



TOPIC: One- & Two-Family Walls and Projections- ORSC/3/#4

CODE: Oregon Residential Specialty Code: 2021 Edition

APPROVED: August 8, 2023 [Rebecca Esau] , Director

REFERENCE: Oregon Residential Specialty Code - Section R302

SUBJECT: Requirements for Fire Resistive Rating for Building Walls and Projections for Conversion of One & Two Family Residential Detached Accessory Structures

QUESTION: For conversions of accessory buildings from non-habitable space to habitable space, are there alternative methods to meet fire-resistance rating for building walls and projections other than those specified in Table R302.1 of the Oregon Residential Specialty Code (ORSC)?

RESPONSE: ORSC 302.1 and Table R302.1 require walls less than 3 feet from a property line be fire-resistance rated. ORSC 302.1 and Table R302.1 also require projections less than 3 feet must be fire-resistance rated, and projections less than 2 feet are not allowed. Portland Permitting & Development (PP&D) has determined that, as an alternative to meeting the requirements of ORSC 302.1 and Table R302.1, building walls may be less than 3 feet from a property line, and projections may be less than 2 feet from a property line if the following conditions are met.

General: This code guide applies to existing detached buildings that are being converted from non-habitable to habitable spaces. These buildings must be accessory to one-and two-family dwelling units.

Code Guide Sections **A**, **B**, **C**, and **D** explain how to provide the minimum required fire protection rating for the following elements:

- A. Exterior Walls, including the space between the wall top plate and the roof sheathing;
- B. Roof Sheathing;
- C. Roof Eaves or Projections where walls are located more than 3' from the property line
- D. Walls and Roof Eaves or Projections, where walls are located less than 3' from the property line

Code Guide Section **E** provides information on additional requirements unrelated to fire rating.

A. Exterior Walls: Exterior walls located *less than 3 feet* from the property line must meet the following conditions:

1. Interior Side of Wall: Provide two (2) layers of 5/8" Type X gypsum board;

and

2. Area at Top Plate: Provide one of the following options between the top plate and the underside of the roof sheathing;

- a. Continuation of Gypsum Board: Continue two (2) layers of 5/8" Type X gypsum board at the interior side of the wall to the underside of the roof sheathing with blocking above the top plate sufficient for gypsum board attachment; (See **Figure A.1**)

or

- b. Addition of Blocking: Terminate gypsum board at the top of the top plate. Provide two (2) layers of solid, vertical, nominal 2 x blocking above the top plate. Bevel the 2-x blocking to be tight to the underside of the roof sheathing. Blocking may be existing, new, or a combination of both. (See **Figure A.2**)

3. Openings or Penetrations: No openings or penetrations may be installed in any portion of the wall that is *less than 3 feet* from the property line. Examples of nonpermitted openings and penetrations include but are not necessarily limited to, windows, plumbing, and vents.

B. Roof Sheathing: Roofs located *less than 3 feet* from the property line must meet the following conditions:

1. Existing Sheathing to Remain: Provide one (1) layer of 5/8" Type X gypsum board installed directly beneath the roof decking or sheathing. It must be supported by minimum nominal 2 x ledgers attached to the side of the roof framing members for a minimum distance of 4 feet measured from the wall along the slope of the roof. (See **Figure B.1**)
2. Existing Sheathing to be Replaced: Provide one (1) layer of minimum 1/2" fire retardant treated roof sheathing for a minimum distance of 4 feet measured from the edge of the roof along the slope of the roof. (See **Figure B.2**)
3. Openings or Penetrations: No openings or penetrations may be installed in any portion of the roof that is less than 3 feet from the property line. Examples of openings include but are not necessarily limited to, skylights, plumbing vents, and roof vents.

C. Roof Eaves or Projections: Where there are walls located *3 feet or more* from the property line AND eaves or other projections *located less than 2 feet* from the property line, the eaves or projections must meet the following conditions:

1. Existing Sheathing to Remain: Provide two (2) layers of 5/8" Type X gypsum sheathing on the underside of the soffit. A protective weather barrier may cover this material. (See **Figure C.1**)
2. Existing Sheathing to be Replaced: Provide one (1) layer of minimum 1/2" fire retardant roof sheathing for the depth of the eave, minimum and provide one (1) layer of 5/8" Type X gypsum sheathing on the underside of the soffit. A protective weather barrier may cover the gypsum sheathing at the soffit. (See **Figure C.2**)
3. Openings or Penetrations: No openings, including eave vents, may be installed in the soffit.

