

PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY,
CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF
LOT2 OF THE PROPOSED TUNDUMA SUBSTATION

Optical Communication System Drawing

8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:			TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania		
CONSULTANT:			POWER GRID CORPORATION OF INDIA LIMITED		
CONTRACTOR:			TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China		
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kV SUBSTATION					
CONTRACT NO.: PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	Cover		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1561		
			SHEET 17/31		

Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.

	1	2	3	4	5	6	7	8
A	DRAWING CONTENT1							
B								
C								
D								
E								
F								
	1	2	3	4	5	6	7	8

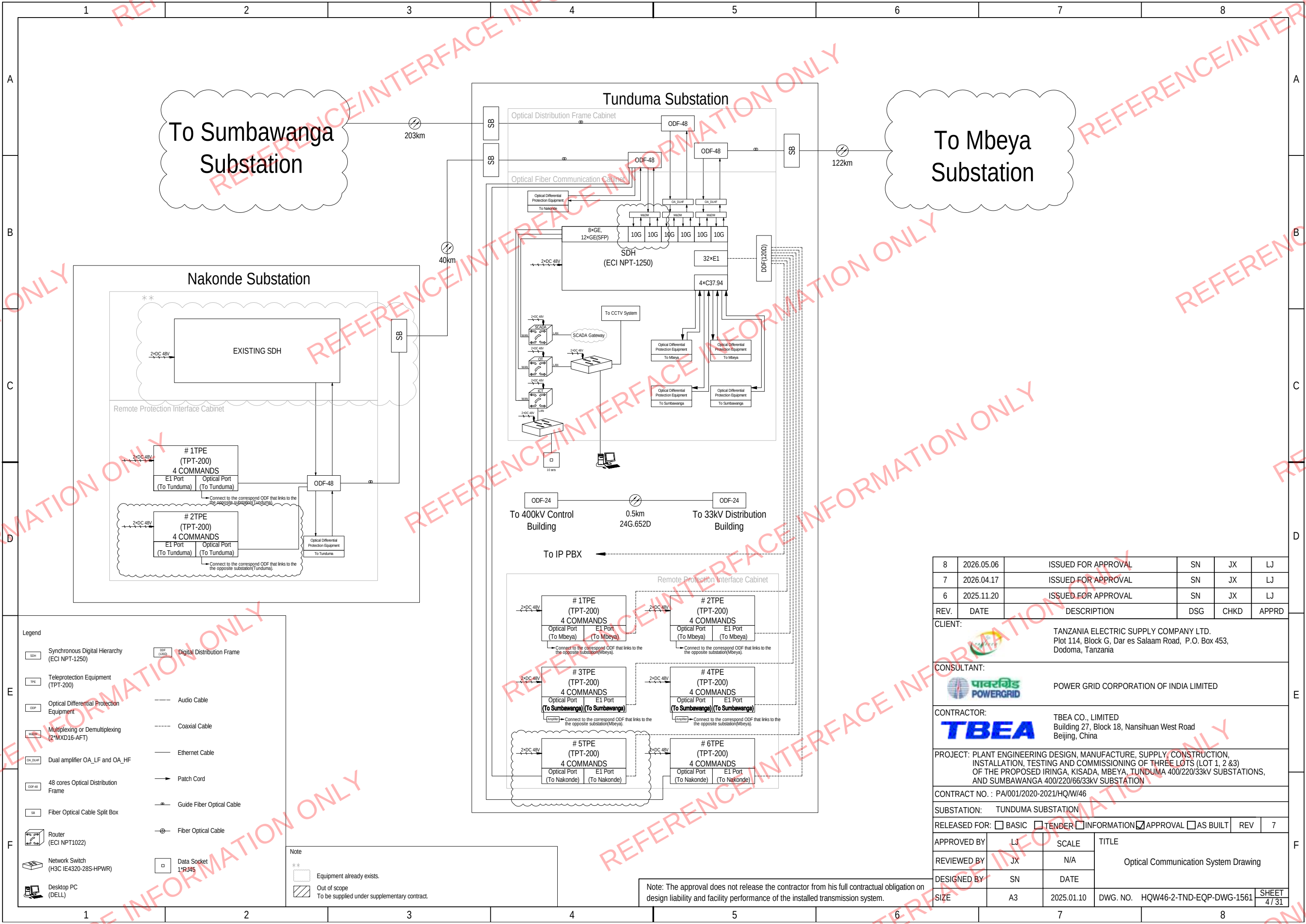
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					2	3	4	5	6	7		
1	HQW46-2-TND-EQP-DWG-1561	Cover	1	A3							*	0 2025.03.11
2	HQW46-2-TND-EQP-DWG-1561	Drawing Content1	1	A3							*	1 2025.05.21
3	HQW46-2-TND-EQP-DWG-1561	Drawing Content2	1	A3							*	2 2025.07.11
4	HQW46-2-TND-EQP-DWG-1561	Optical Communication System Drawing	1	A3							*	3 2025.08.26
5	HQW46-2-TND-EQP-DWG-1561	Cabinet Assembly Drawing	1	A3							*	4 2025.10.14
6	HQW46-2-TND-EQP-DWG-1601	Optical Communication Cabinet Drawing1(TUNDUMA)	1	A3							*	5 2025.11.07
7	HQW46-2-TND-EQP-DWG-1601	Optical Communication Cabinet Power Supply Wiring Drawing1(TUNDUMA)	1	A3							*	6 2025.11.20
8	HQW46-2-TND-EQP-DWG-1601	Optical Communication Cabinet Power Supply Wiring Drawing2(TUNDUMA)	1	A3							*	7 2026.04.17
9	HQW46-2-TND-EQP-DWG-1601	Optical Communication Cabinet Power Supply Wiring Drawing3(TUNDUMA)	1	A3							*	8 2026.05.06
10	HQW46-2-TND-EQP-DWG-1601	SDH ECI NPT-1250 Panel Drawing(TUNDUMA)	1	A3							*	
11	HQW46-2-TND-EQP-DWG-1601	Optical Fiber Communication Cabinet Terminals Wiring Drawing(TUNDUMA)	1	A3							*	
12	HQW46-2-TND-EQP-DWG-1601	Optical Distribution Frame Cabinet Drawing(TUNDUMA)	1	A3							*	
13	HQW46-2-TND-EQP-DWG-1601	Optical Distribution Frame Cabinet Power Supply Wiring Drawing(TUNDUMA)	1	A3							*	
14	HQW46-2-TND-EQP-DWG-1601	ODF Wiring Drawing1(TUNDUMA)	1	A3							*	
15	HQW46-2-TND-EQP-DWG-1601	ODF Wiring Drawing2(TUNDUMA)	1	A3							*	
16	HQW46-2-TND-EQP-DWG-1611	Remote Protection Interface Cabinet(TUNDUMA)	1	A3							*	
17	HQW46-2-TND-EQP-DWG-1611	Remote Protection Interface Cabinet Power Supply Wiring Drawing1(TUNDUMA)	1	A3							*	
18	HQW46-2-TND-EQP-DWG-1611	Remote Protection Interface Cabinet Power Supply Wiring Drawing2(TUNDUMA)	1	A3							*	
19	HQW46-2-TND-EQP-DWG-1611	Remote Protection Interface Cabinet Power Supply Wiring Drawing3(TUNDUMA)	1	A3							*	
20	HQW46-2-TND-EQP-DWG-1611	Remote Protection Interface Cabinet Power Supply Wiring Drawing4(TUNDUMA)	1	A3							*	
21	HQW46-2-TND-EQP-DWG-1611	Remote Protection Interface Cabinet Power Supply Wiring Drawing5(TUNDUMA)	1	A3							*	
22	HQW46-2-TND-EQP-DWG-1611	Teleprotection Interface Equipment TPT-200 Panel Drawing(TUNDUMA)	1	A3							*	
23	HQW46-2-TND-EQP-DWG-1611	Remote Protection Interface Cabinet Terminals Wiring Drawing(TUNDUMA)	1	A3							*	
24	HQW46-2-TND-EQP-DWG-1601	Optical Communication Cabinet Drawing2(TUNDUMA)	1	A3							*	
25	HQW46-2-TND-EQP-DWG-1601	Optical Communication Cabinet Drawing3(TUNDUMA)	1	A3							*	
26	HQW46-2-TND-EQP-DWG-1611	Remote Protection Interface Cabinet(NAKONDE)	1	A3							*	
27	HQW46-2-TND-EQP-DWG-1611	Remote Protection Interface Cabinet Power Supply Wiring Drawing1(NAKONDE)	1	A3							*	
28	HQW46-2-TND-EQP-DWG-1611	Remote Protection Interface Cabinet Power Supply Wiring Drawing2(NAKONDE)	1	A3							*	
29	HQW46-2-TND-EQP-DWG-1611	Teleprotection Interface Equipment TPT-200 Panel Drawing(NAKONDE)	1	A3							*	
30	HQW46-2-TND-EQP-DWG-1611	Remote Protection Interface Cabinet Terminals Wiring Drawing(NAKONDE)	1	A3							*	

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CONSULTANT: POWER GRID CORPORATION OF INDIA LIMITED					
CONTRACTOR: TBEA CO., LIMITED Building 27, Block 18, Nanshuan West Road Beijing, China					
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kv SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kv SUBSTATION					
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
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REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10			
DWG. NO.		HQW46-2-TND-EQP-DWG-1561	SHEET 27/31		

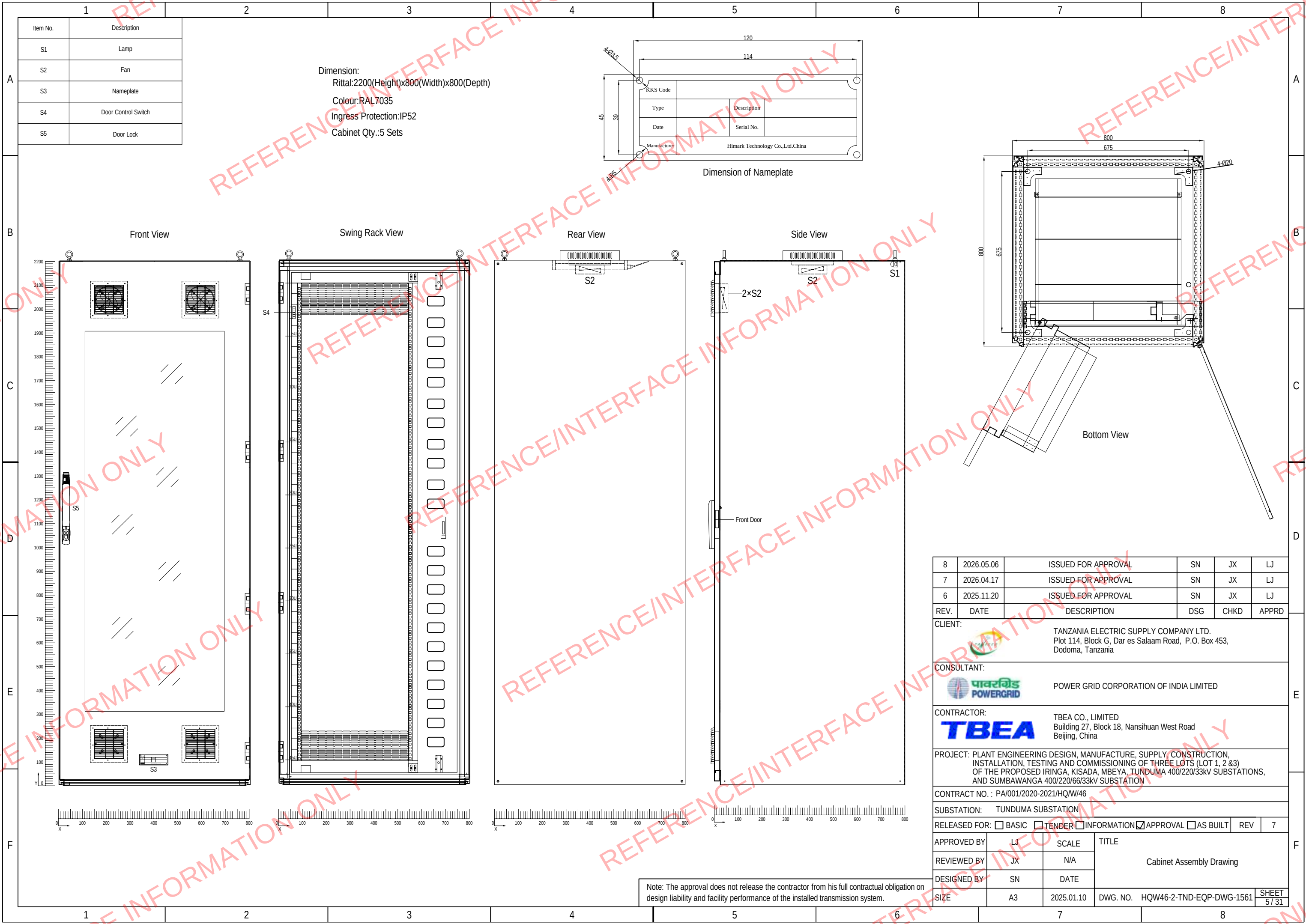
Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.

