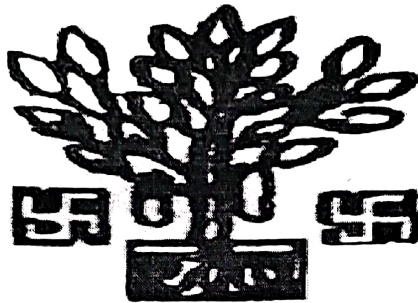


RURAL WORKS DEPARTMENT GOVT OF BIHAR



NAME OF WORKS :- Pipra mai Yusuf Chowk to to Vara Garkati
School hote hue Madrsa tak

BLOCK :- Jokihat

FDR

Phase-I

11,58,751

YEAR(2024-25)

R.W.D., WORKS CIRCLE, KISHANGANJ

R.W.D., WORKS DIVISION, ARARIA

प्रतिवेदन

Pipra mai Yusuf Chowk to to Vara Garkati School hote hue Madrsa tak

पथ का नाम :-

कार्य का नाम :-

Pipra mai Yusuf Chowk to to Vara Garkati School hote hue Madrsa tak

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

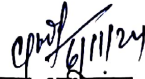
संलग्न प्राक्कलन 2024 को प्रखण्ड में आयी भीषण बाढ़ से क्षतिग्रस्त पथ
..... में बाढ़ क्षतिग्रस्त मरम्मत मद से यातायात चालू करने हेतु तैयार किया गया है जिसकी
प्राक्कलित लागत 11,58,751 (Eleven lakhs fifty-eight thousand seven hundred
का निर्माण MMGSY योनान्तर्गत हुआ है एवं योजना अनुरक्षण अवधि में 5 fifty-one
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।


6/11/24

रानीय अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रशाखा, ज.प्र.दे.प।


6/11/24

सहायक अभियंता,
ग्रामीण कार्य विभाग,
कार्य अवर प्रमण्डल,


6/11/24

कार्यपालक अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रमण्डल,

SUMMARY OF COST ESTIMATE FOR THE PROJECT		
NAME OF ROAD :-	Pipra mai Yusuf Chowk to to Vara Garkat/ School hote hue Madrsa tak	
DISTRICT :-	ARARIA	
BLOCK :-	Jokihat	
Length of Road:-	0.00KM	
Length of Cutting in mtr :-	123.800	
Sl. No.	DESCRIPTION	AMOUNT (LAKHS)
1	Filling of local sand	511261.20
2	Labour for cutting 62mm to 75mm dia bamboo	104055.74
3	Labour for fitting 62mm to 75mm dia bamboo	20275.80
4	Labour for filling empty cement bags with local sand Nylon crate	0.00
5	Supplying of EC bag, of local sand	255986.28
6	Supply and Carriage of brick bats	252172.07
7	Supply, laying and carriage of 1000 mm HPC	0.00
8	Drone Videography Charj Three times	15000.00
	SUB TOTAL COST =	1158751.09
	TOTAL (RS.) =	11,58,751

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J.E 6/11/24

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A.E 6/11/24

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E.E 6/11/24

S.E

Technicolly ^{approved} ~~sanctioned~~ for ₹ 11,58,751.00
(Rupees Eleven Lakhs, Fifty-eight thousand
Seven hundred Fifty-one) only

[Signature]
Superntending Engineer
RWD Work Circle
Kishanganj

Bill of Quantity

NAME OF ROAD :-

Pipra mai Yusuf Chowk to to Vara Garkati School hote hue Madrasa tak

DISTRICT :-

ARARIA

BLOCK :-

Jokihat

Sl. No.	DESCRIPTION OF ITEMS	QUANTITY	UNIT	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	401.69	CUM	1272.78	511261.20
3	Labour for cutting 62 mm to 75mm dia bamboo piles to size and making shoes & driving by jet machine etc. all complete job as per specification & direction of Engineer-in-charge.	1504.00	MTR	69.19	104055.74
4	Labour for fitting & fixing 62 mm 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 etc all complete job as per specification & direction of Engineer-in-charge.	564.00	MTR	35.95	20275.80
5	Labour for fitting 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	0.00	Each	1151.80	0.00
6	Supplying of EC bag, filling of local sand stitching and placing in position as the direction of Engineer-in-charge.	4581.00	Each	55.88	255986.28
7	Supply and Carriage of brick bats upto 8 km breach and placing in breaches and lying of bats, all complete job.	91.40	CUM	2759.12	252172.07
8	Supplaying and carriage of hume pipe 1000 mm dia , all complete job.	0.00	RM	7385.85	0.00
A) SUB TOTAL =					1143751.09
TOTAL COST =					1143751

