

RURAL WORKS DEPARTMENT



GOVERNMENT OF BIHAR

NAME OF ROAD:- SAHWASHPUR TO HARJAN TOLA

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

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

BLOCK:- FORBESGANJ

ESTIMATED COST

784248.00

Abstract of Cost

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

Name of Road:

SAHWASHPUR TO HARJAN 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	280.60	1287.25	361202.35
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.	1296.00	72.518	93983.33
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.	396.00	36.179	14326.88



प्रतिवेदन

पथ का नाम :- Sahbajpur to harjam 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 Sahbajpur to harjam tola
..... में बाढ़ क्षतिग्रस्त मरम्मत मद से यातायात चालू करने हेतु तैयार किया गया है जिसकी
प्राक्कलित लागत 784248.00 है। उक्त पथ
का निर्माण mmsy योनान्तर्गत हुआ है एवं योजना अनुरक्षण अवधि में 21।
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।



कनीय अभियंता,

ग्रामीण कार्य विभाग,

कार्य प्रशाखा, Forbeggarij



सहायक अभियंता,

ग्रामीण कार्य विभाग,

कार्य अवर प्रमण्डल, Forbeggarij



कार्यपालक अभियंता,

ग्रामीण कार्य विभाग,

कार्य प्रमण्डल, Forbeggarij

Inspection Report for Flood Damage Work

Date:-

1.Name of PIUs:-

E.E Forbesganj

2.Name of Block:-

Forbesganj

3.Name of Road:-

Sahajpur to Harijan Tola

A. For Road

1.Damage Location/Chainage :- CH-500, 800, 900 m

2.Damage Length :- 32 m, 16 m, 28 m

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 :-

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

Signature of JE/AE/EE

Signature of JE/AE/EE

Signature

Signature

(Name of Inspector)

Signature of Inspector

Supplying of EC bag, filling of local sand, stitching and placing in position as per the direction of Engineer-in-charge.				
	Per Bags	4068.29	55.882	227344.07
Supply and Carriage of brick bats upto 8 km breach and placing in breaches and lying of bats, all complete job.				
	Cum	25.92	2792.877	72391.37
6 Providing of drone service and drone surveying as per I/E				
	PER TRIP	3.00	5000.000	15000.00
	TOTAL AMOUNT =			784248.00
	SAY TOTAL AMOUNT =			784248.00
				784248.00

[Signature]

JE

RWD SUB DIVISION-FORBESGANJ

[Signature]
12/11/24

AE

RWD SUB DIV.
FORBESGANJ

[Signature]
12/11/24

EE

RWD WORKS DIV. FORBESGANJ

Technically approved for ₹ 784248.00 (Rupees Seven lacs eighty four thousand two hundred forty eight only.)

[Signature]
16/11/24

Superintending Engineer
Rural Works Department
Works Circle, Kishanganj

E.O.



Detailed Estimate

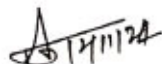
of Road:

SAHWASHPUR TO HARJAN TOLA

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.					
1ST CUTTING	1	45.00	$(4.20+3.90+4.10)/3$	$(1.60+2.00+1.00)/3$	280.60
				TOTAL=	280.60
				Total Qty =	280.60
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.					
1ST CUTTING	2	32.00	3.00	4.00	768.00
2ND CUTTING	1	16.00	3.00	4.00	192.00
3RD CUTTING	1	28.00	3.00	4.00	336.00
				Total Qty =	1296.00
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.					
1ST CUTTING	2	32.00	3.00		192.00
2ND CUTTING	1	16.00	4.00		64.00
3RD CUTTING	1	28.00	5.00		140.00
				Total Qty =	396.00
4 Supplying of EC bag, filling of local sand, stitching and placing in position as per the direction of Engineer-in-charge.					



