Southern Pine Design Value Forum

November 15-16, 2011
Sheraton Gateway Hotel Atlanta Airport
Atlanta, Georgia

MINUTES

A *Southern Pine Design Value Forum* was held November 15-16, 2011 in Atlanta, Georgia. The forum provided an opportunity for Southern Pine lumber producers, component manufacturers, builders and others to come together regarding Southern Pine Inspection Bureau (SPIB) proposed design values. The Southern Forest Products Association (SFPA) facilitated this industry forum in cooperation with the Structural Building Components Association (SBCA) and others to help find a favorable course of action for Southern Pine producers and users.

The following stakeholders participated in the forum:

Victor	Beadles	Beadles Lumber Company
Ricky	Best	UFP Mid-Atlantic, LLC
Adrian	Blocker	SFPA
Dave	Brakeman	ITW Building Components Group
Chris	Brandt	Weyerhaeuser Company
Bob	Browder	SPIB
Steve	Cabler	MiTek Industries, Inc.
Wade	Camp	RISI
Ron	Coker	Hood Industries, Inc.
Brad	Douglas	American Wood Council
Kerlin	Drake	Anthony Forest Products
Gary	Ehrlich	NAHB
Terry	Freeman	Bibler Bros. Lbr. Co.
Kirk	Grundahl	SBCA
John	Hammack	Hood Industries, Inc.
Harry	Hardin	Jones Walker
Dwight	Hikel	Shelter Systems Ltd.
Joe	Hikel	Shelter Systems Ltd.
David	Jones	Mississippi State Univ.
Cathy	Kaake	SFPA
Jim	Kaake	Tolleson Lumber Co.
Tim	Kozik	Beazer Homes
Dave	Kretschmann	Forest Products Laboratory
Todd	Kurle	Metriguard
Joe	Kusar	Tolleson Lumber Co.
George	Layton	Canfor
Zachary	Lowe	CLW, Inc.
Gale	Miller	Autolog, Inc.

Frank	Moore	NLBMDA
Mike	Pastore	Collum's/SFP
Joe	Patton	Westervelt Lumber
Chris	Payne	K. Hovnanian
Gino	Pedatella	Rayonier
Mark	Rey	Travis Lumber Company
Sonny	Richardson	Richardson Home Builders
Matt	Scholl	Georgia-Pacific
Dan	Seale	Mississippi State Univ.
Tom	Searles	ALSC
Rubin	Shmulsky	Mississippi State Univ.
Neal	Shunk	Weyerhaeuser Company
Lon	Sibert	Renewable Resource Associates
Steven	Spradlin	Capital Structures, Inc.
Steve	Stroder	ProBuild/SBCA
Ed	Sutton	NAHB
Charlie	Thomas	Shuqualak Lumber Co., Inc.
Jim	Thomas	Trussway Holdings
James	Travis	Travis Lumber Company
Gilbert	Travis	Travis Lumber Company
Clayton	Traylor	Leading Builders of America
Scott	Vande Linde	West Fraser
Matt	Vinson	Eagle Metal
Richard	Wallace	SFPA
Scott	Ward	Southern Components, Inc.
Ronnie	Williams	Timber Products Inspection

Welcome

The meeting was convened at 1:00 pm on November 15 with opening remarks by Joe Patton with Westervelt Lumber. Joe commented that this is an historic meeting to address a single challenge.

Antitrust Reminder

Harry Hardin, SFPA Legal Counsel, was present to monitor the meeting for potential antitrust concerns.

Opening Session

Cathy Kaake, SFPA, moderated the opening session. Cathy explained the forum's opening session was devoted to education – learning more about the various data sets, the science behind the data, options to consider, the approval and implementation process, impacts on users, plus a summary of Southern Pine producer capabilities.

Understanding the Data

Three speakers reviewed data collected from tests conducted by their respective organizations.

Dan Seale, Mississippi State University, began with an overview of the testing conducted by MSU. He explained how they sampled Southern Pine lumber as packaged for commerce from mills in five states –

Texas, Arkansas, Mississippi, Alabama and Georgia. They tested 744 pieces to obtain MOR (Modulus of Rupture – bending) and MOE (Modulus of Elasticity) data. Dan displayed a summary of MSU's data base and showed how pulling out pieces with pith and/or with three rings or less per inch could increase the resulting design value. Dan also discussed changes in sawmilling technology over the last 20 years and the ability to cut narrow dimension lumber from much smaller logs. He stated this change casts doubt on the extrapolation to other grades and depths as well as on the size model used to conduct the extrapolation. Dan also referenced the requirement in ASTM D1990 to test more than one size and grade cell, and the cautions contained in the standard against extrapolation to other sizes and grades.

