PRIMARY SCHOOL :-

A SCHOOL FOR CHILDREN BETWEEN AGE [FIVE AND SEVEN..] FORMAL EDUCATION BEGIN IN PRIMARY SCHOOL AGE [TO]

ANTHROPOMETRY IS THE STUDY OF HUMAN BODY MEASURES ESPECIALLY ON A COMPARATIVE BASIS.

AGE	HEIGHT IN INCH/M
3	37.1 in / 0.9m
4	40 in / 1m
5	44 in / 1.1mm
6	46 in / 1.1m
7	48 in / 1.2m
8	50 in / 1.3m
9	52 in / 1.3m
10	54 in / 1.3m
11	56 in / 1.4m

SPACES IN PRIMARY SCHOOL

- CLASS ROOM
- RECEPTION AREA
- CORRESPONDED ROOM WITH TOILET
- PRINCIPAL ROOM WITH TOILET
- STAFF ROOM
- TOILETS
- STORAGE ROOM
- WORKER AREA
- SPORTS ROOM
- MEDICAL ROOM
- DINNING AREA
- PARKING AREA
- COMPUTER LAB
- LIBRARY
- INDOOR PLAY AREA
- PLAY GROUND
- OUT DOOR SEATING AREA
- GARDEN AREA
- PUPILS COMMON AREA
- AUDITORIUM
- SECURITY ROOM
- MECHANICAL ROOM
- ASSEMBLY HALL WITH STAGE
- CAFETERIA.

AREA OF CLASSROOM :

A AREA OF CLASS ROOM SHOULD BE CALCULATED ON THE BASIS OF AREA NEEDED PER STUDENTS.

CATEGORY	NO OF STUDENT PLACES PER CLASS	GROSS AREA OF CLASSROOM IN M²
PRE - SCHOOL	20/25	2.00
PRIMARY / JUNIOR		
(i) WITH FURNITURE	40	1.11
(ii) WITH SQUATTING	40	0.74

TYPICAL DISTRIBUTION OF THE PRIMARY CLASSROOM.

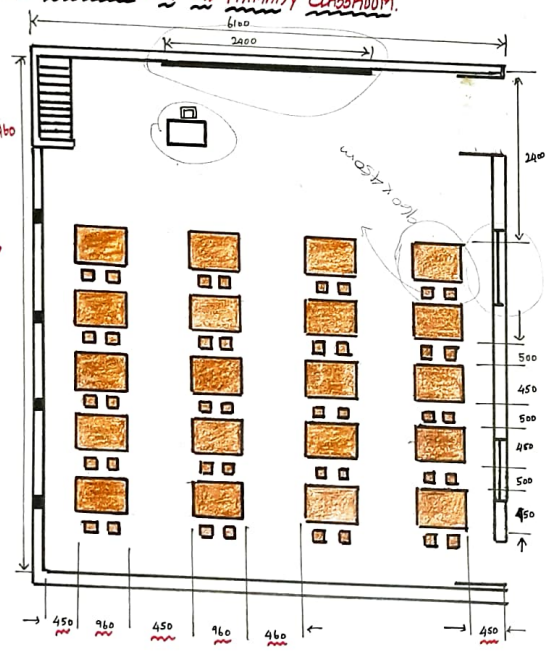
TOTAL NO OF CLASS : 13

LKG	UKG	PRE KG	1st	2ND	3RD
2	2	2	2	2	2

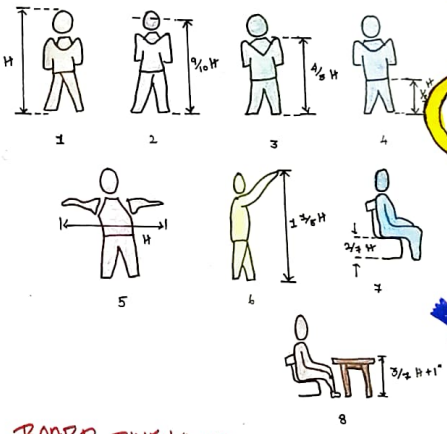
	4th	5th		
	2	2		

TOTAL NUMBER OF STUDENTS: 260

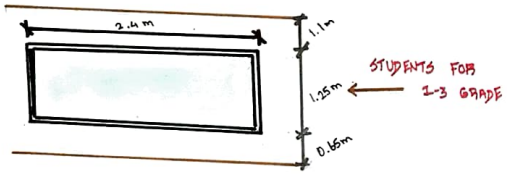
GENDER RATIO : 1:1



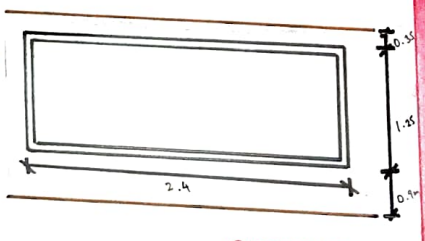
DIMENIONS AND CLEARANCES FOR CHILDREN



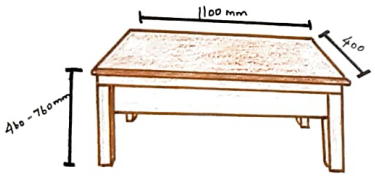
BOARD DIMENSIONS.



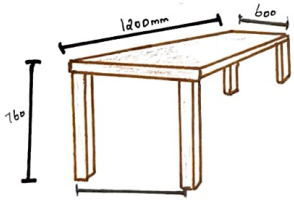
STUDENTS FOR 4-5 GRADE



STUDENT TABLE



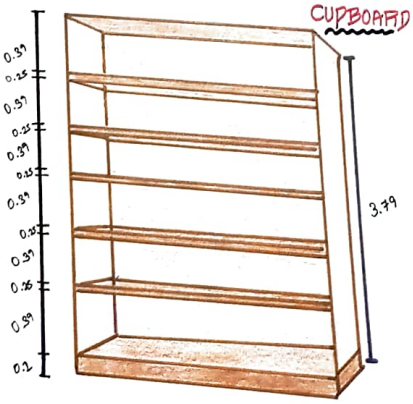
STAFF TABLE



STAFF CHAIR

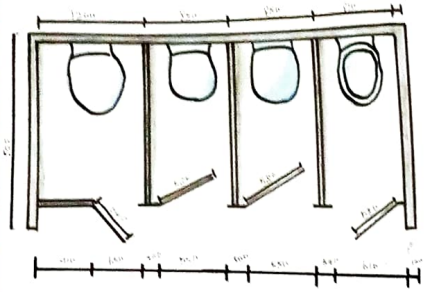
STUDENT CHAIR

CUPBOARD IN SCHOOL

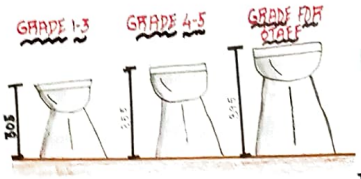


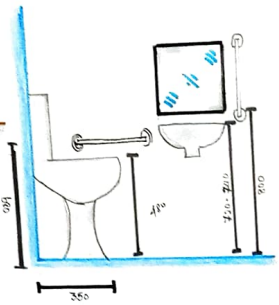
ALL DIMENSION ARE IN MM

TOILET SIZE

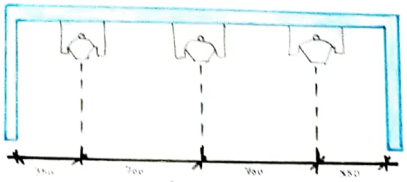


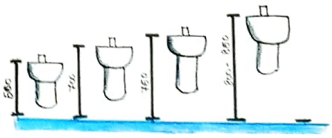
WATER CLOSET



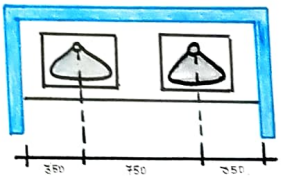


WHEEL CHAIR ACCESSIBLE TOILET





WASH BASIN

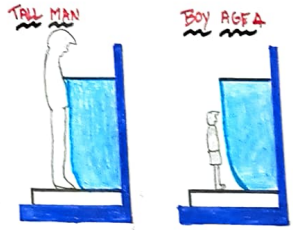


WASH BASIN

BOWL URINALS

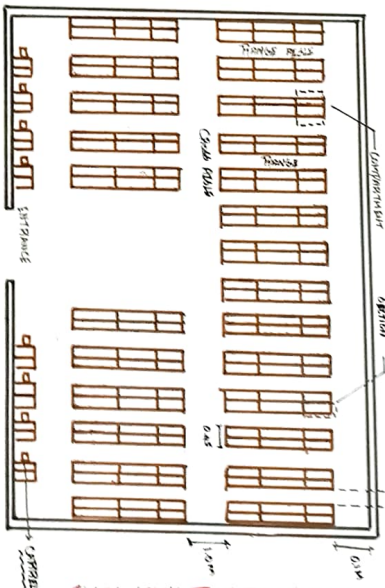
TALL MAN SHORT MAN BOY AGE 3 BOY AGE 4

	PRE SCHOOL	SCHOOL
WATER CLOSET	1 PER 15 PUPILS	1 PER 20 PUPILS
	1 PER 30 MEMBER OF STAFF	
URINAL	1 PER 20 PUPILS	1 PER 20 PUPILS
	1 PER 30 MEMBER OF STAFF	
WASH BASIN	1 PER 15 PUPILS	1 PER 20 PUPILS
	1 PER 30 MEMBER OF STAFF	

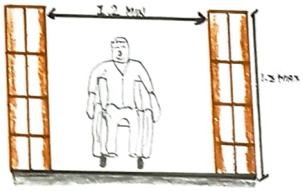


STALL URINAL

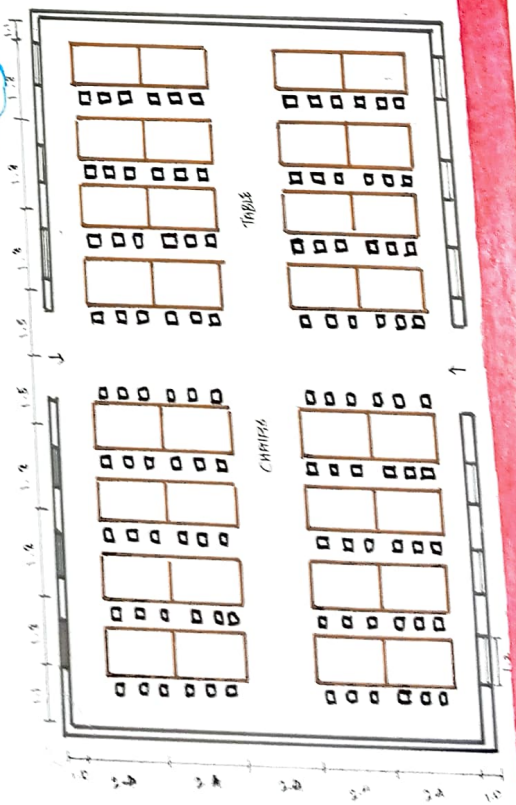
LIBRARY

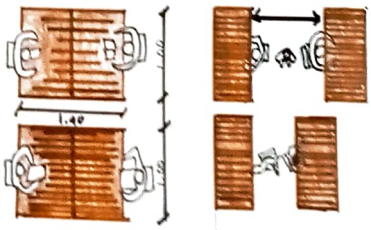


INSIDE STACK REFERENCE ROOM



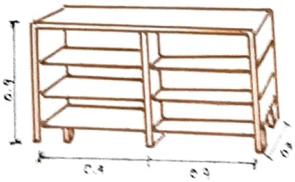
MINIMUM SIZE SHOULD BE 1.2M TO BE FULLY EQUIPPED AND NO PERSONS FROM FACILITY THE USERS.

