

NOTICE INVITING BUDGETORY OFFERS

Name of Work	“Illumination at CISF unit parade ground at Headland”
Date of submission of budgetary quotation	On or Before 25.09.2024 at 15.00 Hrs.
Address for communication:	Executive Engineer (E-HL), 1st floor, Electrical Maintenance Cell, Mormugao Port Authority, Admin. Building, Headland sada Vasco-de-Gama Goa - 403804
Contact Details	Phone : (0832) 2594271, 2594215, 2594241 Email : xene.mgpt@gmail.com
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**EXECUTIVE ENGINEER (E-HL)
MORMUGAO PORT AUTHORITY**

Sub: "Illumination at CISF unit parade ground at headland"

Ref: Budgetary Quotation No. CME/XEN(E-HR)/HL03/2024/09

Mormugao Port Authority intends to carryout work of "Illumination at CISF unit parade ground at headland".

As such, it is requested to kindly furnish budgetary quotation for the same (Scope of work, technical specifications are enclosed at Annexure-I and Price Schedule enclosed at Annexure- II.

Your budgetary quotation should reach to this office on or before **25.09.2024** at **1500** Hrs.

Thanking you,

Yours sincerely,

EXECUTIVE ENGINEER (E-HL)

TITLE OF WORK: "Illumination at CISF unit parade ground at Headland"

GENERAL

Mormugao Port Authority proposes to install 8 Nos Street light Poles of 9mts height with 36 Watts LED fittings to facilitate illumination at CISF unit parade ground at headland as per the relevant IS standards.

1. SCOPE OF WORK

The ground in front of the CISF Barrack at headland sada is used for training and drills by CISF personnel. In order to improve illumination to facilitate duty drills late in the evening, total of 08 Nos street light poles are required to be installed. The work thus involves

- I. Supply and installation of Double door CRCA wall mounted type JB of size (LXBW) 60cmx50cmx30cm housing 01 No 32 Amps 4 Pole incomer MCB and astronomical timer circuit for Auto on/off of lighting with 32 Amps 3 Pole Power contactor. The contractor shall take prior approval of Engineer In charge before supply of JB. The power supply to this JB to be tapped from the JB present inside the barrack using 4CX 10sqmm Aluminum armoured cable. The cable shall be suitably saddled and terminated as per relevant IS Standards at a distance of 1mts apart.
- II. The main power supply from JB to Pole 1 shall be using 4C x 10 sq. mm LT Aluminium armored cable. The work involves Supply, laying and termination of 4C x 10 sq. mm LT Aluminum armored underground cable of length 60 meters by excavating of cable trench from Mandovi Barrack of CISF panel to the street light pole which involves laying of cable in soil, by road crossing and then to Pole no 1 through GI pipe / hume pipe. The cable at road crossing shall be laid through GI/Hume pipe.
- III. The distribution power supply to lighting poles shall be using 4C x 6 sq. mm LT Aluminum armored underground cable. The work involves Supply, laying and termination of 4C x 6 sq. mm LT Aluminum armored underground cable of length 300 meters for providing power supply to each lighting Poles serially in 2 nos looping section.

- IV. To facilitate illumination, 08 nos lighting poles shall be installed. The work involves, Supply and installation of 08 no's 9Mtr height Hot Dip Galvanized Street Light Octagonal Pole with Foundation Type Base Plate & Foundation Bolts with 36 watts LED light fittings. The foundation of Poles to be made of concrete. The poles and foundation drawings should be approved by the Port.
- V. Each lighting pole shall be fitted with 36 watts LED light fitting. The work involves, Supply, installation, testing and commissioning of 36 watts IP 66 rated outdoor type LED light fittings. The contractor shall take prior approval of Engineer in charge before supply of light fittings. The wiring of Light fittings to be carried out using 2.5 sqmm 4 core Copper PVC cable.
- VI. Each lighting pole shall also be properly earthed by providing earth pit using 40 mm dia. 3 mm thick, 3 meter long GI pipe with GI funnel, mesh and suitable size reducer fixed on the top of the earth electrode. The detailed technical specifications is mentioned below.
- VII. All labours, materials, tools plants, machinery, equipment and any other things required for execution for work shall be arranged by the contractor at his own cost.

