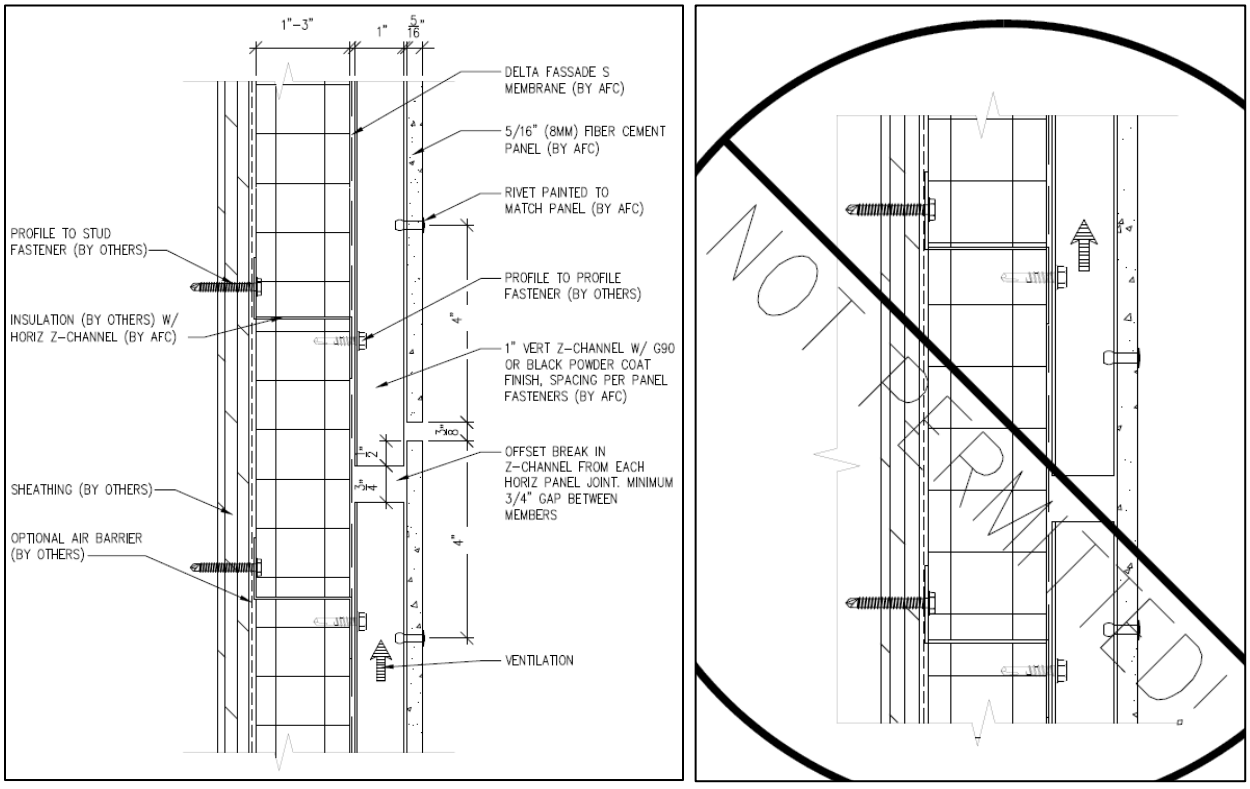
TECHNICAL BULLETIN: 6/20/2024

Attachment System Installation

When installing the attachment system, AFC's installation guidelines should be followed. This technical bulletin highlights key aspects of the attachment system sections shown on page 4 and 5 of the installation guidelines.

