

**CITY & COUNTY OF DENVER  
COMMUNITY PLANNING & DEVELOPMENT  
BUILDING PERMIT POLICY**

**Subject: EXTENDING STORIES IN IRC TOWNHOUSES**

**Approved: Scott V. Prisco, AIA, Building Official**

**Number: IRC R302.2**

**Effective Date: January 16, 2018**

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**Reference: 2015 International Residential Code (IRC) R302.2**

**Scope:**

This policy applies to IRC townhouses and establishes the provisions for exterior wall opening limitations, fire-resistance rating of exterior walls and soffit protection of story/stories extending beyond the exterior wall of the story below. This policy is based on the exterior wall provisions under IRC R302.1, with each individual townhouse considered to be a dwelling. See policy number IRC R302.1 for additional exterior wall requirements.

**Definitions:**

**IMAGINARY LINE.** A line extending from an end of the common wall separating townhouses to a lot line, that is used for the determination of *fire separation distance*.

**EXTENDING STORY.** A story that extends horizontally beyond the exterior wall of the story below.

**OPENINGS IN EXTERIOR FACING-WALL.** The area beneath the exterior wall of an *extending story* and openings in the exterior wall of an *extending story*.

**FIRE SEPARATION DISTANCE.** The distance measured from the *extending story* facing-wall to the *imaginary line*, measured at right angles from the face of the wall.

**Policy:**

The fire-resistance rating of the extending story facing-wall and the *openings in exterior facing-wall* shall satisfy one of the conditions defined by Case 1, Case 2, or Case 3, below. Where the area under the extending story is used for a drive aisle or parking, the soffit under the extending story and its supporting structure shall be protected as required by IRC Section R302.6 for dwelling-garage separation. Structure supporting an *extending story* that continues beyond the *extending story* shall be protected as required by IRC Section R302.6 for dwelling-garage separation; in addition, bearing elements shall be protected per IRC Section R302.1 as required for exterior walls.

Case 1. Where *fire separation distance* is greater than 0 feet and less than 3 feet, a fire-resistance rated one-hour wall assembly tested in accordance with ASTM E 119 or UL 263 for exposure from both sides, in the plane of and below the facing-walls, shall extend down to a foundation for the full length of the *extending story*. *Openings in exterior facing-wall* are not allowed.

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Case 2. At *fire separation distance* greater than or equal to 3 feet and less than 5 feet:

Where fire sprinklers are not provided, the facing-wall shall be a fire-resistance rated one-hour wall assembly tested in accordance with ASTM E 119 or UL 263 for exposure from both sides. The total area of *openings in exterior facing-wall* shall be 25% or less of the exterior wall area. The area of the common wall required by IRC Section R302.2 may be included in the exterior wall area.

Where fire sprinklers are provided, the facing-wall is not required to be fire-resistance rated construction, and *openings in the exterior facing-wall* are unlimited.

Case 3. Where *fire separation distance* is greater than or equal to 5 feet, the facing-wall is not required to be fire-resistance rated construction, and *openings in exterior facing-wall* are unlimited.

**Figures:**

Figures 1 through 4 provide a visual guide to the language described in the Policy section above.