2. APPLICABLE STANDARDS:

The following shall be the Reference Standards for the work:

Code No.	Title
(i) IS 1554-1	Specification for Armoured PVC Aluminium cable.
(ii) IS 1255	Code of practice for installation and maintenance of power cables
(iii) IS 4237	General requirements for switchgears and control gears
(iv) IS 12943	Brass glands for PVC cables
(v) IS 3043	Code of practice for Earthing.

3. DETAILED TECHNICAL SPECIFICATION

I. SUPPLY, LAYING and TERMINATION of 4C x 10 sq.mm / 6 sq. mm LT underground armored Aluminum cable by excavation.

- (i) **Supply of 4C x 10 sq.mm and 6 sq.mm LT underground armoured Aluminium Cable**

Providing and Laying P.V.C. sheathed cable of 1.1kV grade Armoured with Aluminium conductor as per IS 1554-1 in ground as per IS:1255 including excavation of 75cm size trench, 25 cm thick under layer of sand, bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size. The cable trench depth at road crossing shall be 1 mts through GI Pipe/hume pipe.

Note: Test certificates from the manufacturers for the cable shall be submitted along with the supply of cable.

(ii) Supply and Installation of 8 nos. Street Light Poles.

To provide sufficient illumination on ground, 08 nos of Lighting poles shall be installed. The detail technical specification are as mentioned below.

Technical Specification of 9 Mtr Hot Dip Glavanised Street Light Octagonal Pole		
S.I NO	DESCRIPTIONS	OUR REQUIREMENTS
1	General Specifications	Supply of 9Mtr Hot Dip Galvanized Street Light Octagonal Pole with Foundation Type Base Plate & Foundation Bolts (Dimensions for pole as Top Diameter 70 mm, Bottom Diameter 155 mm, Section Length- 9000 mm, Thickness-3 mm, Foundation Type Base Plate (250X250X16 mm), Foundation Bolts (M24 X 700/750 MM- 4Nos).with single type arm bracket 1500 mm long made of 60 mm dia pipe ,suitable for LED street light fitting
2	Pole Shaft	The pole shaft shall be made from sheet steel confirming to BSEN 10025.The pole shaft shall have octagonal cross section and shall be continuously tapered with single longitudinal welding. There shall not be any circumferential welding. All octagonal pole shafts shall be provided with the rigid flange plate of suitable thickness (as per IS 2062) with provision for fixing 4 foundation bolts. This base plate shall be fillet welded to

		the pole shaft at two locations i.e. from inside and outside.
	Dimension	Pole Top Diameter 70 mm, Bottom Diameter 155 mm, Section Length- 9000 mm, Thickness-3 mm Base Plate (250X250X16 mm), Foundation Bolts (M24 X 700/750 MM-4Nos)
3	Door Opening	The octagonal Poles shall have door of approximate 500 mm length at the elevation of 500 mm from the Base plate. The door shall be vandal resistance and shall be weather proof to ensure safety of inside connections. Bakelite sheet with one 6A SP MCB and 16 sq. mm stud type connector (4 nos) inside the pole at door opening for cable connection. The door shall be flush with the exterior surface and shall have suitable locking arrangement. There shall also be suitable arrangement for the purpose of earthing. The pole shall be adequately strengthened at the location of the door to compensate for the loss in section.
4	Material	Octagonal Poles -Steel Grade BSEN 10025 - S355J0 or Equivalent Base Plate Fe 410 conforming to IS 226 / IS 2062
5	Pole Sections	The Octagonal Poles shall be in single section. There shall not be any circumferential weld joint.
6	Galvanization	The poles shall be hot dip galvanized as per relevant Indian standards with average coating thickness of minimum 65 micron.
7	Fixing Type	The Octagonal Poles shall be suitable for bolting on a foundation with a set of four foundation bolts for greater rigidity.
8	Bracket for fixing	The brackets shall be made of specified size G.I heavy duty pipe with minimum 1500 mm long and minimum 48 mm dia with

	luminaire	necessary holding brackets, hold fasts etc suitable for LED light mounting.
9	Documentation	Pole drawing along with details of baseplate , foundation bolts and foundation details (RCC) shall be submitted along with offer

