

RURAL WORKS DEPARTMENT



GOVERNMENT OF BIHAR

NAME OF ROAD:- KHAIRKHA TO ADIWASI TOLA

DIVISION:- R.W.D, WORKS DIVISION, FORBESGANJ

CIRCLE:- R.W.D, WORK CIRCLE, KISHANGANJ

BLOCK:- FORBESGANJ

ESTIMATED COST

1656254.00

प्रतिवेदन

पथ का नाम - Khai Khan to Adiwasi tola

कार्य का नाम - FDR/2024-25

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

संलग्न प्राक्कलन 2024 को प्रखण्ड में आयी भीषण बाढ़ से क्षतिग्रस्त Khai Khan to Adiwasi tola में बाढ़ क्षतिग्रस्त मरम्मत मट से यातायात चालू करने हेतु तैयार किया गया है जिसकी प्राक्कलित लागत 1656254/- है। उक्त पथ का निर्माण m.m.b.s.y यो नान्तर्गत हुआ है एवं योजना अनुदान अवधि में out of m.m.b.s.y 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।

12/11/24

कनीय अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रशाखा, Forbesganj

12/11/24

सहायक अभियंता,
ग्रामीण कार्य विभाग,
कार्य अवर प्रमण्डल, Forbesganj

12/11/24

कार्यपालक अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रमण्डल, Forbesganj

Inspection Report for Flood Damage Work

Date: 12/11/2014

1. Name of P.U.s: E.E Forbesgani
2. Name of Block: Forbesgani
3. Name of Road: Khaikhan to Adiwashi tola

A. For Road

1. Damage Location/Chainage :-
2. Damage Length :- 15.70m, 36.00m, 35.00m
3. Nature of Damage: wash out
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 :- 86.00 (M)

B. For Bridge

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 :-

Signature of JE/AE/EE
12/11/2014

Signature
12/11/2014
AE

Signature
12/11/2014

(Name of Inspector)

Signature
12/11/2014

Abstract of Cost

Name of Work : Estimate for Repairing/Restoration/Making Motorable Roads
Damaged during flood in 2024 in ARARIA District

Name of Road:

KHAIRKHA TO ADIWASI TOLA

Block: FORBESGANJ

District: ARARIA

Divison : RWD, Works Division, FORBESGANJ

Circle: RWD, Work Circle, KISHANGANJ

Sl No.	Description	Unit	Quantity (m3)	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.				
		Cum	789.97	1287.25	1016884.59
2	Labour for cutting 62mm 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.				
		Mtr.	1032.00	72.518	74838.58
3	Labour for fitting & fixing 62mm to 75mm 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.				
		Mtr.	258.00	36.179	9334.18

4	Supplying of EC bag, filling of local sand, stitching and placing in position as per the direction of Engineer-in-charge.				
		Per Bags	5730.96	55.882	320257.64
5	Supply and Carriage of brick bats upto 8 km breach and placing in breaches and lying of bats, all complete job.				
		Cum	78.75	2792.877	219939.06
6	Providing of drone service and drone surveying as per I/E				
		PER TRIP	3.00	5000.000	15000.00
	TOTAL AMOUNT =				1656254.05
	SAY TOTAL AMOUNT =				1656254.05
					1656254.00

[Signature]
JE

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12/11/24

AE

EE

WD SUB DIVISION-FORBESGANJ

RWD SUB DIV.
FORBESGANJ

RWD WORKS DIV. FORBESGANJ

Technically approved for ₹ 1656254.00 (Rupees sixteen lakh fifty six thousand two hundred fifty four only).

[Signature]
16/11/24
Superintending Engineer
Rural Works Department
Works Circle, Kishanganj
Kishanganj
16/11/24
Eo.

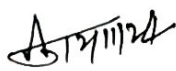
Detailed Estimate

Name of Road:

KHAIRKHA TO ADIWASI TOLA

No.	Items of Works	Nos.	L (m)	B (m)	D (m) IN (Av.)	Quantity (m3)
	Filling of local sand obtained from river bed, watering & ramming, all complete job as per specification & direction of Engineer-in-charge.					
		1	15.00	$(4.30+4.60+5.0)/3$	$(1.00+1.50)/2$	86.88
		1	36.00	$(4.10+4.60+3.20)/2$	$(1.0+2.50+1.0)/3$	321.30
		1	35.00	$(4.10+4.60+3.20)/2$	$(1.20+2.50+1.80)/3$	381.79
					TOTAL=	789.97
					Total Qty =	789.97
	Labour for cutting 62mm 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.					
		1	15.00	3.00	4.00	180.00
		1	36.00	3.00	4.00	432.00
		1	35.00	3.00	4.00	420.00
					Total Qty =	1032.00
	Labour for fitting & fixing 62mm to 75mm 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.					
		1	15.00	3.00	0.00	45.00
		1	36.00	3.00	0.00	108.00
		1	35.00	3.00	0.00	105.00
					Total Qty =	258.00

