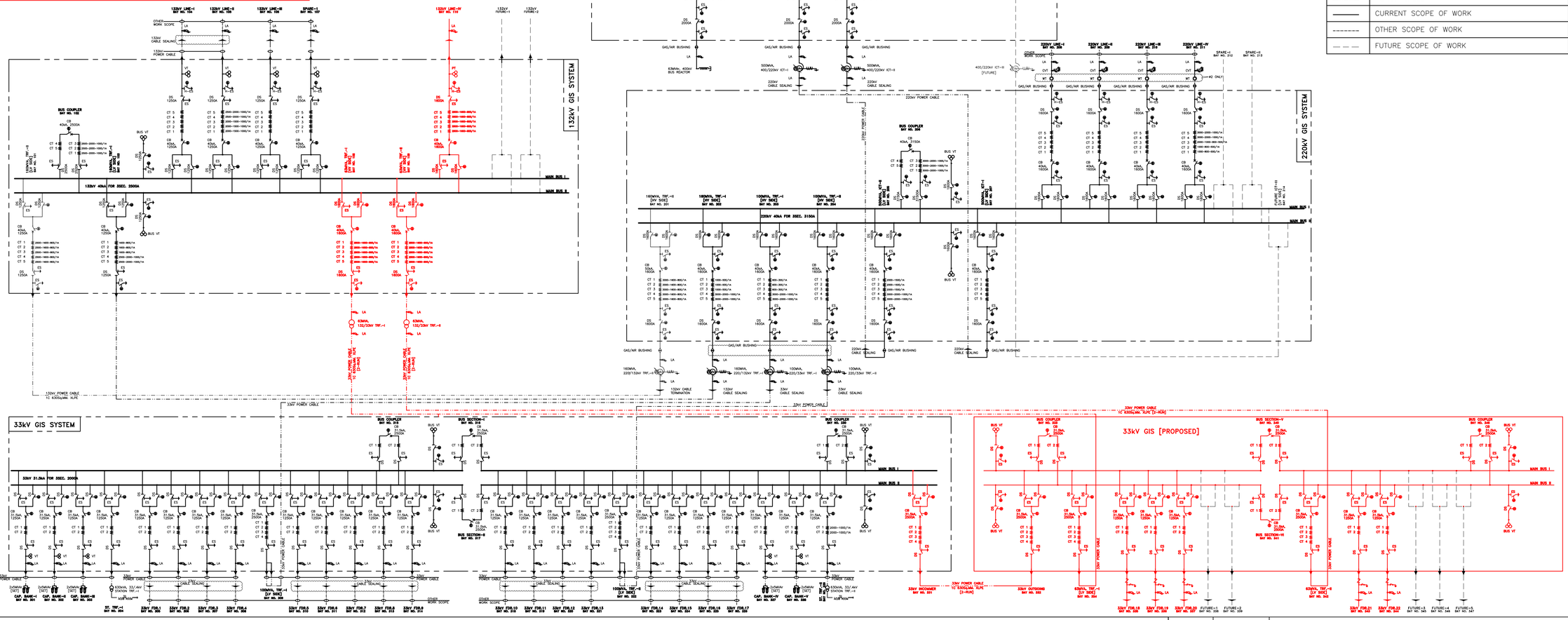
BILL OF QUANTITY AIS SWITCHYARD ITEMS

S.N.	ITEM DESCREPTION	QUANTITY	
		DWG.	BOQ
01	120kV, SURGE ARRESTER	09 NOS.	09 NOS.
02	30kV, SURGE ARRESTER	21 NOS.	21 NOS.
03	36kV, LINE ISOLATOR WITH ONE EARTH SWITCH	05 NOS.	05 NOS.
04	145kV CABLE TERMINATION KIT FOR CONNECTING 1CX630SQ.MM. XLPE POWER CABLE WITH ACCESSORIES, FITTING AND HARDWARE ETC. [OUTDOOR TYPE]	06 NOS.	06 NOS.
05	145kV CABLE TERMINATION KIT FOR CONNECTING 1CX630SQ.MM. XLPE POWER CABLE WITH ACCESSORIES, FITTING AND HARDWARE ETC. [INDOOR TYPE]	06 NOS.	06 NOS.
06	145kV CABLE TERMINATION KIT FOR CONNECTING 1CX1000SQ.MM. XLPE POWER CABLE WITH ACCESSORIES, FITTING AND HARDWARE ETC. [OUTDOOR TYPE]	03 NO.	04 NO.
07	145kV CABLE TERMINATION KIT FOR CONNECTING 1CX1000SQ.MM. XLPE POWER CABLE WITH ACCESSORIES, FITTING AND HARDWARE ETC. [INDOOR TYPE]	03 NO.	04 NO.
08	145kV 1CX630SQ.MM. XLPE COPPER CONDUCTOR POWER CABLE	–	400 MTRS.
09	145kV 1CX1000SQ.MM. XLPE COPPER CONDUCTOR POWER CABLE	–	920 MTRS.
10	36kV 1CX630SQ.MM. XLPE COPPER CONDUCTOR POWER CABLE	–	7100 MTRS.
11	36kV CABLE TERMINATION KIT FOR CONNECTING 1CX630SQ.MM. XLPE POWER CABLE WITH ACCESSORIES, FITTING AND HARDWARE ETC. [OUTDOOR TYPE]	21 NOS.	27 NOS.
12	36kV CABLE TERMINATION KIT FOR CONNECTING 1CX630SQ.MM. XLPE POWER CABLE WITH ACCESSORIES, FITTING AND HARDWARE ETC. [INDOOR TYPE]	27 NOS.	27 NOS.

