

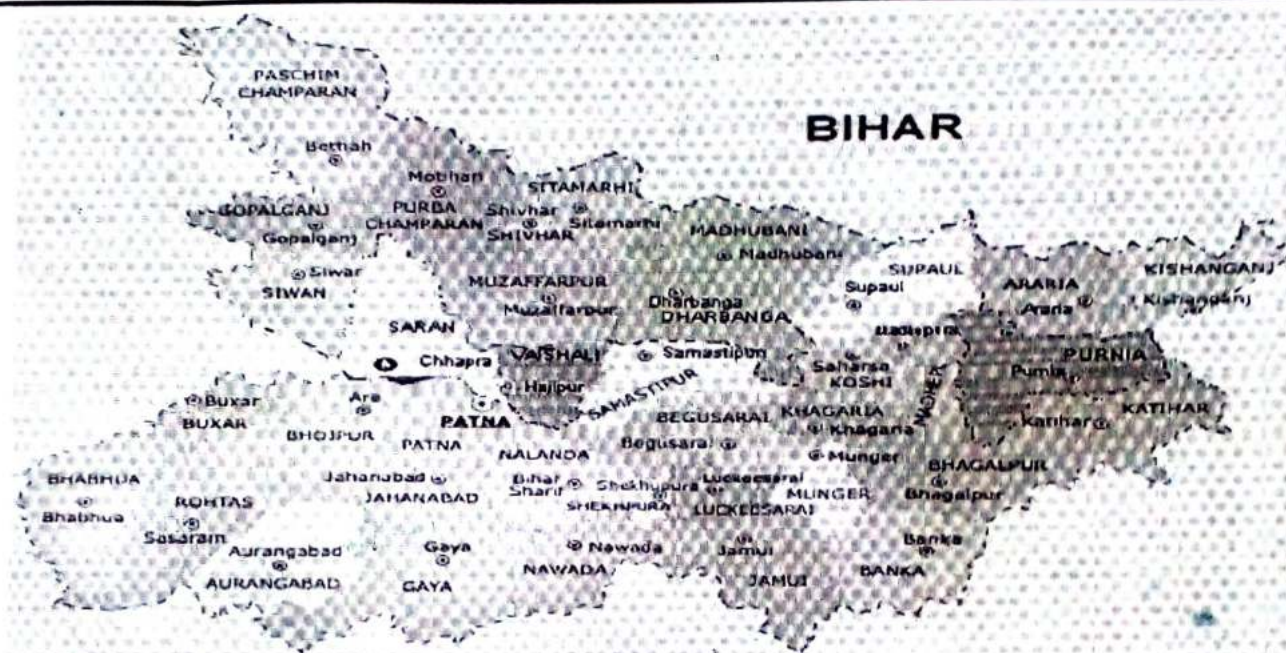


ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

2021-22

FLOOD DAMAGED REPORT

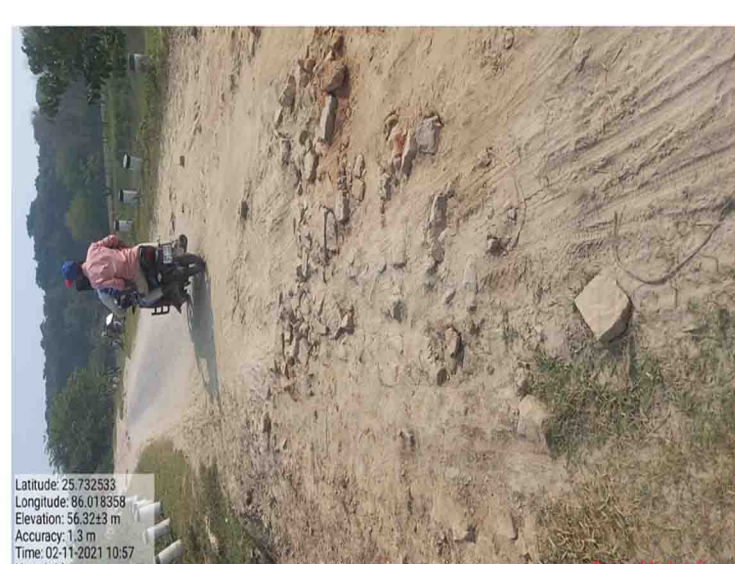
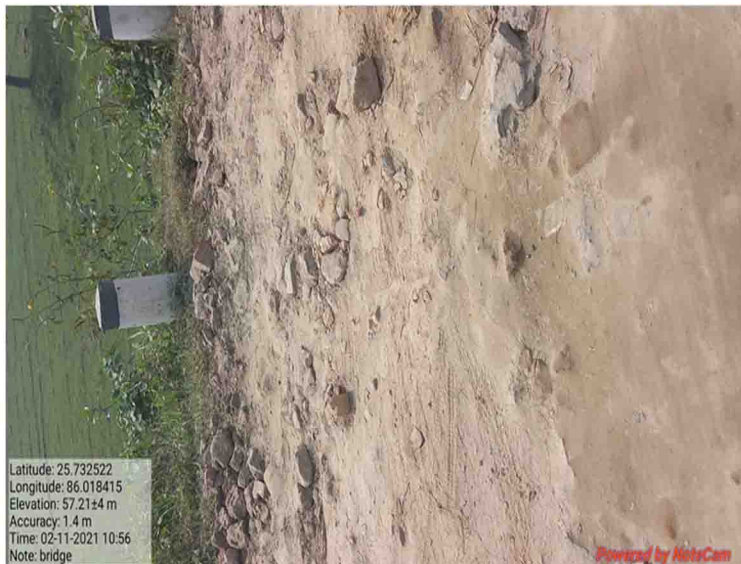
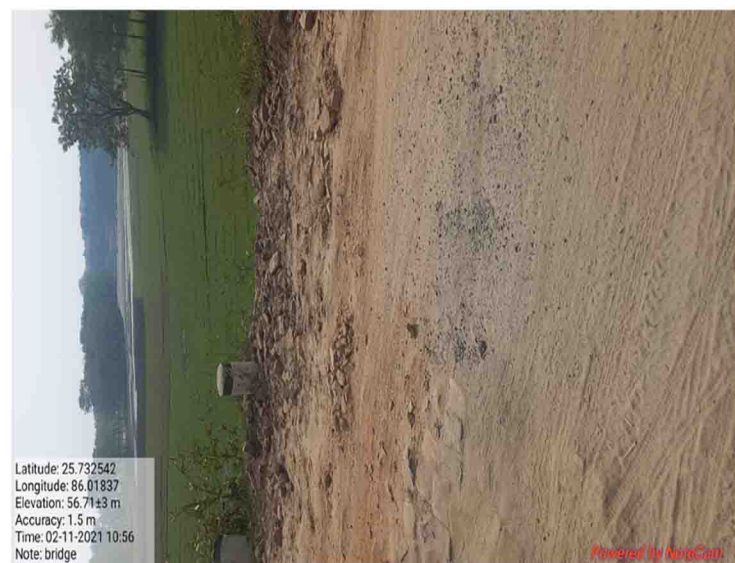
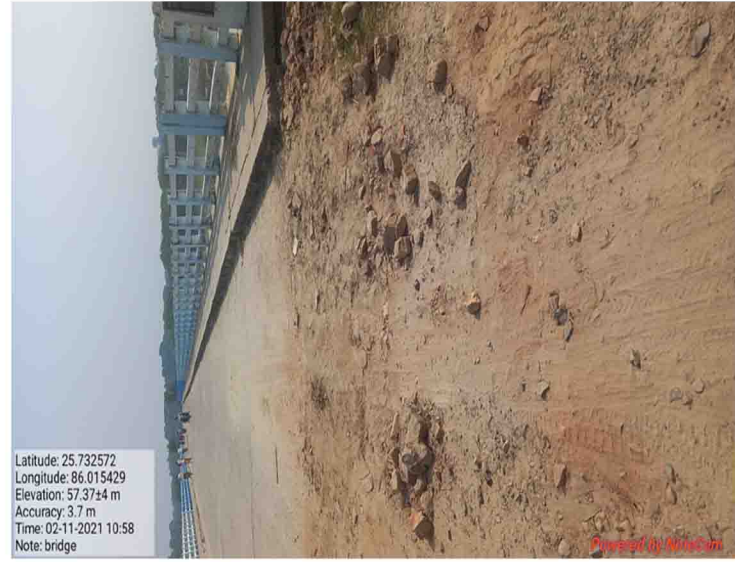


