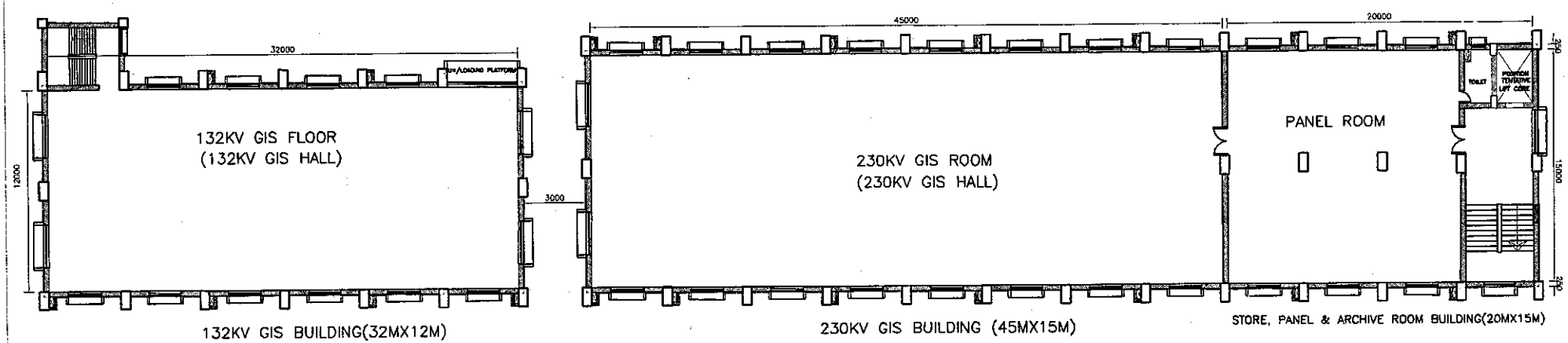


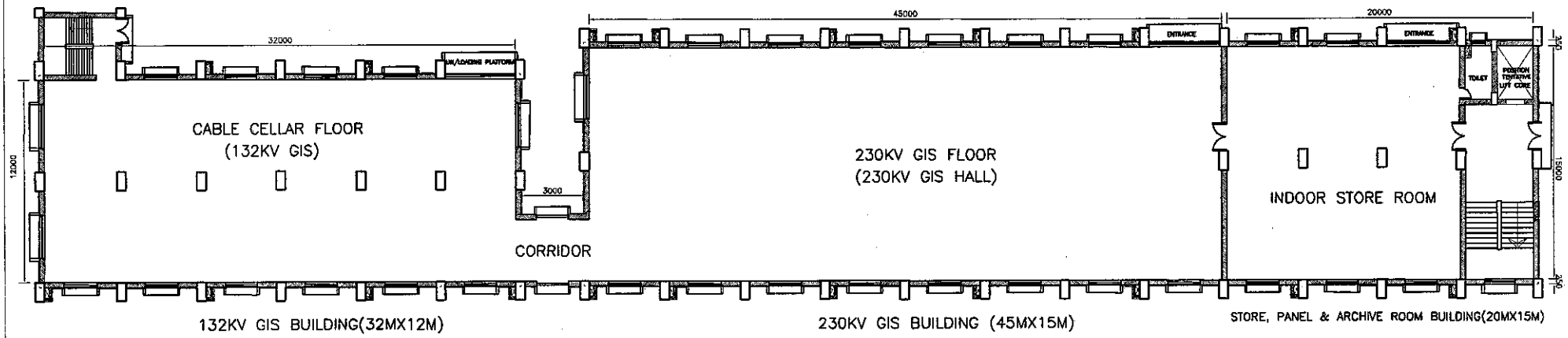
1ST FLOOR PLAN

Note:

1) Floor area and height of the building provided here are minimum required size. If larger size is required due to bidder's GIS specifications, number of bays (including future); the bidder may increase size of the building within the quoted price. No additional payment shall be made in this regard.
2) If transformers are positioned near the GIS building, due to fire safety reasons no window shall be provided on the transformer side of the building. But, if transformers are positioned sufficiently far from the GIS building, then windows shall be provided on the transformer side of the building. IEC guidelines shall be followed for safety of the building.
3) Position and size of GIS equipments, cable ducts, cable shaft, loading & unloading platform, columns, doors, windows, emergency exit stair, lift core, corridor etc. will be finalized during detail design.

