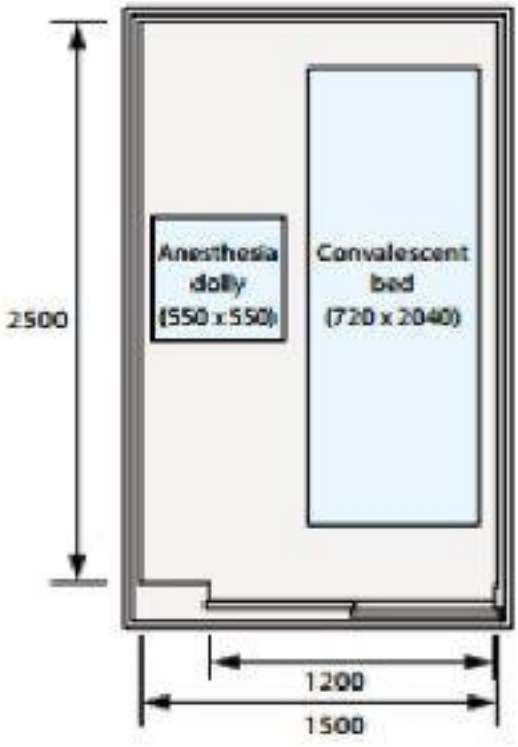


OFFICE-BASED SURGERY / OB-GYN

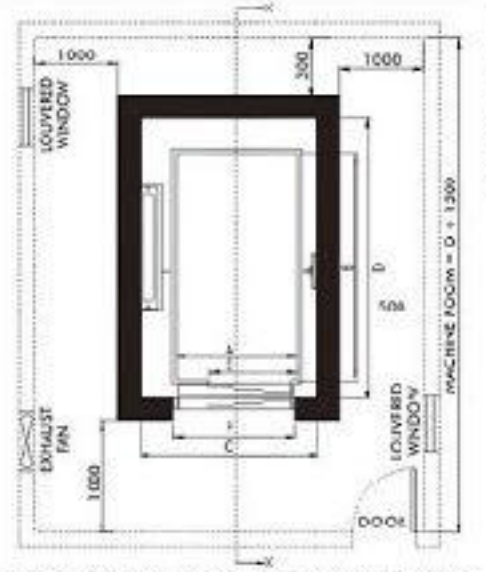
3488 SF

Hospital lifts

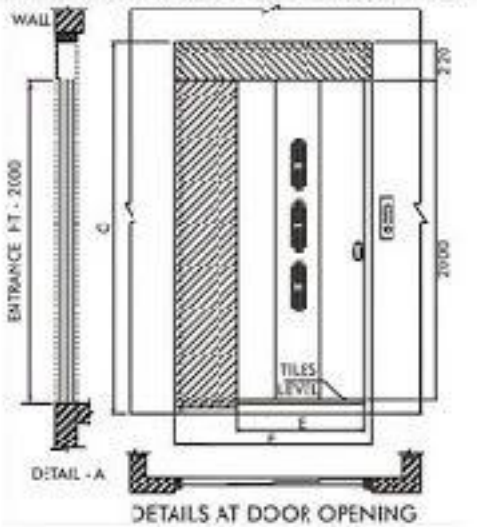




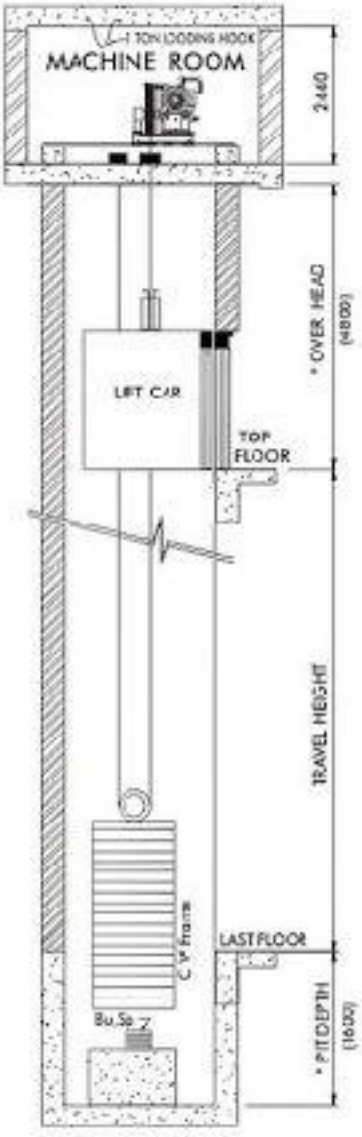
Min. to Max. dimensions



LIFT SHAFT, CAR, C.W. & MACHINE ROOM PLAN



DETAILS AT DOOR OPENING



(SECTION : X-X)

