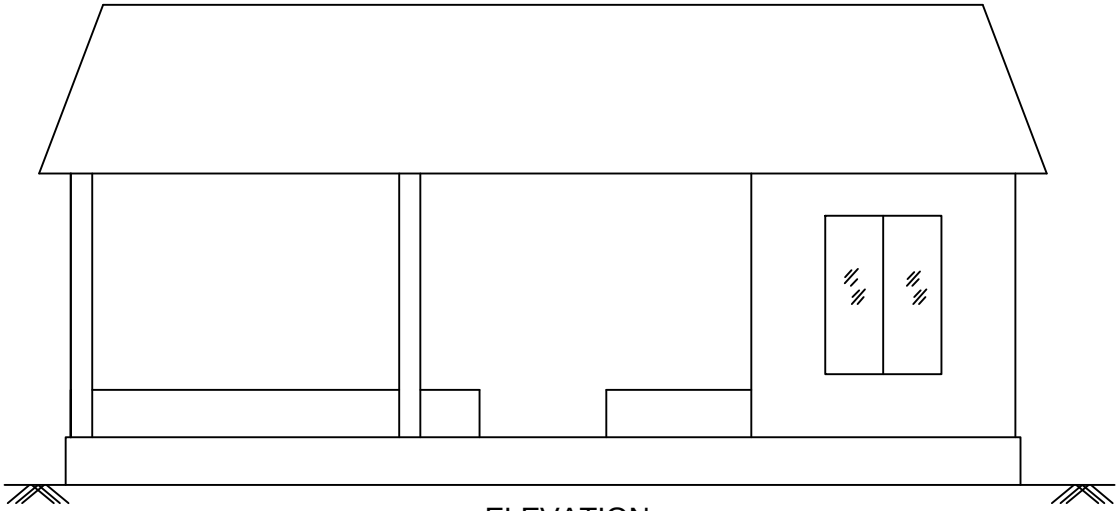
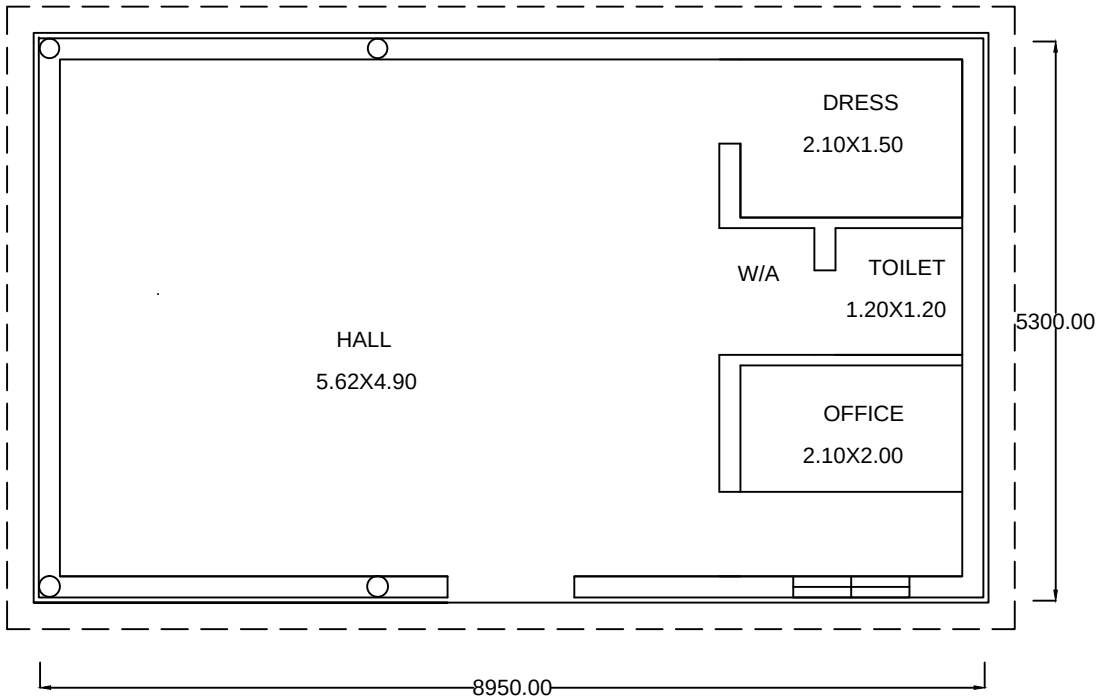
# MATERIAL RECOVERY FACILITY



