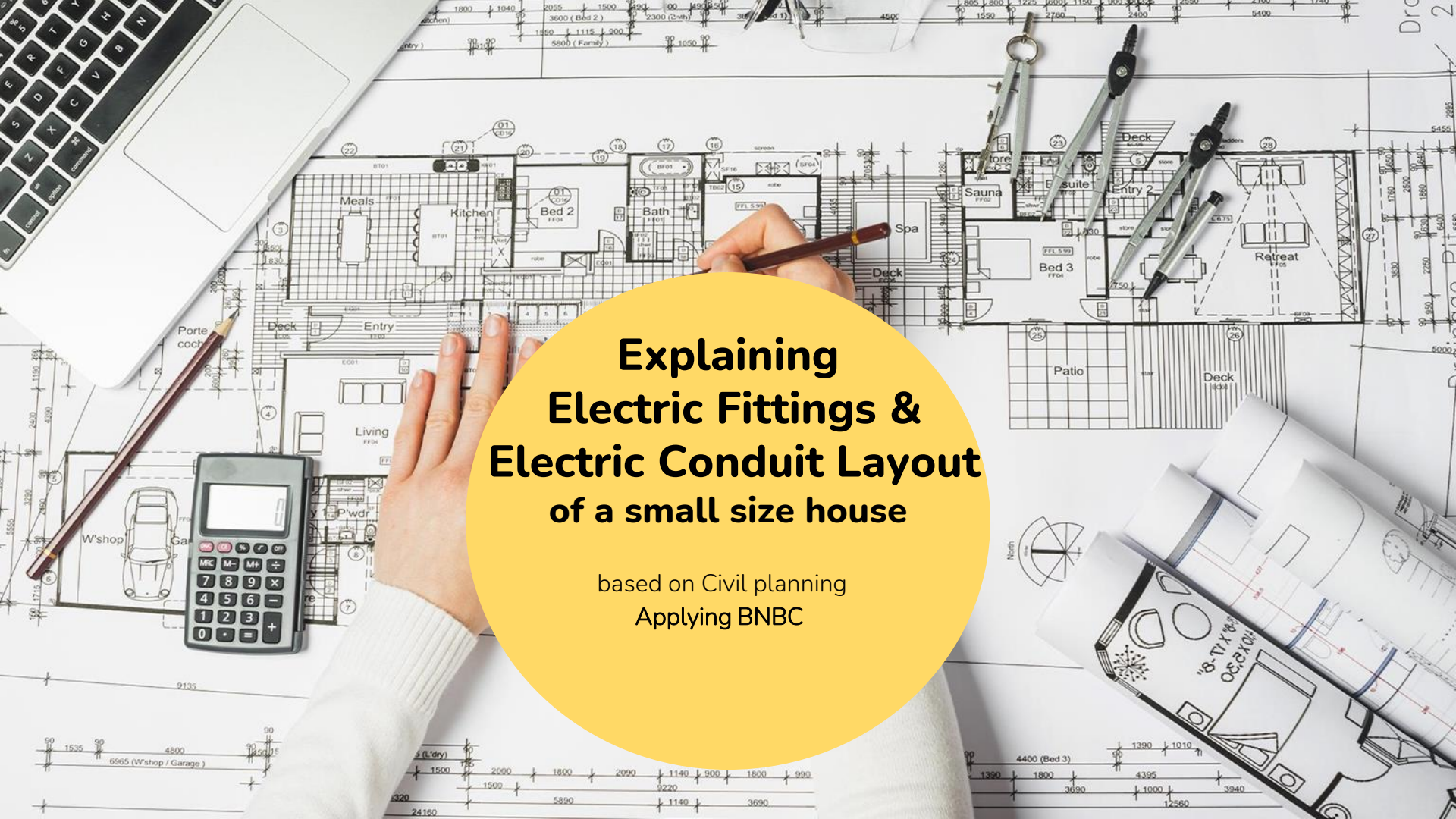
Explaining
Electric Fittings &
Electric Conduit Layout
of a small size house
based on Civil planning
Applying BNBC

ABOUT Us

Md Tamim Ul Islam	ID-19-40902-2	Serial no-14
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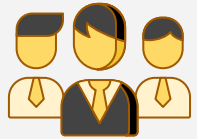
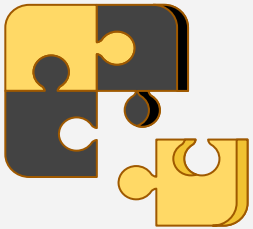