Tender Drawing

EMPLOYER	POWER GRID COMPANY OF BANGLADESH LTD.		
PROJECT:	DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 400/230/132KV GIS SUBSTATION AT PURBACHOL ON TURNKEY BASIS (Package-6).		
CONTRACT NO:			
Prepared		TITLE: 230KV AND 132KV GIS BUILDING – 1ST FLOOR PLAN (TENTATIVE POSITION OF GIS EQUIPMENT)	Paper size
Checked			Scale NTS
Approved		DOCUMENT ID: PGCB/DESIGN/2021/PURBACHAL/C02A	Page 02



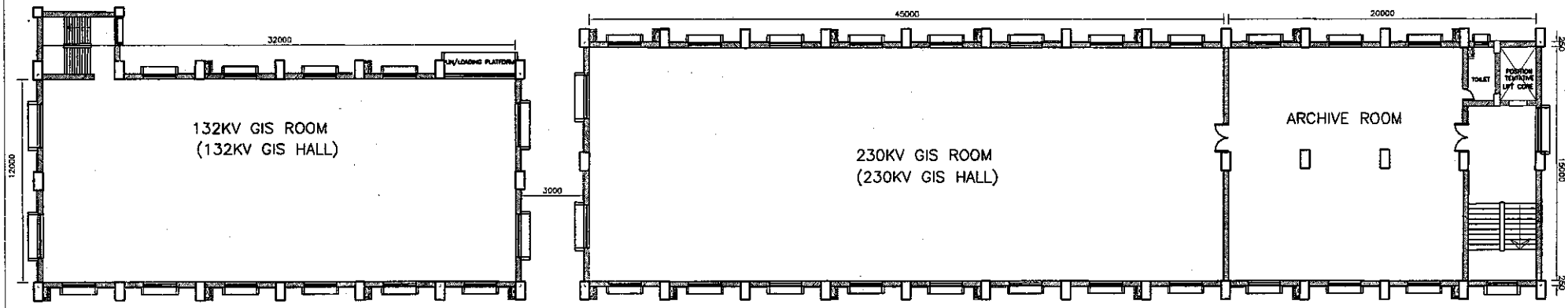
GROUND FLOOR PLAN

Note:

1) Floor area and height of the building provided here are minimum required size. If larger size is required due to bidder's GIS specifications, number of bays (including future); the bidder may increase size of the building within the quoted price. No additional payment shall be made in this regard.
2) If transformers are positioned near the GIS building, due to fire safety reasons no window shall be provided on the transformer side of the building. But, if transformers are positioned sufficiently far from the GIS building, then windows shall be provided on the transformer side of the building. IEC guidelines shall be followed for safety of the building.
3) Position and size of GIS equipments, cable ducts, cable shaft, loading & unloading platform, columns, doors, windows, emergency exit stair, lift core, corridor *etc.* will be finalized during detail design.

Tender Drawing

EMPLOYER	POWER GRID COMPANY OF BANGLADESH LTD.	
PROJECT:	DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 400/230/132KV GIS SUBSTATION AT PURBACHAL ON TURNKEY BASIS (Package-6).	
CONTRACT NO:		
Prepared	TITLE: 230KV AND 132KV GIS BUILDING – GROUND FLOOR PLAN	Paper size
Checked		Scale NTS
Approved	DOCUMENT ID: PGCB/DESIGN/2021/PURBACHAL/C02A	Page 01



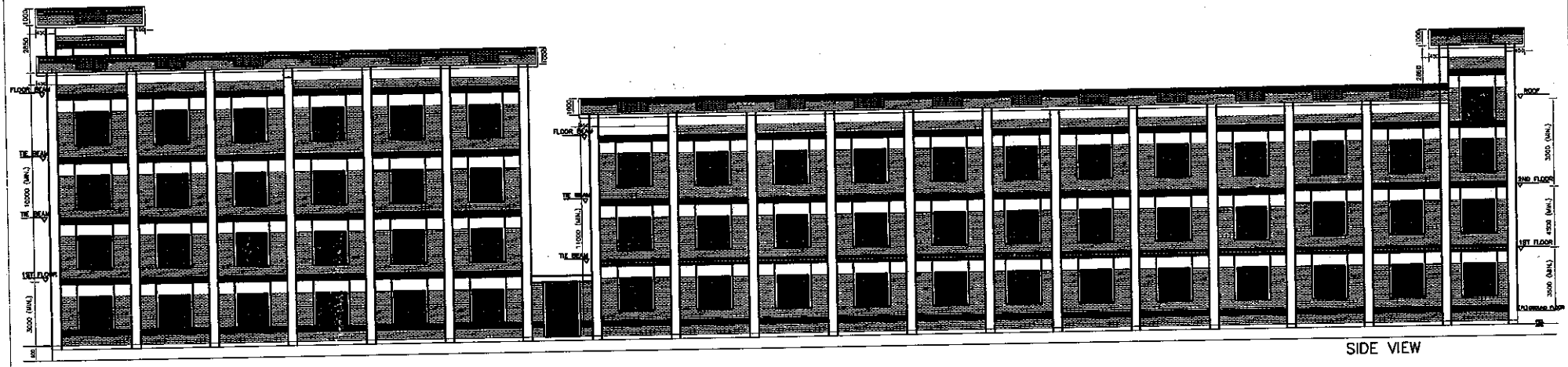
2ND FLOOR PLAN

Note:

1) Floor area and height of the building provided here are minimum required size. If larger size is required due to bidder's GIS specifications, number of bays (including future); the bidder may increase size of the building within the quoted price. No additional payment shall be made in this regard.
2) If transformers are positioned near the GIS building, due to fire safety reasons no window shall be provided on the transformer side of the building. But, if transformers are positioned sufficiently far from the GIS building, then windows shall be provided on the transformer side of the building. IEC guidelines shall be followed for safety of the building.
3) Position and size of GIS equipments, cable ducts, cable shaft, loading & unloading platform, columns, doors, windows, emergency exit stair, lift core, corridor *etc.* will be finalized during detail design.

Tender Drawing

EMPLOYER	POWER GRID COMPANY OF BANGLADESH LTD.		
PROJECT:	DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 400/230/132KV GIS SUBSTATION AT PURBACHOL ON TURNKEY BASIS (Package-5).		
CONTRACT NO:			
Prepared		TITLE: 230KV AND 132KV GIS BUILDING –2ND FLOOR PLAN	Paper size
Checked			Scale NTS
Approved		DOCUMENT ID: PGCB/DESIGN/2021/PURBACHAL/C024	Page 03



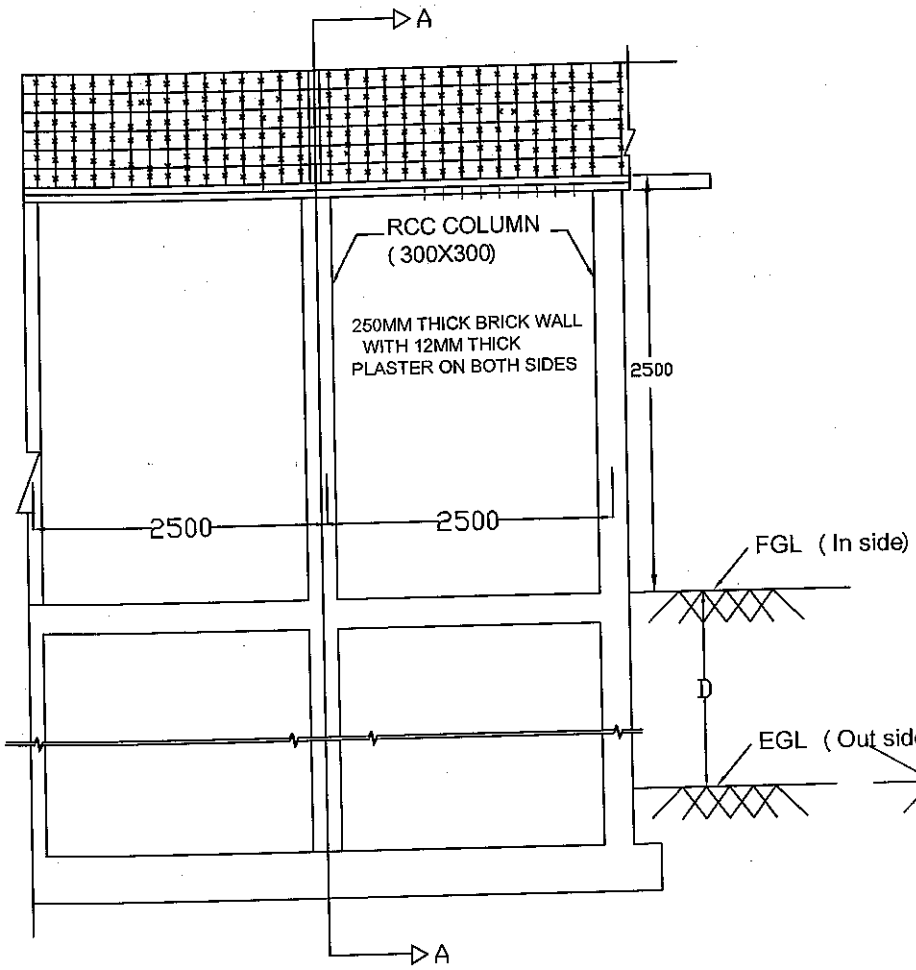
SIDE VIEW

Note:

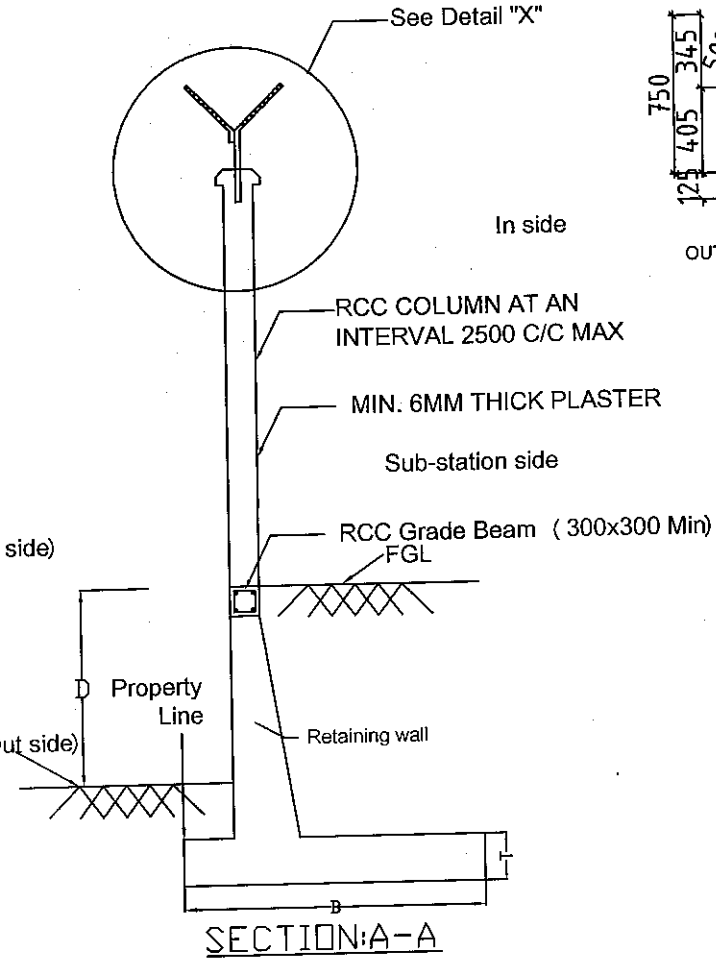
1) Floor area and height of the building provided here are minimum required size. If larger size is required due to bidder's GIS specifications, number of bays (including future); the bidder may increase size of the building within the quoted price. No additional payment shall be made in this regard.
2) If transformers are positioned near the GIS building, due to fire safety reasons no window shall be provided on the transformer side of the building. But, if transformers are positioned sufficiently far from the GIS building, then windows shall be provided on the transformer side of the building. IEC guidelines shall be followed for safety of the building.
3) Position and size of GIS equipments, cable ducts, cable shaft, loading & unloading platform, columns, doors, windows, emergency exit stair, lift core, corridor *etc.* will be finalized during detail design.

Tender Drawing

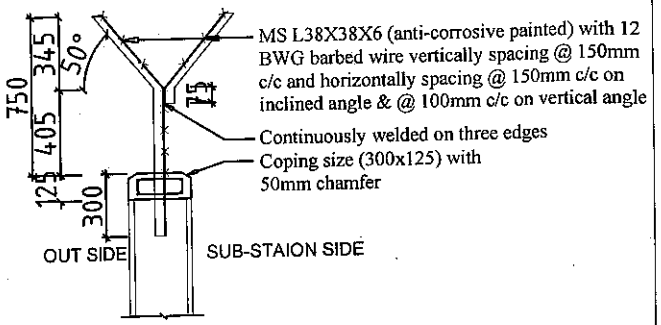
EMPLOYER	POWER GRID COMPANY OF BANGLADESH LTD.	
PROJECT:	DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 400/230/132KV GIS SUBSTATION AT PURBACHAL ON TURNKEY BASIS (Package-6)	
CONTRACT NO:		
Prepared	TITLE: 230KV AND 132KV GIS BUILDING – SIDE VIEW	Paper size
Checked		Scale: NTS
Approved	DOCUMENT ID: PCCB/DESIGN/2021/PURBACHAL/012A	Page: 04



FRONT ELEVATION



SECTION:A-A



Detail "X"

NOTE:

(1) "EGL" means Existing Ground level outside project area.

(2) "FGL" means Finished Ground level

(3) ALL DIMENSIONS ARE IN MM

(4) 'D'=Depth of Earth Filling for Land Development (as per site condition)

(5) Expansion Joints should be provided around 30m Interval.

(6) Exposed surfaces of Boundary / retaining wall shall be rendered with plaster and suitable paint and NCF whereever required.

