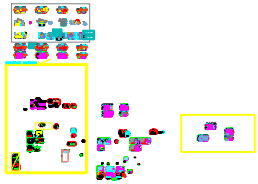
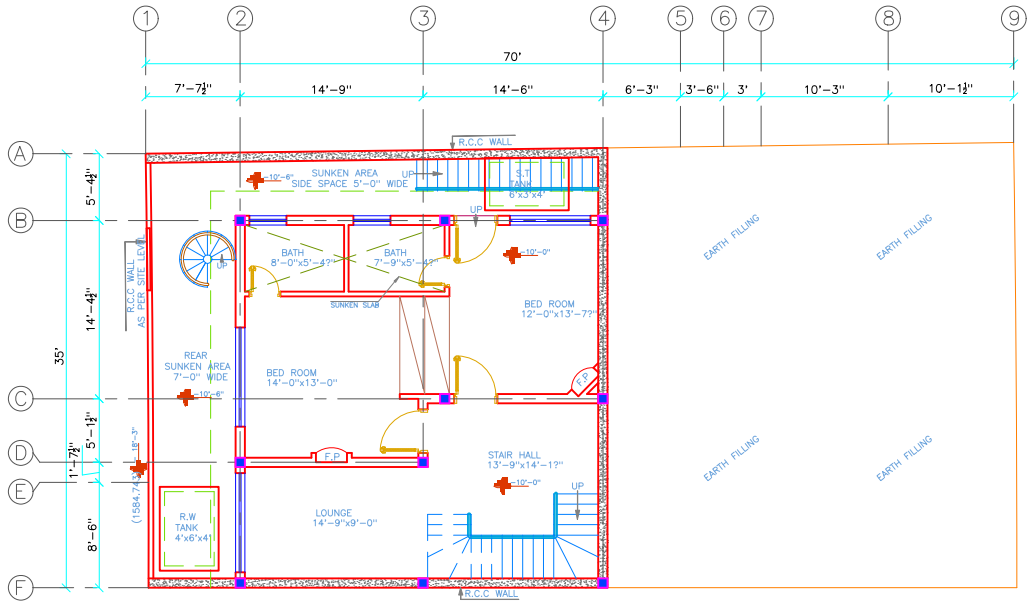
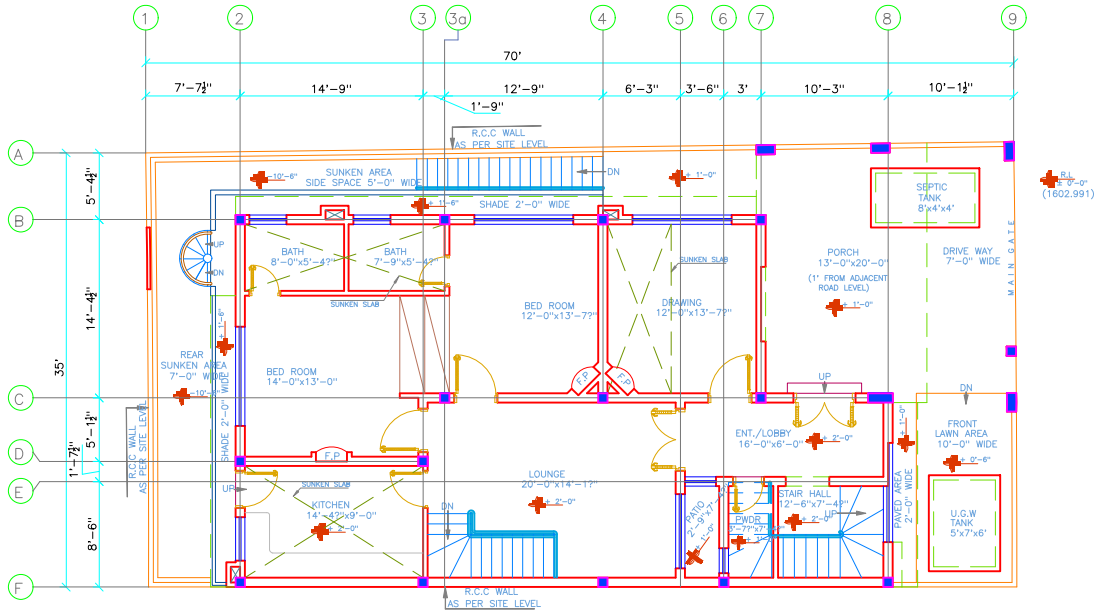


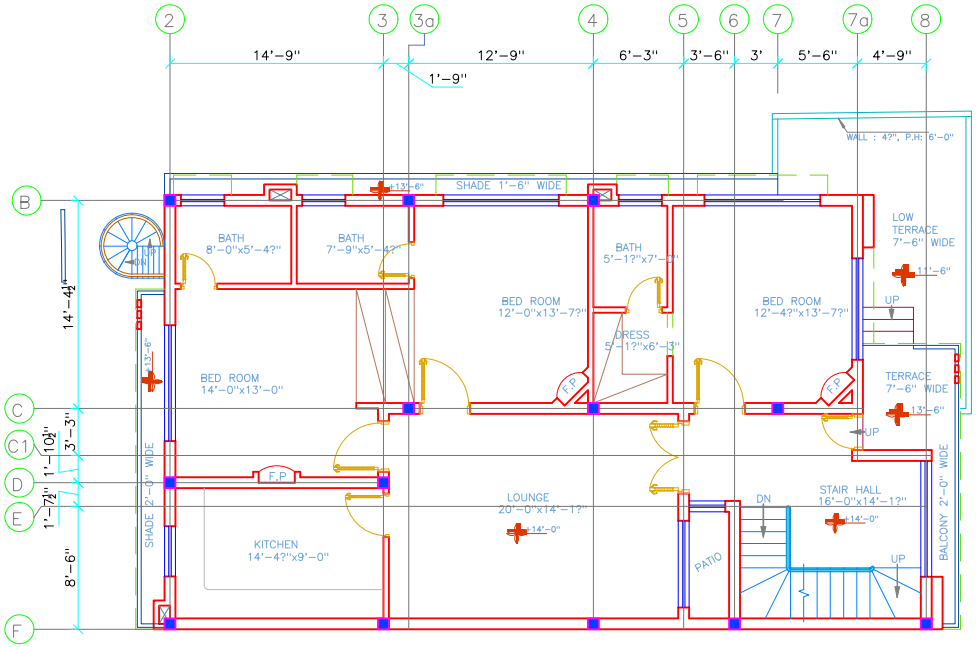


BASEMENT PLAN

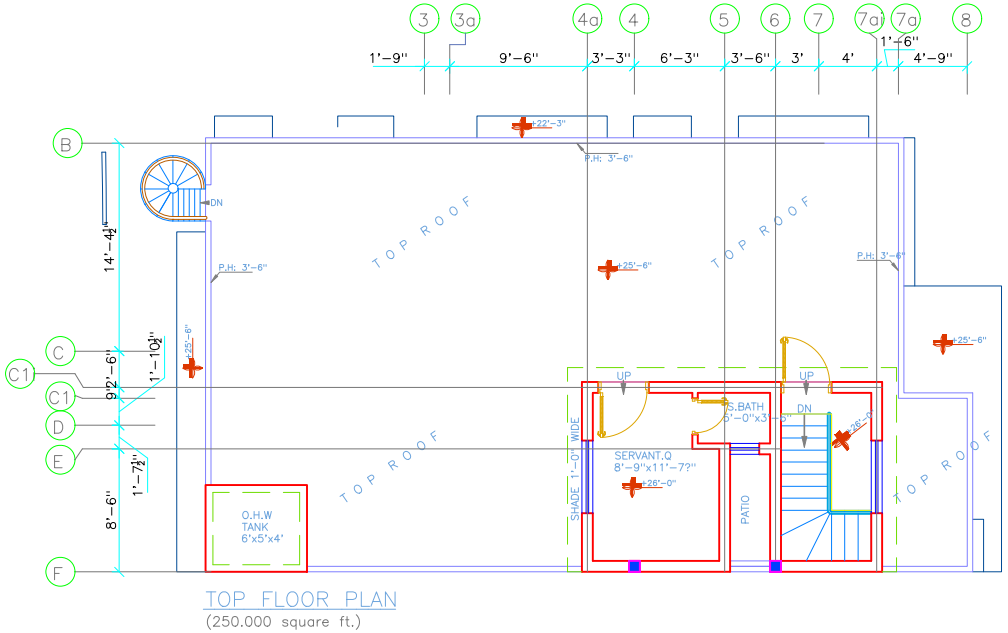


GROUND FLOOR PLAN

BASEMENT FLOOR & GROUND FLOOR PLAN



FIRST FLOOR PLAN



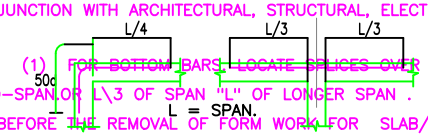
TOP FLOOR PLAN

(250.000 square ft.)

FIRST FLOOR & MUMTY FLOOR PLAN

GENERAL NOTES

1. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL AND OTHER SERVICES DRAWINGS.
2. ANY DISCREPANCY IN THE CONTRACT DOCUMENTS SHALL BE REFERRED TO THE ENGINEER FOR DECISION BEFORE PROCEEDING WITH THE WORK. THE STRUCTURAL DRAWINGS TAKE PRECEDANCE OVER THE SPECIFICATIONS.
3. SETTING–OUT DIMENSIONS AND SIZES OF STRUCTURAL MEMBERS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.
4. ANY SETTING–OUT DIMENSION SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE VERIFIED ON SITE WITH THE ARCHITECTURAL DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS.
5. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITIONS, INCLUDING AMENDMENTS, OF THE RELEVANT ACI STANDARDS (WHERE APPLICABLE).
6. WATER STOPPER (10" X 6MM Thick.) WITH BUBBLE SHALL BE USED AT EVERY CONSTRUCTION JOINT IN RETAINING WALL..
7. ALL DRAWING SHOULD BE READ IN CONJUNCTION WITH ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING, HVAC AND OTHER RELEVANT DRAWINGS.
8. SLAB REINFORCEMENT STEEL SPLICES. (1) FOR BOTTOM BARS, LOCATE SPLICES OVER SUPPORTS. (2) FOR TOP BARS, LOCATE SPLICES AT MID–SPAN.OR L\3 OF SPAN "L" OF LONGER SPAN .
9. PARTITION WALLS SHALL NOT BE BUILT BEFORE THE REMOVAL OF FORM WORK FOR SLAB/BEAMS.
10. ALL REINFORCEING BARS TO BE FABRICATED AS PER THE BENDING SCHEDULES PREPARED BY THE CONTRACTOR AND CHECKED BY THE ENGINEER.
11. DETAIL OF BEAM TOP BAR



12. LAPS IN BEAMS SHALL BE PROVIDED OUTSIDE THE L/3 OF SPAN FROM FACE OF SUPPORT IN BOTH TOP AND BOTTOM BARS.
13. CONSTRUCTION JOINT SHALL BE PROVIDED AT A DISTANCE L/3 FROM THE FACE OF SUPPORT.
14. FOLLOWING MINIMUM CLEAR COVER TO MAIN REINFORCING STEEL SHALL BE MAINTAINED.

