



ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar



गुणवत्ता का काम ही काम

BIHAR RURAL ROAD DEVELOPMENT AGENCY (BRRDA)

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

DETAILED ESTIMATE FOR F.D.R. RESTORATION WORK



DISTRICT :	Bhagalpur	BLOCK :	Kharik
NAME OF ROAD :	Ramgarh village to NH-31		

TOTAL LENGTH OF ROAD		:	4.932	KM
TOTAL COST OF FDR PART-A		:	16.738	LAKH
GST @ 12 %		:	2.009	LAKH
LABOUR CESS @ 1 %		:	0.167	LAKH
SEIGNIORAGE FEE @ 10 %		:	1.005	LAKH
TOTALCOST OF RESTORATION WORK		:	19.919	LAKH

Submitted By :-

Executive Engineer

Rural Work Department
Works Division, Navgachhiya

Inspection Report For Flood Damage Work

Date:-

1. Name of PIUs - E.E. R.W.D. WARAS Division NAUGACHIA
2. Name of Block/ Road Remgarh village to N.H.31 (Kharik Block)

A. For Road

1. Damage Location/Chainage 562m to 3290m
2. Damage length 812.80m
3. Nature of Damage plank cutting/cutting of Road / not passed
4. Detail of Restoration Works 812.80m
 - (i) Material being used in Restoration Works: Brick bats
 - (ii) Equipment's/ Tools Being used in Restoration Works:
 - (iii) Procedure Taken up in Restoration Works:
 - (iv) Restored Length: 812.80m

B. For Bridge

1. Damage Location/Chainage NA
2. Damage length
3. Nature of Damage
4. Detail of Restoration Works
 - (i) Material being used in Restoration Works:
 - (ii) Equipment's/ Tools Being used in Restoration Works:
 - (iii) Procedure Taken up in Restoration Works:
 - (iv) Restored Length:

C. Requirement Of New CD/Bridges NA

- (i) Name of Road:
- (ii) Location/ Chainage
- (iii) Type of CD Work/Length required

Notes:-

- Upload one Photograph of damaged portion if available
- Attach minimum Two Photograph (during restoration & after restoration) Photographs should be Geotags and at Least one Photo be captured in self mode. (Notable work found Satisfactory)

23/12/2021
JE

23/12/21
AE

24/12/21
Executive Engineer
R.W.D., W.D., Naugachia

Signature
(Name of Inspector)

GENERAL ABSTRACT OF COST

Name of Road : Ramgarh village to NH-31

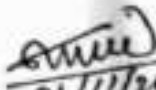
District : Bhagalpur

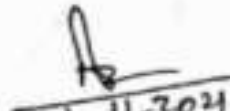
Length (Km) : 4.932

Block : Kharik

SL No	Particulars		Details (Km)	Total Cost (in Rs.)
1	Cost of Road Restoration work	:		1604483.00 1,673,826.00
2	Add G.S.T @ 12 %	:		192538.56 200,850.00
3	Add L.C. @ 1 %	:		16045.00 16,738.00
4	Add 10% S.F. on Basic rate of Mines material	:		100,523.00
	Total Cost of Restoration work	:		1913589.56 1,991,946.00
			Say,	1,991,946.00

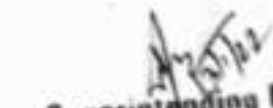
19,13,602.00


01/11/2021
J.E.


01-11-2021
A.E.


2/11/21
E.E.

Technically sanctioned for Rs 19,13,602.00 (Rupees ninteen lacs thirteen thousand six hundred only).


Superintending Engineer
Rural Works Department
Works Circle, Bhagalpur
13/01/22

ESTIMATE FOR ROAD RESTORATION WORK

Name of Road: Ramgarh village to NH-31

Block: Kharik

District: Bhagalpur

Length: 4.832 Km

Sl. 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, chowkidar, taxes, royalty etc. all complete job as per specification and direction of E.I. excluding cartage cost of bricks.								
		As per attached "Annexure - A"					956.45		1677.50	1604483.25
							956.45	Cum	1677.50	1604483.25
										1604483.25
							Total Cost of Flood Protective work =			4,672,822.00

[Signature]
01/11/2021
J.E.

[Signature]
01-11-2021
A.E.

[Signature]
2/11/21
E.E.

