ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

2021-22

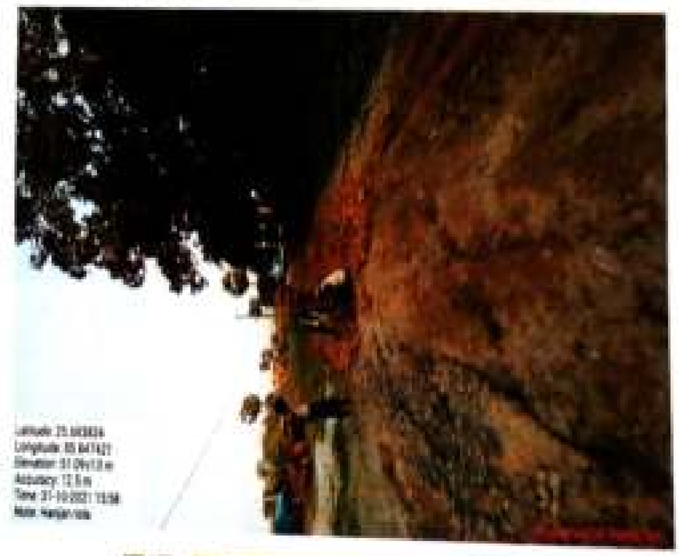
FLOOD DAMAGED REPORT

Repair of Road From T05 to Madhaipur

DISTRICT	:-	Samastipur	
DIVISION	:-	Dalsingh Sarai	
BLOCK	:-	Dalsinghsarai	
TOTAL LENGTH OF ROAD	:-	0.025	KM
TOTAL COST OF PROJECT	:-	2.81	Lac

Site Photograph

ame of Road:- Block-dalsinghsarai



31/10/21
J.E

SUMMARY OF COST ESTIMAT FOR THE PROJECT

AME OF ROAD :- Repair of Road From T05 to Madhaipur

STRICT SAMASTIPUR

OCK Dalsinghsarai

S.NO	DESCRIPTION	AMOUNT LAKH
1	BRICK BAT	248948.000
	SUB TOTAL:-	248948.000
	12% GST on Total Amount:-	29873.760
	1% Labour Cess	2489.480
	Total Cost (including GST and Labour Cess	281311.240

Add 10% [illegible] 14346=00

Total Rs 2,95,657=00

31/10/21

Junior Engineer

D (W) Section, Dalsinghsarai

31.10.21

Assistant Engineer

RWD (W)Sub Division, Dalsinghsarai

Executive Engineer

RWD, Works Division, Dalsinghsarai

FDR
YEAR (2021-2022)
GNERAL ABSTRACT OF COST

LOCK :- Dalsinghsarai DISTRICT :- SAMASTIPUR

ME OF ROAD :- Repair of Road From T05 to Madhaipur

O		ITEM OF WORK						AMOUNT	
A									
	TOTAL COST OF CONSTRUCTION						:-	Rs.	281311
						SUB TOTAL	:-	Rs.	281311

Asinha
31/10/21
Junior Engineer
WD (W) Section, Dalsinghsarai

31.10.21
Assistant Engineer
RWD (W)Sub Division,
Dalsinghsarai

Executive Engineer
RWD, Works Division,
Dalsinghsarai

Cost Estimate for Road Work

FORMAT-6

SL.NO	SDB SL.NO	MORD Ref. No	Description	Unit					Quantity	Rate	Amount
1			**BrickBats**								
			Laying Brick Bats on Prepared Soil Surface as per specifications and direction of E/L								
				cum	1.00	5.00	1.500	2.500	18.75		
				cum	1.00	15.00	2.000	3.000	90.00		
				cum	1.00	5.00	1.500	3.000	22.50		
									131.25	1896.75	248948
										SUB TOTAL=	248948.00
										TOTAL COST OF WORK IN RS	248948.00