LEGEND

	CIRCUIT BREAKER [CB] [HYDRAULIC OPERATION]
	CIRCUIT BREAKER [CB] [SPRING CHARGED OPERATION]
	DISCONNECTING SWITCH [DS] [MOTOR DRIVEN OPERATION]
	MAINTENANCE EARTHING SWITCH [ES] [MOTOR DRIVEN OPERATION]
	HIGH SPEED MAINTENANCE EARTHING SWITCH [H-ES] [MOTOR DRIVEN SPRING CHARGED OPERATION]
	3 POSITION DS & ES [MOTOR DRIVEN OPERATION]
	CURRENT TRANSFORMER
	GAS TO AIR BUSHING
	CAPACITOR VOLTAGE TRANSFORMER
	VOLTAGE TRANSFORMER
	LIGHTNINIG ARRESTER
	AUTO TRANSFORMER
	BUS REACTOR
	STATION TRANSFORMER
	CAPACITOR BANK
	POWER CABLE
	CURRENT SCOPE OF WORK
	OTHER SCOPE OF WORK
	FUTURE SCOPE OF WORK



BILL OF QUANTITY GIS SWITCHYARD ITEMS

S.N.	ITEM DESCREPTION	QUANTITY	
		DWG.	BOQ
01	63MVA, 132/33kV [HV] GIS TRANSFORMER BAY MODULE: RATED FOR 145kV 1600AMP, 40KA FOR 3 SEC COMPRISING OF SF6 CIRCUIT BREAKER, (1600A), CT 2500/1600/800/1–1–1A HAVING TWO BUS BAR DISCONNECTORS (1600A) WITH COMMON GROUNDING SWITCHES, LINE DISCONNECTOR WITH SAFETY GROUNDING SWITCHES, SUITABLE FOR MAIN BUS–I & II BUS SYSTEM LOCAL CONTROL CUBICLE SF6 GAS MONITORING SYSTEM FOR COMPLETE BAY.	02 SET	02 SET
02	132kV LINE GIS BAY MODULE: RATED FOR 145kV 1600AMP, 40KA FOR 3 SEC COMPRISING OF SF6 CIRCUIT BREAKER, (1600A), CT 2500/1600/800/1–1–1A HAVING TWO BUS BAR DISCONNECTORS (1600A) WITH COMMON GROUNDING SWITCHES, LINE DISCONNECTOR WITH SAFETY GROUNDING SWITCHES, & ONE HIGH SPEED FAULT MAKE GROUNDING LOCAL CONTROL CUBICLE SF6 GAS MONITORING SYSTEM FOR COMPLETE BAY.	01 SET	01 SET

S.N.	ITEM DESCREPTION	QUANTITY	
		DWG.	BOQ
03	63MVA, 132/33kV [LV] GIS TRANSFORMER BAY MODULE: RATED FOR 36kV 2500AMP, 40KA FOR 3 SEC COMPRISING OF VACUUM CIRCUIT BREAKER, (2500A), CT 2000/1250/800/1–1–1A HAVING TWO BUS BAR DISCONNECTORS (1600A) WITH COMMON GROUNDING SWITCHES, SUITABLE FOR MAIN BUS–I & II BUS SYSTEM LOCAL CONTROL CUBICLE SF6 GAS MONITORING SYSTEM FOR COMPLETE BAY.	04 SET	04 SET
04	33kV FEEDER GIS BAY MODULE: RATED FOR 36kV 1250AMP, 40KA FOR 3 SEC COMPRISING OF VACUUM CIRCUIT BREAKER, (1250A), CT 400/200/1–1–1A HAVING TWO BUS BAR DISCONNECTORS (1250A) WITH COMMON GROUNDING SWITCHES, SUITABLE FOR MAIN BUS–I & II BUS SYSTEM LOCAL CONTROL CUBICLE SF6 GAS MONITORING SYSTEM FOR COMPLETE BAY.	05 SET	05 SET
05	33kV BUS COUPLER GIS BAY MODULE: RATED FOR 36kV 2500AMP, 40KA FOR 3 SEC COMPRISING OF VACUUM CIRCUIT BREAKER, (2500A), CT 3000/2000/1250/1–1–1A HAVING TWO BUS BAR DISCONNECTORS (2500A) WITH COMMON GROUNDING SWITCHES, SUITABLE FOR MAIN BUS–I & II BUS SYSTEM LOCAL CONTROL CUBICLE SF6 GAS MONITORING SYSTEM FOR COMPLETE BAY.	02 SET	02 SET

