



बिहार राज्य सरकार
Rural Works Department, Govt of Bihar



BIHAR RURAL ROAD DEVELOPMENT AGENCY (BRRDA)

F.D.R. PART - A (2021 - 22)

DETAILED ESTIMATE FOR F.D.R. RESTORATION WORK



DISTRICT :	Bhagalpur	BLOCK :	Navgachhiya
NAME OF ROAD :	RCD Road No-14 to Laxmipur Mandal Tola		

TOTAL LENGTH OF ROAD	:	0.665	KM
TOTAL COST OF FDR PART-A	:	7.218	LAKH
GST @ 12 %	:	0.866	LAKH
LABOUR CESS @ 1 %	:	0.072	LAKH
SEIGNIORAGE FEE @ 10 %	:	0.200	LAKH
TOTAL COST OF RESTORATION WORK	:	8.356	LAKH

Submitted By :

Executive Engineer

Rural Works Department
Works Division, Navgachhiya

प्रतिवेदन

पथ का नाम :-	RCD Road No-14 to Laxmipur Mandal tola
प्रवण्ड का नाम :-	नवगछिया
प्रमंडल :-	ग्रामीण कार्य विभाग, कार्य प्रमंडल, नवगछिया।
अंचल :-	ग्रामीण कार्य विभाग, कार्य अंचल, भागलपुर।
पथ की लंबाई :-	0.665 कि०मी०
क्षतिग्रस्त पथ की लंबाई :-	0.540 कि०मी०
प्राक्कलित सशि :-	8.356 लाख। 8.265

प्रस्तुत प्राक्कलन वर्ष 2021 में आई बाढ़/अतिवृष्टि से क्षतिग्रस्त पथों की तत्काल मरम्माति कर, यातायात पुनः बहाल करने हेतु प्राक्कलन तैयार किया गया है। प्राक्कलन का निर्माण अभियंता प्रमुख, ग्रामीण कार्य विभाग, बिहार पटना के पत्रांक मु०अ०-(नु०) विधि (कार्य) 23-291/2019-4275 दिनांक 22.10.2021 के आलोक में अधीक्षण अभियंता, ग्रामीण कार्य विभाग, कार्य अंचल, भागलपुर के त्वाप्रांक- 822 दिनांक 25.10.2021 आदेश एवं कार्यपालक अभियंता, नवगछिया के आदेश के अनुपालन में तैयार किया गया है।

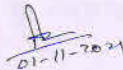
गाह अंगरस्त-अक्टूबर-2021 को बाढ़ के कारण जगह-जगह पर रोडक्रेस्ट में कटाव के साथ-साथ पथ का फर्लें भी क्षतिग्रस्त होने से बचाने हेतु कार्य किया गया है।

अतः आपातकालीन प्रकृति के कार्य को देखते हुए इस क्षतिग्रस्त पथों में आवश्यकता एवं तपलभ्यानुसार Sand Bag and Brick Bats के द्वारा पथ के पुनःस्थापन का प्रावधान किया गया है। प्राक्कलन में मर्दों का दर वर्तमान अनुसूचित दर विश्लेषण पर आधारित है। प्राक्कलन में Contractor Profit एवं Over head charge नहीं जुड़ा हुआ है। SF का प्रावधान करते हुए GST एवं Labour cess को जोड़ा गया है।

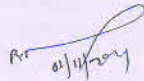
अतः प्राक्कलन का तकनीकी अनुमोदन अपेक्षित है।


01/11/21

कनिष्ठ अभियन्ता
ग्रामीण कार्य विभाग
कार्य प्रशाखा, नवगछिया


01-11-2021

सहायक अभियन्ता
ग्रामीण कार्य विभाग
कार्य अवर प्रमण्डल, नवगछिया


01/11/2021

कार्यपालक अभियन्ता
ग्रामीण कार्य विभाग
कार्य प्रमण्डल, नवगछिया

GENERAL ABSTRACT OF COST

Name of Road :

RCD Road No-14 to Laxmipur Mandal
Tola

District :

Bhagalpur

Length (Km) :

0.665

Block :

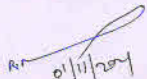
Navgachhiya

SL No	Particulars	Details (Km)	Total Cost (in Rs.)
1	Cost of Road Restoration work		721,802.00
2	Add G.S.T @ 12 %		86,616.00
3	Add L.C. @ 1 %		7,218.00
4	Add 10% S.F. on Basic rate of Mines material		19,965.00
	Total Cost of Restoration work		835,601.00
		Say,	835,601.00

8,26,500.00

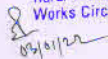

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E. E.