D. Walls and Roof Eaves or Projections: When there are walls located *less than 3 feet* from the property line AND eaves or other projections *less than 2 feet* from the property line, the conditions of sections A, B, and C above must be met. (See **Figures D.1 and D.2**)

E. Additional Requirements

1. Built Elements: No built elements, including footings and gutters, may cross the property line.

2. Stormwater Retention: Stormwater must remain and be disposed of onsite. A minimum of 4.5 inches, measured from the outside of the eave or projection, must be provided to accommodate a rain gutter. The 4.5-inch distance requirement does not apply if:
 - a. There is a rake board facing the property line; or

 - b. The roof is sloped in such a way that no drainage occurs along this roof edge.

Alternative proposals not meeting the standards of the code or this code guide may be approved on a case-by-case basis through the administrative appeals process.

CODE GUIDE DETAILS

FIGURE A.1 CONTINUATION OF GYPSUM BOARD

- APPLIES TO WALLS LESS THAN 3 FEET FROM PROPERTY LINE
- EXTEND GYPSUM BOARD TO UNDERSIDE OF ROOF SHEATHING
- NO PLUMBING IN EXTERIOR WALL

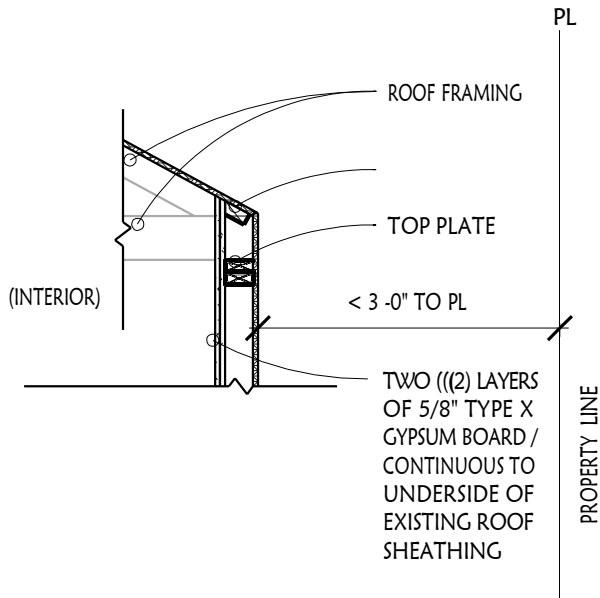
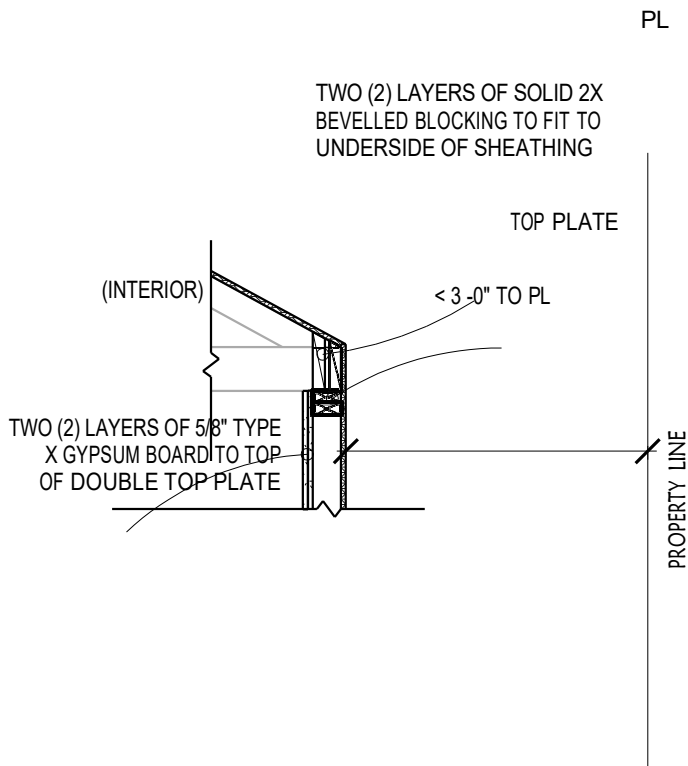


FIGURE A.2 ADDITION OF BLOCKING

- WALLS LESS THAN 3 FEET FROM PROPERTY LINE
- PROVIDE BLOCKING ABOVE TOP PLATE
- NO PLUMBING IN EXTERIOR WALL



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FIGURE B.1 ROOF SHEATHING--EXISTING SHEATHING TO REMAIN OR WHERE NON-FIRE RESISTANT TREATED SHEATHING IS TO BE INSTALLED