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CONSULTANT:					
 पावरग्रिड POWERGRID POWER GRID CORPORATION OF INDIA LIMITED					
CONTRACTOR:					
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SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
REV				7	
APPROVED BY	LJ	SCALE	TITLE Drawing Content2		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO.	HQW46-2-TND-EQP-DWG-1561	SHEET 3 / 31

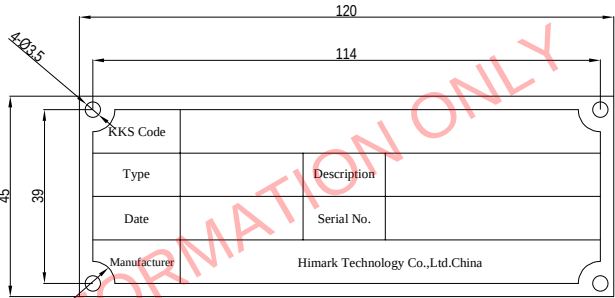


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RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE Optical Communication System Drawing		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1561		
			SHEET 4 / 31		

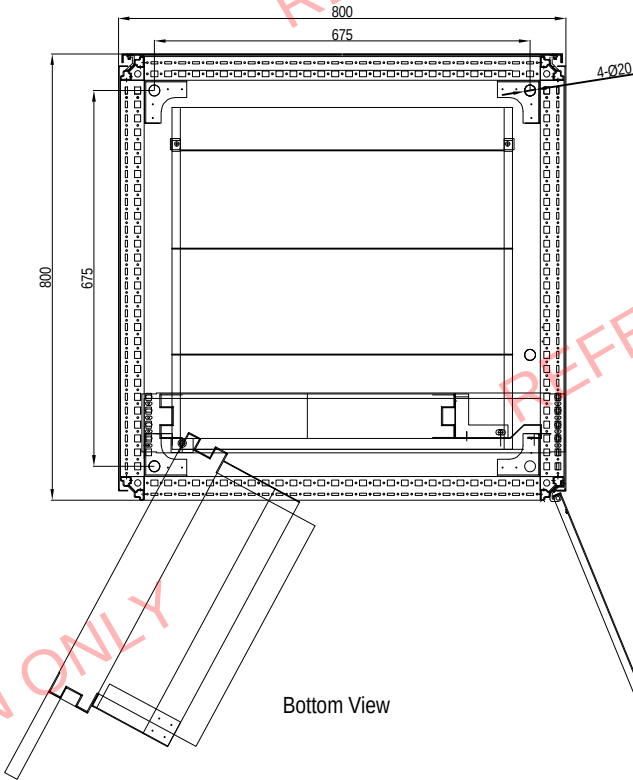


Item No.	Description
S1	Lamp
S2	Fan
S3	Nameplate
S4	Door Control Switch
S5	Door Lock

Dimension:
Rittal:2200(Height)x800(Width)x800(Depth)
Colour:RAL 7035
Ingress Protection:IP52
Cabinet Qty.:5 Sets



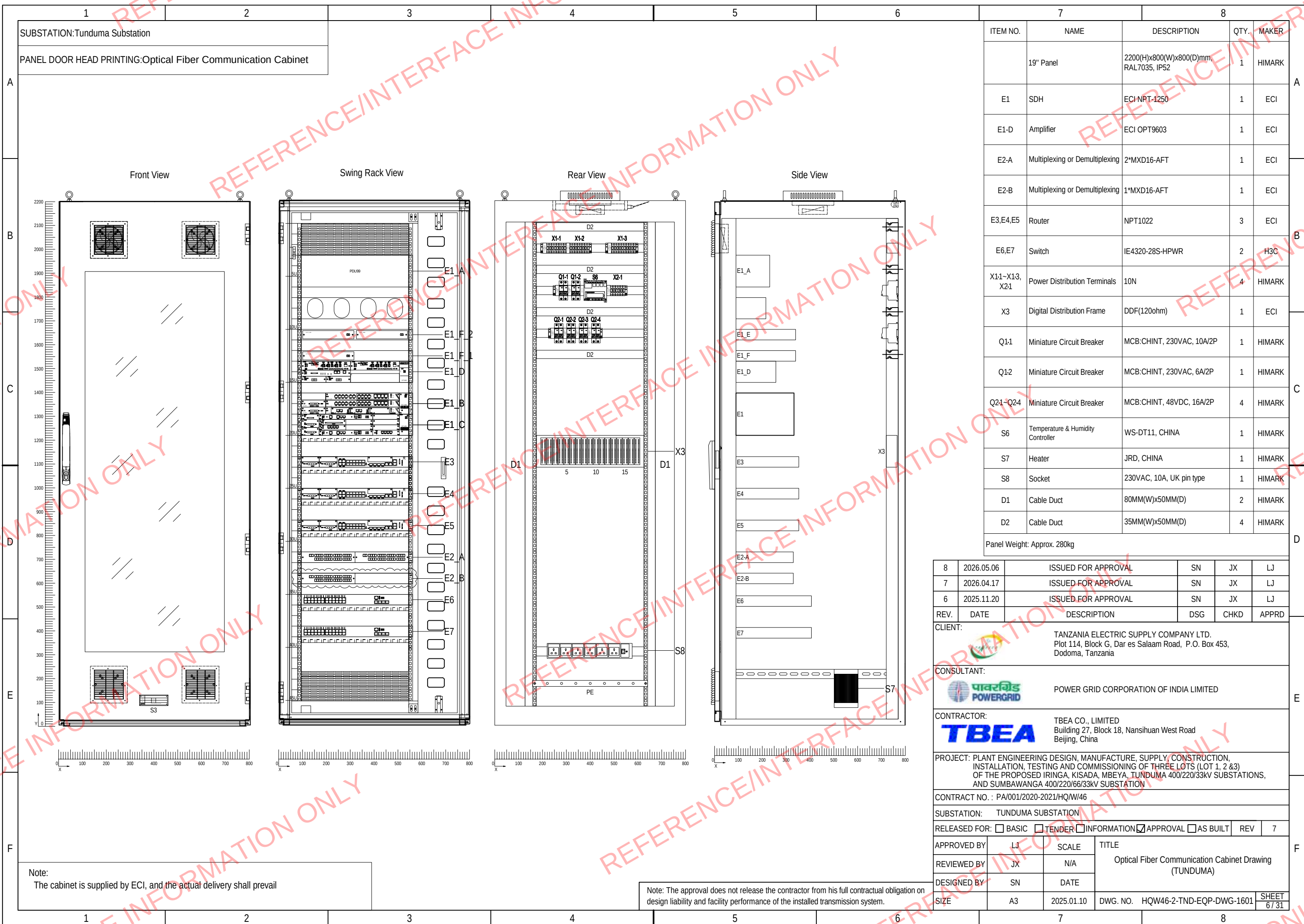
Dimension of Nameplate

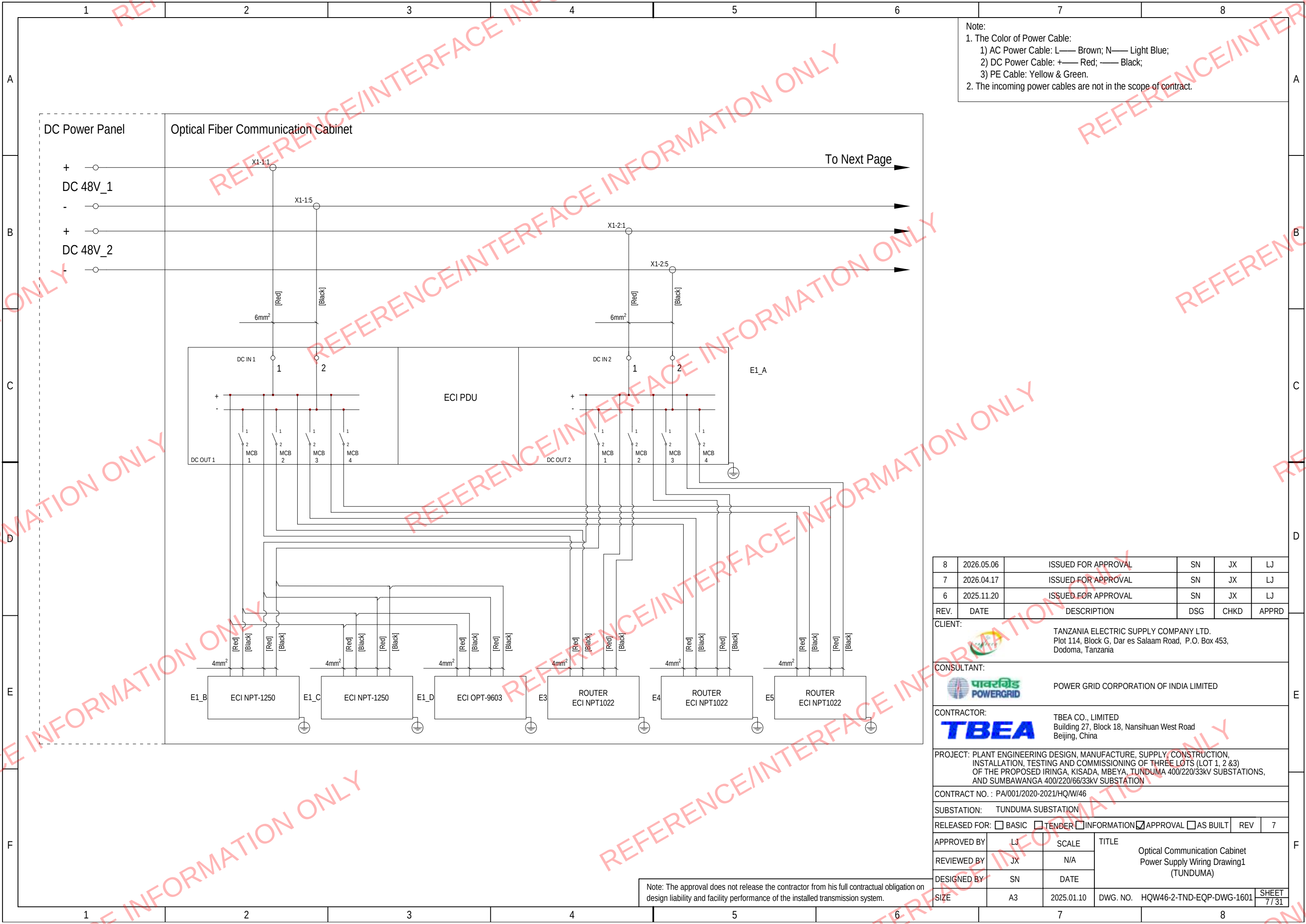


Bottom View

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CONSULTANT:		POWER GRID CORPORATION OF INDIA LIMITED					
CONTRACTOR:		TBEA CO., LIMITED Building 27, Block 18, Nanshuan West Road Beijing, China					
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SUBSTATION: TUNDUMA SUBSTATION							
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT							
					REV	7	
APPROVED BY	LJ	SCALE	TITLE Cabinet Assembly Drawing				
REVIEWED BY	JX	N/A					
DESIGNED BY	SN	DATE					
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1561				SHEET 57/31

Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.





Note:
1. The Color of Power Cable:
1) AC Power Cable: L— Brown; N— Light Blue;
2) DC Power Cable: +— Red; — Black;
3) PE Cable: Yellow & Green.
2. The incoming power cables are not in the scope of contract.

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Plot 114, Block G, Dar es Salaam Road, P.O. Box 453,
Dodoma, Tanzania

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CONTRACTOR: TBEA CO., LIMITED
Building 27, Block 18, Nanshuan West Road
Beijing, China

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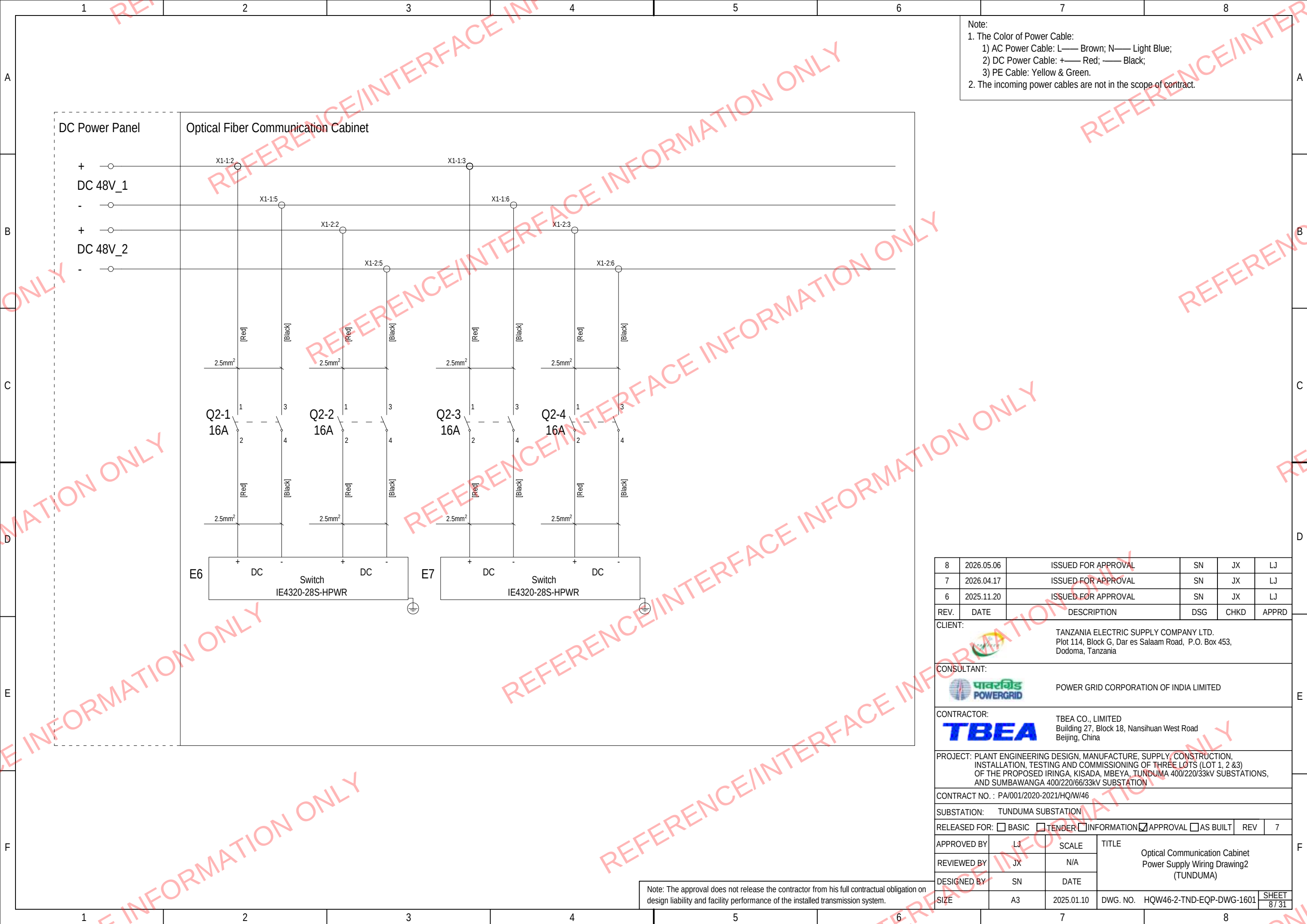
CONTRACT NO. : PA/001/2020-2021/HQ/W/46

SUBSTATION: TUNDUMA SUBSTATION

RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT REV 7

APPROVED BY	LJ	SCALE	TITLE Optical Communication Cabinet Power Supply Wiring Drawing1 (TUNDUMA)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO.	HQW46-2-TND-EQP-DWG-1601	SHEET 7/ 31

