



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 SADHUACHAPAR VILLAGE		
PACKAGE NO :	BR-06R-337		
TOTAL LENGTH OF ROAD	:	1.230 1.497	KMS
TOTAL COST OF FDR. PART - A	:	4.387	LACS
ADD G.S.T. @ 12 %	:	0.526	LACS
ADD LABOUR CESS @ 1%	:	0.044	LACS
ADD SF @ 10%	:	0.068	LACS
	:	5.025	LACS
SUBMITTED BY The Executive Engineer Works Division, Naugachhiya			

GENERAL ABSTRACT OF COST

Name of Road : NH 31 TO SADHUACHAPAR
VILLAGE

District : BHAGALPUR

Package No. : BR-06R-337

Length : 1.230 KM 1.477 km

Block : RANGRA CHOWK

Sl. No	Particulars		Details	Total Cost (in Rs.)
1	Cost of Road Restoration work	:	1.230 KM	4,38,735.00
2	Add G.S.T @ 12 %	:		52,648.00
3	Add L.C. @ 1 %	:		4,387.00
4	S. F. @ 10 %	:		6,778.00
	Total Cost of Restoration work	:		5,02,548.00
			Say,	5,02,548.00

Rs 5,02,548.00

M/K
21/10/2020
J. E.

S
21/10/2020
A. E.

R.T
16/11/20
Executive Engineer
R. W. D., W. D. Naugachia

Technically Approved for Rs 5,02,548.00 (Rupees five lac two thousand five hundred only).

W.D
12/01/2021
Superintending Engineer
Rural Works Department
Works Circle, Bhagalpur
8
12/19

ESTIMATE FOR ROAD RESTORATION WORK

Name of Road: NH 31 TO SADHUACHAPAR VILLAGE

Length : 1.230 KM 1.477 km

Package No. BR-06R-337

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"								
							14,053	/ bags	31.22	4,38,735.00
							Total Cost of Flood Protective work =			4,38,735.00

M/19
21/10/2020
J. E.

A. E.

R. 16/12/20
E. E.
Executive Engineer
R. W. D., W. D. Naugachia

Measurement of E. C. Bags

Name of Road : NH 31 TO SADHUACHAPAR VILLAGE

Length of Road : 1.497 km

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 - 75	1	8.00	2.00			2.00	0.30			0.30	4.80	141
2		1	10.00	2.00			2.00	0.60			0.60	12.00	353
3		1	6.00	5.00			5.00	0.60			0.60	18.00	529
4		1	8.00	2.00			2.00	0.30			0.30	4.80	141
5		1	5.00	2.00			2.00	0.30			0.30	3.00	88
6		1	2.00	2.00			2.00	0.60			0.60	2.40	71
7		1	4.00	2.00			2.00	0.30			0.30	2.40	71
10	450 - 1000	2	10.00	3.00			3.00	0.30			0.30	18.00	529
2		2	8.00	2.00			2.00	0.60			0.60	19.20	565
3		2	12.00	2.00			2.00	0.60			0.60	28.80	847
2		2	15.00	2.00			2.00	0.60			0.60	36.00	1059
3		2	10.00	2.00			2.00	0.60			0.60	24.00	706
4		2	8.00	3.00			3.00	0.30			0.30	14.40	424
5		2	10.00	2.00			2.00	0.30			0.30	12.00	353
6		2	5.00	3.00			3.00	0.60			0.60	18.00	529
7		2	7.00	2.00			2.00	0.30			0.30	8.40	247
4		2	8.00	2.00			2.00	0.30			0.30	9.60	282
5		2	15.00	2.00			2.00	0.30			0.30	18.00	529
6		2	10.00	2.00			2.00	0.60			0.60	24.00	706
2		2	18.00	2.00			2.00	0.60			0.60	43.20	1271
3		2	15.00	2.00			2.00	0.60			0.60	36.00	1059
4		1	30.00	2.00			2.00	0.30			0.30	18.00	529
5		1	14.00	2.00			2.00	0.30			0.30	8.40	247
6		1	20.00	2.00			2.00	0.60			0.60	24.00	706
14	1030 - 1230	2	12.00	2.20			2.20	0.30			0.30	15.84	466
13		2	15.00	2.00			2.00	0.30			0.30	18.00	529
15		2	18.00	2.00			2.00	0.30			0.30	21.60	635
16		2	10.00	2.00			2.00	0.30			0.30	12.00	353
17		1	5.00	2.00			2.00	0.30			0.30	3.00	88
Total =											477.84	14053.00	

M/L
21/10/2020
J.E.

A
21/10/2020
A.E.

R.F.
16/12/20
E.E.

S.F. 14053 X RS 4.52/bag @ No. 1. = 0.068 cum

M/L
21/10/2020
J.E.

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

Rate Analysis for Carriage of Materials

Name of Road : NH 31 TO SADIHACHAPAR VILLAGE

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

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

(Signature)
J. E.

(Signature)
A. E.

(Signature)
Executive Engineer
R. W. D. W. E. Naugachia

S. E.

SDB Sl. 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	0.44	1042.60	417.39
		Empty return trip	hour	0.29	1042.60	302.47

SDB 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 load 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

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 dumping, turning for return trip excluding time for haulage and return trip				
	Unit = cum				
	Taking output = 2,832 cum				
a)	Labour				
	Mazdoor (Unskilled)	day	2.170	287.00	622.79
b)	Material				
	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
10.7.40 WRD	Labour for filling Cement Bag, swing and laying materials				
	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 Bag 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 cement 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, stitching 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
	Nylon 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 stitching 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 stitching	No	0.33	364	120.12
	Stitching roll (Nylon)	No	2	30	60.00
	Hire charge of stitching Machine	day	0.33	50	16.50
	Hire charge of Generator 3 KVA	hrs	2.67	74	197.38
	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