

[TYPE-III]

Revised Estimate For Construction Of Ray House With Shs And Ferro-Cement Panel
[Earthquake Resistant Model]

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

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

Khumulung, west tripura

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

Activity Number	Description	Activity Output to be measured (with unit)	Requirement of Material and Labour for Activity
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 of Column $1.00 * 8.00 * (0.75 * 0.75 * 0.675) = 3.0375$ Add Trench for wall footing $1.00 * 4.00 * (1.075 * 0.5 * 0.375) = 0.8063$ Add Trench for wall footing $1.00 * 4.00 * (2.05 * 0.5 * 0.375) = 1.5375$ $1.00 * (+8(0.75 * 0.75 * 0.675) + 4(1.075 * 0.5 * 0.375) + 4(2.05 * 0.5 * 0.375)) = 5.3813$ Cubic metre (Cum)	Unskilled 4.0521 Number (Nos.)
2	Filling available excavated earth (excluding rock) 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 of Column $0.67 * 8.00 * (0.75 * 0.75 * 0.675) = 2.0351$ Add Trench for wall footing $0.67 * 4.00 * (1.075 * 0.5 * 0.375) = 0.5402$ Add Trench for wall footing $0.67 * 4.00 * (2.05 * 0.5 * 0.375) = 1.0301$ $0.67 * (+8(0.75 * 0.75 * 0.675) + 4(1.075 * 0.5 * 0.375) + 4(2.05 * 0.5 * 0.375)) = 3.6055$ Cubic metre (Cum)	Unskilled 0.9915 Number (Nos.)
3	Filling in plinth with local sand under floors including watering, ramming, consolidating and dressing complete	Add for foundation $1.00 * 8.00 * (0.75 * 0.75 * 0.05) = 0.2250$	Sand (Local) Unskilled 2.4013 Cubic metre (Cum) 0.5723 Number (Nos.)

<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 (40mm) 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 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 centering shuttering and reinforcement in lintels,beams,girders,bresummers 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) {Number (Nos.)} 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 $1.00 * 4.00 * (2.65 * .15 * .25) = 0.3975$ 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/Ballic)complete as per direction of Engineer in Charge(nails,dhari,polythene,binding wire will be supplied by the department

Add Column	1.00*8.00*(4*0.60 * .15)=2.8800
Footing	
Add Column	1.00*8.00*(4*0.15 * .90)=4.3200
Footing	
Add Plinth Beam	1.00*2.00*(2*(5.60+3.65) * .25)=9.2500
Add Precast	1.00*1.00*(1.20 * .60)=0.7200
Ferro-Cement panel(WP-1)	1.00*1.00*(.90 * .95)=0.8550
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)	1.00*1.00*(1.20 * .95)=1.1400
Add Precast	
Ferro-Cement panel(WP-13)	1.00*1.00*(1.20 * .80)=0.9600
Add Precast	
Ferro-Cement panel(WP-14)	

Polythene
Nails
Centering Shuttering

8 87466 Kilogram(KG)
4 92512 Kilogram(KG)
84.1020 Square
49.0 metre(Sqm)
Poly 50% cost of Centering / Shuttering
considered as Precast Ferro-Cement
panels ~~as per~~

