



ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

主 史

PLAN HEAD FDR(2245)
(2020-2021)



**MOTARABLE OF ROAD FROM MITHEPUR/MEENAPUR SE
KOTHEA.**

DISTRICT	:-	Saran	
DIVISION	:-	Chapra-1	
BLOCK	:-	Garkha	
TOTAL LENGTH OF ROAD	:-	8.740	KM
TOTAL COST OF CONSTRUCTION	:-	17.746	Lac
TOTAL COST OF PROJECT	:-	17.746	Lac

Inspection Report for flood Damage Work

Date :-

1- Name of PIUs :- R.W.D., (W) Division, Chapra - 1

2- Name of Block/Road :- GARKHA/mithapur/menapur se kothra, L=8.74 km

A. FOR RAOD

1- Damage Location/Chainage :- 1st to 3rd and 6 to 7 nth km

2- Damage Length :- 354.00 m.

3- Nature of Damage :- breaches and slides

4- Details of Restoration :-

i- Material being used in Restoration

:- Brick bats, Sand, rubbish.

ii- Equipment/Tools being used in Restoration Works

:- J.C.B., Tractor, Roller

iii- Procedure taken up in Restoration Works

:- On damage portion ab road
brick bats laying with rubbish

iv- Restored Length

:- And here pipe laying also.

354.00 m.

B. FOR BRIDGE

1- Damage Location/Chainage :- 7 nth km

2- Damage Length :- 50 m. H.P.C.

3- Nature of Damage :- breaches

4- Details of Restoration :-

i- Material being used in Restoration

Heavy pipe - (1000 mm dia)

ii- Equipment/Tools being used in Restoration Works

:-

iii- Procedure taken up in Restoration Works

:-

iv- Restored Length

:-

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16/10/2020
Garkha

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16/10/2020
A.E

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16/10/2020
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(Name of Inspector)

EE

FDR(2020-2021)

प्रतिवेदन

पथ का नाम:- Mithepur/Meenapur Se Kothea.
पथ की लम्बाई:- 8.740 KM.
प्राक्कलित राशि:- 1774572 रु
प्रखंड:-गरखा
जिला:-सारण

प्रस्तुत प्राक्कलन ग्रामीण कार्य विभाग कार्य प्रमंडल छपरा-1 के अंतर्गत के बाढ़ से क्षतिग्रस्त पथों के मोटेरेबुल कार्य प्राक्कलन विभाग के निर्देशानुसार तैयार किया गया है।

विदित है कि माह जूलाई एवं सितम्बर 2020 में गंडक नदी के बांध के टूटने एवं अतिवृष्टि के कारण आयी बाढ़ के कारण निर्मित/निर्माणाधीन पथों में काफी क्षति हुई है। पानी के तेज बहाव के कारण पथों में हुई कटाव से आवागमन प्रभावित हुआ है साथ ही दिनांक 3.11.2020 को बिहार विधान सभा का चुनाव निर्धारित है। बूथों तक वाहन का आवागमन आवश्यक है जिस कारण से चुनाव कार्य एवं लोगो की कठिनाईयो को देखते हुए तथा उच्चाधिकारी के निर्देशानुसार पथों को तत्काल मोटेरेबुल करने का निर्देश दिया गया है ताकि सभी बूथों पर वाहन का आवागमन सुनिश्चित हो सके।

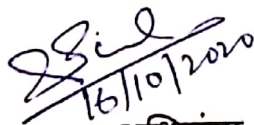
उपरोक्त आलोक में क्षतिग्रस्त पथों में तत्काल Brick Bats से भरकर वाहन का आवागमन चालू किया गया है।

इस प्रकार प्राक्कलन में Brick Bats भरने के साथ आवश्यक मदो का प्रावधान किया गया है।

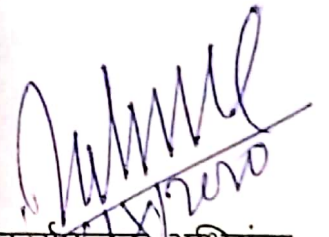
प्राक्कलन वर्तमान अन्सूचित दर पर तैयार कर आवश्यक कारवाई हेतु समर्पित किया जाता है।



कनीय अभियंता
कार्य अवर प्रमंडल गरखा



सहायक अभियंता
कार्य अवर प्रमंडल गरखा



कार्यपालक अभियंता
कार्य प्रमंडल छपरा-1

FDR

GENERAL ABSTRACT OF COST

Block:- Garkha

District:- Saran

Length of Road:- 8.740 KM

Name of Road:- Motarable of Road From Mithepur/Meenapur Se Kothea.

SL. No.	Item of Work	Amount
A	TOTAL COST	: 17.746 Lacs
	TOTAL	: 17.746 Lacs

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16/10/2020
Junior Engineer

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16/10/2020
Asstt. Engineer

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16/10/2020
Executive Engineer

T/A. for Rs. 17 746/- Lakhs.
(Repos. Sewerage Lakhs Seventy four
thousand. Six hundred) only.

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08/01/21
TECHNICAL ADVISER
RURAL WORKS DEPTT.
WORKS CIRCLE, CHAPRA

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Superintending Engineer
Rural (Works) Deptt.
Works Circle, Chapra

GENERAL ABSTRACT OF COST FOR FDR OF ROAD

NAME OF ROAD :

Motable of Road From Mithepur/Meenapur Se Kothra.

DISTRICT

Saran

BLCK

Garkha

DIVISION

Chapra-1

LENGTH OF ROAD (in Km)

8.740

Sl. No.	DESCRIPTION	Amount	1 % Labour Cess	12 % GST	GROSS AMOUNT (LAKHS)
1	EARTHWORK & BRICK BATS &	15.001	0.150	1.800	16.951
	HUME PIPE	0.704	0.007	0.084	0.795
TOTAL COST OF PROJECT IN LACS =		15.704	0.157	1.885	17.746

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Name Of Road :-			Motarable of Road From Mithepur/Meenapur Se Kotha.				Ellock :-		Garkha	DISTRICT:-		Satan	LENGTH :-	8.740 KM.
Sl. No.	SDB SL. NO	MORD Ref.No	Description	Unit	NOS	LENGTH	WIDTH	HEIGHT	QUANTITY	RATE	AMOUNT (in Rs.)			
1	8.1.3.2 (iii)		BRICK BATS Providing brick bats including spreading laying Labour for dry graded jhama khoa folter under Brick Pitching or boulder pitching in slope or apron including light ramming etc. All complete job as per approved design specification and directional E/L including carriage cost of bricks.											
			Quantity As Per Annexure	Cum					785.425					
2	9.30 (ii)	1100	Providing and Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Row (1000 MM DIA) Providing and Laying RCC NP3 Hume Pipe						785.43	1.909.87	15,00,060.00			
			7th KM.	RM	20.00				20.000	3,517.90	70,358.00			
										TOTAL COST IN RS. =	15,70,418.00			

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ANNEXTURE-1

Name Of Road :- Motarable of Road From Mithepur/Meenapur Se Kothea.

