

[TYPE-I]

Revised Estimate For Construction Of Iay House With Shs And Ferro-Cement Panel ~~For Construction of Shs and Ferro-Cement Panel~~
 [WITH GCI SHEET ROOFING]

Name & Designation of Implementing Officer:
 Name & Designation of 1st Supervising Officer:
 Name & Designation of 2nd Supervising Officer:
 Name & Designation of Deptt. Representative(s):

Division: Agartala Division
 Block: Belbari
 Gram Panchayat: Paschim Jiraniakhala
 Habitation: Joy Krishna Para

Khumulung, west tripura

Estimate No: **ES12014-15RDCPE0013 dt. 05/11/2014**

Activity Number	Description	Activity Output to be measured(with unit)	Requirement of Material and Labour for Activity	4.0521 Number (Nos.)
1	Earth work in excavation in foundation trenches not exceeding 1.5 mtr in width or 10 sqm on plan or drains not exceeding 1.5 mtr in width or 10 sqm on plan including dressing of sides and ramming of bottoms lift up to 1.5 m including getting out the excavated soil and disposal of surplus excavated soil as directed,with in a lead of 50 mtrs for hard soil	Add Foundation $1.00 * 8.00 * (0.75 * 0.75 * 0.675) = 3.0375$ Add Trench for $1.00 * 4.00 * (1.075 * 0.5 * 0.375) = 0.8063$ Wall footing $1.00 * 4.00 * (2.05 * 0.5 * 0.375) = 1.5375$ Add Trench for $1.00 * 4.00 * (2.05 * 0.5 * 0.375) = 1.5375$ wall footing $1.00 * (+8(0.75 * 0.75 * 0.675) + 4(1.075 * 0.5 * 0.375) + 4(2.05 * 0.5 * 0.375)) = 5.3813$ Cubic metre(Cum)	Unskilled	0.9915 Number (Nos.)
2	Filling available excavated earth. (excluding rocks) in trenches,plinth,sides of foundations etc in layers not exceeding 20 cm in depth ,consolidating each deposited layer by ramming and watering lead upto 50 m and lift upto 1.5 m	Add Foundation $0.67 * 8.00 * (0.75 * 0.75 * 0.675) = 2.0351$ Add Trench for $0.67 * 4.00 * (1.075 * 0.5 * 0.375) = 0.5402$ Wall footing $0.67 * 4.00 * (2.05 * 0.5 * 0.375) = 1.0301$ Add Trench for $0.67 * 4.00 * (2.05 * 0.5 * 0.375) = 1.0301$ wall footing $0.67 * (+8(0.75 * 0.75 * 0.675) + 4(1.075 * 0.5 * 0.375) + 4(2.05 * 0.5 * 0.375)) = 3.6055$ Cubic metre(Cum)	Sand(Local) Unskilled	2.4013 Cubic metre(Cum) 0.5723 Number (Nos.)
3	Filling in plinth with local sand under floors including watering,ramming,consolidating and dressing complete	Add for foundation $1.00 * 8.00 * (0.75 * 0.75 * 0.05) = 0.2250$	Unskilled	

<p>4 Providing and laying in foundations and plinth cement concrete 1:4:8 (1 cement:4 river sand :8 jhama brick aggregate 40 mm nominal size) excluding the cost of centering and shuttering including breaking labour</p>	<p>Add for foundation $1.00 * 4.00 * (2.65 * 0.5 * 0.05) = 0.2650$ Add for foundation $1.00 * 4.00 * (1.675 * 0.5 * 0.05) = 0.1675$ Add under floors $1.00 * 1.00 * (3.50 * 5.45 * 0.075) = 1.4306$ $1.00 * (+8(0.75 * 0.75 * 0.05) + 4(2.65 * 0.5 * 0.05) + 4(1.675 * 0.5 * 0.05) + 1(3.50 * 5.45 * 0.075)) = 2.0881$ Cubic metre(Cum)</p>	<p>Cement{Bag} Brick aggregate Sand (coarse){Cubic metre(Cum)} Highly skilled Skilled Semi Skilled Unskilled</p> <p>8.2175 Bag 645.3120 Number (Nos.) 1.3063 Cubic metre(Cum) 0.1402 Number (Nos.) 0.1409 Number (Nos.) 12.5920 Number (Nos.) 4.4229 Number (Nos.)</p>
<p>5 Reinforced cement concrete work 1:1:2(1 cement :1 river sand :2 brick aggregate 20 mm and nominal gauge) including finishing and plastering the exposed surface with cement mortar 1:3(1 cement :3 river sand)of thickness not exceeding 6 mm to give a smooth and even surface but excluding the cost of shuttering and lintels,beams,girders,bressumers and cantilevers up to floor two level including breaking of Bricks.</p>	<p>Add for foundation $1.00 * 8.00 * (.75 * .75 * 0.075) = 0.3375$ Add for foundation $1.00 * 4.00 * (2.65 * .50 * 0.075) = 0.3975$ Add for foundation $1.00 * 4.00 * (1.675 * .50 * 0.075) = 0.2513$ Add under floors $1.00 * 1.00 * (3.50 * 5.45 * 0.075) = 1.4306$ $1.00 * (8(.75 * .75 * 0.075) + 4(2.65 * .50 * 0.075) + 4(1.675 * .50 * 0.075) + 1(3.50 * 5.45 * 0.075)) = 2.4169$ Cubic metre(Cum)</p>	<p>Cement{Bag} Brick aggregate(20-12.5mm) Sand (coarse){Cubic metre(Cum)} Highly skilled Skilled Semi Skilled Unskilled</p> <p>15.1622 Bag 316.9140 Number (Nos.) 0.6074 Cubic metre(Cum) 0.1293 Number (Nos.) 0.2225 Number (Nos.) 7.4568 Number (Nos.) 3.6290 Number (Nos.)</p>
	<p>Add Column $1.00 * 8.00 * (.60 * .60 * .15) = 0.4320$ footing $1.00 * 8.00 * (.15 * .15 * .45) = 0.0810$ Add Column $1.00 * 8.00 * (.15 * .15 * .45) = 0.0810$ footing $1.00 * 8.00 * (.15 * .15 * .45) = 0.0810$ Add Column $1.00 * 8.00 * (.15 * .15 * .45) = 0.0810$ footing $1.00 * 8.00 * (.15 * .15 * .45) = 0.0810$ Add Plinth Beam $1.00 * 4.00 * (1.675 * .15 * .25) = 0.2513$ Add Plinth Beam $1.00 * 4.00 * (1.675 * .15 * .25) = 0.2513$ $1.00 * (8(.60 * .60 * .15) + 8(.15 * .15 * .45) + 8(.15 * .15 * .45) + 4(2.65 * .15 * .25) + 4(1.675 * .15 * .25)) = 1.2428$ Cubic metre(Cum)</p>	

