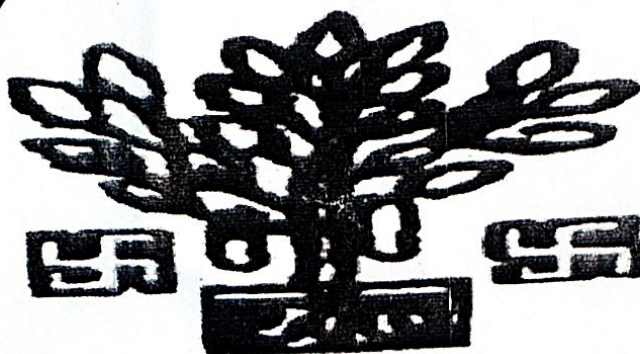


RURAL WORKS DEPARTMENT

GOVT OF BIHAR



NAME OF WORKS :- Debu Kamat home To Tara Nand Sardar house ke Ghar tak
DISTRICT :- Supaul
BLOCK :- Triveniganj
FDR
Rs. 1335088.00
YEAR(2023-24)

R.W.D., WORKS CIRCLE, MADHEPURA

R.W.D., WORK DIVISION, TRIVENIGANJ

प्रतिवेदन

पथ का नाम :- Debu Kamat home to Taranand Sardar House ke Ghar tak.

कार्य का नाम :- FDR

में बाढ़ से क्षतिग्रस्त भाग में यातायात चालू करने का कार्य।

संलग्न प्राक्कलन 14.06.2023 को प्रखण्ड में आयी भीषण बाढ़ से क्षतिग्रस्तपथ.....

..... में बाढ़ क्षतिग्रस्त मरम्मत मद से यातायात चालू करने हेतु तैयार किया गया है

जिसकी प्राक्कलित लागत 13.35088 लाख है।

उक्त पथ का निर्माण GTSNY योनान्तर्गत हुआ है एवं योजना अनुरक्षण

अवधि में। 4 th Year maintenance पथ के कटे (क्षतिग्रस्त)

भाग में आवश्यकता अनुसार Hume Pipe, Bamboo, लोकल बालू एवं Brick Bats देने के बाद

यातायात चालू कराया गया है। पथ के विभिन्न हिस्से में कराये गये कार्य का विवरणी स्पष्ट

रूप से प्राक्कलन में दर्शाया गया है।

प्राक्कलन मदों का दर वर्तमान अनुसूचित दर के अनुरूप है।

SK
21.10.23

कनीय अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रशाखा, निवेणीगंज।

SK
21.10.2023

सहायक अभियंता,
ग्रामीण कार्य विभाग,
कार्य अवर प्रमण्डल, निवेणीगंज।

SK
21.10.23

कार्यपालक अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रमण्डल, निवेणीगंज।

INSPECTION REPORT FOR MOTORABLE WORK

Name of PIUs:- R.W.D Work Division, Triveniganj	
Name of Block/Road:- Debu Kamat Home to Taranand Sardar House Ke Ghar tak	
A. For Road:- Block- Trivenjganj	
1. Damage Location/Chainage:- 0.80 KM	
2. Damage Length:- 18.50 M	
3. Nature of Damage(length wise)	(i) Breach:- —
	(ii) Crust Damage:- ✓ <i>Crust damage</i>
	(iii) Only Flank Damage:- —
Whether traffic fully/Partially obstructed:-	
4. Details of Restoration:-	
(i) Material Being Used in Restoration:- EC bag, Sand, Brick bat	
(ii) Equipment/Tools Being Used in Restoration Works:- JCB, Tractor, Trolley	
(iii) Restored Length	In open Area:- ✓ 18.50 M
	In habitation Area:- —
(iv) If Restoration work done in habitation Area give Reason:- —	
B. For Bridge (Size of Bridge/Culvert)	
(1) Damage Location/Chainage:-	
(2) No. of Span Damage:-	
(3) Length of Span:-	
(4) Nature of Damage(Pier/Abutment/Wing Wall/Approach Road Damage):-	
(5) Details of Restoration:-	
(i) Material Being Used in Restoration:-	
(ii) Equipment/Tools Being Used in Restoration Work:-	
(iii) Restoration Length:-	
Overall Grade of Restoration work(Satisfactory/Unsatisfactory):- <i>Satisfactory</i>	


 21/2/24
 A.B.


