

FEATURED PROJECTS

PROJECTS HOME

Southwest Airlines Maintenance Hangar



Roof Hugger, McElroy Metal And Other Veteran Companies Involved In Retrofit Re-Roof Of Florida Hangar

At the Orlando International Airport, Southwest Airlines re-roofed a 75,000 square foot hangar using several metal construction industry veteran companies. Commercial Siding & Maintenance (CSM) of Houston, Texas was the contractor; Force Engineering & Testing of Humble, Texas provided engineering services; Roof Hugger Inc. of Odessa, Florida furnished their factory-notched sub-framing system; and McElroy Metal furnished the new metal roof system.



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The initial work began in June 2014 when CSM began demolition of structural components on the 30-year old building. This first phase of work was related to the building's now obsolete use as an aircraft painting hangar. Included was removal of insulation under the existing metal roof to address some areas where insulation was falling out and causing potential safety concerns for Southwest Airline workers during maintenance on airplanes.

Due to a Southwest-mandated Foreign Objects Debris (FOD) plan, a conventional removal of the existing roof and replacing with new metal roofing was never an option. Metal-over-metal retrofit roofing typically does not disrupt the building occupants or its operations allowing rooftop retrofit component installation to commence. Also due to the FOD plan, inside work had to be conducted when Southwest's jets were not parked in the hangar, so timing was critical to the project between interior and exterior work. CSM, however, was able to work on the exterior rooftop while 2 to 3 planes were parked inside the hangar. Most scheduled airplane maintenance was conducted overnight, but emergency repairs could be required any time.

The actual retrofit re-roofing began in October 2014 and the entire project was completed in January 2015.

The project components included 75,000 square feet of jobsite roll-formed 24-gauge Regal White Low Gloss McElroy 238T standing seam metal roofing with R-16 fiberglass insulation installed between the existing roof and the underside of the new metal roof. UL Rated Lightning protection was provided by Independent Protection Company. Palram polycarbonate panels provided 4,000 square feet of wall daylighting. Roof Hugger furnished 15,950 lineal feet of their 16-gauge, factory-notched Model "D" sub-purlins to nest over the existing 24" trapezoidal standing seam,

ensuring correct structural attachment for the new metal roof panels. A custom-designed and fabricated rooftop walkway by CSM and designed by Force Engineering was also installed.

In addition to the structural modifications, the new metal-over-metal roof system had to be engineered to "harden" the existing roof from its original 100 mph wind uplift design to the current 136 mph Florida Building Code (FBC) wind speed. The new 36% higher wind speed design had to be done on the existing building's eave height of 50 feet and 3:12 roof slope creating special retrofit sub-framing considerations in the corners and edges of the roof itself. Large obsolete roof vents and equipment screens that are common in paint hangars had to be removed as well.

For more information on Commercial Siding & Maintenance, visit www.commercialsiding.com or call 800-229-4276.

For Roof Hugger information, visit www.roofhugger.com or call 800-771-1711.

For information about Force Engineering & Testing, visit www.forceengineeringtesting.com or call 281-540-6603.

For McElroy Metal information, visit www.mcelroymetal.com or call 800-950-6531.

For Palram Americas information, visit www.palramamericas.com or call 800-999-9459.

About Roof Hugger

Roof



Hugger notched sub-purlins enable replacement of new metal roof panels over an old metal roof. They can be used over screw-down or standing seam roof systems and can accommodate new standing seam or screw-down panels. For more information on metal-over-metal retrofit re-roofing, contact Roof Hugger at 800-771-1711 or visit www.roofhugger.com.

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Roof Hugger's featured video

