

APPROVED OBSERVED DATAS AS PER CPWD SCHEDULE OF RATES 2014

- 1 Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 5.0 in foundation and plinth in Cement mortar 1:6 (1 cement : 6 coarse sand) (modified the item 6.1.2)

Details of cost for 1 cum

MATERIAL

Common burnt clay F.P.S. (non modular) bricks

2603 class designation 5.0	1000 nos	494	4200	2074.8
2201 Carriage of bricks	1000 nos	494	283.96	140.28
3.11 Cement mortar 1:6, Rate as per item no. 3.11 of SH N	Cum	0.25	3340.75	835.19
9999 Sundries	L.S.	2.73	1.78	4.86
LABOUR				
123 Mason (brick layer) 1st class	Day	0.36	435	156.60
124 Mason (brick layer) 2nd class	Day	0.36	399	143.64
115 Coolie	Day	1.37	329	450.73
101 Bhisti	Day	0.2	363	72.60
Total				3878.69
Add water charges 1%				38.79
Total				3917.48
Add CPOH 15%				587.62
Total				4505.10

- 2 Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 5.0 in superstructure above plinth level up to floor V level in all shapes and sizes in Cement mortar 1:6 (1 cement : 6 coarse sand) (modified the item 6.4.2)

Details of cost for 1 cum

MATERIAL

Common burnt clay F.P.S. (non modular) bricks

2603 class designation 5.0	1000 nos	494	4200	2074.8
2201 Carriage of bricks	1000 nos	494	283.96	140.28
3.11 Cement mortar 1:4, Rate as per item no. 3.9 of SH M	Cum	0.25	3340.75	835.19
9999 Sundries	L.S.	2.73	1.78	4.86
LABOUR				
123 Mason (brick layer) 1st class	Day	0.47	435	204.45
124 Mason (brick layer) 2nd class	Day	0.47	399	187.53
115 Coolie	Day	1.8	329	592.20
101 Bhisti	Day	0.2	363	72.60
9999 Scaffolding	L.S.	22.36	1.78	39.80
Extra labour element required for lifting of materials (above floor two level upto floor five level)				
115 Coolie	Day	1.13	329	371.77
Total				4523.47
Add water charges 1%				45.23
Total				4568.71
Add CPOH 15%				685.31
Total				5254.01

- 3 Providing and fixing **glazed shutters (25mm Thick)**for doors, windows and clerestory windows **using 4 mm thick float glass panes** including ISI marked M.S. pressed butt hinges bright finished of required size with necessary screws.-VENGAI WOOD

Details of cost for shutter of a door (glazed)

200x108cm = 2.16 sqm.

WOOD SCANTLINGS

As per Ref DSR 9.9.1.1 Qty of wood for 35mm thick
58cudm There fore for 25mm thick $(58/35)*25=41.4$
cudm

MR15	Vengai wood-planks	10 cudm	41.40	472.50	1956.15
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10 kg/sqm)	sqm	1.27	345.00	438.15
595	Bright finished or black enameled mild steel butt hinges 100x58x1.90 mm	10 Nos	6.00	90.00	54.00
597	Bright finished or black enameled mild steel butt hinges 50x37x1.50 mm	10 Nos	2.00	55.00	11.00
637	Bright finished or black enameled mild steel screws 40 mm	100 Nos	48.00	52.00	24.96
640	Bright finished or black enameled mild steel screws 20 mm	100 Nos	8.00	32.00	2.56
Labour					
156	Carpenter (average)	day	1.83	417.00	763.11
119	Glazier	Day	0.23	399.00	91.77
114	Beldar	Day	0.77	329.00	253.33
9999	Sundries	LS	40.43	1.78	71.97
				Total	3667.00
				Add water charges 1%	36.67
				Total	3703.67
				Add CPOH 15%	555.55
				Total	4259.22
for 1 sqm					1971.86

4 Supplying and installing ready made PVC Septic tank of specified size including the cost of carriage, trenching, placing at the level below ground level as specified as per the direction of engineer in charge:

below 15 flush capacity

MATERIALS:

MR	PVC ready made septic tank	Each	1.000	14000.00	14000.00
9999	Carriage to site	LS	179.400	1.78	319.33
2.8.1	Excavation Charges (L= 2.30, B= 0.70, D= 0.60)	cum	0.966	135.59	130.98
9999	Placing at specified level including back filling as necessary (1/4 th of LS provided for item 18.48)	each	22.425	1.78	39.92
				Total	14490.23
				Add water charges 1%	144.90
				Total	14635.13
				Add CPOH 15%	2195.27
				Total	16830.40

5 Supplying and installing ready made PVC Septic tank of specified size including the cost of carriage, trenching, placing at the level below ground level as specified as per the direction of engineer in charge:

15 to below 25 flush capacity

MATERIALS:

MR	PVC ready made septic tank	Each	1.000	16000.00	16000.00
9999	Carriage to site	LS	179.400	1.78	319.33
2.8.1	Excavation Charges (L= 2.60, B= 0.80, D= 0.70)	cum	1.456	135.59	197.42
9999	Placing at specified level including back filling as necessary (1/4 th of LS provided for item 18.48)	each	22.425	1.78	39.92
				Total	16556.67