LIFT WELL

Lift well section

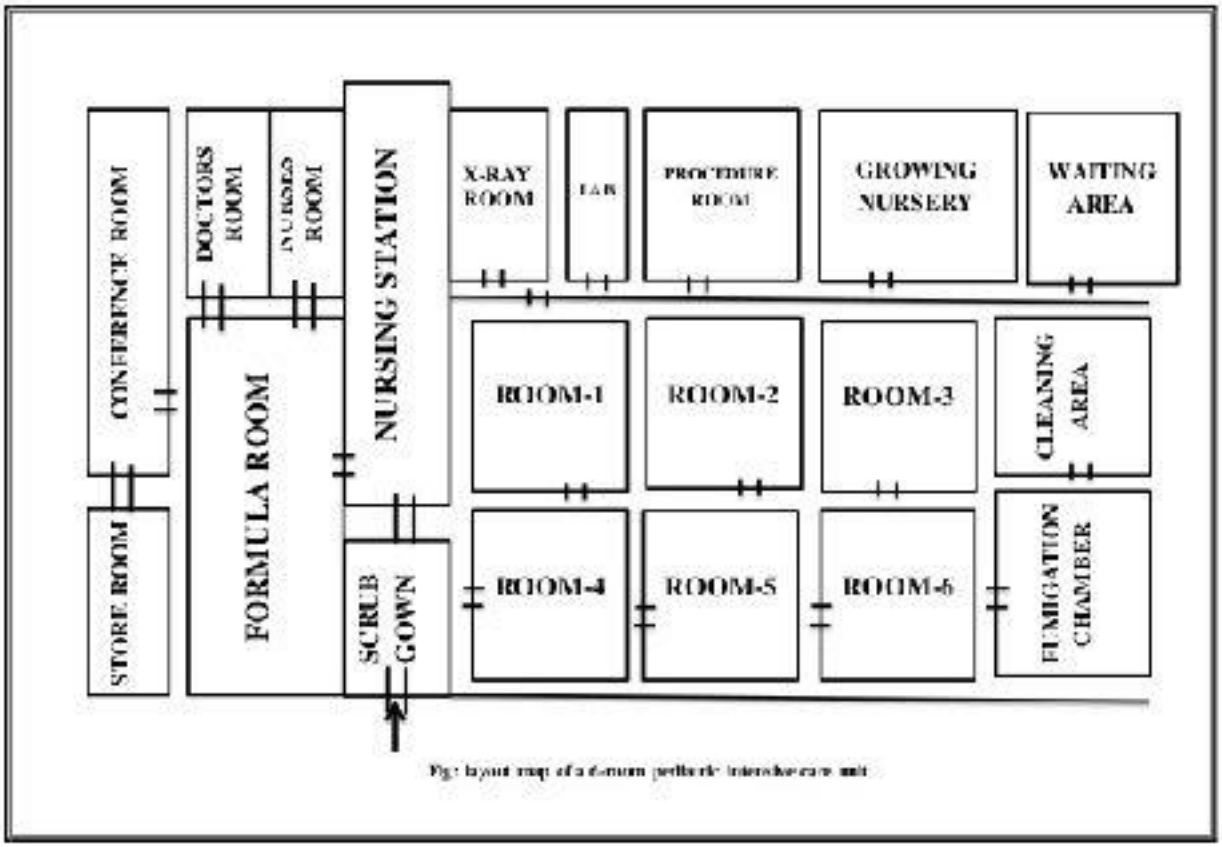
PICU (Paediatric Intensive Care Unit)

- PICU should be a separate unit from the Neonatal and Adult ICU dedicated to infants and children Unit design should take into consideration future adaptability and expansion and must maximize the resource of space, equipment, and personnel in a most affordable way for individual institutions.
- No traffic to other departments should pass through the unit.
- The unit should be located near lift with easy access to emergency department and operation theatre, laboratory and radiology department.
- The ideal PICU size cannot be stated but six to ten beds is desirable. PICUs with less than 4 beds risk inefficiency and PICUs with greater than 16 beds may be difficult to manage, if not properly divided.
- Room layout should allow actual visualization of all patients from central station.
- PICU cubicles should have sliding glass doors to allow full visibility. In rooms, windows are important to prevent a sense of isolation. Adequate lighting, child friendly wall papering or paintings with soothing colors and curtains are desirable.
- Patient area in open PICU should be 150 to 200 sq. ft. In a cubicle, the minimum area should be 200 to 250 square feet with at least one wash basin for two beds. However, one for each bed is preferred.
- At least one, preferably two rooms should have an isolation capability with an area of 250 square feet with an ante room (separate area at least 20 square feet for hand washing and wearing mask and gown) and separate ventilation.
- The area around the bed should allow enough space for performing routine ICU procedures such as central lines, chest tube placement, as well as for easy access for portable X-ray machine, portable ultrasound, electrocardiograph and portable electroencephalograph machine.

NICU (Neonatal Intensive Care Unit)

- Newborn babies who need intensive medical care are often put in a special area of the hospital called the neonatal intensive care unit (NICU).

- The NICU has advanced technology and trained healthcare professionals to give special care for the tiniest patients.
- Neonatal refers to babies ageing upto 28 days.
- The layout of the NICU is such that the nursing station has all the beds visible and in vicinity.



International Health Facility Guidelines

HVAC System

Mechanical rooms and roofs with mechanical equipment shall be provided with staircase and preferably lift access to facilitate maintenance and equipment replacement.
Access to mechanical rooms and roof mechanical areas shall be directly from cores or main corridors.
It is not acceptable for the access to mechanical rooms to be through treatment or patient care areas.
Clear access routes through mechanical rooms and roof areas shall be provided from the ls and staircases.
Routes shall be clearly and permanently marked on the mechanical room floor.
The minimum clear height for access routes shall be 2000mm or higher if dictated by the dimensions of equipment.
Steps on access routes are not acceptable. If changes of level are needed, or if services must be run at low level across an access route, a ramp must be provided.

Location of service shaft

Service shafts shall be strategically located to provide rational and flexible services installations and minimise the size of the distribution ductwork and pipework on each floor. It is recommended that main ductwork shafts are located away from stair cores and elevator shafts to allow ducts to enter and leave the shaft on all sides. Pipework shafts are most suited to locations adjacent to structural cores. In clinical facilities, shafts shall not be located inside surgery suites or critical care areas. If the designer encounters a specific situation where a shaft is needed in one these spaces it should be discussed and agreed with AHJ during the schematic designs stage, through architectural design submission.

