

20m SOLAR HIGH MAST FLOODLIGHT – COMPLETE INSTALLATION

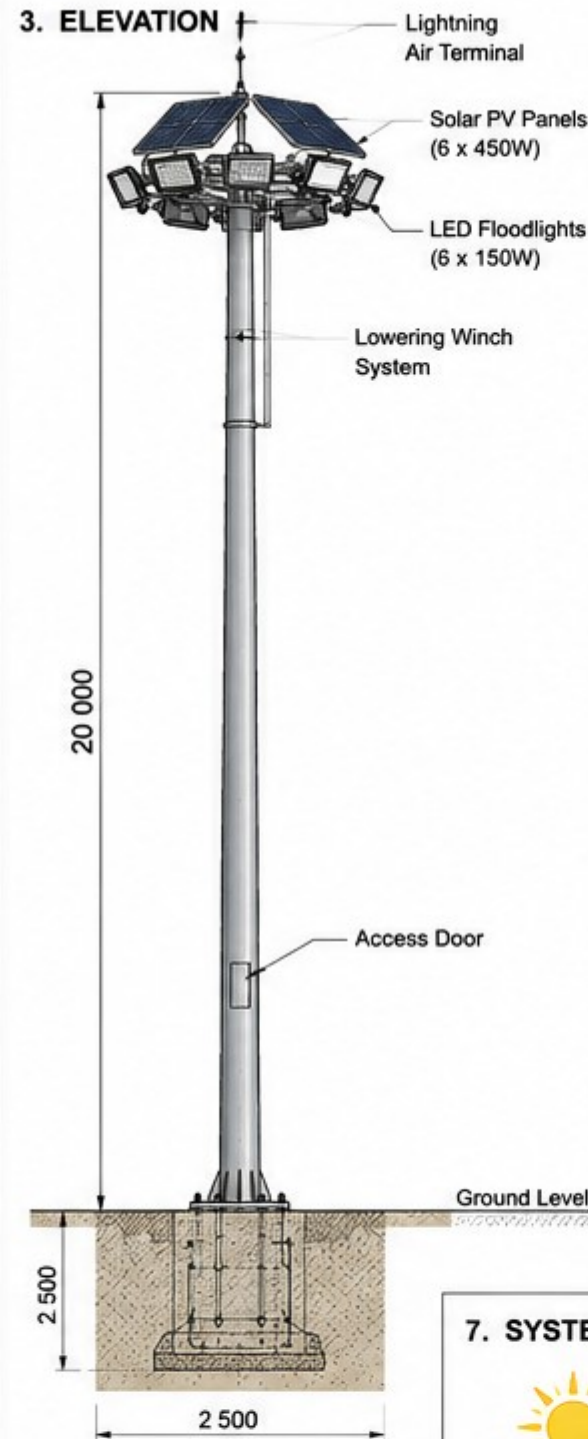
1. OVERALL 3D CONCEPT



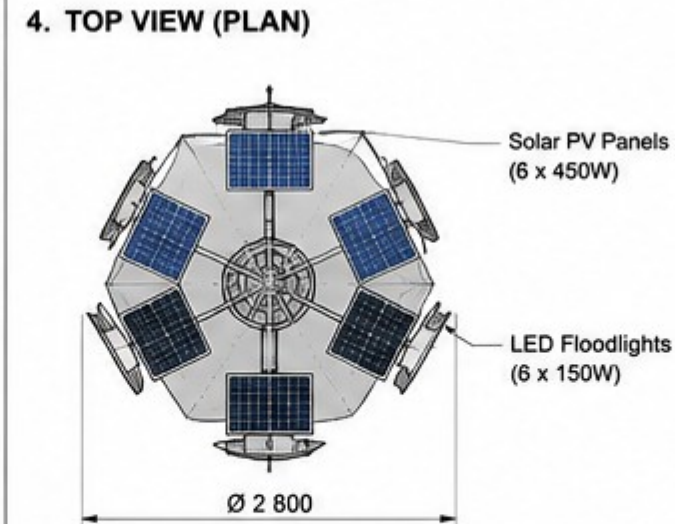
2. SYSTEM COMPONENTS

- 1 20m High Mast (Galvanized Steel)
- 2 LED Floodlights (6 x 150W)
- 3 Solar PV Panels (6 x 450W)
- 4 MPPT Charge Controller
- 5 LiFePO4 Battery Bank (48V)
