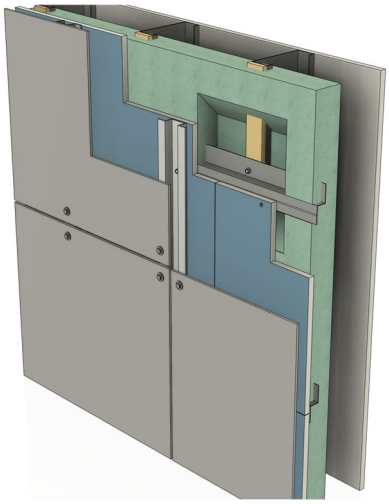

Figure 1: Back-Lattice$_{sm}$ Wall Design Cutaway View from Exterior with Rainscreen Cladding & Interior Drywall

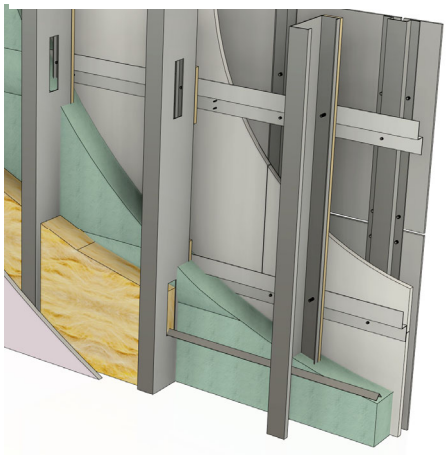

Figure 2: Back-Lattice$_{sm}$ Wall Design Cutaway View from Interior, with Rainscreen Cladding, Interior Drywall and Supplemental Mineral Wool Batt Insulation

Back-Lattice$_{sm}$ Wall System: Back-Lattice$_{sm}$ (BKL) is a patented, test-proven high-performance commercial steel stud wall assembly method that flips the outward sub-girts and continuous insulation inward of the protected sheathing on thermal isolation pads, then encapsulates the crisscross framing assembly with closed-cell spray foam. The continuous insulation is outward of the studs yet inward of the protected sheathing, while the remaining required spray-foam insulation extends inward between the studs. The exterior panel face is clean of sub-girts and insulation which is referred to as a 'naked' wall. This reduces field labor, reduces weather dependence, speeds construction, and facilitates better quality-control testing verification.

Back-Lattice$_{sm}$ Dual-Hybrid Solution: BKL is hybrid in how its continuous insulation is outward of the structure but also inward of the protected sheathing. BKL is also a hybrid solution due to its dual integration of both mineral wool and spray-foam insulations; with each insulation used to its advantage. The mineral wool is used where it can be kept dry for supplemental insulation, or where it is used for fire protection purposes. The energy efficient spray foam, which also performs as a bi-directional vapor retarder, is located inward of the protected sheathing where it is kept dry, while being fire-protected by the gypsum sheathing and interior drywall.

Back-Lattice$_{sm}$ Environmentally Responsible: BKL has been test-proven with 3-D thermal modeling to be a high-performance wall assembly with effective R-values that rival the best systems on the market. Its use of incremental fasteners and thermally broken framing which helps boost its total efficiency. Its total-assembly U-factor is test-proven from climate zones 2 to 8. WUFI hygrothermal performance is proven from climate zones 2 to 6, when even including the optional R15 supplemental batt insulation. BKL complies with not only the most current IECC and ASHRAE energy codes, but also ASHRAE 189.1 high-performance standards for green buildings as required for Net-Zero Energy and LEED. The spray foam is of the latest HFO generation with <1GWP (global warming potential). HPD's and EPD's for LEED compliance are collected up to ten points each when also including the exterior cladding and interior wall finishes.

Back-Lattice$_{sm}$ Test Proven: BKL has been fire-tested by Intertek in load-bearing conditions up to two-hours from both the interior and exterior exposures. Having a load-bearing steel-stud wall assembly with spray foam that is two-hour rated is outstanding and unique. BKL as well has its NFPA 285EEV by Priest & Assoc which accepts the continuous insulation thickness from 1 ½" (R10) up to 3" (R19.8). Finally, ASTM E331 as well as E283 and E2357 have been tested for more than code compliance.

BKL Design-Build: BKL is a delegated design-build solution based on the Back-Lattice wall system. BKL may be prefabricated, or field built. Performance warranties are offered by the design-build fabricator. Materials warranties are offered by the materials utilized in the assembly. BKL's testing and system design is available for independent 3rd party verification & re-testing.

BKL Z & J-Back$_{tm}$: Back-Girts are a key component of the Back-Lattice Wall System. Structural light-gauge steel Z and J-shapes prelaminated with continuous thermal isolation strips allow for the quick and efficient assembly of the horizontal Back-Girt thermally broken sub-framing system.