DEENDAYAL PORT AUTHORITY

(Erstwhile Deendayal/Kandla Port Trust)

Ministry of Ports, Shipping & Waterways, Govt. of India

Mechanical Engineering Department

Office of the Executive Engineer (Electrical), Ground Floor, Nirman Building, New Kandla, Kutch, Gujarat, Pin Code 370210. Email Id: Deepak.hazra@deendayalport.gov.in

No.: EL/WK/2905/ Date: 17/04/2026

EXPRESSION OF INTEREST [EOI]

Providing Scooter/Car Parking Shed & Bus Stop Stand at various locations inside/outside CJA - Electrical work thereof

(This EOI is issued to elicit Expression of Interest from the parties interested in the work and does not constitute any binding commitment from the Deendayal Port Authority to proceed with the work or invite any or all the parties in the subsequent bidding process. (The Open Tenders will be issued subsequently.)

Executive Engineer (Electrical), DPA invites Expression of Interest for the work of "Providing Scooter/Car Parking Shed & Bus Stop Stand at various locations inside/outside CJA" from the reputed firms from those who have executed similar work in Government / Public Sector and other leading private organizations. The Expression of Interest (EOI) documents containing details of Scope of Work and Technical Specifications are enclosed herewith.

The interested firms are requested to submit their Expression of Interest (EOI) for the said work in BOQ format as enclosed, if any query in Technical specification & BOQ same shall be required to submit along EOI offer. The EOI shall be submitted to the office of the undersigned on or before 24/04/2026. A soft copy of EOI is also acceptable through e- mail Id deepak.hazra@deendayalport.gov.in & anil.rautiya@deendayalport.gov.in

Sd/-
Executive Engineer (E)
Deendayal Port Authority

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SCOPE OF WORK

The Deendayal Port Authority (DPA) is one of the Major Ports in India. The Specification is intended to. The contractor shall read carefully the tender condition & make the site visit to get familiared and understand & assess the actual requirement.

The broad scope of the work envisages the followings but not limited to:-

1. Providing power supply from nearest LT source including laying of LT XLPE cables with all terminations.
2. Supply and installation of weatherproof Distribution Boards with necessary protection (MCB/MCCB/ELCB).
3. Providing and fixing energy-efficient LED light fittings for parking sheds and bus stop stands.
4. Supply and erection of lighting poles/brackets wherever required.
5. Internal and external wiring including conduits, cables, and accessories.
6. Providing complete earthing system for DBs, poles, and equipment.
7. Provision of automatic/manual control of lighting system (timer/photocell if required).
8. Testing, commissioning, and handing over of complete electrical installation.
9. Submission of test reports and as-built drawings.
10. All incidental works required for safe and satisfactory operation.
11. The contractor shall bring all the materials as per the Schedule – B, Scope of Work and complete the work with Labour.

DRAWINGS

The contractor shall make the drawing for the work, wherever required or as directed by the EIC.

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Technical Specifications

Technical Specification No. 1

Supply of 9 Meter Octagonal Pole with 1.5-meter dual arm with complete its accessories.

1.1 The Product should be designed for the specific climatic and environmental conditions of the region to ensure full durability and safety throughout its designed life.

1.2 All the Octagonal Poles shall be designed to withstand the maximum wind speed of 180 km/Hr and as per IS 875 or latest. The top loading i.e. area and the weight of fixtures are to be considered to calculate maximum deflection of the pole and the same shall meet the requirement of BS EN 40-2-1&3 or as per latest.

1.3 The pole shaft shall have octagonal cross section and shall be continuously tapered with single longitudinal welding. There shall not be any circumferential welding of the pole shaft. The welding of the pole shaft shall be done by Submerged Welding process.

1.4 All octagonal pole shafts shall be provided with the rigid flange plate MS FE410 conforming to IS 2062 of suitable thickness with provision for fixing minimum 4 foundation bolts. The base plate shall be fillet welded to the pole shaft at two locations i.e. from inside and outside. The welding shall be done as per qualified MMAW process or as directed by Engineer in charge.

1.5 The materials of the pole as follows:

(a) Pole - Conforming to grade S355J0, with 4mm wall thickness.

(b) Base Plate: - Fe 410 Conforming to IS 226/ IS 2062, b/w poles & Base plate four Nos. of shifters in each pole shall be provided.

(c) Foundation Bolts: - Hot dipped 6.8 Gr. as per IS 1367 or as per latest.

(d) Pole Sections: - The Octagonal Poles shall be in single piece with single longitudinal welding joint,

(e) Galvanization: - The poles shall be hot dip galvanized as per IS 2629 / IS 2633/ IS 4759 and BSEN ISO 1461 standards or as per latest with average coating thickness of 100 micron & above. The galvanizing shall be done in single dipping.

