

APTRANS CO

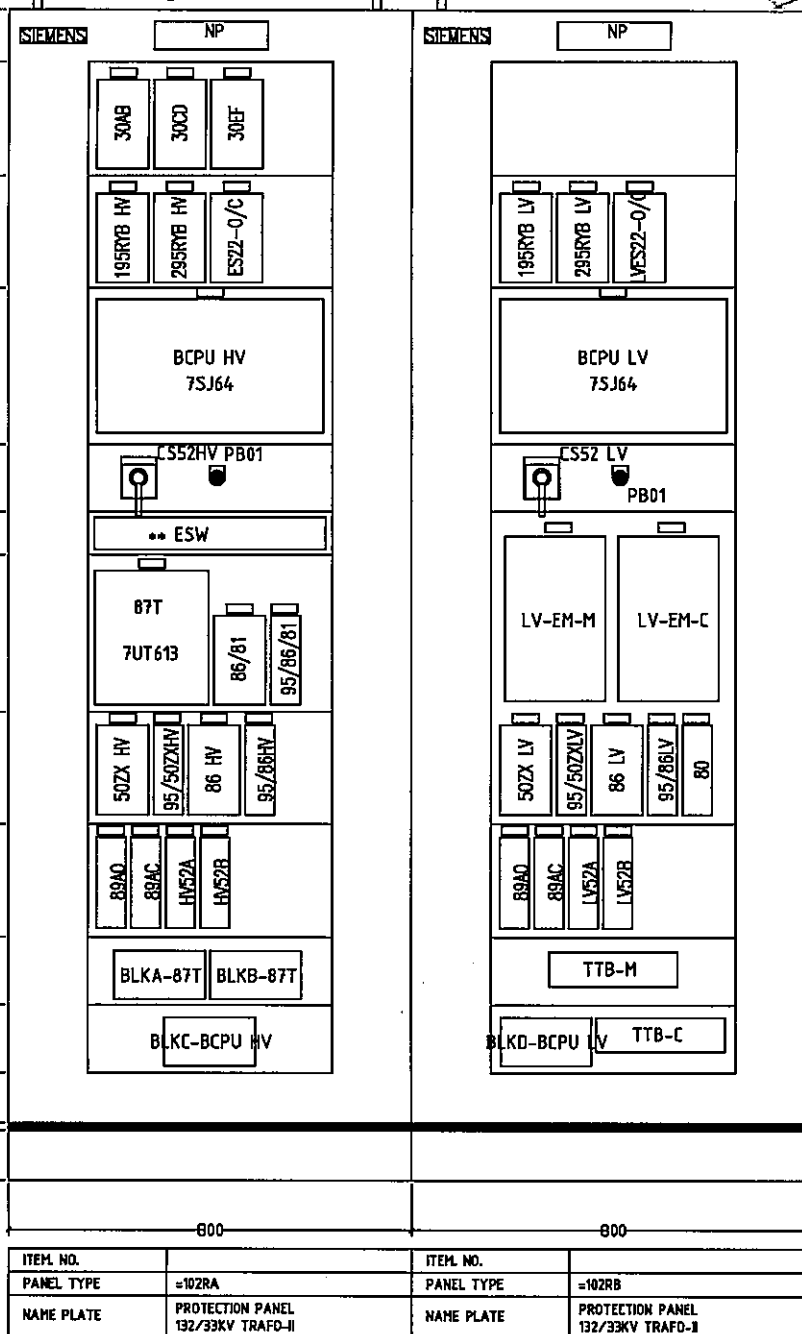
Standardised Drawings for 132/33 kV Transformer C&R panels with BCU for GISS (M/s.Siemens Ltd. make)
(4) G719EA-BG9141-F102-A(1-3) Revision-A
STD/DWG/Approval No. 261.5 Revision No. 0
Prepared & Approved during January - 2012

CHIEF ENGINEER / CONSTRUCTION-1
APTRANS CO/VIDYUTH SOUDHA/HYO.

APPROVED FOR TURNKEY PROJECTS

18/11/2011

SI NO	SUBSTATION	QTY	BAY NO
1	OSMANYA UNIVERSITY	2	102 & 111



PANEL REF : =102RA

RELAY REF.	DESCRIPTION	TYPE	MAKE
87T	DIFF. PROTN RELAY	7UT613	SIEMENS
86 HV	HV MASTER TRIP RELAY	TR24H2	EASUN REYROLLE
195RYB HV	HV TRIP CIRCUIT SUPVN RELAY FOR TC-1	XR351	EASUN REYROLLE
295RYB HV	HV TRIP CIRCUIT SUPVN RELAY FOR TC-2	XR351	EASUN REYROLLE
HV52A,HV52B	CB CLOSE MULTL RELAY	AR111	EASUN REYROLLE
95/86HV	MASTER TRIP SUPVN RELAY	XR151	EASUN REYROLLE
86/81	U/F PROTN TRIP RELAY	TR24H2	EASUN REYROLLE
95/86/81	U/F PROTN TRIP SUPVN RELAY	XR151	EASUN REYROLLE
PB01	PUSH BUTTON FOR TRIP RESET	PB	SIEMENS
89AO,89AC	ISOLATOR OPEN & CLOSE MULTP RELAY	AR111	EASUN REYROLLE
BCPU HV	HV BAY CONTROL & PROTN UNIT	7SJ64	SIEMENS
30AB,30CD,30EF	TRAFD. TROUBLE RELAY	AR11DX2	EASUN REYROLLE
ES22-0/C	HV E.S OPEN & CLOSE MULTI RELAY	AR11DX2	EASUN REYROLLE
50ZX HV	HV LBB TRIP RELAY	TR24H2	EASUN REYROLLE
95/50ZXHV	HV LBB TRIP SUPVN RELAY	XR151	EASUN REYROLLE
BLKA/B-87T	TEST BLOCK FOR 87T	MPG	AREVA
BLKC-BCPU HV	TEST BLOCK FOR BCPU	MPG	AREVA
CS52 HV	CONTROL SWITCH FOR 52 HV	-	SWITRON

PANEL REF : =102RB

RELAY REF.	DESCRIPTION	TYPE	MAKE
86 LV	MASTER TRIP RELAY	TR24H2	EASUN REYROLLE
195RYB LV	LV TRIP CIRCUIT SUPVN RELAY FOR TC-1	XR351	EASUN REYROLLE
295RYB LV	LV TRIP CIRCUIT SUPVN RELAY FOR TC-2	XR351	EASUN REYROLLE
95/86 LV	MASTER TRIP SUPVN RELAY	XR151	EASUN REYROLLE
BCPU LV	LV BAY CONTROL & PROTN UNIT	7SJ64	SIEMENS
50ZX LV	LV LBB TRIP RELAY	TR24H2	EASUN REYROLLE
95/50ZXLV	LV LBB TRIP SUPVN RELAY	XR151	EASUN REYROLLE
LV52A,LV52B	CB CLOSE MULTL RELAY	AR111	EASUN REYROLLE
89AO,89AC	ISOLATOR OPEN & CLOSE MULTI RELAY	AR111	EASUN REYROLLE
LV522-0/C	LV E.S OPEN & CLOSE MULTI RELAY	AR111X2	EASUN REYROLLE
80	DC SUPVN RELAY	AR121	EASUN REYROLLE
PB01	PUSH BUTTON FOR TRIP RESET	PB	SIEMENS
LV EM-M	ENERGY METER FOR MAIN	-	SECURE/L&T
LV EM-C	ENERGY METER FOR CHECK	-	SECURE/L&T
TTB-M	TEST TERMINAL BLOCK FOR EM-M	-	NELSTER
TTB-C	TEST TERMINAL BLOCK FOR EMC	-	NELSTER
CS52 LV	CONTROL SWITCH FOR 52 LV	-	SWITRON
BLK-BCPU LV	TEST BLOCK FOR BCPU	MPG	AREVA

NOTE: ** ETHERNET SWITCH IS PART OF SAS ITEMS

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Date	17.08.11
Drawn	MC
Appr.	MS
Version	Remarks
A	REVISED
Date	06.09.11
Name	Norm.

Client: APTRANS CO
Substation Name: 220/132/33KV O.U.
Contractor: SIEMENS LTD.
Repl./Ref./etc.

SIEMENS

132/33KV TRAFD-II
FRONT VIEW
Circuit Diagram

Sales Reference No: 3002660707
Project Name: 220/132/33KV O.U.
Revision-A
14)G719EA-BG9141-F102-A
CKT 132/33KV TRAFD
=102
Page.01/03

APTRANSO/VIDYUTH LMS Tool
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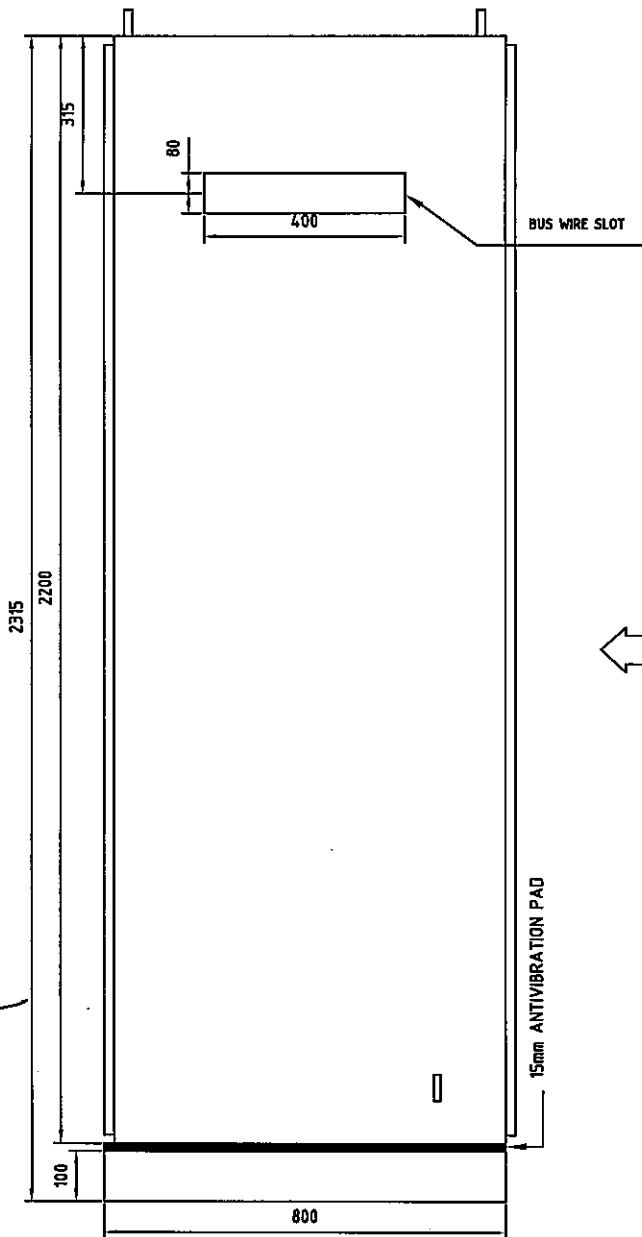
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FRONT VIEW →

← REAR VIEW



Version	Remarks	Date	Name	Norm.
A	REVISED	06.09.11	SH	MS

Date	17.08.11
Drawn	MC
Appr.	MS

SIEMENS

Client: APTRANSO
Substation Name: 220/132/33KV O.U.
Contractor: SIEMENS LTD.
Repl./Ref./etc.

Sales Reference No.: 3002660707	CKT 132/33KV TRAF0	Page 02/03
Project Name: 220/132/33KV O.U.	=102	
Revision-A	(4)G719EA-BE9141-F102-A	

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 Author: AKS
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Version	Remarks	Date	Name	Norm.
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				MS

Date: 17.08.11
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 Client: APTRANSCO
 Substation Name: 220/132/33KV O.U.
 Contractor: SIEMENS LTD.
 Repl./Ref./etc.

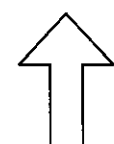
SIEMENS

132/33KV TRAF0-II
 FOUNDATION DETAILS
 Circuit Diagram

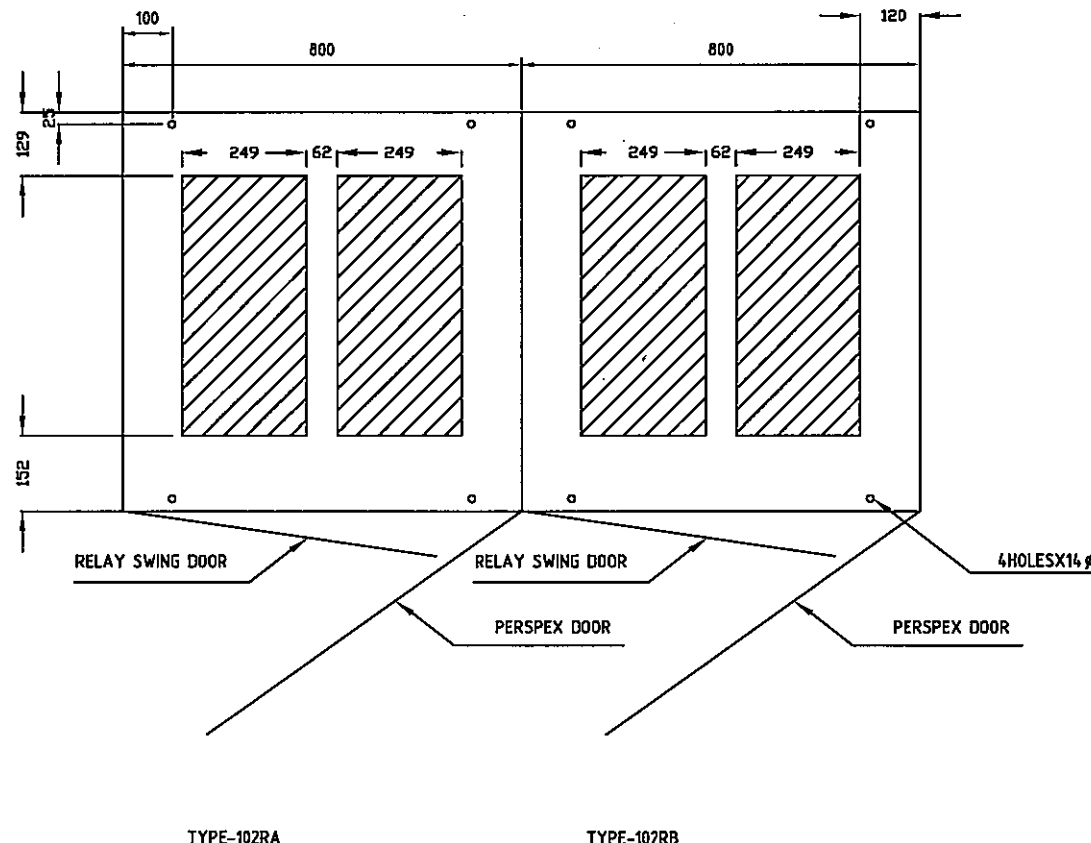
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 Project Name: 220/132/33KV O.U.
 Revision-A
 (4)G719EA-BG9141-F102-A
 CKT 132/33KV TRAF0 Page.03/03
 =102

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18/11/2011
CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH SOUDHA/HYO.



FRONT



Note:
 ALL DIMENSION
 TOLERANCE +/-5mm

1	2	3	4	5	6	7	8
Fun. Ref	Description	Specification	Dis	Make	Type	Qty/Panel	
Front Mounted Equipments							
87T	Numerical Differential protection with inbuilt over flux protection	MLFB NO: 7UT6131-5EB92-1AB0-LOS Flush Mounting Aux supply: 220V DC CT sec: 1A, PT sec: 110V (Ph-Ph) Case size: 1/219" with screw type terminal Bin I/P: 5, BO: 8, with 1 Live status contact IEC61850 with FO Port.	3	SIEMENS	7UT613	1	
89AO 89AC	89A,89B Isolator Open Multi Relay 89A,89B Isolator Close Multi Relay	Aux. Supply: 220V DC Contact : 8 NO , Self Reset, FLAG:-Yes, Case Size:-E2 WDG: 8112W00142 MLFB:-AR111	3	EASUN	AR111	2	
BCPU HV	Bay control unit With inbuilt Non-Directional O/C & Directional E/F	MLFB No: 7SJ6451-5EB92-1FC4-LOS Aux Supply: 220V DC CT Sec: 1A, VT Sec: 110V, Size: 1/1X19", Flush with screw type terminals, Bin I/P: 33, Bin O/P: 19, 1 Live status IEC 61850 with FO Port	3	SIEMENS	7SJ645	1	
HV52A, HV52B	CB Open/Close Multi Relay	Aux. Supply: 220V DC Contact : 8 NO , Self Reset, FLAG:-Yes, Case Size:-E2 WDG: 8112W00142 MLFB:-AR111	3	EASUN	AR111	2	
95/86HV	Master Trip Supervision Relay	Aux: Supply: 220V DC Contacts : 2NO+2NC S/R H/R Rev. Flag , 400 msec , STD DO Case Size : E2 WDG: 8112W00146 MLFB : XR151 with external resistor 2.3K ohm & 7K ohm	3	EASUN	XR151	1	
ES22-O/C	HV ES22 EarthSwitch Open& Close Multi Relay	Aux. Supply: 220V DC Contact : 8 NO , Self Reset, FLAG:-Yes, 2 Element Case Size:-E4 WDG: 8112W00122 MLFB:-AR111X2	3	EASUN	AR111 X2	1	
Dis: 1- W Stock, 2- W Non stock, 3- Boughtouts, 4- Project Supply, 5- Loose Supply							
A		Date 17.08.11	S/S: 220/132/33kV O.U.		SALES REF:3002660707		
REVISED		06.09.11	SM	Created MC	CLIENT: APTRANSCO		
Rev.		Remarks	Date	Name	Norm	CIRCUIT: 132/33kV TRAFO-II	
1		2		3		4	
5		6		7		8	

SIEMENS

EQUIPMENT LIST FOR 102RA

(4)-G719EA-BG9141-E102-A

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APPROVED FOR TURNKEY PROJECTS

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Standardised Drawings for 132/33 kV Transformer C&R panels with BCU for GISS (M/s. Siemens Ltd. make)
 (4) G719EA-BG9141-E102-A(RA 1-4) Revision-A
 STD/DWG/Approval No. 261.5 Revision No. 0
 Prepared & Approved during January - 2012

132/33kV 80MVA POWER TRAFO CONTROL AND RELAY PROTECTION PANEL WITH BCU

1	2	3	4	5	6	7	8
Fun. Ref	Description	Specification	Dis	Make	Type	Qty/Panel	
86 HV	Master Trip Relay	Auxiliary Relay Contact : 16 NO + 4 NC Electrical Reset Aux Supply : 220 V DC Case : E4 WDG : 8112W00084 MLFB: TR241H2	3	EASUN	TR241H2	1	A
50ZX HV	HV LBB Trip Relay	Auxiliary Relay Contact : 16 NO + 4 NC Electrical Reset Aux Supply : 220 V DC Case : E4 WDG : 8112W00084 MLFB: TR241H2	3	EASUN	TR241H2	1	B
195RYB HV 295RYB HV	Trip circuit supervision Relay CB -Trip coil-1 Trip circuit supervision Relay CB -Trip coil-2	Aux. Supply: 220V DC Contacts : 2NO+2NC S/R H/R Rev. Flag , 400 msec , STD DO Case Size : E4 WDG: 8112W00132 MLFB : XR351 Resistors along with relay (Internally Mounted)	3	EASUN	XR351	2	D
30AB,30CD,30EF	Transformer Trouble Relays	Aux. Supply: 220V DC Contact : 8 NO , Self Reset, FLAG:-Yes,2 Element Case Size:-E4 WDG: 8112W00122 MLFB:-AR111X2	3	EASUN	AR111 X2	3	
86/81	Under Frequency Trip Relay	Auxiliary Relay Contact : 16 NO + 4 NC Electrical Reset Aux Supply : 220 V DC Case : E4 WDG : 8112W00084 MLFB: TR241H2	3	EASUN	TR241H2	1	
95/86/81	U/F Trip Supervision Relay	Aux. Supply: 220V DC Contacts : 2NO+2NC S/R H/R Rev. Flag , 400 msec , STD DO Case Size : E2 WDG: 8112W00146 MLFB : XR151 with external resistor 2.3K ohm & 7K ohm	3	EASUN	XR151	1	
Dis: 1- W Stock, 2- W Non stock, 3- Boughtouts, 4- Project Supply, 5- Loose Supply							
Rev.	Remarks	Date	Name	Norm	Orig./Repl./Replay	SIEMENS EQUIPMENT LIST FOR 102RA	
A	REVISED	06.09.11	SM	Appr.	MS	SALES REF:3002660707	
						(4)-G719EA-BG9141-E102-A	Sheet 2+4Sh.

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CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH SOUDHA/HYD.

Fun. Ref	Description	Specification	Dis	Make	Type	Qty/ Panel
95/50ZX HV	LBB Trip Supervision Relay	Aux: Supply: 220V DC Contacts : 2NO+2NC S/R H/R Rev. Flag , 400 msec , STD DO Case Size : E2 WDG: 8112W00146 MLFB : XR151 with external resistor 2.3K ohm & 7K ohm	3	EASUN	XR151	1
CS52 HV	Emergency Breaker control switch	Handle: PISTOL GRIP, SPRING RETURN,15 Ways Position: TRIP/NEUTRAL/CLOSE, Trip-8, Neutral-2, close-6 After Trip-2,After close-2	3	SWITRON		1
PB01	Push-button for trip relay reset	220 VDC, black actuator with plastic front ring, with 2NO contact block	1	SIEMENS	3SB5000-0AB01 +3SB54000E	1 2
BLKA/B-87T	Test blocks	MPG Test block	3	AREVA	MPG	2
BLKC-BCPU HV	Test blocks	MPG Test block	3	AREVA	MPG	1

Dis: 1- W Stock, 2- W Non stock, 3- Boughtouts, 4- Project Supply, 5- Loose Supply

17.08.11

Created

MC

06.09.11

SM

Appr.

MS

S/S: 220/132/33kV O.U.

CLIENT:APTRANSCO

CIRCUIT:132/33kV TRAFO-II

Orig./Repl./Replby

SIEMENS

EQUIPMENT LIST FOR 102RA

SALES REF:3002660707

(4)-G719EA-BG9141-E102-A

Sheet 3+

4Sh

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CHIEF ENGINEER / CONSTRUCTION -1
APTRANSCO/VIDYUTH SOUDHA/HYD.

Fun. Ref	Description	Specification	Dis	Make	Type	Qty/ Panel
INTERNALLY MOUNTED EQUIPMENTS						
HT	Space heater	100W,240V AC	1	APT CONTROL		1
HTS	ON/OFF switch	15 A	1	Anchor		1
PS and PSS	Power socket with ON/OFF Switch	5/15A, 3Pin	1	Anchor		1
TH	Thermostat	30-90 deg cent	1	APT CONTROL		1
CILS	Cubicle door operated switch	Limit Switch(1No+2NC) -3SE30230A	1	SIEMENS		1
CFL	Compact Fluorescent Lamp	240 V AC, 18W	1	Philips		1
F-11	DC MCB Double Pole Aux contact:1NC	20A, 220V DC	3	SIEMENS		1
F-12, F-13,F-14, F-15, F-16 F-17,F-18,F-19	DC MCB Double Pole Aux contact:1NC	4A, 220V DC	3	SIEMENS		9
F-31	AC MCB Single Pole & Neutral Aux contact:1NC	16A, 230V AC	3	SIEMENS		1
Fuse	Control fuses with fuse carrier and holder	4A 3NW20NNSF+3NWNS4	1	SIEMENS		AS PER REQUIREMENT
LK	Link Base + Link	Links	1	SIEMENS		AS PER REQUIREMENT
</						

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 CHIEF ENGINEER / CONSTRUCTION-1
 APTRANSCO/VIDYUTH SOUDHA/HYD.

	1	2	3	4	5	6	7	8
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Dis: 1- W Stock, 2- W Non stock, 3- Boughtouts, 4- Project Supply, 5- Loose Supply

Rev.	REMARKS	06.09.11	SM	Appr.	MS	CIRCUIT:132/33kV TRAFO-II	SIEMENS	EQUIPMENT LIST FOR 102RB	SALES REF:3002660707	(4)-G719EA-BG9141-E102-A	Sheet 1+ 3Sh
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APTRANSCO



Standardised Drawings for 132/33 kV Transformer C&R panels
with BCU for GISS (M/s.Siemens Ltd. make)
(4) G719EA-BG9141-E102-A(RB 1-3) Revision-A
STD/DWG/Approval No. 261.5 Revision No. 0
Prepared & Approved during January - 2012

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CHIEF ENGINEER / CONSTRUCTION
APTRANSCO/VIDYUTH SOUDHA/HYD

132/33kV 80MVA POW TRAFO CONTROL AND RELAY PROTECTION PANEL WITH BCU

1	2	3	4	5	6	7	8
Fun. Ref	Description	Specification	Dis	Make	Type	Qty/ Panel	
86 LV	Master Trip Relay	Auxiliary Relay Contact : 16 NO + 4 NC Electrical Reset Aux Supply : 220 V DC Case : E4 WDG : 8112W00084 MLFB: TR241H2	3	EASUN	TR241H2	1	
195RYB LV 295RYB LV	Trip circuit supervision Relay CB -Trip coil-1 Trip circuit supervision Relay CB -Trip coil-2	Aux: Supply: 220V DC Contacts : 2NO+2NC S/R H/R Rev. Flag , 400 msec , STD DO Case Size : E4 WDG: 8112W00132 MLFB : XR351 Resistors along with relay (Internally Mounted)	3	EASUN	XR351	2	
95/60ZX LV	LV LBB Trip Supervision Relay	Aux: Supply: 220V DC Contacts : 2NO+2NC S/R H/R Rev. Flag , 400 msec , STD DO Case Size : E2 WDG: 8112W00146 MLFB : XR181 with external resistor 2.3K ohm & 7K ohm	3	EASUN	XR351	1	
80	DC circuit supervision relay	Aux: Supply: 220V DC, 1 Element Relay Contact : 2 NO+ 2 NC , Self Reset Case Size : E2 H/R Rev. Flag ,With Time Delay Up To 200 msec WDG : 8112W00142 MLFB: AR121T3	3	EASUN	AR121T3	1	
CS62 LV	Emergency Breaker control switch	Handle: PISTOL GRIP, SPRING RETURN,15 Ways Position: TRIP/NEUTRAL/CLOSE, Trip-8, Neutral-2 close-6, After Trip-2,After close-2	3	SWITRON		1	
PB01	Push-button for trip relay reset	220 VDC, black actuator with plastic front ring, with 2NO contact block	1	SIEMENS	3SB5000-0AB01 +3SB54000E	1 .2	
BLKD-BCPU LV	Test blocks	MPG Test block	3	AREVA	MPG	1	
TTB-M TTB-C	Test Terminal Block For EMM Test Terminal Block For EMC	3 Phase, 4 wire, Back Connected Rear connected Link type	3	IMP / NELSTER		2	
Dis: 1- W Stock, 2- W Non stock, 3- Boughtouts, 4- Project Supply, 5- Loose Supply							
A		B		C		D	
E		F		G		H	
Rev.	Remarks	Date	Name	Norm	Orig./Repl./Reply	SIEMENS	
06.09.11	SM	17.08.11	MC	MS	CLIENT:APTRANSCO CIRCUIT:132/33kV TRAFO-II	EQUIPMENT LIST FOR 102RB	
						SALES REF:3002660707	
						(4)-G719EA-BG9141-E102-A	
						Sheet 2+ 3Sh.	

