



ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

ESTIMATE FOR TEMPORARY RESTORATION OF ROAD DIAMAGED DUE TO
FLOOD

YEAR 2020-21

DISTRICT :- East Champaran
BLOCK :- MOTIHARI

Motihari Chhauradano pirauli road to
Jhitkahiyan

ESTIMATED COST - 25.257 Lacs

SUBMITTED BY:
EXECUTIVE ENGINEER,
RWD WORKS DIVISION,
MOTIHARI

Technical Report

F.D.R.(2020-21)

Name of Road:- Motihari Chauradamp Pirauli Road to Shitkaniyan.

Length of Road:- 13.00 Km.

Name of Block:- Motihari

Project Head:- M.R. 3054

Package No:-

Estimated Cost:- 25.257 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 maintenance / out of maintenance/Work in Progress.

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

01/12/20
A.E

01/12/20
E.E.

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

Motihari Chhauradano pirauli road to Jhltkahlyan

Head - Length-13.031KM

SI No.	Item No.	Name of Item	unit	No	Length	Width	Height	Qty.	Rate	Amount
1		Labour for Filling Sand Bag, Stitching and Placing etc. all complete as per specification and direction of E/I.	no.		bag			2000.00	33.58	67160.00
2		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 II			1144.88	2147.40	2458504.58
TOTAL (in Re.)										2525664.58

Say Rs 2525664.00

[Signature]
11/12/20
Junior Engineer,
Rural Works Department,
Works Section, Motihari

[Signature]
01/12/20
Assistant Engineer,
Rural Works Department,

[Signature]
01/12/20
Executive Engineer,
Rural Works Department,
Works Division, Motihari

Post Facto T.A./D is accorded for Rs. 25,25,700/-
(.....crore.....Twenty Five Twenty Five
.....lacs.....thousand
.....Seven.....hundred.....) only.

[Signature]
01/12/20
S.E. (R.W.D.)
works Circle
Motihari
[Signature]
30/12/20

**अधीक्षण अभियंता का कार्यालय
ग्रामीण कार्य विभाग, कार्य अंचल, गोतिहारी**

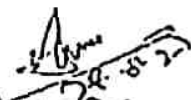
कार्यालय आदेश

कार्यालय आदेश संख्या-

दिनांक.....

विभागीय निर्देशानुसार वर्ष 2020 के बाढ़ एवं अतिवृष्टि से ग्रामीण कार्य विभाग के पनों एवं पुलों में हुई क्षति के कारण आवागमन को सुचारु करने हेतु मुझ स्तर पर कार्य प्रगंडलों को कार्य कराने का निर्देश प्राप्त है। इस सम्बन्ध में सख्त, ग्रामीण कार्य विभाग, विहार पटना के निर्देश के आलोक में इन सभी कार्यों की भौतिक सत्यापन हेतु इस कार्य अंचल में पदस्थापित कार्यपालक अभियंताओं के बीच प्रगंडलवार जाँच कार्य हेतु निम्नवत कार्य क्षेत्र आवंटित किया जाता है।

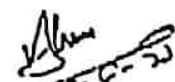
क्रमांक	वर्तमान पदस्थापन कार्य प्रगंडल का नाम	जाँच हेतु आवंटित कार्य प्रगंडल का नाम
1	कार्यपालक अभियंता, गोतिहारी	कार्य प्रगंडल खरसौल
2	कार्यपालक अभियंता, खरसौल	कार्य प्रगंडल ढाका
3	कार्यपालक अभियंता, अरराज	कार्य प्रगंडल गोतिहारी
4	कार्यपालक अभियंता, चकिया	कार्य प्रगंडल अरराज
5	कार्यपालक अभियंता, ढाका	कार्य प्रगंडल पकड़ीदयाल
6	कार्यपालक अभियंता, पकड़ीदयाल	कार्य प्रगंडल चकिया


