# ELECTRICAL DRAWINGS FOR PROPOSED FUEL RETAIL OUTLET, G+1 STORIED SALES BUILDING AND OTHER STRUCTURES .

LOCATION: DAMPHU THROMDE, TSIRANG

OWNER: STATE TRADING CORPORATION OF BHUTAN LTD. THIMPHU



State Trading Corporation of Bhutan Ltd.

#### OWNER SIGNATURE

TITLE:FUEL RETAIL OUTLETLOCATION:DAMPHU, TSIRANGOWNER:STCBLPLOT ID:L18U-03CERTIFICATE NO:TSI-256-5FLOORS:G+1 STRUCTURE

**DESIGNED BY:** 

DRAWING TITLE: AS MENTIONED

SALES BUILDING

DATE: OCTOBER 2021 SCALE: 1:100

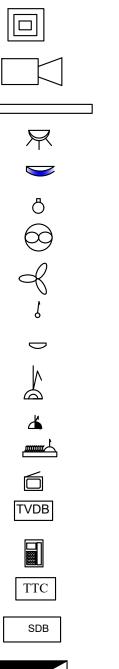
SHEET NO : ELE/00

<b>REVISION SUFFIX</b>			

GENERAL NOTE:

ALL DIMENSIONS ARE IN METERS(FEETS) UNLESS SPECIFIED OTHERWISE ALL DIMENSIONS MEASURE UNFINISHED SURFACES UNLESS SPECIFIED OTHERWISE ALL DIMENSIONS ARE TO BE READ AND NOT SCALE OFF ANY DISCREPANCY IN DRAWING IS TO BE BROUGHT TO THE IMMEDIATE NOTICE OF THE ARCHITECT AND THE ENGINEER

#### SPECIFICATION FOR ELECTRICAL WORKS:



80 Watt LED light

CCTV

1x36 Watts - LED Tube light Surface Fitting

Bulk Head fitting, 60W

1x13 Watts - Flourescent Tubelight/CFL Surface Fitting

0.5 Watt - LED Dim light (taken 20Watt for calculation) 1x80 Watts - 300mm Exhaust Fan

Ceiling Fan, 1400mm Sweep ,60W

6A- One Way Switch (Modular)

Mirror light luminaries, 13W

5pin, 16A- 2000 Watts Socket Outlet (universal)

3pin, 6A-1000 Watts Socket Outlet (Universal)

Switch board with 6 A switch

Television Socket Outlet

Television Distribution Box

Telephone Socket Outlet

Telephone Terminal Cabinet

Sub - Distribution Board



Main Distribution Board

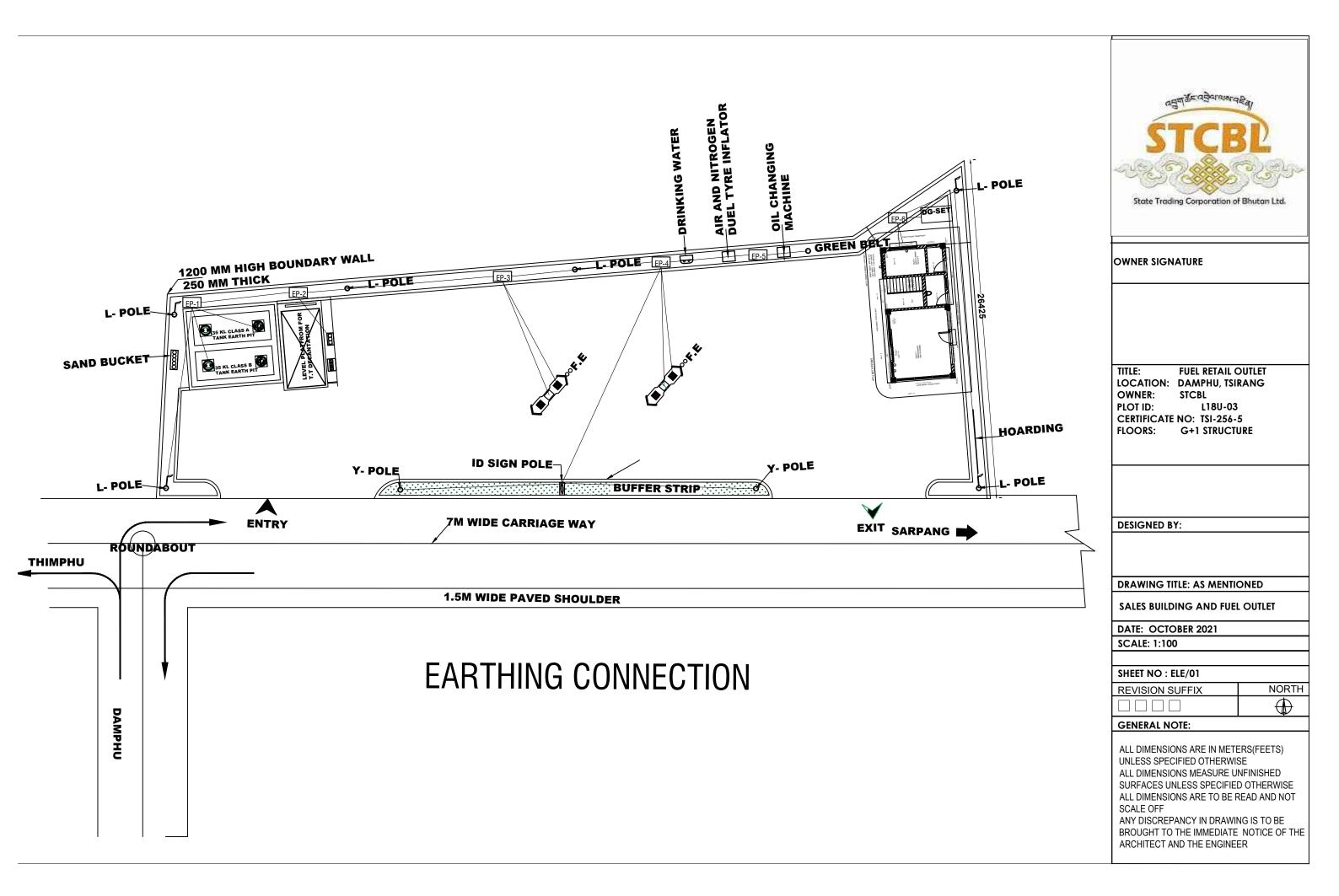
1. ALL LIGHT POINT WIRING SHALL BE WITH 1.5 SQ. MM. PVC INSULATED FIRE RESISTANT COPPER CONDUCTOR 1.1 kV GRADE IN RECESSED HDPE PIPE. 2. ALL LIGHT CIRCUIT WIRING SHALL BE WITH 2.5 SQ. MM. PVC INSULATED FIRE CONDUCTOR 1.1 kV GRADE IN RECESSED HDPE PIPE. RESISTANT COPPER 3. ALL POWER POINT WIRING SHALL BE WITH 4 SQ. MM. PVC INSULATED FIRE RESISTANT COPPER CONDUCTOR 1.1 kV GRADE IN RECESSED HDPE PIPE. 4. ALL THE LIGHT SWITCH BOARDS SHALL BE 23CM AWAY FROM DOOR FRAME/EDGE OF WALL AND 1.5M ABOVE THE FINISHED FLOOR LEVEL (FFL). 5. ALL POWER POINTS IN THE ROOM SHALL BE AT 30CM FROM FINISHED FLOOR LEVEL AND IN TOILETS AND PANTRY AT 1.5M, FROM FFL. 6. ALL THE CONDUIT ACCESSORIES ARE THREADED TYPE ONLY. 7. LAYOUT INDICATES 25MM/32MM DIA. HDPE CONDUIT AS PER THE REQUIREMENT. 8. NO PHASE DIFFERENCE IS ALLOWED TO BE DRAWN THROUGH THE SAME CONDUIT. 9. POWER POINTS SHALL NOT BE LOOPED. 10. ALL WALL FIXTURES SHALL BE AT A HEIGHT OF 2.75 M FROM FINISHED FLOOR LEVEL (FFL). 11. ALL SUBDISTRIBUTION SHALL BE IN RECESSED. 12. TTC (TELEPHONE TERMINAL CABINET) & TV-DB (TELEVISION - DISTRIBUTION BOARD) SHALL BE AT THE GROUND FLOOR. 13. MDB (MAIN DISTRIBUTION BOARD) SHALL BE AT THE BASEMENT OR GROUNDFLOOR. 14. SOME ASSUMPTION AND LOADS ARE AS FOLLOWS FOR THE MAIN DISTRIBUTION BOARD. (A) CONNECTED LOADS - 154,780 WATT (B) DEMAND LOADS - 92,868 WATT (B) DEMAND LOADS (C) POWER FACTOR - 0.85 (D) LOAD FACTOR (E) VOLTAGE - 0.6 VOLTAGE - 415 V (F) CURRENT DRAWN AS PER CONNECTED LOAD - 253.33 A (G) CURRENT DRAWN AS PER DEMAND LOAD - 152 A SPECIFICATION FOR TELEPHONE & TV WORKS: 1. TELEPHONE & TV CABLE DUCT SHALL BE WITH 25MM DIA. CONDUIT. 2. TELEPHONE AND TELEVISION CABLE DUCT MUST BE ATLEAST 0.5M AWAY FROM ELECTRICAL ROUTE. 3. TELEPHONE TERMINAL CABINET (TTC) AT 1.5M ABOVE FINFISHED FLOOR LEVEL AND SHOULD BE WATER TIGHT AND MOISTURE PROOF. 4. TELEPHONE SOCKET OUTLET SHALL BE WITH 2 PIN, RJ-11 AT 25CM ABOVE FINISHED FLOOR LEVEL.

