

RURAL WORKS DEPARTMENT



GOVERNMENT OF BIHAR

CIRCLE – R.W.D. works Circle, Chapra

DIVISION – R.W.D. works Division , Marhaura

Name of Work - Motrable of Road from Dharahara khurd to Dusad tola

Block - Amnaur

Estimated cost - Rs 607321.00

Year : 2020-21

प्रतिवेदन

कार्य का नाम :- *Motable of Rb from Dharasa kharu (to Dard Tola.*
शीर्ष :- FDR
प्राक्कलित राशि:- 607321/-
प्रखण्ड का नाम:- अमनौर

जिला-सारण।

प्रस्तुत प्राक्कलन शीर्ष PMGSY/MMGSY/GTSNY/NABARD/MR-3054 अर्तगत निर्मित/निर्माणाधीन पथ के गत महीने में इस जिला में आये बाढ़/अतिवृष्टि के कारण क्षतिग्रस्त हुए पथों को चलने लायक (Motarable) बनाने हेतु विभागीय दिशा-निर्देशानुसार कार्यपालक अभियंता, ग्रा0का0वि0, कार्य प्रमंडल मढ़ौरा के दिशा-निर्देशन में कुल रु0 607321/- के लिए तैयार किया गया है।

आवश्यकतानुसार तत्काल प्रभाव से पथों को चलने लायक बनाने हेतु प्राक्कलन में Bricks Bats. Sand Bag. Hume-Pipe इत्यादी का प्रावधान आवश्यक लम्बाई, चौड़ाई एवं मोटाई में प्राक्कलन के अनुसार प्रावधान किया गया है।

योजना एवं कार्य की महत्ता के साथ-साथ जनहित के लिए अतिउपयोगी प्राक्कलन को कार्यहित में स्वीकृति हेतु प्रस्तुत किया जा रहा है।

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कार्यपालक अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रमंडल, मढ़ौरा।
le
2/12/20

Inspection Report for Flood damage work

Date:

1. Name of PIUs- E.E. R.W.D (W) Modhaur.

2. Name of Block/Road- Amarnagar - Motorable of Road from Dharshona Khur to Dusad tola.

A. For Road

1. Damage Location/Chainage :- 454, 804, 98, 124, 7964.

2. Damage Length : 52 Meter.

3. Nature of Damage : Road Cutting Due to Flood.

4. Details of Restoration :

i Material being used in Restoration

: Brick Bat, Sand filling.

ii Equipment/Tools being used in Restoration works: Tractor, Tolly, Roller, J.C.B. etc.

iii Procedure taken up in Restoration works

: Brick Bat & L sand dumping

iv Restored Length

: Laying rolling.
52 Me.

B. For Bridge

1. Damage Location/Chainage :

2. Damage Length :

3. Nature of Damage :

4. Details of Restoration :

i Material being used in Restoration :

ii Equipment/Tools being used in Restoration works:

iii Procedure taken up in Restoration works :

iv Restored Length :

Signature of JE/AE/EE

Signature

Er. Akhilesh Kumar
(Name of Inspector)

EE
RWD (W) Division
SONEPUR.

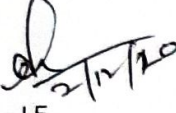
ABSTRACT OF COST

Name of Work - Motrable of Road from Dharahara khurd to Dusad tola

Block - Amnaur

S.L No.	Particulars	Amount (In Rs.)
A	Cost of Restoration work	Rs 537452.00
B	Add 12 % GST on (A)	Rs 64494.00
C	Add 1 % L. Cess on (A)	Rs 5375.00
	Total Cost	Rs 607321.00

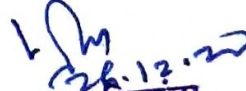
B. 6,07,321 =


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T/A for Rs. 6,07,321 = 0 (Rupees six lac seven thousand and three hundred and twenty one) only,

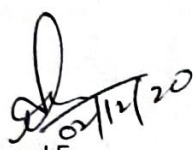

अधीक्षण अभियंता
ग्रामीण कार्य विभाग
कार्य प्रमंडल, छपरा

Detailed Estimate

Name of work :-

Motable of Road from Dharahara khurd to Dusad tola

SI No	Item	No	Length	Width	Avg.H/D	Qty	Unit	Rate	Amount
1	Providing laying and spreading brick bats in Road ditches all complete as per approved design, specifications and direction of E/I	3	10.00	3.90	1.04	121.68			
		2	16.00	4.10	1.17	153.50			
		Total					275.18	cum	1909.87
2	Filling and spreading local sand over brick bats as per drawing and technical specification Clause 305.3.9	3	10.00	3.90	0.10	11.70			
		2	16.00	4.10	0.10	13.12			
		1	0.00	0.00	0.10	0.00			
		Total					24.82	cum	479.27
TOTAL									537452.00