S.N.	ITEM DESCREPTION	QUANTITY	
		DWG.	BOQ
06	33kV BUS SECTIONALISER GIS BAY MODULE: RATED FOR 36kV 2500AMP, 40KA FOR 3 SEC COMPRISING OF VACUUM CIRCUIT BREAKER, (2500A), CT 3000/2000/1250/1–1–1A HAVING TWO BUS BAR DISCONNECTORS (2500A) WITH COMMON GROUNDING SWITCHES, SUITABLE FOR MAIN BUS–I & II BUS SYSTEM LOCAL CONTROL CUBICLE SF6 GAS MONITORING SYSTEM FOR COMPLETE BAY.	01 SET	01 SET
07	36kV BUS PT FOR MAIN–1 AND MAIN–2 BUS GIS MODULE: COMPLETE WITH VOLTAGE TRANSFORMER, DISCONNECTOR, SAFETY GROUNDING SWITCH LOCAL CONTROL CUBICLE SF6 GAS MONITORING SYSTEM FOR COMPLETE BAY.	02 SET	02 SET

REV NO.	REV DATE	DESCREPTION
R1	23.02.2024	REVISED AS PER COMMENTS OF UPPTCL [DESIGN CIRCLE]
R0	13.02.2024	FIRST SUBMISSION FOR APPROVAL

PROJECT: ENGINEERING, SUPPLY, ERECTION AND COMMISSIONING OF 2X63MVA. ICT GIS BAY, 1NO. 132kV GIS LINE BAY & 5NOS. 33kV GIS FEEDER BAY AT 400kV GIS SUBSTATION NOIDA SECTOR–148

CLIENT: U.P. POWER TRANSMISSION CORPORATION LTD.

LOI: 50/ESD–8/193/II/63MVA/SECTOR148 DT.30.01.24

EPC CONTRACTOR: M/S, RELIANCE ELEKTRIK WORK 410, FIRST FLOOR SECTOR–I VAISHALI GHAZIABAD U.P.