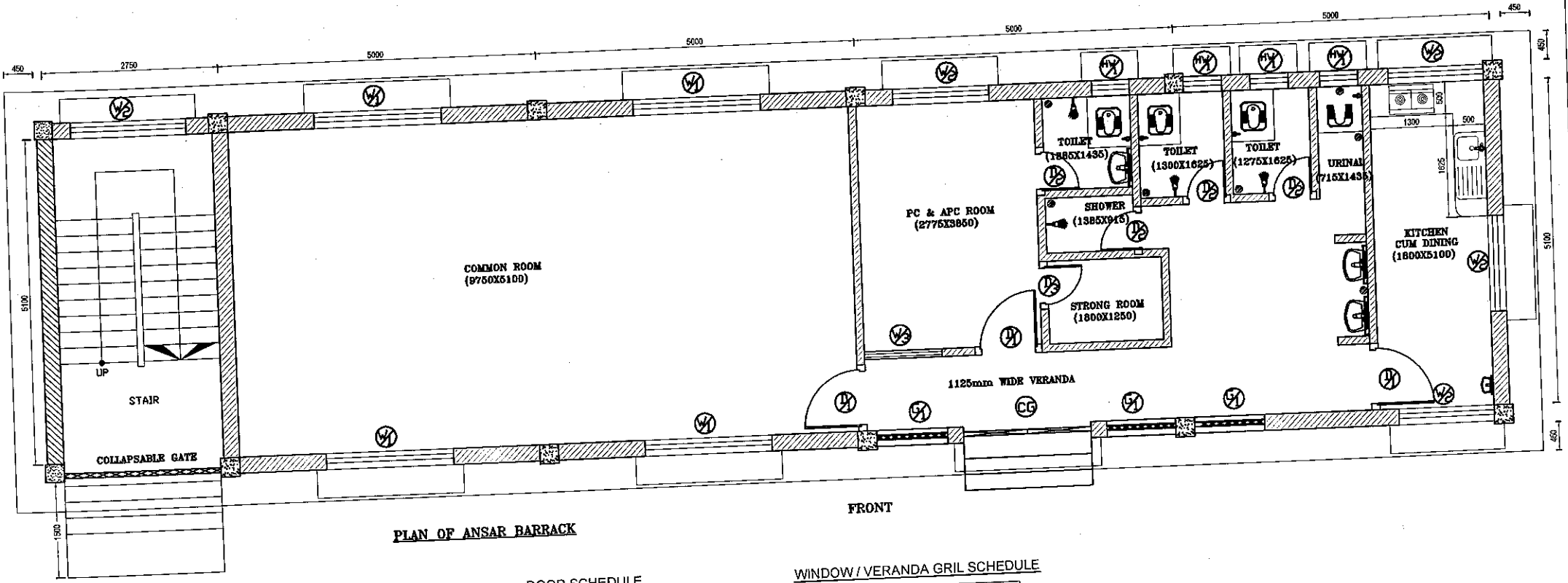
(7) Boundary wall cum retaining wall shall be designed considering wind force (BNBC) , lateral earth pressure, earth settlement, soil bearing capacity and other related safety factors.

(8) Provided that site and soil condition satisfy all the design standards and safety factors, choice of type of retaining wall shall be as follows:

Depth of soil to be retained (m)	Type of retaining wall
0 ~ 3	Gravity/RCC Cantilever/RCC vertical wall - with or without pile
>3 ~ 6	RCC Cantilever/RCC vertical wall - with or without pile
Above 6	RCC vertical wall with pile

Tender Drawing

Power Grid Company of Bangladesh Limited	
Project	DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 400/230/132KV GIS SUBSTATION AT PURBACHOL ON TURNKEY BASIS (Package-6).
Drawing Title	Boundary wall with retaining wall
Drawing No.	PGCB/DESIGN/2021/PURBACHAL/C12A
Drawn:	Checked: Approved:



PLAN OF ANSAR BARRACK

LEGEND

D = DOOR
W = WINDOW
HW = HIGH WINDOW
CG = COLLAPSIBLE GATE
G = VERANDA GRIL

DOOR SCHEDULE

S.L.	NO.	SIZE		MATERIAL
		WIDTH	HEIGHT	
CG	2	2000	2100	M. STEEL
D/1	3	1050	2100	TIMBER
D/2	4	750	2100	PLASTIC
D/3	1	750	2100	M. STEEL

