



ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

BIHAR RURAL ROADS PROJECT

Bihar Rural Development Agency (BRRDA)

Head :- F.D.R.

YEAR (2021-22)

STATE
DISTRICT
BLOCK
DIVISION

BIHAR
MADHEPURA
CHAUSA
UDAKISHANGANJ

DETAILED ESTIMAE FOR TEMPORARY RESTORATION OF ROAD
FROM CONSTRUCTION OF HL BRIDGE OVER BARIYARI DHAR
SAPNI FULAUT PANDAH PATH

Flood affected Length of Road	=	0.075 Km
TOTAL COST OF PAVEMENT	Rs	7,41,311.07
TOTAL PROJECT COST	Rs	7,41,311.07

Submitted By:
Executive Engineer
RWD (W) Division, Udakishanganj

Prepared By:
Executive Engineer
RWD (W) Division, Udakishanganj

SUMMARY OF COST ESTIMATE FOR THE PROJECT

NAME OF ROAD :- DETAILED ESTIMAE FOR TEMPORARY RESTORATION
OF ROAD FROM CONSTRUCTION OF HL BRIDGE OVER
BARIYARI DHAR SAPNI FULAUT PANDAHAI PATH

DIVISION :- UDAKISHANGANJ

BLOCK :- CHAUSA

Actual Length of Road :- 4.050 Km

Flood Affected Length of Road :- 0.075 Km

Sr. No.	Description	Amount (In Rs.)
1	Total Cost of Restoration=	6,44,420.11
2	Add:-Labour Cess @1% amt. =	6,444.20
3	Add:GST@12% on amt. =	77,330.41
4	Add:S.F.@ 10% on Material (Brick Bats) =	13,116.35
TOTAL RESTORATION COST OF THE PROJECT IN LACS		7,41,311.07


22/11/24

Junior Engineer

RWD (W) Division, Udakishanganj


22/11/2024

Assistant Engineer

RWD (W) Division, Udakishanganj


22/11/24

Executive Engineer

RWD (W) Division, Udakishanganj

Index of Road

NAME OF ROAD :- DETAILED ESTIMAE FOR TEMPRORY RESTORATION OF
ROAD FROM CONSTRUCTION OF HL BRIDGE OVER
BARIYARI DHAR SAPNI FULAUT PANDAHU PATH

DISTRICT :- MADHEPURA

BLOCK :- CHAUSA

Head :- F.D.R.

Year :- 2021-22

Actual Length of Road :- 4.050 Km

Flood Affected Length of Road :- 0.075 Km

TOTAL COST OF PAVEMENT :- ₹ 7,41,311.07

Sr. No.	Description	Page No.
1	Prativedan	
2	MIS Report	
3	Executive Engineer's Report	
4	Summary of Road	
5	Estimate of Road	
6	Carriage of Road	
7	Basic Rate of Labour, Material & Machinery	
8	Analysis of Rate	
9	Photographs of Pre & Post Cuttings /Ditches	

Inspection Report for Flood Damage work

Date:-

- 1 Name of PIUS :- E.R. Ram Ratan Reim (EE RWD WORKS DIV - UDAKISHUNCANT)
- 2 Name of Block :- CHAUSA.
- 3 Name of Road :- H.L. Bridge over Banigan Dhar Sapari Fulaur
Pantahi Path.

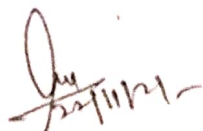
A. For Road

— NA.

- 1 Damage Location/Chainage :-
- 2 Damage Length :-
- 3 Nature of damage :-
- 4 Details of Restoration Works :-
- i Material being used in Restoration works:-
- ii Equipments/Tools being used in Restoration works :-
- iii Procedure taken up in Restoration works :-
- iv Restored Length :-

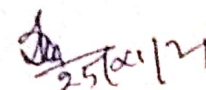
. For Bridge

- 1 Damage Location/Chainage :-
- 2 Damage Length :- 0.075 Km.
- 3 Nature of damage :- Bridge approach, Divergence
- 4 Details of Restoration Works :- Sand Filling, NSB, 14.P. NP-3.
- i Material being used in Restoration works:-
- ii Equipments/Tools being used in Restoration works :- JCB, Tractor.
- iii Procedure taken up in Restoration works :-
- iv Restored Length :- 0.075 Km.