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ANALYSIS FOR CARRIAGE OF MATERIAL

(A) Name of the Work :- Restoration/Mottrable of Road from Dharahara khurd to Dusad tola

(B) Haulage Charge By 8 T Capacity Truck

- (i) For Surface Road :- Rs. 7.52 Per t per K.M
(ii) For Unsurface Toad :- Rs. 9.04 Per t per K.M
(iii) For Kutcha Road :- Rs. 18.19 Per t per K.M

1 CARRIAGE COST OF BAMBOO 62 MM TO 75 MM OF 6 To 8 M LONG

Lead as per Quarry Chart :- 5 P + 5 K

$$\text{Haulage Cost} = \frac{8}{3.00} \times [(7.52 \times 5.00) + (18.19 \times 5.00)] = 206.09$$

Loading & Unloading =

$$\begin{aligned} &= \frac{2224.00}{2430.09} \\ \text{Total per \% Nos} &= 2430.09 \\ \text{Total per m} &= 3.47 \end{aligned}$$

2 CARRIAGE COST OF STONE BOULDER

Lead as per Quarry Chart :- 180 P + 0 K

$$\text{Haulage Cost} = \frac{8}{4.80} \times [(7.52 \times 180.00) + (18.19 \times 0.00)] = 2256.00$$

Loading & Unloading =

$$\begin{aligned} &= 196.13 \\ \therefore \text{Total per M}^3 &= 2452.13 \end{aligned}$$

3 CARRIAGE COST OF GSB Material

Lead as per Quarry Chart :- 180 P + 0 K

$$\text{Haulage Cost} = \frac{8}{4.99} \times [(7.52 \times 180.00) + (18.19 \times 0.00)] = 2170.10$$

Loading & Unloading =

$$\begin{aligned} &= 196.13 \\ \text{Total per M}^3 &= 2366.23 \end{aligned}$$

4 CARRIAGE COST OF HUME PIPE (1000 MM DIA)

Lead as per Quarry Chart :- 55 P + 0 K

$$\text{Haulage Cost} = \frac{8}{22.5} \times [(7.52 \times 55.00) + (18.19 \times 0.00)] = 330.88$$

Loading & Unloading =

$$\begin{aligned} &= 76.58 \\ \text{Total per M} &= 407.46 \end{aligned}$$

5 CARRIAGE COST OF HUME PIPE (600 MM DIA)

Lead as per Quarry Chart :- 55 P + 0 K

$$\text{Haulage Cost} = \frac{8}{52.50} \times [(7.52 \times 55.00) + (18.19 \times 0.00)] = 63.02$$

Loading & Unloading =

$$\begin{aligned} &= 32.82 \\ \text{Total per M} &= 95.84 \end{aligned}$$

(C) Haulage Charge By 3.60 t Tractor capacity

- (i) For Surface Road :- Rs. 18.70 Per t per K.M
(ii) For Unsurface Road :- Rs. 23.30 Per t per K.M
(iii) For Kutcha Road :- Rs. 29.20 Per t per K.M

1 CARRIAGE COST OF BRICK BAT

Lead as per Quarry Chart :- 7 P + 1 K

$$\text{Haulage Cost} = \frac{3.60}{2.25} \times [(18.70 \times 7.00) + (29.20 \times 1.00)] = 256.16$$

Unloading = = 65.38

Total per 1000 Nos. = 321.54

2 CARRIAGE COST OF LOCAL SAND

Lead as per Quarry Chart :- 2 P + 1 K

$$\text{Haulage Cost} = \frac{3.60}{2.25} \times [(18.70 \times 2.00) + (29.20 \times 1.00)] = 106.56$$

Unloading = = 40.81

Total per M³ = 147.37

3 CARRIAGE COST OF STEEL

Lead as per Quarry Chart :- 5 P + 0 K

$$\text{Haulage Cost} = \frac{3.60}{3.60} \times [(18.70 \times 5.00) + (29.20 \times 0.00)] = 93.50$$

Loading & Unloading = = 325.46

Total per Mt = 418.96


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SUMMARY OF CARRIAGE COST OF MATERIAL

