ENGINEERING COLLEGE ROHINI SECTOR -3 DELHI

THESIS GUIDE –AR.KESHAV KUMAR

AR.ABHINAV KHARE

.

ARCHITECTURAL DESIGN THESIS 2019-2020

SCHOOL OF ARCHITECTURE AND PLANNING BABU BANARSI DAS UNIVERSITY LUCKNOW.

THESIS CO-ORDINATORS :

PROF. URVASHI DIXIT

AR. SHAILESH KUMAR YADAV

Alok Verma
Final Year B.Arch
University roll no. 1150101011

CERTIFICATE

- I hereby recommend that the thesis, entitled “ENGINEERING COLLEGE.”, prepared by Mr. ALOK VERMA under
- my supervision, is the bonafide work of the student and be accepted as a partial fulfillment for the award of Bachelors Degree in Architecture School of Architecture BBDU,

…….
(Signatures of the Guide)

……
(Signatures: Dean)

Recommendation:

Accepted
Not Accepted

……
Examiner 1

……
Examiner 2

……
Examiner 3

…….
Examiner 4

……
Examiner 5

ACKNOWLEDGEMENT

I WOULD LIKE TO EXPRESS MY SINCERE THANKS TO MY THESIS GUIDE AR. KESHAV KUMAR FOR GUIDING ME THROUGH OUT THE ARCHITECTURAL THESIS : FOR SUGGESTIONS AND INPUTS AT CRITICAL STAGES OF DESIGN TRANSITION THAT FINALLY HELPED TO SHAPE THE IDEA.

I WOULD DEEPLY THANK TO PROF. SANGEETA SHARMA AND THESIS CO-ORDINATORS :

AR. SHAILESH KUMAR YADAV AND PROF. URVASHI DIXIT FOR GUIDENCE THROUGH OUT ALL THE THESIS STAGES AND FOR HELP AND SUPPORT.

FINALLY I WOULD LIKE TO PAY MY GRATITUDE TO ALL THE FACULTIES OF SCHOOL OF ARCHITECTURE AND PLANNING(SAP) , B.B.D.UNIVERSITY LUCKNOW .

SUMMARY

THE PROJECT IS ALL ABOUT DESIGNING AN “ENGINEERING COLLEGE” AT THE SITE OF ROHINI SECTOR -3 DELHI. THE PROJECT ENGINEERING COLLEGE PROVIDE EDUCATION , A ENGINEERING COLLEGE FOR LEARNING CENTER OF CIVIL ENGINEERING,MECHENICAL ENGINEERING,ELECTRICAL ENGINEERING,COMPUTER SCIENCE.

THE CHALLENGE HERE IS TO DESIGN THE BUILDINGS TO FULFILL ITS PURPOSE MORE ADEQUATELY AND EFFICIENTLY .

CONTENTS

INTRODUCTION 6

1- what is engineering,typs of engineering,aim& objects.

SITE STUDY 7-8

1- location , 2- demography , 3- climate , 4- physiography , 5- neighbourhood , 6- site details

CASE STUDY 9-11

1- I.I.T delhi, 2-I.E.T lucknow

LITRATURE STUDY 12-14

1- H.B.I.T kanpur, 2- I.I.T kanpur

AREA ANALYSIS 15-16

1- comperative analysis , 2- area requirements

CONCEPT 17-20

1- introduction , 2- admin block , 3- institutional block ,4- residential area , 5-zoning

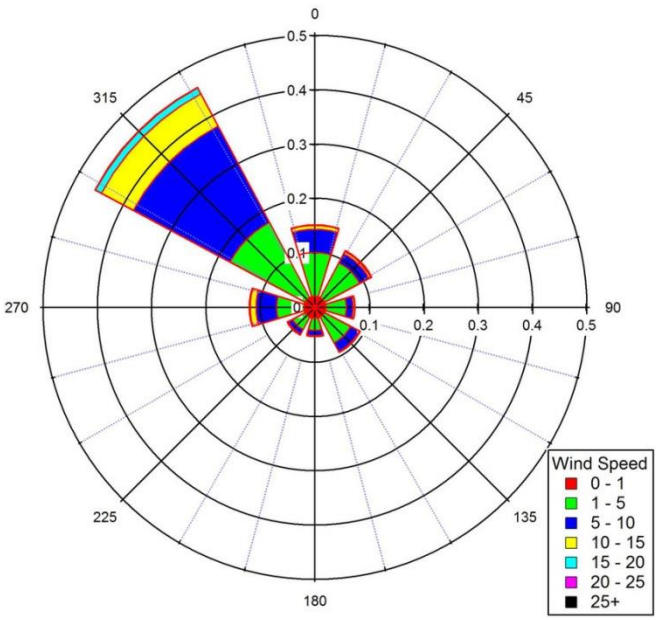
CLIMATE STUDY:-

.

CLIMATE OF DELHI: Delhi stretches over an are of 1483 sq.km it stand in the middle of indian sub –continent,between the himalayas and Aravalli range .
Dimension -33 miles wide and 30 miles broad. Height above mean sea level -213m to 305m
Delhi has a semi arid climate,with hot summers,average rainfall and moderate winter ,mean monthly tempreatures range from 14.3c in january to 34.5c in june.

SUMMER:-
Summer begins in early April and continues till the end of June, with the heat peaking in May. It is characterized by extreme heat, low humidity, very hot winds and thunderstorms. Delhi's proximity to the Thar Desert results in hot, dry continental winds, called loo, at times blowing all across from the West Asian mainland, making the days feel hotter. These winds, blowing over from vast land stretches, are very hot and dry. Since the Western Disturbance depression moves eastward (and is the reason for cyclonic occurrences in Eastern Coastal areas) by this time of the year, there is no moisture-laden wind to increase humidity.

WINTER:-
Winter arrives in Delhi by late November or early December. Minimum temperatures gradually enter single digits by this time of the year, while days are pleasant. Though usually not cold initially, December suddenly becomes cold in the latter half, as chilly north-western winds from the Himalayas begin sweeping the Northern Plains.



Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Average high °C (°F)	21.1 (70)	24.2 (75.6)	30.0 (86)	36.2 (97.2)	39.6 (103.3)	39.3 (102.7)	35.1 (95.2)	33.3 (91.9)	33.9 (93)	32.9 (91.2)	28.3 (82.9)	23.0 (73.4)	31.4 (88.5)
Average low °C (°F)	7.3 (45.1)	10.1 (50.2)	15.4 (59.7)	21.5 (70.7)	25.9 (78.6)	28.3 (82.9)	26.6 (79.9)	25.9 (78.6)	24.4 (75.9)	19.5 (67.1)	12.8 (55)	8.2 (46.8)	18.8 (65.8)
Rainfall mm (inches)	20.3 (0.799)	15.0 (0.591)	15.8 (0.622)	6.7 (0.264)	17.5 (0.689)	54.9 (2.161)	231.5 (9.114)	258.7 (10.185)	127.8 (5.031)	36.3 (1.429)	5.0 (0.197)	7.8 (0.307)	797.3 (31.389)
Avg. rainy days	1.7	1.3	1.2	0.9	1.4	3.6	10.0	11.3	5.4	1.6	0.1	0.6	39.1
Mean monthly sunshine hours	213.9	217.5	238.7	261.0	263.5	198.0	167.4	176.7	219.0	269.7	246.0	217.0	2,688.4

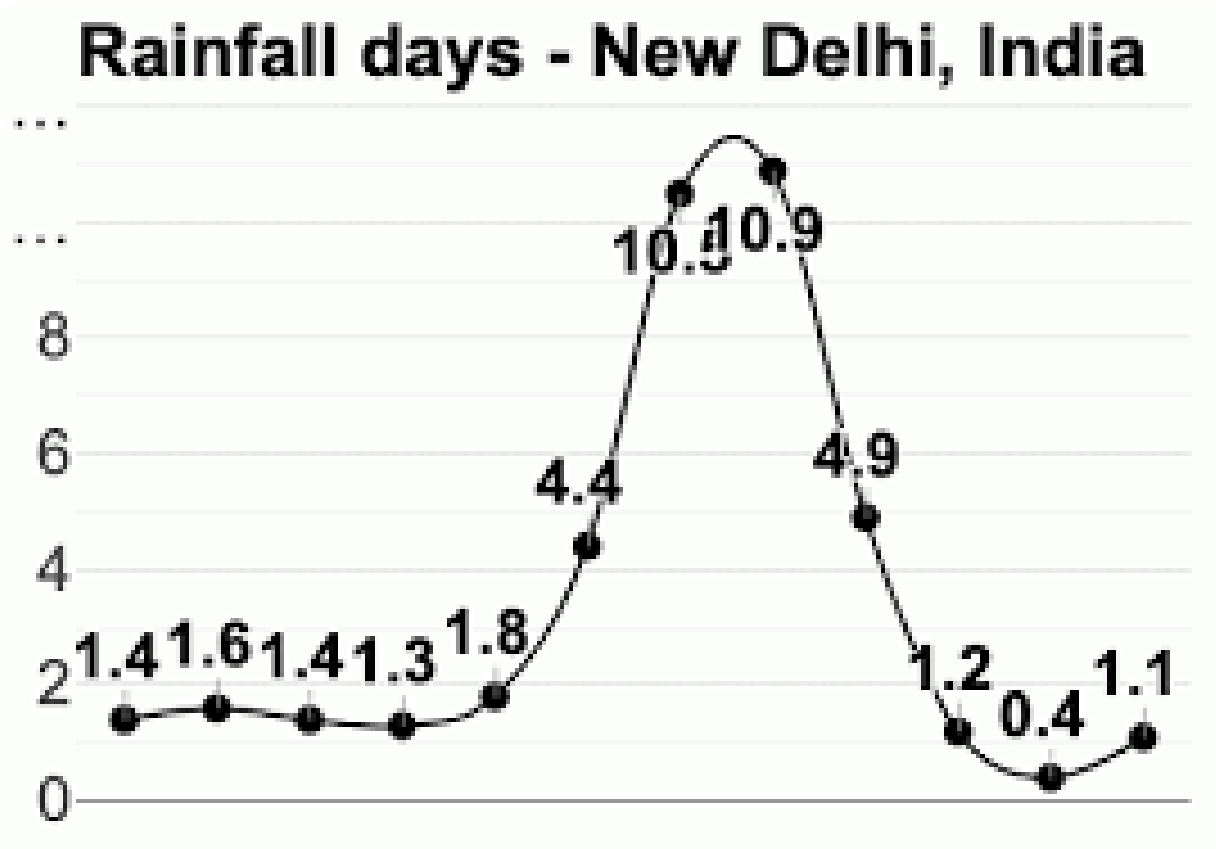
Effect of climate on structuctures of shelter at delhi Roofs at delhi are generally straight and flat because ration of summer is greater than any other climate. Walls in delhi are heat reflecting Generally the size of the windows in delhi was little bit small by which the sufficient amount of light may enters through it