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 panel(RP-1)	$1.00 * 4.00 * (.50 * 1.20 * 2.03) = 4.8720$
Add Precast Ferro-Cement panel(RP-2)	$1.00 * 4.00 * (.90 * 1.7175) = 6.1830$
Add Precast Ferro-Cement panel(RP-3)	$1.00 * 2.00 * (1.40 * 1.7175) = 4.8090$
Add Precast Ferro-Cement panel(RP-4)	$1.00 * 4.00 * (.90 * .320) = 1.1520$
Add Precast Ferro-Cement panel(RP-5)	$1.00 * 2.00 * (1.40 * .320) = 0.8960$
Add Precast Ferro-Cement panel(RP-6)	$1.00 * 4.00 * ((1.825 + .9125) / 2 * .725) = 3.9694$
Add Precast Ferro-Cement panel(RP-7)	$1.00 * 2.00 * (.50 * 1.825 * .625) = 1.1406$
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>7 Cold twisted steel reinforcement for R.C.C work including bending, binding and placing in position complete(6 mm dia)</p>	<p>Add For Column $1.00*8.00*(8*.60*0.22)=8.4480$ Ring Add Ring for $1.00*1.00*(1.25*.80*0.22)=22.0000$ Plinth Beam $1.00*(8*(8*.60*0.22)+1(1.25*.80*0.22))=30.4480$ Kilogram(KG) 6 dia rod</p>	<p>M.S.Rod(6mm dia) Black Wire Highly skilled Unskilled</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 Beam $1.00*1.00*(4*18.50*0.89)=65.8600$ $1.00*(8(4*1.30*0.89)+1(4*18.50*0.89))=102.8840$ 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 $1.00*4.00*(2.65 * 0.381 * 0.075)=0.3029$</p>	<p>Cement(Bag) 1st class bricks(Number (Nos.)) Sand (coarse)(Cubic metre(Cum)) Highly skilled 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 $1.00 * 4.00 * (2.65 * 0.25 * 0.075) = 0.1988$ Add For foundation $1.00 * 4.00 * (1.675 * 0.381 * 0.075) = 0.1915$ Add For foundation $1.00 * 4.00 * (1.675 * 0.25 * 0.075) = 0.1256$ $1.00 * (4(2.65 * 0.381 * 0.075) + 4(2.65 * 0.25 * 0.075) + 4(1.675 * 0.381 * 0.075) + 4(1.675 * 0.25 * 0.075)) = 0.8188$ Cubic metre(Cum)</p>	<p>Cement{Bag} 1.0899 Bag 1st class bricks{Number (Nos.))} 314.8600 Number (Nos.) Sand (coarse){Cubic metre(Cum)} 0.2298 Cubic metre(Cum) Highly skilled 1.3321 Number (Nos.) Unskilled 1.7753 Number (Nos.)</p>
<p>1212 mm cement plaster 1:4 (1 cement:4 river sand)</p>	<p>Add for foundation $1.00 * 4.00 * (2.65 * 0.35) = 3.7100$ Add for foundation $1.00 * 4.00 * (1.675 * 0.35) = 2.3450$ $1.00 * (4(2.65 * 0.35) + 4(1.675 * 0.35)) = 6.0550$ Square metre(Sqm)</p>	<p>Cement{Bag} 0.9455 Bag Sand (coarse){Cubic metre(Cum)} 0.1483 Cubic metre(Cum) Skilled 1.1002 Number (Nos.) Unskilled 1.8909 Number (Nos.)</p>
<p>1315 mm cement plaster 1:4(1 cement:4 river sand) on the rough side of brick wall</p>	<p>Add at plinth level $1.00 * 1.00 * (19.1 * 0.45) = 8.5950$ $1.00 * (1(19.1 * 0.45)) = 8.5950$ Square metre(Sqm)</p>	<p>Cement{Bag} 8.7948 Bag Sand (coarse){Cubic metre(Cum)} 1.4004 Cubic metre(Cum) Skilled 10.5537 Number (Nos.) Unskilled 17.5895 Number (Nos.)</p>
	<p>Add Precast Ferro-Cement panel(WP-1) $1.00 * 1.00 * (1.20 * 6.0) = 0.7200$ 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) $1.00 * 4.00 * (.70 * .95) = 2.6600$</p>	

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
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 panel(RP-1)	1.00*4.00*(.50*1.20 * 2.03)=4.8720

	<p>Add Precast Ferro-Cement panel(RP-2) Add Precast Ferro-Cement panel(RP-3) Add Precast Ferro-Cement panel(RP-4) Add Precast Ferro-Cement panel(RP-5) Add Precast Ferro-Cement panel(RP-6) Add Precast Ferro-Cement panel(RP-7) Add Precast Ferro-Cement Chajja for Door Add Precast Ferro-Cement Chajja for Windows</p>	
<p>14 Neat cement punning</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(1.20 * .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)+4(.50*1.20 * 2.03)+4(.90 * 1.7175)+2(1.40 * 1.7175)+4(.90 * .320)+2(1.40 * .320)+4((1.825+ .9125)/2 * .725)+2(.50*1.825 * .625)+1(1.20 * 0.30)+3(0.90 * 0.30))=67.6520 Square metre(Sqm)</p>	<p>Cement{Bag} Skilled 0.3782 Bag Unskilled 0.3696 Number (Nos.) 0.4727 Number (Nos.)</p>
<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 at plinth 1.00*1.00*((2*5.75+2*3.80) * .45)=8.5950 [Bv]g 1.00*(1((2*5.75+2*3.80) * .45))=8.5950 Square metre(Sqm)</p>	<p>Cement{Bag} Skilled 0.5186 Bag Sand (coarse){Cubic metre(Cum)} 0.0197 Cubic Skilled 0.2560 Number (Nos.) Unskilled 0.4267 Number (Nos.)</p>
	<p>Add Pointing on Ferro-Cement Joints 1.00*(1(164.12 * .010))=1.6412 Square metre(Sqm)</p>	