GENERAL

FOOTING	= 2"
COLUMNS	= 1 1/2"
SLAB	= 3/4"
BEAM	= 1 1/2"
WALLS	= 1 1/2"

BRICK WORK

1. BRICK WORK FOR LOAD BEARING WALLS SHALL BE WITH 1 : 3 CEMENT / SAND MORTAR HAVING MINIMUM COMPRESSIVE STRENGTH OF 1200 Psi.

FOOTINGS

1. ALL FOOTING EXCAVATIONS SHALL BE CLEANED OF LOOSE MATERIAL AND WATER.
2. ALL FOUNDATION MATERIAL SHALL BE INSPECTED BY THE CONSULTING ENGINEER BEFORE ANY CONCRETE IS PLACED.
3. WHERE VERIFIED FOUNDATION MATERIAL IS FOUND LOWER THAN THE UNDERSIDE OF FOOTINGS AS DETAILED, BACKFILL THE SPACE BETWEEN FOUNDING MATERIAL AND FOOTING SOFFIT WITH LEAN CONCRETE.
4. SOIL INVESTIGATION SHOULD BE CARRIED OUT PRIOR TO IMPLEMENTATION OF STR DWGS. RESULTS OF SOIL REPORT SHOULD BE DISCUSS WITH CONSULTING ENGINEER FOR REVIEW / REVISION ACCORDINGLY.
5. FOOTING SHOULD BE LAID ON HARD AND WELL COMPACTED EARTH.
6. THE DESIGN IS IN ACCORDANCE TO THE SEISMIC ZONE II–B.
7. FOUNDATION HAS BEEN DESIGNED FOR THREE STOREY PLUS MUMTY IN ACCORDANCE WITH PILE CAPACITIES MENTIONED IN SOIL REPORT.

REINFORCING STEEL

REINFORCING STEEL			
BAR DIA	DEVELOPMENT LENGTH (INCH) IN TENSION		
	*SLABS & WALLS	BEAMS	
		* TOP BARS	BOTTOM BARS
#3	18"	18"	18"
#4	24"	24"	24"
#5	30"	30"	30"
#6	36"	36"	36"
#7	–	42"	42"
#8	–	47"	47"

* IF HOR. REINFORCEMENT SO PLACED THAT MORE THAN 12" (300) OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOF LENGTH MULTYPLY THE ABOVE LENGTH BY 1.30

CONCRETE

1. CONSTRUCTION JOINTS OR POUR BREAKS, WHERE NOT SHOWN ON PLANS OR DETAILS, SHALL BE LOCATED AND FORMED TO THE APPROVAL OF THE ENGINEER.
2. ALL REINFORCED CONCRETE SHALL HAVE A MINIMUM 28 DAYS CYLINDER STRENGTH OF 3000psi.
3. CONCRETE SHALL BE CONSOLIDATED BY VIBRATION. CURING OF ALL CONCRETE SURFACES SHALL BE DONE AS PER SPECIFICATIONS.
4. BRICK WORK SHALL NOT BE ERECTED ON CONCRETE SLABS OR BEAMS UNTIL FORMWORK SUPPORTING THE SAME HAS BEEN REMOVED.
5. ALL OPENINGS FOR PIPING SHALL BE FORMED IN POSITION BEFORE CASTING CONCRETE.
6. ALL NON–LOAD BEARING WALLS SHALL BE KEPT CLEAR OF THE UNDERSIDE OF SLABS AND BEAMS BY 3/4".
7. WATER STOPPER (10" X 6MM Thick.) WITH BUBBLE SHALL BE USED AT EVERY CONSTRUCTION JOINT IN RETAINING WALL.

REINFORCEMENT

1. ALL REINFORCEMENT SHALL BE DEFORMED BARS CONFORMING TO BS4461/4449 OR ASTM A 615 WITH A MINIMUM CHARACTERISTIC STRENGTH OF 60,000psi EXCEPT SLABS, BEAM STIRRUPS AND COLUMN TIES WHERE IT SHOULD BE 40,000psi .ALL REINFORCEMENT TO BE FIRMLY SUPPORTED ON APPROVED CHAIRS GENERALLY AT NOT GREATER THAN 2'–0" CENTRES BOTHWAYS. BARS TO BE TIED AT ALTERNATE INTERSECTIONS. ONLY APPROVED BAR CHAIRS/SPACERS WILL BE ACCEPTABLE, NO MORTAR BLOCKS ARE PERMITTED.
2. CLEAR COVER FOR CONCERT REINFORCEMENT SHALL BE AS PER TABLE # I.
3. STANDARD HOOKS FOR REINFORCEMENT SHOULD BE FOLLOWED AS PER TABLE # 2 & 3.
4. Fy ≤ FY + 18000 PSI.
5. Fu ≥ 1.25 Fy.
6. PROVIDE #3@12"C/C FOR BINDING TOP REINFORCEMENT IN SLABS.
7. USE SEPARATOR BARS #8 FOR PLACING REINFORCEMENT IN LAYERS IN BEAMS.
8. CRANK IN COLUMN REINFORCEMENT IS ALLOWABLE UPTO 3" OTHERWISE EXTEND BARS INTO COLUMNS UPTO DEVELOPMENT LENGTH OF 30" UPTO #6 BARS AND 48" FOR #8 BARS.

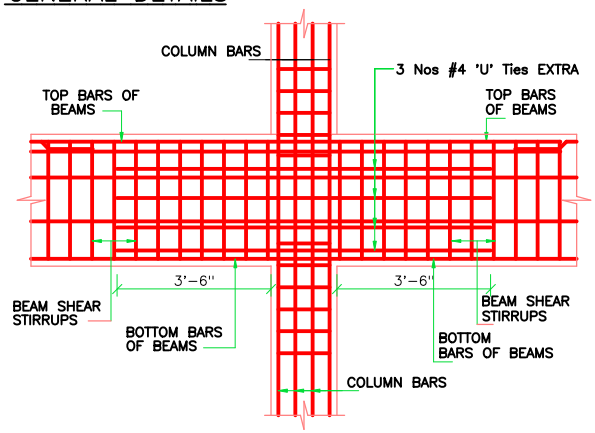
FORMWORK REMOVAL AND SHORING

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE DESIGN, CONSTRUCTION AND SAFETY OF THE FORMWORK AND SHORING.
2. NO CONSTRUCTION LOAD EXCEEDING THE CONSTRUCTION OF SUPERIMPOSED DEAD LOAD PLUS SPECIFIED LIVE LOAD SHALL BE SUPPORTED DN ANY UNSHORED PORTION OF THE STRUCTURE UNDER CONSTRUCTION, UNLESS ANALYSIS INDICATES ADEQUATE STRENGTH TO SUPPORT SUCH ADDITIONAL LOADS.
3. REMOVAL OF SHUTTERING AS FOLLOWS.

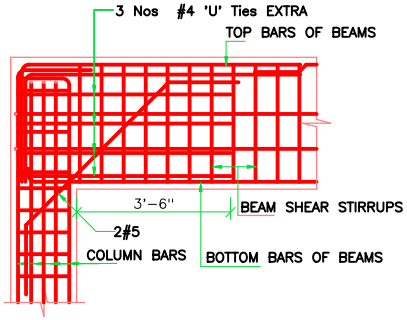
S.NO.	REMOVAL	COLD WEATHER NO.OF DAYS	NORMAL WEATHER NO.OF DAYS
1–	BEAMS SIDES COLUMNS (UNLOADED)	4	2
2–	SLAB SOFFITS	15	10
3–	BEAMS SOFFITS	21	14