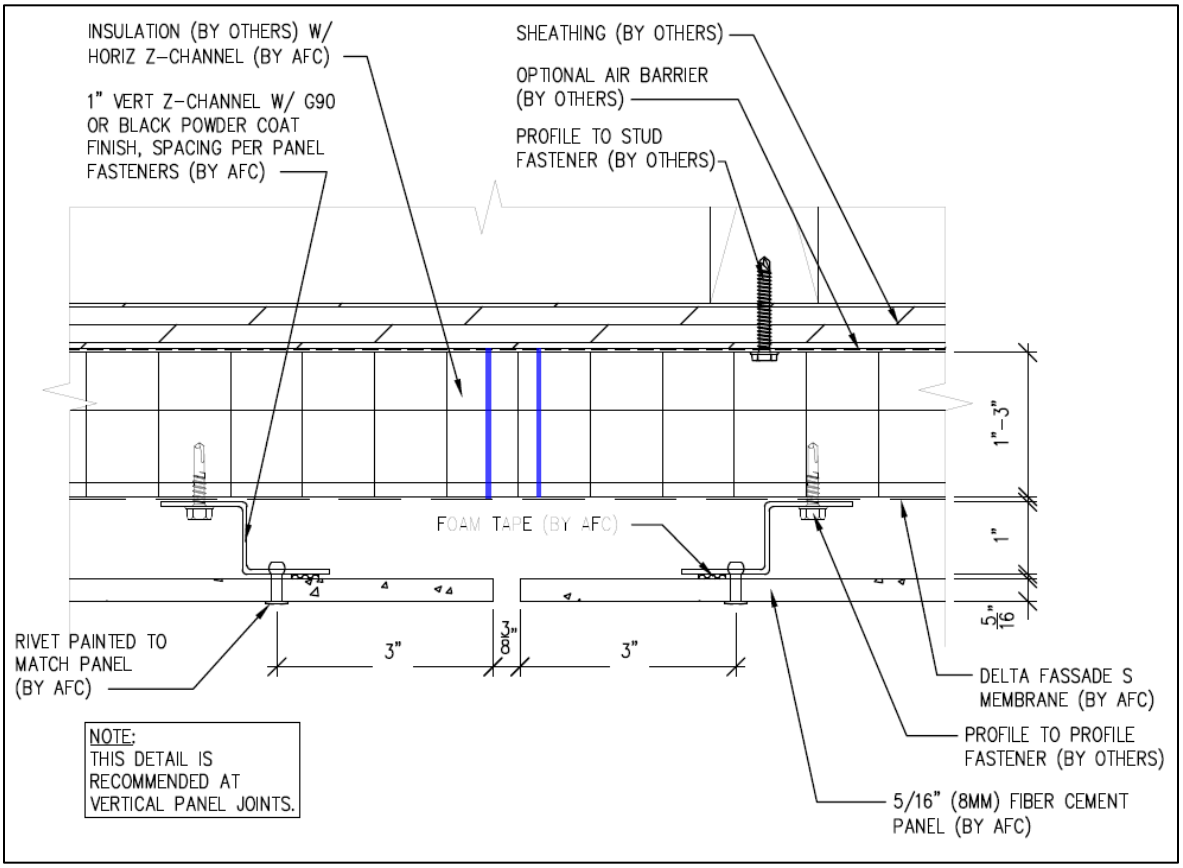
1. Breaks in Vertical Profiles

Profiles should only be a maximum length of 10'. The ¾" break in this profile must coincide with a horizontal joint in the panels like shown below. The profiles expand and contract with changes in temperature. If installed like the right side of the image, this will put the panel into tension when the temperature decreases and compression when the temperature increases. In both scenarios, this can cause panels to crack. In the left image, you will see the vertical Z-Profile for the top panel ends below the top edge of the bottom panels top edge. This allows the face of the panels to lay on one flat surface. When installing the vertical profiles, they may be shimmed off the horizontal Z-Profile as needed to create an even flatter panel surface.



2. Breaks in Horizontal Profiles

The image above shows how a panel break should look for the vertical profile directly behind the panel. If the attachment system is a two layer system like the image below, which it often is when exterior insulation is present, the same principle must be met with the horizontal profile.



Maximum 10' length and each break must coincide with a vertical panel joint. When needed, the break in the horizontal Z-Profile would be where the blue lines are shown in the image above. The break does not need to be centered exactly on the vertical joint. The vertical Z-Profiles shown in the image above just need to be attached to two different horizontal Z-Profiles.