Supplying of EC bag, filling of local sand, stitching and placing in position as per the direction of Engineer-in-charge.					
	1	15.00	$(1.45+0.90)/2$	$(1.00+1.50)/2$	22.03
	1	5.50	$(0.45+0.90)/2$	$(0.50+0.30)/2$	1.49
	1	39.00	$(0.45+1.0)/2$	$(0.60+2.40+0.60)/3$	33.93
	1	36.00	$(0.45+1.0)/2$	$(1.0+2.50+1.0)/3$	39.15
	1	35.00	$(0.45+1.0)/2$	$(1.20+2.3+1.20)/3$	39.75
	1	29.00	$(0.45+1.0)/2$	$(0.60+2.5+0.60)/3$	25.93
				TOTAL=	162.28
Total No. of EC Bags = (162.28×35.315)					5730.96
				SAY NO OF BAGE=	5731
Supply and Carriage of brick bats upto 8 km breach and placing in breaches and lying of bats, all complete job.					
	1	35.00	$(5.00+5.50+4.50)/2$	0.30	78.75
				Total Qty. =	78.75
Providing of drone service and drone surveying as per I/E					
	1	3.0			3.00
				TOTAL=	3.00


JE


12/11/24
AE


12/11/24
EE

RWD SUB DIV- FORBESGANJ

RWD SUB DIV. FORBESGANJ

RWD WORKS DIV. FORBESGANJ

FINAL RATE UNDER WORKS CIRCLE KISHANGANJ

S.No	Discription of Item	Unit	Final Rate (Excluding GST, Selgnlorage & L.Cess)	Final Rate (Including GST, Selgnlorage & L.Cess)
1	EARTH WORK	CUM	459.003	549.740
2	BRICK BAT	CUM	2209.578	2759.115
3	G.S.B	CUM	4328.501	5172.300
4	SAND BAG (Cement Bag)	Each	46.550	55.820
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
12	EACH N.C. BAG WITH SAND (Cement Bag)	Each E.C	967.490	1151.800
13	LOCAL SAND	CUM	721.110	1272.780

Executive Engineer
RWD, Works Division
Kishanganj-1

Executive Engineer
RWD, Works Division
Araria

Executive Engineer
RWD, Works Division
Kishanganj-2

Executive Engineer
RWD, Works Division
Forbesganj

Superintending Engineer
Rural Works Department
Works Circle Kishanganj

SUMMARY OF CARRIGE COST

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

BASIC RATES
(A) Labour

Sl. No.	Description of Labour	Unit	Rate (Rs.)
L-01	Bhisil	day	373
L-02	Binmen, Sproyer (semi skilled)	day	393
L-03	Blacksmith, special	day	503
L-04	Blaster, 2nd class	day	619
L-05	Carpenter 1st Class	day	503
L-06	Chips spreader, semi-skilled	day	449
L-07	Chiseller (Skilled)	day	577
L-08	Dresser (Skilled)	day	472
L-09	Driller, 2nd class	day	449
L-10	Electrician, skilled	day	476
L-11	Filter, skilled	day	511
L-12	Mason (1st class)	day	503
L-13	Mason (2nd Class)	day	449
L-14	Mate, Semi skilled	day	434
L-15	Macdoor (Unskilled)	day	410
L-16	Macdoor (Semi skilled)	day	388
L-17	Macdoor (Skilled)	day	472
L-18	Painter (1st class)	day	476
L-19	Plumber, Special	day	476
L-20	Surveyor	day	454
L-21	White Washer	day	476
L-22	Head blacksmith	day	503
L-23	Welder 1st Class	day	577
	Carpenter Head	day	503
	Night Guard	day	415

(Basic Rates Taken From SOR, Seventeenth Edition, Road Construction Department, Govt. of Bihar effective from 01/07/2024)


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Forbesganj

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Rural Works Department

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.	176.00		176.00
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.)	cum	1063.00	18.00	1081.00
M-007	Brick Bats	cum	2.25	33.00	35.25
M-008	Selected earth (Including @ Rs. 33.00 per cum & compensation @ Rs. 2.25 Per Cum	Nos.	11.11		11.11
M-009	Empty Cement Bag IS 11652:2000	Nos.	170.13		170.13
M-010	Steel Drum 300 mm dia 1.2 m high / empty bitumen drum	Nos.	7.31	2.59	9.90
M-011	Sand bags (Cost of sand and Empty cement bag)	kg	20.59	83.00	20.59
M-012	Sutli (Brown)	cum	84.03		167.03
M-013	Granular material (Natural occurring soil gravel mixture / quarry waste, kankar, laterite, dhandla	kg	108.00		108.00
M-014	Nails	m	5787.23		5787.23
M-014	RCC Pipe NP3 (1000 mm dia)	m	2310.00		2310.00
M-015	RCC Pipe NP3 (600 mm dia)	cum	69.75	75.00	144.75
M-015	Sand (Fine) at source	Nos.	170.13		170.13
M-016	Empty Steel Drum 300 mm dia 1.2 m height	kl	60.30		60.30
M-016	Water	Each	124.00		124.00
M-017	Geo Bags	cum	69.75	75.00	144.75
M-018	G.S.B.				