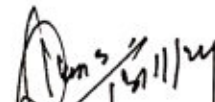
1ST CUTTING	2	32.00	$(1.00+0.600)/2$	$(1.00+2.00+1.00)/3$	68.27
2ND CUTTING	1	16.00	$(1.00+0.600)/2$	$(1.00+2.00+1.00)/3$	17.07
3RD CUTTING	1	28.00	$(1.00+0.600)/2$	$(1.00+2.00+1.00)/3$	29.87
				TOTAL=	115.20
Total No. of EC Bags = (115.20×35.315)					4068.29
				SAY NO OF BAGE=	4068
Supply and Carriage of brick bats upto 8 km breach and placing in breaches and lying of bats, all complete job.					
1ST CUTTING	2	32.00	$(1.00+0.600)/2$	0.30	15.36
2ND CUTTING	1	16.00	$(1.00+0.600)/2$	0.30	3.84
3RD CUTTING	1	28.00	$(1.00+0.600)/2$	0.30	6.72
				Total Qty. =	25.92
Providing of drone service and drone surveying as per I/E					
	1	3.0			3.00
				TOTAL=	3.00


JE

RWD SUB DIV- FORBESGANJ


AE

RWD SUB DIV. FORBESGANJ


EE

RWD WORKS DIV. FORBESGANJ



15/11/24
 J1

15/11/24
 BE



15/11/24
 DE

15/11/24



15/11/24
 DE
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15/11/24
92

15/11/24
DE
Chauhan



Latitude: 26.341305
 Longitude: 87.26976
 Elevation: 81.9114 m
 Accuracy: 600.0 m
 Time: 10-01-2024 15:36
 Note: sahijpur to harjan tola path near chandpur

Powered by NoteCam



Latitude: 26.340105
 Longitude: 87.265094
 Elevation: 77.9717 m
 Accuracy: 1090.1 m
 Time: 10-01-2024 15:29
 Note: sahijpur to harjan tola path near chandpur

Powered by NoteCam



Latitude: 26.334937
 Longitude: 87.264475
 Elevation: 77.2711 m
 Accuracy: 800.0 m
 Time: 10-01-2024 15:17
 Note: sahijpur to harjan tola path near chandpur

Powered by NoteCam

15/11/24
 3E
 15/11/24
 RE

15/11/24
 15/11/24

FINAL RATE UNDER WORKS CIRCLE KISHANGANJ

Discription of Item	Unit	Final Rate (Excluding GST, Selgnlorage & L.Cess)	Final Rate (Including GST, Selgnlorage & L.Cess)
EARTH WORK	CUM	459.003	549.740
BRICK BAT	CUM	2209.576	2759.115
G.S.B	CUM	4328.501	5172.300
SAND BAG (Cement Bag)	Each	46.550	55.880
BAMBOO PILE	Per Mtr.	58.140	69.186
BAMBOO CHACHRI	Per Mtr.	302.258	359.690
BAMBOO RUNNER	Per Mtr.	30.210	35.950
HUME PIPE (1000 mmi Div)	Per Mtr.	6206.598	7385.850
HUME PIPE (600 mm Div)	Per Mtr.	2492.260	2965.790
STEEL DRUM SHEET	Per Sqr.Mtr.	215.352	256.270
GEO BAG WITH SAND	EACH	967.490	1152.320
EACH N.C. BAG WITH SAND (Cement Bag)	Each E.C	967.490	1151.800
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

Item	Unit	Amount (Rs.)
Earth Work	Cum	274.42
Brick Bats	Cum	521.97
Bamboo	Per Mtr.	3.00
G.S.B.	Cum	2960.13
Local Sand	Cum	345.14
HUME PIPE (1000 mm DIA)	Per Pipe	745.93
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	Bhisti	day	373
L-02	Bitumen Sprayer (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	Fitter, 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	Mazdoor (Unskilled)	day	410
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	454
L-20	Surveyor	day	476
L-21	White Washer	day	503
L-22	Head blacksmith	day	577
L-23	Welder 1 St Class	day	503
	Carpenter Head	day	415
	Night Guard	day	415

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

[Signature]
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[Signature]
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Forbesganj

Superintending Engineer
Rural Works Department
Kishanganj

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 01/07/2024.

Executive Engineer
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Kishanganj-1