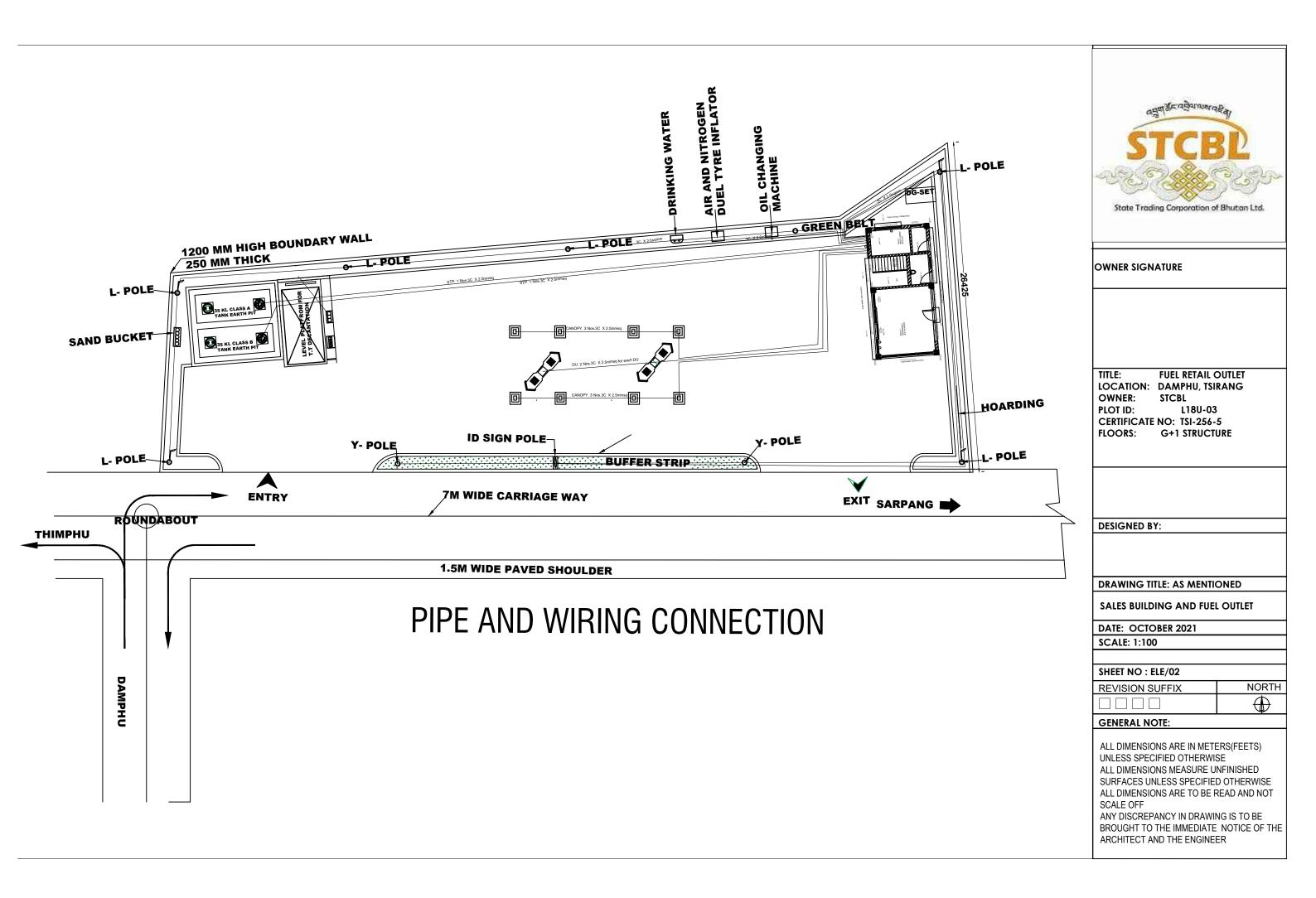
- 5. BRIDGE METHOD SHOULD BE FOLLOWED AT THE CROSSING
- 6. RELEPHONE AND TV LINES SHALL BE ROUTED THROUGH SEPERATE DUCTS.