Overview of Seasonal Distribution Summer: April, May, June; Hot to very hot; Very low to normal humidity (Dry weather); Low to Good precipitation Monsoon (Rainy): July, August, September; Hot, Pleasant during rains; High to very high humidity; Heavy precipitation Autumn: October, November; Warm days, Cool nights, Pleasant; Very low to low humidity; Very low precipitation Winter: December, January; Cool to Cold; Low humidity; Low precipitation Spring: February, March; Warm days, Cool nights, Pleasant; Very low to low humidity; Good precipitation

MONSOON:-

Monsoon winds arrive in Delhi by either the end of June or the first week of July. The arrival of moisture laden South-Western winds, traveling from the Arabian Sea marks the onset of Rainy season in Delhi. This season is marked by high levels of humidity and high heat.

Extreme Temperatures Temperature records for Delhi exist for a period of a little over 100 years. The lowest ever temperature reading during this period is -2.2°C, recorded on January 11, 1967 at Met Delhi Palam. And, the highest ever temperature reading during the same period is 48.4°C, again recorded at Met Delhi Palam.



INTRODUCTION

WHAT IS ENGINERING:-

ENGINEERING IS THE PROFESSION IN WHICH KNOWLEDGE AND NATURAL SCIENCES APPTLIED WITH JUDGEMENT TO DEVELOP WAYS ECONOMICALLY UTILIZE THE THE MATERIAL AND PROCESS OF THE NATURE FOR THE BENIFIT OF MAKING STRUCTURE.

father of engineering

Sir Mokshagundam Visvesaraya is regarded as the father of engineering in India because of his immense contributions to engineering as also in other fields.

first engineering college of India locateted The first engineering college was established in present day Uttarakhand at Roorkee in the year 1847 for the training of Civil Engineers

scope :-

1. as number of students increased very rapidly and the government institute are limited , resulted the need of new engineering college.

oldest engineering college in india

1.IIT Delhi.
2.IIT Kharagpur.
3.IIT Kanpur.
4.ISM Dhanbad.
5.NIT Trichy.
6.NIT Silchar.
7.IIT Roorkee.
8.IIIT Hyderabad

tpes of engineering

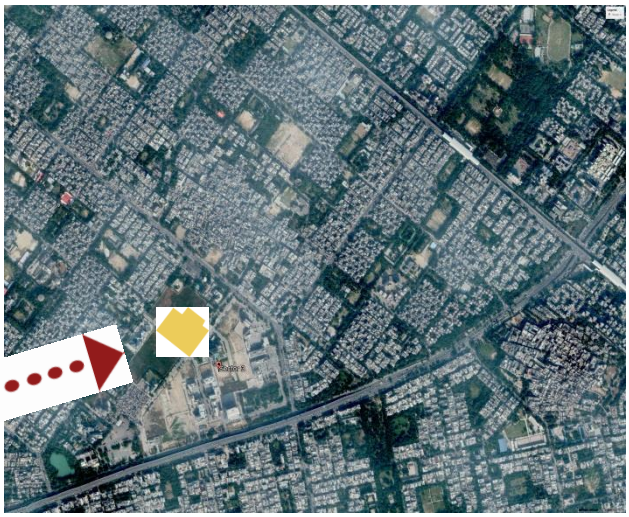
1.civil engineering
2.mehanical engineering
2.aerospace engineering
4.chemical engineering
5.electrical engineering
6.automobile engineering
7.computer science engineering
8.electronic engineering

Mehanical engineering Electrical engineering Civil engineering

Automobile engineering

aims & objectives :- 1. To provide proper education and facilites.
2.To providev friendly environmentfor students under the proper guidance of the teacher.

SITE ANALYSIS



SITE LOCATION:-

SECTOR 3 , POCKET 12 , ROHINI)

THE OUTER RING ROAD IS AT RING ROAD IS AT A DISTANCE OF APPROX 1 KM AND THERE ARE TWO METRO STATION ROHINI EAST AND PITAMPURA OF RED LINE OF DELHI METRO IN THE PROXIMATE OF THE SITE FOR CAMPUS.

THE SITE OF NEW CAMPUS OF AUD IS IN ROHINI DDAPHASE-1 SCHEME, DELHI BEING DEVELOPED BY DDA . THE TOTAL PLOT AREA 90,000 SQM (22.23 ACRES) AND THERE ARE NO ENCUMBRANCES ON SITE. THERE ARE NO OVERHEAD POWER LINES ON THE PLOT AND THE SITE IS FREE FROM ALL ENCUMBRANES.

DETAILED OF THE SITE :-

1.*THE PROPOSED ARE AUD CAMOUS OF ROHINI LIES IN THE WESTERNPART OF THE CITY.*

2. THE EXTERNAL ROAD AND OTHERS SRVICES LIKE SEWERAGE AND STORM WATER DRAINAGEHAVE ALREADY BEEN LAID IN ROHINI. ALL SERVICS UN AUD CAMPUS WOULD BE CONECTED TO THE EXTERNAL SERVICES ALREADY LAID DOWN BY DDA .

APPROACH:-

ANAND VIHAR BUS TERMINAL 32KM

NEW DELHI RAILWAT STATION FROM 15KM

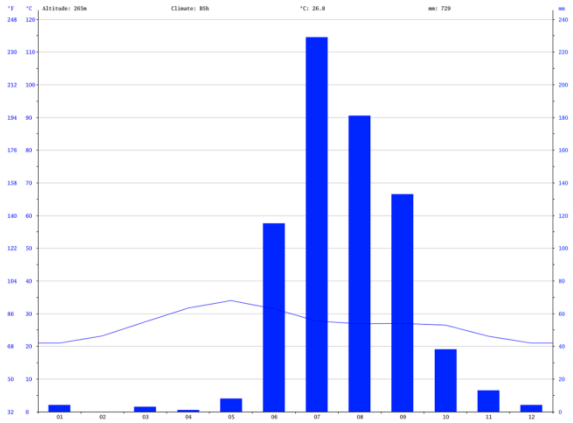
FROM NEW DELHI METRO STATION DISTANCE 15.5 KM

