

RURAL WORKS DEPARTMENT



GOVERNMENT OF BIHAR

CIRCLE – R.W.D. works Circle, Chapra

DIVISION – R.W.D. works Division, Marhaura

Name of Work - Motrable of Road from Madhaura to Apahar
[VR106]

Block - Marhaura

Estimated cost - Rs 732081.00

Year : 2020-21

ABSTRACT OF COST

Name of Work - Motrable of Road from Madhaura to Apahar [VR106]

Block - Marhaura

S.L No.	Particulars	Amount (In Rs.)
A	Cost of Restoration work	Rs 647859.00
B	Add 12 % GST on (A)	Rs 77743.00
C	Add 1 % L. Cess on (A)	Rs 6479.00
	Total Cost	Rs 732081.00

J.E
RWD
Marhaura

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R.W.D
Marhaura

E.E
R.W.D
Marhaura

T/S for Rupar (Seven Lac

T/S for Rupar 7,32,081/- (Seven Lac thirty
two thousand Eighty one only.)

20-12-20
S.E.

Detailed Estimate

Name of work :-

Motrable of Road from Madhaura to Apahar [VR106]

SI No	Item	No	Length	Width	Avg.H/D	Qty	Unit	Rate	Amount
2	Providing and laying reinforced cement concrete pipe NP3 for culverts of 1000 dia, all complete job ———E/I.								
		3	2.50	-	-	7.50			
		Total				7.50	RM	3308.67	24815.00
1	Providing laying and spreading brick bats in Road ditches all complete as per approved design, specifications and direction of E/I	1	11.50	5.00	2.75	158.125			
		1	11.00	6.00	2.50	165.00			
		Total				323.125	cum	1909.87	617125.00
2	Filling and spreading local sand over brick bats as per drawing and technical specification Clause 305.3.9	1	11.50	5.00	0.10	5.75			
		1	11.00	6.00	0.10	6.60			
		Total				12.35	cum	479.27	5919.00
TOTAL									647859.00


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ANALYSIS FOR CARRIAGE OF MATERIAL

(A) Name of the Work :- Motrable of Road from Madhaura to Apahar [VR106]

(B) Haulage Charge By 8 T Capacity Truck

- (i) For Surface Road :- Rs. 7.52 Per t per K.M
- (ii) For Unsurface Toad :- Rs. 9.04 Per t per K.M
- (iii) For Kutcha Road :- Rs. 18.19 Per t per K.M

1 CARRIAGE COST OF BAMBOO 62 MM TO 75 MM OF 6 To 8 M LONG

Lead as per Quarry Chart :- 5 P + 5 K

$$\text{Haulage Cost} = \frac{8}{3.00} \times [(7.52 \times 5.00) + (18.19 \times 5.00)] = 206.09$$

Loading & Unloading =

$$\begin{aligned} &= 2224.00 \\ \text{Total per \% Nos} &= 2430.09 \\ \text{Total per m} &= 3.47 \end{aligned}$$

2 CARRIAGE COST OF STONE BOULDER

Lead as per Quarry Chart :- 180 P + 0 K

$$\text{Haulage Cost} = \frac{8}{4.80} \times [(7.52 \times 180.00) + (18.19 \times 0.00)] = 2256.00$$

Loading & Unloading =

$$\begin{aligned} &= 196.13 \\ \text{Total per M}^3 &= 2452.13 \end{aligned}$$

3 CARRIAGE COST OF GSB Material

Lead as per Quarry Chart :- 180 P + 0 K

$$\text{Haulage Cost} = \frac{8}{4.99} \times [(7.52 \times 180.00) + (18.19 \times 0.00)] = 2170.10$$

Loading & Unloading =

$$\begin{aligned} &= 196.13 \\ \text{Total per M}^3 &= 2366.23 \end{aligned}$$

4 CARRIAGE COST OF HUME PIPE (1000 MM DIA)

Lead as per Quarry Chart :- 55 P + 0 K

$$\text{Haulage Cost} = \frac{8}{22.5} \times [(7.52 \times 55.00) + (18.19 \times 0.00)] = 330.88$$