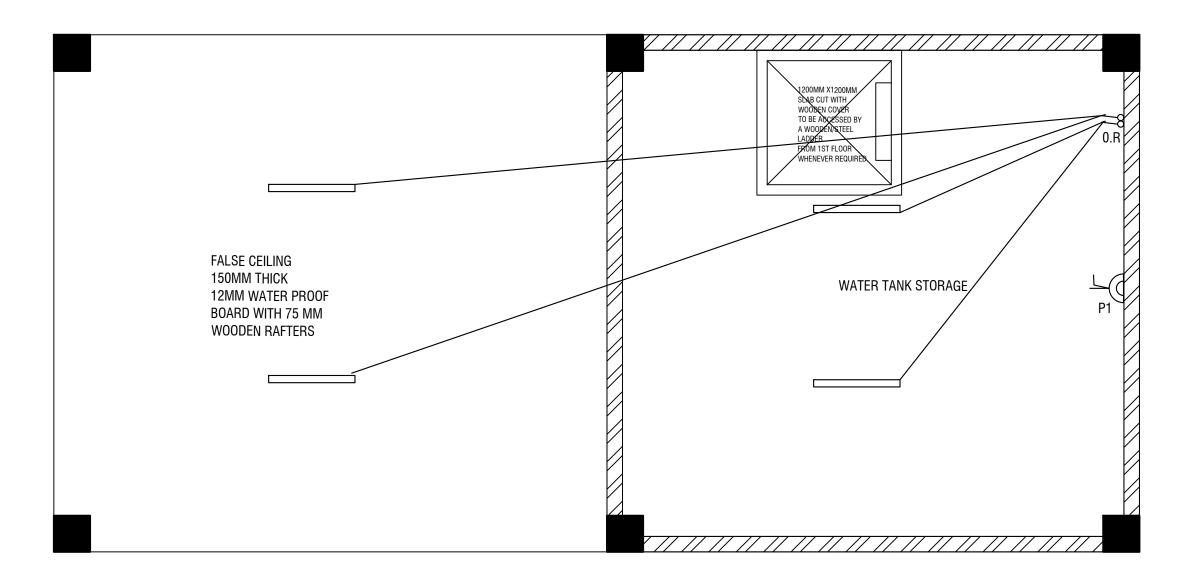
#### TEST RESULTS:

- 1. POLARITY TEST: ALL THE SWITCHES MUST BE ON THE LIVE CONDUCTOR.
- 2. INSULATION TEST : MINIMUM TEST RESULT SHOULD NOT BE LESS THAN 1 MEGA OHM.
- 3. EARTH CONTINUITY TEST : LOW VOLTAGE LAMP TEST SHOULD SATISFY THE WHOLE INSULATION.
- 4. EARTH TEST : TEST RESULTS SHOULD BE WITHIN 5 OHMS.

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DESIGNED BY:		
DRAWING TITLE: AS MENTIO	ONED	
SALES BUILDING		
DATE: OCTOBER 2021 SCALE: 1:100		
SHEET NO : ELE/00		
REVISION SUFFIX	NORTH	
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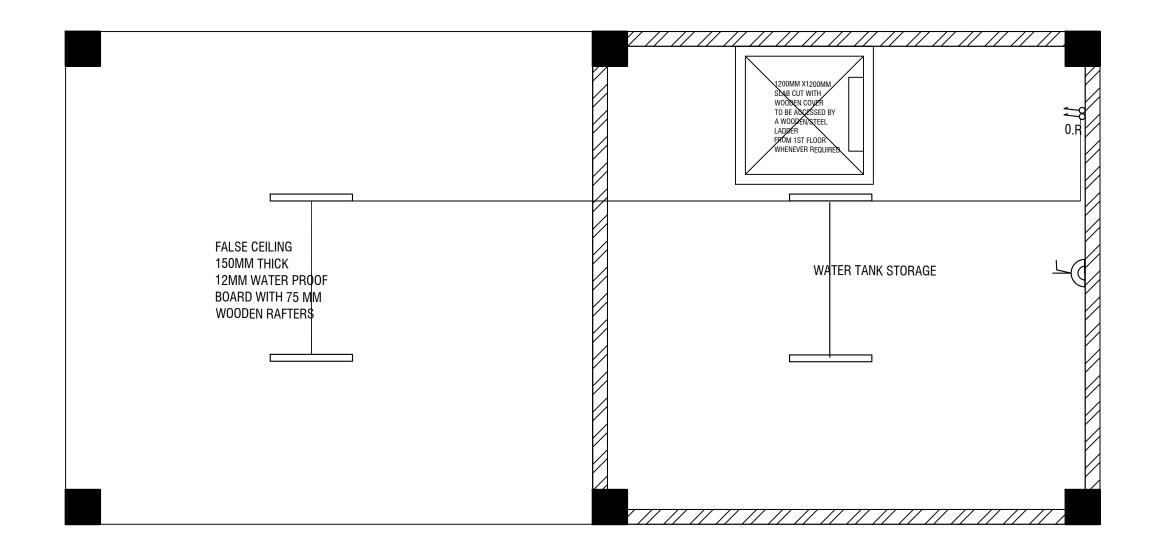






