

ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

PLAN HEAD-FDR(2245) YEAR 2020-21

DISTRICT:- East Champaran

BLOCK :- Phenhara

Estimate for Repair of Road breaches (Damaged by Flood) for Motoribility in Phenhara REO Road to Uttarwari Tola & Dakshinwari Tola.

ESTIMATED COST - 2.31 Lacs

SUBMITTED BY: EXECUTIVE ENGINEER, RWD WORKS DIVISION. PAKRIDAYAL

Technical Report

F.D.R.(2020-21)

Name of Road:- Phenhara REO Road to Uttarwari Tola & Dakshinwari Tola.

Length of Road:- 1.223 K.M

Name of Block:- Phenhara.

Project Head:- MMGSY (NDB BRICS)

Package No:-

Estimated Cost:- 02.31 Lacs

This estimate has been prepared for temporary restoration of the above road damaged due to heavy rain/ Flood - 2020 under instruction of Rural Works Department vide letter no- 2789 dated. 21.08.2020. Brick Bats/ Local Sand Bag / Humepipe / Bamboo Pile / Soil has been provided as per need of the above damaged road. This road is under Construction/maintenance / out of maintenance.

All items of this estimate has been taken from approved current schedule rate of works circle Motihari. This estimate is submitted for technical approval /Sanction.

11-12-2020 J.E

A.E

R.W.D.(w) Div. Pakridayal.

me of Work:-

Estimate for Repair of Road breaches (Damaged by Flood) for Motoribility inPhenhara REO Road to Uttarwari Tola & Dakshinwari Tola.

lead -	2245	Length- 1.223 K.M								
Item No.		Name of Item	unit	No	Length	Width	Height	Qty.	Rate	Amount
	under Brid apron incl	r laying dry graded Jhama Khoa or stone filter ck Pitching or Boulder Pitching in slope or uding light ramming etc. all complete as per design, specification and direction of E/I.	cum		As Per Appendix I		107.675	2147.41 2147.40	231222.372 £ 31221=	
									OTAL (in Re.)	

Say Re

231000.00

2,31,200= €

Junior Engineer, Rural Works Department,

Works Section, Phenhara

Assistant Engineer, Rural Works Department, Works Sub Division, Phenhara

Executive Engineer, Rural Works Department, Works Division, Pakridayal

of Facto T.A.TS is accorded for Rs. 2,31,200 = ~ (...._____ crore Two lacs Thirty one thousand Two hundred) only.

(ame of Work:-

Estimate for Repair of Road breaches (Damaged by Flood) for Motoribility inPhenhara REO Road to Uttarwari Tola & Dakshinwari Tola.

Appendix - I Measurement for surfacing the Breach with Brick Bats								
Sl. No.	Chainage	Length (M)	Avg. Width In Meter	Avg. Depth In Meter	Quantity (Cum)			
1.00	0-000-0.550	15.000	2.50+2.80/2	2.300	91.425			
2.00	0-600-0.330	5.000	2.500	1.300	16.250			
				Total	107.675			

Junior Engineer Rural Works Department, Works Section, Phenhara

Asistant Engineer Rural Works Department, Works Sub Division, Phenhara Executive Engineer, Rural Works Department, Works Division, Pakridayal