 Signature of Inspector
 (Official Seal)

SUMMARY OF COST ESTIMATE FOR THE PROJECT		
NAME OF ROAD :-	Debu Kamat home To Tara Nand Sardar house ke Ghar tak	
DISTRICT :-	Supaul	
BLOCK :-	Triveniganj	
Length of Road :-	1.200Km	
Length of Cutting:-	18.5 Mtr	
Sl.No.	DESCRIPTION	AMOUNT(LAKHS)
		315021.59
1	Filling of local sand	565285.24
2	Supplying of EC bag, of local sand	215421.69
3	Supply and Carriage of brick bats	1095728.52
	SUB TOTAL COST =	197231.13
	ADD GST@18%=	10957.28
	ADD Labour cess@1%=@1%=	31171.00
	Seigniorage Fees@10%=	1335088.00
	TOTAL(Rs.)=	

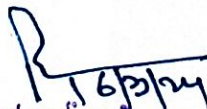
SK
21-10-23
J.E


21-10-2023
A.E


21-10-23
S.E

S.E

Technically sanctioned for Rs. 13,35,088 = w
(Rs. Thirteen Lakh thirty five thousand Eighty eight) only.


Superintending Engineer
Rural Works Department
Works Circle Madhepura

Bill of Quantity				
NAME OF ROAD :-		Debu Kamat home To Tara Nand Sardar house ke Ghar tak		
DISTRICT :-		Supaul		
BLOCK. :-		Triveniganj		
Sl. No	DESCRIPTION OF ITEMS	QUANTITY	RATE (Rs.)	AMOUNT (Rs.)
1	Filling of local sand obtained from river bed. watering & ramming, all complete Job as per specification & direction of Engineer-in-charge	604.30	521.30	315021.59
2	Supplying of EC bag, filling of local sand stitching and placing in position as the direction of Engineer-in-charge.	15964	35.41	565285.24
3	Supply and Carriage of brick bats upto 8 km breach - and placing in breaches and lying of bats, all complete job.	101.90	2114.05	215421.69
		A) SUB TOTAL=		1095728.52
		TOTAL COST=		10,95,729.00

SK
21.10.23
J.E


21.10.2023
A.E


21.10.23

ESTIMATE FOR REPAIRING/ RESTORATION/ MAKING MOTORABLE ROADS DAMAGED DURING FLOOD

NAME OF ROAD:-		Debu Kamat home To Nand Sardar house ke Ghar tak									
DISTRICT:-		Supaul									
BLOCK:-		Triveniganj									
Length of Cutting:-		13.50 mtr									
Sl. No.	DESCRIPTION OF ITEM	Unit	Nos.	L(m)	B(m)	D(m)	QUANTITY	RATE(Rs.)	AMOUNT(Rs)		
1.	Filling of local sand obtained from river bed, watering & ramming, all complete job as per specification & direction of Engineer-in-charge										
	At ch:- 800m	cum	1	18.50	(4.85+5.35+3.90)/3	(6.5+7.85+6.5)/3	604.30				
2.		cum		Total qty :-			604.30	521.30	315021.59		
Supplying of EC bag, filling of local sand switching and placing in position as the direction of Engineer-in-charge											
	At ch:- 800m	cum	1	18.50	(5.65+4.90+2.95)/3	(6.75+6.86+5.95)/3	542.76				
	Total No. of EC Bags(3.4cum=1008bags)=						15964				
		Each		Say No. of Bage :-			15964	35.41	565285.24		

542.76/0.034

Sl. No.	DESCRIPTION OF ITEM	Unit	Nos.	L(m)	B(m)	D(m)	QUANTITY	RATE(Rs.)	AMOUNT (Rs.)
	Supply and Carriage of brick bats upto 8 Km breach and placing in breaches and lying of bats, all complete job.								
	At ch:- 800m	cum	1	18.50	(4.5+3.95+3.5)/3	(1.45+1.75+0.95)/3	101.90		
		cum		Total qty :-				2,114.05	215421.69
							A) SUB TOTAL=		1095728.52
							TOTAL COST=		1095728.52

SK
21.10.23
Junior Engineer

SK
21.10.2023
Asstt. Engineer

SK
21.10.23
Executive Engineer

S.E
Madhepura

Calculation of Seigniorage Fees					
NAME OF ROAD :-		Debu Kamat home To Tara Nand Sardar house ke Ghar tak			
DISTRICT :-		Supaul			
BLOCK. :-		Triveniganj			
Sl. No	DESCRIPTION OF ITEMS	QUANTITY	Unit	RATE (R.s.)	AMOUNT (Rs.)
1	Filling of local sand obtained from river bed. watering & ramming, all complete Job as per specification & direction of Engineer-in-charge	725.16	cum	143.32	103929.93
2	Supplying of EC bag, filling of local sand stitching and placing in position as the direction of Engineer-in-charge.	542.80	cum	143.32	77794.09
3	Supply and Carriage of brick bats upto 8 km breach and placing in breaches and lying of bats, all complete job.	122.28	cum	1063.00	129983.64
		A) SUB TOTAL=			311707.66
	Seigniorage Fees @10% of Basic Amount=				31171.00