Loading & Unloading =

$$\begin{aligned} &= 76.58 \\ \text{Total per M} &= 407.46 \end{aligned}$$

5 CARRIAGE COST OF HUME PIPE (600 MM DIA)

Lead as per Quarry Chart :- 55 P + 0 K

$$\text{Haulage Cost} = \frac{8}{52.50} \times [(7.52 \times 55.00) + (18.19 \times 0.00)] = 63.02$$

Loading & Unloading =

$$\begin{aligned} &= 32.82 \\ \text{Total per M} &= 95.84 \end{aligned}$$

(C) Haulage Charge By 3.60 t Tractor capacity

- (i) For Surface Road :- Rs. 18.70 Per t per K.M
(ii) For Unsurface Toad :- Rs. 23.30 Per t per K.M
(iii) For Kutcha Road :- Rs. 29.20 Per t per K.M

1 CARRIAGE COST OF BRICK BAT

Lead as per Quarry Chart :-

7 P + 1 K

$$\text{Haulage Cost} = \frac{3.60}{2.25} \times [(18.70 \times 7.00) + (29.20 \times 1.00)] = 256.16$$

Unloading =

= 65.38

Total per 1000 Nos. = 321.54

2 CARRIAGE COST OF LOCAL SAND

Lead as per Quarry Chart :-

2 P + 1 K

$$\text{Haulage Cost} = \frac{3.60}{2.25} \times [(18.70 \times 2.00) + (29.20 \times 1.00)] = 106.56$$

Unloading =

= 40.81

Total per M³ = 147.37

3 CARRIAGE COST OF STEEL

Lead as per Quarry Chart :-

5 P + 0 K

$$\text{Haulage Cost} = \frac{3.60}{3.60} \times [(18.70 \times 5.00) + (29.20 \times 0.00)] = 93.50$$

Loading & Unloading =

= 325.46

Total per Mt = 418.96

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SUMMARY OF CARRIAGE COST OF MATERIAL

Name of work :-

Motable of Road from Madhaura to Apahar [VR106]

S.I No.	Name of material	Unit	Source	Mode of Transport	Carriage Charge by Road	Total Carriage up to site
1	2	3	4	5	7	8
1	Bricks Bats	per m ³	Local Kiln	By Road	321.54	321.54
2	Fine sand	per m ³	Local source	By Road	147.37	147.37
3	Steel	per mt	Local	By Road	418.96	418.96
4	Boulder	per m ³	Sheikhpura	By Road	2452.13	2452.13
5	Stone metal <50 mm	per m ³	Sheikhpura	By Road	2366.23	2366.23
6	Hume pipe (1000 mm dia)	Per metre	Hajipur	By Road	407.46	407.46
7	Hume pipe (600 mm dia)	Per metre	Hajipur	By Road	95.84	95.84
8	Bamboo of 62 to 75 mm dia	Per metre	Local	By Road	3.47	3.47

