

**Exterior Brick Masonry Veneer  
Supported by Metal Plate Connected  
Wood Trusses (MPCWT)**

Installation Guide

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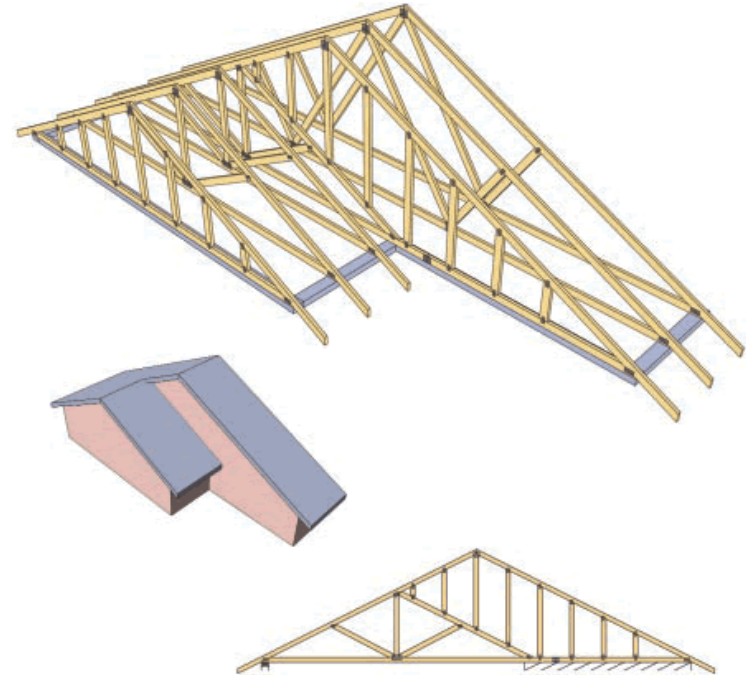
# Introduction

- The *IRC 2015* includes no prescriptive provisions to specifically address an exterior brick veneer wall supported directly by MPCWT
- Code compliance can be accomplished by both individual designs and by adhering to the guidance in this presentation