SK
21.10.23
JE

Sc
21.10.2023
AE

21/10/24

Analysis for Carriage by Road & Rail

Sl No	Item with Source	Unit	Source Up to	Carriage Cost & Lead in Km					Unloading & Loading	Total
				Pucka / Surface	Katcha	Y / 4h	X / 4h	Y / 4h		
1	Local Sand	Cum Local	8.00	x 7.36	x 23.60	8.00	x 7.36	x 100 Km = Rs 11.80	99.08	Rs. 134
2	Brick	Nos Local	3.60	x 15.55	x 7.00 Km = Rs 174.16	3.60	x 24.30	x 100 Km = Rs 38.88	417.46	Rs. 630
3	Hume Pipe (1000 mm)	m Supaul	3.60	x 15.55	x 15.00 Km = Rs 167.94	3.60	x 24.30	x 100 Km = Rs 0.00	190.58	Rs. 358
4	Hume Pipe (600 mm)	m Supaul	3.60	x 15.55	x 15.00 Km = Rs 167.94	3.60	x 24.30	x 100 Km = Rs 0.00	81.68	Rs. 249
5	Hume Pipe (300 mm)	m Supaul	3.60	x 15.55	x 15.00 Km = Rs 167.94	3.60	x 24.30	x 100 Km = Rs 0.00	81.68	Rs. 249

* Subjected to Verification of Lead

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		
Unsurface Gravel Road		
Kachha Road	7.36	21.50

BASIC RATES AS PER LATEST SOR AS ON 28/07/2023

(A) Labour

Sl. No.	Description of Labour	Unit	Rate (Rs.)
L-01	Bhisti	day	373.00
L-02	Bitumen Sprayer(semi skilled)	day	393.00
L-03	Blacksmith,special	day	503.00
L-04	Blaster, 2nd class	day	619.00
L-05	Carpenter 1st Class	day	503.00
L-06	Chips spreader, semi-skilled	day	503.00
L-07	Chiseller	day	449.00
L-08	Dresser (Skilled)	day	577.00
L-09	Driller, 2nd class	day	472.00
L-10	Electrician,skilled	day	449.00
L-11	Fitter, skilled	day	503.00
L-12	Mason (1st class)	day	511.00
L-13	Mason (2nd Class)	day	503.00
L-14	Mate, Semi skilled	day	449.00
L-15	Mazdoor (Unskilled)	day	397.00
L-16	Mazdoor (Semi skilled)	day	373.00
L-17	Mazdoor (Skilled)	day	388.00
L-18	Painter (1st class)	day	472.00
L-19	Plumber, Special	day	476.00
L-20	Surveyor	day	476.00
L-21	White Washer	day	454.00
	Carpenter Gr-II	day	476.00

