

**Name Of Work : Providing, Installing and testing of Street Light From Zadeshwar Chawkdi to Tavra Village on Bharuch – Shukaltirth Road Bharuch - (Second Attempt)**

**Bill Of Quantity**

<i>Item No.</i>	<i>Qty</i>	<i>Item Description</i>	<i>Unit</i>	<i>Estimated Rate in</i>	<i>Amount</i>
1	4000.00	Supplying and erecting Flexible PVC insulated multi strand multi core 1.1 kv grade ISI marked copper wires of following size to be erected as directed.(h) 2.50 Sq.mm 3 core round PVC sheathed	Mtr	75.75	<b>303000.00</b>
2	400.00	Supplying and erecting LED street light / Flood light fittings with High power White LEDs wattage of 3 Watt and above assembled on single MCPCB, efficiency more than 130 lm/w and corrosion free High pressure die cast aluminum housing with smooth finish powder coated and heat sink extruded aluminium with diffuser and Polycarbonate optics/ lenses, with toughened glass with company mark/name engraved or embossed 160 to 270 V,Power Factor more than 0.95, THD < 10 %, CCT 3000 K to 5700K,Uniformity ratio >0.45, Luminaire efficacy> 100 lumens/watt . LED driver efficiency > 85 %.( fittings required LM-79 & LM-80 certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Street Light (IP-65), Surge protection -4KV integral and ,Light must have 440VAC line supply with over-voltage protection. (iv) above 90 to 120 watts Cat-III	Ea	6566.01	<b>2626404.00</b>
3	4.00	Providing and erecting Three Phase IoT GSM/GPRS Central Control & Monitoring System (CCMS) Panel for Streetlights Smart Feeder Panel with 3 Phase GSM/GPRS CCMS Streetlight Controller with LCD Display (1 Nos.). Streetlight Controller with Individual each Phase Control (Energy Saving feature) and Spare relay facility. Streetlight Controller having 10 years of reserved battery for RTC. With 50 programmable schedule, month-wise offset settable facility, Astronomic sunrise/sunset time programming in-built for year long schedule. Operating Voltage @ 440 V AC with Over Voltage & Short Circuit protection. 2 hour Battery Back-up for Streetlight Controller. Panel to have 1 Nos. of 3 Phase – Class 1 Energy Meter for Energy & Fault monitoring on CCMS Web Dashboard. Panel consisting of 3 Nos. of 3 Pole Contactors (3 x 18 A), 7 Nos. of 1 Pole Miniature Circuit Breakers (32 Amp.) for Bypass, Input / Output supply functionalities, 1 Nos. of 4 Pole Earth leakage circuit breaker for safety protection. Standard lock & key facility for Panel security.	Ea	100427.33	<b>401709.32</b>
4	4.00	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 25 KA. at 415 V, having normal current rating up to 25 A to 100A. with Fixed thermal & magnetic release suitable to work on A.C. supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing.ICS=100% of ICU only.Cat III	Ea	6173.12	<b>24692.48</b>
5	400.00	Providing and erecting Miniature circuit breaker single pole 0.5A to 2A system and having breaking capacity 10 KA to be erected in existing box. confirming to IS 8828/1996 with ISI Mark Cat.III	Ea	270.68	<b>108272.00</b>
6	24.00	Providing & erecting 240 V MCB double pole switch for lighting Load (B Curve) having 10 KA breaking capacity & confirms to IS : 8828 in existing box having following capacity.(B) 40 Amp.Cat-III	Ea	295.93	<b>7102.32</b>