ELEVATION




PLAN

## CONSTRUCTION OF A PITCHED ROOF BUILDING FOR MATERIAL RECOVERY FACILITY

***Plinth Area 47.43m$^2$ or 510.33 Square Feet***

1) 2.6.1. Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas(exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavatedearth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Alround Wall | 1 | x | 27.70 | x | 0.40 | x | 0.50 | = 5.54 |
| Longitudinal (M) Wall | 1 | x | 4.70 | x | 0.40 | x | 0.50 | = 0.94 |
| Cross Wall | 2 | x | 1.90 | x | 0.40 | x | 0.50 | = 0.76 |
| | | | | | | | | 7.24 |
| | | | | | | | | ==== |

**Say 7.25m$^3$ Rs. 198.45/m$^3$ = Rs. 1439 /-**

2) OD16 Soid Concrete block 40 x 0.20 x 20 Cms size for fou dation, basement and super structure

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Foundation :-** | | | | | | | | |
| Alround | 1 | x | 27.70 | x | 0.40 | x | 0.50 | = 5.54 |
| Longitudinal | 1 | x | 4.70 | x | 0.40 | x | 0.50 | = 1.54 |
| Cross | 2 | x | 1.90 | x | 0.40 | x | 0.50 | = 0.76 |
| **Basement** | | | | | | | | |
| Alround | 1 | x | 27.70 | x | 0.30 | x | 0.45 | = 3.73 |
| Longitudinal | 1 | x | 4.80 | x | 0.30 | x | 0.45 | = 0.65 |
| Cross | 2 | x | 2.00 | x | 0.30 | x | 0.45 | = 0.54 |
| **Super Structure** | | | | | | | | |
| Alround | 1 | x | 27.70 | x | 0.20 | x | 2.50 | = 13.85 |
| Longitudinal | 1 | x | 4.90 | x | 0.20 | x | 2.50 | = 2.45 |
| Cross | 2 | x | 2.10 | x | 0.10 | x | 2.50 | = 1.05 |
| | | | | | | | | 30.11 |
| **Deduction** | | | | | | | | |
| GI Post fixing block | 2 | x | 2.00 | x | 0.30 | x | 0.45 | = 0.54 |
| Hall outer Wall | 2 | x | 6.25 | x | 0.20 | x | 2.05 | = 5.13 |
| Hall outer Wall | 2 | x | 5.30 | x | 0.20 | x | 2.05 | = 4.35 |
| Door | 3 | x | 0.80 | x | 0.20 | x | 2.10 | = 1.01 |
| Entrance (Hall) | 1 | x | 1.20 | x | 0.20 | x | 0.45 | = 0.10 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Window | 1 | x | 1.10 | x | 0.20 | x | 1.50 | = | 0.33 |
| | | Total deduction | | | | | | | | | 11.46 |
| | | Less deduction | | | | | | | | | 18.65 |
| | | | | | | | LS for steps | | | | 0.35 |
| | | | | | | | **Total** | | | | **19.00** |
| | | **Say 19.00m$^3$** | | | **Rs. 4969.61/m$^3$** | | | | | | **= Rs. 94423/-** |
| 3) | 5.9.1. | Centering and shuttering including strutting, propping etc. and removal of form for :Foundations, footings, bases of columns, etc. for mass concrete | | | | | | | | | |
| | | | 4 | x | 1.2 | x | 0.45 | x | 2.16 | | |
| | | **Say 2.50 m$^2$** | | | **Rs. 250.55/m$^2$** | | | | | | **= Rs. 626/-** |
| 4) | 4.1.3. | 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) | | | | | | | | | |
| | | GI Posts foundation block | 2x2 | x | 0.30 | x | 0.30 | x | 0.45 | = | 0.162 |
| | | **Say 0.20 m$^3$** | | | **6971.67 /m$^3$** | | | | | | = **Rs. 1394/-** |
| 5) | 10.16.1 10.1 | Steel work in built up tubular (round, square or rectanglar hollow tubes etc. ) trusses etc., includingcutting, hoisting, fixing in position and applying a priming coat of approved steel primer, includingwelding and bolted with special shaped washers etc. complete. | | | | | | | | | |
| | | a) 65$^{mm}$ dia GI Pipe | (2 x2 x | | 2.95 = | | 11.80m | x | 6.420kg/m=75.75kg | | |
| | | b) Rectangular Hollow section 80x40x2.60$^{mm}$ | | | | | | | | | |
| | | Wall Plate | 2 | x | 9.40 = | | 18.80 | | | | |
| | | Wall Plate | 2 | x | 5.30 = | | 10.60 | | | | |
| | | | | | | | 29.40 m | x | 4.55 kg = 133.77kg | | |
| | | c) Rectangular Hollow section s 60 x 40x2.60$^{mm}$ | | | | | | | | | |
| | | Common rafter | 2 | x | 5x3.38 = | | 33.80mx3.73kg/m | | =126.07kg | | |
| | | d) Rectangular Hollow section 50x25x2.60$^{mm}$ | | | | | | | | | |
| | | tie beam | 5 | x | 2.10 = | | `10.50m x | | 2.71kg/m= 28.45kg | | |