ANNEXURE - " A "

Brick Bat Measurement

Name of Road : Ramgarh village to NH-31

Length (Km) : 4.932

Sr. No.	Chainage (m)		Nos.	Length (m)		Width (m)		Average Width (m)	Depth (m)		Average Depth (m)	Quantity (Cum)
1	562	- 600	1	1.60	1.30			1.30	0.30		0.30	0.62
2			1	1.30	1.30			1.30	0.45		0.45	0.76
3	600	- 700	1	1.00	3.00			3.00	0.30		0.30	0.90
4			1	4.10	2.40			2.40	0.45		0.45	4.43
5			1	2.40	1.70			1.70	0.30		0.30	1.22
6			1	3.40	1.60			1.60	0.45		0.45	2.45
7			1	2.00	2.10			2.10	0.30		0.30	1.26
8			1	2.00	1.30			1.30	0.30		0.30	0.78
9			1	3.00	1.50			1.50	0.45		0.45	2.03
10			1	4.00	1.10			1.10	0.30		0.30	1.32
11	700	- 800	1	4.00	2.30			2.30	0.45		0.45	4.14
12			1	11.00	2.00			2.00	0.45		0.45	9.90
13			1	2.00	1.50			1.50	0.30		0.30	0.90
14			1	25.00	3.75			3.75	0.30		0.30	28.13
15	800	- 900	1	22.00	2.00	3.70		2.85	0.30		0.30	18.81
16			1	20.00	3.75	3.00		3.38	0.45		0.45	30.42
17			1	7.00	2.50	0.45		1.48	0.30		0.30	3.11
18	900	- 1000	1	4.00	2.00			2.00	0.45		0.45	3.60
19			1	2.00	2.00			2.00	0.45		0.45	1.80
20			1	20.00	3.00			3.00	0.45		0.45	27.00
21			1	5.00	2.60			2.60	0.30		0.30	3.90
22	1000	- 1100	1	60.00	2.00	2.50	3.00	2.50	0.45		0.45	67.50
23			1	6.00	2.50			2.50	0.30		0.30	4.50
24			1	3.00	2.00			2.00	0.45		0.45	2.70
25			1	7.00	2.00			2.00	0.45		0.45	6.30
26			1	2.00	2.00			2.00	0.30		0.30	1.20
27	1100	- 1200	1	9.00	2.00	2.50		2.25	0.45		0.45	9.11
28			1	5.00	2.00			2.00	0.45		0.45	4.50
29			1	2.00	2.00			2.00	0.30		0.30	1.20
30			1	3.00	2.50			2.50	0.45		0.45	3.38
31	1200	- 1300	1	3.00	2.00			2.00	0.45		0.45	2.70

32			1	2.00	2.00			2.00	0.45			0.45	1.80
33			1	1.00	1.50			1.50	0.30			0.30	0.45
34			1	5.00	2.50			2.50	0.45			0.45	5.63
35			1	1.00	1.00			1.00	0.30			0.30	0.30
36			1	25.00	3.00	2.50	2.00	2.50	0.45			0.45	28.13
37	1300	- 1400	1	2.00	2.00			2.00	0.45			0.45	1.80
38			1	2.00	1.00			1.00	0.45			0.45	0.90
39			1	2.00	2.00			2.00	0.45			0.45	1.80
40	1400	- 1500	1	3.00	2.00			2.00	0.30			0.30	1.80
41			1	3.00	1.20			1.20	0.45			0.45	1.62
42			1	5.00	4.60			4.60	0.45			0.45	10.35
43			1	2.00	1.50			1.50	0.45			0.45	1.35
44			1	3.00	2.00			2.00	0.45			0.45	2.70
45			1	4.00	2.00			2.00	0.45			0.45	3.60
46	1500	- 1600	1	31.00	2.00	4.30		3.15	0.45			0.45	43.94
47			1	2.00	1.50			1.50	0.45			0.45	1.35
48			1	2.00	1.50			1.50	0.30			0.30	0.90
49			1	8.00	4.00			4.00	0.45			0.45	14.40
50	1600	- 1700	1	7.00	4.80			4.80	0.45			0.45	15.12
51			1	5.00	2.00			2.00	0.30			0.30	3.00
52			1	17.00	1.30	1.40	1.60	1.43	0.45			0.45	10.94
53	1700	- 1800	1	4.00	1.80			1.80	0.45			0.45	3.24
54	1800	- 1900	1	11.00	3.75			3.75	0.45			0.45	18.56
55			1	10.00	3.75			3.75	0.45			0.45	16.88
56	1900	- 2000	1	8.00	3.75			3.75	0.45			0.45	13.50
57			1	15.00	3.00			3.00	0.45			0.45	20.25
58	2000	- 2100	1	7.00	2.50			2.50	0.30			0.30	5.25
59			1	10.00	3.00			3.00	0.45			0.45	13.50
60			1	5.00	2.50			2.50	0.45			0.45	5.63

