



ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

2021-22

FLOOD DAMAGED REPORT



NH 28 Mazar Satanpur to Andha

DISTRICT	:-	Samastipur	
DIVISION	:-	Dalsingh Sarai	
BLOCK	:-	Ujiarpur	
TOTAL LENGTH OF ROAD	:-	0.060	KM
TOTAL COST OF PROJECT	:-	1.97	Lac

Site Photograph

ame of Road:- NH 28 Majar Satanpur andha

Block-Sarairanjan



SUMMARY OF COST ESTIMAT FOR THE PROJECT

NAME OF ROAD :- Repair of Road NH 28 Mazar Satanpur to Andha

DISTRICT

SAMASTIPUR

BLOCK

Ujiarpur

S.NO	DESCRIPTION	AMOUNT LAKH
1	E/W	30242.000
2	BRICK BAT	128031.000
3	Hume Pipe	15644.250
	SUB TOTAL:-	173917.250
	12% GST on Total Amount:-	20870.070
	SUB TOTAL:-	1739.173
	Total Cost (including GST and Labour Cess	196526.000

Junior Engineer

WD (W) Section, Ujiarpur

Assistant Engineer

RWD (W)Sub Division, Ujiarpur

Executive Engineer

RWD, Works Division, Dalsinghsarai

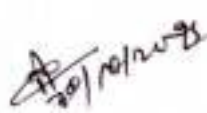
FDR
YEAR (2021-2022)
GENERAL ABSTRACT OF COST