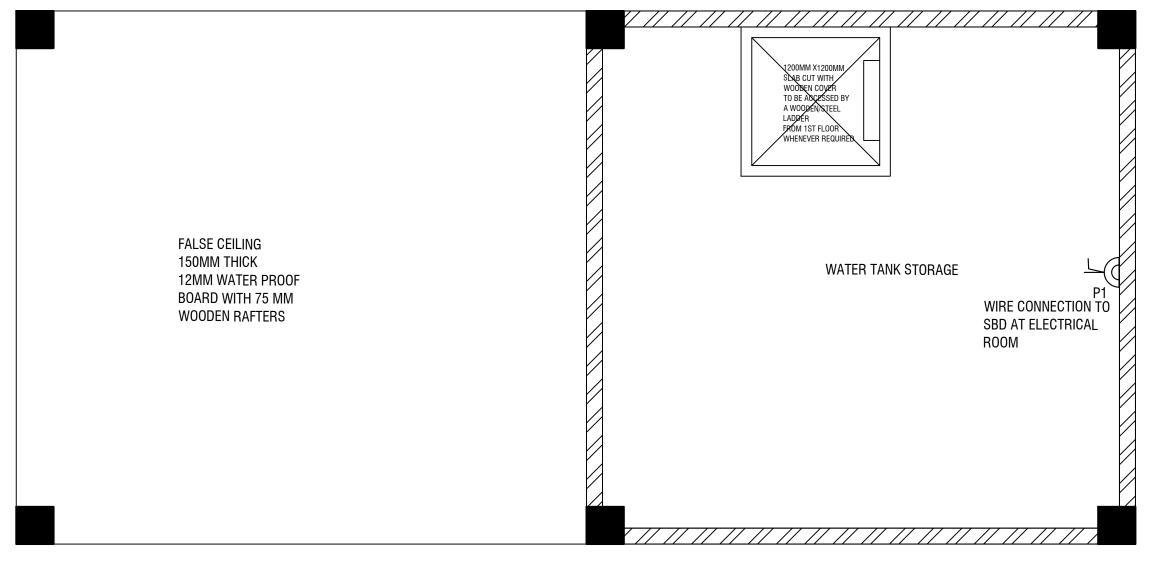
## Jamthog Fitting and fixture with wiring layout





### Jamthog Fitting and fixture with conduit layout

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## Jamthog power point with conduit layout



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SALES BUILDING

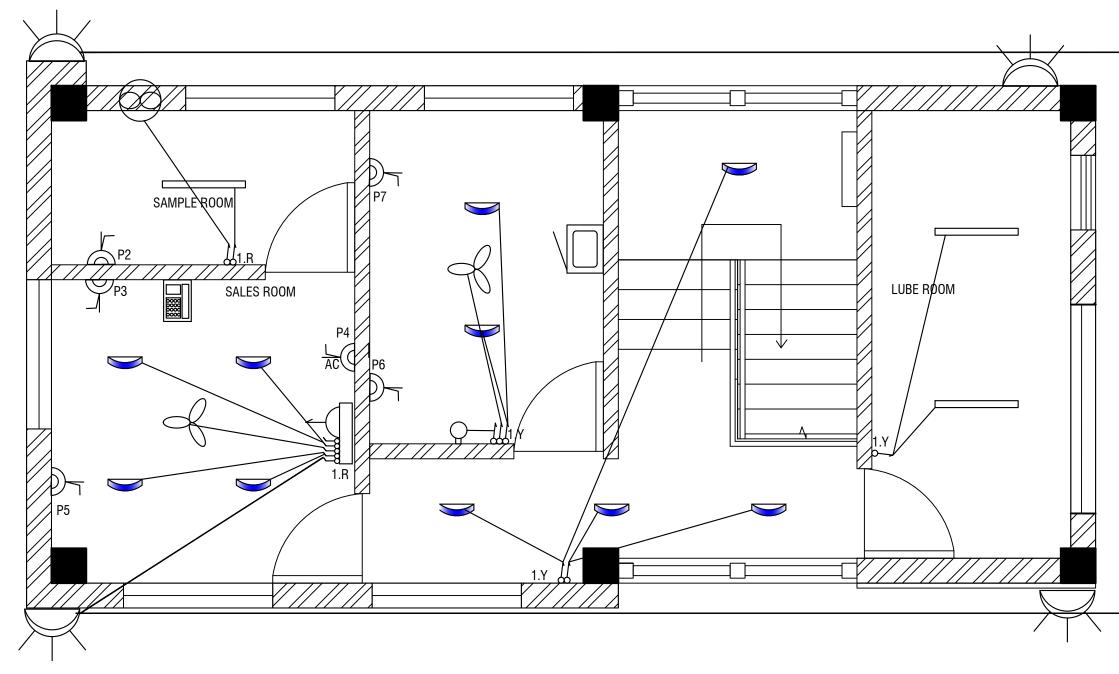
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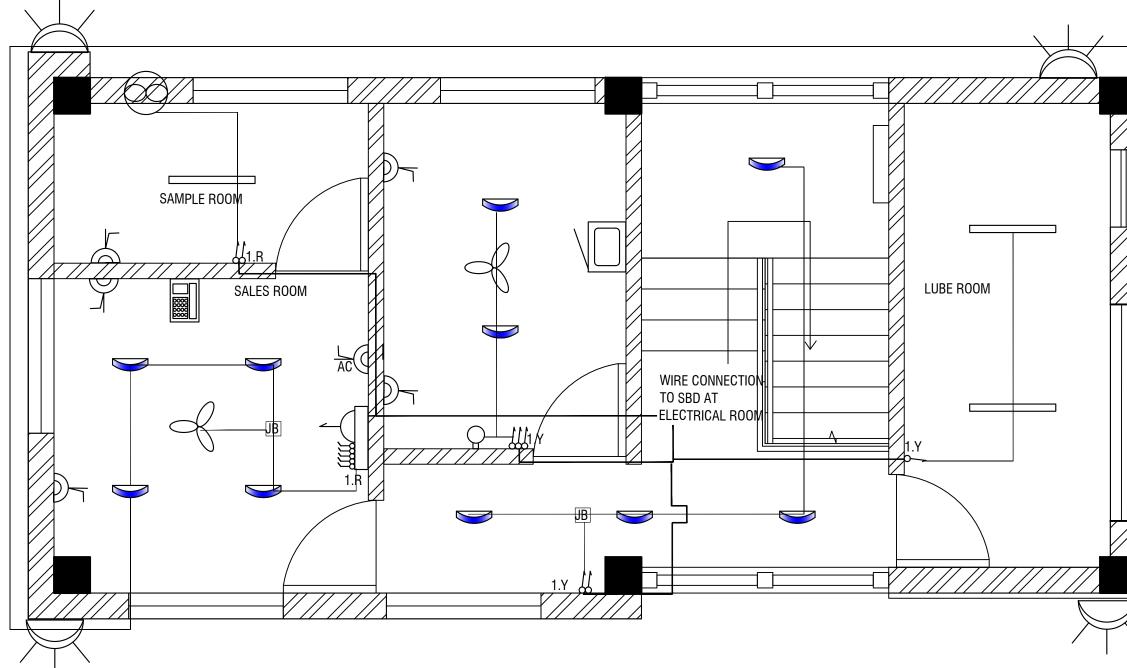
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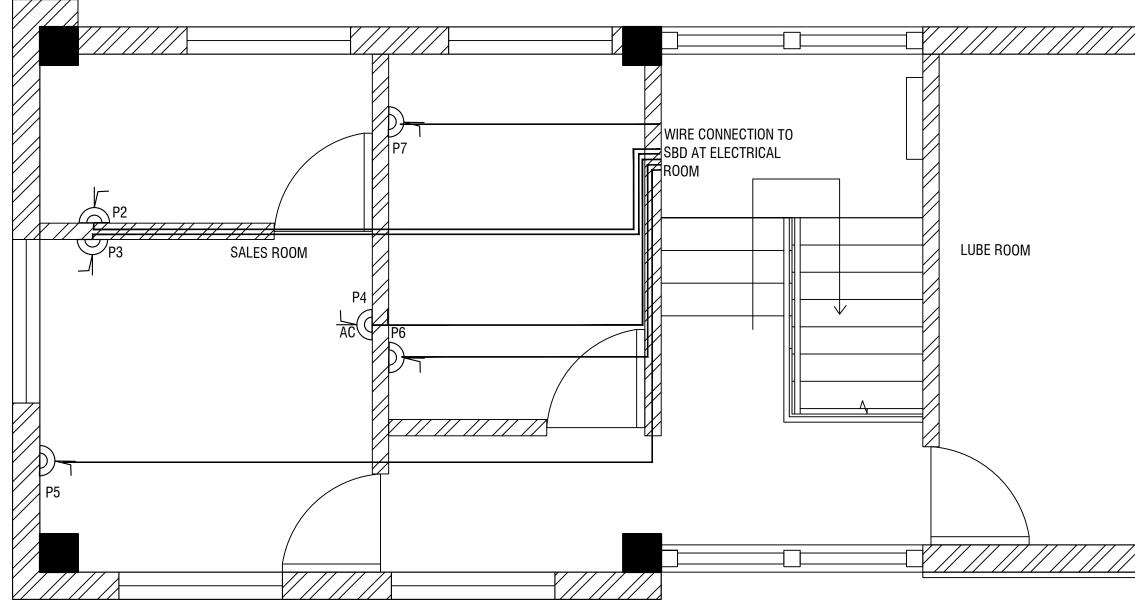
First Floor Fitting and fixture with wiring layout

