

## ESTIMATE OF FOREST RANGE OFFICE

(Total Area = 1475 sq. ft. + Porch 150 sq feet)

1. C/C length of walls in office =  $40.75 \times 3 + 35 \times 3 + 12.75 \times 1 + 11.5 \times 3 + 6.75 \times 1$  running feet  
= 281.25 running feet  
= 85.73 running meter
2. No. of columns in office = 26
3. No. of columns in porch = 2
4. Size of each column = 9 inches x 9 inches
5. Plinth = 0.5 meter above ground level
6. Beam at plinth level = 9 inches x 9 inches
7. Beam at door level = 9 inches x 6 inches
8. Beam at roof level = 9 inches x 9 inches
9. Thickness of slab = 4 inches

### Estimate of different works

#### 1. Excavation:

- (i) For columns =  $(26 + 2) \times 1.0 \times 1.0 \times 1.2$  meter  
= 33.600 cubic meter
- (ii) For walls =  $(85.73 - 64 \times 0.5) \times 0.3 \times 0.5$   
= 8.060 cubic meter
- (iii) For pavement block =  $90.15 \times 0.45 = 40.56$
- (iv) Total excavation = 82.22 cubic meter

#### 2. Filling foundation with 1:3:6 (M-10) cement concrete:

- (i) For columns =  $(26 + 2) \times 1.0 \times 1.0 \times 0.1$   
= 2.800 cubic meter
- (ii) For walls =  $85.73 \times 0.3 \times 0.1$   
= 2.572 cubic meter
- (iii) For flooring in rooms =  $12.59 \times 10.90 \times 0.1$   
= 13.723 cubic meter

(iv) Total CC = 19.095 cubic meter

**3. R.C.C. work in 1:1.5:3 (M-20) in columns, beams, chajjas & slab:**

- (i) Columns footing =  $28 \times (1 \times 1 + 0.22 \times 0.22) / 2 \times 0.3$   
= 4.403 cubic meter
- (ii) Columns up to plinth level =  $28 \times 1.2 \times 0.22 \times 0.22$   
= 1.626 cubic meter
- (iii) Column up to roof level =  $28 \times 0.22 \times 0.22 \times 3.1$   
= 4.201 cubic meter
- (iv) Beam at plinth level =  $(85.73 + 9.753) \times 0.22 \times 0.22$   
= 4.621 cubic meter
- (v) Beam at door level =  $(85.73 + 9.753) \times 0.22 \times 0.15$   
= 3.151 cubic meter
- (vi) Beam at roof level =  $85.73 \times 0.22 \times 0.22$   
= 4.149 cubic meter
- (vii) Chajjas =  $4 \times 0.6 \times 1.5 \times 0.1$   
= 0.36 cubic meter
- (viii) Slab =  $(12.59 \times 10.90 + 4.20 \times 3.60) \times 0.1$   
= 15.23 cubic meter
- (ix) Total RCC = 37.74 cubic meter

4. Steel required in RCC = 1.25 % of volume of RCC  
= 3660 kg

5. Masonry in foundation/plinth =  $(85.73 - 24 \times 0.22) \times 0.22 \times 0.9$   
= 15.929 cubic meter

**6. Masonry in superstructure:**

- (i) In main building =  $85.73 \times 0.22 \times 2.85$   
= 53.752 cubic meter
- (ii) Deduction for doors/windows =  $(5 \times 1.07 \times 2.1 + 6 \times 0.838 \times 2.1 + 4 \times 1.5 \times 1.35 + 2 \times 1.2 \times 1.35 + 9 \times 0.6 \times 0.45) \times 0.22$   
= 7.824 cubic meter

(iii) Total Masonary = 45.928 cubic meter

### 7. Plaster in 1:6 cement mortar

(i) In main building =  $2 \times 85.73 \times 3.2$   
= 548.672 square meter

(ii) In roof =  $12.59 \times 10.90 + 4.20 \times 3.60$   
= 152.35 square meter

(iii) Deduction for doors/windows =  $2 \times (5 \times 1.07 \times 2.1 + 6 \times 0.838 \times 2.1 +$   
 $4 \times 1.5 \times 1.35 + 2 \times 1.2 \times 1.35 +$   
 $9 \times 0.6 \times 0.45)$   
= 71.128 square meter

(iv) Total plaster = 625.575 square meter

### 8. Centering and shuttering:

(i) For Columns in main building =  $28 \times 4 \times 0.22 \times 4.6$   
= 113.344 square meter

(ii) For beam at plinth level =  $(85.73 + 9.753) \times 0.3$   
= 28.645 square meter

(iii) For beam at door level =  $85.73 \times 0.525$

= 45.009 square meter

(iv) For beam at roof level =  $(85.73 + 9.753) \times 0.66$   
= 63.019 square meter