Add water charges 1%	165.57
Total	16722.23
Add CPOH 15%	2508.34
Total	19230.57

- 6 Supplying and installing ready made PVC Septic tank of specified size including the cost of carriage, trenching, placing at the level below ground level as specified as per the direction of engineer in charge:
25 to below 35 flush capacity

MATERIALS:

MR	PVC reddy made septic tank	Each	1.000	20000.00	20000.00
9999	Carriage to site	LS	179.400	1.78	319.33
2.8.1	Excavation Charges (L= 2.60, B= 1.00, D= 0.85)	cum	2.210	135.59	299.65
9999	Placing at specified level including back filling as necessary (1/4 th of LS provided for item 18.48)	each	22.425	1.78	39.92
	Total				20658.90
				Add water charges 1%	206.59
				Total	20865.49
				Add CPOH 15%	3129.82
				Total	23995.32
	for Each				11108.94

- 7 Supplying and installing ready made PVC Septic tank of specified size including the cost of carriage, trenching, placing at the level below ground level as specified as per the direction of engineer in charge:
35 to 50 flush capacity

MATERIALS:

MR	PVC reddy made septic tank	Each	1.000	34000.00	34000.00
9999	Carriage to site	LS	179.400	1.78	319.33
2.8.1	Excavation Charges (L= 2.60, B= 1.20, D= 1.10)	cum	3.432	135.59	465.34
9999	Placing at specified level including back filling as necessary (1/4 th of LS provided for item 18.48)	each	22.425	1.78	39.92
	Total				34824.59
				Add water charges 1%	348.25
				Total	35172.84
				Add CPOH 15%	5275.93
				Total	40448.77
	for Each				18726.28

Structural Rehabilitation Data

- 1 Removing the spallen delaminated concrete by chipping the area after providing necessary supports, Removing the paint using mechanical grinder then Cleaning and applying anti corrosive coating on reinforcement with approved Epoxy – zinc rich primer and applying epoxy bonding coat using approved Epoxy bonding agent for structural concrete

Details of cost for 10sq.m

MATERIAL

MR	rust remover	ltr	3.000	600.00	1800
MR	Approved Epoxy Zinc rich primer	kg	2.000	681.60	1363.2
MR	Approved Epoxy Bonding Agent	kg	2.500	1104.00	2760
999	support for column or beam	ls	400.000	1.70	680
	LABOUR				
131	painter	Nos	3.500	361.00	1263.5
114	Beldar	Nos	5.000	297.00	1485
115	Coolie(for chipping and assisting)	Nos	10.000	297.00	2970

999	sundries including grinding mechine	ls	175.000	1.70	297.5
	Total				12619.20
			Add water charges 1%		126.19
			Total		12745.39
			Add CPOH 15%		1911.81
			Total		14657.20
	for 1 sqm				1465.72

2 Plastering using polymer modified cement mortar by adding suitable bonding agent to the mortar (1:3:5) @5kg per bag of cement (the aggregates shall be of 6mm down size) and applying to the reprofile of the structural elements

Details of cost for 10sq.m

requirement of cement= $0.072 \times 510 \times 10 = 367.2\text{kg}$

usage of cera bond SBR Repair: 0.1kg SBR@1kg cement, for 367.2kg of cement = $367.2 \times 0.1 = 36.72\text{kg}$

MATERIAL

6 mm cement plaster 1:3 (1 cement: 3 fine sand) finished with a floating coat of neat cement and thick coat of Lime wash on top of walls when dry for bearing of R.C.C. slabs and beams. (DSR rate)

MR	bond SBR Repair	kg	36.720	286.80	10531.296
	EXTRA LABOUR				
123	Mason	Nos	2.500	393.00	982.5
115	Coolie(for assisting)	Nos	5.000	297.00	1485
999	sundries including curing	ls	25.000	1.70	42.5
	Total				14660.80
			Add water charges 1%		146.61
			Total		14807.40
			Add CPOH 15%		2221.11
			Total		17028.51
	for 1 sqm				1702.85

3 Preparation of polymer modified cement concrete by adding suitable bonding agent to the concrete @5kg per bag of cement (the fine aggregates shall be of 6mm down size and coarse aggregate of size 10mm) and applying to the reprofile of the structural elements

sub data of concrete using 10mm b/s

0297	Stone aggregate 10mm	cum	0.8500	1050.00	892.50
2202	Carraige of Stone aggregate below 40 mm nominal size	cum	0.850	106.64	90.64
0982	Coarse sand	cum	0.4250	1120.00	476.00
2203	Carraige of Coarse sand	cum	0.4250	106.64	45.32
0367	Cement	tonne	0.610	5240.00	3196.40
2209	Carraige of Cement	tonne	0.610	94.80	57.83
	LABOUR:				
0114	Beldar	Day	0.90	297.00	267.30
0115	Coolie	Day	0.78	297.00	231.66
0101	Bhisthi	Day	0.70	328.00	229.60
0123	Mason I class	Day	0.06	393.00	23.58
0124	Mason II class	Day	0.06	361.00	21.66
0002	Hire running charges of concrete mixer	Day	0.07	800.00	56.00
9999	Scaffolding	L.S.	114.40	1.70	194.48
9999	Sundries	L.S.	14.30	1.70	24.31
	Total for 1 cum				5807.28

