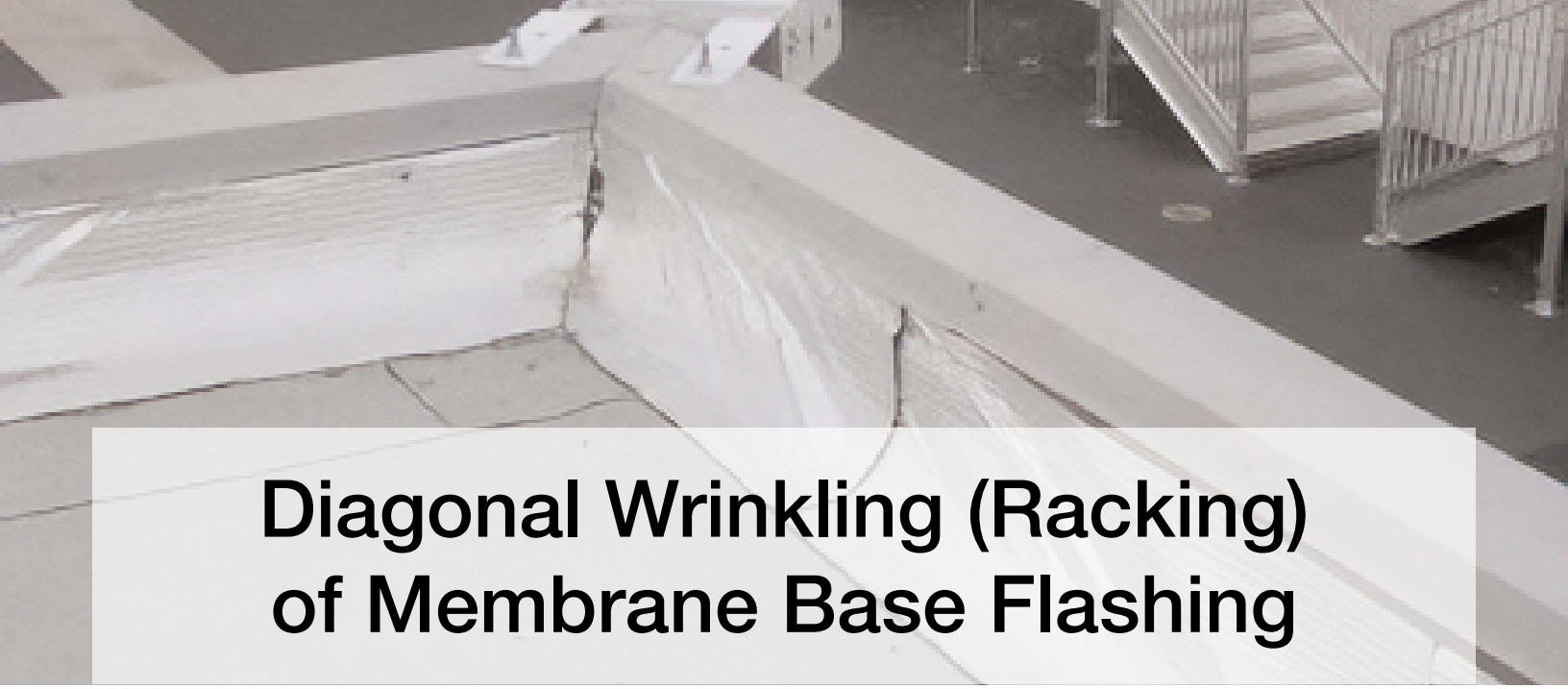


Diagonal Wrinkling (Racking) of Membrane Base Flashing

Diagonal wrinkles in membrane base flashing, commonly referred to as “racking,” sometimes occur along the parapet walls. This condition can affect the long-term performance of a roof membrane system. The wrinkles manifest above the cant strip and extend along vertical surfaces of the wall area. Such wrinkles are more frequent at wall areas near the corners of the building.

What causes racking?

Racking is most often attributed to differential movement between the vertical plane of the wall, and the horizontal plane of the roof deck and related structure beneath the membrane. Movement of this type can result from the roof deck not being adequately supported by the wall itself or the deck not sharing a common support with the adjacent wall. This type of building construction may allow the wall and deck planes to move independently.

EPDM

In addition, thermal loading on an exposed parapet wall and/ or excessive cold temperatures (particularly on masonry walls) can create substantial differences in temperature between the wall and the building structure support and roof deck; the deck assembly and supports are most often beneath thermal insulation and in a conditioned air space. Significant thermal differences of this nature can result in expansion and contraction of the wall itself, or between structural elements of the building, especially at the wall/deck juncture.

SBS-Modified Bitumen

All roofing materials used for flashing walls adjoining the roof system can be affected by movement.

