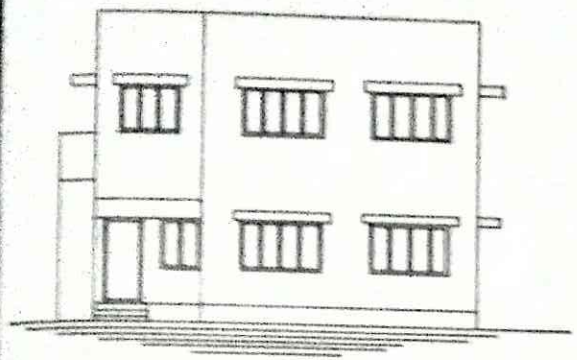
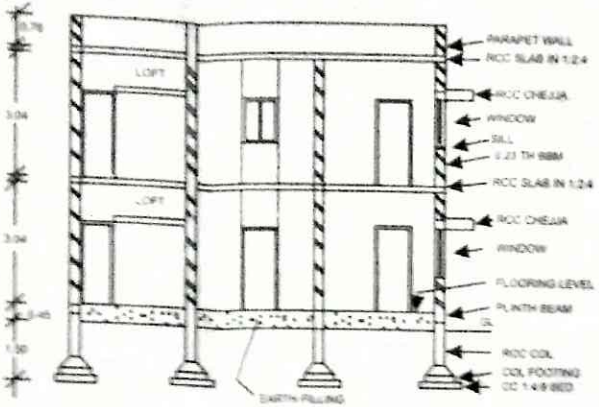
Name of subject: ..... Code: .....

Selection of Site for Building :→

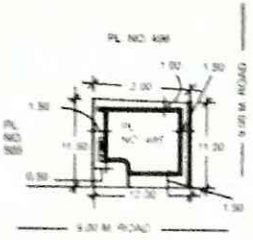
→ fullfil the scope & purpose of Building.
→ Selected in fully developed or which is fast ingrowth
→ for pleasant living cond^n, neighborhood which has equal status.
→ facilities must be available at the site location. like, water, power, gas, drainage etc.
→ nearby facilities → hospital, school, Road, Police station, shopping, trans port facilities.
→ site should be selected at such place which comes under the by-laws of local authority.
→ Soil should have good quality characterstics.
→ Site for residential building must be away from industries factory etc.
→ The site should be located on comparatively elevated place, so as to ensure proper and quick drainage.



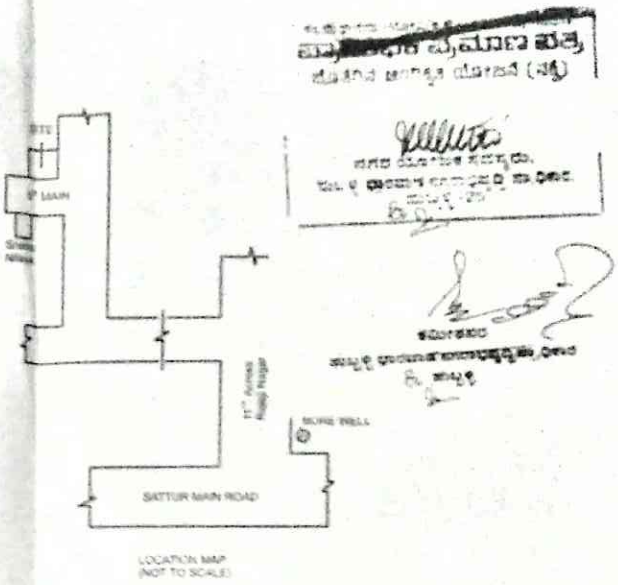
FRONT ELEVATION



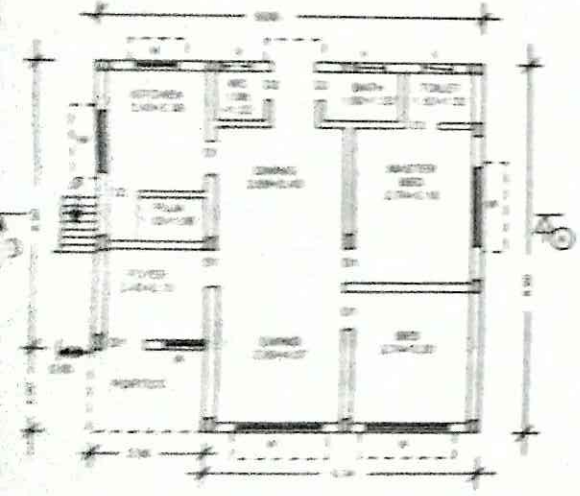
SECTION AT 'A' 'A'



