

PREPARED BY:



UNITED NATIONS OFFICE FOR PROJECT SERVICES

FUNDED BY:



**THE WORLD BANK**

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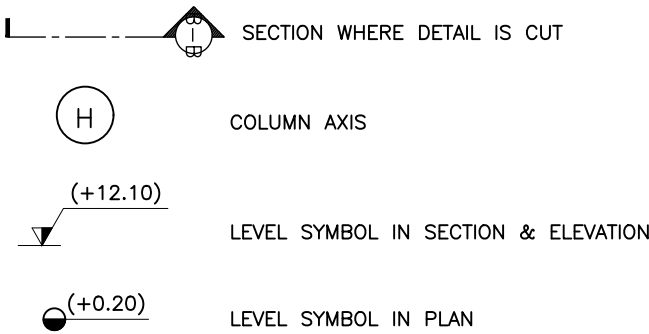
PROJECT.

Constructing an Elevated tank with a capacity of 250 m<sup>3</sup>

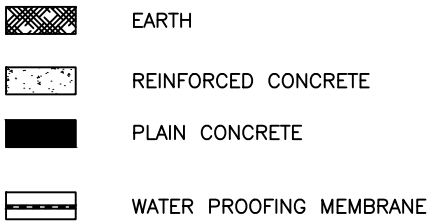
STRUCTURAL DRAWINGS FOR ELEVATED RCC WATER  
TANK CAPACITY 250 M<sup>3</sup>

SEPT, 2024

REFERENCE SYMBOLS



MATERIAL SYMBOLS



TYPICAL BEAM SCHEDULE

NOTES :

1- THE LISTING OF BARS IN THE SCHEDULE (TOP TO BOTTOM) CORRESPONDS TO THE SEQUENCE OF BARS SHOWN ON THE SKETCH (LEFT TO RIGHT) AS SHOWN BELOW.

2- ALL LAPS SHALL BE TENSION LAP SPLICE AT LOCATIONS INDICATED.

DRAWING LIST:-

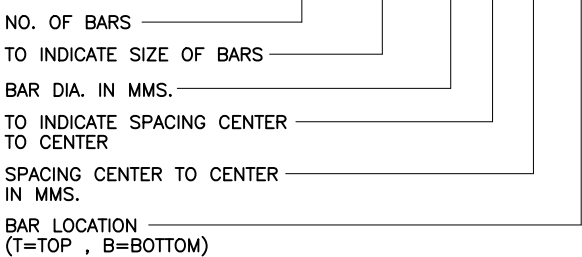
NO	DRAWING TITLE
S-00	GENERAL NOTES
S-01	PLAN HORIZONTAL & SECTION
S-02	CONCRETE SECTION
S-03	FOUNDATION PLAN & SECTION
S-04	COLUMNS PLAN & SCHEDULE
S-05	LEVEL 1, 2, 4 AND 6 BEAM SCHEDULE AND SECTIONS
S-06	LEVEL 3 AND 7 BEAM SCHEDULE AND SECTIONS
S-07	LEVEL 5 BEAM SCHEDULE AND SECTIONS
S-08	TYPICALLY BEAM REINFORCEMENT & CURTAILMENT DETAILS
S-09	LEVEL 8 BEAM SCHEDULE AND SECTIONS
S-10	TYPICALLY BEAM REINFORCEMENT & CURTAILMENT DETAILS
S-11	REINFORCE SLAB & WELL SECTION DETAILS
S-12	REINFORCE SLAB & WELL SECTION DETAILS
S-13	REINFORCE SLAB & WELL SECTION DETAILS
S-14	FIXED LADDERS WITH SAFETY CAGES DETAILS
S-15	DETAIL

Table for Expected Lateral Movement Due to Earthquake

Story	Expected Lateral Movement (mm)	Differential Deflection (mm)	Notes Pipe Pendant Selection
LEVEL 9	78	2	Flexible Joints: Use flexible joints or couplings that can accommodate the maximum differential deflection of 13.0 mm.
LEVEL 8	76	7	
LEVEL 7	69	9	
LEVEL 6	60	10	
LEVEL 5	50	10	
LEVEL 4	40	11	
LEVEL 3	29	11	
LEVEL 2	18	13	
LEVEL 1	5	5	

GENERAL NOTES:

- FOR STRUCTURE LOCATIONS SEE GENERAL LAYOUT .
- ALL STRUCTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, AND PLUMBING DRAWINGS.
- ENOUGH CARE MUST BE GIVEN TO THE SIZE & LOCATION OF OPENINGS IN CONCRETE ELEMENTS BEFORE CASTING.
- THE MINIMUM CYLINDRICAL CONCRETE STRENGTH AT 28 DAYS SHOULD BE 28 MPa FOR REINFORCED CONCRETE AND 15 MPa FOR PLAIN CONCRETE.
- REINFORCING STEEL SHALL BE AS FOLLOWS :
  - \* DEFORMED HIGH TENSILE STEEL BARS ( $\emptyset$ &#) OF SUPPLIED STEEL REBAR SHALL CONFORM TO ASTM A-615M WITH MINIMUM YIELD STRESS OF 4150KG/CM2
- REINFORCEMENT LENGTHS ARE NOT TO BE MEASURED FROM THE DRAWINGS
- STEEL OVERLAP SHALL BE (MIN.) = 60 BAR DIAMETER
- BAR MARKING SYSTEM



- COVER TO STEEL :
  - FOR ELEMENTS IN CONTACT WITH SOIL OR WATER (TIED BEAM, NICK COLUMN & FOUNDATIONS)= 50 mms.
  - COLUMNS & WALLS = 40 mms.
  - TOP SLABS = 40 mms.
  - BOTTOM SLABS = 40 mms.
  - BEAMS = 40 mms.
- CONCRETE IN CONTACT WITH GROUND SHALL BE PROTECTED BY BITUMINOUS COAT AS PER SPECIFICATIONS UNLESS OTHERWISE NOTED.
- IN BEAMS SCHEDULE WHERE NO TOP BARS ARE PROVIDED; ALL BEAMS SHOULD BE PROVIDED WITH STIRRUP HANGERS OF 2 $\emptyset$ 12 OR 10% OF THE BOTTOM REINFORCEMENT WHICHEVER IS GREATER.
- FOR BEAMS OF DEPTH GREATER THAN 600 mm USE INTERMEDIATE BARS 2 $\emptyset$ 12 WITH MAX. SPACING 300 mm.
- FOR THE STRUCTURAL STEEL GRADE: USE GRADE S275 FOR ALL STRUCTURAL STEEL COMPONENTS, INCLUDING STAIRS AND GUARDRAILS, TO ENSURE ADEQUATE STRENGTH AND DURABILITY.

DESIGN LOADS :

Lateral system in both X and Y directions is:

\*Special Reinforced Concrete Moment Frames (SRCMF) (ASCE 7-16 Table 15.4-1)

- \* LIVE LOADS
  - TOP & BOTTOM OF SLAB 0.96 KN\m2
- \* SEISMIC LOADS

- Z = 0.3(475 Year Return Period)
- Ss = 1.1(2475 Year Return Period)
- S1 = 0.33(2475 Year Return Period)
- SEISMIC IMPORTANCE FACTOR=1.5
- RESPONSE MODIFICATION FACTOR =8.00
- SITE CLASS: C

- \* WIND LOADS
  - THE CALCULATING THE MODIFIED WIND SPEED 138.2 KM/H.
  - WIND IMPORTANCE FACTOR=1.15
  - EXPOSURE TYPE C
  - TOPOGRAPHICAL FACTOR 1.3
- \* REINFORCED CONCRETE HAS BEEN DESIGNED IN ACCORDANCE WITH ACI 318M-19
- \* STRUCTURAL STEEL HAS BEEN DESIGNED IN ACCORDANCE WITH AISC 360-16

GENERAL NOTES FOR FOUNDATIONS

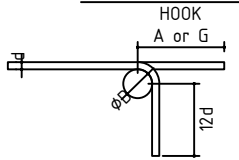
FOR ELEVATED TANK:

- FOUNDATION DESIGN IS BASED ON AN ASSUMED BEARING CAPACITY OF 150 KN\m2
- FOUNDATION LEVEL IS (-2.50) FROM THE SITE GRADING LEVEL OR (-1.50) FROM NATURAL GROUND WHICH IS DEEPER U.O.M.
- THE GROUND WATER LEVEL IS ASSUMED AT AN AVERAGE DEPTH OF 6 m BELOW THE EXISTING GROUND SURFACE.
- THE CONTRACTOR SHOULD CARRYING OUT THE GEOTECHNICAL INVESTIGATION SOIL TESTING WORKS AT TANK AREA THIS WORK CONSISTS OF SUBSOIL INVESTIGATION FOR TANK AREA WHICH INCLUDES THE DRILLING OF BOREHOLES MANUALLY, THE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH B.S. 5930 "CODE OF PRACTICE FOR SITE INVESTIGATION" AND B.S. 1377 "TEST FOR SOILS.THE DESIGNER MUST BE INFORMED IF THERE IS ANY CHANGE IN THE MENTIONED ASSUMPTIONS TO REDESIGN R.C. ELEMENTS IF NEEDED.

STRUCTURAL ABBREVIATIONS

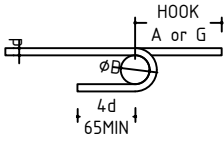
B1.	NUMBER OF BEAM	MAX.	MAXIMUM
BOTT.	BOTTOM	MID.	MIDDLE
CONC.	CONCRETE	P.C.	PLAIN CONCRETE
C1	NUMBER OF COLUMN	R.C.	REINFORCED CONCRETE
CONT.	CONTINUOUS	REINF.	REINFORCEMENT
CTR.	CENTERED	SEC.	SECTION
DIM.	DIMENSION	STR.	STRAIGHT
DET.	DETAIL	STIRR.	STIRRUPS
ELEV.	ELEVATION	SYMM.	SYMMETRICAL
F.L.	FOUNDATION LEVEL	THICK.	THICKNESS
G.L.	GROUND LEVEL	TYP.	TYPICAL
MIN.	MINIMUM	T.	TOP
		U. O. N.	UNLESS OTHERWISE NOTED

STANDARD HOOKS



90° HOOKS

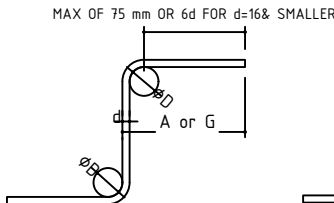
D=4d FOR d=8mm THROUGH d=25mm  
D=8d FOR d=30mm THROUGH d=32mm  
D=FINISHED BEND DIAMETERS



180° HOOKS

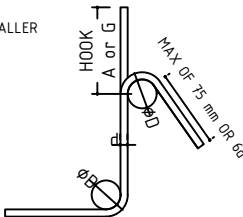
D=4d FOR d=8mm THROUGH d=25mm  
D=8d FOR d=30mm THROUGH d=32mm