About

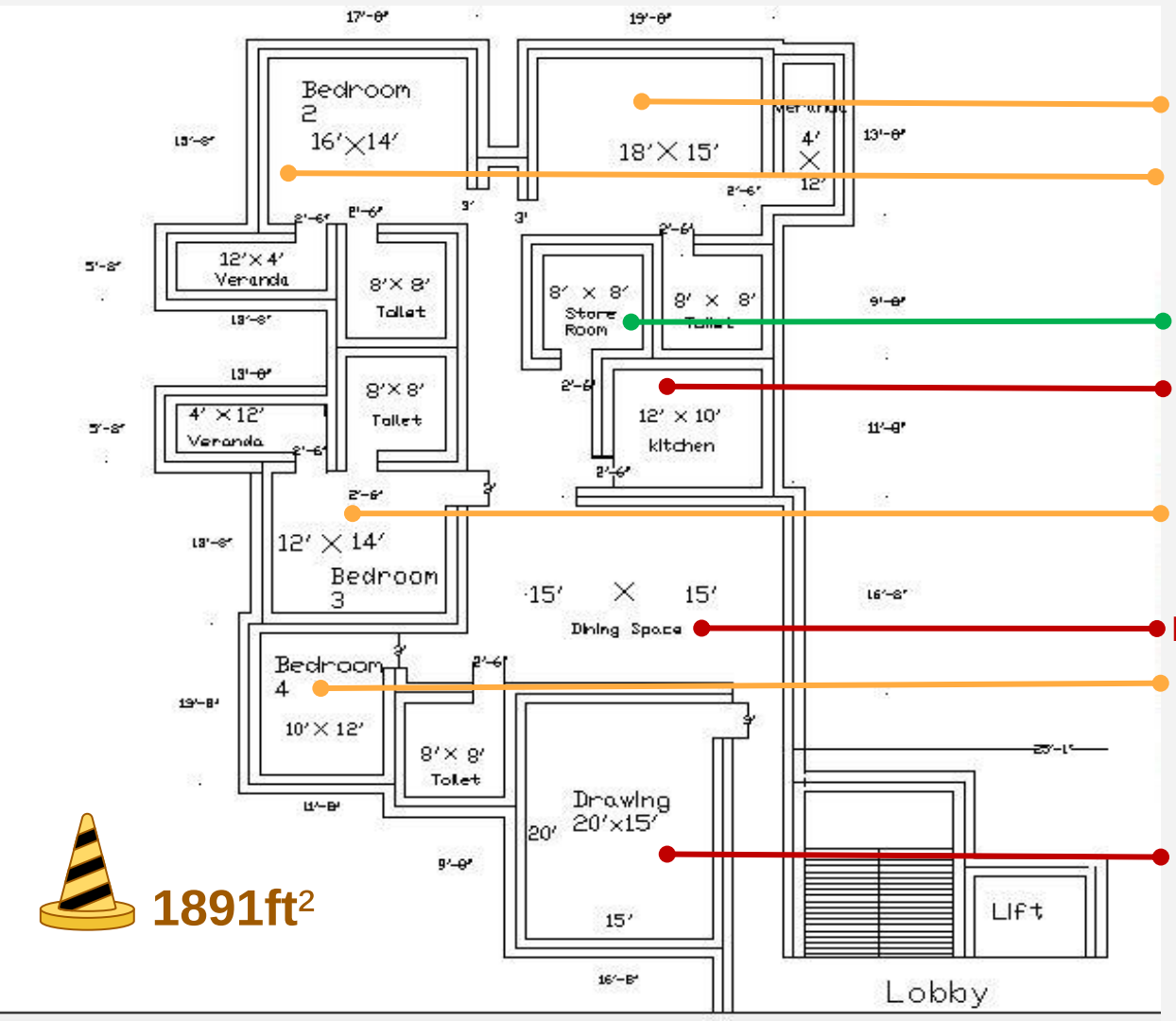


Part 1

Electric Fittings

Part 2

Electric Conduit Layout



Bedroom 1

Bedroom 2

Store Room

Kitchen

Bedroom 3

Dining Space

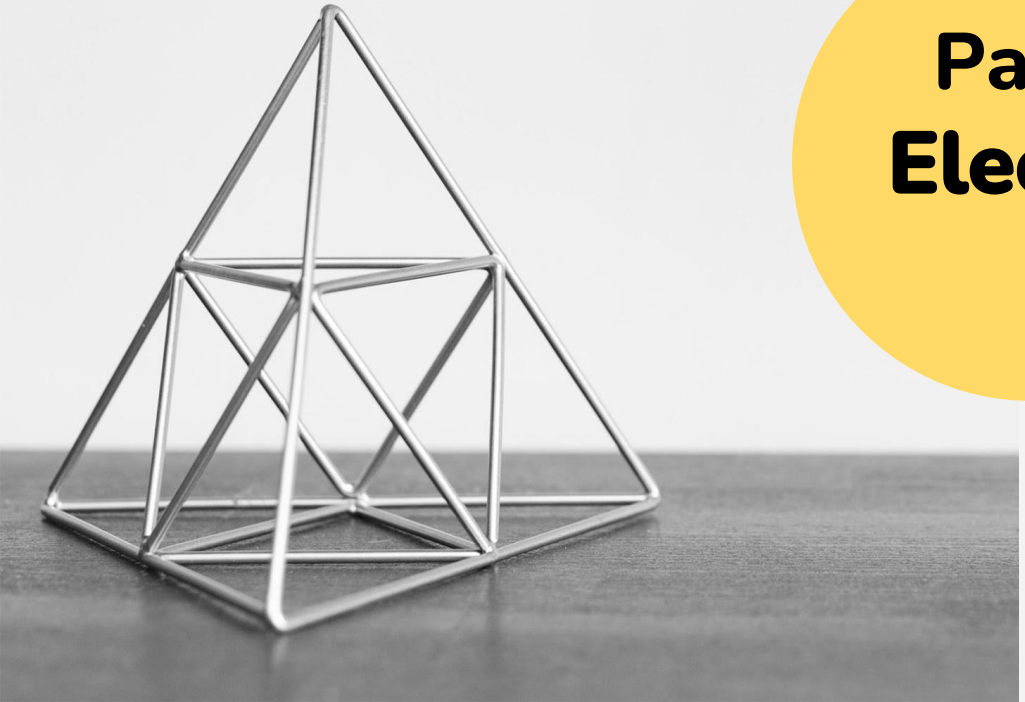
Bedroom 4

Drawing

1891ft²

Main Civil Plan

Calculation	
Bed 1	18x15=270ft²
Bathroom 1	8x8= 64ft²
Varanda 1	4x12= 48ft²
Bed 2	16x14= 224ft²
Bathroom 2	8x8= 64ft²
Varanda 2	4x12= 48ft²
Bed 3	14x12= 168ft²
Bathroom 3	8x8 = 64ft²
varanda 3	012x4= 48ft²
Bed 4	12x10= 120ft²
Drawing room	20x15= 300ft²
Bathroom 4	8x8= 64ft²
Dining	15x15= 225ft²
Kitchen	12x10= 120ft²
Store	8x8= 64ft²
TOTAL	1891ft²



Part 1
Electric Fittings

Electric Fittings

Placing Switchboards (SB)

- In this case it is important to be careful about the direction of door openings.
- Locations of SB for ‘Toilets’, ‘Stores’, ‘Kitchens’ should be outside of the room.

Placement of SDM & MDB

- SDB and MDB should be placed in an easily accessible place where sufficient lighting arrangement is ensured.

