



Bihar Rural Road  
Development Agency



# ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar



गुणवत्ता का सर्वोच्च मानक

## BIHAR RURAL ROAD DEVELOPMENT AGENCY (BRRDA)

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

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



DISTRICT :	Bhagalpur	BLOCK :	Gopalpur
NAME OF ROAD :	L030-RCD Road Sungatia To Tintanga Karari (VR24)		

TOTAL LENGTH OF ROAD	:	1.501	KM
TOTAL COST OF FDR PART-A	:	7.948	LAKH
GST @ 12 %	:	0.954	LAKH
LABOUR CESS @ 1 %	:	0.079	LAKH
SEIGNIORAGE FEE @ 10 %	:	0.125	LAKH
TOTALCOST OF RESTORATION WORK	:	9.106	LAKH

Submitted By :-  
**Executive Engineer**  
 Rural Work Department  
 Works Division, Navgachhiya

## Inspection Report For Flood Damage Work

Date:-

1. Name of PIU's - *EE RW-D-1002K8 Division Nalgachha*
2. Name of Block/ Road *1030 R.C.D. Road Samgadin TO Tinwanga Karazi (VR-24)*  
*(Gopalpur Block)*

### A. For Road

1. Damage Location/Chainage *131m TO 1200m*
2. Damage length *1111mtr*
3. Nature of Damage *cutting of Flank*
4. Detail of Restoration Works *1111 Mtr*
  - (i) Material being used in Restoration Works: *E.C. bags*
  - (ii) Equipment's/ Tools Being used in Restoration Works:
  - (iii) Procedure Taken up in Restoration Works:
  - (iv) Restored Length: *1111 Mtr*

### 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)*

*Signature*  
*16/12/2021*  
*JE*

*Signature*  
*16-12-2021*  
*AE*

*कार्यपालके अखियन्ता*  
*ग्रामीण कार्य विभाग*  
*कृषि प्रमण्डल नयागच्छा*

*Signature*

(Name of Inspector)

GENERAL ABSTRACT OF COST

Name of Road : L030-RCD Road Sungatia To Tintanga  
Karari (VR24)

District : Bhagalpur

Length (Km) : 1.501


Block : Gopalpur

Sl. No	Particulars	Details (Km)	Total Cost (in Rs.)
1	Cost of Road Restoration work	:	794,762.00
2	Add G.S.T @ 12 %	:	95,371.00
3	Add L.C. @ 1 %	:	7,948.00
4	Add 10% S.F. on Basic rate of Mines material	:	12,486.00
	<b>Total Cost of Restoration work</b>	:	<b>910,567.00</b>
		Say,	<b>910,567.00</b>

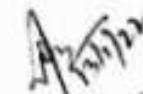
9,10,602.00

  
01/11/2021  
J.E.

  
01-11-2021  
A.E.

  
E.E.

Technically sanctioned for Rs 9,10,602.00 (Ninety one thousand six hundred and two only).

  
Superintending Engineer  
Rural Works Department  
Works Circle, Bhagalpur  
14/01/22

**ESTIMATE FOR ROAD RESTORATION WORK**

Name of Road: **L038-RCD Road Sungatia To Tintanga Karari (VR24)** Block: **Gopalpur** District: **Bhagalpur** Length: **1.501 Km**

Sl. No.	SSR Item No.	Description	No	Length (M)	Width (M)	HD (M)	Qty.	Unit	Rates (in Rs.)	Amount (in Rs.)
1	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								
		As per attached " Annexure - B "					25888	/ bags	30.70	794,762.00
<b>Total Cost of Flood Protective work =</b>										<b>794,762.00</b>

*[Signature]*  
01/11/2021  
A. E.

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

*[Signature]*  
02/11/21  
E. E.