Kirk Grundahl, SBCA, summarized observations from testing conducted on behalf of component manufacturers. He described the optimal solution to serve the best interests of both the lumber and lumber-using industries. Kirk suggested optimal alternatives that could include standard visually graded lumber (e.g. use SPIB's proposed design values), enhanced visually graded lumber (e.g. retain SPIB's current design values) and mechanically graded lumber. He stated the suboptimal approach would be to implement SPIB's proposed design values without providing the market with the means to retain the current design values for visually graded Southern Pine lumber. Kirk explained that users need the current design values, plus the test data confirm higher design values are still available for a significant portion of the lumber population. He stated that structural end users buy resistance, and that those end users can find ways to work with a range of grades as long as those grades have accurate material properties. Kirk stressed that an orderly timeline and transition period is needed whenever design values are changed. He shared the component industry's perspective on negative impacts due to redesign cost/time, inventory devaluation and eroded consumer confidence. Kirk also reviewed test results from an assembly of five trusses. He stated the assembly performed well with system safety factors, supporting the concept there is not an immediate life-safety issue.

Bob Browder, SPIB, explained that SPIB is one of several rules-writing agencies accredited by the American Lumber Standard Committee. SPIB is accountable for establishing design values for Southern Pine visually graded lumber following ASTM consensus standard D1990. Due to the requirement to develop a global number representative of the entire Southern Pine production, SPIB's sampling plan was different than that of MSU and SBCA. SPIB sampled on-grade No.2 2x4 specimens from 42 mills in 14 active producing regions across the U.S Southeast. Bob explained that SPIB also collected additional samples to explore the possibility of reinstating a medium-grain requirement to maintain current design values. SPIB did multiple sorts with their data to investigate the impact of sorting out juvenile wood, including various densities, pith or no pith, rings-per-inch and/or percent summerwood. None of those sorts resulted in the data supporting current design value levels, possibly due to the observed increase in knots and combination knots. Bob stated there were very few combination knots observed in the In-Grade samples tested more than 20 years ago as compared to SPIB's latest data set. On the other hand, he said both of those data sets had a similar number of pieces containing pith. Bob also discussed SPIB's reasons for their proposed extrapolation to all grades and sizes. He explained SPIB's re-analysis of the original In-Grade data using just one cell and the resulting prediction of design values within one rounding rule. When the 2x4 No.2 test data from the original In-grade is used to project design values for the full matrix using the 2x4 SS value as the second anchor point, the result is very similar – generally a 50 psi rounding rule for F_b – to using the actual data for 2x4, 2x8, and 2x10 No.2 and Select Structural. Therefore, one might reasonably expect similar results from using the current No.2 2x4 data to estimate conservative values for the current proposal. In addition, SPIB's recent observation of more than 25,000 pieces of

lumber in Southern Pine mills revealed increased juvenile wood even in wider widths. As a result, SPIB does not expect much change from the proposed design values when the full In-Grade test matrix is complete, assuming the size and grade models are correct. Bob also said the Grade Quality Index (GQI) of 32% for the bending samples vs the target of 45% was due to the mischaracterization of distorted grain that artificially reduced the GQI. In a subsequent analysis, SPIB found that removing the 17 affected pieces restored the GQI to the target level. SPIB and Timber Products Inspection have already begun the next phase of testing to fill out the full in-grade testing matrix. That testing is scheduled for completion in the first half of 2012. There will then be data from more than 7,200 pieces of Southern Pine that can be extensively analyzed for potential sorts, including juvenile wood, rings per inch, pith and knots.

Enhancing the ALSC Process

Clayton Traylor, Leading Builders of America, noted that LBA represents the top 20-25 largest builders with thousands of homes in process at any given time. He summarized potential costs due to business interruption when standard plans have to be changed, additional costs due to price increases and potential conflicts for homes in process. Clayton stated the design value adoption process should be predictable, transparent and inclusive. He recommended mirroring the federal rule-making process that allows for 60- to 90-day periods between key milestones such as submission and approval of sampling and testing plans, submission and comment period for proposed design values, and approval and implementation of design values. Clayton also urged ALSC to develop a system that allows interested parties to register for notices and related materials.

Southern Pine Producer Capabilities

Wade Camp, RISI, spoke about the Southern Pine supply response to new design values. He began by summarizing why the U.S. South is the wood basket of the world. Wade then showed that two-thirds of softwood lumber end-use markets are driven by residential activity, with walls and roofs consuming 83% of the lumber used in single- and multi-family structures. Wade provided examples of market adoptions within the value chain due to new design values. He noted there are few and relatively low barriers to a machine graded lumber supply response. Wade stated the market should achieve equilibrium in 2012, with supply, demand and product mix changes as well as inventory restocking accomplished.

The meeting adjourned at 5:30 pm to continue discussions through a reception and group dinner.

Recap

Adrian Blocker, SFPA, re-convened the group at 8:00 am on November 16 and provided a brief summary of the discussions from the previous day. Kirk Grundahl, SBCA, relayed his continued concern about the uncertainty of what will happen at the January 5, 2012 ALSC Board of Review hearing. He urged everyone to work together for the rest of the morning and into the future to find win/win solutions for all stakeholders.