- 6 Battery Enclosure (IP65)
- 7 Electrical Junction Box
- 8 Earthing System
- 9 Concrete Foundation
- 10 Lightning Protection (Air Terminal)
- 11 DC Cables & Protection Devices
- 12 Lowering Winch System

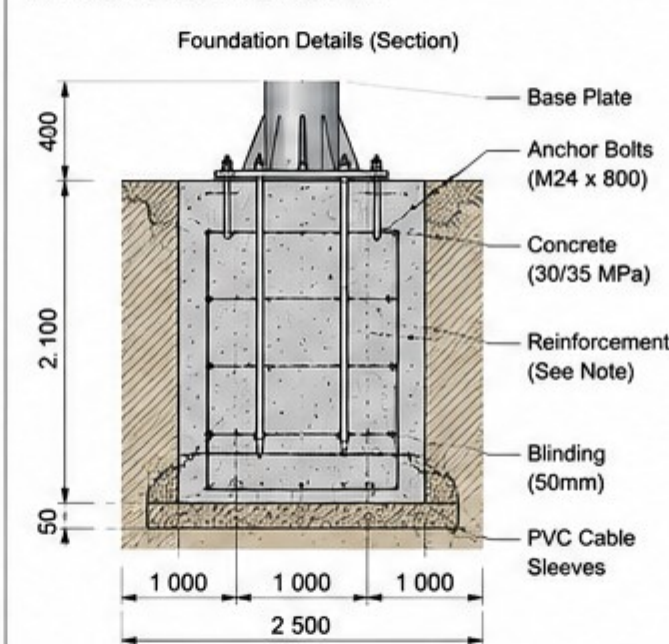
3. ELEVATION



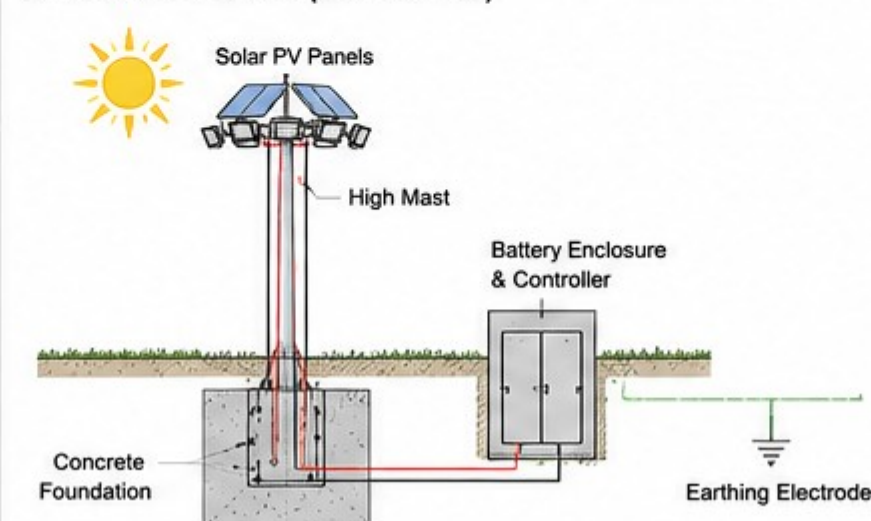
4. TOP VIEW (PLAN)