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Signature
(Name of Inspector)

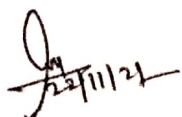
Schedule of Quantity

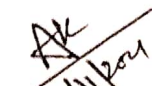
NAME OF ROAD :- FROM CONSTRUCTION OF HL BRIDGE OVER BARIYARI DHAR
SAPNI FULAUT PANDAHAI PATH

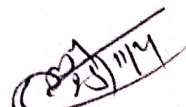
BLOCK :-

CHAUSA

S.No	SOR NO	DESCRIPTION OF ITEMS	QTY	UNIT	RATE	AMOUNT
1	12.3	Sand Filling in Foundation Trenches as per Drawing & Technical Specification.	854.27	Cum	582.71	497793.68
2	A/R	Providing & laying Brick Bat....				
		Providing and laying of Brick bat obtained from chimney with machanical means with all spreading, grading to required slope and compacted at OMC to acheive required density with all complete as per the direction of engineer in charge.	0.00	Cum	1922.87	0.00
3	5.7.7	Labour for cutting 62mm to 75 mm dia bamboo piles to size and making shoes and driving etc. complete job as per specification and direction of E/I	0.00	m	45.86	0.00
4	5.7.8	Labour for fitting and fixing Split bamboo woven chachari in position with 20 swg G.I wire or 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	0.00	sqm	78.20	0.00
5	5.7.9	Labour for fitting and fixing 75 mm dia bamboo runners in position at every vertical pole with 150 mm long nails or 38 swg G.I. wire including cost of G.I wire or nails complete job as per specification and direction of E/I	0.00	m	5.31	0.00
6		Supply of Bamboo at site.	0.00	nos.	188.39	0.00
7	5.7.40.1	Labour filling empty cement bags with loocal sand, stitching the bags and placing including supply of sutli and EC bag etc. all complete as per approved desing, specification and direction of E/I	0.00	nos.	37.05	0.00
8	401	Construction of granular sub-base by providing well graded material, spreading in uniform layers with tractor mounted grader arrangement 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.	21.00	Cum	3128.33	65695.03
9	9.3	Providing and Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Roww(1000mm Dia).	20.00	m	4046.57	80931.40
		Total			Rs.	644420.11


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Details of Measurement

कार्य का ब्यौरा Deatall of Workl		संख्या No.	Measurement				मात्रा Quantity
			लम्बाई in m.	चोड़ाई In m.		In m.	
NAME OF ROAD :-		DETAILED ESTIMAE FOR TEMPORARY RESTORATION OF ROAD FROM CONSTRUCTION OF HL BRIDGE OVER BARIYARI DHAR SAPNI FULAUT PANDAH PATH					
Item No. 1	Sand Filling in ditch & breach portion of road as per Drawing & Technical Specification.						
		2	20	(7+4)/2	5.5	1.50	330.000
		1	35	(8.5+4)/2	6.25	2.50	546.875
							876.875
	Less For Pipe	8	22/7x(0.6)2x2.5		(-)		22.608
			Total (in Cum)				854.267
Item No. 2 :	Laying Brick Bat....						
	CH:-in 1400mt.	1	0	2.50		2.00	0.000
	CH:-in 2320mt.	1	0	3.50		0.85	0.000
	CH:-in 2790mt.	1	0	2.50		1.10	0.000
	CH:-in 2790mt.	1	0	1.50		1.00	0.000
			0				0.000
	Less For Pipe	0	22/7x(0.6)2x2.5		(-)		0.000
			Total (in Cum)				0.000
Item No. 3	Labour for cutting 62mm to 75 mm dia bamboo piles to size and making shoes and driving etc. complete job as per specification and direction of E/I						
		1	0			7	0.000
		1	0			7	0.000
	For Bamboo pilling 1.25m						
							Total (in m)
							0.000
Item No. 4	Labour for fitting and fixing Split bamboo woven chachari in position with 20 swg G.I wire or 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						
	Size 6m*2m, Ch.----- km	1	0	2			0.00
	For Chachary 01 no. Bamboo=1.413 sqm	1	0	2			0.00
							Total (in sqm)
							0.00
Item No. 5	Labour for fitting and fixing 75 mm dia bamboo runners in position at every vertical pole with 150 mm long nails or 38 swg G.I. wire including cost of G.I wire or nails complete job as per specification and direction of E/I						
		1	0				0.00
		1	0				0.00
							Total (in m)
							0.00
Item No. 6	Supply of Bamboo at site.						
							Total (in m)
							0.00
							Total (in nos.)
							0.00
							0.00
Item No. 7	Labour filling empty cement bags with loocal sand, stitching the bags and placing including supply of sutli and EC bag etc. all complete as per approved desing, specification and direction of E/I						
		1	0	0.75		1.5	0.00
		1	0	0.75		1.25	0.00
		1	0	0.75		1.5	0.00
							Total (in Cum)
							0.00
	0.034m3=1 nos.						0.00
							Total (in nos.)
							0.00
Item No. 8	Construction of granular sub-base by providing well graded material, spreading in uniform layers with tractor mounted grader arrangement 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.						
		1	40	3.5		0.150	21.00
							Total (Cum)
							21.00
Item No. 9	Providing and Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Row(1000mm Dia).						
	Ch.0.00km	4	2	2.5			20.00
							Total (in m)
							20.00