1.6 The pole manufacturing & galvanizing unit shall be ISO 9001: 2000 & ISO 14001 or latest certified to ensure consistent quality & environmental protection.

1.7 The poles shall have integrated Junction box with openable door of adequate size (Not less than 500mm length) at the elevation of 1500 mm from the base plate. The door shall be hinged type

with mechanical interlock, dust proof, weather proof and vandal resistance and shall ensure safety of inside connections and components. The door shall be flush with the exterior surface and shall have suitable locking arrangement. The pole shall be adequately strengthened at the location of the door to compensate for the loss in section.

1.8 The suitable cutout for door opening may be 500mm with reinforced & whether proof having locking arrangement by allen key (same shall be submitted to DPA in 4 Sets) of the Junction Box shall permit clear access to the components inside viz., insulated termination strips, connectors, MCBs, cables etc. There shall also be suitable bolt arrangement for the purpose of earthing.

1.9 Electrical connections - Four-way heavy duty Insulated connectors shall be provided, suitable for connecting 1.1 kV grade, 4 core X16 sq.mm. Al. cable. It shall also in house 1 no. 10 amps SP MCB,2.5 sq.mm connectors for looping with 2.5 Sq.mm Copper wires for connecting to the luminaries through 0.6 kV grade, 3 core X 2.5 mm^2 PVC insulated copper conductor flexible un-armoured Cable from the terminal block to the fixture within the pole. All the un-armoured & armoured cables shall be pass through Metallic & Polycarbonate gland of suitable size and suitable brass lugs for cables & cables laid through the pipe shall be without any joint.

1.10 Two nos. Earth Boss shall be provided at the bottom of the pole or on base plate (diagonally opposite) suitable for connecting 25X6 mm GI/ CU earth strip or SWG wire for earthing of the poles.

1.11 Earthing of each pole shall be carried out with one dedicated earth coil. The earth coil shall be GI as recommended in the latest version of IS. The earth coil shall be connected with 8 swg two GI wire to the two distinct earth boss on the pole.

1.12 Aesthetic appearance - All the grooves and carvings of the pole unit shall be free from any kind of distortion for a pleasing aesthetic appearance.

1.13 Top Mountings –The octagonal 9mtr pole should be supplied along with galvanized double arm bracket made from GI Pipe of suitable size of dia, 1.5 mt long suitable for it to install on top with its accessories as directed by Engineer in charge prior to approval of Engineer in charge with drawing, Luminaries fixing at dual arm as per design of LED Luminaries.

1.14 The Poles shall be bolted on a pre-cast RCC or at site along with set of foundation bolts for greater rigidity under supervision & certified by Civil Department, DPA.

1.15 The Contractor shall carry out all the relevant tests and inspection in the presence of the DPA or Third Party Agency, before the dispatch of the poles at no extra cost to be borne by DPA.

1.16 All the material/equipment/accessories shall be supplied with manufacturer's test certificates at site.

1.17 CONTRACTOR shall submit the Proposed Product Catalogue, Detail Data sheet, spare parts list and drawing of Pole & Bracket along with the BID for each product quoted.

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Technical Specification No. 2

Erection of 9 Meter Octagonal Pole with 1.5-meter dual arm with complete its accessories.

The poles shall be erected in plumb at a distance of 30 mtr, bolted on a precast RCC foundation with a set of four foundation bolts for greater rigidity. This includes fixing & erection of 09-meter-long with detachable type double arm Octagonal pole on foundation to be prepared by excavation of pit of 600mm (W) x 1000mm (L) x 1300mm deep after carrying out necessary excavation in the existing divider. All the waste material is to be dumped as directed by Engineer-In Charge.

This also includes Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying including the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in- charge."(Note :- Cement content considered in this item is @ 330 kg/cum. "Excess/ less cement used as per design mix is payable/recoverable separately). Providing M-30 grade concrete instead of M-25 (Concrete with minimum cement content of 350 kg /cum at all floor levels) Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level and above. Thermo-Mechanically Treated bars of grade Fe-500 D or more. Foundation hot dipped GI bolt of size 900mm long "J" type of M24mm dia shall be buried in the RCC up to the length of 775 mm and 125 mm should be projected length over the foundation thereafter pit shall be filled with 1:2:4 CC mix of cement concrete and 6 to 20mm graded metal course aggregate concrete. DWC pipe of suitable size shall be kept while concreting for IN & OUT of cable. This also includes supply and installation of GI Coil earthing to each pole of 7 to 10 meter.

The termination and connection through insulated connector and DIN rail MCB with junction box shall provide, cable brass glands of suitable size including earth linking to the pole and junction box with 8 SWG GI wire with all materials and labors as directed by Engineer-in- charge. The above work is to be done under the direction & supervision of Civil /Electrical Department, DPA.