TITLE: SINGLE LINE DIAGRAM

SCALE: 1:500

PROJECTION

DESIGN BY: ORBIT POWER ENGINEERING, DHAN NIRMAN COMPLEX, ASHOK MARG, HAZARATGANJ LUCKNOW CONTACT NO. (+91) 8853776203

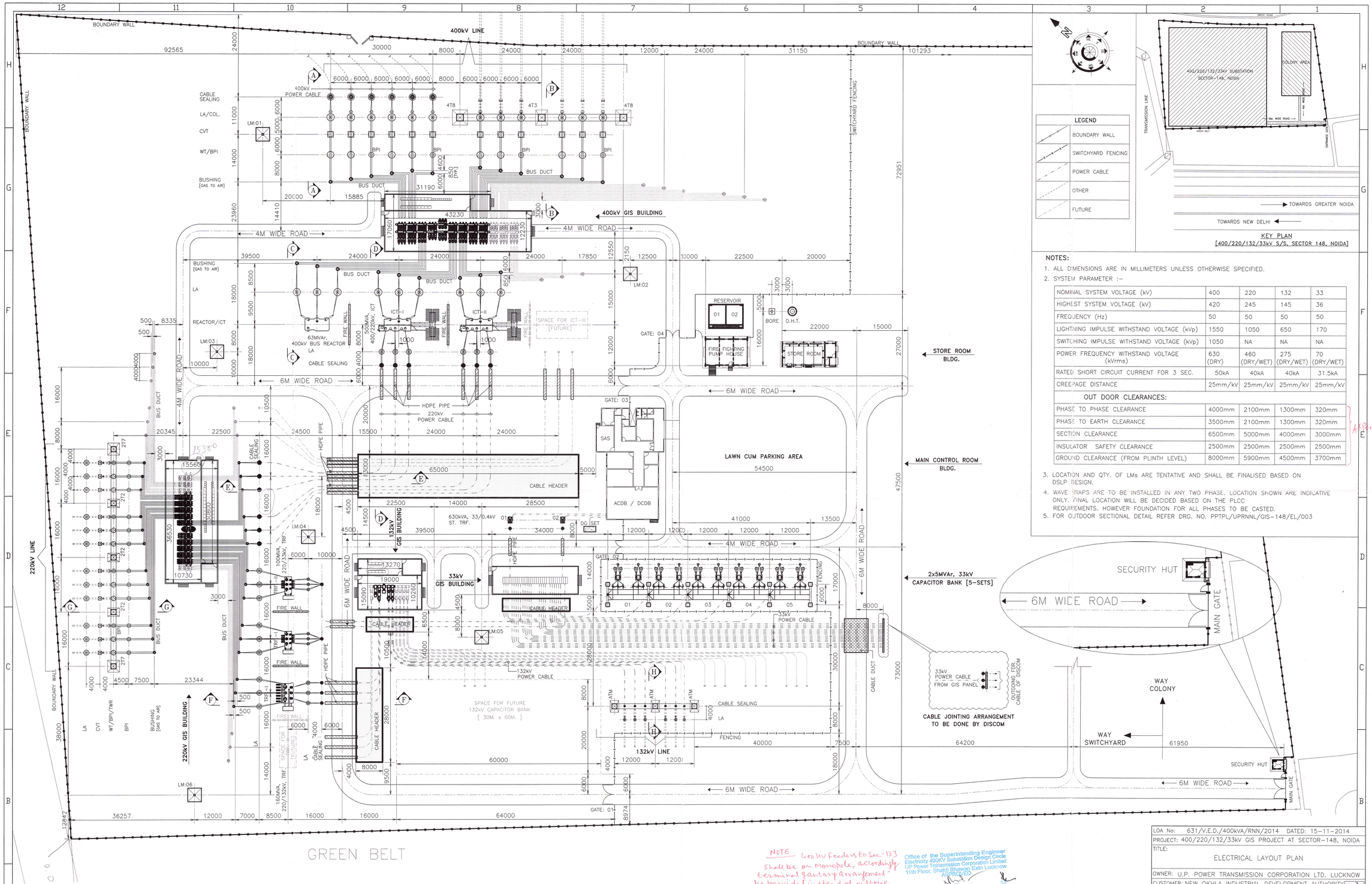
DRG. NO. REW/UPPTCL/EXTN/SECTOR–148 E–0001

SHEET 01 OF 01

SIZE A2

REV. R1

RELEASED FOR: ☐ PRELIMINARY ☐ TENDER ☐ INFORMATION ■ APPROVAL ☐ CONSTRUCTION



LEGEND	
	BOUNDARY WALL
	SWITCHYARD FENCING
	POWER CABLE
	OTHER
	FUTURE

KEY PLAN
[400/220/132/33kV S/S, SECTOR 148, NOIDA]

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. SYSTEM PARAMETER :-

NOMINAL SYSTEM VOLTAGE (kV)	400	220	132	33
HIGHEST SYSTEM VOLTAGE (kV)	420	245	145	36
FREQUENCY (Hz)	50	50	50	50
LIGHTNING IMPULSE WITHSTAND VOLTAGE (kVp)	1550	1050	650	170
SWITCHING IMPULSE WITHSTAND VOLTAGE (kVp)	1050	NA	NA	NA
POWER FREQUENCY WITHSTAND VOLTAGE (kVrms)	630 (DRY)	460 (DRY/WET)	275 (DRY/WET)	70 (DRY/WET)
RATED SHORT CIRCUIT CURRENT FOR 3 SEC.	50kA	40kA	40kA	31.5kA
CREEPAGE DISTANCE	25mm/kV	25mm/kV	25mm/kV	25mm/kV
OUT DOOR CLEARANCES:				
PHASE TO PHASE CLEARANCE	4000mm	2100mm	1300mm	320mm
PHASE TO EARTH CLEARANCE	3500mm	2100mm	1300mm	320mm
SECTION CLEARANCE	6500mm	5000mm	4000mm	3000mm
INSULATOR SAFETY CLEARANCE	2500mm	2500mm	2500mm	2500mm
GROUND CLEARANCE (FROM PLINTH LEVEL)	8000mm	5900mm	4500mm	3700mm

3. LOCATION AND QTY. OF LMs ARE TENTATIVE AND SHALL BE FINALISED BASED ON DSLP DESIGN.
4. WAVE TRAPS ARE TO BE INSTALLED IN ANY TWO PHASE. LOCATION SHOWN ARE INDICATIVE ONLY. FINAL LOCATION WILL BE DECIDED BASED ON THE PLCC REQUIREMENTS. HOWEVER FOUNDATION FOR ALL PHASES TO BE CASTED.
5. FOR OUTDOOR SECTIONAL DETAIL REFER DRG. NO. PPTPL/UPRNNL/GIS-148/EL/003