<p>16 25 mm thick cement concrete flooring-1:2:4(1 cement : 2 river sand : 4 jhama brick aggregate 12.5 mm nominal size) finishing with a floating coat of neat cement <i>For Roof J</i></p>	<p>Add Roof Screened concrete work 1.00*(23.022 * 1)=23.0220</p> <p>1.00*(1(23.022 * 1))=23.0220 Square metre(Sqm)</p>	<p>Cement{Bag} 5.5253 Bag Brick aggregate(20-12.5mm) 193.3850 Number (Nos.) {Number (Nos.)} Sand (coarse){Cubic metre(Cum)} 0.3707 Cubic metre(Cum) Skilled 2.9008 Number (Nos.) Semi Skilled 3.8677 Number (Nos.) Unskilled 5.8292 Number (Nos.)</p>
<p>17 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</p> <p>1.00*(1(5.60 * 3.65))=20.4400 Square metre(Sqm)</p>	<p>Cement{Bag} 7.3584 Bag Stone aggregate <i>RTe Nos</i> (20mm) Brick aggregate Sand (coarse){Cubic metre(Cum)} 0.5171 Cubic metre(Cum) Skilled 3.2295 Number (Nos.) Semi Skilled 6.1320 Number (Nos.) Unskilled 6.6634 Number (Nos.)</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</p> <p>Add For Window 1.00*3.00*(1.20 * .90)=3.2400</p> <p>1.00*(1(2.05 * 1.20)+3(1.20 * .90))=5.7000 Square metre(Sqm)</p>	<p>Steel door{(Kilogram(KG))} 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</p> <p>Add Horizontal tie=3x5.60 1.00*16.80*(1)=16.8000</p> <p>Add Horizontal tie=2x.90 1.00*1.80*(1)=1.8000</p> <p>Add Horizontal tie=2x4.40 1.00*8.80*(1)=8.8000</p> <p>Add Horizontal tie=1x1.20 1.00*1.20*(1)=1.2000</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>SHS 50x50x2.90mm 746.7460 Kilogram(KG)</p>

<p>20 Providing and fixing of Base plates as per direction of Engineer in charge</p>	<p>Add Horizontal tie=2x3x3.65 Add Rafter=4x2x1.93 Add Corner Rafter=4x1x2.03 Add Purlin=3x3.20 Add Purlin=2x1.825 Add Purlin=2x.725 Add Bottom tie=2x3.65 Add Bottom tie=2x5.60 Subtract Horizontal tie=3x.90</p> <p>1.00*(21.90*(1)=21.9000 1.00*15.50*(1)=15.5000 1.00*8.12*(1)=8.1200 1.00*9.60*(1)=9.6000 1.00*3.65*(1)=3.6500 1.00*1.45*(1)=1.4500 1.00*7.30*(1)=7.3000 1.00*11.20*(1)=11.2000 1.00*2.70*(1)=2.7000</p>	<p>Base Plate 150x150x12mm</p> <p>42.3900 Kilogram(KG) 45</p>
<p>21 Providing and fixing of Anchor Bolts in proper place as per direction of Engineer in charge</p>	<p>Add Base plate 1.00*20.00*(.15 * .15 * .012)=0.0054 1.00*(20(.15 * .15 * .012))=0.0054 Cubic metre(Cum)</p> <p>Add Anchor Bolt 1.00*80.00*(1)=80.0000 1.00*(+80(1))=80.0000 Each</p>	<p>Anchor bolt 12mm dia (375mm long)</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*375.00*(0.080 * 0.080 * .005)=0.0120 1.00*(375(0.080 * 0.080 * .005))=0.0120 Cubic metre(Cum)</p>	<p>Insert Plate 80x80x5mm</p> <p>94.2000 Kilogram(KG)</p>