Asinha
31/10/21
Junior Engineer
RWD (W) Section, Dalsinghsarai

31.10.21
Assistant Engineer
RWD (W)Sub Division, Dalsinghsarai

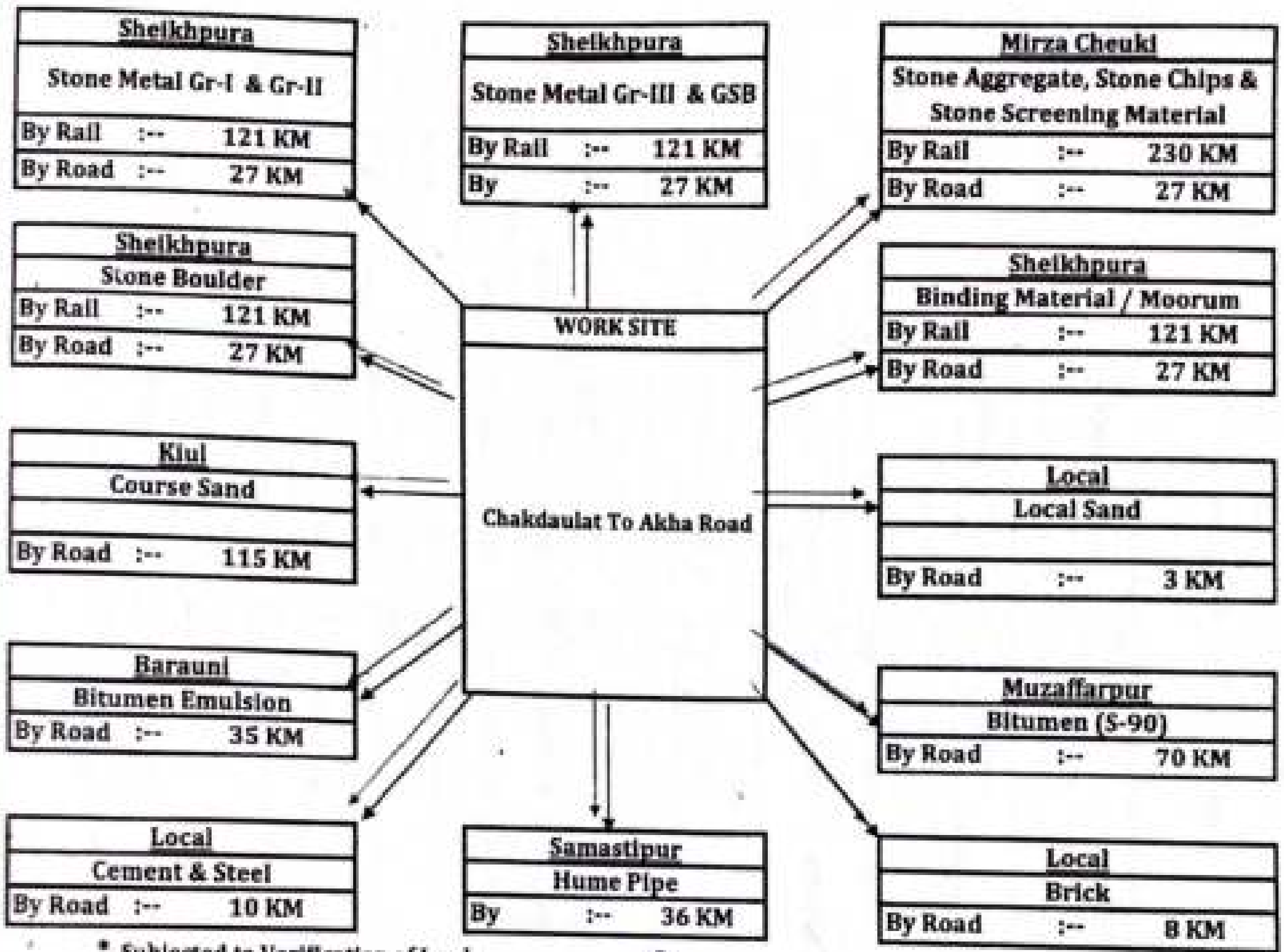
Executive Engineer
RWD, Works Division, Dalsinghsarai

Figure -3 :---

Quarry Map

Name of Road :-- Repair of Road From T05 to Madhaipur
Block :-- Dalsinghsarai
District :-- Samastipur

Length of the Road:- 0.025 KM



* Subjected to Verification of Lead

31/10/21
J.E

31.10.21
A.E.

E.E

S.E.