Siplast Veral - Aluminum-clad SBS-modified Bitumen

Thermoplastic

Coated BUR

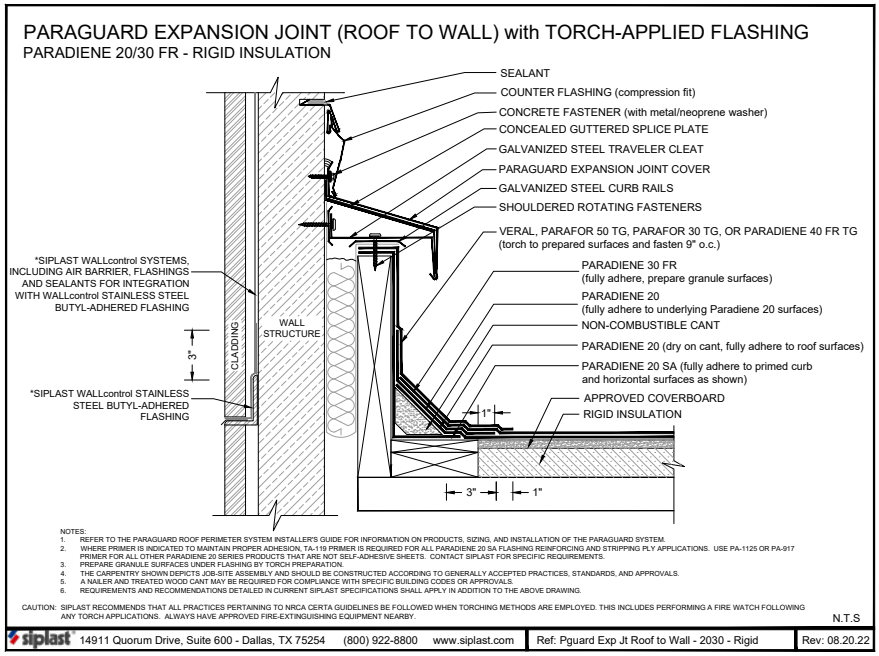
APP-Modified Bitumen

All roofing materials used for flashing walls adjoining the roof system can be affected by this type of differential building movement. Veral membrane flashing is no exception. The wrinkles can vary from small to large enough to pull the flashing membrane from the wall, open laps, and delaminate surfacings. Clearly, the roof/flashing membrane should be repaired when the materials are stressed to the point that the watertight integrity of the roof system could be compromised. Membrane damage caused by structural movement and movement of substrate components is typically not covered by membrane manufacturers' guarantees.

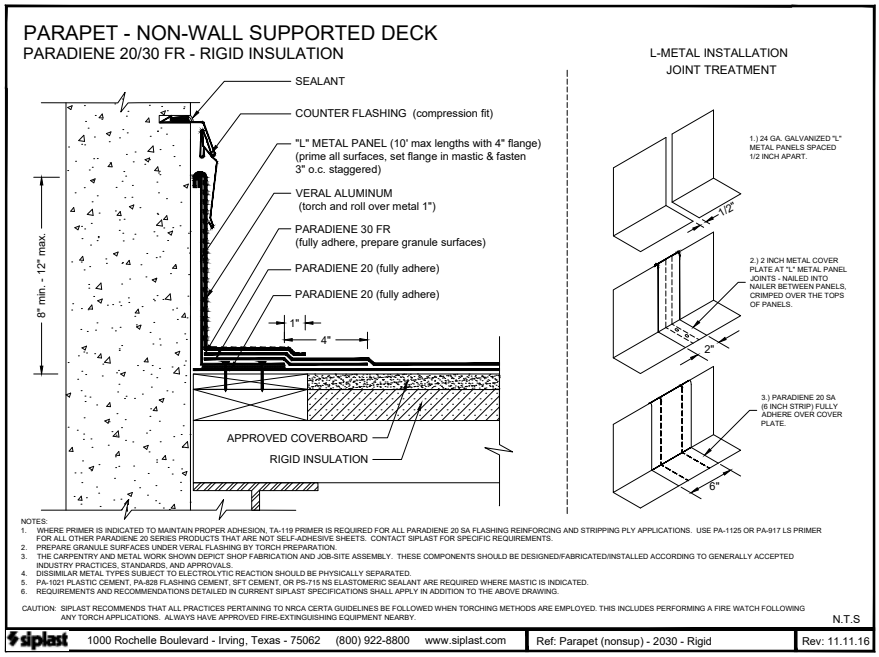
Solutions & Details

Siplast standard specifications and details for addressing such differential movement call for isolating the base flashing materials from the wall. This can be accomplished by incorporating a curb detail at the wall juncture following the *Siplast Paraguard Expansion Joint (Roof To Wall) Detail* or by installing a wood nailer and L-Metal component following the *Siplast Parapet, Non-Wall Supported Deck Detail*.

In designs where differential movement is anticipated by the roof designer or roofing contractor, incorporating detail conditions such as the two provided on the next page are recommended. In cases where the existing flashing has become damaged as a result of substrate movement, each situation should be individually evaluated and treated with a remedial method tailored to address the specific job conditions.



View Detail



View Detail

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