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7	4.00	Providing & erecting 415V MCB Four Pole Switch for Lighting Load (B curve) having 10KA breaking capacity & confirms to IS :8828 in existing box having following capacity (b)40 Amp. Cat.III	Ea	638.32	<b>2553.28</b>
8	4.00	Plastic enclosure fitted with DIN rail suitable for incorporating Three /Four nos. MCB	Ea	108.07	<b>432.28</b>
9	80.00	Providing and erecting HOT deep Galvanised iron strip wire 8 to 16 SWG.	Kg	77.77	<b>6221.60</b>
10	45.00	Providing and erecting Pipe type earthing having 150 cms.long and 2.5 cms. dia. galvanised iron pipe with coupling and buch buried in specially prepared earth pit complete with necessary 8 SWG earth wire.	Ea	368.65	<b>16589.25</b>
11	45.00	For using salt and charcoal / coke as required for pipe type earthing.	Ea	171.70	<b>7726.50</b>
12	8.00	Supplying & erecting earth pit of minimum bore dia.150mm size approved make Earthing Electrode consisting Pipe-in-Pipe Technology as per IS 3043-1987 made of corrosion free hot dipped G.I.Pipes having Outer pipe dia of 50mm having 80-200 Micron galvanising, Inner pipe dia of 25 mm having 200-250 Micron galvanising, connection terminal dia of 12mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation suitable for following type of applications with chamber and heavy duty cover.(approved make OEM has to submit test certificate) & having back filling compound of (B) Inner chemical (CCM Compound)- Resistivity:- 0.2 $\Omega$ / meter testing as per IEC 62561-2017, Voltage drop:- < 1 volt at no load & dry form, Sulphar content:- <2%(C) Back fill Compound :- Earthing compound should be capable to retain moisture for long time Necessary test report must be submitted. (a) For Electrical Installation up to 440V in normal soil Length of pipe - 1 Mtr Back filling compound - 1 Nos Bag of 15 Kg.	Ea	4591.46	<b>36731.68</b>
13	4.00	Providing & erecting weather proof, dust & vermin proof, floor mounted front operated indoor type cubical panel board necessary IP-42 and above protection as per approval from engineer incharge made from 14 SWG thick CRC M.S. sheet for outer body & doors, 16 SWG thick CRC M.S.sheet for internal partitions with necessary accesories , supporting angles/ flats channel including cutting, bending, drilling, welding, riveting with internal partitions & cable alley as per requirements & instruction of engineer-in-charge with erection of supplied switch gears, BUSBARS, suitable size of inter connecting PVC copper wire / copper-aluminium strips, rubber grommets, rib, bakelite control fuses/MCB for measuring instruments, earth bus & earth bolts, foundation flange - bolts-base Plates, sufficient nos. of hinged doors, handles with locking arrangement and rubber gasket,heavy duty end terminal connection,danger notice board,necessary ventilation,earthing strip complete. The Panel shall be painted with epoxy powder coating	Sq. Mtr	10468.65	<b>41874.60</b>
		.(The rates excludes the cost of switchgears, bus bars, inter connecting mains & Copper Aluminium strips, meters, Fuses etc. The dimension shall be measured excluding base beams) The panel shall be supplied with following approved manufacturers with following size.(A) locally fabricated panel board.(i) with 350 mm depth			<b>0.00</b>

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13A	4745.00	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand / Solid Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables(A) 4 core 16 Sq. mm	Mtr	153.52	<b>728452.40</b>
13B	120.00	(B) 4 core 25 Sq. mm	Mtr	190.89	<b>22906.80</b>
14	4645.00	Making trench in soft soil of suitable width of 90 cm deep for laying cable or locating the fault all over the run and back filling the same and making the surface as normal ground.	Mtr	55.55	<b>258029.75</b>
15	200.00	Making trench in Hard Murrum / Tar Road of suitable width of 90 cm or required depth for laying any size of cable or locating the fault all over the run and back filling the same and making the surface as normal ground.	Mtr	74.74	<b>14948.00</b>
16	293.00	Supplying following size of Light duty "A" Class G.I . Pipe & erecting as directed by Engineer-in-charge. (B) 50 mm dia	Mtr	300.98	<b>88187.14</b>
16A	4985.00	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II )with necessary connecting accessories of same material at required depth in existing trench for laying of cable. below ground / road surface for enclosing cable.(A)50 mm outer dia	Mtr	62.62	<b>312160.70</b>
16B	500.00	(C)90 mm outer dia	Mtr	95.95	<b>47975.00</b>
17	32.00	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (D) 2 to 4 core 16 Sq. mm	Ea	47.47	<b>1519.04</b>
18	1320.00	Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (A) 1.5/ 2.5/4/6 Sq.mm	Ea	6.06	<b>7999.20</b>
19	256.00	Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (C) 16/25 Sq.mm.	Ea	15.15	<b>3878.40</b>
20	185.00	Supplying and erecting approved make Octagonal pole made from HR sheet steel. The pole should be made as per IS. and shall be coated with hot dip galvanizing as per IS 2629/2633/4759, suitable suspend local wind speed with integral Junction box consist of terminal plate of min 6mm Hylam sheet, standard profile 35mmX7.5mm Din-Rail for MCB Mounting, stud type terminal and arrangement for cable termination to be erected With Suitable foundation (Included) as per details given by manufacturer considering site requirement. (H) 9 Mtr. Long 70 mm Top X 155 mm bottom dia, 3 mm thickness with 260mmX260mmX16mm base plate, 4-M24 Bolts and 750mm long with necessary G.I. J Bolts .Approx Pole weight 97 kg	Ea	15705.50	<b>2905517.50</b>
21	115.00	Excavating hard rock or bituminous road (B.T.) by chiselling or using tool and tackles for preparing pit for poles or earth plates or for laying pipes & clearing the site by removing debris & making site good. [10 % additional for using machinery like driller as per SOR]	Cu. Mtr.	599.94	<b>68993.10</b>