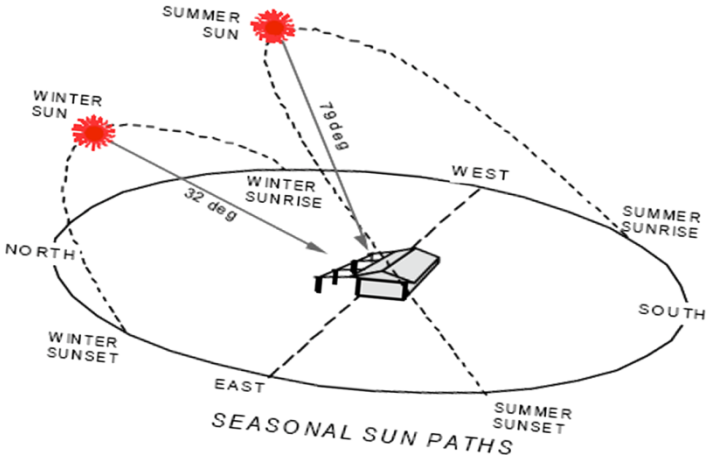
INDIRAGANDHI INTERNATIONAL AIRPORT FROM 22 KM

SITE CONDITION

LANDMARK NEAR SITE

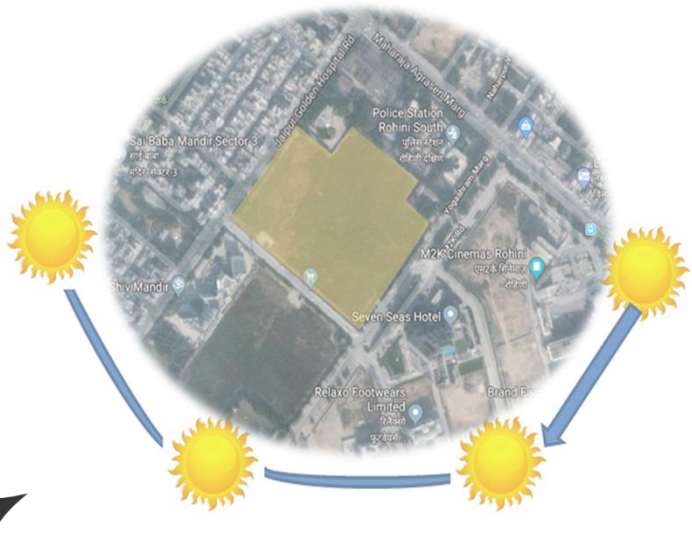
CLIMATIC CONDITION :- *DURING THE MONTH OF JANUARY , FEBRUARY , MARCH , APRIL< OCTOBER , NOVEMBER, YOU ARE MORE LIKELY TO EXPERIENCE GOOD WEATHER WITH PLEASENT AVERAGE TEMPARATUE HOT SEASON / SUMMERS ARE FROM THE MARCH TO NOVEMBER . ON AVERAGE THE WARMEST MONTH IS MAY , THE COLLEST MONTH IS JANUARY AND JULY IS THE WETEST MOTN WHERE AS NOVEMBER IS THE DRIEST MONTH IN ROHINI . - AVERAGE TEMPRATURE IN ROHINI IS 255.2 DEGREE CELCIUS - AVERAGE RAIN FALL IS 728MM*





ANNUAL TEMPERATURE CHART

SUMMMER



WINTER

SUN & WIND DIRECTION

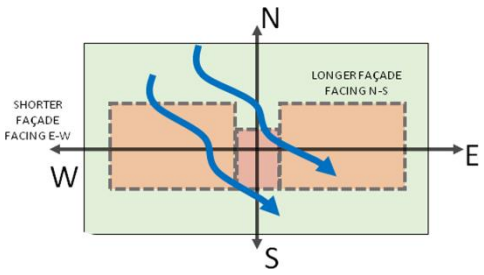
CONCEPT

ORIENTATION OF BLOCK

BUILDING FAÇADE ARE ORIENT IN ACCORDANCE WITH THE WIND FLOW PATTERN AND SUN DIRECTION WITH RESPECT TO WINTER AND SUMMER SUN, SUBSEQUENTLY FAÇADE OF THE BUILDING WILL BE SORTED OUT.

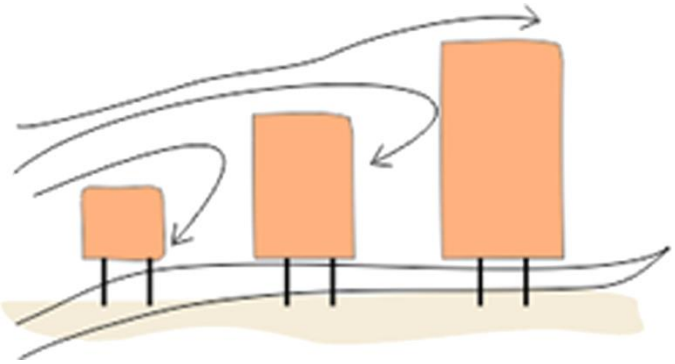
SUMMER SUN

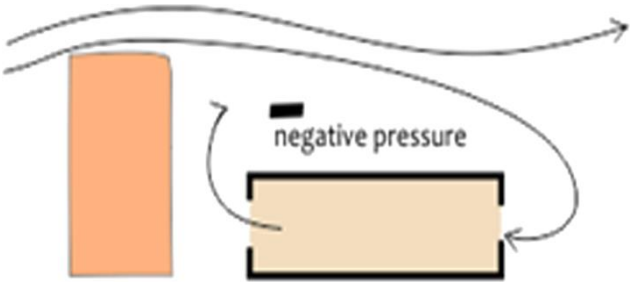
-SUN PATH IS A HIGH ANGLE SUN, NORTH TO E-W AXIS - CLARE FREE DAYLIGHT IS MOST EASILY AVAILABLE ON NORTH FACADE A MINIMAL SOLAR RADATION WILL FALL AT HIGH ANGLE.



LARGER FAÇADE OF THE BUILDINGS ARE ORIENTED TO N-S DIRECTION SO AS TO MAXIMIZE THE CROSS VENTILATION AS PER THE PREDOMINANT WIND DIRECTION IS FROM NW-SE.

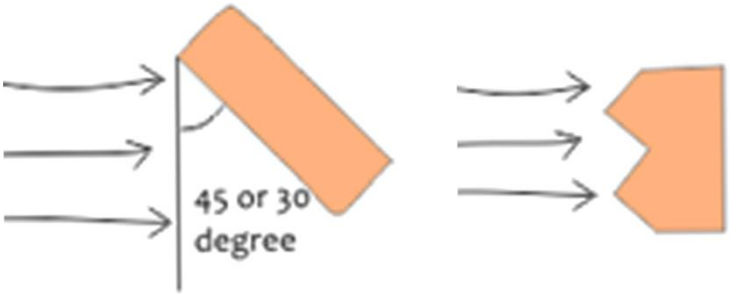
ORIENT LONGER FACADES ALONG THE THE NORTH ,THIS WILL PROVIDE GLARE FREE LIGHT IN SUMMER FROM NORTH WITHOUT SHADING AND WINTER SUN PENETRATION FROM THE SOUTH.

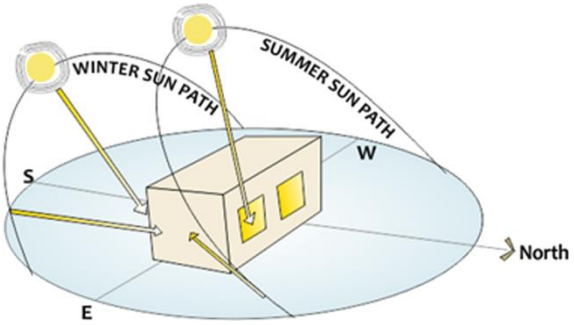




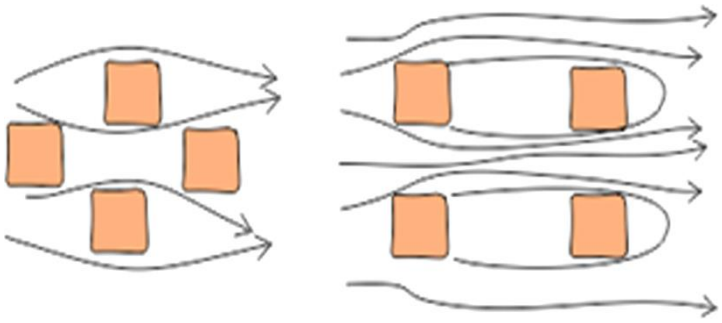
IF A SITE HAS MULTIPLE BUILDINGS, THEY SHOULD BE ARRANGED IN ASCENDING ORDER OF THEIR HEIGHTS AND BE BUILT ON STILTS TO ALLOW VENTILLATION

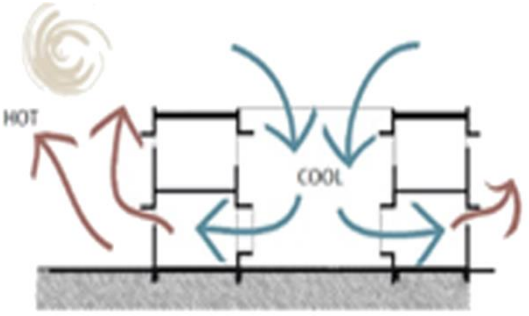
PLACE BUILDING AT 30OR 45 DEGREE ANGLE TO THE DIRECTION OF WIND FOR ENHANCED VENTILLATION FORM CAN BE STAGGERED IN THE WIND FACING DIRECTION ALSO TO ACHIEVE THE SAME RESULT.





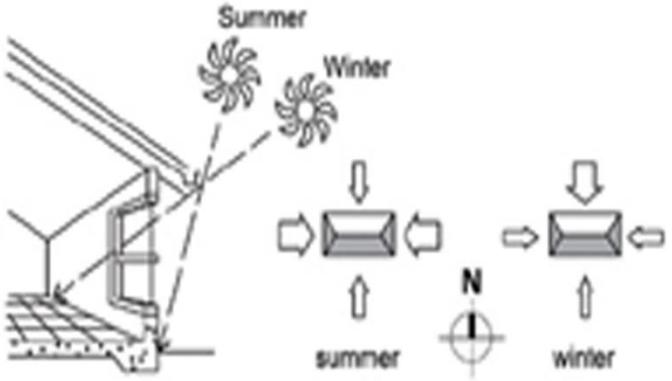
STAGGERED LAYOUT HELPS IN ACCENTU-ATING WIND MOVEMENT.



