



## A. ELECTRICAL LEGENDS.

	1x40 Watts - Fluorescent Tube rod with strip rail type housing for surface mounting.
	1x60 Watts - 1200mm Ceiling Fan
	1x60 Watts - Bulb fitting.
	1x60 Watts - Ceiling Mounted Fitting.
	1x60 Watts - Wall Mounted Luminaries/ Bracket Fitting.
	1x60 Watts - 300mm Exhaust Fan.
	6A - One Way Switch (Modular) for lighting points.
	Door Bell - 1x40W
	6A - 100 Watts Socket Outlet with switch.
	16A - 2000 Watts Socket Outlet with Switch.
	Television Socket Outlet.
	Television Distribution Box (TV-DB).
	Sub-Distribution Box & "X" for SDB number.
	Main Distribution Board.

## B. TECHNICAL SPECIFICATION FOR ELECTRICAL WORKS.

- ALL LIGHT POINT WIRING SHALL BE WITH 1.5 SQ. MM. PVC INSULATED FIRE RESISTANT COPPER CONDUCTOR 1.1KV GRADE IN RECESSED HDPE PIPE.
- ALL LIGHT CIRCUIT WIRING SHALL BE WITH 2.5 SQ. MM. PVC INSULATED FIRE RESISTANT COPPER CONDUCTOR 1.1KV GRADE IN RECESSED HDPE PIPE.
- ALL POWER POINT WIRING SHALL BE WITH 4 SQ. MM. PVC INSULATED FIRE RESISTANT COPPER CONDUCTOR 1.1KV GRADE IN RECESSED HDPE PIPE.
- ALL THE LIGHT SWITCH BOARDS SHALL BE INSTALLED AT 23CM AWAY FROM DOOR FRAME/EDGE OF WALL AND 1.5M ABOVE THE FINISHED FLOOR LEVEL.
- ALL POWER SOCKETS SHALL BE INSTALLED AT 30CM HEIGHT FROM FINISHED FLOOR LEVEL AND IN TOILETS AND PANTRY AT 1.5M.
- BRIDGE METHOD SHOULD BE FOLLOWED AT THE CROSSING.
- ALL THE CONDUIT ACCESSORIES MUST BE THREADED TYPE ONLY.
- THE CONDUIT LAYOUT IN THIS DRAWINGS INDICATES 25MM/40MM DIA. HDPE CONDUIT AS PER THE REQUIREMENT.
- NO PHASE DIFFERENCE IS ALLOWED TO BE DRAWN THROUGH THE SAME CONDUIT.
- THE POWER CIRCUITS SHALL NOT BE LOOPED IN ANY CASE. THE DIRECT CIRCUIT WIRES TO EVERY POWER SOCKETS MUST BE LAID FROM SDB WITH INDIVIDUAL 16A SP MCB FOR EVERY POWER SOCKETS.
- ALL WALL FIXTURES SHALL BE AT 2.75 M FROM FINISHED FLOOR LEVEL.
- ALL SUBDISTRIBUTION (SDB) FOR EVERY UNITS SHALL BE IN RECESSED AT CORRIDOR WALLS AT AN ACCESSIBLE HEIGHT FROM FINISHED FLOOR LEVEL.
- MDB (MAIN DISTRIBUTION BOARD) SHALL BE MOUNTED AT THE GROUND FLOOR.
- ALL ELECTRICAL WIRES/CONDUCTORS AND POWER CABLES MUST BE PROVIDED WITH A PROPER COLOR CODING CONFIRMING TO INTERNATIONAL CODING STANDARDS. THE COLOR CODING SHALL BE RED FOR R-PHASE, YELLOW FOR Y-PHASE, BLUE FOR B-PHASE, BLACK FOR NEURAL AND GREEN FOR EARTHING OR GROUND WIRES.
- THE PROTECTION EARTHING ( SWITCHGEAR & BUILDING PROTECTION AGAINST LIGHTNING) MUST BE PROVIDED AND INSTALLED AS PER EARTHING DRAWING PROVIDED.
- THE EARTH CONTINUITY MUST BE PROVIDED THROUGHOUT THE LENGTH OF WIRING. ALL METALLIC PARTS, SWITCH BOARDS, LIGHTING FITTINGS & POWER POCKETS MUST BE CONNECTED TO THE EARTH WIRES AND CONNECTIONS SHOULD BE ELECTRICALLY & MECHANICALLY SOUND. THE SIZE OF THE EARTH CONTINUITY WIRES SHALL NOT BE LESS THAN 1.5SQ.MM (GREEN COLOUR) COPPER WIRE FOR LIGHTING CIRCUITS AND 2.5SQ.MM (GREEN COLOUR) COPPER WIRES FOR POWER CIRCUITS RESPECTIVELY.
- SOME ASSUMPTION AND LOADS ARE AS FOLLOWS FOR MAIN DISTRIBUTION BOARD.
 

(i) TOTAL CONNECTED LOADS :	165,760 WATTS
(ii) POWER FACTOR :	0.85
(iii) VOLTAGE :	415 V
(iv) CURRENT DRAWN AS PER THE TOTAL CONNECTED LOAD :	271.30A
(v) CURRENT DRAWN AS PER THE 60% LOAD DEMAND :	162.78A

## C. SPECIFICATION FOR TV WORKS

- TV CABLE DUCTS SHALL BE WITH 25MM DIA. HDPE CONDUIT.
- TELEVISION CABLE DUCT MUST BE SEPARATED BY 0.5M AWAY FROM ELECTRICAL ROUTE.
- TELEVISION SOCKET OUTLET SHALL BE AT 25CM ABOVE FINISHED FLOOR LEVEL.
- BRIDGE METHOD SHOULD BE FOLLOWED AT THE CROSSING.
- TV-DB (TELEVISION - DISTRIBUTION BOARD) SHALL BE MOUNTED AT THE GROUND FLOOR.



**BHUTAN POWER CORPORATION LIMITED**

TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

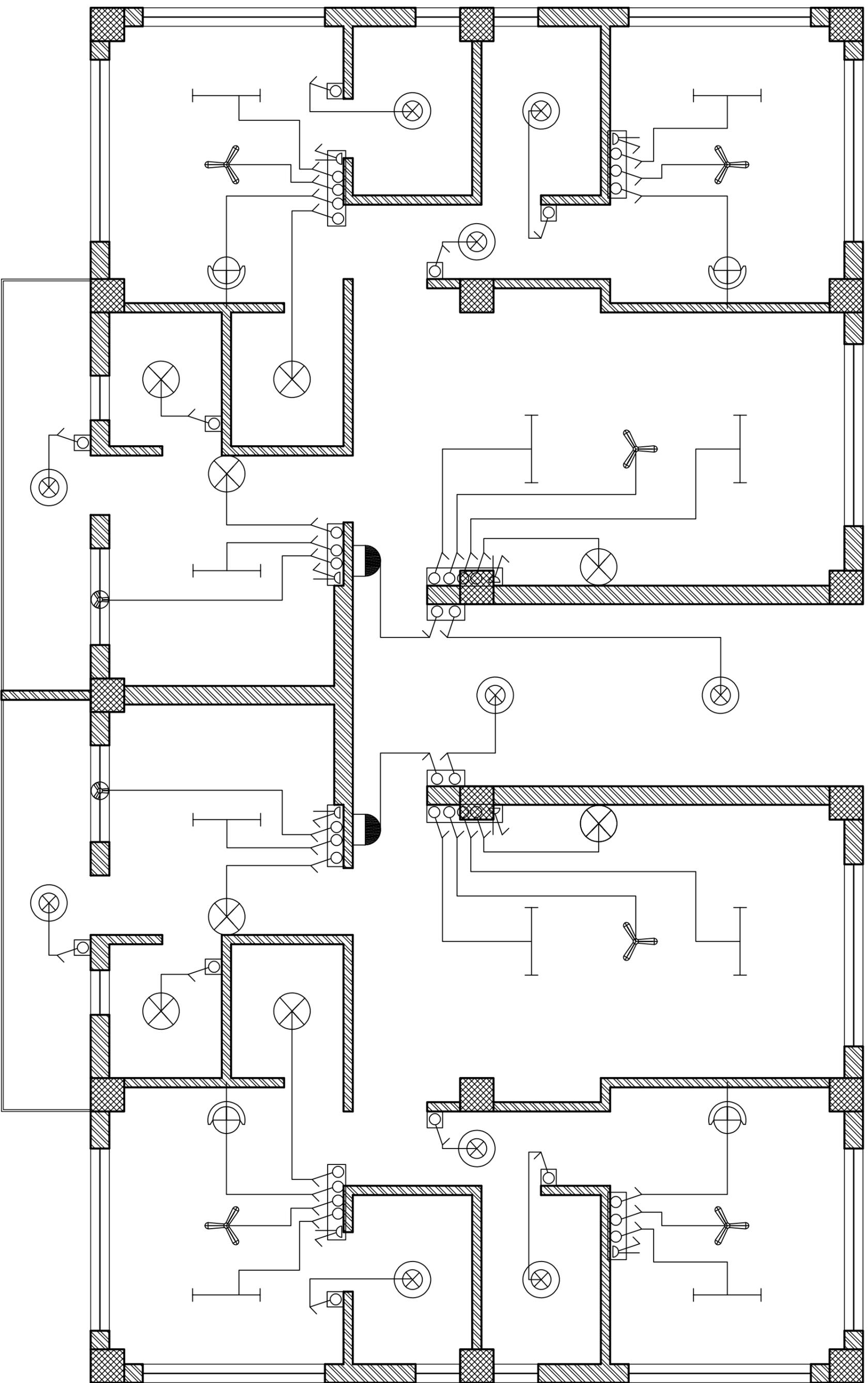
PROJECT TITLE	DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION
DRAWING STATUS	APPROVAL <input type="checkbox"/> APPROVED <input type="checkbox"/>

REFERENCE NOTES	<p>1. ALL MEASUREMENTS IN THE DRAWING ARE IN MM UNLESS AND OTHERWISE MENTIONED.</p> <p>2. THE MEASUREMENTS IN THE DRAWING ARE TO BE READ AND NOT MEASURED.</p> <p>3. ANY DISCREPANCY IN THE DRAWING SHALL BE IMMEDIATELY BROUGHT TO THE NOTICE OF THE DESIGNER.</p>
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APPROVED BY	KUNZANG TOBGYE GENERAL MANAGER TD, BPC.
DESIGNED BY	SANGAY WANGDI ENGINEER, TD, BPC

DRAWING TITLE	REFER DRAWING
SCALE	DATE
REF DWG	FEBRUARY, 2022.

DRAWING NO.	BPC/TD/TMD/ELECTRICAL
DWG #	1/25



# GROUND FLOOR PLAN - FITTING AND FIXTURE WIRING LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

**PROJECT TITLE**  
 DESIGN OF STAFF QUARTER (G+2) AT  
 GOMTU SUBSTATION

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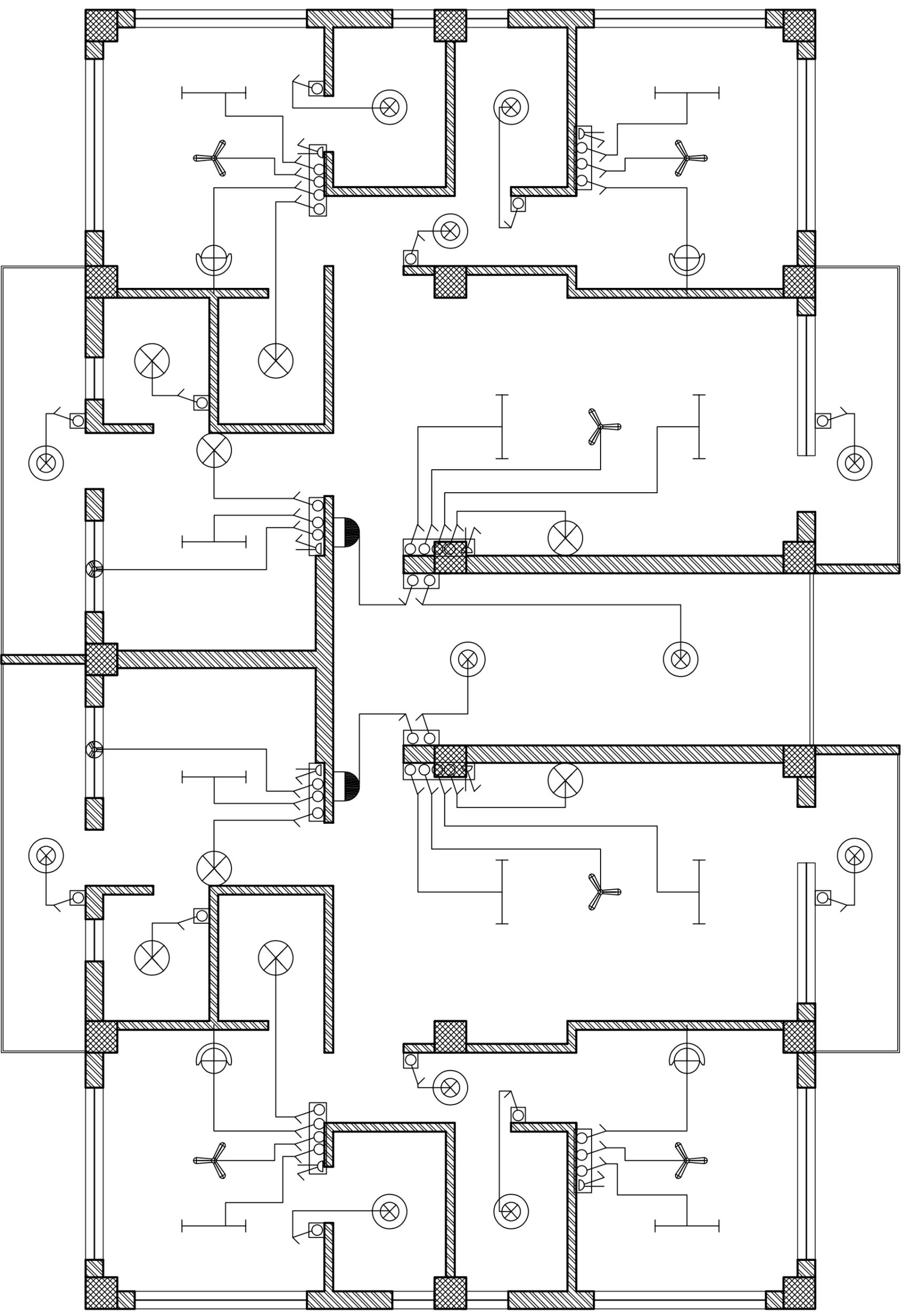
**DESIGNED BY**  
 SANGAY WANGDI  
 ENGINEER, TD, BPC.