Calculation of Seigniorage Fees

NAME OF ROAD :- BRIDGE OVER BARIYARI DHAR SAPNI FULAUT PANDAH PATH
BLOCK :- CHAUSA

DETAILED ESTIMAE FOR TEMPORARY RESTORATION OF ROAD FROM CONSTRUCTION OF HL

S.No	SOR NO	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1/1	12.3	Sand Filling in Foundation Trenches as per Drawing & Technical Specification.				
		Sand	854.27	Cum	141.85	121177.77
2/2	A/R	Providing & laying Brick Bat....				
		Providing and laying of Brick bat obtained from chimney with machanical means with all spreading, grading to required slope and compacted at OMC to acheive required density with all complete as per the direction of engineer in charge.				
		Brick Bats	0.00	Cum	1032.00	0.00
3/7	5.7.40.1	Labour filling empty cement bags with loocal sand, stitching the bags and placing including supply of sutli and EC bag etc. all complete as per approved desing, specification and direction of E/I				
		Sand	0.00	Cum	141.85	0.00
4/9	5.7.40.2	Labour for filling empty cement bags with loocal sand, stitching the bags and placing in Nylon crate of size (1 m x 1 m x 1 m) with lead of 150 M including supply of sutli etc. at site in dry portion all complete as per approved design, specification and direction of E/I				
		Sand	0.00	Cum	141.85	0.00
5/10	401	Construction of granular sub-base by providing well graded material, spreading in uniform layers with tractor mounted grader arrangement 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.				
		For Grading I Material (with Coarse Sand Screening)				
		Unit = Cum				
		Taking output = 300 cum				
		Coarse graded granular sub-base material as per Table 400.2				
		53 mm to 9.5mm @ 50 percent	180.00	Cum	516.42	92955.60
		9.5 mm to 2.36 mm @ 20 percent	72.00	Cum	411.33	29615.76
		2.36 mm below @ 30 percent (coarse Sand Screening)	108.00	Cum	185.94	20081.52
						142652.88
		Cost for 300 cum = a		Cum		475.51
		Rate psr Cum = (a)/300	21.00	Cum	475.51	9985.70
						9985.70
		GSB Gr-I			TOTAL	131163.48
					Say	13116.35
		Seigniorage Fees @10% of Basic Amount				

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Analysis for Carriage by Road & Rail