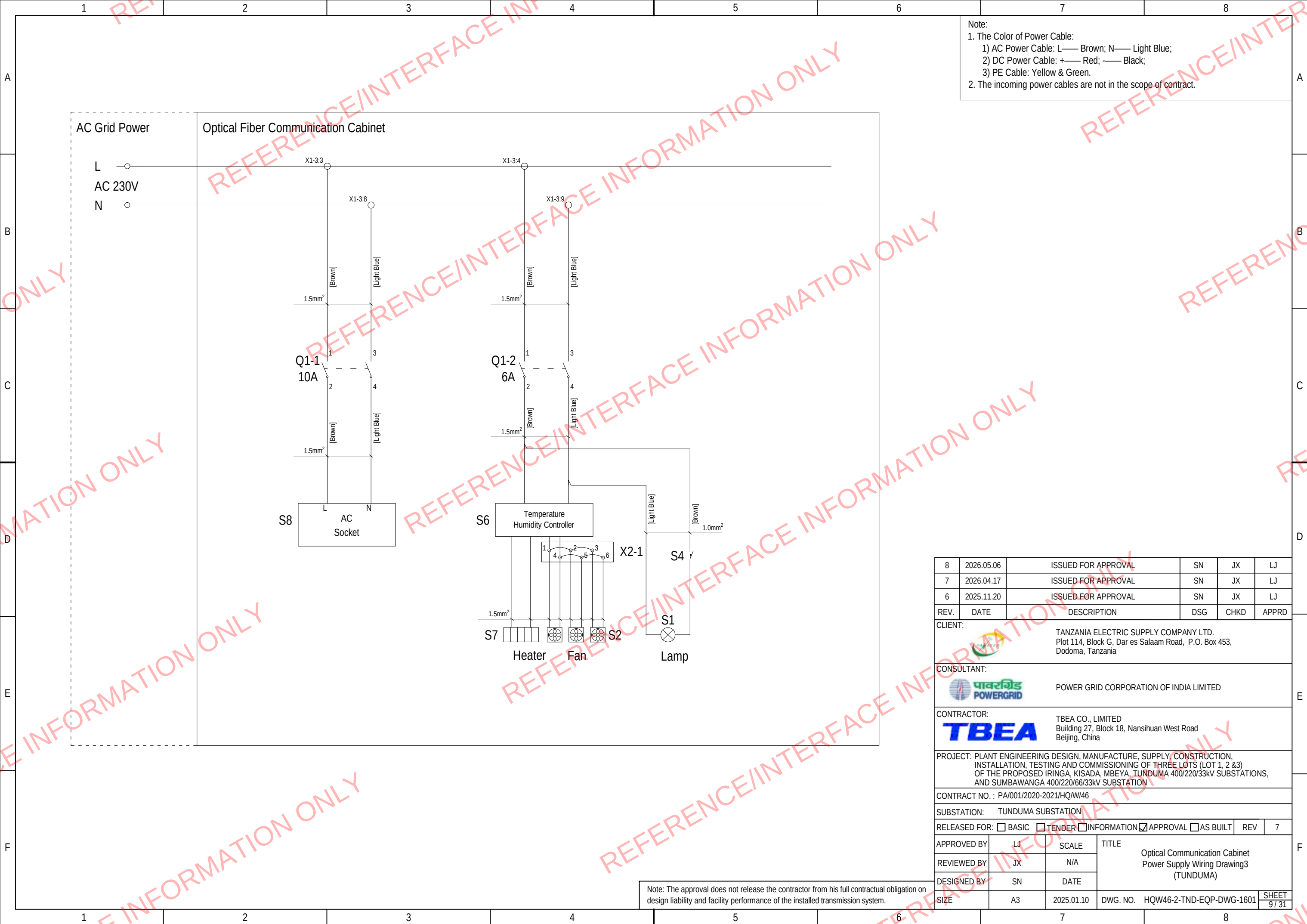
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Note:
1. The Color of Power Cable:
1) AC Power Cable: L—— Brown; N—— Light Blue;
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					REV	7
APPROVED BY	LJ	SCALE	TITLE Optical Communication Cabinet Power Supply Wiring Drawing2 (TUNDUMA)			
REVIEWED BY	JX	N/A				
DESIGNED BY	SN	DATE				
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1601			
						SHEET 8 / 31

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Note:

1. The Color of Power Cable:

1) AC Power Cable: L—— Brown; N—— Light Blue;

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					REV	7
APPROVED BY	LJ	SCALE	TITLE Optical Communication Cabinet Power Supply Wiring Drawing3 (TUNDUMA)			
REVIEWED BY	JX	N/A				
DESIGNED BY	SN	DATE				
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1601			
					SHEET 9/ 31	

ECI NPT-1250 PANEL VIEW



SDH ECI NPT-1250 Configuration List

NO.	SLOT NO.	TYPE	DESCRIPTION	QTY.
1	E1_C-PS A, E1_C-PS B	INF-1200	Power Supply Card	2
2	E1_C-ECB	ECB-1250	Main Control Card	1
3	E1_C-XS A, E1_C-XS B	MCIPS300FB	Crossing Card	2
4	E1_B-ES2,E1_B-ES3	DHGE_10_POE	Ethernet Card(6×GE SFP + 4×GE SFP/4×GE POE)	2
5	E1_C-TS2	DHXE_4	4×10GE Data Hybird Card	2
6	E1_C-TS5	MSE1_32	32×E1 Card	1
7	E1_C-FCU	FCU-1250	Fan	1
8	E1_B-PS A, E1_B-PS B	INF-E2U	Power Supply Card	2
9	E1_B-ES1	EM_10EB	PCM Card	1
10	E1_B-ES1-1,E1_B-ES1-2	SM_C37.94S	2×C37.94 Card	2
11	E1_B-FS	FCU-E2U	Fan	1

Amplifier ECI OPT9603 Configuration List

NO.	SLOT NO.	TYPE	DESCRIPTION	QTY.
1	D-2	RCP03R	Routing Control Processor	1
2	D-3,D-4	PFM03_H	Power Supply Card	2
3	D-1,D-5	OA_DLHF	Dual amplifier OA_LF and OA_HF	2
4	D-7	FCM03	Fan	1

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CONSULTANT:

 पावरग्रिड
POWERGRID

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SUBSTATION: TUNDUMA SUBSTATION

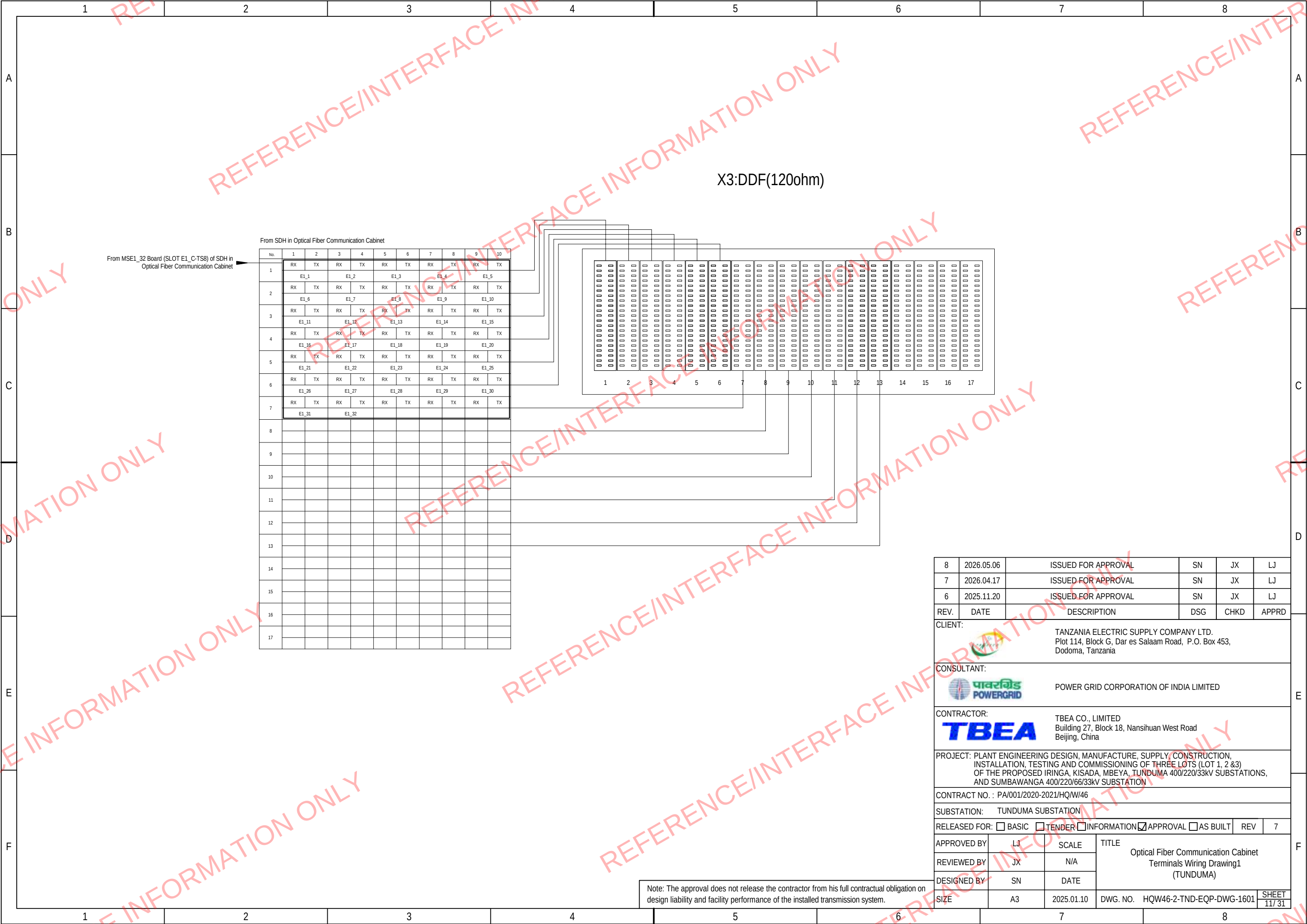
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT | REV | 7

APPROVED BY	LJ	SCALE	TITLE SDH ECI NPT-1250 Panel Drawing (TUNDUMA)
REVIEWED BY	JX	N/A	

DESIGNED BY	SN	DATE		
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1601	SHEET 10 / 31

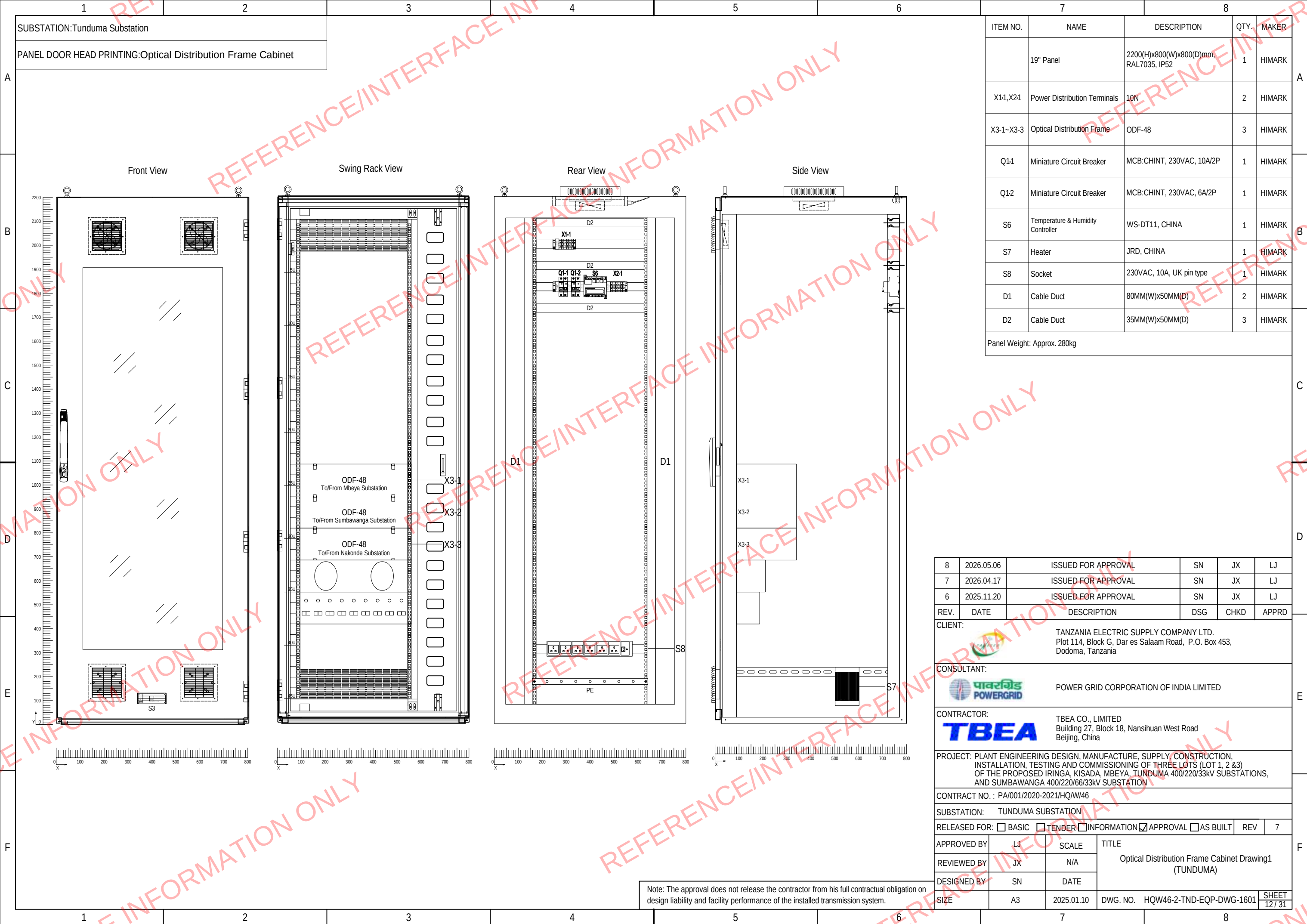
 Out of scope
To be supplied under supplementary contract.

