



Bihar Rural Road Development Agency



# ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar



ग्रामीण कार्य विभाग

## BIHAR RURAL ROAD DEVELOPMENT AGENCY (BRRDA)

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

### DETAILED ESTIMATE FOR F.D.R. RESTORATION WORK



DISTRICT :

Bhagalpur

BLOCK :

Gopalgur

NAME OF ROAD :

RCD Road No-14 Tirasi Chowk to Saidpur Gopalgur Block via Sukatiya Bazar

TOTAL LENGTH OF ROAD	:	2.400	KM
TOTAL COST OF FDR PART-A	:	4.090	LAKH
GST @ 12 %	:	0.491	LAKH
LABOUR CESS @ 1 %	:	0.041	LAKH
SEIGNIORAGE FEE @ 10 %	:	0.086	LAKH
TOTALCOST OF RESTORATION WORK	:	4.708	LAKH

Submitted By :-

**Executive Engineer**

Rural Work Department  
Works Division, Navgachhiya

## Inspection Report For Flood Damage Work

Date:-

1. Name of PUs - E.E.R.W.D. Works Division Naugachia (
2. Name of Block/ Road R.C.D. Road No. 14 Tivasi Chowk to Saidpur Gopalpur Block via Sukaria Bazar (Gopalpur Block)

### A. For Road

1. Damage Location/Chainage 125m - 1109m
2. Damage length 550mtr
3. Nature of Damage flank cutting
4. Detail of Restoration Works 550mtr
  - (i) Material being used in Restoration Works: Brick bats and EC bags
  - (ii) Equipment's/ Tools Being used in Restoration Works:
  - (iii) Procedure Taken up in Restoration Works:
  - (iv) Restored Length: 550mtr

### 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. (restorable work found satisfactory)

16/12/2024  
J.E.

16-12-2024  
A.E.

16/12/2024

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

16/12/2024  
Signature  
(Name of Inspector)

### GENERAL ABSTRACT OF COST

Name of Road : RCD Road No-14 Tirasi Chouk to Saidpur Gopalpur Block via Sukatiya Bazar District : Bhagalpur

Length (Km) : 2.400 Block : Gopalpur

Sl No	Particulars	Details (Km)	Total Cost (in Rs.)
1	Cost of Road Restoration work	:	406,996.00
2	Add G.S.T @ 12 %	:	48,840.00
3	Add L.C. @ 1 %	:	4,070.00
4	Add 10% S.F. on Basic rate of Mines material	:	8,593.00
	<b>Total Cost of Restoration work</b>	:	<b>468,499.00</b>
		Say,	<b>468,499.00</b>

468,500 ru

*[Signature]*  
07/11/2021  
J.E.

*[Signature]*  
01-11-2021  
J.E.

*[Signature]*  
07/11/2021  
E.E.

Technically sanctioned to Rs 4,68,500 ru (Rupees four lac sixty eight thousand five hundred only).

*[Signature]*  
Superintending Engineer  
Rural Works Department  
Works Circle, Bhagalpur  
13/10/21

**ESTIMATE FOR ROAD RESTORATION WORK**

Name of Road: **RCD Road No-14 Tirsi Chowk to Saidpur** Block: **Gopalpur** District: **Bhagalpur** Length: **2.400 Km**  
**Gopalpur Block via Sukatiya Bazar**

Sl. No.	SSR Item No.	Description	No	Length (M)	Width (M)	HD (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"					27.93		161754	46854.00	
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 E/I					27.93	Cum	3288.00	48979.08	
		As per attached "Annexure - B"					11731	/ bags	30.70	360142.00	
										486996.00	
										<b>Total Cost of Flood Protective work =</b>	<b>486996.00</b>

*(Signature)*  
 01/11/2021  
 J. E.

*(Signature)*  
 01-11-2021  
 A. E.

*(Signature)*  
 E. E.

