ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

DETAILED PROJECT REPORT FOR REPAIRING OF ROAD
F.D.R. PART - A (2020 - 21)

DETAILED ESTIMATE FOR F.D.R. RESTORATION WORK

DISTRICT :	BHAGALPUR	BLOCK :	RANGRA CHOWK

NAME OF ROAD :	NH 31 TO AZAMABAD
PACKAGE NO. :	BR-06R-048

TOTAL LENGTH OF ROAD	:	7.760	KMS	
TOTAL COST OF FDR. PART - A	:	7.58	LACS	
ADD G.S.T. @ 12 %	:	0.91	LACS	
ADD LABOUR CESS @ 1%	:	0.075	LACS	
ADD SF @ 10%	:	0.41	LACS	
	:	8.99	LACS	

SUBMITTED BY

The Executive Engineer

Works Division, Naugachhiya

GENERAL ABSTRACT OF COST

Name of Road : NH 31 TO AZAMABAD District : BHAGALPUR

Package No. : BR-06R-048 Block : RANGRA CHOWK

Length : 7.760KM

Sl. No	Particulars		Details	Total Cost (in Rs.)
1	Cost of Road Restoration work	:	7.760KM	758920=00
2	Add G.S.T @ 12 %	:		91070=00 ~~1,14,624.00~~
3	Add L.C. @ 1 %	:		7589=00 ~~9,552.00~~
4	S.F. @ 10 %	:		41477=00 ~~44,510.00~~
	Total Cost of Restoration work	:		899056=00
			Say,	8,99000

Rs. 8,99,100 200

J.E. A. E. E. E.

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

Technically Approved for Rs 8,99,100 200 (Rupees Eight lac ninty nine thousand one hundred only.

Superintending Engineer
Rural Works Department
Works Circle, Bhagalpur

ESTIMATE FOR ROAD RESTORATION WORK

Name of Road: NH 31 TO AZAMABAD

Package No. BR-06R-048

Length : 7.760KM

Block: RANGRA CHOWK

District: BHAGALPUR

Sl. No.	SSR Item No.	Description	No	Length (M)	Width (M)	H/D (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"					3773 ~~10,060~~	/ bags	31.22	~~3,14,073.00~~ 117793=00
2	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"					373.08			
							373.08	cum	1718.47	6,41,127.00
							Total Cost of Flood Protective work =			758920 ~~9,55,200.00~~

J. E. 21/10/2020

A. E. 21/10/2020

E. E. 16/12/20

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ANNEXURE - " B "

Measurement of E. C. Bags

Name of Road : NH 31 TO AZAMABAD

Package No.: BR-06R-048 Length of Road : 7.760KM

Sl. No.	Chainage (m)	Nos.	Length (m)	Width (m)			Average Width (M)	Depth (m)			Average Depth (M)	Quantity (cum)	Quantity (No of bag)
1	CH:[illegible] m - 390 m LHS	1	15.00	4.00	2.00		3.00	0.30			0.30	13.50	397
2	CH:420 m - 480 m LHS	1	25.00	3.00	1.50		2.25	0.30			0.30	16.87	497
3	CH:420 m - 480 m RHS	1	25.00	2.40	1.80		2.10	0.30			0.30	15.75	463
4	CH:3300 m - 3330 m LHS	1	15.00	6.00	4.00		5.00	0.30			0.30	22.50	662
5	CH:3300 m - 3330 m RHS	1	15.00	7.00	3.50		5.25	0.30			0.30	23.62	695
6	CH:3600 m - 3660m LHS	1	30.00	5.00	3.00		4.00	0.30			0.30	36.00	1059
											Total =	128.25	3773

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ANNEXURE - " A "

