OFFICE OF THE SUPERINTENDING ENGINEER (N/E)
PUBLIC HEALTH ENGINEERING DEPARTMENT,
GOVERNMENT OF SIKKIM

Memo. No. [illegible] Dated: [illegible]

To

The General Manager (P),
NHIDCL,
PMU- Ranipool,
District Gangtok.

Subject: Forwarding of estimates.

Please find herewith the attached estimates for the works:

1. Permanent shifting of water supply and sewerage utilities falling under the R.O.W of NH 10 from Rangpo to 32 No. under Pakyong Sub-division following widening of the national highway.

2. Temporary shifting of water supply and sewerage utilities falling under the R.O.W of NH 10 from Rangpo to 32 No. under Pakyong Sub-division following widening of the national highway.

Thanking You

Sincerely,

Superintending Engineer (N/E)
PHE Department
Sikkim, Gangtok

TECHNICAL REPORT

NAME OF THE WORK: Temporary and Permanent Shifting of water supply system and sewerage system from Rangpo to 32 No following the widening of NH10 by NHIDCL.

HISTORY: The Rangpo town lies in the altitude of 300 m from the sea level and the Ranipool lies in the altitude of 1591 m from the seal level. The PHED has been catering the portable water supply to the town lying in between the above-mentioned area. Currently, on the average of Sixty Thousand population is being catered by the department at 135 LPCD.

REPORT: With reference to the letter no. 1186/DC/PKG/2024 dated:16/12/2024, the joint Inspection was conducted by PHED along with the representative of NHIDCL from Rangpo to 32. No (Middle Camp) for the assessment of the utilities that needs to be shifted during the widening of NH10.

The department has prepared the estimate to meet up the probable cost of the asset along the National Highway which requires to be shifted during the road widening works. The estimate has been framed for the temporary measures to facilitate the sewer line and water supply line during the period of the execution of the project by the concern authority, also the probable expenditure that may incur in the permanent restoration of the utility damaged has been highlighted in the estimate.

The estimate has been included with the supply of Galvanized iron pipes, Ductile Iron Pipes, Corrugated flexible Hose pipes, HDPE Pipes, RCC water distribution chambers, RCC sewer chambers, water reservoir tanks and its accessories. Civil work to execute the restoration of the utility has also been framed in the estimate.

RATE USED: As per the schedule of rate 2020, Sikkim state, with the escalation of 7.5% per annum on civil work.

As per the rate of State Trading Corporation of Sikkim w.e.f 26/05/2023 on supply items.

MODE OF EXECUTION: Departmental/ Contractual

ESTIMATED COST: Permanent restoration works-~~₹ 11,15,36,208.30~~ 10,31,48,700/- Jen ~~Rupees (Eleven Crore Fifteen Lakh Thirty-Six Thousand Two Hundred Eight.) only~~ Thirty One Forty-Eight Seven

Temporary restoration works-~~₹ 1,58,23,434.00~~ 1,58,26,656/- ~~Rupees (One Crore Fifty-Eight Twenty-Three Thousand Four Hundred Thirty-Four) only~~ Lakhs Six Fifty Six Only

COMPLETION PERIOD: 6 Month.

ASSISTANT ENGINEER
P.H.E.D PAKYONG

DIVISIONAL ENGINEER
P.H.E.D PAKYONG

PERMANENT SHIFTING OF WATER SUPPLY & SEWERAGE UTILITIES FALLING UNDER THE R.O.W OF NH10 FORM RANGPO TO 32 No. UNDER PAKYONG SUB-DIVISION FOLLOWING WIDENING OF THE NATIONAL HIGHWAY.

GENERAL ABSTRACT		
Sl.No	ITEM OF WORK	AMOUNT
A	**Supply of pipes and fittings**	
1	RANGPO WATER SUPPLY	~~₹ 25,50,073.00~~
2	SINGTAM WATER SUPPLY	~~₹ 4,24,15,317.00~~
3	SINGTAM SEWERAGE	~~₹ 76,01,200.00~~
4	32 NO.WATER SUPPLY	~~₹ 3,71,945.00~~
		~~₹ 5,29,38,535.00~~
	GST @ 18%	~~₹ 95,28,936.30~~
	TOTAL (A)	~~₹ 6,24,67,471.00~~
B	**civil work**	
1	RANGPO WATER SUPPLY	~~₹ 19,81,268.65~~
2	SINGTAM WATER SUPPLY	~~₹ 1,36,59,558.00~~
3	SINGTAM SEWERAGE	~~₹ 69,92,985.69~~
4	32 NO.WATER SUPPLY	~~₹ 21,14,491.37~~
	Civil work Net value	~~₹ 2,47,48,304.00~~
	Price Escallatio for 4 years @ of 7.5% per year on civil work	~~₹ 74,24,491.20~~
	Civil work value with price escallation	~~₹ 3,21,72,795.20~~
	GST @ 18% on civil items	~~₹ 57,91,103.14~~
	Labour cess @ 1% on civil Items	~~₹ 3,21,727.95~~
	Contigency Charges @2%	~~₹ 6,43,455.90~~
	TOTAL (B)	**~~₹ 3,89,29,082.00~~**
	TOTAL (A+B)	**~~₹ 10,13,96,553.00~~**
	Supervision charges @~~10%~~ 9%	~~₹ 1,01,39,655.30~~
	GRAND TOTAL	**~~₹ 11,15,36,208.30~~**

In Words : Rupees (~~Eleven Crore Fifteen Lakh Thirty Six Thousand Two Hundred Eight~~) only

Rate adopted is as per SOR 2020 for civil work and STCS rate for supply work w.e.f 26/5/2023

Junior Engineer
P.H.E.D Pakyong

Assistant Engineer
P.H.E.D Pakyong

Divisional Engineer
PHED Pakyong

Engineering Dept
D - Division
Sikkim

Public Health Engineering
Sub-Division

CHECKED & VERIFIED

of (Ten Crore Thirty One lakh forty Eight Thousand & Seven hundred) only.

Junior Engineer (P)
W.S. & Public Health
Engineering Deptt.
Govt of Sikkim

Assistant Engineer (P
W.S. & Public Health
Engineering Deptt
Govt of Sikkim

PERMANENT RESTORATION OF DAMAGED WATER SUPPLY UTILITY FORM RANGPO TO MAJITAR FOLLOWING WIDINING OF NH10.

GENERAL ABSTRACT		
Sl.No	ITEM OF WORK	AMOUNT
1	Supply of pipes and fittings	₹ 25,50,073.00
	GST @ 18% on civil items	₹ 4,59,013.00
	TOTAL (A)	₹ 30,09,086.00
2	civil work	
a)	Laying, itting and fixing of pipe	₹ 17,27,444.65
b)	Construction of chamber	₹ 2,53,824.00
	Civil work Net value	₹ 19,81,268.65
	Price Escallation for 4 years @ of 7.5% per year on civil work	₹ 5,94,380.59
	Net value of Civil work with price escallation	₹ 25,75,649.24
	GST @ 18% on civil items	₹ 4,63,616.86
	Labour cess @ 1% on civil Items	₹ 25,756.49
	Contigency Charges @2%	₹ 51,512.98
	TOTAL (B)	₹ 31,16,535.58
	TOTAL (A+B)	₹ 61,25,622.00
	Supervision charges @10%	₹ 6,12,562.20
	GRAND TOTAL	₹ 67,38,184.00

In Words : Rupees (Sixty Three Lakh Eighty Three Thousand One Hundred Eighty Seven.) only

Rate adopted is as per SOR 2020 for civil work and STCS rate for supply work w.e.f 26/5/2023

Junior Engineer
P.H.E.D Pakyong

Assistant Engineer
P.H.E.D Pakyong

Divisional Engineer
PHED Pakyong

SUPPLY OF PIPES & FITTINGS

Sl.	Particulars		Qty	Unit	Unit Rate			Amount
A)	**100 MM PIPE & FITTINGS FOR MINING DISTRIBUTON LINE**							
	100 mm dia GI	Pipe Heavy duty	30.5	mtrs @	₹ 1,475.41	/mtr	=	₹ 45,000.00
	100 mm dia GI	Socket	3	nos. @	₹ 498.52	/no	=	₹ 1,496.00
	100 mm dia GI	Bend	4	nos. @	₹ 1,349.30	/no	=	₹ 5,397.00
	100 mm dia GI	Equal Tee	2	nos. @	₹ 1,161.84	/no		₹ 2,324.00
	100 mm dia GI	Un-Equall Tee	2	nos. @	₹ 1,236.00	/no		₹ 2,472.00
	100 mm dia GI	Plug	2	nos. @	₹ 358.44	/no		₹ 717.00
	100 mm dia GI	Flange	8	nos. @	₹ 906.40	/no		₹ 7,251.00
	100mm	Gate Valve	1	nos. @	35287.8	/no		₹ 35,288.00
	100mm	Rubber Gaskit	12	nos. @	₹ 173.04	/no		₹ 2076.00 6,773.00
	100mm	Shortpiece	4	nos. @	₹ 564.44	/no	=	₹ 2,258.00
		Nuts &Bolts	5	kgs. @	₹ 334.75	/no	=	₹ 1,674.00
B)	**65 MM PIPE & FITTINGS FOR RAW WATER MAIN LINE**							
	65 mm dia GI	Pipe Heavy duty	1018.7	mtrs @	₹ 819.54	/mtr	=	₹ 8,34,865.00
	65 mm dia GI	Socket	100	nos. @	₹ 208.06	/no	=	₹ 20,806.00
	65 mm dia GI	Bend	50	nos. @	₹ 372.86	/no	=	₹ 18,643.00
	65 mm dia GI	Equal Tee	5	nos. @	₹ 437.75	/no		₹ 2,189.00
	65 mm dia GI	Un-Equal Tee	5	nos. @	₹ 458.35	/no		₹ 2,292.00
	65 mm dia GI	Plug	5	nos. @	₹ 175.10	/no		₹ 876.00
	65 mm dia GI	Flange	130	nos. @	₹ 509.85	/no		₹ 66,281.00
	65 mm dia	Rubber Gaskit	150	nos. @	₹ 100.94	/no		₹ 15,141.00
	65 mm dia GI	Shortpiece	20	nos. @	₹ 216.30	/no	=	₹ 4,326.00
	65 mm	Gate valve	2	nos. @	₹ 12,236.40	/no	=	₹ 24,473.00
		Nuts &Bolts	50	kgs. @	₹ 334.75	/no	=	₹ 16,738.00
C)	**15MM DIA GI PIPE ANS FITTINGS FOR HOUSEHOLD CONNECTION**							
	15 mm dia GI	Pipe medium duty	3995.5	mtrs @	₹ 146.17	/mtr	=	₹ 5,84,022.00
	15 mm dia GI	Socket	500	nos. @	₹ 20.60	/no	=	₹ 10,300.00
	15 mm dia GI	Plug	20	nos. @	₹ 16.48	/no		₹ 330.00
	15 mm dia GI	Shortpiece	100	nos. @	₹ 17.51	/no	=	₹ 1,751.00
	15 mm dia GI	Union	300	nos. @	₹ 61.80	/no	=	₹ 18,540.00
	15 mm dia GI	Elbow	300	nos. @	₹ 22.66	/no	=	₹ 6,798.00
	15 mm	Gate valve	20	nos. @	₹ 1,184.50	/no	=	₹ 23,690.00
D)	**80 MM PIPE & FITTINGS FOR MAJITAR DIATRIBUTION LINE AT VARIOUS LOCATION**							
	80 mm dia GI	Pipe Heavy duty	305	mtrs @	₹ 1,047.04	/mtr	=	₹ 3,19,347.00
	80 mm dia GI	Socket	25	nos. @	₹ 309.00	/no	=	₹ 7,725.00
	80 mm dia GI	Bend	10	nos. @	₹ 646.84	/no	=	₹ 6,468.00
	80 mm dia GI	Equal Tee	4	nos. @	₹ 633.45	/no		₹ 2,534.00
	80 mm dia GI	Un-Equal Tee	4	nos. @	₹ 667.44	/no		₹ 2,670.00
	80 mm dia GI	Plug	5	nos. @	₹ 252.35	/no		₹ 1,262.00
	80 mm dia GI	Flange	80	nos. @	₹ 653.02	/no		₹ 52,242.00
	80 mm dia	Rubber Gaskit	100	nos. @	₹ 128.75	/no		₹ 12,875.00

1,05,953
10,06,630
6,45,431

	80 mm dia GI	Shortpiece	15	nos.	@	₹	306.94	/no =	₹	4,604.00
	80 mm	Gate valve	1	nos.	@	₹	17,507.94	/no =	₹	17,508.00
		Nuts &Bolts	40	kgs.	@	₹	334.75	/no =	₹	13,390.00
E)	**65 MM PIPE & FITTINGS FOR MAJITAR DISTRIBUTION LINE AT VARIOUS LOCATION**									
	65 mm dia GI	Pipe Heavy duty	213.5	mtrs	@	₹	819.54	/mtr =	₹	1,74,972.00
	65 mm dia GI	Socket	100	nos.	@	₹	208.06	/no =	₹	20,806.00
	65 mm dia GI	Bend	50	nos.	@	₹	372.86	/no =	₹	18,643.00
	65 mm dia GI	Equal Tee	5	nos.	@	₹	437.75	/no	₹	2,189.00
	65 mm dia GI	Un-Equal Tee	5	nos.	@	₹	458.35	/no	₹	2,292.00
	65 mm dia GI	Plug	5	nos.	@	₹	175.10	/no	₹	876.00
	65 mm dia GI	Flange	130	nos.	@	₹	509.85	/no	₹	66,281.00
	65 mm dia	Rubber Gaskit	150	nos.	@	₹	100.94	/no	₹	15,141.00
	65 mm dia GI	Shortpiece	20	nos.	@	₹	216.30	/no =	₹	4,326.00
	65 mm	Gate valve	2	nos.	@	₹	12,236.40	/no =	₹	24,473.00
		Nuts &Bolts	50	kgs.	@	₹	334.75	/no =	₹	16,738.00
								NET TOTAL	₹	**25,50,073.00**
								GST 18% =	₹	**4,59,013.00**
								GRAND TOTAL =	₹	**30,09,086.00**

In words : (Thirty Lakh Nine Thousand Eighty Six) only

JUNIOR ENGINEER
PHED PAKYONG

ASSISTANT ENGINEER
PHED PAKYONG

SUB-WORK: LAYING, FITTING, FIXING OF THE PIPES

Sl. no	Particulars	Quantity	Rate	Amount
1	Track cutting and clearing of bushes along the trackline and breaking of existing structures as per Engineer in-chargeall acomplete 25 men x 18 days = 450 md	450 md	₹ 500.00 /md	₹2,25,000
2	Excavation in soil in hilly area by mechanical means including cutting and trimming of side slopes and disposing of excavated earth with all lifts and lead upto 1000 metres. 50% of total length of the pipe line 2782 x 0.60 x 0.60 = 1001.38 m3 Anchored Pillars 200 x 0.60 x 0.60 x 0.60 = 43.20 m3 1044.58 m3	1044.58 m3	₹ 295.52 /m3	₹3,08,693.00
3	Filling with available excavated earth in trenches, plinth and side of foundation in building works with layers not exceeding 20cm in depth including consolidation of each layer by ramming, watering vide i.no. 2 1001.38 m3	1001.38 m3	₹ 139.83 /m3	₹1,40,022.00
4	Sand filling in building works in layer not exceeding 20cum including watering, ramming etc, in road crossing all complete. 3 x 20.00 x 0.60 x 0.60 = 21.60 m3 21.60	21.60 m3	₹ 838.97 /m3	₹ 18,122.00
5	Fitting and fixing GI pipe of heavy/medium class, (excluding trenching, refilling, compacting and the 100mm dia 30.5 m X @ 1746.74 deduct cost of pipe 1293.6 ₹ 453.14	30.5 m	453.14 / m	₹ 13,820.77
	65mm dia 1019 m X @ 818.73 deduct cost of pipe 588.13 ₹ 230.6	1018.7 m	230.6 / m	₹ 2,34,912.22
	15mm dia 3996 m X @ 177.09 deduct cost of pipe 133.44 ₹ 43.7	3995.5 m	43.65 / m	₹ 1,74,403.58
	80mm dia 305 m X @ 1218.6 deduct cost of pipe 892.03 ₹ 326.6	305 m	326.57 / m	₹ 99,597.75
	65mm dia 214 m X @ 818.73 deduct cost of pipe 588.13 ₹ 230.6	213.5 m	230.6 / m	₹ 49,233.10

12638834.32

7	Providing and laying hand packed stone soling in buildings works with clean hard selected stones, all complete. (Manual Means) anchor pillar 200 x 0.45 x 0.45 x 0.15 = 6.08 m3 6.08 m3	6.08 m3	₹ 1,110.94 /m3	₹ 6,749.00
8	Providing and Laying in position 1:2:4 cement concrete of specified grade including compacting curing etc all anchor pillar 200 x 0.45 x 0.45 x 0.10 = 4.05 m3 4.05 m3	4.05 m3	₹ 5,923.74 /m3	₹ 23,991.00
9	Providing and Laying in position 1:1.5:3 specified grade of reinforced cement concrete excluding the cost of form work, finishing and reinforcements. anchor pillar 200 x 0.45 x 0.45 x 1.00 = 40.50 m3 40.50 m3	40.50 m3	₹ 6,885.24 /m3	₹ 2,78,852.00
10	Supplying, bending and placing in position tor steel reinforcement in all R.C.C works including cost of 40.50 x 130 kg/cum = 5265.00 kg 52.65 qtl	52.65 qtl	₹ 8,038.55 /qtl	₹ 4,23,230.00
11	Providing, fixing & removing form work for casting R.C.C items as indicated below: with locally Anchored Pillar nos side L H 200 x 4 x 0.45 x 1.00 = 360.00 sq m	360.00 sqm 360.00 sqm	₹ 1,149.41 /sqm	₹ 4,13,788.00
12	Carriage of stock materials within 10 Km.Cement & Steel Surfaced road 10 Cement Vide item no 8 4.05 x 6.4 = 25.92 bags Vide item no 9 40.50 x 8 = 324.00 bags 349.92 bags 175 qtl 17.50 MT Steel Vide No 10 5265.00 5.27 MT 22.76 MT	22.76 MT	₹ x 6.83 MT/KM	₹ 1,555.00
13	Carriage of non stock materials within 10Km.Stone and stone chips Surfaced road 10 km Stone Vide item 7 6.08 x 0.950 = 5.77 cu Stone Chips Vide item 8 4.05 x 0.89 = 3.60 cum Vide item 9 40.50 x 0.85 = 34.43 cum 43.80 cum 43.80 x 2.2 = 96.36 MT	96.36 MT	₹ 6.83 MT/KM	₹ 6,582.00

1,54,776.00

14	Carriage of non stock materials within 10K.m:Sand Surfaced road 10 km Vide 8 4.05 x 0.45 = 1.823 cu Vide 9 40.50 x 0.43 = 17.415 cu 19.24 cum 19.24 x 2 = 38.48 MT	38.48 MT	₹ 6.83 MT/KM	₹ 2,628.00
15	Loading and unloading stone and stone chips = 43.80 cum	43.80 cum	₹ 106.65 /cum	₹ 4,671.00
	sand = 19.24 cum	19.24 cum	₹ 106.65 /cum	₹ 2,052.00
	cement/ steel = 22.76 MT	22.76 MT	₹ 228.47 /MT	₹ 5,200.00

Total		₹ 17,27,444.65
excallation charges of 7.5% for 4 years	30.0%	₹ 5,18,233.39
		₹ 22,45,678.04
		₹ 4,04,222.05
Labour cess on civil works @	1.00%	₹ 22,456.78
Grand Total		₹ 26,72,357.00

Rupees (Twenty six lakh Seventy Two Thousnd Three Hundred Fifty Seven)Only

JUNIOR ENGINEER
P.H,E DEPTT PAKYONG

ASSISTANT ENGINEER
P.H,E DEPTT PAKYONG

Sub Work : Construction of Distribution Chamber

1	Earth work in excavation by mechanical means (Hydraulic Excavator)/ manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. 1 X 3.5 X 1 X 1 = 3.50 cum @ Rs. 970.52 /cum	Rs.	₹ 3,396.82
2	Providing and laying hand packed stone soling in buildings works with clean hard selected stones, all complete. (Manual Means) 1 X 3.5 X 1 X 0.11 = 0.385 cum @ Rs. 1110.94 /cum	Rs.	₹ 428.00
3	Providing and Laying in position cement concrete of specified grade including compacting curing etc all complete. 1:3:6 mix. (1 cement, 3 coarse sand, 6 stone aggregate of 20mm & down size) 1 X 3.5 X 1 X 0.1 = 0.35 cum @ Rs. 5221.45 /cum	Rs.	₹ 1,828.00
4	Providing and laying in position 1:1.5:3 (1 cement, 1.5 clean coarse sand and 3 clean hard graded stone chips 20 mm down nominal guage) specified grade of reinforced cement concrete excluding the cost of form work, finishing & reinforcements with Recron RCC base: 1 X 3 X 0.75 X 0.15 = 0.3375 cum l/wall 2 x 3 x 0.15 x 0.6 = 0.54 cum s/wall 2 x 0.45 x 0.15 x 0.6 = 0.081 cum 0.9585 cum @ Rs. 7548.84 /cum	Rs.	₹ 7,235.56
			12888.38
5	S/B/B of tor steel. **v.i.no(4)** 0.959 x 130 kg /cum = 124.605 kg. @ Rs. 53.78 /qtl	Rs.	₹ 6,701.26
6	P/F/F m.s. plate and angle iron etc. all complete. **(a) m.s.plate 6mm** 1 x 3 x 0.82 = 2.460 @ 47.1 kg/sqm = 115.87 kg **(b) Angle iron 50x50x7mm** 2 x 1 x 0.82 1.64 2 x 1 x 3 6 m 7.64 m @ 5.15 kg /m = 39.35 kg **a+b = 155.21 kg** @ Rs. 70 /kg	Rs.	₹ 10,865.00
7	Labour charges for fitting and fixing of m.s.plate with angle iron etc.complete. 1 x 10865.00 / 3	Rs.	₹ 3,621.67
			21191.62

8	Providing, fixing & removing form work for casting R.C.C items as indicated below: with imported timber from outside the state)							
	Base							
		2 x	x	3 x	0.15 =	0.9 sqm		
		2 x	x	0.75 x	0.15 =	0.225 sqm		
						1.125 sqm		
	wall outer face					@	Rs. 985.56 /sqm	Rs. ₹ 1,108.76
		2 x	x	3 x	0.6 =	3.6 sqm		
		2 x	x	0.75 x	0.6 =	0.9 sqm		
		inner face						
		2 x	x	2.7 x	0.6 =	3.24 sqm		
		2 x	x	0.45 x	0.6 =	0.54 sqm		
						8.28 sqm		
						@	Rs. 812.74 /sqm	Rs. ₹ 6,729.49
9	Cost of Haulage Excluding Loading and Unloading						6 KM	
	(a) cement							
	v.i.	3	0.35 x	4.4 =	1.54 bags			
	v.i.	4	0.96 x	8 =	7.68 bags			
				9.22	9.208 bags			
					=	4.60 qtls.		
	(b) steel ,m.s.plate& angle iron							
	v.i.	5	124.605 kg					
	v.i.	6	155.212 kg					
			279.817 kg		=	2.80 qtls.		
			279.88			7.40 qtls.		
					52.12	0.23 mt		
						@	Rs. 40.98 /mt	Rs. ₹ 9.43
	Loading and unloading of cement or steel by manual means and stacking.							
					=	0.23 mt		
					@ Rs.	228.47 /mt		Rs. ₹ 53.00
10	Cost of Haulage Excluding Loading and Unloading							
	6.00		km		sand			
	v.i.	3	0.35 x	0.47	0.165 cum			
	v.i.	4	0.9585 x	0.43	0.412 cum			
				1.60	0.577 cum			
					0.923 mt			
						@	Rs. 40.98 /mt	Rs. ₹ 37.81
11	Cost of Haulage Excluding Loading and Unloading							
	6		km		stone			
	v.i.	2	0.385 x	0.95 =	0.366 cum			
	v.i.	3	0.35 x	0.7	0.245 cum			
	v.i.	4	0.9585 x	0.57	0.546 cum			
					1.157 cum			
					2.546 mt	@	Rs. 40.98 /mt	Rs. ₹ 104.32
12	Loading and unloading of stone boulder/stone/sand etc.							
	V.I	(10+11)			=	1.73 cum		
						@ Rs.	106.65 /cum	Rs. ₹ 185.00
	Cost of one chamber							**Rs. ₹ 42,304.00**

8227.81
42308

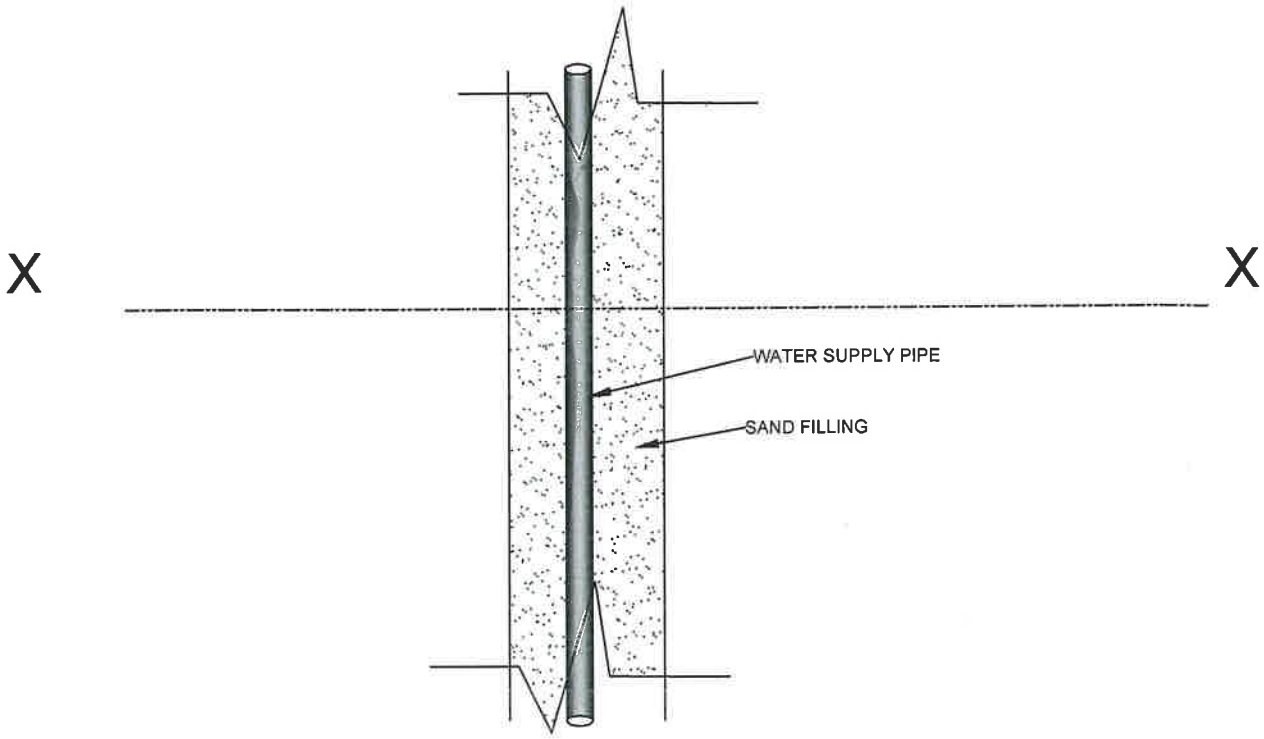
	Therefore, cost of 6 camber		₹2,53,824.00
	excallation charges of 7.5% for 4 years	30%	₹76,147.20
			₹3,29,971.20
	GST @ of 18% on civil work		₹59,394.82
	labour cess @ 1%	1%	₹3,299.71
		Rs.	₹3,92,666.00

In words : (Three Lakh Ninety Two Thousand Six Hundred Sixty Six) only

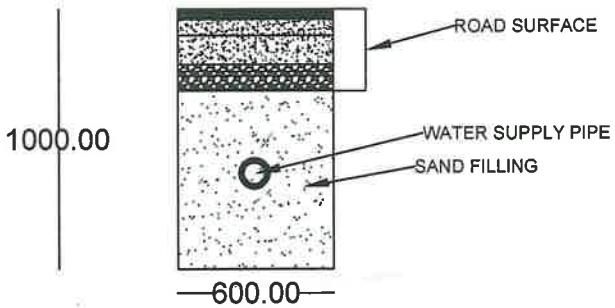
Junior Engineer
W.S.& P.H.E.D.

Assistant Engineer
W.S. & P.H.E.D.

DWG: PIPE ROAD CROSSING



CHAMBER PLAN

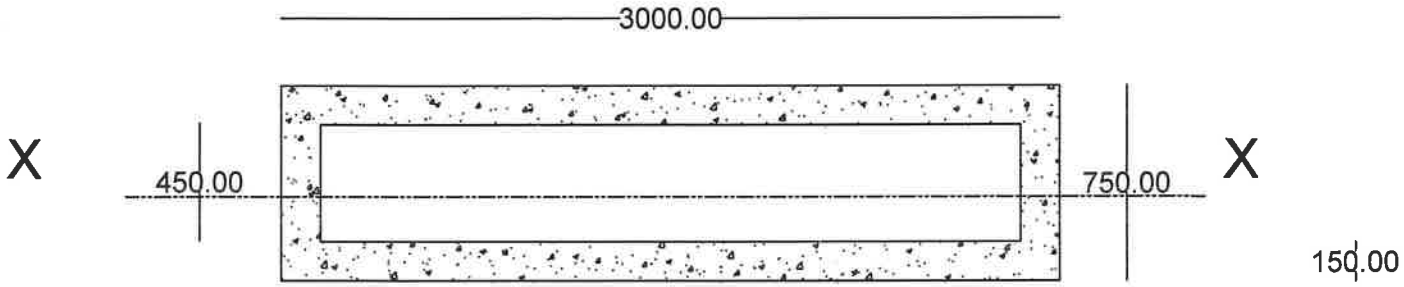


All Dimension Are in mm

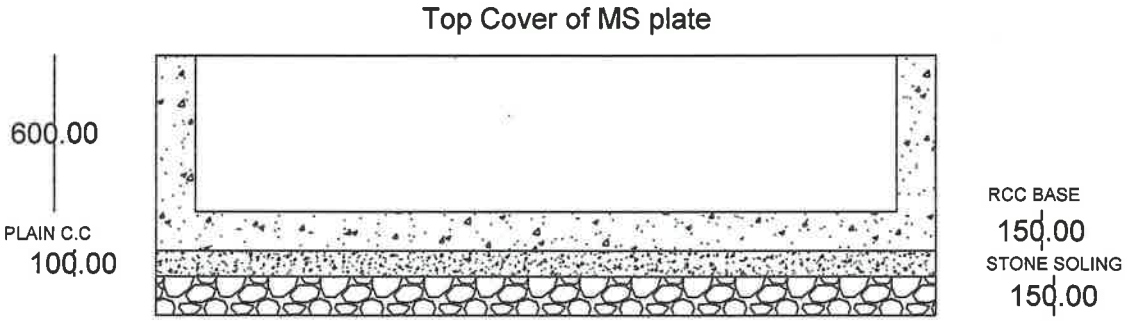
CROSS SECTION ON X-X

JUNIOR ENGINEER PHED	ASSISTANT ENGINEER PHED	DIVISIONAL ENGINEER PHED

DWG: DISTRIBUTION CHAMBER



CHAMBER PLAN



LONGITUDINAL SECTION ON X-X

All Dimension Are in mm

JUNIOR ENGINEER PHED	ASSISTANT ENGINEER PHED	DIVISIONAL ENGINEER PHED

PERMANENT RESTORATION OF DAMAGED WATER SUPPLY UTILITY FROM BARDANG TO SINGTAM FOLLOWING WIDENING OF NH10.

GENERAL ABSTRACT		
Sl.No	ITEM OF WORK	AMOUNT
1	Supply of pipes and fittings	₹ 4,24,15,317.00
	GST @ 18% on civil items	₹ 76,34,757.06
	TOTAL (A)	₹ 5,00,50,074.00
2	civil work	
a)	Laying, itting and fixing of pipe	₹ 1,36,59,558.00
	Civil work Net value	₹ 1,36,59,558.00
	Price Escallation for 4 years @ of 7.5% per year on civil work	₹ 40,97,867.40
	Net value of Civil work with price escallation	₹ 1,77,57,425.40
	GST @ 18% on civil items	₹ 31,96,336.57
	Labour cess @ 1% on civil Items	₹ 1,77,574.25
	Contigency Charges @2%	₹ 3,55,148.51
	TOTAL (B)	₹ 2,14,86,484.73
	TOTAL (A+B)	₹ 7,15,36,559.00
	Supervision charges @10%	₹ 71,53,655.90
	GRAND TOTAL	₹ 7,86,90,215.00

In Words : Rupees (Seven crore Eighty Six Lakh Ninety Thousand Two Hundred Fifteen:) only
Rate adopted is as per SOR 2020 for civil work and STCS rate for supply work w.e.f 26/5/2023

Junior Engineer
P.H.E.D Pakyong

Assistant Engineer
P.H.E.D Pakyong

Divisional Engineer
PHED Pakyong

SUPPLY OF PIPES & FITTINGS

Sl.	Particulars	Qty	Unit	Unit /Rate		Amount
A	**200MM DI PIPE AND FITTINGS FOR BAZAAR DISTRIBUTION LINE**					
	200 mm DI Pipe (k-9)	200	m @	₹ 4,851.00	/m	₹ 9,70,200.00
	200mm DI Double socket Bend 90°	5	nos @	₹ 7,228.00	/nos	₹ 36,140.00
	200mm DI Double socket Bend 45°	8	nos @	₹ 5,735.00	/nos	₹ 45,880.00
	200mm DI Double socket Bend 22°	15	nos @	₹ 4,967.00	/nos	₹ 74,505.00
	200mm DI Double socket Bend 11°	20	nos @	₹ 4,754.00	/nos	₹ 95,080.00
	200mm DI Flanged Socket	5	nos @	₹ 4,740.00	/nos	₹ 23,700.00
	200mm DI Flanged Spigot	5	nos @	₹ 5,159.00	/nos	₹ 25,795.00
	200mm Mechanical Coupling	3	nos @	₹ 9,418.00	/nos	₹ 28,254.00
	200mm Adaptor	3	nos @	₹ 9,507.00	/nos	₹ 28,521.00
	200mm Double Socket Reducer	2	nos @	₹ 4,948.00	/nos	₹ 9,896.00
	200mm Rubber Tyton Ring	100	nos @	₹ 553.00	/nos	₹ 55,300.00
	200mm DI Socket TEE	2	nos @	₹ 9,053.00	/nos	₹ 18,106.00
	200mm Gate Valve	1	nos @	₹ 1,00,000.00	/nos	₹ 1,00,000.00
						14,11,377/-
B	**150MM DI PIPE AND FITTINGS FOR GOLITAR, MANDIR LINE , BHANU PARK AND SHANTINAGAR DISTRIBUTION LINE**					
	150 mm DI Pipe (k-9)	5000	m @	₹ 3,552.00	/m	₹ 1,77,60,000.00
	150mm DI Double socket Bend 90°	150	nos @	₹ 3,464.41	/nos	₹ 5,19,662.00
	150mm DI Double socket Bend 45°	200	nos @	₹ 2,719.49	/nos	₹ 5,43,898.00
	150mm DI Double socket Bend 22°	450	nos @	₹ 2,598.31	/nos	₹ 11,69,240.00
	150mm DI Double socket Bend 11°	450	nos @	₹ 2,425.42	/nos	₹ 10,91,439.00
	150mm DI Flanged Socket	50	nos @	₹ 3,154.00	/nos	₹ 1,57,700.00
	150mm DI Flanged Spigot	50	nos @	₹ 3,666.00	/nos	₹ 1,83,300.00
	150mm Mechanical Coupling	25	nos @	₹ 7,236.00	/nos	₹ 1,80,900.00
	150mm Adaptor	20	nos @	₹ 7,251.00	/nos	₹ 1,45,020.00
	150mm DI Double flanged Bend 11°	10	nos @	₹ 3,924.00	/nos	₹ 39,240.00
	150mm Double Socket Reducer	10	nos @	₹ 3,184.00	/nos	₹ 31,840.00
	150mm Rubber Tyton Ring	1800	nos @	₹ 332.00	/nos	₹ 5,97,600.00
	150mm DI Socket TEE	15	nos @	₹ 5,849.00	/nos	₹ 87,735.00
	150mm Gate Valve	10	nos @	₹ 69,592.98	/nos	₹ 6,95,930.00
	Nuts and Bolts	50	kg @	₹ 334.75	/kg	₹ 16,738.00
						2,41,80,903/-
C	**80MM DI PIPE AND FITTINGS FOR PIPAL DARA DISTRIBUTION LINE**					
	80 mm DI Pipe (k-9)	1000	m @	₹ 2,501.00	/m	₹ 25,01,000.00
	80mm DI Double socket Bend 90°	40	nos @	₹ 2,157.00	/nos	₹ 86,280.00
	80mm DI Double socket Bend 45°	45	nos @	₹ 1,926.00	/nos	₹ 86,670.00
	80mm DI Double socket Bend 22°	65	nos @	₹ 1,694.00	/nos	₹ 1,10,110.00
	80mm DI Double socket Bend 11°	60	nos @	₹ 1,684.00	/nos	₹ 1,01,040.00
	80mm DI Flanged Socket	15	nos @	₹ 1,929.00	/nos	₹ 28,935.00
	80mm DI Flanged Spigot	15	nos @	₹ 1,891.00	/nos	₹ 28,365.00
	80mm Mechanical Coupling	10	nos @	₹ 4,261.00	/nos	₹ 42,610.00
	80mm Adaptor	15	nos @	₹ 4,261.00	/nos	₹ 63,915.00
	80mm DI Double flanged Bend 11°	10	nos @	₹ 2,400.00	/nos	₹ 24,000.00
	80mm DI Double flanged Bend 22°	8	nos @	₹ 2,400.00	/nos	₹ 19,200.00
	80mm DI Double flanged Bend 90°	8	nos @	₹ 2,383.00	/nos	₹ 19,064.00
	80mm DI Double flanged Bend 45°	10	nos @	₹ 2,392.00	/nos	₹ 23,920.00

	80mm Rubber Tyton Ring		500	nos @	₹ 243.00	/nos	₹ 1,21,500.00
	80mm DI Socket TEE		5	nos @	₹ 2,889.00	/nos	₹ 14,445.00
	80mm Gate Valve		4	nos @	₹ 17,507.94	/nos	₹ 70,032.00
							3,341,46.00
D	**65 MM PIPE & FITTINGS FOR JUBLEE LINE DISTRIBUTION**						
	65 mm dia GI	Pipe Heavy duty	1018.7	mtrs @	₹ 819.54	/mtr	₹ 8,34,865.00
	65 mm dia GI	Socket	100	nos. @	₹ 208.06	/nos	₹ 20,806.00
	65 mm dia GI	Bend	50	nos. @	₹ 372.86	/nos	₹ 18,643.00
	65 mm dia GI	Equal Tee	5	nos. @	₹ 437.75	/nos	₹ 2,189.00
	65 mm dia GI	Un-Equal Tee	5	nos. @	₹ 458.35	/nos	₹ 2,292.00
	65 mm dia GI	Plug	5	nos. @	₹ 175.10	/nos	₹ 876.00
	65 mm dia GI	Flange	130	nos. @	₹ 509.85	/nos	₹ 66,281.00
	65 mm dia	Rubber Gaskit	150	nos. @	₹ 100.94	/nos	₹ 15,141.00
	65 mm dia GI	Shortpiece	20	nos. @	₹ 216.30	/nos	₹ 4,326.00
	65 mm	Gate valve	2	nos. @	₹ 12,236.40	/nos	₹ 24,473.00
		Nuts &Bolts	50	kgs. @	₹ 334.75	/nos	₹ 16,738.00
							1006630.00
E	**15MM DIA GI PIPE AND FITTINGS FOR HOUSEHOLD CONNECTION**						
	15 mm dia GI	Pipe medium duty	11998.7	mtrs @	₹ 146.17	/mtr	₹ 17,53,850.00
	15 mm dia GI	Socket	1500	nos. @	₹ 20.60	/nos	₹ 30,900.00
	15 mm dia GI	Plug	800	nos. @	₹ 16.48	/nos	₹ 13,184.00
	15 mm dia GI	Shortpiece	800	nos. @	₹ 17.51	/nos	₹ 14,008.00
	15 mm dia GI	Union	800	nos. @	₹ 61.80	/nos	₹ 49,440.00
	15 mm dia GI	Elbow	650	nos. @	₹ 22.66	/nos	₹ 14,729.00
	15 mm	Gate valve	120	nos. @	₹ 1,184.50	/nos	₹ 1,42,140.00
							2018251
F	**80 MM PIPE & FITTINGS FOR SINGTAM DISTRIBUTION LINE AT VARIOUS LOCATIONS**						
	80 mm dia GI	Pipe Heavy duty	2440	mtrs @	₹ 1,047.04	/mtr	₹ 25,54,778.00
	80 mm dia GI	Socket	370	nos. @	₹ 309.00	/nos	₹ 1,14,330.00
	80 mm dia GI	Bend	200	nos. @	₹ 646.84	/nos	₹ 1,29,368.00
	80 mm dia GI	Equal Tee	15	nos. @	₹ 633.45	/nos	₹ 9,502.00
	80 mm dia GI	Un-Equal Tee	20	nos. @	₹ 667.44	/nos	₹ 13,349.00
	80 mm dia GI	Plug	20	nos. @	₹ 252.35	/nos	₹ 5,047.00
	80 mm dia GI	Flange	400	nos. @	₹ 653.02	/nos	₹ 2,61,208.00
	80 mm dia	Rubber Gaskit	500	nos. @	₹ 128.75	/nos	₹ 64,375.00
	80 mm dia GI	Shortpiece	100	nos. @	₹ 306.94	/nos	₹ 30,694.00
	80 mm	Gate valve	5	nos. @	₹ 17,507.94	/nos	₹ 87,540.00
		Nuts &Bolts	200	kgs. @	₹ 334.75	/nos	₹ 66,950.00
							3337141.00
G	**50 MM DIA GI PIPE & FITTINGS SINGTAM DISTRIBUTION LINE AT VARIOUS LOCATIONS**						
	50 mm dia GI	Pipe Heavy duty	8552.2	mtrs @	₹ 630.15	/mtr	₹ 53,89,169.00
	50 mm dia GI	Socket	1400	nos. @	₹ 127.72	/nos	₹ 1,78,808.00
	50 mm dia GI	Bend	500	nos. @	₹ 372.86	/nos	₹ 1,86,430.00
	50 mm dia GI	Equal Tee	50	nos. @	₹ 247.20	/nos	₹ 12,360.00
	50 mm dia GI	Un-Equal Tee	50	nos. @	₹ 248.23	/nos	₹ 12,412.00
	50 mm dia GI	Plug	100	nos. @	₹ 113.30	/nos	₹ 11,330.00
	50 mm dia GI	Union	100	nos. @	₹ 334.75	/nos	₹ 33,475.00
	50 mm dia GI	Flange	800	nos. @	₹ 350.20	/nos	₹ 2,80,160.00
	50 mm dia	Rubber Gaskit	1000	nos. @	₹ 77.25	/nos	₹ 77,250.00
	50 mm dia GI	Shortpiece	200	nos. @	₹ 123.60	/nos	₹ 24,720.00

252.35

186175.00

	50 mm	Gate valve	12	nos. @	₹ 6,502.39	/nos	₹78,029.00
		Nuts &Bolts	400	kgs. @	₹ 334.75	/nos	₹ 1,33,900.00
							6357785.00
H	32MM DIA GI PIPE AND FITTINGS FOR DISTRICT HOSPITAL						
	32 mm dia GI	Pipe medium duty	1830	m @	₹ 325.85	/m	₹ 5,96,306.00
	32 mm dia GI	Socket	200	nos @	₹ 65.92	/nos	₹ 13,184.00
	32 mm dia GI	Plug	5	nos @	₹ 63.86	/nos	₹ 319.00
	32 mm dia GI	Shortpiece	120	nos @	₹ 70.04	/nos	₹ 8,405.00
32	50 mm dia GI	Un-Equal Tee	4	nos @	₹ 126.69	/nos	₹ 507.00
	32 mm dia GI	Union	200	nos @	₹ 181.28	/nos	₹ 36,256.00
	32 mm dia GI	Elbow	100	nos @	₹ 95.79	/nos	₹ 9,579.00
	32 mm	Gate valve	4	nos @	₹ 3,440.20	/nos	₹ 13,761.00
							678317.00
I	25MM DIA GI PIPE AND FITTINGS FOR SINGTAM DISTRIBUTION AT VARIOUS LOCATION						
	25 mm dia GI	Pipe medium duty	3050	m @	₹ 256.70	/m	₹7,82,935.00
	25 mm dia GI	Socket	300	nos @	₹ 39.14	/nos	₹ 11,742.00
	25 mm dia GI	Plug	50	nos @	₹ 32.96	/nos	₹ 1,648.00
	25 mm dia GI	Shortpiece	200	nos @	₹ 43.26	/nos	₹ 8,652.00
	25 mm dia GI	Union	300	nos @	₹ 126.69	/nos	₹ 38,007.00
	25 mm dia GI	Elbow	200	nos @	₹ 54.59	/nos	₹ 10,918.00
	25 mm	Gate valve	15	nos @	₹ 2,021.89	/nos	₹ 30,328.00
						NET TOTAL	₹ 4,24,15,317.00
						GST 18%	₹ 76,34,757.00
						GRAND TOTAL	₹ 5,00,50,074.00

8,84,230.00
4,32,15,783.00
76,38,841.00
5,09,94,624.00

In words : (Five Crore Eighty FiftyThousand Seventy Four) only

nine l

JUNIOR ENGINEER
PHED PAKYONG

ASSISTANT ENGINEER
PHED PAKYONG

Rupees (five crore nine lakh ninety four thousand six hundred & seventy four) only.

Laying of Pipes

1 Earth work in excavation by mechanical means (Hydraulic Excavator)/ manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.

Length of trenching for 200 mm dia DI pipe	@	100.00%	of	200	=	200.00	m
	1 x 0.60	x	0.60	x	200.0	= 72.00	m3
Length of trenching for 150 mm dia DI pipe	@	80.00%	of	5000.0	=	4000.00	m
	1 x 0.30	x	0.60	x	4000.0	= 720.00	m3
Length of trenching for 80 mm dia DI pipe	@	90.00%	x	1000.00	=	900.00	m
	1 x 0.30	x	0.60	x	900.0	= 162.00	m3
Length of trenching for 80 mm dia GI pipe	@	70.00%	x	2440.00	=	1708.00	m
	1 x 0.30	x	0.60	x	1708.0	= 307.44	m3
Length of trenching for 65mm dia GI pipe	@	70.00%	x	1018.70	=	713.09	m
	1 x 0.30	x	0.60	x	713.1	= 128.36	m3
Length of trenching for 50mm dia GI pipe	@	70.00%	x	8552.20	=	5986.54	m
	1 x 0.30	x	0.60	x	5986.5	= 1077.58	m3
Length of trenching for 32mm dia GI pipe	@	70.00%	x	1830.00	=	1281.00	m
	1 x 0.30	x	0.30	x	1281.0	= 115.29	m3
Length of trenching for 25mm dia GI pipe	@	50.00%	x	3050.00	=	1525.00	m
	1 x 0.30	x	0.30	x	1525.0	= 137.25	m3
Length of trenching for 15 mm dia GI pipe	@	90.00%	x	11998.70	=	10798.83	m
	1 x 0.30	x	0.30	x	10798.8	= 971.89	m3
						3691.81 m3 @	295.52 /m3 ₹ 10,91,004.00

2 Laying, fitting and fixing pipes (excluding trenching, refilling, compacting and the cost of fittings) all complete

200mm DI Pipe					
200.00 mtrs	@	1078.01 /mtr	=	215602.00	₹ 2,15,602.00
150mm DI Pipe					
5000.0 mtrs	@	802.28 /mtr	=	4011400.00	₹ 40,11,400.00
80mm DI Pipe					
1000.00 mtrs	@	569.87 /mtr	=	569870.00	₹ 5,69,870.00
80mm GI Pipe					
2440.00	@	326.55 /mtr	=	796782.00	₹ 7,96,782.00
65mm GI Pipe					
1018.70	@	230.60 /mtr	=	234912.22	₹ 2,34,912.00
50mm GI Pipe					
8552.20	@	187.07 /mtr	=	1599860.05	₹ 15,99,860.00
32mm GI Pipe					
1830.00	@	123.05 /mtr	=	225181.50	₹ 2,25,182.00
25mm GI Pipe					
3050.00	@	103.24 /mtr	=	314882.00	₹ 3,14,882.00
15mm GI Pipe					
11998.70	@	63.65 /mtr	=	763717.26	₹ 7,63,717.00
					89322.00

3	Filling with available excavated earth in trenches, with layers not exceeding 20cm in depth including consolidation of each layer by ramming, watering etc, all complete.					
	Vide item no 1	=	3691.81	m3 @	139.83 /m3	₹ 5,16,226.00
4	Providing of saddle blocks for supporting of pipelines (Analysis attached)	=	100.00	nos @	5170.00 /nos	₹ 5,17,000.00
5	Providing of anchored pillars for supporting of pipelines (Analysis attached)	=	60.00	nos @	~~14058.11~~ 14277.11 /nos	₹ ~~8,43,487.00~~ 8,56,627.00
6	Construction of water supply distribution chambers at various location	=	60.00	nos @	~~26373.55~~ 25059.00 /nos	₹ ~~15,82,413.00~~ 15,03,540.00
7	Construction of valve chambers at various location	=	15.00	nos @	~~25148.09~~ 25527.09 /nos	₹ ~~3,77,221.00~~ 3,82,906.00
				Total =		₹ ~~1,36,59,558.00~~ 1,35,99,510.00
						~~₹ 1,36,59,558.00~~ 1,35,99,510.00

Junior Engineer
PHED

Assistant Engineer
PHED

Construction of RCC Valve Chamber

1 Cleanning and clearing of bushes and debress labour required
O/labour = 2 Nos x 2 Days = 4.00 md
@ 500.00 /day ₹ 2,000.00

2 Excavation in soil in hilly area by manual means including cutting and trimming of side slopes and disposing of excavated earth with all lifts and lead upto 50 meters.

1 x 0.90 x 0.90 x 0.60 = 0.49 cum
@ 295.52 /cur ₹ 144.00

3 Providing and laying hand packed stone soling in buildings works with
1 x 0.90 x 0.90 x 0.15 = 0.12 cum
@ 911.60 /cur ₹ 111.00

4 Providing and Laying in position cement concrete of specified grade 1:3:6 mix. (1 cement, 3 coarse sand, 6 stone aggregate of 20mm &
1 x 0.90 x 0.90 x 0.15 = 0.12 cum
@ 5221.45 /cur ₹ 634.00

5 Providing & Laying in position specified grade of reinforced cement 1:1.5:3 Mix (1cement, 1.5 coarse sand 3 graded stone aggregate 20mm
base slab
1 x 1 x 0.90 x 0.90 x 0.2 = 0.12 cum
long wall
1 x 2 x 0.90 x 0.15 x 0.60 = 0.16 cum
short wall
1 x 2 x 0.90 x 0.15 x 0.60 = 0.16 /cum
0.45 cum
@ 6885.24 /cur ₹ 3,067.00

6 Supplying, bending and placing in position tor- steel reinforcement in all
V.I No-4 0.45 x 130 kg/cum = 61.10 kg
@ 80.38 /kg ₹ 4,911.00

7 Providing fitting fixing of MS Plate chamber covers and ring for supporting man hole cover (Heavy Duty)
a Manhole set of SFRC concrete IS 12592 (600mm) Heavy Duty = 1.00 nos
@ 4600.00 /nos ₹ 4,600.00

b SFRC Adapter Ring (600dia) Heavy Duty = 1.00 nos
@ 2400.00 /nos ₹ 2,400.00

8 Providing, fixing & removing form work for casting R.C.C items as
long wall 2 x 2 x 0.90 x 0.60 = 2.16 sqm
Short wall 2 x 2 x 0.90 x 0.60 = 2.16 sqm
4.32 sqm
@ 812.74 /sqr ₹ 3,511.00

9 Base slab 1 x 2 x 0.90 x 0.15 = 0.27 sqm
1 x 2 x 0.90 x 0.15 = 0.27 sqm
0.54 sqm
@ 1388.89 /sqr ₹ 750.00

10 Cement plaster in 1:3 mix cement mortar with a floating coat of neat
Vide item no 8 & 9 = 4.86 sqm
@ 232.94 /sqr ₹ 1,132.09

11 Cost of Haulage Excluding Loading and Unloading Surface Road
2 km CEMENT
Vide item no 4 0.12 x 4.40 = 0.53 bags
Vide item no 5 0.45 x 8.00 = 3.56 bags
Vide item no 10 4.86 x 0.175 = 0.85 bags
= 4.95 bags
Round bar
Vide item no 6 61.1 /kg = 2.47 qtl
100
= 0.61 qtl
3.09 qtl
0.31 mt
@ 13.66 /mt ₹ 4.00

03598.09

12 Loading and unloading of cement or steel by manual means and stacking.
Vide item no 11

= 0.32 ~~0.31~~ mt
@ 228.47 /mt ₹ ~~70.00~~ 73.00

13 Head load of stock materials for a distance 100 m
11.05

3.23 ~~3.09~~ qtl
@ 11.05 /qtl ₹ ~~34.00~~ 36.00

14 Cost of Haulage Excluding Loading and Unloading Surface Road
20 km STONE

Vide item no	3	0.12	x	~~0.90~~ 0.95	= 0.114 ~~0.11~~ cum
Vide item no	4	0.12	x	0.94	= 0.11 cum
Vide item no	5	0.48 ~~0.45~~	x	0.85	= 0.41 ~~0.38~~ cum
					= 0.63 ~~0.62~~ cum
					1.39 ~~1.36~~ mt

@ 136.60 /mt ₹ ~~186.00~~ 190.00

15 Loading and unloading of stone boulder/stone/sand etc.
Vide item no 14

= 0.63 ~~0.62~~ cum
@ 106.65 /cur ₹ 66.00 67.00

16 Head load of non-stock materials for distance 100 m
261.47

= 0.63 ~~0.62~~ cum
@ 261.47 /cur ₹ ~~162.00~~ 165.00

17 Cost of Haulage Excluding Loading and Unloading Surface Road
20 km SAND

Vide item no	4	0.12	x	0.47	= 0.06 cum
Vide item no	5	0.48 ~~0.45~~	x	0.43	= 0.21 ~~0.19~~ cum
Vide item no	10	4.86	x	0.018	= 0.09 cum
					= 0.36 ~~0.34~~ cum
					0.58 ~~0.54~~ mt

@ 136.60 /mt ₹ ~~74.00~~ 79.00

18 Loading and unloading of stone boulder/stone/sand etc.
Vide item no 17

= 0.36 ~~0.34~~ cum
@ 106.65 /cur ₹ ~~36.00~~ 38.00

19 Head load of non-stock materials for distance 100 m
261.47

= 0.36 ~~0.34~~ cum
@ 261.47 /cur ₹ ~~88.00~~ 94.00

20 Provision for water proof compound
Vide item no 5 ~~0.45~~ 0.48 cum x 35.31 = 16.95 ~~15.73~~ cft
~~15.7306~~ 16.95 x 1 ltr = ~~16.684~~ 16.95 ltrs
@ 70.00 /ltrs ₹ ~~1,168.00~~ 1187.00
₹ ~~25,148.09~~ 25,527.09 1929.00

Junior Engineer
PHED Pakyong

Assistant Engineer
PHED Pakyong

Construction of RCC Distribution Chamber

1 Provision for cleanning and clearing of bushes and debris

O/labour	=	2	Nos	x	1	Days	=	₹	2.00	md		
							@	₹	500.00	/day	₹	1,000.00

2 Earth work in excavation by mechanical means (Hydraulic Excavator)/ manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.