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6/11/24
J.E

[Signature]
6/11/24
A.E

[Signature]
6/11/24
E/E

ROADS DAMAGED DURING FLOOD

NAME OF ROAD :-										Pipra mai Yusuf Chowk to Vara Garkati School hote hue Madrsa tak									
DISTRICT :-										ARARIA									
BLOCK :-										Jokihat									
Length of Cutting:-										123.80 mtr									
Sl. No.	DESCRIPTION OF ITEMS				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:-1.00km bridge app				cum	1	7.30	(4.5+3.25+3)/3	(4+2.25+1.25)/3	65.40									
	At ch:-1.00km bridge app				cum	1	5.00	(4.5+3.25+3.25)/3	(3.05+2.5+1.05)/3	40.33									
	At ch:-0.850 km				cum	1	25.60	(1.5+1.5)/2	(1.5+1.85+1.5)/3	62.08									
	At ch:-0.880 km				cum	1	21.40	(1.5+1.85)/2	(1.5+2.85+1.75)/3	72.88									
	At ch:-0.900 km				cum	1	3.00	(1.5+2.85)/2	(0.85+2.85+1.65)/3	11.64									
	At ch:-0.950 km				cum	1	25.00	(1.5+2.75)/2	(1.5+2.25+0.85)/3	81.46									
	At ch:-0.960 km				cum	1	20.00	(1.75+1.5)/2	(2.25+1.15+1.85)/3	56.88									
	At ch:-0.990 km				cum	1	3.50	(1.75+1.85)/2	(2.25+1.15+1.85)/3	11.03									
	Deductionfor H.P 1000MM dia (1.23 x 1.23)=1.52				cum	0	0.79	1.52	7.50	0.00									
					cum		total qty :-				401.689	1,272.78	511261.20						
1	Labour for cutting 62 mm to 75mm dia bamboo piles to size and making shoes & driving by jet machine etc. all complete job as per specification & direction of Engineer- in -charge.																		
	At ch:-1.00km bridge app					1	7.3/0.3	4.00		97.33									
	At ch:-1.00km bridge app					1	5/0.3	4.00		66.67									
	At ch:-0.850 km					1	25.6/0.3	4.00		341.33									
	At ch:-0.880 km					1	21.4/0.3	4.00		285.33									
	At ch:-0.900 km					1	3/0.3	4.00		40.00									
	At ch:-0.950 km					1	25/0.3	4.00		333.33									
	At ch:-0.960 km					1	22/0.3	4.00		293.33									

	At ch:-0.990 km		1	3.5/0.3	4.00	total qty:-	46.67	69.19	1,04,055.74
	Mtr.						1504.00		
2	Labour for fitting & fixing 62 mm 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 etc all complete job as per specification & direction of Engineer-in-charge.								
	At ch:-1.00km bridge app		1	7.30	2.5/0.5		36.50		
	At ch:-1.00km bridge app		1	5.00	2.5/0.5		25.00		
	At ch:-0.850 km		1	25.60	2.5/0.5		128.00		
	At ch:-0.880 km		1	21.40	2.5/0.5		107.00		
	At ch:-0.900 km		1	3.00	2.5/0.5		15.00		
	At ch:-0.950 km		1	25.00	2.5/0.5		125.00		
	At ch:-0.960 km		1	22.00	2.5/0.5		110.00		
	At ch:-0.990 km		1	3.50	2.5/0.5		17.50		
	Mtr.		total qty :-				564.00	35.95	20275.80
3	Supplying of EC bag, filling of local sand stitching and placing in position as the direction of Engineer-in-charge.								
	At ch:-1.00km bridge app	cum	1	7.30	0.90	$(4+2.25+1.25)/3$	16.43		
	At ch:-1.00km bridge app	cum	1	5.00	0.90	$(3.05+2.5+1.05)/3$	9.90		
	At ch:-0.850 km	cum	1	25.60	0.90	$(1.5+1.85+1.05)/3$	33.79		
	At ch:-0.880 km	cum	1	21.40	0.90	$(1.5+1.85+1.75)/3$	32.74		
	At ch:-0.900 km	cum	1	3.00	0.90	$(0.85+2.85+0.65)/3$	3.92		
	At ch:-0.950 km	cum	1	25.00	0.90	$(1.5+1.25+0.85)/3$	27.00		
	At ch:-0.960 km	cum	1	22.00	0.90	$(2.25+1.15+0.85)/3$	28.05		
	At ch:-0.990 km	cum	1	3.50	0.90	1.25	3.94		
	Total No of E C Bags(0.034cum=100Bags)		155.76 /			0.034	4581.00		
	Each		Say No of Bage :-				4581.00	55.88	255986.280

