

# TECHNICAL SOURCE GUIDE

## TIMBERSTRAND LSL

By Roy Hoglund, Scenic and Lighting Designer, University of Wisconsin - Oshkosh

In an ongoing attempt to beat the high price and inconsistent quality of lumber, theatrical scene shops are continually looking for new materials to replace traditional, old growth lumber. Such was the case for Max Leventhal, technical director of The Goodman Theatre in Chicago. TimberStrand™ LSL, a new product to the construction industry, was originally introduced to the theatre world at the 1992 USITT Convention in Seattle. In August of that year, Leventhal received his first shipment of 1 x 12 and has found it to be perfectly suited to the theatre industry.

TimberStrand™ LSL, manufactured by Trus Joist MacMillan, is an oriented strand composition board product. Aspen logs are cut in 12" long strands, which are then dried and treated with polyurethane resin. The strands are aligned parallel to one another, and pressed and steam-injected to create a large billet of wood. This billet is then cut to the desired width. The end product is a piece of wood possessing the same strengths as the standard pine or fir that is presently being used, but without the warping, cracking, or knots one might find in regular wood Products

Leventhal finds TimberStrand™ LSL to be a structurally sound and consistent material for scenic construction. He states that its advantages are that it is not affected as much by moisture, and does not warp when painted. A disadvantage, according to Leventhal, is that it is 1.47 times heavier than its equivalent size in pine. For instance, a standard 1 x 12 (16 ft. in length) weighs approximately 29 Pounds, Whereas the TimberStrand™ LSL equivalent weighs approximately 43 Pounds. Also, Leventhal relates that it is visually unappealing in its raw state

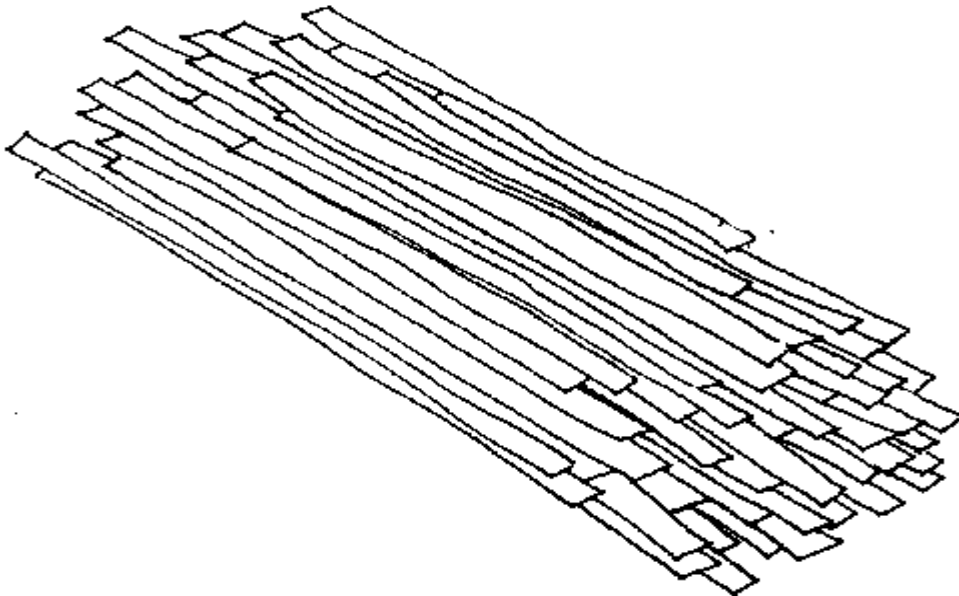
In our research of this product, the Technical Source Guide found that the utility grade 1 x 12 Leventhal had ordered was a start-up, market test line, which at this time is not being produced.. Bill Bean, the Marketing Director for true Joist MacMillan, informed us that the two primary reasons for discontinuing this product were that its market was not substantial enough, and that in the Process of manufacturing the product, the billet would stick to the screens, resulting in a \$60,000 repair bill. For this reason, the narrowest boards now produced are 1-1/8" in thickness.