District:-

MADHEPURA

Block :- BIHARIGANJ

Sl No	Item with Source	Unit	Source Up to	Carriage Cost & Lead in Km		Loading & Unloading Cost	Carriage Cost by Rail Head	Total *
				Pucka / Surface	Katcha			
1	Stone Metal Gr-I & Gr-II	Cum	Sheikhpura	8.00 4.59 x 8.20 x 35.00 Km = Rs 500.22	8.00 4.59 x 19.80 x 0.00 Km = Rs 0.00	89.90	1243.54	Rs. 1833.66
2	Stone Metal Gr-III / GSB	Cum	Sheikhpura	8.00 4.99 x 8.20 x 35.00 Km = Rs 460.12	8.00 4.99 x 19.80 x 0.00 Km = Rs 0.00	89.90	1166.59	Rs. 1716.61
3	Stone Aggregate / Chips	Cum	Mirzachowki	8.00 4.99 x 8.20 x 35.00 Km = Rs 460.12	8.00 4.99 x 19.80 x 0.00 Km = Rs 0.00	89.90	1166.59	Rs. 1716.61
4	Stone Aggregate / Chips	Cum	Mirzachowki	8.00 4.99 x 8.20 x 35.00 Km = Rs 460.12	8.00 4.99 x 19.80 x 0.00 Km = Rs 0.00	89.90	1248.39	Rs. 1798.41
4	Stone Boulder	Cum	Sheikhpura	8.00 4.80 x 8.20 x 35.00 Km = Rs 478.33	8.00 4.80 x 19.80 x 0.00 Km = Rs 0.00	89.90	1201.54	Rs. 1769.77
5	Coarse Sand	Cum	Jagdishpur	8.00 4.99 x 7.47 x 225.00 Km = Rs 2694.59	8.00 4.99 x 18.09 x 0.00 Km = Rs 0.00	104.88		Rs. 2799.47
6	Binding Material/Moorum	Cum	Sheikhpura	8.00 6.00 x 7.47 x 35.00 Km = Rs 348.60	8.00 6.00 x 19.80 x 0.00 Km = Rs 0.00	104.88		Rs. 453.48
7	Local Sand	Cum	Local	8.00 4.99 x 7.47 x 2.00 Km = Rs 23.95	8.00 4.99 x 17.82 x 1.00 Km = Rs 28.57	104.88		Rs. 157.40
8	Brick	1000 Nos	Local	8.00 2.00 x 7.47 x 35.00 Km = Rs 261.45	8.00 2.00 x 18.09 x 1.00 Km = Rs 72.36	417.46		Rs. 698.98
9	Cement	MT	Local	8.00 8.00 x 7.47 x 35.00 Km = Rs 261.45	8.00 8.00 x 18.09 x 0.00 Km = Rs 0.00	299.38		Rs. 560.83
10	Steel	MT	Local	8.00 8.00 x 7.47 x 35.00 Km = Rs 261.45	8.00 8.00 x 18.09 x 0.00 Km = Rs 0.00	318.00		Rs. 579.45
11	Bitumen Emulsion	MT	Barauni	8.00 8.00 x 7.47 x 220.00 Km = Rs 1643.40	8.00 8.00 x 18.09 x 0.00 Km = Rs 0.00	344.50		Rs. 1987.90
12	Bitumen	MT	Muzaffarpur	8.00 8.00 x 7.47 x 178.00 Km = Rs 1329.66	8.00 8.00 x 18.09 x 0.00 Km = Rs 0.00	344.50		Rs. 1674.16
13	Hume Pipe (1000 mm)	m	Karjain	8.00 10.00 x 7.47 x 106.00 Km = Rs 633.46	8.00 10.00 x 18.09 x 0.00 Km = Rs 0.00	73.32		Rs. 706.78
14	Hume Pipe (600 mm)	m	Karjain	8.00 25.00 x 7.47 x 106.00 Km = Rs 253.38	8.00 25.00 x 18.09 x 0.00 Km = Rs 0.00	31.42		Rs. 284.80
15	Hume Pipe (300 mm)	m	Karjain	8.00 60.00 x 7.47 x 106.00 Km = Rs 105.58	8.00 60.00 x 18.09 x 0.00 Km = Rs 0.00	31.42		Rs. 137.00
16	Brick Bats	Nos.	Local	3.60 2.25 x 19.63 x 5.00 Km = Rs 157.04	3.60 2.25 x 29.03 x 2.00 Km = Rs 92.90	194.82		Rs. 444.76

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Cost of Haulage Excluding Loading & Unloading as per SOR

Type of Road	Per Ton. Km by Tipper	Per Ton. Km by Truck
For Surface Road	8.20	7.47
Unsurface Gravel Road	9.90	8.99
Kachha Road	19.80	18.09

* Subjected to Verification of Lead

Type of Road	Per Ton. Km by	Per Ton. Km by Truck
For Surface Road		19.63
Unsurface Gravel Road		24.53
Kachha Road		29.03

Summary of Cartilage Cost

Sl. No.	Particulars	Unit	Amount
1	Gr-III, GSB	Cum	1716.61
2	Stone Metal Below 40 mm	Cum	1716.61
3	Stone Chips	Cum	1716.61
4	Screening Materials	Cum	1716.61
5	Gr-II	Cum	1833.66
6	Stone Metal above 40 mm	Cum	1833.66
7	Binding Material (Moormun)	Cum	453.48
8	a) Coarse Sand	Cum	2799.47
9	b) Coarse Sand at Site	Cum	2950.27
10	c) Local sand	Cum	157.40
11	d) Local Sand at Site	Cum	299.25
12	Boulder	Cum	1769.77
13	a) Cement	Ton	560.83
14	b) Cement at Site	Ton	5716.83
15	Bitumen (S-90) (FROM MUZAFFARPUR)	Ton	1674.16
16	Bitumen Emulsion SS & RS (FROM BARAUNI)	Ton	1987.90
17	a) Hume Pipe NP 3 (600 MM DIA)	m	284.80
18	b) Hume pie (600 dia) at site	m	1053.33
19	a) Hume Pipe NP 3 (1000MM DIA)	m	706.78
20	b) Hume Pipe NP 3 (1000MM DIA) at site	m	3481.28
21	Steel	Ton	579.45
22	Brick	per 1000	698.98
23	Brick Bats/Jhama metal	Cum	444.76

Junior Engineer

Asstt. Engineer

Executive Engineer

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	Blacksmith	day	388.00
L-04	Blaster	day	477.00
L-05	Carpenter 1st Class	day	388.00
L-06	Carpenter 2nd Class	day	345.00
L-07	Chips spreader	day	345.00
L-08	Chiseller	day	364.00
L-09	Dresser (Skilled)	day	367.00
L-10	Driller	day	345.00
L-11	Electrician	day	367.00
L-12	Fitter	day	395.00
L-13	Mason (1st class)	day	388.00
L-14	Mason (2nd Class)	day	345.00
L-15	Mate	day	305.00
L-16	Mazdoor (Unskilled)	day	287.00
L-17	Mazdoor (Semi skilled)	day	299.00
L-18	Mazdoor (Skilled)	day	364.00
L-19	Painter (1st class)	day	367.00
L-20	Plumber	day	349.00
L-21	Surveyor	day	349.00
L-22	White Washer	day	364.00