Sl No	Item with Source	Unit	Source Up to	Carriage Cost & Lead in Km: Pucka / Surface	Carriage Cost & Lead in Km: Katcha	Loading & Unloading Cost	Carriage Cost by Rail Head	Total ₹	Total ₹ Minimum
1	Stone Metal Gr-I & Gr-II (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	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	1025.87	Rs. 1799.92	Rs. 1799.92
	Stone Metal Gr-I & Gr-II	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	8.00/4.99 x 10.10 x 38.00 Km = Rs 615.31	8.00/4.99 x 24.30 x 0.00 Km = Rs 0.00	105.12	1128.34	Rs. 1848.77	Rs. 1848.77
	Stone Metal Gr-III	Cum	Sheikhpura	8.00/4.99 x 7.94 x 137.00 Km = Rs 1743.94	8.00/4.99 x 19.22 x 0.00 Km = Rs 0.00	210.19	1128.34	Rs. 3082.47	
3	Stone Aggregate / Chips (Mirza Chowki by Rail 230 Km)	Cum	Sheikhpura	8.00/4.99 x 10.10 x 38.00 Km = Rs 615.31	8.00/4.99 x 24.30 x 0.00 Km = Rs 0.00	105.12	1588.15	Rs. 2308.58	Rs. 2308.58
	Stone Aggregate / Chips	Cum	Sheikhpura	8.00/4.99 x 7.94 x 137.00 Km = Rs 1743.94	8.00/4.99 x 19.22 x 0.00 Km = Rs 0.00	210.19	1588.15	Rs. 3542.28	
4	Stone Boulder (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	8.00/4.80 x 10.10 x 38.00 Km = Rs 639.67	8.00/4.80 x 24.30 x 0.00 Km = Rs 0.00	105.12	1159.81	Rs. 1904.60	Rs. 1904.60
	Stone Boulder	Cum	Sheikhpura	8.00/4.80 x 7.94 x 137.00 Km = Rs 1812.97	8.00/4.80 x 19.22 x 0.00 Km = Rs 0.00	210.19	1159.81	Rs. 3182.97	
5	Course Sand	Cum	Kiul	8.00/4.99 x 7.94 x 208.00 Km = Rs 2647.73	8.00/4.99 x 19.22 x 0.00 Km = Rs 0.00	113.67		Rs. 2761.40	Rs. 2761.40
6	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	851.49	Rs. 1476.89	Rs. 1476.89
	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	851.49	Rs. 2368.17	
7	Local Sand	Cum	Local	8.00/4.99 x 10.10 x 2.00 Km = Rs 32.38	8.00/4.99 x 24.30 x 1.00 Km = Rs 38.96	113.67		Rs. 185.01	Rs. 185.01
8	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
9	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
10	Steel	MT	Local	8.00/8.00 x 7.94 x 10.00 Km = Rs 79.40	8.00/8.00 x 19.22 0.00 Km = Rs 0.00	370.58		Rs. 449.98	Rs. 449.98
11	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
12	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
13	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
14	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
15	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 SOR as

Type of Road	₹ Per Ton. Km by Tipper	₹ Per Ton. Km by Truck
For Surface Road	10.10	7.94
Unsurface Gravel Road	12.10	9.55
Kachha Road	24.30	19.22

* **Subjected to Verification of Lead**

FORM F8

31/10/21
JE
RWD

31.10.21
AE
RWD

EE
RWD

Analysis for Carrige Through Railway from Quarry Site to Work Site

Sheikhpura to Karpurigram

Material -Stone Metal Gr-I & Gr-II

...ry Site to Sheikhpura Railway Yard (By Road)