BLOCK :- Ujiarpur

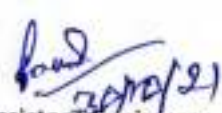
DISTRICT :- SAMASTIPUR

NAME OF ROAD :- Repair of Road NH 28 Mazar Satanpur to Andha

NO	ITEM OF WORK						AMOUNT	
A								
	TOTAL COST OF CONSTRUCTION					:-	Rs.	196526
					SUB TOTAL	:-	Rs.	196526


Junior Engineer

RWD (W) Section, Ujiarpur


Assistant Engineer
RWD (W) Sub Division,
Ujiarpur

Executive Engineer
RWD, Works Division,
Dalsinghsarai

Sl No	Item with Source	Unit	Source Up to	Pucka / Surface		Kachha		Carriage Cost by Rail Road	Total ₹	Total ₹ Minimum		
1	Stone Metal Gr-I & Gr-II (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	8.00	x 10.10	x 30.00 Km	= Rs 660.93	8.00	x 24.30	x 0.00 Km	= Rs 0.00	Rs. 1799.92
				4.59	x 7.94	x 137.00 Km	= Rs 1895.91	4.59	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 2104.10
				8.00	x 10.10	x 30.00 Km	= Rs 615.31	8.00	x 24.30	x 0.00 Km	= Rs 0.00	Rs. 1848.77
				4.99	x 7.94	x 137.00 Km	= Rs 1743.94	4.99	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 3082.47
2	Stone Metal Gr-III (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	8.00	x 10.10	x 30.00 Km	= Rs 615.31	8.00	x 24.30	x 0.00 Km	= Rs 0.00	Rs. 2308.58
				4.99	x 7.94	x 137.00 Km	= Rs 1743.94	4.99	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 3542.28
				8.00	x 10.10	x 30.00 Km	= Rs 639.67	8.00	x 24.30	x 0.00 Km	= Rs 0.00	Rs. 1904.60
				4.80	x 7.94	x 137.00 Km	= Rs 1812.97	4.80	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 3182.97
3	Stone Boulder (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	8.00	x 7.94	x 208.00 Km	= Rs 2647.73	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 2761.40
				4.99	x 10.10	x 30.00 Km	= Rs 511.73	4.99	x 24.30	x 0.00 Km	= Rs 0.00	Rs. 1476.89
				8.00	x 7.94	x 137.00 Km	= Rs 1450.37	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 2368.17
				6.00	x 10.10	x 2.00 Km	= Rs 32.38	6.00	x 24.30	x 1.00 Km	= Rs 38.96	Rs. 185.01
4	Course Sand	Cum	Local	8.00	x 7.94	x 7.00 Km	= Rs 222.32	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 776.64
				4.99	x 7.94	x 10.00 Km	= Rs 79.40	4.99	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 426.72
				8.00	x 7.94	x 10.00 Km	= Rs 79.40	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 449.98
				8.00	x 7.94	x 82.00 Km	= Rs 651.08	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 1048.06
5	Brick	1000 Nos	Local	8.00	x 7.94	x 91.00 Km	= Rs 722.54	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 1119.52
				8.00	x 7.94	x 36.00 Km	= Rs 228.67	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 299.51
				10.00	x 7.94	x 36.00 Km	= Rs 91.47	10.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 121.83
				25.00	x 7.94	x 36.00 Km	= Rs 38.11	25.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 68.47
6	Cement	MT	Local	8.00	x 7.94	x 36.00 Km	= Rs 228.67	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 2761.40
				8.00	x 7.94	x 36.00 Km	= Rs 91.47	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 1476.89
				25.00	x 7.94	x 36.00 Km	= Rs 38.11	25.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 2368.17
				60.00	x 7.94	x 36.00 Km	= Rs 38.11	60.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 185.01
7	Steel	MT	Local	8.00	x 7.94	x 36.00 Km	= Rs 228.67	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 776.64
				8.00	x 7.94	x 36.00 Km	= Rs 91.47	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 426.72
				25.00	x 7.94	x 36.00 Km	= Rs 38.11	25.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 449.98
				60.00	x 7.94	x 36.00 Km	= Rs 38.11	60.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 1048.06
8	Bitumen Emulsion	MT	Barauni	8.00	x 7.94	x 36.00 Km	= Rs 228.67	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 1119.52
				8.00	x 7.94	x 36.00 Km	= Rs 91.47	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 299.51
				25.00	x 7.94	x 36.00 Km	= Rs 38.11	25.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 121.83
				60.00	x 7.94	x 36.00 Km	= Rs 38.11	60.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 68.47
9	Bitumen	MT	Muzaffarpur	8.00	x 7.94	x 36.00 Km	= Rs 228.67	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 2761.40
				8.00	x 7.94	x 36.00 Km	= Rs 91.47	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 1476.89
				25.00	x 7.94	x 36.00 Km	= Rs 38.11	25.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 2368.17
				60.00	x 7.94	x 36.00 Km	= Rs 38.11	60.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 185.01
10	Hume Pipe (1000 mm)	m	Samastipur	8.00	x 7.94	x 36.00 Km	= Rs 228.67	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 776.64
				8.00	x 7.94	x 36.00 Km	= Rs 91.47	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 426.72
				25.00	x 7.94	x 36.00 Km	= Rs 38.11	25.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 449.98
				60.00	x 7.94	x 36.00 Km	= Rs 38.11	60.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 1048.06
11	Hume Pipe (600 mm)	m	Samastipur	8.00	x 7.94	x 36.00 Km	= Rs 228.67	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 1119.52
				8.00	x 7.94	x 36.00 Km	= Rs 91.47	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 299.51
				25.00	x 7.94	x 36.00 Km	= Rs 38.11	25.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 121.83
				60.00	x 7.94	x 36.00 Km	= Rs 38.11	60.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 68.47
12	Hume Pipe (300 mm)	m	Samastipur	8.00	x 7.94	x 36.00 Km	= Rs 228.67	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 2761.40
				8.00	x 7.94	x 36.00 Km	= Rs 91.47	8.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 1476.89
				25.00	x 7.94	x 36.00 Km	= Rs 38.11	25.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 2368.17
				60.00	x 7.94	x 36.00 Km	= Rs 38.11	60.00	x 19.22	x 0.00 Km	= Rs 0.00	Rs. 185.01

FORM F8

* Subjected to Verification of Load

Cost of Haulage Excluding Loading & Unloading as per M/M as

Type of Road	₹ Per Ton. Km by Tipper	₹ Per Ton. Km by Truck
For Surface Road	10.10	1.94
Unsurface Gravel Road	12.10	9.55
Kachha Road	24.30	14.22