23.15mm thick Precast Ferro-Cement panel in Cement Mortar 1:1 (1 Cement : 1 River Sand) with sized Welded 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	Cement{Bag}	21.3780 Bag
Add Precast Ferro-Cement panel(WP-2)	1.00*1.00*(.90 * .95)=0.8550	Sand (coarse){Cubic metre(Cum)}	0.8118 Cubic
Add Precast Ferro-Cement panel(WP-3)	1.00*1.00*(.90 * .80)=0.7200	Welded Steel Wire Mesh 2.65mm dia @ C/C bothways	77.7998 Square metre(Sqm)
Add Precast Ferro-Cement panel(WP-4)	1.00*4.00*(.70 * .95)=2.6600	Chicken Wire Mesh 0.265mm dia	80 metre(Sqm)
Add Precast Ferro-Cement panel(WP-5)	1.00*4.00*(.70 * .80)=2.2400	Highly skilled	74.4172 Square metre(Sqm)
Add Precast Ferro-Cement panel(WP-6)	1.00*4.00*(0.7 * 0.9)=2.5200	Skilled	10.1478 Number (Nos.)
Add Precast Ferro-Cement panel(WP-7)	1.00*3.00*(.90 * .60)=1.6200	Unskilled	10.5537 Number (Nos.)
Add Precast Ferro-Cement panel(WP-8)	1.00*3.00*(0.9 * 0.9)=2.4300		17.5895 Number (Nos.)
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)	1.00*1.00*(1.20 * .95)=1.1400		
Add Precast Ferro-Cement panel(WP-13)	1.00*1.00*(1.20 * .80)=0.9600		
Add Precast Ferro-Cement panel(WP-14)			

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*(.50*1.20 * 2.03)=4.8720
Add Precast Ferro-Cement panel(RP-1)	1.00*4.00*(.90 * 1.7175)=6.1830
Add Precast Ferro-Cement panel(RP-2)	1.00*2.00*(1.40 * 1.7175)=4.8090
Add Precast Ferro-Cement panel(RP-3)	1.00*4.00*(.90 * .320)=1.1520
Add Precast Ferro-Cement panel(RP-4)	1.00*2.00*(1.40 * .320)=0.8960
Add Precast Ferro-Cement panel(RP-5)	1.00*4.00*((1.835+ .9125)/2 * .725) =3.9694
Add Precast Ferro-Cement panel(RP-6)	1.00*2.00*(.50*1.825 * .625)=1.1406
Add Precast Ferro-Cement panel(RP-7)	1.00*1.00*(1.20 * 0.30)=0.3600
Chajja for Door	1.00*3.00*(0.90 * 0.30)=0.8100
Add Precast Ferro-Cement Chajja for windows	

<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>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)+4(.50*1.20 * 2.03)+4(.90 * 1.7175)+2(1.40 * 1.7175)+4(.90 * .320)+2(1.40 * .320)+4((1.825+.9125)/2 * .725)+2(.50*1.825 * .625)+1(1.20 * 0.30)+3(0.90 * 0.30))=67.6520 Square metre(Sqm)</p>	<p>Highly skilled Unskilled</p> <p>8.4605 Number (Nos.) 9.6692 Number (Nos.)</p>
<p>25 Fitting/ Fixing of Welded Wire Mesh before Inside Plastering by spot welding as per Direction of Engineer Incharge</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 1.00*(614.62(1)+5.20(1))=619.8200 Kilogram(KG)</p>	<p>Welded Steel Wire Mesh 2.65mm dia @ C/C bothways</p> <p>80'0 Square metre(Sqm) (in/cutting metre)</p>
	<p>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</p>	

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 panel(RP-1)	1.00*4.00*(.50*1.20 * 2.03)=4.8720
Add Precast Ferro-Cement panel(RP-2)	1.00*4.00*(.90 * 1.7175)=6.1830
Add Precast Ferro-Cement panel(RP-3)	1.00*2.00*(1.40 * 1.7175)=4.8090
Add Precast Ferro-Cement panel(RP-4)	1.00*4.00*(.90 * .320)=1.1520