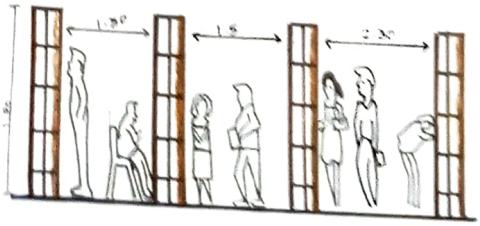




MINIMUM DISTANCE BETWEEN TABLE

LOW WALLED SHELVES WITH DISPLAY





CASE STUDY.

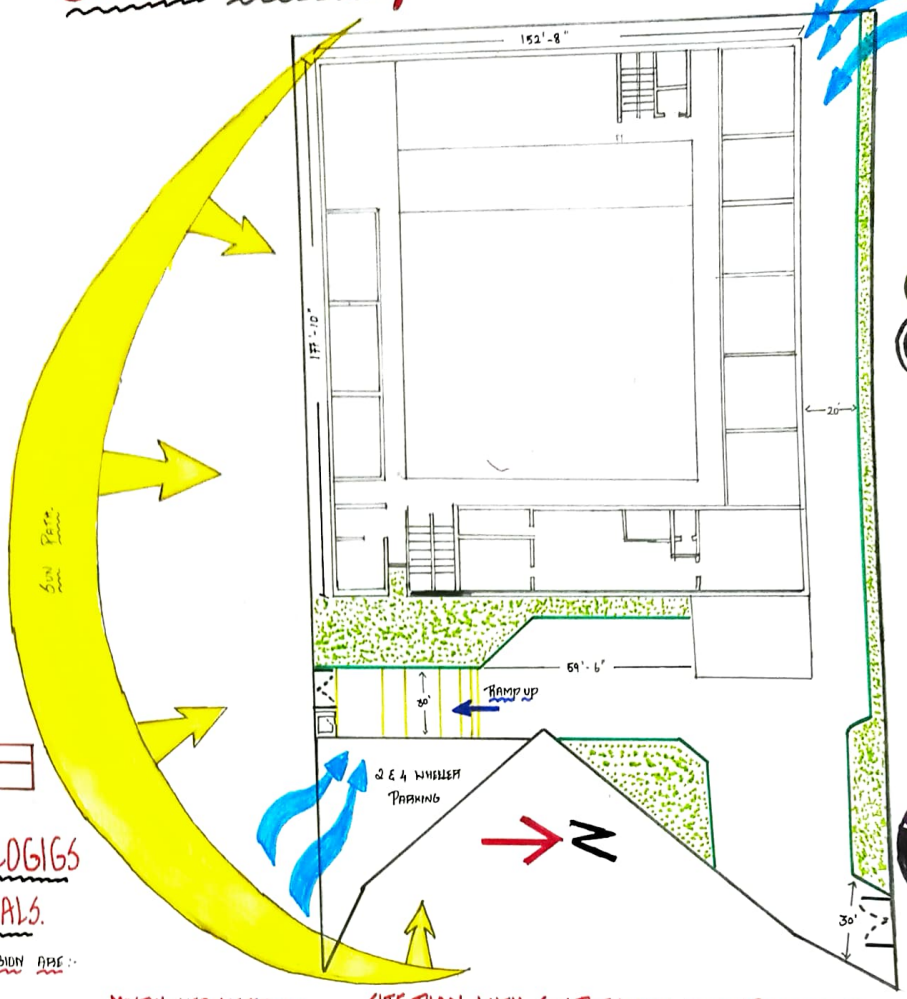
LOCATION :- PALLAKAPALAYAM, TAMIL NADU

TOTAL AREA :-

PROJECT YEAR :- 2021

ARCHITECTS :- [illegible]

PROJECT TYPE :- SCHOOL



GEOLOGY :- IN THIS AREA MOSTLY UNDERLAIN BY THE ARCHEAN CRYSTALLINE AND METAMORPHIC COMPLEX

SOIL TYPOLOGY :- GRAVELLY, STONY AND SANDY OF THE BED VARIETY

HYDROGRAPHY :- WATER LEVEL IN NAMAKKAL DISTRICT (2013 - 2023)

VILLAGE	PRE-MONSOON	WINTER	SUMMER	
KOMBANAPALAYAM	2.64	2.79	2.99	

CONSTRCTION TECHNOLOGIES AND METERIALS.

METERIALS EASILY AVAILABLE IN THAT REGION ARE :-

- STEEL
- CONCRETE
- WOOD
- STONE
- BRICK / MASONRY

MOSTLY USED METERIALS.

- FLY ASH BRICKS
- CONCRETE
- STEEL

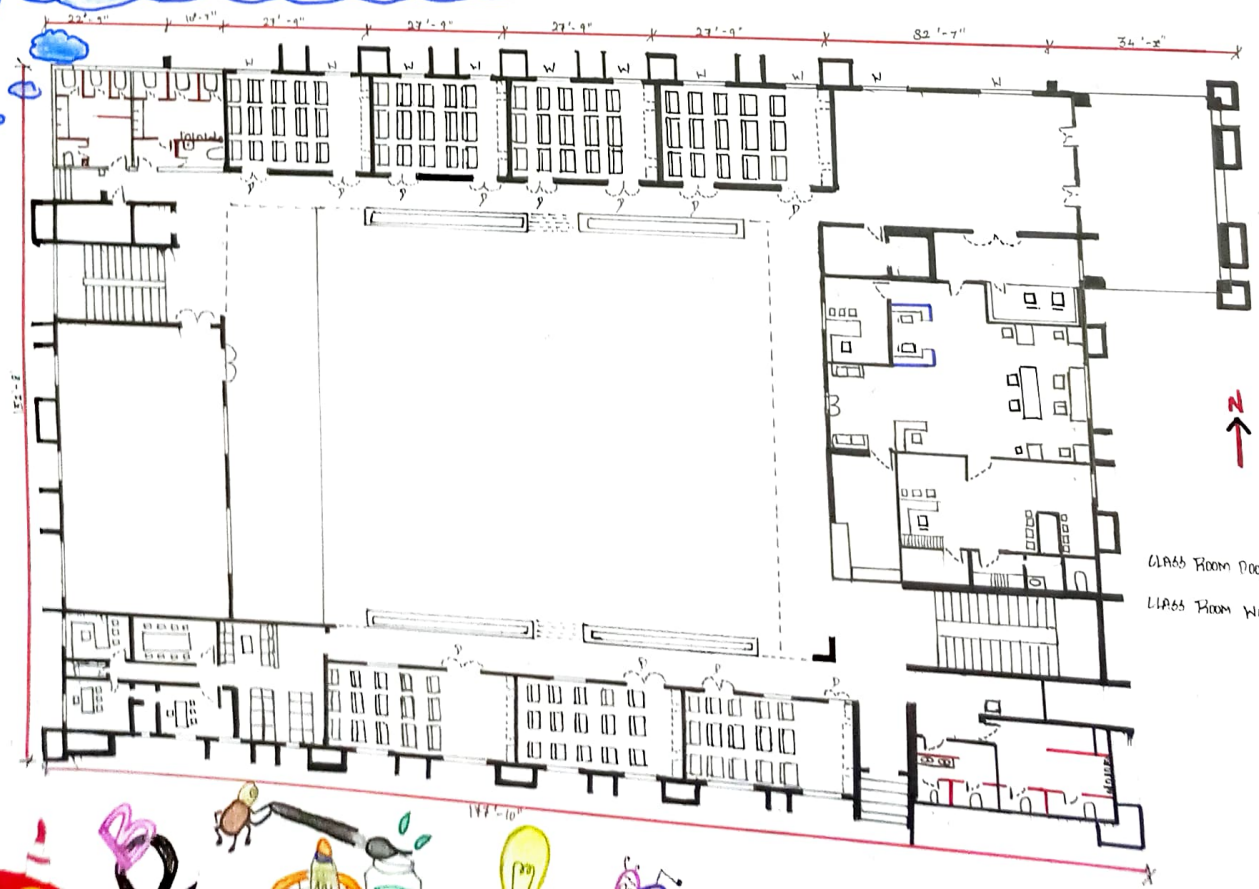
TECHNOLOGIES USED IN THAT REGION. SEARCH FOR LOCAL TECHNOLOGIES THAT ARE KNOWN AMONG THE LOCAL LABORERS.

SITE PLAN WITH SUN PATH AND WIND PREVAILING.

SUN PATH :- EAST TO WEST

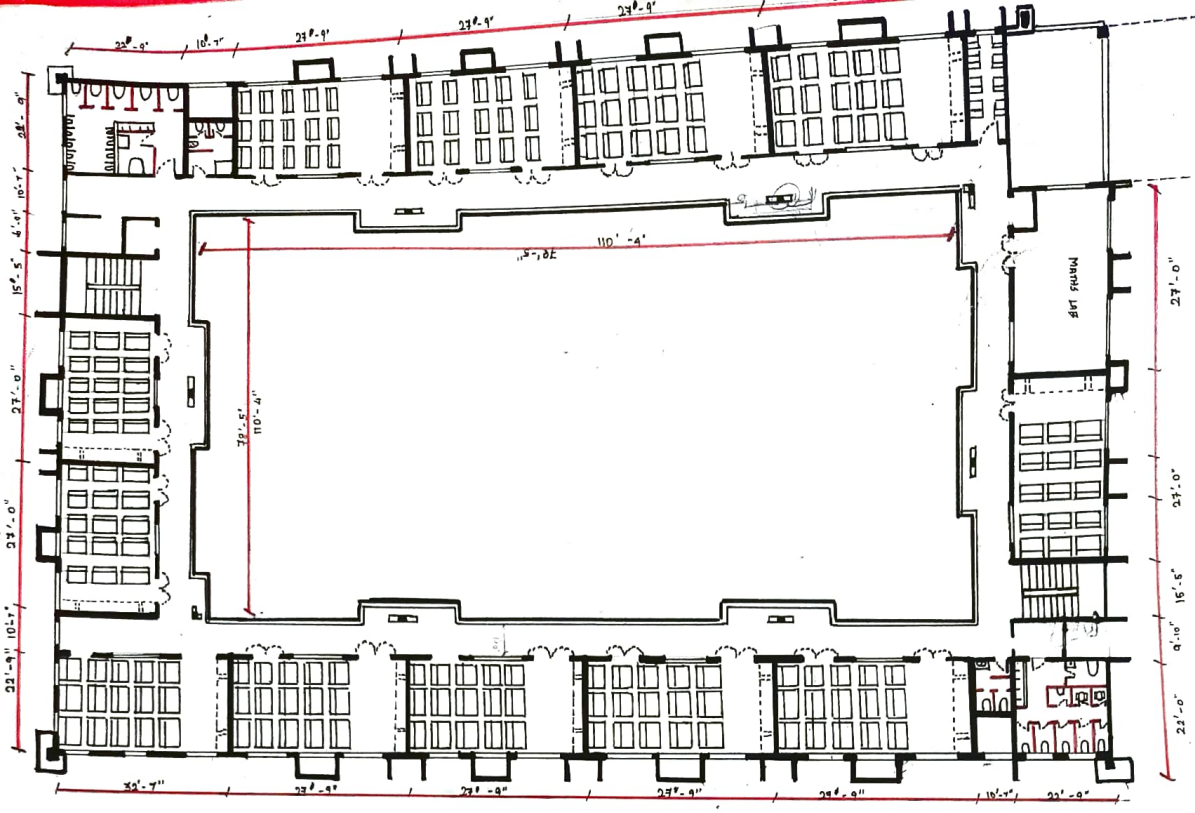
WIND PREVAILING :- NORTHEAST

GROUND FLOOR PLAN....