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 AE
 PWD

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 JE
 RWD

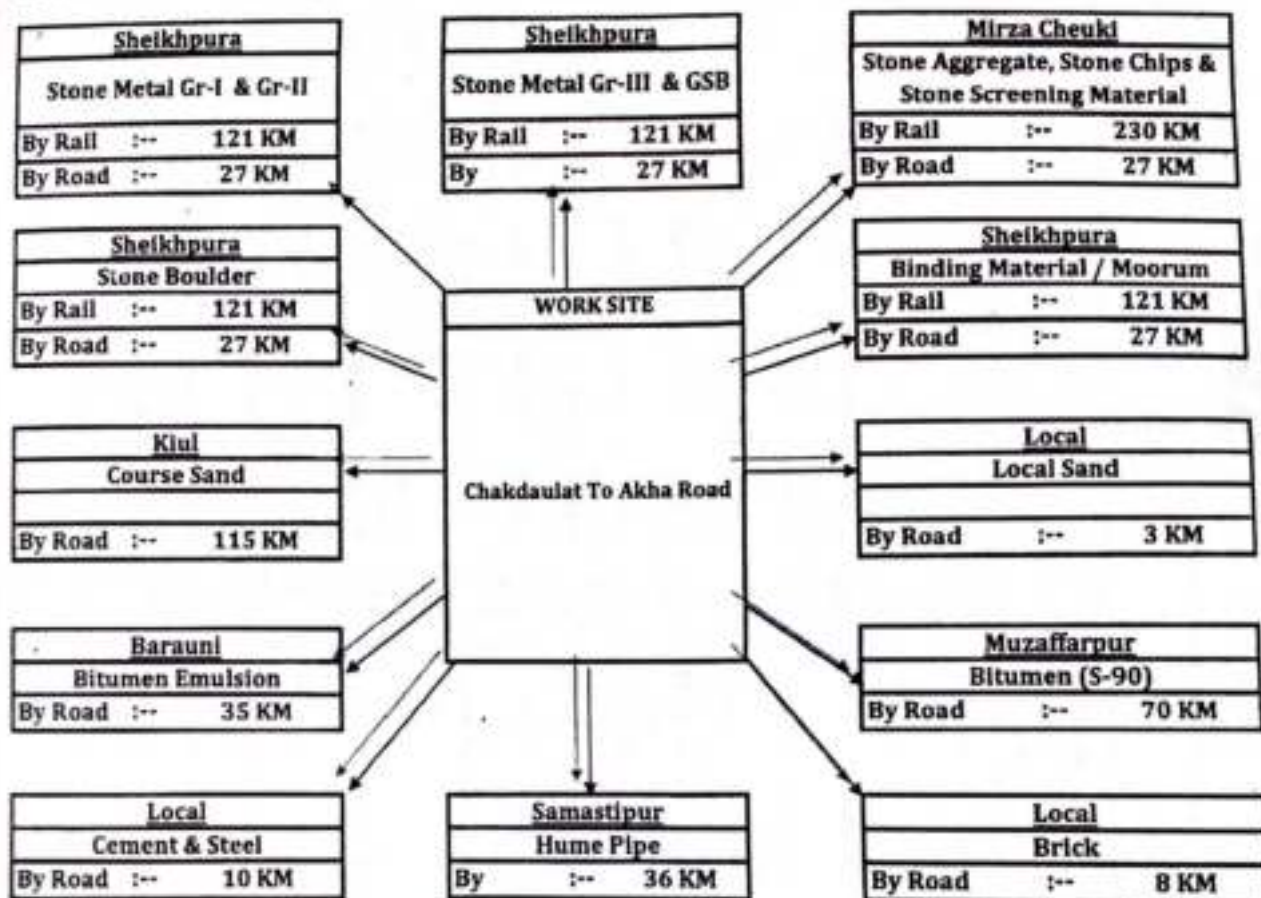
EE
RWD

Figure -3

Quarry Map

Name of Road :- NH 28 Mazar Satanpur to Andha
 Block :- Ujarpur
 District :- Samastipur

Length of the Road:- 0.060 KM



* Subjected to Verification of Lead

[Signature]
30/10/21
J.E.

[Signature]
30/10/21
A.E.

E.E.

S.E.

