

SPECIFICATION OF POLE MOUNTABLE STREET LIGHT WITH SOLAR PANEL

BNS SHER-E- BANGLA

1. **Name of Equipment.** Pole Mountable Street Light with Solar Panel.
2. **Purpose.** For outdoor lighting to increase security.
3. **Brand.** To be mentioned.
4. **Model.** To be mentioned.
5. **Manufacturer.** To be mentioned.
6. **Country of Origin.** To be mentioned.
7. **Manufacturing Country.** To be mentioned.
8. **Supplier.** To be mentioned.
9. **Year of Manufacturing.** To be mentioned, it will be 2018 or later.
10. **Quantity.** 05(Five) in nos.
11. **Qualification of Bidder.** To be mentioned.
12. **Scope of Supply.** 05(Five) in nos Pole Mountable Street Light with Solar Panel to be supplied as per specification. Test/Trial should be carried out.
13. **Standard Accessories (Per Pole Mountable Street Light with Solar Panel).**
 - a. Solar Panel - 01 in no.
 - b. Battery - 01 in no.
 - c. Solar Charge Controller - 01 in no.
 - d. LED Light - 01 in no.
 - e. Structure for Solar Light - 01 in no.
 - f. Pole - 01 in no.
 - g. Arm for Light and Battery Box - 01 in no.
 - h. Installation Cable - As required.
14. **Installation, Testing & Commissioning.** By the supplier in designated places (BNS SHER-E-BANGLA, Kolapara, Patuakhali).
15. **Labor & Carrying Cost.** By the supplier.
16. **Technical Specification.**

a. Solar Panel.

- | | | |
|----------------------------|---|---------------------------------------|
| (I) Power | - | 200 Watt. |
| (II) Manufacturing Country | - | China. |
| (III) Brand | - | Solarrise/ Longi Solar/Equivalent. |
| (IV) Module Capacity | - | 100 Watt x 2 nos. or 200 watt x 1 no. |
| (V) PV Module Type | - | Mon crystalline/ Poly crystalline. |
| (VI) Operating Voltage | - | 17.8 for 12 Volt. |
| (VII) Junction Box | - | IP65. |
| (VIII) Mounted Structure | - | On the top of the pole. |
| (IX) Wind Loading | - | 220 Kmph |
| (X) Operating Temperature | - | - 40° C to 85° C. |
| (XI) Warranty | - | 05 years replacement warranty. |

b. Battery.

- | | | |
|----------------------------|---|--------------------------------------|
| (I) Manufacturer | - | Kenson korea Batteries/ Equivalent. |
| (II) Manufacturing Country | - | China. |
| (III) Brand | - | Kenson/ Equivalent. |
| (IV) Design Life | - | 12 Years. |
| (V) Type | - | Sealed maintenance free SMF battery. |
| (VI) Battery Voltage | - | 12 V DC. |
| (VII) Efficiency | - | 90 %. |
| (VIII) Self Discharge | - | 2 %. |
| (IX) Operating Temperature | - | -15° C to 60° C. |
| (X) Warranty | - | 2 years replacement warranty. |
| (XI) Life Cycle | - | 1400 at 30 % . |

c. Solar Charge Controller.

- | | | | |
|-------|---------------------|---|--|
| (I) | Brand | - | Ensystco/ Equivalent. |
| (II) | Capacity | - | 12 V DC 20A. |
| (III) | Display Type | - | LED. |
| (IV) | Function | - | Auto-Programmable with remote. |
| (V) | Electric Protection | - | PV reverse polarity protection, Battery over voltage protection, Battery over discharge protection, Battery over heating protection, Battery reverse polarity protection, Load short circuit protection. |

d. LED Light.

- | | | | |
|--------|---------------------|---|------------------------------------|
| (I) | Manufacturer | - | Energy System Company/ Equivalent. |
| (II) | Brand | - | Ensystco/ Equivalent. |
| (III) | Type | - | COB LED Light. |
| (IV) | Power | - | 40 Watt. |
| (V) | Luminous Flux | - | 4800-5200 lm. |
| (VI) | Lamp Efficiency | - | 120-130 lm/ Watt. |
| (VII) | Junction Box | - | IP65. |
| (VIII) | PF | - | PF \geq 0.98 |
| (IX) | Beam Angle | - | 120 $^{\circ}$ |
| (X) | Rated Life | - | 50000 h. |
| (XI) | Color Temperature | - | 5000-7000K. |
| (XII) | Working Temperature | - | -30 $^{\circ}$ to 70 $^{\circ}$ C. |
| (XIII) | Input Voltage | - | 12 V DC. |
| (XIV) | Warranty | - | 03 years replacement warranty. |

e. Structure for Solar Light.

- | | | | |
|------|-----------|---|------------------------------|
| (I) | Dimension | - | 20 inch x 20 inch x 60 inch. |
| (II) | Type | - | RCC. |

f. Pole.

