

* DEFINE SPECIFICATION:-

- A SPECIFICATION IS A DETAILED DESCRIPTION OF THE DIMENSIONS, CONSTRUCTION, WORKSHIP MATERIALS, ETC OF WORK DONE OR TO BE DONE
- THERE IS A LOT OF DETAILED WORK
- SPECIFICATION SHOULD BE GRAMMATICALLY PERFECT.
- THE DRAWINGS CANNOT BE READ BY ANY PERSON SO IF SPECIFICATION ARE PROVIDED
- A DETAILED SPECIFICATION IS GIVEN FOR MATERIALS THAT ARE BEING USED.

* EXCAVATION

- EXCAVATION IS REQUIRED FOR FOOTING FOUNDATION AND BUILDING COLUMNS.
- DEPTH OF EXCAVATION CAN GO 1.5 TO 2M DEEP THE RATE CHANGES AS WE GO DEEPER.
- THERE IS A ROYALTY THAT HAS TO BE PAID THE COLLECTOR.
- THERE ARE DIFFERENT METHOD OF EXCAVATION
- WE SHOULD NOT DAMAGE ~~THE~~ THE WATER LINE, TELEPHONE LINE, GAS LINE DEEP DOWN BY THE CONTRACTOR.
- WE WILL GET WATER BELOW THE GROUND THE CONTRACTOR HAS TO DEWATER IT.

- AFTER EXCAVATING THE LAND HAS TO BE FILLED WITH LAYERS.
- THE EXCAVATED MATERIAL GOES TO THE DUMPING GROUND
- THE SOIL TYPE IS ALSO TESTED IN LAB.

* BRICK WALL

- BRICK WALL IS REQUIRED IN FOOTING,
- FOUNDATION, EXTERNAL, INTERNAL WALL, PAVEMENTS, CURBS FOR WATER BED, COMPOUND WALL ETC.
- ONCE THE BRICK IS ARRIVED AT THE SITE CHECK ITS SHARPNESS, EDGES, ALL SAME IN SIZE, NO CRACKS ETC. ALSO COLOUR
- $230 \times 115 \times 75$ mm IS THE STANDARD SIZE.
- WHEN TWO BRICKS ARE BANGED TOGETHER THERE SHOULD BE A RINGING SOUND.
- PUT THE BRICK IN WATER FOR 1 HOUR THE WEIGHT OF THE BRICK SHOULD BE $\frac{1}{6}^{\text{th}}$ OF ITS ORIGINAL WEIGHT.
- IN LAB - THE CRUSHING STRENGTH OF THE BRICK SHOULD BE 10 N/mm^2
- CEMENT USED SHOULD BE ORDINARY PORTLAND CEMENT AND SAND SHOULD BE RIVER SAND (WELL WASHED)
- SAND SHOULD HAVE SHARP EDGES AND ANGULAR IN SHAPE.
- PORTABLE DRINKING WATER SHOULD BE USED FOR ANY TYPE OF CONSTRUCTION.

- SKILLED LABOURS KNOWN AS MASON ARE USED AND TO HELP THEM UNSKILLED LABOURS.
- THE PROPORTION OF THE CEMENT : SAND IS 1:6 OR 1:5 IT IS MIXED IN DRY CONDITIONS 2 TO 3 TIMES AFTER THAT WATER IS ADDED AND THEN MIXED 2 TO 3 TIMES.
- MORTAR THICKNESS SHOULD NOT BE MORE THAN 10 TO 12 MM.
- IN ONE DAY LABOUR CAN ONLY DO 1m HEIGHT OF BRICK WALL, WAIT FOR 24 HRS AND THEN ANOTHER 1M WALL.
- AT THE END OF THE DAY WATER THE WALL ALL THE JOINTS SHALL BE RACKED AND FACES TO THE WALL SHOULD BE CLEANED.
- WATERING THE WALL 3 TIMES A DAY
- CURING TIME FOR BRICK WALL IS 10-16 DAYS.