4	Providing laying & filling Geo bags of size 1m X 0.700m (Type A) 300 GSM nonwoven weight 420 gm volume of filled bag 0.070 cum Weight of filled Geo bag 126 kg with local sand including stitching in four lines by approved Nylon thread with Staching machine and generator, stacking and placing after loading, Unloading and carriage with the help of Trolley within 150 mtr. lead and all complete as per specification and direction of E/I.									
	At ch:-23500 m	cum	0	7.30	4.50	2.73	0.00			
	(0.07m ³ =1 no. of Geo Bags)			0.00	/	0.07	0.00			
	Each						0.00	332.74		0.000
5	Supply and Carriage of brick bats upto 8 km breach and placing in breaches and lying of bats, all complete job.									
	At ch:-1.00km bridge app	cum	1	7.30	(4.5+3.25+3)/3	(0.45+0.35+0.35)/3	10.03			
	At ch:-1.00km bridge app	cum	1	5.00	(4.5+3.25+3.25)/3	(0.25+0.65+0.5)/3	8.56			
	At ch:-0.850 km	cum	1	25.60	(1.5+1.5)/2	(0.45+0.35+0.35)/3	14.72			
	At ch:-0.880 km	cum	1	21.40	(1.5+1.85)/2	(0.45+0.45+0.25)/3	13.74			
	At ch:-0.900 km	cum	1	3.00	(1.5+2.85)/2	(0.45+0.65+0.55)/3	3.59			
	At ch:-0.950 km	cum	1	25.00	(1.5+2.75)/2	(0.45+0.55+0.55)/3	27.45			
	At ch:-0.960 km	cum	1	22.00	(1.75+1.5)/2	(0.25+0.35+0.35)/3	11.32			
	At ch:-0.990 km	cum	1	3.50	(1.75+1.85)/2	(0.35+0.35+0.25)/3	2.00			
		cum		total qty :-				91.40	2,759.12	252172.07

FINAL RATE UNDER WORKS CIRCLE KISHANGANJ

S.No	Description of Item	Unit	Final Rate (Excluding GST, Seigniorage & L. Cess)	Final Rate (Including GST, Seigniorage & L. Cess)	S.F. Per Cum / Per Bag BAG
1	EARTH WORK	CUM	459.003	549.740	3.530
2	BRICK BAT	CUM	2209.576	2759.115	129.720
3	G.S.B	CUM	4328.501	5172.300	21.380
4	SAND BAG (Cement Bag)	Each	46.550	55.880	0.490
5	BAMBOO PILE	Per Mtr.	58.140	69.186	
6	BAMBOO CHACHRI	Per Mtr.	302.258	359.690	
7	BAMBOO RUNNER	Per Mtr.	30.210	35.950	
8	HUME PIPE (1000 mm Div)	Per Mtr.	6206.598	7385.850	
9	HUME PIPE (600 mm Div)	Per Mtr.	2492.260	2965.790	
10	STEEL DRUM SHEET	Per Sqr.Mtr.	215.352	256.270	
11	GEO BAG WITH SAND	EACH	967.490	1152.320	1.010
12	EACH N.C. BAG WITH SAND (Cement Bag)	Each E.C	967.490	1151.800	0.490
13	LOCAL SAND	CUM	721.110	1272.780	0.490

Junior Engineer

Assistant Engineer

Executive Engineer

Superintending Engineer
Rural Works Department
Works Circle Kishanganj

BASIC RATES

(A) Labour

No.	Description of Labour	Unit	Rate (Rs.)
-01	Bhisti	day	373
-02	Bitumen Sprayer(semi skilled)	day	393
-03	Blacksmith special	day	503
-04	Blaster, 2nd class	day	619
-05	Carpenter 1st Class	day	503
-06	Chips spreader, semi-skilled	day	449
-07	Chiseller (Skilled)	day	577
-08	Dresser (Skilled)	day	472
L-09	Driller, 2nd class	day	449
L-10	Electrician,skilled	day	476
L-11	Fitter, skilled	day	511
L-12	Mason (1st class)	day	503
L-13	Mason (2nd Class)	day	449
L-14	Mate, Semi skilled	day	397
L-15	Mazdoor (Unskilled)	day	373
L-16	Mazdoor (Semi skilled)	day	388
L-17	Mazdoor (Skilled)	day	472
L-18	Painter (1st class)	day	476
L-19	Plumber, Special	day	476
L-20	Surveyor	day	454
-21	White Washer	day	476
-22	Head blacksmith	day	531
-23	Welder 1 St Class	day	584
	Carpenter Head	day	531
	Night Gurad	day	415

Basic Rates Taken From SOR, Seventeenth Edition, Road Construction Department, Govt. of Bihar
effective from 01/04/2023