6 Hiring charges for centering, shuttering including propping(Bamboo/Steel/Balile)complete as per direction of Engineer in Charge(nails,dhari,polythene,blinding wire will be supplied by the department

Add Column	1.00*8.00*(4*0.60 * .15)=2.8800
Footling	1.00*8.00*(4*0.15 * .90)=4.3200
Add Column	1.00*2.00*(2*(5.60+3.65) * .25)=9.2500
Footling	1.00*1.00*(1.20 * .60)=0.7200
Add Plinth Beam	1.00*1.00*(.90 * .95)=0.8550
Add Precast	1.00*1.00*(.90 * .80)=0.7200
Ferro-Cement panel(WP-1)	1.00*1.00*(0.9 * 0.9)=0.8100
Add Precast	1.00*4.00*(.70 * .95)=2.6600
Ferro-Cement panel(WP-2)	1.00*4.00*(.70 * .80)=2.2400
Add Precast	1.00*4.00*(0.7 * 0.9)=2.5200
Ferro-Cement panel(WP-3)	1.00*3.00*(.90 * .60)=1.6200
Add Precast	1.00*3.00*(0.9 * 0.9)=2.4300
Ferro-Cement panel(WP-4)	1.00*1.00*(1.20 * .95)=1.1400
Add Precast	1.00*2.00*(1.20 * .80)=1.9200
Ferro-Cement panel(WP-5)	1.00*2.00*(1.2 * 0.9)=2.1600
Add Precast	1.00*1.00*(1.20 * .95)=1.1400
Ferro-Cement panel(WP-6)	1.00*1.00*(1.20 * .80)=0.9600
Add Precast	
Ferro-Cement panel(WP-7)	
Add Precast	
Ferro-Cement panel(WP-8)	
Add Precast	
Ferro-Cement panel(WP-9)	
Add Precast	
Ferro-Cement panel(WP-10)	
Add Precast	
Ferro-Cement panel(WP-11)	
Add Precast	
Ferro-Cement panel(WP-12)	
Add Precast	
Ferro-Cement panel(WP-13)	
Add Precast	
Ferro-Cement panel(WP-14)	

Polythene 6.3523 Kilogram(KG)
 Nails 6.7188 Kilogram(KG)
 Centaring Shuttering ~~51.0800~~ Square
 30 sqm metre(Sqm)

I only 50% cost of centering / shuttering (only 50% as precast for panel work is done)

<p>Add Precast Ferro-Cement panel(WP-15) Add Precast Ferro-Cement panel(WP-16) Add Precast Ferro-Cement panel(WP-17) Add Precast Ferro-Cement panel(WP-18) Add Precast Ferro-Cement panel(WP-19) Add Precast Ferro-Cement panel(WP-20) Add Precast Ferro-Cement panel(WP-21) Add Precast Ferro-Cement panel(WP-22) Add Precast Ferro-Cement Chajja for Door Add Precast Ferro-Cement Chajja for Windows</p>	<p>1.00*1.00*(1.2 * 0.9)=1.0800 1.00*1.00*(1.20 * .95)=1.1400 1.00*4.00*(1.2 * 1)=4.8000 1.00*4.00*(1.2 * 1)=4.8000 1.00*4.00*(1.2 * 0.65)=3.1200 1.00*4.00*(0.625 * 1)=2.5000 1.00*4.00*(0.625 * 1)=2.5000 1.00*4.00*(0.625 * 0.65)=1.6250 1.00*1.00*(1.20 * 0.30)=0.3600 1.00*3.00*(0.90 * 0.30)=0.8100</p>	<p>M.S.Rod(6mm dia) Black Wire Highly skilled Unskilled</p>
<p>7 Cold twisted steel reinforcement for R.C.C work including bending,blinding and placing in position complete(6 mm dia)</p>	<p>1.00*(8(4*0.60 * .15)+8(4*0.15 * .90)+2(2*(5.60+3.65) * .25)+1(1.20 * .60)+1(.90 * .95)+1(.90 * .80)+1(0.9 * 0.9) +4(.70 * .95)+4(.70 * .80)+4(0.7 * 0.9)+3(.90 * .60)+3(0.9 * 0.9)+1(1.20 * .95)+2(1.20 * .80)+2(1.2 * 0.9)+1(1.20 * .95)+1(1.20 * .80)+1(1.2 * 0.9)+1(1.20 * .95)+4(1.2 * 1) +4(1.2 * 1)+4(1.2 * 0.65)+4(0.625 * 1)+4(0.625 * 1) +4(0.625 * 0.65)+1(1.20 * 0.30)+3(0.90 * 0.30))=81.8880 Square metre(Sqm)</p> <p>Add For Column 1.00*8.00*(8*.60*0.22)=8.4480 Ring 1.00*1.00*(125*.80*0.22)=22.0000 Add Ring for Plinth Beam 1.00*(8*(8*.60*0.22)+1(125*.80*0.22))=30.4480 Kilogram(KG) 6 dia rod</p>	<p>31.9704 Kilogram(KG) 0.3045 Kilogram(KG) 0.4156 Number (Nos.) 0.4750 Number (Nos.)</p>