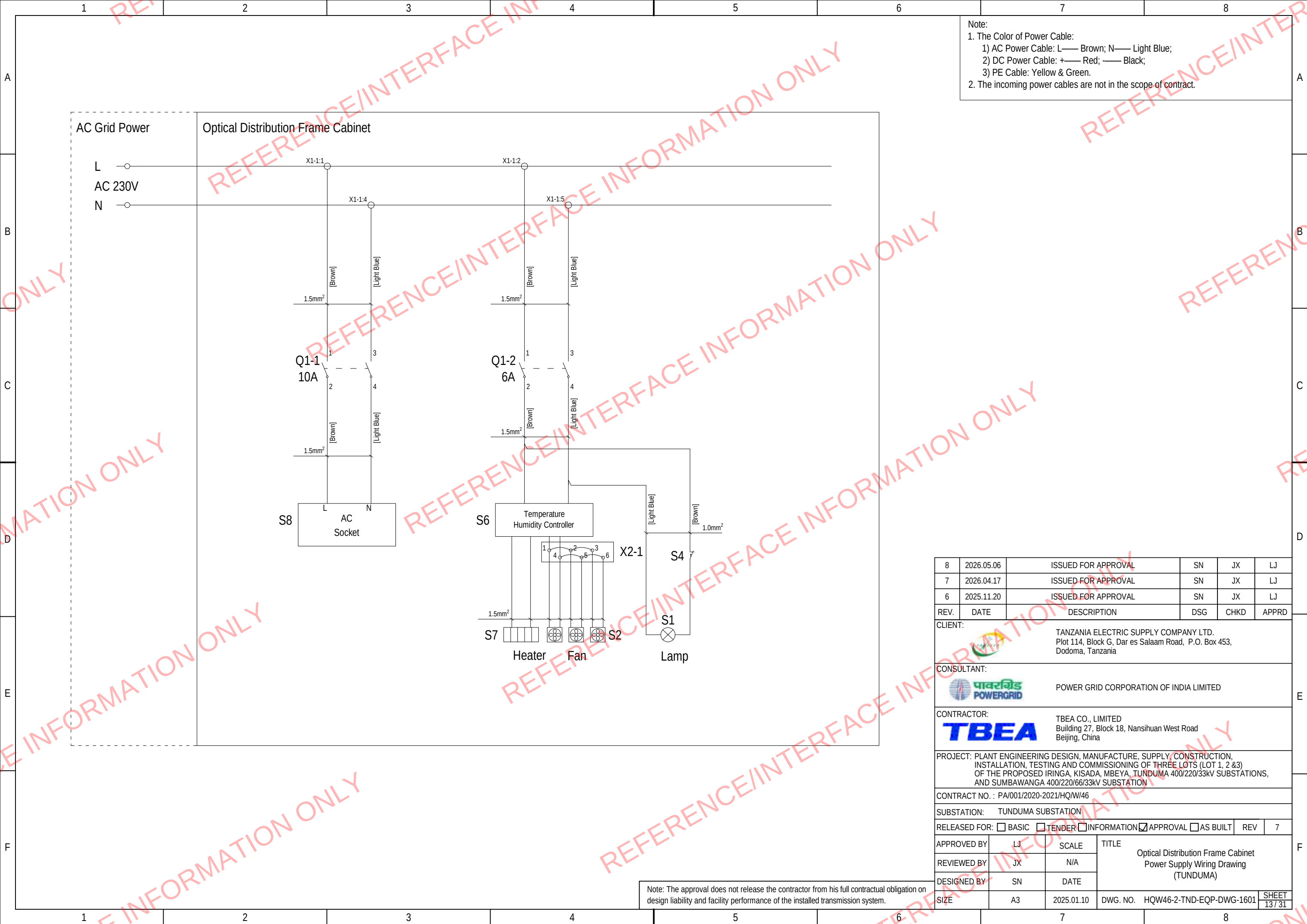
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CONTRACTOR:  TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China						
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kV SUBSTATION						
CONTRACT NO. : PA/001/2020-2021/HQ/W/46						
SUBSTATION: TUNDUMA SUBSTATION						
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT						
					REV	7
APPROVED BY	LJ	SCALE	TITLE Optical Fiber Communication Cabinet Terminals Wiring Drawing1 (TUNDUMA)			
REVIEWED BY	JX	N/A				
DESIGNED BY	SN	DATE				
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1601			SHEET 11/ 31

Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.





Note:

1. The Color of Power Cable:

1) AC Power Cable: L—— Brown; N—— Light Blue;

2) DC Power Cable: +—— Red; —— Black;

3) PE Cable: Yellow & Green.

2. The incoming power cables are not in the scope of contract.

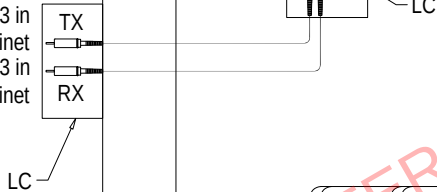
8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:		TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania			
CONSULTANT:		POWER GRID CORPORATION OF INDIA LIMITED			
CONTRACTOR:		TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China			
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kV SUBSTATION					
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE Optical Distribution Frame Cabinet Power Supply Wiring Drawing (TUNDUMA)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1601		
			SHEET 137/31		

Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.

X3-1 ODF-48

To Mbeya Substation

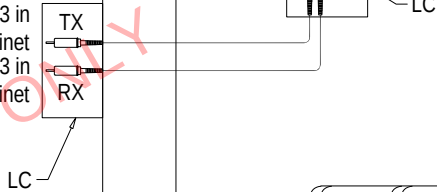
From OA-DLHF(SLOT E1_D-1) of OPT9603 in
Optical Fiber Communication Cabinet
From OA-DLHF(SLOT E1_D-1) of OPT9603 in
Optical Fiber Communication Cabinet



X3-2 ODF-48

To Sumbawanga Substation

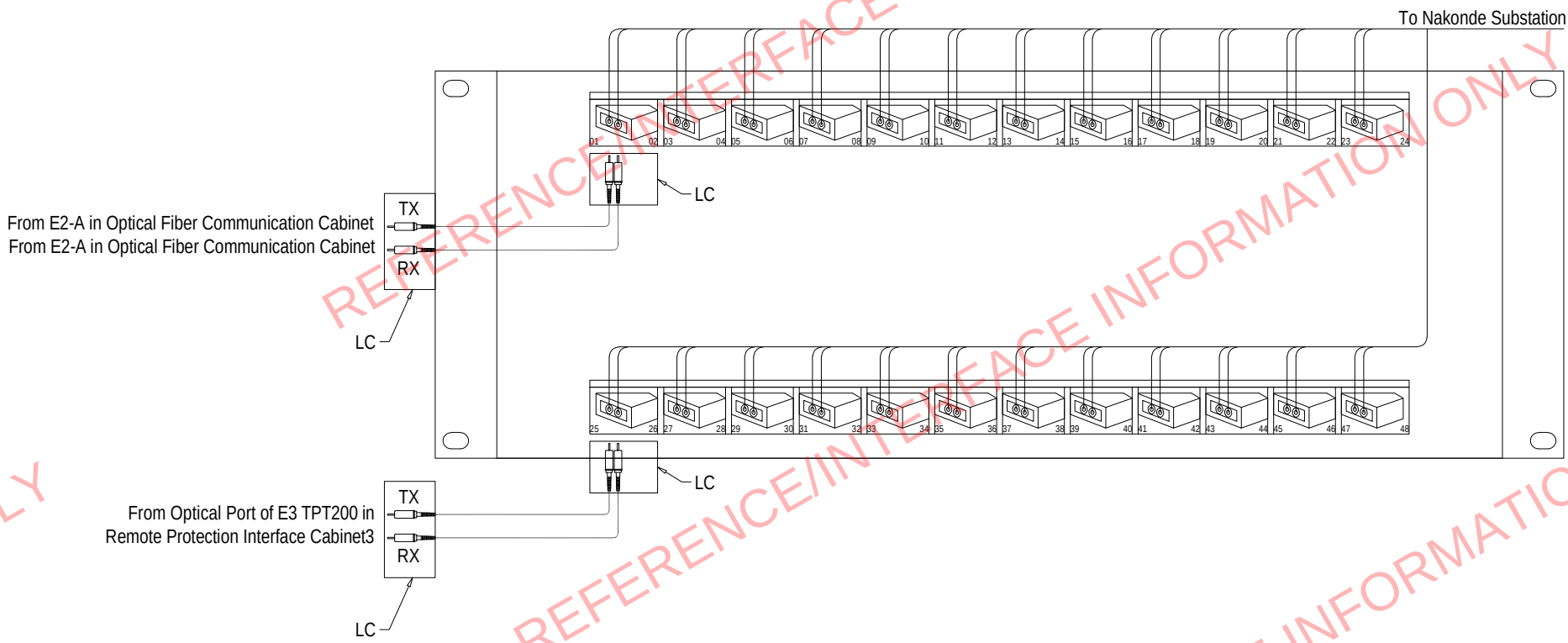
From OA-DLHF(SLOT E1_D-5) of OPT9603 in
Optical Fiber Communication Cabinet
From OA-DLHF(SLOT E1_D-5) of OPT9603 in
Optical Fiber Communication Cabinet



8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:		 TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania			
CONSULTANT:		 POWER GRID CORPORATION OF INDIA LIMITED			
CONTRACTOR:		 TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China			
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kV SUBSTATION					
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE ODF Wiring Drawing1 (TUNDUMA)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1601		
			SHEET 14/ 31		

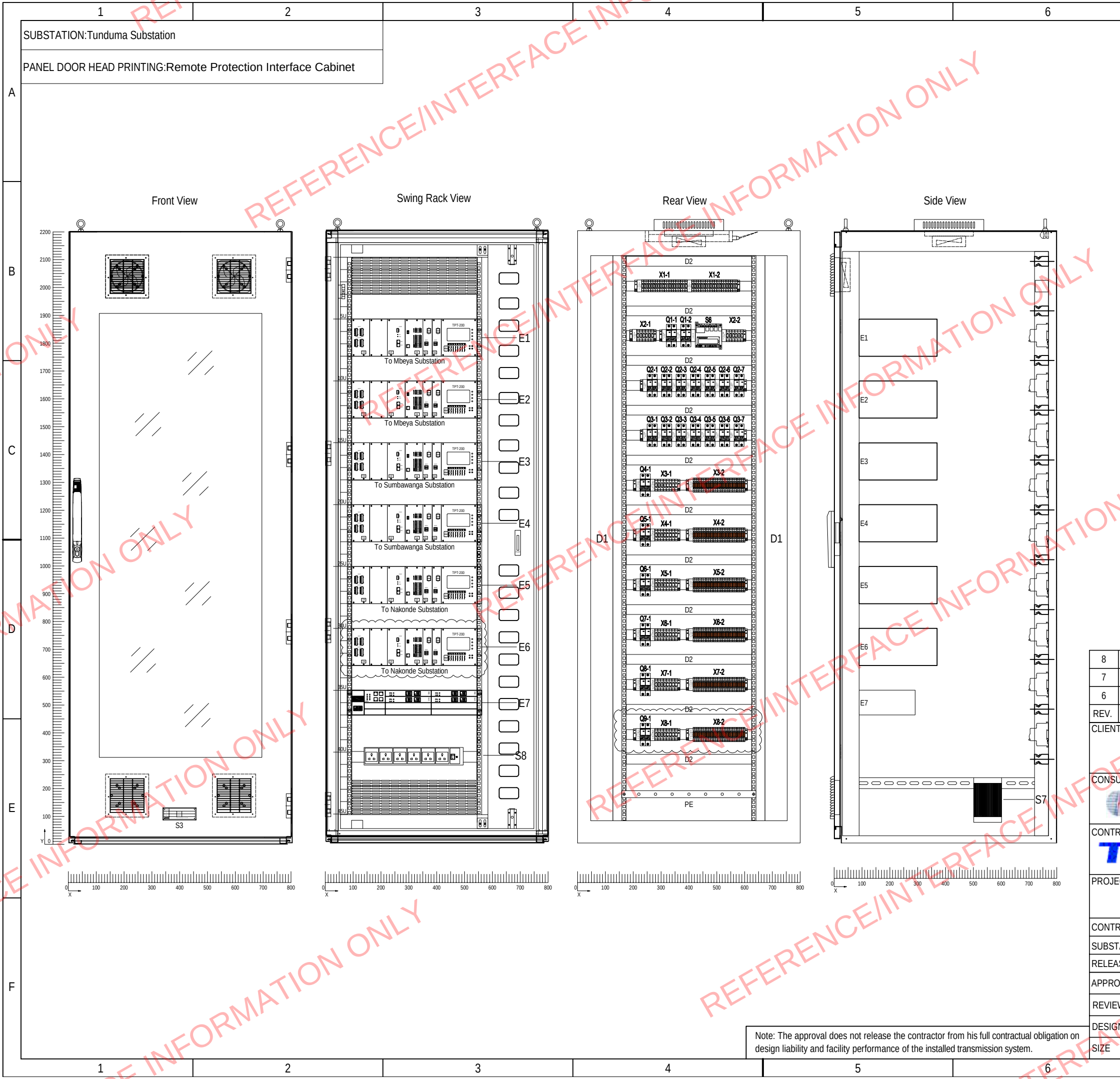
Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.

X3-3 ODF-48

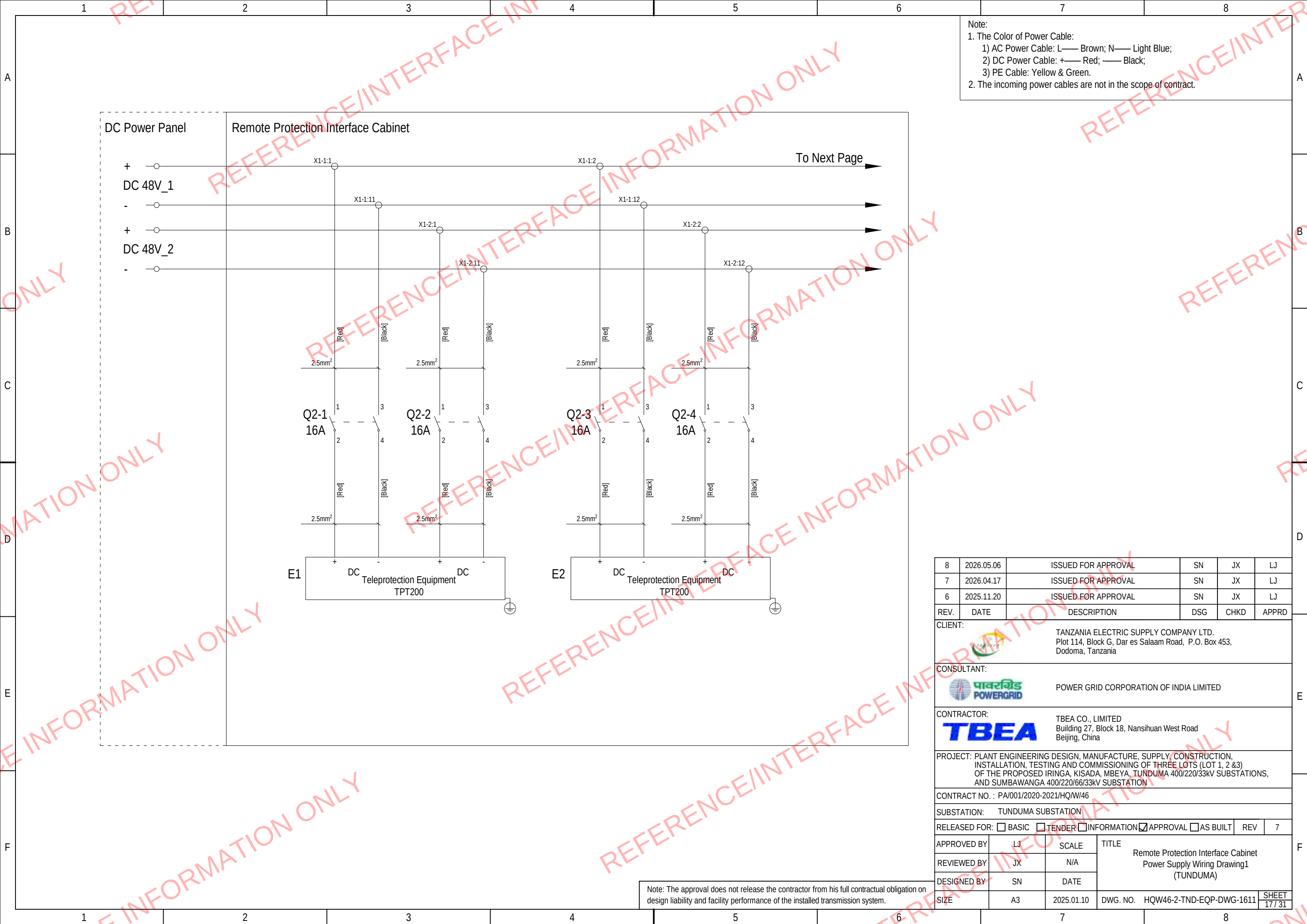


8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:		TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania			
CONSULTANT:		POWER GRID CORPORATION OF INDIA LIMITED			
CONTRACTOR:		TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China			
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kV SUBSTATION					
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE ODF Wiring Drawing2 (TUNDUMA)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO.	HQW46-2-TND-EQP-DWG-1601	SHEET 15 / 31

Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.