BASIC RATES (B) Material					
Sl. No.	Description	Unit	Basic Rate as per SOR	Add Royalty	Final Rate With Royalty
M-001	Bamboo (1st Class) 100 mm - 100 mm dia. 6.0 m -8.0 m long (per mtr.- 23.52 Rs.)	No.	188.00		188.00
M-002	Bamboo (1st Class) 100 mm - 100 mm dia. 6.0 m -8.0 m long (per mtr.- 23.52 Rs.)	No.	188.00		188.00
M-003	Bamboo (1st Class) 50 mm - 100 mm dia. 6.0 m -8.0 m long (per mtr.- 14.71 Rs.)	No.	118.00		118.00
M-004	Bamboo (1st Class) 50 mm - 100 mm dia. 6.0 m -8.0 m long (per mtr.- 14.71 Rs.)	No.	118.00		118.00
M-005	Bamboo (2nd Class) 75mm dia. 1.8 m - 6.0 m -8.0 m long (per mtr.- 22.03 Rs.)	No.	176.00		176.00
M-006	Bamboo (2nd Class) 75mm dia. 6.0 m -8.0 m long (per mtr.- 22.03 Rs.)	No.	176.00		176.00
M-007	Brick Bats	cum	1063.00	18.00	1081.00
M-008	Selected earth (Including @ Rs. 33.00 per cum & compensation @ Rs. 2.25 Per Cum	cum	2.25	33.00	35.25
M-009	Empty Cement Bag IS 11652:2000	Nos.	11.11		11.11
M-010	Steel Drum 300 mm dia 1.2 m high / empty bitumen drum	Nos.	170.13		170.13
M-011	Sand bags (Cost of sand and Empty cement bag)	Nos.	7.31	2.59	9.90
M-012	Sutli (Brown)	kg	20.59		20.59
M-013	Granular material (Natural occurring, soil gravel mixture / quarry waste, kankar, laterite, dhandla	cum	84.03	83.00	167.03
M-014	Nails	kg	108.00		108.00
M-014	RCC Pipe NP3 (1000 mm dia)	m	5787.23		5787.23
M-015	RCC Pipe NP3 (600 mm dia)	m	2310.00		2310.00
M-015	Sand (Fine) at source	cum	69.75	75.00	144.75
M-016	Empty Steel Drum 300 mm dia 1.2 m height	Nos.	170.13		170.13
M-016	Water	kl	60.30		60.30
M-017	Geo Bags	Each	124.00		124.00
M-018	G.S.B.	cum	69.75	75.00	144.75

(Basic Rates Taken From SOR, Seventeenth Edition, Road Construction Department, Govt. of Bihar effective from 01/04/2023.

BASIC RATES
(C) USAGE RATES OF PLANT & MACHINERY

Sl. No.	P&M Code	Description of		Output of Machine		Usage Rates In Rs.	
		Machine	Activity	Unit	Output	Unit	Rate
PM-009	P&M-012	Crane upto 80 t	Lifting of materials			per hour	5,573.00
PM-010	P&M-015	Dozer D 80 - A12 Dozer D 50 - A15	Dozing cutting	cum h	260.00	per hour	2,997.00
PM-011				cum h	120.00		4,326.00
PM-014	P&M-017						
PM-017	P&M-026	Front end-loader 1 cum bucket capacity @ 45 cum hour	Loading Aggregates	cum h	45.00	per hour	1,119.00
PM-021	P&M-044	Hydraulic Excavator of 1 cum bucket	Excavation	cum h	100.00	per hour	2,272.00
PM-032		Three wheel 80-100 kN Static Roller	Compaction Rolling			per hour	1,593.00
PM-033			Earth - Embankment or sub-grade	cum h	80.70		1,593.00
PM-034			Sub-base G-I	cum h	10.00		1,593.00
PM-035			Sub-base G-II G-III	cum h	8.00		1,593.00
PM-036			WMM	cum h	16.00		1,593.00
PM-037			BUSG	cum h	10.00		1,593.00
PM-038			BM 50 75 mm	cum h	12.00		1,593.00
PM-039			Premix 20 mm	sqm h	250.00		1,593.00
PM-040			Seal Coat	sqm h	500.00		1,593.00
PM-041			Surface Dressing 1st Coat	sqm h	400.00		1,593.00
PM-042	P&M-048		Surface Dressing 2nd Coat	sqm h	500.00		1,593.00
PM-043	P&M-053	Tipper 5.5 cum 10 t	Carriage	cum trip	5.50	per hour	1,426.00
PM-044	P&M-055	Tractor with Disc Harrows	Pulverisation of soil	cum h	80.00	per hour	693.00
PM-045	P&M-053	Tractor with ripper @ 60 cum per hour	Ripping Pavements, uprooting trees	cum h	60.00	per hour	697.00
PM-046	P&M-054	Tractor with trolley with Grading equipment	Transportation of materials	t/trip	3 to 5	per hour	676.00
PM-047	P&M-057	Tractor with Rotavator	Scarifier	cum h	25.00	per hour	693.00
PM-048	P&M-059	Truck 10 t capacity	Carriage	cum trip	5.50	per hour	1,054.00
PM-049		Vibratory roller 80-100 kN	Compaction of soil WMM	cum h	100.00	per hour	2,053.00
PM-050	P&M-060		Compaction of BM	cum h	60.00		2,053.00
PM-051	P&M-060		Carriage of water	litre h	12000.00	per hour	752.00
PM-063	P&M-060	generator 3KVA	stitching	per hour		per hour	74.00
PM-064	P&M-060	stitching machine	stitching	day		day	50.00

(Basic Rates Taken From SOR, Seventeenth Edition, Road Construction Department, Govt. of Bihar effective from 01/04/2023.

