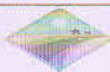




ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar



BRD Logo

BIHAR RURAL ROAD DEVELOPMENT AGENCY (BRDA)

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

DETAILED ESTIMATE FOR F.D.R. RESTORATION WORK



DISTRICT :	Bhagalpur	BLOCK :	Navgachhiya
NAME OF ROAD :	RCD Road to Khagra		

TOTAL LENGTH OF ROAD	:	3.760	KM
TOTAL COST OF FDR PART A	:	0.468 0.456	LAKH
GST @ 12 %	:	0.056 0.054	LAKH
LABOUR CESS @ 1 %	:	0.005	LAKH
SEIGNIORAGE FEE @ 10 %	:	0.020	LAKH
TOTAL COST OF RESTORATION WORK	:	0.549 0.535	LAKH

Submitted By :-

Executive Engineer

Rural Work Department
Works Division, Navgachhiya

GENERAL ABSTRACT OF COST

Name of Road : RCD Road to Khagra

District : Bhagalpur

Length (Km) : 3.760

Block : Navgachhiya

Sl. No.	Particulars	Details (Km)	Total Cost (in Rs.)
1	Cost of Road Restoration work	:	46,782.00 45,572.00
2	Add G.S.T @ 12 %	:	5,614.00 5,463.00
3	Add L.C. @ 1 %	:	468.00 456.00
4	Add 10% S.F. on Basic rate of Mines material	:	2,029.00
	Total Cost of Restoration work	:	54,893.00 53,526.00
		Say,	54,893.00 53,500.00

(Signature)
01/11/21
J. E.

(Signature)
11-11-2024
A. E.

(Signature)
01/11/21
E. E.

Technically sanctioned for Rs - 53,500.00 (Rupees fifty three thousand five hundred) only.

(Signature)
02/01/22
Superintending Engineer
Rural Works Department
Works Circle, Bhagalpur

ESTIMATE FOR ROAD RESTORATION WORK

Name of Road: RCD Road to Khatra

Block: Nargachhiya

District: Bhagalpur

Length: 3.760 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 base including spreading, laying, hand packing and compacting with C.I. Hammer in layers not exceeding 75 mm thick including cost of right barriers, danger signals, shoulder, taxes, royalty etc. all complete job as per specification and direction of E.I. excluding carriage cost of bricks.								
		As per attached "Annexure - A"					16.88		1677.50	27938.00
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.					16.88	Cum	4780.04	56181.00
		As per attached "Annexure - B"					573	/bags	30.70	17561.00
Total Cost of Flood Protective work =										46782.00

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45372-00
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ANNEXURE - " A "

Brick Bat Measurement

Name of Road : RCD Road to Khagra

Length (Km) : 3.760

Sr. No.	Chainage (m)	Nos.	Length (m)	Width (m)	Average Width (m)	Depth (m)	Average Depth (m)	Quantity (Cum)
1	30 - 37.0	1	7.00	0.50	0.50	0.60	0.60	2.10
2	325 - 337.0	1	12.00	2.70	2.70	0.45	0.45	14.58
							Total =	16.68

S. F.	-	16.68	Cum	@	Rs	1051.00	x	10%	=	Rs.	1,753.00
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01-11-2024
A. E.

E. E.
01/11/24
E. E.

Carriage Cost of Material via Road

RDWS works (Hill Road, Dhamghat)