**DRAWING TITLE**  
 REFER DRAWING

**SCALE**  
 REF DWG

**DATE**  
 FEBRUARY, 2022.

**DRAWING NO.**  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 2/25**



# FIRST FLOOR PLAN - FITTING AND FIXTURE WIRING LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

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**DESIGNED BY**  
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 ENGINEER, TD, BPC

**DRAWING TITLE**  
 REFER DRAWING

**SCALE**  
 REF DWG

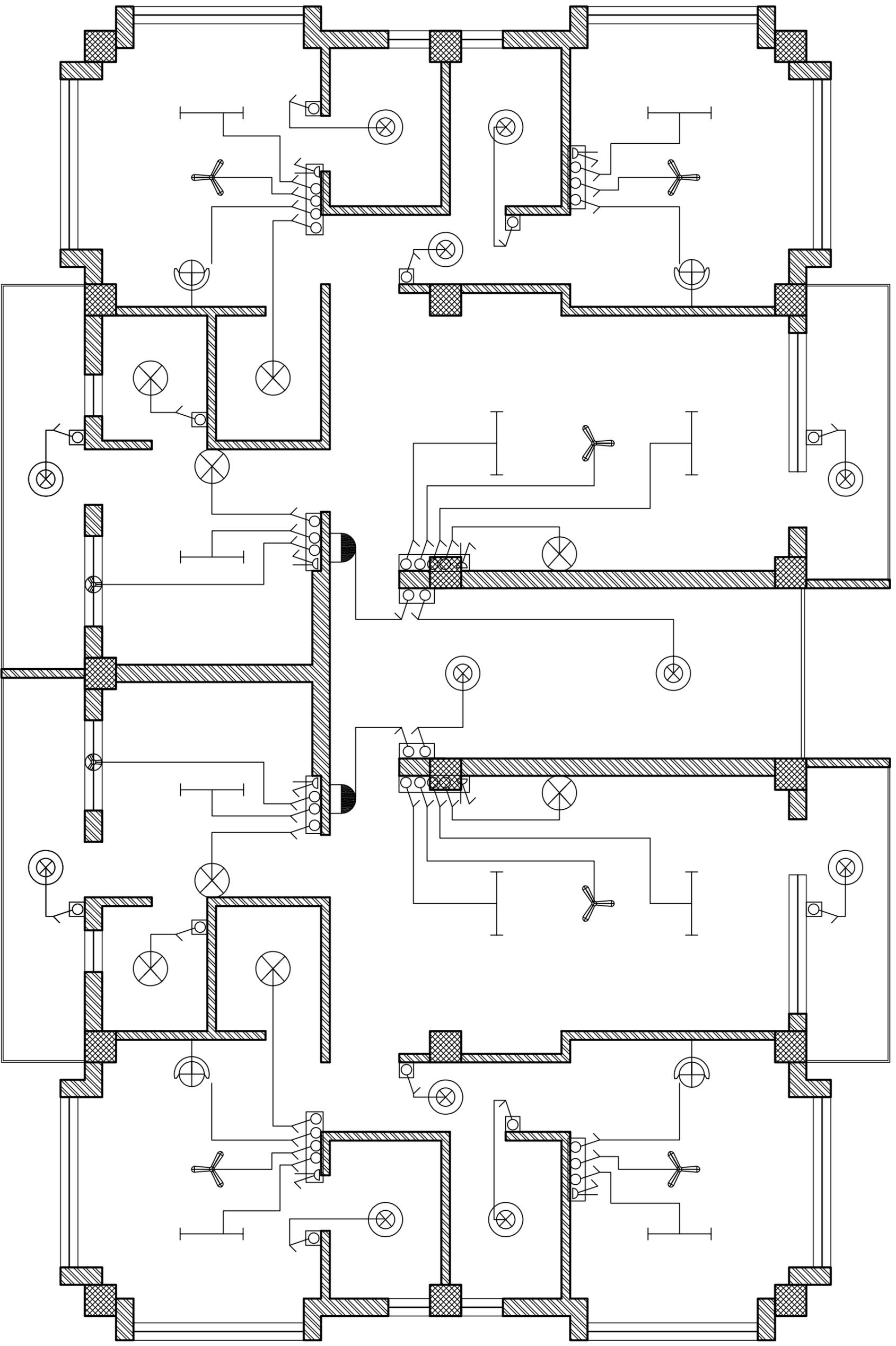
**DATE**  
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**DRAWING NO.**  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 3/25**

**DRAWING STATUS**

APPROVAL

APPROVED



# SECOND FLOOR PLAN - FITTING AND FIXTURE WIRING LAYOUT

		<b>BHUTAN POWER CORPORATION LIMITED</b> TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.	
<b>PROJECT TITLE</b> DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION		<b>DRAWING STATUS</b> <input checked="" type="checkbox"/> APPROVAL <input checked="" type="checkbox"/> APPROVED	
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<b>DESIGNED BY</b> SANGAY WANGDI ENGINEER, TD, BPC.		<b>DRAWING TITLE</b> REFER DRAWING	
<b>SCALE</b> REF DWG		<b>DATE</b> FEBRUARY, 2022.	
<b>DRAWING NO.</b> BPC/TD/TMD/ELECTRICAL		<b>DWG # 4/25</b>	



**BHUTAN POWER CORPORATION LIMITED**

TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE

DESIGN OF STAFF QUARTER (G+2) AT  
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DRAWING STATUS

APPROVAL

APPROVED

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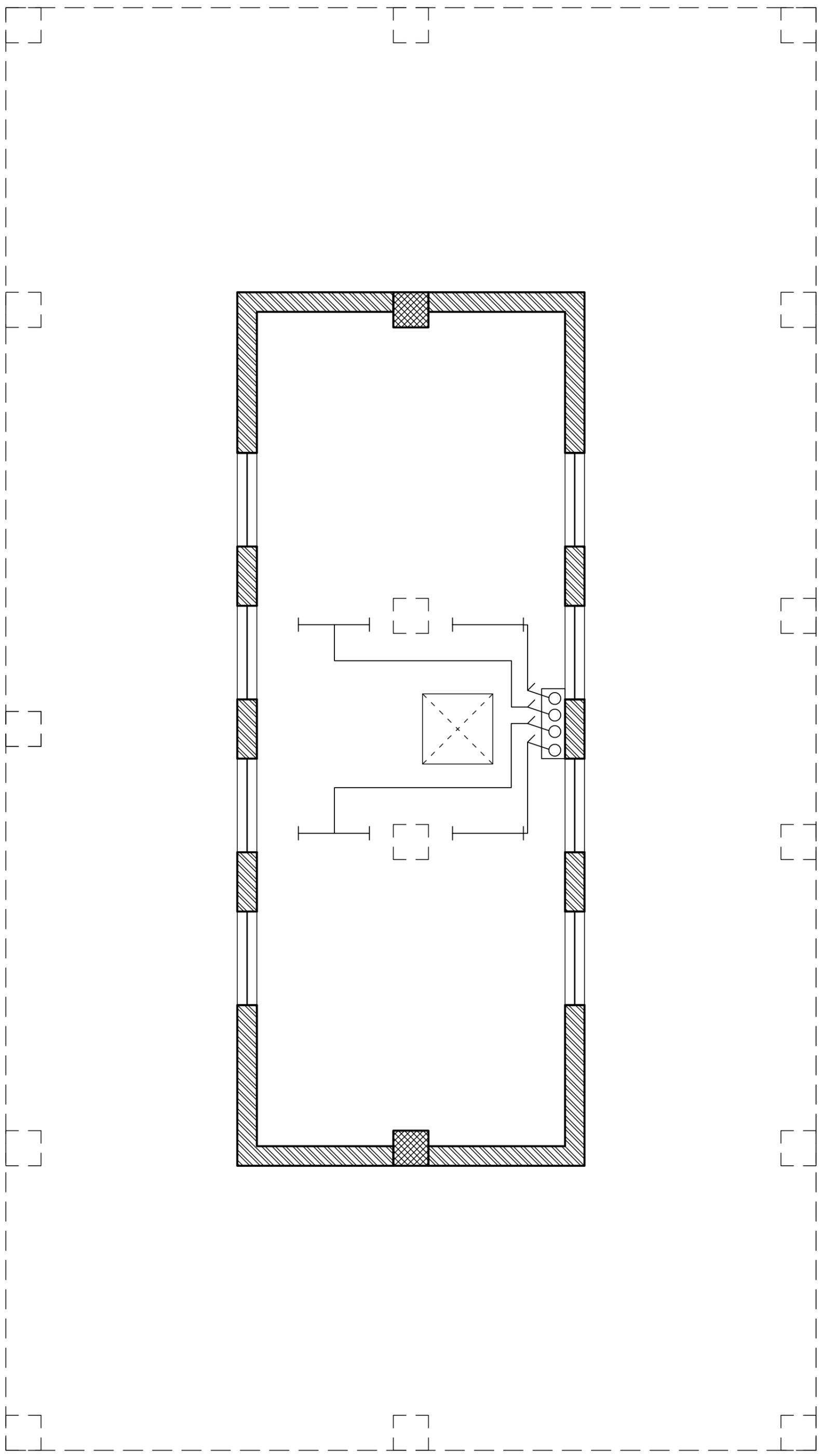
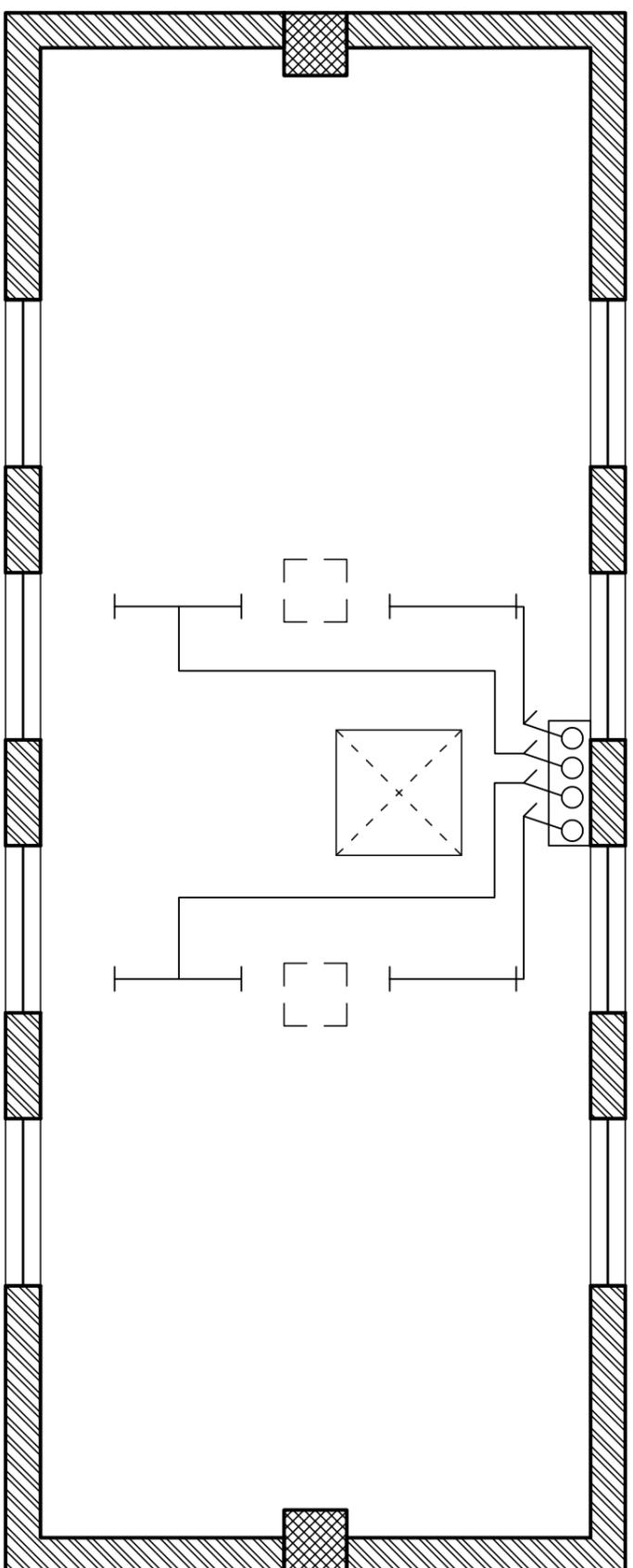
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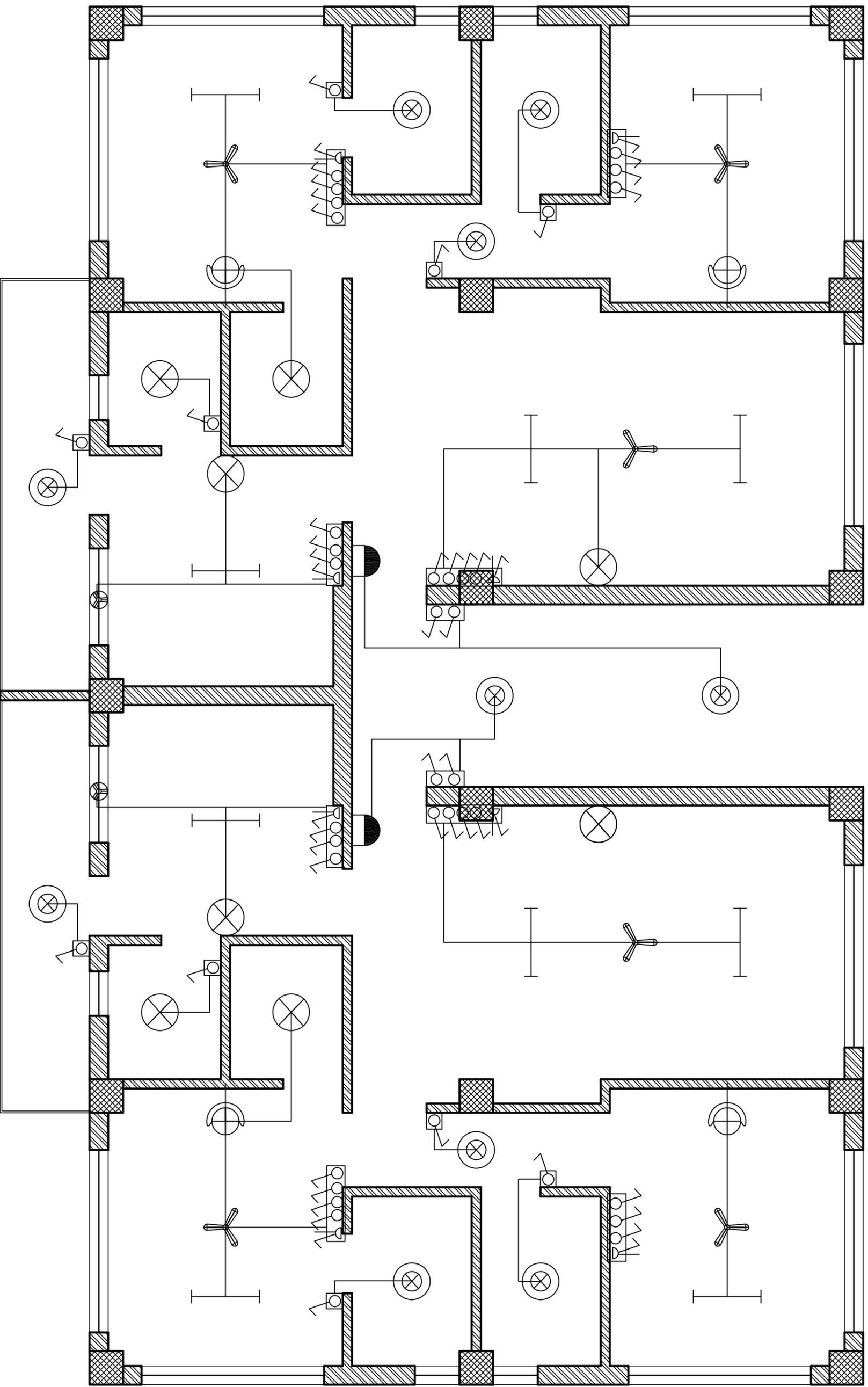
DRAWING NO.