Block:- Garkha

SL No.	Description	Nos.	LENGTH (m)	WIDTH (m)	HEIGHT (m)	UNIT	QUANTITY
1	1st Km.	1	2.00	4.00	0.50	CUM	4.00 m3
2	"	1	5.00	5.00	0.50	CUM	12.50 m3
3	"	1	2.00	2.00	0.40	CUM	1.60 m3
4	"	3	6.00	3.00	0.50	CUM	27.00 m3
5	2nd Km.	1	7.00	2.50	0.40	CUM	7.00 m3
6	"	1	4.00	5.00	0.40	CUM	8.00 m3
7	"	2	25.00	2.50	0.30	CUM	37.50 m3
8	"	1	30.00	5.00	0.60	CUM	90.00 m3
9	"	1	12.00	5.00	0.75	CUM	45.00 m3
10	3rd Km.	2	4.00	2.00	0.50	CUM	8.00 m3
11	"	1	3.00	3.50	0.60	CUM	6.30 m3
12	"	2	15.00	2.00	0.50	CUM	30.00 m3
13	"	3	6.00	2.50	0.40	CUM	18.00 m3
14	"	2	8.00	5.00	0.50	CUM	40.00 m3
15	"	1	2.50	3.50	0.40	CUM	3.50 m3
16	"	1	12.00	5.00	0.40	CUM	24.00 m3
17	"	3	2.50	2.00	0.30	CUM	4.50 m3
18	6th Km.	1	9.00	3.00	0.90	CUM	24.30 m3
19	"	4	8.00	2.50	0.50	CUM	40.00 m3
20	"	1	20.00	3.75	0.80	CUM	60.00 m3
21	"	1	12.00	3.00	0.90	CUM	32.40 m3
22	"	1	9.00	3.00	0.60	CUM	16.20 m3
23	7th Km.	1	15.00	5.00	0.75	CUM	56.25 m3
24	"	1	25.00	4.75	1.50	CUM	178.13 m3
25	"	1	5.00	3.75	0.60	CUM	11.25 m3
TOTAL QUANTITY =							785.43 m3

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Analysis of Rates (FORMAT F8)

SDB SL No.	MORD Ref No.	DESCRIPTION	Unit	Quantity	Rate	Amount In Rs
		BRICK BATS				
WRD		Providing, Laying and Spreading Brick Bats In Road ditches sll complete as per approved design specification and direction of E/L.				
5.7.40		Unit = cum Taking Output = 1 cum				
	a)	Labour	day	0.04	305.00	12.20
		Mate	day	1.00	287.00	287.00
		Unskilled				
	b)	Materials				
		Brick Bats	Cum	1.00	1063.00	1063.00
	c)	Over Heads @ 6 % on (a+b)				81.73
		C. Profit @ 10 % on (a+b+c)				144.39
	d)	Rate Per cum=(a+b+c+d)/2.832	cum			1588.33
	e)	Carriage				
		Brick bats	day	1.000	321.54	321.54
		Rate per cum with carriage				1909.87
		FINISHED RATE	CUM			1909.87

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ANALYSIS FOR CARRIAGE OF MATERIALS

(C) Haulage Charge By 3.60 t Tractor capacity

- | | |
|----------------------------|-------------------------|
| (i) For Surface Road :- | Rs. 18.70 Per t per K.M |
| (ii) For Unsurface Toad :- | 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

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

$$\text{Unloading} = \quad \quad \quad = \quad \quad \quad 65.38$$

$$\text{Total per 1000 Nos.} = \quad \quad \quad 321.54$$

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Analysis for Carriage by Road & Rail

Name of Road:-- Motarable of Road From Mithepur/Meenapur Se Kothea.

District:- Saran

Block :- Garakha

Sl No	Item with Source	Unit	Source Up to	Pukka / Surface	Carriage Cost & Lead in Km	Katcha	Loading & Unloading Cost	Carriage Cost by Rail Head	Total	Min Total
4	Hume Pipe (1000 mm)	m	Hazipur	$\frac{8.00}{10.00} \times 7.52$	$\times 65.00 \text{ Km} = \text{Rs } 391.04$	$\frac{8.00}{10.00} \times 18.19$	76.58			Rs. 467.62

Cost of Haulage Excluding Loading & Unloading as per SOR

• Subjected to Verification of Lead

Type of Road	Per Ton. Km by Tipper	Per Ton. Km by Truck
For Surface Road	8.40	7.52
Unsurface Gravel Road	10.10	9.04
Kachha Road	20.30	18.19

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**BASIC RATES
(A) Labour**

Sl. No.	Description of Labour	Unit	Rate (Rs.)
L-01	Bhisti	day	287.00
L-02	Bitumen Sprayer	day	302.00
L-03	Head Blacksmith	day	388.00
L-04	Blaster	day	477.00
L-05	Carpenter 1st Class	day	388.00
L-06	Chips spreader	day	345.00
L-07	Chiseller	day	364.00
L-08	Dresser (Skilled)	day	367.00
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	364.00
L-19	Plumber	day	364.00
L-20	Surveyor	day	349.00
L-21	White Washer	day	364.00

(Basic Rates taken from SOR, 15th edition, Road Construction Department, Govt of Bihar effective from 16/04/2020) Revised (Basic Rates taken from SOR, 15th edition, Road Construction Department, Govt of Bihar effective from 11/05/2020) & 21/07/2020