GENERAL NOTES

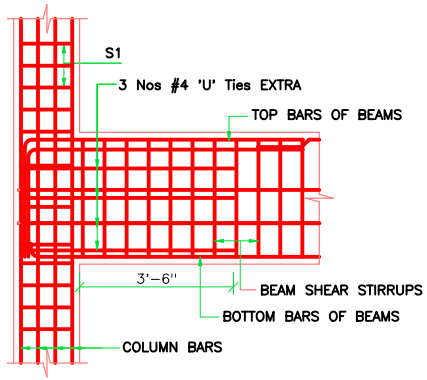
GENERAL DETAILS



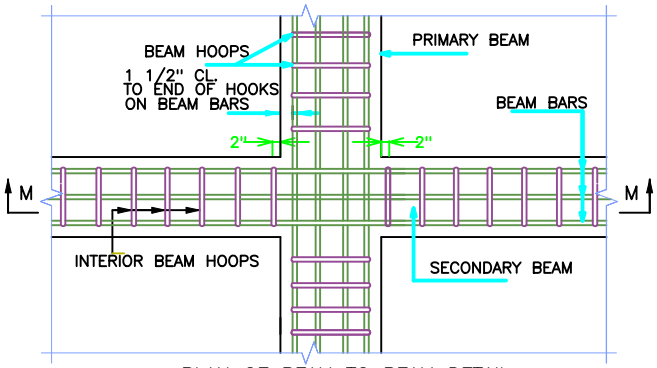
TYPICAL COLUMN BEAM JOINT
OUTER MIDDLE



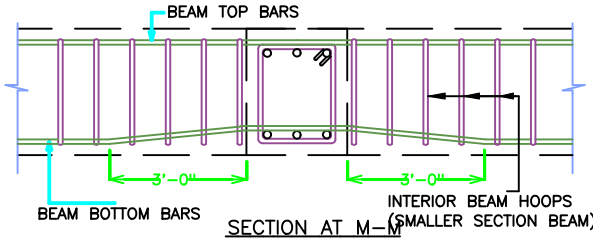
TYPICAL COLUMN BEAM JOINT



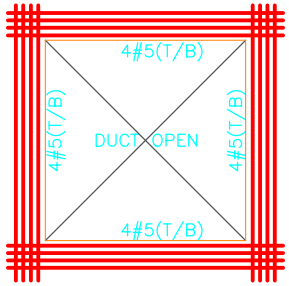
TYPICAL COLUMN BEAM JOINT
OUTER SUPPORT



PLAN OF BEAM TO BEAM DETAIL

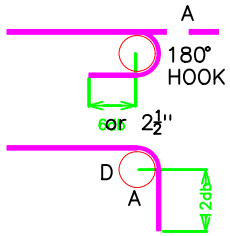


SECTION AT M-M

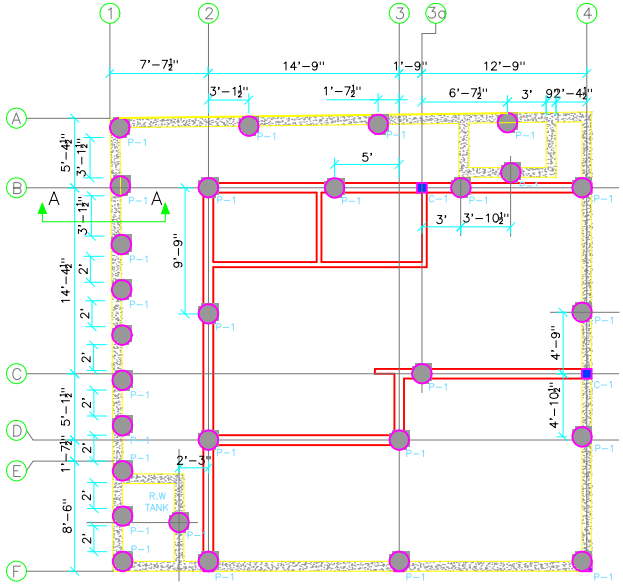


TYP. DUCT OPENING DETAIL

BAR DIA	HOOKS				
	180°			90°	
	A	J	D	A	D
#3	7"	$2\frac{3}{4}$"	$2\frac{1}{4}$"	7"	$2\frac{1}{4}$"
#4	8"	$3\frac{1}{4}$"	3"	8"	3"
#5	$9\frac{1}{4}$"	$4\frac{1}{2}$"	$3\frac{1}{4}$"	$10\frac{1}{2}$"	$3\frac{1}{4}$"
#6	12"	$5\frac{1}{2}$"	$4\frac{1}{2}$"	$13\frac{1}{2}$"	$4\frac{1}{2}$"
#7	13"	$6\frac{1}{4}$"	$5\frac{1}{4}$"	$14\frac{3}{4}$"	$5\frac{1}{4}$"
#8	15"	7"	6"	18"	6"



BAR DIA	SPLICE LAP LENGTH (INCHES)		
	COLUMNS	BEAMS / SLABS	
		TOP BARS	BOTTOM BARS
#3	–	18"	18"
#4	33"	33"	33"
#5	39"	39"	39"
#6	48"	48"	48"
#7	54"	54"	54"
#8	61"	61"	61"



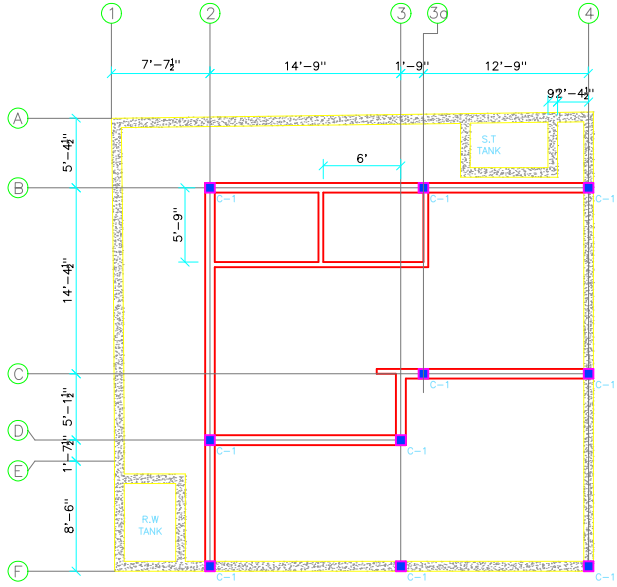
PILE LAYOUT PLAN OF BASMENT FLOOR

TOTAL NO OF PILES P-1 = 28 NOS

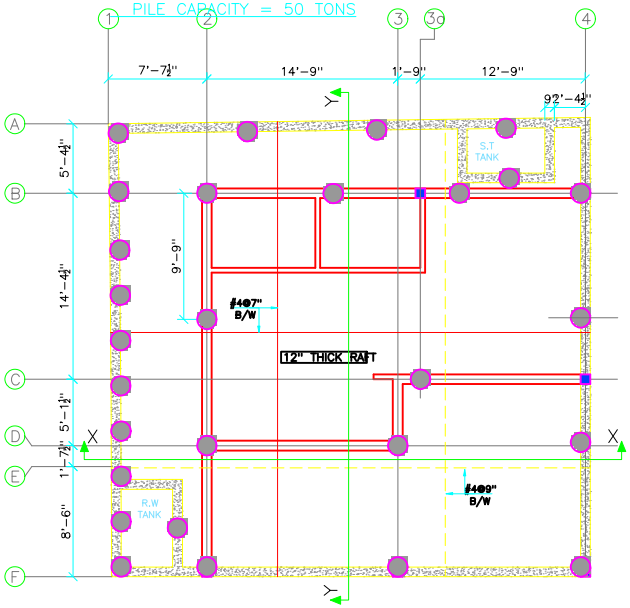
DEPTH (P-1)= 50'-0"

PILE-1 DIA = 18"

