



ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

PLAN HEAD- FDR(2245) YEAR 2020-21

DISTRICT :- East Champaran

BLOCK :- Madhuban

Estimate for Repair of Road breaches
(Damaged by Flood) for Motorability in SGarhia
Bazar to Mushar Tola Garahia Middle School
Via Shekh Toli Gandhak Bandh.

ESTIMATED COST - 1.65 Lacs

1.634

SUBMITTED BY:
EXECUTIVE ENGINEER,
RWD WORKS DIVISION,
PAKRIDAYAL

Technical Report

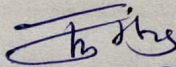
F.D.R.(2020-21)

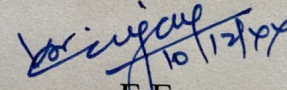
Name of Road:- Garahia Bazar To Mushar Tola Garahia Middle School Via Shek
Toli Gandhak Bandh.
Length of Road:- 1.445 K.M
Name of Block:- Madhuban.
Project Head:- M.M.G.S.Y
Package No:-
Estimated Cost:- 1.65 Lacs

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.

W
10.12.2020
J.E


10.12.20
A.E


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

of Work:-

Estimate for Repair of Road breaches (Damaged by Flood) for Motorability in SGarhia Bazar to Mushar Tola Garahia Middle School Via Shekh Toli Gandhak Bandh.

2245

Length- 1.445 K.M

Item No.	Name of Item	unit	No	Length	Width	Height	Qty.	Rate	Amount
1	Labour for laying dry graded Jhama Khoa or stone filter under Brick Pitching or Boulder Pitching in slope or apron including light ramming etc. all complete as per approved design, specification and direction of E/I.	cum		As Per Appendix I			16.374	2216.20 2147.40	36288.0588 35162.00
2	Labour for Filling Sand Bag, Stitching and Placing etc. all complete as per specification and direction of E/I.	cum		As Per Appendix I			4537	28.27	128260.99
TOTAL (in Re.)									164549.05

Say Re 165000.00

W
10.12.2020

Junior Engineer,
Rural Works Department,
Works Section, Madhuban

10.12.20

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

10.12.20

Executive Engineer,
Rural Works Department,
Works Division, Pakridayal

Post facto
T.A./T.S. is accorded for Rs. 1,63,400.00
(One crore One lacs Sixty three thousand Four hundred) only.

S.E. (R.W.D.)
works Circle
Mgtihari

he of Work:-

Estimate for Repair of Road breaches (Damaged by Flood) for Motorability in SGarhia Bazar to Mushar Tola Garahia Middle School Via Shekh Toli Gandhak Bandh.

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 - 0.250	12.400	1.300	0.450	7.254
2.00		4.000	1.900	1.200	9.120
					16.374

Measurement for surfacing the Breach with Sand Bags

Sl. No.	Chainage	Length (M)	Avg. Width In Meter	Avg. Depth In Meter	Quantity (Cum)
1.00	0.250 - 0.300	13.000	2.0+1.50/2	3.000	83.850
2.00	0.300 - 0.330	8.000	2.000	1.600	25.600
3.00	0.330 - 0.350	16.000	2.00+1.50/2	1.600	44.800
				Total	154.250

1 no Sand Bag Filled With 0.034 Cum Sand
Hence Nos Of Bag = 154.250M3 / 0.034 M3 = 4536.76 Bag
Say 4537 Bag

W
10/12/2020

Junior Engineer
Rural Works Department,
Works Section, Madhuban

[Signature]
10/12/20

Asistant Engineer
Rural Works Department,
Works Sub Division, Madhuban

[Signature]
10/12/20

Executive Engineer,
Rural Works Department,
Works Division, Pakridayal

BRICK BATS PITCHING MANUAL MEANS

1.1	Labour for laying dry graded Jhama Khoja or stone filter under Brick Pitching or Boulder Pitching in slope or apron including light ramming etc. all complete as per approved design, specification and direction of E/I.				
VRD					
Bihar					
	Unit :- Per Cum				
	Taking Output = 2.832 Cum				
	Unskilled Mazdoor	Nos.	3	287.00	861.00
	Add 6% Overhead Charges				51.66
	Rate for 2.832 Cum				912.66
	Rate per Cum (Rs.) -				383.15
1.4 RCD	Cost of Haulage Excluding Loading and Unloading				
	Haulage of materials by Tractor excluding cost of loading, unloading and stacking.				
	Unit = t.km				
	Taking output 3.60 tonnes load and lead 10 km = 36.0 t.km				
	(i) Surfaced Road				
	Speed with load : 15 km / hour.				
	Speed while Returning empty :25 km / hour.				
	a) Machinery.				
	Tractor 3.6 tonne capacity				
	Time taken for onward haulage with load	hour	0.667	549.10	366.25
	Time taken for empty return trip.	hour	0.400	549.10	219.64
	b) Overhead charges @ 0.06 on (a)				35.15
	cost for 36 t km = a+b+c				621.04
	Rate per t.km = (a+b+c)/36				17.25
	Say Rs. -				17.25
	(ii) Unsurfaced Graveled Road				
	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	hour	0.833	549.10	457.40
	Time taken for empty return trip hour 0.50	hour	0.500	549.10	274.55
	b) Overhead charges @ 0.06 on (a)				43.92
	Cost for 36 t .km = a+b+c				775.87
	Rate per t.Km = (a+b+c)/36				21.55
	Say Rs. -				21.55