Qty of concrete required for 1m² - 15mm thick surface= 0.172 m³ ie 0.172 x Rs 5807.28/m³ = Rs 998.85

Details of cost for 10sq.m

requirement of cement = 0.172 x 610 x 10m² =

usage of cera bond SBR Repair: 0.1kg SBR@1kg cement, for 1049.2kg of cement = 1049.2x0.1 =

PCC 1:1:2 For walls pillars etc	sq.m	10	998.85	9988.5
MR cera bond SBR Repair	kg	104.920	286.80	30091.056
EXTRA LABOUR				
123 Mason	Nos	2.500	393.00	982.5
115 Coolie(for assisting)	Nos	5.000	297.00	1485
999 sundries including curing	ls	25.000	1.70	42.5
Total				42589.56
			Add water charges 1%	425.90
			Total	43015.45
			Add CPOH 15%	6452.32
			Total	49467.77
for 1 sqm				4946.78

- 4 Protecting concrete pillars and beams by providing CFR MEMBRANE using adhesive MEC CFW ADHESIVE, The membrane shall be covered the surface of the structure by cleaning the surface and then pasting the CFR MEMBRANE using MEC CFW ADHESIVE. after properly dried one more coating of adhesive shall be made the surface of membrane for sticking the fine aggregate. this gives the further bonding of plastering.

Details of cost for 10sq.m

MATERIAL

MR CFR MEMBRANE	sq.m	10.500	3144.00	33012
MR MEC CFW ADHESIVE	kg	20.000	499.00	9980
999 sand paper,brush,cotton etc	ls	300.000	1.78	534
LABOUR				
131 painter	Nos	2.000	361.00	722
115 Beldar	Nos	1.000	297.00	297
115 Coolie(for assisting)	Nos	1.000	297.00	297
999 sundries for fine aggregate	ls	50.000	1.70	85
Total				44927.00
			Add water charges 1%	449.27
			Total	45376.27
			Add CPOH 15%	6806.44
			Total	52182.71
for 1 sqm				5218.27

- 5 Applying PRIMER - EP (Epoxy primer) on concrete surface including all charges

Details of cost for 10sq.m

MATERIAL

MR PRIMER - EP (Epoxy primer)	kg	1.350	805.00	1086.75
999 sundries for brush,sand paper,cotton etc	ls	50.000	1.70	85
LABOUR				
131 painter	Nos	1.250	361.00	451.25
115 Beldar	Nos	0.500	297.00	148.5
115 Coolie(for chipping and assisting)	Nos	0.500	297.00	148.5
999 sundries including grinding mechine	ls	60.000	1.70	102
Total				2022.00
			Add water charges 1%	20.22
			Total	2042.22

Add CPOH 15% 306.33

Total 2348.55

for 1 sqm 234.86

6 Reinforced cement microconcrete work in walls, columns, pillars, piers, etc. up to floor five level excluding cost of centering, shuttering, finishing and reinforcement . using cera grout and 10mm coarse aggregate in the ratio 1:2 by volume.

Qty for 9.18 m³

MATERIALS:

MR	cera grout .67m ³ /m ³ of concrete (2000kg/m ³)	tonne	12.300	20080.00	246984.00
0297	Stone aggregate 10mm	cum	3.0300	1175.00	3560.25
2202	Carraige of Stone aggregate below 40 mm nominal size	cum	3.030	106.49	322.66

2209	Carraige cera grout(cement)	tonne	0.000	94.65	0.00
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LABOUR:

0114	Beldar	Day	11.29	329.00	3714.41
0115	Coolie	Day	7.53	329.00	2477.37
0101	Bhisthi	Day	8.26	363.00	2998.38
0123	Mason I class	Day	0.92	435.00	400.20
0124	Mason II class	Day	0.92	399.00	367.08
0002	Hire running charges of concrete mixer	Day	0.64	800.00	512.00
0012	Vibrator (Hire charges)	Day	0.64	350.00	224.00
9999	Sundries	L.S.	131.82	1.70	1.78

Total 261562.13

Add water charges 1% 2615.62

Total 264177.75

Add CPOH 15% 39626.66

Total 303804.41

for 1 sqm 33094.16

12.50
modi

Providing and fixing aluminium Traftold sheet pre coated (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.45 mm or nearest available thickness, total coated 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and thickness with zinc coating 120 grams per sqm as per IS: 277, in polyester top coat 15-18 microns. Sheet should have protective guard film of 25microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.

Details of cost for 216.14 sqm

Consider a shed of 20x10 metres.

(External dimensions of plinth).

Area of roof-

20.2x10.70m = 216.14 sqm.