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CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH SOUDHA/HYD.

Fun. Ref	Description	Specification	Dis	Make	Type	Qty/ Panel
INTERNALLY MOUNTED EQUIPMENTS						
HT	Space heater	100W,240V AC	1	APT		1
HTS	ON/OFF switch	15 A	1	CONTROL Anchor		1
PS and PSS	Power socket with ON/OFF Switch	5/15A, 3Pin	1	Anchor		1
TH	Thermostat	30-90 deg cent	1	APT CONTROL		1
CILS	Cubicle door operated switch	Limit Switch(1No+2NC) -3SE30230A	1	SIEMENS		1
CFL	Compact Fluorescent Lamp	240 V AC, 18W	1	Philips		1
F-22, F-23, F-24, F-25 F-21, F-26	DC MCB Double Pole Aux contact:1NC	4A, 220V DC	3	SIEMENS		6
F-32	AC MCB Single Pole & Neutral Aux contact:1NC	16A, 230V AC	3	SIEMENS		1
Fuse	Control fuses with fuse carrier and holder	4A 3NW20NNSF+3NWNS4	1	SIEMENS		AS PER REQUIREMENT
LK	Link Base + Link	Links	1	SIEMENS		AS PER REQUIREMENT
OTI	Temperature transmitter (Panel mountable / Loose supply)	RTI Scheme O/P: 4-20mA, Auxiliary supply 240V AC/DC with Pt 100 sensor simplex type, ccu with psu. Without remote indicator	3	Premeasur/ Accsys/Equ		1
WTI HV, WTI LV	Temperature transmitter (Panel mountable / Loose supply)	RWTI Scheme O/P: 4-20mA, Auxiliary supply 240V AC/DC with Pt 100 sensor simplex type, ccu with psu. Without remote indicator	3	Premeasur/ Accsys/Equ		2
TPI	Tap position transmitter (Panel mountable / Loose supply)	O/P: 4-20mA Auxiliary supply 240V AC/DC Drg.6300-123	3	Premeasur/ Accsys/Equ		1

Dis: 1- W Stock, 2- W Non stock, 3- Boughtouts, 4- Project Supply, 5- Loose Supply

Date	17.08.11	S/S: 220/132/33kV O.U.	SIEMENS	EQUIPMENT LIST FOR 102RB	SALES REF:3002660707		
Created	MC	CLIENT: APTRANSCO					
Appr.	MS	CIRCUIT:132/33kV TRAFO-II					
Rev.	Remarks	Date	Name	Norm	Orig./Repl./Reply		

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(4)-G719EA-8G9141-E102-A

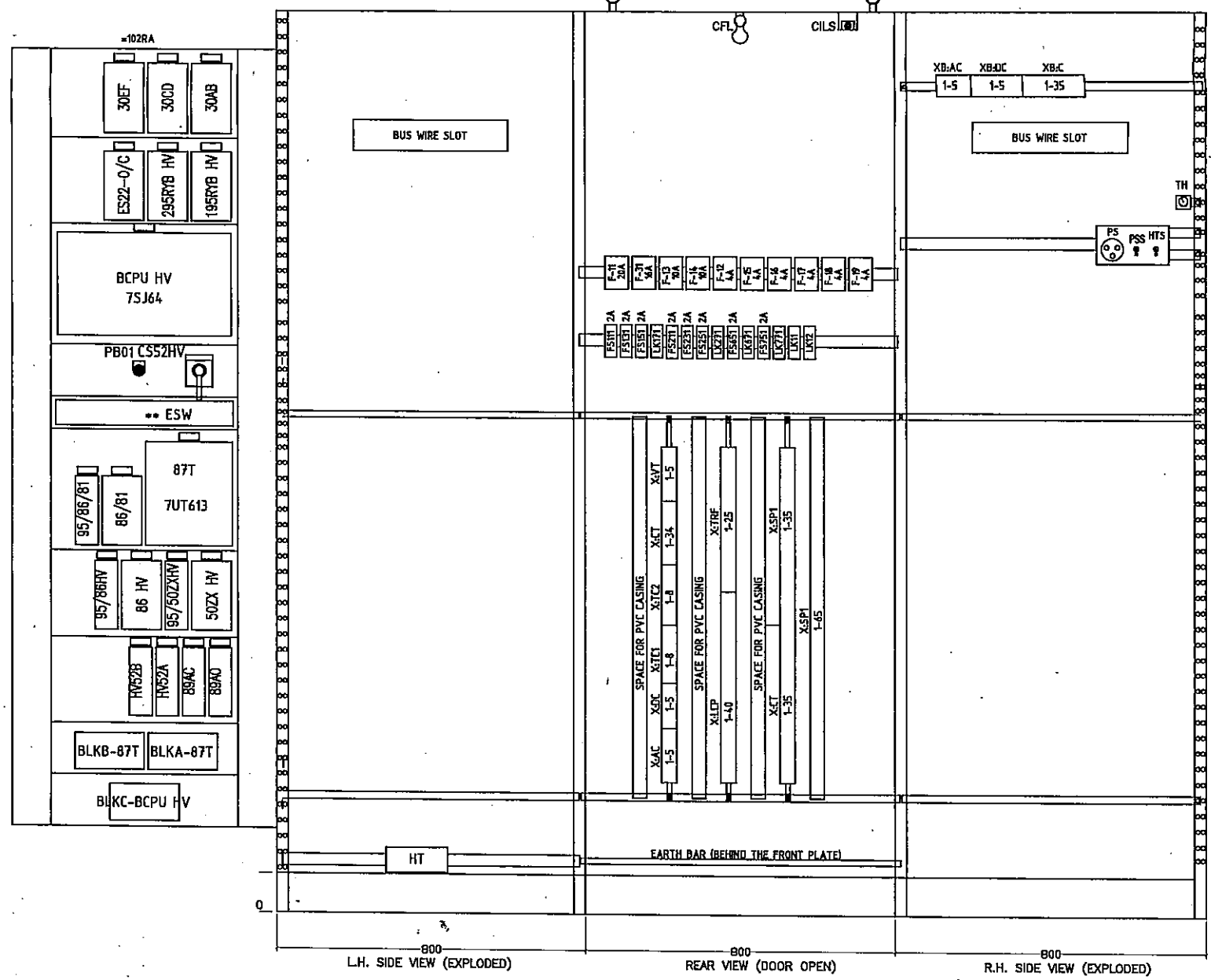
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APTRANSCO/VIDYUTH SOUDHA/HYD.



Standardised Drawings for 132/33 kV Transformer C& R panels
with BCU for GISS (M/s. Siemens Ltd. make)
(4) G719EA-BG9141-V102(1-2) Revision-A
STD/DWG/Approval No. 261.5 Revision No. 0
Prepared & Approved during January - 2012



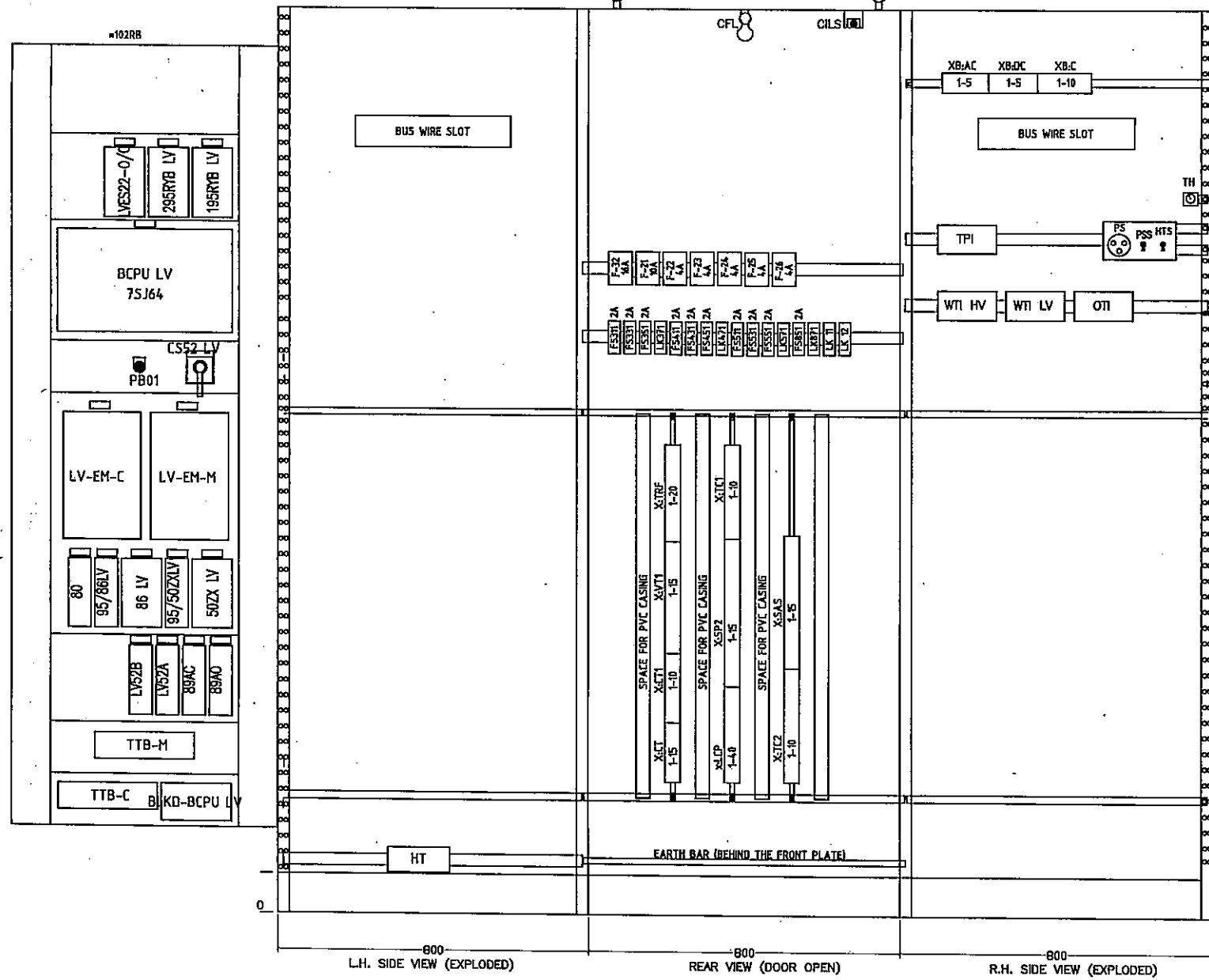
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Created Date: 12.10.2011
Saved Date: 13.10.2011
Version: 1
Remarks: 1
Date: 11.11.09
Name: KRR
Appr: MS
Client: APTRANSCO
Substation Name: 220/132/33KV O.U
Contractor: SIEMENS LTD.
Repl./Ref./etc.

####	####	####	####	Date	07.10.11	Client: APTRANSCO	132/33KV TRANSFORMER	Sales Reference No: 3002660707	CKT	132/33KV TRAF.	Page.01/02
####	####	####	####	Drawn	MC	Substation Name: 220/132/33KV O.U	INTERNAL VIEW-RA	Project Name: 220/132/33KV O.U		=102	
A	Revised	11.11.09	KRR	Appr.	MS	Contractor: SIEMENS LTD.		Revision:-----		{4}G719EA-BG9141-V102	
Version	Remarks	Date	Name	Norm.		Repl./Ref./etc.	Circuit Diagram				

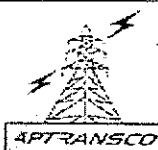


####	####	####	####	Date	07.10.11	Client:	APTRANSCO	132/33KV TRANSFORMER	Sales Reference No:	3002660707	CKT	132/33KV TRAF.	Page.02/02
####	####	####	####	Drawn	HC	Substation Name:	220/132/33KV O.U	INTERNAL VIEW-RB	Project Name:	220/132/33KV O.U		=102	
A	Revised	11.11.09	KRK	Appr.	HS	Contractor:	SIEMENS LTD.		Revision		(4)G719EA-B69141-V102		
Version	Remarks	Date	Name	Norm.		Repl/Ref./etc.		Circuit Diagram					

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CHIEF ENGINEER / CONSTRUCTION-1
APTRANSO/MIDYUTH SODHA/HVD.

Sheet List Table		
Sheet Number	Sheet Title	Revision
00	LIST OF DRAWINGS	A-
01	LIST OF REFERENCE DRAWINGS	A
02	LEGENDS	A
03	SYSTEM SLD	A
04	CT AND VT DISTRIBUTION	A
05	TRIP LOGIC	A
06	DC DISTRIBUTION CIRCUIT	A
07	AUXILIARY AC DISTRIBUTION CIRCUIT	A
08	CT AND VT CIRCUIT FOR 87T	A
09	BINARY INPUT AND OUTPUT DISTRIBUTION FOR 87T	A
10	CT AND VT CIRCUIT FOR HV BCPU	A
11	HV BCPU B1 CIRCUIT	A
12	HV BCPU B0 CIRCUIT	A
13	BINARY INPUT CIRCUIT FOR HV BCPU	A
14	CT AND VT CIRCUIT FOR LV BCPU	A
15	LV BCPU B1 CIRCUIT	A
16	LV BCPU B0 CIRCUIT	A
17	BINARY INPUT CIRCUIT FOR LV BCPU	A
18	METERING CIRCUIT	A
19	LBB TRIP RELAY CIRCUIT	A
20	86 HV 3-PH TRIP RELAY CIRCUIT	A
21	86 LV 3-PH TRIP RELAY CIRCUIT	A
22	LB CLOSE AND TRIP MULTI RELAY CIRCUIT	A
23	ISOLATOR CLOSE AND OPEN MULTI RELAY CIRCUIT	A
24	EARTH SWITCH CLOSE AND OPEN MULTI RELAY CIRCUIT	A
25	HV CB TC-1 CIRCUIT	A
26	HV CB TC-2 CIRCUIT	A
27	LV CB TC-1 CIRCUIT	A
28	LV CB TC-2 CIRCUIT	A
29	CB CLOSE AND OPEN LOGIC	A
30	ISOL CONTROL INTERLOCK LOGIC	A
31	EARTH SWITCH CONTROL INTERLOCK LOGIC	A
32	HV CB MANUAL CLOSE AND TRIP CIRCUIT	A
33	LV CB MANUAL CLOSE AND TRIP CIRCUIT	A
34	HV LCC INPUTS TO BCU CIRCUIT	A
35	LV LCC INPUTS TO BCU CIRCUIT	A
36	ISOL AND EARTH SWITCH CONTROL CIRCUIT	A
37	TRAF0 AUX PUNCT & LV TRIP CIRCUIT	A
38	TRAF0 TROUBLE RELAY CIRCUIT	A
39	TRAF0 TROUBLE RELAY CIRCUIT	A
40	SWITCH AND BLOCK CONTACT DISTRIBUTION	A



Standardised Drawings for 132/33 kV Transformer C& R panels
 with BCU for GISS (M/s.Siemens Ltd. make)
 (4) G719EA-BG9141-W102-A (0-43) Revision-A
 STD/DWG/Approval No. 261.5 Revision No. 0
 Prepared & Approved during **January - 2012**

Version		REVISION	06.09.11	SH	MS	Client: APTRANSO		132/33KV TRAF0 - II		Sales Reference No.: 3002660707		CKT	132/33KV TRAF0	Page.00/43
Remarks		Date	Name	Appr.	Norm.	Substation Name: 220/132/33KV O.U.		LIST OF DRAWINGS		Project Name: 220/132/33KV O.U.		=102		
						Contractor: SIEMENS LTD.		Circuit Diagram		Revision-A		(4)G719EA-BG9141-W102-A		
						Repl./Ret./etc.								

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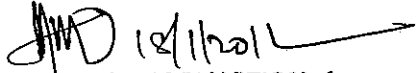
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DETAILS OF REFERENCE DRAWING

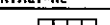
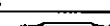
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LCC DRAWING	---	---
TRANSFORMER DRAWING	---	---

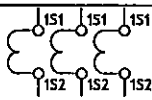
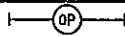
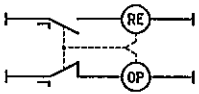
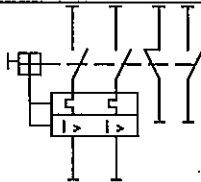
APPROVED FOR TURNKEY PROJECTS


CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH SOUDHA/HYD.

Version	REVISION	06.09.11	SH	Appr.	MS	Client: APTRANSCO Substation Name: 220/132/33KV O.U. Contractor: SIEMENS LTD.	SIEMENS	132/33KV TRAFD - II LIST OF REFERENCE DRAWINGS	Sales Reference No.: 3002660707 Project Name: 220/132/33KV O.U.	CKT 132/33KV TRAFD =102	Page: 01/43
Remarks	Date	Name	Norm.	Repl./Ret./etc.				Circuit Diagram	Revision-A	(4)IG719EA-BG9141-W102-A	

[illegible]

SYMBOLS & DESCRIPTION	
	FUSE
	LINK
	DISCONNECTING TERMINAL
	NON DISCONNECTING TERMINAL
TERMINALS	
	RELAY TEST BLOCK
	CURRENT COIL
	VOLTAGE COIL
	LATCHED CONTACT-NO
	UNLATCHED CONTACT-NO
	LATCHED CONTACT-NC
	UNLATCHED CONTACT-NC
	SPACE HEATER
	FLUORESCENT LAMP
	BELL
	HOOTER
	PUSH BUTTON
	STABILIZING RESISTOR
	VARIASTOR

SYMBOLS & DESCRIPTION			
			
SWITCH CONTACT			
			
POWER SOCKET			
			
CURRENT TRANSFORMER SECONDARY			
			
OPERATING COIL			
			
OPERATING/RESET COIL			
			
MCB			
XX	Bl##	SIPROTEC DESCRIPTION	XX
			
BINARY INPUT			
XX	PS	SIPROTEC POWER SUPPLY	XX
			
POWER SUPPLY			

[illegible]

TERMINAL DESIGNATION & DESCRIPTION
X:AC
ALTERNATIVE CURRENT
X:DC1
DIRECT CURRENT-1
X:DC2
DIRECT CURRENT-2
X:CB
CIRCUIT BREAKER
X:CB-T1
CIRCUIT BREAKER FOR TRIP COIL-01
X:CB-T2
CIRCUIT BREAKER FOR TRIP COIL-02
X:CT
CT INPUT
X:VT
VT INPUT
X:JS-Q1
ISOLATOR-Q1
X:JS-Q2
ISOLATOR-Q2
X:JS-Q9
ISOLATOR-Q9
X:LCP
LCP PANEL
X:PLCC-1
POWER LINE CARRIER COMMUNICATION-1
X:PLCC-2
POWER LINE CARRIER COMMUNICATION-2
X:PLCC-3
POWER LINE CARRIER COMMUNICATION-3
X:RT
REACTOR
X:TRF
TRANSFORMER
X:ES-Q8
EARTH SWITCH-Q8
XB:DC
BUS WIRING INCOMING DC
XB:BB
BUS WIRING FROM/TO BB
X:BB
BUS WIRING /CABLE FROM/TO BB

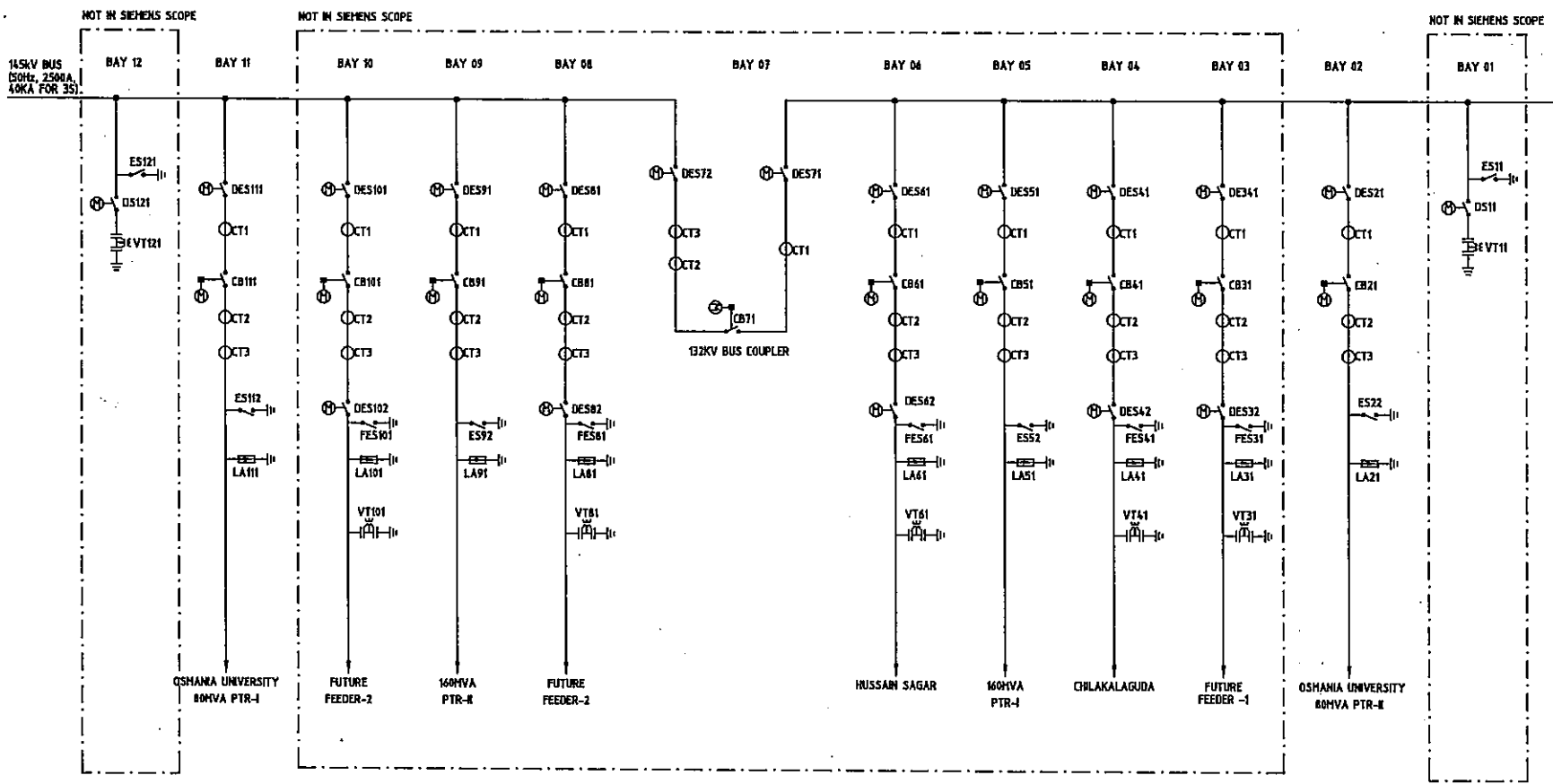
CHIEF ENGINEER / CONSTRUCTION
ATTN: MANSCO / VIDYUTHI SODHA / HYD

APPROVED FOR TURNKEY PROJECTS

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 Model: 2010
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 Plot Date: 12.10.2011
 Saved Date: 12.10.2011

Last Saved By: jn20192
 Created Date: 12.10.2011
 Saved Date: 12.10.2011

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[Signature]
CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH SOUDHA/HYD.