e) Square Hollow section 2.5x2.5x2.60$^{mm}$

| | | | |
|---|---|---|---|
| Purlin | 2 x 3x9.85 =59.10mx | 1.69kg/m =99.87kg | |
| | **Total** | =463.91kg | |
| **Say 475 kg** | | **Rs. 217.5/kg =** | **Rs.103351/-** |

6) 12.50 Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation asapproved by Engineer-in-charge) 0.50 mm (+ 0.05 %), total coated thickness with zinc coating 120grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of thesheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 micronsminimum to avoid scratches during transportation and should be supplied in single length upto 12metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping

| | | | | |
|---|---|---|---|---|
| Roof | 2 x | 3.45 x | 9.90 = | 68.31 |
| Rudge | 1 x | 0.60 x | 9.90 = | 5.94 |
| | | | | 74.25m$^2$ |

**Say 74.50 m$^2$** 793.29/m$^2$ = **Rs. 59100/-**

7) 4.1.8.

1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)

| | | | | | |
|---|---|---|---|---|---|
| Hall | 1 x | 6.00 x | 4.65 x | 0.075 = | 2.09 |
| Office | 1 x | 1.85 x | 1.75 x | 0.075 = | 2.24 |
| Toilet | 1 x | 0.95 x | 0.95 x | 0.075 = | 0.07 |
| Dressing Room | 1 x | 1.85 x | 1.25 x | 0.075 = | 0.17 |
| | | | | | 2.57 |

**Say 2.60 m$^2$** **5485.65/m$^3$** = **Rs. 14263/-**

8) 13.1.1. 12 mm cement plaster of mix:
1:4 (1 cement : 4 fine sand)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Outer Basement | 1 | x | 28.50 | x | 0.45 | = | 12.83 | |
| Outer Hall Length Wise | 2 | x | 6.45 | x | 0.45 | = | 5.80 | |
| Outer Hall Width Wise | 1 | x | 5.30 | x | 0.45 | = | 2.38 | |
| Inner Hall Length Wise | 2 | x | 6.25 | x | 0.45 | = | 5.63 | |
| Inner Hall Width Wise | 1 | x | 4.90 | x | 0.45 | = | 2.20 | |
| Top | 2 | x | 6.45 | x | 0.20 | = | 2.58 | |
| Top Hall | 1 | x | 4.90 | x | 0.20 | = | 0.98 | |
| Outer (Right) | 1 | x | 9.90 | x | 2.50 | = | 24.75 | |
| Inner office | 1 | x | 8.20 | x | 2.50 | = | 20.50 | |
| Washing area | 1 | x | 3.20 | x | 2.50 | = | 8.00 | |
| Toilet | 1 | x | 4.80 | x | 2.50 | = | 12.00 | |
| Dress | 1 | x | 7.20 | x | 2.50 | = | 18.00 | |
| | | | | | | | 115.65 | |
| **Deduction** | | | | | | | | |
| Wall ties | 1 | x | 4.80 | x | 1.50 | = | 7.20 | |
| Door | 3 | x | 0.75 | x | 2.10 | = | 4.72 | |
| window | 1 | x | 1.10 | x | 1.50 | = | 1.65 | |
| Entrance | 1 | x | 1.20 | x | 0.45 | = | 0.54 | |
| Total Deduction | | | | | | | 14.11 | |
| Less Deduction | | | | | | | 101.5 | |

