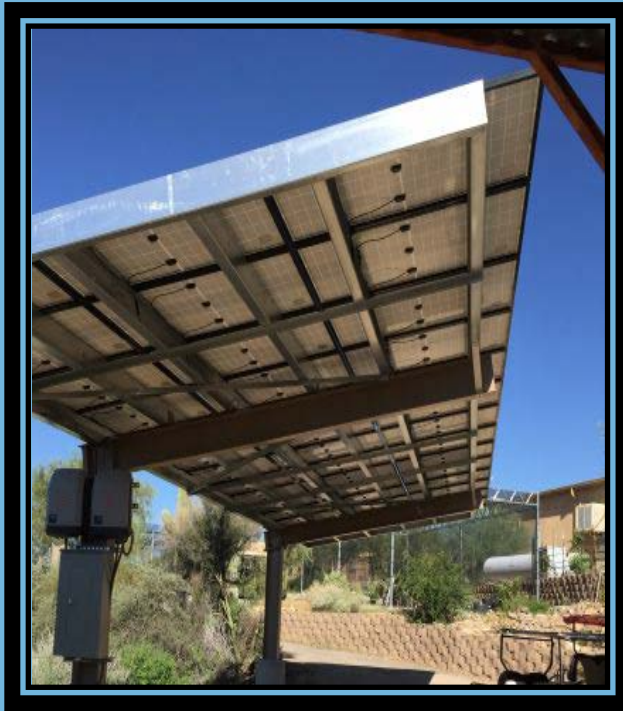


SVERDRUP ENGINEERING SERVICES

PROJECT EXPERIENCE



Desert Museum Solar Covered Parking

Tucson, AZ

Civil and Electrical Engineering for 10KWAC Solar Carport at the Arizona-Sonora Desert Museum in Tucson, Arizona. Fifty percent of engineering cost donated for the charitable cause. Site consists of five covered parking spaces and design included infrastructure for future electric vehicle charging stations. Civil design included specifying/reviewing survey, site plan, layout, trenching, and foundation locations. Structural design included specifying and reviewing geotechnical report, meter/disconnect foundations, inverter support structures, power panel support, and conduit/lighting supports under carport.

Electrical design included forty-two REC Solar 270-watt solar modules in fourteen module strings at 1000V DC and connected to three single phase Fronius Inverters. The modules were attached to the carport structure at a fixed 10-degree tilt. The inverter outputs combined into three-phase 208VAC power and run in underground trench to the existing electrical room and utility connection point. Modules were bolted to carport structure and weeb washers were used to ground the modules to provide the most efficient connection. Lighting and grounding were provided. Performed design, QA/QC over construction, commissioning, and start up support.

Design drawings include; site plan, demolition, foundations, lighting, grounding, stringing, details, single line diagram, three-line diagrams, DC line diagrams, signage, and equipment data sheets.

Owner: Arizona-Sonora Desert Museum

Design: May 2018

Inservice: September 2018