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RWD, Works Division
Arrah

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Kishanganj-2

Executive Engineer
RWD, Works Division
Farrukhganj

Superintending Engineer
Rural Works Department
Works Circle Kishanganj

**BASIC RATES
(C) USAGE RATES OF PLANT & MACHINERY**

Sor Code	Description of		Output of Machine		Usage Rates in Rs.	
	Machine	Activity	Unit	Output	Unit	Rate
P&M-012	Crane upto 80 T	Lifting of materials	cum/h	260.00	per hour	3,573.00
P&M-015	Dumper D-80 - A12 Dumper D-50 - A13	Dozing, cutting	cum/h	120.00	per hour	2,997.00
P&M-017	Front end-loader 1 cum bucket capacity (n) 45 cum/hr	Loading Aggregates	cum/h	45.00	per hour	1,426.00
P&M-026	Hydraulic Excavator of 1 cum bucket	Excavation	cum/h	100.00	per hour	1,315.00
P&M-044	Three wheel 30-100 kW Static Roller	Compaction/ Rolling	cum/h	40-70	per hour	1,272.00
		Earth - Embankment or sub-grade	cum/h		per hour	1,159.00
		Sub-base G-I	cum/h	10.00	per hour	1,159.00
		Sub-base G-II G-III	cum/h	8.00	per hour	1,159.00
		WBM	cum/h	16.00	per hour	1,159.00
		BLISS	cum/h	10.00	per hour	1,159.00
		BM 50-75 mm	cum/h	12.00	per hour	1,159.00
		Premix 20 mm	cum/h	250.00	per hour	1,159.00
		Soil Curb	cum/h	500.00	per hour	1,159.00
		Surface Dressing 1st Coat	cum/h	400.00	per hour	1,159.00
		Surface Dressing 2nd Coat	cum/h	500.00	per hour	1,159.00
		Carriage	cum/h	5.50	per hour	1,159.00
		Pulverization of soil	cum/h	80.00	per hour	1,159.00
		Ripping Pavement, uprooting trees	cum/h	60.00	per hour	1,159.00
		Transportation of materials	cum/h	3 to 5	per hour	1,159.00
		Scarifier	cum/h	25.00	per hour	1,159.00
		Carriage	cum/h	5.50	per hour	1,159.00
		Compaction of soil WBM	cum/h	100.00	per hour	1,159.00
		Compaction of BM	cum/h	60.00	per hour	1,159.00
		Carriage of water	litre/h	12000.00	per hour	1,159.00
		slicing	per hour		per hour	1,159.00
		slicing machine	day		day	1,159.00

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

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RWD, Works
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Forbesganj

Superintending Engineer
Rural Works Department
Works Circle Kishanganj

Carriage Cost & Lead in Km

Cost of Haulage Excluding Loading & Unloading as per SO* Subjected to Verification
Dr. 20/11/19

Superintending Engineer
Rural Works Department
Chikankar

Executive Engineer
RWD, Works Division
Araria

Executive Engineer
RWD, Works Division
Forbesganj

MORD Ref No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
	Carriage Of Material (By Tractor)				
4	Loading and unloading of stone Boulder /stone aggregates sand/ kankar/ moorum				
	Placing tractor at loading point loading with front end loader dumping ,turning for return trip excluding 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				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 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 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				
	(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		1Min		
	(ii) loading by front end loader 1 cum bucket capacity @25		13Min		
	(iii) maneuvering, reversing, dumping and turning for return		2Min		
	(iv) Waiting time unforeseen contingencies etc.		4Min		
	Total		20Min		
	b) Machinery				
	Tipper 5.5 Tonnes Capacity	hour	0.330	1,426.00	470.58
	Front end loader 1 cum bucket capacity @ 25 Cum/hour	hour	0.330	1,419.00	468.27
	Cost for 5.5 cum = a+b+c				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 = 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	hour	0.40	1426.00
		Empty return trip	hour	0.29	1426.00
		Cost for 100t km = a+b+c			983.94
		Cost for 1 t km = a+b/100			9.830
		Total per km =			9.830
		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			
		Haulage with load	hour	1.00	1426.00
		Empty return trip	hour	0.67	1426.00
		Cost for 100t km = a+b			955.42
		Cost for 1 t km = a+b+c/100			2381.42
		Total per km =			23.81
3					23.81
		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	hour	0.40	1054.00
		Empty return trip	hour	0.29	1054.00
		Cost for 100t km = a+b+c			421.60
		Cost for 1 t km = a+b/100			305.66
		Total per km =			727.26
		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			1054.00
		Cost for 1 t km = a+b+c/100			706.18
		Total per km =			1760.18
					17.60
1.9		Loading and Unloading of Hume Pipes			17.60
	(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			
		Mazdoor (Unskilled)	day	0.02	434.00
	b)	Machinery	day	0.50	410.00
		Truck			205.00
		Crane	hour	0.33	1054.00
		Cost for 9 pipes = a+b+c+d	hour	0.33	5573.00
					1039.09
					2400.59