1	x	1.22	x	1.22	x	0.90	=	₹	1.34	cum		
							@	₹	295.52	/cum	₹	396.00

3 Providing and laying hand packed stone soling in buildings works

1	x	1.22	x	1.22	x	0.20	=	₹	0.30	cum		
							@	₹	1,110.94	/cum	₹	331.00

4 Providing and Laying in position cement concrete of specified grade 1:2:4mix. (1 cement, 2coarse sand, 4 stone aggregate of 20mm &

1	x	1.22	x	1.22	x	0.10	=	₹	0.15	cum		
							@	₹	5,923.74	/cum	₹	882.00

5 Providing & Laying in position specified grade of reinforced cement 1:1.5:3 Mix (1cement, 1.5 coarse sand 3 graded stone aggregate

base slab

1	x	1	x	1.22	x	1.22	x	0.1	=	₹	0.15	cum		

long wall

1	x	2	x	1.22	x	0.60	x	0.10	=	₹	0.15	cum		

short wall

1	x	2	x	1.22	x	0.60	x	0.10	=	₹	0.15	/cum		
										₹	0.44	cum		
									@	₹	6,885.24	/cum	₹	3,041.00

6 Supplying, bending and placing in position tor- steel reinforcement

V.I No-4	0.44	x	130	kg/cum	=	₹	68.90	kg				
					@	₹	80.38	/kg	₹	5,538.00		

7 Providing, fixing & removing form work for casting R.C.C items as

long wall	2	x	2	x	1.22	x	0.60	=	₹	2.93	sqm		
Short wall	2	x	2	x	1.22	x	0.60	=	₹	2.93	sqm		
									₹	5.86	sqm		
								@	₹	812.74	/sqm	₹	4,759.00

8 Base slab

	1	x	2	x	1.22	x	0.10	=	₹	0.24	sqm		
	1	x	2	x	1.22	x	0.10	=	₹	0.24	sqm		
									₹	0.48	sqm		
								@	₹	1,388.89	/sqm	₹	677.78

9 Cement plaster in 1:3 mix cement mortar with a floating coat of neat

Vide item no	7	&	8	=	₹	6.34	sqm					
				@	₹	232.94	/sqm	₹	1,477.77			

10 Cost of Haulage Excluding Loading and Unloading Surface Road

20 km CEMENT

Vide item no	4	0.15	x	4.40	=	₹	0.65	bags				
Vide item no	5	0.44	x	8.00	=	₹	4.24	bags				
Vide item no	9	6.34	x	0.175	=	₹	1.11	bags				
						₹	6.01	bags				
Round bar						₹	3.00	qtl				
Vide item no	6	68.9 / 100		/kg	=	₹	0.69	qtl				
						₹	3.69	qtl				
						₹	0.37	mt				
					@	₹	136.60	/mt	₹	50.00		

11 Loading and unloading of cement or steel by manual means and stacking.

Vide item no	10	=	₹	0.37	mt							
		@	₹	228.47	/mt	₹	84.00					

12 Head load of stock materials for a distance 100 m
11.05

	₹	3.69	qtl		
@	₹	11.05	/qtl	₹	41.00

13 Cost of Haulage Excluding Loading and Unloading Surface Road
40 km STONE

Vide item no	3	0.30	x	0.90	=	₹	0.27	cum
Vide item no	4	0.15	x	0.94	=	₹	0.14	cum
Vide item no	5	0.44	x	0.85	=	₹	0.38	cum
					=	₹	0.78	cum
						₹	1.72	mt
					@	₹	273.20	/mt

₹ 471.00

14 Loading and unloading of stone boulder/stone/sand etc.
Vide item no 13

=	₹	0.78	cum		
@	₹	106.65	/cum	₹	84.00

15 Head load of non-stock materials for distance 100 m
261.47

=	₹	0.78	cum		
@	₹	261.47	/cum	₹	205.00

16 Cost of Haulage Excluding Loading and Unloading Surface Road
40 km SA ND

Vide item no	4	0.15	x	0.47	=	₹	0.07	cum
Vide item no	5	0.44	x	0.43	=	₹	0.19	cum
Vide item no	9	6.34	x	0.018	=	₹	0.11	cum
					=	₹	0.37	cum
						₹	0.60	mt
					@	₹	273.20	/mt

₹ 164.00

17 Loading and unloading of stone boulder/stone/sand etc.
Vide item no 16

=	₹	0.37	cum		
@	₹	106.65	/cum	₹	40.00

18 Head load of non-stock materials for distance 100 m
261.47

=	₹	0.37	cum		
@	₹	261.47	/cum	₹	98.00

19 Provision for water proof compound

Vide item no	5		0.44	cum	x	35.31	=	₹	18.71	cft	
18.7143	x	1	ltr		=	18.714	ltrs	@	₹	70.00	/ltrs

₹ 1,310.00

20 Provision for chamber's top cover of ms plate 6mm thick

1.22	x	1.22	x	0.006	x	7870	=	₹	70.28	kg	
m		m		m		kg/m3	@	₹	81.44	/kg	₹ 5,724.00

₹ 26,373.55

Junior Engineer
PHED Pakyong

Assistant Engineer
PHED Pakyong

Construction of Anchor Pillar

1 Cleanning and clearing of bushes and debress labour required

O/labour	=	2	Nos	x	1	Days	=	2	days		
							@ ₹	400.00	/day	₹	800.00

2 Excavation in soil in hilly area by manual means including cutting

1	x	0.90	x	0.90	x	0.60	=	0.49	cum		
							@ ₹	311.19	/cum	₹	151.00

3 Providing and laying hand packed stone soling in buildings works

1	x	0.90	x	0.90	x	0.15	=	0.12	cum		
							@ ₹	911.60	/cum	₹	111.00

4 Providing and Laying in position cement concrete of specified grade 1:3:6 mix. (1 cement, 3 coarse sand, 6 stone aggregate of 20mm &

1	x	0.90	x	0.90	x	0.10	=	0.08	cum		
							@ ₹	5,221.45	/cum	₹	423.00

5 Providing and Laying in position cement concrete of specified grade including compacting curing etc all complete.
1:2:4 mix. (1 cement, 2 coarse sand, 4 graded stone aggregate of 20mm & down size)

Anchor pillar

1	x	0.6	x	0.60	x	2.00	=	0.72	cum		
							=	0.72	cum		
							@ ₹	5,923.74	/cum	₹	4,265.00

6 Providing, fixing & removing form work for casting R.C.C items as Anchor

pillar	1	x	4	x	0.60	x	2.00	=	4.80	sqm	
							=	**4.80**	sqm		
							@ ₹	1,149.41	/sqm	₹	5,517.00

7 Cement plaster in 1:3 mix cement mortar with a floating coat of neat

Vide item no	6						=	4.80	sqm		
							@ ₹	232.94	/sqm	₹	1,118.11

8 Cost of Haulage Excluding Loading and Unloading Surface Road

20	km	CEMENT									
Vide Item no	4	0.08	x	4.40			=	0.36	bags		
Vide Item no	5	0.72	x	6.40			=	4.61	bags		
Vide Item no	7	4.80	x	0.175			=	0.84	bags		
							=	5.80	bags		
								2.90	qtl		
								2.90	qtl		
								0.29	mt		
							@ ₹	136.60	/mt	₹	40.00

9 Loading and unloading of cement or steel by manual means and stacking.

Vide Item no	8						=	0.29	mt		
							@ ₹	228.47	/mt	₹	66.00

10 Head load of stock materials for a distance 200 km

11.05	+	0.17	X	100				2.90	qtl		
							@ ₹	27.79	/qtl	₹	81.00

11 Cost of Haulage Excluding Loading and Unloading Surface Road

40	km	STONE									
Vide Item no	3	0.12	x	0.90			=	0.11	cum		
Vide Item no	4	0.08	x	0.94			=	0.08	cum		
Vide Item no	5	0.72	x	0.89			=	0.64	cum		
							=	0.83	cum		
								1.82	mt		
							@ ₹	273.20	/mt	₹	497.00

12 Loading and unloading of stone boulder/stone/sand etc.

Vide Item no	11						=	0.83	cum		
							@ ₹	106.65	/cum	₹	88.00

1358.11

13 Head load of non-stock materials for distance 200 m

261.47		+	2.7	X	100	=	0.83	cum
						@ ₹	527.34	/cum ₹ 436.00

14 Cost of Haulage Excluding Loading and Unloading Surface Road

40 km SAN D

Vide Item no	4	0.08	x	0.47	=		0.04	cum
Vide Item no	5	0.72	x	0.43 0.45	=	0.32	0.31	cum
Vide Item no	7	4.80	x	0.018	=		0.09	cum
					=	0.45	0.43	cum
						0.72	0.69	mt
					@ ₹	273.20	/mt ₹ 190.00	196.80

15 Loading and unloading of stone boulder/stone/sand etc.

Vide Item no	14					0.45		
					=		0.43	cum
					@ ₹	106.65	/cum ₹ 46.00	48.00

16 Head load of non-stock materials for distance 200 m

261.47		+	2.7	X	100	0.45 =		0.43 cum
						@ ₹	527.34	/cum ₹ 229.00 237.00

₹ 14,058.11 919.00

14277.11

Junior Engineer
PHED Pakong

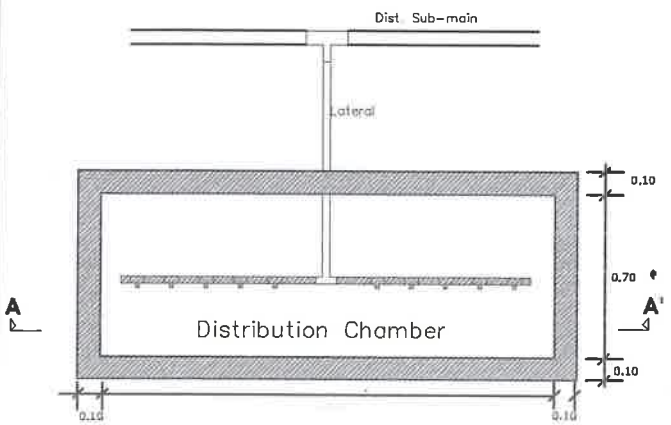
Assistant Engineer
PHED Pakong

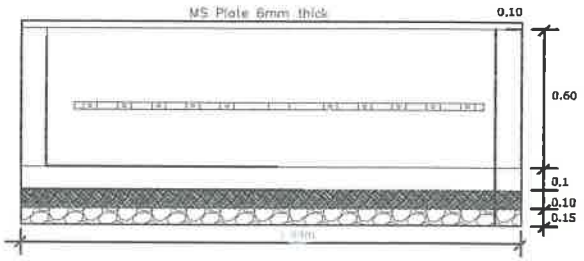
RATE ANALYSIS FOR SADDLE BLOCK
DIMENSION 0.6M x 0.6m FOR 0.6M.

Sn.	Item	Quantity	Rate	Amount
1	Earth work excavation in foundation trenches in mixed soil i/c throwing of spoils to 30m lead & 1.5m lift all complete.			
	1 x 0.90 x 0.90 x 0.60 =	0.49 m^3	295.52 / m^3 ₹	145.00
2	Providing &laying hand packed stone soling with clean hard selected stones all complete			
	1 x 0.90 x 0.90 x 0.15 =	0.12 m^3	1110.94 / m^3 ₹	133.00
3	Providing &laying 1:3:6 mix cement concrete work i/c shuttering, centering, curing, etc., all complete.			
	1 x 0.90 x 0.90 x 0.15 =	0.12 m^3	5221.45 / m^3 ₹	627.00
4	Providing &laying 1:2:4 mix CC works i/c shuttering, centering, curing, etc., all complete			
	BASE 1 x 0.90 x 0.90 x 0.10 =	0.08 m^3		
	COLUMN 1 x 0.60 x 0.60 x 0.80 =	0.29 m^3		
		0.37 m^3	5923.74 / m^3 ₹	2,192.00
6	Providing &laying 12.5mm thick 1:3 mix cement plaster in internal sides of chambers i/c curing, etc., all complete.			
	COLUMN 1 x 4 x 0.60 x 0.80 =	1.92 m^2		
		1.92 m^2	199.99 /m^2 ₹	384.00
7	Quantity of stock materials for assessment of carriage from store to the work site.			
	Vide Item No. (3) 0.12 x 4.400 =	0.53 Bags		
	Vide Item No. (4) 0.37 x 6.400 =	2.37 Bags		
	Vide Item No. (6) 1.92 x 0.147 =	0.28 Bags		
		3.18 Bags		
	=	1.60 Qtls		
	=	0.16 MT		
	Loading/Unloading/Stacking =	0.16 t	₹ 228.47 /mt	₹ 37.00
	Cost of haulage 6.83 X 40 =	0.16 t	₹ 273.20 /mt	₹ 44.00
	Head Load of Stock Materials for a distance =	1.60 qtl	₹ 150.67 /qtl	₹ 241.00
8	Quantity of non stock materials(sand) for assessment of			
	Vide Item No. (3) 0.12 x 0.470 =	0.06 m^3		
	Vide Item No. (4) 0.37 x 0.450 =	0.17 m^3		
	Vide Item No. (6) 1.92 x 0.015 =	0.03 m^3		
		0.26 m^3	0.26 m^3	
	=	0.42 MT		
	Loading/Unloading/Stacking =	0.26 m^3	₹ 106.65 /m^3	₹ 28.00
	Cost of haulage 6.83 X 40 =	0.416 mt	₹ 273.20 /mt	₹ 114.00
	Head Load of Non Stock Materials for a =	0.26 m^3	₹ 2,658.74 /m^3	₹ 691.00
9	Quantity of non stock materials(Stone) for assessment of carriage from qurry to the work site.			
	Vide Item No. (2) 0.12 x 0.95 =	0.11 m^3	Stone	
	Vide Item No. (3) 0.12 x 0.70 =	0.08 m^3	20mm	
	Vide Item No. (3) 0.12 x 0.24 =	0.03 m^3	12mm	
	Vide Item No. (4) 0.37 x 0.67 =	0.25 m^3	20mm	
	Vide Item No. (4) 0.37 x 0.22 =	0.08 m^3	12mm	
		0.55 m^3	0.55 m^3	
	=	1.21 MT		

Loading/Unloading/Stacking		=	0.55 m^3	₹	106.65	/m^3	₹	59.00
Cost of haulage	6.83 X	40 =	1.210 mt	₹	273.20	/mt	₹	331.00
Head Load of Non Stock Materials for a distance upto 100m		=	0.55 m^3	₹	261.47	/m^3	₹	144.00
							₹	5,170.00
						Say	₹	**5,167.00**

5170.00



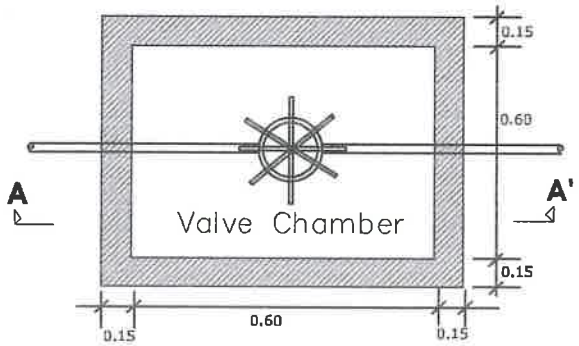


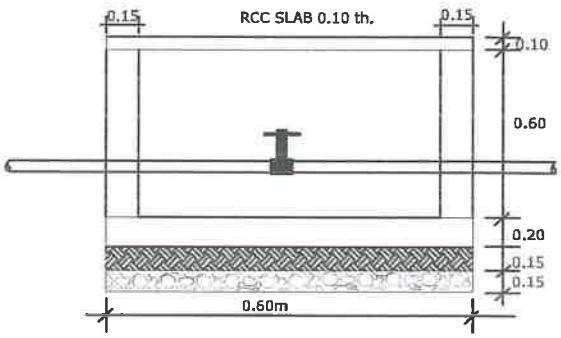
Drawing dimension are in mtr.

Floor Plan and Sectional drawing of Distribution Chamber

Junior Engineer
PHE Department

Assistant Engineer
PHE Department





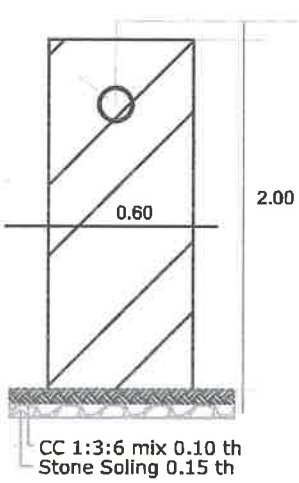
X–Section at A–A'

Drawing dimension are in mtr.

Floor Plan and Sectional drawing of Valve Chamber

Junior Engineer
PHE Department

Assistant Engineer
PHE Department



X – section

Drawing dimension are in mtr.

Cross Section of Pcc in 1:2:4 mix Anchor Pillar

Junior Engineer
PHE Department

Assistant Engineer
PHE Department

Name of Work-Estimate for Laying of new sewerage pipeline with Chambers at NH-10 from Shantinagar near Petrolpump to Traffic point ,Singtam,Pakyong Sub-Division.

GENERAL ABSTRACT		
Sl.No	ITEM OF WORK	AMOUNT
1	Supply of pipes and fittings	₹ 76,01,200.00
	GST @ 18% on civil items	₹ 13,68,216.00
	TOTAL (A)	₹ 89,69,416.00
2	civil work	
	Laying, itting and fixing of pipe & Construction of chamber	₹ 69,92,985.69
	Price Escallation for 4 years @ of 7.5% per year on civil work	₹ 20,97,895.71
	Net value of Civil work with price escallation	₹ 90,90,881.39
	GST @ 18% on civil items	₹ 16,36,358.65
	Labour cess @ 1% on civil Items	₹ 90,908.81
	Contigency Charges @2%	₹ 1,81,817.63
	TOTAL (B)	₹ 1,09,99,966.49
	TOTAL (A+B)	₹ 1,99,69,382.00
	Supervision charges @10%	₹ 19,96,938.20
	GRAND TOTAL	₹ 2,19,66,320.00

In Words : Rupees (Two Crore Nineteen Lakh Sixty Six Thousand Three Hundred Twenty:) only
Rate adopted is as per SOR 2020 for civil work and STCS rate for supply work w.e.f 26/5/2023

Junior Engineer
P.H.E.D Pakyong

Assistant Engineer
P.H.E.D Pakyong

Divisional Engineer
PHED Pakyong

Sub Work -Supply items for laying of new sewer pipelines.

S.No.	Items	Nos	Unit	Rate	/Unit	Amount
1	200 mm dia D.I Pipes (k-7)	1800.00	m	@ Rs. 4100.00	/m	₹ 73,80,000.00
2	200 mm dia Tyton Ring	400	nos	@ Rs. 553.00	/nos	₹ 2,21,200.00
					=	₹ 76,01,200.00
				CGST 9%	=	₹ 6,84,108.00
				SGST 9%	=	₹ 6,84,108.00
				Total	=	**₹ 89,69,416.00**

In words Rupees (Eighty Nine lakh Sixty Nine Thousand Four Hundre Sixteen) only

Junior Engineer
PHED
Pakyong

Assistant Engineer
PHED
Pakyong

Sub Work -Laying fitting fixing of pipes and construction of new chambers.

1	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and removal of rubbish outside the periphery and cleaning, clearing of blocked chambers.									
	Labour									
	20 men	x	20 days	=	400 md	@	₹ 500.00	m/d		₹ 2,00,000.00
2	Provision for shifting of existing pipelines etc all complete.									
	Labour									
	20 men	x	10 days	=	200 md	@	₹ 500.00	m/d		₹ 1,00,000.00
3	Earthwork Excavation in mixed soil in foundation trenches i/c dressing of all sides , watering & ramming i/c disposal of excavated earth upto 50 m lead and lift upto 1.5 m, earth to be levelled and neatly dressed.									
	1800	x	1.4	x	2.1	=	5292.00	cum		
						@	295.52	/cum	₹	15,63,871.00
5	P/L hand packed stone soling with clean hard selected stone etc complete.									
	Chambers									
	80	x	1.4	x	1.4 x 0.15	=	23.52	cum		
						@	704.48	/cum		₹ 16,569.00
6	Providing and Laying in position cement concrete of 1:2:4 mix including compacting curing etc all complete.									
	Chambers									
	80	x	1.4	x	1.4 x 0.1	=	15.68	cum		
						@	5923.74	/cum		₹ 92,884.00
7	Laying, fitting, fixing of 200mm D.I pipes(k-7)									
						=	1800.00	m		
						@	637.23	/m		₹ 11,47,014.00
8	P/L 1:1.5:3 RCC i/c curing, compacting etc but excluding cost of form work complete.									
	Chamber base		80	x	1.2 x 1.2 x 0.2	=	23.04	cum		
	Chamber side	4 x	80	x	1.2 x 0.2 x 1.55	=	119.04	cum		
	slab		80	x	1.2 x 1.2 x 0.125	=	14.40	cum		
							156.48	cum		
	Deduction Manhole		80	x	3.14 x 0.090 x 0.125	=	2.83	cum		
							153.65	cum		
						@	6885.24	/cum		₹ 10,57,945.00
9	S/B/B and placing in position steel reinforcement in RCC works etc.									
	vi no 8	153.65	cum	x	130 kgs cum	=	19975.02	kgs		
							199.75	qtl		
						@	8038.55	/qtls		₹ 16,05,702.00
10	Providing fixing and removing of formwork to cast RCC items as under									
	Chambers									
	RCC	80	x	8	x 1.2 x 1.88	=	1443.84	m2		
							1443.84	m2		
					Considering 60% only		866.30	m2		
						@	703.70	/m2		₹ 6,09,618.00
	Slab	80	x	1.2	x 1.2	=	115.20	m2		
	Deduction manhole	80	x	3.14	x 0.30 x 0.3	=	22.61	m2		
							92.59	m2		
					Considering 60% only		55.56	m2		
						@	902.07	/m2		₹ 50,115.00
11	Manhole set of SFRC concrete IS 12592 (600mm) Heavy Duty									
			80 Nos			@	4600	/nos		₹ 3,68,000.00
12	Carriage of stock material from 5 km dist.									
	Steel & Cement:									
	Vide item no. 9						199.75	qtls		
	Vide item no. 6	15.68	cum	@	6.4	/bags	50.18	qtls		
	Vide item no. 8	153.65	cum	@	6.4	/bags	491.69	qtls		
							741.62	qtls		
							@ Rs. 6.83	/mt x Km	34.15	₹ 25,318.00
13	Carriage of Non Stock material at radius from 20km.									
	Sand:									
	Vide item no. 6	15.68	cum	@	0.45	cum	= 7.06	cum		
	Vide item no. 8	153.65	cum	@	0.45	/cum	= 69.14	cum		
							76.20	cum		

				1600kg/cum		121920.48 kg		
						121.92 MT		
						@ Rs. 6.83	/mt x km	₹ 16,649.00
14	Carriage of Non Stock Material within radius of 15 km.							
	Stone:							
	Vide item no. 5	23.52	cum	@	0.95	/cum	22.34 cum	
	Vide item no. 6	15.68	cum	@	0.85	/cum	13.33 cum	
	Vide item no. 8	153.65	cum	@	0.85	/cum	130.60 cum	
							166.28 cum	
							365811.38 kg	
							365.81 MT	
						@ Rs. 6.83	/mt x km	₹ 37,465.00
15	Head load of stock materials for a distance beyond 30 m and within 100 m distance							
	Vide item no. 12	741.62	qtls					
						@ Rs. 11.05	/qtls	₹ 8,194.89
16	Head load of Non-stock materials for a distance beyond 30 m and within 100m distance.							
	Vide item no. 13	76.20	cum					
	Vide item no. 14	166.28	cum					
		242.48	cum			@ Rs. 261.47	/cum	₹ 63,400.77
17	loding and unloding of stock and non stock materials							
	Vide item no. 12	19.17	MT			@ Rs. 228.47	MT	₹ 4,379.50
	Vide item no. 13	76.20	cum			@ Rs. 106.65	cum	₹ 8,126.83
	Vide item no. 14	166.28	cum			@ Rs. 106.65	cum	₹ 17,733.69
								₹ 69,92,985.69
21	Add Escallation 7.5% for 4 years							₹ 20,97,895.71
							Net Amt	₹ 90,90,881.39
20	Add 18% GST on civil works							₹ 16,36,358.65
22	Add Contingencies chargers 2%							₹ 1,81,817.63
							Total	₹ 1,09,09,058.00

Junior Engineer
PHED
Pakyong

Assistant Engineer
PHED
Pakyong

SHIFTING OF WATER SUPPLY ASSETS UNDER PHED FOR EXTENSION OF NH-10 AT 32 No Area

GENERAL ABSTRACT		
Sl.No	ITEM OF WORK	AMOUNT
1	Supply of pipes and fittings	₹ 3,71,945.00
	GST @ 18% on civil items	₹ 66,950.10
	TOTAL (A)	₹ 4,38,895.00
2	civil work	
a)	Laying, itting and fixing of pipe	₹ 1,63,542.58
b)	Construction of chamber	₹ 1,20,484.00
c)	Construction of 1 Lakh ltrs Fire Reserve Tank.	₹ 18,30,464.80
	Civil work Net value	₹ 21,14,491.37
	Price Escallation for 4 years @ of 7.5% per year on civil work	₹ 6,34,347.41
	Net value of Civil work with price escallation	₹ 27,48,838.78
	GST @ 18% on civil items	₹ 4,94,790.98
	Labour cess @ 1% on civil Items	₹ 27,488.39
	Contigency Charges @2%	₹ 54,976.78
	TOTAL (B)	₹ 33,26,094.93
	TOTAL (A+B)	₹ 37,64,990.00
	Supervision charges @10%	₹ 3,76,499.00
	GRAND TOTAL	₹ 41,41,489.00

In Words : Rupees (Fourty One Lakh Fourty One Thousand Four Hundred Ninety Eight) only
Rate adopted is as per SOR 2020 for civil work and STCS rate for supply work w.e.f 26/5/2023

Junior Engineer
P.H.E.D Pakyong

Assistant Engineer
P.H.E.D Pakyong

Divisional Engineer
PHED Pakyong

SUPPLY OF PIPE AND FITTING

A	**50 MM DIA GI PIPE & FITTINGS 32 No DISTRIBUTION LINE AT VARIOUS LOCATIONS**						
	50 mm dia GI	Pipe Heavy duty	305	mtrs	@ ₹ 630.15	/mtr	₹ 1,92,196.00
	50 mm dia GI	Socket	40	nos.	@ ₹ 127.72	/nos	₹ 5,109.00
	50 mm dia GI	Bend	20	nos.	@ ₹ 372.86	/nos	₹ 7,457.00
	50 mm dia GI	Equal Tee	5	nos.	@ ₹ 247.20	/nos	₹ 1,236.00
	50 mm dia GI	Un-Equal Tee	5	nos.	@ ₹ 248.23	/nos	₹ 1,241.00
	50 mm dia GI	Plug	10	nos.	@ ₹ 113.30	/nos	₹ 1,133.00
	51 mm dia GI	Union	10	nos.	@ ₹ 334.75	/nos	₹ 3,348.00
	50 mm dia GI	Flange	10	nos.	@ ₹ 350.20	/nos	₹ 3,502.00
	50 mm dia	Rubber Gaskit	20	nos.	@ ₹ 77.25	/nos	₹ 1,545.00
	50 mm dia GI	Shortpiece	10	nos.	@ ₹ 123.60	/nos	₹ 1,236.00
	50 mm	Gate valve	2	nos.	@ ₹ 6,502.39	/nos	₹ 13,005.00
		Nuts &Bolts	5	kgs.	@ ₹ 334.75	/nos	₹ 1,674.00
B	**40 MM DIA GI PIPE & FITTINGS 32 No DISTRIBUTION LINE AT VARIOUS**						
	40 mm dia GI	Pipe Heavy duty	152.5	mtrs	@ ₹ 450.80	/mtr	₹ 68,747.00
	40 mm dia GI	Socket	25	nos.	@ ₹ 76.22	/nos	₹ 1,906.00
	40 mm dia GI	Bend	10	nos.	@ ₹ 157.59	/nos	₹ 1,576.00
	40 mm dia GI	Equal Tee	10	nos.	@ ₹ 154.50	/nos	₹ 1,545.00
	40 mm dia GI	Un-Equal Tee	5	nos.	@ ₹ 170.98	/nos	₹ 855.00
	40 mm dia GI	Plug	25	nos.	@ ₹ 81.37	/nos	₹ 2,034.00
	40 mm dia GI	Union	5	nos.	@ ₹ 226.60	/nos	₹ 1,133.00
	40 mm dia GI	Flange	5	nos.	@ ₹ 323.42	/nos	₹ 1,617.00
	40 mm	Gate valve	5	nos.	@ ₹ 4,586.59	/nos	₹ 22,933.00
C	**15MM DIA GI PIPE AND FITTINGS FOR HOUSEHOLD CONNECTION**						
	15 mm dia GI	Pipe medium duty	152.5	mtrs	@ ₹ 146.17	/mtr	₹ 22,291.00
	15 mm dia GI	Socket	20	nos.	@ ₹ 20.60	/nos	₹ 412.00
	15 mm dia GI	Plug	20	nos.	@ ₹ 16.48	/nos	₹ 330.00
	15 mm dia GI	Shortpiece	20	nos.	@ ₹ 17.51	/nos	₹ 350.00
	15 mm dia GI	Union	20	nos.	@ ₹ 61.80	/nos	₹ 1,236.00
	15 mm dia GI	Elbow	20	nos.	@ ₹ 22.66	/nos	₹ 453.00
	15 mm	Gate valve	10	nos.	@ ₹ 1,184.50	/nos	₹ 11,845.00
						Total	**₹ 3,71,945.00**
						GST 18%	₹ 66,950.10
							₹ 4,38,895.10

Junior Engineer
P.H.E.D Pakyong

Assistant Engineer
P.H.E.D Pakyong

Construction of 1 Lakh ltrs Fire Reserve Tank.

1	Cleanning and clearing of bushes and debress labour required												
	O/labour			6	Nos	x	5	Days	=		30	days	
									@	₹	500.00	/day	₹ 15,000.00
2	Excavation in soil in hilly area by manual means including cutting and												
	1	x	9.20	x	5.40	x	4.10		=		203.69	cum	
									@	₹	311.19	/cum	₹ 63,386.00
3	Antitermite Treatment for RCC Foundation Work 500 mm below the												
								1 job			Lumsum		₹ 1,30,000.00
4	Providing and laying hand packed stone soling in buildings works with												
	1	x	9.20	x	5.40	x	0.20		=		9.94	cum	
									@	₹	911.60	/cum	₹ 9,058.00 9061.00
5	Providing and Laying in position cement concrete of specified grade												
	1:3:6 mix. (1 cement, 3 coarse sand, 6 stone aggregate of 20mm & down size)												
	1	x	9.20	x	5.40	x	0.15		=		7.45	cum	
									@	₹	5,221.45	/cum	₹ 38,910.00
6	Providing & Laying in position specified grade of reinforced cement												
	1:1.5:3 Mix (1cement, 1.5 coarse sand 3 graded stone aggregate 20mm												
	Base slab												
		1	x	9.20	x	5.40	x	0.30	=		14.90	cum	
	Long wall												
	2	x	8.90	x	0.30	+	0.20	x 3.3 / 2	=		14.69	cum	
	Short wall												
	2	x	4.80	x	0.30	+	0.20	x 3.3 / 2.00	=		7.92	cum	
	Slab												
	1	x	9.20	x	5.40	x	0.15		=		7.45	/cum	
	Fillet long side												
	2	x	0.50	x	8.90	x	0.30	x 0.30	=		0.80	cum	
	Fillet Short side												
	2	x	0.50	x	4.80	x	0.30	x 0.30	=		0.43	cum	
	Colum		1	x	0.30	x	0.30	x 3.30	=		0.30	cum	
	Beam		1	x	4.80	x	0.30	x 0.30	=		0.43	cum	
			1	x	8.90	x	0.30	x 0.30	=		0.80	cum	
											47.72	cum	
									@	₹	6,885.24	/cum	₹ 3,28,591.00 3,28,564.00
7	Supplying, bending and placing in position tor- steel reinforcement in												
	V.I No-4		47.72	x	130	kg/cum			=		6204.1	kg	
									@	₹	80.380	/kg	₹ 4,98,687.00
8	Providing, fixing & removing form work for casting R.C.C items as												
	long wall		2	x	2	x	8.90	x 3.30	=		117.48	sqm	
	Short wall		2	x	2	x	4.80	x 3.30	=		63.36	sqm	
											180.84	sqm	
									@	₹	703.70	/sqm	₹ 1,27,257.00
9	Base slab		1	x	2	x	9.20	x 0.30	=	₹	5.52	sqm	
			1	x	2	x	5.40	x 0.30	=	₹	3.24	sqm	
	Top slab				1	x	9.20	x 5.40	=	₹	49.68	sqm	
										₹	58.44	sqm	
									@	₹	902.07	/sqm	₹ 52,716.97
10	Colum		1	x	4	x	0.30	x 3.30	=	₹	3.96	sqm	
									@	₹	1,149.41	/sqm	₹ 4,551.66
11	Beam		1	x	3	x	0.30	x 4.80	=	₹	4.32	sqm	

12,68,124/-

								₹	4.32	sqm	
							@	₹	808.92	/sqm	₹ 3,494.53
12	Cement plaster in 1:3 mix cement mortar with a floating coat of neat										
	Vide item no	8	&	9	&	10	&	11	=	247.56	sqm
							@	₹	232.94	/sqm	₹ 57,666.63
13	Cost of Haulage Excluding Loading and Unloading Surface Road										
	20	km	CEMENT								
	Vide item no	5		7.45	x	4.40			=	32.79	bags
	Vide item no	6		47.72	x	8.00			=	381.79	bags
	Vide item no	12		247.56	x	0.175			=	43.32	bags
									=	457.90	bags
										228.95	qtl
	Round bar										
	Vide item no	7		6204.0	/kg				=	62.04	qtl
				100						290.99	qtl
										29.10	mt
							@	₹	6.83	/mtkm	₹ 3,975.00
14	Loading and unloading of cement or steel by manual means and										
	Vide item no	13							=	29.10	mt
							@	₹	228.47	/mt	₹ 6,648.00
15	Head load of stock materials for a distance							1200	m		
	11.05	151	+	0.15	X	200				290.99	qtl
							@	₹	176.79	/qtl	₹ 51,445.00
16	Cost of Haulage Excluding Loading and Unloading Surface Road										
	20	km	STONE								
	Vide item no	4		9.94	x	0.90			=	8.94	cum
	Vide item no	5		7.45	x	0.94			=	7.00	cum
	Vide item no	6		47.72	x	0.85			=	40.57	cum
									=	56.51	cum
										124.33	mt
							@		6.83	/mtkm	₹ 16,983.00
17	Loading and unloading of stone boulder/stone/sand etc.										
	Vide item no	16							=	56.51	cum
							@	₹	106.65	/cum	₹ 6,027.00
18	Head load of non-stock materials for distance							1200	m		
	261.47		2658.74	+	2.66	X	200		=	56.51	cum
							@	₹	3,186.08	/cum	₹ 1,80,054.00 1,80,045.0
19	Cost of Haulage Excluding Loading and Unloading Surface Road										
	20	km	SAND								
	Vide item no	5		7.45	x	0.47			=	3.50	cum
	Vide item no	6		47.72	x	0.43			=	20.52	cum
	Vide item no	12		247.56	x	0.018			=	4.46	cum
									=	28.48	cum
										45.57	mt
							@		6.83	/mtkm	₹ 6,225.00
20	Loading and unloading of stone boulder/stone/sand etc.										
	Vide item no	19							=	28.48	cum
							@	₹	106.65	/cum	₹ 3,037.00
21	Head load of non-stock materials for distance							1200	m		
	261.47		2658.74	+	2.66	X	200		=	28.48	cum
							@	₹	3,186.08	/cum	₹ 90,739.00
22	Provision for water proof compound										
	Vide item no	6		38.74	cum	x	35.31		=	1367.91 1684.9932	cft
1367.91	1685	x	1	ltr		=	1685	ltrs	@	70	ltrs ₹ 1,17,950.00 95,754.0
23	Provision For Man hole Cover SFRC Adapter Ring (600dia) Heavy									1369.91 2	nos
									@	2400	₹ 4,800.00
											5,26,839.16

24	Provision for installation of sludge valve & outlet valve	Lumsum	₹	13,263.00	
			Total ₹	~~18,30,464.80~~	1808 226.16
			Say ₹	~~18,30,465.00~~	1,808,226.00

Junior Engineer
P.H.E.D (Pakyong)

Assistant Engineer
P.H.E.D (Pakyong)

Construction of RCC Distribution Chamber

1 Cleanning and clearing of bushes and debress labour required

O/labour	=	4	Nos	x	1	Days	=	4 md			
							@	₹ 400.00 /day	₹	1,600.00	2000.00

2 Excavation in soil in hilly area by manual means including cutting and

1	x	2.44	x	0.90	x	0.25	=	0.55 cum			
							@	₹ 311.19 /cum	₹	171.00	

3 Providing and laying hand packed stone soling in buildings works

1	x	2.14	x	0.90	x	0.15	=	0.29 cum			
							@	₹ 911.60 /cum	₹	263.00	

4 Providing and Laying in position cement concrete of specified grade 1:3:6 mix. (1 cement, 3 coarse sand, 6 stone aggregate of 20mm &

1	x	2.14	x	0.90	x	0.10	=	0.19 cum			
							@	₹ 5,221.45 /cum	₹	1,005.00	992.00

5 Providing & Laying in position specified grade of reinforced cement 1:1.5:3 Mix (1cement, 1.5 coarse sand 3 graded stone aggregate

base slab

1	x	1	x	2.14	x	0.90	x	0.1	=	0.19 cum	

long wall

1	x	2	x	2.14	x	0.60	x	0.10	=	0.26 cum	

short wall

1	x	2	x	0.70	x	0.60	x	0.10	=	0.08 /cum	
										0.53 cum	
									@	₹ 6,885.24 /cum	₹ 3,671.00 3649.00

6 Supplying, bending and placing in position tor- steel reinforcement in

V.I No-4	0.53	x	130	kg/cum					=	68.9 kg	
									@	₹ 80.380 /kg	₹ 5,538.00

7 Providing, fixing & removing form work for casting R.C.C items as

long wall	2	x	2	x	2.14	x	0.60		=	5.13 sqm	
Short wall	2	x	2	x	0.70	x	0.60		=	1.68 sqm	
										6.81 sqm	
									@	₹ 812.74 /sqm	₹ 5,538.00 5,535.00

8 Base slab	1	x	2	x	2.14	x	0.10	=	₹	0.43 sqm	
	1	x	2	x	0.90	x	0.10	=	₹	0.18 sqm	
									₹	0.61 sqm	
								@	₹	1,388.89 /sqm	₹ 844.17 847.00

9 Cement plaster in 1:3 mix cement mortar with a floating coat of neat

Vide item no	7	&	8						=	7.42 sqm	
									@	₹ 232.94 /sqm	₹ 1,728.76 41

10 Cost of Haulage Excluding Loading and Unloading Surface Road

20 km CEMENT

Vide item no	4		0.19	x	4.40				=	0.84 bags	
Vide item no	5		0.53	x	8.00				=	4.24 bags	
Vide item no	9		7.42	x	0.175				=	1.30 bags	
									=	6.38 6.39 bags	
Round bar										3.19 qtl	
Vide item no	6		68.9 / 100	/kg					=	0.69 qtl	
										3.88 qtl	
										0.39 mt	
									@	₹ 136.60 /mt	₹ 53.00

11 Loading and unloading of cement or steel by manual means and stacking.

Vide item no	10								=	0.39 mt	
									@	₹ 228.47 /mt	₹ 89.00

12 Head load of stock materials for a distance 100 m

11.05

										3.88 qtl	
									@	₹ 11.05 /qtl	₹ 43.00

20909.41

13 Cost of Haulage Excluding Loading and Unloading Surface Road

20	km	STONE						
Vide item no	3	0.29	x	0.90	=	0.26	cum	
Vide item no	4	0.19	x	0.94	=	0.18	cum	
Vide item no	5	0.53	x	0.85	=	0.45	cum	
					=	0.89	cum	
						1.97	mt	
					@ ₹	136.60	/mt	₹ 269.00

14 Loading and unloading of stone boulder/stone/sand etc.

Vide item no	13	=	0.89	cum
		@ ₹	106.65	/cum ₹ 95.00

15 Head load of non-stock materials for distance 100 m

261.47		=	0.89	cum
		@ ₹	261.47	/cum ₹ 234.00

16 Cost of Haulage Excluding Loading and Unloading Surface Road

20	km	SAND						
Vide item no	4	0.19	x	0.47	=	0.09	cum	
Vide item no	5	0.53	x	0.43	=	0.23	cum	
Vide item no	9	7.42	x	0.018	=	0.13	cum	
					=	0.45	cum	
						0.73	mt	
					@ ₹	136.60	/mt	₹ 99.00

17 Loading and unloading of stone boulder/stone/sand etc.

Vide item no	16	=	0.45	cum
		@ ₹	106.65	/cum ₹ 48.00

18 Head load of non-stock materials for distance 100 m

261.47		=	0.45	cum
		@ ₹	261.47	/cum ₹ 119.00

19 Provision for water proof compound

Vide item no	5	0.53	cum	x	35.31	=	18.7143	cft		
18.7143	x	1	ltr	=	18.714	ltrs	@	70	/ltrs	₹ 1,310.00

20 provision for chamber's top cover of ms plate 6mm thick

2.14	x	0.90	x	0.006	x	7870	=	90.90	kg	
m		m		m		kg/m3	@	81.44	/kg	₹ 7,403.00
										₹ 30,120.93
Total number of Distribution Chamber	=	4	nos						=	₹ 1,20,484
									Total	₹ 1,20,484

Junior Engineer
PHED Pakyong

Assistant Engineer
PHED Pakyong

Laying of Pipes

1 Earth work in excavation by mechanical means (Hydraulic Excavator)/ manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.

Length of trenching for 50 mm dia pipe	@	90.00%	of	305	=	274.50	m		
	1 x	0.30	x	0.60	x	274.5	= 49.41	m3	
Length of trenching for 40 mm dia pipe	@	100.00%	of	152.5	=	152.50			
	1 x	0.30	x	0.60	x	152.5	= 27.45	m3	
							76.86	m3 @	311.19 /m3 ₹ 23,918.00

2 Laying fitting fixing of Pipes and fittings

50mm GI Pipe	305 @	187.07 /m	=	57056.35	₹ 57,056.35
40mm GI Pipe	153 @	143.09 /m	=	~~21821.23~~ 21892.77	~~₹ 21,821.23~~ 21892.77

3 Filling with available excavated earth in trenches, with layers not exceeding 20cm in depth including consolidation of each layer by ramming, watering etc, all complete.

Length of trenching for 40 mm dia pipe	@	100.00%	of	153	=	~~152.50~~ 153.00	m		
	1 x	0.30	x	0.60	x	~~152.50~~ 153.00	= ~~27.45~~ 27.54	m3 @	139.83 /m3 ~~₹ 3,838.00~~ 3851.00
Length of trenching for 50mm	@	90.00%	of	305	=	274.50			
	1 x	0.30	x	0.60	x	274.50	= 49.41	m3 @	139.83 /m3 ₹ 6,909.00

4 Provision for cutting and remaking of road surfaces

= Lumsum ₹ 50,000.00

(To be Paid in actual)

~~₹ 1,63,542.58~~ 1,63,627.12

Total = ~~₹ 1,63,542.58~~ 163,627.12

Junior Engineer
PHED

Assistant Engineer
PHED

TEMPORARY SHIFTING OF WATER SUPPLY & SEWERAGE UTILITIES FALLING UNDER THE R.O.W OF NH10 FORM RANGPO TO 32 No. UNDER PAKYONG SUB-DIVISION FOLLOWING WIDENING OF THE NATIONAL HIGHWAY.

Sl.No	ITEM OF WORK	AMOUNT
A	**Supply of pipes and fittings**	
1	RANGPO WATER SUPPLY	₹ 9,85,417.00
2	SINGTAM WATER SUPPLY	₹ 1,04,22,481.00
3	SINGTAM SEWERAGE	₹ 9,41,753.00
4	32 NO. WATER SUPPLY	₹ 1,31,738.00
		₹ 1,24,81,389.00
	GST @ 18%	₹ 22,46,650.02
	TOTAL (A)	₹ 1,47,28,039.00
B	**civil work**	
1	RANGPO WATER SUPPLY	**₹ 3,00,000.00**
2	SINGTAM WATER SUPPLY	**₹ 3,00,000.00**
3	SINGTAM SEWERAGE	**₹ 3,00,000.00**
4	32 NO. WATER SUPPLY	**₹ 20,500.00**
	Civil work Net value	**₹ 9,20,500.00**
	GST @ 18% on civil items	₹ 1,65,690.00
	Labour cess @ 1% on civil Items	₹ 9,205.00
		₹ 10,95,395.00
	GRAND TOTAL	**₹ 1,58,23,434.00**

In Words : Rupees (One Crore Fifty-Eight Twenty-Three Thousand Four Hundred Thirty-
Rate adopted is as per SOR 2020

Junior Engineer
P.H.E.D Pakyong

Assistant Engineer
P.H.E.D Pakyong

Divisional Engineer
PHED Pakyong

CHECKED & VERIFIED

Junior Engineer (P)
W.S. & Public Health
Engineering Deptt.
Govt. of Sikkim

Assistant Engineer (P
W.S. & Public Health
Engineering Deptt
Govt of Sikkim

TEMPORARYY RESTORATION OF DAMAGED WATER SUPPLY UTILITY FORM RANGPO TO MAJITAR FOLLOWING WIDINING OF NH10.

GENERAL ABSTRACT		
Sl.No	ITEM OF WORK	AMOUNT
1	Supply of pipes and fittings	₹ 9,85,417.00
	GST @ 18% on civil items	₹ 1,77,375.00
	TOTAL (A)	₹ 11,62,792.00
2	civil work	
	Laying, itting and fixing of pipe	**₹ 3,00,000.00**
	Civil work Net value	₹ 3,00,000.00
	GST @ 18% on civil items	₹ 54,000.00
	Labour cess @ 1% on civil Items	₹ 3,000.00
		₹ 3,57,000.00
	GRAND TOTAL	**₹ 15,19,792.00**

In Words : Rupees (Fifteen lakh Nineteen Thousand Seven Hundred Ninety Two) only
Rate adopted is as per SOR 2020

Junior Engineer
P.H.E.D Pakyong

Assistant Engineer
P.H.E.D Pakyong

Divisional Engineer
PHED Pakyong

SUPPLY OF PIPES & FITTINGS

Sl.	Particulars	Qty	Unit	Unit Rate	Amount
A	**95 MM PIPE & FITTINGS FOR MINING DISTRIBUTON LINE**				
	95mm dia (8kgs) HDPE pipe	40	mtrs @	₹ 525.00 /mtr =	₹ 21,000.00
	8bwg GI wire	20	kgs. @	₹ ~~70.70~~ 74.24 /no =	₹ 1485 ~~1,414.00~~
	Rubber Tubes (used JEEP Tyre size)	10	nos. @	₹ 390.00 /no =	₹ 3,900.00
	Hack-saw Blade both side teeth	20	nos. @	₹ 20.00 /no =	₹ 400.00
	Hack-saw Blade Frame	2	nos. @	₹ 200.00 /no =	₹ 400.00
	Sledgehammer 14 pound with handle	2	nos. @	₹ 1,250.00 /no =	₹ 2,500.00
	Pipe wrench 150mm TAPARIA	2	nos. @	₹ 1,450.00 /no =	₹ 2,900.00
	Chain Wrench 36 inch handle	2	nos. @	₹ 3,600.00 /no =	₹ 7,200.00
	Hi-density Polyethylene water tank 2000 ltrs i/c fittings	1	nos. @	₹ 17,200.00 /no =	₹ 17,200.00
B)	**75 MM PIPE & FITTINGS FOR RAW WATER MAIN LINE**				
	75mm dia (10kgs) HDPE pipe	1200	mtrs @	₹ 438.00 /mtr =	₹ 5,25,600.00
	75mm dia (8kgs) HDPE pipe	600	mtrs @	₹ 366.23 /mtr =	₹ 2,19,738.00
	8bwg GI wire	60	kgs. @	₹ ~~70.70~~ 74.24 /no =	₹ 4454 ~~4,242.00~~
	Rubber Tubes (used JEEP Tyre size)	20	nos. @	₹ 390.00 /no =	₹ 7,800.00
C)	**95 MM PIPE & FITTINGS FOR MAJITAR DIATRIBUTION LINE AT VARIOUS LOCATION**				
	75mm dia (10kgs) HDPE pipe	250	mtrs @	₹ 438.00 /mtr =	₹ 1,09,500.00
	75mm dia (8kgs) HDPE pipe	100	mtrs @	₹ 366.23 /mtr =	₹ 36,623.00
	Rubber Tubes (used JEEP Tyre size)	20	nos. @	₹ 390.00 /no =	₹ 7,800.00
	Hi-density Polyethylene water tank 2000 ltrs i/c fittings	1	nos. @	₹ 17,200.00 /no =	₹ 17,200.00
				NET TOTAL =	₹ ~~9,85,417.00~~ 985700.00
				GST 18% =	₹ ~~1,77,375.00~~ 177426.00
				GRAND TOTAL =	₹ ~~11,62,792.00~~ 1163126.00

In words : (Eleven Lakh Sixty ~~Two~~ Thousand ~~Seven~~ Hundred ~~Ninety Two~~) only

JUNIOR ENGINEER
PHED PAKYONG

ASSISTANT ENGINEER
PHED PAKYONG

LAYING, FITTING, FIXING OF THE PIPES

Sl. no	Particulars	Quantity	Rate	Amount
1	Track cutting and clearing of bushes along the trackline and breaking of existing structures as per Engineer in-chargeall acomplete 10 men x 10 days = 100 md	100 md	₹ 500.00	₹ 50,000
2	Excavation in soil in hilly area by manual/mechanical means including cutting and trimming of side slopes and disposing of excavated earth with all lifts and lead upto 1000 metres. 30% of total length of the pipe line 10 men x 10 days = 100 md	100 md	₹ 500.00	₹ 50,000
5	Laying of HDPE pipe of heavy/medium class, (excluding trenching, refilling, compacting and the cost of fittings) 20 men x 20 days = 400 md	400 md	₹ 500.00	₹ 2,00,000
				₹ 3,00,000.00
			GST 18%	~~₹ 54,000.00~~ 54540.00
			Labour cess on civil works @	₹ 3,000.00
			Grand Total	~~₹ 3,57,000.00~~ 3,57,540.00

Rupees (Three Lakh Fifty Seven Thousand) ~~Only~~ Five Hundred & Forty) only.

JUNIOR ENGINEER
P.H,E DEPTT PAKYONG

ASSISTANT ENGINEER
P.H,E DEPTT PAKYONG

TEMPORARY WATER SUPPLY PROVISION FOR SINGTAM TOWN FOLLOWING THE WIDENING OF NH10 FROM RANGPO TO RANIPOOL.

GENERAL ABSTRACT			
Sl.No	ITEM OF WORK		AMOUNT
1	Supply of pipes and fittings		₹ 1,04,22,481.00
	GST @ 18% on civil items		₹ 18,76,047.00
		TOTAL (A)	₹ 1,22,98,528.00
2	civil work		
	Laying, itting and fixing of pipe		**₹ 3,00,000.00**
		Civil work Net value	₹ 3,00,000.00
	GST @ 18% on civil items		₹ 54,000.00
	Labour cess @ 1% on civil Items		₹ 3,000.00
			₹ 3,57,000.00
		GRAND TOTAL	**₹ 1,26,55,528.00**

In Words : Rupees (One Crore Twenty Six lakh Fifty Five Thousand Five Hundred and Twenty Eight) only

Rate adopted is as per SOR 2020 and STCS Rates for Pipes and fittings 2022

Junior Engineer
P.H.E.D Pakyong

Assistant Engineer
P.H.E.D Pakyong

Divisional Engineer
PHED Pakyong

SUPPLY OF PIPES & FITTINGS

Sl.	Particulars	Qty	Unit	Unit Rate	Amount
A	**160 MM HDPE PIPE & FITTINGS FOR GOLITAR DISTRIBUTON LINE**				
	160mm dia (10kg) HDPE pipe	2500	mtrs @	₹ 2,483.77 /mtr =	₹ 62,09,425.00
	HDPE FLANGE	260	set @	₹ 2,649.52 /set =	₹ 6,88,875.00
	8bwg GI wire	100	kg @	₹ ~~70.70~~ /nos =	₹ ~~7,070.00~~
	Rubber Tubes (used JEEP Tyre size)	30	nos. @	₹ 390.00 /nos =	₹ 11,700.00
	Hack-saw Blade both side teeth	100	nos. @	₹ 20.00 /nos =	₹ 2,000.00
	Hack-saw Blade Frame	5	nos. @	₹ 200.00 /nos =	₹ 1,000.00
	Sledgehammer 14 pound with handle	3	nos. @	₹ 1,250.00 /nos =	₹ 3,750.00
	Pipe wrench 150mm TAPARIA	2	nos. @	₹ 1,450.00 /nos =	₹ 2,900.00
	Chain Wrench 36 inch handle	2	nos. @	₹ 3,600.00 /nos =	₹ 7,200.00
	HDPE Pipe 15mm	1050	kgs. @	₹ 95.00 /kg	₹ 99,750.00
	Hi-density Polyethylene water tank 2000 ltrs i/c fittings	4	nos. @	₹ 17,200.00 /no =	₹ 68,800.00
B)	**75 MM PIPE & FITTINGS FOR RAW WATER MAIN LINE**				
	75mm dia (10kgs) HDPE pipe	500	mtrs @	₹ 438.00 /mtr =	₹ 2,19,000.00
	8bwg GI wire	60	kgs. @	₹ 70.70 /no =	₹ 4,242.00
	Rubber Tubes (used JEEP Tyre size)	20	nos. @	₹ 390.00 /no =	₹ 7,800.00
C)	**90 MM HDPE PIPE & FITTINGS FOR SINGTAM DISTRIBUTION LINE AT VARIOUS LOCATION**				
	90 mm dia (10kgs) HDPE pipe	2000	mtrs @	₹ 785.47 /mtr =	₹ 15,70,940.00
	Rubber Tubes (used JEEP Tyre size)	30	nos. @	₹ 390.00 /no =	₹ 11,700.00
	GI wire	60	kgs. @	₹ ~~70.70~~ /no =	₹ ~~4,242.00~~
D)	**50 MM HDPE PIPE & FITTINGS FOR SINGTAM DISTRIBUTION LINE AT VARIOUS LOCATION**				
	50 mm dia (10kgs) HDPE pipe	5500	mtrs @	₹ 249.32 /mtr =	₹ 13,71,260.00
	Rubber Tubes (used JEEP Tyre size)	30	nos. @	₹ 390.00 /no =	₹ 11,700.00
	GI wire	60	kgs. @	₹ ~~70.70~~ /no =	₹ ~~4,242.00~~
E)	**32MM AND 25 MM HDPE PIPE & FITTINGS FOR SINGTAM DISTRICT HOSPITAL LINE**				
	32mm HDPE Pipe	540	kg @	₹ 95.00 /kg =	₹ 51,300.00
	25mm HDPE Pipe	550	kg @	₹ 95.00 /kg =	₹ 52,250.00
	Rubber Tubes (used JEEP Tyre size)	20	nos @	₹ 390.00 /no =	₹ 7,800.00
	GI wire	50	kg @	₹ ~~70.70~~ /kg =	₹ ~~3,535.00~~
				NET TOTAL =	₹ ~~1,04,22,481.00~~
				GST 18% =	₹ ~~18,76,047.00~~
				GRAND TOTAL =	₹ ~~1,22,98,528.00~~

In words : (One Crore Twenty Two Lakh Ninety Eight Thousand Five Hundred Twenty Eight) only

JUNIOR ENGINEER
PHED PAKYONG

ASSISTANT ENGINEER
PHED PAKYONG

LAYING, FITTING, FIXING OF HDPE PIPES

Sl. no	Particulars	Quantity	Rate	Amount
1	Track cutting and clearing of bushes along the trackline and breaking of existing structures as per Engineer in-chargeall acomplete 10 men x 10 days = 100 md	100 md	₹ 500.00	₹ 50,000
2	Excavation in soil in hilly area by manual/mechanical means including cutting and trimming of side slopes and disposing of excavated earth with all lifts and lead upto 1000 metres. 30% of total length of the pipe line 10 men x 10 days = 100 md	100 md	₹ 500.00	₹ 50,000
5	Laying of HDPE pipe of heavy/medium class, (excluding trenching, refilling, compacting and the cost of fittings) all 20 men x 20 days = 400 md	400 md	₹ 500.00	₹ 2,00,000
				₹ 3,00,000.00
			GST 18%	~~₹ 54,000.00~~ 54540/-
			Labour cess on civil works @	₹ 3,000.00
			Grand Total	~~₹ 3,57,000.00~~ 357540/-

Rupees (Three Lakh Fifty Seven Thousand) ~~Only~~ Five Hundred & Forty) only .

JUNIOR ENGINEER
P.H,E DEPTT PAKYONG

ASSISTANT ENGINEER
P.H,E DEPTT PAKYONG

TEMPORARYY RESTORATION OF DAMAGED WATER SUPPLY UTILITY FORM RANGPO TO MAJITAR FOLLOWING WIDINING OF NH10.

GENERAL ABSTRACT			
Sl.No	ITEM OF WORK		AMOUNT
1	Supply of pipes and fittings		₹ 9,41,753.00
	GST @ 18% on civil items		₹ 1,69,516.00
		TOTAL (A)	₹ 11,11,269.00
2	civil work		
	Laying, itting and fixing of pipe		₹ 3,00,000.00
		Civil work Net value	₹ 3,00,000.00
	GST @ 18% on civil items		₹ 54,000.00
	Labour cess @ 1% on civil Items		₹ 3,000.00
			₹ 3,57,000.00
		GRAND TOTAL	₹ 14,68,269.00

In Words : Rupees (Fourteen laks sixty eight thousand two hundred sixty nine) only

Junior Engineer
P.H.E.D Pakyong

Assistant Engineer
P.H.E.D Pakyong

Divisional Engineer
PHED Pakyong

SUPPLY OF PIPES & FITTINGS

Sl.	Particulars	Qty	Unit	Unit Rate			Amount
	160mm dia (8kgs) HDPE pipe	300	mtrs @	₹ 2,081.13	/mtr	= ₹	6,24,339.00
	8bwg GI wire	20	kgs. @	₹ ~~74.04~~ 70.70	/no	= ₹	~~1,414.00~~ 1485.00
	Rubber Tubes (used JEEP Tyre size)	10	nos. @	₹ 390.00	/no	= ₹	3,900.00
	Hack-saw Blade both side teeth	20	nos. @	₹ 20.00	/no	= ₹	400.00
	Hack-saw Blade Frame	2	nos. @	₹ 200.00	/no	= ₹	400.00
	Sledgehammer 14 pound with handle	2	nos. @	₹ 1,250.00	/no	= ₹	2,500.00
	Hose Pipe 160 mm	300	mtrs @	₹ 800.00	/no	= ₹	2,40,000.00
	Hi-density Polyethylene water tank 2000 ltrs i/c fittings	4	nos. @	₹ 17,200.00	/no	= ₹	68,800.00
				NET TOTAL		= ₹	~~9,41,753.00~~ 9,41,824.00
				GST	18%	= ₹	~~1,69,516.00~~ 1695 28.00
				GRAND TOTAL		= ₹	~~11,11,269.00~~ 11,11,352.00

JUNIOR ENGINEER
PHED PAKYONG

ASSISTANT ENGINEER
PHED PAKYONG

LAYING, FITTING, FIXING OF THE PIPES

Sl. no	Particulars	Quantity	Rate	Amount
1	Track cutting and clearing of bushes along the trackline and breaking of existing structures as per Engineer in-chargeall acomplete 10 men x 10 days = 100 md	100 md	₹ 500.00	₹ 50,000
2	Excavation in soil in hilly area by manual/mechanical means including cutting and trimming of side slopes and disposing of excavated earth with all lifts and lead upto 1000 metres. 30% of total length of the pipe line 10 men x 10 days = 100 md	100 md	₹ 500.00	₹ 50,000
5	Laying of HDPE & Hose pipe of heavy/medium class, (excluding trenching, refilling, compacting and the cost of 20 men x 20 days = 400 md	400 md	₹ 500.00	₹ 2,00,000
				₹3,00,000.00
			GST 18%	~~₹ 54,000.00~~ 54540/-
			Labour cess on civil works @	₹ 3,000.00
			Grand Total	~~₹3,57,000.00~~ 357540/-

JUNIOR ENGINEER
P.H,E DEPTT PAKYONG

ASSISTANT ENGINEER
P.H,E DEPTT PAKYONG

TEMPORARYY RESTORATION OF DAMAGED WATER SUPPLY UTILITY From 32 No BAZAR TO HITTI FOLLOWING WIDINING OF NH10.

GENERAL ABSTRACT		
Sl.No	ITEM OF WORK	AMOUNT
1	Supply of pipes and fittings	₹ 1,31,738.00
	GST @ 18% on supply items	₹ 23,713.00
	TOTAL (A)	₹ 1,55,451.00
2	Civil work	
	Laying, Fitting and fixing of pipe	₹ 20,500.00
	GST @ 18% on civil items	₹ 3,690.00
	Labour cess @ 1% on civil Items	₹ 205.00
		₹ 24,395.00
	GRAND TOTAL	₹ 1,79,846.00

In Words : Rupees (One Lakh Seventy Nine Thousand Eight Hundred Forty Six) only
Rate adopted is as per SOR 2020

Junior Engineer
P.H.E.D Pakyong

Assistant Engineer
P.H.E.D Pakyong

Divisional Engineer
PHED Pakyong

SUPPLY OF PIPES & FITTINGS

Sl.	Particulars	Qty	Unit	Unit Rate	Amount
A	**50 MM PIPE & FITTINGS FOR DISTRIBUTON LINE**				
	50mm dia (8kgs) HDPE pipe	305	mtrs @	₹ 205.03 /mtr =	₹ 62,534.00
	40mm dia HDPE pipe	152.5	mtrs @	₹ 90.00 /mtr =	₹ 13,725.00
	15mm dia (HDPE)pipe	152.5	mtrs @	₹ 90.00 /mtr =	₹ 13,725.00
	8bwg GI wire	5	kgs. @	₹ 70.70 /no =	₹ 354.00 371.00
	Rubber Tubes (used JEEP Tyre size)	10	nos. @	₹ 390.00 /no =	₹ 3,900.00
	Hack-saw Blade both side teeth	10	nos. @	₹ 20.00 /no =	₹ 200.00
	Hack-saw Blade Frame	2	nos. @	₹ 200.00 /no =	₹ 400.00
	Sledgehammer 14 pound with handle	2	nos. @	₹ 1,250.00 /no =	₹ 2,500.00
	Hi-density Polyethylene water tank 2000 ltrs i/c fittings	2	nos. @	₹ 17,200.00 /no =	₹ 34,400.00
				NET TOTAL =	₹ 1,31,738.00 1,31,755.00
				GST 18% =	₹ 23,713.00 23716.00
				GRAND TOTAL =	₹ 1,55,451.00 155,471.00

In words : (One Lakh Fifty Five Thousand Four Hundred Fifty one) only Seventy one.