Sl No	Item with Source	Unit	Source Up to	Puchas / Surface	Katicha	Loading & Unloading Cost	Carriage Cost by Road	Total	Cost/Min
1	Stone Metal Gr-I & Gr-II (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	$\frac{8.00}{4.59} \times 10.10 \times 30.00 \text{ Km} = \text{Rs } 648.93$	$\frac{8.00}{4.59} \times 24.30 \times 0.00 \text{ Km} = \text{Rs } 0.00$	105.12	1025.87	Rs. 1795.92	Rs. 1795.92
	Stone Metal Gr-I & Gr-II	Cum	Sheikhpura	$\frac{8.00}{4.59} \times 7.94 \times 137.00 \text{ Km} = \text{Rs } 1895.91$	$\frac{8.00}{4.59} \times 19.22 \times 0.00 \text{ Km} = \text{Rs } 0.00$	210.19		Rs. 2106.10	Rs. 1795.92
2	Stone Metal Gr-III (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	$\frac{8.00}{4.99} \times 10.10 \times 30.00 \text{ Km} = \text{Rs } 615.31$	$\frac{8.00}{4.99} \times 24.30 \times 0.00 \text{ Km} = \text{Rs } 0.00$	105.12	1128.34	Rs. 1848.77	Rs. 1848.77
	Stone Metal Gr-III	Cum	Sheikhpura	$\frac{8.00}{4.99} \times 7.94 \times 137.00 \text{ Km} = \text{Rs } 1743.94$	$\frac{8.00}{4.99} \times 19.22 \times 0.00 \text{ Km} = \text{Rs } 0.00$	210.19	1128.34	Rs. 3082.47	Rs. 3082.47
3	Stone Aggregate / Chips (Mirza Chowki by Rail 230 Km)	Cum	Sheikhpura	$\frac{8.00}{4.99} \times 10.10 \times 30.00 \text{ Km} = \text{Rs } 615.31$	$\frac{8.00}{4.99} \times 24.30 \times 0.00 \text{ Km} = \text{Rs } 0.00$	105.12	1588.15	Rs. 2308.58	Rs. 2308.58
	Stone Aggregate / Chips	Cum	Sheikhpura	$\frac{8.00}{4.99} \times 7.94 \times 137.00 \text{ Km} = \text{Rs } 1743.94$	$\frac{8.00}{4.99} \times 19.22 \times 0.00 \text{ Km} = \text{Rs } 0.00$	210.19	1588.15	Rs. 3542.28	Rs. 3542.28
4	Stone Boulder (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	$\frac{8.00}{4.80} \times 10.10 \times 30.00 \text{ Km} = \text{Rs } 639.67$	$\frac{8.00}{4.80} \times 24.30 \times 0.00 \text{ Km} = \text{Rs } 0.00$	105.12	1159.81	Rs. 1904.60	Rs. 1904.60
	Stone Boulder	Cum	Sheikhpura	$\frac{8.00}{4.80} \times 7.94 \times 137.00 \text{ Km} = \text{Rs } 1812.97$	$\frac{8.00}{4.80} \times 19.22 \times 0.00 \text{ Km} = \text{Rs } 0.00$	210.19	1159.81	Rs. 3182.97	Rs. 3182.97
5	Course Sand	Cum	Khal	$\frac{8.00}{4.99} \times 7.94 \times 208.00 \text{ Km} = \text{Rs } 2647.73$	$\frac{8.00}{4.99} \times 19.22 \times 0.00 \text{ Km} = \text{Rs } 0.00$	113.67		Rs. 2761.40	Rs. 2761.40