AHU Air Handling Unit

For Type A super speciality O.T. the AHU should be specific for its use and not be in conjunction with other air conditioning systems.

The outdoor air intake should be located away from pollution causing facilities like laboratory exhaust vents.

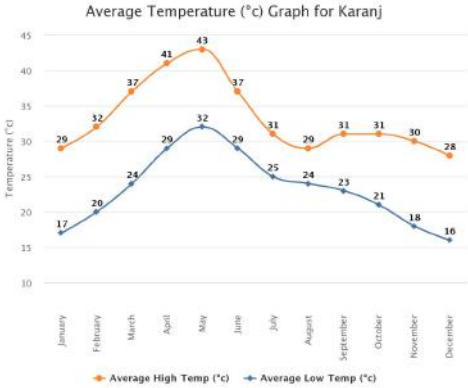
A minimum of 20 Air changes per hour should be provided

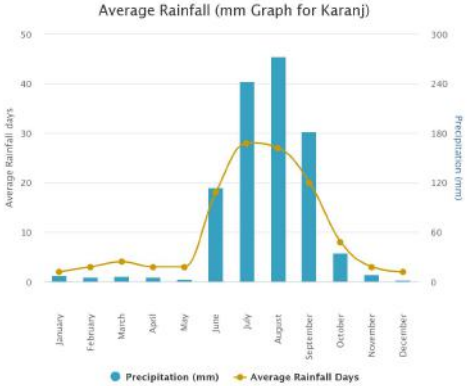
Each air-handling unit shall be installed as a standalone entity without any physical interface with another air-handling unit. Selection of stacked (one on the top of another) air handling units is not permitted.

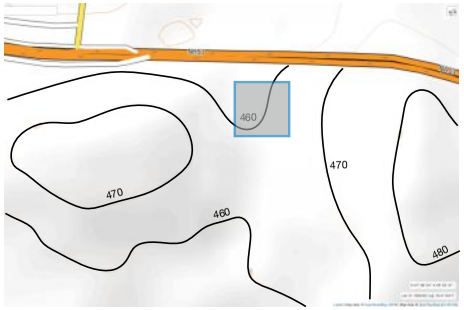
Size: 3.5 m x 4.5 m

References

- International Health Facility Guidelines
- Guidelines from "Operational Guideline for Strengthening of Paediatric Health Services at District Hospitals" - GoI, Ministry of Health & Family Welfare
- Guidelines for general ward design - Ministry of Health, Kuwait
- Toilets and Sanitation requirements for Hospitals as per IS 1172 : 1993
- "Architectures for paediatric palliative care: how to improve quality of life and environmental well-being" - Marci Gola
- "Children's Hospital: The role of architecture in children’s recovery and development" - Claudia Sofia
- "Behavioural Study of Children in Paediatric Hospitals: A Design Perspective." - Dr. Nandineni Rama Devi
- "New trends in health architecture for children and the effects of the built environment on young patients" - Luis Felipe Barahona
- Zimring C, Joseph A, Choudhary R. The role of the physical environment in the hospital of the 21st century: Concord, CA: The Center for Health Design. 2004.







LOCATION: KARANJA GHADGE
POPULATION: 17,000 (2011)
AREA OF SITE: 5 ACRES
DIMENSIONS: 150 M X 130 M

HOT AND DRY SUMMERS
HUMID RAINY SEASON
MODERATELY COLD AND DRY WINTERS
WIND: NORTH EAST DIRECTION, 1-4 M/S

MODERATELY SLOPING
AVERAGE OF 3% SLOPE TOWARDS WEST

SHEET NO.	PROJECT:		
1	MULTI-SPECIALITY PAEDIATRIC HOSPITAL	**SITE LOCATION & ANALYSIS**	STUDENT: SYED MOHAMMAD ASIM GUIDE: DR. PANKAJ N. BAHADURE ROLL: BA16ARC059

FACTORS SHAPING THE DESIGN

1. CONTOURS
2. SUN PATH
3. HIGHWAY AND ACCESS FROM ONLY ONE FACE OF THE PLOT
4. NEED FOR MORE WALL SURFACE AREA
5. SPECIALIZED FUNCTION OF THE STRUCTURE
6. IRREGULAR FORM FOR CHILDREN'S FASCINATION, INTRIGUE AND SENSE OF INFORMALITY

CONTOURS: TO REDUCE THE AMOUNT OF CUT AND FILL REQUIRED AND MINIMAL LEVELS ON GROUND FLOOR SUCH AN ORIENTATION WAS SELECTED

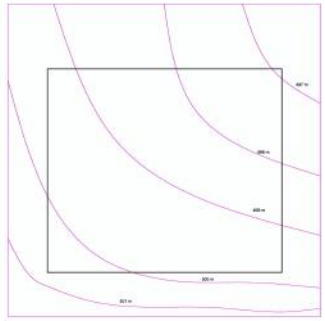
SUN PATH: THE NORTH EAST FACING AREA WOULD BE DESIGNATED FOR OUT-PATIENT WAITING AND IN PATIENT LOUNGES

ACCESS: 2 ACCESSES WOULD BE PROVIDED, ONE FOR THE PATIENTS AND THE OTHER WOULD BE A COMBINED ACCESS FOR EMERGENCY, STAFF AND SERVICES

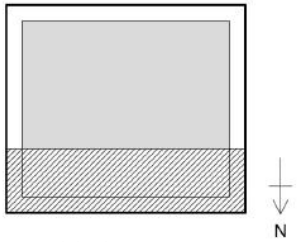
CLINIC COMPLEX: A SUPER-SPECIALIZED PAEDIATRIC CLINIC COMPLEX IS PROVIDED WITH A COMMON WAITING AREA OUTSIDE FOR CHILD-INTERACTION, FREEDOM, EASE OF NAVIGATION AND SECLUSION FOR THE DOCTORS FROM THE WAITING AREA

