ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

BIHAR RURAL ROADS PROJECT

Bihar Rural Road Development Agency (BRRDA)

YEAR (2020 - 2021)

FDR

STATE	:-	BIHAR
DISTRICT	:-	Samastipur
BLOCK	:-	Patori
NAME OF ROAD	:-	Detailed Estimate For Repair of Flood Damaged in Kusho Chowk To Chakraj Ali
TOTAL COST OF CONSTRUCTION	:-	Rs. 8.055 Lacs
TOTAL COST OF PROJECT	:-	Rs. 8.055 Lacs

7.961 Lakh

SUBMITTED BY:

EXECUTIVE ENGINEER
RWD (W) DIVISION, PATORI
SAMASTIPUR

FDR

YEAR (2020 - 2021)

GENERAL ABSTRACT OF COST

Block:--Patori **District:--Samastipur**

Name of Road:-- Detailed Estimate For Repair of Flood Damaged in Kusho Chowk To Chakraj Ali

SL. No.	Item of Work	Amount
A		
	TOTAL COST OF CONSTRUCTION	8.055 Lacs
	Sub Total= (A)	8.055 Lacs
	TOTAL cost of project	**8.055 Lacs**

7.961
7.961
7.961 Lac.

Ravi 15-10-2020
Junior Engineer
RWD (w)Section , Patori

15/10/20
Asstt. Engineer
RWD (w)Sub Division , Patori

15.10.20
Executive Engineer
RWD (w) Division, Patori

Technically Approved for Rs 7.961 Lac Seven Seven Lakh Sixty one thousand One Hundred Only

02-02-2021

पथीक्षण अभियंता
ग्रामीण कार्य विभाग
कार्य मंडल, समस्तीपुर

2/2/21

SUMMARY OF COST ESTIMATE FOR THE PROJECT

NAME OF ROAD : Detailed Estimate For Repair of Flood Damaged in Kusho Chowk To Chakraj Ali

DISTRICT Samastipur

BLOCK Patori

Sl. No.	DESCRIPTION	AMOUNT (LAKHS)
1	EARTHWORK	1.142
2	BRICK BAT	3.308
3	GSB GRADE II	1.332 1.413
4	WBM GRADE III	1.192 1.192
	SUB TOTAL OF PAVEMENT COST IN LACS =	**7.055**
	Sub Total ` :--	6.974 **7.055**
	12% GST on Total Amount :--	0.834 **0.847**
	1% Lab Cess :--	0.070 **0.071**
	Seigniorage Fee @ 10%	0.083 **0.083**
	Total Constriction Cost (including GSt and Labour Cess) (A) :--	**8.055**
	TOTAL COST OF PROJECT IN LACS(including GST 12% & 1% Lab Cess)(A+B+C) :--	7.961 **8.055**

Ravi 15-10-2020

Junior Engineer

RWD (w)Section , Patori

15/10/20

Assistant Engineer

RWD (w)Sub Division , Patori

15.10.20

Executive Enginee
RWD (w)
Division, Patori

Cost Estimate for Road Work

FORMAT F6

Sl. No.	SDB SL .NO	MORD Ref.No	Description	Unit	NOS	LENGTH	WIDTH	HEIGHT	QUANTITY	RATE	AMOUNT (in Rs.)
			SUB HEAD : Embankment								
1			**Earthwork**								
			Damaged Strech	cum	2.00	500.0	1.100	0.60 avg	660.00		
									660.00	173.06	1,14,219.60
2			**Brick Bats**								
			Laying Brick Bats on Prepared Soil Surface as per specifications and direction of E/L								
			Damaged Strech	cum	1.00	65.0	1.250	0.450	36.56		
			Damaged Strech 2	cum	1.00	35.0	1.800	0.600	37.80		
			Damaged Strech 3	cum	1.00	21.0	1.200	0.750	18.90		
			Damaged Strech 4	cum	1.00	45.0	1.650	0.450	33.41		
			Damaged Strech 5	cum	1.00	90.0	1.100	0.300	29.70		
			Damaged Strech 6	cum	1.00	30.0	1.500	0.900	40.50		
									196.88	1,680.02	3,30,753.94
									B) SUB TOTAL OF CRUST =		**4,44,973.54**