6.6.1	Labour for laying dry graded Jhama Kh	OB or ct	and file					
WRD	Labour for laying dry graded Jhama Kh Pitching in slope or apron including light	rammin	one filter under B	rick Pitching	or Boulder			
Bihar	Pitching in slope or apron including light ramming etc. all complete as per approved design specification and direction of E/I.							
	Unit :- Per Cum							
7	Taking Output = 2.832 Cum							
	Unskilled Mazdoor	Nos.						
	Add 6% Overhead Charges	1405.	3	287.00	861.00			
	Rate for 2.832 Cum				51.6			
	Rate per Cum (Rs.) -				912.6			
					322.2			
1.4 RCD	Cost of Haulage Excluding Loading and Ur	loading						
	Haulage of materials by Tractor excluding cost of loading, unloading and stacking. Unit = t km							
	Unit = t.km	T	ading, unloading a	nd stacking.				
	Taking output 3.60 tonnes load and lead 1	0 km = 36	O t km					
	(i) Surfaced Road	NIII = 30	J.O t.KIII					
	Speed with load : 15 km / hour.							
	Speed while Returning empty :25 km / hou	ır						
	a) Machinery.							
	Tractor 3.6 tonne capacity							
G . A R R C . A	Time taken for onward haulage with load	hour	0.667	F40.40	Man M			
	Time taken for empty return trip.	hour	0.400	549.10	366.2			
	b) Overhead charges @ 0.06 on (a)	cui	0.400	549.10	219.6			
	cost for 36 t km = a+b+c				35.1			
	Rate per t.km = $(a+b+c)/36$				621.0			
	Say Rs				17.2			
					17.2			
	(ii) Unsurfaced Graveled Road			2.2662.000				
	Speed with load: 12 km / hour							
	Speed for empty return trip :20 km / hour							
	a) Machinery							
	Tractor 3.6 tonnes capacity							
	Time taken for onward haulage with load h	hour	0.022					
	Time taken for empty return trip hour 0.50	hour	0.833	549.10	457.4			
	b) Overhead charges @ 0.06 on (a)	Tioui	0.500	549.10	274.5			
	Cost for 36 t .km = $a+b+c$ 840.34				43.9			
	Rate per t.Km = $(a+b+c)/36\ 23.34$				775.8			
	Say Rs				21.5			
					21.5			