BPC/TD/TMD/ELECTRICAL

**DWG # 5/25**

# JAMTHOG PLAN - FITTING AND FIXTURE WIRING LAYOUT





# GROUND FLOOR PLAN - FITTING AND FIXTURE CONDUIT LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

**PROJECT TITLE**  
 DESIGN OF STAFF QUARTER (G+2) AT  
 GOMTU SUBSTATION

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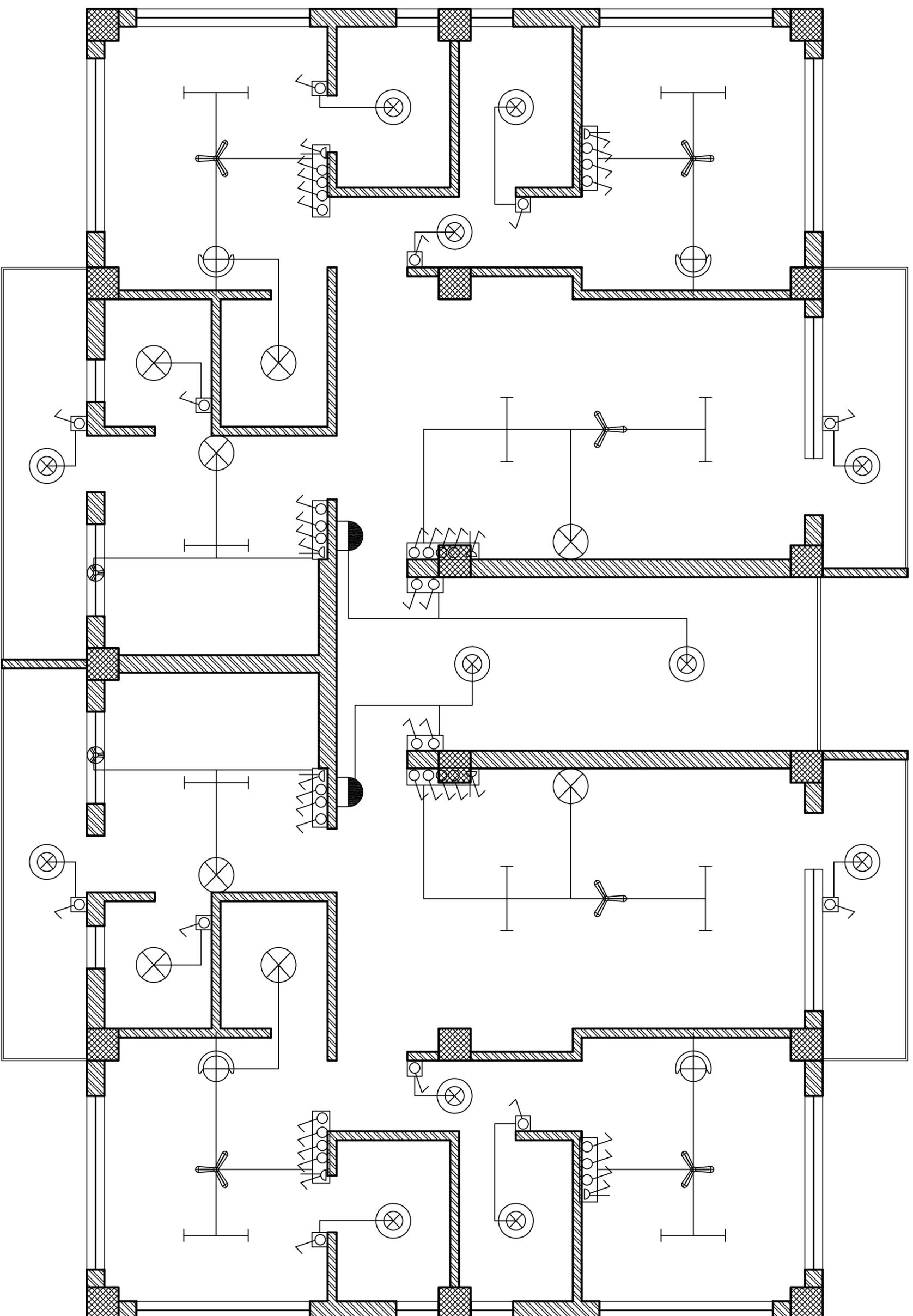
**DESIGNED BY**  
 SANGAY WANGDI  
 ENGINEER, TD, BPC.

**DRAWING TITLE**  
 REFER DRAWING

**SCALE**  
 REF DWG

**DATE**  
 FEBRUARY, 2022.

**DRAWING NO.**  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 6/25**



# FIRST FLOOR PLAN - FITTING AND FIXTURE CONDUIT LAYOUT



**BHUTAN POWER CORPORATION LIMITED**

TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE	DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION
DRAWING STATUS	APPROVAL <input type="checkbox"/> APPROVED <input type="checkbox"/>

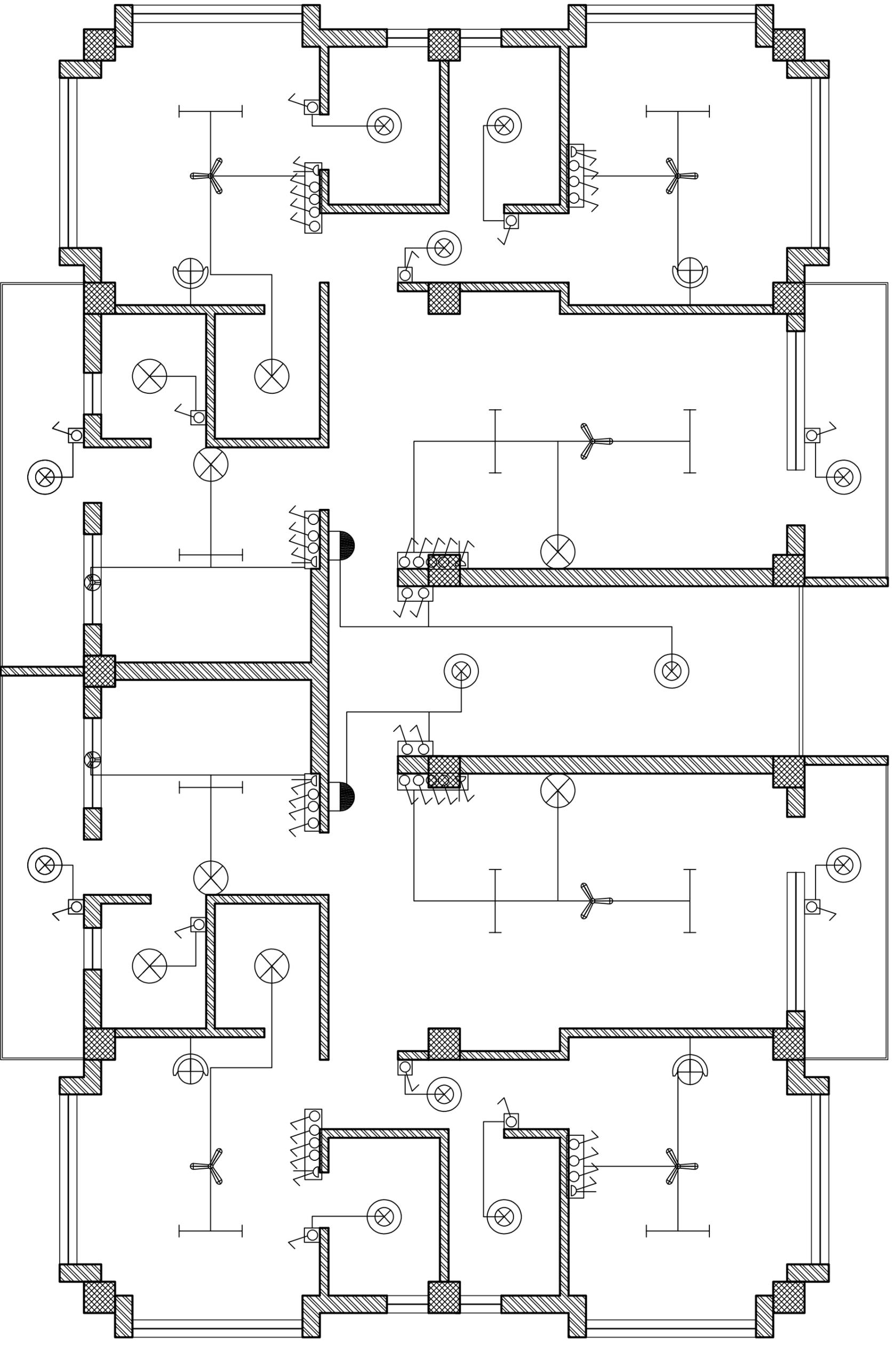
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APPROVED BY	KUNZANG TOBGYE GENERAL MANAGER TD, BPC.
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DESIGNED BY	SANGAY WANGDI ENGINEER, TD, BPC.
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DRAWING TITLE	REFER DRAWING
SCALE	DATE
REF DWG	FEBRUARY, 2022.

DRAWING NO.	BPC/TD/TMD/ELECTRICAL
DWG #	7/25

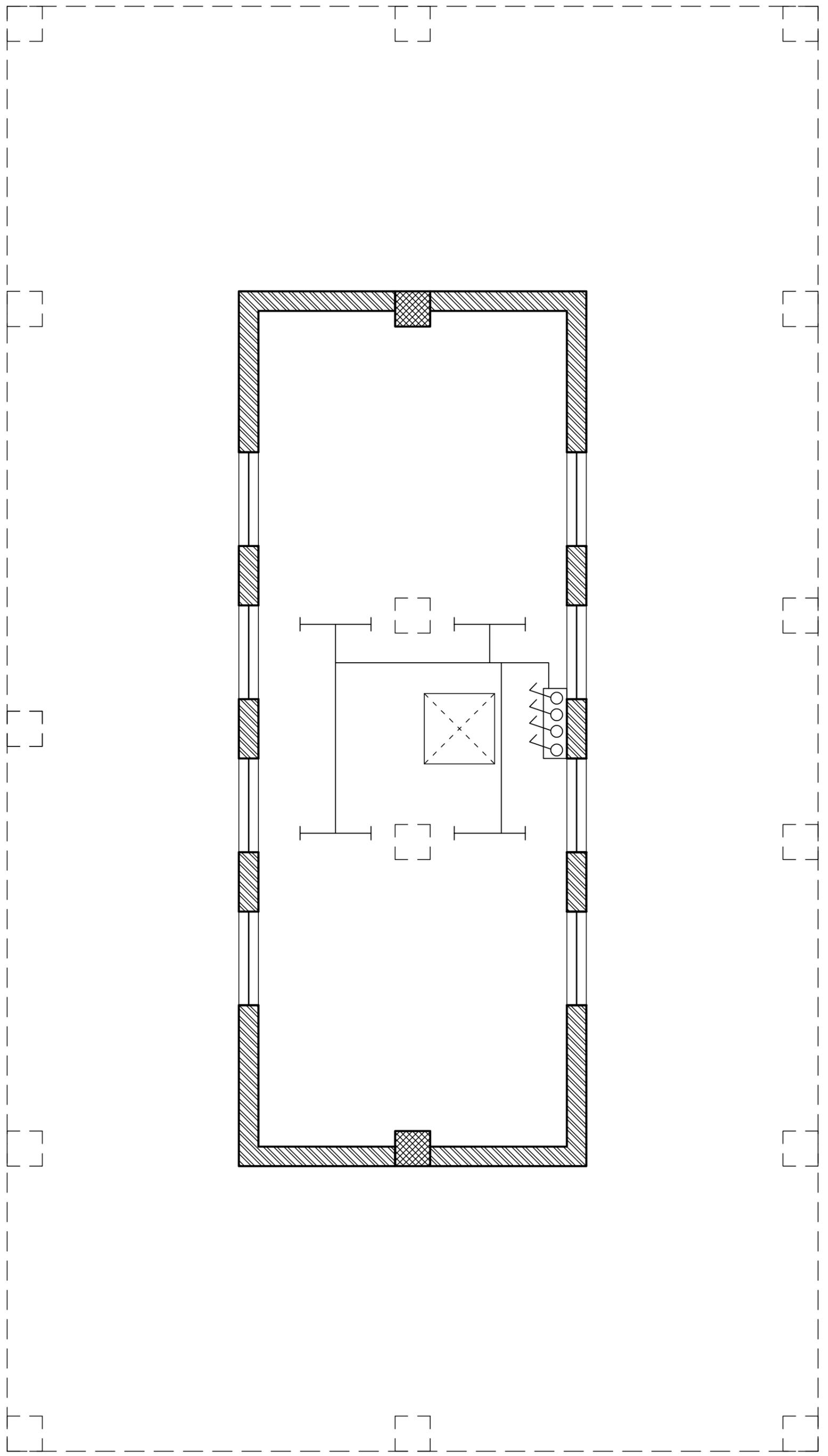


# SECOND FLOOR PLAN - FITTING AND FIXTURE CONDUIT LAYOUT

		<b>BHUTAN POWER CORPORATION LIMITED</b> TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.	
<b>PROJECT TITLE</b> DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION		<b>DRAWING STATUS</b> APPROVAL <input type="checkbox"/> APPROVED <input type="checkbox"/>	
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<b>DESIGNED BY</b> SANGAY WANGDI ENGINEER, TD, BPC		<b>DRAWING TITLE</b> REFER DRAWING	
<b>SCALE</b> REF DWG		<b>DATE</b> FEBRUARY, 2022.	
<b>DRAWING NO.</b> BPC/TD/TMD/ELECTRICAL		<b>DWG # 8/25</b>	



# JAMTHOG PLAN - FITTING AND FIXTURE CONDUIT LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE  
**DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION**