Technical Specification No.3

Supply at site energy efficient 150W LED Street Light. The rate shall be firm and inclusive all taxes, packing and forwarding, insurance, loading at supplier's depot, transportation and unloading at site work. The LED fixtures should be suitable for pole pipe bracket. The contractor shall take prior approval from the Engineer In Charge for make of LED Street Light fixture & Flood light fixtures.

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Technical Requirements for LED Street Light are as under:

Sr. No.	Parameters	Requirements /Value
1.	Type	90W Street light(Clear cool white) LED Luminaire complete with all accessories including driver, internal wiring with flameproof wires, etc.
2.	LED chip make	CREE / NICHIA /OSRAM/LUMILED/SEOUL
3.	Rated Voltage	190V – 230V AC,
4.	Operating voltage range	Single phase 120-280-volt AC. But luminaries shall be tested for 100V to 300 V AC
5.	Frequency	50 Hz +/- 3%
6.	Power Factor	> 0.95
7.	LED chip Efficacy	>150 Lm/Watt system lumen output at 25 degree C, supported by LM80 report, to be submitted.
8.	LED Drive current	>=350 mA<750 mA
9.	LED Beam Angle	As directed by EIC
10.	Colour Temperature	≥5500K.
11.	Rated Minimum LED Life(L70)	50000 Burning Hours (With only 30% Lumen Degradation or 70% Lumen maintenance)
12.	System efficiency	≥ 100 Lm/Watt
13.	Total Lumen Output	CONTRACTOR to offer
14.	Colour Rendering Index of Luminaires	>70
15.	System Power Efficiency	≥ 90%
16.	Driver Type	Constant Current based Electronic Driver
17.	Driver Efficiency	> 90%
18.	Driver Life	>20000 hrs.
19.	Maximum temperature rise for Driver	<30 Deg C at 45 Deg C ambient
20.	Operating Temperature Range	-20 Deg C to + 50 Deg C
21.	Luminaries body temperature after 12 hours of continuous operation	≤ 30 Deg C from ambient
22.	Junction temperature	< 85 Deg C - self certified by Manufacturer
23.	Heat Sink Temperature	≤ 15 C from ambient
24.	Solder point temperature	< 70 Deg C
25.	Operating Humidity	10% to 95% RH
26.	Control Gear	Prewired with low smoke halogen free, fire retardant beam cables up to terminal block. Fuse protection shall be provided inside.
27.	Operating Hours	Dusk to Dawn (max 12 Hrs.)

28.	Total Harmonics Distortion (THD)	<10%
29.	Construction	High power SMD and LED must be mounted on Copper MCPCB for high thermal conductivity and fastest heat transfer from the LED junction
30.	IP Protection	IP66 or more; no water stagnation anywhere
31.	Luminary Housing	Pressure Die Cast Aluminum (grade 5000 or similar) housing with corrosion resistant polyster powder coating & safety as per IEC 60598 / IS 10322. Mounting bracket with aiming & locking facilities. Large surface area with fins to dissipate the heat to ambient air
32.	Heat Sink	Well-designed thermal management system with defined heat sink - Aluminium extrusion
33.	Clip / Fasteners	Corrosion free/ Stainless steel.
34.	Wire	The connecting wires used inside the luminaries, shall be Low Smoke Halogen Free, fire retardant e- beam cable and fuse protection shall be provided in input side.
35.	Optics	Secondary lens array should be provided for optimized roadway photometric distribution. Lens material should be optical high grade PMMA with more than 90% light transmittance
36.	IK protection for Optic Cover	>IK07
37.	Photometric measurements	LM-79/IS16105.
38.	Minimum Surge Protection	>10 kV
39.	Warranty / Guarantee	5 Years
40.	Protection Required in Driver Module	
a.	Short Circuit	Yes; Constant current limit mode.
b.	Open Circuit	Yes
c.	Over Voltage	Yes; Auto Isolation
d.	Over Temperature	Yes; Auto Shut Off.
e.	Under Voltage	Yes;
f.	String Open Protection	Yes;
41.	LED Type	B

(b) This includes fixing & commissioning of supplied 150W LED Street Light Luminary. The supplied fitting shall be fixed on 1.5 mtr double arm GI pipe bracket or as directed by EIC on nipple on the Octagonal Pole cross arm. This includes Electrical connections - Four-way connectors shall be provided along with Slide lock suitable for connecting 1.1 kV grade, 4 core X 6 sq mm Al cable armoured Cable from the terminal block to the fixture within the pole. All the cables laid through the pipe shall be without any joint. This also includes necessary wiring,

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connections & necessary earth linking connections with all material, labour, tools & tackles as directed by Engineer-In-charge.