**ANNEXURE - " A "**

**Brick Bat Measurement**

Name of Road : **RCD Road No-14 Tiraa Chowk to Saidpur Gopalpur Block via Sukatiya Bazar** Length (Km) : **2.400**

Sr. No.	Chainage (m)	Nos.	Length (m)	Width (m)	Average Width (m)	Depth (m)	Average Depth (m)	Quantity (Cum)
1	0 - 224	1	2.00	1.20	1.20	0.30	0.30	0.72
2	800 - 1100	1	15.00	2.00	2.00	0.30	0.30	9.00
3		1	2.00	2.00	2.00	0.30	0.30	1.20
4		1	6.00	3.00	3.00	0.30	0.30	5.40
5		1	3.00	2.00	2.00	0.30	0.30	1.80
6		1	2.50	1.80	1.80	0.30	0.30	1.35
7		1	3.25	1.75	1.75	0.30	0.30	1.71
8		1	3.00	1.50	1.50	1.50	1.50	6.75
<b>Total =</b>								<b>27.93</b>

S. F.	-	27.93	Cum	@	Rs. 1051.00	x	10%	=	Rs.	<b>2,835.00</b>
-------	---	-------	-----	---	-------------	---	-----	---	-----	-----------------

*J. E.*  
01/11/2021

**J. E.**

*A. E.*  
01-11-2021

**A. E.**

*E. E.*  
21/11/2021

**E. E.**

**ANNEXURE - " B "**

**E. C. Bags Measurement**

Name of Road : RCD Road No-14 Tirasi Chowk to Saidpur Gopalpur Block via Sukatiya Bazar

Length (Km) : 2.400

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 - 125	1	125.00	5.80	6.00		5.90	0.16		0.16	118.00	3471	
2	125 - 191	1	66	5.20	6.20		5.70	0.16		0.16	60.19	1770	
3	191 - 224	1	33	5.80	6.00		5.90	0.16		0.16	31.15	916	
4	382 - 389	1	7	2			2.00	0.16		0.16	2.24	66	
5	413 - 420	1	7	2			2.00	0.16		0.16	2.24	66	
6	420 - 470	1	50	3.9			3.90	0.16		0.16	31.20	918	
7	470 - 472	1	2	2			2.00	0.16		0.16	0.64	19	
8	843 - 880	1	37	3.8			3.80	0.16		0.16	22.50	662	
9	880 - 971	1	91	3.6			3.60	0.16		0.16	52.42	1542	
10	971 - 994	1	23	3.9			3.90	0.16		0.16	14.35	422	
11	1000 - 1048	1	48	3.9			3.90	0.16		0.16	29.95	881	
12	1048 - 1070	1	22	3.75			3.75	0.16		0.16	13.20	388	
13	1070 - 1091	1	21	3.6			3.60	0.16		0.16	12.10	356	
14	1091 - 1109	1	18	3			3.00	0.16		0.16	8.64	254	
			550 m								Total =	11,731	

S. F.	-	11731	Nos.	@	Rs.	4.82	x	10%	=	Rs.	5,658.00
-------	---	-------	------	---	-----	------	---	-----	---	-----	----------

*J.E.*  
01/11/2021  
J. E.

*A.E.*  
01-11-2021  
A. E.


*E.E.*  
01/11/2021  
E. E.