Brick Bat Measurement

Name of Road : NH 31 TO AZAMABAD

Package No.: BR-06R-048 Length of Road : 7.760KM

Sr.No.	Chainage (m)	Nos.	Length (m)	Width (m)			Average Width (M)	Depth (m)			Average Depth (M)	Quantity (cum)
1	100 - 300	2	20.00	3.00			3.00	0.30			0.30	36.00
2		2	10.00	3.00			3.00	0.30			0.30	18.00
3		1	15.00	3.00			3.00	0.30			0.30	13.50
4		1	12.00	3.00			3.00	0.30			0.30	10.80
5		2	10.00	2.80			2.80	0.30			0.30	16.80
6		2	7.00	3.00			3.00	0.30			0.30	12.60
7		1	5.00	3.00			3.00	0.30			0.30	4.50
8		2	2.00	3.10			3.10	0.30			0.30	3.72
9		1	3.00	2.50			2.50	0.30			0.30	2.25
10	350 - 500	1	30.00	3.00			3.00	0.30			0.30	27.00
11		2	15.00	2.80			2.80	0.30			0.30	25.20
12		2	10.00	2.50			2.50	0.30			0.30	15.00
13		1	10.00	3.00			3.00	0.30			0.30	9.00
14	2700 - 3000	1	15.00	2.50			2.50	0.30			0.30	11.25
15		1	22.00	2.60			2.60	0.30			0.30	17.16
16		1	25.00	2.50			2.50	0.30			0.30	18.75
17		2	6.00	3.00			3.00	0.30			0.30	10.80
18	3300 - 3360	2	30.00	2.30			2.30	0.30			0.30	41.40
19	3600 - 3700	1	30.00	3.00			3.00	0.30			0.30	27.00
20		1	15.00	3.10			3.10	0.30			0.30	13.95
21		1	10.00	3.20			3.20	0.30			0.30	9.60
22		1	32.00	3.00			3.00	0.30			0.30	28.80
											Total =	373.08

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Rate Analysis for Carriage of Materials

Name of Road : NH 31 TO AZAMABAD

Sl No	Item	Unit	Source	Carriage Cost & Lead in Km: Pucka / Surface	Carriage Cost & Lead in Km: Katcha	Loading & Unloading Cost	Carriage Cost by Rail Head	Total (By Road)
1	Stone Metal Gr-III / GSB	Cum	Mirjachauki	8.00/4.99 x 16.32 x 80.00 Km = Rs 2093.21	8.00/4.99 x 25.47 x 0.00 Km = Rs 0.00	172.07	0	Rs. 2265.28
2	Brick/ Brick Bats	Cum	Local	3.60/1.91 x 16.32 x 7.00 Km = Rs 215.33	3.60/1.91 x 25.47 x 1.00 Km = Rs 48.01	172.07	0	Rs. 435.40
3	Local Sand	Cum	Local	3.60/2.04 x 16.32 x 2.00 Km = Rs 57.60	3.60/2.04 x 25.47 x 1.00 Km = Rs 44.95	172.07	0	Rs. 274.62
4	Earth	Cum	Local	8.00/6.00 x 16.32 x 0.00 Km = Rs 0.00	8.00/6.00 x 25.47 x 1.00 Km = Rs 33.96	172.07	0	Rs. 206.03
5	Hume Pipe (1000 mm)	M	~~Purnia~~ Grotda	8.00/10.00 x 16.32 x 52.00 Km = Rs 678.93	8.00/10.00 x 25.47 x 0.00 Km = Rs 0.00	164.19	0	Rs. 843.12
6	Hume Pipe (600 mm)	M	~~Purnia~~ Grotda	8.00/25.00 x 16.32 x 52.00 Km = Rs 271.57	8.00/25.00 x 25.47 x 0.00 Km = Rs 0.00	164.36	0	Rs. 435.93

Cost of Haulage Excluding Loading & Unloading as per SOR

Type of Road	Per Ton. Km by Tractor	Per Ton. Km by Tipper
For Surface Road	16.32	
Unsurface Gravel Road	0.00	
Kachha Road	25.47	