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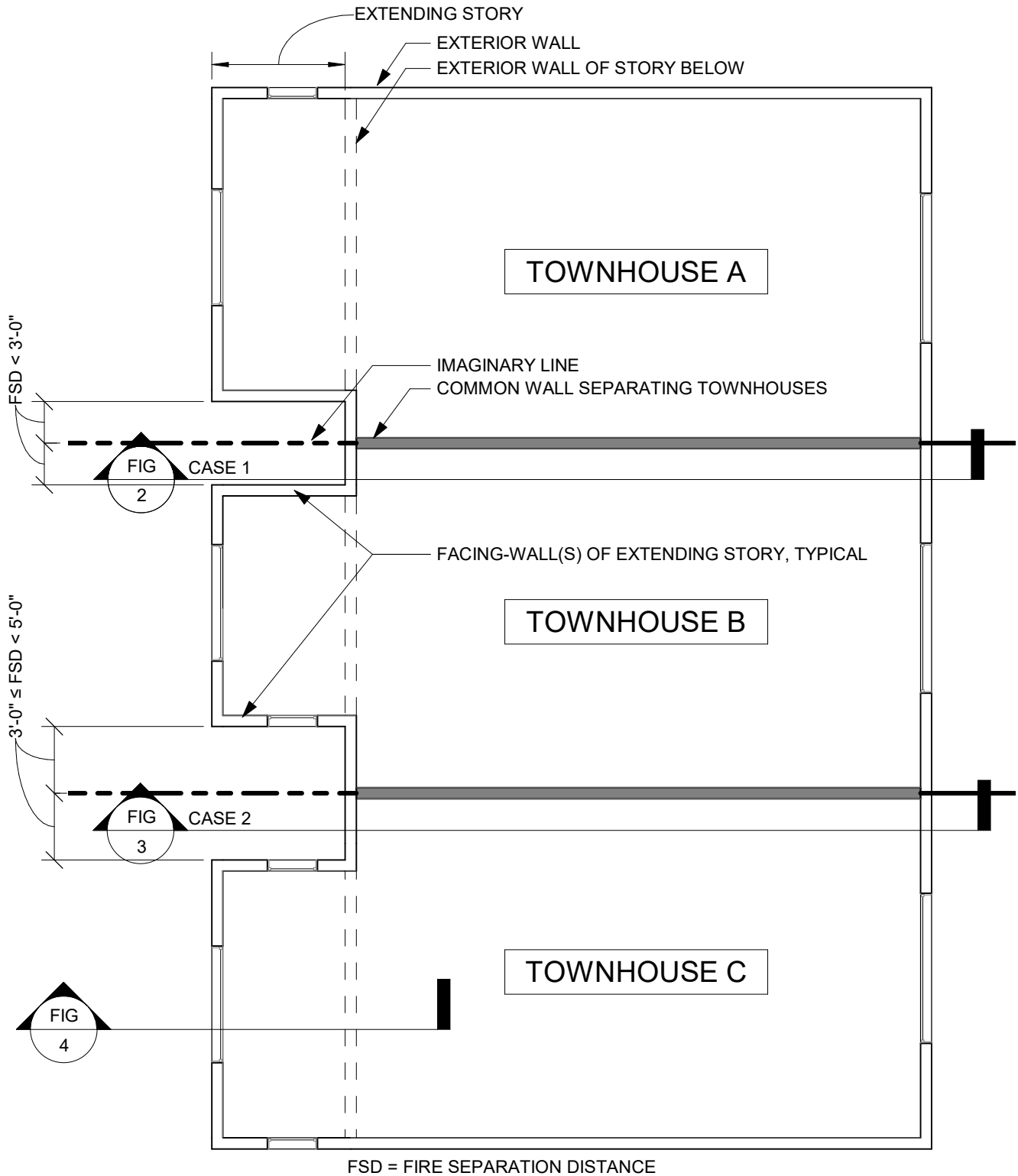
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**FIGURE 1 - UPPER LEVEL PLAN**