Sl. No.	SDB Sl .NO	MORD Ref.No	Description	Unit	Quantity	Rate	Amount (In Rs.)	Total Material Required	Material Amount	Add Seignoirage Fee 10%
			EARTHWORK							
1	**3.14**	**303.1**	**Earthwork**							
			Construction of Embankment with material obtained from borrow pits with a lift upto 1.5 m , transporting to the site spreading , grading to required slope and compacting to meet requirement of Tables 300.1 and 300.2 with a ***lead upto 1000 m*** as per Technical Specification Clause 301.5 .							
			Unit = cum							
			Taking output = 100 cum							
		a)	**Material**							
			Compensation For Earth Taken From Private Land	Cum	100	34.81	3,481.00			
			Cost for 100 cum = a				**3,481.00**			
			Rate Per Cum = (a)/100=	**Cum**			**34.81**			
			Total Cost =	**Cum**			**34.81**	**660.00**	**22,974.60**	**2,297.46**
			PAVEMENT LAYERS - GSB ,WBM-II & WBM-III							
2	**4.1**	**401**	**Granular Sub-base with Well Graded Material (Table 400.1)**							
			(By mix in place method)							
		(i)	**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.							
			For Grading II Material (Local Sand)							
			Unit = cum							
			Taking output = 300 cum							
		a)	**Material**							
			Well graded granular sub-base material as per Table 400.1							
			26.5 mm to 9.5 mm @ 35%	cum	134	657.85	88,151.900			
			9.5 mm to 2.36 mm @ 25%	cum	96	514.58	49,399.680			
			2.36 mm below @ 40% (Local sand)	cum	153	141.85	21,703.050			
			Cost for 300 cum = a				**1,59,254.63**			
			Rate Per Cum = (a)/300=	**Cum**			**530.85**			
			Total Cost =	**Cum**			**530.85**	**65.21**	**34,616.65**	**3,461.66**

Sl. No.	SDB Sl .NO	MORD Ref.No	Description	Unit	Quantity	Rate	Amount (In Rs.)	Total Material Required	Material Amount	Add Seignoirage Fee 10%
3	4.7	405	**Water Bound Macadam with Stone Screening Type "B" Gr- III**							
			WBM Grading 3 (Mechanical means)							
	(3-A)		Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with smooth wheel roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density Grading 3 as per Technical Specification Clause 405.							
			For WBM III Material							
			Unit = cum							
			Taking output = 360 cum							
		a)	**Material**							
			Aggregate							
			Grading 3 53 mm to 22.4 mm @ 0.91 cum per 10 sqm for compacted thickness of 75 mm	Cum	435.60	511.44	2,22,783.26			
			Stone Screening							
			Type B 11.2 mm for Grading 3 @ 0.18 cum per 10 sqm	Cum	86.40	397.73	34,363.872			
			Cost for 360 cum = a				**2,57,147.14**			
			Rate Per Cum = (a)/360=	**Cum**			**714.30**			
			Total Cost =	**Cum**			**714.30**	**34.92**	**24,943.27**	**2,494.33**
Total Construction Cost (With 10% Seigniorage Fee) :--										**8,253.45**

15-10-20

FORM F8

Analysis for Carriage by Road & Rail

Name of Road:-- Detailed Estimate For Repair of Flood Damaged in Kusho Chowk To Chakraj Ali