State Trading Corporation of Bhutan Ltd.		
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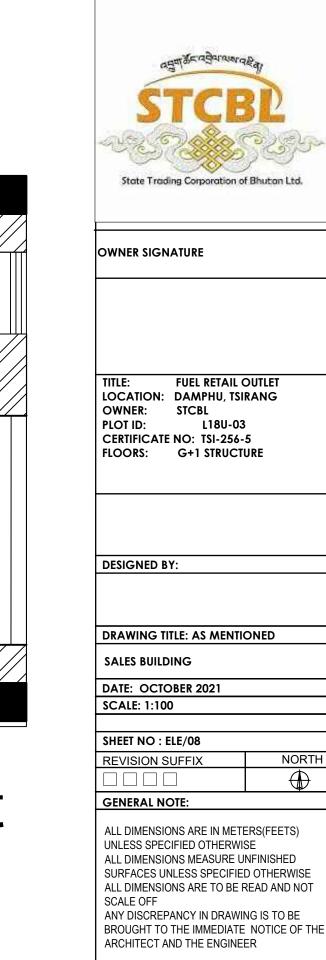


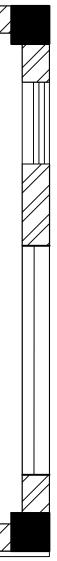
First Floor Fitting and fixture with conduit layo