Carriage Cost & Lead in Km																
Pucka / Surface							Katcha						Loading & Unloading		Total
x 10.10	x	4.00 Km	=	Rs 70.41	+	8.00 / 4.59	x	24.30	x	0.00 Km	=	Rs 0.00	+	Rs 105.12	=	Rs 175.53
UnSurface						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
...s for O.H & C.P.		=	Rs 405.81	/	1.166			[illegible]						Total "A"	=	[illegible]

...ikhpura 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 Seasion 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	=					
Rail Fright = 1.743 x Rs 277.57		For 1 MT			=	Rs 277.57
		For 1 MT		"B"	=	Rs 483.80
[illegible]						[illegible]
		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			=	[illegible]

Analysis for Carrige Through Railway from Quarry Site to Work Site

Sheikhpura to Karpurigram

Material -Stone Metal Gr-III / GSB

...y Site to Sheikhpura Railway Yard (By Road)

Carriage Cost & Lead in Km																
Pucka / Surface							Katcha						Loading & Unloading		Total
x 10.10	x	4.00 Km	=	Rs 64.77	+	8.00 / 4.99	x	24.30	x	0.00 Km	=	Rs 0.00	+	Rs 105.12	=	Rs 169.89
UnSurface						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
...s for O.H & C.P.		=	Rs 399.48	/	1.166			Rs 342.61						Total "A"	=	[illegible]

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
Busy Season charge 15% of Railway freight charge	=	For 1 MT		=	15%
Railway Development Charge to 5% of Railway freight Charge		For 1 MT		=	5%
Terminal charge @Rs.40.00 per Terminal per MT		For 1 MT	2	x	Rs 40.00
GST 0 % "(4% included in Overhead Charges) = Rs 357.57 x	0%				
Total	=	For 1 MT			
Rail Freight = 1.602 x Rs 357.57		For 1 MT		"B"	

Add 12% Overhead Charge = 12%

Add 10% Contractor Profit = 10%

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

Analysis for Carrige 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
Pucka / Surface		Katcha			
$\frac{8.00}{4.99}$ 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 =
UnSurface	$\frac{8.00}{4.99}$ x	12.10	x 1.00 Km		
Loading & Unloading Cost by manual	=				= Rs 218.19 =
					Total

Mirza Chowki Railway Yard to Karpurigram Railway Yard = 230.00 Km

Railway freight charge from Mirza Chowki Railway station to Karpurigram Railway station	=	For 1 MT	230.00 Km	=	Rs 425.30
Busy Season charge 15% of Railway freight charge	=	For 1 MT		=	15%
Railway Development Charge to 5% of Railway freight Charge		For 1 MT		=	5%
Terminal charge @Rs.40.00 per Terminal per MT		For 1 MT	2	x	Rs 40.00
GST 0 % "(4% included in Overhead Charges) = Rs 590.37 x	0%				
Total	=	For 1 MT			
Rail Freight = 1.033 x Rs 590.37		For 1 MT			

Add 12% Overhead Charge = 12%

Add 10% Contractor Profit = 10%

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

Analysis for Carrige Through Railway from Quarry Site to Work Site

Sheikhpura to Karpurigram

Material -Stone Boulder

Quarry Site to Sheikhpura Railway Yard (By Road)

Carriage Cost & Lead in Km					Loading & Unloading	Total
Pucka / Surface		Katcha				
$\frac{8.00}{4.80}$ x 10.10 x 4.00 Km = Rs 67.33	+ $\frac{8.00}{4.80}$ x	24.30	x 0.00 Km	= Rs 0.00	+ Rs 105.12 =	Rs 172.45
UnSurface	$\frac{8.00}{4.80}$ x	12.10	x 1.00 Km			Rs 20.17
Loading & Unloading Cost by manual	=				= Rs 210.24 +	Rs 210.24
					Total =	Rs 402.86
				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
						Rs 941.41
		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 Carrige Through Railway from Quarry Site to Work Site

Sheikhpura to Karpurigram

Binding Material /Moorum

Quarry Site to Sheikhpura Railway Yard (By Road)