<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(RP-5) Add Precast Ferro-Cement panel(RP-6) Add Precast Ferro-Cement panel(RP-7) Add Precast Ferro-Cement Chajja for Door Ferro-Cement Chajja for windows $1.00*(1(1.20 * .60)+1(.90 * .95)+1(.90 * .80)+1(0.9 * 0.9)+4(.70 * .95)+4(.70 * .80)+4(0.7 * 0.9)+3(.90 * .60)+3(0.9 * 0.9)+1(1.20 * .95)+2(1.20 * .80)+2(1.2 * 0.9)+1(1.20 * .95)+1(1.20 * .80)+1(1.2 * 0.9)+1(1.20 * .95)+4(1.2 * 1)+4(1.2 * 1)+4(1.2 * 0.65)+4(0.625 * 1)+4(0.625 * 1)+4(0.625 * 0.65)+4(.50*1.20 * 2.03)+4(.90 * 1.7175)+2(1.40 * 1.7175)+4(.90 * .320)+2(1.40 * .320)+4((1.825+.9125)/2 * .725)+2(.50*1.825 * .625)+1(1.20 * 0.30)+3(0.90 * 0.30))=67.6520 Square metre(Sqm)$</p>	<p>50mm Thick Thermocol Highly skilled Unskilled</p> <p>74.0346 Square metre(Sqm) 2.0296 Number (Nos.) 2.0296 Number (Nos.)</p>
<p>Add Precast Ferro-Cement panel(WP-1) Add Precast Ferro-Cement panel(WP-2) Add Precast Ferro-Cement panel(WP-3) Add Precast Ferro-Cement panel(WP-4) Add Precast Ferro-Cement panel(WP-5) Add Precast Ferro-Cement panel(WP-6) Add Precast Ferro-Cement panel(WP-7) Add Precast Ferro-Cement panel(WP-8)</p>	<p>$1.00*1.00*(1.20 * .60)=0.7200$ $1.00*1.00*(.90 * .95)=0.8550$ $1.00*1.00*(.90 * .80)=0.7200$ $1.00*1.00*(0.9 * 0.9)=0.8100$ $1.00*4.00*(.70 * .95)=2.6600$ $1.00*4.00*(.70 * .80)=2.2400$ $1.00*4.00*(0.7 * 0.9)=2.5200$ $1.00*3.00*(.90 * .60)=1.6200$</p>	

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 * 0.65)=3.1200	
Add Precast Ferro-Cement panel(WP-19)	1.00*4.00*(0.625 * 1)=2.5000	
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*(.50*1.20 * 2.03)=4.8720	
Add Precast Ferro-Cement panel(RP-1)	1.00*4.00*(.90 * 1.7175)=6.1830	
Add Precast Ferro-Cement panel(RP-2)	1.00*2.00*(1.40 * 1.7175)=4.8090	
Add Precast Ferro-Cement panel(RP-3)	1.00*4.00*(.90 * .320)=1.1520	
Add Precast Ferro-Cement panel(RP-4)		

<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>Add Precast Ferro-Cement panel(RP-5) Add Precast Ferro-Cement panel(RP-6) Add Precast Ferro-Cement panel(RP-7) Add Precast Ferro-Cement Chajja for Door Add Precast Ferro-Cement Chajja for windows</p> <p>1.00*2.00*(1.40 * .320)=0.8960 1.00*4.00*((1.825+ .9125)/2 * .725)=3.9694 1.00*2.00*(.50*1.825 * .625)=1.1406 1.00*1.00*(1.20 * 0.30)=0.3600 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(1.20 * .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)+4(.50*1.20 * 2.03)+4(.90 * 1.7175)+2(1.40 * 1.7175)+4(.90 * .320)+2(1.40 * .320)+4((1.825+ .9125)/2 * .725)+2(.50*1.825 * .625)+1(1.20 * 0.30)+3(0.90 * 0.30))=67.6520 Square metre(Sqm)</p>	<p>Fabrication weight</p> <p>13364288- Kilogram(KG) 1166kg</p>
<p>28 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>Add Welding of Door/Windows 1.00*(700(1)+45(1)+94.2(1)+267.22(1)+220(1))=1326.4200 Kilogram(KG)</p> <p>Insert plate = Add Welding of Welded Wire Mesh = Add Welding of Door/Windows 1.00*267.22*(1)=267.2200 1.00*220.00*(1)=220.0000 Only 80% = 60kg</p>	<p>Mechanical transportation Unskilled</p> <p>98744- Cubic metre(Cum) 10 Cum 2.3605 Number (Nos.)</p>

Estimate No: **ESI2014-15RDC0013** dt. **05/11/2014**
 29 Scaffolding for construction/repairing