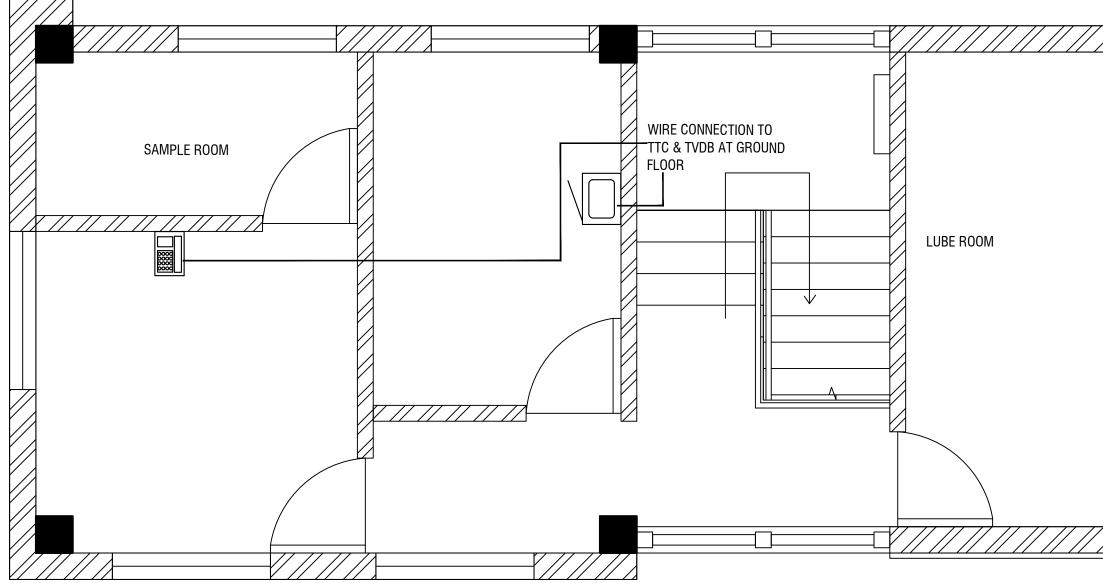
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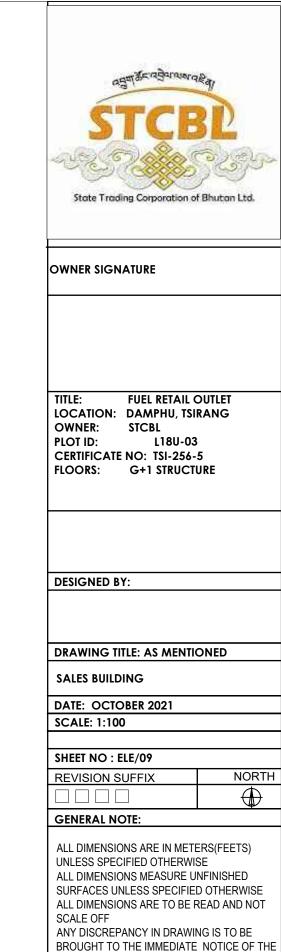
First Floor power point with conduit layout