SUMMARY OF RATE

Sl. No.	Ref. Code No.	Description of Labour	Rate (Rs.)	Unit
1		Filling E.C. Bags	629.20	%nos.
2		Placing E.C Bags	924.60	%nos.
3		Filling E.C Bags and Placing	1553.80	%nos.
4		Filling Geo. Bags	26.40	each
5		Placing Geo Bags	34.30	each
6		Filling Geo Bags and Placing	81.00	each
7		Filling E.C Bags and Placing in N.C	388.50	each
8		Filling E.C Bags and Placing in B.A Wire Crates	1243.00	each
9		Filling Geo Bags and Placing in N.C	364.20	each
10		Filling Geo Bags and Placing in B.A.Wire Crates(Beggy)	1638.90	each
11		Filling Geo Bags and Placing in B.A.Wire Crates(Box))	2003.10	each
12		Filling Geo Bags and Placing in Gabbin 1.8x1.8x0.5	1092.60	each
13		Filling Geo Bags and Placing in Gabbin 1.8x1.8x0.6	728.40	each
14		Already Filled E.C Bags Placing in N.C	231.15	each
15		Already Filled E.C Bags Placing in B.A.Wire crates	739.68	each
16		Already Filled Geo Bags Placing in N.C	205.80	each
17		Already Filled Geo Bags Placing in B.A.Wire Crates(Beggy)	926.10	each
18		Already Filled Geo Bags Placing in B.A.Wire Crates(Box))	1131.90	each
19		Already Filled Geo Bags Placing in Gabbin 1.8x1.8x0.5	617.40	each
20		Already Filled Geo Bags Placing in Gabbin 1.8x1.8x0.6	411.60	each
21		Supply of bamboo 75mm dia	162.70	each
22		Carriage of bamboo 75mm dia lead 5km us	8.70	each
23		Supply of bamboo 100 mm dia	173.70	each
24		Carriage of bamboo 100 mm dia lead 5km us	9.30	each
25		Supply of binding wire	75.04	each
26		Laying of porcupine Without boat	834.80	each
27		Laying of porcupine with boat	877.90	each
28		Bamboo pilling with jet pump	38.20	each
29		Tree spur	358.00	each
30	M-189	Water	253.69	KL
31	e(ii)	Brick Bats	1063.00	per cum
32	M-006	Local/Fine Sand	143.32	per cum
33		Nails	55.84	per kg
34	222(i)	Bamboo 75mm dia 6m to 8m long	141.50	each
35	232	Sutali	19.75	per kg
36		Coarse Sand	150.8	per cum
37	M-081	Cement	5850.4	per mt
38		HP 1000mm dia NP3	6125.90	per mt
39		HP 600mm dia NP3	2574.81	per mt
40	M-159	Sand Bags (Cost of sand and empty cement bag)	8.46	per nos..
41	275	Old empty cement bag(synthetic)(Annexure-I)	292	per %nos.
42	276	Nylon Crate of size 1mx1mx1m	39.85	Each

**BASIC RATES AS PER LATEST SOR
(B) USAGE RATES OF PLANT & MACHINERY**

Sr. No.	Description of		Output of Machine		Usage Rates in Rs.	
	Machine	Activity	Unit	Output	Unit	Rate
PM-101	Air Compressor 210 cfm	Supplying compressed air	cfm	210.00	per hour	481.00
PM-102	Batch mix HMP 40-60 TPH	BM, DBM, SDBC, PM	t/h	50.00	per hour	21,633.00
PM-103	Batch type HMP 30/40 TPH	BM, DBM, SDBC, PM	t/h	35.00	per hour	2,851.00
PM-104	Bitumen boiler oil fired	Heating of bitumen	litre / h	400.00	per hour	270.00
			litre / h	2000.00	per hour	270.00
PM-105	Bitumen emulsion pressure distributor	Applying bitumen tack coat	sqm/h	1750.00	per hour	1,463.00
PM-106	Concrete mixer 0.28/0.4 cum	Mixing of ingredients	cum/h	2.50	per hour	80.00
PM-107	Crane upto 3.5T	Lifting of materials			per hour	1,163.00
PM-108	Dozer D 175	Dozing cutting	cum/h	200.00	per hour	4,249.00
		CLEANING	cum/h	100.00	per hour	4,249.00
PM-109	Electric generator set, 125 KVA	Electricity generation	KVA	100.00	per hour	2,637.00
PM-110	Emulsion spreyyer with tractor	Spraying of Emulsion	sqm/h		per hour	1,091.00
PM-111	Front end-loader 1 cum bucket capacity @ 45 cum/hour	Loading soil/Aggregates	cum/h	45	per hour	1,419.00
		Loading Soil	cum/h	100.00	per hour	1,594.00
PM-112	Hydraulic broom with tractor	Surface cleaning	sqm/h	1250.00	per hour	2,272.00
PM-113	Hydraulic Excavator 0.9cum	Excavation	cum/h	100.00	per hour	1,858.00
PM-114	Dozer D- 80-A 12	Spreading/Cutting/Clearing	cum/h	300/150/250	per hour	5,598.00
	Jack Hammer with tractor	Pavement breaking & rock drilling	cum/h	05. to 1	per hour	1,163.00
PM-116	Joint Cutting Machine with 2-3 blades	Cutting of Joints	h		per hour	317.00
PM-117	Mixall 6-10 t capacity	Mixing of bituminous	t/h	8.00	per hour	1,547.50
PM-118	Motor Grader 3.35m blade	Scarifier & levelling	cum/h	200.00	per hour	2,982.00
PM-119	Tractor Mounted Grader			50.00	per hour	570.00
PM-120	Needle vibrator	Vibrating cement	cum/h	3.50	per hour	386.00
PM-121	Paver finisher Hydrostatic with sensor control 100TPH	Laying/DBM/BM/SDBC	t/h	75.00	per hour	2,141.00
PM-122	Plate compactor	Compaction	cum/h		per hour	469.00
PM-123	Plate vibrator	Compaction	cum/h		per hour	469.00
PM-124	Screed vibrator	Compaction	cum/h		per hour	102.64
PM-125	Smooth wheeled 80-100 kN tandem roller	Compaction of Sub-base/ Asphalt	cum/h	30.00	per hour	1,593.00
PM-126	Stone crusher (Integrated) of 200 TPH	Crushing of Spalls	t/h	200.00	per hour	27,425.00
PM-127	Three wheel 80-100 kN Static Roller	Compaction/ Rolling				1,518.00
		Earth:- Embankment or sub-grade	cum/h	80/70		1,518.00
		Sub-base G-I	cum/h	10.00		1,518.00
		Sub-base G-II/G-III	cum/h	8.00		1,518.00
		WMM	cum/h	16.00		1,518.00
		BUSG	cum/h	10.00		1,518.00
		BM 50/75 mm	cum/h	12.00		1,518.00
		Premix 20 mm	sqm/h	250.00		1,518.00
		Seal Coat	sqm/h	500.00		1,518.00
		Surface Dressing 1st Coat	sqm/h	400.00		1,518.00
		Surface Dressing 2nd Coat	sqm/h	500.00		1,518.00
PM-128	Tipper 5.5 cum/10 t	Carriage	cum/trip	5.50	per hour	1,426.00
PM-129	Tractor with Disc Harrows (Rotovator)	Pulverisation of soil	cum/h	80.00	per hour	546.00