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21A	155.00	Providing and erecting street light pole bracket comprising main B Class GI pipe of 4.2 cm/require outside dia. complete with suitable B Class G.I sleeve tubing of approx. 45cms.length and suitable for 76.5 mm / 80mm. / require size pole top having sufficient fasteners for fixing the brackets and having spread of 1 mtr. length with suitable rise as per site condition & suitable welded stiffener reducer and nipple with check nut complete painted with one coat of Red oxide / PU base primer and two coats of Aluminium / PU paint. paint with following nos of arms.[B] Double Arm Bracket 1 Mtr	Ea	829.21	<b>128527.55</b>
21B	30.00	[C] Three Arm Bracket 1 Mtr	Ea	1045.35	<b>31360.50</b>
22	4.00	Supplying & erecting approved make IP 55 grade Company fabricated Timer Panel of following capacity for switch On-Off street lights on time scheduling basis made from 16G CRCA sheet duly epoxy power painted inside and outside with hinged doors and locking arrangement consisting of suitable size of 4 Pole MCB and 4 pole contactor (cat-III)with analog time switch, auto manual switch of same make and suitable input and output Bakelite terminals and with door earthing approved by Engineer in charge. (C) 63 Amp	Ea	17059.91	<b>68239.64</b>
23	4.00	Supplying and erecting approved make panel mounting type Digital Voltmeter having 3 digits LED display, 0 to 750 AC Volts range erected on existing panel board with all connection, wiring etc .with manufacturers calibration certificate.	Ea	1275.63	<b>5102.52</b>
24	12.00	Supplying and erecting approved make suitable panel indicator LED type lamp, lens cover, complete erected with necessary connections.	Ea	43.43	<b>521.16</b>
				<b>Total Cost</b>	<b>8277627.71</b>
				<b>Total Say</b>	<b>8277628.00</b>

**Rupees In Word: Eighty Two lacs Seventy Seven Thousand Six Hundread Twenty Eight Only.**

I/We am/are willing to carry out the work @ \_\_\_\_\_ % above/below percent (Should be written in figures and words) of the estimated rate mentioned above. Amount of my /our tender works out as under.

	<b>Estimated amount put to tender</b>	<b>8277628.00</b>
	Deduct.....% below	Add.....% Above
	Total Rs. _____	Total Rs. _____
	In words _____	In words _____

- The labour cess will be deducted as per prevailing rules i.e. 1% of the work done.
- GST and Income tax TDS will be deducted at a source while making payments of bills.
- In all R.C.C. Items in Rate Analysis Standard Cement Consumption has been taken as per Govt. G.R.: PRC-10/2017

**Above all items of "Schedule-B" with Item Description, Unit, Rate & Amount have verified by me and found order.**

Deputy Executive Engineer  
BAUDA  
Bharuch

Divisional Account Officer  
BAUDA  
Bharuch

Executive Engineer  
BAUDA  
Bharuch