Repair of Bridge Approach H.L. RCC Bridge in Bibhutipur Block
Across Budhi Gandak River Near Mahti.

DISTRICT	:-	Samastipur	
DIVISION	:-	Dalsingh Sarai	
BLOCK	:-	Bibhutipur	
TOTAL LENGTH OF ROAD	:-	0.800	KM
TOTAL COST OF PROJECT	:-	15.86	Lac

Site Photograph

Name of Raod:- H.L. RCC Bridge in Bibhutipur Block Across Budhi Gandak River Near Mahti.



25/10/21
AE.

FDR
YEAR (2021-2022)
GENERAL ABSTRACT OF COST

BLOCK :- BIBHUTIPUR

DISTRICT :- SAMASTIPUR

NAME OF ROAD :- Repair of Bridge Approach H.L. RCC Bridge in Bibhutipur Block Across Budhi Gandak River Near Mahti.

S.NO	ITEM OF WORK						AMOUNT	
A								
	TOTAL COST OF CONSTRUCTION						Rs.	1586045
						SUB TOTAL	Rs.	1586045


28.10.21
Junior Engineer

RWD (W) Section, Bibhutipur


28/10/21
Assistant Engineer
RWD (W) Sub Division,
Bibhutipur

Executive Engineer
RWD, Works Division,
Dalsinghsarai

SUMMARY OF COST ESTIMAT FOR THE PROJECT

ME OF ROAD :- Repair of Bridge Approch H.L. RCC Bridge in Bibhutipur Block Across Budhi Gandak
er Near Mahti.

TRICT

SAMASTIPUR

OCK

BIBHUTIPUR

S.NO	DESCRIPTION	AMOUNT LAKH
1	E/W	450515.000
2	BRICK BAT	529652.000
3	SAND FILLEING	423412.920
	SUB TOTAL:-	1403579.920
	12% GST on Total Amount:-	168429.590
	1% lab cess	14035.799
	Total Cost (including GST and Labour Cess	1586045.000


28/10/21

Junior Engineer


28/10/21

Assistant Engineer

Executive Engineer

VD (W) Section, Bibhutipur

RWD (W)Sub Division, Bibhutipur

RWD, Works Division, Dalsinghsarai

Figure -3

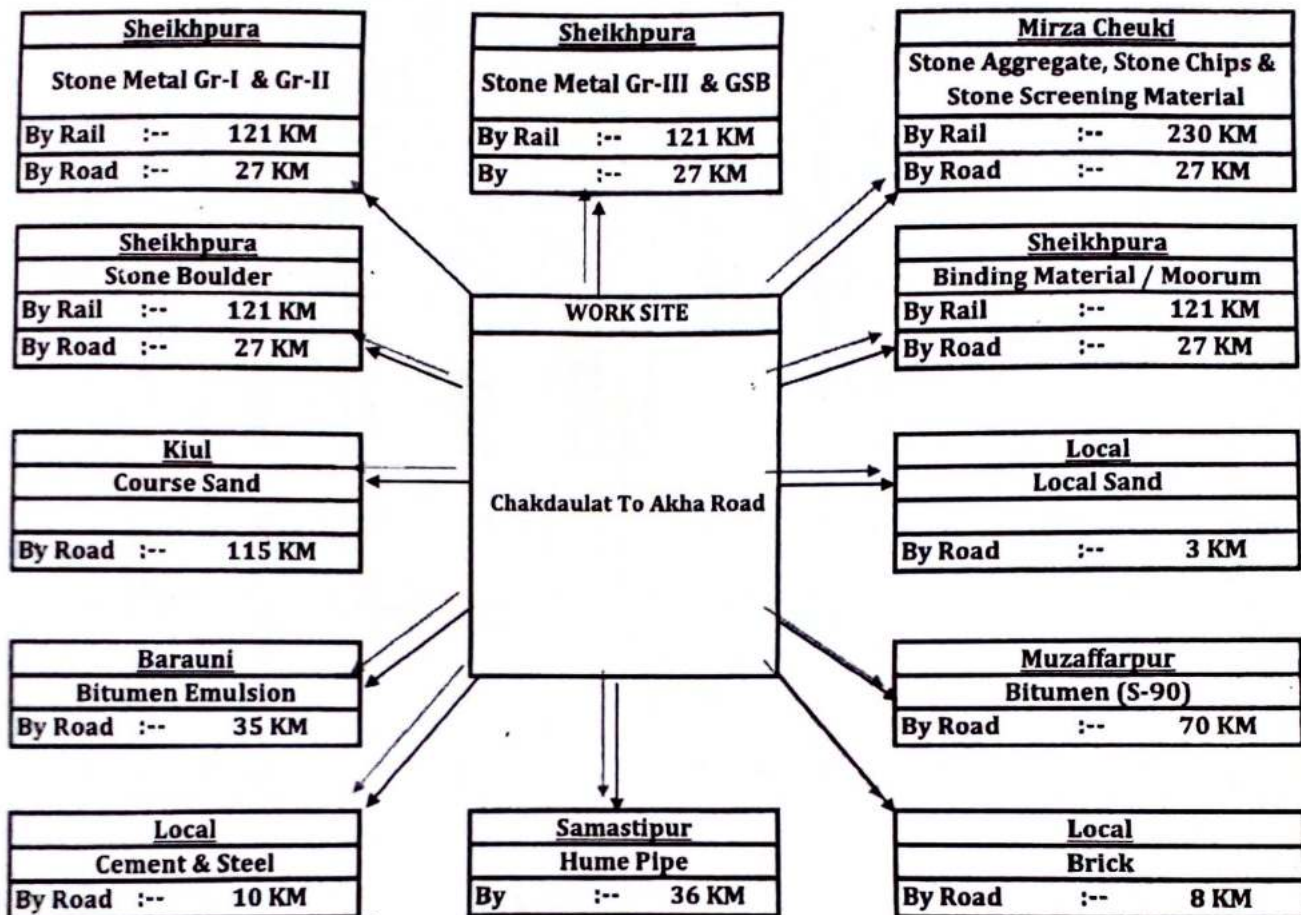
Quarry Map

Name of Road :-- Approach H.L.RCC Bridge in Bibhutipur Block Across Budhi Gandak River Near Mahit

Block :-- Bibhutipur

District :-- Samastipur

Length of the Road:- 0.800 KM



* Subjected to Verification of Lead

[Signature]
28/10/21
J.E

[Signature]
28/10/21
A.E.