7			8		
ITEM NO.	NAME	DESCRIPTION	QTY.	MAKER	
	19" Panel	2200(H)x800(W)x800(D)mm, RAL7035, IP52	1	HIMARK	
E1-E6	Teleprotection Equipment	TPT200	6	HIMARK	
E7	Amplifier	OSP2200	1	HIMARK	
X11-X12	Power Distribution Terminals	6N	2	HIMARK	
X21-X22 X31-X81	Power Distribution Terminals	10N	8	HIMARK	
X32-X82	TPT-200 Terminals	JWD1-4K	6	HIMARK	
Q11	Miniature Circuit Breaker	MCB:CHINT, 230VAC, 10A/2P	1	HIMARK	
Q12	Miniature Circuit Breaker	MCB:CHINT, 230VAC, 6A/2P	1	HIMARK	
Q21-Q27, Q31-Q37, Q41-Q91	Miniature Circuit Breaker	MCB:CHINT, 48VDC, 16A/2P	20	HIMARK	
S6	Temperature & Humidity Controller	WS-DT11, CHINA	1	HIMARK	
S7	Heater	JRD, CHINA	1	HIMARK	
S8	Socket	230VAC, 10A, UK pin type	1	HIMARK	
D1	Cable Duct	80MM(W)x50MM(D)	2	HIMARK	
D2	Cable Duct	35MM(W)x50MM(D)	10	HIMARK	
Panel Weight: Approx. 280kg					



Note:

1. The Color of Power Cable:

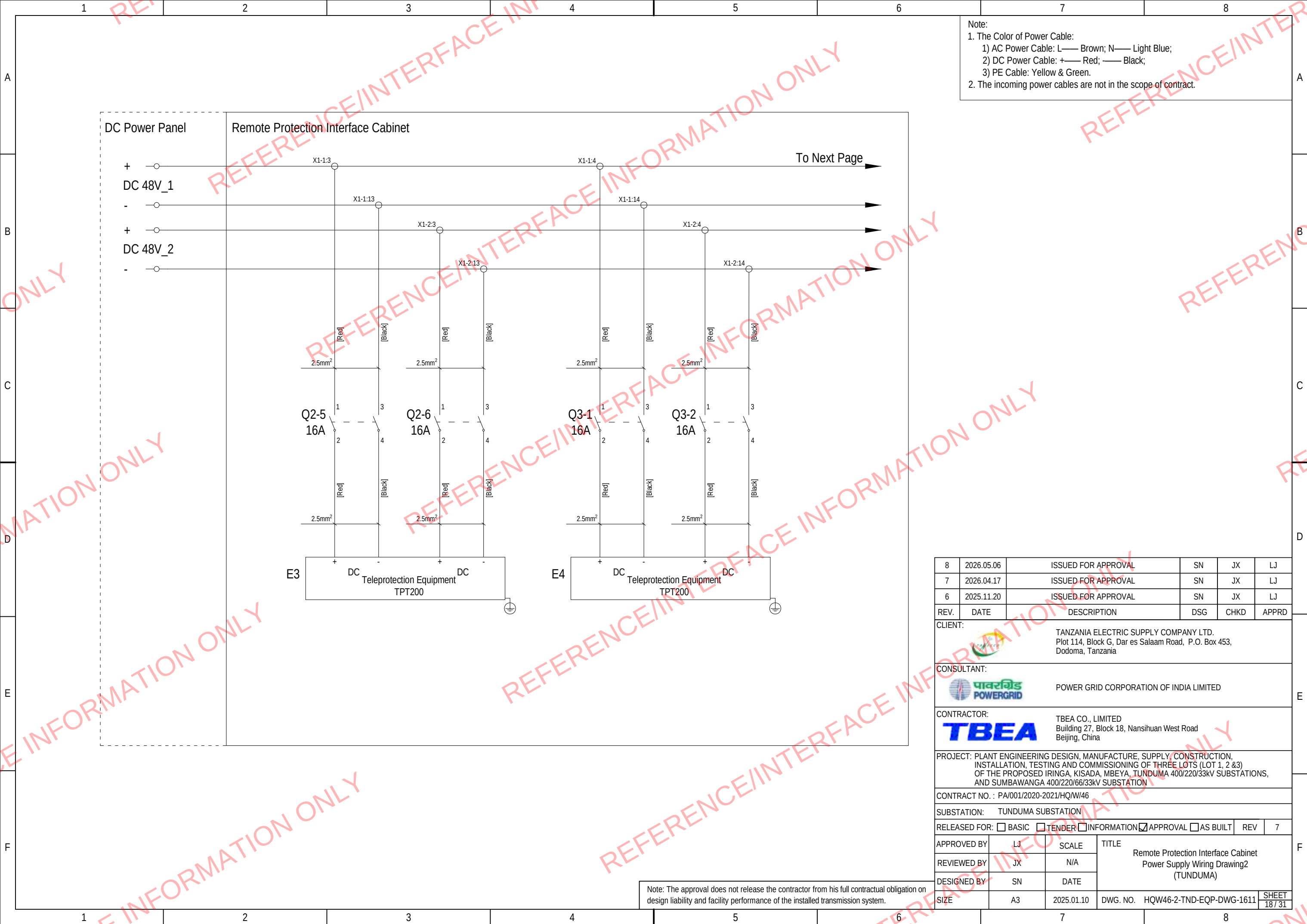
1) AC Power Cable: L—— Brown; N—— Light Blue;

2) DC Power Cable: +—— Red; —— Black;

3) PE Cable: Yellow & Green.

2. The incoming power cables are not in the scope of contract.

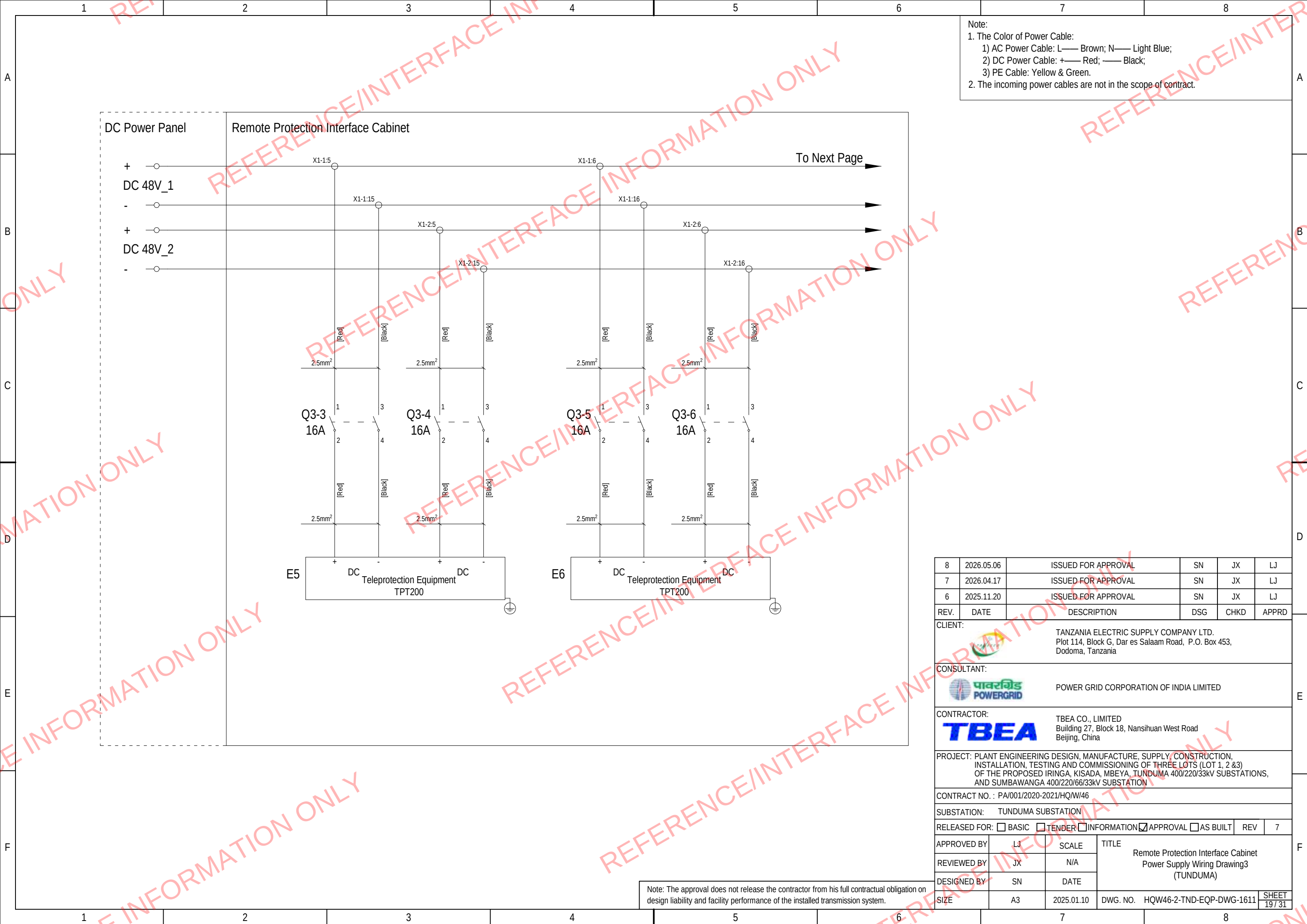
8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:		 TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania			
CONSULTANT:		 POWER GRID CORPORATION OF INDIA LIMITED			
CONTRACTOR:		 TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China			
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33KV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33KV SUBSTATION					
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE Remote Protection Interface Cabinet Power Supply Wiring Drawing1 (TUNDUMA)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1611		SHEET 177/31



Note:
1. The Color of Power Cable:
1) AC Power Cable: L—— Brown; N—— Light Blue;
2) DC Power Cable: +—— Red; —— Black;
3) PE Cable: Yellow & Green.
2. The incoming power cables are not in the scope of contract.

8	2026.05.06	ISSUED FOR APPROVAL		SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL		SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL		SN	JX	LJ
REV.	DATE	DESCRIPTION		DSG	CHKD	APPRD
CLIENT:  TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania						
CONSULTANT:  POWER GRID CORPORATION OF INDIA LIMITED						
CONTRACTOR:  TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China						
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kV SUBSTATION						
CONTRACT NO.: PA/001/2020-2021/HQ/W/46						
SUBSTATION: TUNDUMA SUBSTATION						
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT						
					REV	7
APPROVED BY	LJ	SCALE	TITLE Remote Protection Interface Cabinet Power Supply Wiring Drawing2 (TUNDUMA)			
REVIEWED BY	JX	N/A				
DESIGNED BY	SN	DATE				
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1611			SHEET 18 / 31

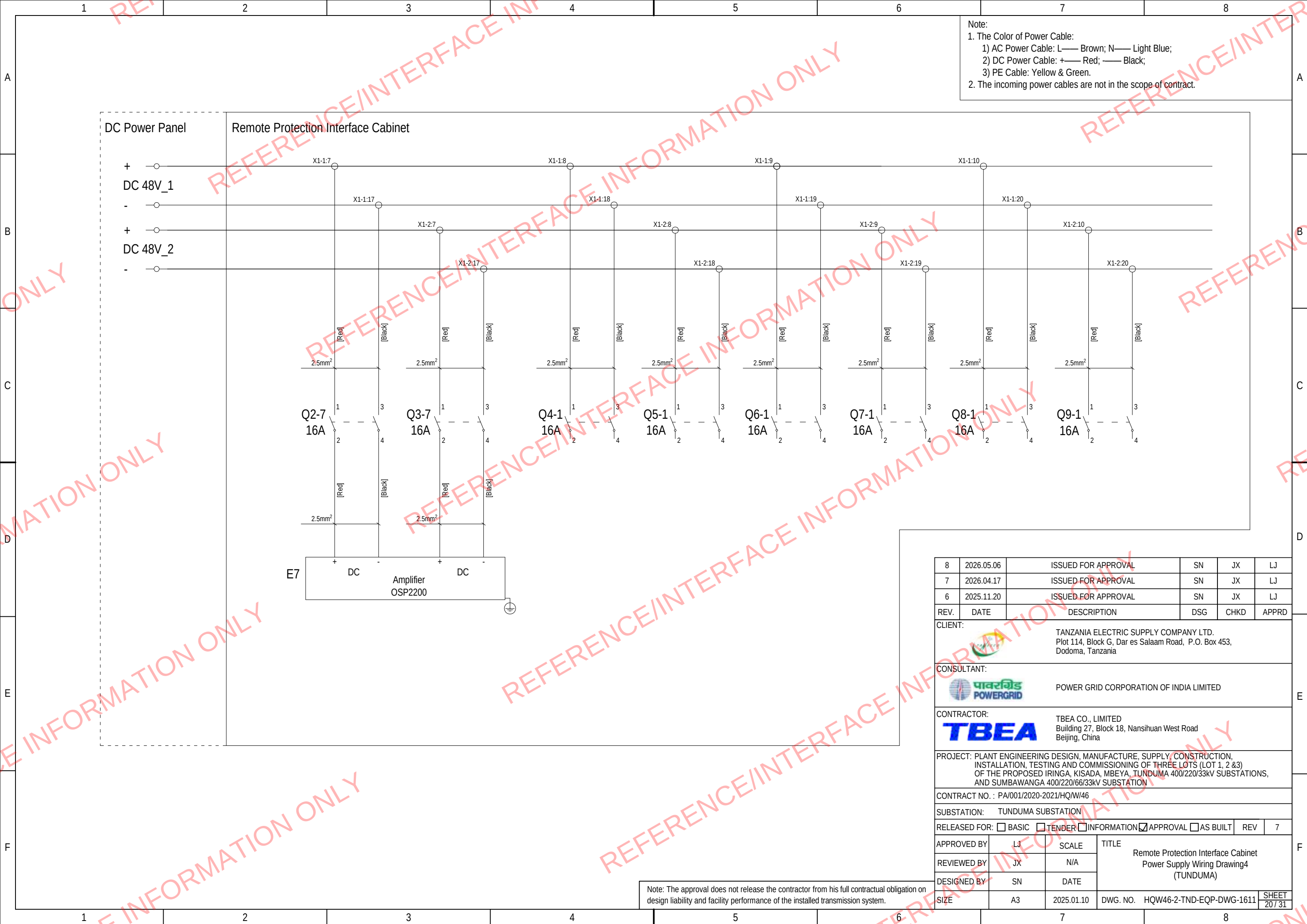
Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.