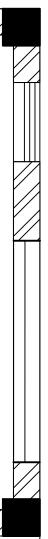


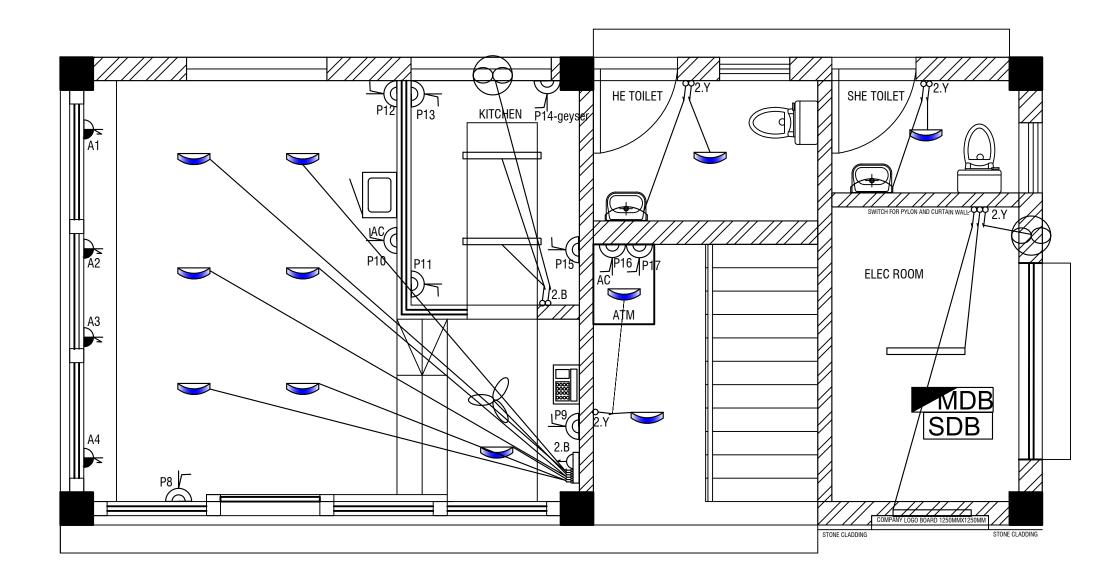




First Floor TV and Telephone layout

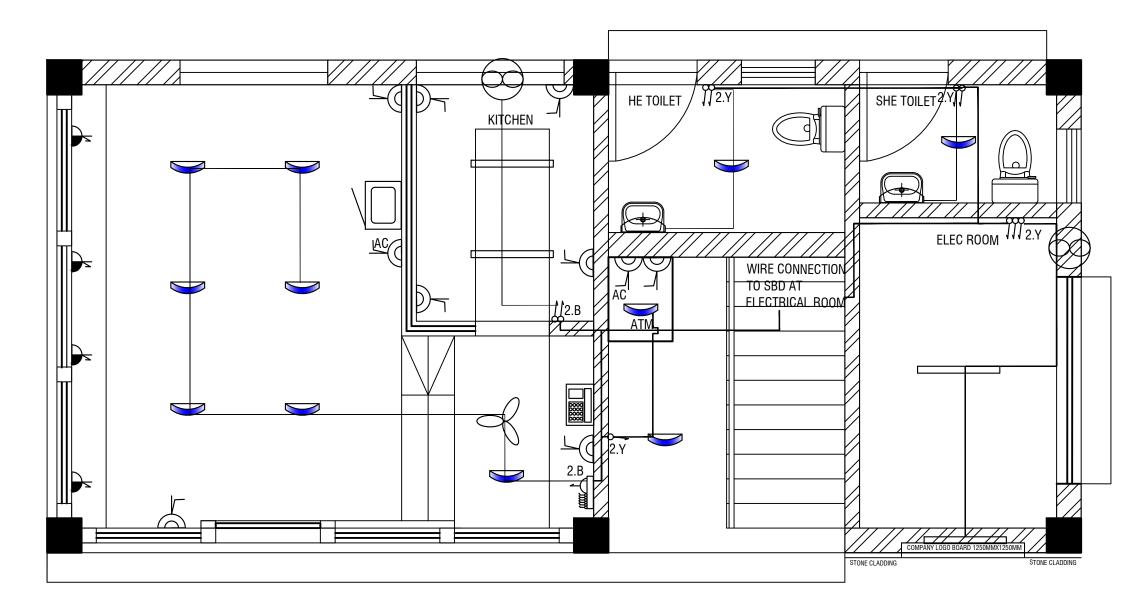




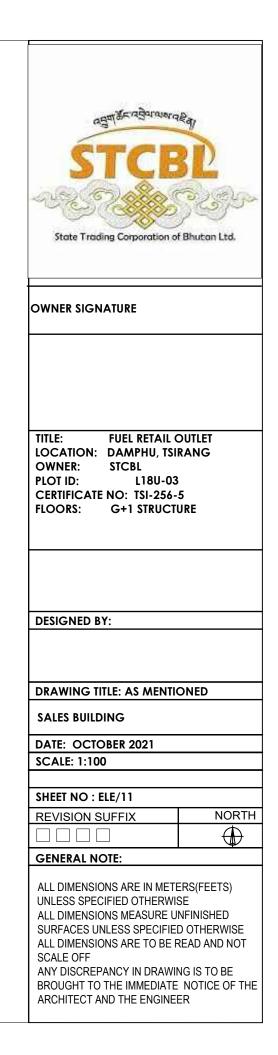


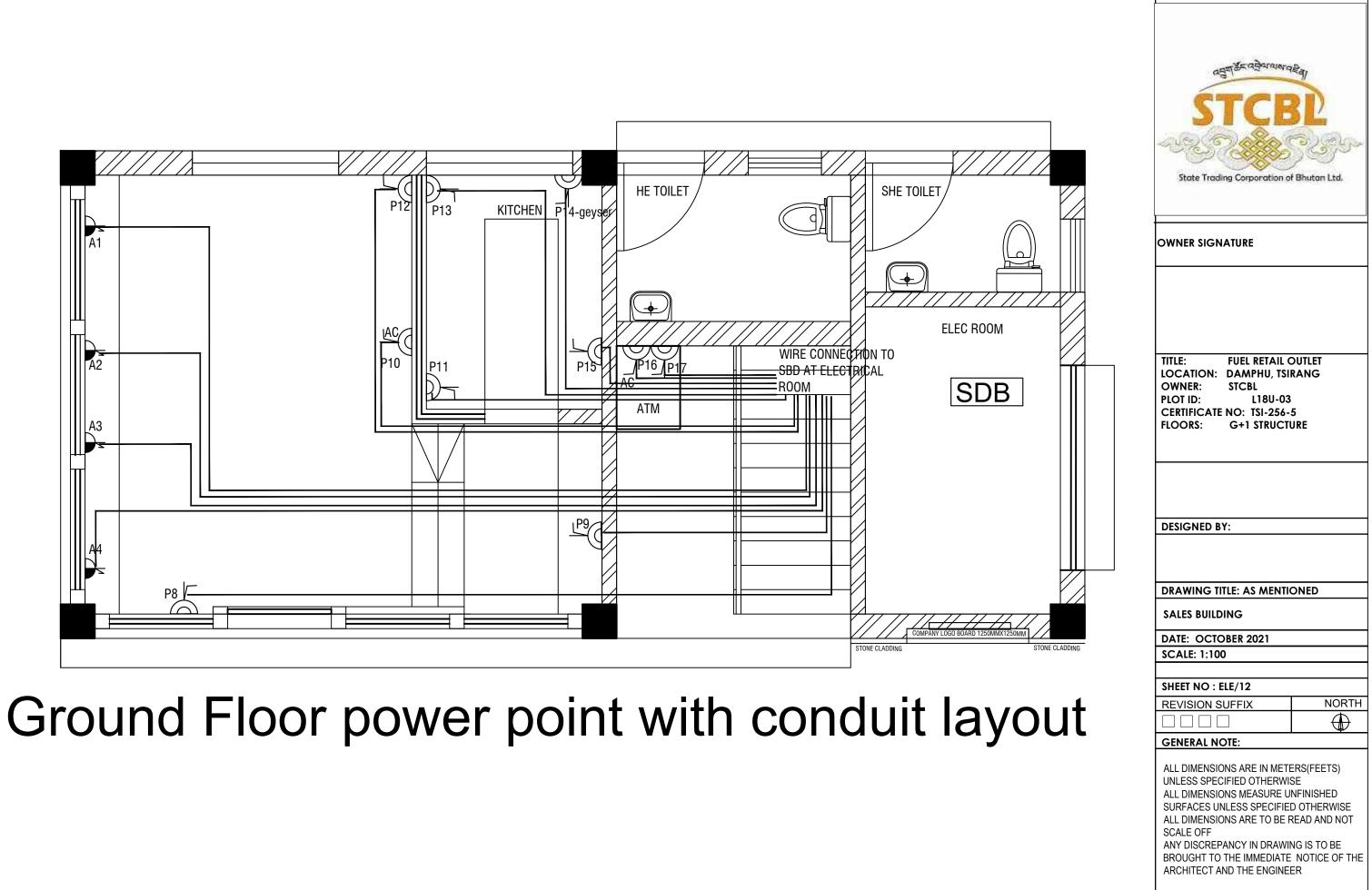
### Ground Floor Fitting and fixture with wiring layout

