THESIS - MULTISPECIALITY HOSPITAL

SITE:

Imparting special architectural features for a Multi-speciality Hospital. My aim was to emphasize on some critical physical aspects such as day-lighting, window design, thermal conditions and others.

STUDIO OBJECTIVE:

To acknowledge the critical experiences of patients, staff and visitors in hospital buildings and studing the Importance of daylight in hospital architecture. It will serve as a place of healing, providing facilities of various disciplines of medicine.

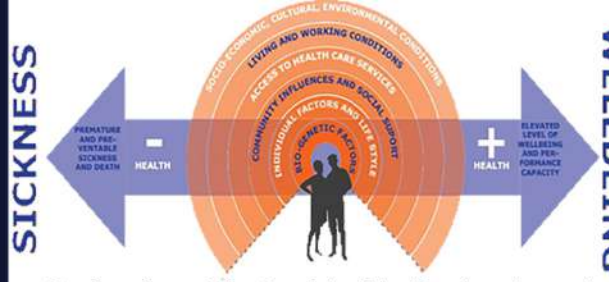
HOSPITAL:

+ A hospital is a healthcare instituion that provides medical, surgical and nursing treatment to the sick or injured through specialized staff and equiptments.
+ It is not just a cure center, it is a place for cure with facilities like pleasant environment, cleanliness, health care and human support. It provides happiness, calmness and self control.
+ According to WHO norms, Indias proportion of hospital beds to population is less than one-third of the set standards.

+ Hospital is the most visible place of health care industry.
+ It provides the platform where the practitioners of medicine integrate the healthcare technology with the living process.
+ They can be grouped by various classification like ownership, type of system,etc. But they all are planned to provide a level of healthcare, which ordinally cannot be provided at home.

TYPES OF HOSPITAL

- **ACC. TO LVL. OF CARE**
  - 1.1 Secondary hospital: District hospital, some specific hospitals
  - 1.2 Tertiary hospital: Central high specialized hospital, Educational hospital and some specific hospital.
- **ACC. TO SIZE**
  - 2.1 Minimum size hospital : <50
  - 2.2 Mid size hospital: 50-250 beds
  - 2.3 Big hospital: 250-500 beds
  - 2.4 Huge hospital: >500 beds
- **ACC. TO SPECIALITIES**
  - 3.1 Specialist hospital: paediatric hospital, eye hospital etc.
  - 3.2 General hospital (Multispeciality hospital): all medical specialities are provided.
- **ACC. TO OWNERS**
  - 4.1 Private hospitals
  - 4.2 Public hospitals, University hospitals, etc.



+ Curing is not just related to the treatment provided in the hospital but it also depends upon the genetical factore, living style, environmental factors etc.
+ If proper treatment is provided at proper time then there are chances of being curec

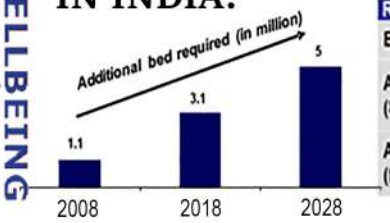
INDIAN HEALTHCARE SECTOR:

Country	Market Size
India	34.2 billion
Brazil	19.1 billion
China	137.0 billion
Germany	250.0 billion
USA	2,100.0 billion

Public healthcare infrastructure	
Primary Health Centres	23,000
Community Health Centres	2,935
District Hospitals	4,400
State Owned Hospitals	1,200

+ At 1.9 bed per '000 population, India would be at 75% of current Chinese ratio and at 50% of the level of Brazil and Korea.

HEALTH INFRASTRUCTURE NEEDED IN INDIA:



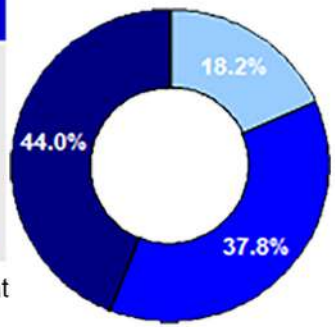
REQUIREMENT OF BEDS

REQUIREMENTS	2008	2018	2028
Bed/1000 population ratio	0.7 to 1.7	4	5
Additional floor space (800 sq. ft./bed)	880 million sq ft	2480 million sq ft	1600 million sq ft
Additional land area (floor space index 1:1)	20,000 acres	56,400 acres	36,400 acres

IN CASE OF GUJARAT:

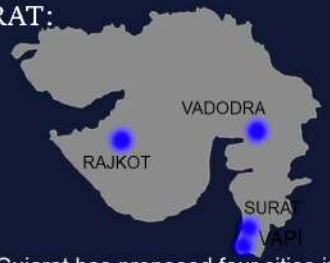
1. Strategic location
2. High growth economy ->10%
3. Pool of trained manpower
4. Active capital market
5. Conductive business environment
6. General competitiveness
7. Least utility cost and globally cost competitive labor cost

+ Population : Over 50 million (5.0% of India)
+ Geographical area : 1,96,000 sq. km (6.2% of India)
+ Gross State Domestic Product (GSDP):US$45.3 billion
+ Per Capita Income : US$915 at current prices
+ Urbanisation: 37.4%



+ High industrial growth : Gujarat has demonstrated a high industrial growth rate of 12.5% from 2002 -2007
+ Industrialisation: Gujarat is home to over 800 large industries and 3,20,000 micro, small and medium enterprises.

PROPOSED CITIES BY VIBRANT GUJARAT:



Vibrant Gujarat has proposed four cities in gujarat for medical tourism and hospital that is Surat, Rajkot, Vapi and Vadodra

Gujarat is well connected to all major locations such as Delhi, Mumbai and other nearby states from where Broad gauge railway line passes through.

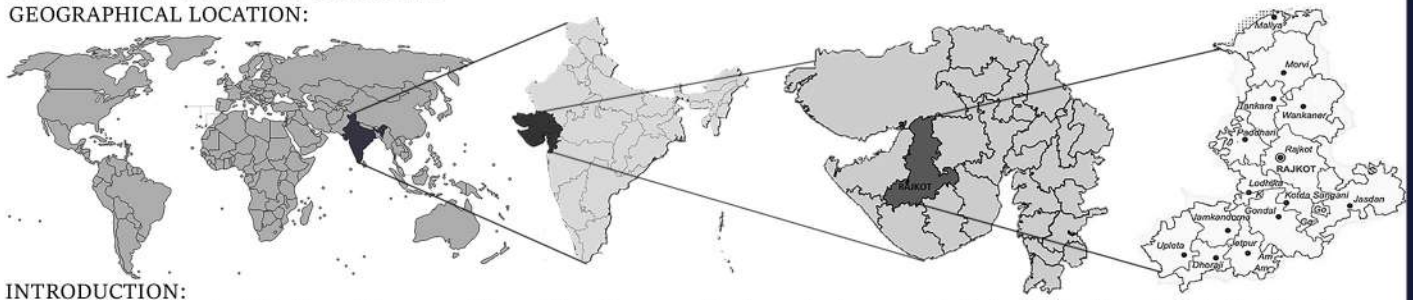
Gujarat is well connected to all major locations such as Delhi and Mumbai through Delhi-Mumbai Industrial Corridor (DMIC) and neighbouring states.

Gujarat has 1 international airport in Ahmedabad & 8 domestic airport in Surat Vadodara,Rajkot, Bhavnagar,Junagadh, Jamnagar, Porbandar & Kachchh which is connected to metro cities in India

Gujarat has a major seaport in Kandla and around 40 non major seaports

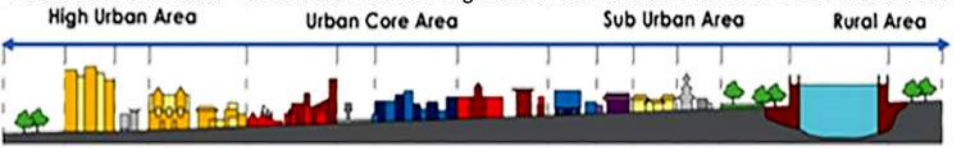
SITE - INTRODUCTION:

GEOGRAPHICAL LOCATION:

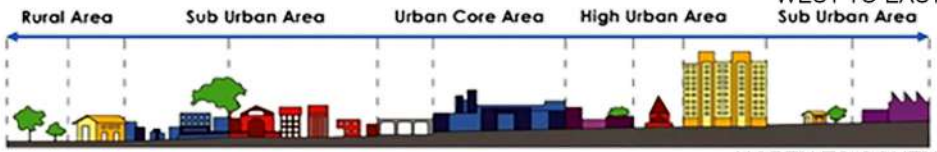


INTRODUCTION:

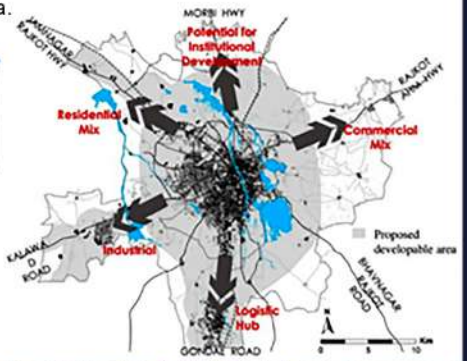
Rajkot has developed alot in th past few years it is ranking 4th among the largest urban area in Gujarat after Ahmedabad, Surat and Vadodra. The delvelopment of Rajkot is in a perticular direction as in from the core city of Rajkot to the West is the High Urban Area, to the East there is least development which is the Rural Area, to the North of the city there is less development and it is a Rural Area and to the South from the Urban Core Area there is a High Urban are and then there is a Sub Urban Area.