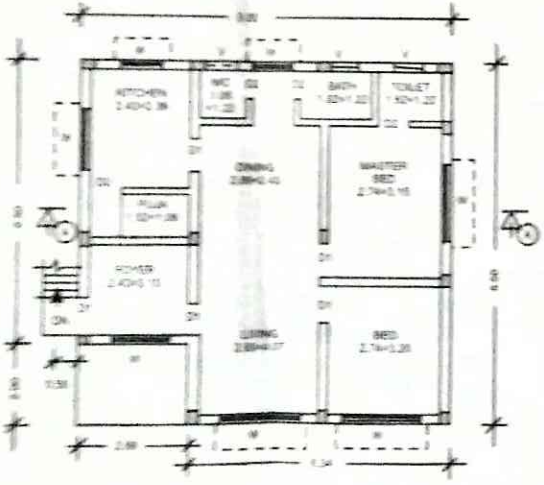
SITE PLAN
(SCALE = 1:500)



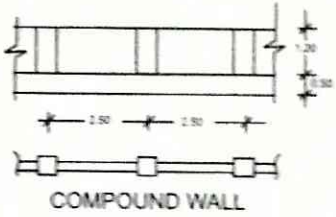
LOCATION MAP
(NOT TO SCALE)



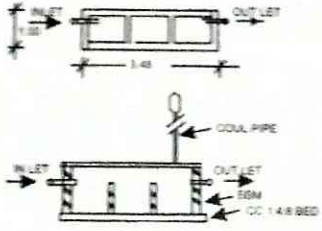
GROUND FLOOR PLAN



FIRST FLOOR PLAN



COMPOUND WALL



SEPTIC TANK DETAILS

AREA STATEMENT

PLOT AREA =	135.00 SQM
PROPOSED G.F. BUILT UP AREA =	71.18 SQM
PROPOSED F.F. BUILT UP AREA =	71.18 SQM
TOTAL BUILT UP AREA =	142.36 SQM
F.A.R. =	1.0 S
COVERAGE =	52.73%
COMPOUND WALL LENGTH =	23.00 RMTS

SCHEDULE OF OPENINGS

DOORS	D1	0.90 × 2.10
DOORS	D2	0.75 × 2.10
WINDOWS	W	1.50 × 1.25
VENTILATORS	V	0.75 × 0.60

NOTE :

(1) ALL DIMENSIONS ARE SHOWN IN METERS

Sd/—
APPLICANT SIGNATURE

STABILITY CERTIFICATE

THIS IS TO CERTIFY THAT THE FOUNDATIONS ARE DESIGNED STRONG ENOUGH TO TAKE THE LOAD OF GROUND & FIRST FLOOR. THE OVERALL STRUCTURE WILL BE SOUND AND SAFE.

Sd/—

ENGINEER

SANJAY PATIL
CONSULTING ENGINEER
SHRI SHAKTI KEMPAGERI,
LINE BAZAR, DHARWAD
DHARWAD-580001

SCALE = 1:100
DRG. NO. =
DATE =

PROPOSED RESIDENTIAL BUILDING FOR MR. L.V. JOSHI, IN PLOT NO. 495 R.S. NO./BL NO. 100, 101, 102, 105, 106, 107, 108, 109Y, 87, 84, 88, 89 : 2, 92, 93, 96, 97, 81 : 2, 82 : 1 & 78 AT SATTUR HUDCO LAYOUT, DHARWAD

Type of Building :→

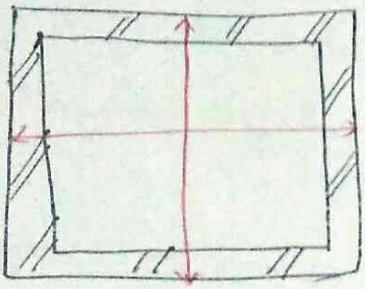
1. Residential Building → include one or two private dwellings, apartment, dormitories hotels etc.
2. Educational Building → School & College, University for education purpose.
3. Institutional Building → Institutional building ordinarily provide sleeping accommodation for the occupants.
   → It includes hospitals, sanatoria, nursing homes, orphanages, Jails, mental hospitals, reformatories etc.
4. Assembly Buildings → group of people gather for amusement, recreation, social, religious etc.
   → It includes theaters, halls, auditoria, museum, dance halls etc.
5. Business Building → Building which is used for transaction of business for the keeping of accounts & records for similar purpose.
6. Mercantile Building :→ include shop, store, market for display and sale of merchandise either wholesale or retail.