**ANNEXURE - " B "**

**E. C. Bags Measurement**

Name of Road : L630-RCD Road Sungatia To Tintanga Karari (VR24)

Length (Km) : 1.501

Sr. No.	Chainage (m)	Nos.	Length (m)	Width (m)	Average Width (m)	Depth (m)	Average Depth (m)	Quantity (Cum)	Quantity (No of bag)
1	131 - 153 LHS	1	22	9.50	9.50	0.16	0.16	33.44	964
2	153 - 175 LHS	1	22	8.50	8.50	0.16	0.16	29.92	860
3	175 - 188 LHS	1	13	6.50	6.50	0.16	0.16	13.52	398
4	188 - 307 LHS	1	119	5.50	5.50	0.16	0.16	104.72	3060
5	310 - 500 LHS	1	190	4.50	4.50	0.16	0.16	136.80	4024
6	500 - 700 LHS	1	85	5.00	5.00	0.16	0.16	68.00	2000
7	700 - 800 LHS	1	40	4.75	4.75	0.16	0.16	30.40	894
8	800 - 900 LHS	1	35	3.50	3.50	0.16	0.16	19.60	576
9	900 - 1000 LHS	1	42	5.00	5.00	0.16	0.16	33.60	968
10	1000 - 1100 LHS	1	45	3.75	3.75	0.16	0.16	27.00	794
11	1100 - 1200 LHS	1	47	4.25	4.25	0.16	0.16	31.96	940
12	1200 - 1300 RHS	1	51	4.25	4.25	0.16	0.16	34.68	1020
13	141 - 200 RHS	1	59	6.50	6.50	0.16	0.16	61.36	1805
14	200 - 350 RHS	1	150	5.00	5.00	0.16	0.16	120.00	3529
15	800 - 900 RHS	1	79	5.00	5.00	0.16	0.16	63.20	1859
16	900 - 1000 RHS	1	65	4.50	4.50	0.16	0.16	46.80	1376
17	1000 - 1100 RHS	1	22	3.75	3.75	0.16	0.16	13.20	388
18	1100 - 1200 RHS	1	25	3.00	3.00	0.16	0.16	12.00	353
								<b>Total =</b>	<b>25,888</b>

S. F.	-	25888	Nos.	Rs.	4.82	x	10%	=	Rs.	12,488.00
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01-11-2024

A. E.

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01/11/2024

E. E.

# Carriage Cost of Material via Road

RWD, works Division, Bhagalpur

Name of Road :		L030-RCD Road Sungatia To Tintanga Karari (VR24)										Block : Gopalpur	
Sl No	Items	Unit	Source	Pucks / Surface		Carriage Cost & Lead in Km		Marcha		Leading & Unloading Cost	Carriage By Road	Total	
1	Steele Metal Gr-II/Via Road	Cum	Mirza Chevki	8.00	7.47 x 83 Km	Rs 1060.63	8.00	18.09	x 0 Km	Rs 0.00	193.62	1274.25	
				4.59			8.59						
2	Steele Metal Gr-III / GSB Via Road	Cum	Mirza Chevki	8.00	7.47 x 83 Km	Rs 994.00	8.00	18.09	x 0 Km	Rs 0.00	193.62	1187.62	
				4.99			4.99						
3	Steele Aggregate / Chips Via Road	Cum	Mirza Chevki	8.00	7.47 x 83 Km	Rs 994.00	8.00	18.09	x 0 Km	Rs 0.00	193.62	1187.62	
				4.99			4.99						
4	Steele Boulder /Via Road	Cum	Mirza Chevki	8.00	7.47 x 83 Km	Rs 1033.35	8.00	18.09	x 0 Km	Rs 0.00	193.62	1226.97	
				4.80			4.80						
5	Coarse Sand/Via Road	Cum	Nasawara	8.00	7.47 x 36 Km	Rs 431.13	8.00	18.09	x 0 Km	Rs 0.00	104.88	536.01	
				4.99			4.99						
6	Mosarem/Via Road	Cum	Mirza Chevki	8.00	7.47 x 83 Km	Rs 826.68	8.00	18.09	x 0 Km	Rs 0.00	104.88	931.56	
				6.00			6.00						
7	Blitzem Barasani /Via Road	MT	Barasani	8.00	7.47 x 125 Km	Rs 933.75	8.00	18.09	x 0 Km	Rs 0.00	365.00	1298.75	
				8.00			8.00						
8	Blitzem Emulsion /Via Road	MT	Fataha	8.00	7.47 x 212 Km	Rs 1583.64	8.00	18.09	x 0 Km	Rs 0.00	365.00	1948.64	
				8.00			8.00						
9	Local Sand	Cum	Local	8.00	7.47 x 2 Km	Rs 23.95	8.00	18.09	x 1 Km	Rs 29.00	104.88	157.83	
				4.99			4.99						
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	
				2.00			2.00						
11	Cement	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	
				8.00			8.00						
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	
				8.00			8.00						
13	Heavy Pipe (1000 mm )	M	Gadda	8.00	7.47 x 548 Km	Rs 406.37	10.00	18.09	x 0 Km	Rs 0.00	75.69	482.06	
				10.00			10.00						
14	Heavy Pipe (600 mm )	M	Gadda	8.00	7.47 x 548 Km	Rs 162.55	8.00	18.09	x 0 Km	Rs 0.00	32.44	194.99	
				25.00			25.00						
15	Heavy Pipe (300 mm )	M	Gadda	8.00	7.47 x 411 Km	Rs 67.73	8.00	19.82	x 0 Km	Rs 0.00	32.44	100.17	
				60.00			60.00						
16	Bamboo	Nos	Karvela	8.00	7.47 x 42 Km	Rs 313.74	8.00	19.02	x 0 Km	Rs 0.00	317.64	631.38	
				8.00			8.00						
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	
				2.00			2.00						
18	Kita Rubbish	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	
				2.00			2.00						