MATERIALS:

Sheets used = 20 Nos x 10.70m x 1.06m = 226.84sqm

Add 3% wastage = 6.81

Total = 233.65sqm

MR	Pre coated aluminium traftold sheet <u>0.45mm</u> thick	Square metere	233.650	505.00	117993.25
1023	Galvanised steel J or L hooks 8 mm dia	each	476.000	12.00	5712
1208	bitumin washer	each	476.000	0.30	142.8
1209	G.I. plain washer thick	each	476.000	0.35	166.6
9999	Carriage of bolts and nuts, washers etc.	LS	8.060	1.78	14.3468
9999	Sundries	LS	39.520	1.78	70.3456
LABOUR:					
0130	Mistry	Day	2.340	435.00	1017.9
0112	Carpenter 2nd class	Day	9.340	399.00	3726.66

0114	Belder	Day	9.340	329.00	3072.86
	Total				131916.762
				Add water charges 1%	1319.17
				Total	133235.93
				Add CPOH 15%	19985.39
				Total	153221.32
		for 1 sqm			708.90

GI Pipes

1 Providing and fixing G.I. pipes complete with G.I. fittings External work. 15 mm dia nominal dia, (Details of Cost for : 10 m

Material

1545	G.I. pipes 15 mm dia	metre	10.20	105.00	1071.00
	Weight for carriage = pipe weight + 2% for fittings =				
	1.02 X 12.30 = 12.546 kg = 0.012546 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.012546	94.65	1.19
9999	White lead, hemp, oil etc	L.S.	5.33	1.78	9.49

Labour

116	Fitter (grade 1)	Day	0.08	435.00	34.80
114	Beldar	Day	0.16	329.00	52.64
				. Total	1169.11
				Add water charges 1%	11.69
				Total	1180.80
				Add CPOH 15%	177.12
				Grand Total	1357.92
		for 1m			135.79

2 Providing and fixing G.I. pipes complete with G.I. fittings External work. 20 mm dia nominal dia Details of Cost for : 10 m

Material

1546	G.I. pipes 20 mm dia	metre	10.20	125.00	1275.00
	Weight for carriage = pipe weight + 2% for fittings =				
	1.02 X 15.90 = 16.218 kg = 0.016218 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.016218	94.65	1.54
9999	White lead, hemp, oil etc	L.S.	5.33	1.78	9.49

Labour

116	Fitter (grade 1)	Day	0.08	435.00	34.80
114	Beldar	Day	0.16	329.00	52.64
				. Total	1373.46
				Add water charges 1%	13.73
				Total B	1387.19
				Add CPOH 15%	208.08
				Grand Total	1595.27
		for 1 m			159.53

3 Providing and fixing G.I. pipes complete with G.I. fittings External work. 25 mm dia nominal dia Details of Cost for : 10 m

Material

1547	G.I. pipes 25 mm dia	metre	10.20	160.00	1632.00
	Weight for carriage = pipe weight + 2% for fittings =				

1.02 X 24.60 = 25.092 kg = 0.025092 tonne

2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.025092	94.65	2.37	
9999	White lead, hemp, oil etc	L.S.	6.76	1.78	12.03	
<u>Labour</u>						
116	Fitter (grade 1)	Day	0.12	435.00	52.20	
114	Beldar	Day	0.25	329.00	82.25	
					. Total	1780.86
					Add water charges 1%	17.81
					Total B	1798.67
					Add CPOH 15%	269.80
					Grand Total	2068.47
for 1 m						206.85

4 **Providing and fixing G.I. pipes complete with G.I. fittings External work. 32 mm dia nominal dia**
Details of Cost for : 10 m

Material

1548	G.I. pipes 32 mm dia	metre	10.20	180.00	1836.00	
Weight for carriage = pipe weight + 2% for fittings =						
1.02 X 31.70 = 32.334 kg = 0.032334 tonne						
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.032334	94.64	3.06	
9999	White lead, hemp, oil etc	L.S.	6.76	1.78	12.03	
<u>Labour</u>						
116	Fitter (grade 1)	Day	0.12	435.00	52.20	
114	Beldar	Day	0.25	329.00	82.25	
					. Total	1985.54
					Add water charges 1%	19.86
					Total B	2005.40
					Add CPOH 15%	300.81
					Grand Total	2306.21
for 1 m						230.62

5 **Providing and fixing G.I. pipes complete with G.I. fittings External work. 40 mm dia nominal dia**
Details of Cost for : 10 m

Material

1549	G.I. pipes 40 mm dia	metre	10.20	220.00	2244.00	
Weight for carriage = pipe weight + 2% for fittings =						
1.02 X 36.50 = 37.23 kg = 0.03723 tonne						
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.03723	94.65	3.52	
9999	White lead, hemp, oil etc	L.S.	9.49	1.78	16.89	
<u>Labour</u>						
116	Fitter (grade 1)	Day	0.16	435.00	69.60	
114	Beldar	Day	0.33	329.00	108.57	
					. Total	2442.59
					Add water charges 1%	24.43
					Total B	2467.02
					Add CPOH 15%	370.05
					Grand Total	2837.07
for 1 m						283.71

6 **Providing and fixing G.I. pipes complete with G.I. fittings External work. 50 mm dia nominal dia**
Details of Cost for : 10 m

<u>Material</u>					
1550	G.I. pipes 50 mm dia	metre	10.20	275.00	2805.00
	Weight for carriage = pipe weight + 2% for fittings =				
	1.02 X 51.70 = 52.73 kg = 0.05273 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.05273	94.65	4.99
9999	White lead, hemp, oil etc	L.S.	9.49	1.78	16.89
<u>Labour</u>					
116	Fitter (grade 1)	Day	0.16	435.00	69.60
114	Beldar	Day	0.33	329.00	108.57
				. Total	3005.05
				Add water charges 1%	30.05
				Total B	3035.10
				Add CPOH 15%	455.27
				Grand Total	3490.37
				for 1 m	349.04

