

EPDM recover favors insulation options

By Ron Goodman / RSI Contributing Writer

Professional roof consultants, in order to meet the needs of building owners, are becoming fully educated on energy spending, environmental issues, and restoration choices.

Just a few of the basic considerations that must be looked at when determining how to address an aging roof are: geographic location of the building relative to cooling degree days and heating degree days; surrounding buildings; wind; fire; the existing maintenance program; maintenance costs available for washing the roof; and insurance.

EPDM roof recovers provide the ability to address more of these issues than a typical EPDM restoration, which was the focus last month in Part 1 of this two-part series. Proper drainage, thermal bridging, enhanced R-value, altered surface color, as well as enhanced wind uplift and hail resistance are all issues that are better addressed with a roof recover.

This option is primarily employed on adhered and mechanically fastened systems and is an exciting development in the roof-repair industry, as it provides the opportunity to address more building issues than a typical restoration. Through today's innovative energy-analysis software, it has been noted that most buildings in the United States are under-insulated. This is important because the cost of energy has gone up dramatically in the past 10 to 15 years.

Recover options afford the opportunity to add more insulation to the rooftop without having to tear off the original material. The insulation can be fastened in place, or in some cases, adhered directly to the existing material with a two-component urethane adhesive. With the recent advancements in insulation product offerings, drainage issues can also

be addressed with tapered insulation or crickets prior to the installation of the new membrane.

Altering the color of a building's rooftop is also easier in a recover than a restoration. If a building has a black roof in the south, where there are more cooling-degree days than heating-degree days, it makes sense to consider recovering the system with a white membrane. Conversely, if one has a white roof in the north, where there are more heating-degree days than cooling-degree days, a black roof recover could be the answer.

The emergence of fleece-backed technology (a single-ply



Restoring or recovering an existing roof system makes sense because the owner and environment receive numerous benefits besides a watertight roof, including extended service life, less waste generation, less ozone depletion, and little disturbance to building operations. (Photograph courtesy of Carlisle SynTec)

membrane matted to a fleece material) has advanced the roof recover industry. These membranes are an excellent choice for a roof recover, as the fleece acts as a separator between the new membrane and the old membrane, while providing an increase in puncture- and hail-damage resistance.

This method has been popular for several years when recovering asphalt-based roofing systems, and the technology has recently been extended to single-ply systems as well. In many cases, the existing EPDM membrane can be power washed, and then a fleece-backed membrane can be adhered directly to the old roof. One can think of this as a two-ply system that provides dual protection, yet it is still much lighter in weight than many of the alternative multi-ply roofing systems. Fleece-backed membranes are typically available in both EPDM and thermoplastic polyolefin (TPO) options of varying thicknesses.

Another option gaining in popularity is a roof garden recovery. This allows a new membrane to be loose-laid on top of the existing system and then covered with a traditional or modular garden system. Roof gardens not only provide an aesthetically appealing roofing option but also help reduce a building's stormwater runoff and lower its overall energy cost. Roof gardens can add significant weight to the structure, and a structural analysis should be performed before they are implemented.

As the market for single-ply has grown over the years, there is an expanding body of knowledge, techniques, and design options available to building owners who are looking to protect their assets, maximize their return on investment, and be in sync with the sustainability movement. Restoring or recovering an existing roof system makes sense because the owner and the environment receive numerous benefits. In addition to the obvious advantage of a watertight roof, other benefits of a recovery or restoration include extended service life, less waste generation, less ozone depletion, little disturbance to building operations, and the financial advantage of incurring minimal maintenance costs versus large-scale capital expenses for full replacement.

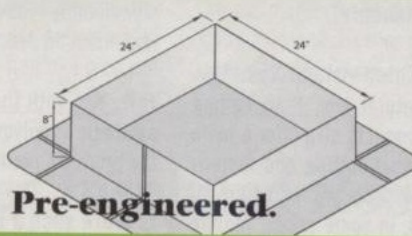
Investigative tools have dramati-

cally improved over the past decade and investigation techniques are beginning to follow suit. In the future, system and material choices will be based on how the roof space will be used. As consultants continue to become familiar with the latest technologies, the process of tearing off an existing roof may become less and less appealing. **RSI**

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