At present, TimberStrand™ LSL is produced in a structural grade for the door and window market, and in some sizes for the construction industry in the form of studs, headers and floor joists. These products are equivalent in strength to select grades of lumber. Mike Hume of Hines Lumber, the major distributor of TimberStrand™ LSL in the Chicago area, states that Timberstrand™ LSL is a very high structural grade product and is priced as such. Although its price is double that of regular shop grade lumber, there is considerably less waste with each piece because it does not contain the defects of other lumber. Promotional literature for TimberStrand™ LSL touts that while approximately 35% of traditional lumber is wasted due to imperfections, TimberStrand™ LSL offers nearly 100% utilization.

# TECHNICAL SOURCE GUIDE

Prices will fluctuate between \$1.20 to \$2.00 per board foot, compared to 90¢ per board foot for #2 pine, the typical shop grade. It is important to note that TimberStrand™LSL can only be bought in large quantities, around 12,000 board feet. Some utility grades of various sizes are available as seconds from the factory, but sizes and availability are subject to whatever is on hand at the time. The price may also be as low as half the original price, depending on quantity. To find out what is available, contact Bob Schwenke of Trus Joist MacMillan at 21d3-546-8114.

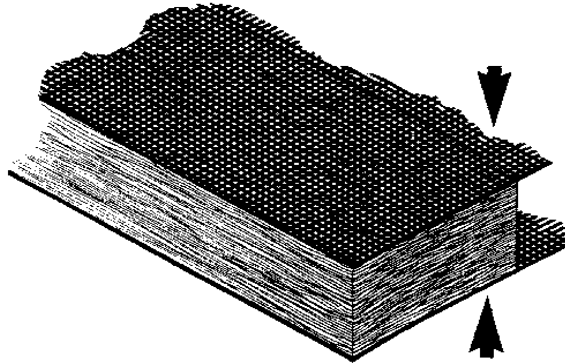
Leventhal, along with Chicago-area theatrical scene shop staff and those us at the Technical Source Guide, hope that Trus Joist MacMillan will come to realize the healthy, viable market the theatre industry provides for the TimberStrand™LSL product, and that they will take the necessary steps to continue producing the 1 x 12 utility grade for theatrical purposes.



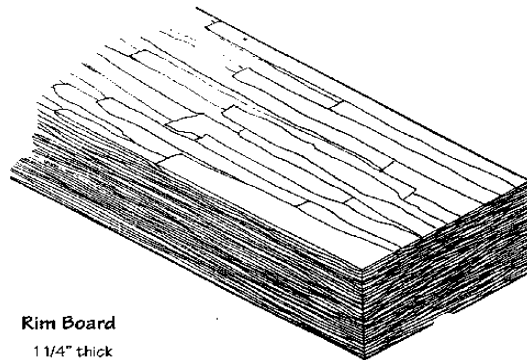
**12" Aspen strands treated with polyurethane resin**

Thank you for taking time to read this "classic" Technical Source Guide! Because it has been published a relatively long time ago, addresses (physical & web) and any phone numbers, might not be current!

# TECHNICAL SOURCE GUIDE



**Steam-injected and pressurized**



**Kim Board**  
1 1/4" thick

**All sides smooth-finished**

Size	Weights PLF (Per Linear Foot)
9 1/2"	3.2
11 7/8"	4.0
14"	4.6
16"	5.2

Thank you for taking time to read this "classic" Technical Source Guide! Because it has been published a relatively long time ago, addresses (physical & web) and any phone numbers, might not be current!

Technical Source Guide #10 – TIMBERSTRAND LSL

**Disclaimer:** the publisher does not assume any liabilities resulting from the use of the information contained in this document. Neither Sightlines nor USITT endorses any products presented.

- A project of the USITT Technical Production Commission