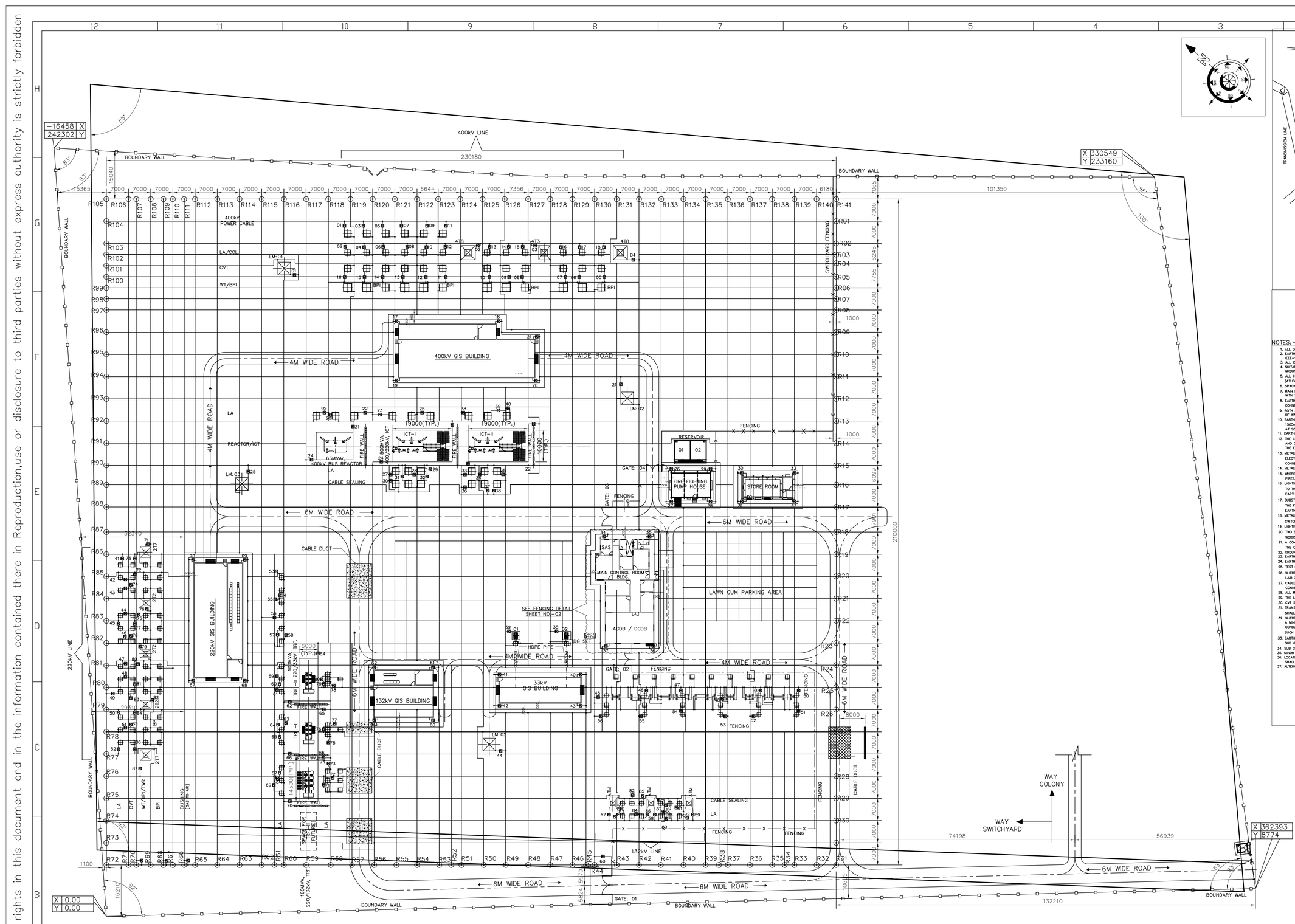
NOTE
132kV Feeders to Sec-123 shall be on monopole, accordingly terminal gantry arrangement be provided instead of outgoing Cable.

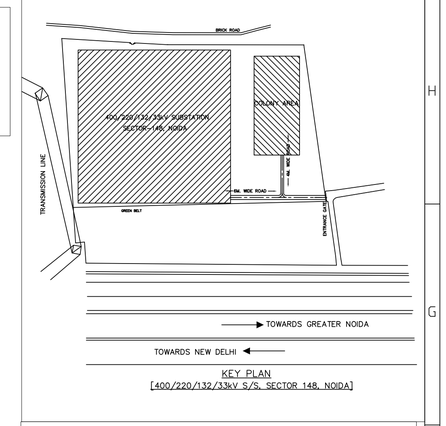
Office of the Superintending Engineer
Electricity 400KV Substation Design Circle
UP Power Transmission Corporation Limited
11th Floor, Shakti Bhawan Extn Lucknow
APPROVED
AE EE SE