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FDR Analysis

Sr. No.	Description	Unit	Quantity	Rate (Rs.)	Amount (Rs.)
1.1	Loading and Unloading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by Manual Means				
	(i) Loading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by manual means including a lead upto 30 m				
	Unit = cum				
	Taking output = 5.5 cum				
	a) Labour				
	Mate	day	0.02	305.00	6.10
	Mazdoor (Unskilled)	day	0.50	287.00	143.50
	b) Machinery				
	Truck	hour	0.50	934.30	467.15
	c) Overheads on (a+b)	=@ 6%			37.01
	d) Contractor's profit on (a+b+c)	=@ 10%			65.38
	Cost for 5.5 cum = a+b+c+d				719.13
	Rate per cum = (a+b+c+d)/5.5				130.75
	(ii) Loading of Earth, Sand, Moorum, Manure, Flyash by manual means including a lead upto 30 m				
	Unit = cum				
	Taking output = 5.5 cum				
	a) Labour				
	Mate	day	0.01	305.00	3.05
	Mazdoor (Unskilled)	day	0.25	287.00	71.75
	b) Machinery				
	Truck	hour	0.25	934.30	233.58
	c) Overheads on (a+b)	=@ 6%			18.50
	d) Contractor's profit on (a+b+c)	=@ 10%			32.69
	Cost for 5.5 cum = a+b+c+d				359.57
	Rate per cum = (a+b+c+d)/5.5				65.38
	(iii) Unloading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by manual means including a lead upto 30 m				
	Unit = cum				
	Taking output = 5.5 cum				
	a) Labour				
	Mate	day	0.01	305.00	3.05
	Mazdoor (Unskilled)	day	0.25	287.00	71.75
	b) Machinery				
	Truck	hour	0.25	934.30	233.58
	c) Overheads on (a+b)	=@ 6%			18.50
	d) Contractor's profit on (a+b+c)	=@ 10%			32.69
	Cost for 5.5 cum = a+b+c+d				359.57
	Rate per cum = (a+b+c+d)/5.5				65.38

(iv) Unloading of Earth, Sand, Moorum, Manure, Flyash by manual means including a lead upto 30 m

Unit = cum

Taking output = 5.5 cum

a) Labour

Mate	day	0.005	305.00	1.53
Mazdoor (Unskilled)	day	0.125	287.00	35.88

b) Machinery

Truck	hour	0.166	934.30	155.09
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c) Overheads on (a+b) =@ 6% 11.55

d) Contractor's profit on (a+b+c) =@ 10% 20.40

Cost for 5.5 cum = a+b+c+d 224.45

Rate per cum = (a+b+c+d)/5.5 40.81

1.3 Loading, Unloading and Stacking of Bricks by Manual Means

(i) Loading of Bricks by manual means including a lead upto 30 m

Unit = 1000 Nos.

Taking output = 2000 Nos.

a) Labour

Mate	day	0.01	305.00	3.05
Mazdoor (Unskilled)	day	0.25	287.00	71.75

b) Machinery

Truck	hour	0.33	934.30	308.32
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c) Overheads on (a+b) =@ 6% 22.99

d) Contractor's profit on (a+b+c) =@ 10% 40.61

Cost for 2000 Nos. = a+b+c+d 446.72

Rate for 1000 bricks = (a+b+c+d)/2 223.36

(ii) Unloading and Stacking of Bricks by manual means including a lead upto 30 m

Unit = 1000 Nos.

Taking output = 2000 Nos.

a) Labour

Mate	day	0.01	305.00	3.05
Mazdoor (Unskilled)	day	0.25	287.00	71.75

b) Machinery

Truck	hour	0.33	934.30	308.32
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c) Overheads on (a+b) =@ 6% 22.99

d) Contractor's profit on (a+b+c) =@ 10% 40.61

Cost for 2000 Nos. = a+b+c+d 446.72

Rate for 1000 bricks = (a+b+c+d)/2 223.36

1.5 Loading and Unloading of Structural Steel and Steel Bars by manual means

(i) Loading of Structural Steel, Steel Bars by manual means including a lead upto 30 m

Unit = t

Taking output = 10 t

a) Labour

Mate	day	0.07	305.00	21.35
Mazdoor (Unskilled)	day	1.80	287.00	516.60

b) Machinery

Truck	hour	1.00	934.30	934.30
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c) Overheads on (a+b) =@ 6% 88.34

d) Contractor's profit on (a+b+c) =@ 10% 156.06

(ii) Unloading of Structural Steel, Steel Bars by manual means including a lead upto 30 m

