



Ceiling Protection at Furred Out Walls

Building Division Interpretations and Procedures

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Background

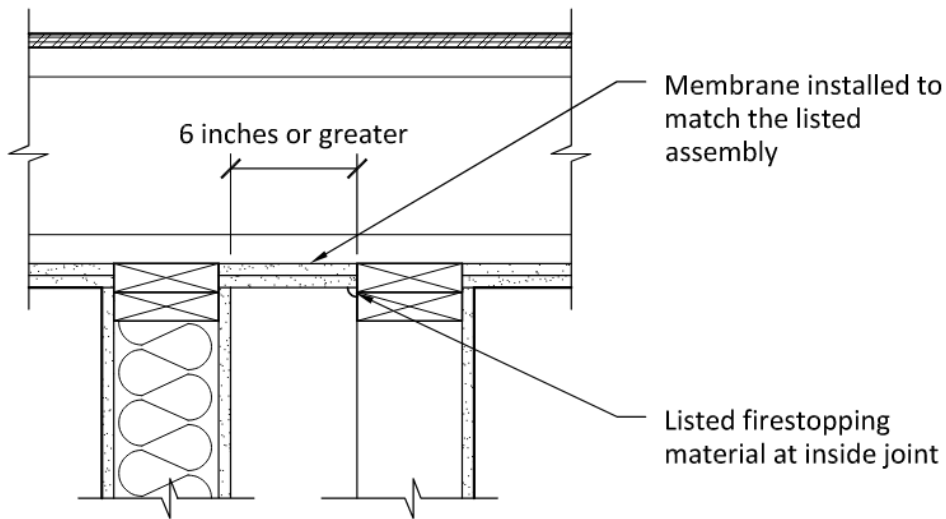
Horizontal assemblies are generally required to be continuous regardless of if they are fire-resistance rated or not per IBC 711. IBC sections 712 and 714 include some provisions for allowing openings and penetrations into horizontal assemblies. Typical construction practices do not install the bottom membrane of the ceiling until after all the walls are framed, which leads to the wall top plates becoming membrane penetrations in the ceiling assembly. Exception 7 of IBC Section 714.5.2 allows double top plates to penetrate the bottom ceiling membrane where they are sheathed with Type X gypsum board on both sides.

In situations where walls are furred out, the wall layout may not permit the installation of the gypsum board on the inside face of the furred wall. It may also be impractical to install the bottom membrane of the ceiling assembly between the furred-out walls. This policy provides some typical solutions to maintain the integrity and rating of the ceiling assembly in these conditions.

Policy

Larger Spaces

Where the space between the walls is six inches or greater, the floor/ceiling space that is between the walls is required to be built per the listed floor/ceiling assembly that is used on the remainder of the space. Where the furred-out wall is not provided with Type X gypsum board on one of its faces, that face must use a listed fire caulk where the wall meets the ceiling membrane.