DRAWING STATUS     APPROVAL     APPROVED

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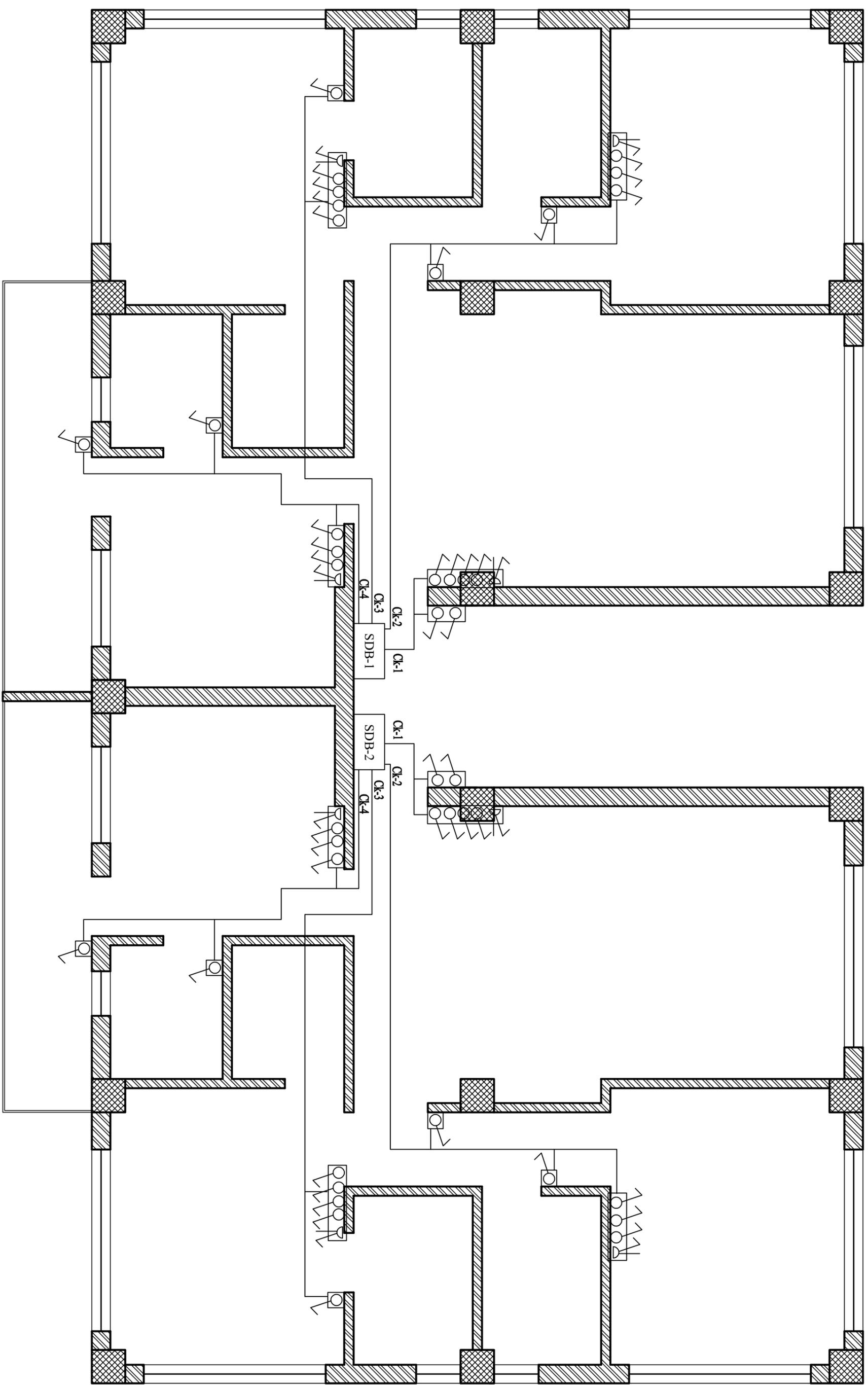
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DRAWING TITLE  
 REFER DRAWING

SCALE    DATE  
 REF DWG    FEBRUARY, 2022.

DRAWING NO.  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 9/25**

# GROUND FLOOR PLAN - LIGHTING CIRCUIT CONDUIT LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE  
**DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION**

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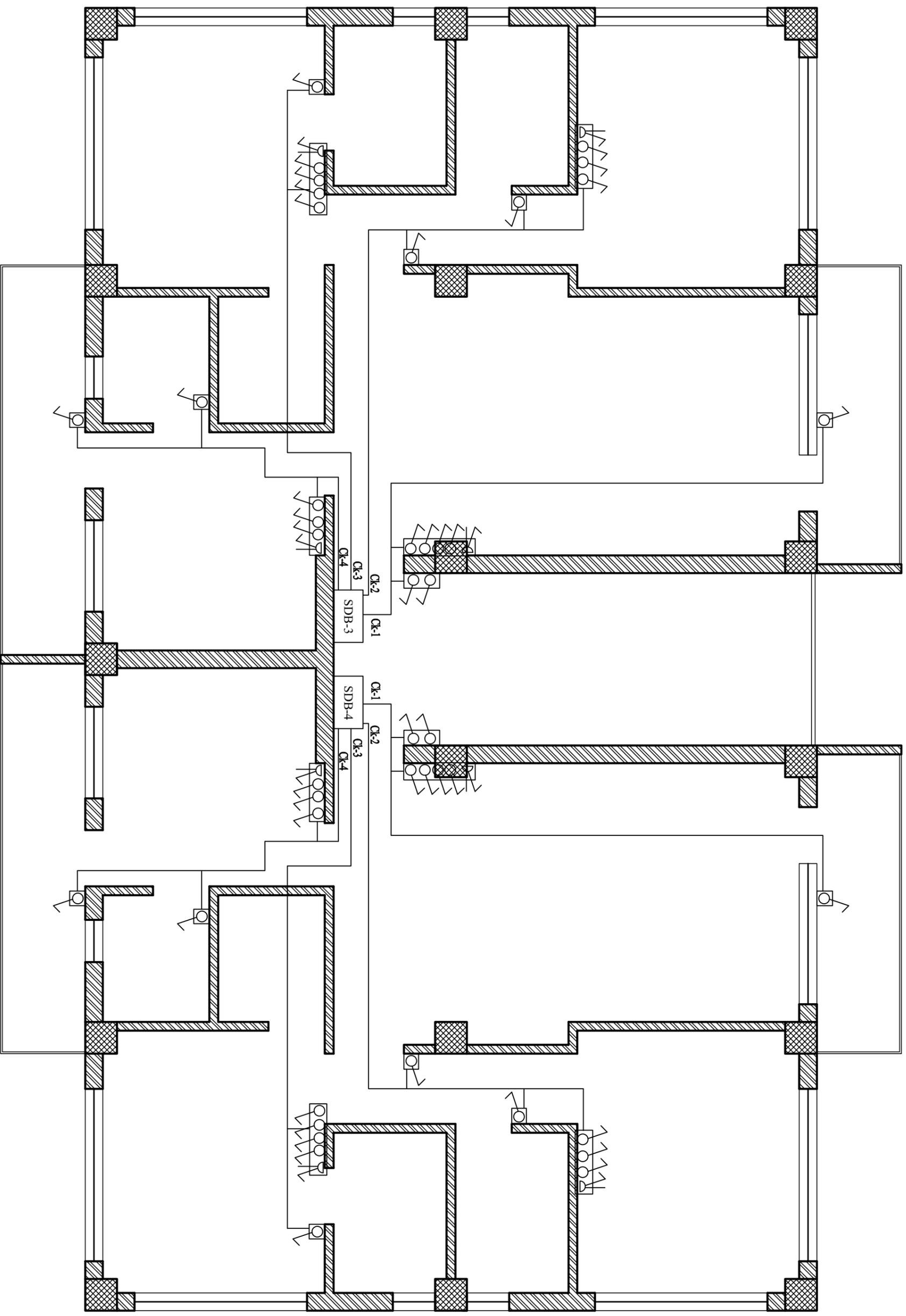
DESIGNED BY  
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 ENGINEER, TD, BPC.

DRAWING TITLE  
 REFER DRAWING  
 SCALE  
 REF DWG

DRAWING STATUS  
 APPROVAL  APPROVED

DRAWING NO.  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 10/25**

DATE  
 FEBRUARY, 2022.



# FIRST FLOOR PLAN - LIGHTING CIRCUIT CONDUIT LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE  
**DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION**

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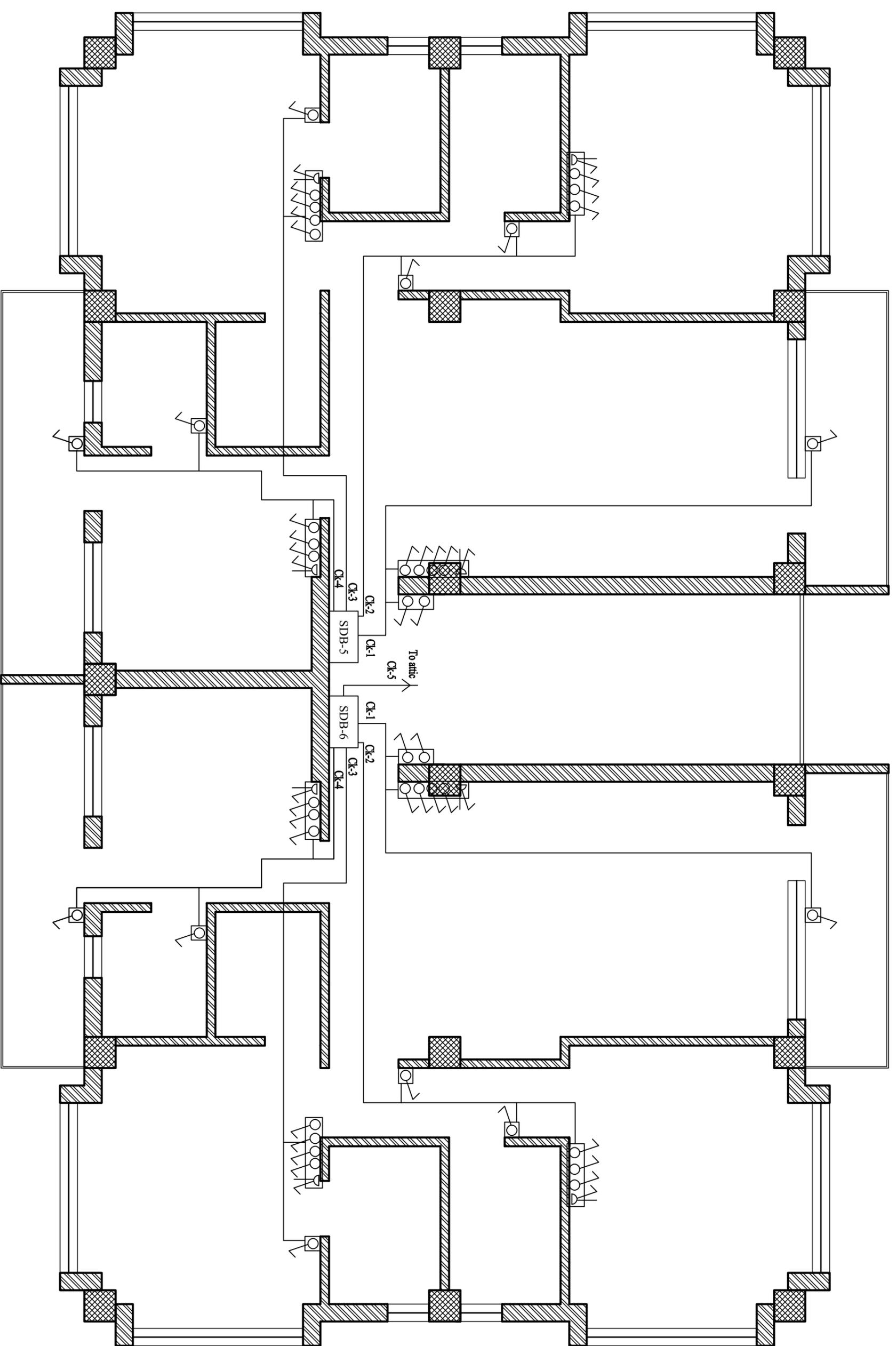
APPROVED BY  
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DRAWING TITLE  
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DRAWING NO.  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 11/25**  
 DATE  
 FEBRUARY, 2022.

DRAWING STATUS  
 APPROVAL  APPROVED



# SECOND FLOOR PLAN - LIGHTING CIRCUIT CONDUIT LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE  
**DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION**

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DATE  
 FEBRUARY, 2022.  
**DWG # 12/25**

DRAWING NO.  
 BPC/TD/TMD/ELECTRICAL

DRAWING STATUS  
 APPROVAL  APPROVED



**BHUTAN POWER CORPORATION LIMITED**

TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE

**DESIGN OF STAFF QUARTER (G+2) AT  
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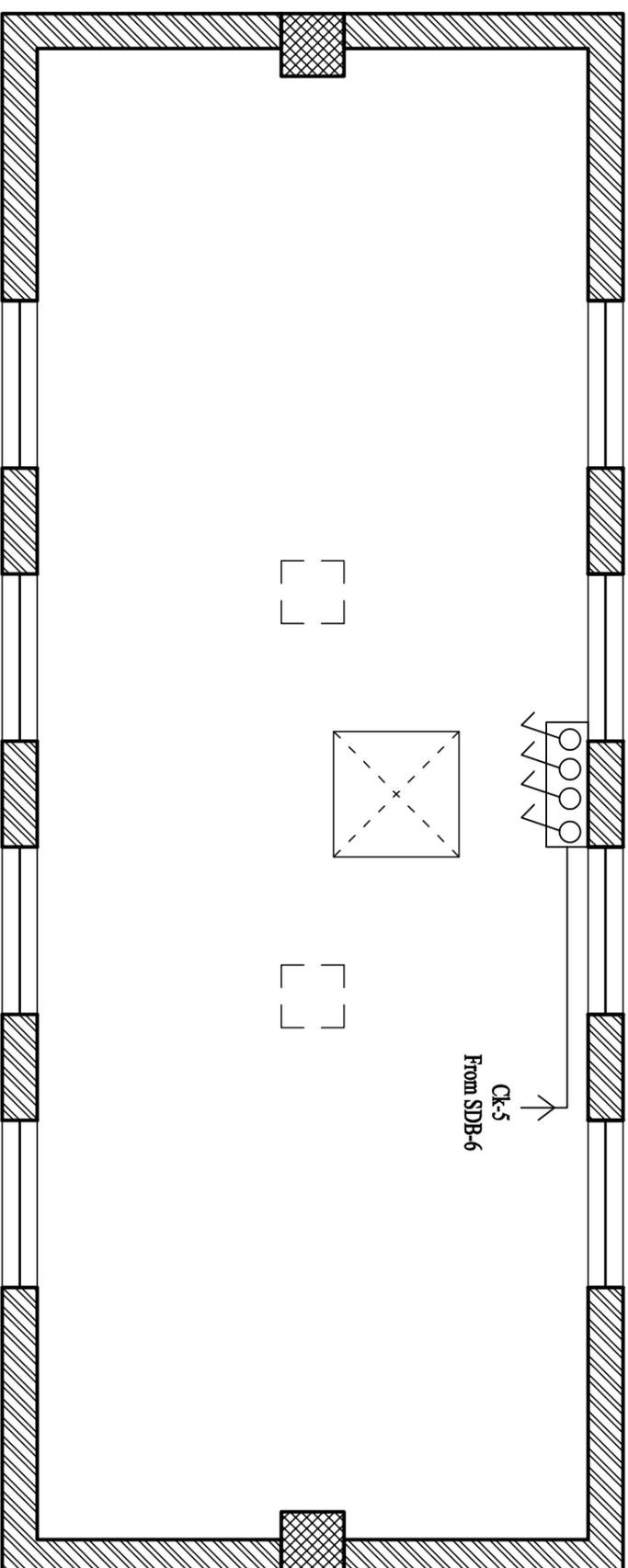
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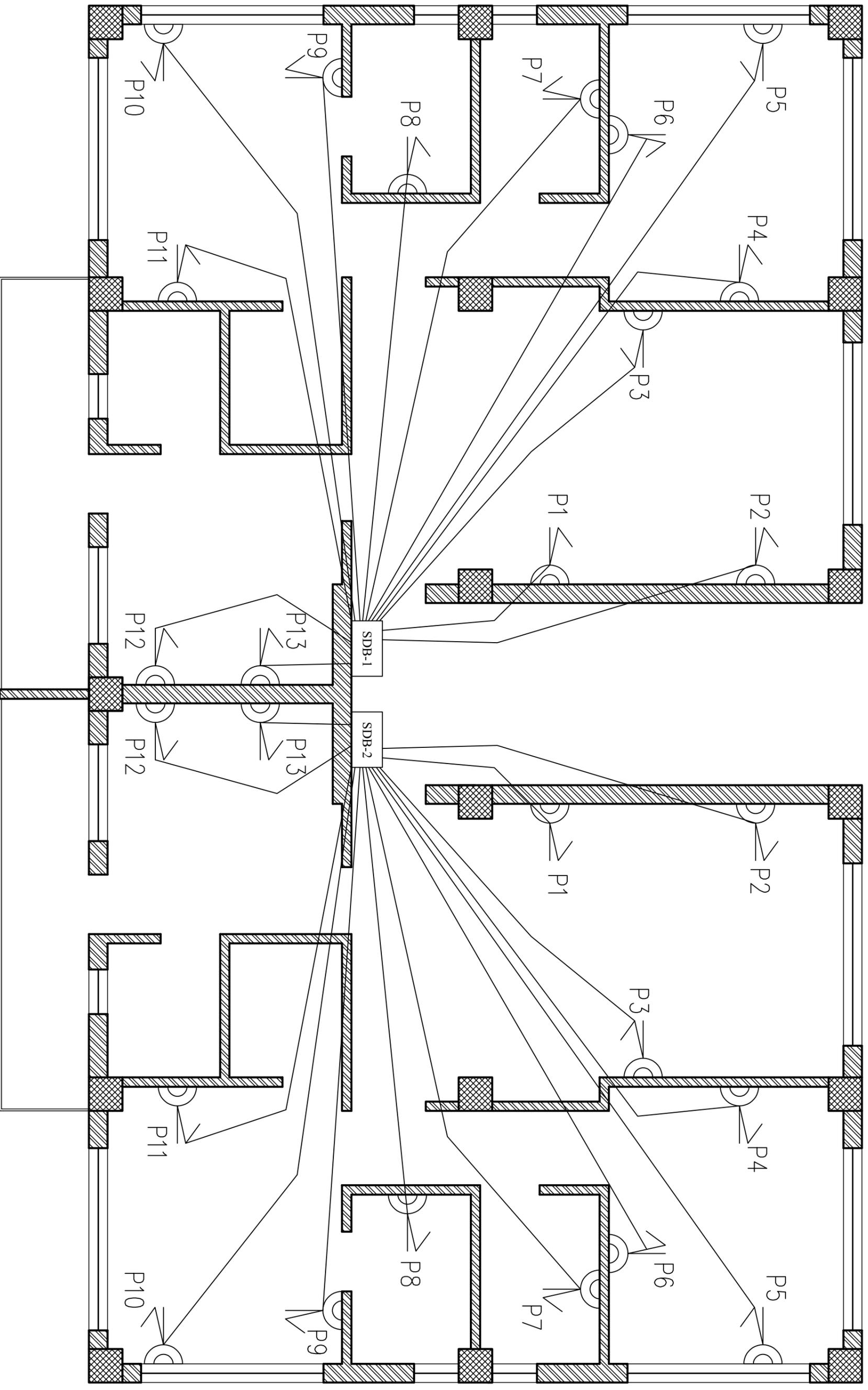
DRAWING NO.