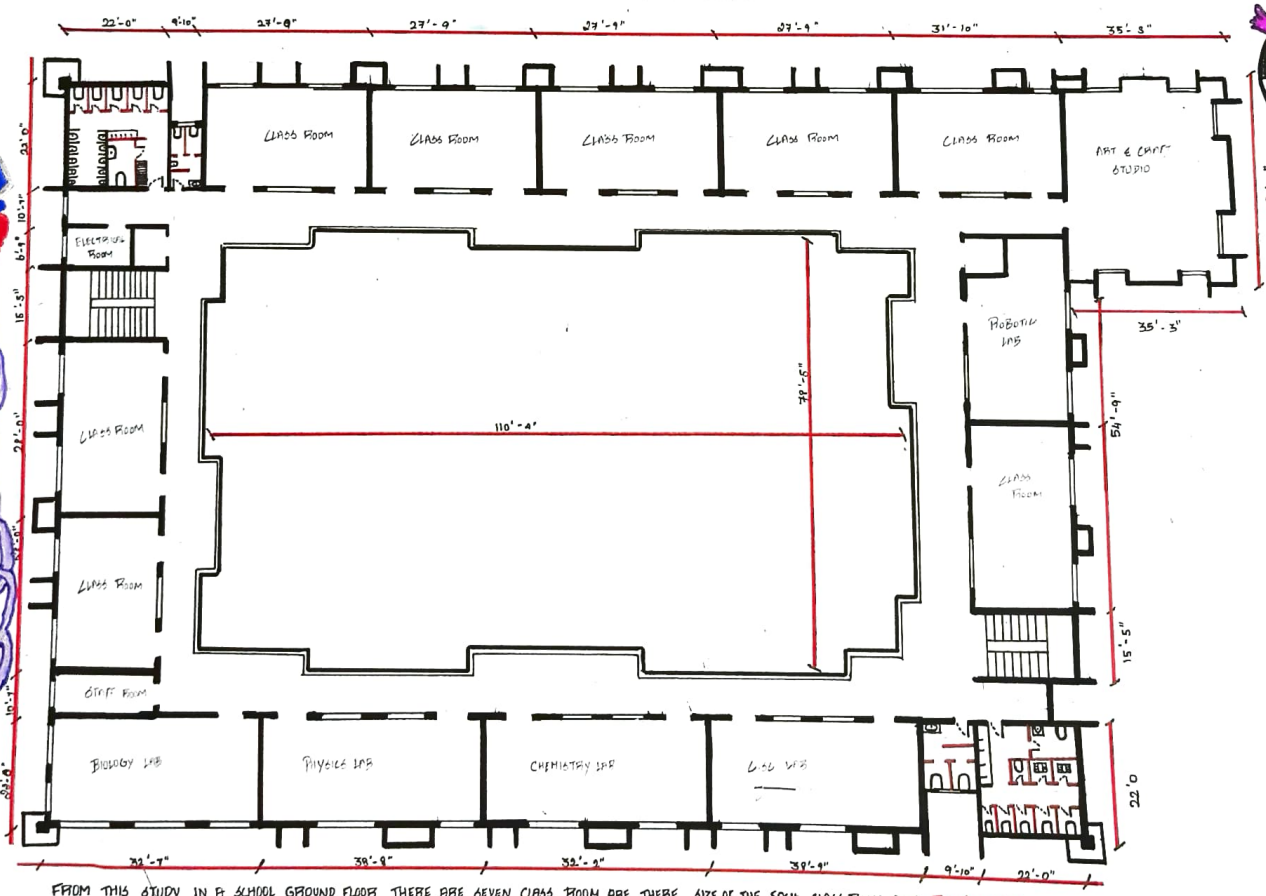
CLASS ROOM DOOR SIZE :- 1.5m x 2.4m

CLASS ROOM WINDOW SIZE :- 1.9m x 1.5

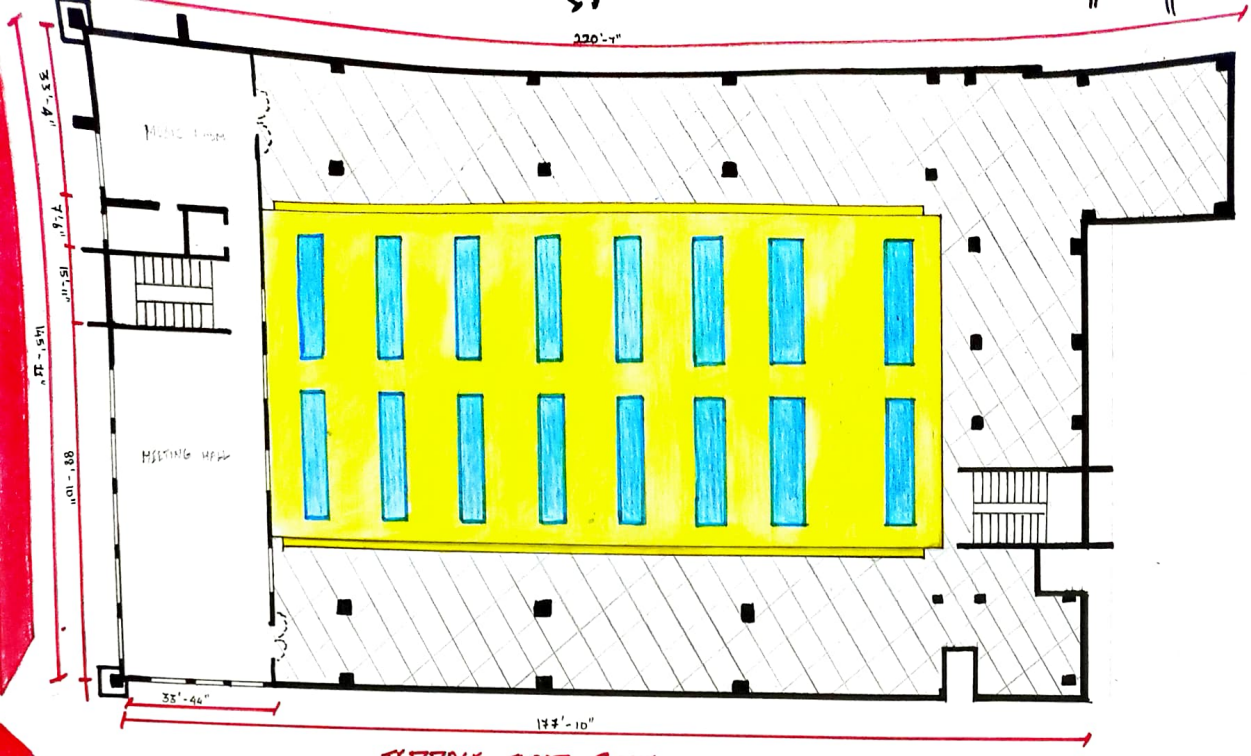


FIRST FLOOR PLAN ↑

SECOND FLOOR PLAN ↓

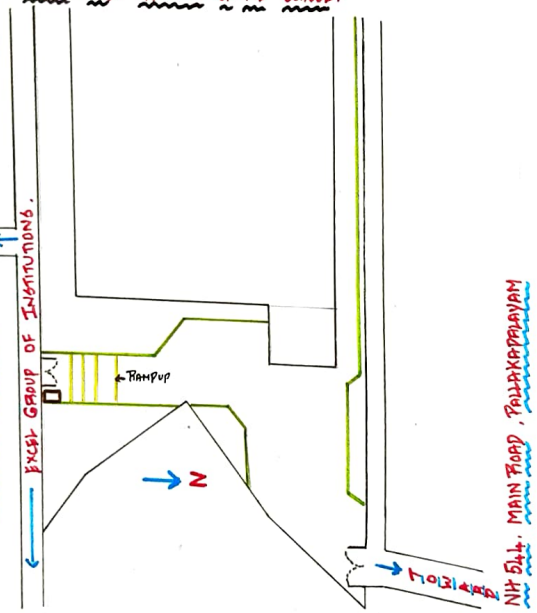


FROM THIS STUDY IN A SCHOOL GROUND FLOOR THERE ARE SEVEN CLASS ROOM ARE THERE. SIZE OF THE EACH CLASS ROOM ARE [22' X 27'] IN THE SOUTH EAST OF THE GROUND FLOOR THERE IS A STAFF TOILET SIZE OF THE MALE STAFF TOILET IS [22' x 11'] AND FEMALE STAFF TOILET IS [22' x 11'] AND IN NORTH WEST OF GROUND FLOOR THERE IS KIDS BOYS AND GIRLS TOILET AND THE SIZE IS [22' x 32'-2"] AND IN A EAST WEST SOUTHWEST DIRECTION OF THE GROUND FLOOR THERE ARE CHAIRMAN ROOM [16' x 16'], VICE CHAIRMAN ROOM [16' x 16'], CONFERENCE ROOM [10'-9" x 17'-1"] ACADAMIC HEAD ROOM [10'-9" x 16'-0"], OPEN OFFICE [13'-10" x 16'-5"] AND WAITING LOUNGE [10'-10" x 13'-3"] AND W GROUND FLOOR THERE IS A LIBRARY [32'-7" x 54'-9"] IN A NORTH EAST THERE ARE PRINCIPAL ROOM [16'-2" x 22'-0"], STORE ROOM [22'-6" x 10'-3"], EXECUTIVE ROOM [16'-3" x 10'-7"] CASH COUNTER [9'-6" x 9'-10"] RECEPTION [14'-11" x 11'-3"] AND THE LARGE KINDER GARDEN PLAY AREA [110'-4" x 78'-5"]. IN FIRST FLOOR THERE ARE 12 CLASS ROOM, THE SIZE OF THE EACH CLASS ROOM IS [22' x 27'], STAFF ROOM [22' x 10'], MATHS LAB [27'-22'] STUDENTS GIRLS TOILET [22' x 22'] STUDENTS BOYS TOILET [22' x 22'] LADIES STAFF TOILET [14' x 9'] GENTS STAFF TOILET [14' x 9'], ELETRICAL ROOM [6'-9" x 14'-6"] IN SECOND FLOOR THERE ARE 8 CLASSROOM, AND SIZE OF THE EACH CLASS ROOM IS [22' x 27'] STAFF ROOM [9'-10" x 22'-0"] ELETRICAL ROOM [6'-9" x 14'-6"] [22' x 22'] STUDENT GIRLS TOILET [22' x 22'] LADIES STAFF TOILET [14' x 9'] GENTS STAFF TOILET [14' x 9'] BIOLOGY LAB [22'-0" x 32'-7"] STUDENTS BOYS TOILET PHYSICS LAB [22'-0" x 32'-2"] L.S.L LAB [22'-0" x 38'-9"] ROBOTIC LAB [34'-6" x 22'-0"] ART & CRAFT STUDIO [37'-8" x 34'-3"] IN A TERRACE FLOOR THERE IS A LARGE MEETING HALL [88'-2" x 32'-7"] AND MUSIC ROOM [32'-7" x 32'-7"] AND ELETRICAL ROOM [6'-9" x 14'-6"]

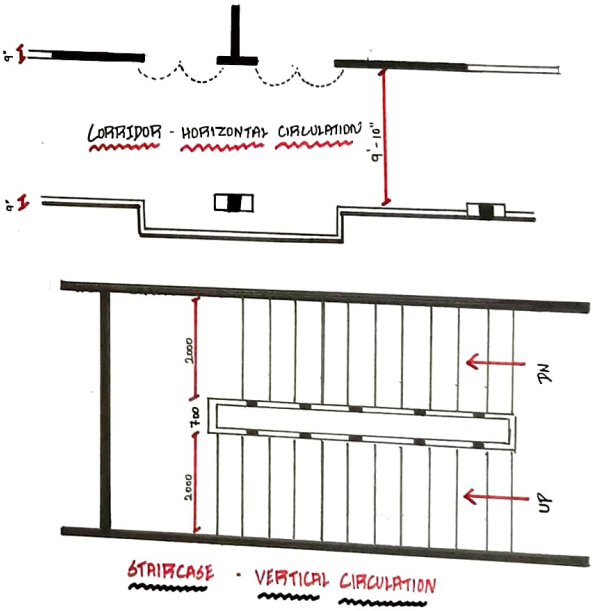


TERRACE FLOOR PLANE

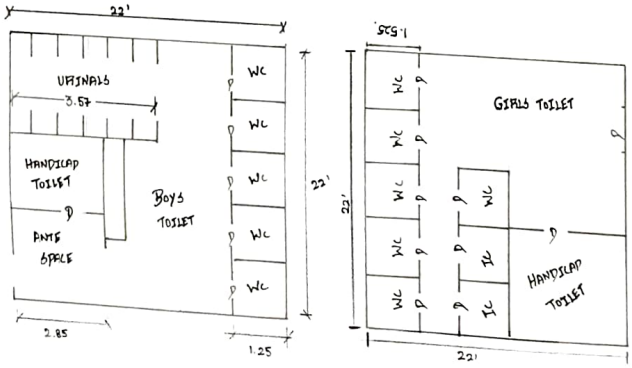
ACCESS AND APPROACH OF THE SCHOOL.