Note:
1. The Color of Power Cable:
1) AC Power Cable: L—— Brown; N—— Light Blue;
2) DC Power Cable: +—— Red; —— Black;
3) PE Cable: Yellow & Green.
2. The incoming power cables are not in the scope of contract.

8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:			TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania		
CONSULTANT:			 POWER GRID CORPORATION OF INDIA LIMITED		
CONTRACTOR:			TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China		
PROJECT:			PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kV SUBSTATION		
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE Remote Protection Interface Cabinet Power Supply Wiring Drawing3 (TUNDUMA)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1611		SHEET 19 / 31

Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.



Note:

1. The Color of Power Cable:

1) AC Power Cable: L—— Brown; N—— Light Blue;

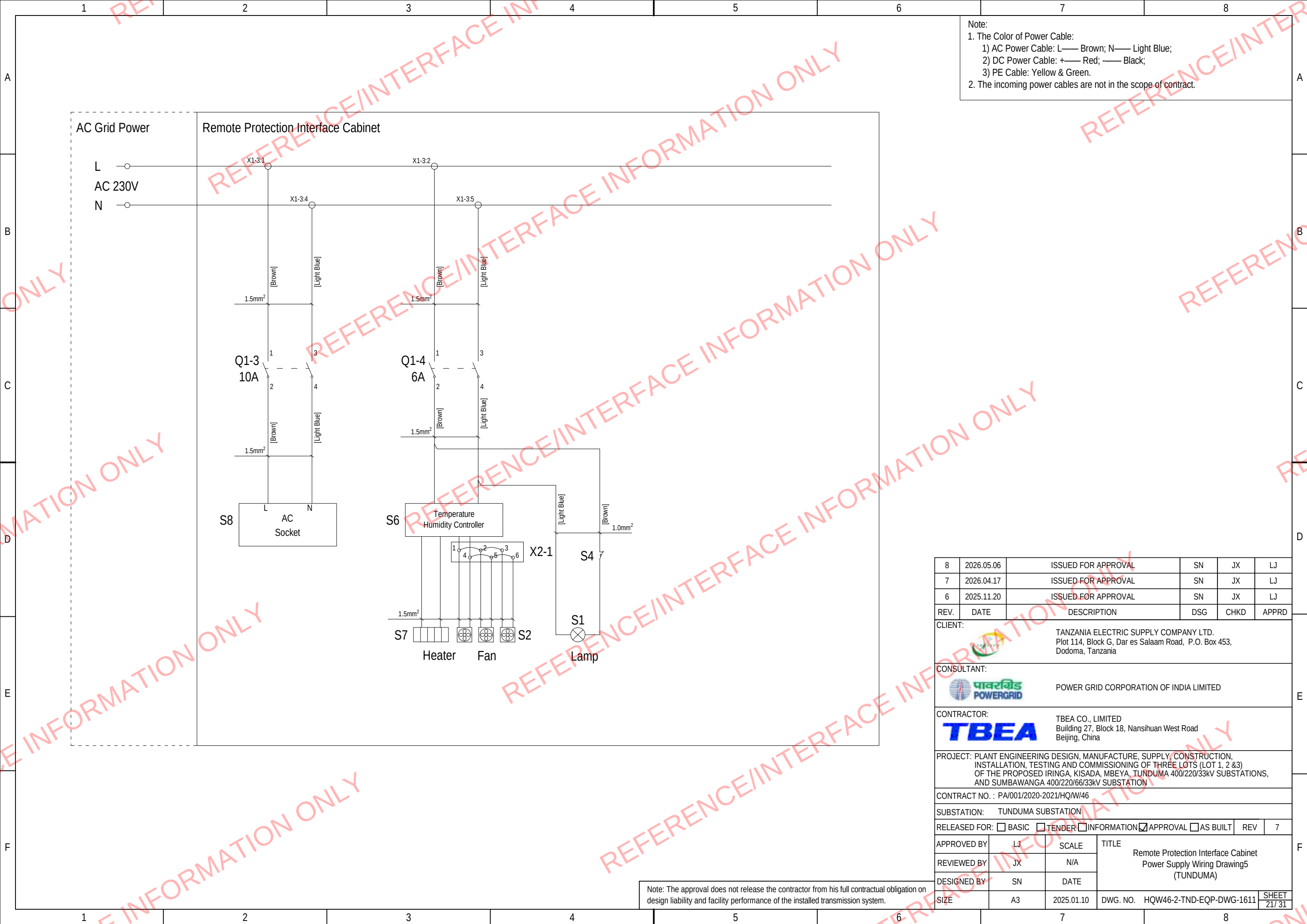
2) DC Power Cable: +—— Red; —— Black;

3) PE Cable: Yellow & Green.

2. The incoming power cables are not in the scope of contract.

8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:		 TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania			
CONSULTANT:		 POWER GRID CORPORATION OF INDIA LIMITED			
CONTRACTOR:		 TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China			
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33KV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33KV SUBSTATION					
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE Remote Protection Interface Cabinet Power Supply Wiring Drawing4 (TUNDUMA)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO.	HQW46-2-TND-EQP-DWG-1611	SHEET 20 / 31

Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.



Note:

1. The Color of Power Cable:

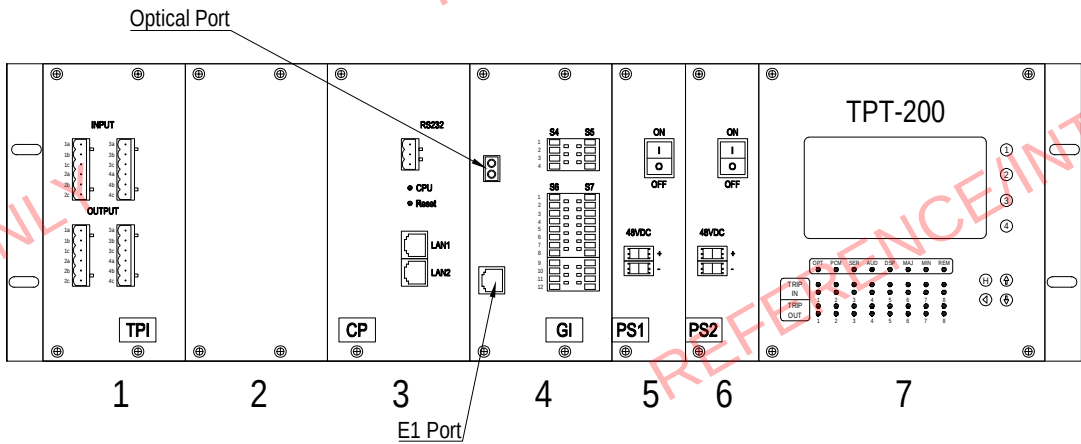
- 1) AC Power Cable: L — Brown; N — Light Blue;
- 2) DC Power Cable: + — Red; — Black;
- 3) PE Cable: Yellow & Green.

2. The incoming power cables are not in the scope of contract.

8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:		 TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania			
CONSULTANT:		 POWER GRID CORPORATION OF INDIA LIMITED			
CONTRACTOR:		 TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China			
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33KV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33KV SUBSTATION					
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE Remote Protection Interface Cabinet Power Supply Wiring Drawing5 (TUNDUMA)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1611		
			SHEET 21/ 31		

Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.

E1~E5
TPT-200 PANEL VIEW



HIMARK TPT-200 SCHEDULE

NO.	Slot NO.	Type	Description	QTY.
1	7	/	Display Unit	1
2	5,6	PS	Power Supply Unit(DC48V)	2
3	3	CP	Central Processing Unit	1
4	4	GI	General Interface Module	1
5	1	TPI	Tele-Protection Interface Module(4Commands)	1

8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD

CLIENT:  TANZANIA ELECTRIC SUPPLY COMPANY LTD.
Plot 114, Block G, Dar es Salaam Road, P.O. Box 453,
Dodoma, Tanzania

CONSULTANT:  POWER GRID CORPORATION OF INDIA LIMITED

CONTRACTOR:  TBEA CO., LIMITED
Building 27, Block 18, Nanshuan West Road
Beijing, China

PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY CONSTRUCTION,
INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3)
OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS,
AND SUMBAWANGA 400/220/66/33kV SUBSTATION

