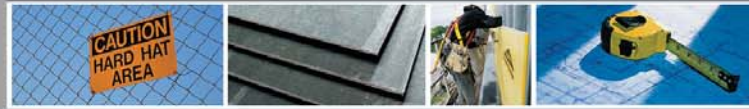


# Project Profile



## Deltona Elementary School Deltona, Florida

**Owner:** Hernando County (Fla.)  
School Board

**Specifier:** Arthur Sark, RRC, FRCI; Rogers and  
Sark Consulting, Inc.; Orlando, Fla.

**Contractor:** Mike Leonard, project manager,  
Architectural Sheetmetal, Orlando, Fla.

**Roof System Manufacturer:** Berridge "Double Lock"  
metal panel system

**Roof Membrane Manufacturer:** Tamko

When Arthur Sark, RRC, FRCI, principal with Rogers and Sark Consulting, Inc., was presented with the task of choosing a new roof for the Deltona Elementary School in Deltona, Fla., Sark knew the 20 year old school needed a long-lasting roof that would also dress up the school's overall appearance. Sark chose a metal roof system applied over the existing asphalt shingles for the 110,000 sq. ft. job.

"We chose metal roofing to get the benefit of long life. And we chose to use a peel-and-stick membrane underneath the metal to keep the roof leak-free," said Sark. "We installed the system directly over the existing shingles so we saved money on tear-off."

The existing roof on the Hernando County school had a history of leaks and was failing. The original roof consisted of a metal deck, ½" plywood and a layer of asphalt shingles.

Roofing contractor Mike Leonard of Architectural Sheetmetal installed 3" polyisocyanurate board over the shingles for its thermal value. "By using 3" polyisocyanurate board underneath DensDeck® DuraGuard from Georgia-Pacific, we achieved the thermal value needed," said Sark. "Previously, insulation for the roof was hidden above the ceiling tiles inside the building. When the ceiling tiles are removed to run new cabling or wires, the insulation is usually taken out or moved and never replaced. It's never uniform again so you lose the integrity of the thermal envelope. We installed the 3" polyisocyanurate board on top of the shingles to achieve a consistent thermal envelope."

The ½" DensDeck DuraGuard Roof Board was mechanically attached with fasteners going through the DensDeck DuraGuard, ISO board and the existing roof system into the metal deck to conform with Florida Building Code criteria. A 40-mil Tamko self-adhered membrane was applied to the DensDeck DuraGuard. "It was imperative to use a peel-and-stick rather than traditional roof felt," said Sark. "Peel-and-stick is an upgrade to traditional underlayment. It gave the client the advantage of sealing the edges for a more water-tight system."



Sark is a firm believer in self-adhered roof systems. "It dries in a building quickly. It's simple to install. And the dry-in is secure. You don't have to worry about wind blowing the felts up. And with the self-healing characteristics of the membrane, mechanical penetrations won't leak."

The rubberized asphalt of modified bitumen peel-and-stick membranes reseal any penetrations, including those of mechanical fasteners, so they're more water-tight than other choices. For instance, if a fastener is driven through felt, it leaves a hole in the felt. Modified bitumen heals itself.

Sark added: "For peel-and-stick to work well, you have to have a good substrate. DensDeck® DuraGuard is ideal. The substrate for peel-and-stick must be smooth and clean enough for the membrane to adhere to the surface. Most substrates require a field primer for the membrane to adhere well. The surface of DensDeck DuraGuard doesn't need any additional preparation."

Like its long-established, proven performance sister products (DensDeck® and DensDeck®

Prime Roof Boards), DensDeck DuraGuard is composed of glass mats over a moisture-resistant treated gypsum core that is noncombustible and dimensionally stable. In addition, DensDeck DuraGuard incorporates a low perm, integrated, durable coating that not only enhances bond strength of the membrane system but also increases peel strength and allows for more uniform spread of adhesives with better coverage. DuraGuard is especially recommended for use as a cover board in a wide variety of adhered systems, including self-adhered and hot mopped asphalt.

"Another thing we like about DensDeck DuraGuard," said Sark, "is that it's rigid in nature. It has a smoothing out or a leveling effect. When perlite, wood fiberboard or a lot of other substrates get moisture on them, they'll conform to whatever shape is underneath. That doesn't happen with DensDeck DuraGuard. And when you walk on DensDeck DuraGuard, you don't leave any heel prints or indentations."



#### SALES INFORMATION AND ORDER PLACEMENT

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West: **1-800-824-7503**  
South: **1-800-327-2344**  
Northeast: **1-800-947-4497**

**CANADA** Canada Toll Free: **1-800-387-6823**  
Quebec Toll Free: **1-800-361-0486**

#### TECHNICAL INFORMATION

Georgia-Pacific Gypsum Technical Hotline  
U.S.A. and Canada: **1-800-225-6119**  
[www.gpgypsum.com](http://www.gpgypsum.com)

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