Version		Remarks	Date	Name	Norm.	Date	17.08.11	Client: APTRANSCO	Substation Name: 220/132/33kv O.U.		Contractor: SIEMENS LTD.		Repl./Ref./etc.		Sales Reference No.: 3002660707		Project Name: 220/132/33KV O.U.		Revision-A		(4)G719EA-BG9141-W102-A		Page: 03/43	
A		REVISED	06.09.11	SM	Appr.	MS																		

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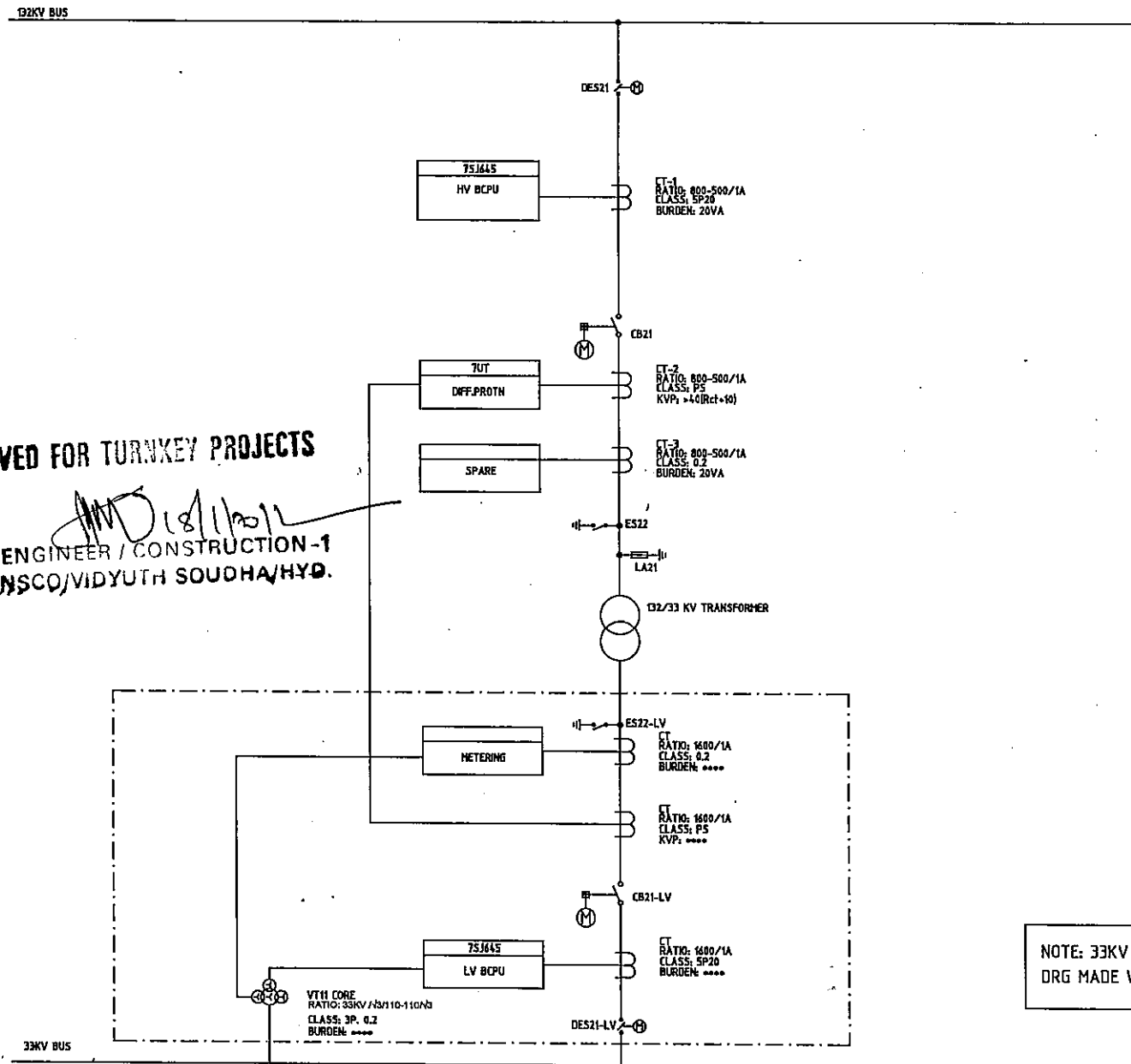
132/33KV TRAFO - II
 SYSTEM SLD
 Circuit Diagram

Page: 03/43
 132/33KV TRAFO
 =102

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NOTE: 33KV SLD TO BE FURNISHED BY APTRANSCO.
 DRG MADE WITHOUT CO-ORDINATING WITH GIS DRG.

Version		REVISIO	06.09.11	SM	Appr.	MS	Client: APTRANSCO		132/33KV TRAF0 - II		Sales Reference No.: 3002660707		CKT	132/33KV TRAF0	Page 04/43
Remarks		Date	Name	Norm.	Repl./Ref./etc.		Substation Name: 220/132/33kV O.U.		CT AND VT DISTRIBUTION		Project Name: 220/132/33KV O.U.		=102		
							Contractor: SIEMENS LTD.		Circuit Diagram		Revision-A		(4)G719EA-BG9141-W102-A		

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Workspace: —
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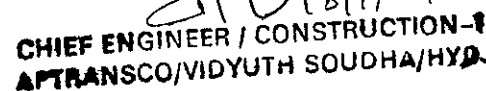
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87T	DIFFERENTIAL & O/F PROTN.	7UT613					x	x					
BCPU HV	HV B/U NON-DIR. O/C & DIR. E/F PROTN.	7SJ645					x						
30AB,30CD,30EF	TRANSFORMER TROUBLE FUNCTIONS	AR111X2					x	x					
BCPU LV	LV B/U NON-DIR. O/C & E/F PROTN.	7SJ645						x					
50ZX HV	LBB TRIP RELAY	TR241H2			x	x			x			x	x
BCPU HV	HV LBB PROTN	7SJ645		x					x	x			
86HV	HV 3-PH TRIP RELAY	TR241H2	x		x	x					x	x	x
86LV	LV 3-PH TRIP RELAY	TR241H2			x	x						x	x
BCPU HV	UNDER FREQUENCY PROTN.	7SJ645								x			
BCPU LV	LV LBB PROTN OPTD	7SJ645									x		

x	INITIATION CONTACT (HARD WIRED)
---	---------------------------------

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Handwritten Signature
CHIEF ENGINEER / CONSTRUCTION-1
APTRANSO/VIDYUTH SOUDHA/HYD.

Version		REVISD	06.09.11	SH	Appr.	MS	Client: APTRANSO		132/33KV TRAF0 - II		Sales Reference No.: 3002660707		CKT	132/33KV TRAF0	Page: 05/43
Remarks		Date	Name	Norm.	Substation Name: 220/132/33kv O.U.		SIEMENS		TRIP LOGIC		Project Name: 220/132/33KV O.U.		=102		
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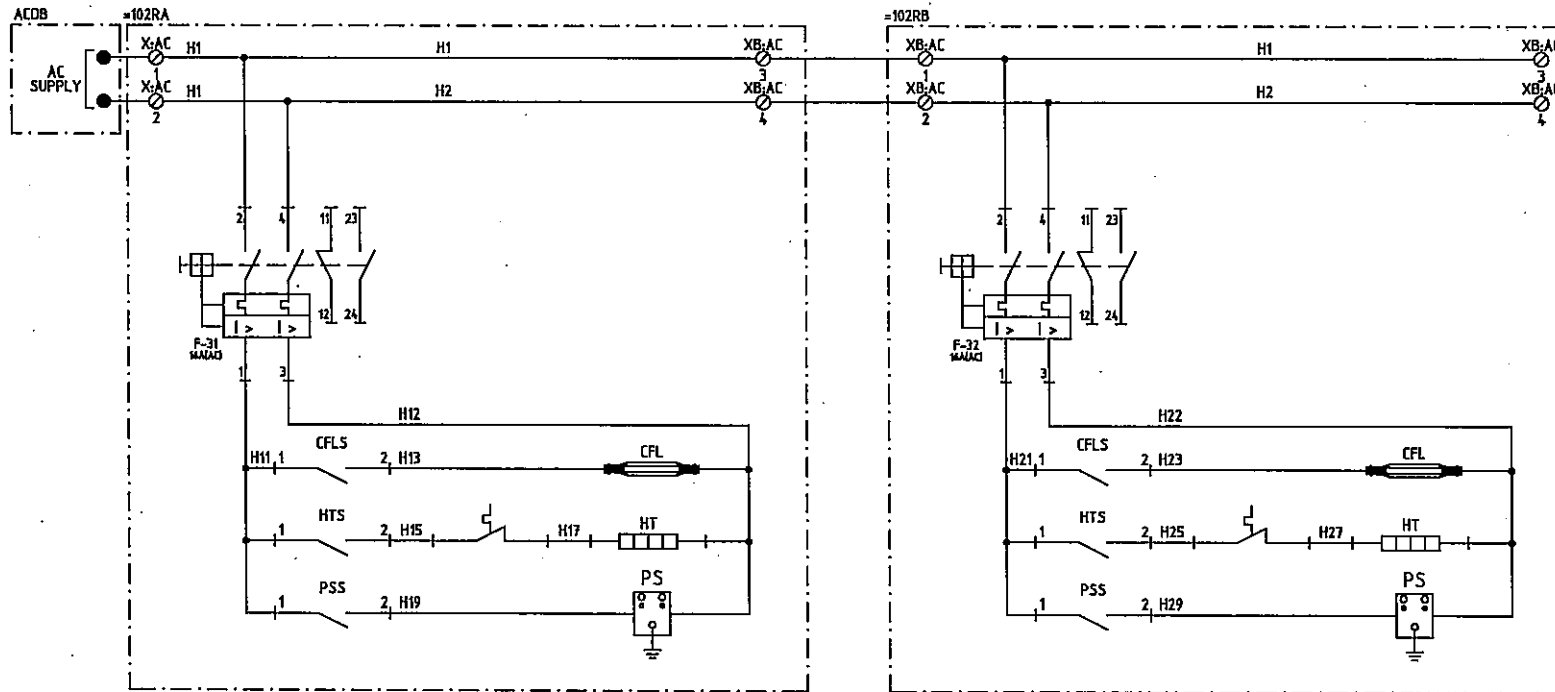


Circuit Diagram

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 Plot Time: 10:00:00
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Version		REVIS	06.09.11	SM	Appr.	HS	Client: APTRANSCO		132/33KV TRAFO - II		Sales Reference No: 3002660707		CKT	132/33KV TRAFO	Page.07/43
Remarks							Substation Name: 220/132/33kv O.U.		AUXILIARY AC DISTRIBUTION CIRCUIT		Project Name: 220/132/33KV O.U.			=102	
Date							Repl./Ref./etc.		Circuit Diagram		Revision-A		(4)G719EA-BG9141-W102-A		

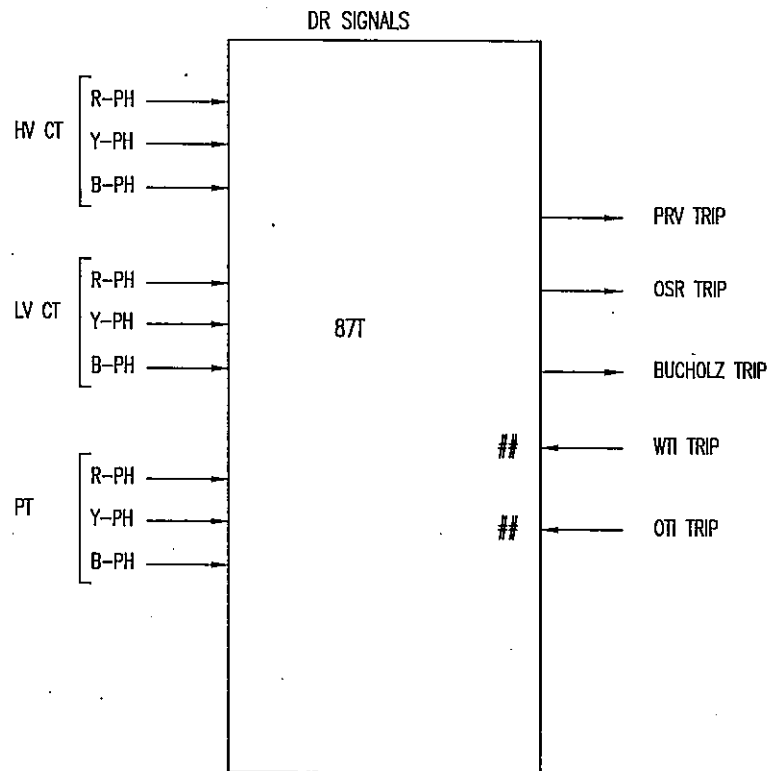
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Jul14/10-Verion1.0a, LMS Tech
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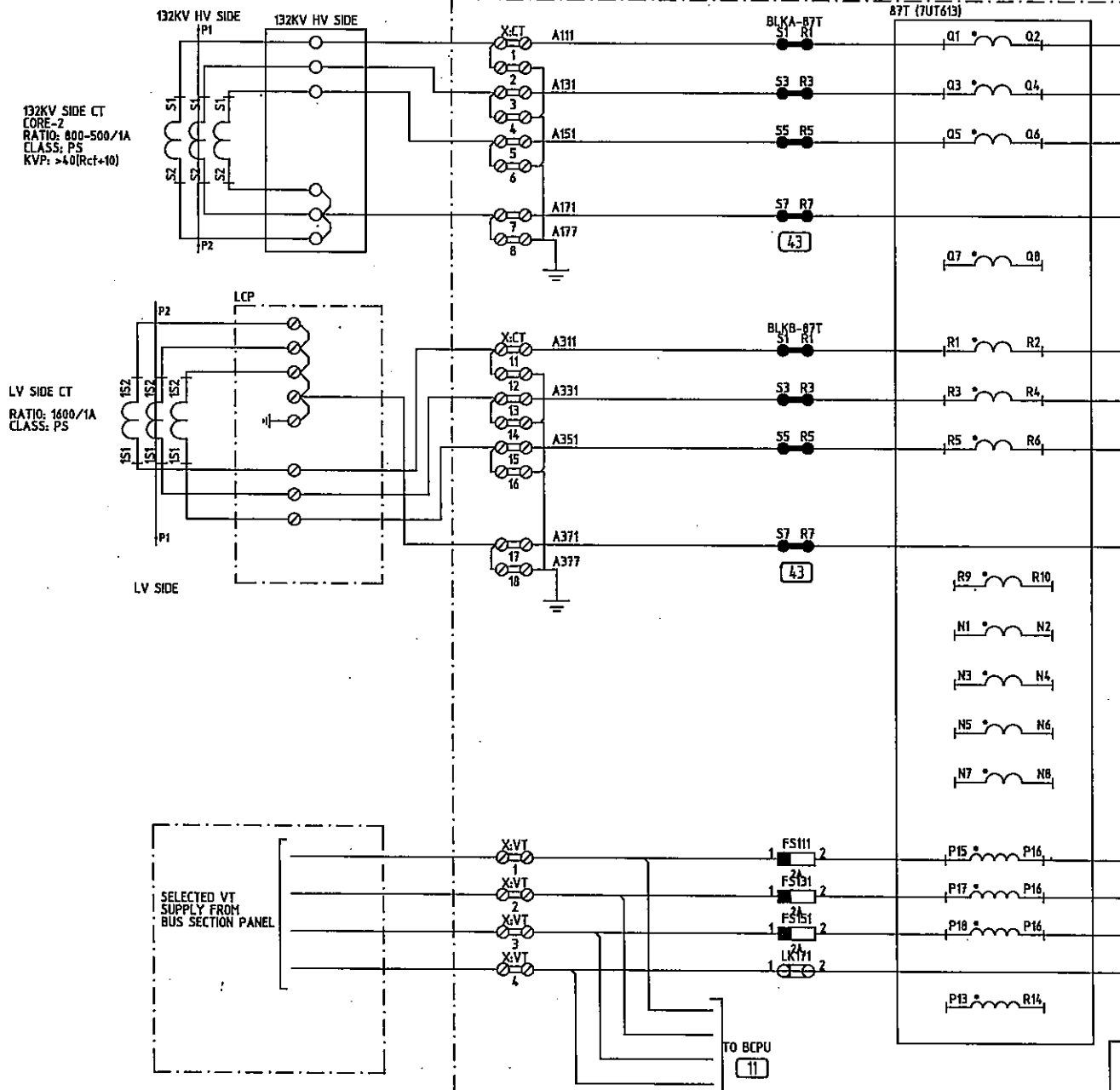
##-GOOSE FROM HV BCPU

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[Signature]
CHIEF ENGINEER / CONSTRUCTION-4
APTRANSO/VIDYUTH SOUDHA/HYD.

Version		Remarks	Date	Name	Norm.	Client: APTRANSO		132/33KV TRAF0 - II		Sales Reference No.: 3002660707		CKT	132/33KV TRAF0	Page: 08/43
A		REVISED	06.09.11	SM	Appr.	MS	Substation Name: 220/132/33KV O.U.		DR SIGNALS CIRCUIT		Project Name: 220/132/33KV O.U.		=102	
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							Repl./Ref./etc.							

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LED CONFIGURATION

1	GEN.TRIP
2	R-PH TRIP
3	Y-PH TRIP
4	B-PH TRIP
5	DIFF.TRIP
6	OVERLOAD OPTD
7	OVER EXCTN OPTD
8	TRAFO. AUX. TRIP

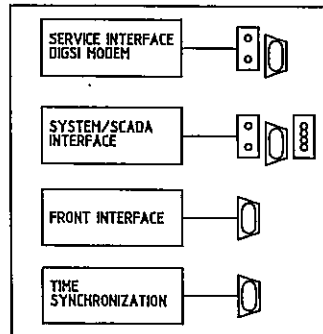
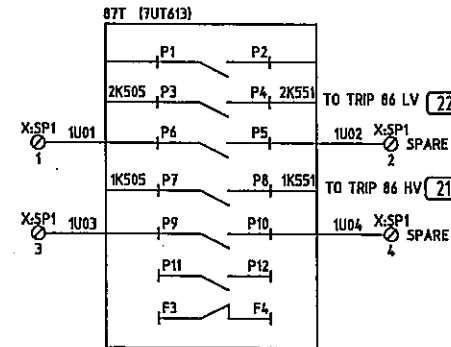
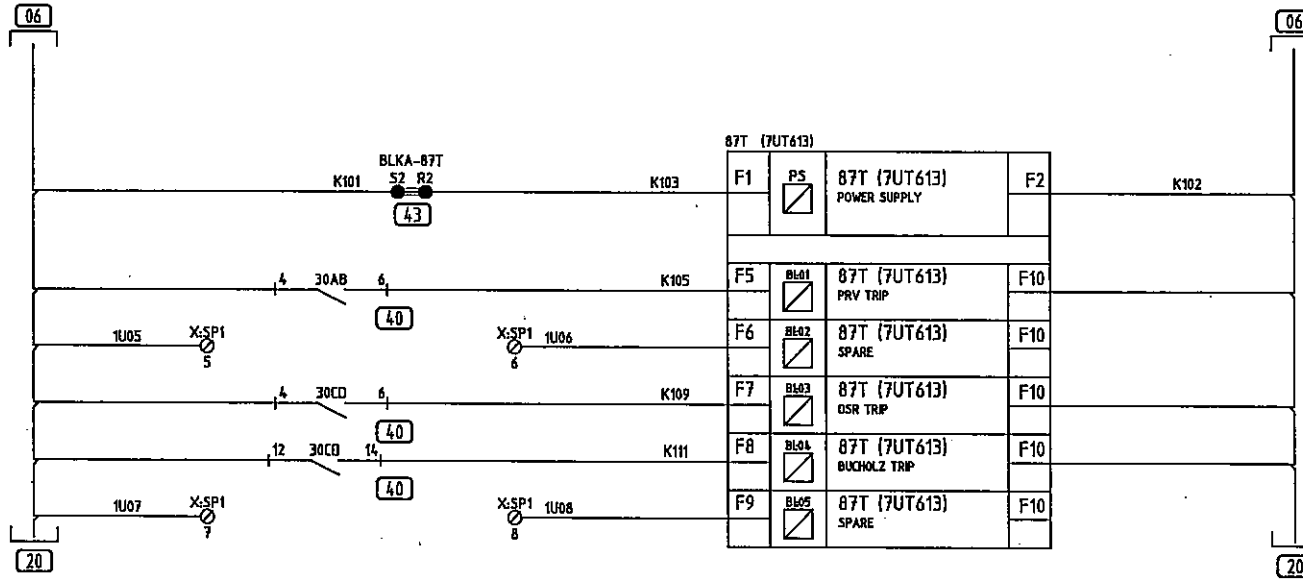
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APTRANSCO/VIDYUTH SOUDHA/HYD.

****NOTE: CT RATIO TO BE FURNISHED BY APTRANSCO**

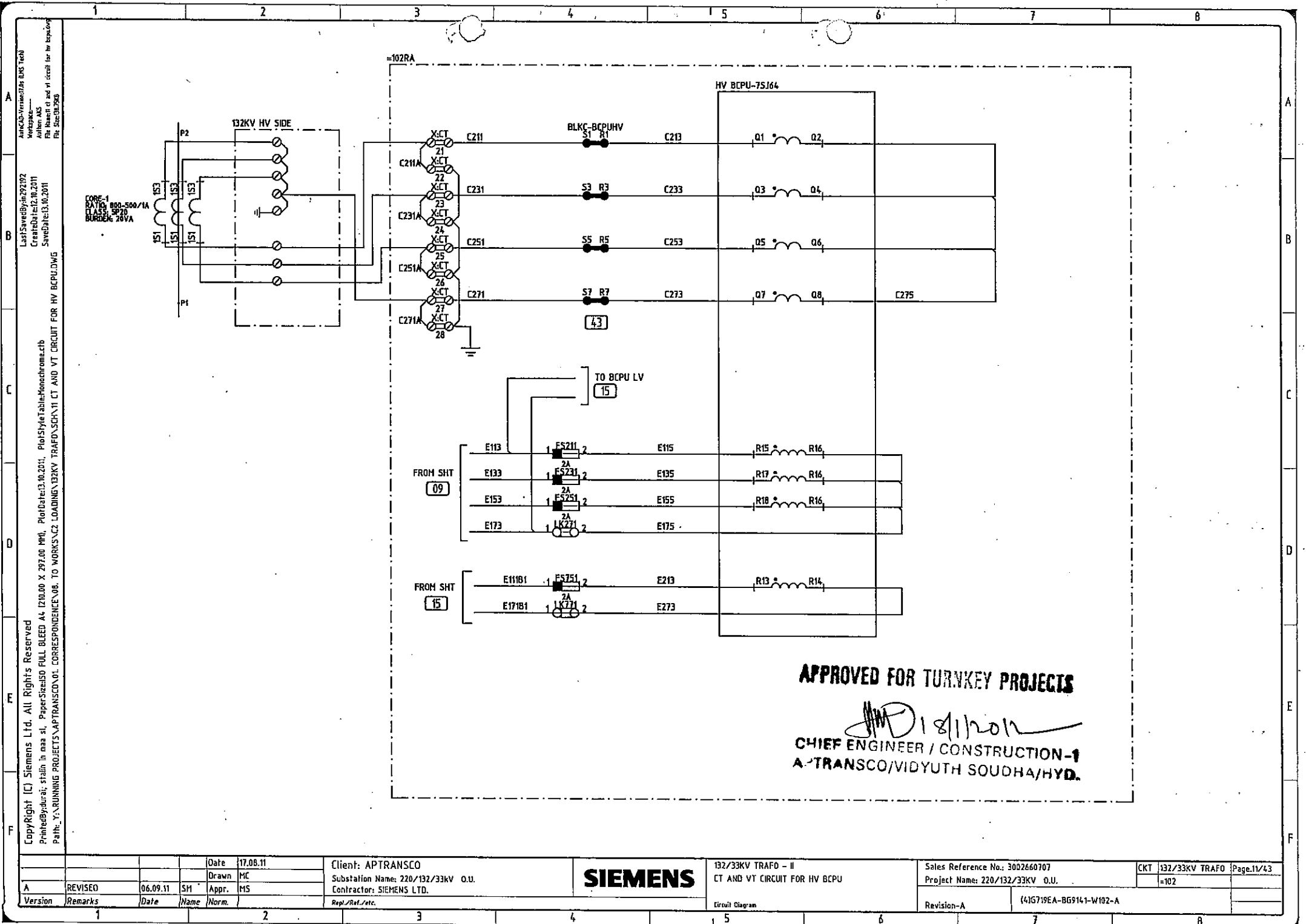
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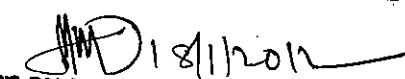


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[Signature]
 CHIEF ENGINEER / CONSTRUCTION-1
 APTRANSCO/VIDYUTH SOUDHA/HYD.



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CHIEF ENGINEER / CONSTRUCTION-1
A-TRANSCO/VIDYUTH SOUDHA/HYD.

