

CAPE COD COMMUNITY COLLEGE SOLAR CARPORT & EV CHARGING



Commercial Solar, Electrical Infrastructure & EV Charging

Location: West Barnstable, MA

Scope:

- Commercial solar carport electrical construction
- Underground conduit and raceway systems
- Site excavation and electrical trenching
- Solar DC wiring and collection
- Yaskawa Solectria commercial inverters
- AC distribution and electrical equipment
- Equipment pads and support systems
- Grounding and bonding
- Commercial EV charger installation
- EV charger branch circuit infrastructure
- Electrical interconnection
- Testing and commissioning support



Project Overview

BD Electrical & Solar completed the electrical construction for a large commercial solar carport and EV charging installation at Cape Cod Community College in West Barnstable, Massachusetts.

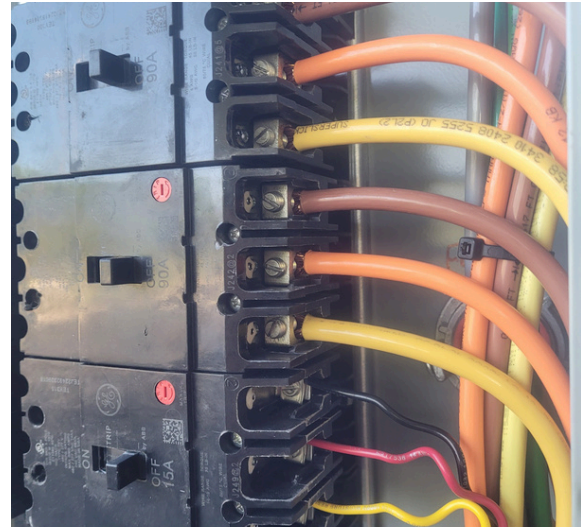
The project combined solar generation, commercial electrical infrastructure, and EV charging within an existing campus parking area. BD's scope extended from the underground raceway system through the solar inverters and electrical distribution, along with the infrastructure and connections required for the EV charging stations beneath the canopy.

Solar Carport Electrical Construction

Solar carports combine renewable energy generation with productive use of existing parking areas, but they also create a complex electrical construction environment.

BD installed the electrical infrastructure connecting the photovoltaic arrays across the canopy structures to the project's power conversion and distribution equipment. Conduit systems were routed along the steel canopy structures and transitioned underground to connect the different areas of the installation.

Yaskawa Solecia commercial inverters were integrated directly into the canopy structures, allowing DC power generated by the arrays to be converted and distributed through the site's electrical system.



Extensive Underground Electrical Infrastructure

A significant portion of the project involved underground construction.

BD installed multiple conduit banks across the site to create pathways between the solar canopies, electrical distribution equipment, EV chargers, and the facility's electrical system.

The work required coordination of excavation, conduit routing, sweeps, equipment locations, concrete pads, grounding, conductor installation, and final site restoration.

This infrastructure forms the backbone of the installation and allows the solar generation and EV charging systems to operate as an integrated electrical system.



Commercial EV Charging Integration

The Cape Cod Community College project also incorporated EV charging stations directly beneath the solar canopy.

BD installed the electrical infrastructure and branch circuits serving the chargers, integrating EV charging into the site's larger electrical distribution system. Protective bollards were installed around the charging equipment to provide additional protection within the active parking environment. Pairing EV charging with a solar carport allows a property to use the same parking area for three purposes: vehicle parking, renewable energy generation, and transportation electrification.



Electrical Distribution & Interconnection

The project required substantial electrical distribution infrastructure beyond the equipment visible beneath the canopy.

BD installed outdoor distribution equipment, disconnects, raceways, conductors, and associated electrical systems connecting the solar and EV infrastructure to the campus electrical system.

The result is a coordinated commercial energy installation capable of supporting both on-site solar generation and EV charging.



A Multi-Technology Commercial Energy Project

The Cape Cod Community College installation demonstrates how solar, EV charging, and traditional commercial electrical construction increasingly overlap.

Projects like this require an electrical contractor capable of working across all three disciplines. BD Electrical & Solar provides the field experience and electrical capabilities required to take these systems from underground infrastructure through equipment installation, interconnection, and commissioning.

Commercial Solar & EV Infrastructure in Massachusetts

BD Electrical & Solar provides commercial solar, EV charging, and electrical construction throughout Massachusetts and New England.

Our capabilities include solar carports, commercial rooftop PV, ground-mounted solar, underground electrical infrastructure, commercial distribution, inverter installation, Level 2 and DC fast charging infrastructure, and utility interconnection.

We work with developers, EPCs, general contractors, municipalities, educational institutions, and commercial property owners to deliver complex electrical and renewable energy projects.