**Say 105m$^2$** 259.22/m$^2$ = **Rs.27218/-**

9)

Supplying fixingAnjili wood framed work for doors and windows frames including all cost of material and labour charges etc. complete.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Door size 0.8 x 2.10 (3 Nos) | | | | | | | |
| Vertical Frame | 3x2 | x | 0.10 | x | 0.075 x | 2.10 | = 0.094 |
| Horizontal Frame | 3x2 | x | 0.10 | x | 0.075 x | 0.80 | = 0.033 |
| Window Size 1.10x1.50 (1No) | | | | | | | |
| Vertical Frame | 1x3 | x | 0.10 | x | 0.075 x | 1.50 | = 0.033 |
| Horizontal Frame | 1x2 | x | 0.10 | x | 0.075 x | 1.10 | = 0.016 |
| | | | | | | | 0.176 |

**Say 20m$^3$** Rs. 82599.52/m$^3$ = **Rs.16520/-**

10) 11.37 Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by themanufacturer), of 1st quality conforming to IS : 15622, of approved make, in colours such as White,Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand),including pointing the joints with white cement and matching pigment etc., complete.

| | | | | |
|---|---|---|---|---|
| Office | 1 x | 2.30 x | 2.20 = | 5.06 |
| Toilet | 1 x | 1.20 x | 1.20 = | 1.44 |
| Dress | 1 x | 2.30 x | 1.20 = | 3.91 |
| Washing area | 1 x | 1.00 x | 1.30 = | 1.3 |
| | | | | 11.71 |

**Say 1175m$^2$** **Rs. 1001.69/m$^2$** **= Rs.11770/-**

11) 17.1.1. Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm Sand Cast Iron P orS trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, manually controlled device(handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting andmaking good the walls and floors wherever required:White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests

**Say 1 No.** **Rs. 4327.15/E** **= Rs. 4327/-**

12) 11.36 Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to bespecified by the manufacturer), of approved make, in all colours, shades except burgundy, bottlegreen, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.

| | | | | | |
|---|---|---|---|---|---|
| Toilet | 1 x | 4.80 x | 1.50 = | 7.20 | |
| **Say 720m$^2$** | | **Rs. 1067.06/m$^2$** | | | **= Rs. 7683/-** |

13) White Vitreous China Wash basin size 630x450 mm with a single 15 mm C.P. brass pillar tap

**Say 1 No.** **Rs.2563.98/E** **= Rs. 2564/-**

14) 13.39.1 Colour washing such as green, blue or buff to give an even shade:New work (two or more coats) with a base coat of white washing with lime

| | | | | |
|---|---|---|---|---|
| As per item No. 8 | | | 101.5 | |
| **Say 105m2.** | | Rs.28.12/m$^2$ | | = **Rs. 2953/-** |

15) Water supply and sanitary fitting L.S = **Rs. 5000/-**

16) OD 27/46 supplying and fioxing fully pannelled angili wood shutter for door and window etc. complete.

| | | | | |
|---|---|---|---|---|
| Door | 3 x | 0.67 x | 1.98 = | 3.979 |
| Window | 1x2 x | 0.33 x | 1.35 = | 0.891 |

| | | | |
|---|---|---|---|
| | **Say 5.00m$^{2.}$** | **Rs.1860.87/m$^2$** | = **Rs. 9304/-** |
| 17 | Supplying and laying M.S. angle and M.S rods for providing partition in the Material Recovery Facilities building (calculatiion should seperately attached) | | |
| | Horizontal | 2 x 4.00 x 1.00 x 1.20 = 9.60 | |
| | Vertical | 5 x 1.00 x 1.20 = 9.60 | |
| | | 15.60m2 or 195.78kg | |
| | **Say 200kg** | **Rs.107.05/kg** | = **Rs.21410/-** |
| 18 | Providing and instaling double cavity baling machine and as per standard specification. | | |
| | | LS | **Rs.350000/-** |
| | Total | | **Rs. 733345/-** |
| | Unforeseen | | **Rs. 6655/-** |
| | **Total** | = | **Rs. 740000/-** |
| | | | ======= |