Name of work :-

Restoration/Motrabale of Road from Dharahara khurd to Dusad tola

S.I No.	Name of material	Unit	Source	Mode of Transport	Carriage Charge by Road	Total Carriage up to site
1	2	3	4	5	7	8
1	Bricks Bats	per m ³	Local Kiln	By Road	321.54	321.54
2	Fine sand	per m ³	Local source	By Road	147.37	147.37
3	Steel	per mt	Local	By Road	418.96	418.96
4	Boulder	per m ³	Sheikhpura	By Road	2452.13	2452.13
5	Stone metal <50 mm	per m ³	Sheikhpura	By Road	2366.23	2366.23
6	Hume pipe (1000 mm dia)	Per metre	Hajipur	By Road	407.46	407.46
7	Hume pipe (600 mm dia)	Per metre	Hajipur	By Road	95.84	95.84
8	Bamboo of 62 to 75 mm dia	Per metre	Local	By Road	3.47	3.47

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FDR Analysis

Sr. No.	Description	Unit	Quantity	Rate (Rs.)	Amount (Rs.)
1.1	Loading and Unloading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by Manual Means				
	(i) Loading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by manual means including a lead upto 30 m				
	Unit = cum				
	Taking output = 5.5 cum				
	a) Labour				
	Mate	day	0.02	305.00	6.10
	Mazdoor (Unskilled)	day	0.50	287.00	143.50
	b) Machinery				
	Truck	hour	0.50	934.30	467.15
	c) Overheads on (a+b)	=@ 6%			37.01
	d) Contractor's profit on (a+b+c)	=@ 10%			65.38
	Cost for 5.5 cum = a+b+c+d				719.13
	Rate per cum = (a+b+c+d)/5.5				130.75
	(ii) Loading of Earth, Sand, Moorum, Manure, Flyash by manual means including a lead upto 30 m				
	Unit = cum				
	Taking output = 5.5 cum				
	a) Labour				
	Mate	day	0.01	305.00	3.05
	Mazdoor (Unskilled)	day	0.25	287.00	71.75
	b) Machinery				
	Truck	hour	0.25	934.30	233.58
	c) Overheads on (a+b)	=@ 6%			18.50
	d) Contractor's profit on (a+b+c)	=@ 10%			32.69
	Cost for 5.5 cum = a+b+c+d				359.57
	Rate per cum = (a+b+c+d)/5.5				65.38
	(iii) Unloading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by manual means including a lead upto 30 m				
	Unit = cum				
	Taking output = 5.5 cum				
	a) Labour				
	Mate	day	0.01	305.00	3.05
	Mazdoor (Unskilled)	day	0.25	287.00	71.75
	b) Machinery				
	Truck	hour	0.25	934.30	233.58
	c) Overheads on (a+b)	=@ 6%			18.50
	d) Contractor's profit on (a+b+c)	=@ 10%			32.69
	Cost for 5.5 cum = a+b+c+d				359.57
	Rate per cum = (a+b+c+d)/5.5				65.38

(iv) Unloading of Earth, Sand, Moorum, Manure, Flyash by manual means including a lead upto 30 m

Unit = cum

Taking output = 5.5 cum

a) Labour

Mate	day	0.005	305.00	1.53
Mazdoor (Unskilled)	day	0.125	287.00	35.88

b) Machinery

Truck	hour	0.166	934.30	155.09
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c) Overheads on (a+b) =@ 6% 11.55

d) Contractor's profit on (a+b+c) =@ 10% 20.40

Cost for 5.5 cum = a+b+c+d 224.45

Rate per cum = (a+b+c+d)/5.5 40.81

1.3 Loading, Unloading and Stacking of Bricks by Manual Means

(i) Loading of Bricks by manual means including a lead upto 30 m

Unit = 1000 Nos.

Taking output = 2000 Nos.

a) Labour

Mate	day	0.01	305.00	3.05
Mazdoor (Unskilled)	day	0.25	287.00	71.75

b) Machinery

Truck	hour	0.33	934.30	308.32
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c) Overheads on (a+b) =@ 6% 22.99

d) Contractor's profit on (a+b+c) =@ 10% 40.61

Cost for 2000 Nos. = a+b+c+d 446.72

Rate for 1000 bricks = (a+b+c+d)/2 223.36

(ii) Unloading and Stacking of Bricks by manual means including a lead upto 30 m

Unit = 1000 Nos.