* STONE MASONARY :-

- TYPES OF STONE IS SEDIMENTARY IE DEPOSITION OF MINERAL AND IGNEOUS ROCK IE LAVA
- AVAILABILITY OF STONE IN INDIA IS GRANITE FROM SOUTH OF INDIA, MARBLE, KOTA FROM RAJASTHAN, SHAHIBAD FROM HYDERABAD

BASAR FROM DECCAN, LATERAL STONE FROM KOKAN.

- THICKNESS OF UNCOURSED STONE SHOULD NOT EXCEED 20 MM.
- THE PROPORTION OF CEMENT MORTAR FOR JOINARY IS 1:6
- ~~THE~~ SKILLED LABOURS ARE USED.
- PROVIDING COURSED RUBBLE MASONRY SECOND SORT OF TRAP / GRANITE / QUARTZITE / GNESSIS STONE OF MASONARY AND IN CEMENT MORTAR 1:6 IN LATERAL WALLS. OF PLINTH INCLUDING BAILUNG OUT WATER OF MANUALLY STRIKING JOINTS AND RACKING MANUALLY OUT JOINTS FROM OUTSIDE AND WATERING ETC.
- DIFFERENT TYPES OF LABOURER ARE TAPPERS DRESSERS AND DECORATIVE LABOUR
- AS STONE IS A HARD MATERIAL BUT NATURAL MATERIAL BUT POROS
- IT IS A DURABLE.

* RCC WORK

- MATERIAL USED IN RCC WORK IS FINE AGGREGATE (SAND) AND SOURCE AGGREGATE. (METAL), CEMENT (GRADE 53), STEEL (TOR) Fe 500
- THE SIZE OF FINE AGGREGATE SHOULD BE 4.75 mm

- METAL NO. 1 VARIES FROM 6mm to 2mm AND METAL NO. 2 VARIES FROM 20mm To 40mm
- THE FORM WORK WILL BE OF WOODEN PLY ON BOTH SIDES ALSO KNOWN AS SHUTTERING WORK.
- CHECKING OF STEEL SHOULD BE DONE BY RCC EXPERT.
- BY VIBRATOR WE NEED TO VIBRATE THE CONCRETE AND COMPACTING THE CONCRETE BY USING NEEDLE VIBRATOR AND REMOVING AIR BUBBLES.
- FOR CURING THE RCC WORK THE DURATION IS 15 DAYS IE THE REMOVAL OF FORM
- THE CURING TIME FOR RCC DEPENDS UPON THE SIZE OF BEAM, COLUMN, AFTER 24 HRS OR MAX 48 HRS. THE BOTTOM OF SLAB TAKES IS TO 14 DAYS AND THE BOTTOM OF BEAM TAKES IF THE SPAN IS LESS THAN 6m THEN 15 DAYS OR IF THE SPAN IS MORE THAN 6m THEN 21 DAYS.

* FABRICATION OF STEEL

- FABRICATION OF STRUCTURAL STEEL IS USUALLY SEEN IN ROOFS, SKYWALLS, BRIDGES SPACE FRAMES, NORTHLIGHT ROOF ETC.
- MATERIAL USED ARE I BEAMS, CHANNELS GUSSET PLATES, ANGLES, TRUSSES, BASE PLATE, HEAVY / LIGHT BEAM, REFER TO STEEL PLATE TABLE FOR SIZES.
- REFER STEEL TABLE FOR SIZES ISMB, ISMC HEAVY LIGHT, BEAMS
- FABRICATION PROCESS INCLUDES BOLTING REVETING, WELDING ETC.
- REQUIRED CRANES FOR ERECTING WORK IT EXCAVATION OF THE FOUNDATION
- TECHNOLOGY USED IS CRANE TO LIFT THE HEAVY LOAD.
- MODE OF MEASUREMENT IS METRIC, TON OR KG.