Sr. No.	Description of		Output of Machine		Usage Rates in Rs.	
	Machine	Activity	Unit	Output	Unit	Rate
PM029	Tractor with ripper @ 60 cum per hour	Ripping Pavements, uprooting trees	cum/h	60.00	per hour	629.00
PM030	Tractor with trolley	Transportation of materials	t/trip	3 to 5	per hour	629.00
PM031	Tractor with Rotavator	Scarifier	cum/h	25.00	per hour	573.00
PM032	Moter Grader 3.35mtr blade	Clearing/Spreading/GS B/WBM	cum/hour	200/200/50/5	hour	2,697.00
PM035	Wet mix plant (75TPH)	Wet Mix	cum/h	25.00	per hour	1,822.30
PM043	Road Marking Machine	Wet Mix	cum/h	100.00	per hour	128.00
PM047	Tipper 5 cum @5.5 cum/hour	Transportation of Soil, GS	capacity in	5.5	tonne.km	8.86
PM059	Vibratory roller 8 tonn	Earth or Soil/GSB/WBM	cum/hour	100/60/60	hour	2,029.00
PM060	Water tanker 6 kl capacity (Truck Mounted)	Transportation of Soil, GS	capacity in	6	hour	183.00

Shedule P & M / MORTH - 1 B (RCD SOR Page No. xLiv)

Sr No. 5 Tractor (25 HP)

Carriage

25 HP Cap 2.25 cum Hour

525.00

Analysis of Rates

2	Sand Filling in Foundation Trenches as per Drawing & Technical Specification.										
	Unit= Cum						Unit	Qty.	Rate	Cost	
	Taking Output= 1 Cum.										
	a) Labour										
	Mate						day	0.010	449.00	4.49	
	Mazdoor						day	0.300	397.00	119.10	
	b) Material										
	Sand (assuming 20 per cent voids)						Cum.	1.20	143.32	171.98	
	Cost for 1 cum = (a+b)									295.57	(C)

Rate Analysis

Item No. 2 :- Loading and unloading of Sand by Manual means				
Unit = cum				
Taking output = 2.25 cum				
a) Labour				
Mate	no.	0.05	449.00	22.45
Mazdoor for loading and unloading	no.	0.31	397.00	123.07
b) Machinery				
Tractor 3.60 tonnes capacity	hour	0.31	525.00	162.75
				308.27
Cost of 2.25 cum (3.6 tonnes)				308.27
Cost per cum				137.01

Cost of Haulage Excluding Loading and Unloading

Haulage of materials by Tractor Excluding cost of Loading, Unloading and Stacking