Technically sanctioned for Rs-8,26,500.00 (Rupees Eight lac twenty six thousand five hundred) only.


Superintending Engineer
Rural Works Department
Works Circle, Bhagalpur


03/01/22

ESTIMATE FOR ROAD RESTORATION WORK

Name of Road: RCD Road No-14 to Laxmipur Mahil Tolu Block: Navgachhiya District: Bhagalpur Length: 0.555 Km

Sr. No.	SSR Item No.	Description	No.	Length (M)	Width (M)	H/D (M)	Qty.	Unit	Rate (in Rs.)	Amount (in Rs.)
1.	4.5	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, chowdhar, taxes, royalty etc. all complete job as per specification and direction of Sd. including carriage cost of bricks.								
		As per attached "Annexure - A"					111.14		1677.57	186492.58
2.	5.7.53	Providing sand bag with sand and labour including carriage, laying, filling etc. all complete job as per specification and direction of C.I.					111.14	Cum	1760.64	195432.66
		As per attached "Annexure - B"					17176	10000	30.70	527303.00
										913745.58
							Total Cost of Flood Protective work =			921,002.00

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ANNEXURE - " A "

Brick Bat Measurement

Name of Road :

RCD Road No-14 to Laxmipur Mandal Tola

Length (Km) :

0.665

Sr. No.	Chainage (m)	Nos.	Length (m)		Width (m)			Average Width (m)	Depth (m)		Average Depth (m)	Quantity (Cum)
1	800 - 665	1	8.20	3.30				3.30	0.60		0.60	15.24
2		1	4.00	1.00				1.00	0.30		0.30	1.20
3		1	8.00	2.00				2.00	0.60		0.60	9.60
4		1	11.00	2.00				2.00	0.50		0.50	11.00
5		1	10.00	2.70				3.70	0.60		0.60	22.20
6		1	2.00	1.00				1.00	0.50		0.30	0.60
7		1	3.00	2.00				2.00	0.30		0.30	1.80
8		1	14.00	6.20	4.30	2.60	4.73	0.80			0.60	48.60
											Total =	111.14

S. F.	111.14	Cum	@	Rs.	1051.00	x	10%	=	Rs.	11,681.00
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J. E.

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A. E.

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E. E.

ANNEXURE - " B "

