CASE STUDY

# Bee Sweet Mandarin Line

All Weather Insulated Panels

Your vision. Our purpose.

ONEDEK®
INSULATED ROOF DECK

## OneDek® Insulated Roof Deck - Making the Switch

Bee Sweet Citrus, a prominent citrus fruit grower, needed a new facility to expand its operations in Northern California. For Bee Sweet Citrus, control of temperature and humidity is paramount to product quality and longevity. Additionally, the construction schedule, envelope performance, and operational costs were major design considerations for the project team. Overall, the 212,000 square-foot facility posed a unique challenge with a requirement of three distinct climate zones.

Gerald A Mele & Associates, the firm designing the project, originally considered a traditional low slope roof assembly and partnered with general contractor Beckenhauer Construction, Inc., who specializes in food processing construction, and PanelClad, a premier vertically integrated design-build steel contractor, to

**LOCATION:**
Fowler, CA

**PROJECT OWNER:**
Bee Sweet Citrus - California

**ARCHITECT**
GMA, Gerald A Mele & Associates

**CONTRACTOR**
Beckenhauer Construction, Inc.

**INSTALLER:**
PanelClad

**PRODUCT DETAILS:**
- 212,000 sq. ft.
- 4” OneDek RD1 panels
- 80 mil. fully adhered TPO membrane
- 40-5/12 diaphragm shear fastening

“OneDek leverages IMP technology and capability into low-slope applications.”

- Jared Bradford

## OneDek® Insulated Roof Deck - Making the Switch (Continued)

develop the right system to handle the varying climate requirements throughout the facility. Different R-values were needed for the refrigerated (processing/storage), ambient (shipping/nonperishable storage) and air conditioned (office/processing). PanelClad proposed OneDek for the project; and after understanding the benefits, the project team agreed.

"OneDek paired with a membrane on top is an ideal solution which leverages IMP technology and capability into low slope roof applications," said PanelClad president Jared Bradford. "If performance, efficiency, and speed are driving factors on a project I always think OneDek."

Having a higher R-value per inch of thickness when compared to ISO board insulation resulted in the use of 4" OneDek panels without additional material or installation steps which would have been required with a traditional low slope roof assembly to meet the R-value requirements for the different climate zones of the facility. Humidity control is also critical for this type of facility and is another strength of the OneDek assembly, as it requires less steps and components reducing potential opportunities for vapor drive.

The structural benefits of going to OneDek reduced the number of structural supports that were required, along with the ability to accommodate mounting a full roof solar array due to the consistency of the deck.


"The performance and efficiency of OneDek is unequaled," Bradford said. "When you have a compressed project schedule like we had on Bee Sweet, we have the ability to panelize OneDek panels on the ground. This allows us to install up to 1,000 square feet of roof panels at a time, reducing installation time and labor. You just can't do that with traditional systems."

The switch to a OneDek roof assembly in this facility produced remarkable results. Bee Sweet Citrus experienced more consistent temperature and humidity control, enabling it to store citrus fruits for extended periods without compromising quality. The reduced temperature fluctuations translated into energy savings, as the cooling systems had to work less to maintain the desired conditions.

AWIP All Weather Insulated Panels

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