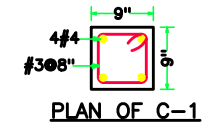
PILE CAPACITY = 50 TONS



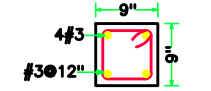
COLUMN LAYOUT PLAN OF BASEMENT FLOOR



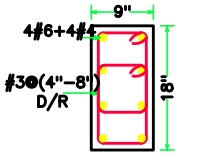
RAFT FOUNDATION REINFORCEMENT PLAN



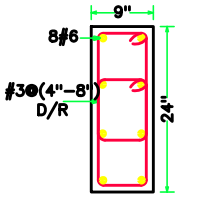
PLAN OF C-1



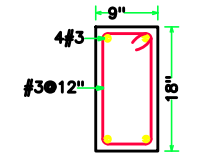
PLAN OF C-2



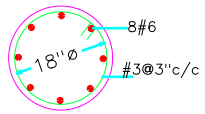
PLAN OF C-3



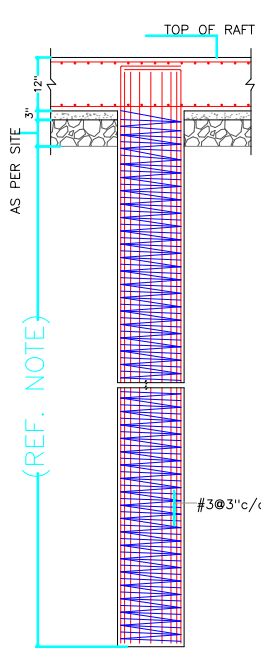
PLAN OF C-4



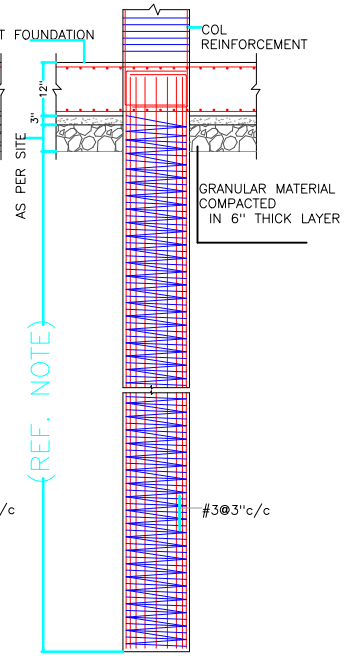
PLAN OF C-5



PLAN OF P-1

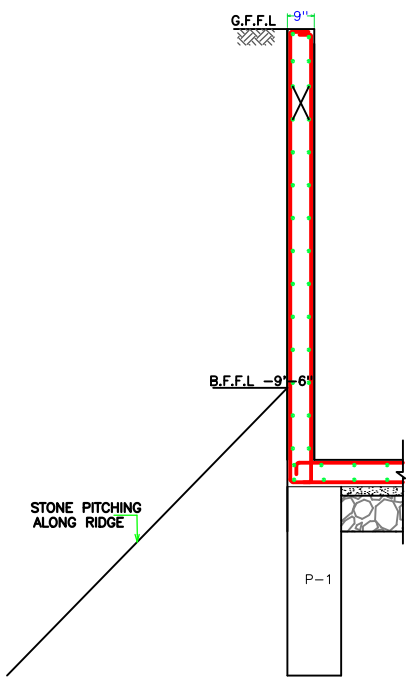


TYPICAL SEC. OF PILE

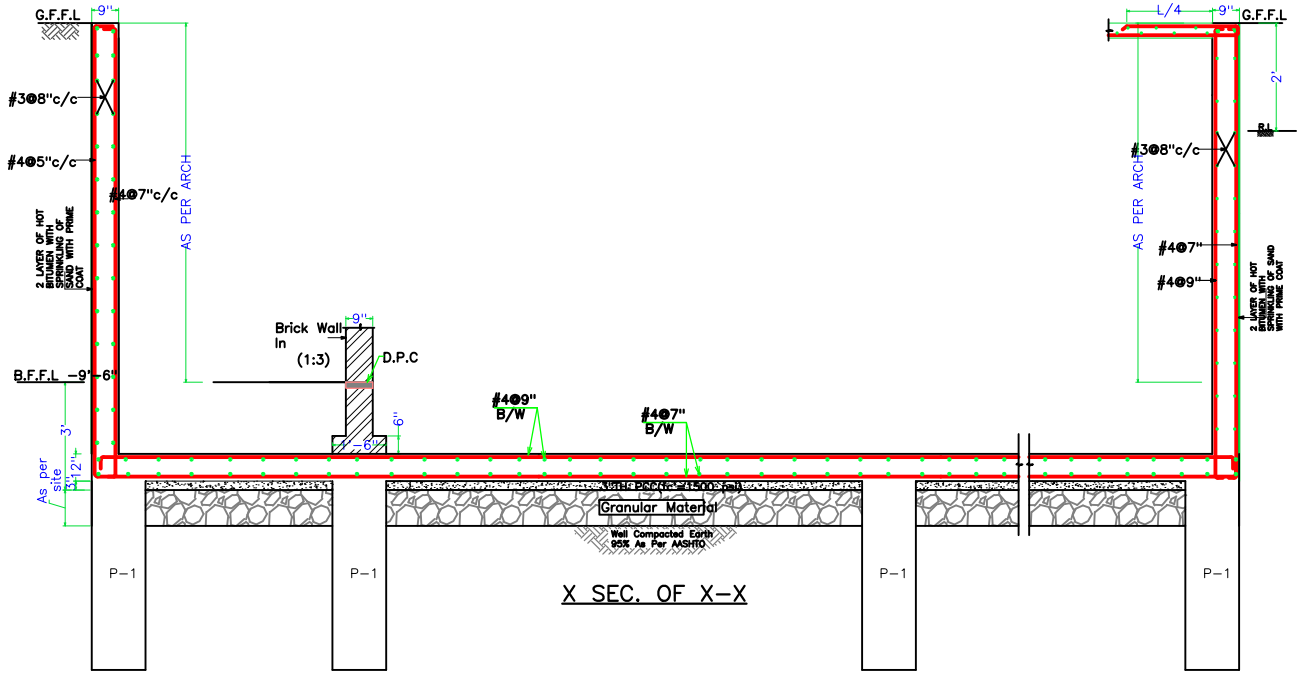


TYPICAL SEC. OF PILE

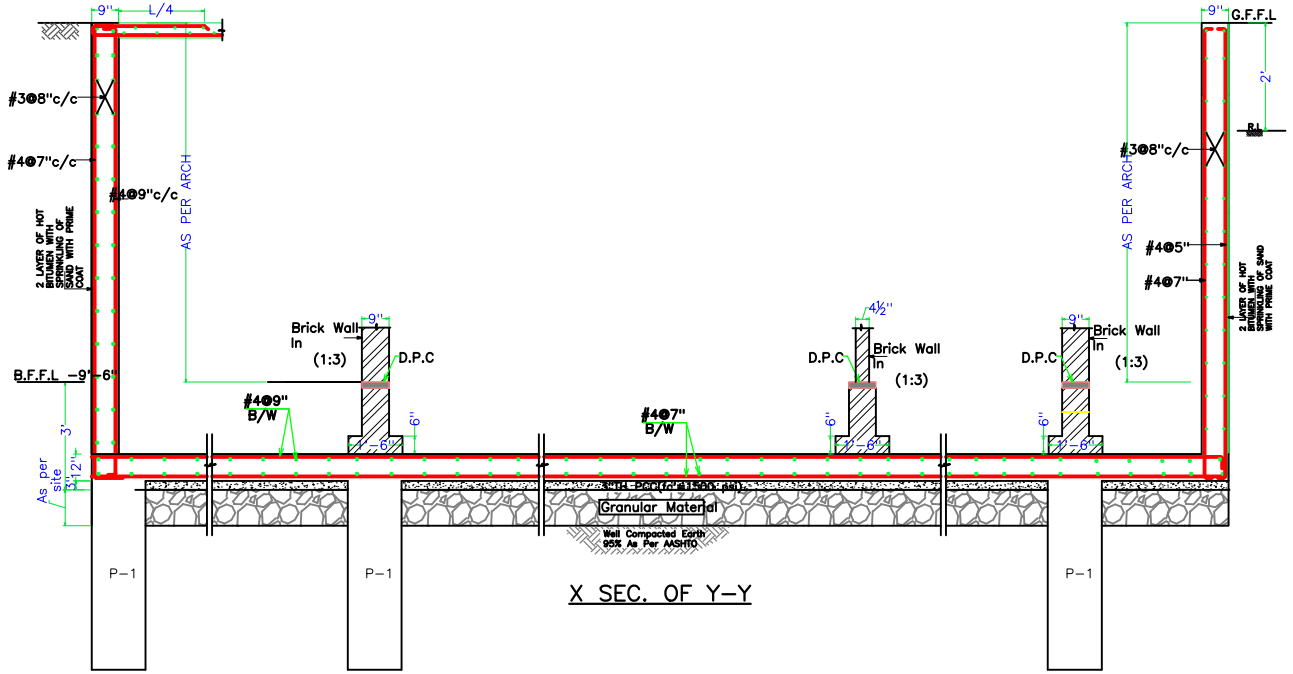
COLUMN LAYOUT PLAN
PILE LAYOUT PLAN
FOUNDATION LAYOUT PLAN
OF BASEMENT FLOOR



X SEC. OF A-A

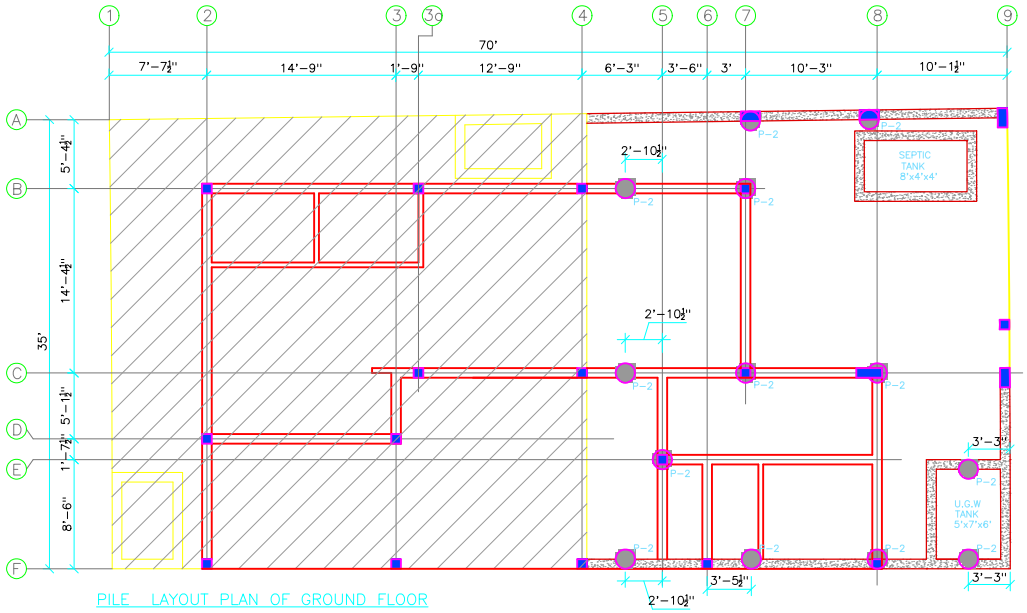


X SEC. OF X-X



X SEC. OF Y-Y

SECTIONS OF FOUNDATION



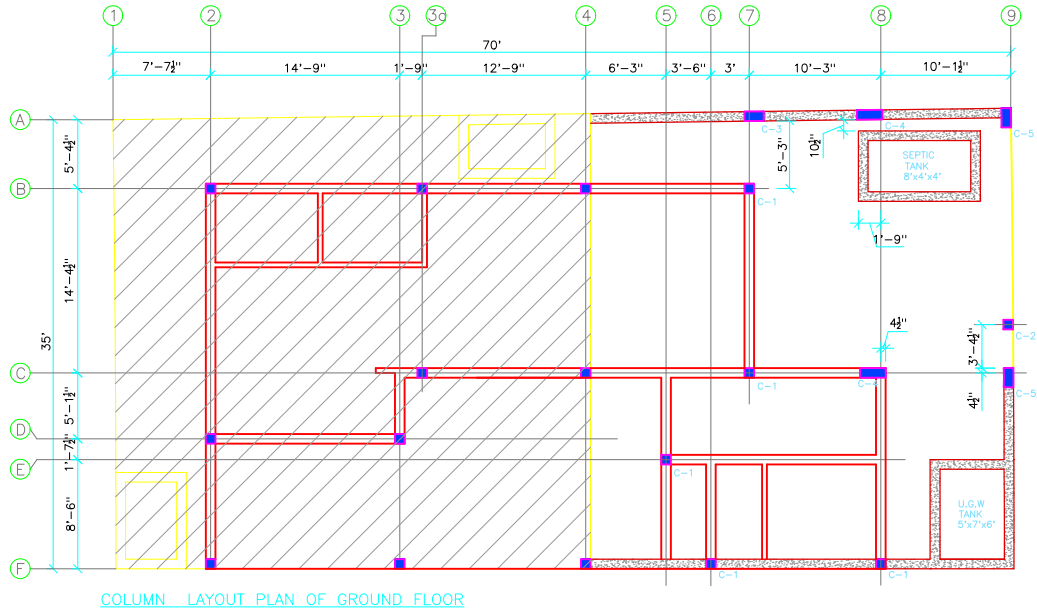
PILE LAYOUT PLAN OF GROUND FLOOR

TOTAL NO OF PILES P-2 = 13 NOS

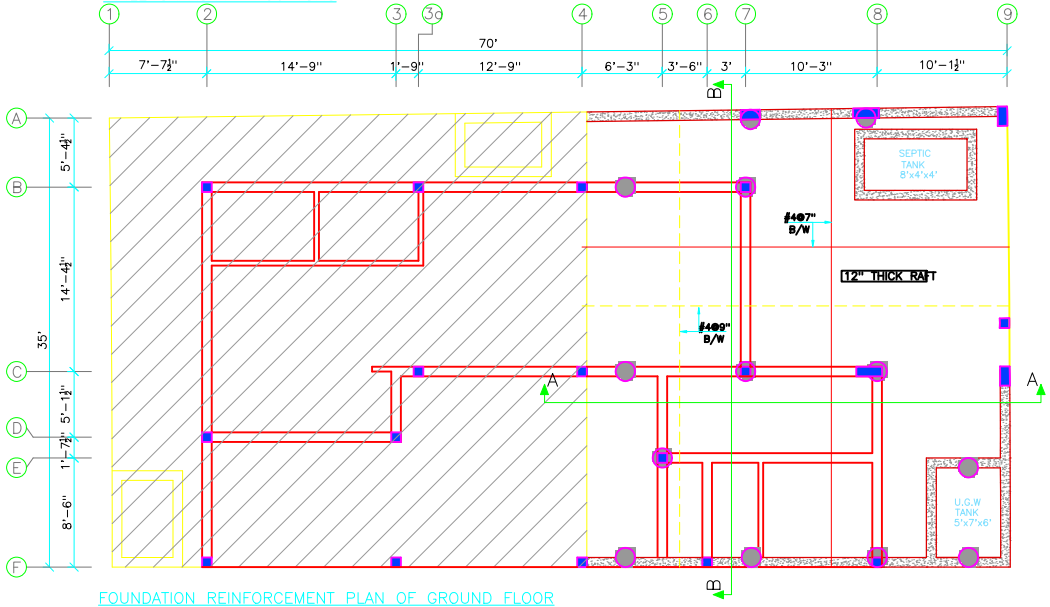
DEPTH (P-2)= 50'-0"