SUMMARY OF CARRIGE COST

Sl. No.	Item	Unit	Amount (Rs.)
1	Earth Work	Cum	274.42
2	Brick Bats	Cum	521.97
3	Bamboo	Per Mtr.	3.00
4	G.S.B.	Cum	2960.13
5	Local Sand	Cum	345.14
6	HUME PIPE (1000 mm DIA)	Per Pipe	745.93
7	HUME PIPE PIR METER	Per Mtr.	298.37
8	HUME PIPE (600 mm DIA)	Per Pipe	310.88
9	HUME PIPE (600 mm DIA)	Per Mtr.	124.35
10	Local Sand	Cum	345.10

Comparison of carriage cost of Material via Road from different sources																
Sl No	Item	Unit	Source	Pucka / Surface						Katcha				Loadi ng & Unloa	Carriage by Road	Total
1	By Tractor															
	A	Earth Work Via Road	Cum	3.60												
				2.04	x 20.04	x 0 Km	= Rs 0.00			x 31.30	x 1 Km	= Rs 55.24	219.18	274.42		
B	Brick Bat Via Road	Cum	3.60													
			2.04	x 20.04	x 7 Km	= Rs 247.55			x 31.30	x 1 Km	= Rs 55.24	219.18	521.97			
	B	Bamboo Via Road	pet mtr.	Local	3.60	x 20.04	x 2 Km	= Rs 1.15			x 31.30	x 1 Km	= Rs 0.89	0.96	1.00	
D	Local Sand Via Road	Cum	Local	126.00												
				3.60												
				2.04	x 20.04	x 2 Km	= Rs 70.73			x 31.30	x 1 Km	= Rs 55.24	219.18	345.14		
	2	By Tipper	Cum	Siliguri	8.00	x 9.83	x 177 Km	= Rs 2789.43								
4.99																
3		By Truck														
A	Hume Pipe (1000 mm) Via Rod	Mtr.	purnea	8.00												
				10.00	x 7.27	x 53 Km	= Rs 308.25			x 17.60	x 0 Km	= Rs 0.00	437.68	745.93		
	A1	Rate Per Mtr. Pipe	Mtr.	purnea							Rate per mtr				298.37	298.37
B	Hume Pipe (600 mm) Via Road	Mtr.	purnea	8.00												
				25.00	x 7.27	x 53 Km	= Rs 123.30			x 17.60	x 0 Km	= Rs 0.00	187.58	310.88		
	B1	Rate Per Mtr. Pipe	Mtr.	purnea							Rate per mtr				124.35	124.35

Cost of Haulage Excluding Loading & Unloading as per SO. Subjected to Verification of Lead

Junior Engineer
R.W.D. Works Section

Asstt. Engineer
R.W.D. Works Sub - Division,

Executive Engineer
R.W.D. Works

Sl. No.	Item No.	Description	Unit	Qty	Rate	Amount in Rs.
Unloading of Material (By Tractor)						
Loading and unloading of items: Boulder, Crushed aggregates, waste / Curbside / materials						
This is for loading and unloading work from and to the dumping, stacking for storage and unloading from the storage and return trip.						
		Unit = cum				
		Taking output = 2.25 cum				
		Time required for				
	(i)	Positioning of tractor at loading point				
	(ii)	Loading by front end loader 1 cum bucket capacity @ 25 cum	min	1 min		
		Total	min	5 min		
				6 min		
	a)	Labour				
		Male				
		Mazdoor (Unskilled)	day	0.030	192.00	11.91
	b)	Machinery	day	0.720	171.00	249.56
		Tractor 3.6 Tonnes Capacity				
		Front end loader 1 cum bucket capacity @ 25 Cum/hour	hour	0.100	676.00	67.60
		Cost for 2.25 cum = a+b+c	hour	0.081	1,419.00	117.79
		Rate per cum = (a+b+c)/2.25				165.85
		Total per cum	cum			207.044
1.10		Haulage excluding Loading & Unloading	cum			207.044
Haulage of materials by truck excluding cost of Loading, Unloading and stacking						
Unit = 7km						
		Taking output 3.6t load and lead 10km = 36t/km				
		Case - I: Surfaced Road				
		Speed with load : 15km per hour				
		Speed while returning empty : 25km per hour				
	a)	Machinery				
		Tractor 3.6 tonnes Capacity				
		Haulage with load				
		Empty return trip	hour	0.667	676.00	450.89
		Cost for 36t/km = a+b+c	hour	0.400	676.00	270.40
		Cost for 1 t.km = a+b/36				721.29
		Total per t per km				20.040
		Case - II Kutcha Track and Track in River Bed / Nallah Bed and Choe Bed				20.040
		Speed with load : 10km per hour				
		Speed while returning empty : 15km per hour				
	a)	Machinery				
		Tractor 3.6 tonnes Capacity				
		Haulage with load				
		Empty return trip	hour	1.00	676.00	676.00
		Cost for 36t/km = a+b+c	hour	0.667	676.00	450.89
		Cost for 1 t.km = a+b/36				1126.89
		Total per t per km				31.300
2						31.300
Carriage Of Material (By Tipper)						
1.1		Loading and Unloading Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by Manual Means				
	(1)	Loading of lime, Aggregates, Stone boulder, Brick aggregate, Kankar, Building Rubbish, Crushed Slag Stone for masonry work by manual means including a lead upto 30m				
		Unit = cum				
		Taking output = 5.5 cum				
		Time required for				
	(i)	Position of tipper at loading point				
	(ii)	loading by front end loader 1 cum bucket capacity @25		1Min		
	(iii)	maneuvering, reversing, dumping and turning for return		13Min		
	(iv)	Waiting time unforeseen contingencies etc.		2Min		
		Total		4Min		
	b)	Machinery		20Min		
		Tipper 5.5 Tonnes Capacity				
		Front end loader 1 cum bucket capacity @ 25 Cum/hour	hour	0.330	1,426.00	470.58
		Cost for 5.5 cum = a+b+c	hour	0.330	1,419.00	468.27
						938.85