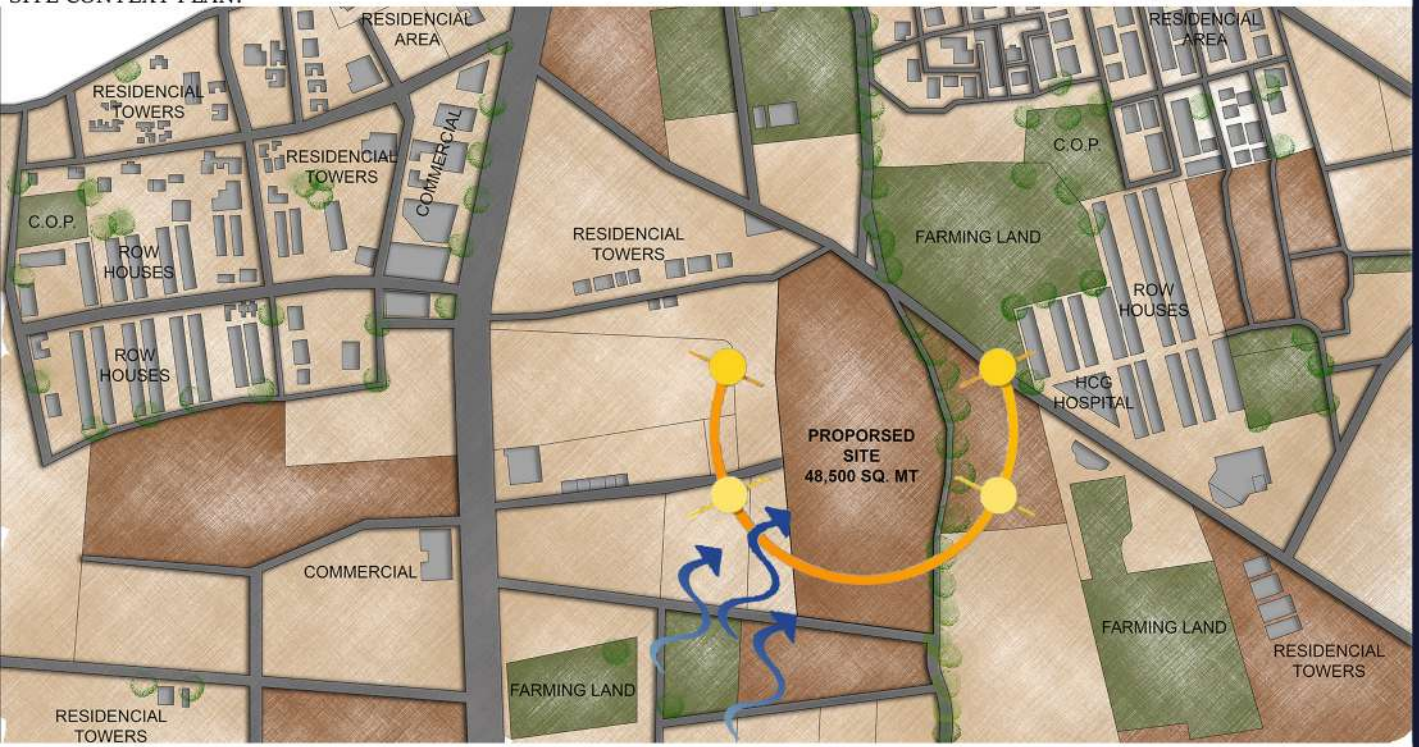
WEST TO EAST



NORTH TO SOUTH

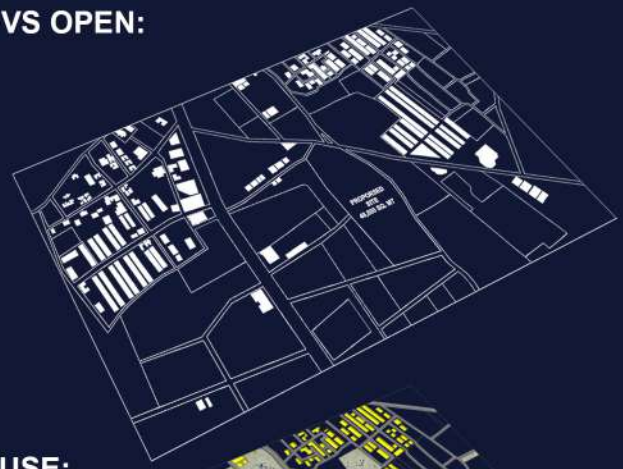


SITE CONTEXT PLAN:



+ Site area is 48,500 sq. mt, it is located near to the Rajkot airport with temperature 13°C to 40°C temperature difference with semi arid climate. It receives rainwal upto 23 inches on average every year.

BUILT VS OPEN:

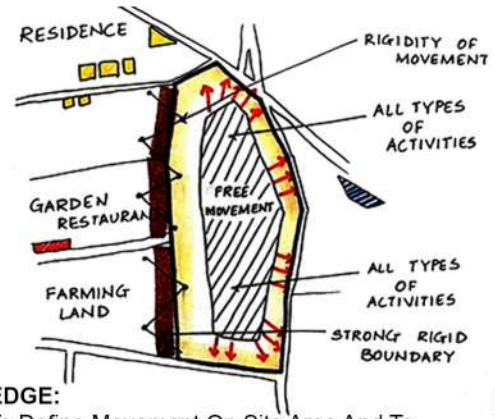


LAND USE:

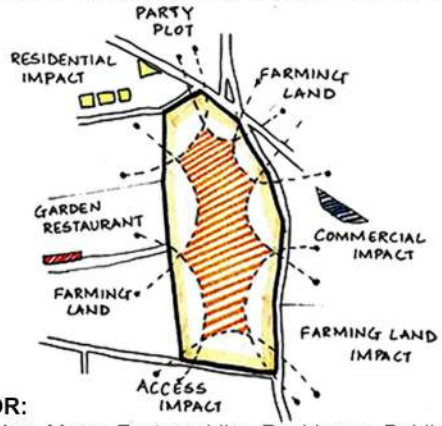
GREEN AREA AND ROAD:

ROAD NETWORK:

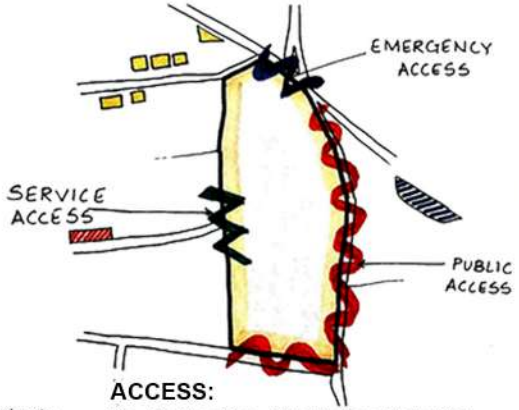
ZONING ON SITE WITH AFFECTING FACTORS AND CONCERN:



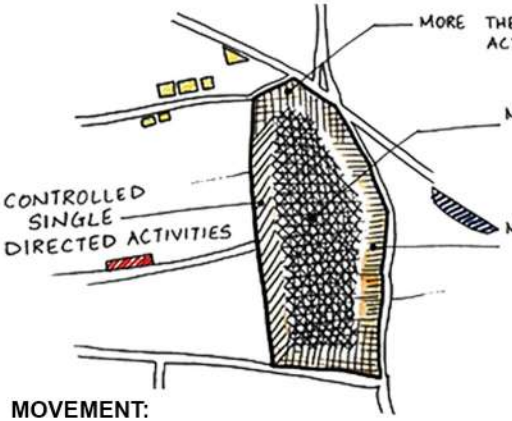
EDGE:
To Define Movement On Site Area And To Identify Restricted And Free Area Respect To Site. Also Identify Major Gathering Areas.



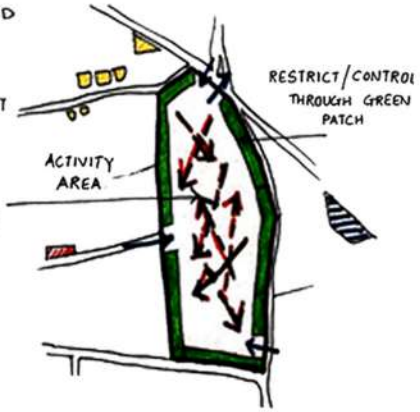
FACTOR:
There Are Many Factors Like Residence, Public, Private, Commercial, Institutional. Factors Affecting On Site, Site Which Is Dependent On Intensity And More Of Activities.



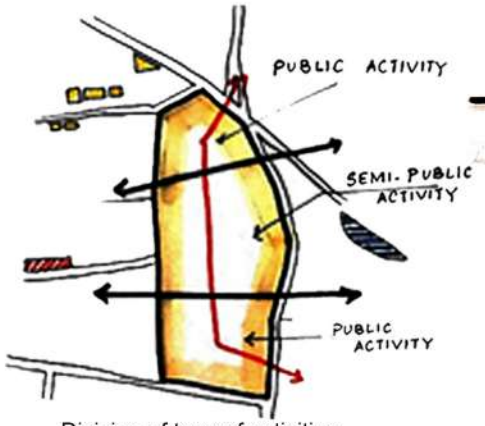
ACCESS:
To Define The Circulation Path For Vehicular, Pedestrian, Emergency And Service Access.



MOVEMENT:
Through Out Site Need To Identify The Movement Pattern And Intensity Of The Movement.



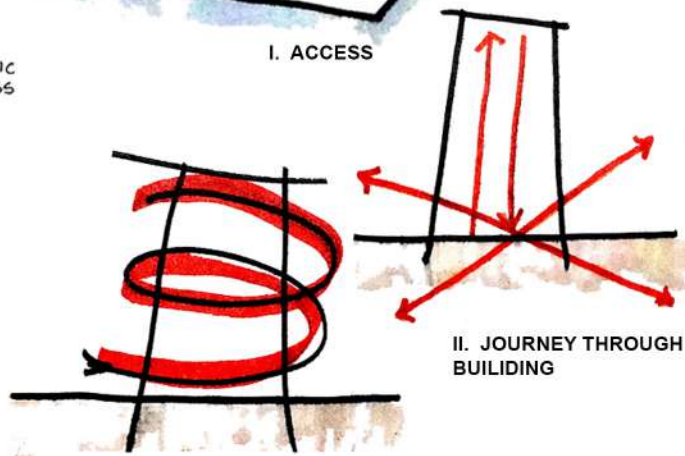
Providing Green Patch and trees on the Boundary to absorb the noise of vehicles



Division of type of activities on site.

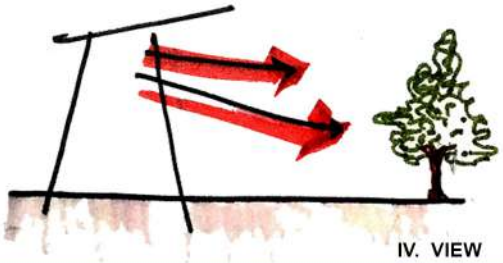
CONNECTIVITY:

I. ACCESS



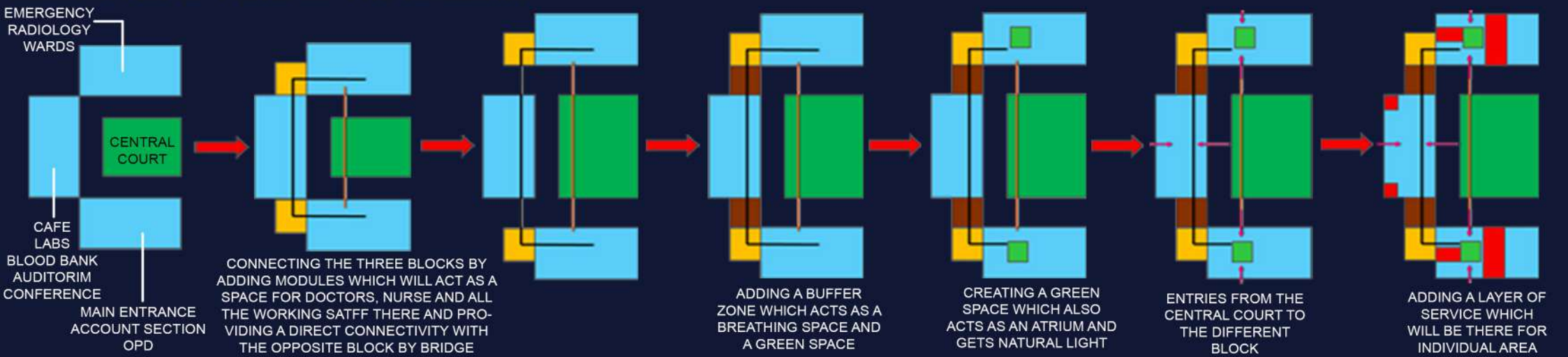
II. JOURNEY THROUGH BUILIDING

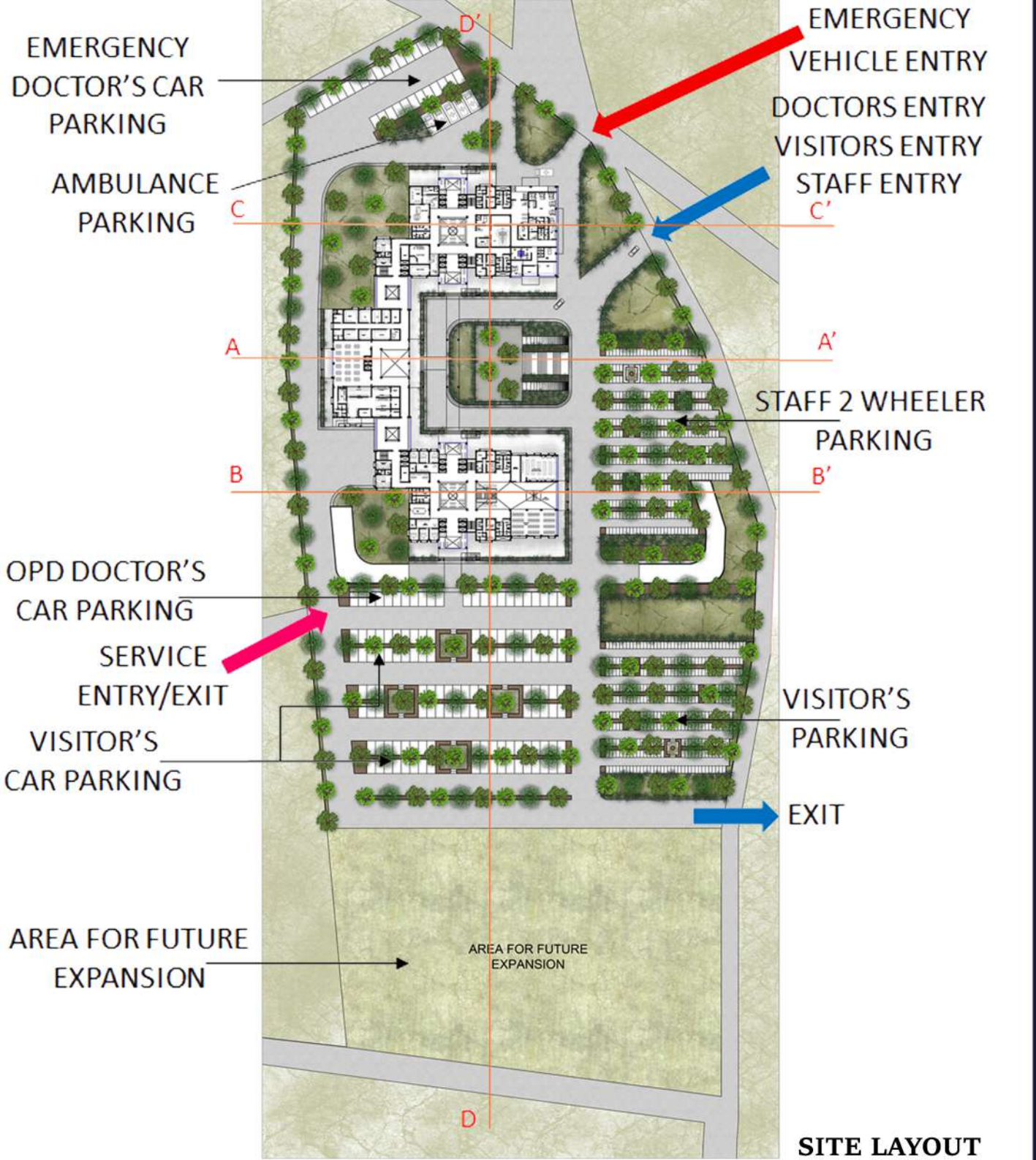
III. CIRCULATION



IV. VIEW

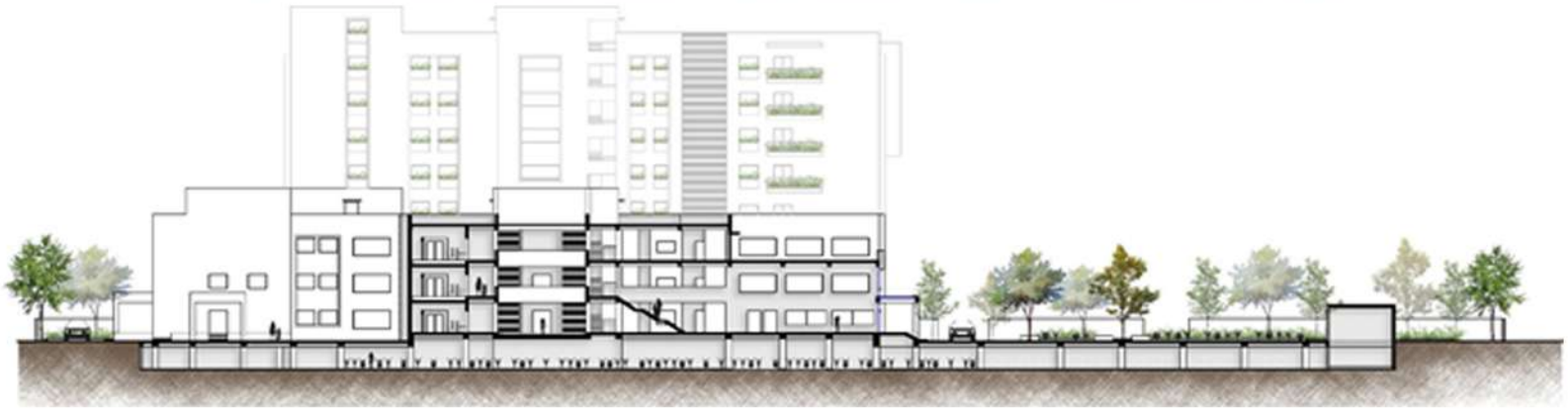
DERIVATION OF FORM OF THE BUILDING:

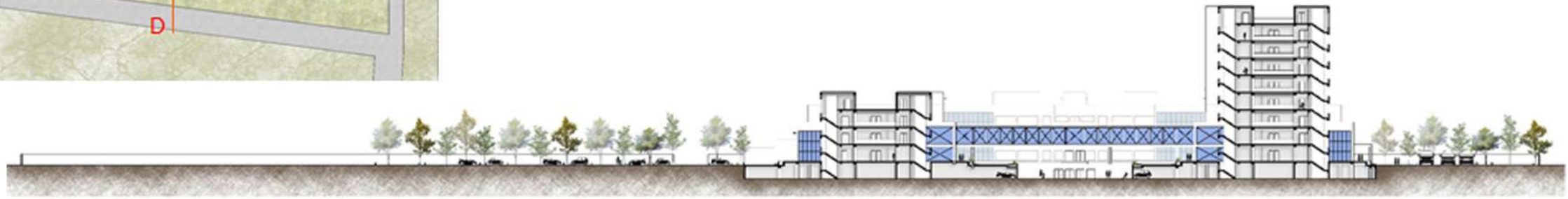


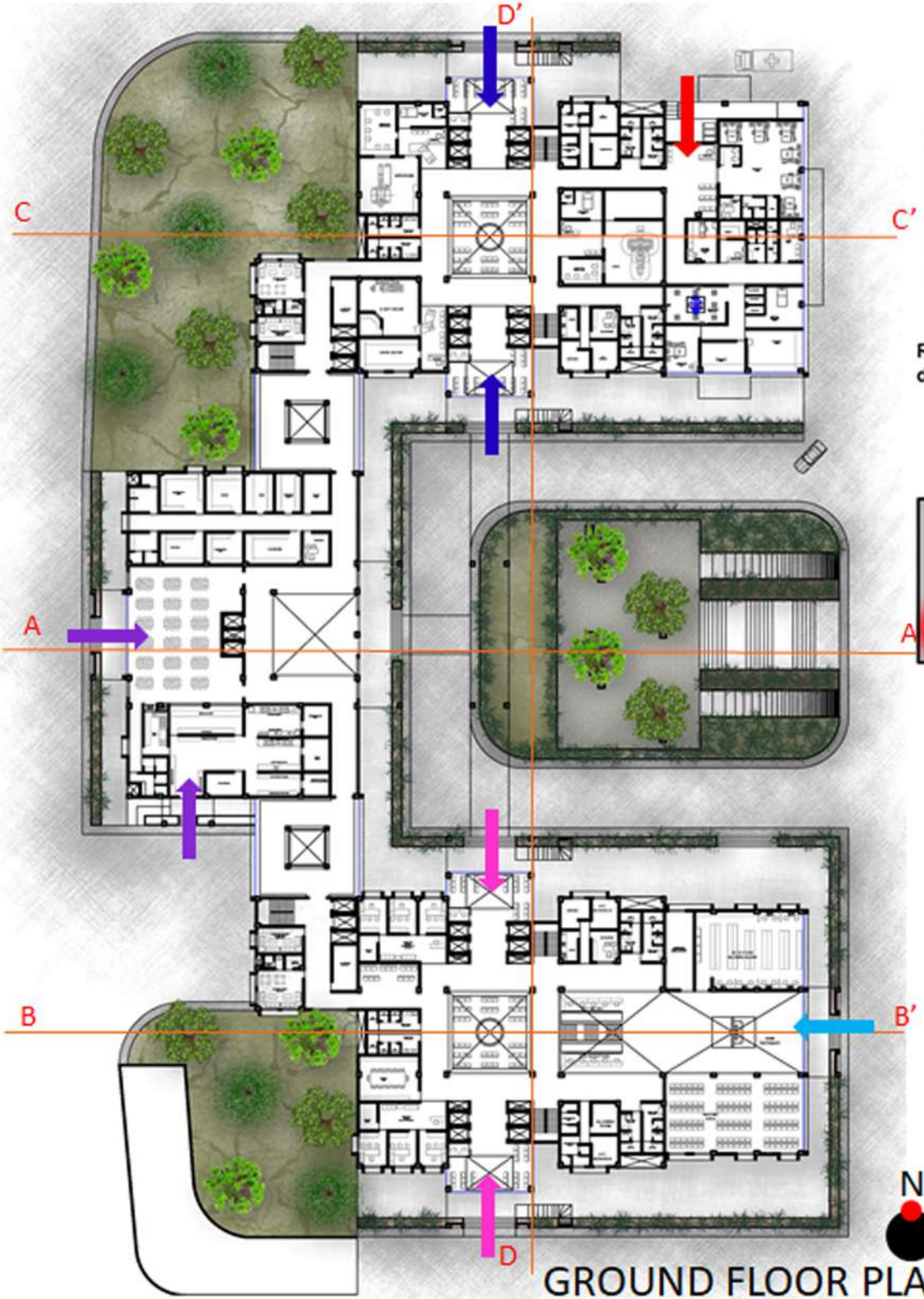

EMERGENCY
DOCTOR'S CAR
PARKING
AMBULANCE
PARKING
D'
C
C'
A
A'
B
B'
D
EMERGENCY
VEHICLE ENTRY
DOCTORS ENTRY
VISITORS ENTRY
STAFF ENTRY
STAFF 2 WHEELER
PARKING
OPD DOCTOR'S
CAR PARKING
SERVICE
ENTRY/EXIT
VISITOR'S
CAR PARKING
VISITOR'S
PARKING
EXIT
AREA FOR FUTURE
EXPANSION
AREA FOR FUTURE
EXPANSION

SITE LAYOUT


D'
C
C'
A
A'
B
B'
AREA FOR FUTURE
EXPANSION
D



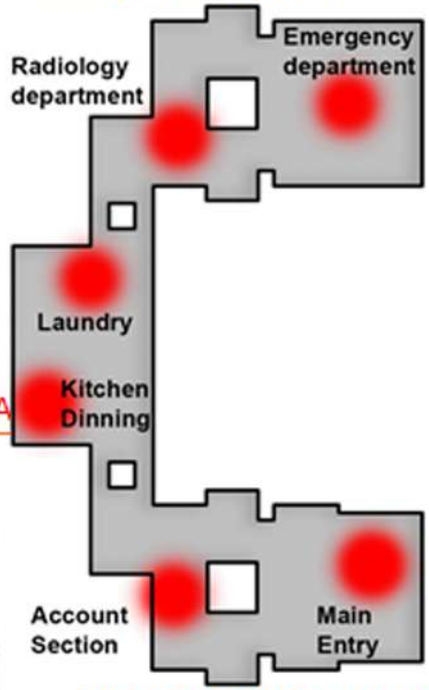




GROUND FLOOR PLAN

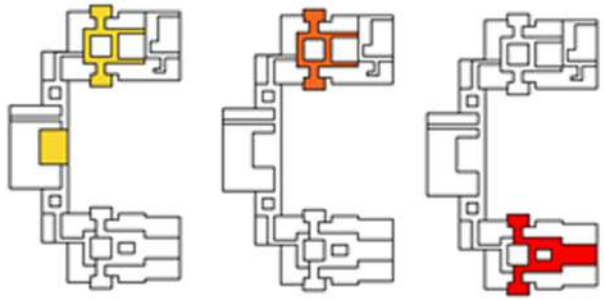
On the ground floor most of the areas are accessible for all the people. They can be used according to the need.

