



ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar



ग्रामीण कार्य विभाग, बिहार

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 :

**Road No-14 Khadi Bhandar to NH-31 Bagri Chowk Via
Thaneswari Baba Mandir, Mandal tola**

TOTAL LENGTH OF ROAD	:	6.430	KM
TOTAL COST OF FDR PART-A	:	12.493	LAKH
GST @ 12 %	:	1.499	LAKH
LABOUR CESS @ 1 %	:	0.125	LAKH
SEIGNIORAGE FEE @ 10 %	:	0.750	LAKH
TOTALCOST OF RESTORATION WORK	:	14.868	LAKH

Submitted By :-

Executive Engineer

Rural Work Department
Works Division, Navgachhiya

Inspection Report For Flood Damage Work

Date:-

1. Name of PIUs - *EE R.W.D. Warma Division Naugachia*
2. Name of Block/ Road *Road No 14 Kheoli Bhandar to NH-31 (Bogri) chok via Thameiwar
Baba Mondar, Mondal to/a. (Khar/K Block)*

A. For Road

1. Damage Location/Chainage *94m to 3800m*
2. Damage length *552m*
3. Nature of Damage *flank cutting / cutting of Road / put path*
4. Detail of Restoration Works *552m*
 - (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: *552m*

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 selfie mode. *(Satisfactory work found Satisfactory)*

23/12/2021
SE

23-12-21
AE

Signature of JE/AE/EE
Executive Engineer
R. W. D., W. D., Naugachia

Signature
(Name of Inspector)

GENERAL ABSTRACT OF COST

Name of Road : Road No-14 Khadi Bhandar to NH-31
Bagri Chowk Via Thaneswari Baba
Mandir, Mandal tola District : Bhagalpur

Length (Km) : 6.430 Block : Kharik

Sl. No	Particulars		Details (Km)	Total Cost (in Rs.)
1	Cost of Road Restoration work	:		1197562.00 1,248,319.00
2	Add G.S.T @ 12 %	:		143707.00 149,918.00
3	Add L.C. @ 1 %	:		11976.00 12,483.00
4	Add 10% S.F. on Basic rate of Mines material	:		75,029.00
	Total Cost of Restoration work	:		1425274.00 1,486,759.00
			Say,	1,486,759.00

14,28,302.00

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

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

[Signature]
Executive Engineer
R.W.D. W.D. Naugachia

Technically Sanctioned for Rs 14,28,302.00 (Rupees fourteen lac twenty eight thousand three hundred only).

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

ESTIMATE FOR ROAD RESTORATION WORK

Name of Road: Road No-14 Khadi Bhandar to NH-31 Bagri
Choak Via Thanewari Baba Mandir, Mandal Block: Kharik District: Bhagalpur Length: 6.430 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 carriage cost of bricks.								
		As per attached "Annexure - A"					713.88		167754	119756 2-00
							713.88	Cum	4769-84	1,349,319-00
										11,97,562-00
							Total Cost of Flood Protective work =			1,24,349-00

Attia
04/11/2021
J. E.

A
01-11-2021
A. E.

R. W. D.
E. E.

Executive Engineer
R. W. D. W. D. Naugachia

ANNEXURE - " A "

Brick Bat Measurement

Name of Road : Road No-14 Khadi Bhandar to NH-31 Bagri Chowk Via Thaness Length (Km) : 6.430