CIRCULATION - HORIZONTAL AND VERTICAL



STAIRCASE - VERTICAL CIRCULATION

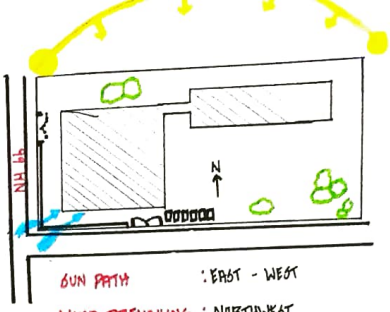


CASE STUDY

COLLODI PRIMARY SCHOOL

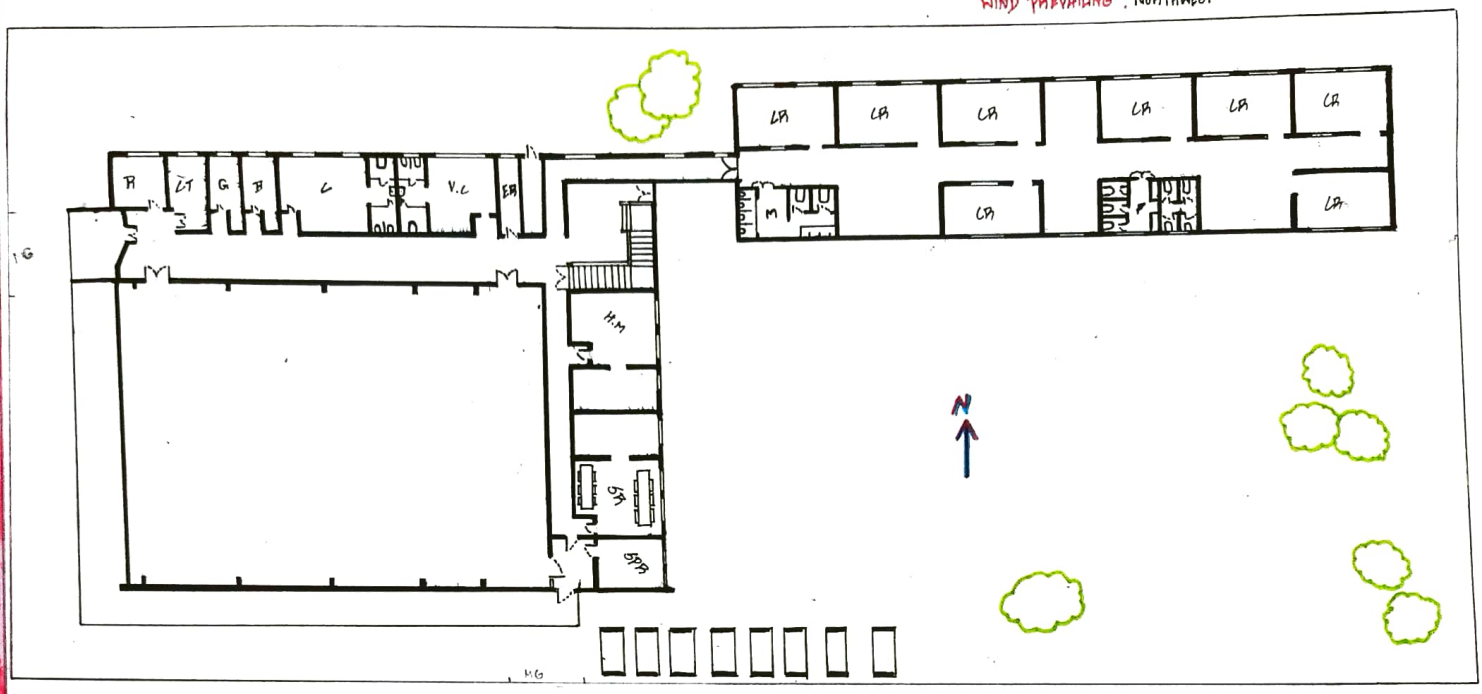
COUNTRY	INDIA
CITY	[KARNATAKA]
AREA	2500 m²
YEAR	2021
ARCHITECTS	SETTANTA
BUILDING TYPE	PRIMARY SCHOOL.

COLLODI PRIMARY SCHOOL IS LOCATED IN UDUPI MANGALURU NH 66, UDUPI. KARNATAKA

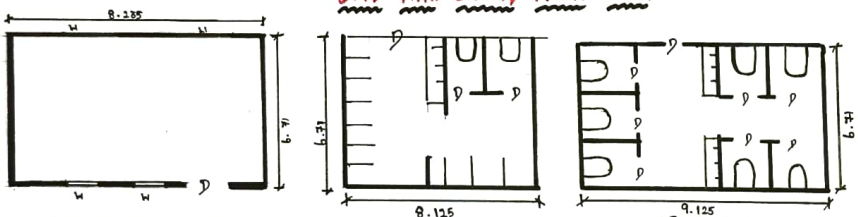


SUN PATH : EAST - WEST

WIND PREVAILING : NORTHWEST



SITE WITH GROUND FLOOR PLAN



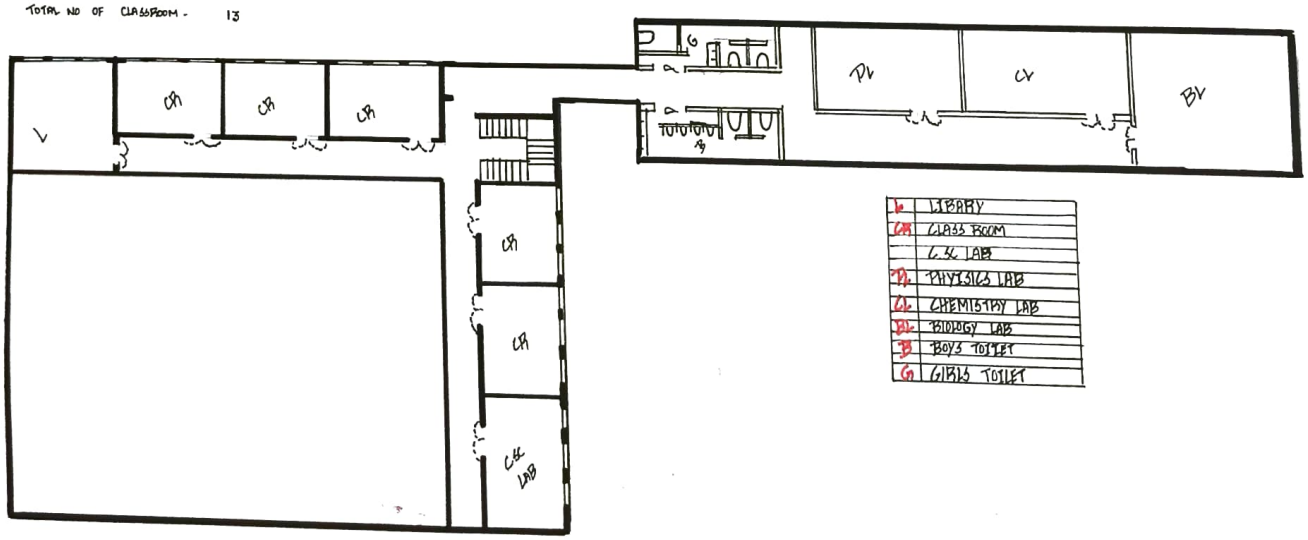
NO OF STUDENTS IN A CLASS - 30

D- DOOR - 1.57 x 2.24

W - WINDOW - 1.98 x 1.525

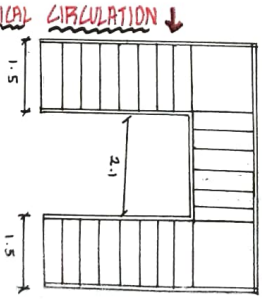
TOTAL NO OF CLASSROOM - 13

R	RECEPTION
LT	COMMON TOILET (STAFF)
G	COMMON TOILET (GIRLS)
B	COMMON TOILET (BOYS)
C	CORRESPONDENT ROOM
VC	VICE CORRESPONDENT ROOM
ER	ELECTRICAL ROOM
HM	HEAD MASTER ROOM
SR	STAFF ROOM
SPR	SPORTS ROOM
LR	CLASS ROOM

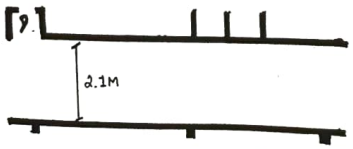


L	LIBRARY
LR	CLASS ROOM
	L & LAB
PL	PHYSICS LAB
CL	CHEMISTRY LAB
BL	BIOLOGY LAB
B	BOYS TOILET
G	GIRLS TOILET

VERTICAL CIRCULATION ↓

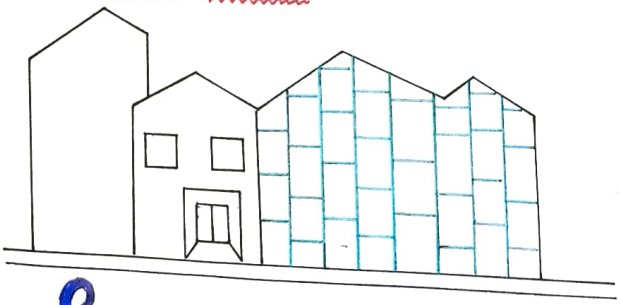


FIRST FLOOR PLAN ↑



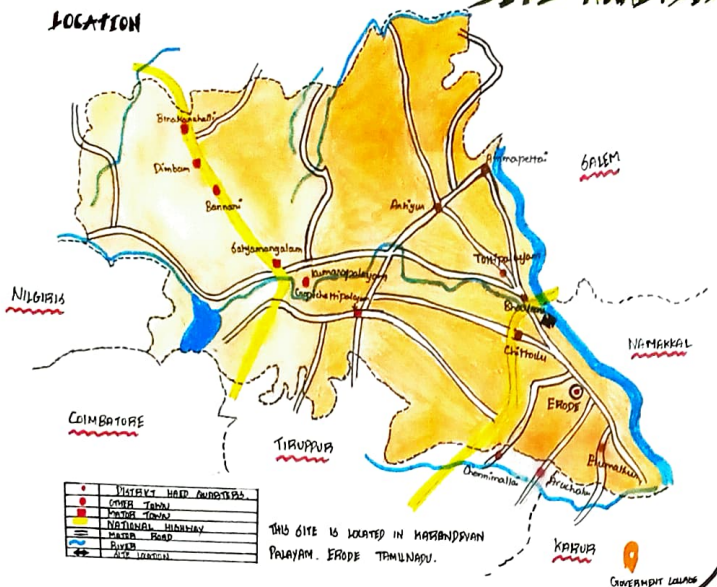
HORIZONTAL CIRCULATION ↑

FRONT ELEVATION

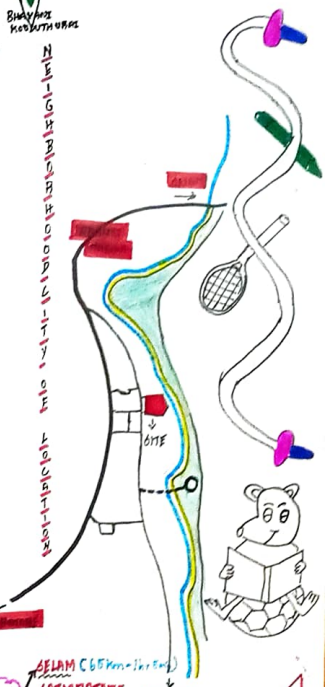


SITE ANALYSIS

LOCATION



THIS SITE IS LOCATED IN KARANDAVAN PALAYAM. ERODE TAMILNADU.