(Basic Rates Taken From SOR, Seventeenth Edition, Road Construction Department, Govt. of Bihar
Effective From 01/07/2024.

(Basic Rates Taken From SOR, Seventeenth Edition, Road Construction Department, Govt. of Bihar effective from 01/07/2024.)

[Signature]
Executive Engineer
RWD, Works Division
Kishanganj-1

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Executive Engineer
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Arra

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Executive Engineer
RWD, Works Division
Kishanganj-2

[Signature]
Executive Engineer
RWD, Works Division
Farrukhgarh

[Signature]
Superintending Engineer
Rural Works Department
Works Circle Kishanganj

(C) USAGE RATE OF PLANT & MACHINERY

(Basic Rates Taken From MCR, Seventeenth Edition, Road Construction Department, Govt. of Bihar effective from 01/07/2024).

Executive Engineer
BWD, Works Division
Portblaney

2. Engineer

Comparison of carriage cost of Material via Road from different sources																
Sl No	Item	Unit	Source	Pucka / Surface					Katcha					Load ing & Rate	Carriage by Road	Total
1	By Tractor															
	Earth Work Via Road	Cum	Local	3.60				3.60								
				2.04	x 20.04	x 0 Km	= Rs 0.00									
A																
	Brick Bat Via Road	Cum	Local	3.60				3.60								
				2.04	x 20.04	x 7 Km	= Rs 247.55									
B																
	Bamboo Via Road	pet mtr.	Local	3.60				3.60								
				126.00	x 20.04	x 2 Km	= Rs 1.15									
B																
	Local Sand Via Road	Cum	Local	3.60				3.60								
				2.04	x 20.04	x 2 Km	= Rs 70.73									
D																
2	By Tipper															
	GSB Via Road	Cum	Sillguri	8.00				8.00								
				4.99	x 9.83	x 177 Km	= Rs 2789.43									
A																
3	By Truck															
	Hume Pipe (1000 mm) Via Rod	Mtr.	pumea	8.00				8.00								
				10.00	x 7.27	x 53 Km	= Rs 308.25									
A																
A1	Rate Per Mtr. Pipe	Mtr.	pumea													
B																
	Hume Pipe (600 mm) Via Road	Mtr.	pumea	8.00				8.00								
				25.00	x 7.27	x 53 Km	= Rs 123.30									
B																
	Rate Per Mtr. Pipe	Mtr.	pumea													
B1																

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

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RWD, Works Division
Kishanganj-1

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Kishanganj-2

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RWD, Works Division
Forbesganj