Sr. No.	Chainage (m)		Nos.	Length (m)		Width (m)		Average Width (m)	Depth (m)		Average Depth (m)	Quantity (Cum)
1	94	- 104	1	10.00	3.75			3.75	0.30		0.30	11.25
2	300	- 400	1	10.00	3.00			3.00	0.45		0.45	13.50
3	800	- 900	1	9.00	3.60			3.60	0.45		0.45	14.58
4	900	- 1000	1	9.00	3.00			3.00	0.45		0.45	12.15
5	1000	- 1100	1	8.00	3.75			3.75	0.45		0.45	10.13
6			1	16.00	3.00			3.00	0.45		0.45	21.60
7	1300	- 1400	1	20.00	3.30			3.30	0.45		0.45	29.70
8			1	10.00	2.50			2.50	0.30		0.30	7.50
9	1400	- 1500	1	4.00	2.00			2.00	0.45		0.45	3.60
10			1	3.00	2.00			2.00	0.45		0.45	2.70
11	1500	- 1600	1	33.00	2.50			2.50	0.90		0.90	74.25
12	1600	- 1700	1	16.00	3.20			3.20	0.80		0.80	40.96
13			1	20.00	1.50			1.50	0.30		0.30	9.00
14			1	4.00	2.00			2.00	0.45		0.45	3.60
15	1900	- 2000	1	14.00	3.00			3.00	0.45		0.45	18.90
16	2400	- 2500	1	17.00	3.00			3.00	0.45		0.45	22.95
17			1	19.00	3.00			3.00	0.45		0.45	25.65
18	2600	- 2700	1	7.00	2.80			2.80	0.45		0.45	8.82
19			1	7.00	3.00			3.00	0.45		0.45	9.45
20	2700	- 2800	1	5.00	3.00			3.00	0.45		0.45	6.75
21			1	7.00	3.00			3.00	0.30		0.30	6.30
22	2800	- 2900	1	7.00	3.00			3.00	0.45		0.45	9.45
23	2900	- 3000	1	12.00	3.30			3.30	0.45		0.45	17.82
24			1	10.00	3.00			3.00	0.45		0.45	13.50
25	3000	- 3100	1	3.00	2.00			2.00	0.45		0.45	2.70
26			1	11.00	3.75			3.75	0.30		0.30	12.38
27			1	9.00	2.50			2.50	0.45		0.45	10.13
28			1	22.00	3.00			3.00	0.45		0.45	29.70
29	3300	- 3400	1	10.00	2.50			2.50	0.30		0.30	7.50
30			1	30.00	2.50			2.50	0.45		0.45	33.75
31			1	17.00	2.00			2.00	0.45		0.45	15.30

32	3400	-	3500	1	5.00	2.00			2.00	0.45			0.45	4.50
33				1	33.00	3.75			3.75	0.40			0.40	49.50
34	3500	-	3600	1	10.00	3.00			3.00	0.45			0.45	13.50
35				1	7.00	3.00			3.00	0.30			0.30	6.30
36				1	21.00	3.30			3.30	0.45			0.45	31.19
37	3600	-	3700	1	42.00	2.50			2.50	0.45			0.45	47.25
38				1	16.00	2.20			2.20	0.45			0.45	15.84
39	3700	-	3800	1	14.00	2.50			2.50	0.45			0.45	15.75
40				1	6.00	2.00			2.00	0.30			0.30	3.60
41				1	7.00	2.20			2.20	0.45			0.45	6.93
42				1	10.00	2.30			2.30	0.45			0.45	10.35
43				1	4.00	2.00			2.00	0.45			0.45	3.60
					552.00								Total =	713.88

	S. F.	-	713.88	Cum	@	Rs.	1051.00	x	10%	=	Rs.	75,029.00
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01/11/2024
J. E.

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01-11-2024
A. E.

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E. E.
Executive Engineer
R. W. D. W. D. Naugachia