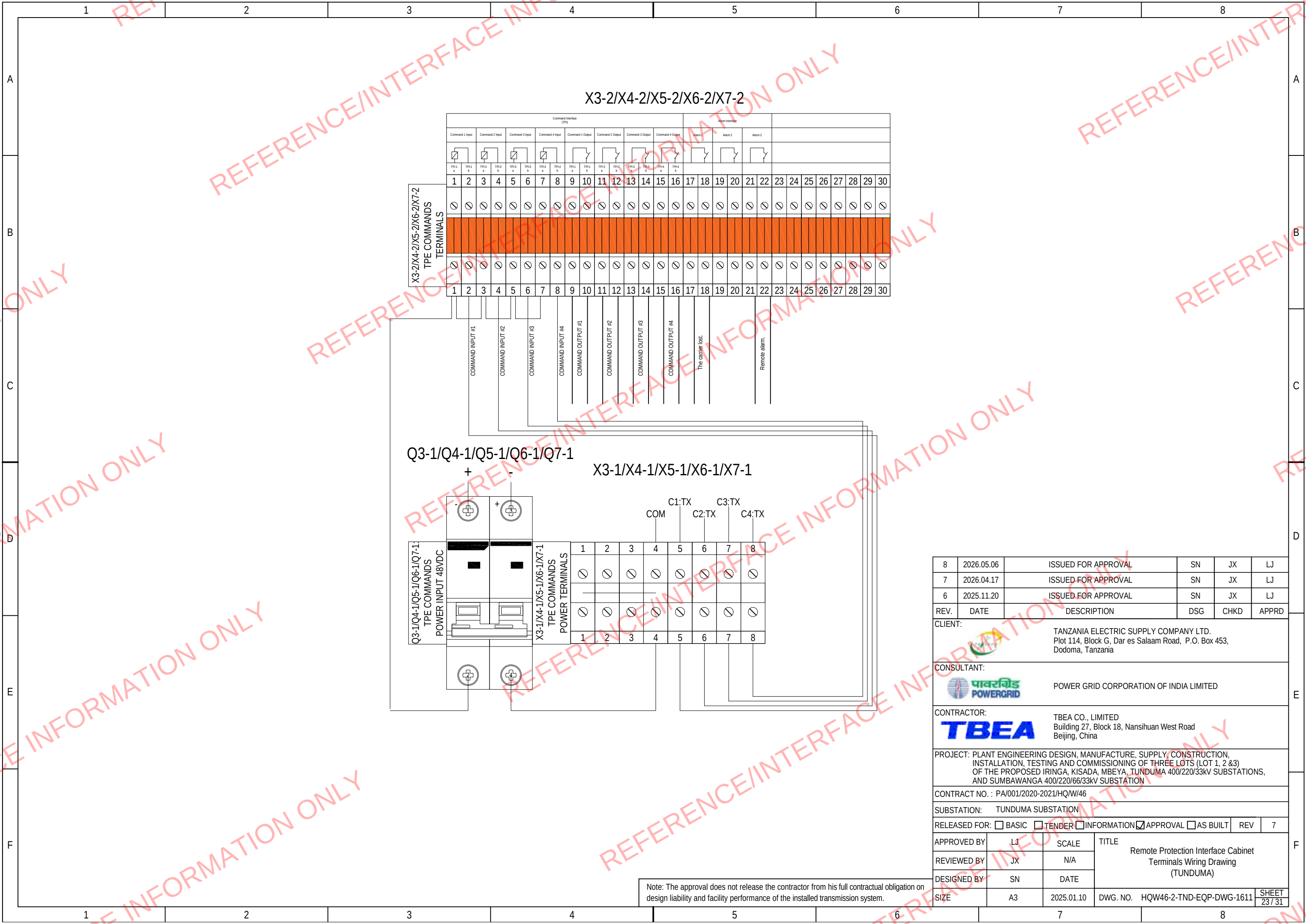
CONTRACT NO. : PA/001/2020-2021/HQ/W/46

SUBSTATION: TUNDUMA SUBSTATION

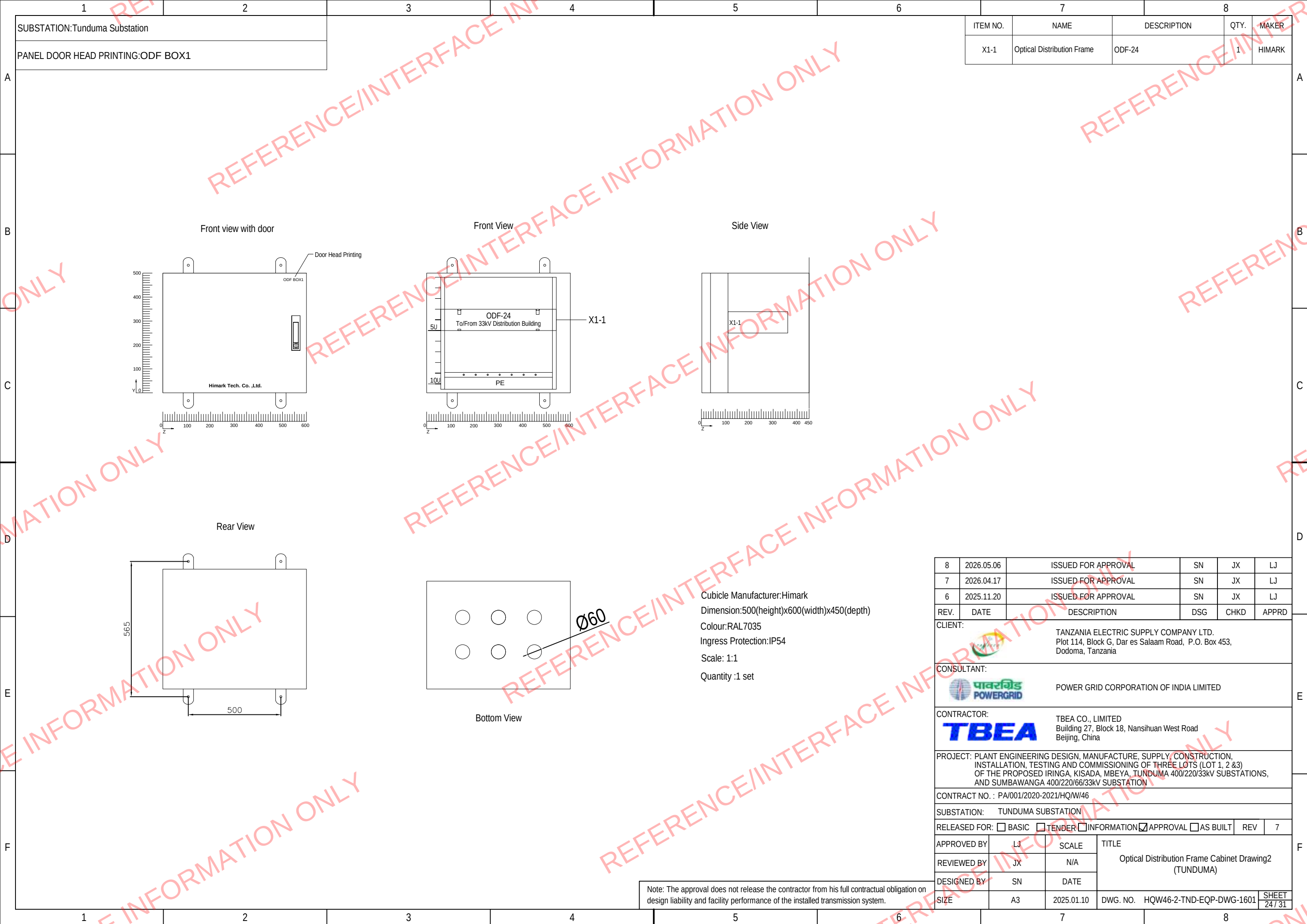
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT REV 7

APPROVED BY	LJ	SCALE	TITLE Teleprotection Interface Equipment TPT-200 Panel Drawing (TUNDUMA)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO.	HQW46-2-TND-EQP-DWG-1611	SHEET 22 / 31

Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.



8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:			TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania		
CONSULTANT:			POWER GRID CORPORATION OF INDIA LIMITED		
CONTRACTOR:			TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China		
PROJECT:			PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kV SUBSTATION		
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE Remote Protection Interface Cabinet Terminals Wiring Drawing (TUNDUMA)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1611		SHEET 23 / 31



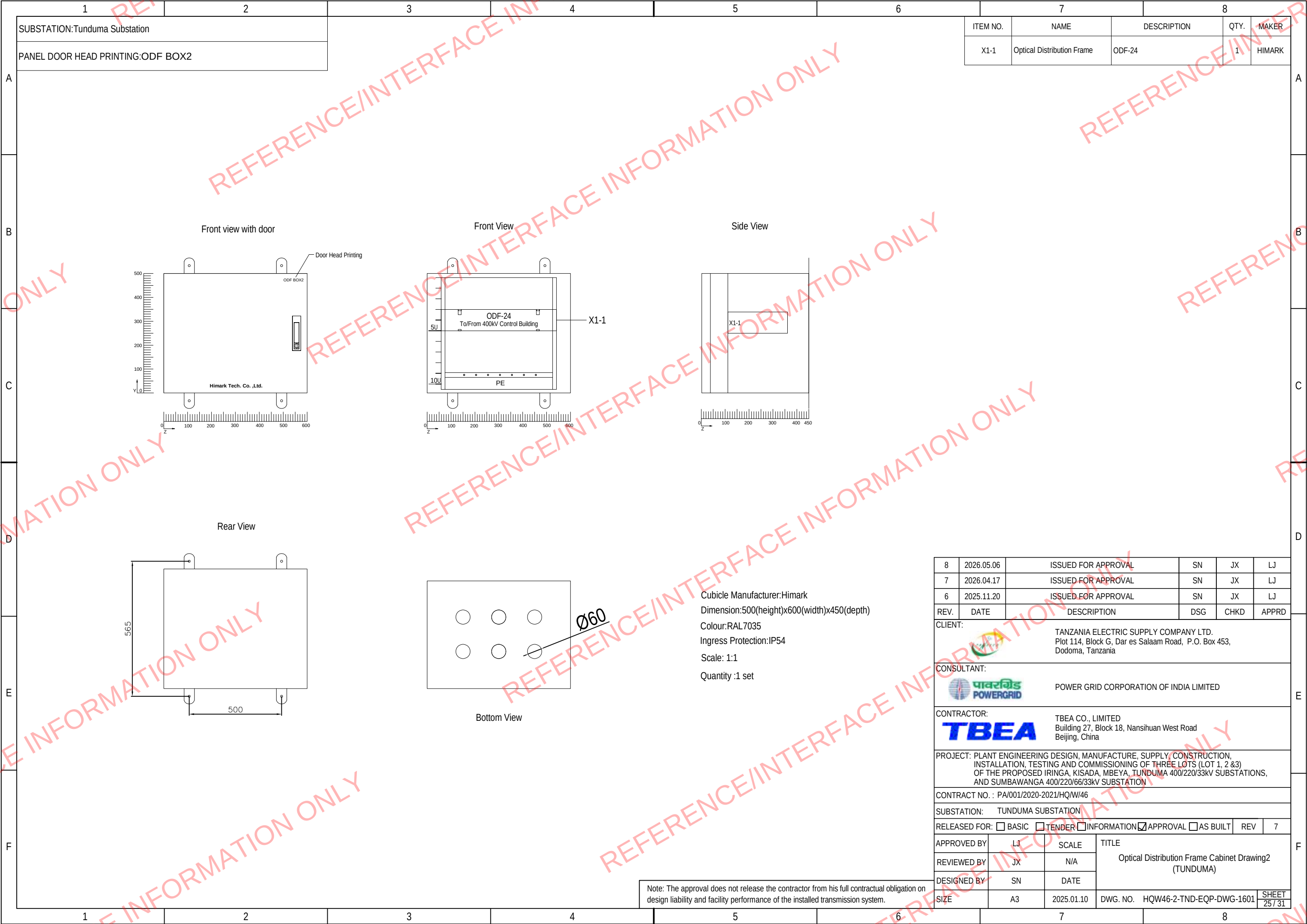
SUBSTATION:Tunduma Substation

PANEL DOOR HEAD PRINTING:ODF BOX1

ITEM NO.	NAME	DESCRIPTION	QTY.	MAKER
X1-1	Optical Distribution Frame	ODF-24	1	HIMARK

8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:		 TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania			
CONSULTANT:		 POWER GRID CORPORATION OF INDIA LIMITED			
CONTRACTOR:		 TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China			
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kV SUBSTATION					
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE Optical Distribution Frame Cabinet Drawing2 (TUNDUMA)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1601		
			SHEET 24 / 31		

Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.



8	7	6	5	4	3	2	1
2026.05.06	2026.04.17	2025.11.20					
ISSUED FOR APPROVAL	ISSUED FOR APPROVAL	ISSUED FOR APPROVAL					
SN	SN	SN					
JX	JX	JX					
LJ	LJ	LJ					
DSG	CHKD	APPRD					

CLIENT:

TANZANIA ELECTRIC SUPPLY COMPANY LTD.
Plot 114, Block G, Dar es Salaam Road, P.O. Box 453,
Dodoma, Tanzania

CONSULTANT:

पावरग्रिड
POWERGRID

POWER GRID CORPORATION OF INDIA LIMITED

CONTRACTOR:

TBEA

TBEA CO., LIMITED
Building 27, Block 18, Nanshuan West Road
Beijing, China

PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY CONSTRUCTION,
INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3)
OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS,
AND SUMBAWANGA 400/220/66/33kV SUBSTATION

CONTRACT NO. : PA/001/2020-2021/HQ/W/46

SUBSTATION: TUNDUMA SUBSTATION

RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT

REV 7

APPROVED BY LJ

SCALE

TITLE

REVIEWED BY JX

N/A

Optical Distribution Frame Cabinet Drawing2
(TUNDUMA)