Unit = t.km or cum.km

Taking output (3.60 tonnes load & lead 10 km) = 36 Tonnes.km

Surface Graveled road				
Speed with load : 15 km / hour				
Speed for return trip : 25 km / hour				
(a) Machinery				
Tractor 3.6 tonnes capacity				
Time taken for onward haulage with load	hour	0.667	525.00	350.18
Time taken for empty return trip	hour	0.4	525.00	210.00
				560.18
Cost of 36 tonnes .km				560.18
Rate per 3.6 Tonnes.km				56.02
				Say 56.00
Rate per 1 Tonnes.km				15.56
				Say 15.60
Unsurface Graveled road				
Speed with load : 12 km / hour				
Speed for return trip : 20 km / hour				
(a) Machinery				
Tractor 3.6 tonnes capacity				
Time taken for onward haulage with load	hour	0.833	525.00	437.33
Time taken for empty return trip	hour	0.5	525.00	262.50
				699.83
Cost of 36 tonnes .km				699.83
Rate per 3.6 Tonnes.km				69.98
				Say 70.00
Rate per 1 Tonnes.km				19.44
				Say 19.40
Katchia Track Graveled road				
Speed with load : 10 km / hour				
Speed for return trip : 15 km / hour				
(a) Machinery				
Tractor 3.6 tonnes capacity				
Time taken for onward haulage with load	hour	1	525.00	525.00
Time taken for empty return trip	hour	0.667	525.00	350.18
				875.18
Cost of 36 tonnes .km				875.18
Rate per 3.6 Tonnes.km				87.52
				Say 87.50
Rate per 1 Tonnes.km				24.31
				Say 24.30
Sand Filling in Foundation Trenches as per Drawing & Technical Specification.				
Lead - 1.00 km(Us)+2.00 km (K)				
Cost /m ³	=	137.01	2.0 x 56.00 + 0.0 x 70.00 + 1.0 x 87.50	= 225.67556
				2.25
Say Rs (D)				225.70
				295.57
Total Cost of Sand & carriage by tractor = (C + D) =				521.27
Overhead charges @ 6%				0.00
				521.27

	Add CP @ 0%	0.00			
		521.27			
	Say	521.30			

Rate Analysis

Item No. 2 :- Loading and unloading of Sand by Manual means				
Unit = cum				
Taking output = 2.25 cum				
a) Labour				
Male	no.	0.05	449.00	22.45
Blade door for loading and unloading	no.	0.31	397.00	123.07
b) Machinery				
Tractor 3.60 tonnes capacity	hour	0.31	525.00	162.75
				308.27
Cost of 2.25 cum (3.6 tonnes)				308.27
Cost per cum				137.01

Cost of Haulage Excluding Loading and Unloading

Haulage of materials by Tractor Excluding cost of Loading, Unloading and Stacking

Unit = t.km or cum.km

Taking output (3.60 tonnes load & lead 10 km)= 36 Tonnes.km

Surface Graveled road				
Speed with load : 15 km / hour				
Speed for return trip : 25 km / hour				
(a) Machinery				
Tractor 3.6 tonnes capacity				
Time taken for onward haulage with load	hour	0.667	525.00	350.18
Time taken for empty return trip	hour	0.4	525.00	210.00
				560.18
Cost of 36 tonnes .km				560.18
Rate per 3.6 Tonnes.km				56.00
			Say	56.00
Rate per 1 Tonnes.km				15.56
			Say	15.60
Unsurface Graveled road				
Speed with load : 12 km / hour				
Speed for return trip : 20 km / hour				
(a) Machinery				
Tractor 3.6 tonnes capacity				
Time taken for onward haulage with load	hour	0.833	525.00	437.33
Time taken for empty return trip	hour	0.5	525.00	262.50
				699.83
Cost of 36 tonnes .km				699.83
Rate per 3.6 Tonnes.km				69.98
			Say	70.00
Rate per 1 Tonnes.km				19.44
			Say	19.40
Katcha Track Graveled road				
Speed with load : 10 km / hour				
Speed for return trip : 15 km / hour				
(a) Machinery				
Tractor 3.6 tonnes capacity				
Time taken for onward haulage with load	hour	1	525.00	525.00
Time taken for empty return trip	hour	0.667	525.00	350.18
				875.18
Cost of 36 tonnes .km				875.18
Rate per 3.6 Tonnes.km				87.52
			Say	87.50
Rate per 1 Tonnes.km				24.31
			Say	24.30

Sand Filling in Foundation Trenches as per Drawing & Technical Specification.																			
Lead - 1.00 km(Us)+2.00 km (K)																			
Cost /m ³	=	137.01		2.0	x	56.00	+	0.0	x	70.00	+	1.0	x	87.50	=	225.67556			
2.25																			
																Say Rs (D)	225.70		
																(C)	295.57		
Total Cost of Sand & carriage by tractor = (C + D) =															521.27				
Overhead charges @ 6%															0.00				
															521.27				
Add CP @ 0%															0.00				
															521.27				
Say															521.30				

