

## Sealed Software Calculations for I-joists and Structural Composite Lumber

Prefabricated wood I-joists (I-joists) and Structural Composite Lumber (SCL), which includes Laminated Veneer Lumber (LVL), are specifically recognized in the model building codes. I-joists are covered under Section R502.1.2 of the 2021 and 2018 International Residential Code (IRC) and Section 2303.1.2 of the 2021 and 2018 International Building Code (IBC). Both sections read as follows: *Structural capacities and design provisions for prefabricated wood I-joists shall be established and monitored in accordance with ASTM D5055.* SCL is covered under Section R502.1.5 of the 2021 and 2018 IRC and Section 2303.1.10 of the 2021 and 2018 IBC and those sections read as follows: *Structural capacities for structural composite lumber shall be established and monitored in accordance with ASTM D5456.*

Roseburg Forest Products manufactures and monitors I-joists (RFPI®-Joist) in accordance with ASTM D5055 and LVL (RigidLam® LVL) in accordance with ASTM D5456. Both processes are audited by APA – The Engineered Wood Association, which is an accredited independent third party inspection and certification agency.

Roseburg maintains various code evaluation reports for its engineered wood products (EWP), for example the joint ICC-ES and APA Evaluation Reports ESR-1251 for RFPI-Joists and ESR-1210 for RigidLam LVL. These code reports include approved design properties and in some cases allowable spans for the various products. In addition, Roseburg provides literature and software that incorporate the approved design values which assist the user in determining the required product for a specific application. I-joist and LVL products are manufactured in long lengths and then cut to length to meet the design requirements for specific applications. Because the approved design values are provided in the code reports and incorporated into the literature and software, it is not necessary, or required by code, to have an engineer's seal on span or load tables, or on software output. Plated trusses, on the other hand, are custom designed and built for a specific application and therefore must follow different provisions and guidelines as outlined in Section 2303.4.1.4.1 of the 2021 and 2018 IBC, which reads as follows: *Truss Design Drawings. Where required by the registered design professional, the building official or the statutes of the jurisdiction in which the project is to be constructed, each individual truss design drawing shall bear the seal and signature of the truss designer.*

In summary, provided an I-joist or SCL manufacturer has a valid code evaluation report, an engineer's seal on span or load tables, or on software output, is not required by the IBC or IRC.