E.E

S.E.

SI No	Item with Source	Unit	Source Up to	Pukka / Surface		Katcha		Carriage Cost by Rail Head	Total ₹	Total ₹ Minimum
				8.00 4.59	x 10.10 x 38.00 Km = Rs 668.93	8.00 4.59	x 24.30 x 0.00 Km = Rs 0.00	105.12	Rs. 1799.92	Rs. 1799.92
1	Stone Metal Gr-I & Gr-II (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	8.00 4.59	x 7.94 x 137.00 Km = Rs 1895.91	8.00 4.59	x 19.22 x 0.00 Km = Rs 0.00	210.19	Rs. 2106.10	
2	Stone Metal Gr-III (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	8.00 4.59	x 10.10 x 38.00 Km = Rs 615.31	8.00 4.59	x 24.30 x 0.00 Km = Rs 0.00	105.12	Rs. 1848.77	Rs. 1848.77
3	Stone Metal Gr-III (Chowki by Rail 230 Km)	Cum	Sheikhpura	8.00 4.59	x 7.94 x 137.00 Km = Rs 1743.94	8.00 4.59	x 19.22 x 0.00 Km = Rs 0.00	210.19	Rs. 3082.47	
4	Stone Aggregate / Chips (Mirza Chowki by Rail 230 Km)	Cum	Sheikhpura	8.00 4.59	x 10.10 x 38.00 Km = Rs 615.31	8.00 4.59	x 24.30 x 0.00 Km = Rs 0.00	105.12	Rs. 2308.58	Rs. 2308.58
5	Stone Aggregate / Chips (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	8.00 4.59	x 7.94 x 137.00 Km = Rs 1743.94	8.00 4.59	x 19.22 x 0.00 Km = Rs 0.00	210.19	Rs. 3542.28	
6	Stone Boulder (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	8.00 4.59	x 10.10 x 38.00 Km = Rs 639.67	8.00 4.59	x 24.30 x 0.00 Km = Rs 0.00	105.12	Rs. 1904.60	Rs. 1904.60
7	Stone Boulder	Cum	Sheikhpura	8.00 4.59	x 7.94 x 137.00 Km = Rs 1812.97	8.00 4.59	x 19.22 x 0.00 Km = Rs 0.00	210.19	Rs. 3182.97	
8	Course Sand	Cum	Kiul	8.00 4.59	x 7.94 x 208.00 Km = Rs 2647.73	8.00 4.59	x 19.22 x 0.00 Km = Rs 0.00	113.67	Rs. 2761.40	Rs. 2761.40
9	Binding Material/Moorum (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	8.00 6.00	x 10.10 x 38.00 Km = Rs 511.73	8.00 6.00	x 24.30 x 0.00 Km = Rs 0.00	113.67	Rs. 1476.89	Rs. 1476.89
10	Binding Material/Moorum	Cum	Sheikhpura	8.00 6.00	x 7.94 x 137.00 Km = Rs 1450.37	8.00 6.00	x 19.22 x 0.00 Km = Rs 0.00	66.31	Rs. 2368.17	
11	Local Sand	Cum	Local	8.00 4.59	x 10.10 x 2.00 Km = Rs 32.38	8.00 4.59	x 24.30 x 1.00 Km = Rs 38.96	113.67	Rs. 185.01	Rs. 185.01
12	Brick	1000 Nos	Local	8.00 2.00	x 7.94 x 7.00 Km = Rs 222.32	8.00 2.00	x 19.22 x 1.00 Km = Rs 76.88	477.44	Rs. 776.64	Rs. 776.64
13	Cement	MT	Local	8.00 8.00	x 7.94 x 10.00 Km = Rs 79.40	8.00 8.00	x 19.22 x 0.00 Km = Rs 0.00	347.32	Rs. 426.72	Rs. 426.72
14	Steel	MT	Local	8.00 8.00	x 7.94 x 10.00 Km = Rs 79.40	8.00 8.00	x 19.22 x 0.00 Km = Rs 0.00	370.58	Rs. 449.98	Rs. 449.98
15	Bitumen Emulsion	MT	Barauni	8.00 8.00	x 7.94 x 82.00 Km = Rs 651.08	8.00 8.00	x 19.22 x 0.00 Km = Rs 0.00	396.98	Rs. 1048.06	Rs. 1048.06
16	Bitumen	MT	Muzaffarpur	8.00 8.00	x 7.94 x 91.00 Km = Rs 722.54	8.00 8.00	x 19.22 x 0.00 Km = Rs 0.00	396.98	Rs. 1119.52	Rs. 1119.52
17	Hume Pipe (1000 mm)	m	Samastipur	8.00 10.00	x 7.94 x 36.00 Km = Rs 228.67	8.00 10.00	x 19.22 x 0.00 Km = Rs 0.00	70.84	Rs. 299.51	Rs. 299.51
18	Hume Pipe (600 mm)	m	Samastipur	8.00 25.00	x 7.94 x 36.00 Km = Rs 91.47	8.00 25.00	x 19.22 x 0.00 Km = Rs 0.00	30.36	Rs. 121.83	Rs. 121.83
19	Hume Pipe (300 mm)	m	Samastipur	8.00 60.00	x 7.94 x 36.00 Km = Rs 38.11	8.00 60.00	x 19.22 x 0.00 Km = Rs 0.00	30.36	Rs. 68.47	Rs. 68.47

Cost of Haulage Excluding Loading & Unloading as per MCR as

Type of Road	₹ Per Ton. Km by Tipper	₹ Per Ton. Km by Truck
For Surface Road	10.10	9.94
Unsurface Gravel Road	12.10	9.55
Kachha Road	24.30	19.22

* Subjected to Verification of Lead

FORM F8

AE 28/10/21
PWD

JE RWD

EE RWD

Analysis for Carriage Through Railway from Quarry Site to Work Site

Sheikhpura to Karpurigram

Material -Stone Metal Gr-I & Gr-II

Quarry Site to Sheikhpura Railway Yard (By Road)

