Shale Oak Winery – LEED-NC GOLD

Overview

Shale Oak Winery is an exceptional project in the Central Coast green building movement and the local wine community. The avant-garde winery, consisting of a tasting room and production facility, is the dream of a Central Valley "table grape" grower turned fine wine producer. Located off of Hwy 46 West in Paso Robles, the winery is built on the site of an old residence. Wanting to be responsive to the natural landscape and setting high sustainability goals, the owner chose to pursue LEED early in the project's development. Once In Balance became involved, a full design team charrette was conducted early in schematic design. Originally looking to fulfill LEED Silver, **Shale Oak received LEED Gold** using aggressive water harvesting and conservation measures.

Architectural Style

A bold and dramatic look makes Shale Oak Winery unique and creates a truly Californian atmosphere. The butterfly roof design was influenced by the rainwater catchment goals and the Photovoltaic array placement. The tasting room features an iconic stained glass and photo printed glass wall that greets visitors and is most impressive at night.

Water Harvesting

Shale Oak redefines sustainable water use in its comprehensive approach to rainwater design and catchment, reduced water use, and adapted landscaping. The buildings are nestled up against the base of a hill and an old Oak forest. Bioswales behind the buildings at the base of the hill harvest rainwater which is then pumped to five water tanks up the hill, providing almost 500,000 gallons of water storage. The storage tanks, carefully placed to least disturb the Oak forest, mix harvested rainwater and used process water from the winemaking process. This water is then gravity fed to flush the building's toilets and irrigate the California native landscape. The implementation of these integrated systems reduced indoor water use by over 65% and completely eliminated the use of potable water for landscape irrigation. The remaining water is used for vineyard irrigation, planned to cover more than half of the vineyard's annual irrigation needs.

Energy

Shale Oak was able to achieve a 22% reduction in energy use by using daylighting techniques, high levels of insulation and efficient fixtures. In addition, 14% of Shale Oak's energy is provided by a 8.6Kw photovoltaic array on the process building's roof. Green Power was also purchased for 100% of the offsite energy required for the next 2 years.

Materials

An excellent example of material conservation, 10% of the winery materials is reclaimed or reused. In addition to the low emitting and no VOC finish materials and products, Shale Oak uses recycled and regional materials. 18% of the building material has recycled content and 23% is material regionally sourced within 500 miles. Conscious of the impact construction has, the project recycled 81% of its construction waste.

Project Team: Studio 2G, In Balance Green Consulting, Thoma Electric, BMA Engineering, Ashley & Vance Engineering, Above Grade, Jeffrey Gordon Smith Landscape, Specialty Construction.