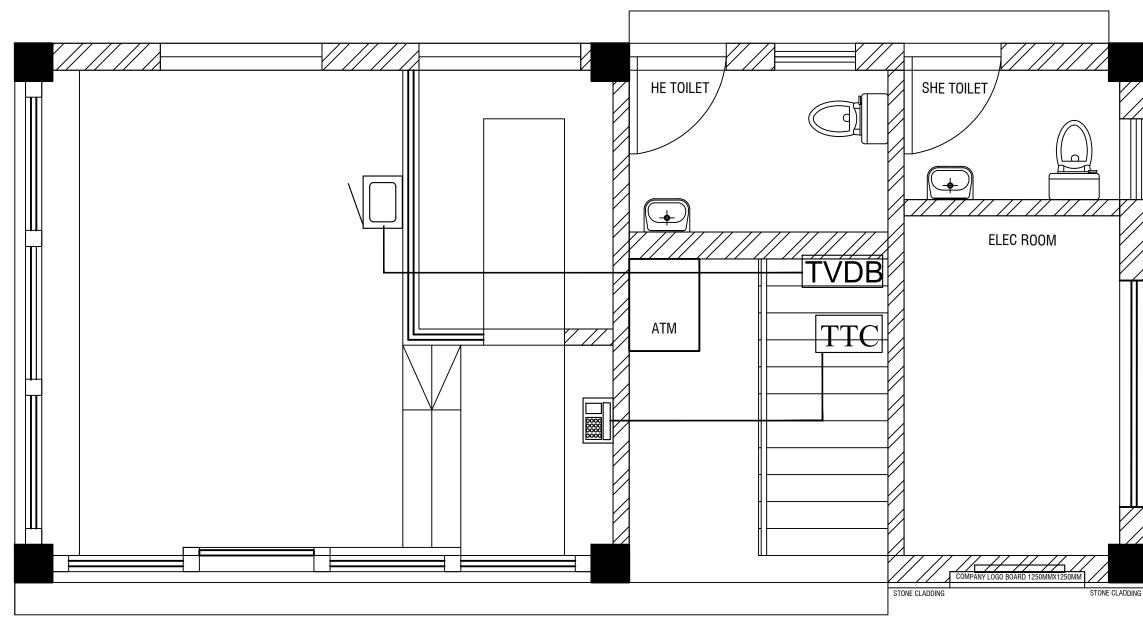
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STCBC State Trading Corporation of Bhutan Ltd.		
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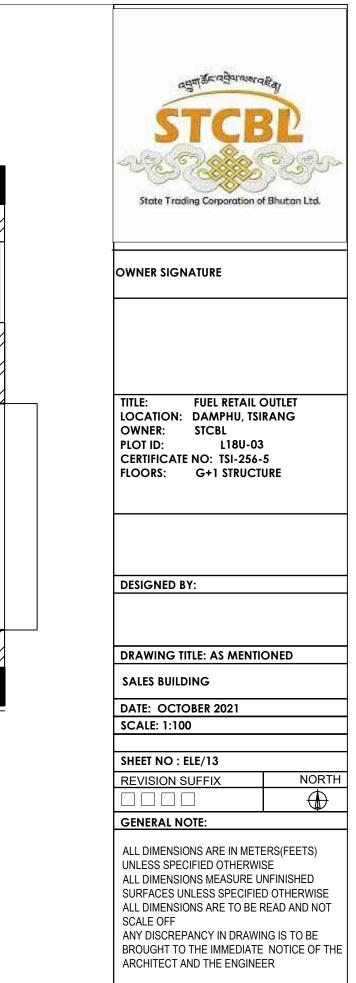
### Ground Floor Fitting and fixture with conduit layout







## Ground Floor TV and Telephone layout



Circuit	R-phase	Y-phase	B-phase
Ckt-1	283	1000	1000
ckt-2	2000	1000	1000
Ckt-3	2000	2000	2000
Ckt-4	1000	1000	1000
Ckt-5	0	1000	1000
Ckt-6	0	0	0
Total	5283	6000	6000
Total connected load			17283

#### Load distribution

Circuit	R-phase	Y-phase	B-phase
Ckt-1	384	298	330
ckt-2	1000	1000	1000
Ckt-3	1000	1000	1000
Ckt-4	1000	2000	2000
Ckt-5	940	900	2000
Ckt-6	2000	2000	2000
Ckt-7	2000	0	0
Total	8324	7198	8330
Total connected load 238			23852

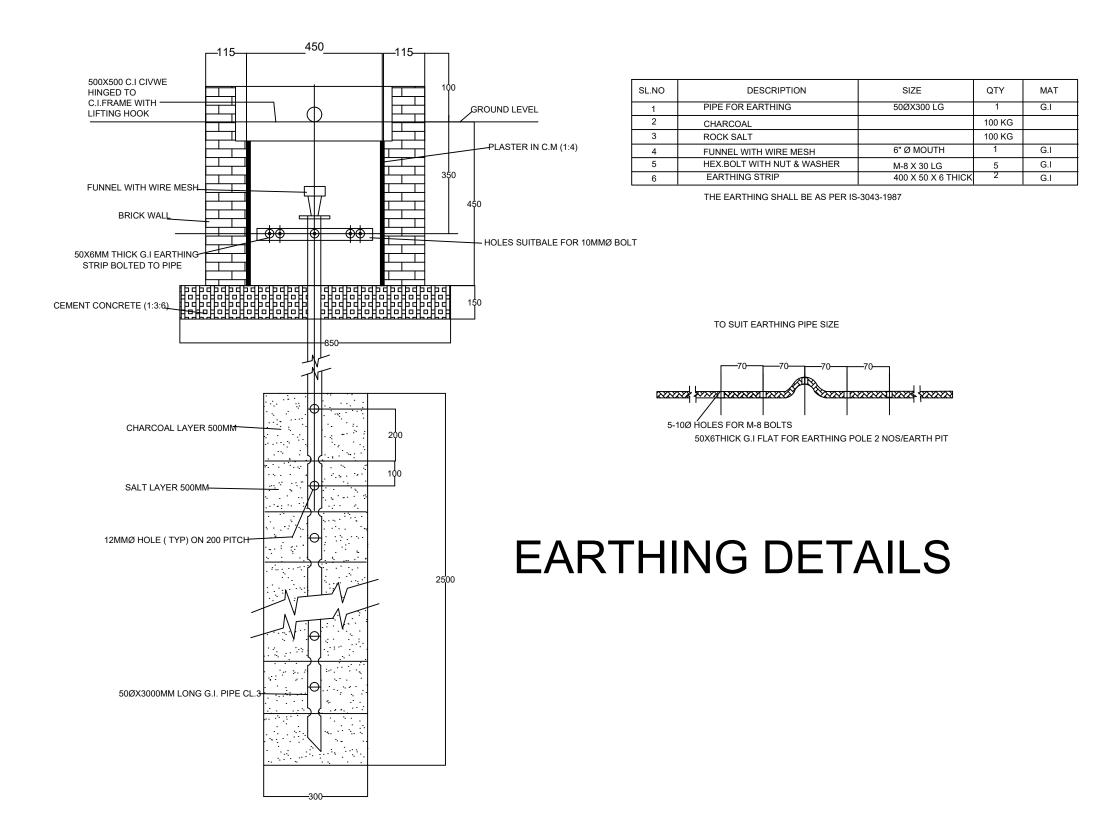
Total Connected load (Watt)		
R-phase	R-phase Y-phase	
5283	5283 6000	
Total connected load (watt)		17283
Assumed Load factor		80%
Minimum Pf		85%
Calculated load current at		22.6305
80% L.F (Amps)		

Total Connected load (Watt)		
R-phase	R-phase Y-phase	
8324	8324 7198	
Total connected load (watt)		23852
Assumed Load factor		80%
Minimum Pf		85%
Calculated load current at 80% L.F (Amps)		31.23109

Commercial space

Sales building & outside lightning

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