Pucka / Surface		Carriage Cost & Lead in Km		Katcha		Loading & Unloading		Total
$\frac{8.00}{4.59}$	x 10.10	x 4.00 Km	= Rs 70.41	+	$\frac{8.00}{4.59}$ x 24.30	x 0.00 Km	= Rs 0.00	+ Rs 105.12 = Rs 175.53
UnSurface			$\frac{8.00}{4.59}$ x 12.10	x 1.00 Km				= Rs 21.09
Loading & Unloading Cost by manual							= Rs 210.19	= Rs 210.19
							Total	= Rs 406.81
Less for O.H & C.P			= Rs 406.81 / 1.166		= Rs 348.89		Total "A"	= Rs 348.89

Sheikhpura Railway Yard to Karpurigram

Railway Yard = 121.00 Km

Railway freight charge from Sheikhpura Railway station to Karpurigram Railway station	= For 1 MT	121.00 Km	= Rs 231.30	= Rs 231.30
Busy Season charge 15% of Railway freight charge	= For 1 MT		= 15%	= Rs 34.70
Railway Development Charge to 5% of Railway freight Charge	= For 1 MT		= 5%	= Rs 11.57
Terminal charge @Rs.40.00 per Terminal per MT	= For 1 MT		x Rs 40.00	= Rs 0.00
GST 0 % (4% included in Overhead Charges)	= Rs 277.57 x 0%			= Rs 0.00
Total	= For 1 MT			= Rs 277.57
Rail Freight =	1.743 x Rs 277.57		"B"	= Rs 483.80
Gross cost for Railway freight charge "A" + "B"				
Add 12% Overhead Charge				
			= 12%	= Rs 99.92
Add 10% Contractor Profit				
			= 10%	= Rs 93.26

Carriage Cost from Quarry to Karpurigram Railway Yard For 1000 cum = Rs 1045.87

Analysis for Carriage Through Railway from Quarry Site to Work Site

Sheikhpura to Karpurigram

Material -Stone Metal Gr-III / GSB

Quarry Site to Sheikhpura Railway Yard (By Road)

Pucka / Surface		Carriage Cost & Lead in Km		Katcha		Loading & Unloading		Total
$\frac{8.00}{4.99}$	x 10.10	x 4.00 Km	= Rs 64.77	+	$\frac{8.00}{4.99}$ x 24.30	x 0.00 Km	= Rs 0.00	+ Rs 105.12 = Rs 169.89
UnSurface			$\frac{8.00}{4.99}$ x 12.10	x 1.00 Km				= Rs 19.40
Loading & Unloading Cost by manual							= Rs 210.19	= Rs 210.19
							Total	= Rs 399.48
Less for O.H & C.P			= Rs 399.48 / 1.166		= Rs 342.61		Total "A"	= Rs 342.61

Sheikhpura Railway Yard to Karpurigram		Railway Yard = 121.00 Km			
Railway freight charge from Sheikhpura Railway station to Karpurigram Railway station	=	For 1 MT	121.00 Km	=	Rs 231.30 = Rs 231.30
Busy Season charge 15% of Railway freight charge	=	For 1 MT		=	15% = Rs 34.70
Railway Development Charge to 5% of Railway freight Charge		For 1 MT		=	5% = Rs 11.57
Terminal charge @Rs.40.00 per Terminal per MT		For 1 MT	2	x	Rs 40.00 = Rs 80.00
GST 0 % *(4% Included in Overhead Charges) =	Rs 357.57	x	0%		= Rs 0.00
Total	=	For 1 MT			= Rs 357.57
Rail Freight =	1.603 x	Rs 357.57	For 1 MT	"B"	= Rs 573.25
Cost of Carriage from Quarry to Karpurigram Railway Yard					
For 1 Cum					
Add 12% Overhead Charge					
= 12% = Rs 109.99					
Add 10% Contractor Profit					
= 10% = Rs 102.58					
Cost of Carriage from Quarry to Karpurigram Railway Yard					
For 1 Cum					
= Rs 1128.34					

Analysis for Carriage Through Railway from Quarry Site to Work Site

Mirza Chowki to Karpurigram

Material -Stone Aggregate / Chips

Quarry Site to Mirza Chowki Railway Yard (By Road)

		Carriage Cost & Lead in Km						Loading & Unloading		Total								
		Pucka / Surface				Katcha												
8.00	x	10.10	x	4.00 Km	=	Rs 64.77	+	8.00	x	24.30	x	0.00 Km	=	Rs 0.00	+	Rs 105.12	=	Rs 169.89
4.99								4.99										
		UnSurface																

Analysis for Carriage Through Railway from Quarry Site to Work Site

Sheikhpura to Karpurigram

Material -Stone Metal Gr-I & Gr-II

Quarry Site to Sheikhpura Railway Yard (By Road)

Pucka / Surface		Carriage Cost & Lead in Km				Katcha		Loading & Unloading		Total
$\frac{8.00}{4.59}$	x 10.10	x 4.00 Km	= Rs 70.41	+	$\frac{8.00}{4.59}$	x 24.30	x 0.00 Km	= Rs 0.00	+ Rs 105.12	= Rs 175.53
UnSurface			$\frac{8.00}{4.59}$	x 12.10	x 1.00 Km					= Rs 21.09
Loading & Unloading Cost by manual								= Rs 210.19		= Rs 210.19
								Total		= Rs 406.81
Less for O.H. & C.P.		= Rs 406.81 / 1.166						= Rs 348.89		Total 'A' = Rs 348.89

Sheikhpura Railway Yard to Karpurigram

Railway Yard = 121.00 Km

Railway freight charge from Sheikhpura Railway station to Karpurigram Railway station	= For 1 MT	121.00 Km	= Rs 231.30	= Rs 231.30
Busy Season charge 15% of Railway freight charge	= For 1 MT		= 15%	= Rs 34.70
Railway Development Charge to 5% of Railway freight Charge	For 1 MT		= 5%	= Rs 11.57
Terminal charge @Rs.40.00 per Terminal per MT	For 1 MT		x Rs 40.00	= Rs 0.00
GST 0 % *(4% included in Overhead Charges) = Rs 277.57 x 0%				= Rs 0.00
Total	= For 1 MT			= Rs 277.57
Rail Freight = 1.743 x Rs 277.57	For 1 MT		'B'	= Rs 483.80

Gross Cost for Railway freight charge 'A' + 'B'				
		Add 12% Overhead Charge		= 12% = Rs 99.92
		Add 10% Contractor Profit		= 10% = Rs 93.26

Carriage Cost from Quarry to Karpurigram Railway Yard	For 1 cum	= Rs 1025.87
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Analysis for Carriage Through Railway from Quarry Site to Work Site

Sheikhpura to Karpurigram

Material -Stone Metal Gr-III / GSB

Quarry Site to Sheikhpura Railway Yard (By Road)

Pucka / Surface		Carriage Cost & Lead in Km				Katcha		Loading & Unloading		Total
$\frac{8.00}{4.99}$	x 10.10	x 4.00 Km	= Rs 64.77	+	$\frac{8.00}{4.99}$	x 24.30	x 0.00 Km	= Rs 0.00	+ Rs 105.12	= Rs 169.89
UnSurface			$\frac{8.00}{4.99}$	x 12.10	x 1.00 Km					= Rs 19.40
Loading & Unloading Cost by manual								= Rs 210.19		= Rs 210.19
								Total		= Rs 399.48
Less for O.H. & C.P.		= Rs 399.48 / 1.166						= Rs 342.61		Total 'A' = Rs 342.61