EMERGENCY AREA: IT IS SEPARATED VISUALLY AND PHYSICALLY FROM THE GENERAL PATIENT ENTRANCE AND WAITING AREA

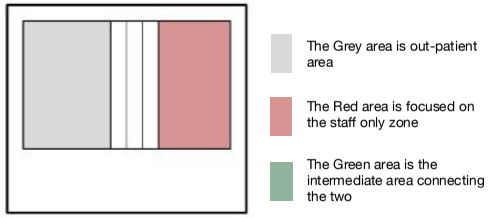
CRITICAL AREAS: CSSD, OT, NICU, PICU, DTU, HDU, ETAT AND THE ALLIED DEPARTMENTS ARE ALL STUDIED, LOCATED AND DESIGNED ACCORDING TO SEVERAL GUIDELINES AND STANDARDS. DETAILS PROVIDED IN THE PROJECT REPORT



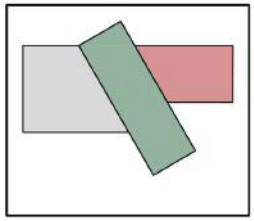
CONTOURS



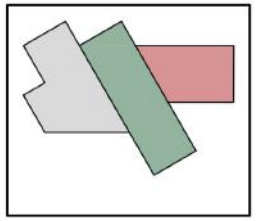
1. DIVISION OF BUFFER AREA AND BUILT MASS



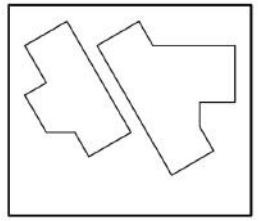
2. DIVISION BETWEEN EMERGENCY AND OPD



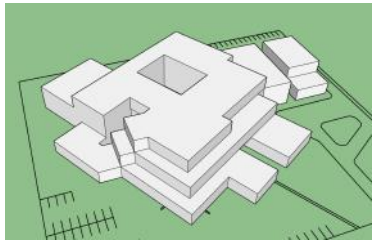
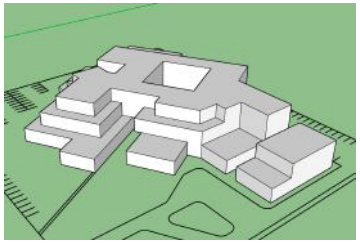
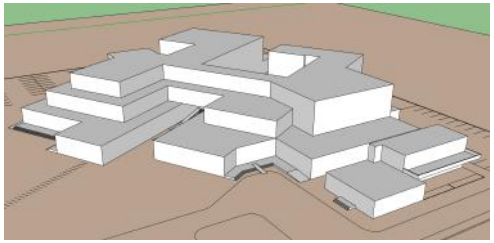
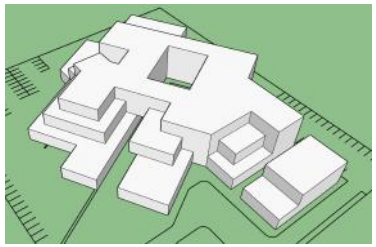
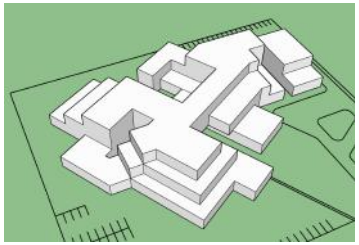
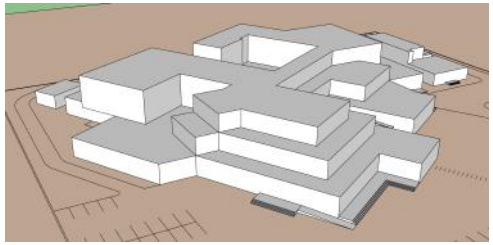
3. CENTRE MASS ALIGNED FACING THE NORTH-EAST DIRECTION