Taking output = 2000 Nos.

a) Labour

Mate	day	0.01	305.00	3.05
Mazdoor (Unskilled)	day	0.25	287.00	71.75

b) Machinery

Truck	hour	0.33	934.30	308.32
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c) Overheads on (a+b) =@ 6% 22.99

d) Contractor's profit on (a+b+c) =@ 10% 40.61

Cost for 2000 Nos. = a+b+c+d 446.72

Rate for 1000 bricks = (a+b+c+d)/2 223.36

1.5 Loading and Unloading of Structural Steel and Steel Bars by manual means

(i) Loading of Structural Steel, Steel Bars by manual means including a lead upto 30 m

Unit = t

Taking output = 10 t

a) Labour

Mate	day	0.07	305.00	21.35
Mazdoor (Unskilled)	day	1.80	287.00	516.60

b) Machinery

Truck	hour	1.00	934.30	934.30
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c) Overheads on (a+b) =@ 6% 88.34

d) Contractor's profit on (a+b+c) =@ 10% 156.06

BASIC RATES
(A) Labour As per Notification dtd.- 06.05.20

Sl. No.	Description of Labour	Unit	Rate (Rs.)
L-01	Bhisti	day	287.00
L-02	Bitumen Sprayer	day	302.00
L-03	Blacksmith	day	345.00
L-04	Blaster	day	477.00
L-05	Carpenter 1st Class	day	388.00
L-06	Carpenter 2nd Class	day	345.00
L-06	Chips spreader	day	345.00
L-07	Chiseller	day	364.00
L-08	Dresser (Skilled)	day	364.00
L-09	Driller	day	345.00
L-10	Electrician	day	367.00
L-11	Fitter	day	395.00
L-12	Mason (1st class)	day	388.00
L-13	Mason (2nd Class)	day	345.00
L-14	Mate	day	305.00
L-15	Mazdoor (Unskilled)	day	287.00
L-16	Mazdoor (Semi skilled)	day	299.00
L-17	Mazdoor (Skilled)	day	364.00
L-18	Painter (1st class)	day	367.00
L-19	Plumber	day	367.00
L-20	Surveyor	day	349.00
L-21	White Washer	day	365.00

BASIC RATES
(B) USAGE RATES OF PLANT & MACHINERY (Dated 25.03.20)

Sr. No.	Description of		Output of Machine		Usage Rates in Rs.	
	Machine	Activity	Unit	Output	Unit	Rate
PM-001	Air Compressor 210 cfm	Supplying compressed air	cfm	210.00	per hour	483.70
PM-002	Batch mix HMP 40-60 TPH	BM, DBM, SDBC, PM	t/h	50.00	per hour	23,729.00
PM-003	Batch type HMP 30/40 TPH	BM, DBM, SDBC, PM	t/h	35.00	per hour	14,237.40
PM-004	Bitumen boiler oil fired	Heating of bitumen				
	200 litre		litre / h	400.00	per hour	299.70
	1000 litre		litre / h	2000.00	per hour	299.70
PM-005	Bitumen emulsion pressure distributor	Applying bitumen tack coat	sqm/h	1750.00	per hour	1,622.20
PM-006	Concrete mixer 0.28/0.4 cum	Mixing of ingredients	cum/h	2.50	per hour	86.30
PM-007	Crane upto 8T	Lifting of materials			per hour	1,289.30
PM-008	Dozer D 50	Dozing cutting	cum/h	200.00	per hour	3,337.90
			cum/h	100.00		3,337.90
PM-009	Electric generator set, 125 KVA	Electricity generation	KVA	100.00	per hour	2,724.00
PM-010	Emulsion Sprayer with Tractor	Spraying of Emulsion			per hour	1,209.90
PM-011	Front end-loader 1 cum bucket capacity @ 45 cum/hour	Loading Aggregates	cum/h	45.00	per hour	1,403.00
		Loading Soil	cum/h	100.00		1,403.00
PM-012	Hydraulic broom with tractor	Surface cleaning	sqm/h	1250.00	per hour	572.00
PM-013	Hydraulic Excavator 0.9 cum	Excavation	cum/h	100.00	per hour	1,969.20
PM-014	Hydraulic self propelled chip spreader	Surface Dressing	sqm/h	1500.00	per hour	3,986.60
PM-015	Jack Hammer with tractor	Pavement breaking & rock drilling	cum/h	05. to 1	per hour	161.16
PM-016	Joint Cutting Machine with 2-3 blades	Cutting of Joints	h		per hour	352.00
PM-017	Mixall 6-10 t capacity	Mixing of bituminous materials	t/h	8.00	per hour	1,547.50
PM-018	Motor Grader	Scarifier & levelling	cum/h	200.00	per hour	2,786.00
				50.00		Input Rate
PM-019	Needle vibrator	Vibrating cement concrete mix	cum/h	3.50	per hour	76.35
PM-020	Paver finisher	Laying/spreading	t/h	75.00	per hour	1,417.00

