

Manufacturer: DuPont™

Product(s): Tyvek® StuccoWrap; DuPont Roof Liner



Category: Weatherization Systems

Most of the strategies, technologies, materials, and design choices discussed in relationship to the ReVISION House focus on the energy-efficiency, or more broadly, the “sustainability” of the post-retrofit home. However, the true barometer of sustainability is measured by the ability to endure over time, thus the assuring the durability of whatever it is we value. It is with this in mind that the ReVISION project team selected DuPont Weatherization system products to provide the envelope moisture control for both the wall and roof systems. With over 25 years of residential performance on over 5 million homes, the DuPont™ Tyvek® line of protective membranes, breathable weather resistant barriers and flashing systems are the world’s leading weather protection products. The ReVISION Home uses several of the Tyvek family of products in helping us reach our zero-energy goal, and do it for a long time!

Tyvek™ StuccoWrap® is a non-woven, breathable housewrap specifically designed and engineered for use below stucco surfaces. Its unique crimped surface texture provides a 3-dimension surface with continuous peaks and valleys assuring that a continuous drainage path is provided below whatever stucco surface is used for the final finish. Knowing that the finished stucco coat is only the first-line-of-defense and that a “weather-resistive-barrier” is also needed under the exterior finish, the project team chose StuccoWrap® for its ability to provide reliable redundant protection, and also because it is prescriptively indicated as a manufactured approved choice by Dryvit, for use below its exterior insulation finish system (EIFS), which was also used for the ReVISION House.

Along with the StuccoWrap®, DuPont™ StaightFlash™ and FlexFlash™ were used as the primary flashing elements at window and door openings and at other miscellaneous sidewall penetrations. The properly designed and executed wall protection system will assure that the high levels of performance achieved by the walls will continue for many trouble free years.

It should come as no surprise that roof systems in Las Vegas are a particularly hard working portion of the building envelope. Providing long-term protection against extreme solar UV, heat, and the periodic flash-flood inducing rainstorm, roofs in Las Vegas are asked to do a lot, and to do so economically and effectively. In designing the roof system for the ReVISION House, the project team selected advanced heat-rejection strategies (a vented “cool” metal roof) and durable under-pinning. The unique insulation strategy of closed-cell foam insulation sprayed against the existing ceiling gypsum board meant that a void would result above the insulation and below the replaced roof decking. Our desire in this instance to provide durable roofing underlayment that is also vapor permeable so as to not lock any errant moisture in the above insulation void.



Dupont™ RoofLiner® was selected for meeting the team’s objective, and for its tear resistance and simplicity of application. The large lightweight rolls are easy to handle and install and provide the type of durability expected in a truly sustainable building.