

**PROJECT PROFILE | HARLEY DAVIDSON, 1616 HARLEY DAVIDSON BLVD. COLUMBIA, TN**

**LOCAL ARCHITECT**

Randall Stiles, Architect  
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**INSTALLER**

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**VAPROSHIELD REPRESENTATIVE**

**James K. Christain** Architect AIA CSI CDT  
President, Exterior Materials Incorporated  
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**PRODUCT(S)**

**WrapShield (orange)**  
**VaproTape & 3D Factory Formed Corners**

**PROJECT DESCRIPTION**

Approximately 25,000 sq ft of WrapShield, the highest permeable air barrier in the industry, was used for this 42,000 sq ft Harley Davidson showroom completed in January 2009.

Designed to LEED-type standards, particular care was taken to ensure that construction materials would ensure healthy indoor air and create an energy efficient structure.

Additionally, Jim Christain worked with the architect for a year to address the specific needs for the building envelope. The plywood substrate was nailable because of the variable complex sheet metal cladding. Also, due to the potential for wet winter weather during construction, the plywood needed to be protected quickly and the membrane drying period needed to be short to prevent mildew and mold. The additional use of 3D Factory Formed Corners saved installation time and costs; and will reduce the incidence of moisture intrusion around windows and doors.

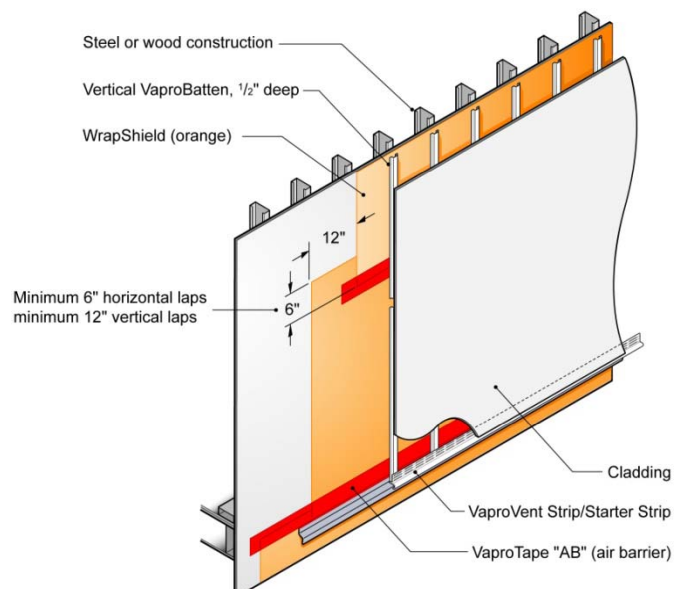
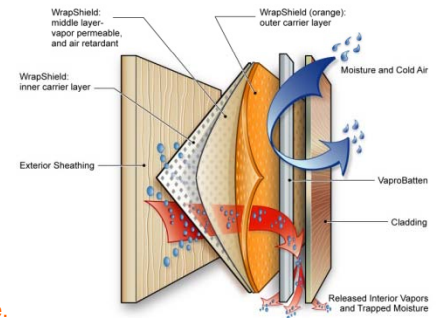


*Installation complete for WrapShield (orange)*



WrapShield combines the best properties of a vapor permeable membrane and an air barrier in one innovative, affordable product.

With a rating of 50 perms, WrapShield provides the highest vapor permeability in a commercial quality air barrier breather membrane.