<p>8 Cold twisted steel reinforcement for R.C.C work including bending, binding and placing in position complete (10 mm dia)</p>	<p>Add Column 1.00*8.00*(2*5*0.60*0.62)=29.7600 footing 1.00*(8*(2*5*0.60*0.62))=29.7600 Kilogram(KG) 10 dia rod</p>	<p>TMT bar (10mm) Black Wire Highly skilled Unskilled</p> <p>32.7360 Kilogram(KG) 0.2976 Kilogram(KG) 0.4062 Number (Nos.) 0.4643 Number (Nos.)</p>
<p>9 Cold twisted steel reinforcement for R.C.C work including bending, binding and placing in position complete (12 mm dia)</p>	<p>Add For column 1.00*8.00*(4*1.30*0.89)=37.0240 Add For plinth 1.00*1.00*(4*18.50*0.89)=65.8600 Beam 1.00*(8*(4*1.30*0.89)+1*(4*18.50*0.89))=102.8840 Kilogram(KG) 12 dia rod</p>	<p>TMT bar (12mm) Black Wire Highly skilled Unskilled</p> <p>113.1720 Kilogram(KG) 1.0288 Kilogram(KG) 1.4044 Number (Nos.) 1.6050 Number (Nos.)</p>
<p>10 First class brick work in foundations and plinth in cement mortar 1:6(1 cement:6 river sand)</p>	<p>Add For foundation 1.00*4.00*(2.65 * 0.381 * 0.075)=0.3029 Add For foundation 1.00*4.00*(2.65 * 0.25 * 0.075)=0.1988 Add For foundation 1.00*4.00*(1.675 * 0.381 * 0.075)=0.1915 Add For foundation 1.00*4.00*(1.675 * 0.25 * 0.075)=0.1256 Add For foundation 1.00*(4*(2.65 * 0.381 * 0.075)+4*(2.65 * 0.25 * 0.075)+4*(1.675 * 0.381 * 0.075)+4*(1.675 * 0.25 * 0.075))=0.8188 Cubic metre(Cum)</p>	<p>Cement{Bag} 1st class bricks{Number (Nos.)} Sand (coarse){Cubic metre(Cum)} Highly skilled Unskilled</p> <p>0.9007 Bag 319.3320 Number (Nos.) 0.2119 Cubic metre(Cum) 0.3152 Number (Nos.) 0.3152 Number (Nos.) 1.2994 Number (Nos.)</p>
<p>11 Half brick masonry (1st class) in cement mortar 1:4 (1 cement:4 river sand) in foundation and plinth</p>	<p>Add for foundation 1.00*4.00*(2.65 * 0.35)=3.7100 Add for foundation 1.00*4.00*(1.675 * 0.35)=2.3450</p>	<p>Cement{Bag} 1st class bricks{Number (Nos.)} Sand (coarse){Cubic metre(Cum)} Highly skilled Unskilled</p> <p>1.0899 Bag 314.8600 Number (Nos.) 0.2298 Cubic metre(Cum) 1.3321 Number (Nos.) 1.7753 Number (Nos.)</p>

1212 mm cement plaster 1:4 (1 cement:4 river sand)	$1.00 * (+4(2.65 * 0.35) + 4(1.675 * 0.35)) = 6.0550$ Square metre(Sqm)	Cement{Bag} Sand (coarse){Cubic metre(Cum)} Skilled Unskilled	0.9455 Bag 0.1483 Cubic metre(Cum) 1.1002 Number (Nos.) 1.8909 Number (Nos.)
1315 mm cement plaster 1:4(1 cement:4 river sand)on the rough side of brick wall	Add at plinth level $1.00 * (1(19.1 * 0.45)) = 8.5950$ Square metre(Sqm)	Cement{Bag} Sand (coarse){Cubic metre(Cum)} Skilled Unskilled	5.8019 Bag 0.9238 Cubic metre(Cum) 6.9623 Number (Nos.) 11.6038 Number (Nos.)
Add Precast Ferro-Cement panel(WP-1)	$1.00 * 1.00 * (1.20 * .60) = 0.7200$		
Add Precast Ferro-Cement panel(WP-2)	$1.00 * 1.00 * (.90 * .80) = 0.7200$		
Add Precast Ferro-Cement panel(WP-3)	$1.00 * 1.00 * (0.9 * 0.9) = 0.8100$		
Add Precast Ferro-Cement panel(WP-4)	$1.00 * 4.00 * (.70 * .95) = 2.6600$		
Add Precast Ferro-Cement panel(WP-5)	$1.00 * 4.00 * (.70 * .80) = 2.2400$		
Add Precast Ferro-Cement panel(WP-6)	$1.00 * 4.00 * (0.7 * 0.9) = 2.5200$		
Add Precast Ferro-Cement panel(WP-7)	$1.00 * 3.00 * (.90 * .60) = 1.6200$		
Add Precast Ferro-Cement panel(WP-8)	$1.00 * 3.00 * (0.9 * 0.9) = 2.4300$		
Add Precast Ferro-Cement panel(WP-9)	$1.00 * 1.00 * (1.20 * .95) = 1.1400$		
Add Precast Ferro-Cement panel(WP-10)	$1.00 * 2.00 * (1.20 * .80) = 1.9200$		
Add Precast Ferro-Cement panel(WP-11)	$1.00 * 2.00 * (1.2 * 0.9) = 2.1600$		
Add Precast Ferro-Cement panel(WP-12)			