7 **Providing and fixing G.I. pipes complete with G.I. fittings External work. 65 mm dia nominal dia**
Details of Cost for : 10 m

<u>Material</u>					
1551	G.I. pipes 65 mm dia	metre	10.20	365.00	3723.00
	Weight for carriage = pipe weight + 2% for fittings =				
	1.02 X 66.30 = 67.626 kg = 0.067626 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.067626	94.65	6.40
9999	White lead, hemp, oil etc	L.S.	13.52	1.78	24.07
<u>Labour</u>					
116	Fitter (grade 1)	Day	0.25	435.00	108.75
114	Beldar	Day	0.66	329.00	217.14
				. Total	4079.36
				Add water charges 1%	40.79
				Total B	4120.15
				Add CPOH 15%	618.02
				Grand Total	4738.17
				for 1 m	473.82

8 **Providing and fixing G.I. pipes complete with G.I. fittings External work. 80 mm dia nominal dia**
Details of Cost for : 10 m

<u>Material</u>					
1552	G.I. pipes 80 mm dia	metre	10.20	460.00	4692.00
	Weight for carriage = pipe weight + 2% for fittings =				
	1.02 X 86.40 = 88.128 kg = 0.088128 tonne				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.088128	94.65	8.34
9999	White lead, hemp, oil etc	L.S.	13.52	1.78	24.07
<u>Labour</u>					
116	Fitter (grade 1)	Day	0.25	435.00	108.75
114	Beldar	Day	0.66	329.00	217.14
				. Total	5050.30
				Add water charges 1%	50.50
				Total B	5100.80

Add CPOH 15% 765.12

Grand Total 5865.92

for 1 m

586.59

Water proof Plastering with Cement mortar 1:4 (1 cement : 4 fine sand) 12mm thick plaster finished with a floating coat of neat cement mixed with water proofing compound of approved make @ 2kg/m² of mix floated hard and trowelled smooth including all labour, material, conveyance charges etc complete.

Details of Cost for : 10.00 Sqm

MATERIALS

3.4	Cement mortar 1:4 (1 cement : 4 fine sand) (Rate as per item No. 3.4)	Cum	0.144	3637.05	523.74
MR	water proofing compound 2K @ 2kg/m ² of mix	Kg	20.00	280.00	5600.00
	Labour				
155	Mason (average)	Day	0.67	417.00	279.39
115	Coolie	Day	0.75	329.00	246.75
101	Bhisti	Day	0.92	363.00	333.96
9999	Scaffolding and sundries	L.S.	12.61	1.78	22.45
367	Cement	tonne	0.02	6300.00	126.00
2209	Carriage of cement	tonne	0.02	94.65	1.89
155	Mason (average)	Day	0.27	417.00	112.59
115	Coolie	Day	0.27	329.00	88.83
9999	Scaffolding and sundries	L.S.	8.06	1.78	14.35
				Total:	7349.94
				Add water charges 1%	68.26
				Total B	7418.20
				Add CPOH 15%	1034.17
				Grand Total	8452.37
					8452.35
				for 1 sqm	845.24

Roofing

Roofing with G.I hard colour powder coated traffod sheets 0.35 mm thick or nearest available thickness with overlaps of 150 mm at ends and GI hook or crank C.I. bolts and nuts including plain washers and bitumen washers etc complete

Details of Cost for : 184.52 Sqm

Material


MR	G.I hard colour powder coated traffod sheets 0.35 mm thick (Add 10% for lap and wastage)	m ²	202.97	300.00	60891.00
	(c) G.I.Seam bolts and nuts 60cm centre to centre zig-zag i.e. 30cm centre to centre straight Breadth is 5.1 metre No. of bolts in one lap $5.1/0.3 = 17$ nos. $2 \times 26(\text{laps}) \times 17$ nos. = 884 nos.				
1022	G.I seam bolts and nuts (d) G.I..J or L hooks 8mm dia. (No. of purlins to be used 5 on either side) $2 \times 5 \times 27$ (No. of sheets) $\times 23$ nos. of bolts in each sheet = 810 nos.	Nos	884.00	25.00	2210.00
1023	G.I J or L hooks 8mm dia with nuts and bolts	Nos	810.00	120.00	9720.00

1207	Limpet washers	Nos	1694.00	35.00	592.90
1208	GI washers	Nos	1694.00	30.00	508.20
9999	Carriage of bolts and washers	L.S.	26.91	1.78	47.90
9999	Sundries	L.S.	53.82	1.78	95.80
	Labour				
130	Mistry	Day	1.30	435.00	565.50
112	Carpenter II class	Day	15.50	399.00	6184.50
114	Beldar	Day	15.50	329.00	5099.50
9999	Sundries	L.S.	12.09	1.78	21.52
				Total:	85936.82
				Add water charges 1%	859.37
				Total B	86796.19
				Add CPOH 15%	13019.43
				Grand Total	99815.62
				for 1 sqm	540.95

Supplying, fabricating PVC Door with frame in locality available best quality including cost of all fittings, labour charges etc complete