# Carriage Cost of Material via Road

RWD, works Division, Bhagalpur

Name of Road : RCD Road No-14 Tirasi Chowk to Saidpur Gopalpur Block via Sukatiya B:Block Gopalpur												
Sl No	Item	Unit	Source	Pucca / Surface			Katcha			Loading & Unloading Cost	Carriage By Road	Total
				8.00	7.47 x 83 Km	Rs 1080.63	8.00	18.09 x 0 Km	Rs 0.00			
1	Stone Metal Gr-II/Via Road	Cum	Mirza Chetki	4.59	7.47 x 83 Km	Rs 1080.63	4.59	18.09 x 0 Km	Rs 0.00	193.62	1274.25	
2	Stone Metal Gr-III / GSB Via Road	Cum	Mirza Chetki	4.99	7.47 x 83 Km	Rs 994.00	8.00	18.09 x 0 Km	Rs 0.00	193.62	1187.62	
3	Stone Aggregate / Chips Via Road	Cum	Mirza Chetki	8.00	7.47 x 83 Km	Rs 994.00	8.00	18.09 x 0 Km	Rs 0.00	193.62	1187.62	
4	Stone Boulder /Via Road	Cum	Mirza Chetki	4.99	7.47 x 83 Km	Rs 1033.35	4.99	18.09 x 0 Km	Rs 0.00	193.62	1226.97	
5	Coarse Sand/Via Road	Cum	Hammara	8.00	7.47 x 36 Km	Rs 431.13	8.00	18.09 x 0 Km	Rs 0.00	104.88	536.01	
6	Mooram/Via Road	Cum	Mirza Chetki	4.99	7.47 x 83 Km	Rs 826.68	8.00	18.09 x 0 Km	Rs 0.00	104.88	931.56	
7	Bitumen Baranasi/ Via Road	MT	Baranasi	8.00	7.47 x 125 Km	Rs 933.75	8.00	18.09 x 0 Km	Rs 0.00	365.00	1298.75	
8	Bitumen Emulsion /Via Road	MT	Patuha	8.00	7.47 x 212 Km	Rs 1583.64	8.00	18.09 x 0 Km	Rs 0.00	365.00	1948.64	
9	Local Sand	Cum	Local	8.00	7.47 x 2 Km	Rs 23.95	4.99	18.09 x 1 Km	Rs 29.00	104.88	157.83	
10	Brick	1000 No/Local	Local	8.00	7.47 x 7 Km	Rs 209.16	8.00	18.09 x 1 Km	Rs 72.36	441.62	723.14	
11	Concrete	MT	Local	8.00	7.47 x 7 Km	Rs 52.29	8.00	18.09 x 0 Km	Rs 0.00	317.64	369.93	
12	Steel	MT	Local	8.00	7.47 x 7 Km	Rs 52.29	8.00	18.09 x 0 Km	Rs 0.00	337.70	389.99	
13	Humus Pipe (1000 mm)	M	Godda	8.00	7.47 x 68 Km	Rs 406.37	8.00	18.09 x 0 Km	Rs 0.00	75.69	482.06	
14	Humus Pipe (600 mm)	M	Godda	25.00	7.47 x 68 Km	Rs 162.55	25.00	18.09 x 0 Km	Rs 0.00	32.44	194.99	
15	Humus Pipe (300 mm)	M	Local	60.00	7.47 x 68 Km	Rs 67.73	60.00	19.82 x 0 Km	Rs 0.00	32.44	100.17	
16	Bamboo	Nos	Karwala	8.00	7.47 x 42 Km	Rs 313.74	8.00	19.82 x 0 Km	Rs 0.00	317.64	631.38	
17	Brick bats	Cum	Local	8.00	7.47 x 7 Km	Rs 209.16	8.00	18.09 x 1 Km	Rs 72.36	193.62	475.14	
18	Ellis Baddish	Cum	Local	8.00	7.47 x 7 Km	Rs 209.16	8.00	18.09 x 1 Km	Rs 72.36	104.88	386.40	

  
 01/11/2021  
 Junior Engineer

  
 01-11-2021  
 Assistant Engineer

  
 Executive Engineer

### Rate Analysis

SDB Sl. No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
<b>4.5</b>	<b>Providing and Laying of Brick Bats</b>				
	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				
<b>a)</b>	<b>Labour</b>				
	Mazdoor (Unskilled)	day	2.17	292	633.64
<b>b)</b>	<b>Materials</b>				
	Brick Bats	cum	2.832	1,051.00	2976.43
<b>c)</b>	<b>Carriage</b>				
		cum	2.832	402.80	1140.73
	Cost for 5.5 cum = a+b+c				4750.80
	<b>Rate per cum = (a+b+c+d)/2.832</b>	cum			1677.54
	<b>Total per cum</b>	<b>cum</b>			<b>1,677.54</b>
<b>5.7.9</b>	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				
<b>(i)</b>	<b>Materials</b>				
	Cost of 150 mm long nails	Kg	0.50	61.74	30.87
<b>(ii)</b>	<b>Labour</b>				
	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
					4.84
<b>(iii)</b>	<b>Bamboo(2nd class) 75mm dia, 1.8 - 2.5m long</b>	m	1.00	23.58	23.58
	<b>Rate per m</b>			<b>Say.</b>	<b>28.43</b>
<b>5.7.7</b>	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				
<b>(i)</b>	<b>Labour</b>				
	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
<b>(ii)</b>	<b>Bamboo(2nd class) 75mm dia, 1.8 - 2.5m long</b>	m	1.00	23.58	23.58
	<b>Rate per m</b>			<b>Say.</b>	<b>50.39</b>
<b>5.7.8</b>	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				