	Add Precast Ferro-Cement panel(WP-13)	1.00*1.00*(1.20 * .95)=1.1400	
	Add Precast Ferro-Cement panel(WP-14)	1.00*1.00*(1.20 * .80)=0.9600	
	Add Precast Ferro-Cement panel(WP-15)	1.00*1.00*(1.2 * 0.9)=1.0800	
	Add Precast Ferro-Cement panel(WP-16)	1.00*1.00*(1.20 * .95)=1.1400	
	Add Precast Ferro-Cement panel(WP-17)	1.00*4.00*(1.2 * 1)=4.8000	
	Add Precast Ferro-Cement panel(WP-18)	1.00*4.00*(1.2 * 1)=4.8000	
	Add Precast Ferro-Cement panel(WP-19)	1.00*4.00*(1.2 * 0.65)=3.1200	
	Add Precast Ferro-Cement panel(WP-20)	1.00*4.00*(0.625 * 1)=2.5000	
	Add Precast Ferro-Cement panel(WP-21)	1.00*4.00*(0.625 * 0.65)=1.6250	
	Add Precast Ferro-Cement panel(WP-22)	1.00*1.00*(1.20 * 0.30)=0.3600	
	Chajja for Door Ferro-Cement	1.00*3.00*(0.90 * 0.30)=0.8100	
	Chajja for Windows	1.00*(1(1.20 * .60)+1(.90 * .95)+1(.90 * .80)+1(0.9 * 0.9)+4(.70 * .95)+4(.70 * .80)+4(0.7 * 0.9)+3(.90 * .60)+3(0.9 * 0.9)+1(1.20 * .95)+2(1.20 * .80)+2(1.2 * 0.9)+1(1.20 * .95)+1(1.20 * .80)+1(1.2 * 0.9)+1(1.20 * .95)+4(1.2 * 1)+4(1.2 * 1)+4(1.2 * 0.65)+4(0.625 * 1)+4(0.625 * 1)+4(0.625 * 0.65)+1(1.20 * 0.30)+3(0.90 * 0.30))=44.6300	
	Square meter(Sqm)		
14 Neat cement punning	Add at plinth level	1.00*1.00*((2*5.75+2*3.80) * .45)=8.5950	
	1.00*(1((2*5.75+2*3.80) * .45))=8.5950 Square metre(Sqm)		
	Cement{Bag} Skilled Unskilled	0.3782 Bag Number (Nos.) 0.3696 Bag Number (Nos.) 0.4727 Bag Number (Nos.)	

<p>15 15mm thick Pointing with CM 1:1:1 Cement:1 River Sand) for all the Outer joints of Ferro-Cement as direction of Engineer Incharge</p>	<p>Add Pointing on Ferro-Cement Joints $1.00 * (1.164.12 * .010) = 1.6412$ Square metre(Sqm)</p>	<p>Cement{Bag} Sand (coarse){Cubic metre(Cum)} Skilled Unskilled</p> <p>0.5186 Bag 0.0197 Cubic metre(Cum) 0.2560 Number (Nos.) 0.4267 Number (Nos.)</p>
<p>16 Cement concrete to flooring 1:2:4(1 cement :2 river sand :4 stone aggregate 20 mm nominal size) finished with a floating coat of neat cement 50 mm thick</p>	<p>Add Flooring $1.00 * 1.00 * (5.60 * 3.65) = 20.4400$ $1.00 * (1.5.60 * 3.65) = 20.4400$ Square metre(Sqm)</p>	<p>Cement{Bag} Stone aggregate (20mm) {Cubic metre(Cum)} Sand (coarse){Cubic metre(Cum)} Skilled Semi Skilled Unskilled</p> <p>7.3584 Bag 0.9198 Cubic metre(Cum) 0.5171 Cubic metre(Cum) 3.2295 Number (Nos.) 6.1320 Number (Nos.) 6.6634 Number (Nos.)</p>
<p>17 Fabrication of steel tubular truss(Members made of 25mm NB pipe)</p>	<p>Add Purline $1.00 * 37.40 * (1) = 37.4000$ $1.00 * (37.40(1)) = 37.4000$ Metre (M)</p>	<p>B I Pipe(25mm NB) Fabrication weight</p> <p>38.5220 Metre (M) 76.2960 Kilogram(KG)</p>
<p>18 Fabrication and supply of steel door and window In/c priming coat complete as per design)</p>	<p>Add For Door $1.00 * 1.00 * (2.05 * 1.20) = 2.4600$ Add For Window $1.00 * 3.00 * (1.20 * .90) = 3.2400$ $1.00 * (1(2.05 * 1.20) + 3(1.20 * .90)) = 5.7000$ Square metre(Sqm)</p>	<p>Steel door{Kilogram(KG)}</p> <p>250.8000 Kilogram(KG)</p>
<p>19 Providing and fitting/fixing of steel SHS (Square Hollow Section) of 50x50x2.90mm in position to form steel structure In/c cutting/butt welding as per design and direction of Engineer in charge</p>	<p>Add Post=20x2.65 $1.00 * 53.00 * (1) = 53.0000$ Add Horizontal tie=3x5.60 $1.00 * 16.80 * (1) = 16.8000$ Add Horizontal tie=2x.90 $1.00 * 1.80 * (1) = 1.8000$ Add Horizontal tie=2x.40 $1.00 * 8.80 * (1) = 8.8000$ Add Horizontal tie=1x1.20 $1.00 * 1.20 * (1) = 1.2000$</p>	<p>SHS 50x50x2.90mm</p> <p>746.7460 Kilogram(KG)</p>