F. C. Bags Measurement

Name of Road : RCD Road No-14 to Laxmipur Mandal Tola

Length (Km) : 0.565

Sr No.	Chainage (m)	Nos.	Length (m)	Width (m)	Average Width (m)	Depth (m)	Average Depth (m)	Quantity (Cum)	Quantity (No of bag)
1	0 - 15 RHS	1	15	0.40	0.40	0.10	0.10	0.60	18
2	15 - 18 RHS	1	3	4.00	4.00	0.20	0.20	2.40	71
3	18 - 52 RHS	1	34	0.40	0.40	0.10	0.10	1.36	40
4	51 - 85 RHS	1	24	0.40	0.40	0.20	0.20	1.92	56
5	85 - 137 RHS	1	52	0.80	0.80	0.20	0.20	8.32	245
6	148 - 170 RHS	1	24	0.80	0.60	0.20	0.20	3.84	113
7	177 - 216 RHS	1	47	0.80	0.80	0.20	0.20	8.72	158
8	229 - 237 RHS	1	8	3.50	3.50	0.80	0.80	22.40	668
9	238 - 259 RHS	1	21	0.80	0.80	0.20	0.20	3.36	99
10	281 - 281 RHS	1	30	3.00	3.00	0.70	0.70	63.00	1853
11	291 - 297 LHS	1	6	4.00	4.00	1.00	1.00	24.00	705
12	317 - 324 LHS	1	7	2.50	2.50	1.10	1.10	18.25	526
13	326 - 338 LHS	1	10	2.40	2.40	1.20	1.20	28.80	847
14	331 - 368 RHS	1	37	1.20	1.20	0.80	0.80	13.32	382
15	370 - 403 LHS	1	33	2.20	2.20	1.50	1.00	72.60	2135
16	408 - 434 RHS	1	26	1.50	1.50	1.20	1.20	46.80	1376
17	484 - 504 RHS	1	20	1.80	1.60	0.90	0.90	28.80	847
18	490 - 494 LHS	1	4	0.40	0.40	0.30	0.30	0.48	14
19	494 - 497 LHS	1	3	3.00	3.00	1.10	1.10	9.90	291
20	514 - 523 RHS	1	9	1.00	1.00	0.20	0.20	1.80	53
21	523 - 557 RHS	1	34	2.50	2.60	1.10	1.10	93.50	2750
22	565 - 593 RHS	1	28	3.00	3.00	1.80	1.50	126.00	3708
23	623 - 628 LHS	1	5	3.80	0.80	1.60	1.00	4.80	141
			476					Total =	17,176

S. F.	-	17176	Nos.	Rs.	4.82	x	10%	=	Rs.	8,284.00
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Carriage Cost of Material Via Road

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Name of Road :		RCD Road No-14 to Laximpur Mandal Tola		Block: Navaghatiya			
S No	Item	Unit	Source	Carriage Cost & Load in km	Carriage Cost	Carriage Cost	Total
1	Stone Metal 15-17 Via Road	Cum	Shirga Chalki	0.00	Rs. 1000.00	Rs. 0.00	127.32
2	Stone Metal 18-20 Via Road	Cum	Shirga Chalki	4.59	Rs. 1000.00	Rs. 0.00	127.32
3	Stone Metal 21-23 Via Road	Cum	Shirga Chalki	8.00	Rs. 1000.00	Rs. 0.00	127.32
4	Stone Aggregate / Chippa Via Road	Cum	Shirga Chalki	3.00	Rs. 1000.00	Rs. 0.00	127.32
5	Stone Boulder / Via Road	Cum	Shirga Chalki	4.00	Rs. 1000.00	Rs. 0.00	127.32
6	Gravel Sand / Via Road	Cum	Shirga Chalki	1.00	Rs. 1000.00	Rs. 0.00	127.32
7	Mudum / Via Road	Cum	Shirga Chalki	8.00	Rs. 1000.00	Rs. 0.00	127.32
8	Blumen Basalt / Via Road	Cum	Shirga Chalki	8.00	Rs. 1000.00	Rs. 0.00	127.32
9	Blumen Basalt / Via Road	Cum	Shirga Chalki	8.00	Rs. 1000.00	Rs. 0.00	127.32
10	Local Sand	Cum	Local	8.00	Rs. 1000.00	Rs. 0.00	127.32
11	Gravel	Cum	Local	8.00	Rs. 1000.00	Rs. 0.00	127.32
12	Gravel	Cum	Local	8.00	Rs. 1000.00	Rs. 0.00	127.32
13	Gravel	Cum	Local	8.00	Rs. 1000.00	Rs. 0.00	127.32
14	Gravel	Cum	Local	8.00	Rs. 1000.00	Rs. 0.00	127.32
15	Gravel	Cum	Local	8.00	Rs. 1000.00	Rs. 0.00	127.32
16	Gravel	Cum	Local	8.00	Rs. 1000.00	Rs. 0.00	127.32
17	Gravel	Cum	Local	8.00	Rs. 1000.00	Rs. 0.00	127.32
18	Gravel	Cum	Local	8.00	Rs. 1000.00	Rs. 0.00	127.32