- EMERGENCY ENTRY
- MAIN ENTRY
- OPD ENTRY
- IPD ENTRY
- SERVICE ENTRY

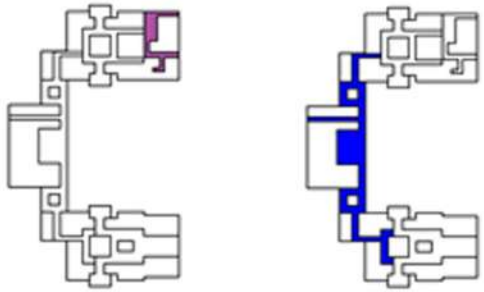


BASIC DEPARTMENT ZONING

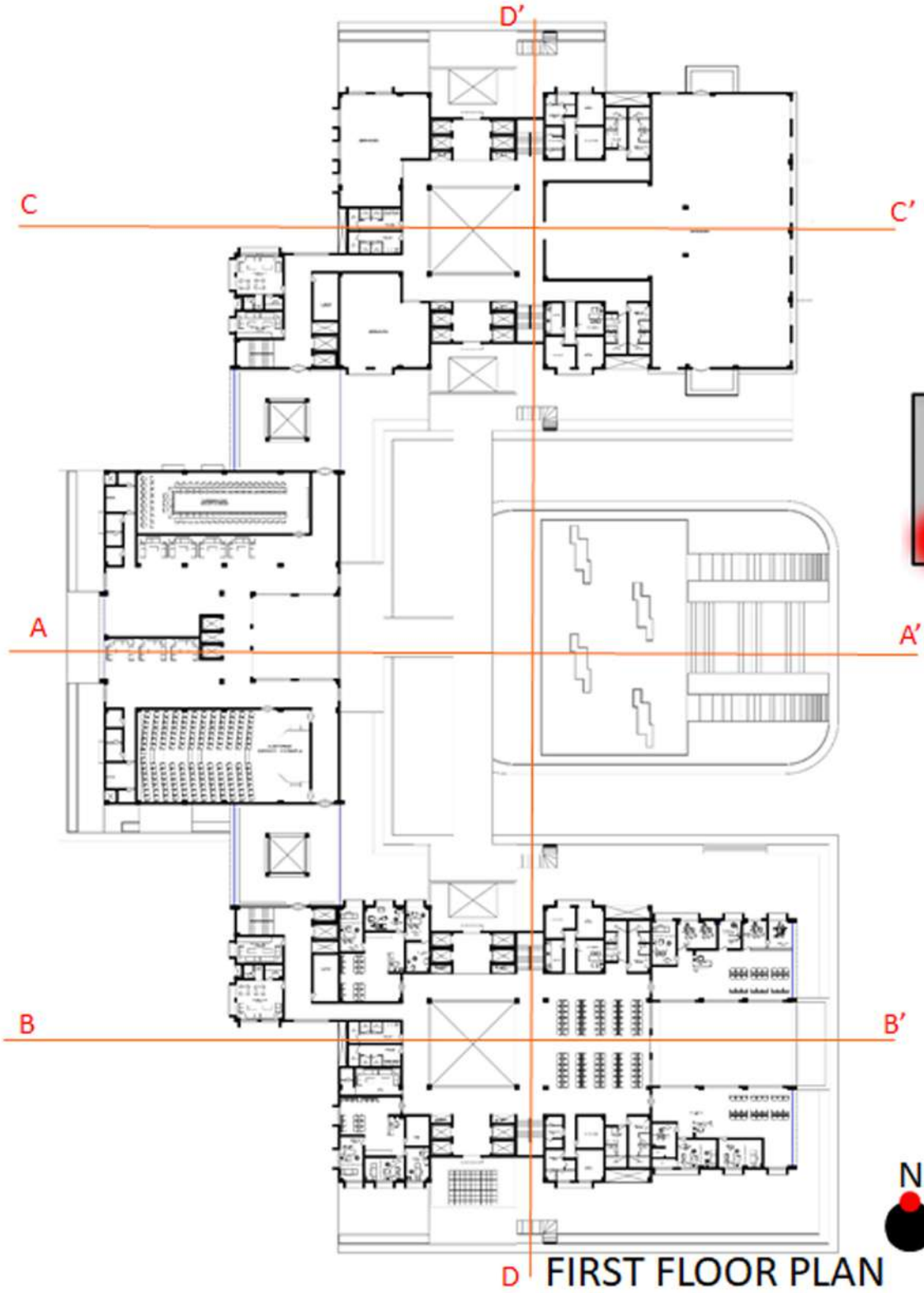
CIRCULATION:



VISITOR AREA | INPATIENTS CORRIDOR | OUTPATIENTS CORRIDOR

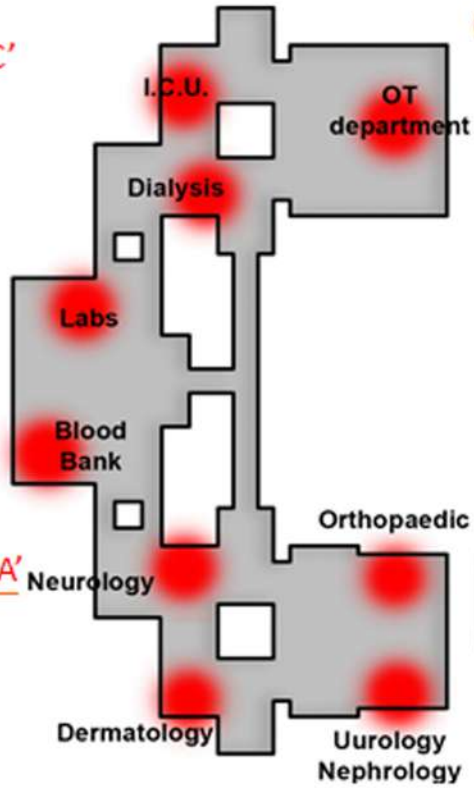


DOCTORS CORRIDOR | CORRIDOR FOR STAFF AND DOCTORS



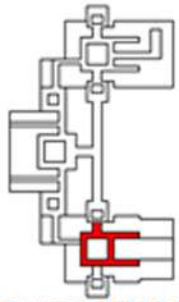
FIRST FLOOR PLAN

On the first floor the areas are accessible by the doctors going for surgeries, outpatients and the normal staff and the supporting doctors.

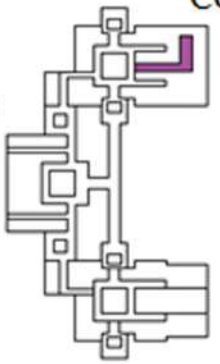


BASIC DEPARTMENT ZONING

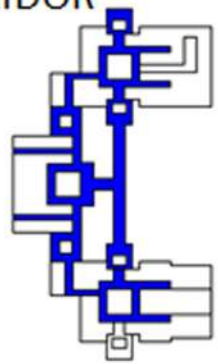
CIRCULATION:



OUTPATIENTS CORRIDOR

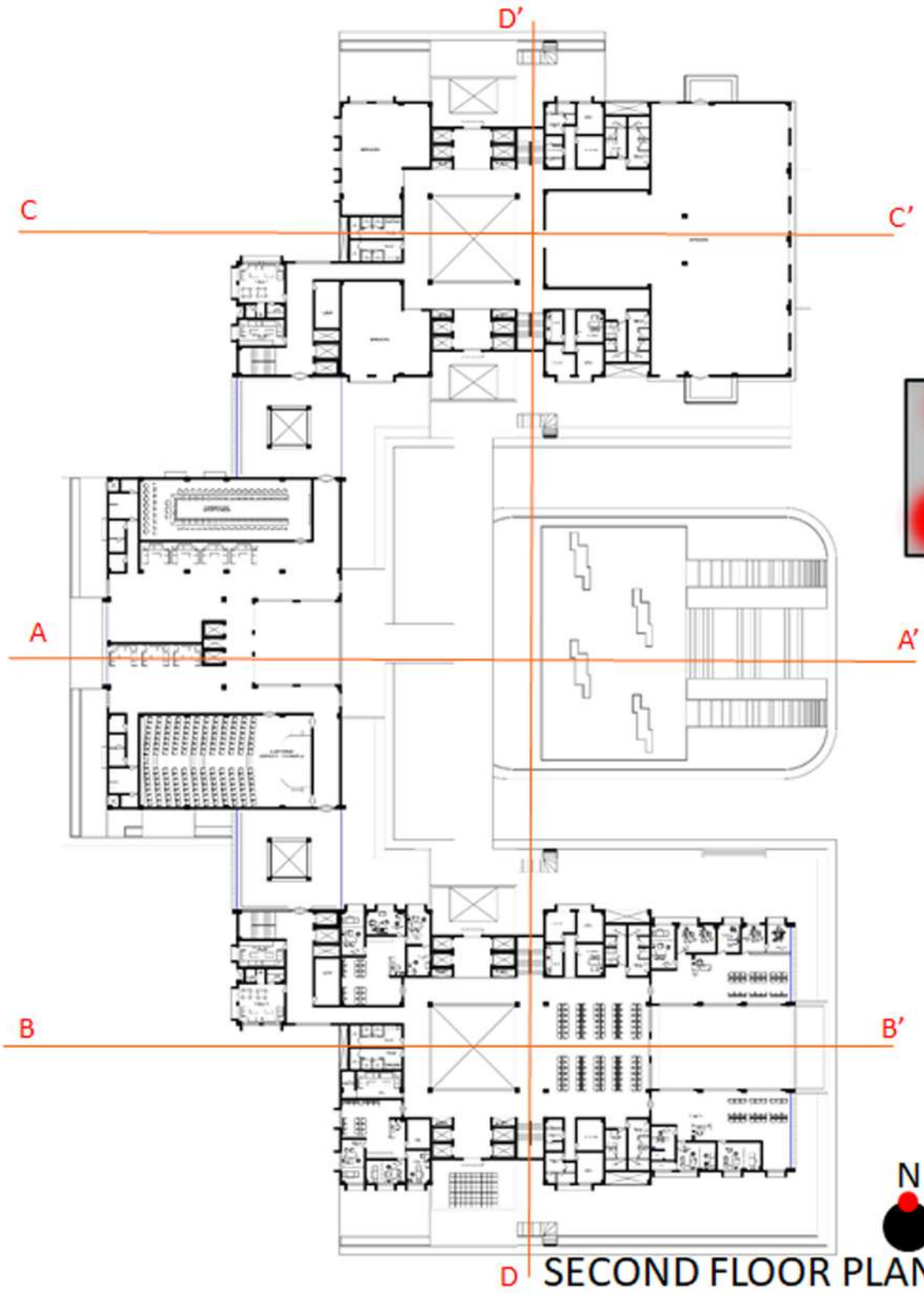


DOCTORS CORRIDOR



CORRIDOR FOR STAFF AND DOCTORS

N



SECOND FLOOR PLAN

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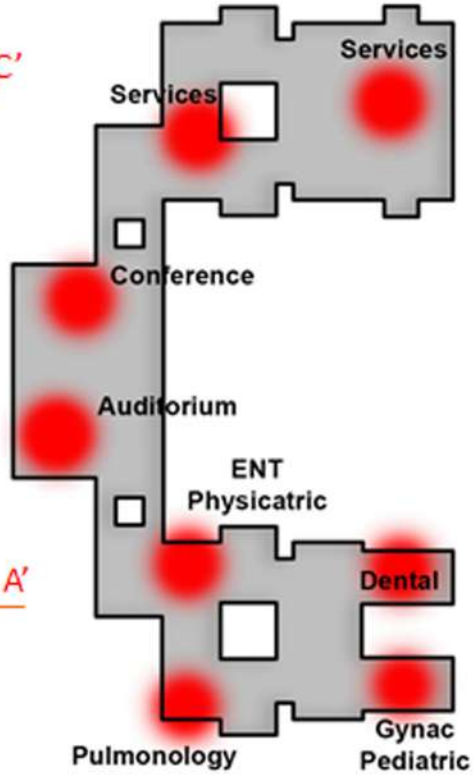
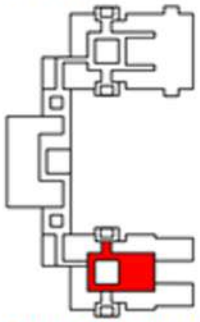
On the second floor the areas are accessible by the visitors, outpatients and the normal staff and the supporting doctors.

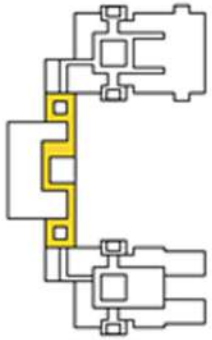


BASIC DEPARTMENT ZONING

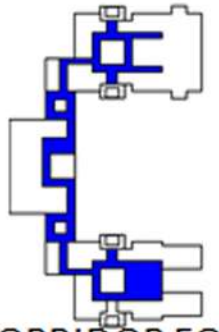
CIRCULATION:



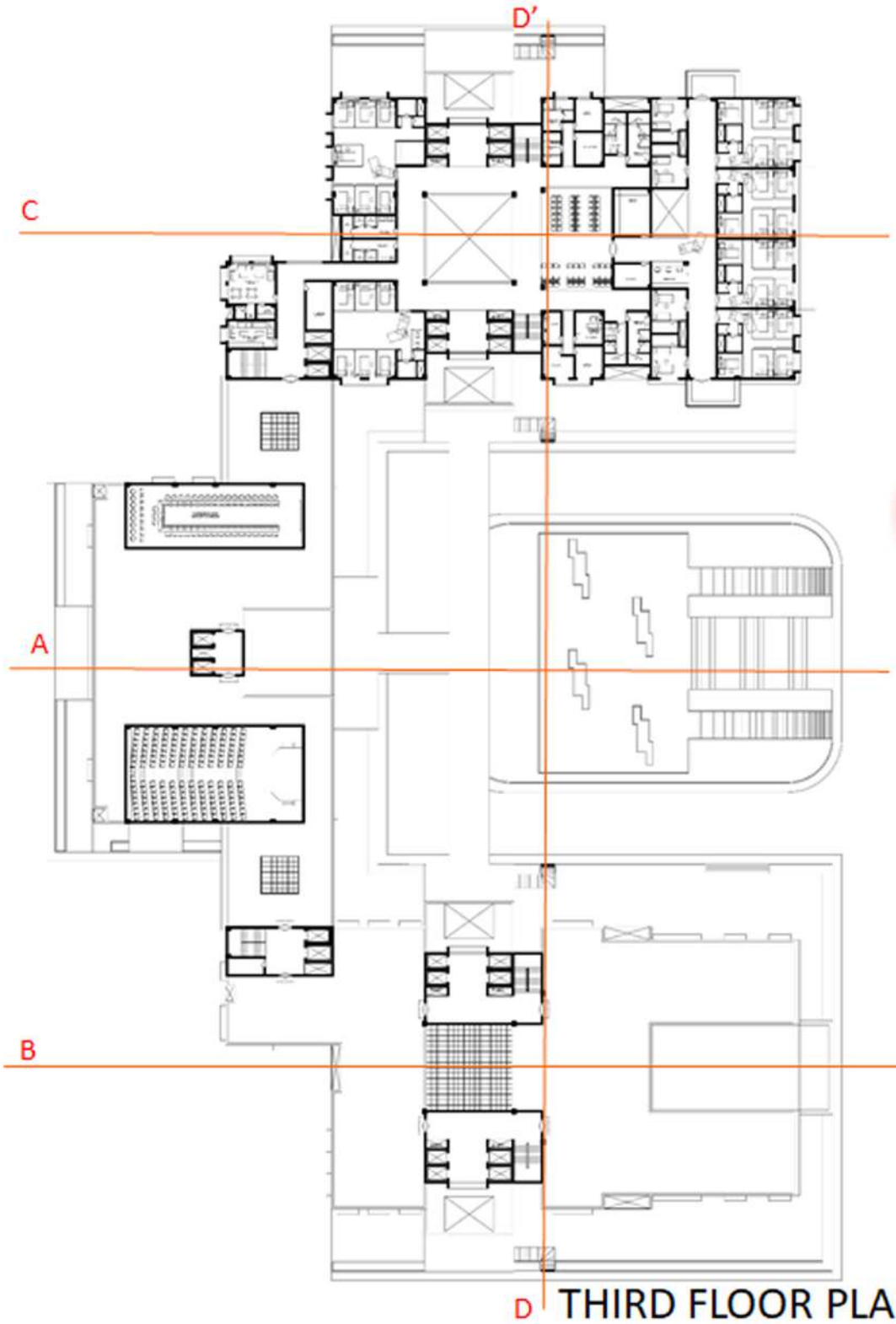
OUTPATIENTS CORRIDOR



VISITORS CORRIDOR



CORRIDOR FOR STAFF AND DOCTORS



THIRD FLOOR PLAN

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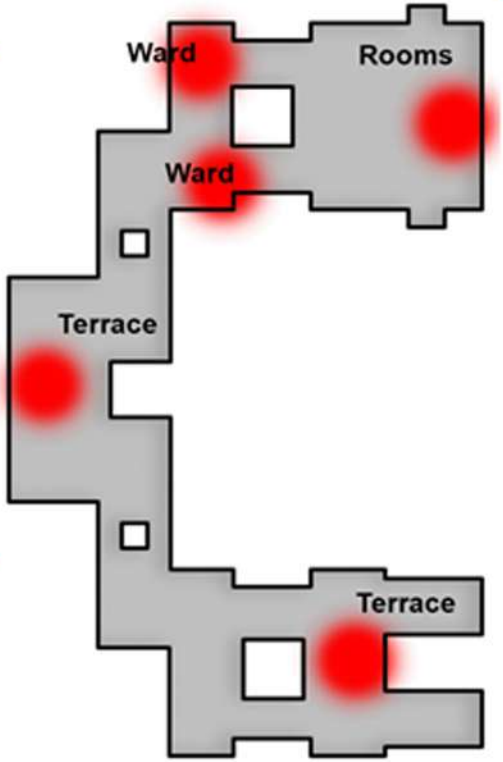
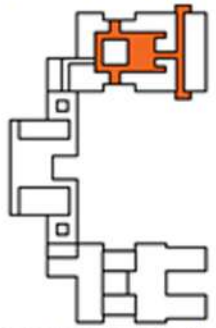
On the third floor the areas are accessible by the doctors, inpatients, visitors relatives and the normal staff and the supporting doctors.

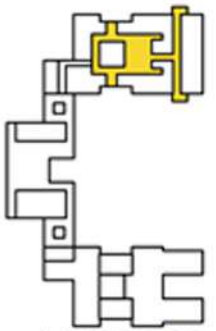
CIRCULATION:



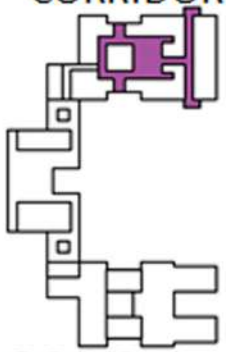
BASIC DEPARTMENT ZONING



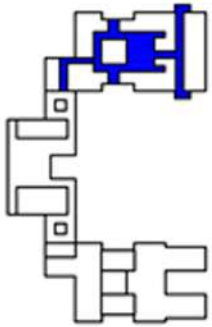
INPATIENTS CORRIDOR



VISITORS CORRIDOR

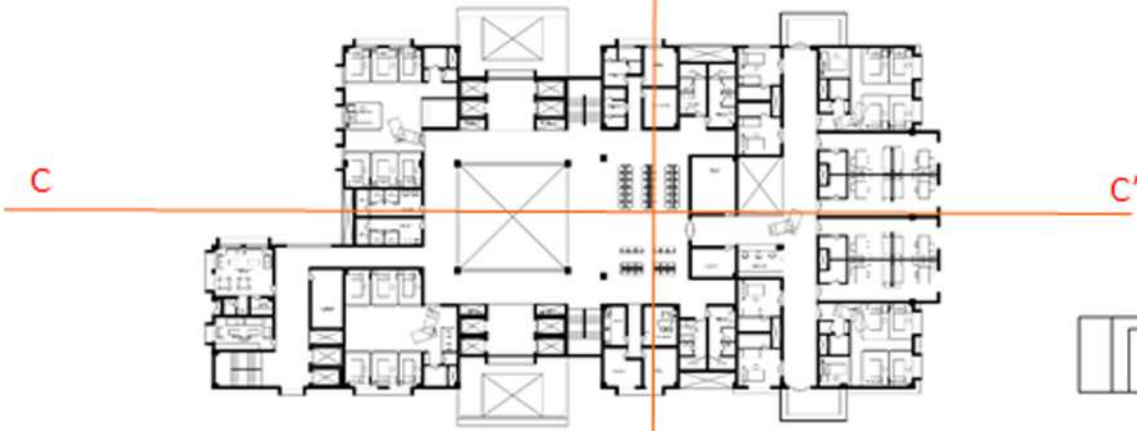


DOCTORS CORRIDOR



CORRIDOR FOR STAFF AND DOCTORS

FOURTH FLOOR PLAN



FIFTH FLOOR PLAN

SIXTH FLOOR PLAN

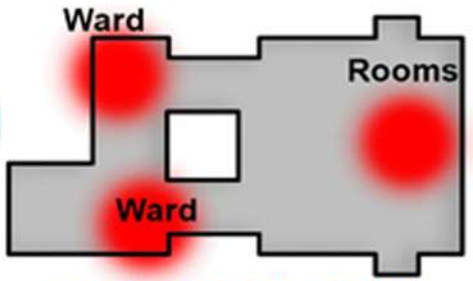
On the fourth, fifth and sixth floor the areas are accessible by the doctors, inpatients, visitors relatives and the normal staff and the supporting doctors.