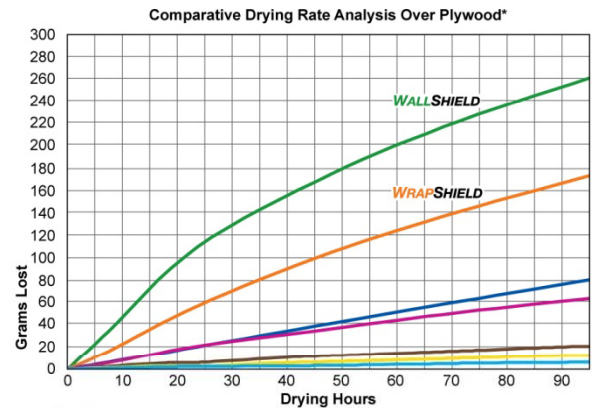
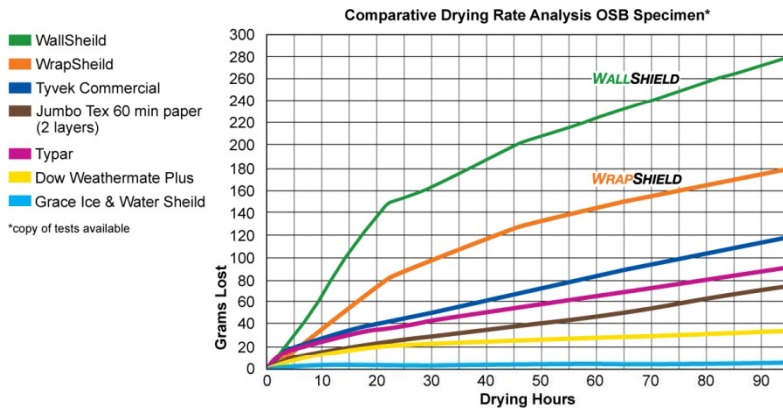


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**WRAPSHIELD TESTING**

**Drying Rates Comparisons**

Actual test reports available from VaproShield LLC



The superior drying capability of WrapShield, the highest vapor permeable commercial air barrier breather membrane in the industry

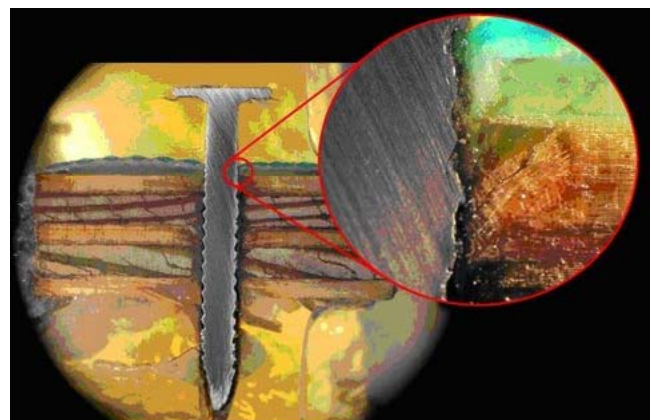
Property	Standard/Test	Result
<b>Air Barrier Testing</b>		
Air Permeance of Building Materials	ASTM 2178 (required for Massachusetts Energy Code and Air Barrier Association of America criteria)	0.0095 L/s/m <sup>2</sup> 0.0019 cfm/ft <sup>2</sup> <b>PASS</b>
Air Leakage through Wall Systems	ASTM E – 283	0.00017 L/s/m <sup>2</sup> 0.000034 cfm/ft <sup>2</sup> <b>PASS</b>
Air Retarder Materials & Systems	ASTM E – 1677	Type 1 Air Barrier <b>PASS</b>
Tensile Strength	ASTM D882	MD – 44.8 lbf/inch (4.94 N/mm) CD – 25.1 lbf/inch <b>PASS</b>
Water Resistance (control and weathered specimens)	AATCC 127 (55cm Hydrostatic Head of Water for 5 hrs)	No leakage noted on underside of control or weathered samples <b>PASS</b>
Water Vapor Transmission	ASTM E96* (Method B)	308.9 g/m <sup>2</sup> 24hrs 2860 ng/Pa/s/m <sup>2</sup> 50 Perms <b>PASS</b>
Flamespread Index	ASTM E-84	10 – Class A <b>PASS</b>
Smoke Development Index	ASTM E-84	35 – Class A <b>PASS</b>



WrapShield water vapor transmission:  
50 perms  
Air Permeability: 0.0019 cmf/ft<sup>2</sup>



WrapShield triple layer spun bond polypropylene



Self-cinching minimizes penetration point leaks reducing the need for sealant

\*Note: ASTM E 96 - Method B (wet cup method) typically gives a more realistic result for permeance than does the Method A (dry cut/desiccant) method.