		Rate per cum = $(a+b+c)/5.5$				170.70	
1.10		Total per cum		cum		170.700	
		Haulage excluding Loading & Unloading		cum			
		Haulage of materials by truck excluding cost of Loading, Unloading and stacking					
		Unit 1km					
		Taking output 10t load and lead 10km - 100t km					
		Case- I : Surfaced Road					
		Speed with load : 25km per hour					
		Speed while returning empty : 35km per hour					
a)		Machinery					
		Tipper					
		Haulage with load					
		Empty return trip					
		Cost for 100t km a b c		hour	0.40	1426.00	570.40
		Cost for 1 t km = $a+b/100$		hour	0.29	1426.00	413.54
		Total per t per km				983.94	
		Case - III Kutcha Track and Track in River Bed / Nallah Bed and Choe Bed				9.830	
		Speed with load : 10km per hour					
		Speed while returning empty : 15km per hour					
a)		Machinery					
		Tipper					
		Haulage with load					
		Empty return trip					
		Cost for 100t km a b c		hour	1.00	1426.00	1426.00
		Cost for 1 t km = $a+b+c/100$		hour	0.67	1426.00	955.42
		Total per t per km				2381.42	
						23.81	
						23.810	
3		Carriage Of Material (By Truck)					
1.10		Haulage excluding Loading & Unloading					
		Haulage of materials by truck excluding cost of Loading, Unloading and stacking					
		Unit 1km					
		Taking output 10t load and lead 10km - 100t km					
		Case- I : Surfaced Road					
		Speed with load : 25km per hour					
		Speed while returning empty : 35km per hour					
a)		Machinery					
		Truck					
		Haulage with load					
		Empty return trip		hour	0.40	1054.00	421.60
		Cost for 100t km a b c		hour	0.29	1054.00	305.66
		Cost for 1 t km = $a+b/100$				727.26	
		Total per t per km				7.270	
		Case - III Kutcha Track and Track in River Bed / Nallah Bed and Choe Bed				7.270	
		Speed with load : 10km per hour					
		Speed while returning empty : 15km per hour					
a)		Machinery					
		Truck					
		Haulage with load					
		Empty return trip		hour	1.00	1054.00	1054.00
		Cost for 100t km a b c		hour	0.67	1054.00	706.18
		Cost for 1 t km = $a+b+c/100$				1760.18	
		Total per t per km				17.60	
1.9		Loading and Unloading of Hume Pipes				17.600	
(i)		Loading of RCC Hume pipes by mechanical means including a lead upto 30 m					
A.		1000 / 1200 mm dia Hume pipe					
		Unit = per pipe					
		Taking output = 9 pipes					
a)		Labour					
		Mate		day	0.02	397.00	7.94
		Mazdoor (Unskilled)		day	0.50	373.00	186.50
b)		Machinery					
		Truck		hour	0.33	1054.00	347.82
		Crane		hour	0.33	5573.00	1839.09
		Cost for 9 pipes = $a+b+c+d$				2381.35	