(v) For chajjas =  $4 \times 0.6 \times 1.5$

= 3.600 square meter

(vi) For slab =  $12.59 \times 10.90 + 4.20 \times 3.60$

= 152.35 square meter

(vii) Total shuttering = 405.967 square meter

9. Filling foundation with moorum/Stone dust =  $12.59 \times 10.90 \times 0.5 + 90.15 \times 0.30$   
= 95.661 cubic meter
10. Wood required for frames =  $0.0635 \times 0.127 \times (5 \times 5.334 +$   
 $6 \times 5.105$   
= 0.46 cubic meter
11. Frame work for doors/window =  $(5 \times 1.07 \times 2.1 + 6 \times 0.838 \times 2.1$   
= 21.79 square meter
- 12 Flooring =  $12.59 \times 10.90 +$   
= 137.23 square meter
13. Paver Block work in front of building =  $15.85 \times 3.05 + 13.71 \times 3.05$   
= 90.15 square meter

### Estimate of expenditure for forest Range Office

Sr.	CSR item no.	Description of the work	Quantity	Rate in Rs.		Amount
				Amount	Unit	
1	2.2	Clearing jungle including uprooting of rank vegetation, grass, brush wood etc	270	4.14	Sqm	1118
2	2.6.	Earth work in excavation in all kinds of soil	82.22	129.00	Cum	10606
3	4.1.1.4	Filling foundation- Providing and laying in position cement concrete of M-10 grade with 20 mm nominal size graded stone aggregate	19.095	3890.00	Cum	74280
4	5.1.1	Providing and laying in position M-20 grade of reinforced cement concrete with 20 mm nominal size graded stone aggregate excluding cost of centering/shuttering/steel	37.74	6153.00	Cum	232214
5	5.16.6	Reinforcement for RCC work including straighening, cutting, bending etc with TMT bars	3660	80.00	Kg	292800
6	6.5.2	Brick work with well burnt open bhatta bricks with crushing strength no less than 25 kg/sq.cm and absorption not more than 20% in 1:6 cement mortar	15.929	4155.00	Cum	66185
7	6.6.2	Brick work with well burnt chimney bricks with crushing strength no less than 25 kg/sq.cm and absorption not more than 20% in 1:6 cement mortar	45.928	4350.00	Cum	199787
8	13.2.2	15 mm thick plaster in 1:6 cement mortar	629.88	128.00	Sqm	80625
9	5.9.1	Centering and shuttering including removal in beams, columns, slab etc	405.967	190.60	Sqm	77377
10	2.26	Supplying and filling in plinth with Stone dust including ramming, watering etc	95.661	672.00	Cum	64284
11	9.1.2	Providing wood work in frames of doors and fixed in position with sal wood	0.46	71309.00	Cum	32802
12	9.5.2.2	Providing and fixing panelled shutters for doors with prelaminated board with decorative lamination on one side and balancing lamination on other side	21.79	1956.00	Sqm	42621

Sr.	CSR item no.	Description of the work	Quantity	Rate in Rs.		Amount
				Amount	Unit	
13	11.78.1.1	Providing and laying vitrified floor tiles laid on 20 mm thick cement mortar in 1:4 with 600 mm x 600 mm x 9 mm size tiles (additional 10% for skirting)	150.93	1104.00	Sqm	166627
14	11.66	Concrete interlocking paver stock. Infront of building (i/c porch)	90.15	586.00	Sqm	52828
15		Cost of window grills as per market rate	390	80.00	Kg	31200
16		Aluminium window frame 3 track sliding ( 2Glass+1 Mosquito mesh shutter) & fly proof outer doors	LS			60000
17		Cost of septic tank of size 6` feet x 6 feet x 6 feet; 1 no.	LS			40000
		Miscellaneous Expnese	LS			10000
18		<b>Total</b>				<b>1535354</b>
19		Add 5% for electrification				76768
20		Add 5% for sanitary fittings including 1500 liter tank				76768
21		Add for tile work in bath/toilets	LS			35000
22		Add 5% for white washing (with 2 coats of cement based putty and emulsion)				76768
24		Add for the cost of 03 kota stone covered almirah of size 7 feet high, 4 feet wide and 20 inches deep in each room				45000
25		<b>Total</b>				<b>1845657</b>
26		Add for GST	18.00%			332218
27		<b>Total</b>				2177875
28		Add 1% for labour welfare tax				21779
		<b>Grand Total</b>				<b>2199654</b>
		Rs. Twenty Lakhs Ninty Thousand Only				or Rs. 22,00,000
29		<b>Provision for Boundarywall (100 rmt)</b>				400000
		<b>Grand Total</b>				<b>2600000</b>