 अधीक्षण अभियंता
 ग्रामीण कार्य विभाग,
 कार्य अंचल, गोतिहारी

जापांक- 1344

दिनांक- 28/08/2020

प्रतिलिपि- कार्यपालक अभियंता, ग्रामीण कार्य विभाग, कार्य प्रगंडल गोतिहारी/खरसौल/अरराज/चकिया/ढाका/पकड़ीदयाल को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।


 अधीक्षण अभियंता
 ग्रामीण कार्य विभाग,
 कार्य अंचल, गोतिहारी

**कार्यपालक अभियंता का कार्यालय,
ग्रामीण कार्य विभाग, कार्य प्रमंडल, अरेराज।**

पत्रांक 2514

दिनांक 26.12.2020

प्रेषक,

कार्यपालक अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रमंडल अरेराज।

सेवा में,

अधीक्षण अभियंता,
ग्रामीण कार्य विभाग,
कार्य अंचल, मोतिहारी।

विषय:- वर्ष 2020 के बाढ़ में क्षतिग्रस्त पथों को मोटरेबुल कराने हेतु किये गये कार्यों की जाँच के संबंध में।

प्रसंग:- मु0अ0-4(मु0)विविध (कार्य)-23-40/2016- 2789 पटना, दिनांक 21.08.2020 एवं भवदीय कार्यालय आदेश ज्ञापांक- 1344 दिनांक 28.08.2020

महाराज

उपर्युक्त विषयक एवं प्रासंगिक पत्र के अनुपालन में कार्य प्रमंडल, मोतिहारी द्वारा उपलब्ध कराये गए मोटरेबुल पथों की सूची में अंकित पथों का अधोहस्ताक्षरी तथा सहायक अभियंता एवं कनीय अभियंता के द्वारा निरीक्षण किया गया। निरीक्षण के दौरान कार्य प्रमंडल, मोतिहारी द्वारा प्रतिवेदित सभी पथों में मोटरेबुल का कार्य कराया गया है एवं वर्तमान में यातायात चालू है।

सादर सूचनार्थ एवं अग्रेतर कार्रवाई हेतु समर्पित।

अनु0- निरीक्षण किये गए पथों की सूची।


कनीय अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रमंडल, अरेराज।


सहायक अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रमंडल, अरेराज।

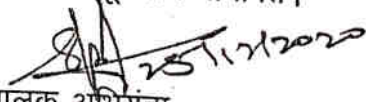
विश्वासभाजन,

कार्यपालक अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रमंडल, अरेराज।

ज्ञापांक 2514

दिनांक 26.12.2020

प्रतिलिपि:- कार्यपालक अभियंता ग्रामीण कार्य विभाग, कार्य प्रमंडल, मोतिहारी को सूचनार्थ समर्पित।


कार्यपालक अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रमंडल, अरेराज।

25	Motihari	Motihari Chhauradano piraul road - Jhitkahian (021)	13.031
26	Motihari	L038-T 04 to Alir Tola via Buriyar pur (VR49)	2.818
27	Motihari	REO Rond Dekaha - Bardaha (219)	8.639
28	Motihari	L046-L 028 to Hasun (VR24)	3
29	Motihari	L076-L 025 to Siluliya (VR76)	3.517
30	Motihari	Patjirwa pul to pwd road Dhaka	2
31	Motihari	Motihari dhaka PWD road patparia moran - Chhatauni Ramsingh	5.85
32	Motihari	L027 to Bheriharwa Via Harijan Tola	2.954
33	Motihari	Dekhaha to Harajpur	4.5
34	Motihari	L026 to Mahmood Nagar	0.836
35	Motihari	L040-Baraulia to Harajpur Laxmipur (VR6)	2.231
36	Motihari	Motihari Rulhi PWD To Sahni Tola	3.2
37	Motihari	Motihari Chhauradano PWD road - Loknathpur	3.606
38	Motihari	Motihari Chhauradano P.W.D Rd. - Dostiya	2.5
39	Motihari	Motihari Chhauradano P.W.D. Road - Ramgarhwa (142)	3.695
40	Motihari	Jhakha - Arajisirs to Machhaha (213)	7.227
41	Motihari	L071-T 03 To Maniya Tola Via Mahuwa Tola (VR60)	2.881
42	Motihari	T01 PWD Motihari Madhubani Ghat to Mathiya (Maniya) Tola	2.868
43	Motihari	Pwd Madhubani Ghat Health Center to Nandpur	2.15
44	Motihari	House of Baidhnath Mahto to NH28A Bairia	0.873
45	Motihari	T01 PWD Madhubani Ghat to Sirsa Mal	1.518
46	Motihari	Motihari Chhauradano PWD road to Ramgarhwa	3.695
47	Motihari	T 06 to Mullah Toli	2.1
48	Motihari	PWD Madhubani Ghat Ayurved College to Daswariya Tak	4.1
49	Piprakothi	L057-Dhekha Bela Watjung to Hathiyahce (VR13)	4.545
50	Piprakothi	Home Of Anshur Ali to Home Of Kishan Pandit	0.6
51	Piprakothi	Aasa Muhammad to Link Road L034	0.65