JUNIOR ENGINEER
PHED PAKYONG

ASSISTANT ENGINEER
PHED PAKYONG

LAYING, FITTING, FIXING OF THE PIPES

Sl. no	Particulars	Quantity	Rate	Amount
1	Track cutting and clearing of bushes along the trackline and breaking of existing structures as per Engineer in-charge all acomplete 5 men x 5 days = 25 md	25 md	₹ 500.00	₹ 12,500
2	Excavation in soil in hilly area by manual/mechanical means including cutting and trimming of side slopes and disposing of excavated earth with all lifts and lead upto 1000 metres. 30% of total length of the pipe line 4 men x 2 days = 8 md	8 md	₹ 500.00	₹ 4,000
3	Laying of HDPE pipe of heavy/medium class, (excluding trenching, refilling, compacting and the cost of fittings) 4 men x 2 days = 8 md	8 md	₹ 500.00	₹ 4,000
				₹ 20,500.00
			GST 18%	₹ 3,690.00
			Labour cess on civil works @	₹ 205.00
			Grand Total	**₹ 24,395.00**

3727.00

24432.00

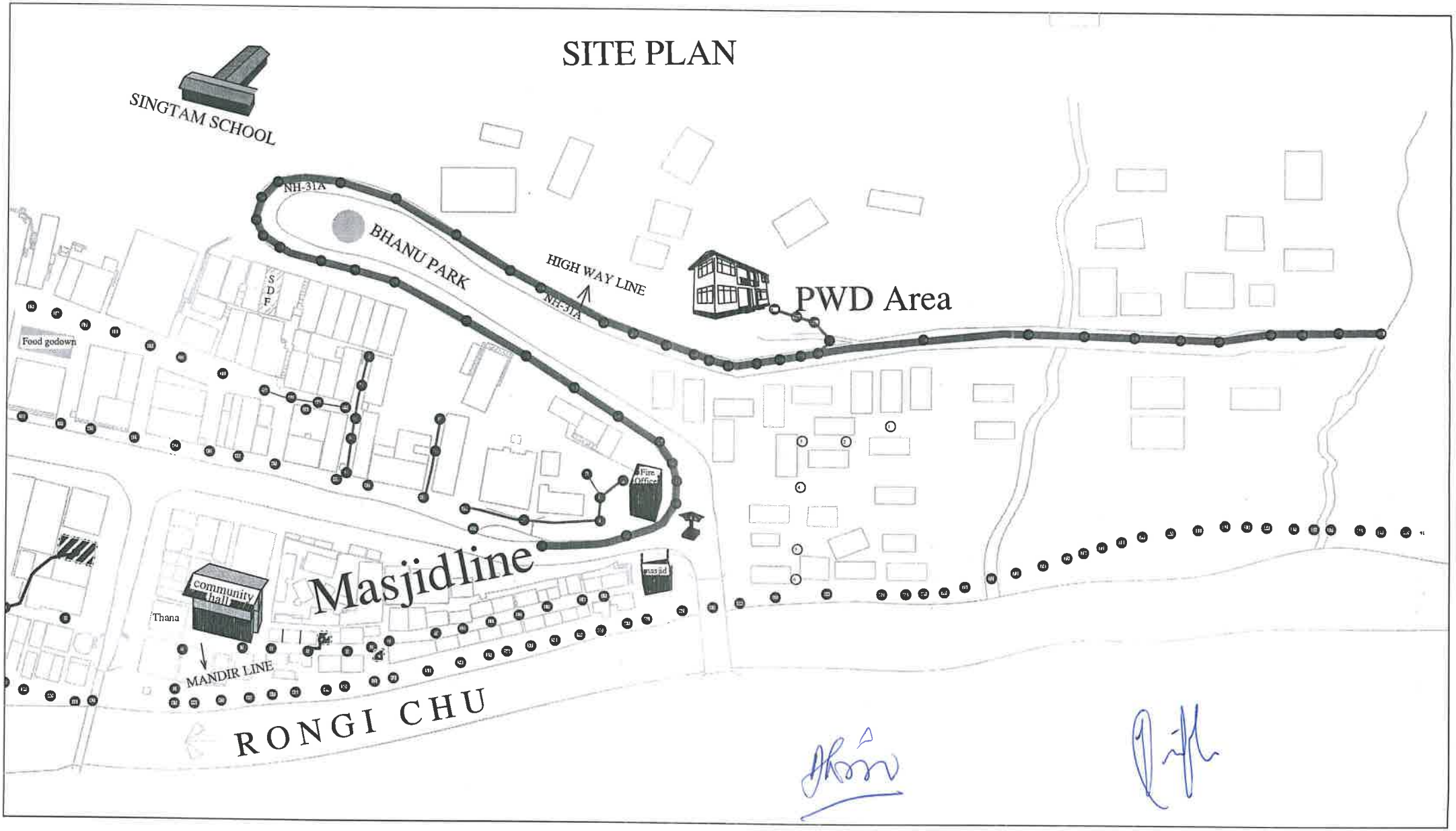
Rupees (Twenty Four thousand Three hundred Ninty Five) Only

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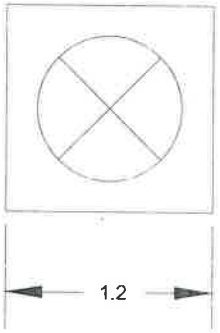
JUNIOR ENGINEER
P.H,E DEPTT PAKYONG

ASSISTANT ENGINEER
P.H,E DEPTT PAKYONG

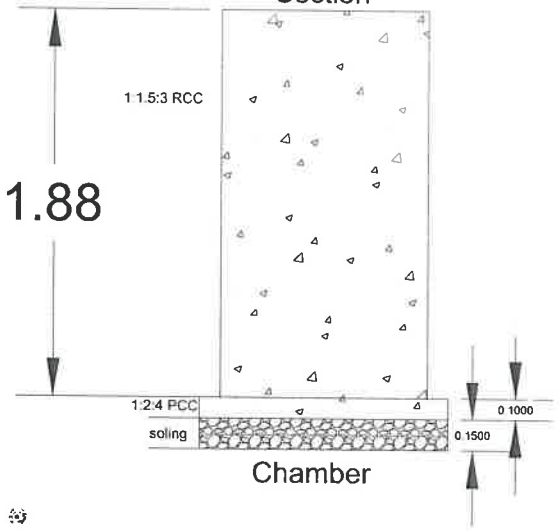
SITE PLAN


SINGTAM SCHOOL
NH-31A
BHANU PARK
HIGH WAY LINE
NH-31A
PWD Area
S
D
F
Food godown
Fire office
Masjidline
community hall
Thana
MANDIR LINE
RONGI CHU

PLAN



Section



Chamber

Name of the Work :	Scale: NOT TO SCALE		
Laying of new sewerage pipeline with Chambers at NH-10 from Shantinagar near Petrolpump to Traffic point ,Singtam, Pakyong Sub-Division.	Draft Prepared:	Draft Checked:	Approved By:

Telex : 0264202 POWER IN
Fax : 03592 222927

Phones : 202244
PBX : 222908
222916
222028

GOVERNMENT OF SIKKIM
POWER DEPARTMENT

No.01/CE/Plg./PD/2025-26/471. Dated. 04/03/2025.

To
The General Manager,
NHIDCL, PMU-Ranipool,
Gangtok District.

References: **1. NHIDCL/PMU-Ranipool/NH-10/2023-24/550 dated:03.12.2024.**
2. Memo No.186/DC/PKG/2024 dated: 06.12.2024.

Subject: Forwarding of DPR.

Sir,

With reference to your above-mentioned letter, a joint survey was conducted by officials from the Power Department and representatives of DPR consultant of NHIDCL. Subsequently, DPR for shifting of electrical utilities falling under proposed RoW of NH-10 from Rangpo to Ranipool has been prepared which is enclosed herewith as detailed below:

Sl.No	Name of Work	Amount (In Rs).
1	Shifting and diversion of HT and LT Network and Sub-stations along NH-10 highway road from Radong Chuba Bridge to Ranipool Bridge under LLHP Sub Division-I, Ranipool, Gangtok District.	₹ 5,15,73,879.00
2	Shifting of Power infrastructure falling under PRoW of NH-10 from 19th mile to Radang Bridge under Singtam Division, Gangtok District.	₹ 11,38,54,164.00
3	Shifting and diversion of existing 11KV HT lines, Sub-stations along with the LT distribution lines at various locations from Atal Setu Bridge at Rangpo till 19th Mile Bordang along the NH-10 highway under Rangpo Circle in Pakyong District.	₹ 28,82,57,063.00
	TOTAL	**₹45,36,85,106.00**

In this regard, you are requested to deposit the equivalent amount of Rs. 45,36,85,106.00 (Rupees Forty-Five Crore Thirty-Six Lakh Eighty-Five Thousand One Hundred and Six) only under the disposal of PCE cum Secretary, Power Department, Govt. of Sikkim for early execution of the work.

Thanking you,

Yours faithfully,

(Siri Kr. Gurung),
Chief Engineer (Planning),
Power Department,
Govt. of Sikkim,
Gangtok.

S.K. Gurung
Chief Engineer
Power Department
Govt. of Sikkim

Encl: As above

Copy for information to:

1. PCE cum Secretary, Power Department, Govt. of Sikkim,
2. PCE-II/III, Power Department, Govt. of Sikkim,
3. District Collector, Gangtok District, Govt. of Sikkim.
4. District Collector, Pakyong District, Govt. of Sikkim.

Chief Engineer (Planning),

GOVERNMENT OF SIKKIM,
POWER DEPARTMENT,
LAGYAP./RANIPOOL.

TECHNICAL REPORT

NAME OF WORK: SHIFTING AND DIVERSION OF HT AND LT NETWORK AND SUB STATIONS ALONG NH-10 HIGHWAY ROAD FROM RADONG CHUBA BRIDGE TO RANIPOOL BRIDGE UNDER LLHP SUB DIVISION-I, RANIPOOL GANGTOK DISTRICT.

History: - The NHIDCL has decided to widen the existing NH10 into two lane highway from Rangpo to Ranipool bridge. The jurisdiction of the LLHP division falls from Chuba bridge to Ranipool bridge which amounts to almost 6 km . In this regard the joint survey was called on 10/12/2025 by District Collector , Pakyong vide letter number :1186/DC/PKG/2024 Dated: 06/12/2024. In the survey it was found that many HT lines, LT line and three distribution substation falls along the alignment of the proposed road widening. Hence in the survey it was decided that 4.8km of HT line will be underground using XLPE cable remaining 1.5km will be drawn using covered conductor of size 99sqmm. Similarly around 3.8 km of LT line falls in the alignment so it has been decided to shift the LT line in new alignment. Finally three numbers of distribution also needs to be shifted and the for the same new location has been identified. These networks are feeding power supply to different industries and public of the Radong, Namli and lower belt of the Marchak and Tumlabong areas. Hence to feed uninterrupted power supply to these consumers the new network along the new alignment of the road is necessary. As there is no provision of alternate supply the shifting of electrical network needs to be done well in advance to avoid inconvenience to the consumers. In this regard an estimate is framed in the tune of Rs. 5,15,73, 879.00 (Five crore fifteen lakhs seventy three thousand eight hundred and seventy nine) only to meet the probable expenditure which is likely to be incurred towards the execution of the above work. The dismantling charge of the above electrical assets has also been included in the estimate.

Rate:- Based on latest SOR (2020) of the Power Department Government of Sikkim.

Scope: -The scope of the works covers shifting of 3 numbers of distribution sub-station, HT line and LT networks that falls along the alignment of the proposed road widening of NH10 by NHIDCL between Chuba Bridge to Ranipool Bridge.

Design: - 11 KV H.T. line will be drawn using covered conductor of size 99sqmm in a 9mtr lattice structure. Under ground system will be done using XLPE HT cable of size120sqmm. LT line will be drawn using Gnat conductor in a 8.5mtr lattice structure and underground will be done using PVC armoured cable of size 3.5x95sqmm. Three number of distribution sub-station will also be shifted to new location.

Estimated Cost: Rs. 5,15,73, 879.00 (Five crore fifteen lakhs seventy three thousand eight hundred and seventy nine) only.

FUND:- 100% fund is required to be transferred in favour of the Secretary, Power Department, Kazi Road, Gangtok, East Sikkim through T.E.O or at par cheque. The work shall not be executed unless 100% fund is not received by the Department.

Mode of execution:- Departmentally/Govt. contractor.

Executive Engineer (T&D-I)
Power Department
LLHP/Ranipool

Superintending Engineer (LLHP)
Power Department,
L.L.H.P./Ranipool.

GOVERNMENT OF SIKKIM
POWER DEPARTMENT
LAGYAP./RANIPOOL

NAME OF WORK:- SHIFTING AND DIVERSION OF HT AND LT NETWORK AND SUB STATIONS ALONG NH-10 HIGHWAY ROAD FROM RADONG CHUBA BRIDGE TO RANIPOOL BRIDGE UNDER LLHP SUB DIVISION-I, RANIPOOL GANGTOK DISTRICT.

SL.NO	NAME OF WORK	AMOUNT
1	DRAWING OF 11 KV 3-PHASE TRANSMISSION LINE USING UG XLPE CABLE	Rs. 2,68,23,243.00
2	SHIFTING OF SUB STATION	Rs. 55,44,742.00
3	DRAWING OF 11 KV HT LINE USING COVERED CONDUCTOR	Rs. 88,13,955.00
4	DRAWING OF LT LINE USING UG ARMOURED CABLE	Rs. 18,36,808.00
5	DRAWING OF OVERHEAD THREE PHASE FOUR WIRE LT LINE	Rs. 17,66,748.00
6	Dismantling charge after deduction of Salvage value	12,88,383.00
7	Conveyance	Rs. 55,00,000.00
	GRAND TOTAL	5,15,73,879.00

Rupees (Five crore fifteen lakhs seventy three thousand eight hundred and seventy nine) only

Executive Engineer (Maint-I)

Junior Engineer (Maint-I)

Superintendent Engineer (LLHP)

GOVERNMENT OF SIKKIM
POWER DEPARTMENT
LAGYAP./RANIPOOL

NAME OF WORK:- DRAWING OF 11 KV 3-PHASE TRANSMISSION LINE USING UG XLPE CABLE

Sl.no	Particulars	Unit	Qnty	Rate	Amount
1	Safe earthing model T-39 short time current 50 KA rms for 1 sec (EHV) application: 80mm diax3mtr. Electrode & two bags back fill chemical compound.	2	nos	21270.00	42,540.00
2	3core x 120sqmm, 6.6KV (UE)/11KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II	4800	mtr	1830.00	87,84,000.00
3	3 C x 120 sqmm EPKT 3362, Heat Shrinkable outdoor type end termination kit for 6.6KV (UE)/11KV (E) 3 core XLPE (kit no. EOKT_3332-3382) (Raychem make or equivalent)	3	Kit	15102.00	45,306.00
4	3 C x 120 sqmm EPKT 3362, Heat Shrinkable indoor type end termination kit for 6.6KV (UE)/11KV (E) 3 core XLPE (kit no. EOKT_3332-3382) (Raychem make or equivalent)	1	Kit	10450.00	10,450.00
5	Straight through jointing kit for 11 KV grade 3 core, XLPE insulated cables of size 120 sqmm for XLPE cable.	10	nos	29204.00	2,92,040.00
6	160 mm dia Rigid U PVC pipe as per IS 4985-2000 working pressure 6 kgf/cm2 (Finolex).	4760	mtr	1249.00	59,45,240.00
7	RCC Hume pipe 2000 mm long 200 mm dia with collars as required	20	nos	662.00	13,240.00
A.	**Total cost of materials**			₹	**1,51,32,816.00**
B.	**GST @ 18 % of A**			₹	**27,23,906.88**
C.	Erection charges @15 % on A			₹	**22,69,922.40**
D.	Transportation charges @ 10 % on A			₹	**15,13,281.60**
E.	**GST @ 18 % on ERECTION**			₹	**4,08,586.03**
F.	**GST @ 18 % on TRANSPORTATION**			₹	**2,72,390.69**
G.	**Sub Total (A+B+C+D+E+F)**			₹	**2,23,20,903.60**
8	Excavation of 0.45 x 0.90 x 1.00 m cable trench in mix soil & re- filling with available excavated earth and providing cement concrete on the top of the trench.	4760	mtr	447.00	21,27,720.00
H.	**Total cost of works**			₹	**21,27,720.00**
I.	**GST @ 18 % on H**			₹	**3,82,989.60**
J.	Contingency charges @ 0.5 % on A+H			₹	86,302.68
K.	Establishment charge @ 9% on A+H			₹	15,53,448.24
L.	Tools and Plants @ 0.5 % on A+H			₹	86,302.68
M.	**Grand Total (G+H+I+J+K+L)**			₹	**2,65,57,666.80**
N.	**Labour CESS @ 1% on M**			₹	**2,65,576.67**
O.	**TOTAL**			₹	**2,68,23,243.47**
P.	**SAY**			₹	**2,68,23,243.00**

(Rupees Two crore sixty eight lakhs twenty three thousand two hunderd and forty three) only

Executive Engineer,(Maint-I)

Junior Engineer,(Maint-I)

Superintendent Engineer (LLHP)

Rates Checked by Planning Cell
Power Department

(J.E. Planning)

A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

GOVERNMENT OF SIKKIM
POWER DEPARTMENT
LAGYAP./RANIPOOL

NAME OF WORK:- SHIFTING OF 315 KVA, 100 KVA AND 63 KVA SUB STATION

S.N.	PARTICULARS	QNTY.	UNIT	RATE	AMOUNT
1	9 mtrs. steel latticed structure of 35x35x6mm complete with nuts & bolts.	6	Nos.	13390.00	80340.00
2	M.S.channel ISLC 75(75x40x6mm) X 2.8mtr. for supporting line, G.O.S & D.O fuse etc(SAIL Brand)	200	Kg.	61.62	12324.00
3	Back clamps 75x8mm flat.	40	Nos.	139.00	5560.00
4	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	20	Kg.	133.00	2660.00
5	11 KV, 3 pole,400 amps. Air Break G.O.S tilting type, three insulator per phase, complete with all fittings confirming to IS: 9921 Raychem RPG make or equivalent.	3	Set	18,839.00	56517.00
6	11 KV, 3 pole,400 amps. Air Break D.O.Fuse unit complete with all accesories confirming to IS: 9385 Raychem RPG make or equivalent.	3	Set	12,058.00	36174.00
7	9 KV, 5KA single pole unit metal oxide gapless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system confirming to IS: 3070 (part-3) Raychem RPG make or equivalent.	9	Nos.	1,055.00	9495.00
8	Danger board 11000 Volts.	3	Nos.	85.00	255.00
9	Safe earthing model T-39 short time current 50 KA rms for 1 sec (EHV) application: 80mm diax3mtr. Electrode & two bags back fill chemical compound.	18	Set	21270.00	3,82,860.00
10	G.I.guy assembly complete with 7/10 SWG guy wire, guy insulators,16 mm dia 300 x 300 x 6 mm anchor plate,M.S clamps and turn buckle etc.	3	set	1930.00	5790.00
11	G.I barbed wire for anti climbing device	12	Kg.	62.00	744.00
12	3core x 120 sqmm, 6.6KV (UE)/11KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II	700	mtr	1830.00	1281000.00
13	3 C x 120 sqmm EPKT 3362, Heat Shrinkable outdoor type end termination kit for 6.6KV (UE)/11KV (E) 3 core XLPE (kit no. EOKT_3332-3382) (Raychem make or equivalent)	6	Kit	15102.00	90612.00
14	160 mm dia Rigid U PVC pipe as per IS 4985-2000 working pressure 6 kgf/cm2 (Finolex).	640	mtr	1249.00	799360.00
15	Red oxide metal primer (NEROLAC or equivalent).	9	Ltr.	130.00	1170.00
16	Aluminium paint (NEROLAC or equivalent).	6	Ltr.	247.00	1482.00
A.	**Total cost of materials**			₹	**27,66,343.00**
B.	**GST @ 18 % of A**			₹	**4,97,941.74**
	Erection 15% on 315KVA,100 KVA & 63 KVA transformer (821261+385591+340168) = 1547020			₹	2,32,053.00
	Erection 15% on 400A,200A & 100A LTDB (182900+109740+86140) = 378780			₹	56,817.00
	Erection charges @15 % on A			₹	4,14,951.45
C.	**Total Erection charges**				**7,03,821.45**
	Transportation 10% on 315KVA,100 KVA & 63 KVA transformer (821261+385591+340168) = 1547020			₹	1,54,702.00
	Transportation 10% on 400A,200A & 100A LTDB (182900+109740+86140) = 378780				37,878.00
	Transportation charges @ 10 % on A			₹	2,76,634.30
D	**Total Transportation charges**				**4,69,214.30**
E	**GST @ 18 % on ERECTION (C)**			₹	**1,26,687.86**
F	**GST @ 18 % on TRANSPORTATION (D)**			₹	**84,458.57**
G	**Sub Total (A+B+C+D+E+F)**			₹	**46,48,466.93**

17	Fencing for 315 KVA,100 KVA distribution sub station of size 2x3 mtrs constructed with 50x50x5 mm M.S angle vertical props, 35x35x6mm M.S angle supports (bouble run) M.S.wire mesh, 50x6mm MS flat iron for claming wire mesh complete with gate with locking arrangement, site development, concreting of props in 1:2:4 cc i/c soiling and flooring works in 1:4:8 cc.	2	Nos.	42,311.00	84622.00
18	Fencing for 63 KVA distribution sub station of size 2x3 mtrs constructed with 50x50x5 mm M.S angle vertical props, 35x35x6mm M.S angle supports (bouble run) M.S.wire mesh, 50x6mm MS flat iron for claming wire mesh complete with gate with locking arrangement, site development, concreting of props in 1:2:4 cc i/c soiling and flooring works in 1:4:8 cc.	1	Nos.	34,689.00	34689.00
19	Concreting of 9 mtrs. Latticed structure in 1:4:8 cc in 0.9x0.9x1.75 mtrs pit, construction of parapet 0.61x0.61x0.153 mtrs in 1:3:6 cc i/c 12 mm cement plaster of parapet in 1:4 mix.	6	Nos.	1,722.00	10332.00
20	Concreting of H.T guy assembly in 1:4:8 ccm in 0.40x0.40x1.05 Mtr.pit.	3	Nos.	876.00	2628.00
21	Placement of 315 KVA,100 KVA,63 KVA Distribution Transformer on parapet of size 1.5x1.5x1 mtrs in 1:3:6 C.C mix including 12 mm thick cement plaster in 1:4 mix.	3	Job	5,791.00	17373.00
22	Placement of LT Distribution Board on parapet of size 2x0.61x0.35x0.61 mtrs in 1:3:6 cc Mix including 12mm thick cement plaster in 1:4 mix.	3	Job	1,827.00	5481.00
23	Excavation of 0.45 x 0.90 x 1.00 m cable trench in mix soil & re-filling with available excavated earth and providing cement concrete on the top of the trench.	640	mtr	447.00	2,86,080.00
H	**Total cost of work.**			₹	**4,41,205.00**
I	**GST @ 18 % on H**			₹	**79,416.90**
J	Contingency charges @ 0.5% on A+H			₹	16,037.74
K	Establishment charge @ 9% on A+H			₹	2,88,679.32
L	Tools and Plants @ 0.5 % on A+H			₹	16,037.74
M	**Grand Total (G+H+I+J+K+K+L)**			₹	**54,89,843.63**
N	**Labour CESS @ 1% on M**			₹	**54,898.44**
O	**TOTAL**			₹	**55,44,742.06**
P	**SAY**			₹	**55,44,742.00**

Rupees (Fifty five lakhs forty four thousand seven hundred and forty two) only.

Executive Engineer,(Maint-I.)

Junior Engineer (Maint-I)

Superintendent Engineer (LLHP)

Rates Checked by Planning Cell
Power Department

(J.E. Planning)
A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

GOVERNMENT OF SIKKIM
POWER DEPARTMENT
L.L.H.P./RANIPOOL

NAME OF WORK:- DRAWING OF 11 KV HT LINE USING COVERED CONDUCTOR

SL.NO.	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
1	9 mtr long Steel lattice structure complete with nuts and bolts.	32	nos	13390.00	4,28,480.00
2	M.S.channel ISLC 100(100x50x6.4mm)X 0.46mtr.long for supporting A.B. cable.(SAIL Brand)	160	Kg.	63.31	10,129.60
3	Back clamps of 75 x 8mm flat	32	Kg	139.00	4,448.00
4	M.S.nuts & bolts of 16mm diax40mm length full thread.	64	Kg	133.00	8,512.00
5	11KV polymeric tension insulator 70KN with clamps, nuts and bolts .	120	Nos.	2124.00	2,54,880.00
6	11KV polymeric pin insulator with GI pin, nuts and bolts .	36	Nos.	472.00	16,992.00
7	11 KV Covered conductor 99 sqmm.	4800	Mtr.	917.00	44,01,600.00
8	Metallic ties for 11 KV line	36	Nos.	472.00	16,992.00
9	11 KV Tension mid span jointing kit	18	Nos.	6962.00	1,25,316.00
10	11 KV Termination kit	18	Nos.	5782.00	1,04,076.00
11	Guy assembly complete with 7/10 SWG G.I. stay wire,140x85 mm H.T.guy insulator, 18mm dia stay rod 1.8 mtrs. Long with bow thimble, turn buckle and 300x300x6mm anchor plate.	16	Set	1930.00	30,880.00
12	11 KV, 3 pole,400 amps. Air Break G.O.S tilting type, three insulator per phase, complete with all fittings confirming to IS: 9921 Raychem RPG make or equivalent.	1	Set	18839.00	18,839.00
13	Safe earthing model T-39 short time current 50 KA rms for 1 sec (EHV) application: 80mm diax3mtr. Electrode & two bags back fill chemical compound.	2	Nos.	21270.00	42,540.00
14	G.I. barbed wire for anti climbing.	64	Kg	63.00	4,032.00
15	Danger board 11000 Volts.	32	Nos.	85.00	2,720.00
16	Red oxide metal primer (NEROLAC or equivalent).	48	Ltr.	130.00	6,240.00
17	Aluminium paint (NEROLAC or equivalent).	32	Ltr.	247.00	7,904.00
A.	**Total cost of materials**			₹	**54,84,580.60**
B.	**GST @ 18 % of A**			₹	**9,87,224.51**
C.	Erection charges @15 % on A			₹	**8,22,687.09**
D.	Transportation charges @ 10 % on A			₹	**5,48,458.06**
E.	**GST @ 18 % on ERECTION**			₹	**1,48,083.68**
F.	**GST @ 18 % on TRANSPORTATION**			₹	**98,722.45**
G.	**Sub Total (A+B+C+D+E+F)**			₹	**80,89,756.39**
18	Concreting of 9 mtrs. Latticed structure in 1:4:8 cc in 0.9x0.9x1.75 mtrs pit, construction of parapet 0.61x0.61x0.153 mtrs in 1:3:6 cc i/c 12 mm cement plaster of parapet in 1:4 mix.	32	Nos.	1,722.00	55104.00
19	Concreting of HT Guy assembly in 1:4:8cc in 0.40x0.40x1.05 mts pit.	16	Job	876.00	14016.00
H.	**Total cost of works**			₹	**69,120.00**
I.	GST @ 18% on H			₹	**12,441.60**
J.	Contingency charges @ 0.5 % on A+H			₹	**27,768.50**
K.	Establishment charge @ 9% on A+H			₹	**4,99,833.05**
L.	Tools and Plants @ 0.5 % on A+H			₹	27,768.50

M.	Grand Total (G+H+I+J+K+L)			₹	87,26,688.05
N.	Labour CESS @ 1% on M			₹	87,266.88
O.	TOTAL			₹	88,13,954.93
P.	SAY			₹	88,13,955.00

(Rupees Eighty eight lakhs thirteen thousand nine hundred and fifty five)only

Executive Engineer,(Maint-I.)

Junior Engineer,(Maint-I)

Superintendent Engineer (LLHP)

Rates Checked by Planning Cell
Power Department

A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

GOVERNMENT OF SIKKIM
POWER DEPARTMENT
L.L.H.P./RANIPOOL

NAME OF WORK:-DRAWING OF LT LINE USING UG ARMOURED CABLE

S.NO.	PARTICULARS	QTY	UNIT	RATE	AMOUNT
1	1.1 KV PVC/XLPE insulated heavy duty power armoured cables for working voltage upto and including 660/1100 volts aluminum cable:-				
a)	3.5x 95 sqmm armoured PVC Al. cable from transformer bush to distribution switch board.	800	mtr	919.00	735200.00
2	LT 1.1KV Indoor/Outdoor End Termination Kit for PVC / XLPE cables 2,3 & 1/2 Core (DENSION)				
a)	3.5 x 95 sqmm	2	Kit	6,446.00	12892.00
3	Safe Earthing model T-19 short time current 50 KA rms for 1 sec (EHV) application 50 mm dia x 2 mtrs. Electrode & one bag backfill chemical compound.	2	Set	10,820.00	21,640.00
4	50 mm dia Rigid U PVC pipe as per IS 4985-2000 working pressure 6 kgf/cm2 (Finolex).	790	mtr	124.00	97,960.00
A.	**Total cost of materials**			₹	**8,67,692.00**
B.	**GST @ 18 % of A**			₹	**1,56,184.56**
C.	Erection charges @15 % on A			₹	**1,30,153.80**
D.	Transportation charges @ 10 % on A			₹	**86,769.20**
E.	**GST @ 18 % on ERECTION**			₹	**23,427.68**
F.	**GST @ 18 % on TRANSPORTATION**			₹	**15,618.46**
G.	**Sub Total (A+B+C+D+E+F)**			₹	**12,79,845.70**
5	Excavation of 0.45 x 0.90 x 1.00 m cable trench in mix soil & re- filling with available excavated earth and providing cement concrete on the top of the trench.	790	mtr	447.00	3,53,130.00
H.	**Total cost of works**			₹	**3,53,130.00**
I.	GST @ 18% on H			₹	**63,563.40**
J.	Contingency charges @ 0.5 % on A+H			₹	**6,104.11**
K.	Establishment charge @ 9% on A+H			₹	**1,09,873.98**
L.	Tools and Plants @ 0.5 % on A+H			₹	**6,104.11**
M.	**Sub total (G+H+I+J+K+L)**			₹	**18,18,621.30**
N.	**LABOUR CESS @ 1% on M**			₹	**18,186.21**
O.	**GRAND TOTAL**			₹	**18,36,807.51**
P.	**SAY**			₹	**18,36,808.00**

(Rupees Eighteen lakhs thirty six thousand eight hunderd and eight)only

Executive Engineer,(Maint-I.)

Junior Engineer (Maint-I)

Superintendent Engineer (LLHP)

Superintending Engineer
(LLHP, Ranipool)
Power Department
Government of Sikkim

Rates Checked by Planning Cell
Power Department

J.E. Planning

A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

GOVERNMENT OF SIKKIM
POWER DEPARTMENT
L.L.H.P./RANIPOOL

NAME OF WORK: DRAWING OF OVERHEAD THREE PHASE FOUR WIRE LT LINE

S.N.	PARTICULARS	QTY	UNIT	RATE	AMOUNT
1	8.5 mtrs.long steel latticed structure 35x35x6mm complete with nuts & bolts.	60	Nos	11845.00	710700.00
2	D' clamp complete with pin, washers, nuts & bolts.	300	Set	51.00	15300.00
3	L.T. shackle insulator 3"x3 1/2".	240	Nos	59.00	14160.00
4	Guy assembly complete with 7/12 SWG GI Stay wire, 110x75 mm L.T. Guy insulator, 16 mm dia Stay Rod 1.8 mtrs. long with bow thimble, turn buckle and 150x150x6 mm anchor plate	30	Set	1047.00	31410.00
5	AAC GNAT conductor 25 sq mm	12.6	Km	17110.00	215586.00
6	G.I. Wire 8 SWG	330	Kg	63.00	20790.00
A.	**Total cost of materials**			₹	**10,07,946.00**
B.	**GST @ 18 % of A**			₹	**1,81,430.28**
C.	Erection charges @15 % on A			₹	**1,51,191.90**
D.	Transportation charges @ 10 % on A			₹	**1,00,794.60**
E.	**GST @ 18 % on ERECTION**			₹	**27,214.54**
F.	**GST @ 18 % on TRANSPORTATION**			₹	**18,143.03**
G.	**Sub Total (A+B+C+D+E+F)**			₹	**14,86,720.35**
7	Concreting of 8.5 Mtrs. Lattice structure in 1:4:8 cc in 0.9x0.9x1.50 mtrs. pit, construction of parapet 0.35x0.475x0.153 mtrs. in 1:3:6 cc i/c 12mm cement plaster of parapet in 1:4 mix.	60	Job	1,722.00	103320.00
8	Concreting of LT Guy assembly in 1:4:8cc in 0.30x0.30x1.05 mts pit.	30	Job	768.00	23040.00
H.	**Total cost of works**			₹	**1,26,360.00**
I.	GST @ 18% on H			₹	**22,744.80**
J.	Contingency charges @ 0.5 % on A+H			₹	**5,671.53**
K.	Establishment charge @ 9% on A+H			₹	**1,02,087.54**
L.	Tools and Plants @ 0.5 % on A+H			₹	**5,671.53**
M.	**Sub total (G+H+I+J+K+L)**			₹	**17,49,255.75**
N.	**LABOUR CESS @ 1% on M.**			₹	**17,492.56**
O.	**GRAND TOTAL**			₹	**17,66,748.31**
P.	**SAY**			₹	**17,66,748.00**

(Rupees Seventeen lakhs sixty six thousand seven hunderd and forty eight)only

Executive Engineer,(Maint-I.)

Junior Engineer,(Maint-I)

Superintendent Engineer (LLHP)

Superintending Engineer
(LLHP, Ranipool)
Power Department
Government of Sikkim

Rates Checked by Planning Cell
Power Department

A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

Government of Sikkim
Power Department
LLHP/Ranipool.

NAME OF WORK:- DISMANTLING CHARGE

ABSTRACT

Dismantling charge after deduction of Salvage value.

Sl.No	PARTICULARS		AMOUNT
1	Dismantling of HT 9 meter lattice Structure pole and 11 KV network.	₹	2,23,758.00
2	Dismantling of 315 KVA,100 KVA and 63 KVA sub station.	₹	2,74,257.00
3	Dismantling of L.T. network.	₹	3,97,990.00
4	Dismantling of underground HT network.	₹	3,92,378.00
	GRAND TOTAL	₹	**12,88,383.00**

(Rupees Twelve lakhs eighty eight thousand three hundred and eighty three) only

Executive Engineer,(Maint-I)

Junior Engineer,(Maint-I)

Superintendent Engineer (LLHP)

Government of Sikkim
Power Department
LLHP/Ranipool.

Name of Work :- Dismantling of HT 9 meter lattice Structure pole and 11 KV network.

S.No	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
1	9 Mtrs steel lattice structure of 65x65x6 mm M.S. angle complete with nuts & bolts confirming to specification of design details No. 1/L/FT/E&PD/11Mtrs (DP structure)	28	Nos	13,390.00	3,74,920.00
2	M.S.channel ISLC 100(100x50x6.4mm) for DP structure.	140	Kg.	63.31	8,863.40
3	Pole top channel ISLC 100(100x50x6.4mm) for SP structure.	84	Kg.	63.31	5,318.04
4	Back clamps of 75 x 8mm flat	28	Kg.	139.00	3,892.00
5	M.S.nuts & bolts of 16mm diax40mm length full thread.	56	Kg.	133.00	7,448.00
6	11 KV Disc insulator 90 KN T/C type (ABI/Saravanan make or equivalent) double disc.	168	Set	1,394.00	2,34,192.00
7	ACSR Weasel conductor 30 sq mm	6.00	Km.	28,444.00	1,70,664.00
8	G.I.guy assembly complete with 7/10 SWG guy wire, guy insulators,16 mm dia 300 x 300 x 6 mm anchor plate,M.S clamps and turn buckle etc.	14	set	1930.00	27020.00
9	G.I wire 8 SWG	220	Kg.	63.00	13860.00
10	Danger board 11000 Volts	28	Nos.	85.00	2,380.00
9	G.I barbed wire for anti climbing device	56	Kg.	63.00	3528.00
A.	**Sub Total**			₹	**8,52,085.44**
DISMANTLING COSTS					
B.	Dismantling charges @ 15 % of 'A'			₹	1,27,812.82
C.	Transportation charges @ 10 % of 'A'			₹	85,208.54
D.	GST @ 18% on B			₹	23,006.31
E.	GST @ 18% on C			₹	15,337.54
F	Store and Handing @1 of A			₹	8,520.85
G.	Tools and Plants @ 0.5 % of A			₹	4,260.43
H.	**Sub Total (Dismantling charge)**			₹	**2,64,146.49**
I.	**Salvage value deduction @ 5 % of cost of above materials (sl.no A)**			₹	**42,604.27**
J.	**(Dismatling charge - Salvage value) (H-I)**			₹	**2,21,542.21**
K.	**Labour cess @ 1% on J**			₹	**2,215.42**
L.	**Total payable**			₹	**2,23,757.64**
M.	**SAY**			₹	**2,23,758.00**

Rupees Two lakhs twenty three thousand seven hundred and fifty eight)only

Executive Engineer,(Maint-I)

Junior Engineer,(Maint-I)

Superintendent Engineer (LLHP)

Rates Checked by Planning Cell
Power Department

A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

Government of Sikkim
Power Department
LLHP/Ranipool.

Name of Work:- Dismantling of 315 KVA,100 KVA and 63 KVA sub station.

S.N.	PARTICULARS	QNTY.	UNIT	RATE	AMOUNT
1	9 mtrs. steel latticed structure of 35x35x6mm complete with nuts & bolts.	6	Nos.	13390.00	80340.00
2	M.S.channel ISLC 100(100x50x6.4mm) for DP structure.	90	Kg.	63.31	5,697.90
3	Back clamps of 75 x 8mm flat	30	Kg.	139.00	4,170.00
4	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	8	Kg.	133.00	1064.00
5	11 KV, 3 pole,400 amps. Air Break G.O.S tilting type, three insulator per phase, complete with all fittings confirming to IS: 9921 Raychem RPG make or equivalent.	3	Set	18,839.00	56517.00
6	11 KV, 3 pole,400 amps. Air Break D.O.Fuse unit complete with all accesories confirming to IS: 9385 Raychem RPG make or equivalent.	3	Set	12,058.00	36174.00
7	9 KV, 5KA single pole unit metal oxide gapless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system confirming to IS: 3070 (part-3) Raychem RPG make or equivalent.	9	Nos.	1,055.00	9495.00
8	Danger board 11000 Volts.	3	Nos.	85.00	255.00
9	Safe earthing model T-39 short time current 50 KA rms for 1 sec (EHV) application: 80mm diax3mtr. Electrode & two bags back fill chemical compound.	12	Set	21270.00	2,55,240.00
10	G.I.guy assembly complete with 7/10 SWG guy wire, guy insulators,16 mm dia 300 x 300 x 6 mm anchor plate,M.S clamps and turn buckle etc.	3	set	1930.00	5790.00
11	G.I barbed wire for anti climbing device	12	Kg.	63.00	756.00
12	3core x 120 sqmm, 6.6KV (UE)/11KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II	80	mtr	1830.00	146400.00
13	3core x 95 sqmm, 6.6KV (UE)/11KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II	80	mtr	1605.00	128400.00
14	3core x 70 sqmm, 6.6KV (UE)/11KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II	80	mtr	1354.00	108320.00
15	11 KV end termination kit for 3core x 120 sqmm, 6.6KV (UE)/11KV(E) XLPE insulated armoured cable (outdoor type)	2	Nos.	15102.00	30204.00
16	11 KV end termination kit for 3core x 95 sqmm, 6.6KV (UE)/11KV(E) XLPE insulated armoured cable (outdoor type)	2	Nos.	14064.00	28128.00
17	11 KV end termination kit for 3core x 70 sqmm, 6.6KV (UE)/11KV(E) XLPE insulated armoured cable (outdoor type)	2	Nos.	14064.00	28128.00
18	Fencing for 315 KVA,100 KVA distribution sub station of size 2x3 mtrs constructed with 50x50x5 mm M.S angle vertical props, 35x35x6mm M.S angle supports (bouble run) M.S.wire mesh, 50x6mm MS flat iron for claming wire mesh complete with gate with locking arrangement, site development, concreting of props in 1:2:4 cc i/c soiling and flooring works in 1:4:8 cc.	2	Nos.	42,311.00	84622.00

9	Fencing for 63 KVA distribution sub station of size 2x3 mtrs constructed with 50x50x5 mm M.S angle vertical props, 35x35x6mm M.S angle supports (bouble run) M.S.wire mesh, 50x6mm MS flat iron for claming wire mesh complete with gate with locking arrangement, site development, concreting of props in 1:2:4 cc i/c soiling and flooring works in 1:4:8 cc.	1	Nos.	34,689.00	34689.00
A.	**Total cost of materials**			₹	**10,44,389.90**
DISMANTLING COSTS					
B.	Dismantling charges @ 15 % of 'A'			₹	1,56,658.49
C.	Transportation charges @ 10 % of 'A'			₹	1,04,438.99
D.	GST @ 18% on B			₹	28,198.53
E.	GST @ 18% on C			₹	18,799.02
F	Store and Handing @1 of A			₹	10,443.90
G.	Tools and Plants @ 0.5 % of A			₹	5,221.95
H.	**Sub Total (Dismantling charge)**			₹	**3,23,760.87**
I.	**Salvage value deduction @ 5 % of cost of above materials (sl.no A)**			₹	**52,219.50**
J.	**(Dismatling charge - Salvage value) (H-I)**			₹	**2,71,541.37**
K.	**Labour cess @ 1% on J**			₹	**2,715.41**
L.	**Total payable**			₹	**2,74,256.79**
M.	**SAY** Seventy Two Fifty Seven			₹	**2,74,257.00**

Rupees Two lakhs thirty four thousand nine hundred and eighty five) only

Executive Engineer, (Maint-I)

Junior Engineer, (Maint-I)

Superintendent Engineer (LLHP)

Rates Checked by Planning Cell
Power Department

A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

Government of Sikkim
Power Department
LLHP/Ranipool.

Name of Work:-Dismantling of L.T. network.

S.NO.	PARTICULARS	QTY	UNIT	RATE	AMOUNT
1	8.5 mtrs.long steel latticed structure 35x35x6mm complete with nuts & bolts..	50	Nos	11,845.00	5,92,250.00
2	8.5 mtrs.long 410 SP 21 swaged type steel tubular pole with CI base plate & cap double part (nuts & bolts type) working load 120 kgs	24	Nos	14,590.00	3,50,160.00
3	L.T. shackle insulator 3"x3 1/2".	200	Nos	59.00	11,800.00
4	D' clamp complete with pin, washers, nuts & bolts.	250	Set	51.00	12,750.00
5	Guy assembly complete with 7/12 SWG GI Stay wire, 110x75 mm L.T. Guy insulator, 16 mm dia Stay Rod 1.8 mtrs. long with bow thimble, turn buckle and 150x150x6 mm anchor plate	25	Set	1,047.00	26,175.00
6	AAC GNAT conductor 25 sq mm	12.5	Km	17,110.00	2,13,875.00
7	G.I wire 8 SWG	275	Kg.	63.00	17325.00
8	Safe Earthing model T-19 short time current 50 KA rms for 1 sec (EHV) application 80 mm dia x 2 mtrs. Electrode & one bag backfill chemical compound.	2	Set	10,820.00	21,640.00
9	Danger board 440 Volts	50	Nos	63.00	3,150.00
10	G.I. barbed wire	100	Kg	63.00	6,300.00
11	LED street light 15 Watts	50	Set	2,803.00	1,40,150.00
12	2 core x 16 sqmm 1.1 KV PVC insulated heavy duty power cables	600	meter	200.00	1,20,000.00
A.	**Sub Total**			₹	**15,15,575.00**
DISMANTLING COSTS					
B.	Dismantling charges @ 15 % of 'A'			₹	2,27,336.25
C.	Transportation charges @ 10 % of 'A'			₹	1,51,557.50
D.	GST @ 18% on B			₹	40,920.53
E.	GST @ 18% on C			₹	27,280.35
F	Store and Handing @1 of A			₹	15,155.75
G.	Tools and Plants @ 0.5 % of A			₹	7,577.88
H.	**Sub Total (Dismantling charge)**			₹	**4,69,828.25**
I.	**Salvage value deduction @ 5 % of cost of above materials (sl.no A)**			₹	**75,778.75**
J.	**(Dismatling charge - Salvage value) (H-I)**			₹	**3,94,049.50**
K.	**Labour cess @ 1% on J**			₹	**3,940.50**
L.	**Total payable**			₹	**3,97,990.00**
M.	**SAY**			₹	**3,97,990.00**

Rupees (Three lakhs ninety seven thousand nine hundred and ninety)only

Executive Engineer,(Maint-I)

Junior Engineer,(Maint-I)

Superintendent Engineer (LLHP)

Rates Checked by Planning Cell
Power Department

(J.E. Planning)

A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

Government of Sikkim
Power Department
LLHP/Ranipool.

Name of Work:-Dismantling of underground HT network.

Sl.no	Particulars	Unit	Qnty	Rate	Amount
1	3core x 120sqmm, 6.6KV (UE)/11KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II	800	mtr	1830.00	14,64,000.00
2	11 KV end termination kit for 3core x 120 sqmm, 6.6KV (UE)/11KV(E) XLPE insulated armoured cable (outdoor type)	2	Nos.	15102.00	30204.00
A.	**Total cost of materials**			₹	**14,94,204.00**
DISMANTLING COSTS					
B.	Dismantling charges @ 15 % of 'A'			₹	2,24,130.60
C.	Transportation charges @ 10 % of 'A'			₹	1,49,420.40
D.	GST @ 18% on B			₹	40,343.51
E.	GST @ 18% on C			₹	26,895.67
F	Store and Handing @1 of A			₹	14,942.04
G.	Tools and Plants @ 0.5 % of A			₹	7,471.02
H.	**Sub Total (Dismantling charge)**			₹	**4,63,203.24**
I.	**Salvage value deduction @ 5 % of cost of above materials (sl.no A)**			₹	**74,710.20**
J.	**(Dismatling charge - Salvage value) (H-I)**			₹	**3,88,493.04**
K.	**Labour cess @ 1% on J**			₹	**3,884.93**
L.	**Total payable**			₹	**3,92,377.97**
M.	**SAY**			₹	**3,92,378.00**

(Rupees Three lakhs ninety two thousand three hundred seventy eight) only

Executive Engineer,(Maint-I)

Junior Engineer,(Maint-I)

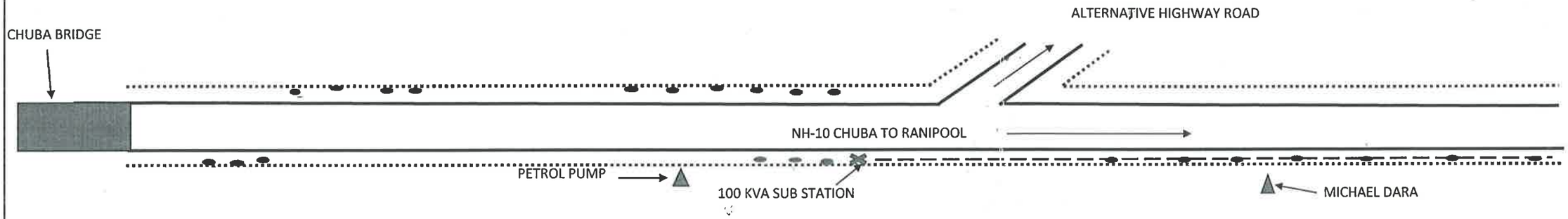
Superintendent Engineer (LLHP)

Rates Checked by Planning Cell
Power Department

(J.E. Planning)
A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

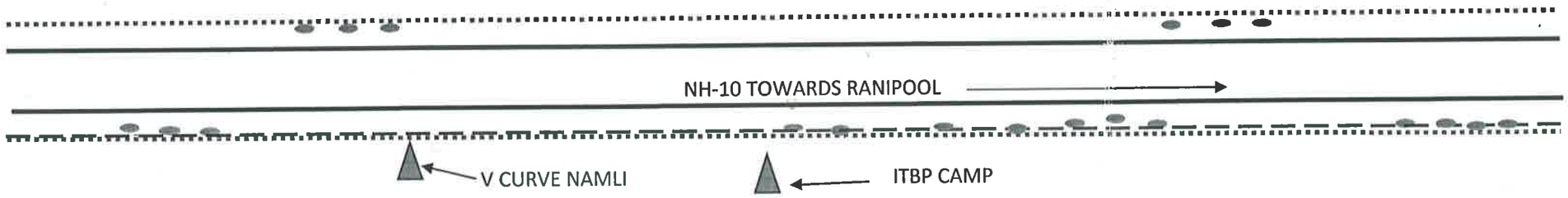
DRAWING SHOWING FOR RE-LOCATION FOR THE WORK SHIFTING AND DIVERSION OF HT AND LT NETWORK AND SUB STATIONS ALONG NH-10 HIGHWAY ROAD FROM RADONG CHUBA BRIDGE TO RANIPOOL BRIDGE UNDER LLHP SUB DIVISION-I, RANIPOOL GANGTOK DISTRICT.



SL.NO	PARTICULARS	SYMBOLS
1	OVERHEAD LT NETWORK	
2	SUB STATION TO BE SHIFT	
3	IMPORTANT POINTS	
4	PROPOSED HT LINE ON UG CABLE	

DESIGNED BY:	J.E	
CHECKED BY:	D.E	
VERIFIED BY:	S.E	

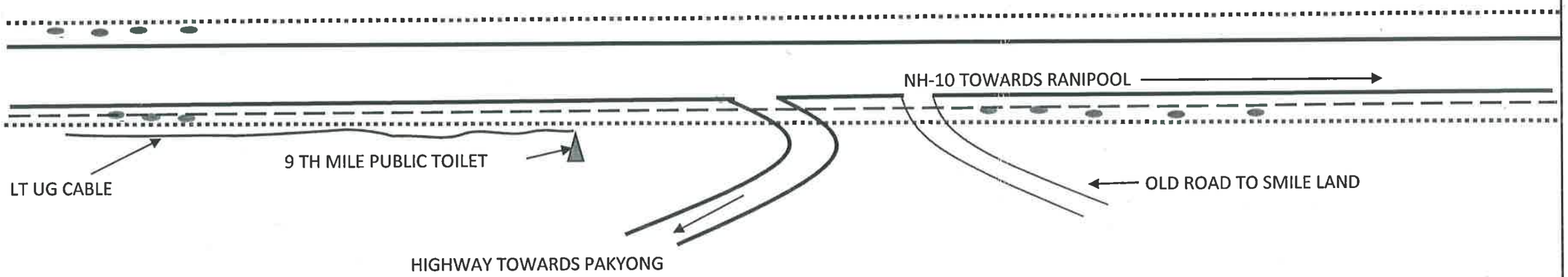
Superintending Engineer
(LLHP, Ranipool)
Power Department
Government of Sikkim



SL.NO	PARTICULARS	SYMBOLS
1	OVERHEAD LT NETWORK	
2	IMPORTANT POINTS	
3	PROPOSED HT UG CABLE	

DESIGNED BY:	J.E	
CHECKED BY:	D.E	
VERIFIED BY:	S.E	

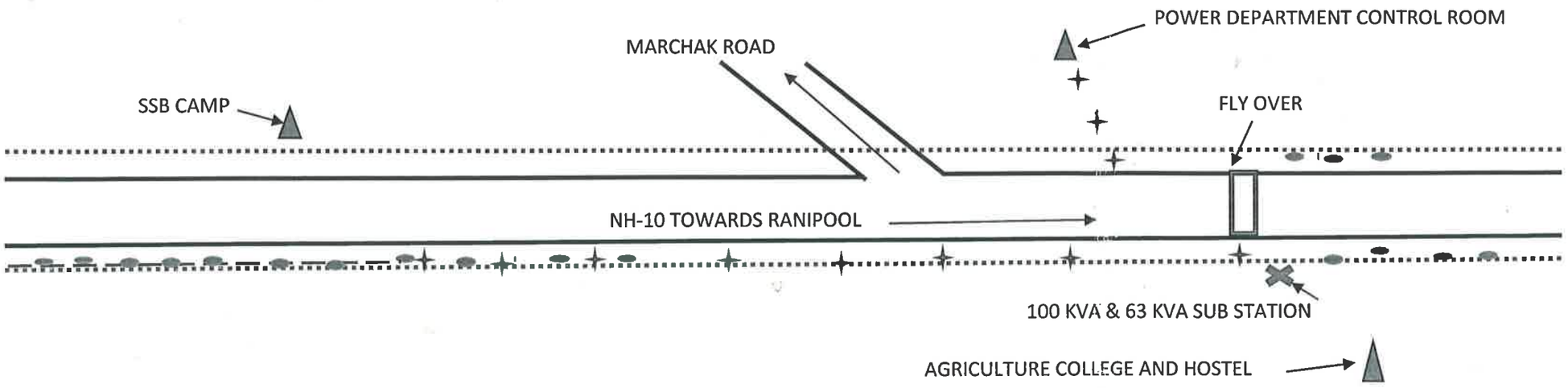
Superintending Engineer
(LLHP, Ranipool)
Power Department
Government of Sikkim



SL.NO	PARTICULARS	SYMBOLS
1	OVERHEAD LT NETWORK	
2	LT UNDERGROUND CABLE	
3	IMPORTANT POINTS	
4	PROPOSED HT LINE ON UG CABLE	

DESIGNED BY:	J.E	
CHECKED BY:	D.E	
VERIFIED BY:	S.E	

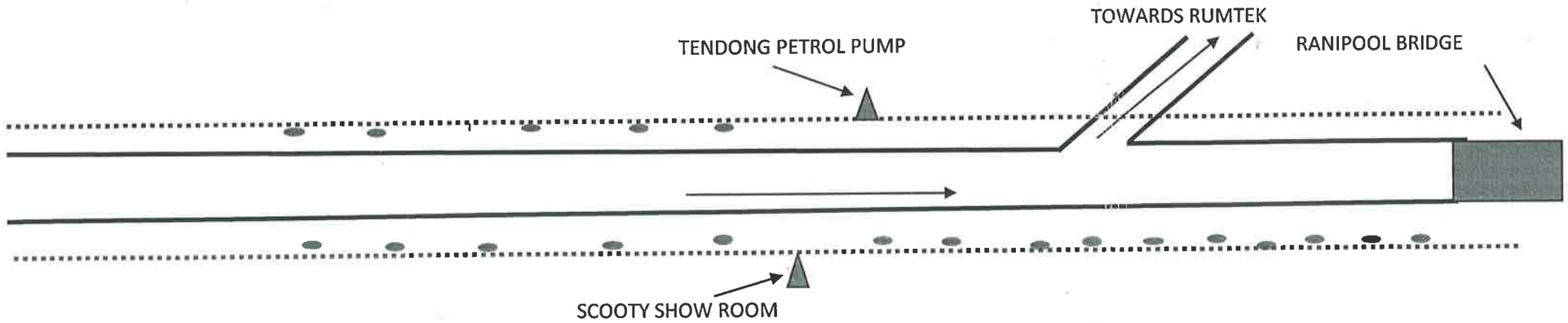
Superintending Engineer
(ULHP, Ranipool)
Power Department
Government of Sikkim



SL.NO	PARTICULARS	SYMBOLS
1	SUB STATION TO BE SHIFT	
2	OVERHEAD LT NETWORK	
3	PROPOSED HT LINE ON COVERED CONDUCTOR	
4	IMPORTANT POINTS	
5	PROPOSED HT LINE ON UG CABLE	

DESIGNED BY:	J.E	
CHECKED BY:	D.E	
VERIFIED BY:	S.E	

Superintending Engineer
(LLHP, Ranipool)
Power Department
Government of Sikkim



SL.NO	PARTICULARS	SYMBOLS
1	OVERHEAD LT NETWORK	
2	IMPORTANT POINTS	

SL.NO	ITEMS	NUMBERS
1	LT POLE	60
2	HT POLE	38
3	LT CONDUCTOR	8.8 KILO METER
4	LT UG CABLE	500 METER
5	HT UG CABLE	4.8 KILO METER
6	HT COVERED CONDUCTOR	1.5 KILO METER
7	SUB STATION SHIFTING	3

DESIGNED BY:	J.E	
CHECKED BY:	D.E	
VERIFIED BY:	S.E	

Superintending Engineer
(LLHP, Ranipool)
Power Department
Government of Sikkim

GOVERNMEMT OF SIKKIM
POWER DEPARTMENT
RANGPO

TECHNICAL REPORT

NAME OF WORK: SHIFTING AND DIVERSION OF EXISTING 11 KV HT LINES, SUB-STATIONS ALONG WITH THE LT DISTRIBUTION LINES AT VARIOUS LOCATIONS FROM ATAL SETU BRIDGE AT RANGPO TILL 19TH MILE BORDANG ALONG THE NH-10 HIGHWAY UNDER RANGPO CIRCLE IN PAKYONG DISTRICT.

ESTIMATED COST : Rs. ~~28, 83, 26,707.00~~ 28825 7063.00 (Rupees Twenty Eight Crore Eighty ~~Three~~ Two Lakhs ~~Twenty Six~~ Thousand ~~Seven Hundred & Seven~~ Fifty Seven Sixty three) only

REPORT:- With reference to letter received from office of the Sub-District Magistrate (HQ), Pakyong District, vide letter No. 1209/DAC/PKG/2024-25 dated: 02/12/24 for the coordination meeting regarding the DPR and the pre-construction activities for the road widening of existing carriageway into 2-lane highway, slope protection works and improvement of sliding/sinking zones.

With reference to letter vide No. 1186/DC/PKG/2024 dated: 06/12/24 from the Office of the District Collector, Pakyong District for the joint inspection for same was called on date 10.12.24.

Accordingly, the joint survey was conducted by the various Departments pertaining their work along with the representatives from NHIDCL starting from Atal Setu Bridge, Rangpo till 19TH Mile, Bordang. As per the survey it has been decided to shift /divert the entire existing Power infrastructure along the ROW of existing NH-10 Highway to proposed ROW of highway.