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9.5	b)	Machinery				
		Tractor mounted grader arrangement				4864.56
		Three wheel BP 100 kN static roller @ 10 cum per hour	hour	12.00	676.00	8112.00
		Tractor with Rotavator 25 cum per hour	hour	30.00	1593.00	47790.00
		Water tanker 6 K capacity	hour	12.00	693.00	8316.00
		Material	hour	5.00	732.00	3760.00
		Well graded granular sub base material as per Table 400.1				67978.00
		GSE				
		Cost of 300 cum without Carriage = (a+b+c+d+e)	cum	1.28	167.03	213.80
		A) Basic Cost per cum = (a+b+c+d+e)/300				7056.36
	c)	CARRIAGE	cum			243.521
		G.S.B				
		Carriage cost of 300 cum	Cum	414.00	2960.13	1225493.82
		B) Carriage cost per cum				1225493.82
		Rate per cum = (A+B)				4084.98
		Total per cum	CUM			4328.501
		Labour Cess @ 1%	CUM			4328.501
		G.S.T. @ 18%				43.285
		Add Seigniorage Fee @ 10 % of Materials				779.130
		Total Cost of 1 cum 1% Cess & 18 % GST =	cum	1.28	167.03	21.38
9.5	1100	Providing and laying reinforced 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 Clause 1106.				5,172.296
		B. 1000 MM DIA (Single Row)				
		a) Material				
		RCC NP3 pipe including collar				
		b) Labour	m	7.50	5787.23	43404.23
		Mate				
		Mason (1st class)	day	0.09	397.00	35.73
		Mazdoor (Unskilled)	day	0.25	503.00	125.75
		Cost for 7.5m = (a+b+c)	day	2.00	373.00	746.00
		A) Basic Cost per m = (a+b)/7.5				44311.71
	(d)	Rate per m of Pipe	m			5908.23
		CARRIAGE COST				5908.23
		NP3 Pipe				
		Carriage cost of 7.5 m	m	7.5	298.37	2237.78
		Carriage cost per m				2237.78
		Rate per m with Carriage	m			298.37
		Total per m	m			6,206.598
		Labour Cess @ 1%	m			6,206.598
		G.S.T. @ 18%				62.066
		Total Cost of 1 mtr. 1% Cess & 18 % GST =				1,117.188
9.5	C. 600 MM DIA (Single Row)	a) Material				7,385.852
		RCC NP3 pipe including collar				
		b) Labour	m	7.50	2310.00	17325.00
		Mate				
		Mason (1st class)	day	0.04	397.00	15.88
		Mazdoor (Unskilled)	day	0.12	503.00	60.36
		Cost of 7.5m = (a+b+c+d)	day	0.96	373.00	358.08
		A) Basic Cost per m = (a+b)/7.5				17759.32
		Rate per m of Pipe	m			2367.91
		CARRIAGE COST				2367.91
		NP3 Pipe				
		Carriage cost of 7.5 m	m	7.5	124.35	932.63
		B) Carriage cost per m				932.63
		Rate per m with Carriage	m			124.35
		Total per m	m			2,492.260
		Labour Cess @ 1%	m			2,492.260
		G.S.T. @ 18%				24.923
		Total Cost of 1 mtr. 1% Cess & 18 % GST =				448.607
3	57.40.1	Labour for filling empty cement bags with local sand, stitching the bags and placing including supply of suttu etc. all complete as per approved design, specification and direction E/I.				2,965.789

Unit = Per % Nos.				
(A) For Filling & Stitching & Stacking				
Labour				
Skilled Labour for filling sand into bags and sewing	No.	2.00	472.00	314.00
(B) Labour Rate For Carrying & Placing filled 1 C. Bags				
Labour				
Skilled Labour for Carrying filled bags and placing to work site	No.	3.00	472.00	1416.00
TOTAL =			Say.	2370.30
Per % Nos. (B) =				2370.30
Rate per bag (A+B) = /100				23.70
(C) Cost of empty cement bag & cost of sand	each			11.11
(D) Carriage cost				
Tractor with trolley	cum	0.034	345.14	11.73
(G) Total = (A+B+C+D) =				46.55
Labour Cess @ 1%				0.465
G.S.T. @ 18%				8.379
Add Seigniorage Fee @ 10 % of Materials				0.49
Total Cost of 1 E.C.Bag 1% Cess & 18 % GST =	cum	0.034	144.75	55.882
Supply Labour for fitting and fixing 62 mm to 75 mm dia bamboo runners in position at every verticle pile with 150 mm long nails or 28 swg G.I. wire including cost of G.I. or nails complete job as per specification and direction				
Unit = Per mt.				
Taking Out Put = 30.50 m				
(i) Materials				
Bamboo	m	30.50	20.21	616.41
Nails	kg	0.50	108.00	54.00
(ii) Labour				
Carpenter Gr-II	No.	0.125	531.00	66.38
Unskilled Labour	No.	0.25	373.00	93.25
Rate for 30.5 m				830.04
TOTAL =				830.04
Rate per mt				27.21
(iii) Carriage cost				
bamboo	mt	1	3.00	3
Total Cost with Carriage				30.21
Labour Cess @ 1%				0.302
G.S.T. @ 18%				5.439
Total Cost of 1 mtr. 1% Cess & 18 % GST =				35.955
Labour for cutting 62 mm to 75 mm dia bamboo piles in size and making shoes and driving etc. complete bob as per specification and direction E/I.				
Unit = Per mt.				
Taking Out Put = 30.50 m				
Assurning				
20 no pile sunk 1.525 m deeps				
Total depth sunk 30.50 m				
(i) Materials				
Bamboo	m	30.50	20.21	616.41
(i) Labour				
Carpenter Gr-II.	No.	0.25	531.00	132.75
Unskilled Labour for piling	No.	2.50	373.00	932.5
Rate for 30.5 m				1681.66
Total				1681.66
Rate for 1 m				55.14
Carriage Cost of Bamboo	per mtr.			3.00
Total Cost with Carriage				58.14
Labour Cess @ 1%				0.581
G.S.T. @ 18%				10.465
Total Cost of 1 mtr. 1% Cess & 18 % GST =				69.182