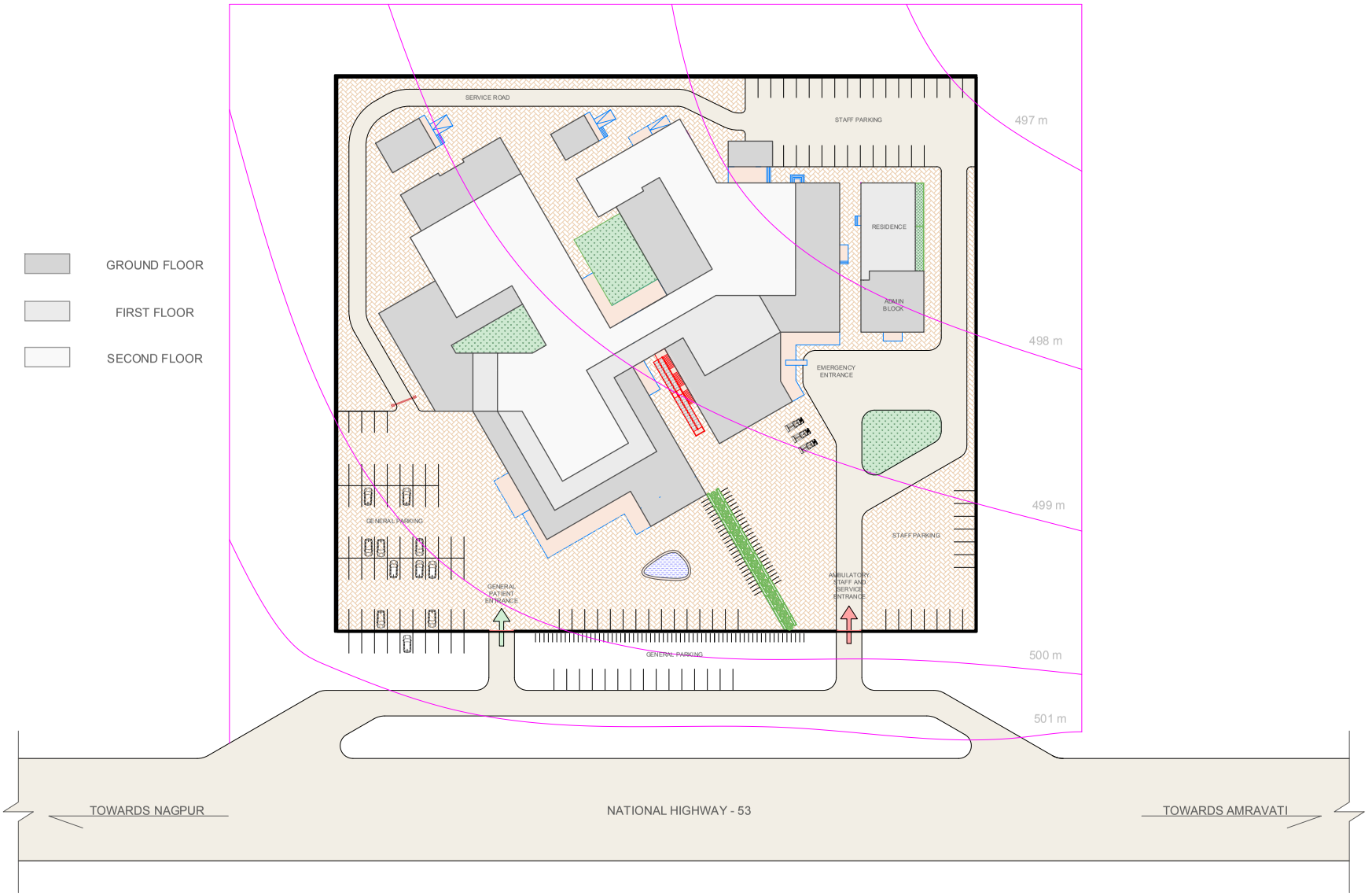
4. SURFACE AREA INCREASED BY CREATING NICHES ALIGNED TO THE SLOPE AND THE CENTRE MASS



5. WORKED ALONG WITH 3D MODEL AND TENTATIVE FUNCTION PLACEMENTS


SHEET NO.	PROJECT:		STUDENT:	SYED MOHAMMAD ASIM
2	MULTI-SPECIALITY PAEDIATRIC HOSPITAL	**CONCEPT**	GUIDE:	DR. PANKAJ N. BAHADURE
			ROLL:	BA16ARC059

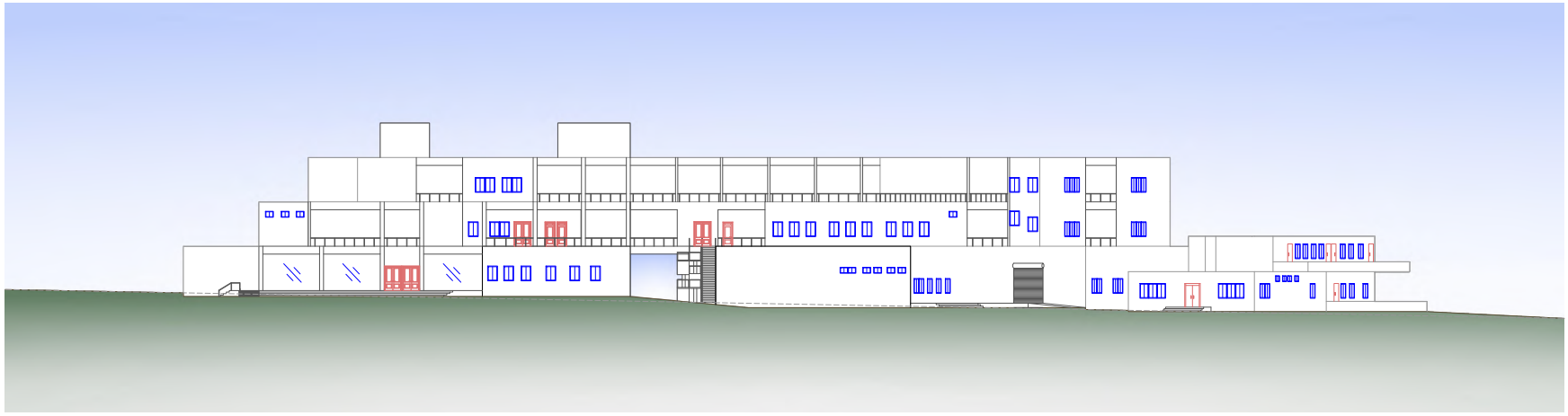


SHEET NO.	SHEET TITLE	SCALE = 1:300		UNDER THE GUIDANCE OF:	STUDENT NAME:
3	SITE PLAN	ALL DIMENSIONS ARE IN M	S E W N	DR. PANKAJ N. BAHADURE	SYED MOHAMMAD ASIM
				PROJECT NAME: MULTI-SPECIALITY PEDIATRIC HOSPITAL	ROLL NUMBER: BA16ARC059