Section A: **Shifting & Diversion of Existing 11 KV HT lines, LT Distribution Lines and other associated materials-**

All the power infrastructures along the NH-10 Highway including 11 kV HT lines and LT distributions lines is to be shifted starting from Atal Setu Bridge, Rangpo till 19th Mile Burdang area which has around five (05) numbers of existing 11 kV Feeders which is to be shifted at strategic locations from proposed tower till existing 11 kV tapping points i.e. 11 kV Alkem Feeder, 11 kV Cipla Feeder, 11 kV IFFCCO Feeder, 11 kV Rangpo-I Feeder and 11 kV Rangpo-Goskhan Feeder.

Similarly, around four (04) numbers of 11 kV feeders along the NH-10 Highway is to be shifted from proposed Double Pole (11 meter) near 11/11 kV Mining Control room till end points of respective feeders. 11 kV IPDS Feeder is to be diverted/ shifted till Majhitar town,

11 kV Aristo Feeder is to be shifted till Highway near Aristo Company, 11 kV Zydus Feeder is to be shifted Bageykhola near Zydus Company and 11 kV Heavy Duty Feeder is to be shifted till proposed Boundary meter near 19th Mile Bordang. So, all the existing power infrastructures like 11-meter HT lattice structures, HT cables of different sizes are to be shifted and re-erected in proposed widened alignment of the road.

Further, existing LT distribution lines at Majhitar town and Bageykhola which has routed along the NH-10 Highway in Overhead/Underground system is to be shifted. So, all the 8.5 meters LT lattice structures, LT XLPE cables of different sizes along with Feeder pillars and L.T AB cables is to be shifted and re-erected as it was earlier for the resilient power supply at said locations.

Section B: Shifting & Diversion of existing Distribution Sub-Stations-

All the distribution sub-stations along the NH-10 Highway starting from Eco Paradise till Burdang area is to be shifted and re-installed after road widening work.

Total three (03) number of 500 kVA (3x500 kVA) distribution transformer is to be shifted at Upper Majhitar, Middle Majhitar and Goshkhan area. Total two (02) number of 250 kVA (2x250 kVA) DT is to be shifted at Chanautey and Bageykhola. Total three (03) number of 100 kVA (3x100 kVA) DT is to be shifted at Bageykhola, Khanikhola and ITI Mining.

Total one (01) number of 63 kVA DT is to be shifted at Eco Paradise resort.

Total three (03) number of 25 kVA (3x25 kVA) DT is to be shifted at Oasis Café, Eco Paradise and Bageykhola along with all the accessories like LTDB, GOS, DOF, Fencing etc. Since, the existing LTDB panels is in deteriorative condition which is not working it has to be included for replacement of LTDB panels for each DTs. Furthermore, the feeder Panels is also proposed which shall be installed in the different location as per site condition.

Section C: Construction of 66 KV tower for diversion of 11 KV transmission line of Rangpo-I, Rangpo-II, IFFCCO, Alkem and CIPLA feeder-

The 66 KV tower which is currently drawing the 11 KV HT lines for Rangpo-I, Rangpo-Goskhan feeder, Alkem, Cipla and IFFCCO Feeders is to be diverted from the existing locations and re-constructed at strategic locations for the re-stringing of above five (05) numbers of HT lines through DOG circuit. So, total four (04) number of 66 KV tower is incorporated in the estimate.

Section D: Civil work for tower-

The Civil part of proposed four (04) number of 66 KV tower is incorporated in the estimate.

Section E: Protective wall

The protective wall is to be required for the construction of two (02) number of tower in the hill side which is incorporated in the estimate.

Section F: Shifting & Diversion of existing High Mast Lights and street LED lights-

The existing high mast lights at Majhitar town and LED streetlights along the NH-10 highway from Oasis Café till Burdang area is to be shifted. So, four (04Nos.) number of high mast lights and hundred (100 Nos.) Numbers of LED street lights along with all its accessories is proposed in the estimate. In case of existing street light pole is in good condition during execution then the same existing poles shall be utilized in other right of way along the proposed NH-10.

Section G: Installation of 11 KV CT/PT Boundary metering unit with MDI & AMR Facility at 19th Mile Bardang

The existing 11 KV CT/PT boundary metering cubical units is to be shifted at 19th Mile Bardang.So, new 11 KV CT/PT boundary metering unit along with its accessories is incorporated in the estimate.

SCHEDULE OF RATES: Latest schedule of rate of department SOR 2020.

FUND: To be provided by the NHIDCL.

Divisional Engineer (Elect.)
Power Department
Rangpo Division

Superintending Engineer (Elect.)
Power Department
Rangpo Circle

GOVERMENENT OF SIKKIM
POWER DEPARTMENT
RANGPO

NAME OF WORK:- SHIFTING & DIVERSION OF EXISTING 11KV HT LINES, SUB-STATIONS ALONG WITH THE LT DISTRIBUTION LINES AT VARIOUS LOCATIONS FROM ATAL SETU BRIDGE AT RANGPO TILL 19TH MILE BORDANG ALONG THE NH-10 HIGHWAY UNDER RANGPO CIRCLE, PAKYONG DISTRICT.

ABSTRACT

SECTION	PARTICULARS	AMOUNT
A	SHIFTING & DIVERSION OF EXISTING 11KV HT LINES, LT DISTRIBUTIONS LINES AND OTHER ASSOCIATES MATERIALS.	216,445,568.00
B	SHIFTING & DIVERSION OF EXISTING DISTRIBUTION SUB-STATIONS.	14,971,929.00
C	CONSTRUCTION OF 66KV SINGLE CIRCUIT TOWER FOR DIVERSION OF 11KV TRANSMISSION LINES OF RANGPO, GOSKHAN, CIPLA, ALKEM & IFFCO FEEDERS.	5,346,228.00
D	ESTIMATE FOR CIVIL PORTION (TOWER FOUNDATION WORK) .	4,993,406.00
E	PROTECTIVE WALL FOR TOWER.	1,391,950.00
F	SHIFTING & DIVERSION OF EXISTING HIGH MAST LIGHTS AND STREET LED LIGHTS.	17,046,801.00
G	INSTALLATION,OF 11KV CT/PT BOUNDARY METERING UNIT WITH MDI & AMR FACILITY AT 19TH MILE BARDANG.	673,087.00
H	DISMANTELING OF EXISTING 11KV TRANSMISSION LINES, SUB-STATIONS ALONG WITH LT DISTRIBUTION LINES, HIGH MAST LIGHTS,STREET LIGHTS AND OTHER ASSOCIOATES ITEMS AT VARIOUS LOCATION FROM ATAL SETU BRIDGE AT RANGPO TILL 19TH MILE BORDANG ALONG NH-10.	2,73,88,094.05 ~~27,457,738.00~~
	GRAND TOTAL RS	~~288,326,707.00~~ 288,257,963.00

(Rupees Twenty Eight Crore Eighty Three Lakhs Twenty Six Thousand Seven Hundred & Seven) Only

Executive Engineer(Elect.)
Power Department
Rangpo Division

Junior Engineer (Elect.)
Power Department
Rangpo Sub Division

Superintending Engineer
Power Department
Rangpo Circle

GOVERNMENT OF SIKKIM
POWER DEPARTMENT
RANGPO

SECTION A-SHIFTING & DIVERSION OF EXISTING 11KV HT LINES, LT DISTRIBUTIONS LINES AND OTHER ASSOCIATES MATERIALS UNDER RANGPO CIRCLE IN PAKYONG DISTRICT.

SL.NO	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
I	**DRAWING OF 11KV TRANSMISSION LINES ON 11MTRS LATTICE STRUCTURE AT DIFFERENT LOCATION.**				
1.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts without Arms	430	Nos	26,483.00	11,387,690.00
2.00	M.S Channel ISLC75 (75x40x6mm) SAIL Brand conforming to IS: 808	8600	Kgs	61.63	530,018.00
3.00	Back Clamps 75 x 8 mm flat	1200	Nos	139.00	166,800.00
4.00	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	860	Kgs	133.00	114,380.00
5.00	Guy Assembly complete with 7/10 SWG Stay Wire, 140x85 mm H.T Guy Insulator, 18mm diameter Stay Rod 1.8 mtrs Long with bow thimble, turn buckle & 300x300x6mm anchor plate	215	Sets	1,930.00	414,950.00
6.00	Red Oxide Metal Primer (Nerolac or Equivalent) conforming to IS: 2074@ 2Ltrs/pole	860	Ltrs	130.00	111,800.00
7.00	Aluminum Paint (Nerolac or Equivalent) conforming to IS: 2339@ 2Ltrs/Pole	860	Ltrs	247.00	212,420.00
8.00	G.I Barbed Wire @ 2Kg/Pole	860	Kgs	63.00	54,180.00
9.00	Danger Board 11000Volts	430	Nos	85.00	36,550.00
I a	**Total cost of Materials**				**13,028,788.00**
10.00	Concreting of 11Mtrs Lattice Structure / Swaged STP in 1:4:8 cc in 0.9x0.9x2.05mtrs cement plaster of parapet in 1:4 mix.	430	Job	3,267.00	1,404,810.00
11.00	Concreting of H.T Guy Assembly in 1:4:8 cc in 0.40x0.40x1.05mtrs Pit.	215	Job	876.00	188,340.00
I b	**Cost of Civil work**				**1,593,150.00**
12.00	13 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts (without arm)	20	Nos	42,008.00	840,160.00

13.00	M.S Channel ISLC75 (75x40x6mm) SAIL Brand conforming to IS: 808	300	Kgs	61.63	18,489.00
14.00	Back Clamps 75 x 8 mm flat	60	Nos	139.00	8,340.00
15.00	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	40	kgs	133.00	5,320.00
16.00	Guy Assembly complete with 7/10 SWG Stay Wire, 140x85 mm H.T Guy Insulator, 18mm diameter Stay Rod 1.8 mtrs Long with bow thimble, turn buckle & 300x300x6mm anchor plate.	10	Sets	1,930.00	19,300.00
17.00	Red Oxide Metal Primer (Nerolac or Equivalent) conforming to IS: 2074@ 2Ltrs/pole	40	Ltrs	130.00	5,200.00
18.00	Aluminum Paint (Nerolac or Equivalent). @ 2Ltrs/Pole	40	Ltrs	247.00	9,880.00
19.00	G.I Barbed Wire @ 2Kg/Pole	40	Kgs	63.00	2,520.00
20.00	Danger Board 11000Volts	20	Nos	85.00	1,700.00
I c	**Cost of Materials**				**910,909.00**
21.00	Concreting of 11Mtrs Lattice Structure / Swaged STP in 1:4:8 cc in 0.9x0.9x2.05mtrs cement plaster of parapet in 1:4 mix.	20	Job	3,267.00	65,340.00
22.00	Concreting of H.T Guy Assembly in 1:4:8 cc in 0.40x0.40x1.05mtrs Pit.	10	Job	876.00	8,760.00
I d	**Cost of Civil work**				**74,100.00**
II	**DRAWING OF LT DISTRIBUTION LINES ON 8.5MTRS LATTICE STRUCTURE AT DIFFERENT LOCATION.**				
23.00	8.5 Mtrs. Steel lattice structure of 35x35x6mm M.S Angle complete with nuts & bolts.	75	Nos	11,845.00	888,375.00
24.00	Guy Assembly complete with 7/12 SWG Stay Wire, 110x75 mm L.T Guy Insulator, 16mm diameter Stay Rod 1.8 mtrs Long with bow thimble, turn buckle & 150x150x6mm anchor plate	35	Sets	1,047.00	36,645.00
25.00	L.T Aerial Bunched cable (ABC) of 3 x 95 sq.mm + 1 x 16 sq.mm + 1 x 50 sq.mm, 1.1 KV with aluminum alloy. ~~bare~~ Insulated messenger wire	1500	mtrs	728.00	1,092,000.00
26.00	**LT A.B CABLE ACCESSORIES**				-
a	LT A.B Cable tension clamps (Galvanized)	77	nos	415.00	31,955.00

b	LT A B cable Suspension clamps (Galvanized)	77	nos	332.00	25,564.00
c	Clamps for neutral for AB Cable	77	nos	33.00	2,541.00
d	LT Dead End Clamp for L.T.A.B Cable	77	nos	389.00	29,953.00
27.00	G.I Barbed Wire @ 2Kg/Pole	150	Kgs	63.00	9,450.00
28.00	Danger Board 440Volts	75	nos	63.00	4,725.00
II a	**Cost of Materials**				**2,121,208.00**
29.00	Concreting of 8.5 Mtrs. Lattice Structure / Swaged Steel Tubular Pole in 1:4:8 cc in 0.9x0.9x1.50 mtrs Pit, Construction of parapet 0.35 x 0.47x0.153 mtrs. In 1:3:6 cc i/c 12mm cement plaster of parapet in 1:4 Mix.	75	job	1,722.00	129,150.00
30.00	Concreting of L.T Guy Assemble in 1:4:8 cc in 0.30x0.30x1.05mtrs. Pit.	35	job	768.00	26,880.00
II b	**Cost of Civil work**				**156,030.00**
III	**11KV XLPE CABLE FOR DEDICATED TRANAMISSION LINES IN UNDERGROUND AND OVER HEAD SYSTEM AT DIFFERENT FEEDERS.**				
31.00	6.35 KV (Uo) / 11 KV(U) XPLE INSULATED ARMOURED CABLE WITH ALUMINIUM CONDUCTOR CONFORMING TO IS:7098 PART-2.				-
	3 x 185 sqmm	3000	mtrs	2,407.00	7,221,000.00
	3 x 150 sq.mm	6000	mtrs	2,207.00	13,242,000.00
	3 x 120 sqmm	20000	mtrs	1,830.00	36,600,000.00
	3 x 95 sqmm	6000	mtrs	1,605.00	9,630,000.00
32.00	RIGID U PVC PIPE AS PER IS 4985-2000 WORKING PRESSURE 6 KGF/CM2				
	90 mm dia	5980	Mtr	407.00	2,433,860.00
	110 mm dia	17000	Mtr	587.00	9,979,000.00
33.00	FLEXIBLE SUPER PVC GREEN PIPE 3.5KG/CM2 CONFORMING TO IS: 4985-2000.				-
	3" dia	2000	Mtr	273.00	546,000.00
	4"dia	1500	Mtr	314.00	471,000.00
34.00	Safe earthing model T-19 short time current 50 KA rms for 1 sec (EHV) application: 50 mm diameter x 2 mtrs. Electrode (Copper bonded) & One bag backfill chemical compound.	150	Nos	10,820.00	1623000

35.00	Heat Shrinkable Straight Through jointing kits for 11KV (U) 3core XLPE, Make Raychem/ Denson or equivelent.				
	3 C X 120-185 SQMM	50	Kit	29,204.00	1,460,200.00
	3 C X 50-95 SQMM	10	Kit	22,956.00	229,560.00
36.00	Heat Shrinkable outdoor type termination kits for 6.36KV (U) 3core XLPE, Make Raychem/ Denson or equivelent.				
	3 C X 185 sqmm EPKT 3362	20	Kit	15,102.00	302,040.00
	3 C X 120 sqmm EPKT 3362	30	Kit	15,102.00	453,060.00
	3 C X 95 sqmm EPKT 3352	12	Kit	14,064.00	168,768.00
III a	**Cost of Materials**				**84,359,488.00**
37.00	Excavation of 0.45x0.90x1.00mtrs. Cable trench in mix soil & re-filling with available excavated earth & providing cement concrete on the top of the trench.	26000	Mtrs	447.00	11,622,000.00
III b	**Cost of Civil work**				**11,622,000.00**
IV	**L.T DISTRIBUTION LINES IN UNDERGROUND & OVER HEAD SYSTEN & FOR HOUSEHOLD SERVICE CONNECTRIONS.**				
38.00	1.1 KV PVC / XLPE Insulated heavy duty power cables for working voltage upto & including 660/1100 volts aluminium conductors insulated armoured cable. Make Havells or equivalents.				
	3.5 Core x 300 sqmm	1400	Mtrs	2,607.00	3,649,800.00
	3.5 Core x 185 sqmm	1700	Mtr	1,665.00	2,830,500.00
	3.5 core x 150 Sq.mm	500	Mtrs	1,342.00	671,000.00
	3.5 Core x 120 sqmm	500	Mtr	1,134.00	567,000.00
	3.5 Core x 95 sqmm	500	Mtr	919.00	459,500.00
	3.5 Core x 70 sq.mm	500	mtrs	697.00	348,500.00
	2 Core x 16 sqmm for household service connections.	5000	Mtr	200.00	1,000,000.00
	2 Core x 10 sqmm for household service connections.	4000	Mtr	177.00	708,000.00
39.00	L.T 1.1 KV heat shrinkable indoor and outdoor end termination kit for PVC/ XLPE cables 2,3 &1/2 core. Make Havells or equivalent.				
	3.5 Core x 300 sqmm	50	kit	8,857.00	442,850.00
	3.5 Core x 185 sqmm	34	kit	8,857.00	301,138.00
	3.5 Core x 120 sqmm	12	kit	6,446.00	77,352.00
	3.5 Core x 95 sqmm	12	kit	6,446.00	77,352.00

40.00	RIGID U PVC PIPE AS PER IS 4985-2000 WORKING PRESSURE 6 KGF/CM2				
	50 mm dia	7500	mtrs	124.00	930,000.00
	90 mm dia	940	Mtr	407.00	382,580.00
	110 mm dia	4000	Mtr	587.00	2,348,000.00
41.00	FLEXIBLE SUPER PVC GREEN PIPE 3.5KG/CM2 CONFORMING TO IS: 4985-2000.				-
	3" dia	280	Mtr	273.00	76,440.00
	4"dia	300	Mtr	314.00	94,200.00
IV a	**Cost of Materials**				**14,964,212.00**
42.00	Excavation of 0.45x0.90x1.00mtrs. Cable trench in mix soil & re-filling with available excavated earth & providing cement concrete on the top of the trench.	12000	Mtrs	447.00	5,364,000.00
IV b	**Cost of Civil work**				**5,364,000.00**
V	**FEEDER PILLARS: OUTDOOR TYPE CUBICLE.**				
43.00	Main Feeder Panel: Cubicle design totally enclosed and water proof outdoor type floor mounted suitable for use in 440 V,400A main feeder pillar				
	Incomer : 1 No 400 A, MCCB, 50KA				
	Outgoing: 2 Nos. 200 A TPN MCCB & 4 Nos. 32 A TPN, MCB for individual service connections.	5	Nos	181,337.00	906,685.00
44.00	Sub-Main Feeder Panel: Cubicle design totally enclo.& water proof outdoor type floor mounted suitable for use in 440V 200 A as a sub-main feeder pillar:				
	Incomer: 1 No. 200 A, TPN MCCB				
	Outgoing: 3 Nos. 63 A TPN MCCB & 4 Nos. 32 A MCCB for individual service connections & 8 Nos.16 A TPN for individual service connection.	12	Nos	100,742.00	1,208,904.00
V a	**Cost of Materials**				**2,115,589.00**
45.00	Placement of feeder 1.5 mx1mx0.2m in 1:3:6 cc plum pillar.	17	job	2,122.00	36,074.00
V b	**cost of civil work**				**36,074.00**
VI	**INSTALLATION OF 11KV THREE PHASE TEE-OFF SWITCH IN 11MTRS LATTICE STRUCTURES AT DIFFERENT LOCATION.**				

46.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 1/L/FT/E&PD/ 11 Mtrs.(without arms)	24	nos	26,483.00	635,592.00
47.00	M.S Channel ISLC75 (75x40x6mm x 2.2 m long for DP	1360	kg	63.31	86,101.60
48.00	Back clamps of 50x6mm M.S Flat for holding channel	192	nos	62.17	11,936.64
49.00	M.S Nuts & Bolts 16mm diax 40mm full thread	230	kg	133.00	30,590.00
50.00	11 KV, 3 Pole 400amp, Air Break G.O.S tilting type, three insulator per phase, complete with all fittings conforming to IS:9920 & IS: 9921 (Porcelain/Polymer)	12	set	18,839.00	226,068.00
51.00	Safe earthing model T-19 short time current 50 KA rms for 1 sec (EHV) application: 50 mm diameter x 2 mtrs. Electrode (Copper bonded) & One bag backfill chemical compound.	12	nos	10,820.00	129,840.00
52.00	Guy Assembly complete with 7/10 SWG Stay Wire, 140x85 mm H.T Guy Insulator, 18mm diameter Stay Rod 1.8 mtrs Long with bow thimble, turn buckle & 300x300x6mm anchor plate	12	set	1,930.00	23,160.00
53.00	G.I Barbed Wire for anticlimbing device @ 2kgs/pole	48	kg	63.00	3,024.00
54.00	Danger Board 11000 Volts	12	nos	85.00	1,020.00
55.00	Red Oxide Metal Primer @ & 2 ltr/pole(11mtr)	48	ltr	130.00	6,240.00
56.00	Aliminium Paint @ 2 ltr/pole(11mtr)	48	ltr	247.00	11,856.00
VI a	**Cost of Materials**				**1,165,428.24**
57.00	Concreting of 11Mtrs Lattice Structure / Swaged STP in 1:4:8 cc in 0.9x0.9x2.05mtrs cement plaster of parapet in 1:4 mix.	24	jobs	3,267.00	78,408.00
58.00	Concreting of H.T Guy Assembly in 1:4:8 cc in 0.40x0.40x1.05mtrs Pit.	12	jobs	876.00	10,512.00
VI b	**Cost of Civil work**				**88,920.00**
A	**Total cost of Materials (Ia,Ic, IIa, IIIa, IVa,Va,VI a).**				**118,665,622.24**
B	**Total Cost of Civil work (I b, Id, IIb, IIIb, IV b, V b, VI b)**				**18,934,274.00**
C	**Total Cost of Materials & Civil work**				**137,599,896.24**

D	GST @ 18%		C		24,767,981.32
E	Erection Charges @15%		A		17,799,843.34
F	Transportation Charges @ 10%		A		11,866,562.22
G	GST on Erection @18%		E		3,203,971.80
H	GST on Transportation @ 18%		F		2,135,981.20
I	Contigency @ 0.5%		C		687,999.48
J	Establishment charges @ 9% on C		C		12,383,990.66
K	Tools and Plans Charges @0.5%		C		687,999.48
L	**SUB- TOTAL**				**211,134,225.75**
M	Mobile T&P and Communication				3,200,000.00
N	**TOTAL**				**214,334,225.75**
O	Labour Cess @1%		J		2,111,342.26
P	**GRAND TOTAL**	**SAY RS**			**216,445,568.00**

(Rupees Twenty One Crore Sixty Four Lakhs Forty Five Thousand Five Hundred Sixty Eight) Only.

Executive Engineer(Elect.)
Power Department
Rangpo Division

Junior Engineer (Elect.)
Power Department
Rangpo Sub Division

Superintending Engineer
Power Department
Rangpo Circle

Rates Checked by Planning Cell
Power Department

(J.E. Planning)

A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

GOVERNMENT OF SIKKIM
POWER DEPARTMENT
RANGPO

SECTION B:-SHIFTING & DIVERSION OF EXISTING DISTRIBUTION SUB-STATIONS UNDER RANGPO CIRCLE IN PAKYONG DISTRICT.

SL.NO	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
I	**500KVA CONVENTIONAL TYPE DISTRIBUTION SUB-STATION.**				
1.00	50 HZ, DYN 11, 3 Phase, ONAN cooled,Outdoor type distribution transformer with off-circuit tapping + 2.5%, +5% on HV side with bare bushing on HV & LV side & providing with standard fittings & accessories with first filling of transformer oil, Energy efficiency level-2				
	500 KVA, 11/ 0.433 KV, Copper Wound	3	nos	1,092,773.00	3,278,319.00
2.00	L.T distribution switch board with copper bus bar, out-door type Kiosk, having electrolytic annealed copper bus bar 50x12mm for phase & 50x6mm for neutral circuits mounted on glazed porcelain or Bakelite base & fitted with voltmeter, ammeter, selector switches for ammeter & voltmeter, electronic KWH meter, indicating lamps cabin light, fabricated with 12 gauge M.S plain sheet, painted with anti- rust primer & two coats of Epoxy paint of shade 631 as per IS: 8623-1, front opening doors with gasket & locking arrangement complete with following incoming & outgoing controls:				
	LTDB 800 A INCOMING: 1 No. 800 A, 4P,50KA, MDO ACB. OUTGOING: 4 Nos. 200A TP MCCB , 50 KA, 1 No. 63 A TP MCCB, 35 KA all with built in Thermo Magnetic Release .	3	nos	448,400.00	1,345,200.00
3.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts.	6	nos	26,483.00	158,898.00
4.00	M.S.channel ISLC 75(75x40x6mm) X 2.8mtr. for supporting line, G.O.S & D.O fuse etc(SAIL Brand)	90	Kgs	63.31	5,697.90
5.00	Back clamps of 75x8mm M.S.flat for holding the channel.(SAIL Brand)	48	Kgs	139.00	6,672.00
6.00	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	48	Kgs	133.00	6,384.00

7.00	11 KV, 3 Pole 400amp, Air Break G.O.S tilting type, three insulator per phase, complete with all fittings conforming to IS:9920 & IS: 9921 (Porcelain/Polymer)	3	Sets	18,839.00	56,517.00
8.00	11 KV, 3 Pole, 400 amp. D.O.F Unit complete with all accessories conforming to IS: 9385 (Porcelain/Polymer)	3	Sets	12,058.00	36,174.00
9.00	9 KV, 5KA single pole unit metal oxide gapless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system confirming to IS: 3070 (part-3) Raychem RPG make or equivalent.	9	nos	1,055.00	9,495.00
10.00	Danger board 11000 Volts.	6	Nos	85.00	510.00
11.00	Safe earthing model T-19 short time current 50 KA rms for 1 sec (EHV) 50 mm diameter x 3 Mtrs. Electrode & two bags backfill chemical compound.	12	Sets	16,844.00	202,128.00
12.00	Guy assembly complete with 7/10 SWG G.I. stay wire,140x85 mm H.T.guy insulator, 18mm dia stay rod 1.8 mtrs. Long with bow thimble, turn buckle and 300x300x6mm anchor plate.	3	Nos	1,930.00	5,790.00
13.00	Red oxide metal primer (NEROLAC or equivalent).@2trs/pole	12	Ltrs	130.00	1,560.00
14.00	Aluminium paint (NEROLAC or equivalent).2ltrs/pole	12	Ltrs	247.00	2,964.00
15.00	G.I barbed wire for anti climbing device @ 2 kg./pole	12	Kgs	63.00	756.00
16.00	11 KV(E) XLPE insulated armoured cable with Aluminium conductor of size 3 X 70Sqmm. Make Polycab.	130	Mtrs	1,354.00	176,020.00
17.00	Heat shrinkable Outdoor type end termination kit for 11 KV (E) 3 Core XLPE)(Raychem make or equivalent) for 3x70 Sqmm	6	Sets	14,064.000	84384
18.00	1.1 KV grade PVC Insulatd Heavy Duty Power Cable for working voltage upto 660/1100 volts CONF To IS: 7098 (Part-1) with latest amendments ALUMINIUM Conductors.Make Polycab.				-
	3.5 core x 300 Sq.mm	180	Mtrs	2,607.00	469,260.00
19.00	LT 1.1KV outdoor End Termination Kit for PVC/ XLPE cables 3 &1/2 core for 50 sq.mm(DENSION)(from transformer to panel and panel to site) 3.5x300sqmm	6	Nos	8,857.00	53,142.00
I A	**Cost of Materials**				**5,899,870.00**

20.00	Fencing for 500 KVA parapet mounted distribution sub-station of size 3.5x4 mtrs.constructed with 50x50x5mm M.S angle vertical props, 35x35x6mm M.S angle supports(double run), M.S wire mesh, 50x6mm M.S flat iron for clamping wire mesh complete with gate with locking arrangement, site development, concreting of props in 1:2:4 cc i/c soling & flooring works in 1:4:8 cc.	3	Job	52,955.00	158,865.00
21.00	Concreting of 11Mtrs Lattice Structure / Swaged STP in 1:4:8 cc in 0.9x0.9x2.05mtrs cement plaster of parapet in 1:4 mix.	6	Job	3,267.00	19,602.00
22.00	Concreting of H.T guy assembly in 1:4:8 ccm in 0.40x0.40x1.05 Mtr.pit.	3	Job	876.00	2,628.00
23.00	Placement of L.T Distribution board on parapet of size 2x0.61x0.35x0.61 mtrs in 1:3:6 C.C mix including 12 mm thick cement plaster in 1:4 mix.	3	Job	1,827.00	5,481.00
24.00	Placement of 500 KVA distribution Transformer on parapet of size 1.5x1.5x1mtrs. In 1:3:6 cc Mix including 12mm thick cement plaster in 1:4 Mix.	3	Job	8,566.00	25,698.00
I B	**Cost of Civil work**				**212,274.00**
II	**250KVA CONVENTIONAL TYPE DISTRIBUTION SUB-STATION.**				
25.00	50 HZ, DYN 11, 3 PHASE, ONAN COOLED, OUT-DOOR TYPE DISTRIBUTION TRANSFORMER WITH OFF-CIRCUIT TAPPING +2.5%, +5%, ON H.V SIDE WITH BARE BUSHING ON HV & LV SIDE & PROVIDED WITH STANDARD FITTINGS & ACCESSORIES WITH FIRST FILLING OF TRANSFORMER OIL CONFORMING TO IS:1180(PART-I)2014:ENERGY EFFICIENCY LEVEL - 2.				-
	250 KVA, 11/ 0.433 KV, Copper Wound	2	Nos	695,019.00	1,390,038.00

26.00	L.T distribution switch board with copper bus bar, out-door type Kiosk, having electrolytic annealed copper bus bar 50x12mm for phase & 50x6mm for neutral circuits mounted on glazed porcelain or Bakelite base & fitted with voltmeter, ammeter, selector switches for ammeter & voltmeter, electronic KWH meter, indicating lamps cabin light, fabricated with 12 gauge M.S plain sheet, painted with anti- rust primer & two coats of Epoxy paint of shade 631 as per IS: 8623-1, front opening doors with gasket & locking arrangement complete with following incoming & outgoing controls:				-
	LTDB 400 A INCOMING: 1 No. 400 A, 4P,50KA, MCCB OUTGOING: 1 No. 200A TP MCCB, 50 KA ,2 Nos. 100A TP MCCB, 35 KA & 1 No. 63A TP MCCB, 35 KA all with built in Thermo Magnetic Release.	2	Nos	182,900.00	365,800.00
27.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 1/L/FT/E&PD/ 11 Mtrs.	4	Nos	26,483.00	105,932.00
28.00	M.S.channel ISLC 75(75x40x6mm) X 2.8mtr. for supporting line, G.O.S & D.O fuse etc(SAIL Brand)	360	Kgs	63.31	22,791.60
29.00	M.S.channel ISLC 100(100x50x6.4mm)X 0.46mtr.long for supporting main channel of T.(SAIL Brand)	230	Kgs	63.31	14,561.30
30.00	Back clamps of 75x8mm M.S.flat for holding the channel.(SAIL Brand)	330	Nos	139.00	45,870.00
31.00	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	100	kgs	133.00	13,300.00
32.00	11 KV, 3 Pole 400amp, Air Break G.O.S tilting type, three insulator per phase, complete with all fittings conforming to IS:9920 & IS: 9921 (Porcelain/Polymer)	2	Sets	18,839.00	37,678.00
33.00	11 KV, 3 Pole, 400 amp. D.O.F Unit complete with all accessories conforming to IS: 9385 (Porcelain/Polymer)	2	Sets	12,058.00	24,116.00

34.00	9 KV, 5KA single pole unit metal oxide gapless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system confirming to IS: 3070 (part-3) Raychem RPG make or equivalent.	6	Nos	1,055.00	6,330.00
35.00	Danger board 11000 Volts.	4	Nos	85.00	340.00
36.00	Safe earthing model T-19 short time current 50 KA rms for 1 sec (EHV) 50 mm diameter x 3 Mtrs. Electrode & two bags backfill chemical compound.	8	Nos	16,844.00	134,752.00
37.00	Guy assembly complete with 7/10 SWG G.I. stay wire,140x85 mm H.T.guy insulator, 18mm dia stay rod 1.8 mtrs. Long with bow thimble, turn buckle and 300x300x6mm anchor plate.	2	Nos	1,930.00	3,860.00
38.00	Red oxide metal primer (NEROLAC or equivalent).@2ltrs/pole	8	Ltrs	130.00	1,040.00
39.00	Aluminium paint (NEROLAC or equivalent).2ltrs/pole	8	Ltrs	247.00	1,976.00
40.00	G.I barbed wire for anti climbing device @ 2 kg./pole	8	Kgs	63.00	504.00
41.00	11 KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II 3X 70 Sqmm. Make Polycab.	160	Mtrs	1,354.00	216,640.00
42.00	Heat shrinkable Outdoor type end termination kit for 11 KV (E) 3 Core XLPE)(Raychem make or equivalent) for 3x70 Sqmm	8	Sets	14,064.00	112,512.00
43.00	1.1 KV grade PVC Insulatd Heavy Duty Power Cable for working voltage upto 660/1100 volts CONF To IS: 7098 (Part-1) with latest amendments ALUMINIUM Conductors.Make Polycab.				-
	3.5 core x 185 Sq.mm	240	Mtrs	1,665.00	399,600.00
44.00	LT 1.1KV outdoor End Termination Kit for PVC/ XLPE cables 3 &1/2 core for 50 sq.mm(DENSION)(from transformer to panel and panel to site) 3.5x185sqmm	16	Nos	8,857.00	141,712.00
II A	**Cost of Materials**				**3,039,352.90**

45.00	Fencing for 250 KVA parapet mounted distribution sub-station of size 3.5x4 mtrs.constructed with 50x50x5mm M.S angle vertical props, 35x35x6mm M.S angle supports(double run), M.S wire mesh, 50x6mm M.S flat iron for clamping wire mesh complete with gate with locking arrangement, site development, concreting of props in 1:2:4 cc i/c soling & flooring works in 1:4:8 cc as per Layout No. 3/F/E&PD/400-750 KVA.	2	Job	42,311.00	84,622.00
46.00	Concreting of 11Mtrs Lattice Structure / Swaged STP in 1:4:8 cc in 0.9x0.9x2.05mtrs cement plaster of parapet in 1:4 mix.	4	Job	3,267.00	13,068.00
47.00	Concreting of H.T guy assembly in 1:4:8 ccm in 0.40x0.40x1.05 Mtr.pit.	2	Job	876.00	1,752.00
48.00	Placement of L.T Distribution board on parapet of size 2x0.61x0.35x0.61 mtrs in 1:3:6 C.C mix including 12 mm thick cement plaster in 1:4 mix.	2	Job	1,827.00	3,654.00
49.00	Placement of 250 KVA distribution Transformer on parapet of size 1.5x1.5x1mtrs. In 1:3:6 cc Mix including 12mm thick cement plaster in 1:4 Mix.	2	Job	5,791.00	11,582.00
II B	**Cost of Civil work**				**114,678.00**
III	**100KVA CONVENTIONAL TYPE DISTRIBUTION SUB-STATION.**				
50.00	50 HZ, DYN 11, 3 PHASE, ONAN COOLED, OUT-DOOR TYPE DISTRIBUTION TRANSFORMER WITH OFF-CIRCUIT TAPPING +2.5%, +5%, ON H.V SIDE WITH BARE BUSHING ON HV & LV SIDE & PROVIDED WITH STANDARD FITTINGS & ACCESSORIES WITH FIRST FILLING OF TRANSFORMER OIL CONFORMING TO IS:1180(PART-I)2014:ENERGY EFFICIENCY LEVEL - 2.				-
	100 KVA, 11/ 0.433 KV, Copper Wound	3	Nos	385,591.00	1,156,773.00

51.00	L.T distribution switch board with copper bus bar, out-door type Kiosk, having electrolytic annealed copper bus bar 50x12mm for phase & 50x6mm for neutral circuits mounted on glazed porcelain or Bakelite base & fitted with voltmeter, ammeter, selector switches for ammeter & voltmeter, electronic KWH meter, indicating lamps cabin light, fabricated with 12 gauge M.S plain sheet, painted with anti- rust primer & two coats of Epoxy paint of shade 631 as per IS: 8623-1, front opening doors with gasket & locking arrangement complete with following incoming & outgoing controls:				-
	LTDB 200 A INCOMING: 1 No. 200 A, 4P,50KA, MCCB OUTGOING: 3 Nos. 100A TP MCCB, 35 KA, & 1 No. 32A TP MCCB, 35 KA all with built in Thermo Magnetic Release.	3	Nos	109,740.00	329,220.00
52.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 1/L/FT/E&PD/ 11 Mtrs.	6	Nos	26,483.00	158,898.00
53.00	M.S.channel ISLC 75(75x40x6mm) X 2.8mtr. for supporting line, G.O.S & D.O fuse etc(SAIL Brand)	520	Kgs	63.31	32,921.20
54.00	M.S.channel ISLC 100(100x50x6.4mm)X 0.46mtr.long for supporting main channel of T.(SAIL Brand)	260	Kgs	63.31	16,460.60
55.00	Back clamps of 75x8mm M.S.flat for holding the channel.(SAIL Brand)	260	Nos	139.00	36,140.00
56.00	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	200	kgs	133.00	26,600.00
57.00	11 KV, 3 Pole 400amp, Air Break G.O.S tilting type, three insulator per phase, complete with all fittings conforming to IS:9920 & IS: 9921 (Porcelain/Polymer)	3	Sets	18,839.00	56,517.00
58.00	11 KV, 3 Pole, 400 amp. D.O.F Unit complete with all accessories conforming to IS: 9385 (Porcelain/Polymer)	3	Sets	12,058.00	36,174.00

59.00	9 KV, 5KA single pole unit metal oxide gapless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system confirming to IS: 3070 (part-3) Raychem RPG make or equivalent.	9	Nos	1,055.00	9,495.00
60.00	Danger board 11000 Volts.	6	Nos	85.00	510.00
61.00	Safe earthing model T-19 short time current 50 KA rms for 1 sec (EHV) 50 mm diameter x 3 Mtrs. Electrode & two bags backfill chemical compound.	12	Nos	16,844.00	202,128.00
62.00	Guy assembly complete with 7/10 SWG G.I. stay wire,140x85 mm H.T.guy insulator, 18mm dia stay rod 1.8 mtrs. Long with bow thimble, turn buckle and 300x300x6mm anchor plate.	3	Nos	1,930.00	5,790.00
63.00	Red oxide metal primer (NEROLAC or equivalent).@2ltrs/pole	12	Ltrs	130.00	1,560.00
64.00	Aluminium paint (NEROLAC or equivalent).2ltrs/pole	12	Ltrs	247.00	2,964.00
65.00	G.I barbed wire for anti climbing device @ 2 kg./pole	12	Kgs	63.00	756.00
66.00	11 KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II 3X 70 Sqmm. Make Polycab.	120	Mtrs	1,354.00	162,480.00
67.00	Heat shrinkable Outdoor type end termination kit for 11 KV (E) 3 Core XLPE)(Raychem make or equivalent) for 3x70 Sqmm	6	Sets	14,064.00	84,384.00
68.00	1.1 KV grade PVC Insulatd Heavy Duty Power Cable for working voltage upto 660/1100 volts CONF To IS: 7098 (Part-1) with latest amendments ALUMINIUM Conductors.Make Polycab.				-
	3.5 core x 120 Sq.mm	180	Mtrs	1,134.00	204,120.00
69.00	LT 1.1KV outdoor End Termination Kit for PVC/ XLPE cables 3 &1/2 core for 50 sq.mm(DENSION)(from transformer to panel and panel to site) 3.5x120sqmm	16	Nos	6,446.00	103,136.00
III A	**Cost of Materials**				**2,627,026.80**

70.00	Fencing for 100 KVA parapet mounted distribution sub-station of size 3.5x4 mtrs.constructed with 50x50x5mm M.S angle vertical props, 35x35x6mm M.S angle supports(double run), M.S wire mesh, 50x6mm M.S flat iron for clamping wire mesh complete with gate with locking arrangement, site development, concreting of props in 1:2:4 cc i/c soling & flooring works in 1:4:8 cc as per Layout No. 3/F/E&PD/400-750 KVA.	3	Job	42,311.00	126,933.00
71.00	Concreting of 11Mtrs Lattice Structure / Swaged STP in 1:4:8 cc in 0.9x0.9x2.05mtrs cement plaster of parapet in 1:4 mix.	6	Job	3,267.00	19,602.00
72.00	Concreting of H.T guy assembly in 1:4:8 ccm in 0.40x0.40x1.05 Mtr.pit.	3	Job	876.00	2,628.00
73.00	Placement of L.T Distribution board on parapet of size 2x0.61x0.35x0.61 mtrs in 1:3:6 C.C mix including 12 mm thick cement plaster in 1:4 mix.	3	Job	1,827.00	5,481.00
74.00	Placement of 100 KVA distribution Transformer on parapet of size 1.5x1.5x1mtrs. In 1:3:6 cc Mix including 12mm thick cement plaster in 1:4 Mix.	3	Job	5,791.00	17,373.00
III B	**Cost of Civil work**				**172,017.00**
IV	**63KVA CONVENTIONAL TYPE DISTRIBUTION SUB-STATION.**				
75.00	50 HZ, DYN 11, 3 PHASE, ONAN COOLED, OUT-DOOR TYPE DISTRIBUTION TRANSFORMER WITH OFF-CIRCUIT TAPPING +2.5%, +5%, ON H.V SIDE WITH BARE BUSHING ON HV & LV SIDE & PROVIDED WITH STANDARD FITTINGS & ACCESSORIES WITH FIRST FILLING OF TRANSFORMER OIL CONFORMING TO IS:1180(PART-I)2014:ENERGY EFFICIENCY LEVEL - 2.				-
	63 KVA, 11/ 0.433 KV, Copper Wound	1	Nos	340,168.00	340,168.00

76.00	L.T distribution switch board with copper bus bar, out-door type Kiosk, having electrolytic annealed copper bus bar 50x12mm for phase & 50x6mm for neutral circuits mounted on glazed porcelain or Bakelite base & fitted with voltmeter, ammeter, selector switches for ammeter & voltmeter, electronic KWH meter, indicating lamps cabin light, fabricated with 12 gauge M.S plain sheet, painted with anti- rust primer & two coats of Epoxy paint of shade 631 as per IS: 8623-1, front opening doors with gasket & locking arrangement complete with following incoming & outgoing controls:				-
	LTDB 100 A INCOMING: 1 No. 100 A, 4P,50KA, MCCB OUTGOING: 3 Nos. 63A TP MCCB, 35 KA, & 1 No. 32A TP MCCB, 35 KA all with built in Thermo Magnetic Release.	1	Nos	86,140.00	86,140.00
77.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 1/L/FT/E&PD/ 11 Mtrs.	2	Nos	26,483.00	52,966.00
78.00	M.S.channel ISLC 75(75x40x6mm) X 2.8mtr. for supporting line, G.O.S & D.O fuse etc(SAIL Brand)	240	Kgs	63.31	15,194.40
79.00	M.S.channel ISLC 100(100x50x6.4mm)X 0.46mtr.long for supporting main channel of T.(SAIL Brand)	120	Kgs	63.31	7,597.20
80.00	Back clamps of 75x8mm M.S.flat for holding the channel.(SAIL Brand)	130	Nos	139.00	18,070.00
81.00	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	60	kgs	133.00	7,980.00
82.00	11 KV, 3 Pole 400amp, Air Break G.O.S tilting type, three insulator per phase, complete with all fittings conforming to IS:9920 & IS: 9921 (Porcelain/Polymer)	1	Sets	18,839.00	18,839.00
83.00	11 KV, 3 Pole, 400 amp. D.O.F Unit complete with all accessories conforming to IS: 9385 (Porcelain/Polymer)	1	Sets	12,058.00	12,058.00

84.00	9 KV, 5KA single pole unit metal oxide gapless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system confirming to IS: 3070 (part-3) Raychem RPG make or equivalent.	3	Nos	1,055.00	3,165.00
85.00	Danger board 11000 Volts.	2	Nos	85.00	170.00
86.00	Safe earthing model T-19 short time current 50 KA rms for 1 sec (EHV) 50 mm diameter x 3 Mtrs. Electrode & two bags backfill chemical compound.	4	Nos	16,844.00	67,376.00
87.00	Guy assembly complete with 7/10 SWG G.I. stay wire,140x85 mm H.T.guy insulator, 18mm dia stay rod 1.8 mtrs. Long with bow thimble, turn buckle and 300x300x6mm anchor plate.	1	Nos	1,930.00	1,930.00
88.00	Red oxide metal primer (NEROLAC or equivalent).@2ltrs/pole	4	Ltrs	130.00	520.00
89.00	Aluminium paint (NEROLAC or equivalent).2ltrs/pole	4	Ltrs	247.00	988.00
90.00	G.I barbed wire for anti climbing device @ 2 kg./pole	4	Kgs	63.00	252.00
91.00	11 KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II 3X 70 Sqmm. Make Polycab.	60	Mtrs	1,354.00	81,240.00
92.00	Heat shrinkable Outdoor type end termination kit for 11 KV (E) 3 Core XLPE)(Raychem make or equivalent) for 3x70 Sqmm	4	Sets	14,064.00	56,256.00
93.00	1.1 KV grade PVC Insulatd Heavy Duty Power Cable for working voltage upto 660/1100 volts CONF To IS: 7098 (Part-1) with latest amendments ALUMINIUM Conductors.Make Polycab.				-
	3.5 core x 95 Sq.mm	110	Mtrs	919.00	101,090.00
94.00	LT 1.1KV outdoor End Termination Kit for PVC/ XLPE cables 3 &1/2 core for 50 sq.mm(DENSION)(from transformer to panel and panel to site) 3.5x 95sqmm	8	Nos	6,446.00	51,568.00
IV A	**Cost of Materials**				**923,567.60**

95.00	Fencing for 63 KVA parapet mounted distribution sub-station of size 3.5x4 mtrs.constructed with 50x50x5mm M.S angle vertical props, 35x35x6mm M.S angle supports(double run), M.S wire mesh, 50x6mm M.S flat iron for clamping wire mesh complete with gate with locking arrangement, site development, concreting of props in 1:2:4 cc i/c soling & flooring works in 1:4:8 cc as per Layout No. 3/F/E&PD/400-750 KVA.	1	Job	34,689.00	34,689.00
96.00	Concreting of 11Mtrs Lattice Structure / Swaged STP in 1:4:8 cc in 0.9x0.9x2.05mtrs cement plaster of parapet in 1:4 mix.	2	Job	3,267.00	6,534.00
97.00	Concreting of H.T guy assembly in 1:4:8 ccm in 0.40x0.40x1.05 Mtr.pit.	1	Job	876.00	876.00
98.00	Placement of L.T Distribution board on parapet of size 2x0.61x0.35x0.61 mtrs in 1:3:6 C.C mix including 12 mm thick cement plaster in 1:4 mix.	1	Job	1,827.00	1,827.00
IV B	**Cost of Civil work**				**43,926.00**
V	**25KVA CONVENTIONAL TYPE DISTRIBUTION SUB-STATION.**				
99.00	50 HZ, DYN 11, 3 PHASE, ONAN COOLED, OUT-DOOR TYPE DISTRIBUTION TRANSFORMER WITH OFF-CIRCUIT TAPPING +2.5%, +5%, ON H.V SIDE WITH BARE BUSHING ON HV & LV SIDE & PROVIDED WITH STANDARD FITTINGS & ACCESSORIES WITH FIRST FILLING OF TRANSFORMER OIL CONFORMING TO IS:1180(PART-I)2014:ENERGY EFFICIENCY LEVEL - 2.				-
	25 KVA, 11/ 0.433 KV, Aluminium Wound	3	Nos	83,235.00	249,705.00

100.00	L.T distribution switch board with copper bus bar, out-door type Kiosk, having electrolytic annealed copper bus bar 50x12mm for phase & 50x6mm for neutral circuits mounted on glazed porcelain or Bakelite base & fitted with voltmeter, ammeter, selector switches for ammeter & voltmeter, electronic KWH meter, indicating lamps cabin light, fabricated with 12 gauge M.S plain sheet, painted with anti- rust primer & two coats of Epoxy paint of shade 631 as per IS: 8623-1, front opening doors with gasket & locking arrangement complete with following incoming & outgoing controls:				
	LTDB 63 A INCOMING: 1 No. 63 A, 4P,50KA, MCCB OUTGOING: 2 Nos. 40A TP MCCB, 35 KA, & 1 No. 32A TP MCCB, 35 KA all with built in Thermo Magnetic Release.	3	Nos	67,896.00	203,688.00
101.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 1/L/FT/E&PD/ 11 Mtrs.	6	Nos	26,483.00	158,898.00
102.00	M.S.channel ISLC 75(75x40x6mm) X 2.8mtr. for supporting line, G.O.S & D.O fuse etc(SAIL Brand)	520	Kgs	63.31	32,921.20
103.00	M.S.channel ISLC 100(100x50x6.4mm)X 0.46mtr.long for supporting main channel of T.(SAIL Brand)	260	Kgs	63.31	16,460.60
104.00	Back clamps of 75x8mm M.S.flat for holding the channel.(SAIL Brand)	280	Nos	139.00	38,920.00
105.00	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	120	kgs	133.00	15,960.00
106.00	11 KV, 3 Pole 400amp, Air Break G.O.S tilting type, three insulator per phase, complete with all fittings conforming to IS:9920 & IS: 9921 (Porcelain/Polymer)	3	Sets	18,839.00	56,517.00
107.00	11 KV, 3 Pole, 400 amp. D.O.F Unit complete with all accessories conforming to IS: 9385 (Porcelain/Polymer)	3	Sets	12,058.00	36,174.00

108.00	9 KV, 5KA single pole unit metal oxide gapless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system confirming to IS: 3070 (part-3) Raychem RPG make or equivalent.	9	Nos	1,055.00	9,495.00
109.00	Danger board 11000 Volts.	6	Nos	85.00	510.00
110.00	Safe earthing model T-19 short time current 50 KA rms for 1 sec (EHV) 50 mm diameter x 3 Mtrs. Electrode & two bags backfill chemical compound.	12	Nos	16,844.00	202,128.00
111.00	Guy assembly complete with 7/10 SWG G.I. stay wire,140x85 mm H.T.guy insulator, 18mm dia stay rod 1.8 mtrs. Long with bow thimble, turn buckle and 300x300x6mm anchor plate.	3	Nos	1,930.00	5,790.00
112.00	Red oxide metal primer (NEROLAC or equivalent).@2ltrs/pole	12	Ltrs	130.00	1,560.00
113.00	Aluminium paint (NEROLAC or equivalent).2 ltrs/pole	12	Ltrs	247.00	2,964.00
114.00	G.I barbed wire for anti climbing device @ 2 kg./pole	12	Kgs	63.00	756.00
115.00	11 KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II 3X 35 Sqmm. Make Polycab.	120	Mtrs	1,001.00	120,120.00
116.00	Heat shrinkable Outdoor type end termination kit for 11 KV (E) 3 Core XLPE)(Raychem make or equivalent) for 3x35 Sqmm	6	Sets	12,364.00	74,184.00
117.00	1.1 KV grade PVC Insulatd Heavy Duty Power Cable for working voltage upto 660/1100 volts CONF To IS: 7098 (Part-1) with latest amendments ALUMINIUM Conductors.Make Polycab.				-
	3.5 core x 95 Sq.mm	280	Mtrs	919.00	257,320.00
118.00	LT 1.1KV outdoor End Termination Kit for PVC/ XLPE cables 3 &1/2 core for 50 sq.mm(DENSION)(from transformer to panel and panel to site) 3.5x95 sqmm	16	Nos	6,446.00	103,136.00
V A	**Cost of Materials**				**1,587,206.80**

119.00	Fencing for 25 KVA parapet mounted distribution sub-station of size 3.5x4 mtrs.constructed with 50x50x5mm M.S angle vertical props, 35x35x6mm M.S angle supports(double run), M.S wire mesh, 50x6mm M.S flat iron for clamping wire mesh complete with gate with locking arrangement, site development, concreting of props in 1:2:4 cc i/c soling & flooring works in 1:4:8 cc as per Layout No. 3/F/E&PD/400-750 KVA.	3	Job	34,689.00	104,067.00
120.00	Concreting of 11Mtrs Lattice Structure / Swaged STP in 1:4:8 cc in 0.9x0.9x2.05mtrs cement plaster of parapet in 1:4 mix.	6	Job	3,267.00	19,602.00
121.00	Concreting of H.T guy assembly in 1:4:8 ccm in 0.40x0.40x1.05 Mtr.pit.	3	Job	876.00	2,628.00
122.00	Placement of L.T Distribution board on parapet of size 2x0.61x0.35x0.61 mtrs in 1:3:6 C.C mix including 12 mm thick cement plaster in 1:4 mix.	3	Job	1,827.00	5,481.00
V B	**Cost of Civil work**				**131,778.00**
A	**Total cost of Materials (I A+II A+III A+IVA+V A)**				**14,077,025.00**
B	**Total Transformer cost (-)**				**6,415,003.00**
C	**Total cost of materials after deduction transformer cost.**				**7,662,022.00**
D	**Total Cost of Civil work(I B+ II B+ III B+ IV B+ V B)**				**674,673.00**
E	**Total Cost of Materials & Civil work** (C+D)				**8,336,695.00**
F	GST @ 18%		E		1,500,605.10
G	Erection Charges @15%		A		2,111,553.75
H	Transportation Charges @ 10%		A		1,407,702.50
I	GST on Erection @18%		G		380,079.68
J	GST On Transportation @ 18%		H		253,386.45
K	Establishment Charges @ 9% ON E.		E		750,302.55
L	Contigency @ 0.5%		E		41,683.48
M	Tools and Plants @0.5%		E		41,683.48
N	**SUB- TOTAL**				**14,823,691.98**
O	Labour Cess @1%		N		148,236.92
P	**GRAND TOTAL**				**14,971,928.89**
		SAY	**RS**		**14,971,929.00**

(Rupees One Crore Forty Nine Lakhs Seventy One Thousand Nine Hundred & Twenty Nine) Only

Executive Engineer(Elect.)
Power Department
Rangpo Division

A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

Superintending Engineer
Power Department

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

Junior Engineer (Elect.)
Power Department
Rangpo Sub Division

GOVERNMENT OF SIKKIM
POWER DEPARTMENT
RANGPO

SECTION: C':- CONSTRUCTION OF 66KV SINGLE CIRCUIT TOWER FOR DIVERSION OF 11KV TRANSMISSION LINES OF RANGPO, GOSKHAN, CIPLA, ALKEM & IFFCO FEEDERS.

Sl. No.	Particulars	Qty	Unit	Rate (Rs.)	Amount (Rs.)
1	Fabrication, galvanizing & supply of various types of towers & tower parts, tower/leg extensions (complete) excluding step bolt, stubs and bolts & nuts but including hangers, D-Shackles, pack washers etc.-HTSteel for Normal Towers conforming to IS :802(Part-II)-1978 .				
	a) Large angle Tension towers:				
	i) Super structures	3.010	MT	107,380.00	323,213.80
	ii) +9 meters extension	1.350	MT	107,380.00	144,963.00
2	Supply of Hexagonal Bolts & Nuts for Tower and Stub including Step Bol, Spring Washers etc conforming to IS6639	0.128	MT	135,700.00	17,369.60
3	Number plate	2	nos	806.00	1,612.00
4	Danger plate	2	nos	806.00	1,612.00
5	Phase plate	1	Set	1,581.00	1,581.00
6	Anti-climbing device	1	Set	8,774.00	8,774.00
7	Earthing of tower :				
8	Safe earthing model T-39 short current 50rms application: 80 mm diameter x 3 Mtrs. Electrode (Copper Bonded) & two bags backfill chemical compound.	2	nos	21,270.00	42,540.00
9	ACSR DOG CONDUCTOR CONFORMING TO IS 398-2 (1996)	2.50	Kms	82,894.00	207,235.00
10	GI(7/10) SWG EARTH WIRE Conforming to IS: 7887:1975	0.50	Kms	68,334.00	34,167.00
11	Conductor accessories :				
	a) Mid span compression joints.	6	nos	706.00	4,236.00
	b) Repaired sleeves.	4	nos	706.00	2,824.00
	c) Vibration dampers.	8	nos	903.00	7,224.00
	d) Arching horns.	8	nos	413.00	3,304.00
12	Earth wire accessories :				
	a) Mid span compression joints.	2	nos	271.00	542.00
	b) Tension clamps assembly.	2	nos	991.00	1,982.00
	c) Flexible copper bonds for Earth wire	2	nos	1,086.00	2,172.00
13	Single tension insulator strings :				
	a) Number of discs.	26	nos	879.00	22,854.00
	b) Set of hardware.	8	nos	1,500.00	12,000.00
A	**Cost of Materials**				**840,205.40**
B	Erection Charges @ 15% ON A				126,030.81
C	Transportation Charges @ 10% ON A				84,020.54
D	GST @18% ON A				151,236.97
E	GST @ 18% on Erection (B)				22,685.55

F	GST @ 18% on Transportation (C)				15,123.70
G	Contingency Charges @0.5% ON A				4,201.03
H	Establishment Charges @09% ON A				75,618.49
I	Tools and Plants @0.5% on A				4,201.03
J	**Total Cost i/c charges**				**1,323,323.51**
K	Labour Cess @1% ON I & J				13,233.24
L	**Sub-Total**				**1,336,556.74**
M	**Grand Total**				**1,336,557.00**
N	**Total cost for 1 (one) tower is**				**1,336,557.00**
O	**Total cost for 4(Four) towers is**		4	1,336,557.00	**5,346,228.00**

(Rupees Fifty Three Lakhs Forty Six Thousand Two Hundred & Twenty Eight) Only

Executive Engineer(Elect.)
Power Department
Rangpo Division

Superintending Engineer
Power Department
Rangpo Circle

Junior Engineer (Elect.)
Power Department
Rangpo Sub Division

Rates Checked by Planning Cell
Power Department

J.E. Planning

A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

GOVERNMENT OF SIKKIM
POWER DEPARTMENT
RANGPO

SECTION-D':- ESTIMATE FOR CIVIL PORTION (TOWER FOUNDATION WORK)

Sl. No.	Particulars	Qty	Unit	Rate (Rs.)	Amount (Rs.)
1	Setting of stubs excluding cost of excavation concreting	1	Lumsum	17,050.00	17,050.00
2	Clearing of jungle including uprooting of rank vegetation, grass, bush, trees and sapling of girth up to 30 cm measured at a height of about 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared.	144.00	M^2	7.96	1,147.00
	Clearing grass and removal of the rubbish upto a distance of 50 m outside the periphery of the area cleared.	144.00	sqmt	4.03	580.32
3	EARTH WORK IN HILL CUTTING WORKS:Excavation in soil in hilly area by mechanical means including cutting and trimming of side slopes and disposing of excavated earth with all lifts and lead up to 1000 meters.	315.00	M^3	127.444	40,145.00
4	EARTH WORK IN FOUNDATION TRENCHES: Earth work in excavation by mechanical means (Hydraulic Excavator)/ manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil.	56.14	M^3	816.006	45,811.00
5	Providing and Laying Plum concrete in 1:2:4 c.c. (1cement, 2coarse sand, 4clean hard graded stone chips of 20 mm down nominal gauge) with 50% clean hard stone of sizes not exceeding 15cm including shuttering, compacting and curing complete, as per the direction of Engineer in Charge.	43.13	M^3	5,923.74	255,491.00
6	Providing and laying hand packed stone filling in building works with clean hard selected stones, all complete.	5.52	M^3	968.15	5,344.00
7	Providing and Laying in position cement concrete of specified grade 1:2:4 mix. (1 cement, 2 coarse sand, 4 stone aggregate of 20mm & down size) including compacting curing etc all complete.	2.65	M^3	5,923.74	15,698.00

8	Providing and Laying Cement Concrete in 1:3:6 mix (1 cement, 3 clean coarse sand, 6 clean hard graded stone chips of 20 mm down nominal gauge) including centering, shuttering, compacting and curing etc all complete.	14.20	M^3	5,221.45	74,145.00
9	Loading and Unloading of Cement or Steel by Manual Means and Stacking.	12.60	MT	228.47	2,879.00
10	Cost of Haulage Excluding Loading and Unloading for 20km distance	252.00	MT/ Km	10.69	2,693.00
11	Loading and Unloading of Stone Boulder/ Stone aggregates/Sand/Kanker/Moorum.	168.87	M^3	106.65	18,010.00
12	Cost of Haulage Excluding Loading and Unloading for 20km distance	3,377.41	MT/ Km	10.69	36,092.00
A	**Cost of Materials**				**515,085.32**
B	GST @18% on A				92,715.36
C	Labour Cess @1% on C				5,150.85
D	**Sub-Total**				**612,951.53**
E	Check Survey, Tower Spotting and Pit marking at site.	1	nos.	23,600.00	23,600.00
F	Preliminary alignment profile, tower spotting check survey, prepartion of tower schedule, pegging of tower centre and pit marking.	1	job	11,800.00	11,800.00
G	Forest, Private Land & Damaged Compensation	1	LS	Rs	600,000.00
H	For one no of Tower				**1,248,351.53**
I	**For 4 nos of Tower is Rs**	**4**	**nos.**	**1,248,351.53**	**4,993,406.00**
	Rupees (Forty Nine Lakh Ninety Three Thousand Four Hundred and Six) only.				