7. Industrial Building :→ In this building product or material of all kinds are assembled, fabricated & processed. Eg → refineries gas plants, mills, dairies, Industry etc

8. Storage Building :→ like Cold storage, warehouse freight department transit shed etc.

9. Hazardous Building :→ used for highly combustible explosive material.

→ Plinth Area :→ Plinth area shall mean the built up area covered measured at the floor level of the basement or of any storey.

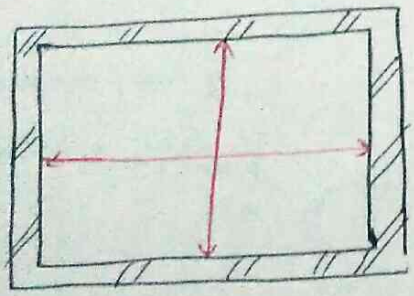


→ usually 10 to 20% more than the carpet area

Area Include → internal & external wall
→ Entire Carpet area

Area not Included →
→ lobbies, gate way etc.
→ Area of loft
→ Terrace

→ Carpet Area :→ The area available for use within an apartment excluding the area occupied by the walls.



Area Includes :→
→ All Rooms → living Room, bed rooms dining room, etc.
→ ~~Kitchen~~ & ~~Bathrooms~~ (Door)
→ ~~Stores~~ & ~~Balconies~~ (Intermediate Pillar)

Areas Not Included →
→ external & Internal Wall
→ Verandah
→ Bathroom, Kitchen, Store, Canteen etc.

Campus: ..... Course: ..... Class/Section: ..... Date: .....
Name of Faculty: ..... Name of Subject: ..... Code: .....

→ floor Space Index (floor area Ratio) :→ It is the ratio obtained by dividing total covered area of all the floors with the area of the plot.

$$FSI = \frac{\Sigma \text{ Covered Area of Plot}}{\text{Area of Plot}}$$

→ Building By law :→ Building by law are the rule & regulation set forth by the concerned goverment authority and updated time to time.

The building by law should be followed strictly by any person or organization that plan to construct a building.

Building by law helps in making a planned development.

The by laws govern the following aspects:

(1) Line of building frontage
(2) built up area of building
(3) Open space around building and their hights.
(4) Provision of size, height & ventilation of rooms and apartments.
(5) Water supply & sanitary provisions
(6) Structural design or size & sections.

Concept of sun light & Ventilation:-

Good sun light or day lighting is not toomuch of light, but sufficient light which is free from glare and it should come from the right direction.

Good day-lighting is essential in many ways:

① To create a pleasing and healthy environment.

② To promote the activities carried in building like factory etc.

③ To ensure the safety of people inside the building.

→ Good lighting is achieved by providing windows in residential or commercial building. It is important to admit enough light for good seeing as per the requirement of the room.

Ventilation :→ Ventilation is referred as the supply of out side air into a building through windows or other opening due to wind outside and convection effects arising from temperature or vapours pressure difference or both between inside & out side of the building.

Ventilation of a building is essential because of various functional requirements,

① To create air movements

② To maintain conditions suitable to the contents of the space.

③ To prevent undue concentration of body odours, fumes, dust, bacteria, CO_2, moisture etc.

④ To remove the product of combustion, body heat and heat liberated from the operation of certain equipments

→ Natural Ventilation is provided through window & artificial ventilation is provided by fan etc.

→ Basic Concept of R.C.C.

RCC = Cement + Sand + Aggregate + Reinforcement

= Concrete + Reinforcement

Concrete give better Result in Compression but When member of structure occurs tension then provide Reinforcement.

→ Composite material of concrete & steel is called RCC [R.C.C. → Reinforced Cement Concrete.].

Advantage of R.C.C.

