Townhouse Unit
Structural Independence Interpretation

Issue Date:	September 23, 2025
Code/Section:	2024 IRC Amended R302.2.6, R302.2.2, R302.2.3, R302.4
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Purpose:
Townhouse units are required to be structurally independent and separated by fire rated walls that extend from the foundation to the roof sheathing. This document describes the interpretations surrounding these requirements.

Interpretations:
1. Common walls may not be designed or detailed as gravity load bearing walls unless the detailing allows for separate bearing walls per townhouse unit. See Figures 2 and 3.
   1.1. A maximum of one foot of tributary width gravity load is acceptable. See Figure 1.

2. Common walls may receive lateral support and resist lateral loads from floors and roofs.
   2.1. Connections to the common wall shall be fire-rated penetration assemblies and are not allowed to continuously interrupt the fire-rated wall assembly.
      2.1.1. Connections where only fasteners penetrate the fire-resistance rated assembly’s membrane behind a flush structural member and without any open annular space between the fastener and the membrane are accepted as providing fire-rating integrity. See Figures 1 and 2. Structural fasteners that extend through gypsum shall be tested for this condition or calculated with a gap per AWC’s TR12.

Rationale and Reference:
Paramount in applying this interpretation is ensuring a continuous fire-resistance rating between townhouse units and that the structural failure of one townhouse unit due to gravity loads during a fire will not immediately destroy the fire-resistance rating of the common wall.

The intent of the amendment is to have the common wall function closer to that of an IBC fire wall, which itself is intended to function like two exterior walls, such that collapse of one of the townhouse units during a fire will be much less likely to cause the collapse of the common wall and the adjacent townhouse unit. Remodels will also be safer for a unit’s neighbors.

The department has traditionally interpreted the penetration of fasteners (screws, bolts, nails) through gypsum (or other material membrane) as not requiring a listing for this penetration, due to the frequent necessity of connecting through for lateral support. This is only the case if the holes in the gypsum/membrane are the same size as the shank and behind a protective member that will take the primary exposure to the fire. A small annular space between the fastener and the membrane may be acceptable where a material that is commonly used in listed penetrations to fill annular space is used. See IRC Section R302.4.1 Exception 1.2.

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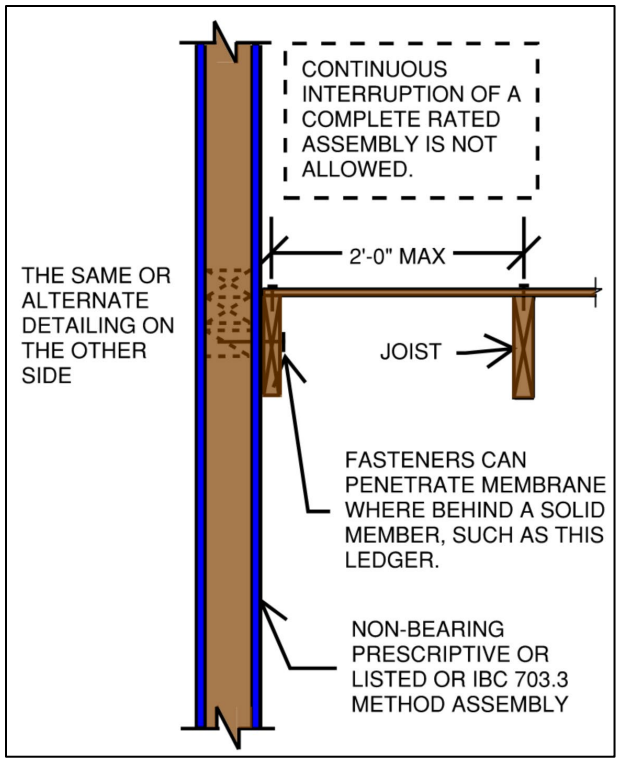


Figure 1

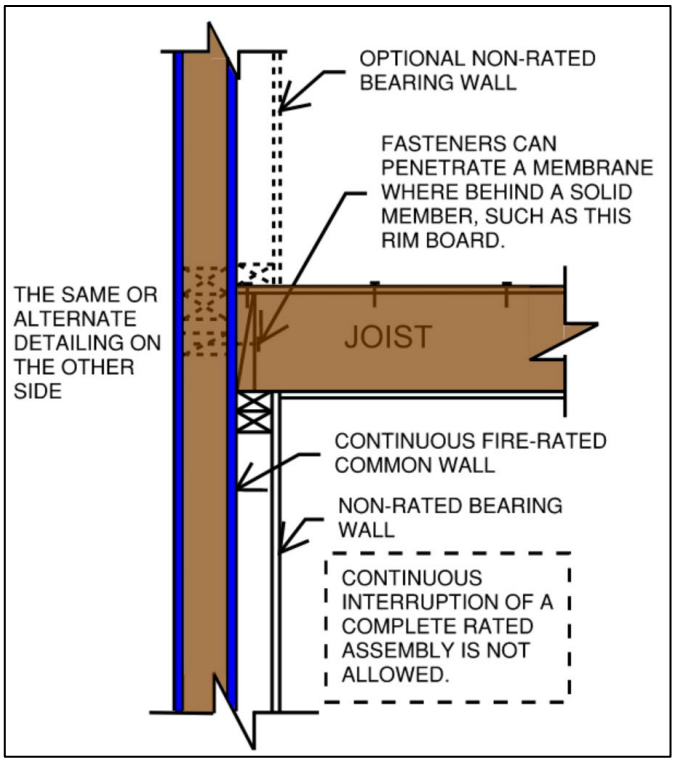
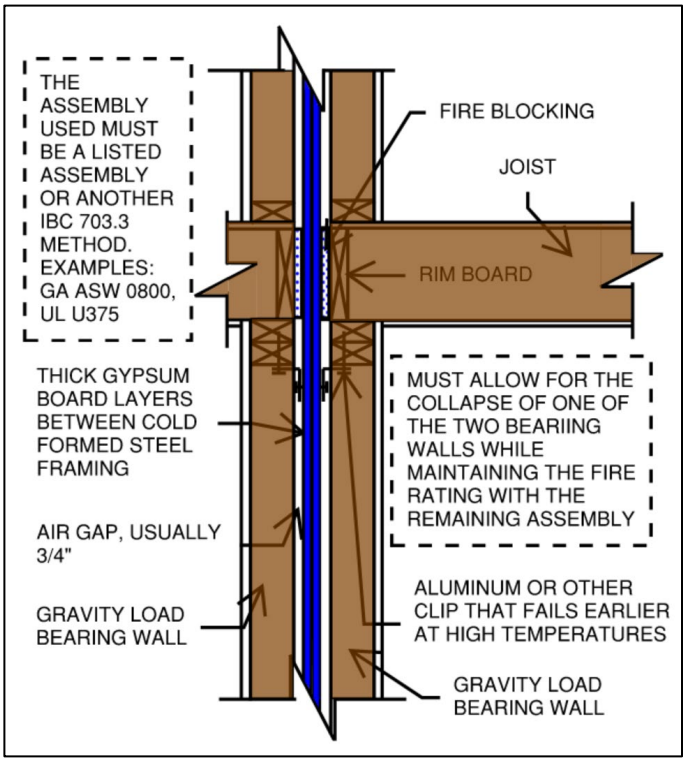


Figure 2

Figure 3 →



Examples of acceptable common wall construction at floor intersections – Wood construction is pictured, but similar concepts work for other materials.