



Thomas C. Kelly
Administration Building

ARCHITECT
A/R/C Associates

OWNER
COUNTY OF VOLUSIA

MANUFACTURER
CPI DAYLIGHTING, INC

CPI REPRESENTATIVE
LOGSDON & ASSOCIATES

CPI DAYLIGHTING *solutions*

A Governing Eye

The 47-ft.-diameter rotunda atop the Thomas C. Kelly Administration Building has been the County of Volusia, Fla.'s trademark for 25 years. Built in 1986 with the goal of providing a kaleidoscope of natural light to the County's main administrative offices, the rotunda serves as a governing eye from 65-ft. above ground.

Over the years the rotunda's fiberglass sandwich panels darkened and fell prey to significant leaks, accumulating algae and residue, leaving the dirty appearance of mold in many areas. After years of unsuccessful attempts at refinishing and resealing the panels with their original manufacturer, the iconic dome spent the last six months of its life covered with blue tarps to minimize seepage.

"The fiberglass sandwich panels were starting to deteriorate because what was leaking inside wasn't just water, but more of a fiberglass resin that was sticky and had an odor," said Pete Musslewhite, facilities engineer for the County of Volusia. "It was staining the precast concrete staircase on the way up to the county council chambers. We finally decided we needed to replace it.

"CPI came out and decided they could use the original framework, beef it up a little and then put their polycarbonate panels on top," Musslewhite continued. "It came in at less money than at what the competitors wanted to replace their panels."

The County of Volusia specified CPI Daylighting's 4-in. Quadwall advanced scalable daylighting system in Ice White matte, anti-glare finish, for the interior and Ice White exterior glazing, complete with stainless sill flashings and welded segments, all custom engineered by CPI to fit the rotunda's existing 16-sided polygon of aluminum rafters. The Quadwall system requires no maintenance and provided a much-needed double-paneled building envelope that can stand up to both Florida's high wind uplift requirements of 120 mph and its typical yearly rainfall.

"What the CPI system has allowed me to do is to run the panels vertically without any head of end laps and what I liked about the system for this application was that it had basically an internal drainage system," said Jim Ripley, project architect and vice president of A/R/C Associates, Inc. "If anything gets into the panel system or into the seam system, it will just continue down the panel and exit at the drip edge of the skylight. Its integral, internal drainage system doesn't depend on sealants of laps or any of those other issues."

Working nights and weekends, installation crews avoided disrupting daily building operations and completed the project in just six weeks time. With three and half times the daylight and without the risk of mold, bad odors or depressing light levels it had previously, Ripley said the newly refurbished rotunda has a diffused light that is "much brighter and more pleasant, without the glare of a clear skylight system."



Deteriorated panels were replaced with custom engineered translucent panels to fit the existing aluminum rafters.



Newly refurbished rotunda with CPI Quadwall advanced scalable daylighting system provides three and half times the daylighting.

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