BASIC RATES (B) Material

Sl. No.	SOR Code	Description	Unit	Basic Rate	Add Royalty	Final Basic rate
			m	40.63		40.63
M-001	M-056	AC pipe 100 mm	cum	431.99	150.00	581.99
M-002	M-032	Aggregate - For 37.5 mm Maximum size - 22.4 mm to 5.6 mm	cum	382.52	150.00	532.52
M-003	M-034	Aggregate - For 37.5 mm Maximum size - 45 mm to 22.5 mm	cum	101.35	150.00	251.35
M-004	M-030	Aggregate - For 37.5 mm Maximum size - Below 5.6 mm	cum	431.99	150.00	581.99
M-005	M-032	Aggregate - For 53 mm Maximum size - 22.5 mm to 5.6 mm	cum	330.64	150.00	480.64
M-006	M-038	Aggregate - For 53 mm Maximum size - 63 mm to 45 mm	cum	101.35	150.00	251.35
M-007	M-030	Aggregate - For 53 mm Maximum size - Below 5.6 mm	cum	432.80	150.00	582.80
M-008	M-040	Aggregate - Grading I (40 mm nominal Size) 10 mm - 5 mm	cum	517.20	150.00	667.20
M-009	M-046	Aggregate - Grading I (40 mm nominal Size) 25 mm - 10 mm	cum	382.52	150.00	532.52
M-010	M-049	Aggregate - Grading I (40 mm nominal Size) 37.25 mm - 25 mm	cum	101.35	150.00	251.35
M-011	M-030	Aggregate - Grading I (40 mm nominal Size) 5 mm and below	cum	432.80	150.00	582.80
M-012	M-040	Aggregate - Grading II (19 mm nominal Size) 10 mm - 5 mm	cum	517.20	150.00	667.20
M-013	M-046	Aggregate - Grading II (19 mm nominal Size) 25 mm - 10 mm	cum	101.35	150.00	251.35
M-014	M-030	Aggregate - Grading II (19 mm nominal Size) 5 mm and below	cum	518.80	150.00	668.80
M-015	M-051	Aggregate 10 mm	cum	454.91	150.00	604.91
M-016	M-053	Aggregate 20 mm	cum	344.15	150.00	494.15
M-017	M-055	Aggregate 40 mm	cum	76.97	83.00	159.97
M-018	M-007	Aggregate- Crushable type such as moorum or Gravel for Grading I	cum	76.97	83.00	159.97
M-019	M-007	Aggregate- Crushable type such as moorum or Gravel for Grading II	cum	76.97	83.00	159.97
M-020	M-007	Aggregate- Crushable type such as moorum or Gravel for Grading III	cum	298.91	150.00	448.91
M-021	M-039	Aggregate-Grading I 90 mm to 45 mm	cum	330.64	150.00	480.64
M-022	M-038	Aggregate-Grading II 63 mm to 45 mm	cum	361.44	150.00	511.44
M-023	M-036	Aggregate-Grading III 53 mm to 22.4 mm	cum	431.99	150.00	581.99
M-024	M-031	Aggregates 22.4 mm to 2.36 mm for wet mix macadam	cum	382.52	150.00	532.52
M-025	M-034	Aggregates 45 mm to 22.4 mm for wet mix macadam	cum			

Sl. No.	SOR Code	Description	Unit	Basic Rate	Add Royalty	Final Basic rate
M-026	M-059	Aluminium sheeting (1.5 mm thick)	sqm	7,738.53		7,738.53
M-027	M-062	Aluminium Studs 100 mm x 100 mm fitted with lense reflectors	Nos.	168.52		168.52
M-028		Bamboo (1st Class) 85 mm - 100 mm dia, 2.0 m long	No.	15.00		15.00
M-029		Bamboo (1st Class) 85 mm - 100 mm dia, 2.5 m long	No.	20.00		20.00
M-029		Bamboo (1st Class) 85 mm - 100 mm dia, 3.0 m long	No.	20.00		20.00
M-030		Bamboo (1st Class) 85 mm - 100 mm dia, 4.5 m - 5.5 m long	No.	50.00		50.00
M-029		Bamboo (2nd Class) 75mm dia, 1.8 m - 2.5 m long	No.	15.00		15.00
M-030		Bamboo (2nd Class) 75mm dia, 2.1 m - 3.0 m long	No.	20.00		20.00
M-031	M-063	Barbed wire	kg	59.01		59.01
M-032	M-007	Binding Material (Moorum)	cum	76.97	83.00	159.97
M-033	M-072	Binding wire	kg	60.03		60.03
M-034	M-078	Bitumen (Crumb Rubber Modified)	tonne	39,962.50		39,962.50
M-035		Bitumen (Natural Rubber Modified)	tonne	41,271.30		41,271.30
M-036		Bitumen (Polymer Modified)	tonne			-
M-037	M-074	Bitumen (S-65)(Muzaffarpur)(Excluding the Cost of Empty Drum @Rs.778.18/-Per MT)	t	31,696.82		31,696.82
M-038	M-075	Bitumen (S-90)(Muzaffarpur)(Excluding the Cost of Empty Drum @Rs.778.18/-Per MT)	t	30,896.82		30,896.82
M-039	M-077	Bitumen Emulsion (RS-1) (Muzaffarpur)(Excluding the Cost of Empty Drum @Rs.778.18/-Per MT)	t	36,567.82		36,567.82
M-040	M-077	Bitumen Emulsion (SS-1) (Muzaffarpur)(Excluding the Cost of Empty Drum @Rs.778.18/-Per MT)	t	38,388.82		38,388.82
M-041	M-120	Bituminous sealant	litre	24.05		24.05
M-042	M-148	Randum Rubble Stone	kg	288.84		288.84
M-043		Blasting material	kg	781.83		781.83
M-044	M-182	Bond stone (400 mm x 150 mm x 150 mm)	No.	10.48		10.48
M-045	M-079	Brick 1st Class	No.	5.001		5.00
M-046		Cement (OPC - 43 Grade) (Darbhanga) Excluding the Cost of Empty Bag @Rs.3.60/-Per Bag	t	5,146.00		5,146.00
M-047	M-090	Cement Primer	litre	111.48		111.48
M-048		Chlorprene Elastomer or Closed Cell Foam Sealing Element	m			-