61	2100	2200	1	6.00	2.30			2.30	0.45		0.45	6.21
62			1	28.00	2.00			2.00	0.45		0.45	25.20
63	2200	2300	1	7.00	3.75			3.75	0.45		0.45	11.81
64			1	17.00	3.75			3.75	0.45		0.45	28.69
65			1	19.00	3.75			3.75	0.45		0.45	32.06
66	2300	2400	1	19.00	3.75			3.75	0.45		0.45	32.06
67			1	20.00	3.00			3.00	0.45		0.45	27.00
68	2400	2500	1	9.00	3.00			3.00	0.45		0.45	12.15
69			1	26.00	3.00			3.00	0.45		0.45	35.10
70	2500	2600	1	25.00	3.00			3.00	0.45		0.45	33.75
71	2600	2700	1	24.00	3.75			3.75	0.45		0.45	40.50
72			1	5.00	2.00			2.00	0.30		0.30	3.00
73	2700	2800	1	19.00	3.00			3.00	0.45		0.45	25.65
74			1	14.00	3.00			3.00	0.45		0.45	18.90
75	2800	2900	1	20.00	3.00			3.00	0.45		0.45	27.00
76			1	2.00	2.00			2.00	0.30		0.30	1.20
77			1	4.00	2.00			2.00	0.45		0.45	3.60
78	2900	3000	1	19.00	2.50			2.50	0.45		0.45	21.38
79	3000	3100	1	8.00	2.00			2.00	0.45		0.45	7.20
80			1	4.00	2.00			2.00	0.30		0.30	2.40
81			1	6.00	2.00			2.00	0.45		0.45	5.40
82	3100	3200	1	6.00	2.00			2.00	0.30		0.30	3.60
83			1	7.00	2.50			2.50	0.45		0.45	7.88
84			1	6.00	2.00			2.00	0.30		0.30	3.60
85			1	6.00	2.00			2.00	0.30		0.30	3.60
86			1	7.00	2.00			2.00	0.30		0.30	4.20
87			1	4.00	2.50			2.50	0.30		0.30	3.00
88			1	10.00	3.70			3.70	0.30		0.30	11.10
89	3200	3290	1	12.00	3.00			3.00	0.45		0.45	16.20
90			1	5.00	2.50			2.50	0.30		0.30	3.75
				812.80							Total =	956.45

S. F.	-	956.45	Cum	@	Rs.	1051.00	x	10%	=	Rs.	100,523.00
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[Signature]
01/11/2024
J. E.

[Signature]
01-11-2024
A. E.

[Signature]
20/11/24
E. E.

Carriage Cost of Material via Road

RWD, works Division, Bhagalpur

Name of Road :		Ramgarh village to NH-31		Carriage Cost & Load in Km		Block - Kharik		Carriage By Road	Total
Sl No	Item	Unit	Source	Pukka / Surface	Matcha	Block - Kharik	Block - Kharik		
1	Stone Metal Gr-II/Via Road	Cum	Mirza Chetki	8.00 4.59	8.00 4.59	8.00 4.59	8.00 4.59	1274.25	1274.25
2	Stone Metal Gr-III / GSB Via Road	Cum	Mirza Chetki	8.00 4.99	8.00 4.99	8.00 4.99	8.00 4.99	1187.62	1187.62
3	Stone Aggregate / Chips Via Road	Cum	Mirza Chetki	8.00 4.99	8.00 4.99	8.00 4.99	8.00 4.99	1187.62	1187.62
4	Stone Boulder /Via Road	Cum	Mirza Chetki	8.00 4.80	8.00 4.80	8.00 4.80	8.00 4.80	1226.97	1226.97
5	Coarse Sand/Via Road	Cum	Haemara	8.00 4.99	8.00 4.99	8.00 4.99	8.00 4.99	536.01	536.01
6	Moorm/Via Road	Cum	Mirza Chetki	8.00 6.00	8.00 6.00	8.00 6.00	8.00 6.00	931.56	931.56
7	Blissmen Barren/Via Road	MT	Barrani	8.00 8.00	8.00 8.00	8.00 8.00	8.00 8.00	1298.75	1298.75
8	Blissmen Emulsion /Via Road	MT	Paticha	8.00 8.00	8.00 8.00	8.00 8.00	8.00 8.00	1948.64	1948.64
9	Local Sand	Cum	Local	8.00 4.99	8.00 4.99	8.00 4.99	8.00 4.99	157.83	157.83
10	Brick	000 No/Local	Local	8.00 2.00	8.00 2.00	8.00 2.00	8.00 2.00	723.14	723.14
11	Cement	MT	Local	8.00 8.00	8.00 8.00	8.00 8.00	8.00 8.00	365.93	365.93
12	Steel	MT	Local	8.00 8.00	8.00 8.00	8.00 8.00	8.00 8.00	389.99	389.99
13	House Pipe (1000 mm)	M	Gadda	8.00 10.00	8.00 10.00	8.00 10.00	8.00 10.00	482.06	482.06
14	House Pipe (600 mm)	M	Gadda	8.00 25.00	8.00 25.00	8.00 25.00	8.00 25.00	194.99	194.99
15	House Pipe (300 mm)	M	Gadda	8.00 60.00	8.00 60.00	8.00 60.00	8.00 60.00	100.17	100.17
16	Bamboo	MT	Karsula	8.00 8.00	8.00 8.00	8.00 8.00	8.00 8.00	631.38	631.38
17	Brick bats	Cum	Local	8.00 2.00	8.00 2.00	8.00 2.00	8.00 2.00	1274.25	1274.25
18	Kila Rabbish	Cum	Local	8.00 2.00	8.00 2.00	8.00 2.00	8.00 2.00	104.88	104.88