				Date	17.08.11	Client: APTRANSCO Substation Name: 220/132/33KV O.U. Contractor: SIEMENS LTD.	SIEMENS	132/33KV TRAFD - II CT AND VT CIRCUIT FOR HV BCPU	Sales Reference No.: 3002660707 Project Name: 220/132/33KV O.U.	CKT	132/33KV TRAFD	Page.11/43					
		Drawn	MC														
A	REVISED	06.09.11	SM	Appr.	MS												
Version	Remarks	Date	Name	Norm.		Repl./Ref./etc.		Circuit Diagram	Revision-A		(4)G719EA-BG9141-W102-A						
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 File Size: 10.5 KB

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 Saved Date: 13.10.2011

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HV BCU (BINARY INPUT DISTRIBUTION)

K401	F1	PS	BCPU (7SJ645)	F2	K402
		☒	POWER SUPPLY		
K403	F5	BL01	BCPU (7SJ645)	F10	K402
		☒	CB 21 OPEN		
K405	F6	BL02	BCPU (7SJ645)	F10	K402
		☒	CB 21 CLOSE		
K407	F7	BL03	BCPU (7SJ645)	F10	K402
		☒	ISOL-DES21 OPEN		
K409	F8	BL04	BCPU (7SJ645)	F10	K402
		☒	ISOL-DES21 CLOSE		
K411	F9	BL05	BCPU (7SJ645)	F10	K402
		☒	E/SW-ES22 OPEN		
K413	R9	BL06	BCPU (7SJ645)	R10	K402
		☒	E/SW-ES22 CLOSE		
K415	R11	BL07	BCPU (7SJ645)	R12	K402
		☒	IRS 1/2		
K417	K1	BL08	BCPU (7SJ645)	K5	K402
		☒	BUCH ALARM		
K419	K2	BL09	BCPU (7SJ645)	K5	K402
		☒	OTI ALARM		
K421	K3	BL10	BCPU (7SJ645)	K5	K402
		☒	WTI ALARM		
K423	K4	BL11	BCPU (7SJ645)	K5	K402
		☒	HOG ALARM		
K425	K6	BL12	BCPU (7SJ645)	K5	K402
		☒	HCB TRIPPED		
K427	K7	BL13	BCPU (7SJ645)	K5	K402
		☒	SEL. SWITCH IN REMOTE		
K429	K8	BL14	BCPU (7SJ645)	K5	K402
		☒	SEL. SWITCH IN LOCAL		
K431	K9	BL15	BCPU (7SJ645)	K5	K402
		☒	ANTI PUMP FAILURE		
K433	K10	BL16	BCPU (7SJ645)	K14	K402
		☒	SF6 LOW LOCKOUT		
K435	K11	BL17	BCPU (7SJ645)	K14	K402
		☒	SF6 LOW ALARM (G1,G2,GH1,GH2)		
K437	K12	BL18	BCPU (7SJ645)	K14	K402
		☒	DS MOTOR OVER CURRENT ALARM		
K439A	K13	BL19	BCPU (7SJ645)	K14	K402
		☒	TR. HOG ALARM		

TO LCP INPUTS CIRCUIT
 36

TO TRAF0 AUX CIRCUIT
 39

TO BINARY INPUT CIRCUIT
 14

TO LCP INPUTS CIRCUIT
 36

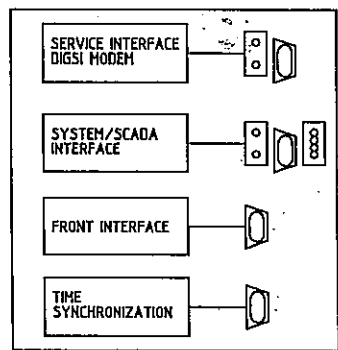
TO LCP INPUTS CIRCUIT
 39

HV BCU (BINARY INPUT DISTRIBUTION)

K441	K15	BL20	BCPU (7SJ645)	K16	K402
		☒	AC HCB OPEN OR TRIP ALARM		
K443	P1	BL21	BCPU (7SJ645)	P5	K402
		☒	DC HCB OPEN OR TRIP ALARM		
K445	P2	BL22	BCPU (7SJ645)	P5	K402
		☒	ES/FES MOTOR OVER CURRENT ALARM		
K447	P3	BL23	BCPU (7SJ645)	P5	K402
		☒	CB MOTOR OVERTIME CHARGING FAULT		
K449	P4	BL24	BCPU (7SJ645)	P5	K402
		☒	CLOSING SPRING CHARGING		
K451	P6	BL25	BCPU (7SJ645)	P5	K402
		☒	LV BCU FAIL		
K453	P7	BL26	BCPU (7SJ645)	P5	K402
		☒	50ZX OPTD		
K455	P8	BL27	BCPU (7SJ645)	P5	K402
		☒	50ZX FAULTY		
K457	P9	BL28	BCPU (7SJ645)	P5	K402
		☒	TC-1 FAULTY		
K459	P10	BL29	BCPU (7SJ645)	P14	K402
		☒	TC-2 FAULTY		
K461	P11	BL30	BCPU (7SJ645)	P14	K402
		☒	TRIP RELAY OPTD		
K463	P12	BL31	BCPU (7SJ645)	P14	K402
		☒	TRIP RELAY FAULTY		
K465	P13	BL32	BCPU (7SJ645)	P14	K402
		☒	CB MANUAL OPEN		
K467	P15	BL33	BCPU (7SJ645)	P16	K401
		☒	CB MANUAL CLOSE		

TO LCP INPUTS CIRCUIT
 36

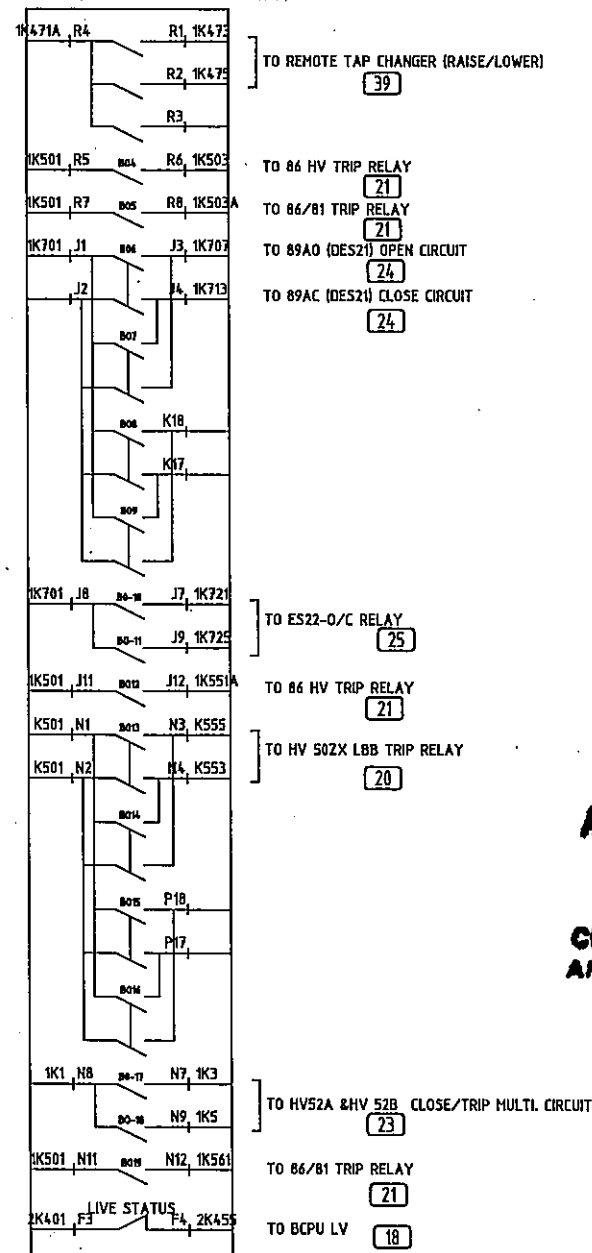
TO BINARY INPUT CIRCUIT
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CHIEF ENGINEER / CONSTRUCTION
 APTRANSCO/VIDYUTH SOUDHA/HYD

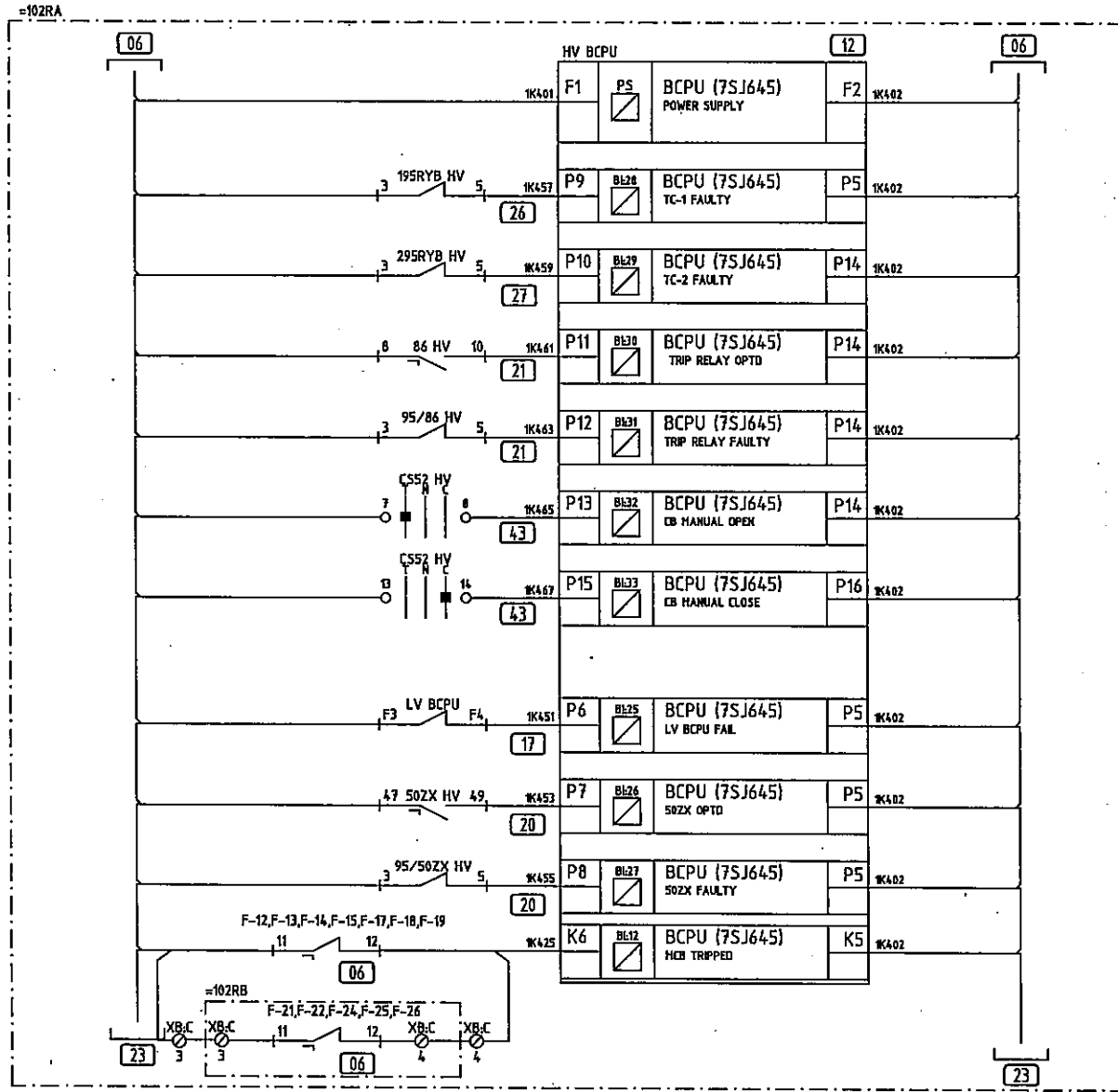
HV BCPU (BINARY OUTPUT DISTRIBUTION)



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[Signature] 18/1/2012
CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH SOUDHA/HYD.

			Date	17.08.11	Client: APTRANSCO Substation Name: 220/132/33kV O.U. Contractor: SIEMENS LTD.	SIEMENS	132/33kV TRAFO - II HV BCPU BD CIRCUIT	Sales Reference No. 3002660707 Project Name: 220/132/33kV O.U.	CKT	132/33kV TRAFO	Page 13/43
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A	REVISED	06.09.11	SM	Appr.	MS					=102	
Version	Remarks	Date	Name	Norm.	Repl./Ref./etc.		Grid Diagram	Revision: A		(4)IG719E-A-BG9141-W102-A	

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CHIEF ENGINEER / CONSTRUCTION
APTRANSCO/VIDYUTH SOUDHA/HYD

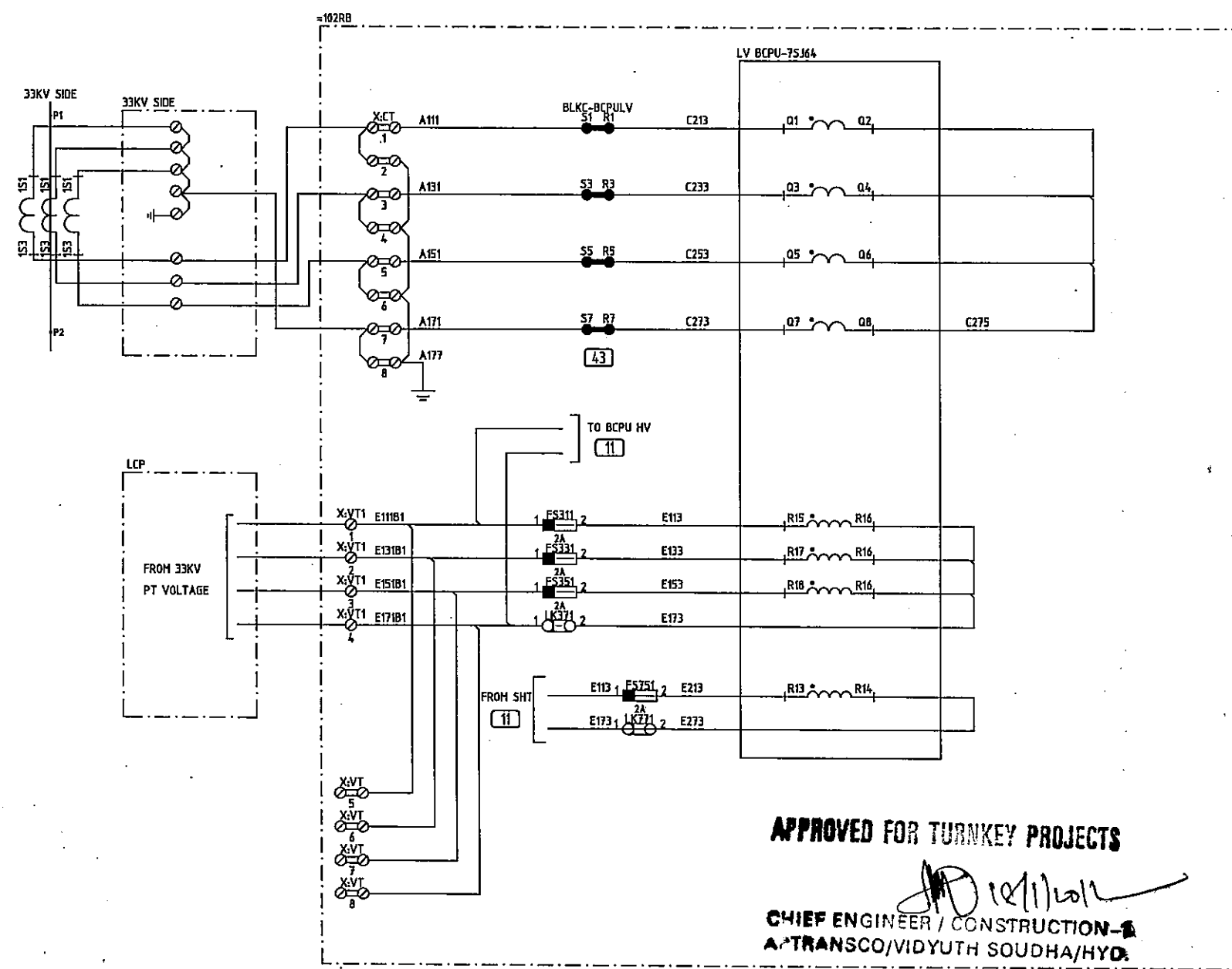
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Remarks		Date	Name	Norm.	Repl./Ref./etc.		Substation Name: 220/132/33KV O.U.		Binary Input Circuit for HV BCPU		Project Name: 220/132/33KV O.U.		132/33KV TRAF0	
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33KV CT
 RATIO CLASS: *****



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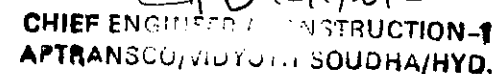
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APTRANSKO/VIDYUTH SOUDHA/HYD.

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Author: AKS
 Site Name: Ly born bi circuit duo

18

18



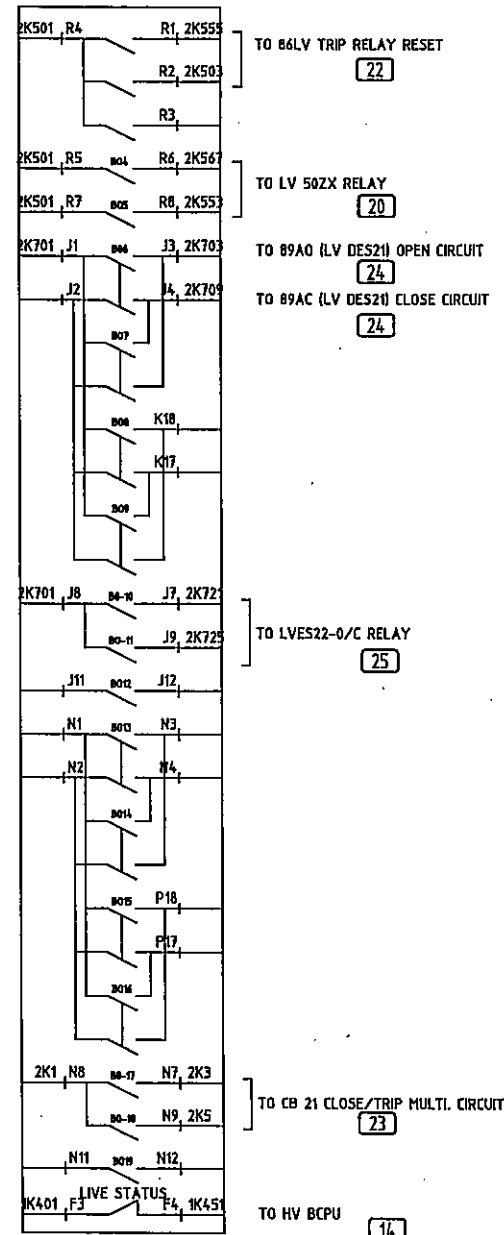
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=102RB

LV BCU (BINARY OUTPUT DISTRIBUTION)



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 APTRANSCO/MIDYUTH SODHA/HYD.

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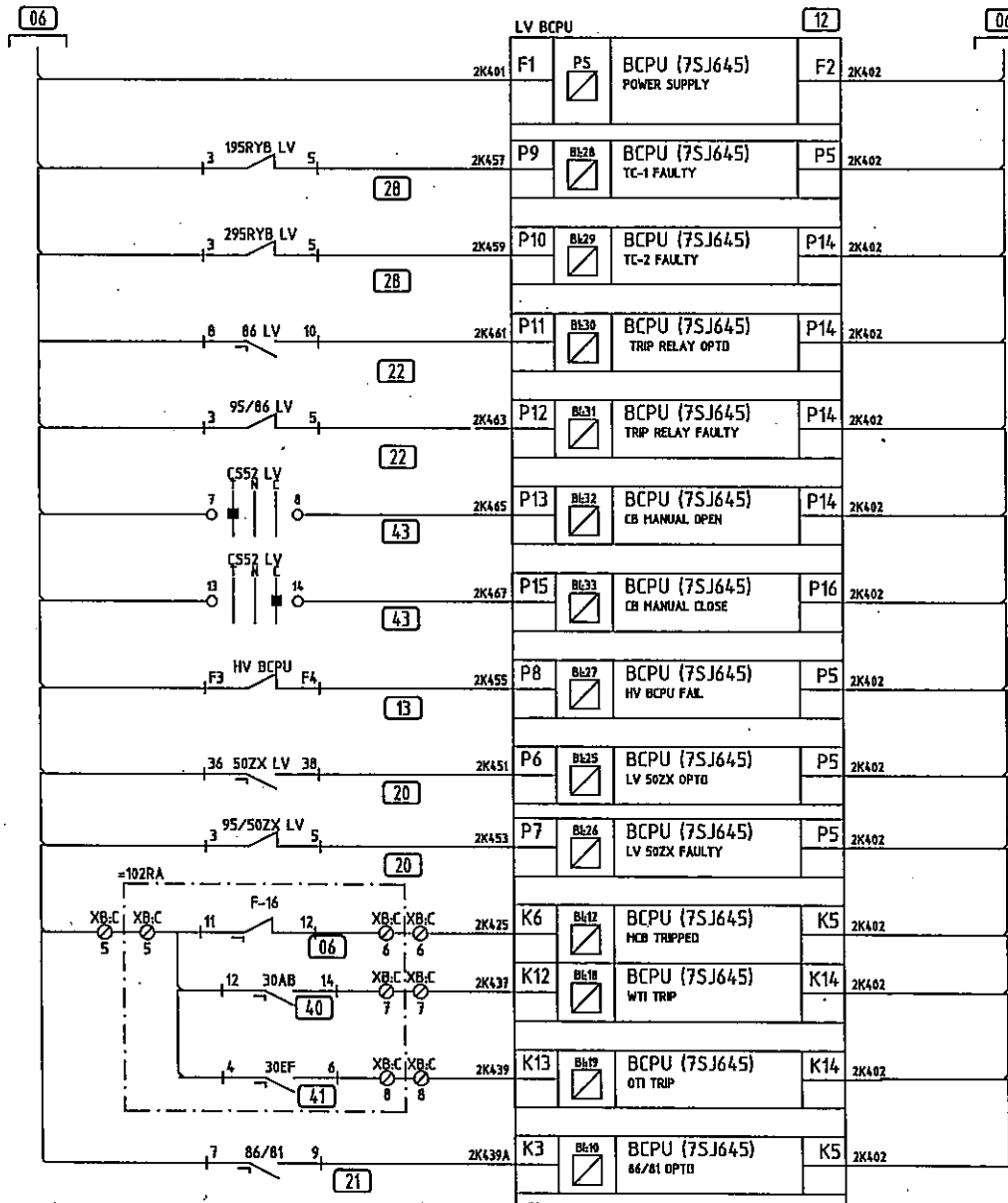
SIEMENS

APTRANSCO/VIDYUTH SOUDHA/CH-1
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 Substation Name: 220/132/33KV O.U.
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=102RB

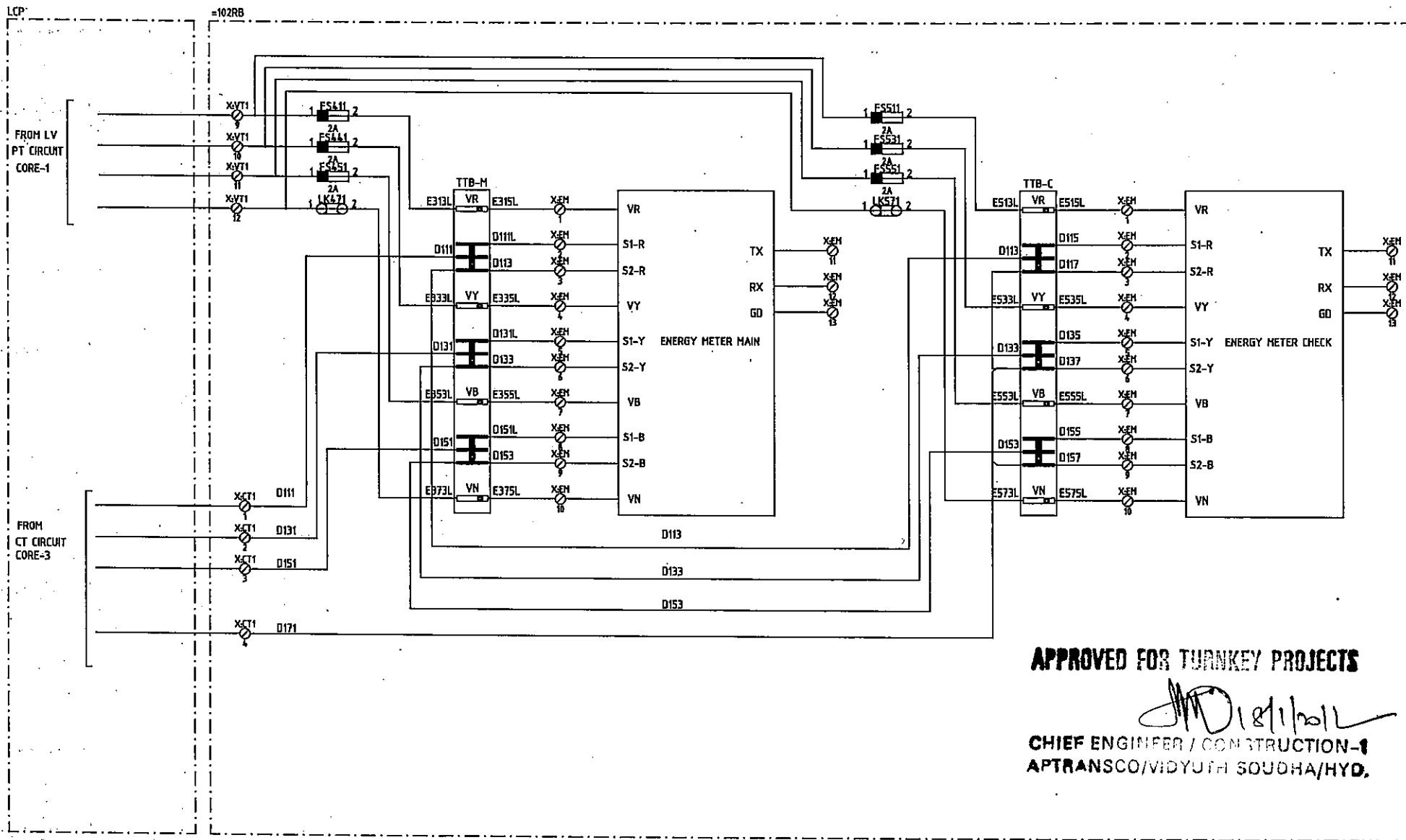


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CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH SOUDHA/HYD.