(iii) Supply and installation of Lighting Junction Box in CISF Barrack

Lighting JB shall be double door and IP 65, wall mounted type & made out of 2 mm thick high quality CRCA sheet steel and shall be of pre-treated and powder coated sheet steel used in the construction of JB. The painting of all the metal part shall be with seven tank process followed by powder coating as per the standard, JB shall be suitable for indoor / outdoor installation, wall mounting type, in double door construction. The JB shall be totally enclosed, completely dust and vermin proof and shall be with hinged doors, Neoprene gasket, padlocking arrangement. All removable/ hinged doors and covers shall be grounded by 4.0 sqmm tinned stranded copper connectors. Joints of any kind in sheet metal shall be seam welded, all welding, slag shall be rounded off and welding pits wiped smooth with plumber metal. The JB shall have suitable provision for grounding. The general construction shall confirm to IS-8623-1977 (Part-1) for factory built assembled switchgear & control gear for voltage up to and including 1100 V AC.

(iv) Earthing of Each Pole

02 nos earth pits shall be provided for lighting poles at CISF Parade ground. Each lighting pole shall be conneted with GI strip and shall be properly earthed. The Earthing shall be carried out by using 40 mm dia. 3 mm thick, 3 meter long GI pipe with GI funnel, mesh and suitable size reducer fixed on the top of the earth electrode. The funnel should be enclosed in a CC chamber of size 400 x 400 x 400 mm above the ground, with Kadappa stone cover. The electrode shall have staggered holes of 12-mm dia. and the electrode should be covered 150 mm around with alternate layers of salt and charcoal from the bottom of the pipe to the bottom of the CC chamber. The connection from the electrode is to be carried out through GI strip of size 25mm x 5mm.

The Earth looping to 4 nos of Poles to be carried out from 1 nos earthpit using GI strip of size 25mm x 5mm and other 4 nos Pole from 2nd Earth Pit. The works involves welding the GI strips for making continuous earth connection.

The job work also includes measuring resistance of the new earth pits after installation using earth tester. Copy of valid calibration certificate and earth testing certificate of the above said earth tester has to be provided to the Port before commencement of testing. The values shall be tabulated and submitted to Engineer-in-charge. The individual earth pit resistance value shall not exceed 3 ohms. Earth pits measuring higher than 3 ohms are liable for rejection. Testing of earth pit shall be carried out in the presence of Engineer – In charge or his representative.

The following information shall be displayed with white or yellow paint on the cover depending on location of the earth stations.

- a. Earth Pit No.....
- b. Earth resistance.....ohms.
- c. Date of testing.....

4. Completion Period:

The entire work shall be completed within 90 days from date of issue of Letter of Acceptance (LOA).

5. Security Deposit:

5.1 An amount equivalent to 10% of the contract value shall be deducted from the invoice generated by the Contractor and withheld as Security Deposit.

5.2 The same will be refunded to the contractor after one year from the date of satisfactory completion of work and acceptance by Port.

5.3 The Board may, at its option, forthwith forfeit the above Security Deposit in whole or part, if in the opinion of the Board the contractor has failed to fulfill any or all of the conditions of this contract without prejudice to any and all rights of the Board to recover from the contractor any amount falling due to the Board through non-observance by the contractor of any of the clause thereof.

6. Payment Terms:

- 6.1 100% payment after satisfactory completion of the works.
- 6.2 The payment will be released within 15 days from the date of receipt of undisputed bills in duplicate and with all other supporting documents (IT returns for last two years).
- 6.3 The contractor shall furnish their bank account details alongwith other details as per Appendix-I and copy of the PAN card and GST Registration. The payment will be made in ECS mode.
- 6.4 The contractor shall comply with EPF, ESIC and other statutory regulations as applicable.