		Rate per cum = (a+b+c+d)/100	cum		58.265
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
		Mazdoor (Unskilled)	day	2.00	410.00
	b)	Machinery			
		Dozer D-50 for spreading @200 cum per hour	hour	3.60	4326.00
		Cost for 100 cum = a+b+c+d+e			16427.20
		Rate per cum = (a+b+c+d)/100	cum		91.262
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			
		Rate item no. 3.5(ii) Clause 301.5			58.265
		Royalty Compensation for earth taken from private land			91.260
		Carriage of Earth by Tractor Lead 1 K.M.			35.250
		Total Cost of 1 cum =			274.420
		Labour Cess @ 1%			459.195
		G.S.T. @ 18%			4.590
		Add Seigniorage Fee @ 10 % of Materials			82.655
		Total Cost of 1 cum =	cum	1.00	35.25
7	4.5	Providing and Laying of Brick Bats			
		Placing tractor at loading point loading with front end loader dumping, turning for return trip excluding time for haulage and return trip			
		Unit = cum			
		Taking output = 2.83 cum			
	a)	Labour			
		Mazdoor (Unskilled)			
	b)	Materials	day	2.170	410.00
		Brick Bats			889.70
		Total (a+b)=	cum	3.396	1,081.00
		Total (a+b+c) =			4560.78
	d)	Carriage			4560.78
		Brick Bats			
		TOTAL	cum	3.396	521.97
		Rate per cum = (a+b+c+d)/2.83			1772.61
		Total per cum	cum		6333.39
		Labour Cess @ 1%	cum		2237.947
		G.S.T. @ 18%			2237.947
		Add Seigniorage Fee @ 10 % of Materials			402.830
		Total Cost of 1 cum =	cum	1.20	1,081.00
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	0.40	434.00
		Mazdoor (Skilled)	day	2.00	472.00
		Mazdoor (Unskilled)	day	10.00	410.00

	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	1593.00	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 Selniorage Fee @ 10 % of Materials				21.38
		Total Cost of 1 cum 1% Cess & 18% GST =	cum	1.28	167.03	173.835
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				
	b)	Labour	m	7.50	5787.23	43404.23
		Mate				
		Mason (1st class)	day	0.09	434.00	39.06
		Mazdoor (Unskilled)	day	0.25	503.00	125.75
		Cost for 7.5m = (a+b+c)	day	2.00	410.00	820.00
		A) Basic Cost per m = (a+b)/7.5				44389.04
		Rate per m of Pipe	m			5918.54
	(d)	CARRIAGE COST				5918.54
		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			6,216.909
		Labour Cess @ 1%	m			6,216.909
		G.S.T. @ 18%				62.169
		Total Cost of 1 mtr 1% Cess & 18% GST =				1,119.044
2	C.	600 MM DIA (Single Row)				
	a)	Material				
		RCC NP3 pipe including collar				
	b)	Labour	m	7.50	2310.00	17325.00
		Mate				
		Mason (1st class)	day	0.04	434.00	17.36
		Mazdoor (Unskilled)	day	0.12	503.00	60.36
		Cost of 7.5m = (a+b+c+d)	day	0.96	410.00	393.60
		A) Basic Cost per m = (a+b)/7.5				17796.32
		Rate per m of Pipe	m			2372.84
		CARRIAGE COST				2372.84
		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			2,497.193
		Labour Cess @ 1%	m			2,497.193
		G.S.T. @ 18%				24.972
		Total Cost of 1 mtr 1% Cess & 18% GST =				449.495
3	5.7.40.1	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/L				

		Unit = Per % Nos.			
		(A) For Filling & Stitching & Stacking			
		Labour			
		Skilled Labour for filling sand into bags and sewing	No.	2.00	472.00
		sutali	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 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			
			cum	0.034	144.75
					0.49
		TOTAL Cost of E.C. Bag 18% Cess & 18% GST =			55.88
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 3B 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			
		Nails	m	30.50	20.21
					616.41
	(ii)	Labour	kg	0.50	108.00
					54.00
		Carpenter Gr-II			
		Unskilled Labour	No.	0.125	503.00
					62.88
		Rate for 30.5 m	No.	0.25	410.00
					102.50
		TOTAL =			835.79
		Rate per mt			835.79
	(iii)	Carriage cost			27.40
		bamboo			
		Total Cost with Carriage	mt	1	3.00
					3
		Labour Cess @ 1%			30.40
		G.S.T. @ 18%			0.304
		TOTAL Cost of Labour 1% Cess & 18% GST =			5.473
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			
		Assuming			
		20 no pile sunk 1.525 m deeps			
		Total depth sunk 30.50 m			
	(i)	Materials			
		Bamboo			
	(i)	Labour	m	30.50	20.21
					616.41
		Carpenter Gr-II			
		Unskilled Labour for piling	No.	0.25	503.00
					125.75
		Rate for 30.5 m	No.	2.50	410.00
					1025.0
		Total			1767.16
		Rate for 1 m			1767.16
		Carriage Cost of Bamboo	per mtr.		57.94
		Total Cost with Carriage			3.00
		Labour Cess @ 1%			60.94
		G.S.T. @ 18%			0.609
		TOTAL Cost of Labour 1% Cess & 18% GST =			10.969
					1778.10