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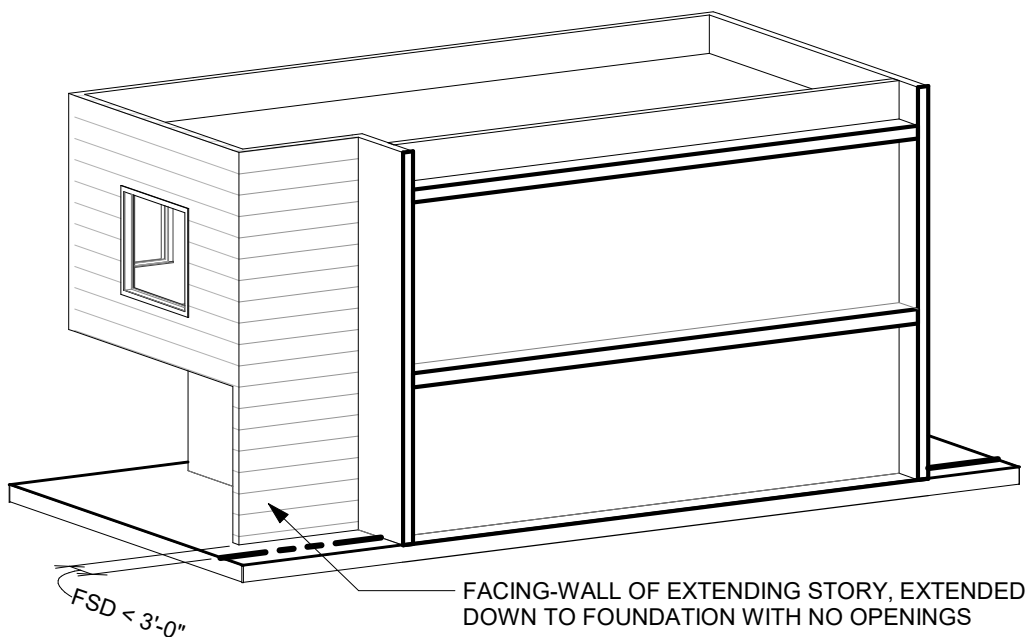
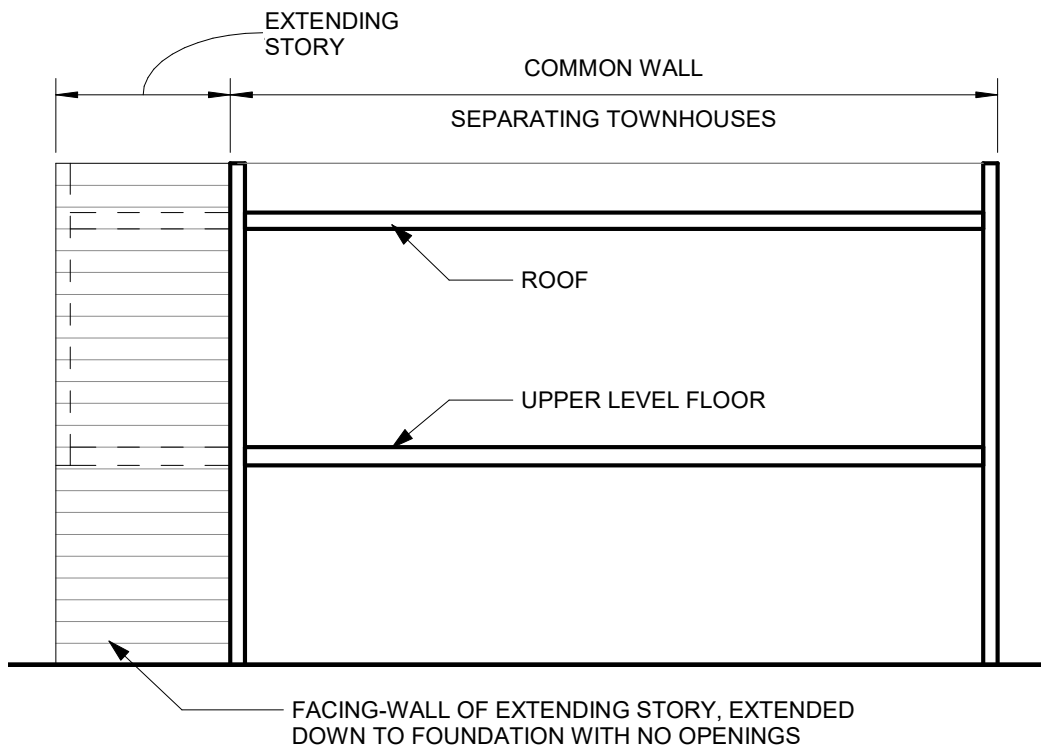
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**FIGURE 2 - CASE 1 SECTION AND ISOMETRIC VIEW**