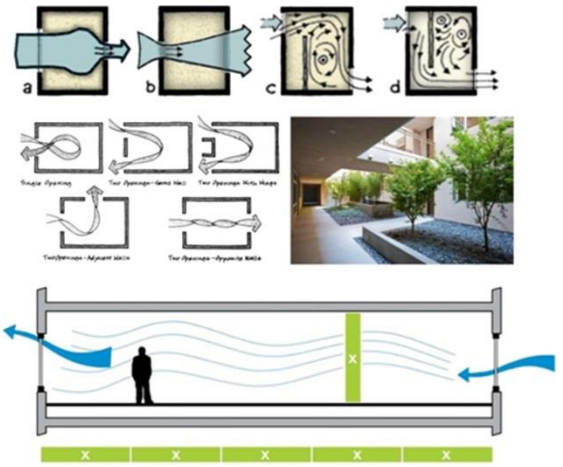


COURTYARDS HELP REGULATE THE MICROCLIMATE OF THE BUILDING

PASSIVE COOLING



OVERHANGS ON FENESTRATIONS HELP REGULATE SUN INTAKE



CASE STUDY-1
IIT DELHI

ZONING

DEPARTMENT IS A SEPARATE ENTITY WITH A COURTYARD AROUND HEAVY ENGINEERING LABORATORIES ARE PLACE ON THE GROUND FLOOR,LIGHI LABORATORIES CHEMICAL ENGINEERING LAB ON THE FIRST FLOOR WHILE PROJECT ROOM AND CLASS ROOM ARE LOCATED ON SECOND FLOOR .SEPARATE OFFICE HAVE BEEN PROVIDE TO EVERY MEMBER .THR CAMPUS ALSO OFFERS AMENITIESLIKE HOSPITAL,SHOPPING CENTER ,BANK ,POST OFFICE, ATM,STADIUM,PLAYING FIELD.

THE CAMPUS OF THE INSTITUTE EXTENDS TO AN AREA OF 320 ACRES. WITH MANY TOPOGRAPHICAL FEATURES,THE CAMPUS PRESENTS A SPECTACLE OF HORMONY IN ARCHITECTURE AND NATURAL BEAUTY.

THE CAMPUS AREA HAS BEEN DIVIDED IN TO FOUR FUNCTIONAL ZONES WITCH ARE AS FOLLOWS:

1. RESIDENTIAL ZONE FOR STUDENT
2. RESIDENTIAL ZONE FOR THE FACULTY AND STAF
3. ACADEMIC ZONE FOR THE FACULTY AND STAF.
4.CULTURAL -CUM SOCIAL AND RECREATIONAL ZONE FOR STUDENTS.

POPULATION INSIDE CAMPUS

1. Faculty	426	5. Students	4854
2. Staff	1256	6. Phd	916
3. Technical	485	7. M.Tech	1290
4. Non - Tech.	772	8. B.Tech	1597
		9. M.Des	26

DESIGNCOMPOSITION OF IIT DELHI

ACADEMIC AREA :INCLUDES INSTITUTES MAIN BUILIDING (MULTI STOREY),BLOCK 1,BLOCK2,BLOCK 3,BLOCK 4,BLOCK5,BLOCK6,BLOCK7,BLOCK8,CENTRAL LIBRARY,TEXTILE TECHNOGY,STATE BANK OF INDIA ,WORKSHOP ,IIT HOSPITAL AND AUDITORIUM,

THE ACADEMIC BLOCKS ARE LINEAR BLOCKS AND ARE CONNECTED BY CORRIDORS AND BRIDGE TO GO
THROUGH EVERY BLOCKS AND IN BETWEEN TWO BLOCKS A COUETYARD IS PRESENT AND IT

LIST OF DEPARTMENTS

1. APPLIED MECHANICS
2 .BIOCHEMECAL ENGINEERING & BIOTECHNOLOGY
3. CHEMICAL ENGINEE3RING
4. CHEMISTRY
5. CIVIL ENGINEERING
6. COMPUTER SCIENCE & ENGINEERING
7 .ELECTRICAL ENGINEERING
8 .HUMANITIES & SOCIAL SCIENCE
9. MECHANICAL ENGINEERING
10.PHYSICS
11. TEXTILE TECHNOLOGY
OTHER THEN THESE DEPARTMENT,THERE ARE 9 RESEARCH CENTERS WHICH ARE ENLISTED BELOW.
1.CENTRE FOR APPLIED RESEARCH IN ELECTRONICS.
2.CENTRE FOR BIOMEDICAL ENGINEERING.
3. INSTRUMENT DESIGN DEVELOPMENT CENTRE.
4. EDUCATINOL TECHNOLOGY SERVICE CENTRE.

THE MAIN AUDITORIUM OF THE IT CAMPUS LIES IN THE MAIN BUILDING
IT SELF AND IS ALSO CALLED THE DOGRA HALL.THIS HAS A UNIOUE STRUCTURE AS THE WHOLE MASSIVE ROOF BY ON ONLY FOUR COLUMN.
AUDITORIUM OF A CAPACITY OF 325 SEATING .

SPORT:-

IN VARIOUS OUT DOOR AND INDOOR GAMES. THE STUDENT ARE ENCOURAGED TO PARTICIPATE IN GAME AND SPORTS ACTIVITIES WHICH
COVER ACTIVITIES WHICH ATHLETICS (MEN AND WOMEN), BADMINTION,BASKETBALL,CRICKET,FOOTBALL,HOCKEY,YOGA SWIMMING AND WATER POLO.

HOUSING:-

THE HOUSING IS GIVEN FOR THE FACULTY, THE STAFF ,THE TECHNICAL AS WELL AS THE NON TECHNICAL STAFF INSIDE THE CAMPUS .HOUSING FOR STAFF AND NON TECHNICAL STAFF IS GIVEN SEPARATE.WORKERS HOUSING ARE GIVEN IN FRONT OF THE CAMPUS AND STAFF AND FACULTUY HOUSING IS GIVEN AT BACK SIDE OF THE CAMPUS.THE HOUSING FOR THE FACULTY ON HIGHER POSTSIS LOW RISE (ROW HOUSING) OTHER BEING MULTY STORIED.

HOSTEL:-

THERE ARE 9 BOYS HOSTEL AND 3 GIRLS HOSTELIN THE CAMPUS.

PARKING *PARKING PLANNED IS ONLY FOR THE ACADEMIC COMPLEX. AND ACADMIC PARKING BELOW THE DEPARTMENT.*

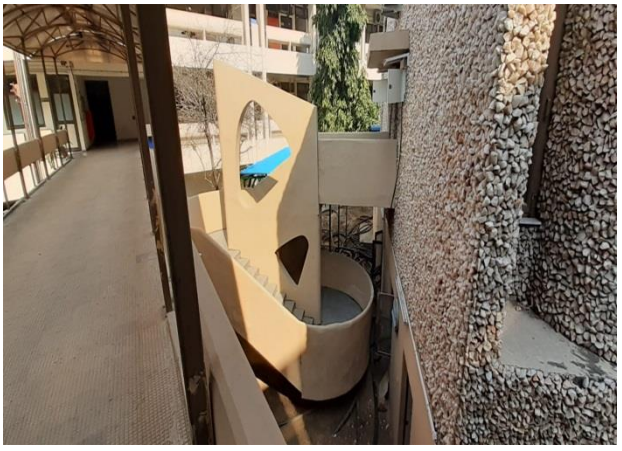
LANDSCAPE:-

THE CAMPUS IS FREE FROM POLLUTION AND IS A DIFFRENT WORLD AS COMPARED TO THE SORROUNDING AREA OF THE IIT DELHI. THE CAMPUS IS LUSH GREEN AND HAS AROUND 15,000 TREES AND OTHER PLANT.

THE LANDSCAPE HAS BEEN PLANNED KEEPING IN MIND THE CENTRAL OR THE PRIMARY CIRCULATION PATH.THE TREE HAS BEEN PLANED ALONG THE ROOD SIDE SHADING THE PATHWAYS AS WELL AS THE ROAD.DENCE VEGETATION HAS BEEN PROVIDE SO AS TO CUT OFF THE SUN AS WELL AS THE NOISE.