Sl No	Name of Road	RCD Road to Khargra		Carriage Cost & Load in Km		Block		Carriage Cost (including Unloading Cost)	Navapachhua Carriage (No Road)	Total
		Unit	Source	Distance / Quantity	Rate	Distance	Rate			
1	Stone Metal Gr-II/Via Road	Cum	Shree Charki	8.00 x 7.47 x 0.4 Km	Rs. 1000.00	8.00 x 10.00 x 0.4 Km	Rs. 1000.00	195.63	1754.35	1754.35
2	Stone Metal Gr-II / GSI/Via Road	Cum	Miran Charki	8.00 x 7.47 x 0.4 Km	Rs. 994.66	8.00 x 10.00 x 0.4 Km	Rs. 994.66	155.67	1187.82	1187.82
3	Stone Aggregate / Chilo/Via Road	Cum	Miran Charki	8.00 x 7.47 x 0.4 Km	Rs. 994.66	8.00 x 10.00 x 0.4 Km	Rs. 994.66	233.62	1187.61	1187.61
4	Stone Boulder /Via Road	Cum	Miran Charki	8.00 x 7.47 x 0.4 Km	Rs. 1003.58	8.00 x 10.00 x 0.4 Km	Rs. 1003.58	155.62	1256.97	1256.97
5	Coarse Sand/Via Road	Cum	Dhamghat	8.00 x 7.47 x 0.4 Km	Rs. 431.13	8.00 x 10.00 x 0.4 Km	Rs. 431.13	106.48	356.01	356.01
6	Phuwan/Via Road	Cum	Miran Charki	8.00 x 7.47 x 0.4 Km	Rs. 826.68	8.00 x 10.00 x 0.4 Km	Rs. 826.68	106.48	570.56	570.56
7	Bitumen Barren/Via Road	M ³	Barren	8.00 x 7.47 x 1.5 Km	Rs. 253.75	8.00 x 10.00 x 1.5 Km	Rs. 253.75	35.10	1298.55	1298.55
8	Bitumen Emulsion/Via Road	M ³	Barren	8.00 x 7.47 x 1.5 Km	Rs. 138.66	8.00 x 10.00 x 1.5 Km	Rs. 138.66	35.10	148.64	148.64
9	Local Sand	Cum	Local	8.00 x 7.47 x 0.4 Km	Rs. 73.95	8.00 x 10.00 x 0.4 Km	Rs. 73.95	106.88	177.83	177.83
10	Gravel	Cum	Local	8.00 x 7.47 x 0.4 Km	Rs. 209.12	8.00 x 10.00 x 0.4 Km	Rs. 209.12	116.62	723.14	723.14
11	Gravel	Cum	Local	8.00 x 7.47 x 0.4 Km	Rs. 52.26	8.00 x 10.00 x 0.4 Km	Rs. 52.26	30.93	369.93	369.93
12	Gravel	Cum	Local	8.00 x 7.47 x 0.4 Km	Rs. 52.29	8.00 x 10.00 x 0.4 Km	Rs. 52.29	30.93	369.93	369.93
13	Gravel Pipe (100 mm)	M	Gravel	8.00 x 7.47 x 0.4 Km	Rs. 66.37	8.00 x 10.00 x 0.4 Km	Rs. 66.37	75.69	402.06	402.06
14	Gravel Pipe (100 mm)	M	Gravel	8.00 x 7.47 x 0.4 Km	Rs. 112.35	8.00 x 10.00 x 0.4 Km	Rs. 112.35	32.55	144.95	144.95
15	Gravel Pipe (100 mm)	M	Gravel	8.00 x 7.47 x 0.4 Km	Rs. 67.72	8.00 x 10.00 x 0.4 Km	Rs. 67.72	32.44	100.17	100.17
16	Gravel	Cum	Gravel	8.00 x 7.47 x 0.4 Km	Rs. 112.75	8.00 x 10.00 x 0.4 Km	Rs. 112.75	317.64	369.93	369.93
17	Gravel	Cum	Gravel	8.00 x 7.47 x 0.4 Km	Rs. 209.12	8.00 x 10.00 x 0.4 Km	Rs. 209.12	159.62	1274.55	1274.55
18	Gravel	Cum	Gravel	8.00 x 7.47 x 0.4 Km	Rs. 209.12	8.00 x 10.00 x 0.4 Km	Rs. 209.12	159.62	1274.55	1274.55

Executive Engineer

Assistant Engineer

Junior 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				
4.6	Labour				
	Mazdoor (Unskilled)	day	2.17	292	633.64
4.7	Materials				
	Brick Bats	cum	2.832	1,051.00	2974.33
4.8	Carriage				
		cum	2.832	475.14	1344.65
	Cost for 5.5 cum = a+b+c				4952.62
	Rate per cum = (a+b+c+d)/2.832	cum			1750.04
	Total per cum	cum			1750.04
5.7.9	Labour for fitting and fixing 62 mm to 75 mm dia bamboo runners in position at every vertical pile with 180 mm long nails or 38 swg G. I. wire including cost of G.I. or nails complete job as per specification and direction of B/I				1697.59
	Unit = Per mt				
	Taking Out Put = 30.50 m				
	Materials				
	Cost of 150 mm long nails	Kg	0.50	61.74	30.87
	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				4.84
	Bamboo(2nd class) 75mm dia, 1.8 - 2.5m long	m	1.00	23.58	23.58
	Rate per m			Say,	28.43
5.7.1	Labour for cutting 62 mm to 75 mm dia bamboo piles in size and making staves and driving etc. complete job as per specification and direction of I/I				
	Unit = Per m				
	Taking Out Put = 30.50 m				
	Assuming				
	20 no pile sunk 1.525 m deeps				
	Total depth sunk 30.50 m				
	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
	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 Cr -II	No.	1.00	351	351.00
b	Mazdoor (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	11	23.58	259.42
	Rate Per Sqm = (a+b+c)/9.30				917.85
					98.69
III.7.40 WRD	Labour for filling Cement Bag, swing and laying materials Unit - Per Bag				
A	Supply Empty cement Bag with Sumi (2.92+1.82)	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 staling	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) =	Bag		Total (D)	536.62
	Rate per Bag				3,070.44
4.1	Granular Sub-base with Well Graded Material (Table 400.1) (By mix in place method) For Grading II Material				30.70
	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.				
iii	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	378.00	740.00
b)	Mazdoor (Unskilled)	day	8.00	292.00	2336.00
	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	502.80	55948.80
	2.36 mm below @ 40 per cent - Local Sand	cum	153.60	514.58	79039.49
	Water	ld	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
d)	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				2336.02
	Providing and Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Row				
	Providing and laying reinforced cement concrete pipe NP3 as per design 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	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	0.50	351.00	210.60
	Mazdoor (Unskilled)	day	4.80	292.00	1401.60
	Cost for 7.5m = (a+b+c)				13011.58
	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)				21075.40
	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
C	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
SLI	Local Sand filling in as per drawing and technical specification Clause 305.3.9				
	Sand filling				
	Unit = cum				
40	Labour				
	Mate	day	0.01	304.00	3.04
40	Mazdoor (Unskilled)	day	0.30	292.00	87.60
	Material				
	Sand (assuming 20 per cent voids)	cum	1.20	141.85	170.22
	Rate per cum = (a+b)				260.86
40	Carriage Cost				
	Sand (assuming 20 per cent voids)	cum	1.20	157.86	189.40
	Rate per cum = a+b+c=				450.26

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