S.N.	Page No.	WRD SOR	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	Unit	Rate	Amount	Final Rate
1	5.7.7	WRD SOR Page No.	Unit :- Per M				
			Taking Out Put = 30.50 m				
			(Assuming 20nos. Pile sunk 1.525 mtr deep)				
			Total depth sunk				
			20Nos X 1.525 Metre depth = 30.50 meter				
			Labour				
			Carpenter Gr-II	0.25 nos	476.00	119.00	
			Unskilled mazdoor for piling	2.5 nos	397.00	992.50	
						1111.50	
			Add Overhead charge @6%			0.00	
						1111.50	
			Add C.P.@0%			0.00	
						1111.50	
			Rate per meter			36.44	
			Say Rs.			36.40	36.40
2	5.7.8	WRD SOR Page No. 146,147	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				
			Unit :- Per sqm				
			Taking Out Put = 9.30sqm				
			(Assuming strip of 3.05x3.05=9.30sqm)				
			Materials				
			75mm to 100mm long nails	0.25 kg	55.84	13.96	
			Labour				
			Carpenter Gr-II	1 nos.	476.00	476.00	
			Unskilled mazdoor	1 nos	397.00	397.00	
						886.96	
			Add Overhead charge @6%			0.00	
						886.96	
			Add C.P.@0%			0.00	
						886.96	
			Rate per sqm			95.37	
			Say Rs.			95.40	95.40
3	5.7.9	WRD SOR Page No. 147	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				
			Unit :- Per M				
			Taking Out Put = 30.50 M				
			Materials				
			75mm to 100mm long nails	0.5 kg	55.84	27.92	
			Labour				
			Carpenter Gr-II	0.125 nos	476.00	59.5	
			Unskilled mazdoor	0.25 nos	397.00	99.25	
						186.67	
			Add Overhead charge @6%			0.00	
						186.67	
			Add C.P.@0%			0.00	
						186.67	
			Rate per m			6.12	
			Say Rs.			6.10	6.10

4	Supply of Bamboo					
	Bamboo 6m to 8m	1	nos.	141.50	141.50	A
	Gross Truck Capacity (Unit Per%) (280 per Trip)					
	Loading and Unloading of bamboo					
WRD SOR No. 4.3 Page No. 67 & Sr. No 6 page 70	Unit = tonne					
	Taking output = 10 tonnes					
	(a) Labour					
	Mate	0.08	nos	449.00	35.92	
	Mazddor for Loading and Unloading	2	nos	397.00	794.00	
	(b) Machinery					
	Truck 10Tonne Capacity	2	Hour	929.00	1858.00	
					2687.92	
	Rate per Tonne				268.79	B
	Carriage Cost					
WRD SOR No. 4.4a Page No. 68	Lead 5km U/S					
	Unit = t.km					
	Taking output (for 10 tonnes or 5.5 cum load and lead 10					
	Speed with load : 25 km / hour					
	Speed for return trip : 35 km / hour					
	(a) Machinery					
	Truck 10 tonnes capacity					
	Time taken for onward haulage with load	0.4	Hour	929.00	371.60	
	Time taken for empty return trip	0.29	Hour	929.00	269.41	
	Cost for 100 t.km or 55 cum km				641.01	
Cost of Loading and Unloading	Rate per t.km				6.41	C
	Cost/cum	8x241.67			7.68	D=(8*B/280)
		280				
	Cost of Haulage					
	Cost/cum	8(6.41x5+0.00x0+0.00x0)			0.916	E=(8*Lead*C/280)
		280				
					150.10	A+D+E
	Add Overhead charge @6%				0.00	
					150.10	
	Add C.P@0%				0.00	
	Rate per nos.				150.10	150.10
C	WRD SOR Sr. No.275 Page 26	Supply of EC bag including carriage				
	Material					
	Old Empty Cement Bags (Synthetic) (Annexure-1)		Per %		292	
	Add Overhead charge @6%				0	
					292	
	Add C.P@0%				0	
	Rate per %				292.00	292.00

