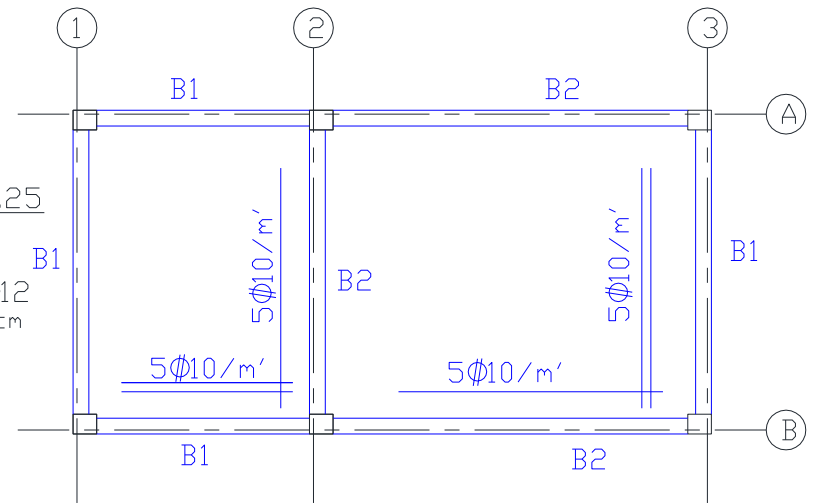
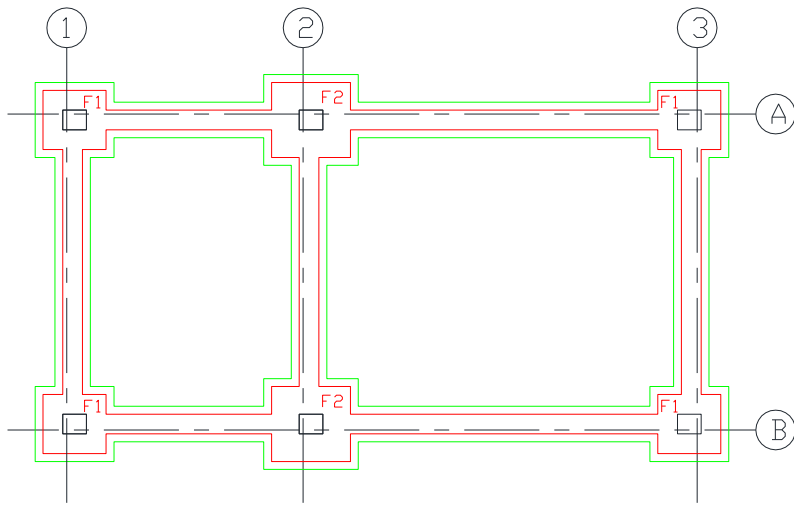


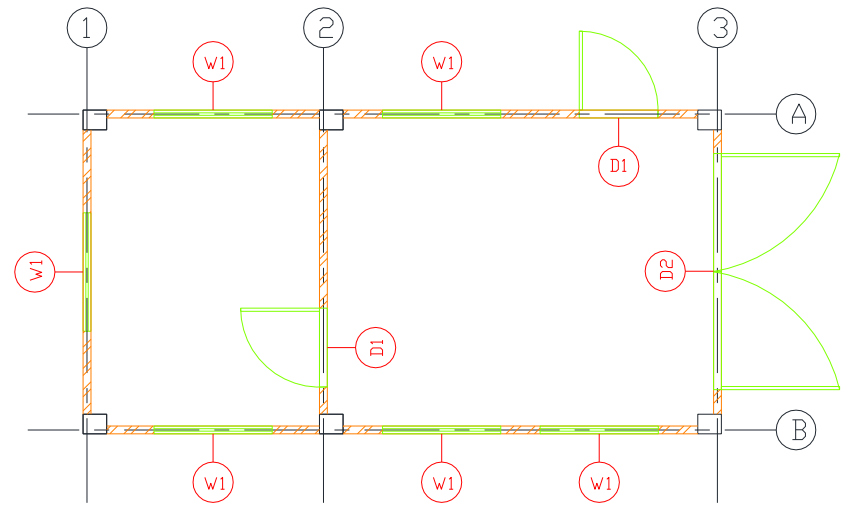
Columns & Axes



Roof



Foundations



Arch. Plan

| Footing | Dimensions | | | Reinforcement | |
|---------|------------|------|-----|----------------|-----------------|
| | L | W | H | Long direction | Short Direction |
| F1 | 0.8 | 0.75 | 0.5 | 5 ϕ 12 | 5 ϕ 12 |
| F2 | 1.00 | 0.95 | 0.5 | 6 ϕ 12 | 6 ϕ 12 |

All ties are 25 x 50 cm have a top and bottom reinforcement 3 ϕ 16 and stirrups ϕ 8 @20 cm

Foundation level -1.10 m

Plain concrete for foundations extends 10 from all ends of footings and ties and have a thickness of 15 cm