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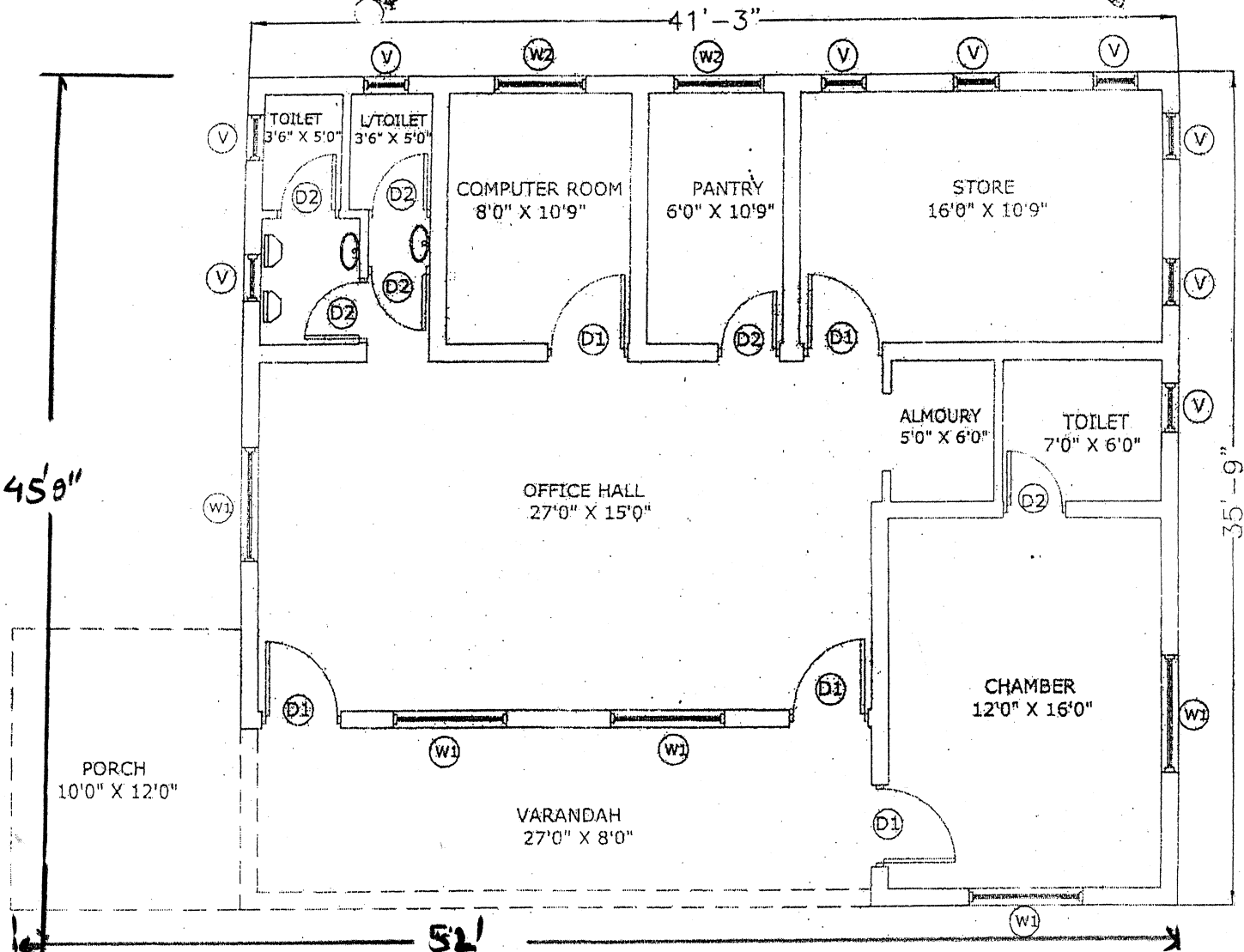
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### Estimate of Quantities of Range Office

Sr.	Description of the work	Quantity	Cement (Bag)	Sand (cu m)	Aggregate (cu m)	Brick	Steel in kg	Stone dust(cu m)
1	M-10 grade CC	19.095 cu.m	85	8.707	17.415	0	0	0
2	M-20 CC	37.74 cu.m	308	15.46	30.93	0	0	0
3	Steel	3660 kg	0	0	0	0	3660	0
4	Brick work (15.46 cum mortar)	61.857 cu.m	71	15.46	0	33928	0	0
5	Plaster (11.26 cum mortar)	625.575 sq.m	52	11.26	0	0	0	0
6	Stone Dust	95.661 cu.m	0	0	0	0	0	95.661
	Tiles Flooring	150.93 sqm	65	6.5	0	0	0	95.661
	<b>Total</b>		<b>581</b>	<b>57.387</b>	<b>48.345</b>	<b>33928</b>	<b>3660</b>	<b>191.322</b>



**PLAN OF RO OFFICE**

SIZE - 41'3" X 35'9" = 1475.0 SQFT. + PORCH.

NOTE- WALL THICKNESS 9" & 4.5"

**SPECIFICATION OF DOOR & WINDOW**

D1	3'6" X 7'0"	= 5NOS.
D2	2'9" X 7'0"	= 6NOS.
W1	5'0" X 4'6"	= 4NOS.
W2	4'0" X 4'6"	= 2NOS.
V	2'0" X 1'6"	= 9NOS.

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118

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