

Modern Mountain Home Asheville, NC



STRUCTURAL INSULATED PANELS
BY INSULFOAM A CARLISLE COMPANY



Project requirements for this 2,721 square foot North Carolina Mountain home: simple construction that was clean and low maintenance. 8" SIP Walls and 10" SIP Roof helped achieve this.



Project Profile: Modern Mountain Home

DESIGN VERSATILITY. SIPS gave the Architect design flexibility versus stick frame construction when it came to the vaulted spaces and roof spans without beams.

LABOR SAVINGS. Builder was able to save on building time especially when installing the roof.

ENERGY SAVINGS. This North Carolina mountain home is an example of air tight SIPS construction evidenced by the blower door test results on 0.56 ACH50. The airtightness coupled with the great insulation levels that SIPS provides led to a HERS rating of 52, 48% better than the building code. The projected energy use is \$460 per year for heating, cooling and hot water.



www.premiersips.com



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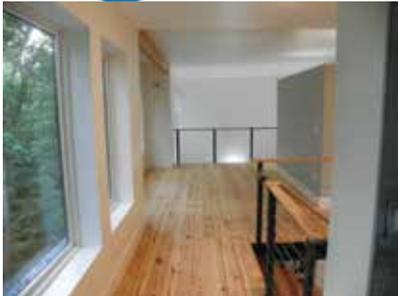
FOUNDATION. Enclosed crawlspaces can be a magnet for moisture, mold and rot. Slab on grade with no crawlspace was incorporated into the design so that there was no hidden enclosed area below the house, where energy can be lost and mold can grow. Foundation and concrete slab were both insulated to make sure they were completely isolated from their surrounding surface to eliminate thermal bridging.

ROOF. Where no lumber splines were used on parts of the roof, an extra inch of polyiso for R44 total assembly and parts that have some lumber in it got on average an extra R15 for a R53 total.

EXTERIOR WALLS. Outside of SIP Walls is a double layer Tyvek weather barrier system. The first layer is conventional Tyvek air and moisture barrier while the second layer is a Tyvek drainage plane product called Tyvek Stucco Wrap/Drain Wrap that provides a path out for moisture that gets between stucco and a house, reducing any chance of mold in walls. Exterior is a stucco application.



The high performance rigid insulation in the SIP walls and roof increase energy performance for the long term.



The Premier SIPS Solution:

ENERGY EFFICIENT & COST EFFECTIVE: Reduce heating and cooling costs by 60% for significant operational savings, which can be directed back into the school's operational budget

HEALTHY: Superior indoor air quality with reduced infiltration of outside pollutants, which can benefit those with respiratory ailments

COMFORTABLE: Warmer in the winter, cooler in the summer, ideal controlled indoor environments for employees and clients

EASY TO OPERATE: Tight building envelope reduces HVAC mechanical equipment sizes and related heating and cooling over the life of each building

ENVIRONMENTALLY RESPONSIBLE: SIPS produce 30% less job-site waste than traditional construction

LEED POINTS: Up to 39 valuable environmental design credits can be awarded for use of Premier SIPS in commercial, new construction or major renovation

Project Details

Architect: Wilson Architects

Contractor: BuiltSmart by Bob

Project Size: 2,721 Sq. Ft., 3-Story home & 23.5 x 24 garage

Premier SIPS Used: 8" Walls on Main House with 4" Walls on Garage, 12" Roof on Main House with 6" Roof on Garage



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