



TECHNICAL MEMORANDUM

DATE: April 20, 2026

FOR: Web Portfolio / Project Showcase

FROM: Roofing Project Management Division

SUBJECT: Premium Tile-to-Metal Retrofit Conversion –Landon Cir.

1. Project data summary

- Mean Roof Height: 15'
- Roof Pitch: 5/12
- Roof Geometry: Hip Roof
- Total Area: 40 Squares
- Exposure Category: C (Open terrain/Inland)

2. Proposed roofing system

The following components are engineered to function as an integrated assembly, ensuring structural integrity and a sealed building envelope:

Roof Tile: Eagle Capistrano (High Profile) NOA:24-1008.07

Underlayment: Weather Armor (1 Layer, Direct-to-Deck) NOA:25-0219.08

Adhesive: APOC Polyset AH-160 NOA:23-0614.01

3. Design pressure requirements

Based on the Simplified Roof Uplift Chart (ASCE 7-22) for a 15' Mean Roof Height in Exposure C, the following pressures are required for this structure:

- Zone 1 (Field): -50.8 psf
- Zone 2 (Perimeter): -70.1 psf
- Zone 3 (Corners): -70.1 psf

4. Regulatory compliance & justification

A. Underlayment System (1-Ply Weather Armor)

The use of one layer of Weather Armor (NOA 25-0219.08) applied direct-to-deck is compliant with the Florida Building Code (FBC) and Palm Beach County requirements.

- Material: Glass-fiber reinforced, SBS modified bitumen membrane meeting ASTM D1970.
- Code Justification: Per FBC 1507.1.1.1, a self-adhering polymer-modified bitumen underlayment qualifies as a Sealed Roof Deck and a Secondary Water Barrier.
- Compliance: The NOA specifically approves this product for HVHZ use in single-ply application, providing superior monolithic protection and a robust bonding surface for adhesive-set systems.

B. Adhesive Attachment (APOC Polyset AH-160)

For a 5/12 pitch, the attachment must resist the overturning moment created by -70.1 psf pressures.

- Attachment Protocol: To satisfy the -70.1 psf demand in Zones 2 & 3, the installer shall utilize a Large Paddy (min. 45g) or Dual Paddy placement as outlined in NOA 23-0614.01.
- Tested Safety: The AH-160 system is TAS 101 tested and rated for high-velocity wind zones, ensuring the Eagle Capistrano tile remains secure under peak design loads.

5. Installation protocol

- Surface Prep: Deck must be clean, dry, and free of debris.
- Underlayment: Minimum 3-inch headlap and 6-inch end lap for a continuous seal.
- Tile Setting: Tiles must be set firmly into the foam adhesive within the specified "string time" to ensure a minimum contact area of 2/3 of the tile's length.

6. Conclusion

The Proposed Roofing System is a fully compliant assembly engineered for the environmental demands of Boynton Beach. The selection of Eagle Capistrano tiles secured with APOC Polyset AH-160 over a Weather Armor secondary water barrier exceeds the structural and waterproofing requirements for a 15' Mean Roof Height in this jurisdiction.