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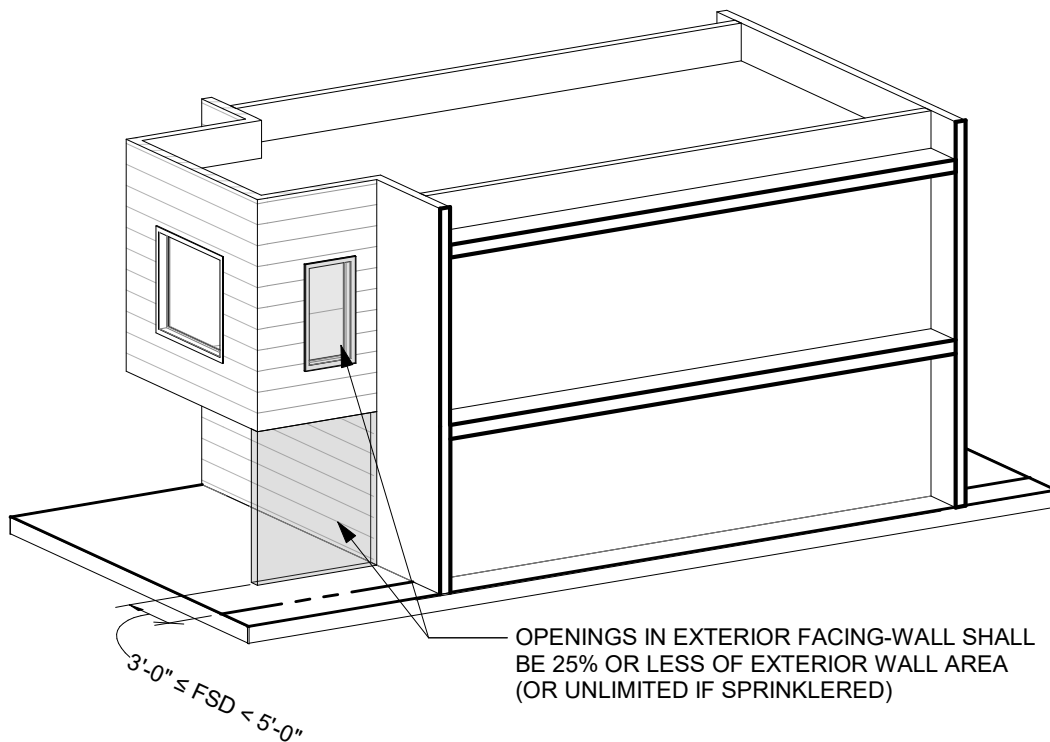
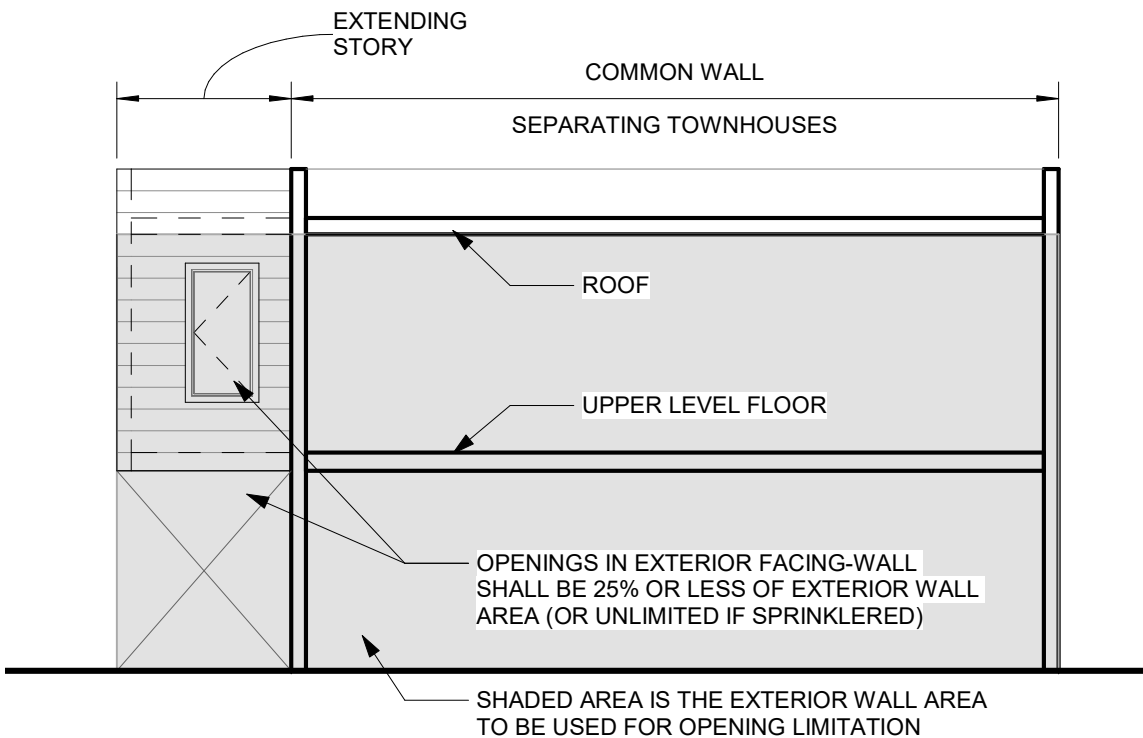
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**FIGURE 3 - CASE 2 SECTION AND ISOMETRIC VIEW**