Divisional Engineer (Elect.)
Power Department
Rangpo Division

Junior Engineer (Elect.)
Power Department
Rangpo Sub Division

Superintending Engineer
Power Department
Rangpo Circle

GOVERNMENT OF SIKKIM
POWER DEPARTMENT
RANGPO

SECTION -E:- PROTECTIVE WORKS FOR TWO NUMBER OF TOWER.

Sl. No.	Particulars	Qty	Unit	Rate (Rs.)	Amount (Rs.)
1	Provison for Site clearance and throwing of spoils etc all complete.	45	sqmt	400.00	18,000.00
2	Excavation in hilly area in ordinary rock not requiring blasting by Manual means including cutting and trimming of slopes and disposal of cut material with all lift and lead upto 50 metres.	22.66	cum	549.55	12,453.00
3	Providing and Laying Plum concrete in 1:2:4 c.c. (1cement, 2coarse sand, 4clean hard graded stone chips of 20 mm down nominal gauge) with 50% clean hard stone of sizes not exceeding 15cm including shuttering, compacting and curing complete, as per the direction of Engineer in Charge.	89.23	cum	5923.74	528,575.32
4	Loading and Unloading of Stock Materials	22.42	MT	228.47	5,122.00
5	Cost of Haulage Excluding Loading and Unloading for 20km distance	252.00	MT/ Km	10.69	2,693.00
6	Loading and Unloading of Stone Boulder/ Stone aggregates/Sand/Kanker/Moorum.	168.87	M^3	106.65	18,010.00
A	**Cost of Civil work**				**584,853.32**
B	GST @18% on E				105,273.60
C	Labour Cess @1% on C				5,848.53
D	Grand Total				**695,975.45**
E	Total cost of 1 no of protective wall				**695975.00**
F	**Total cost of 2 nos of protective wall**				**1,391,950.00**
	Rupees (Thirteen Lakh Ninety One Thousand Nine Hundred and Fifty) only.				

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Rangpo Division

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POWER DEPARTMENT
RANGPO

SECTION F:- SHIFTING & DIVERSION OF EXISTING HIGH MAST LIGHTS AND STREET LED LIGHTS UNDER RANGPO CIRCLE IN PAKYONG DISTRICT.					
SL.NO	**PARTICULARS**	**QNTY**	**UNIT**	**RATE**	**AMOUNT**
I	**LED STREET LIGHTS**				
1.00	9 Mtrs. Long 410-SP-33 swaged type steel tubular pole with CI base plate & cap, double part (Nuts & bolts type) working load 245 Kgs	100	NOS	22,999.00	2,299,900.00
2.00	LED Street light 60 Watt	100	Nos	8,939.00	893,900.00
3.00	1.1 KV PVC / XLPE INSULATED HEAVY DUTY POWER CABLES FOR WORKING VOLTAGE UPTO & INCLUDING 660/1100 VOLTS ALUMINIUM CONDUCTORS ARMOURED				
	2 Core x 16 sqmm	6000	Mtrs	200.00	1,200,000.00
4.00	Isolators Four pole 063 Amps	26	nos	1,272.00	33,072.00
5.00	TIME SWITCH FOR STREET LIGHT CONFORMING TO IEC 60730-1/IEC 60730-2-7				-
	Digital time switch	24	Nos	3,487.00	83,688.00
6.00	Polycarbonate junction box with bus bar arrangement and 6 Amp MCB (Street lights)	100	Nos	887.00	88,700.00
7.00	2.5 sqmm. ISI marked Single core PVC insulated industrial Grade copper conductor flexible cable, 1100volt	3000	Mtrs	33.46	100,380.00
8.00	1.0 sqmm. ISI marked Single core PVC insulated industrial Grade copper conductor flexible cable, 1100volt.	5000	Mtrs	14.18	70,900.00
9.00	RIGID U PVC PIPE AS PER IS 4985-2000 WORKING PRESSURE 6 KGF/CM2				-
	50 mm dia	5000	Mtrs	124.00	620,000.00
10.00	SAFE EARTHING MODEL T-19 SHORT CURRENT 20KA RMS FOR 1 SEC(LV / MV) APPLICATION CONFORMING TO IS: 3043				-
	50 mm diameter x 2 mtrs. Electrode (Copper bonded) & One bag backfill chemical compound.	100	Nos	10,820.00	1,082,000.00
11.00	4 Pole power contractor MCX 01 16A	100	Nos	1,015.00	101,500.00
I a	**Cost of Materials**				**6,574,040.00**

12.00	Concreting of 9 Mtrs. Lattice Structure / Swaged Steel Tubular Pole in 1:4:8 cc in 0.9x0.9x1.75 mtrs Pit, Construction of parapet 0.61 x 0.61x0.153 mtrs. In 1:3:6 cc i/c 12mm cement plaster of parapet in 1:4 Mix.	100	Job	1,722.00	172,200.00
13.00	Excavation of 0.45x0.90x1.00mtrs. Cable trench in mix soil & re-filling with available excavated earth & providing cement concrete on the top of the trench.	5000	Mtrs	447.00	2,235,000.00
I b	**Cost of Civil work**				**2,407,200.00**
II	**HIGH MAST LIGHTS**				
14.00	12 mtrs long Mast Light with 6 way LED flood light including automatic control panel, complete set.	4	nos	483,408.00	1,933,632.00
15.00	LED Flood light of 200 watts	24	nos	32,745.00	785,880.00
16.00	SAFE EARTHING MODEL T-19 SHORT CURRENT 20KA RMS FOR 1 SEC(LV / MV) APPLICATION CONFORMING TO IS: 3043				-
	50 mm diameter x 2 mtrs. Electrode (Copper bonded) & One bag backfill chemical compound.	4	Nos	10,820.00	43,280.00
17.00	1.1KV PVC grade aluminium armoured aluminium conductor of size 3.5c x 25 sq.mm	720	Mtrs	342.00	246,240.00
18.00	RIGID U PVC PIPE AS PER IS 4985-2000 WORKING PRESSURE 6 KGF/CM2				
	50 mm dia	680	mtrs	124.00	84,320.00
19.00	Sub-Main Feeder Panel: Cubicle design totally enclo.& water proof outdoor type floor mounted suitable for use in 440V 200 A as a sub-main feeder pillar: Incomer: 1 No. 200 A, TPN MCCB Outgoing: 3 Nos. 63 A TPN MCCB & 4 Nos. 32 A MCCB for individual service connections & 8 Nos.16 A TPN for individual service connection.	4	nos	100,742.00	402,968.00
20.00	TIME SWITCH FOR STREET LIGHT CONFORMING TO IEC 60730-1/IEC 60730-2-7				-
	Digital time switch	4	Nos	3,487.00	13,948.00
II a	**Cost of Materials**				**3,510,268.00**

21.00	Excavation of 0.45x0.90x1.00mtrs. Cable trench in mix soil & re-filling with available excavated earth & providing cement concrete on the top of the trench.	680	Mtrs	447.00	303,960.00
II b	**Cost of Civil work**				**303,960.00**
A	**Cost of Materials (I a, II a).**				**10,084,308.00**
B	**Deduction amount of High Mast Light**				**1,933,632.00**
C	**Cost of materials after deduction amount of High Mast Light**				**8,150,676.00**
D	**Cost of Civil work (I b,II b)**				**2,711,160.00**
E	**Cost of Materials & Civil work**				**10,861,836.00**
F	GST @ 18%		E		1,955,130.48
G	Erection Charges @15%		A		1,512,646.20
H	Transportation Charges @ 10%		A		1,008,430.80
I	GST On Erection @18%		G		272,276.32
J	GST On Transportation @ 18%		H		181,517.54
K	Contingency @ 0.5%		E		54,309.18
L	Eastablishment charges @ 9% on C		E		977,565.24
M	Tools and Plans @0.5%		E		54,309.18
N	**Sub- Total**				**16,878,020.94**
O	Labour Cess @1%		N		168,780.21
P	**TOTAL**				**17,046,801.15**
Q	**GRAND TOTAL**	**SAY RS**			**17,046,801.00**

(Rupees One crore Seventy Lakhs Forty Six Thousand Eight Hundred and One) only

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SECTION G :- INSTALLATION,OF 11KV CT/PT BOUNDARY METERING UNIT WITH MDI & AMR FACILITY AT 19TH MILE BARDANG UNDER RANGPO CIRCLE.

SL.NO.	*PARTICULARS*	*QNTY*	*UNIT*	*RATE*	*AMOUNT*
1	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts without Arms	*2*	*Nos.*	26,483.00	52966.00
2	DLMS compliant 3 ph 4wire, 0.2s class CT/PT operated fully static and AMR compatible trivector Energy Meter for HT consumer, Panel metering and11KV feeder metering, CTR -/5 or -/1 A and PTR -/110 V	1	No.	46,800.00	46,800.00
3	GPRS Modem for AMR facility	1	No.	14,632.00	14,632.00
4	2.5 sq.mm 4 core PVC Copper control cable	30	mtr	224.00	6,720.00
5	Safe earthing model T-19 short time current 50 KA rms for 1 sec (EHV) application: 50mm diax2 mtr. Electrode &one bag back fill chemical compound.	3	Nos.	10,820.00	32,460.00
6	11 KV 3phase 4 wire ,CTPT oil immersed Combined Pole Mounted metering unit with different CTR ../5Aor 1A and PTR 11KV/110 V 0.2s Accuracy class(75/50/5)	1	Set	114,000.00	114,000.00
7	M.S.channel ISLC 75(75x40x6mm) X 2.8mtr. for supporting C.T/PT (SAIL Brand)	100	Kg.	61.63	6,163.00
8	Back clamp 75x8mm M.S flat for holding the MS Channel	8	Nos.	139.00	1,112.00
9	M.S. nuts & bolts 16mm dia x 40mm length.	5	Kg.	133.00	665.00
10	6.35 KV (Uo) / 11 KV(U) XPLE INSULATED ARMOURED CABLE WITH ALUMINIUM CONDUCTOR CONFORMING TO IS:7098 PART-2. 3C x 120 sqmm	30	Mtrs	1,830.00	54,900.00
11	HEAT SHRINKABLE OUTDOOR TYPE END TERMINATION KIT FOR 6.35 KV(Uo)/11 KV (U) 3 CORE XLPE (KIT NO.EOKT 3332-3382) RAYCHEM MAKE OR EQUIVALENT:3 C X 120 sqmm EPKT 3362	4	Nos.	15,102.00	60,408.00
12	Danger Board 11000Volts	2	Nos.	85.00	170.00
A	**Total cost of materials**				**390,996.00**

13	Fencing for CT/PT pole mounted distribution sub-station of size 2x3 mtrs.constructed with 50x50x5mm M.S angle vertical props, 35x35x6mm M.S angle supports(double run), M.S wire mesh, 50x6mm M.S flat iron for clamping wire mesh complete with gate with locking arrangement, site development, concreting of props in 1:2:4 cc i/c soling & flooring works in 1:4:8 cc as per layout No. 1/F/E&PD/10-63 KVA.	1	job	34,689.00	34,689.00
14	Concreting of 11Mtrs Lattice Structure / Swaged STP in 1:4:8 cc in 0.9x0.9x2.05mtrs cement plaster of parapet in 1:4 mix.	2	job	3,267.00	6,534.00
B	**Total cost of Civil Work**				**41,223.00**
C	**Total cost of materials and work**				**432,219.00**
D	Erection Charges @ 15% on A				58,649.40
E	Transportation charge @ 10% on A				39,099.60
F	GST @ 18% on C				77,799.42
H	GST on Erection @18%				10,556.89
I	GST on Transportation @18%				7,037.93
J	Contingency charges @0.5% on C				2,161.10
K	Establishment Charges @ 9% on C				38,899.71
L	**Sub Total**				**666,423.05**
M	Labour Cess @ 1% on J				6,664.23
N	**Grand Total**				**673,087.28**
P	**GRAND TOTAL**	**SAY RS**			**673,087.00**

Rupees Six Lakhs Seventy Three Thousand & Eighty Seven only

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SECTION H:- DISMANTELING OF EXISTING 11KV TRANSMISSION LINES, SUB-STATIONS ALONG WITH LT DISTRIBUTION LINES, HIGH MAST LIGHTS,STREET LIGHTS AND OTHER ASSOCIOATES ITEMS AT VARIOUS LOCATION FROM ATAL SETU BRIDGE AT RANGPO TILL 19TH MILE BORDANG ALONG NH-10.

SL.NO	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
I	**DRAWING OF 11KV TRANSMISSION LINES ON 11MTRS LATTICE STRUCTURE AT DIFFERENT LOCATION.**				
1.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts without Arms	305	Nos	26,483.00	8,077,315.00
2.00	M.S Channel ISLC75 (75x40x6mm) SAIL Brand conforming to IS: 808	3660	Kgs	61.63	225,554.82
3.00	Back Clamps 75 x 8 mm flat	1200	Nos	139.00	166,800.00
4.00	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	305	Kgs	133.00	40,565.00
II	**500KVA CONVENTIONAL TYPE DISTRIBUTION SUB-STATION.**				
5.00	L.T distribution switch board with copper bus bar, out-door type Kiosk, having electrolytic annealed copper bus bar 50x12mm for phase & 50x6mm for neutral circuits mounted on glazed porcelain or Bakelite base & fitted with voltmeter, ammeter, selector switches for ammeter & voltmeter, electronic KWH meter, indicating lamps cabin light, fabricated with 12 gauge M.S plain sheet, painted with anti- rust primer & two coats of Epoxy paint of shade 631 as per IS: 8623-1, front opening doors with gasket & locking arrangement complete with following incoming & outgoing controls:				
	LTDB 800 A INCOMING: 1 No. 800 A, 4P,50KA, MDO ACB. OUTGOING: 4 Nos. 200A TP MCCB , 50 KA, 1 No. 63 A TP MCCB, 35 KA all with built in Thermo Magnetic Release .	3	nos	448,400.00	1,345,200.00
6.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts.	6	nos	26,483.00	158,898.00

7.00	M.S.channel ISLC 75(75x40x6mm) X 2.8mtr. for supporting line, G.O.S & D.O fuse etc(SAIL Brand)	90	Kgs	63.31	5,697.90
8.00	Back clamps of 75x8mm M.S.flat for holding the channel.(SAIL Brand)	48	Kgs	139.00	6,672.00
9.00	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	48	Kgs	133.00	6,384.00
10.00	11 KV, 3 Pole 400amp, Air Break G.O.S tilting type, three insulator per phase, complete with all fittings conforming to IS:9920 & IS: 9921 (Porcelain/Polymer)	3	Sets	18,839.00	56,517.00
11.00	11 KV, 3 Pole, 400 amp. D.O.F Unit complete with all accessories conforming to IS: 9385 (Porcelain/Polymer)	3	Sets	12,058.00	36,174.00
12.00	9 KV, 5KA single pole unit metal oxide gapless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system confirming to IS: 3070 (part-3) Raychem RPG make or equivalent.	9	nos	1,055.00	9,495.00
13.00	Danger board 11000 Volts.	6	Nos	85.00	510.00
14.00	Guy assembly complete with 7/10 SWG G.I. stay wire,140x85 mm H.T.guy insulator, 18mm dia stay rod 1.8 mtrs. Long with bow thimble, turn buckle and 300x300x6mm anchor plate.	3	Nos	1,930.00	5,790.00
15.00	G.I barbed wire for anti climbing device @ 2 kg./pole	12	Kgs	63.00	756.00
16.00	11 KV(E) XLPE insulated armoured cable with Aluminium conductor of size 3 X 70Sqmm. Make Polycab.	130	Mtrs	1,354.00	176,020.00
17.00	1.1 KV grade PVC Insulatd Heavy Duty Power Cable for working voltage upto 660/1100 volts CONF To IS: 7098 (Part-1) with latest amendments ALUMINIUM Conductors.Make Polycab.				-
	3.5 core x 300 Sq.mm	180	Mtrs	697.00	125,460.00
III	**250KVA CONVENTIONAL TYPE DISTRIBUTION SUB-STATION.**				

18.00	L.T distribution switch board with copper bus bar, out-door type Kiosk, having electrolytic annealed copper bus bar 50x12mm for phase & 50x6mm for neutral circuits mounted on glazed porcelain or Bakelite base & fitted with voltmeter, ammeter, selector switches for ammeter & voltmeter, electronic KWH meter, indicating lamps cabin light, fabricated with 12 gauge M.S plain sheet, painted with anti- rust primer & two coats of Epoxy paint of shade 631 as per IS: 8623-1, front opening doors with gasket & locking arrangement complete with following incoming & outgoing controls:				-
	LTDB 400 A INCOMING: 1 No. 400 A, 4P,50KA, MCCB OUTGOING: 1 No. 200A TP MCCB, 50 KA ,2 Nos. 100A TP MCCB, 35 KA & 1 No. 63A TP MCCB, 35 KA all with built in Thermo Magnetic Release.	2	Nos	182,900.00	365,800.00
19.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 1/L/FT/E&PD/ 11 Mtrs.	4	Nos	26,483.00	105,932.00
20.00	M.S.channel ISLC 75(75x40x6mm) X 2.8mtr. for supporting line, G.O.S & D.O fuse etc(SAIL Brand)	360	Kgs	63.31	22,791.60
21.00	M.S.channel ISLC 100(100x50x6.4mm)X 0.46mtr.long for supporting main channel of T.(SAIL Brand)	230	Kgs	63.31	14,561.30
22.00	Back clamps of 75x8mm M.S.flat for holding the channel.(SAIL Brand)	330	Nos	139.00	45,870.00
23.00	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	100	kgs	133.00	13,300.00
24.00	11 KV, 3 Pole 400amp, Air Break G.O.S tilting type, three insulator per phase, complete with all fittings conforming to IS:9920 & IS: 9921 (Porcelain/Polymer)	2	Sets	18,839.00	37,678.00
25.00	11 KV, 3 Pole, 400 amp. D.O.F Unit complete with all accessories conforming to IS: 9385 (Porcelain/Polymer)	2	Sets	12,058.00	24,116.00

26.00	9 KV, 5KA single pole unit metal oxide gapless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system confirming to IS: 3070 (part-3) Raychem RPG make or equivalent.	6	Nos	1,055.00	6,330.00
27.00	Danger board 11000 Volts.	4	Nos	85.00	340.00
28.00	Guy assembly complete with 7/10 SWG G.I. stay wire,140x85 mm H.T.guy insulator, 18mm dia stay rod 1.8 mtrs. Long with bow thimble, turn buckle and 300x300x6mm anchor plate.	2	Nos	1,930.00	3,860.00
29.00	G.I barbed wire for anti climbing device @ 2 kg./pole	8	Kgs	63.00	504.00
30.00	11 KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II 3X 70 Sqmm. Make Polycab.	160	Mtrs	1,354.00	216,640.00
31.00	1.1 KV grade PVC Insulatd Heavy Duty Power Cable for working voltage upto 660/1100 volts CONF To IS: 7098 (Part-1) with latest amendments ALUMINIUM Conductors.Make Polycab.				-
	3.5 core x 185 Sq.mm	240	Mtrs	1,665.00	399,600.00
32.00	LT 1.1KV outdoor End Termination Kit for PVC/ XLPE cables 3 &1/2 core for 50 sq.mm(DENSION)(from transformer to panel and panel to site) 3.5x185sqmm	16	Nos	8,857.00	141,712.00
IV	**100KVA CONVENTIONAL TYPE DISTRIBUTION SUB-STATION.**				
33.00	L.T distribution switch board with copper bus bar, out-door type Kiosk, having electrolytic annealed copper bus bar 50x12mm for phase & 50x6mm for neutral circuits mounted on glazed porcelain or Bakelite base & fitted with voltmeter, ammeter, selector switches for ammeter & voltmeter, electronic KWH meter, indicating lamps cabin light, fabricated with 12 gauge M.S plain sheet, painted with anti- rust primer & two coats of Epoxy paint of shade 631 as per IS: 8623-1, front opening doors with gasket & locking arrangement complete with following incoming & outgoing controls:				
	LTDB 200 A INCOMING: 1 No. 200 A, 4P,50KA, MCCB				-

	OUTGOING: 3 Nos. 100A TP MCCB, 35 KA, & 1 No. 32A TP MCCB, 35 KA all with built in Thermo Magnetic Release.	3	Nos	109,740.00	329,220.00
34.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 1/L/FT/E&PD/ 11 Mtrs.	6	Nos	26,483.00	158,898.00
35.00	M.S.channel ISLC 75(75x40x6mm) X 2.8mtr. for supporting line, G.O.S & D.O fuse etc(SAIL Brand)	520	Kgs	63.31	32,921.20
36.00	M.S.channel ISLC 100(100x50x6.4mm)X 0.46mtr.long for supporting main channel of T.(SAIL Brand)	260	Kgs	63.31	16,460.60
37.00	Back clamps of 75x8mm M.S.flat for holding the channel.(SAIL Brand)	260	Nos	139.00	36,140.00
38.00	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	200	kgs	133.00	26,600.00
39.00	11 KV, 3 Pole 400amp, Air Break G.O.S tilting type, three insulator per phase, complete with all fittings conforming to IS:9920 & IS: 9921 (Porcelain/Polymer)	3	Sets	18,839.00	56,517.00
40.00	11 KV, 3 Pole, 400 amp. D.O.F Unit complete with all accessories conforming to IS: 9385 (Porcelain/Polymer)	3	Sets	12,058.00	36,174.00
41.00	9 KV, 5KA single pole unit metal oxide gapless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system confirming to IS: 3070 (part-3) Raychem RPG make or equivalent.	9	Nos	1,055.00	9,495.00
42.00	Danger board 11000 Volts.	6	Nos	85.00	510.00
43.00	Guy assembly complete with 7/10 SWG G.I. stay wire,140x85 mm H.T.guy insulator, 18mm dia stay rod 1.8 mtrs. Long with bow thimble, turn buckle and 300x300x6mm anchor plate.	3	Nos	1,930.00	5,790.00
44.00	G.I barbed wire for anti climbing device @ 2 kg./pole	12	Kgs	63.00	756.00
45.00	11 KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II 3X 70 Sqmm. Make Polycab.	120	Mtrs	1,354.00	162,480.00
V	**63KVA CONVENTIONAL TYPE DISTRIBUTION SUB-STATION.**				

46.00	L.T distribution switch board with copper bus bar, out-door type Kiosk, having electrolytic annealed copper bus bar 50x12mm for phase & 50x6mm for neutral circuits mounted on glazed porcelain or Bakelite base & fitted with voltmeter, ammeter, selector switches for ammeter & voltmeter, electronic KWH meter, indicating lamps cabin light, fabricated with 12 gauge M.S plain sheet, painted with anti- rust primer & two coats of Epoxy paint of shade 631 as per IS: 8623-1, front opening doors with gasket & locking arrangement complete with following incoming & outgoing controls:				-
	LTDB 100 A INCOMING: 1 No. 100 A, 4P,50KA, MCCB OUTGOING: 3 Nos. 63A TP MCCB, 35 KA, & 1 No. 32A TP MCCB, 35 KA all with built in Thermo Magnetic Release.	1	Nos	86,140.00	86,140.00
47.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 1/L/FT/E&PD/ 11 Mtrs.	2	Nos	26,483.00	52,966.00
48.00	M.S.channel ISLC 75(75x40x6mm) X 2.8mtr. for supporting line, G.O.S & D.O fuse etc(SAIL Brand)	240	Kgs	63.31	15,194.40
49.00	M.S.channel ISLC 100(100x50x6.4mm)X 0.46mtr.long for supporting main channel of T.(SAIL Brand)	120	Kgs	63.31	7,597.20
50.00	Back clamps of 75x8mm M.S.flat for holding the channel.(SAIL Brand)	130	Nos	139.00	18,070.00
51.00	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	60	kgs	133.00	7,980.00
52.00	11 KV, 3 Pole 400amp, Air Break G.O.S tilting type, three insulator per phase, complete with all fittings conforming to IS:9920 & IS: 9921 (Porcelain/Polymer)	1	Sets	18,839.00	18,839.00
53.00	11 KV, 3 Pole, 400 amp. D.O.F Unit complete with all accessories conforming to IS: 9385 (Porcelain/Polymer)	1	Sets	12,058.00	12,058.00
54.00	9 KV, 5KA single pole unit metal oxide gapless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system confirming to IS: 3070 (part-3) Raychem RPG make or equivalent.	3	Nos	1,055.00	3,165.00

55.00	Danger board 11000 Volts.	2	Nos	85.00	170.00
56.00	Guy assembly complete with 7/10 SWG G.I. stay wire,140x85 mm H.T.guy insulator, 18mm dia stay rod 1.8 mtrs. Long with bow thimble, turn buckle and 300x300x6mm anchor plate.	1	Nos	1,930.00	1,930.00
57.00	G.I barbed wire for anti climbing device @ 2 kg./pole	4	Kgs	63.00	252.00
58.00	11 KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II 3X 70 Sqmm. Make Polycab.	60	Mtrs	1,354.00	81,240.00
59.00	1.1 KV grade PVC Insulatd Heavy Duty Power Cable for working voltage upto 660/1100 volts CONF To IS: 7098 (Part-1) with latest amendments ALUMINIUM Conductors.Make Polycab.			6446.00	7,09,060.00 -
	3.5 core x 95 Sq.mm	110	Mtrs	8,857.00	974,270.00
VI	**25KVA CONVENTIONAL TYPE DISTRIBUTION SUB-STATION.**				
60.00	L.T distribution switch board with copper bus bar, out-door type Kiosk, having electrolytic annealed copper bus bar 50x12mm for phase & 50x6mm for neutral circuits mounted on glazed porcelain or Bakelite base & fitted with voltmeter, ammeter, selector switches for ammeter & voltmeter, electronic KWH meter, indicating lamps cabin light, fabricated with 12 gauge M.S plain sheet, painted with anti- rust primer & two coats of Epoxy paint of shade 631 as per IS: 8623-1, front opening doors with gasket & locking arrangement complete with following incoming & outgoing controls:				-
	LTDB 63 A INCOMING: 1 No. 63 A, 4P,50KA, MCCB OUTGOING: 2 Nos. 40A TP MCCB, 35 KA, & 1 No. 32A TP MCCB, 35 KA all with built in Thermo Magnetic Release.	3	Nos	67,896.00	203,688.00
61.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 1/L/FT/E&PD/ 11 Mtrs.	6	Nos	26,483.00	158,898.00
62.00	M.S.channel ISLC 75(75x40x6mm) X 2.8mtr. for supporting line, G.O.S & D.O fuse etc(SAIL Brand)	520	Kgs	63.31	32,921.20

63.00	M.S.channel ISLC 100(100x50x6.4mm)X 0.46mtr.long for supporting main channel of T.(SAIL Brand)	260	Kgs	63.31	16,460.60
64.00	Back clamps of 75x8mm M.S.flat for holding the channel.(SAIL Brand)	280	Nos	139.00	38,920.00
65.00	M.S.bolts & nuts 16mm dia x 40 mm length full thread.	120	kgs	133.00	15,960.00
66.00	11 KV, 3 Pole 400amp, Air Break G.O.S tilting type, three insulator per phase, complete with all fittings conforming to IS:9920 & IS: 9921 (Porcelain/Polymer)	3	Sets	18,839.00	56,517.00
67.00	11 KV, 3 Pole, 400 amp. D.O.F Unit complete with all accessories conforming to IS: 9385 (Porcelain/Polymer)	3	Sets	12,058.00	36,174.00
68.00	9 KV, 5KA single pole unit metal oxide gapless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system confirming to IS: 3070 (part-3) Raychem RPG make or equivalent.	9	Nos	1,055.00	9,495.00
69.00	Danger board 11000 Volts.	6	Nos	85.00	510.00
70.00	Guy assembly complete with 7/10 SWG G.I. stay wire,140x85 mm H.T.guy insulator, 18mm dia stay rod 1.8 mtrs. Long with bow thimble, turn buckle and 300x300x6mm anchor plate.	3	Nos	1,930.00	5,790.00
71.00	G.I barbed wire for anti climbing device @ 2 kg./pole	12	Kgs	63.00	756.00
72.00	11 KV(E) XLPE insulated armoured cable with Aluminium conductor confirming to IS: 7098 part II 3X 35 Sqmm. Make Polycab.	120	Mtrs	1,001.00	120,120.00
VII	**DRAWING OF LT DISTRIBUTION LINES ON 8.5MTRS LATTICE STRUCTURE AT DIFFERENT LOCATION.**				
73.00	8.5 Mtrs. Steel lattice structure of 35x35x6mm M.S Angle complete with nuts & bolts.	52	Nos	11,845.00	615,940.00
VIII	**11KV XLPE CABLE FOR DEDICATED TRANAMISSION LINES IN UNDERGROUND AND OVER HEAD SYSTEM AT DIFFERENT FEEDERS.**				
74.00	6.35 KV (Uo) / 11 KV(U) XPLE INSULATED ARMOURED CABLE WITH ALUMINIUM CONDUCTOR CONFORMING TO IS:7098 PART-2.				-
	3 x 185 sqmm	6800	mtrs	2,407.00	16,367,600.00
	3 x 150 sq.mm	6000	mtrs	2,207.00	13,242,000.00

	3 x 120 sqmm	16000	mtrs	1,830.00	29,280,000.00
	3 x 95 sqmm	8000	mtrs	1,605.00	12,840,000.00
	3 x 70 sq.mm	3000	Mtrs	1,354.00	4,062,000.00
IX	**L.T DISTRIBUTION LINES IN UNDERGROUND & OVER HEAD SYSTEN & FOR HOUSEHOLD SERVICE CONNECTRIONS.**				
	1.1 KV PVC / XLPE Insulated heavy duty power cables for working voltage upto & including 660/1100 volts aluminium conductors insulated armoured cable. Make Havells or equivalents.				
75.00	3.5 Core x 300 sqmm	1200	Mtrs	2,607.00	3,128,400.00
	3.5 Core x 185 sqmm	1500	Mtr	1,665.00	2,497,500.00
	3.5 core x 150 Sq.mm	200	Mtrs	1,342.00	268,400.00
	3.5 Core x 120 sqmm	240	Mtr	1,134.00	272,160.00
	3.5 Core x 95 sqmm	180	Mtr	919.00	165,420.00
	3.5 Core x 70 sq.mm	100	mtrs	697.00	69,700.00
	2 Core x 16 sqmm for household service connections.	4500	Mtr	200.00	900,000.00
	2 Core x 10 sqmm for household service connections.	3500	Mtr	177.00	619,500.00
X	**FEEDER PILLARS: OUTDOOR TYPE CUBICLE.**				
76.00	Main Feeder Panel: Cubicle design totally enclosed and water proof outdoor type floor mounted suitable for use in 440 V,400A main feeder pillar Incomer : 1 No 400 A, MCCB, 50KA Outgoing: 2 Nos. 200 A TPN MCCB & 4 Nos. 32 A TPN, MCB for individual service connections.	5	Nos	181,337.00	906,685.00
77.00	Sub-Main Feeder Panel: Cubicle design totally enclo.& water proof outdoor type floor mounted suitable for use in 440V 200 A as a sub-main feeder pillar: Incomer: 1 No. 200 A, TPN MCCB Outgoing: 3 Nos. 63 A TPN MCCB & 4 Nos. 32 A MCCB for individual service connections & 8 Nos.16 A TPN for individual service connection.	7	Nos	100,742.00	705,194.00
XI	**PROVIDING STREET LIGHT AT DIFFERENT LOCATION.**				
78.00	9 Mtrs. Long 410-SP-33 swaged type steel tubular pole with CI base plate & cap, double part (Nuts & bolts type) working load 245 Kgs	60	NOS	22,999.00	1,379,940.00
79.00	LED Street light 60 Watt	60	Nos	8,939.00	536,340.00

80.00	1.1 KV PVC / XLPE INSULATED HEAVY DUTY POWER CABLES FOR WORKING VOLTAGE UPTO & INCLUDING 660/1100 VOLTS ALUMINIUM CONDUCTORS ARMOURED				-
81.00	2 Core x 16 sqmm	2000	Mtrs	200.00	400,000.00
XII	**INSTALLATION OF 11KV THREE PHASE TEE-OFF SWITCH IN 11MTRS LATTICE STRUCTURES AT DIFFERENT LOCATION.**				
82.00	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 1/L/FT/E&PD/ 11 Mtrs.	12	nos	26,483.00	317,796.00
83.00	M.S Channel ISLC75 (75x40x6mm x 2.2 m long for DP	144	kg	63.31	9,116.78
84.00	Back clamps of 50x8mm M.S Flat for holding channel	96	nos	139.00	13,344.00
85.00	M.S Nuts & Bolts 16mm diax 40mm full thread	230	kg	133.00	30,590.00
86.00	11 KV, 3 Pole 400amp, Air Break G.O.S tilting type, three insulator per phase, complete with all fittings conforming to IS:9920 & IS: 9921 (Porcelain/Polymer)	6	set	18,839.00	113,034.00
XIII	**EXISTING 66KV TOWER**				
87	Fabrication, galvanizing & supply of various types of towers & tower parts, tower/leg extensions (complete) excluding step bolt, stubs and bolts & nuts but including hangers, D-Shackles, pack washers etc.-HTSteel for Normal Towers conforming to IS :802(Part-II)-1978 .				
	a) Large angle Tension towers:				
	i) Super structures	3.010	MT	107,380.00	323,213.80
	ii) +9 meters extension	1.350	MT	107,380.00	144,963.00
88	Supply of Hexagonal Bolts & Nuts for Tower and Stub including Step Bol, Spring Washers etc conforming to IS6639	0.128	MT	135,700.00	17,369.60
89	Number plate	2	nos	806.00	1,612.00
90	Danger plate	2	nos	806.00	1,612.00
91	Phase plate	1	Set	1,581.00	1,581.00
92	Anti-climbing device	1	Set	8,774.00	8,774.00
93	ACSR DOG CONDUCTOR CONFORMING TO IS 398-2 (1996)	4.00	Kms	82,894.00	331,576.00
94	GI(7/10) SWG EARTH WIRE Conforming to IS: 7887:1975	0.50	Kms	68,334.00	34,167.00
95	Single tension insulator strings :				
	a) Number of discs.	26	nos	879.00	22,854.00
	b) Set of hardware.	8	nos	1,500.00	12,000.00

XIV	BOUNDRY CT/PT UNITS				
6	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts without Arms	2	Nos.	26,483.00	52966.00
97	11 KV 3phase 4 wire ,CTPT oil immersed Combined Pole Mounted metering unit with different CTR ../5Aor 1A and PTR 11KV/110 V 0.2s Accuracy class(75/50/5)	1	Set	114,000.00	114,000.00
98	M.S.channel ISLC 75(75x40x6mm) X 2.8mtr. for supporting C.T/PT (SAIL Brand)	100	Kg.	61.63	6,163.00
99	Back clamp 75x8mm M.S flat for holding the MS Channel	8	Nos.	139.00	1,112.00
100	M.S. nuts & bolts 16mm dia x 40mm length.	5	Kg.	133.00	665.00
101	6.35 KV (Uo) / 11 KV(U) XPLE INSULATED ARMOURED CABLE WITH ALUMINIUM CONDUCTOR CONFORMING TO IS:7098 PART-2. 3C x 120 sqmm	30	Mtrs	1,830.00	54,900.00
A	**Total Cost of Materials**			**RS**	~~104,561,075.00~~
B	Dismanteling Charges of Existing infrastractures @15% on A			**RS**	1042958864.6 ~~15,684,161.00~~ 15644379
C	Transportation Charges @ 10% on A			**Rs**	~~10,456,107.50~~ 10429586.4
D	GST @18% ON (B & C)			**RS**	~~4,705,248.00~~ 4693313.9
E	Store and Handling @ 1% on A			**Rs**	~~1,045,610.75~~ 1042958.65
F	Tools and Plants @ 0.5% on A				~~522,805.38~~ 521,479.32
G	**Sub Total**			3,23,31,718.03	**32,413,932.63**
H	Salvage items @ 5% on A			~~5,24,47,93~~ **RS**	~~5,228,054.00~~ 5214,793.23
I	**Total Cost (G-H)**			2,71,16,924.80	**27,185,879.00**
J	Labour Cess @ 1% on I			2,71,169.25 **RS**	~~271,858.79~~
K	**Grand Total (I+J)** Three			2,73,88,094.05 **RS**	~~27,457,738.00~~

(Rupees Two Crore Seventy ~~Four~~ Lakhs ~~Fifty Seven~~ Thousand ~~Seven Hundred & Thirty Eight~~) Eight Eight and Ninety Four **only**

Executive Engineer(Elect.)
Power Department
Rangpo Division

Sadhan.
Junior Engineer (Elect.)
Power Department
Rangpo Sub Division

Superintending Engineer
Power Department
Rangpo Circle

Rates Checked by Planning Cell
Power Department

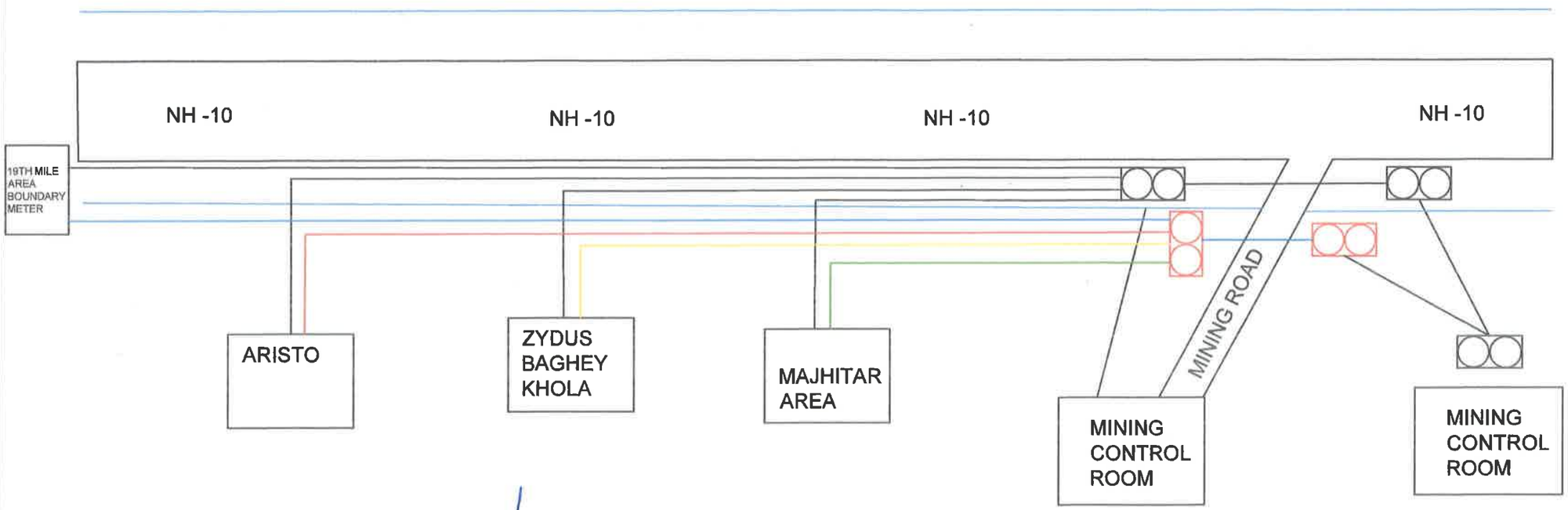
(T.E. Plan)
A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

SHIFTING AND DIVERSION OF 11KV HT LINES SIB-STATIONS ALONG WITH THE LT DISTRIBUTIONS LINES AT VARIOUS LOCATION FROM ATAL SETHU BRIDGE AT RANGPO TILL 19TH MILE BARDANG ALONG THE NH-10 HIGHWAYUNDER RANGPO CIRCLE PAKYONG DISTRICT.

SECTION A- SHIFTING & DIVERSION OF EXISTING 11KV HT LINES AND OTHER ASSOCIATED MATERIALS UNDER RANGPO CIRCLE IN PAKYONG DISTRICT.

	EXISTING HEAVY DUTY, IPDS ARISTO AND ZYDUS BAGHEYKHOLA FEEDER
	PROPOSED ROUTE FOR HEAVY DUTY FEEDER
	PROPOSED ROUTE FOR ARISTO FEEDER
	PROPOSED ROUTE FOR ZYDUS BAGHEYKHOLA FEEDER
	PROPOSED ROUTE FOR IPDS FEEDER
	EXISTING DOUBLE POLE
	PROPOSED DOUBLE POLE



Executive Engineer

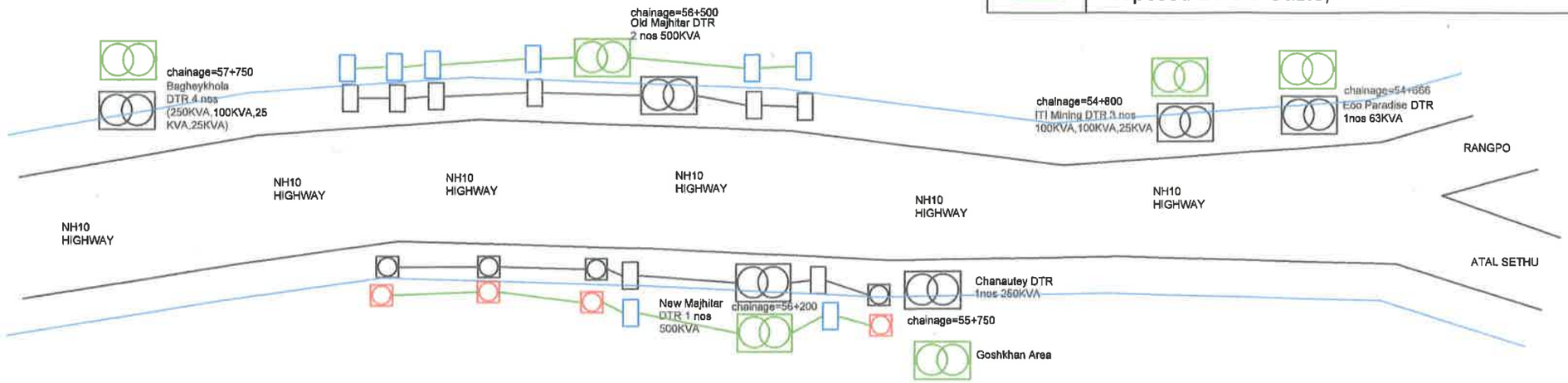
Junior Engineer

SHIFTING AND DIVERSION OF 11KV HT LINES SIB-STATIONS ALONG WITH THE LT DISTRIBUTIONS LINES AT VARIOUS LOCATION FROM ATAL SETHU BRIDGE AT RANGPO TILL 19TH MILE BARDANG ALONG THE NH-10 HIGHWAYUNDER RANGPO CIRCLE PAKYONG DISTRICT.

SECTION A-SHIFTING & DIVERSION OF EXISTING LT DISTRIBUTIONS LINES AND OTHER ASSOCIATED MATERIALS UNDER RANGPO CIRCLE IN PAKYONG DISTRICT.

SECTION B- SHIFTING & DIVERSIOM OF EXISTING DISTRIBUTION SUB STATIONS UNDER RANGPO CIRCLE IN PAKYONG DISTRICT.

	Existing location of DTS.
	Proposed location of DTS for shifting.
	Existing High Mast Light.
	Proposed location for High Mast Light,
	Existing Feeder pillers.
	Proposed location for feeder Pillars
	Existing LT UG Cable.
	Proposed LT UG Cable,



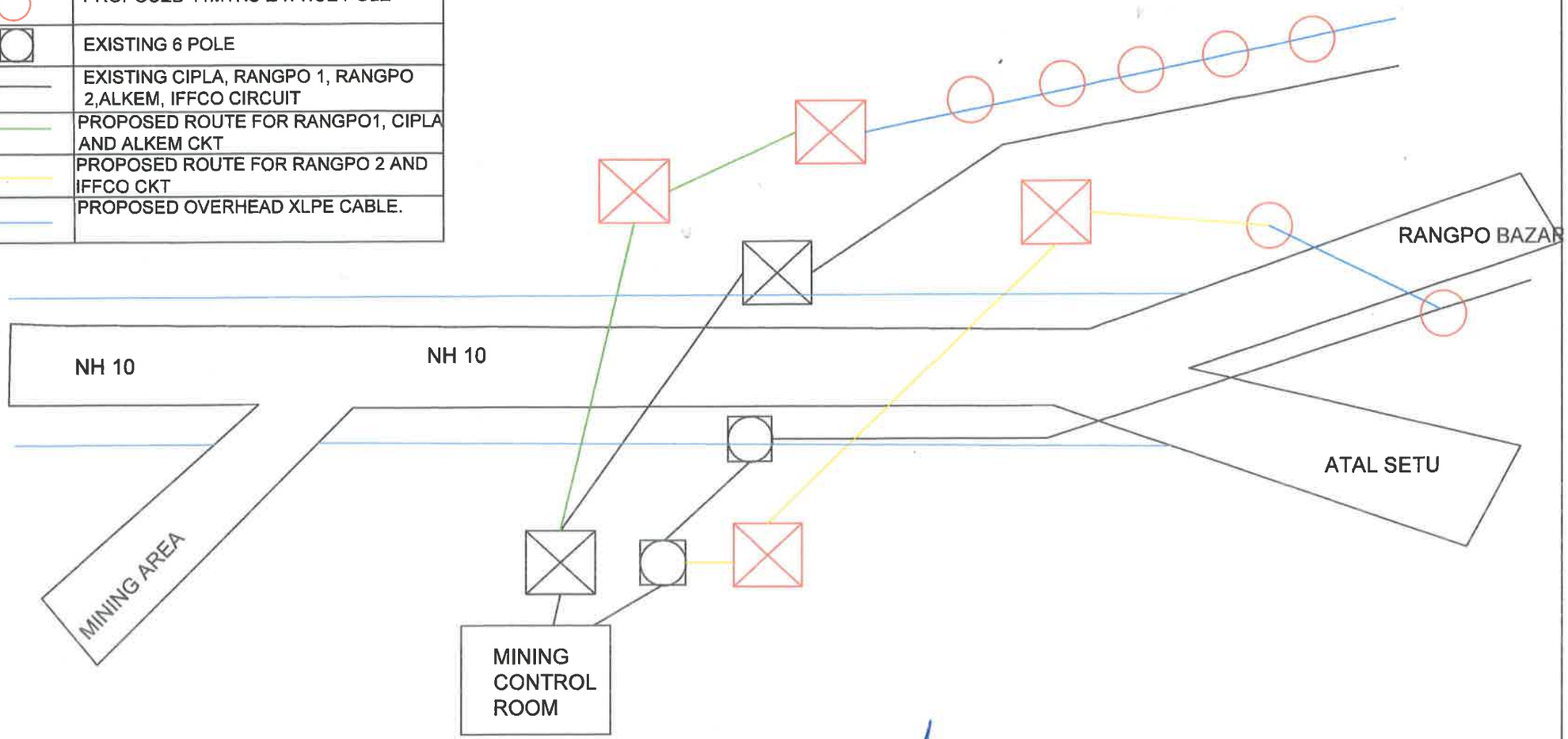
Executive Engineer

Junior Engineer

SHIFTING AND DIVERSION OF 11KV HT LINES SIB-STATIONS ALONG WITH THE LT DISTRIBUTIONS LINES AT VARIOUS LOCATION FROM ATAL SETHU BRIDGE AT RANGPO TILL 19TH MILE BARDANG ALONG THE NH-10 HIGHWAYUNDER RANGPO CIRCLE PAKYONG DISTRICT.

☒	EXISTING 66 KV TOWER
☒	PROPOSED 66 KV TOWER (PROPOSED IN SECTION C)
○	PROPOSED 11MTRS LATTICE POLE
○	EXISTING 6 POLE
———	EXISTING CIPLA, RANGPO 1, RANGPO 2,ALKEM, IFFCO CIRCUIT
———	PROPOSED ROUTE FOR RANGPO1, CIPLA AND ALKEM CKT
———	PROPOSED ROUTE FOR RANGPO 2 AND IFFCO CKT
———	PROPOSED OVERHEAD XLPE CABLE.

SECTION A- SHIFTING & DIVERSION OF EXISTING 11KV HT LINES AND OTHER ASSOCIATED MATERIALS UNDER RANGPO CIRCLE IN PAKYONG DISTRICT.



SE(RPO)

Executive Engineer

Junior Engineer

POWER DEPARTMENT
GOVERNMENT OF SIKKIM
TOPAKHANI

REPORT

NAME OF WORK: **SHIFTING OF POWER INFRASTRUCTURE FALLING UNDER PRoW OF NH-10 FROM 19TH MILE TO RADANG BRIDGE UNDER SINGTAM DIVISION, GANGTOK DISTRICT.**

ESTIMATED COST: **Rs. 11, 38,54,164.00 (Rupees Eleven crore Thirty-Eight Lakh Fifty-Four Thousand One Hundred Sixty-Four) only**

In Pursuant to letter no. NHIDCL/PMU-Ranipool/NH-10/2023-24/551, dated 03.12.2024, a joint survey was conducted by officials from the Power Department and representatives of DPR consultant of NHIDCLfor shifting of electrical utilities fallingunder proposed ROW of NH-10 widening from 19th Mile to Radang Bridge under Singtam Division. The details of the electrical infrastructures that needs to be shifted is mentioned below.

SECTION-ASHIFTING OF 11KV TRANSMISSION LINE

The source of the power distribution system is catered by the 11kV network, which is being severely affected in different stretches i.e. Golitar to Hospital Bridge and Sangkhola to Radang Bridge. The existing network is drawn on underground XLPE, ABC and overhead (DOG and Weasel) conductor. The stretch between Golitar to Hospital Bridge has multiple circuits such as Temi Feeder, Hospital feeder, Golitar-Sawney Feeder. The entire length of the circuit passes through populated households with active commercial establishment. Therefore, the lines to be shifted has been proposed in covered and XLPE cable. The covered conductor shall be drawn on 11mtr and 9mtr lattice structures and XLPE cables will be laid underground.

SECTION-BSHIFTING OF 3 X 500KVA DISTRIBUTION SUB-STATION

3 nos of Distribution Sub-station of 500kVA, 11/.430KVA capacity at Golitar, below Hospital Dara and Shantinagar will be affected due to the widening works. So, excluding the transformer, all the sub-station accessories which includes lattice poles, LA, GOS, DOF, Earthing, LTDB, Fencing, etc, have been proposed.

SECTION-CSHIFTING OF 1 X 100KVA DISTRIBUTION SUB-STATION

1 nos of Distribution Sub-station of 100kVA, 11/.430KVA capacity at Sangkhola will be affected due to the widening works. So, excluding the transformer, all the sub-station accessories which includes lattice poles, LA, GOS, DOF, Earthing, LTDB, Fencing, etc, have been proposed.

SECTION-DSHIFTING OF 2 X 63KVA DISTRIBUTION SUB-STATION

2nos of Distribution Sub-station of 63kVA, 11/.430KVA capacity at Andheri and Sawmill area will be affected due to the widening works. So, excluding the transformer, all the sub-station accessories which includes lattice poles, LA, GOS, DOF, Earthing, LTDB, Fencing, etc, have been proposed.

SECTION-ESHIFTING OF LT LINES

The proposed widening works is also significantly affecting the LT lines of all the areas such as Golitar, Bhanu Park, Shantinagar, Andheri, Lower Chisopani, Sangkhola, Kerabari, 14th Mile, Gaidara, Lower Martam, 32 No., Hitty and Sawmill along the NH-10 stretch. The existing lines are UG XLPE, ABC and overhead bare conductors. Therefore, same has been proposed in the estimate where, overhead ANT conductor shall be drawn on 8.5mtr lattice structure, ABC on 8.5 mtrs tubular poles and XLPE cables will be laid underground.

SECTION-FSHIFTING OF STREETLIGHTS AND SERVICE CONNECTION

The areas affected which includes Singtam town and surrounding areas have in recent years undergone major remodeling works which includes underground LT network, service connections and quantitative amount of illumination works. Even the stretch of 32No. Bazar has streetlights. All these luminaries including a high mast light at Singtam traffic point and UG service connections of Golitar, Bhanu Park, Shantinagar is being affected. Therefore, the estimate has proposed new 90-watt streetlights on 8.5mtrs tubular poles and a 12mtr 6way high mast light and UG service connections.
The estimate proposed ensures all the power infrastructures are restored efficiently and minimizepower disruptions.

RATES: The rates adopted are based on approved SOR 2020.

Superintending Engineer (Singtam),
Power Department,
Topakhani

Executive Engineer (Singtam)
Power Department,
Topakhani

POWER DEPARTMENT
GOVERNMENT OF SIKKIM
TOPAKHANI

NAME OF WORK: SHIFTING OF POWER INFRASTRUCTURES FALLING UNDER PRoW OF NH-10 FROM 19TH MILE TO RADANG BRIDGE UNDER SINGTAM DIVISION, GANGTOK DISTRICT.

ABSTRACT

SECTION	PARTICULARS	AMOUNT
A	SHIFTING OF 11KV TRANSMISSION LINE	₹3,02,98,015.00
B	SHIFTING OF 3 X 500KVA DISTRIBUTION SUB-STATION	₹38,95,944.00
C	SHIFTING OF 1 X 100KVA DISTRIBUTION SUB-STATION	₹6,47,105.00
D	SHIFTING OF 2 X 63KVA DISTRIBUTION SUB-STATION	₹11,35,827.00
E	SHIFTING OF LT LINES	₹4,04,01,985.00
F	SHIFTING OF LT ABC LINE , STREETLIGHTS AND SERVICE CONNECTION CABLES OF SINGTAM AND SURROUNDING AREAS.	₹2,66,96,431.00
G	TOTAL DISMANTLING CHARGES OF POWER INFRASTRUCTURES FALLING UNDER PRoW OF NH-10 FROM 19TH MILE TO RADANG BRIDGE.	₹1,07,78,857.00
	Total	**₹11,38,54,164.00**
	Say	**₹11,38,54,164.00**

(Rupees Eleven Crore Thirty Eight Lakh Fifty Four Thousand One Hundred and Sixty Four) Only.

Superintending Engineer (Singtam.),
Power Department,
Singtam.

Executive Engineer (Singtam),
Power Department
Singtam.

POWER DEPARTMENT
GOVERNMENT OF SIKKIM
TOPAKHANI

SECTION'A': SHIFTING OF 11KV TRANSMISSION LINE

PART-I: SHIFTING OF OVERHEAD 11KV TRANSMISSION LINE USING COVERED CONDUCTOR BETWEEN ANDHERI TO RADANG BRIDGE, CHUBA.

SL. NO.	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
1	9 mtr. long steel latticed structure of 35x35x6 mm complete with nuts & bolts.	19	Nos.	13,390.00	2,54,410.00
2	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 1/L/FT/E&PD/ 11 Mtrs.	36	Nos.	26,483.00	9,53,388.00
3	99sq mm 11 KV COVERED CONDUCTOR	4500	Mtrs.	917.00	41,26,500.00
4	50sq mm 11 KV COVERED CONDUCTOR	2900	Mtrs.	596.00	17,28,400.00
5	11 KV COVERED CONDUCTOR ACCESSORIES				
i.	11 KV Class Polymeric Pin Insulator for covered conductor with GI Pin, Nuts & Bolts	60	No	2,124.00	1,27,440.00
iii.	11 KV Polymeric Tension Insulator, 70 KN with Clamps, Nuts & Bolts	210	No	2,124.00	4,46,040.00
iv.	11 KV Class Polymeric Tension Hardware with Clamps, Nuts & Bolts	210	No	2,596.00	5,45,160.00
v.	Insulating Piercing Connector	55	No	2,478.00	1,36,290.00
vi.	NDS-Silicon / Surge Arrestor	55	No	2,950.00	1,62,250.00
6	No.10 SWG G.I wire for continuous earth wire.	938	Kgs.	63.00	59,094.00
7	11 KV, 3 Pole,400 Amps, Air Break G.O S tilting type, three insulators per phase, complete with all fittings.	2	Set	18,839.00	37,678.00
8	11 KV, 3 Pole, 400 Amps, Dropout fuse unit complete with all accessories.	2	Set	12,058.00	24,116.00
9	M.S. Channel 75x40mmx6mmx2.2 mtr long for suppoting D.O.F and G.O.S etc.	72	Kgs	63.31	4,558.32
10	Guy Assembly complete with 7/10 SWG Stay Wire, 140x85 mm H.T Guy Insulator, 18mm diameter Stay Rod 1.8 mtrs Long with bow thimble, turn buckle & 300x300x6mm anchor plate	23	Set	1,930.00	44,390.00
11	Safe Earthing model T-19 short time current 20 KA rms for 1 sec (LV/MV) application with 50 mm dia x 3 mtrs electrode & two backfill chemical compound	8	Nos.	16,844.00	1,34,752.00
12	Pole top channel 75x40x6mmx0.3 mtr. long for S.P structure	37	Kgs	63.31	2,342.47
13	Bottom Channel 75x40mmx6mmx1.8 mtr long for SP	312	Kgs	63.31	19,752.72
14	Back clamp of 75x6mm M.S. flat for holding the M.S. channel	55	Kgs	139.00	7,645.00
15	M.S Bolts with Nut 16 dia x40 mm conforming to IS: 1364	25	Kgs	133.00	3,325.00
16	Painting of structure with red oxide paint @ 2ltr/pole.	110	Ltrs	130.00	14,300.00
17	Painting of structure with Al. paint @ 1.5 ltr/pole.	82.5	Ltrs	247.00	20,377.50
18	11 KV danger board of size 8"x6".	55	Nos.	85.00	4,675.00
19	Barbed wire for anti-climbing device @2 Kg/pole.	110	Kgs	63.00	6,930.00
A.	**Cost of Materials**				**88,63,814.01**
20	Concreting of 11Mtrs Lattice Structure / Swaged STP in 1:4:8 cc in 0.9x0.9x2.05mtrs cement plaster of parapet in 1:4 mix.	36	Job	3,267.00	1,17,612.00
22	Concreting of 9 Mtrs. Lattice Structure / Swaged Steel Tubular Pole in 1:4:8 cc in 0.9x0.9x1.75 mtrs Pit, Construction of parapet 0.61 x 0.61x0.153 mtrs. In 1:3:6 cc i/c 12mm cement plaster of parapet in 1:4 Mix.	19	Job	1,722.00	32,718.00

23	Concreting of H.T Guy Assembly in 1:4:8 cc in 0.40x0.40x1.05mtrs Pit.	23	Job	876.00	20,148.00
B	**TOTAL OF CIVIL COMPONENT**				**1,70,478.00**
C	SUB TOTAL (A+B)			₹	**90,34,292.01**
D	Erection charge@ 15 % of A.			₹	13,29,572.10
E	Transportation @ 10 % of A.			₹	8,86,381.40
F	GST @ 18% on C,D and E			₹	20,25,044.19
G	Contingency @ 0.5 % of C.			₹	45,171.46
H	Tools and Plants @ 0.5% of C			₹	45,171.46
I	Establishment charge @ 9 % of C.			₹	8,13,086.28
J	SUB TOTAL			₹	**1,41,78,718.91**
K	Labour Cess @ 1% of 'J'			₹	1,41,787.19
L	**TOTAL**			₹	**1,43,20,506.09**
	Say			₹	**1,43,20,506.00**

(Rupees One Crore Forty Three Lakhs Twenty Thousand Five Hundred and Six) Only.

