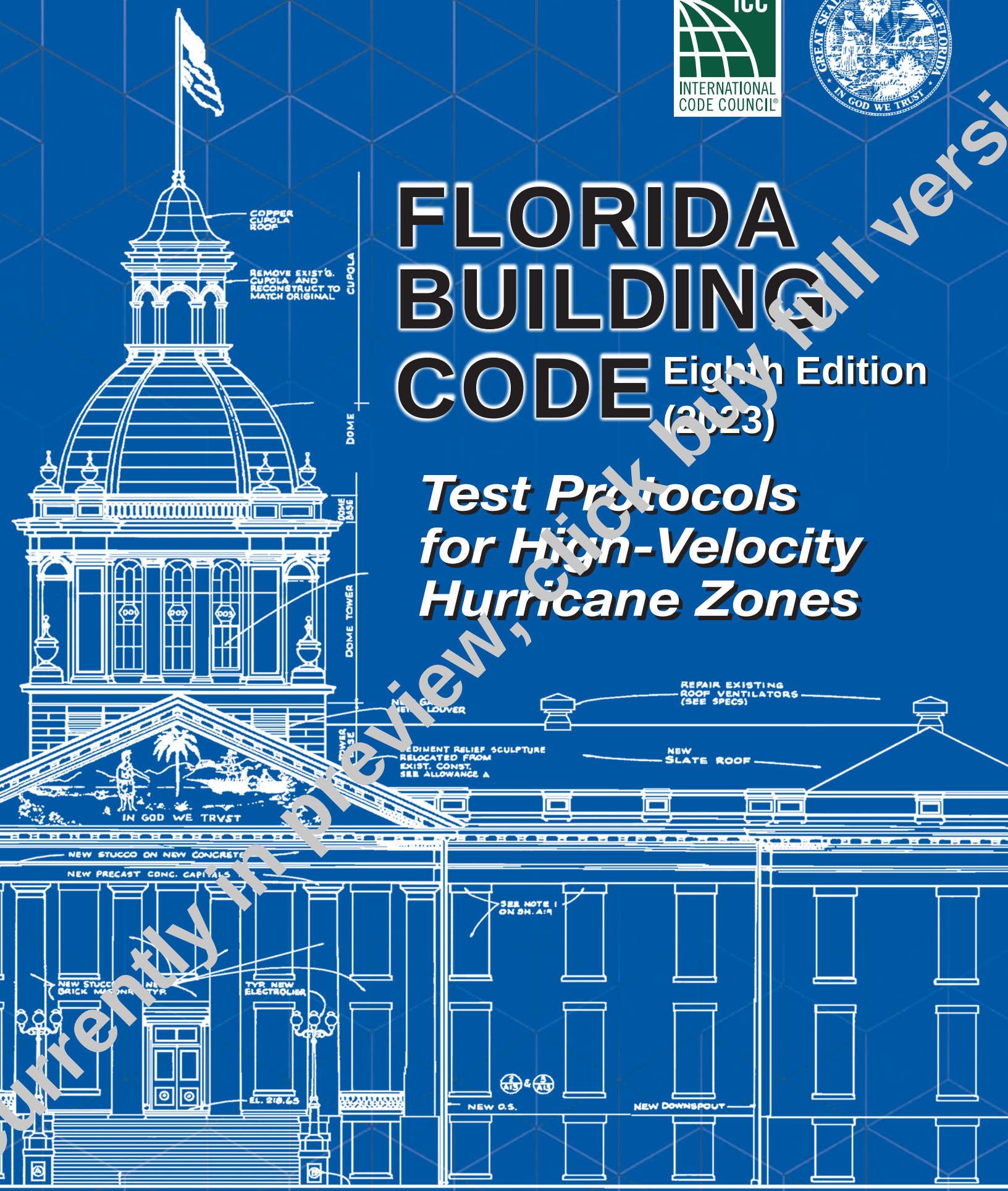

FLORIDA BUILDING CODE

Eighth Edition (2023)