Breakouts

The meeting participants broke into three smaller, mixed groups of lumber producers, component manufacturers, builders and technical experts to encourage more discussion. The group leaders were Scott Ward with Southern Components, Sonny Richardson with Richardson Home Builders, and Chris Brandt with Weyerhaeuser Company.

Concluding Session

Each breakout group highlighted their discussions and recommendations to the entire group in the concluding session.

Tom Searles with ALSC answered questions from the group, clarifying the following:

- The American Lumber Standard Committee develops PS-20, policies and enforcement regulations that SPIB and other agencies must follow
- The Board of Review (BOR) enforces the rules and approves design values
- The BOR left the record open and wants everyone's input regarding SPIB's submission on proposed design values
- The BOR encourages both written comments and presentations at its January 5, 2012 meeting
- The BOR welcomes technical as well as nontechnical input
- The BOR has a wide range of decision options

Major Themes/Recommendations

Several common discussion themes emerged as the three groups reported. The points summarized below may or may not represent everyone's individual opinion, but seemed to garner general consensus from the meeting participants.

- Due to the redundancies and conservatism in the design of light-frame wood construction, there is not a product defect or safety issue for existing houses or projects in process.

- Science needs to prevail. There is a lack of confidence in the proposed changes from producers and customers based on third-party qualitative and quantitative work. Additional deliberation is needed to create confidence that the proposed changes are correct.

- The SPIB technical committee needs broader involvement to include other key stakeholders to analyze and evaluate other grade rule alternatives. Improving transparency through broader involvement of stakeholders will greatly improve the acceptance of these and future changes.

- There needs to be a change management process similar to other building code design change processes whereby 1) the change is announced followed by 2) a comment period then 3) an implementation period prior to 4) the effective date (the exception would be in the case of a product defect). An orderly implementation will build confidence in future changes and reduce the concerns and claims regarding inventory devaluation and in-process work.

- There needs to be only ONE change in design values; not one now and then another in six months. The full in-grade testing of all cells should be completed before changes are made. Multiple changes for one species in a short time erode confidence and cause unnecessary, expensive design and implementation changes. Preferably all species would be changed at the same time to create a fair competitive environment.

Additional Points

Throughout the course of the forum, the following additional points were raised for further consideration:

- The forest resource changed from the time of the original In-Grade Testing Program to now
    - Smaller logs, higher percentage of juvenile wood
    - More variability from short-rotation plantations to long-rotation national forests
- Communicate needs to landowners to change silvicultural practices
- Resource monitoring must be improved to detect smaller, incremental changes
- What grades/properties do end-users need?
- Dense grade options are still desirable
- How can we provide reliable design values without machine grading?
- Can the lowest strength material be pulled out visually?
    - Rings per inch, density, percent summerwood, pith, knots, other?
- Consider better visual design values with quality control
- Do global-number design values still make sense?
- Should we abandon visual grades entirely?
- Look at ASTM D1990 changes
    - Moisture content adjustments
    - Characteristic value adjustments
        - Are the grade and size models still valid?
        - Review the size effect – is the "w" exponent correct?
    - Sampling requirements – how to reconcile the theoretical on-grade population with what is in the stream of commerce.
- Are National Grading Rule changes needed to address combination knots?

Next Steps

The overall consensus of the meeting participants was to develop a collective set of statements to send to both the SPIB Board of Governors and the ALSC Board of Review in a two-pronged approach. The suggestion was to first send these recommendations to the meeting participants to see who would be interested in forwarding them to SPIB and ALSC in a group statement. In addition, everyone was encouraged to forward their individual comments to both ALSC and SPIB, and to present their viewpoint in person at the next ALSC Board of Review meeting scheduled for January 5, 2012 in Washington, DC. Anyone wishing to speak should contact Tom Searles with ALSC as soon as possible. ALSC would like to receive written comments at least 10 days prior to the meeting.

Three task groups were formed to draft the following by December 2 for the entire group's consideration:

- One group will summarize the forum findings, expressing concerns and recommendations in a unified statement to the SPIB Board of Governors and the ALSC Board of Review.
    - Leaders Adrian Blocker and Cathy Kaake, plus Chris Brandt, Sonny Richardson, and Scott Ward

- A second task group will review underlying statistics to assess whether design value changes may be deferred until additional testing is completed or whether safety concerns require more immediate action.
    - Leader Chris Brandt, plus Kirk Grundahl, Brad Douglas, Rubin Shmulsky, and Gary Ehrlich

- The third task group will provide guidance about what the implementation process should be for current and future proposed changes to design values.
    - Leader Frank Moore, plus Clayton Traylor, Ed Sutton, Steve Stroder, Steven Spradlin, Neal Shunk, James Travis and Kerlin Drake

Having no further business, the *Southern Pine Design Value Forum* was adjourned at 11:45 am.