REV. NO.	DATE	DESCRIPTION
R2	16.02.15	REVISED AS PER COMMENTS VIDE LET NO.113/ESD-8/NOIDA/UPRNN DT. 09.02.2015 OF UPPTCL, LUCKNOW
-		REVISED AS PER COMMENTS VIDE LET NO. 81/ESD-8/400kV/GIS NOIDA DT. 30.01.2015 OF UPPTCL, LUCKNOW
R1	27.01.15	REVISED AS PER COMMENTS VIDE LET NO. 65/ESD-8/400kV/GIS NOIDA DT. 20.01.2015 OF UPPTCL, LUCKNOW

LOA No:	631/V.E.D./400kVA/RNN/2014 DATED: 15-11-2014
PROJECT:	400/220/132/33kV GIS PROJECT AT SECTOR-148, NOIDA
TITLE:	ELECTRICAL LAYOUT PLAN
OWNER:	U.P. POWER TRANSMISSION CORPORATION LTD. LUCKNOW
CUSTOMER:	NEW OKHLA INDUSTRIAL DEVELOPMENT AUTHORITY, GAUTAMBUDH NAGAR
SUBMITTED BY:	U.P. RAJAKIYA NIRMAN NIGAM LTD. ELECTRICAL UNIT, NEW DELHI
PREPARED BY:	PISCESIA POWER TRANSMISSION PVT. LTD. AND HYOSUNG CORPORATION
DATE	17.12.2014
SHEET NO.	01 OF 01
SCALE	1:500
REV.	R2
CONSULTANT:	SHOBHAN LAL UKIL
DRG. NO.	PPTPL/UPRNNL/GIS-148/EL/002

ADDL. PROJECT MANAGER (E)
U.P. RAJAKIYA NIRMAN NIGAM LTD.
ELECTRICAL UNIT DELHI,
KVS (HQ) KATWARIA SARAI
NEW DELHI-110016

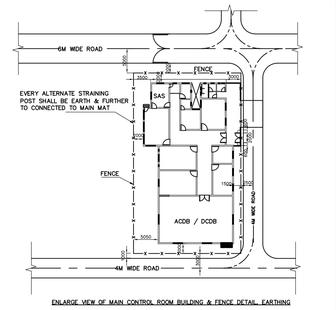




KEY PLAN
[400/220/132/33kV S/S, SECTOR 148, NOIDA]