6	Binding Material/Moorum (Sheikhpura by Rail 121 Km)	Cum	Sheikhpura	$\frac{8.00}{6.00} \times 10.10 \times 30.00 \text{ Km} = \text{Rs } 511.73$	$\frac{8.00}{6.00} \times 24.30 \times 0.00 \text{ Km} = \text{Rs } 0.00$	113.67	851.49	Rs. 1476.89	Rs. 1476.89
	Binding Material/Moorum	Cum	Sheikhpura	$\frac{8.00}{6.00} \times 7.94 \times 137.00 \text{ Km} = \text{Rs } 1450.37$	$\frac{8.00}{6.00} \times 19.22 \times 0.00 \text{ Km} = \text{Rs } 0.00$	66.31	851.49	Rs. 2368.17	Rs. 2368.17
7	Local Sand	Cum	Local	$\frac{8.00}{4.99} \times 10.10 \times 2.00 \text{ Km} = \text{Rs } 32.38$	$\frac{8.00}{4.99} \times 24.30 \times 1.00 \text{ Km} = \text{Rs } 38.96$	113.67		Rs. 185.01	Rs. 185.01
8	Brick	1000 Nos	Local	$\frac{8.00}{2.00} \times 7.94 \times 7.00 \text{ Km} = \text{Rs } 222.32$	$\frac{8.00}{2.00} \times 19.22 \times 1.00 \text{ Km} = \text{Rs } 76.88$	477.44		Rs. 776.64	Rs. 776.64
9	Cement	MT	Local	$\frac{8.00}{8.00} \times 7.94 \times 10.00 \text{ Km} = \text{Rs } 79.40$	$\frac{8.00}{8.00} \times 19.22 \times 0.00 \text{ Km} = \text{Rs } 0.00$	347.32		Rs. 426.72	Rs. 426.72
10	Steel	MT	Local	$\frac{8.00}{8.00} \times 7.94 \times 10.00 \text{ Km} = \text{Rs } 79.40$	$\frac{8.00}{8.00} \times 19.22 \times 0.00 \text{ Km} = \text{Rs } 0.00$	370.58		Rs. 449.98	Rs. 449.98
11	Brown Emulsion	MT	Barauni	$\frac{8.00}{8.00} \times 7.94 \times 82.00 \text{ Km} = \text{Rs } 651.08$	$\frac{8.00}{8.00} \times 19.22 \times 0.00 \text{ Km} = \text{Rs } 0.00$	396.98		Rs. 1048.06	Rs. 1048.06
12	Bitumen	MT	Muzaffargarh	$\frac{8.00}{8.00} \times 7.94 \times 91.00 \text{ Km} = \text{Rs } 722.54$	$\frac{8.00}{8.00} \times 19.22 \times 0.00 \text{ Km} = \text{Rs } 0.00$	396.98		Rs. 1119.52	Rs. 1119.52
13	Hume Pipe (1000 mm)	m	Samastipur	$\frac{8.00}{10.00} \times 7.94 \times 36.00 \text{ Km} = \text{Rs } 228.67$	$\frac{8.00}{10.00} \times 19.22 \times 0.00 \text{ Km} = \text{Rs } 0.00$	70.84		Rs. 299.51	Rs. 299.51
14	Hume Pipe (600 mm)	m	Samastipur	$\frac{8.00}{25.00} \times 7.94 \times 36.00 \text{ Km} = \text{Rs } 91.47$	$\frac{8.00}{25.00} \times 19.22 \times 0.00 \text{ Km} = \text{Rs } 0.00$	30.36		Rs. 121.83	Rs. 121.83
15	Hume Pipe (300 mm)	m	Samastipur	$\frac{8.00}{60.00} \times 7.94 \times 36.00 \text{ Km} = \text{Rs } 38.11$	$\frac{8.00}{60.00} \times 19.22 \times 0.00 \text{ Km} = \text{Rs } 0.00$	30.36		Rs. 68.47	Rs. 68.47