Labour for fitting and and fixing Steel Drum 300 mm dia 1.2 m high as per specification and direction				
(Assuming Per Mtr = 3.14x0.30 = 0.942 mtr)				
Area of Assuming in one Drum = 0.942x1.20 = 1.130 sqm				
One sqm sheet Cost = 127.80/1.130 = 113.12 Cost				
Unit = per sqm				
Taking Out = 100 sqm				
a	Labour			
	Hammer man			2124.00
b	Materials			
	Mazdoor (Unskilled)	No.	4.00	531.00
	Carpenter 1st Class	No.	4.00	373.00
	Nails	No.	4.00	303.00
	Steel Drum sheet	kg	5.00	170.13
		Nos.	88.5	170.13
Rate Per m = (a+b+c)/100				15056.51
Labour Cess @ 1%				215.352
G.S.T. @ 18%				2.154
Total Cost of 1 mtr. 1% Cess & 18 % GST =				38.763
Labour for fitting and and fixing split bamboo woven chachari in position with 20 cwg G.I. wire of 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				256.268
(Assuming strip of 3.05x3.05 = 9.30 sqm				
Unit = per sqm				
Taking Out = 9.30 sqm				
a	Labour			
	Carpenter Gr-II			
b	Materials			
	Mazdoor (Unskilled) for pilling	No.	1.00	531.00
	Bamboo	No.	1.00	373.00
	Nails	Mtr.	10.00	188.00
		kg	0.25	108.00
Rate Per m = (a+b+c)/9.30				2811.000
Labour Cess @ 1%				302.258
G.S.T. @ 18%				3.023
Total Cost of 1 mtr. 1% Cess & 18 % GST =				54.406
Providing laying & filling Geo bags of size 1m X 0.700m (Type A) 300 GSM nonwoven weight 420 gm volume of filled bag 0.070 cum generator, stacking and placing after loading, Unloading and carriage with the help of Trolley within 150 mtr. lead and all complete as per specification and direction of E/I.				359.687
Unit = Each Bag				
Taking Out = 40 Nso.				
Labour				
	Unskilled Loading For filling stacking			
	Skilled labour for stacking	nos	2	373.00
	Unskilled labour for carrying and placing	nos	0.33	472.00
	Mate	nos	4.00	373.00
	Stiching Machine	nos	0.25	397.00
	Tractor with trolley	day	0.33	50.00
	Generator 3KVA	day	1.00	676.00
	Total	hrs	20.67	74.00
	Rate per bag (total/40) (A)			1529.58
	charge for placing & dumping			4715.09
(ii)	unskilled labour for loading unloading & dumping			117.88
	Mate	nos	16	373.00
	Tractor with trolley	nos	1	397.00
	Total	each	4	676.00
	Rate per bag (Total/256) (B)			2704.00
	Matroials			9,443.000
	cost of Geo Bag			36.887
	Total cost (a+b+c)	each	1	124.00
				124.00
				278.764

					Rate per bag
					Labour Cess @ 1%
					G.S.T. @ 18%
					Add Seigniorage Fee @ 10 % of Materials
					Total Cost of 1 Geo Bag 1% Cess & 18 % GST =
					Labour for filling empty cement bags with local sand checking the bags and putting in Nylon crates of size (1m x 1m x 1m) with a lead of 150 m including supply of cut etc. and placing the final crates in water portion within a limit 90 as all complete as per department design specification and direction of P/I.
(ii)	(i)	Unit = Each N/C			
	(ii)	(i) Labour Cost for filling bags in one Nylon crate in dry portion,			
		(ii) Placing of filed N/C with 30 m lead in water portion			
		Labour			
		Mate			
		Labour(Skilled)			
		Labour(Unskilled)			
		Hence, Total Labour for 100 cft.			
		Taking one E.C. Bags to contain 1.20 cft. Of sand			
		Hence, labour rate for placing one filed N.C.			
(iii)		Hence rate for muqm crate on water portion (I+II)			
		Labour Cess @ 1%			
		G.S.T. @ 18%			
		Add Seigniorage Fee @ 10 % of Materials			
		Total Cost of 1 E.C.1% Cess & 18 % GST =			
		local sand Filling in foundation trenches as per drawing and technical specification	cum	0.034	144.75
		local sand Filling in foundation trenches as per drawing and technical specification Clause 305.3.9			
(l)		Sand filling			
	i.	Unit = cum			
	a)	Labour			
		Mate			
		Mazdoor (Unskilled)	day	0.01	397.00
b)		Material	day	0.30	373.00
		Sand (assuming 20 per cent voids)			111.90
		Overheads @ 6 % on (a)	cum	1.20	144.75
		CARRIAGE COST			17.37
		sand			306.94
		Rate per cum = a+b+c	Cum	1.2	345.14
		Total Cost including 1 % LABOUR CESS			414.17
		G.S.T. @ 18%			721.11
		Add Seigniorage Fee @ 10 % of Materials			7.21
		Total Cost of 1 E.C.1% Cess & 18 % GST =			129.80
					0.49
					1272.78