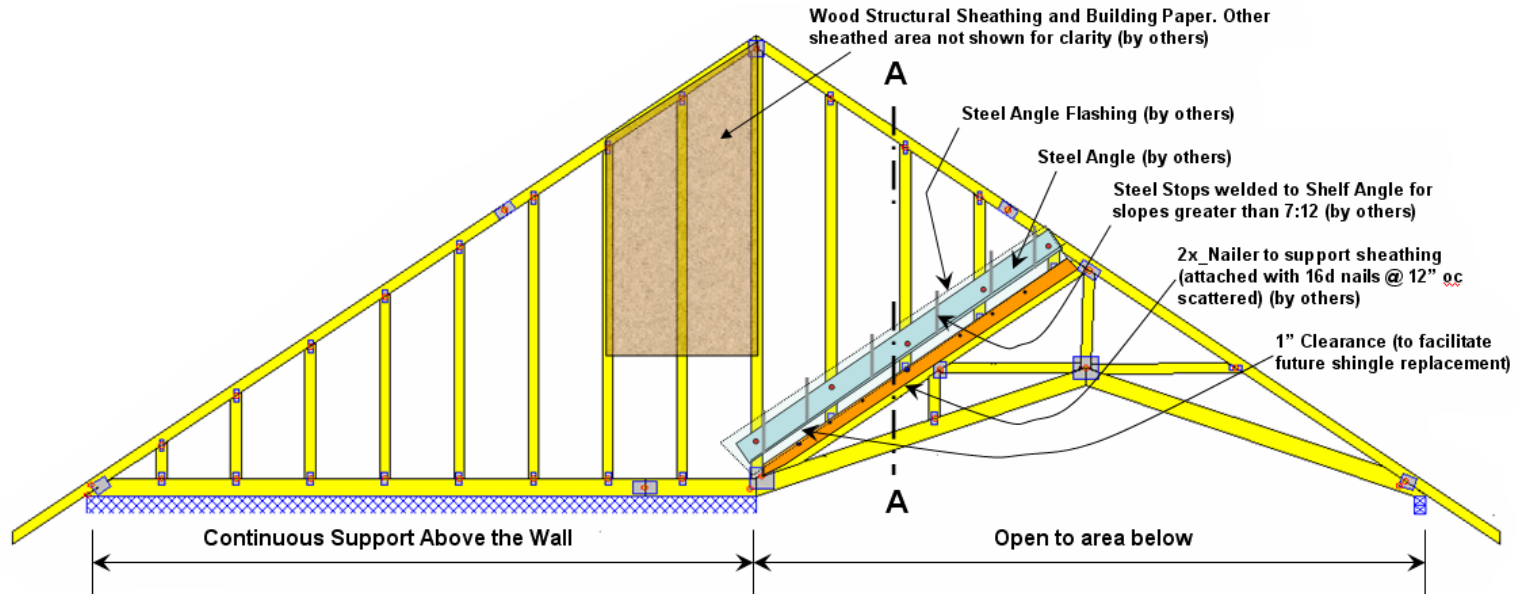
# Introduction

- This presentation specifically focuses on masonry veneer supported by MPCWT on the gable end at the transition from a wider section of a building to a narrower section
- However, the concepts shown can be applied to many different situations utilizing trusses



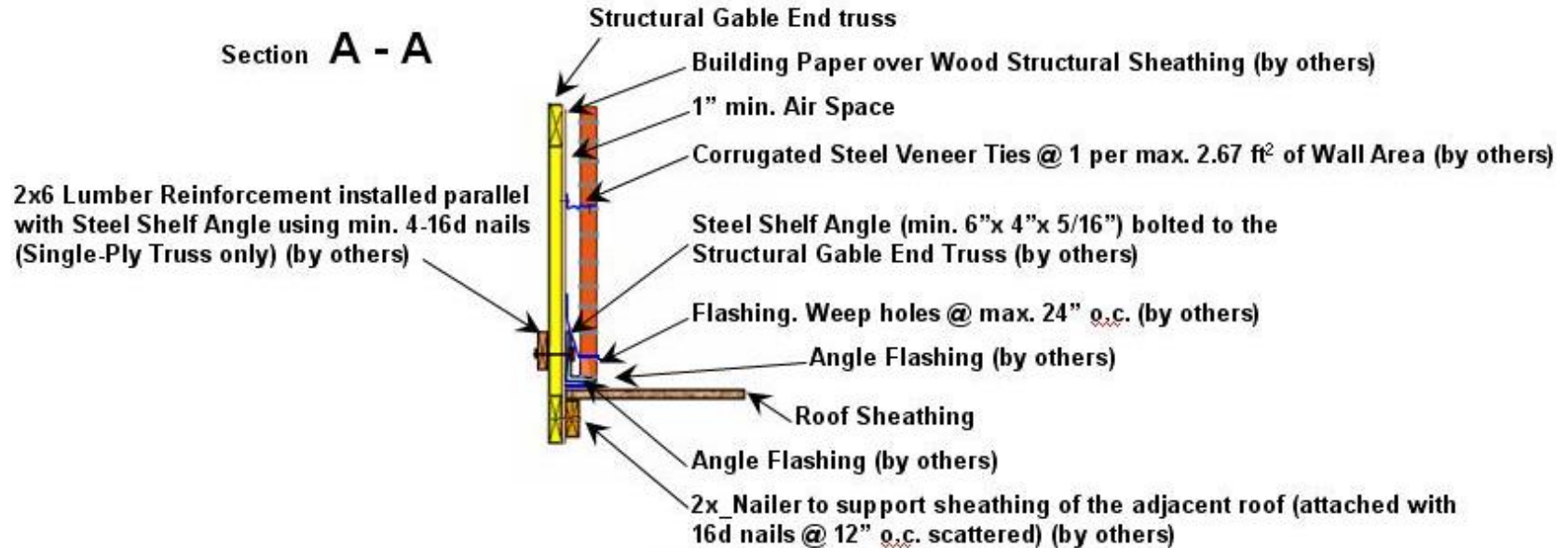
# Step 1: Review Detail

- The detail below may be referred to by the building designer to achieve a code-conforming steel lintel connection



