

## Sam's Smokehouse at Sam's Knob



Sam's Smokehouse is a LEED Gold certified restaurant that overcomes its exposed location high on the mountain to provide an energy efficient building by using structurally insulated panels (SIPS) with R-49 foam insulation on the roof and high-efficiency boilers and furnaces that are designed for high altitude use. Highly efficient plumbing fixtures including waterless urinals and a low maintenance landscaping plan are elements of an aggressive water strategy that is designed to reduce water use by 47 percent as compared to a conventional building. Additional building elements recognized by LEED include LED lights that radically cut lighting energy use, structural wood timbers that were sustainably harvested and extensive use of building materials featuring recycled content.

"Designing Sam's to be an energy efficient building was only the first step. Our operations and design teams carefully analyzed actual energy use over the first year of operation and compared the results to our energy modeling simulations," notes Project Manager Chris Kiley. "We realized that we didn't have the building's mechanical systems running optimally. But by troubleshooting the building with Resource Engineering Group (a Crested Butte based engineering firm that performed enhanced commissioning on the building), we were able to identify and implement numerous small changes that now have the building running properly. Our optimized mechanical system is projected to demonstrate a 26 percent energy cost savings relative to a



conventionally designed building. This is a tribute to the LEED system—it helped us to get the best performance out of our new building."

Other Sam's team members involved in the mechanical system adjustments included O'Bryan Architecture, RA Nelson Construction and MKK Engineering.