CASE STUDY: Redesigning for Sustainability

NW Wine Academy takes welding space and turns it into an environmentally friendly barrel storage area

Sophia McDonald-Bennett

WHEN THE NW WINE Academy at South Seattle College set out to remodel their teaching space, they knew they wanted to combine traditional best practices for wineries with new environmentally friendly materials and innovations. Their success in meeting those goals is most evident in two functional and beautiful wine barrel storage rooms inside the tasting room and event center.

According to Regina Daigneault, wine technology coordinator at the NW Wine Academy at South Seattle College, the academy opened in 2004 with the goal of educating hobbyists and professionals about winemaking, food and wine pairing, and wine marketing and sales. They started in a tiny building formerly used for flower arranging classes, but the program grew quickly, and it soon became evident that they needed a larger space. The one they were given presented some challenges. The academy was asked to share a pre-engineered steel building with the school’s welding program. Tall ceilings and poorly insulated walls were acceptable for people using acetylene torches all day, but they wouldn’t work so well for aging and storing the 1,000 to 1,500 bottles of wine students made every year. With help from Joe Chauncey, principal and owner of the Seattle-based integrated design studio Boxwood, the staff began thinking through ways to affordably redesign the space while incorporating as many “green” features as possible.

Storage Room Construction

Chauncey recommended creating a “building within a building” for the wine barrel storage rooms. Rather than using one of the existing exterior walls for one side of the room, they would create two 15-foot-square spaces with four brand new walls. That would give the academy better control over the storage rooms’ temperature and humidity. A better insulated space would also help lower their energy bills.

The wine storage rooms are made with Faswall building blocks from ShelterWorks Ltd. Faswall blocks are made from a combination of chipped pallet wood and concrete. They resemble large cinderblocks; each piece is 1-foot by 2-feet in size and has two large holes in the middle. The blocks can be stacked without mortar, making them easy to use. Contractors pour concrete through the cores to hold them together and create extremely energy-efficient structures.

There are numerous other advantages to using Faswall blocks for wine storage rooms, Chauncey says. The mineralized wood composition of the blocks means they do not grow mold or mildew that could harm the wine. The blocks take plaster well, so it was easy to finish the interior walls with an easy-to-clean coating. Faswall can be cut with wood saws and take standard wood screws, meaning contractors do not need specialized equipment. They are made with 60 percent recycled materials, making them a very green building product.

Other companies make similar blocks (known as insulated concrete forms or ICFs), but Chauncey says he chose ShelterWorks because they offered superior customer service. At his request they sanded and polished the block faces that made up the exterior walls. Those blocks were coated with a clear waterborne sealer rather than plaster. “It exposes the mineralized wood surface so you can see that it is a wood project,” he said. “It has a beautiful texture.”

The storage room roofs are made from 12-inch, fully insulated, light gauge steel joist systems. They are topped with sealed plywood so they can be used for storage.

Garage doors allow a forklift or pallet jack to enter each room to move barrels. The doors are made of aluminum and glass, which allow visitors to look into the space. Several solar tubes (similar to skylights) in the tasting room allow natural light to filter in. Thanks to the solar tubes, “you can work inside the building without turning the lights on through all the daylight hours,” Chauncey said. A small door at the back of each storage room allows staff and students to enter without opening the large doors and allowing cool air to escape.