	<p>Add Horizontal tie=1x0.90 1.00*0.90*(1)=0.9000</p> <p>Add Horizontal tie=1x5.60 1.00*5.60*(1)=5.6000</p> <p>Add Horizontal tie=2x3x3.65 1.00*21.90*(1)=21.9000</p> <p>Add Rafter=4x2x1.93 75 1.00*15.50*(1)=15.5000</p> <p>Add Corner Rafter=4x1x2.03 1.00*8.12*(1)=8.1200</p> <p>Add Purlin=3x3.20 1.00*9.60*(1)=9.6000</p> <p>Add Purlin=2x1.825 1.00*3.65*(1)=3.6500</p> <p>Add Purlin=2x.725 1.00*1.45*(1)=1.4500</p> <p>Add Bottom tie=2x3.65 1.00*7.30*(1)=7.3000</p> <p>Add Bottom tie=2x5.60 1.00*11.20*(1)=11.2000</p> <p>Subtract Horizontal tie=3x.90 1.00*2.70*(1)=2.7000</p> <p>1.00*(53.0(1)+16.80(1)+11.80(1)+8.80(1)+1.20(1)+0.90(1)+5.60(1)+21.90(1)+15.50(1)+8.12(1)+9.60(1)+3.65(1)+1.45(1)+7.30(1)+11.20(1)-2.70(1))=164.1200 Metre (M)</p>	
<p>20 Providing and fixing of Base plates as per direction of Engineer in charge</p>	<p>Add Base plate 1.00*20.00*(.15 * .15 * .012)=0.0054</p> <p>1.00*(20(.15 * .15 * .012))=0.0854 Cubic metre(CUM)</p>	<p>Base Plate 150x150x12mm</p> <p>42.9900 Kilogram(KG)</p>
<p>21 Providing and fixing of Anchor Bolts in proper place as per direction of Engineer in charge</p>	<p>Add Anchor Bolt 1.00*80.00*(1)=80.0000</p> <p>1.00*(+80(1))=80.0000 Each</p>	<p>Anchor bolt 12mm dia (375mmlong)</p> <p>36.0000 Kilogram(KG)</p>
<p>22 Providing and fixing by welding of M.S Insert Plates (80x80x5mm) in four corners of welded steel wire mesh in/c cutting placing in complete as per direction of Engineer in charge</p>	<p>Add Insert plate 1.00*275.00*(0.08 * 0.08 * 0.005) =0.0088</p> <p>1.00*(+275(0.08 * 0.08 * 0.005))=0.0088 Cubic metre(Cum)</p>	<p>Insert Plate 80x80x5mm</p> <p>69.0800 Kilogram(KG)</p>

2315mm thick Precast Ferro-Cement panel in Cement Mortar 1:1 (1 Cement : 1 River Sand) with sized Welled Wire Mesh of 2.65mm dia @25mm c/c bothways placed centrally in/c welded Insert plates at four corners and sized 0.265mm Chicken Wire mesh in/c cutting placing as per direction of Engineer Incharge

Add Precast Ferro-Cement panel(WP-1)	1.00*1.00*(1.20 * .60)=0.7200
Add Precast Ferro-Cement panel(WP-2)	1.00*1.00*(.90 * .95)=0.8550
Add Precast Ferro-Cement panel(WP-3)	1.00*1.00*(.90 * .80)=0.7200
Add Precast Ferro-Cement panel(WP-4)	1.00*1.00*(0.9 * 0.9)=0.8100
Add Precast Ferro-Cement panel(WP-5)	1.00*4.00*(.70 * .95)=2.6600
Add Precast Ferro-Cement panel(WP-6)	1.00*4.00*(.70 * .80)=2.2400
Add Precast Ferro-Cement panel(WP-7)	1.00*4.00*(0.7 * 0.9)=2.5200
Add Precast Ferro-Cement panel(WP-8)	1.00*3.00*(.90 * .60)=1.6200
Add Precast Ferro-Cement panel(WP-9)	1.00*3.00*(0.9 * 0.9)=2.4300
Add Precast Ferro-Cement panel(WP-10)	1.00*1.00*(1.20 * .95)=1.1400
Add Precast Ferro-Cement panel(WP-11)	1.00*2.00*(1.20 * .80)=1.9200
Add Precast Ferro-Cement panel(WP-12)	1.00*2.00*(1.2 * 0.9)=2.1600
Add Precast Ferro-Cement panel(WP-13)	1.00*1.00*(1.20 * .95)=1.1400
Add Precast Ferro-Cement panel(WP-14)	1.00*1.00*(1.20 * .80)=0.9600

Cement{Bag}	14.1031	Bag
Sand (coarse){Cubic metre(Cum)}	0.5356	Cubic metre(Cum)
Welled Steel Wire Mesh 2.65mm dia @	51.3245	Square metre(Sqm)
C/C bothways	49.0930	Square metre(Sqm)
Chicken Wire Mesh	6.6945	Number (Nos.)
0.265mm dia	6.9623	Number (Nos.)
Highly skilled	11.6038	Number (Nos.)
Skilled		
Unskilled		