Mazdoor for loading and unloading b) Machinery Tractor 3.60 tonnes capacity hour 0.1 549.10 549.1	ć	Loading and Unloading of Stone Boulder	/ 54						
excludingfor haulage and return trip		Placing Tractor at loading point loading with 6							
Taking output = 2.25 cum Time required for i) Positioning of Tractor 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 O Min Total a) Labour Mate day O.03 305.00 9 Mazdoor for loading and unloading day O.72 287.00 206 b) Machinery Tractor 3.60 tonnes capacity Front end-loader 1 cum bucket capacity @ 25 cum/hour c) Overhead charges @ 0.06 on (a+b) Cost for 2.25 cum = a+b+c+d Rate per cum = (a+b+c+d)/2.25 Unloading will be done manually. 1. Suplying for Brick Bats (with OH) A. Basic Rate of Brick Bats Add overhed Charges Total Surface Lead Vinsurface Lead Factor (3.6/2.25) Cum 1.60 C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) Total (A+B+C) Add 1% Labour Gess (M+B+C) Add 1% Labour Gess (M+B+C) Add 1% Labour Cess (A+B+C) Add 1% Labour Cess (M+B+C) Add 10% Cost of Material for Seigniorage Fee Total Cost per Cum		excludingfor haulage and return trip	with frontl	oader, dumping	g, turning for	return trip,			
Time required for i) Positioning of Tractor 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 O Min Total a) Labour Mate Mazdoor for loading and unloading b) Machinery Tractor 3.60 tonnes capacity Front end-loader 1 cum bucket capacity @ 25 cum/hour c) Overhead charges @ 0.06 on (a+b) Cost for 2.25 cum = a+b+c+d Rate per cum = (a+b+c+d)/2.25 Unloading will be done manually. 1. Suplying for Brick Bats (with OH) A. Basic Rate of Brick Bats Add overhed Charges Total - Surface Lead MM 7 Unsurface Lead KM 7 Unsurface Lead Factor (3.6/2.25) C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) Total (A+B+C) Add 12% GST (A+B+C) Add 12% GST (A+B+C) Add 10% cost of Material for Seigniorage Fee Total Cost per Cum									
1) Positioning of Tractor at loading point 1 Min 1 Loading by front end loader 1 cum 5 Min 1 Loading by front end loader 1 cum 5 Min 1		Taking output = 2.25 cum							
	9								
		i) Positioning of Tractor at loading point		1 Min					
bucket capacity @ 25 cum per hour		ii) Loading by front end loader 1 cum		Tiviiii					
III) Maneuvering, reversing, dumping and turning for return Iv) Waiting time, unforeseen Contingencies etc O Min O M		bucket capacity @ 25 cum per hour		5 Min					
turning for return iv) Waiting time, unforeseen contingencies etc Total a) Labour Mate Mazdoor for loading and unloading b) Machinery Tractor 3.60 tonnes capacity Front end-loader 1 cum bucket capacity @ 25 cum/hour c) Overhead charges @ 0.06 on (a+b) Cost for 2.25 cum = a+b+c+d Rate per cum = (a+b+c+d)/2.25 Iote:- Unloading will be done manually. 1. Suplying for Brick Bats (with OH) A. Basic Rate of Brick Bats Per Cum Add overhed Charges Total Surface Lead Vinsurface L		III) Maneuvering, reversing, dumping and							
IV) Waiting time, unforeseen contingencies etc		turning for return		0 Min					
Total a) Labour Adate Aday Mazdoor for loading and unloading b) Machinery Tractor 3.60 tonnes capacity Front end-loader 1 cum bucket capacity @ 25 cum/hour c) Overhead charges @ 0.06 on (a+b) Cost for 2.25 cum = a+b+c+d Rate per cum = (a+b+c+d)/ 2.25 ote:- Unloading will be done manually. 1. Suplying for Brick Bats (with OH) A. Basic Rate of Brick Bats Add overhed Charges Total Unsurface Lead Unsurface Lead KM Factor (3.6/2.25) Cum 1.60 B. Carriage (with OH) (1.6 x 7 x 17.25) + (1.6 x 1 x 21.55) + 182.39 C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) Total (A+B+C) Add 1% Labour Cess (A+B+C) Add 10% cost of Material for Seigniorage Fee Total Cost per Cum Total Cost per Cum Total Cost per Cum		iv) Waiting time, unforeseen	-37-34 ST						