BASIC RATES
(C) USAGE RATES OF PLANT & MACHINERY

Sr. No.	Description of		Output of Machine		Usage Rates in Rs.	
	Machine	Activity	Unit	Output	Unit	Rate
PM-017	Front end-loader 1 cum bucket capacity	Loading Aggregates	cum/h	25.00	per hour	1,403.00
		Loading Soil	cum/h	60.00		1,403.00
PM-032	Motor Grader	Scarifier & levelling	cum/h	200.00	per hour	2,786.00
	Tractor Mounted Grader			50.00		570.00
PM-033	Needle vibrator	Vibrating cement concrete mix	cum/h	3.50	per hour	76.35
PM-035	Paver finisher	Laying/spreading	Cum/h	40.00	per hour	1,417.00
PM-086	Plate compactor	Compaction	cum/h		per hour	469.70
PM-087	Plate vibrator	Compaction	cum/h		per hour	467.00
PM-088	Screed vibrator	Compaction	cum/h		per hour	102.64
PM-044	Smooth wheeled 80-100 kN tandem roller	Compaction of Sub-base/ Asphalt	cum/h	30.00	per hour	803.00
PM-045	Stone crusher (Integrated) of 200 TPH	Crushing of Spalls	t/h	200.00	per hour	27,425.00
PM-046	Three wheel 80-100 kN Static Roller	Compaction/ Rolling			per hour	781.00
		Earth:- Embankment or sub-grade	cum/h	80/70		781.00
		Sub-base G-I	cum/h	10.00		781.00
		Sub-base G-II/G-III	cum/h	8.00		781.00
		WMM	cum/h	16.00		781.00
PM-047	Tipper 5.5 cum/10 t	Carriage	cum/trip	5.50	per hour	1,018.00
PM-048	Tractor with Disc Harrows	Pulverisation of soil	cum/h	80.00	per hour	546.00
PM-049	Tractor with ripper @ 60 cum per hour	Ripping Pavements, uprooting trees	cum/h	60.00	per hour	591.40
PM-050	Tractor with trolley/with Grading equipment	Transportation of materials	t/trip	3 to 5	per hour	591.40
PM-051	Tractor with Rotavator	Scarifier	cum/h	25.00	per hour	573.20
PM-052	Truck 10 t capacity	Carriage	cum/trip	5.50	per hour	929.00
PM-053	Vibratory roller 80-100 kN	Compaction of soil WMM	cum/h	100.00	per hour	2,029.00
		Compaction of BM	cum/h	60.00		2,029.00
PM-054	Water tanker 6 kl capacity (Truck Mounted)	Carriage of water	litre / h	12000.00	per hour	183.00
PM-055	Wet mix plant (Pug Mill)	Wet Mix	cum/h	25.00	per hour	1,812.00