Unit = t

Taking output = 10 t

a) Labour

Mate	day	0.07	305.00	21.35
Mazdoor (Unskilled)	day	1.80	287.00	516.60

b) Machinery

Truck	hour	1.00	934.30	934.30
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c) Overheads on (a+b)

=@	6%			88.34
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d) Contractor's profit on (a+b+c)

=@	10%			156.06
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Cost for 10 t = a+b+c+d

1716.64

Rate per t = (a+b+c+d)/10

171.66

1.9 Loading and Unloading of Hume Pipes

(i) Loading of RCC Hume pipes by mechanical means including a lead upto 30 m

A. 1000 / 1200 mm dia Hume pipe

Unit = per pipe

Taking output = 9 pipes

a) Labour

Mate	day	0.02	305.00	6.10
Mazdoor (Unskilled)	day	0.50	287.00	143.50

b) Machinery

Truck	hour	0.33	934.30	308.32
Crane	hour	0.33	1,289.30	425.47

c) Overheads on (a+b)

=@	6%			53.00
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d) Contractor's profit on (a+b+c)

=@	10%			93.64
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Cost for 9 pipes = a+b+c+d

1030.03

Rate per pipe = (a+b+c+d)/9

114.45

Rate per M = (a+b+c+d)/2.50

45.78

C. 600/450 mm dia Hume pipe

Unit = per pipe

Taking output = 21 pipe

a) Labour

Mate	day	0.02	305.00	6.10
Mazdoor (Unskilled)	day	0.50	287.00	143.50

b) Machinery

Truck	hour	0.33	934.30	308.32
Crane	hour	0.33	1,289.30	425.47

c) Overheads on (a+b)

=@	6%			53.00
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d) Contractor's profit on (a+b+c)

=@	10%			93.64
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Cost for 21 pipes = a+b+c+d

1030.03

Rate per pipe = (a+b+c+d)/21

49.05

Rate per M = (a+b+c+d)/2.5

19.62

(iii) Unloading of RCC Hume pipes by mechanical means including a lead upto 30 m

A. 1000/1200 mm dia Hume pipe

Unit = per pipe

Taking output = 9 pipes

a) Labour

Mate	day	0.02	305.00	6.10
Mazdoor (Unskilled)	day	0.50	287.00	143.50

b) Machinery

Truck	hour	0.20	934.30	186.86
Crane	hour	0.20	1,289.30	257.86

c) Overheads on (a+b) =@ 6% 35.66

d) Contractor's profit on (a+b+c) =@ 10% 63.00

Cost for 9 pipes = a+b+c+d 692.98

Rate per M = (a+b+c+d)/9 277.19

Rate per pipe = (a+b+c+d)/9 77.00

Rate per M = (a+b+c+d)/9 30.80

C. 600/450 mm dia Hume pipe

Unit = per pipe

Taking output = 21 pipes

a) Labour

Mate	day	0.02	305.00	6.10
Mazdoor (Unskilled)	day	0.50	287.00	143.50

b) Machinery

Truck	hour	0.20	934.30	186.86
Crane	hour	0.20	1,289.30	257.86

c) Overheads on (a+b) =@ 6% 35.66

d) Contractor's profit on (a+b+c) =@ 10% 63.00

Cost for 21 pipes = a+b+c+d 692.98

Rate per pipe = (a+b+c+d)/21 33.00

Rate per M = (a+b+c+d)/9 13.20

BY Truck

1.10 Haulage excluding Loading & Unloading

Haulage of materials by tipper excluding cost of loading, unloading and stacking.