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Executive Engineer

Assistant Engineer

Rate Analysis

Sl. No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
4.5	Providing and Laying of Brick Bats				
	Placing tractor at loading point loading with front end loader dumping, turning for return trip excluding time for haulage and return trip				
	Unit = cum				
	Taking output = 2.832 cum				
46	Labour				
	Master (Unskilled)	day	2.17	292	633.64
46	Materials				
	Brick Bats	cum	2.832	1,031.00	2978.33
4.6	Carriage				
	Cost for 5.5 cum = a+b+c	cum	2.832	162.80	1140.33
	Rate per cum = (a+b+c)/2.832	cum		476.14	1344.65
	Total per cum	cum			4952.62
					1750.04
4.7	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. or nails complete job as per specification and direction of I/I				1672.54
	Unit - Per mt.				
	Taking Out Put = 30.50 m				
47	Materials				
	Cost of 150 mm long nails				
48	Labour	Kg	0.50	61.74	30.87
	Carpenter Gr-II	No.	0.125	351	43.88
	Unskilled Labour	No.	0.25	292	73.00
	Rate for 30.5 m				147.75
	Rate for 1 m				147.75
48	Bamboo(2nd class) 75mm dia, 1.8 - 2.5m long	m	1.00	23.58	23.58
	Rate per m			Say.	28.43
4.7.7	Labour for cutting 62 mm to 75 mm dia bamboo piles in size and making shoes and driving etc complete job as per specification and direction I/I.				
	Unit - Per m				
	Taking Out Put = 30.50 m				
	Assuming				
	20 no pile sunk 1.575 m deeps				
	Total depth sunk 30.50 m				
49	Labour				
	Carpenter Gr-II	No.	0.25	351	87.75
	Unskilled Labour for piling	No.	2.50	292	730.00
	Rate for 30.5 m				817.75
	Rate for 1 m				817.75
49	Bamboo(2nd class) 75mm dia, 1.8 - 2.5m long	m	1.00	23.58	23.58
	Rate per m			Say.	50.39
4.7.8	Labour for fitting and and fixing split bamboo woven cruchan in position with 20 swg G.I. wire of 75 mm to 100 mm long nails alternatively including cost of G.I. wire or nails complete job as per specification and direction of I/I				
	(Assuming strip of 3.05x3.05 = 9.30 sqm				
	Unit - per sqm				
	Taking Out = 9.30 sqm				

a	Labour				
	Carpenter Gr-II	No.	1.00	351	351.00
b	Muddoor (Unskilled) for piling	No.	1.00	292	292.00
	Materials				
c	75 mm to 100 mm long nails	kg	0.25	61.74	15.44
	Bamboo (2nd class) 75mm dia, 1.8 - 2.5m long	m	71	23.58	259.42
					917.85
	Rate Per Sqm = (a+b+c)/9.30				98.69
d	Labour for filling Cement Bag, swing and laying materials Unit - Per Bag				
	Supply Empty cement Bag with Sand (2.42 : 4.82)	No	100	7.74	774.00
e	Stitching Roll (Nylon)	No	2	30.00	60.00
				Total (A)	834.00
f	Unskilled Labour for filling stitching and staking	No	1.67	292	487.64
	Unskilled Labour for carrying and Piling at work site	No	3	292	876.00
g	Skilled Labour for stitching	No	0.33	170	122.70
	Total per bag			Total (B)	1,485.74
h	Hire charge of Machine				
	Hire charge of Stitching Machine	No	0.33	50	16.50
i	Hire charge of Generator 3 K.V.A	No	2.67	74	197.58
	Total per bag			Total (C)	214.08
j	Carriage Cost of Local Sand				
	1.2 Cft = 0.034 m ³	cum	3.40	157.83	536.62
				Total (D)	536.62
	Total cost of (A+B+C+D) =	Bag			3,070.44
	Rate per Bag				30.70
A	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, conform as per Technical Specification Clause 401.				
B	For Grading II Material				
	Unit - cum				
C	Labour				
	Mate	day	0.40	304.00	121.60
D	Machinor (Skilled)	day	2.00	370.00	740.00
	Machdoor (Unskilled)	day	8.00	292.00	2336.00
E	Machinery				
	Tractor mounted grader arrangement for grading @ 100 cum per	hour	12.00	573.20	6878.40
F	Three wheel 80-100 kN static roller @ 10 cum per hour	hour	12.00	803.00	9636.00
	Tractor with Rotavator 25 cum per hour	hour	12.00	573.20	6878.40
G	Water tanker 6 kl capacity	hour	5.00	184.00	920.00
	Material				
H	Well graded granular sub-base material as per Table 400.1				
	26.5 mm to 9.5 mm @ 35 per cent	cum	134.40	604.91	81299.90
I	9.5 mm to 2.36 mm @ 25 per cent	cum	96.00	582.80	55948.80
	2.36 mm below @ 40 per cent - Local Sand	cum	153.60	514.50	79039.49
J	Water	kl	30.00	40.00	1200.00
	Cost of GSB for 300 cum				241998.59
K	A) Cost of GSB without carriage per cum	cum			816.66
	CARRIAGE				
L	Carriage for GSB material	Cum	0.768	1187.62	912.09
	Carriage for material below 2.36 mm (Local Sand)	Cum	0.512	1187.62	608.06