Sl. No.	SOR Code	Description	Unit	Basic Rate	Add Royalty	Final Basic rate
M-049	M-163	Compensation for earth taken from private land (Including royalty @ Rs. 22.0 per cum & compensation @ Rs. 1.71 per cum)	cum	1.81	33.00	34.81
M-050	M-084	Compressible Fibre Board	sqm	1,014.12		1,014.12
M-051	M-086	Copper plate	kg	728.10		728.10
M-052		Corbelling Stones (300 mm x 150 mm x 150 mm)	No.			-
M-053	M-087	Corrosion Resistant Structural Steel Grating	kg	44.79		44.79
M-054	M-089	Credit for excavated rock found suitable for use	cum	171.48		171.48
M-055		Crow bars 40 mm dia (hire charges)	hour	5.00		5.00
M-056	M-021	Crushed Sand or Grit Passing 2.36 mm and retained on 180 micron	cum	89.10	30.00	119.10
M-057		Crushed Slag	cum	775.57		775.57
M-058	M-026	Crushed Stone Aggregate 26.5 mm to 75 micron	cum	403.36	150.00	553.36
M-059	M-052	Crushed Stone chipping 13.2 mm nominal size	cum	547.55	150.00	697.55
M-060	M-050	Crushed Stone Chipping 6.7 mm size 100% passing 11.2 mm and retained on 2.36 mm	cum	311.52	150.00	461.52
M-061	M-050	Crushed Stone Chipping 6.7 mm size 100% passing 9.5 mm and retained on 2.36 mm	cum	311.52	150.00	461.52
M-062	M-051	Crushed Stone chipping 9.5 mm nominal size	cum	518.80	150.00	668.80
M-063	M-035	Crushed Stone Coarse Aggregate Passing 53 mm and retained on 2.8 mm	cum	374.27	150.00	524.27
M-064	M-009	Curing compound	litre	122.56		122.56
M-065		Debonding strips	m	45.00		45.00
M-066		Edge Stone (450 mm x 350 mm x 100 mm)	No.			-
M-067		Edge Stone (450 mm x 350 mm x 200 mm)	No.			-
M-068		Elastomeric bearing assembly	Nos.	27,040.49		27,040.49
M-069	M-094	Electric Detonator	each	5.75		5.75
M-070	M-095	Epoxy Paint	litre	568.30		568.30
M-071	M-097	Epoxy Primer	litre	116.35		116.35
M-072	M-167	Farmyard manure	cum	757.57		757.57
M-073		Fevicol adhesive	kg	125.00		125.00

FORM F8

SL No.	SOR Code	Description	Unit	Basic Rate	Add Royalty	Final Basic rate
M-074	M-012	Filter media	cum	362.06	150.00	512.06
M-075	M-021	Fine aggregate/Crushed sand 2.36 mm to 75 micron	cum	119.10		119.10
M-076		Galvanised angle	kg	43.62		43.62
M-077		Galvanised angle Section 100 mm x 100 mm of 12 mm thickness	kg	43.62		43.62
M-078	M-104	Gelatine 80 per cent	kg	806.85		806.85
M-079	M-056	GI Pipe 100 mm dia	m	266.67		266.67
M-080	M-056	GI Pipe 50 mm dia	m	138.89		138.89
M-081	M-102	GI wires	kg	60.03		60.03
M-082		Graded stone aggregate	cum	311.52	150.00	461.52
M-083	M-003	Granular material (Natural occurring, soil gravel mixture / quarry waste, kankar, laterite, dhandla	cum	205.68	150.00	355.68
M-084	M-055	Hand Broken Metal 40 mm size	cum	344.15	150.00	494.15
M-085		Indigo	kg	416.00		416.00
M-086		Interlocking Blocks with 60 mm thickness	sqm			-
M-087		Interlocking Blocks with 80 mm thickness	sqm			-
M-088	M-141	Joint filler board	sqm	957.49		957.49
M-089	M-121	Jute netting, open weave 25 mm square opening	sqm	34.20		34.20
M-090	M-121	Jute rope 12 mm dia	m	39.82		39.82
M-091	M-031	Key Aggregates passing 22.4 mm and retained on 2.8 mm	cum	431.99	150.00	581.99
M-092	M-188	Lime	t	3,615.82		3,615.82
M-093	M-188	Lime putty	t	3,615.82		3,615.82
M-094	M-094	Local Wood Piles (1st Class) 150-200 mm dia, 6m long	No.	525.75		525.75
M-095		Local Wood Piles (1st Class) 100 mm x 75 mm	cum	42,224.54		42,224.54
M-096	M-002	Loose stone	cum	205.68	150.00	355.68
M-097	M-101	MS clamps	Nos.	34.68		34.68
M-098	M-179	MS Flat / Structural Steel	t	38,649.00		38,649.00
M-099		MS Sheet Tube (47 mm x 47 mm x 12 SWG Sheet)	kg	43.62		43.62

Sl. No.	SOR Code	Description	Unit	Basic Rate	Add Royalty	Final Basic rate
			sqm	416.00		416.00
M-100		MS Sheet 1.5 mm thick	sqm	832.00		832.00
M-101		MS Sheet 2 mm thick	t	61,740.00		61,740.00
M-102	M-130	Nuts, Bolts and Rivets	litre	226.28		226.28
M-103	M-131	Paint (Synthetic Enamel)	litre	156.84		156.84
M-104	M-180	Plasticizer	sqm	14.68		14.68
M-105	M-138	Polythene sheet (125 micron)	Nos.	14.68		14.68
M-106	M-138	Polythene Sheething	cum	205.68	150.00	355.68
M-107	M-002	Quarried Stone 150-200 mm size	m	3,921.34		3,921.34
M-108	M-150	RCC Pipe NP3 (1200 mm dia)	m	2,758.22		2,758.22
M-109	M-149	RCC Pipe NP3 (1000 mm dia)	m	2,037.52		2,037.52
M-110		RCC Pipe NP3 (750 mm dia)	m	2,058.38		2,058.38
M-111		RCC Pipe NP3 (600 mm dia)	m			-
M-112		RCC Pipe NP3 (500 mm dia)	m	505.12		505.12
		RCC Pipe NP3 (300 mm dia)	m	3,921.34		3,921.34
M-113	M-150	RCC Pipe NP4 (1200 mm dia)	m	2,758.22		2,758.22
M-114	M-149	RCC Pipe NP4 (1000 mm dia)	m			-
M-115		RCC Pipe NP4 (750 mm dia)	m	2,058.38		2,058.38
M-116		RCC Pipe NP4 (600 mm dia)	m	502.61		502.61
M-117		RCC Pipe NP4 (300 mm dia)	litre	226.49		226.49
M-118		Red-oxide Primer	litre	226.28		226.28
M-119	M-132	Road marking paint	cum	100.80	75.00	175.80
M-120	M-005	Sand (Coarse)	cum	66.85	75.00	141.85
M-121	M-006	Sand (Fine)	kg	34.47		34.47
M-122	M-162	Seeds	m	223.45		223.45
M-123	M-175	Steel Pipe 50 mm dia	t	38,750.00		38,750.00
M-124		Steel Reinforcement (HYSD Bars) 12 mm				