Cost for 2.42 sqm

8100	Powder coated M.S. butt hinges 100 mm X58 mm X 1.9 mm	10 nos	4	90	36
637	Bright finished or black enameled mild steel screws 40 mm	100 nos	48	52	24.96
640	Bright finished or black enameled mild steel screws 20 mm	100 nos	8	32	2.56
156	Carpenter (average)	Day	0.55	417	229.35
114	Beldar	Day	0.55	329	180.95
9999	Sundries	L.S.	29	1.78	51.62
MR	Factory made door frame	RM	5.5	290	1595
MR	35 mm thick factory made solid panel PVC door shutter	sqm	2.38	1550	3689
	TOTAL				5809.44
					58.09
					5867.5344
					880.13016
					6747.66456
					2788.29114
					for 1 sqm


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OBSERVED DATAS AS PER CPWD SCHEDULE OF RATES 2014

- 1 Filling up low lying and water logged areas with local material/quarry muck, spreading in layers, levelling the top at site and consolidation by ramming etc complete for improving the CBR value of subgrade.

Details of cost for 300 cum

MATERIAL

MR	Soil gravel mixture/quarry waste	cum	300	935	280500.00
	LABOUR				
128	Mate	Day	0.40	363	145.20
139	Skilled Beldar	Day	2.00	363	726.00
114	Beldar	Day	8.00	329	2632.00
			Total		284003.20
			Add water charges 1%		2840.03
			Total		286843.23
			Add CPOH 15%		43026.48
			Total		329869.72
					1099.56572

- 2 Supplying and filling sand in foundation trenches of culvert for stabilising the top clay layer including watering ramming consolidating and dressing etc complete for improving bearing capacity of soil.

Details of cost for 10 cum

MATERIAL

982	Coarse sand (zone III)	cum	10	1200	12000.00
2335	Carriage of Coarse sand (zone III)	cum	10	106.49	1064.90
	LABOUR				
114	Beldar	day	0.89	329	292.81
115	Coolie	day	1.07	329	352.03
101	Bhisti	day	0.35	363	127.05
			Total		13836.79
			Add water charges 1%		138.37
			Total		13975.16
			Add CPOH 15%		2096.27
			Total		16071.43
					for 1 cum
					1607.14316

- 3 Providing and applying primer coat with bitumen emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per Technical Specification Clause 502(low porosity).(MORD 502)

Unit = sqm

Taking output = 1750 sq.m

MATERIAL

MR	Bitumen emulsion (SS-1) @ 0.85 kg per sqm	T	1.48	39040.00	57779.20
2211	Conveyance of emulsion	T	1.48	106.49	157.61
	LABOUR				
0128	Mate	Nos	0.04	363.00	14.52
0114	Beldar	Nos	1.00	329.00	329.00
	MACHINERY				
0060	Hydraulic broom @ 1250 sqm per hour	hour	1.40	360.00	504.00
0058	Air compressor 210 cfm	hour	1.40	325.00	455.00
	Bitumen emulsion pressure distributor @ 1750 sqm	hour	1.00	800.00	800.00
0061	per hour				
0057	Water tanker 6 kl capacity 1 trip per hour	hour	0.50	150.00	75.00

		60114.33
Add water charges @ 1% on		601.14
		60715.47
Add C.P & OH @15% on		9107.32
Cost for 1750.00 Sqm		69822.79
Rate per One Sqm:		39.90

Cold Mix Technology

- 1 Providing, laying and rolling of open-graded premix carpet of 20 mm thickness composed of 13.2 mm to 5.6 mm aggregates (Table 500.13) either using Bitumen emulsion (MS) at the rate of 21.50kg/10 sqm to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a concrete mixer 0.25 to 0.4 cum capacity, laying and rolling with a three wheel 0-100 kN static roller capacity, finished to required level and grades (tack coat to be paid separately)

Details for 100 sqm

MR	Bitumen emulsion medium setting (M.S.) conforming	tonne	0.215	39283	8445.845
2211	Carriage of Tar Bitumen	tonne	0.215	106.49	22.89535
2910	Stone chippings/ screenings 12.5/13.2 mm nominal si	cum	1.8	1250	2250
2911	Stone chippings/ screenings 10.0/ 11.20 mm nominal	cum	0.9	1250	1125
2202	Carriage of Stone aggregate below 40 mm nominal si:	cum	2.7	106.49	287.523
128	Mate	day	0.08	363	29.04
114	Beldar	day	1.4	329	460.6
115	Coolie	day	1.4	329	460.6
130	Mistry	day	0.19	435	82.65
114	Beldar	day	5	329	1645
113	Chowkidar	day	0.27	329	88.83
101	Bhisti	day	0.11	363	39.93
3	Hire charges of diesel road roller - 8 to 10 tonne	day	0.11	1500	165
1235	Diesel Oil for road roller @ 18 litres per day	litre	2	55.49	110.98
9999	Carriage of diesel	LS	2.73	1.78	4.8594
2	Hire charges of concrete mixer 0.25 to 0.40 cum with	day	0.189	800	151.2
364	Wire Brush	each	0.11	20	2.2
365	Soft brush	each	0.32	18	5.76
9999	Brooms and gunny bags	LS	6.76	1.78	12.0328
9999	Sundries	LS	9.49	1.78	16.8922
	Total				15406.84

Add water charges 1% 154.07

Total 15560.91

Add CPOH 15% 2334.14

Total 17895.04

for 1 sqm 178.95

- 2 Providing and laying seal coat with 0.90 cum of stone aggregate of 6.7 mm size (Passing 11.2 mm sieve and retained on 2.36mm sieve) per 100 sqm of road surface with bitumen emulsion (SS2) 10kg/10m² of road surface including rolling and finishing with road roller all complete.