*** Subjected to Verification of Lead**

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[illegible] No.	MORD Ref No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
1.9		**Loading and Unloading of Hume Pipes**				
	(i)	Loading of RCC Hume pipes by mechanical means including a lead upto 30 m				
	A.	**1000 / 1200 mm dia Hume pipe**				
		Unit = per pipe				
		Taking output = 9 pipes				
	a)	**Labour**				
		Mate	day	0.02	305.00	6.10
		Mazdoor (Unskilled)	day	0.50	287.00	143.50
	b)	**Machinery**				
		Truck	hour	0.33	934.30	308.32
		Crane	hour	0.33	1289.30	425.47
		Cost for 9 pipes = a+b+c+d				883.39
		Rate per pipe = (a+b+c+d)/9	**per p**			98.15
		Total per p				**98.15**
	C.	**600/450 mm dia Hume pipe**				
		Unit = per pipe				
		Taking output = 21 pipe				
	a)	**Labour**				
		Mate	day	0.02	305.00	6.10
		Mazdoor (Unskilled)	day	0.50	287.00	143.50
	b)	**Machinery**				
		Truck	hour	0.33	934.30	308.32
		Crane	hour	0.33	1289.30	425.47
		Cost for 21 pipes = a+b+c+d				883.39
		Rate per pipe = (a+b+c+d)/21	**per p**			98.15
		Total per p				**98.15**
	(ii)	Unloading of RCC Hume pipe by Mechanical means including a lead upto 30 m				
	A.	**1000/1200 mm dia RCC Hume pipes**				
		Unit = per pipe				
		Taking output = 9 pipes				
	a)	**Labour**				
		Mate	day	0.02	305.00	6.10
		Mazdoor (Unskilled)	day	0.50	287.00	143.50
	b)	**Machinery**				
		Truck	hour	0.20	934.30	186.86
		Crane	hour	0.20	1289.30	257.86
		Cost for 9 pipes = a+b+c+d				594.32
		Rate per pipe = (a+b+c+d)/9	**per p**			66.04
		Total per p				**66.04**
	C.	**600/450 mm dia Hume pipe**				
		Unit = per pipe				
		Taking output = 21 pipes				
	a)	**Labour**				
		Mate	day	0.03	305.00	7.63
		Mazdoor (Unskilled)	day	0.50	287.00	143.50
	b)	**Machinery**				
		Truck	hour	0.20	934.30	186.86
		Crane	hour	0.20	1289.30	257.86
		Cost for 21 pipes = a+b+c+d				595.85
		Rate per pipe = (a+b)/21	**per p**			66.21
		Total per p				**66.21**
1.10		**Haulage excluding Loading & Unloading**				
		Haulage of materials by truck excluding cost of Loading, Unloading and stacking				
		Unit = 1km				
		Taking output 10t load and lead 10km = 100t km				
		Case- I : Surfaced Road				
		Speed with load : 25km per hour				
		Speed while returning empty : 35km per hour				
	a)	**Machinery**				
		Tipper				
		Haulage with load	hour	0.40	1043.00	417.20
		Empty return trip	hour	0.29	1043.00	302.47

SOR Sl. No.	MORD Ref No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
		Cost for 100t_km = a+b+c				719.67
		Cost for 1 t_km = a+b+c/100				7.20
		Total per t per km				**7.20**
		Case- II : Unsurfaced Road				
		Speed with load : 20km per hour				
		Speed while returning empty : 30km per hour				
	a)	**Machinery**				
		Tipper				
		Haulage with load	hour	0.50	1043.00	521.50
		Empty return trip	hour	0.33	1043.00	344.19
		Cost for 100t_km = a+b+c				865.69
		Cost for 1 t_km = a+b+c/100				8.66
		Total per t per km				**8.66**
		Case - III Kutcha Track and Track in River Bed / Nallah Bed and Choe Bed				
		Speed with load : 10km per hour				
		Speed while returning empty : 15km per hour				
	a)	**Machinery**				
		Tipper				
		Haulage with load	hour	1.00	1043.00	1043.00
		Empty return trip	hour	0.67	1043.00	698.81
		Cost for 100t_km = a+b+c				1741.81
		Cost for 1 t_km = a+b+c/100				17.42
		Total per t per km				**17.42**
1.10		**Haulage excluding Loading & Unloading**				
		Haulage of materials by truck excluding cost of Loading, Unloading and stacking				
		Unit = 1km				
		Taking output 10t load and lead 10km = 100t_km				
		Case- I : Surfaced Road				
		Speed with load : 25km per hour				
		Speed while returning empty : 35km per hour				
	a)	**Machinery**				
		truck				
		Haulage with load	hour	0.40	934.30	373.72
		Empty return trip	hour	0.29	934.30	270.95
		Cost for 100t_km = a+b+c				644.67
		Cost for 1 t_km = a+b+c/100				6.45
		Total per t per km				**6.45**
		Case- II : Unsurfaced Road				
		Speed with load : 20km per hour				
		Speed while returning empty : 30km per hour				
	a)	**Machinery**				
		truck				
		Haulage with load	hour	0.50	934.30	467.15
		Empty return trip	hour	0.33	934.30	308.32
		Cost for 100t_km = a+b+c				775.47
		Cost for 1 t_km = a+b+c/100				7.75
		Total per t per km				**7.75**
		Case - III Kutcha Track and Track in River Bed / Nallah Bed and Choe Bed				
		Speed with load : 10km per hour				
		Speed while returning empty : 15km per hour				
	a)	**Machinery**				
		truck				
		Haulage with load	hour	1.00	934.30	934.30
		Empty return trip	hour	0.67	934.30	625.98
		Cost for 100t_km = a+b+c				1560.28
		Cost for 1 t_km = a+b+c/100				15.60
		Total per t per km				**15.60**