SL No.	SOR Code	Description	Unit	Basic Rate	Add Royalty	Final Basic rate
M-125		Steel Reinforcement (MS Round Bars) 6 mm	t	39,271.43		39,271.43
M-126		Steel Reinforcement (TMT Bars) 8 mm	t	38,750.00		38,750.00
M-127	M-001	Stone Boulder of size 150 mm and below	cum	205.68	150.00	355.68
M-128	M-052	Stone Chips 12 mm size	cum	547.55	150.00	697.55
M-129	M-043	Stone Chips 13.2 mm to 5.6 mm	cum	518.80	150.00	668.80
M-130	M-041	Stone Crushed Aggregate 11.2 mm to 0.09 mm	cum	247.73	150.00	397.73
M-131		Stone for Coarse Rubble Masonry 1st Sort	cum			-
M-132		Stone for Coarse Rubble Masonry 2nd Sort	cum			-
M-133	M-148	Stone for Random Rubble Masonry	cum	190.55	150.00	340.55
M-134		Stone for Stone Set Pavement (300 mm x 200 mm x 150 mm)	No.			-
M-135	M-042	Stone Screening - Type A 13.2 mm for Grading-1	cum	373.37	150.00	523.37
M-136	M-042	Stone Screening - Type A 13.2 mm for Grading-2	cum	373.37	150.00	523.37
M-137	M-041	Stone Screening - Type B 11.2 mm for Grading-2	cum	247.73	150.00	397.73
M-138	M-041	Stone Screening - Type B 11.2 mm for Grading-3	cum	247.73	150.00	397.73
M-139	M-001	Stone spall	cum	205.68	150.00	355.68
M-140		Traffic cones	No.			-
M-141	M-189	Water	kl	40.00		40.00
M-142	M-020	Well graded Granular Base Material - Grading A 2.36 mm below	cum	86.71	150.00	236.71
M-143	M-026	Well graded Granular Base Material - Grading A 26.5 mm to 4.75 mm	cum	403.36	150.00	553.36
M-144	M-029	Well graded Granular Base Material - Grading A 53 mm to 26.5 mm	cum	361.44	150.00	511.44
M-145	M-020	Well graded Granular Base Material - Grading B 2.36 mm below	cum	86.71	150.00	236.71
M-146	M-026	Well graded Granular Base Material - Grading B 26.5 mm to 4.75 mm	cum	403.36	150.00	553.36
M-147	M-020	Well graded Granular Base Material - Grading C 2.36 mm below	cum	86.71	150.00	236.71
M-148	M-016	Well graded Granular Base Material - Grading C 9.5 mm to 4.75 mm	cum	432.80	150.00	582.80
M-149	M-020	Well Graded Material for Sub-Base - Grading I 2.36 mm below	cum	86.71	150.00	236.71
M-150	M-013	Well Graded Material for Sub-Base - Grading I 53 mm to 9.5 mm	cum	470.62	150.00	620.62

Sl. No.	SOR Code	Description	Unit	Basic Rate	Add Royalty	Final Basic rate
M-151	M-017	Well Graded Material for Sub-Base - Grading I 9.5 mm to 2.36 mm	cum	364.58	150.00	514.58
M-152	M-020	Well Graded Material for Sub-Base - Grading II 2.36 mm below	cum	86.71	150.00	236.71
M-153	M-027	Well Graded Material for Sub-Base - Grading II 26.5 mm to 9.5 mm	cum	507.85	150.00	657.85
M-154	M-017	Well Graded Material for Sub-Base - Grading II 9.5 mm to 2.36 mm	cum	364.58	150.00	514.58
M-155	M-020	Well Graded Material for Sub-Base - Grading III 2.36 mm below	cum	86.71	150.00	236.71
M-156	M-018	Well Graded Material for Sub-Base - Grading III 4.75 mm to 2.36 mm	cum	101.35	150.00	251.35
M-157	M-016	Well Graded Material for Sub-Base - Grading III 9.5 mm to 4.75 mm	cum	432.80	150.00	582.80
M-158		Wooden sleepers (250 mm x 250 mm x 125 mm) (hire charges)	No.	5.00		5.00
RCD						
M-118	M-118	Hot applied thermoplastic compound (Sp. Gravity - 2.10)	litre	188.53		188.53
M-152	M-152	Reflectorising glass beads	kg	64.78		64.78
M-146	M-146	Stone crushed aggregates 13.2 mm to 0.09 mm	cum			
		Slow-curing bitumen emulsion	kg	115.16		115.16
M-146	M-146	Sapling 2 m high 25 mm dia	each	22.99		22.99
M-146	M-146	Pesticide	Kg	78.17		78.17
M-146	M-091	Delineators from ISI certified firm as per the standard drawing given in IRC - 79	each	776.17		776.17