- → SRI VASAVI COLLAGE (1.0 KM - 2 Min)
- → GOVERMENT COLLAGE OF ENGINEERING, ERODE (9.0 km - 13 min)
- → PARVALAKSHMI TEXTILE PROCESSORS (boom - 7 min)
- → GOVERMENT WATER PROCESSING AND PUMPING STATION (250m - 3min)
- → KALINGARAYAN ANICUT (9.9 km - 37 min)
- → BHAVANI KOODUTHURAI (MUKUDAL).
- → SRI VASAVI SCHOOL (1.0 km - 2 min)
- → NEAR BY BUS STOPS
- → MEHANDRA WATER TREAT PLANT.

DISTANCE AND TIME TRAVELS BETWEEN SITE AND RELATED LOCATIONS.

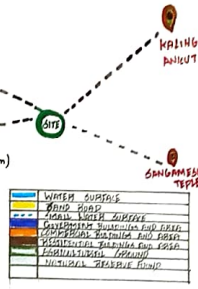
SITE LOCATION TO
- SALEM (65 km - 1hr 5 min)
- COIMBATORE (125 km)
- ERODE (11 km - 21 min)
- LAKSHMI NAGAR (1.2 km - 2 min)
- PN PUDUR (4.1 km - 8 min)

HISTORICAL BULIDING NEAR BY SITE

SANGAMESHWARAN TEMPLE GARDEN, MUKUDAL IS A HISTORICAL BULDING, WHICH IS LOCATED 3.5 KM AWAY FROM OUR SITE IN BHAVANI. IS A HINDU TEMPLE DEDICATED TO LORD SHIVA.

SITE SURROUNDING WITH MAJOR ROADS, MINOR ROAD

ROAD ASSESSIBILITY WITH MINOR AND MAJOR ROADS.



SITE ACCESSIBILITY - BOUNDARIES.

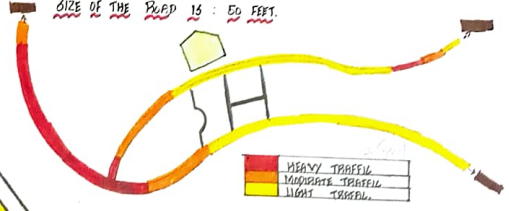
- IN NORTH SIDE THERE IS A MAN MADE BOUNDARIES (WALL)
- IN EAST SIDE THERE IS A NATURAL BOUNDARIES (CHANNEL)
- IN SOUTH SIDE THERE IS A NO BOUNDARIES
- IN WEST SIDE THERE IS A STATE HIGHWAY

CIRCULATION

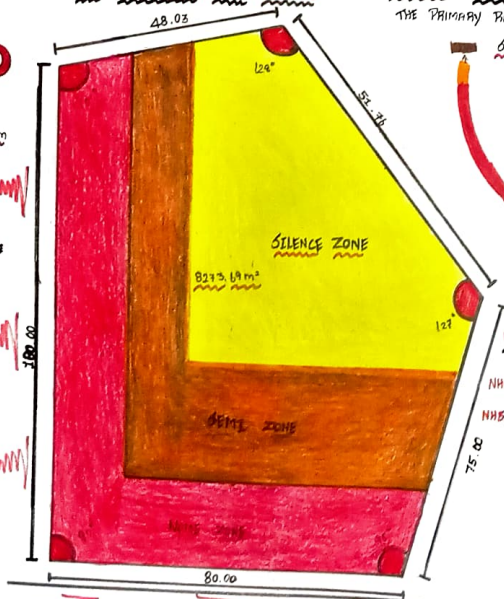
VEHICULAR CIRCULATION:

THE PRIMARY ROAD FOR THE SITE IS THOPPUR - METTUR DAM - BHAVANI - ERODE ROAD

SIZE OF THE ROAD IS : 50 FEET.



SITE DIMENSION WITH ACOUSTIC



HEIGHT RESTRICTIONS.

BULDING NOT EXEEDING 12.30 m IN HEIGHT.

SOIL TYPE :-

GRAVELY, STONY AND SANDY OF THE RED VARIETY.

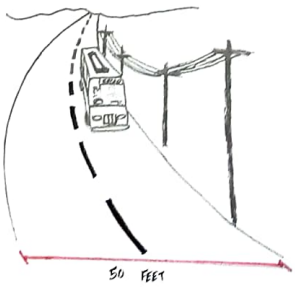
SITE AREA

THE TOTAL AREA OF THE SITE IS (2.044) ACRES

WIDTH OF ROADS.

NH544 - 100 FEET (30m)

NH544 W - 50 FEET (15m)



THOPPUR - METTUR DAM - BHAVANI - ERODE ROAD.

PUBLIC TRANSPORT :-

THE MAJOR BUS STAND FOR THE SITE IS NEARBY BY LOCATION BHAVANI AND THAT CONNECTED WITH LOCAL BUSES TO ALMOST TOWNS OF THE DISTRICT OF ERODE. FIND THE CITY BUSES COMMUTE MAJOR AREAS LIKE ERODE JUNCTION, PERUNDURAI, CHENNIMALAI, SENNIMALAI, GOBICHETTIPALAYAM, KANGAYAM, METTUR DAM. THE SITE STANDS ON TWO MAJOR NATIONAL HIGHWAYS, NH544 CONNECTING SALEM - KOCHI AND NH544 CONNECTING THOPPUR - ERODE. THE MAJOR TRANSPORTATION HUB FOR THE SITE IS THOPPUR ERODE

SITE ANALYSIS

	ROAD NOISE
	ELECTRIC POLE
	RAISED ELEVATION
(-)	LOW ELEVATION
	APPROACH OF SITE
	TRANSFORMERS.
	DRAIN

HUMAN AND CULTURE

ROAD NOISE

SUN PATH :- EAST - WEST.

WIND DIRECTION :- NORTHEAST

SUN SET (SUMMER)

CLIMATE ANALYSIS

TEMPERATURE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
HIGH	81°F	93°F	98°F	100°F	99°F	96°F	94°F	95°F	94°F	91°F	87°F	86°F
AVG	72°F	85°F	86°F	88°F	89°F	86°F	85°F	86°F	84°F	82°F	80°F	78°F
LOW	64°F	72°F	76°F	80°F	80°F	78°F	77°F	77°F	77°F	76°F	73°F	70°F

TEMPERATURE ANALYSIS

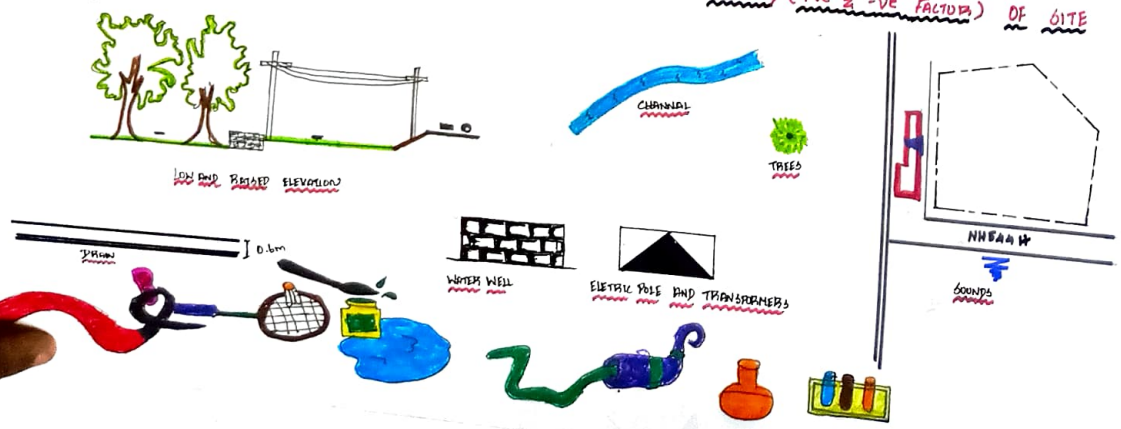
RAINFALL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
AVG	0.3"	0.3"	0.5"	1.2"	1.8"	1.3"	1.4"	1.9"	3.0"	4.3"	3.7"	1.4"