PM-021	Plate compactor	Compaction	cum/h		per hour	469.70
PM-022	Plate vibrator	Compaction	cum/h		per hour	250.00
PM-023	Screed vibrator	Compaction	cum/h		per hour	102.64
PM-024	Smooth wheeled 80-100 kN tandem roller	Compaction of Sub-base/ Asphalt	cum/h	30.00	per hour	1,731.80
PM-025	Stone crusher (Integrated) of 200 TPH	Crushing of Spalls	t/h	200.00	per hour	27,581.30
PM-026	Three wheel 80-100 kN Static Roller	Compaction/ Rolling			per hour	803.00
		Earth:- Embankment or sub-grade	cum/h	80/70		803.00
		Sub-base G-I	cum/h	10.00		803.00
		Sub-base G-II/G-III	cum/h	8.00		803.00
		WMM	cum/h	16.00		803.00
		BUSG	cum/h	10.00		803.00
		BM 50/75 mm	cum/h	12.00		803.00
		Premix 20 mm	sqm/h	250.00		803.00
		Seal Coat	sqm/h	500.00		803.00
		Surface Dressing 1st Coat	sqm/h	400.00		803.00
		Surface Dressing 2nd Coat	sqm/h	500.00		803.00
PM-027	Tipper 5.5 cum/10 t	Carriage	cum/trip	5.50	per hour	1,043.00
PM-028	Tractor with Disc Harrows	Pulverisation of soil	cum/h	80.00	per hour	591.40
PM-029	Tractor with ripper @ 60 cum per hour	Ripping Pavements, uprooting trees	cum/h	60.00	per hour	591.40
PM-030	Tractor with trolley	Transportation of materials	t/trip	3 to 5	per hour	542.00
PM-031	Tractor with Rotavator	Scarifier	cum/h	25.00	per hour	573.20
PM-032	Truck 10 t capacity	Carriage	cum/trip	5.50	per hour	934.30
PM-033	Vibratory roller 80-100 kN	Compaction of soil WMM	cum/h	100.00	per hour	2,069.00
		Compaction of BM	cum/h	60.00		2,029.00
PM-034	Water tanker 6 kl capacity (Truck Mounted)	Carriage of water	litre / h	12000.00	per hour	184.00
PM-035	Wet mix plant (Pug Mill)	Wet Mix	cum/h	25.00	per hour	1,822.30

BASIC RATES

(C) Material (vide SOR RCD Dtd- 16.04.20 and WRD dtd -15.07.19)

Sl. No.	Description	Unit	Basic Rate (Rs.)	Royalty included in col. 4 (Rs.)	Final Rate with all taxes (Rs.)
1	2	3	4	5	6
1	Annealed wire 20 to 25 SWG	kg	62.92	0.00	62.92
2	Bamboo of 62 mm to 75 mm dia (6 to 8 m long)	M	20.21	0.00	20.21
3	B.A wire 8 to 10 SWG	kg	62.92	0.00	62.92
4	Brick bat	cum	1,063.00	18.00	1,063.00
5	Empty Bitumen Drum	nos	127.80	0.00	127.80
6	Empty Cement Bag	nos	2.92	0.00	2.92
7	Nylon Crate	nos	39.85	0.00	39.85
8	RCC Pipe NP3 (1000 mm dia)	m	2,744.50	0.00	2,744.50
9	RCC Pipe NP3 (600 mm dia)	m	2,058.38	0.00	2,058.38
10	River bed materials Grade-III	cum	210.35	75.00	210.35
11	Sand bag (Cost of sand + Empty Cement Bag)	nos	8.46	2.59	8.46
12	Sand (Coarse)	cum	175.80	75.00	175.80
13	Sutali	kg	19.75	0.00	19.75
14	Sand (Fine)	cum	141.85	75.00	141.85
15	Water	kl	40.00	0.00	40.00
16	75 mm to 100 mm long Nail	kg	55.84	0.00	55.84
17	150 mm long Nail	kg	55.84	0.00	55.84