Superintending Engineer
Rural Works Department
Works Circle Kishanganj

SDB Sl. No.	MORD Ref No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
1		Carriage Of Material (By Tractor)				
4.4		Loading and unloading of stone Boulder /stone aggregates sand/ kankar/ moorum				
		Placing tractor at loading point loading with front end loader dumpoing ,turning for return trip exluding time for haulage and return trip				
		Unit = cum				
		Taking output = 2.25 cum				
		Time required for				
		i) positioning of tractor at loading point	min	1 min		
		ii) Loading by front end loader 1 cum bucket capacity @ 25 cum	min	5 min		
		Total		6 min		
		a) Labour				
		Mate	day	0.030	434.00	13.02
		Mazdoor (Unskilled)	day	0.720	410.00	295.20
		b) Machinery				
		Tractor 3.60 Tonnes Capacity	hour	0.100	676.00	67.60
		Front end loader 1 cum bucket capacity @ 25 Cum/hour	hour	0.083	1,419.00	117.78
		Cost for 2.25 cum = a+b+c				493.60
		Rate per cum = (a+b+c)/2.25	cum			219.378
		Total per cum				219.378
1.10		Haulage excluding Loading & Unloading				
		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	hour	0.667	676.00	450.89
		Empty return trip	hour	0.400	676.00	270.40
		Cost for 36t/km = a+b+c				721.29
		Cost for 1 t km = a+b/36				20.040
		Total per t per km				20.040
		Case - II Kutcha Track and Track in River Bed / Nallah Bed and Choe Bed				
		Speed with load : 10km per hour				
		Speed while returning empty : 15km per hour				
		a) Machinery				
		Tractor 3.6 tonnes Capacity				
		Haulage with load	hour	1.00	676.00	676.00
		Empty return trip	hour	0.667	676.00	450.89
		Cost for 36t/km = a+b+c				1126.89
		Cost for 1 t km = a+b/36				31.300
		Total per t per km				31.300
2		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				
		(I) 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 laoding 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 = $(a+b+c)/5.5$	cum		170.70
		Total per cum			170.70
1.10		Haulage excluding Loading & Unloading			
		Haulage of materials by truck excluding cost of Loading, Unloading and stacking			
		Unit = 1 km			
		Taking output 10t load and lead 10km = 100t km			
		Case- I : Surfaced Road			
		Speed with load : 7.5km per hour			
		Speed while returning empty : 35km per hour			
	a)	Machinery			
		Tipper	hour	0.40	1426.00
		Haulage with load	hour	0.29	1426.00
		Empty return trip			983.94
		Cost for 100t km = $a+b+c$			2,830
		Cost for 1 t km = $a+b/100$			28.30
		Total per 100t km			28.30
		Case - III Kutcha Track and Track in River Bed / Nallah Bed and Choe Bed			
		Speed with load : 10km per hour			
		Speed while returning empty : 15km per hour			
	a)	Machinery			
		Tipper	hour	1.00	1426.00
		Haulage with load	hour	0.67	1426.00
		Empty return trip			2381.42
		Cost for 100t km = $a+b$			23.81
		Cost for 1 t km = $a+b+c/100$			23.81
		Total per 100t km			23.81
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 = 1 km			
		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	hour	0.40	1054.00
		Empty return trip	hour	0.29	1054.00
		Cost for 100t km = $a+b+c$			727.26
		Cost for 1 t km = $a+b/100$			7.27
		Total per 100t km			7.27
		Case - III Kutcha Track and Track in River Bed / Nallah Bed and Choe Bed			
		Speed with load : 10km per hour			
		Speed while returning empty : 15km per hour			
	a)	Machinery			
		Truck			
		Haulage with load	hour	1.00	1054.00
		Empty return trip	hour	0.67	1054.00
		Cost for 100t km = $a+b$			706.18
		Cost for 1 t km = $a+b+c/100$			1760.18
		Total per 100t km			17.60
1.9		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			
		Mate	day	0.02	434.00
		Mazdoor (Unskilled)	day	0.50	410.00
	b)	Machinery			
		Truck	hour	0.33	1054.00
		Crane	hour	0.33	5573.00
		Cost for 9 pipes = $a+b+c+d$			1839.09
					2400.59

			Rate per pipe = (a+b+c)/9	per p			266.722
			Total per pipe				166.184
		C.	600/450 mm dia Hume pipe				
			Unit = per pipe				
			Taking output = 21 pipe				
		a)	Labour	day	0.02	434.00	8.68
			Mate	day	0.50	410.00	205.00
			Mazdoor (Unskilled)				
		b)	Machinery				
			Tractor 3.60 Tonnes Capacity	hour	0.33	1054.00	347.82
			Crane	hour	0.33	5573.00	1839.09
			Cost for 21 pipes = a+b+c+d				2400.59
			Rate per pipe = (a+b+c)/21	per p			114.314
			Total per pipe				114.314
		(III)	Unloading of RCC Hume pipe by Mechanical means Including a lead upto 30 m				
		A.	1000/1200 mm dia RCC Hume pipes				
			Unit = per pipe				
			Taking output = 9 pipes				
		a)	Labour				
			Mate	day	0.02	434.00	8.68
			Mazdoor (Unskilled)	day	0.50	410.00	205.00
		b)	Machinery				
			Truck	hour	0.20	1054.00	210.80
			Crane	hour	0.20	5573.00	1114.60
			Cost for 9 pipes = a+b+c+d				1539.08
			Rate per pipe = (a+b+c)/9	per p			171.009
			Total per pipe				171.009
		C.	600/450 mm dia Hume pipe				
			Unit = per pipe				
			Taking output = 21 pipes				
		a)	Labour				
			Mate	day	0.020	434.00	8.68
			Mazdoor (Unskilled)	day	0.50	410.00	205.00
		b)	Machinery				
			Truck	hour	0.20	1054.00	210.80
			Crane	hour	0.20	5573.00	1114.60
			Cost for 21 pipes = a+b+c+d				1539.08
			Rate per pipe = (a+b+c)/21	per p			73.290
			Total per pipe				73.290
	1.9		Loading and Unloading of Bamboo				
		(I)	Loading & unloading Bamboo				
			Unit = per metre				
			Taking output = per mtr.				
		a)	Material				
			Bamboo = 2016/300	per pipe			6.72
			Bamboo Per Mt.	per mt			0.96
			Total per pipe				10.960
4	3.3	301.5	Construction of Embankment with material obtained from roadway cutting				
			Construction of Embankment with approved material deposit at site from roadway cutting and excavation from drain and foundation of other structure graded and compacted to meet requirement of Table 300.1 and 300.2 as per Technical Specification Clause 301.5.				
			Unit = cum				
			Taking output = 100 cum				
		a)	Labour				
			Mate	day	0.02	434.00	8.68
			Mazdoor (Unskilled)	day	0.50	410.00	205.00
		b)	Machinery				
			Dozer D-50 for spreading @200 cum per hour	hour	0.50	0.00	0.00
			Motor Grader for grading @200 Cum per hour	hour	2.00	697.00	1,394.00
			Water tanker 6 kl capacity	hour	2.00	752.00	1,504.00
			Three Wheel 80-100 kN Static Roller	hour	1.25	1593.00	1,991.25
		c)	Material				
			Water				
			Cost for 100 cum = a+b+c+d+e	kl	12.00	60.30	723.60
							5826.53