Test Protocols for High-Velocity Hurricane Zones

INTERNATIONAL CODE COUNCIL®

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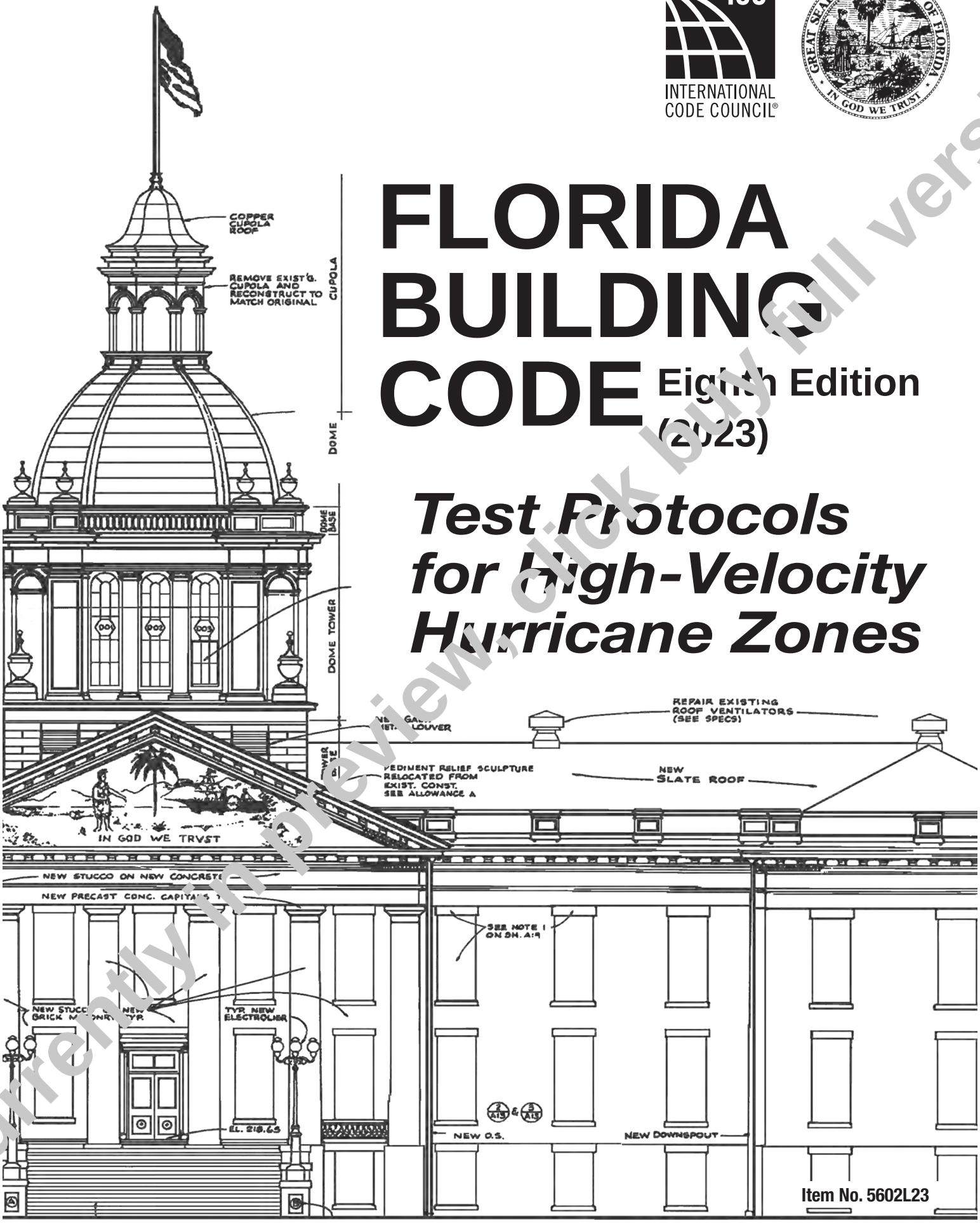

Item No. 5602L23

Florida Test Protocols for High-Velocity Hurricane Zones, 8th Edition (2023)

First Printing: July 2023

ISBN: 978-1-960701-12-1

T029076

PRINTED IN THE USA

PREFACE

History

The State of Florida first mandated statewide building codes during the 1970s at the beginning of the modern construction boom. The first law required all municipalities and counties to adopt and enforce one of the four state-recognized model codes known as the "state minimum building codes." During the early 1990s a series of natural disasters, together with the increasing complexity of building construction regulation in vastly changed markets, led to a comprehensive review of the state building code system. The study revealed that building code adoption and enforcement was inconsistent throughout the state and those local codes thought to be the strongest proved inadequate when tested by major hurricane events. The consequences of the building codes system failure were devastation to lives and economies and a statewide property insurance crisis. The response was a reform of the state building construction regulatory system that placed emphasis on uniformity and accountability.