MATERIALS USED :-

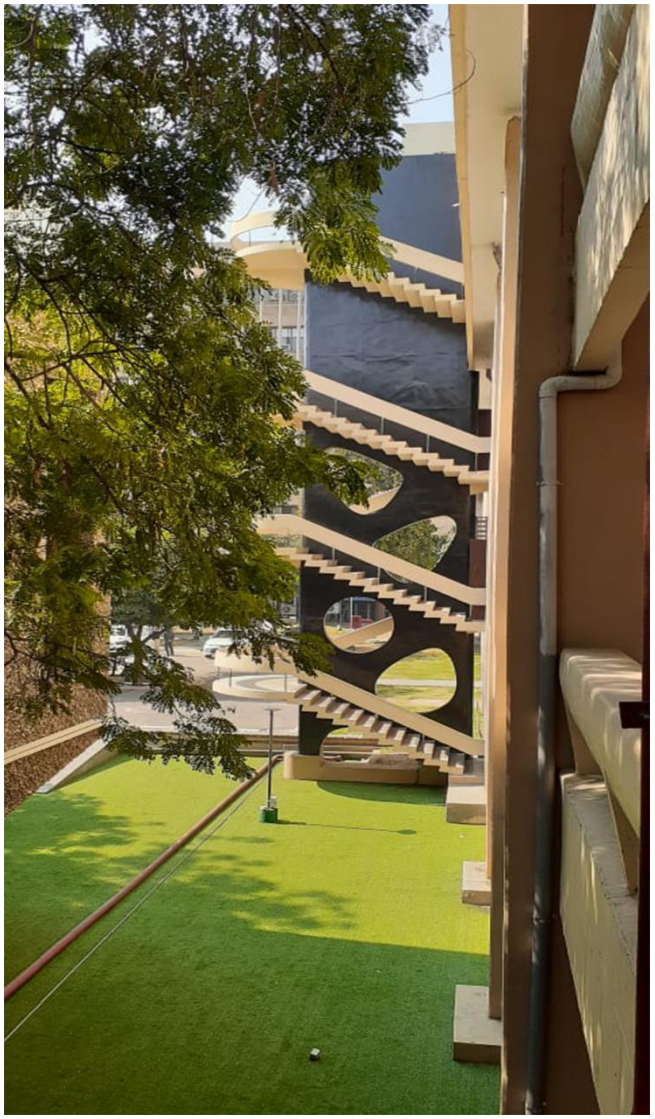
ITHE MATERIALS USED PREDOMINANTLY IS BRICK WORK AND DHAULPUR STONE .THE ACADMIC AREA HAS BRICK WORK .THE DEPARTMENT ARE A MIX OF EXPOSED BRICKWORK,CLADDING AND CONCRETE .

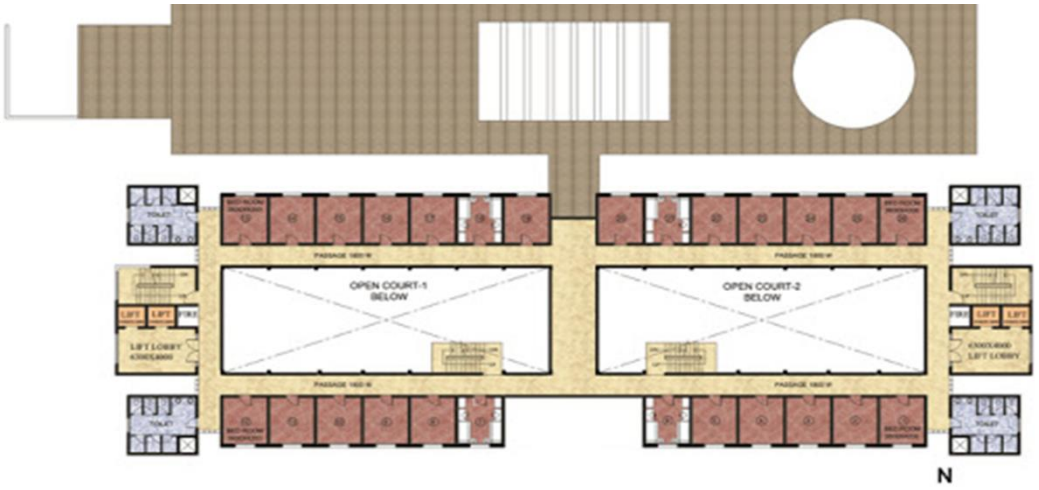


LAB :-

MECHENICAL LAB IS PROVID GROUND FLOOR

BECAUSE HEAVY MACHINE .AND CHEMICAL ENGINEERING LAB ON THE FIRST FLOOR.





TYPICAL FLOOR PLAN (1st TO 3rd)

PROPOSED HOSTEL FOR IIT DELHI

CASE STUDY-2
IET LUCKNOW:-

INTRODUCTION:-

NAME - INSTITUTE OF ENGINEERING AND TECHNOLOGY - LUCKNOW

ESTABLISHED BY U.P GOVERNMENT AND CONSTRUCTION U.P.R.N.N LOCATION - SITAPUR ROAD AT LUCKNOW ESHTABLISHED - 1984S SITE AREA - 95 ACRES (384451.00 SQM) COVERED AREA- 77500.00 SQM F.A.R - 1.2 TOTAL BUILTUP AREA OF INSTITUTIONAL BUILDING - 42000.00 SQM TOTAL BUILTUP OF AREA OF RESIDENTIAL BUILDING - 32000.00 SQM . TOTAL OPEN AND GREEN SPACES - 295000.00SQM ENGINEERING EDUCATION OF IN THIS INSTITUTE UNDERGRADUATE (INTAKE IS ABOUT 360 STUDENT PER YEAR

COURSES OFFERED :- *1. COMPUTER ENGINEERING 2.CIVIL EINGINEERING 3.MECHANICAL EINGINEERING 4.ELECTRICAL EINGINEERING 5.ELECTRONICS EINGINEERING 6.CHEMICAL EINGINEERING 7. MBA*

CAMPUS HAS BEEN DEVIDED INTO FOLLOWING :-

INSTITUTIONAL ZONE (ACADMIC & ADMINSTRATIVE)
RECREATION ZONE RESIDENTIAL ZONE AND PLAYS GROUND

GROUND FLOOR SUB UNIT *1. TUTORIAL ROOM 2. LECTURE HALL 3. WORK SHOP 4. PARKING 5. LABS 6. STAFF ROOM. 7.ADMINSTRATIVE BLOCK*

LIBRARY

THE INSTITUTE HAS AN EXCELLENT LIBRARY TO ACADEMIC BLOCK , A PART FORM BOOKS, STUDENTS HAVET ACCESS TO THE LAST MAGAZINES INTERNATIONAL , NEWS PAPERS JOURNALS AND RESERCHER PAPER

FIRST FLOOR SUB UNIT *1. TUTORIAL ROOM 2. DRAWING ROOM 3. LECTURE HALL 4. CANTEEN 5. LABS 6. ADMINSTRATIVE 7. LIBRARY BLOCK*

PLANNING ANALYSIS *ALL DEPARTMENT ARE INTERLINKETD BY CORRIDORS AND SHARES COMMON FACILITYS LIKE LECTURE THETER , TUTORIALS, LIBRARY, LABS AND TOILET AND CANTEEN ARE PROVIDES. BUT DUE T OTHIS SHARING THE CORRIDORS DUBLY LOADED. FEW CORRIDORS ARE RUNNING FOR LONG DISTENCES BY PROVIDING A SMALL COURT SO THE BECOME DARK AND GIVES TUNAL EFFECT.*

ACADEMIC BLOCK *THE ACADEMIC BLOCK IS G +3 FLOOR BUILDING THE ACADEMIC BLOCK ARE CONNECTED THROUGH THE CORRIDOR*

THE INSTITUTE ID DIRECT ACCESS THROUGH RING ROAD OTHER ACCESS THROUGH SITAPUR ROAD ADMINTRATIVE STAFF-350

THE INSTITUTE HAS AN EXCELLENT LIBRARY TO ACADEMIC BLOCK , A PART FORM BOOKS, STUDENTS HAVET ACCESS TO THE LAST MAGAZINES INTERNATIONAL , NEWS PAPERS JOURNALS AND RESERCHER PAPER

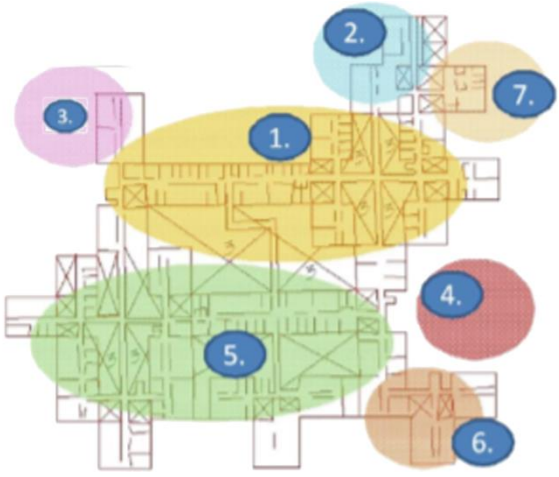
CIRCULATION *CAMPUS IS DEFINED AND PLANED THAT ALL BLOCK CANBE APPROACHED EASILY ACADEMIC IS FREE FROM VEHICULAR MOVEMENT.*

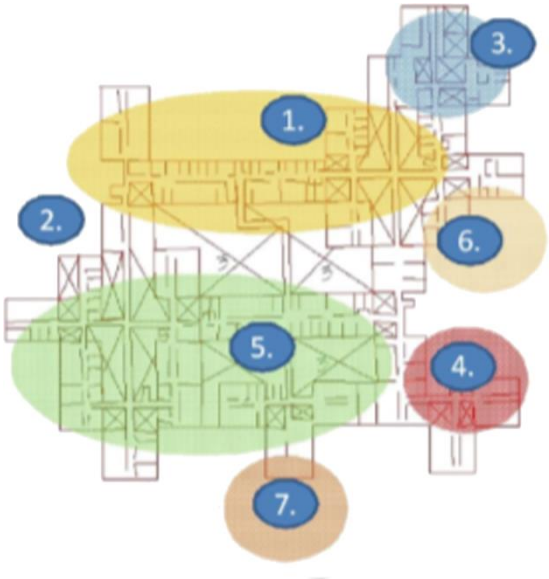
ACADEMIC BLOCK

CANTEEN

LECTURE HALL *LECTURE HALL IS PLANNED ALONG VARIED CAPACITY IS ONE OF THEM HAVING HAVING CAPACITY OF 40 AND SOME THEM HAVING CAPACITY OF 60.*

ACADEMIC BLOCK





GROUND FLOOR PLAN :-

FIRST FLOOR PLAN :-

LITERATURE STUDY- 1
IIT KANPUR

LOCATION:-

THE CAMPUS OF IIT KANPUR IS LOCATED OFF GRAND TRUNK ROAD NEAR KALYANPUR ROAD ABOUTB 16 KM WEST OF KANPUR CITY THE CAMPUS IS LOCATED ON 1055 ACRES OF LAND OFFERED BY THE GOVERNMENT OF U.P
APPORACH:IIT KANPUR IS LOCATED 16 KM FROM KANPUR CENTRAL RAILWAY STATION KANPUR AIRPORT IS LOCATEDIS ABOUT 25 KM AWAY FROM THE IIT CAMPUS.