1990

Analysis for Carriage Through Railway from Quarry Site to Work Site

Sheikhpura to Karpurigram

Material -Stone Boulder

Quarry Site to Sheikhpura Railway Yard (By Road)

Pucka / Surface		Carriage Cost & Lead in Km		Katcha		Loading & Unloading		Total
$\frac{8.00}{4.80} \times 10.10 \times 4.00 \text{ Km}$	= Rs 67.33	+	$\frac{8.00}{4.80} \times 24.30 \times 0.00 \text{ Km}$	= Rs 0.00	+	Rs 105.12	=	Rs 172.45
UnSurface			$\frac{8.00}{4.80} \times 12.10 \times 1.00 \text{ Km}$				=	Rs 20.17
Loading & Unloading Cost by manual			=			= Rs 210.19	=	Rs 210.19
						Total	=	Rs 402.81
Less for O.H & C.P.		=	Rs 402.81 / 1.166	=	Rs 345.46	Total 'A'	=	Rs 345.46

Sheikhpura Railway Yard to Karpurigram

Railway Yard = 121.00 Km

Railway freight charge from Sheikhpura Railway station to Karpurigram Railway station

= For 1 MT 121.00 Km = Rs 231.30 = Rs 231.30

Busy Season charge 15% of Railway freight charge

= For 1 MT = 15% = Rs 34.70

Railway Development Charge to 5% of Railway freight Charge

For 1 MT = 5% = Rs 11.57

Terminal charge @Rs.40.00 per Terminal per MT

For 1 MT 2 x Rs 40.00 = Rs 80.00

GST 0% *(4% included in Overhead Charges) = Rs 357.57 x 0%

= Rs 0.00

Total = For 1 MT

= Rs 357.57

Rail Freight = 1.667 x Rs 357.57

For 1 MT 'B' = Rs 595.94

Carriage Cost from Quarry to Karpurigram Railway Yard For 1 Cum = Rs 1159.81

Add 12% Overhead Charge = 12% = Rs 112.97

Add 10% Contractor Profit = 10% = Rs 105.44

Carriage Cost from Quarry to Karpurigram Railway Yard For 1 Cum = Rs 1159.81

Analysis for Carriage Through Railway from Quarry Site to Work Site

Sheikhpura to Karpurigram

Binding Material /Moorum

Quarry Site to Sheikhpura Railway Yard (By Road)

Pucka / Surface		Carriage Cost & Lead in Km		Katcha		Loading & Unloading		Total
$\frac{8.00}{6.00} \times 10.10 \times 4.00 \text{ Km}$	= Rs 53.87	+	$\frac{8.00}{6.00} \times 24.30 \times 0.00 \text{ Km}$	= Rs 0.00	+	Rs 66.31	=	Rs 120.18
UnSurface			$\frac{8.00}{6.00} \times 12.10 \times 1.00 \text{ Km}$				=	Rs 16.13
Loading & Unloading Cost by manual			=			= Rs 113.67	=	Rs 113.67
						Total	=	Rs 249.98
Less for O.H & C.P.		=	Rs 249.98 / 1.166	=	Rs 214.39	Total 'A'	=	Rs 214.39

Sheikhpura Railway Yard to Karpurigram

Railway Yard = 121.00 Km

Railway freight charge from Sheikhpura Railway station to Karpurigram Railway station	=	For 1 MT	121.00 Km	=	Rs 231.30	=	Rs 231.30
Busy Season charge 15% of Railway freight charge	=	For 1 MT		=	15%	=	Rs 34.70
Railway Development Charge to 5% of Railway freight Charge		For 1 MT		=	5%	=	Rs 11.57
Terminal charge @Rs.40.00 per Terminal per MT		For 1 MT	2	x	Rs 40.00	=	Rs 80.00
GST 0 % "(4% Included In Overhead Charges) =	Rs 357.57	x	0%			=	Rs 0.00
Total			For 1 MT			=	Rs 357.57
Rail freight =	1,333 x	Rs 357.57	For 1 MT	"B"		=	Rs 476.67
Add 12% Overhead Charge							
				=	12%	=	Rs 82.99
Add 10% Contractor Profit							
				=	10%	=	Rs 77.44
Carriage Cost from Quarry to Karpurigram Railway Yard			For 1 Cum			=	Rs 851.10

Analysis of Rates (FORMAT F8)

Sl. No.	SDB No.	MORD Ref. No.	DESCRIPTION	Unit	Quantity	Rate	Amount in Rs
1	1.10	(i)	Haulage BY TIPPER 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	1183.00	473.20
			Empty return trip	hour	0.29	1183.00	343.07
		b)	Overheads @ 12%				97.95
		c)	Contractor's profit @ 10% on (a+b)				91.42
			Cost for 100 t-km = a+b+c				1005.64
			Rate per cum = (a+b+c) / 100				10.06
			Rate Per Km.	Cum			10.10
2	1.10	(ii)	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-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	1183.00	591.50
			Empty return trip	hour	0.33	1183.00	390.39
		b)	Overheads @ 12%				117.83
		c)	Contractor's profit @ 10% on (a+b)				109.97
			Cost for 100 t-km = a+b+c				1209.69
			Rate per cum = (a+b+c) / 100				12.10
			Rate Per Km.	Cum			12.10
3	1.10	(iii)	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-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 Tipper 10 t capacity Haulage with load	hour	1.00	1183.00	1183.00
			Empty return trip	hour	0.67	1183.00	792.61
		b)	Overheads @ 12%				237.07
		c)	Contractor's profit @ 10% on (a+b)				221.27
			Cost for 100 t-km = a+b+c				2433.95
			Rate per cum = (a+b+c) / 100				24.34
			Rate Per Km.	Cum			24.30
			Haulage BY TRUCK				
1.10	(i)	Haulage excluding Loading & Unloading Haulage of materials by tipper excluding cost of loading, unloading and stacking.					