Carriage Cost & Lead in Km					Loading & Unloading	Total
Pucka / Surface		Katcha				
$\frac{8.00}{6.00}$ x 10.10 x 4.00 Km = Rs 53.87	+ $\frac{8.00}{6.00}$ x	24.30	x 0.00 Km	= Rs 0.00	+ Rs 66.31 =	Rs 120.18
UnSurface	$\frac{8.00}{6.00}$ x	12.10	x 1.00 Km			Rs 16.13
Loading & Unloading Cost by manual	=				= Rs 113.67 =	Rs 113.67
					Total =	Rs 249.98
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
Busy Season charge 15% of Railway freight charge	=	For 1 MT			= 15%	=	Rs
Railway Development Charge to 5% of Railway freight Charge		For 1 MT			= 5%	=	Rs
Terminal charge @Rs.40.00 per Terminal per MT		For 1 MT	2	x	Rs 40.00	=	Rs
GST 5 % "(5% included in Overhead Charges) = Rs 357.57 x 0%						=	
Total	=	For 1 MT				=	Rs
Rail Fright =	1.333 x Rs 357.57	For 1 MT			"R"	=	Rs
[illegible]							
		Add 12% Overhead Charge			= 12%	=	Rs
		Add 10% Contractor Profit			= 10%	=	Rs
[illegible]		For 1 Cum				=	Rs

Sl No.	MORD Sec No.		DESCRIPTION	Unit	Quantity	Rate	Amount
			Haulage BY TIPPER				
1	1.10	(i)	**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 [illegible] Cum				[illegible]
	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 [illegible] Cum				[illegible]
	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 [illegible] Cum				[illegible]
			[illegible]				
	1.10	(i)	**Haulage excluding Loading & Unloading**				
			Haulage of materials by tipper excluding cost of loading, unloading and stacking.				

Analysis of Rates (FORMAT F5)

Sl. No.	SOR Sl. No.	MORD Ref No.	DESCRIPTION	Unit	Quantity	Rate
			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**			
			Truck 10 t capacity			
			Haulage with load	hour	0.40	934.30
			Empty return trip	hour	0.29	934.30
		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			
			Rate Per Km	**Cum**		
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	hour	0.50	934.30
			Empty return trip	hour	0.33	934.30
		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			
			Rate Per Km	**Cum**		
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 Chor 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	hour	1.00	934.30
			Empty return trip	hour	0.67	934.30
		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			
			Rate Per Km	**Cum**		
7	1.10	RCD	Loading and Unloading of Stone Boulder/Stone aggregates/Sand/Kankar/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		1 Min	
			ii) Loading by front end loader 1 cum bucket capacity @ 25 cum per hour		13 Min	
			iii) Maneuvering, reversing, dumping and turning for return		2 Min	
			iv) Waiting time, unforeseen contingencies etc		4 Min	
			Total		20 Min	
			a) **Machinery**			
			Tipper 5.5 tonnes capacity	hour	0.33	1183.00
			Front end-loader 1 cum bucket capacity @ 25 cum/hour	hour	0.33	1403.00
			Overheads @ 12%			

Analysis of Rates (FORMAT F5)