GEOGRAPHY:-

KANPUR IS SITUATED ON THE BANK OF RIVER GANGA AND ALSO ON MOST IMPORTANT NATIONAL HIGWAY 25 AND STATE HIGHWAY.IT IS ALSO SITUATED ON THE MAIN DELHI HOWRAH RAILWAY.IT ABOUT 126 M ABOVE SEA LEVEL.

INTRODUCTION:-

THE INDIAN INSTITUTE OF TECHNOLOGY WAS THE FIVE I.I.T ESTABLISHED IN POST INDEPENDENCE INDIA.THE STRUCTURE WAS DESIGNED ON REPETITIIVE MODULAR CONCEPT.THERE ALSO PROVIDE CROSS VENTILATION AND ALLOW FOR FUTURE EXPANSION.A SYSTEM OF DOUBLY LOADED CORRIDOR .

STRUCTURE SYSTEM:-

R.C.C.COLUMN STRUCTURE.

P.K. KELKAR LIBRARY

- Established in 1960 as Central Library. Established in 1960 as Central Library. □ Renamed as P.K. Kelkar Library in 2001. Renamed as P.K. Kelkar Library in 2001. □
- Four-storied building (covered area: 5730 sq. m.)
- Basement - 700 sq m
- Ground floor - 700 sq m
- First floor -1630 sq m
- Second floor - 2700 sq m
- Staff strength – 40
- Exposed brickwork: reduces maintenance costs and enhances aesthetic appeal

WATER SUPPLY :-

INSTUTE HAS A SELF CONTAINED WATER TANK SCHEME THE CAPACITY OF THE TANK IS 50,000 LITRE ,

ELECTRIC SUPPLY :-

ELECTRICITY SUPPLIES FROM U.P.S.E.B,THERE IS UNDER GROUND ELECTRICAL SUPPLY.

SEWERAGE SYSTEM :-

PROPERLY PLANNED DRAINAGE AND SEWAGE SYSTEM.ALL DRAINAGE LINE ARE COVERED WITH THE PEDESTRIAN PATH.

1.CIRCULAR COURTYARD PLANING BEAUTIFUL PLAY OF LIGHT.
2.12 TUTORIAL ROOM ON EACH FLOOR ,CONNECTED.
3.TO LECTURE HALL COMPLEX THROUGH ELEVATED
4.WALKWAY AND SEPARATE ENTRY FROM GROUND FLOOR
5.TOILET ON FIRST FLOOR ONLY.

SHOPPING CENTER :-

PARKING :-

SUFFICIENT PARKING SPACE IS PROVIDE D IN FRONT OF FACULTY BUILDING THE CYCLES ARE SEEN PARKED IN THE CORRIDORS OF LIBRARY BLOCKS.

CANTEEN :-

PROVIDE IN ACADEMIC COMPLEX, CANTEEN IS PROVIDED IN EVERY BLOCK AT GROUND FLOOR.

PLAY GROUND AREA :-

LITERATURE STUDY- 2
HBIT KANPUR

LOCATION:-

LOCATED IN THE NAWABGANJ, KANPUR APPROCH:8 KM AWAY FROM KANPUR CENTREL RAILWAY SATTION INSTITUTE IS SITUATED IN THE EDUCATIONAL HUB. THIS INSTITUTE IS CONSTUCTED IN YEAR OF YEAR OF 1921.9 KM AWAY FROM JHAKARKATI BUS STAND IN KANPUR .

CAFETERIA:-

PROVIDE IN ACADIMIC COMPLEX AND NEAR TO AUDITORIUM AND HOSTEL FOR BETTER ACCESS TO THE STUDENTS .THERE IS A COVERED SITTING AND OPEN SITTING AT OUT SIDE OF A CAFETERIA.

ACADEMIC DEPARTMENT AT H.B.T.I. KANPUR:-

I. ELECTRONICS AND COMMUNICATION ENGINEERING
2. MECHANICAL ENGINEERING
3. ELECTRICAL ENGINEERING
4. CHEMISTRY
5. MATHEMATICS
6. COMPUTER APPLICATIONS
7. BUSINESS MANAGEMENT
8. HUMANITIES
9.CIVIL ENGINEERING
10.COMPUTER SCIENCE

LECTURE HALL:-

MAIN BUILDING HAVING LECTURE HALL ON FIRST FLOOR. THE MAIN BUILDING HAVING TWO FLOORS, GROUND AND FIRST FLOOR .SIMPLY SUPPORTED STRUCTURE. NATURAL LIGHT AND ARTIFICIAL LIGHT PROVISION LECTURE HALL IS PLANNED ALONG CORRIDOR.

WATER TANK:-

OVER HEAD WATER TANK PROVIDE AT THE REAR SIDE OF THE CAMPUS. IT SERVES THE CAMPUS AS WELL AS STORES THE 50,000 LITRE OF WATER IN IT.

INDOORE GAMING AND GYM FACILITIES:-

PROVIDE THE INDOOR GAMING AREA AND GYMNASIUM NEAR TO THE HOSTEL .FOR THE PHYSICALLY DEVLOPMENT OF STUDENT THE GYM ARE FOR HEALTH, FITNESS OF STUDENTS.

THE INTERNAL ROADS OF 20 FEET IS USED AS ACCESS ROAD TO DIFFERENT BLOCK.THE INTERNAL ROAD OF 40 FEET DIRECTLY LINKED TO THE EXTERNAL ROAD OF THE CAMPUS AND CONNECTED TO THE MAIN ROAD.

PARKING:-

MOST OF THE PARKING PROVIDE ON FRONT ON THE MAIN BUILDING.FOR VISITORS AND STAFF SOME PARKING IS PROVIDE.

LANDSCAPE :-

PROPER PROVIDE LANDSCAPE ONLY IN MAIN BUILDING OF H.B.I.T REST IS NOT PLANNED NEEM AND ASHOKA TREE IN THE CAMPUS.

LIBRARY:-

THE INSTITUTE HAS AN EXCELLENT LIBRARY ADJACENT TO ADMIN BLOCK.THIS INSTITUTE HAS ALSO E-LIBRARY FACILITIES LIBRARY HAS SUFFICIENT NATURAL LIGHT.

