

CASE STUDY

Architectural & Commercial

Project Specs

Location: Portland, Oregon

Application: Rooftop Walkway between Solar Panels

Product: Corvex® Square Mesh Molded Grating

Overview

Built in 1974 and located in downtown Portland, Oregon, this 525,000 square foot, 18-story Federal Building is now home to more than 16 federal agencies with 1,200 federal employees.

In August 2012, an electrical contracting company, was in charge of a very important part of the ongoing renovation project at this federal building. The contractor was in charge of installing solar panels on the rooftop of the building. Due to a previous successful project with Fibergrate, the contractor contacted our territory manager and asked him to be a part of this project. The project consisted of walkways located on the rooftop of the federal building. These walkways would be used to access the recently installed solar panels for maintenance.

Problem

The two main requirements for the materials used on this project were safety for the maintenance staff and cost-efficiency. The contractor and our territory manager structured the client's needs as follows:

- **Electrically and Thermally Non-Conductive:** The solar panels would provide energy to the building. In order to help keep the staff safe during the maintenance of the panels, the materials needed to be electrically non-conductive and have a low thermal conductivity.
- **Corrosion Resistant:** Because this application was situated on a rooftop and would be exposed to Portland's highly corrosive salt water air as well as the chemicals that could be used during maintenance of the solar panels, it was important that the material could withstand the damage caused by these conditions.
- **Lightweight:** The ability to move the panels is key. As we have mentioned throughout this document, the walkways between the solar panels would give access to different areas of the roof for maintenance, so it is important that the pieces of the walkway could be easily removed to perform maintenance.
- **Slip Resistant:** Portland experiences rain and snow for almost half of the year. Because the walkways would need to be used during rainy days, they needed to have a safe, slip resistant surface for the person using it.
- **Low Maintenance and Long Service Life:** The client specifically requested a product that was not an inconvenience in the long run and did not need to be constantly replaced.



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Solution

Fibergrate fiberglass reinforced plastic (FRP) products are ideal for these kinds of applications. For this project, Fibergrate used square mesh molded grating with a standard grit surface to create walkways between the solar panels. Molded grating was chosen because it combines unmatched corrosion resistance with strength, long service life, and safety. It was a total of twenty 3'x10' panels with a 1-1/2" depth. Fibergrate used Corvex® resin for the molded grating because Corvex isophthalic polyester resin system outperforms a number of competitive fiberglass and metal products and meets the requirements for corrosion resistance found in industrial, chemical processing, and water/wastewater applications.

The territory manager made sure that the materials selected for the project covered the client's requests:

- **Electrically and Thermally Non-Conductive:** FRP is an electrically non-conductive material that increases the safety of the workers using the walkway. It also has low thermal conductivity.
- **Corrosion Resistant:** FRP molded grating is known for its ability to provide corrosion resistance in the harshest environments and chemical exposures.
- **Lightweight:** Molded grating weighs considerably less than steel. Its lighter weight will allow easy removal of the walkways to perform maintenance on the solar panels.
- **Slip Resistant:** The surface of the Fibergrate molded grating has unmatched slip resistance for improved worker safety.
- **Low Maintenance:** The corrosion resistant properties of this FRP grating reduce or eliminate the need for heavy maintenance. These products can be easily cleaned with a high-pressure washer.
- **Long Service Life:** Fibergrate products provide outstanding durability and corrosion resistance in demanding applications allowing for improved product life over traditional materials.

Quality products, team work, customer service, and seasoned personnel are what makes the Fibergrate experience positive for our clients, including the owners of this federal building.



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