Sl. No.	SOR Sl. No.	MORD Ref No.	DESCRIPTION	Unit	Quantity	Rate	Amount
			c) Contractor's profit @ 10% on (a+b)				95.58
			Cost for 5.5 cum = a+b+c				1051.38
			Rate per cum = (a+b+c)/ 5.5				191.16
8	1.29	RCD	**Loading and Unloading of Boulders by Manual Means**				
			Unit = cum				
			Taking output = 5.5 cum				
			a) **Labour**				
			Mate	day	0.11	321.00	35.31
			Mazdoor for loading and unloading	day	0.75	304.00	228.00
			b) **Machinery**				
			Tipper 5.5 tonne capacity	hour	0.75	1183.00	887.25
			Overheads @ 12%				138.07
			d) Contractor's profit @ 10% on (a+b+c)				128.86
			Cost for 5.5 cum = a+b+c+d				1417.49
			Rate per cum = (a+b+c+d)/5.5				257.73
9	1.30	RCD	**Loading and Unloading of Cement or Steel by Manual Means and**				
			Unit = tonne				
			Taking output = 10 tonnes				
			a) **Labour**				
			Mate	day	0.08	321.00	25.68
			Mazdoor for loading and unloading	day	2.00	304.00	608.00
			b) **Machinery**				
			Truck 10 tonne capacity	hour	2.00	934.30	1868.60
			Overheads @ 12%				300.27
			d) Contractor's profit @ 10% on (a+b+c)				280.26
			Cost for 10 tonnes = a+b+c+d				3082.81
			Rate per tonnes = (a+b+c+d)/10				308.28
	5.1	(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	day	0.02	321.00	6.42
			Mazdoor (Unskilled)	day	0.50	304.00	152.00
		b)	**Machinery**				
			Truck	hour	0.50	934.30	467.15
		c)	**Overheads @ 12%**				75.07
		d)	Contractor's profit @ 10% on (a+b+c)				70.06
			Cost for 5.5 cum = a+b+c+d				770.70
			Rate per cum = (a+b+c+d) /5.5				140.13
			Total Cost	**Cum**			
		(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	321.00	3.21
			Mazdoor (Unskilled)	day	0.25	304.00	76.00
		b)	**Machinery**				
			Truck	hour	0.25	934.30	233.58
		c)	**Overheads @ 12%**				37.53
		d)	Contractor's profit @ 10% on (a+b+c)				35.03
			Cost for 5.5 cum = a+b+c+d				385.35
			Rate per cum = (a+b+c+d) /5.5				70.06
			Total Cost	**Cum**			70.06
		(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

Sl No	SOR Sl No	MORD Ref No	DESCRIPTION	Unit	Quantity	Rate
			Mazdoor (Unskilled)	day	0.25	304.00
		b)	Machinery			
			Truck	hour	0.25	934.30
		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	Cum		
			Total Lading & Unloading of Stone Aggregate	Cum	= 140.13 + 70.06 =	
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			
			Mate	day	0.01	321.00
			Mazdoor (Unskilled)	day	0.13	304.00
		b)	Machinery			
			Truck	hour	0.17	934.30
		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	Cum		
			Total Lading & Unloading of Sand / Moorum	Cum	= 70.06 + 43.61 =	
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			
			Mate	day	0.01	321.00
			Mazdoor (Unskilled)	day	0.25	304.00
		b)	Machinery			
			Truck	hour	0.33	934.30
		c)	Overheads @ 12%			
		d)	Contractor's profit @ 10% on (a+b+c)			
			Cost for 2000 Nos. = a+b+c+d			
			Rate for 1000 bricks = (a+b+c+d)/2			
			Total Cost			
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			
			Mate	day	0.01	321.00
			Mazdoor (Unskilled)	day	0.25	304.00
		b)	Machinery			
			Truck	hour	0.33	934.30
		c)	Overheads @ 12%			
		d)	Contractor's profit @ 10% on (a+b+c)			
			Cost for 2000 Nos. = a+b+c+d			
			Rate for 1000 bricks = (a+b+c+d)/2			
			Total Cost	no.		
			Total Lading & Unloading of Brick Per 1000		= 218.72 + 218.72 =	
16			Loading and Unloading of Cement by Manual Means			
		(i)	Loading of Cement by manual means including a lead upto 30 m			
			Unit = t			
			Taking output = 10 t			
		a)	Labour			
			Mate	day	0.06	321.00
			Mazdoor (Unskilled)	day	1.50	304.00

Analysis of Rates (FORMAT 78)

SOR Sl No	MORD Ref No	DESCRIPTION	Unit	Quantity	Rate	Amount
	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 tonnes = (a+b+c+d)/10				173.66
		Total Cost				173.66
	(ii)	Unloading of Cement 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	1.50	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				173.66
		Total Lading & Unloading of Cement		= 173.66 + 173.66 =		347.32
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	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				185.29
	(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				185.29
		Total Lading & Unloading of Steel		= 185.29 + 185.29 =		370.58
1.6		Loading and Unloading of Bitumen Drums by Manual Means				
	(i)	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