District:- Samastipur **Block :-** Patori

Sl No	Item with Source	Unit	Source Up to	Carriage Cost & Lead in Km		Loading & Unloading Cost	Carriage Cost by Rail Head	Total `
				Pucka / Surface	Katcha			
1	Stone Metal Gr-I & Gr-II	Cum	Sheikhpura	8.00/4.59 x 7.60 x 60.00 Km = Rs 794.77	8.00/4.59 x 18.50 x 0.00 Km = Rs 0.00	83.64	952.23	Rs. 1830.64
2	Stone Metal Gr-III / GSB	Cum	Sheikhpura	8.00/4.99 x 7.60 x 60.00 Km = Rs 731.06	8.00/4.99 x 18.50 x 0.00 Km = Rs 0.00	83.64	896.90	Rs. 1711.61
3	Stone Aggregate / Chips	Cum	Sheikhpura	8.00/4.99 x 7.60 x 60.00 Km = Rs 731.06	8.00/4.99 x 18.50 x 0.00 Km = Rs 0.00	83.64	896.90	Rs. 1711.61
4	Stone Aggregate / Chips	Cum	Mirzachowki	8.00/4.99 x 7.60 x 60.00 Km = Rs 731.06	8.00/4.99 x 16.54 x 0.00 Km = Rs 0.00	83.64	1282.63	Rs. 2097.34
5	Stone Boulder	Cum	Sheikhpura	8.00/4.80 x 7.60 x 60.00 Km = Rs 760.00	8.00/4.80 x 18.50 x 0.00 Km = Rs 0.00	83.64	922.04	Rs. 1765.68
6	Course Sand	Cum	Kuil	8.00/4.99 x 6.83 x 111.00 Km = Rs 1215.44	8.00/4.99 x 16.54 x 0.00 Km = Rs 0.00	96.53		Rs. 1311.97
7	Local Sand	Cum	Local	8.00/4.99 x 6.83 x 2.00 Km = Rs 21.90	8.00/4.99 x 16.54 x 1.00 Km = Rs 26.52	96.53		Rs. 144.95
8	Brick	1000 Nos	Local	8.00/2.00 x 6.83 x 7.00 Km = Rs 191.24	8.00/2.00 x 16.54 x 1.00 Km = Rs 66.16	406.10		Rs. 663.50

Cost of Haulage Excluding Loading & Unloading as per SOR

Type of Road	` Per Ton. Km by Tipper	` Per Ton. Km by Truck
For Surface Road	7.60	6.83
Unsurface Gravel Road	9.20	8.22
Kachha Road	18.50	16.54

* **Subjected to Verification of Lead**

15.10.20

Ravi
15-10-2020
J-E

FORM F8

Analysis for Carriage by Road

Name of Road:-- Detailed Estimate For Repair of Flood Damaged in Kusho Chowk To Chakraj Ali

District:- Samastipur **Block :-** Patori

Sl No	Item with Source	Unit	Source Up to	Carriage Cost & Lead in Km		Loading & Unloading Cost	Carriage Cost by Rail Head	Total `
				Pucka / Surface	Katcha			
1	Stone Metal Gr-I & Gr-II	Cum	Sheikhpura	8.00/4.59 x 7.60 x 163.00 Km = Rs 2159.13	8.00/4.59 x 18.50 x 0.00 Km = Rs 0.00	83.64		Rs. 2242.77
2	Stone Metal Gr-III / GSB	Cum	Sheikhpura	8.00/4.99 x 7.60 x 163.00 Km = Rs 1986.05	8.00/4.99 x 18.50 x 0.00 Km = Rs 0.00	83.64		Rs. 2069.69
3	Stone Aggregate / Chips	Cum	Sheikhpura	8.00/4.99 x 7.60 x 163.00 Km = Rs 1986.05	8.00/4.99 x 18.50 x 0.00 Km = Rs 0.00	83.64		Rs. 2069.69
4	Stone Aggregate / Chips	Cum	Mirzachowki	8.00/4.99 x 7.60 x 208.00 Km = Rs 2534.35	8.00/4.99 x 18.50 x 0.00 Km = Rs 0.00	83.64		Rs. 2617.99
5	Stone Boulder	Cum	Sheikhpura	8.00/4.80 x 7.60 x 163.00 Km = Rs 2064.67	8.00/4.80 x 18.50 x 0.00 Km = Rs 0.00	83.64		Rs. 2148.31
6	Course Sand	Cum	Kuil	8.00/4.99 x 6.83 x 111.00 Km = Rs 1215.44	8.00/4.99 x 16.54 x 0.00 Km = Rs 0.00	96.53		Rs. 1311.97
7	Local Sand	Cum	Local	8.00/4.99 x 6.83 x 2.00 Km = Rs 21.90	8.00/4.99 x 16.54 x 1.00 Km = Rs 26.52	96.53		Rs. 144.95
8	Brick	1000 Nos	Local	8.00/2.00 x 6.83 x 7.00 Km = Rs 191.24	8.00/2.00 x 16.54 x 1.00 Km = Rs 66.16	406.10		Rs. 663.50