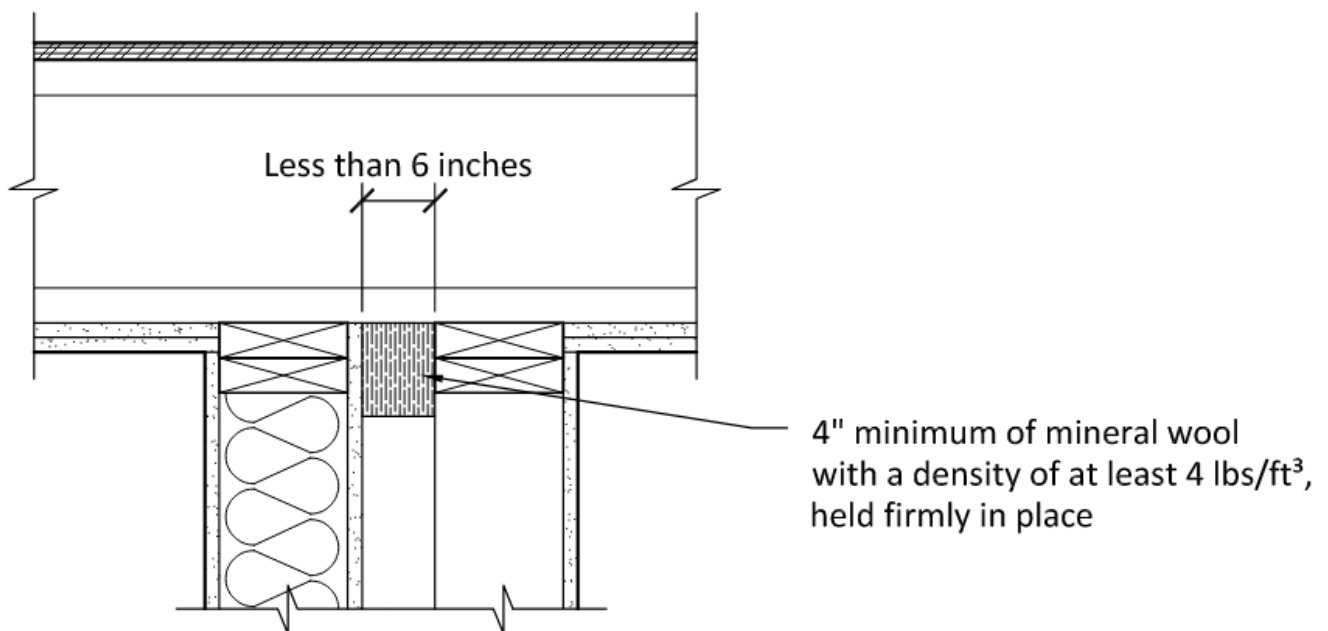


Smaller Spaces

Where the space between the two walls is six inches or less, and/or it is impractical to install the lower membrane of the ceiling assembly, the city approves of the two options below:

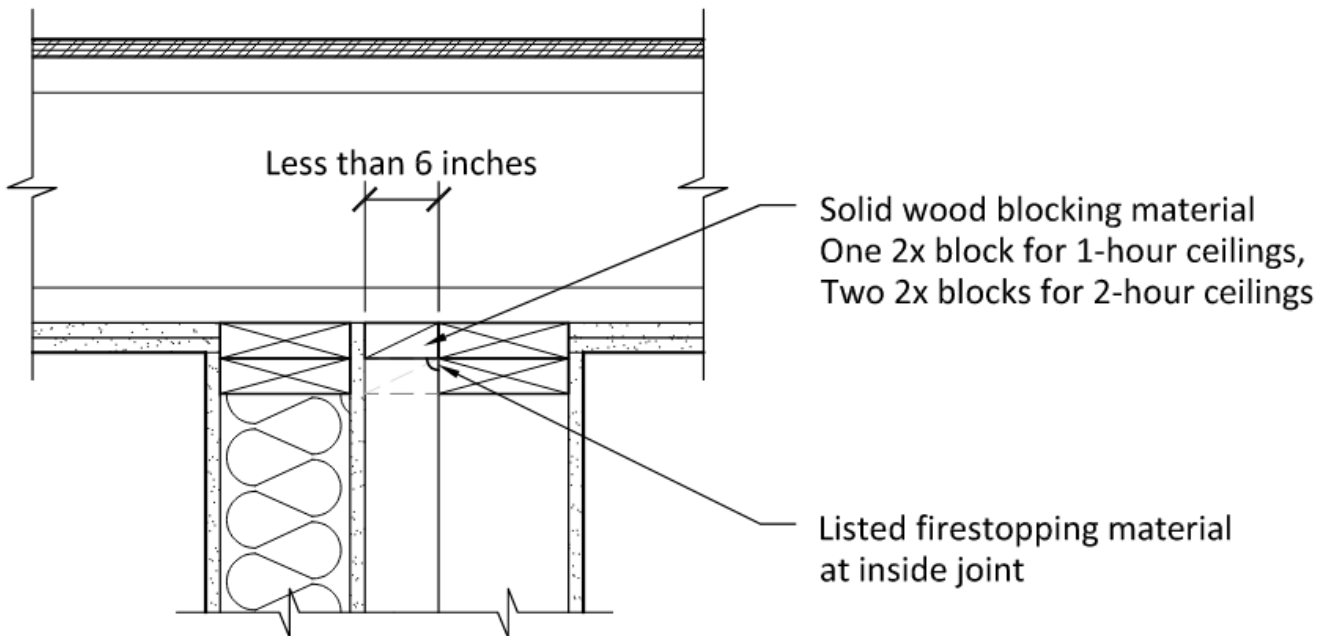
Option 1: Mineral Wool

The space between the walls must be filled at the line of the ceiling bottom membrane with mineral wool batt insulation. The mineral will must be a minimum of four inches in thickness of a minimum four lbs/ft³ density, and installed so as to remain securely in place for the life of the building. All penetrations through the wall top plates must be sealed with an approved firestopping system in accordance with IBC 714.5.1.



Option 2: Solid Blocking

Where the type of construction allows combustible materials, the space between the walls must be filled at the line of the ceiling bottom membrane with solid wood blocking. One-hour rated floor/ceiling assemblies shall have a single 2x material for blocking, while two-hour assemblies require two 2x blocking. The blocking must be installed to remain securely in place. All penetrations through the wall top plates and the blocking must be sealed with an approved firestopping system in accordance with IBC 714.5.1. Where the furred-out wall is not provided with Type X gypsum board on one of its faces, that face must use a listed fire caulk where the wall meets the blocking.



For alternate formats, interpreters, or reasonable modification requests please phone at least 48 hours in advance 425-452-4570 (voice) or email ds_experience@bellevuewa.gov. For complaints regarding modifications, contact the City of Bellevue ADA, Title VI, and Equal Opportunity Officer at ADATitleVI@bellevuewa.gov.

Signature Gregg Schrader

Gregory H. Schrader, PE, SE, Building Official

Date: 07/18/2024

Attachments

Supersedes: _____