- WALLS LESS THAN 3 FEET FROM PROPERTY LINE
- NO OPENINGS OR PENETRATIONS MAY BE INSTALLED IN ANY PORTION OF THE ROOF THAT IS LESS THAN 3 FEET FROM THE PROPERTY LINE
- PROVIDE ONE (1) LAYER OF 5/8" TYPE X GYPSUM BOARD AT UNDERSIDE OF EXISTING ROOF SHEATHING
- ROOF FRAMING PARALLEL TO WALL (SIMILAR WHERE PERPENDICULAR)
- NO EAVES
- SEE ALSO DETAILS A.1 / A.2 FOR EXTERIOR WALL DRYWALL CONTINUITY AND BLOCKING
- SEE ALSO DETAILS D.1/D.2 FOR ROOF EAVES

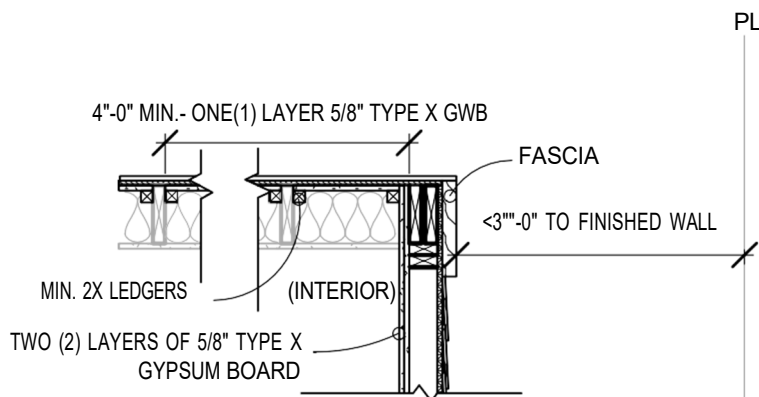
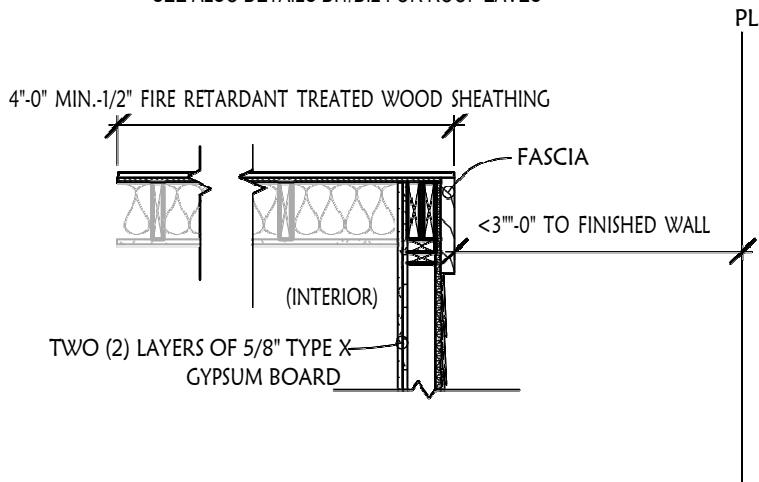


FIGURE B.2 ROOF SHEATHING--EXISTING SHEATHING TO BE REPLACED

- WALLS LESS THAN 3 FEET FROM PROPERTY LINE
- NO OPENINGS OR PENETRATIONS MAY BE INSTALLED IN ANY PORTION OF THE ROOF THAT IS LESS THAN 3 FEET FROM THE PROPERTY LINE
- REPLACE EXISTING ROOF SHEATHING WITH FIRE RETARDANT-TREATED WOOD (FRTW) SHEATHING
- ROOF FRAMING PARALLEL TO WALL (SIMILAR WHERE PERPENDICULAR)
- NO EAVES
- SEE ALSO DETAILS A.1 / A.2 FOR EXTERIOR WALL DRYWALL CONTINUITY AND BLOCKING
- SEE ALSO DETAILS D.1/D.2 FOR ROOF EAVES



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FIGURE C.1 ROOF EAVES OR OTHER PROJECTIONS - EXISTING SHEATHING TO REMAIN OR WHERE NON-FIRE RESISTANT TREATED SHEATHING IS TO BE INSTALLED