Loading and Unloading of Stone Boulder/ Stone aggregates/Sand /Kanker/Moorum					
Placing Tractor at loading point, loading with frontloader, dumping, turning for return trip, excluding for haulage and return trip					
Unit = cum					
Taking output = 2.25 cum					
Time required for					
i) Positioning of Tractor at loading point			1 Min		
ii) Loading by front end loader 1 cum bucket capacity @ 25 cum per hour			5 Min		
iii) Maneuvering, reversing, dumping and turning for return			0 Min		
iv) Waiting time, unforeseen contingencies etc			0 Min		
Total			6 Min		
a) Labour					
Mate	day	0.03	305.00	9.15	
Mazdoor for loading and unloading	day	0.72	287.00	206.64	
b) Machinery					
Tractor 3.60 tonnes capacity	hour	0.1	549.10	54.91	
Front end-loader 1 cum bucket capacity @ 25 cum/hour	hour	0.083	1403.00	116.45	
c) Overhead charges @ 0.06 on (a+b)				23.23	
Cost for 2.25 cum = a+b+c+d				410.38	
Rate per cum = (a+b+c+d)/ 2.25				182.39	
Note:- Unloading will be done manually.					
1. Supplying for Brick Bats (with OH)					
A.	Basic Rate of Brick Bats	Per Cum	1017.00	1017.00	
	Add overhed Charges	6%		61.02	
	Total -			1078.02	
	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			410.07	
C.	Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH)			383.15	
	Total (A+B+C) -			1871.24	
	Add 1% Labour Cess (A+B+C)			18.71	
	Add 12% GST (A+B+C)			224.55	
	Add 10% cost of Material for Seigniorage Fee	1	101.70	101.70	
	Total Cost per Cum		Rs.-	2216.20	

PROVIDING AND PLACING SAND BAGS

RCD (12.9)	Labour for Filling Sand Bag, Stitching and Placing etc. all complete as per specification and direction of E/I.			
	Unit :- Per Bag			
	Taking Output = 750 Bag			
	Unskilled Mazdoor	Nos.	15	287.00
	Add 6% Overhead Charges			4305.00
	Rate for 750 Bag			258.30
	Mazdoor Rate per Bag (Rs.) -			4563.30
				6.08
1.4 RCD	Cost of Haulage Excluding Loading and Unloading			
	Haulage of materials by Tractor excluding cost of loading, unloading and stacking.			
	Unit = t.km			
	Taking output 3.60 tonnes load and lead 10 km = 36.0 t.km			
	(i) Surfaced Road			
	Speed with load : 15 km / hour.			
	Speed while Returning empty :25 km / hour.			
	a) Machinery.			
	Tractor 3.6 tonne capacity			
	Time taken for onward haulage with load	hour	0.667	549.10
	Time taken for empty return trip.	hour	0.400	549.10
	b) Overhead charges @ 0.06 on (a)			35.15
	cost for 36 t km = a+b+c			621.04
	Rate per t.km = (a+b+c)/36			17.25
	Say Rs. -			17.25
	(iii) Katcha Track			
	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	hour	1.000	549.10
	Time taken for empty return trip	hour	0.667	549.10
	b) Overhead charges @ 0.06 on (a)			366.25
	Cost for 36 t .km =			54.92
	Rate per t.Km =			970.27
	Say Rs. -			26.95
				26.95

Loading and Unloading of Stone Boulder/ Stone aggregates/Sand /Kanker/Moorum				
Placing Tractor at loading point, loading with frontloader, dumping, turning for return trip, excluding for haulage and return trip				
Unit = cum				
Taking output = 2.25 cum				
Time required for				
i) Positioning of Tractor at loading point		1 Min		
ii) Loading by front end loader 1 cum bucket capacity @ 25 cum per hour		5 Min		
iii) Maneuvering, reversing, dumping and turning for return		0 Min		
iv) Waiting time, unforeseen contingencies etc		0 Min		
Total		6 Min		
a) Labour				
Mate	day	0.03	305.00	9.15
Mazdoor for loading and unloading	day	0.72	287.00	206.64
b) Machinery				
Tractor 3.60 tonnes capacity	hour	0.1	549.10	54.91
Front end-loader 1 cum bucket capacity @ 25 cum/hour	hour	0.083	1403.00	116.45
c) Overhead charges @ 0.06 on (a+b)				23.23
Cost for 2.25 cum = a+b+c+d				410.38
Rate per cum = (a+b+c+d)/ 2.25				182.39
Note:-	Unloading will be done manually.			
1. Suplying of Sand Bag (with OH)				
A. Basic Rate of Sand Bag	Per Bag		8.46	8.46
Add overhed Charges		6%		0.51
Total -				8.97
1 No. Cement Bag filled with 40 Kg. / 1.2 CuFt Sand				
Conversion factor: 1 m3 = 35.3146667 ft3				
1) Cubic Meter = Cubic Foot / 35.3146667				
2) Cubic Meter = 1.2 / 35.3146667				
3) Cubic Meter = 0.034				
Hence 1 No. Sand Bag Filled with 0.034 Cum Sand				
Surface Lead	KM	2		
Katcha Lead	KM	1		
Factor (3.6/2.25)	Cum	1.60		
B. Carriage (with OH)				
(1.6 x 2 x 17.25) + (1.6 x 1 x 26.95) + 182.39				280.71
Cost of Carriage of Sand in Filling of one Sand Bag				
		280.71	0.034	9.54
C. Cost of Labour for Filling Sand Bag, Stitching and Placing (with OH)				6.08
Total (A+B+C) -				24.59
Add 1% Labour Cess (A+B+C)				0.25
Add 12% GST (A+B+C)				2.95
Add 10% cost of Material for Seigniorage Fee		0.034	14.19	0.48
Total Cost per Bag			Rs.-	28.27