NOTES:-

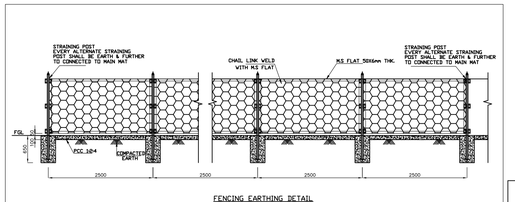
1. ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS ARE IN METRES, UNLESS NOTED OTHERWISE.
2. EARTH SYSTEM SHALL BE ACCORDING TO THE FOLLOWING:- IS-3043-CODE OF PRACTICE FOR EARTHING. IEEE-STD.80 -2000 GUIDE FOR SAFETY IN ALTERNATING CURRENT SUB STATION GROUNDING.
3. ALL CABLE SUPPORTS AND CABLE TRAYS RUNNING IN TRENCHES OR ELSEWHERE ARE TO BE EARTHED.
4. SUITABLE NO. OF RISERS 40M MS ROD FROM MAIN EARTH MAT SHALL BE BROUGHT UPTO 300mm ABOVE GROUND LEVEL AS PER SITE CONDITIONS FOR EARTHING.
5. ALL INTERCONNECTIONS OF GS FLAT WHETHER SHOWN OR NOT IN THE DRAWING, SHALL BE WELDED (ATLEAST 2W LENGTH) AND BITUMINOUS COMPOUND OVER THE WELDED JOINT SHALL BE APPLIED.
6. SPACING BETWEEN THE EARTH PITS SHALL BE MAINTAINED AT 3000mm(Min.)
7. MAIN EARTH MAT CONDUCTOR SIZE 40X12 mm MS. ROD WILL BE LAID AT 600mm BELOW GROUND LEVEL WITH SPACING OF 14mm. BETWEEN CONDUCTORS.
8. EARTH INSERT/RISER SHALL BE PROVIDED NEAR THE EQUIPMENT FOUNDATION/PEDESTAL FOR FUTURE CONNECTIONS TO THE EQUIPMENT EARTHING TERMINALS.
9. BOTH ENDS OF THE SLEEVE BE PIPE SEALED WHEREVER USED TO PREVENT THE PASSAGE OF WATER THROUGH THE SLEEVES
10. EARTHING CONDUCTOR AROUND THE BUILDING SHALL BE BURIED IN EARTH AT A MINIMUM DISTANCE OF 1500mm FORM THE OUTER BOUNDARY OF THE BUILDING. IN CASE HIGH TEMPERATURE IS ENCOUNTERED AT SOME LOCATION, THE EARTHING CONDUCTOR SHALL BE LAID MINIMUM 2000mm AWAY, WHEREVER SPACE PERMITS
11. EARTHING CONDUCTORS EMBEDDED IN THE CONCRETE FLOOR SHALL BE 50mm BELOW F.F.L
12. THE CONNECTION BETWEEN EARTHING PADS OF EQUIPMENT AND THE EARTHING GRID SHALL BE MADE BY SHORT AND DIRECT EARTHING LEAD FREE FROM KINKS AND SPLICES. IN CASE EARTHING PADS ARE NOT PROVIDED ON THE EQUIPMENT TO BE EARTHED, SAME SHALL BE PROVIDED IN CONSULTATION WITH THE PURCHASER
13. METALLIC PIPES, CONDUITS, AND CABLE TRAY SECTIONS FOR CABLE INSTALLATION SHALL BE BONDED TO ENSURE ELECTRICAL CONTINUITY AND CONNECTED TO EARTHING CONDUCTORS AT REGULAR INTERVAL APART FROM INTERMEDIATE CONNECTIONS, BEGINNING POINTS SHALL BE CONNECTED TO EARTHING SYSTEM
14. METALLIC CONDUITS AND WATER PIPES SHALL NOT BE USED AS EARTH CONTINUITY CONDUCTOR.
15. WHEREVER EARTHING CONDUCTOR CROSSES OR RUNS ALONG METALLIC STRUCTURES AS GAS, WATER, STEAM, CONDUITS, PIPES, OR STEEL REINFORCEMENT IN CONCRETE, IT SHALL BE BONDED TO THE SAME.
16. LIGHTING POLES, JUNCTION BOXES ON THE POLES, CABLE BOXES/GLANDS, LOCKOUT SWITCHES ETC. SHALL BE CONNECTED TO THE EARTHING CONDUCTOR RUNNING ALONG THE SUPPLY CABLE/EARTH GRID WHICH IN TURN, SHALL BE CONNECTED TO EARTHING GRID CONDUCTOR AT MINIMUM TWO POINTS, WHETHER SPECIFICALLY SHOWN OR NOT.
17. SUBSTATION EARTHING CONDUCTOR SHALL BE EXTENDED MINIMUM 1500mm OUTSIDE THE SUBSTATION FENCE ON ALL THE SIDES. THE FENCE AND GATES SHALL BE CONNECTED TO EARTHMAT BY SEPARATE EARTHING CONDUCTOR. FENCE SHALL BE EARTHED AT EVERY 25 Mtr.
18. METALLIC SHEATHS AND ARMOUR OF ALL MULTI CORE POWER CABLES SHALL BE EARTHED AT BOTH EQUIPMENT AND SWITCHGEAR ENDS. SHEATH AND ARMOUR OF SINGLE CORE POWER CABLES (IF ANY) SHALL BE EARTHED AT SWITCHGEAR END ONLY.
19. LIGHTNING CONDUCTORS SHALL NOT PASS THROUGH OR RUN INSIDE GI CONDUIT.
20. TWO SEPARATE AND DISTINCT GROUND CONNECTON SHALL BE PROVIDED FOR GROUNDING OF ELECTRICAL EQUIPMENT WORKS IN COMPLIANCE WITH I.E RULES.
21. A CONTINUOUS GS FLAT GROUND CONDUCTOR SHALL BE INSTALLED SECTION FORMING A SOLIDLY GROUNDED TRAY SYSTEM ALONG THE CABLE RACEWAY & SECURELY ATTACHED TO EACH TRAY
22. GROUND ELECTRODES SHALL BE PROVIDED AT CONNECTIONS WITH TRANSFORMERS LIGHTNING ARRESTOR,
23. EARTH PITS SHALL BE AS PER IS 3043-1987 WITH 3 MTR LONG 40mm DIA M.S. ROD, DRIVEN TYPE
24. EARTH PITS SHALL BE AS PER IS 3043-1987 WITH 3 MTR LONG 40mm DIA GI PIPE WITH TREATED EARTH PITS
25. TEST LINK ARE PROVIDED IN LIGHTNING MAST TO MEASURE THE RESISTANCE OF EARTH ELECTRODE.
26. WHEREVER THE EARTHING CONDUCTOR CROSSES THE CABLE TRENCHES, PIPES, DRAINROADS ETC. THE SAME SHALL BE LAID 300mm BELOW THE CABLE TRENCH.
27. CABLE TRENCH METALLIC PARTS SHALL BE CONNECTED BY 50x6mm GI FLAT & THE CABLE TRAY SYSTEM SHALL BE FURTHER CONNECTED TO EARTH MAT AT EVERY 30Mtr.
28. ALL METALLIC PARTS OF TRENCH SHALL BE EARTHED THROUGHOUT EARTH MAT.
29. THE LA's SHALL BE EARTHED THROUGH AN INDEPENDENT EARTHING ROD ELECTRODE (RE) BY 50X6 MM GS FLAT DOWN CONDUCTOR.
30. CVT SHALL BE EARTHED THROUGH "R E" AND EACH CVT SHALL BE PROVIDED WITH ONE EARTH ELECTRODE.
31. TRANSFORMER NEUTRAL SHALL BE EARTHED BY GI PLATE , SIZE 600x600x6mm & 50X6 MM CU. FLAT. EACH NEUTRAL SHALL HAVE TWO EARTH PITS , INTERCONNECTED.
32. WHEREVER THE MAIN EARTH CONDUCTOR FOULS WITH THE CIVIL FOUNDATIONS,THE EARTH CONDUCTOR SHALL BE REROUTED BY A MINIMUM INTERFERANCE & COMPLETE CONTINUITY OF THE EARTH CONDUCTOR SHALL BE ENSURED. IF NEED ARISES THE REROUTED CONDUCTOR MAY BE WELDED & THE WELD OVERLAP IN THAT CASE SHALL BE MINIMUM 2W WITH ALL JOINTS WELDED.ALL SUCH LOCATIONS SHALL BE APPROVED BEFORE EXCAVATION AT SITE.
33. EARTHMAT (HALF GRID SPACED) SHALL BE LAID UNDER POWER/ AUTO TRANSFORMER AT THE TIME FOUNDATION. THE DEPTH OF SUCH SUB GRID SHALL BE BELOW THE TRANSFORMER FOUNDATION. THIS SUB GRID WILL BE CONNECTED BY WELDING TO MAIN MAT
34. SUB GRID SHALL BE LAID IN THE GIS PORTION AT THE FOUNDATION LEVEL & THIS SHALL BE CONNECTED TO MAIN MAT.
35. MINOR ALTERATION IN SPACING OF RODS AND OTHER EARTHING ARRANGEMENT MAY BE DONE TO SUIT SITE CONDITION.
36. LOCATION OF EQUIPMENT EARTHING LEADS AND EARTH ELECTRODE ARE SHOWN DIAGRAMMATIC ONLY. EXACT LOCATION SHALL BE ALTERED TO SUIT SITE CONDITION.
37. ALTERNATE FENCE POST SHALL BE EARTHED WHEREVER APPLICABLE.