# Step 1: Review Detail

- Section view of previous slide

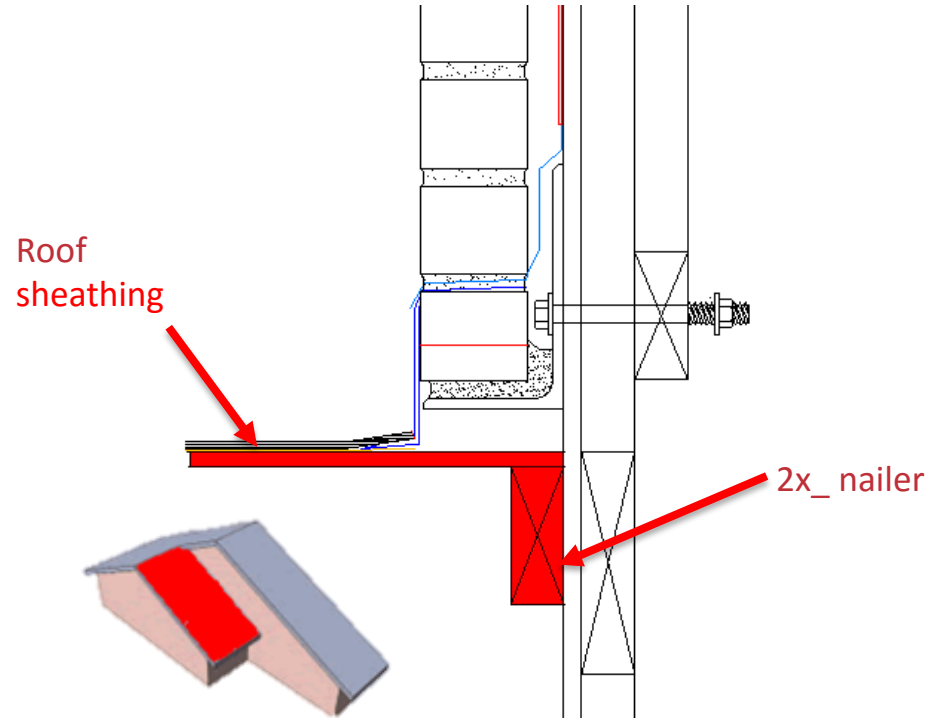


## Step 2: Review Materials

- Steel Angle - minimum 6" x 4" x  $\frac{5}{16}$ ", full length of supporting roof section
  - Stops welded by others (if required)
- Flashing
- 2x\_ nailer to support sheathing of the adjacent roof
- 2x6 lumber reinforcement
- 16d nails
- Veneer ties
- Masonry
- Wood Structural Sheathing
- Other materials as specified by the Building Designer

## Step 3: Attach Nailer and Roof Sheathing

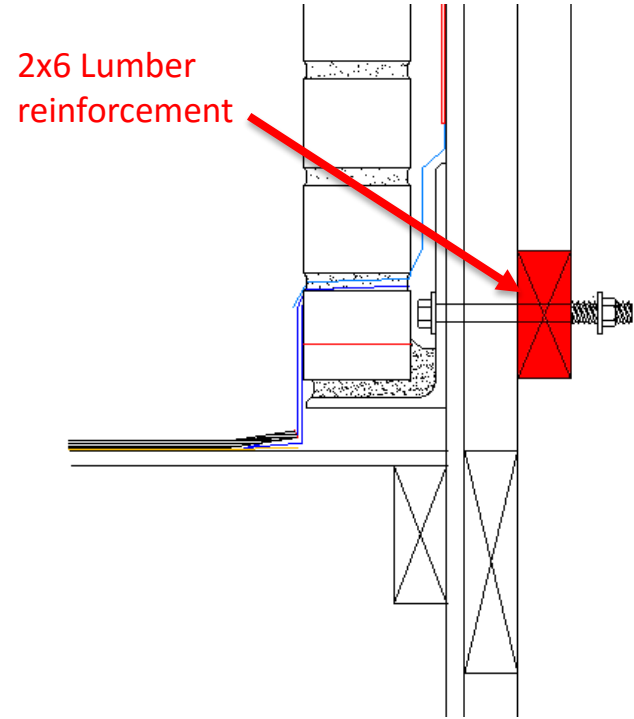
- Attach 2x\_ nailer to support sheathing of the adjacent roof with 16d nails @ 12" o.c. scattered
- Apply roof sheathing to nailer and adjacent roof trusses