<p>24 Labour wages for Cutting of Welded Wire Mesh and Chicken Wire Mesh as per required size and direction of Engineer Incharge</p>	<p>Add Precast Ferro-Cement panel(WP-15) Add Precast Ferro-Cement panel(WP-16) Add Precast Ferro-Cement panel(WP-17) Add Precast Ferro-Cement panel(WP-18) Add Precast Ferro-Cement panel(WP-19) Add Precast Ferro-Cement panel(WP-20) Add Precast Ferro-Cement panel(WP-21) Add Precast Ferro-Cement panel(WP-22) Add Precast Ferro-Cement Chajja for Door Add Precast Ferro-Cement Chajja for windows</p>	<p>1.00*1.00*(1.2 * 0.9)=1.0800 1.00*1.00*(1.20 * .95)=1.1400 1.00*4.00*(1.2 * 1)=4.8000 1.00*4.00*(1.2 * 1)=4.8000 1.00*4.00*(1.2 * 0.65)=3.1200 1.00*4.00*(0.625 * 1)=2.5000 1.00*4.00*(0.625 * 1)=2.5000 1.00*4.00*(0.625 * 0.65)=1.6250 1.00*1.00*(1.20 * 0.30)=0.3600 1.00*3.00*(0.90 * 0.30)=0.8100</p>	<p>8.4605 Number (Nos.) 9.6692 Number (Nos.)</p>
<p>Add Welded Wire Mesh 2.65mm dia @25mm C/C bothways=155 Add Chicken Wire Mesh 0.265mm dia @12.5mm C/C bothways</p>	<p>1.00*614.62*(1)=614.6200 1.00*5.20*(1)=5.2000 1.00*(614.62(1)+5.20(1))=619.8200 Kilogram(KG)</p>	<p>1.00*(1.20 * .60) + 1(.98 * .95) + 1(.90 * .80) + 1(0.9 * 0.9) + 4(.70 * .95) + 4(.70 * .80) + 4(0.7 * 0.9) + 3(.90 * .60) + 3(0.9 * 0.9) + 1(1.20 * .95) + 2(1.20 * .80) + 2(1.2 * 0.9) + 1(1.20 * .95) + 1(1.20 * .80) + 1(1.2 * 0.9) + 1(1.20 * .95) + 4(1.2 * 1) + 4(1.2 * 1) + 4(1.2 * 0.65) + 4(0.625 * 1) + 4(0.625 * 1) + 4(0.625 * 0.65) + 1(1.20 * 0.30) + 3(0.90 * 0.30)) = 44.6300 Square metre(Sqm)</p>	<p>Highly skilled Unskilled</p>

25 Fitting/ Fixing of Welded Wire Mesh before
 inside Plastering by spot welding as per
 Direction of Engineer Incharge

Add Precast Ferro-Cement panel(WP-1)	1.00*1.00*(1.20 * .60)=0.7200
Add Precast Ferro-Cement panel(WP-2)	1.00*1.00*(.90 * .95)=0.8550
Add Precast Ferro-Cement panel(WP-3)	1.00*1.00*(.90 * .80)=0.7200
Add Precast Ferro-Cement panel(WP-4)	1.00*1.00*(0.9 * 0.9)=0.8100
Add Precast Ferro-Cement panel(WP-5)	1.00*4.00*(.70 * .95)=2.6600
Add Precast Ferro-Cement panel(WP-6)	1.00*4.00*(.70 * .80)=2.2400
Add Precast Ferro-Cement panel(WP-7)	1.00*4.00*(0.7 * 0.9)=2.5200
Add Precast Ferro-Cement panel(WP-8)	1.00*3.00*(.90 * .60)=1.6200
Add Precast Ferro-Cement panel(WP-9)	1.00*3.00*(0.9 * 0.9)=2.4300
Add Precast Ferro-Cement panel(WP-10)	1.00*1.00*(1.20 * .95)=1.1400
Add Precast Ferro-Cement panel(WP-11)	1.00*2.00*(1.20 * .80)=1.9200
Add Precast Ferro-Cement panel(WP-12)	1.00*2.00*(1.2 * 0.9)=2.1600
Add Precast Ferro-Cement panel(WP-13)	1.00*1.00*(1.20 * .95)=1.1400
Add Precast Ferro-Cement panel(WP-14)	1.00*1.00*(1.20 * .80)=0.9600
Add Precast Ferro-Cement panel(WP-15)	1.00*1.00*(1.2 * 0.9)=1.0800
Add Precast Ferro-Cement panel(WP-16)	1.00*1.00*(1.20 * .95)=1.1400
Add Precast Ferro-Cement panel(WP-17)	1.00*4.00*(1.2 * 1)=4.8000

Welded Steel Wire
 Mesh 2.65mm dia @
 C/C bothways

51.3245 Square
 metre(Sqm)

	<p>Add Precast Ferro-Cement panel(WP-18) $1.00*4.00*(1.2 * 1)=4.8000$</p> <p>Add Precast Ferro-Cement panel(WP-19) $1.00*4.00*(1.2 * 0.65)=3.1200$</p> <p>Add Precast Ferro-Cement panel(WP-20) $1.00*4.00*(0.625 * 1)=2.5000$</p> <p>Add Precast Ferro-Cement panel(WP-21) $1.00*4.00*(0.625 * 1)=2.5000$</p> <p>Add Precast Ferro-Cement panel(WP-22) $1.00*4.00*(0.625 * 0.65)=1.6250$</p> <p>Ferro-Cement Chajja for Door Add Precast Ferro-Cement Chajja for Windows $1.00*3.00*(0.90 * 0.30)=0.8100$</p> <p>$1.00*(1(1.20 * .60)+1(.90 * .95)+1(.90 * .80)+1(0.9 * 0.9)+4(.70 * .95)+4(.70 * .80)+4(0.7 * 0.9)+3(.90 * .60)+3(0.9 * 0.9)+1(1.20 * .95)+2(1.2 * 0.9)+1(1.20 * .95)+1(1.20 * .80)+1(1.2 * 0.9)+1(1.20 * .95)+4(1.2 * 1)+4(1.2 * 1)+4(1.2 * 0.65)+4(0.625 * 1)+4(0.625 * 1)+4(0.625 * 0.65)+1(1.20 * 0.30)+3(0.90 * 0.30))=44.6300$</p> <p>Square metre(Sqm)</p>	
<p>26 Providing and Fitting/Fixing of 50 mm Thermocol inside walling in between Ferro-Cement panel and welded wire mesh plastering as per direction of Engineer Incharge.</p>	<p>Add Precast Ferro-Cement panel(WP-1) $1.00*1.00*(1.20 * .60)=0.7200$</p> <p>Add Precast Ferro-Cement panel(WP-2) $1.00*1.00*(.90 * .95)=0.8550$</p> <p>Add Precast Ferro-Cement panel(WP-3) $1.00*1.00*(.90 * .80)=0.7200$</p> <p>Add Precast Ferro-Cement panel(WP-4) $1.00*1.00*(0.9 * 0.9)=0.8100$</p> <p>Add Precast Ferro-Cement panel(WP-5) $1.00*4.00*(.70 * .95)=2.6600$</p> <p>Add Precast Ferro-Cement panel(WP-6) $1.00*4.00*(.70 * .80)=2.2400$</p>	<p>50mm Thick Thermocol Highly skilled Unskilled</p> <p>4618615 Square Metre(Sqm) 1.3389 Number (Nos.) 1.3389 Number (Nos.)</p>

