



**Above right:** The church is a great example of the dramatic spans possible with timber frame construction.

**Above left:** A round oculus demonstrates the extreme flexibility of plywood in a finish application.

**Opposite:** Remaining bits of the beaming leftovers from bent fabrication were used to create a dramatic hanging cross set amidst the outsized fretwork.

# The Lutheran Church of Madison

New sanctuary portrays unique qualities of wood construction and detailing

**Duo Dickinson, Architect**

*The Lutheran Church of Madison evidences the virtues of wood construction and detailing in many ways, leveraging both timber frame and plywood construction.*

The timber frame utilized for the creation of a new sanctuary clearly shows the dramatic spans possible with timber frame construction that are both structurally expressive and visually delightful. Each individual bent is slightly different and has non-structural addendums to transform something that is potentially barn-like into something botanic. Given the fact that these were 100-year-old salvaged Douglas Fir timbers, the 'sticks' that were available had a fixed length, and thus the main vertical supports needed to be elevated above the floor plan to allow the new roof to align as an extension of the existing roof that covered the original sanctuary.

The timbers – partially donated to the church by Bensonwood – were lightly oiled prior to fabrication

and touched up afterward. Given the heavy overhang of the Structural Insulated Panels (SIP) roof structure that it supports, the use of the natural wood as an expressive continuation of the interior beaming beyond the perimeter walls to form supports for the eaves adds a wonderful additional element to the exterior ambience of the project.

This interior wood structure is boldly put on display by the use of clerestory glazing set above an opaque brick base, both of which are held separate from the timber frame to allow for differential movement. Beyond the obvious ethical advantages of recycling, it should be noted that the great virtue of using salvaged wood was that the wood was so stable that it evidenced virtually no net movement relative to the existing










**Above left:** The interior wood structure is boldly put on display by the use of clerestory glazing.

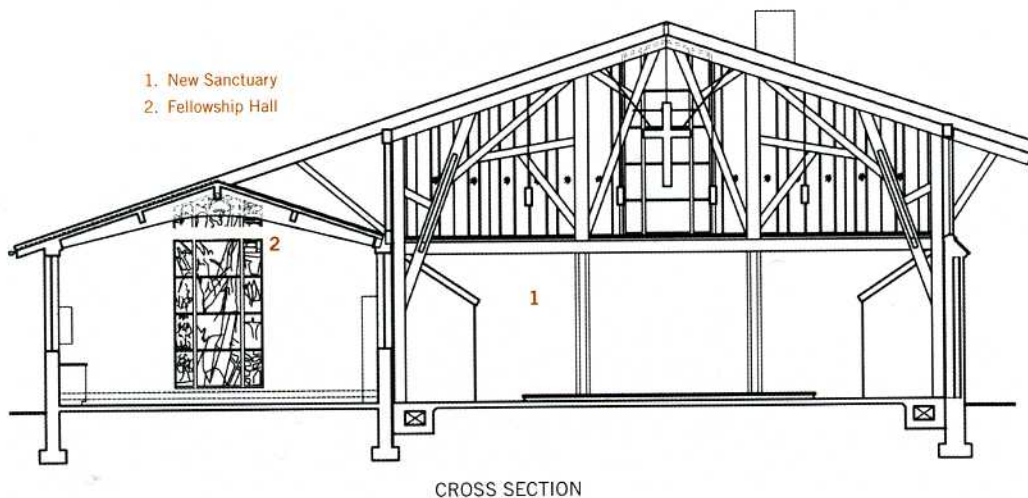
**Above right:** Continuous and sleek panelling was created with birch plywood.

50-year-old structure it extends – which is largely masonry and steel (although the original sanctuary, now the parish hall, does use glulam bents as its roof support system).

The second use of wood for this project is as a decorative skin that evidences the extreme flexibility of plywood in a finish application. By utilizing 1/4-in. birch plywood to flex into a newly formed round oculi/narthex, the inevitable anomalies that occur when three independent parts of pre-existing rooms are fused into a single new space meant that the details had to be flexible. By gapping the panels utilizing blackened out dados/reveals smooth, continuous and sleek paneling was created where it could have been awkward and 'lumpy'. The ability to field finish these birch plywood

panels, as well as the use of solid wood to form the 'lips' at the portals in and out of the space, made this installation very cost effective – versus shop fabricating a similar product and then installing it in the field. The in-field adaptability of this approach allowed for total control by the general contractor at a time when an occupancy deadline was rapidly approaching.

Pre-finished wood flooring was also utilized in the sanctuary, and its durability and stability were paramount criteria for its selection. Simple wood railings and newels are durable, affordable and are inspired by the timber frame. Lastly, remaining bits of the beaming leftovers from bent fabrication were used to create a dramatic hanging cross set amid the outsized fretwork. 



**Architect**

Duo Dickinson, Brian Ross, Jim Wilson, Madison, CT

**Timberframe Engineer**

Ben Brungraber, Bensonwood Woodworking, Wallpole, NH

**General Contractor**

Paul Torcellini, Waverly Builders, Branford, CT

**Structural Engineer**

Edward Stanley, P.E., Edward Stanley Engineers, Guilford, CT

**Landscape Designer**

John Cunningham, Tec Landscape Design, Madison, CT