

# Skin Treatment: Subcutaneous and Superficial Enhancements to a Legacy Curtain Wall

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This paper coincides with the completion of the actual project for the south and west facades of a 20,000 sf two-story office building in suburban Baltimore originally completed in 1961.

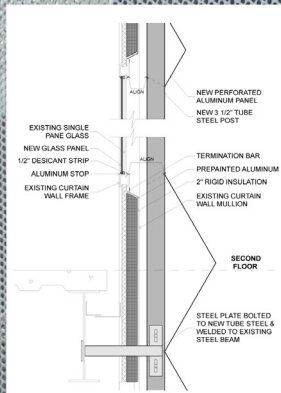
'Skin Treatment' will look at a project for the curtain wall of 1961 office building in suburban Baltimore. It is an ordinary building of its period with ordinary problems like poor thermal and solar performance and a general need for TLC. As a child of the 60's this building exhibits a visual composition of solids and voids rooted in the international style and implemented globally in the postwar years in which the voids in the style's compositional binary are broadly translated into building systems as a curtain wall. While the iconic flat roof and its attendant leaks might have taken the brunt of the early building systems criticism of the modern movement, EPDM and other membranes have settled this issue leaving a more significant legacy of problems presented by the ubiquitous single pane, non-thermally broken aluminum curtain wall for today's building owners and designers to wrestle with.

In looking at the legacy curtain wall, one is caught between the ongoing expense of 'fueling' the solution to the underperforming curtain wall through the continuous operation of the buildings mechanical systems or of 'grafting' a new insulation rich skin which will likely alter the patient/building beyond recognition. Sustainability, not to mention energy codes limits the first option and an appreciation of modernism or at least its historic significance as it passes the 50 year mark is cause for concern with the second option.

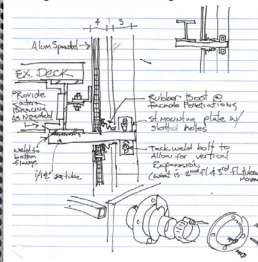
'Skin Treatment' involves both 'subcutaneous' and 'superficial' modifications to the building which address both the performance and the image of the legacy curtain wall. The 'subcutaneous' enhancements take place beneath the skin and include the application of additional low 'e' glazing, sealant and insulation producing significant gains in the systems thermal performance including a tripling of the buildings 'R' value equating to a 20% energy savings for the building overall. The 'superficial' and arguably more interesting of the performance enhancements take place above the skin in the form of a perforated metal rainscreen. The rainscreen both leaves the legacy curtain wall intact in an act of preservation and shades the surface of the building from direct solar gain. The act of penetrating one façade to support another provides the designer opportunities to reconfigure the building appearance as a form of aesthetic renewal that preserves rather than erases the original skin off the building.

The 'skin treatment' is presented as a sensitive approach to one of Modern Architecture's common ailments not only with regards to improved comfort and performance, but also sensitive to what it doesn't require including the need to dispose of an existing system or purchase a new one.

## SUPERFICIAL

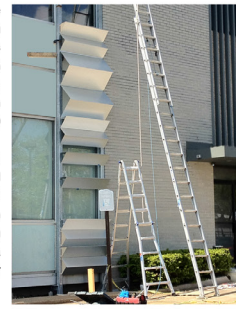


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## SUBCUTANEOUS

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## EXISTING CURTAINWALL



THE 'SKIN TREATMENT' IS PRESENTED AS A SENSITIVE APPROACH TO ONE OF MODERN ARCHITECTURES COMMON AILMENTS NOT ONLY WITH REGARDS TO IMPROVED COMFORT AND PERFORMANCE, BUT ALSO SENSITIVE TO WHAT IT DOESN'T REQUIRE INCLUDING THE NEED TO DISPOSE OF AN EXISTING SYSTEM OR PURCHASE A NEW ONE.

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# SKIN TREATMENT:

## SUBCUTANEOUS AND SUPERFICIAL PERFORMANCE ENHANCEMENTS TO A LEGACY CURTAIN WALL

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