

# American Lumber Standard Committee, Incorporated

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April 5, 2006

Mr. Kirk Grundahl  
Wood Truss Council of America  
One WTCA  
6300 Enterprise Lane  
Madison, WI 53719-1140

Dear Kirk,

Thank you for your letter of March 21, 2006. I will attempt to answer each question in the order listed in your letter.

1. The component industry, since its inception, has purchased grade marked lumber and re-cut it in a variety of ways to best suit the manufacturing process. The typical re-cutting methods today include:

- a) Bunk cutting using a chain saw to reduce the size (optimize) of a bunk of lumber so that the shorter lengths can be used in a web saw, for instance.
- b) Component sawing of lumber chords and webs of various sizes, lengths and grades.
- c) Linear sawing one stick of lumber or a stack of identical sticks of lumber into several pieces of lumber with a wide variety of end, side and bevel cuts

*Q.1d. The questions we have include: What does this cutting process do to the grade of lumber used in the truss? This is a critical question for our industry given that we have been assuming that the lumber design properties hold per the original grade stamp as pieces are cut in the variety of ways that we cut the lumber.*

A: When lumber is cross cut the grade is seldom affected. There are some exceptions such as, re-grading for shake or splits in very short pieces cut from long pieces. Appearance characteristics may also be affected. I am not sure what you

mean by “linear cutting”, but if the lumber is cut, it retains the grade if that cutting is a cross cut or an angle-cut, but not if it is a ripped longitudinally.

*Q 1d,ii. One of the questions that we also frequently get in the field, from building officials primarily, is that since the grade stamp has been cut off the original piece of lumber, how does one know what grade was used in the truss. What should our response be to this?*

A: The presence of grade stamps on some or several component sections of the truss, along with the general observation that the unmarked components are of a similar type to the marked components should usually be sufficient to infer that the truss is manufactured from appropriately graded and grade marked lumber. It remains the fabricators responsibility to use the appropriate grade for each truss component. If the grade quality is in question then further inspection should be made.

*Q. 1d,iii. Is it possible to get grade stamps applied to lumber in one foot increments?*

A. There is no technical problem with grade stamping at closer intervals and a mill may be willing to do so if the needs of the truss industry can justify the additional capital and operating expenses.

*Q. 1d,iv. What are the impediments to getting grade stamps applied in this manner?*

A. See iii above.

*Q. 1d,v. What other opinions can ALSC share with us with respect to this issue to guide us into the future?*

A. No comment. The truss manufacturer has the responsibility for using the correct size, species, moisture content, grade of lumber in the correct location, as stipulated by the truss design specifications.

*Q. 2a. Similar to item number 1 above, there are instances in the field where the project owner desires to have flat ceilings and, due to the installation variations, the solution chosen is to plane the bottom chord of the truss, sometimes up to 3/8". What does this field planing process do to the grade of lumber used in the truss?*

A. If the width or thickness is changed, the wood must be re-graded.

*Q. 2b. Can the allowable wane rules for the grade be used to justify the planing that has taken place?*

A. No—wane occurs on an irregular basis on some pieces. Uniform removal of thickness or width reduces the section modulus of all pieces.

*Q. 2c. What other opinions can ALSC share with us with respect to this issue to guide us into the future?*

A. No comment.

*Q. 3a. It has been our position as an industry that we do not have to worry about the lumber grade of the incoming lumber that we purchase. If it is properly grade stamped by an ALSC approved agency, then we can rely on the design properties of that stick of lumber and design and manufacture a truss accordingly. Is this the appropriate position for our industry to take?*

A. Yes—but the truss manufacturer has the responsibility to use the product as intended and defined in the grading rules, and in conformance with the specifications of the truss design.

*Q. 3a(i.) If yes, what standard or grade rule criteria should we reference?*

A. Rules approved by the Board of Review of the ALSC for the species involved.

*Q. 4g(i.) Given that the lumber was re-cut and not every piece had a grade stamp on it, how does one defend oneself in a case like this?*

A. The truss manufacturer is responsible for the trusses and wall panels. In their manufacturing process, they have the quality control responsibility to see that properly stamped and graded material is used in the manufactured products. The truss manufacturer has the responsibility to verify that the material being used is on grade. When the lumber is believed to be not on grade, the industry provides recourse to have the material re-inspected. Also see 1-d-ii above.

*Q. 4,ii. Is this an appropriate activity for the grading agency to undertake? If yes what are the rules or standards that are used for this type of re-grading?*

A. Yes. The standard industry practice is reflected in the qualified report sent to us. This type of report has been used on numerous occasions to solve the type problem that you describe. From your letter and the report attached, it is not possible to determine if the lumber was on grade as originally marked or if the grade as specified in the truss design was used for the wrong truss member, but given the truss specifications the accredited agency inspector can identify and mark the pieces below a specified grade.

*Q. 4,ii 2. If yes, how concerned does our industry need to be about this occurring more frequently?*

A. This does not happen very frequently. Given that approximately 60 billion feet a year are consumed in the US, and only approximately 100 of these type inspections are performed and not all of these are on trusses it does not appear to be a major problem.

*Q. 4,ii 4. What other opinions can ALSC share with us with respect to this issue to guide us in event that this type of situation happens to us again?*

A. No comment.

I hope that this information is helpful. If we can furnish any additional information please feel free to let me know.

Sincerely,



Thomas D. Searles  
President

TDS:tw

cc: A&F Subcommittee  
ALSC Officers  
Counsel