Analysis of Rates (FORMAT F8)

Sl. No.	SDB Sl. No.	MORD Ref. No.	DESCRIPTION	Unit	Quantity	Rate	Amount	
		a)	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 Machinery Truck 10 t capacity Haulage with load Empty return trip b) Overheads @ 12% c) Contractor's profit @ 10% on (a+b) Cost for 100 t-km = a+b+c Rate per cum = (a+b+c) / 100	hour hour	0.40 0.29	934.30 934.30	373.7 270.8 77.3 72.1 794.1 7.8	
5	1.10	(II)	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-II: Unsurfaced Gravel Road. Speed with load: 20 km/hour Speed for empty return trip: 30 km/hour a) Machinery Truck 10 t capacity Haulage with load Empty return trip b) Overheads @ 12% c) Contractor's profit @ 10% on (a+b) Cost for 100 t-km = a+b+c Rate per cum = (a+b+c) / 100	hour hour	0.50 0.33	934.30 934.30	467.1 308.8 93.1 86.1 953.1 9.5	
6	1.10	(III)	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-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 Truck 10 t capacity Haulage with load Empty return trip b) Overheads @ 12% c) Contractor's profit @ 10% on (a+b) Cost for 100 t-km = a+b+c Rate per cum = (a+b+c) / 100	hour hour	1.00 0.67	934.30 934.30	934.3 623.8 187.1 174.1 1922.3 19.2	
7	1.10	RCD	Loading and Unloading of Stone Boulder/Stone aggregates/Sand/Kanker/Moorum. Placing tipper at loading point, loading with front end loader, dumping, turning for return trip, excluding time for haulage and Unit = cum Taking output = 5.5 cum Time required for i) Positioning of tipper at loading point ii) Loading by front end loader 1 cum bucket capacity @ 25 cum per hour iii) Maneuvering, reversing, dumping and turning for return iv) Waiting time, unforeseen contingencies etc Total a) Machinery Tipper 5.5 tonnes capacity Front end-loader 1 cum bucket capacity @ 25 cum/hour Overheads @ 12%	hour hour	1 Min 13 Min 2 Min 4 Min 20 Min	0.33 0.33	1183.00 1403.00	39.1 46.6 10.0

Analysis of Rates (FORMAT F8)

Sl. No.	SDE Sl. No.	MORD Ref No.	DESCRIPTION	Unit	Quantity	Rate	Amount in Rs
			c) Contractor's profit @ 10% on (a+b) Cost for 5.5 cum = a+b+c Rate per cum = (a+b+c) / 5.5 Unloading will be by tipping.				95.58 1051.36 191.16
8	1.20	RCD	Loading and Unloading of Boulders by Manual Means Unit = cum Taking output = 5.5 cum a) Labour Mate Mazdoor for loading and unloading b) Machinery Tipper 5.5 tonne capacity Overheads @ 12% d) Contractor's profit @ 10% on (a+b+c) Cost for 5.5 cum = a+b+c+d Rate per cum = (a+b+c+d) / 5.5 Unloading will be by tipping.	day day hour	0.11 0.75 0.75	321.00 304.00 1183.00	35.31 228.00 887.25 138.07 128.86 1417.49 257.73
						say	191.20
9	1.30	RCD	Loading and Unloading of Cement or Steel by Manual Means and Unit = tonne Taking output = 10 tonnes a) Labour Mate Mazdoor for loading and unloading b) Machinery Truck 10 tonne capacity Overheads @ 12% d) Contractor's profit @ 10% on (a+b+c) Cost for 10 tonnes = a+b+c+d Rate per tonnes = (a+b+c+d) / 10 Unloading will be by tipping.	day day hour	0.08 2.00 2.00	321.00 304.00 934.30	25.68 608.00 1868.60 300.27 280.26 3082.81 308.28
						say	257.75
10	1.1	(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 Mazdoor (Unskilled) b) Machinery Truck c) Overheads @ 12% d) Contractor's profit @ 10% on (a+b+c) Cost for 5.5 cum = a+b+c+d Rate per cum = (a+b+c+d) / 5.5 Total Cost	day day hour	0.02 0.50 0.50	321.00 304.00 934.30	6.42 152.00 467.15 75.07 70.06 770.70 140.13
				Cum			140.13
		(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 Mazdoor (Unskilled) b) Machinery Truck c) Overheads @ 12% d) Contractor's profit @ 10% on (a+b+c) Cost for 5.5 cum = a+b+c+d Rate per cum = (a+b+c+d) / 5.5 Total Cost	day day hour	0.01 0.25 0.25	321.00 304.00 934.30	3.21 76.00 233.58 37.53 35.03 385.35 70.06
				Cum			70.06
12		(iii)	Unloading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by mechanical means including a lead upto 30 m Unit = cum Taking output = 5.5 cum a) Labour Mate	day	0.01	321.00	3.21

Analysis of Rates (FORMAT F8)

Sl. No.	SDB Sl. No.	MORD Ref. No.	DESCRIPTION	Unit	Quantity	Rate	Amount
			Mazdoor (Unskilled)	day	0.25	304.00	76.00
		b)	Machinery	hour	0.25	934.30	233.58
			Truck				37.50
		c)	Overheads @ 12%				35.00
		d)	Contractor's profit @ 10% on (a+b+c)				385.30
			Cost for 5.5 cum = a+b+c+d				70.06
			Rate per cum = (a+b+c+d) / 5.5				70.06
			Total Cost	Cum			70.06
			Total Loding & Unloading of Stone Aggregate	Cum		= 140.13 + 70.06 =	210.19
13		(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	day	0.01	321.00	1.61
			Mate	day	0.13	304.00	38.00
		b)	Machinery	hour	0.17	934.30	155.00
			Truck				23.36
		c)	Overheads @ 12%				21.81
		d)	Contractor's profit @ 10% on (a+b+c)				239.87
			Cost for 5.5 cum = a+b+c+d				43.61
			Rate per cum = (a+b+c+d) / 5.5				43.61
			Total Cost	Cum			43.61
			Total Loding & Unloading of Sand / Moorum	Cum		= 70.06 + 43.61 =	113.67
14	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	day	0.01	321.00	3.21
			Mate	day	0.25	304.00	76.00
		b)	Machinery	hour	0.33	934.30	308.30
			Truck				46.50
		c)	Overheads @ 12%				43.40
		d)	Contractor's profit @ 10% on (a+b+c)				477.40
			Cost for 2000 Nos. = a+b+c+d				238.72
			Rate for 1000 bricks = (a+b+c+d)/2				238.72
			Total Cost	no.			238.72
15		(II)	Unloading and Stacking of Bricks by manual means including a lead upto 30 m Unit = 1000 Nos. Taking output = 2000 Nos.				
		a)	Labour	day	0.01	321.00	3.21
			Mate	day	0.25	304.00	76.00
		b)	Machinery	hour	0.33	934.30	308.30
			Truck				46.50
		c)	Overheads @ 12%				43.40
		d)	Contractor's profit @ 10% on (a+b+c)				477.40
			Cost for 2000 Nos. = a+b+c+d				238.72
			Rate for 1000 bricks = (a+b+c+d)/2				238.72
			Total Cost	no.			238.72
			Total Loding & Unloading of Brick Per 1000			= 238.72 + 238.72 =	477.44
16		(I)	Loading and Unloading of Cement by Manual Means Loading of Cement by manual means including a lead upto 30 m Unit = t Taking output = 10 t				
		a)	Labour	day	0.06	321.00	19.26
			Mate	day	1.50	304.00	456.00
			Mazdoor (Unskilled)				

Analysis of Rates (FORMAT F8)