Technical Specification No.4

Supply at site energy efficient **50W High Bay LED Light fixture** along with FRP Junction Box (size:100X100X75mm) for Dome shaped area of parking shed.

The contractor shall take prior approval from the Engineer in charge for make of LED Street Light fixture
(i.e. Bajaj / Philips /CG / C&S / SYSKA / WIPRO/ Pyrotech).

Technical Requirements for LED Street light is as under:

Sr. no.	Parameter	Requirement
1	Input Voltage	AC 130 - 260 V
2	Input Frequency	50 Hz +/-1 HZ
3	Life	50,000 glow hrs.
4	Luminary mounting arrangement	Adjustable mounting arrangement
5	Total Harmonic Distortion	<15% maximum
6	Working Temperature	-5°C to +60°C
7	Working Humidity	10% to 90% RH
8	Temperature	5000° K to 6500° K
9	Wattage	<1.2 W per LED
10	System Efficacy (Lumens / Watt)	≥100
11	Coating	Finishing Excellent with Powder Coating
12	Power factor	≥0.90
13	Warrantee	2 years
14	Working Humidity	10% to 90% RH
15	Color	White
16	Color Rendering Index	≥70
17	Ingress protection Level	IP 66 for lamp compartment and Driver unit
18	Power efficiency	≥ 80%
19	Light Source	SMD LED array with lens
20	Makes of LEDs	Bajaj / Philips /CG / C&S / SYSKA / WIPRO/ Pyrotech
21	Certification	preferred/essential CE, ROHS, ERTL & ERDI.
22	LM	79-80
23	Body of fitting	Die cast aluminum / aluminium Extrusion

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Technical Specification No.5

This includes fixing & commissioning of supplied 50 watt High Bay LED light fixture along with FRP Junction Box (size:100X100X75mm) shall be erected at dome shaped area for illumination. This also includes necessary wiring (with providing & connecting with 3CX 1.5 sq.mm copper Braided flexible cable), junction box connections & necessary earth linking connections with all material, labour, tools & tackles as directed by Engineer-In-charge.

Technical Specification No.6

This includes supply at site, installation, testing and commissioning of Outdoor mounted type MS type Feeder pillar panel double shutter, broader top canopy, handle with locking arrangement, dust, damp and vermin proof. The feeder pillar shall be fabricated from 3mm thick M. S sheet outer frame using suitable size of M.S angle and M.S Flat for the frame structure the inner sheet and the door should be made from 1.8 mm thick M.S sheet. The feeder pillar shall be painted using powdered coated simens grade paint along with Danger indication sticker of voltages.

The feeder pillar shall be specious for easy maintenance and shall be specious to be provided with all the material mentioned below.

(a) Type-A Distribution Board

MCB capacity	**Qty (per DB)**
63 Amps. 4P ,C series 10 KA breaking capacity	01
63 Amps. 4P, ELCB, 30 mA	01
63 Amps. 4P Contactor	01
DIN mounted astronomical timer Switch	01

(b) Type-B Distribution Board

MCB capacity	**Qty (per DB)**
16 Amps. 4P ,C series 10 KA breaking capacity	01
6 Amps. DP ,C series 10 KA breaking capacity	03
16 Amps. 4P, ELCB, 30 mA	01
16 Amps. 4P Contactor	01
DIN mounted astronomical timer Switch	01

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(c) Type-C Distribution Board

MCB capacity	Qty (per DB)
6 Amps. DP ,C series 10 KA breaking capacity	01
6 Amps. 2P Contactor	01
DIN mounted astronomical timer Switch	01

Suitable size of Aluminium bus bar for Phase & Neutral, PVC sleeved with colour code. Danger Board, tie belt All these components shall be mounted in the feeder pillar by means of suitable cadmium passivated hardware. The feeder pillar shall be complete in all respects with cable glands, lugs for incoming and outgoing cables including interconnection with PVC insulated cable single core, standard copper conductor of 650/1100V grade.

The feeder pillar shall be erected on MS angle of size 50x50x6mm with suitable height duly epoxy painted. The panel shall be fitted with proper GI bolt & nut on the so that it shall withstand the load of the panel properly.

The feeder pillar shall be tested as per latest IS Norms. The feeder pillar shall be provided with 2 Nos. terminals for earthing. The Panel shall be manufactured from type test holder having type test certificate of feeder panel of similar or above ratings. The above panel drawing should have to be approved by Engineer-in-charge before placing the order showing the position of the components as mentioned This includes all labour and material as directed by Engineer-in-charge.