BPC/TD/TMD/ELECTRICAL

**DWG # 13/25**

# JAMTHOG PLAN - LIGHTING CIRCUIT CONDUIT LAYOUT





# GROUND FLOOR PLAN - POWER POINT WIRING LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE  
**DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION**

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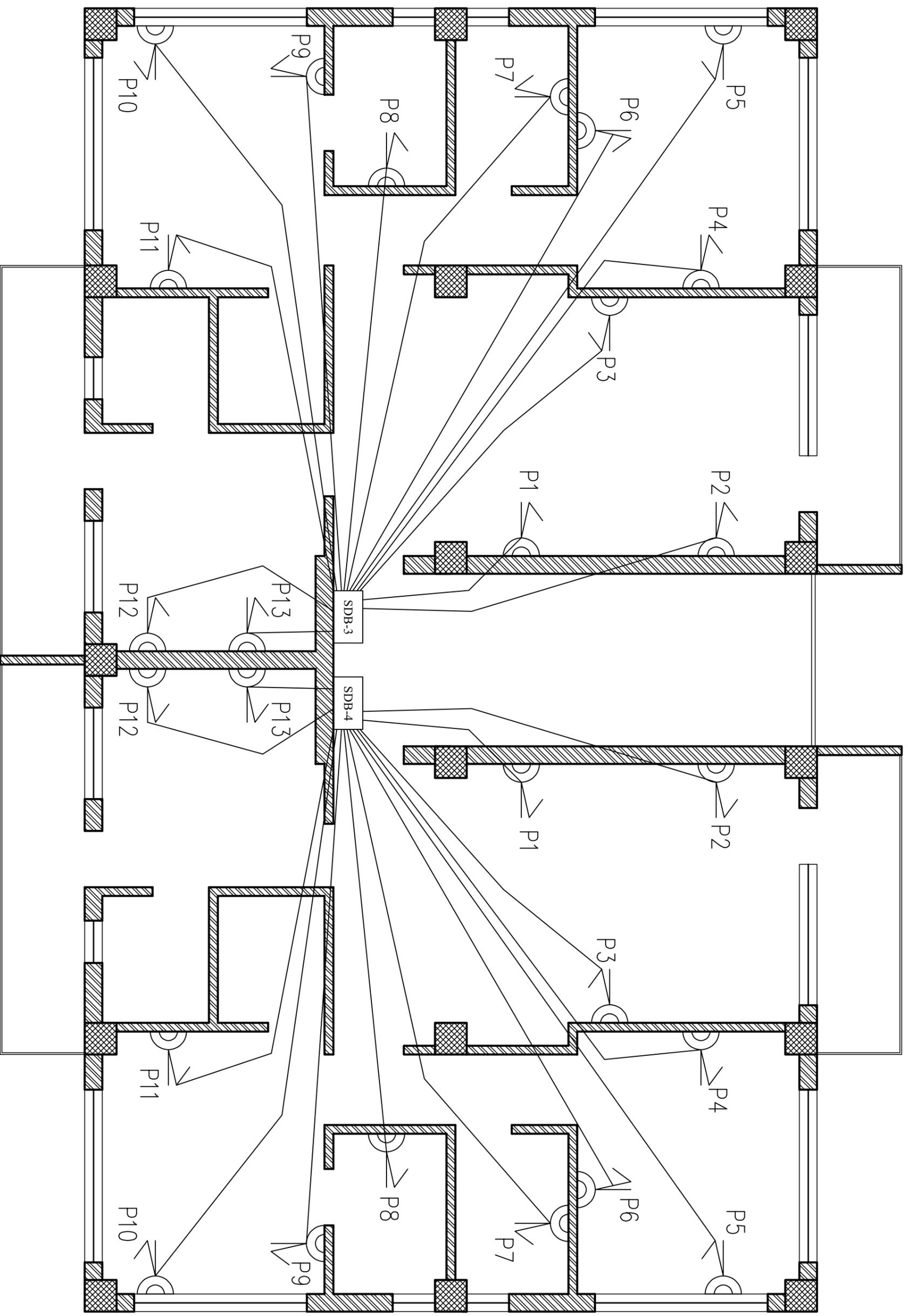
APPROVED BY  
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 TD, BPC.

DESIGNED BY  
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 REFER DRAWING  
 SCALE  
 REF DWG

DRAWING NO.  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 14/25**  
 DATE  
 FEBRUARY, 2022.

DRAWING STATUS  
 APPROVAL  APPROVED



# FIRST FLOOR PLAN - POWER POINT WIRING LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE  
**DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION**

DRAWING STATUS  
 APPROVAL  APPROVED

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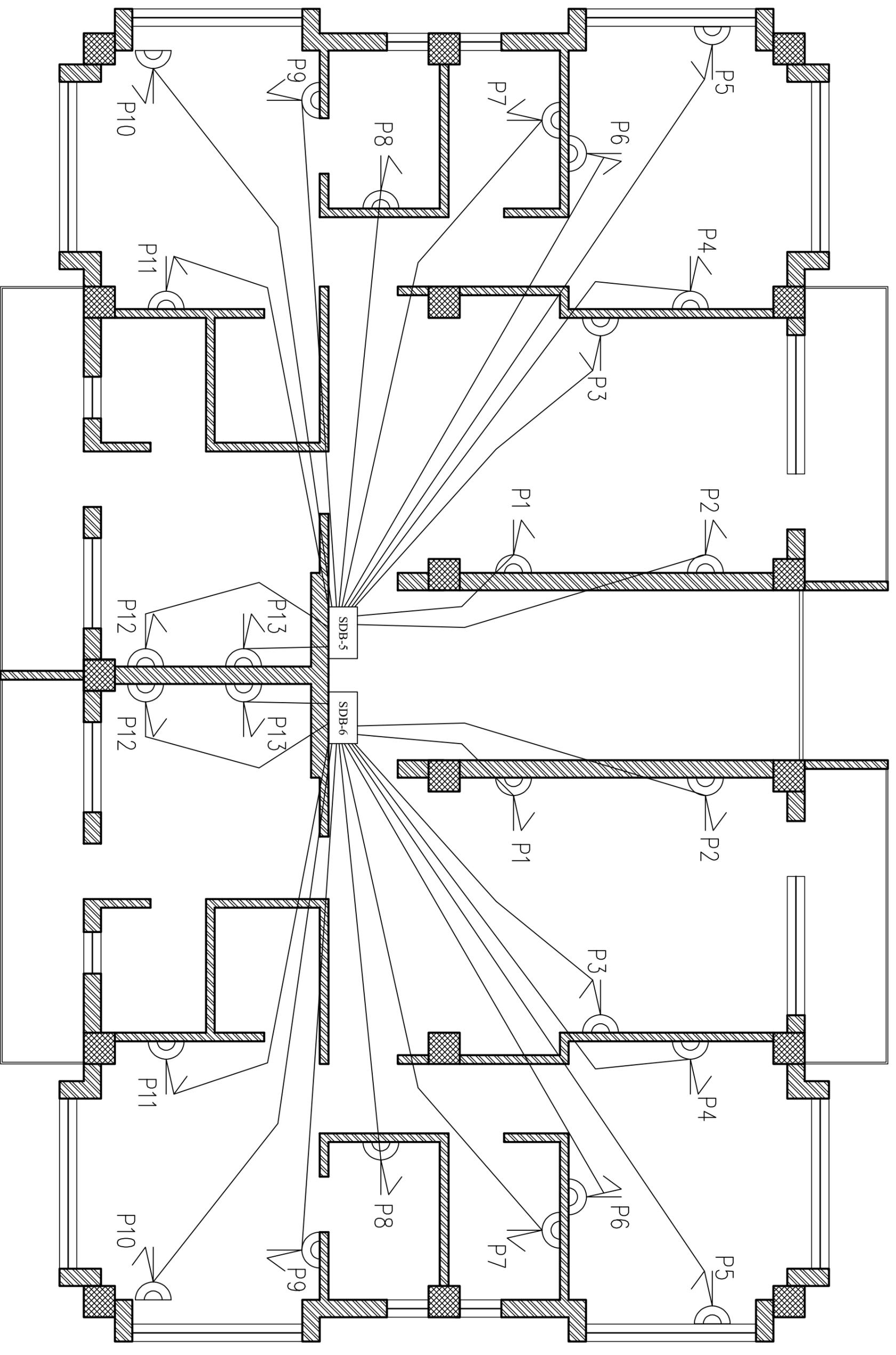
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DRAWING TITLE  
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DRAWING NO.  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 15/25**



# SECOND FLOOR PLAN - POWER POINT WIRING LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE  
**DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION**

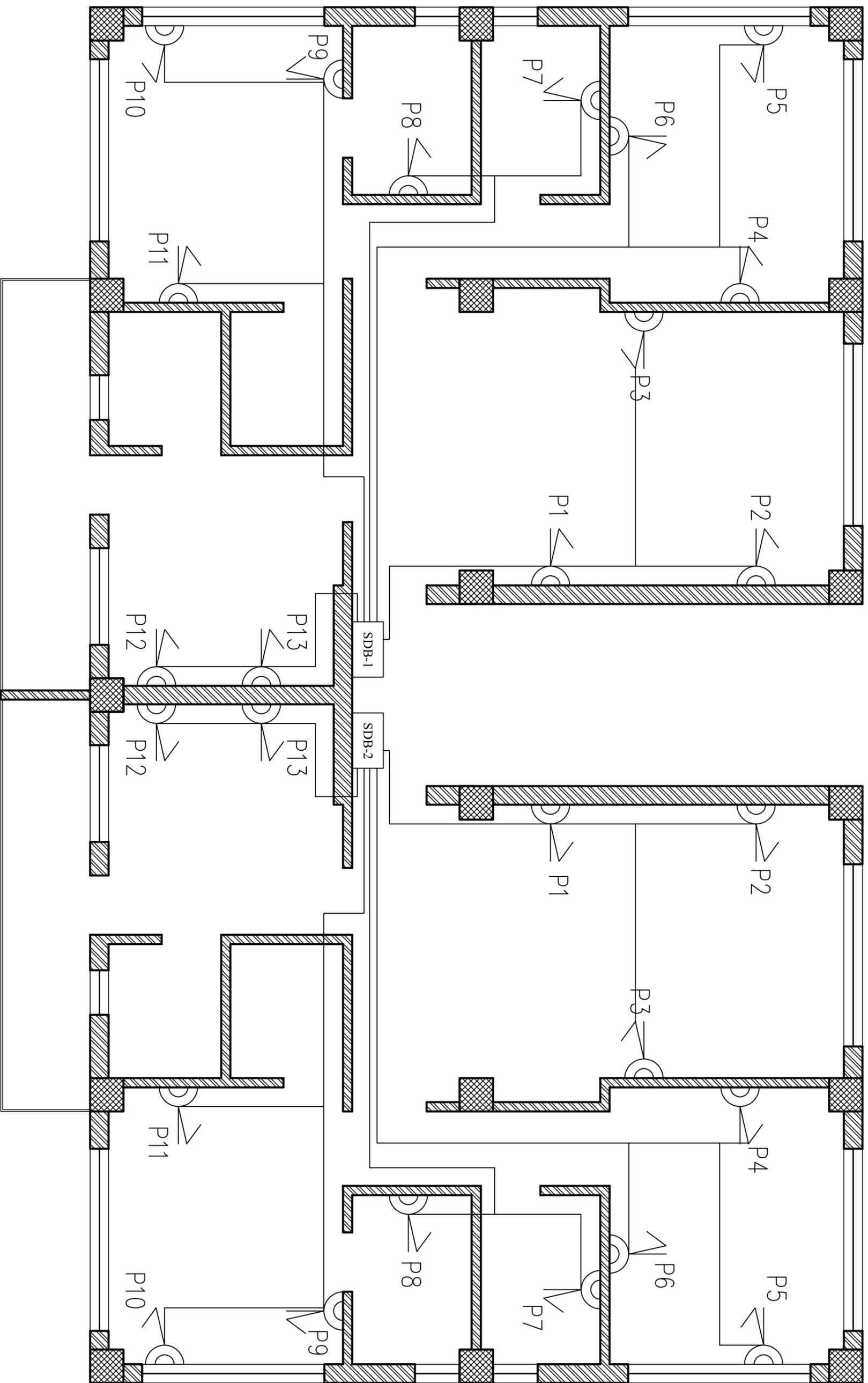
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 SCALE  
 REF DWG

DRAWING NO.  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 16/25**  
 DATE  
 FEBRUARY, 2022.