Unit = t.km

Taking output 10 t load and lead 10 km = 100 t.km

Case-I : Surfaced Road

Speed with load: 25 km per hour

Speed while returning empty: 35 km per hour

a) Machinery

Tipper 10 t capacity

Haulage with load	hour	0.40	934.30	373.72
Empty return trip	hour	0.29	934.30	270.95

b) Overheads on (a) =@ 6% 38.68

c) Contractor's profit on (a+b) =@ 10% 68.33

Cost for 100 t.km = a+b+c 751.68

Rate per t.km = (a+b+c)/100 7.52

Case-II: Unsurfaced Gravel Road

Speed with load: 20 km/hour

Speed for empty return trip: 30 km/hour

a) Machinery**Tipper 10 t capacity**

Haulage with load

hour 0.50 934.30 467.15

Empty return trip

hour 0.33 934.30 308.32

b) Overheads on (a)

=@ 6% 46.53

c) Contractor's profit on (a+b)

=@ 10% 82.20

Cost for 100 t.km = a+b+c

904.20

Rate per t.km = (a+b+c)/100

9.04

Case-III Katcha Track and Track in River Bed/Nallah Bed and Choe Bed

Speed with load: 10 km per hour

Speed while returning empty: 15 km per hour

a) Machinery**i) Tipper 10 t capacity**

Haulage with load

hour 1.00 934.30 934.30

Empty return trip

hour 0.67 934.30 625.98

b) Overheads on (a)

=@ 6% 93.62

c) Contractor's profit on (a+b)

=@ 10% 165.39

Cost for 100 t.km = a+b+c

1819.29

Rate per t.km = (a+b+c)/100

18.19

BY Tractor**1.10 Haulage excluding Loading & Unloading**

Haulage of materials by tractor excluding cost of loading, unloading and stacking.

Unit = t.km

Taking output 3.60 t load and lead 10 km = 36 t.km

Case-I : Surfaced Road

Speed with load: 15 km per hour

Speed while returning empty: 25 km per hour

a) Machinery**Tractor 3.60 t capacity**

Haulage with load

hour 0.667 542.00 361.51

Empty return trip

hour 0.40 542.00 216.80

b) Overheads on (a)

=@ 6% 34.70

c) Contractor's profit on (a+b)

=@ 10% 61.30

Cost for 36 t.km = a+b+c

674.31

Rate per t.km = (a+b+c)/36

18.73

Case-II: Unsurfaced Gravel Road

Speed with load: 12 km/hour

Speed for empty return trip: 20 km/hour

a) Machinery**Tractor 3.60 t capacity**

Haulage with load

hour 0.833 542.00 451.49

Empty return trip

hour 0.50 542.00 271.00

b) Overheads on (a)

=@ 6% 43.35

c) Contractor's profit on (a+b)

=@ 10% 76.58

Cost for 100 t.km = a+b+c

842.42

Case-II Katcha Track and Track in River Bed/Nallah Bed and Choe Bed

Speed with load: 10 km per hour

Speed while returning empty: 15 km per hour

a) Machinery**i) Tractor 3.60 t capacity**

Haulage with load hour 1.00 542.00 542.00

Empty return trip hour 0.667 542.00 361.51

b) Overheads on (a) =@ 6% 54.21**c) Contractor's profit on (a+b)** =@ 10% 95.77

Cost for 100 t.km = a+b+c 1053.50

Rate per t.km = (a+b+c)/36 29.26

3.3 Construction of Embankment with Material Obtained from Roadway Cutting

Construction of embankment with approved materials deposited at site from roadway cutting and excavation from drain and foundation of other structures graded and compacted to meet requirement of Tables 300.1 and 300.2 as per Technical Specification Clause 301.5

Unit = cum

Taking output = 120 cum

a) Labour

Mate day 1.80 305.00 549.00

Mazdoor (Unskilled) day 45.00 287.00 12915.00

b) Machinery

Tractor with trolley @ 2.50 cum per trip hour 12.00 542.00 6504.00

c) Overheads on (a+b) =@ 6% 1198.08**d) Contractor's profit on (a+b+c)** =@ 10% 2116.61

Rate for 120 cum = a+b+c+d 23282.69

Rate per cum = (a+b+c+d)/120 194.02

Add royalty with comensation charge Rs.23.65 / cum 23.65

FINISHED RATE CUM 217.67**4.1 Granular Sub-base with Well Graded Material (Table 400.1)****(A) By Mix in Place Method**

Construction of granular sub-base by providing well graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401.