*[Signature]*  
Executive Engineer

*[Signature]*  
01-11-2021  
Assistant Engineer

*[Signature]*  
01/11/2021  
Junior 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				
a)	Labour				
	Mazdoor (Unskilled)	day	2.17	292	633.64
b)	Materials				
	Brick Bats	cum	2.832	1,051.00	2976.43
c)	Carriage				
	Cost for 5.5 cum = a+b+c	cum	2.832	402.80	1140.73
	Rate per cum = (a+b+c+d)/2.832	cum			4750.80
	<b>Total per cum</b>	<b>cum</b>			<b>1677.54</b>
<b>5.7.9</b>	<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</b>				
	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
	Rate for 1 m				147.75
					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
<b>5.7.7</b>	<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.</b>				
	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
	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
<b>5.7.8 WRD</b>	<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.</b>				
	(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 pilling	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 materilas 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 pe	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				
	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
	<b>Cost of GSB for 300 cum</b>				<b>244998.59</b>
	<b>A) Cost of GSB without carriage per cum</b>	cum			<b>816.66</b>
<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					
9.3	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				
b)	Labour	m	15.00	2755.50	41332.50
	Mate				
	Mason ( 1st class )	day	0.22	304.00	66.88
	Mazdoor ( Unskilled )	day	0.60	351.00	210.60
	Cost for 7.5m = ( a+b+c)	day	4.80	292.00	1401.60
	A) Basic Cost per m = (a+b+c+d)/7.5				43011.58
	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>B) Carriage cost per m</b>	m			194.99
	<b>Rate per m = (A+B)</b>	m			1822.32
<b>Local Sand filling in as per drawing and technical specification Clause 305.3.9</b>					
<b>Sand filling</b>					
Unit = cum					
a)	<b>Labour</b>				
	Mate	day	0.01	304.00	3.04
	Mazdoor (Unskilled)	day	0.30	292.00	87.60
b)	<b>Material</b>				
	Sand (assuming 20 per cent voids)	cum	1.20	141.85	170.22
	<b>Rate per cum = (a+b)</b>				260.86
c)	<b>Carriage Cost</b>				
	Sand (assuming 20 per cent voids)	cum	1.20	157.83	189.40
	<b>Rate per cum = a+b+c=</b>	cum			450.26

  
 01/11/2024  
 J.E.

  
 01-11-2024  
 AE

  
 E.E.