PLANNING:-

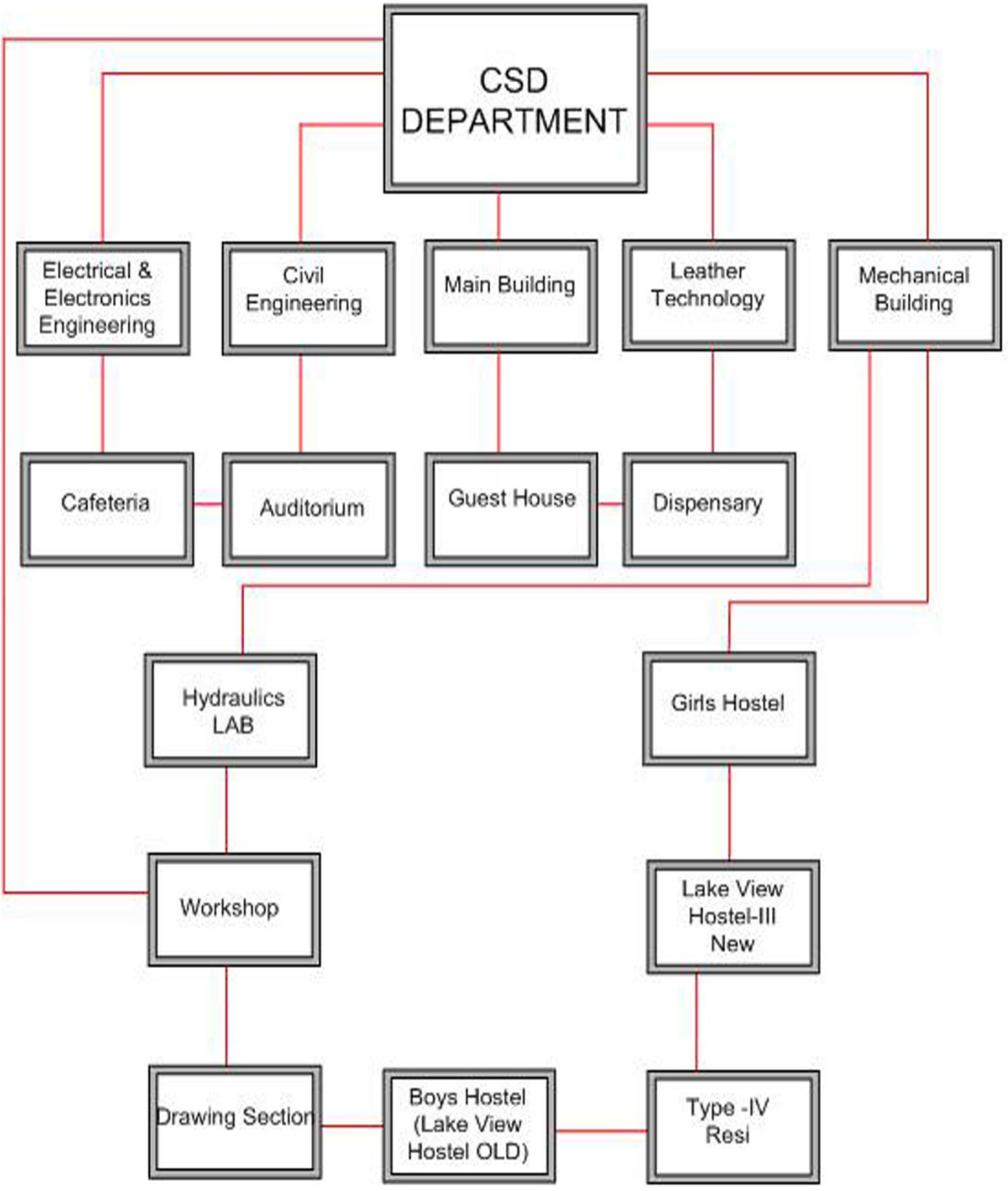
PLANING IS IN RECTANGULAR SHAP.MANY RECTENGULAR BOXES ARE JOINT TOGETHER WITH THE HELP OF ONE CORRIDOR.MAINLY COMPLETE CAMPUS IS DIVIDE IN THREE PARTS.

1.ACADMIC ZONE

2. HOSTELS FOR STUDENTS

3. STAFF RESIDENTIAL SECTION

EAST CAMPUS OFC LAYOUT



POLICE STATION:-

PROVIDE A POLICE STATION FRONT OF THE CAMPUS .FOR THE SENSE OF SECURITY TO THE CAMPUS.

AUDITORIUM:-

IT IS ON THE SOUTH SIDE OF ACADEMIC BLOCK AND LOCATED TO THE EXTERNAL ROAD THE CAPACITY OF THE AUDITORIUM IS 400.STORE IS PROVIDE AT INSIDE THE GENERATOR ROOM IS OUTSIDE THE AUDITORIUM.

WATER SUPPLY:-

INST1TUTE HAS A SELF -CONTAINED WATER TANK 5CHEME (OVER HEAD TANK). THE CAPACITY OF TANK IS 50,000 LITRE . IT SERVES THE yMPUS AS REQUIRED FOR THEIR NEED

ELECTRIC SUPPLY:-

:ELECTRIC SUPPLY FROM UPPCL, THERE IS OVER ; HEAD ELECTRICAL SUPPLY OF 320 KVA TO 560 KVA ! THE TRANSFORMER ARE BEEN SET UP FOR I ELECTRIC SUPPLY. GENERATOR ARE ALSO THERE I FOR POWER BACK UP.

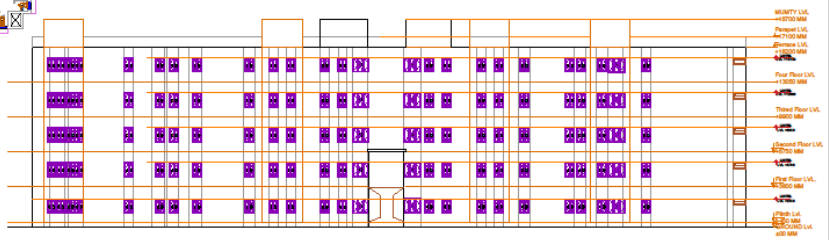
SEWERAGE SYSTEM:-

NOT PROPERLY PLANNED DRAINAGE SYSTEM .

MOST OF THE DRAINAGE LINES ARE COVERED WITH THE PEDESTRIAN PATH.

GROUND FLOOR

SECTION A-A'