<b>a</b>	<b>Labour</b>				
	Carpenter Gr-II	No.	1.00	351	351.00
	Mazdoor (Unskilled) for piling	No.	1.00	292	292.00
<b>b</b>	<b>Materials</b>				
	75 mm to 100 mm long nails	kg	0.25	61.74	15.44
<b>c</b>	<b>Bamboo(2nd class) 75mm dia, 1.8 - 2.5m long</b>	m	11	23.58	259.42
					<b>917.85</b>
	<b>Rate Per Sqm = (a+b+c)/9.30</b>				<b>98.69</b>
<b>10.7.40 WRD</b>	Labour for filling Cement Bag, swing and laying materials Unit = Per Bag				
<b>A</b>	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
				<b>Total (A)</b>	<b>834.00</b>
<b>B</b>	Unskilled Labour for filling stiching 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 stiching	No	0.33	370	122.10
	<b>Total per bag</b>			<b>Total (B)</b>	<b>1,485.74</b>
<b>C</b>	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
	<b>Total per bag</b>			<b>Total (C)</b>	<b>214.08</b>
<b>D</b>	<b>Carriage Cost of Local Sand</b>				
	1.2 Cft = 0.034 m <sup>3</sup>	cum	3.40	157.83	536.62
				<b>Total (D)</b>	<b>536.62</b>
	<b>Total cost of (A+B+C+D) =</b>	Bag			<b>3,070.44</b>
	<b>Rate per Bag</b>				<b>30.70</b>
<b>4.1</b>	<b>Granular Sub-base with Well Graded Material (Table 400.1)</b> ( 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.				
<b>(ii)</b>	<b>For Grading II Material</b>				
	Unit = cum				
	Taking output = 300 cum				
<b>a)</b>	<b>Labour</b>				
	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>b)</b>	<b>Machinery</b>				
	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
<b>c)</b>	<b>Material</b>				
	Well graded granular sub-base material as per Table 400.1	cum	134.40	604.91	81299.90
	26.5 mm to 9.5 mm @ 35 per cent	cum	96.00	582.80	55948.80
	9.5 mm to 2.36 mm @ 25 per cent	cum	153.60	514.58	79039.49
	2.36 mm below @ 40 per cent - Local Sand	kl	30.00	40.00	1200.00
	Water				<b>244998.59</b>
	<b>Cost of GSB for 300 cum</b>				<b>816.66</b>
	<b>A) Cost of GSB without carriage per cum</b>	cum			
<b>e)</b>	<b>CARRIAGE</b>				
	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	<b>Providing and Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Row</b>				
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.				
<b>A.</b>	<b>1000 MM DIA (Double Row)</b>				
a)	<b>Material</b>				
	RCC NP3 pipe including collar	m	15.00	2755.50	41332.50
b)	<b>Labour</b>				
	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
	<b>A) Basic Cost per m = (a+b+c+d)/7.5</b>	m			<b>5734.88</b>
	<b>CARRIAGE COST</b>				
	NP3 Pipe	m	15.00	482.06	7230.90
	Carriage cost of 7.5 m				7230.90
	<b>B) Carriage cost per m</b>	m			<b>964.12</b>
	<b>Rate per m = (A+B)</b>	m			<b>6699.00</b>
<b>B.</b>	<b>1000 MM DIA (Single Row)</b>				
a)	<b>Material</b>				
	RCC NP3 pipe including collar	m	7.50	2755.50	20666.25
b)	<b>Labour</b>				
	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
	<b>A) Basic Cost per m = (a+b)/7.5</b>	m			<b>2848.71</b>
	<b>CARRIAGE COST</b>				
	NP3 Pipe	m	7.50	482.06	3615.45
	Carriage cost of 7.5 m				3615.45
	<b>B) Carriage cost per m</b>	m			<b>482.06</b>
	<b>Rate per m = (A+B)</b>	m			<b>3330.77</b>
<b>C.</b>	<b>600 MM DIA (Double Row)</b>				
a)	<b>Material</b>				
	RCC NP3 pipe including collar	m	15	1582.72	23740.80
b)	<b>Labour</b>				
	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
	<b>A) Basic Cost per m = (a+b)/7.5</b>	m			<b>3210.05</b>
	<b>CARRIAGE COST</b>				
	NP3 Pipe	m	15	194.99	2924.85
	Carriage cost of 7.5 m				2924.85
	<b>B) Carriage cost per m</b>	m			<b>389.98</b>
	<b>Rate per m = (A+B)</b>	m			<b>3600.03</b>
<b>D.</b>	<b>600 MM DIA (Single Row)</b>				
a)	<b>Material</b>				
	RCC NP3 pipe including collar	m	7.50	1582.72	11870.40
b)	<b>Labour</b>				
	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
	<b>A) Basic Cost per m = (a+b)/7.5</b>	m			<b>1627.33</b>
	<b>CARRIAGE COST</b>				
	NP3 Pipe	m	7.5	194.99	1462.43

Carrriage cost of 7.5 m				1462.43
B) Carrriage cost per m	m			194.99
Rate per m = (A+B)	m			1822.32

*Amie*  
 01/11/2021  
 J.E

*A*  
 01-11-2021  
 A.E

*R.T*  
 2/11/2021  
 E.E