- | | | | |
|--------|---------------------|---|--|
| (I) | Manufacturer | - | Energy System Company/ Equivalent. |
| (II) | Total Height | - | Height – 20 feet, Dia – 5 inch. 8' + 4 inch. 7' + 3 inch. 5'. |
| (III) | Materials | - | GI. |
| (IV) | Diameter | - | 20 feet, Dia – 5 inch. 8' 4 inch. 7' 3 inch. 5'. |
| (V) | Thickness | - | 2.5 mm. |
| (VI) | Arm | - | Single arm. Length-3 feet, Diameter- 1.5 inch. |
| (VII) | Weight | - | 50-70 Kg. |
| (VIII) | Battery Box | - | MS Made. |
| (IX) | Base | - | 18 inch x 18 inch with 12 mm thickness with 4 hole for Nut-bolt with diameter 18 inch. |
| (X) | Structure for Panel | - | MS Made frame. Size: Length – 18 inch, Width – 26 inch. |

17. Test/ Trial and Acceptance : The system to be handed over to BN as operational and test/trial of the system should be carried out. Final acceptance will be given by BN after satisfactory performance test of the system.

18. Manual : Following manuals are to be provided:
a. Operational & Maintenance Manual with necessary circuit diagram.
b. Parts Catalogue.

19. Warranty : Supplier should provide warranty for period of two years after satisfactory acceptance by BN. During warranty period if the system remain non-operational due to defect for a certain period, the warranty will be extended for that period.