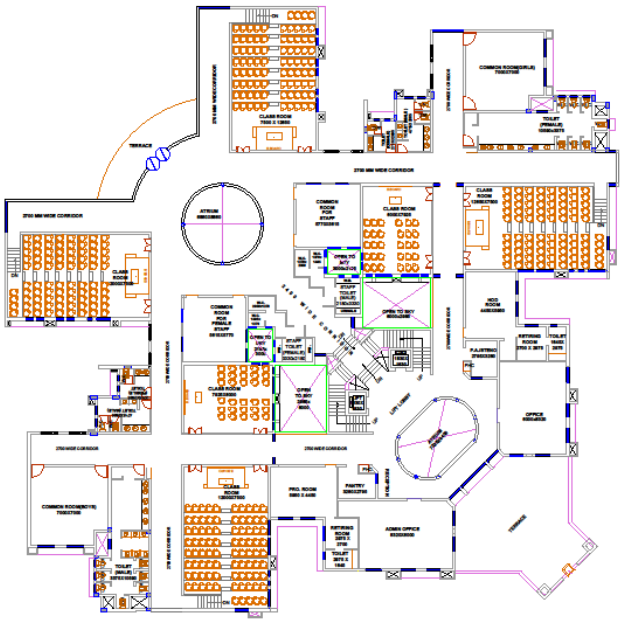
ACADEMIC PLAN

ENGINEERING COLLEGE ROHINI EAST,SECTOR-3 DELHI

E:\alok thises bbd\floor plan.dwg, 06-06-2020 16:42:10, DWG To PDF.pc3

THESES GUIDE - AR.KESHAV KUMAR
AR.ABHINAV KHARE
THESIS BY :- ALOK VERMA
B.ARCH - 5th YR
BBDU LUCKNOW

FIRST FLOOR

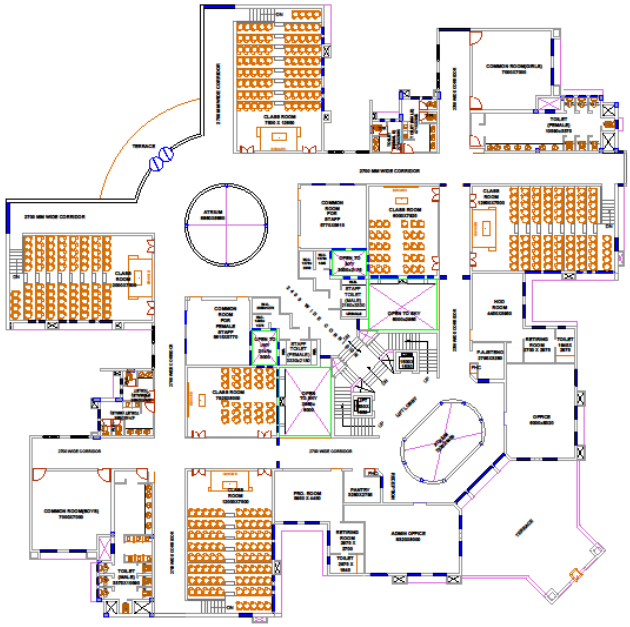


SECOND FLOOR

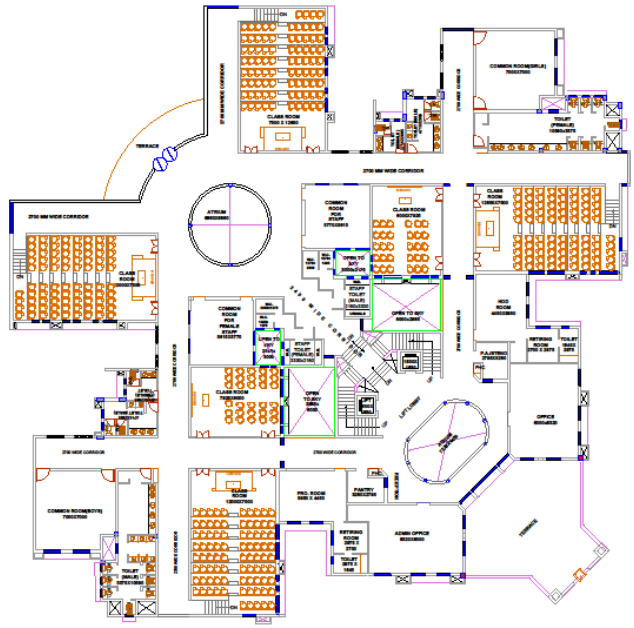
ACADEMIC PLAN

ENGINEERING COLLEGE ROHINI EAST,SECTOR-3 DELHI

THESES GUIDE - AR.KESHAV KUMAR
AR.ABHINAV KHARE
THESIS BY :- ALOK VERMA
B.ARCH - 5th YR
BBDU LUCKNOW



THIRD FLOOR

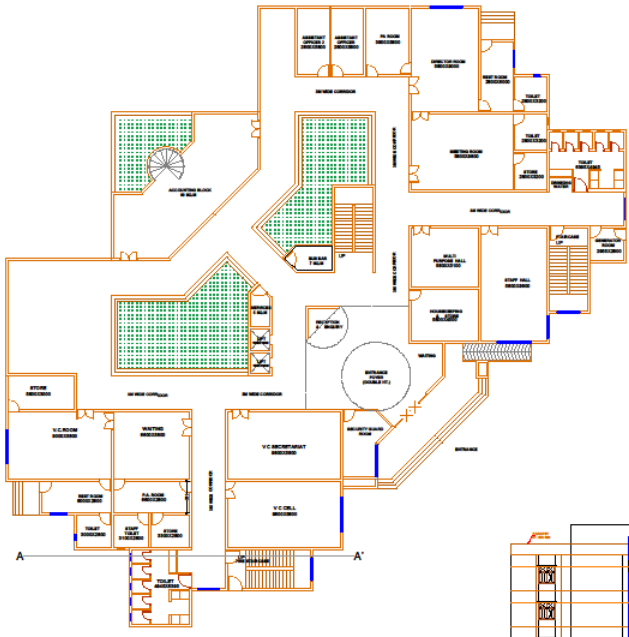


FOUR FLOOR

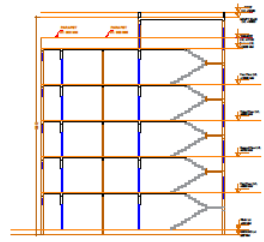
ACADEMIC PLAN

ENGINEERING COLLEGE ROHINI EAST,SECTOR-3 DELHI

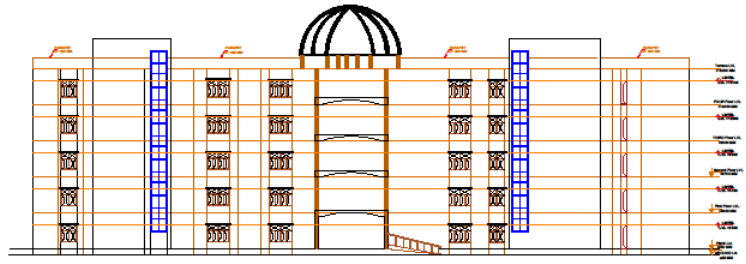
THESES GUIDE - AR.KESHAV KUMAR
AR.ABHINAV KHARE
THESIS BY :- ALOK VERMA
B.ARCH - 5th YR
BBDU LUCKNOW



GROUND FLOOR



SECTION AT A-A

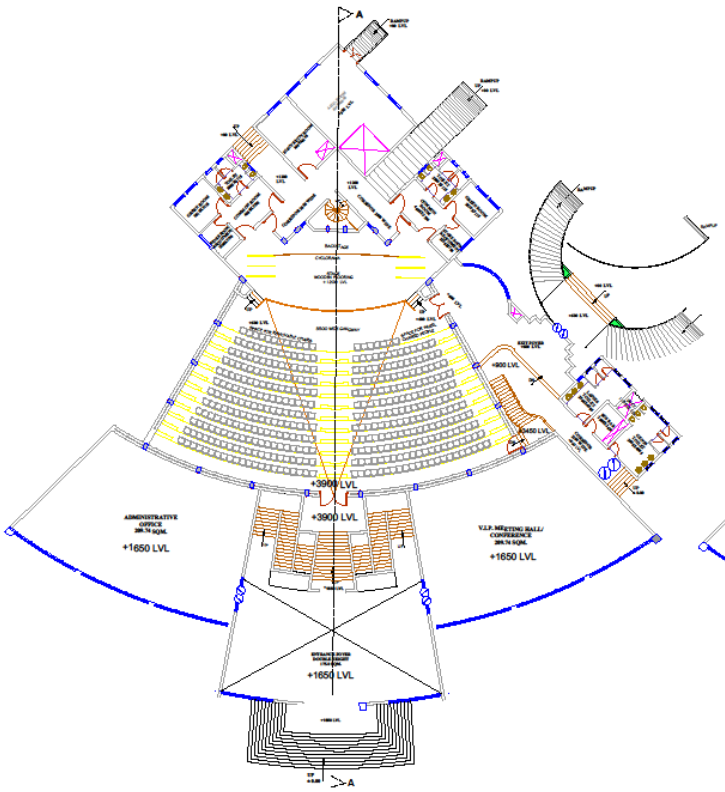


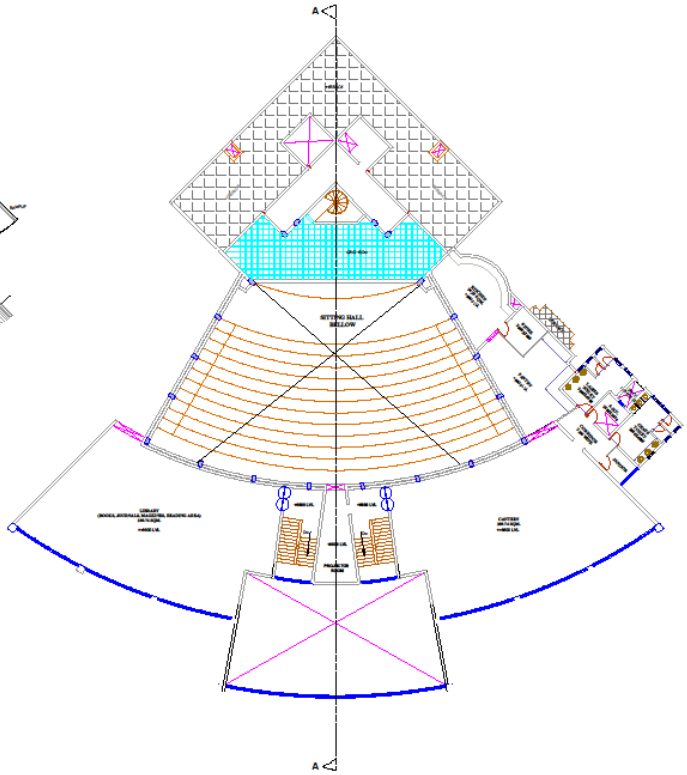
FRONT ELEVATION

ADMIN BLOCK PLAN

ENGINEERING COLLEGE ROHINI EAST,SECTOR-3 DELHI

THESES GUIDE - AR.KESHAV KUMAR
AR.ABHINAV KHARE
THESIS BY :- ALOK VERMA
B.ARCH - 5th YR
BBDU LUCKNOW



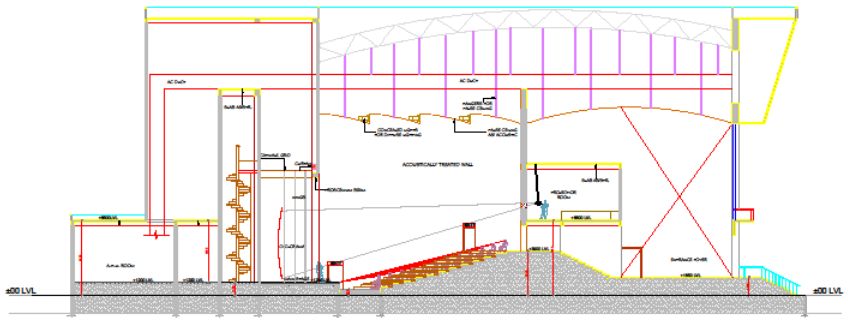


FLOOR PLAN AT +11000 LVL

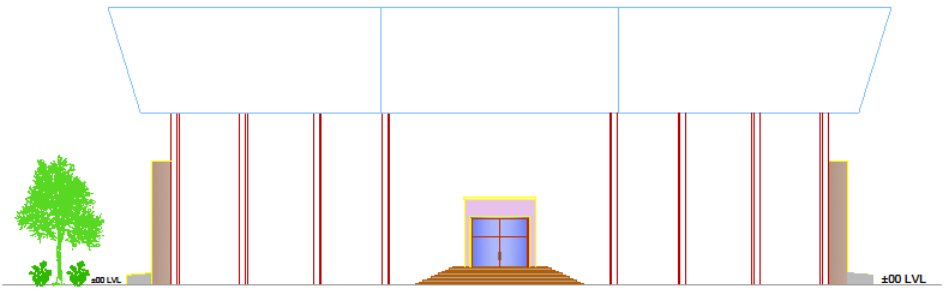
AUDITORIUM

ENGINEERING COLLEGE ROHINI EAST,SECTOR-3 DELHI

THESES GUIDE - AR.KESHAV KUMAR
AR.ABHINAV KHARE
THESIS BY :- ALOK VERMA
B.ARCH - 5th YR
BBDU LUCKNOW



SECTION AT A-A



FRONT ELEVATION

SITE PLAN

ENGINEERING COLLEGE ROHINI EAST,SECTOR-3 DELHI

THESES GUIDE - AR.KESHAV KUMAR
AR.ABHINAV KHARE
THESIS BY :- ALOK VERMA
B.ARCH - 5th YR
BBDU LUCKNOW