S.No.	Ref.	Sub	Description	Unit	Quantity	Rate	Amount
21		(iii)	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	
			Mate	day	1.20	304.00	
			Mazdoor (Unskilled)				
		b)	Machinery	hour	1.25	934.30	
			Truck				
		c)	Overheads @ 12%				
		d)	Contractor's profit @ 10% on (a+b+c)				
			Cost for 10 t = a+b+c+d				
			Rate per t = (a+b+c+d)/10				
		Note :-	The rate is inclusive of the self weight of drum				
			Total Cost	t			
			Total Loding & Unloading of Bitumen Drums	t	= 206.18 + 190.9 =		
22	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	321.00	
			Mazdoor (Unskilled)	day	0.50	304.00	
		b)	Machinery				
			Truck	hour	0.33	934.30	
			Crane	hour	0.33	909.00	
		c)	Overheads @ 12%				
		d)	Contractor's profit @ 10% on (a+b+c)				
			Cost for 9 pipes = a+b+c+d				
			Rate per pipe = (a+b+c+d)/9				
			Total Cost per p				
23		C.	600/450 mm dia Hume pipe				
			Unit = per pipe				
			Taking output = 21 pipe				
		a)	Labour				
			Mate	day	0.02	321.00	
			Mazdoor (Unskilled)	day	0.50	304.00	
		b)	Machinery				
			Truck	hour	0.33	934.30	
			Crane	hour	0.33	909.00	
		c)	Overheads @ 12%				
		d)	Contractor's profit @ 10% on (a+b+c)				
			Cost for 21 pipes = a+b+c+d				
			Rate per pipe = (a+b+c+d)/21				
			Total Cost per p				
24		(iii)	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				
			Mate	day	0.02	321.00	
			Mazdoor (Unskilled)	day	0.50	304.00	
		b)	Machinery				
			Truck	hour	0.20	934.30	
			Crane	hour	0.20	909.00	
		c)	Overheads @ 12%				
		d)	Contractor's profit @ 10% on (a+b+c)				
			Cost for 9 pipes = a+b+c+d				
			Rate per pipe = (a+b+c+d)/9				
			Total Cost per p				
			Total Loding & Unloading of RCC Hume Pipe per Pipe			= 104.95 + 72.15 =	
			Total Loding & Unloading of RCC Hume Pipe	m		= 177.1 / 2.5 =	

Ref.	Sub	Item	Description	Unit	Quantity	Rate	Amount
		C.	600/450 mm dia Hume pipe				
			Unit = per pipe				
			Taking output = 21 pipes				
		a)	Labour				
			Mate	day	0.02	321.00	6.42
			Mazdoor (Unskilled)	day	0.50	304.00	152.00
		b)	Machinery				
			Truck	hour	0.20	934.30	186.86
			Crane	hour	0.20	909.00	181.80
		c)	Overheads @ 12%				63.25
		d)	Contractor's profit @ 10% on (a+b+c)				59.03
			Cost for 21 pipes = a+b+c+d				649.36
			Rate per pipe = (a+b+c+d)/21				30.92
			Total Cost per p				30.92
			Total Loding & Unloading of RCC Hume Pipe per Pipe		= 44.98 + 30.92 =		75.90
			Total Loding & Unloading of RCC Hume Pipe	m	= 75.9 / 2.5 =		30.36
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. 208.1 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	5942.23	594.22
			3. Brick Masonry in CM 1:4	cum	0.48	5938.84	2820.95
			4. Plastering with CM 1:4 , 15 mm thick cement plaster on Brick work.	sqm	2.63	186.79	491.26
			Add 5 per cent cost of items No.1 to 4 for white washing.				200.76
			Sub Total	NO			4215.93
			[illegible]				[illegible]
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	5942.23	356.53
			3. Brick Masonry in CM 1:4	cum	0.193	5938.84	1146.20
			4. Plastering with CM 1:4 , 15 mm thick cement plaster on Brick work.	sqm	1.50	186.79	280.19
			Add 5 per cent cost of items No.1 to 4 for white washing.				92.36
			Sub Total	NO			1939.51
			[illegible]				[illegible]
			Cost of Setting out				[illegible]
			Total Cost				[illegible]
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,manas,royality etc.all complete job as per specification and direction of E/I including carriage cost of bricks.				
8.1.5.2 (III)			Unit = cum				
			Assuming- 2.833 Cum				
		a)	Labour (Unskilled)				
			i) Carrying,spreading,laying & Packing		1.50	304.00	456.00
			ii) Compaction brick bats with C.I. Hammer.		0.67	304.00	203.68
			iii) Brick Bat	Cum	2.83	1062.00	3010.42
			iv) Local Sand	Cum	0.63	141.85	89.42
			Over Heads @ 12 % on (a+b+c)				451.17
			C. Profit @ 10 % on (a+b+c+d)				421.09
							4632.01
		d)	Cost for 2.833 cum = a+b+c+d				
			Rate Per cum=(a+b+c+d)/2.833	cum			1635.00
		e)	CARRIAGE		0.300	776.44	233.10
			Carriage for Brick (1 cum Bats = 300 nos Bricks)				
			Rate per cum with carriage				1868.70