FORM F8

* Subjected to Verification of Lead

Cost of Haulage Excluding Loading & Unloading as per NCIN 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

EE
RWDAE
PWDJE
RWD

Analysis of Rates (FORMAT F8)

Sl. No.	Particulars	Unit	Quantity	Rate	Amount
HAULAGE BY TIPPER					
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
					10.06
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
					12.10
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
					24.34
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.	Particulars	Unit	Quantity	Rate	Amount
	Unit = tkm Taking output 10 t load and lead 10 km = 100 tkm 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 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	37 27 7 7 79
5	1.10 (II) Haulage excluding Loading & Unloading Haulage of materials by tipper excluding cost of loading, unloading and stacking. Unit = tkm Taking output 10 t load and lead 10 km = 100 tkm 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	46 30 9 8 93
6	1.10 (III) Haulage excluding Loading & Unloading Haulage of materials by tipper excluding cost of loading, unloading and stacking. Unit = tkm Taking output 10 t load and lead 10 km = 100 tkm 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	93 62 187 174 1922
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	0.33 0.93	1183.00 1403.00	11 10

Analysis of Rates (FORMAT F8)

		UNIT	MANPOWER	MATERIAL	OVERHEADS	PROFIT
	c) Contractor's profit @ 10% on (a+b)					95.58
	Cost for 5.5 cum = a+b+c					1051.36
	Rate per cum = (a+b+c) / 5.5					191.16
1.20	RCD					
	Unloading will be by Tipper					
	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
1.30	RCD					
	Unloading will be by Tipper					
	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
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	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
	(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
	(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.	Particulars	Unit	Quantity	Rate	Amount
	b) Mazdoor (Unskilled)	day	0.25	304.00	76.00
	Machinery				
	Truck	hour	0.25	934.30	233.58
	c) Overheads @ 12%				27.53
	d) Contractor's profit @ 10% on (a+b+c)				35.87
	Cost for 5.5 cum = a+b+c+d				385.38
	Rate per cum = (a+b+c+d) / 5.5				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	3.21
	Mazdoor (Unskilled)	day	0.13	304.00	39.52
	b) Machinery				
	Truck	hour	0.17	934.30	158.83
	c) Overheads @ 12%				23.34
	d) Contractor's profit @ 10% on (a+b+c)				21.87
	Cost for 5.5 cum = a+b+c+d				239.87
	Rate per cum = (a+b+c+d) / 5.5				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	3.21
	Mazdoor (Unskilled)	day	0.25	304.00	76.00
	b) Machinery				
	Truck	hour	0.33	934.30	308.32
	c) Overheads @ 12%				46.53
	d) Contractor's profit @ 10% on (a+b+c)				43.41
	Cost for 2000 Nos. = a+b+c+d				477.47
	Rate for 1000 bricks = (a+b+c+d) / 2				238.74
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	3.21
	Mazdoor (Unskilled)	day	0.25	304.00	76.00
	b) Machinery				
	Truck	hour	0.33	934.30	308.32
	c) Overheads @ 12%				46.53
	d) Contractor's profit @ 10% on (a+b+c)				43.41
	Cost for 2000 Nos. = a+b+c+d				477.47
	Rate for 1000 bricks = (a+b+c+d) / 2				238.74
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				
	Mate	day	0.06	321.00	19.26
	Mazdoor (Unskilled)	day	1.50	304.00	456.00

Analysis of Rates (FORMAT F8)

		UNIT	QTY	PRICE	AMOUNT
1.7	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
1.5	(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 Loading & Unloading of Cement				
1.6	(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
	(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 Loading & Unloading of Steel					
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.	Particulars	Unit	Quantity	Rate	Amount
Rate per tonnes = (a+b+c+d)/10					
21	(II) Unloading of Bitumen Drums by Manual Means including a lead upto 30 m Unit = t Taking output = 10 t a) Labour Mate Mazdoor (Unskilled) b) Machinery 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	day day hour	0.05 1.20 1.25	321.00 304.00 934.30	
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 Mazdoor (Unskilled) b) Machinery Truck Crane 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	day day hour hour	0.02 0.50 0.33 0.33	321.00 304.00 934.30 909.00	
23	C. 600/450 mm dia Hume pipe Unit = per pipe Taking output = 21 pipe a) Labour Mate Mazdoor (Unskilled) b) Machinery Truck Crane 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	day day hour hour	0.02 0.50 0.33 0.33	321.00 304.00 934.30 909.00	
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 Mate Mazdoor (Unskilled) b) Machinery Truck Crane 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	day day hour hour	0.02 0.50 0.20 0.20	321.00 304.00 934.30 909.00	

Analysis of Rates (FORMAT F8)

c) 600/450 mm dia Hume pipe Unit = per pipe Taking output = 21 pipes a) Labour Mate Mazdoor (Unskilled) Machinery b) Truck Crane Overheads @ 12% c) Contractor's profit @ 10% on (a+b+c) d) Cost for 21 pipes = a+b+c+d Rate per pipe = (a+b+c+d)/21		day day hour hour	0.02 0.50 0.20 0.20	321.00 304.00 934.30 909.00	6.42 152.00 186.86 181.80 63.25 59.03 649.36 30.92
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 2. P.C.C. grade M 10 3. Brick Masonry in CM 1:4 4. Plastering with CM 1:4, 15 mm thick cement plaster on Brick work. Add 5 per cent cost of items No.1 to 4 for white washing.		cum cum cum sqm	0.33 0.10 0.48 2.63	334.58 6681.46 6237.17 216.63	108.74 668.15 2962.66 569.74 215.46 4524.74
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 2. P.C.C. grade M 10 3. Brick Masonry in CM 1:4 4. Plastering with CM 1:4, 15 mm thick cement plaster on Brick work. Add 5 per cent cost of items No.1 to 4 for white washing.		cum cum cum sqm	0.192 0.060 0.193 1.50	334.58 6681.46 6237.17 216.63	64.24 400.89 1203.77 324.95 99.69 2093.54
442 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. Unit = cum Assuming- 2.832 Cum a) Labour (Unskilled) (i) Carrying, spreading, laying & Packing. (ii) Compaction brick bats with C.I. Hammer. (iii) Brick Bat (iv) Local Sand Over Heads @ 12 % on (a+b+c) C. Profit @ 10 % on (a+b+c+d) d) Cost for 2.832 cum = a+b+c+d e) Rate Per cum = (a+b+c+d)/2.832 CARRIAGE Carriage for Brick (1 cum Bats = 300 nos Bricks) Rate per cum with carriage		nos nos Cum Cum cum nos	1.50 0.67 2.83 0.63 0.300	304.00 304.00 1063.00 141.85 776.64	456.00 203.68 3010.42 89.65 451.17 421.09 4632.01 1635.40 233.10 1868.70

