

2017 AGC ACE Awards

**Panasonic Enterprise Solutions Company
Operations & Technology Center**

Peña Station Next, Denver, Colorado
Best Building Project \$10-\$40 Million - GC



BUILDING WHAT'S NEXT: SMART CITIES

When Panasonic began looking for a site to build a scalable “Smart City” in the U.S. they looked to Denver. The Panasonic Enterprise Solutions Company (PESCO) Operations and Technology Center is the first vertical construction project to be built at Peña Station NEXT, Denver’s “Smart City” development located at the 61st Avenue and Pena Boulevard rail stop on RTD’s new University of Colorado A-Line.

Mortenson delivered this 112,500-square-foot project for Westfield Company. The project is part of Fulenwider’s larger 400-acre Peña Station NEXT development. Designed by Farnsworth Group, the facility allows PESCO to attain best-in-class facility performance and minimizes waste and environmental impacts. The primary building systems are investment-grade, tilt-up concrete panels and structural steel with extensive glazing in the office areas. Specialty electrical systems were constructed to service the testing and development needs of the ECO lab inside the warehouse and the roof-mounted solar panels. The project is pursuing LEED Gold certification.

The facility accommodates 100+ PESCO engineers, scientists and management personnel of the Energy Solutions Group and Sensory Solutions Group of PESCO, as well as Panasonic CityNOW, which is Panasonic’s smart city initiative in North America. This facility also includes a 24/7 network operations center that monitors a nationwide network of large-scale solar photovoltaic installations. Mortenson was also part of the team that installed the patented dual incline canopies from Solaire on the carport, which is owned by DEN. Mortenson also built its first

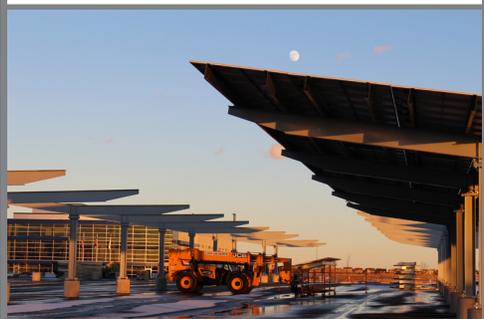
Panasonic’s Enterprise Solutions Company at Denver’s Smart City: Pena Station Next



SMART CITY INTEGRATION



Vertical Development



Solar Energy



Battery Storage for Microgrid

battery storage project at the site, as part of the Panasonic and Xcel Energy team bringing the Peña Station NEXT microgrid to life.

**PESCO'S OPERATIONS & TECHNOLOGY CENTER:
A PROTOTYPE FOR VERTICAL DEVELOPMENT**

As the first vertical development at Peña Station NEXT, the PESCO project is a prototype for vertical development at the 61st and Peña Boulevard rail stop on RTD's University of Colorado A Line. Highly visible and under tight construction schedule, the team had to set a strong precedent and work as part of the large stakeholder group involved with Peña Station NEXT while meeting the immediate cost and schedule goals of the developer and end user, Westfield and Panasonic, respectively.

In addition to Westfield and Panasonic, the team had to coordinate with the city and county of Denver, DEN, Fulenwider and Xcel Energy, among others. Partnering sessions helped prioritize owner needs to help resolve the budget while still accommodating the installation of systems required to support Panasonic operations.

Project Success Factors:

- No Surprises
- Honest, effective and timely communication
- Adherence to budget and schedule
- Foresight of Future and Unknowns
- Quality
- Seamless Delivery (Effective Management of Design)
- Decision Making for Benefit of Project, Not Individuals
- End User Satisfaction in Decisions and Delivery



The PESCO building provides an opportunity for Panasonic to showcase its technology, such as these LED panels.

Building Information Modeling and Virtual Design and Construction was implemented to ensure constructibility before crews began installing in the field. Integrated work plans were used to evaluate each phase to identify high risk activities. The team's trained crews were required to demonstrate their ability to execute the plans prior to, and during installation. Resources were assigned to execute the quality system including quality leaders, quality leadership teams, and a person responsible for quality and transition to sustainable operations.



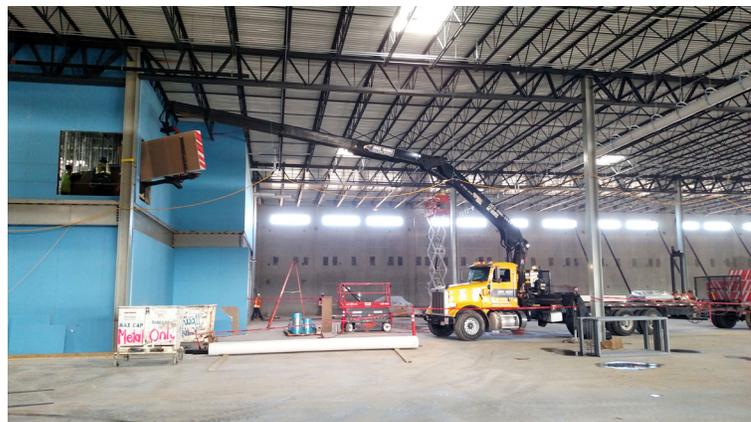
The PESCO building at Peña Station Next is an exciting development and a statement of Panasonic's commitment to the Denver Metro region and developing scalable "Smart Cities" right here in Colorado.

On-site battery storage provides smart energy benefits that helps mitigate the cost of peak power demands. The solar carport owned by DEN is visible in the background.

Key to the overall Smart City concept is a micro-grid, which is the first of its kind in Colorado and the first that Xcel Energy will own. Another major component to the Peña Station NEXT Smart City, in addition to the solar carport, is 1 Megawatt / 2.22 Megawatt Hour battery storage element. Battery storage systems provide multiple services and benefits in helping owners become smarter planners of energy consumption.

The leading-edge technology that is part of the development, including the future implementation of driverless shuttles, is generating excitement in the community. As the

additional residential and mixed-use development continues at Peña Station NEXT, residents will begin to see the benefits of the multiple fiber-optic cabling infrastructure, a network of programmable LED street lights and on-street cameras, and video analytics technology for parking, traffic and security management.



The PESCO Operations and Technology Center includes both office and warehouse/testing space. Tilt construction helped the team meet the schedule.

INTEGRATED DESIGN

The design solution for this facility successfully expressed Panasonic's branding, spirit of innovation and collaboration with the visioning for the master development. The exterior expression demonstrates the design and technical expertise of the Panasonic employees while allowing the pedestrian to experience the company's depth. The curtainwall opens up a two-story volume that is highly articulate, transforming a façade into a visual space of depth and interest.



A “digital signature” is carried out in the animated wall panels, flooring and patterning through the design solution. This allows the architecture an opportunity to hold up the Panasonic brand image and emphasizes the innovative expertise of the professionals within.

Panasonic's program was all about fulfilling a mission to develop a “smart city” project. The building design was obliged to be smart in response. Efficiency and flexibility were key drivers in achieving that design response. The building's LEED Gold application highlights over 70 points of recognized efficiencies, and its long-term energy use projections have earned it notoriety as well. The building's flexible design has allowed Panasonic to accommodate new partners for its developing initiatives, even though those partners were unknowns during the design phase process.



Some of the finished office space at the PESCO Operations and Technology Center. Flexibility to accommodate future needs and potential additional on-site partners was incorporated in the design and construction planning.



A view of the PESCO Operations and Technology Center, with the battery storage and solar components visible to the left of the building, along with Downtown Denver in the background.