Technical Specification No.7

This includes supply at site following size 1.1 KV grade, 4 core & 2 core aluminium conductor, XLPE insulated armoured cable of given sizes which confirming to IS: 7098 (Part-I) 1988 with up to date amendments and of approved make with ISI mark. The manufacturer shall produce TYPE TEST certificate with similar size of cable, which shall not be more than 5 years old. The cable shall have marking/embossing at the interval of every meter showing its progressive length. During the cable inspection, the manufacturer shall show the relevant ROUTINE TESTS to inspecting authority or otherwise the manufacturer shall produce the routine test certificate during supply of cable at site.

I) 4C X 25 Sq.mm XLPE Insulated.
II) 4C X 4 Sq.mm XLPE Insulated
III) 2C X 2.5 Sq.mm XLPE Insulated

Technical Specification No.8

This includes laying of cable size up to size of cable up to 4 core x 25 Sq.mm LT armored aluminum Conductor XLPE Cable of 1.1KV Grade through.

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i) In Hard / soft Soil :- the cable shall be laid through excavation in soft/hard soil. The trench to be excavated 0.3 Mtr. Wide 0.6 Mtr. deep. The bed of 50mm of river sand shall be provided in the bottom of the excavated trench. The cable shall be laid over the bed of river sand. This includes providing & laying of half round RCC Pipe on cable lengthwise i.e. parallel to the cable and the gaps shall be filled by fresh river sand. The cable shall be covered by keeping half round heavy duty RCC NP 2 Pipe. The filling of the trench shall be done with by provided Sand cover (at least 50mm from cable surface) completely & followed by excavated stuff & should be watered and rammed properly to its original position. The excess excavated stuff shall be disposed off from the Site of work and spreaded in low laying area as directed. The contractor shall provide heat shrinkable straight through joint of relevant size of approved make if the laying of cable shall be more than standard drum length,. This includes all labour and material as directed by Engineer-in-Charge.

ii) On wall through PVC Pipe & Clamp: This includes laying of cable size 16 sq.mm LT cable through wall /Truss / structure This includes laying of single / double length cable 4 core x 4 Sq.mm LT armored aluminum Conductor XLPE Cable of 1.1KV Grade on existing wall/cement structure/Truss/ Perlin through suitable size of PVC pipe & clamp. The Clamps shall be provided of suitable size (with respect to PVC pipe outer diameter) made from G.I. flat 25 x 3 mm with G.I. Nut bolts/heavy duty screws for clamping. The base shall be fixed rigidly on wall/cement structure through cemented wooden gutties. The work includes with all materials and labour as directed by Engineer-in-charge.

iii) In Road/RCC Crossing: - This includes laying of single length cable up to 4.0 core x 4 Sq.mm LT armoured aluminum Conductor XLPE Cable of 1.1KV Grade (excluding supply of cable) through road crossing in the trench to be excavated 0.3 Mtr wide 1.0 Mtr deep. by providing of 1 lengths of RCC NP2 Class pipe of 150mm diameter, in which cable shall be passed through. The excavated stuff shall be disposed off from the Site of work and spreaded in low laying area as directed. The filling of the trench shall be done with material in layers of 20 cm thickness and each layer should be watered and rammed properly and road position shall be properly re-done to its original position with all material and labour as directed by Engineer- in-charge.

iv) In RCC Trench: - The cable shall be laid after opening of RCC trench by removing the RCC Covers & cable trench shall be cleaned properly including removal of garbage, stones, bricks & old unused cables etc from the trench line without damaging the other cables laying in the trench. After laying of the cable, cable trench shall be properly covered with removed RCC covers as per original. The contractor shall provide heat shrinkable straight through joint of relevant size of approved make if the laying of cable shall be more than standard drum length, This includes all labour and material as directed by Engineer-in-Charge.

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Technical Specification No.9

This includes supply at site following size 1.1 KV grade, 3 core copper conductor, XLPE insulated Braided Copper cable of given sizes which confirming to IS: 7098 (Part-I) 1988 with up to date amendments and of approved make with ISI mark. The manufacturer shall produce TYPE TEST certificate with similar size of cable, which shall not be more than 5 years old. The cable shall have marking/embossing at the interval of every meter showing its progressive length. During the cable inspection, the manufacturer shall show the relevant ROUTINE TESTS to inspecting authority or otherwise the manufacturer shall produce the routine test certificate during supply of cable at site.

3C X 1.5 Sq.mm XLPE Insulated Braided Copper Cable.

Technical Specification No.10

This includes laying of cable size up to size of cable up to 3 core x 1.5 Sq.mm LT Braided Copper Cable Conductor XLPE Cable of 1.1KV Grade through.