			Rate per cum = (a+b+c+d)/100	cum			50.265
			Total per cum	cum			50.265
5	3.5	301.5	Excavation in soil with Dozer with lead upto 100 m				
	(ii)	(ii)	Excavation for roadway in soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 m, including trimming bottom and side slopes in accordance with requirements of lines, grades and cross-sections.				
			Unit = cum				
			Taking output = 100 cum				
		a)	Labour				
			Mate	day	0.08	434.00	31.60
			Mazdoor (Unskilled)	day	2.00	410.00	822.00
		b)	Machinery				
			Dozer D-50 for spreading @200 cum per hour	hour	3.60	4326.00	15,573.60
			Cost for 100 cum = a+b+c+d+e				16427.20
			Rate per cum = (a+b+c+d)/180	cum			91.262
			Total per cum	cum			91.260
6	3.3	301.5	Construction of Embankment with approved material obtained from borrow pits with a lift upto 1.5 m transporting to site, spreading grading to required slope and compacting to meet requirement of Table 300.1 and 300.2 with a lead of 1000 m as per Technical				
			Unit = cum				
			Rate item no. 3.3 Clause 301.5				50.265
			Rate item no. 3.5(ii) Clause 301.5				91.260
			Royalty Compensation for earth taken from private land				35.250
			Carriage of Earth by Tractor Lead 1 K.M.				274.420
			Total Cost of 1 cum =				459.195
			Labour Cess @ 1%				4.590
			G.S.T. @ 18%				82.655
			Add Seigniorage Fee @ 10 % of Materials	cum	1.00	35.25	3.53
			Total Cost of 1 cum 1% Cess & 18% GST				649.970
7	4.5		Providing and Laying of Brick Bats				
			Placing tractor at loading point loading with front end loader dump on, turning for return trip excluding time for haulage and return trip				
			Unit = cum				
			Taking output = 2.83 cum				
		a)	Labour				
			Mazdoor (Unskilled)	day	2.170	410.00	889.70
		b)	Materials				
			Brick Bats	cum	3.396	1,081.00	3671.08
			Total (a+b) =				4560.78
			Total (a+b+c) =				4560.78
		d)	Carriage				
			Brick Bats	cum	3.396	521.97	1772.61
			TOTAL				6333.39
			Rate per cum = (a+b+c+d)/2.83	cum			2237.947
			Total per cum	cum			2237.947
			Labour Cess @ 1%				22.379
			G.S.T. @ 18%				402.830
			Add Seigniorage Fee @ 10 % of Materials	cum	1.20	1,081.00	129.72
			Total Cost of 1 cum 1% Cess & 18% GST				7792.877
8	4.1	401	PAVEMENT CRUST LAYERS				
			For Grading II Material				
			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.				
		(ii)	For Grading II Material				
			Unit = cum				
			Taking output = 300 cum				
		a)	Labour				
			Mate	day	0.48	434.00	208.32
			Mazdoor (Skilled)	day	2.00	472.00	944.00
			Mazdoor (Unskilled)	day	10.00	410.00	4100.00