(ii) For Grading II Material

Unit = cum

Taking output = 300 cum

a) Labour

Mate day 0.48 305.00 146.40

Mazdoor (Skilled) day 2.00 364.00 728.00

Mazdoor (Unskilled) day 10.00 287.00 2870.00

b) Machinery

Motor Grader 110 HP @ 50 cum per hour hour 6.00 2,786.00 16716.00

Three wheel 80-100 kN static roller @ 10 cum per hour hour 30.00 803.00 24090.00

Tractor with Rotavator 25 cum per hour hour 12.00 573.20 6878.40

Water tanker 6 kl capacity hour 5.00 184.00 920.00

c)	Material	:			
	Well graded granular sub-base material as per Table 400.1				
	River bed materials Grade-II	cum	134.00	210.35	28186.90
	Water	kl	30.00	40.00	1200.00
d)	Overheads on (a+b+c)	=@	6%		4904.14
e)	Contractor's profit on (a+b+c+d)	=@	10%		8663.98
	Cost for 300 cum = a+b+c+d+e				95303.83
	Rate per cum = (a+b+c+d+e)/300				317.68
f)	Carriage				
	GSB Material	cum	1.28	2,366.23	3028.77
	FINISHED RATE	CUM			3346.45

9.3 Providing and Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Row

Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 1106.

Unit = m

Taking output = 7.5 m

(3 pipes of 2.5 m length each)

(B) 1000 mm dia

a)	Labour				
	Mate	day	0.09	305.00	27.45
	Mason (1st Class)	day	0.25	388.00	97.00
	Mazdoor (Unskilled)	day	2.00	287.00	574.00
b)	Material				
	Sand at site	cum	0.04	0.00	0.00
	Cement at site	t	0.03	0.00	0.00
	RCC pipe NP3 concrete pipe including collar at site	m	7.50	2,744.50	20,583.75
c)	Overheads on (a+b)	=@	6%		1276.93
d)	Contractor's profit on (a+b+c)	=@	10%		2255.91
	Cost for 7.5 m = a+b+c+d				24,815.05
	Rate per m = (a+b+c+d)/7.5				3,308.67
	FINISHED RATE	M			3,308.67

(C) 600 mm dia

a)	Labour				
	Mate	day	0.04	305.00	12.20
	Mason (1st Class)	day	0.12	388.00	46.56
	Mazdoor (Unskilled)	day	0.96	287.00	275.52
b)	Material				
	Sand at site	cum	0.024	0.00	0.00
	Cement at site	t	0.018	0.00	0.00
	RCC pipe NP3 concrete pipe including collar at site	m	7.50	2,058.38	15,437.85
c)	Overheads on (a+b)	=@	6%		946.33
d)	Contractor's profit on (a+b+c)	=@	10%		1671.85
	Cost for 7.5 m = a+b+c+d				18,390.30
	Rate per m = (a+b+c+d)/7.5				2,452.04
	FINISHED RATE	M			2,452.04

5.7.7 Providing and cutting of 62 mm to 75 mm dia bamboo piles to size and making shoes and driving etc. WRD complete job as per specification and direction of E/I.

Unit =Per M

Taking output = 30.50 m

(Assuming 20 nos. pile sunk 1.525 m deep)

a) Labour

Carpenter Gr II	day	0.25	345.00	86.25
Unskilled mazdoor for piling	day	2.50	287.00	717.50

b) Materials

Bamboo of 62 mm to 75 mm dia	M	30.50	20.21	616.41
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c) Overheads on (a+b)

=@	6%			85.21
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d) Contractor's profit on (a+b+c)

=@	10%			150.54
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Cost for 30.50 m = a+b+c+d 1655.90

Rate per m = (a+b+c+d)/30.5 54.29

c) Carriage

Bamboo of 62 mm to 75 mm dia	M	1.00	3.47	3.47
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FINISHED RATE M 57.76

5.7.8 Providing, fitting and fixing split bamboo woven chachari in position with 20 swg G.I. wire or 75 mm to 100 mm long nails alternatively including cost of G.I. wire or nails complete job as per specification and direction of E / I.