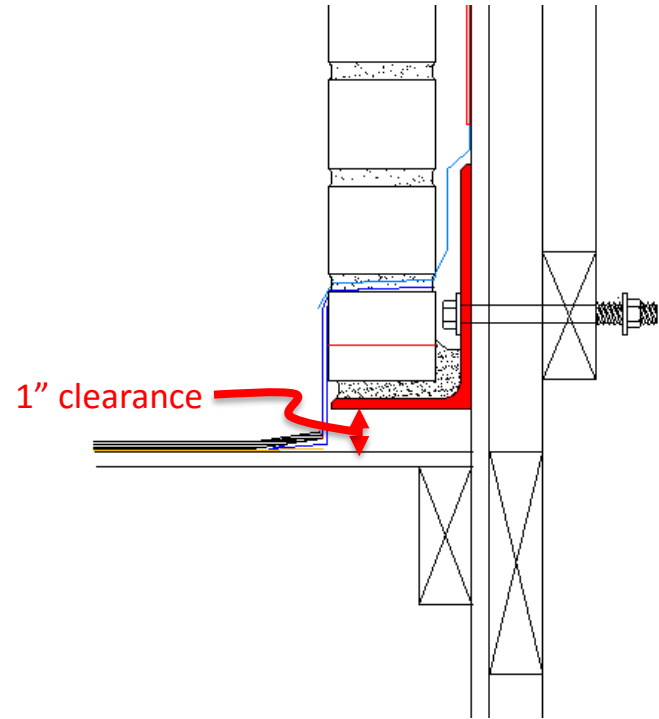
## Step 4: Lumber Reinforcement

- Attach 2x6 lumber reinforcement parallel with steel shelf angle.



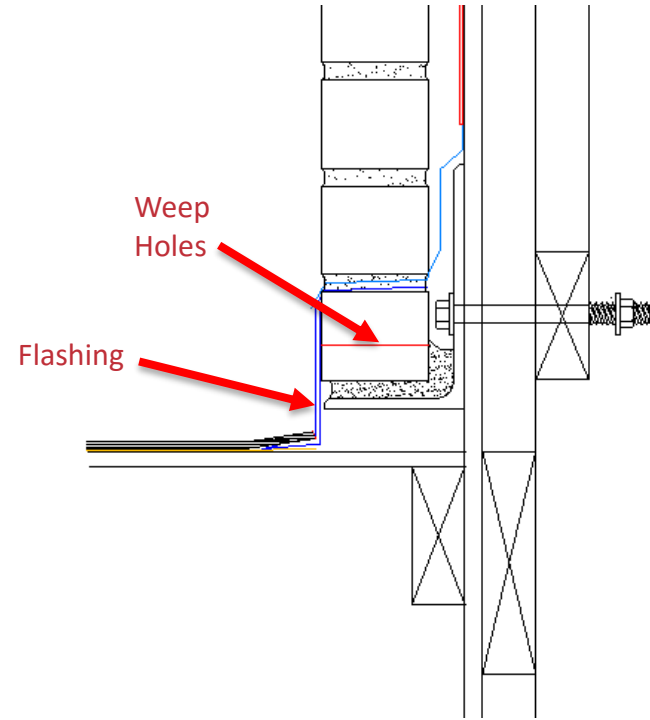
## Step 5: Install Angle

- Attach steel angle as specified by the building designer
- Leave 1" minimum clearance between the angle and lower roof deck to facilitate further roofing replacement and/or re-roofing