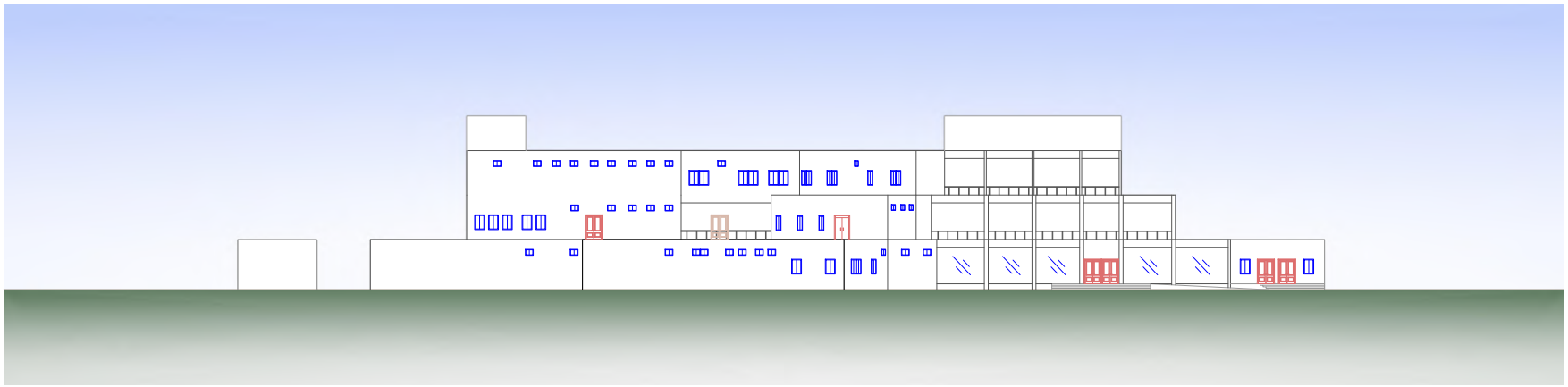
SHEET NO.	SHEET TITLE	SCALE = 1:200		UNDER THE GUIDANCE OF:	STUDENT NAME:
6	GROUND FLOOR PLAN	ALL DIMENSIONS ARE IN M	S E W N	DR. PANKAJ N. BAHADURE	SYED MOHAMMAD ASIM
				PROJECT NAME: MULTI-SPECIALITY PEDIATRIC HOSPITAL	ROLL NUMBER: BA16ARC059

SHEET NO.	SHEET TITLE	SCALE = 1:200		UNDER THE GUIDANCE OF: DR. PANKAJ N. BAHADURE	STUDENT NAME: SYED MOHAMMAD ASIM
7	FIRST FLOOR PLAN	ALL DIMENSIONS ARE IN M	S E W N	PROJECT NAME: MULTI-SPECIALITY PEDIATRIC HOSPITAL	ROLL NUMBER: BA16ARC059

SHEET NO.	SHEET TITLE	SCALE = 1:200		UNDER THE GUIDANCE OF:	STUDENT NAME:
8	SECOND FLOOR PLAN	ALL DIMENSIONS ARE IN M	S E W N	DR. PANKAJ N. BAHADURE	SYED MOHAMMAD ASIM
				PROJECT NAME: MULTI-SPECIALITY PEDIATRIC HOSPITAL	ROLL NUMBER: BA16ARC059