Details for 100 sqm

MR	Bitumen emulsion (SS)	tonne	0.1	39040	3904
2211	Carriage of Tar Bitumen	tonne	0.1	106.49	10.649
2910	Stone aggregates 6 mm nominal size	cum	0.9	1140	1026
2202	Carriage of Stone aggregate below 40 mm nominal si:	cum	0.9	106.49	95.841
128	Mate	day	0.06	363	21.78
114	Beldar	day	0.49	329	161.21
115	Coolie	day	0.97	329	319.13

130	Mistry	day	0.05	435	21.75
114	Beldar	day	1.11	329	365.19
113	Chowkidar	day	0.15	329	49.35
101	Bhisti	day	0.06	363	21.78
3	Hire charges of diesel road roller - 8 to 10 tonne	day	0.06	1500	90
1235	Diesel Oil for road roller @ 18 litres per day	litre	1.08	55.49	59.9292
9999	Carriage of diesel	LS	0.26	1.78	0.4628
2	Hire charges of concrete mixer 0.25 to 0.40 cum with	day	0.063	800	50.4
364	Wire Brush	each	0.05	20	1
365	Soft brush	each	0.12	18	2.16
9999	Sundries	LS	18.2	1.78	32.396
Total					6233.03
				Add water charges 1%	62.33
				Total	6295.36
				Add CPOH 15%	944.30
				Total	7239.66
for 1 sqm					72.40

Zydex

1 Subgrade waterproofing

Providing and applying two coats of Terrasil and Zycobond solution prepared in water in the ratio of 1 : 0.5 : 300 (Terrasil : Zycobond: Water) on the prepared surface of subgrade for water proofing and preventing capillary rise. First spray is to be applied at the rate of 2.5 - 3.5 L/sqm and second spray at the same rate applied after 1 - 3 hours of applying first spray, using mechanical means and as per the directions of the departmental officers at the site.

Details of cost for 1750 sq m for one application

MATERIAL

LMR	Terrasil	kg	17.500	1036.20	18133.46
LMR	Zycobond	kg	8.750	241.78	2115.60

LABOUR

0128	Mate	day	0.040	363.00	14.52
0114	Beldar	day	1.000	329.00	329.00

MACHINERY

Bitumen Emulsion pressure distributor @ 1750sqm per hour

hour	1.000	750.00	750.00
TOTAL			21342.58

Add water charges @ 1%

TOTAL 21556.01

Add CPOH @ 15%

TOTAL for one application 24789.41

TOTAL for two application 49578.81

Cost of 1750sqm 49578.81

Cost of 1 sqm 28.33

2 WBM waterproofing

Providing and applying two coats of Terrasil and Zycobond solution prepared in water in the ratio of 1 : 0.5 : 300 (Terrasil : Zycobond: Water) on the WBM surface for water proofing and preventing capillary rise. Spray is to be applied at the rate of 2.5 - 3.5 L/sqm using mechanical means and as per the directions of the departmental officers at the site.

Details of cost for 1750 sq m for one application

MATERIAL

LMR	Terrasil	kg	17.500	1036.20	18133.46
LMR	Zycobond	kg	8.750	241.78	2115.60

LABOUR

0128	Mate	day	0.040	363.00	14.52
0114	Beldar	day	1.000	329.00	329.00
MACHINERY					
	Bitumen Emulsion pressure distributor @ 1750sqm per hour	hour	1.000	750.00	750.00
				TOTAL	21342.58
				Add water charges @ 1%	213.43
				TOTAL	21556.01
				Add CPOH @ 15%	3233.40
				TOTAL	24789.41
				Cost of 1750sqm	24789.41
				Cost of 1 sqm	14.17

**3 2 cm premix carpet surfacing with 1.8cum and 0.90 cum of stone chipping of 13,2 mm size and 11.2mm size respectively per 100 sqm and 52 kg. and 56 kg. of hot bitumen per cum of stone shipping of 13,.2 mm and 11.2 mm size respectivly including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately)
With paving Asphalt grade VG-30 with Antistripping Agent @ 0.1% by weight of bitumen**