PILE-2 DIA = 18"

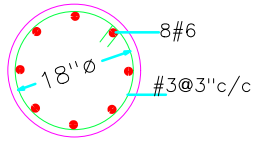
PILE CAPACITY = 50 TONS



COLUMN LAYOUT PLAN OF GROUND FLOOR

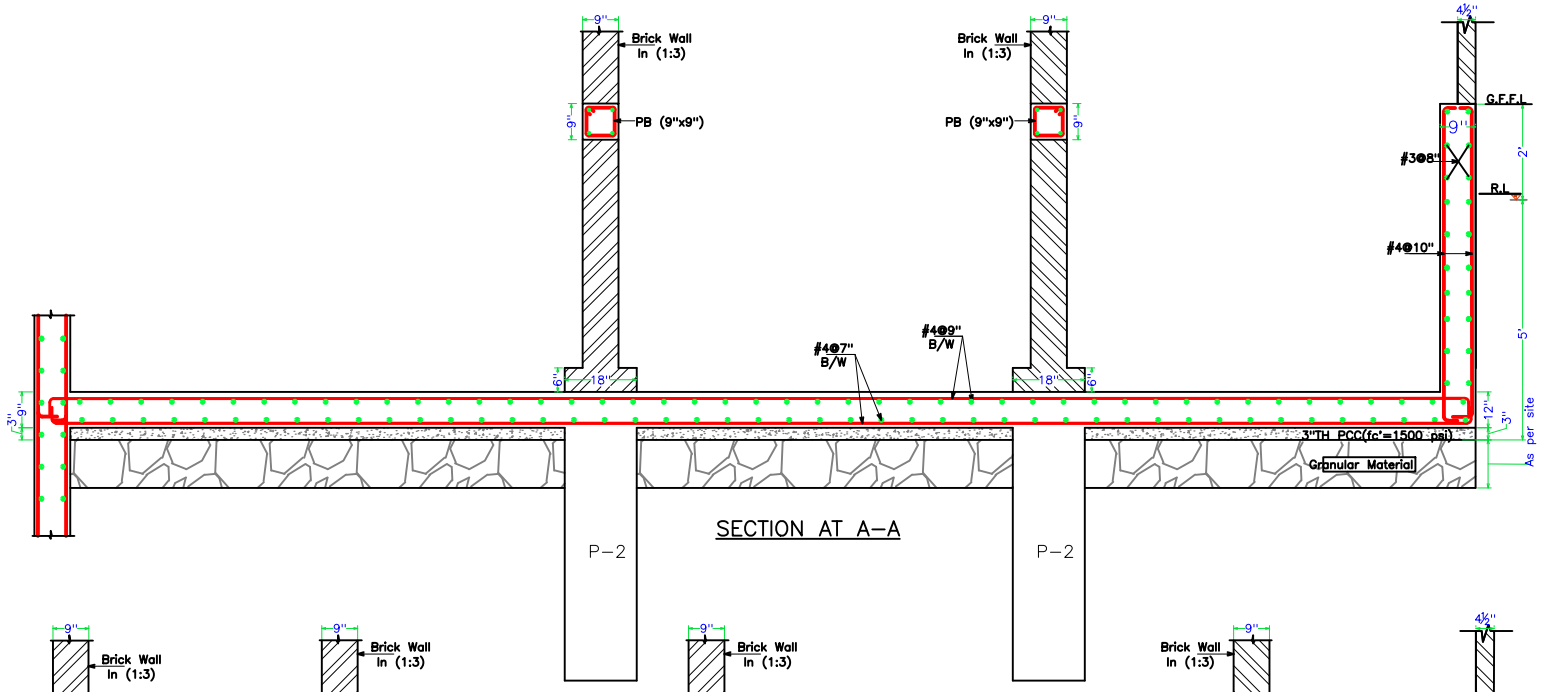


FOUNDATION REINFORCEMENT PLAN OF GROUND FLOOR

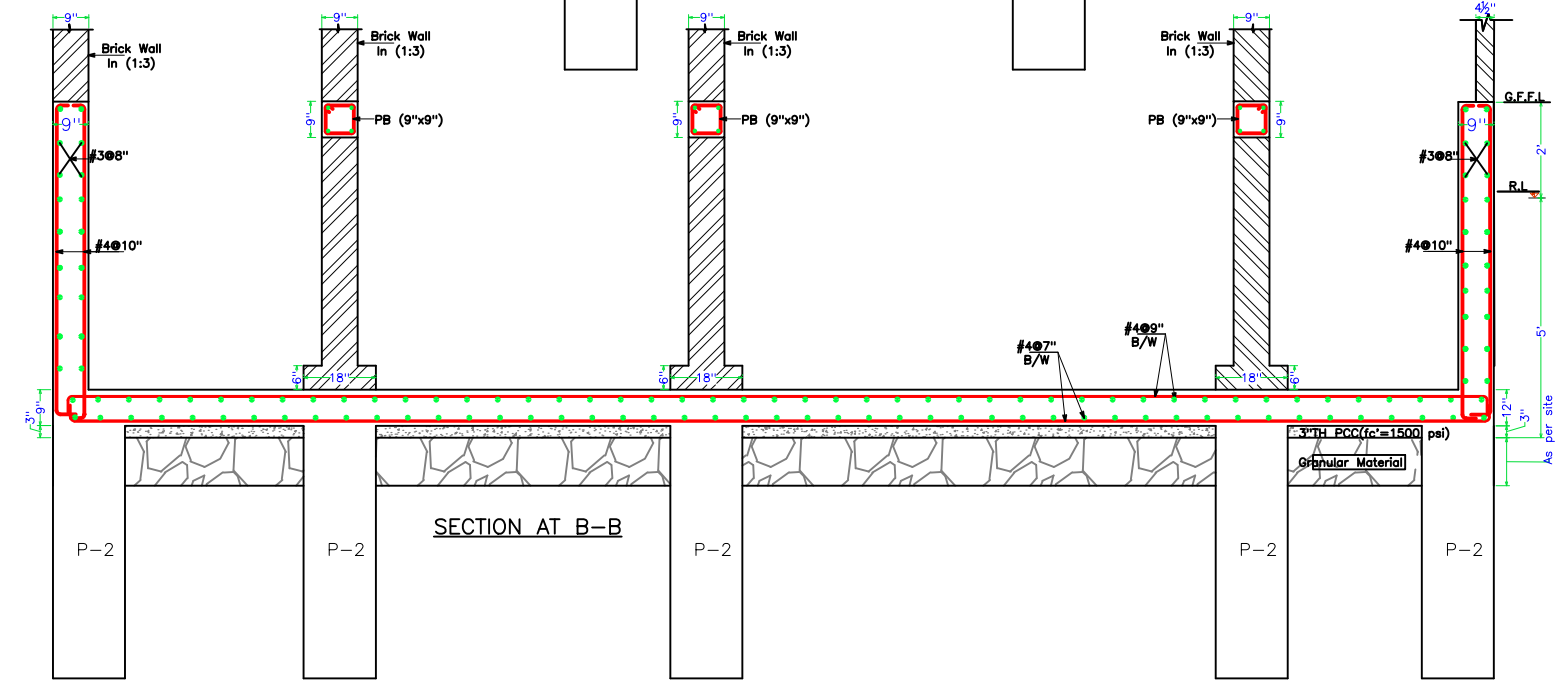


PLAN OF P-2

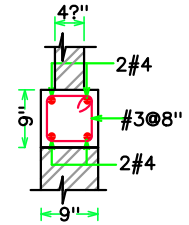
COLUMN LAYOUT PLAN
PILE LAYOUT PLAN
FOUNDATION LAYOUT PLAN
OF GROUND FLOOR



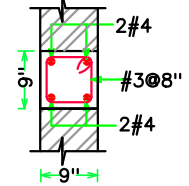
SECTION AT A–A



SECTION AT B–B



X. SECTION OF PB FOR 4?" WALL

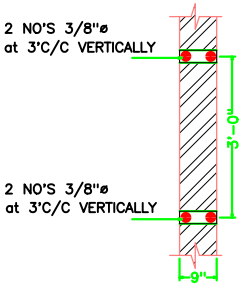


X. SECTION OF PB FOR 9" WALL

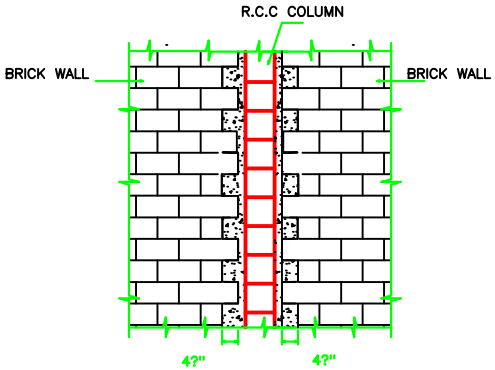
SECTIONS OF FOUNDATION

JOINTS DETAIL

Brick Masonary & RCC Work

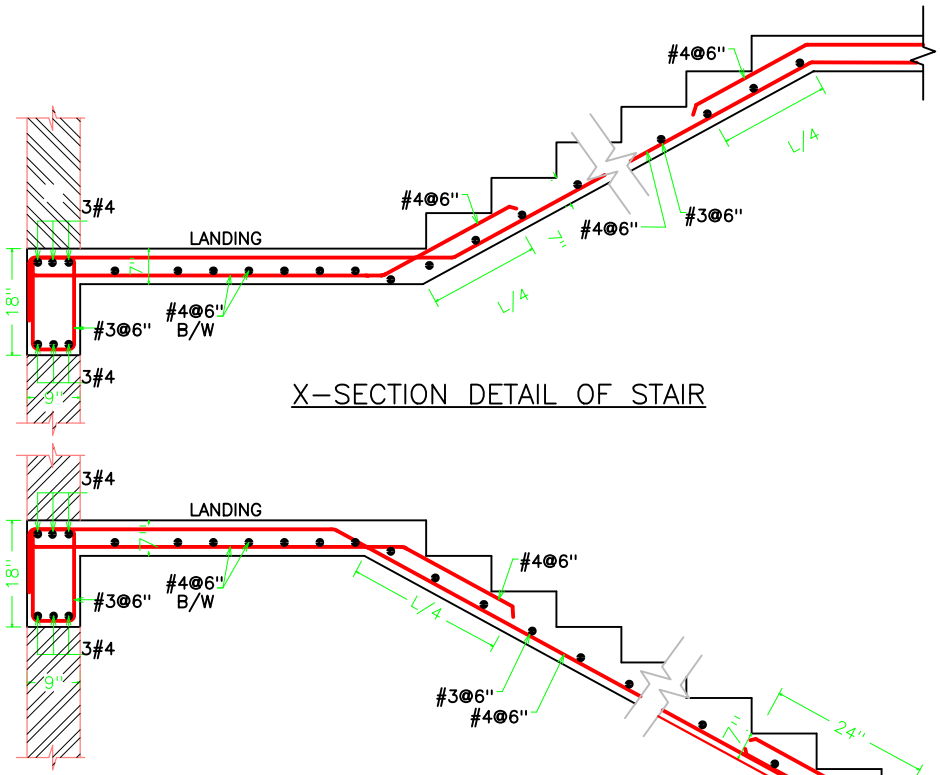


X. SECTION AT Y-Y

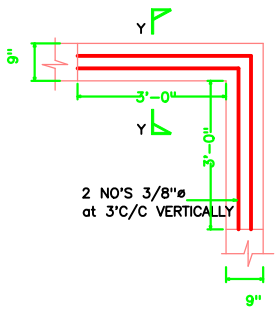


DETAIL OF SIESMIC JOINT

BETWEEN COLUMN & BRICK WALL.



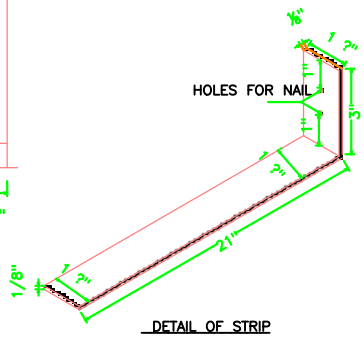
X-SECTION DETAIL OF STAIR

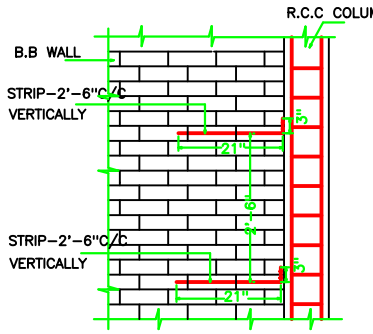


SEISMIC CONTROL STICHING AT

