

Checked By AM (P&D)	Checked By DM	Checked By AGM (P&D)	Checked By DGM (P&D)	Approved By GM (P&D)

SL. NO.	DESCRIPTION	LEGENDS
1	Circuit Breaker (CB)	
2	DB Isolator w/o Earth Switch	
3	DB Isolator with 1 Earth Switch	
4	Lightning Arrestor (LA)	
5	Current Transformer (CT)	
6	Post Insulator (PI)	

SL. NO.	DESCRIPTION	QTY
1	Lightning Arrestor (LA)	3 Nos.
2	DB Isolator with 1 Earth Switch	1 Set
3	Current Transformer (CT)	3 Nos.
4	Circuit Breaker (CB)	1 Set
5	DB Isolator w/o Earth Switch	1 Set
6	Post Insulator (PI)	1 No.
7	Column C5A beam at 7.5 m+peak+spike (Techno)	1 No.
8	Beam B5 at 7.5 m level (Techno)	1 No.
9	Column C7 beam at 5.5 m without peak (Techno)	2 Nos.
10	Beam B5 at 5.5 m level Techno)	1 No.
11	33 kv Bus Expansion	1 No.

FOR TENDER REFERENCE PURPOSE ONLY

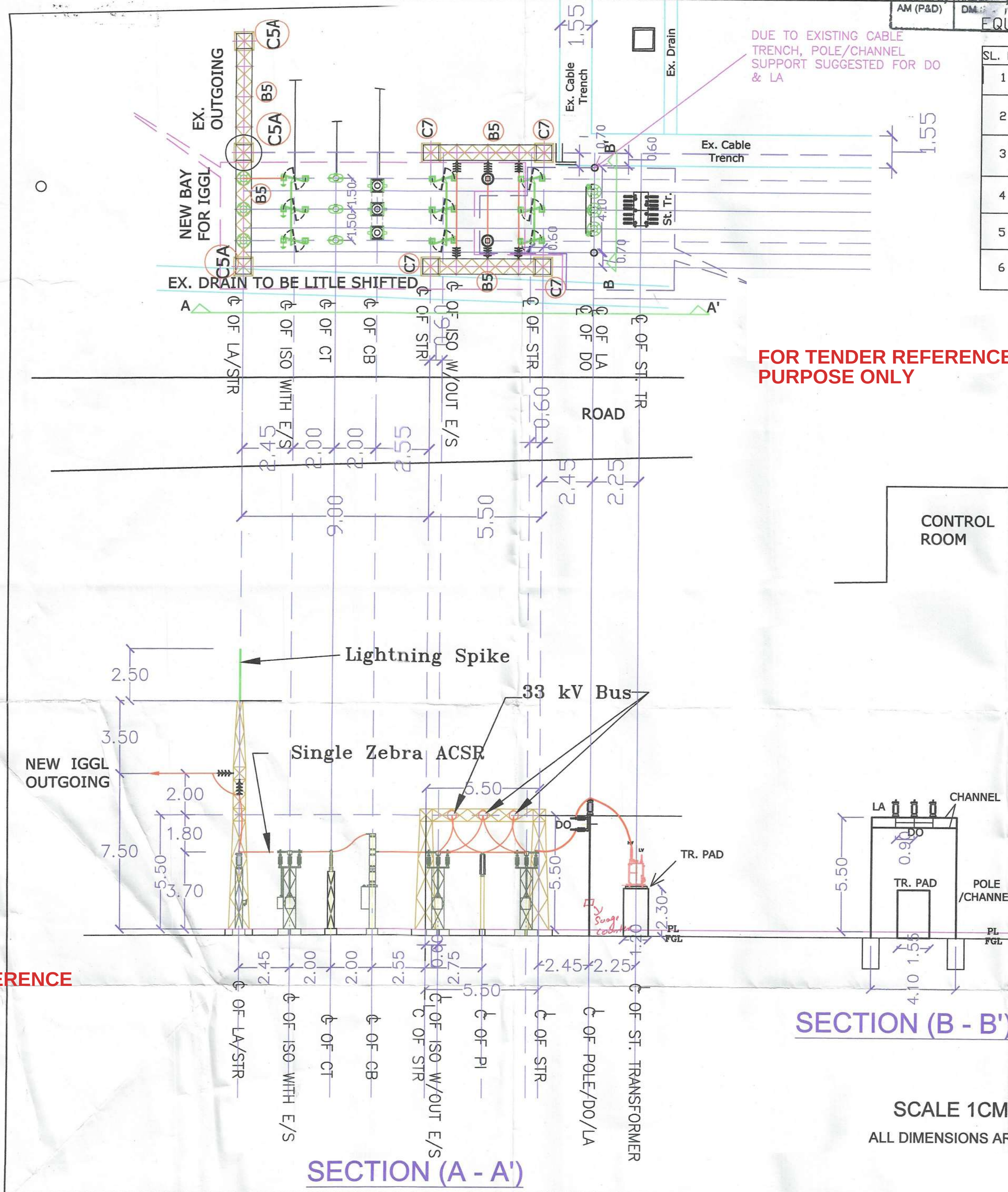
SL. NO.	DESCRIPTION	QTY
1	Post Insulator (PI)	1 No.
2	DB Isolator with out Earth Switch	1 Set
3	DO Fuse	1 Set
4	33 KV LA	3 Nos.
5	33/0.4 kv Station Transformer	1 No.
6	Pole / Channel 7.0 m ht (1.5 M Embedded in concrete)	2 Nos.
7	Channel 5.0 m long	4 Nos.

SL. NO.	DESCRIPTION	LEGENDS
1	Circuit Breaker (CB), 33 kV, 31.5 KA for 3 sec, 2000 A VCB complete with fittings and terminal connector	
2	DB Isolator w/o Earth Switch, 31.5 KA for 3 sec, 1250 A complete with all fittings & accessories including terminal connector & support insulator (creepage distance - 31 mm/kV)	
3	DB Isolator with 1 Earth Switch, 31.5 KA for 3 sec, 1250 A complete with all fittings including terminal connector and support insulator (creepage - 31 mm/kV)	
4	Lightning Arrestor (LA), 30 kV, 10 kA, class-II, station class complete with all fittings & accessories including terminal connector, surge counter & base insulator.	
5	Current Transformer (CT), 33 kV, 400-200/1-1A, single ph complete with all fittings & accessories including terminal connector (0.25-5 P&D, live-tank design)	
6	Post Insulator (PI), 33 kV, 8 kV with all fittings, creepage distance - 31 mm/kV	
7	Potential Transformer (PT)	

FOR TENDER REFERENCE PURPOSE ONLY

NEW 33 KV LAYOUT & SECTION

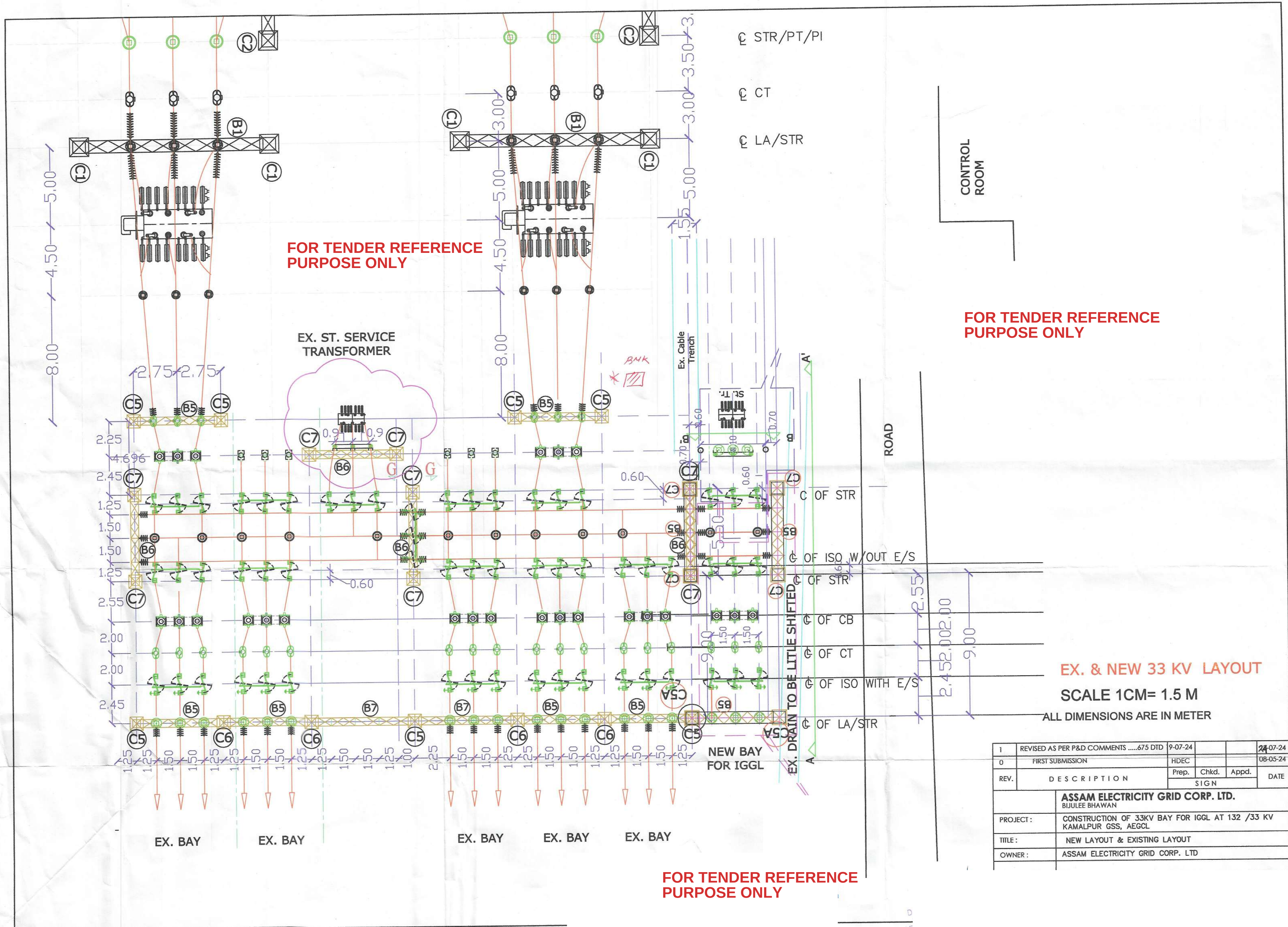
ASSAM ELECTRICITY GRID CORP. LTD.	
BIJULEE BHAWAN	
PROJECT:	CONSTRUCTION OF 33KV BAY FOR IGGL AT 132 /33 KV KAMALPUR GSS, AEGCL
TITLE:	BAY LAYOUT & SECTION
OWNER:	ASSAM ELECTRICITY GRID CORP. LTD



FOR TENDER REFERENCE PURPOSE ONLY

SECTION (B - B')

SCALE 1CM= 1.5 M
ALL DIMENSIONS ARE IN METER



EX. & NEW 33 KV LAYOUT

SCALE 1CM= 1.5 M

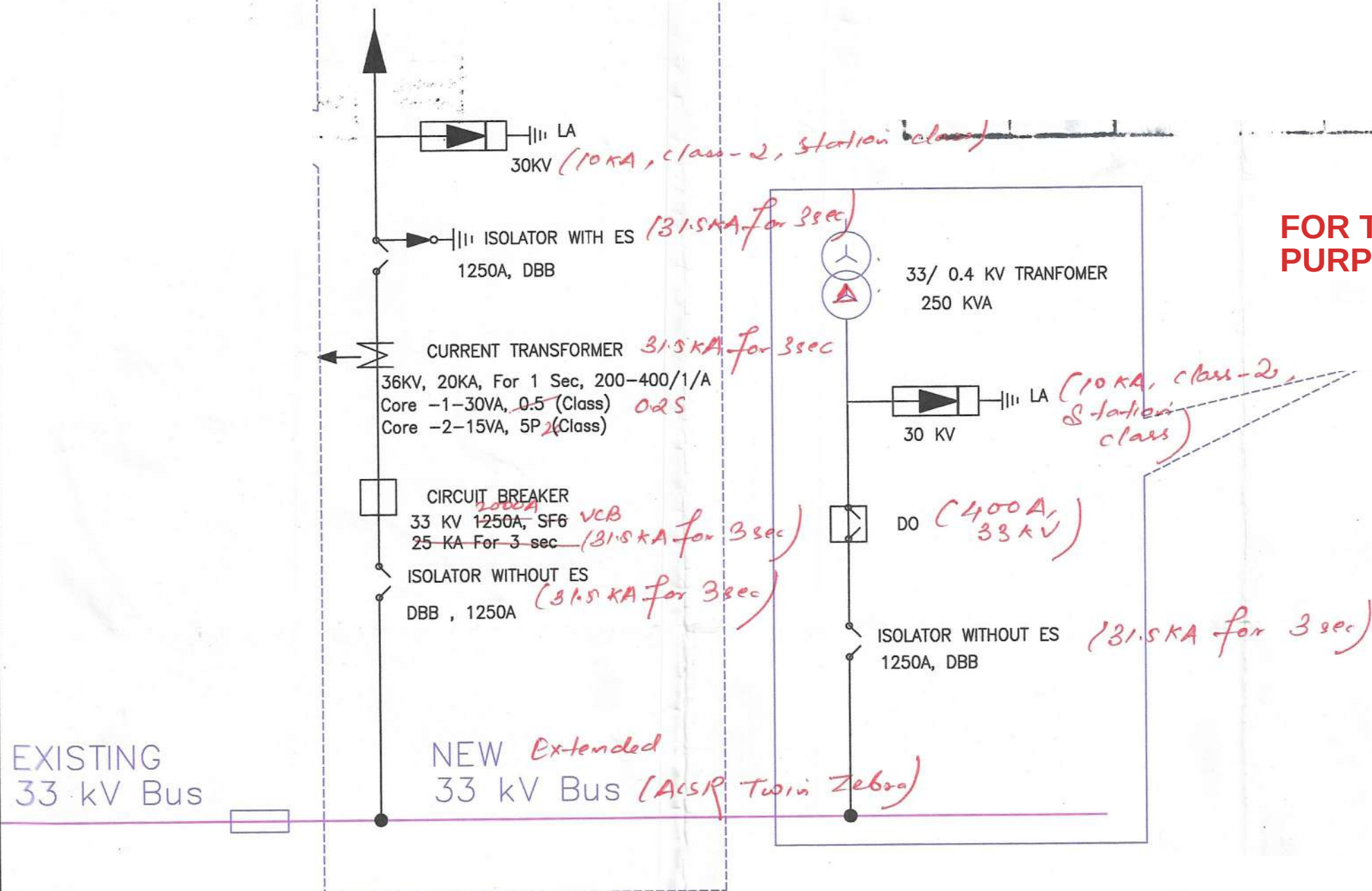
ALL DIMENSIONS ARE IN METER

1	REVISED AS PER P&D COMMENTS675 DTD	9-07-24			24-07-24
0	FIRST SUBMISSION	HDEC			08-05-24
REV.	DESCRIPTION	Prep.	Chkd.	Appd.	DATE
		SIGN			
	ASSAM ELECTRICITY GRID CORP. LTD.				
	BIJULEE BHAWAN				
PROJECT :	CONSTRUCTION OF 33KV BAY FOR IGGL AT 132 /33 KV KAMALPUR GSS, AEGCL				
TITLE :	NEW LAYOUT & EXISTING LAYOUT				
OWNER :	ASSAM ELECTRICITY GRID CORP. LTD				

FOR TENDER REFERENCE PURPOSE ONLY

x Dc voltage level - 220 Vdc

IGGL 33 KV FEEDER

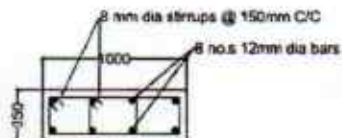


FOR TENDER REFERENCE PURPOSE ONLY

EQUIPMENT LEGENDS

POWER TRANSFORMER	CIRCUIT BREAKER	ISOLATOR WITHOUT ES	ISOLATOR WITH ES	CURRENT TRANSFORMER	POTENTIAL TRANSFORMER	LIGHTNING ARRESTER	DO FUSE

1	REVISED AS PER P&D COMMENT ...675 DTD	19-7-24			24.07.24
0	FIRST SUBMISSION	HDEC			
REV.	DESCRIPTION	Prep.	Chkd.	Appd.	DATE
		SIGN			
	ASSAM ELECTRICITY GRID CORP. LTD BIJULEE BHAWAN, GUWAHATI				
PROJECT :	CONSTRUCTION OF 33 KV BAY FOR IGGL AT 132 KV KAMLAPUR GSS, AEGCL				
TITLE :	SINGLE LINE DIAGRAM				
OWNER :	ASSAM ELECTRICITY GRID CORP. LTD				

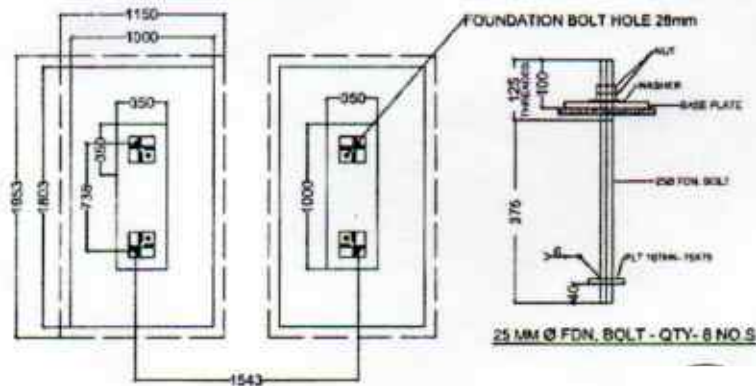


SECTION C-C

**FOR TENDER REFERENCE
PURPOSE ONLY**

GENERAL NOTES

1. ALL MEASUREMENTS ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. IN THIS DRAWING REINFORCEMENT STEEL CONFORMS TO IS-1795-1985 OF GRADE F450.
3. LAP LENGTH SHALL BE 47 TIMES OF DIA OF BAR.
4. PROVIDE CLEAR COVER TO REINFORCEMENT AS UNDER
+42mm BOTTOM TOP AND SIDE REINFORCEMENT OR RAFT,
+50mm FOR COLUMN
5. FOR DETAILS OF THE FOUNDATION BOLTS REFER APPROVED STRUCTURE DRAWING.
6. FOUNDATION BOLTS SHALL BE PLACED IN POSITION BEFORE CONCRETE IS CAST.
7. UNLESS OTHERWISE NOTED ALL RCC CONCRETE GRADE SHALL BE OF M20.
8. AGGREGATES SHALL BE CONFORM TO IS-383. NOMINAL SIZE OF COURSE.
9. AGGREGATE SHALL BE 20MM COARSE SAND CONFORM TO GRADE III/1 SHALL BE USED
10. FGL DENOTES FINISHED GROUND LEVEL AND PL DENOTES PLINTH LEVEL.



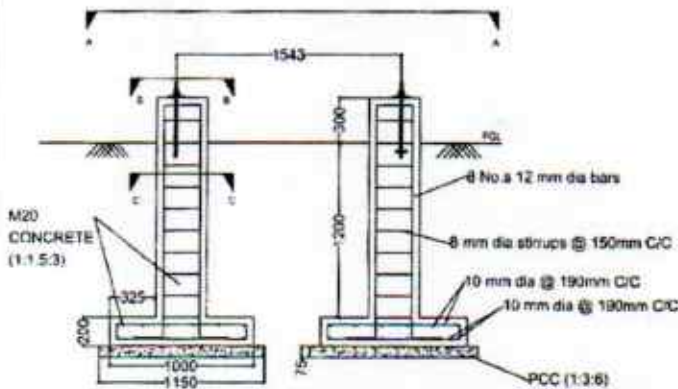
25 MM Ø FDN. BOLT - QTY- 8 NO S

DRAWING:-

FOUNDATION DRAWING OF 33KV DOUBLE BREAK
C.R TYPE ISOLATOR WITH EARTH SWITCH

**FOR TENDER REFERENCE
PURPOSE ONLY**

**FOUNDATION DRAWING OF
ISOLATOR WITH E/S
FOR REFERENCE
ONLY**

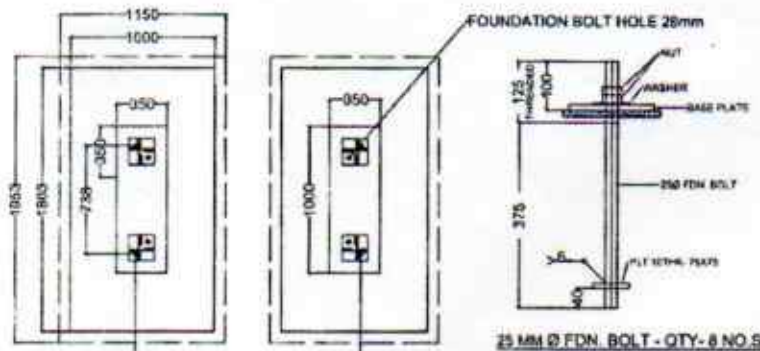


SECTION A-A, D-D



SECTION C-C

**FOR TENDER REFERENCE
PURPOSE ONLY**



FOUNDATION PLAN

GENERAL NOTES

1. ALL MEASUREMENTS ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. IN THIS DRAWING REINFORCEMENT STEEL CONFORMS TO IS-1785-1965 OF GRADE Fe500.
3. LAP LENGTH SHALL BE 47 TIMES OF DIA OF BAR.
4. PROVIDE CLEAR COVER TO REINFORCEMENT AS UNDER:
 >40mm BOTTOM TOP AND SIDE REINFORCEMENT OR RAFT.
 >50mm FOR COLUMN.
5. FOR DETAILS OF THE FOUNDATION BOLTS REFER APPROVED STRUCTURE DRAWING.
6. FOUNDATION BOLTS SHALL BE PLACED IN POSITION BEFORE CONCRETE IS CAST.
7. UNLESS OTHERWISE NOTED ALL RCC CONCRETE GRADE SHALL BE OF M20.
8. AGGREGATES SHALL BE CONFORM TO IS:383. NOMINAL SIZE OF COURSE.
9. AGGREGATE SHALL BE 20MM COARSE SAND CONFORM TO GRADE III SHALL BE USED.
10. FGL DENOTES FINISHED GROUND LEVEL AND PL DENOTES PLINTH LEVEL.

25 MM Ø FDN. BOLT - QTY - 8 NO.S

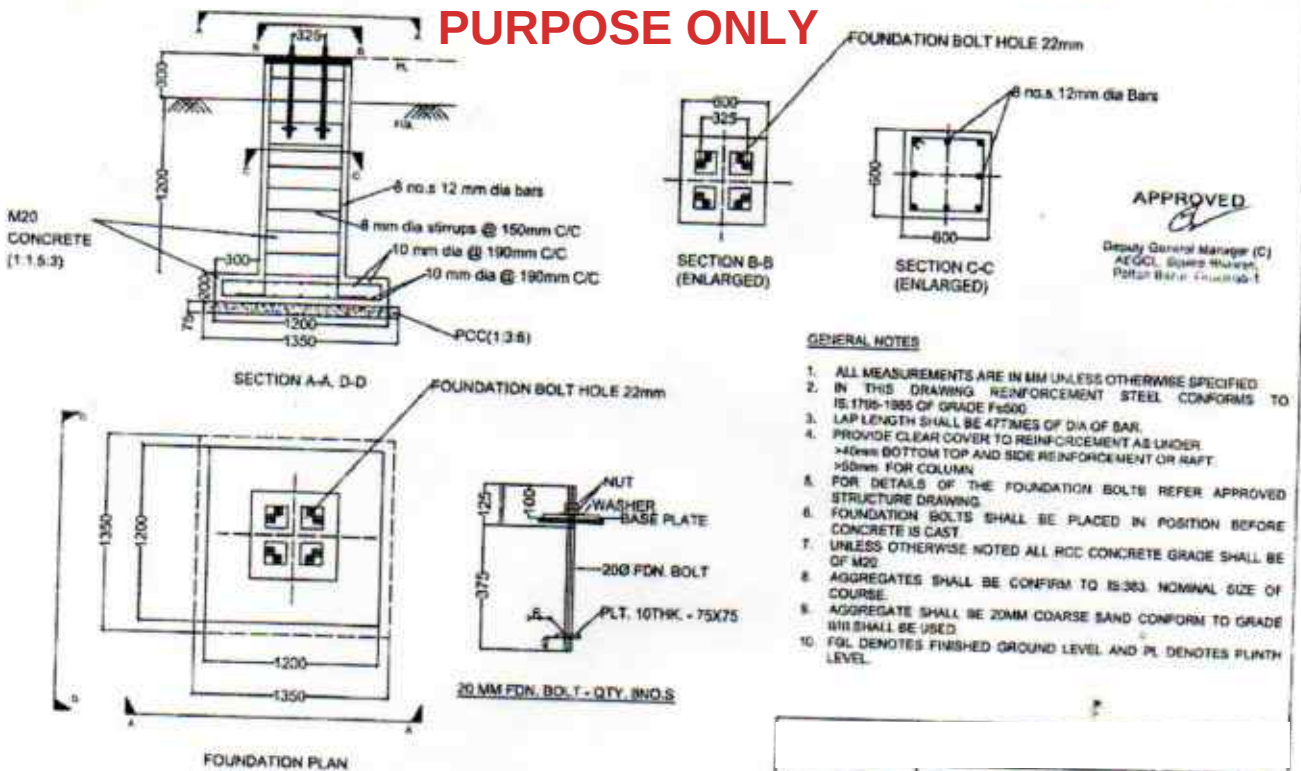
DRAWING:-

Foundation Drawing of 33kV Isolator
Without Earth Switch

**FOR TENDER REFERENCE
PURPOSE ONLY**

**FOUNDATION DRAWING OF
ISOLATOR WITHOUT E/S
FOR REFERENCE
ONLY**

**FOR TENDER REFERENCE
PURPOSE ONLY**



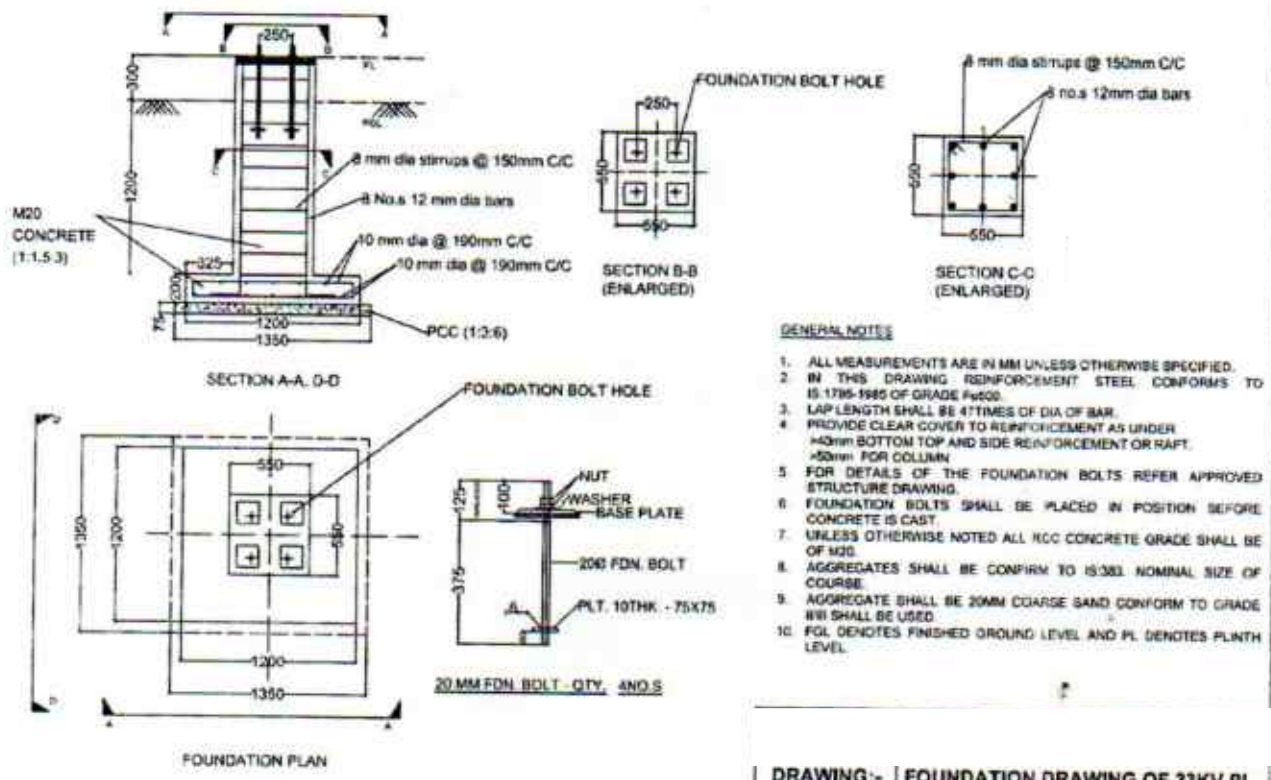
APPROVED

Deputy General Manager (C)
AEGCL, Sikkim Division,
Patan Bazar, Gangtok-1

DRAWING:- FOUNDATION DRAWING OF 33KV LA

**FOUNDATION DRAWING OF
33KV LA FOR REFERENCE
ONLY**

**FOR TENDER REFERENCE
PURPOSE ONLY**

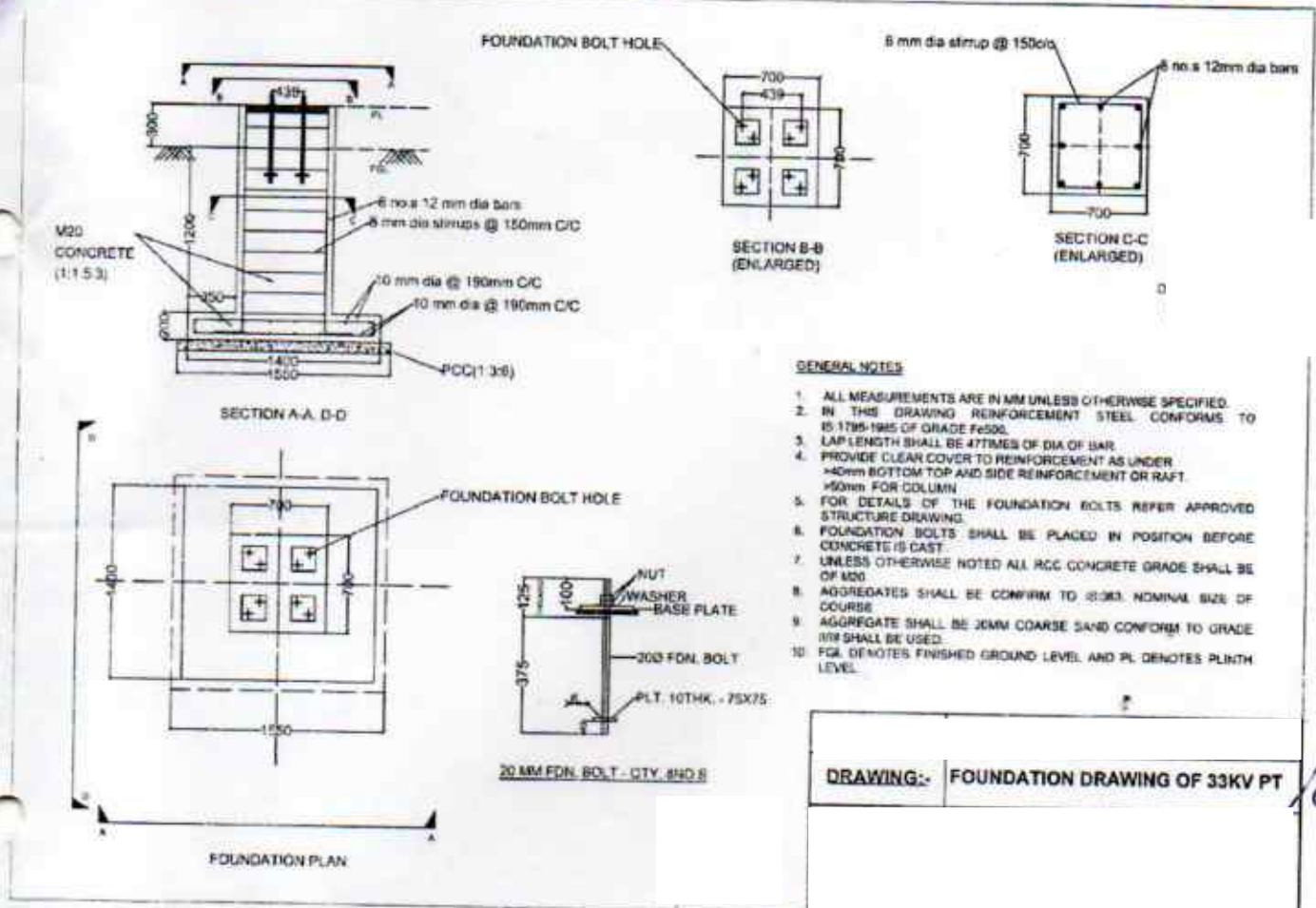


**FOR TENDER REFERENCE
PURPOSE ONLY**

DRAWING:- FOUNDATION DRAWING OF 33KV PI

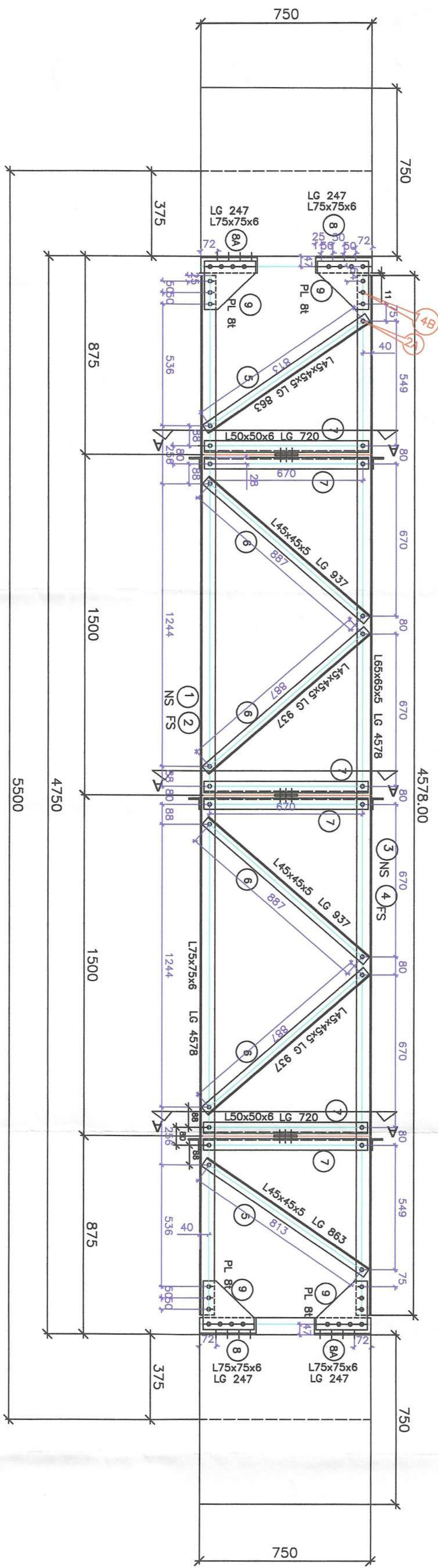
**FOUNDATION DRAWING OF
33KV PI FOR REFERENCE
ONLY**

FOR TENDER REFERENCE PURPOSE ONLY



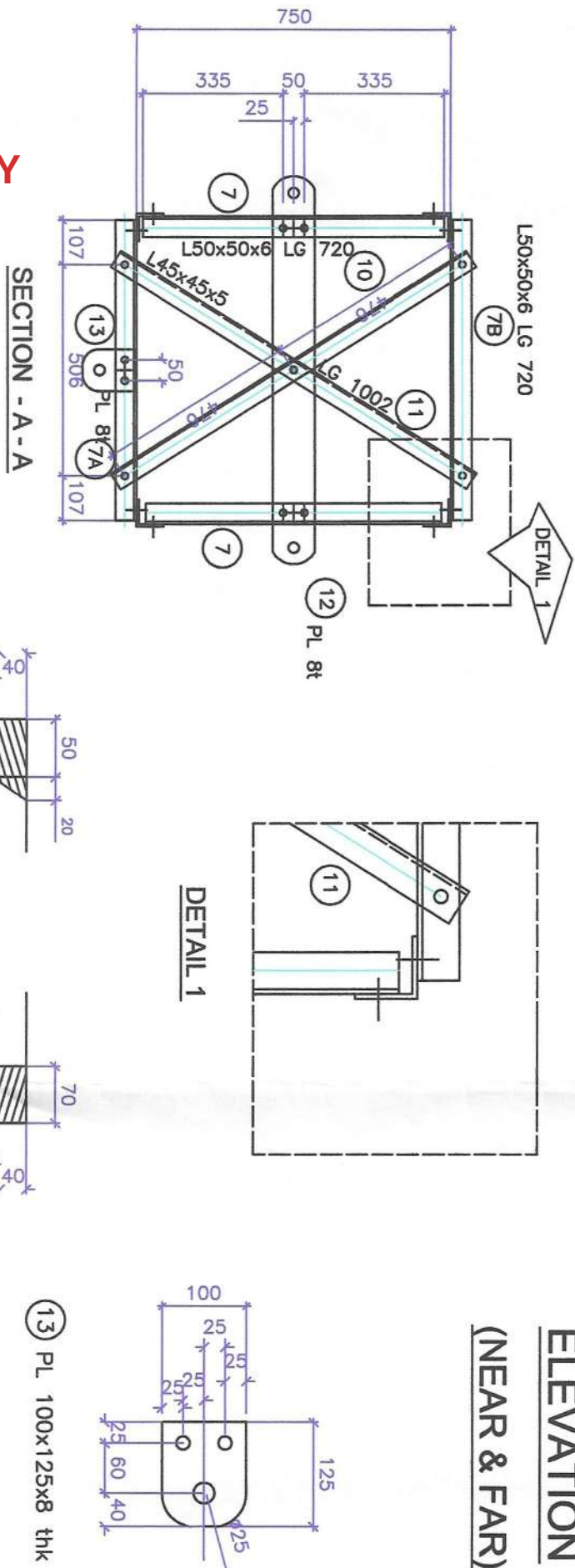
FOR TENDER REFERENCE PURPOSE ONLY

FOUNDATION DRAWING OF 33KV CT/PT FOR REFERENCE ONLY



Drawing B5 Beam

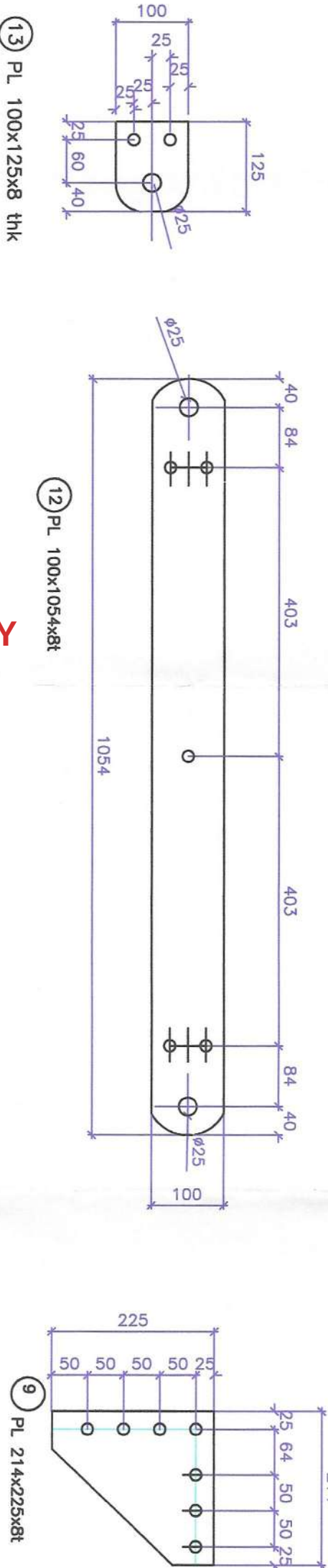
FOR TENDER
REFERENCE
PURPOSE ONLY



FOR TENDER
REFERENCE
PURPOSE ONLY

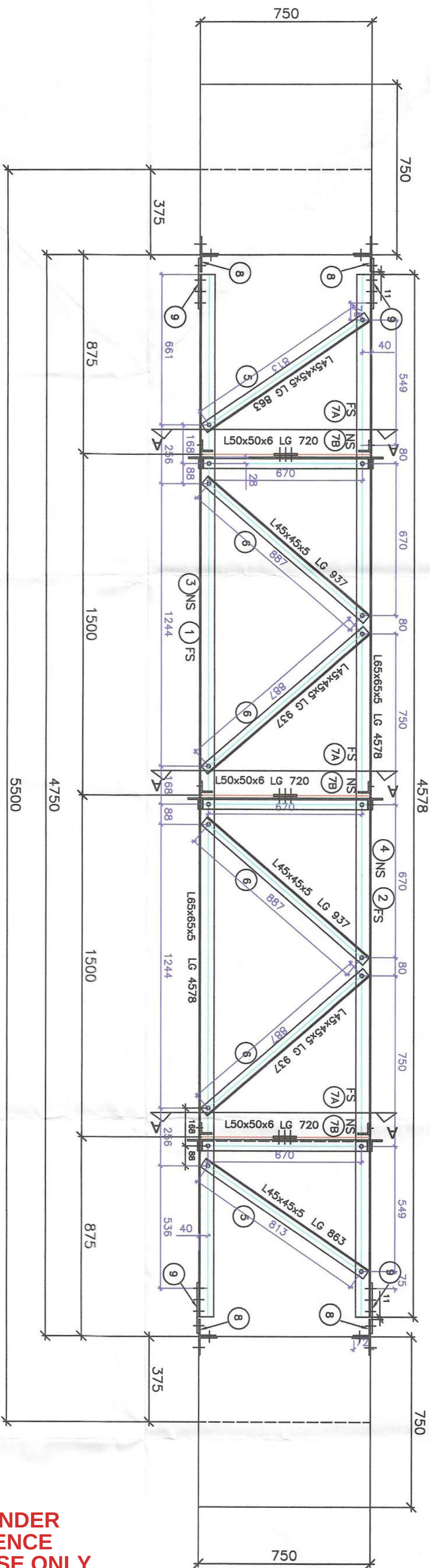
NTS (11)

FOR TENDER
REFERENCE
PURPOSE ONLY



NOTE :

1. ALL DIMENSIONS ARE IN MM
2. ALL MEMBERS ARE OF MILD STEEL IS 2062 (LATEST REV.)
3. FABRICATION IN GENERAL FOLLOWING IS 802(PART 1, SEC 1&2 (LATEST REV.)
4. ALL STEEL ITEMS TO BE HOT DIP GALVD. IS 2629 (LATEST REV.)
5. ALL BOLT & NUTS AS PER IS 6639 (LATEST REV.)
6. ALL BOLT & NUTS, SP. WASHER GALVD AS PER IS 5358 (LATEST REV.)
7. ALL HOLES UNLESS SPECIFIED ARE OF 17.5 MM FOR BOLT SIZE 16 MM
8. ALL ITEMS TO BE PREFIXED WITH 'B5/B6'
9. BACK MARK (GAUGE LINE) OF L45x45x5 IS 23 MM



FOR TENDER
REFERENCE
PURPOSE ONLY

BEAM "B5"

SCALE 1:15
FOR DETAILS SCALE 1:7.5

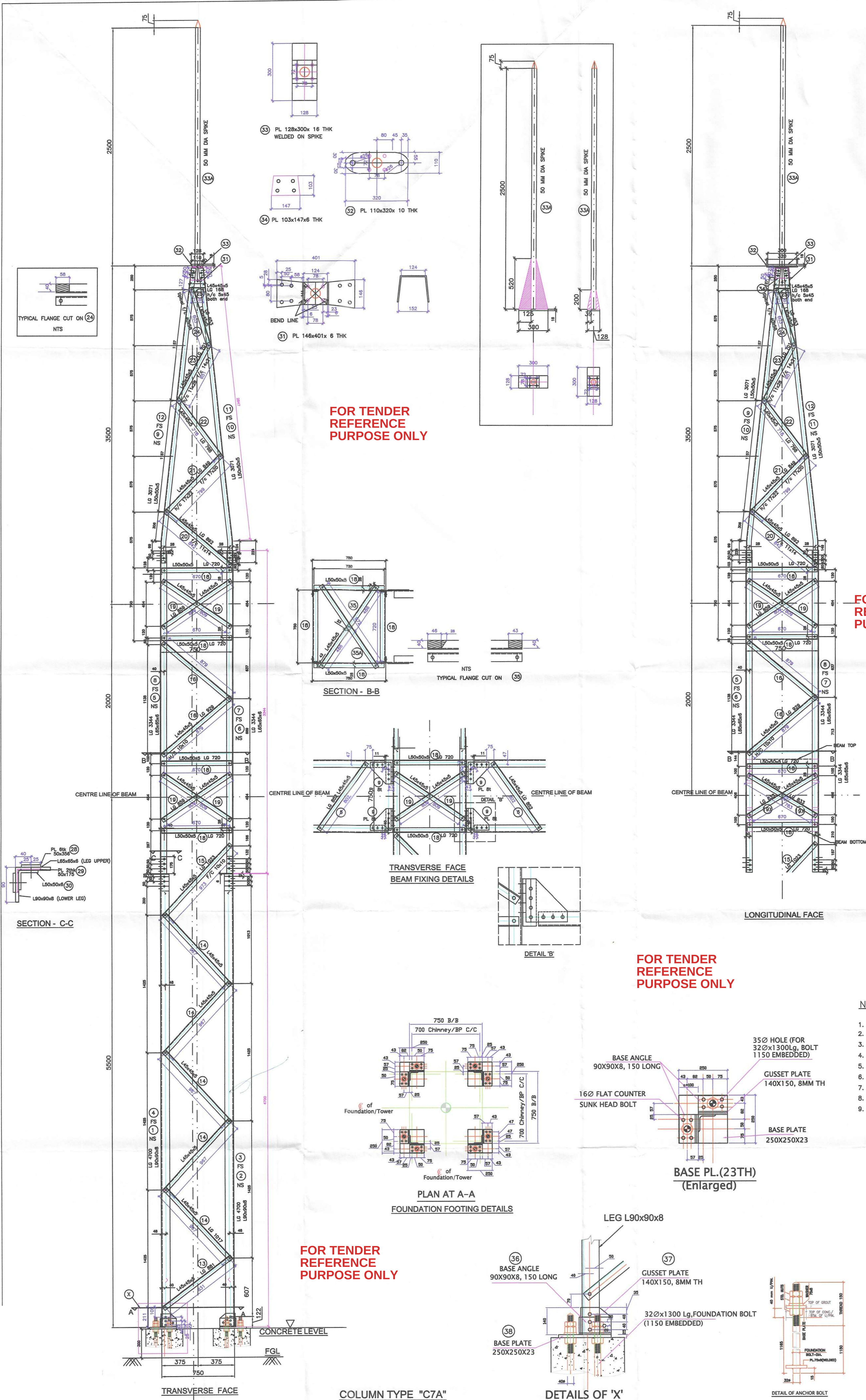
BILL OF MATERIALS
BEAM TYPE "B5"/"B6"

MARK NO.	SECTION	LENGTH	WT KG/M	QTY. PER STR.	TOTAL WT.
1	L65x65x5	4578	4.9	1	22.43
2	L65x65x5	4578	4.9	1	22.43
3	L65x65x5	4578	4.9	1	22.43
4	L65x65x5	4578	4.9	1	22.43
5	L45x45x5	863	3.4	8	23.47
6	L45x45x5	937	3.4	16	50.97
7	L50x50x6	720	4.5	12	38.88
7A	L50x50x6	720	4.5	3	9.72
7B	L50x50x6	720	4.5	3	9.72
8	L75x75x6	247	6.8	4	6.72
8A	L75x75x6	247	6.8	4	6.72
9	PL 8 THK 225x214	62.8	8	24.19	
10	L45x45x5	1002	3.4	3	10.22
11	L45x45x5	1002	3.4	3	10.22
12	PL 8 THK 100x1054	62.8	3	19.86	
13	PL 8 THK 100x125	62.8	3	2.36	

TOTAL: 302.77 KG

FOR PLATES - UNIT WEIGHTS ARE IN KG/SQ.M

0	FIRST SUBMISSION	HDEC		
REV.	DESCRIPTION	Prep.	Chkd.	Appd.
		SIGN		DATE
	ASSAM ELECTRICITY GRID CORP. LTD.			
	GUWAHATI			
PROJECT :	33 KV ICGI. BAY EXPANSION AT 132/33 KV KAMALPUR GSS			
TITLE :	FABRICATION & ERECTION DRAWING OF BEAM MARKED - B5(33KV) B5 - CONNECTIONING TOWER NO. C7-C7 AOR C7A-C7A AT 5.5 M HT.			
APPLICABLE TO :	132/ 33 KV KAMALPUR GRID SUBSTATION			
OWNER :	ASSAM ELECTRICITY GRID CORP. LTD.			



BILL OF MATERIALS TOWER TYPE "C7A"						
MARK NO.	SECTION	LENGTH	WT KG/M	QTY. PER STR.	TOTAL WT.	REMARKS
1	L90X90X8	4700	10.8	1	50.76	LEG
2	L90X90X8	4700	10.8	1	50.76	LEG
3	L90X90X8	4700	10.8	1	50.76	LEG
4	L90X90X8	4700	10.8	1	50.76	LEG
5	L65X65X6	3344	5.8	1	19.40	LEG
6	L65X65X6	3344	5.8	1	19.40	LEG
7	L65X65X6	3344	5.8	1	19.40	LEG
8	L65X65X6	3344	5.8	1	19.40	LEG
9	L50X50X5	3071	3.8	1	11.67	LEG
10	L50X50X5	3071	3.8	1	11.67	LEG
11	L50X50X5	3071	3.8	1	11.67	LEG
12	L50X50X5	3071	3.8	1	11.67	LEG
13	L45X45X5	881	3.4	4	11.98	BRACING
14	L45X45X5	1017	3.4	20	89.16	BRACING
15	L45X45X5	1023	3.4	4	13.91	BRACING
16	L45X45X5	929	3.4	8	25.27	BRACING
17	L50X50X5	720	3.8	16	43.78	BELT
18	L45X45X5	859	3.4	12	35.05	CROSS BRACING
19X	L45X45X5	833	3.4	4	11.33	CROSS BRACING
20	L45X45X5	892	3.4	4	12.13	BRACING
21	L45X45X5	849	3.4	4	11.54	BRACING
22	L45X45X5	768	3.4	4	10.44	BRACING
23	L45X45X5	701	3.4	4	9.53	BRACING
24	L45X45X5	653	3.4	4	8.88	BRACING
25	L45X45X5	168	3.4	4	2.28	BELT
26	6 THK	50x356	47.1	8	6.71	JOINT PL
27	2 THK	50x175	15.7	8	1.65	PACK PL
28	L50X50X6	356	4.5	4	1.1	JOINT ANGLE
29	6 THK	146x401	47.1	1	2.76	CAP PLATE
30	10 THK	110x320	78.5	1	2.76	TENSION PLATE
31	16 THK	128x300	125.6	1	4.82	CAP PLATE FOR SPIKE
32	6 THK	103x147	47.1	2	1.43	CAP SIDE
33	L45X45X5	1022	3.4	2	6.95	PLAN BRACING
34	L45X45X5	1022	3.4	2	6.95	PLAN BRACING
35	L90X90X8	150	10.8	8	12.96	BASE ANGLE
36	8 THK	140x150	62.8	8	10.55	BASE SIDE PLATE
37	23 THK	250x250	180.55	4	45.14	BASE PLATE
TOTAL =					696.38 KG	

FOR PLATES - UNIT WEIGHTS ARE IN KG/SQ.M

33A	50MM DIA	2500	1	SPIKE
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FOR TENDER
REFERENCE
PURPOSE ONLY

FOR TENDER
REFERENCE
PURPOSE ONLY

NOTE :

1. ALL DIMENSIONS ARE IN MM
2. ALL MEMBERS ARE OF MILD STEEL IS 2062 (LATEST REV.)
3. FABRICATION IN GENERAL FOLLOWING IS 802(PART I, SEC 1&2 (LATEST REV.)
4. ALL STEEL ITEMS TO BE HOT DIP GALVD. IS 2629 (LATEST REV.)
5. ALL BOLT & NUTS AS PER IS 6639 (LATEST REV.)
6. ALL BOLT & NUTS, SP. WASHER GALVD AS PER IS 5358 (LATEST REV.)
7. ALL HOLES UNLESS SPECIFIED ARE OF 17.5 MM FOR BOLT SIZE 16 MM
8. ALL ITEMS TO BE PREFIXED WITH 'C7A'
9. BACK MARK (GAUGE LINE) OF L45X45X5 IS 23 MM

SCALE 1:20
FOR DETAILS SCALE 1:10

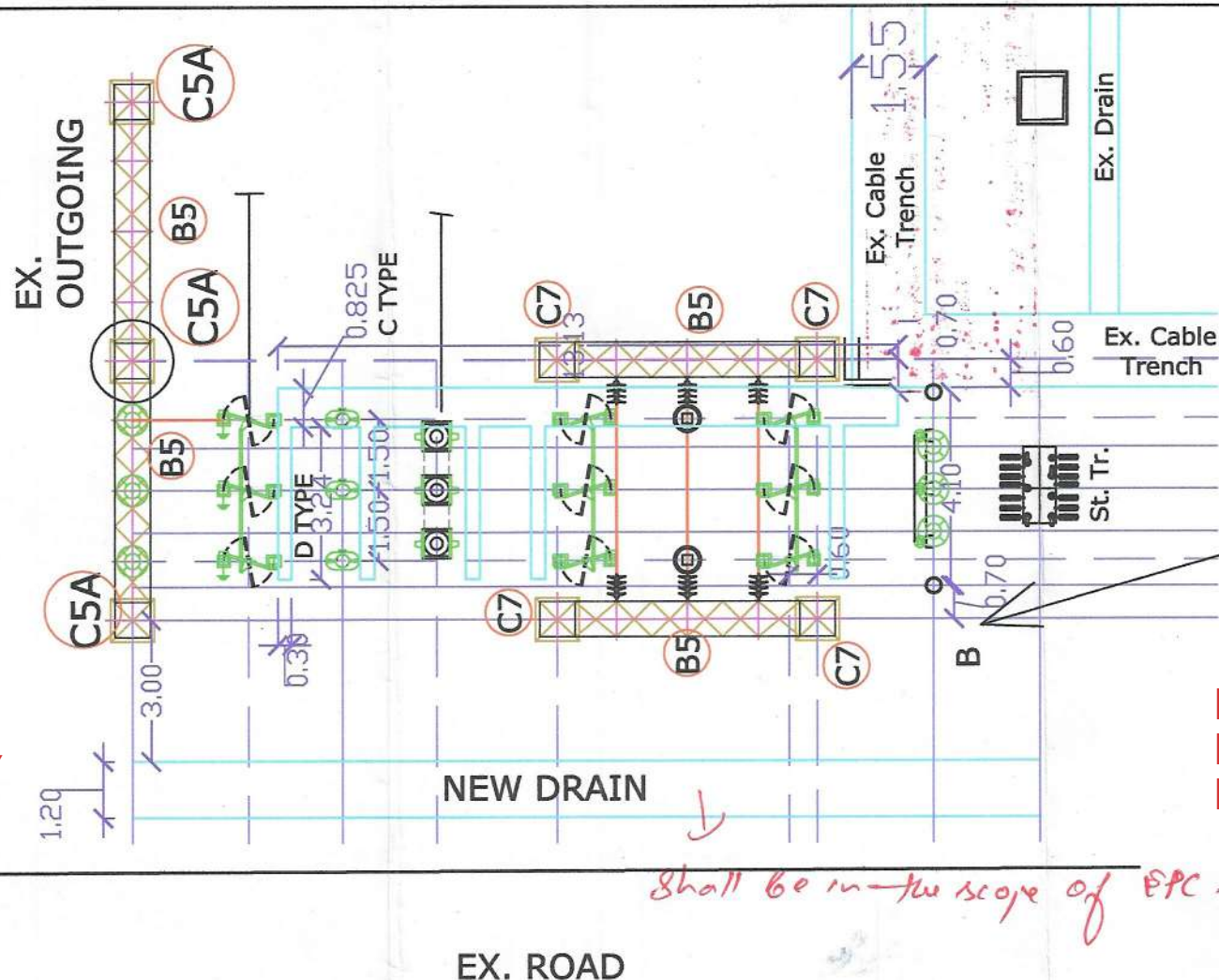
0	FIRST SUBMISSION	HDEC			
REV.	DESCRIPTION	Prep.	Chkd.	Appd.	DATE
		SIGN			
ASSAM ELECTRICITY GRID CORP. LTD.					
GUWAHATI					
PROJECT :	33 KV IGL BAY EXPANSION AT 132/33 KV KAMALPUR GSS				
TITLE :	FABRICATION & ERECTION DRAWING OF TOWER MARKED - C7A (33 KV) CONNECTING BEAM "B5" AT 5.5 M HEIGHT				
APPLICABLE TO :	132/ 33 KV KAMALPUR GRID SUBSTATION				
OWNER :	ASSAM ELECTRICITY GRID CORP. LTD.				

Drawing: C7A Column

FOR TENDER
REFERENCE
PURPOSE ONLY

FOR TENDER
REFERENCE
PURPOSE ONLY

FOR TENDER
REFERENCE
PURPOSE ONLY



CABLE TRENCH

D TYPE

(3.24x5)= 16.2 M

C TYPE

(13.13x1)= 13.13 M

*as per site requirement.
drawings attached
@ D type*

Cable Trench
Drawing for
Reference only

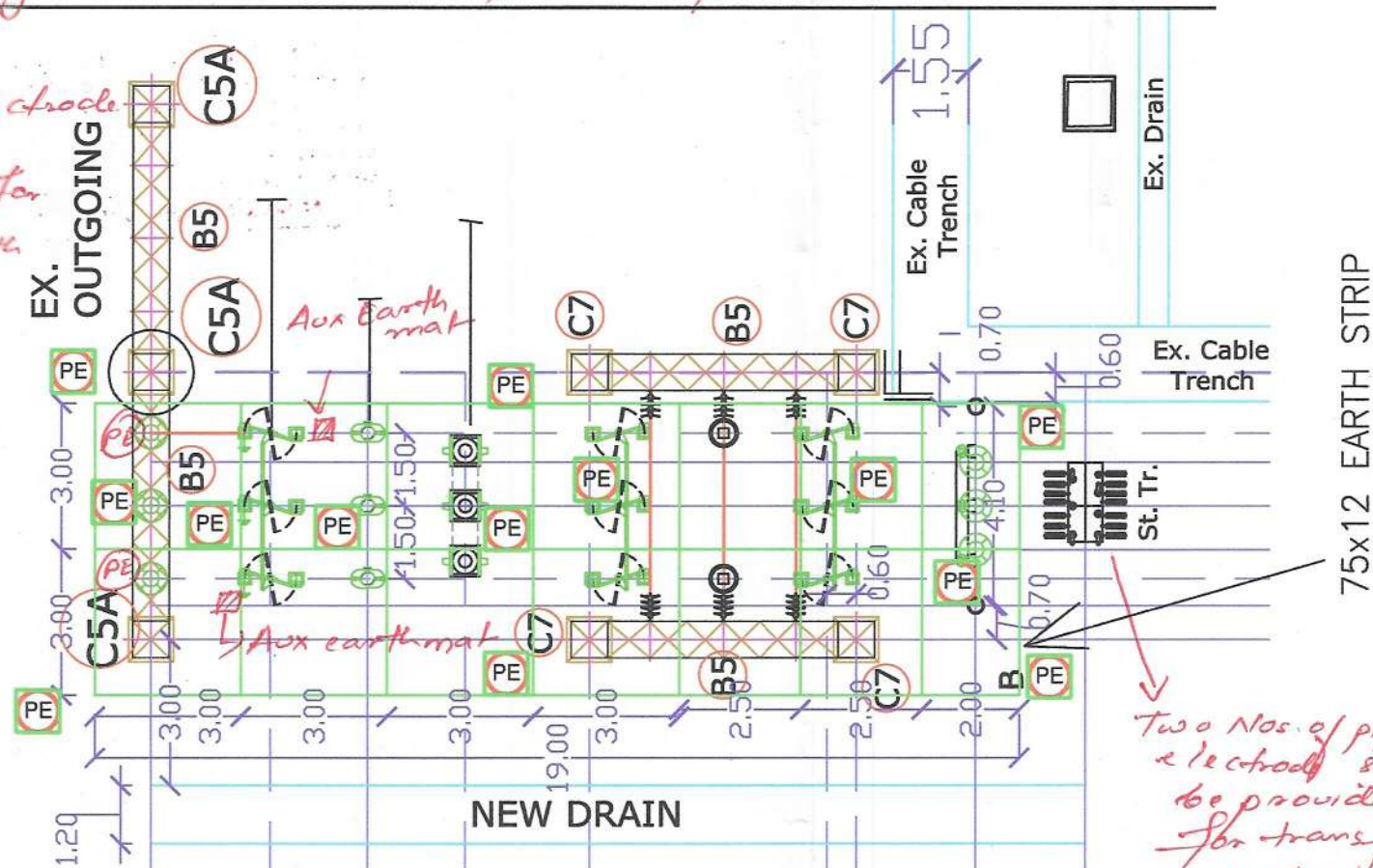
SCALE 1CM= 1.5 M
ALL DIMENSIONS ARE IN METER

1	REVISED AS PER P&D COMMENTS 675 DTD 19-07-24			24-07-24
0	FIRST SUBMISSION	HDEC		08-05-24
REV.	DESCRIPTION	Prep.	Chkd.	Appd.
				SIGN
PROJECT :	ASSAM ELECTRICITY GRID CORP. LTD. BILULEE BHAWAN			
TITLE :	CONSTRUCTION OF 33KV BAY FOR IGGL AT 132 /33 KV KAMALPUR GSS, AEGCL			
OWNER :	ASSAM ELECTRICITY GRID CORP. LTD			

* Auxiliary earthmat shall be provided for Isolator earth switch and MOM box of

* Rod electrode shall be provided for towers with peak.

NEW BAY FOR IGGL



* 50x10 mm MS (HDG) for riser for control box, marshalling box, cable trench etc. shall be provided.

* The Station service transformer shall be connected to the main earthmat.

* Rod electrode shall be provided at all the corner points of the grid.

SCALE 1CM= 1.5 M

ALL DIMENSIONS ARE IN METER

1	REVISED AS PER P&D COMMENTS675 DTD 19-07-24				24-07-24
0	FIRST SUBMISSION	HDEC			08-05-24
REV.	DESCRIPTION	Prep.	Chkd.	Appd.	DATE
		SIGN			
		ASSAM ELECTRICITY GRID CORP. LTD. BIJULEE BHAWAN			
PROJECT :		CONSTRUCTION OF 33KV BAY FOR IGGL AT 132 /33 KV KAMALPUR GSS, AEGCL			
TITLE :		EARTH MAT			
OWNER :		ASSAM ELECTRICITY GRID CORP. LTD			

NEW EARTHING STRIP SHOWN BY GREEN COLOUR

PE PIPE ELECTRODE

C.I. PIPE ELECTRODE & BRICK CHAMBER WITH C.I. COVER = 13 NOS.
75X12 MM ^{MS} NEW EARTHING STRIP =
 $(19 \times 3) + (6 \times 8) = 105$ m plus 25 m (extra for connection from PE) = 130 m

FOR TENDER
REFERENCE
PURPOSE ONLY

FOR TENDER
REFERENCE
PURPOSE ONLY

2. Earth system shall be according to the following IS-3043-code or practice for earthing IEEE std. 80-2000 guide for safety in alternating current sub station grounding.

3. All cable supports and cable trays running in trances or elsewhere are to be earthed.

5. The size of main earth mat conductor is 75x12 mm ^{MS} Flat and will be laid at 0.6 m below FGL with each spacing of 4.5m (max) between conductors. * shall match with the existing earthmat.

6. The voltage equipment such as LA, CVT earthed with Pipe Electrodes (PE).

7. Each earthing chamber covered with CI Cover.

8. Metallic pipes, conduits and cable trays sections for cable installation shall be bonded to ensure electrical continuity and connected to earthing conductors at regular interval. Apart from intermediate connections, beginning points shall be connected to earthing system.

9. Metallic conduits and water pipes shall not be used as earth continuity conductor.

10. Lighting poles, junction boxes on the poles, cable boxes/glandes, lockout switches etc. shall be connected to the earthing conductor.

11. Two separate and distinct ground connection shall be provided for grounding of electrical equipments in compliance with IE rules.

12. Gravel along with PCC cover shall be extended over the earth mat at a distance 1.5 m (min) beyond the perimeter of earth mat.

13. Treated earth pit shall be as per IS 3043-1987 with 3 mtr. long 40 mm dia perforated GI pipe. Pipe Electrode (PI). ⁵⁰ (For non-treated earth pit - 40 mm diameter MS Rod 3 meter long shall be provided.)

14. Wherever the earthmat conductor crosses the cable trenches, crossing under the trench shall be made & shall have a minimum clear distance of 300 mm below the trench.

15. Cable Trench metallic parts shall be connected by 50x6 mm GI flat & the cable tray system shall be further connected to earth mat at every 30mtr.

16. All metallic parts of trench shall be earthed through earth mat.

17. The lighting spikes & shield wires shall be earthed through an independent earthing pipe electrode (PE).

18. All electrodes must be connected to the main grid.

9. Whenever main earth conductor fouls with civil foundations the earth conductor shall be re-routed by minimum interference & complete continuity of the earth conductor shall be ensured. If need arises the re-routed conductor may be welded. All such locations shall be approved before execution at site.

20. The new earthmat shall be connected to the existing earthmat.

21. 65x10 ^{MS} GI flat shall be used as equipment riser. Qty. no shown here.

Earth Mat drawing for reference only

1350

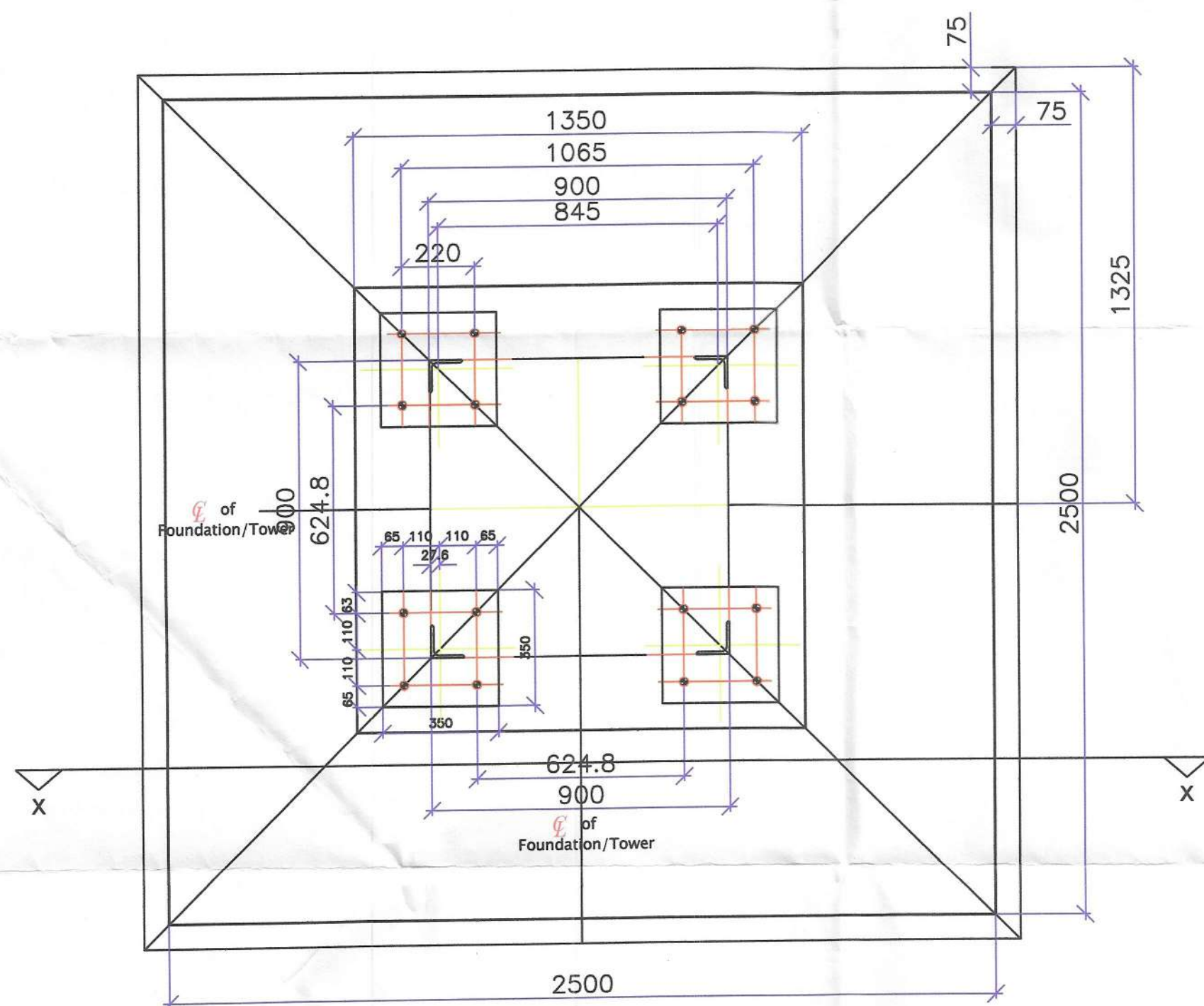
1250

16 NOS. 12 Ø TOR

8 Ø LINK @ 250 C/C

SECTION - Y-Y

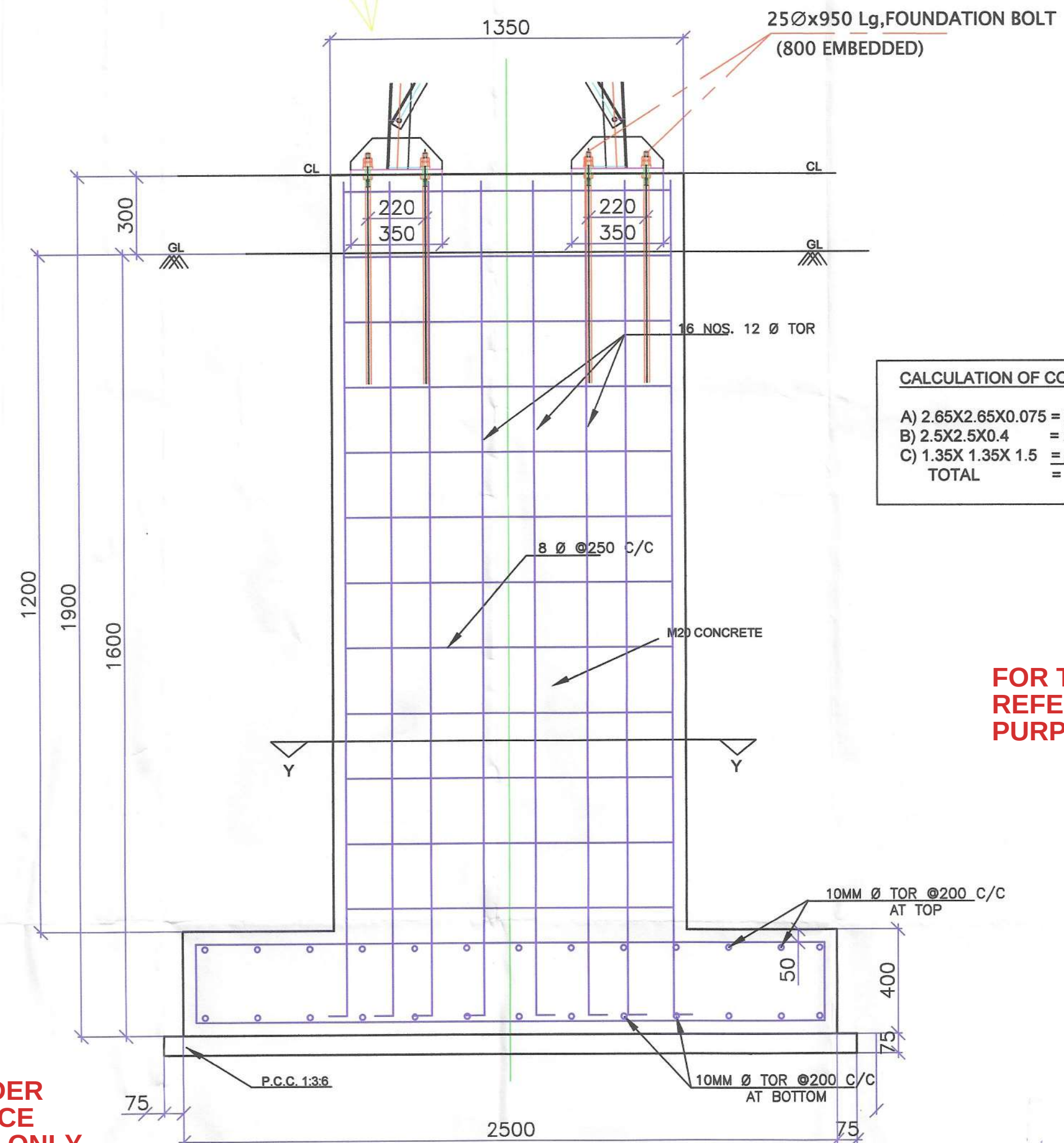
SECTION - Y-Y



PLAN AT A-A

FOUNDATION PLAN FOR 33 KV COLUMN "C5A" OF TECHNO FOR KAMALPUR IGGL BAY

C5A OF TECHNO (AT 7.5 M BEAM +PEAK)



A) $2.65 \times 2.65 \times 0.075$	$= 0.527$ C.M.
B) $2.5 \times 2.5 \times 0.4$	$= 2.500$ C.M.
C) $1.35 \times 1.35 \times 1.5$	$= 2.733$ C.M.
TOTAL	$= 5.760$ C.M.

**FOR TENDER
REFERENCE
PURPOSE ONLY**

SECTION - X-X

SCALE NTS

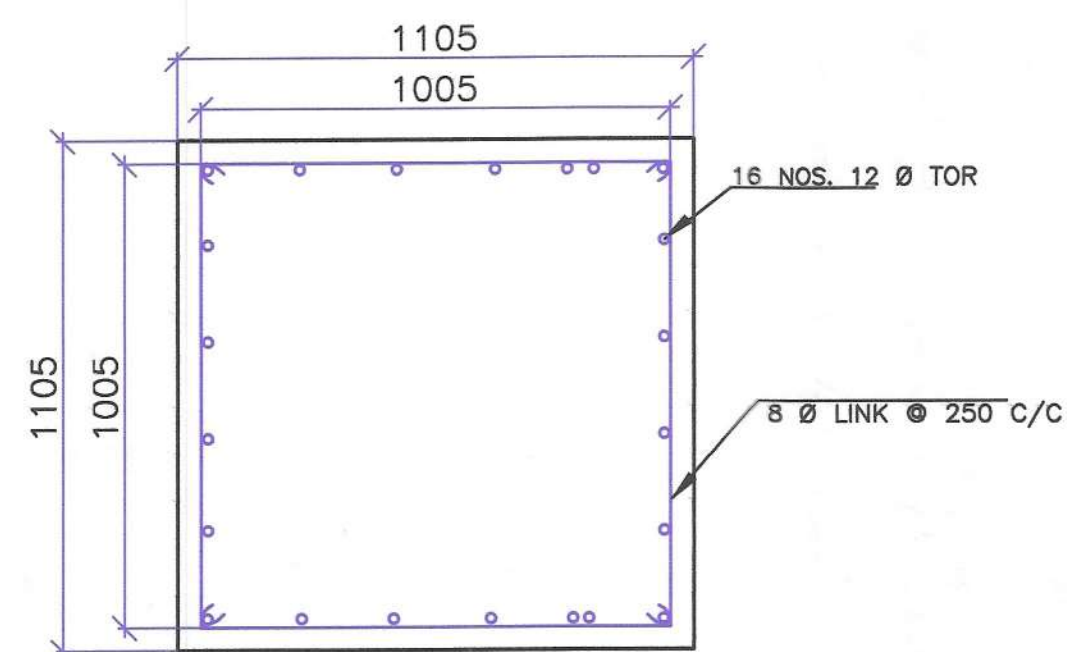
ALL DIMENSIONS ARE IN MILIMETER

1. STEEL CONFORMING TO IS 1786
2. FGL DENOTES FINISHED GROUND LEVEL OF SS
3. LAP LENGTH SHALL BE 40 TIMES DIA OF BAR
4. PROVIDE CLEAR COVER TO REINFORCEMENT AS UNDER
50 MM FOR BOTTOM & TOP REINFORCEMENT OF RAFT
50 MM FOR SIDE REINFORCEMENT OF RAFT
50 MM FOR COLUMN
5. ANCHOR BOLTS AND OTHER EMBEDDED FIXTURES SHALL BE EMBEDDED DIRECTLY INTO CONCRETE WITH NECESSARY TEMPLATE
6. UNLESS OTHERWISE NOTED ALL CONCRETE SHALL BE OF GRADE M20 (1: 1.5:3)

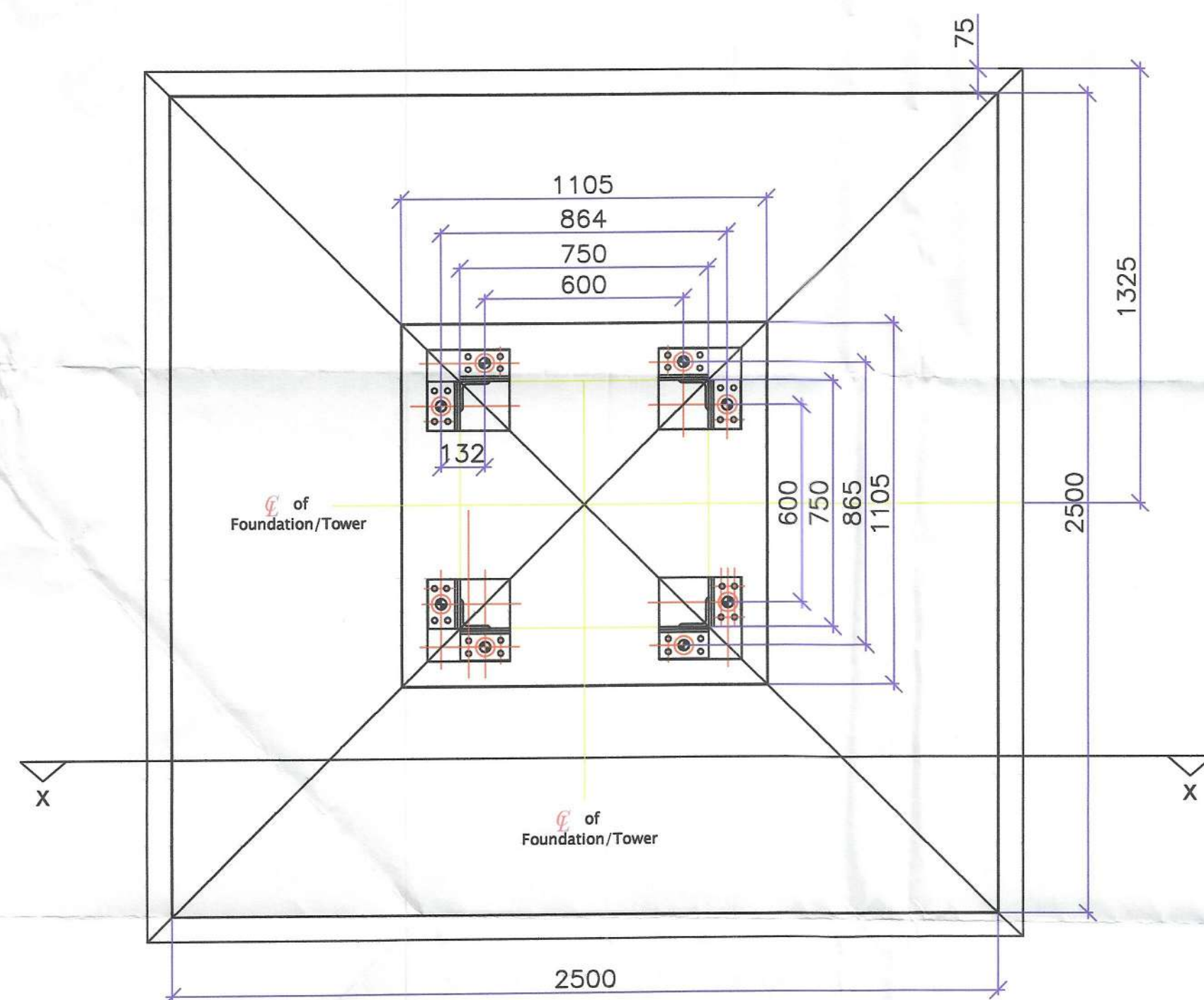
[illegible]

Foundation Drawing C5A Column

FOR TENDER
REFERENCE
PURPOSE ONLY



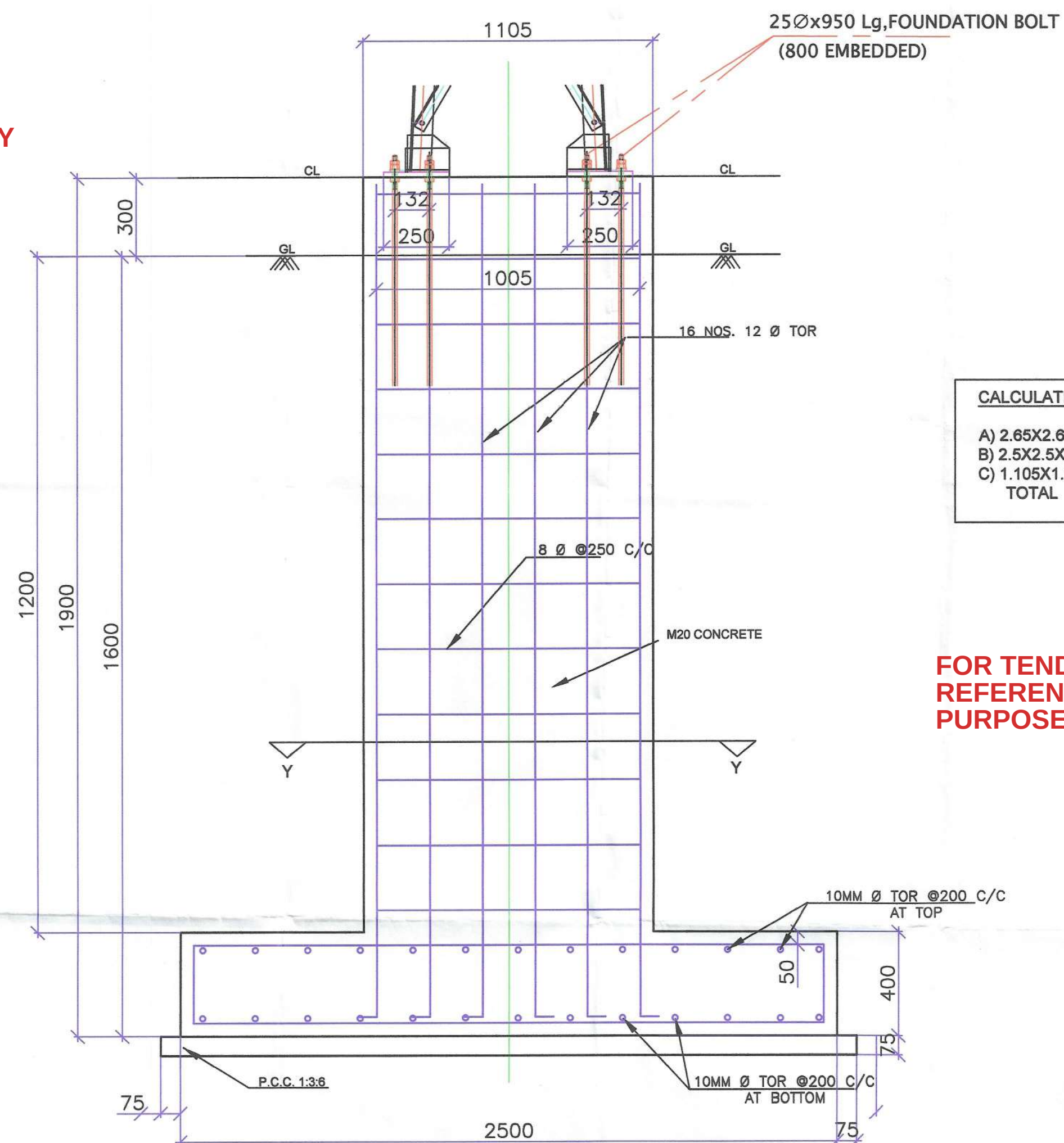
SECTION - Y-Y



PLAN AT A-A

FOUNDATION PLAN FOR 33 KV COLUMN "C7A" FOR KAMALPUR IGGL BAY

C7A OF (AT 5.5 M BEAM +2M+PEAK)



SECTION - X-X

FOR TENDER
REFERENCE
PURPOSE ONLY

CALCULATION OF CONCRETE VOLUME:	
A) $2.65 \times 2.65 \times 0.075$	= 0.527 C.M.
B) $2.5 \times 2.5 \times 0.4$	= 2.500 C.M.
C) $1.105 \times 1.105 \times 1.5$	= 1.831 C.M.
TOTAL	= 4.858 C.M.

SCALE NTS
ALL DIMENSIONS ARE IN MILIMETER

1. STEEL CONFORMING TO IS 1786
2. FGL DENOTES FINISHED GROUND LEVEL OF SS
3. LAP LENGTH SHALL BE 40 TIMES DIA OF BAR
4. PROVIDE CLEAR COVER TO REINFORCEMENT AS UNDER
50 MM FOR BOTTOM & TOP REINFORCEMENT OF RAFT
50 MM FOR SIDE REINFORCEMENT OF RAFT
50 MM FOR COLUMN
5. ANCHOR BOLTS AND OTHER EMBEDDED FIXTURES SHALL BE EMBEDDED DIRECTLY INTO CONCRETE WITH NECESSARY TEMPLATE
6. UNLESS OTHERWISE NOTED ALL CONCRETE SHALL BE OF GRADE M20 (1: 1.5:3)

0	FIRST SUBMISSION	HDEC		
REV.	DESCRIPTION	Prep.	Chkd.	SIGN
ASSAM ELECTRICITY GRID CORP. LTD				
PROJECT :	33 KV IGGL BAY AT 132 / 33 KV KAMALPUR GSS			
TITLE :	FOUNDATION OF 132KV COLUMN "C7A"			
APPLICABLE TO :	132 / 33 KV KAMALPUR GSS			
OWNER :	ASSAM ELECTRICITY GRID CORP. LTD.			

Foundation Drawing C7A Column

FOR TENDER
REFERENCE
PURPOSE ONLY