Executive Engineer (Singtam)
Power Department,
Topakhani.

Junior Engineer (Elect)
Power Department,
Topakhani.

Superintending Engineer (Singtam)
Power Department,
Topakhani.

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Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
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Govt. of Sikkim, Gangtok

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TOPAKHANI

PART-II: SHIFTING OF 11KV TRANSMISSION LINE USING XLPE CABLE BETWEEN GOLITAR TO SHANTINAGAR, SINGTAM

S. No	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
1	3 x 120 sqmm, 11/11 KV (U) XPLE INSULATED ARMOURED CABLE WITH ALUMINIUM CONDUCTOR CONFORMING TO IS: 7098/11/85.	2000.00	Mtrs	1,945.00	38,90,000.00
2	3 x 185 sqmm, 11/11 KV (U) XPLE INSULATED ARMOURED CABLE WITH ALUMINIUM CONDUCTOR CONFORMING TO IS: 7098/11/85.	450.00	Mtrs	2,559.00	11,51,550.00
3	110 mm dia, RIGID U PVC PIPE AS PER IS 4985-2000 WORKING PRESSURE 6 KGF/CM2	2400.00	Mtrs	587.00	14,08,800.00
4	4"dia, FLEXIBLE SUPER PVC GREEN PIPE 3.5KG/CM2 CONFORMING TO IS: 4985-2000.	50.00	Mtrs	314.00	15,700.00
5	Safe earthing model T-39 short time current 50 KA rms for 1	2.00	Nos	21,270.00	42,540.00
6	3 C X 185 sqmm Heat Shrinkable Kit,EPKT 3362	2.00	Kit	15,102.00	30,204.00
7	3 X 120 SQMM, Heat Shrinkable outdoor type termination kits for 6.36KV (U) 3core XLPE, Make Raychem/ Denson or equivelent.	4.00	Kit	15,102.00	60,408.00
8	3x120sqmm heat shrinkable straight through kit	2.00	kit	29,204.00	58,408.00
A	**COST OF MATERIALS**				**66,57,610.00**
9	Excavation of 0.45x0.90x1.00mtrs. Cable trench in mix soil & re-filling with available excavated earth & providing cement concrete on the top of the trench.	2400.00	Mtrs	447.00	10,72,800.00
B	**COST OF CIVIL WORK**				**10,72,800.00**

C	**SUB-TOTAL (A+B)**	₹	**77,30,410.00**
D	Erection charge @ 15 % of A.	₹	9,98,641.50
E	Transportation @ 10 % of A.	₹	6,65,761.00
F	GST @ 18% on C,D&E	₹	16,91,066.25
G	Contingency @ 0.5 % of C.	₹	38,652.05
H	Tools and Plants @ 0.5% of C	₹	38,652.05
I	Establishment charge @ 9 % of C.	₹	6,95,736.90
J	SUB TOTAL	₹	1,18,58,919.75
K	Labour Cess @ 1% of 'J'	₹	1,18,589.20
L	Communication Vehicle (LS)	₹	40,00,000.00
M	**GRAND TOTAL**	₹	**1,59,77,508.95**
	SAY	₹	**₹1,59,77,509.00**

(Rupees One Crore Fifty Nine Lakhs Seventy Seven Thousand Five Hundred and Nine) Only.

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Superintending Engineer (Singtam)
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SECTION 'B': SHIFTING OF 3 X 500 KVA, 11/.433KV DISTRIBUTION SUB-STATION CATERING GOLITAR, HOSPITAL and SHANTINAGAR.

S. No	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
1	9 Mtrs. Steel lattice structure of 35x35x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 2/L/FT/E&PD/ 9 Mtrs.	2.00	Nos	13390.00	26,780.00
2	M.S Channel ISLC75 (75x40x6mm) SAIL Brand conforming to IS: 808	200.00	Kg	63.31	12,662.00
3	Back clamps for holding ms channel.	12.00	Nos	139.00	1,668.00
4	M.S. nuts & bolts 16mm dia x 40mm length.	30.00	kgs	133.00	3,990.00
5	11 KV, 3 Pole,400 Amps, Air Break G.O S tilting type, three insulators per phase, complete with all fittings.	1.00	Set	18,839.00	18,839.00
6	11 KV, 3 Pole, 400 Amps, Dropout fuse unit complete with all accessories.	1.00	Set	12,058.00	12,058.00
7	9 KV, 10 KA Single pole unit Metal Oxide Gapless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system confirming to IS:3070 (Part III) Raychem RPG make or equivalent.	3.00	No	2,432.00	7,296.00
8	Guy assembly complete with 7/10 SWG stay wire, 110*75 mm LT guy insulator, 16 mm dia stay rod, 1.8 mtrs. Long with bow thimble, tum buckle and 150*150*6mm Anchor plate.	2.00	No.	1,047.00	2,094.00
9	50 mm diameter x 2 mtrs. Electrode Copper bonded) & Two bag backfill Chemical compound.	3.00	Set	10,820.00	32,460.00
10	Danger Board 11000 Volts	4.00	No.	85.00	340.00
11	Red oxide paint.	3.00	Ltr	130.00	390.00
12	Aluminium paint	2.00	Ltr	247.00	494.00
13	Barbed wire	4.00	Kgs	63.00	252.00
14	500 KVA, 11/.43KV, Copper wound 50Hz, Dyn-11, Distribution Transformer.	0.00	No	10,92,773.00	-
15	LT distribution switch board, out-door Type Kiosk, 800 Amp, having electrolytic annealed copper bus bar 50x12mm for hase & 50x6mm for neutral circuits mounted on glazed porcelain or bakelite base & fitted with voltmeter, ammeter, selector switches for ammeter & voltmeter, electronic KWH meter, indicating lamps cabin light, febricated with 12 gauge M.S plain sheet, painted with anti- rust primer & over coats of Epoxy paint of shade 631 as per IS: 5, front opening doors with gasket & locking arrangement complete With following incoming & outgoing controls: INCOMING:- No. 630 Amp, 15 Volt, FP, manually Draw Out type ,CB with in built Thermo Magnetic release & 6No+6Nc Auxiliary contacts.) outgoing:- 2 Nos. 200 Amp TP MCCB breaking capacity 35 KA with built in Thermo Magnetic Release, 2 Nos. 100 ,amp TP MCCB breaking capacity 35 KA With built in Thermo Magnetic Release.	1.00	No	3,48,100.00	3,48,100.00
16	3x35 sqmm Armoured XLPE Aluminium Cable.	60.00	Mtr	1,064.00	63,840.00
17	Heat Shrinkable End Termination Kit suitable for 3x 35 sq.mm. XLPE Armoured Cable	2.00	No.	12,364.00	24,728.00
A.	**Cost of Materials**				**₹ 5,55,991.00**

18	Concreting of 9 Mtrs. Lattice Structure / Swaged Steel Tubular Pole in 1:4:8 cc in 0.9x0.9x1.75 mtrs Pit, Construction of parapet 0.61 x 0.61x0.153 mtrs. In 1:3:6 cc i/c 12mm cement plaster of parapet in 1:4 Mix.	2.00	Job	1,722.00	3,444.00
19	Concreting of HT guy assembly in 1:4:8cc in 0.40*0.40*1.05 mtrs. Pit.	2.00	Job	876.00	1,752.00
20	Placement of 500 KVA Distribution transformer on parapet of size 1.2x1.2xlmtrs. In 1:3:6 cc Mix including 12 mm thick cement plaster in 1:4 Mix.	1.00	Job	8,566.00	8,566.00
21	Placement of L.T Distribution Board on parapet of size 2x0.61x0.35x0.61 mtrs. 1 1:3:6 cc Mix including 12mm thick Cement plaster in 1:4 Mix.	1.00	Job	1,827.00	1,827.00
22	Fencing for 500 KVA parapet mounted distribution substation of size 3x3 mtrs.constructed with 50x50x5mm M.S angle vertical props, 35x35x6mm M.S angle supports(double run), M.S wire mesh, .0x6mm M.S flat iron for clamping wire mesh complete with gate with locking Arrangement, site development, concreting of props in 1:2:4 cc i/c soling & flooring works in 1:4:8 cc as per layout.	1.00	Job	52,955.00	52,955.00
B	**Total of Civil Component**				**68,544.00**

C	**SUB TOTAL (A+B)**	₹	**6,24,535.00**
D	Erection charge @ 15 % of (A+Sl. No. 14).	₹	2,47,314.60
E	Transportation @ 10 % of (A+Sl no 14)	₹	1,64,876.40
F	GST @ 18% on C, D and E	₹	1,86,610.68
G	Contingency @ 0.5% of C	₹	3,122.68
H	Tools and Plants @0.5% of C	₹	3,122.68
I	Establishment Charges @9%	₹	56,208.15
J	**SUB TOTAL**	₹	**12,85,790.18**
K	**TOTAL: FOR 3 X 500KVA S/S (3 * K)**	₹	**38,57,370.54**
M	**Labour Cess 1%of L**	₹	**38,573.71**
N	**Grand Total (L+M)**	₹	38,95,944.25
		₹	**38,95,944.00**

Say

(Rupees Thirty Eight Lakhs Ninety Six Thousand Nine Hundred and Forty Four)only

Executive Engineer (Singtam)
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Topakhani.

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Topakhani.

Junior Engineer (Elect)
Power Department,
Topakhani.

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POWER DEPARTMENT
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TOPAKHANI

SECTION 'C': SHIFTING OF 100 KVA, 11/.433KV DISTRIBUTION SUB-STATION FEEDING SANGKHOLA.

S. No	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
1	9 Mtrs. Steel lattice structure of 35x35x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 2/L/FT/E&PD/ 9 Mtrs.	2	Nos	13,390.00	26,780.00
2	M.S. Channel 75x40mmx6mmx1.28 mtr long for suppoting D.O.F and G.O.S etc.	63	Kgs	63.31	3,988.53
3	Back clamp of 75x6mm M.S. flat for holding the M.S. channel	12	Kgs	139.00	1,668.00
4	M.S. nuts & bolts 16mm dia x 40mm length.	4	Kg	133.00	532.00
5	M.S. nuts & bolts 16mm dia x 250mm length half threaded.	5	Nos	133.00	665.00
6	11 KV, 3 Pole,400 Amps, Air Break G.O S tilting type, three insulators per phase, complete with all fittings.	1	Set	18,839.00	18,839.00
7	11 KV, 3 Pole, 400 Amps, Dropout fuse unit complete with all accessories.	1	Set	12,058.00	12,058.00
8	9 KV rms, 10 KA single pole unit Metal Oxide Gapeless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system with clamps.	3	Nos.	2,432.00	7,296.00
9	Safe Earthing model T-19 short time current 20 KA rms for 1 sec (LV/MV) application with 50 mm dia x 3 mtrs electrode & two backfill chemical compound	3	Nos.	16,844.00	50,532.00
10	100 KVA, 11/ 0.433 KV, Copper Wound , 50 HZ, DYN 11, 3 PHASE, ONAN COOLED, OUT-DOOR TYPE DISTRIBUTION TRANSFORMER WITH OFF-CIRCUIT TAPPING +2.5%, +5%, ON H.V SIDE WITH BARE BUSHING ON HV & LV SIDE & PROVIDED WITH STANDARD FITTINGS & ACCESSORIES WITH FIRST FILLING OF TRANSFORMER OIL CONFORMING TO IS:1180(PART-I)2014:ENERGY EFFICIENCY LEVEL -2.	1	No	3,85,591	
11	L.T distribution switch board outdoor type Kiosk, 200 Amps, having electroytic annealed copper bus-bar 50x12 mm for phase & 50x6 mm for neutral circuits mounted on on glazed procelian or bakelite base and fitted with voltmeter, ammeter, selector switches for ammeter and voltmeter electronic KWH meter, indicating lamps, cabin light, fabricated with 12 guage M.S plain sheet, painted with anti rust primer & two coats of Epoxy paint of shade 631 as per ISS, front and back opening doors with gasket and locking arrangement complete with following incoming/outgoing controls :				
	Incoming :1 No. 200 A, 415 FP MCCB 50 KA breaking capacity with built in Thermo Magnetic Release.				
	Outgoing :3 Nos.100 A TP MCCB 35 KA breaking capacity with built in Thermo Magnetic Release.	1	No.	92,040.00	92,040.00
12	3x35 sq. mm 11/11kv XPLE insulated armoured cable with Al. conductor.	20	mtrs	1,064.00	21,280.00
13	3.5 core, 50 sq.mm. L.T Alumunium PVC armoured cable from transformer to L.T panel.	20	Mtrs.	532.00	10,640.00
14	L.T 1.1 KV cable end termination kit for. a) 50 sq.mm.	4	Sets	5,037.00	20,148.00
15	Heat Shrinkable End Termination Kit suitable for 3x 35 sq.mm. XLPE Armoured Cable	2.00	No.	12,364.00	24,728.00

A.	**Cost of Materials**				**2,91,194.53**
16	Concreting of 9 Mtrs. Lattice Structure / Swaged Steel Tubular Pole in 1:4:8 cc in 0.9x0.9x1.75 mtrs Pit, Construction of parapet 0.61 x 0.61x0.153 mtrs. In 1:3:6 cc i/c 12mm cement plaster of parapet in 1:4 Mix.	2	Job	1,722.00	3,444.00
17	Placement of L.T. distribution board on parapet of size 2x0.61x0.35x 0.61 Mtr. in 1:3:6 ccm including 12 mm thick cement plaster in 1:4 mix.	1	Job	1,827.00	1,827.00
18	Placement of 100kva Distribution Transformer on parapet of size 1.2x1.2x1mtrs. In 1:3:6cc mix including 12mm thivk cement plaster in 1:4 mix	1	Job	5,791.00	5,791.00
19	Fencing for 100/150/200/315 KVA pole mounted distribution substation of size 2x3 mtrs constructed with 50x50x5 mm MS angle vertical props, 35x35x6 mm MS angle supports(double run),M.S wire mesh, 50x6mm M.S flat iron for clamping wire mesh complete with gate with locking arrangement, site development, concreting of props in 1:2:4 cc i/c soiling and floring works in 1:4:8 cc.	1	No	42,311.00	42,311.00
B	**TOTAL OF CIVIL COMPONENT**			**₹**	**53,373.00**
C	**SUB TOTAL (A+B)**			**₹**	**3,44,567.53**
D	Erection charge @ 15 % of (A+Sl. No. 10).			₹	1,01,517.83
E	Transportation @ 10 % of (A + Sl no 10)			₹	67,678.55
F	GST @ 18% on C, D and E			₹	92,477.50
G	Contingency @0.5% of C			₹	1,722.84
H	Tools and Plants @0.5% of C			₹	1,722.84
I	Establishment Charges @9% of C			₹	31,011.08
J	**SUB TOTAL**			**₹**	**6,40,698.17**
K	Labour Cess @ 1% of 'J'			₹	6,406.98
L	**TOTAL(J+K)**			**₹**	**6,47,105.15**
	SAY			**₹**	**6,47,105.00**

(Rupees Six Lakhs Forty Seven Thousand One Hundred and Five) Only.

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POWER DEPARTMENT
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TOPAKHANI

SECTION 'D': SHIFTING OF 2 X 63 KVA, 11/.433KV DISTRIBUTION SUB-STATION FEEDING 32 MILE AND ANDHERI.

S. No	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
1	9 Mtrs. Steel lattice structure of 35x35x6mm M.S Angle complete with nuts & bolts conforming to specification of	4	Nos	13390.00	53,560.00
2	M.S. Channel 75x40mmx6mmx1.28 mtr long for suppoting	126	Kgs	63.31	7,977.06
3	Back clamp of 75x6mm M.S. flat for holding the M.S. channel	24	Kgs	139.00	3,336.00
4	M.S. nuts & bolts 16mm dia x 40mm length.	8	Kg	133.00	1,064.00
5	M.S. nuts & bolts 16mm dia x 250mm length half threaded.	10	Nos	133.00	1,330.00
6	11 KV, 3 Pole,400 Amps, Air Break G.O S tilting type, three insulators per phase, complete with all fittings.	2	Set	18,839.00	37,678.00
7	11 KV, 3 Pole, 400 Amps, Dropout fuse unit complete with all	2	Set	12,058.00	24,116.00
8	9 KV rms, 10 KA single pole unit Metal Oxide Gapeless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system with	6	Nos.	2,432.00	14,592.00
9	Safe Earthing model T-19 short time current 20 KA rms for 1 sec (LV/MV) application with 50 mm dia x 3 mtrs electrode &	6	Nos.	16,844.00	1,01,064.00
10	63 KVA, 11/ 0.433 KV, Dyn 11, Aluminum Wound (3 phase), 50 HZ, ONAN COOLED, OUTDOOR/INDOOR TYPE DISTRIBUTION TRANSFORMER PROVIDED WITH STANDARD FITTINGS & ACCESSORIES WITH FIRST FILLING OF TRANSFORMER OIL CONFORMING TO IS: 1180(PART-I)2014:ENERGY EFFICIENCY LEVEL 2	2	No.	1,84,375	
11	L.T distribution switch board outdoor type Kiosk, 100 Amps, having electroytic annealed copper bus-bar 50x12 mm for phase & 50x6 mm for neutral circuits mounted on on glazed procelian or bakelite base and fitted with voltmeter, ammeter, selector switches for ammeter and voltmeter electronic KWH meter, indicating lamps, cabin light, fabricated with 12 guage M.S plain sheet, painted with anti rust primer & two coats of Epoxy paint of shade 631 as per ISS, front and back opening doors with gasket and locking arrangement complete with following incoming/outgoing controls :				
	Incoming :1 No. 100 A, 415 FP MCCB 50 KA breaking capacity with built in Thermo Magnetic Release.				
	Outgoing :2 Nos.63 A TP MCCB 35 KA breaking capacity with built in Thermo Magnetic Release.	2	No.	86,140.00	1,72,280.00
12	3x35 sq. mm 11/11kv XPLE insulated armoured cable with Al. conductor.	40	mtrs	1,064.00	42,560.00
13	3.5 core, 50 sq.mm. L.T Alumunium PVC armoured cable from transformer to L.T panel.	40	Mtrs.	532.00	21,280.00
14	L.T 1.1 KV cable end termination kit for. a) 50 sq.mm.	8	Sets	5037.00	40,296.00
15	Heat Shrinkable End Termination Kit suitable for 3x 35 sq.mm. XLPE Armoured Cable	4	No.	12,364.00	49,456.00
A.	**Cost of Materials**				**5,70,589.06**
16	Concreting of 9 Mtrs. Lattice Structure / Swaged Steel Tubular Pole in 1:4:8 cc in 0.9x0.9x1.75 mtrs Pit, Construction of parapet 0.61 x 0.61x0.153 mtrs. In 1:3:6 cc i/c 12mm cement plaster of parapet in 1:4 Mix.	4	Job	1,722.00	6,888.00

17	Placement of L.T. distribution board on parapet of size 2x0.61x0.35x 0.61 Mtr. in 1:3:6 ccm including 12 mm thick cement plaster in 1:4 mix.	2	Job	1,827.00	3,654.00
18	Placement of 63kva Distribution Transformer on parapet of size 1.2x1.2x1mtrs. In 1:3:6cc mix including 12mm thivk cement plaster in 1:4 mix	2	Job	5,791.00	11,582.00
19	Fencing for 25/63 KVA pole mounted distribution substation of size 2x3 mtrs constructed with 50x50x5 mm MS angle vertical props, 35x35x6 mm MS angle supports(double run),M.S wire mesh, 50x6mm M.S flat iron for clamping wire mesh complete with gate with locking arrangement, site development, concreting of props in 1:2:4 cc i/c soiling and floring works in 1:4:8 cc.	2	No	34,689.00	69,378.00
				₹	**91,502.00**
B	**TOTAL OF CIVIL COMPONENT**			₹	**6,62,091.06**
C	**SUB TOTAL (A+B)**			₹	1,40,900.86
D	Erection charge @ 15 % of (A+Sl. No. 10).			₹	93,933.91
E	Transportation @ 10 % of (A + Sl no 10)			₹	1,61,446.65
F	GST @ 18% on C, D and E			₹	3,310.46
G	Contingency @0.5% of C			₹	3,310.46
H	Tools and Plants @0.5% of C			₹	59,588.20
I	Establishment Charges @9% of C			₹	**11,24,581.58**
J	**SUB TOTAL**			₹	11,245.82
K	Labour Cess @ 1% of 'J'			₹	11,35,827.40
L	**TOTAL(J+K)**			₹	**11,35,827.00**
	SAY				

(Rupees Eleven Lakhs Thirty Five Thousand Eight Hundred and Twenty Seven) Only.

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TOPAKHANI

SECTION'E': SHIFTING OF LT LINES

PART-I: SHIFTING OF LT LINES USING AAC ANT CONDUCTOR BETWEEN ANDHERI TO RADANG BRIDGE, CHUBA.

S. No	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
1	8.5 mtr. long steel latticed structure with all nuts & bolts complete.	110	Nos.	11,845.00	13,02,950.00
2	3"x3 1/2" L.T shackle insulator.	440	Nos.	59.00	25,960.00
3	G.I 'D' clamps with nuts, bolts.	550	Nos.	51.00	28,050.00
4	G.I guy assembly complete with 7/12 SWG GI stay wire, guy insulator, 16 mm dia rod 1.8 mtr long with bow thimble, turn buckle and 150x150x6mm anchor plate.	55	Sets	872.89	48,008.89
5	AAC ANT conductor	22.22	KM	36,059.00	8,01,230.98
6	No.12 SWG G.I wire for continuous earth wire.	1694	Kgs.	63.00	1,06,722.00
7	Safe Earthing model T-19 short time current 20 KA rms for 1 sec (LV/MV) application with 50 mm dia x 2 mtrs electrode & one backfill chemical compound	22	Nos.	10,820	2,38,040.00
8	440 volts danger board size 6"x4".	110	Nos.	63.00	6,930.00
9	Painting of structure with red oxide paint @ 1.5 ltr/pole.	165	Nos.	130.00	21,450.00
10	Painting of structure with Al. paint @ 1 ltr/pole.	110	Ltrs.	247.00	27,170.00
11	Barbed wire for anti-climbing device @2 Kg/pole.	220	Kgs	63.00	13,860.00
A	**Cost of Materials**				**26,20,371.87**
12	Concreting of above structure in 1:4:8 CC in .9x.9x1.5m pit, construction of parapet 0..35x0.475x0.153m in 1:3:6 cc i/c 12 mm cement plaster of parapet in 1:4 mix.	110		1,722.00	1,89,420.00
13	Concreting of L.T guy assembly in 1:4:8 CC in 0.3x0.3x1.05	55		720.00	39,600.00
B	**TOTAL OF CIVIL COMPONENT**			₹	**229020.00**
C	SUB TOTAL (A+B)			₹	**28,49,391.87**
E	Erection charge @ 15 % of A.			₹	393055.78
F	Transportation @ 10 % of A.			₹	262037.19
G	GST @ 18% on C, E & F			₹	6,30,807.27
H	Contingency @ 0.5 % of C.			₹	14,246.96
I	Tools and Plants @ .5% of C			₹	14,246.96
J	Establishment charge @ 9 % of C.			₹	256445.27
K	**Total**			₹	**44,20,231.29**
L	Labour Cess @ 1% of K.			₹	44202.31
M	**Total**			₹	**44,64,433.61**
P	**SAY**			₹	**44,64,434.00**

(Rupees Four Crore Forty Six Lakhs Four Thousand Four Hundred and Thirty four)Only.

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Govt. of Sikkim, Gangtok

POWER DEPARTMENT
GOVERNMENT OF SIKKIM
TOPAKHANI

PART-II: SHIFTING OF LT LINES WITH NEW TUBLAR POLE USING AERIAL BUNCHED CABLE BETWEEN SANGKHOLA TO RADANG BRIDGE, CHUBA.

S. No	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
1	8.5 Mtrs. Long 410-SP-18 swaged type steel tubular pole with CI base plate & cap, double part (Nuts & bolts type) working load 120 Kgs	63	Nos	14,590.00	9,19,170.00
2	G.I guy assembly complete with 7/12 SWG GI stay wire, guy insulator, 16 mm dia rod 1.8 mtr long with bow thimble, turn buckle and 150x150x6mm anchor plate.	24	Sets	872.89	20,949.33
3	Safe Earthing model T-19 short time current 20 KA rms for 1 sec (LV/MV) application with 50 mm dia x 2 mtrs electrode & one backfill chemical compound	10	Nos.	10,820.00	1,08,200.00
4	L.T AERIAL BUNCHED CABLE (ABC) CONFIRMING TO IS: 14255				
5	3 x 120 sq.mm + 1 x 16 sq.mm +1X 70sq mm, 1.1 KV with aluminum alloy bare messenger wire(double run)	2500	Mtr	761.00	19,02,500.00
6	LT A.B CABLE ACCESSORIES				
i.	LT A.B Cable tension clamps (Galvanized)	63	No	415.00	26,145.00
ii.	LT A B cable Suspension clamps (Galvanized)	63	No	332.00	20,916.00
iii.	Clamps for neutral for AB Cable	63	No	33.00	2,079.00
iv.	LT Dead End Clamp for L.T.A.B Cable	12	No	389.00	4,668.00
v.	Piercing Connector TYPE -1, 1P/3P (Main 16-50 sqmm Tap Off 16-50 Sqmm)	30	No	99.00	2,970.00
vi.	Piercing Connector TYPE -II, 1P/3P (Main 16-50 sqmm Tap Off 16-50 Sqmm)	30	No	68.00	2,040.00
7	440 volts danger board size 6"x4".	63	Nos.	63.00	3,969.00
8	Painting of structure with red oxide paint @ 1.5 ltr/pole.	94.5	Nos.	130.00	12,285.00
9	Painting of structure with Al. paint @ 1 ltr/pole.	63	Ltrs.	247.00	15,561.00
10	Bus bar chamber (Cu bar type)4pole 63A	30	Nos	7,685.00	2,30,550.00
11	Barbed wire for anti-climbing device @2 Kg/pole.	126	Kgs	63.00	7,938.00
A	**Cost of Materials**				**32,79,940.33**
12	Concreting of 8.5 Mtrs. Lattice Structure / Swaged Steel Tubular Pole in 1:4:8 cc in 0.9x0.9x1.50 mtrs Pit, Construction of parapet 0.35 x 0.47x0.153 mtrs. In 1:3:6 cc i/c 12mm cement plaster of	63	Nos.	1,722.00	1,08,486.00
13	Concreting of L.T guy assembly in 1:4:8 CC in 0.3x0.3x1.05 mts pit.	24	Nos.	768.00	18,432.00
B	TOTAL OF CIVIL COMPONENT				₹ **1,26,918.00**
C	**SUB TOTAL (A+B)**				₹ **34,06,858.33**
E	Erection, testing and commissioning @ 15 % of A.				₹ 4,91,991.05
F	Transportation @ 10 % of A.				₹ 3,27,994.03
G	GST @ 18% on C,E & F				₹ 7,60,831.82
H	Contingency @ 0.5 % of C.				₹ 17,034.29
I	Tools and Plants @ .5% of C				₹ 17,034.29
J	Establishment charge @ 9 % of C.				₹ 3,06,617.25

K	**Total**	₹	**53,28,361.07**
L	Labour Cess @ 1% of K.	₹	53,283.61
M	**Total**	₹	**53,81,644.68**
	SAY	₹	**53,81,645.00**

(Rupees Fifty Three Lakhs Eighty One Thousand Six Hundred and Forty Five) Only.

Executive Engineer (Singtam)
Power Department,
Topakhani.

Junior Engineer (Elect)
Power Department,
Topakhani.

Superintending Engineer (Singtam)
Power Department,
Topakhani.

Rates Checked by Planning Cell
Power Department

A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

POWER DEPARTMENT
GOVERNMENT OF SIKKIM
TOPAKHANI

PART-III: SHIFTING OF LT LINES USING XLPE CABLE

S. No	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
1	1.1 kV grade 3.5C x 300 sq.mm. PVC Armoured cable (for Incoming & Outgoing both), double run	1800	Mtr	2607.00	46,92,600.00
2	3.5x185sqmm xlpe 1.1kv armoured cable	2000	Mtr	1665.00	33,30,000.00
3	3.5x120sqmm xlpe 1.1kv armoured cable	2500	Mtr	1,134.00	28,35,000.00
4	110 mm dia Rigid U PVC pipe as per IS 4985-2000 working pressure 6Kgf/cm2 (Finolex)	6200	Mtr.	587.00	36,39,400.00
5	Flexible Super PVC Green Pipe 3.5 KG/CM2 Conforming To IS: 4985-2000	100	Mtr.	273.00	27,300.00
6	Heat Shrinkable End Termination Kit suitable for 3.5C x 300 sq.mm. Armoured PVC Cable Indoor/outdoor	6	No.	8857.00	53,142.00
7	Termination outdoor type kit suitablefor 3.5cx185sqmm cable	8	kit	8857.00	70,856.00
8	Termination outdoor type kit suitablefor 3.5cx120sqmm cable	10	kit	6,446.00	64,460.00
9	Jointing kit for 3.5Cx300sqmm xlpe cable	2	kit	9,551.00	19,102.00
10	Jointing kit for 3.5Cx185sqmm xlpe cable	3	kit	7,751.00	23,253.00
11	Jointing kit for 3.5Cx120sqmm xlpe cable	4	kit	4,698.00	18,792.00
12	50 mm diameter x 2 mtrs. Electrode (Copper bonded) & One bag backfill chemical compound.	15	Set	10,820.00	1,62,300.00
13	Main Feeder Panel: Cubicle design totally enclosed and water proof outdoor type floor mounted suitable for use in 440 V,400A main feeder pillar Incomer : 1 No 400 A, MCCB, 50KA Outgoing: 2 Nos. 200 A TPN MCCB & 4 Nos. 32 A TPN, MCB for individual service connections.	5	No	1,81,337.00	9,06,685.00
14	Sub-Main Feeder Panel: Cubicle design totally enclo.& water proof outdoor type floor mounted suitable for use in 440V 200 A as a sub-main feeder pillar: Incomer: 1 No. 200 A, TPN MCCB Outgoing: 3 Nos. 63 A TPN MCCB & 4 Nos. 32 A MCCB for individual service connections &8 Nos16 TPN for individual service connection.	10	No	1,00,742.00	10,07,420.00
15	Copper strips (20x4)mm for earth continuity.	100	Kg	800.00	80,000.00
A.	**Cost of Materials**				**₹ 1,69,30,310.00**
16	Placement of feeder 1.5 mx1mx0.2m in 1:3:6 cc plum pillar.	15	Job	2,122.00	₹ 31,830.00
17	Excavation of 0.45x0.90x1.00 m cable trench in mix soil & refilling with available excavated earth and providing concreting on the top of the trench.	6200	Mtr	447.00	₹ 27,71,400.00
B	**Total of Civil Component**				**₹ 28,03,230.00**
C	**SUB TOTAL (A+B)**				**₹ 1,97,33,540.00**
E	Erection charge @ 15 % of A.				₹ 25,39,546.50
F	Transportation 10% of A				₹ 16,93,031.00
G	GST @ 18% on C, E and F				₹ 43,13,901.15
H	Contingency @ 0.5 % of C.				₹ 98,667.70
I	Tools and Plants @ .5% of C				₹ 98,667.70
J	Establishment charge @ 9 % of C.				₹ 17,76,018.60
K	**SUB TOTAL**				**₹ 3,02,53,372.65**

L	Labour Cess @ 1% of 'K'		₹ 3,02,533.73
M	TOTAL(K+L)		₹ 3,05,55,906.38
	SAY	₹	3,05,55,906.00

(Rupees Three Crore Five Lakhs Fifty Five Thousand Nine Hundred and Six) Only.

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Superintending Engineer (Singtam)
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POWER DEPARTMENT
GOVERNMENT OF SIKKIM
TOPAKHANI

SECTION 'F': SHIFTING OF LT ABC LINE , STREETLIGHTS AND SERVICE CONNECTION CABLES OF SINGTAM AND SURROUNDING AREAS.

S. No	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
1	8.5 Mtrs. Long 410-SP-21 swaged type steel tubular pole with CI base plate & cap, double part (Nuts & bolts type) working load 185 Kgs	110	No	18,070.00	19,87,700.00
2	Greenline DUO philips/ Havells/ Surya /Bajaj/ Syska/EESL: LED 90 watt street light fitting complete with all accessories i/c earth connector & lead (BRP 320 LED)	110	No	13,688.00	15,05,680.00
3	1.1 KV PVC/XLPE insulated heavy duty power cables for working voltage upto & including 660/1100 volts aluminium conductors armoured 2 Core x 10 sqmm	6500	Mtr	177.00	11,50,500.00
4	1.1 KV PVC/XLPE insulated heavy duty power cables for working voltage upto & including 660/1100 volts aluminium conductors armoured 2 Core x 16 sqmm	6000	Mtr	200.00	12,00,000.00
5	1.1 KV PVC/XLPE insulated heavy duty power cables for working voltage upto & including 660/1100 volts aluminium conductors armoured 3.5Core x 25 sqmm	3500	Mtr	342.00	11,97,000.00
6	1.1 KV PVC/XLPE insulated heavy duty power cables for working voltage upto & including 660/1100 volts aluminium conductors armoured 3.5corex35sqmm	2000	Mtr	402.00	8,04,000.00
7	3 x 120 sq.mm + 1 x 16 sq.mm +1X 70sq mm, 1.1 KV with aluminum alloy bare messenger wire	2800	Mtr	761.00	21,30,800.00
8	LT A.B CABLE ACCESSORIES				-
i.	LT A.B Cable tension clamps (Galvanized)	70	No	415.00	29,050.00
ii.	LT A B cable Suspension clamps (Galvanized)	70	No	332.00	23,240.00
iii.	Clamps for neutral for AB Cable	70	No	33.00	2,310.00
iv.	LT Dead End Clamp for L.T.A.B Cable	8	No	389.00	3,112.00
v.	Piercing Connector TYPE -1, 1P/3P (Main 16-50 sqmm Tap Off 16-50 Sqmm)	70	No	99.00	6,930.00
vi.	Piercing Connector TYPE -II, 1P/3P (Main 16-50 sqmm Tap Off 16-50 Sqmm)	70	No	68.00	4,760.00
9	2.5 sqmm single core industrial grade cu conductor flexible cable	2800	Mtr	33.46	93,688.00
10	12 mtrs long mast light with 6 way led light including automatic control panel,complete set	1	No	4,83,408.00	4,83,408.00
11	pvc bend 90 mm dia	800	mtr	175.00	1,40,000.00
12	Rigid Upvc pipeas per IS 4985-2000 working pressure 6kgf/cm2 50mm dia	12000	Mtr	124.00	14,88,000.00
13	green pipe 2" dia	1200	mtr	144.00	1,72,800.00
A	**Cost of Materials**				**₹ 1,24,22,978.00**
14	Excavation of 0.45x0.9x1 mtr in cable trench in mix soil and refelling with avialable excavated earth and providing cement concrete on the top of the trench	12000	mtr	447	**₹ 53,64,000.00**
B	**Total of Civil Component**				**₹ 53,64,000.00**
C	**SUB TOTAL (A+B)**				**₹ 1,77,86,978.00**
E	Erection charge @ 15 % of A.				₹ 18,63,446.70
F	Transportation @ 10 % of A				₹ 12,42,297.80
G	GST @ 18% on C, E &F				₹ 37,60,690.05
H	Contingency @ 0.5 % of C.				₹ 88,934.89

I	Tools and Plants @ .5% of C	₹ 88,934.89
J	Establishment charge @ 9 % of C.	₹ 16,00,828.02
K	**SUB TOTAL**	**₹ 2,64,32,110.35**
L	Labour Cess @ 1% of 'K'	₹2,64,321.10
M	**GRAND TOTAL**	**₹2,66,96,431.45**
	SAY	**₹2,66,96,431.00**

(Rupees Two Crore Sixty Six Lakhs Ninety Six Thousand Four Hundred and Thirty One) Only.

Executive Engineer (Singtam)
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SECTION'G': TOTAL DISMANTLING CHARGES OF POWER INFRASTRUCTURES FALLING UNDER PRoW OF NH-10 FROM 19TH MILE TO RADANG BRIDGE.

SL. NO.	PARTICULARS	QNTY	UNIT	RATE	AMOUNT
1	9 mtr. long steel latticed structure of 35x35x6 mm complete with nuts & bolts.	25	Nos.	13,390.00	3,34,750.00
2	11 Mtrs. Steel lattice structure of 65x65x6mm M.S Angle complete with nuts & bolts conforming to specification of design detail No. 1/L/FT/E&PD/ 11 Mtrs.	28	Nos.	26,483.00	7,41,524.00
3	100sq mm DOG conductor	9.09	km	82894.00	7,53,506.46
4	30sq mm weasel conductor	3.03	km	28444.00	86,185.32
6	No.10 SWG G.I wire for continuous earth wire.	938	Kgs.	63.00	59,094.00
7	11 KV, 3 Pole,400 Amps, Air Break G.O S tilting type, three insulators per phase, complete with all fittings.	8	Set	18,839.00	1,50,712.00
8	11 KV, 3 Pole, 400 Amps, Dropout fuse unit complete with all accessories.	8	Set	12,058.00	96,464.00
9	9 KV rms, 10 KA single pole unit Metal Oxide Gapeless Surge Arrestor for 11 KV, 50 c/s solidly earthed neutral system with clamps.	18	Nos.	2,432.00	43,776.00
10	M.S. Channel 75x40mmx6mmx2.2 mtr long for suppoting D.O.F and G.O.S etc.	261	Kgs	63.31	16,523.91
11	Guy Assembly complete with 7/10 SWG Stay Wire, 140x85 mm H.T Guy Insulator, 18mm diameter Stay Rod 1.8 mtrs Long with bow thimble, turn buckle & 300x300x6mm anchor plate	29	Set	1,930.00	55,970.00
12	Safe Earthing model T-19 short time current 20 KA rms for 1 sec (LV/MV) application with 50 mm dia x 3 mtrs electrode & two backfill chemical compound	36	Nos.	16,844.00	6,06,384.00
13	Pole top channel 75x40x6mmx0.3 mtr. long for S.P structure	150	Kgs	63.31	9,496.50
14	Bottom Channel 75x40mmx6mmx1.8 mtr long for SP	512	Kgs	63.31	32,414.72
15	Back clamp of 75x6mm M.S. flat for holding the M.S. channel	103	Kgs	139.00	14,317.00
16	M.S Bolts with Nut 16 dia x40 mm conforming to IS: 1364	67	Kgs	133.00	8,911.00
17	11 KV danger board of size 8"x6".	53	Nos.	85.00	4,505.00
18	Barbed wire for anti-climbing device @2 Kg/pole.	106	Kgs	63.00	6,678.00
19	3 x 120 sqmm, 11/11 KV (U) XPLE INSULATED ARMOURED CABLE WITH ALUMINIUM CONDUCTOR CONFORMING TO IS: 7098/11/85.	2000.00	meter	945.00	18,90,000.00
20	3 x 185 sqmm, 11/11 KV (U) XPLE INSULATED ARMOURED CABLE WITH ALUMINIUM CONDUCTOR CONFORMING TO IS: 7098/11/85.	450.00	meter	2,559.00	11,51,550.00
21	110 mm dia, RIGID U PVC PIPE AS PER IS 4985-2000 WORKING PRESSURE 6 KGF/CM2	2400.00	meter	587.00	14,08,800.00
22	4"dia, FLEXIBLE SUPER PVC GREEN PIPE 3.5KG/CM2 CONFORMING TO IS: 4985-2000.	50.00	meter	314.00	15,700.00
23	3 C X 185 sqmm Heat Shrinkable Kit,EPKT 3362	2.00	Kit	15,102.00	30,204.00
24	3 X 120 SQMM, Heat Shrinkable outdoor type termination kits for 6.36KV (U) 3core XLPE, Make Raychem/ Denson or equivelent.	4.00	Kit	15,102.00	60,408.00
25	3x120sqmm heat shrinkable straight through kit	2.00	kit	29,204.00	58,408.00
26	500 KVA, 11/.43KV, Copper wound 50Hz, Dyn-11, Distribution Transformer.				

27	LT distribution switch board, out-door Type Kiosk, 800 Amp, having electrolytic annealed copper bus bar 50x12mm for hase & 50x6mm for neutral circuits mounted on glazed porcelain or bakelite base & fitted with voltmeter, ammeter, selector switches for ammeter & voltmeter, electronic KWH meter, indicating lamps cabin light, febricated with 12 gauge M.S plain sheet, painted with anti- rust primer & over coats of Epoxy paint of shade 631 as per IS: 5, front opening doors with gasket & locking arrangement complete With following incoming & outgoing controls: INCOMING:- No. 630 Amp, 15 Volt, FP, manually Draw Out type ,CB with in built Thermo Magnetic release & 6No+6Nc Auxiliary contacts.) outgoing:- 2 Nos. 200 Amp TP MCCB breaking capacity 35 KA with built in Thermo Magnetic Release, 2 Nos. 100 ,amp TP MCCB breaking capacity 35 KA With built in Thermo Magnetic Release.	3.00	No	3,48,100.00	10,44,300.00
28	3x35 sqmm Armoured XLPE Aluminium Cable.	180.00	Mtr	1,064.00	1,91,520.00
29	Heat Shrinkable End Termination Kit suitable for 3x 35 sq.mm. XLPE Armoured Cable	6.00	No.	12,364.00	74,184.00
30	100 KVA, 11/ 0.433 KV, Copper Wound , 50 HZ, DYN 11, 3 PHASE, ONAN COOLED, OUT-DOOR TYPE DISTRIBUTION TRANSFORMER.				
31	L.T distribution switch board outdoor type Kiosk, 200 Amps, having electroytic annealed copper bus-bar 50x12 mm for phase & 50x6 mm for neutral circuits mounted on on glazed procelian or bakelite base and fitted with voltmeter, ammeter, selector switches for ammeter and voltmeter electronic KWH meter, indicating lamps, cabin light, fabricated with 12 guage M.S plain sheet, painted with anti rust primer & two coats of Epoxy paint of shade 631 as per ISS, front and back opening doors with gasket and locking arrangement complete with following incoming/outgoing controls :				
	Incoming :1 No. 200 A, 415 FP MCCB 50 KA breaking capacity with built in Thermo Magnetic Release.				
	Outgoing :3 Nos.100 A TP MCCB 35 KA breaking capacity with built in Thermo Magnetic Release.	1	No.	92,040.00	92,040.00
32	3x35 sq. mm 11/11kv XPLE insulated armoured cable with Al. conductor.	20	mtrs	1,064.00	21,280.00
33	3.5 core, 50 sq.mm. L.T Alumunium PVC armoured cable from transformer to L.T panel.	20	Mtrs.	532.00	10,640.00
34	L.T 1.1 KV cable end termination kit for. a) 50 sq.mm.	4	Sets	5,037.00	20,148.00
35	Heat Shrinkable End Termination Kit suitable for 3x 35 sq.mm. XLPE Armoured Cable	2.00	No.	12,364.00	24,728.00
36	63 KVA, 11/ 0.433 KV, Dyn 11, Aluminum Wound (3 phase), 50 HZ, ONAN COOLED, OUTDOOR/INDOOR TYPE DISTRIBUTION TRANSFORMER				
37	L.T distribution switch board outdoor type Kiosk, 100 Amps, having electroytic annealed copper bus-bar 50x12 mm for phase & 50x6 mm for neutral circuits mounted on on glazed procelian or bakelite base and fitted with voltmeter, ammeter, selector switches for ammeter and voltmeter electronic KWH meter, indicating lamps, cabin light, fabricated with 12 guage M.S plain sheet, painted with anti rust primer & two coats of Epoxy paint of shade 631 as per ISS, front and back opening doors with gasket and locking arrangement complete with following incoming/outgoing controls :				
	Incoming :1 No. 100 A, 415 FP MCCB 50 KA breaking capacity with built in Thermo Magnetic Release.				
	Outgoing :2 Nos.63 A TP MCCB 35 KA breaking capacity with built in Thermo Magnetic Release.	2	No.	86,140.00	1,72,280.00
38	3x35 sq. mm 11/11kv XPLE insulated armoured cable with Al. conductor.	40	mtrs	1,064.00	42,560.00
39	3.5 core, 50 sq.mm. L.T Alumunium PVC armoured cable from transformer to L.T panel.	40	Mtrs.	532.00	21,280.00

40	L.T 1.1 KV cable end termination kit for. a) 50 sq.mm.	8	Sets	5037.00	40,296.00
41	Heat Shrinkable End Termination Kit suitable for 3x 35 sq.mm. XLPE Armoured Cable	4	No.	12,364.00	49,456.00
42	8.5 mtr. long steel latticed structure with all nuts & bolts complete.	117	Nos.	11,845.00	13,85,865.00
43	3"x3 1/2" L.T shackle insulator.	468	Nos.	59.00	27,612.00
44	G.I 'D' clamps with nuts, bolts.	585	Nos.	51.00	29,835.00
45	G.I guy assembly complete with 7/12 SWG GI stay wire, guy insulator, 16 mm dia rod 1.8 mtr long with bow thimble, turn buckle and 150x150x6mm anchor plate.	25	Sets	872.89	21,822.22
46	AAC ANT conductor	23.4	KM	36,059.00	8,43,780.60
47	No.12 SWG G.I wire for continuous earth wire.	1694	Kgs.	63.00	1,06,722.00
48	Safe Earthing model T-19 short time current 20 KA rms for 1 sec (LV/MV) application with 50 mm dia x 2 mtrs electrode & one backfill chemical compound	20	Nos.	10,820	2,16,400.00
49	440 volts danger board size 6"x4".	117	Nos.	63.00	7,371.00
50	Barbed wire for anti-climbing device @2 Kg/pole.	234	Kgs	63.00	14,742.00
51	8.5 Mtrs. Long 410-SP-18 swaged type steel tubular pole with CI base plate & cap, double part (Nuts & bolts type) working load 120 Kgs	70	Nos	14,590.00	10,21,300.00
52	G.I guy assembly complete with 7/12 SWG GI stay wire, guy insulator, 16 mm dia rod 1.8 mtr long with bow thimble, turn buckle and 150x150x6mm anchor plate.	24	Sets	872.89	20,949.33
53	Safe Earthing model T-19 short time current 20 KA rms for 1 sec (LV/MV) application with 50 mm dia x 2 mtrs electrode & one backfill chemical compound	15	Nos.	10,820.00	1,62,300.00
54	L.T AERIAL BUNCHED CABLE (ABC) CONFIRMING TO IS: 14255				
55	3 x 120 sq.mm + 1 x 16 sq.mm +1X 70sq mm, 1.1 KV with aluminum alloy bare messenger wire	2500	Mtr	761.00	19,02,500.00
56	LT A.B CABLE ACCESSORIES				
i.	LT A.B Cable tension clamps (Galvanized)	120	No	415.00	49,800.00
ii.	LT A B cable Suspension clamps (Galvanized)	120	No	332.00	39,840.00
iii.	Clamps for neutral for AB Cable	120	No	33.00	3,960.00
iv.	LT Dead End Clamp for L.T.A.B Cable	14	No	389.00	5,446.00
v.	Piercing Connector TYPE -1, 1P/3P (Main 16-50 sqmm Tap Off 16-50 Sqmm)	160	No	99.00	15,840.00
vi.	Piercing Connector TYPE -II, 1P/3P (Main 16-50 sqmm Tap Off 16-50 Sqmm)	160	No	68.00	10,880.00
57	440 volts danger board size 6"x4".	70	Nos.	63.00	4,410.00
58	Barbed wire for anti-climbing device @2 Kg/pole.	140	Kgs	63.00	8,820.00
59	1.1 kV grade 3.5C x 300 sq.mm. PVC Armoured cable (for Incoming & Outgoing both), double run	1800	Mtr	2607.00	46,92,600.00
60	3.5x185sqmm xlpe 1.1kv armoured cable	2000	Mtr	1665.00	33,30,000.00
61	3.5x120sqmm xlpe 1.1kv armoured cable	2500	Mtr	1,134.00	28,35,000.00
62	110 mm dia Rigid U PVC pipe as per IS 4985-2000 working pressure 6Kgf/cm2 (Finolex)	6200	Mtr.	587.00	36,39,400.00
63	Flexible Super PVC Green Pipe 3.5 KG/CM2 Conforming To IS: 4985-2000	100	Mtr.	273.00	27,300.00
64	Heat Shrinkable End Termination Kit suitable for 3.5C x 300 sq.mm. Armoured PVC Cable Indoor/outdoor	6	No.	8857.00	53,142.00
65	Termination outdoor type kit suitablefor 3.5cx185sqmm cable	8	kit	8857.00	70,856.00
66	Termination outdoor type kit suitablefor 3.5cx120sqmm cable	10	kit	6,446.00	64,460.00
67	Jointing kit for 3.5Cx300sqmm xlpe cable	2	kit	9,551.00	19,102.00
68	Jointing kit for 3.5Cx185sqmm xlpe cable	3	kit	7,751.00	23,253.00
69	Jointing kit for 3.5Cx120sqmm xlpe cable	4	kit	4,698.00	18,792.00
70	Main Feeder Panel: Cubicle design totally enclosed and water proof outdoor type floor mounted suitable for use in 440 V,400A main feeder pillar Incomer : 1 No 400 A, MCCB, 50KA Outgoing: 2 Nos. 200 A TPN MCCB & 4 Nos. 32 A TPN, MCB for individual service connections.	5	No	1,81,337.00	9,06,685.00
71	Sub-Main Feeder Panel: Cubicle design totally enclo.& water proof outdoor type floor mounted suitable for use in 440V 200 A as a sub-main feeder pillar: Incomer: 1 No. 200 A, TPN MCCB	10	No	1,00,742.00	10,07,420.00

	Outgoing: 3 Nos. 63 A TPN MCCB & 4 Nos. 32 A MCCB for individual service connections &8 Nos16 TPN for individual service connection.				
72	Copper strips (20x4)mm for earth continuity.	100	Kg	800.00	80,000.00
73	Greenline DUO philips/ Havells/ Surya /Bajaj/ Syska/EESL: LED 90 watt street light fitting complete with all accessories i/c earth connector & lead (BRP 320 LED)	110	No	13,688.00	15,05,680.00
74	1.1 KV PVC/XLPE insulated heavy duty power cables for working voltage upto & including 660/1100 volts aluminium conductors armoured 2 Core x 10 sqmm	6500	Mtr	177.00	11,50,500.00
	1.1 KV PVC/XLPE insulated heavy duty power cables for working voltage upto & including 660/1100 volts aluminium conductors armoured 2 Core x 16 sqmm	6000	Mtr	200.00	12,00,000.00
	1.1 KV PVC/XLPE insulated heavy duty power cables for working voltage upto & including 660/1100 volts aluminium conductors armoured 3.5Core x 25 sqmm	3500	Mtr	342.00	11,97,000.00
75	1.1 KV PVC/XLPE insulated heavy duty power cables for working voltage upto & including 660/1100 volts aluminium conductors armoured 3.5corex35sqmm	2000	Mtr	402.00	8,04,000.00
67	3 x 120 sq.mm + 1 x 16 sq.mm +1X 70sq mm, 1.1 KV with aluminum alloy bare messenger wire	2800	Mtr	761.00	21,30,800.00
77	2.5 sqmm single core industrial grade cu conductor flexible cable	2800	Mtr	33.46	93,688.00
78	12 mtrs long mast light with 6 way led light including automatic control panel,complete set	1	No	4,83,408.00	4,83,408.00
79	pvc bend 90 mm dia	800	mtr	200.00	1,60,000.00
80	green pipe 2" dia	1200	mtr	177.00	2,12,400.00
A	**Cost of Materials**			₹	**4,10,46,675.07**
B	Dismantling Charge @ 15% of A			₹	61,57,001.26
C	Transportation @ 10% of A			₹	41,04,667.51
D	Tools and Plans @ 0.5% of A			₹	2,05,233.38
E	Store and Handling charge @ 1% of A			₹	4,10,466.75
F	GST @ 18% on B & C			₹	18,47,100.38
G	Sub Total (B to F)			₹	1,27,24,469.27
J	Salvage items @ 5% of A (-)			₹	20,52,333.75
K	SUB TOTAL (G-J)			₹	1,06,72,135.52
H	LABOR CESS 1% of K			₹	1,06,721.36
	TOTAL			₹	**1,07,78,856.87**
			SAY	₹	**1,07,78,857.00**

(Rupees One Crore Seven Lakhs Seventy Eight Thousand Eight Hundred and Fifty Seven) only.

Executive Engineer (Singtam)
Power Department,
Topakhani.

Junior Engineer (Elect)
Power Department,
Topakhani.

Superintending Engineer (Singtam)
Power Department,
Topakhani.