Analysis of Rates (FORMAT F8)

Sl. No.	SOR Sl. No.	MORD Ref No.	DESCRIPTION	Unit	Quantity	Rate
27	5.7.6		Labour for cutting 62 mm to 75 mm dia bamboo piles to size and making shoes and driving etc complete specification and direction of E/I.			
			Unit = Per M			
			Taking Out put = 10 Joint			
			(Assuming 10 Joints)			
		a)	**Materials**			
			Nut And Bolts 16 mm Dia 225mm Long With Washer etc.	nos	20.00	32.88
		b)	**Laber**			
			Carpenter Grll	nos	0.50	408.00
			Unskilled Mazdoor	nos	0.25	304.00
		c)	Overheads @ 12%			
		d)	Contractor's profit @ 10% on (a+b+c+d)			
		e)	Rate Per cum=(a+b+c+d)/10	Per M		
			Total Cost	Per M		
28	5.7.7		Labour for cutting 62 mm to 75 mm dia bamboo piles to size and making shoes and driving etc complete specification and direction of E/I.			
			Unit = Per M			
			Taking Out put = 30.50 M			
			(Assuming 20 nos, Pile Sunk 1.525 Mtr Deep)			
		b)	**Laber**			
			Carpenter Grll	nos	0.25	408.00
			Unskilled Mazdoor	nos	2.50	304.00
		c)	Overheads @ 12%			
		d)	Contractor's profit @ 10% on (a+b+c+d)			
		e)	Rate Per cum=(a+b+c+d)/30.5	Per M		
			Total Cost	Per M		
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 1[...] nails alternatively including cost of G.I. wire or nails complete job as per specification and direction of E/I.			
			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
		b)	**Laber**			
			Carpenter Grll	nos	1.00	408.00
			Unskilled Mazdoor	nos	1.00	?04.00
		c)	Overheads @ 12%			
		d)	Contractor's profit @ 10% on (a+b+c+d)			
		e)	Rate Per cum=(a+b+c+d)/9.30	Per M		
			Total Cost	Per M		
30	5.7.9		Labour for fitting and fixing 62 mm to 75 mm dia bamboo runers in position at every vertiacal pile with nails or 38 swg G.I wire including cost of G.I wire or nails complete job as per specification and direction of [...]			
			Unit = Per M			
			Taking Out put = 30.50 M			
		a)	**Materials**			
			75mm To 100 mm Lon Nails	Kg	0.25	61.74
		b)	**Laber**			
			Carpenter Grll	nos	0.125	408.00
			Unskilled Mazdoor	nos	0.250	304.00
		c)	Overheads @ 12%			
		d)	Contractor's profit @ 10% on (a+b+c+d)			
		e)	Rate Per cum=(a+b+c+d)/30.5	Per M		
			Total Cost	Per M		