Total a Labour Aate				0 Min					
Mate									
Mazdoor for loading and unloading day 0.72 287.00 206									
Mazdoor for loading and unloading day 0.72 287.00 206		Mate	day	0.03	305.00	9.15			
b) Machinery Tractor 3.60 tonnes capacity Front end-loader 1 cum bucket capacity @ 25 cum/hour c) Overhead charges @ 0.06 on (a+b) Cost for 2.25 cum = a+b+c+d Rate per cum = (a+b+c+d)/ 2.25 Iote: Unloading will be done manually. 1. Suplying for Brick Bats (with OH) A. Basic Rate of Brick Bats Add overhed Charges Total Surface Lead Unsurface Lead Vinsurface Lead Factor (3.6/2.25) Cum 1.60 Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) Total (A+B+C) Add 12% GST (A+B+C) Add 10% cost of Material for Seigniorage Fee Total Cost per Cum 10.10 1.549.10 54		Mazdoor for loading and unloading	-			206.64			
Front end-loader 1 cum bucket capacity @ 25 cum/hour c) Overhead charges @ 0.06 on (a+b) Cost for 2.25 cum = a+b+c+d Rate per cum = (a+b+c+d)/ 2.25 Unloading will be done manually. 1. Suplying for Brick Bats (with OH) A. Basic Rate of Brick Bats Per Cum Add overhed Charges Total - Surface Lead Vinsurface Lead Vinsu		b) Machinery			201.00	200.04			
Front end-loader 1 cum bucket capacity @ 25 cum/hour c) Overhead charges @ 0.06 on (a+b) Cost for 2.25 cum = a+b+c+d Rate per cum = (a+b+c+d)/ 2.25 Unloading will be done manually. 1. Suplying for Brick Bats (with OH) A. Basic Rate of Brick Bats Add overhed Charges Total - Surface Lead Unsurface Lead Unsurface Lead KM T Unsurface (with OH) Eactor (3.6/2.25) Cum 1.60 B. Carriage (with OH) (1.6 x 7 x 17.25) + (1.6 x 1 x 21.55) + 182.39 C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) Total (A+B+C) - Add 1% Labour Cess (A+B+C) Add 10% cost of Material for Seigniorage Fee 1 101.70 Total Cost per Cum		Tractor 3.60 tonnes capacity	hour	0.1	549 10	54.91			
@ 25 cum/hour hour 0.083 1403.00 116 c) Overhead charges @ 0.06 on (a+b) 2: Cost for 2.25 cum = a+b+c+d 410 Rate per cum = (a+b+c+d)/ 2.25 18: Ote:- Unloading will be done manually. 1. Suplying for Brick Bats (with OH) A. Basic Rate of Brick Bats Per Cum 1017.00 101 Add overhed Charges 6% 66 Total - 107 Surface Lead KM 7 Unsurface Lead KM 1 Factor (3.6/2.25) Cum 1.60 B. Carriage (with OH) (1.6 x 7 x 17.25) + (1.6 x 1 x 21.55) + 182.39 41 C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) 32 Total (A+B+C) - 181 Add 12% GST (A+B+C) 21 Add 10% cost of Material for Seigniorage Fee 1 101.70 101 Total Cost per Cum		Front end-loader 1 cum bucket capacity		0.1	343.10	34.91			
c) Overhead charges @ 0.06 on (a+b) Cost for 2.25 cum = a+b+c+d Rate per cum = (a+b+c+d) / 2.25 Iote:- Unloading will be done manually. 1. Suplying for Brick Bats (with OH) A. Basic Rate of Brick Bats Add overhed Charges Total -		@ 25 cum/hour	hour	0.083	1403.00	116 45			
Cost for 2.25 cum = a+b+c+d		c) Overhead charges @ 0.06 on (a+b)		0.003	1403.00	23.23			
Nate per cum = (a+b+c+d)/ 2.25 183 Intelligent						410.38			
1. Suplying for Brick Bats (with OH) A. Basic Rate of Brick Bats Add overhed Charges Total - Unsurface Lead Unsurface Lead Factor (3.6/2.25) Cum 1.60 B. Carriage (with OH) (1.6 x 7 x 17.25) + (1.6 x 1 x 21.55) + 182.39 C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) Total (A+B+C) - Add 1% Labour Cess (A+B+C) Add 10% cost of Material for Seigniorage Fee 1 101.70 101 101 101 101 101 101 10		Rate per cum = $(a+b+c+d)/2.25$							
A. Basic Rate of Brick Bats Per Cum 1017.00 101 Add overhed Charges 6% 66 Total - 107 Surface Lead KM 7 Unsurface Lead KM 1 Factor (3.6/2.25) Cum 1.60 B. Carriage (with OH) (1.6 x 7 x 17.25) + (1.6 x 1 x 21.55) + 182.39 C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) Total (A+B+C) - 181 Add 1% Labour Cess (A+B+C) Add 10% cost of Material for Seigniorage Fee 1 101.70 100 Total Cost per Cum	lote:-					102.35			