There are five occupancy room

General wards

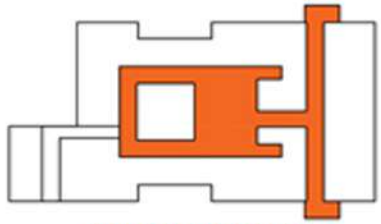
Single occupancy room

Twin room

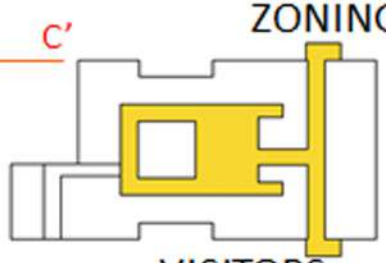


BASIC DEPARTMENT ZONING

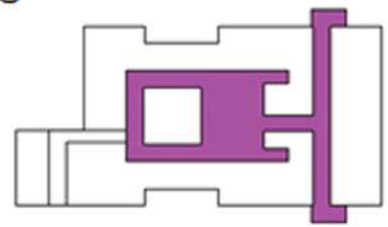
CIRCULATION:



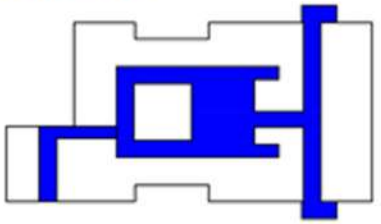
INPATIENTS CORRIDOR



VISITORS CORRIDOR



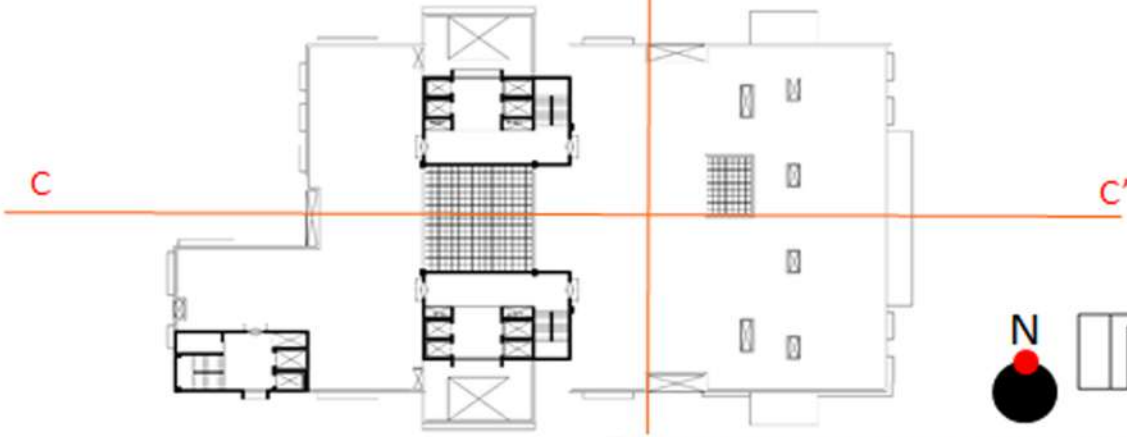
DOCTORS CORRIDOR



CORRIDOR FOR STAFF AND DOCTORS

N

SEVENTH FLOOR PLAN



TERRACE FLOOR PLAN

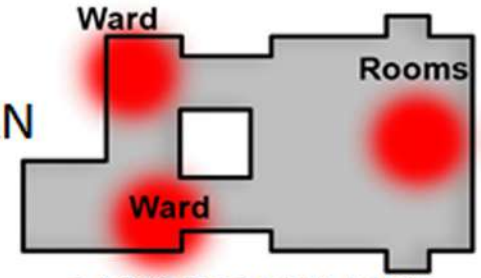
On the seventh and terrace floor the areas are accessible by the doctors, inpatients, visitors relatives and the normal staff and the supporting doctors.

There are single occupancy room

General wards

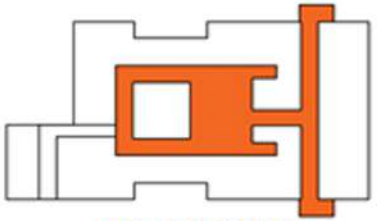
Suite rooms

Premium room

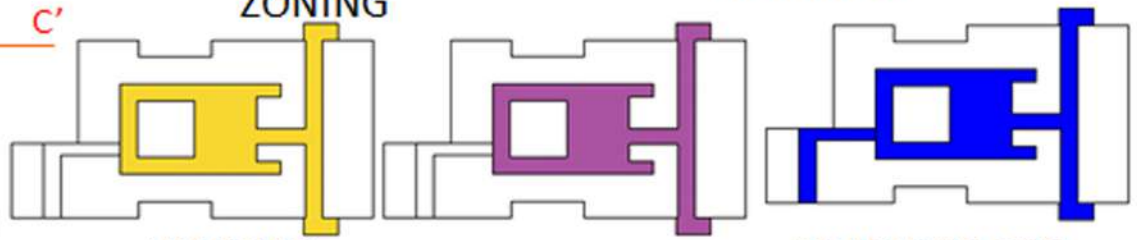


BASIC DEPARTMENT ZONING

CIRCULATION:



INPATIENTS CORRIDOR



VISITORS CORRIDOR

DOCTORS CORRIDOR

CORRIDOR FOR STAFF AND DOCTORS

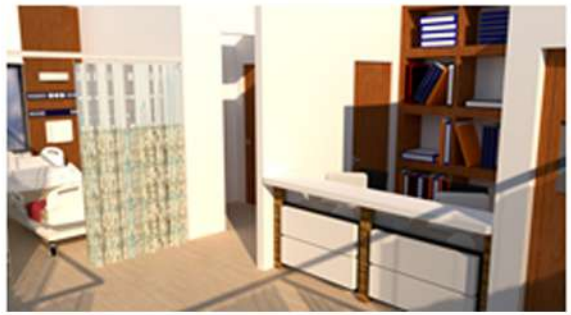
SECTION CC'

DIFFERENT ROOM GATEGORY: GENERAL WARD

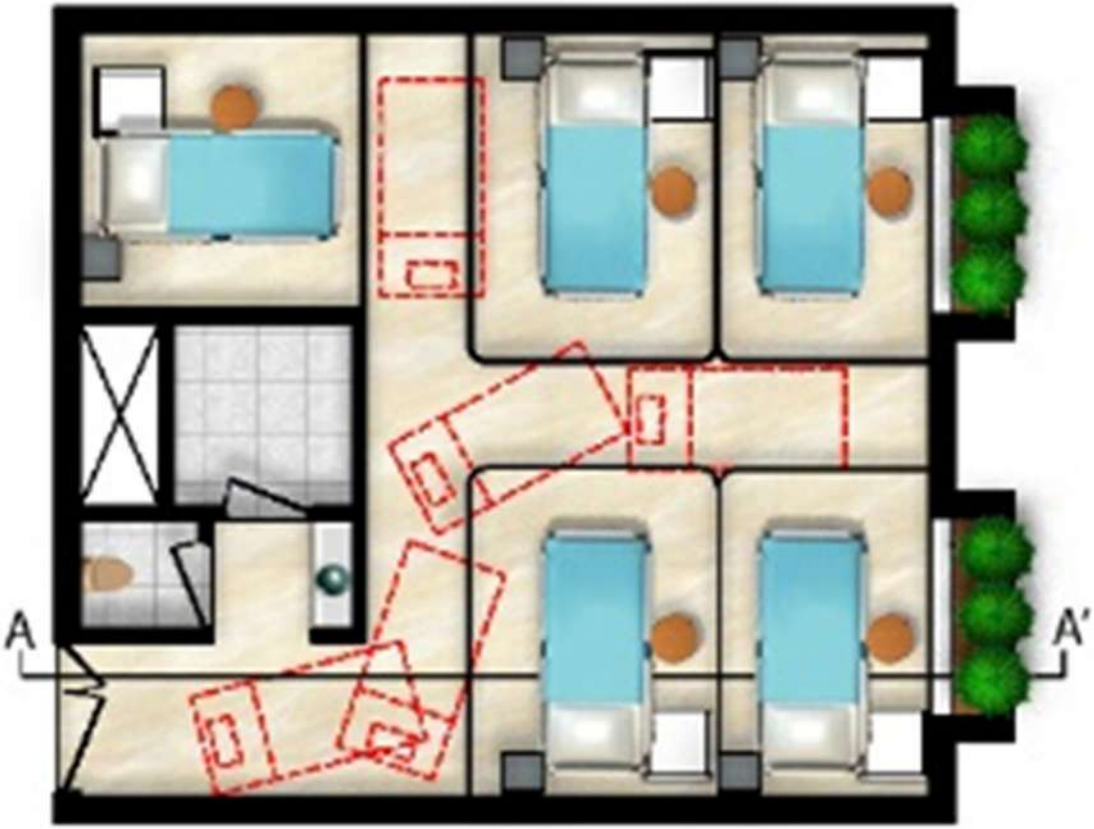
ISO VIEW

SECTION - BB'

SECTION - AA'