DESIGNED BY SN

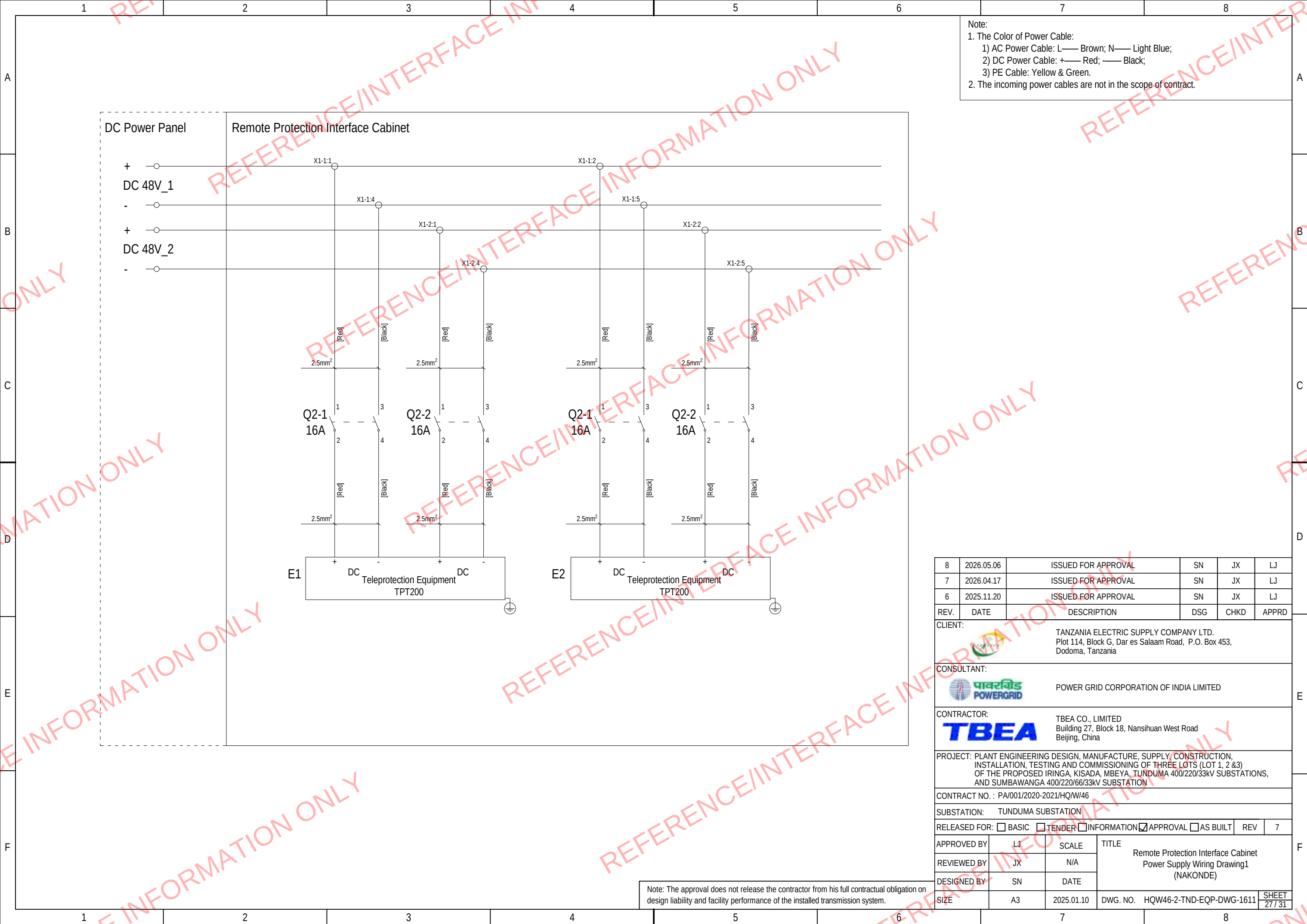
DATE

SIZE A3

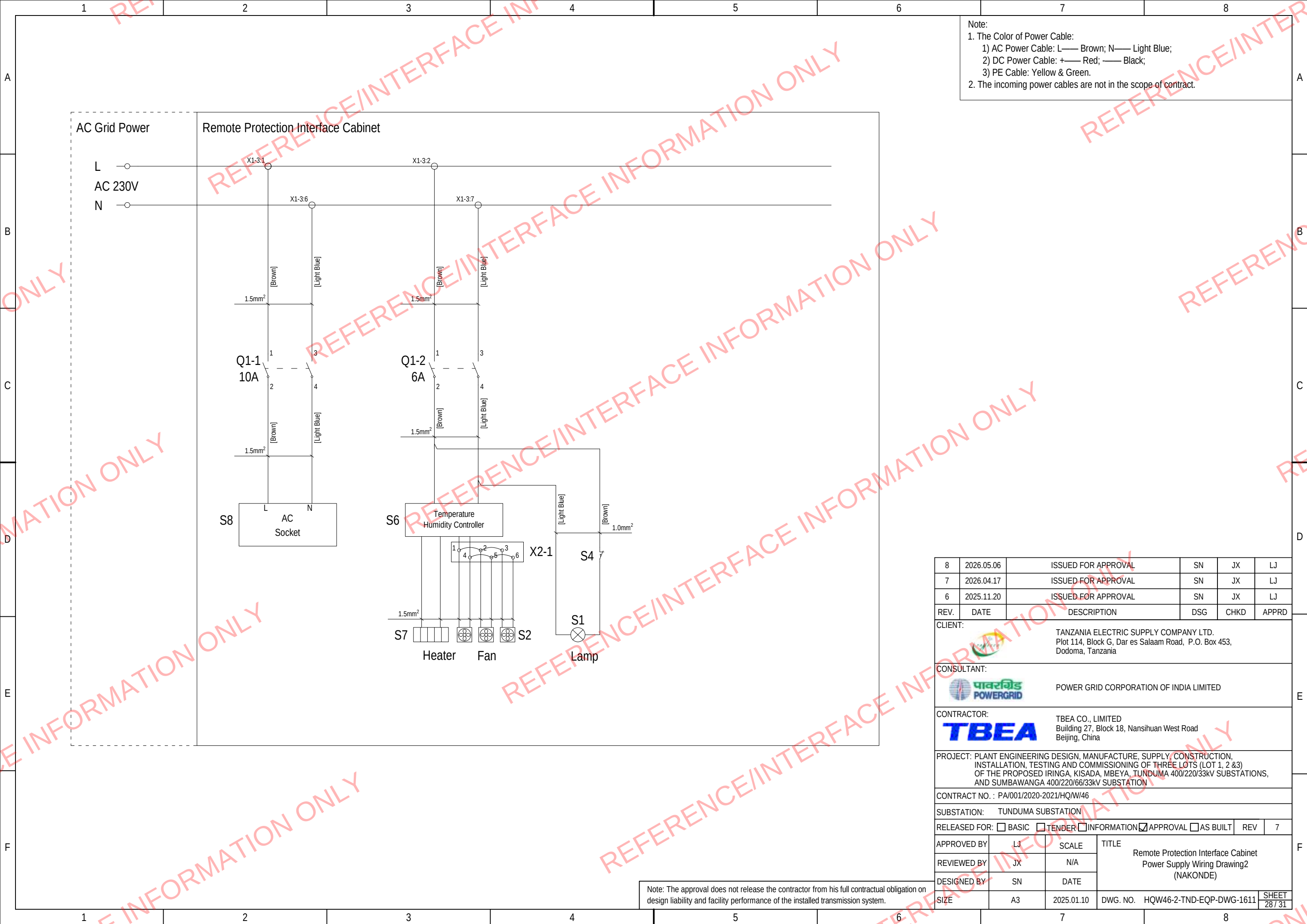
2025.01.10

DWG. NO. HQW46-2-TND-EQP-DWG-1601

SHEET 25 / 31



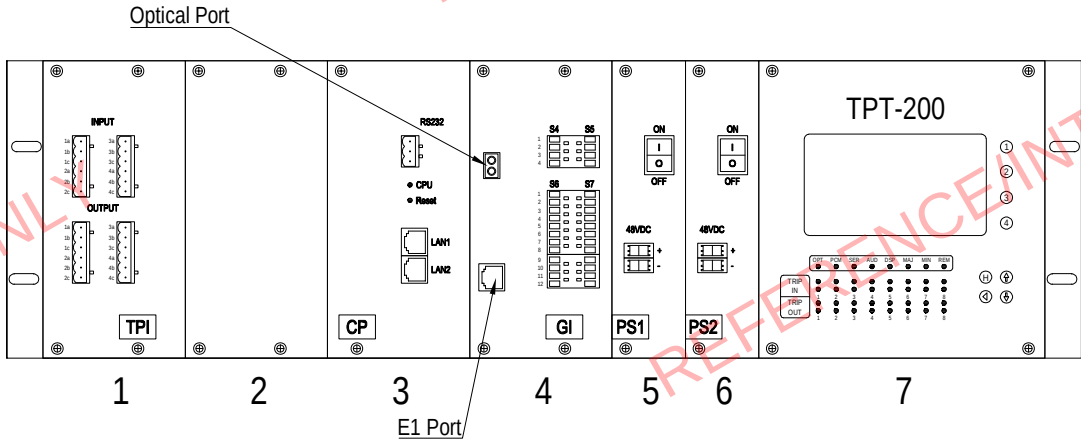
8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:		TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania			
CONSULTANT:		POWER GRID CORPORATION OF INDIA LIMITED			
CONTRACTOR:		TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China			
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kV SUBSTATION					
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE Remote Protection Interface Cabinet Power Supply Wiring Drawing1 (NAKONDE)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1611		
			SHEET 27 / 31		



Note:
1. The Color of Power Cable:
1) AC Power Cable: L—— Brown; N—— Light Blue;
2) DC Power Cable: +—— Red; —— Black;
3) PE Cable: Yellow & Green.
2. The incoming power cables are not in the scope of contract.

8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:		 TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania			
CONSULTANT:		 POWER GRID CORPORATION OF INDIA LIMITED			
CONTRACTOR:		 TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China			
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33KV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33KV SUBSTATION					
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE Remote Protection Interface Cabinet Power Supply Wiring Drawing2 (NAKONDE)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1611		
			SHEET 28 / 31		

E1
TPT-200 PANEL VIEW

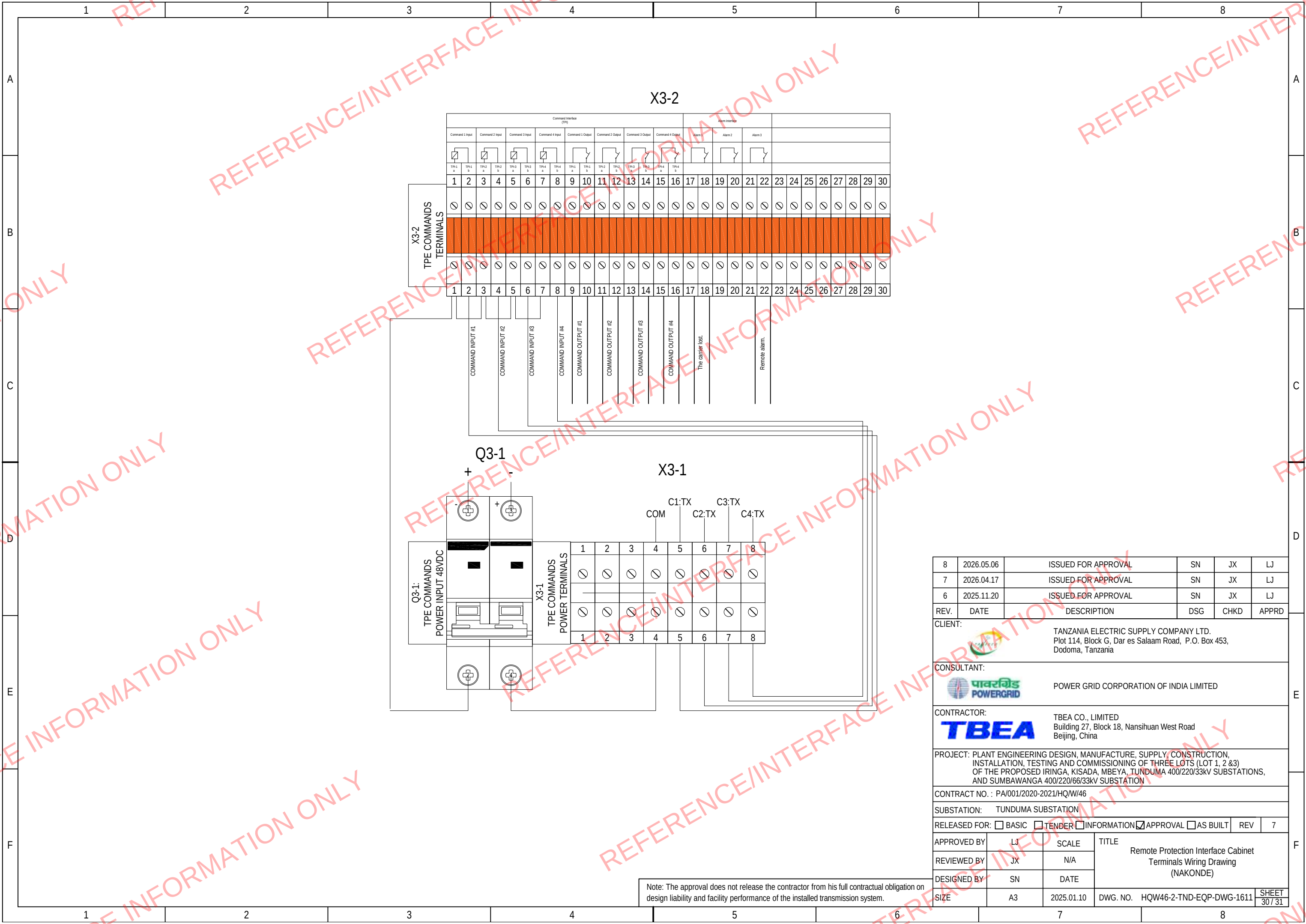


HIMARK TPT-200 SCHEDULE

NO.	Slot NO.	Type	Description	QTY.
1	7	/	Display Unit	1
2	5,6	PS	Power Supply Unit(DC48V)	2
3	3	CP	Central Processing Unit	1
4	4	GI	General Interface Module	1
5	1	TPI	Tele-Protection Interface Module(4Commands)	1

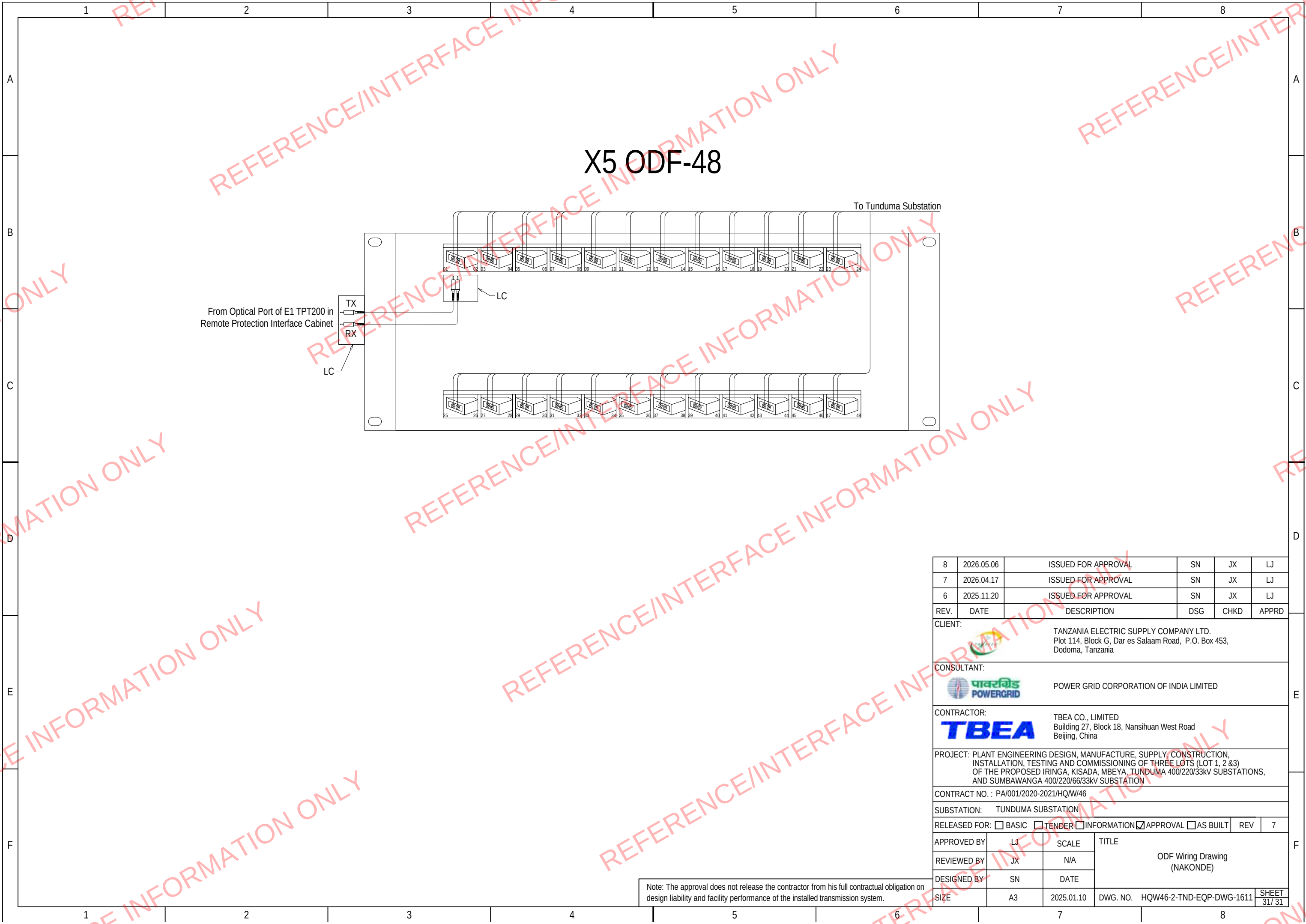
8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:		TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania			
CONSULTANT:		POWER GRID CORPORATION OF INDIA LIMITED			
CONTRACTOR:		TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China			
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kV SUBSTATION					
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE Teleprotection Interface Equipment TPT-200 Panel Drawing (NAKONDE)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1611		
			SHEET 29 / 31		

Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.



8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:			TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania		
CONSULTANT:			POWER GRID CORPORATION OF INDIA LIMITED		
CONTRACTOR:			TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China		
PROJECT:			PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY, CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kV SUBSTATION		
CONTRACT NO. : PA/001/2020-2021/HQ/M/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE Remote Protection Interface Cabinet Terminals Wiring Drawing (NAKONDE)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1611		
			SHEET 30 / 31		

Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.



8	2026.05.06	ISSUED FOR APPROVAL	SN	JX	LJ
7	2026.04.17	ISSUED FOR APPROVAL	SN	JX	LJ
6	2025.11.20	ISSUED FOR APPROVAL	SN	JX	LJ
REV.	DATE	DESCRIPTION	DSG	CHKD	APPRD
CLIENT:		 TANZANIA ELECTRIC SUPPLY COMPANY LTD. Plot 114, Block G, Dar es Salaam Road, P.O. Box 453, Dodoma, Tanzania			
CONSULTANT:		 POWER GRID CORPORATION OF INDIA LIMITED			
CONTRACTOR:		 TBEA CO., LIMITED Building 27, Block 18, Nansihuan West Road Beijing, China			
PROJECT: PLANT ENGINEERING DESIGN, MANUFACTURE, SUPPLY CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF THREE LOTS (LOT 1, 2 &3) OF THE PROPOSED IRINGA, KISADA, MBEYA, TUNDUMA 400/220/33kV SUBSTATIONS, AND SUMBAWANGA 400/220/66/33kV SUBSTATION					
CONTRACT NO. : PA/001/2020-2021/HQ/W/46					
SUBSTATION: TUNDUMA SUBSTATION					
RELEASED FOR: ☐ BASIC ☐ TENDER ☐ INFORMATION ☒ APPROVAL ☐ AS BUILT					
				REV	7
APPROVED BY	LJ	SCALE	TITLE ODF Wiring Drawing (NAKONDE)		
REVIEWED BY	JX	N/A			
DESIGNED BY	SN	DATE			
SIZE	A3	2025.01.10	DWG. NO. HQW46-2-TND-EQP-DWG-1611		SHEET 31/ 31

Note: The approval does not release the contractor from his full contractual obligation on design liability and facility performance of the installed transmission system.