SUMMARY OF RATE				
Sl. No.	Ref. Code No.	Description of Labour	Rate (Rs.)	Unit
1		Filling E.C. Bags		
2		Placing E.C Bags	629.20	%nos.
3		Filling E.C Bags and Placing	924.60	%nos.
4		Filling Geo. Bags	1553.80	%nos.
5		Placing Geo Bags	26.40	each
6		Filling Geo Bags and Placing	34.30	each
7		Filling E.C Bags and Placing in N.C	60.70	each
8		Filling E.C Bags and Placing in B.A.Wire Crates	388.50	each
9		Filling Geo Bags and Placing in N.C	1243.00	each
10		Filling Geo Bags and Placing in B.A.Wire Crates(Beggy)	364.20	each
11		Filling Geo Bags and Placing in B.A.Wire Crates(Box))	1638.90	each
12		Filling Geo Bags and Placing in Gabbin 1.8x1.8x0.5	2003.10	each
13		Filling Geo Bags and Placing in Gabbin 1.8x1.8x0.6	1092.60	each
14		Already Filled E.C Bags Placing in N.C	728.40	each
15		Already Filled E.C Bags Placing in B.A.Wire crates	231.15	each
16		Already Filled Geo Bags Placing in N.C	739.68	each
17		Already Filled Geo Bags Placing in B.A.Wire Crates(Beggy)	205.80	each
18		Already Filled Geo Bags Placing in B.A.Wire Crates(Box))	926.10	each
19		Already Filled Geo Bags Placing in Gabbin 1.8x1.8x0.5	1131.90	each
20		Already Filled Geo Bags Placing in Gabbin 1.8x1.8x0.6	617.40	each
21		Supply of bamboo 75mm dia	411.60	each
22		Carriage of bamboo 75mm dia lead 5km us	162.70	each
23		Supply of bamboo 100 mm dia	8.70	each
24		Carriage of bamboo 100 mm dia lead 5km us	173.70	each
25		Supply of binding wire	9.30	each
26		Laying of porcupine Without boat	71.60	each
27		Laying of porcupine with boat	834.80	each
28		Bamboo pilling with jet pump	877.90	each
29		Tree spur	38.20	each
30	M-189	Water	358.00	each
31	e(ii)	Brick Bats	40.00	KL
32	M-006	Local/Fine Sand	1032.00	per cum
33		Nails	141.85	per cum
34	222(i)	Bamboo 75mm dia 6m to 8m long	55.84	per kg
35	232	Sutali	141.50	each
36	M-120	Coarse Sand	19.75	per kg
	M-121	Sand (Fine)	150.80	per cum
37	M-081	Cement	141.85	per cum
38		HP 1000mm dia NP3	5156.00	per mt
39		HP 600mm dia NP3	2774.50	per mt
40	M-159	Sand Bags (Cost of sand and empty cement bag)	768.53	per mt
41	275	Old empty cement bag(synthetic)(Annexure-I)	8.46	per nos..
42	276	Nylon Crate of size 1mx1mx1m	292.00	per %nos.
43	M-017	Aggregate 40 mm	39.85	Each
44	M-016	Aggregate 20 mm	494.15	Cum
45	M-015	Aggregate 10 mm	604.91	Cum
46	M-047	Cement Primer	668.8	Cum
47	M-103	Paint (Synthetic Enamel)	115.16	litre
48	M-150	Well Graded Material for Sub-Base - Grading I 53 mm to 9.5 mm	516.42	litre
49	M-151	Well Graded Material for Sub-Base - Grading II 9.5 mm to 2.36 mm	516.42	Cum
50	M-152	Well Graded Material for Sub-Base - Grading III 2.36 mm below	411.33	Cum
51	M-105	Polythene sheet (125 micron)	185.94	Cum
52		G.I. wire 3.15 mm dia	14.35	Sqm
			69.3	per kg

Analysis of Rate						
Sl No.	SOR No.	Description	Unit	Qty	Rate(Rs.)	Amount (Rs.)
1	1.4	Carriage of materials (By Tractor)				
	RCD	Cost of Haulage excluding Loading & Unloading				
		Haulage of materials by Tractor excluding cost of loading, unloading and stacking.				
		Unit = t.km				
		Taking output 3.60 Tonne load and lead 10 km = 36.0 t.km				
		Case-I : Surfaced Road				
		Speed with load: 15 km per hour				
		Speed while returning empty: 25 km per hour				
	a)	Machinery				
		Tractor 3.6 t capacity				
		Time taken for onwards haulage with load	hour	0.667	591.40	394.46
		Time taken for empty return trip	hour	0.400	591.40	236.56
		Total				631.02
		Add OH@12%				75.72
						706.75
		Rate per Ton.km				19.63
		Case-II: Unsurfaced Gravel Road				
		Speed with load: 12 km/hour				
		Speed for empty return trip: 20 km/hour				
	a)	Machinery				
		Tractor 3.6 t capacity				
		Time taken for onwards haulage with load	hour	0.833	591.40	492.64
		Time taken for empty return trip	hour	0.500	591.40	295.70
		Total				788.34
		Add OH@12%				94.60
						882.94
		Rate per Ton.km				24.53
	(c)	Case-III: Katcha Track and Track in River Bed / Nallah Bed and Choe Bed				
		Speed with load : 10 km / hour				
		Speed with returning empty : 15 km / hour				
	(a)	Machinery				
		Tipper 10 tonnes or 5.5 cum capacity	hour	1.000	591.40	591.40
		Time taken for empty return trip	hour	0.667	591.40	394.46
		Total				985.86
		Add OH@12%				118.30
		Cost for 36.0 t.km = a+b				1,104.17
		Rate per Ton.km				30.67
2	6.6.1.	Labour for laying Brick bats /dry graded jhama khoa or stone filter under Brick Pitching or Boulder pitching in slope or apron including light ramming etc. all complete job as per approved design, specification and direction of E/I				
	WRD	Unit = Per Cum				
		Taking output= 2.832 Cum				
	a)	Labour				
		Mazdoor (Unskilled)	Nos	3.00	287.00	861.00
	b)	Overheads @ 12% on (a)				103.32
		Rate for 2.832 Cum				964.32
		Rate Per Cum				340.51
3	1.1	Loading and Unloading of Stone Boulder, Stone aggregate ,Sand, Kankar,Moorum , Brick Bats and Sand etc.				
	RCD	Unit = Per Cum				
		Taking output= 2.25 Cum				
		Time required for				
	i)	Positioning of tipper at unloading point	day	1 Min		
	ii)	Loading by front end loader 1 cum bucket capacity @ 25 cum per hour	day	5Min		
	iii)	Maneuvering, reversing, dumping and turning for return		0Min		
	iv)	Waiting time, unforeseen contingencies etc	hour	0Min		
		Total				
	a)	Labour				
		Mate	day	0.03	305.00	9.15
		Mazdoor for Loading and unloading	day	0.72	287.00	206.64
	b)	Machinery				
		Tractor 3.6 t capacity	Hour	0.10	591.40	59.14
		Front end loader 1 cum bucket capacity @ 25 cum per hour	Hour	0.08	1,403.00	116.45
						391.38
		Add OH@12%				46.97
						438.34
		Rate per Cum=(a+b+c)/2.25				194.82
		Unloading will be done Manually.				
	Note:-					