Add 1.00*18.50*(1)=18.5000 1.00*(18.50(1))=18.5000 Metre (M)	Barak Bamboo Multi Bamboo Coir Rope Unskilled 10 9-2500- Each 60 6-1050- Each 6 6-1050- Kilogram(KG) 6,1050 Number (Nos.)
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Revised Estimate For Construction Of Tay House With Shs And Ferro-Cement Panel
 Requirement of materials, Labour and Funds for construction of Summary of materials and Labour Usages **[Earthquake Resistant Model]** ANNEXURE III

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
	Cement(Bag)	Bag	70	327.00	22977.94	22,890.00	
	M.S.Roof(6mm dia)	Kilogram(KG)	32	34.97	1,514.12	1920.00	
	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	4917.28	5160.00	
	Brick aggregate(20-12.5mm){Number (Nos.)}	Number (Nos.)	510	540.30	3888.48	4080.00	
	1st class bricks{Number (Nos.)}	Number (Nos.)	634	634.19	4832.54	5072.00	
	Stone aggregate (20mm) Barak (Dixer)	Cubic metre(Cum)	276	4.02	3624.01	3308.00	
	Sand (coarse){Cubic metre(Cum)}	Cubic metre(Cum)	610	5.62	3249.35	3300.00	
	Sand(Local)	Cubic metre(Cum)	310	2.40	707.63	1320.00	
	Barak Bamboo	Each	10	0.25	4387.50	1500.00	
	Mull Bamboo	Each	60	61.64	4540.43	1500.00	
	Polythene	Kilogram(KG)	8	8.75	699.73	640.00	
	Nails	Kilogram(KG)	4	9.25	693.84	300.00	
	Coir Rope	Kilogram(KG)	6	6.14	427.35	120.00	
	Centaring Shuttering	Square metre(Sqm)	42	64.10	4556.87	7812.00	
	Steel door(Kilogram(KG))	Kilogram(KG)	250	250.00	16302.00	20000.00	
	SHS 50x50x2.90mm	Kilogram(KG)	746.75	89	669	44058.00	
	Base Plate 50x150x12mm	Kilogram(KG)	45	42.39	0.00	2700.00	
	Anchor bolt 12mm dia (375mm long)	Kilogram(KG)	36.00	85	0.00	3060.00	
	Insert Plate 80x80x5mm	Kilogram(KG)	94.20	60	0.00	5652.00	
	Welded Steel Wire Mesh 2.65mm dia @	Square metre(Sqm)	160	455.66	0.00	47200.00	
	C/C bootways	metre(Sqm)	75	74.42	0.00	6750.00	
	Chicken Wire Mesh 0.265mm dia	Square metre(Sqm)	76	74.03	0.00	15400.00	
	50mm Thick Thprr	metre(Sqm)	1166	1326.42	0.00	23150.00	
	Febrication weight	Kilogram(KG)	1150	4.63	42232	112.57	
	Black Wire	Kilogram(KG)	10	9.87	997.01	1610.00	
	Mechanical transportation	Cubic metre(Cum)					
	Highly skilled	Number (Nos.)					
	Skilled	Number (Nos.)					
	Semi Skilled	Number (Nos.)					
	Unskilled	Number (Nos.)					
Total of Material Components (A):					90644.72	2,35,234.00	

Total of Manpower Component (B): 37,030.00

Total C=(A+B): 427,644.72

ADD 3% Contingency = ₹ 2,70,864.00
 ADD 3% for Beautification = ₹ 8,168.00
 of work (NYC Pointing)
 ADD 5% for Price escalation = ₹ 13,613.00

SubTotal D=(C+Cl+C2+C3+C4+C5): ₹ 427,645.00

ADD 1% for allowance for ₹ 3,02,213.00
 ₹ 3,02,213.00
 ₹ 3,02,213.00
 ₹ 3,02,213.00

Grand Total E=(D+D1+D2): ₹ 3,02,213.00

RUPPEES ONE LAKH TWENTY SEVEN THOUSAND SIX HUNDRED FORTY FIVE ONLY

~~Proposed three lakhs only~~
 Proposed three lakhs five thousand three hundred thirty five only

Suman Majumder

Prepared by

90
 Dr. Smit Kr. Majumdar
 Junior Engineer, G-1
 D/O to Chief Engineer
 RD Department Agri

27/04/15

(Er. U. Debbarma)
 Assistant Engineer
 S.E.R.D. 1st Circle, Agri.

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

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

27/04/15