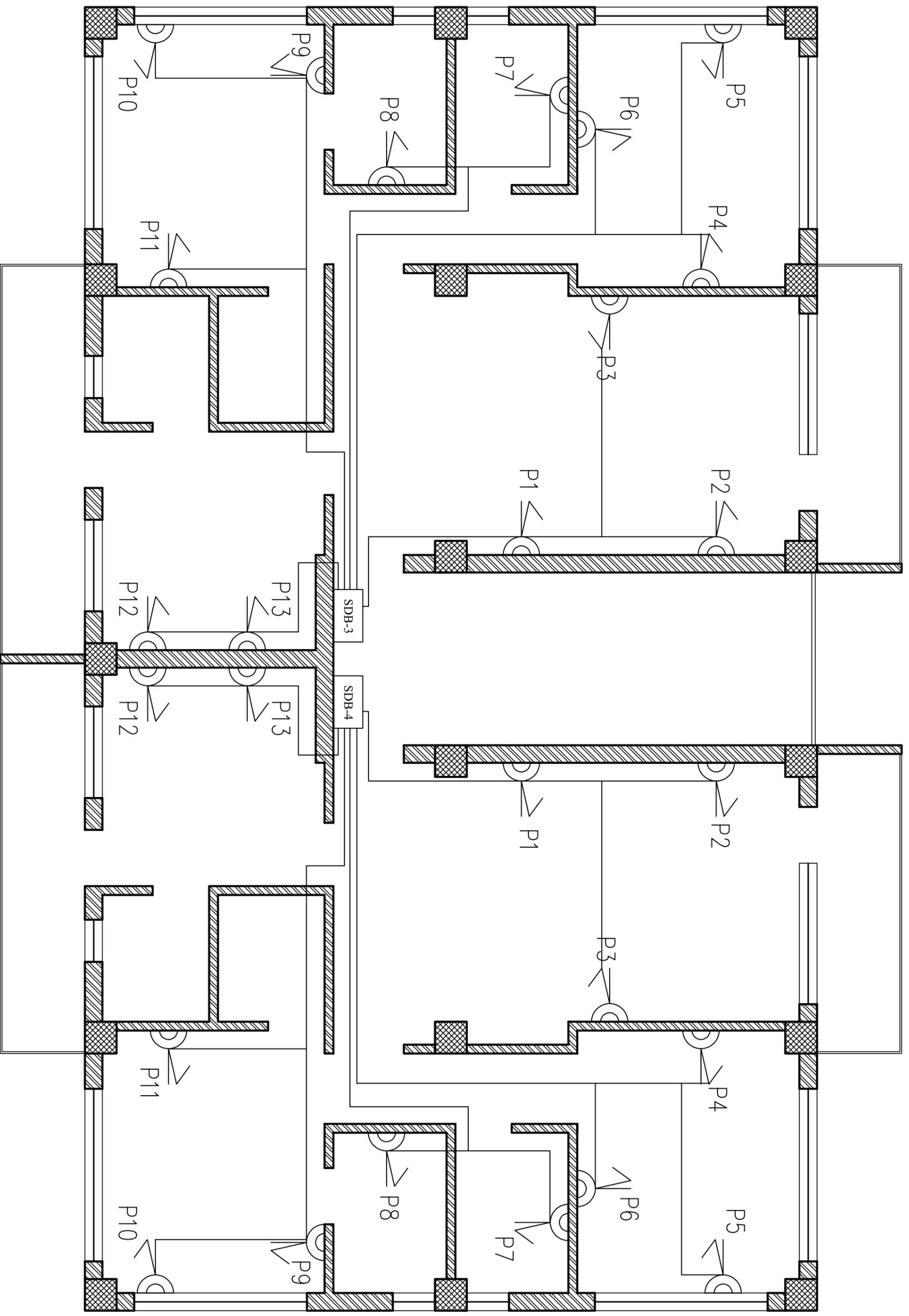
# GROUND FLOOR PLAN - POWER POINT CONDUIT LAYOUT



**BHUTAN POWER CORPORATION LIMITED**

TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE		REFERENCE NOTES		APPROVED BY		DRAWING TITLE		DRAWING NO.	
DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION		1. ALL MEASUREMENTS IN THE DRAWING ARE IN mm UNLESS AND OTHERWISE MENTIONED. 2. THE MEASUREMENTS IN THE DRAWING ARE TO BE READ AND NOT MEASURED. 3. ANY DISCREPANCY IN THE DRAWING SHALL BE IMMEDIATELY BROUGHT TO THE NOTICE OF THE DESIGNER.		KUNZANG TOBGYE GENERAL MANAGER TD, BPC.		BPC/TD/TMD/ELECTRICAL		DWG # 17/25	
DRAWING STATUS		DESIGNED BY		SANGAY WANGDI ENGINEER, TD, BPC.		SCALE		DATE	
<input type="checkbox"/> APPROVAL <input type="checkbox"/> APPROVED		SANGAY WANGDI ENGINEER, TD, BPC.		REFER DRAWING		FEBRUARY, 2022.			



# FIRST FLOOR PLAN - POWER POINT CONDUIT LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE  
**DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION**

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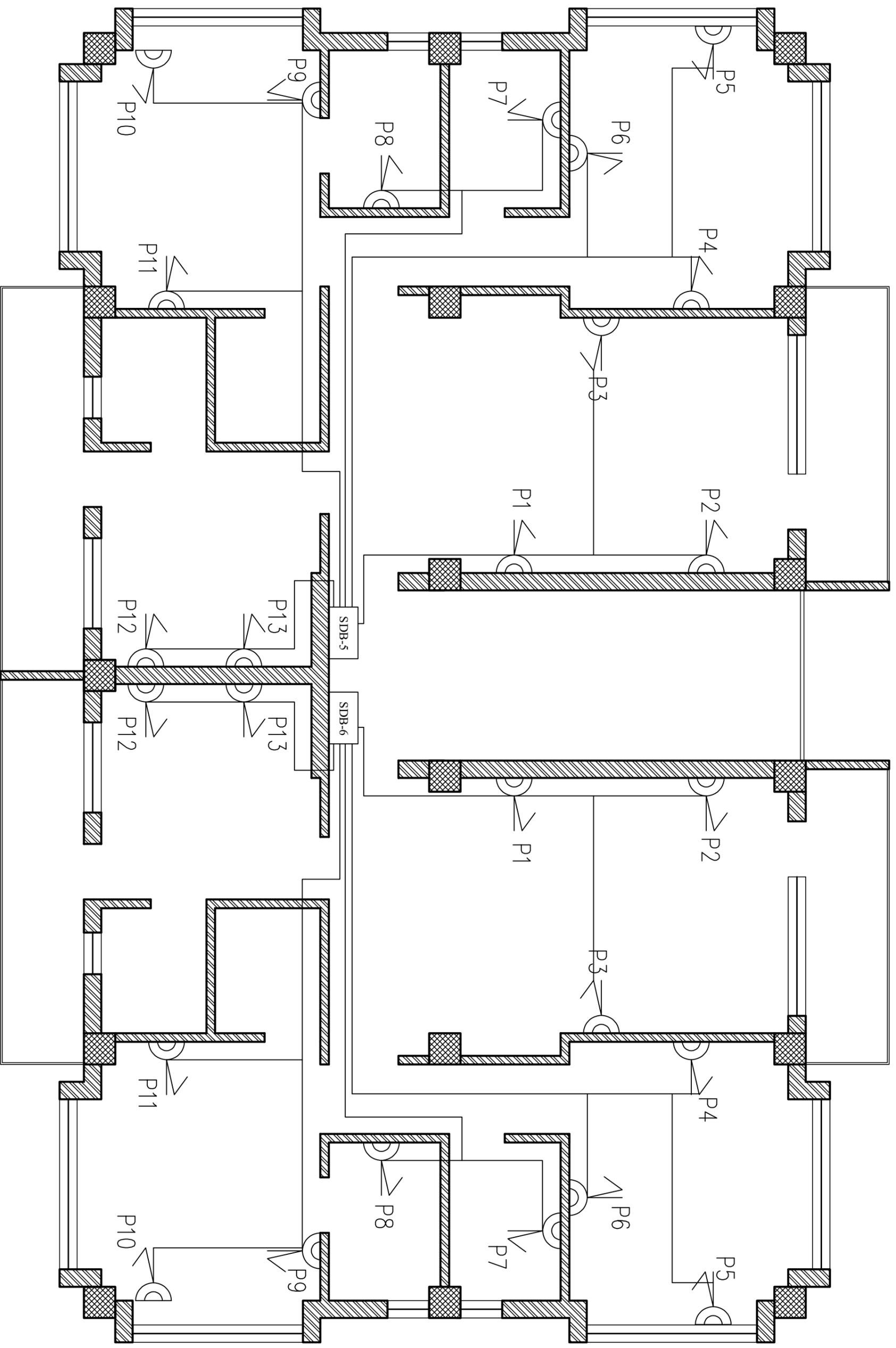
APPROVED BY  
 KUNZANG TOBGYE  
 GENERAL MANAGER  
 TD, BPC.

DESIGNED BY  
 SANGAY WANGDI  
 ENGINEER, TD, BPC.

DRAWING TITLE  
 REFER DRAWING  
 SCALE  
 REF DWG

DRAWING NO.  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 18/25**  
 DATE  
 FEBRUARY, 2022.

DRAWING STATUS  
 APPROVAL  APPROVED



# SECOND FLOOR PLAN - POWER POINT CONDUIT LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE  
**DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION**

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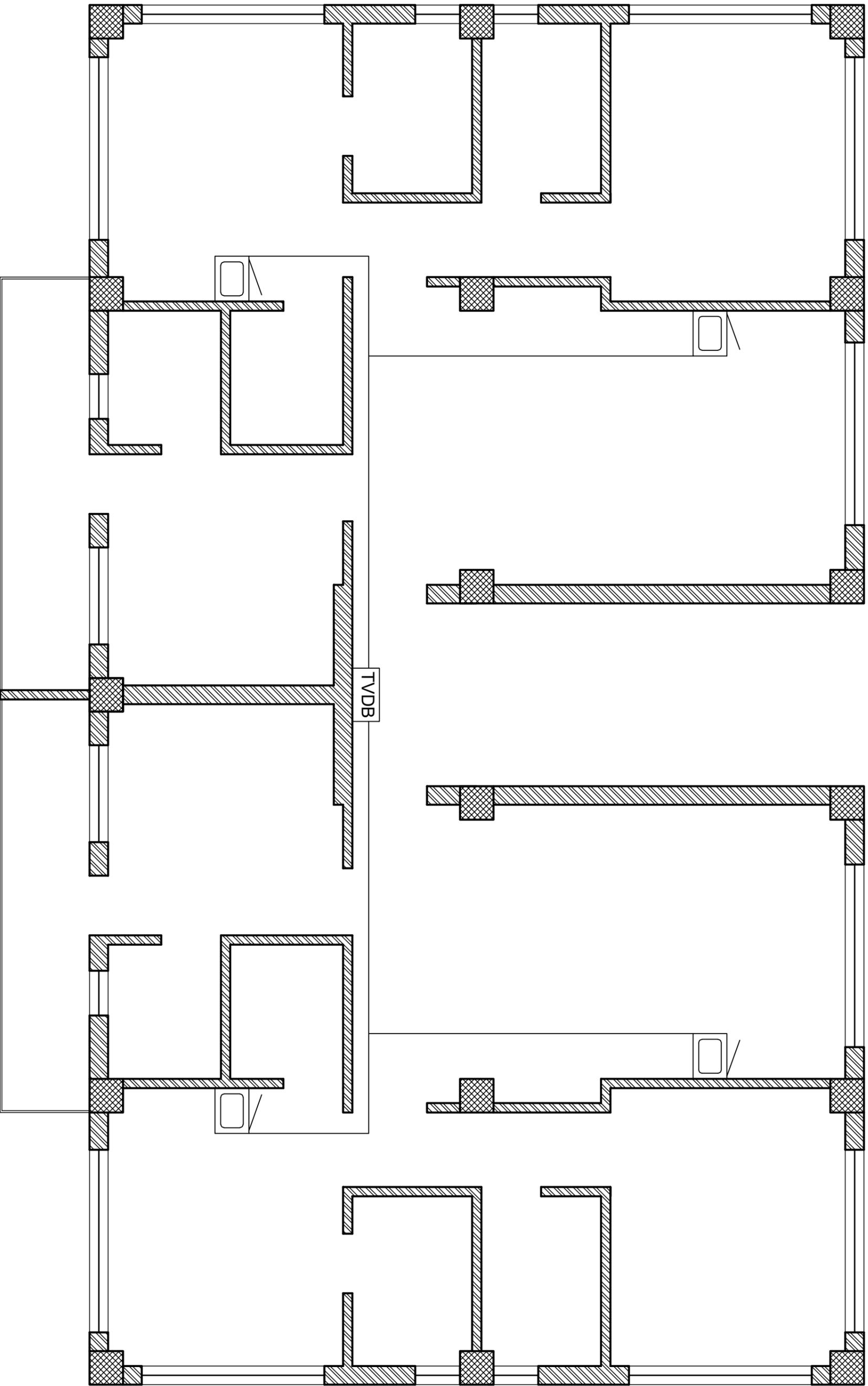
APPROVED BY  
 KUNZANG TOBGYE  
 GENERAL MANAGER  
 TD, BPC.

DESIGNED BY  
 SANGAY WANGDI  
 ENGINEER, TD, BPC.

DRAWING TITLE  
 REFER DRAWING  
 SCALE  
 REF DWG

DRAWING NO.  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 19/25**  
 DATE  
 FEBRUARY, 2022.