BASIC RATES
(C) USAGE RATES OF PLANT & MACHINERY

Sr. No.	SOR Code	Description of		Output of Machine		Usage Rates in Rs.	
		Machine	Activity	Unit	Output	Unit	Rate
PM-001	P&M-001	Air Compressor 210 cfm	Supplying compressed air	cfm	210.00	per hour	483.70
PM-002	P&M-024	HMP 30-40 TPH	BM, DBM, SDBC, PM	Cum/h	17.00	per hour	23,729.00
PM-003	P&M-002	Batch mix Plant 30 cum capacity	Concrete mixing	Cum/h	20.00	per hour	2,981.00
PM-004	P&M-005	Bitumen boiler oil fired	Bitumen Spraying				
		20		litre / h	400.00	per hour	299.70
		100		litre / h	2000.00	per hour	299.70
PM-005	P&M-004	Bitumen pressure distributor	Applying bitumen tack coat	sqm/h	1750.00	per hour	1,209.90
PM-006	P&M-009	Concrete mixer 0.28/0.4 cum	Mixing of ingredients	cum/h	2.50	per hour	86.30
PM-007	P&M-012	Crane upto 3.5T	Lifting of materials			per hour	1,289.30
PM-008	P&M-015	Dozer D 50	Dozing/cutting/ Clearing	cum/h	200.00	per hour	3,337.90
				cum/h	100.00		3,337.90
PM-009	P&M-018	Electric generator set, 125 KVA	Electricity generation	KVA	100.00	per hour	2,724.00
PM-010	P&M-016	Emulsion Sprayer with Tractor	Spraying of Emulsion			per hour	1,209.90
PM-011	P&M-017	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	P&M-031	Hydraulic broom with tractor	Surface cleaning	sqm/h	1250.00	per hour	572.00
PM-013	P&M-026	Hydraulic Excavator 0.9 cum	Excavation	cum/h	100.00	per hour	1,969.20
PM-014	P&M-025	Hydraulic self propelled chip spreader	Surface Dressing	sqm/h	1500.00	per hour	3,986.60
PM-015	P&M-084	Jack Hammer with tractor	Pavement breaking & rock drilling	cum/h	05. to 1	per hour	939.30
PM-016	P&M-083	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	3,601.00
PM-018	P&M-032	Motor Grader	Scarifier & levelling	cum/h	200.00	per hour	2,786.00
	P&M-054	Tractor Mounted Grader			50.00		591.40
PM-019		Needle vibrator	Vibrating cement concrete mix	cum/h	3.50	per hour	76.35
PM-020	P&M-035	Paver finisher	Laying/spreading	t/h	75.00	per hour	1,417.00
PM-021	P&M-086	Plate compactor	Compaction	cum/h		per hour	469.70
PM-022	P&M-086	Plate vibrator	Compaction	cum/h		per hour	469.70
PM-023		Screed vibrator	Compaction	cum/h		per hour	102.65
PM-024	P&M-044	Smooth wheeled 80-100 kN tandem roller	Compaction of Sub-base/ Asphalt	cum/h	30.00	per hour	803.00
PM-025	P&M-028	Stone crusher (Integrated) of 200 TPH	Crushing of Spalls	t/h	200.00	per hour	27,581.30

Sr. No.	SOR Code	Description of		Output of Machine		Usage Rates in Rs.	
		Machine	Activity	Unit	Output	Unit	Rate
PM-026	P&M-044	Three wheel 80-100 kN Static Roller	Compaction/ Rolling				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	P&M-048	Tipper 5.5 cum/10 t	Carriage	cum/trip	5.50	per hour	1,043.00
PM-028	P&M-053	Tractor with Disc Harrows	Pulverisation of soil	cum/h	80.00	per hour	549.10
PM-029	P&M-055	Tractor with ripper @ 60 cum per hour	Ripping Pavements, uprooting trees	cum/h	60.00	per hour	591.40
PM-030	P&M-053	Tractor with trolley/with Grading equipment	Transportation of materials	t/trip	3 to 5	per hour	549.10
PM-031	P&M-054	Tractor with Rotavator	Scarifier	cum/h	25.00	per hour	573.20
PM-032	P&M-057	Truck 10 t capacity	Carriage	cum/trip	5.50	per hour	934.30
PM-033	P&M-059	Vibratory roller 80-100 kN	Compaction of soil	cum/h	100.00	per hour	2,069.00
			Compaction of BM	cum/h	60.00		2,069.00
PM-034	P&M-060	Water tanker 6 kl capacity (Truck Mounted)	Carriage of water	litre / h	12000.00	per hour	184.00
PM-035	P&M-062	Wet mix plant (Pug Mill)	Wet Mix	cum/h	25.00	per hour	1,822.30
RCD							
P&M-036	P&M-043	Road marking machine	Road marking	Sqm/h	100.00	per hour	141.80
P&M-037	P&M-022	Hot Mix Plant - 100 TPH	DBM/BM/SDBC/Premix	Cum/h	30.00	per hour	39,088.00
P&M-038	P&M-034	Sensor Paver Finisher	Paving of DBM/BM/SDBC/Premix	Cum/h	40.00	per hour	3,505.00
P&M-039	P&M-081	250 KVA Generator Set	Generation of Electric Energy	KVA	200.00	per hour	3,691.00
P&M-040	P&M-047	Tipper 5 Cum	Transportation of Soil, GSB, WMM, Hotmix etc.	Capacity in Cum	5.50	Tonne.Km	8.80
P&M-040	P&M-045	Tandem Road Roller	Rolling of Asfalt Surface	Cum/h	30.00	per hour	1,722.00

Analysis of Rates (FORMAT F8)

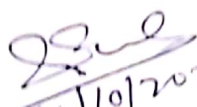
SL No.	SDS SL No.	MORD Ref No.	DESCRIPTION	Unit	Quantity	Rate	Amount in Rs
Haulage BY TRUCK							
4	1.10	(i)	Haulage excluding Loading & Unloading Haulage of materials by tipper excluding cost of loading, unloading and stacking. Unit = t.km Taking output 10 t load and lead 10 km = 100 t.km Case-I : Surfaced Road Speed with load: 25 km per hour Speed while returning empty: 35 km per hour				
		a)	Machinery Truck 10 t capacity	hour	0.40	934.30	373.72
			Haulage with load	hour	0.29	934.30	270.95
			Empty return trip				38.68
		b)	Overheads @ 6% on (a)				68.33
		c)	Contractor's profit @ 10% on (a+b)				751.68
			Cost for 100 t-km = a+b+c				7.52
			Rate per cum = (a+b+c) /100				7.52
			Rate Per Km.	Cum			
5	1.10	(ii)	Haulage excluding Loading & Unloading Haulage of materials by tipper excluding cost of loading, unloading and stacking. Unit = t.km Taking output 10 t load and lead 10 km = 100 t.km Case-II: Unsurfaced Gravel Road. Speed with load: 20 km/hour Speed for empty return trip: 30 km/hour				
		a)	Machinery Truck 10 t capacity	hour	0.50	934.30	467.15
			Haulage with load	hour	0.33	934.30	308.32
			Empty return trip				46.53
		b)	Overheads @ 6% on (a)				82.20
		c)	Contractor's profit @ 10% on (a+b)				904.20
			Cost for 100 t-km = a+b+c				9.04
			Rate per cum = (a+b+c) /100				9.04
			Rate Per Km.	Cum			
6	1.10	(iii)	Haulage excluding Loading & Unloading Haulage of materials by tipper excluding cost of loading, unloading and stacking. Unit = t.km Taking output 10 t load and lead 10 km = 100 t.km Case-III : Katcha Track and Track in River Bed/Nallah Bed and Choe Bed. Speed with load: 10 km per hour Speed while returning empty: 15 km per hour				
		a)	Machinery Truck 10 t capacity	hour	1.00	934.30	934.30
			Haulage with load	hour	0.67	934.30	625.98
			Empty return trip				93.62
		b)	Overheads @ 6% on (a)				165.39
		c)	Contractor's profit @ 10% on (a+b)				1819.29
			Cost for 100 t-km = a+b+c				18.19
			Rate per cum = (a+b+c) /100				18.19
			Rate Per Km.	Cum			