- ROOF EAVES OR OTHER PROJECTIONS LOCATED LESS THAN 2 FEET FROM PROPERTY LINE
- WALLS LOCATED 3 FEET OR MORE FROM PROPERTY LINE
- PROVIDE TWO (2) LAYERS OF 5/8" TYPE X GYPSUM BOARD AT SOFFIT
- ROOF FRAMING LOCATED PERPENDICULAR TO WALL (SIMILAR WHERE PARALLEL)
- NO OPENINGS, INCLUDING EAVE VENTS, MAY BE INSTALLED IN THE SOFFIT
- SEE ALSO, DETAILS A.1 / A.2 FOR EXTERIOR WALL DRYWALL CONTINUITY AND BLOCKING

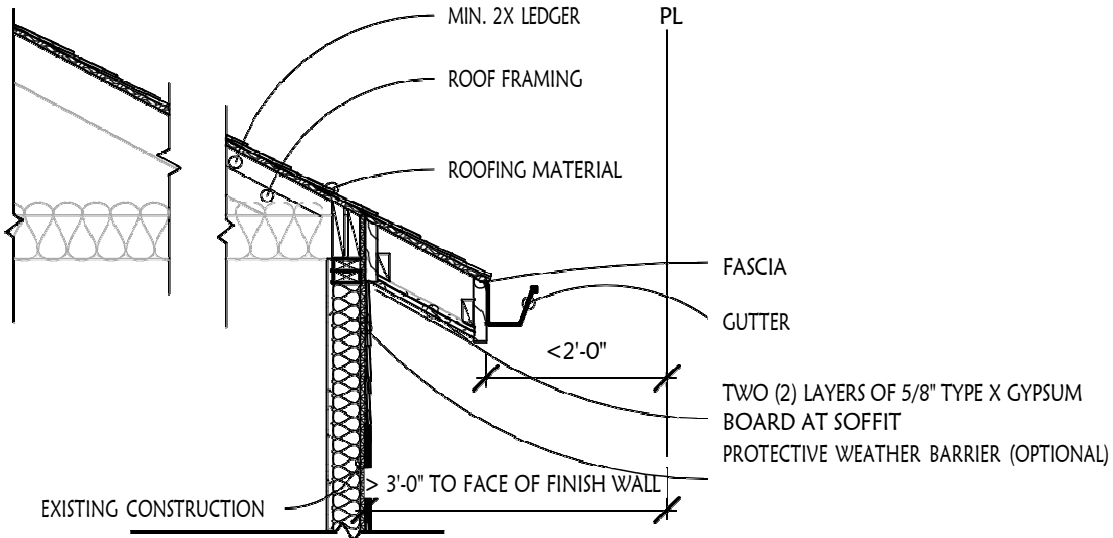
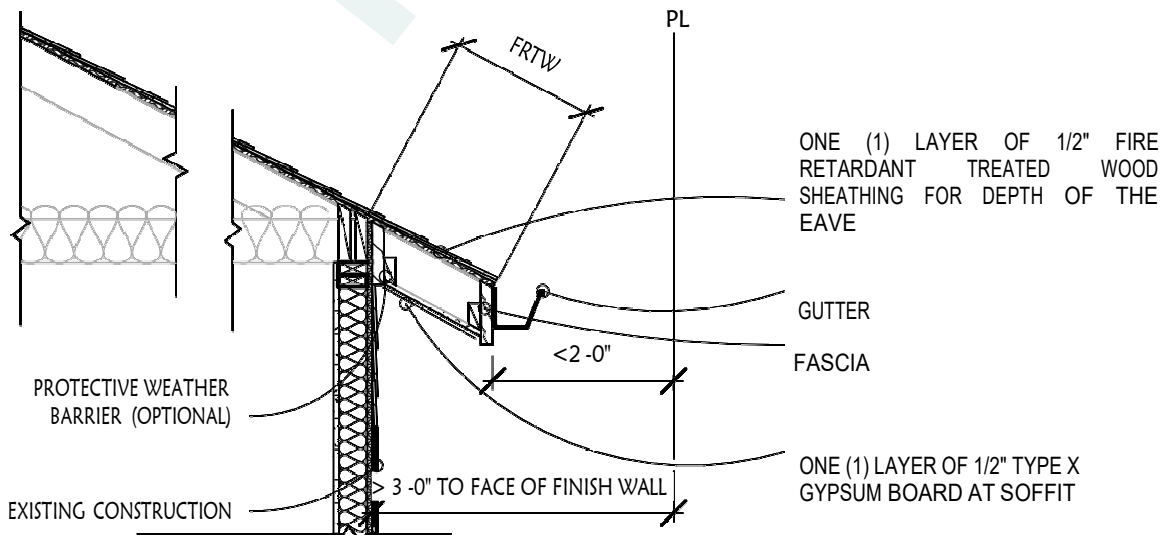