Cost of Haulage Excluding Loading & Unloading as per SOR

*** Subjected to Verification of Lead**

Type of Road	` Per Ton. Km by Tipper	` Per Ton. Km by Truck
For Surface Road	7.60	6.83
Unsurface Gravel Road	9.20	8.22
Kachha Road	18.50	16.54

15.10.20

Ravi 15-10-2020 J.E

FDR

YEAR (2020 - 2021)

Analysis for Carriage by Road & Rail

Name of Road:-- Detailed Estimate For Repair of Flood Damaged in Kusho Chowk To Chakraj Ali

Block :- Patori

District:- Samastipur **0.190 KM.**

Sl No	Item	Unit	Carriage Cost By Road (Per cum)	Carriage Cost By Road & Rail (Per cum)	Minimum Carriage Cost (Addopted in DPR)
1	Stone Metal Gr-I & Gr-II	Cum	2242.77	1830.64	1830.64
2	Stone Metal Gr-III / GSB	Cum	2069.69	1711.61	1711.61
3	Stone Aggregate / Chips (seikhpura)	Cum	2069.69	1711.61	1711.61
4	Stone Aggregate / Chips	Cum	2617.99	2097.34	2097.34
5	Stone Boulder	Cum	2148.31	1765.68	1765.68
6	Course Sand	Cum	1311.97	1311.97	1311.97
7	Local Sand	Cum	144.95	144.95	144.95
8	Brick	1000 Nos	663.50	663.50	663.50
9	Cement	MT	617.16	617.16	617.16
10	Steel	MT	617.16	617.16	617.16
11	Bitumen Emulsion (Ulberia)	MT	978.35	978.35	978.35
12	Bitumine (Barauni)	MT	848.58	848.58	848.58
13	Hume Pipe (1000 mm)	Pipe	353.75	353.75	353.75

Ravi 15-10-2020
Junior Engineer
RWD (w) Division, Patori

15/10/20
Asstt. Engineer
RWD (w) Division, Patori

15.10.20
Executive Engineer
RWD (w) Division, Patori

Analysis for Carrige Through Railway from Quarry Site to Work Site

Sheikhpura to Karpoorigram

Material -Stone Metal Gr-I & Gr-II

Quarry Site to Sheikhpura Railway Yard (By Road)

	Carriage Cost & Lead in Km													
	Pucka / Surface					Katcha				Loading & Unloading			Total
8.00/4.59	x 7.60	x 2.00 Km	= Rs 26.49	+	8.00/4.59	x 18.50	x 0.00 Km	= Rs 0.00	+	Rs 83.64	=		Rs 110.13
	UnSurface				8.00/4.59	x 9.20	x 1.00 Km				=		Rs 16.03
										Total "A"	=		Rs 126.16