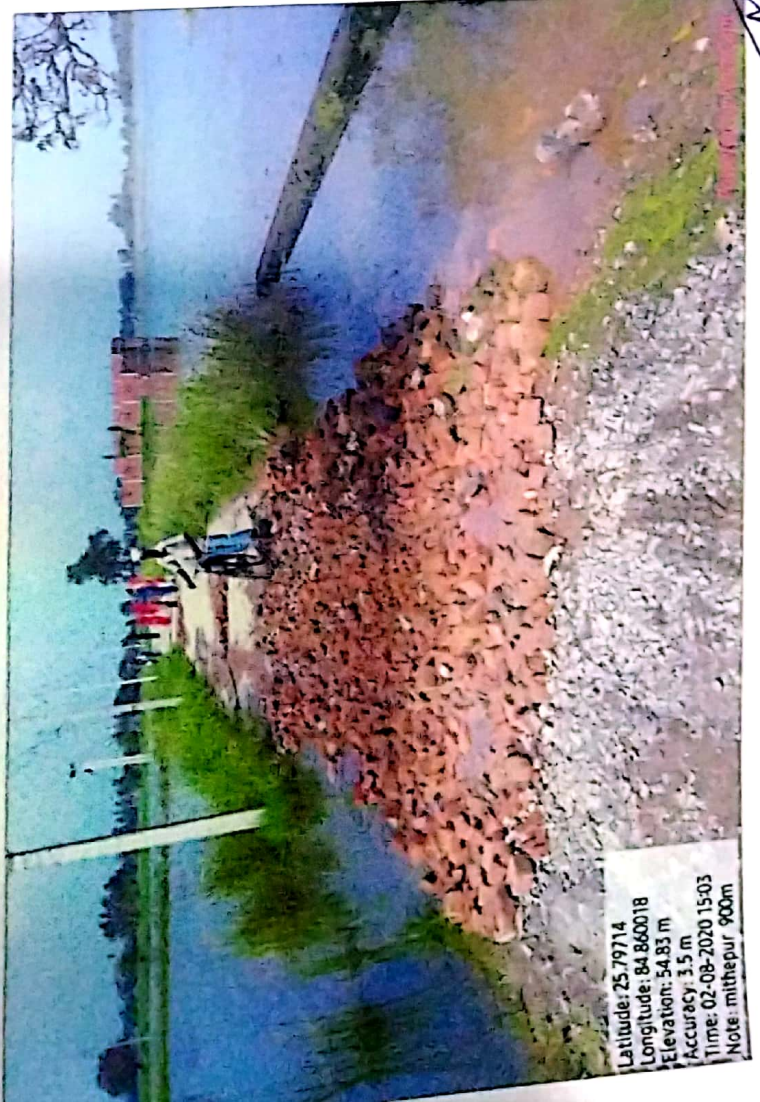
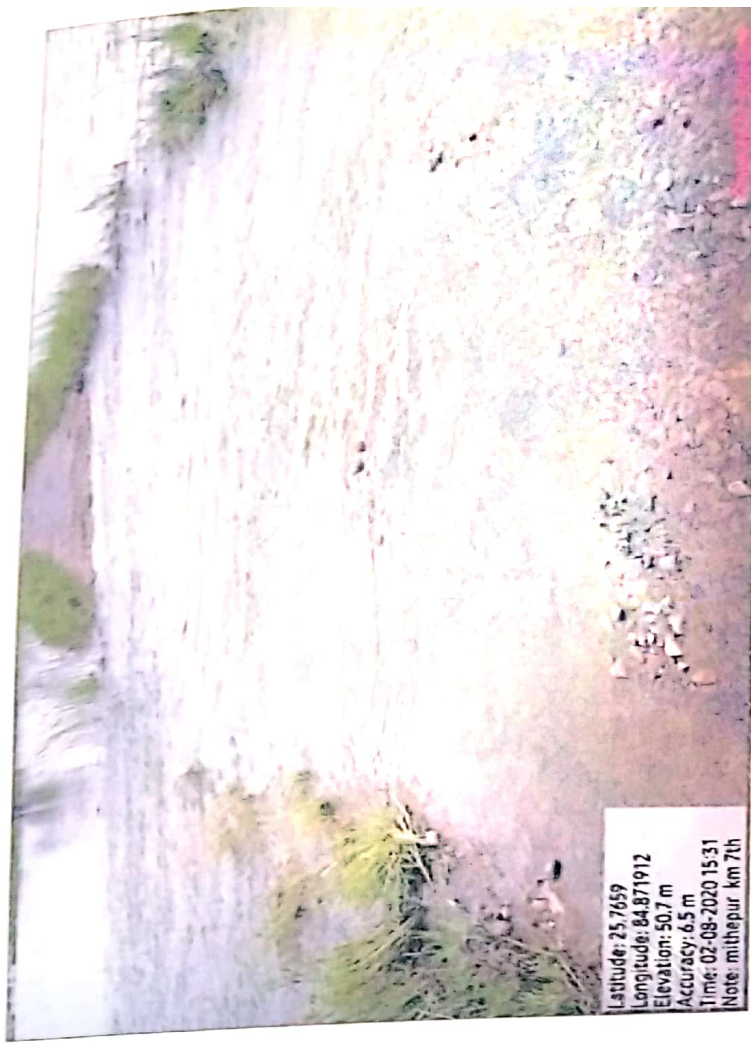
Analysis of Rates (FORMAT F8)