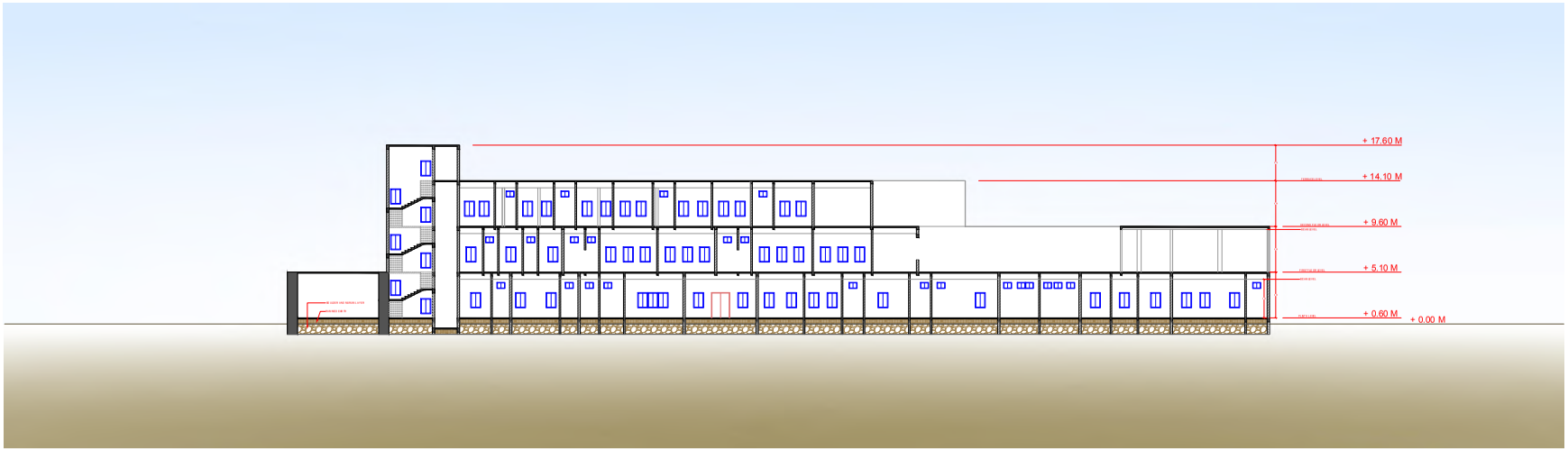


NORTH-WEST ELEVATION

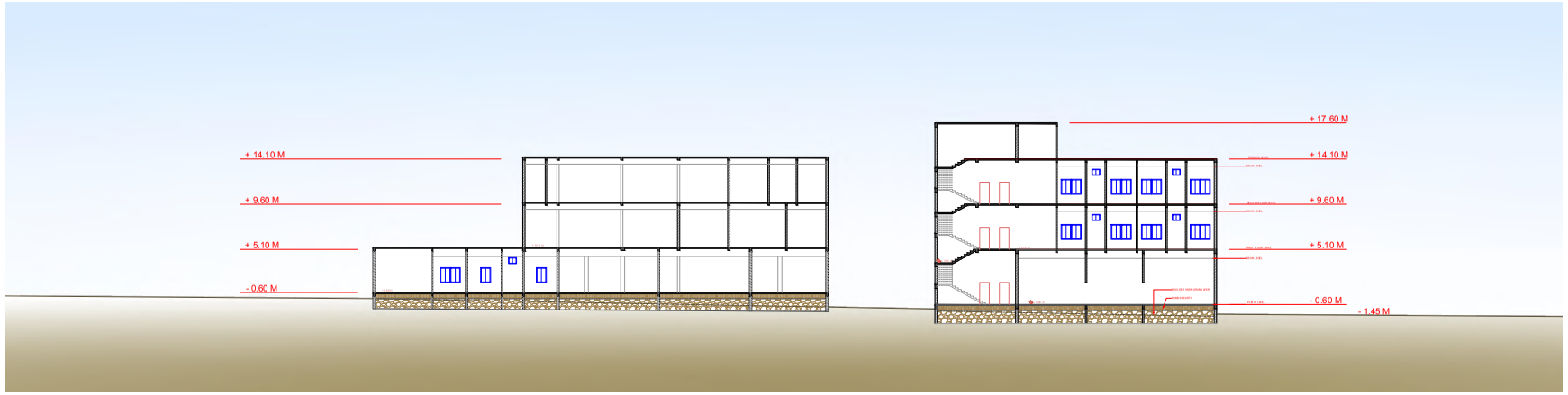


NORTH-EAST ELEVATION

SHEET NO.	SHEET TITLE			
9	ELEVATIONS	NOT TO SCALE	UNDER THE GUIDANCE OF: DR. PANKAJ N. BAHADURE	STUDENT NAME: SYED MOHAMMAD ASIM
		ALL DIMENSIONS ARE IN M	PROJECT NAME: MULTI-SPECIALITY PEDIATRIC HOSPITAL	ROLL NUMBER: BA16ARC059