SL No.	SDB SL No.	MORD Ref No.	DESCRIPTION	Unit	Quantity	Rate	Amount in Rs
		b)	Machinery				
			Truck				
		c)	Overheads @ 12%	hour	1.00	934.30	934.30
		d)	Contractor's profit @ 10% on (a+b+c)				169.15
			Cost for 10 t = a+b+c+d				157.87
			Rate per tonnes = (a+b+c+d)/10				1736.58
							173.66
17		(ii)	Unloading of Cement by manual means including a lead upto 30 m	t			173.66
			Unit = t				
			Taking output = 10 t				
		a)	Labour				
			Mate	day	0.06	321.00	19.26
			Mazdoor (Unskilled)	day	1.50	304.00	456.00
		b)	Machinery				
			Truck	hour	1.00	934.30	934.30
		c)	Overheads @ 12%				169.15
		d)	Contractor's profit @ 10% on (a+b+c)				157.87
			Cost for 10 t = a+b+c+d				1736.58
			Rate per tonne = (a+b+c+d)/10				173.66
			Total Cost	t			173.66
			Total Loding & Unloading of Cement	t			347.32
18	1.5	(i)	Loading and Unloading of Structural Steel and Steel Bars by manual means				
			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	321.00	22.47
			Mazdoor (Unskilled)	day	1.80	304.00	547.20
		b)	Machinery				
			Truck	hour	1.00	934.30	934.30
		c)	Overheads @ 12%				180.48
		d)	Contractor's profit @ 10% on (a+b+c)				168.44
			Cost for 10 t = a+b+c+d				1852.89
			Rate per tonnes = (a+b+c+d)/10				185.29
			Total Cost	t			185.29
19		(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	321.00	22.47
			Mazdoor (Unskilled)	day	1.80	304.00	547.20
		b)	Machinery				
			Truck	hour	1.00	934.30	934.30
		c)	Overheads @ 12%				180.48
		d)	Contractor's profit @ 10% on (a+b+c)				168.44
			Cost for 10 t = a+b+c+d				1852.89
			Rate per t = (a+b+c+d)/10				185.29
			Total Cost	t			185.29
			Total Loding & Unloading of Steel	t			370.58
20	1.6	(i)	Loading and Unloading of Bitumen Drums by Manual Means				
			Loading of Bitumen Drums by manual means including a lead upto 30 m				
			Unit = t				
			Taking output = 10 t				
		a)	Labour				
			Mate	day	0.06	321.00	19.26
			Mazdoor (Unskilled)	day	1.60	304.00	486.40
		b)	Machinery				
			Truck	hour	1.25	934.30	1167.88
		c)	Overheads @ 12%				200.82
		d)	Contractor's profit @ 10% on (a+b+c)				187.44
			Cost for 10 t = a+b+c+d				2061.80

Analysis of Rates (FORMAT F8)

Sl. No.	SDB Sl. No.	MORD Ref. No.	DESCRIPTION	Unit	Quantity	Rate	
			Rate per tonnes = (a+b+c+d)/10	t			206.18
			Total Cost				206.18
21		(II)	Unloading of Bitumen Drums by Manual Means including a lead upto 30 m				
			Unit = t				
			Taking output = 10 t				
		a)	Labour	day	0.05	321.00	16.05
			Mate	day	1.20	304.00	364.80
		b)	Machinery	hour	1.25	934.30	1167.88
			Truck				185.00
		c)	Overheads @ 12%				173.40
		d)	Contractor's profit @ 10% on (a+b+c)				1908.13
			Cost for 10 t = a+b+c+d				1908.13
			Rate per t = (a+b+c+d)/10				190.81
		Note :-	The rate is inclusive of the self weight of drum				
			Total Cost	t			190.81
			Total Loding & Unloading of Bitumen Drums	t		= 206.18 + 190.81 =	396.99
22	1.9	(I)	Loading and Unloading of Hume Pipes				
			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	day	0.02	321.00	6.42
			Mate	day	0.50	304.00	152.00
		b)	Machinery	hour	0.33	934.30	308.81
			Truck	hour	0.33	909.00	299.97
			Crane				92.00
		c)	Overheads @ 12%				85.00
		d)	Contractor's profit @ 10% on (a+b+c)				944.20
			Cost for 9 pipes = a+b+c+d				1044.40
			Rate per pipe = (a+b+c+d)/9				116.04
			Total Cost	per p			1044.40
23		C.	600/450 mm dia Hume pipe				
			Unit = per pipe				
			Taking output = 21 pipe				
		a)	Labour	day	0.02	321.00	6.42
			Mate	day	0.50	304.00	152.00
		b)	Machinery	hour	0.33	934.30	308.81
			Truck	hour	0.33	909.00	299.97
			Crane				92.00
		c)	Overheads @ 12%				85.00
		d)	Contractor's profit @ 10% on (a+b+c)				944.20
			Cost for 21 pipes = a+b+c+d				1444.40
			Rate per pipe = (a+b+c+d)/21				68.78
			Total Cost	per p			1444.40
24		(II)	Unloading of RCC Hume pipe by mechanical means including a lead upto 30 m				
		A.	1000/1200 mm dia RCC Hume pipes				
			Unit = per pipe				
			Taking output = 9 pipes				
		a)	Labour	day	0.02	321.00	6.42
			Mate	day	0.50	304.00	152.00
		b)	Machinery	hour	0.20	934.30	186.86
			Truck	hour	0.20	909.00	181.80
			Crane				63.00
		c)	Overheads @ 12%				59.00
		d)	Contractor's profit @ 10% on (a+b+c)				64.00
			Cost for 9 pipes = a+b+c+d				64.00
			Rate per pipe = (a+b+c+d)/9				7.11
			Total Loding & Unloading				
			Total Cost				

Analysis of Rates (FORMAT F8)