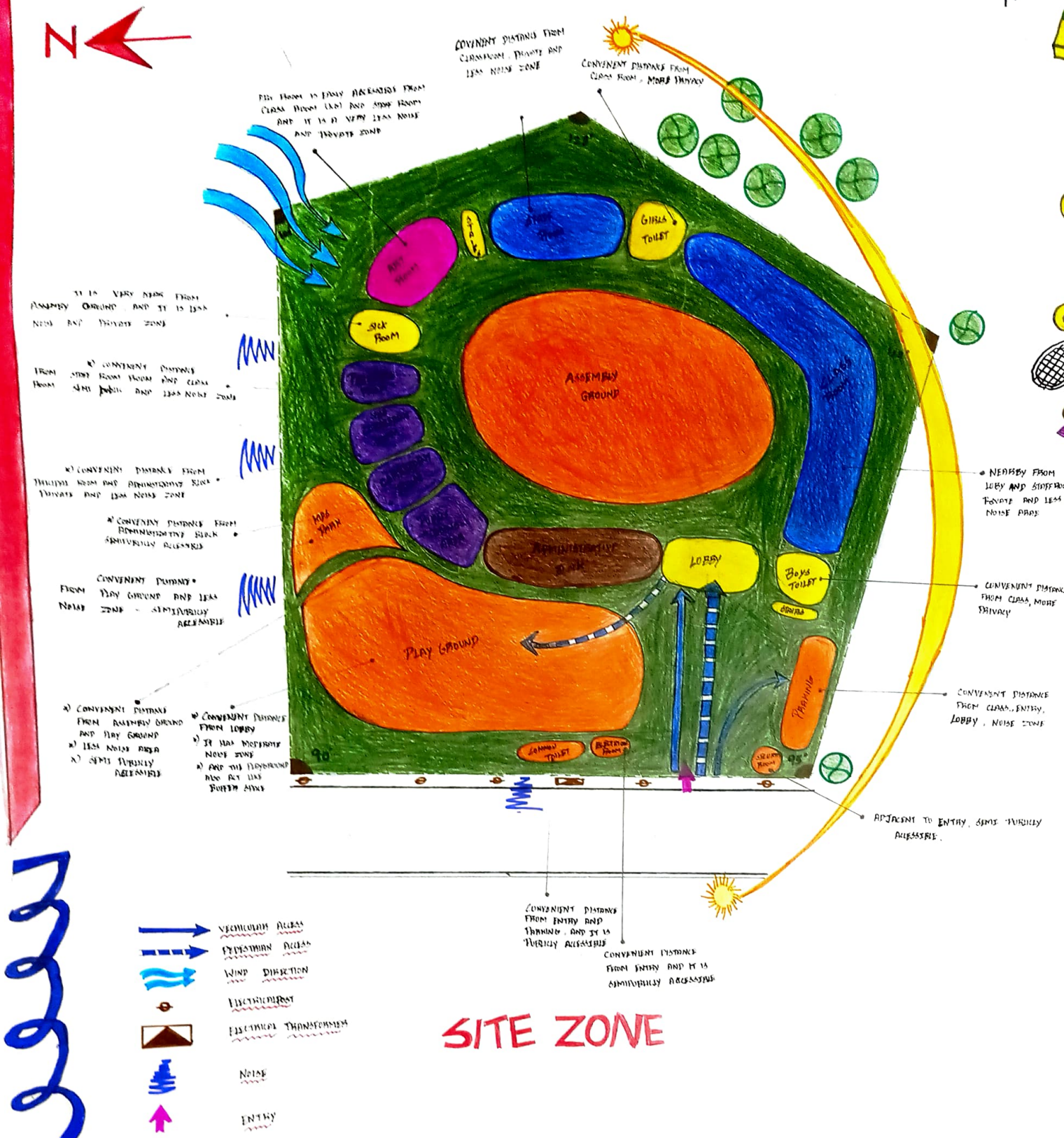
RAINFALL ANALYSIS

WIND SPEED	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC.	
AVG	6.0	6.8	8.6	8.4	7.4	10.4	11.2	9.9	9.3	8.7	5.4	6.1	MPH

WIND SPEED ANALYSIS

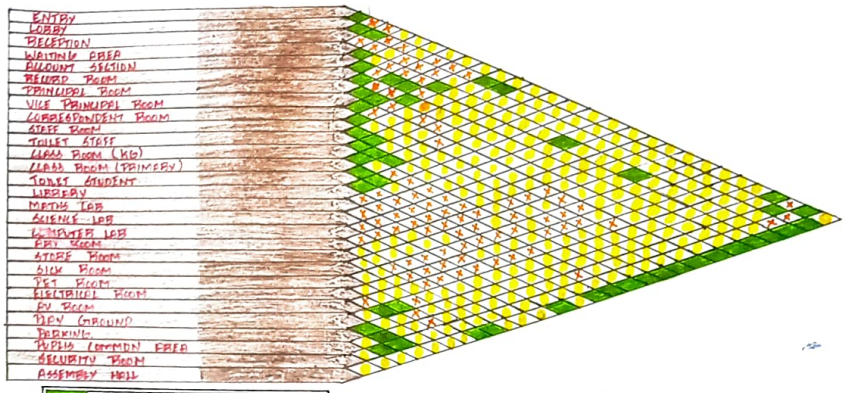
SENSORY (+ve & -ve FACTOR) OF SITE




N
CONVENIENT DISTANCE FROM CLASSROOM, PRIVACY AND LESS NOISE ZONE
CONVENIENT DISTANCE FROM CLASS ROOM, MORE PRIVACY
THIS ROOM IS EASILY ACCESSIBLE FROM CLASS ROOM (LAB) AND STORE ROOM AND IT IS A VERY LESS NOISE AND PRIVATE ZONE
GIRLS TOILET
SICK ROOM
ASSEMBLY GROUND
LOBBY
BOYS TOILET
PLAY GROUND
TRANSFORMER
NEARBY FROM LOBY AND STAFF ROOM PRIVATE AND LESS NOISE ZONE
CONVENIENT DISTANCE FROM CLASS, MORE PRIVACY
CONVENIENT DISTANCE FROM CLASS, ENTRY, LOBBY, NOISE ZONE
ADJACENT TO ENTRY, SEMI PUBLICLY ACCESSIBLE.
CONVENIENT DISTANCE FROM ENTRY AND TRAINING, AND IT IS PUBLICLY ACCESSIBLE
CONVENIENT DISTANCE FROM ENTRY AND IT IS SEMIPUBLICLY ACCESSIBLE
VEHICULAR ACCESS
PEDESTRIAN ACCESS
WIND DIRECTION
ELECTRICAL POST
ELECTRICAL TRANSFORMER
NOISE
ENTRY

SITE ZONE

PROXIMITY BUBBLE DIAGRAM SITE ZONING...



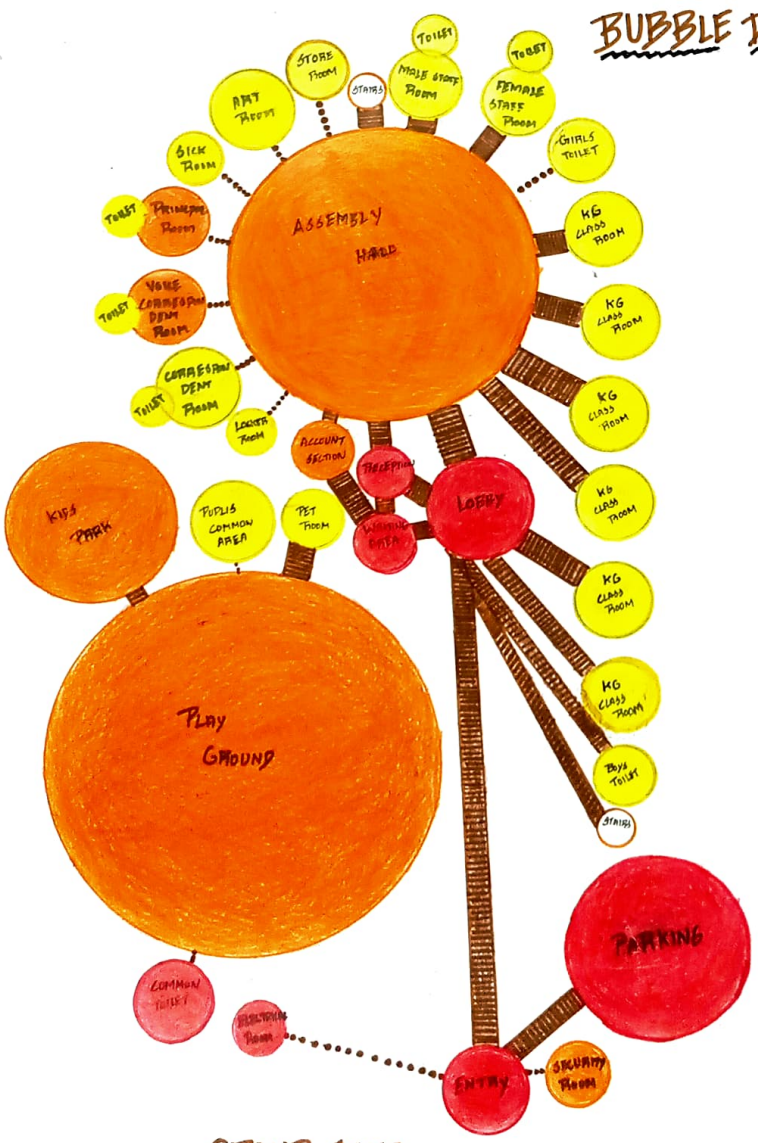
	NEARBY
X	ADJACENT
	FAR

PROXIMITY CHART

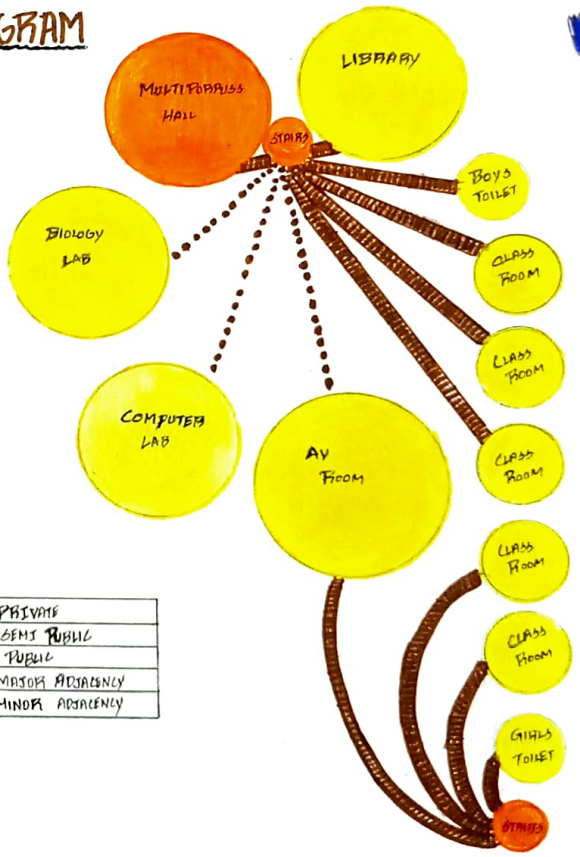
REQUIREMENTS...
ENTRY
LOBBY
RECEPTION
WAITING AREA
ACCOUNT SECTION
RECORD ROOM
PRINCIPAL ROOM
VICE CORRESPONDENT ROOM
CORRESPONDENT ROOM
STAFF ROOM
TOILET STAFF
CLASS ROOM (KG)
CLASS ROOM (PRIMARY)
TOILET STUDENT
LIBRARY
MATHS & MULTIPURPOSE HALL
SCIENCE LAB
COMPUTER LAB
ART ROOM
STORE ROOM
SICK ROOM
PET ROOM
ELECTRICAL ROOM
AV ROOM
PUPILS COMMON AREA
SECURITY ROOM
ASSEMBLY HALL

PRIVATE		SEMI PUBLIC	PUBLIC	
	LOCKER ROOM	PLAY GROUND	LOBBY	
CLASS ROOM	CORRESPONDENT ROOM	KIDS PARK	WAITING AREA	
SICK ROOM	VICE CORRESPONDENT ROOM	PRINCIPAL ROOM	PARKING	
STORE ROOM	PET ROOM	ACCOUNTS SECTION	ENTRY	
MALE STAFF ROOM	PUPILS COMMON AREA	SECURITY ROOM	COMMON TOILET	
FEMALE STAFF ROOM	BIOLOGY & COMPUTER LAB	MULTI PURPOSE HALL	ELECTRIC ROOM	
TOILET	LIBRARY	ASSEMBLY GROUND	RECEPTION	

BUBBLE DIAGRAM



GROUD FLOOR



	PRIVATE
	SEMI PUBLIC
	PUBLIC
	MAJOR ADJACENCY
	MINOR ADJACENCY

FIRST FLOOR

CONCEPT

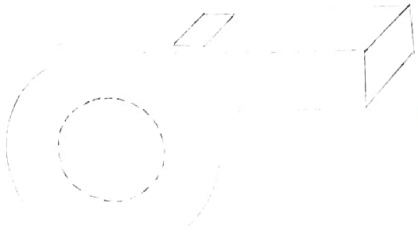
- A SMALL METAL (OR) PLASTIC TUBE THAT YOU BLOW INTO TO MAKE A LONG HIGH SOUND (OR) MUSIC AND IT IS MAINLY USED FOR SIGNALING, CONTROLING
- WHEN COMPARED TO SCHOOL, BLOW THE STUDENTS INTO TO THE SCHOOL (WHISTLE) TO MAKE A LONG AND HIGH SOUND (KNOWLEDGE) AND SIGNALING, CONTROLING THE STUDENTS FOR DISCIPLINE.