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Add overhed Charges 6% 6 Total - 107 Surface Lead KM 7 Unsurface Lead KM 1 Factor (3.6/2.25) Cum 1.60 B. Carriage (with OH) (1.6 x 7 x 17.25) + (1.6 x 1 x 21.55) + 182.39 41 C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) 32 Total (A+B+C) - 181 Add 1% Labour Cess (A+B+C) 192 Add 10% cost of Material for Seigniorage Fee 1 101.70 100 Total Cost per Cum	Α.		Per Cum		1017.00				
Total - 107 Surface Lead KM 7 Unsurface Lead KM 1 Factor (3.6/2.25) Cum 1.60 B. Carriage (with OH) (1.6 x 7 x 17.25) + (1.6 x 1 x 21.55) + 182.39 41 C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) 32 Total (A+B+C) - Add 1% Labour Cess (A+B+C) Add 10% cost of Material for Seigniorage Fee 1 101.70 10			r cr cum	504	1017.00	1017.0			
Surface Lead KM 7 Unsurface Lead KM 1 Factor (3.6/2.25) Cum 1.60 B. Carriage (with OH) (1.6 x 7 x 17.25) + (1.6 x 1 x 21.55) + 182.39 41 C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) Total (A+B+C) - Add 1% Labour Cess (A+B+C) Add 10% cost of Material for Seigniorage Fee 1 101.70 10				6%		61.0			
Unsurface Lead KM 1 Factor (3.6/2.25) Cum 1.60 B. Carriage (with OH) (1.6 x 7 x 17.25) + (1.6 x 1 x 21.55) + 182.39 C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) 32 Total (A+B+C) - 181 Add 1% Labour Cess (A+B+C) 19 Add 10% cost of Material for Seigniorage Fee 1 101.70 100 Total Cost per Cum						1078.0			
Factor (3.6/2.25) Cum 1.60 B. Carriage (with OH) (1.6 x 7 x 17.25) + (1.6 x 1 x 21.55) + 182.39 C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) Total (A+B+C) - Add 1% Labour Cess (A+B+C) Add 12% GST (A+B+C) Add 10% cost of Material for Seigniorage Fee 1 101.70 Total Cost per Cum			KM	7					
B. Carriage (with OH) (1.6 x 7 x 17.25) + (1.6 x 1 x 21.55) + 182.39 C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) Total (A+B+C) - Add 1% Labour Cess (A+B+C) Add 12% GST (A+B+C) Add 10% cost of Material for Seigniorage Fee 1 101.70 Total Cost per Cum			KM	1					
C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) Total (A+B+C) - Add 1% Labour Cess (A+B+C) Add 12% GST (A+B+C) Add 10% cost of Material for Seigniorage Fee Total Cost per Cum		Factor (3.6/2.25)	Cum	1.60					
C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) Total (A+B+C) - Add 1% Labour Cess (A+B+C) Add 12% GST (A+B+C) Add 10% cost of Material for Seigniorage Fee 1 101.70 Total Cost per Cum	B.	Carriage (with OH)							
C. Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH) Total (A+B+C) - Add 1% Labour Cess (A+B+C) Add 12% GST (A+B+C) Add 10% cost of Material for Seigniorage Fee 1 101.70 10 Total Cost per Cum		(1.6 x 7 x 17.25) + (1.6 x 1 x 21.55) + 182.3	9			410.0			
Ramming as per WRD SOR 6.6.1 (with OH) 32	C.	Cost of Labour for Pitching and Light				120.0			
Total (A+B+C) - 181 Add 1% Labour Cess (A+B+C) 1 Add 12% GST (A+B+C) 2 Add 10% cost of Material for Seigniorage Fee 1 101.70 10 Total Cost per Cum 1 101.70 10						322.2			
Add 1% Labour Cess (A+B+C) Add 12% GST (A+B+C) Add 10% cost of Material for Seigniorage Fee 1 101.70 10 Total Cost per Cum	9 (8) (6)	Total (A+B+C) -							
Add 12% GST (A+B+C) Add 10% cost of Material for Seigniorage Fee 1 101.70 10 Total Cost per Cum		Add 1% Labour Cess (A+B+C)				1810.3			
Add 10% cost of Material for Seigniorage Fee 1 101.70 10 Total Cost per Cum						18.1			
Total Cost per Cum		Add 10% cost of Material for Seigniorage F	ee	1	101.70	217.2			
Do Company of the Com					101.70	101.7			
ns 214					Rs	2147.4			