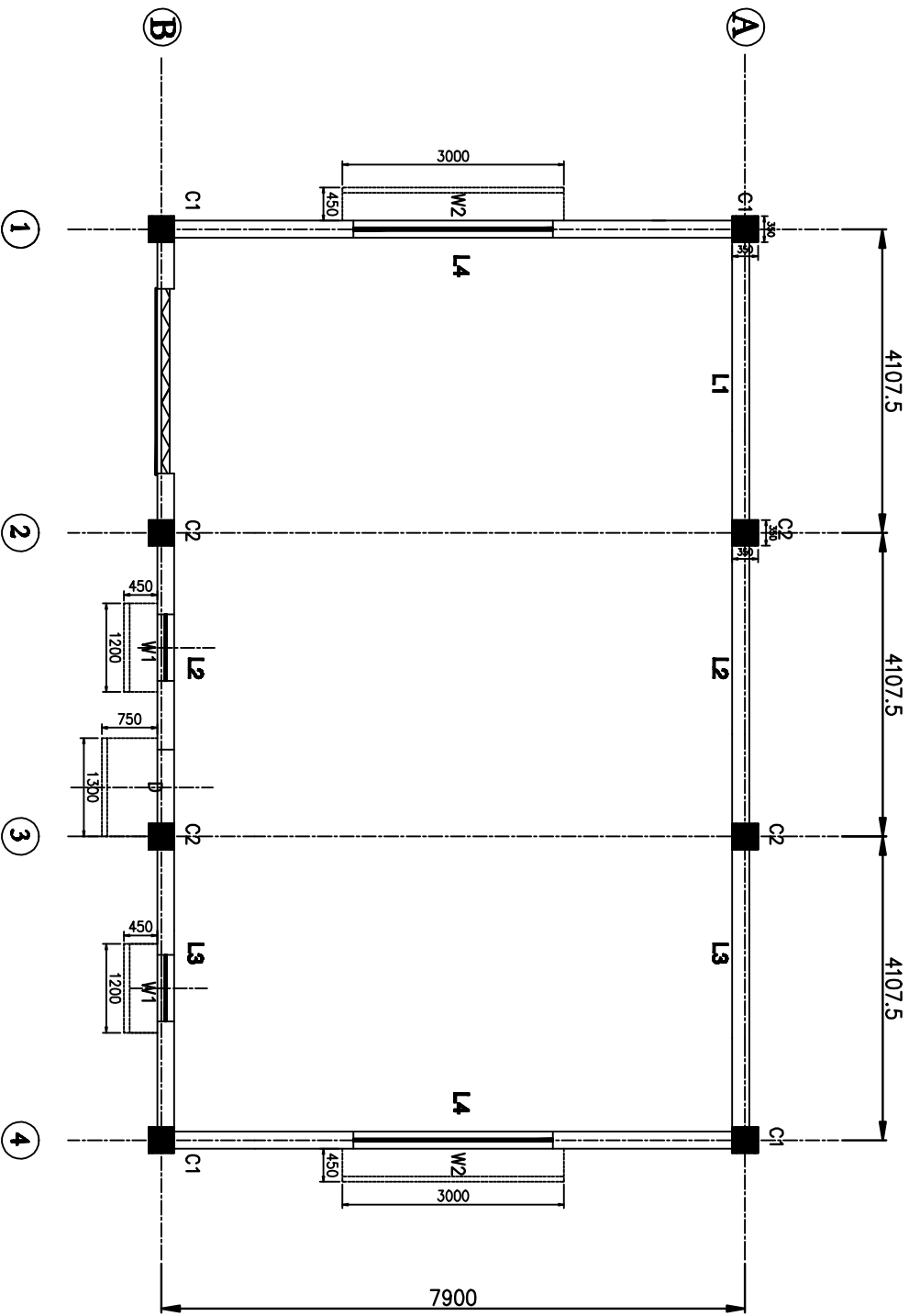
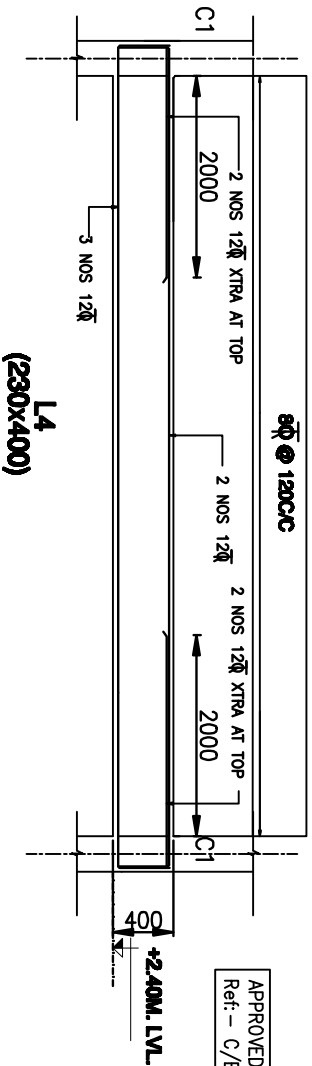
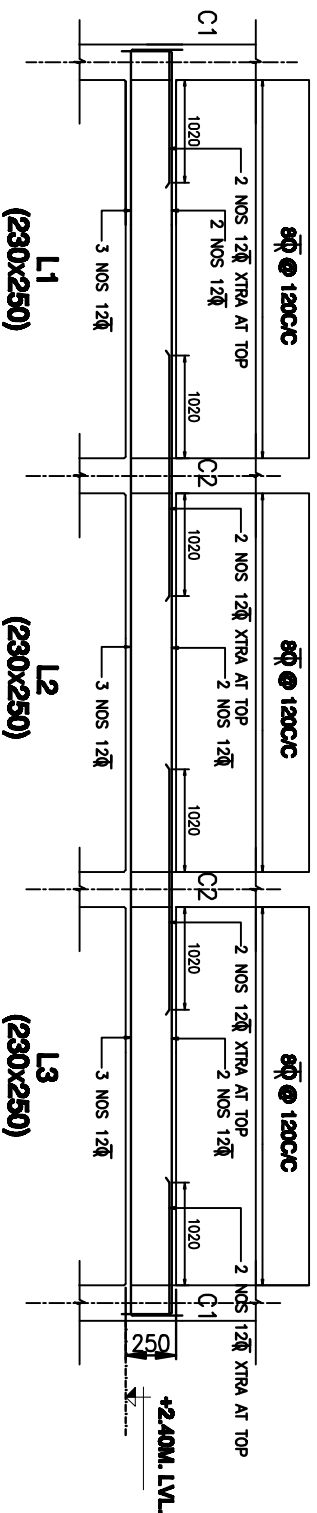
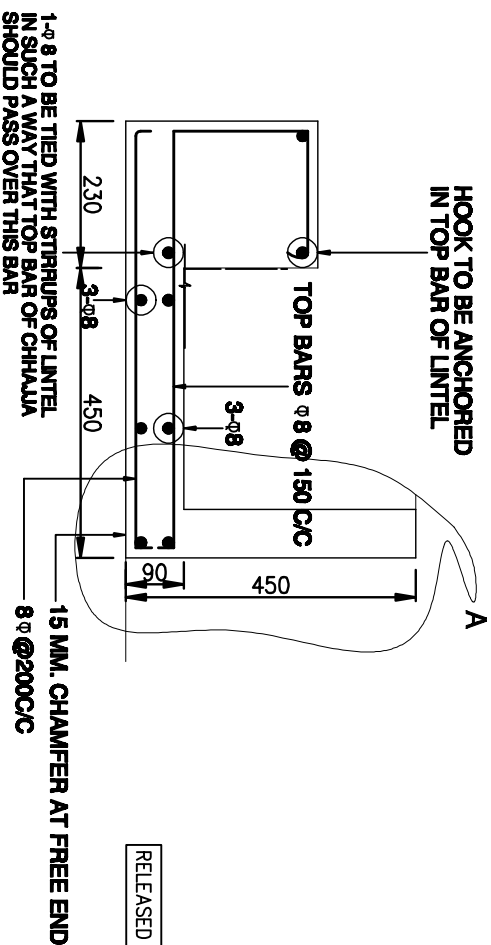
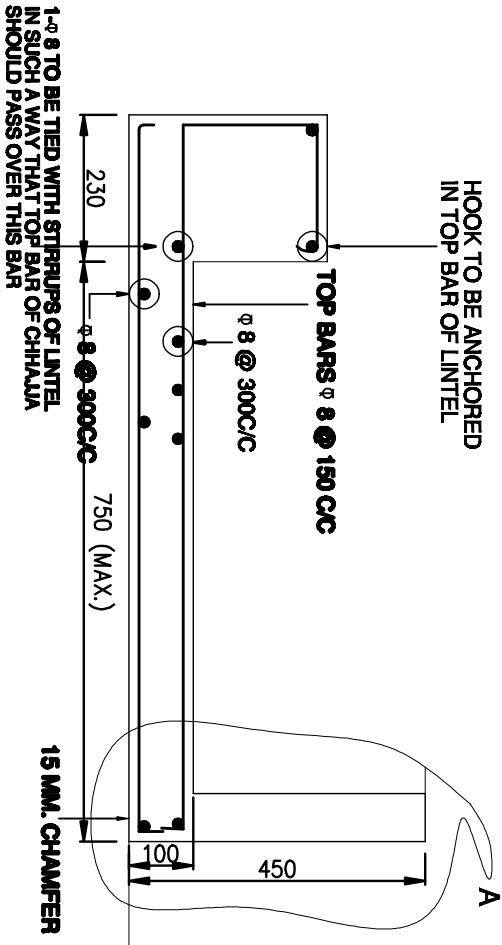




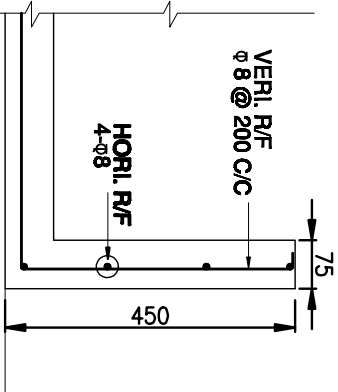
LINTEL LEVEL LAYOUT FOR FFPH



APPROVED BY E.D/ENGG-S/Shn & T/L WIDE NOTE SHEET
Ref:- C/ENGG/CIVIL/STD/FDN/M25 Dated 09/02/2012



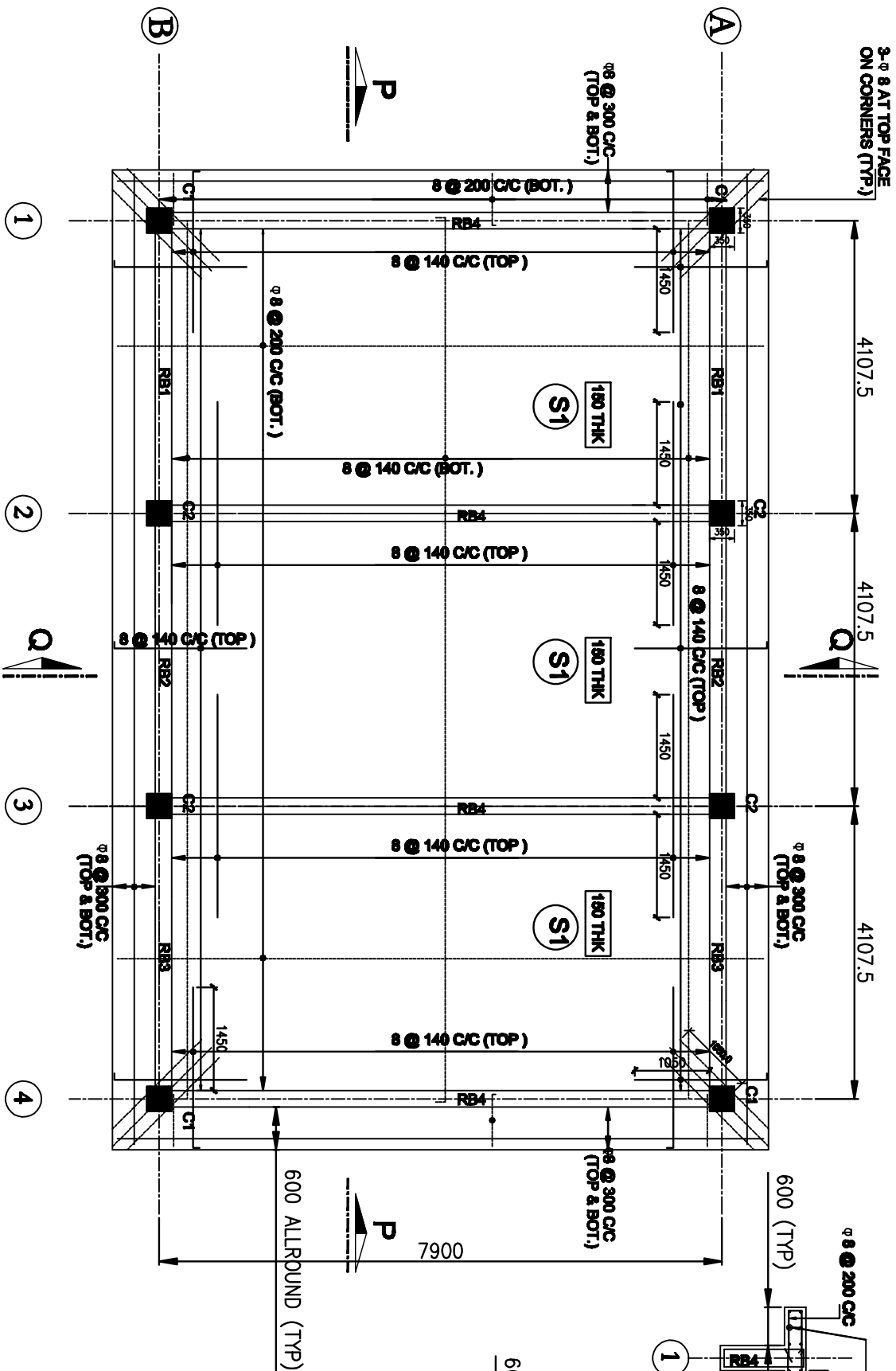
TYPICAL CHHALUA DETAIL UP TO 450mm PROJECTION



DETAIL A

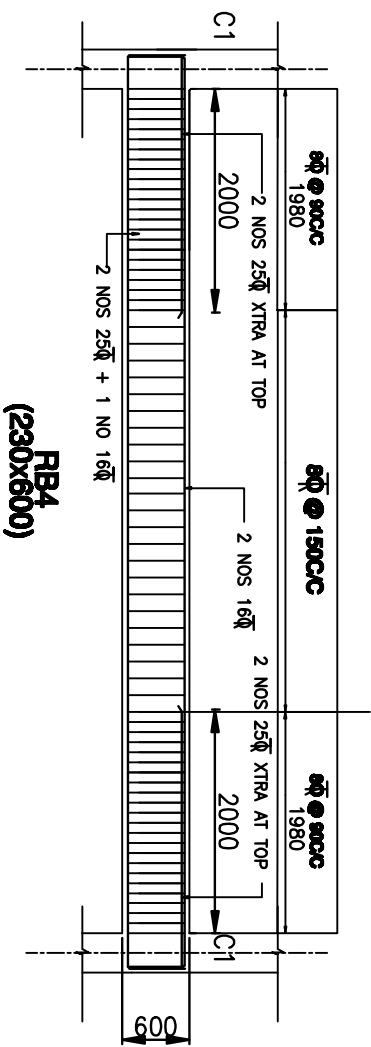
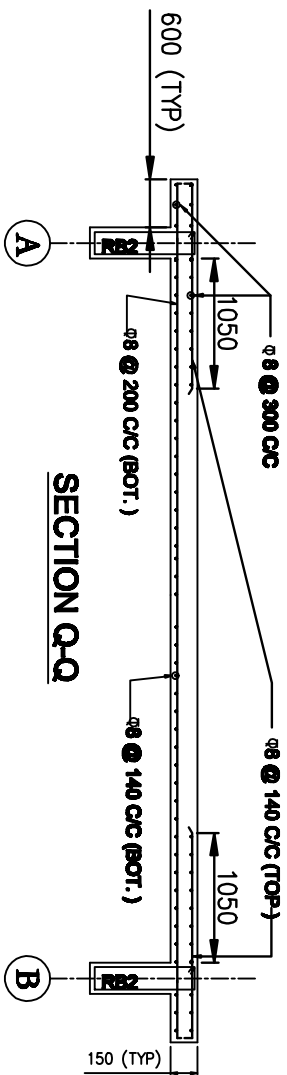
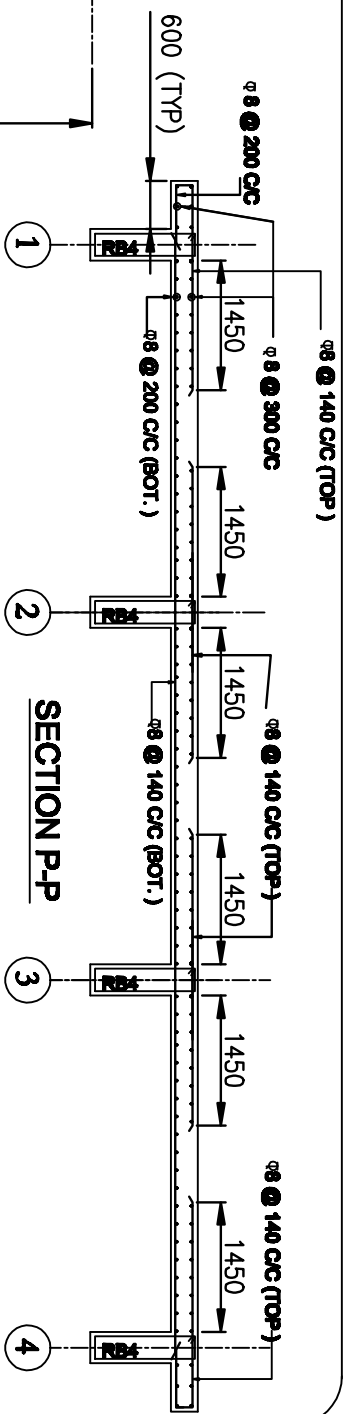
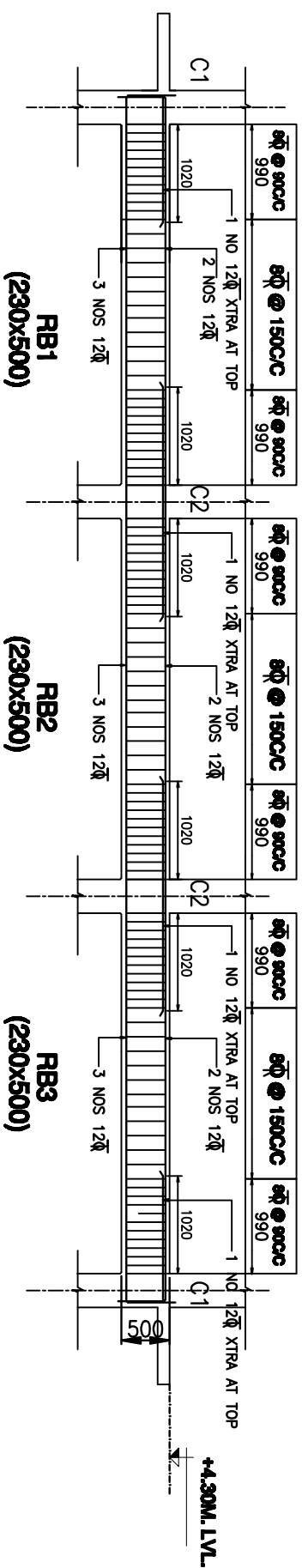
PREP.	REVD.	REVD.	REVD.	REVD.	APPD.	DATE

FOR NOTES REFER DRG. NO.: - C/ENGG/STD/FFPH/15			PROJECT: STANDARD FIRE FIGHTING PUMP HOUSE & WATER TANK.		
DRAWING NO: C/ENGG/STD/M25/FFPH-8			TITLE: LINTEL LEVEL LAYOUT & DETAILS OF LINTEL BEAMS FOR FFPH		
SCALE N.T.S.			Sheet 1		



ROOF SLAB LEVEL LAYOUT FOR FFPH

NOTE: - DISTRIBUTION REINFORCEMENT WHERE EVER NOT SHOWN SHALL BE TOR 8@300 C/C

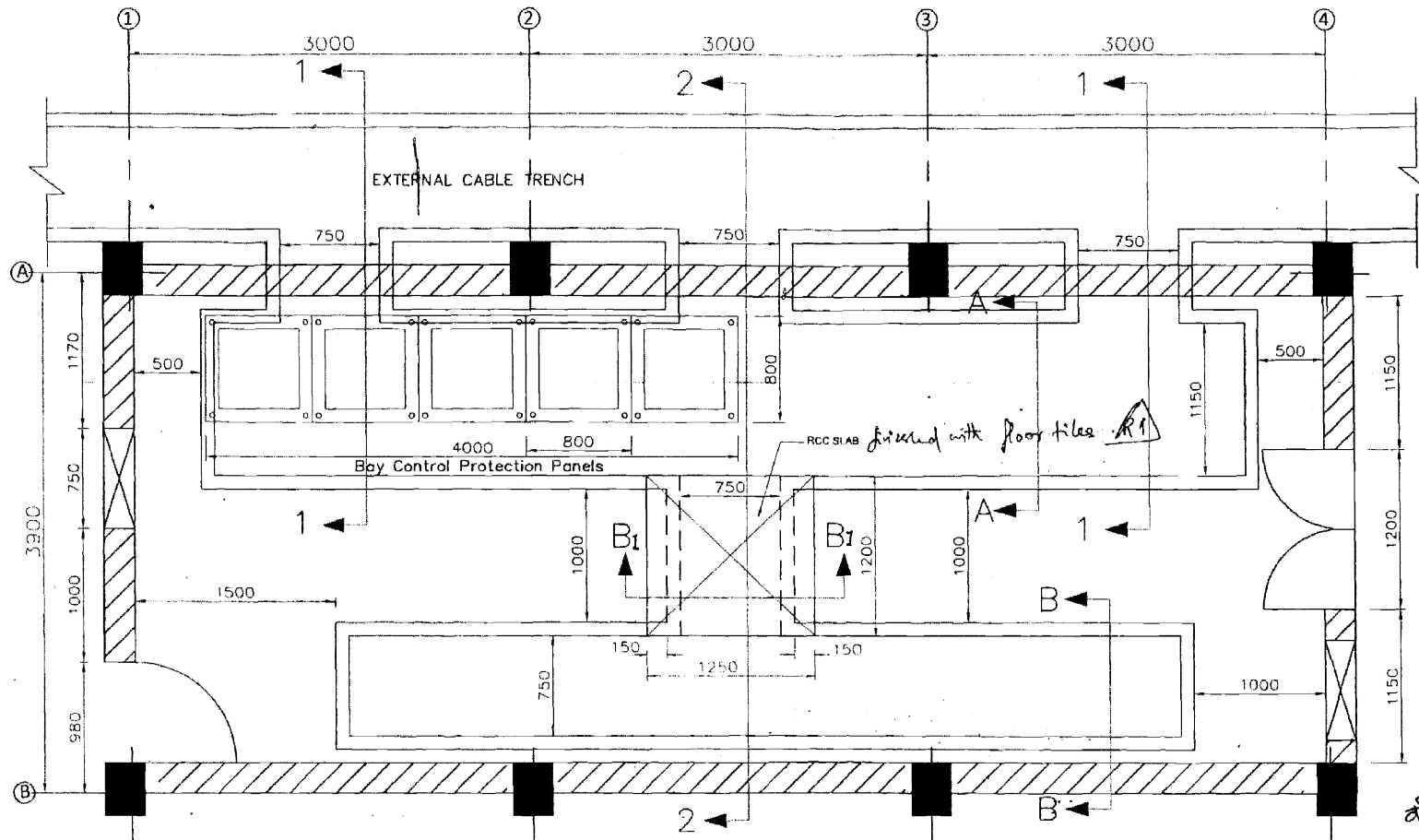


RELEASED FOR TENDER/CONSTRUCTION
FOR NOTES REFER DRG. NO.: -
C/ENGG/STD/FFPH/15

PREP.	REVD.	REVD.	REVD.	REVD.	APPD.	DATE

1.	R0	02/01/12
No.	Revision/Issue	Date
POWER GRID CORPORATION OF INDIA LIMITED (A Government of India Enterprise)		
PROJECT: STANDARD FIRE FIGHTING PUMP HOUSE & WATER TANK.		
TITLE: ROOF LEVEL LAYOUT & DETAILS OF BEAMS & SLAB FOR FFPH		
DRAWING NO: C/ENGG/STD/M25/FFPH-9		
SCALE	SCALE	Sheet
N.T.S.		1

APPROVED BY E.D.ENGG-S/SIn & T/L VIDE NOTE SHEET
Ref: - C/ENGG/CIVIL/STD/FDN/M25 Dated 09/02/2012



PANEL ARRANGEMENT PLAN LAYOUT

निर्माण हेतु जारी

इलाका अधिकारी

Barastala

पावर ग्रिड कारपोरेशन ऑफ इंडिया लि०
(लिमिटेड) अभियांत्रिकी विभाग, गुडगांव, हरियाणा

R1-3) SLAB FOR CABLE TRENCH ADDED
2) CABLE TRANSIT SYSTEM ADDED

NOTES:

- 1) ALL DIMENSIONS ARE IN MM AND LEVEL ARE IN METER. UNTIL OTHERWISE SPECIFIED.
- 2) FOR INTERNAL CABLE TRENCH LAYOUT REFER APPROVED SUB-STATION SPECIFIC ELECTRICAL DRAWING.
- 3) PANELS SHOWN ARE INDICATIVE ONLY
- 4) ALL CABLE ENTRIES SHALL BE PROVIDED WITH "CABLE TRANSIT SYSTEM".

REFERENCE DRG.:

STANDARD SWITCHYARD PANEL ROOM.
DRG NO.: C-ENGG-STD-SPR-STR-3011 (Rev-01) DATED: 10/12/2010

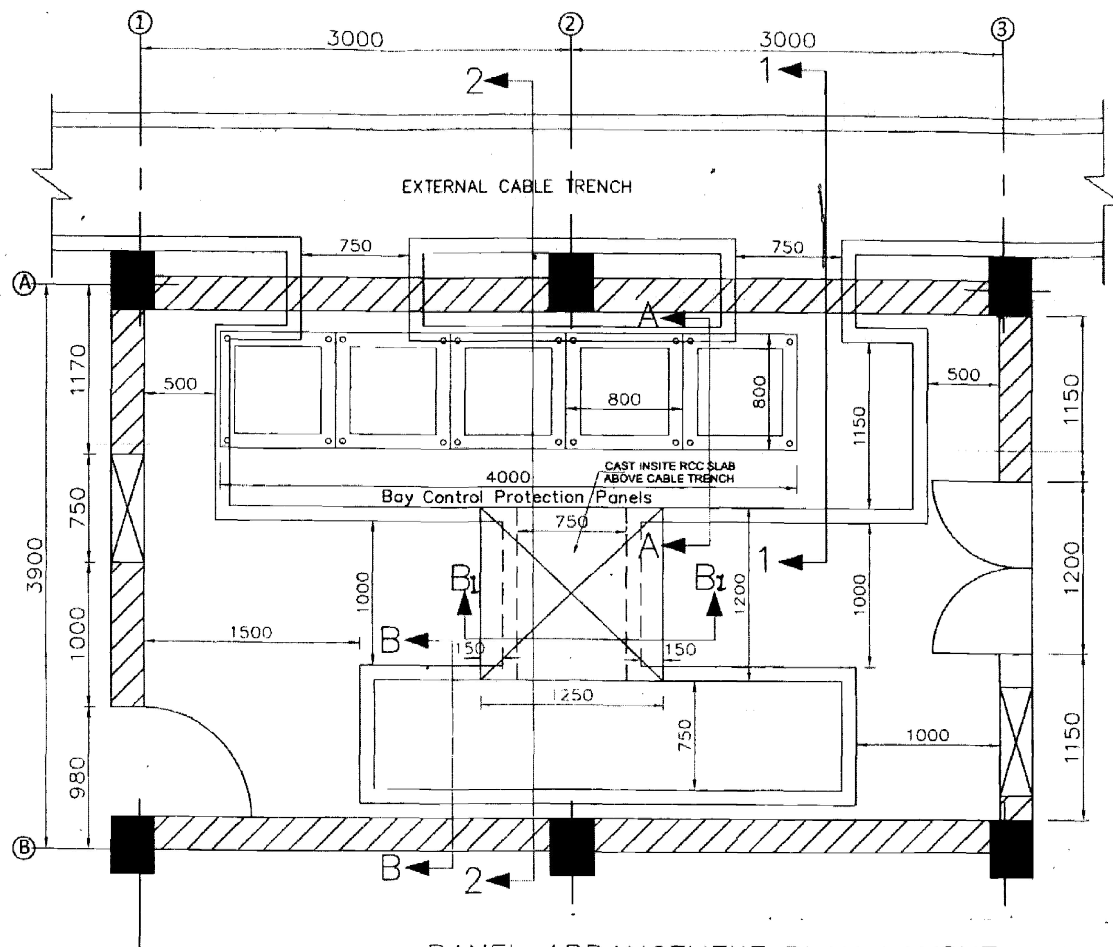
POWER GRID CORPORATION
OF INDIA LIMITED
(A Government of India Enterprise)

PROJECT : 765/400/220 KV SUB-STATION.....

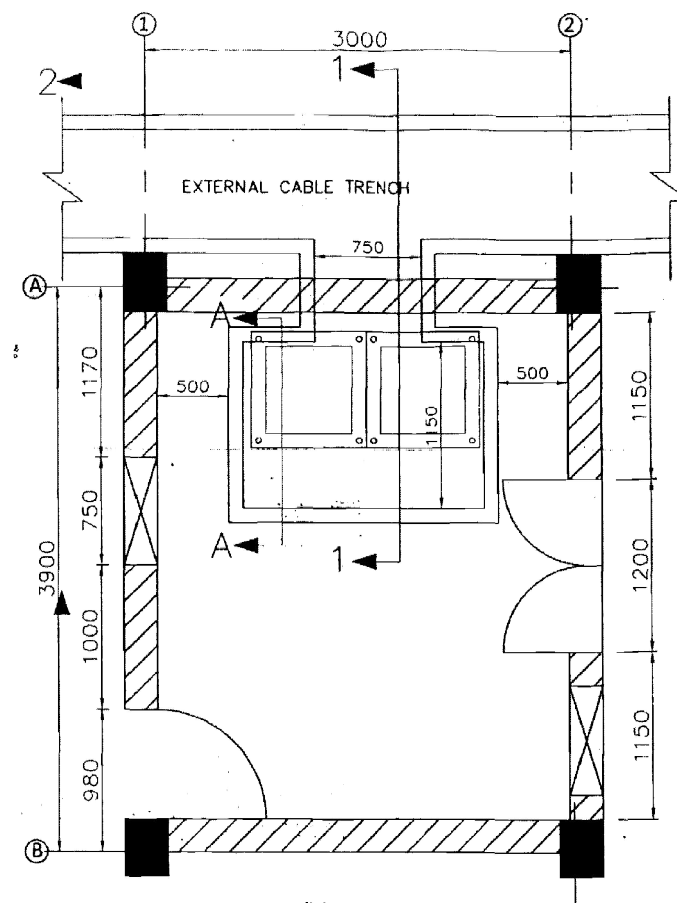
TITLE : STANDARD SWITCHYARD PANEL ROOM
(FOR 9 METER.)
GA & R.C.C DETAIL OF INTERNAL CABLE TRENCH

DRAWING NO. C-ENGG-STD-SPR-STR-3012 (SH. 1 OF 3) SCALE: NTS DATE: 16-4-17

PREP BY: T.K. SONDHIYA JE (CIVIL)	REVD BY: S. SHARMA CDE (CIVIL)	REVD BY: R. SRIVASTAVA DGM (S/S)	REVD BY: A.S. PANDEY DGM (CIVIL)	REVD BY: K. RACHURAM GM (CIVIL)	DATE: 16-4-17
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PANEL ARRANGEMENT PLAN LAYOUT



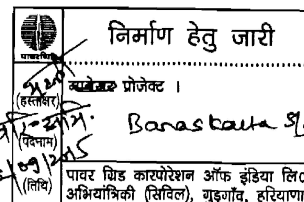
PANEL ARRANGEMENT PLAN LAYOUT

NOTES.:

- 1) ALL DIMENSIONS ARE IN MM. AND LEVEL ARE IN METER. UNTIL OTHERWISE SPECIFIED.
- 2) FOR INTERNAL CABLE TRENCH LAYOUT REFER APPROVED SUB-STATION SPECIFIC ELECTRICAL DRAWING.
- 3) PANELS SHOWN ARE INDICATIVE ONLY.
- 4) ALL CABLE ENTRIES SHALL BE PROVIDED WITH "CABLE TRANSIT SYSTEM".

REFERENCE DRG.:

STANDARD SWITCHYARD PANEL ROOM.
DRG. NO.: C-ENGG-STD-SPR-STR-3011 (Rev-01) DATED: 10.12.2010



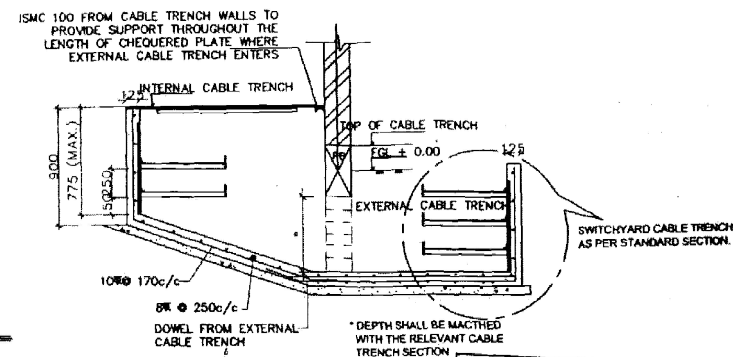
R1- SLAB FOR CABLE TRENCH ADDED

POWER GRID CORPORATION
OF INDIA LIMITED
(A Government of India Enterprise)

PROJECT : 765/400/220 KV SUB-STATION.....

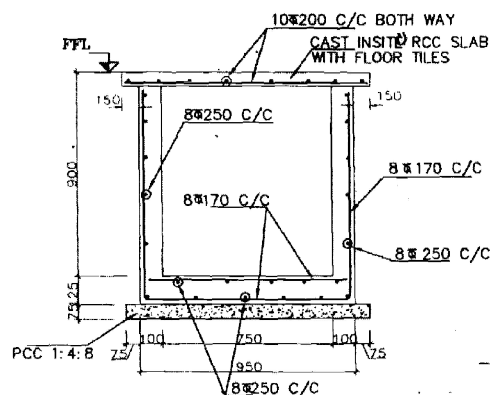
TITLE : STANDARD SWITCHYARD PANEL ROOM
(FOR 6 & 3 METER.)
GA & R.C.C DETAIL OF INTERNAL CABLE TRENCH
DRAWING NO. C-ENGG-STD-SPR-STR-3012
(SH 2 OF 3) SCALE: 1/1

PREP BY: T.K. SONDIYA JE (CIVIL)	REVD BY: S. SHARMA CDE (CIVIL)	REVD BY: R. SIVASTAVAN DOM (S/S)	REVD BY: S. PANDEY DOM (CIVIL)	REVD BY: K. RAJURAM DOM (CIVIL)	DATE: 16.4.17
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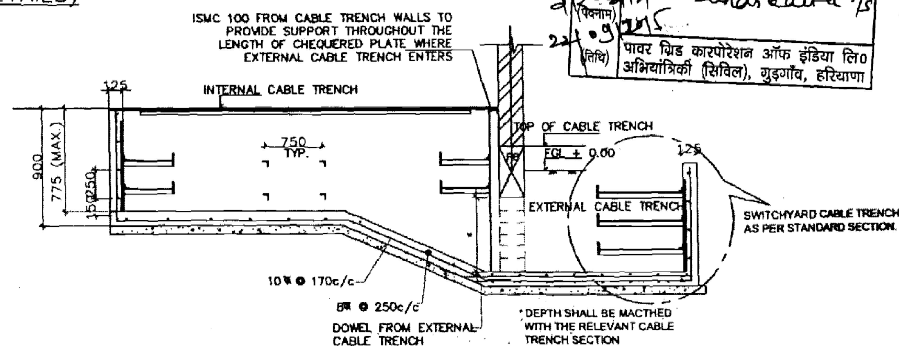
DETAIL - 'Y'
TYPICAL BOLT ARRANGEMENT

SECTION 1-1

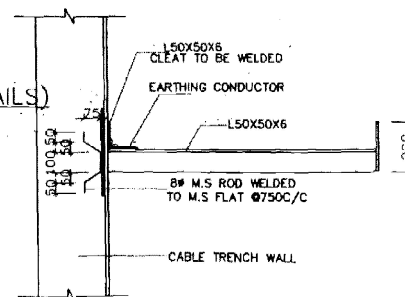


SECTION A-A
(SHOWING REINFORCEMENT DETAILS)

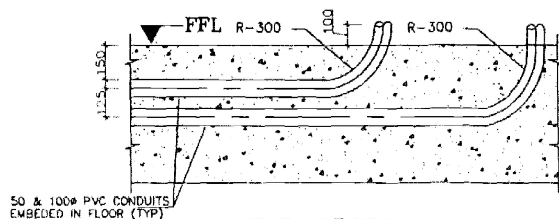
SECTION B1-B1
(SHOWING REINFORCEMENT DETAILS)



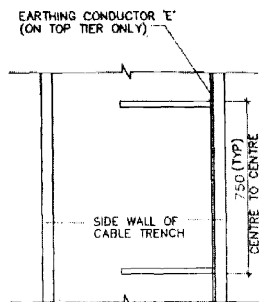
SECTION 2-2



TYPICAL CABLE SUPPORT



TYP. SECTION



CABLE TRAY SUPPORT (TYP)

- NOTES :-

1. ALL DIMENSION ARE IN MM UNLESS NOTED OTHERWISE.
2. FOR NOTES REFER DRG. NO. : C-ENG-STD-SPR-STR-3011
3. FOR LAYOUT REFER DRG. NO. : C-ENG-STD-SPR-STR-3012 (SHEET 1 OF 2)
4. TOP OF CHEQUERED PLATE TO FLUSH WITH FINISHED FLOOR LEVEL
5. THIS DRAWING SHALL BE MATCHED WITH VENDORS APPROVED INTERNAL CABLE TRENCH LAYOUT DRAWING BEFORE START OF CONSTRUCTION
6. ALL WELDS ARE 6MM FILLET CONTINUOUS WELD UNLESS OTHERWISE SPECIFIED
7. ISMC 1000 SHALL BE PROVIDED @ 1000 C/C TO SUPPORT CHEQUERED PLATE WHEREVER CABLE TRENCH WIDTH EXCEEDS 1000 MM.
8. ISMC 1000 SHALL BE PROVIDED BELOW PANELS ALSO.
9. FOR CABLE TRENCH WITH LESSER WIDTH 150x50x5 STIFFENER SHALL BE WELDED WITH CHEQUERED PLATE @ 1000 C/C.

R1- SLAB FOR CABLE TRENCH ADDED

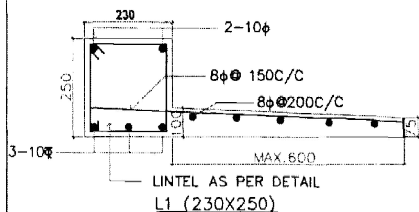
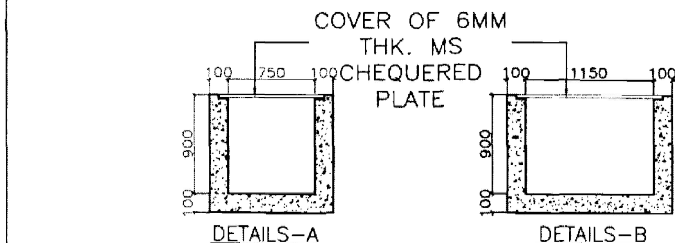
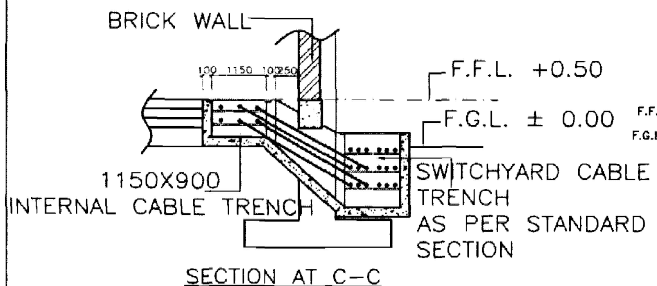
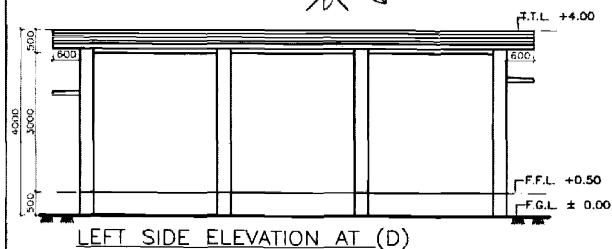
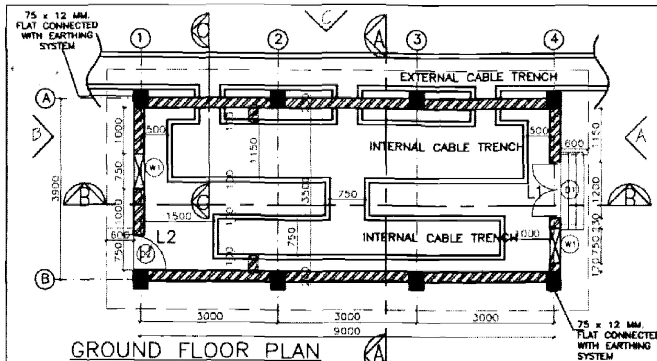
POWER GRID CORPORATION
OF INDIA LIMITED
(A Government of India Enterprise)

PROJECT : 765/400/220 KV SUB-STATION

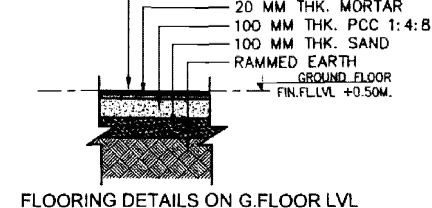
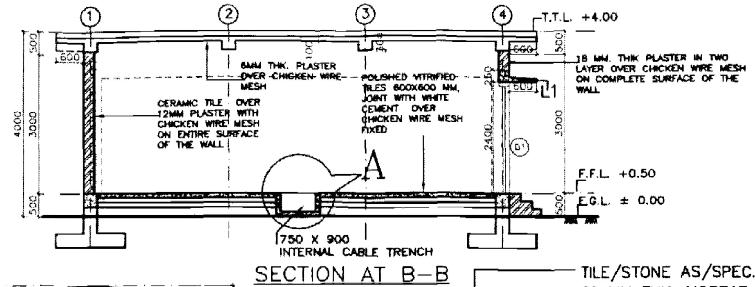
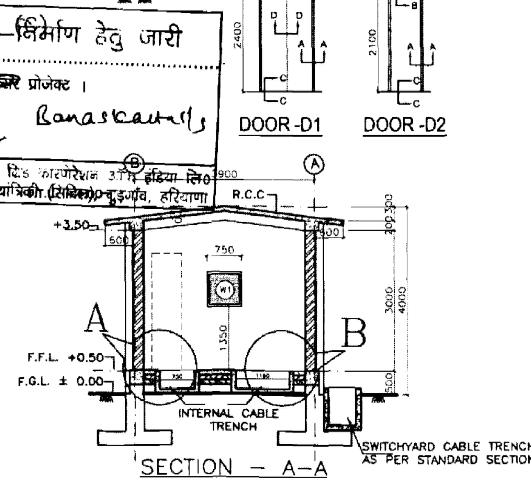
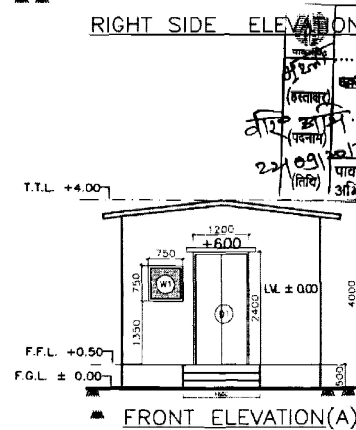
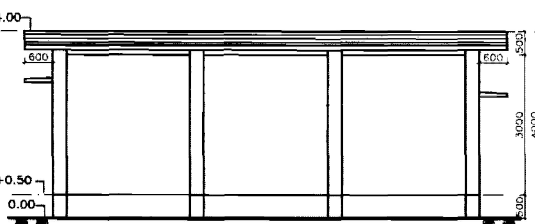
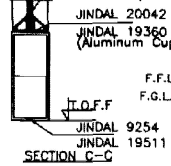
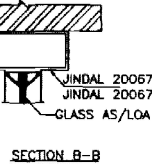
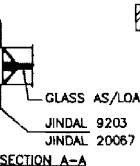
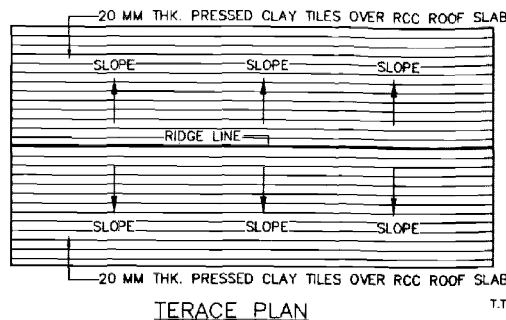
TITLE : STANDARD SWITCHYARD PANEL ROOM
GA & R.C.C DETAIL OF INTERNAL CABLE TRENCH

DRAWING NO.	C-ENGG-STD-SPR-STR-3012 (SHEET 1 OF 1)	SCALE	REV
		NTS	1

7/9/11	Signature	Signature	4/20/11	Signature
PREP BY: T.K.SONDHYA E. (SMA)	REVO BY: S.SHARMA	REVO BY: R. SRIVASTAVA	REVO BY: S.PANDEY	REVO BY: K.RAGHURAM



REQUIREMENT OF LINTEL BEAM WITH CHAJJA ABOVE THE WINDOW MKD W1 SHALL BE DECIDED LOCALLY AT SITE.



Door/Window Schedule				
Doors				
Typ.	Size	Description		
D1	1200 x 2400	ALUMINUM GLAZED DOOR		
D2	750 x 2100	ALUMINUM GLAZED DOOR		
Windows				
Typ.	Size	Lintel	Sill	Description
W1	750 x 750	2100	1350	OPENING FOR FIXING AC

- NOTE:-**
- ALL DIMENSIONS ARE IN MM. AND LEVELS ARE IN MTR.
 - OPENING ARE PROVIDED FOR INSTALLATION OF ACS. IN CASE ONE AC IS PROVIDED, OTHER OPENING SHALL BE CLOSED.
 - 22GX12 MM. CHICKEN WIRE MESH TO BE PROVIDED FOR ALL WALL, FLOORING AND ROOF. CHICKEN WIRE MESH SHALL BE CONNECTED WITH EARTHING SYSTEM THROUGH 75X12MM FLAT FIXED ON DIAGONALLY OPPOSITE COLUMNS ON ITS OUTER SURFACE
 - SWITCHYARD PANEL ROOM IS A MODULAR STRUCTURE OF 3M. LENGTH AND 3.9M. WIDE THE CONSTRUCTION OF SWYD PANEL ROOM SHALL BE CARRIED OUT IN A MULTIPLE OF 3M LENGTH KEEPING WIDTH 3.9M AS CONSTANT AS PER REQUIREMENT OF SITE SPECIFIED IN LOA/ LAYOUT APPD. BY S/S ENGG.

RELEASED FOR TENDER/CONSTRUCTION

POWER GRID CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)

PROJECT : 400/220 KV SUB-STATION

TITLE : STANDARD SWITCHYARD PANEL ROOM
ARCHITECTURAL DRAWING OF PANEL ROOM

DRAWING NO. C-ENGG-STD-PR-ARCH-3000

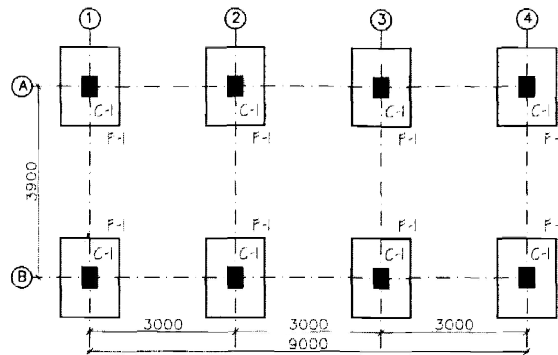
THIS DRAWING HAS BEEN REPRODUCED FROM EARLIER
APPROVED DRAWING NO. C-ENGG-STD-PR-ARCH-3000

REV.	DESCRIPTION	CIVIL	REVD.	ELEC.	REVD.	REVD.	APPD.	DATE.

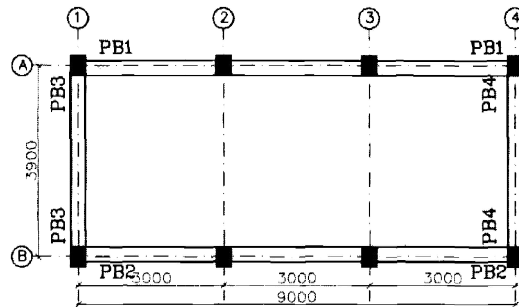
CLEARED BY

SCALE
NTS

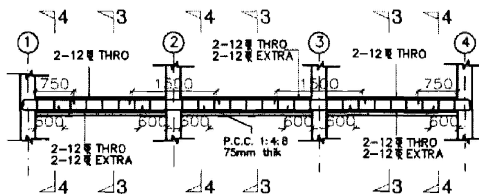
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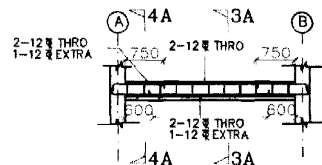
FOUNDATION PLAN



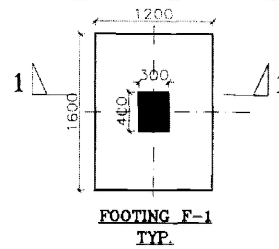
PLINTH BEAM PLAN



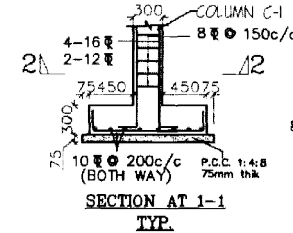
PB1 & PB2(250 X 350)
ON GRID A & B



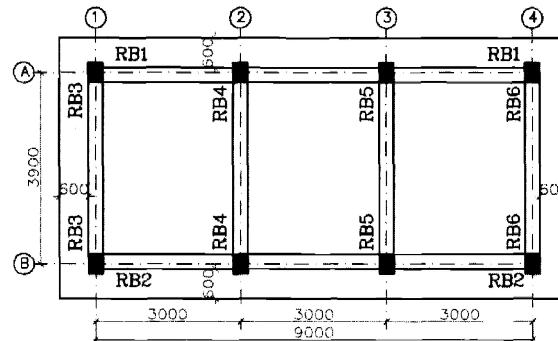
PB3 & PB4(250 X 350)
ON GRID 1&4



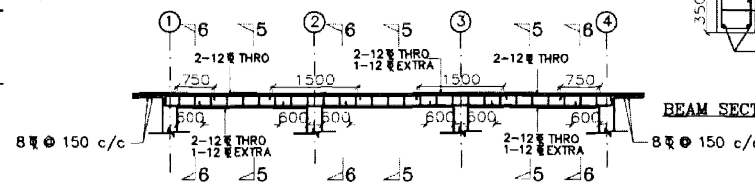
FOOTING F-1
TYP.



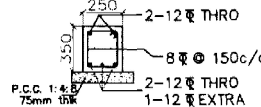
SECTION AT 1-1
TYP.



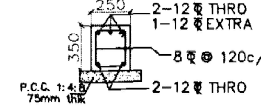
ROOF BEAM PLAN



RB1 & RB2 (250 X 350)
ON GRID A & B



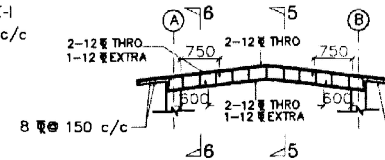
BEAM SECTION AT 3A-3A



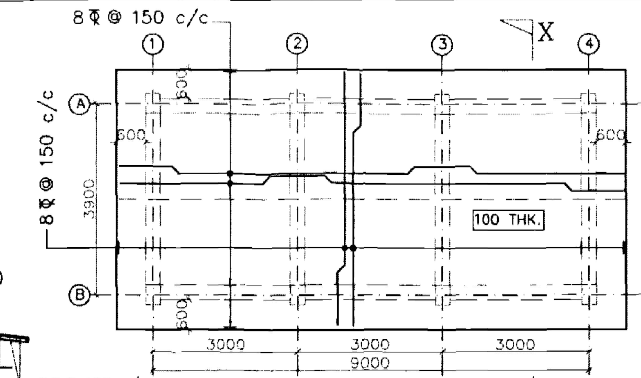
BEAM SECTION AT 4A-4A

THIS DRAWING HAS BEEN REPRODUCED FROM EARLIER
APPROVED DRAWING NO. C-ENGG-STD-SPR-STR-3011

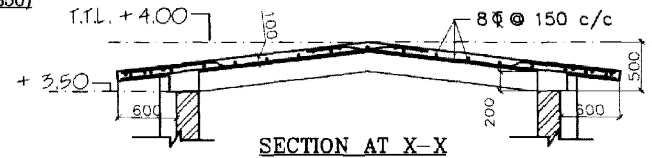
COLUMN SECTION AT 2-2
TYP.



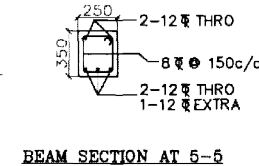
RB3, RB4, RB5 & RB6 (250 X 350)
ON GRID 1, 2, 3 & 4



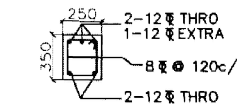
REINFORCEMENT ROOF PLAN
OF TOP SURFACE SLAB



SECTION AT X-X



BEAM SECTION AT 5-5



BEAM SECTION AT 6-6

NOTES :-

1. ALL LINEAR DIMENSION ARE IN MM AND LEVELS IN METERS.
2. THIS DRAWING IS NOT TO BE SCALED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. ± 0.00 CORRESPONDS TO FINISHED GROUND LEVEL (F.G.L.)
4. ALL R.C.C. USED SHALL BE OF GRADE AS PER BPS.
5. ALL R/F STEEL SHALL BE HYSD CONFORMING TO IS:1786. /TMT BARS AS PER BPS. (EQUIVALENT GRADE)
6. CLEAR COVER FOR MAIN R/F BARS SHALL BE 40MM FOR COLUMN, 25MM FOR BEAMS, 15MM FOR SLAB, 50MM FOR FOOTINGS.
7. LAP LENGTH FOR R/F BARS SHALL BE 47 X DIA OF BAR.
8. LAP SHALL NOT BE PROVIDED WITHIN A JOINT, OR WITHIN A DISTANCE 2 X DEPTH FROM THE EACH JOINT FACE, OR 1/4 OF MEMBER LENGTH FROM JOINT FACE.
9. SPACING OF STIRRUPS PROVIDED OVER THE ENTIRE SPLICE LENGTH SHALL NOT EXCEED 150 MM.
10. ALL FOUNDATION SHALL BE TAKEN AT LEAST 500MM BELOW VIRGIN SOIL. LOOSE POCKET IF ANY SHALL BE COMPLETELY REMOVED AND BACK FILLED WITH P.C.C. (1:4:8)
11. REINFORCEMENT DETAILING SHALL BE AS PER SP - 34 AND IS 13920 LATEST.
12. NET SAFE BEARING CAPACITY AT A DEPTH OF M. BELOW FGL IS ASSUMED AS 9T/M2.
13. Ld DEVELOPMENT LENGTH = 47 DIAMETER OF BAR.
14. THE FOUNDATION SHOULD REST MINIMUM 500MM IN VIRGIN SOIL BY PROVIDING WELL COMPACTED STONE PACKING IF REQUIRED (SIZE 40mm TO 150mm) WITH INTERSTICES FILLED WITH SAND. STONE PACKING TO BE COMPACTED IN LAYERS OF 300mm AS PER CPWD SPEC.
15. SWITCHYARD PANEL ROOM IS A MODULAR STRUCTURE OF 3M LENGTH AND 3.9M WIDTH. THE CONSTRUCTION OF SWYD PANEL ROOM SHALL BE CARRIED OUT IN MULTIPLES OF 3M LENGTH KEEPING WIDTH 3.9M AS CONSTRUCTED AS PER REQUIREMENT OF SITE SPECIFIED IN LDA/ LAYOUT APPD. BY S/S ENGG.

निर्माण हेतु जारी
प्रोजेक्ट 1
कॉन्स्ट्रक्शन प्रोजेक्ट
कॉन्स्ट्रक्शन प्रोजेक्ट
कॉन्स्ट्रक्शन प्रोजेक्ट
कॉन्स्ट्रक्शन प्रोजेक्ट

RELEASED FOR TENDER/CONSTRUCTION

POWER GRID CORPORATION
OF INDIA LIMITED
(Government of India Enterprise)



PROJECT : 765/400/220 KV SUB-STATION

TITLE : STANDARD SWITCHYARD PANEL ROOM
G.A. AND RCC DETAIL OF PANEL ROOM

DRAWING NO. C-ENGG-STD-SPR-STR-3011
SCALE: N.T.S.
REV: 0

REV.	DESCRIPTION	CIVIL.	REVD.	ELEC.	REVD.	REVD.	APPD.	DATE.

CLEARED BY

पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
POWER GRID CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)



केन्द्रीय कार्यालय : "सौदामिनी" प्लॉट सं. 2, सैक्टर-29, गुडगाँव-122 001, हरियाणा
फोन : 2571700 - 719, फैक्स : 2571760, 2571761 तार 'नेटग्रिड'
Corporate Office : "Saudamini" Plot No. 2, Sector-29, Gurgaon-122 001, Haryana
Tel. : 2571700 - 719, Fax : 2571760, 2571761 Gram : 'NATGRID'

संदर्भ संख्या/Ref. Number

संदर्भ / Ref: C-ENG/Tr.Core/SIEMENS/TR/01

दिनांक / Date: 08/03/2013

सेवा में /To M/s SIEMENS Limited
Energy Sector, Transformer Works, Thane Belapur Road
Kalwa, Thane - 400601, Maharashtra, India

Kind Attn: Mr. PC Ajishkumar, Manager - Marketing

विषय / Sub: 7 x 500MVA, (765/√3)/(400/√3)/33kV Single Phase Auto Transformer
Transformer Package (P325-TR01) for 765/400kV Kurnool Substation (New) under
Transmission System associated with Krishnapatnam UMPP Part C1
LOA No: CC-CS/325-SR1/TR-1787/1/G5/CA-I/4572 Dated 18.02.2013

Dear Sir,

कृपया उपरोक्त विषय पर अपने ईमेल दिनांक 13/02/2013 का अवलोकन करे दस्तावेजों पर टिप्पणियों / अनुमोदन संलग्नित पेज में दिया गया है ।

Please refer to your email dated 13/02/2013. We are herein conveying comments/approval / Comment code of each drawing. Please refer the category indicated in remarks/category column of the attached sheet.

अगर हमारे द्वारा वांछित संशोधन के आलावा आप कोई संशोधन करना चाहते हैं तो कृपया उसे पूर्ण तर्कसंगत के साथ हाईलाइट करे एवं दस्तावेज को पुनः अनुमोदन हेतु दुबारा प्रेषित करे ।

In case of any modification other than those desired by us are carried out, the same shall be highlighted with full justification thereof and resubmitted for approval.

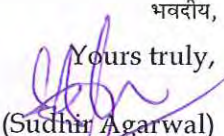
दस्तावेजों में जो टिप्पणी / अनुमोदन दिया गया है उससे संविदाकार अपनी संविदा जिम्मेदारियों से और समय-समय पर लागू भारतीय स्टेचुयरी कानून के अंतर्गत उसकी जिम्मेदारियों जैसे डायमें की यथार्थताएँ निर्माण में इस्तेमाल की गई सामग्री वजन मात्राएँ अभिकल्प व्योरा (design details) असम्बल फिटस निष्पादन व्योरा और सामग्री पूर्ति से मुक्त नहीं होगा तथा क्रेता का इस संविदा के अधीन कोई भी अधिकार प्रतिबंधित नहीं होगा ।

Approval/Comments conveyed herein neither relieve the contractor of his contractual obligations and his responsibilities, weights, quantities, design details assemble fits, performance particulars and conformity of the supplies with the Indian Statutory Laws as may be applicable, nor does it limits the purchaser's right under the contract.

अन्य टिप्पणी यदि कोई हो तो: Additional REMARKS (if any) :

सधन्यवाद ।

Thanking you.

भवदीय,
Yours truly,

(Sudhir Agarwal)
DGM (Engg-S/s)



क.सं. Sl. No.	व्हेडर की ड्राईंग/ दस्तावेज संख्या Vendor Drg./Doc. No.	पुनरीक्षण संख्या Rev. No.	शीर्षक Title	श्रेणी Category / Remarks
7 x 500MVA, (765/√3)/(400/√3)/33kV Single Phase Auto Transformer Kurnool s/s				
1	I09 02 366	A	Guaranteed Technical Particulars. (Sheet 01 To 09)	CAT – I
2	I00 02 340	-	General Arrangement Drawing (Sheet 01 To 07).	CAT – I
3	I00 02 341	-	Bill Of Material (Sheet 01 of 04)	CAT – I
4	I02 02 342	-	Foundation Details	CAT – I
5	I01 02 343	-	Valve Schedule Plate	CAT – II
6	I06 02 344	-	Transport Detail	CAT – IV
7	I01 02 345	-	Air Cell Type Conservator Oil Filling Plate	CAT – IV
8	I09 02 346	-	Core Assembly	CAT – IV
9	I09 02 347	-	Oil Flow Diagram	CAT – IV
10	I09 02 348	-	Winding Cross Section	CAT – IV
11	I03 02 349	-	List of Bushings	CAT – I
12	I03 02 353	-	36kV, 3150A Neutral Bushing Assembly.	CAT – I
13	I01 02 365	-	Rating And Diagram Plate (English) (Sheet 01 To 02)	CAT – II
14	-	-	Write-Up on OLTC Control Scheme (Sheet 01 To 05)	-
15	I04 02 354	-	OLTC Control Scheme (Sheet 01 To 02)	CAT – II
16	I04 02 355	-	GA of RTCC Panel (Sheet 01 To 02)	CAT – II
17	I04 02 356	-	Interconnection Scheme	CAT – II
18	I04 02 358	-	Cooler Control Scheme. (Sheet 01 To 28)	CAT – I
19	I04 02 359	-	Layout Of Instruments on Cooler Control Kiosk	CAT – I
20	I04 02 360	-	Marshalling Kiosk Scheme. (Sheet 01 To 08)	CAT – I
21	I04 02 361	-	Layout Of Instruments On Marshalling Kiosk	CAT – I
22	I04 02 362	-	Common Marshalling Box (Sheet 01 To 11)	CAT – I
23	I04 02 363	-	Layout of Instruments on Common Marshalling Box	CAT – I
24	I04 02 364	-	Interconnection Between Panels For Supply.	CAT – IV
25	I09 02 367	-	Over fluxing Curve, (Sheet 01 To 02)	CAT – IV
26	ITP/765/01	-	Transformer Test Procedure. (Sheet 01 To 16)	CAT – II
27	I04 02 487	-	List of Spare.	CAT – IV

श्रेणीयां /Categories:

- I. फेब्रिकेशन/निर्माण/टाईप टेस्टिंग हेतु अनुमोदित/ जारी ।

Approved/released for fabrication/construction.

- II. फेब्रिकेशन/निर्माण/टाईप टेस्टिंग हेतु अनुमोदित/ जारी वशर्तें दिये गये टिप्पणियों एवं आशोधनों को सम्मिलित किया जाए ।
कृपया रिवाइज्ड दस्तावेज अनुमोदनार्थ प्रस्तुत करें ।

Approved/released for fabrication/construction subject to incorporation of comments and modification as noted. Revised drawing required.



- III. टिप्पणियों सम्मिलित करने के उपरांत दस्तावेज को अनुमोदनार्थ प्रस्तुत करें ।
To be resubmitted for approval after incorporating the comments.
- IV. सूचनार्थ एवं रिकार्ड हेतु ।
For information and record.
- V. अनुमोदित नहीं ।
Not Approved.

नोट : इस पत्र के अनुसार दस्तावेज में दिये गये अनुमोदन द्वारा किसी भी मद के सबवेन्डर का अनुमोदन नहीं किया गया है । यह अनुमोदन गुणवत्ता विश्वास विभाग द्वारा प्राप्त करें ।

Note: The approval of the drawing conveyed vide this letter does not cover the approval of sub-vendor for make of the items. The approval in this respect is to be obtained from Quality Assurance Group.

(हस्ताक्षर)

(Signature)

Dimensions in millimeters (mm) except marked differently