DRAWING STATUS  
 APPROVAL  APPROVED



# GROUND FLOOR PLAN - TV POINT CONDUIT LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE  
**DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION**

DRAWING STATUS  
 APPROVAL  APPROVED

REFERENCE NOTES

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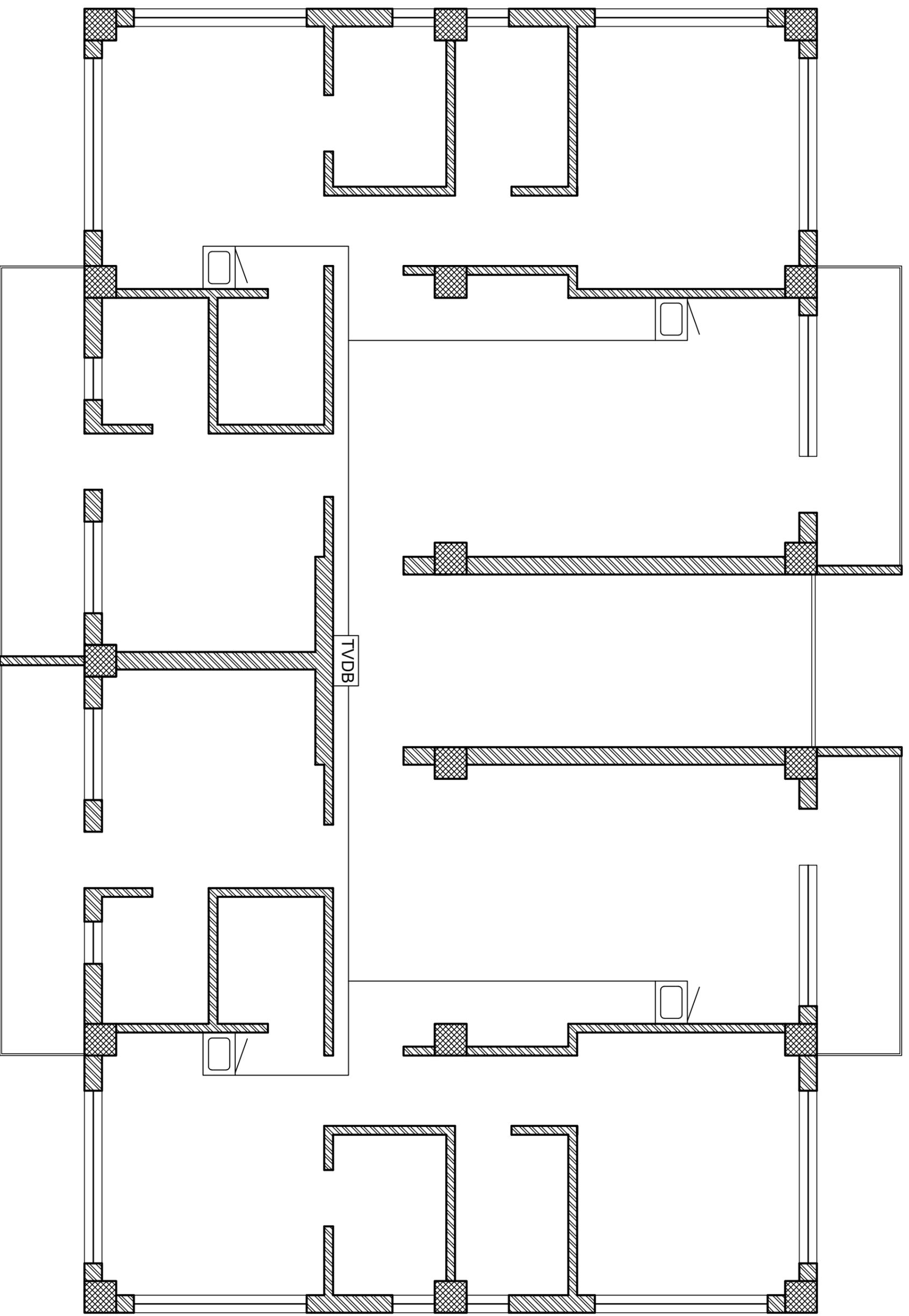
DESIGNED BY  
 SANGAY WANGDI  
 ENGINEER, TD, BPC.

DRAWING TITLE  
 REFER DRAWING

SCALE  
 REF DWG

DATE  
 FEBRUARY, 2022.

DRAWING NO.  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 20/25**



# FIRST FLOOR PLAN - TV POINT CONDUIT LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE  
**DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION**

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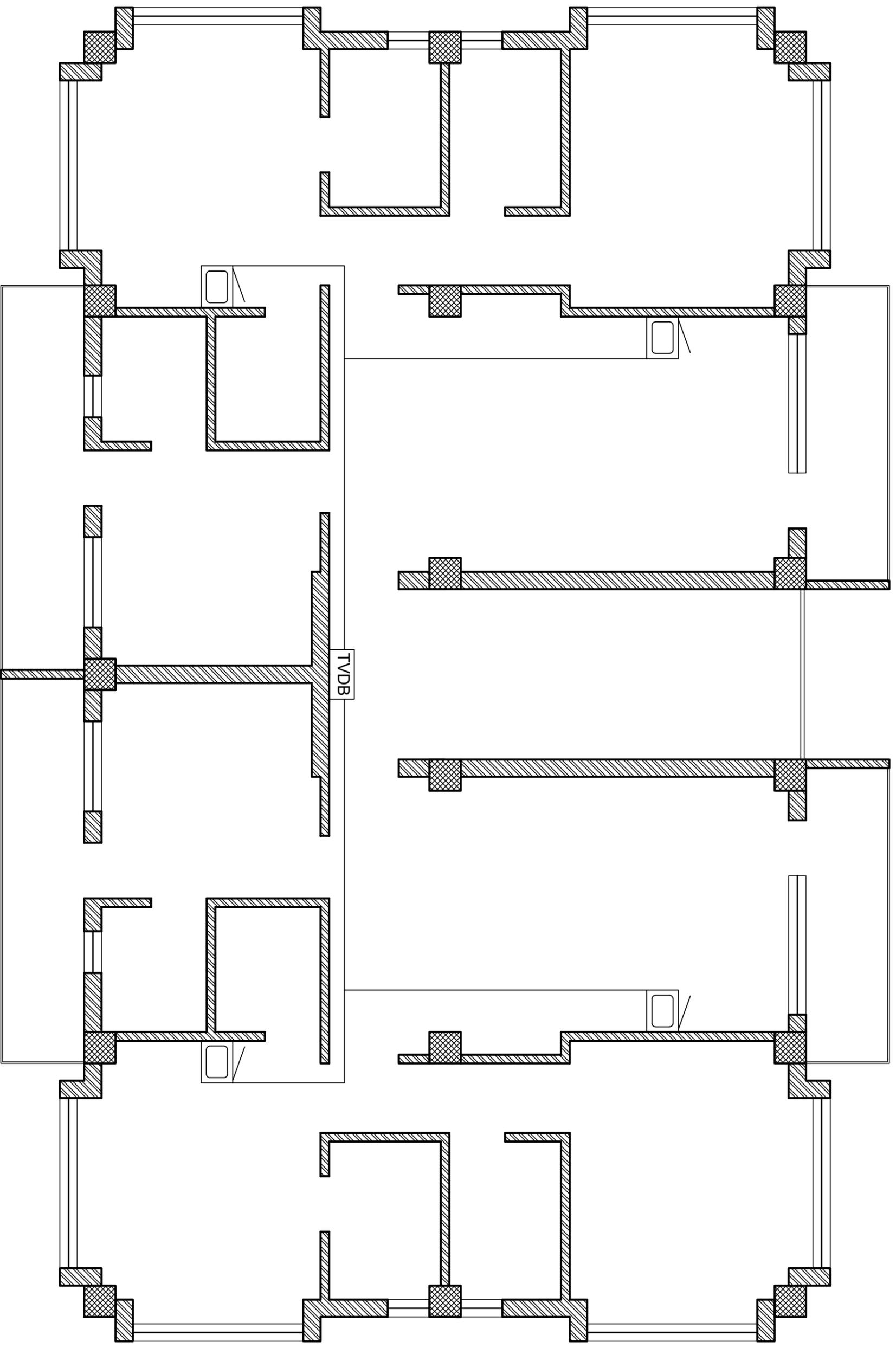
APPROVED BY  
 KUNZANG TOBGYE  
 GENERAL MANAGER  
 TD, BPC.

DESIGNED BY  
 SANGAY WANGDI  
 ENGINEER, TD, BPC.

DRAWING TITLE  
 REFER DRAWING  
 SCALE  
 REF DWG

DRAWING NO.  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 21/25**  
 DATE  
 FEBRUARY, 2022.

DRAWING STATUS  
 APPROVAL  APPROVED



# SECOND FLOOR PLAN - TV POINT CONDUIT LAYOUT



**BHUTAN POWER CORPORATION LIMITED**  
 TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE  
**DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION**

DRAWING STATUS  
 APPROVAL  APPROVED

REFERENCE NOTES

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 GENERAL MANAGER  
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 ENGINEER, TD, BPC.

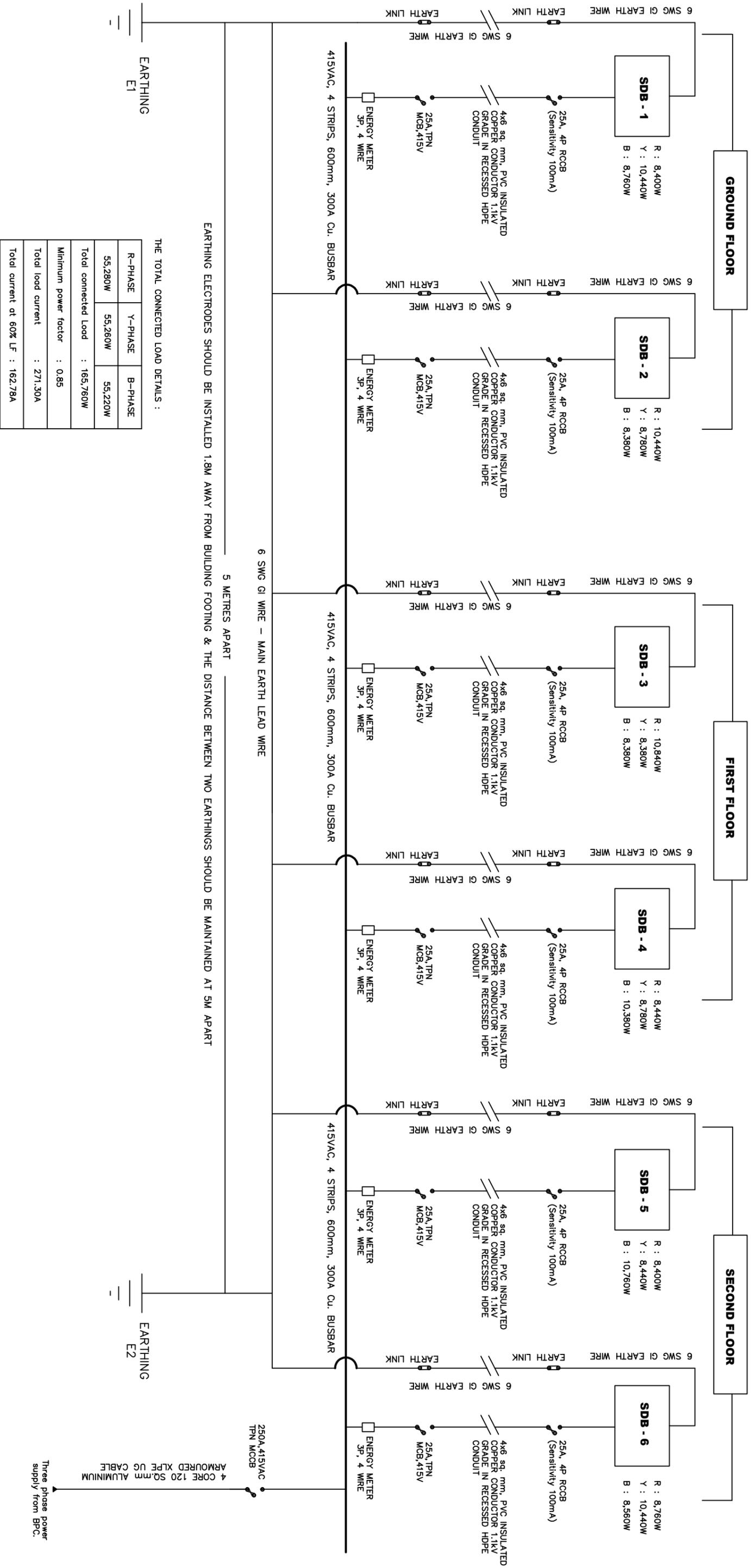
DRAWING TITLE  
 REFER DRAWING

SCALE  
 REF DWG

DATE  
 FEBRUARY, 2022.

DRAWING NO.  
 BPC/TD/TMD/ELECTRICAL  
**DWG # 22/25**

# SINGLE LINE DIAGRAM FOR MAIN DISTRIBUTION BOARD



EARTHING ELECTRODES SHOULD BE INSTALLED 1.8M AWAY FROM BUILDING FOOTING & THE DISTANCE BETWEEN TWO EARTHINGS SHOULD BE MAINTAINED AT 5M APART



**BHUTAN POWER CORPORATION LIMITED**  
TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

PROJECT TITLE: DESIGN OF STAFF QUARTER (G+2) AT GOMTU SUBSTATION

DESIGNED BY: SANGAY WANGDI ENGINEER, TD, BPC

APPROVED BY: KUNZANG TOBGYE GENERAL MANAGER TD, BPC

DATE: FEBRUARY, 2022.

DRAWING NO.: BPC/TD/TMD/ELECTRICAL

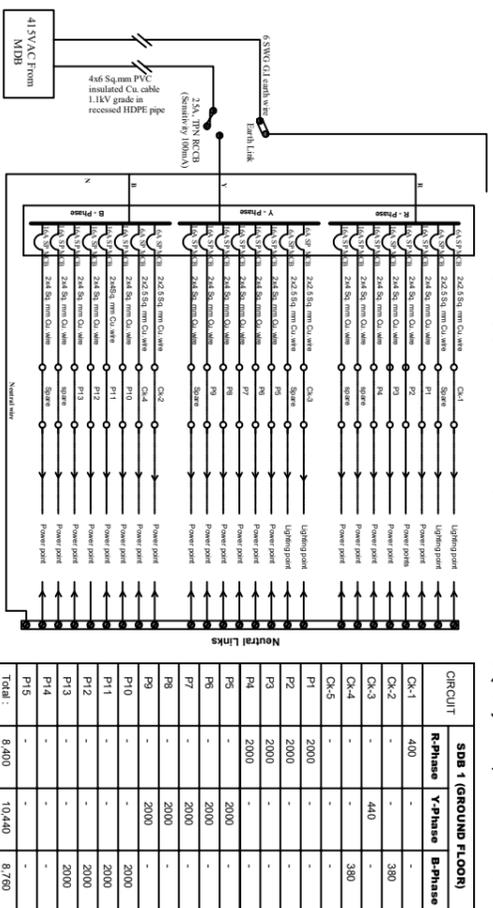
DWG # 23/25

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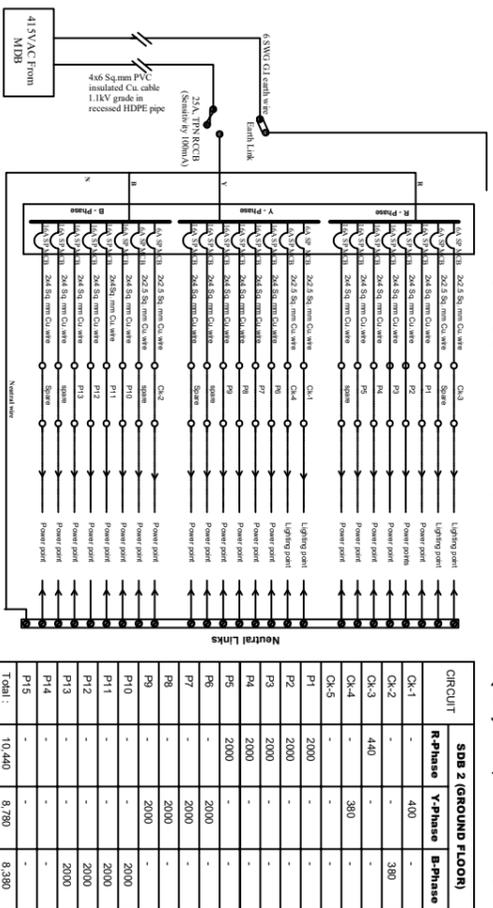
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# SINGLE LINE DIAGRAM FOR SUB - DISTRIBUTION BOARDS