Rates Checked by Planning Cell
Power Department

JE (Planning)
A.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

E.E (Planning)
Power Department
Govt. of Sikkim, Gangtok

62+000

62+500

ROW OF NH-10

NH-10

ROW OF NH-10

***NO ELECTRICAL UTILITIES TO BE SHIFTED**

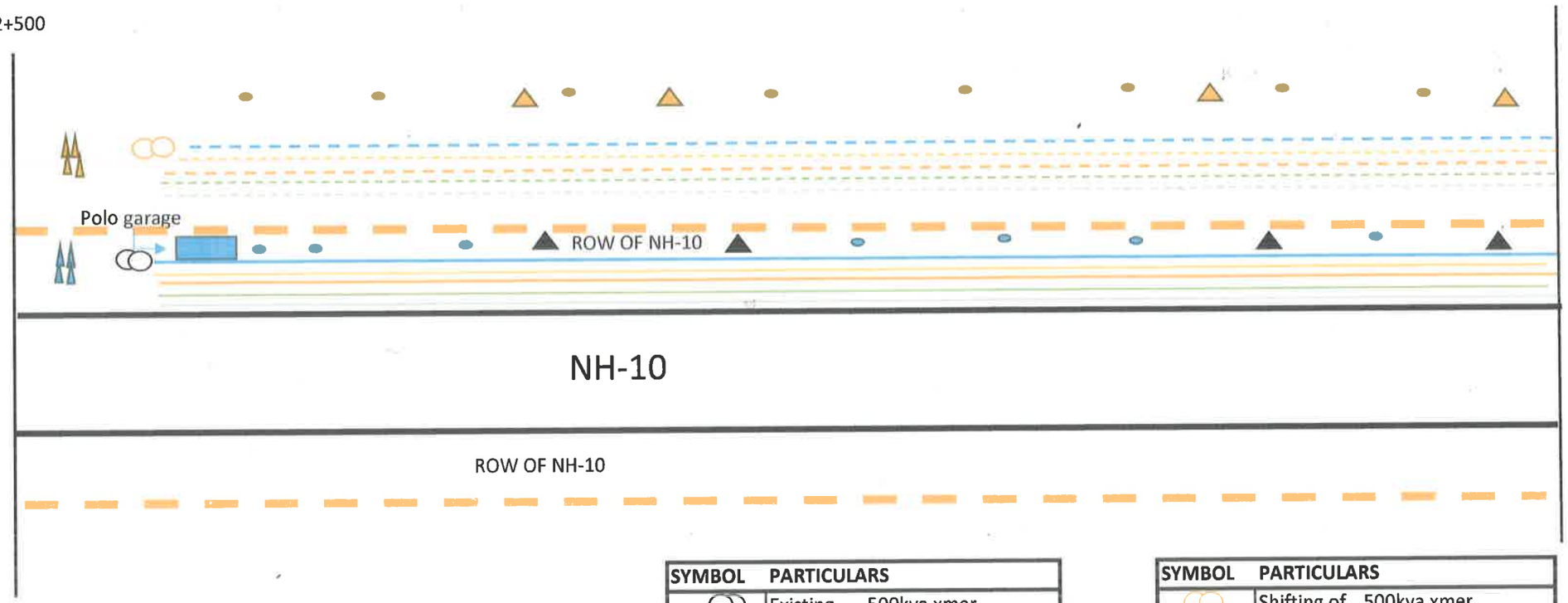
Superintending Engineer (East-I)
Energy & Power Department
Topakhani, Singtam

Executive Engineer (Sgt.)
Power Department
Govt. of Sikkim
Topakhani

Junior Engineer (Elect.)
Power Department
Sub- Division

63+000

62+500



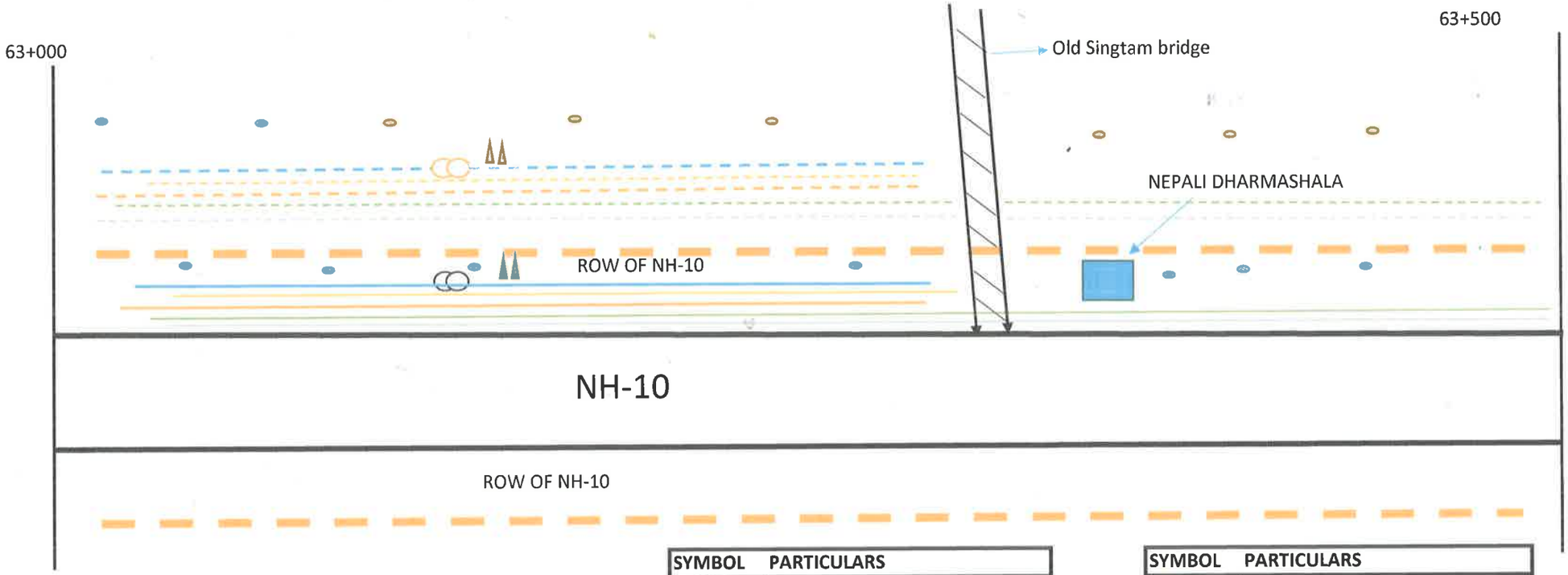
SYMBOL	PARTICULARS
	Existing 500kva xmer
	Existing 3X185smm UG
	Existing 3X120sqmm UG
	Existing 3.5x300sqmm UG
	Existing 3.5x185sqmm UG
	Existing 3.5x120sqmm UG
	Existing tubular pole for streetlight
	Existing 11mtr lattice pole
	Existing 8.5mtr lattice pole

SYMBOL	PARTICULARS
	Shifting of 500kva xmer
	Proposed 3X185smm UG
	Proposed 3X120sqmm UG
	Proposed 3.5x185sqmm UG
	Proposed 3.5x300sqmm UG
	Proposed 3.5x120sqmm UG
	Proposed tubular pole for streetlight
	Proposed 11mtr lattice pole
	Proposed 8.5mtr lattice pole

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Power Department
Sub- Division



SYMBOL	PARTICULARS
	Existing 500kva xmer
	Existing 3X185smm UG
	Existing 3X120sqmm UG
	Existing 3.5x300sqmm UG
	Existing 3.5x185sqmm UG
	Existing 3.5x120sqmm UG
	Existing tubular pole for streetlight
	Existing 11mtr lattice pole

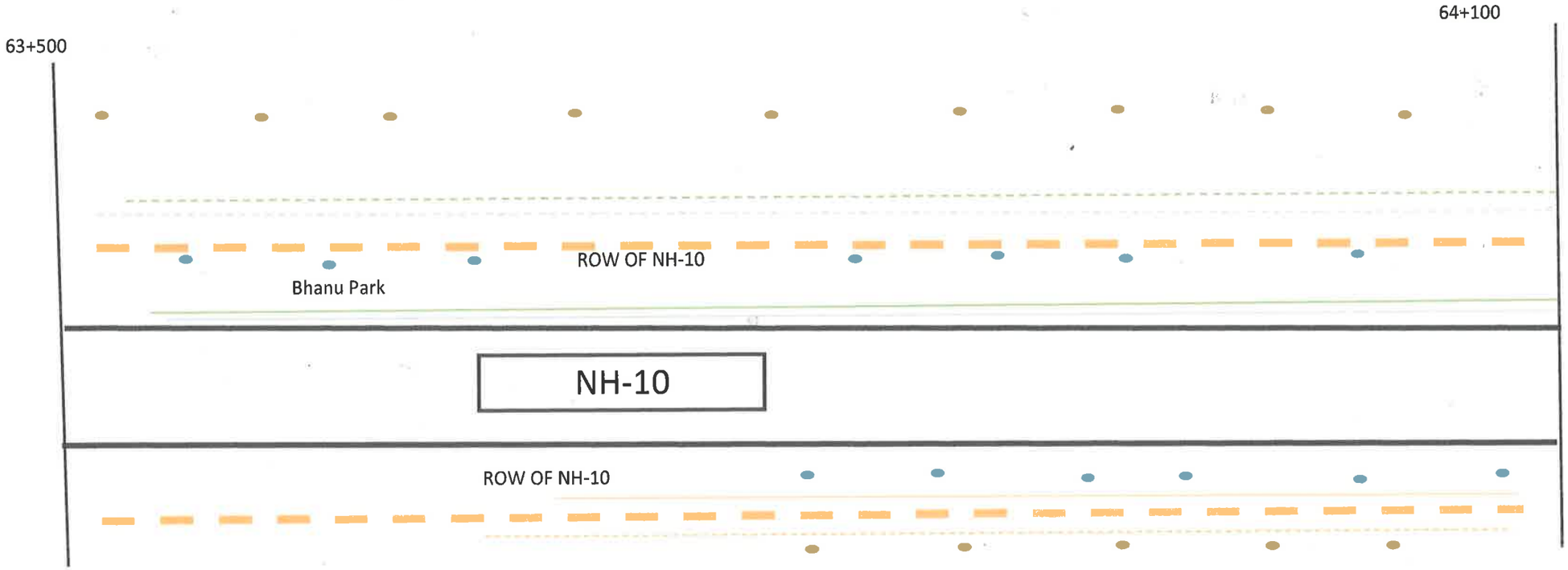
SYMBOL	PARTICULARS
	Shifting of 500kva xmer
	Proposed 3X185smm UG
	Proposed 3X120sqmm UG
	Proposed 3.5x300sqmm UG
	Proposed 3.5x185sqmm UG
	Proposed 3.5x120sqmm UG
	Proposed tubular pole for streetlight
	Proposed 11mtr lattice pole

*NOT TO SCALE

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Govt. of Sikkim
Topakhani

Junior Engineer (Elect.)
Power Department
Sub- Division



SYMBOL	PARTICULARS
	Existing 3.5x240sqmm UG
	Existing 3.5x185sqmm UG
	Existing 3.5x120sqmm UG
	Existing tubular pole for streetlight

SYMBOL	PARTICULARS
	Proposed 3.5x240sqmm UG
	Proposed 3.5x185sqmm UG
	Proposed 3.5x120sqmm UG
	Proposed tubular pole for streetlight

*NOT TO SCALE

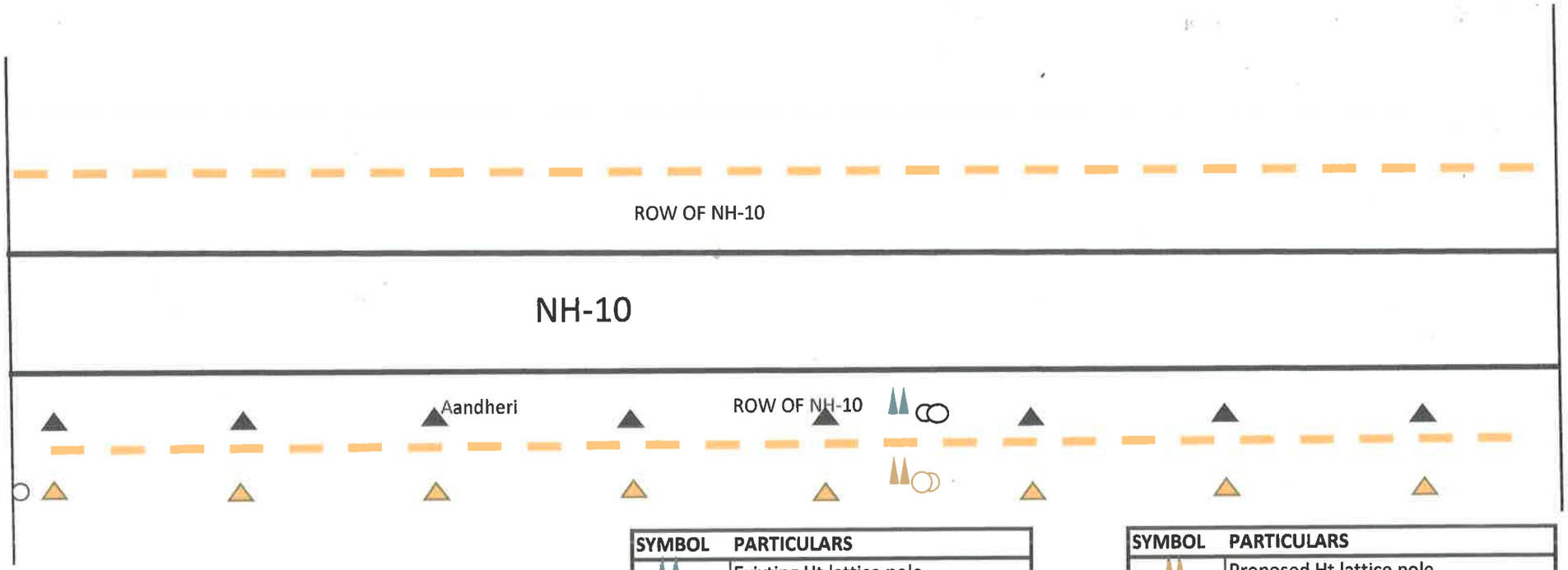
Superintending Engineer (East-I)
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Govt. of Sikkim
Topakhani

Junior Engineer (Elect.)
Power Department
Sub- Division

64+500

65+000



SYMBOL	PARTICULARS
	Exixting Ht lattice pole
	Existing 8.5mtr Lattice pole
	Existing 63kva Transformer

SYMBOL	PARTICULARS
	Proposed Ht lattice pole
	Proposed 8.5mtr Lattice pole
	Proposed 63kva Transformer

*NOT TO SCALE

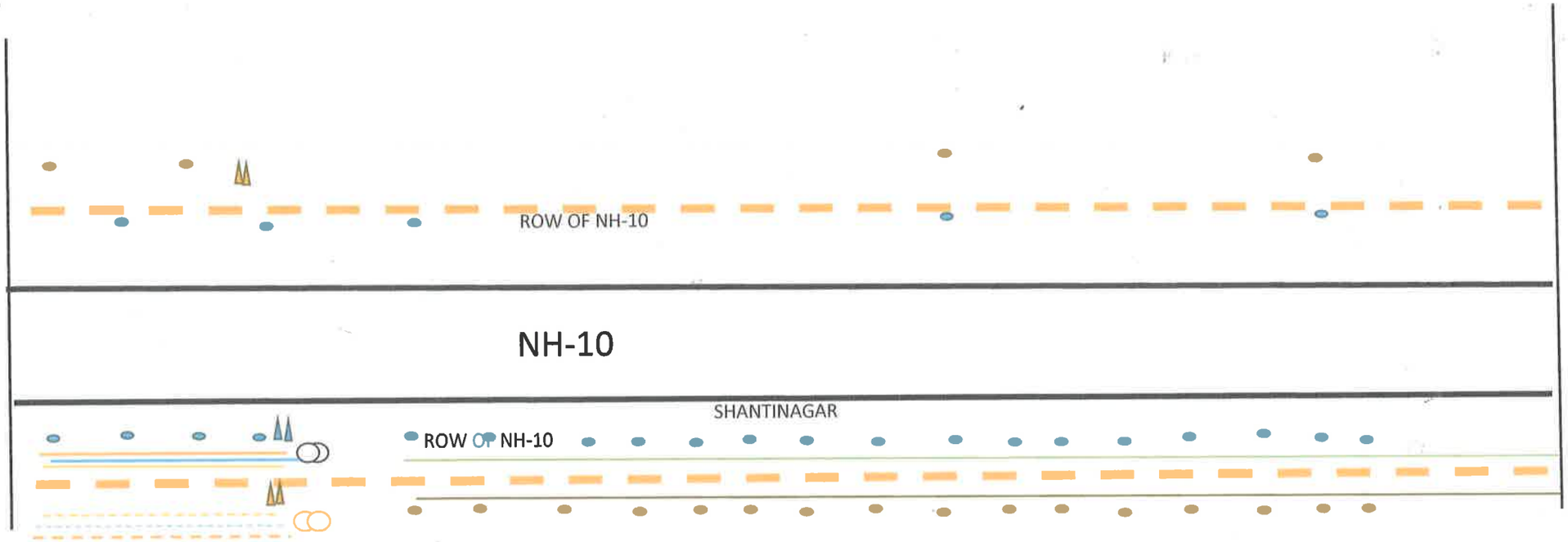
Superintending Engineer (East-I)
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Govt. of Sikkim
Topakhani

Junior Engineer (Elect.)
Power Department
Sub- Division

65+000

64+500



SYMBOL	PARTICULARS
	Existing 500kva xmer
	Existing 11mtr Lattice Structure
	Existing 3.5x240sqmm UG
	Existing lt aerial bunch cable
	Existing 3X185smm UG
	Existing 3.5x120sqmm UG
	Existing tubular pole for streetlight

SYMBOL	PARTICULARS
	Shifting of 500kva xmer
	Proposed 11mtr Lattice Structure
	Proposed 3.5x240sqmm UG
	Proposed lt aerial bunch cable
	Proposed 3.5x185sqmm UG
	Proposed 3.5x120sqmm UG cable
	Proposed tubular pole for streetlight

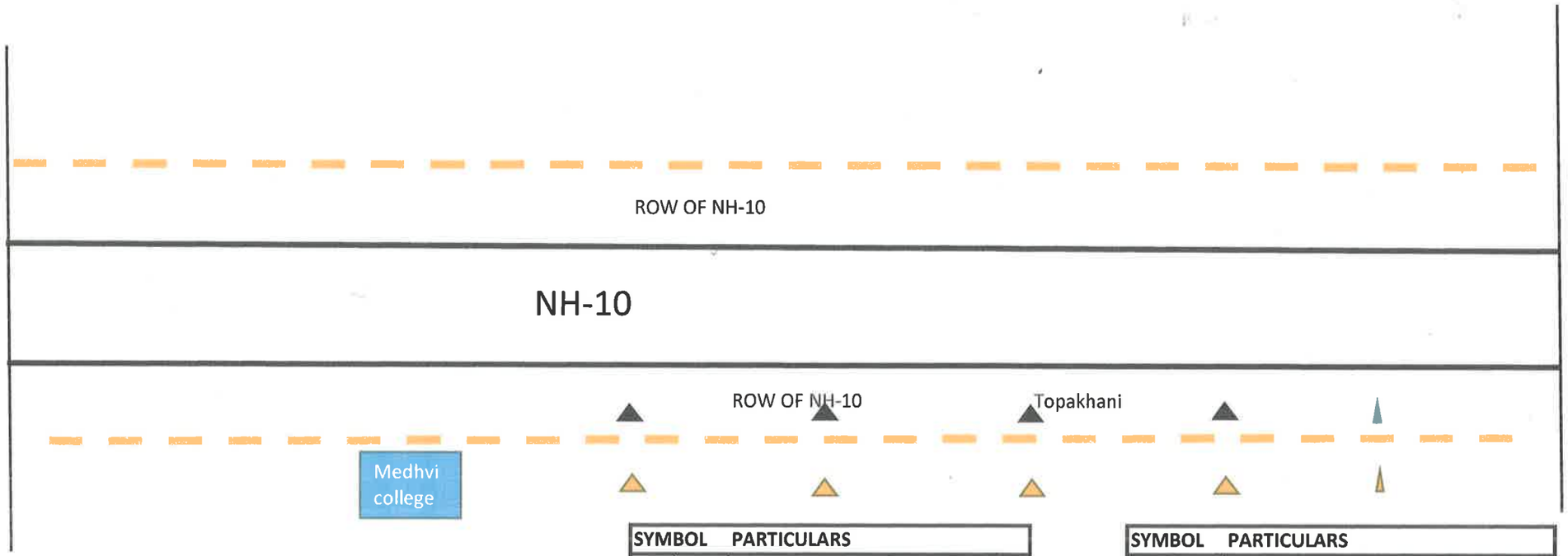
Superintending Engineer (East-I)
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Topakhani, Singtam

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Power Department
Govt. of Sikkim
Topakhani

Junior Engineer (Elect.)
Power Department
Sub-Division

65+500

66+000



SYMBOL	PARTICULARS
▲	Existing 8.5mtr Lattice pole
▲	Existing 9mtr Lattice pole

SYMBOL	PARTICULARS
△	Proposed 8.5mtr Lattice pole
△	Proposed 9mtr Lattice pole

*NOT TO SCALE

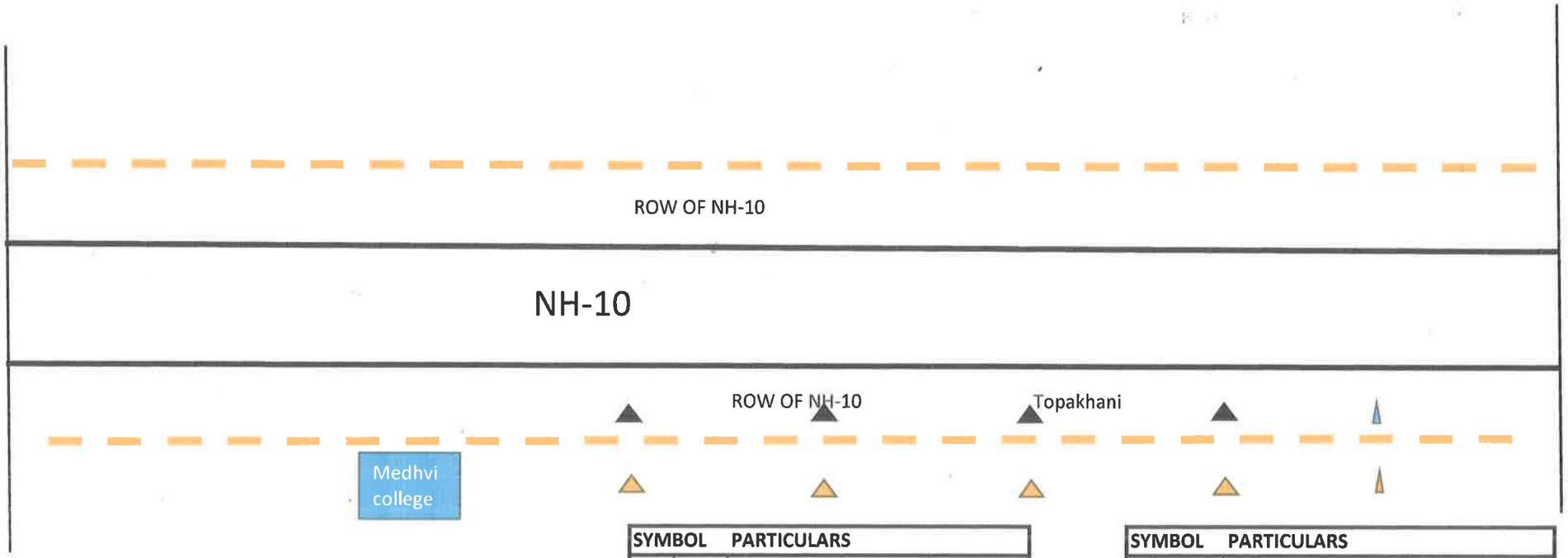
Superintending Engineer (East-I)
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Topakhani, Singtam

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Power Department
Govt. of Sikkim
Topakhani

Junior Engineer (Elect.)
Power Department
Sub- Division

65+500

66+000



SYMBOL	PARTICULARS
▲	Existing 8.5mtr Lattice pole
▲	Existing 9mtr Lattice pole

SYMBOL	PARTICULARS
△	Proposed 8.5mtr Lattice pole
△	Proposed 9mtr Lattice pole

*NOT TO SCALE

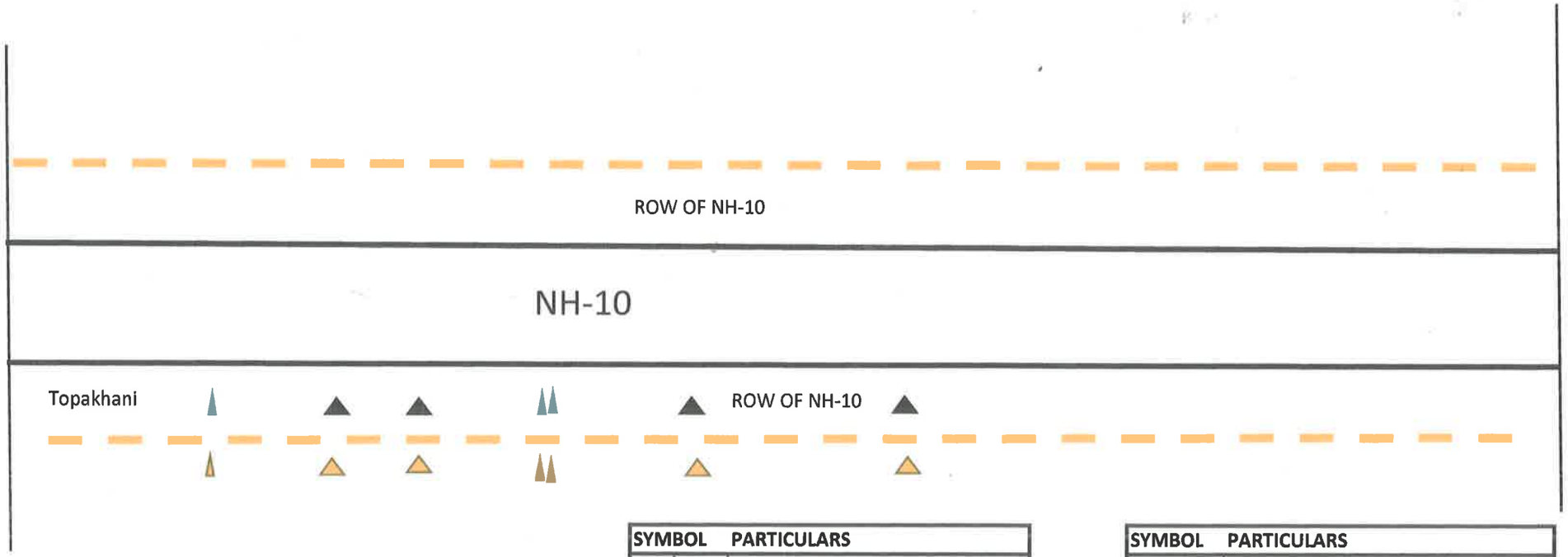
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Topakhani

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Power Department
Sub- Division

66+000

66+500



SYMBOL	PARTICULARS
▲	Existing 8.5mtr Lattice pole
▲	Existing 11mtr Lattice pole

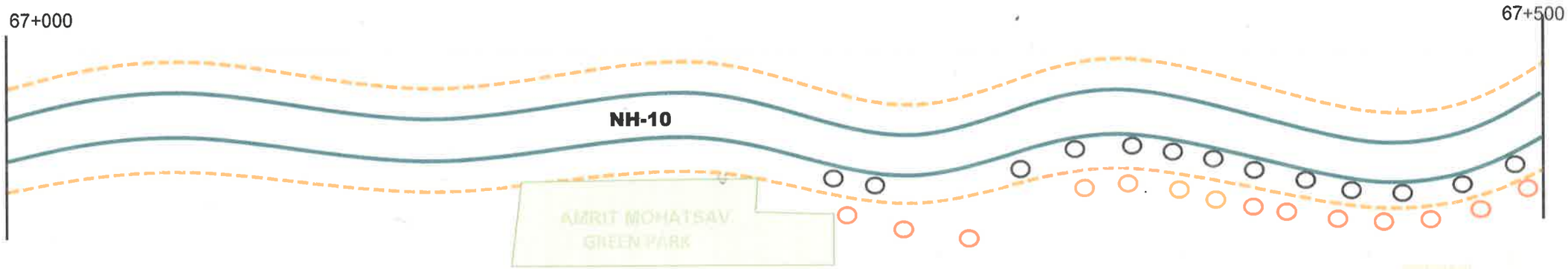
SYMBOL	PARTICULARS
△	Proposed 8.5mtr Lattice pole
△	Proposed 11mtr Lattice pole

*NOT TO SCALE

Superintending Engineer (East-I)
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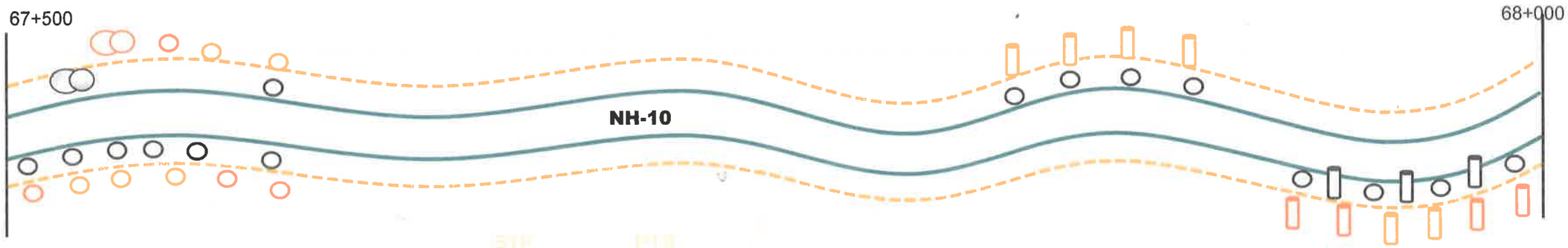


LEGEND	
SYMBOL	PARTICULARS
O	Existing LT Lattice Pole
O	Proposed LT Lattice Pole

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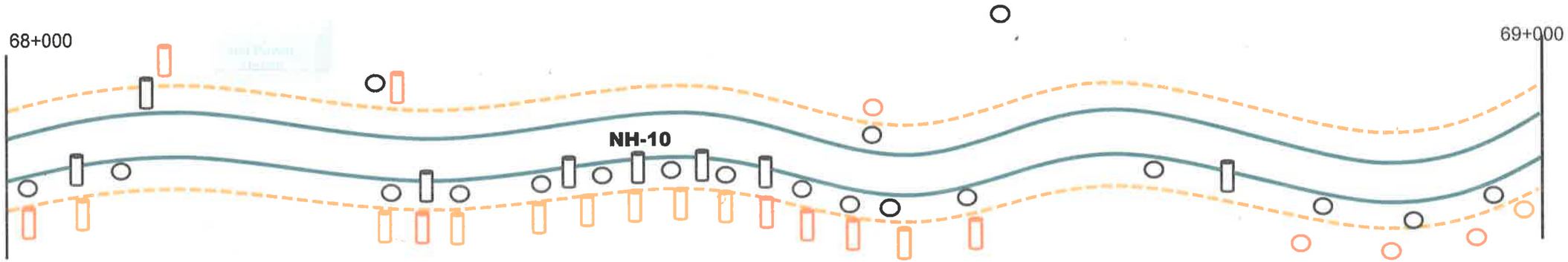


LEGEND	
SYMBOL	PARTICULARS
	Existing 100kva S/s
	Existing LT Lattice Pole
	Existing LT Tubular Pole
	Proposed 100kva S/s
	Proposed LT Lattice Pole
	Proposed LT Tubular Pole

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Sub- Division

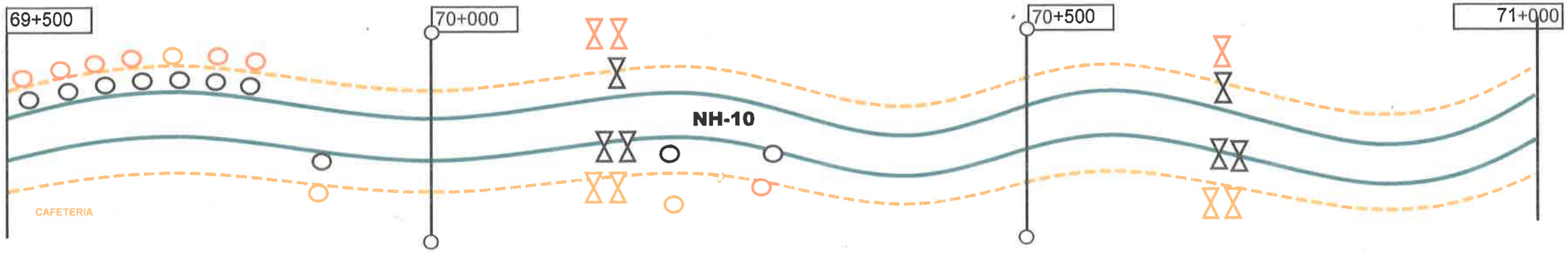


LEGEND	
SYMBOL	PARTICULARS
○	Existing LT Lattice Pole
▯	Existing LT Tubular Pole
○	Proposed LT Lattice Pole
▯	Proposed LT Tubular Pole

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Sub- Division

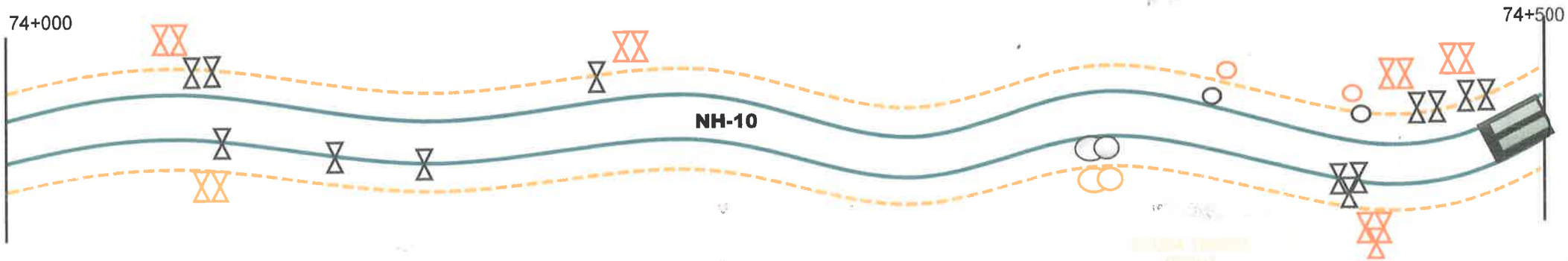


LEGEND	
SYMBOL	PARTICULARS
⧖	Existing HT Lattice Pole
○	Existing LT Lattice Pole
⧖	Proposed HT Lattice Pole
○	Proposed LT Lattice Pole

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Power Department
Sub- Division

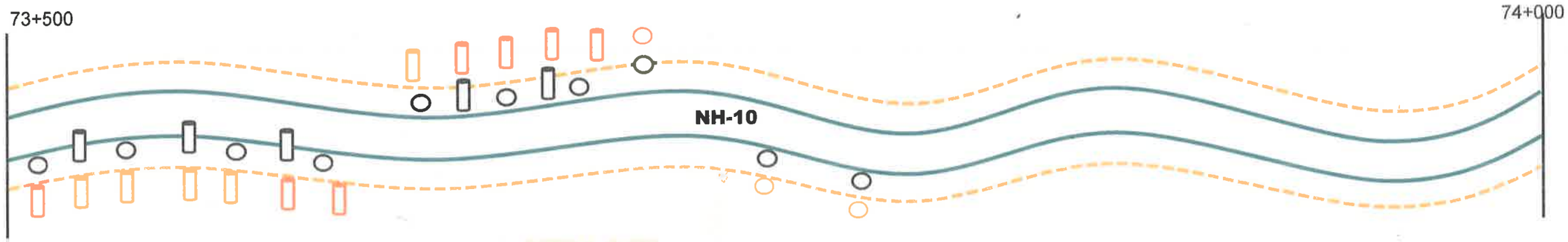


LEGEND	
SYMBOL	PARTICULARS
	Existing 63kva S/s
	Existing HT Lattice Pole
	Existing LT Lattice Pole
	Proposed 63kva S/s
	Proposed HT Lattice Pole
	Proposed LT Lattice Pole

Superintending Engineer (East-I)
Energy & Power Department
Topakhani, Singtam

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Power Department
Govt. of Sikkim
Topakhani

Junior Engineer (Elect.)
Power Department
Sub- Division

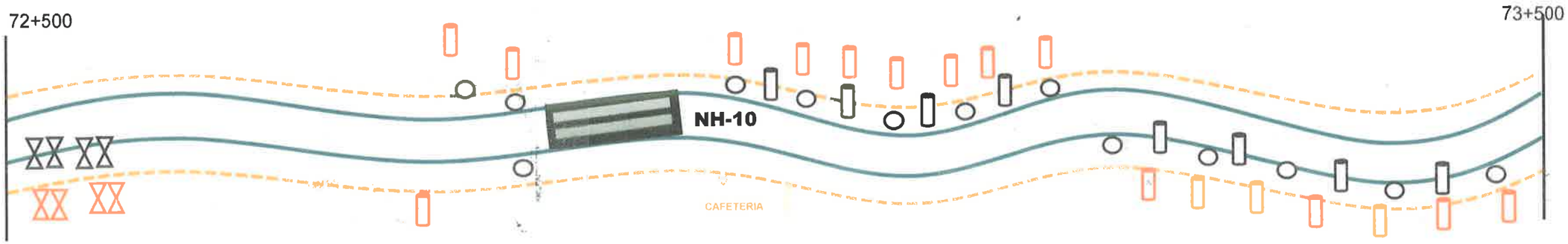


LEGEND	
SYMBOL	PARTICULARS
○	Existing LT Lattice Pole
▯	Existing LT Tubular Pole
○	Proposed LT Lattice Pole
▯	Proposed LT Tubular Pole

Superintending Engineer (East-I)
Energy & Power Department
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Power Department
Sub- Division

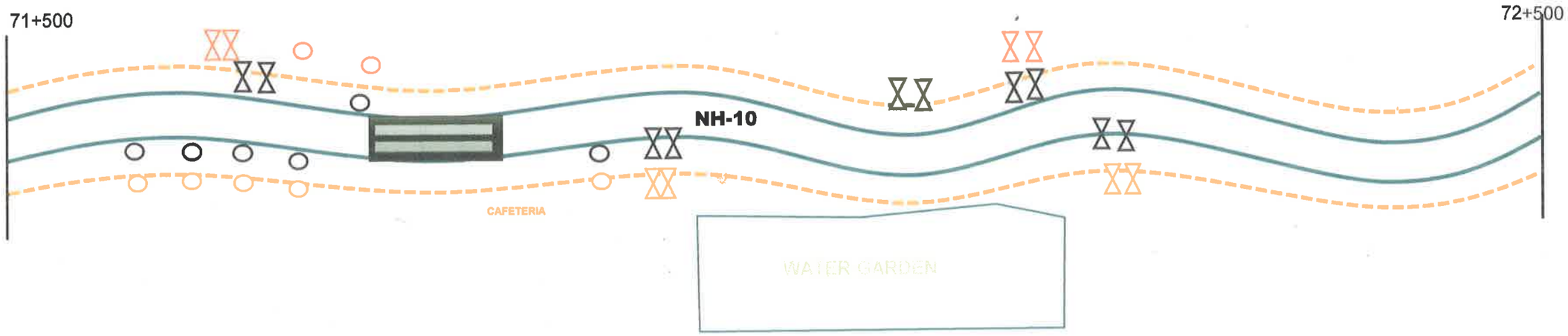


LEGEND	
SYMBOL	PARTICULARS
	Existing HT Lattice Pole
	Existing LT Lattice Pole
	Existing LT Tubular Pole
	Proposed HT Lattice Pole
	Proposed LT Tubular Pole

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Power Department
Sub- Division



LEGEND	
SYMBOL	PARTICULARS
⧖	Existing HT Lattice Pole
○	Existing LT Lattice Pole
▯	Existing LT Tubular Pole
⧖	Proposed HT Lattice Pole
○	Proposed LT Lattice Pole

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Power Department
Sub- Division

Government of Sikkim
Rural Development Department
Gangtok

No:- 146/RDD/JJM

Dated: 07/03/2025.

To,

The General Manager (P),
NHIDCL,
Ranipool,
Gangtok, Sikkim.

Subject:-Forwarding of two nos of estimate for shifting of water supply pipelines along NH 10

Sir,

Kindly find enclosed herewith the estimates for shifting of water supply pipelines along NH-10 for

1. "RWSS from Topa Khane uptoRanipool under Martam BAC" amounting to Rs. 55,15,700.00 only.
2. "RWSS at Chisopani GPU under Khamdong block" amounting to Rs 14,22,200.00 only.

Submitted for favour of kind information and further necessary action please.

Thanking You,

Yours Faithfully,

Divisional Engineer-cum-Project Manager (JJM)
Rural Development Department.

Copy to :-

1. District Collector (Gangtok) for kind information please.

Name of work; Estimate for shifting of existing pipe lines from Topa Khane upto Ranipool under Martam Block.

TECHNICAL REPORT

Estimate amounting Rs. ~~62,02,000.00 (Sixty Two Lakhs and Two Thousand)~~ only has been framed to meet a probable caused for the above sited work.

Brief: A Joint survey for widening of NH1O from Topa Khane upto Ranipool was conducted along with NHIDCL and concerned Junior Engineer on dated 7?12/2024. During survey it was observed the alignment of pipe lines catering to various area falling under Martam Block passess along NH10. Hence this pipe lines needs to be shifted after the widening of road is completed in order to ensure proper water supply to the public. Further, two numbers of 10,000 meter cube tank was found in way of widening of the road. So a proposal for reconstruction of the tank has been proposed. In addition provision of temporary water supply through HDPE and Alkaline Pipe has been in cooperated to ensure proper water supply to the affected areas during widening process. Accordingly an estimate has been framed in cooperating all the necessary items such has shifting of utilities.

Scope of work:

- Purchase of G.I Pipes, HDPE Pipes, Alkathene Pipes, fittings.
- Construction of RCC Tank
- Shifting of Pipe lines

RATES: JJM SOR.

Cost: ~~62,02,000.~~00

Agency: Departmental

Date of Comp: 3 Months

Hence an estimate has been prepared and submitted for favour of seeking administrative approval and financial sanction from the competent authority.

ASSISTANT ENGINEER
BLOCK ADMINISTRATIVE CENTRE
MARTAM, EAST SIKKIM

ESTIMATE OF SHIFTING OF EXISTING PIPE LINES FROM TOPA KHANE UPTO RANIPOOL UNDER MARTAM BAC.

GENERAL ABSTRACT OF COST

S.NO.	PRACTICULAR OF WORK	AMOUNT
1	Cost of G.I pipes and fittings including 5% storage charge	~~3966632.00~~
3	Cost of HDPE pipe and fittings including 5% storage charge	~~286075.00~~
	Material (A)	~~4252707.00~~ (A)
5	Fitting and Fixing of G.I pipes	307800.00
6	Shifting RE-fitting and fixing, trench cutting,CC	350787.00
7	Provision for construction of RCC Tank(1000ltr)	300500.00 (B)
	Civil Cost (B)	959087.00 (B)
8	TOTAL (A+B)	5211794.00 (A+B)
9	~~GST 18%~~	938123.000
10	L.CESS 1% ON 8 (A+B)	52118.000
		6202035.000
	say rupee	**6202000.00**

Rupees (~~Sixty two~~ lakhs and ~~two~~ thousand) only

Junior Engineer
BAC Martam

Assistant Engineer
BAC Martam

Divisional Engineer
GDZP

Divisional Engineer
Gangtok District Zilla Panchayat

CHECKED AND VERIFIED

Name of Work: Shifting of existing pipe lines from Topa Khane upto Ranipool

For Rs 55,15,700.00

Rupees fifty five lakhs fifteen thousand seven hundred only/-

Junior Engineer (JJM) Asst Engr (JJM)

ESTIMATE OF SHIFTING OF EXISTING PIPE LINES FROM TOPA KHANE UPTO RANIPOOL UNDER MARTAM BAC.

1 Providing HDPE pipe -PN 10 of medium class forv temporary restortion

size	length	unit	@	RS	
20mm	800	mtr.	@	~~51.92~~ 46	~~41536.00~~ 36800
25mm	1050	mtr.	@	~~64.9~~ 46.85	~~68145.00~~ 49193
32mm	800	mtr.	@	~~72.03~~ 63.80	~~57624.00~~ 51040
50mm	100	mtr.	@	~~148.2~~ 152.52	~~14820.00~~ 15252
75mm	200	mtr.	@	~~333.18~~ 345.02	~~66636.00~~ 69004
				Cost of pipes = Rs 2,21,288.00	~~2,48,761.00~~
				= Rs. 22128.85	Rs 12,438.05
~~supply of GI fittings~~				= Rs. 12170.87	Rs ~~24,876.00~~
					~~2,86,075.00~~

Add ~~5% for SC~~ 10% GI Fittings

Add @ 5% SC - 10% (243417)

MATERIAL COST (PIPE) (A) = Rs. 2,55,588.00 + Add 18% GST on (A) = Rs 46005.84 ⇒ Rs. 301593.84

2 Providing GI pipe of medium class (excluding trernching, refilling , compacting and cost of fitting) all complete.

80mm	200	m	@	Rs	1134.15 /m	Rs 226830.00
50mm	100	m	@	Rs	~~662.65~~ /m 679.21	Rs ~~66265.00~~ 67920
32mm	1340	m	@	Rs	426.81 /m	Rs 571925.40
25mm	1750	m	@	Rs	339.9 /m	Rs 594825.00
20mm	1310	m	@	Rs	221.19 /m	Rs ~~289758.90~~ 289760
15mm	9865	m	@	Rs	172.29 /m	Rs 1699640.85
					Cost of pipes = Rs. 3450914.00	~~3449245.15~~
	~~5% sc~~		on	~~Rs~~	~~3449245~~	Rs ~~172462.26~~
Supply of GI fittings @ 10% on total cost of pipe						= Rs ~~344924.52~~ 345091
						Rs ~~3966631.92~~ 3796005

Add @ 5% S.C (on 3796005) = 189800.00

MATERIAL COST (A) = Rs 3985806.00

3 Removing, RE-fixing, RE-fittng and fixing of pipes in various diameter as per sites conditions.

			rate	
Skilled labour	4 x	30 days	565 /days	67800.00
Unskilled labour	20	30 days	400 /days	240000.00

4 Trench cutting in mixed soil 0.5m in depth and 0.30m in width.

2621.7m	0.5	x	0.3	393.26 /m3	311	~~122303.86~~ 122379.00

5 Fitting with excavated earth in trenches.

393.26 /m3	136	~~53483.36~~ 139.83	54990

6 Provision for crossing of pipe at road

25	nos	4000 /nos	100000.00

7 Stagging of loading unloading of removed pipes of various locations

L/S	25000.00

8	Provision for Purchese of Alkaline Pipe & acc. L/S		50000.00
9	Provision for shifting of RCC Tank(estimate in closed) 2 nos		334516.00 ~~300500.00~~
		(B)	9,94,685.00
		TOTAL AMOUNT	~~5211794.14~~
		SAY RS	~~5211794.00~~

Add 18% GST on (B) = Rs 179043.00
Total civil work (B) = Rs. 11,73,728.00
(A+B) = Rs. 54,61,126.00

Junior Engineer
BAC Martam

For
Assistant Engineer
BAC Martam

CONSTRUCTION OF RESERVIOR TANK (10000 ltrs)

Items of Work		No.	Lengt	Breadth		Height	Quantity		Rate		Amount		
Site development & jungle clearance		2	lab	x	1	days	2	m/days	500	m/days	Rs.	1000	
labour engaged for hill cutting		2	lab		6	days	12	m/days	500	man/datys	Rs.	6000	
Labour engaged for removal of rubbish upto a distance of 50m outside the periphery of the area cleared		3	lab	X	4	days	12	m/days	500	man/datys	Rs.	6000	
Earthwork in excavation in all kinds of soil in foundation trenches i/c dressing of all sides, watering, ramming i/c disposal of excavated earth upto 30m lead and lift upto 1.5m disposed earth to be levelled and neatly dressed.		1	4.22	4.22		0.50	8.91		311.19	/Cum	Rs.	~~2772~~	2770.00
Providing and laying stone Soling in building works with clean hard selected stones, all complete		1	3.57	3.57		0.5	6.37		1110.94 ~~960.45~~	/Cum	Rs.	~~6118~~	7076.00
Providing and laying in position cement concrete of 1:3:6mix inclding compacting curing etc. all complete 20MM		1	3.57	3.57		0.19	2.42		5221.45 ~~4812.58~~	/cum	Rs.	~~11654~~	12636.00
							2.42 cum						
Providing, fixing and removing form work for casting RCC items with locally available timber		wall							703.70 ~~478.17~~	/sqm	Rs.	~~15894~~	23391.00
		2	3.26			1.38	9.00						
		2	3.26			1.38	9.00						
		2	3.02			1.26	7.62						
		2	3.02			1.26	7.62						
							33.24						
		Floor / Roof slab											
		2	3.57			0.19	1.36						
		2	3.57			0.19	1.36						
		1	3.43			0.13	0.45						
		1	3.43			0.13	0.45						
		1	3.43			3.43	11.77						

							15.39		902.07 ~~604.90~~	/sqm	Rs.	~~9310~~	13883.00
P/L RCC in 1:1.5:3 cement concrete mix excluding the cost of form work, finshing and reinforcements		1	3.26	3.26		0.13	1.38						
		2	3.26	0.10		1.26	0.82						
		2	3.26	0.10		1.26	0.82						
		1	3.26	3.26		0.13	1.38						
		1	0.23	0.23		0.13	0.007						
							4.42		6885.24 ~~6847.36~~				
D/d of manhole cover		1	0.2	0.2		0.1	0.004						
							4.42		6885.24 ~~6847.36~~	/cum	Rs.	~~30238~~	30405.00
Supplying / bending, binding in position tor steel reinforcement in all RCC works i/c cost of binding wires													
		No.	L	TL		WT	KG						
BASE 12MM(long side)	1	28	3.26	91.823		0.89	81.72	kg					
BASE 12MM(short side)		28	3.26	91.823		0.89	81.72	kg					
SIDE WALL (VERTICAL)	2	28	1.36	76.16		0.89	67.78	kg					
SIDE WALL (VERTICAL)	2	28	1.36	76.16		0.89	67.78	kg					
SLAB 12MM	1	30	3.43	101.47		0.89	90.31	kg					
SLAB 10MM	1	30	3.43	102.9		0.62	63.80	kg					
stirrups 10mm	1	13	13	169.52		0.62	105.10	kg					
							558	kg					
							6.0	qtl	8038.55				
							6.00	qtl	~~7462.43~~	/Qtl	Rs	~~44775~~	48231.00
P/L 12 mm thick cement plaster of 1:3 mix in single coat i/c finishing even and smooth and curing complete		2	3.26			1.38	9.00						
		2	3.26			1.38	9.00						
		2	3.02			1.26	7.61						
		2	3.02			1.26	7.61						
		1	3.26			3.26	10.63						
		2	3.43			0.13	0.90						
		2	3.43			0.13	0.90						
							45.66		199.99 ~~196.92~~	/Sqm	Rs.	~~8991~~	9131.00
P/L 40mm thick 1:2:4 c.c (1 cement, 2 coarse sand , 4 stone aggregate of size 12.5mm and down) flooring with floating coat of neat cement to give smooth		1	3.02	3.02			9.12						
							9.12		421.26 ~~372.49~~	/Sqm	Rs.	~~3397~~	3842.00
Providing neat cement finish		2	3.02			1.26	7.62						
		2	3.02			1.26	7.62						
		1	3.02			3.02	9.13						
							24.37		16.13	/Sqm	Rs.	393	

lettering and dIstemparing/wish wash on tank and with cost of the painter											LS	Rs.	2500
												Rs.	149042 Rs. 16,7258.00

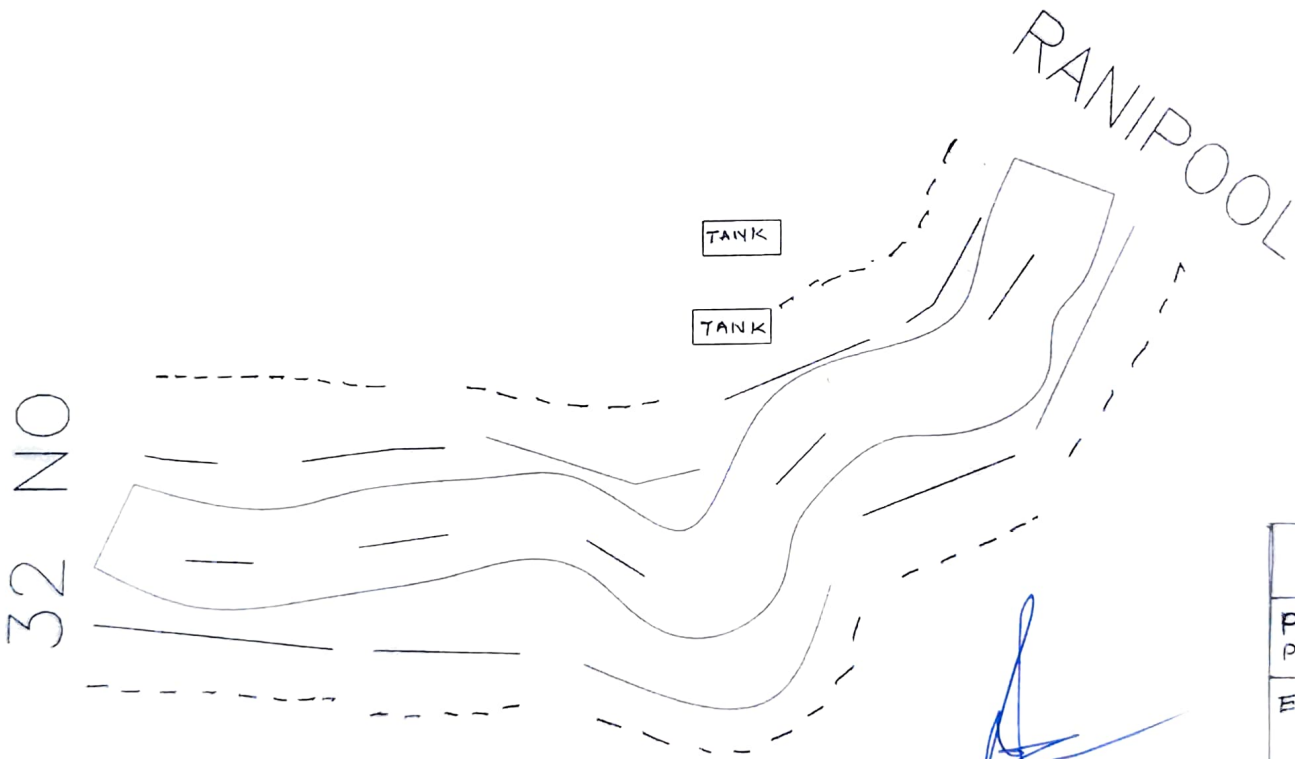
Particulars of work		Quantity	con	bags	con	sand	con	Stone	MS Rod
Stone soling		6.37 cum	0.00		0.00		0.95	6.05	0.00
1:3:6CC vide item no 6		2.42 cum	4.40	10.65	0.477 0.00	1.13 0.00	0.70 0.65	1.57 69	0.00
1.1.5.3 RCC vide item no 7		4.42 cum	8.00	35.00	0.57 0.00 0.43	1.89 0.00	0.57	2.51 2.38	0.00
12mm Plaster vide item no 9		45.66 sqm	10.20 0.00 0.147	6.71 0.00	1.67 0.000 0.015	0.684 0.000		0.00	0.00
40mm flooring vide item no 10		9.12 sqm	0.34	3.10	0.082 0.000	0.164 0.000	0.09	0.82	0.00
TMT bar		6.00 Qtl							6.00
TOTAL			8.5 5.5 bags	49		0.0 2.86 cum		10.83 11.07 cum	6.000 Qtl

Junior Engineer
Martam BAC

Assistant Engineer
Martam BAC

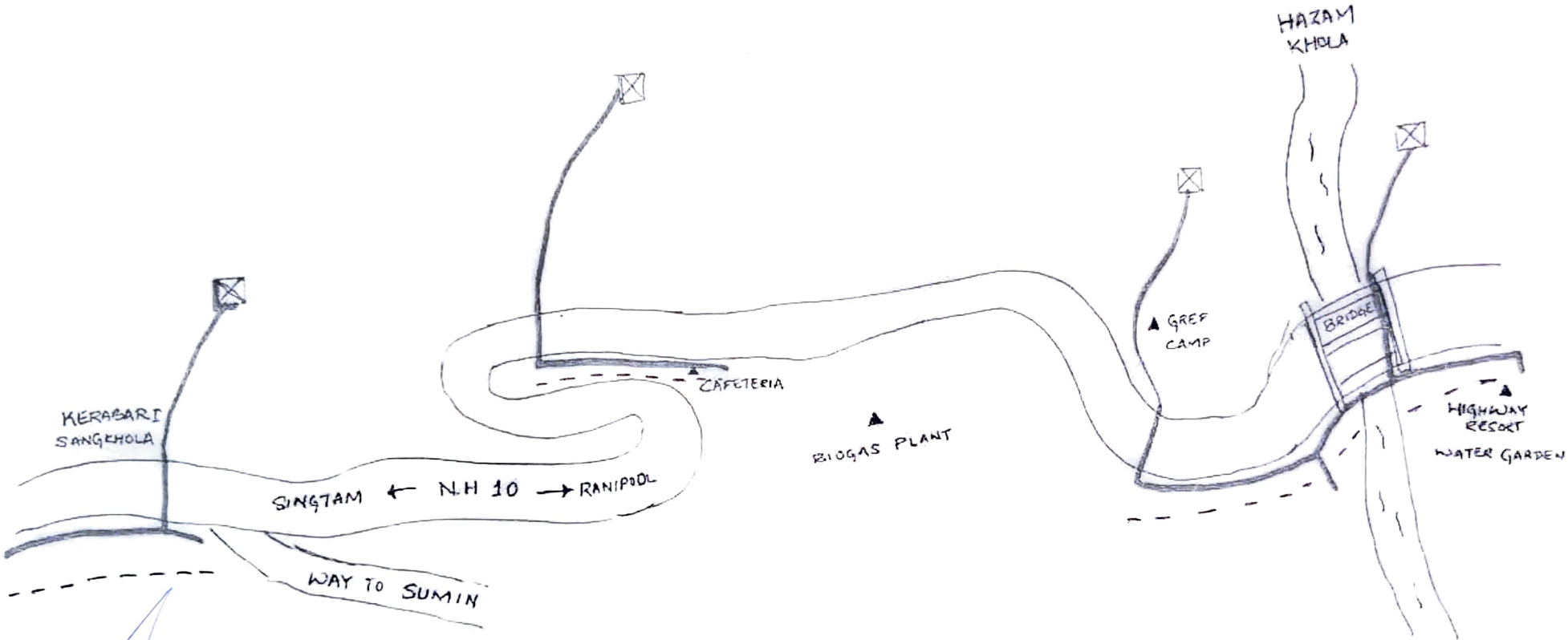
JUNIOR ENGINEER
MARTAM BAC, EAST

SHIFTING OF PIPE ALONG NH10 FOR THE SCHEME "RWSS FROM RANIPOOL TO 32NO



TANK	□
PROPOSED PIPELINE	----
Exiting pipe line	——

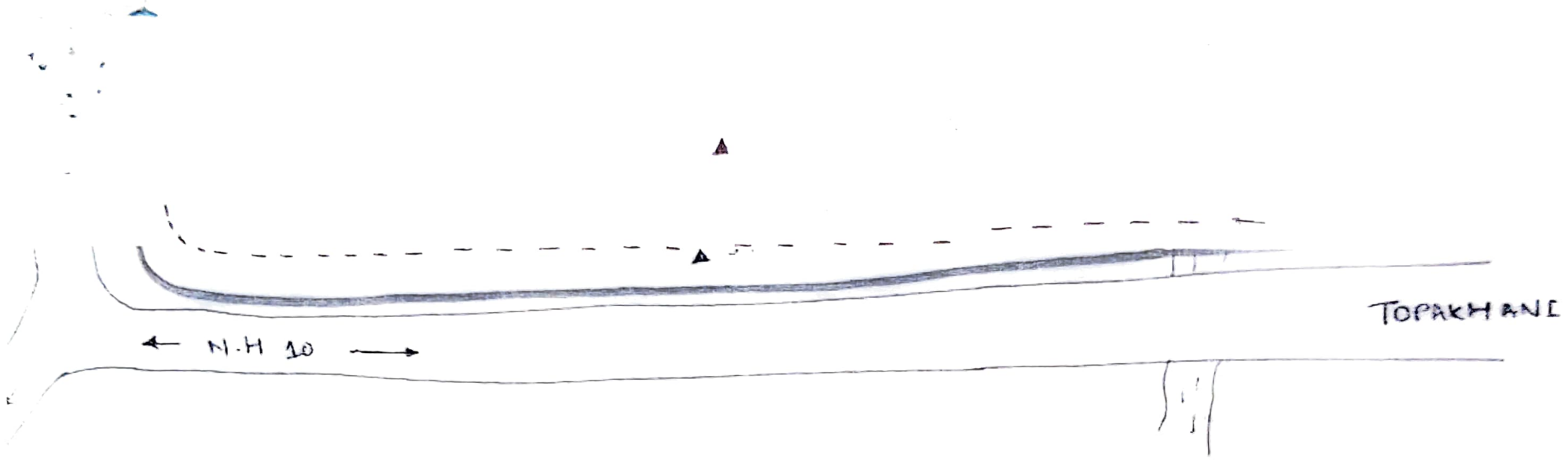
JUNIOR ENGINEER
MARTAM BAC, EAST



- WATER PIPELINE
- WATER TANK
- PROPOSAL PIPELING

JUNIOR ENGINEER
MARTAM BAC, EAST

CHUZA WARD



SANGKHOLA WARD

- WATER PIPELINE
- WATER TANK
- PROPOSAL PIPELINE

JUNIOR ENGINEER
MARTAM BAC, EAST

TITLE: ESTIMATE FOR SHIFTING OF UTILITIES UNDER RURAL DEVELOPMENT DEPARTMENT AT CHISOPANI GPU, KHAMDONG BLOCK , GANGTOK DISTRICT.

Technical Report

Brief: Estimate amounting to Rs.~~14,00,700.00~~ 14,22,200.00 (Rupees ~~Fourteen Lakhs and Seven Hundred~~ Fourteen Lakh twenty two thousand two hundred) only has been framed to meet up the probable cost for the above cited work.

Necessity: Reportedly, widening of NH10 from Singtam to Ranipool shall be done by NHIDCL after this monsoon season. In this regard a joint inspection was conducted by NHIDCL and RDD officials to verify the utilities that would be affected by the widening process. It was observed that the alignment of pipelines catering water supply to Shantinagar and Chisopani passes along the shoulder of NH10, with few crossings beneath the culverts. Hence, these pipelines need to be shifted after the widening of road is completed in order to ensure water supply to the public. Further, a 10000 m^3 water tank was found to be in the way of widening the road. So, the tank is proposed to be dismantled and reconstructed about 300m away from the existing location. In addition, provision of temporary supply of water to the affected public has also been incorporated to ensure continuous supply of water during the widening process. Accordingly, an estimate has been framed incorporating all the works necessary for shifting of utilities and ensuring temporary water supply during the disrupted period.

Rate : JJM SOR

Cost: Rs .~~14,00,700.00~~ 14,22,200.00

Location :Chisopani GPU, Khamdong Block, Gangtok District.

Scope: Shifting of water pipeline, construction of water tank.

Agency : Departmental

Time of Completion : 03months

Assistant Engineer,
BAC Khamdong

Assistant Engineer
Khamdong BAC
Rural Development Department
Government of Sikkim

ESTIMATE FOR:SHIFTING & RETROFITTING OF RWSS AT CHISOPANI GPU,UNDER RDD DEPARTMENT,GANGTOK DISTRICT.