		b)	Machinery				5252.32
			Tractor mounted grader arrangement	hour	12.00	676.00	8112.00
			Three wheel 80-100 kN static roller @ 10 cum per hour	hour	30.00	1573.00	47790.00
			Tractor with Rotavator 25 cum per hour	hour	12.00	693.00	8316.00
			Water tanker 6 kl capacity	hour	5.00	752.00	3760.00
		c)	Material				67978.00
			Well graded granular sub-base material as per Table 400.1				
			GSB	cum	1.28	167.03	213.80
			Cost of 300 cum without Carriage = (a+b+c+d+e)				73444.12
			A) Basic Cost per cum = (a+b+c+d+e)/300	cum			244.814
			CARRIAGE				
			G.S.B.	Cum	414.00	2960.13	1225493.82
			Carriage cost of 300 cum				1225493.82
			B) Carriage cost per cum				4084.98
			Rate per cum = (A+B)	CUM			4329.794
			Total per cum	CUM			4329.794
			Labour Cess @ 1%				43.298
			G.S.T. @ 18%				779.363
			Add Selgnorage Fee @ 10 % of Materials	cum	1.28	167.03	21.38
			Total Cost of 1 cum @ 10% Cess & 18% GST				5073.935
9	9.3	1100	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 Clause 1106.				
		B.	1000 MM DIA (Single Row)				
		a)	Material				
			RCC NP3 pipe including collar	m	7.50	5787.23	43404.23
		b)	Labour				
			Mate	day	0.09	434.00	39.06
			Mason (1st class)	day	0.25	503.00	125.75
			Mazdoor (Unskilled)	day	2.00	410.00	820.00
			Cost for 7.5m = (a+b+c)				44389.04
			A) Basic Cost per m = (a+b)/7.5	m			5918.54
			Rate per m of Pipe				5918.54
		(d)	CARRIAGE COST				
			NP3 Pipe	m	7.5	298.37	2237.78
			Carriage cost of 7.5 m				2237.78
			Carriage cost per m	m			298.37
			Rate per m with Carriage	m			6,216.909
			Total per m	m			6,216.909
			Labour Cess @ 1%				62.169
			G.S.T. @ 18%				1,119.044
			Total cost of 1 mtr @ 10% Cess & 18% GST				7,398.121
2		C.	600 MM DIA (Single Row)				
		a)	Material				
			RCC NP3 pipe including collar	m	7.50	2310.00	17325.00
		b)	Labour				
			Mate	day	0.04	434.00	17.36
			Mason (1st class)	day	0.12	503.00	60.36
			Mazdoor (Unskilled)	day	0.96	410.00	393.60
			Cost of 7.5m = (a+b+c+d)				17796.32
			A) Basic Cost per m = (a+b)/7.5	m			2372.84
			Rate per m of Pipe				2372.84
			CARRIAGE COST				
			NP3 Pipe	m	7.5	124.35	932.63
			Carriage cost of 7.5 m				932.63
			B) Carriage cost per m	m			124.35
			Rate per m with Carriage	m			2,497.193
			Total per m	m			2,497.193
			Labour Cess @ 1%				24.972
			G.S.T. @ 18%				449.495
			Total Cost of 1 mtr @ 10% Cess & 18% GST				32,974.660
3	5.7.40.1		Labour for filling empty cement bags with local sand, stitching the bags and placing including supply of suttli etc. all complete as per approved design, specification and direction E/I.				

		Unit = Per % Nos.				
		(A) For Filling & Stitching & Stacking				
		Labour				
		Skilled Labour for filling sand into bags and sewing	No.	2.00	472.00	944.00
		sutall	kg	0.50	20.59	10.30
		(B) Labour Rate For Carrying & Placing filed E.C. Bags.				
		Labour				
		Skilled Labour for Carrying filed bags and placing to work site	No.	3.00	472.00	1416.00
		TOTAL =				2370.30
		Per % Nos. (B) =			Say.	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 trolly	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
4	5.7.9	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 38 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 -li	No.	0.125	503.00	62.88
		Unskilled Labour	No.	0.25	410.00	102.50
		Rate for 30.5 m				835.79
		TOTAL =				835.79
		Rate per mt				27.40
		(iii) Carriage cost				
		bamboo	mt	1	3.00	3
		Total Cost with Carriage				30.40
		Labour Cess @ 1%				0.304
		G.S.T. @ 18%				5.473
		Total Cost of 1 Unit @ 1% Cess & 18% GST =				86.179
5	5.7.7	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 -li	No.	0.25	503.00	125.75
		Unskilled Labour for piling	No.	2.50	410.00	1025.0
		Rate for 30.5 m				1767.16
		Total				1767.16
		Rate for 1 m				57.94
		Carriage Cost of Bamboo	per mtr.			3.00
		Total Cost with Carriage				60.94
		Labour Cess @ 1%				0.609
		G.S.T. @ 18%				10.969
		Total Cost of 1 Unit @ 1% Cess & 18% GST =				122.518