Version		REVISOR	DATE	SM	APPR.	MS	Client: APTRANSCO		132/33KV TRAF0 - II		Sales Reference No.: 3002660707		CKT	132/33KV TRAF0	Page 18/43
Remarks		06.09.11	06.09.11	MS	MS	MS	Substation Name: 220/132/33KV O.U.		BINARY INPUT CIRCUIT FOR LV BCPU		Project Name: 220/132/33KV O.U.		=102		
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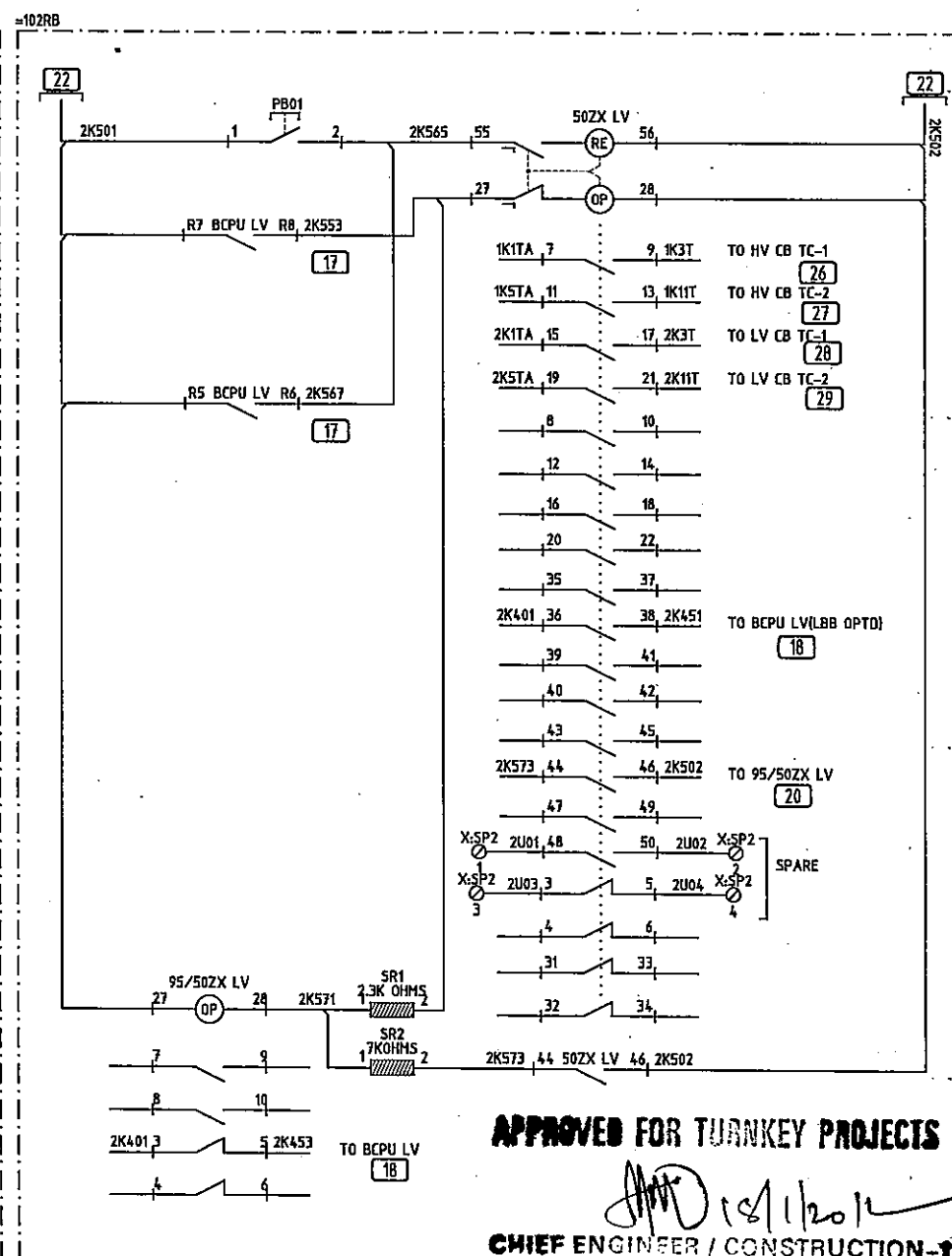
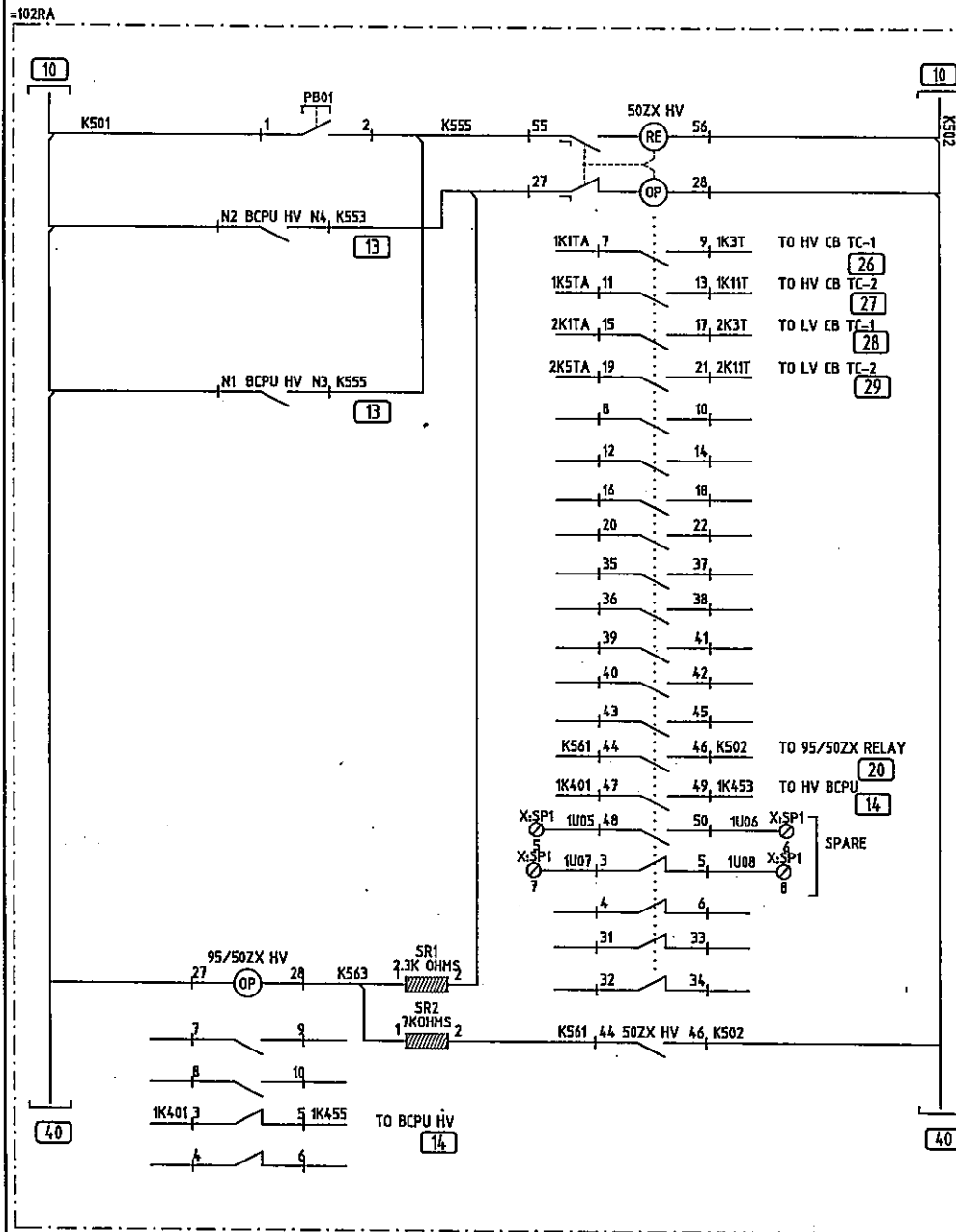
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APTRANSCO/VIDYUTH SOUDHA/HYD.

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 AutoCAD-10.10.2011
 PTH-10.10.2011
 R/S-10.10.2011

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[Signature] 18/11/2011

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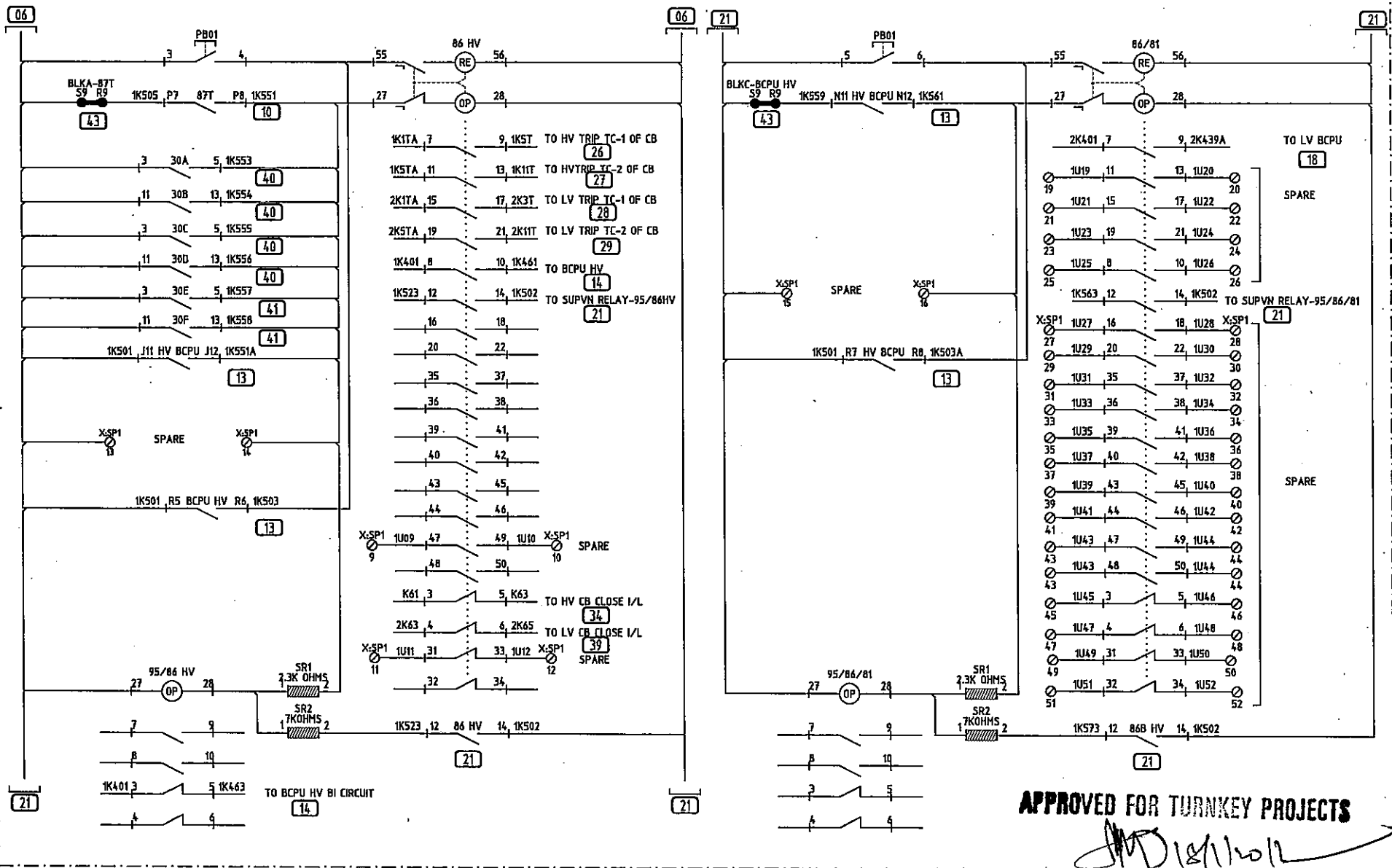
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A	REVISED	06.09.11	SM	Drawn	HC						
Version	Remarks	Date	Name	Appr.	MS						

SIEMENS

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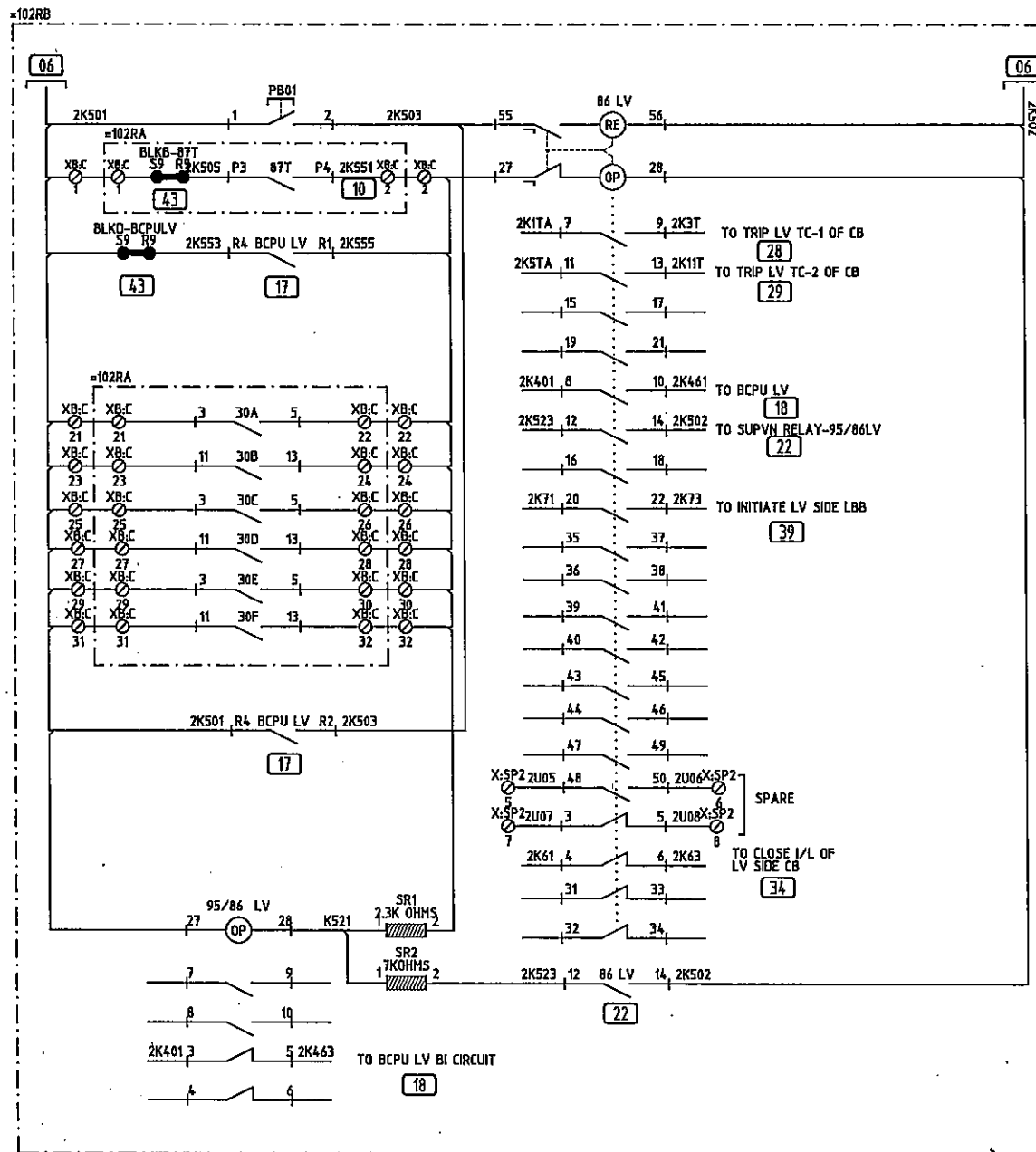
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CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH Soudha/HYD

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SIEMENS

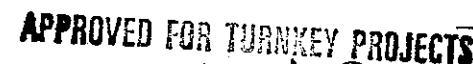


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CHIEF ENGINEER / CONSTRUCTION-1
LAPTRANS CO/VENKAT SUDHA/HYD.

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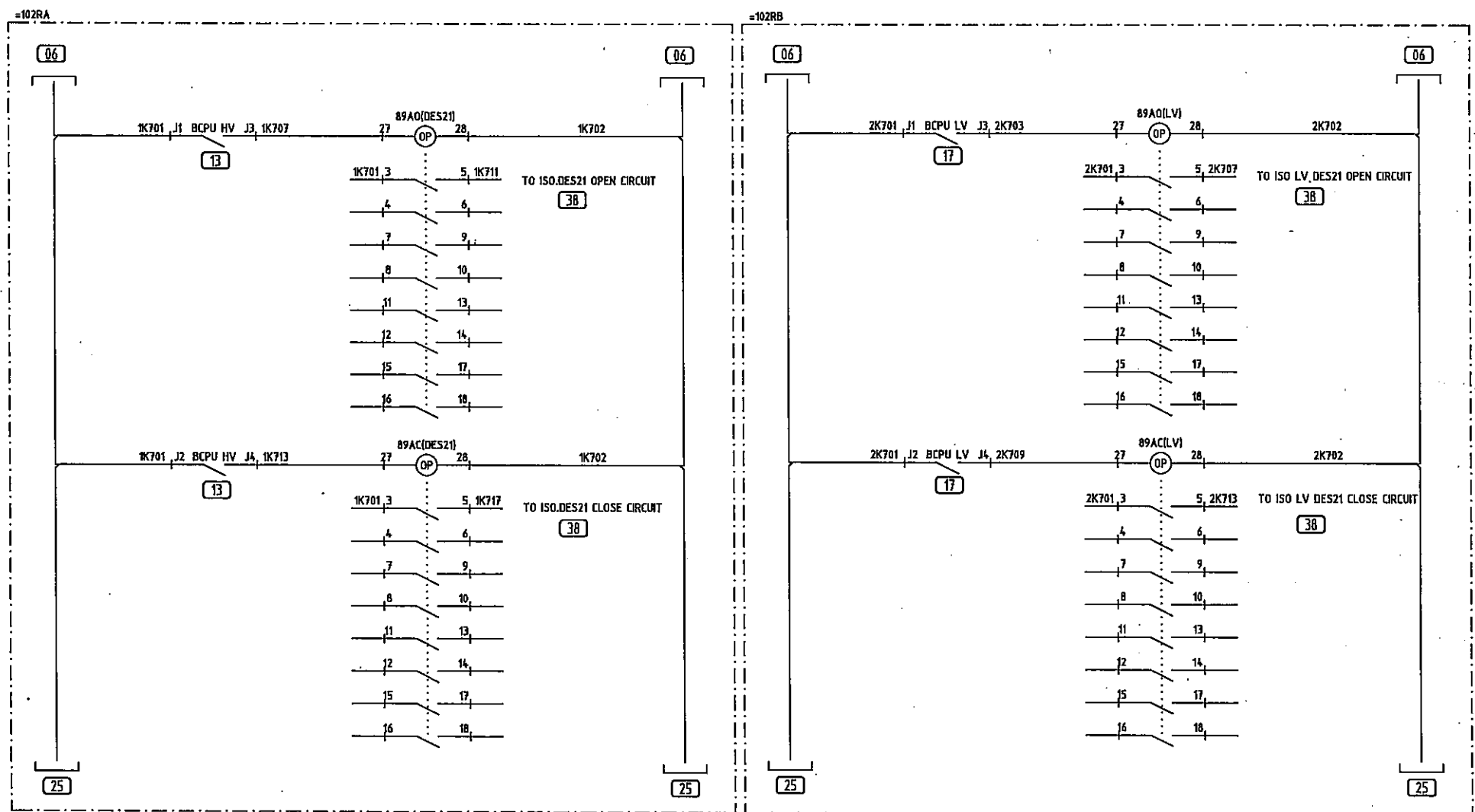
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APTRANSCO/VIDYUTH SOUDHA/HYD.

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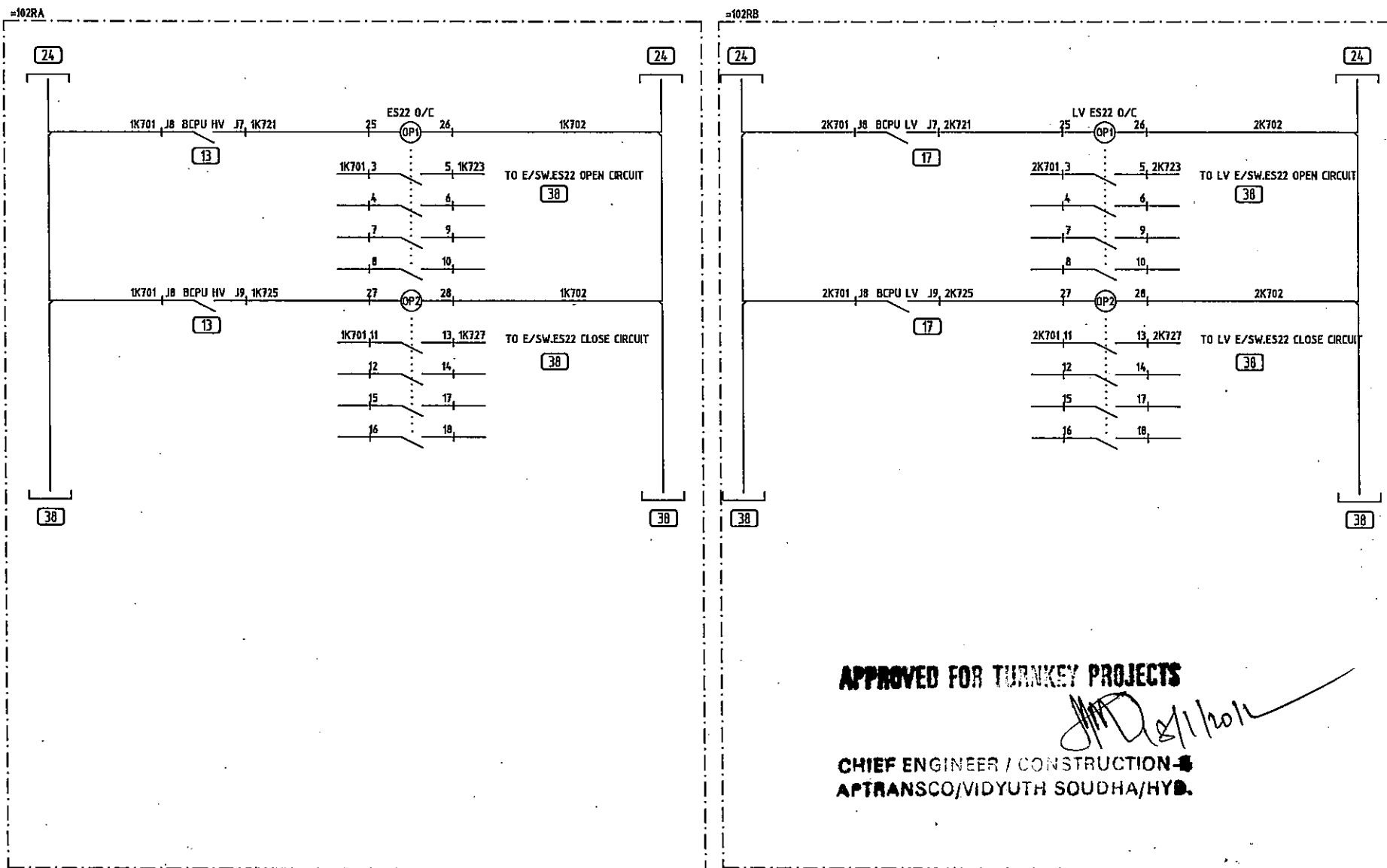


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CHIEF ENGINEER / CONSTRUCTION
 A-TRANSCO/MIDYUTH SOUDHA/HYD

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Remarks		Date	Name	Norm.	Repl./Ret./etc.		SIEMENS		132/33KV TRAF0 - II		ISOLATOR CLOSE AND OPEN MULTI. RELAY CIRCUIT		Project Name: 220/132/33KV O.U.		=102		
													Revision-A		(4)G719EA-BG9141-W102-A		

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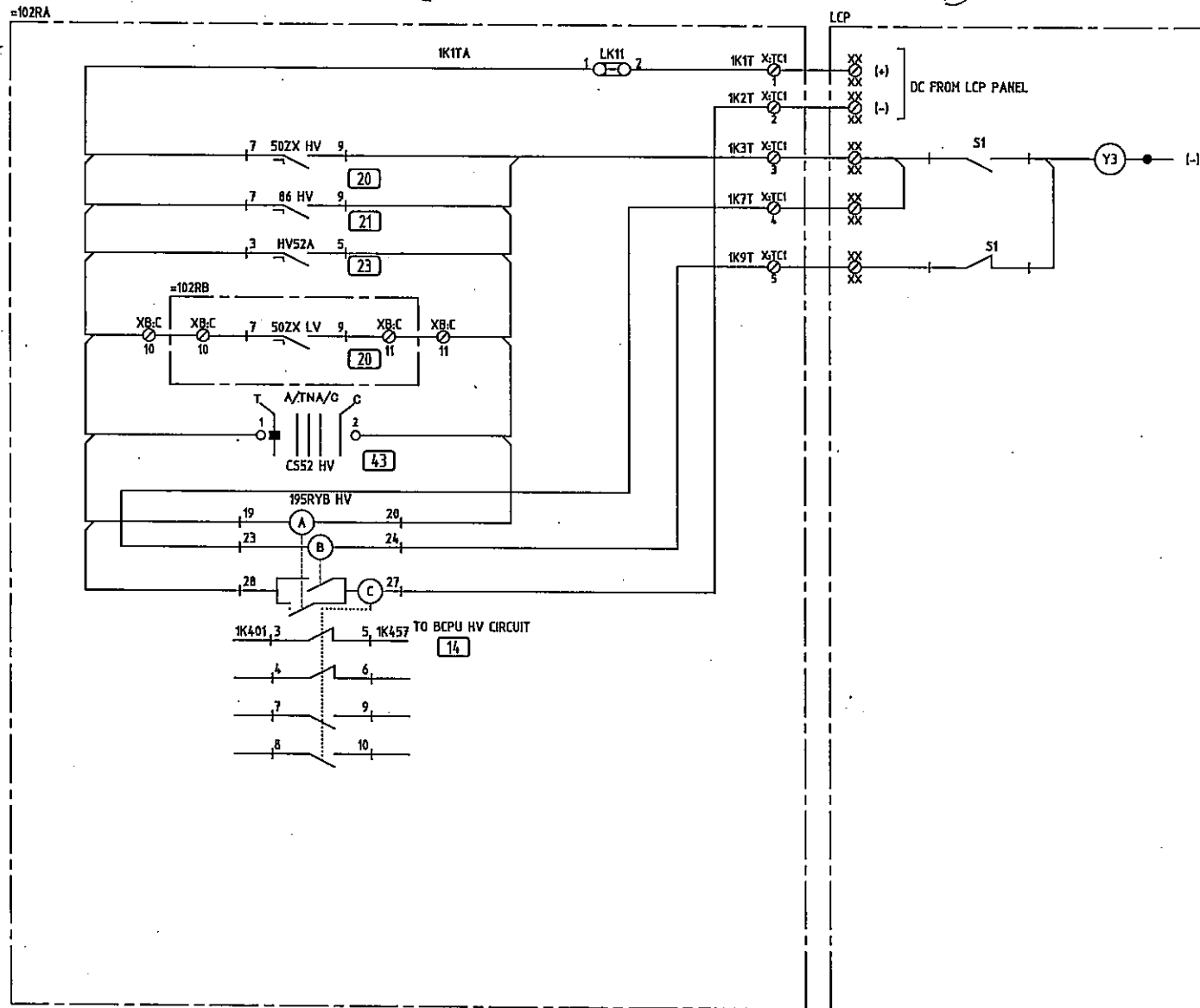
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CHIEF ENGINEER / CONSTRUCTION-1
 APTRANSCO / VIDYUTH SOUDHA/HX3