7. OTHER TERMS AND CONDITIONS

- i. The Contractor shall commence and complete the work as per the BOQ and technical specifications. The work and quantity is to be carried out as per the site conditions and relevant IS standards.
- ii. The Contractor shall complete the work in all respect to the satisfaction of the Engineer-In-Charge or his representative.
- iii. The work should be carried out with utmost safety precaution with minimum possible disruption of power supply. The contractor has to ensure that that cables are disconnected on both the sides.
- iv. The firm is advised to visit the site and get acquainted regarding the nature of the work involved and site conditions before quoting the offer.
- v. The firm should engage skilled service personal with the relevant required tools and instruments for commissioning the same.
- vi. The Contractor personnel engaged in the work shall follow all safety, security and General Rules enforced by Mormugao Port Authority (MPA) and the firm will only be responsible for the same.
- vii. MPA will not be responsible for any loss or damage of the men / materials / tools / plants engaged by the firm during the work at site / transportation.
- viii. The firm should indicate the GST No.
- ix. No advance payment will be made.
- x. Final payment will be made only after handing over the entire system in good working condition.

- xi. Power Supply will be provided free of cost by the Port. However, the firm should make his own arrangements to take power supply from the nearest source of supply.
- xii. The quantities indicated in the BOQ are tentative and bills will be settled as a per actual quantity executed.

Annexure-II

Bill of Quantities

Sr.No	Description	Qty.	Unit	Rate	Amount	GST%	Amount incl. of GST
1	Supply and laying of 10 Sq. mm 4 Core Aluminium armoured cable						
a	Supply	60	Mts				
b	Laying cable by excavation in soil at depth of 75 cms as per relevant IS standards	15	Mts				
c	Laying by road cutting at depth of 100 cms and through GI/Hume pipe. The contractor shall make good the road after laying of cable.	20	Mts				
d	Laying of 10 Sqmm cable through GI pipe	10	Mts				
e	Saddling of 10 Sqmm cable at distance of 1mts	5	Mts				
2	Supply and laying of 6 Sq. mm 4 Core Aluminium armoured cable						
a	Supply	300	Mts				
b	Laying cable by excavation in soil at depth of 75 cms as per relevant IS standards	300	Mts				
3	Supply, installation testing and commissioning of 9mts Height GI Pole as detailed in technical specifications. The work involves making suitable foundation.						
a	Supply	8	Nos				
b	Installation 9mts Height GI Pole as per approved foundation drawing. The work involves making suitable foundation as per approved drawing.	8	Nos				
4	Supply, installation, testing and commissioning of 36 watts LED light fitting with IP 66 rating.						
a	Supply	8	Nos				

	b	Installation, testing and commissioning of 36 Watts LED light fitting.	8	Nos				
5		Supply, installation testing and commissioning of Lighting Junction Box in CISF Barrack as per the technical specifications and relevant IS standards.						
	a	Supply	1	Nos				
	b	Installation, testing and commissioning of Lighting Junction Box including controls for lighting.	1	Nos				
6		Supply, installation testing and commissioning of 10 sqmm x4C aluminium armoured cable for making power supply arrangement to Lighting JB from JB at CISF Barrack.						
	a	Supply	6	Mts				
	b	Installation testing and commissioning of 10 sqmm x 4C aluminium armoured cable	6	Mts				
7		Termination 10 sqmm x4C aluminium armoured cable and 6 sqmm x 4C aluminium armoured cable at Lighting JB, JB at CISF barrack panel and Lighting Poles.	18	Nos				
8		Carrying out Pipe Earthing of Lighting Pole as per technical specifications	2	Nos				
9		Supply and Installation of GI Earth Strip of size 25mm x 5mm						
	a	Supply	300	mts				
	b	Installation	300	mts				