Unit =Per sqm

Taking output = 9.30 sqm

(Assuming strip of 3.05X3.05 = 9.30 sqm)

a) Labour

Carpenter Gr II	day	1.00	345.00	345.00
Unskilled mazdoor	day	1.00	287.00	287.00

b) Materials

75 mm to 100 mm long nails	Kg	0.25	55.84	13.96
Bamboo of 62 mm to 75 mm dia	M	56.00	20.21	1131.76

c) Overheads on (a+b)

=@	6%			106.66
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d) Contractor's profit on (a+b+c)

=@	10%			188.44
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Cost for 9.30 sqm = a+b+c+d 2072.82

Rate per sqm = (a+b+c+d)/9.30 222.88

e) Carriage

75 mm to 100 mm long nails	Kg	0.027	0.42	0.01
Bamboo of 62 mm to 75 mm dia	M	6.02	3.47	194.41

FINISHED RATE SQM 417.30

5.7.9 Providing, fitting and fixing 62 mm to 75 mm dia bamboo runners in position at every vertical pile with 150 mm long nails or 38 swg G.I. wire including cost of G.I. wire or nails complete job as per specification and direction of E/I.

Unit =Per m

Taking output = 30.50 m

a) Labour

Carpenter	day	0.125	345.00	43.13
Unskilled mazdoor	day	0.25	287.00	71.75

b) Materials

150 mm long nails	Kg	0.50	55.84	27.92
Bamboo of 62 mm to 75 mm dia	M	30.50	20.21	616.41

c) Overheads on (a+b)

=@	6%			45.55
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d) Contractor's profit on (a+b+c)	=@	10%		80.48
Cost for 30.50 m = a+b+c+d				885.23
Rate per m = (a+b+c+d)/30.50				29.02
e) Carriage				
150 mm long nails	Kg	0.016	0.42	0.01
Bamboo of 62 mm to 75 mm dia	M	1.00	3.47	105.88
FINISHED RATE	M			134.91

5.7.40 WRD Providing and filling empty cement bags with local sand, stitching the bags and placing including supply of sutli etc. all complete as per approved design, specifications and direction of E/I

Unit =Per nos				
Taking output = 100 nos				
a) Labour				
Unskilled mazdoor	day	5.00	287.00	1435.00
b) Materials				
Sand bag (cost of sand + empty cement bag)	Nos	100.00	8.46	846.00
Sutali	Kg	0.50	19.75	9.88
c) Overheads on (a+b)	=@	6%		137.45
d) Contractor's profit on (a+b+c)	=@	10%		242.83
Cost for 100 bags = a+b+c+d				2671.16
Rate per bags = (a+b+c+d)/100				26.71
e) Carriage				
Fine Sand	cum	0.028	0.00	0.00
FINISHED RATE	Nos			26.71

5.7.40 WRD Providing and filling empty cement bags with rubbish / Brick bats (Type-B) , stitching the bags and placing including supply of sutli etc. all complete as per approved design, specifications and

Unit =Per % nos				
Taking output = 100 nos				
a) Labour				
Unskilled mazdoor	day	5.00	287.00	1435.00
b) Materials				
Brick bats / Rubbish	cum	3.40	1063.00	3614.20
Empty cement bags	Nos	100.00	2.92	292.00
Sutali	Kg	0.50	19.75	9.88
c) Overheads on (a+b)	=@	6%		321.06
d) Contractor's profit on (a+b+c)	=@	10%		567.21
Cost for 100 bags = a+b+c+d				6239.35
Rate per bags = (a+b+c+d)/100				62.39
e) Carriage				
Brick bats / Rubbish	cum	0.034	321.54	10.93
FINISHED RATE	Nos			73.32