The 1998 Florida Legislature amended Chapter 553, *Florida Statutes*, Building Construction Standards, to create a single state building code that is enforced by local governments. As of March 1, 2002, the *Florida Building Code*, which is developed and maintained by the Florida Building Commission, supersedes all local building codes. The *Florida Building Code* is updated every three years and may be amended in the interim in accordance with criteria set out in Section 553.73, *Florida Statutes.*

Scope

The *Florida Building Code* is based on national model building codes and national consensus standards, in addition to Florida-specific provisions. The code incorporates all building construction-related regulations for public and private buildings in the State of Florida other than those specifically exempted by Section 553.73, *Florida Statutes*. It has been harmonized with the *Florida Fire Prevention Code*, which is developed and maintained by the Department of Financial Services, Office of the State Fire Marshal, to establish unified and consistent standards.

The model codes used for the *Florida Building Code*, 8th Edition (2023) include: the 2021 editions of the *International Building Code®*; the *International Plumbing Code®*; the *International Mechanical Code®*; the *International Fuel Gas Code®*; the *International Residential Code®*; the *International Existing Building Code®*; the *International Energy Conservation Code®*; the *National Electrical Code*, 2020 edition; the substantive criteria from ASHRAE Standard 90.1-2019. State and local codes adopted and incorporated into the code include the *Florida Building Code, Accessibility,* and special hurricane protection standards for the High-Velocity Hurricane Zone.

The code is composed of nine main volumes: the *Florida Building Code, Building*, which also includes state regulations for licensed facilities; the *Florida Building Code, Plumbing*; the *Florida Building Code, Mechanical;* the *Florida Building Code, Fuel Gas*; the *Florida Building Code, Existing Building*; the *Florida Building Code, Residential;* the *Florida Building Code, Energy Conservation*; the *Florida Building Code, Accessibility* and the *Florida Building Code, Test Protocols for High-Velocity Hurricane Zones*. Chapter 27 of the *Florida Building Code, Building*, adopts the *National Electrical Code*, NFPA 70, by reference.

Under certain strictly defined conditions, local governments may amend technical requirements to be more stringent than the code. All local technical amendments to the *Florida Building Code* must be adopted in accordance with the requirements of Section 553.73(4), *Florida Statutes*, and reported to the Florida Building Commission, then posted on www.floridabuilding.org in legislative format for 30 days prior to being enforced. Local amendments to the *Florida Building Code* and the *Florida Fire Prevention Code* may be obtained from the Florida Building Commission website, or from the Florida Department of Business and Professional Regulation or the Florida Department of Financial Services, Office of the State Fire Marshal, respectively.

Adoption and Maintenance

An updated edition of the *Florida Building Code* is adopted triennially by the Florida Building Commission. The code may also be amended between updates in order to incorporate the Florida Building Commission's interpretations into the code, address conflicts, and update standards, among other statutorily specified reasons. Minimum requirements for permitting, plans review and inspections are established by the code, and local jurisdictions may adopt additional administrative requirements that are more stringent. Local technical amendments are subject to strict criteria established by Section 553.73(4), *Florida Statutes.* They are subject to Commission review during each triennial update of the code, and may be either adopted into the updated edition of the code or repealed. Local technical amendments are also subject to appeal according to the procedure established by Section 553.73(4), *Florida Statutes.*

Eleven Technical Advisory Committees (TACs), which are constituted consistent with American National Standards Institute (ANSI) Guidelines, review proposed code changes and clarifications of the code and make recommendations to the Commission. These TACs whose membership is constituted consistent with American National Standards Institute (ANSI) Guidelines include: Accessibility; Joint Building Fire (a joint committee of the Commission and the State Fire Marshal); Building Structural; Code Administration/ Enforcement; Electrical; Energy; Mechanical; Plumbing and Fuel Gas; Roofing; Swimming Pool; and Special Occupancy (state agency construction and facility licensing regulations).