	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	No.	4.00	503.00
	Mazdoor (Unskilled)	No.	4.00	410.00
	Carpenter 1st Class	No.	4.00	503.00
b	Materials			
	Nails	kg	5.00	170.13
	Steel Drum sheet	Nos.	88.5	170.13
				21571.160
	Rate Per m = $(a+b+c)/100$			
	Labour Cess @ 1%			
	G.S.T. @ 18%			
	Total Cost of 1 mtr. @ 100 mtr. @ 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/L.			
	(Assuming strip of $3.05 \times 3.05 = 9.30$ sqm			
	Unit = per sqm			
	Taking Out = 9.30 sqm			
a	Labour			
	Carpenter Gr -II	No.	1.00	531.00
	Mazdoor (Unskilled) for piling	No.	1.00	410.00
b	Materials			
	Bamboo			
	Nails	Mtr.	10.00	188.00
		kg	0.25	108.00
				2848.000
	Rate Per m = $(a+b+c)/9.30$			
	Labour Cess @ 1%			
	G.S.T. @ 18%			
	Total Cost of 1 mtr. @ 100 mtr. @ 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/L.			
	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
	Unskilled labour for carrying and placing	nos	4.00	410.00
	Mate	nos	0.25	434.00
	Stitching Machine	day	0.33	50.00
	Tractor with trolley	day	1.00	676.00
	Generator 3KVA	hrs	20.67	74.00
	Total			1529.58
	Rate per bag (total/40) (A)			
	charge for placing & dumping			
(ii)	unskilled labour for loading unloading & dumping	nos	16	410.00
	Mate	nos	1	434.00
	Tractor with trolley	each	4	676.00
	Total			9,443.000
	Rate per bag (Total/256) (B)			
	Materials			
	cost of Geo Bag	each	1	124.00
	Total cost (a+b+c)			

		Rate per bag				284.545
		Labour Cess @ 1%				2.845
		G.S.T. @ 18%				51.218
		Add Seigniorage Fee @ 10 % of Materials				1.01
		Total Cost of 100 Cft. @ 10% Cess & 18% GST	cum	0.070	144.75	1.01
5.7.40.3		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.				
	(i)	Unit = Each N.C.				
	(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
		Hence, Total Labour for 100 Cft.				2064.58
		Taking one E.C. Bags to contain 1.20 Cft. Of sand				2064.58
	(ii)	Hence, labour rate for placing one filed N.C.				
		Hence rate for mu:pm crate on water portion (I+II)		356.49		356.49
		Labour Cess @ 1%			Say.	967.49
		G.S.T. @ 18%				9.675
		Add Seigniorage Fee @ 10 % of Materials				174.148
		Total Cost of 1 E.C. @ 10% Cess & 18% GST	cum	0.034	144.75	0.49
	(i)	Local sand filling in foundation trenches as per drawing and technical specification Clause 305.3.2				1151.803
		I. Sand filling				
		Unit = cum				
	a)	Labour				
		Mate	day	0.01	434.00	4.34
	b)	Mazdoor (Unskilled)	day	0.30	410.00	123.00
		Material				
		Sand (assuming 20 per cent voids)	cum	1.20	144.75	173.70
		Overheads @ 6 % on (a)				18.06
		CARRIAGE COST				319.10
		sand	Cum	1.2	345.14	414.17
		Rate per cum = a+b+c				733.27
		Total Cost including 1 % LABOUR CESS				7.33
		G.S.T. @ 18%				131.99
		Add Seigniorage Fee @ 10 % of Materials				0.49
		Total Cost of 1 E.C. @ 10% Cess & 18% GST				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 Denartment
Works Circle Kishanganj