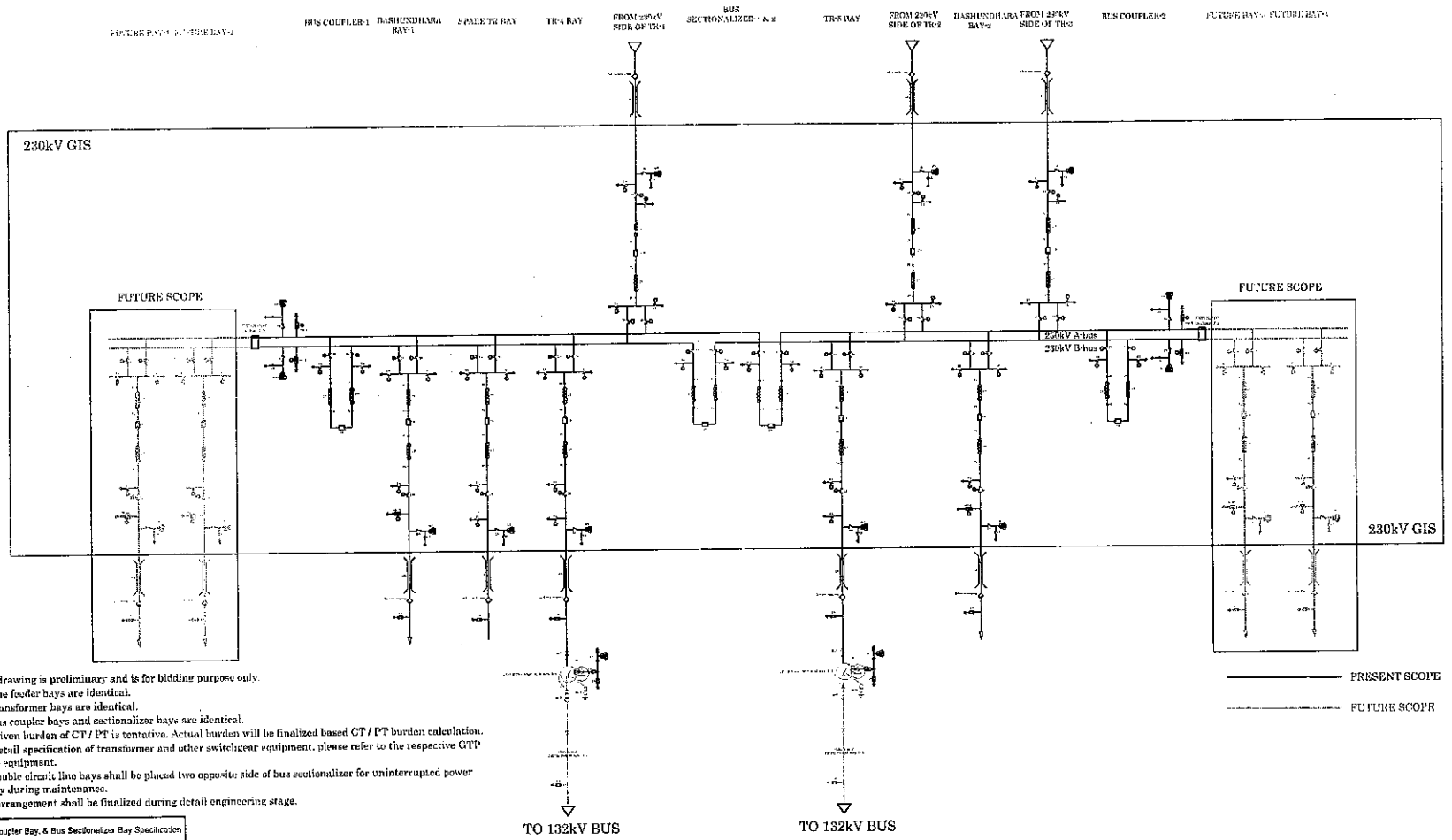
WINDOW / VERANDA GRIL SCHEDULE

S.L.	NO.	SIZE		MATERIAL
		WIDTH	HEIGHT	
W/1	4	2000	1350	ALUMINIUM
W/2	5	1500	1350	ALUMINIUM
W/3	1	1200	1350	ALUMINIUM
HW/1	4	600	600	ALUMINIUM
G/1	3	1100	1350	MS PLAIN/ FLAT BAR

NOTES:
1. ANSAR BARRACK BUILDING SHALL BE RCC FRAME STRUCTURE AND FLOOR HEIGHT SHALL BE MIN. 3.0 METER.
2. DETAILS OF ARCHITECTURAL, STRUCTURAL & FOUNDATION DRAWING SHALL BE SUBMITTED FOR APPROVAL.
2. WATER SUPPLY SYSTEM, TOILET & OTHER SANITARY FITTINGS SHALL BE PROVIDED.
3. ROOF SHALL BE WATER PROOFED WITH LIME TERRACING 2:2:7–LIME, SHURKI (POWDERED BRICK) & 0.75" DOWN BRICK CHIPS.
4. RAIN WATER DOWN PIPE & BUILDING DRAINAGE SYSTEM SHALL BE TAKE INTO CONSIDER PRIOR TO SLAB CASTING.
5. POWER CONNECTION LAYOUT SHALL BE APPROVED BEFORE WORK.

Tender Drawing

Power Grid Company of Bangladesh Limited	
Project	DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF NEW 400/230/132KV GIS SUBSTATION AT PURBACHAL ON TURNKEY BASIS (Package-6).
Drawing Title	Single storied ansar barrack with foundation for two storied
Drawing No.	DOCUMENT ID: PGCB/DESIGN/2021/PURBACHAL/C&A
Drawn:	Checked: Approved:



NOTES:

1) This drawing is preliminary and is for bidding purpose only.
2) All line feeder bays are identical.
3) All transformer bays are identical.
4) All bus coupler bays and sectionalizer bays are identical.
5) The given burden of CT / PT is tentative. Actual burden will be finalized based CT / PT burden calculation.
6) For detail specification of transformer and other switchgear equipment, please refer to the respective GTP of the equipment.
7) All double circuit line bays shall be placed two opposite side of bus sectionalizer for uninterrupted power supply during maintenance.
8) Bay arrangement shall be finalized during detail engineering stage.