Sheikhpura Railway Yard to Karpoorigram **Railway Yard = 122.00 Km**

i) Loading Cost from Railway Yard to Railway Wegon	=	For 1 cum			=	Rs 118.86	=	Rs 118.86
Total	**=**	**For 1 cum**				**"B"**	**=**	**Rs 118.86**
iii) Railway freight charge from Sheikhpura Railway	=	For 1 MT	122.00 Km		=	Rs 231.30	=	Rs 231.30
Busy Seasion charge 12% of Railway freight charge	=	For 1 MT			=	12%	=	Rs 27.76
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
Total	**=**	**For 1 MT**					**=**	**Rs 350.63**
		For 1 cum				**"C"**	**=**	**Rs 611.11**
		Add 6% Overhead Charge			=	6.0%	=	**Rs 36.67**
		Add 10% Contractor Profit			=	10%	=	**Rs 0.00**
		Total Railway Freight for 1 cum				**"C"**		**Rs 647.78**
Cost for Stacking the Materials from Unloding dump upto lead 30 m.								
Total "D"	=	For 1 cum			=	Rs 59.43	=	Rs 59.43
Carriage Cost from Quarry to Karpoorigram Railway Yard	**=**	**For 1 Cum**				**A+B+C+D**	**=**	**Rs 952.23**

Analysis for Carrige Through Railway from Quarry Site to Work Site

Sheikhpura to Karpoorigram

Material -Stone Aggregate / Chips

Quarry Site to Sheikhpura Railway Yard (By Road)

Carriage Cost & Lead in Km														
Pucka / Surface						Katcha					Loading & Unloading			Total
8.00/4.99	x 7.60	x 2.00 Km	= Rs 24.37	+	8.00/4.99	x 18.50	x 0.00 Km	= Rs 0.00	+	Rs 83.64	=			Rs 108.01
UnSurface					8.00/4.99	x 9.20	x 1.00 Km				=			Rs 14.75
										Total "A"	=			Rs 122.76

Sheikhpura **Railway Yard to** Karpoorigram	**Railway Yard**	=	122.00 Km					
i) Loading Cost from Railway Yard to Railway Wegon	=	For 1 cum		=	Rs 118.86	=	Rs 118.86	
Total	=	**For 1 Cum**			**"B"**	=	**Rs 118.86**	
iii) Railway freight charge from Sheikhpura Railway station to Karpoorigram Railway station	=	For 1 MT	122.00 Km	=	Rs 231.30	=	Rs 231.30	
Busy Seasion charge 12% of Railway freight charge	=	For 1 MT		=	12%	=	Rs 27.76	
Railway Development Charge to 5% of Railway Fright 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	
Total	=	**For 1 MT**				=	**Rs 350.63**	
		For 1 CUM			**"C"**	=	**Rs 562.13**	
		Add 6% Overhead Charge			6%		**Rs 33.73**	
		Add 10% Contractor Profit		=	10%	=	**Rs 0.00**	
		Total Railway Freight for 1 cum			**"C"**	=	**Rs 595.85**	
Cost for Stacking the Materials from Unloding dump upto lead 30 m.								
Total "D"	=	For 1 CUM		=	Rs 59.43	=	Rs 59.43	
Carriage Cost from Quarry to Karpoorigram Railway Yard	=	**For 1 Cum**			**A+B+C+D**	=	**Rs 896.90**	

Analysis for Carrige Through Railway from Quarry Site to Work Site

Sheikhpura to Karpoorigram

Material -Stone Boulder

Quarry Site to Sheikhpura Railway Yard (By Road)

Carriage Cost & Lead in Km														
	Pucka / Surface					Katcha					Loading & Unloading			Total
8.00/4.80	x 7.60	x	2.00 Km	= Rs 25.33	+	8.00/4.80	x 18.50	x	0.00 Km	= Rs 0.00	+ Rs 83.64	=		Rs 108.98
	UnSurface					8.00/4.80	x 9.20	x	1.00 Km			=		Rs 15.33
											Total "A"	=		Rs 124.31