Carriage Cost of Material via Road

RWD, works Division, Bhagalpur

Name of Road :				Road No-14 Khadi Bhandar to NH-31 Bagri Chowk Via Thaneswari Baba Block : Kharik										Loading & Unloading Cost	Carriage By Road	Total	
Sl No	Item	Unit	Source	Carriage Cost & Lead in Km													
				Pucka / Surface					Katcha								
				8.00	7.47	6.83	Km	=	Rs 1080.63	8.00	7.47	6.83	Km	=	Rs 0.00		
				4.59				=		4.59				=			
1	Stone Metal Gr-II/Via Road	Cum	Mirza Chetki	8.00	7.47	6.83	Km	=	Rs 994.00	8.00	7.47	6.83	Km	=	Rs 0.00		
2	Stone Metal Gr-III / GSB Via Road	Cum	Mirza Chetki	8.00	7.47	6.83	Km	=	Rs 994.00	8.00	7.47	6.83	Km	=	Rs 0.00		
3	Stone Aggregate / Chips Via Road	Cum	Mirza Chetki	8.00	7.47	6.83	Km	=	Rs 994.00	8.00	7.47	6.83	Km	=	Rs 0.00		
4	Stone Boulder /Via Road	Cum	Mirza Chetki	8.00	7.47	6.83	Km	=	Rs 1033.35	8.00	7.47	6.83	Km	=	Rs 0.00		
5	Coarse Sand/Via Road	Cum	Hamra	8.00	7.47	6.83	Km	=	Rs 431.13	8.00	7.47	6.83	Km	=	Rs 0.00		
6	Mouram/Via Road	Cum	Mirza Chetki	8.00	7.47	6.83	Km	=	Rs 826.68	8.00	7.47	6.83	Km	=	Rs 0.00		
7	Bitumen Baranval /Via Road	MT	Baranval	8.00	7.47	6.83	Km	=	Rs 933.75	8.00	7.47	6.83	Km	=	Rs 0.00		
8	Bitumen Emulsion /Via Road	MT	Patuha	8.00	7.47	6.83	Km	=	Rs 1583.44	8.00	7.47	6.83	Km	=	Rs 0.00		
9	Local Sand	Cum	Local	8.00	7.47	6.83	Km	=	Rs 23.95	8.00	7.47	6.83	Km	=	Rs 29.00		
10	Brick	(000 No/Local	Local	8.00	7.47	6.83	Km	=	Rs 209.16	8.00	7.47	6.83	Km	=	Rs 72.36		
11	Cement	MT	Local	8.00	7.47	6.83	Km	=	Rs 52.29	8.00	7.47	6.83	Km	=	Rs 0.00		
12	Steel	MT	Local	8.00	7.47	6.83	Km	=	Rs 52.29	8.00	7.47	6.83	Km	=	Rs 0.00		
13	House Pipe (1000 mm)	M	Godda	8.00	7.47	6.83	Km	=	Rs 406.37	8.00	7.47	6.83	Km	=	Rs 0.00		
14	House Pipe (600 mm)	M	Godda	8.00	7.47	6.83	Km	=	Rs 162.55	8.00	7.47	6.83	Km	=	Rs 0.00		
15	House Pipe (300 mm)	M	Godda	8.00	7.47	6.83	Km	=	Rs 67.73	8.00	7.47	6.83	Km	=	Rs 0.00		
16	Ramboo	Nm	Karsela	8.00	7.47	6.83	Km	=	Rs 313.74	8.00	7.47	6.83	Km	=	Rs 0.00		
17	Brick bats	Cum	Local	8.00	7.47	6.83	Km	=	Rs 209.16	8.00	7.47	6.83	Km	=	Rs 72.36		
18	Kilas Bulbich	Cum	Local	8.00	7.47	6.83	Km	=	Rs 209.16	8.00	7.47	6.83	Km	=	Rs 72.36		

Signature
01-11-2021
Junior Engineer

Signature
01-11-2021
Assistant Engineer

Signature
Executive Engineer

Executive Engineer
R. W. D. W. D. Naugachai

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 dumpoing ,turning for return trip excluding time for haulage and return trip				
	Unit = cum				
	Taking output = 2.832 cum				
a)	Labour				
	Mazdoor (Unskilled)	day	2.17	292	633.64
b)	Material				
	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
					4.84
	Rate for 1 m				
(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	No.	0.25	351	87.75
	Carpenter Gr -II	No.	2.50	292	730.00
	Unskilled Labour for piling				817.75
					817.75
	Rate for 30.5 m				26.81
	Rate for 1 m				
(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				
	Mazdoor (Unskilled) for piling	No.	1.00	351	351.00
b	Materials	No.	1.00	292	292.00
	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 WRD	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
	Stitching 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 Stitching 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 cost of (A+B+C+D) =			Total (D)	536.62
	Rate per Bag	Bag			3,070.44
					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	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				
93	Providing and Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Row				2336.82
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

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Executive Engineer
A. W. D. W. S. Kharashe