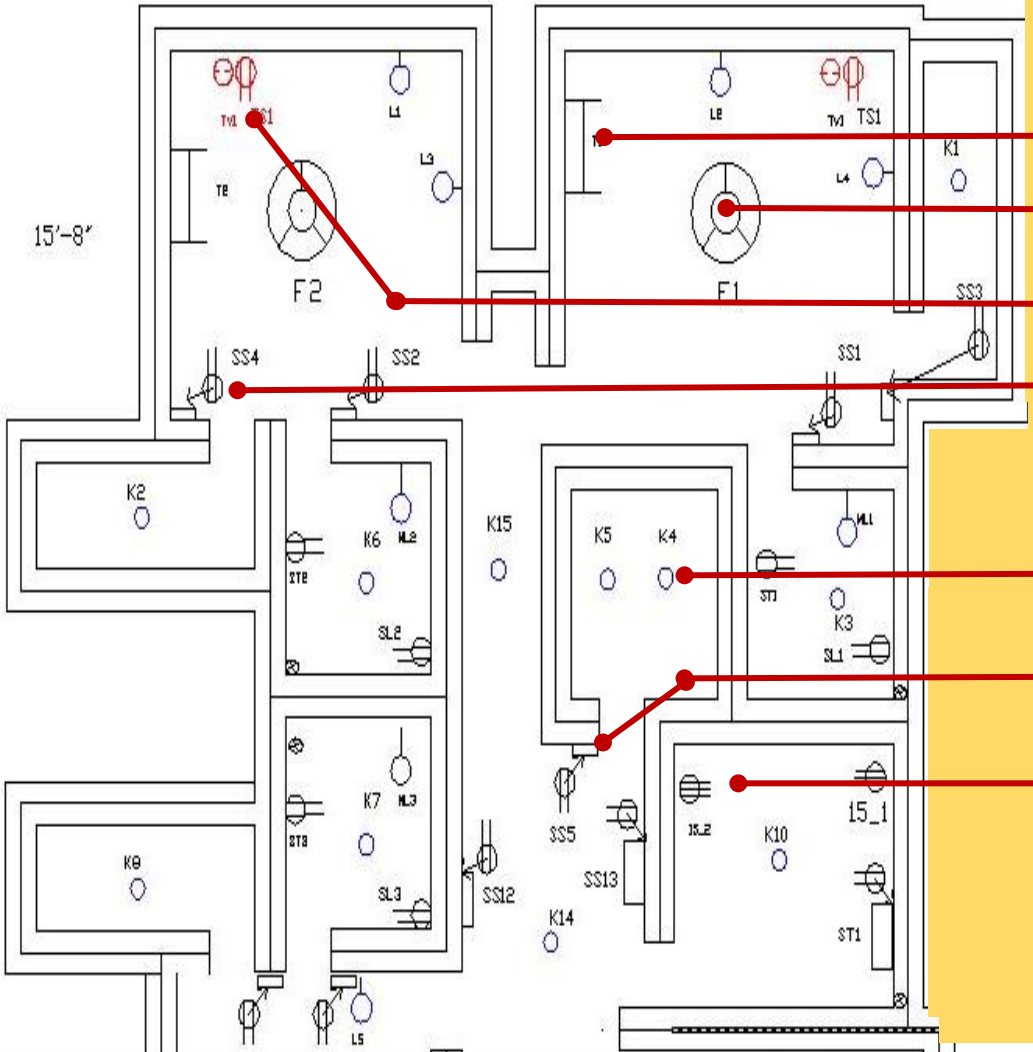
Placement of TV & Telephone

- Each living room should have distant switched socket at skirting level for TV with cable TV connectivity.
- Fair amount of telephone connectivity options should be allocated.

Placing Exhaust Fan

- Every toilet and kitchen should have exhaust fans.