Version		Remarks	Date	Name	Norm.	Client: APTRANSCO		132/33KV TRAF0 - II		Sales Reference No: 3002660707		CKT	132/33KV TRAF0	Page 26/43
A		REVISED	06.09.11	SM	Appr.	Substation Name: 220/132/33KV O.U.		HV CB TC-1 CIRCUIT		Project Name: 220/132/33KV O.U.			=102	
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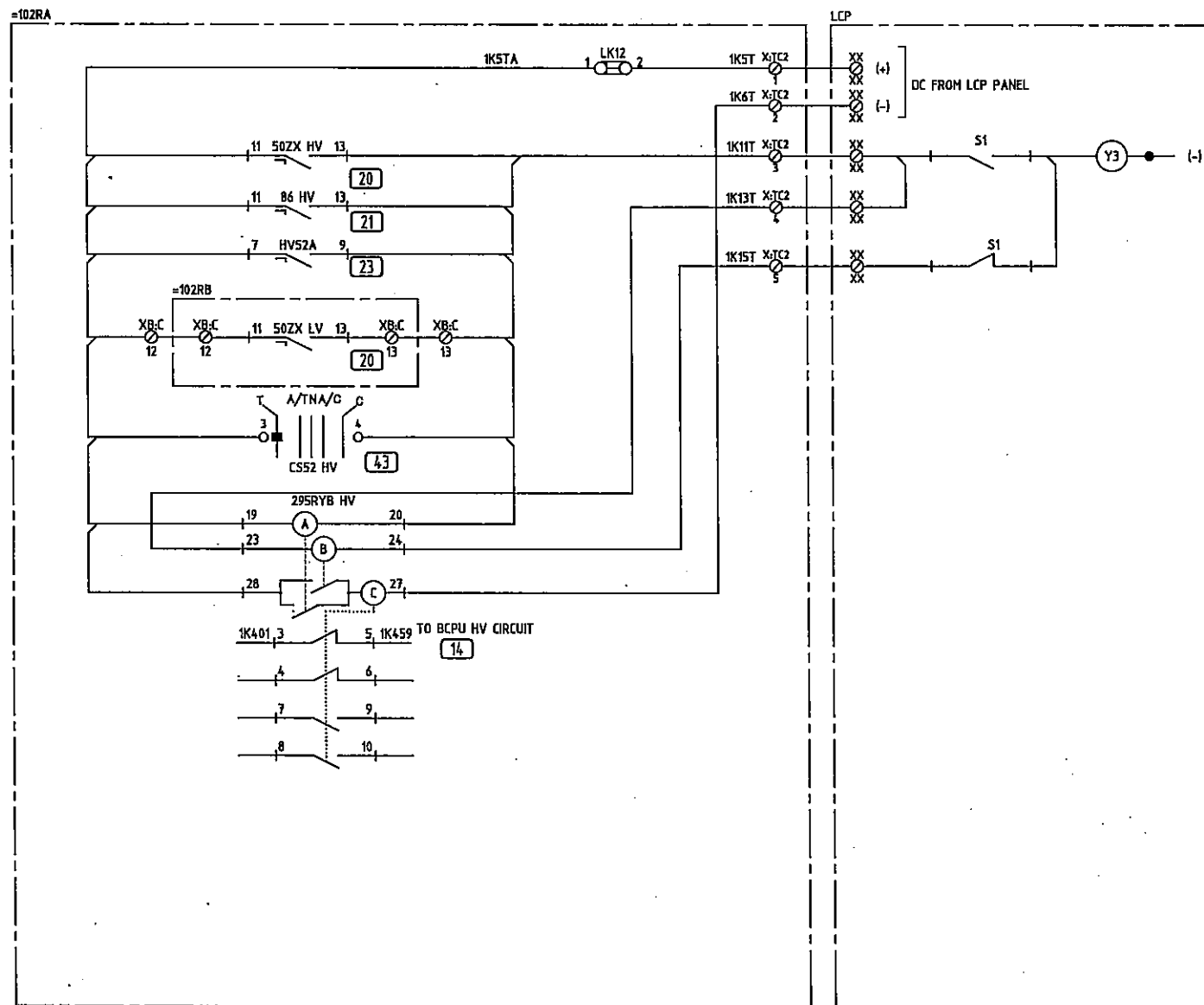
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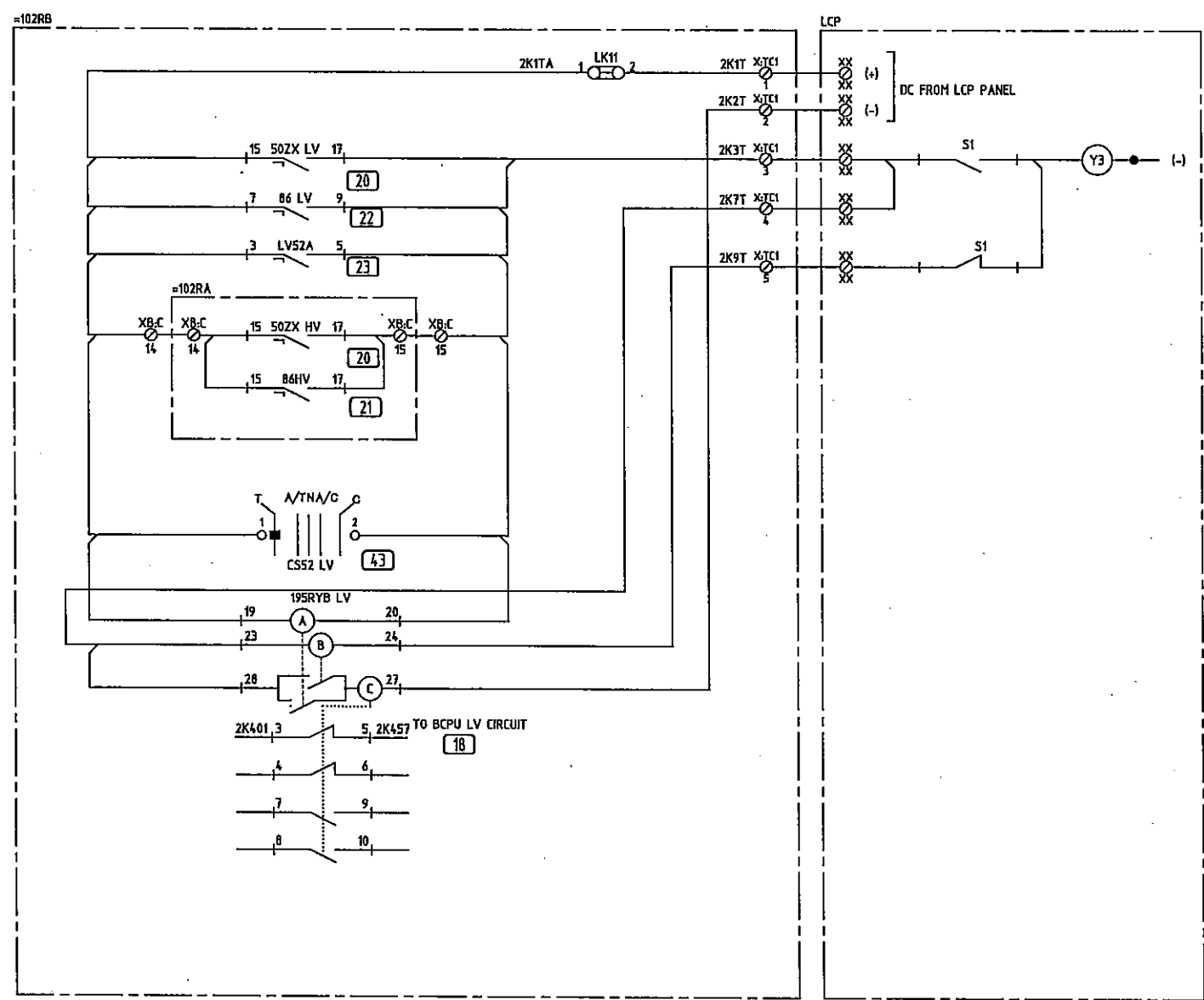
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ASTRANSCOVID WITH Soudha/HYD.

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Version	Remarks	Date	Name	Norm.	Repl./Ref./etc.			Circuit Diagram	Revision-A		(4)G719EA-BG9141-W102-A			

A
B
C
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AutoCAD Version: 7.0a DWS Tool
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CHIEF ENGINEER / (25)
 APTRANSCO/VIDYUTH SODHA/HYD

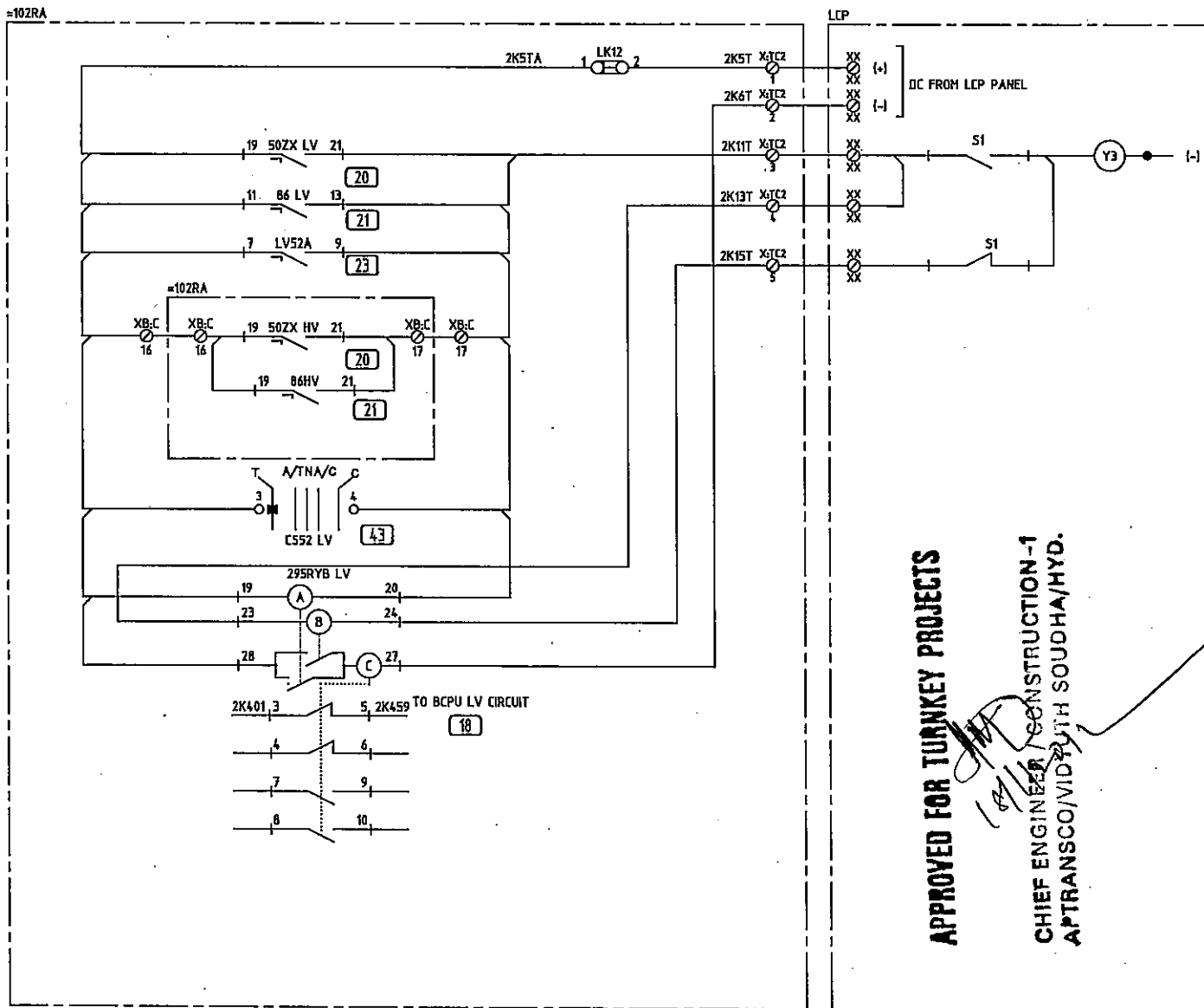
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A		REVISED	06.09.11	SH	Appr.	Substation Name: 220/132/33kV O.U.		LV CB TC-1 CIRCUIT		Project Name: 220/132/33KV O.U.		=102		
						Contractor: SIEMENS LTD.				Revision-A		(41G719EA-BG914-1-W102-A)		
						Repl./Ref./etc.		Circuit Diagram						

SIEMENS

AutoCAD Version: 2010 LMS Tool
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 APTRANSCO/VIDYUTH SOUDHA/HYD.

Version		REVIS	06.09.11	SM	Appr.	MS	Client: APTRANSCO		132/33KV TRAF0 - II		Sales Reference No: 3002660707		CKT	132/33KV TRAF0	Page: 29/43
Remarks		Date	Name	Norm.	Substation Name: 220/132/33kv O.U.		SIEMENS		LV CB TC-2 CIRCUIT		Project Name: 220/132/33KV O.U.		=102		
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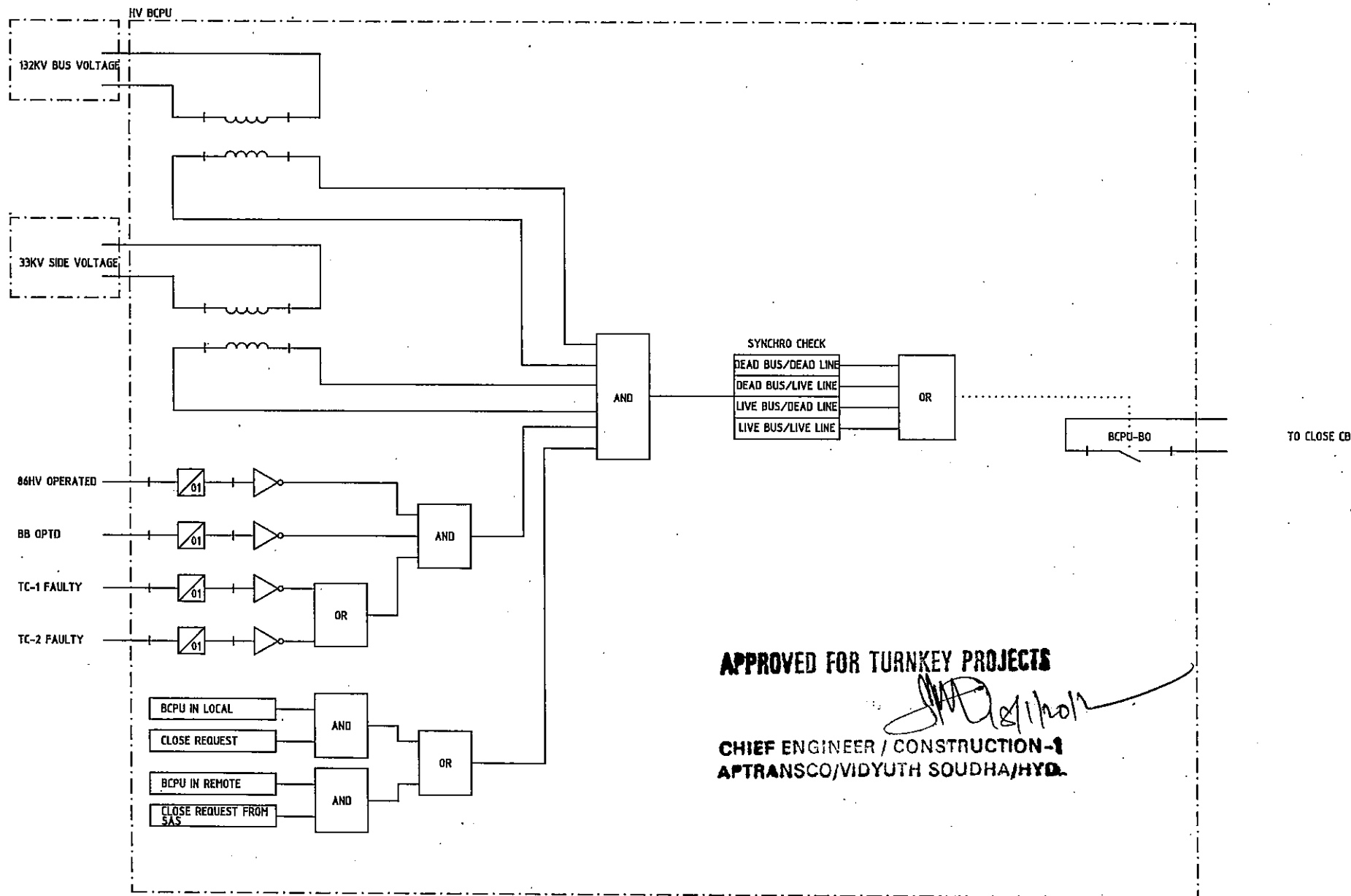
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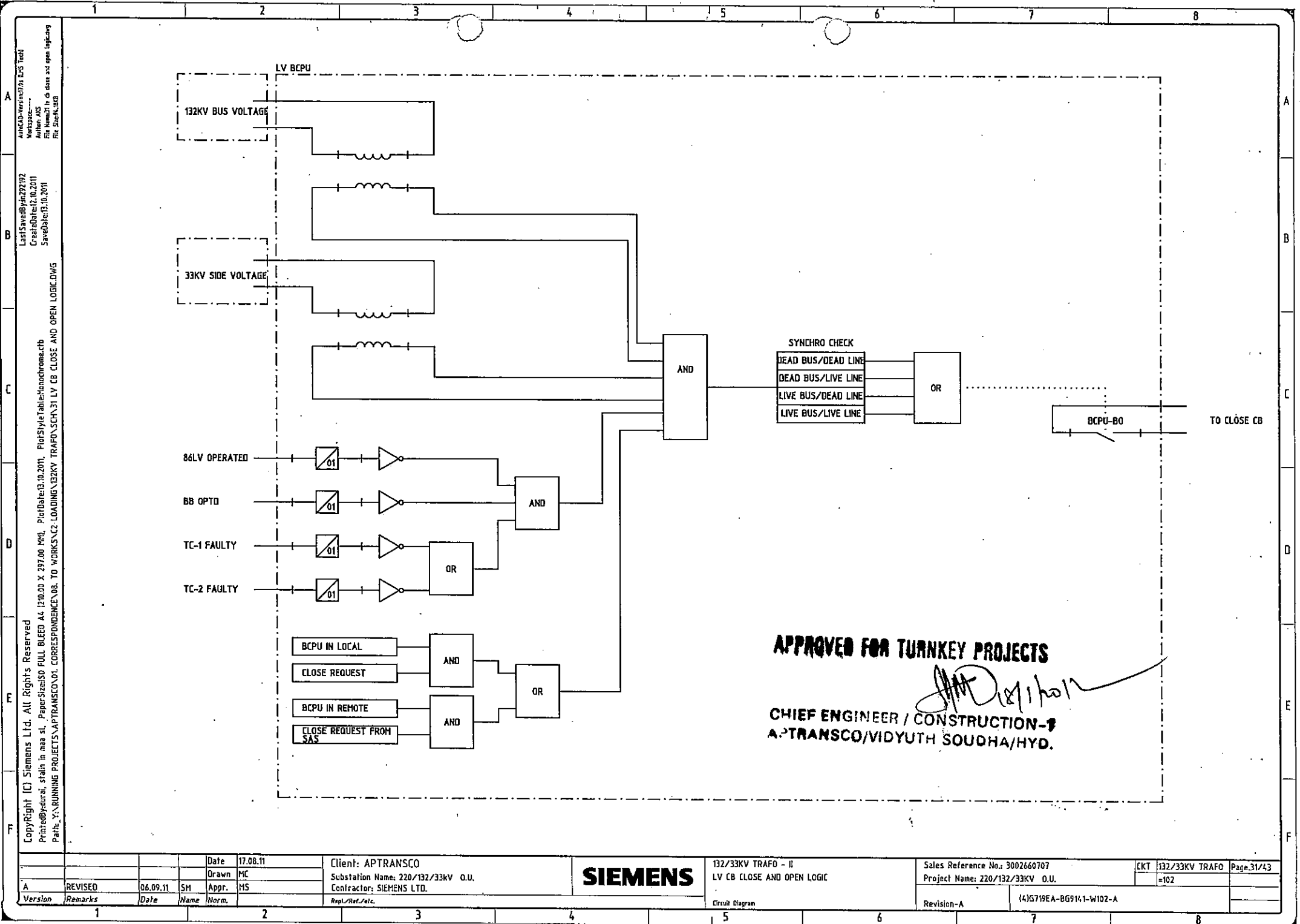
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Remarks											Substation Name: 220/132/33kv O.U.	HV CB CLOSE AND OPEN LOGIC	Project Name: 220/132/33KV O.U.		=102	
											Contractor: SIEMENS LTD.					
											Repl./Mat./etc.					
													Revision-A		(4)G719EA-BG9141-W102-A	





			Date	17.08.11
			Drawn	MC
A	REVISED	06.09.11	SM	Appr. HS
Version	Remarks	Date	Name	Norm.

Client: APTRANSO
 Substation Name: 220/132/33KV O.U.
 Contractor: SIEMENS LTD.
 Rep./Ref./etc.

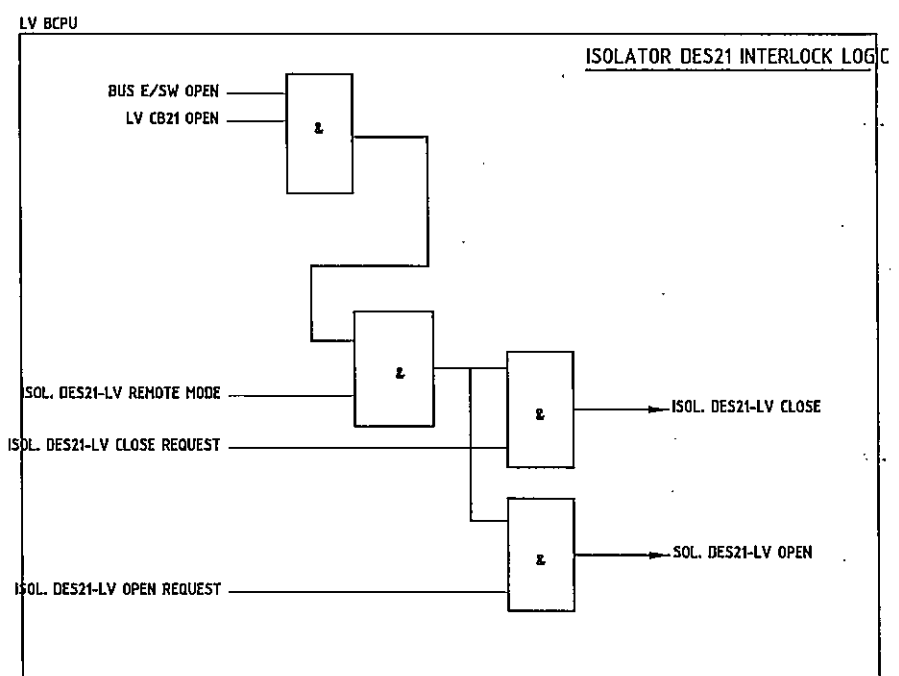
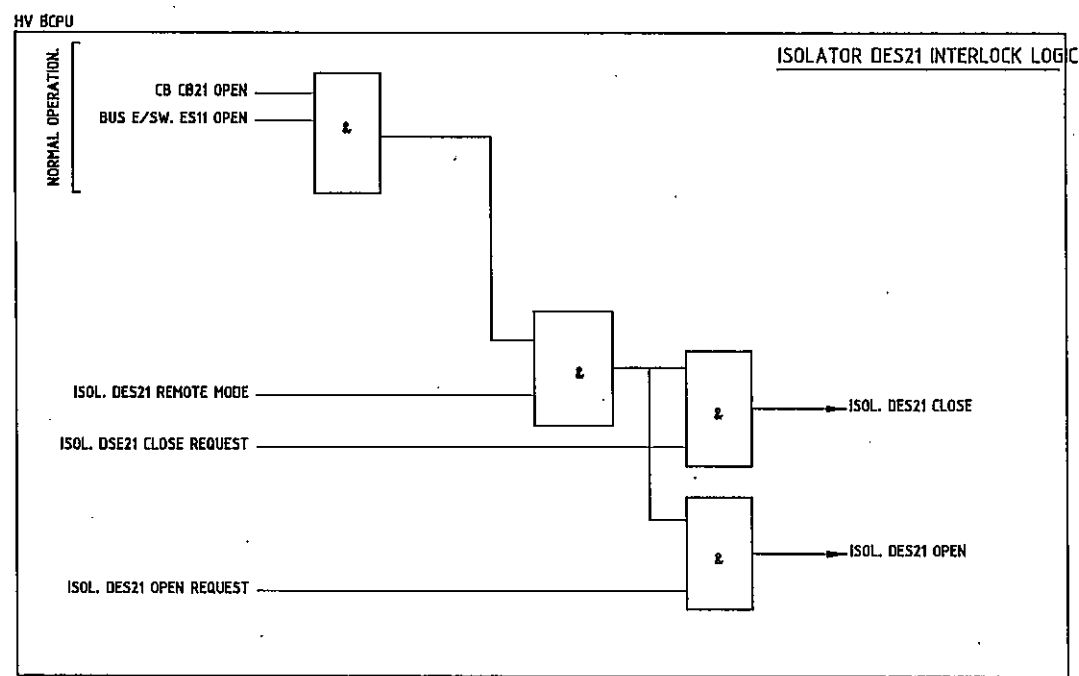
SIEMENS

132/33KV TRAF0 - II
 LV CB CLOSE AND OPEN LOGIC

Circuit Diagram

Sales Reference No.: 3002660707	CKT	132/33KV TRAF0	Page 31/43
Project Name: 220/132/33KV O.U.		=102	
Revision-A	(4)5719EA-BG9141-W102-A		

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[Signature]
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A*TRANSCO/VIDYUTH SOUDHA/HYD.