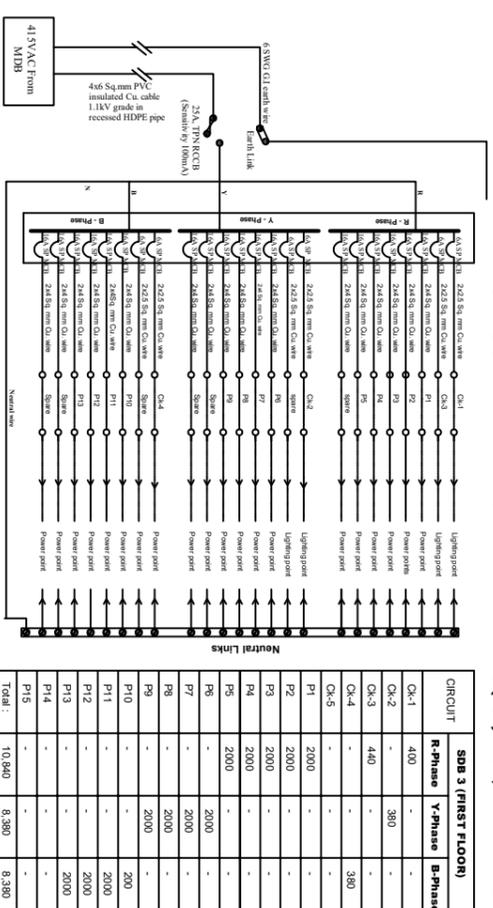
SINGLE LINE DIAGRAM FOR SUBDISTRIBUTION BOARD (SDB) No. 1, TPN 8 WAY DB



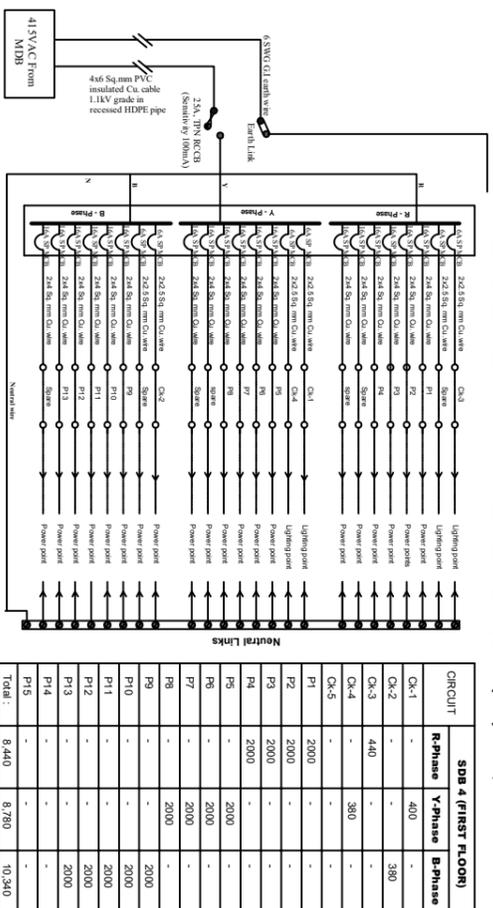
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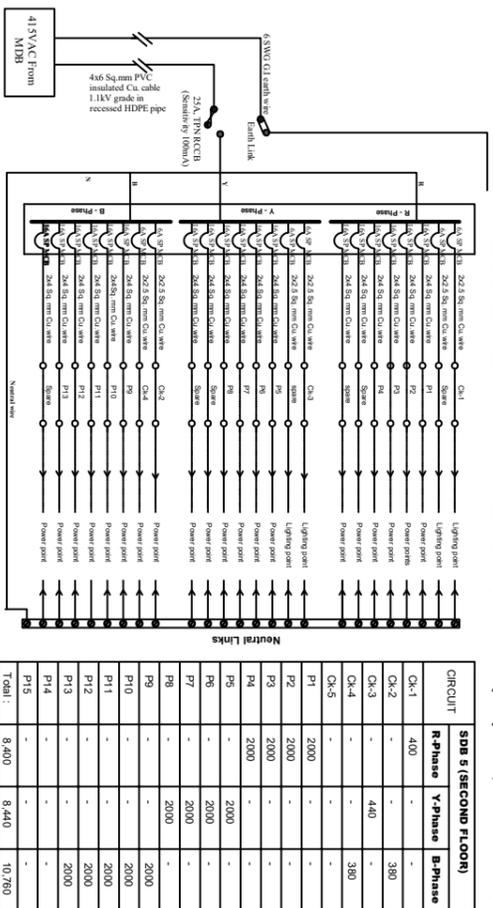
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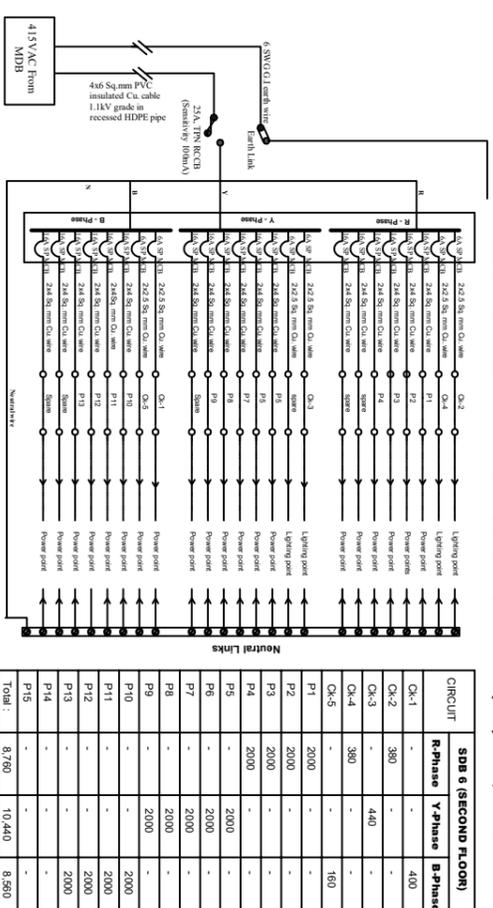
SINGLE LINE DIAGRAM FOR SUBDISTRIBUTION BOARD (SDB) No. 4, TPN 8 WAY DB



SINGLE LINE DIAGRAM FOR SUBDISTRIBUTION BOARD (SDB) No. 5, TPN 8 WAY DB



SINGLE LINE DIAGRAM FOR SUBDISTRIBUTION BOARD (SDB) No. 6, TPN 8 WAY DB



**BHUTAN POWER CORPORATION LIMITED**  
TRANSMISSION DEPARTMENT, THIMPHU: BHUTAN.

**PROJECT TITLE**  
DESIGN OF STAFF QUARTER (G+2) AT  
GOMTU SUBSTATION

**REFERENCE NOTES**  
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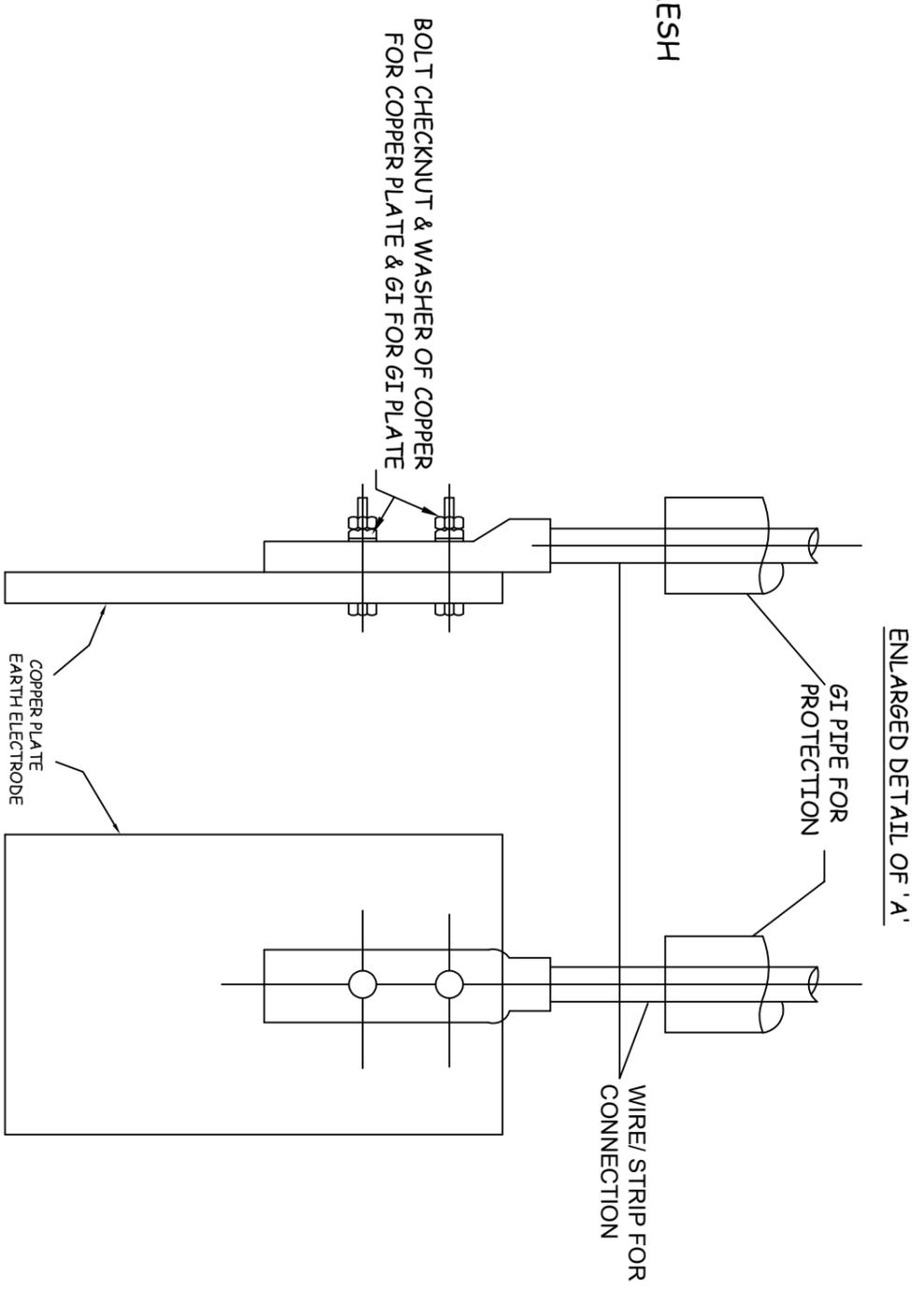
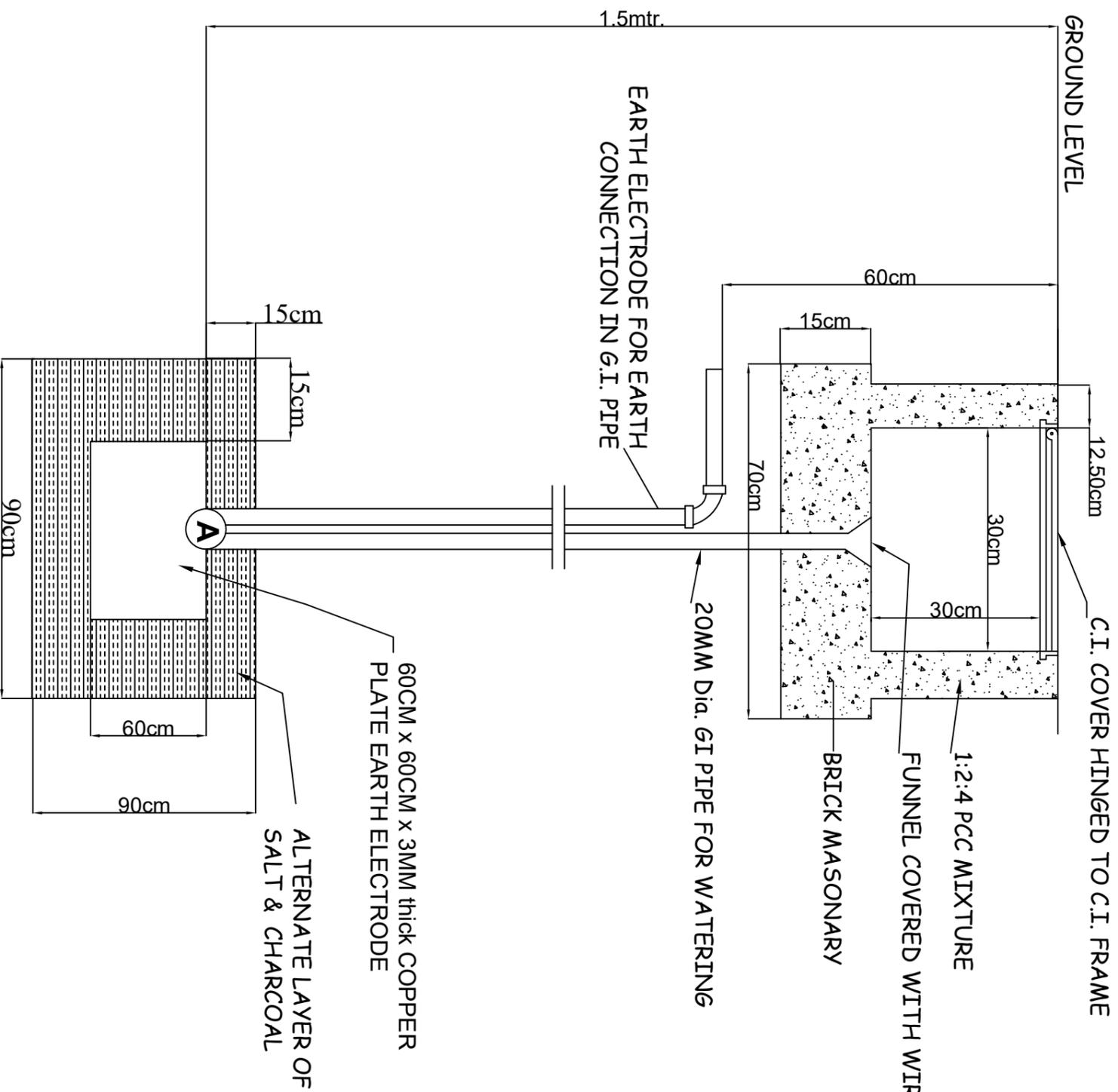
**APPROVED BY**  
KUNZANG TOBGYE  
GENERAL MANAGER  
TD, BPC.

**DESIGNED BY**  
SANGAY WANGDI  
ENGINEER, TD, BPC.

**DRAWING TITLE**  
REFER DRAWING  
**SCALE**  
REF DWG  
**DATE**  
FEBRUARY, 2022.

**DRAWING NO.**  
BPC/TD/MD/ELECTRICAL  
**DWG # 24/25**

**DRAWING STATUS**     APPROVAL     APPROVED



#### TECHNICAL SPECIFICATIONS FOR EARTHING:

1. Nuts, bolts & washers to be of GI for GI plate and tinned brass for copper pate.
2. The plate electrode shall be buried in ground with face vertical and top not less than 3m below ground level.
3. Earth electrode shall be suited not less than 1.8m away from building footings.
4. No earth electrodes shall have a resistance greater than 5 ohms as measured by an approved earth testing apparatus. However, in rocky soils resistance may be accepted upto 8 ohms.
5. The size of main earthing lead shall be not less than 8 SWG of copper or 6 SWG G.I wires or copper strips 20mm x 3mm in case for copper earth plate and G.I strips 25mm x 4mm in case G.I earth plate.
6. The separate earthing electrode must be provided for lightning arresters for building protections. The distance between any two earthing electrodes shall be 5m.
7. Any specification not included herein is deemed to be followed as specified in relevant agency standards of Bhutan or as per international standards in consultation with the client.

## TYPICAL INSTALLATION OF PLATE EARTHING