

SMART WOOD PRODUCTS ENABLE VERSATILE AND EFFICIENT DESIGN

Nestled in the woods of Provo Canyon, Utah, three cross laminated timber (CLT) cabins do more than inspire hundreds of Girl Scout campers each summer: They boldly embody sustainable design principles that can be applied to nearly any building design.



CLT CABINS FRAME THE COMMON ACTIVITY AND GATHERING AREA

WOOD MEETS CODE & STRUCTURAL PERFORMANCE

The cabins were constructed with solid wood panels using locally-sourced wood affected by the mountain pine beetle. “Wood was used in a new way,” says project designer Jörg Rügemer, co-director, Integrated Technology in Architecture Center, University of Utah. “We not only recycled mountain pine beetle wood that otherwise would have decomposed, releasing CO₂ into the atmosphere, but we helped mitigate greenhouse gas emissions and provide a wonderful environment for the Girl Scouts of Utah.” These durable wood panels have a lighter carbon footprint than other commonly used building materials.

In addition to sustainability, the use of interlocking CLT also proved to be beneficial to the overall cost, timing, durability, and meeting code requirements. CLT is an engineered wood panel typically consisting of three, five, or seven layers of dimension lumber oriented at right angles to one another and then glued to form structural panels with exceptional strength, dimensional stability, and rigidity.

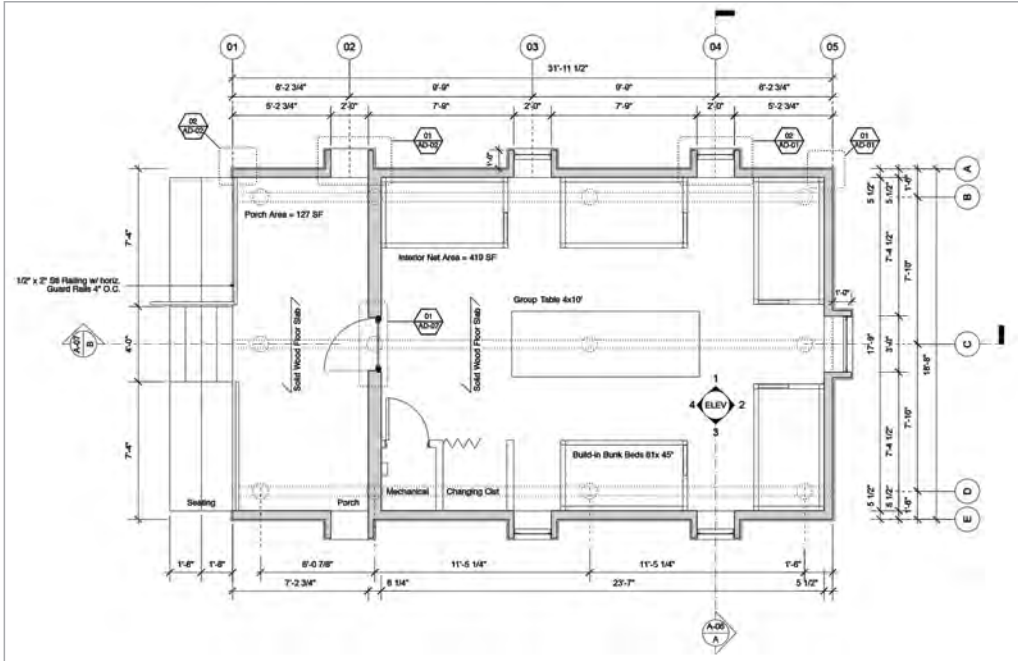
“The owner wanted a domestic and modern architecture and we were on a tight budget and timeline,” Rügemer explained. This innovative timber construction system not only met code requirements and recommendations specified by the fire marshal, but also an accelerated timeline—the final third cabin was completed in less than four weeks.



Solid Floor Assembly



Triple-Layer Interlocking CLT Wall with Dove Tail Connection



SUMMER CABIN FLOOR PLAN

The 602 square-foot sustainable cabins were constructed from interlocking cross laminated timber made from locally sourced wood affected by the mountain pine beetle. CLT offers the structural simplicity needed for cost-effective buildings, as well as a lighter environmental footprint than other materials. It also provides other benefits, including faster installation, reduced waste, improved thermal performance and design versatility.

WOOD INSPIRES INNOVATIVE DESIGN

A key element throughout the design process was to remain conscious about not disturbing the outside environment. "We fully embraced the existing surroundings and natural resources of the wooded landscape," Rügemer says. This meant designing a simple, yet functional space to inspire the Girl Scouts of Utah. According to Rügemer, for all projects, it's important to consider the size of buildings and respect the natural elements around it. Rügemer and his team exercise this idea when designing many high-efficient spaces



CABIN #2 INTERIOR

CABIN DESIGN

Jörg Rügemer and Erin Carraher, Integrated Technology in Architecture Center, University of Utah

OWNER

Girl Scouts of Utah

ENGINEER

Acute Engineering

CONTRACTOR

Euclid Timber Frames

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AWARDS

WoodWorks 2015 Wood Design Winner Award Category—Regional Excellence

2014 Design Arts Utah

Juror's Award

2014 ACSA Diversity

Achievement Award

2014 Honorable Mention

award—Public Interest

DESIGN Award

2014 ACSA Collaborative

Practice Award