GENERAL ABSTRACT OF COST

S.NO	PARTICULARS OF WORK		AMOUNT
1	COST OF GI PIPES including 5% storage charge		₹ ~~4,49,646.75~~
2	COST OF GI FITTINGS		~~₹ 44,964.68~~
3	COST OF HDPE PIPES including 5% storage charge		~~₹ 2,49,618.60~~
4	COST OF HDPE FITTINGS		~~₹ 24,961.86~~
	MATERIAL (A)	~~₹ 7,24,227.21~~ incl 18% GST	7,81,541.00
4	Fitting and fixing of GI pipes		~~₹ 88,703.00~~
5	Shifting,Re-Fitting and Fixing, Trench cutting and burrying		~~₹ 2,36,715.00~~
6	Provision for shifting of RCC Tank 10,000 ltrs		~~₹ 1,61,459.00~~
7	Carriage Cost		~~₹ 4,105.00~~
	CIVIL COST (B)	~~₹ 4,90,982.00~~ incl 18% GST	5,87,030.00
	SUB-TOTAL (A+B)	~~₹ 12,15,209.21~~	13,68,571.00
8	GST 18%		~~₹ 88,376.76~~
9	Labour Cess @1% on A+B		~~₹ 12,152.09~~ 13686
10	Unforeseen/Miscellaneous Items		₹ 40,000.00
	TOTAL		~~₹ 14,00,702.74~~ 14,22,257.00
			~~₹14,00,700.00~~

Rs. 14,22,200.00 Rs 14,22,200.00

Say	~~₹ 14,00,700~~	Rupees fourteen Lakh twenty two thousand two Hundred only/-

In ~~Words:Rupees Fourteen Lakhs and Seven Hundred only~~

Prepared by:	Junior Engineer			Assistant Engineer Khamdong BAC Rural Development Department Government of Sikkim	
	BAC	KHAMDONG		BAC	KHAMDONG

Divisional Engineer
GDZP

CHECKED AND VERIFIED

Cost estimate for the work of Shifting & Retrofitting of RWSS at Chisopani GPU, under RDD, Gangtok.

Name of Work: .....

For Rs 14,22,200.00/-

Rupees fourteen Lakh twenty two thousand two Hundred only/-

Junior Engineer (JJM)
Rural Development Department
Government of Sikkim, Gangtok

Executive Engineer (JJM)

Sl.No										
	Providing GI pipe of medium class (excluding trenching, refilling, compacting and cost of fittings) all complete								incl @18% GST	
1	15mm		365.00	mtr.					172.29	₹ 62,886.00
	20mm		300.00	mtr.					221.19	₹ 66,357.00
	25mm		351.00	mtr.					339.90	₹ 1,19,305.00
	32mm		421.00	mtr.					426.81	₹ 1,79,687.00
	40mm		0.00	mtr.					489.58	₹ 0.00
	50mm		0.00	mtr.					662.65	₹ 0.00
	65mm		0.00						0.00	₹ 0.00
	Total		1437.00	mtr.					0.00	**₹ 4,28,235.00**
	Add @ 10% GI Fittings ~~Add 5% for SC~~ on Cost of pipes								**₹ 4,28,235**	~~₹ 21,412~~ 42823
										₹ 4,49,646.75 471058
	Add @ 5% S.C on (471058)									
	~~Supply of GI Fittings @10% on total cost of pipe~~			**449646.75**						~~₹ 44,964.68~~ 23553
2	(~~MATERIAL COST~~) Cost of pipes (A) =									**₹ 4,73,199.68** 494611.00
	Providing HDPE pipe-PN 10 of medium class for temporary restortion.									
6	Sizes		Length	unit					Rate Inc @18% GST	
	32mm		3300.00	mtr.				75.28	~~72.04~~	₹ ~~2,37,732~~ 2,48,424.00
	Add @ 10% GI Fittings ~~Add 5% for SC~~ on Cost of pipe									~~₹ 11,887~~ 24842.00
	Add @ 5% S.C									~~₹ 2,49,619~~ 273266.00
	~~Supply of GI Fittings @10% on total cost of pipe~~			**249618.60**						~~₹ 24,961.86~~ 13663.00
2	(494611 + 286930)									**₹ ~~24,961.86~~** 286930.00
	MATERIAL COST (A) = Rs. 7,81,541.00									
	Fitting and fixing GI pipe of in various size as per requirement at site									
3	Sizes		Length	unit					Rate	
	15mm		365.00	mtr.					38.67	₹ 14,115
	20mm		398.00	mtr.					47.09	₹ 18,742
	25mm		351.00	mtr.					65.3	₹ 22,920
	32mm		421.00	mtr.					78.21	₹ 32,926
	40mm		0.00	mtr.					90.66	₹ 0
	50mm		0.00	mtr.					120.83	₹ 0
	Total		1535.00	mtr.						**₹ 88,703**
	Shifting, RE-Fitting and fixing GI pipe in various size as per requirement at site									
4	labour				Dys	M/DAY			Rate	
	skilled		4	x	25	100.00			550.00	₹ 55,000
	unskilled		12	x	25	300.00			400.00	₹ 1,20,000
										₹ 1,75,000
	Trench cutting in mixed soil 0.50m in depth and 0.30m in width.									
5	Sizes		Length	unit		Qntty.			Rate	
	15mm		219.00	mtr.						
	20mm		238.80	mtr.						
	25mm		210.60	mtr.						
	32mm		252.60	mtr.						
	40mm		0.00	mtr.						
	50mm		0.00	mtr.						42944
			921.00	mtr.		138	m^3		311.00	~~₹ 42,965~~

1134.12

	Filling with excavated earth in trenches								
6		Qntty	m^3				unit	Rate	
		138.15					mtr.	~~135.72~~ 139.83	~~₹ 18,750.00~~ 19297.00

	provision for shifting of RCC Tank										
7	Sizes	Nos	cement (bags)	Sand (cum)	Stone (cum)	Msbars (Qtl)				Rate	
	10000	1	~~56.43~~ 55	~~3.60~~ 3.86	~~7.11~~ 11.07	~~6.44~~ 6.00				~~161459~~	~~1,61,459.00~~ 167258.00
											₹ 1,61,459.00

	Loading and unloading of Stock Material		Qty	Qty				Rate	
8			Qntls.	MT					
	a	cement	~~28.22~~ 27.50						
	b	MS Bars	~~6.44~~						
	c	GI Pipe	30.71						
		stock	~~65.37~~ 64.21	~~6.54~~ 6.42				~~253.85~~ 228.47 1466.77	~~₹ 1,659.00~~

	Cost of Haulage				Material		Qty	Distance	Rate	
9			Qntls. 27.50	MT		cum 3.86	Ton 6.33	Km	Ton/ Km	
	a	cement	~~28.22~~		sand	~~3.60~~	~~5.76~~ 6.83	8	7.17	~~₹ 330.00~~ 345
	b	MS Bars	~~6.44~~ 6.42		Stone	~~7.11~~ 11.07	~~15.6~~ 6.42	8	7.17	~~₹ 897.00~~ 1330
	c	GI Pipe	~~65.37~~ 64.21	~~6.54~~ 6.42	stock		6.54	26	7.17	~~₹ 1,219.00~~ 1140
										~~₹ 2,446.00~~ 2815.00

(B) 497483

JUNIOR ENGINEER
BAC Khamdong

Assistant Engineer
Khamdong BAC
ASSISTANT ENGINEER
Rural Development Department
Government of Sikkim
BAC Khamdong

MATERIAL COST (A) = Rs. 7,81,541.00 (incl of 18% GST).

CIVIL COST (B) = Rs 4,97,483.00

Add 18% GST on (B) = Rs. 89547.00

TOTAL (~~A+B~~) CIVIL COST (B) = Rs. 587030

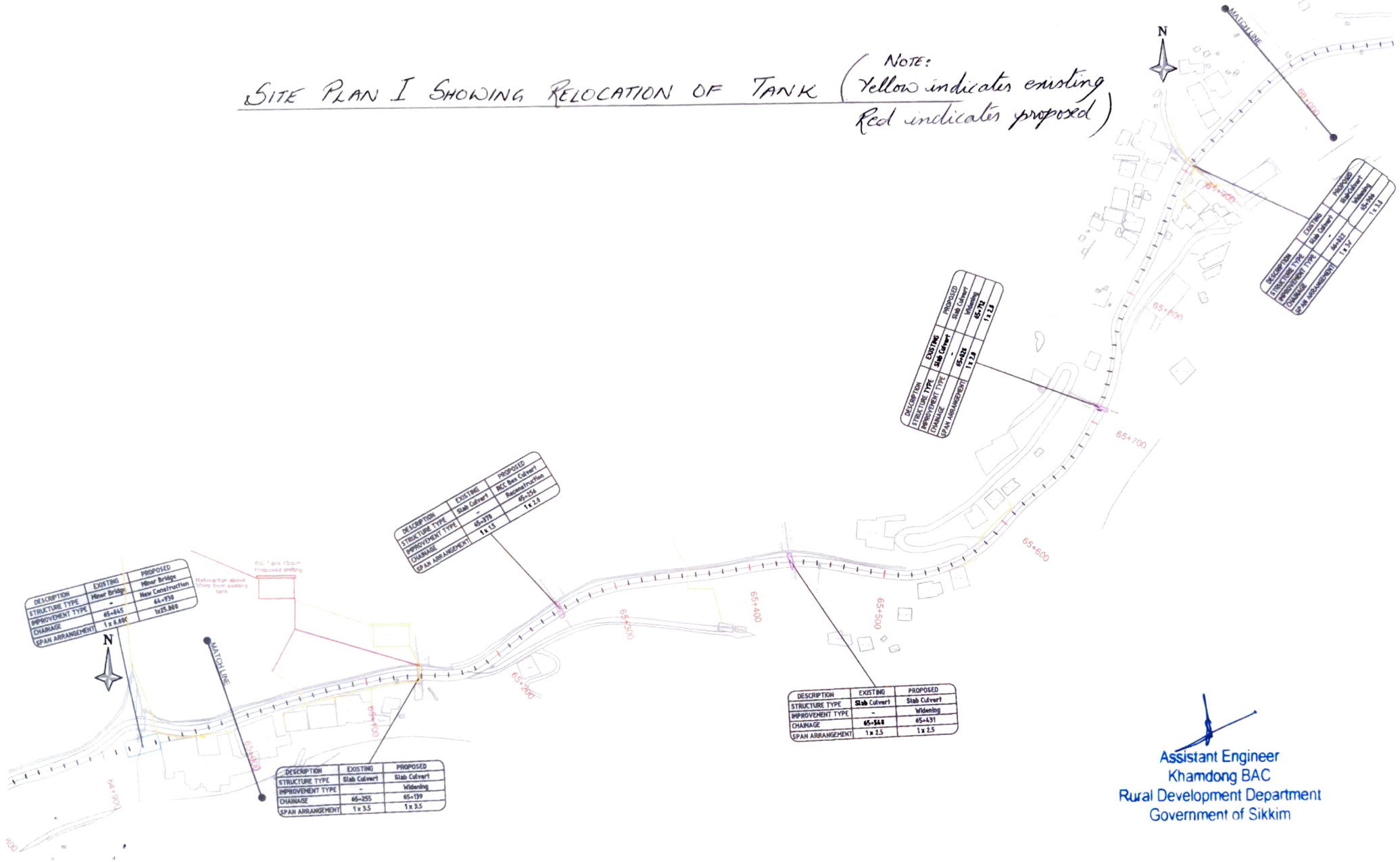
(A+B) = Rs. 13,68,571.00

Labour cess @ 1% (A+B) = 13685.71

~~GRAND TOTAL = Rs. 13,82,256.00~~ /-

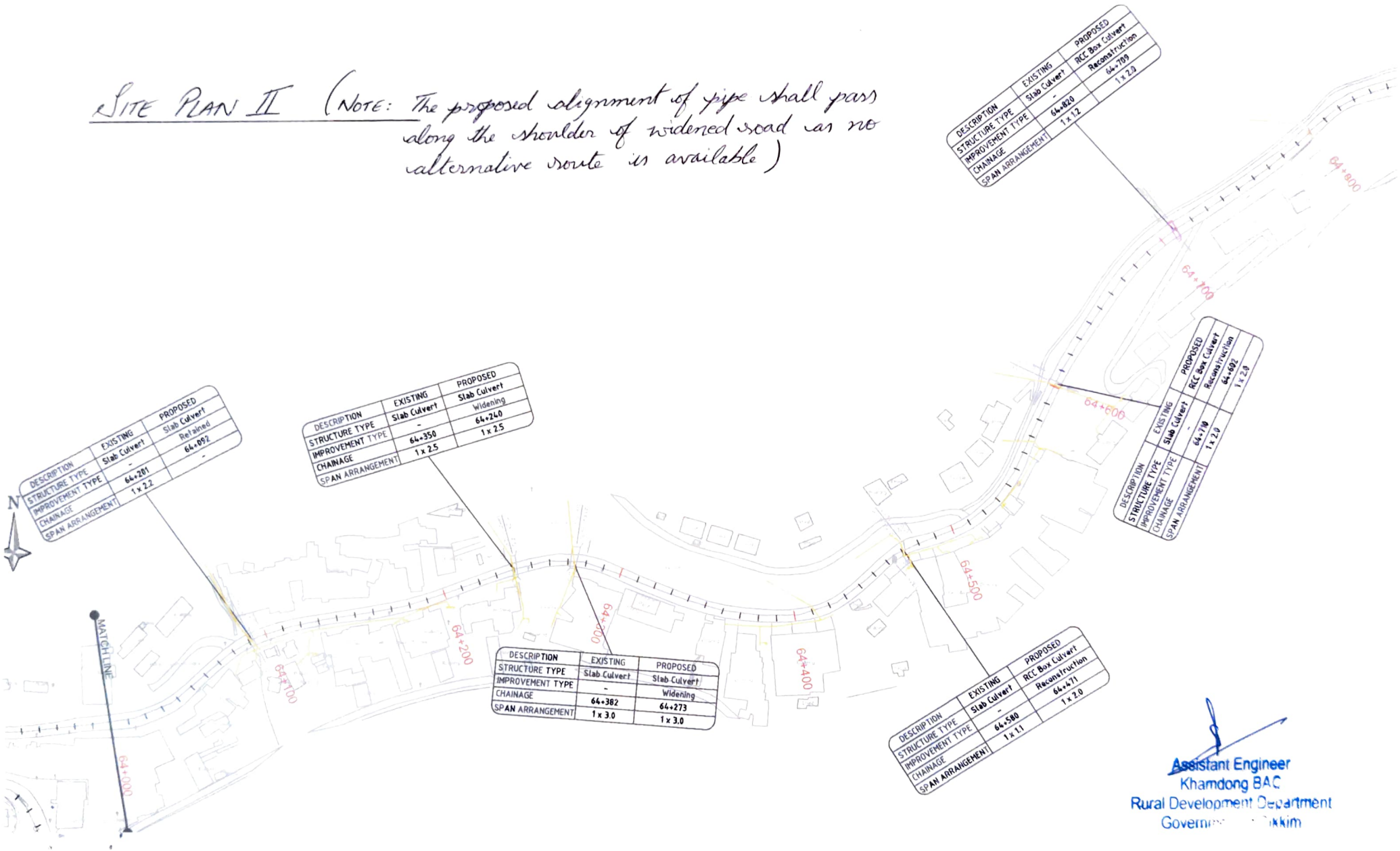
SITE PLAN I SHOWING RELOCATION OF TANK

NOTE:
Yellow indicates existing
Red indicates proposed



Assistant Engineer
Khamdong BAC
Rural Development Department
Government of Sikkim

SITE PLAN II (NOTE: The proposed alignment of pipe shall pass along the shoulder of widened road as no alternative route is available)



Assistant Engineer
Khamdong BAC
Rural Development Department
Govern... Sikkim

Government of Sikkim
Rural Development Department
Gangtok

No:- 144/RDD/JJM **Dated: 07/03/2025.**

To,

The General Manager (P),
NHIDCL,
Ranipool,
Gangtok, Sikkim.

Subject:- Forwarding of estimate for shifting of water supply pipelines along NH-10.

Sir,

Kindly find enclosed herewith the "Estimate for shifting of water supply pipelines along NH-10 for RWSS from Bagey khola source to Toribari gaon via lower Bordang at Singlebong" amounting to Rs. 8,95,234.00 only.

Submitted for favour of kind information and further necessary action please.

Thanking You,

Yours Faithfully,

Divisional Engineer-cum-Project Manager (JJM)
Rural Development Department, Government of Sikkim, Gangtok

Divisional Engineer-cum-Project Manager (JJM)
Rural Development Department.

Copy to :-

1. District Collector (Pakyong) for kind information please.

TECHNICAL REPORT ON WORK SHIFTING OF PIPES ALONG NH 10

Name of Work: Augmentation of RWSS from Bhagaykhola Source to Tooribari Goan via Lower Bordang at Singleybong Ward under West Pendam G.P.U.

Estimated Cost: Rs.9,73,914.00 ~~(Rupees Nine lakhs seventy-three thousand nine hundred and fourteen only)~~ 8,95,234

Rate: SoR 2020

Location: Along the stretch of NH 10 from Rangpo to Singtam

History:

The proposed extension of NH 10 has necessitated the shifting of existing infrastructure assets constructed under BAC Duga. A joint survey was conducted on **10.12.2024** by the Junior Engineers from BAC Duga and officials from NHIDCL to evaluate the damage to these assets. Based on this survey, it was determined that certain assets would be affected due to the road extension.

Identified Affected Assets:

The following assets were identified as likely to be damaged due to the NH 10 extension:

1. Footpath from NH 10 to Jholungey Bridge at Mazitar.
2. Pipeline for the scheme "RWSS from Bhagaykhola Source to Tooribari Goan via Lower Bordang at Singleybong."
3. Footpath from NH 10 to Jholungey Bridge at Bardang.
4. RCC Water Tank (10 cum) at Bardang near the sliding zone.
5. Footpath from NH 10 to Bardang Village at two locations.
6. Jhora Training work at Bordang near NH 10.
7. Waiting shed along NH 10 near the road bridge at Singtam.
8. Footpath from NH 10 to Sawney Village near the road bridge at Singtam.

Scope of Work

Out of the identified assets, a **detailed estimate** for the shifting work has been prepared specifically for **Sl. No. 2 - the pipeline shifting for the RWSS scheme**. The repair/reconstruction of the remaining assets will be undertaken by NHIDCL as per their commitment. The shifting of the affected pipeline under the RWSS scheme (mention above) has been estimated accordingly.

Additionally, it was observed that 2.00nos (two) **40mm GI pipelines** were also present at Bhagaykhola, which were constructed and repaired by Aristo Pharma Company (Bhageykhola).

Estimated Cost & Approval:

The total estimated cost for the shifting of the identified pipeline amounts to **Rs.** ~~9,73,914.00~~ 8,95,234.00 prepared based on **SoR 2020** rates. The estimate has been submitted for **administrative approval** and **financial sanction** from the competent authority.

The shifting of the pipeline is essential to ensure uninterrupted water supply under the RWSS scheme and to facilitate the NH 10 extension. Timely approval and financial sanction will allow for seamless execution of the necessary work, minimizing disruptions to public infrastructure and services.

Assistant Engineer
BAC Duga
RDD
Govt of Sikkim

Assistant Engineer
Block Administrative Centre
Duga RDD
Govt of Sikkim

ABSTRACT OF COST

Name of Scheme: Shifting of Pipes along NH 10 for the Scheme"RWSS from Bhagaykhola source to Tooribari Goan via Lower Bardang at Singlrybong under West Pedam G.P.U

Sl.no	Particular	Amount
1	Shifting of pipe along NH 10 for the scheme RWSS from Tooribari source to Lower Bordang at Singleybong ward under West Pendam G.P.U	₹ 7,51,161.00
2	Add GST @18%	₹ 1,35,209.00
	Sub Total	₹ 8,86,370.00
3	Add labour Cess @1%	₹ 8,864.00
	Grand Total	₹ 8,95,234.00

Rupees (Eight Lakhs ninty five Thousand two Hundred and thirty four)Only.

Junior Engineer
BAC Duga
RDD
Govt. of Sikkim

Assistant Engineer
BAC Duga
RDD
Govt. of Sikkim

CHECKED AND VERIFIED

Name of Work: Shifting of pipes along NH10 for the Scheme "RWSS from Bhagaykhola source to Tooribari Goan via Lower Bordang at Singlrybong.

For Rs 8,95,234/-

Rs Eight Lakh ninty five thousand two hundred thirty four Only/-

Junior Engineer (JJM)

Assistant Engineer (JJM)

Project Manager(JJM)
Rural Development Department
Government of Sikkim
Gangtok

Name of Scheme: Shifting of Pipes along NH 10 for the Scheme"RWSS from Bhagaykhola source to Tooribari Goan via Lower Bardang at Singlrybong under West Pedam G.P.U

Sl.no	Item of Work	Qty	Unit	Rate	Amount (in Rs)
1	Sifting of G.I Pipes from Old alignment to New alignment				
	15mm 10 men x 30 days	300	m.days	600	180000
				A	180000
2	Providing GI pipe of medium class(excluding trenching, refilling, compacting and cost of fittings) all complete including GST.				
	15mm	1525	m	146.01	222665
2a	Providing GI Fittings @ 30% on total cost of Pipe	222665	@	20%	44533
				B	267198
3	Fittings and Fixing GI pipe of medium class				
	15mm	2772.7	m	38.67	107221
4	Trench cutting in mixed soil 0.40m in depth and 0.30m in width				
	15mm	232.91	cum	295.92	68923
5	Filling with excavated earth in trenches	232.91	cum	139.83	32568
				C	208712

Therotical consumption of stock and non stock materials

	Item	Qty	Unit/ Weight	Cement	Sand	Stone	M.S Rod	Tank	Weight (Kg)
	15mm	1525	1.21						1845.25
	15mm	2772.7	1.21						3355.00

6	Loading and unloading of Stock Materials				
	GI Pipe	1845.25	Kg		
		1.85	MT	228.47	423
7	Cost of Haulage of Stock Materials				
	GI Pipe	1.85	MT	6.83	13
8	Head load of Materials				
	Stock	600.00	m		
	Beyond 100m for every additional 1000m	33.55	Qtls	86.38	2898
				D	3334
9	Construction of New pillar for supporting pipes (RCC)	11	nos	5287.9	58167
10	During road widening, the Supply of water can be affected. To ensure contineud access to water, alternative through HDPE Polypipe	25	coil	1350	33750
				E	91917
				Total Amount (A+B+C+D+E)	751161

Junior Engineer
BAC Duga
RDD
Govt. of Sikkim

Assistant Engineer
BAC Duga
RDD
Govt. of Sikkim

Estimate for Construction of R.C.C Pillar

Sl.no	Particulars	Length	Width	Hight	Quantity	Unit	Rate	Amount
1	Preparatory work			=	1	Job	L S	₹ 1,578.00
2	Excavation in soil in hilly area by manual means including cutting and trimming of side slopes and disposing of excavated earth with all lifts and lead upto 50 meters	0.60	0.65	0.650	0.25	m3	₹ 311.19	₹ 78.00
3	Providing and laying hand packed stone soling in building works with clean hard selected stones, all complete. (Manual Means)	0.60	0.65	0.15	0.06	m3	₹ 1,110.94	₹ 67.00
4	Providing and laying in position cement concrete of 1:4:8 mix including compacting curing etc all complete	0.60	0.65	0.10	0.04	m3	₹ 4,496.65	₹ 180.00
5	Providing, Fixing and removing form work for casting RCC items with locally available timber							
	Base of Column:-	4.00	0.30	0.30	0.36	m2	₹ 825.32	₹ 297.00
6	Providing and Laying in position 1:1.5:3 mix of reinforced cement concrete excluding the cost of form work, finishing and reinforcements	0.60	0.65	0.10	0.04	m3		
		0.30	0.30	1.50	0.14	m3		
					0.18	m3	₹ 6,885.24	₹ 1,239.00
7	Supplying, bending and placing in position tor steel reinforcement in all R.C.C works including cost of binding wires, all complete		0.18	1.30	0.23	Qtls	₹ 8,038.55	₹ 1,849.00
							Total	₹ 5,288.00

Theoretical Consumption

sl.no	Particular of work	Unit	Cement (Bags)	Sand (Cum)	Stone (Cum)	Tor-Steel (Qtls)
1	Stone Soiling	cum			0.06	
2	C.C 1:4:8 mix	cum	0.13	0.02	0.03	
3	R.C.C 1:1.5:3	cum	1.44	0.08	0.15	
4	Tor Steel	Qtls				0.23
	Total		**1.57**	**0.10**	**0.25**	**0.23**

Junior Engineer
BAC Duga
RDD
Govt. of Sikkim

Assistant Engineer
BAC Duga
RDD
Govt. of Sikkim

Shifting of Pipe along NH10 for the scheme"RWSS from Bhagaykhola source to Tooribari goan via Lower Bordang Singleybong

Junior Engineer
BAC Duga
RDD
Govt. of Sikkim



Assistant Engineer
BAC Duga
RDD
Govt. of Sikkim

Government of Sikkim
Rural Development Department
Gangtok

No:- 146/RDD/JJM **Dated: 07/03/2025.**

To,

The General Manager (P),
NHIDCL,
Ranipool,
Gangtok, Sikkim.

Subject:-Forwarding of two nos of estimate for shifting of water supply pipelines along NH 10

Sir,

Kindly find enclosed herewith the estimates for shifting of water supply pipelines along NH-10 for

1. "RWSS from Topa Khane upto Ranipool under Martam BAC" amounting to Rs. 53,34,900.00 only.
2. "RWSS at Chisopani GPU under Khamdong block" amounting to Rs 14,22,200.00 only.

Submitted for favour of kind information and further necessary action please.

Thanking You,

Yours Faithfully,

Divisional Engineer-cum-Project Manager (JJM)
Rural Development Department.

Copy to :-

1. District Collector (Gangtok) for kind information please.

TITLE: ESTIMATE FOR SHIFTING OF UTILITIES UNDER RURAL DEVELOPMENT DEPARTMENT AT CHISOPANI GPU, KHAMDONG BLOCK , GANGTOK DISTRICT.

Technical Report

Brief: Estimate amounting to Rs.~~14,00,700.00~~ 14,22,200.00 (Rupees ~~Fourteen Lakhs and Seven Hundred~~ fourteen lakh twenty two thousand two hundred) only has been framed to meet up the probable cost for the above cited work.

Necessity: Reportedly, widening of NH10 from Singtam to Ranipool shall be done by NHIDCL after this monsoon season. In this regard a joint inspection was conducted by NHIDCL and RDD officials to verify the utilities that would be affected by the widening process. It was observed that the alignment of pipelines catering water supply to Shantinagar and Chisopani passes along the shoulder of NH10, with few crossings beneath the culverts. Hence, these pipelines need to be shifted after the widening of road is completed in order to ensure water supply to the public. Further, a 10000 m^3 water tank was found to be in the way of widening the road. So, the tank is proposed to be dismantled and reconstructed about 300m away from the existing location. In addition, provision of temporary supply of water to the affected public has also been incorporated to ensure continuous supply of water during the widening process. Accordingly, an estimate has been framed incorporating all the works necessary for shifting of utilities and ensuring temporary water supply during the disrupted period.

Rate : JJM SOR

Cost: Rs .~~14,00,700.00~~ 14,22,200.00

Location :Chisopani GPU, Khamdong Block, Gangtok District.

Scope: Shifting of water pipeline, construction of water tank.

Agency Departmental

Time of Completion : 03months

Assistant Engineer,
Rural Development Department
Khamdong BAC
Government of Sikkim

ESTIMATE FOR:SHIFTING & RETROFITTING OF RWSS AT CHISOPANI GPU,UNDER RDD DEPARTMENT,GANGTOK DISTRICT.

GENERAL ABSTRACT OF COST

S.NO	PARTICULARS OF WORK		AMOUNT
1	COST OF GI PIPES including 5% storage charge		₹ 4,49,646.75
2	COST OF GI FITTINGS		₹ 44,964.68
3	COST OF HDPE PIPES including 5% storage charge		₹ 2,49,618.60
4	COST OF HDPE FITTINGS		₹ 24,961.86
	MATERIAL (A)	₹ 7,24,227.21 incl 18% GST	7,81,541.00
4	Fitting and fixing of GI pipes		₹ 88,703.00
5	Shifting,Re-Fitting and Fixing, Trench cutting and burrying		₹ 2,36,715.00
6	Provision for shifting of RCC Tank 10,000 ltrs		₹ 1,61,459.00
7	Carriage Cost		₹ 4,105.00
	CIVIL COST (B)	₹ 4,90,982.00 incl 18% GST	5,87,030.00
	SUB-TOTAL (A+B)	₹ 12,15,209.21	13,68,571.00
8	GST 18%		₹ 88,376.76
9	Labour Cess @1% on A+B		₹ 12,152.09 13686
10	Unforeseen/Miscellaneous Items		₹ 40,000.00
	TOTAL		₹ 14,00,702.74 14,22,257.00
			₹14,00,700.00

Rs. 14,22,200.00 Rs 14,22,200.00

Say	₹ 14,00,700 Rupees fourteen lakh twenty two thousand two hundred only/-

In Words: Rupees Fourteen Lakhs and Seven Hundred only

Prepared by:	Junior Engineer	BAC	KHAMDONG	Assistant Engineer Khamdong BAC Rural Development Department Government of Sikkim	Assistant Engineer	BAC	KHAMDONG

Divisional Engineer
GDZP

Gangtok dtd/ branch at

CHECKED AND VERIFIED

Name of Work: Shifting & Retrofitting of RWSS at Chisopani GPU under RDD, Gangtok.

For Rs 14,22,200.00/-

Rupees fourteen lakh twenty two thousand two hundred only/-

Junior Engineer (JJM)
Rural Development Department
Government of Sikkim, Gangtok

Junior Engineer (JJM)

Sl.No										
	Providing GI pipe of medium class (excluding trenching, refilling, compacting and cost of fittings) all complete								incl. @18% GST	
1	15mm		365.00	mtr.					172.29	₹ 62,886.00
	20mm		300.00	mtr.					221.19	₹ 66,357.00
	25mm		351.00	mtr.					339.90	₹ 1,19,305.00
	32mm		421.00	mtr.					426.81	₹ 1,79,687.00
	40mm		0.00	mtr.					489.58	₹ 0.00
	50mm		0.00	mtr.					662.65	₹ 0.00
	65mm		0.00						0.00	₹ 0.00
	Total		1437.00	mtr.					0.00	**₹ 4,28,235.00**
	Add @ 10% GI Fittings Add 5% for SC on cost of pipes								**₹ 4,28,235**	~~₹ 21,412~~ 42823
										~~₹ 4,49,646.75~~ 471058
	Add @ 5% S.C on (471058)									
	~~Supply of GI Fittings @10% on total cost of pipe~~			**449646.75**						~~₹ 44,964.68~~ 23553
2									(~~MATERIAL COST~~) Cost of pipes (A) =	**~~₹ 4,73,199.68~~** 494611.00

	Providing HDPE pipe-PN 10 of medium class for temporary restortion.									
6	Sizes		Length	unit					Rate Inc @18% GST	
	32mm		3300.00	mtr.					75.28 ~~72.04~~	~~₹ 2,37,732~~ 2,48,424.00
	Add @ 10% GI Fittings Add ~~5% for SC~~ on Cost of pipe									~~₹ 11,887~~ 24842.00
	Add @ 5% S.C.									~~₹ 2,49,619~~ 273266.00
	~~Supply of GI Fittings @10% on total cost of pipe~~			**249618.60**						~~₹ 24,961.86~~ 13663.00
2										**~~₹ 24,961.86~~** 286930.00

(494611 + 286930)
MATERIAL COST (A) = Rs. 7,81,541.00

	Fitting and fixing GI pipe of in various size as per requirement at site									
3	Sizes		Length	unit					Rate	
	15mm		365.00	mtr.					38.67	₹ 14,115
	20mm		398.00	mtr.					47.09	₹ 18,742
	25mm		351.00	mtr.					65.3	₹ 22,920
	32mm		421.00	mtr.					78.21	₹ 32,926
	40mm		0.00	mtr.					90.66	₹ 0
	50mm		0.00	mtr.					120.83	₹ 0
	Total		1535.00	mtr.						**₹ 88,703**

	Shifting, RE-Fitting and fixing GI pipe in various size as per requirement at site									
4	labour				Dys	M/DAY			Rate	
	skilled		4	x	25	100.00			550.00	₹ 55,000
	unskilled		12	x	25	300.00			400.00	₹ 1,20,000
										₹ 1,75,000

	Trench cutting in mixed soil 0.50m in depth and 0.30m in width.									
5	Sizes		Length	unit		Qntty.			Rate	
	15mm		219.00	mtr.						
	20mm		238.80	mtr.						
	25mm		210.60	mtr.						
	32mm		252.60	mtr.						
	40mm		0.00	mtr.						
	50mm		0.00	mtr.						42944
			921.00	mtr.		138	m^3		311.00/19	~~₹ 42,965~~

	Filling with excavated earth in trenches								
6		Qntty.	m^3				unit	Rate	
		138.15					mtr.	~~135.72~~ 139.83	~~₹ 18,750.00~~ 19297.00

	provision for shifting of RCC Tank										
7	Sizes	Nos	cement (bags)	Sand (cum)	Stone (cum)	Msbars (Qtl)				Rate	
	10000	1	~~56.43~~ 55	~~3.60~~ 3.86	~~7.11~~ 11.07	~~6.44~~ 6.00				~~161459~~	~~1,61,459.00~~ 167258.00
											₹ 1,61,459.00

	Loading and unloading of Stock Material		Qty	Qty				Rate	
8			Qntls.	MT					
	a	cement	~~28.22~~ 27.50						
	b	MS Bars	~~6.44~~						
	c	GI Pipe	30.71						
		stock	~~65.37~~ 64.21	~~6.54~~ 6.42				~~253.85~~ 228.47 1466.77	~~₹ 1,659.00~~

	Cost of Haulage			Material		Qty	Distance	Rate	
9			Qntls. 27.50	MT		cum 3.86	Ton 6.33	Km	Ton/ Km	
	a	cement	~~28.22~~		sand	~~3.60~~	~~5.76~~	8	~~7.17~~ 6.83	~~₹ 330.00~~ 345
	b	MS Bars	~~6.44~~ 6.42		Stone	7.11	~~15.6~~ 11.07	8	7.17	₹ ~~897.00~~ 1330
	c	GI Pipe	~~65.37~~ 64.21	~~6.54~~ 6.42	stock		~~6.54~~ 6.42	26	7.17	₹ ~~1,219.00~~ 1140
										~~₹ 2,446.00~~ 2815.00

(B) 497483

JUNIOR ENGINEER
BAC Khamdong

Assistant Engineer
Khamdong BAC
Rural Development Department
Government of Sikkim
ASSISTANT ENGINEER
BAC Khamdong

MATERIAL COST (A) = Rs. 7,81,541.00 (incl. @18% GST).

CIVIL COST (B) = Rs 4,97,483.00
Add 18% GST on (B) = Rs. 89547.00

TOTAL (~~A+B~~) CIVIL COST (B) = Rs. 587030

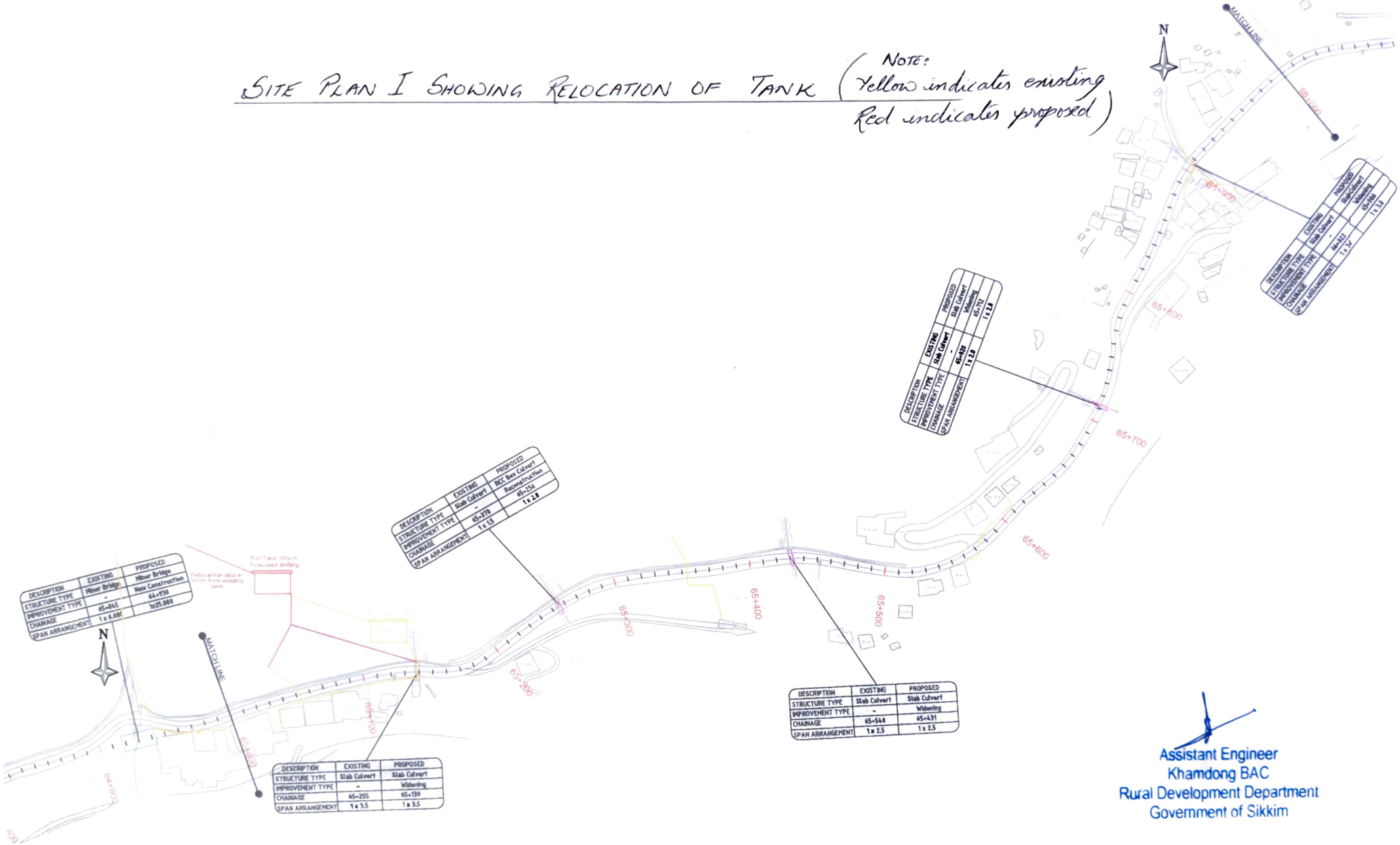
(A+B) = Rs. 13,68,571.00

Labour cess @ 1% (A+B) = 13685.71

~~GRAND TOTAL = Rs. 13,82,257.00~~ /-

SITE PLAN I SHOWING RELOCATION OF TANK

NOTE:
Yellow indicates existing
Red indicates proposed



Assistant Engineer
Khamdong BAC
Rural Development Department
Government of Sikkim

SITE PLAN II (NOTE: The proposed alignment of pipe shall pass along the shoulder of widened road as no alternative route is available)



Assistant Engineer
Khamdong BAC
Rural Development Department
Govern... Sikkim

Name of work; Estimate for shifting of existing pipe lines from Topa Khane upto Ranipool under Martam Block.

TECHNICAL REPORT

Estimate amounting Rs. ~~62,02,000.00~~ (Sixty Two Lakhs and Two Thousand) only has been framed to meet a probable caused for the above sited work.

Brief: A Joint survey for widening of NH1O from Topa Khane upto Ranipool was conducted along with NHIDCL and concerned Junior Engineer on dated 7?12/2024. During survey it was observed the alignment of pipe lines catering to various area falling under Martam Block passess along NH10. Hence this pipe lines needs to be shifted after the widening of road is completed in order to ensure proper water supply to the public. Further, two numbers of 10,000 meter cube tank was found in way of widening of the road. So a proposal for reconstruction of the tank has been proposed. In addition provision of temporary water supply through HDPE and Alkaline Pipe has been in cooperated to ensure proper water supply to the affected areas during widening process. Accordingly an estimate has been framed in cooperating all the necessary items such has shifting of utilities.

Scope of work:

- Purchase of G.I Pipes, HDPE Pipes, Alkathene Pipes, fittings.
- Construction of RCC Tank
- Shifting of Pipe lines

RATES: JJM SOR.

Cost: ~~62,02,000.~~00

Agency: Departmental

Date of Comp: 3 Months

Hence an estimate has been prepared and submitted for favour of seeking administrative approval and financial sanction from the competent authority.

ASSISTANT ENGINEER
BLOCK ADMINISTRATIVE CENTRE
MARTAM, EAST SIKKIM

ESTIMATE OF SHIFTING OF EXISTING PIPE LINES FROM TOPA KHANE UPTO RANIPOOL UNDER MARTAM BAC.

GENERAL ABSTRACT OF COST

S.NO.	PRACTICULAR OF WORK	AMOUNT
1	Cost of G.I pipes and fittings including 5% storage charge	3966632.00
3	Cost of HDPE pipe and fittings including 5% storage charge	286075.00
	Material (A)	4252707.00 (A)
5	Fitting and Fixing of G.I pipes	307800.00
6	Shifting RE-fitting and fixing, trench cutting,CC	350787.00
7	Provision for construction of RCC Tank(1000ltr)	300500.00 (B)
	Civil Cost (B)	959087.00 (B)
8	TOTAL (A+B)	5211794.00 (A+B)
9	GST 18%	938123.000
10	L.CESS 1% ON 8 (A+B)	52118.000
		6202035.000
	say rupee	6202000.00

Rupees (Sixty two lakhs and two thousand) only

Junior Engineer
BAC Martam

Assistant Engineer
BAC Martam

Divisional Engineer
GDZP

Divisional Engineer
Gangtok District Zilla Panchayat

CHECKED AND VERIFIED

Name of Work: Shifting of existing pipe lines from Topa Khane upto Ranipool

For Rs 62,34,900.00

Rupees fifty three lakhs thirty four thousand nine hundred only/-

Junior Engineer (JJM) Asst Engineer

ESTIMATE OF SHIFTING OF EXISTING PIPE LINES FROM TOPA KHANE UPTO RANIPOOL UNDER MARTAM BAC.

1 Providing HDPE pipe -PN 10 of medium class forv temporary restortion

size	length	unit	@	RS	
20mm	800	mtr.	@	~~51.92~~ 46	~~41536.00~~ 36800
25mm	1050	mtr.	@	~~64.9~~ 46.85	~~68145.00~~ 49193
32mm	800	mtr.	@	72.03 63.80	~~57624.00~~ 51040
50mm	100	mtr.	@	~~148.2~~ 152.52	~~14820.00~~ 15252
75mm	200	mtr.	@	333.18 345.02	~~66636.00~~ 69004

Cost of pipes = Rs. 2,21,288.00 — 2,48,761.00

Add 5% ~~for SC~~ 10% GI Fittings = Rs. 22128.85 — Rs 12,438.05

~~supply of GI fittings~~ Add @ 5% SC ~~10%~~ (243417) = Rs. 12170.87 — Rs ~~24,876.00~~ 2,86,075.00

MATERIAL COST (PIPE) (A) = Rs. 2,55,588.00 ⎫ ⇒ Rs. 301593.84
Add 18% GST on (A) = Rs. 46005.84 ⎭

2 Providing GI pipe of medium class (excluding trernching, refilling , compacting and cost of fitting) all complete.

80mm	200 m	@	Rs	1134.15 /m	Rs 226830.00
50mm	100 m	@	Rs	~~662.65~~ /m 679.21	Rs ~~66265.00~~ 67920
32mm	1340 m	@	Rs	426.81 /m	Rs 571925.40
25mm	1750 m	@	Rs	339.9 /m	Rs 594825.00
20mm	1310 m	@	Rs	221.19 /m	Rs ~~289758.90~~ 289760
15mm	9865 m	@	Rs	172.29 /m	Rs 1699640.85

Cost of pipes = Rs. 3450914.00 — ~~3449245.15~~

~~5% sc~~ on Rs 3449245 — Rs ~~172462.26~~

Supply of GI fittings @ 10% on total cost of pipe = Rs ~~344924.52~~ 345091

Add @ 5% SC (on 3796005) = 189800.00 — Rs ~~3966631.92~~ 3796005

MATERIAL COST (A) = Rs. 3985806.00

3 Removing, RE-fixing, RE-fittng and fixing of pipes in various diameter as per sites conditions.

			rate	
Skilled labour	4 x	30 days	565 /days	67800.00
Unskilled labour	20	30 days	400 /days	240000.00

4 Trench cutting in mixed soil 0.5m in depth and 0.30m in width.

2621.7m	0.5	x	0.3	393.26 /m3	311	~~122303.86~~ 122379.00

5 Fitting with excavated earth in trenches.

393.26 /m3	136	~~53483.36~~ 139.83	54990

6 Provision for crossing of pipe at road

25	nos	4000 /nos	100000.00

7 Stagging of loading unloading of removed pipes of various locations

L/S	25000.00

8	Provision for Purchese of Alkaline Pipe & acc. L/S	50000.00
9	Provision for shifting of RCC Tank(estimate in closed) 2 nos	334516.00 ~~300500.00~~
	(B)	9,94,685.00
	TOTAL AMOUNT	~~**5211794.14**~~
	SAY RS	~~**5211794.00**~~
	(A+B) Rs. 5282085/-	

Juniour Engineer
BAC Martam

For
Assistant Engineer
BAC Martam

CONSTRUCTION OF RESERVIOR TANK (10000 ltrs)

Items of Work		No.	Lengt	Breadth		Height	Quantity		Rate		Amount		
Site development & jungle clearance		2	lab	x	1	days	2	m/days	500	m/days	Rs.	1000	
labour engaged for hill cutting		2	lab		6	days	12	m/days	500	man/datys	Rs.	6000	
Labour engaged for removal of rubbish upto a distance of 50m outside the periphery of the area cleared		3	lab	X	4	days	12	m/days	500	man/datys	Rs.	6000	
Earthwork in excavation in all kinds of soil in foundation trenches i/c dressing of all sides, watering, ramming i/c disposal of excavated earth upto 30m lead and lift upto 1.5m disposed earth to be levelled and neatly dressed		1	4.22	4.22		0.50	8.91		311.19	/Cum	Rs.	~~2772~~	2770.00
Providing and laying stone Soling in building works with clean hard selected stones, all complete		1	3.57	3.57		0.5	6.37		~~960.45~~ 1110.94	/Cum	Rs.	~~6118~~	7076.00
Providing and laying in position cement concrete of 1:3:6mix incldng compacting curing etc. all complete 20mm		1	3.57	3.57		0.19	2.42 2.42 cum		~~4812.58~~ 5221.45	/cum	Rs.	~~11654~~	12636.00
Providing fixing and removing form work for casting RCC items with locally available timber		wall							~~478.17~~ 703.70	/sqm	Rs.	~~15894~~	23391.00
		2	3.26			1.38	9.00						
		2	3.26			1.38	9.00						
		2	3.02			1.26	7.62						
		2	3.02			1.26	7.62						
							33.24						
		Floor / Roof slab											
		2	3.57			0.19	1.36						
		2	3.57			0.19	1.36						
		1	3.43			0.13	0.45						
		1	3.43			0.13	0.45						
		1	3.43			3.43	11.77						

							15.39		902.07						
P/L RCC in 1:1.5:3 cement concrete mix excluding the cost of form work, finshing and reinforcements		1	3.26	3.26		0.13	1.38		604.90	/sqm	Rs.	9310	13883.00		
		2	3.26	0.10		1.26	0.82								
		2	3.26	0.10		1.26	0.82								
		1	3.26	3.26		0.13	1.38								
		1	0.23	0.23		0.13	0.007		6885.24						
							4.42		6847.36						
D/d of manhole cover		1	0.2	0.2		0.1	0.004								
							4.41		6885.24						
									6847.36	/cum	Rs.	30238	30405.00		
Supplying / bending, binding in position tor steel reinforcement in all RCC works i/c cost of binding wires															
		No.	L	TL		WT	KG								
BASE 12MM(long side)	1	28	3.26	91.823		0.89	81.72	kg							
BASE 12MM(short side)		28	3.26	91.823		0.89	81.72	kg							
SIDE WALL (VERTICAL)	2	28	1.36	76.16		0.89	67.78	kg							
SIDE WALL (VERTICAL)	2	28	1.36	76.16		0.89	67.78	kg							
SLAB 12MM	1	30	3.43	101.47		0.89	90.31	kg							
SLAB 10MM	1	30	3.43	102.9		0.62	63.80	kg							
stirrups 10mm	1	13	13	169.52		0.62	105.10	kg							
							558	kg							
							6.0	qtl	8038.55						
							6.00	qtl	7462.43		/Qtl	Rs	44775	48231.00	
P/L 12 mm thick cement plaster of 1:3 mix in single coat i/c finishing even and smooth and curing complete.		2	3.26			1.38	9.00								
		2	3.26			1.38	9.00								
		2	3.02			1.26	7.61								
		2	3.02			1.26	7.61								
		1	3.26			3.26	10.63								
		2	3.43			0.13	0.90		199.99						
		2	3.43			0.13	0.90								
							45.66		196.92		/Sqm	Rs.	8991	9131.00	
P/L 40mm thick 1:2:4 c.c (1 cement, 2 coarse sand , 4 stone aggregate of size 12.5mm and down) flooring with floating coat of neat cement to give smooth		1	3.02	3.02			9.12		421.26						
									372.49		/Sqm	Rs.	3397	3842.00	
							9.12								
Providing neat cement finish		2	3.02			1.26	7.62								
		2	3.02			1.26	7.62								
		1	3.02			3.02	9.13								
							24.37		16.13		/Sqm	Rs.	393		

lettering and dIstemparing/wish wash on tank and with cost of the painter											LS	Rs.	2500
												Rs	~~149042~~ Rs. 167258.00

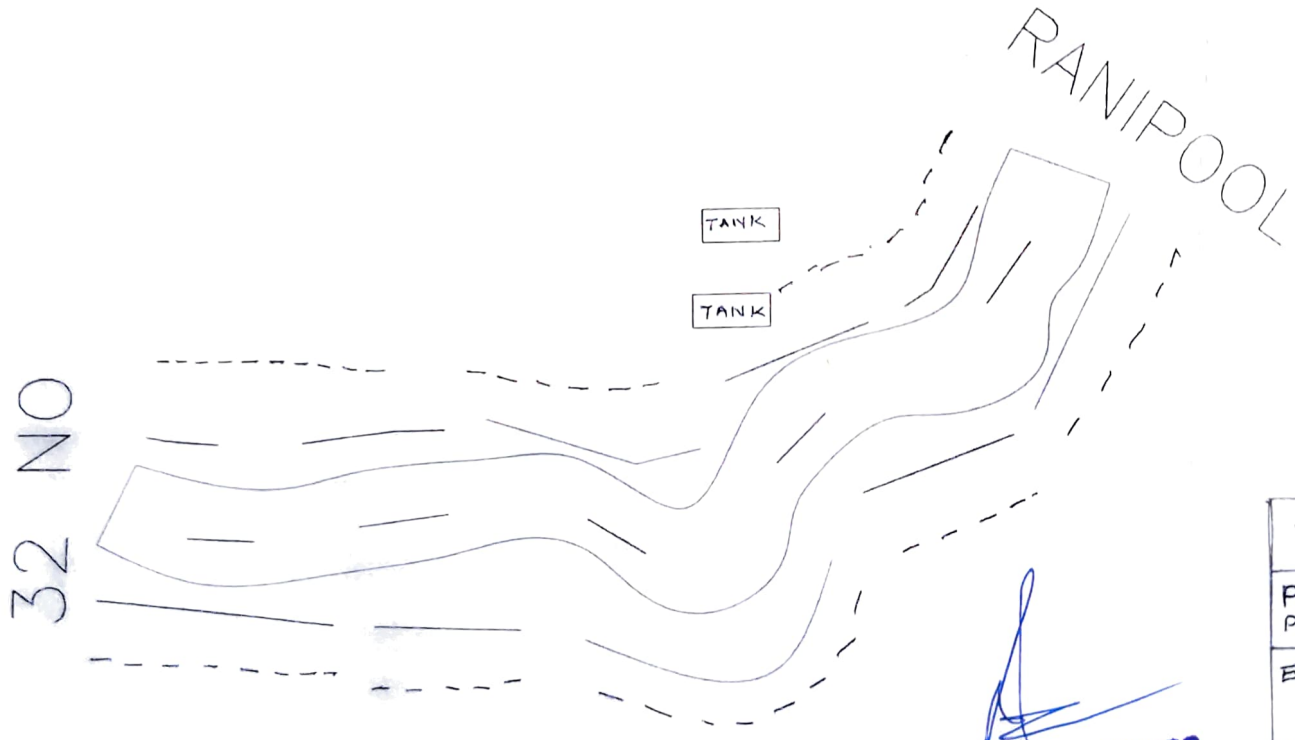
Particulars of work		Quantity	con	bags	con	sand	con	Stone	MS Rod
Stone soling		6.37 cum	0.00		0.00		0.95	6.05	0.00
1:3:6CC vide item no 6		2.42 cum	4.40	10.65	0.457 ~~0.00~~	1.13 ~~0.00~~	0.70 ~~0.65~~	~~1.57~~ 1.69	0.00
1:1.5:3 RCC vide item no 7		4.42 cum	8.00	35.00	~~0.57~~ 0.00 0.43	1.89 ~~0.00~~	~~0.57~~	2.51 ~~2.38~~	0.00
12mm Plaster vide item no 9		45.66 sqm	~~0.00~~ 0.147	6.71 ~~0.00~~	~~0.007~~ ~~0.000~~ 0.015	0.684 0.000		0.00	0.00
40mm flooring vide item no 10		9.12 sqm	0.34	3.10	0.018 0.000	0.164 0.000	0.09	0.82	0.00
TMT bar		6.00 Qtl.							6.00
TOTAL			~~55~~ 49 55 bags			0.0 3.86 cum		~~10.83~~ 11.07 cum	6.000 Qtl.

Junior Engineer
Martam BAC

Assistant Engineer
Martam BAC

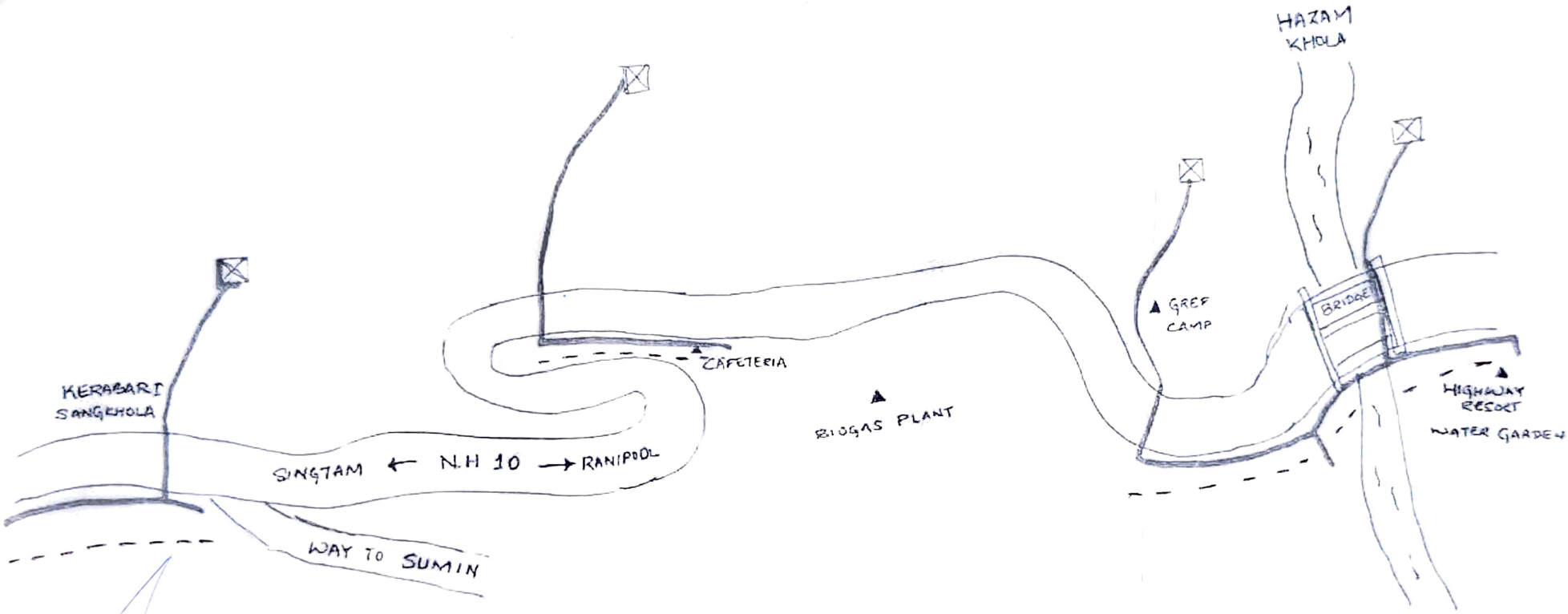
JUNIOR ENGINEER
MARTAM BAC, EAST

SHIFTING OF PIPE ALONG NH10 FOR THE SCHEME"RWSS FROM RANIPOOL TO 32NO



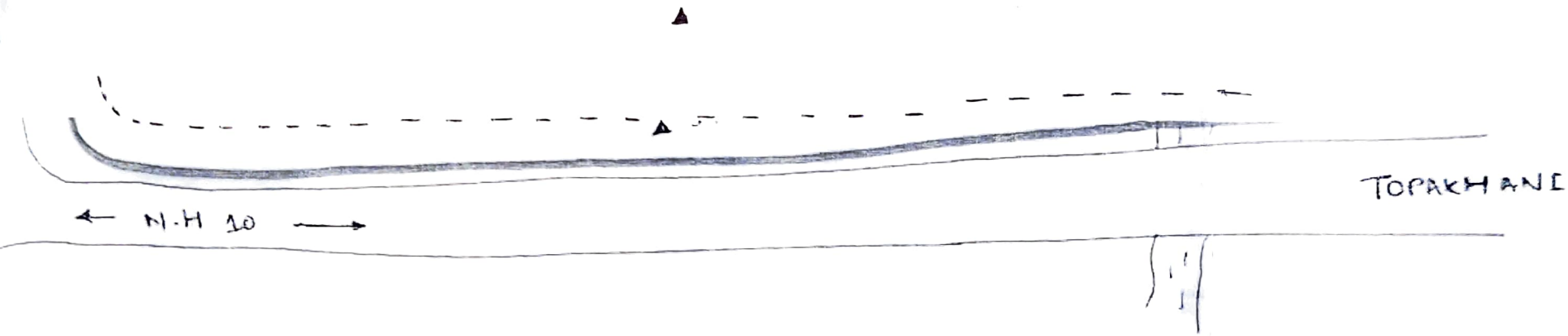
TANK	☐
PROPOSED PIPELINE	----
Exiting PIPE LINE	——

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CHUZA WARD



SANGKHOLA WARD

- WATER PIPELINE
- WATER TANK
- PROPOSAL PIPELING

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