LINKS AND TIE HOOKS



90° HOOKS

D=4d FOR d=16mm AND SMALLER



135° HOOKS

D=4d FOR d=16mm AND SMALLER

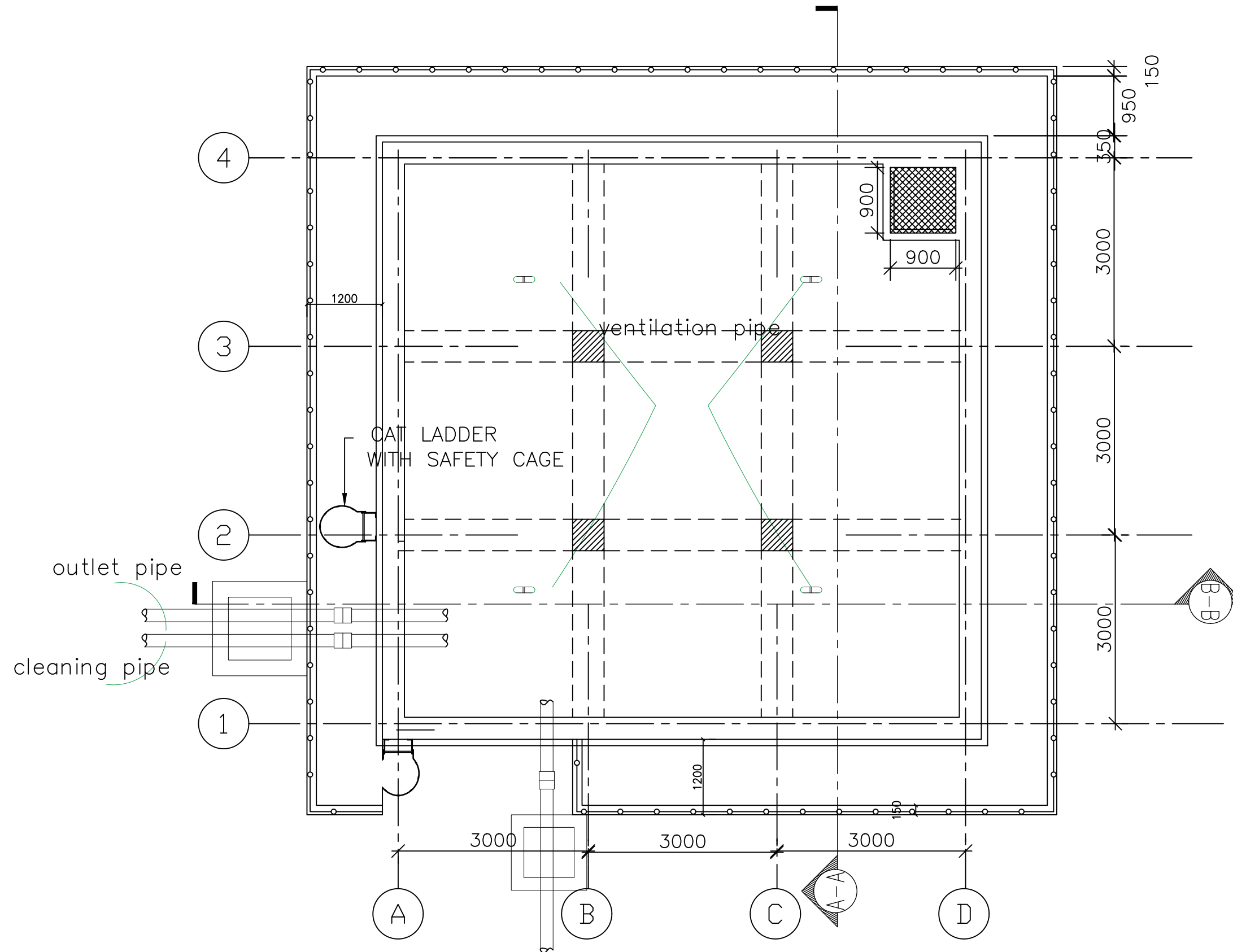
DETAIL - STANDARD END HOOK DIMENSIONS

BAR SIZE (mm)	D (mm)	180° HOOKS A or G(mm)	90° HOOKS A or G(mm)
10	60	195	185
12	75	220	220
14	85	245	260
16	100	270	295
20	120	335	370

DETAIL - LINKS AND TIES HOOK DIMENSIONS

BAR SIZE (mm)	D (mm)	90° HOOKS HOOK-A OR G(mm)	135° HOOKS HOOK-A OR G(mm)
10	40	125	150
12	50	135	160
14	60	150	185
16	65	175	210

STANDARD 90° BAR HOOKS, EMBEDMENT LENGTHS & LAP LENGTHS  
SCALE N.T.S



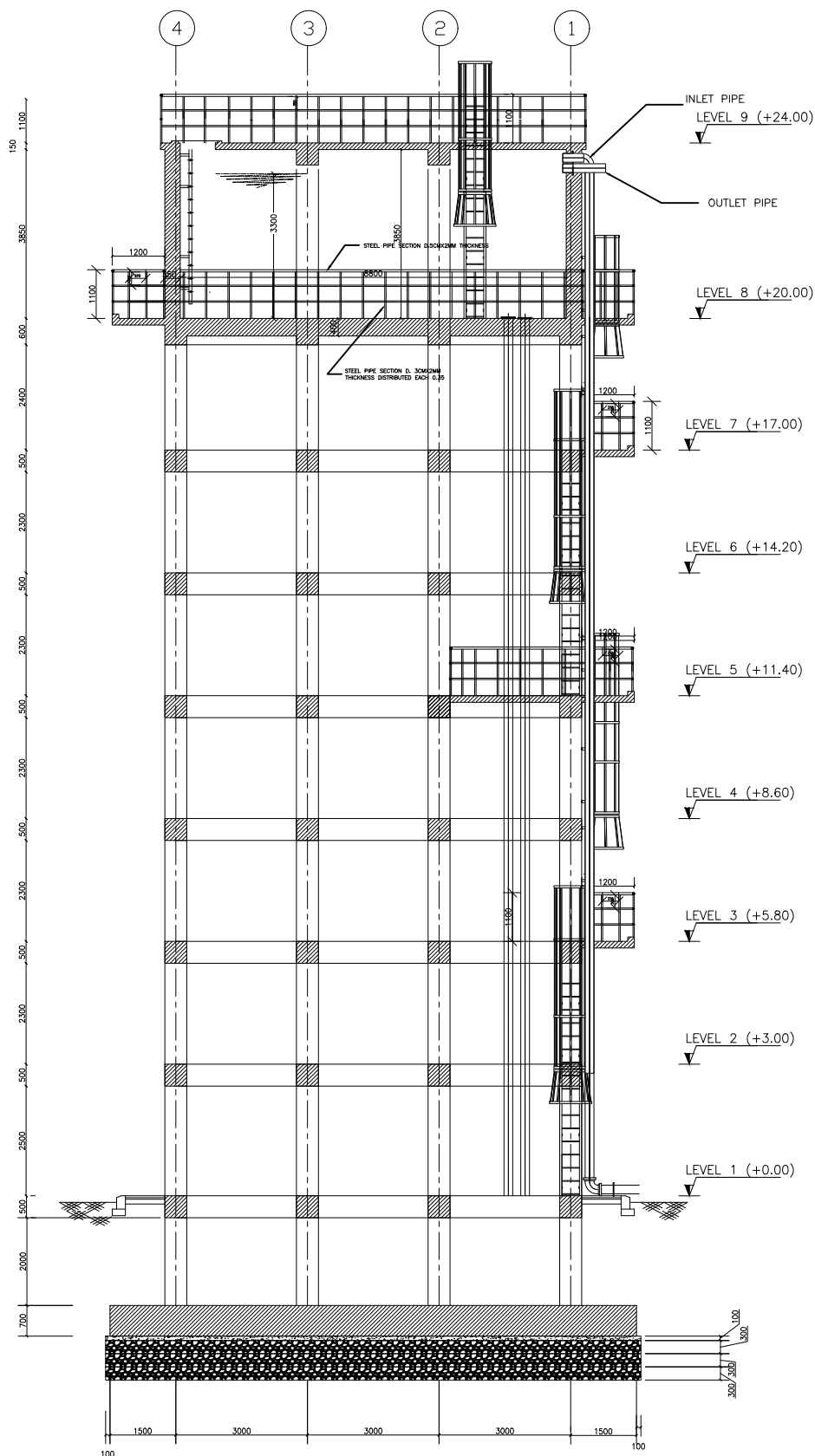
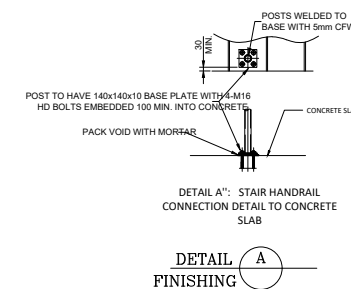
#### STRUCTURAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED .
2. ALL LEVELS ARE IN METERS MEASURED FROM THE RELATIVE ZERO , WHICH REPRESENT THE ROAD LEVEL IN FRONT OF EACH STRUCTURE ENTRANCE.
3. ALL RE-BARS DIAMETERS ARE IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
4. THE FOUNDATION TANK HAS BEEN DESIGNED FOR SOIL ALLOWABLE NET SOIL BEARING CAPACITY 150 KN/M2.
5. SUPPLIED STEEL REBAR SHALL CONFORM TO ASTM A-615M WITH MINIMUM YIELD STRESS OF 4200KG/CM2.
6. CONCRETE COVER FOR REINFORCEMENT BARS SHALL BE 40MM FOR TANK ROOF SLAB, COLUMN,BEAMS , TANK BOTTOM SLAB, AND WALLS AND 50MM FOR FOUNDATIONS.
7. THE 28-DAY CYLINDRICAL CONCRETE STRENGTH SHALL BE A MINIMUM OF 28 MPa FOR REINFORCED CONCRETE AND 15 MPa FOR PLAIN CONCRETE.
8. PLASTERING WORKS FOR (STAGING FRAME) WITH MORTAR (1:3) FOR INSIDE AND OUTSIDE AND ADD SICA MATERIAL (2KG/CEMENT BAG). INCLUDE PAINTING ALL THE OUTSIDE PARTS.
9. PIPE BENDS WILL BE INCLUDING FLEXIBLE CONNECTION.

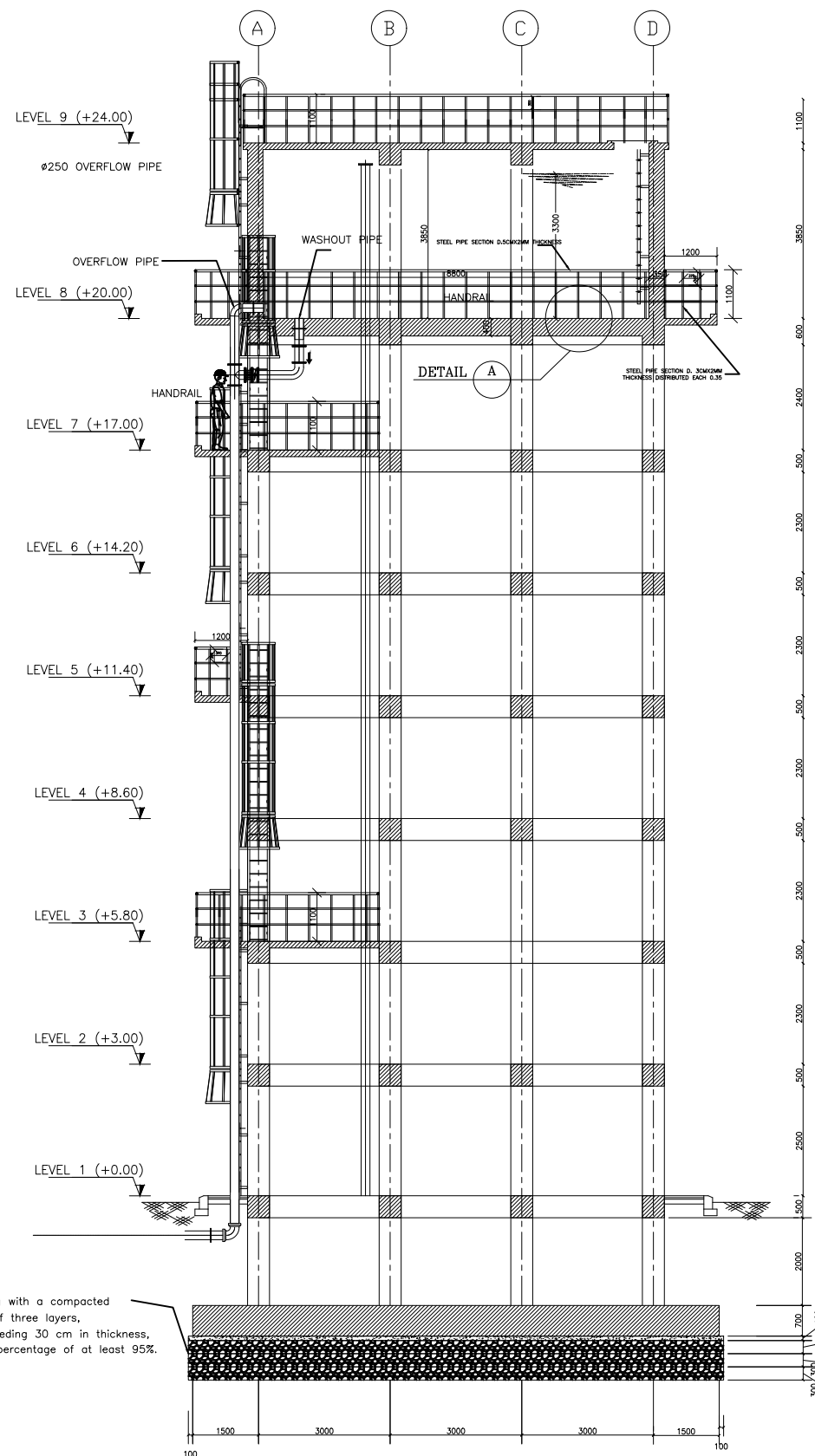
RC ELEVATED WATER TANK  
HORIZONTAL PLAN

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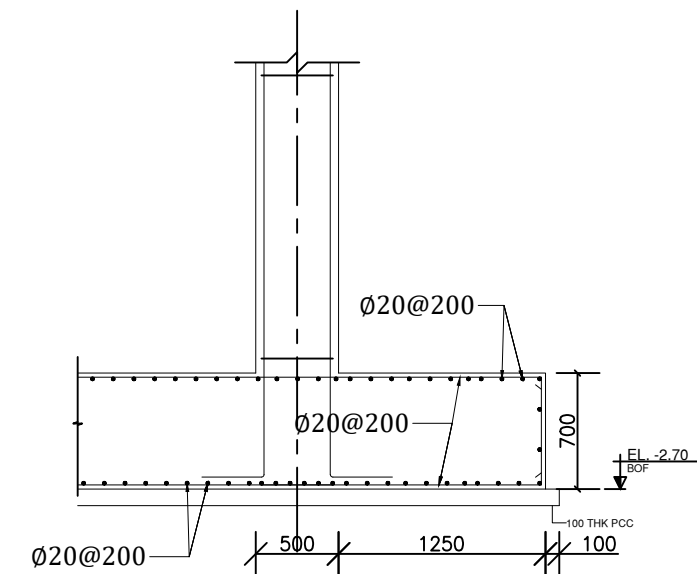
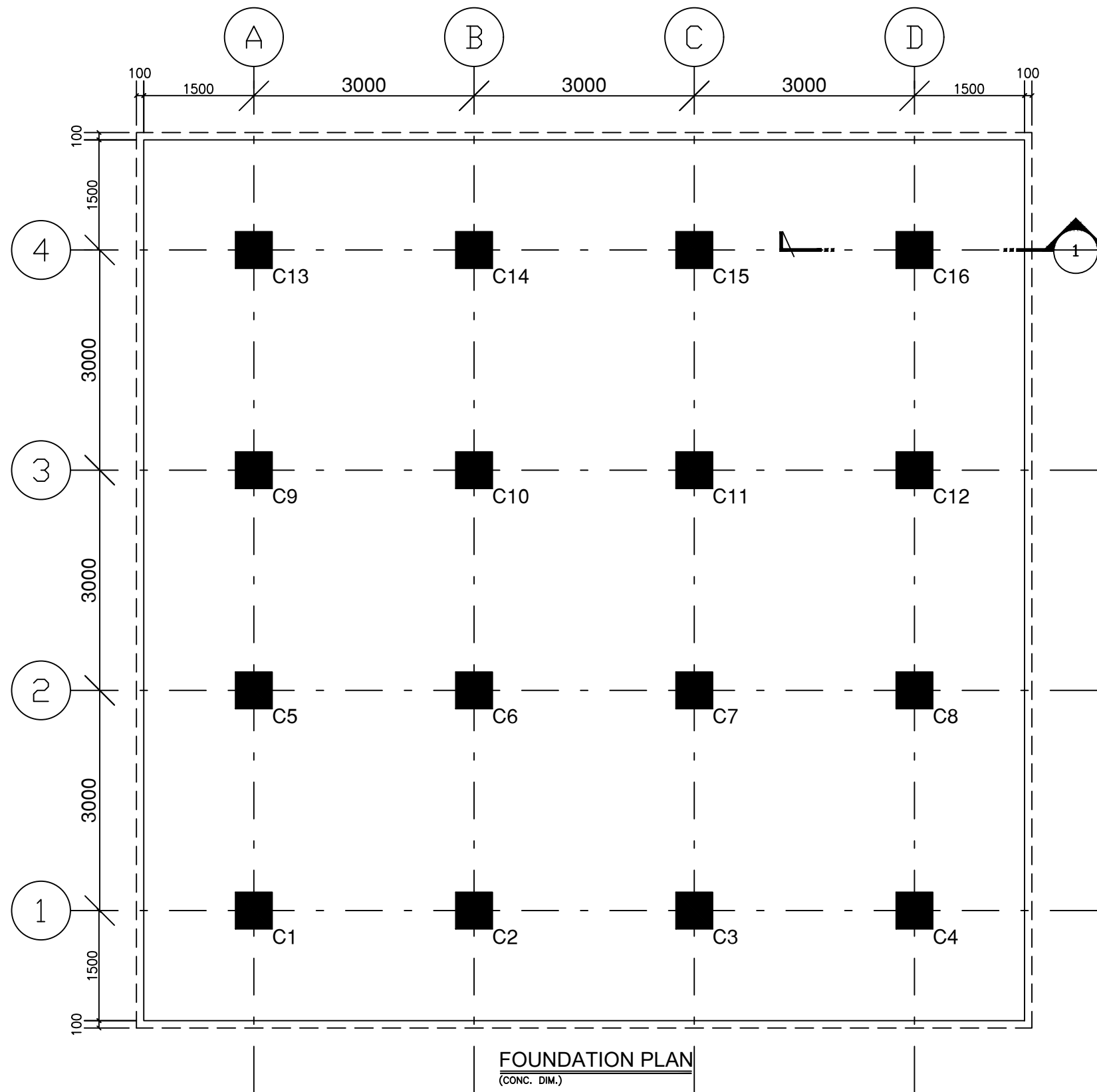
RC ELEVATED WATER TANK  
SIDE VIEW 2



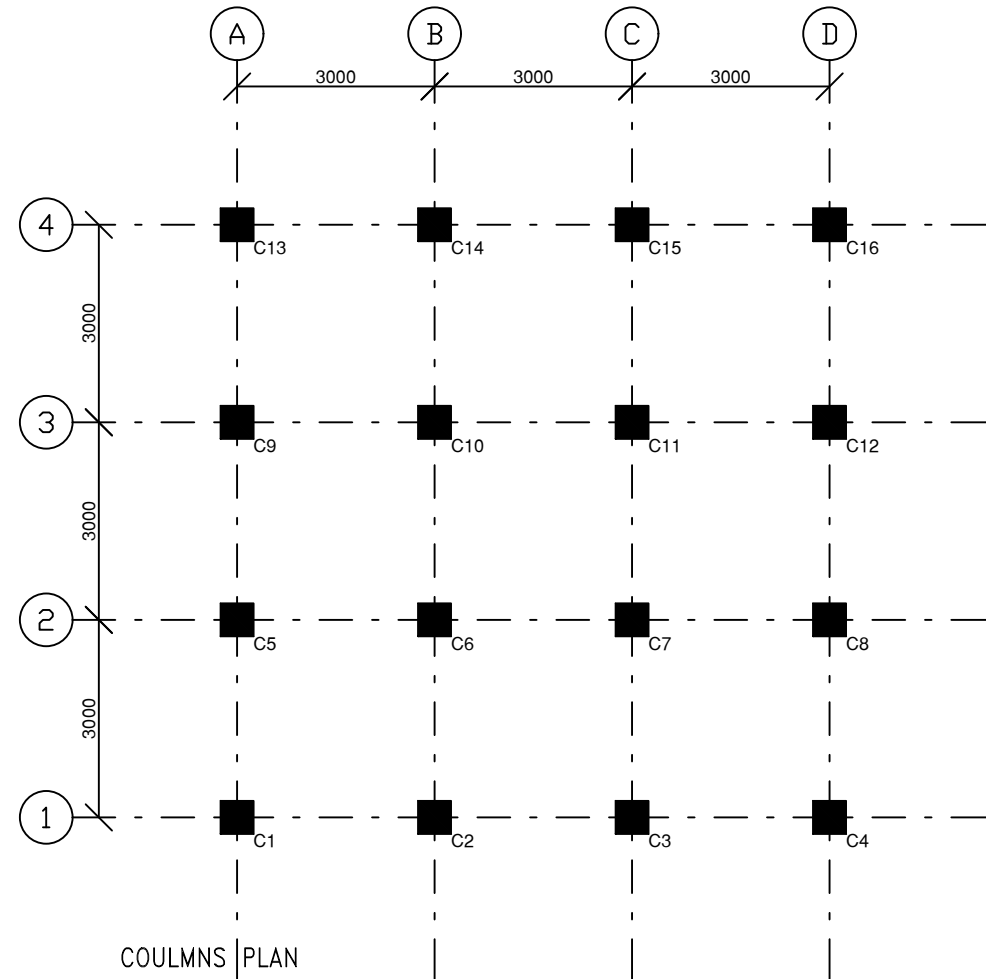
RC ELEVATED WATER TANK  
SIDE VIEW 1

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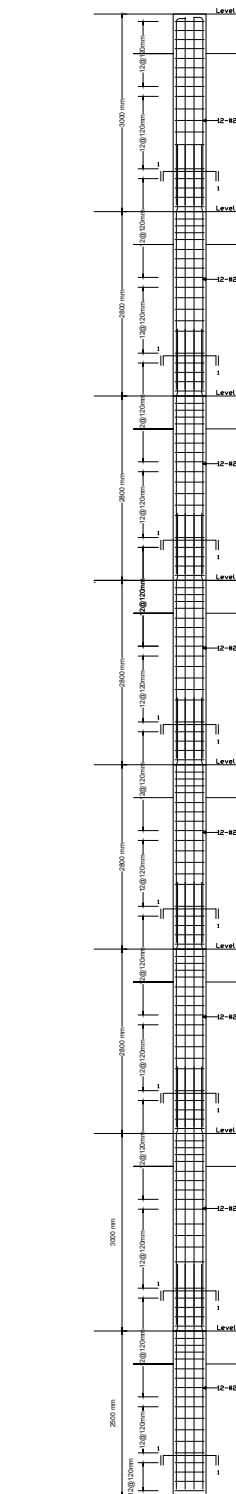
COULMNS PLAN

	C4 : Fy60 , COVER = 50 MM CONFINING ZONE = 500 MM			C4 : Fy60 , COVER = 40 MM CONFINING ZONE = 500 MM			C4 : Fy60 , COVER = 40 MM CONFINING ZONE = 500 MM		
	Z1 MAIN LINK	Z1 OTHERS	Z2 LINKS	Z1 MAIN LINK	Z1 OTHERS	Z2 LINKS	Z1 MAIN LINK	Z1 OTHERS	Z2 LINKS
	#12 @ 120	#12 @ 120	#12 @ 120	#12 @ 120	#12 @ 120	#12 @ 120	#12 @ 120	#10 @ 150	#12 @ 120
	12-#20			12-#20			12-#20		
COLUMN MARKED	BASE TO LEVEL 1			LEVEL1 TO LEVEL 8			LEVEL1 TO LEVEL 9		
	ALL THE COLUMN			C13, C14, C15, C16, C9, C12, C5, C8, C1,C2, C3, C4			C10, C11, C6, C7		

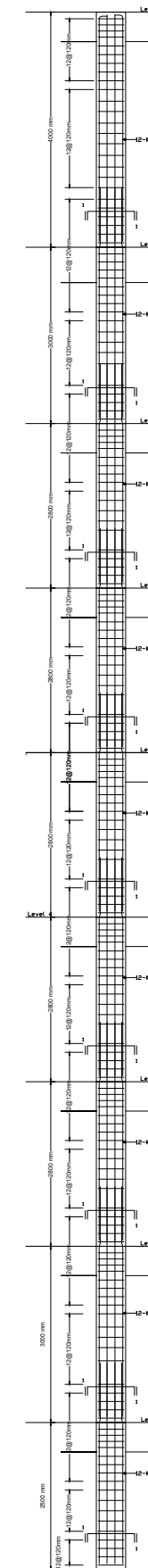
### SCHEDULE OF COULMNS

NOTES:

2. Z1 = SPECIAL CONFINING ZONE AS PER ACI 318 - 19, Z2 = REMAINING ZONES AS PER ACI 318 - 19



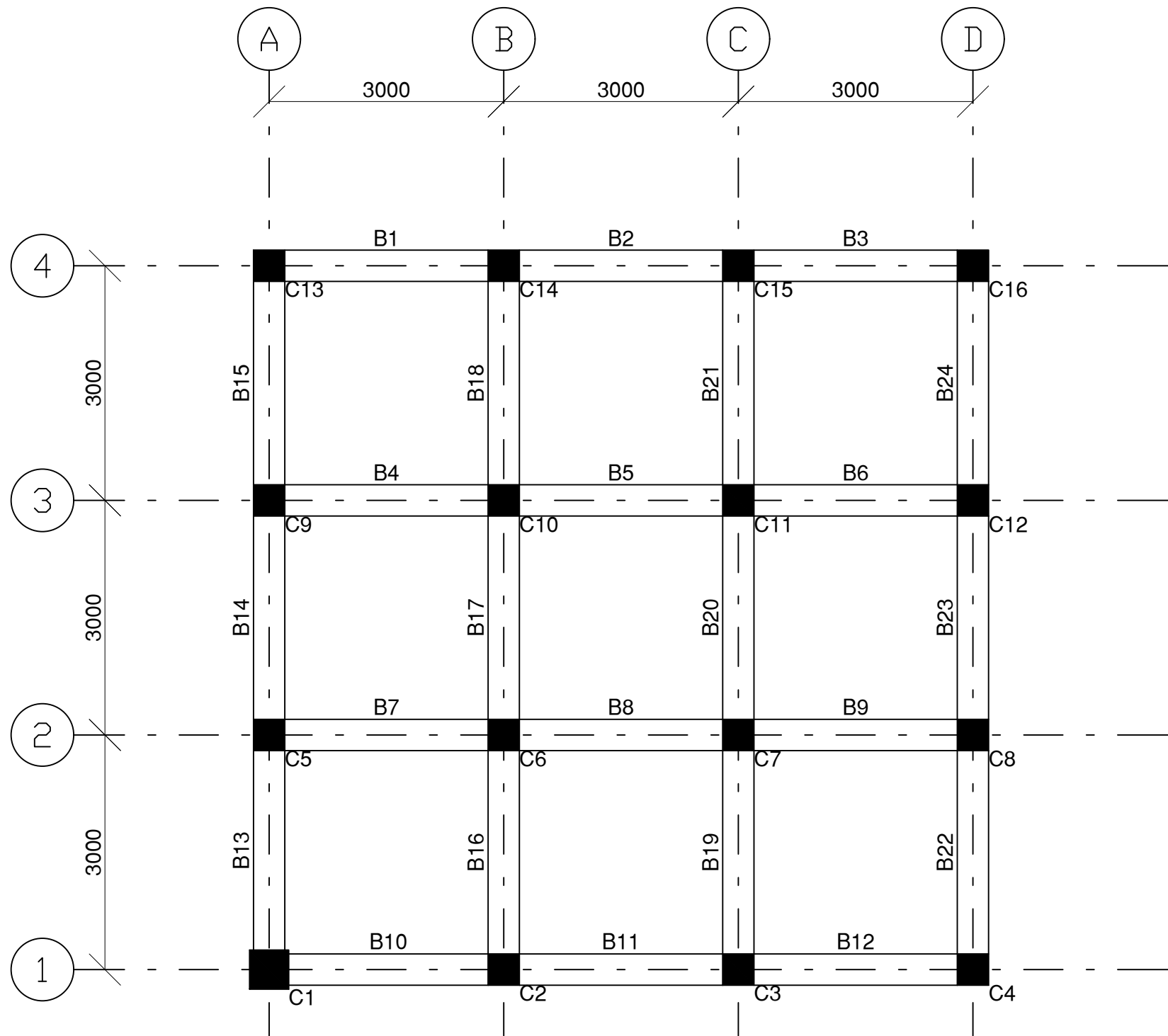
DETAIL OF COLUMN  
C13, C14, C15, C16, C9, C12,  
C5, C8, C1,C2, C3, C4



DETAIL OF COLUMN C6, C7, C10, C11

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3. ALL RE-BARS DIAMETERS ARE IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
4. THE FOUNDATION TANK HAS BEEN DESIGNED FOR SOIL ALLOWABLE NET SOIL BEARING CAPACITY 150 KN/M2.
5. SUPPLIED STEEL REBAR SHALL CONFORM TO ASTM A-615M WITH MINIMUM YIELD STRESS OF 4200KG/CM2.
6. CONCRETE COVER FOR REINFORCEMENT BARS SHALL BE 40MM FOR TANK ROOF SLAB, COLUMN,BEAMS , TANK BOTTOM SLAB, AND WALLS AND 50MM FOR FOUNDATIONS.
7. THE 28-DAY CYLINDRICAL CONCRETE STRENGTH SHALL BE A MINIMUM OF 28 MPa FOR REINFORCED CONCRETE AND 15 MPa FOR PLAIN CONCRETE.
8. PLASTERING WORKS FOR (STAGING FRAME) WITH MORTAR (1:3) FOR INSIDE AND OUTSIDE AND ADD SICA MATERIAL (2KG/CEMENT BAG). INCLUDE PAINTING ALL THE OUTSIDE PARTS.
9. PIPE BENDS WILL BE INCLUDING FLEXIBLE CONNECTION.

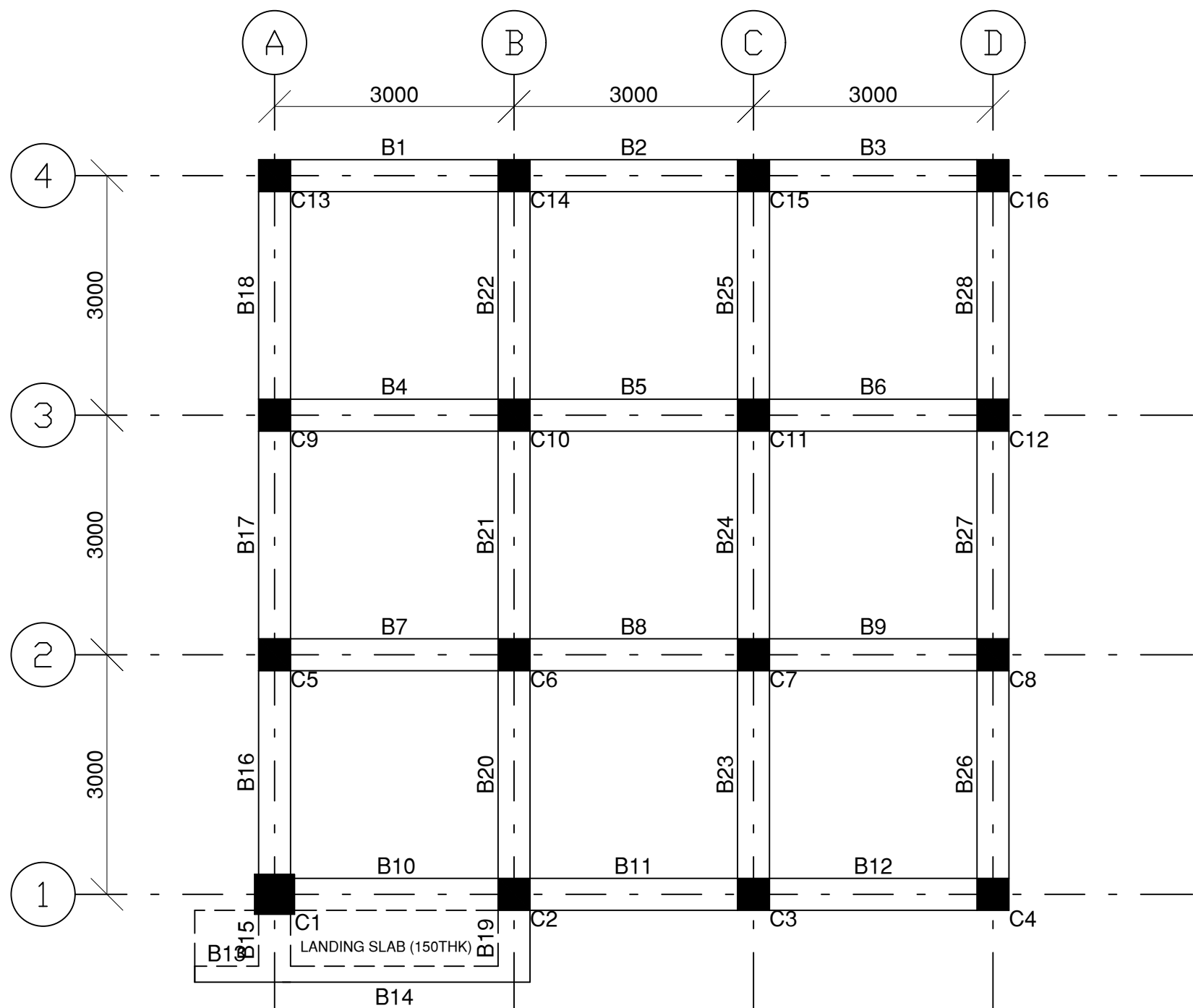


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BEAM SCHEDULE (LEVEL: 1, 2, 4, and 6 )

BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT			TOP REINFORCEMENT			SHEAR STIRRUPS			SFR	DIAGONAL	REMARKS
	B	D	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT			
B1,B2,B3,B4,B5,B6 ,B7,B8,B9,B10,B11 ,B12,B13,B14,B15 ,B16,B17,B18,B19 ,B20,B21,B22,B23 ,B24	500	500	6-#16	6-#16	6-#16	6-#16	6-#16	6-#16	10@100 C/C	10@200 C/C	10@100 C/C	-	-	-

SEE TYPICALLY BEAM REINFORCEMENT & CURTAILMENT DETAILS



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LANDING SLAB SCHEDULE (LEVEL : 3 and 7)

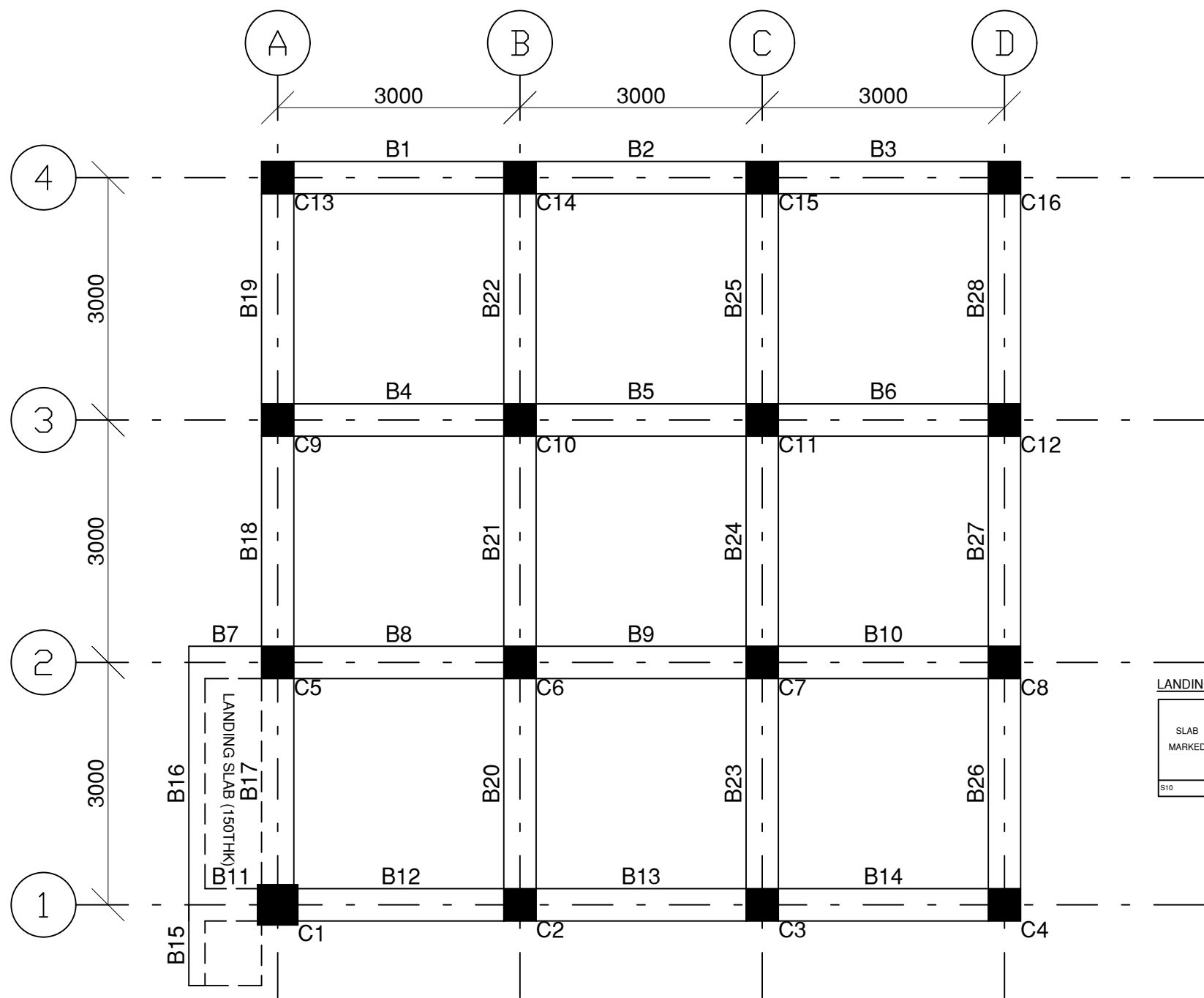
SLAB MARKED	SLAB THICKNESS	BOTTOM REINFORCEMENT				TOP REINFORCEMENT				REMARKS
		ALONG SHORT SPAN		ALONG LONG SPAN		ALONG SHORT SPAN		ALONG LONG SPAN		
		FULL LENGTH	CURTAILED	FULL LENGTH	CURTAILED	FULL LENGTH	CURTAILED	FULL LENGTH	CURTAILED	
S10	150	#10 @ 200 C/C	---	#10 @ 200 C/C	---	#10 @ 200 C/C	---	#10 @ 200 C/C	---	---

BEAM SCHEDULE (LEVEL: 3 and 7)

BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT			TOP REINFORCEMENT			SHEAR STIRRUPS			SFR	DIAGONAL	REMARKS
	B	D	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT			
B1,B2,B3,B4,B5,B6 ,B7,B8,B9,B10,B11 ,B12,B16,B17,B18 ,B20,B21,B22,B23 ,B24,B25,B26,B27 ,B28	500	500	6-#16	6-#16	6-#16	6-#16	6-#16	6-#16	10@100 C/C	10@200 C/C	10@100 C/C	-	-	-
B13	200	400	3-#16	3-#16	3-#16	3-#16	3-#16	3-#16	10@100 C/C	10@100 C/C	10@100 C/C	-	-	CANTILEVERED
B14	200	400	3-#16	3-#16	3-#16	3-#16	3-#16	3-#16	10@150 C/C	10@100 C/C	10@100 C/C	-	-	-
B15,B19	500	500	6-#16	6-#16	6-#16	6-#16	6-#16	6-#16	10@100 C/C	10@200 C/C	10@100 C/C	-	-	CANTILEVERED

SEE TYPICALLY BEAM REINFORCEMENT & CURTAILMENT DETAILS





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LANDING SLAB SCHEDULE (LEVEL : 5)

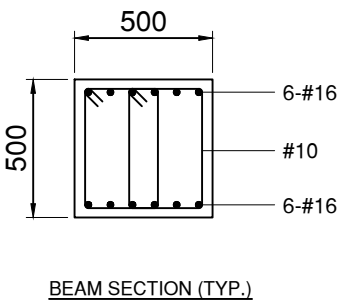
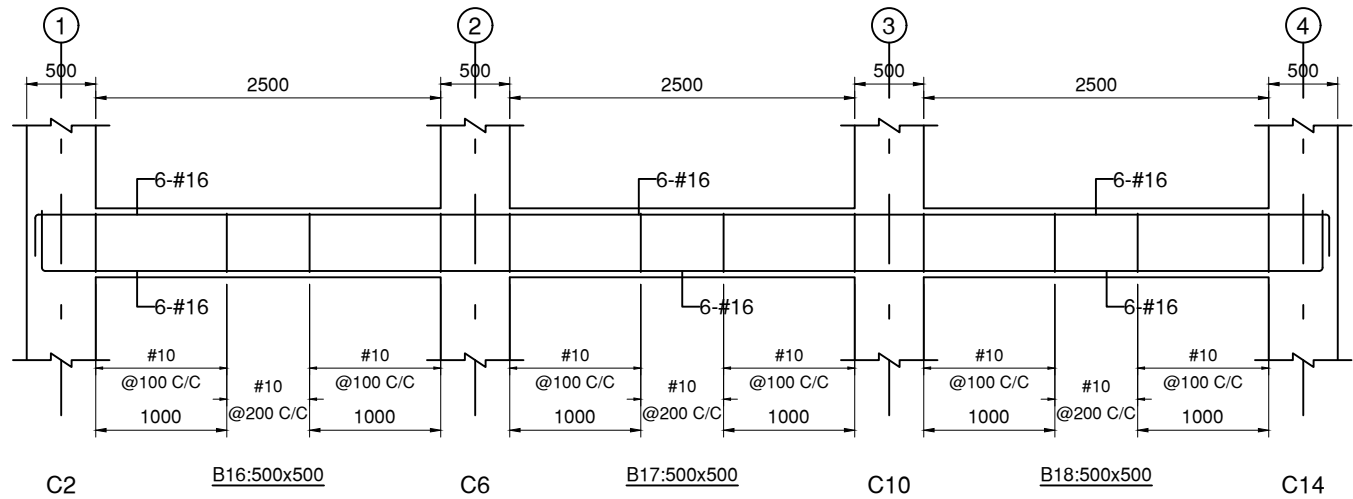
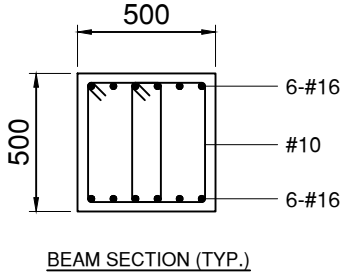
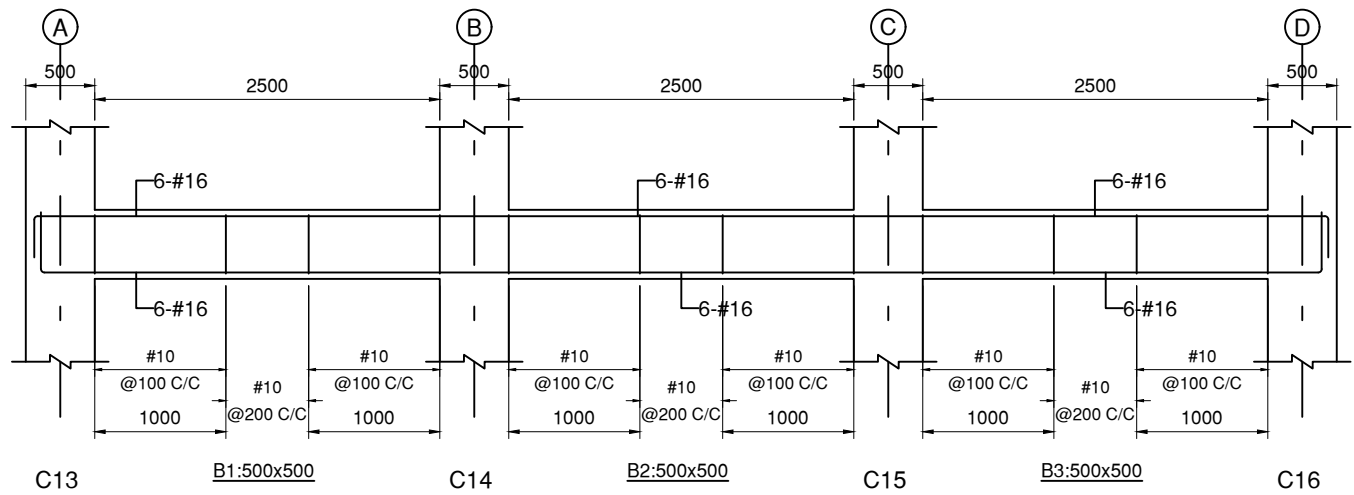
SLAB MARKED	SLAB THICKNESS	BOTTOM REINFORCEMENT				TOP REINFORCEMENT				REMARKS
		ALONG SHORT SPAN		ALONG LONG SPAN		ALONG SHORT SPAN		ALONG LONG SPAN		
		FULL LENGTH	CURTAILED	FULL LENGTH	CURTAILED	FULL LENGTH	CURTAILED	FULL LENGTH	CURTAILED	
S10	150	#10 @ 200 C/C	---	#10 @ 200 C/C	---	#10 @ 200 C/C	---	#10 @ 200 C/C	---	---

BEAM SCHEDULE (LEVEL: 5)

BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT			TOP REINFORCEMENT			SHEAR STIRRUPS			SFR	DIAGONAL	REMARKS
	B	D	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT			
B1,B2,B3,B4,B5,B6 ,B8,B9,B10,B12,B13 ,B14,B17,B18,B19 ,B20,B21,B22,B23 ,B24,B25,B26,B27 ,B28	500	500	6-#16	6-#16	6-#16	6-#16	6-#16	6-#16	10@100 C/C	10@200 C/C	10@100 C/C	-	-	-
B7,B11	500	500	6-#16	6-#16	6-#16	6-#16	6-#16	6-#16	10@100 C/C	10@200 C/C	10@100 C/C	-	-	CANTILEVERED
B15	200	400	3-#16	3-#16	3-#16	3-#16	3-#16	3-#16	10@100 C/C	10@100 C/C	10@100 C/C	-	-	CANTILEVERED
B16	200	400	3-#16	3-#16	3-#16	3-#16	3-#16	3-#16	10@150 C/C	10@100 C/C	10@100 C/C	-	-	-

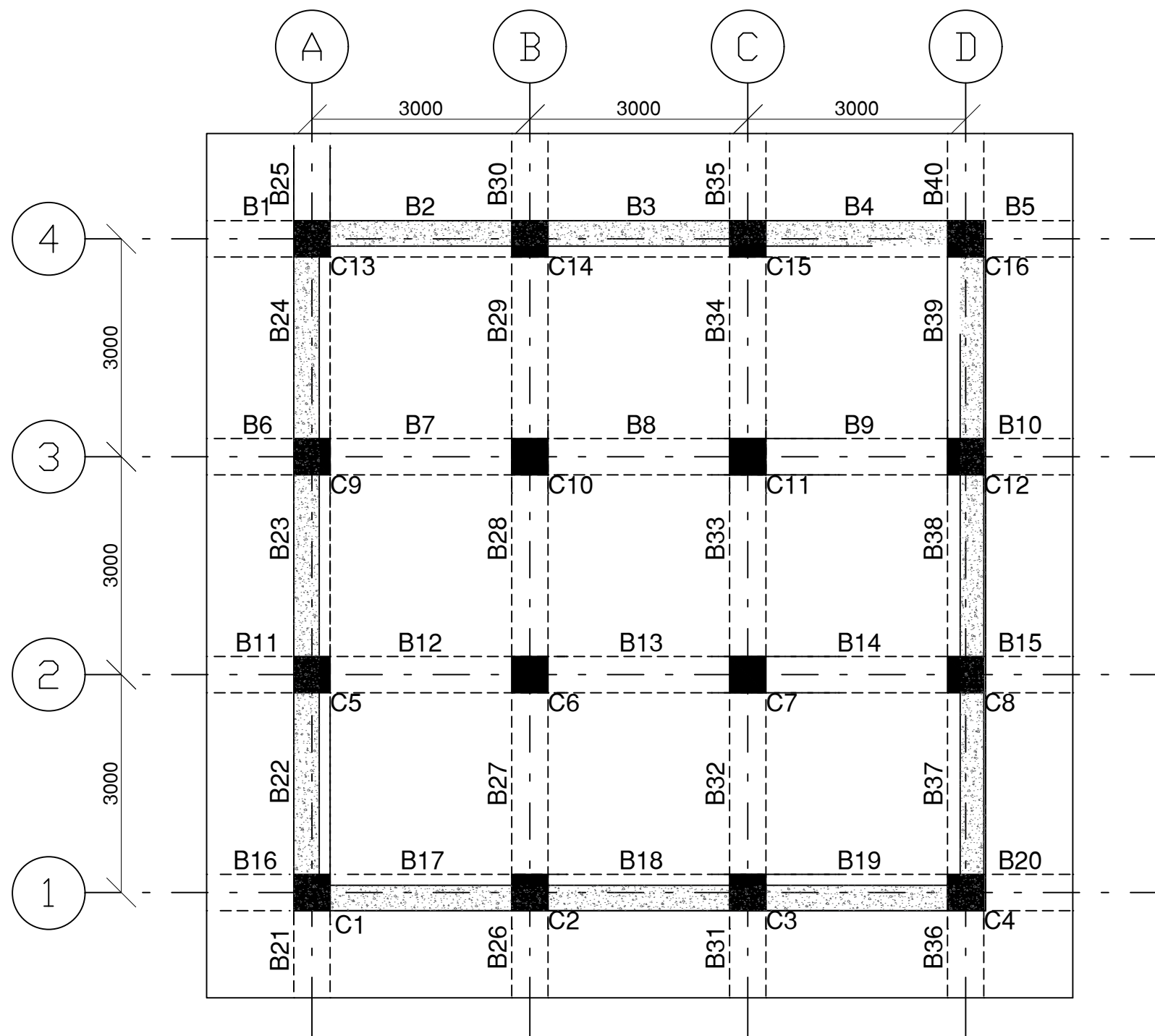
SEE TYPICALLY BEAM REINFORCEMENT & CURTAILMENT DETAILS

TYP. BEAM REINF. & CURTAILMENT DET. (SECTIONAL ELEVATION)



STRUCTURAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED .
2. ALL LEVELS ARE IN METERS MEASURED FROM THE RELATIVE ZERO , WHICH REPRESENT THE ROAD LEVEL IN FRONT OF EACH STRUCTURE ENTRANCE.
3. ALL RE-BARS DIAMETERS ARE IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
4. THE FOUNDATION TANK HAS BEEN DESIGNED FOR SOIL ALLOWABLE NET SOIL BEARING CAPACITY 150 KN/M2.
5. SUPPLIED STEEL REBAR SHALL CONFORM TO ASTM A-615M WITH MINIMUM YIELD STRESS OF 4200KG/CM2.
6. CONCRETE COVER FOR REINFORCEMENT BARS SHALL BE 40MM FOR TANK ROOF SLAB, COLUMN,BEAMS , TANK BOTTOM SLAB, AND WALLS AND 50MM FOR FOUNDATIONS.
7. THE 28-DAY CYLINDRICAL CONCRETE STRENGTH SHALL BE A MINIMUM OF 28 MPa FOR REINFORCED CONCRETE AND 15 MPa FOR PLAIN CONCRETE.
8. PLASTERING WORKS FOR (STAGING FRAME) WITH MORTAR (1:3) FOR INSIDE AND OUTSIDE AND ADD SICA MATERIAL (2KG/CEMENT BAG). INCLUDE PAINTING ALL THE OUTSIDE PARTS.
9. PIPE BENDS WILL BE INCLUDING FLEXIBLE CONNECTION.



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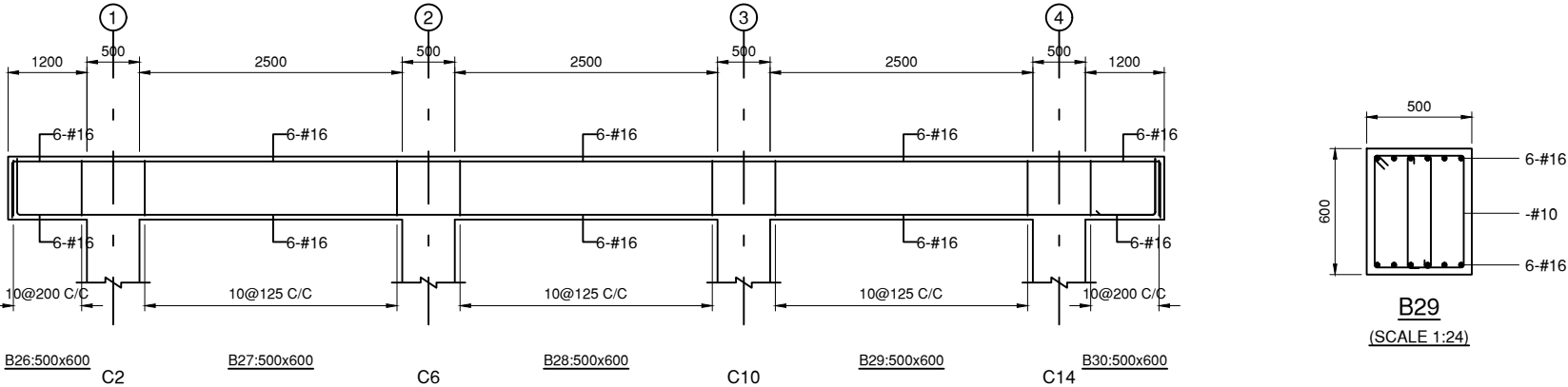
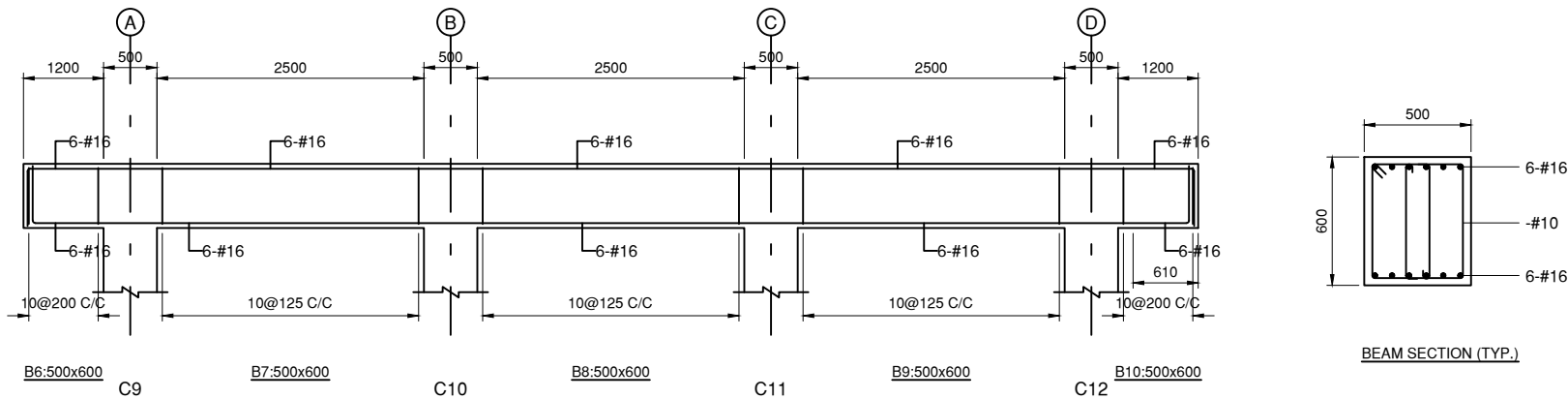
BEAM SCHEDULE (LEVEL: 8)

BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT			TOP REINFORCEMENT			SHEAR STIRRUPS			SFR	DIAGONAL	REMARKS
	B	D	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT			
B2,B3,B4,B17,B18 ,B19,B22,B23,B24 ,B27,B28,B29,B32 ,B33,B34,B37,B38 ,B39 B7,B8,B9,B12,B13 ,B14	500	600	6-#16	6-#16	6-#16	6-#16	6-#16	6-#16	10@125 C/C	-	10@125 C/C	-	-	-
B1,B5,B6,B11,B16 B10,B15,B20,B25 ,B30,B35,B40 B21,B26,B31,B36	500	600	6-#16	6-#16	6-#16	6-#16	6-#16	6-#16	10@200 C/C	10@200 C/C	10@200 C/C	-	-	CANTILEVERED

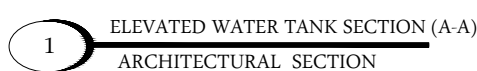
SEE TYPICALLY BEAM REINFORCEMENT & CURTAILMENT DETAILS

TYP. BEAM REINF. & CURTAILMENT DET. (SECTIONAL ELEVATION)

- STRUCTURAL NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED .
  2. ALL LEVELS ARE IN METERS MEASURED FROM THE RELATIVE ZERO , WHICH REPRESENT THE ROAD LEVEL IN FRONT OF EACH STRUCTURE ENTRANCE.
  3. ALL RE-BARS DIAMETERS ARE IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
  4. THE FOUNDATION TANK HAS BEEN DESIGNED FOR SOIL ALLOWABLE NET SOIL BEARING CAPACITY 150 KN/M2.
  5. SUPPLIED STEEL REBAR SHALL CONFORM TO ASTM A-615M WITH MINIMUM YIELD STRESS OF 4200KG/CM2.
  6. CONCRETE COVER FOR REINFORCEMENT BARS SHALL BE 40MM FOR TANK ROOF SLAB, COLUMN,BEAMS , TANK BOTTOM SLAB, AND WALLS AND 50MM FOR FOUNDATIONS.
  7. THE 28-DAY CYLINDRICAL CONCRETE STRENGTH SHALL BE A MINIMUM OF 28 MPa FOR REINFORCED CONCRETE AND 15 MPa FOR PLAIN CONCRETE.
  8. PLASTERING WORKS FOR (STAGING FRAME) WITH MORTAR (1:3) FOR INSIDE AND OUTSIDE AND ADD SICA MATERIAL (2KG/CEMENT BAG). INCLUDE PAINTING ALL THE OUTSIDE PARTS.
  9. PIPE BENDS WILL BE INCLUDING FLEXIBLE CONNECTION.

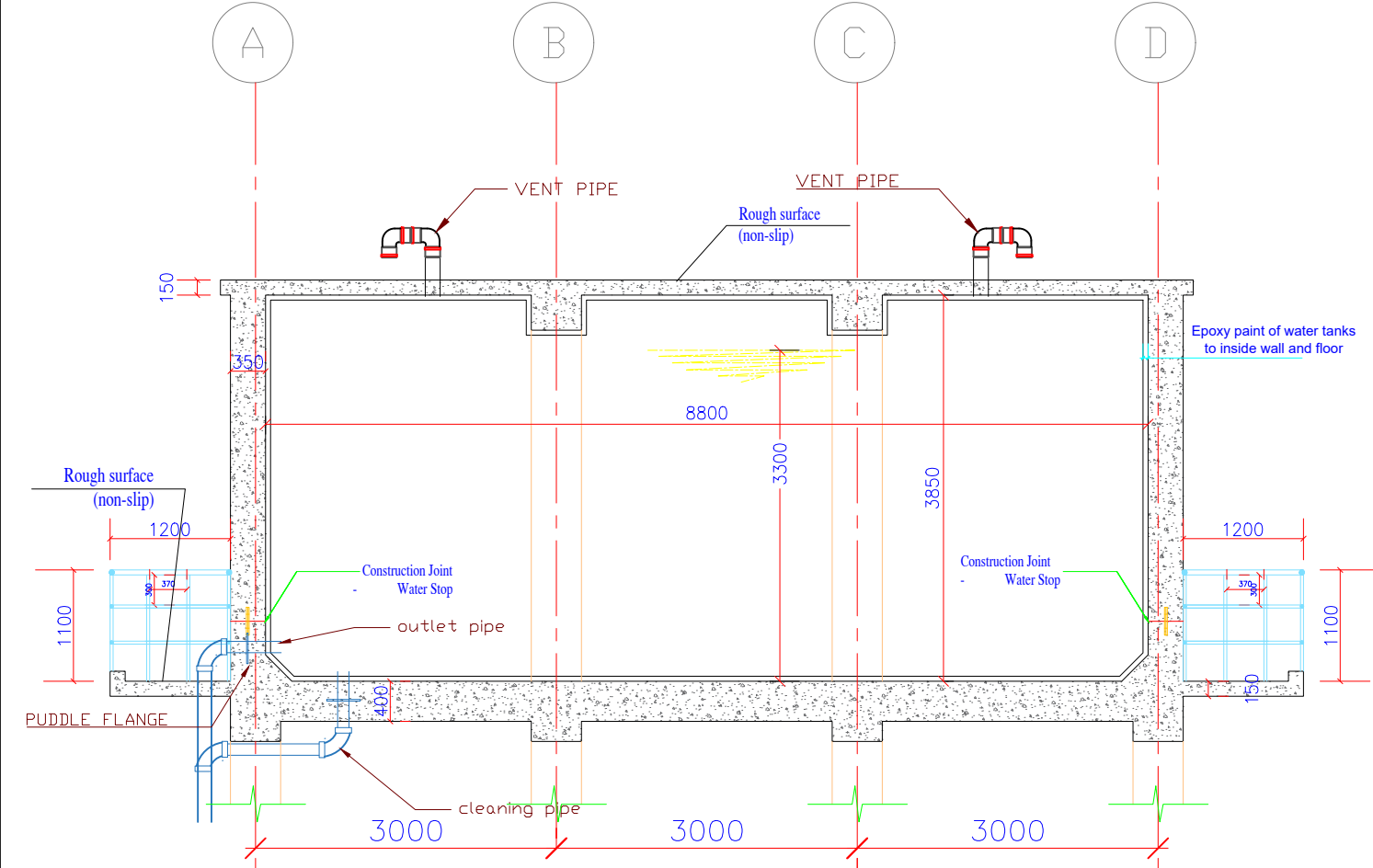


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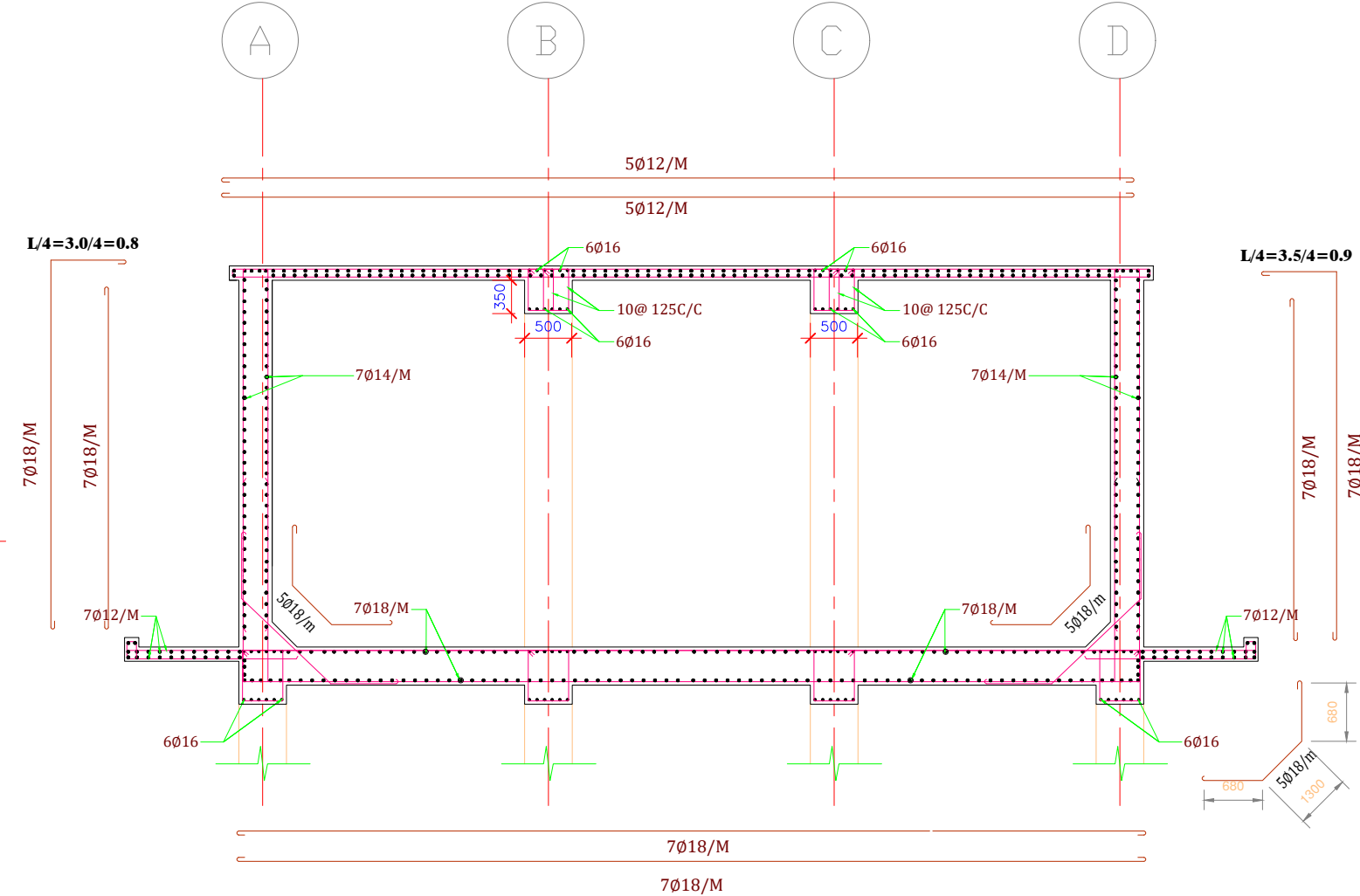




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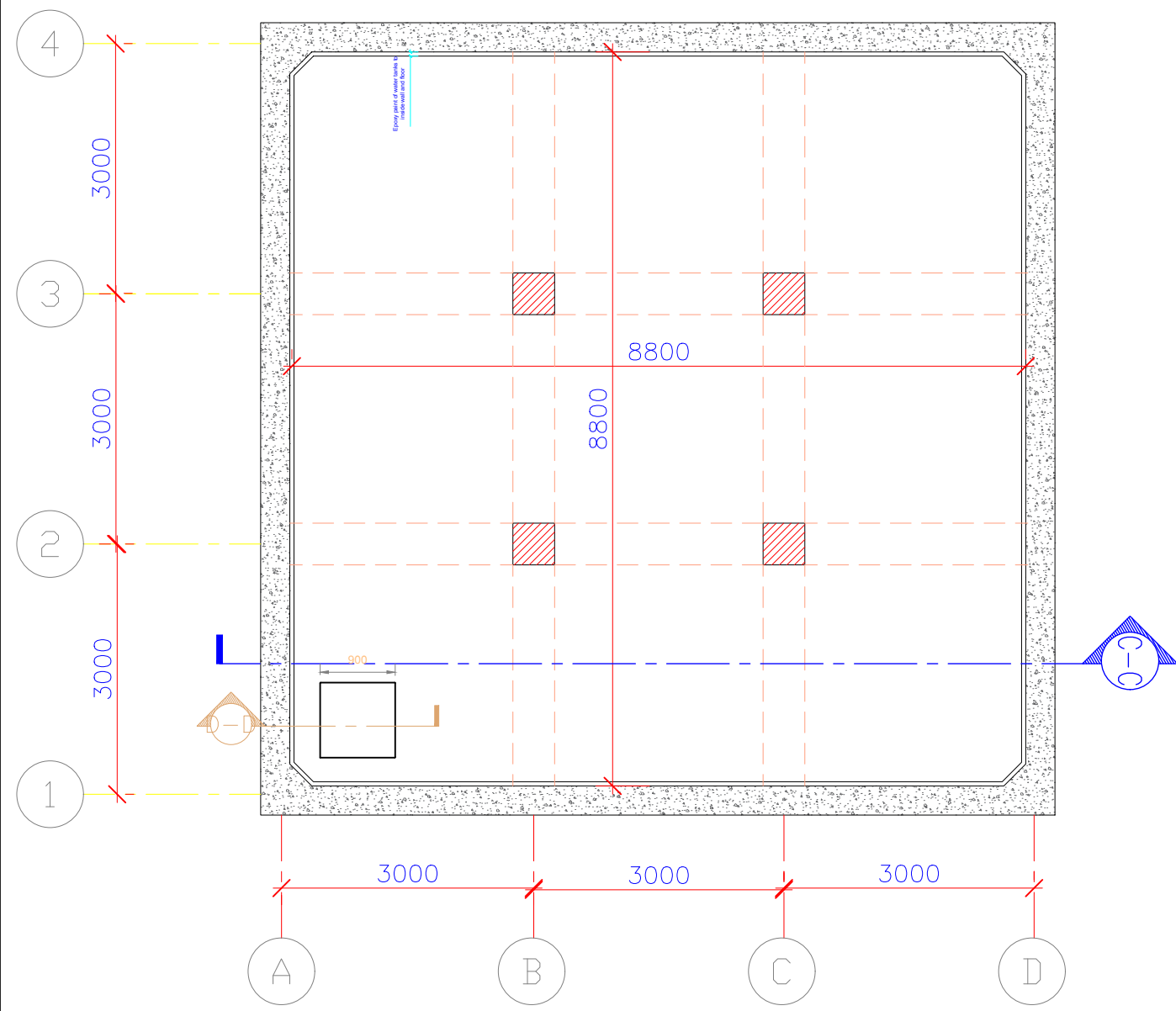


1 ELEVATED WATER TANK SECTION (C-C)  
ARCHITECTURAL SECTION

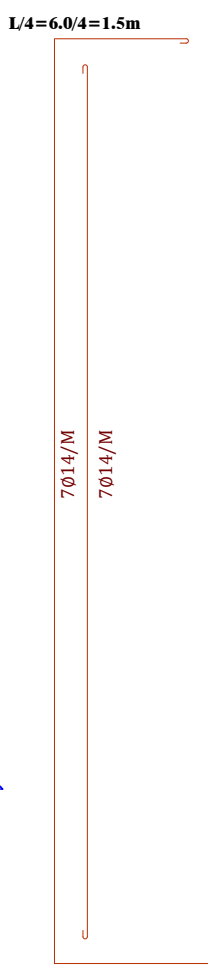


2 ELEVATED WATER TANK SECTION (C-C)  
STRUCTURAL SECTION

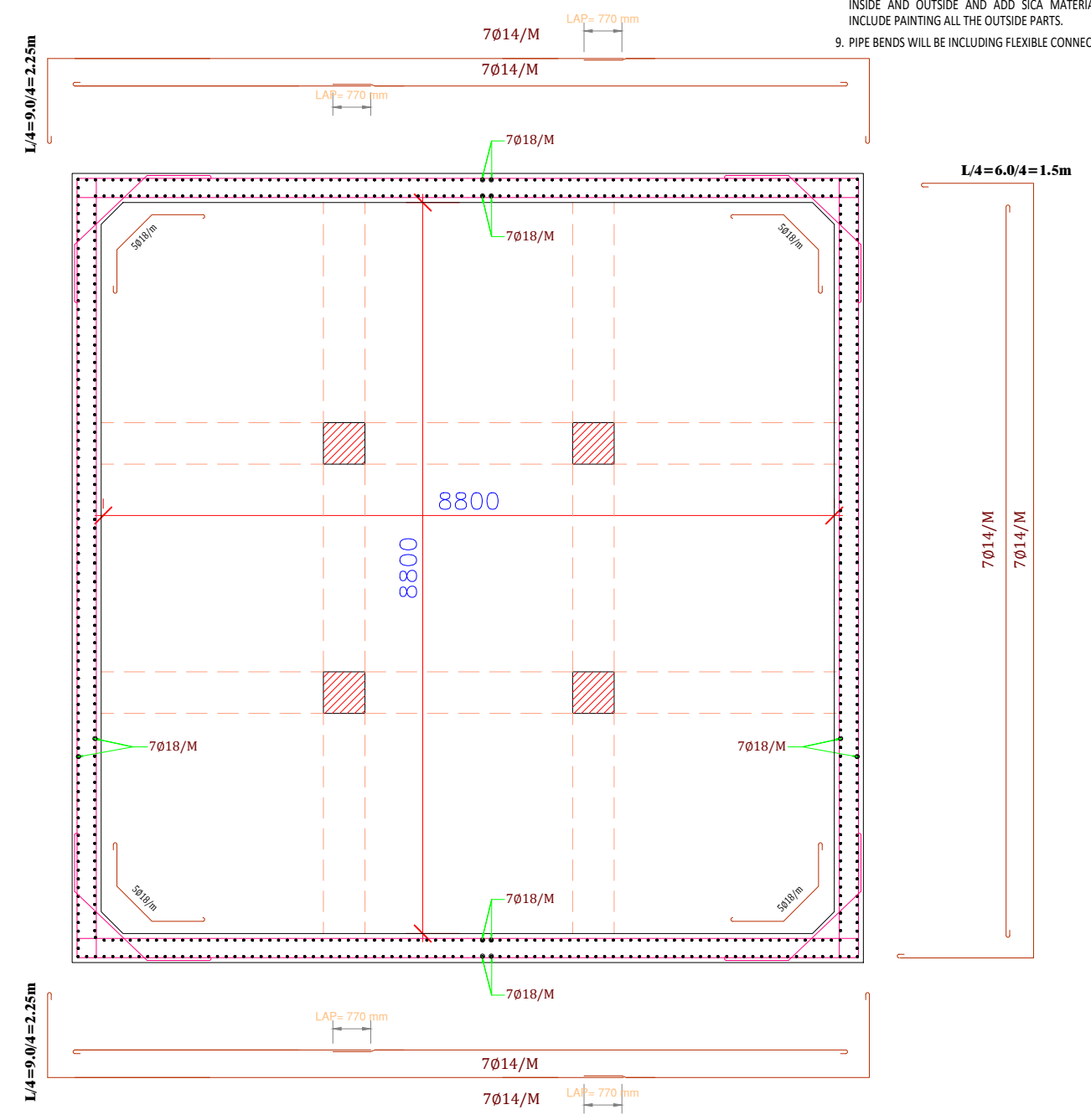
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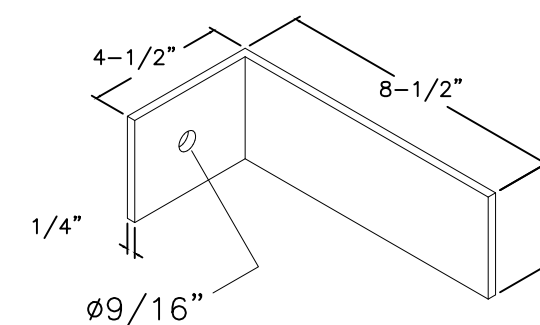
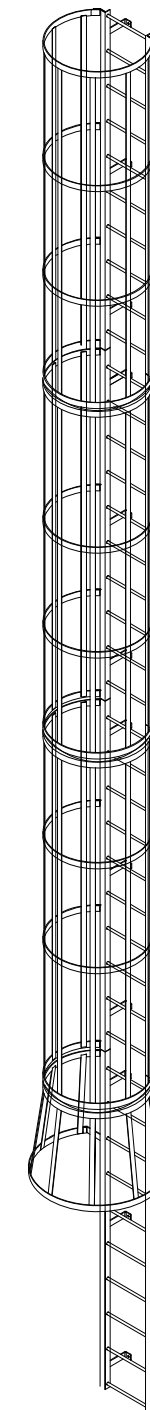
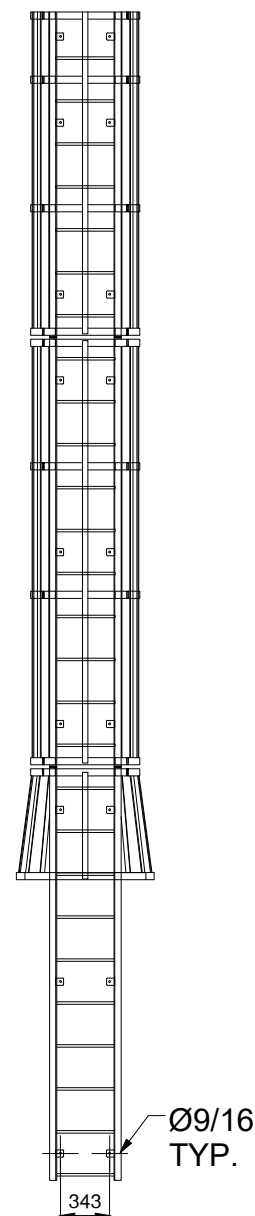
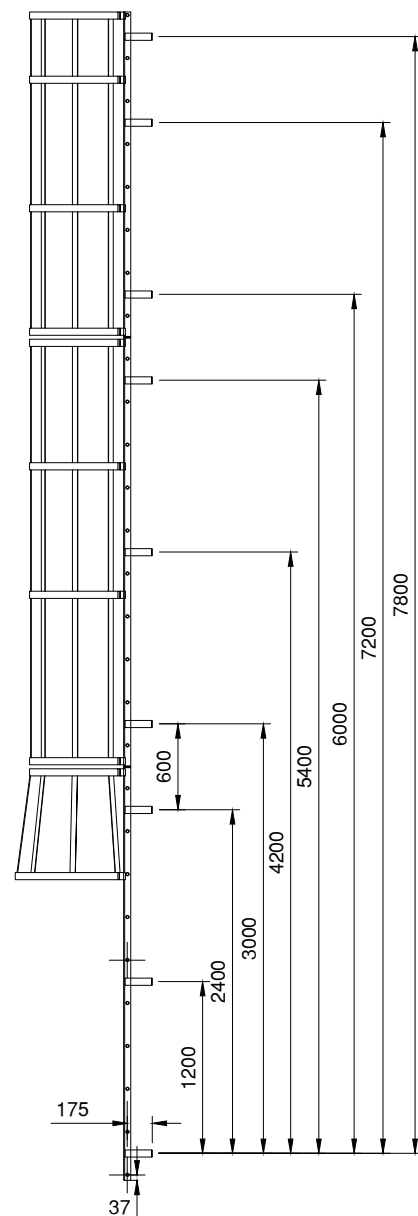
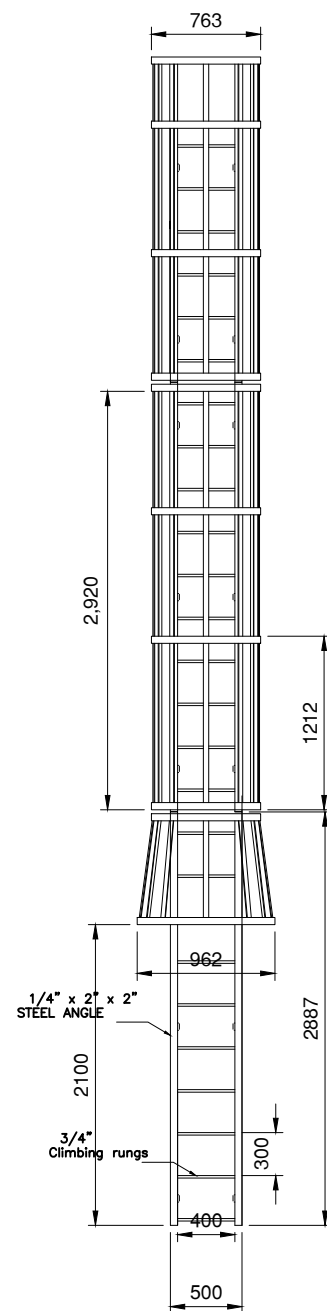


1 ELEVATED WATER TANK SECTION (B-B)  
ARCHITECTURAL SECTION



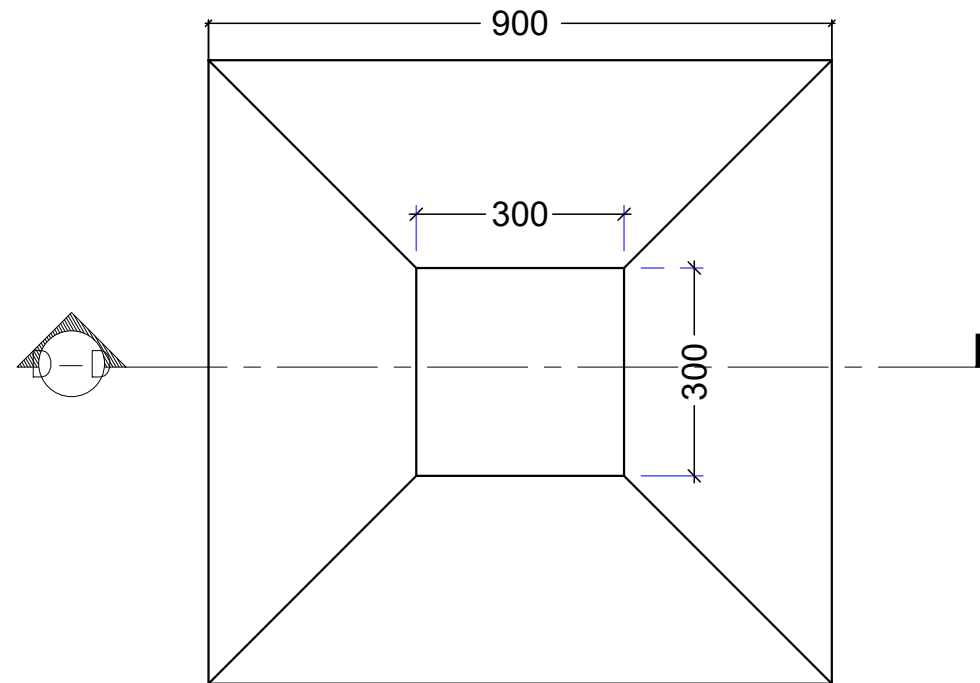
2 ELEVATED WATER TANK SECTION (B-B)  
STRUCTURAL SECTION



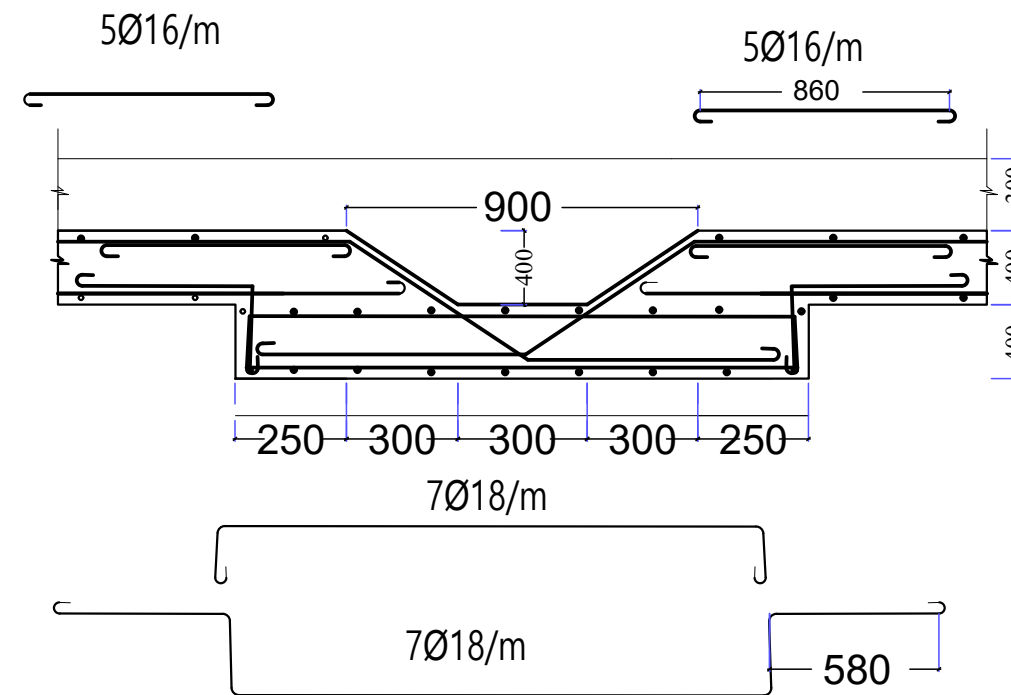


BRACKET DETAIL

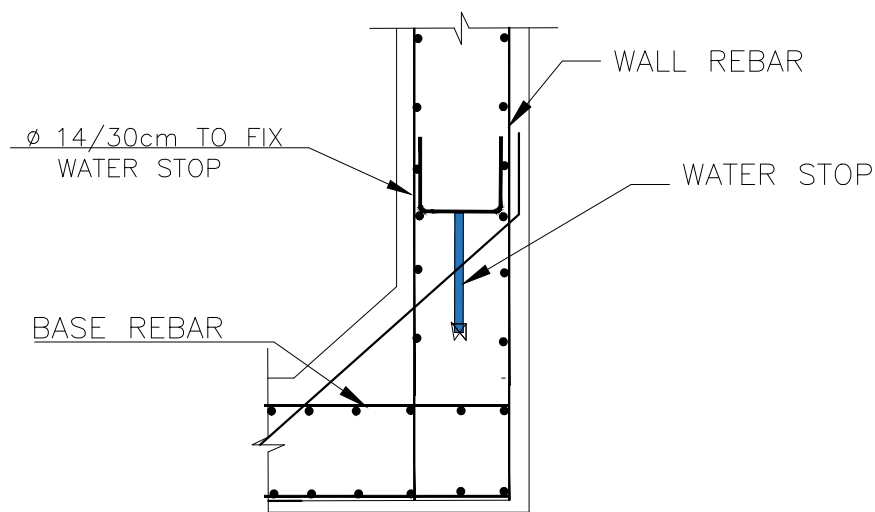
NOTE:  
THE FIXED LADDERS SHOULD BE MEET APPLICABLE OSHA  
AND ANSI STANDARDS.  
STANDOFF BRACKET LOCATIONS ARE 25MM.  
DO NOT PREDRILL HOLES IN THE STRUCTURE.  
HOLES SHOULD BE MATCH DRILLED TO INSURE PROPER  
ALIGNMENT.



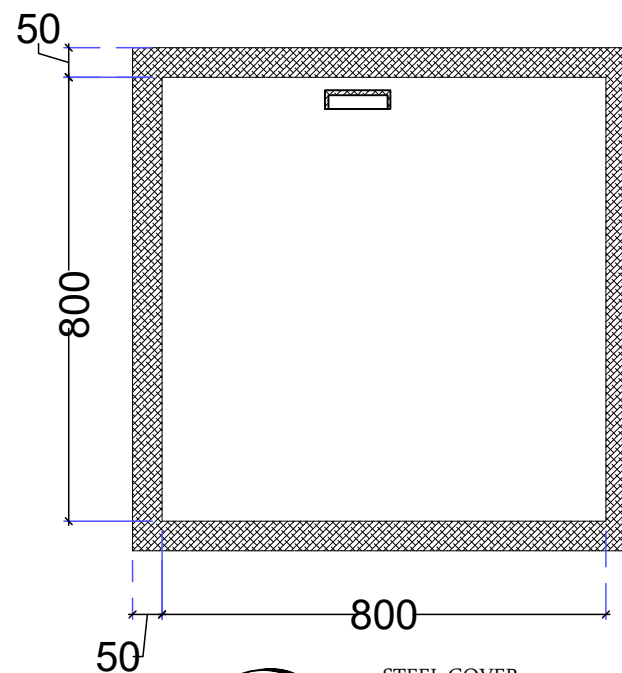
1 CLEANING DROP PLAN  
STRUCTURE DETAILS



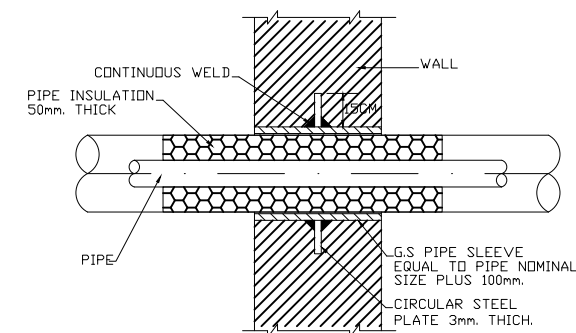
2 CLEANING DROP SECTION (D-D)  
STRUCTURE DETAILS



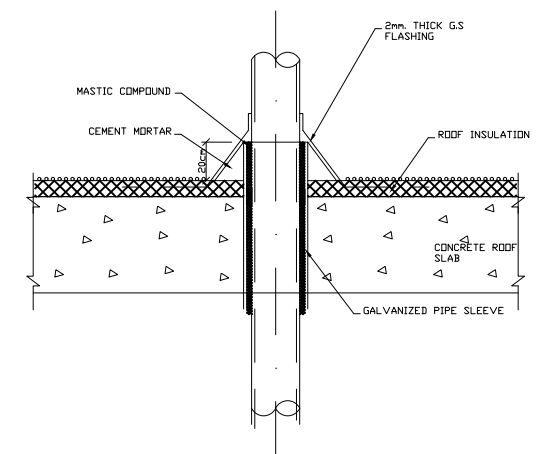
3 WATER STOP FIXING DETAILS  
STRUCTURE DETAILS



4 STEEL COVER  
STRUCTURE DETAILS



5 INSULATED PIPE SLEEVE  
THROUGH WALL



6 PIPE SLEEVE THROUGH ROOF