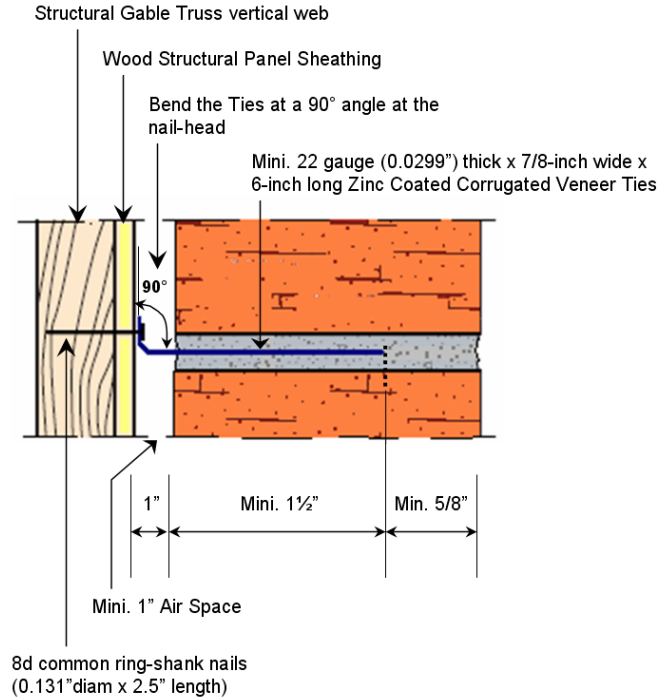
## Step 6: Flashing and Weep Holes

- Apply counter flashing, step flashing, and weep holes in the brick veneer wythe directly above the steel angle
- Weep holes shall be spaced a maximum of 33" o.c.



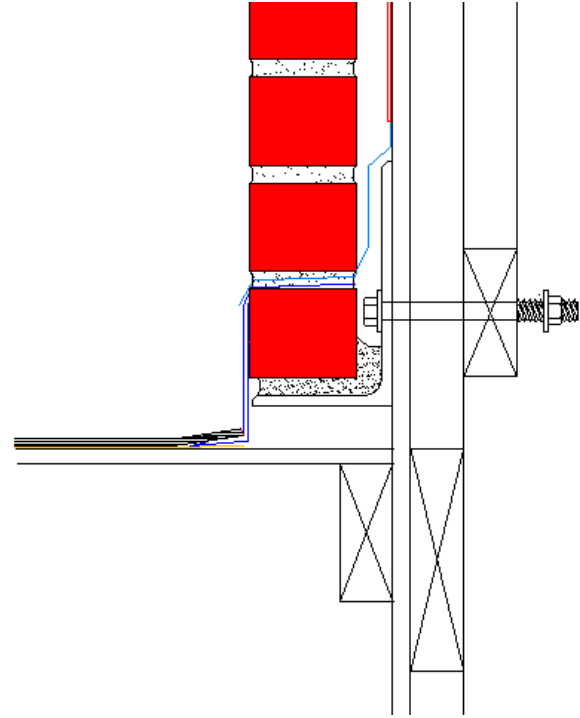
# Step 7: Veneer Ties

- Attach veneer ties at maximum 32" o.c. horizontally and 24" o.c. vertically to support a maximum of 2.67 ft<sup>2</sup> of brick veneer wall area



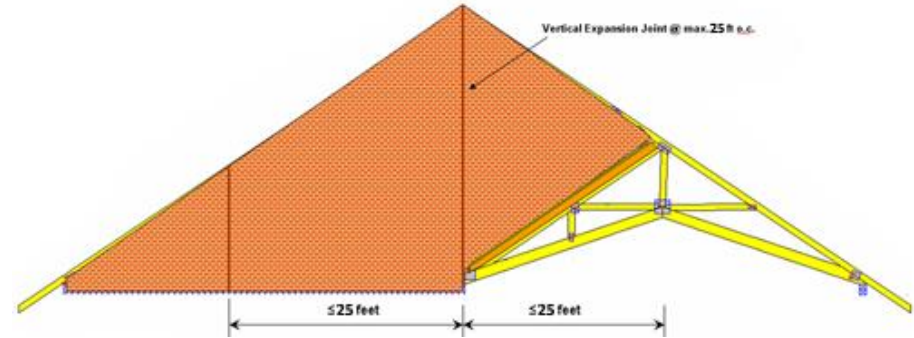
## Step 8: Masonry Veneer

- Install masonry veneer as shown



# Step 9: Vertical Expansion Joints

- Add vertical expansion joints at a maximum of 25' o.c.
- Expansion joints are typically sized similar to a mortar joint, usually between  $\frac{3}{8}$ " and  $\frac{1}{2}$ "



# Step 9: Vertical Expansion Joints

- Vertical expansion joints should be considered with:
  - Corners
  - Offsets
  - Setbacks
  - Wall intersections
  - Changes in the wall height
  - Wall backing system changes
  - Brick veneer support changes
  - Wall function or climatic exposure changes