Bus, Bus Coupler Bay, & Bus Sectionalizer Bay Specification

Equipment	Symbol	Rating
Bus Scheme & Capacity		Double Bus, 4000A, 50kA/3sec
BUS PT with externally operated isolation link (without degassing)		Core I: Core II: Core III:
BUS HSES		50kA/3sec
DS (Bus Side)		4000A, 50kA/3sec
CT1 (BUS COUPLER)		4000-2000/1A, 50kA/3sec Core I: Core II: Core III:
CB		Triple Pole, 4000A, 50kA/3sec
CT2 (BUS COUPLER)		4000-2000/1A, 50kA/3sec Core I: Core II: Core III:
CT1 (BUS SECTIONALIZER)		4000-2000/1A, 50kA/3sec Core I: Core II: Core III:
CT2 (BUS SECTIONALIZER)		4000-2000/1A, 50kA/3sec Core I: Core II: Core III:

Line Feeder Bay Specification

Equipment	Symbol	Rating
AIS LA		Ur=198kV, Up=156kV, 10kA
PVT with externally operated isolation link (without degassing)		Core I: Core II: Core III:
HSES		50kA/3sec
DS (Line side)		3150A, 50kA/3sec
CT (Line side)		3200-1600/1A, 50kA/3sec Core I: Core II: Core III:
CB		Single Pole, 3150A, 50kA/3sec
CT (Bus side)		3200-1600/1A, 50kA/3sec Core I: Core II: Core III:
DS (Bus side)		3150A, 50kA/3sec

Tr-1, Tr-2, & Tr-3 Transformer Bay Specification

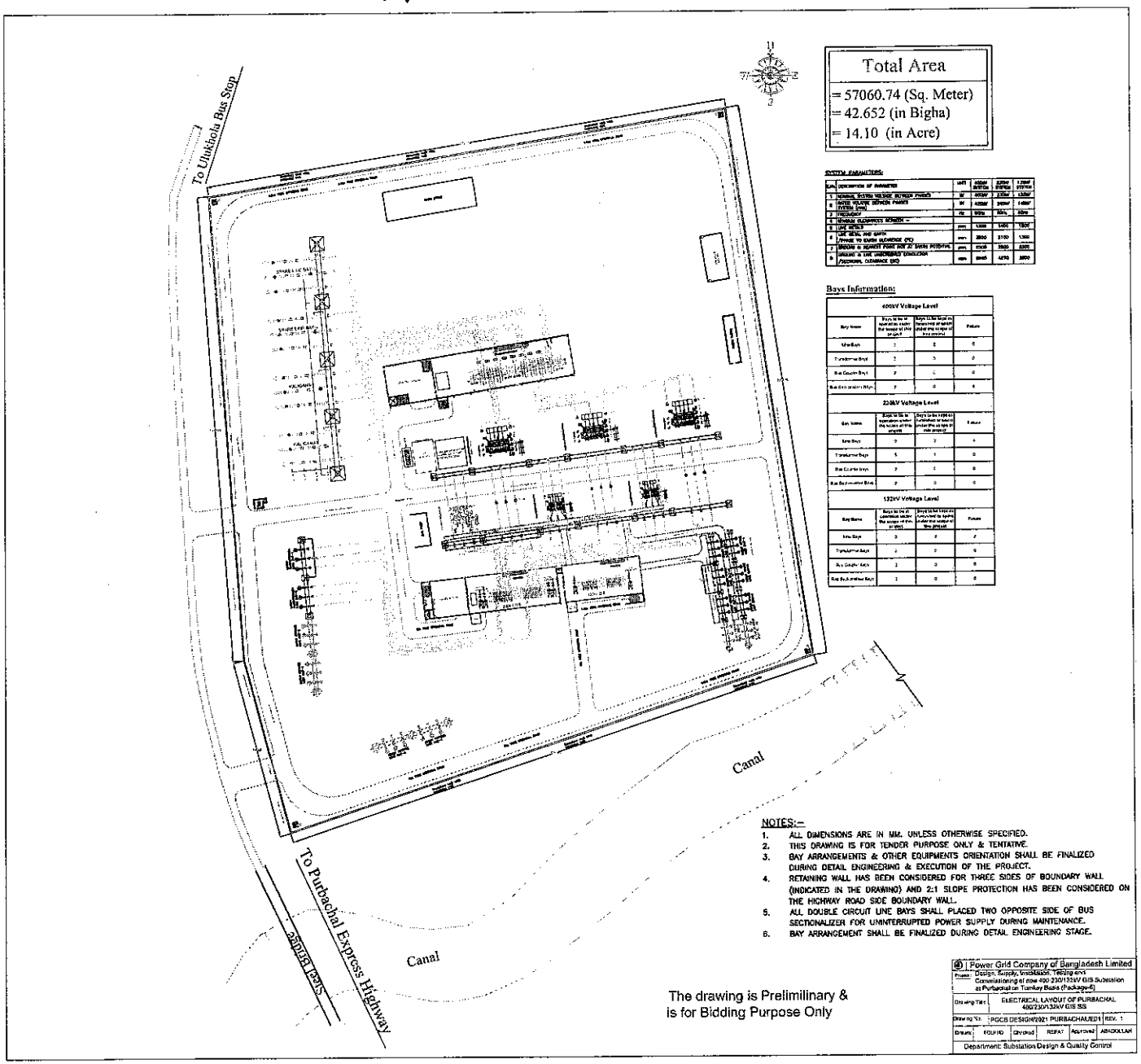
Equipment	Symbol	Rating
AIS LA		Ur=198kV, Up=156kV, 10kA
PVT with externally operated isolation link (without degassing)		Core I: Core II: Core III:
DS (Tr side)		3150A, 50kA/3sec
CT (Tr side)		3200-2400/1A, 50kA/3sec Core I: Core II:
CB		Triple Pole, 3150A, 50kA/3sec
CT (Bus side)		3200-2400/1A, 50kA/3sec Core I: Core II: Core III:
DS (Bus side)		3150A, 50kA/3sec