SL No.	SDB SL No.	MORD Ref No.	DESCRIPTION	Unit	Quantity	Rate	Amount
Total Loding & Unloading of Brick Per 1000 = 223.36 + 223.36 =							446.72
22	19		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	day	0.02	305.00	6.10
			Mate	day	0.50	287.00	143.50
			Mazdoor (Unskilled)				
		b)	Machinery	hour	0.33	934.30	308.30
			Truck	hour	0.33	1289.30	425.47
			Crane				
		c)	Overheads @ 6 % on (a+b)				53.00
		d)	Contractor's profit @ 10% on (a+b+c)				93.64
			Cost for 9 pipes = a+b+c+d				1030.03
			Rate per pipe = (a+b+c+d)/9				114.45
			Total Cost	per p			114.45
23		C.	600/450 mm dia Hume pipe				
			Unit = per pipe				
			Taking output = 21 pipe				
		a)	Labour	day	0.02	305.00	6.10
			Mate	day	0.50	287.00	143.50
			Mazdoor (Unskilled)				
		b)	Machinery	hour	0.33	934.30	308.30
			Truck	hour	0.33	1289.30	425.47
			Crane				
		c)	Overheads @ 6 % on (a+b)				53.00
		d)	Contractor's profit @ 10% on (a+b+c)				93.64
			Cost for 21 pipes = a+b+c+d				1030.03
			Rate per pipe = (a+b+c+d)/21				49.05
			Total Cost	per p			49.05
24		(ii)	Unloading of RCC Hume pipe by mechanical means including a lead				
		A.	1000/1200 mm dia RCC Hume pipes				
			Unit = per pipe				
			Taking output = 9 pipes				
		a)	Labour	day	0.02	305.00	6.10
			Mate	day	0.50	287.00	143.50
			Mazdoor (Unskilled)				
		b)	Machinery	hour	0.20	934.30	186.86
			Truck	hour	0.20	1289.30	257.86
			Crane				
		c)	Overheads @ 6 % on (a+b)				35.66
		d)	Contractor's profit @ 10% on (a+b+c)				63.00
			Cost for 9 pipes = a+b+c+d				692.98
			Rate per pipe = (a+b+c+d)/9				77.00
			Total Cost	per p			77.00
Total Loding & Unloading of RCC Hume Pipe per Pipe = 114.45 + 77 =							191.45
Total Loding & Unloading of RCC Hume Pipe per Pipe = 191.45 / 2.50 =							76.58
25		C.	600/450 mm dia Hume pipe				
			Unit = per pipe				
			Taking output = 21 pipes				
		a)	Labour	day	0.02	305.00	6.10
			Mate	day	0.50	287.00	143.50
			Mazdoor (Unskilled)				
		b)	Machinery	hour	0.20	934.30	186.86
			Truck	hour	0.20	1289.30	257.86
			Crane				
		c)	Overheads @ 6 % on (a+b)				35.66
		d)	Contractor's profit @ 10% on (a+b+c)				63.00
			Cost for 21 pipes = a+b+c+d				692.98
			Rate per pipe = (a+b+c+d)/21				33.00
			Total Cost	per p			33.00
Total Loding & Unloading of RCC Hume Pipe per Pipe = 49.05 + 33 =							82.05
Total Loding & Unloading of RCC Hume Pipe per Pipe = 82.05 / 2.50 =							32.82
			Total Cost	CUM			190.57

Analysis of Rates (FORMAT F8)

SL No.	SDB SL No.	MORD Ref No.	DESCRIPTION	Unit	Quantity	Rate	Amount in Rs
29 (II)	9.30	1100	Providing and Laying Reinforced Cement Concrete Pipe NP 4 as per design in Single Row Providing and laying reinforced cement concrete pipe NP 4 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.				
		B. 1000 MM DIA					
		Unit =m					
		Taking output =7.5 m					
		(3 pipes of 2.5 m length each)					
		a) Material					
		i) Sand at site	cum	0.04	159.46	6.38	
		ii) Cement at site	ton	0.03	5543.74	166.31	
		iii) RCC pipe NP 4 pipe including collar at site	m	7.50	2758.22	20686.65	
		b) Labour					
		Mate	day	0.09	305.00	27.45	
		Mason (1st class)	day	0.25	388.00	97.00	
		Mazdoor (Unskilled)	day	2.00	287.00	574.00	
		c)Overheads @6 % on (a+b)				1293.47	
		d)Contractor's profit @ 10% on (a+b+c)				2285.13	
		Cost for 7.5m = (a+b+c+d)				22851.26	
		Rate per m =(a+b+c+d)/7.5				3046.83	
		Carriage cost:-					
		Sand at site	cum	0.01	347.31	1.85	
		Cement at site	ton	0.00	397.74	1.59	
		RCC pipe NP 4 concrete pipe including collar at site	m	1.00	467.62	467.62	
		Rate per cum including Carriage				3517.90	
		Total Cost	m				3517.90


 16/10/2020
 A.E





Latitude: 25.75458
Longitude: 84.879706
Accuracy: 2745.0 m
Time: 2 : 1 ~ 2020 12:15
Note: Mithepur to kotya 1



Latitude: 25.765142
Longitude: 84.872063
Elevation: 77.55 m
Accuracy: 4.9 m
Time: 2 : 1 ~ 2020 12:16
Note: Mithepur to kotya 1

25.765142
84.872063
77.55
4.9
2020 12:16
Mithepur to kotya 1



Latitude: 25.765155
Longitude: 84.87201
Elevation: 75.45 m
Accuracy: 4.9 m
Time: 2 : 1 ~ 2020 12:17
Note: Mithepur to kotya 1



Latitude: 25.765155
Longitude: 84.87201
Elevation: 75.45 m
Accuracy: 4.9 m
Time: 2 : 1 ~ 2020 12:16
Note: Mithepur to kotya 1