25/12/20
a

25/12/20
H.E.

25/12/20
H.E.

Appendix - I

Measurement for filling of Breach with E/W

Sl. No.	Location	Length (M)	width (M)	Av. Width (M)	Thickness (M)	Av. Thickne ss (M)	Quantity (cum)
1		145.00	(4.0+7.0)/2	5.50	(2.0+1.25+0.75)/3	0.00	0.00
				Total			0.00

		Appendix - II	
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Measurement for surfacing the Breach with Brick Bats	
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Sl. No.	Chainage (m)	Length (M)	width (M)		Thickness (M)		Quantity (cum)	
1	700	2.00		2.50		0.45	2.25	
2	2400	5.00		0.50		0.30	0.75	
3	2490	13.50		1.80		0.60	14.58	
4	2515	5.00		1.40		0.30	2.10	
5	2540	5.00		1.40		0.30	0.20 2-10	
6	2600	4.50		1.00		0.35	1.58	
7	2980	9.50		3.00		0.30	8.55	
8	3860	11.00		3.00		0.60	19.80	
9	3890	4.00		2.50		0.40	4.00	
10	3920	21.50		3.60		0.55	42.57	
11	3950	13.00		4.00		0.80	41.60	
12	5900	6.50		3.50		0.35	7.96	
13	6100	10.00		1.80		0.60	10.80	
14	6150	4.50		1.00		0.30	1.35	
15	6160	7.50		1.00		0.45	3.38	
16	6170	5.50		1.00		0.30	1.65	
17	6180	12.00		4.50		4.50	243.00	
18	6380	3.00		1.00		0.40	1.20	
19	6900	9.00		4.00		0.40	14.40	
20	6910	16.00		4.00		0.75	48.00	
21	6930	2.00		1.50		0.40	1.20	
22	6950	2.00		1.50		0.40	1.20	
23	6990	4.00		1.00		0.30	1.20	
24	7100	8.00		4.00		0.30	9.60	
25	7300	2.00		4.00		0.50	4.00	
26	7350	3.00		4.00		0.30	3.60	
27	7440	22.00		2.70		1.30	77.22	
28	7540	22.00		3.50		1.20	92.40	
29	7600	32.00		3.50		1.00	112.00	
30	10200	1.50		3.50		0.45	2.36	
31	10800	13.00		1.00		0.60	7.80	
32	11000	8.00		1.00		0.35	2.80	
33	11080	11.00		1.00		0.50	5.50	
34	11300	20.00		3.50		0.60	42.00	
			Total					832.60

Second Time Flood (Breach Refill)

	6180.00	12.00		4.50		2.30	124.20
	7440.00	22.00		2.80		0.90	55.44
	7540.00	22.00		3.50		0.80	61.60
	7600.00	32.00		3.70		0.60	71.04
					Total		312.28

Grand Total	1144.88
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Junior Engineer,
Rural Works Department,
Works Section, Motihari