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 dumpong ,turning for return trip exluding time for haulage and return tirp				
	Unit = cum				
	Taking output = 2.832 cum				
a)	**Labour**				
	Mazdoor (Unskilled)	day	2.170	287.00	622.79
b)	**Materilas**				
	Brick Bats	cum	2.830	1,063.00	3008.29
c)	**Carriage**				
		cum	2.830	435.40	1232.19
	Cost for 5.5 cum = a+b+c				4863.27
	Rate per cum = (a+b+c+d)/2.83	cum			1718.47
	Total per cum	**cum**			**1,718.47**
7.40 WRD	**Labour for filling Cement Bag, swing and laying materilas**				
	Unit = Per Bag				
A	**Supply Empty cement Bag with Sand**	kg	1	7.460	7.46
					7.46
B	Unskilled Mazdoor for filling sand into bag and swing	No	2	287.00	574.00
	Unskilled Mazdoor for filling sand Bad to work site	No	3	287.00	861.00
	Rate per 100 Nos.				1,442.46
	Total per bag				**14.42**
C	**Supply Local sand Cost of Fine Sand**				
	Supply Empty Cement Bag				
	Unit = No.				
	Taking output = 1 No.				
	Labour				14.42
	Cost of cemnt bag with Sand				7.46
	Cost of Local Sand				
	1.2 Cft = 0.034 m^3	cum	0.034	274.62	9.34
	Carriage				
	Total per bag	**Bag**			**31.22**
	Total cost of (A + B+C) =				**31.22**
5.7.52	Supply of New bag and N.C with labour for filling item E.C. bag with local sand,stiching on two lines by approval (1mx1mx1m)				
	Unit = Per N.C.				
	Taking output = 100 Nos filled new bags in 4 nos N.C..				
A	Supply Empty cement Bag with Sand	No	100	14.30	1430.00
	Nylan crate (N.C.)	No	4	39.85	159.40
	Total =				1589.40
	Rate of Material for each N. C. (Total x 25/100)				397.35
B	Labour for filling stiching and stacking in dry position	No	1.67	287	479.29
	Labour for carrying and placing at work site	No	3	287	861.00
	skilled Mazdoor for stiching	No	0.33	364	120.12
	Stiching roll (Nylone)	No	2	30	60.00
	Hire charge of stiching Machine	day	0.33	50	16.50
	Hire charge of Generator 3 KVA	hrs	2.67	74	197.58
	Total =				1734.49
	Rate of Material for each N. C. (Total x 25/100)				433.62
	Rate for each N. C. in dry portion (A + B) =				830.97
C	Carriage :				
	Local sand				
	25 bags = 0.85 m^3	cum	0.85	274.62	233.43
	Carriage for each N. C.	No			**233.43**
	Total cost of (A + B+C) =	No			**1064.40**

SOR Sl. No.	DESCRIPTION	Unit	QTY	Rate	[illegible] Rs	[illegible]	Amount	[illegible]
4.5	**Providing and Laying of Brick Bats**							
	Placing tractor at loading point loading with front end loader dumpong ,turning for return trip exluding time for haulage and return tirp							
	Unit = cum							
	Taking output = 2.832 cum							
b)	**Materilas**							
	Brick Bats	cum	2.830	1,063.00	3008.29			
	Total per cum	**cum**			**1,063.00**	373.08	396584.04	39658.404
10.7.40 WRD	**Labour for filling Cement Bag, swing and laying materilas** **Unit = Per Bag**							
A	Supply Empty cement Bag with Sand							
	Cost of Local Sand							
	1.2 Cft = 0.034 m^3	cum	0.034	141.85	4.82			
	Total per bag	**Bag**			**4.82**	3773	18185	1819=00
	Total cost of (A + B+C) =	Bag			**4.82**	~~10060~~	~~48518.37~~	~~4852~~

Total Amount = 41477 ~~44,510~~

21/10/2020
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