

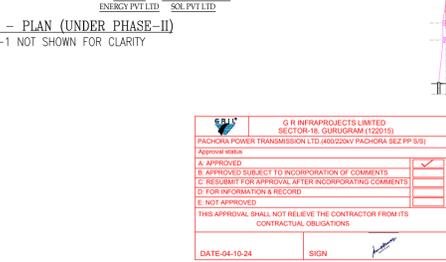
- GENERAL NOTES:-**
- ALL DIMENSIONS ARE IN MM AND LEVELS IN METER UNLESS NOTED OTHERWISE. LEVELS IN PHASE-II AREA ARE FINALIZED WITH RESPECT TO THAT IN EXISTING/PHASE-I AREA FURNISHED HERE OR AS PER EXISTING DRG. CITED IN SL.2 UNDER "REFERENCE".
 - THIS DRG. TO BE READ IN CONJUNCTION WITH SINGLE LINE DIAGRAM OF PHASE-II SCOPE IN SL.3 UNDER "REFERENCE...." OR SLD OF PHASE-I IN SL.1 UNDER "REFERENCE".
 - FOLLOWING DETAILS UNDER "H O L D" TILL FARTHER CLEARANCE:-**
 - LOCATION OF T/L TOWER ON LINE SIDE WHICH MUST ALIGN WITH S/S GANTRY.
 - LOCATION OF 400KV LINE SIDE EQUIPMENTS(LA/BPI/CVT/WT) TILL FINALIZATION OF LOCATION OF DEAD END TOWER OF 400KV D/C LINE.
 - LOCATION OF 400KV LA, 220KV LA & BPI BESIDE TRANSFORMER TILL FINALIZATION OF THE GA DRG. OF TRANSFORMER & SOAK PIT.
 - SUPPORT STRUCTURES ON EQUIPMENT LOCATED ON TRANSFORMER RAIL CUM ROAD TO BE PLANNED SO THAT THEY CAUSE NO HINDRANCE TO THE MOVEMENT OF TRAFQ/WHEEL WHEN REQD. AND WITHOUT REQUIREMENT OF SHUT-DOWN OF ANY OTHER FACILITY.
 - LT AC/DC SYSTEM REQUIREMENT OF PHASE-II TO BE MET FROM EXISTING AC/DC SYSTEM UNDER PHASE-I AND NECESSARY LOOP IN TO BE MADE(CAPACITY EXTN. NOT REQD.).
 - IDENTIFY GANTRY STRUCTURES FROM STRUCTURAL LAYOUT DRG. CITED UNDER "REFERENCE".
 - FOR ACTUAL LOCATION/ LAYOUT/SIZE OF TRAFQ SOAK PIT, RAIL TRACK INFROUNT, FIRE WALL, BURNT OIL PIT, CONNECTING PIPE LINES & MAN HOLES, REFER DRG. IN SL.9 UNDER "REFERENCE" CITED BELOW.
 - FIRE FIGHTING WATER REQUIREMENT TO BE MET FROM FACILITIES AVAILABLE IN PHASE-I AND THE PIPE LINES TO BE SUITABLY EXTENDED FOR TRANSFORMERS UNDER PHASE-II.
 - FOR TECH. SPEC. FOR MAJOR EQUIPMENTS INCL. CANTILEVER STRENGTH OF BPI, REFER SEPARATE DOCUMENTS ALREADY APPROVED.
 - CO-ORDINATE OF EXISTING BOUNDARY WALL CORNERS PROVIDED AS PER AVAILABLE SURVEY DRG. NO. CITED UNDER SL.10 OF "REFERENCE DRG." BELOW
 - ROADS SHOWN ARE OF FINAL LOCATION & WIDTH. ROAD LEVELS ARE RAISED ON SLOPE FROM PHASE-I TO PHASE-II & SHOWN TENTATIVELY. ACTUAL SLOPE NOT TO EXCEED 6% AT SITE. ROAD CURVES TO BE OF MIN. 4.0M WITH MAX. SPEED 10KM/HOUR.
 - BASIC SYSTEM PARAMETERS REQUIRED:-**

SL.	PARAMETERS	400kV	220kV
01.	NOMINAL SYSTEM VOLTAGE, kV	400	220
02.	HIGHEST SYSTEM VOLTAGE, kV	420	245
03.	RATED FREQUENCY, Hz / NO. OF PH.	50/3	50/3
04.	RATED INSULATION LEVELS, kVp:-		
A	LIGHTNING IMPULSE WITHSTAND VOLT.		
i)	Equipment Other than Transformer	1425	1050
ii)	Insulator String	1550	1050
B	SWITCHING IMPULSE WITHSTAND VOLT. DRY & WET, kVp	1050	-
C	1MIN. POWER FREQUENCY WITHSTAND (DRY & WET) VOLTAGE, kV RMS	DRY 630 WET 680	460
05.	CORONA EXTINCTION VOLTAGE, kV	320	-
06.	MAX. RADIO INTERFERENCE V FOR FR -EQUENCY BETWEEN 0.5 - 2.0 MHz	1000 MICRO V AT 266kV RMS	1000 MICRO V AT 156kV RMS
07.	MIN. CREEPAGE DISTANCE, mm/kV:-		
i)	Equipment	25	25
ii)	Insulator String	31	31
08.	MAX. FAULT LEVEL for 1 Sec., kA	63	50
09.	AMBIENT TEMP, DEG. CENTIGRADE	50	50
10.	EQPT. CURRENT CARRYING CAPACITY, A		
A	MAIN BUS	4000	4000
B	TRANSFER BUS	-	1600
C	LINE & TRANSFORMER BAY	3150	1600
D	BUS COUPLER	-	3000
E	TRANSFER BUS COUPLER	-	1600
F	BUS SECTIONALIZER	4000	3000
11.	MINIMUM CLEARANCES:-		
A	PHASE TO PHASE	4000	2100
B	PHASE TO EARTH	3500	2100
C	SECTIONAL CLEARANCE	6500	5000
D	GROUND CLEARANCE	8000	5500
E	SUB-CONDUCTOR SPACING	450	250