3 BASIC PARTS OF WHISTLE

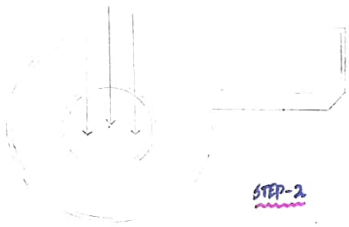
MOUTHPIECE → MANAGEMENT

PARTITION → TEACHERS

PEA → STUDENTS

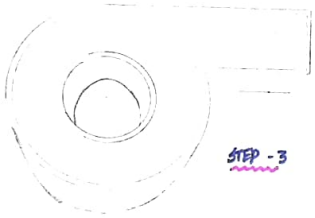


STEP-1



STEP-2

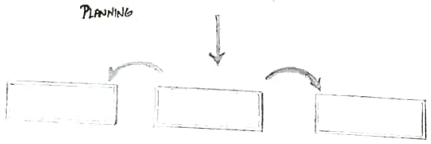
- CENTRAL PLANE PUSHED DOWN TO ALLOW OPEN COURTYARD



STEP - 3

- THE CIRCULAR SPACE ACT LIKE A COURTYARD SPACE, ASSEMBLY GROUND AND FREE UP SPACE

- TAKING THE BASIC SHAPE [RECTANGLE] FOR ADDING THE SHAPES FOR SPACIAL PLANNING



- REAPTING THE SHAPE FOR SPACIAL PLANNING

STEP-4

METERIALS GOING TO BE USED IN BUILDING CONSTRUCTION ARE, STONE, BRICK, CONCRETE THK EARTHEN WALLS, UV BLOCKING GLASS..

BRICK (ADVANTAGES)

- BRICK IS ENERGY EFFICIENT
- LOW MAINTENANCE
- WEATHERPROOF

(DISADVANTAGES)

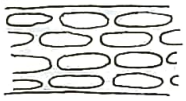
- NOT AS DURABLE COMPARED TO STONE
- RAISE CONSTRUCTION COST

STONE (ADVANTAGES)

- DURABLE
- LOW MAINTENANCE
- WEATERPROOF

(DISADVANTAGES)

- HEAVIER IN WEIGHT

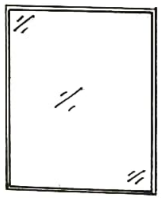


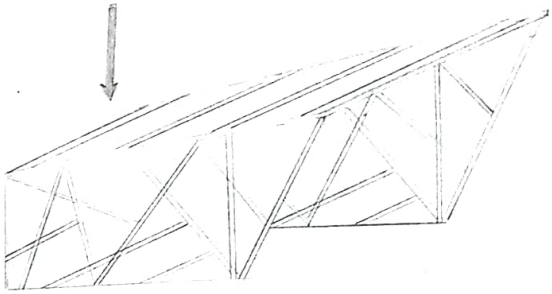
UV BLOCK GLASSES (ADVANTAGES)

- VERY LIGHT WEIGHT
- PREVENT HEAT
- ABSORPTION AND RESISTANCE TO UV LIGHTS

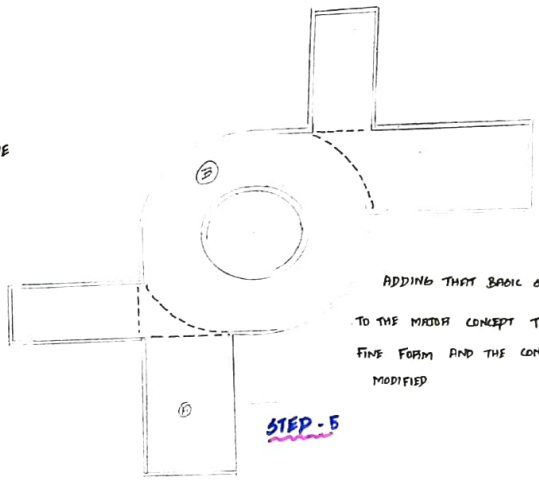
(DISADVANTAGES)

- VERY COSTLY
- HANDLE WITH CARE
- HIGH MAINTENANCE



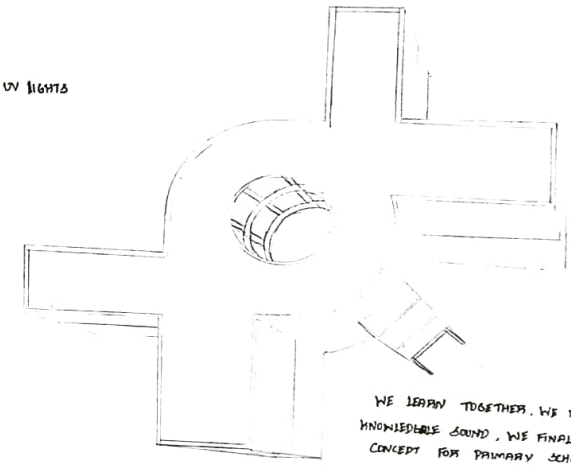


STANGE - 1 (E)



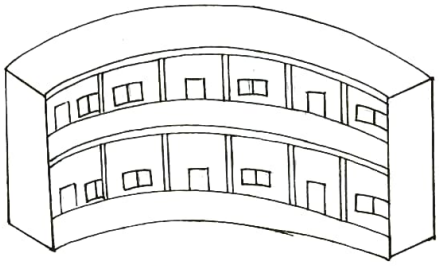
STEP - 5

ADDING THAT BASIC SHAPE TO THE MAJOR CONCEPT TO MAKE A FINE FORM AND THE CONCEPT IS MODIFIED

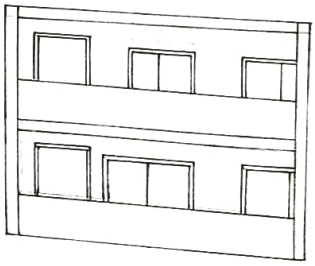


STEP-6

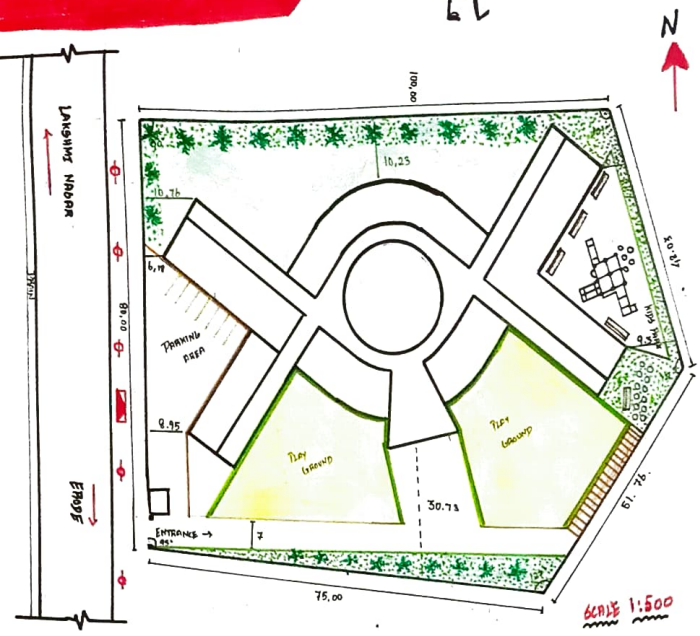
WE LEARN TOGETHER. WE MADE A LARGE KNOWLEDGE SOUND, WE FINALLY MADE THE CONCEPT FOR PRIMARY SCHOOL.