Sl No.	SOR No.	Description	Unit	Qty	Rate(Rs.)	Amount (Rs.)
4	9.3	1100 Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Row. Providing and Laying Reinforced cement concrete pipe NP3 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.				
		1000 mm dia Hume Pipe				
		Unit=m				
		Taking Output=7.5 m (3 pipes of 2.5 m length each)				
	a	Material				
		Sand at site				
		Cement at site	cum	0.04	2,950.27	118.01
	b	RCC pipe NP3 pipe including collar at site	ton	0.03	5,716.83	171.50
		Labour	m	7.50	3,481.28	26,109.60
		Mate				
		Mason (I class)	day	0.09	305.00	27.45
		Mazdoor(Unskilled)	day	0.25	388.00	97.00
			day	2.00	287.00	574.00
		Add OH@12%				27,097.57
						3,251.71
		Cost for 7.50 m =				30,349.27
		Rate per M=				30,349.27
						4,046.57
5		(Providing and laying of brick bats obtained from chimney with machnical means with all spreading gradding to required slope and compacted at OMC to achieve required density with all completed as per direction of E/I)				
		Taking out put=100 cum				
	a)	Labour				
		Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH)	day	1.00	322.27	322.27
	b)	Materials				
		Bricks Bats -Basic Rate Taken From RCD S.O.R. Schedule-M:11-5(ii) dt.-25.02.2021	Cum	1	1032.00	1032.00
		Overheads @12% on (b)				123.84
		Add:Carriage Charge for Brick bats				444.76
		Total Cost				1,922.87
		NET TOTAL COST PER CUM				1,922.87
		SAY Rs				1,922.87
6	5.7.7	Labour for cutting 62 mm to 75 mm dia sal bamboo piles to size and making shoes and driving etc.complete job as per specification and direction of E/I.				
	WRD	Unit :- Per M				
		Taking Out put:- 30.50 Mtr				
		(Assuming 20 nos. pile sunk 1.525 mtr deep)				
		Total depth sunk 30.50 meter				
	(a)	Labour				
		Carpenter Gr II	Nos	1.00	388.00	388.00
		Unskilled mazdoor for pilling	Nos	3.00	287.00	861.00
						1,249.00
		Overheads @ 12%				149.88
						1,398.88
						1,398.88
		Rate Per M				45.86
7	5.7.8	Providing fitting and fixing split bamboo woven chachari in position with 20 swg G.I. wire or 75 mm to 100 mm long nails alternatively including cost of G.I. wire 3.15 mm dia or nails complete job as per specification and direction of E / I.				
		Unit :- Per M2				
		Taking Out put:- 9.30 Sqm				
		(Assuming strip of 3.05x3.05 = 9.30 sqm)				
	a	Material				
	1	75 mm to 100mm long nail	kg	0.25	55.84	13.96
	2	Bamboo - 75mm dia to 62 mm dia				
		Bamboo @75mm = 3050/75 = 40.67				
		Say=41Nosx3.05=125.05M				
		Add for Lower Binder of chachari				
		10x3.75=30.50M				
		Runner @150mmc/c=7x3.05=21.35M				
		Total length of Bamboo=176.9M	No	30	141.50	4245
		Total No of Bamboo=176.9/6=30No				
	b	Labour	Nos	1.00	345.00	345.00
		Carpenter Gr II	Nos	1.00	287.00	287.00
		Unskilled mazdoor for pilling				