Sheikhpura Railway Yard to Karpoorigram **Railway Yard = 122.00 Km**

i) Loading Cost from Railway Yard to Railway Wegon	=	For 1 cum			=	Rs 118.86	=	Rs 118.86
Total	**=**	**For 1 CUM**				**"B"**	**=**	**Rs 118.86**
iii) Railway freight charge from Sheikhpura Railway station to Karpoorigram Railway station	=	For 1 MT	122.00 Km		=	Rs 231.30	=	Rs 231.30
Busy Seasion charge 12% of Railway freight charge	=	For 1 MT			=	12%	=	Rs 27.76
Railway Development Charge to 5% of Railway Fright 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
Total	**=**	**For 1 MT**					**=**	**Rs 350.63**
		For 1 CUM				**"C"**	**=**	**Rs 584.38**
		Add 6% Overhead Charge			=	6.0%	=	**Rs 35.06**
		Add 10% Contractor Profit			=	10.0%	=	**Rs 0.00**
		Total Railway Freight for 1 cum				**"C"**	**=**	**Rs 619.44**
Cost for Stacking the Materials from Unloding dump upto lead 30 m.								
Total "D"	=	For 1 CUM			=	Rs 59.43	=	Rs 59.43
Carriage Cost from Quarry to Karpoorigram Railway Yard	**=**	**For 1 Cum**				**=A+B+C+D**	**=**	**Rs 922.04**

Analysis of Rates (FORMAT F8)

Sl. No.	SDB Sl. No.	MORD Ref No.	DESCRIPTION	Unit	Quantity	Rate	Amount in Rs
			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	1043.00	417.20
			Empty return trip	hour	0.29	1043.00	302.47
		b)	Overheads @ 6 % on (a)				43.18
			Contractor's profit @ 10% on (a+b)				0.00
			Cost for 100 t-km = a+b				762.85
			Rate per cum = (a+b) /100				7.63
			Rate Per Km.	**Cum**			**7.60**
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	1043.00	521.50
			Empty return trip	hour	0.33	1043.00	344.19
		b)	Overheads @ 6 % on (a)				51.94
			Contractor's profit @ 10% on (a+b)				0.00
			Cost for 100 t-km = a+b				917.63
			Rate per cum = (a+b) /100				**9.18**
			Rate Per Km.	**Cum**			**9.20**
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	1043.00	1043.00
			Empty return trip	hour	0.67	1043.00	698.81
		b)	Overheads @ 6 % on (a)				104.51
		(c)	Contractor's profit @ 10% on (a+b)				0.00
			Cost for 100 t-km = a+b+c				1846.32
			Rate per cum = (a+b+c) /100				**18.46**
			Rate Per Km.	**Cum**			**18.50**

Sl. No.	SDB Sl. No.	MORD Ref No.	DESCRIPTION	Unit	Quantity	Rate	Amount in Rs
7	1.1	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		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	0.330	1043.00	344.19
			Front end-loader 1 cum bucket capacity @ 25 cum/hour	hour	0.330	1403.00	462.99
			(b) Overheads @ 6 % on (a)				48.43
			(c) Contractor's profit @ 10% on (a+b)				0.00
			Cost for 5.5 cum = a+b+c				855.61
			Rate per cum = (a+b+c)/ 5.5				155.57
			Unloading will be by tipping.			***say***	***156.00***
8	1.2		Loading and Unloading Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by Mechanical Means				
		i	Loading 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				
			Placing tipper at loading point, loading with front end loader excluding time for haulage and return trip.				
			Unit = cum				
			Taking output = 5.5 cum				
			Time required for				
		i	Positioning of tipper at loading point	Min	1.000		
		ii	Loading by front end loader 1 cum bucket capacity @ 45 cum per hour	Min	7.330		
		iii	Waiting time, unforeseen contingencies, etc.	Min	2.000		
			Total	Min	10.330		
		a)	**Machinery**				
			Tipper 10 t capacity	hour	0.172	1043.00	179.40
			Front end-loader 1 cum bucket capacity @ 45 cum per hour	hour	0.122	1403.00	171.17
		b)	Overheads @ 6.0 %				21.03
		C	Contractors Profit @ 10.0 %				-
			Cost for 5.5 cum = a+b+C				371.60
			Rate per cum = (a+b)/5.5				67.56
			Unloading of Earth, Sand, Lime, Moorum, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Manure, Crushed Slag, Flyash, Stone for Masonry Work by mechanical means.				
			Unit = cum				
			Taking output = 5.5 cum				
			Placing tipper at unloading point excluding time for haulage and return trip				
			Time required for				
		i	Positioning of tipper at loading point	Min	1.000		
		ii	Manoeuvering, reversing, dumping and turning for return	Min	2.000		
		iii	Waiting time, unforeseen contingencies, etc.	Min	2.000		
			Total	Min	5.000		
		a)	**Machinery**				
			Tipper 10 t capacity	hour	0.080	1043.00	83.44
		b)	Overheads @ 6 % on (a)				5.01
		C	Contractors Profit @ 10.0 % on (b)				0.00
			Cost for 5.5 cum = a+b				88.45
			Rate per cum = (a+b)/5.5				16.08
			Total loading and unloading by mechanical means				***83.64***