20. Pictures : Attached.

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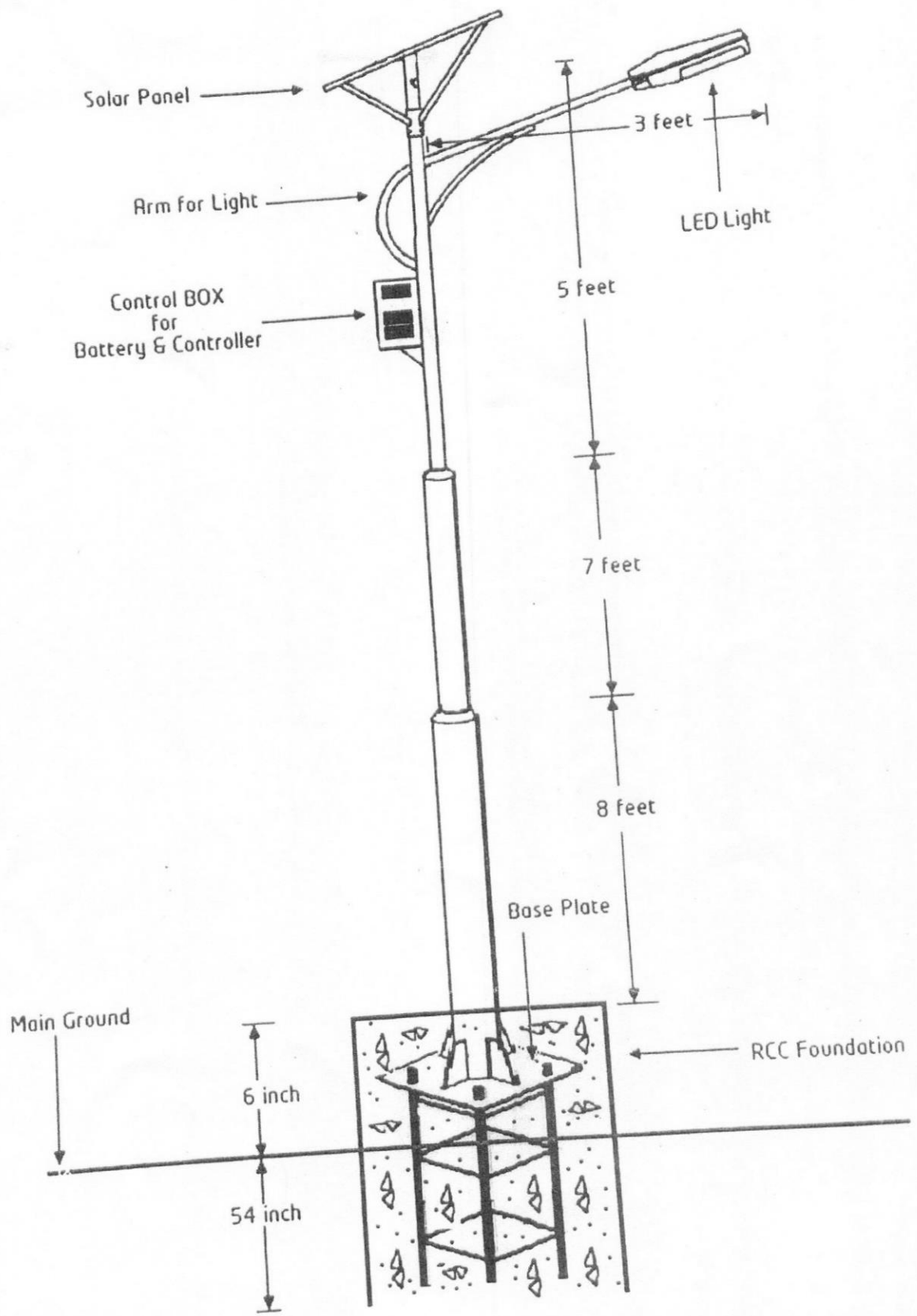
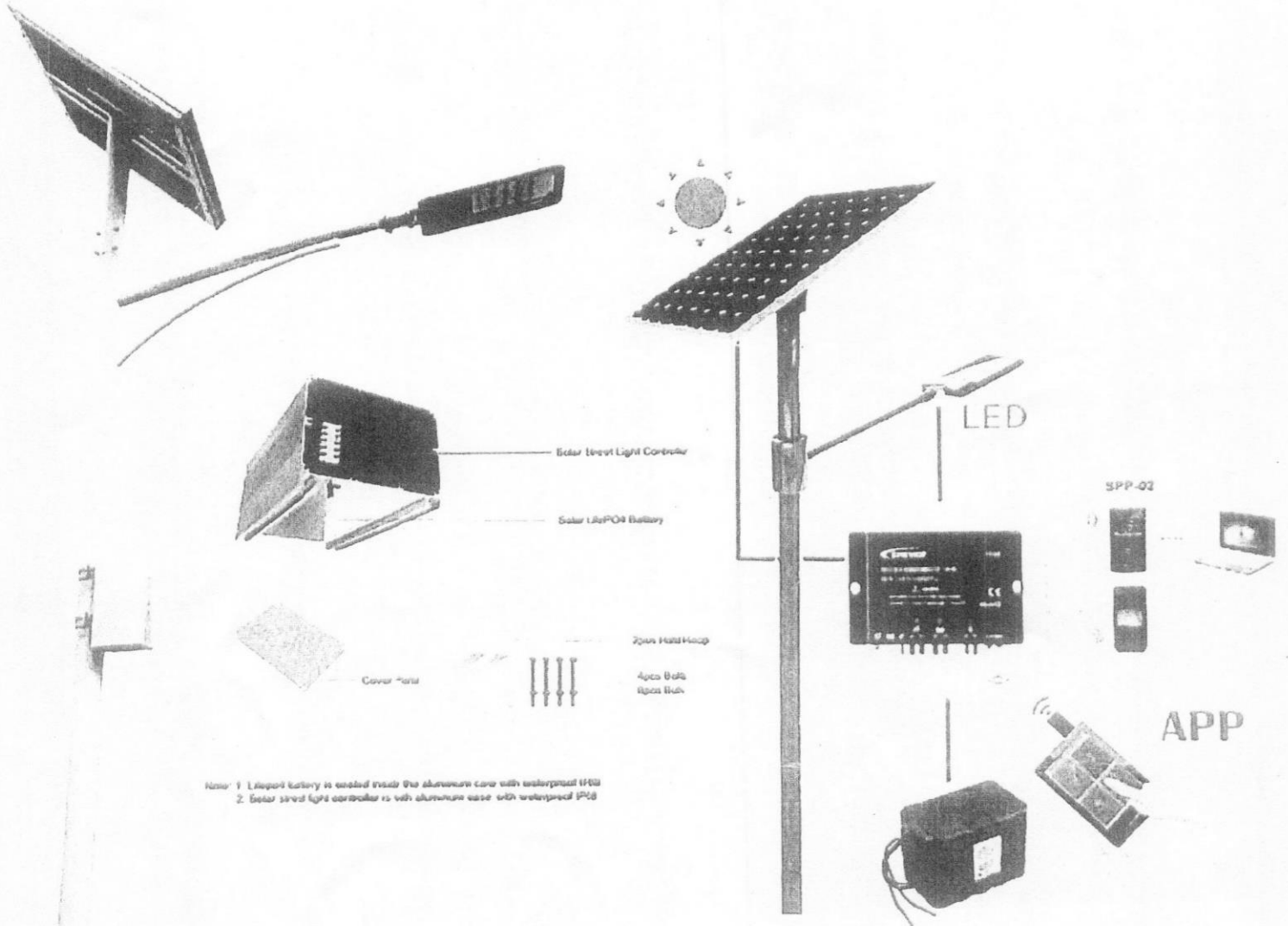


Fig: Solar Street Light

Solar Street Light



Note: 1. LiFePO4 battery is sealed inside the aluminum case with waterproof IP68
2. Solar street light controller is with aluminum case with waterproof IP68

Jahid Iqbal Chowdhury
JAHID IQBAL CHOWDHURY
S.L.F.N