Roof finishing level +3.7 m

Internal floor finishing level +0.30 m

Window W1 is 1.50 x 1.0 m

Door D1 is 1.0 x 2.2 m

Door D2 is 3.0 x 2.5 m

Roof parapet height is 50 cm

| Beam | Dimensions | | Reinforcement | | | |
|------|------------|-----|---------------|-------------|-------------|-----------------|
| | W | H | Top | Bottom | Hanging | Stirrups |
| B1 | 0.2 | 0.6 | 2 ϕ 16 | 2 ϕ 16 | 2 ϕ 12 | ϕ 8 @20 cm |
| B2 | 0.2 | 0.6 | 3 ϕ 16 | 3 ϕ 16 | 2 ϕ 12 | ϕ 8 @20 cm |

| Item | Description | No. | L | W | H | Add | Deduct | Total |
|------------------|---|-----|------|------|------|--------|--------|----------------|
| Excavation | Footings F1 | 4 | 1.00 | 0.95 | 1.10 | 4.1800 | | |
| | Footings F2 | 2 | 1.20 | 1.15 | 1.10 | 3.0360 | | |
| | Ties axes 1 and 3 | 2 | 2.90 | 0.45 | 1.10 | 2.8710 | | |
| | Ties axis 2 | 1 | 2.70 | 0.45 | 1.10 | 1.3365 | | |
| | Ties axes A and B between axes 1 and 2 | 2 | 1.90 | 0.45 | 1.10 | 1.8810 | | |
| | Ties axes A and B between axes 2 and 3 | 2 | 3.70 | 0.45 | 1.10 | 3.6630 | | |
| | | | | | | | | 16.9675 |
| Plain Concrete | Footings F1 | 4 | 1.00 | 0.95 | 0.15 | 0.5700 | | |
| | Footings F2 | 2 | 1.20 | 1.15 | 0.15 | 0.4140 | | |
| | Ties axes 1 and 3 | 2 | 2.90 | 0.45 | 0.15 | 0.3915 | | |
| | Ties axis 2 | 1 | 2.70 | 0.45 | 0.15 | 0.1823 | | |
| | Ties axes A and B between axes 1 and 2 | 2 | 1.90 | 0.45 | 0.15 | 0.2565 | | |
| | Ties axes A and B between axes 2 and 3 | 2 | 3.70 | 0.45 | 0.15 | 0.4995 | | |
| | | | | | | | | 2.3138 |
| R.C. Foundations | Footings F1 | 4 | 0.80 | 0.75 | 0.50 | 1.2000 | | |
| | Footings F2 | 2 | 1.00 | 0.95 | 0.50 | 0.9500 | | |
| | Ties axes 1 and 3 | 2 | 3.10 | 0.25 | 0.50 | 0.7750 | | |
| | Ties axis 2 | 1 | 2.90 | 0.25 | 0.50 | 0.3625 | | |
| | Ties axes A and B between axes 1 and 2 | 2 | 2.10 | 0.25 | 0.50 | 0.5250 | | |
| | Ties axes A and B between axes 2 and 3 | 2 | 3.90 | 0.25 | 0.50 | 0.9750 | | |
| | | | | | | | | 4.7875 |
| R.C. Skelton | Columns | 6 | 0.30 | 0.25 | 3.83 | 1.7235 | | |
| | Slab | 1 | 8.10 | 4.10 | 0.12 | 3.9852 | | |
| | Beams axes 1, 2 and 3 | 3 | 3.60 | 0.20 | 0.48 | 1.0368 | | |
| | Beams axes A and B between axes 2 and 3 | 2 | 4.50 | 0.20 | 0.48 | 0.8640 | | |
| | Beams axes A and B between axes 1 and 2 | 2 | 2.70 | 0.20 | 0.48 | 0.5184 | | |
| | | | | | | | | 8.1279 |

| Bar # | Member & description | Bar diameter | No. of bars / member | No. of Members | Bar Shape | Total length of bar | W/m (kg) | Total weight of bars (kg) |
|-------|---|--------------|----------------------|----------------|-----------|---------------------|----------|---------------------------|
| 1 | Footing F1 short direction | 12 | 5 | 4 | | 1.52 | 0.888 | 27.00 |
| 2 | Footing F1 Long direction | 12 | 5 | 4 | | 1.54 | 0.888 | 27.35 |
| 3 | Footing F2 short direction | 12 | 6 | 2 | | 1.72 | 0.888 | 18.33 |
| 4 | Footing F2 Long direction | 12 | 6 | 2 | | 1.74 | 0.888 | 18.54 |
| 5 | Ties axes 1,2 & 3 (main rft. top & bottom) | 16 | 6 | 3 | | 4.1 | 1.58 | 116.60 |
| 6 | Ties axes A and B between axes 1 and 2 (main rft. top & bottom) | 16 | 6 | 2 | | 3.3 | 1.58 | 62.57 |
| 7 | Ties axes A and B between axes 2 and 3 (main rft. top & bottom) | 16 | 6 | 2 | | 5.1 | 1.58 | 96.70 |
| 8 | Ties axes 1 and 3 (Stirrups) | 8 | 16 | 2 | | 1.34 | 0.394 | 16.89 |
| 9 | Ties axis 2 (Stirrups) | 8 | 15 | 1 | | 1.34 | 0.394 | 7.92 |
| 10 | Ties axes A and B between axes 1 and 2 (Stirrups) | 8 | 11 | 2 | | 1.34 | 0.394 | 11.62 |
| 11 | Ties axes A and B between axes 2 and 3 (Stirrups) | 8 | 20 | 2 | | 1.34 | 0.394 | 21.12 |
| 12 | Column dowels | 12 | 6 | 6 | | 1.1 | 0.888 | 35.16 |