		Labour for fitting and and fixing Steel Drum 300 mm dia 1.2 m high as per specification and direction			
		(Assuming Per Mtr. = $3.14 \times 0.30 = 0.942$ mtr.)			
		Area of Assuming in one Drum = $0.942 \times 1.20 = 1.130$ Sqm			
		One Sqm sheet Cost = $127.80 / 1.130 = 113.12$ Cost			
		Unit = per sqm			
		Taking Out = 100 sqm			
	a	Labour			
		Hammer man			
		Mazdoor (Unskilled)	No.	4.00	503.00
		Carpenter 1st Class	No.	4.00	410.00
	b	Materials			
		Nails			
		Steel Drum sheet	kg	5.00	170.13
			Nos.	88.5	170.13
		Rate Per m = $(a+b+c)/100$			
		Labour Cess @ 1%			
		G.S.T. @ 18%			
		Total Cost of 1 mtr. @ 1% Cess & 18% GST			
5.7.8	WRD	Labour for fitting and and fixing split bamboo woven chachari in position with 20 swg 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.			
		(Assuming strip of $3.05 \times 3.05 = 9.30$ sqm			
		Unit = per sqm			
		Taking Out = 9.30 sqm			
	a	Labour			
		Carpenter Gr -II			
		Mazdoor (Unskilled) for pilling	No.	1.00	531.00
	b	Materials			
		Bamboo			
		Nails	Mtr.	10.00	188.00
			kg	0.25	108.00
		Rate Per m = $(a+b+c)/9.30$			
		Labour Cess @ 1%			
		G.S.T. @ 18%			
		Total Cost of 1 mtr. @ 1% Cess & 18% GST			
5.7.50		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.			
		Unit = Each Bag			
		Taking Out = 40 Nso.			
		Labour			
		Unskilled Loading For filling stacking			
			nos	2	410.00
		Skilled labour for stacking			
			nos	0.33	472.00
		Unskild labour for corring and placing			
			nos	4.00	410.00
		Mate			
			nos	0.25	434.00
		Stiching Machine			
			day	0.33	50.00
		Tractor with trolley			
			day	1.00	676.00
		Generator 3KVA			
			hrs	20.67	74.00
		Total			
		Rate per bag (total/40) (A)			
		(II) charge for placing & dumping			
		unskilled labour for loading unloading & dumping			
			nos	16	410.00
		Mate			
			nos	1	434.00
		Tractor with trolley			
			each	4	676.00
		Total			
		Rate per bag (Total/256) (B)			
		Matroials			
		cost of Geo Bag			
			each	1	124.00
		Total cost (a+b+c)			

		Rate per bag				
		Labour Cess @ 1%				284.545
		G.S.T. @ 18%				2.845
		Add Selgnorage Fee @ 10 % of Materials				51.218
			cum	0.070	144.75	1.01
5.7.40.3		Total Cost of 1600 Bags 1% Cess & 18% GST =				339.619
		Labour for filling empty cement bags with local sand, stitching the bags and pitching in Nylon crate of size (1m x 1m x 1m) with a lead of 150 m including supply of suti etc. and placing the filed crates in water portion within a lead 30 m all complete as per approved design, specification and direction of E/I.				
		Unit = Ench N.C.				
	(i)	(i) Labour Cost for filling bags in one Nylon crate in dry portion	No.	1	472.00	411.00
	(ii)	(i) Labour Cost for filling bags in one Nylon crate in dry portion	No.	1	472.00	611.00
		(ii) Placing of filed N/C with 30 m lead in water portion				
		Labour				
		Mate	No.	0.37	434.00	160.58
		Labour(Skilled)	No.	1.00	472.00	472.00
		Labour(Unskilled)	No.	1.00	410.00	410.00
						2064.58
		Hence, Total Labour for 100 Cft.				2064.58
		Taking one E.C. Bags to contain 1.20 Cft. Of sand				
	(ii)	Hence, labour rate for placing one filed N.C.		356.49		356.49
		Hence rate for mu;pm crate om water portion (I+II)			Say.	967.49
		Labour Cess @ 1%				9.675
		G.S.T. @ 18%				174.148
		Add Selgnorage Fee @ 10 % of Materials	cum	0.034	144.75	0.49
		Total Cost of 1 E.C. 1% Cess & 18% GST =				1251.803
		Local sand filling in foundation trenches as per drawing and technical specification				
		Local sand filling in foundation trenches as per drawing and technical specification clause 305.3.9				
	I.	Sand filling				
		Unit = cum				
	a)	Labour				
		Mate				
		Mazdoor (Unskilled)	day	0.01	434.00	4.34
	b)	Material	day	0.30	410.00	123.00
		Sand (assuming 20 per cent voids)				
		Overheads @ 6 % on (a)	cum	1.20	144.75	173.70
						18.06
		CARRIAGE COST				319.10
		sand				
		Rate per cum = a+b+c	Cum	1.2	345.14	414.17
		Total Cost including 1 % LABOUR CESS				733.27
		G.S.T. @ 18%				7.33
		Add Selgnorage Fee @ 10 % of Materials				131.99
		Total Cost of 1 E.C. 1% Cess & 18% GST =				0.49
						1287.25