FIGURE C.2 ROOF EAVES OR OTHER PROJECTIONS - EXISTING SHEATHING TO BE REPLACED

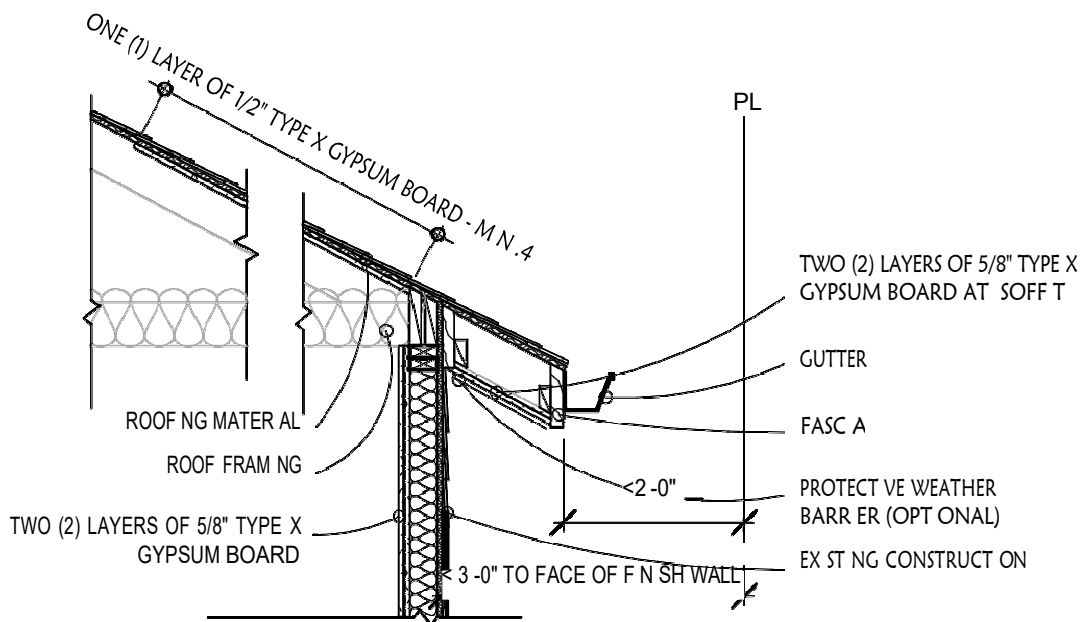
- ROOF EAVES OR OTHER ROOF PROJECTIONS LOCATED LESS THAN 2 FEET FROM PROPERTY LINE
- WALLS LOCATED MORE THAN 3 FEET FROM PROPERTY LINE
- REPLACE EXISTING ROOF SHEATHING WITH FIRE RETARDANT TREATED WOOD (FRTW) SHEATHING
- ROOF FRAMING PERPENDICULAR TO WALL (SIMILAR WHERE PARALLEL)
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FIGURE D.1 ROOF EAVES OR OTHER PROJECTIONS EXISTING SHEATHING TO REMAIN OR WHERE NON-FIRE-RESISTANT TREATED SHEATHING IS TO BE INSTALLED

- ROOF EAVES OR OTHER PROJECTIONS LOCATED LESS THAN 2 FEET FROM PROPERTY LINE
- WALLS LOCATED LESS THAN 3 FEET FROM PROPERTY LINE
- PROVIDE LAYER OF 5/8" TYPE X GYPSUM BOARD AT UNDERSIDE OF EXISTING ROOF SHEATHING
- ROOF FRAMING PERPENDICULAR TO WALL (SIMILAR WHERE PARALLEL)
- NO OPENINGS, INCLUDING EAVE VENTS, MAY BE INSTALLED IN THE SOFFIT
- SEE ALSO, DETAILS A.1 / A.2 FOR EXTERIOR WALL DRYWALL CONTINUITY AND BLOCKING
- SEE ALSO, DETAILS B.1 / B.2 FOR ROOF SHEATHING



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FIGURE D.2 ROOF EAVES OR OTHER PROJECTIONS EXISTING SHEATHING TO BE REPLACED

- ROOF EAVES OR OTHER PROJECTIONS LOCATED LESS THAN 2 FEET FROM PROPERTY LINE
- WALLS LOCATED LESS THAN 3 FEET FROM PROPERTY LINE
- REPLACE EXISTING SHEATHING WITH FIRE RETARDANT TREATED WOOD (FRTW) SHEATHING
- ROOF FRAMING PERPENDICULAR TO WALL (SIMILAR WHERE PARALLEL)
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