Details of cost for 100 sq m

MR	Paving Asphalt VG 30 of approved quality	tonne	0.144	41000	5904.00
2211	Carriage of tar/bitumen	tonne	0.144	106.49	15.33
MR	Antistripping Agent	kilogram	0.144	2000.00	288.00
2910	Stone chipping/screenings 12.5/13.2 mm nominal size @1.80 cm per 100 sqm,	cum	1.800	1250	2250.00
2911	Stone chipping/screenings 10/11.2 mm nominal size @0.90cm per 100 sqm,	cum	0.900	1250.00	1125.00
2202	Carriage of stone aggregate below 40mm nominal size				
0370	Steam coal for heating bitumen @ 2 quintals per tonne of bitumen = 2x0.144 =0.288q	cum	2.700	106.49	287.52
2200	Coal (steam)	quintal	0.288	400.00	115.20
2200	Carriage of steam coal	tonne	0.029	121.70	3.50
LABOUR					
for cleaning the road surface, heating and spraying bitumen and aggregate					
(a) for cleaning.					
0128	Mate	day	0.08	363.00	29.04
0114	Beldar	day	1.400	329.00	460.60
0115	Coolie				
0114	(b) for heating bitumen	day	1.400	329.00	460.60
0114	Beldar				
0114	(c) for screening and spreading aggregate	day	0.570	329.00	187.53
0130	Mistry	day	0.190	435.00	82.65
0114	Beldar				
0114	d) Consolidation charges	day	5.000	329.00	1645.00
0113	Chowkidar				
0101	(a) barrier for night watch and for road roller)	day	0.270	329.00	88.83
0003	Bhisti	day	0.110	363.00	39.93
1235	Hire charges of Diesel Road roller -8 to 10 tonne	day	0.110	1500.00	165.00
9999	Diesel oil				
0001	for road roller @ a8 litres per day	litre	2.000	55.49	110.98
0023	Carriage of diesel	L>S	2.730	1.78	4.86
0364	Hire charges of Coallar Boiler 900 to 1400 litres.	day	0.130	830.00	107.90
0365	Hot bitumen Mixer of 0.5 cum i/c hand cart (e) misc.				
9999	Brushes etc. for cleaning.	day	0.040	4000.00	160.00
9999	Wire Brush				
9999	(with thick wire)	each	0.110	20.00	2.20
9999	Soft brush	each	0.320	18.00	5.76
9999	Brooms and gunny bags	L.S	6.760	1.78	12.03
9999	Sundries.	L.S	9.490	1.78	16.89
				TOTAL	13568.35

Add water charges @ 1%	135.68
TOTAL	13704.03
Add CPOH @ 15%	2055.61
TOTAL	15759.64
Cost of 100 sqm	15759.64
Cost of 1 sqm	157.60

4 Premix Seal Coat

Providing and laying seal coat of premixed 6.7 mm aggregate (Passing 11.2 mm sieve and retained on 2.36mm sieve) using 6.50 kg of bitumen of grade VG-30 per sqm road surface including antistripping agent, rolling and finishing with road roller all complete.

Details for 100 sqm

MR	Paving Asphalt of VG-30 of approved quality	tonne	0.065	41000	2665
2211	Carriage of Tar Bitumen	tonne	0.065	106.49	6.92185
MR	Antistripping Agent	kg	0.065	2000	130
298	Stone aggregates 6 mm nominal size	cum	0.9	1140	1026
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.9	106.49	95.841
370	Coal (Steam)	quintal	1.3	400	520
2200	Carriage of Coal	tonne	0.13	121.7	15.821
	for cleaning road surface, heating bitumen mixing and spreading aggregate :				
128	Mate	day	0.06	363	21.78
114	Beldar	day	0.49	329	161.21
115	Coolie	day	0.97	329	319.13
	(b) for heating bitumen:				
114	Beldar	day	0.25	329	82.25
	(c) for cleaning, mixing and spreading premix aggregate				
130	Mistry	day	0.05	435	21.75
114	Beldar	day	1.11	329	365.19
	(d) Consolidation Charges:				
113	Chowkidar	day	0.15	329	49.35
	(at barrier for night watch and for road roller)				
101	Bhisti	day	0.06	363	21.78
3	Hire charges of diesel road roller - 8 to 10 tonne	day	0.06	1500	90
1235	Diesel Oil for road roller @ 18 litres per day	litre	1.08	55.49	59.9292
9999	Carriage of diesel	LS	0.26	1.78	0.4628
23	Hot Bitumen Mixer 0.5cum i/c hand cart	day	0.01	4000	40
1	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.05	830	41.5
364	Wire Brush	each	0.05	20	1
365	Soft brush	each	0.12	18	2.16
9999	Sundries	LS	18.2	1.78	32.396

Total **5769.47**

Add water charges 1% 57.69

Total 5827.17

Add CPOH 15% 874.07

Total 6701.24

for 1 sqm 67.01

Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.25 to 0.30 kg per sqm on the prepared granular surfaces treated with primer & cleaned with Hydraulic broom as per Technical Specification Clause 503.

Details of cost for 1750 sq.m

LABOUR

0128	Mate	day	0.040	363.00	14.52
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0115	Coolie	Day	1.000	329.00	329
MACHINERY					
0060	Mechanical Broom Hydraulic	hour	1.400	360.00	504
0058	Air compressor	hour	1.400	325.00	455
0061	Emulsion Pressure Distributor @ 1750 sqm per hour	hour	1.000	800.00	800
MATERIAL					
7382	Bitumen emulsion rapid setting (R.S.) confirming to IS : 8887 @c0.275 kg/m ²	T	0.480	29800.00	14304
2211	Carriage of bitumen emulsion	T	0.480	106.49	51.1152
Total					16457.6352
Add water charges @ 1%					164.58
TOTAL					16622.21
Add CPOH @ 15%					2493.33
TOTAL					19115.54
Cost of 1750 sqm					19115.54
Cost of 1 sqm					10.92


CHIEF ENGINEER
 Local Self Government Dept.
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