On wall through PVC Pipe & Clamp: This includes laying of cable size 3C x 1.5 sq.mm LT Braided cable through wall /Truss / structure. This includes laying of single / double length cable 3C x 1.5 Sq.mm LT Braided Copper Cable Conductor XLPE Cable of 1.1KV Grade on existing wall/cement structure/Truss/ Perlin through suitable size of PVC pipe & clamp. The Clamps shall be provided of suitable size (with respect to PVC pipe outer diameter) made from G.I. flat 25 x 3 mm with G.I. Nut bolts/heavy duty screws for clamping. The base shall be fixed rigidly on wall/cement structure through cemented wooden gutties. The work includes with all materials and labour as directed by Engineer-in-charge.

Technical Specification No.11

This includes preparation of earth station with chemical treated back filled compound 50 mm dia. Pipe In Pipe GI Type 2 Mtr Depth , Maintenance free including all accessories & Masonry work Enclosure with cover plate.

A cement concrete (ratio 1:4:8) chamber of at least 30 Cm. x 30 Cm. shall be provided just below the surface of ground over the funnel for watering and having RCC/CI cover of suitable size as directed. This also includes removal of extra-excavated earth from the site. The work shall be carried out to entire satisfaction of Engineer-in-charge. This work includes all labour and material as directed by Engineer-in-Charge. The works also include earthing value marking & painting on earth strips & earthing station by suitable paints (Green Color on Strips) and also mentioned the earth value on earth pits.

Technical Specification No.12

The works include providing & fixing the following size earth strip from earth station to equipment / Main DB or as per site requirement. The complete work consists necessary wiring connections and earth linking at both the ends with all materials and labour as directed by Engineer-in-charge.

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(a)8 SWG GI earthing wire

This includes supply, Laying & connecting, 8 SWG GI earthing wire , from DB/Meter /Switch to earth station by providing & fixing suitable Dia Medium duty PVC conduit pipe in concealed manner, the works include 8 SWG earth wire will be pass through conduit pipe. The earth wire shall be connected using copper nut bolts rigidly or as directed by EIC.

Technical Specification No.13

This works include Supply & Fixing of FRP Junction Box with 3P, 10 Amp MCB and All components shall conform to relevant IS/IEC standards. Installation to be completed with all necessary accessories as directed by Engineer-in-charge.

Enclosure:	FRP, IP65/IP66, weatherproof, UV resistant
Size:	Approx. 150×150×100 mm
Shape:	Rectangle
No. of cable Entry:	3
Mounting:	Wall/Pole mounted
MCB:	10A, 3P, 230V AC, C-curve, 6kA,
Mounting Type:	DIN rail
Internal Wiring:	FRLS copper wire (1.5 sq.mm)
Cable Entry:	With weatherproof glands (PG type)
Earthing:	Brass/GI earthing stud provided
Accessories:	Neutral link, earth link, DIN rail
Standard:	IS/IEC 60898, IP as per IEC 60529

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Bill of Quantity

Schedule - B

ELECTRICAL DIVISION

Name of Work : EOI for Providing Scooter/Car Parking Shed & Bus Stop Stand at various locations inside/outside CJA - Electrical work thereof

S/N	Description	Qty.	Unit	Rate	Amount
1	Supply at site 9 Mtr. long Hot Dip galvanized octagonal street light pole with detachable double Arm as per **Technical Specification No. 1**				
(a)	9 Mtr. long Octagonal Type Street light pole with 1.5 Mtr. long double arm	18	Nos.		
2	Erection, Testing & Commissioning of supplied 9 Mtr. long Hot Dip galvanized octagonal street light pole with detachable double Arm along with civil foundation as per **Technical Specification No. 2**	18	Nos.		
3	Supply & Fixing of 150 Watt LED Street light fixture with all accessories as per **Technical Specification No. 3**				
(a)	Supply	40	Nos.		
(b)	Fixing	40	Nos.		
4	Supply of following type High Bay LED light fitting, along with FRP Junction Box (size:100X100X75mm) with single compression Gland suitable Loop in loop out along with connector. LED light complete in all respect as per **Technical Specification No.4**				
(a)	50 Watt (cool white)	130	Nos.		
5	Fixing of following type High Bay Light LED fitting, along with FRP Junction Box (size:100X100X75mm) with single compression Gland suitable Loop in loop out along with connector. LED light complete in all respect as per **Technical Specification No.5**				
(a)	50 Watt (cool white)	130	Nos.		
6	Supply, installation, Testing & commissioning following type Feeder panel as per **Technical specification No. 6**				
(a)	Type-A	2	Nos.		
(b)	Type-B	2	Nos.		
(c)	Type-C	39	Nos.		