ENLARGE VIEW OF MAIN CONTROL ROOM BUILDING & FENCE DETAIL, EARTHING

LEGEND:

SYMBOL	DESCRIPTION	UNIT	QUANTITY
———	40ø M.S ROD – MAIN EARTHING MAT	MTRS.	17755
———	RISER LENGTH	MTRS.	4945
———	75 x 12 G.S FLAT – ABOVE GROUND EARTHING CONDUCTOR	MTRS.	5225
●	40ø M.S ROD – RISER	Nos.	490
▣	– 40ø, 3000 LONG M.S ROD ELECTRODE WITH PIT	Nos.	92
▣	– 40ø, 3000 LONG G.S PIPE ELECTRODE WITH TREATED PIT	Nos.	92
□	GI PLATE 6 THICK. 600x600 FOR NEUTRAL EARTHING OF TRANSFORMER & SCADA ROOM EARTHING. (REFER DESIGN PHILOSOPHY)	Nos.	16
⊙	– BURIED 40ø, 3000 LONG M.S ROD ELECTRODE WITHOUT PIT (FOR ACHIEVING VALUE RESISTANCE FOR EARTHING CALULATION) BURIED ELECTRODE FOR GRID EARTHING 63 NOS.	Nos.	144



FENCING EARTHING DETAIL

REV. NO.	DATE	DESCRIPTION
R0	10.07.19	FIRST SUBMISSION

AS BUILD DRAWING

LOI No:	PPTPL/P2&P3/N-ARC/003 DATED: 19-11-2015
PROJECT:	400/220/132/33kV GIS PROJECT AT SECTOR-148, NOIDA
TITLE:	EARTHMAT LAYOUT PLAN
CLIENT:	U.P. POWER TRANSMISSION CORPORATION LTD. LUCKNOW
CUSTOMER:	NEW OKHLA INDUSTRIAL DEVELOPMENT AUTHORITY GAUTAMBUDH NAGAR
SUBMITTED BY:	U.P. RAJAKIYA NIRMAN NIGAM LTD. ELECTRICAL UNIT, NEW DELHI
PREPARED BY:	PISCESIA POWER TRANSMISSION PVT. LTD. AND HYOSUNG CORPORATION
CONSULTANT:	N_ARC CONSULTING PVT. LTD.
DATE	10.07.19
SHEET NO.	01 OF 01
REV.	R1
DRG. NO.	PPTPL/UPRNNL/GIS-148/EL/015
SCALE:	1:310 SIZE-A0