

#	Item	Unit	Qty.
A	Supply and Installation of Solar Street lights, remote Control (All-in-one) and specification as follows:		
	<p>High Efficiency not less than 8000 Lumen Constant lighting with mode options for energy saving. Constant current output to achieve all night lighting when weather change. Working Temperature and charging control: Between 0 ºC and +60 ºC and should be equipped with battery charging management system (MPPT type) to monitor and control the charging and discharging of rechargeable batteries.</p> <p>Solar Panel High efficiency Mono-Crystalline Silicon panel. Adjustable solar panel to increase the charging efficiency. Minimum 130 Watt. Solar charging time: 10-11 hours by bright sunlight.</p> <p>LED Max output 60 W. High Quality LED (1W= minimum 160 Lumen). Colour temperature (5500-6500K), type Philips (Europe) or Cree (USA) or PMMA (JAPAN) or equivalent efficiency & wide lighting angle.</p> <p>PIR: Motion sensor distance over 15M. Over 3 Nights lighting time with 1 full charge. Body: Aluminium Alloy + IP65. Replaceable lithium battery (aggraded li-ion battery no.18650).</p>	No.	188
B	Foundations of lights poles (Attached Drawing # F-01)		
	<p>Provide manpower and machinery to excavate the poles foundation with dimensions 70 X 70 X100 cm in all type of the soil, concrete, asphalt ...etc. The depth of the foundation is 100 cm, will be measured from the NGL (any extra excavation to reach the NGL, the contractor will be responsible for casting it with concrete at his expense). Casting the foundation will be in one stage with a kicker (20 cm above the ground) by ordinary concrete 210 Kg/cm2 (ready mix and job mix must be provided before casting). The work includes fixing Anchorage rods 102 Cm length and diameter 18 mm 4 rods, coated totally with hot-dip galvanization, each rod has three HEX nut –M20 with Washer A21. The price includes all necessary works to do the foundation in the proper way and according to the specifications and according to the instruction of the supervisor engine.</p>	No.	188

C	Supply and Installation of Street light poles (Attached Drawing # P-01)		
	Supply and install Galvanized steel lights poles 7m height with plate thickness 4mm, bearing plate (ground anchored) with dimensions 400mm X 400mm 14 mm thickness, Column stiffening plate (4 units) thickness 10 mm, and poles Diameter at the top not less than 60 mm and the bottom 170mm (cone shape). The bearing plate holes must be in compliance with the anchored rod diameter.	No.	188