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Question Regarding Application of Transition Strips

QUESTION

I have a project that is a masonry block wall - 2" closed cell polyurethane insulation - 2" air cavity and 4" face brick and pre-cast. The anchors for the pre-cast base pieces are attached to the masonry block. The anchors are screwed to the masonry block. The screws only penetrate the outer face shell.

Do I need to put a transition strip at each anchor location? The masonry block has wire ties coming out at the mortar joints and no special treatment is required of them.

ANSWER

Without seeing the exact detail, it is hard to say definitely one way or the other but we will give some information based on standard industry practices. The principal here is to ensure that the air barrier is continuous. The first question is what material is designated as the air barrier (plane of air tightness)? If it is the closed cell spray polyurethane foam (SPF) at a two inch thickness, that material would meet the requirements for air barrier material. You should still check the ABAA website to see if that specific material is ABAA-listed. Your specific question is focused on the anchors for the pre-cast.

The second question then is whether the two inch SPF will be installed after the anchors in place and if the anchors clean, dry and free of grease and oil? If the SPF will cover the base plate for the anchor and the screws that attach the base plate to the CMU and is clean dry and free of grease and oil, there is no need to install a transition strip under each fastener. If the SPF is not intended to cover the anchor base plate completely or the anchor is not clean dry and free of grease or oil, then you would need to install a transition membrane.

Transition membranes are required where the primary material is not continuous or where there is expected to be movement in the substrate. Putting them behind anchors where the primary air barrier material will completely cover the anchor does not add any value. The main air barrier material can be continuous and as the substrate (CMU) does not change, there is not expected to be a difference in movement of the substrate due to temperature or moisture variations over time.

Consult with the primary air barrier manufacturer whose material is being installed for more information.