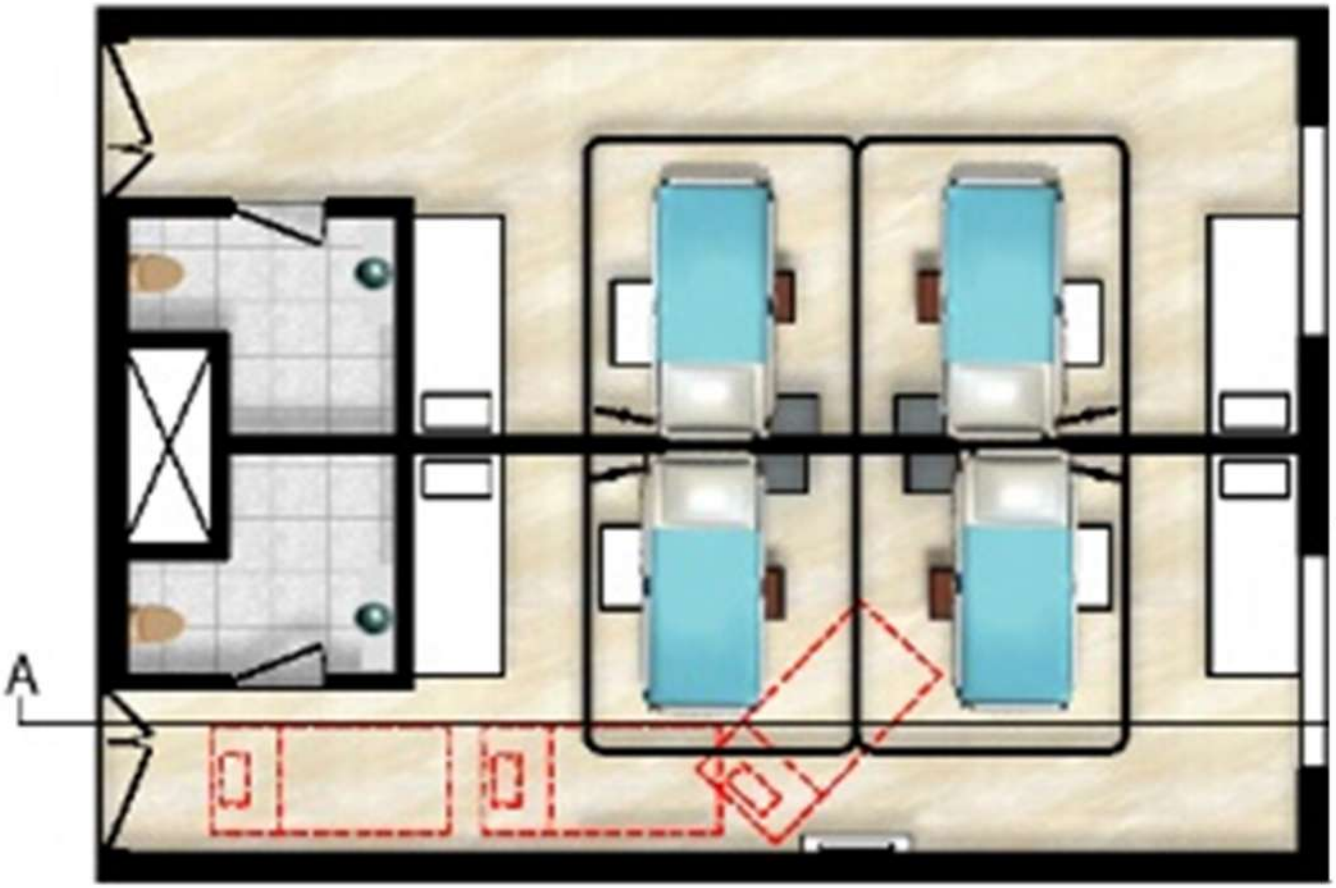
DIFFERENT ROOM GATEGORY: FIVE OCCUPANCY ROOM

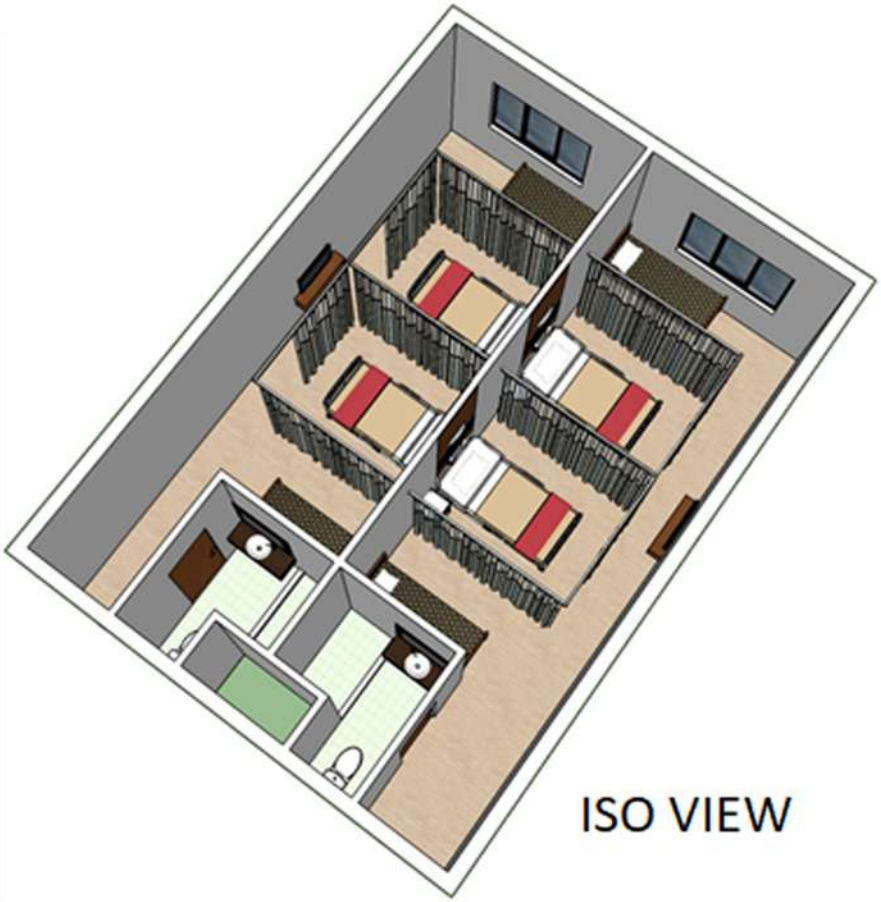


ISO VIEW

SECTION - AA'

DIFFERENT ROOM GATEGORY: TWIN ROOM

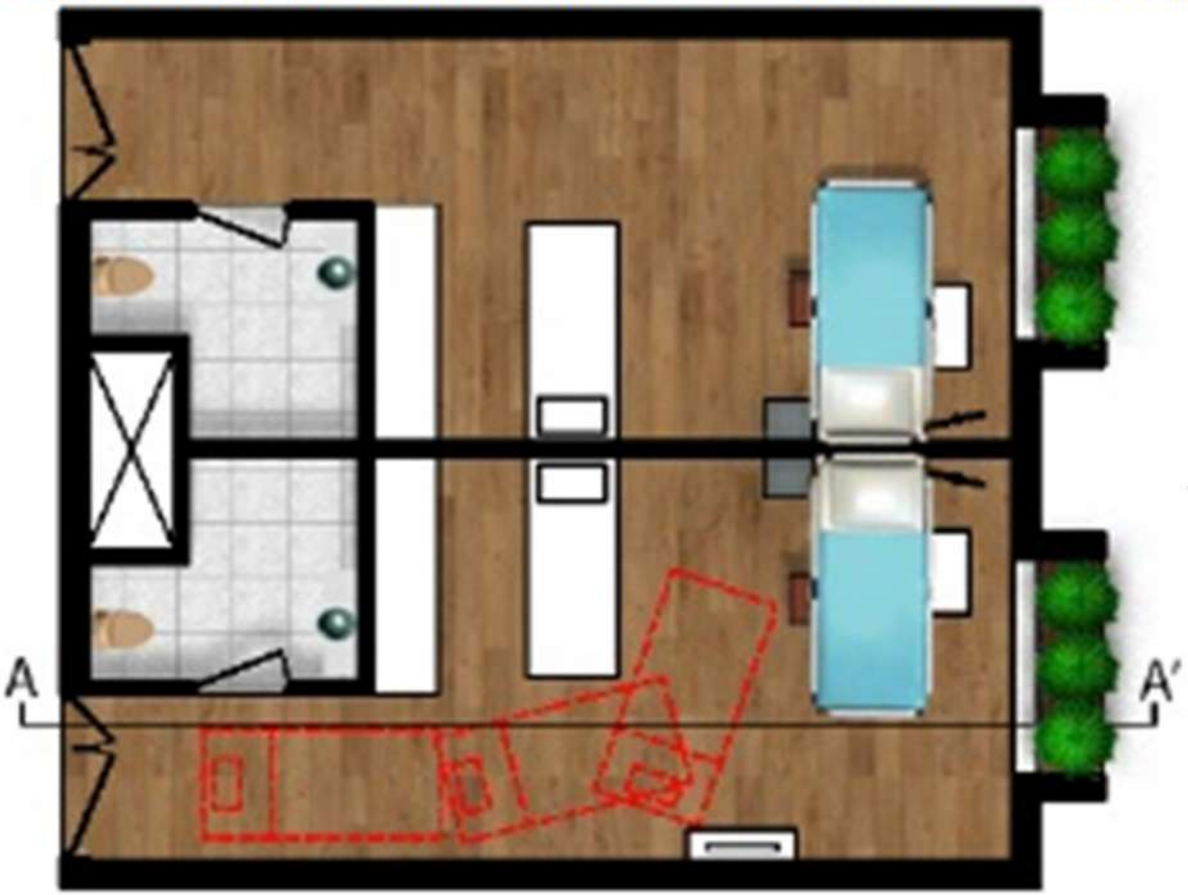




ISO VIEW

SECTION - AA'

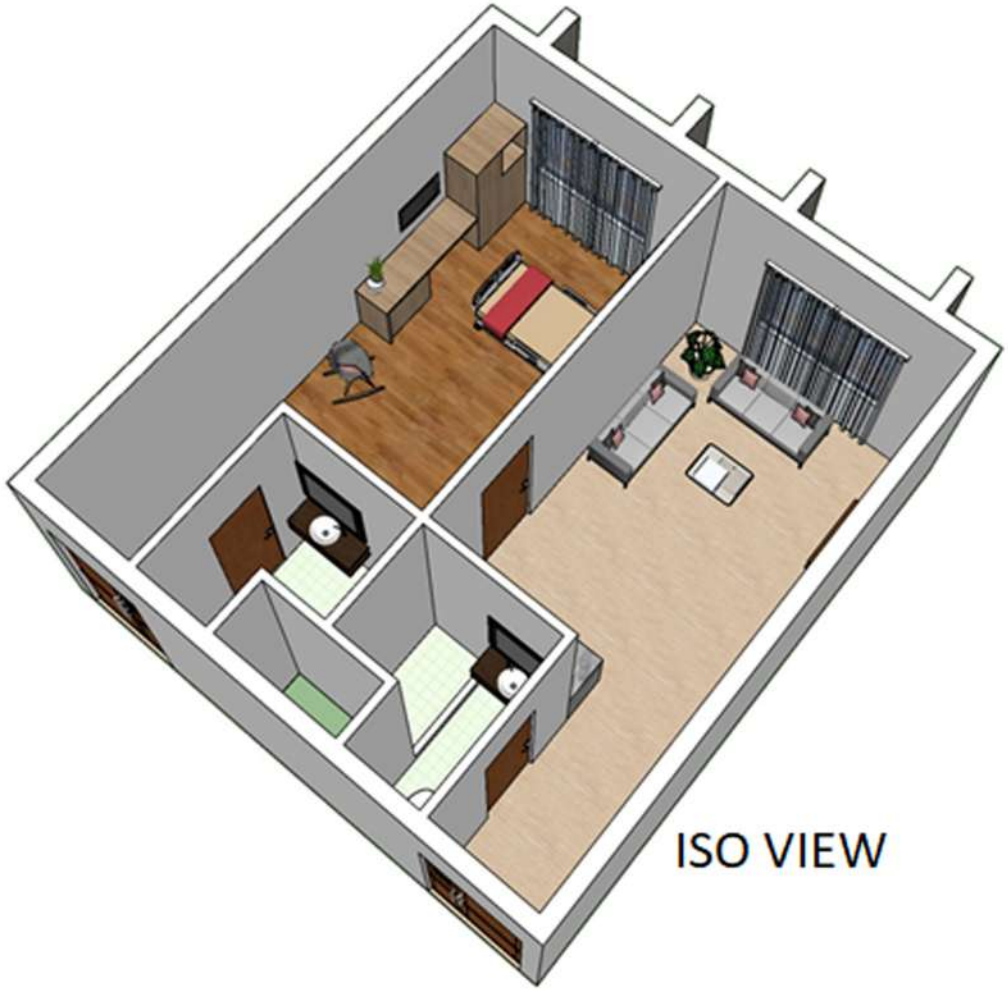
DIFFERENT ROOM GATEGORY: SINGLE OCCUPANY ROOM



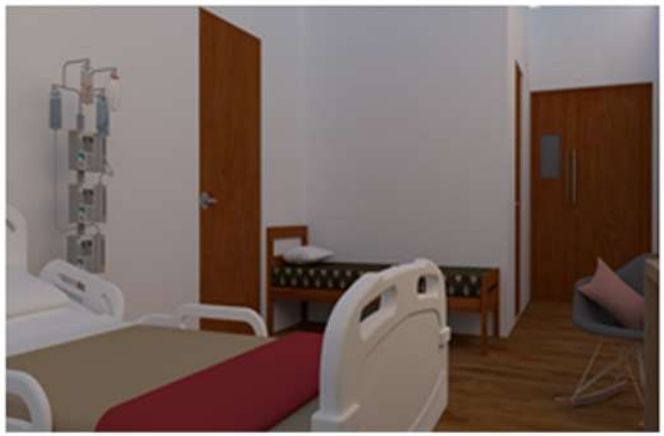
ISO VIEW

SECTION - AA'