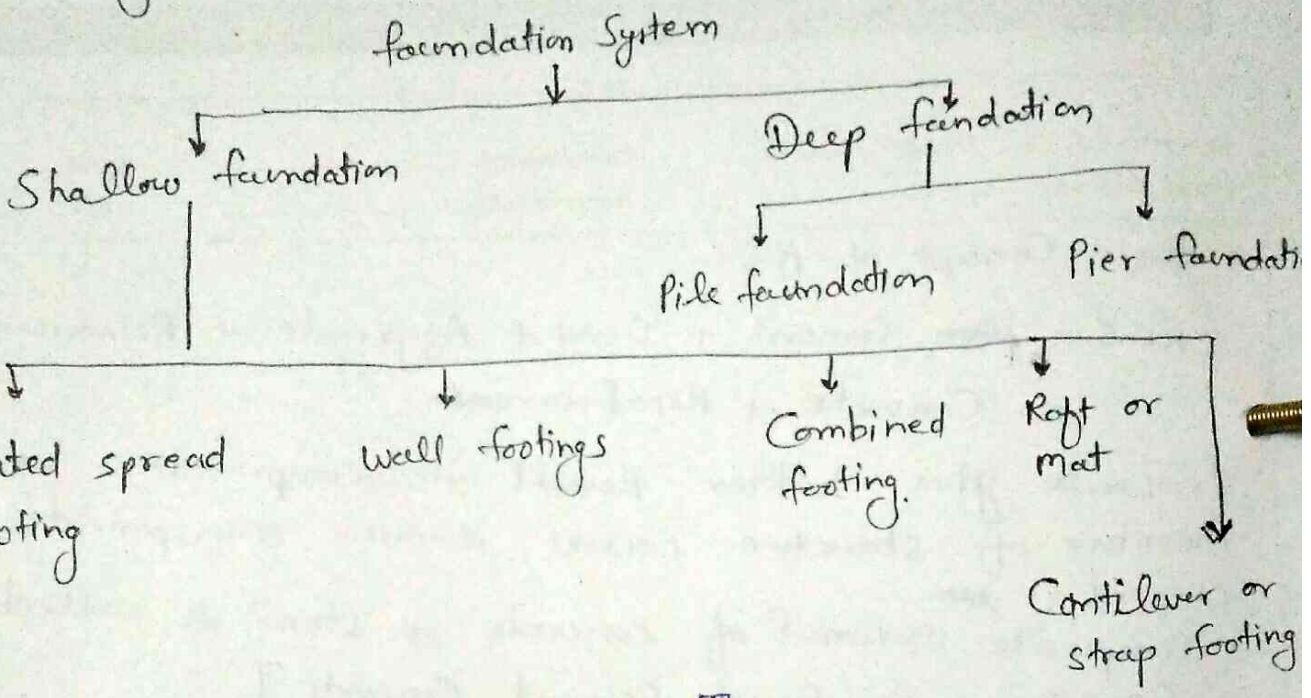
→ It is good fire resistant
→ Durability is very good
→ R.C.C structure can be designed to take any load.

Use of R.C.C.

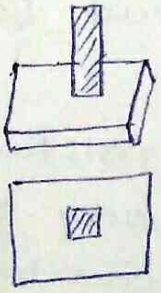
→ footing
→ Column
→ Beam
→ stair
→ Roof
→ Slab
→ Water tank
→ Dams
→ Bridges.
→ Retaining Wall
→ Docks & harbour
→ Railway sleeper
→ electric pole
→ Towers
→ Roads
→ Airports.
→ Atomic plant

Foundations :→ foundation is the lowest part of a building which is below the surface of the surrounding ground.
→ It's direct contact with soil surface & transmit all the loads to the soil beneath.

Types of ~~footing~~ :→ foundation :→

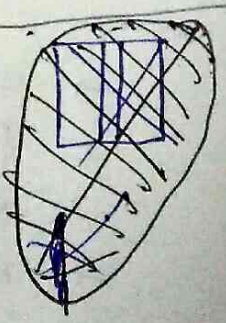


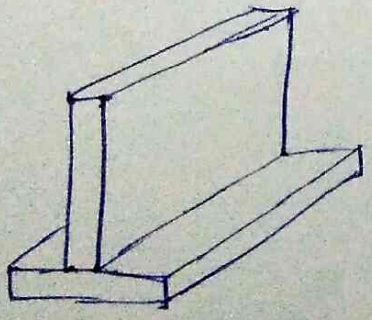
→ Shallow foundation →

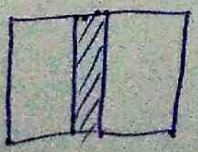


① Isolated spread footings -
under individual column.
These can be square, rectangular, or circular

② Wall footing → is a continuous slab strip along the length of wall.