	Rate per cum with carriage				2336.82
9.3	Providing and Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Row				
1100	Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 1106.				
A.	1000 MM DIA (Double Row)				
a)	Material				
	RCC NP3 pipe including collar	m	15.00	2755.50	41352.50
b)	Labour				
	Mate	day	0.22	304.00	66.88
	Mason (1st class)	day	0.60	351.00	210.60
	Mazdoor (Unskilled)	day	4.80	292.00	1401.60
	Cost for 7.5m = (a+b+c+d)/7.5				43011.58
	A) Basic Cost per m = (a+b+c+d)/7.5	m			5734.88
	CARRIAGE COST				
	NP3 Pipe	m	15.00	482.06	7210.90
	Carriage cost of 7.5 m				7230.90
	B) Carriage cost per m	m			964.12
	Rate per m = (A+B)	m			6699.00
B.	1000 MM DIA (Single Row)				
a)	Material				
	RCC NP3 pipe including collar	m	7.50	2755.50	20666.25
b)	Labour				
	Mate	day	0.09	304.00	27.36
	Mason (1st class)	day	0.25	351.00	87.75
	Mazdoor (Unskilled)	day	2.00	292.00	584.00
	Cost for 7.5m = (a+b+c)/7.5				21365.36
	A) Basic Cost per m = (a+b+c)/7.5	m			2848.71
	CARRIAGE COST				
	NP3 Pipe	m	7.50	482.06	3615.45
	Carriage cost of 7.5 m				3615.45
	B) Carriage cost per m	m			482.06
	Rate per m = (A+B)	m			3330.77
C.	600 MM DIA (Double Row)				
a)	Material				
	RCC NP3 pipe including collar	m	15	1582.72	23740.80
b)	Labour				
	Mate	day	0.04	304.00	12.16
	Mason (1st class)	day	0.12	351.00	42.12
	Mazdoor (Unskilled)	day	0.96	292.00	280.32
	Cost of 7.5m = (a+b+c+d)				24075.40
	A) Basic Cost per m = (a+b+c)/7.5	m			3210.05
	CARRIAGE COST				
	NP3 Pipe	m	15	194.99	2924.85
	Carriage cost of 7.5 m				2924.85
	B) Carriage cost per m	m			389.98
	Rate per m = (A+B)	m			3600.03
D.	600 MM DIA (Single Row)				
a)	Material				
	RCC NP3 pipe including collar	m	7.50	1582.72	11870.40
b)	Labour				
	Mate	day	0.04	304.00	12.16
	Mason (1st class)	day	0.12	351.00	42.12
	Mazdoor (Unskilled)	day	0.96	292.00	280.32
	Cost of 7.5m = (a+b+c+d)				12205.00
	A) Basic Cost per m = (a+b+c)/7.5	m			1627.33
	CARRIAGE COST				
	NP3 Pipe	m	7.5	194.99	1462.43

Carriage cost of 7.5 m				1462.43
B) Carriage cost per m	m			194.99
Rate per m = (A ÷ B)	m			1822.32

Paul
01/11/21
J.E

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01-11-2021
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01/11/21