Sl No.	SOR No.	Description	Unit	Qty	Rate(Rs.)	Amount (Rs.)
		Overheads @ 12% on labour charge (345.00+287.00)				75.84
						4,966.80
		Rate Per M2				534.06
8	5.7.8	Labour for fitting and fixing split bamboo woven chachari in position with 20 swg G.I. wire or 75 mm to 100 mm long nails alternatively including cost of G.I. wire 3.15 mm dia or nails complete job as per specification and direction of E / I.				
	WRD	Unit :- Per M2				
		Taking Out put:- 9.30 Sqm				
		(Assuming strip of 3.05x3.05 = 9.30 sqm)				
		(a) Material				
		G.I. wire 3.15 mm dia	Kg	0.250	69.30	17.33
		(b) Labour				
		Carpenter Gr II	Nos	1.00	345.00	345.00
		Unskilled mazdoor for piling	Nos	1.00	287.00	287.00
						649.33
		Overheads @ 12%				77.92
						727.24
						727.24
		Rate Per M2				78.20
9	5.7.9	Labour for fitting and fixing 62mm to 75 mm dia bamboo runners in position at every vertical pile with 150 mm long nails or 38 swg G.I. wire including cost of G.I. wire or nails complete job as per specification and direction of E / I.				
	WRD	Unit :- Per M				
		Taking Out put:- 30.50 Mtr				
		(a) Materials				
		Cost of 150 mm long nails	Kg	0.50	55.84	27.92
		(b) Labour				
		Carpenter Gr II	Nos	0.13	345.00	44.85
		Unskilled mazdoor for piling	Nos	0.25	287.00	71.75
						144.52
		Overheads @ 12%				17.34
						161.86
						161.86
		Rate Per M				5.31
10		Supplying bamboo 75 mm dia 6 m to 8 m long at..... complete job as per specification and direction of E / I.				
		Taking Out put:- 115 nos				
		(a) Material				
		Supplying bamboo 75 mm dia 6 m to 8 m long (Cost of bamboo)	Nos	115	162.70	18,710.50
		Add: Carriage Charge for Bamboo				292.22
		Add Labour for laying Bamboo				340.51
						19,343.23
		Overheads @ 12%				2,321.19
						21,664.42
						21,664.42
		Rate Per each Bamboo				188.39
11	5.7.40.1	Labour for filling empty cement bags with local sand, stitching the bags and placing including supply of sutli etc. all complete as per approved design, specifications and direction of E / I				
	WRD	Unit :- Per % nos				
		Taking Out put:- 100 nos				
		(a) Supplying of Sand bags (Cost of sand and Empty cement bag)	Nos	100	8.46	846.00
		Carriage cost for Local sand (100 no. of Bags=100x0.034m3	cum	3.4	299.25	1017.45
					Total	1863.45
		(b) For filling & stitching & stacking				
		(a) Unskilled mazdoor for filling sand into bags and sewing	Nos	2	287	574.00
		(b) Sutali	Kg	0.5	19.75	9.88
					Total	583.88
		(c) Labour rate for Carrying & Placing to work site of E.C.Bags				
		(a) Unskilled mazdoor for carrying filled bags and placing to work site	Nos	3	287	861.00
		Total (A+B+C)=				3308.33

Sl No.	SOR No.	Description	Unit	Qty	Rate(Rs.)	Amount (Rs.)
		Add overhead charge @12%				
		Total Net Rs.				397.00
		Rate per %				3705.32
		Sand Each Bag				3705.32
						37.05
					Say	Rs 37.05
12	5.7.40.2 WRD SOR Page 159	Labour for filling empty cement bags with loocal sand, stitching the bags and placing in Nylon crate of size (1 m x 1 m x 1 m) with lead of 150 M including supply of sutli etc. at site in dry portion all complete as per approved design, specification and direction of E/I				
		Unit :- Each N.C				
		Taking Out Put = 25 nos. filled E.C. Bags in each N/C				
		Cost of 25 nos of filled E.C.Bags (Vide item no. 5.7.40.1				
		Rate each	Nos	25	37.05	926.33
						926.33
13		Supply of Nylon Crate of size 1mx1mx1m			39.85	39.85
		Material				
	(a)	Nylon Crate				39.85
	(b)	Add Overhead charge @12%				4.78
		Total (a+b)				44.63
		Rate per nos.				44.63
14	11.2	Sand filling in Foundation Trenches as per Drawing & Technical Specification				
		Unit = Per Cum				
	a	Material				
		Sand(assuming 20 percent voids)	cum	1.20	141.85	170.22
	b	Labour				
		Mate	day	0.01	305.00	3.05
		Mazdoor(Unskilled)	day	0.3	287.00	86.10
						259.37
		Add overhead charge @12%				31.1244
						290.494
		total=				290.49
		Carraige cost for Local sand				292.22
		Rate per cum				582.71



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