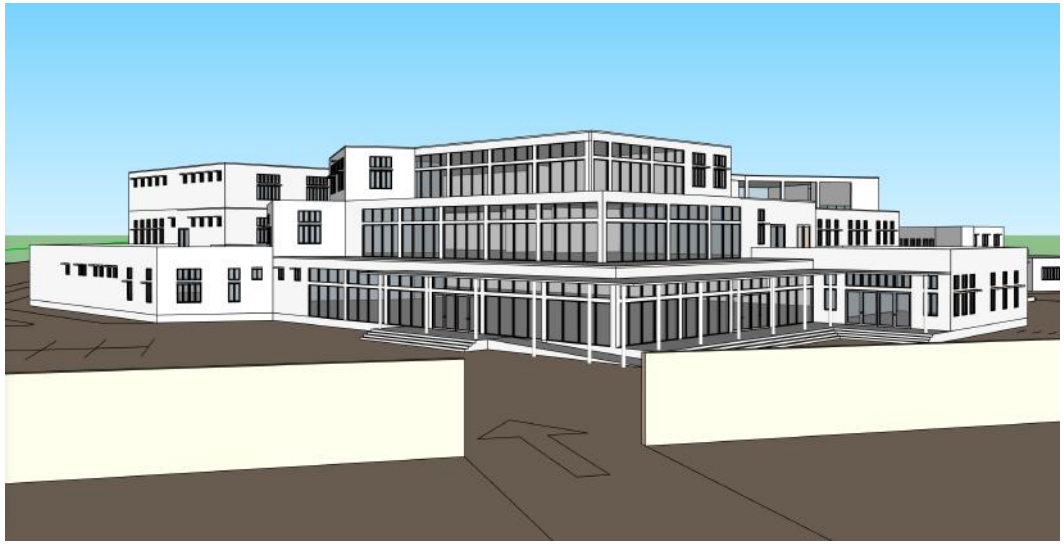


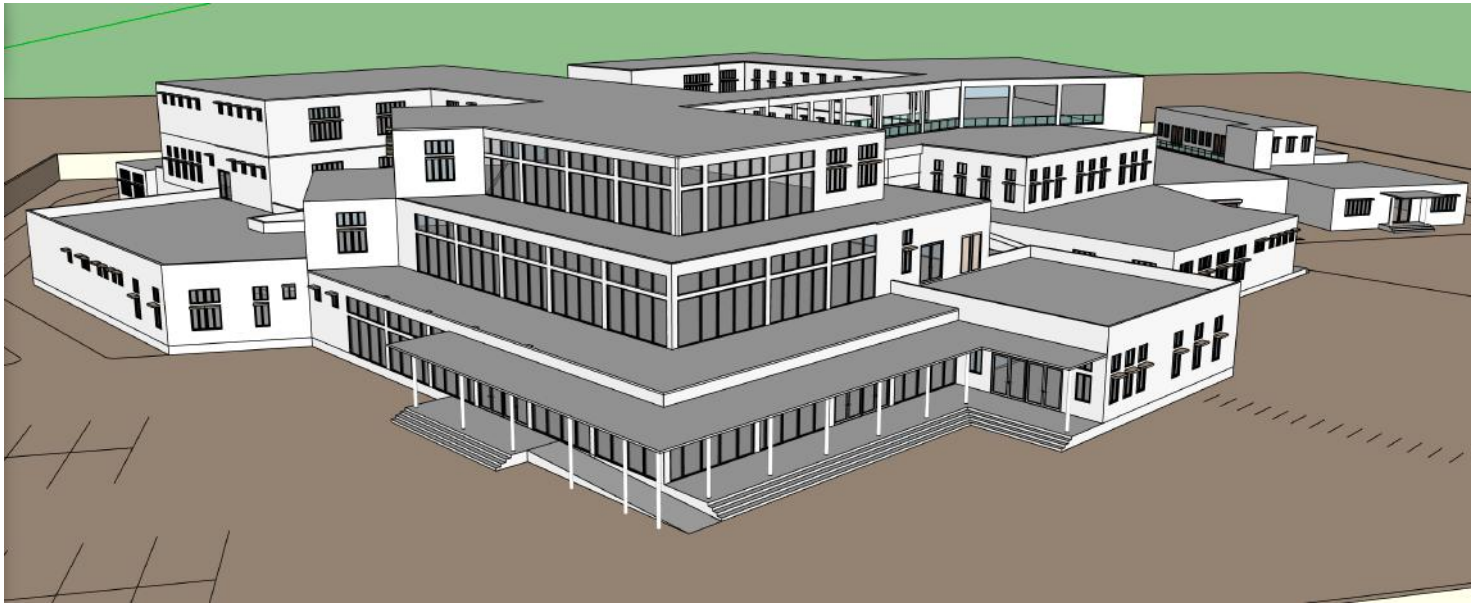
SECTION A



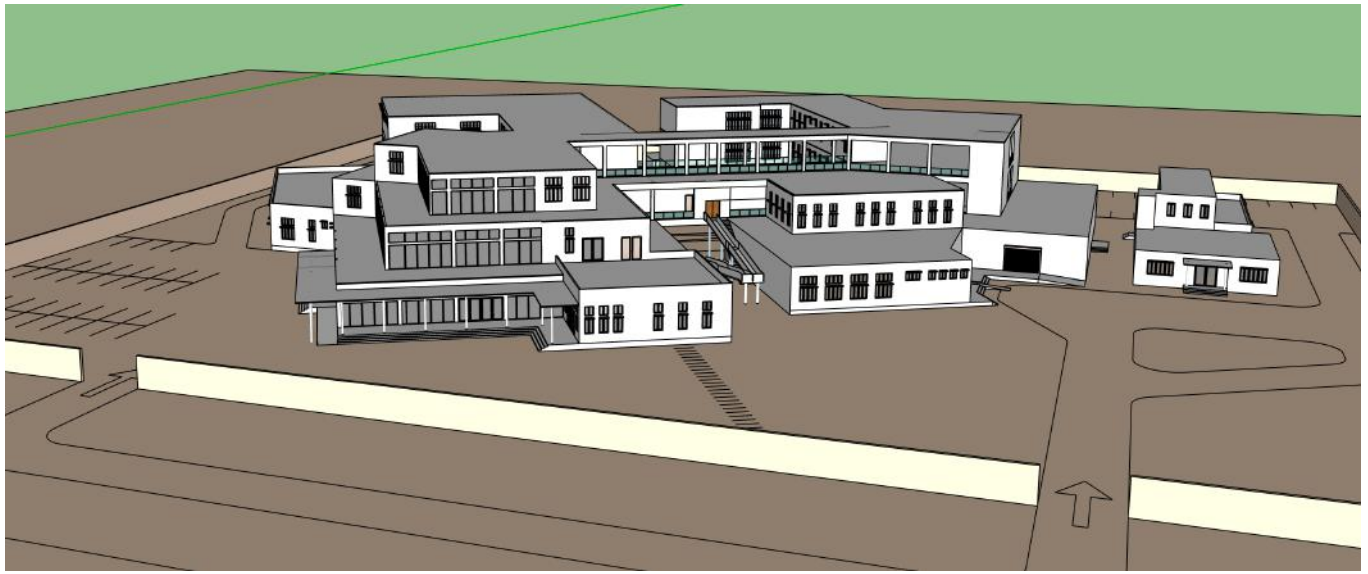
SECTION B

SHEET NO.	SHEET TITLE			
10	SECTIONS	NOT TO SCALE	UNDER THE GUIDANCE OF: DR. PANKAJ N. BAHADURE	STUDENT NAME: SYED MOHAMMAD ASIM
		ALL DIMENSIONS ARE IN M	PROJECT NAME: MULTI-SPECIALITY PEDIATRIC HOSPITAL	ROLL NUMBER: BA16ARC059





SHEET NO.	SHEET TITLE		
11	MODEL	UNDER THE GUIDANCE OF: DR. PANKAJ N. BAHADURE	STUDENT NAME: SYED MOHAMMAD ASIM
		PROJECT NAME: MULTI-SPECIALITY PEDIATRIC HOSPITAL	ROLL NUMBER: BA16ARC059



SHEET NO.	SHEET TITLE		
12	MODEL	UNDER THE GUIDANCE OF: DR. PANKAJ N. BAHADURE	STUDENT NAME: SYED MOHAMMAD ASIM
		PROJECT NAME: MULTI-SPECIALITY PEDIATRIC HOSPITAL	ROLL NUMBER: BA16ARC059