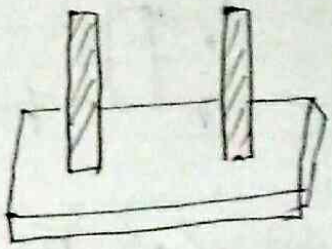


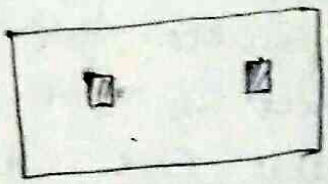




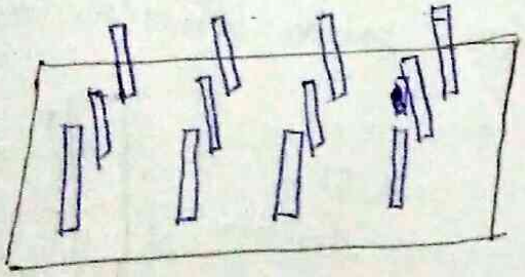
③ Combined footing

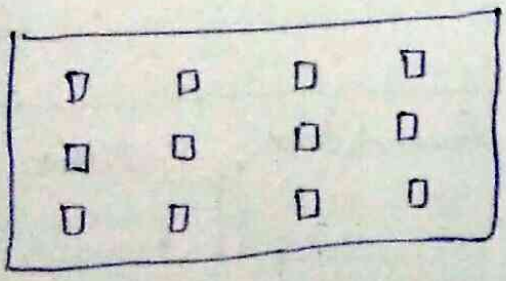
support two or more columns. there can be rectangular or trapezoidal plan.





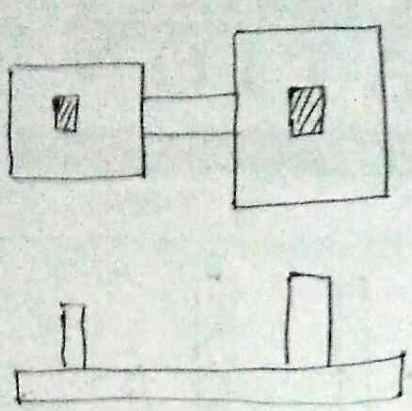
④ Mat or Raft footing.





This is a large continuous footing supporting all the columns of the structure. This is used when soil condition are poor but piles are not used.

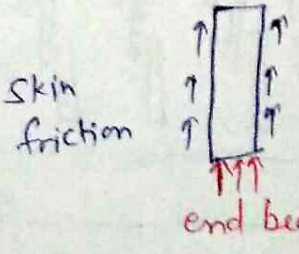
5. Cantilever or Strap footing :→ These are similar to Combined footing, except that the footing under Column are built independently and are joined by strap beam.



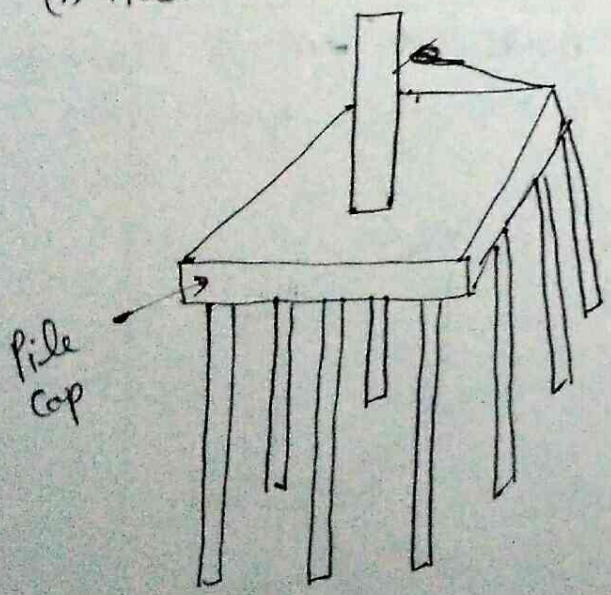
→ Deep foundation → The shallow foundation may not be economical or even possible when the soil bearing capacity near the surface is too low.

→ In this case deep foundation are used to transfer loads to a stronger layer, which may be located at a significant depth below the ground surface.

→ The load is transfer through skin friction and end bearing.



(1) Pile foundation



(2). Pier foundation