6	5.7.40.1 WRD SOR Page 159	Labour for filling empty cement bags with local 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					
		Unit :- Per % nos					
		Taking Out Put = 100 nos					
		(a) For filling & stitching & stacking					
		Unskilled mazdoor for filling sand into bags and sewing	2 nos	397	794.00		
		Sutali (WRD Sr. 232 Page 25)	0.5 kg	19.75	9.88		
					803.88	F	
		(b) Labour rate for carrying filled bags					
		Unskilled mazdoor for carrying filled bags and placing to work site	3 nos	397	1191.00	G	
		(C) Cost of Sand & carriage by tractor per cum					
		Cost of Sand for 1 cum	1 cum	143.32	143.32	T	
		Carriage including Loading and Unloading			225.70	U	
		Cost Per Cum			369.02	V=T+U	
		(D) Cost of Sand & carriage by tractor per for 100 nos. bag			1253.75	H	
		For 100 Bags 3.4 Cum Sand Required					
		(E) Cost of EC bag per % nos.			292.00	I	
		TOTAL	Per % nos		3540.62	F+G+H+I	
		Add Overhead charge @6%			0		
		Add C.P.@0%			0		
		Say Rs.			3540.62		
					3540.60		35.41
7	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	25 nos.	41.93	1048.25		
8		Rate each			1048.30		1048.30
		Supply of Nylon Crate of size 1mx1mx1m			39.85		
		Material					
		Nylon Crate	Each		39.85		
		Add Overhead charge @6%			0.00		
					39.85		
		Add C.P.@0%			0.00		
		Rate per nos.			39.85		
		Say			39.90		39.90

				Analysis				
9.3	1100	Providing and Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Row						
		Providing and laying reinforced cement						
		Unit = m						
		Taking output = 7.5 m						
		(3 pipes of 2.5 m length each)						
		(B) 1000 mm dia						
		a) Labour						
		Mate						
				day	0.09	449.00	40.41	
		Mason (1st Class)						
				day	0.25	511.00	127.75	
		Mazdoor (Unskilled).						
				day	2.00	397.00	794.00	
		b) Material						
		RCC pipe NP3						
				m	7.50	6,125.90	45,944.25	
							46,906.41	
		c) Add Overheads @ 6%						
							0.00	
							46,906.41	
		d) Add CP @ 00%						
							0.00	
		Cost for 7.5 m = a+b+c+d						
							46,906.41	
		Rate per m = (a+b+c+d)/7.5						
							6,254.19	
		Carriage Cost						
							358.52	
		Total cost per m						
							6,612.708	
						Say	6612.70	

Carriage of materials (By Tractor)

1	1.4		Cost of Haulage excluding Loading & Unloading				
	RCD		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	hour	0.667	525.00	350.18
			Time taken for empty return trip	hour	0.400	525.00	210.00
		b)	Overheads @ 6% on (a)				
			Cost for 36.0 t.km = a+b				
			Rate per t.km = (a+b)/36.00				
						Say	15.56
			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	hour	0.833	525.00	437.33
			Time taken for empty return trip	hour	0.500	525.00	262.50
		b)	Overheads @ 6% on (a)				
			Cost for 36.0 t.km = a+b				
			Rate per t.km = (a+b)/36.00				
						Say	19.44
2	6.6.1.		Labour for laying 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	397.00	1,191.00
		b)	Overheads @ 6% on (a)				0.00
			Rate for 2.832 Cum				
			Rate Per Cum				
							420.55
3	1.1		Loading and Unloading of Stone Boulder, Stone aggregate, Sand, Kankar, Moorum, Brick Bats				
	RCD		Unit = Per Cum				
			Taking output= 2.25 Cum				
			Time required for				
		i)	Positioning of tipper at unloading	day	1 Min		
		ii)	Loading by front end loader 1 cum bucket capacity @ 25 cum	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	449.00	13.47
			Mazdoor for Loading	day	0.72	397.00	285.84
		b)	Machinery				
			Tractor 3.6 t capacity	Hour	0.10	525.00	52.50

				Front end loader 1 cont. bucket capacity	Hour	0.08	1,419.00	117.78
			c)	Overheads @ 6% on (a+b)				0.00
				Cost of 2.25 Cum = (a+b+c)=				469.59
				Rate per Cum=(a+b+c)				208.71
			Note:-	Unloading will be done Manually.				
			Supplying of Brick Bats (With OH)					
			a)	Labour				
				Cost of Labour for Pitching and Light Ramming as per	day			420.55
			b)	Materials				
				Bricks Bats -Basic Rate Taken From RCD S.O.R. Schedule- M:11- 5631 dt. 26.02.2019	Cum	1	1063.00	1063.00
			c)	Overheads @ 6% on (b)				6.00
			d)	Carriage				
			Add:Carriage Charge for Brick bats					630.50
			Total = (a+b+c+d)=					2,114.05
			Total Cost Per Cum=					2,114.05