CORNERS/JOINTS

AT EACH JOINT OF WALLS.

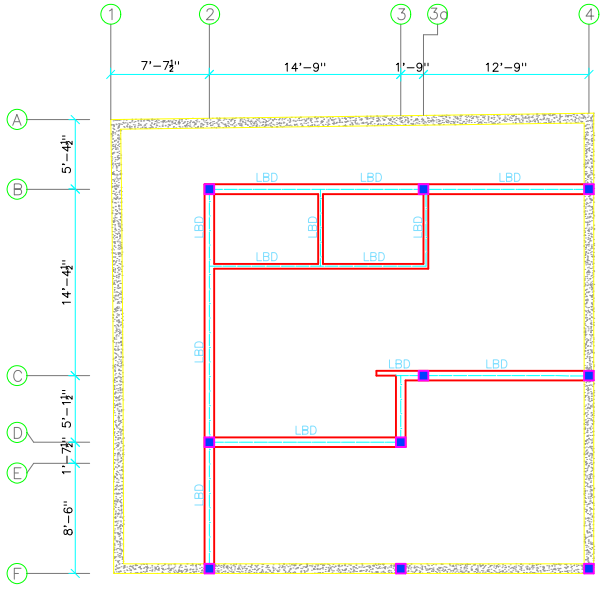




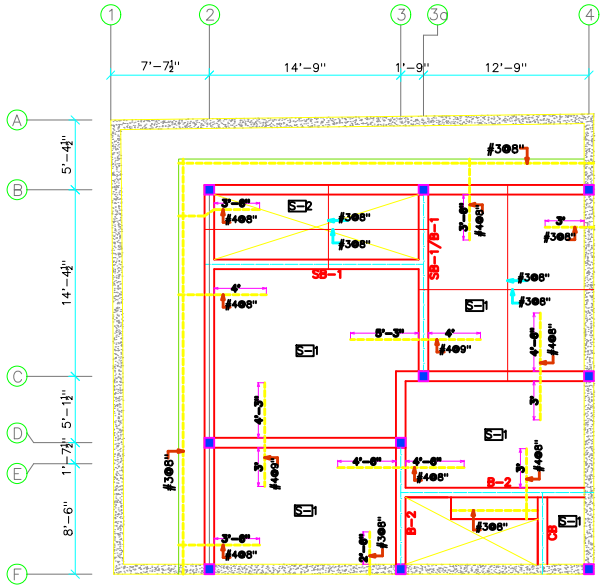
DETAIL OF SIESMIC JOINT

BETWEEN COLUMN & B.B WALL.

JOINTS & STAIR DETAIL



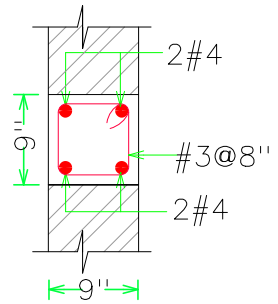
LINTEL BEAM LAYOUT PLAN OF BASMENT FLOOR



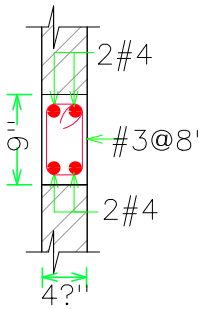
SLAB REINFORCEMENT PLAN OF BASEMENT FLOOR
SLAB THICKNESS= 6" (EXCEPT SPECIFIED)

NOTE:

A. NON-LOAD BEARING WALLS SHALL BE STOPPED ATLEAST 12" BELOW SOFFIT OF BEAMS/SLABS AND COMPLETED AFTER COMPLETION OF STRUCTURE.
B. PROVIDE #3@12"c/c AS BINDING BARS FOR TOP REINFORCEMENT

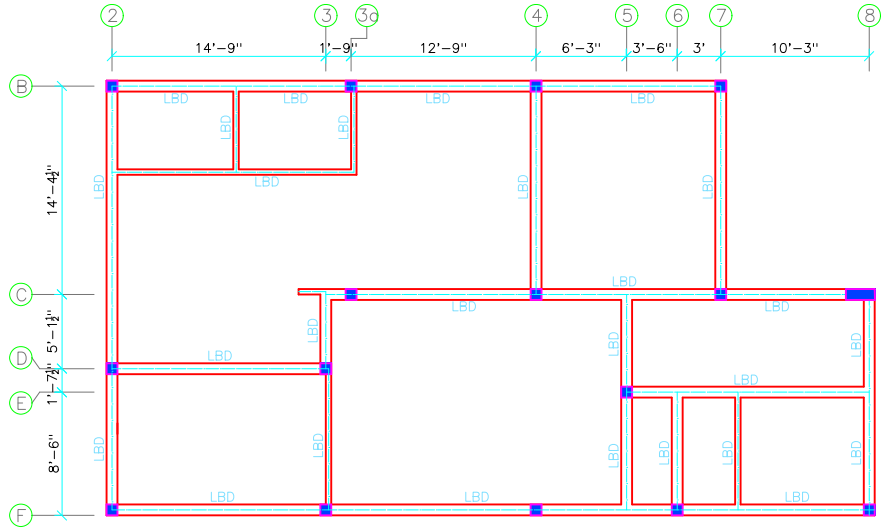


X. SECTION OF LBD FOR 9" WALL

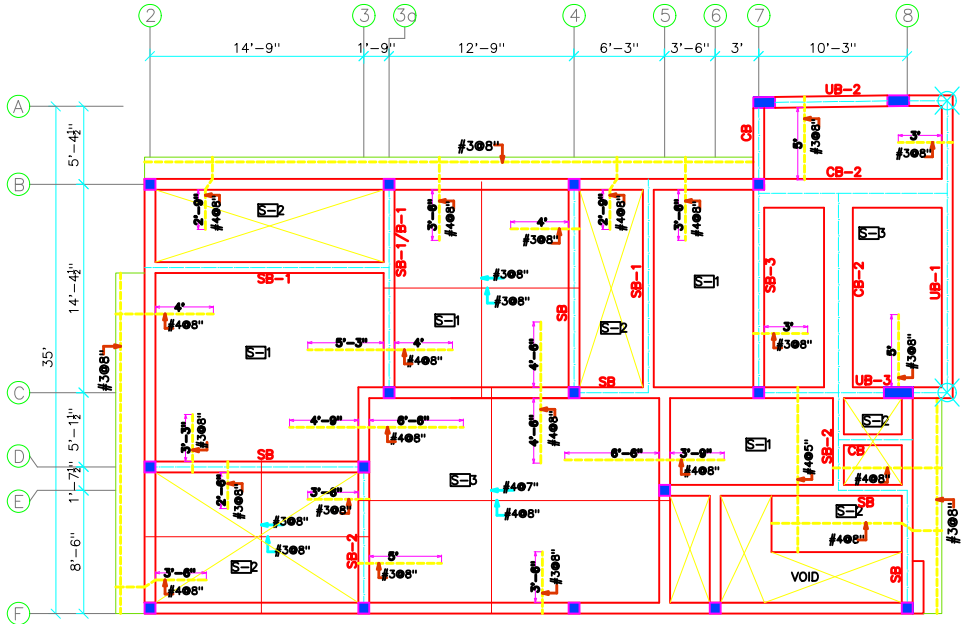


X. SECTION OF LBD FOR 4?" WALL

LINTEL BAND BEAM & SLAB REINFORCEMENT PLAN OF BASEMENT FLOOR



LINTEL BEAM LAYOUT PLAN OF GROUND FLOOR



SLAB REINFORCEMENT PLAN OF GROUND FLOOR

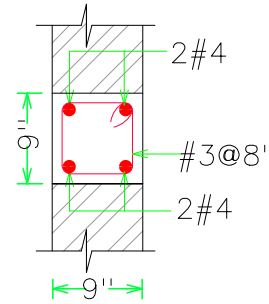
SLAB THICKNESS= 6" (EXCEPT SPECIFIED)

