Standard: CSA O86 *Engineering Design in Wood*

Topic: Southern Pine MSR Lumber

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Date: May 25, 2012

Initial Review: TC Executive
Final Approval: Technical Committee on Engineering Design in Wood (A257TC)

Request for Interpretation (RFI):

Applicable clause(s): Table 5.2.1.3, Table 5.3.2

Question:
Does the withdrawal of the equivalency between Southern Pine and S-P-F lumber in Table 5.2.1.3 implicate the use of Southern Pine lumber in Table 5.3.2 of CSA O86?

Recommendations:
See attached letter from Robert Baynit

Official TC Position and Rationale:		
1.	No	Machine Stress Rated (MSR) S-P-F and Southern Pine lumber could be considered equivalent for lumber specified in Table 5.3.2 of CSA O86 for the following reasons: • The design properties for MSR lumber are independent of species for determining: o Bending at extreme fibre, f_b o Modulus of elasticity, E o Tension parallel to grain, f_t, and o Compression parallel to grain f_c. • The Southern Pine design values for compression perpendicular to grain, f_{cp} and longitudinal shear f_v did not change in the June 1st addendum to the 2012 and previous versions of "Design Values for Wood Construction" (a supplement to the National Design Specification® (NDS®) for Wood Construction). The Southern Pine MSR values for f_{cp} and f_v are higher than corresponding S-P-F values: o f_{cp}: 425 psi for S-P-F and 565 psi for Southern Pine o f_v: 135 psi for S-P-F and 175 psi for Southern Pine. • The test basis for longitudinal shear and compression perpendicular to grain characteristic values in Canada and the US are similar. • Equivalency between Southern Pine and S-P-F lumber in Table 5.3.2 will be reevaluated if there are changes to NDS design values for Southern Pine f_{cp} or f_v design values.