Executive Engineer
RWD, Works Division
Kishanganj-1

Executive Engineer
RWD, Works Division
Kishanganj-2

Executive Engineer
RWD, Works Division
Forbesganj

Superintending Engineer
Rural Works Department
Works Circle Kishanganj



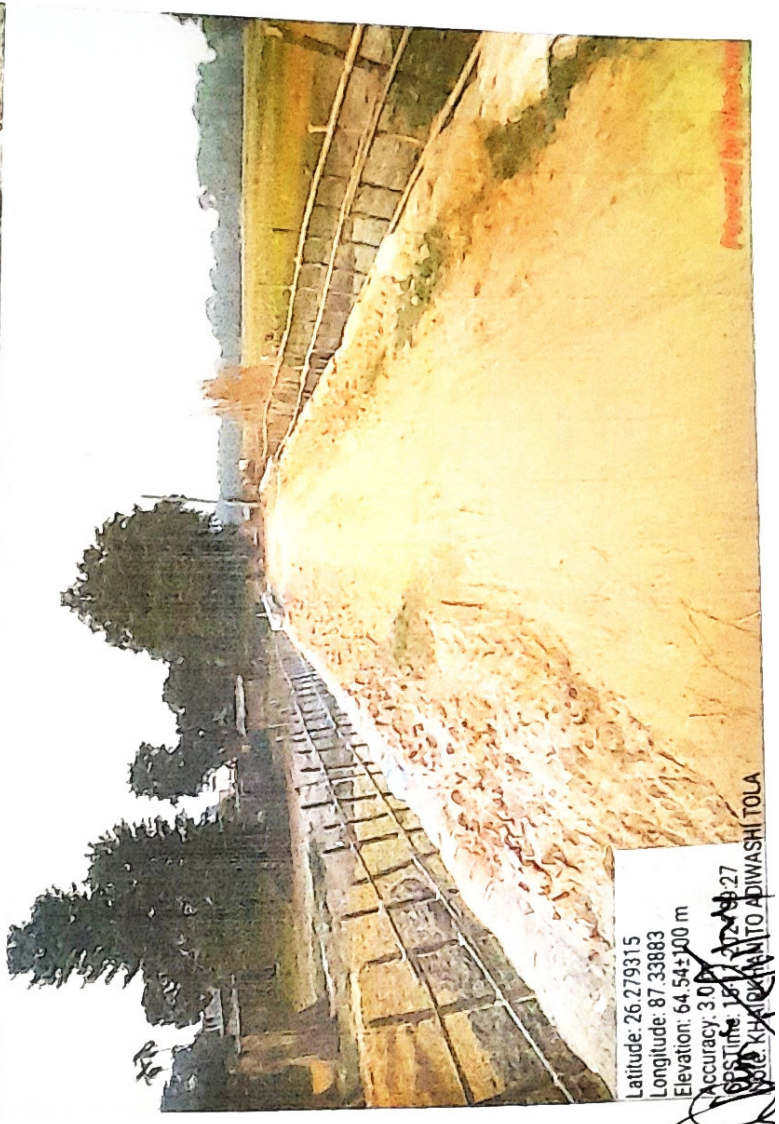
Latitude: 26.278673
Longitude: 87.342627
Elevation: 70.53±100 m
Accuracy: 5.2 m
GPSTime: 19-10-2024 16:00
Note: KHAIRKHAN TO ADIWASHI TOLA



Latitude: 26.278887
Longitude: 87.342588
Elevation: 67.53±100 m
Accuracy: 3.0 m
GPSTime: 15-11-2024 09:25
Note: KHAIRKHAN TO ADIWASHI TOLA



Latitude: 26.278715
Longitude: 87.342539
Elevation: 64.53±100 m
Accuracy: 3.0 m
GPSTime: 27-10-2024 10:42
Note: KHAIRKHAN TO ADIWASHI TOLA



Latitude: 26.279315
Longitude: 87.33883
Elevation: 64.54±100 m
Accuracy: 3.0 m
GPSTime: 18-11-2024 18:27
Note: KHAIRKHAN TO ADIWASHI TOLA





Latitude: 26.27871
Longitude: 87.342537
Elevation: 64.53±100 m
Accuracy: 3.0 m
GPSTime: 27-10-2024 10:42
Note: KHAIRKHAN TO ADIWASHI TOLA



Latitude: 26.278616
Longitude: 87.342548
Elevation: 67.53±100 m
Accuracy: 3.4 m
GPSTime: 27-10-2024 10:38
Note: KHAIRKHAN TO ADIWASHI TOLA



Latitude: 26.278648
Longitude: 87.342587
Elevation: 58.53±100 m
Accuracy: 5.5 m
GPSTime: 20-10-2024 15:56
Note: KHAIRKHAN TO ADIWASHI TOLA



Latitude: 26.278679
Longitude: 87.342512
Elevation: 67.53±100 m
Accuracy: 3.0 m
GPSTime: 27-10-2024 10:39
Note: KHAIRKHAN TO ADIWASHI TOLA

Signature
25/10/24
Signature