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7	Supply at site LT armored aluminum conductor XLPE cable of the following type & size as per **Technical Specification No.7**				
(a)	4 Core, 25 Sq.mm	1000	Mtr.		
(b)	4 Core, 4 Sq.mm	1000	Mtr.		
(c)	2 Core, 2.5 Sq.mm	2000	Mtr.		
8	Lying at site LT armored aluminum conductor XLPE cable of the following type & size as per **Technical Specification No.8**				
(a)	4 Core, 25 Sq.mm				
(b)	4 Core, 4 Sq.mm (Road/RCC Crossing)	1000	Mtr.		
(c)	2 Core, 2.5 Sq.mm (Hard/Soft Soil)	1000	Mtr.		
		2000	Mtr.		
9	Supply at site 3 Core, LT Flexible Braided copper conductor cable of the following type & size as per **Technical Specification No.9**				
(a)	3 Core, 1.5 Sq.mm	1000	Mtr.		
10	Lying at site 3 Core, LT Flexible Braided copper conductor cable of the following type & size as per **Technical Specification No.10**				
(a)	3 Core, 1.5 Sq.mm (On wall through PVC Pipe & Clamp).	1000	Mtr.		
11	Preparation earthing station, chemical treated back filled compound earthing system with Pipe-In-Pipe 50 mm Dia GI type 2 Mtr Depth , Maintenance free as per **Technical Specification No.11**	6	Nos.		
12	Providing & connecting following type earth wire for earth station to equipments as per requirement As per **Technical Specification No.12**				
(a)	8 SWG GI earthing wire.	300	Mtr.		
13	Providing & Fixing of FRP MCB JB (Size-150x150x100mm) with 3P,10A MCB requirement As per **Technical Specification No.13**	30	Nos.		
				Total Amount Rs.	

(In words Rupees _____only.)

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Note : The rate is inclusive of Taxes, Duties, Transportation, Loading & Unloading, Incidental Charges etc. but excluding the GST.

Sd/-

Signature & Seal of Firm

EXECUTIVE ENGINEER (ELECTRICAL)

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Make List of Electrical Items		
Sr. No.	**Description**	**Approved Makes**
1	HV VCB	Siemens/Crompton Greaves/ABB/ Schneider
1(a)	HV Gas Insulated Breakers	Siemens/Schneider/ABB
2	Power Transformers	Voltamp/Crompton Greaves/Bharat Bijlee/BHEL/Siemens/ABB/Schneider /T&R
3	Distribution Transformers	EMCO/Kirloskar/Patson/ Voltamp/ABB/Schneider/T&R
4	Resin Cast Transformers	
	A) Resin Cast Impregnated	Voltamp/Kirloskar/EMCO
	B) Dry Cast	VOLTAMP/KIRLOSKAR/EMCO
5	HT XLPE Cables	Polycab/Torrent/RPG Asian/ Gloster/Unistar
6	LT XLPE Cables	Polycab/Torrent/RPG Asian/Rallison / Primecab/Havells/Unistar/Avocab/ Allcab/Adcab
7	LT ACB	Siemens/L&T/Schneider/C&S
8	Protection Relays	Areva/L&T/Siemens/ABB/C&S
9	LT Panel	CPRI Approved
10	Changeover Switch	Siemens/L&T/ABB/C&S/Schnider/ Legrand/Indoasian
11	SFU FOR MAIN LT Distribution Panels	Siemens/L&T/ABB/C&S
12	SFU for Distribution Panels & Feeder Pillers	Siemens/L&T/ABB/C&S/Schneider/ Legrand/Indoasian/Havells
13	MCCB for Main LT Distribution Panels	Siemens/L&T/ABB
14	MCCB for Distribution Panels and Feeder Pillers	Siemens/L&T/ABB/C&S/ Schnider/Legrand/Indoasian/Havells

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15	MCB/ELCB/RCCB/ RCCBO for Main LT Distribution Panels	Siemens/HAGER/L&T/ABB
16	MCB for Distribution Panels and Feeder Pillers	Siemens/L&T/ABB/C&S/Schneider/ Legrand/Indoasian/Havells/Standard
17	MCB Distribution Board	Standard/Hensel/Legrand/Indoasian/ Havells
18	Multi-Function Digital Meter for Main LT Distribution Panels/Digital KWH Meters	L&T/Enercon/Secure/L&G/Rishabh
19	Analog Volt/Ampare Meter for Distribution Panels and Feeder Pillers	Rishabh/AE/Enercon/L&T
20	Slector Switch for Voltmeter/ Ampare Meter	L&T/Siemens/C&S
21	Power Contactor & Over Load Relays	L&T/Siemens/ABB
22	Quartz Time Clock Switch	L&T/Indoasian/Siemens
23	PVC Wire with Copper Conductor	RR Kabel/KEI/Polycab/Milex/Gujcab/ Standard/ Finolex/Anchor
24	Flush type Switches, Sockets, Holders and Ceiling Roses & Electronic Regulators	Anchor/MK/Northwest/Vinay/Panama/ Havells
25	Door Bells/Call Bells	Anchor/Legend/MK/Northwest
26	Modular Switches, Sockets, Plates & Boxes	Anchor/MK/Northwest/Legrand/ Havells/Indoasian/Siemens
27	PVC Conduit/Oval Conduit & Cassing Capping and Accessories	Precision/Vulcan/Finolex/Garware/ REStoplast/Swastik/BPI
28	GLS Lamps & Fluorescent Lamps	Philips/Bajaj/Wipro/Crompton Greaves/ Osram/SuryaRoshni/GE/ NERI
29	HPSV, HPMV & Metal Helide Lamps	Philips/Bajaj/Wipro/Crompton Greaves/ Osram/Surya Roshni/GE