Tr-4 & Tr-5 Transformer Bay Specification

Equipment	Symbol	Rating
AIS LA		Ur=198kV, Up=156kV, 10kA
PVT with externally operated isolation link (without degassing)		Core I: Core II: Core III:
DS (Tr side)		3150A, 50kA/3sec
CT (Tr side)		3200-1600/1A, 50kA/3sec Core I: Core II:
CB		Triple Pole, 3150A, 50kA/3sec
CT (Bus side)		3200-1600/1A, 50kA/3sec Core I: Core II: Core III:
DS (Bus side)		3150A, 50kA/3sec

The drawing is Prelimilinary & is for Bidding Purpose Only

Power Grid Company of Bangladesh Limited	
Project:	Design, Supply, Installation, Testing and Commissioning of new 400/230/132kV GIS Substation at Purbachal on Turnkey Basis (Package-6)
Drawing Title:	Single Line Diagram: PURBACHAL 400/230/132kV GIS SS (230kV Side)
Drawing No.	PGCB/DESIGN/2021/PURBACHAL/E03 — REV 1
Drawn: TOUHID — Checked: REFAT — Approved: ABADULLAH	
Department: Substation Design & Quality Control	


To Ulukhola Bus Stop
Canal
To Purbachal Express Highway
Canal
Total Area
= 57060.74 (Sq. Meter)
= 42.652 (in Bigha)
= 14.10 (in Acre)
SYSTEM PARAMETERS:
Bays Information:
400kV Voltage Level
220kV Voltage Level
132kV Voltage Level
NOTES:-
1. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE SPECIFIED.
2. THIS DRAWING IS FOR TENDER PURPOSE ONLY & TENTATIVE.
3. BAY ARRANGEMENTS & OTHER EQUIPMENTS ORIENTATION SHALL BE FINALIZED DURING DETAIL ENGINEERING & EXECUTION OF THE PROJECT.
4. RETAINING WALL HAS BEEN CONSIDERED FOR THREE SIDES OF BOUNDARY WALL (INDICATED IN THE DRAWING) AND 2:1 SLOPE PROTECTION HAS BEEN CONSIDERED ON THE HIGHWAY ROAD SIDE BOUNDARY WALL.
5. ALL DOUBLE CIRCUIT LINE BAYS SHALL PLACED TWO OPPOSITE SIDE OF BUS SECTIONALIZER FOR UNINTERRUPTED POWER SUPPLY DURING MAINTENANCE.
6. BAY ARRANGEMENT SHALL BE FINALIZED DURING DETAIL ENGINEERING STAGE.
The drawing is Prelimilinary & is for Bidding Purpose Only
Power Grid Company of Bangladesh Limited
Project: Design, Supply, Installation, Testing and Commissioning of new 400/230/132kV GIS Substation at Purbachal on Turnkey Basis (Package-6)
Drawing Title: ELECTRICAL LAYOUT OF PURBACHAL 400/230/132kV GIS SS
Drawing No.: PGCB DESIGN/2021 PURBACHAUED1 REV. 1
Drawn: EQUFID Checked: REFAT Approved: ABDOLLAH
Department: Substation Design & Quality Control