

TECHNICAL MEMORANDUM

PROJECT & ADMINISTRATIVE SUMMARY

- **Property Address:** Miramar, FL 33029
- **Contractor:** 3rd Eye Builders LLC (CGC1535496 / CCC1335198)
- **Permit Authority:** City of Miramar Building Department
- **Scope of Work:** Full tear-off to wood deck, re-nailing per 8th Ed. FBC (HVHZ), installation of single-layer Titanium PSU30 underlayment (FL# 16709), and 24ga Sentrigard ML150 Series Standing Seam metal panels (FL# 46113.2).

PHOTOGRAPHIC EVIDENCE & STRUCTURAL VERIFICATION

The attached field site inspection photographs document the roof-to-wall tie-downs and truss anchor connections at the subject property (1931 SW 179th Ave, Miramar, FL 33029).

- **Roof-to-Wall Connection Compliance:** Photos show installed galvanized hurricane straps/clips anchored to the wood trusses/rafters and embedded/secured into the concrete bond beam/wall structure below.
- **Fastener Verification:** Anchors feature multiple approved structural fasteners per clip, satisfying High-Velocity Hurricane Zone (HVHZ) uplift resistance criteria.
- **Location Identification:** Physical site markers verifying the property address are clearly visible in each frame alongside the inspected structural joints.

TECHNICAL COMPLIANCE & EXPLANATIONS

Regarding Section D and fire barrier requirements, the proposed roof assembly utilizes Owens Corning Titanium PSU30 self-adhering underlayment (FL# 16709). Titanium PSU30 carries a standalone UL Class A fire rating when installed directly under metal roofing assemblies. Under Florida Building Code regulations, this product satisfies all fire resistance requirements independently, making a separate secondary fire barrier sheet entirely redundant and unnecessary.

To satisfy Section 1525 of the building code, the official UL Fire Resistance Directory listing has been provided in the technical submittal. This document verifies that the primary assembly achieves full ASTM E108 / UL Class A fire resistance compliance, ensuring safety standards are met for high-temperature metal roofing installations.

For wind load pressure compliance, the engineered metal roofing assembly is rated to meet or exceed Miramar's 170 mph wind speed requirements. Product approval documentation and structural calculations for roof Zones 1, 2, and 3 demonstrate that the system accommodates all High-Velocity Hurricane Zone (HVHZ) design uplift pressures.

Regarding structural load transfer and environmental mandates, a signed and notarized Affidavit of Roof-to-Wall Connection is submitted alongside clear photographic evidence. This visual data confirms that single or double strap hurricane tie-downs are anchored directly into the supporting masonry and structural framing to resist elevated wind uplift forces. Additionally, a signed Broward County Asbestos Notification Statement and an updated Waste Pro Affidavit have been included to satisfy local environmental health standards and resolve portal metadata discrepancies.

TECHNICAL CONCLUSIONS & ENGINEERING ASSESSMENT

Prior to this intervention, the existing roofing system exhibited signs of severe age-related degradation, failing to meet modern High-Velocity Hurricane Zone (HVHZ) standards. The complete tear-off revealed an aged substrate that required full deck re-nailing to bring the sheath attachment into strict compliance with current Florida Building Code Chapter 16 wind load requirements. Furthermore, retrofitting the roof-to-wall connections ensured that the structural load paths successfully transfer uplift forces directly into the masonry bond beams, resolving historical structural vulnerabilities at the truss anchors.

The completion of this full roof replacement elevates the property's building envelope to peak high-velocity wind and weather standards. By replacing the legacy material with a continuous 24-gauge standing seam metal panel system backed by a self-adhered, high-temperature secondary water barrier (Titanium PSU30), the structure now possesses superior waterproofing integrity, Class A fire protection, and wind resistance rated for 170 mph conditions. The resulting installation permanently mitigates previous failure risks, protects internal framing, and fulfills all technical criteria mandated by the City of Miramar Building Department