Electric Fittings



Tube Light

Fan

TV/AC

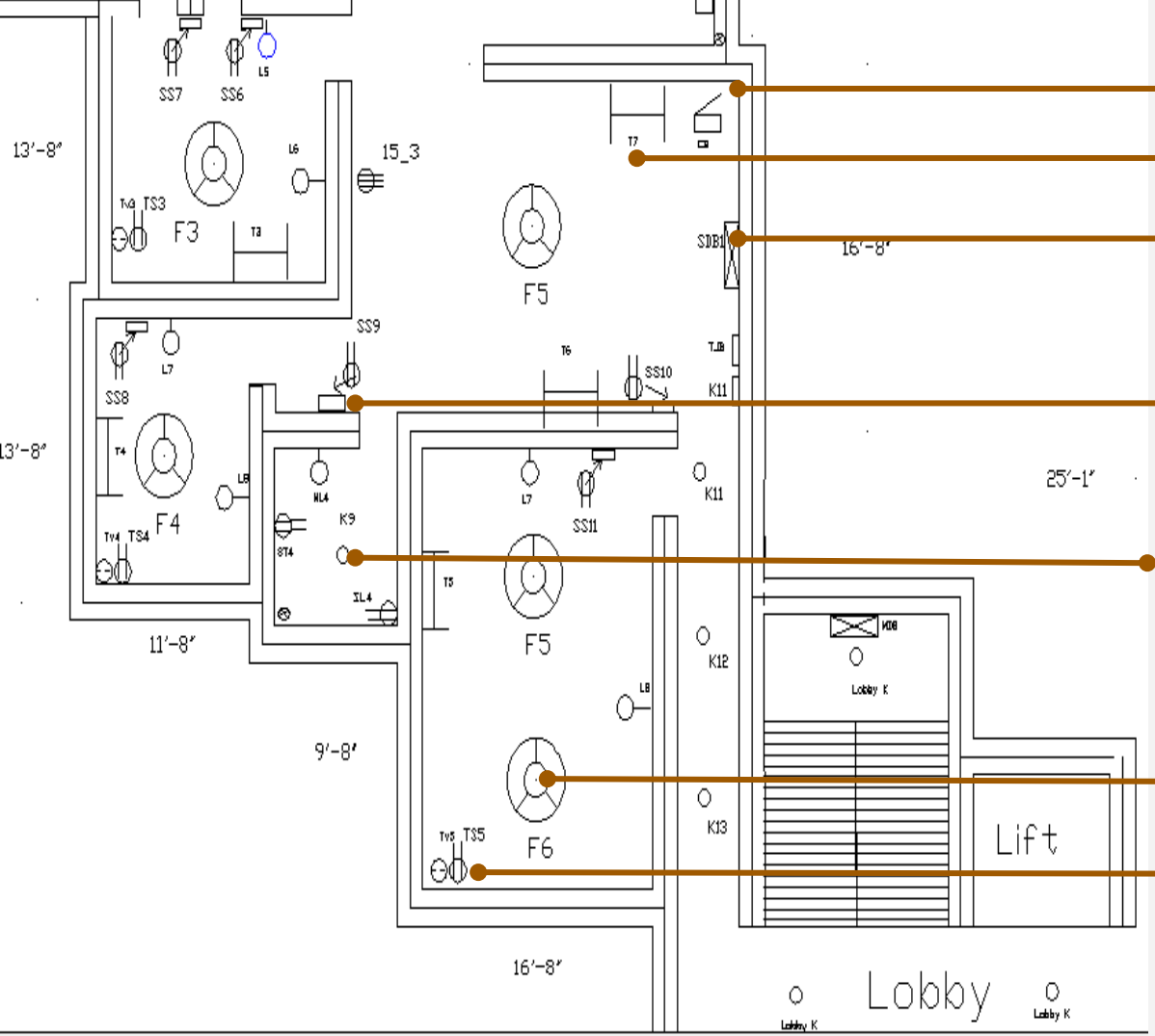
2 Pin Socket

Another type of light

Switch Board

3 Pin Socket

Electric Fittings



Circuit Breaker

Tube Light

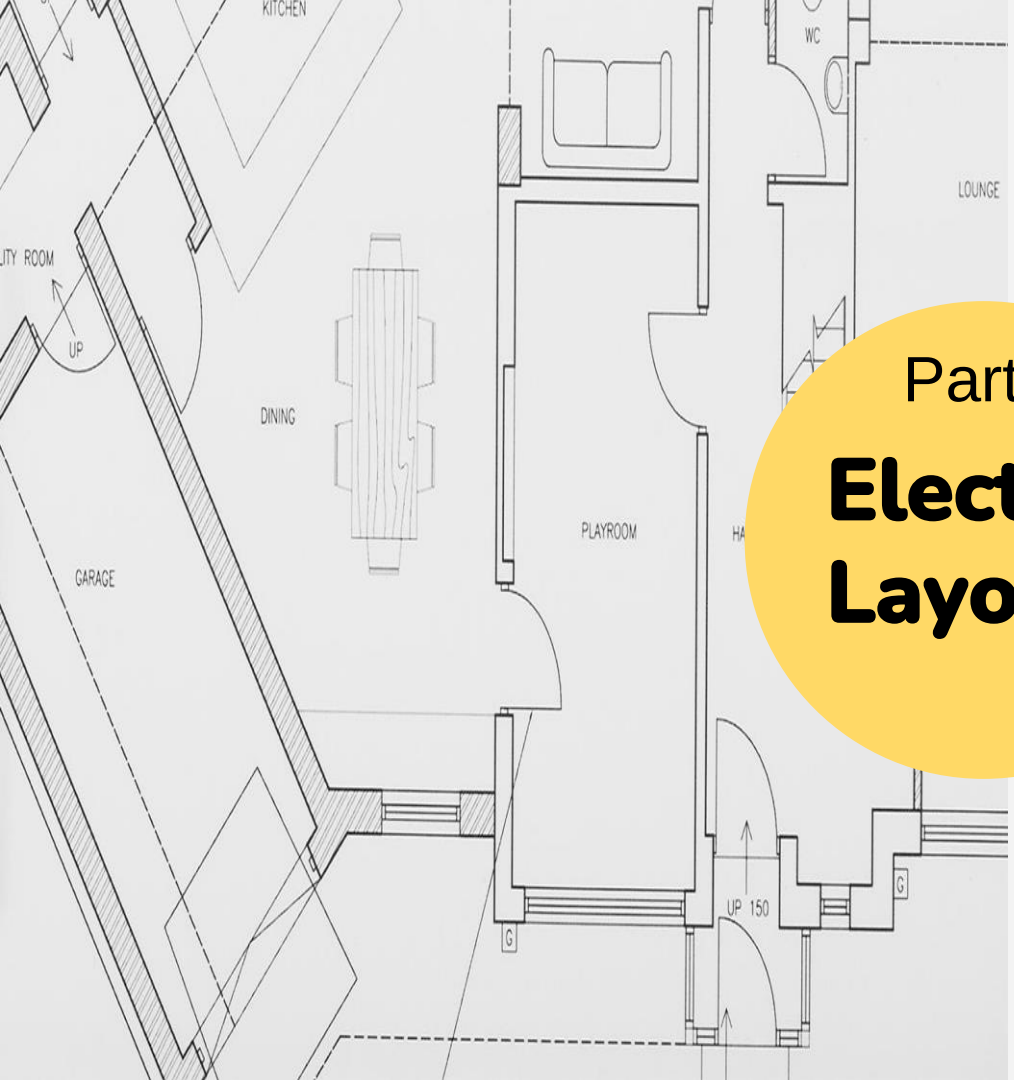
Secondary Distribution Board

Switch Board

Another type of light

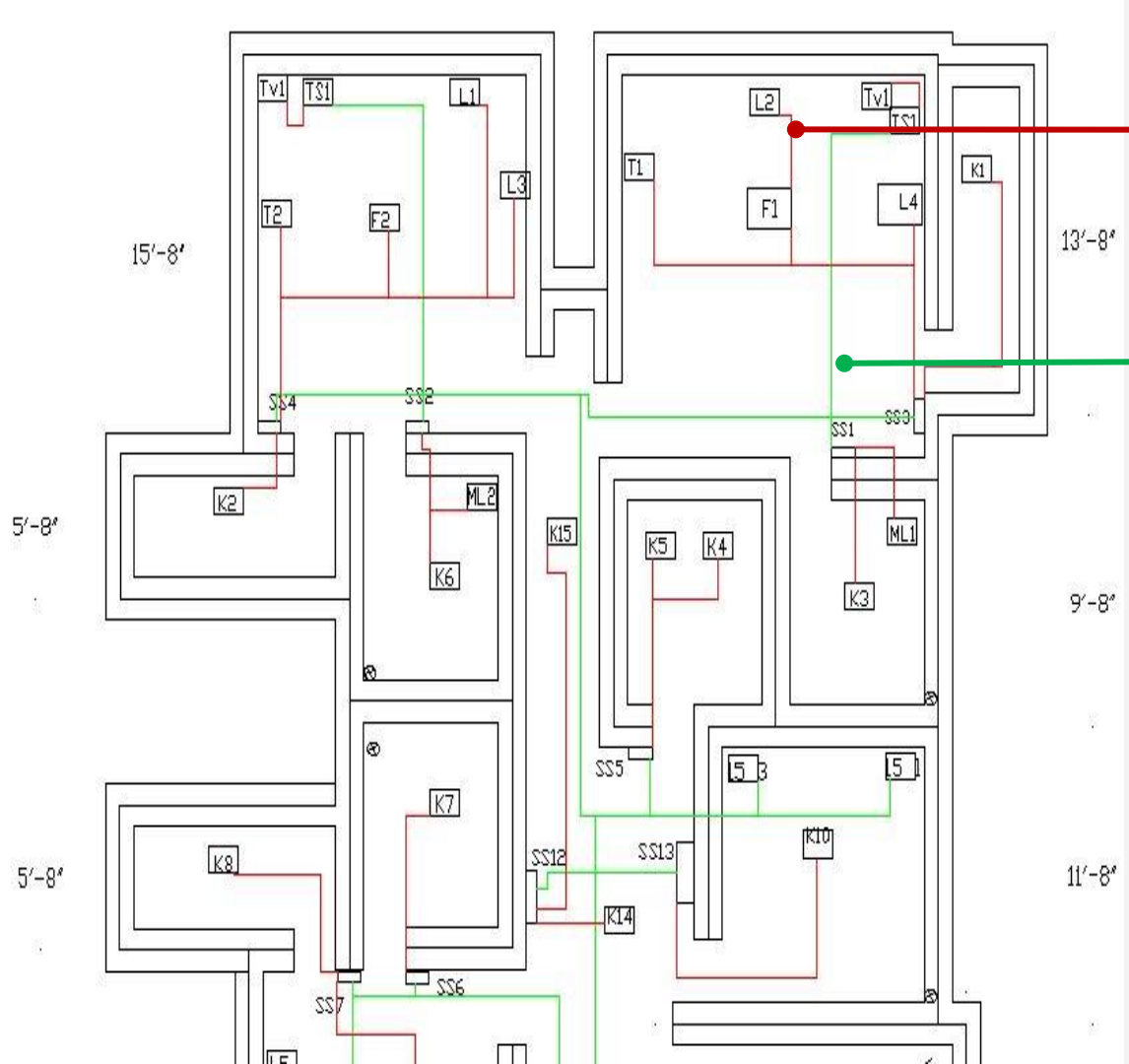
Fan

TV/AC



Part 2

Electric Conduit Layout

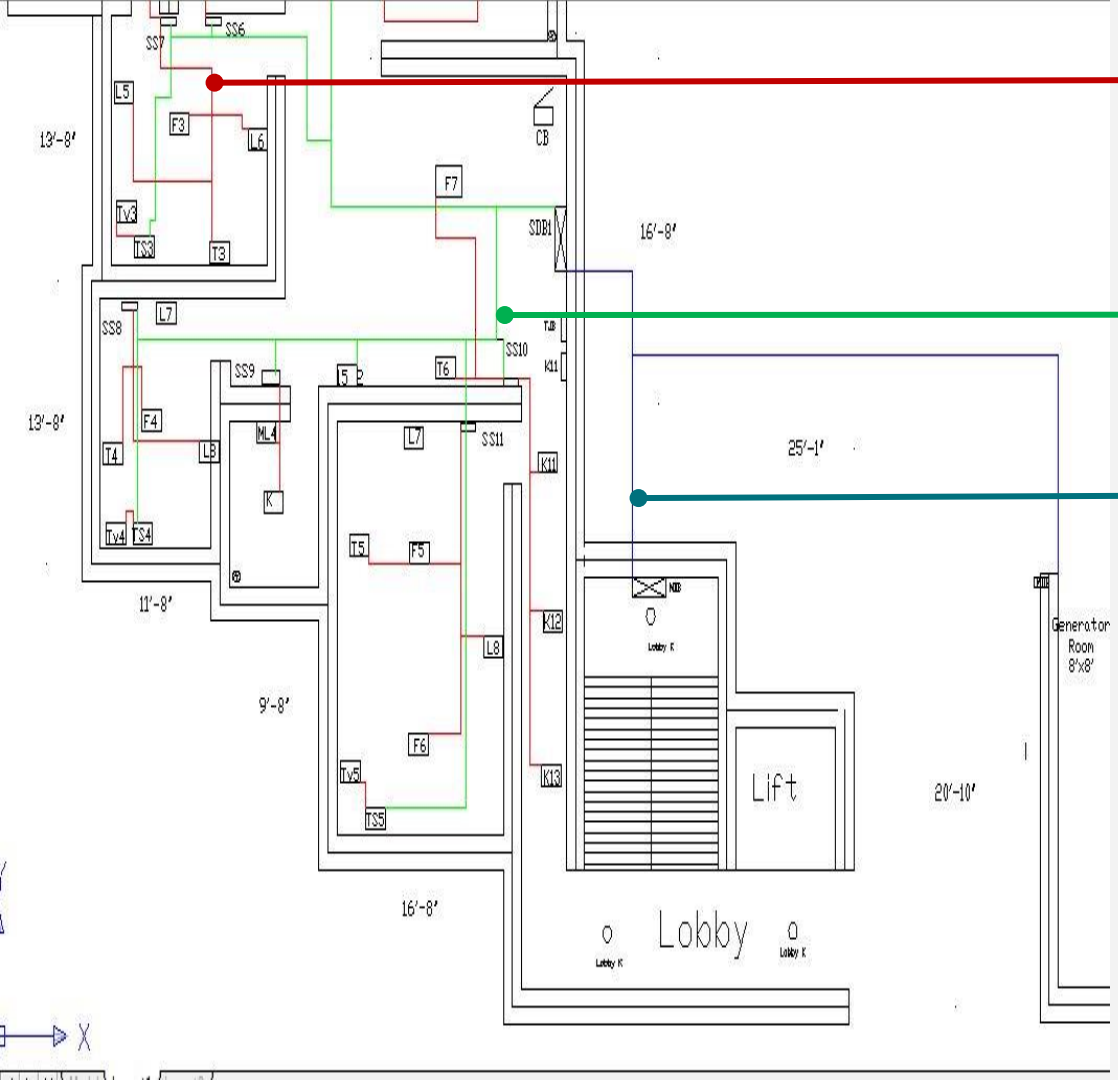


Red line represents **light load**

Green line represents **Medium Load.**

Line from **Secondary distribution board** to **Switch Board** are usually Medium load line.

Switch Board to **Light and Fan** are usually Light load line.



Red line represents **light load**

Green line represents **Medium Load.**

Blue Line represents **High Load.**

- **high power loads (15A, 20A).**

Wire Size in (mm²)

- **For Light load-2.5(mm²)**
- **For Medium load-4 (mm²)**
- **For High load-6(mm²)**

Load Calculation

FAN:

7 Fans= 7*70 watt= 490 watt

LIGHT:

9 Lights= 9*20 watt= 180 watt

6 Tube lights= 6*40 watt= 240 watt

3 Multiple lights= 3*15 watt= 45 watt

13 one kind of lights= 13*10 watt= 130 watt

Total Light Load= (180+240+45+130)watt= 595 watt

TELEVISION:

5 Television= 5*250 watt= 1250 watt

·2-PIN SOCKET:

4 2Pin socket= 4*100 watt= 400 watt

·3-PIN SOCKET:

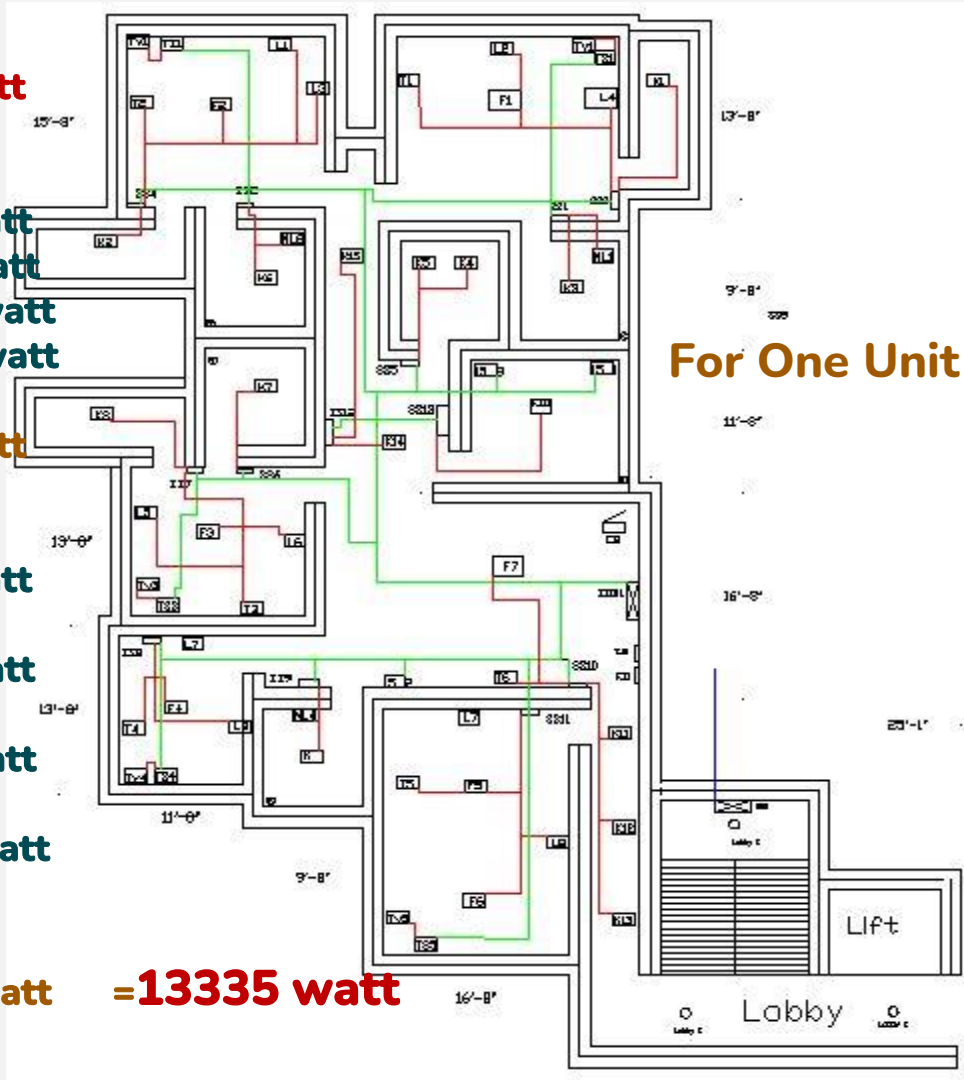
3 3Pin socket= 3*500 watt= 1500 watt

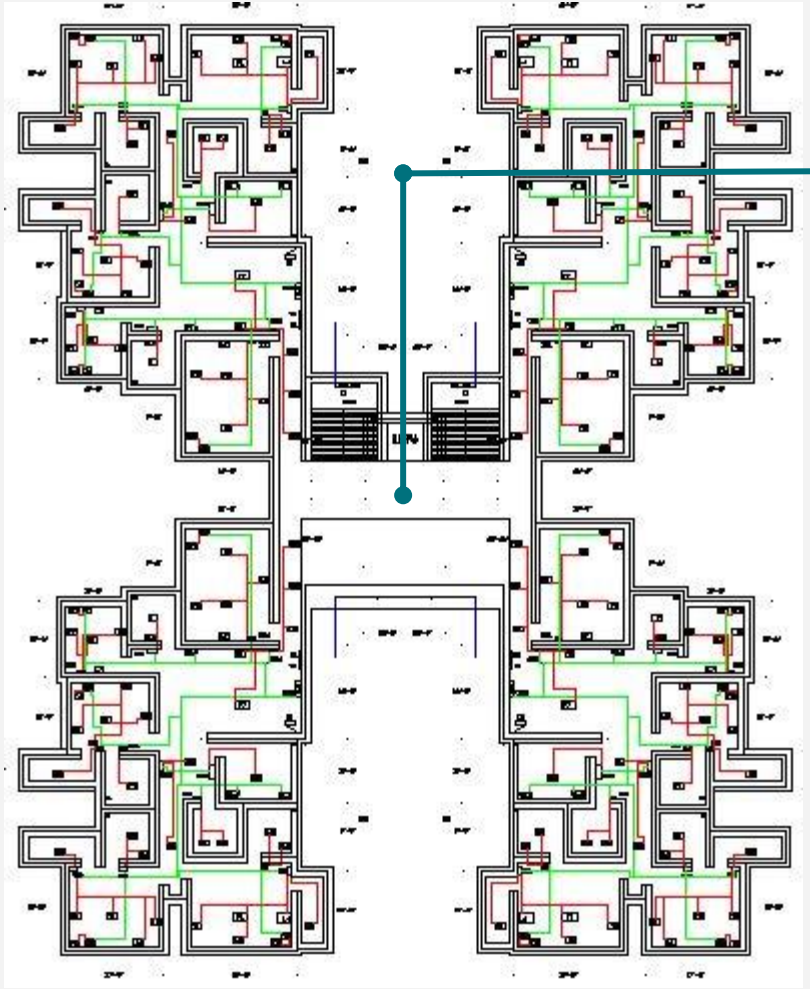
·SWITCH BOARD:

13 Switch board= 13*700 watt= 9100 watt

Total power

for 1 unit= (490+595+1250+400+1500+9100 watt =**13335 watt**





Load Calculation
For Full Floor & Building

Lobby power load calculation:

Light: 3 Lights= 3*20 watt= 60 watt

Total power load for each floor= [(Unit power load)*4 + Lobby power load]

=[(13335*4+ 60] watt
=53400 watt
= 53.4 k watt

·Ground floor power load calculation:

LIGHT: 6 Lights= 6*20 watt= 120 watt

FAN: 1 Fan= 70 watt

Total power load for ground floor= (120+70)watt= 190 watt= 0.19 kwatt

Building elevator= 25Hp= 18.64 kwatt

Finally,

Load for the building=[(Load for each floor)*10 + Load for ground floor + Building elevator]

=[(53.4)*10+0.19+18.64]kwatt

=552.83 kwatt

CONCLUSION

Thanks For Watching

ALTERNATIVE ICONS