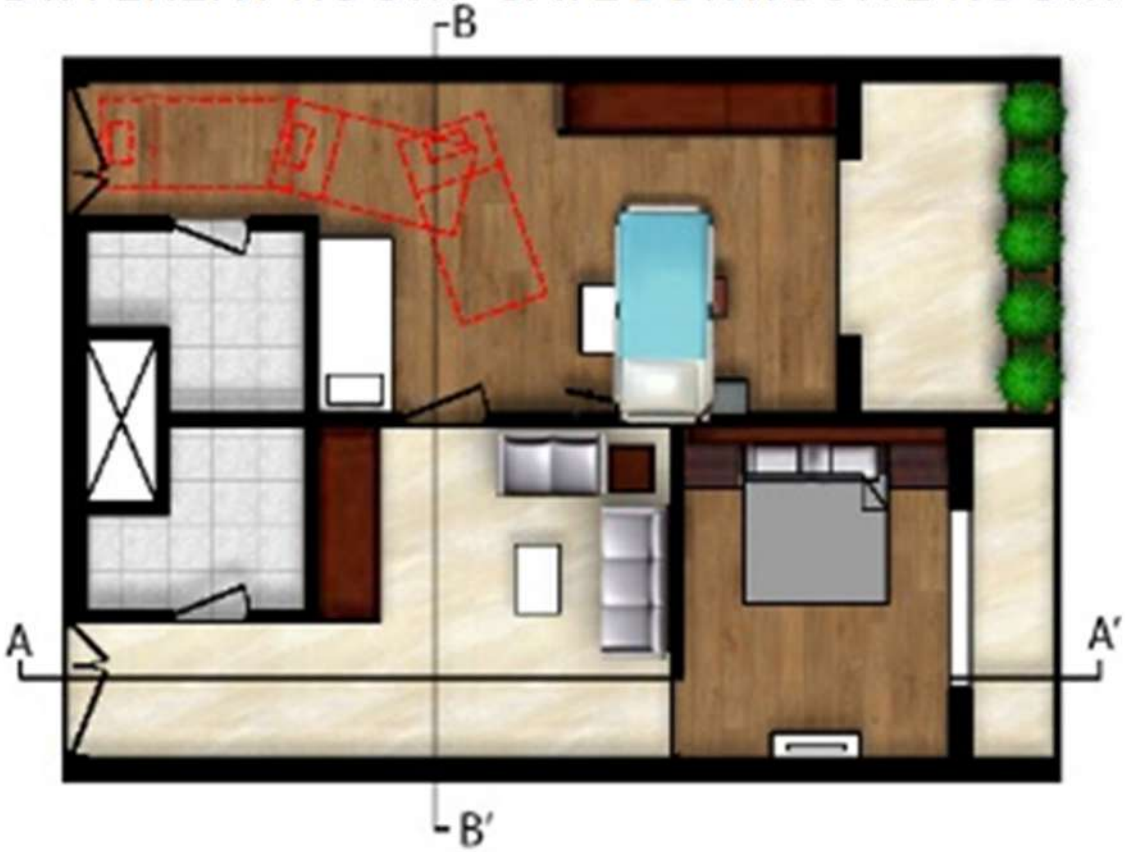
DIFFERENT ROOM GATEGORY: PREMIUM ROOI



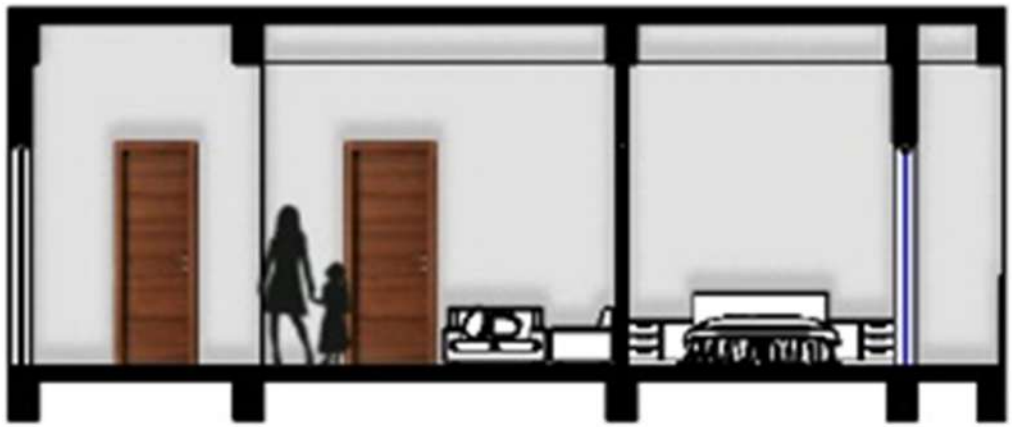
ISO VIEW



DIFFERENT ROOM GATEGORY: SUITE ROOM



ISO VIEW



SECTION - AA'

ARCHITECTURE HELPS IN HEALING:

1. ART AND MUSIC

THERE CAN BE A MELODIOUD MUSIC WHICH KEEPS ON THE ENTIRE DAY THAT MAKES A PATIENT FEEL FRESH.

THERE CAN BE MOTIVATIONAL IMAGES THOUGHTS SOME WRITINGS ON THE WALL FRAMES WHICH GIVES THE PATIENT OF GEETING RECOVERED AND ENJOY HIDS LIFE.

2. SOCIAL SUPPORT:

WHEN A PERSON IS NOT WELL HE NEEDS SOME ONE AROUND TO SUPPORT HIM. TO HAVE MOTIVATIONAL TALKS.TO HAVE SOME DIFFERENT SPACE OF EXPERIENCE

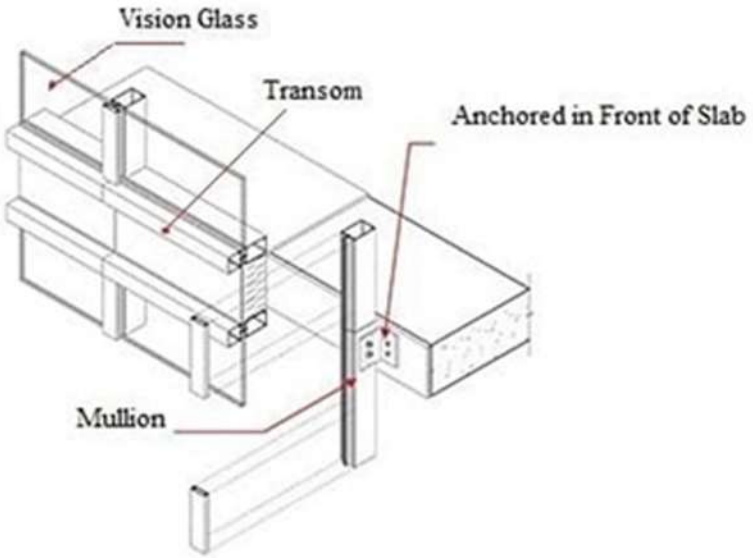
3. ENTERTAINMENT:

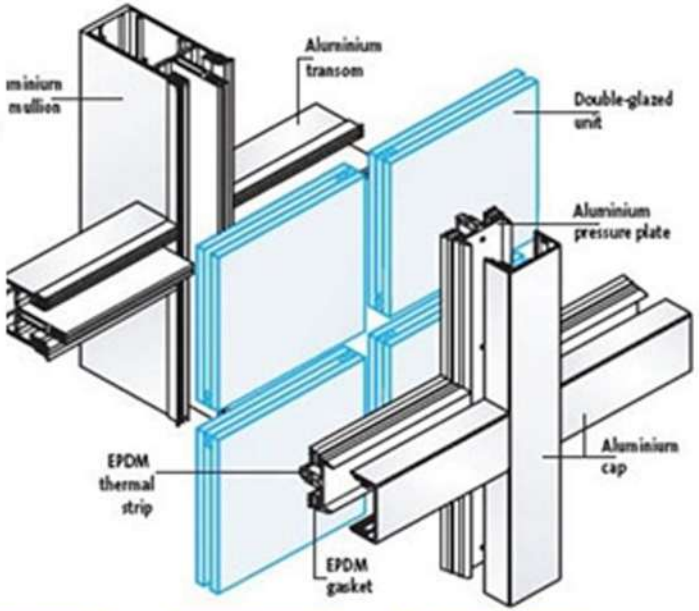
DURING A TREATMENT A PATIENT AS WELL THE FAMILY STAYS AT A PERTICULAR FOR A LONG PERIOD OF TIME BY WHICH THEY GET BORED AND AT CERTAIN TIME THE RECOVERY AFFECTS IT AT A CERTAINLEVEL . SO AN ENTERTAIMENT PLACE IS NEEDED WATHER YOUNG OLD OR A CHILD

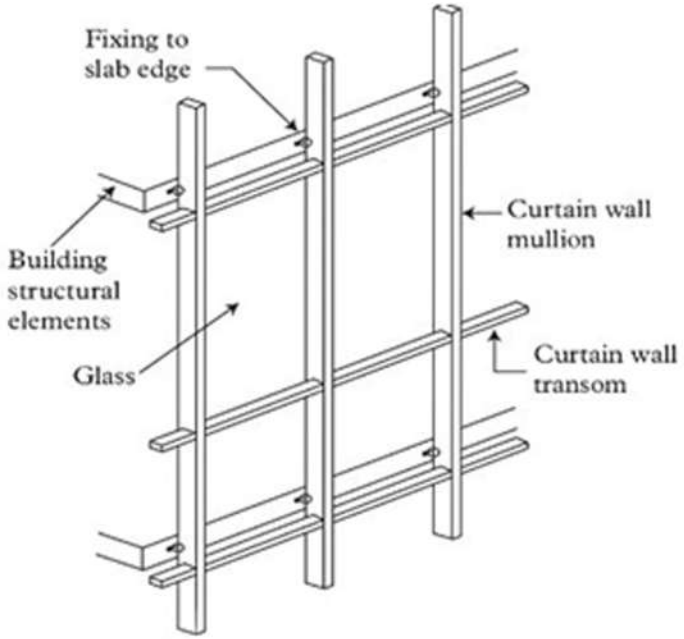
4. VIEWS:

VIEWS OF VEGETATION AND WATER APPEAR TO SUSTAIN INTEREST AND ATTENTION MORE EFFECTIVELY THEN URAN VIEWS. BECAUSE MOST NATURAL VIEWS APPARENTLY ELITE POSITIVE FEEINGS REDUCE FEAR , HOLD INTEREST AND MAY BLOCK OR REDUCE STRESSFUL THOUGHTS

CURTAIN WALL DETAIL :







False ceiling is used in all the part of the building. It is installed at a height of 3.2m from the floor. It is used as a cover for all the major services. The ducting, water pipes, vents, oxygenpipe, nitrogen pipe etc all comes inside the ceiling with the artificial light.