⊗ " RAISE IN SHUTTERING AT MARKED LOCATION

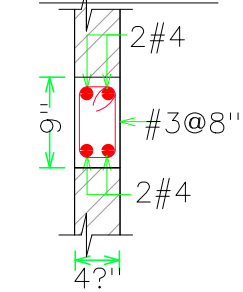
NOTE:

A. NON-LOAD BEARING WALLS SHALL BE STOPPED ATLEAST 12" BELOW SOFFIT OF BEAMS/SLABS AND COMPLETED AFTER COMPLETION OF STRUCTURE.

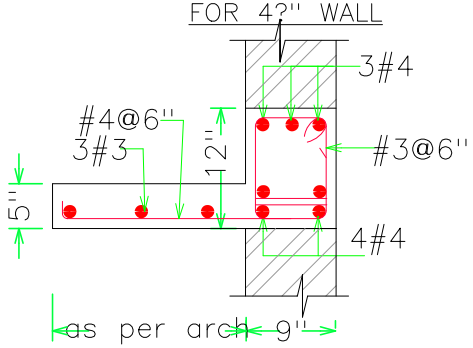
B. PROVIDE #3@12"c/c AS BINDING BARS FOR TOP REINFORCEMENT



X. SECTION OF LBD FOR 9" WALL

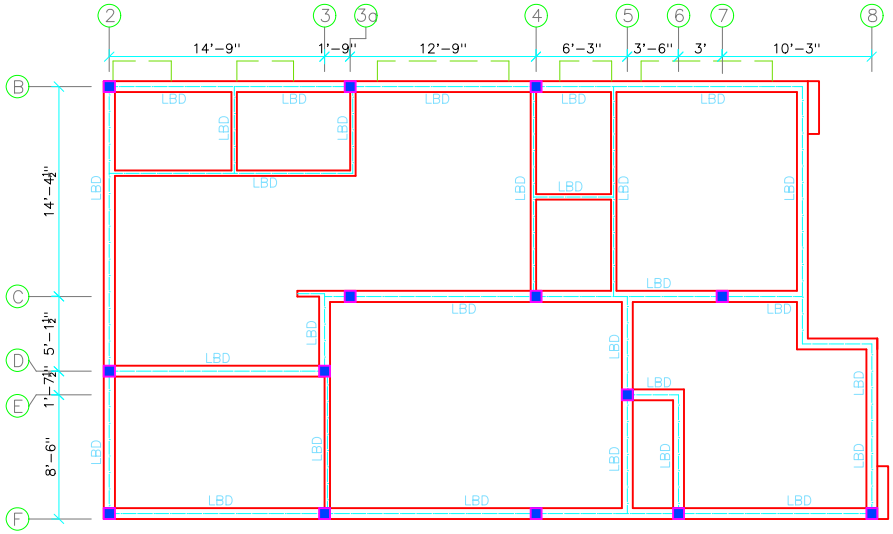


X. SECTION OF LBD FOR 4?" WALL

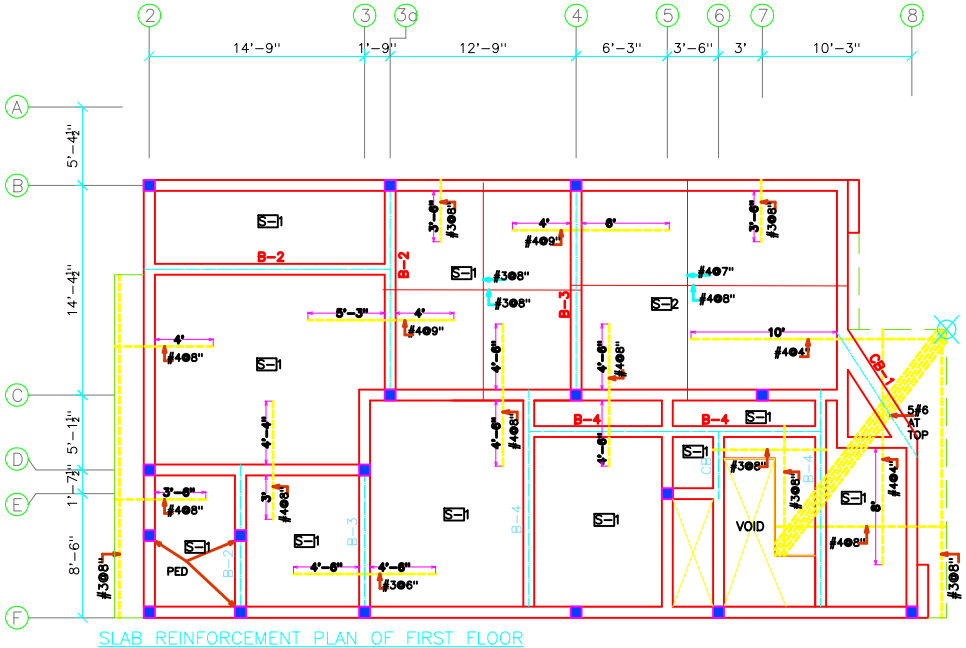


X. SECTION OF LBD WITH SHADE FOR 9" WALL

LINTEL BAND BEAM & SLAB REINFORCEMENT PLAN OF GROUND FLOOR



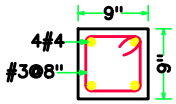
LINTEL BEAM LAYOUT PLAN OF FIRST FLOOR



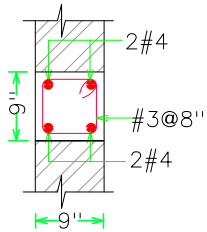
SLAB REINFORCEMENT PLAN OF FIRST FLOOR
SLAB THICKNESS= 6" (EXCEPT SPECIFIED)
⊗ 1" RAISE IN SHUTTERING AT MARKED LOCATION

NOTE:

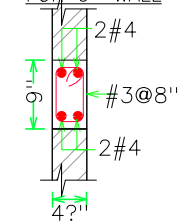
A. NON-LOAD BEARING WALLS SHALL BE STOPPED ATLEAST 12" BELOW SOFFIT OF BEAMS/SLABS AND COMPLETED AFTER COMPLETION OF STRUCTURE.
B. PROVIDE #3@12"c/c AS BINDING BARS FOR TOP REINFORCEMENT



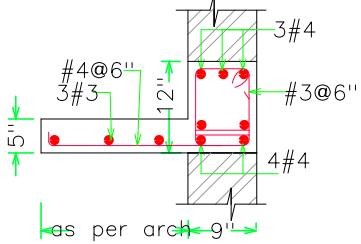
PED FOR O.H.W.TANK



X. SECTION OF LBD FOR 9" WALL

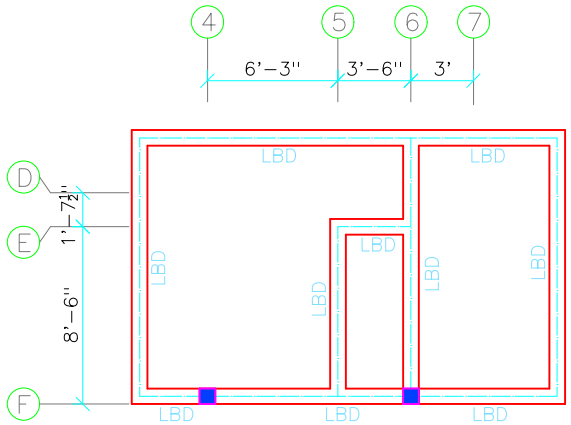


X. SECTION OF LBD FOR 4?" WALL

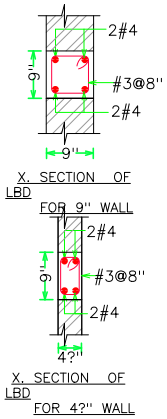


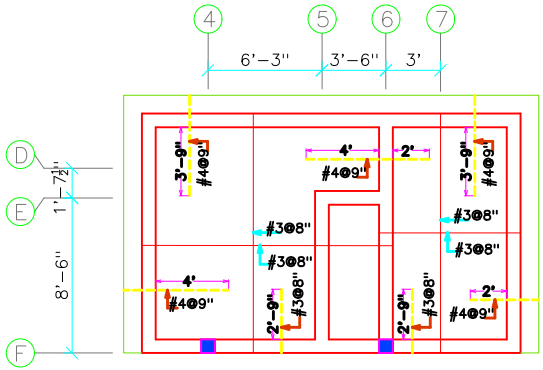
X. SECTION OF LBD WITH SHADE FOR 9" WALL

LINTEL BAND BEAM & SLAB REINFORCEMENT PLAN OF FIRST FLOOR

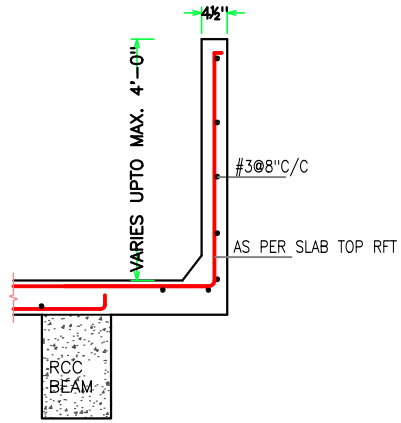


LINTEL BAND BEAM LAYOUT PLAN OF MUMTY FLOOR

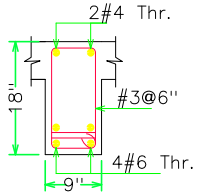




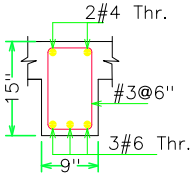
SLAB REINFORCEMENT PLAN OF MUMTY FLOOR SLAB THICKNESS= 6"