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30	Ignitors for HPSV, Metal Helide Lamps	Philips/Bajaj/Wipro/Crompton Greaves/ Osram/Surya Roshni/GE
31	Luminaries	Philips/Bajaj/Wipro/Crompton Greaves/ Osram/Surya Roshni/GE/ NERI
1a	LED Luminaries	Philips/Bajaj/Wipro/CG/Surya/ Pyrotech/ Neri/Syska/Nessa having surge Protection ≥10KV for fittings & internal Surge protection for Driver of≥4KV, LED Chip only Osram/CREE/Philips Lumileds/ Citizen/NiciawithLM-79, 80 Certification
32	Ceiling Fans	Bajaj/Orient/Usha/Crompton Greaves/ Almonard/GEC
33	Wall Mounting Fans	Bajaj/Orient/Usha/Crompton Greaves/ Almonard/GEC
34	EXHUASTFANS	Bajaj/Orient/Usha/Crompton Greaves/ Almonard/GEC
35	Heavy Duty Industrial Wall Mounting Fans	Bajaj/Orient/Usha/Crompton Greaves/ Almonard/GEC
36	Water Cooler	Voltas/Shriram Usha/Bluestar
37	Air Conditioners	Voltas/Carrier/Bluestar/Usha/Hitachi/LG/ Samsung/Onida
38	Refrigerators	Voltas/Carrier/Bluestar/Usha/Hitachi/LG/Samsung/Whirlpool
39	Voltage Stabilizer	Veeline/Capri
40	Inverters	Sukam/Microtek
41	D.G. SETS (a) Engine (b) Alternator	 Cummins/Greaves/Kirloskar/ Caterpillar/ Ashok Leyland/Volvo Stamford/Crompton Greaves /Jyoti/Kirloskar Electric
42	Electric Motor	Alstom/Crompton Greaves/Siemens/ Kirloskar/ABB
43	Water Pumps	Swastik/KSB
44	Water Geyser	Bajaj/Usha/Crompton Greaves/ Spherehot /Racold
46	Heat Shrink Joint Kits	3M/Raychem/Yamuna Denson/Vikchem
45	LUGS & Cable Glands	Dowells/Jainson/Braco

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TERMS AND CONDITIONS

1. Time Schedule: The work shall be completed within 12 (Twelve) months from the date of issue of written order to commence the Work.

2. The bidder, at his own responsibility and risk is encouraged to visit and examine the site of work and its surroundings and obtain all information that may be necessary for preparing the Bid. The costs of visiting the site shall be at the Bidders' own expense.

3. The rates should be quoted in figures and words both. In case of difference in figure & words, the rate mentioned in words will be considered.

4. The contractor shall affix SEAL along with SIGNATURE in the Offer.

5. The work shall be carried out in accordance with the best standards of workmanship and to the entire satisfaction of the Engineer in-Charge.

6. The contractor shall not deposit any materials at such a place that may cause inconvenience to the public or staff or nearby offices.

7. The Contractor shall execute the work in such a way that not to cause inconvenience to the public or staff or nearby offices and not to cause hindrance to traffic. Necessary barricading shall be done by the contractor at his own cost if required.

8. All tools, plants, scaffolding, ladder etc. and other machinery etc. required temporary for the purpose of execution of work will have to be arranged by the contractor at his own cost and storing of such tools, plants etc. will have to be made by him.

9. All the materials should be got approved from Engineer-in-Charge before put into use.

10. Correction if any should be signed/ initialed by the contractor. White ink correction will not be allowed and lead to rejection of quotation.

11. All the rules and regulations governing DPA will be applicable.

12. After completion of the work, the site should be neatly cleaned by the contractor.

13. The contractor shall ensure not to cause any damages to the port properties in the vicinity of work site during execution of work. If any damage occurs due to workmen/ machinery of the contractor, the contractor has to make good the loss / damage at his cost.

14. For Entry & exist of material and contractor personnel, pass shall be arranged by contractor.

15. All the work shall be carried out to the entire satisfaction of Engineer in-Charge.

Sd/-

Signature & Seal of Firm

Executive Engineer (E)
Deendayal Port Authority