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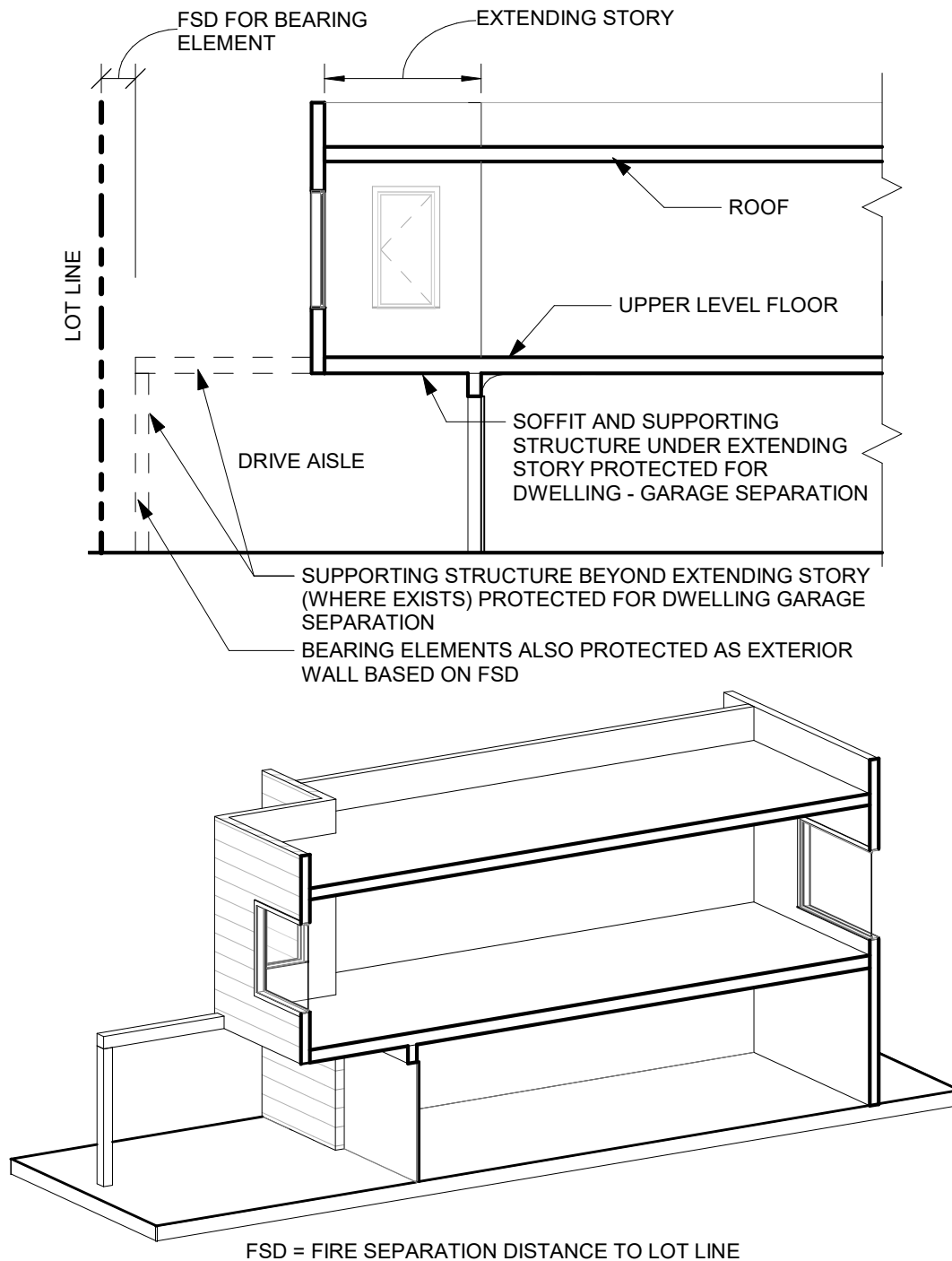
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**FIGURE 4 - EXTENDING STORY SECTION AND ISOMETRIC VIEW**