Assistant Engineer
Rural Works Department,
Works Sub Division, Motihari

Executive Engineer
Rural Works Department
Works Division, Motihari

BRICK BATS PITCHING MANUAL MEANS

6.6.1 WRD Bihar	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.				
	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.) -				322.27
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
	c) Contractor's profit @ 0.1 on (a+b)				0.00
	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 0.833 521.00 4.	hour	0.833	549.10	457.40
	Time taken for empty return trip hour 0.500 521.00 260.50	hour	0.500	549.10	274.55
	b) Overhead charges @ 0.06 on (a)				43.92
	c) Contractor's profit @ 0.1 on (a+b)				0.00
	Cost for 36 t .km = a+b+c 840.34				775.87
	Rate per t.Km = (a+b+c)/36 23.34				21.55
	Say Rs. -				21.55
1.1 RCD	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				
	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
	d) Contractor's profit @ 0.1 on (a+b+c)				0.00
	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 Royalty (450 Bricks/Cum)		450	0.000	0.00
	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)				322.27
	Total (A+B+C) -				1810.36
	Add 1% Labour Cess (A+B+C)				18.10
	Add 12% GST (A+B+C)				217.24
	Add 10% cost of Material for Seigniorage Fee		1	101.70	101.70
	Total Cost per Cum			Rs.-	2147.40

PROVIDING AND PLACING SAND BAGS

Ref. RCD SoR (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	4305.00
	Add 6% Overhead Charges				258.30
	Rate for 750 Bag				4563.30
	Mazdoor Rate per Bag (Rs.) -				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	366.25
	Time taken for empty return trip.	hour	0.400	549.10	219.64
	b) Overhead charges @ 0.06 on (a)				35.15
	c) Contractor's profit @ 0.1 on (a+b)				0.00
	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	549.10
	Time taken for empty return trip	hour	0.667	549.10	366.25
	b) Overhead charges @ 0.06 on (a)				54.92
	c) Contractor's profit @ 0.1 on (a+b)				0.00
	Cost for 36 t .km =				970.27
	Rate per t.Km =				26.95
	Say Rs. -				26.95
1.1 RCD	Loading and Unloading of Stone Boulder/ Stone aggregates/Sand /Kanker/Moorum				
	Placing Tractor at loading point, loading with frontloader, dumping, turning for 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
	d) Contractor's profit @ 0.1 on (a+b+c)				0.00
	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 Royalty (450 Bricks/Cum)		450	0.000	0.00
	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	7		
	Katcha 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 26.95) + 182.39				418.71
	Cost of Carriage of Sand in Filling of one Sand Bag				
			418.71	0.034	14.24

C.	Cost of Labour for Filling Sand Bag, Stitching and Placing (with OH)				6.08
					29.29
	Total (A+B+C) -				0.29
	Add 1% Labour Cess (A+B+C)				3.51
	Add 12% GST (A+B+C)				0.48
	Add 10% cost of Material for Seigniorage Fee		0.034	14.19	
	Total Cost per Bag			Rs.-	33.58
2.	Supplying for Brick Bats (without OH & CP)				
A.	Basic Rate of Brick Bats	Per Cum		1050.00	1050.00
	Add Royalty (450 Bricks/Cum)		450	0.029	13.05
	Add GST		5%		53.15
	Total -				1116.20
	Surface Lead	KM	7		
	Unsurface Lead	KM	1		
	Factor (3.6/2.25)	Cum	1.60		
B.	Carriage (without OH & CP)				
	$((1.6 \times 7 \times 17.25) + (1.6 \times 1 \times 26.95) + 182.39)/1.21$				346.04
C.	Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (without OH & CP)				5.02
	Total (A+B+C) -				1467.27
	Add 1% Labour Cess				14.67
	Total Cost per Cum			Rs.-	1481.94

Motihari Chhaura dano Pirauli Road to Thitkahiyan.



KM
1/12/2020
DE



1/12/20

1/12/20
DE

Motihari Chhauraduro Pirauli Road to Jhitkahiya.



Lat
 11/12/2020
 SE



Lat
 01/12/20
 A-B

Lat
 01/12/20
 EE