Add Precast Ferro-Cement panel(WP-7)	1.00*4.00*(0.7 * 0.9)=2.5200
Add Precast Ferro-Cement panel(WP-8)	1.00*3.00*(.90 * .60)=1.6200
Add Precast Ferro-Cement panel(WP-9)	1.00*3.00*(0.9 * 0.9)=2.4300
Add Precast Ferro-Cement panel(WP-10)	1.00*1.00*(1.20 * .95)=1.1400
Add Precast Ferro-Cement panel(WP-11)	1.00*2.00*(1.20 * .80)=1.9200
Add Precast Ferro-Cement panel(WP-12)	1.00*2.00*(1.2 * 0.9)=2.1600
Add Precast Ferro-Cement panel(WP-13)	1.00*1.00*(1.20 * .95)=1.1400
Add Precast Ferro-Cement panel(WP-14)	1.00*1.00*(1.20 * .80)=0.9600
Add Precast Ferro-Cement panel(WP-15)	1.00*1.00*(1.2 * 0.9)=1.0800
Add Precast Ferro-Cement panel(WP-16)	1.00*1.00*(1.20 * .95)=1.1400
Add Precast Ferro-Cement panel(WP-17)	1.00*4.00*(1.2 * 1)=4.8000
Add Precast Ferro-Cement panel(WP-18)	1.00*4.00*(1.2 * 1)=4.8000
Add Precast Ferro-Cement panel(WP-19)	1.00*4.00*(1.2 * 0.65)=3.1200
Add Precast Ferro-Cement panel(WP-20)	1.00*4.00*(0.625 * 1)=2.5000
Add Precast Ferro-Cement panel(WP-21)	1.00*4.00*(0.625 * 1)=2.5000
Add Precast Ferro-Cement panel(WP-22)	1.00*4.00*(0.625 * 0.65)=1.6250
Add Precast Ferro-Cement Chajja for Door	1.00*1.00*(1.20 * 0.30)=0.3600
Add Precast Ferro-Cement Chajja for windows	1.00*3.00*(0.90 * 0.30)=0.8100

<p>27 Welding Charges of Steel Structure made of SHS 50x50x2.90, Base plate, anchor bolt, ferro-cement panel, welded wire mesh In/c fitting/ fixing of Door & windows by welding as per direction of Engineer Incharge</p>	<p>1.00*(1.20 * .60)+1(.90 * .95)+1(.90 * .80)+1(0.9 * 0.9)+4(.70 * .95)+4(.70 * .80)+4(0.7 * 0.9)+3(.90 * .60)+3(0.9 * 0.9)+1(1.20 * .95)+2(1.20 * .80)+2(1.2 * 0.9)+1(1.20 * .95)+1(1.20 * .80)+1(1.2 * 0.9)+1(1.20 * .95)+4(1.2 * 1)+4(1.2 * 1)+4(1.2 * 0.65)+4(0.625 * 1)+4(0.625 * 1)+4(0.625 * 0.65)+1(1.20 * 0.30)+3(0.90 * 0.30))=44.6300 Square metre(Sqm)</p>	<p>Fabrication weight 1044.0000 Kilogram(KG)</p>
<p>28 Providing G.C. sheet (2500x800x0.4)roofing fixed with galvanized iron J or L hooks bolts and nuts 6 mm dia with bitumen and G.I. limpet washers complete,excluding the cost of purlins,rafters and trusses for 0.4 mm thick sheet.</p>	<p>Add Welding of Steel Structure SHS50X50X2.90 mm= Add Welding of 1.00*45.00*(1)=45.0000 Base plate= Add Welding of 1.00*69.00*(1)=69.0000 Insert plate= Add Welding of 1.00*170.00*(1)=170.0000 Welded Wire Mesh= Add Welding of Door/windows 1.00*60.00*(1)=60.0000 1.00*(+700(1))+45(1)+69(1)+170(1)+60(1))=1044.0000 Kilogram(KG)</p>	<p>Limpet washer 1.7111 Packet(Pkt) Bitumen washer 1.7111 Packet(Pkt) GCI 0.1454 Metric Ton (MT) Sheet(2500x0.4mm) 7.5290 Kilogram(KG) J hook (suitable for 40mm dia Pipe) 0.5476 Number (Nos.) Highly skilled 6.6734 Number (Nos.) Skilled 7.7001 Number (Nos.) Unskilled</p>
<p>29 Providing & fixing ridge & hips of 45cm overall fixed with j hook etc.</p>	<p>Add Roofing Area 1.00*1.50*(5.85 * 3.9)=34.2225 1.00*(+1.5(5.85 * 3.9))=34.2225 Square metre(Sqm) Add Roofing Area 1.00*12.40*(1)=12.4000 1.00*(12.40(1))=12.4000 Metre (M)</p>	<p>Ridge Highly skilled 14.0120 Metre (M) Skilled 2.6040 Number (Nos.) Unskilled 2.6040 Number (Nos.)</p>

Estimate No: ESI2014-15RDCE0013 dt. 05/11/2014

<p>30 Mechanical transportation of earth from out side In/c consolidating ramming etc.</p>	<p>Add under floors 1.00*1.00*(5.45 * 3.50 * .45)=8.5838 1.00*(1(5.45 * 3.50 * .45))=8.5838 Cubic metre(Cum)</p>	<p>Mechanical transportation Unskilled 9.6714 Cubic metre(Cum) 10 2.3605 Number (Nos.)</p>
<p>31 Scaffolding for construction/repairing</p>	<p>Add 1.00*18.50*(1)=18.5000 1.00*(18.50(1))=18.5000 Metre (M)</p>	<p>Barak Bamboo Mull Bamboo Coir Rope Unskilled 10 9.2500 Each 60 61.6050 Each 6 1050 Kilogram(KG) 6.1050 Number (Nos.)</p>