Sl. No.	SDB Sl. No.	MORD Ref No.	DESCRIPTION	Unit	Quantity	Rate	Amount in Rs
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				
			Mazdoor (Unskilled)	day	0.01	305.00	3.05
		b)	**Machinery**	day	0.25	287.00	71.75
			Truck				
		c)	Overheads 6 % on (a+b)	hour	0.25	934.30	233.58
		d)	Contractor's profit @ 10% on (a+b+c)				18.50
			Cost for 5.5 cum = a+b+c+d				0.00
			Rate per cum = (a+b+c+d) /5.5				326.88
							59.43
			Total Cost	**Cum**			**59.43**
			Total Loding & Unloading of Stone Aggregate	***Cum***	***= 118.86 + 59.43 =***		***178.29***
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				
			Mazdoor (Unskilled)	day	0.01	305.00	1.53
		b)	**Machinery**	day	0.13	287.00	35.88
			Truck				
		c)	Overheads 6 % on (a+b)	hour	0.166	934.30	155.09
		d)	Contractor's profit @ 10% on (a+b+c)				11.55
			Cost for 5.5 cum = a+b+c+d				0.00
			Rate per cum = (a+b+c+d) /5.5				204.04
							37.10
			Total Cost	**Cum**			**37.10**
			Total Loding & Unloading of Sand / Moorum	***Cum***	***= 59.43 + 37.1 =***		***96.53***
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				
			Mazdoor (Unskilled)	day	0.01	305.00	3.05
		b)	**Machinery**	day	0.25	287.00	71.75
			Truck				
		c)	Overheads 6 % on (a+b)	hour	0.33	934.30	308.32
		d)	Contractor's profit @ 10% on (a+b+c)				22.99
			Cost for 2000 Nos. = a+b+c+d				0.00
			Rate for 1000 bricks = (a+b+c+d)/2				406.11
							203.05
			Total Cost	**no.**			**203.05**
15		(ii)	Unloading and Stacking of Bricks by manual means including a				
			Unit = 1000 Nos.				
			Taking output = 2000 Nos.				
		a)	**Labour**				
			Mate				
			Mazdoor (Unskilled)	day	0.01	305.00	3.05
		b)	**Machinery**	day	0.25	287.00	71.75
			Truck				
		c)	Overheads 6 % on (a+b)	hour	0.33	934.30	308.32
		d)	Contractor's profit @ 10% on (a+b+c)				22.99
			Cost for 2000 Nos. = a+b+c+d				0.00
			Rate for 1000 bricks = (a+b+c+d)/2				406.11
							203.05
			Total Cost	**no.**			**203.05**
			Total Loding & Unloading of Brick Per 1000		***= 203.05 + 203.05 =***		***406.10***