DETAIL B



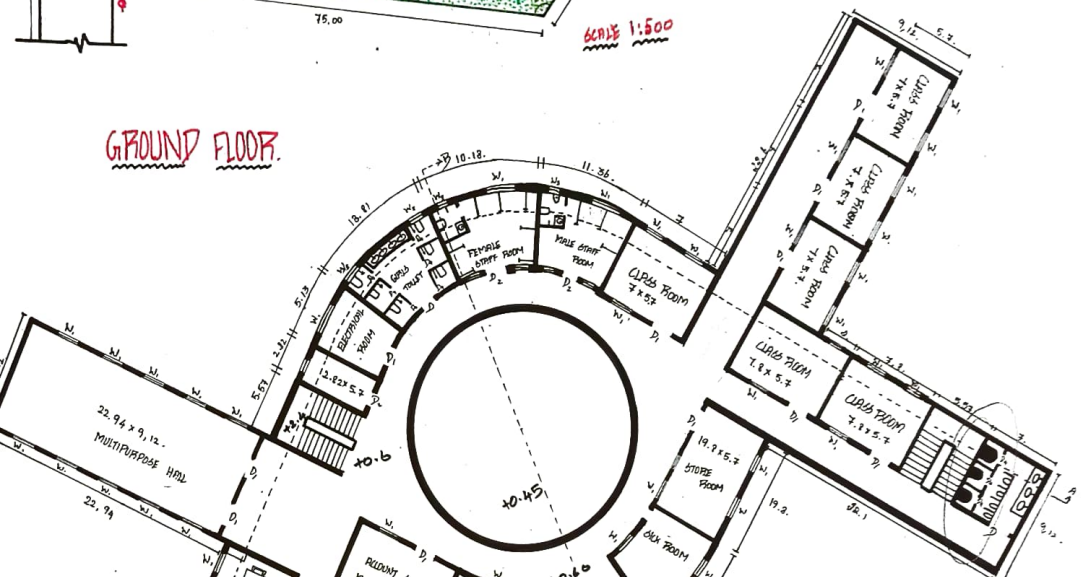
DETAIL - A

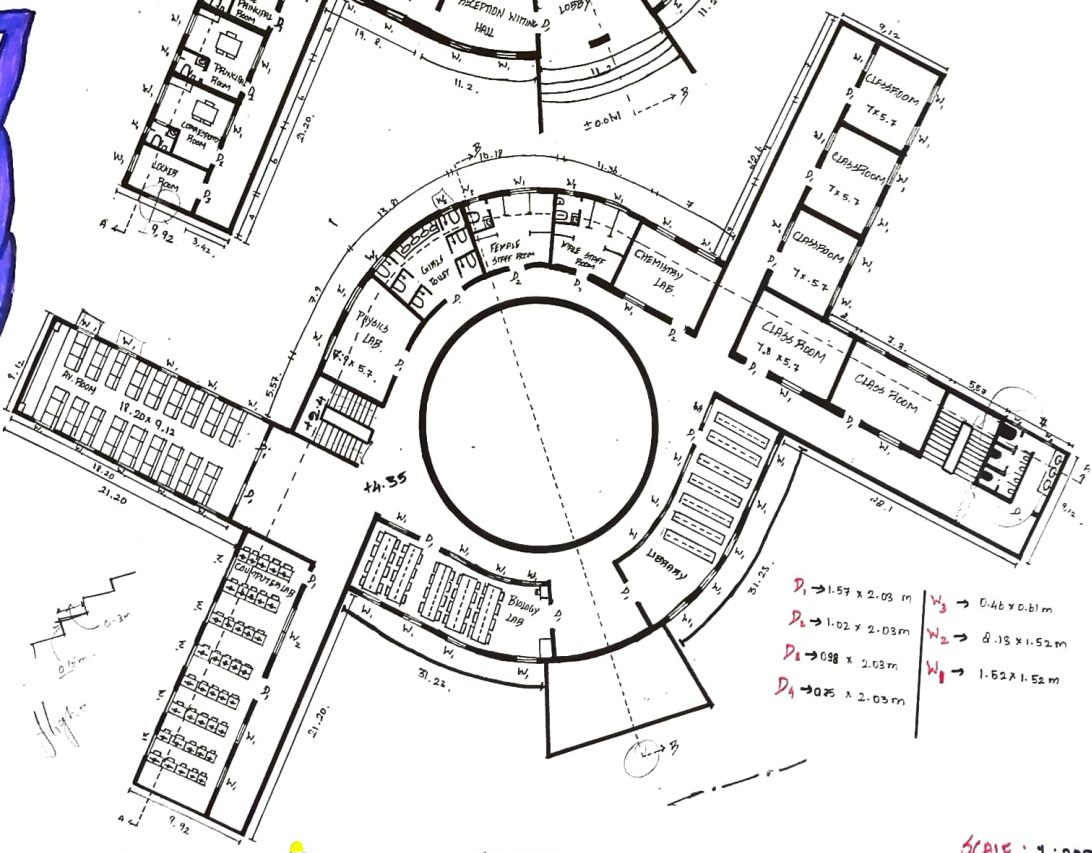


SCALE 1:500

AREA OF GROUND FLOOR - 1100 M
AREA OF FIRST FLOOR - 909.15
TOTAL - 2009.15
AREA OF ⊕ SITE - 8273.69
FSI - 0.24

GROUND FLOOR





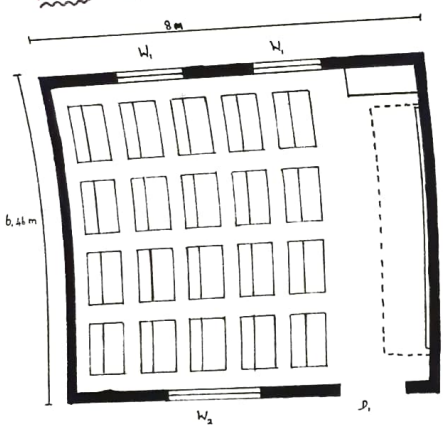
$D_1 \rightarrow 1.57 \times 2.03$ m
$D_2 \rightarrow 1.02 \times 2.03$ m
$D_3 \rightarrow 0.98 \times 2.03$ m
$D_4 \rightarrow 0.75 \times 2.03$ m

$W_3 \rightarrow 0.46 \times 0.61$ m
$W_2 \rightarrow 0.18 \times 1.52$ m
$W_1 \rightarrow 1.52 \times 1.52$ m

FIRST FLOOR

SCALE : 1:200.
ALL DIMENSIONS ARE IN M

DETAIL - A

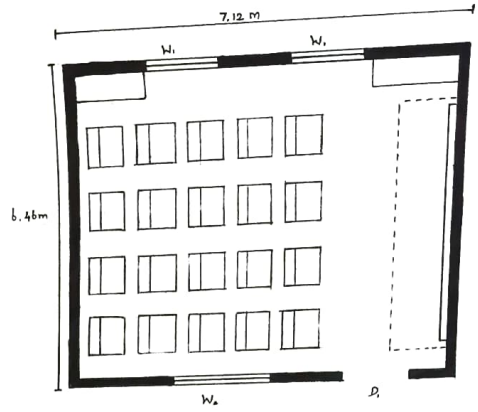


$W_1 \rightarrow$ 1.52 M x 1.52m

$W_2 \rightarrow$ 2.13 M x 1.52m

$D_1 \rightarrow$ 1.57 M x 2.03m

DETAIL - B

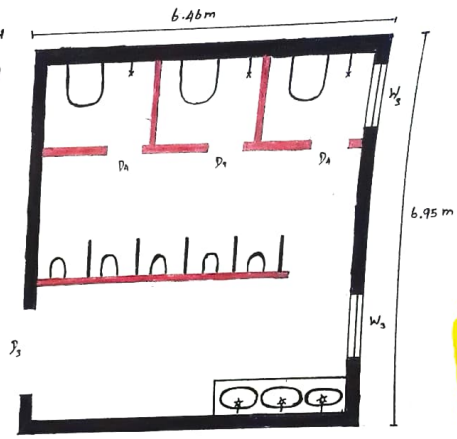


$W_1 \rightarrow$ 1.52 m x 1.52 m

$W_2 \rightarrow$ 2.13 m x 1.52m

$D_1 \rightarrow$ 1.57 m x 2.03m

DETAIL - C

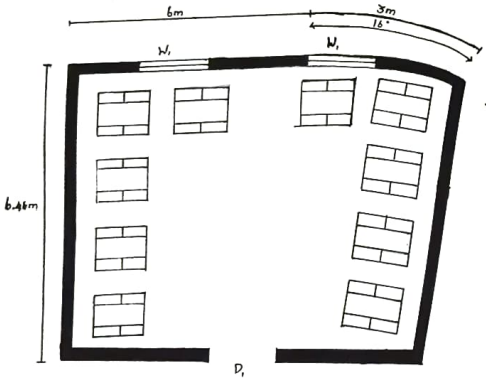


$W_3 \rightarrow$ 0.46m x 0.61 m

$D_3 \rightarrow$ 0.76 m x 2.03 m

$D_4 \rightarrow$ 0.96m x 2.03 m

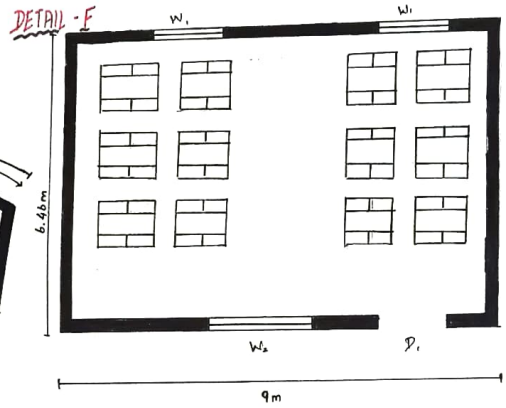
DETAIL - E



$W_1 \rightarrow$ 1.52 M x 1.52 m

$D_1 \rightarrow$ 1.57 m x 2.03m

DETAIL - F

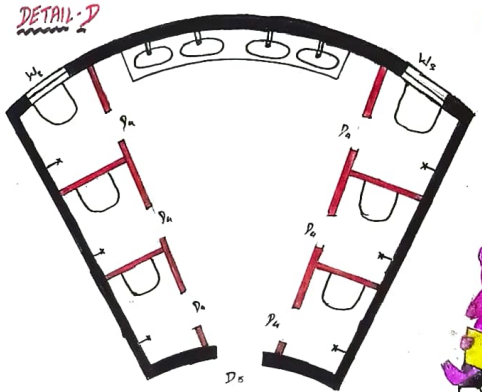


$W_1 \rightarrow$ 1.52m x 1.52m

$W_2 \rightarrow$ 2.13 m x 1.52m

$D_1 \rightarrow$ 1.57 m x 2.03m

DETAIL - D



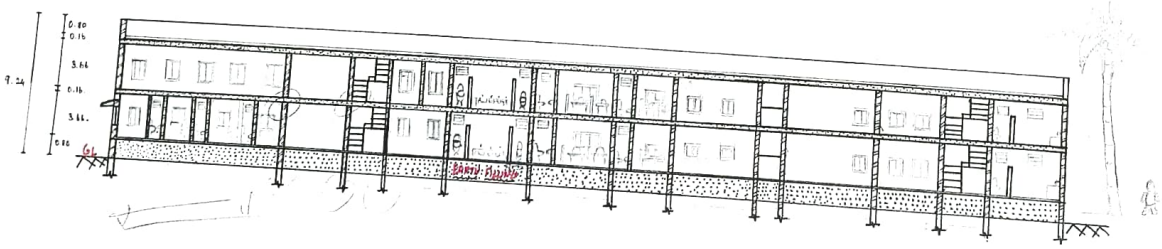
$W_3 \rightarrow$ 0.46m x 0.61m

$D_4 \rightarrow$ 0.96m x 2.03m

$D_5 \rightarrow$ 1.5m x 2.03 m

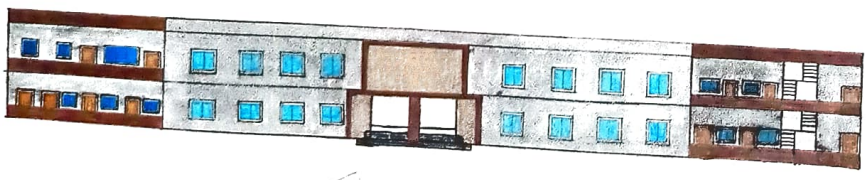
SCALE :- 1 : 100

SECTION OF 'AA'

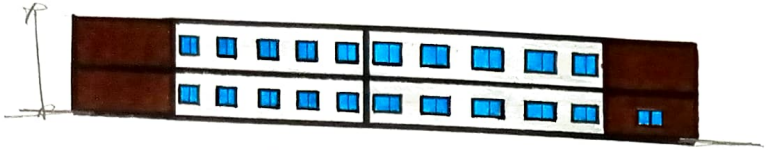


SCALE : 1 : 200

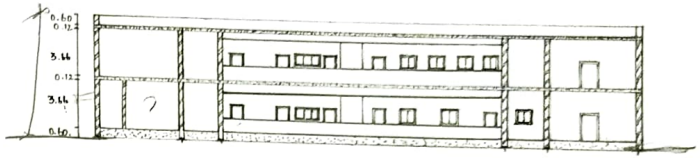
FRONT ELEVATION



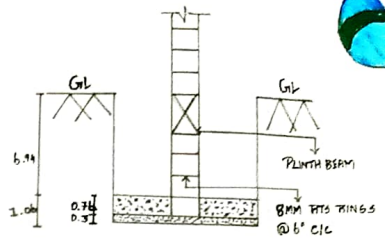
SCALE :- 1 : 200



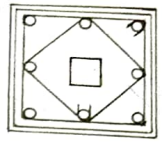
SIDE ELEVATION

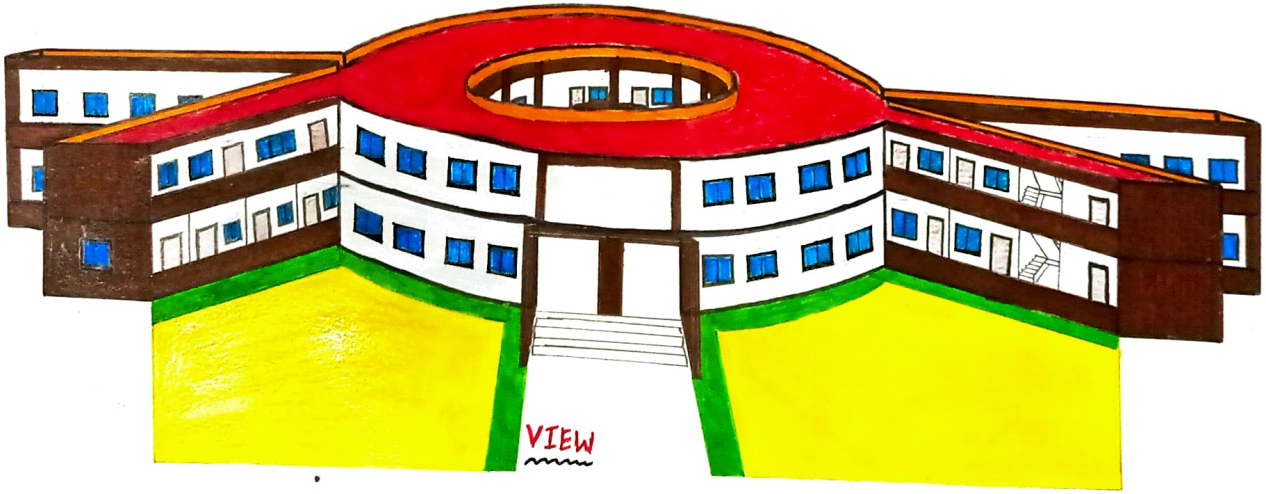


SECTION OF 'BB'



COLUMN FOOTING DETAILS.





VIEW