5.7.40 WRD Providing laying and spreading brick bats in Road ditches all complete as per approved design, specifications and direction of E/I

Unit =Per cum				
Taking output = 1 cum				
a) Labour				
Mate	day	0.04	305.00	12.20
Unskilled mazdoor	day	1.00	287.00	287.00
b) Materials				
Brick bats	cum	1.00	1,063.00	1063.00

c) Overheads on (a+b)	=@	6%		81.73
d) Contractor's profit on (a+b+c)	=@	10%		144.39
Rate per cum = (a+b+c+d)				1588.33
e) Carriage				
Brick bats		cum	1.00	321.54
FINISHED RATE		CUM		1909.87

11.2 Filling and spreading local sand over brick bats as per drawing and technical specification Clause 305.3.9

I. Fine sand filling

Unit = cum

a) Labour

Mate	day	0.01	305.00	3.05
Mazdoor (Unskilled)	day	0.30	287.00	86.10

b) Material

Sand (assuming 20 per cent voids)	cum	1.20	141.85	170.22
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c) Overheads on (a+b)	=@	6%		15.56
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d) Contractor's profit on (a+b+c)	=@	10%		27.49
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Rate per cum = a+b+c+d				302.43
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e) Carriage

Fine sand	cum	1.20	147.37	176.84
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FINISHED RATE		CUM		479.27
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5.7.46 Supplying and placing bamboo roll each roll of 4 nos uncleared full bamboo 75 mm dia 6 m to 8 m long at site binding properly each other in bunch with annealed wire 20 to 25 SWG at least at 3 places, lods filled with local sand in E.C bags 3nos- do---do--- E/I

(c)

WRD

Unit = each

Taking output = 1 nos of bamboo roll

a) Labour

Unskilled mazdoor	day	0.56	287.00	160.72
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b) Materials

Bamboo of 62 mm to 75 mm dia	Nos	4.25	141.47	601.25
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Annealed wire 20 to 25 SWG	Kg	0.50	62.92	31.46
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B.A wire 8 to 10 SWG	Kg	1.13	62.92	70.79
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Sand bags	Nos	3.00	8.46	25.38
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c) Overheads on (a+b)	=@	6%		53.38
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d) Contractor's profit on (a+b+c)	=@	10%		94.30
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Rate per roll = (a+b+c+d)				1039.26
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e) Carriage

Bamboo of 62 mm to 75 mm dia	M	29.750	3.47	103.28
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FINISHED RATE		Nos		1142.54
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5.7.40.3 Providing and laying empty cement bags with local sand, stitching the bags and placing in Nylon crate of size (1 m x 1 m x 1 m) with a lead of 150 M including supply of sutli etc and placing the filled crates in water portion within a lead of 30 M, all complete as per approved design, specifications and direction of E/I

WRD

Unit = Each N.C (Filled with 25 E.C Bags)

a) Labour

Unskilled mazdoor	day	1.55	287.00	444.85
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Skilled mazdoor	day	0.30	364.00	109.20
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Mate	day	0.11	305.00	33.55
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b) Materials

Nylon crate	Nos	1.00	39.85	39.85
Sand bag (cost of sand + empty cement bag)	Nos	25.00	8.46	211.50
Sutali	Kg	0.125	19.75	2.47

c) Overheads on (a+b)

=@ 6% 50.49

d) Contractor's profit on (a+b+c)

=@ 10% 89.19

Cost for each N.C = a+b+c+d 981.09

e) Carriage

Sand bags	Nos	25.00	0.00	0.00
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FINISHED RATE Nos 981.09

J.E
RWD
Marhaura

A.E
R.W.D
Marhaura

E.E
R.W.D
Marhaura