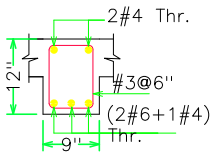
TYPICAL PARAPET WALL DETAIL



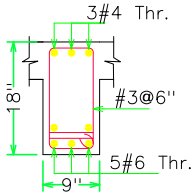
X–SECTION OF B–1



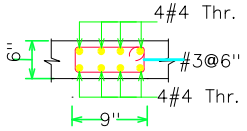
X–SECTION OF B–2



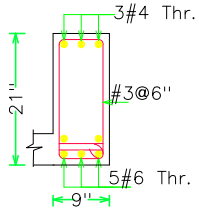
X–SECTION OF B–3



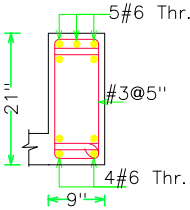
X–SECTION OF B–4



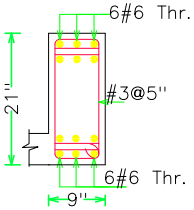
X–SECTION OF CB



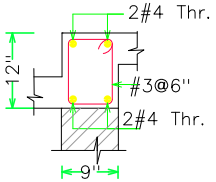
X–SECTION OF UB–1



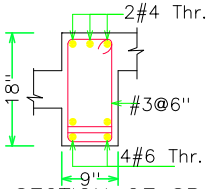
X–SECTION OF UB–2



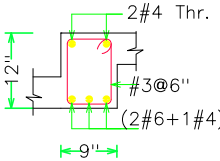
X–SECTION OF UB–3



X–SECTION OF SB



X–SECTION OF SB–1



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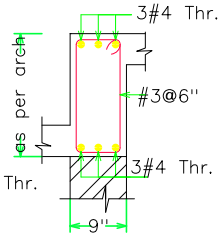

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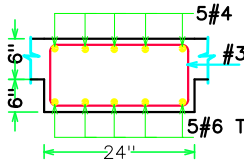
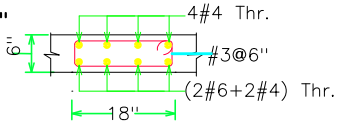
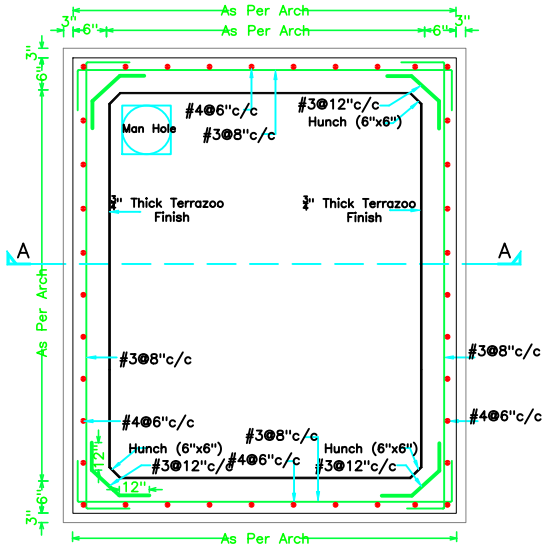


X–SECTION OF CB–2

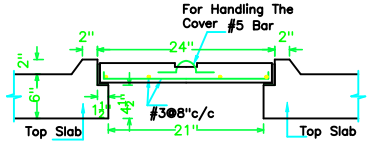


X–SECTION OF CB–1

SLAB REINFORCEMENT PLAN OF MUMTY FLOOR AND BEAMS DETAILS

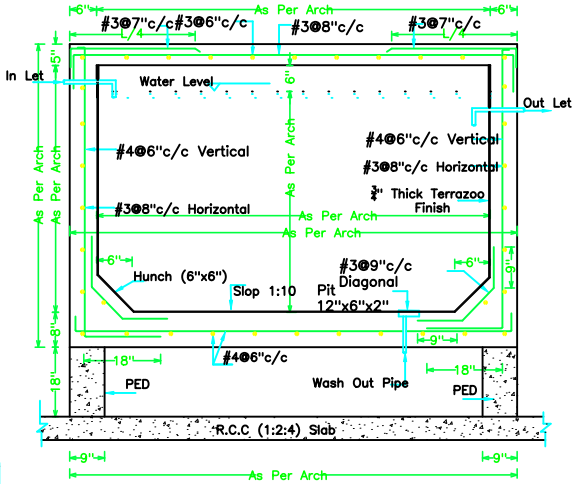


PLAN OF OVER HEAD WATER TANK

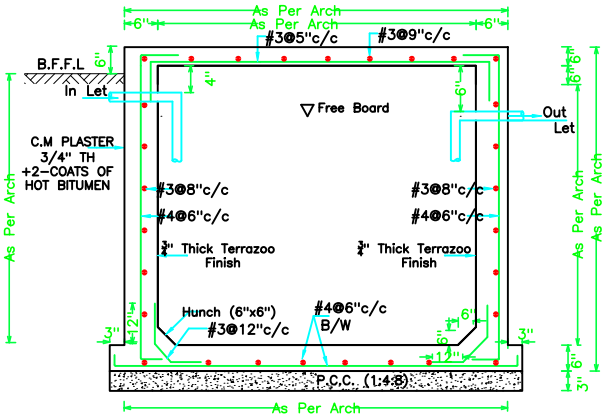


DETAIL OF MAN HOLE COVER

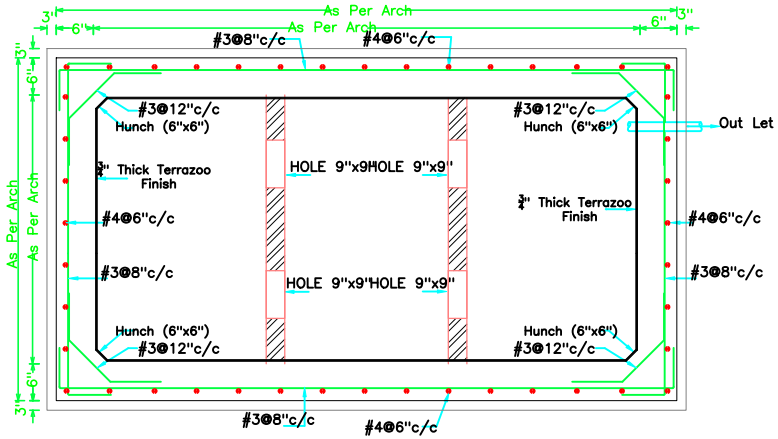
NOTE:
Provide PVC Water Stopper At Every Construction Joint.



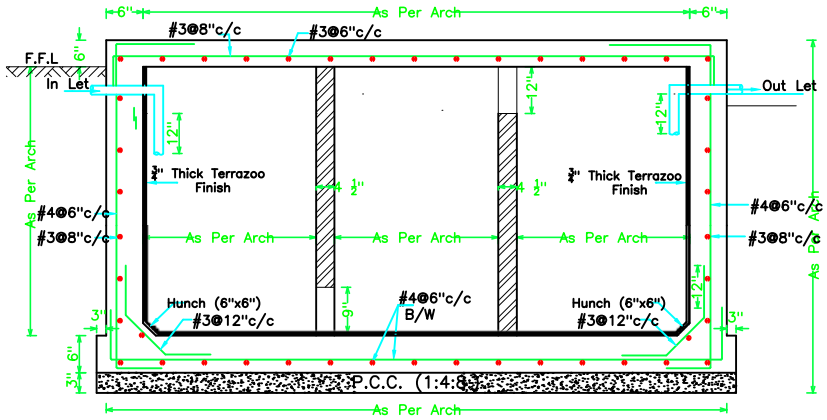
TYPICAL SECTION OF OVER HEAD WATER TANK AT A–A



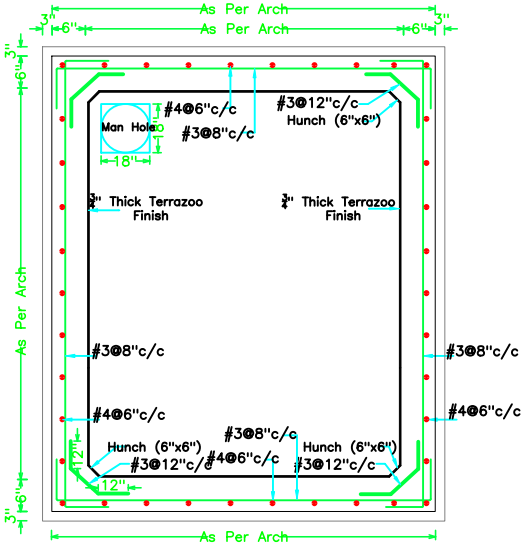
TYPICAL X–SECTION OF U.G.W.TANK



TYPICAL DETAIL OF SEPTIC TANK



TYPICAL SECTION DETAIL OF SEPTIC TANK AT S–S



TYPICAL DETAIL OF U.G.W.TANK/RAIN WATER TANK

WATER TANKS REINFORCEMENT DETAIL

PROJECT:-

PLOT NO. 517, STREET NO. 25, SECTOR -G, PHASE-VIII BAHRIA TOWN, RAWALPINDI

STRUCTURAL DRAWINGS

OWNER:

MUHAMMAD MUSHTAQ

UMAIR MAJEED
CONSULTING ENGINEER

PEC REGISTRATION NO : CONSULT/1816
DHA REGISTRATION NO : SE-0254
CDA REGISTRATION NO : STRUCTURES - 220/696
RDA REGISTRATION LTR NO: RDA / LU&BC / F - 371556
GULBERG REGISTRATION NO : GI / STR / 039 / 2018
Office Address: # S-116,117,118,119 2nd FLOOR CITY CENTER BANK ROAD SADDAR RAWALPINDI.
E- mail: umairmce@yahoo.com ; umairmce@gmail.com
Contact # : + 92 332 5056097

STAMP: