



ASIAN SWITCHGEAR PVT. LTD.
B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianswitchgear.com
Email: asianknp@gmail.Com

Asian Switchgear Pvt. Ltd.

DRAWING FOR APPROVAL

PANEL NAME	415V ACDB EXTENSION
CLIENT	 BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	 M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOHEY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOHEY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY:	1No.

APPROVED

Subject to the condition that you are not released from the responsibility of the work as per the contract.

Electrician's Certificate: Approved

Signature: [Signature]

Date: [Date]

CUSTOMER :  BIHAR STATE POWER TRANSMISSION CO. LTD.

CONTRACTOR:  M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

PROJECT : 132/33KV GSS BHOHEY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :  **ASIAN SWITCHGEAR PVT. LTD.**
B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
Ph: 0512-2416004 Fax: 0512-2416000
E-Mail: asianknp@gmail.Com

NAME	DATE	TITLE :
DRAWN GANESH	08.08.2024	415V ACDB EXTENSION
CHECKED GANESH	08.08.2024	TITLE SHEET
APPROVED		

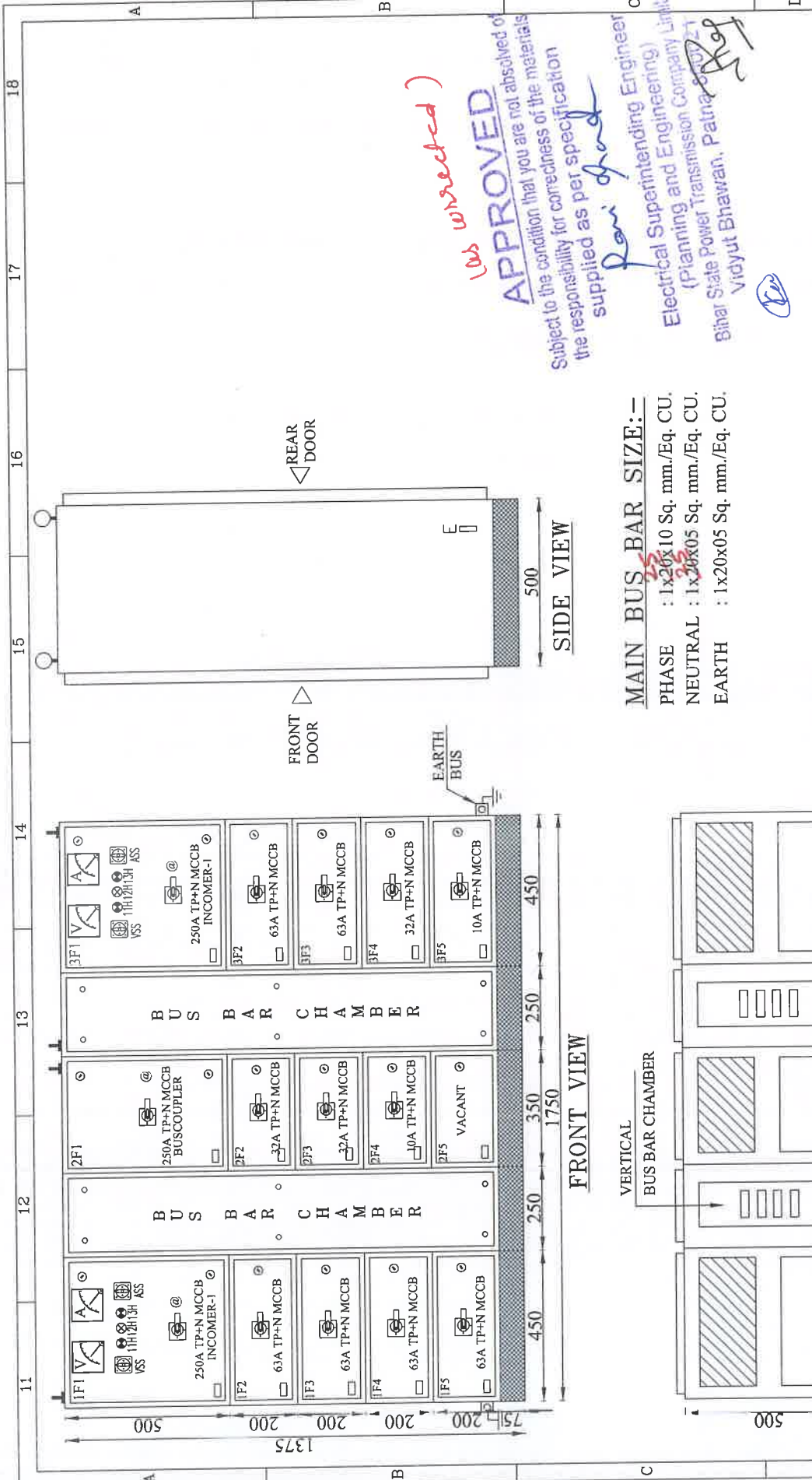
REV.01	04.11.2024	REV.03	SCALE
REV.02		REV.04	N.T.S.
ALL DIMENSION ARE IN mm NIT NO.:10/PR/BSPTCL/2023			
DIMENSION TOLERANCE ± 10MM.			

DRAWING NUMBER : ASPL/BSPTCL/24160L

JOB NUMBER : ASPL/2024/****

SHEET NO. 1 OF 6

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MAIN BUS BAR SIZE:-

PHASE : 1x20x10 Sq. mm./Eq. CU.

NEUTRAL : 1x20x5 Sq. mm./Eq. CU.

EARTH : 1x20x05 Sq. mm./Eq. CU.

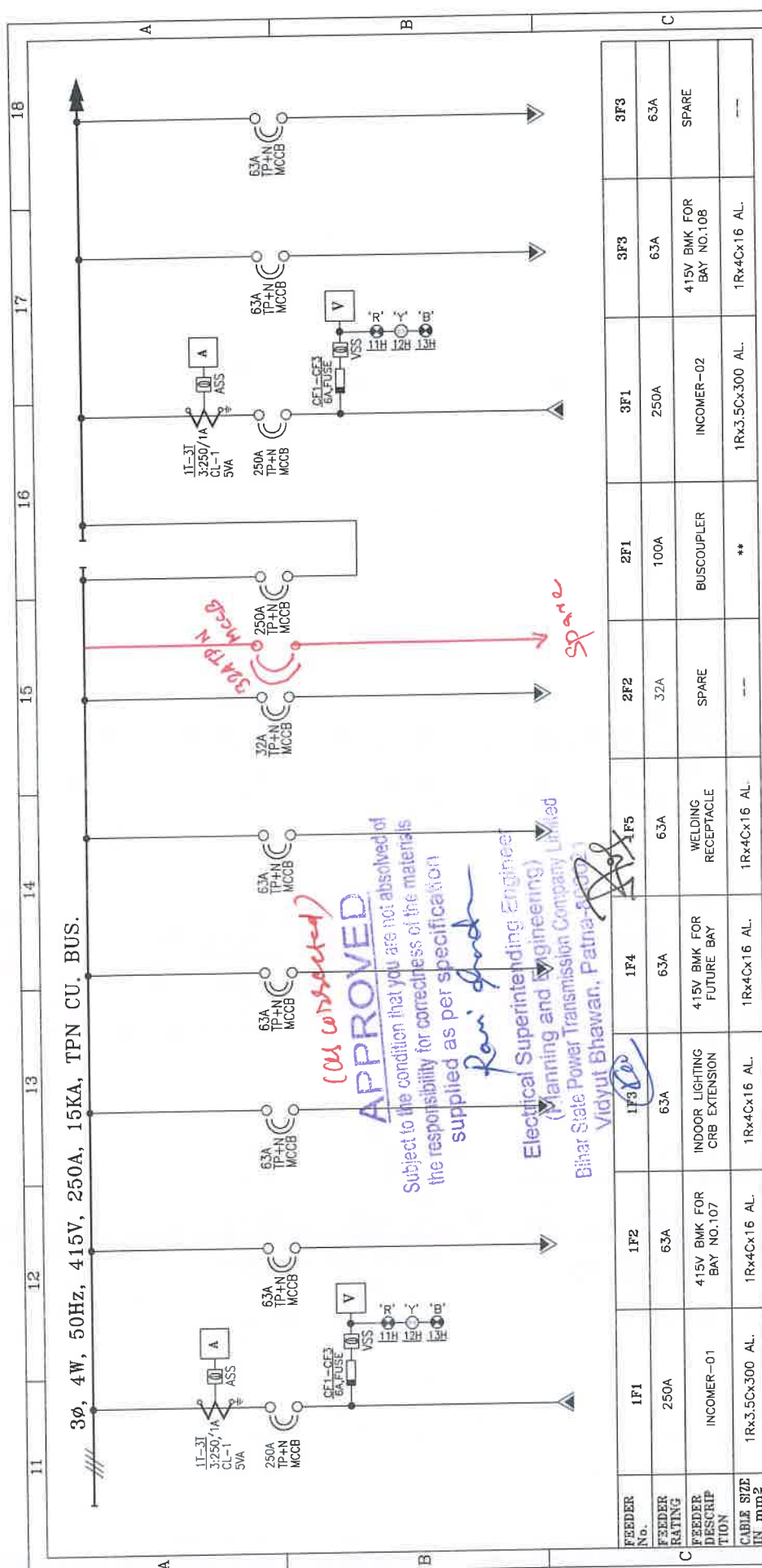
APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Ravi Shankar
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
 MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17, Kumaon Industrial Estate, Greater Noida (UP) 201 012 www.asian-switchgear.com E-Mail: asianpl@gmail.com	DRAWN	NAME	DATE	TITLE :		
	CHECKED	GANESH	08.08.2024	415V ACDB EXTENSION		
	APPROVED	GANESH	08.08.2024	GENERAL ARRANGEMENT		
		REV.01	04.11.2024	REV.03	SCALE	
		REV.02	---	REV.04	N.T.S.	
DRAWING NUMBER : ASPL/BSPTCL/24160L	ALL DIMENSION ARE IN mm. INT NO. :10/PR/BSPTCL/2023			SHEET NO.		
JOB NUMBER : ASPL/2024/****	DIMENSION TOLERANCE $\pm$ 10MM.			7 OF 6		

@:- MECHANICAL INTERLOCKED
CABLE ENTRY - BOTTOM





FEEDER No.	1F1	1F2	1F3	1F4	1F5	2F2	2F1	3F1	3F3	3F3
FEEDER RATING	250A	63A	63A	63A	63A	32A	100A	250A	63A	63A
FEEDER DESCRIPTION	INCOMER-01	415V BMK FOR BAY NO.107	INDOOR LIGHTING CRB EXTENSION	415V BMK FOR FUTURE BAY	WELDING RECEPTACLE	SPARE	BUSCOUPLER	INCOMER-02	415V BMK FOR BAY NO.108	SPARE
CABLE SIZE IN mm ²	1Rx3.5Cx300 AL.	1Rx4Cx16 AL.	1Rx4Cx16 AL.	1Rx4Cx16 AL.	1Rx4Cx16 AL.	---	**	1Rx3.5Cx300 AL.	1Rx4Cx16 AL.	---

GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND NON COMPARTMENTALISED.
3. THE PANEL SHALL BE FABRICATED WITH - 2.01.6 MM. CRCA.
4. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
5. THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
6. EARTH STUD SHALL BE PROVIDED
7. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD:
 - A. AC CONTROL CKT. - 1.5 SQ MM RED. BLACK
 - B. GROUNDING - 2.5 SQ MM GREEN
8. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
9. PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
10. CABLE ENTRY AS PER G.A. DRAWING.
11. PAINT SHADE - SMOKE GREY (692 OF IS:5)

BIHAR STATE POWER TRANSMISSION CO. LTD.

CONTRACTOR:

PROJECT:	132/33KV GSS BHOREY (DIST.GOPALGANJ), BIHAR
----------	---

 MANUFACTURER : Asian Switchgear Pvt. Ltd. 10th Floor, Industrial Estate Road, 147, Taramani Industrial Estate, (U.P.) Chennai-600 044, Tamil Nadu-600 044 Tel: 044-24410000, Fax: 044-24410000 E-Mail: info@asianindia.com	NAME GANESH		DATE 08.08.2024	TITLE : 415V ACDB EXTENSION SINGLE LINE DRAWING
	DRAWN GANESH		08.08.2024	
	CHECKED GANESH		08.08.2024	
	APPROVED			
DRAWING NUMBER : ASPL/BSPTCL/24160L				
JOB NUMBER : ASPL/2024/****				
REV.01		REV.03		SCALE N.T.S.
REV.02		REV.04		
ALL DIMENSION ARE IN mm; NIT NO.:10/PR/BSPTCL/2023				
DIMENSION TOLERANCE ± 10MM.				
SHEET NO. 3 OF 6				



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or for any other purpose without their written permission



3 ϕ , 4W, 50Hz, 415V, 250A, 15KA, TPN CU. BUS.



FEEDER No.	3F4	2F3	3F5	2F4
FEEDER RATING	32A	32A	10A	10A
FEEDER DESCRIPTION	OUTDOOR LIGHTING	AUX. SUPPLY 132KV CRP	AC AUX. SUPPLY 220V DCDB	SPARE
CABLE SIZE IN mm2	1R4Cx16 AL.	1R4Cx6 AL.	1R4Cx6 AL.	--

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

For
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-80002

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOKEY (DIST. GOPALGANJ), BIHAR
MANUFACTURER:		ASIAN Switchgear Pvt. Ltd. Asian Switchgear Pvt. Ltd., Kankar Bazar, Patna-80002 Ph: 012-2410000, Fax: 012-2410002 E-Mail: india@asgindia.com
DRAWING NUMBER:	ASPL/BSPTCL/24160L	REV/01 04.11.2024 REV/02 -- REV/03 -- REV/04 --
JOB NUMBER:	ASPL/2024/****	ALL DIMENSION ARE IN mm, INT NO.: 10/PR/BSPTCL/2023 DIMENSION TOLERANCE $\pm$ 10MM.
		TITLE: 415V ACDB EXTENSION SINGLE LINE DRAWING SCALE N.T.S. SHEET NO. 4 OF 6

BILL OF MATERIAL

Sr. No.	ITEM DESCRIPTION	MAKE	Qty
1	MCCB-250A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE, EXTENDED- ROM & SPREADER	C&S	3
2	MCCB-63A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE, EXTENDED- ROM	C&S	6
3	MCCB-32A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE, EXTENDED- ROM	C&S	3-4
4	MCCB-10A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE, EXTENDED- ROM	C&S	2
5	ANALOG AMP METER 96Sq.mm, 90DEG. CTR-/1A, 0-250A	RISHABH/AE	2
6	ANALOG VOLT METER 96Sq.mm, 0-500V, 90DEG.	RISHABH/AE	2
7	AMMETER SELECTOR SWITCH 3POSITION WITH OFF, 6A	VAISHNO/SURDHI	2
8	VOLTMETER SELECTOR SWITCH 3POSITION WITH OFF, 6A	VAISHNO/SURDHI	2
9	CURRENT TRANSFORMER, 250/1A, CL-1.5VA RESIN CAST	AE/ASIAN	6
10	LED INDICATION LAMP, 230V AC, DIA. 22.5mm- RED	C&S/VAISHNO/SURDHI	2
11	LED INDICATION LAMP, 230VAC, DIA. 22.5mm- YELLOW	C&S/VAISHNO/SURDHI	2
12	LED INDICATION LAMP, 230V AC, DIA. 22.5mm- BLUE	C&S/VAISHNO/SURDHI	2
13	CONTROL FUSE BASE WITH HRC 6A	C&S	6

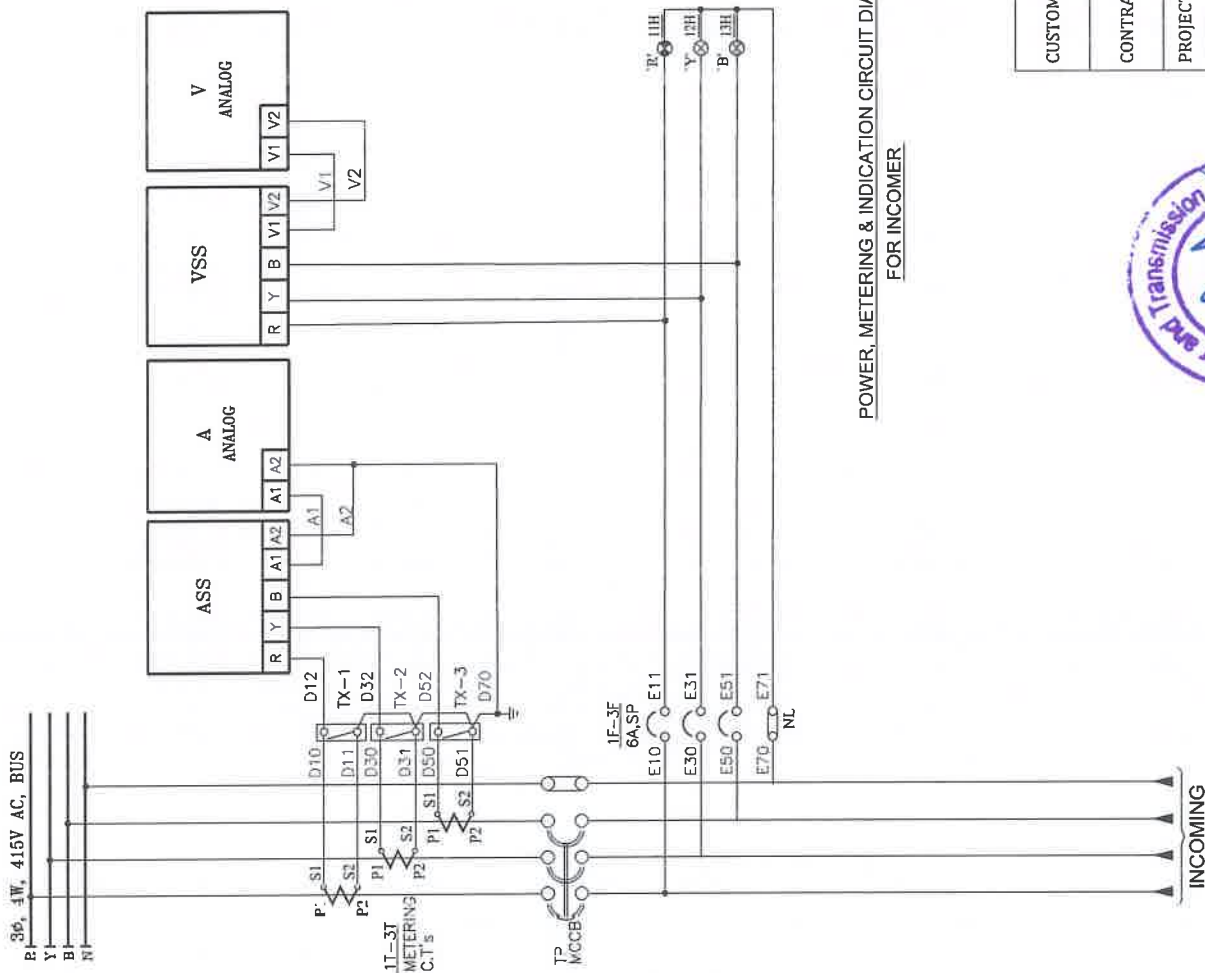
(As corrected)
APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Shankar
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021



CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR
MANUFACTURER:		TITLE:
		415V ACDB EXTENSION
DRAWN		BILL OF MATERIAL
CHECKED		
APPROVED		
DRAWING NUMBER : ASPL/BSPTCL/24-160L		REV.01 04.11.2024
JOB NUMBER : ASPL/2024/****		REV.02
		REV.03
		REV.04
		SCALE N.T.S.
		SHEET NO. 5 OF 6

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**POWER, METERING & INDICATION CIRCUIT DIAGRAM
FOR INCOMER**

- * Auto Changeover Scheme to be provided for ACDB incoming, Bus couplers & DG set.
- * Protection & Metering scheme to be provided as per TS.
i.e inclusion of UV/OV relays etc & ELF relays etc as per TS & BoD of NIT.

APPROVED

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Ravi Jadhav
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Widvut Bhawan, Patna-800021

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
 MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Bina Industrial Estate Karama (U.P.) Lucknow - 226002 E-Mail: info@asian-switchgear.com E-Mail: indiaap@gmail.com	NAME	DATE	TITLE :			
	DRAWN	GANESH	08.08.2024	415V ACDB EXTENSION		
	CHECKED	GANESH	08.08.2024	SCHEMATIC DIAGRAM		
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160L		REV.01	04.11.2024	REV.03	SCALE	
		REV.02		REV.04	N.T.S	
JOB NUMBER : ASPL/2024/*****	ALL DIMENSION ARE IN mm. NIT NO :10/PR/BSPTCL/2023				SHEET NO. 6 OF 6	
	DIMENSION TOLERANCE $\pm$ 10MM.					



ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianswitchgear.com
Email: asianknp@gmail.com

Asian Switchgear Pvt. Ltd.

DRAWING FOR APPROVAL

PANEL NAME	220V DCDB-EXTENSION
CLIENT	 BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	 M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Remi Datta

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited

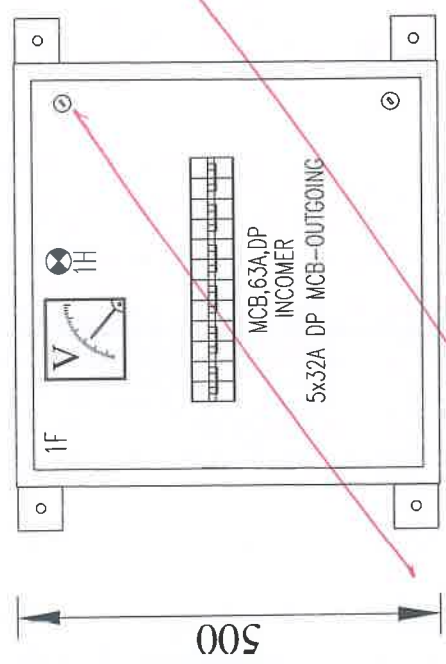
Vidhyut Bhawan, Patna-800021



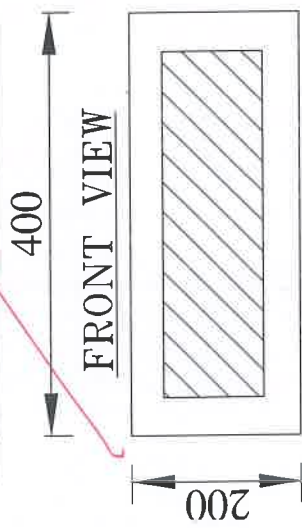


CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.									
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED									
PROJECT:		132/33KV GSS BHOOREY (DIST. GOPALGANJ), BIHAR									
MANUFACTURER:		<table><tr><td>DRAWN</td><td>NAME</td><td>DATE</td></tr><tr><td>CHECKED</td><td>GANESH</td><td>08.08.2024</td></tr><tr><td>APPROVED</td><td>GANESH</td><td>08.08.2024</td></tr></table>	DRAWN	NAME	DATE	CHECKED	GANESH	08.08.2024	APPROVED	GANESH	08.08.2024
DRAWN	NAME	DATE									
CHECKED	GANESH	08.08.2024									
APPROVED	GANESH	08.08.2024									
DRAWING NUMBER:	ASPL/BSPTCL/24160M	REV.01 04.11.2024 REV.02 --- REV.03 --- REV.04 ---									
JOB NUMBER:	ASPL/2024/****	SCALE N.T.S.									
		SHEET NO. 1 OF 4									

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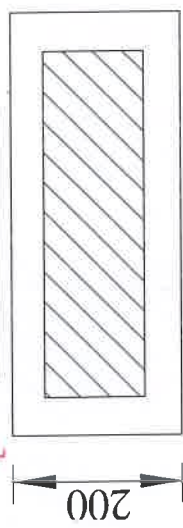


Should be revised as per comments.



FRONT VIEW

SIDE VIEW



BOTTOM VIEW

GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, WALL MOUNTED AND NON COMPARTMENTALISED.
3. THE PANEL SHALL BE FABRICATED WITH -2.0/1.6 MM. CRCA.
4. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
5. THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
6. EARTH STUD SHALL BE PROVIDED
7. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
 - A. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
 - B. DC CONTROL CKT. - 1.5 SQ MM GRAY
 - C. GROUNDING - 2.5 SQ MM GREEN
8. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
9. PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
10. CABLE ENTRY AS PER G.A. DRAWING.
11. PAINT SHADE - SMOKE GREY (692 OF IS-5)

(M corrected)

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

For: [Signature]

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidvut Bhawan, Patna-800021



CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.										
CONTRACTOR :	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED										
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR										
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17, Sector-10, Industrial Estate, Kalyan (M.P.) Pin-475131 (M.P.), Fax: 0373-2416602 www.asiansg-india.com E-Mail: asiansg@gmail.com 	DRAWN	NAME	DATE	TITLE :				SCALE			
	CHECKED	GANESH	08.08.2024	220V DCDB-EXTENSION				N.T.S.			
	APPROVED	GANESH	08.08.2024	GENERAL ARRANGEMENT				DRAWING			
DRAWING NUMBER : ASPL/BSPTCL/24160M	REV.01	04.11.2024		REV.03						SCALE	
	REV.02			REV.04						N.T.S.	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm, NIT NO. 110/PR/BSPTCL/2023										SHEET NO.
	DIMENSION TOLERANCE ± 10MM.										2 OF 4

TITLE:
220V DCDB-EXTENSION
GENERAL ARRANGEMENT DRAWING



Ref No. ABN/24-25/10/BSPTCL/RL-977

Date: 05.11.2024

To
The Chief Engineer (P&E),
Bihar State Power Transmission Company Limited,
4th Floor, Vidyut Bhawan,
Jawahar Lal Nehru Marg,
Patna (Bihar) PIN 800001.

Sub: Submission of revised drawing & GTP of LT Switchgear of M/s Asian Switchgear Pvt. Ltd. for approval.

Name of Work: Design, manufacture, testing at manufacture's works and delivery of equipments required for Construction of 2x50MVA, 132/33KV GSS Bhorey (Dist. Gopalganj) including residential quarter with Construction of its associated 02nos. 132KV Line bays at GSS Hathua & Construction of its associated 132KV D/C Bhorey-Hathua Tr. Line with ACSR Panther Conductor (Line length-60RKM) on turnkey basis.

Ref: N.I.T NO. 10/PR/BSPTCL/2023
NOA No. 12 & 13 Trans/Misc./P-1/21/2023 Dated 01.09.2023

Dear Sir,

This is in reference to the above subject. We are submitting the revised drawing & GTP of LT Switchgear of M/s Asian Switchgear Pvt. Ltd. for your kind approval.

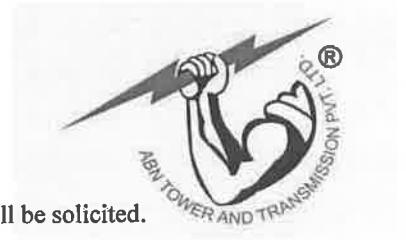
The details are tabulated below:

Sl. No.	Description of Drawing	Drawing No.
1	STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 415V MSB, 415V ACDB , MLDB , ELDB ,LIGHTING PANELS, & BMK	-
2	STANDARD GUARANTEED TECHNICAL PERTICULARS FOR STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 220V DCDB & 48V DCDB	-
3 ✓	415V Main Switch Board	ASPL/BSPTCL/24160A
4 ✓	415V ACDB	ASPL/BSPTCL/24160B
5 ✓	415V MLDB	ASPL/BSPTCL/24160C
6 ✓	415V ELDB	ASPL/BSPTCL/24160D
7 ✓	220V DCDB	ASPL/BSPTCL/24160E
8 ✓	48V DCDB	ASPL/BSPTCL/24160F
9 ✓	LIGHTING PANEL (INDOOR) TYPE ACP-1	ASPL/BSPTCL/24160G
10 ✓	LIGHTING PANEL (OUTDOOR) TYPE ACP-2	ASPL/BSPTCL/24160H
11 ✓	LIGHTING PANEL (OUTDOOR) TYPE ACP-3	ASPL/BSPTCL/24160I
12 ✓	LIGHTING PANEL (INDOOR) TYPE DCP	ASPL/BSPTCL/24160J
13 ✓	132 KV BMK & 33 KV BMK	ASPL/BSPTCL/24160K
14 ✓	415V ACDB EXTENSION	ASPL/BSPTCL/24160L
15 ✓	220V DCDB-EXTENSION	ASPL/BSPTCL/24160M

ABN Tower and Transmission Private Limited

CIN No.: U51109WB2005PTC104244

Godrej Genesis Building, Unit No. 609, Plot No. XI, Block EP & GP, Sector-V, Saltlake Kolkata - 700091
Phone No. : +91 33 4800 1325 | E-mail: info@abntower.com / Website: www.abntower.com



Kindly give your approval for the same at the earliest. Your early action in this regard will be solicited.

Assuring you with the best of our service and attention at all times.

Thanks & Regards,
For **ABN Tower & Transmission Pvt. Ltd.**



Authorized Signatory

ABN Tower and Transmission Private Limited

CIN No.: U51109WB2005PTC104244

Godrej Genesis Building, Unit No. 609, Plot No. XI, Block EP & GP, Sector-V, Saltlake Kolkata - 700091
Phone No. : +91 33 4800 1325 | E-mail: info@abntower.com / Website: www.abntower.com

ASIAN SWITCHGEAR PVT.LTD.
B-17 Rooma Industrial Estate Kanpur (U.P.)
 E-Mail: info@asianswitchgear.com
 E-Mail: asianknp@gmail.com
www.asianswitchgear.com



**STANDARD GUARANTEED TECHNICAL PERTICULARS FOR
 415V MSB, 415V ACDB , MLDB , ELDB ,LIGHTING PANELS, & BMK**

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

- | | |
|--|--------------------------|
| 7. Rated short-circuits Breaking capacity (Ics) | : 20KA (RMS) |
| 8. Rated short-circuits Making capacity | : 42KA (RMS) |
| 9. Short time withstands current for 1 sec. duration | : 20KA (RMS) For 1Sec. |
| 10. No. of Auxiliary contacts | : 4NO+4NC |
| 11. Operating Position | : Service-Test-Isolation |
| 12. Rated Voltage and pickup burden of | |
| a. Trip coil | : 220V DC/200W |
| b. Closing coil | : 220V DC/200W |
| 13. Voltage & Power consumption of Spring charging motor | : 200 W, 220V DC |
| 14. Indication of service / Test /Isolated Position | : Yes |
| 15. ACB Have trip free and Anti-pumping features | : Provided |

APPROVED
 Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

 Electrical Superintending Engineer
 (Planning and Engineering)
 Bihar State Power Transmission Company Limited
 Vidyut Bhawan, Patna-800021
 

MOULDED CASE CIRCUIT BREAKER (MCCB Motorized Type)

- | | |
|------------------------------------|--|
| 1. Make | : C&S |
| 2. Type | : Thermal Release, Manual/Electrical Operated Type |
| 3. Nos. of Pole | : 4 |
| 4. Operating Voltage and frequency | : 415V , 50Hz |
| 5. Rated operating duty | : As Per IS |
| 6. Rated current | : 250A/100A |

ASIAN SWITCHGEAR PVT.LTD.
B-17 Rooma Industrial Estate Kanpur (U.P.)
 E-Mail: info@asianswitchgear.com
 E-Mail: asianknp@gmail.com
www.asianswitchgear.com



**STANDARD GUARANTEED TECHNICAL PARTICULARS FOR
 415V MSB, 415V ACDB, MLDB, ELDB, LIGHTING PANELS, & BMK**

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

- | | |
|---|-------------------|
| 7. Rated short-circuits Breaking capacity (Ics) | : 20KA (RMS) |
| 8. Rated short-circuits Making capacity | : 42KA (RMS) |
| 9. No. of Auxiliary contacts | : 1NO+1NC |
| 8. Rated Voltage and pickup burden of | |
| a. Trip coil | : 220V DC/50VA |
| b. Closing coil | : 220V DC/50VA |
| 9. Voltage & Power consumption of Spring charging motor | : 200 W , 220V DC |

APPROVED
 Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

 Electrical Superintending Engineer
 (Planning and Engineering)
 Bihar State Power Transmission Company Limited
 Vidyut Bhawan, Patna-800021
 

MOULDED CASE CIRCUIT BREAKER (MCCB)

- | | |
|---|---|
| 1. Make | : C&S |
| 2. Type | : Thermal Release, Manual Operated Type |
| 3. Nos. of Pole | : 4/3 |
| 4. Operating Voltage and frequency | : 415V , 50Hz |
| 5. Rated operating duty | : As Per IS |
| 6. Rated current | : As Per Drawing |
| 7. Rated short-circuits Breaking capacity (Ics) | : 20KA (RMS) |
| 8. Rated short-circuits Making capacity | : 42KA (RMS) |

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**STANDARD GUARANTEED TECHNICAL PARTICULARS FOR
415V MSB, 415V ACDB, MLDB, ELDB, LIGHTING PANELS, & BMK**

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

POWER CONTACTOR

- | | |
|----------------------|---------------------------------|
| 1. Make | : C&S |
| 2. Type | : AC-1/3 |
| 3. Nos. of Pole | : 3 |
| 4. Operating Voltage | : 415V AC, Coil Voltage-230V AC |
| 5. Rated current | : As Per Drawing |

MINIATURE CIRCUIT BREAKER (MCB)

- | | |
|----------------------|---------------------------------|
| 1. Make | : C&S |
| 2. Type | : C-CURVE, Manual Operated Type |
| 3. Nos. of Pole | : 3/2/1 |
| 4. Operating Voltage | : 415V/230V AC, 10kA |
| 5. Rated current | : As Per Drawing |

APPROVED

Subject to the condition that you are not absolved of
the responsibility for correctness of the materials
supplied as per specification

Ravi Jand

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800002

(Signature)

(Signature)

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**STANDARD GUARANTEED TECHNICAL PERTICULARS FOR
 415V MSB, 415V ACDB , MLDB , ELDB ,LIGHTING PANELS, & BMK**

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

POWER BUSBAR AND INSULATORS

- | | |
|---|-----------------------|
| 1. Material of Bus Bar | : Copper |
| 2. Bare/Painted epoxy Insulated / sleeved | : Heat Shrink Sleeved |
| 3. Size | : As per Drawing |
| 4. Current Rating | : As Per Requirement |
| 5. Temp Rise above Ambient temp. (50 °C) | : 55 °C |
| 6. Bus Bar Clearance in Air | |
| (a) Between phases | : 20mm (Minimum) |
| (b) Between phases and earth | : 20mm (Minimum) |
| 7. Bus bar Support & Insulator | : SMC/DMC |
| 8. Voltage | : 415V AC |
| 9. 1Minut H.V. Withstand Test | : 2.5KV AC |

APPROVED
 Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
for hand
 Electrical Superintending Engineer
 (Planning and Engineering)
 Bihar State Power Transmission Company Limited
 Vidyut Bhawan, Patna-800002

(Note:-Clearance between Terminals at Components shall be as per Applicable Individual Standard for Components Manufacturer)

CURRENT TRANSFORMER(CT)

- | | |
|---------------------------|---------------------------------|
| 1. Make | : AE/ASIAN |
| 2. Type | : Cast Resin, Bar primary (BPL) |
| 3. Rating | : As Per Requirement |
| 4. Accuracy Class/Voltage | : C1-1/5P15/PS/415V AC |

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**STANDARD GUARANTEED TECHNICAL PARTICULARS FOR
 415V MSB, 415V ACDB, MLDB, ELDB, LIGHTING PANELS, & BMK**

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

5. Class of Insulation

: E or Better

6. CT Secondary Current Rating

: 1A

VOLTAGE TRANSFORMER(PT)

1. Make

: V-CON/ASIAN

2. Type

: Dry Type

3. Rating

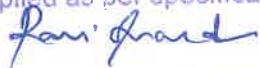
: 415/√3 V/110/√3 V

4. Accuracy Class/Voltage

: CI-0.5, 50VA

5. Method of connection Primary/Secondary

: Star/Star

APPROVED
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 Electrical Superintending Engineer
 (Planning and Engineering)
 Bihar State Power Transmission Company Limited
 Vidut Bhawan, Patna-800021





METERING

1. Make

: RISHABH/AE

2. Ammeter/Voltmeter Type

: Analog 96Sq.mm.

3. Energy Meter Type(MFM)

: Digital 96Sq.mm.

4. Rating

: 1A /415V AC

5. Accuracy Class

: CI-1/1.5

INDICATION

1. Make

: C&S/VAISHNO/SURDHI

2. Type

: Led Type

3. Size

: 22.5 Sq.mm.

4. Rating

: 64V AC/230V AC/220V DC

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**STANDARD GUARANTEED TECHNICAL PERTICULARS FOR
 415V MSB, 415V ACDB , MLDB , ELDB ,LIGHTING PANELS, & BMK**

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

5. Colour

: As Per Drawing

RELAYS

1. Make
2. Application
3. Coil Burden
4. Setting Range

- : C&S/JVS
- : Over current ,Earth fault , Under & Over Voltage
- : 7.5 to 30VA
- : As per requirement

APPROVED

Subject to the condition that you are not absolved of
 the responsibility for correctness of the materials
 supplied as per specification



Electrical Superintending Engineer
 (Planning and Engineering)
 Bihar State Power Transmission Company Limited
 Vidyut Bhawan, Patna-800001





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www.asianswitchgear.com



**STANDARD GUARANTEED TECHNICAL PERTICULARS FOR
 STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 220V DCDB & 48V DCDB**

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

GENERAL

- | | |
|---------------------------------------|-------------------------------------|
| 1. Manufacturer's Name | : Asian Switchgear Pvt. Ltd. Kanpur |
| 2. Rated Voltage | : 220V/48V DC |
| 3. Enclosure sheet metal details | : 2.0/1.6 mm. (14/16SWG CRCA) |
| 4. Painting shade | |
| (a) External surfaces | : SMOKE GREY (692 OF IS:5) |
| 5. Internal surfaces | : SMOKE GREY (692 OF IS:5) |
| 6. Ambient Temperature | : 50 °C |
| 7. Material of the support insulators | : SMC/DMC |
| 8. Panel Construction Type | : Indoor Type , Fixed Type |

APPROVED
 Subject to the condition that you are not absolved of
 the responsibility for correctness of the materials
 supplied as per specification

[Signature]

Electrical Superintending Engineer
 (Planning and Engineering)

Bihar State Power Transmission Company Limited
 Vidya Bhawan, Patna-800021

[Signature]

[Signature]

MOULDED CASE CIRCUIT BREAKER (MCCB)

- | | |
|---|---|
| 1. Make | : C&S |
| 2. Type | : Thermal Release, Manual Operated Type |
| 3. Nos. of Pole | : 2 |
| 4. Operating Voltage | : 220V/48V DC |
| 5. Rated operating duty | : As Per IS |
| 6. Rated current | : As Per Drawing (100A) |
| 7. Rated short-circuits Breaking capacity (Ics) | : 4KA |

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**STANDARD GUARANTEED TECHNICAL PARTICULARS FOR
 STANDARD GUARANTEED TECHNICAL PARTICULARS FOR 220V DCDB & 48V DCDB**

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

8.

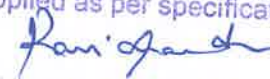
Rated short-circuits Making capacity : 8.4KA

MINIATURE CIRCUIT BREAKER (MCB)

- | | |
|----------------------|------------------------------------|
| 1. Make | : C&S |
| 2. Type | : DC, Manual Operated Type |
| 3. Nos. of Pole | : 2 |
| 4. Operating Voltage | : 220V/48V DC , 4kA |
| 5. Rated current | : As Per Drawing(32A, 16A, DP 4kA) |

ISOLATING SWITCHES

- | | |
|-------------------------|-------------------------|
| 1. Make | : C&S |
| 2. Type | : Manual Operated Type |
| 3. Nos. of Pole | : 2 |
| 4. Operating Voltage | : 220V/48V DC |
| 5. Rated operating duty | : As Per IS |
| 6. Rated current | : As Per Drawing (100A) |

APPROVED
 Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

 Electrical Superintending Engineer
 (Planning and Engineering)
 Bihar State Power Transmission Company Limited
 Vidyut Bhawan, Patna-800021
 

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STANDARD GUARANTEED TECHNICAL PERTICULARS FOR STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 220V DCDB & 48V DCDB

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

POWER BUSBAR AND INSULATORS

- | | |
|---|-----------------------|
| 1. Material of Bus Bar | : Copper |
| 2. Bare/Painted epoxy Insulated / sleeved | : Heat Shrink Sleeved |
| 3. Size | : As per Drawing |
| 4. Current Rating | : As Per Requirement |
| 5. Temp Rise above Ambient temp. (50 °C) | : 55 °C |
| 6. Bus Bar Clearance in Air | |
| (a) Between +Ve & -Ve | : 20mm (Minimum) |
| (b) Between +Ve , -Ve and earth | : 20mm (Minimum) |
| 7. Bus bar Support & Insulator | : SMC/DMC |
| 8. Voltage | : 220V/48V DC |

METERING

- | | |
|---------------------------|----------------------|
| 1. Make | : AE/RISHABH |
| 2. Ammeter/Voltmeter Type | : Analog 96Sq.mm. |
| 3. Rating | : 75mV , 220V/48V DC |
| 4. Accuracy Class/Voltage | : 1.5 |

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Ran. Jank

Electrical Superintending Engineer
(Planning and Engineering)

Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

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ABJ

(Note:-Clearance between Terminals at Components shall be as per Applicable Individual Standard for Components Manufacturer)

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**STANDARD GUARANTEED TECHNICAL PERTICULARS FOR
 STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 220V DCDB & 48V DCDB**

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOrey (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOrey-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

RELAYS

- | | |
|------------------|---|
| 1. Make | : C&S/JVS |
| 2. Application | : Under/over Voltage ,Battery Earth Fault |
| 3. Coil Burden | : 7.5 to 30VA |
| 4. Setting Range | : As per requirement |

APPROVED
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 Electrical Superintending Engineer
 (Planning and Engineering)
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 Vidyut Bhawan, Patna-800021

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**STANDARD GUARANTEED TECHNICAL PARTICULARS FOR
 415V MSB, 415V ACDB, MLDB, ELDB, LIGHTING PANELS, & BMK**

Drawing/GTP :-		
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CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

GENERAL

- | | |
|---------------------------------------|---|
| 1. Manufacturer's Name | : Asian Switchgear Pvt. Ltd. Kanpur |
| 2. Rated Voltage & Frequency | : 415V± 10% AC & 50 Hz ± 5% |
| 3. Enclosure sheet metal details | : 2.0/1.6 mm. (14/16SWG CRCA) |
| 4. Painting shade | |
| (a) External surfaces | : SMOKE GREY (692 OF IS:5) |
| (b) Internal surfaces | : SMOKE GREY (692 OF IS:5) |
| 5. Ambient Temperature | : 50 °C |
| 6. Material of the support insulators | : SMC/DMC |
| 7. Panel Construction Type | : Indoor Type/ Outdoor Type, Fixed Type |

AIR CIRCUIT BREAKER (ACB)

- | | |
|------------------------------------|---|
| 1. Make | : C&S |
| 2. Type | : Air Break, Thermal Release, Manual/Electrical Operated Type |
| 3. Nos. of Pole | : 3 (As Per Drawing) |
| 4. Operating Voltage and frequency | : 415V, 50Hz |
| 5. Rated operating duty | : As Per IS |
| 6. Rated current | : 630A |

APPROVED
 Subject to the condition that you are not absolved of
 the responsibility for correctness of the materials
 supplied as per specification
[Signature]
 Electrical Superintending Engineer
 (Planning and Engineering)
 Bihar State Power Transmission Company Limited
 Vidyut Bhawan, Patna-800021
[Signature]



ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
Email: asianknp@gmail.Com

Asian Switchgear Pvt. Ltd.

DRAWING FOR APPROVAL

PANEL NAME

415V MAIN SWITCH BOARD

CLIENT



BIHAR STATE POWER TRANSMISSION COMPANY
LIMITED(BSPTCL)

CONTRACTOR



M/S. ABN TOWER AND TRANSMISSION PRIVATE
LIMITED

PROJECT.

DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF
EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY
(DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS
ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS
ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR
(LINE LENGTH-60RKM) ON TURNKEY BASIS.

PO NO:

ABN/24-25/BSPTCL/10/PO-160

NIT No.

10/PR/BSPTCL/2023

QTY.

1No.

APPROVED

Subject to the condition that you are not absolved of
the responsibility for correctness of the materials
supplied as per specification

Pan Singh

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800021

[Signature]

[Signature]

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.			
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED			
PROJECT :		132/33KV GSS BHOOREY (DIST. GOPALGANJ), BIHAR			
 MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Pin-208002 E-Mail: asianknp@gmail.Com	DRAWN	NAME	DATE	TITLE :	
	CHECKED	GANESH	08.08.2024	415V MAIN SWITCH BOARD	
	APPROVED	GANESH	08.08.2024	TITLE SHEET	
DRAWING NUMBER : ASPL/BSPTCL/24160A		REV.01	04.11.2024	REV.03	SCALE
JOB NUMBER : ASPL/2024/*****		REV.02	---	REV.04	N.T.S.
ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO.	
DIMENSION TOLERANCE ± 10MM.				1 OF 14	

GENERAL NOTES FOR LT SWITCH BOARD :-

- ALL DIMENSIONS ARE IN MM.
- THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND COMPARTMENTALISED , CONFIRM TO IS:8623
- THE PANEL SHALL BE SUITABLE FOR 3Ø, 4W, 415V±10% AC, 50±5% HZ SUPPLY.
- THE PANEL SHALL BE FABRICATED WITH
(i) BASE CHANNEL - ISMC-75
(ii) STRUCTURE & MOUNTING PLATE - 2.0 mm. CRCA
(iii) DOOR, COVER & PARTITION - 1.6 mm. CRCA
(iv) GLAND PLATE - 3.0 mm. CRCA
- RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
- THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
- BUS BAR SHALL BE OF ELECTROLYTIC GRADE COPPER SUPPORTED ON NON HYGROSCOPIC, NON CARBONISING, CORROSION RESISTANCE, SMC/DMC INSULATORS.
- BUS BAR SHALL BE INSULATED HEAT SHRINKABLE COLOURED PVC SLEEVES RED, YELLOW, BLUE AND BLACK FOR IDENTIFICATION.
- EARTH BUS SHALL BE PROVIDED THROUGHOUT THE PANEL LENGTH
- CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
 - AC VOLTAGE CIRCUIT - 1.5 SQ MM RED, YELLOW, BLUE, BLACK
 - CURRENT CIRCUIT - 2.5 SQ MM RED, YELLOW, BLUE, BLACK
 - AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
 - DC CONTROL CKT. - 1.5 SQ MM GREY
 - GROUNDING - 2.5 SQ MM GREEN

- THE MINIMUM CLEARANCE IN MAIN BUSBARS SHALL BE AS FOLLOWS:
 - BETWEEN PHASE TO PHASE - 25 MM
 - BETWEEN PHASE TO NEUTRAL - 25 MM
 - BETWEEN PHASE TO EARTH - 25 MM
 - BETWEEN NEUTRAL TO EARTH - 25 MM
- NOTE:-CLEARANCE BETWEEN TERMINALS AT COMPONENTS SHALL BE AS PER APPLICABLE INDIVIDUAL STANDARDS FOR COMPONENTS MANUFACTURER.
- NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
 - PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
 - CABLE ENTRY AS PER G.A. DRAWING.
 - PAINT SHADE - SMOKE GREY (692 OF IS:5)
 - AUX. SUPPLY 220V DC NOT IN ASPL SCOPE

APPROVED

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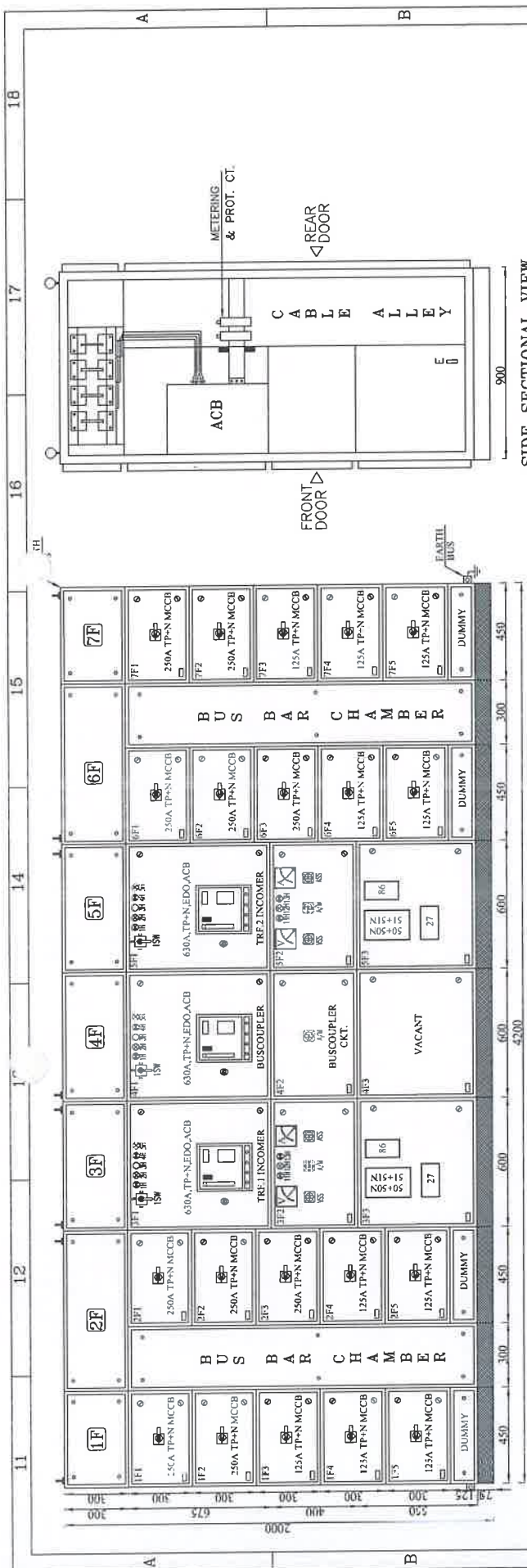
Ravi Shankar
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800022

[Signature]

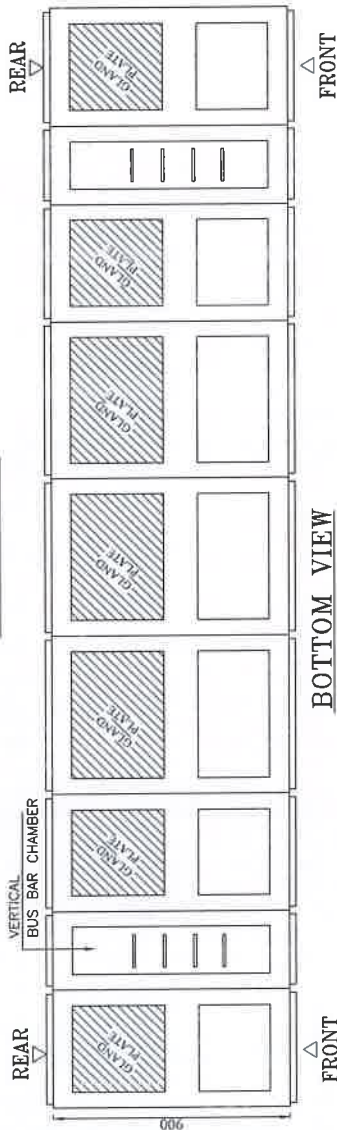
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CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANI), BIHAR
MANUFACTURER:  Asian Switchgear Pvt. Ltd., Plot No. 241/1004, Extn. 1013-2/10002, B-Model, Industrial Estate, Gurgaon, Haryana-122002		TITLE: 415V MAIN SWITCH BOARD GENERAL NOTES
DRAWING NUMBER: ASPL/BSPTCL/24160A		NAME GANESH GANESH APPROVED
JOB NUMBER: ASPL/2024/****		DATE 08.08.2024 08.08.2024 ---
DRAWING NUMBER: ASPL/BSPTCL/24160A		REV.01 REV.02 ---
JOB NUMBER: ASPL/2024/****		REV.03 REV.04 ---
DRAWING NUMBER: ASPL/BSPTCL/24160A		SCALE N.T.S.
JOB NUMBER: ASPL/2024/****		SHEET NO. 2 OF 14

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FRONT VIEW



SIDE SECTIONAL VIEW
FOR INCOMER

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800 001

CUSTOMER :		BIHAR STATE POWER TRANSMISSION COMPANY LIMITED			
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED			
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR			
 MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17, Roza Industrial Estate, Roza (U.P.) Dist. Raebareilly - 226 001 www.asianbvt.com E-Mail: asiansales@gmail.com		NAME	DATE	TITLE : 415V MAIN SWITCH BOARD GENERAL ARRANGEMENT DRAWING	
	DRAWN	GANESH	08.08.2024		
	CHECKED	GANESH	08.08.2024		
	APPROVED				
DRAWING NUMBER : ASPL/BSPTCL/24160A		REV.01	04.11.2024	REV.03	SCALE N.T.S.
		REV.02		REV.04	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm. INT NO.:10/PR/BSPTCL/2023				SHEET NO. 3 OF 14
	DIMENSION TOLERANCE ± 10MM.				

MAIN BUS BAR SIZE: -

PHASE : 1x63x10 Sq. mm./Eq. CU.

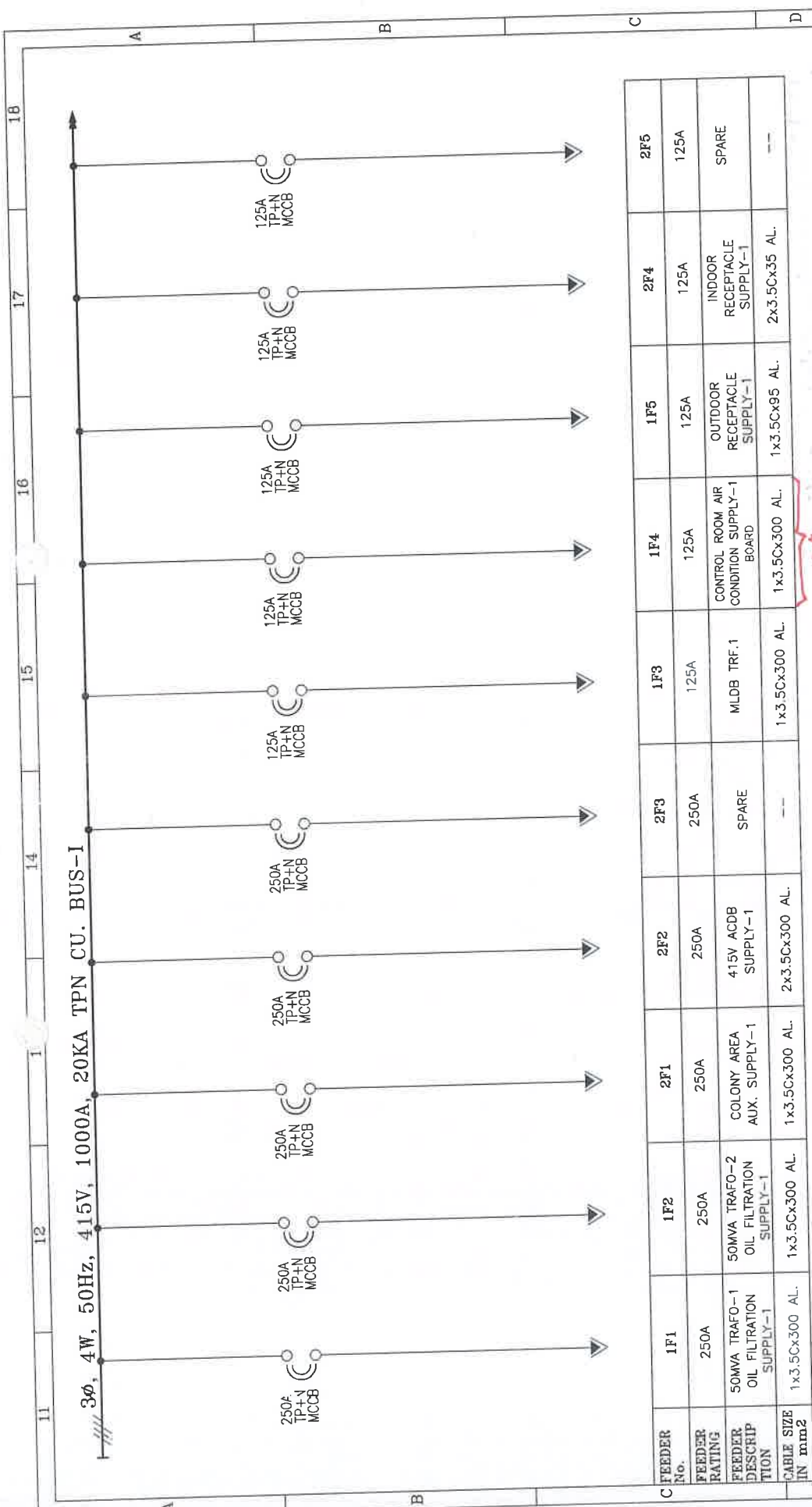
NEUTRAL : 1x63x05 Sq. mm./Eq. CU.

EARTH : 1x30x05 Sq. mm./Eq. CU.

CABLE ENTRY-BOTTOM

© :- ELECTRICALLY & MECHANICAL INTERLOCKED

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* Separate Air Condition Supply board to be provided to distribute power to individual AC's with separate MCCBs in line with AC's approval

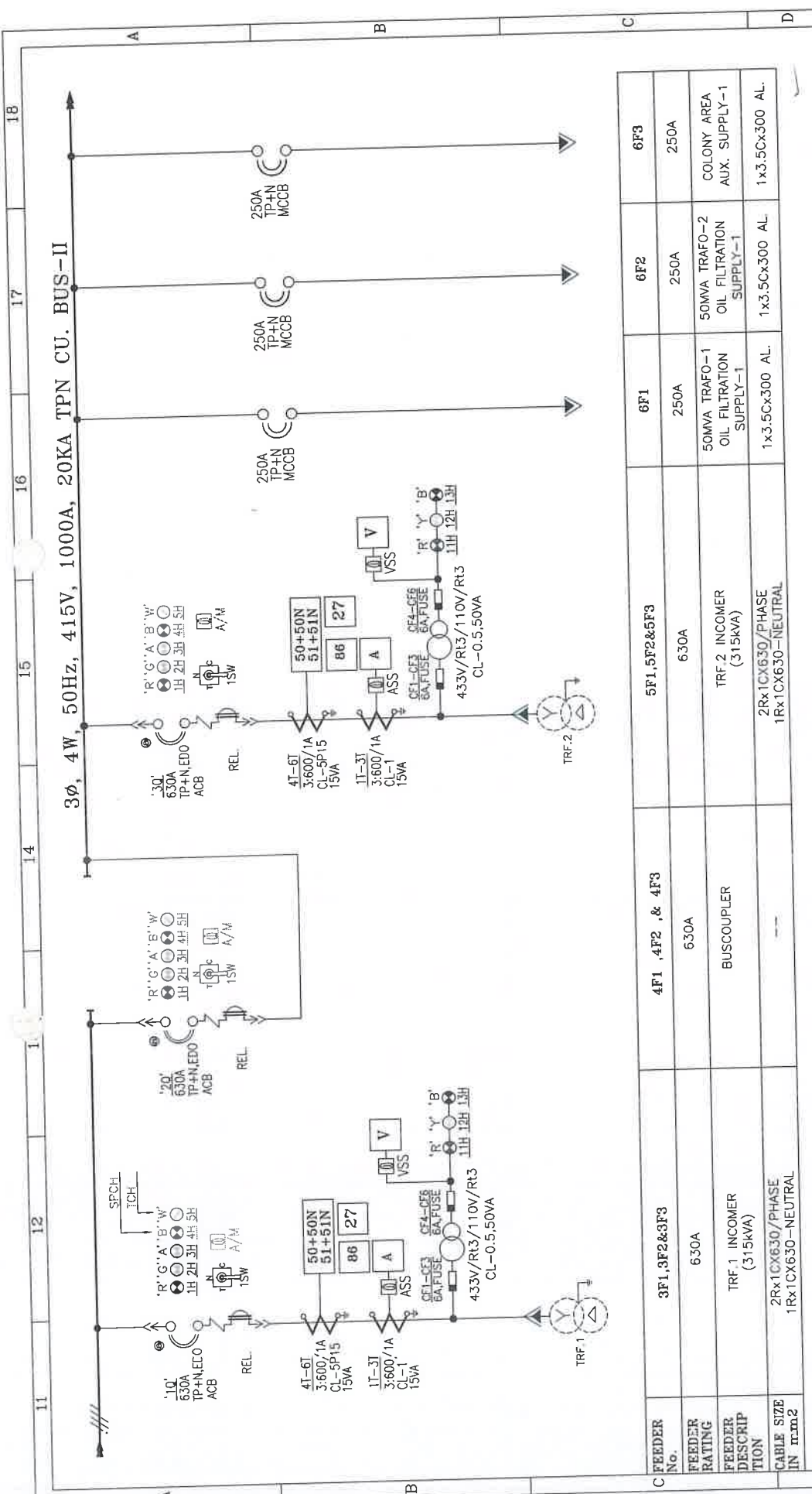
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for signature

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Patna-800015

CUSTOMER:	BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:	132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR
MANUFACTURER:	ASIAN Switchgear Pvt. Ltd.
DRAWN:	GANESH
CHECKED:	GANESH
APPROVED:	
DRAWING NUMBER:	ASPL/BSPTCL/24160A
JOB NUMBER:	ASPL/2024/****
REV.01:	04.11.2024
REV.02:	--
REV.03:	--
REV.04:	--
SCALE:	NTS
SHEET NO.:	4 OF 14

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C	FEEDER No.	FEEDER RATING	FEEDER DESCRIPTION	CABLE SIZE IN mm ²
3F1, 3F2 & 3F3	630A	BUSCOUPLER	TRF 1 INCOMER (315kVA)	2R _x 1CX630/PHASE 1R _x 1CX630-NEUTRAL
4F1, 4F2 & 4F3	630A	BUSCOUPLER	TRF 2 INCOMER (315kVA)	2R _x 1CX630/PHASE 1R _x 1CX630-NEUTRAL
5F1, 5F2 & 5F3	630A			
6F1	250A	50MVA TRAFO-1 OIL FILTRATION SUPPLY-1	1x3.5Cx300 AL	
6F2	250A	50MVA TRAFO-2 OIL FILTRATION SUPPLY-1	1x3.5Cx300 AL	
6F3	250A	COLONY AREA AUX. SUPPLY-1	1x3.5Cx300 AL	

APPROVED

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Ravi Shankar

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800001

CUSTOMER:	BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:	132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR
MANUFACTURER:	ASIAN SWITCHGEAR Pvt. Ltd.
DRAWN:	GANESH
CHECKED:	GANESH
APPROVED:	
DRAWING NUMBER:	ASPL/BSPTCL/24160A
JOB NUMBER:	ASPL/2024/****
NAME:	GANESH
DATE:	08.08.2024
TITLE:	415V MAIN SWITCH BOARD SINGLE LINE DRAWING
REV.01:	04.11.2024
REV.02:	---
REV.03:	---
REV.04:	---
SCALE:	NTS
SHEET NO.:	5 OF 14

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3 ϕ , 4W, 50Hz, 415V, 1000A, 20KA TPN CU. BUS-II



104 corrected
APPROVED

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Sanjiv Singh
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyalok Bhawan, Patna-800021

FEEDER No.	7F1	7F2	7F3	7F4	7F5	7F6	7F7
FEEDER RATING	250A	250A	125A	125A	125A	125A	125A
FEEDER DESCRIPTION	415V ACDB SUPPLY-2	SPARE	MLDB TRF.2	CONTROL ROOM AIR CONDITION SUPPLY-1 BOARD	OUTDOOR RECEPTACLE SUPPLY-1	INDOOR RECEPTACLE SUPPLY-1	SPARE
CABLE SIZE IN mm ²	2x3.5Cx300 AL	---	1x3.5Cx300 AL	1x3.5Cx300 AL	1x3.5Cx95 AL	2x3.5Cx35 AL	---

Same comment as in Sheet 04 of 14 (IF4)

CUSTOMER:	BIHAR STATE POWER TRANSMISSION CO. LTD.		
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED		
PROJECT:	132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR		
MANUFACTURER:	DRAWN	CHECKED	APPROVED
ASIAN Switchgear Pvt. Ltd. B-111, Sector-10, Gurgaon (UP) Phone: 012-2510004, Fax: 012-2510002 E-Mail: marketing@asianindia.com	GANESH	GANESH	
	NAME	DATE	
	REV.01	04.11.2024	REV.03
	REV.02	---	REV.04
DRAWING NUMBER : ASPL/BSPTCL/24160A	TITLE : 415V MAIN SWITCH BOARD SINGLE LINE DRAWING		
JOB NUMBER : ASPL/2024/****	SCALE NTS		
	ALL DIMENSION ARE IN mm. INT NO.: 10/PR/BSPTCL/2023		
	DIMENSION TOLERANCE $\pm$ 10MM.		
	SHEET NO. 6 OF 14		

11											12	1	14	15	16	17	18
A											BILL OF MATERIAL						
B																	
C																	
D																	
Sr. No.	ITEM DESCRIPTION										MAKE	Qty					
1	ACB, 3P, 630A, EDO 20KA WITH THERMAL MAGNETIC RELEASE, WITH FOLLOWING ACCESSORIES (i) MOTOR- 220V DC (ii) CLOSING COIL- 220V DC (iii) SHUNT TRIP COIL- 220V DC (iv) AUX(4NO-4NC) + TRIP CONTACT BLOCK (v) MECHANICAL LOCK										C&S	3					
2	MCCB-250A, 3P 20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE, EXTENDED- ROM, SPREADER										C&S	10					
3	MCCB-125A, 3P 20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE, EXTENDED- ROM, SPREADER										C&S	10					
4	OVER CURRENT & EARTH FAULT RELAY (51+51N+50+50N), CTR-/1A, FLUSH MOUNTED AUX. SUPPLY- 220V DC										C&S/JSVS	2					
5	MASTER TRIP(HIGH SPEED TRIP) RELAY 220V DC FLUSH MOUNTING										C&S/JSVS	2					
6	UNDER VOLTAGE RELAY(27) WITH TIME DELAY, FLUSH MOUNTED, AUX. 220V DC										C&S/JSVS	2					
7	ANALOG AMP METER 96Sq.mm, 90DEG. CTR-/1A, 0-600A										RISHABH/AE	2					
8	ANALOG VOLT METER 96Sq.mm, 0-500V, 90DEG. 415VR13/110V Rr3										RISHABH/AE	2					
9	VOLT-METER SELECTOR SWITCH 3POSITION WITH OFF, 6A										VAISHNO/SURDHI	2					
10	ANMETER SELECTOR SWITCH 3POSITION WITH OFF, 6A										VAISHNO/SURDHI	2					
11	CURRENT TRANSFORMER, 600/1A, CL-1, 15VA RESIN CAST										AE/ASIAN	6					
12	CURRENT TRANSFORMER, 600/1A, CL-SP 15, 15VA RESIN CAST										AE/ASIAN	6					
13	LT SINGLE PHASE POTENTIAL TRANSFORMER, 415V/R3/110V/R3, 50VA CL-0.5, DRY TYPE										V-CON/ASIAN	6					
14	BREAKER CONTROL SWITCH (T/N/C)										KAYCEE/SURDHI	3					
15	LED INDICATION LAMP, 64V AC, DIA. 22.5mm- RED										C&S/VAISHNO/SURDHI	2					
16	LED INDICATION LAMP, 64VAC, DIA. 22.5mm- YELLOW										C&S/VAISHNO/SURDHI	2					
17	LED INDICATION LAMP, 64V AC, DIA. 22.5mm- BLUE										C&S/VAISHNO/SURDHI	2					
18	LED INDICATION LAMP, 220V DC, DIA. 22.5mm- RED										C&S/VAISHNO/SURDHI	3					
19	LED INDICATION LAMP, 220V DC, DIA. 22.5mm- GREEN										C&S/VAISHNO/SURDHI	3					
20	LED INDICATION LAMP, 220V DC, DIA. 22.5mm- AMBER										C&S/VAISHNO/SURDHI	3					
21	LED INDICATION LAMP, 220V DC, DIA. 22.5mm- BLUE										C&S/VAISHNO/SURDHI	3					
22	LED INDICATION LAMP(ILLUMINATED), 220V DC, DIA. 22.5mm- WHITE										C&S/VAISHNO/SURDHI	3					
23	AUTO-MANUAL SELECTOR SWITCH, 6A, 2P 2W, OFF										VAISHNO/SURDHI	3					
24	VOLTAGE MONITOR RELAY, 415V AC, 3P, 4W										L&T/SELEC	2					
25	ON DELAY TIMER-220V DC										L&T/SELEC	3					
26	CONTROL FUSE BASE WITH HRC 6A										C&S	1SET					
27	CONTROL CONTACTOR 230V AC/220V DC										C&S	1SET					
28	SPACE HEATER WITH THERMOSTATE										REPUTED	2SET					
29	BULB HOLDER WITH DOOR SWITCH										REPUTED	2SET					
30	SWITCH & SOCKET 5/15A 3PIN										REPUTED	2SET					



CUSTOMER:



CONTRACTOR:



PROJECT:

BIHAR STATE POWER TRANSMISSION CO. LTD.

M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR

MANUFACTURER:

Asian Switchgear Pvt. Ltd.
B-17, Hazratganj, Lucknow (U.P.)
Ph: 0522-210004, Fax: 0522-210002
E-Mail: india@asgpl.com

ASIAN Switchgear Pvt. Ltd.

TITLE:

415V MAIN SWITCH BOARD
BILL OF MATERIAL

DRAWN: GANESH
CHECKED: GANESH
APPROVED:

NAME: GANESH
DATE: 08.08.2024
08.08.2024

DRAWING NUMBER: ASPL/BSPTCL/24160A

REV.01: 04.11.2024
REV.02: ---
REV.03: ---
REV.04: ---

SCALE: N.T.S.

JOB NUMBER: ASPL/2024/****

DIMENSION ARE IN mm. NIT NO.: 10/PR/BSPTCL/2023

SHEET NO. 7 OF 14

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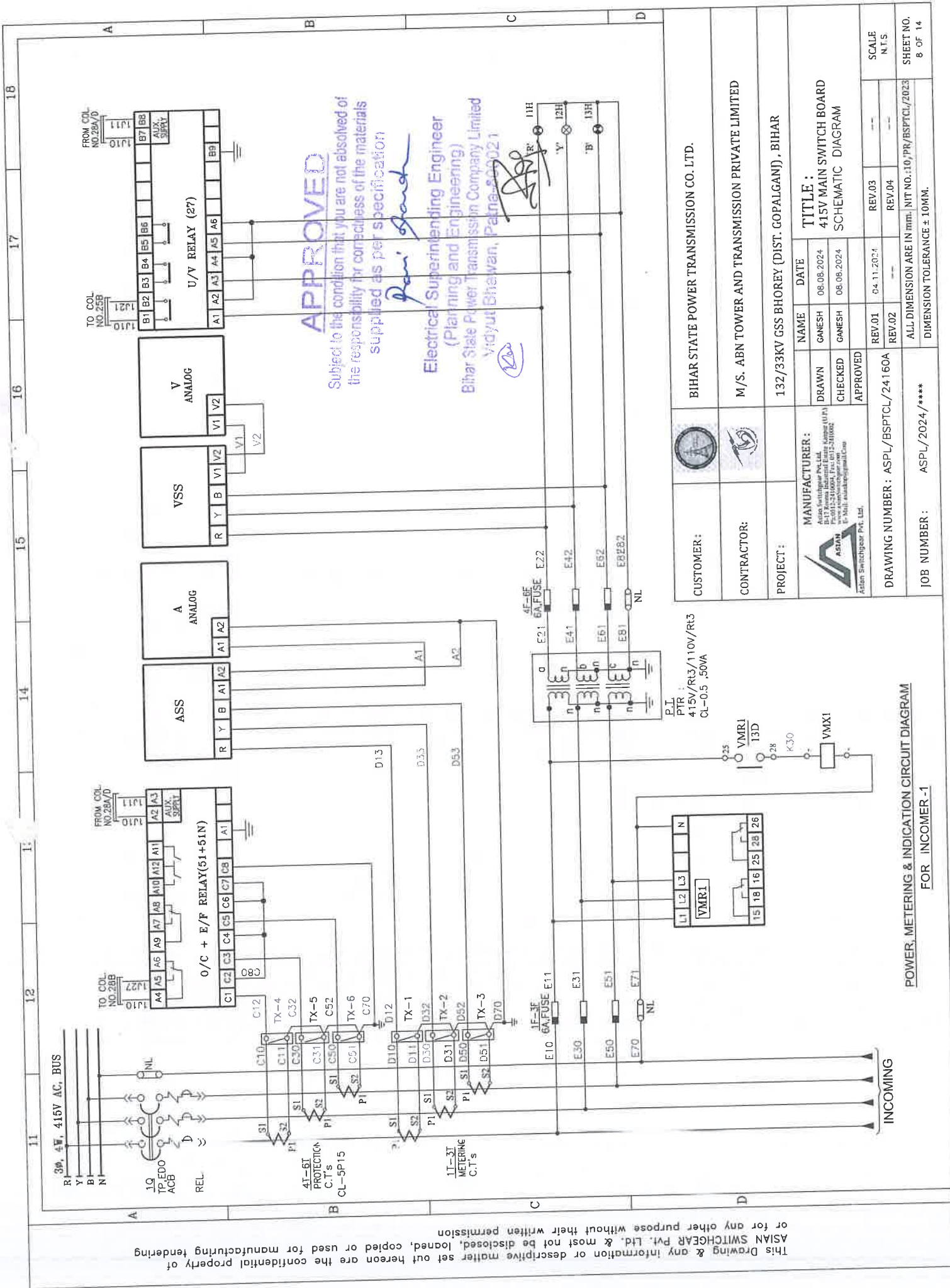
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Ran' Gadh

Electrical Superintending Engineer
(Planning and Engineering) Limited
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800021

As

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APPROVED

Subject to the condition that you are not absolved of CONTROL CIRCUIT DIAGRAM FOR INCOMER-1

The responsibility for correctness of the materials supplied as per specification

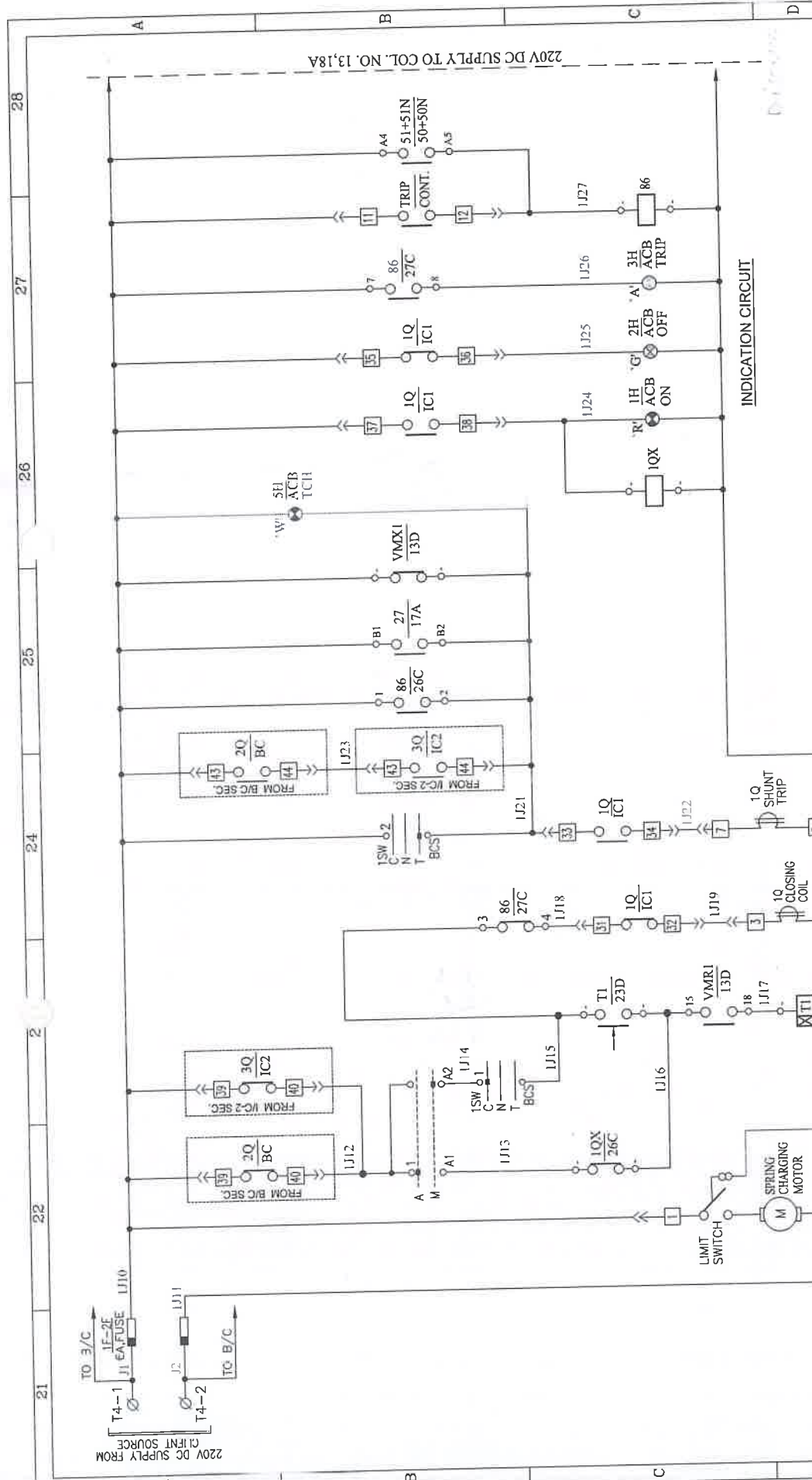
Pan. g. d. d.

Electrical Superintending Engineer
(Planning and Engineering)

Bihar State Power Transmission Company Limited

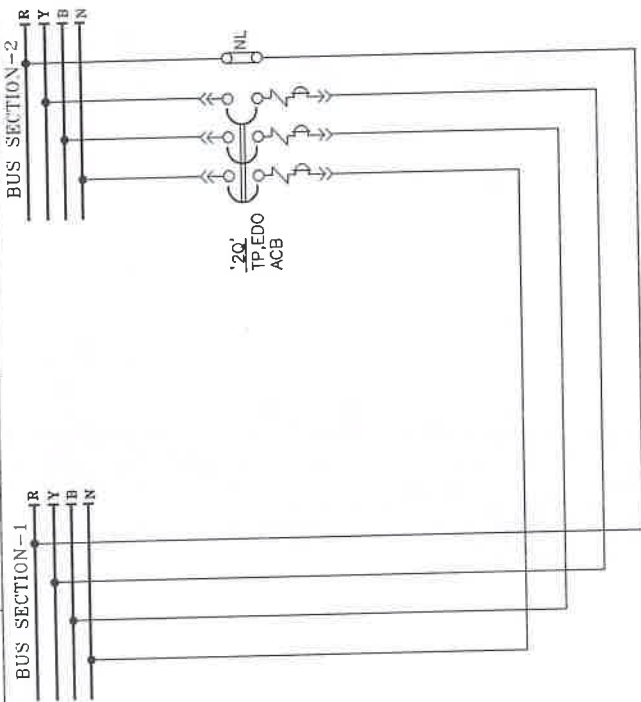
Patna-800 005

Yash Bhawan, Patna-800 005



CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR :	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR
MANUFACTURER :	ASIAN SWITCHGEAR PVT. LTD.
DRAWN :	GANESH
CHECKED :	GANESH
APPROVED :	ASIAN SWITCHGEAR PVT. LTD.
DRAWING NUMBER :	ASPL/BSPTCL/24160A
JOB NUMBER :	ASPL/2024/*****
REV.01	---
REV.02	---
REV.03	---
REV.04	---
ALL DIMENSION ARE IN mm	NIT NO.:10/PR/BSPTCL/2023
DIMENSION TOLERANCE ± 10MM.	
SCALE	N.T.S.
SHEET NO.	9 OF 14

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POWER CIRCUIT DIAGRAM
FOR BUSCOUPLER

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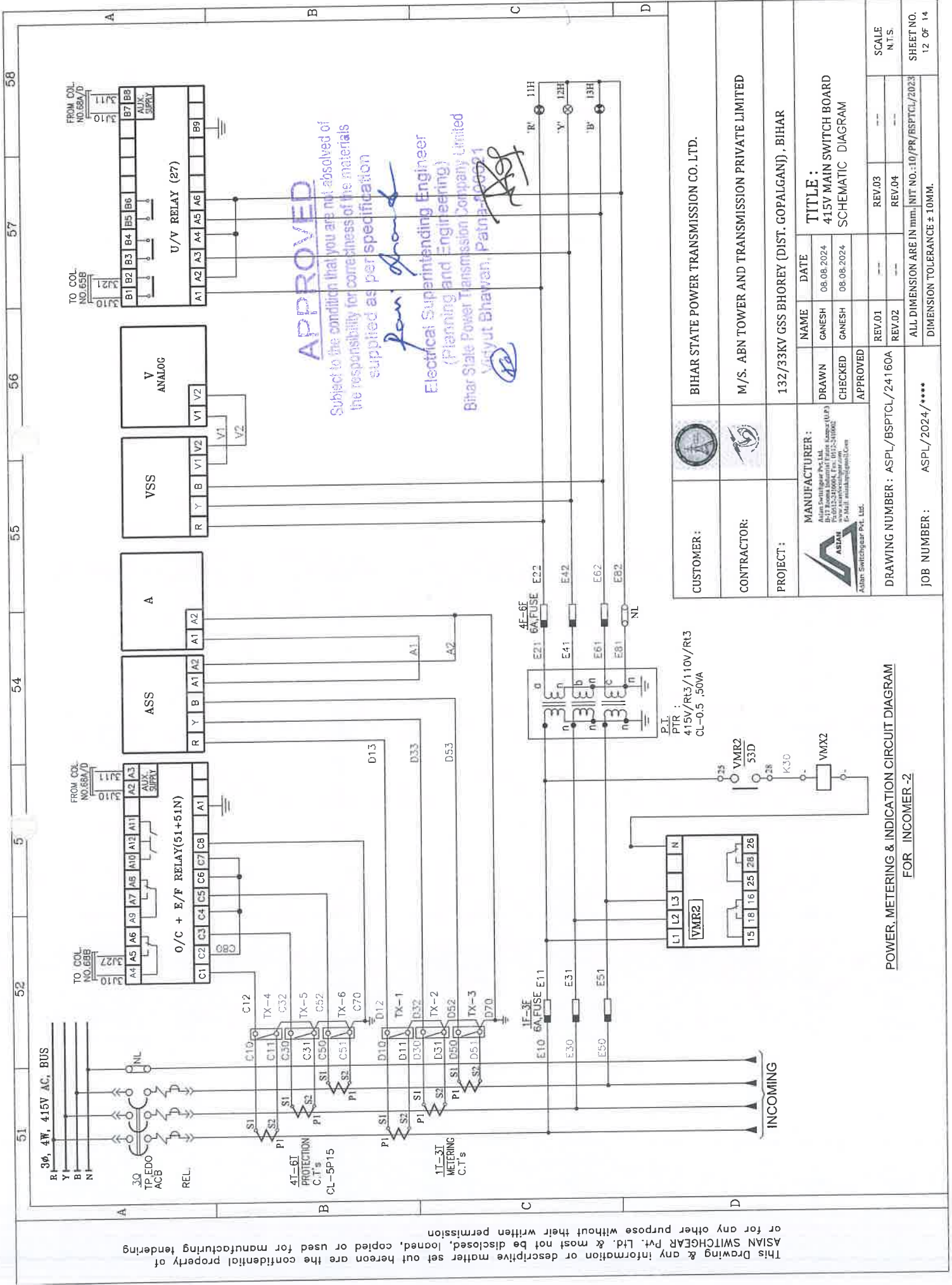
Sanjiv Pandey

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited

Vidyut Bhawan, Patna-800021

Sanjiv Pandey

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.								
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED								
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR								
MANUFACTURER :		<table><tr><td>NAME</td><td>DATE</td></tr><tr><td>DRAWN</td><td>08.08.2024</td></tr><tr><td>CHECKED</td><td>08.08.2024</td></tr><tr><td>APPROVED</td><td></td></tr></table>	NAME	DATE	DRAWN	08.08.2024	CHECKED	08.08.2024	APPROVED	
NAME	DATE									
DRAWN	08.08.2024									
CHECKED	08.08.2024									
APPROVED										
DRAWING NUMBER :	ASPL/BSPTCL/24160A	TITLE : 415V MAIN SWITCH BOARD SCHEMATIC DIAGRAM								
JOB NUMBER :	ASPL/2024/****	SCALE N.T.S.								
		REV.01 REV.02 REV.03 REV.04								
		ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023								
		DIMENSION TOLERANCE $\pm$ 10MM.								
		SHEET NO. 10 OF 14								



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	BIHAR STATE POWER TRANSMISSION CO. LTD.		
	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED		
	132/33KV GSS BHOERY (DIST. GOPALGANJ), BIHAR		
	TITLE : 415V MAIN SWITCH BOARD SCHEMATIC DIAGRAM		
	MANUFACTURER : Asian Switchgear Pvt. Ltd. B-12, Broom Industrial Estate, Sector (U-3) Gurgaon, Haryana - 122002 www.asianswitchgear.com E-Mail: asiansg@asiansg.com	NAME : GANESH	DATE : 08.08.2024
	ASIAN Asian Switchgear Pvt. Ltd.	CHECKED : GANESH	APPROVED :
CUSTOMER :		DRAWN : GANESH	REV.01 :
CONTRACTOR :		CHECKED : GANESH	REV.02 :
PROJECT :		APPROVED : 	REV.03 :
DRAWING NUMBER : ASPL/BSPTCL/24160A		ALL DIMENSION ARE IN mm, NIT NO.10/PR/BSPTCL/2023	SCALE : N.T.S.
JOB NUMBER : ASPL/2024/*****		DIMENSION TOLERANCE ± 10MM.	SHEET NO. 12 OF 14

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For: *[Signature]*
 Electrical Superintending Engineer
 Planning and Engineering
 Bihar State Power Transmission Company Limited
 Vijay Bhawan, Patna-800 005

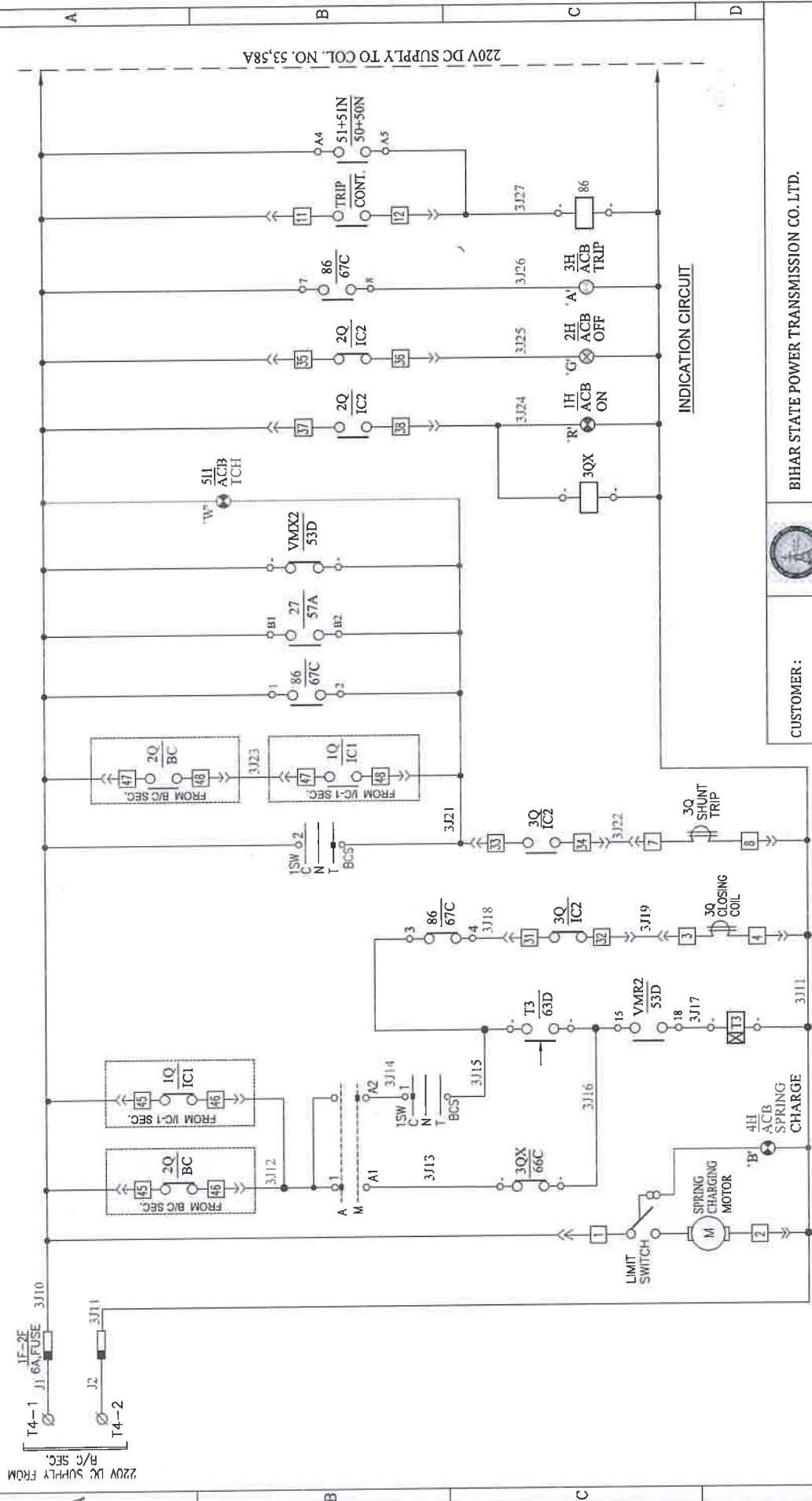
APPROVED

CONTROL CIRCUIT DIAGRAM
 FOR INCOMER-2

MOTOR CKT.

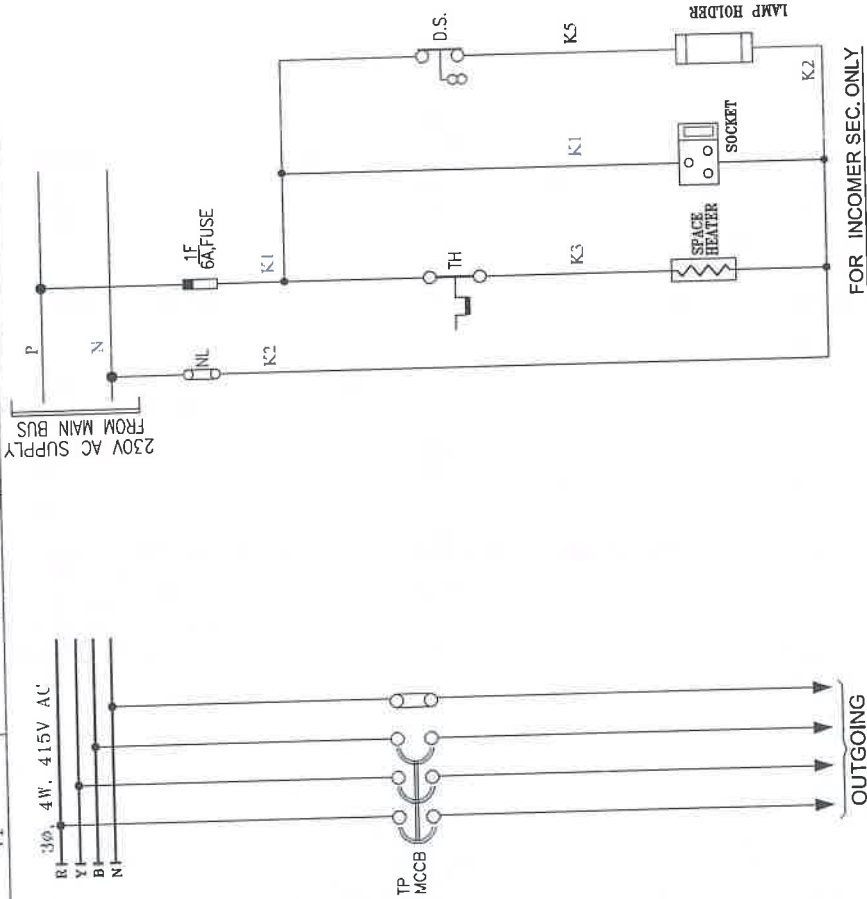
C/C CKT.

ST CKT.



CUSTOMER:	BIHAR STATE POWER TRANSMISSION CO. LTD.			
	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED			
CONTRACTOR:	132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR			
	TITLE: 415V MAIN SWITCH BOARD SCHEMATIC DIAGRAM			
PROJECT:	MANUFACTURER: Asian Switchgear Pvt. Ltd.			
	DRAWN: GANESH, DATE: 08.08.2024, CHECKED: GANESH, 08.08.2024, APPROVED: [Signature]			
JOB NUMBER:	DRAWING NUMBER: ASPL/BSPTCL/24160A			
	ALL DIMENSION ARE IN mm, NIT NO.: 10/PR/BSPTCL/2023, DIMENSION TOLERANCE ± 10MM.			
SCALE:	REV.01, REV.02, REV.03, REV.04			
	SHEET NO. 13 OF 14			

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Sanjiv

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyal Bhawan, Patna-800021

Sanjiv

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.																	
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED																	
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR																		
 MANUFACTURER : Asian Switchgear Pvt. Ltd. Plot No. 1, Industrial Area, Phase II, Patna (U.P.) Pin-800012, India www.asianswitchgear.com E-Mail: asian@asianswitchgear.com	NAME		DATE		TITLE :														
	DRAWN		GANESH		08.08.2024		415V MAIN SWITCH BOARD												
	CHECKED		GANESH		08.08.2024		SCHEMATIC DIAGRAM												
	APPROVED						REV.01		REV.03		SCALE								
							REV.02		REV.04		N.T.S.								
DRAWING NUMBER : ASPL/BSPTCL /241 60A												SHEET NO.							
JOB NUMBER : ASPL/2024/****												ALL DIMENSION ARE IN mm.				NIT NO.:10/PR/BSPTCL/2023			
												DIMENSION TOLERANCE ± 10MM.				14 OF 14			



ASIAN SWITCHGEAR PVT. LTD.
B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
Email: asianknp@gmail.Com

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DRAWING FOR APPROVAL

PANEL NAME	415V ACDB
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Pari Anand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
vidyut Bhawan, Patna-800021

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.									
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED									
PROJECT :		132/33KV GSS BHOOREY (DIST. GOPALGANJ) , BIHAR									
 MANUFACTURER : Asian Switchgear Pvt. Ltd. Plot No. 10, Phase (U/P) P.O. 10/2-241004, Pat. 10/2-241002 www.asianswitchgear.com E-Mail: marketing@asgpl.com		DRAWN		NAME	DATE	TITLE :					
		CHECKED		GANESH	08.08.2024	415V ACDB					
		APPROVED		GANESH	08.08.2024	TITLE SHEET					
				REV.01	04.11.2024	REV.03	SCALE				
DRAWING NUMBER : ASPL/BSPTCL/24160B		REV.02	REV.04				N.T.S.				
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023										SHEET NO.
	DIMENSION TOLERANCE $\pm$ 10MM.										1 OF 20

GENERAL NOTES FOR LT SWITCH BOARD :-

- ALL DIMENSIONS ARE IN MM.
- THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND COMPARTMENTALISED , CONFIRM TO IS:8623
- THE PANEL SHALL BE SUITABLE FOR 3Ø, 4W, 415V±10% AC, 50±5% HZ SUPPLY.
- THE PANEL SHALL BE FABRICATED WITH
(i) BASE CHANNEL - ISMC-75
(ii) STRUCTURE & MOUNTING PLATE - 2.0 mm. CRCA
(iii) DOOR, COVER & PARTITION - 1.6 mm. CRCA
(iv) GLAND PLATE - 3.0 mm. CRCA
- RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
- THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
- BUS BAR SHALL BE OF ELECTROLYTIC GRADE COPPER SUPPORTED ON NON HYGROSCOPIC, NON CARBONISING, CORROSION RESISTANCE, SMC/DMC INSULATORS.
- BUS BAR SHALL BE INSULATED HEAT SHRINKABLE COLOURED PVC SLEEVES RED, YELLOW, BLUE AND BLACK FOR IDENTIFICATION.
- EARTH BUS SHALL BE PROVIDED THROUGHOUT THE PANEL LENGTH
- CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
 - AC VOLTAGE CIRCUIT - 1.5 SQ MM RED, YELLOW, BLUE, BLACK
 - CURRENT CIRCUIT - 2.5 SQ MM RED, YELLOW, BLUE, BLACK
 - AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
 - DC CONTROL CKT. - 1.5 SQ MM GREY
 - GROUNDING - 2.5 SQ MM GREEN

- THE MINIMUM CLEARANCE IN MAIN BUSBARS SHALL BE AS FOLLOWS:
 - BETWEEN PHASE TO PHASE - 25 MM
 - BETWEEN PHASE TO NEUTRAL - 25 MM
 - BETWEEN PHASE TO EARTH - 25 MM
 - BETWEEN NEUTRAL TO EARTH - 25 MM
- NOTE:-CLEARANCE BETWEEN TERMINALS AT COMPONENTS SHALL BE AS PER APPLICABLE INDIVIDUAL STANDARDS FOR COMPONENTS MANUFACTURER.
- NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
 - PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
 - CABLE ENTRY AS PER G.A. DRAWING.
 - PAINT SHADE - SMOKE GREY (692 OF IS:5)
 - AUX. SUPPLY 220V DC NOT IN ASPL SCOPE

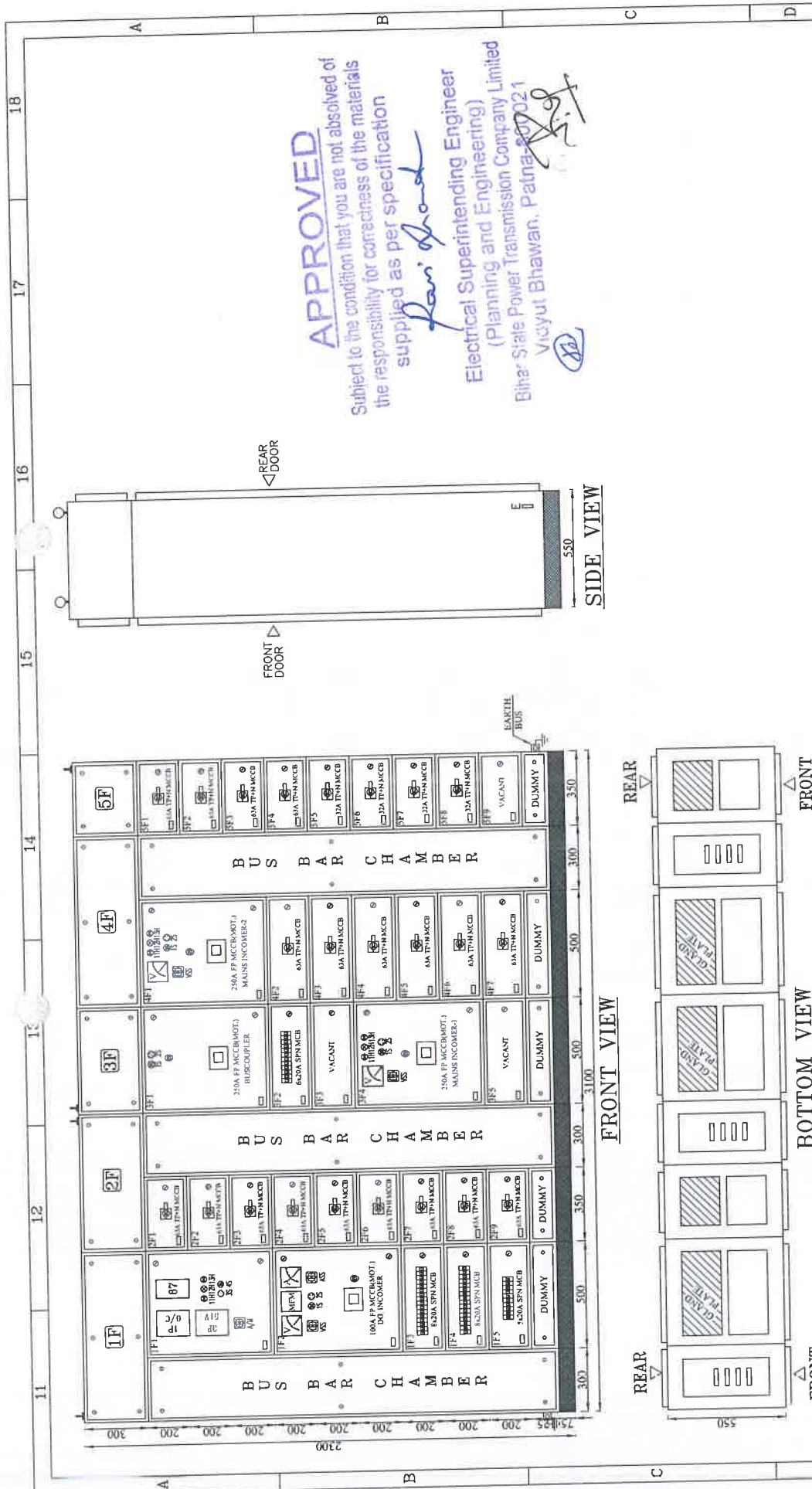
APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Ravi Prasad
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800 021

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CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR :	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR
MANUFACTURER :	
DRAWN :	NAME : DATE : GANESH 08.08.2024
CHECKED :	GANESH 08.08.2024
APPROVED :	REV.01 04.11.2024
DRAWING NUMBER :	ASPL/BSPTCL/24160B
JOB NUMBER :	ASPL/2024/****
DRAWING NUMBER :	REV.03
DRAWING NUMBER :	REV.04
DRAWING NUMBER :	SCALE N.T.S.
DRAWING NUMBER :	SHEET NO. 3 OF 20

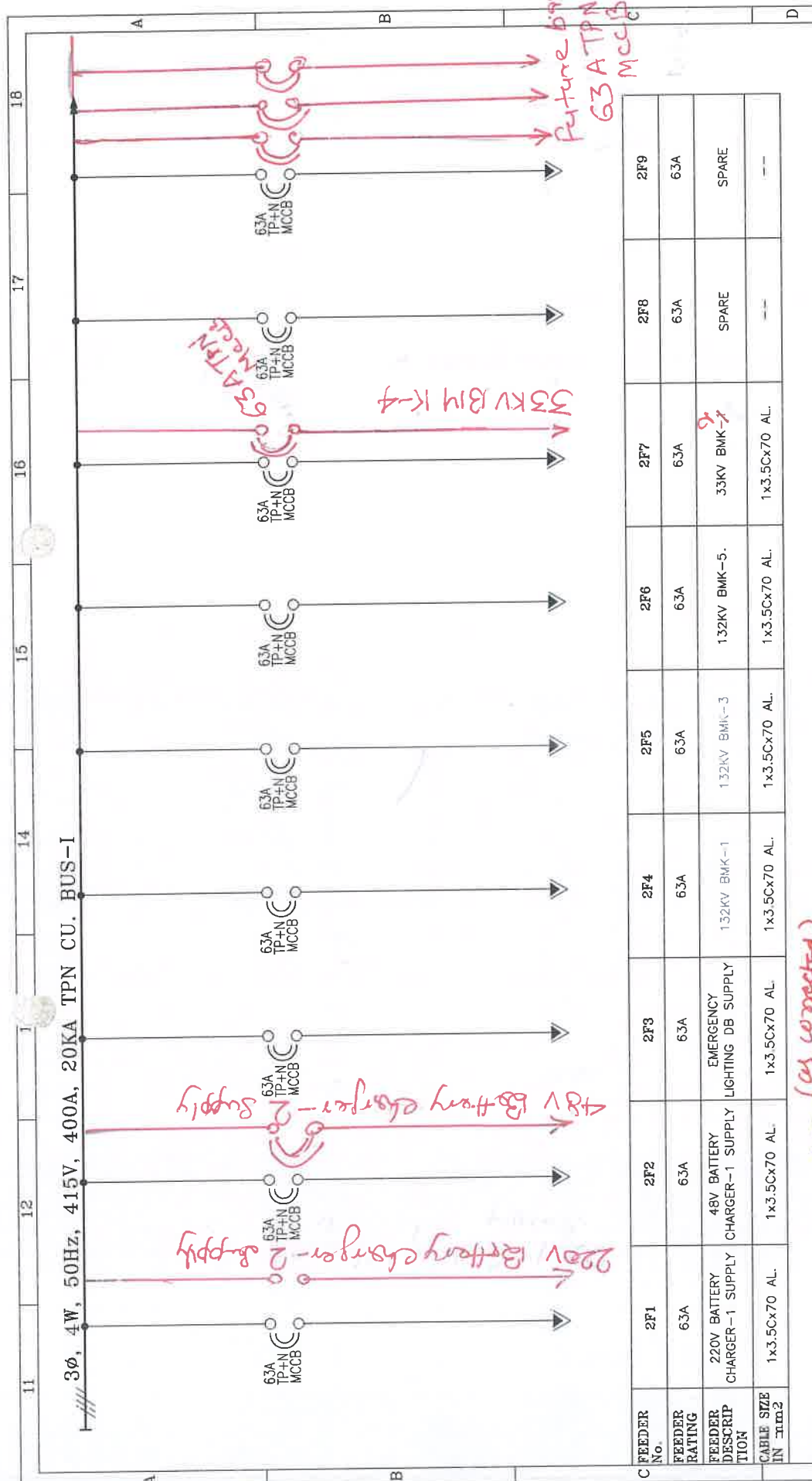
MAIN BUS BAR SIZE:—

PHASE : 1x25x10 Sq. mm./Eq. CU.
 NEUTRAL : 1x25x05 Sq. mm./Eq. CU.
 EARTH : 1x20x05 Sq. mm./Eq. CU.

CABLE ENTRY-BOTTOM

© :- ELECTRICALLY INTERLOCKED

It Shall be modified as per comments



APPROVED (as corrected)

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

supplied as per specification

For Tender

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidya Bhawan, Patna-800021

[Signature]

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :	 MANUFACTURER : Aspl Switchgear Pvt. Ltd. Plot 7 & 8, Industrial Estate, Kanchi (U.P.) Pin-201104, Dist-201104, U.P. Phone: 0512-2410004, Fax: 0512-2410002 E-Mail: aspl@asplindia.com	132 / 33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR TITLE : 415V ACDB SINGLE LINE DRAWING				
 Aspl Switchgear Pvt. Ltd.		DRAWN	NAME	DATE	TITLE : 415V ACDB SINGLE LINE DRAWING	
		CHECKED	GANESH	08.08.2024		
		APPROVED	GANESH	08.08.2024		
DRAWING NUMBER : ASPL/BSPTCL/24160B		REV.01	04.11.2024	REV.03	SCALE	
		REV.02	---	REV.04	N.T.S.	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm, NIT NO.:10/PR/BSPTCL/2023				
		DIMENSION TOLERANCE ± 10MM.				
		SHEET NO. 4 OF 20				

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.									
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED									
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR									
 MANUFACTURER : Asian Switchgear Pvt.Ltd. B-17, Karam Industrial Estate, Gurgaon (UP) Gurgaon - 122002 www.asianindia.com Tel: 0124- 2510002			NAME	DATE	TITLE :						
	DRAWN		GANESH	08.09.2024	415V ACDB						
	CHECKED		GANESH	08.08.2024	SINGLE LINE DRAWING						
	APPROVED										
		REV.01	REV.02	04.11.2024		REV.03		REV.04		SCALE N.T.S	
DRAWING NUMBER : ASPL/BSPTCL/24160B											
JOB NUMBER : ASPL/2024/*****											
ALL DIMENSION ARE IN mm										SHEET NO.	
DIMENSION TOLERANCE $\pm$ 10MM.										5 OF 20	

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

For and

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800001

[Signature]

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3Ø, 4W, 50Hz, 415V, 400A, 20KA TPN CU. BUS-I

20A
SPN
MCB

20A
SPN
MCB

20A
SPN
MCB

20A
SPN
MCB

20A
SPN
MCB

20A
SPN
MCB

20A
SPN
MCB

20A
SPN
MCB

20A
SPN
MCB

FEEDER No.	1F4	1F4	1F4	1F4	1F4	1F4	1F4	1F5	1F5
FEEDER RATING	20A	20A	20A	20A	20A	20A	20A	20A	20A
FEEDER DESCRIPTION	50MVA TRAFO-1RTCC AUX. SUPPLY	50MVA TRAFO-2RTCC AUX. SUPPLY	FDA PANEL AUX. SUPPLY	CCTV SYSTEM AUX. SUPPLY	DG. AMF PANEL AUX. SUPPLY	SPARE	SPARE	SPARE	SPARE
CABLE SIZE IN mm ²	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.	---	---	---	---

CUSTOMER: BIHAR STATE POWER TRANSMISSION CO. LTD.

CONTRACTOR: M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

PROJECT: 132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR



MANUFACTURER:
Asian Switchgear Pvt. Ltd.
Plot No. 13, Sector 13, Gurgaon (Haryana)
Pin-122001, India. Tel: 012-2310000, Fax: 012-2310002
E-Mail: marketing@asian.co

DRAWN: GANESH
CHECKED: GANESH
APPROVED: GANESH

DATE: 08.08.2024
08.08.2024

TITLE:
415V ACDB
SINGLE LINE DRAWING

DRAWING NUMBER: ASPL/BSPTCL/24160B

REV.01 04.11.2024
REV.02 ---

SCALE: N.T.S.

JOB NUMBER: ASPL/2024/****

ALL DIMENSION ARE IN mm. IIT NO. 10/PR/BSPTCL/2023

DIMENSION TOLERANCE ± 10MM.

SHEET NO. 6 OF 20

APPROVED

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Ravi Shankar
Electrical Superintending Engineer
(Planning and Engineering) Limited
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800004

3 ϕ , 4W, 50Hz, 415V, 20KA TPN CU. BUS-I

11 12 13 14 15 16 17 18

20A SPN MCB

20A SPN MCB

20A SPN MCB

100A FP MCCB (MOT.)

4T-6T 3:100/1A CL-5P15 10VA

11-3T 3:100/1A CL-1 10VA

1P O/C 3S 4S

3P 51V A/M

MPM HZ+KWH ASS

7T-12T 6:100/1A CL-PS 10VA

6T1-OF3 6A FUSE

VSS

V

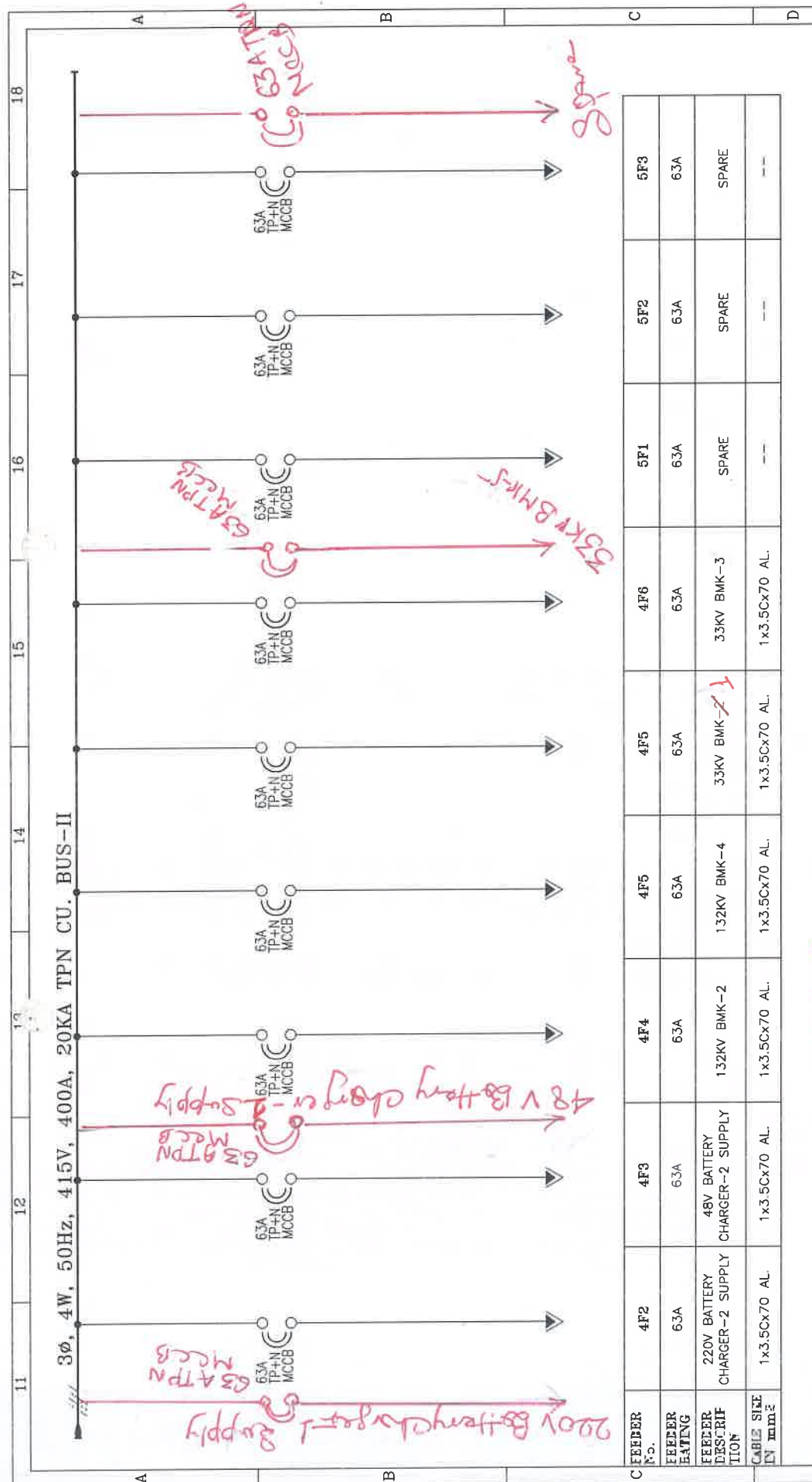
A

FEEDER No.	1F5	1F5	1F5	1F1 & 1F2	3F1	3F4	4F1
FEEDER RATING	20A	20A	20A	100A	250A	250A	250A
FEEDER DESCRIPTION	SPARE	SPARE	SPARE	FROM DG AMF PANEL	INCOMER-1 FROM MAIN SWITCH BOARD	BUS COUPLER	INCOMER-2 FROM MAIN SWITCH BOARD
CABLE SIZE IN mm ²				2R ² 3.5C ² 300 AL.	2R ² 3.5C ² 300 AL.		2R ² 3.5C ² 300 AL.

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800021

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.														
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED														
PROJECT:		132/33KV GSS BHOKEY (DIST. GOPALGANJ), BIHAR														
 MANUFACTURER: Asian Switchgear Pvt.Ltd. Plot No. 10, Sector - 10, Phase - II, Industrial Area, P.O. 165125, 161004, Pin - 801315, Patna www.asianswitchgear.com E-Mail: india@asianswitchgear.com	DRAWN		NAME	DATE	TITLE :					SCALE N.T.S.						
	CHECKED		GANESH	08.08.2024	415V ACDB											
	APPROVED		GANESH	08.08.2024	SINGLE LINE DRAWING											
DRAWING NUMBER : ASPL/BSPTCL/24160B												REV.01	04.11.2024	REV.03		
												REV.02		REV.04		
ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023												SHEET NO.				
JOB NUMBER : ASPL/2024/****												7 OF 20				
DIMENSION TOLERANCE ± 10MM.																



all corrected)

APPROVED

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Ran. Gerd

Electrical Superintending Engineer
(Planning and Engineering)

(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021



CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.									
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED									
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR									
 MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Kamas Industrial Estate, Kamas (U.P.) Pin-201224, India. Fax-9121-3110062 E-Mail: mumbai@aspl.co.in	DRAWN	NAME	DATE		TITLE : 415V ACDB SINGLE LINE DRAWING						
	CHECKED	GANESH	08.08.2024								
	APPROVED	GANESH	08.08.2024								
		REV.01	04.11.2024		REV.03	SCALE		N.T.S.			
		REV.02			REV.04						
DRAWING NUMBER : ASPL/BSPTCL/24160B					ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023					SHEET NO. 8 OF 20	
JOB NUMBER :	ASPL/2024/****				DIMENSION TOLERANCE $\pm$ 10MM.						

(page 8) 111

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Don't forget

**Electrical Superintending Engineer
(Planning and Engineering)**

(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyal: Bhawan Patna-800021

④

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.																			
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED																			
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR																			
 MANUFACTURER : Asian Switchgear Pvt.Ltd. B-17 Korum Industrial Estate, Kurla (W) P. Mumbai - 400017, India www.asianswitchgear.com E-Mail : asian@asgindia.com	NAME		DATE		TITLE :																
	DRAWN		GANESH		08.08.2024		415V ACDB														
	CHECKED		GANESH		08.08.2024		SINGLE LINE DRAWING														
	APPROVED																				
DRAWING NUMBER : ASPL/BSPTCL/241608												REV.01		04.11.2024		REV.03		SCALE			
												REV.02		---		REV.04		N.T.S			
JOB NUMBER : ASPL/2024/*****												ALL DIMENSION ARE IN mm. I/T NO.:10/PPR/BSPTCL/2023									
												DIMENSION TOLERANCE ± 10MM.									
												SHEET NO. 9 OF 20									

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3 ϕ , 4W, 50Hz, 415V, 400A, 20KA TPN CU. BUS-II

20A
SPN
MCB

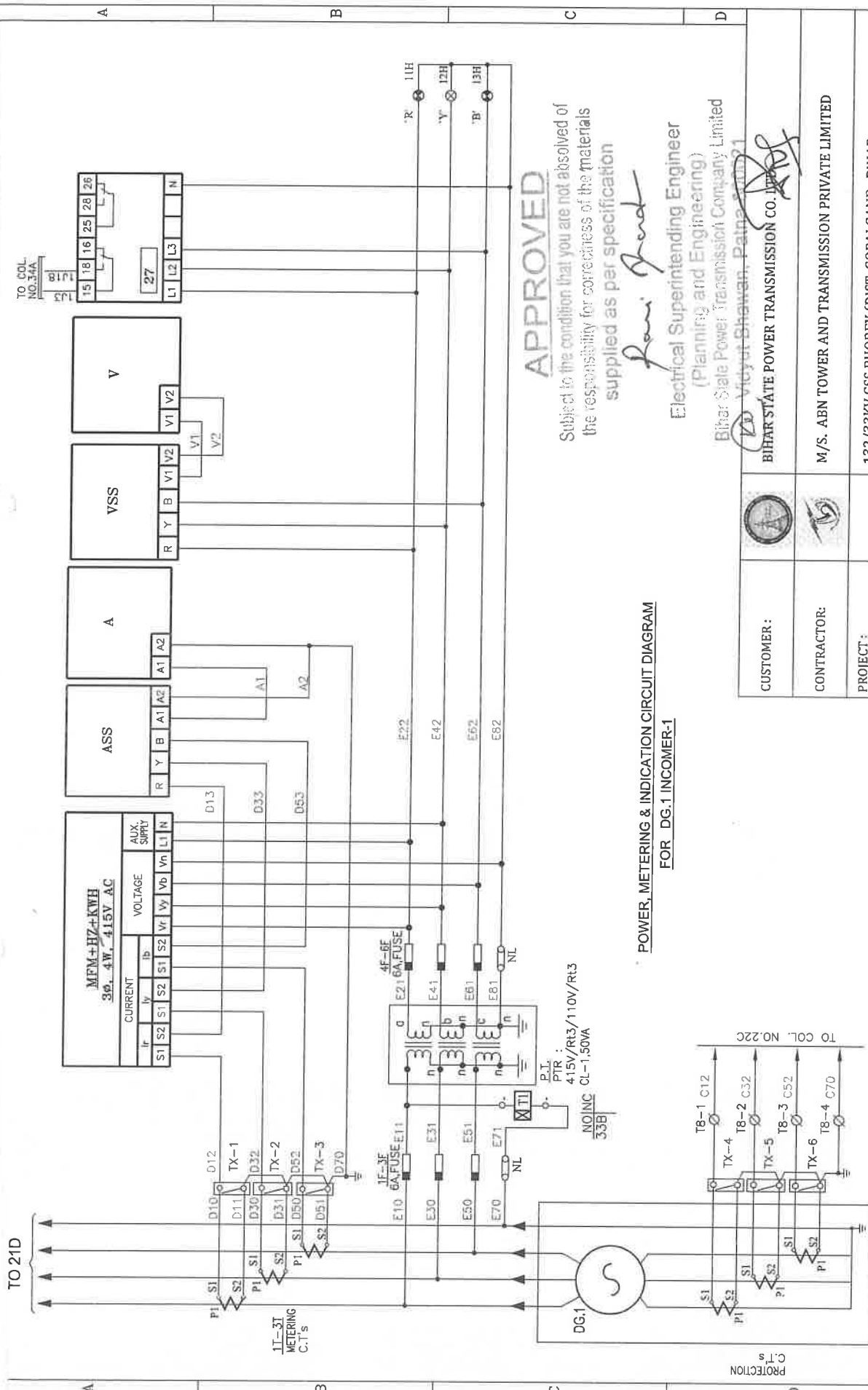
20A
SPN
MCB

FEEDER No.	3F3	3F3
FEEDER RATING	20A	20A
FEEDER DESCRIPTION	SPARE	SPARE
CABLE SIZE IN mm2	--	--

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Per: [Signature]
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Bihar State Power Transmission Company Limited
Vidyal Bhawan, Patna-800021

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR
MANUFACTURER:		ASIAN Asian Switchgear Pvt. Ltd. Plot No. 12, Industrial Area, Phase (II), Patna-800012, Bihar, India. Tel: 0512-2410001 Fax: 0512-2410002 E-mail: asian@switchgear.com Website: www.asianswitchgear.com
DRAWING NUMBER:	ASPL/BSPTCL/24160B	
JOB NUMBER:	ASPL/2024/****	
	REV.01	REV.02
	REV.03	REV.04
	04.11.2024	--
	08.08.2024	08.08.2024
	NAME	DATE
	GANESH	GANESH
	DRAWN	CHECKED
	APPROVED	
	TITLE: 415V ACDB SINGLE LINE DRAWING	
	SCALE N.T.S.	
	SHEET NO. 10 OF 20	
	ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023 DIMENSION TOLERANCE $\pm$ 10MM.	

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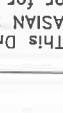
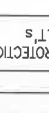
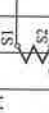
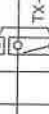
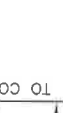
APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Raw. Jadh

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Bihar State Power Transmission Co. Ltd.
Vidya Bhawan, Patna-800 021

BIHAR STATE POWER TRANSMISSION CO. LTD.
Vidya Bhawan, Patna-800 021



CUSTOMER:

CONTRACTOR:

PROJECT:

MANUFACTURER:

DRAWING NUMBER:

JOB NUMBER:

NAME

DRAWN

CHECKED

APPROVED

DATE

TITLE:

GANESH

GANESH

GANESH

04.11.2024

08.08.2024

08.08.2024

REV.01

REV.02

REV.03

REV.04

SCALE

N.T.S.

ALL DIMENSION ARE IN mm

DIMENSION TOLERANCE ± 10MM.

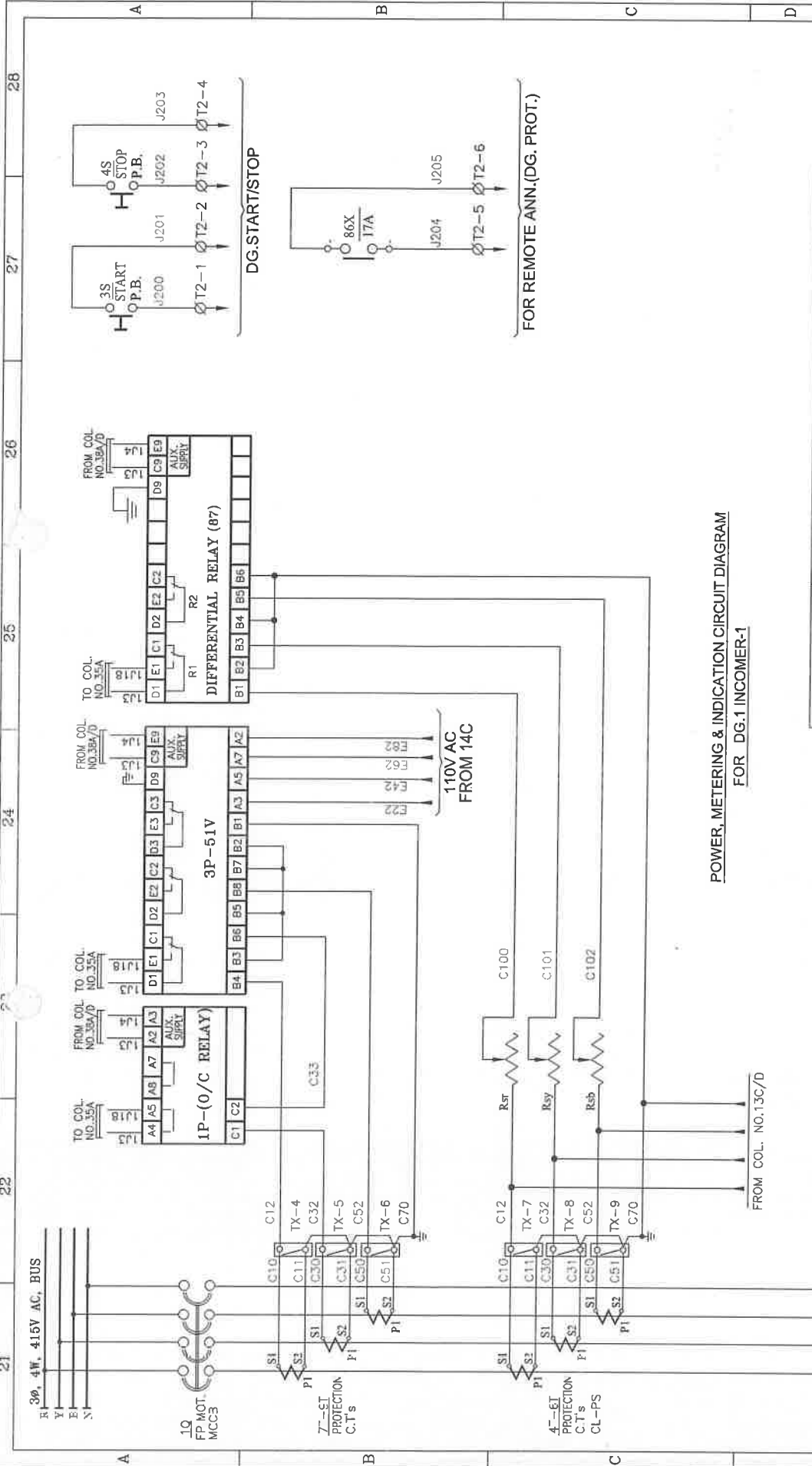
SHEET NO.

12 OF 20

ASPL/2024/****

ASPL/BSPTCL/24160B

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POWER, METERING & INDICATION CIRCUIT DIAGRAM
FOR DG.1 INCOMER-1

APPROVED

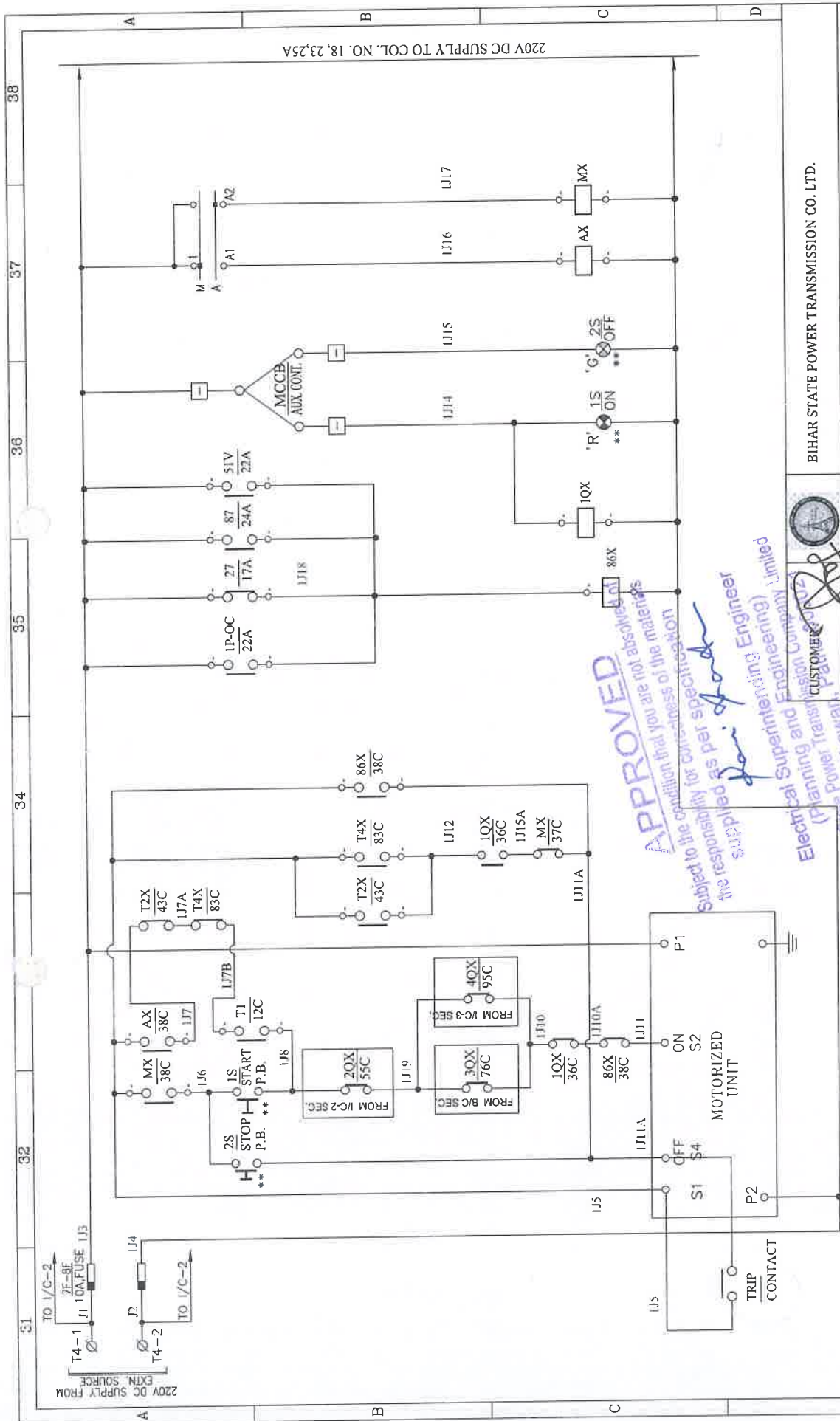
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

[Signature]

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER:	BIHAR STATE POWER TRANSMISSION CO. LTD.		
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED		
PROJECT:	132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR		
MANUFACTURER:	ASIAN SWITCHGEAR PVT. LTD.		
DRAWN	GANESH	DATE	08.08.2024
CHECKED	GANESH		08.08.2024
APPROVED			
DRAWING NUMBER:	ASPL/BSPTCL/24.160B	REV.01	---
JOB NUMBER:	ASPL/2024/****	REV.02	---
		REV.03	---
		REV.04	---
		SCALE	N.T.S.
		SHEET NO.	13 OF 20

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CONTROL CIRCUIT DIAGRAM
FOR DG.1 INCOMER-1

** :- ILLUMINATED TYPE PUSH BUTTON

BIHAR STATE POWER TRANSMISSION CO. LTD.

M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR

MANUFACTURER:
Asian Switchgear Pvt. Ltd.
B-17, Bypass Industrial Estate, Patna (U.P.)
Pin-800 002
www.asian-switchgear.com
E-Mail: asian@sigmail.com

TITLE:
415V ACDB
SCHEMATIC DIAGRAM

DRAWING NUMBER: ASPL/BSPTCL/24160B

SCALE
N.T.S.

DRAWN: GANESH
CHECKED: GANESH
APPROVED: GANESH

DATE
08.08.2024
08.08.2024
08.08.2024

DRAWING NUMBER: ASPL/BSPTCL/24160B

SCALE
N.T.S.

JOB NUMBER: ASPL/2024/*****

SHEET NO.
14 OF 20

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BIHAR STATE POWER TRANSMISSION CO. LTD.		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED		132/33KV GSS BHOHEY (DIST. GOPALGANJ), BIHAR	
APPROVED Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification <i>Ravi Shankar</i> Electrical Superintendent (Planning and Engineering) Limited Bihar State Power Transmission, Patna		CUSTOMER: 		PROJECT: 132/33KV GSS BHOHEY (DIST. GOPALGANJ), BIHAR	
MANUFACTURER: ASIAN SWITCHGEAR Pvt. Ltd. B-17, Avenue Industrial Estate, Kanger (U.P.) Ph: 052-2410004, Fax: 052-2410002 E-Mail: asiaind@gmail.com		CONTRACTOR: 		TITLE: 415V ACDB SCHEMATIC DIAGRAM	
DRAWING NUMBER: ASPL/BSPTCL/24160B		DRAWN: GANESH CHECKED: GANESH APPROVED:		DATE: 08.08.2024 08.08.2024	
JOB NUMBER: ASPL/2024/****		REV.01 REV.02		SCALE N.T.S.	
DIMENSION TOLERANCE: ± 10MM.		ALL DIMENSION ARE IN mm.		SHEET NO. 15 OF 20	

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41 42 43 44 45 46 47 48

A B C D

3φ, 4W, 415V AC, BUS
R
Y
B
N

20
F.P. MOT.
MCCB

TO COL. NO. 54A
TO COL. B/C

27-1

VSS
R Y B V1 V2
V
V1 V2

1F-3F
6A FUSE E11
E10
E30
E50
E51
NL

1F-3F
6A FUSE
K1
K2
K3

TH

SPACE HEATER

INCOMING

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Shankar
Electrical Superintendent
(Planning and Engineering) Limited
Bihar State Power Transmission, Patna
Vidhyut Bhawan, Patna

CONTRACTOR:
Bihar State Power Transmission, Patna
Vidhyut Bhawan, Patna

CUSTOMER:
Bihar State Power Transmission Co. Ltd.

PROJECT:
132/33KV GSS BHOUREY (DIST. GOPALGANJ), BIHAR

MANUFACTURER:
ASIAN SWITCHGEAR Pvt. Ltd.
B-17, Avenue Industrial Estate, Kanger (U.P.)
Ph: 052-2410004, Fax: 052-2410002
E-Mail: asiaind@gmail.com

DRAWING NUMBER: ASPL/BSPTCL/24160B

JOB NUMBER: ASPL/2024/****

DRAWING NUMBER: ASPL/BSPTCL/24160B

REV.01
REV.02

REV.03
REV.04

SCALE
N.T.S.

TITLE:
415V ACDB
SCHEMATIC DIAGRAM

POWER, METERING & INDICATION CIRCUIT DIAGRAM
FOR TRF.1 INCOMER-2

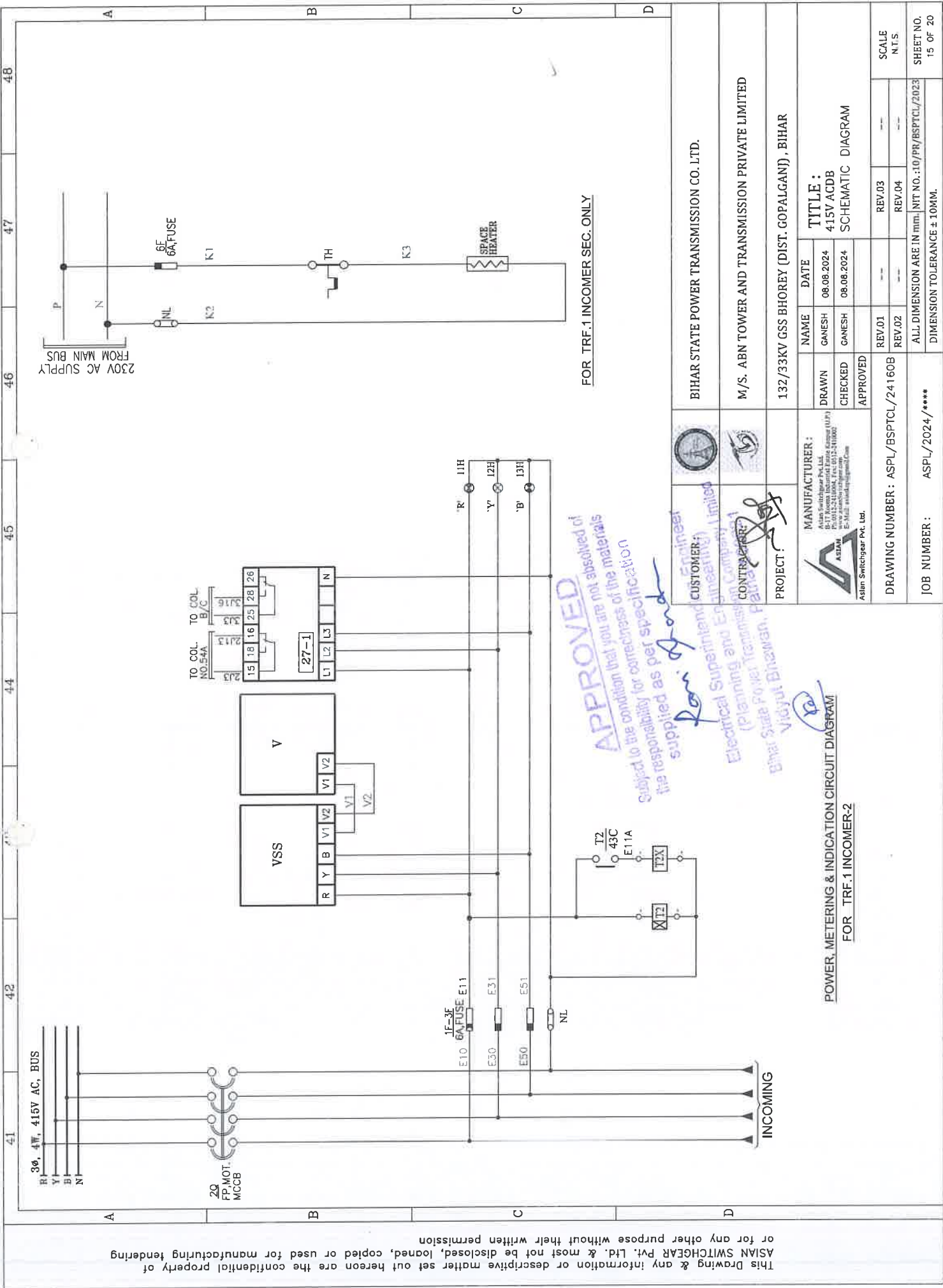
BIHAR STATE POWER TRANSMISSION CO. LTD.

M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

132/33KV GSS BHOUREY (DIST. GOPALGANJ), BIHAR

ALL DIMENSION ARE IN mm. NIT NO.: 10/PR/BSPTCL/2023
DIMENSION TOLERANCE ± 10MM.

SHEET NO.
15 OF 20



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41 42 43 44 45 46 47 48

A B C D

3 ϕ , 4W, 415V AC, BUS
R
Y
B
N

20
F.P.MOT.
MCCB

TO COL. NO. 54A
TO COL. B/C

15 18 16 25 28 26
27-1
L1 L2 L3 N

V
V1 V2
V2

VSS
R Y B V1 V2
V1 V2

1F-3F
6A FUSE E11
E10
E30
E31
E50
E51
NL

1F-3F
6A FUSE
K1
K2
K3

TH

SPACE HEATER

INCOMING

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Singh
Electrical Superintendent
(Planning and Engineering) Limited
Bihar State Power Transmission, Patna
Vidhyut Bhawan, Patna

CUSTOMER:
Bihar State Power Transmission Co. Ltd.

CONTRACTOR:
ASIAN Switchgear Pvt. Ltd.

PROJECT:
132/33KV GSS BHOHEY (DIST. GOPALGANJ), BIHAR

MANUFACTURER:
ASIAN Switchgear Pvt. Ltd.
B-17, Avenue Industrial Estate, Kanger (U.P.)
Ph: 052-2418004, Fax: 052-2418002
E-Mail: asiaind@gmail.com

DRAWN
GANESH
08.08.2024

CHECKED
GANESH
08.08.2024

APPROVED

DRAWING NUMBER: ASPL/BSPTCL/24160B

JOB NUMBER: ASPL/2024/****

REV.01
REV.02

REV.03
REV.04

SCALE
N.T.S.

TITLE:
415V ACDB
SCHEMATIC DIAGRAM

ALL DIMENSION ARE IN mm. NIT NO.: 10/PR/BSPTCL/2023

DIMENSION TOLERANCE $\pm$ 10MM.

SHEET NO.
15 OF 20

POWER, METERING & INDICATION CIRCUIT DIAGRAM
FOR TRF.1 INCOMER-2

BIHAR STATE POWER TRANSMISSION CO. LTD.

M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

132/33KV GSS BHOHEY (DIST. GOPALGANJ), BIHAR

230V AC SUPPLY FROM MAIN BUS

FOR TRF.1 INCOMER SEC. ONLY

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41 42 43 44 45 46 47 48

A B C D

3φ, 4W, 415V AC, BUS
R
Y
B
N

20
F.P. MOT.
MCCB

TO COL. NO. 54A
TO COL. B/C

27-1
L1 L2 L3 N
V1 V2
V1 V2

VSS
R Y B V1 V2
V
V1 V2

1F-3F
6A FUSE E11
E10
E30
E50
E51
NL

1F-3F
6A FUSE
K1
K2
K3

TH

SPACE HEATER

INCOMING

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Shankar
Electrical Superintendent
(Planning and Engineering) Limited
Bihar State Power Transmission, Patna
Vidhyut Bhawan, Patna

CONTRACTOR:
Bihar State Power Transmission, Patna
Vidhyut Bhawan, Patna

CUSTOMER:
Bihar State Power Transmission Co. Ltd.

MANUFACTURER:
ASIAN SWITCHGEAR Pvt. Ltd.
B-17, Kamesh Industrial Estate, Kameh (U.P.)
Ph: 0522-2410004, Fax: 0522-2410002
E-Mail: asiaind@gmail.com

PROJECT:
132/33KV GSS BHOUREY (DIST. GOPALGANJ), BIHAR

DRAWING NUMBER: ASPL/BSPTCL/24160B

JOB NUMBER: ASPL/2024/****

DRAWING NUMBER: ASPL/BSPTCL/24160B

REV.01
REV.02

REV.03
REV.04

SCALE
N.T.S.

TITLE:
415V ACDB
SCHEMATIC DIAGRAM

POWER, METERING & INDICATION CIRCUIT DIAGRAM
FOR TRF.1 INCOMER-2

BIHAR STATE POWER TRANSMISSION CO. LTD.

M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

132/33KV GSS BHOUREY (DIST. GOPALGANJ), BIHAR

REVISIONS

ALL DIMENSION ARE IN mm. DIMENSION TOLERANCE ± 10MM.

SHEET NO. 15 OF 20

[illegible]

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

David

Electrical Superintending Engineer
(Planning and Engineering)

Elbiter State Power Transmission Company Limited
Vidvat Bhayavac Palna-590021

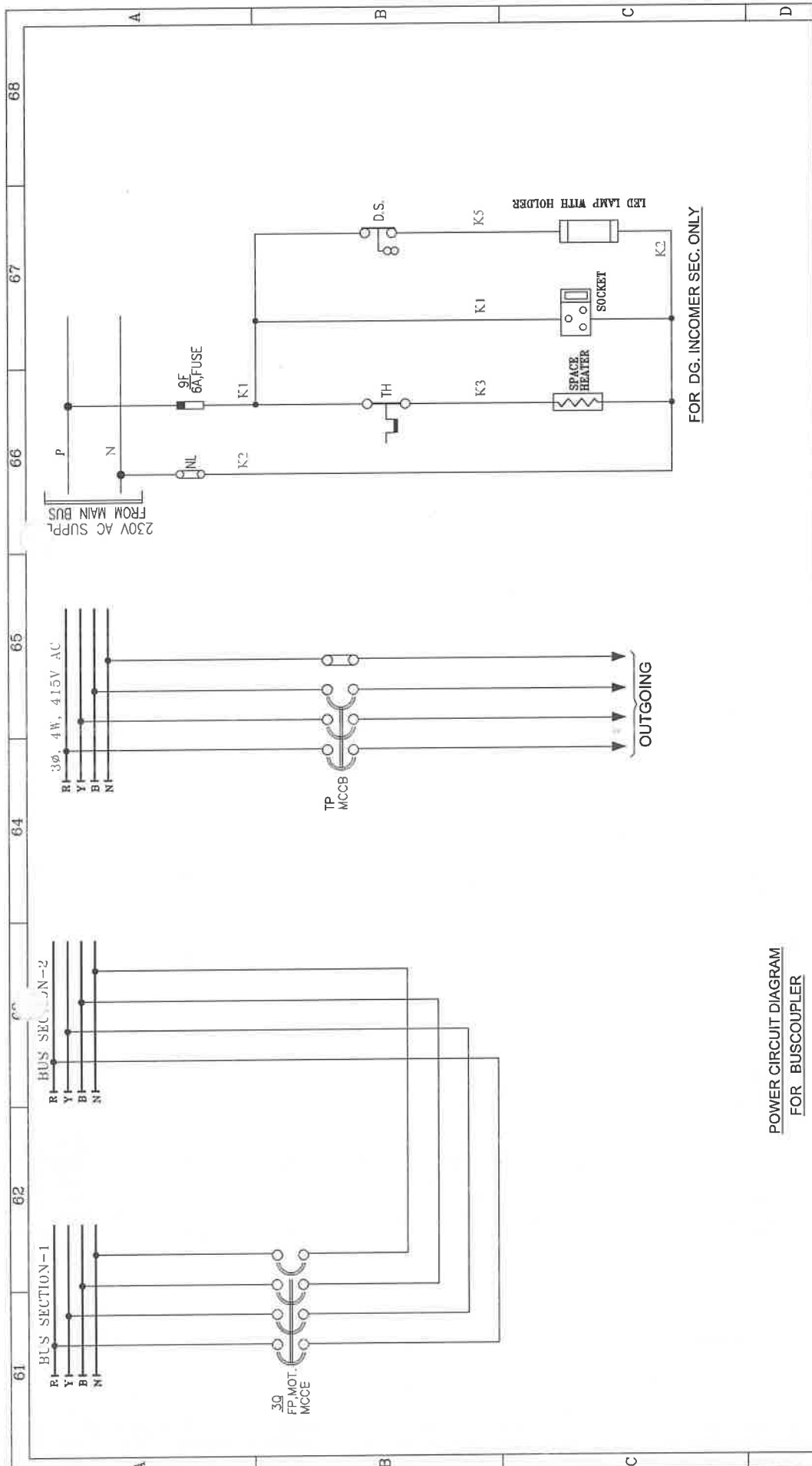
(12) Vidyut Chavan, Palnoli

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
 MANUFACTURER : Astar Switchgear Pvt. Ltd. Plot No. 10, Sector 10, Gurgaon (H.P.S.) Dist. Gurgaon, Haryana - 122001 Ph: 0122-2410004, Fax: 0122-2410002 E-Mail: astar@astarswitchgear.com	DRAWN	NAME	DATE	TITLE :		
	CHECKED	GANESH	08.08.2024	415V ACDB		
	APPROVED	GANESH	08.08.2024	SCHEMATIC DIAGRAM		
		REV.01	--	REV.03	--	SCALE
		REV.02	--	REV.04	--	N.T.S.
DRAWING NUMBER : ASPL/BSPTCL/24160B		ALL DIMENSION ARE IN mm.			SHEET NO.	
JOB NUMBER :	ASPL/2024/****	DIMENSION TOLERANCE $\pm$ 10MM.			16 OF 20	

**-ILLUMINATED TYPE PUSH BUTTON.

CONTROL CIRCUIT DIAGRAM
FOR TRF.1 INCOMER-2

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POWER CIRCUIT DIAGRAM
FOR BUSCOUPLER

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Ravi Gadh

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyal Bhawan, Patna-800021

Ravi

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
 MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Karna Industrial Estate Kamee (U.A.) Sector-14, Gurgaon-122015 www.asianswitchgear.com E-Mail: asiainfo@asianswitchgear.com	DRAWN	NAME	DATE	TITLE :		
	CHECKED	GANESH	08.08.2024	415V ACDB		
	APPROVED	GANESH	08.08.2024	SCHEMATIC DIAGRAM		
DRAWING NUMBER :	ASPL/BSPTCL/24160B			REV.01	REV.03	SCALE
				REV.02	REV.04	N.T.S.
JOB NUMBER :	ASPL/2024/****			ALL DIMENSION ARE IN mm, [NIT NO.:10/PR/BSPTCL/2023]		SHEET NO.
				DIMENSION TOLERANCE ± 10MM.		17 OF 20

*** :-ILLUMINATED TYPE PUSH BUTTON

ADORE YOU **:-ILLUM

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

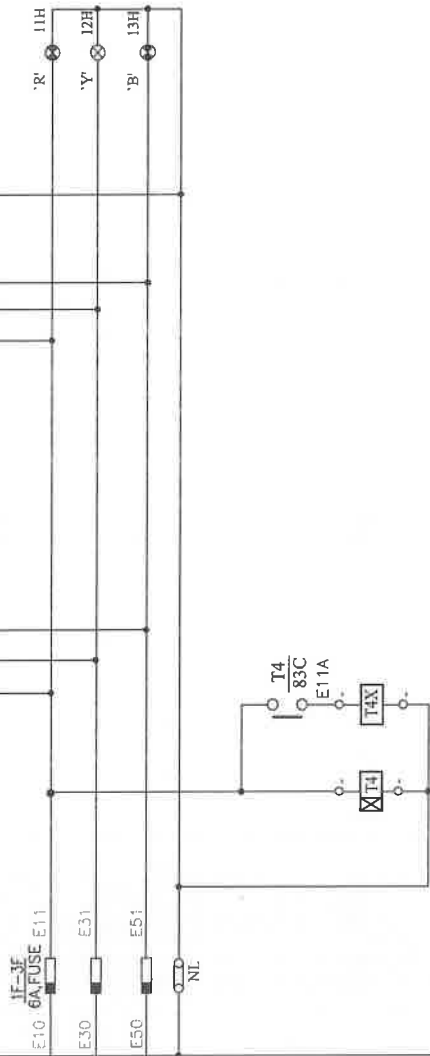
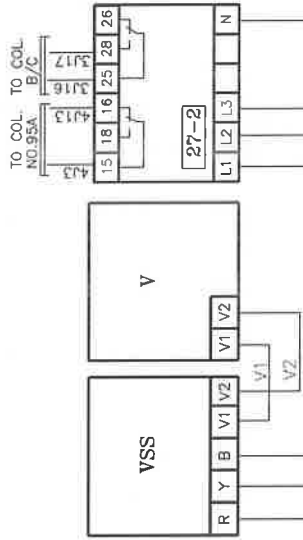
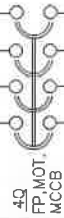
Don't forget

Electrical Superintending Engineer

(Planning and Engineering)

(Planning and Engineering)
Bihar State Power Transmission Company Limited

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or for any other purpose without their written permission



APPROVED

Subject to the condition that you are not absolved of
the responsibility for correctness of the materials
supplied as per specification

Sanjiv Singh

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800023

[Signature]

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOOREY (DIST. GOPALGANJ), BIHAR
MANUFACTURER:		
ASIAN Switchgear Pvt. Ltd. Plot No. 13, Industrial Estate, Kumbhariya, Dist. Varanasi, U.P. Pin-221004. Tel: 0522-2410002 E-Mail: info@asianswitchgear.com		
DRAWING NUMBER:	ASPL/BSPTCL/24160B	
JOB NUMBER:	ASPL/2024/****	
TITLE:		415V ACDB SCHEMATIC DIAGRAM
NAME		DATE
DRAWN		GANESH
CHECKED		GANESH
APPROVED		
REV.01		---
REV.02		---
REV.03		---
REV.04		---
ALL DIMENSION ARE IN mm		SCALE N.T.S.
DIMENSION TOLERANCE ± 10MM.		SHEET NO. 19 OF 20

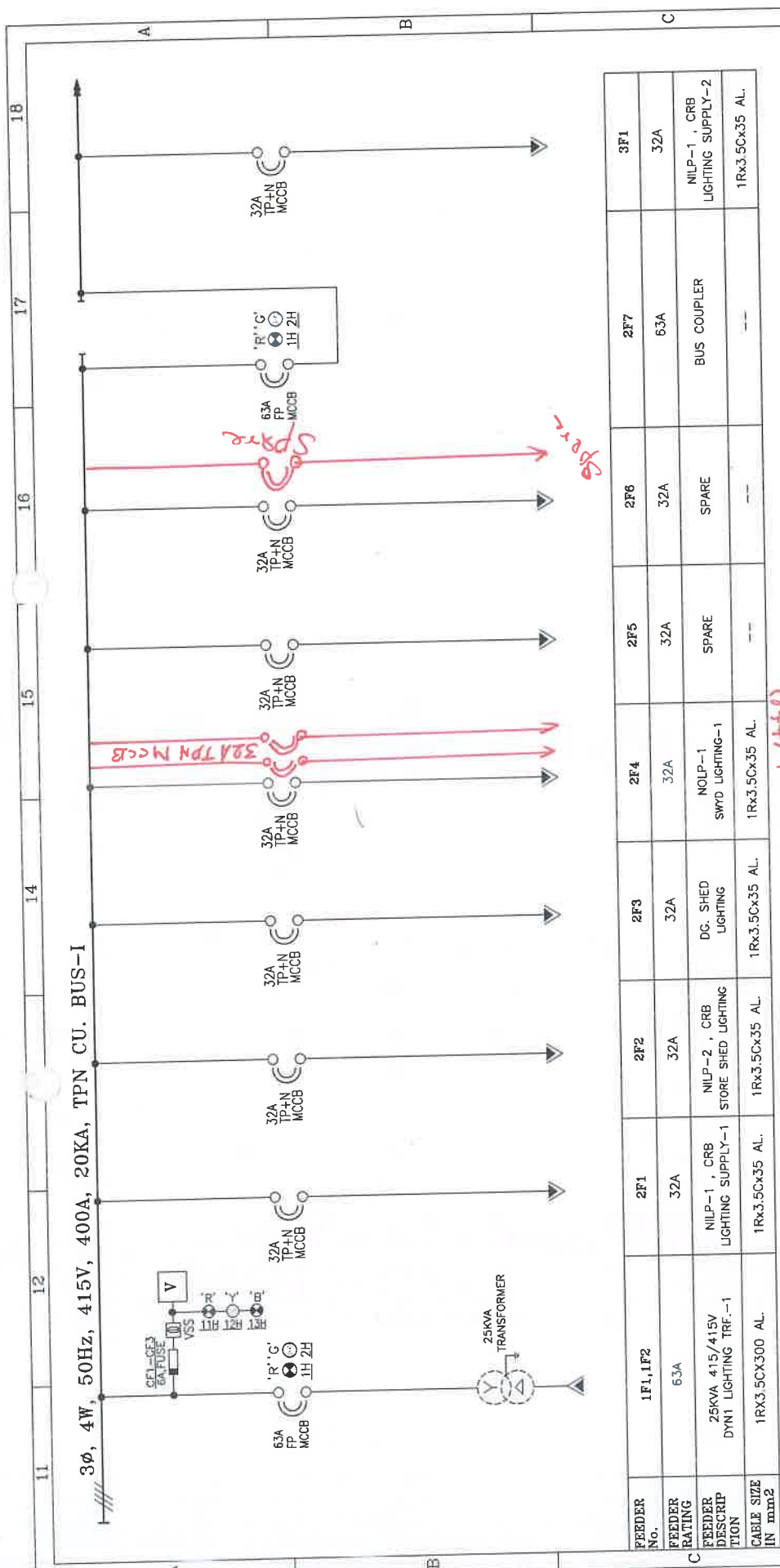
POWER, METERING & INDICATION CIRCUIT DIAGRAM
FOR TRF.2 INCOMER-3

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
 MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17, Korum Industrial Estate Korum (U.P.) Dist. Meerut, U.P. - 201002 Tel: 0519-2611111 E-Mail: asian@asianswitchgear.com	DRAWN	NAME	DATE	TITLE : 415V ACDB SCHEMATIC DIAGRAM		
	CHECKED	GANESH	08.08.2024			
	APPROVED	GANESH	08.08.2024			
		REV.01	---	REV.03	---	SCALE
		REV.02	---	REV.04	---	N.T.S.
DRAWING NUMBER : ASPL/BSPTCL/24160B						
ALL DIMENSION ARE IN mm. TIT NO.: 10/PR/BSPTCL/2023						
DIMENSION TOLERANCE $\pm$ 10MM.						
JOB NUMBER :	ASPL/2024/*****					
SHEET NO. 20 OF 20						

11		12		13		14		15		16		17		18	
GENERAL NOTES FOR LT SWITCH BOARD :-															
1. ALL DIMENSIONS ARE IN MM.															
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND COMPARTMENTALISED , CONFIRM TO IS:8623															
3. THE PANEL SHALL BE SUITABLE FOR 3Ø, 4W, 415V±10% AC, 50±5% HZ SUPPLY.															
4. THE PANEL SHALL BE FABRICATED WITH															
(i) BASE CHANNEL - ISMC-75															
(ii) STRUCTURE & MOUNTING PLATE - 2.0 mm. CRCA															
(iii) DOOR,COVER & PARTITION - 1.6 mm. CRCA															
(iv) GLAND PLATE - 3.0 mm. CRCA															
5. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.															
6. THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.															
7. BUS BAR SHALL BE OF ELECTROLYTIC GRADE COPPER SUPPORTED ON NON HYGROSCOPIC, NON CARBONISING, CORROSION RESISTANCE, SMC/DMC INSULATORS.															
8. BUS BAR SHALL BE INSULATED HEAT SHRINKABLE COLOURED PVC SLEEVES RED, YELLOW, BLUE AND BLACK FOR IDENTIFICATION.															
9. EARTH BUS SHALL BE PROVIDED THROUGHOUT THE PANEL LENGTH															
10. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.															
A. AC VOLTAGE CIRCUIT - 1.5 SQ MM RED, YELLOW, BLUE, BLACK															
B. CURRENT CIRCUIT - 2.5 SQ MM RED, YELLOW, BLUE, BLACK															
C. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK															
D. DC CONTROL CKT. - 1.5 SQ MM GREY															
E. GROUNDING - 2.5 SQ MM GREEN															
11.THE MINIMUM CLEARANCE IN MAIN BUSBARS SHALL BE AS FOLLOWS:															
A. BETWEEN PHASE TO PHASE - 25 MM															
B. BETWEEN PHASE TO NEUTRAL - 25 MM															
C. BETWEEN PHASE TO EARTH - 25 MM															
D. BETWEEN NEUTRAL TO EARTH - 25 MM															
NOTE:-CLEARANCE BETWEEN TERMINALS AT COMPONENTS SHALL BE AS PER APPLICABLE INDIVIDUAL STANDARDS FOR COMPONENTS MANUFACTURER.															
12.NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.															
13.PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.															
14.CABLE ENTRY AS PER G.A. DRAWING.															
15.PAINT SHADE -SMOKE GREY (692 OF IS:5)															
APPROVED Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification Pan. Jhaud Electrical Superintending Engineer (Planning and Engineering) Bihar State Power Transmission Company Limited Vidyut Bhawan, Patna-800021															
CUSTOMER: CONTRACTOR: PROJECT: BIHAR STATE POWER TRANSMISSION CO. LTD. M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED 132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR															
MANUFACTURER: ASPL/2024/**** ASPL/BSPTCL/24160C ASPL/2024/**** ASPL/BSPTCL/2023 2 OF 8															

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FEEDER No.	1F1, 1F2	2F1	2F2	2F3	2F4	2F5	2F6	2F7	3F1
FEEDER RATING	63A	32A	32A	32A	32A	32A	32A	63A	32A
FEEDER DESCRIP TION	25KVA 415/415V DYN1 LIGHTING TRF.-1	NLP-1, CRB LIGHTING SUPPLY-1	NLP-2, CRB STORE SHED LIGHTING	DC. SHED LIGHTING	NOLP-1 SWD LIGHTING-1	SPARE	SPARE	BUS COUPLER	NLP-1, CRB LIGHTING SUPPLY-2
CABLE SIZE IN mm2	1RX3.5CX300 AL.	1RX3.5CX35 AL.	1RX3.5CX35 AL.	1RX3.5CX35 AL.	1RX3.5CX35 AL.	---	---	---	1RX3.5CX35 AL.

1 as corrected

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Pav. Gad

Electrical Superintending Engineer
(Planning and Engineering) Limited
Bihar State Power Transmission Company
Vidhyut Bhawan, Patna-800021

BIHAR STATE POWER TRANSMISSION CO. LTD.

CONTRACTOR: M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

PROJECT: 132/33KV GSS BHOERY (DIST. GOPALGANJ), BIHAR

MANUFACTURER:		TITLE:	
 Asian Switchgear Pvt. Ltd. Plot 12, Industrial Estate, Katra (U.P.) Pin-201204, India www.asianswitchgear.com E-Mail: asiansg@gmail.com	DRAWN	NAME	DATE
	CHECKED	GANESH	08.08.2024
	APPROVED	GANESH	08.08.2024
DRAWING NUMBER: ASPL/BSPTCL/24160C		SINGLE LINE DRAWING	
JOB NUMBER: ASPL/2024/*****		SCALE	
DRAWING NUMBER: ASPL/BSPTCL/24160C		REV.01	04.11.2024
JOB NUMBER: ASPL/2024/*****		REV.02	---
DRAWING NUMBER: ASPL/BSPTCL/2023		REV.03	---
JOB NUMBER: ASPL/2024/*****		REV.04	---
DRAWING NUMBER: ASPL/BSPTCL/2023		SHEET NO. 4 OF 8	



FEEDER No.	3F2	3F3	3F4	3F5	3F6	4F1,4F2
FEEDER EATING	32A	32A	32A	32A	32A	63A
FEEDER DISCRIP TION	NLP-4 DORMITORY LIGHTING	NLP-5 SECURITY HUT & PUMP HOUSE LIGHTING	NLP-1 SWDY LIGHTING-2	SPARE	SPARE	25KVA 415/415V DYN1 LIGHTING TRF.-2
FEEDER CABLE SIZE	1Rx3.5Cx35 AL.	1Rx3.5Cx35 AL.	1Rx3.5Cx35 AL.	---	---	1Rx3.5Cx300 AL.

boards of wall mounted
SSO to be provided for
port to be provided at mid span
in each girder at mid span and
Sectionalizer Switching
① 132 kV Switching
② 33 kV Switching
③ Street lighting

(as wanted)

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

for: [Signature]

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-50002

[Signature]

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CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR				
 MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Brown Industrial Estate, Kumbhari (U.P.) PIN-201305, Phn: 0512-2416601 Email: aspl@aspl.co.in E-Mail: aspl@aspl.co.in	DRAWN	NAME	DATE	TITLE :		
	CHECKED	GANESH	08.08.2024	415V MLDB		
	APPROVED	GANESH	08.08.2024	SINGLE LINE DRAWING		
		REV.01	04.11.2024	REV.03	SCALE	
DRAWING NUMBER : ASPL/BSPTCL/24160C		REV.02		REV.04	N.T.S	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm, NIT NO.:10/P/R/BSPTCL/2023				SHEET NO. 5 OF 8	
	DIMENSION TOLERANCE ± 10MM.					

BILL OF MATERIAL

Sr. No.	ITEM DESCRIPTION	MAKE	Qty
1	MCCB-63A,4P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE, EXTENDED- ROM & AUX. CONTACT BLOCK	C&S	3
2	CASTLE LOCK FOR MECHANICAL INTERLOCKING	REPUTED	3
3	25KVA, 415/415V DYN1 LIGHTING TRANSFORMER	AE/GPD	2
4	MCCB-32A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE, EXTENDED- ROM	C&S	12
5	ANALOG VOLT METER 96sq.mm, 0-500V ,90DEG.	RISHABH/AE	2
6	VOLTMETER SELECTOR SWITCH 3POSITION WITH OFF ,6A	VAISHNO/SURDHI	2
7	LED INDICATION LAMP, 230V AC ,DIA. 22.5mm- RED	C&S/VAISHNO/SURDHI	5
8	LED INDICATION LAMP, 230VAC ,DIA. 22.5mm- YELLOW	C&S/VAISHNO/SURDHI	2
9	LED INDICATION LAMP, 230V AC ,DIA. 22.5mm- BLUE	C&S/VAISHNO/SURDHI	2
10	LED INDICATION LAMP, 230V AC ,DIA. 22.5mm- GREEN	C&S/VAISHNO/SURDHI	3
11	CONTROL CONTACTOR 230V AC	C&S	1
12	CONTROL FUSE BASE WITH HRC 6A	C&S	10
13	THEMOSTATE	REPUTED	2
14	COOLING FAN	REPUTED	2

Comments in different sheets.

BOM shall be modified as per comments in different sheets of MLD B drawings

(as checked)

APPROVED

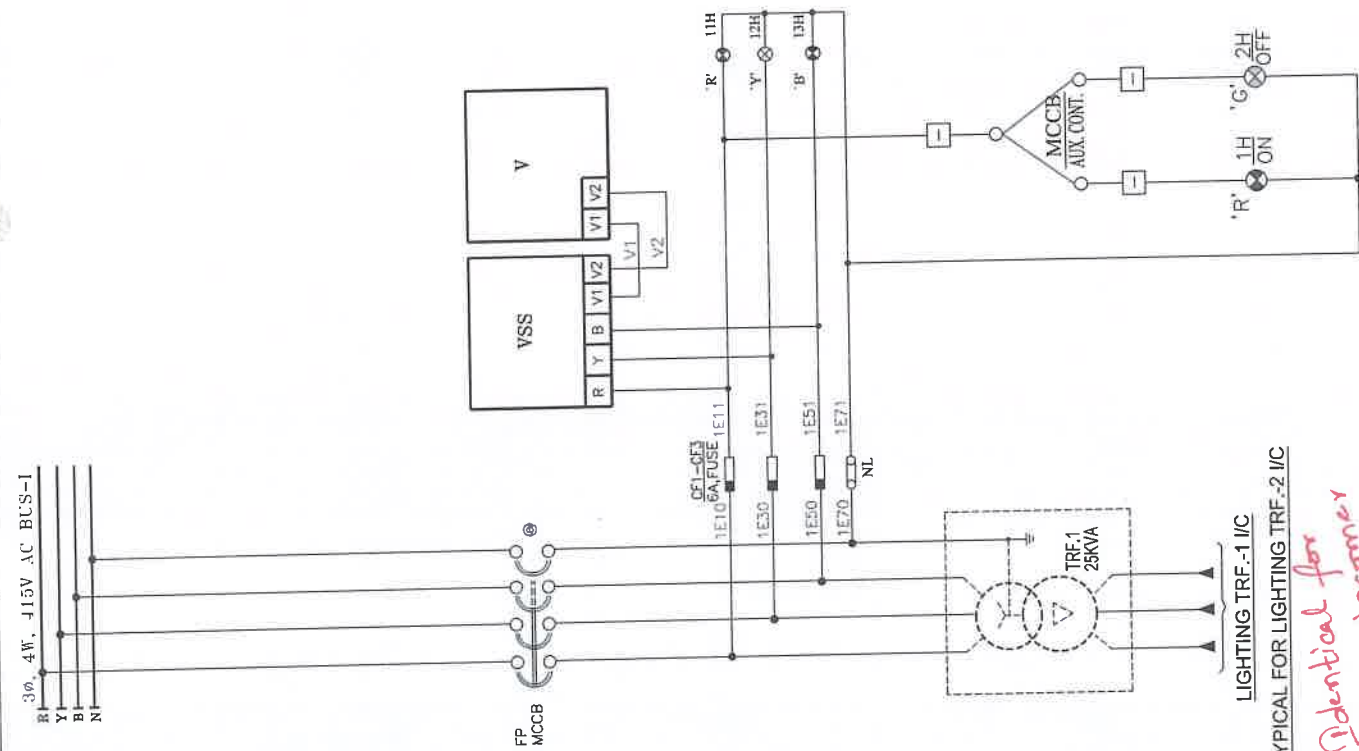
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Pan. Jand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidvut Bhawan, Patna-800004

[Signature]

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.			
CONTRACTOR :	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED			
PROJECT :	132/33KV GSS BHOERY (DIST. GOPALGANJ) , BIHAR			
 MANUFACTURER : Asian Switchgear Pvt. Ltd. Plot No. 15, Sector 15, Phase 1, Gurgaon (HR) Pin-122004, Tel. 012-2410000 E-Mail: asian@switchgear.com	DRAWN	GANESH	DATE	08.08.2024
	CHECKED	GANESH		08.08.2024
	APPROVED			
DRAWING NUMBER : ASPL/BSPTCL/24160C		REV.01	04.11.2024	REV.03
JOB NUMBER : ASPL/2024/****		REV.02	---	REV.04
DRAFTING NUMBER : ASPL/BSPTCL/24160C		ALL DIMENSION ARE IN mm, INT NO.:10/PR/BSPTCL/2023		SCALE N.T.S.
JOB NUMBER : ASPL/2024/****		DIMENSION TOLERANCE ± 10MM.		SHEET NO. 6 OF 8

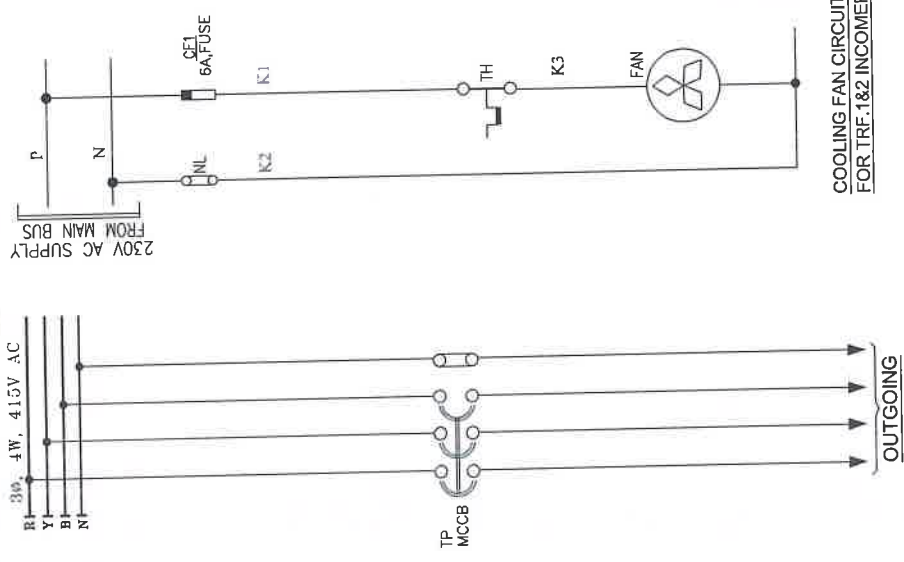
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LIGHTING TRF.-1 I/C

TYPICAL FOR LIGHTING TRF.-2 I/C

Identical for
in corner
both



COOLING FAN CIRCUIT FOR TRF.1&2 INCOMER

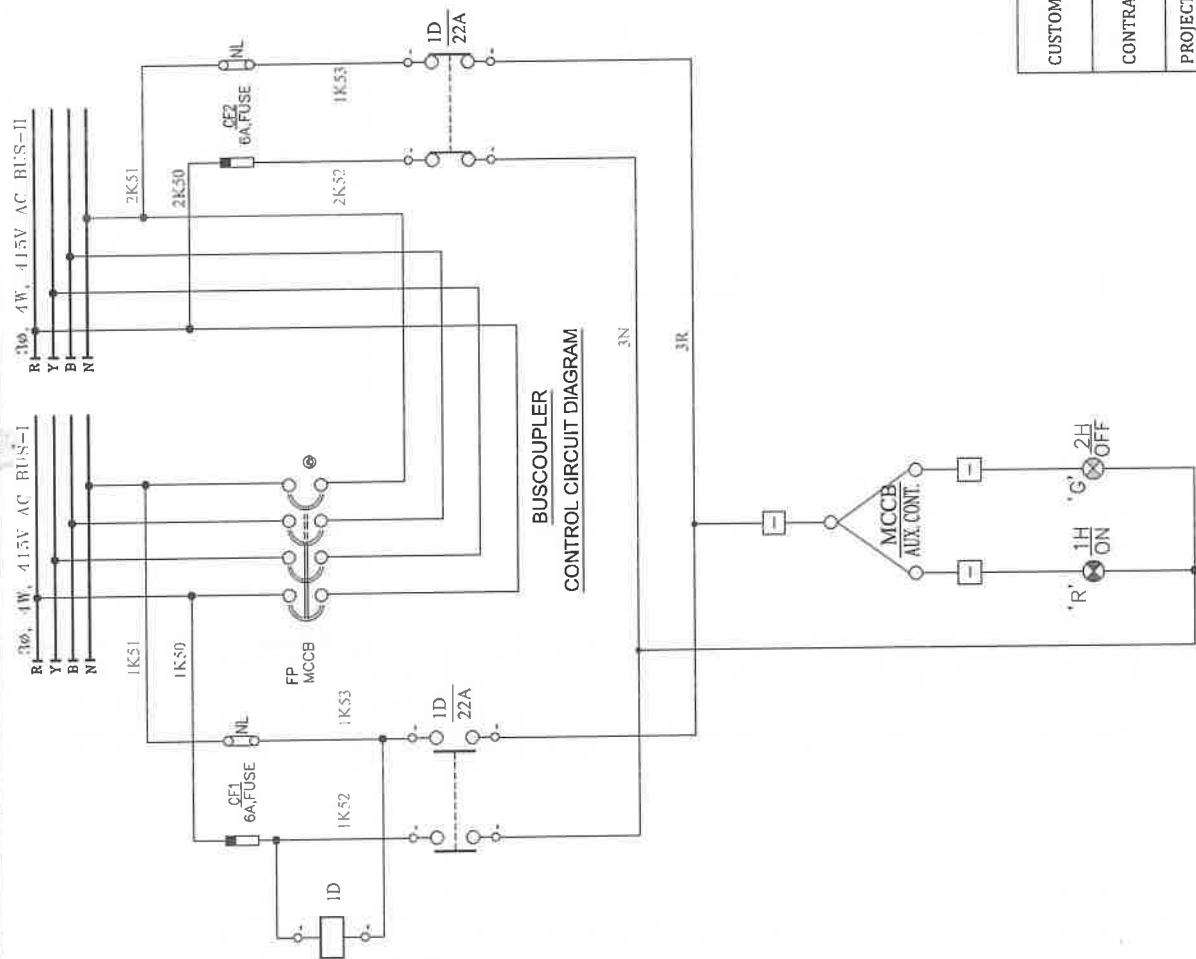
APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Electrical Superintendent Engineer
(Planning and Engineering)
Ohio State Power Transmission Company Limited
10021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
 MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Karam Industrial Estate, Karam (UP) PIN-201205 Tel: 0522-2541161 Email: info@asianswitchgear.com E-Mail: marketing@asianswitchgear.com	DRAWN	NAME	DATE	TITLE : 415V MLDDB SCHEMATIC DIAGRAM		
	CHECKED	GANESH	08.08.2024			
	APPROVED	GANESH	08.08.2024			
		REV.01	04.11.2024	REV.03	SCALE	N:1 S
DRAWING NUMBER : ASPL/BSPTCL/241 60C		REV.02		REV.04		
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm, NIT NO.:10/PR/BSPTCL/2024				SHEET NO.
		DIMENSION TOLERANCE ± 10MM.				7 OF 8

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800 015



CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.									
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED									
PROJECT :	 MANUFACTURER : Aditya Switchgear Pvt. Ltd. B-17 Kirti Industrial Estate, Kanpur (U.P.) Pin-201224/INDIA. Tel: 0512-511002 E-Mail: adityasg@gmail.com	DRAWN	NAME	DATE	TITLE : 415V MLDB SCHEMATIC DIAGRAM						
		CHECKED	GANESH	08.08.2024							
		APPROVED									
			REV.01	04.11.2024							REV.03
		DRAWING NUMBER : ASPL/BSPTCL/24160C					REV.02	REV.04	SCALE N.T.S.		
JOB NUMBER :	ASPL/2024/****	ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023									
		DIMENSION TOLERANCE ± 10MM.									
		SHEET NO. 8 OF 8									

ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianswitchgear.com
Email: asianknp@gmail.Com



Asian Switchgear Pvt. Ltd.

DRAWING FOR APPROVAL

PANEL NAME	415V ELDB
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Panigrahi
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800011

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT:	132/33KV GSS BHOOREY (DIST. GOPALGANJ) , BIHAR					
 MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.) www.asianswitchgear.com E-Mail: asianknp@gmail.com	NAME	DATE	TITLE :			
	DRAWN	GANESH	08.08.2024	415V ELDB		
	CHECKED	GANESH	08.08.2024	TITLE SHEET		
	APPROVED					
		REV.01	04.11.2024	REV.03		SCALE
DRAWING NUMBER : ASPL/BSPTCL/24160D	REV.02		REV.04		N.T.S.	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm, NIT NO.:10/PR/BSPTCL/2023					
	DIMENSION TOLERANCE ± 10MM.					

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GENERAL NOTES FOR LT SWITCH BOARD :-

- ALL DIMENSIONS ARE IN MM.
- THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND COMPARTMENTALISED , CONFIRM TO IS:8623
- THE PANEL SHALL BE SUITABLE FOR 3Ø, 4W, 415V±10% AC, 50±5% HZ SUPPLY.
- THE PANEL SHALL BE FABRICATED WITH
- ISMC-75
(i) BASE CHANNEL
(ii) STRUCTURE & MOUNTING PLATE -2.0 mm. CRCA
(iii) DOOR, COVER & PARTITION -1.6 mm. CRCA
(iv) GLAND PLATE -3.0 mm. CRCA
- RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
- THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
- BUS BAR SHALL BE OF ELECTROLYTIC GRADE COPPER SUPPORTED ON NON HYGROSCOPIC, NON CARBONISING, CORROSION RESISTANCE, SMC/DMC INSULATORS.
- BUS BAR SHALL BE INSULATED HEAT SHRINKABLE COLOURED PVC SLEEVES RED, YELLOW, BLUE AND BLACK FOR IDENTIFICATION.
- EARTH BUS SHALL BE PROVIDED THROUGHOUT THE PANEL LENGTH
- CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
 - AC VOLTAGE CIRCUIT - 1.5 SQ MM RED, YELLOW, BLUE, BLACK
 - CURRENT CIRCUIT - 2.5 SQ MM RED, YELLOW, BLUE, BLACK
 - AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
 - DC CONTROL CKT. - 1.5 SQ MM GREY
 - GROUNDING - 2.5 SQ MM GREEN

- THE MINIMUM CLEARANCE IN MAIN BUSBARS SHALL BE AS FOLLOWS:
 - BETWEEN PHASE TO PHASE - 25 MM
 - BETWEEN PHASE TO NEUTRAL - 25 MM
 - BETWEEN PHASE TO EARTH - 25 MM
 - BETWEEN NEUTRAL TO EARTH - 25 MM

NOTE:-CLEARANCE BETWEEN TERMINALS AT COMPONENTS SHALL BE AS PER APPLICABLE INDIVIDUAL STANDARDS FOR COMPONENTS MANUFACTURER.

 - NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
 - PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
 - CABLE ENTRY AS PER G.A. DRAWING.
 - PAINT SHADE - SMOKE GREY (692 OF IS:5)

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

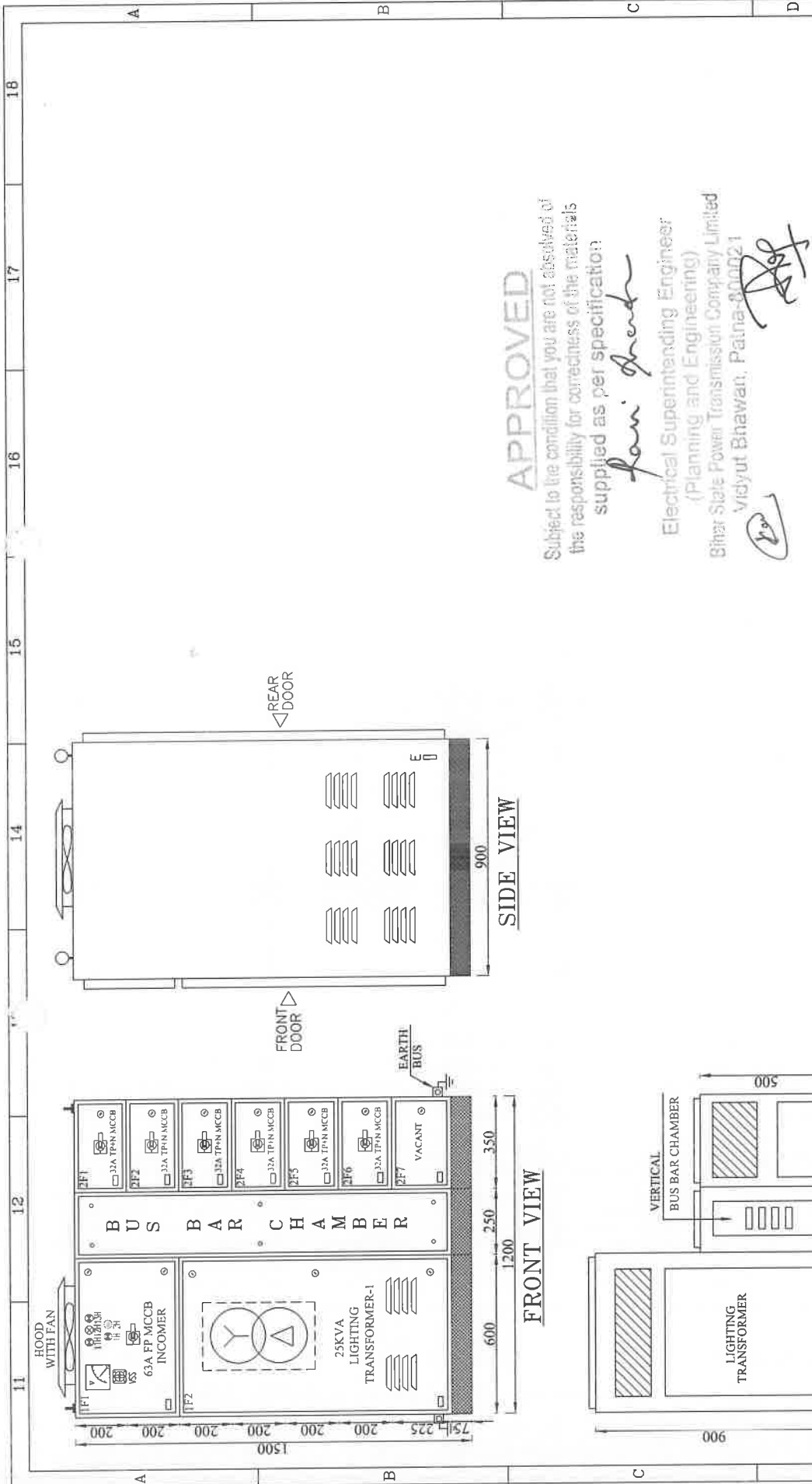
Sanjiv
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800021

Sanjiv

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CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOIREY (DIST. GOPALGANJ), BIHAR
MANUFACTURER:  Asian Switchgear Pvt. Ltd. B-17 Avenue Industrial Estate Jalandhar (U.P.) Pin-225002, Jalandhar (U.P.) E-Mail: info@asiansg.com		TITLE: 415V ELDB GENERAL NOTES
DRAWING NUMBER: ASPL/BSPTCL/24160D		NAME GANESH
JOB NUMBER: ASPL/2024/****		DATE 08.08.2024
DRAFTING NUMBER: ASPL/BSPTCL/24160D		CHECKED GANESH
JOB NUMBER: ASPL/2024/****		APPROVED
DRAFTING NUMBER: ASPL/BSPTCL/24160D		REV.01 04.11.2024
JOB NUMBER: ASPL/2024/****		REV.02 ---
DRAFTING NUMBER: ASPL/BSPTCL/24160D		REV.03 ---
JOB NUMBER: ASPL/2024/****		REV.04 ---
DRAFTING NUMBER: ASPL/BSPTCL/24160D		SCALE N.T.S.
JOB NUMBER: ASPL/2024/****		SHEET NO. 2 OF 6

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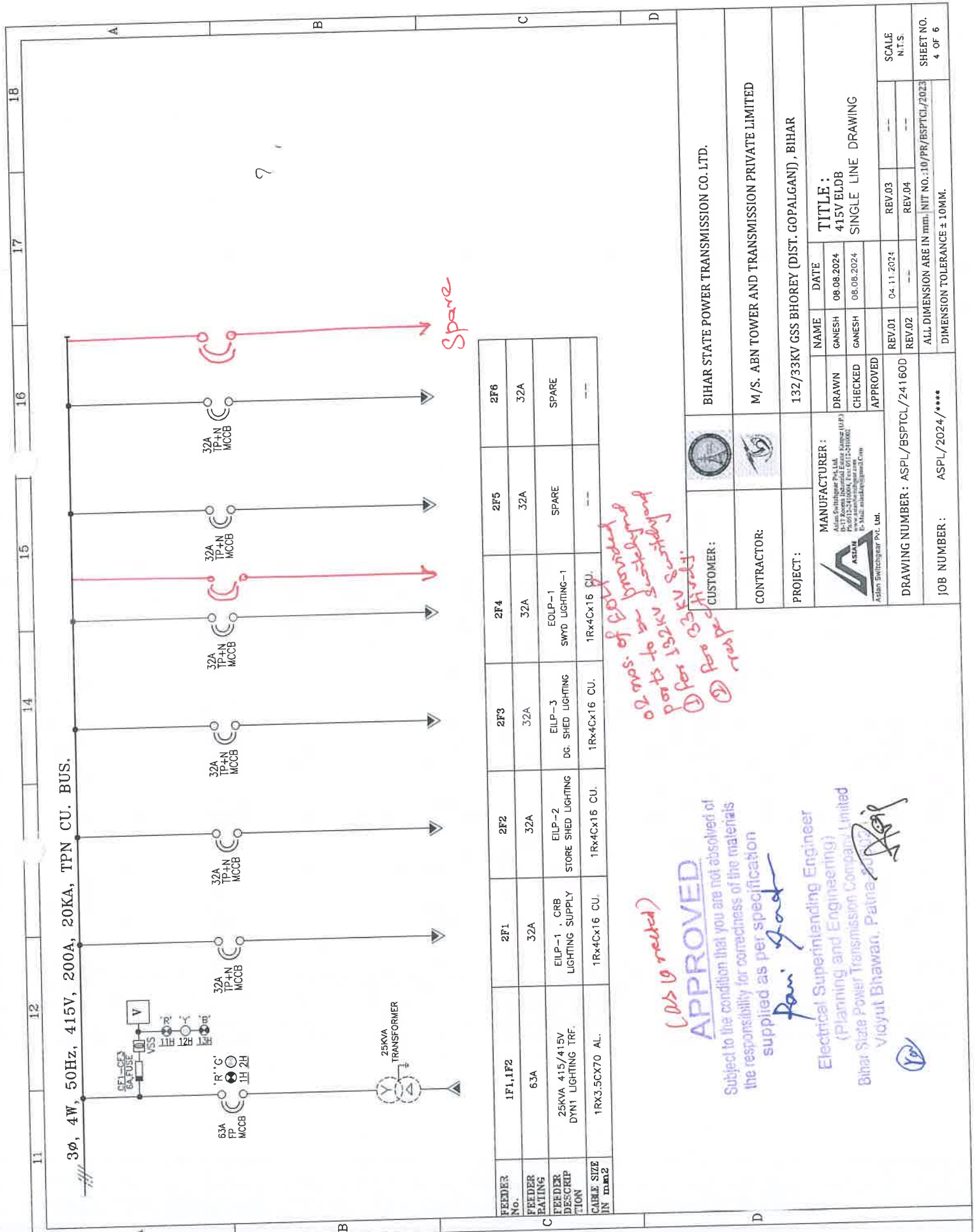


CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR	
MANUFACTURER :		ASIAN SWITCHGEAR PVT. LTD. Plot No. 13, Phase II, Industrial Area, Patna-800021 Ph: 0912-2410004, Fax: 0912-2410002 E-Mail: info@asianswitchgear.com
DRAWN	GANESH	DATE: 08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		
DRAWING NUMBER :	ASPL/BSPTCL/241600	REV.01 04.11.2024
JOB NUMBER :	ASPL/2024/****	REV.02 ---
		REV.03 ---
		REV.04 ---
		SCALE N.T.S.
		SHEET NO. 3 OF 6

MAIN BUS BAR SIZE:—
PHASE : 1x25x05 Sq. mm./Eq. CU.
NEUTRAL : 1x25x05 Sq. mm./Eq. CU.
EARTH : 1x20x05 Sq. mm./Eq. CU.

CABLE ENTRY—BOTTOM

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(As is noted)

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Pan. Gadh

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Viduyat Bhawan, Patna 800 002

10/



BIHAR STATE POWER TRANSMISSION CO. LTD.

CUSTOMER:

CONTRACTOR:

PROJECT:

MANUFACTURER:
Asian Switchgear Pvt. Ltd.
B-11, Keesari Industrial Estate, Keesari (U.P.)
Pin-201304, Lucknow, India
E-Mail: sales@asianindia.com

TITLE:
415V ELDB
SINGLE LINE DRAWING

DRAWING NUMBER: ASPL/BSPTCL/24160D

JOB NUMBER: ASPL/2024/****

SCALE
N.T.S.

SHEET NO.
4 OF 6

11	12	13	14	15	16	17	18
BILL OF MATERIAL							
Sr. No.	ITEM DESCRIPTION	MAKE	Qty				
A							
1	MCCB-63A,4P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM & AUX CONTACT BLOCK	C&S	1				
2	25KVA , 415/415V DYN1 LIGHTING TRANSFORMER	AE/GPD	1				
3	MCCB-32A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM	C&S	6				
4	ANALOG VOLT METER 96Sq.mm, 0-500V ,90DEG.	RISHABH/AE	1				
5	VOLTMETER SELECTOR SWITCH 3POSITION WITH OFF ,6A	VAISHNO/SURDHI	1				
6	LED INDICATION LAMP, 230V AC ,DIA. 22.5mm- RED	C&S/VAISHNO/SURDHI	2				
7	LED INDICATION LAMP, 230VAC ,DIA. 22.5mm- YELLOW	C&S/VAISHNO/SURDHI	1				
8	LED INDICATION LAMP, 230V AC ,DIA. 22.5mm- BLUE	C&S/VAISHNO/SURDHI	1				
9	LED INDICATION LAMP 230V AC ,DIA. 22.5mm- GREEN	C&S/VAISHNO/SURDHI	1				
10	CONTROL FUSE BASE WITH HRC 6A	C&S	4				
11	THEMOSTATE	REPUTED	1				
12	COOLING FAN	REPUTED	1				

BOM shall be modified as per comments in different sheets of CLSB

(as corrected)

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

BOM shall be modified as per comments in different sheets of CLOS

(as corrected)
APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
pan. gadu
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
vidyut Bhawan, Patna-800001

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOOREY (DIST. GOPALGANJ) , BIHAR
MANUFACTURER :		ASIAN SWITCHGEAR PVT. LTD.
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		
REV.01		04.11.2024
REV.02		
DRAWING NUMBER :	ASPL/BSPTCL/24160D	
JOB NUMBER :	ASPL/2024/****	
TITLE :	415V ELDB	
BILL OF MATERIAL		
SCALE	REV.03	---
N.T.S.	REV.04	---
SHEET NO.	ALL DIMENSION ARE IN mm	NIT NO.:10/PR/BSPTCL/2023
5 OF 6	DIMENSION TOLERANCE ± 10MM.	

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APPROVED

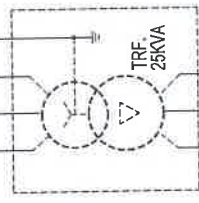
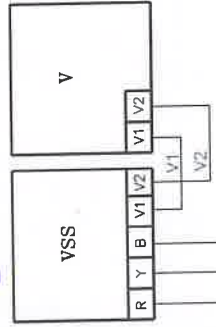
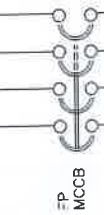
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Sanjiv Kumar

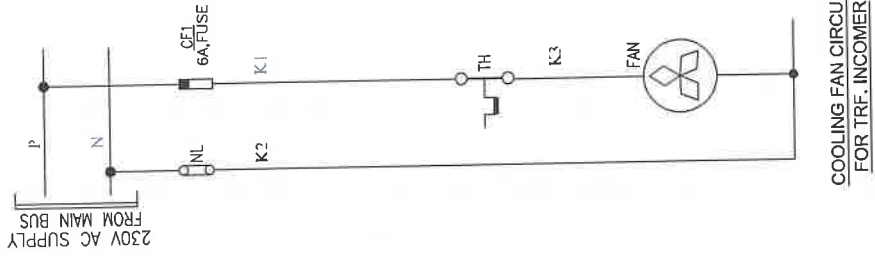
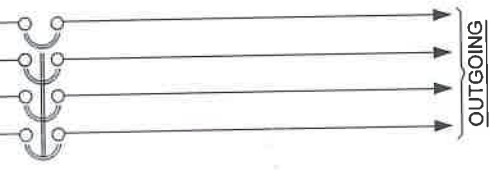
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-80002

[Signature]

[Signature]



LIGHTING TRF. - I/C



COOLING FAN CIRCUIT FOR TRF. INCOMER

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.									
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED									
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR									
 MANUFACTURER : Asian Switchgear Pvt. Ltd., B-17 Bypass Industrial Estate, Gurgaon (Haryana) India www.asian-switchgear.com E-Mail: marketing@asian.com	DRAWN	NAME	DATE	TITLE :				415V ELDB SCHEMATIC DIAGRAM			
	CHECKED	GANESH	08.08.2024								
		GANESH	08.08.2024								
		APPROVED									
	DRAWING NUMBER : ASPL/BSPTCL/24160D		REV.01	04.11.2024	REV.03	SCALE					
		REV.02	---	REV.04	N.T.S.						
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm, I/T NO.:10/PH/BSPTCL/2023				SHEET NO.						
	DIMENSION TOLERANCE $\pm$ 10MM.				6 OF 6						



ASIAN SWITCHGEAR PVT. LTD.
B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
Email: asianknp@gmail.Com

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DRAWING FOR APPROVAL

PANEL NAME	220V DCDB
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOHEY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOHEY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Pan. gad
Electrical/Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800001

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOHEY (DIST. GOPALGANJ) . BIHAR
MANUFACTURER:		TITLE : 220V DCDB TITLE SHEET
	DRAWN GANESH 08.08.2024	NAME GANESH 08.08.2024
	CHECKED GANESH 08.08.2024	DATE 08.08.2024
	APPROVED	REV.01 REV.02 REV.03 REV.04
	DRAWING NUMBER : ASPL/BSPTCL/24160E	SCALE N.T.S.
	JOB NUMBER : ASPL/2024/****	SHEET NO. 1 OF 10

GENERAL NOTES FOR LT SWITCH BOARD :-

- ALL DIMENSIONS ARE IN MM.
- THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND COMPARTMENTALISED , CONFIRM TO IS:8623
- THE PANEL SHALL BE SUITABLE FOR 220V±10% DC SUPPLY.
- THE PANEL SHALL BE FABRICATED WITH
(i) BASE CHANNEL - ISMC-75
(ii) STRUCTURE & MOUNTING PLATE - 2.0 mm. CRCA
(iii) DOOR,COVER & PARTITION - 1.6 mm. CRCA
(iv) GLAND PLATE - 3.0 mm. CRCA
- RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
- THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
- BUS BAR SHALL BE OF ELECTROLYTIC GRADE COPPER SUPPORTED ON NON HYGROSCOPIC, NON CARBONISING, CORROSION RESISTANCE, SMC/DMC INSULATORS.
- BUS BAR SHALL BE INSULATED HEAT SHRINKABLE COLOURED PVC SLEEVES RED, YELLOW, BLUE AND BLACK FOR IDENTIFICATION.
- EARTH BUS SHALL BE PROVIDED THROUGHOUT THE PANEL LENGTH
- CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
A. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
B. DC CONTROL CKT. - 1.5 SQ MM GREY
C. GROUNDING - 2.5 SQ MM GREEN

- THE MINIMUM CLEARANCE IN MAIN BUSBARS SHALL BE AS FOLLOWS:
A. BETWEEN +VE TO -VE - 25 MM
B. BETWEEN -VE TO EARTH - 25 MM
C. BETWEEN +VE TO EARTH - 25 MM
- NOTE:-CLEARANCE BETWEEN TERMINALS AT COMPONENTS SHALL BE AS PER APPLICABLE INDIVIDUAL STANDARDS FOR COMPONENTS MANUFACTURER.
- NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
- PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
- CABLE ENTRY AS PER G.A. DRAWING.
- PAINT SHADE - SMOKE GREY (692 OF IS:5)
- AUX. SUPPLY 230V AC NOT IN ASPL SCOPE

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Engineer
(Planning and Engineering)

Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800 001

10

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CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.			
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED			
PROJECT:		132/33KV GSS BHOOREY (DIST. GOPALGANI), BIHAR			
 MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17, Kuma Sagar Industrial Estate, Kumaug (U.P.) Pin-201224 (U.P.) E-Mail: marketing@asgpl.com	DRAWN	NAME	DATE	TITLE:	
	CHECKED	GANESH	08.08.2024	220V DCDB	
	APPROVED	GANESH	08.08.2024	GENERAL NOTES	
DRAWING NUMBER : ASPL/BSPTCL/24160E		REV.01	04.11.2024	REV.03	SCALE
JOB NUMBER : ASPL/2024/****		REV.02	---	REV.04	N.T.S.
		ALL DIMENSION ARE IN mm. INT NO.:10/PR/BSPTCL/2023			SHEET NO.
		DIMENSION TOLERANCE ± 10MM.			2 OF 10

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MAIN BUS BAR SIZE:-

+VE : 1x25x10 Sq. mm./Eq. CU.
 -VE : 1x25x10 Sq. mm./Eq. CU.
 EARTH : 1x20x05 Sq. mm./Eq. CU.

CABLE ENTRY-BOTTOM

@ :- MECHANICAL INTERLOCKED

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Ravi Kishor

Electrical Superintending Engineer
 (Planning and Engineering)
 Bihar State Power Transmission Company Limited
 Vidyut Bhawan, Patna-800024

10/11/2024

CUSTOMER: BIHAR STATE POWER TRANSMISSION CO. LTD.

CONTRACTOR: M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

PROJECT: 132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR

TITLE:

220V DCDB

GENERAL ARRANGEMENT DRAWING

NAME

DATE

GANESH

08.08.2024

GANESH

08.08.2024

APPROVED

REV.01

04.11.2024

REV.02

REV.04

ALL DIMENSION ARE IN mm.

UNIT NO.:10/PR/BSPTCL/2023

DIMENSION TOLERANCE ± 10MM.

SCALE

N.T.S.

SHEET NO.

3 OF 10

[illegible][illegible]

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MAIN BUS BAR SIZE:-

+VE : 1x25x10 Sq. mm./Eq. CU.
-VE : 1x25x10 Sq. mm./Eq. CU.
EARTH : 1x20x05 Sq. mm./Eq. CU.

CABLE ENTRY-BOTTOM

FRONT VIEW

SIDE VIEW

@ :- MECHANICAL INTERLOCKED

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Ravi Kishor
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800024

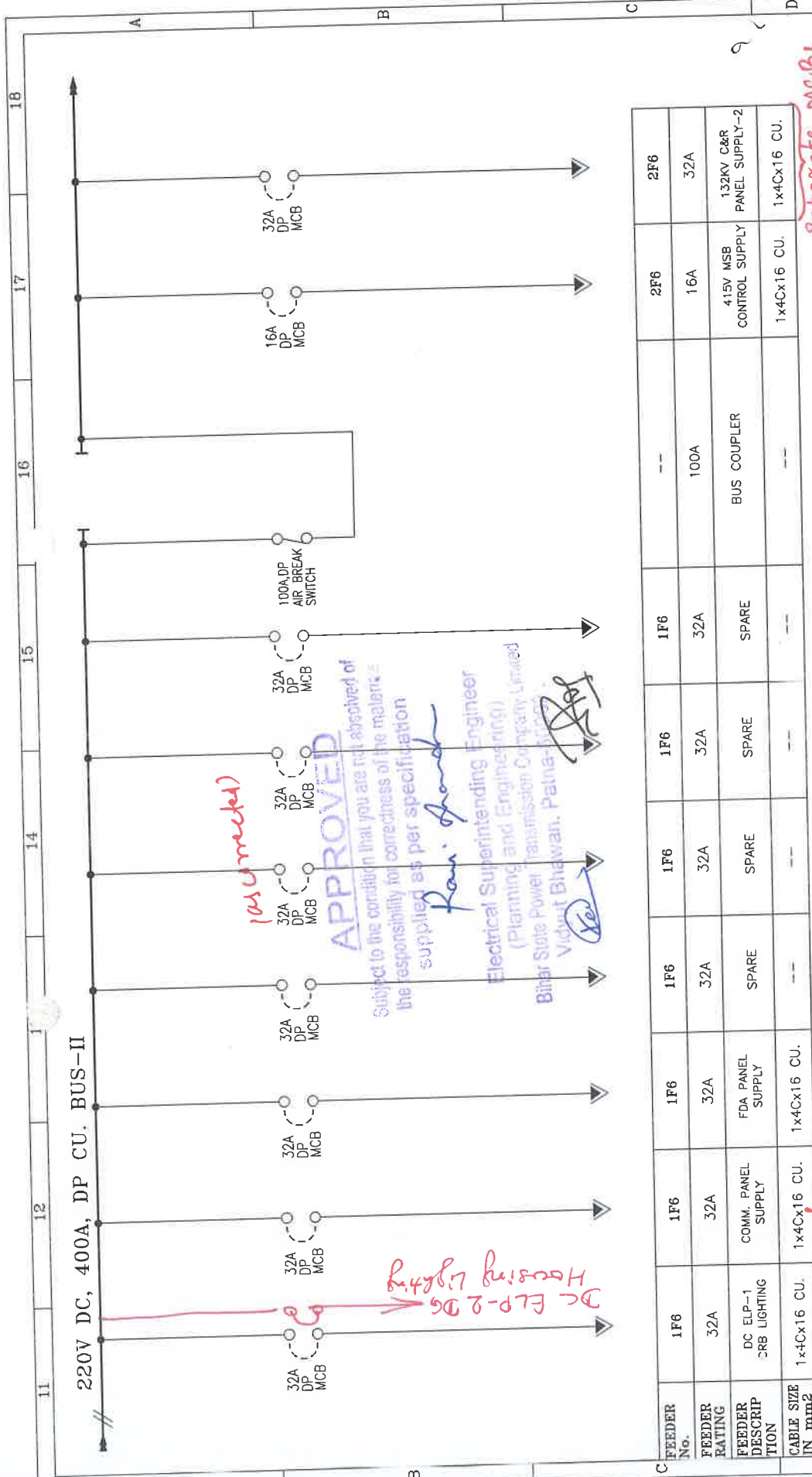
CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR
MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Sector-17, Industrial Area, Gurgaon (Haryana) www.asianswitchgear.com E-Mail: asiainfo@asianswitchgear.com	NAME	DATE
	DRAWN	08.08.2024
	CHECKED	08.08.2024
	APPROVED	
DRAWING NUMBER: ASPL/BSPTCL/24160E	REV.01	04.11.2024
	REV.02	---
JOB NUMBER: ASPL/2024/*****	ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023	
	DIMENSION TOLERANCE $\pm$ 10MM.	
	SCALE	N.T.S.
	SHEET NO.	3 OF 10

TITLE:

220V DCDB

GENERAL ARRANGEMENT DRAWING

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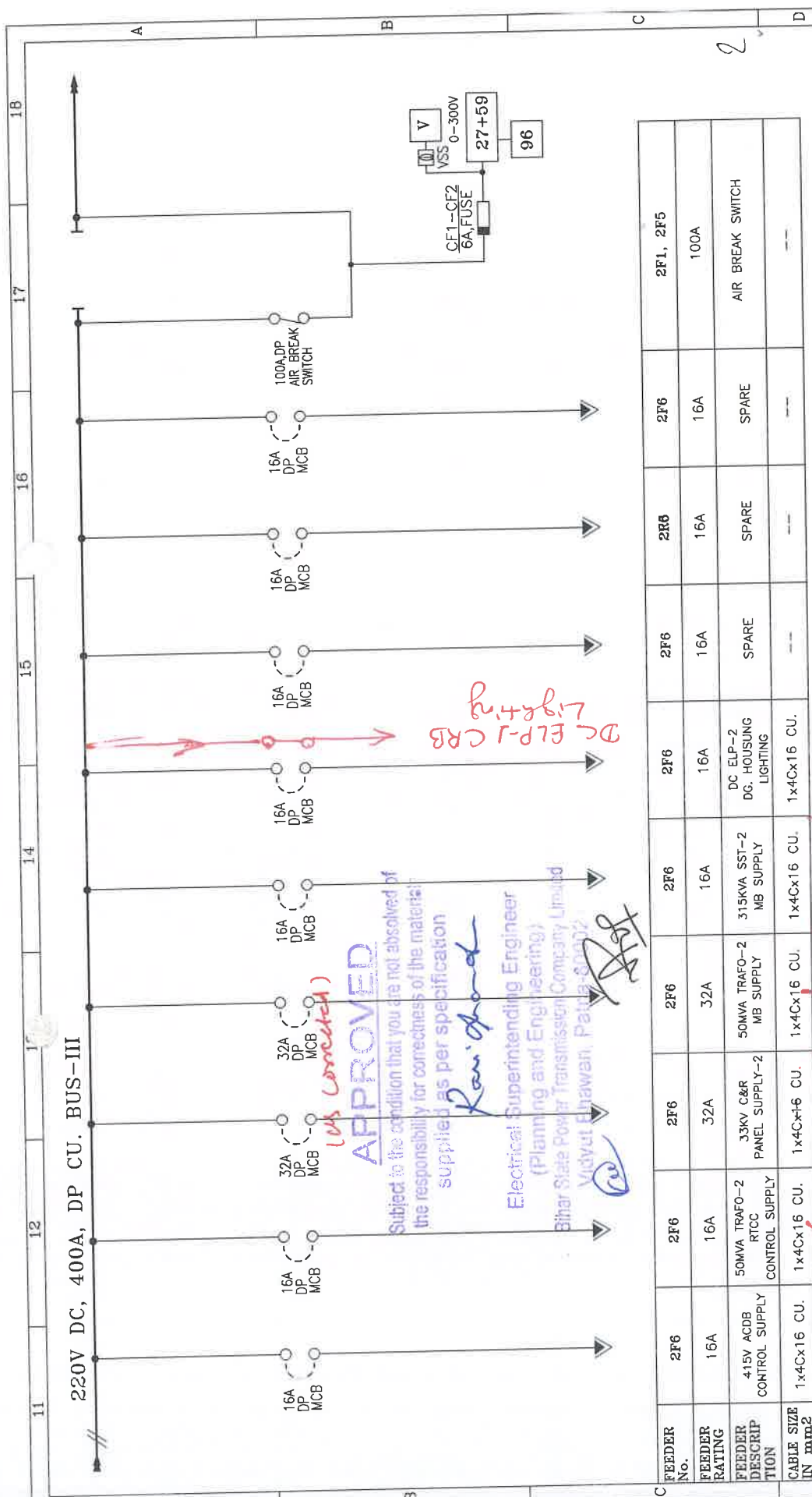


Each comm. panel shall be separately supplied via separate MCBs through DC-1 & DC-2 both

FEEDER No.	1F6	1F6	1F6	1F6	1F6	1F6	1F6	1F6	1F6	1F6	2F6	2F6
FEEDER RATING	32A	32A	32A	32A	32A	32A	32A	32A	32A	100A	16A	32A
FEEDER DESCRIP TION	DC ELP-1 CRB LIGHTING	COMM. PANEL SUPPLY	COMM. PANEL SUPPLY	FDA PANEL SUPPLY	SPARE	SPARE	SPARE	SPARE	SPARE	BUS COUPLER	415V MSB CONTROL SUPPLY	132KV C&R PANEL SUPPLY-2
CABLE SIZE IN mm2	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.	--	--	--	--	--	--	1x4Cx16 CU.	1x4Cx16 CU.

separate MCBs feeders for 08 nos. 132 kv bays

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR :	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :	132/33KV GSS BHOHEY (DIST. GOPALGANJ), BIHAR
MANUFACTURER :	ASIAN SWITCHGEAR PVT. LTD.
DRAWN :	GANESH
CHECKED :	GANESH
APPROVED :	ASIAN
DATE :	08.08.2024
TITLE :	220V DCDB SINGLE LINE DRAWING
REV.01 :	04.11.2024
REV.02 :	--
REV.03 :	--
REV.04 :	--
DRAWING NUMBER :	ASPL/BSPTCL/24160E
JOB NUMBER :	ASPL/2024/****
SCALE :	NTS
SHEET NO.	5 OF 10



CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR				
 MANUFACTURER : Asian Switchgear Pvt. Ltd. D-17, Kirti Industrial Estate, Gurgaon (Haryana) INDIA-122004. Tel: 012-2419001 E: sales@asianswitchgear.com		NAME GANESH GANESH APPROVED	DATE 08.08.2024 08.08.2024	TITLE : 220V DCDB SINGLE LINE DRAWING		
DRAWING NUMBER : ASPI/_BSPTCL/_24160E		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
JOB NUMBER : ASPI/_2024/_****		REV.02	--	REV.04	--	SHEET NO. 5 OF 10
		ALL DIMENSION ARE IN mm. NIT NO.: 10/P/R/BSPTCL/2023				
		DIMENSION TOLERANCE ± 10MM.				

Separate NCB
 feeders to
 Trade-1
 & Trade-2
 common supply

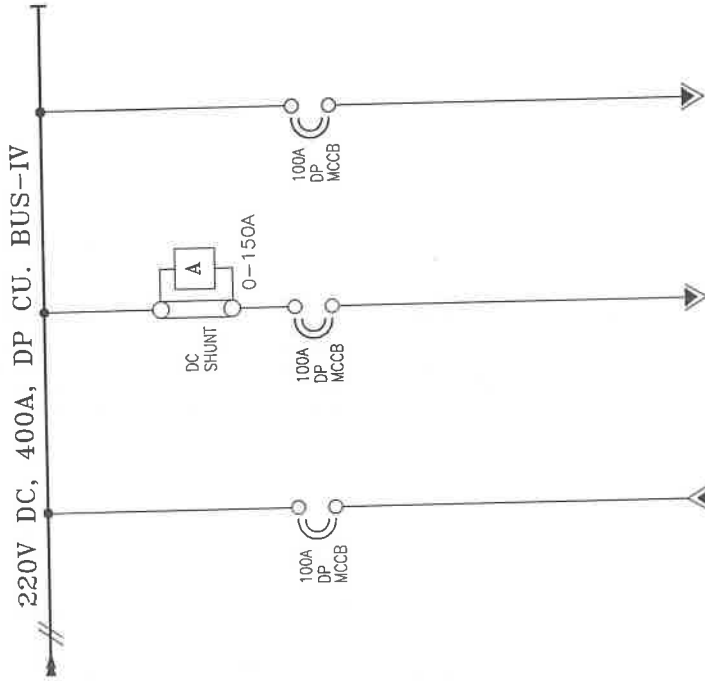
Separate
 NCB feeders
 for Trade-1
 & Trade-2

Separate
 NCB feeders
 for SST-1 &
 SST-2

NCB
 Trade-1 &
 Trade-2
 supply

Separate
 NCB
 Trade-1 &
 Trade-2
 supply

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FEEDER No.	2F2	2F3	2F4
FEEDER RATING	100A	100A	100A
FEEDER DESCRIPTION	INCOMER FROM CHARGER-2	220V BATTERY-2	220V BATTERY DISCHARGE FEEDER
CABLE SIZE IN mm ²	2x1Cx150 AL.	2x1Cx150 AL.	2x1Cx150 AL.

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Ravi Prasad
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-80002

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR					
 MANUFACTURER : Asian Switchgear Pvt. Ltd. Plot 17, Kuma Industrial Estate, Kumbhariya (U.P.) Pin-2211004, Tel: 0512-2910602 E-Mail: mumbai@asiangear.com	DRAWN		NAME	DATE	TITLE : 220V DCDB SINGLE LINE DRAWING		
	CHECKED		GANESH	08.08.2024			
	APPROVED		GANESH	08.08.2024			
DRAWING NUMBER : ASPL/BSPTCL/24160E				REV.01	04.11.2024	REV.03	SCALE N.T.S.
JOB NUMBER : ASPL/2024/****				REV.02	--	REV.04	SHEET NO. 7 OF 10
				ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023 DIMENSION TOLERANCE ± 10MM.			

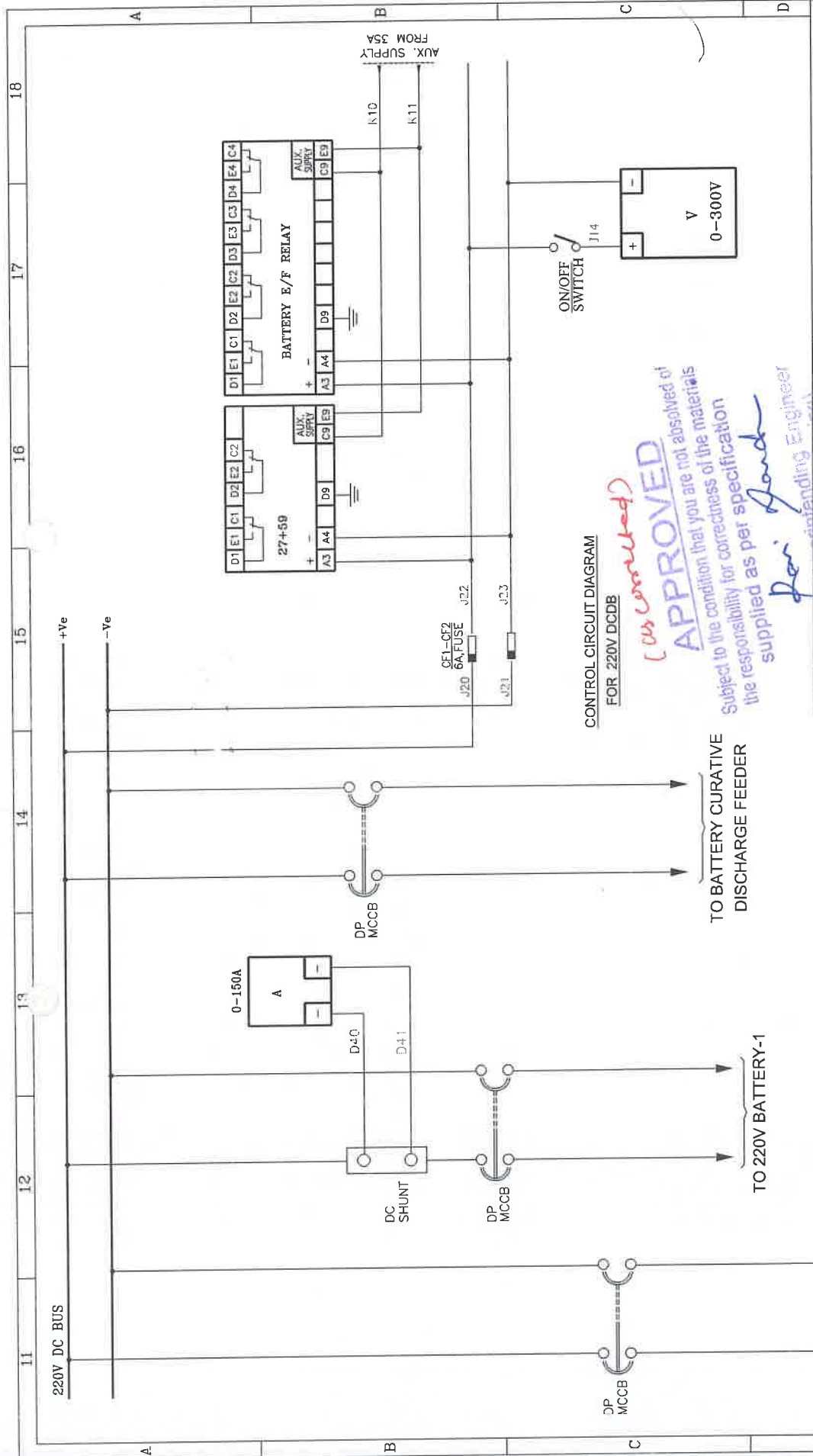
BILL OF MATERIAL

Sr. No.	ITEM DESCRIPTION	MAKE	Qty
1	MCCB-100A,2P,4KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM, SPREADER , SHUNT TRIP COIL-230V AC	C&S	2
2	MCCB-100A,2P,4KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM, SPREADER	C&S	4
3	AIR BREAK SWITCH , 100A DP (i) DOOR OPERATING HANDLE	C&S	3
4	MCB ,32A,DP, C-CURVE -4KA	C&S	13
5	MCB ,16A,DP, C-CURVE -4KA	C&S	10
6	INSTANTANEOUS UNDER + OVERVOLTAGE RELAY , OPERATING VOLTAGE-220V DC, AUX SUPPLY-230V AC	C&S/IVS	2
7	BATTERY EARTH FAULT RELAY , OPERATING VOLTAGE-220V DC, AUX SUPPLY-230V AC	C&S/IVS	2
8	ANALOG AMP METER 96Sq.mm, 0-150A WITH SHUNT	AE/RISHABH	2
9	ANALOG VOLT METER 96Sq.mm, 0-300V	AE/RISHABH	2
10	VOLT SELECTOR SWITCH	VAISHNO/SURDHI	2
11	CONTROL FUSE BASE WITH HRC 6A	C&S	8

BOM shall be modified as per comments in SLDs of DCDB-1 & 2.
* 50% Spare feeders to be provided after consideration of comments in SLDs

(as requested)
APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Kumar
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800 021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOERY (DIST. GOPALGANJ) , BIHAR
MANUFACTURER :	Asian Switchgear Pvt. Ltd. B-101/2, 2410004, Faridkot (U.P.) E-mail: asianswitchgear@gmail.com Phone: 0522-2410002	TITLE : 220V DCDB BILL OF MATERIAL
DRAWING NUMBER : ASPL/BSPTCL/24160E	DRAWN : CHECKED : APPROVED :	NAME : GANESH GANESH REV.01 REV.02 REV.03 REV.04
JOB NUMBER : ASPL/2024/****	DATE : 08.08.2024 08.08.2024 04.11.2024 ---	SCALE : N.T.S. ---
	DRAWING NUMBER : ASPL/BSPTCL/24160E	SHEET NO. 8 OF 10
	ALL DIMENSION ARE IN mm. TIT NO.:10/PR/BSPTCL/2023	
	DIMENSION TOLERANCE $\pm$ 10MM.	



CONTROL CIRCUIT DIAGRAM
FOR 220V DCDB



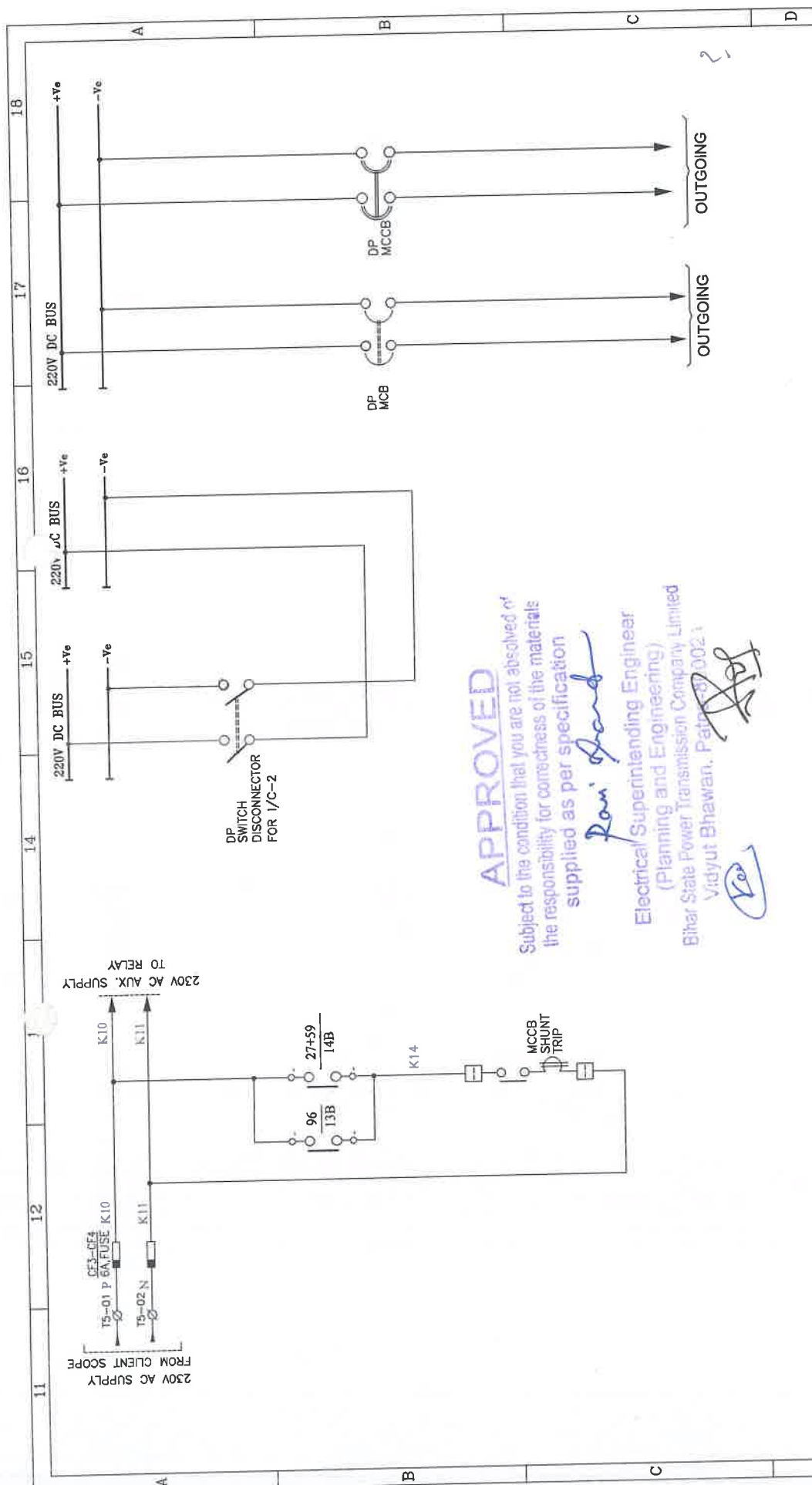
CONTROL CIRCUIT DIAGRAM
FOR 220V DCDB

for both sides of DCDB
i.e Bus-I & Bus-II

CUSTOMER: BIHAR STATE POWER TRANSMISSION CO. LTD.		PROJECT: 132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR	
CONTRACTOR: M/S. ABN POWER AND TRANSMISSION PRIVATE LIMITED		TITLE: 220V DCDB SCHEMATIC DIAGRAM	
MANUFACTURER: Asian Switchgear Pvt. Ltd. Plot No. 12-211000A, T. Ra. 0512-2410002 E-Mail: info@asianswitchgear.com	DRAWN	NAME	DATE
	CHECKED	GANESH	08.08.2024
	APPROVED	GANESH	08.08.2024
DRAWING NUMBER: ASPL/BSPTCL/24160E	REV.01	04.11.2024	REV.03
	REV.02	---	REV.04
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm; NIT NO. 110/PR/BSPTCL/2023		SHEET NO. 9 OF 10

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APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Shankar
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.									
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED									
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR									
 MANUFACTURER : Asian Switchgear Pvt. Ltd., Gurgaon (H.P.) Plot No. 101-2-2410004, P.O. 1012-2410002 B-10, Sector 14, Gurgaon, Haryana-122001 E-Mail: india@aspl.com	DRAWN	NAME	DATE	TITLE :				220V DCDB SCHEMATIC DIAGRAM			
	CHECKED	GANESH	08.08.2024								
	APPROVED	GANESH	08.08.2024								
		REV.01	REV.02	04.11.2024	REV.03				SCALE	N.T.S.	
DRAWING NUMBER : ASPL/BSPTCL/24160E					REV.04					SHEET NO.	
JOB NUMBER : ASPL/2024/****							ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023			10 OF 10	
								DIMENSION TOLERANCE ± 10MM.			

ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianswitchgear.com
Email: asianknp@gmail.com



Asian Switchgear Pvt. Ltd.

DRAWING FOR APPROVAL

PANEL NAME	48V DCDB
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna

Signature

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CUSTOMER:	BIHAR STATE POWER TRANSMISSION CO. LTD.			
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED			
PROJECT:	132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR			
MANUFACTURER:	DRAWN	CHECKED	APPROVED	TITLE:
Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) www.asianswitchgear.com E-Mail: asianknp@gmail.com	GANESH	GANESH		48V DCDB
				TITLE SHEET
DRAWING NUMBER: ASPL/BSPTCL/24160F	REV.01	REV.02	REV.03	SCALE
				N.T.S.
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023			SHEET NO.
	DIMENSION TOLERANCE $\pm$ 10MM.			1 OF 8

GENERAL NOTES FOR LT SWITCH BOARD :-

- ALL DIMENSIONS ARE IN MM.
- THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND COMPARTMENTALISED , CONFIRM TO IS:8623
- THE PANEL SHALL BE SUITABLE FOR 48V±10% DC SUPPLY.
- THE PANEL SHALL BE FABRICATED WITH
- ISMC-75
(i) BASE CHANNEL
(ii) STRUCTURE & MOUNTING PLATE -2.0 mm. CRCA
(iii) DOOR,COVER & PARTITION -1.6 mm. CRCA
(iv) GLAND PLATE -3.0 mm. CRCA
- RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
- THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
- BUS BAR SHALL BE OF ELECTROLYTIC GRADE COPPER SUPPORTED ON NON HYGROSCOPIC, NON CARBONISING, CORROSION RESISTANCE, SMC/DMC INSULATORS.
- BUS BAR SHALL BE INSULATED HEAT SHRINKABLE COLOURED PVC SLEEVES RED, YELLOW, BLUE AND BLACK FOR IDENTIFICATION.
- EARTH BUS SHALL BE PROVIDED THROUGHOUT THE PANEL LENGTH
- CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
A. AC CONTROL CKT. -1.5 SQ MM RED, BLACK
B. DC CONTROL CKT. -1.5 SQ MM GREY
C. GROUNDING -2.5 SQ MM GREEN

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800001

10/11/2024

11. THE MINIMUM CLEARANCE IN MAIN BUSBARS SHALL BE AS FOLLOWS:

- A. BETWEEN +VE TO -VE -25 MM
- B. BETWEEN -VE TO EARTH -25 MM
- C. BETWEEN +VE TO EARTH -25 MM

NOTE:-CLEARANCE BETWEEN TERMINALS AT COMPONENTS SHALL BE AS PER APPLICABLE INDIVIDUAL STANDARDS FOR COMPONENTS MANUFACTURER.

- NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
- PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
- CABLE ENTRY AS PER G.A. DRAWING.
- PAINT SHADE - SMOKE GREY (692 OF IS:5)
- AUX. SUPPLY 230V AC NOT IN ASPL SCOPE

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800001



CUSTOMER: BIHAR STATE POWER TRANSMISSION CO. LTD.



CONTRACTOR: M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

PROJECT: 132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR



MANUFACTURER:
Asian Switchgear Pvt. Ltd.
19-17 Kumaon Industrial Estate, Kumaon (U.P.)
Pin-221002, India
E-Mail: asiasg@asiasg.com

TITLE:
48V DCDB
GENERAL NOTES

NAME	DATE
GANESH	08.08.2024
GANESH	08.08.2024
APPROVED	

DRAWING NUMBER: ASPL/BSPTCL/24160F

REV.01 04.11.2024

REV.02 ---

REV.03 ---

REV.04 ---

ALL DIMENSION ARE IN mm. NIT NO.10/PR/BSPTCL/2023

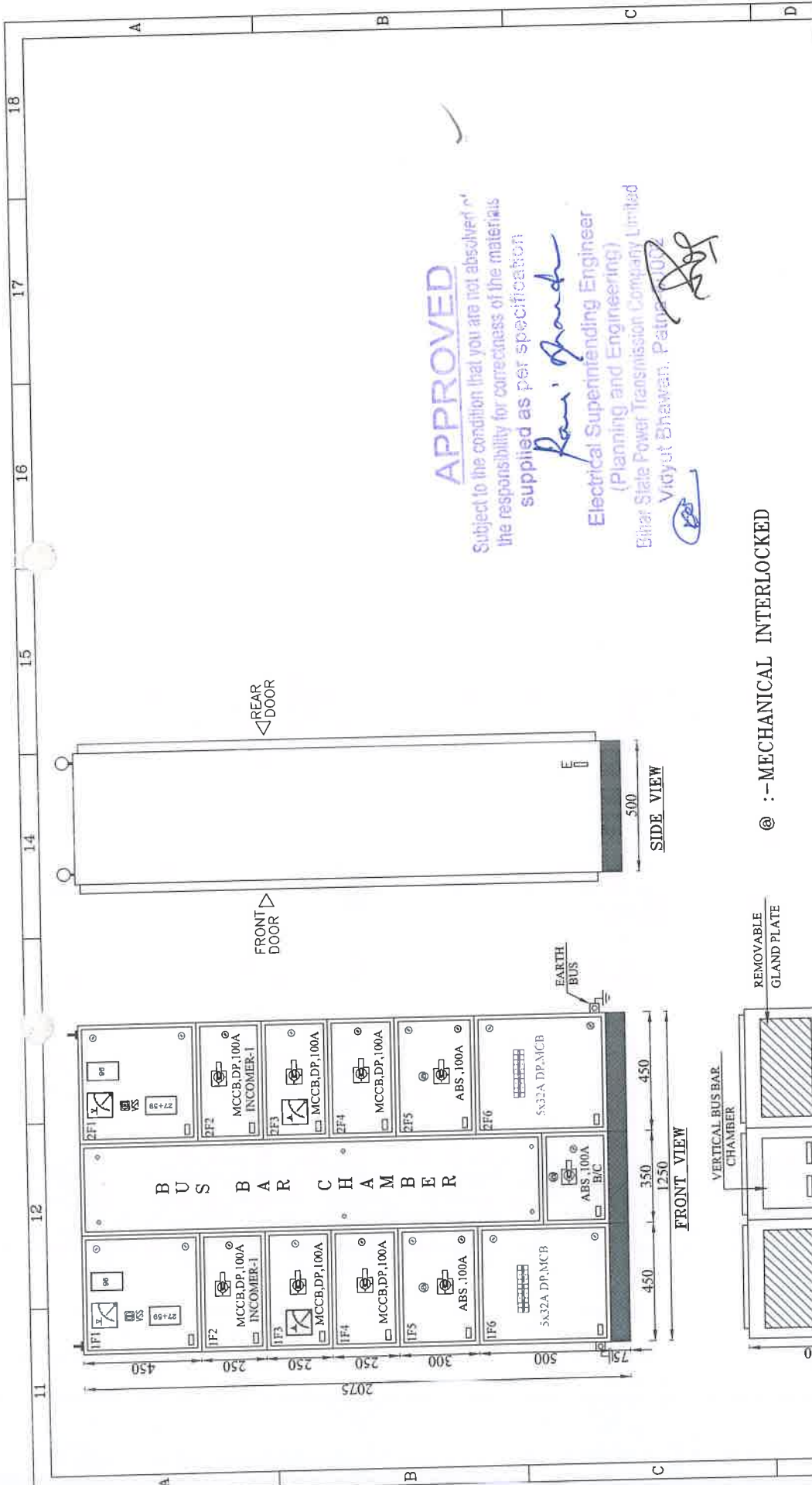
JOB NUMBER: ASPL/2024/****

DIMENSION TOLERANCE ± 10MM.

SCALE
N.T.S.

SHEET NO.
2 OF 8

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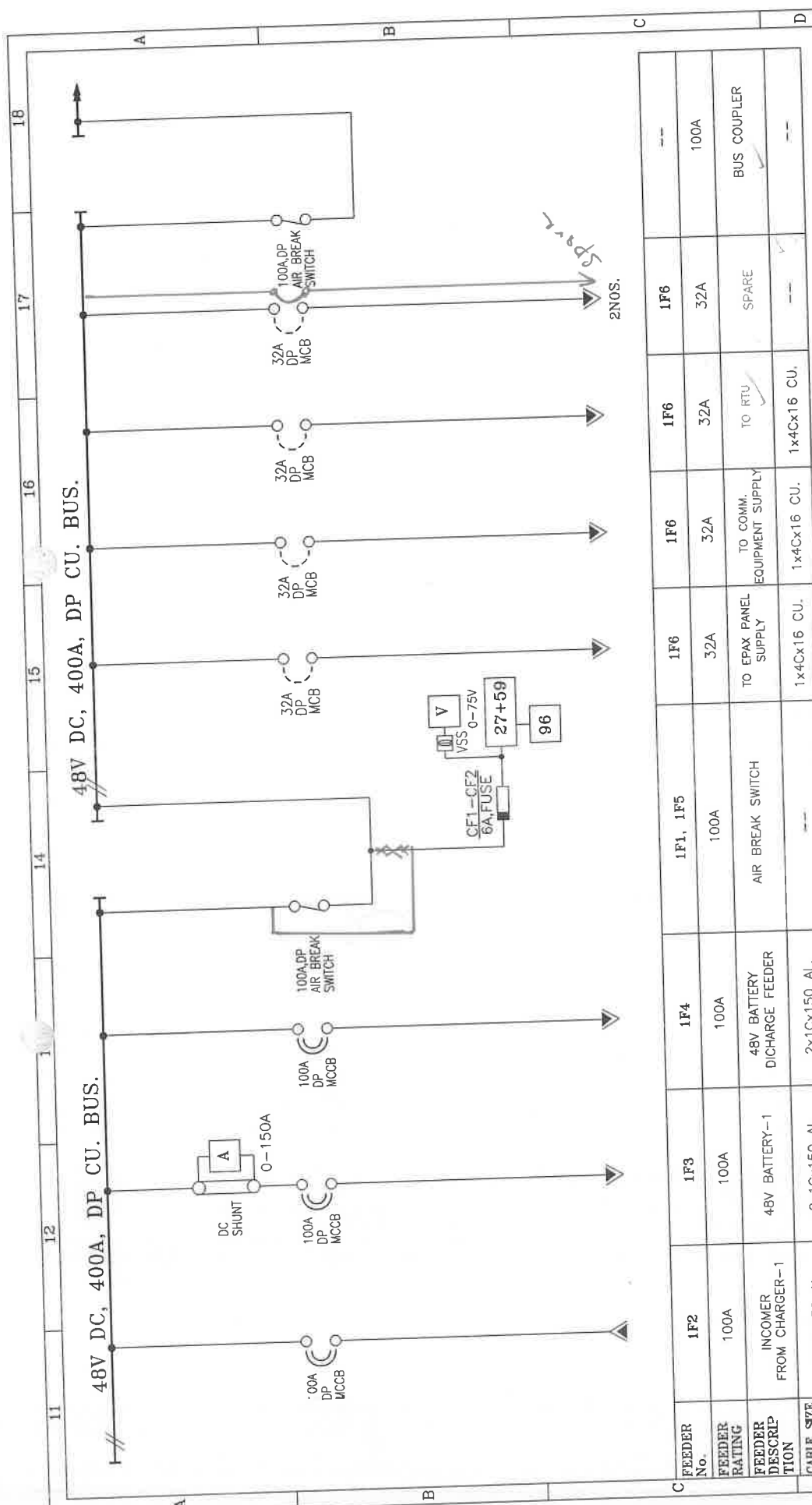
@ :- MECHANICAL INTERLOCKED

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.									
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED									
PROJECT :		132/33KV GSS BHOHEY (DIST. GOPALGANJ), BIHAR									
 MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17, Roza Industrial Estate, Roza (U.P.) Pin-201305, Dist. Etah, U.P. www.asianswitchgear.com E-Mail: asianswitchgear@gmail.com		NAME		DATE		TITLE :				48V DCDB GENERAL ARRANGEMENT DRAWING	
		DRAWN		GANESH		08.08.2024					
		CHECKED		GANESH		08.08.2024					
		APPROVED									
DRAWING NUMBER : ASPL/BSPTCL/24160F		REV.01		04.11.2024		REV.03		SCALE		SHEET NO. 3 OF 8	
JOB NUMBER : ASPL/2024/****		REV.02				REV.04		N.T.S.			
		ALL DIMENSION ARE IN mm, NIT NO.:10/PR/BSPTCL/2023									
		DIMENSION TOLERANCE ± 10MM.									

MAIN BUS BAR SIZE:--
+VE : 1x25x10 Sq. mm./Eq. CU.
-VE : 1x25x10 Sq. mm./Eq. CU.
EARTH : 1x20x05 Sq. mm./Eq. CU.

CABLE ENTRY-BOTTOM

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FEEDER No.	1F2	1F3	1F4	1F1, 1F5	1F6	1F6	1F6	1F6	1F6
FEEDER RATING	100A	100A	100A	100A	32A	32A	32A	32A	100A
FEEDER DESCRIPTION	INCOMER FROM CHARGER-1	48V BATTERY-1	48V BATTERY DISCHARGE FEEDER	AIR BREAK SWITCH	TO EPAX PANEL SUPPLY	TO COMM. EQUIPMENT SUPPLY	TO RTU	SPARE	BUS COUPLER
CABLE SIZE IN mm ²	2x1Cx150 AL	2x1Cx150 AL	2x1Cx150 AL	--	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.	--	--

(as corrected)

APPROVED

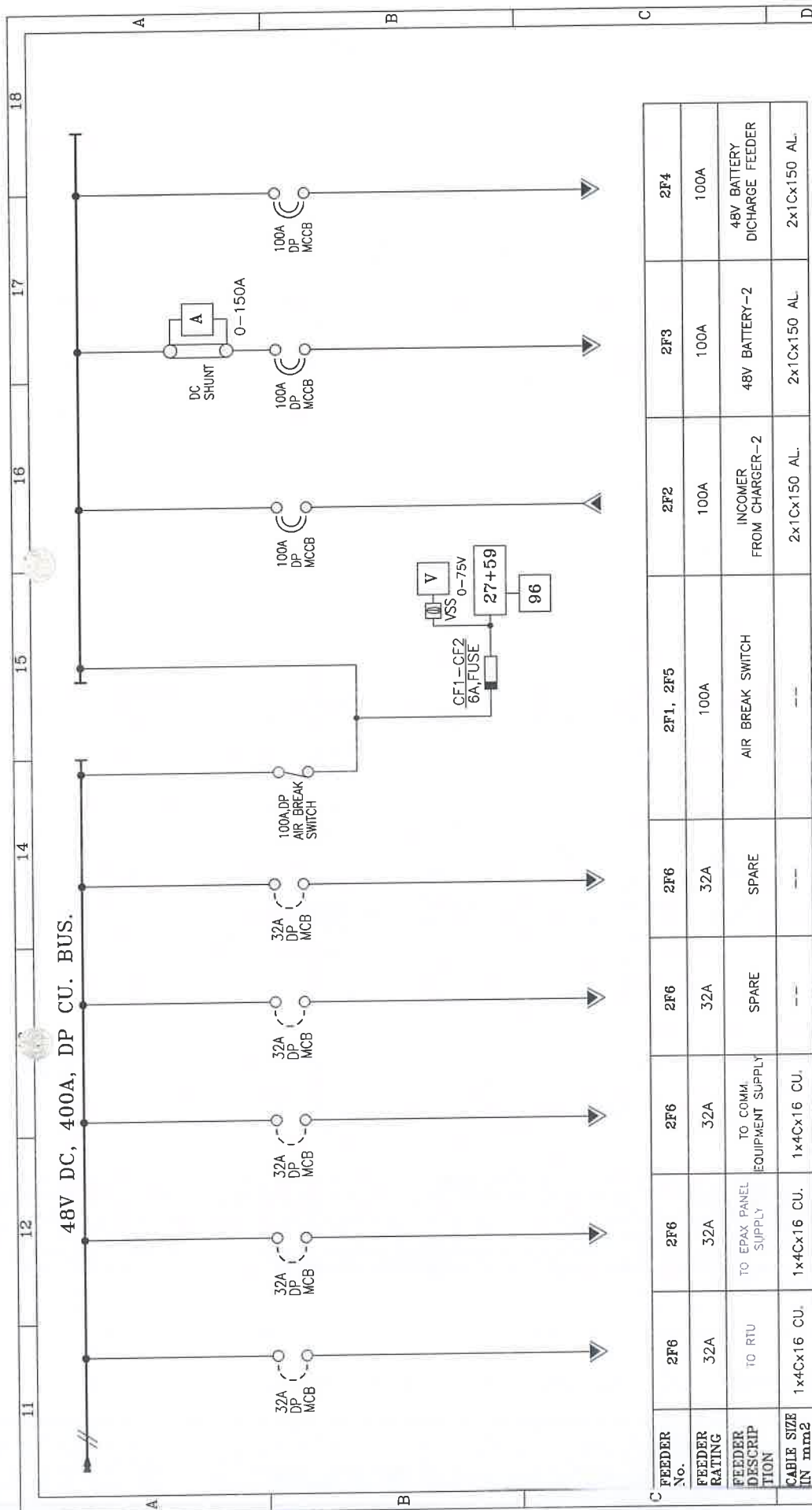
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

supplied as per specification.

Ravi Gaud
Electrical Superintending Engineer
(Planning and Engineering)
33kV State Power Transmission Company (Limited)
Vidhyut Bhawan, Patna-800 002

Ver *Def*

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.													
CONTRACTOR :	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED													
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR													
 MANUFACTURER : Asian Smitibhagur Pvt. Ltd. B-17 Tazewar Road, Industrial Area, Gurgaon (Haryana) India-122001 www.asianstibhagur.com E-Mail : asiantsp@gmail.com	NAME		DATE		TITLE :									
	DRAWN		GANESH		08.08.2024		48V DCDB							
	CHECKED		GANESH		08.08.2024		SINGLE LINE DRAWING							
	APPROVED								REV.01		04.11.2024			
DRAWING NUMBER : ASPL/BSPTCL/24160F							REV.02		---		REV.03		SCALE	
							REV.04		---		REV.04		N.T.S	
ALL DIMENSION ARE IN mm.												SHEET NO.		
DIMENSION TOLERANCE $\pm$ 10MM.												4 OF 8		
JOB NUMBER :							ASPL/2024/*****							



FEEDER No.	2F6	2F6	2F6	2F6	2F6	2F1, 2F5	2F2	2F3	2F4
FEEDER RATING	32A	32A	32A	32A	32A	100A	100A	100A	100A
FEEDER DESCRIPTION	TO RTU	TO EPAX PANEL SUPPLY	TO COMM. EQUIPMENT SUPPLY	SPARE	SPARE	AIR BREAK SWITCH	INCOMER FROM CHARGER-2	48V BATTERY-2	48V BATTERY DICHARGE FEEDER
CABLE SIZE N mm2	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.	--	--	--	2x1Cx150 AL.	2x1Cx150 AL.	2x1Cx150 AL.

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Ravi Gandhi

Electrical Superintending Engineer
(Planning and Engineering)

Star State Power Transmission Company Limited
Vidyut Bhawan, Palna-80002

2008-En

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.									
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED									
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR									
MANUFACTURER : Asian Switchgear Pvt.Ltd. Plot No. 13, Phase - I (UP) B-1012, 211004, Ind. SEZ-211004, www.asianswitchgear.com E-Mail: marketing@gmail.com		DRAWN	NAME	DATE	TITLE : 4BV DCDB SINGLE LINE DRAWING				SCALE N.T.S		
		CHECKED	GANESH	08.08.2024					REV.03		
			APPROVED							REV.04	
		DRAWING NUMBER : ASPL/BSPTCL/24160F			REV.01	04.11.2024	ALL DIMENSION ARE IN mm, NIT NO.:10/PR/BSPTCL/2023				SHEET NO. 5 OF 8
JOB NUMBER :	ASPL/2024/****	DIMENSION TOLERANCE ± 10MM.									

BILL OF MATERIAL

Sr. No.	ITEM DESCRIPTION	MAKE	Qty
1	MCCB-100A,2P,4KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE, EXTENDED- ROM, SPREADER, SHUNT TRIP COIL-230V AC	C&S	2
2	MCCB-100A,2P,4KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE, EXTENDED- ROM, SPREADER	C&S	4
3	AIR BREAK SWITCH, 100A DP	C&S	3
4	(1) DOOR OPERATING HANDLE	C&S	10
6	MCB 32A,DP, C-CURVE -4KA	C&S/IVS	2
7	INSTANT ANEBOUS UNDER + OVERVOLTAGE RELAY, OPERATING VOLTAGE-48V DC, AUX. SUPPLY-230V AC	C&S/IVS	2
8	BATTERY EARTH FAULT RELAY, OPERATING VOLTAGE-48V DC, AUX. SUPPLY-230V AC	AE/RISHABH	2
9	ANALOG AMP METER 96Sq.mm, 0-150A WITH SHUNT	AE/RISHABH	2
10	ANALOG VOLT METER 96Sq.mm, 0-75V	VAISHNO/SURDHI	2
11	VOLT SELECTION SWITCH	C&S	8
	CONTROL FUSE BASE WITH HRC 6A		

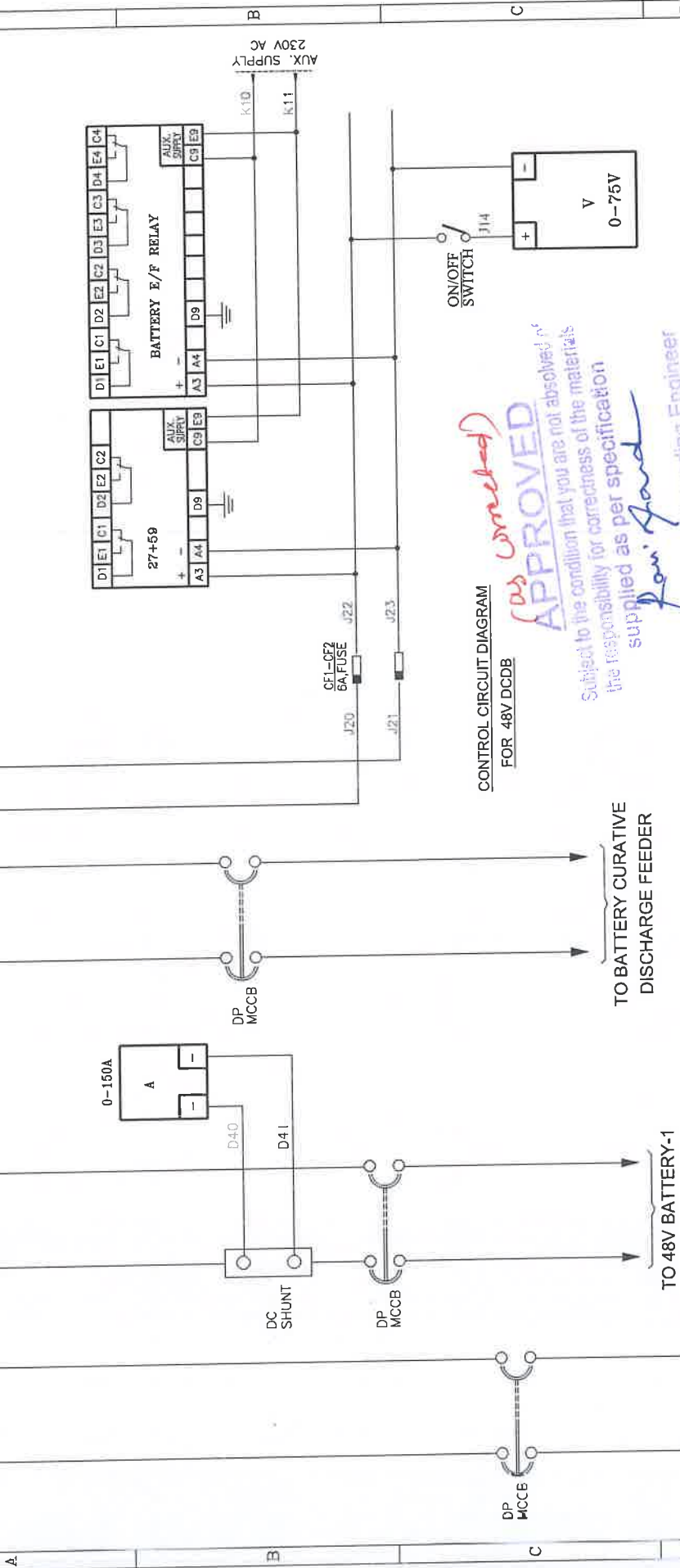
BOM shd be modified as per comments in 48V DCDB - SLD

(As corrected)
APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Sanjay
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.	
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED	
PROJECT :	132/33KV GSS BHOERY (DIST. GOPALGANJ) , BIHAR		
MANUFACTURER :  Asian Switchgear Pvt. Ltd. B-17, Khas Industries Estate, Sector-10, Gurgaon (Haryana) Pin-122001, India www.asianswitchgear.com E-Mail: mrsatya@gmail.com		NAME GANESH GANESH GANESH	DATE 08.08.2024 08.08.2024 08.08.2024
DRAWN		CHECKED	APPROVED
DRAWING NUMBER : ASPL/BSPTCL/24160F		REV.01	REV.02
JOB NUMBER : ASPL/2024/*****		REV.03	REV.04
TITLE : 48V DCDB BILL OF MATERIAL		SCALE N.T.S.	
ALL DIMENSION ARE IN mm. DIMENSION TOLERANCE ± 10MM.		SHEET NO. 6 OF 8	

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48V DC BUS



CONTROL CIRCUIT DIAGRAM
FOR 48V DCDB

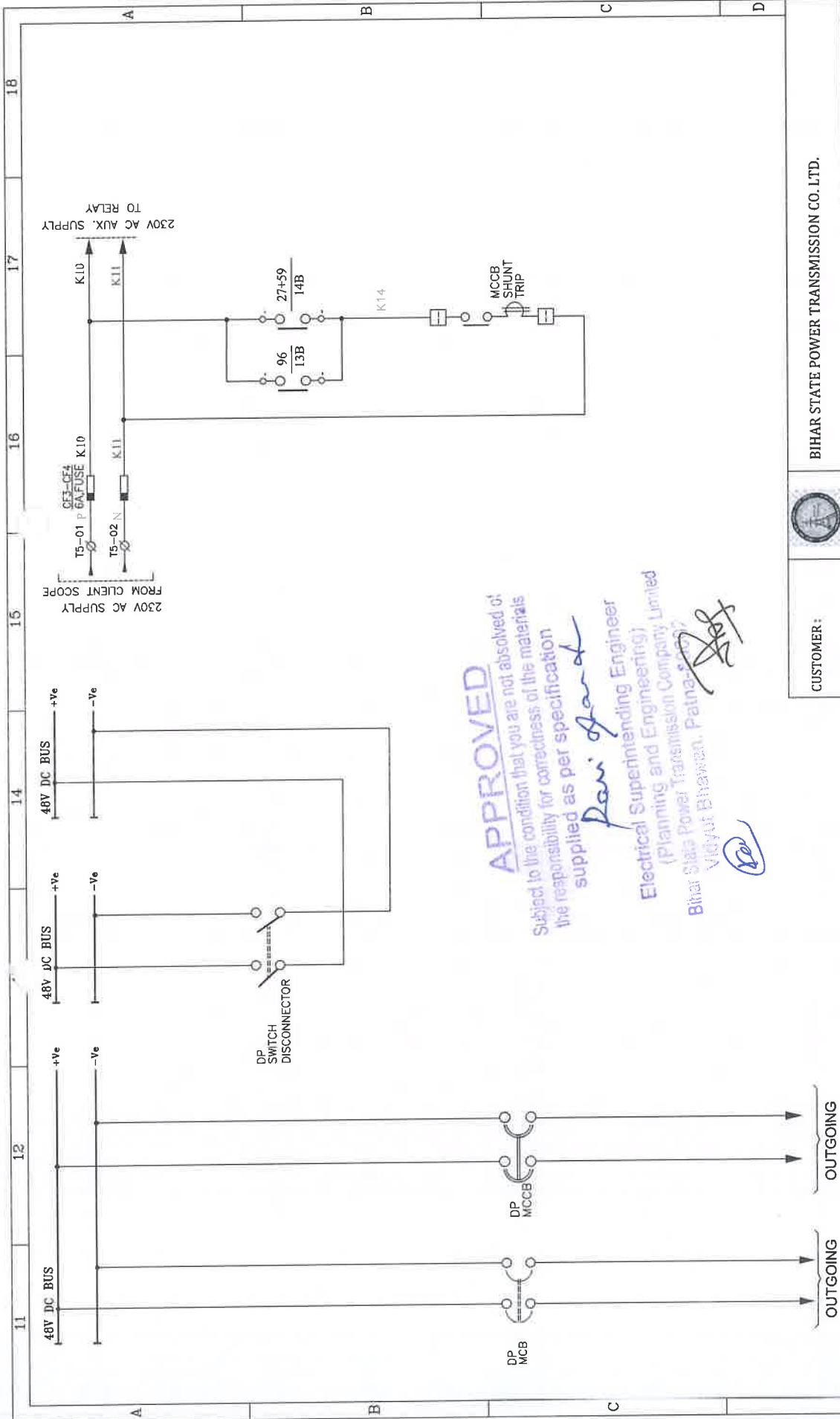
(as corrected)
APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
For. Gaud
Electrical Superintending Engineer
(Bihar State Power Transmission Co. Ltd.)

CONTROL CIRCUIT DIAGRAM
FOR 48V DCDB

*both sides of DCDB
i.e. Bus-I & Bus-II*

CUSTOMER: BIHAR STATE POWER TRANSMISSION CO. LTD.		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED	
CONTRACTOR:		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR	
PROJECT:		TITLE: 48V DCDB SCHEMATIC DIAGRAM	
MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17, Sector-10, Industrial Area, Gurgaon (Haryana) Phone: 0124-2330000, 0124-2330001 Fax: 0124-2330002 E-Mail: asian@asianpg.com	DRAWN	NAME	DATE
	CHECKED	GANESH	08.08.2024
	APPROVED	GANESH	08.08.2024
DRAWING NUMBER: ASPL/BSPTCL/24160F		REV.01	04.11.2024
JOB NUMBER: ASPL/2024/****		REV.02	---
ALL DIMENSION ARE IN mm. NIT NO. 10/PR/BSPTCL/2023		REV.03	---
DIMENSION TOLERANCE ± 10MM.		REV.04	---
SCALE		N.T.S.	
SHEET NO.		7 OF 8	

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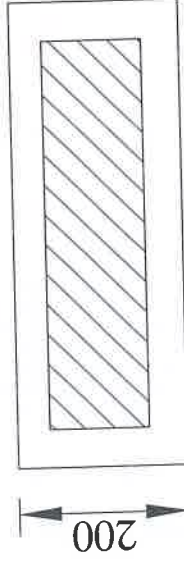
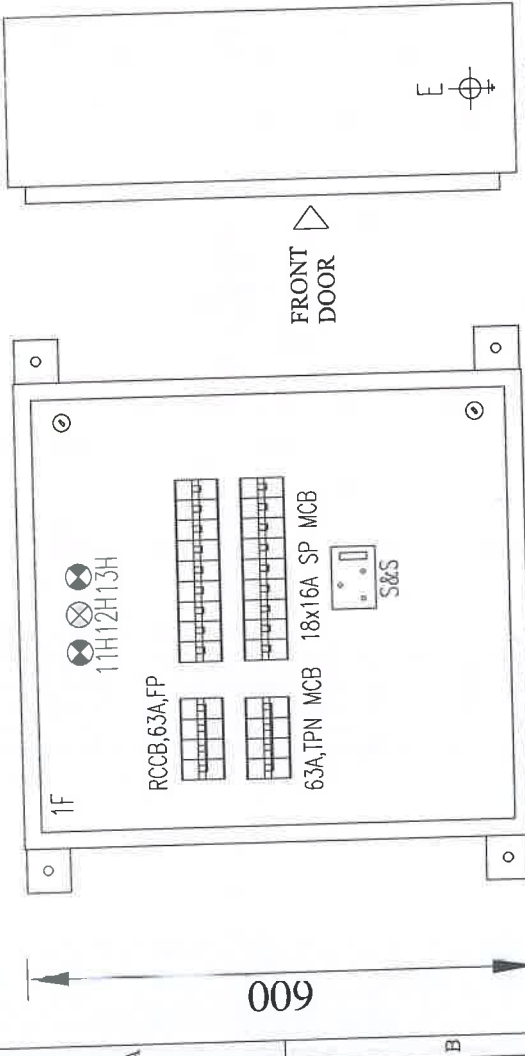


APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Kant
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan, Patna-800 002

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR
MANUFACTURER :		ASIAN SWITCHGEAR PVT. LTD. G-10, Industrial Estate, Sector-10, Gurgaon (Haryana) Pin-122 004, Fax: 012-2410602 www.asian-switchgear.com E-Mail: enquiry@asian-switchgear.com
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		
DRAWING NUMBER :	ASPL/BSPTCL/24160F	REV.01 04.11.2024 REV.02 REV.03 REV.04
JOB NUMBER :	ASPL/2024/****	SCALE N.T.S.
		SHEET NO. 8 OF 8

11	12	14	15	16	17	18
 ASIAN Switchgear Pvt. Ltd. ASIAN SWITCHGEAR PVT. LTD. B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.) www.asianswitchgear.com Email: asianknp@gmail.com						
DRAWING FOR APPROVAL						
PANEL NAME	LIGHTING PANEL(INDOOR) TYPE ACP-1					
CLIENT	 BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)					
CONTRACTOR	 M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.					
PO NO:	ABN/24-25/BSPTCL/10/PO-160					
NIT No.	10/PR/BSPTCL/2023					
QTY.	4Nos.					
APPROVED Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification  Pankaj Electrical Superintending Engineer (Planning and Engineering) Bihar State Power Transmission Company Limited Vidut Bhawan, Patna, Bihar  Pankaj  Pankaj						
CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT:	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
 MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.) Ph: 0512-241004, Fax: 0512-241002 www.asianswitchgear.com E-Mail: asianknp@gmail.com		DRAWN	NAME	DATE	TITLE :	
		CHECKED	GANESH	08.08.2024	LIGHTING PANEL(INDOOR) TYPE ACP-1	
		APPROVED	GANESH	08.08.2024	TITLE SHEET	
DRAWING NUMBER : ASPL/BSPTCL/24160G		REV.01	04.11.2024	REV.03	SCALE	
JOB NUMBER : ASPL/2024/****		REV.02	--	REV.04	N.T.S.	
		ALL DIMENSION ARE IN mm, NIT NO.: 10/PR/BSPTCL/2023				SHEET NO.
		DIMENSION TOLERANCE ± 10MM.				1 OF 5

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GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, WALL MOUNTED AND NON COMPARTMENTALISED.
3. THE PANEL SHALL BE FABRICATED WITH - 2.0/1.6 MM. CRCA.
4. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
5. THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
6. EARTH STUD SHALL BE PROVIDED
7. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
 - A. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
 - B. GROUNDING - 2.5 SQ MM GREEN
8. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
9. PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
10. CABLE ENTRY AS PER G.A. DRAWING.
11. PAINT SHADE - SMOKE GREY (692 OF IS:5)
12. GLAND PLATE - 3.0 MM. CRCA.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
P. S. Pandey
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800005

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANI) , BIHAR					
 MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Roza Industrial Estate, Roza (U.P.) 201002, India www.asianswitchgear.com E-Mail: asian@sgmail.com	NAME		DATE		TITLE: LIGHTING PANEL(INDOOR) TYPE APC-1 GENERAL ARRANGEMENT DRAWING		
	DRAWN		08.08.2024				
	CHECKED		08.08.2024				
	APPROVED						
DRAWING NUMBER : ASPL/BSPTCL/24160G			REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
			REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****			ALL DIMENSION ARE IN mm. (1/10)PR/BSPTCL/2023				SHEET NO. 2 OF 5
			DIMENSION TOLERANCE ± 10MM.				

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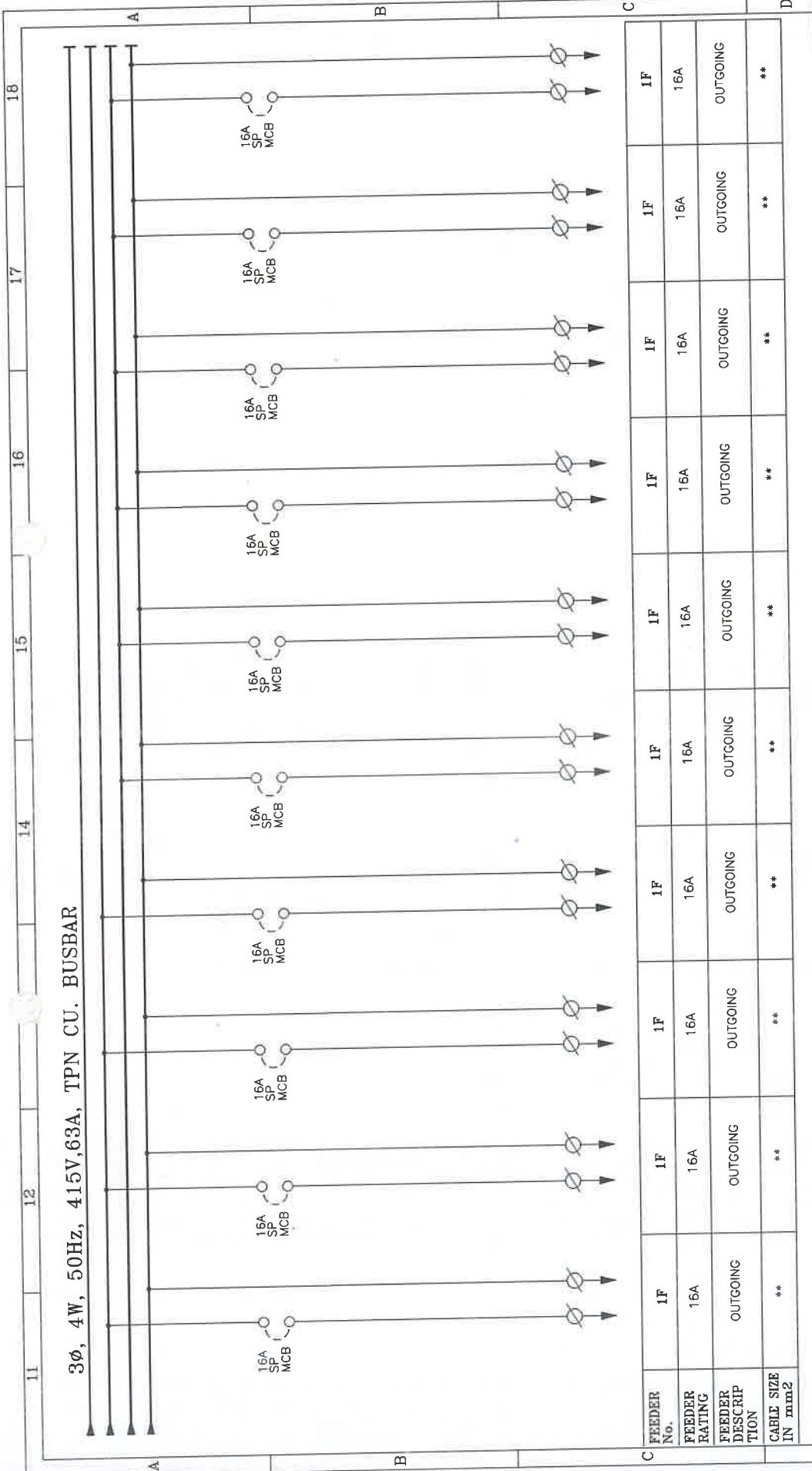
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Engineer
(Planning and Engineering)

Bihar State Power Transmission Company Limited
Vidya Bhawan, Patna-80002

vidyut Brawan, Patna-80002

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.										
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED										
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR										
 ASTAN ASTAN Switchgear Pvt. Ltd. B-13, Pashchim Medinipur Estate, Kanchpur (W.P.) Kanchpur, West Bengal - 741002. E-Mail: astan@astanenggindia.com	MANUFACTURER :		NAME	DATE	TITLE : LIGHTING PANEL (INDOOR) TYPE ACP-1 FOUR LINE DIAGRAM					SCALE N.T.S.		
	DRAWN	GANESH	08.08.2024									
	CHECKED	GANESH	08.08.2024									
	APPROVED			REV.01	04.11.2024	REV.03	SCALE N.T.S.					
	DRAWING NUMBER : ASPL/BSPTCL/24160G			ALL DIMENSION ARE IN mm, NIT NO.:10/PR/BSPTCL/2023								SHEET NO. 3 OF 5
JOB NUMBER : ASPL/2024/****			DIMENSION TOLERANCE ± 10MM.									



APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Pan Singh
Electrical/Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Ltd.
Vidhyut Bhawan, Patna-800010

SR

CUSTOMER:	BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT:	132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR				
MANUFACTURER:	NAME	DATE	TITLE:		
 ASIAN Switchgear Pvt. Ltd. Plot No. 12/1, 12/2, 12/3, 12/4, 12/5, 12/6, 12/7, 12/8, 12/9, 12/10, 12/11, 12/12, 12/13, 12/14, 12/15, 12/16, 12/17, 12/18, 12/19, 12/20, 12/21, 12/22, 12/23, 12/24, 12/25, 12/26, 12/27, 12/28, 12/29, 12/30, 12/31, 12/32, 12/33, 12/34, 12/35, 12/36, 12/37, 12/38, 12/39, 12/40, 12/41, 12/42, 12/43, 12/44, 12/45, 12/46, 12/47, 12/48, 12/49, 12/50, 12/51, 12/52, 12/53, 12/54, 12/55, 12/56, 12/57, 12/58, 12/59, 12/60, 12/61, 12/62, 12/63, 12/64, 12/65, 12/66, 12/67, 12/68, 12/69, 12/70, 12/71, 12/72, 12/73, 12/74, 12/75, 12/76, 12/77, 12/78, 12/79, 12/80, 12/81, 12/82, 12/83, 12/84, 12/85, 12/86, 12/87, 12/88, 12/89, 12/90, 12/91, 12/92, 12/93, 12/94, 12/95, 12/96, 12/97, 12/98, 12/99, 12/100, 12/101, 12/102, 12/103, 12/104, 12/105, 12/106, 12/107, 12/108, 12/109, 12/110, 12/111, 12/112, 12/113, 12/114, 12/115, 12/116, 12/117, 12/118, 12/119, 12/120, 12/121, 12/122, 12/123, 12/124, 12/125, 12/126, 12/127, 12/128, 12/129, 12/130, 12/131, 12/132, 12/133, 12/134, 12/135, 12/136, 12/137, 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	CHECKED	08.08.2024			
	APPROVED				
DRAWING NUMBER:	ASPL/BSPTCL/24160G	REV.01	04.11.2024	REV.03	SCALE
JOB NUMBER:	ASPL/2024/****	REV.02		REV.04	N.T.S.
ALL DIMENSION ARE IN mm		NIT NO.: 10/PR/BSPTCL/2023		SHEET NO.	
DIMENSION TOLERANCE ± 10MM.				4 OF 5	

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11	12	13	14	15	16	17	18																																																																							
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105 worked APPROVED Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification Sanjiv Kumar Electrical Superintending Engineer (Planning and Engineering) Bihar State Power Transmission Company Limited Vijay Bhawan, Patna-800021 ASIAN SWITCHGEAR Pvt. Ltd.																																																																														
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GENERAL NOTES:-

- ALL DIMENSIONS ARE IN MM.
- THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, WALL MOUNTED AND NON COMPARTMENTALISED.
- THE PANEL SHALL BE FABRICATED WITH - 2.0/1.6 MM. CRCA.
- RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
- THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
- EARTH STUD SHALL BE PROVIDED
- CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
 - AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
 - GROUNDING - 2.5 SQ MM GREEN
- NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
- PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
- CABLE ENTRY AS PER G.A. DRAWING.
- PAINT SHADE - SMOKE GREY (692 OF IS:5)
- GLAND PLATE - 3.0 MM. CRCA.

550

600

FRONT OUTER VIEW

600

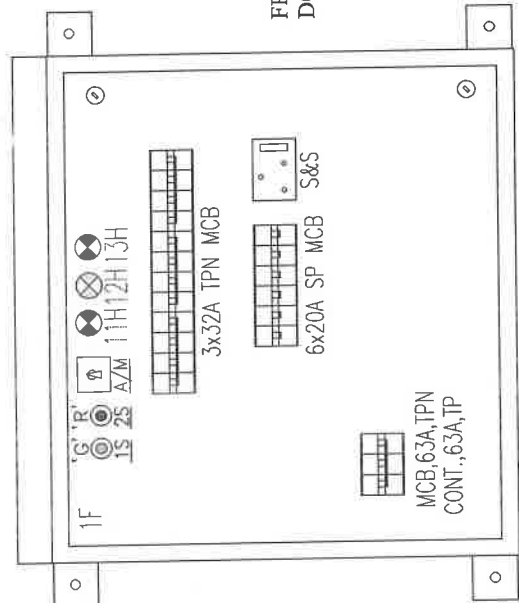
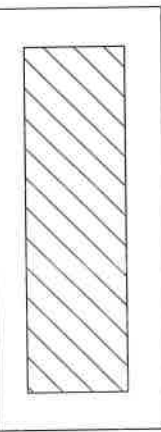
FRONT INNER VIEW

200

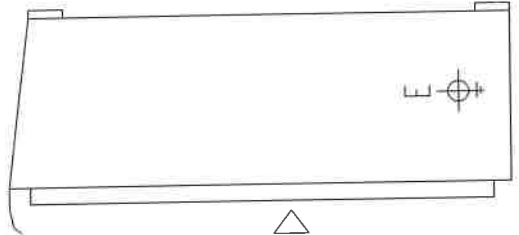
SIDE VIEW

200

BOTTOM VIEW



FRONT DOOR



APPROVED

Subject to the condition that you are not absolve the responsibility for correctness of the material supplied as per specification

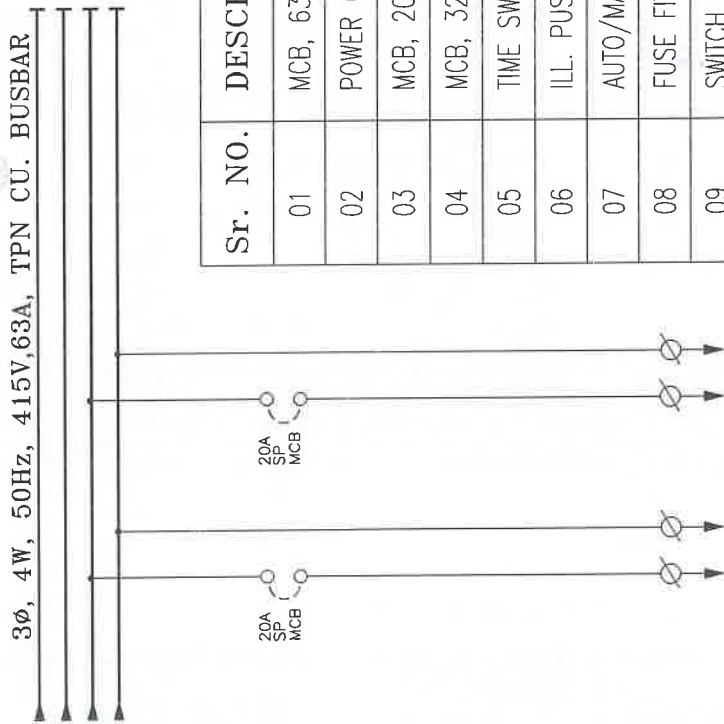
Ran. Gadh

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna

CUSTOMER:		BIHAR STATE POWER TRANSMISSION COMPANY LIMITED
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR
MANUFACTURER:		ASIAN SWITCHGEAR PVT. LTD. B-17, Karam Industrial Estate, Karam (U.P.) 201 210, Karam, Karam www.asianswitchgear.com
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		
DRAWING NUMBER:	ASPL/BSPTCL/24160H	REV.01 04.11.2024
JOB NUMBER:	ASPL/2024/****	REV.02 ---
		REV.03 ---
		REV.04 ---
		SCALE N.T.S
		SHEET NO. 2 OF 5

TITLE:
LIGHTING PANEL (OUTDOOR) TYPE ACP-2
GENERAL ARRANGEMENT DRAWING

DIMENSION TOLERANCE ± 10 MM.



FEDER No.	1F	1F
FEDER RATING	20A	20A
FEDER DESCRIPTION	OUTGOING	OUTGOING
CABLE SIZE IN mm ²	**	**

(as warranted)

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

APPROVED

Ravi

Electrical Superintending Engineer

(Planning and Engineering)

Yidvut Bhawan Patna-80002



BILL OF MATERIAL

Sr. NO.	DESCRIPTION	MAKE	QTY.
01	MCB, 63A,TPN ,10KA C-CURVE	C&S	1
02	POWER CONTACTOR ,63A, TP ,COIL VOLTAGE-230V AC ,AC-1	C&S	1
03	MCB, 20A,SP ,10KA C-CURVE	C&S	6
04	MCB, 32A,TPN ,10KA C-CURVE	C&S	3
05	TIME SWITCH ,230V AC ,0-24 HOUR	L&T/SELEC	1
06	ILL. PUSH BUTTON -RED, GREEN, 22.5sq.MM	C&S/VAISHNO/SURDHI	2
07	AUTO/MANUAL SELECTOR SWITCH, 1P,2W ,6A	VAISHNO/SURDHI	1
08	FUSE FITTING WITH HRC (20/6A)	C&S	4
09	SWITCH & SOCKET 5/15A ,230V AC <i>Legrand/Schneider/</i>	<i>Discontinued or obsolete</i>	1
10	POWER TERMINAL ,16SQ.MM.	CONNECTWELL	4
11	POWER TERMINAL ,10SQ.MM.	CONNECTWELL	24
12	PHASE INDICATION LAMP-RED,YELLOW,BLUE -230V AC,22.5sq.MM	C&S/VAISHNO/SURDHI	3

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
 MANUFACTURER : Asian Switchgear Pvt.Ltd. B-17 Karna Industrial Estate Karpas (U.P.) Pin-201324H004, Fax-0512-411002 E-Mail: mkt@asiansgmfg.com		DRAWN	NAME	DATE	TITLE : LIGHTING PANEL (OUTDOOR) TYPE ACP-2 FOUR LINE DIAGRAM	
		CHECKED	GANESH	08.08.2024		
		APPROVED	GANESH	08.08.2024		
 Asian Switchgear Pvt. Ltd.		REV.01	REV.03	REV.04	SCALE	SHEET NO.
		REV.02	REV.04	REV.04	N.T.S.	
JOB NUMBER :	ASPL/2024/****	ALL DIMENSION ARE IN mm, NIT NO.:110/PR/BSPTCL/2023				
		DIMENSION TOLERANCE ± 10MM.				

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ASIAN SWITCHGEAR PVT. LTD.
B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
Email: asianknp@gmail.Com

DRAWING FOR APPROVAL

PANEL NAME	LIGHTING PANEL (OUTDOOR) TYPE ACP-3		
CLIENT	 BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)		
CONTRACTOR	 M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED		
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.		
PO NO:	ABN/24-25/BSPTCL/10/PO-160		
NIT No.	10/PR/BSPTCL/2023		
QTY.	5Nos.		

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Ravi Rande

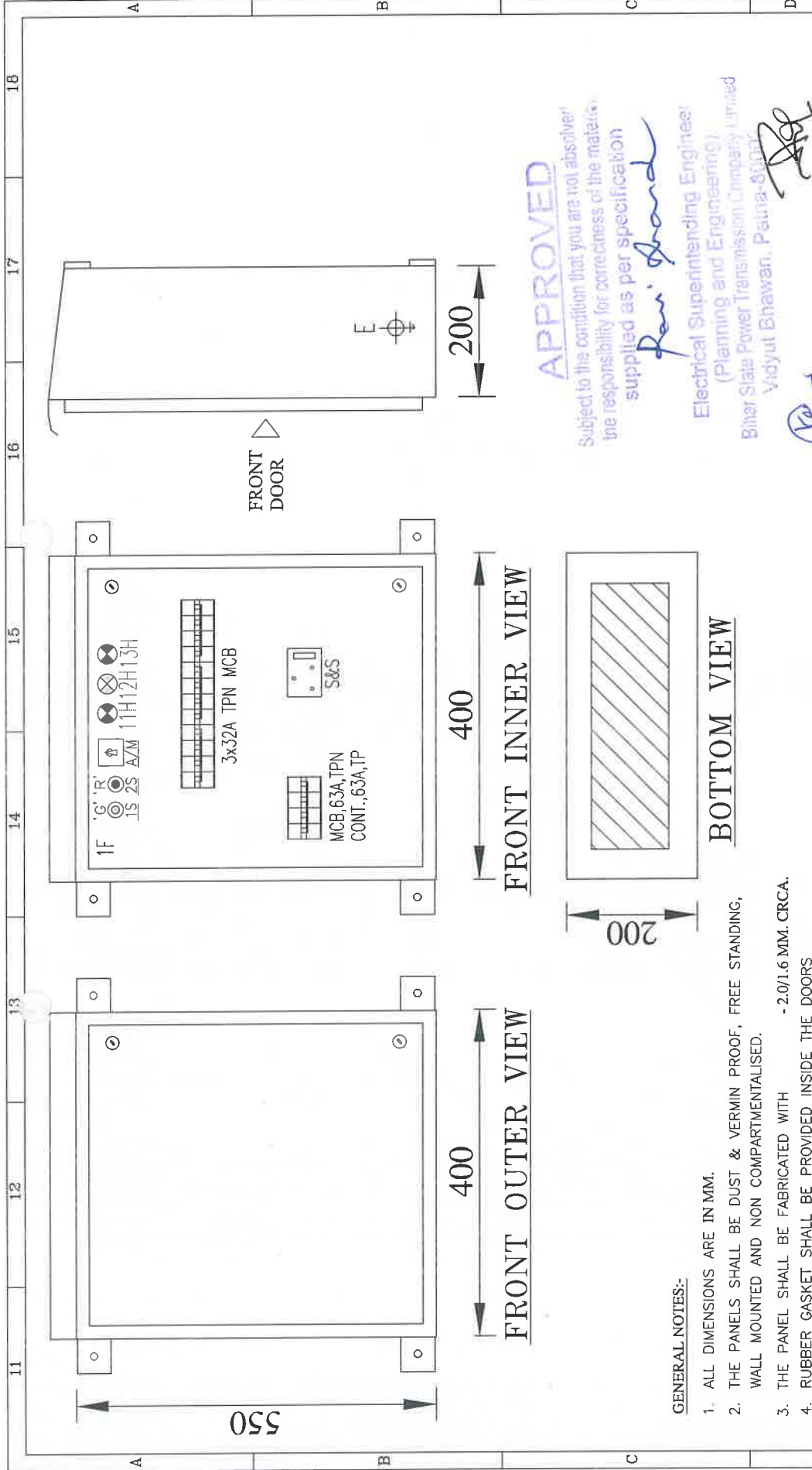
Electrical Superintending Engineer
(Planning and Engineering)

Bihaar State Power Transmission Company Limited

Vidvut Bhawan, Patna

[Signature]

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.		
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED		
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR		
MANUFACTURER :		NAME	DATE	TITLE :
 Asian Switchgear Pvt. Ltd. B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.) www.asianSwitchgear.com E-Mail: asianknp@gmail.Com		DRAWN	09.08.2024	LIGHTING PANEL (OUTDOOR) TYPE ACP-3
		CHECKED	08.08.2024	TITLE SHEET
		APPROVED		
DRAWING NUMBER : ASPL/BSPTCL/241601		REV.01	04.11.2024	REV.03
JOB NUMBER : ASPL/2024/****		REV.02	---	REV.04
		ALL DIMENSION ARE IN mm, NIT NO.:10/PR/BSPTCL/2023		SCALE N.T.S.
		DIMENSION TOLERANCE $\pm$ 10MM.		SHEET NO. 1 OF 5

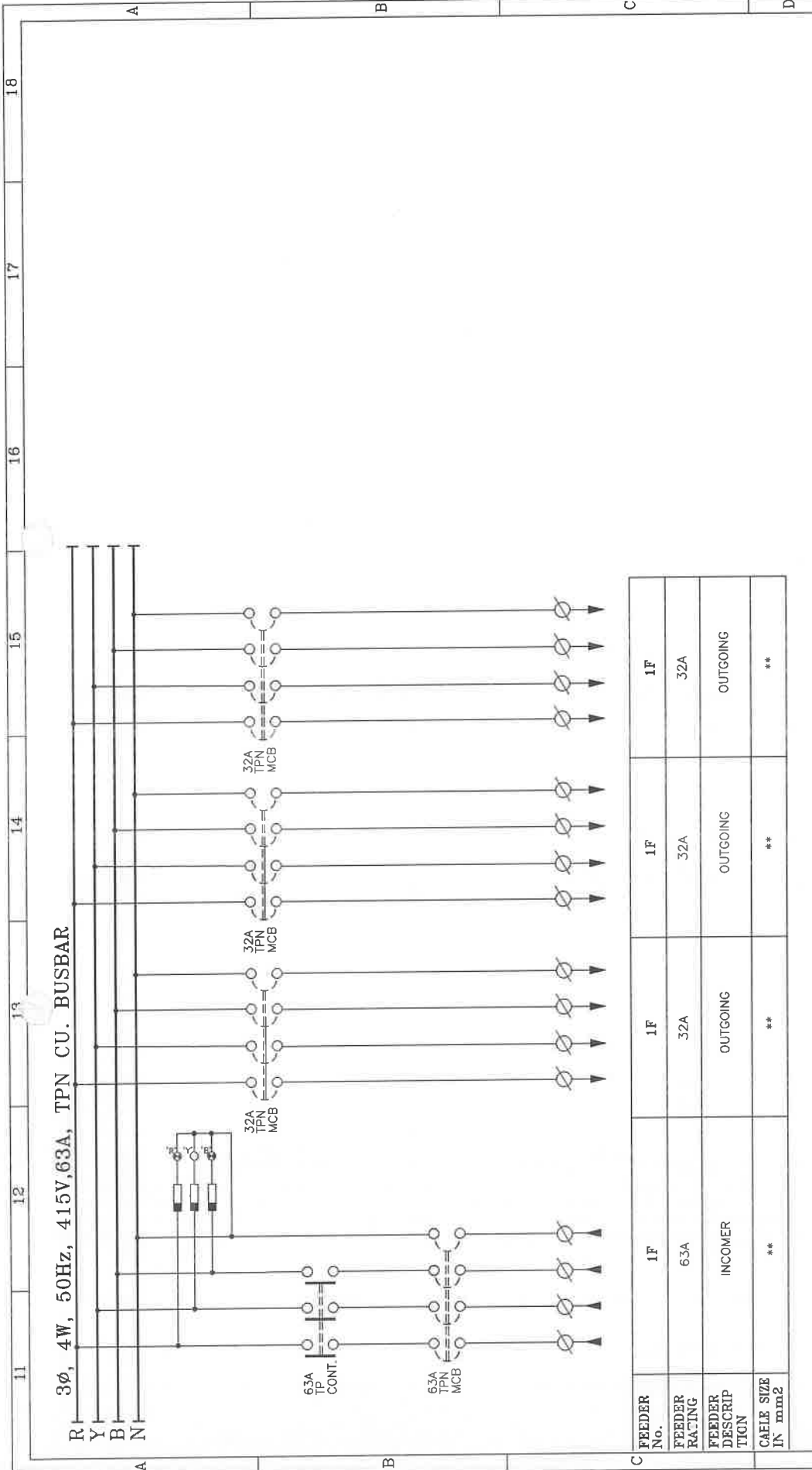


GENERAL NOTES:-

- ALL DIMENSIONS ARE IN MM.
- THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, WALL MOUNTED AND NON COMPARTMENTALISED.
- THE PANEL SHALL BE FABRICATED WITH - 2.0/1.6 MM. CRCA.
- RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
- THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
- EARTH STUD SHALL BE PROVIDED
- CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
 - AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
 - GROUNDING - 2.5 SQ MM GREEN
- NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
- PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
- CABLE ENTRY AS PER G.A. DRAWING.
- PANT SHADE - SMOKE GREY (692 OF IS:5)
- GLAND PLATE - 3.0 MM. CRCA.

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR
MANUFACTURER : Asian Switchgear Pvt. Ltd. Plot No. 12-24/1000A, P.O. 0512-210002 G. Mall, Mumbai-400011, India		
TITLE : LIGHTING PANEL (OUTDOOR) TYPE ACP-3 GENERAL ARRANGEMENT DRAWING		
DRAWN : GANESH CHECKED : GANESH APPROVED :		
DATE : 08.08.2024 08.08.2024		
REV.01 : 04.11.2024 REV.02 : --- REV.03 : --- REV.04 : ---		
DRAWING NUMBER : ASPL/BSPTCL/241601		
JOB NUMBER : ASPL/2024/****		
ALL DIMENSION ARE IN mm. NIT NO. 10/PR/BSPTCL/2023		
DIMENSION TOLERANCE ± 10MM.		
SCALE : N.T.S.		
SHEET NO. 2 OF 5		

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FEEDER No.	1F	1F	1F	1F
FEEDER RATING	63A	32A	32A	32A
FEEDER DESCRIPTION	INCOMER	OUTGOING	OUTGOING	OUTGOING
CABLE SIZE IN mm ²	**	**	**	**

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR
MANUFACTURER:		ASIAN SWITCHGEAR PVT. LTD.
DRAWN	GANESH	06.08.2024
CHECKED	GANESH	06.08.2024
APPROVED		
DRAWING NUMBER:	ASPL/BSPTCL/241601	REV.01 04.11.2024
JOB NUMBER:	ASPL/2024/****	REV.02 --
		REV.03 --
		REV.04 --
		SCALE N.T.S.
		SHEET NO. 3 OF 5

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the material supplied as per specification

Ravi Shankar

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Ltd.
Vijay Bhawan Patna-80002

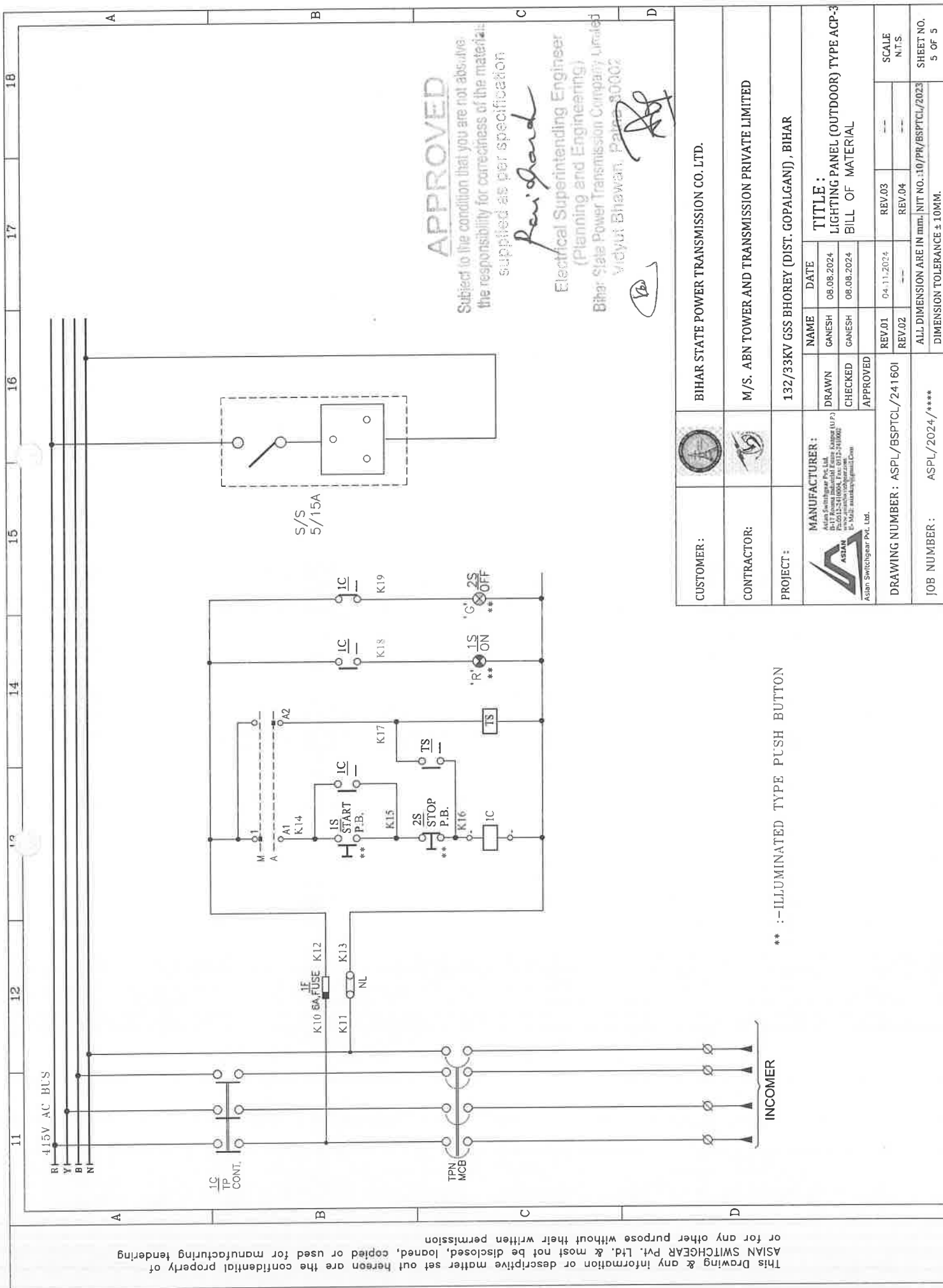
[Signature]

BILL OF MATERIAL

Sr. NO.	DESCRIPTION	MAKE	QTY.
01	MCB, 63A,TPN ,10KA C-CURVE	C&S	1
02	POWER CONTACTOR ,63A, TP ,COIL VOLTAGE -230V AC ,AC-1	C&S	1
03	MCB, 32A,TPN ,10KA C-CURVE	C&S	3
04	TIME SWITCH ,230V AC ,0-24 HOUR	L&T/SELEC	1
05	ILL. PUSH BUTTON-RED, GREEN, 22.5Sq.MM	C&S/VAISHNO/SURDHI	2
06	AUTO/MANUAL SELECTOR SWITCH, 1P,2W ,6A	VAISHNO/SURDHI	1
07	FUSE FITTING WITH HRC (20/6A)	C&S	1
08	SWITCH & SOCKET 5/15A ,230V AC <i>Legrand/Schneider</i>	<i>Siemens/REPUTED/Grabtree</i>	1
09	POWER TERMINAL ,16SQ.MM.	CONNECTWELL	4
10	POWER TERMINAL ,10SQ.MM.	CONNECTWELL	12
11	PHASE INDICATION LAMP-RED,YELLOW,BLUE -230V AC,22.5Sq.MM	C&S/VAISHNO/SURDHI	3

(US corrected)
APPROVED
 Subject to the condition that you are not absolve the responsibility for correctness of the material supplied as per specification
Ravi Shankar
 Electrical Superintending Engineer
 (Planning and Engineering)
 Bihar State Power Transmission Company Limited
 Vidhyut Bhawan, Patna-80002

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOHEY (DIST. GOPALGANI) , BIHAR
MANUFACTURER:	 Asian Switchgear Pvt. Ltd. Plot No. 1, Phase II, Kharagpur (H.P.) Dist. Jharkhand, India - 826002 Tel: 0351-2410004, Fax: 0351-2410002 E-Mail: asg@asianswitchgear.com	TITLE : LIGHTING PANEL (OUTDOOR) TYPE ACP-3 FOUR LINE DIAGRAM
DRAWING NUMBER : ASPL/BSPTCL/241601	DRAWN : CHECKED : APPROVED :	NAME : DATE : REV.01 : REV.02 : REV.03 : REV.04 :
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023 DIMENSION TOLERANCE ± 10MM.	
	SCALE : N.T.S.	
	SHEET NO. 4 OF 5	



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11 12 13 14 15 16 17 18

A B C D

R
Y
B
N

415V AC BUS

1C
TP
CONT.

K10 6A FUSE K12

K11 NL

K13

M A

A1

K14

1S START P.B.

K15

2S STOP P.B.

K16

1C

K17

TS

*R' 1S ON **

*G' 2S OFF **

K18

K19

S/S
5/15A

INCOMER

APPROVED

Subject to the condition that you are not absolve the responsibility for correctness of the materials supplied as per specification

Perigard

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyal Bhawan, Patna-80002

CUSTOMER : BIHAR STATE POWER TRANSMISSION CO. LTD.

CONTRACTOR : M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

PROJECT : 132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :

Asian Switchgear Pvt. Ltd.
B-10, Kankar Road, Industrial Area,
Patna - 800 015, Bihar, India
E-Mail: asiandesign@gmail.com

DRAWN : GANESH
CHECKED : GANESH
APPROVED :

NAME : DATE :
GANESH 08.08.2024
GANESH 08.08.2024

TITLE :
LIGHTING PANEL (OUTDOOR) TYPE AC-3
BILL OF MATERIAL

DRAWING NUMBER : ASPL/BSPTCL/241601

JOB NUMBER : ASPL/2024/****

REV.01 04.11.2024 REV.03 --
REV.02 -- REV.04 --

SCALE N.T.S.

ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023 SHEET NO. 5 OF 5
DIMENSION TOLERANCE ± 10MM.

** :- ILLUMINATED TYPE PUSH BUTTON

[illegible]

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11 12 13 14 15 16 17 18

A B C D

R
Y
B
N

415V AC BUS

1C
TP
CONT.

K10 6A FUSE K12

K11 NL

K13

M A

A1

K14

1S START P.B.

K15

2S STOP P.B.

K16

1C

K17

TS

*R' 1S ON **

*G' 2S OFF **

K18

K19

S/S
5/15A

INCOMER

TPN
MCB

APPROVED

Subject to the condition that you are not absolve the responsibility for correctness of the materials supplied as per specification

Pavindan

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyal Bhawan, Patna-800002

CUSTOMER : BIHAR STATE POWER TRANSMISSION CO. LTD.

CONTRACTOR : M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

PROJECT : 132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-10, Kirti Nagar Industrial Area Phase I (U.P.)
New Delhi - 110015 India. Tel: 011-26109000
www.asianswitchgear.com
E-Mail: asiandesign@gmail.com
Asian Switchgear Pvt. Ltd.

DRAWING NUMBER : ASPL/BSPTCL/241601

JOB NUMBER : ASPL/2024/*****

TITLE :
LIGHTING PANEL (OUTDOOR) TYPE AC-3
BILL OF MATERIAL

NAME DATE
DRAWN GANESH 08.08.2024
CHECKED GANESH 08.08.2024
APPROVED

REV.01 04.11.2024
REV.02 ---
REV.03 REV.04 ---

SCALE
N.T.S.

ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023
DIMENSION TOLERANCE ± 10MM.

SHEET NO.
5 OF 5

** :- ILLUMINATED TYPE PUSH BUTTON

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11 12 13 14 15 16 17 18

A B C D

415V AC BUS
R
Y
B
N

1C TP CONT.

K10 6A FUSE K12
K11 NL

M A1 A2

1S START P.B.
2S STOP P.B.

K14 K15 K16 K17 K18 K19

S/S 5/15A

G 2S OFF
R 1S ON

TPN MCB

INCOMER

** :- ILLUMINATED TYPE PUSH BUTTON

APPROVED

Subject to the condition that you are not absolve the responsibility for correctness of the materials supplied as per specification

Ravindran

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyal Bhawan, Patna-800002

CUSTOMER : BIHAR STATE POWER TRANSMISSION CO. LTD.

CONTRACTOR : M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

PROJECT : 132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-10, Kirti Nagar Industrial Area Phase-I,
New Delhi-110015 India. Tel: +91-11-26108000
Fax: +91-11-26108001
E-Mail: asiainfo@switchgear.com
Asian Switchgear Pvt. Ltd.

DRAWING NUMBER : ASPL/BSPTCL/241601

JOB NUMBER : ASPL/2024/*****

TITLE :
LIGHTING PANEL (OUTDOOR) TYPE AC-3
BILL OF MATERIAL

NAME DATE
DRAWN GANESH 08.08.2024
CHECKED GANESH 08.08.2024
APPROVED

REV.D1 04.11.2024
REV.D2 ---
REV.D3 REV.D4

SCALE N.T.S.

ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023

SHEET NO. 5 OF 5

[illegible]

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11 12 13 14 15 16 17 18

A B C D

R
Y
B
N

415V AC BUS

1C
TP
CONT.

K10 6A FUSE K12

K11 NL

K13

M A

A1

K14

1S START P.B.

K15

2S STOP P.B.

K16

1C

K17

TS

*R' 1S ON **

*G' 2S OFF **

K18

K19

S/S 5/15A

INCOMER

APPROVED

Subject to the condition that you are not absolve the responsibility for correctness of the materials supplied as per specification

Pavindar

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyal Bhawan, Patna-800002

CUSTOMER : BIHAR STATE POWER TRANSMISSION CO. LTD.

CONTRACTOR : M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

PROJECT : 132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-10, Kankarbagh Industrial Area, Patna (U.P.)
Pin - 800 025 India. Tel : 0512-2500001
www.asianswitchgear.com
E-Mail : asiainfo@asianswitchgear.com

DRAWING NUMBER : ASPL/BSPTCL/241601

JOB NUMBER : ASPL/2024/****

TITLE :
LIGHTING PANEL (OUTDOOR) TYPE AC-3
BILL OF MATERIAL

NAME DATE
DRAWN GANESH 08.08.2024
CHECKED GANESH 08.08.2024
APPROVED

REV.D1 04.11.2024
REV.D2 ---
REV.D3 REV.D4

SCALE N.T.S.

ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023

DIMENSION TOLERANCE ± 10MM.

SHEET NO. 5 OF 5

** :- ILLUMINATED TYPE PUSH BUTTON

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11 12 13 14 15 16 17 18

A B C D

R
Y
B
N

415V AC BUS

1C
TP
CONT.

K10 6A FUSE K12

K11 NL

K13

M A

A1

K14

1S START P.B.

K15

2S STOP P.B.

K16

1C

K17

TS

*R' 1S ON **

*G' 2S OFF **

K18

K19

S/S
5/15A

INCOMER

TPN
MCB

APPROVED

Subject to the condition that you are not absolve the responsibility for correctness of the materials supplied as per specification

Pavindan

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyal Bhawan, Patna-800002

CUSTOMER : BIHAR STATE POWER TRANSMISSION CO. LTD.

CONTRACTOR : M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED

PROJECT : 132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR

MANUFACTURER :

Asian Switchgear Pvt. Ltd.
B-10/1, Industrial Area Phase I, Patna (U.P.)
Pin - 800 002 India. Tel No. 0512-2500001
www.asianswitchgear.com
E-Mail: asiainfo@asianswitchgear.com

DRAWN : GANESH
CHECKED : GANESH
APPROVED :

NAME : DATE :
GANESH 08.08.2024
GANESH 08.08.2024

TITLE :
LIGHTING PANEL (OUTDOOR) TYPE AC-3
BILL OF MATERIAL

DRAWING NUMBER : ASPL/BSPTCL/241601

JOB NUMBER : ASPL/2024/****

REV.D1 REV.D2 REV.D3 REV.D4

04.11.2024

SCALE N.T.S.

ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023

DIMENSION TOLERANCE ± 10MM.

SHEET NO. 5 OF 5

** :- ILLUMINATED TYPE PUSH BUTTON



ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianswitchgear.com
Email: asianknp@gmail.Com

Asian Switchgear Pvt. Ltd.

DRAWING FOR APPROVAL

PANEL NAME	LIGHTING PANEL(INDOOR) TYPE DCP
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED

Subject to the condition that you are not absolve the responsibility for correctness of the material supplied as per specification

Signature

Electrical Superintending Engineer,
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidya Bhawan, Patna-800002

Signature

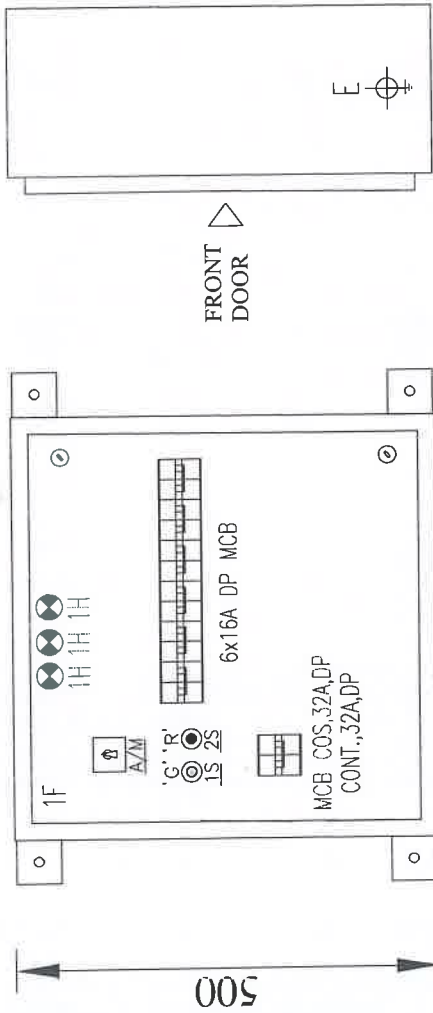
CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.			
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED			
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR			
MANUFACTURER :  Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Pin-2011241004, Tel: 0512-2410002 E-Mail: asiaknp@gmail.Com		DRAWN	GANESH	08.08.2024	TITLE : LIGHTING PANEL(INDOOR) TYPE DCP TITLE SHEET
		CHECKED	GANESH	08.08.2024	
		APPROVED			
DRAWING NUMBER : ASPL/BSPTCL/24160J		REV.01	04.11.2024	REV.03	
		REV.02		REV.04	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023			
		DIMENSION TOLERANCE ± 10MM.			

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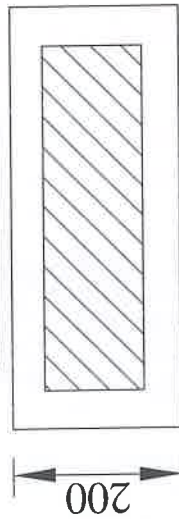
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GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, WALL MOUNTED AND NON COMPARTMENTALISED.
3. THE PANEL SHALL BE FABRICATED WITH - 2.0/1.6 MM. CRCA.
4. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
5. THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
6. EARTH STUD SHALL BE PROVIDED
7. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
 - A. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
 - B. DC CONTROL CKT. - 1.5 SQ MM GRAY
 - C. GROUNDING - 2.5 SQ MM GREEN
8. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
9. PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
10. CABLE ENTRY AS PER G.A. DRAWING.
11. PAINT SHADE - SMOKE GREY (692 OF IS:5)
12. GLAND PLATE - 3.0 MM. CRCA.



FRONT VIEW



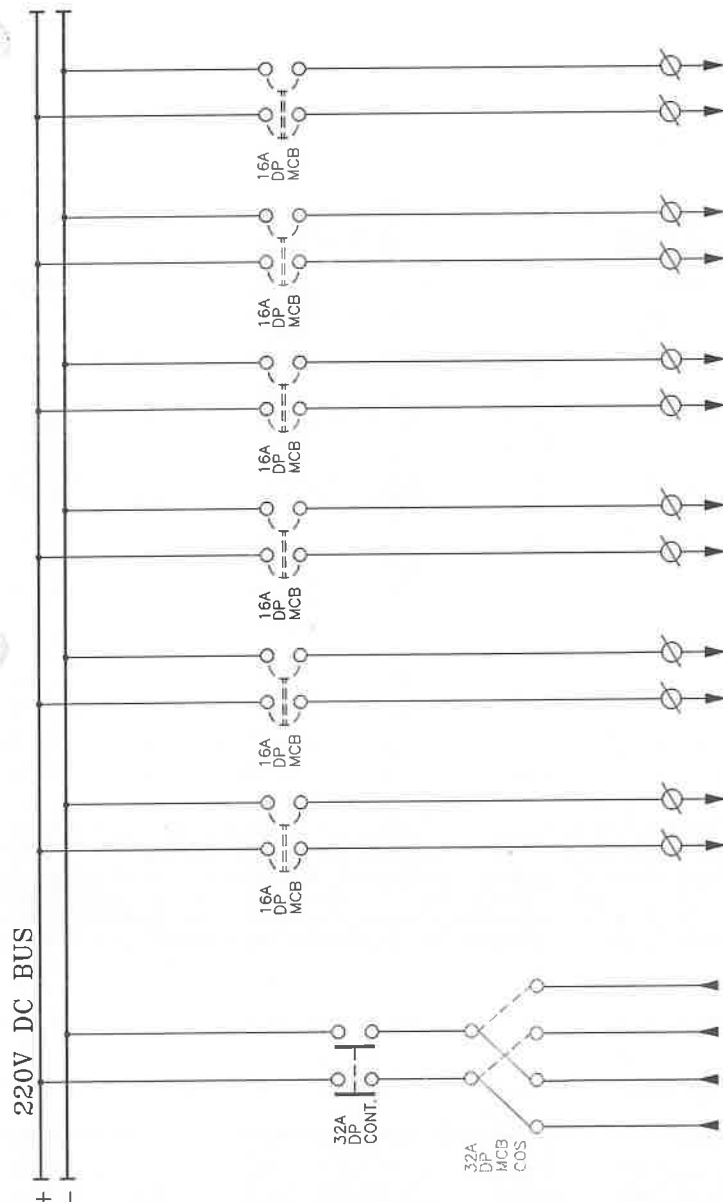
BOTTOM VIEW

SIDE VIEW



APPROVED
Subject to the condition that you are not absolve the responsibility for correctness of the material supplied as per specification
Ravi Gaud
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Aditya Bhawan, Patna-80002

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOERY (DIST. GOPALGANJ), BIHAR
MANUFACTURER:		ASIAN SWITCHGEAR PVT. LTD.
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		
DRAWING NUMBER:	ASPL/BSPTCL/24160J	
JOB NUMBER:	ASPL/2024/****	
DRAWING NO.	REV.01	REV.02
SHEET NO.	REV.03	REV.04
SCALE	N.T.S.	N.T.S.
DIMENSION TOLERANCE	± 10MM.	± 10MM.



FEEDER No.	1F	1F	1F	1F	1F	1F	1F
FEEDER RATING	32A	16A	16A	16A	16A	16A	16A
FEEDER DESCRIPTION	INCOMER-1 & 2	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING
CABLE SIZE IN mm2	***	**	**	**	**	**	**

APPROVED

Subject to the condition that you are not absolve the responsibility for correctness of the material supplied as per specification

Ravi Sarda

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Wardha Bhawan, Patna-80002

[Signature]

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.									
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED									
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR									
 MANUFACTURER : Asian Switchgear Pvt. Ltd. 16-17, Borena Industrial Estate, Borena (UP) India - 201302 www.asian-switchgear.com E-MAIL: sales@asianpl.com	DRAWN	NAME	DATE	TITLE : LIGHTING PANEL (INDOOR) TYPE DCP TWO LINE DIAGRAM							
	CHECKED	GANESH	08.08.2024								
	APPROVED	GANESH	08.08.2024								
	REV.01	04.11.2024	REV.03	SCALE N.T.S.							
	REV.02		REV.04								
DRAWING NUMBER : ASPL/BSPTCL/24160U		ALL DIMENSION ARE IN mm. NIT NO.:10/PH/BSPTCL/2023 DIMENSION TOLERANCE ± 10MM.									
JOB NUMBER :	ASPL/2024/*****	SHEET NO. 3 OF 5									

BILL OF MATERIAL

Sr. NO.	DESCRIPTION	MAKE	QTY.
01	MCB COS, 32A, DP	C&S	1
02	POWER CONTACTOR ,32A, DP ,COIL VOLTAGE-220V DC	C&S	1
03	MCB, 16A, DP ,DC	C&S	6
04	AUX. RELAY , 230V AC , 8PIN	SALZER	1
05	ILL. PUSH BUTTON-RED, GREEN, 22.5Sq.MM-220V DC	C&S/VAISHNO/SURDHI	2
06	AUTO/MANUAL SELECTOR SWITCH, 1P, 2W , 6A	VAISHNO/SURDHI	1
07	FUSE FITTING WITH HRC (20/6A)	C&S	3
08	POWER TERMINAL , 16SQ.MM.	CONNECTWELL	2
09	POWER TERMINAL , 10SQ.MM.	CONNECTWELL	12
10	INDICATING LAMP -RED , 22.5Sq.MM-220V DC	C&S/VAISHNO/SURDHI	2
11	INDICATING LAMP -RED , 22.5Sq.MM-230V AC	C&S/VAISHNO/SURDHI	1

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Ravi gund

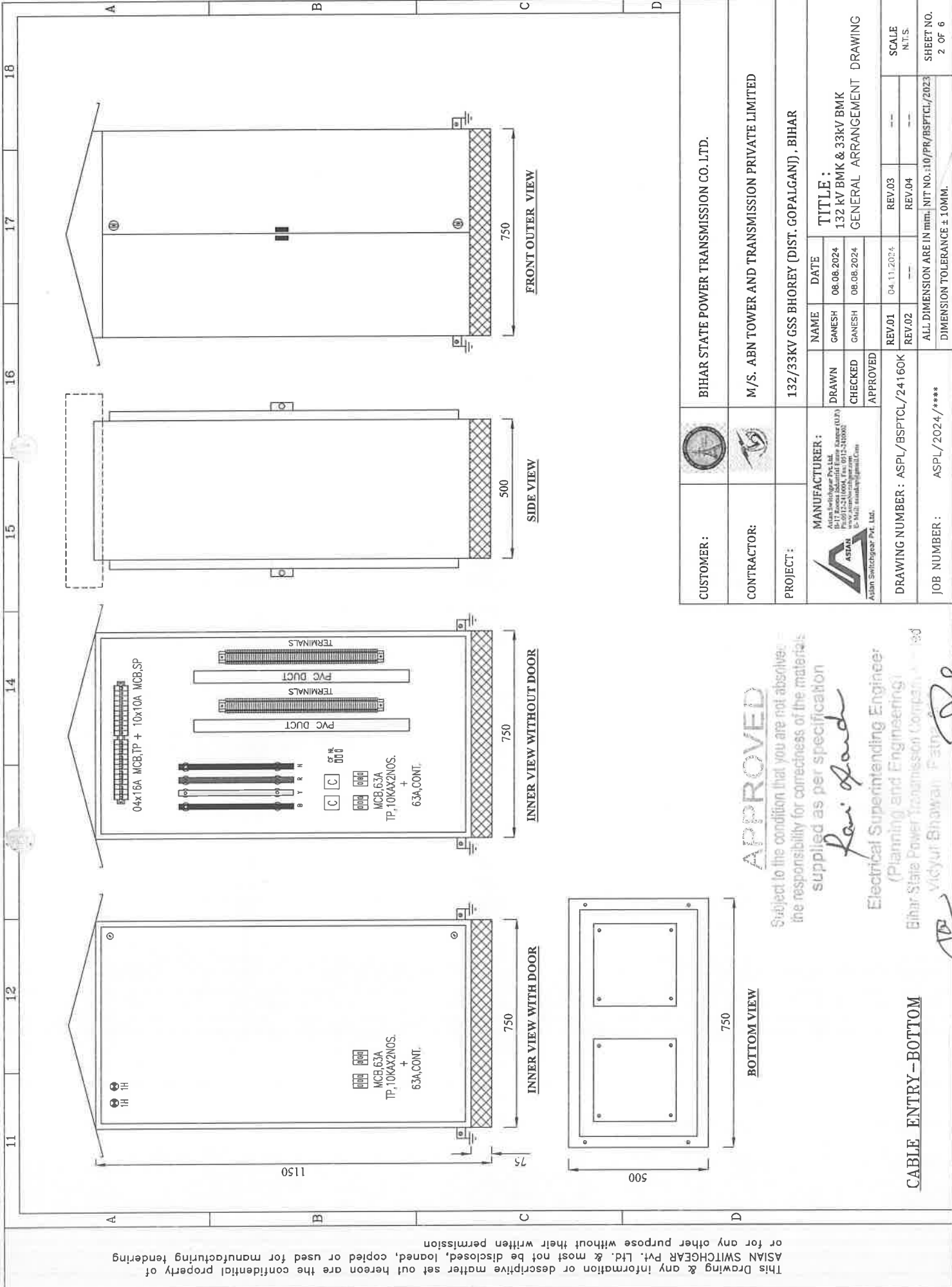
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidhyut Bhawan Patna

Def

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.								
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED								
PROJECT:		132/33KV GSS BHOOREY (DIST. GOPALGANJ) , BIHAR								
MANUFACTURER:		<table><tr><td>NAME</td><td>DATE</td></tr><tr><td>GANESH</td><td>06.08.2024</td></tr><tr><td>CHECKED</td><td>06.08.2024</td></tr><tr><td>APPROVED</td><td></td></tr></table>	NAME	DATE	GANESH	06.08.2024	CHECKED	06.08.2024	APPROVED	
NAME	DATE									
GANESH	06.08.2024									
CHECKED	06.08.2024									
APPROVED										
DRAWING NUMBER : ASPL/BSPTCL/24160J		REV.01 04.11.2024								
JOB NUMBER : ASPL/2024/****		REV.02 ---								
		REV.03 ---								
		REV.04 ---								
		SCALE NTS								
		SHEET NO. 4 OF 5								

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11	12	13	14	15	16	17	18
 ASIAN Switchgear Pvt. Ltd. ASIAN SWITCHGEAR PVT. LTD. B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.) www.asianSwitchgear.com Email: asianknp@gmail.Com							
DRAWING FOR APPROVAL							
PANEL NAME	132 kV BMK & 33kV BMK						
CLIENT	 BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)						
CONTRACTOR	 M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED						
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.						
PO NO:	ABN/24-25/BSPTCL/10/PO-160						
NIT No.	10/PR/BSPTCL/2023						
QTY.	132kV BMK-5Nos. 33kV BMK-6Nos.						
APPROVED Subject to the condition that you are not absolved from the responsibility for correctness of the materials supplied as per specification  Electrical Superintendent Engineer (Planning and Engineering) Bihar State Power Transmission Company Limited Aditya Bhawan Patna-800001  CUSTOMER : BIHAR STATE POWER TRANSMISSION CO. LTD.  CONTRACTOR: M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED  PROJECT: 132/33KV GSS BHOOREY (DIST. GOPALGANJ) , BIHAR  MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Pin-208004, Fax: 0512-210002 E-Mail: asianknp@gmail.Com NAME DATE DRAWN 08.08.2024 CHECKED 08.08.2024 APPROVED TITLE : 132 kV BMK & 33kV BMK TITLE SHEET DRAWING NUMBER : ASPL/BSPTCL/24160K REV.01 04.11.2024 REV.02 REV.03 REV.04 SCALE N.T.S. JOB NUMBER : ASPL/2024/**** ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023 DIMENSION TOLERANCE ± 10MM. SHEET NO. 1 OF 5							

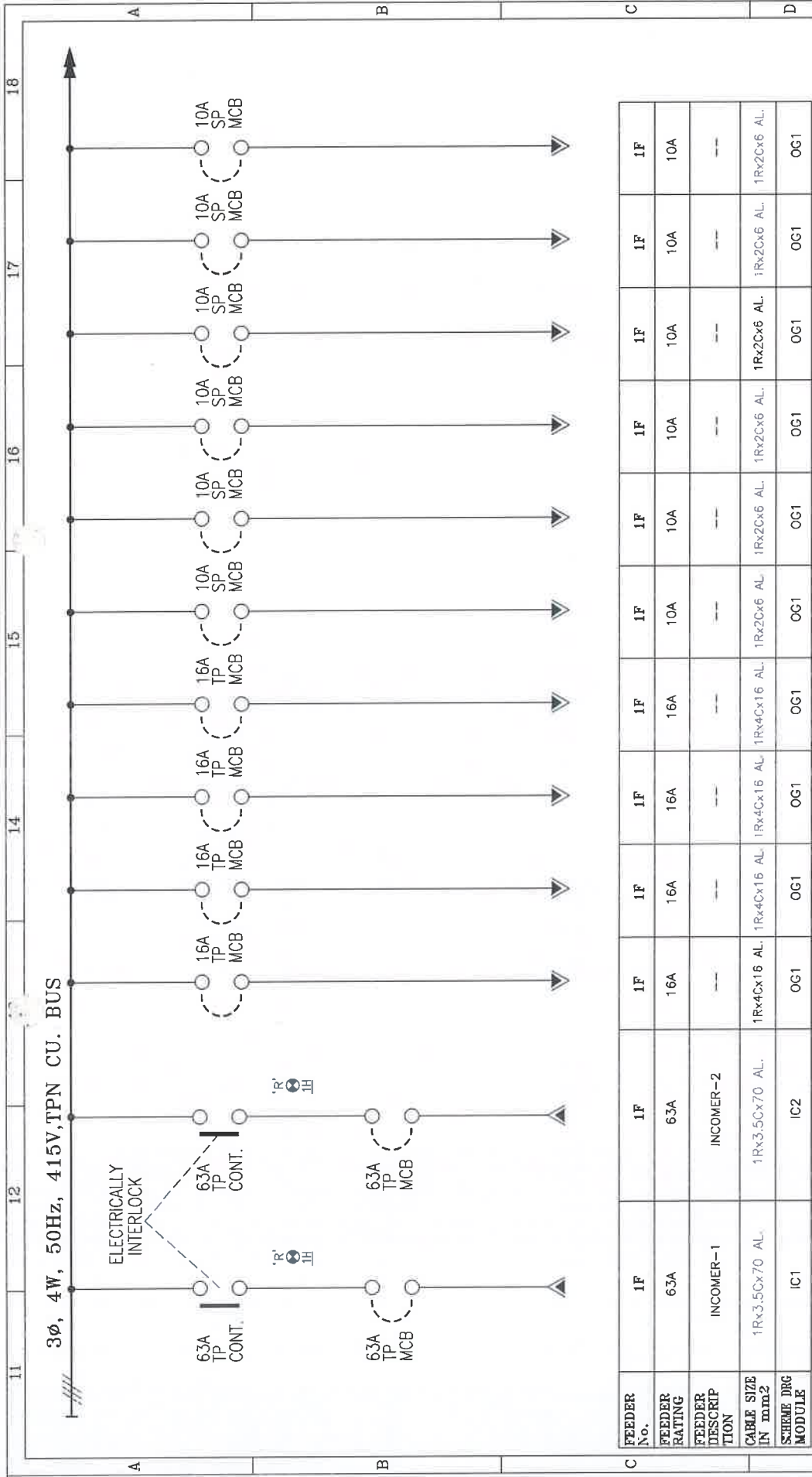


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CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
 MANUFACTURER : Asian Switchgear Pvt. Ltd. Plot No. 12-17, Kanchan Industrial Estate, Sector (UP), Gurgaon, Haryana - 122006, India. 0121-2416004, Fax: 0121-2416005 E-Mail: astan@asianswitchgear.com Website: www.asianswitchgear.com	DRAWN	NAME	DATE	TITLE :		
	CHECKED	GANESH	08.08.2024	132 kV BMK & 33kV BMK		
	APPROVED	GANESH	08.08.2024	GENERAL ARRANGEMENT		
				DRAWING		
DRAWING NUMBER : ASPL/BSPTCL/24160K		REV.01	04.11.2024	REV.03	SCALE	
		REV.02	---	REV.04	N.T.S.	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm. INT NO.110/PR/BSPTCL/2023				SHEET NO.	
	DIMENSION TOLERANCE ± 10MM.				2 OF 6	

APPROVED
Subject to the condition that you are not absolve the responsibility for correctness of the materials supplied as per specification
Ravi Hand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company
Vidyut Bhawan, Patna
[Signature]

CABLE ENTRY - BOTTOM



FEEDER No.	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F
FEEDER RATING	63A	63A	16A	16A	16A	16A	16A	16A	16A	10A	10A	10A	10A	10A	10A
FEEDER DESCRIPTION	INCOMER-1	INCOMER-2													
CABLE SIZE IN mm ²	1Rx3.5Cx70 AL	1Rx3.5Cx70 AL	1Rx4Cx16 AL	1Rx4Cx16 AL	1Rx4Cx16 AL	1Rx4Cx16 AL	1Rx4Cx16 AL	1Rx4Cx16 AL	1Rx4Cx16 AL	1Rx2Cx6 AL	1Rx2Cx6 AL	1Rx2Cx6 AL	1Rx2Cx6 AL	1Rx2Cx6 AL	1Rx2Cx6 AL
SCHEME DRG MODULE	IC1	IC2	OG1	OG1	OG1	OG1	OG1	OG1	OG1	OG1	OG1	OG1	OG1	OG1	OG1

APPROVED

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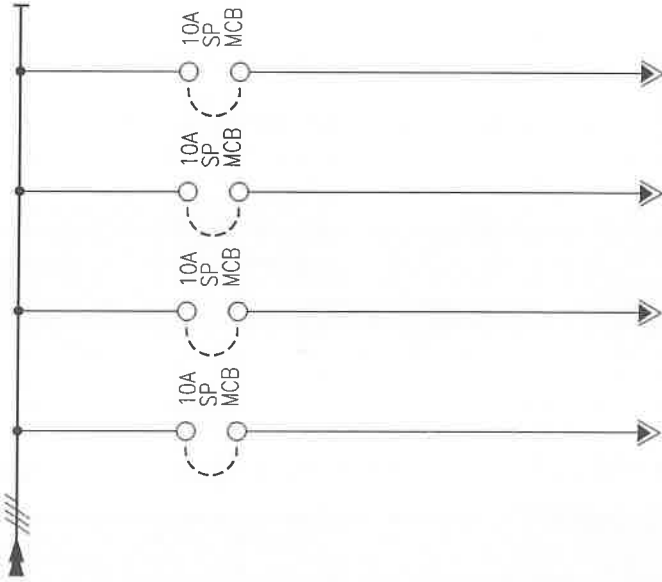
Ravi Sarda

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidvat Bhawan Patna-800006

CUSTOMER:	BIHAR STATE POWER TRANSMISSION CO. LTD.			
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED			
PROJECT:	132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR			
MANUFACTURER:	NAME	DATE	TITLE:	
 Asian Switchgear Pvt. Ltd. B-17, Bypass Industrial Estate, Patna (U.P.) Pin-800 001 www.asian-switchgear.com E-Mail: asian@switchgear.com	DRAWN	GANESH	08.08.2024	132 kV BMK & 33kV BMK
	CHECKED	GANESH	08.08.2024	SINGLE LINE DIAGRAM
	APPROVED			
DRAWING NUMBER:	ASPL/BSPTCL/24160K	REV.01	04.11.2024	REV.03
JOB NUMBER:	ASPL/2024/****	REV.02	---	REV.04
ALL DIMENSION ARE IN mm. NIT NO.: 10/PR/BSPTCL/2023				SCALE
DIMENSION TOLERANCE $\pm$ 10MM.				N.T.S.
SHEET NO.				3 OF 6

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FEEDER No.	1F	1F	1F	1F
FEEDER RATING	10A	10A	10A	10A
FEEDER DESCRIPTION	--	--	--	--
CABLE SIZE IN mm ²	1R2C6 AL	1R2C6 AL	1R2C6 AL	1R2C6 AL
SCHEME DRG MODULE	OG1	OG1	OG1	OG1

GENERAL NOTES:-

- ALL DIMENSIONS ARE IN MM.
- THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, WALL MOUNTED AND NON COMPARTMENTALISED.
- THE PANEL SHALL BE FABRICATED WITH -2.0/1.6 MM. CRCA.
- RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
- THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
- EARTH STUD SHALL BE PROVIDED
- CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
 - AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
 - GROUNDING - 2.5 SQ MM GREEN
- NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
- PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
- CABLE ENTRY AS PER G.A. DRAWING.
- PAINT SHADE:- - SMOKE GREY (692 OF IS:5)
- GLAND PLATE- 3.0 MM. CRCA.

APPROVED

Subject to the condition that you are not absolve the responsibility for correctness of the material supplied as per specification

Ravi Kumar

Electrical Superintending Engineer
(Planning and Engineering)

Bihar State Power Transmission Company Limited
Vidvut Bhawan Patna-800 005

VP

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.								
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED								
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR								
MANUFACTURER:		TITLE: 132 kV BMK & 33kV BMK SINGLE LINE DIAGRAM <table><thead><tr><th>NAME</th><th>DATE</th></tr></thead><tbody><tr><td>DRAWN</td><td>08.08.2024</td></tr><tr><td>CHECKED</td><td>08.08.2024</td></tr><tr><td>APPROVED</td><td></td></tr></tbody></table>	NAME	DATE	DRAWN	08.08.2024	CHECKED	08.08.2024	APPROVED	
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JOB NUMBER:	ASPL/2024/****	ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023 DIMENSION TOLERANCE ± 10MM. SHEET NO. 4 OF 6								

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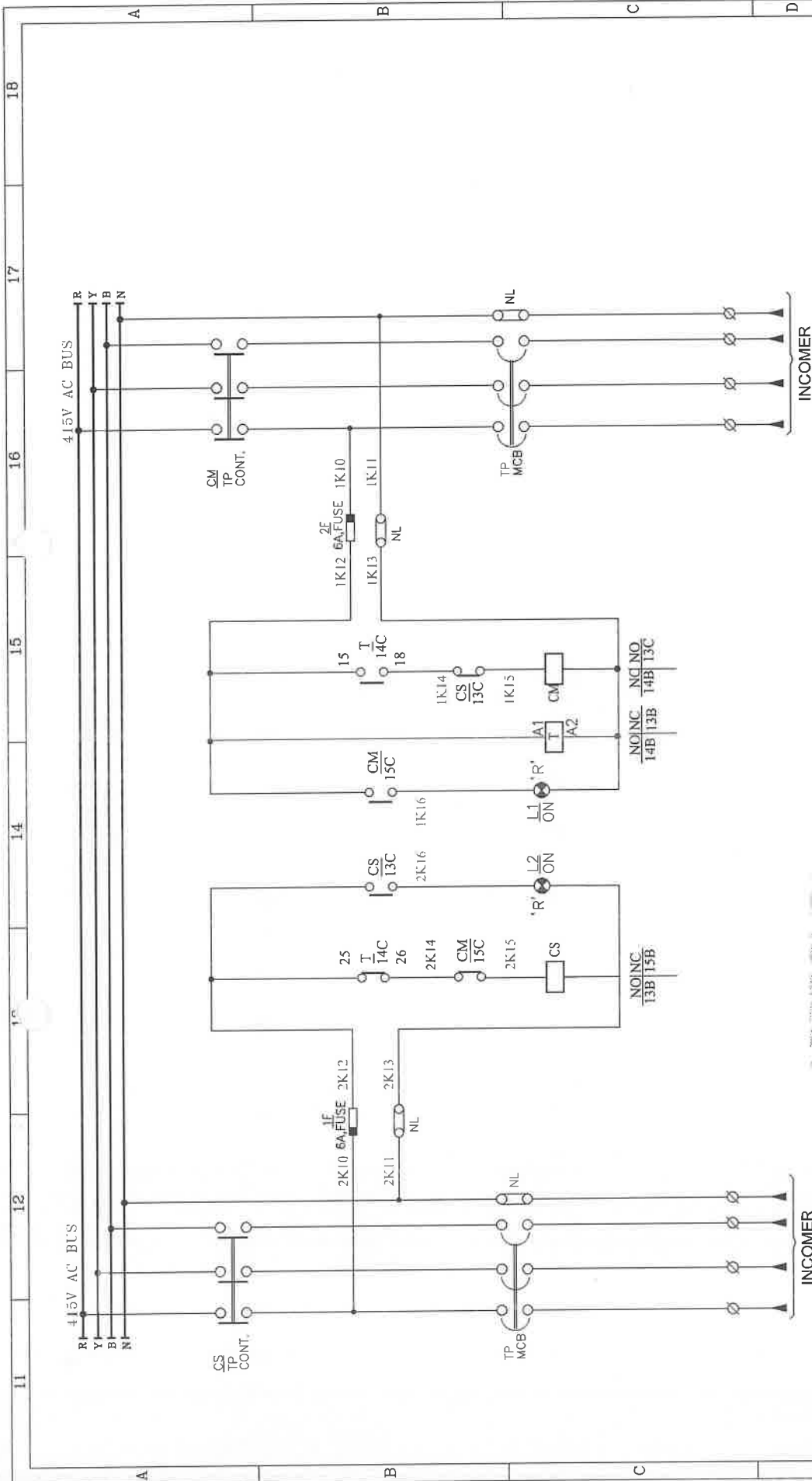
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Sanjiv Kumar
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company
Patna-800 001

[Signature]

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
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MANUFACTURER :		TITLE : 132 KV BMK & 33KV BMK BILL OF MATERIAL
DRAWING NUMBER :	ASPL/BSPTCL/24160K	REV.01 04.11.2024
JOB NUMBER :	ASPL/2024/****	REV.02 ---
		REV.03 ---
		REV.04 ---
		SCALE N.T.S.
		SHEET NO. 5 OF 6

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company
Vidhyut Bhawan Patna

10/11/2024

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR :		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
 MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Zonal Industrial Estate, Kanpur (U.P.) Pin-205005 Phone: 0512-2410002 E-Mail: asian@asianltd.com	DRAWN	NAME	DATE	TITLE :		
	CHECKED	GANESH	08.08.2024	132 kV BMK & 33kV BMK		
	APPROVED	GANESH	08.08.2024	SCHEMATIC DIAGRAM		
DRAWING NUMBER :	ASPL/BSPTCL/24160K				SCALE N.T.S.	
JOB NUMBER :	ASPL/2024/****				SHEET NO. 6 OF 6	
	ALL DIMENSION ARE IN mm. INT NO. :10/PR/BSPTCL/2023					
	DIMENSION TOLERANCE ± 10MM.					

CALCULATION FOR COPPER BUS BAR CAPACITY – 1000A

PARAMETERS

Thermal rating of Bus Bar (reqd.)	=	1000A
Size of Copper Bus Bar Proposed	=	(1x63x10 sq.mm)**
Current rating as per copper table no.-12 on CDA (AC rating)	=	1555.31A**
Site Ambient Temperature	=	50°C
Rise in Temperature allowed	=	35°C
Final Temperature Permitted	=	85°C
Size of Bus Bar enclosure	=	300 X 900 sq.mm

(0) THERMAL RATING

(0) Derating due to Temperature rise of 35°C over ambient of 50°C

Derating factor due to temperature rise = 0.815 (As per annexure-1, Table 28.3)

(b) DERATING DUE TO ENCLOSURE

The derating factor for enclosure is based on the ratio of Bus Bar size and enclosure size, which is:

$$= \frac{3 \times (1 \times 63 \times 10)}{300 \times 900} = \frac{1890}{270000}$$

$$= 0.70\%$$

As per table 5(enclosed) of INDAL. Bus Bar the derating factor is:

0.85 if ratio is less than 1%

0.75 if ratio is less than 5%

(c) PROXIMITY FACTOR

The Bus Bar is air cooled. The effect of proximity is considered to be negligible. The proximity factor is 1.

APPROVED

Subject to the condition that you are not absolved
the responsibility for correctness of the material
supplied as per specification

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidya Bhawan, Patna-800 005

(Signature)

Total Derating Factor

Summing up the total derating factor shall be

$$= \text{Derating factor due to temperature rise} \times \text{derating factor due to enclosure} \times \text{derating factor due to proximity}$$

$$\text{Total derating factor} = 0.815 \times 0.85 \times 1$$

$$= 0.69275$$

$$\text{Thermal Rating of Bus Bar} = 1555.31 \times 0.69275 = 1077.44\text{A}$$

The bus bar size taken is suitable for 1077.44A (required 1000A)

Hence given cross-section is suitable to carry a continuous current of 1000A.

** As per CDA Copper Table No.-12

1X80X8 is suitable for current rating 1580A.

Than 1X63X10 will be suitable for current rating $(1580 \times 63 \times 10) / (1 \times 80 \times 8)$

$$= 1555.31\text{A}$$

APPROVED

Subject to the condition that you are not absolve of the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company
Vidya Bhawan Patna

(Signature)