Signature
Executive Engineer

Signature
01-11-2024
Assistant Engineer

Signature
01/11/2024
Junior Engineer

Rate Analysis

SDB 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				
a)	Labour				
	Mandoor (Unskilled)	day	2.17	292	633.64
b)	Materials				
	Brick Bats	cum	2.832	1,051.00	2976.43
c)	Carriage				
		cum	2.832	402.80	1140.73
	Cost for 5.5 cum = a+b+c				4750.80
	Rate per cum = (a+b+c+d)/2.832	cum			1677.54
	Total per cum	cum			1,677.54
5.7.9	Labour for fitting and fixing 62 mm to 75 mm dia bamboo runners in position at every verticle 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 E/I				
	Unit = Per mt.				
	Taking Out Put = 30.50 m				
(i)	Materials				
	Cost of 150 mm long nails	Kg	0.50	61.74	30.87
(ii)	Labour				
	Carpenter Gr -II	No.	0.125	351	43.88
	Unskilled Labour	No.	0.25	292	73.00
	Rate for 30.5 m				147.75
					147.75
	Rate for 1 m				4.84
(iii)	Bamboo(2nd class) 75mm dia, 1.8 - 2.5m long	m	1.00	23.58	23.58
	Rate per m			Say.	28.43
5.7.7	Labour for cutting 62 mm to 75 mm dia bamboo piles in size and making shoes and driving etc. complete bob as per specification and direction E/I.				
	Unit = Per m				
	Taking Out Put = 30.50 m				
	Assurning				
	20 no pile sunk 1.525 m deeps				
	Total depth sunk 30.50 m				
(i)	Labour				
	Carpenter Gr -II	No.	0.25	351	87.75
	Unskilled Labour for piling	No.	2.50	292	730.00
					817.75
	Rate for 30.5 m				817.75
	Rate for 1 m				26.81
(ii)	Bamboo(2nd class) 75mm dia, 1.8 - 2.5m long	m	1.00	23.58	23.58
	Rate per m			Say.	50.39
5.7.8 WRD	Labour for fitting and and fixing split bamboo woven chachari 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 E/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
	Mazdoor (Unskilled) for piling	No.	1.00	292	292.00
b	Materials				
	75 mm to 100 mm long nails	kg	0.25	61.74	15.44
c	Bamboo(2nd class) 75mm dia, 1.8 - 2.5m long	m	11	23.58	259.42
					917.85
	Rate Per Sqm = (a+b+c)/9.30				98.69
10.7.40 WBD	Labour for filling Cement Bag, swing and laying materials Unit = Per Bag				
A	Supply Empty cement Bag with Sand (2.92+4.82)	No	100	7.74	774.00
	Stiching Roll (Nylon)	No	2	30.00	60.00
				Total (A)	834.00
B	Unskilled Labour for filling stitching and staking	No	1.67	292	487.64
	Unskilled Labour for carrying and Placing at work site	No	3	292	876.00
	Skilled Labour for stitching	No	0.33	370	122.10
	Total per bag			Total (B)	1,485.74
C	Hire charge of Machine				
	Hire charge of Stiching Machine	No	0.33	50	16.50
	Hire charge of Generator 3 K.V.A	No	2.67	74	197.58
	Total per bag			Total (C)	214.08
D	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
4.1	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, complete as per Technical Specification Clause 401.				
(ii)	For Grading II Material				
	Unit = cum				
	Taking output = 300 cum				
a)	Labour				
	Mate	day	0.40	304.00	121.60
	Mazdoor (Skilled)	day	2.00	370.00	740.00
	Mazdoor (Unskilled)	day	8.00	292.00	2336.00
b)	Machinery				
	Tractor mounted grader arrangement for grading @ 100 cum per hour	hour	12.00	573.20	6878.40
	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
	Water tanker 6 kl capacity	hour	5.00	184.00	920.00
c)	Material				
	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
	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	514.58	79039.49
	Water	kl	30.00	40.00	1200.00
	Cost of GSB for 300 cum				244998.59
	A) Cost of GSB without carriage per cum	cum			816.66
e)	CARRIAGE				
	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	41332.50
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)				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	7230.90
	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)				21365.36
	A) Basic Cost per m = (a+b)/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)/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)/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

sent
01/11/2024
J.E.

[Signature]
01-11-2024
A.E.

[Signature]
21/11/2024
E.E.