3. Cantilevering Vertical Profiles

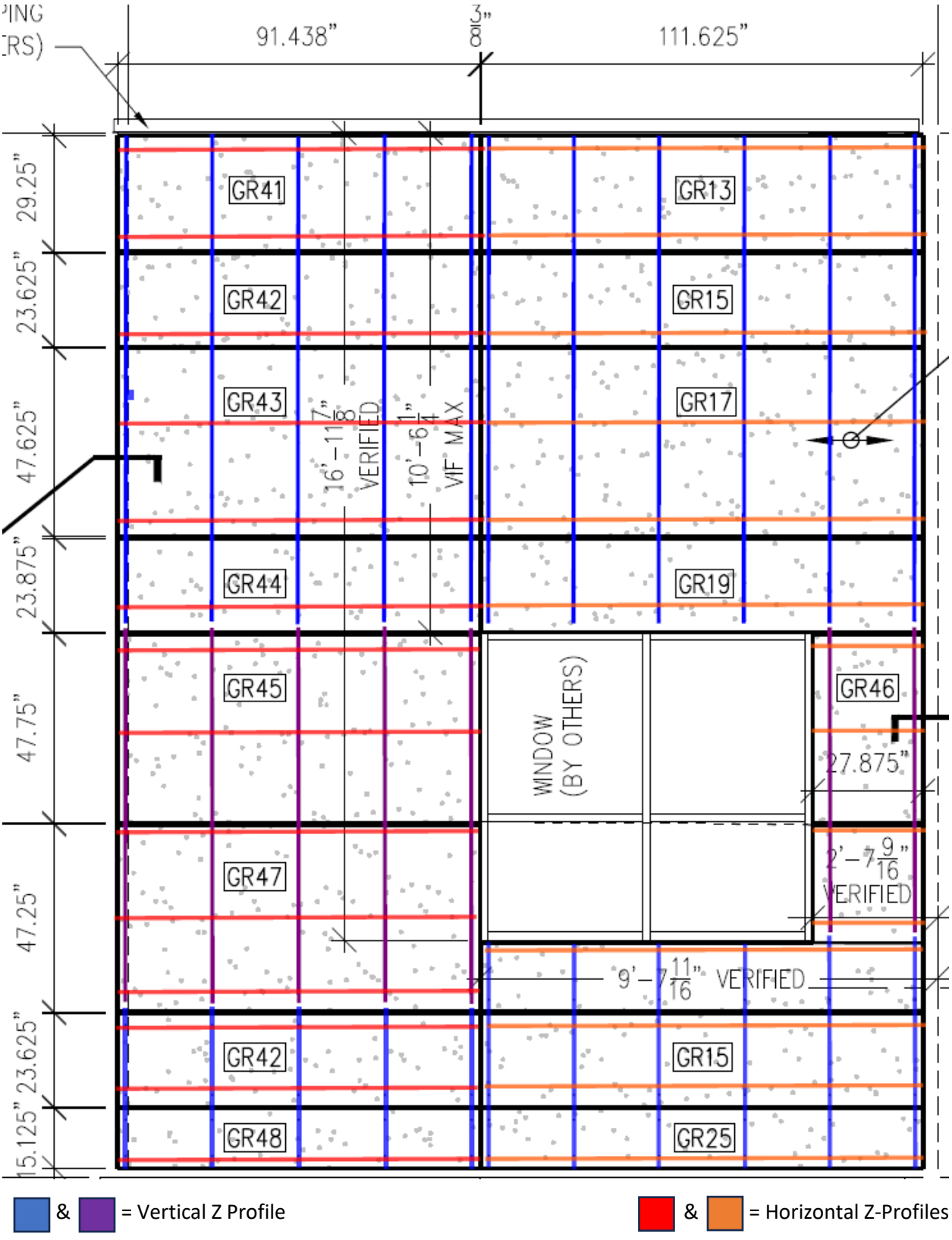
In a two layer system, the vertical Z-profiles will cantilever over the horizontal Z-profiles near breaks in the Z-Profile. The Z-Profile should not exceed a cantilever distance of 6 inches. Typically the horizontal Z-Profiles that break up the insulation are spaced out at 24" on center up the wall. To prevent large cantilever distances, the horizontal Z-Profiles must only be spaced a maximum distance of 12" where breaks in the vertical Z-Profile are anticipated.

A vertical and horizontal Z-Profile layout is displayed on the image below to show where breaks in the profile should be placed according to the layout as well as to avoid large cantilever distances.

**Using Steel? Minimum thickness = 16-Gauge. Fastening leg must be at least 1.25" wide (1.5" TYP.)*

**Using Aluminum? Minimum thickness = 2mm. (TYP. 6063-T6 or stronger)*

** AFC offers Steel and Aluminum vertical Z-Profiles.*



& = Vertical Z Profile

& = Horizontal Z-Profiles