FUNCTIONAL SYMBOLS	
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≥1	OR
=1	NOT

Version		REVISD	06.09.11	SM	Appr.	MS	Client: APTRANSCO		132/33KV TRAFD - II		Sales Reference No.: 3002660707		CKT	132/33KV TRAFD	Page 32/43
Remarks							Substation Name: 220/132/33KV O.U.		ISOL CONTROL INTERLOCK LOGIC		Project Name: 220/132/33KV O.U.			=102	
							Contractor: SIEMENS LTD.		Circuit Diagram		Revision-A		(4)G719EA-BG9141-W102-A		
							Repl./Ref./etc.								

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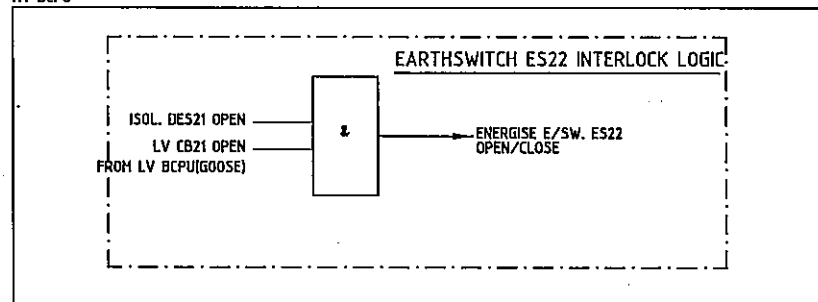
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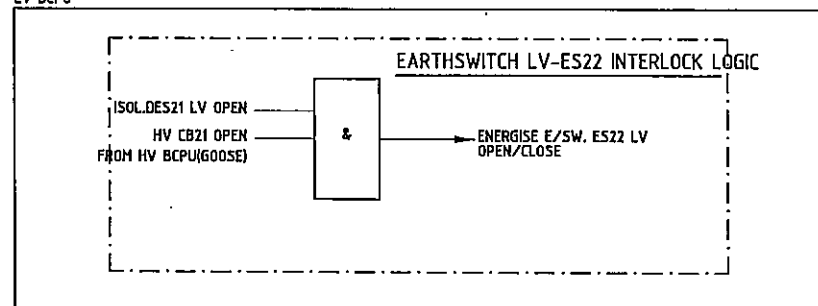
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HV BCPU



LV BCPU



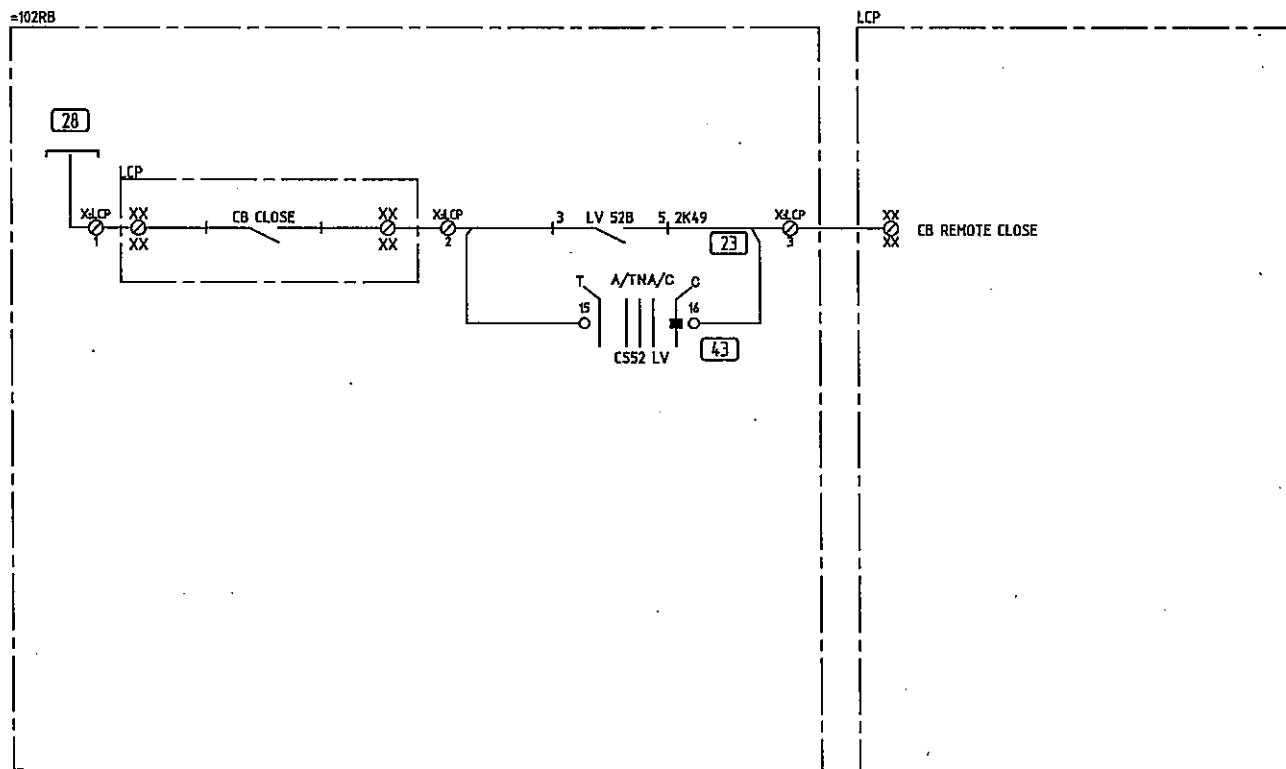
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CHIEF ENGINEER / CONSTRUCTION
APTRANSCO/VIDYUTH SOUDHA/HYD.

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Remarks							Substation Name: 220/132/33KV O.U.		EARTH SWITCH CONTROL INTERLOCK LOGIC		Project Name: 220/132/33KV O.U.			=102	
Date							Contractor: SIEMENS LTD.		SIEMENS		Revision-A		(4)G719EA-BG9141-W102-A		
Name							Rep./Ref./etc.		Circuit Diagram						



				Date	17.08.11	Client: APTRANSCO		132/33KV TRAFO - II	Sales Reference No.: 3002660707	CKT	132/33KV TRAFO	Page 34/43
				Drawn	MC	Substation Name: 220/132/33KV O.U.		HV CB MANUAL CLOSE AND TRIP CIRCUIT	Project Name: 220/132/33KV O.U.		=102	
A	REVISED	06.09.11	SM	Appr.	HS	Contractor: SIEMENS LTD.						
Version	Remarks	Date	Name	Norm.		Repl./Ref./etc.		Circuit Diagram	Revision-A	[4IG719EA-BG9141-W102-A]		



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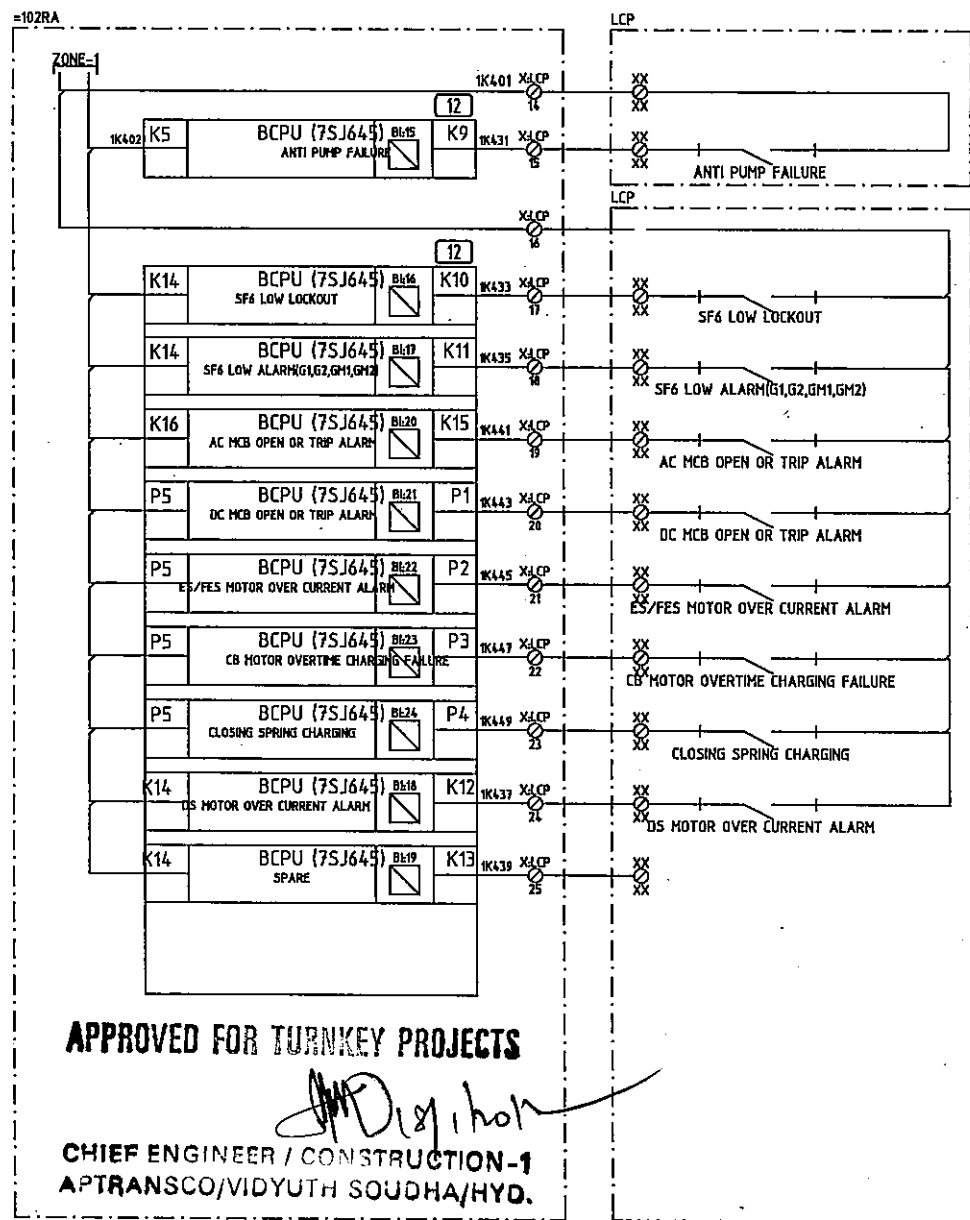
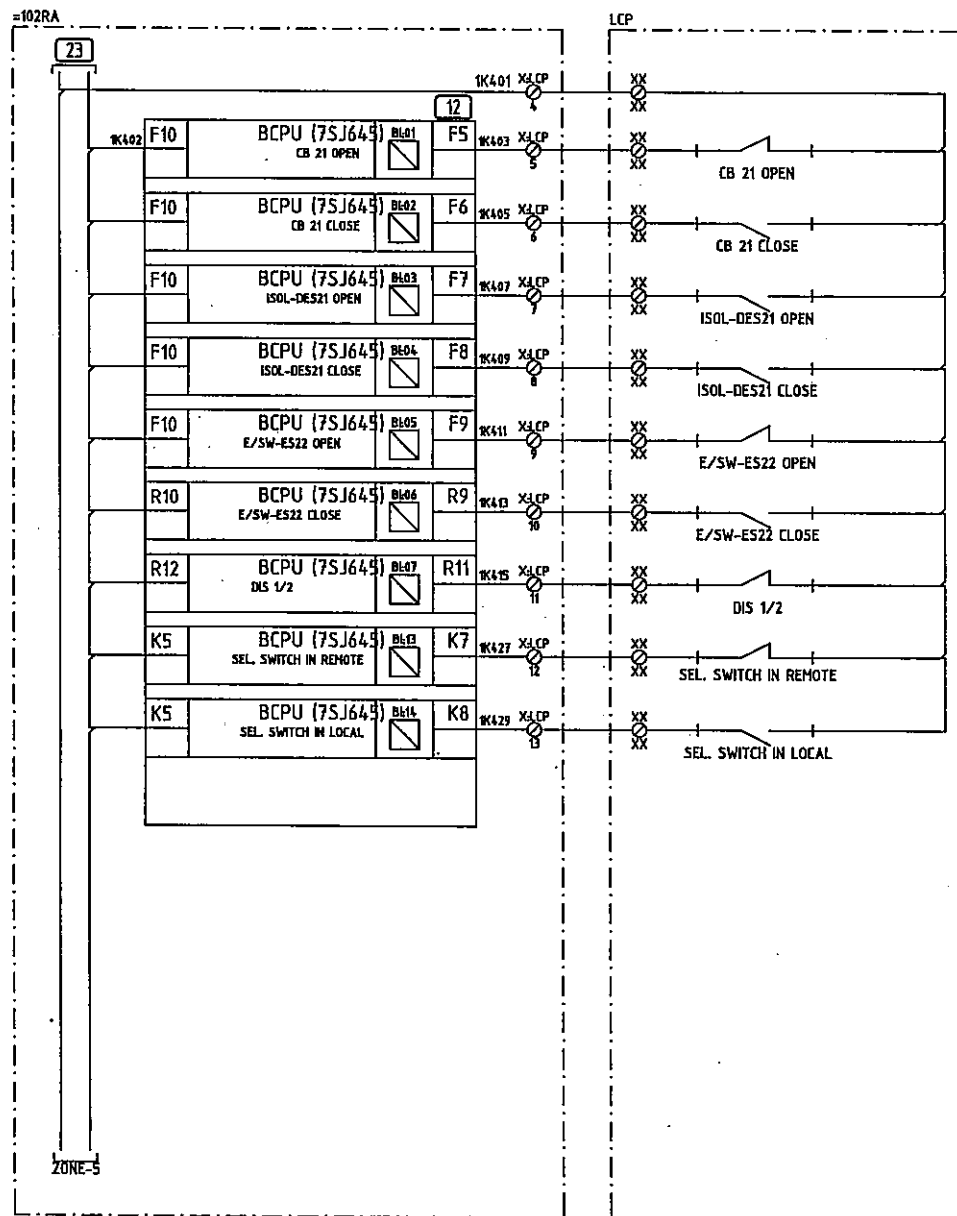
CHIEF ENGINEER / CONSTRUCTION-T
APTRANSCO/VIDYUTH Soudha/HYD.

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				Drawn	MC							
A	REVISED	06.09.11	SM	Appr.	MS							
Version	Remarks	Date	Name	Norm.		Repl./Ref./etc.		Circuit Diagram	Revision-A	(4)G719EA-BG9141-W102-A		

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 Date: 13.10.2011
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Version	Remarks	Date	Name	Norm.	

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 Contractor: SIEMENS LTD.
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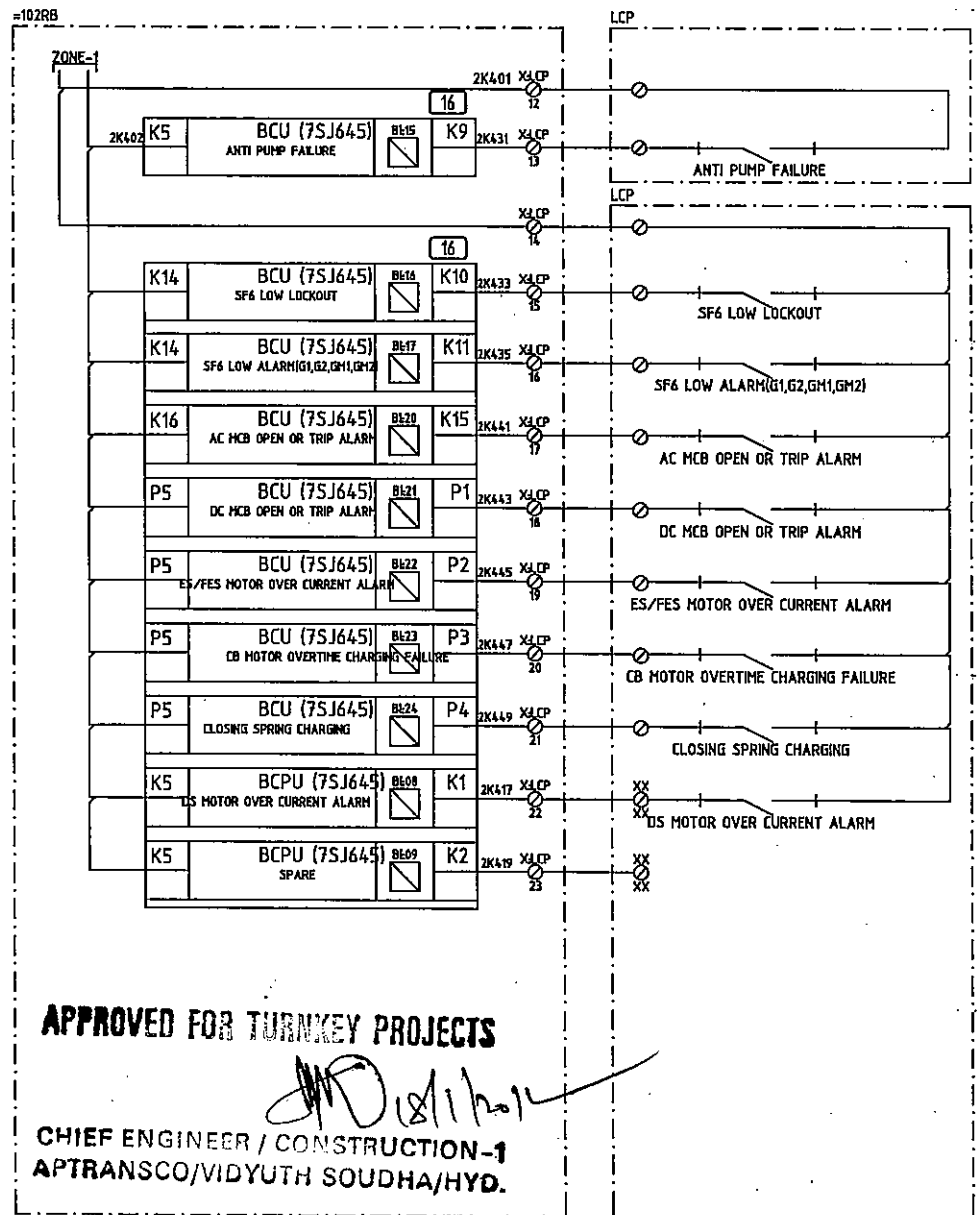
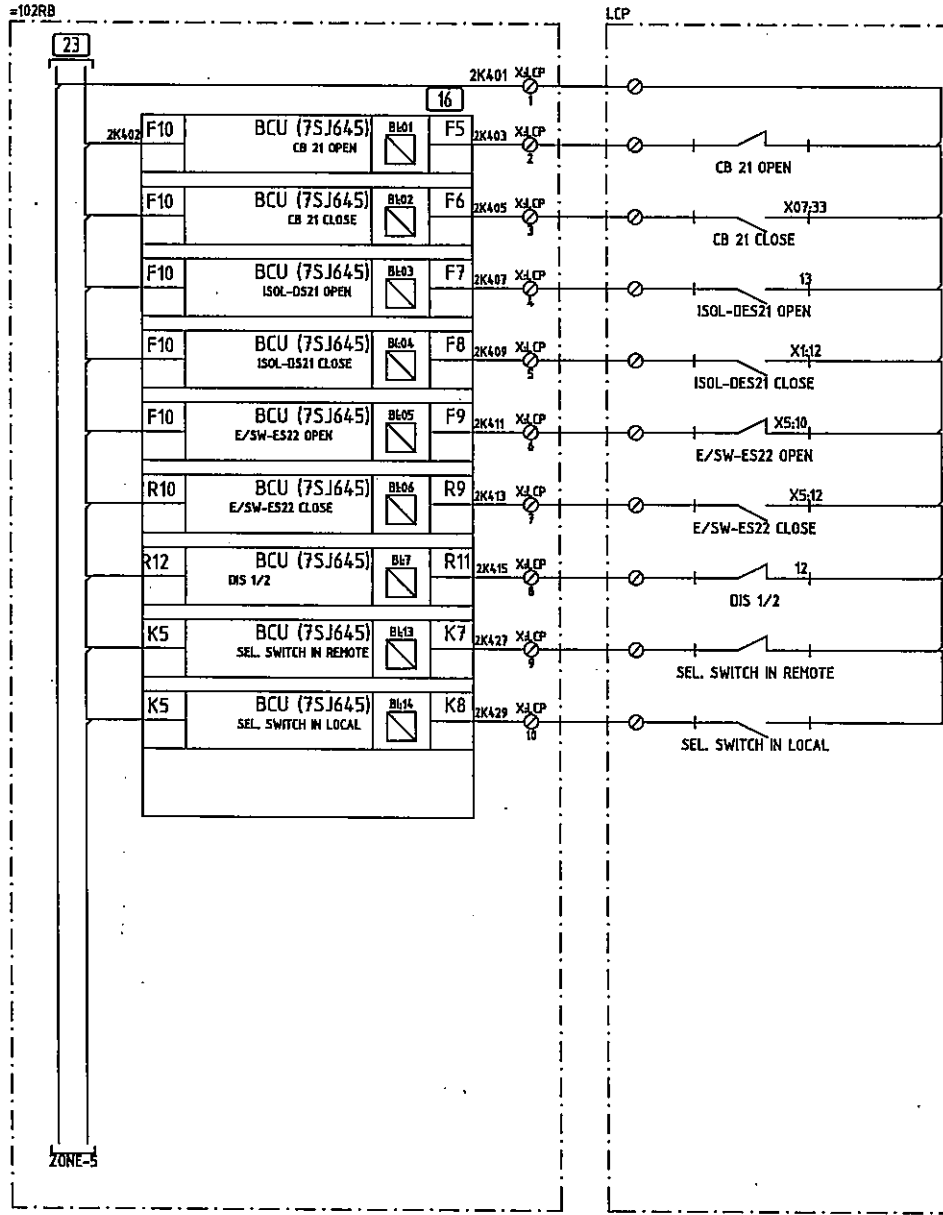
SIEMENS

132/33kV TRAF0 - II
 HV LCC INPUTS TO BCU CIRCUIT
 Circuit Diagram

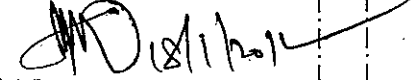
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 Revision-A
 (4)6719EA-BG9141-W102-A

CKT 132/33kV TRAF0
 =102
 Page 36/43

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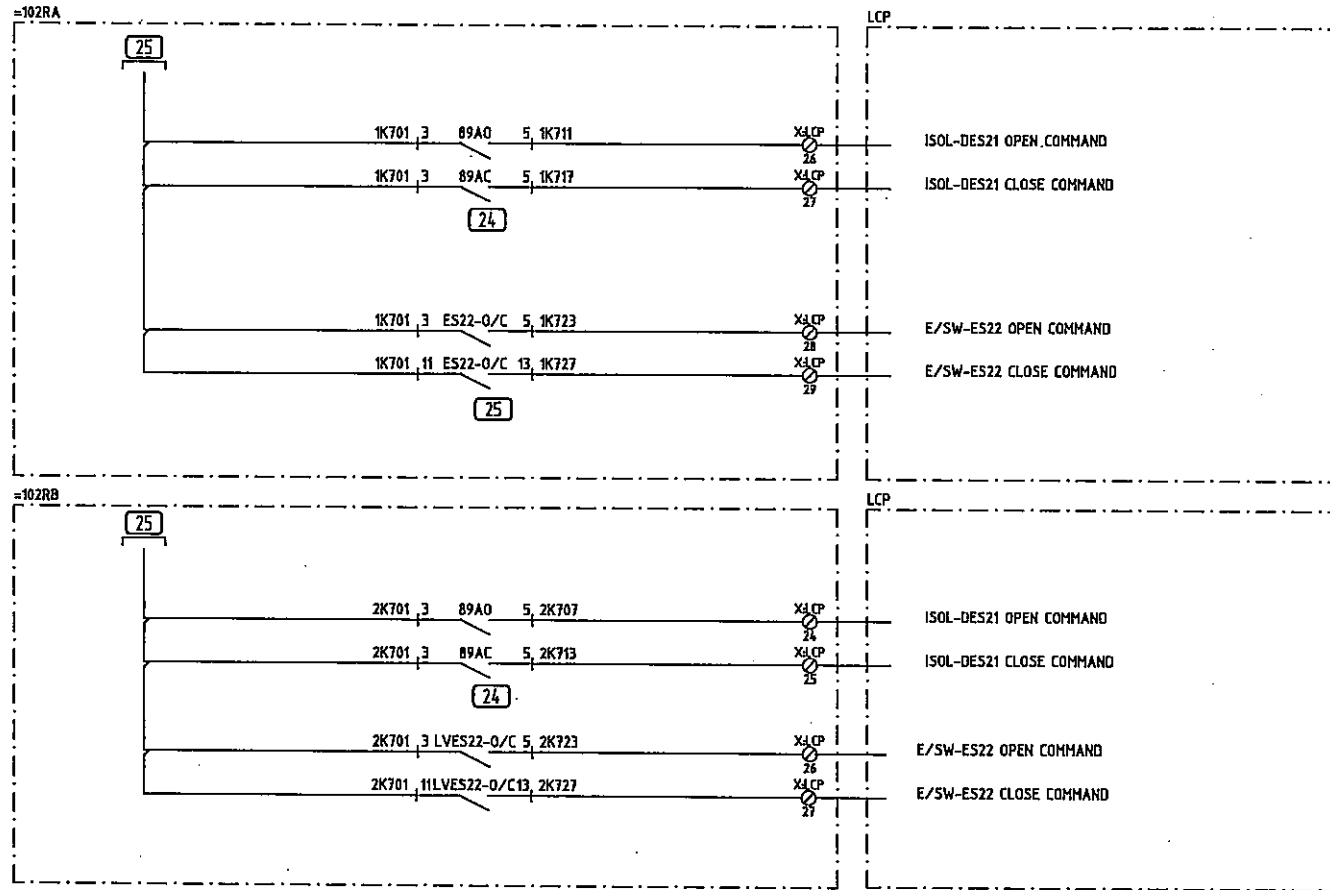
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 APTRANSCO/VIDYUTH SOUDHA/HYD.

