

CHANGE TYPE: Modification

CHANGE SUMMARY: Concealed spaces are now permitted in floors and roof decks for Type IV-HT.

2021 CODE TEXT: 2304.11.3 Floors. Floors shall be without concealed spaces or with concealed spaces complying with Section 602.4.4.3. Wood floors shall be constructed in accordance with Section 2304.11.3.1 or 2304.11.3.2.

2304.11.4 Roof decks. Roofs shall be without concealed spaces and roof or with concealed spaces complying with Section 602.4.4.3. Roof decks shall be constructed in accordance with Section 2304.11.4.1 or 2304.11.4.2. Other types of decking shall be an alternative that provides equivalent fire resistance and structural properties. Where supported by a wall, roof decks shall be anchored to walls to resist forces determined in accordance with Chapter 16. Such anchors shall consist of steel bolts, lags, screws or approved hardware of sufficient strength to resist prescribed forces.

CHANGE SIGNIFICANCE: Historically, concealed spaces have not been permitted in traditional heavy timber construction. Now, concealed spaces are permitted in traditional Type IV-HT construction, with specific requirements for their protection. New protection options include:

- In fully sprinklered buildings, installing automatic sprinkler protection in the concealed space.
- Filling the space with noncombustible insulation.
- Protecting combustible surfaces with not less than 5/8-inch Type X gypsum board.

Concealed spaces in new Types IV-A, IV-B and IV-C construction are addressed separately. The option of having protected concealed spaces in Type IV-HT buildings is important for encouraging adaptive re-use of existing heavy timber buildings as well as providing for the installation of mechanicals (MEP) in Type IV-HT cross-laminated timber construction.



Concealed spaces must be protected.

Photo courtesy of ATF Fire Research Laboratory

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Concealed Spaces in Type IV-HT



This excerpt is taken from *Significant Changes to the International Building Code®, 2021 Edition.*

The Significant Changes series takes you directly to the most important changes that impact projects.

Key changes are identified then followed by in-depth discussion of how the change affects real-world application. Photos, tables and illustrations are included to further clarify application.

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