TABLE FOR CONDUCTORS:-

SL.	PARAMETERS	400kV	220kV
01.	CONDUCTOR USED		
A	MAIN BUS	QUAD AL59	QUAD AL59
B	TRANSFER BUS	-	TWIN AL59
C	JACK BUS IN BUS COUPLER	QUAD AL59	QUAD AL59
D	JACK BUS - 400KV TRAFQ BAY	TWIN AL59	-
E	JACK BUS - 220KV TRAFQ BAY	4.5" EH IPS AL. TUBE/QUAD AL -59, AS SHOWN	4.0" EH IPS AL. TUBE/TWIN AL -59, AS SHOWN
F	EQPT. INTERCONNECTION		

- SINGLE LINE DIAGRAM OF 400/220KV SW. YARD RAJGARH S/S(PH-II) : REC/RE/A/E-SYD/002
- ELECTRICAL LAYOUT PLAN & SEC.-400 & 220KV SWYARD UNDER PHASE-I : REC/RE/A/E-SYD/PLAN-SEC-003.
- SINGLE LINE DIAGRAM OF 400/220KV SW. YARD RAJGARH S/S(PH-II) : REC/URJA/E-SYD-DRG/SLD-001
- ELECTRICAL LAYOUT PLAN & SEC.-400 & 220KV SWYARD UNDER PHASE-II : REC/URJA/E-SYD-DRG/GA-003.
- OVERALL PLOT PLAN(OA) OF 400/220KV SWYARD(PHASE-II) WITH FGL AND SLOPE PLANS(PHASE-II) : REC/URJA/C-LVL-DRG/OCA-01(FOR FGL OF DIFFERENT AREA, RETAINING OF SLOPES & MEASURES FOR THE SAME PURPOSE.
- STRUCTURAL LAYOUT PLAN/SEC.-400 & 220KV SWYARD UNDER PHASE-II : REC/URJA/ST-SYD-DRG/STGA-005.
- FOUNDATION & CABLE TRENCH LAYOUT IN OUTDOOR YARD UNDER PHASE-II : REC/URJA/E-SYD-DRG/CABR-011.
- EARTHING LAYOUT DRG. FOR PHASE-II : REC/URJA/E-SYD-DRG/EM-006.
- FOUND. DETAIL OF 500MVA, 400/220KV ICT WITH ASSOCIATED DETAILS : REC/URJA/C-FND-DRG/TRAF-03.
- REF. DRG. NO. REC/URJA/C-MISC/CLD-25 FOR FINAL CORNER CO-ORDINATES OF SITE & LEVELS OF NGL/EGL OVER SITE.



G R INFRA PROJECTS LIMITED
SECTOR-18, GURUGRAM (122015)

PACHORA POWER TRANSMISSION LTD. (400/220KV PACHORA SEZ PP BAY)

APPROVED

APPROVED SUBJECT TO INCORPORATION OF COMMENTS

RESUBMIT FOR APPROVAL AFTER INCORPORATING COMMENTS

FOR INFORMATION & RECORD

NOT APPROVED

THIS APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ITS CONTRACTUAL OBLIGATIONS

DATE: 04-10-24

SIGN

REV.	DESCRIPTION	NAME	PK	AR	AK	DATE	STATUS
R2	BUS SECTIONALIZER REVISED AS PER SITE INPUT						FOR APPROVAL
R1	BAY NUMBERING REVISED AS PER LAYOUT						FOR APPROVAL
R0	FIRST ISSUE						FOR APPROVAL
		Name	PK	AR	AK	DATE	
		Sign.					

CUSTOMER PACHORA POWER TRANSMISSION LIMITED

OWNER'S ENGINEER CONSULTANT BONA FANG ZHENG PRIVATE LIMITED, KOLKATA, WEST BENGAL

PROJECT TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM RE PROJECTS IN RAJGARH 1000 MW SEZ IN MADHYA PRADESH, PHASE -II

REF NO RECPDCL/TBCC/RAJGARH PHASE-II/2023-2024/3461 DATED 31.12.2023

TITLE ELECTRICAL LAYOUT - PLAN & SECTION

CLIENT: G R INFRA PROJECTS LTD.

DRAWING No. REC/URJA/E-SYD-DRG/GA-003

SHEET 01 OF 02

SCALE NTS

REV. R2

DATE: 04.10.24

Size: A0 (1189 x 841)