Sl. No.	SDB Sl. No.	MORD Ref No.	DESCRIPTION	Unit	Quantity	Rate	Amount in Rs
25		C.	600/450 mm dia Hume pipe Unit = per pipe Taking output = 21 pipes				
		a)	Labour				
			Mate				
		b)	Mazdoor (Unskilled)	day	0.02	321.00	6.42
		b)	Machinery	day	0.50	304.00	152.00
			Truck				
			Crane	hour	0.20	934.30	186.86
		c)	Overheads @ 12%	hour	0.20	909.00	181.80
		d)	Contractor's profit @ 10% on (a+b+c)				63.25
			Cost for 21 pipes = a+b+c+d				59.03
			Rate per pipe = (a+b+c+d)/21				649.36
							30.92
			Total Cost per p				30.92
			Total Loading & Unloading of RCC Hume Pipe per Pipe				44.98 + 30.92 =
							75.90
			Total Loading & Unloading of RCC Hume Pipe	m			75.9 / 2.50 =
							30.36
26	1.16	100	Setting Out Pillars Unit = 1 No. Analysis of rates per pillar shall account for following : Typical Benchmark 1 no. as per Dwg no. 200.1 of MORD Data Book (Page 1-18) The rate analysis for a typical benchmark as per dwg.				
			1. Excavation	cum	0.33	334.58	108.74
			2. P.C.C. grade M 10	cum	0.10	6681.46	668.15
			3. Brick Masonry in CM 1:4	cum	0.48	6237.17	2962.66
			4. Plastering with CM 1:4, 15 mm thick cement plaster on Brick work	sqm	2.63	216.63	569.74
			Add 5 per cent cost of items No.1 to 4 for white washing.				215.46
			Sub Total	NO			4524.74
		A	Total 6 Nos. of Pillars required for 1 Km.	NO	6.00	4524.74	27148.44
27	1.16	100	Setting Out Pillars Unit = 1 No. Analysis of rates per pillar shall account for following : Reference Pillar 1 no. as per Dwg no. 200.2 of MORD Data Book (Page 1-18) The rate analysis for a typical benchmark as per dwg.				
			1. Excavation	cum	0.192	334.58	64.24
			2. P.C.C. grade M 10	cum	0.060	6681.46	400.89
			3. Brick Masonry in CM 1:4	cum	0.193	6237.17	1203.77
			4. Plastering with CM 1:4, 15 mm thick cement plaster on Brick work	sqm	1.50	216.63	324.95
			Add 5 per cent cost of items No.1 to 4 for white washing.				99.69
			Sub Total	NO			2093.54
		B	Total 2 Nos. of reference pillars required for 1 Km.	NO	2.00	2093.54	4187.08
			Cost of Setting out	Km	A + B		31335.52
			Total Cost	Km			31335.52
26	OLD SOR		Providing brick bats including spreading laying hand packing and compacting with C.I. Hammer in layers not exceeding 75 mm thick including cost of light barriers, danger signals, chowkidar, taxes, royalty etc. all complete job as per specification and direction of E/I including carriage cost of bricks.				
	8.1.3.2 (III)		Unit = cum Assuming- 2.832 Cum				
		a)	Labour (Unskilled)				
		i)	Carrying, spreading, laying & Packing	nos	1.50	304.00	456.00
		ii)	Compaction brick bats with C.I. Hammer.	nos	0.67	304.00	203.68
		iii)	Brick Bat	Cum	2.83	1063.00	3010.42
		iv)	Local Sand	Cum	0.63	141.85	89.65
			Over Heads @ 12 % on (a+b+c)				451.17
			C. Profit @ 10 % on (a+b+c+d)				421.09
		d)	Cost for 2.832 cum = a+b+c+d				4632.01
		e)	Rate Per cum = (a+b+c+d) / 2.832	cum			1635.60
			CARRIAGE				
			Carriage for Brick (1 cum Bats = 300 nos Bricks)	nos	0.300	776.64	233.10
			Rate per cum with carriage				1868.70
			Total Cost	CUM			1868.70

Analysis of Rates (FORMAT F8)

Sl. No.	SDB Sl. No.	MORD Ref. No.	DESCRIPTION	Unit	Quantity	Rate	Total Cost
27	5.7.6		Labour for cutting 62 mm to 75 mm dia bamboo piles to size and making shoes and driving etc complete job as per specification and direction of E/L.				
			Unit = Per M Taking Out put = 10 Joint (Assuming 10 Joints)				
		a)	Materials	nos	20.00	32.88	657.60
			Nut And Bolts 16 mm Dia 225mm Long With Washer etc.				
		b)	Laber	nos	0.50	408.00	204.00
			Carpenter Gril	nos	0.25	304.00	76.00
			Unskilled Mazdoor				
		c)	Overheads @ 12%				112.51
		d)	Contractor's profit @ 10% on (a+b+c+d)				105.01
		e)	Rate Per cum = (a+b+c+d)/10	Per M			115.51
			Total Cost	Per M			115.51
28	5.7.7		Labour for cutting 62 mm to 75 mm dia bamboo piles to size and making shoes and driving etc complete job as per specification and direction of E/L.				
			Unit = Per M Taking Out put = 30.50 M (Assuming 20 nos, Pile Sunk 1.525 Mtr Deep)				
		b)	Laber	nos	0.25	408.00	102.00
			Carpenter Gril	nos	2.50	304.00	760.00
			Unskilled Mazdoor				
		c)	Overheads @ 12%				103.44
		d)	Contractor's profit @ 10% on (a+b+c+d)				96.54
		e)	Rate Per cum = (a+b+c+d)/30.5	Per M			34.82
			Total Cost	Per M			34.82
29	5.7.8		Labour for fitting and fixing split bamboo woven chachari inn 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/L.				
			Unit = Per M Taking Out put = 9.30 M (Assuming 20 nos, Pile Sunk 1.525 Mtr Deep)				
		a)	Materials				
			75 mm To 100 mm Lon Nails	Kg	0.25	61.74	15.44
		b)	Laber				
			Carpenter Gril	nos	1.00	408.00	408.00
			Unskilled Mazdoor	nos	1.00	304.00	304.00
		c)	Overheads @ 12%				87.25
		d)	Contractor's profit @ 10% on (a+b+c+d)				81.47
		e)	Rate Per cum = (a+b+c+d)/9.30	Per M			96.31
			Total Cost	Per M			96.31
30	5.7.9		Labour for 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/L.				
			Unit = Per M Taking Out put = 30.50 M				
		a)	Materials				
			75mm To 100 mm Lon Nails	Kg	0.25	61.74	15.44
		b)	Laber				
			Carpenter Gril	nos	0.125	408.00	51.00
			Unskilled Mazdoor	nos	0.250	304.00	76.00
		c)	Overheads @ 12%				17.0
		d)	Contractor's profit @ 10% on (a+b+c+d)				15.9
		e)	Rate Per cum = (a+b+c+d)/30.5	Per M			5.1
			Total Cost	Per M			5.1

Analysis of Rates (FORMAT F8)

Sl. No.	MORD Ref. No.	DESCRIPTION	Unit	Quantity	Rate	Amount in Rs
401		Granular Sub-base with Well Graded Material (Table 400.1) (By mix in place method) For Grading II Material 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. Unit = cum Taking output = 300 cum				
(ii)		For Grading II Material				
a)		Labour				
		Mate				
		Mazdoor (Skilled)	day	0.48	321.00	154.08
		Mazdoor (Unskilled)	day	2.00	385.00	770.00
b)		Machinery	day	10.00	304.00	3040.00
		Tractor mounted grader arrangement for grading @ 100 cum per hour	hour	12.00	573.20	6878.40
		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	629.00	7548.00
		Water tanker 6 kl capacity	hour	5.00	907.00	4535.00
c)		Material				
		Well graded granular sub-base material as per Table 400.1				
		26.5 mm to 9.5 mm @ 35 per cent	cum	134.40	595.36	80016.38
		9.5 mm to 2.36 mm @ 25 per cent	cum	96.00	506.92	48664.32
		2.36 mm below @ 40 per cent - Local Sand	cum	153.60	141.85	21788.16
		Water	kl	30.00	40.00	1200.00
d)		Overheads @ 12%				23842.12
e)		Contractor's profit @ 10% on (a+b+c+d)				22252.65
		Cost of GSB for 300 cum				244779.11
		A) Cost of GSB without carriage per cum	cum			815.93
f)		CARRIAGE				
		Carriage for GSB material	Cum	0.768	1670.65	1283.06
		Carriage for material below 2.36 mm (Local Sand)	Cum	0.512	185.01	94.73
		Rate per cum with carriage				2193.71
		Total Cost	CUM			2193.71

28/10/21

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