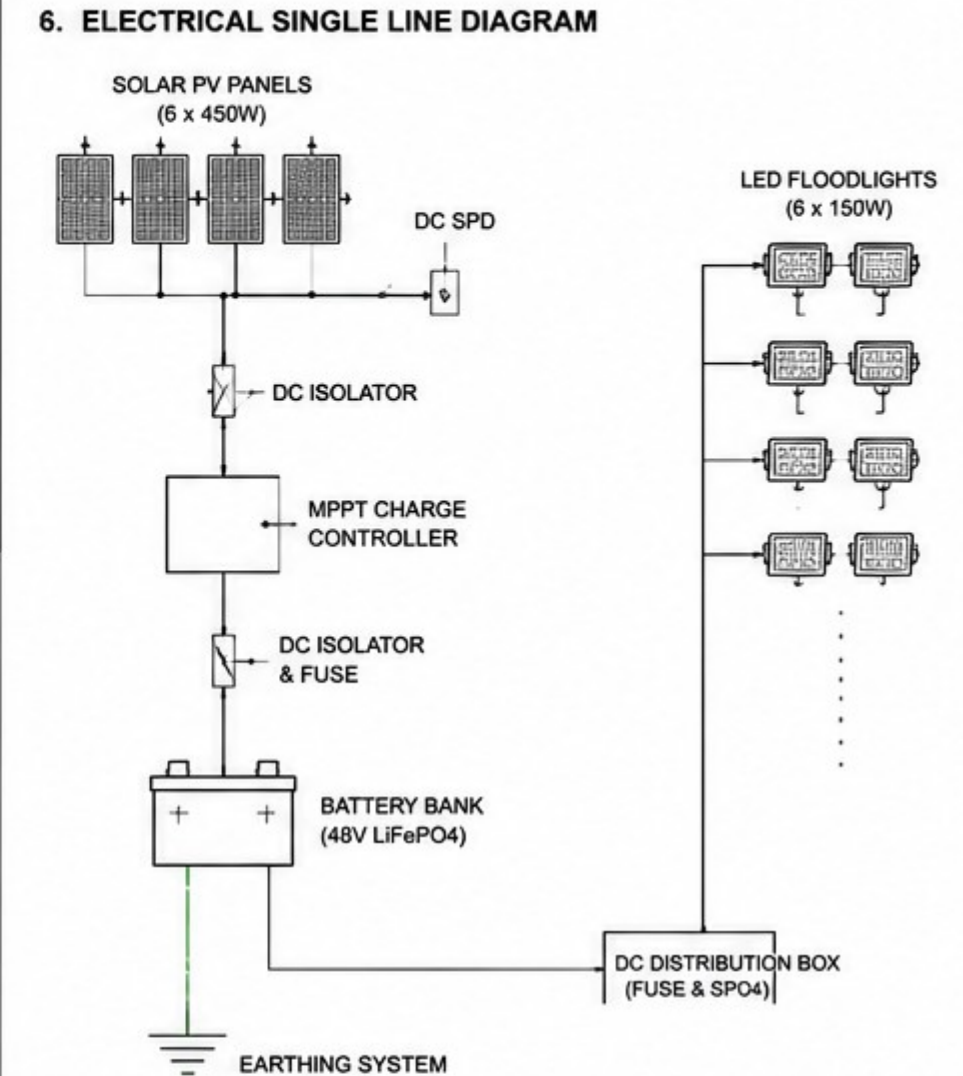
5. FOUNDATION DETAILS



7. SYSTEM LAYOUT (SCHEMATIC)



6. ELECTRICAL SINGLE LINE DIAGRAM



9. SPECIFICATIONS SUMMARY

- Mast Height : 20m
- Mast Material : Steel S355 – Hot Dip Galvanized
- Floodlights : 6 x 150W LED, IP66, 4000K
- Solar PV : 6 x 450W Monocrystalline Panels
- Battery System : 48V LiFePO4, Sizing for 2-3 days autonomy
- Controller : MPPT, 48V System
- Wind Speed Design : 160 km/h (Design wind speed)
- Foundation : RC, 30/35 MPa Concrete
- Protection : Lightning Protection, Surge Protection, Earthing
- Operation : Dusk to Dawn (Automatic)

10. NOTES

- All dimensions in millimetres unless otherwise stated.
- Final foundation size to be confirmed by Structural Engineer based on soil test and wind loading.
- All works to comply with SANS, NRS & Local Authority requirements.
- System to include testing, commissioning and certification.