Analysis of Rates (FORMAT F8)

Sl. No.	Description of Work	Unit	Quantity	Rate	Amount	Job as per
17.6	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					
b)	Nut And Bolts 16 mm Dia 225mm Long With Washer etc.	nos	20.00	32.88	657.60	
	Laber					
	Carpenter Gril	nos	0.50	408.00	204.00	
	Unskilled Mazdoor	nos	0.25	304.00	76.00	
c)	Overheads @ 12%				112.50	
d)	Contractor's profit @ 10% on (a+b+c+d)				105.00	
e)					115.50	
	Rate Per cum = (a+b+c+d)/10	Per M				
17.7	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					
	Carpenter Gril	nos	0.25	408.00	102.00	
	Unskilled Mazdoor	nos	2.50	304.00	760.00	
c)	Overheads @ 12%				103.44	
d)	Contractor's profit @ 10% on (a+b+c+d)				96.54	
e)					34.82	
	Rate Per cum = (a+b+c+d)/30.5	Per M				
17.8	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					
b)	75 mm To 100 mm Lon Nails	Kg	0.25	61.74	15.44	
	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)					96.3	
	Rate Per cum = (a+b+c+d)/9.30	Per M				
17.9	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					
b)	75mm To 100 mm Lon Nails	Kg	0.25	61.74	15.44	
	Laber					
	Carpenter Gril	nos	0.125	408.00	51.00	
	Unskilled Mazdoor	nos	0.250	304.00	76.00	
c)	Overheads @ 12%				17.8	
d)	Contractor's profit @ 10% on (a+b+c+d)				15.9	
e)					5.3	
	Rate Per cum = (a+b+c+d)/30.5	Per M				

Analysis of Rates (FORMAT F8)

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.				
(10)	Unit = cum Taking output = 300 cum				
a)	Labour				
	Mate				
	Mazdoor (Skilled)				
	Mazdoor (Unskilled)				
b)	Machinery				
	Tractor mounted grader arrangement for grading @ 100 cum per hour	day	0.48	321.00	154.08
	Three wheel 80-100 kN static roller @ 10' cum per hour	day	2.00	385.00	770.00
	Tractor with Rotavator 25 cum per hour	day	10.00	304.00	3040.00
	Water tanker 6 kl capacity	hour	12.00	573.20	6078.40
c)	Material	hour	30.00	803.00	24090.00
	Well graded granular sub-base material as per Table 400.1	hour	12.00	629.00	7548.00
	26.5 mm to 9.5 mm @ 35 per cent	hour	5.00	907.00	4535.00
	9.5 mm to 2.36 mm @ 25 per cent				
	2.36 mm below @ 40 per cent - Local Sand	cum	134.40	595.36	80016.38
	Water	cum	96.00	506.92	48664.32
d)	Overheads @ 12%	cum	153.60	141.85	21788.16
e)	Contractor's profit @ 10% on (a+b+c+d)	kl	30.00	40.00	1200.00
	Cost of GSB for 300 cum				23842.12
					22252.65
	CARRIAGE				244779.11
	A) Cost of GSB without carriage per cum	cum			815.93
	Carriage for GSB material				
	Carriage for material below 2.36 mm (Local Sand)	Cum	0.768	1670.65	1283.06
	Rate per cum with carriage	Cum	0.512	185.01	94.73
					2193.71

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