Revised Estimate For Construction Of Iay House With Shs And Ferro-Cement Panel

Requirement of materials, Labour and Funds for construction of Summary of materials and Labour Usages

SI No	Description	Unit	Requirement as per ANNEXURE II	Cost of 1 unit as per RD Schedule	Cost of work as per RD Schedule	Market cost of item at location	Approved cost of work at location
	B I Pipe(25mm NB)	Metre (M)	38.52	107.00	4,121.85		
	Limpet washer	Packet(Pkt)	1.71	31.00	53.05		
	Bitumen washer	Packet(Pkt)	1.71	11.00	18.82		
	GCI Sheet(2500x0.4mm)	Metric Ton (MT)	0.15	69150.00	10,057.59		
	Cement(Bag)	Bag	54	54.48	327.00	17,658/-	
	M.S.Rod(6mm dia)	Kilogram(KG)	32	31.97	60.47	19,201/-	
	TMT bar (10mm)	Kilogram(KG)	32.74	55.78	1,826.01		
	TMT bar (12mm)	Kilogram(KG)	113.17	55.39	6,268.60		
	Brick aggregate (40mm)	Number (Nos.)	645	645.34	4,743.04	5160/-	
	Brick aggregate(20-12.5mm)(Number (Nos.))	Number (Nos.)	317	346.94	2,329.32	2556/-	
	1st class bricks(Number (Nos.))	Number (Nos.)	634	634.19	4,661.34	5160/-	
	Stone aggregate (20mm) (Cubic metre(Cum))	Cubic metre(Cum)	27.6	4.50	3,587.22	2208/-	
	Sand (coarse)(Cubic metre(Cum))	Cubic metre(Cum)	3.0	2.48	1,799.96	2475/-	
	Sand(local)	Each	10	9.25	912.50	1320/-	
	Barak Bamboo	Each	60	61.61	1,540.13	1502/-	
	Muli Bamboo	Each	6	6.35	508.19	480/-	
	Polythene	Kilogram(KG)	4	6.72	569.91	342/-	
	Nails	Kilogram(KG)	4	6.14	427.35	420/-	
	Coir Rope	Square metre(Sqm)	30	61.08	1,832.70	5580/-	
	Centaring Shuttering	Metre (M)	14.04	4.9	0.00	659/-	
	Ridge	Kilogram(KG)	76.30	14.75	953.70	1135/-	
	Fabrication weight	Kilogram(KG)	250	250.00	16,302.00	22000/-	
	Steel door(Kilogram(KG))	Kilogram(KG)	746.75	59	0.00	44,058/-	
	SHS 50x50x2.90mm	Kilogram(KG)	45	42.39	0.00	3700/-	
	Base Plate150x150x12mm	Kilogram(KG)	36.00	85	0.00	3060/-	
	Anchor bolt 12mm dia (375mm long)	Kilogram(KG)	69	69.00	0.00	4140/-	
	Insert Plate 80x80x5mm	Kilogram(KG)	105	102.65	0.00	30,975/-	
	Welded Steel Wire Mesh 2.65mm dia @	Square metre(Sqm)	50	49.09	0.00	4500/-	
	C/C bothways	Square metre(Sqm)	47	46.86	0.00	10,390/-	
	Chicken Wire Mesh 0.265mm dia	Square metre(Sqm)	1,044.00	25	13,050.00	26,102/-	
	50mm Thick Thermocol	Kilogram(KG)	1,450	1188	122.32	112,500	
	Fabrication weight	Kilogram(KG)	7.53	85.00	639.96	1010/-	
	Black wire	Kilogram(KG)	10	9.87	101	1480.74	
	J hook (suitable for 40mm dia Pipe)	Cubic metre(Cum)					

Total of Material Components (A): 107,922.54 2,15,931.00

Estimate No: ES12014-15RDCE0013 dt. 05/11/2014

Highly skilled	Number (Nos.)	24.00	280.00	6,720.00	-
Skilled	Number (Nos.)	29.00	245.00	7,105.00	-
Semi Skilled	Number (Nos.)	26.00	210.00	5,460.00	-
Unskilled	Number (Nos.)	82.00	182.00	14,924.00	-

Total of Manpower Component (B): 34,209.00

Total C=(A+B):

442132.54 - ₹ 2,50,140.00

Add 33% for Re-education of work = ₹ 7504.00

Inc. Paying of NCCs, Doses/Incentives = ₹ 12,507.00

Add 5% for price escalation = ₹ 7504.00

Add 3% for contingencies = ₹ 7504.00

Subtotal D=(C+C1+C2+C3+C4+C5): 442132.00 - ₹ 2,79,655.00

Add 1% for labour cost = ₹ 2,776.00

Grand Total E=(D+D1+D2): 442132.00 - ₹ 2,80,431.00

RUPRES ONE LAKH FORTY-TWO THOUSAND ONE HUNDRED THIRTY-TWO ONLY

[Rupees two lakhs eighty thousand four hundred thirty two only]

Estimate Checked By
Sumit Majumder

Prepared by
Sumit Majumder

Er. Sumit K. Majumder
Junior Engineer, C-1
D/O S.E. Chief Engineer
WD Irradiation, Agt

(Er. U. Debnarma)
Assistant Engineer
S.E. R.D. 1st Circle, Agt

(Er. S. K. Malakar)
Executive Engineer
O/O the S.E., RD 1st Circle
Gurkhabasti, Agartala

(Er. K. Tripathi)
Superintending Engineer
R.D 1st Circle, Agartala