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B		Version	Remarks	Date	Name	Norm.	Substation Name: 220/132/33kv O.U.		LV LCC INPUTS TO BCU CIRCUIT		Project Name: 220/132/33KV O.U.		=102			
C							Contractor: SIEMENS LTD.		Circuit Diagram		Revision-A		[4]6719EA-BG9141-W102-A			
D							Repl./Ref./etc.									

SIEMENS

AutoCAD Version: 12.0.5.1
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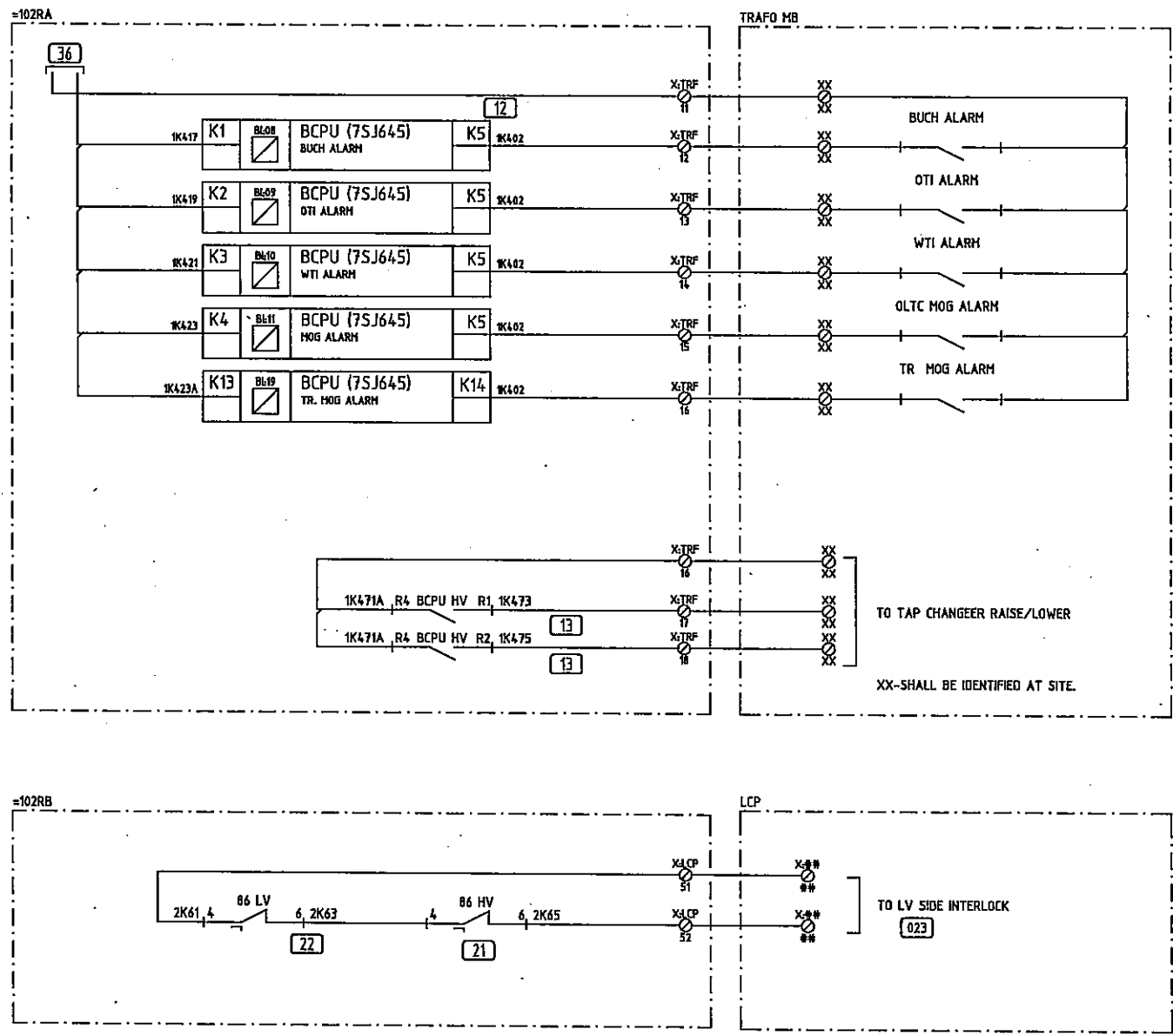
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[Signature]
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APTRANSCO/VIDYUTH SOUDHA/HYD.

NOTE: HARDWARE INTERLOCKS OF ISOLATOR AND EARTHSWITCH ARE PROVIDED IN THE LCP PANEL.

				Date	17.08.11	Client: APTRANSCO	SIEMENS	132/33KV TRAF0 - II ISOL AND EARTH SWITCH CONTROL CIRCUIT	Sales Reference No.: 3002660707	CKT	132/33KV TRAF0	Page 38/43	
				Drawn	MC	Substation Name: 220/132/33kV O.U.			Project Name: 220/132/33KV O.U.		=102		
A	REVISED	06.09.11	SM	Appr.	MS	Contractor: SIEMENS LTD.							
Version	Remarks	Date	Name	Norm.		Repl./Ref./etc.		Circuit Diagram	Revision-A	(4)G719EA-BG9141-W102-A			

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 Drawn: MS
 Checked: MS
 Date: 17.08.11
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 Contractor: SIEMENS LTD.
 Sales Reference No.: 3002640707
 Project Name: 220/132/33KV O.U.
 Revision: A
 (416719EA-B69141-W102-A)



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 APTRANSCO, P.O. BOX 11, SQUADHA/HYD.

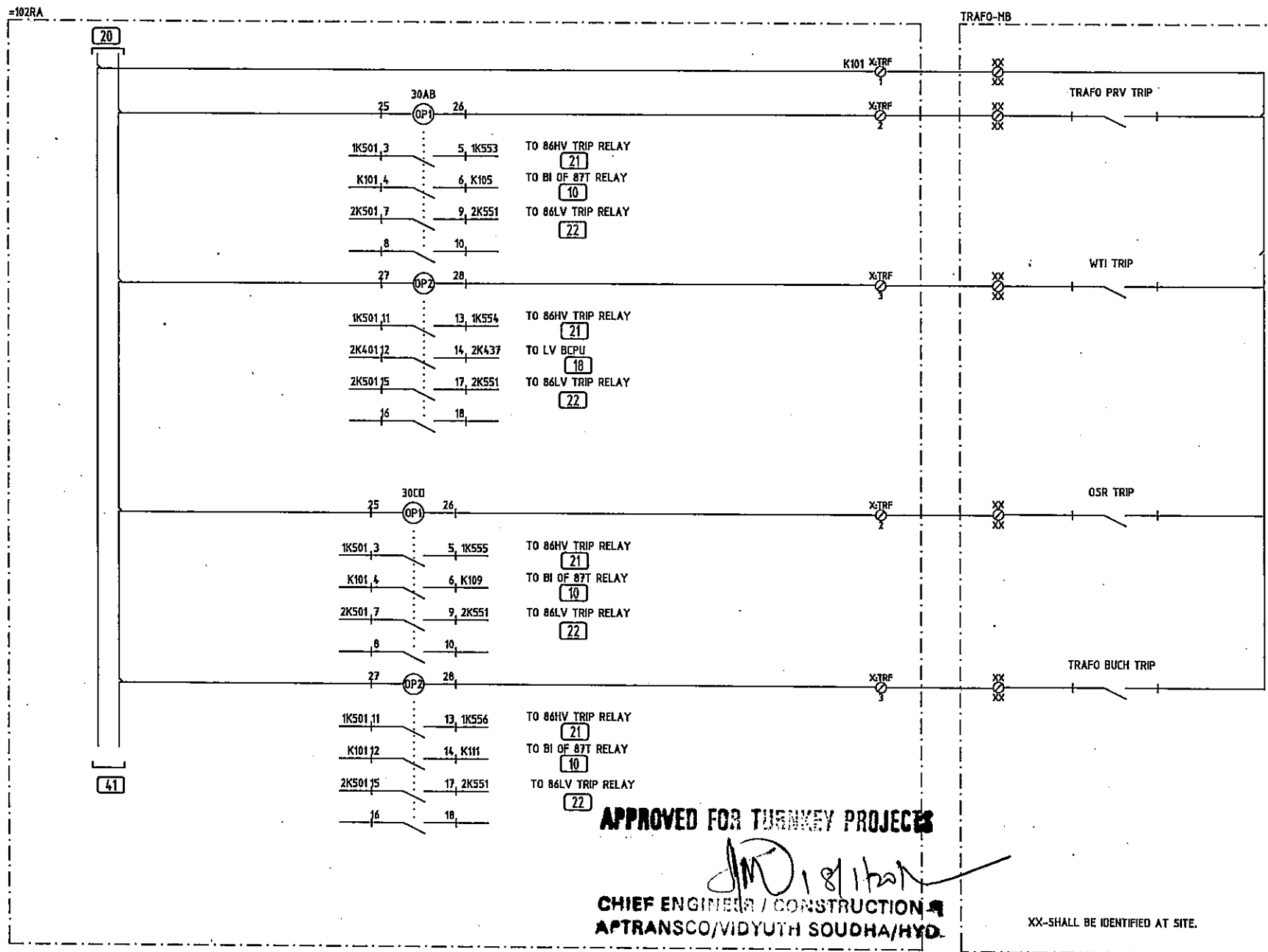
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A	REVISED	06.09.11	SH	Appr.	MS	Substation Name: 220/132/33KV O.U. Contractor: SIEMENS LTD.		Project Name: 220/132/33KV O.U.		=102	
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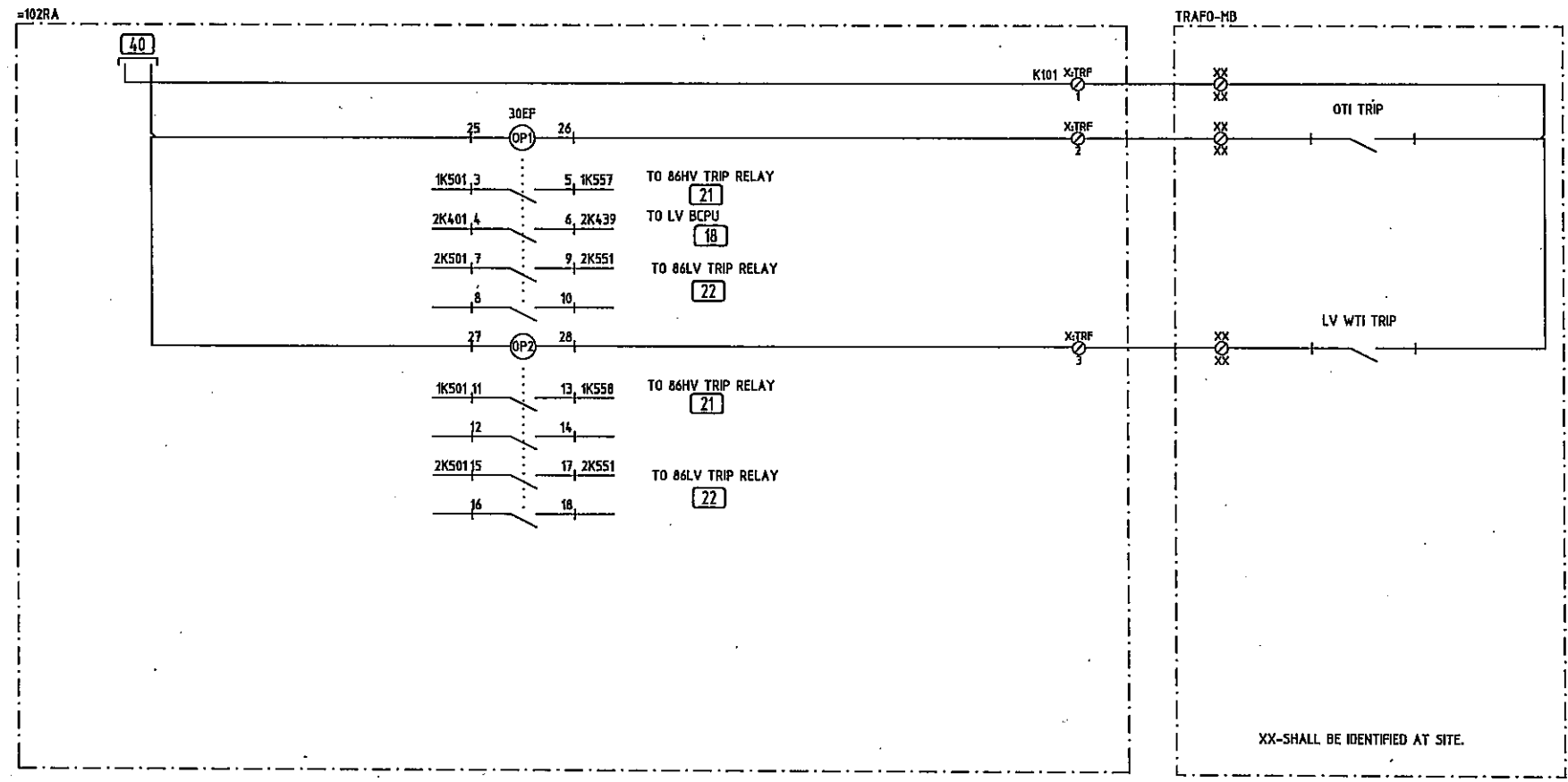
CHIEF ENGINEER / CONSTRUCTION
 APTRANSCO/VIDYUTH SOUDHA/HYD.

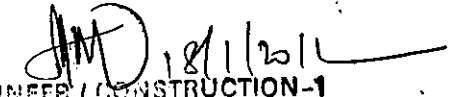
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				Drawn		MC		Substation Name: 220/132/33kv O.U.						Project Name: 220/132/33KV O.U.				#102			
A		REVISED		06.09.11		SM		Appr. MS		Contractor: SIEMENS LTD.											
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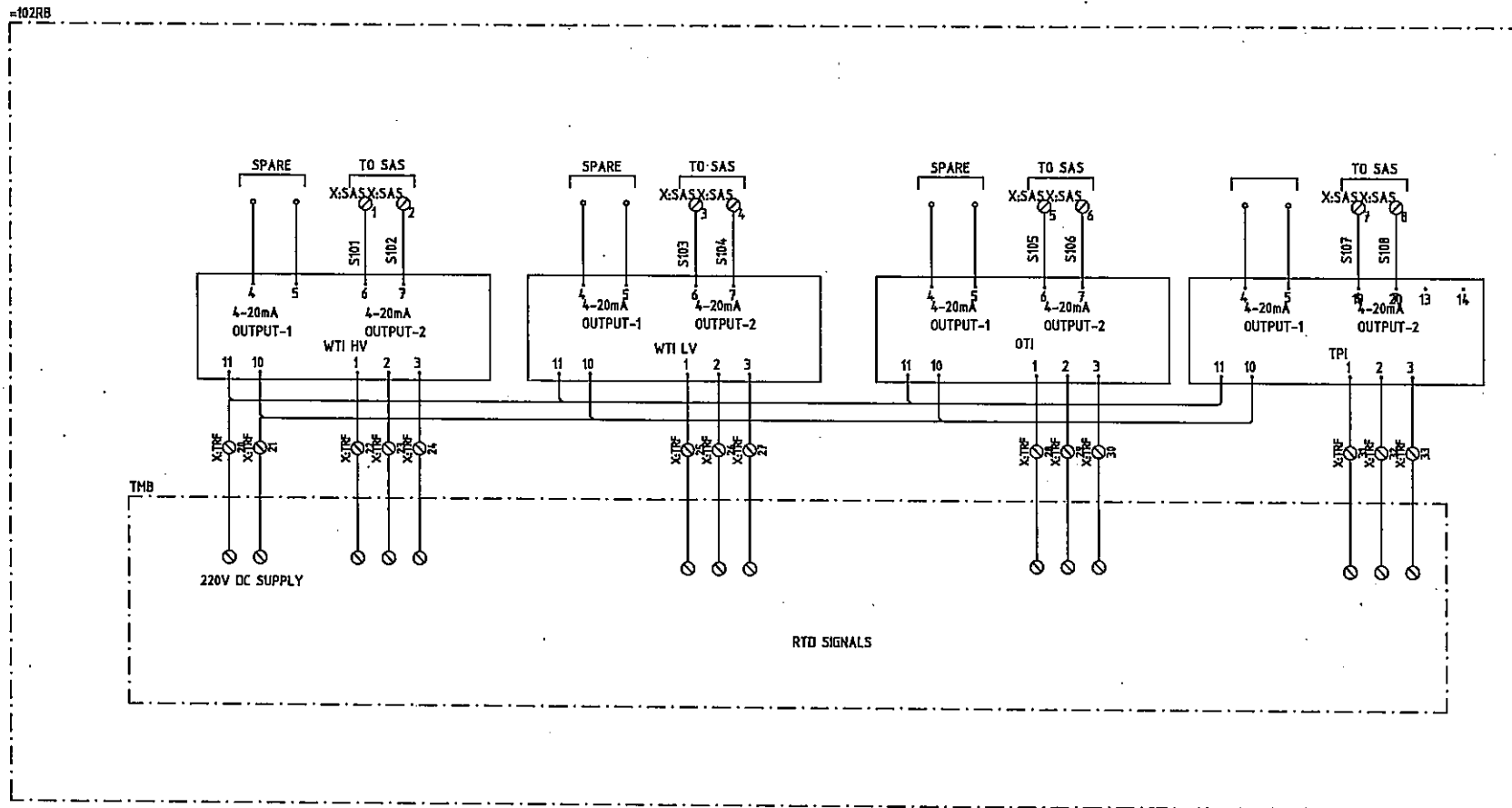
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CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH SOUDHA/HYD.

Version		REVISION	06.09.11	SH	Appr.	MS	Date	17.08.11	Client: APTRANSCO	SIEMENS 132/33KV TRAFO - II TRAFO TROUBLE RELAY CIRCUIT Circuit Diagram	Sales Reference No.: 3002660707 Project Name: 220/132/33KV O.U. Revision-A	CKT 132/33KV TRAFO =102 (41G719EA-BG9141-W102-A)	Page.41/43
Remarks									Substation Name: 220/132/33KV O.U. Contractor: SIEMENS LTD. Repl./Ref./etc.				

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 Author: MS
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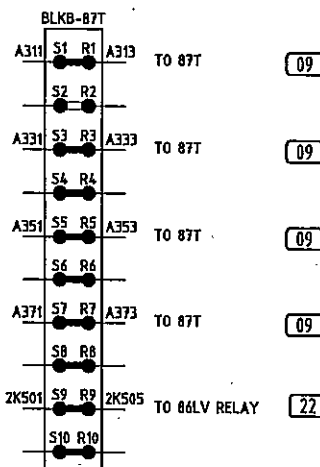
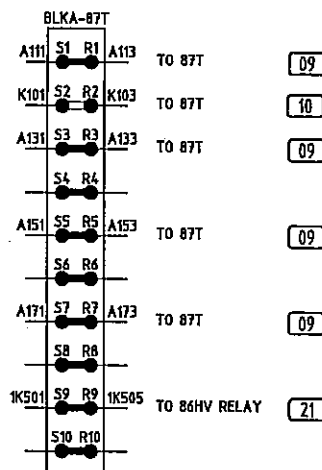
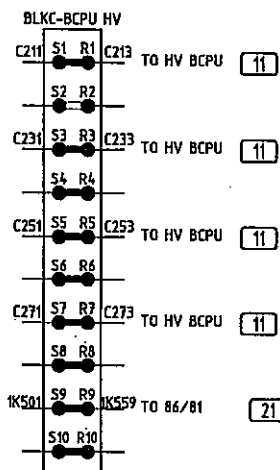
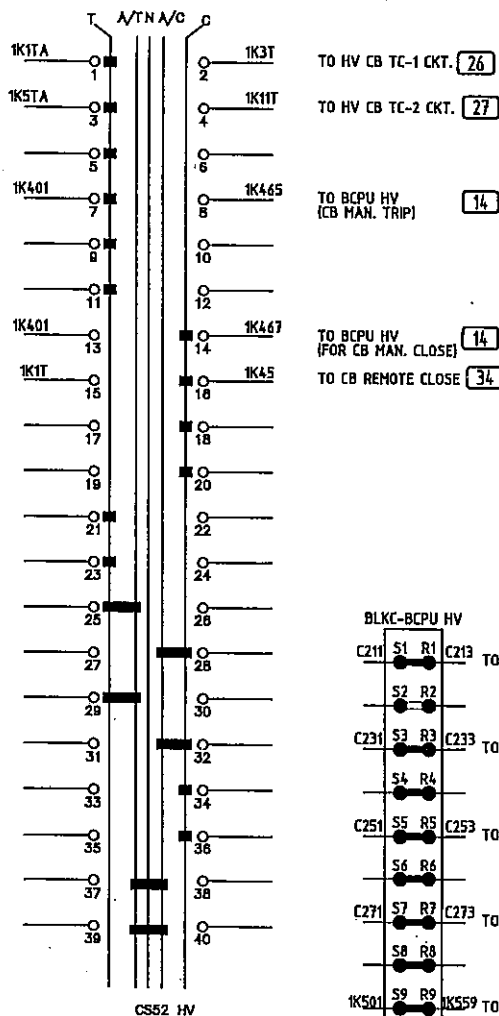
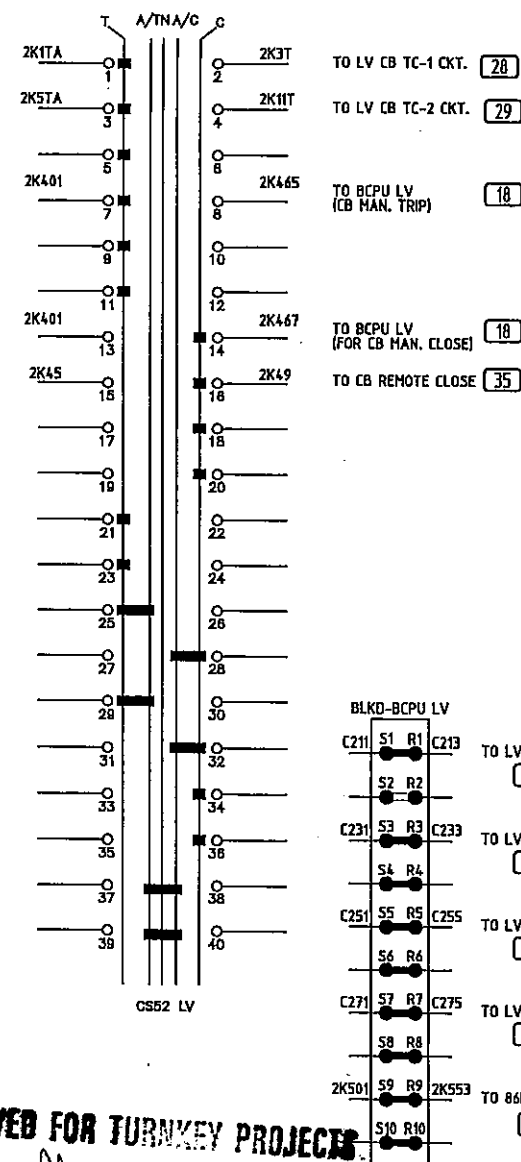


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CHIEF ENGINEER / CONSTRUCTION - I
APTRANS CO/VIDYUTH SOUDHA/HYD.

Version		REVISI	06.09.11	SM	Appr.	MS	Client: APTRANS CO		132/33KV TRAFO - II		Sales Reference No.: 3002660707		CKT 132/33KV TRAFO		Page 42/43
Remarks		Date	Name	Norm.	Substation Name: 220/132/33kV O.U.		SIEMENS		TRANSFORMERS CIRCUIT		Project Name: 220/132/33KV O.U.		=102		
					Contractor: SIEMENS LTD.		Repl./Ref./etc.		Circuit Diagram		Revision-A		(4)G719EA-BG9141-W102-A		

=102RA

 $=102RB$ 

APPROVED FOR TURNKEY PROJECT

CHIEF ENGINEER / CONSTRUCTION-3
APTRANSCOM/CDX/11

				Date	17.08.11	Client: APTRANSCO Substation Name: 220/132/33kV O.U. Contractor: SIEMENS LTD.
				Drawn	MC	
A	REVISED	05.07.11	SM	Appr.	MS	
Version	Remarks	Date	Name	Norm.		Reel / Bat / Jale

SIEMENS

132/33KV TRAFO - II
SWITCH AND BLOCK CONTACT DISTRIBUTION

Circuit Diagram

Sales Reference No.: 360266077	
Project Name: 220/132/33KV O.U.	
Designation:	(416719EA-BG9141-W102-A

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