The Commission may only issue official code interpretations using procedures set out by Chapter 120, *Florida Statutes*. To obtain such an interpretation, a request for a declaratory statement must be made to the Florida Building Commission in a manner that establishes a clear set of facts and circumstances and identifies the section of the code in question. Requests are analyzed by staff, reviewed by the appropriate Technical Advisory Committee, and sent to the Florida Building Commission for action. These interpretations establish precedents for situations having similar facts and circumstances and are typically incorporated into the code in the next code amendment cycle. Nonbinding interpretations are available from the Building Officials Association of Florida's website (www.BOAF.net) and a binding interpretation process is available online at www.floridabuilding.org.

Marginal Markings

Solid vertical lines in the margins within the body of the code indicate a change from the requirements of the *Florida Test Protocols for High-Velocity Hurricane Zones*, 7th Edition (2020) to the *Florida Test Protocols for High-Velocity Hurricane Zones*, 8th Edition (2023), effective December 31, 2023.

Sections deleted from the base code are designated "Reserved."

Acknowledgments

The *Florida Building Code* is produced through the efforts and contributions of building designers, contractors, product manufacturers, regulators and other interested parties who participate in the Florida Building Commission's consensus processes, Commission staff and the participants in the national model code development processes.

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ROOFING APPLICATION STANDARD (RAS) No. 109

1. Scope

1.1 This Roofing Application Standard sets the requirements to determine whether a substrate and surrounding environmental conditions are appropriate for the application of a spray applied polyurethane foam Roof Assembly; whether the final application is in compliance with the requirements of the *Florida Building Code, Building* and, whether proposed details are in compliance with industry standards.

2. Referenced Documents

2.1 For definitions of terms used in this application standard, refer to ASTM D1079; and the *Florida Building Code, Building.*

3. Significance and Use

3.1 The test procedures outlined herein provide a means for establishing the use of industry accepted details of spray applied polyurethane foam Roof Assemblies, proper substrate and environmental conditions at the time of application, and methods of quality control during and after application of the Roof Assembly.

3.2 Quality control test methods are intended to confirm compliance with the wind load requirements of Chapter 16 (High-Velocity Hurricane Zones) of the *Florida Building Code, Building* and compliance with the spray applied polyurethane foam Roof Assembly manufacturer's Product Approval.

4. General Requirements

4.1 All spray applied polyurethane foam (PUF) Roof Assemblies shall have Product Approval. Spray applied polyurethane manufacturer's Product Approval shall include all components used in accepted systems and manufacturer's installation instructions, including environmental constraints concerning application temperatures and relative humidity.

4.2 All spray applied polyurethane foam (PUF), and coatings applied over spray applied polyurethane foam shall comply with the *Florida Building Code, Building.*

4.3 All spray applied polyurethane foam applications shall have a minimum slope of $^1/_4$ in.:12 in. The application shall be applied to eliminate ponding. Ponding, for the purposes of this Roofing Application Standard, shall be defined as any roof area of 100 ft^2 or more which holds $^1/_2$ in. or more of water as measured 24 hours after a rain fall.

4.4 A *Certificate of Compliance* of a completed spray applied polyurethane foam Roof System Assembly shall be provided to the building official within 30 days of job completion as detailed in Section 1521 of the *Florida Building Code, Building.*

4.5 The minimum finished thickness of all spray applied polyurethane foam applications shall be not less than 1 in. A foam pass (or lift) shall not be less than 0.5 in. in thickness.

4.6 The spray polyurethane foam shall be uniformly terminated a minimum of four inches above the roof line at all penetrations (except drains, parapet walls or building junctions). Foamed in place cants shall be smooth and uniform to allow for positive drainage.

4.7 The spray polyurethane foam shall be terminated below existing weep holes at through wall flashings. Weep holes shall not be covered with foam or coatings.

5. Details

5.1 Model details for spray applied polyurethane foam applications are provided in Appendix "A," herein.

6. General Practices – The following general practices shall be observed prior to and during the application of spray applied polyurethane foam:

6.1 A Job Log shall be maintained on the job site in a ring binder, including but not limited to:

- Roof Assembly Product Approval
- Section II of the Uniform Building Permit Application
- All pre-job testing
- All job testing detailed in this Roofing Application Standard
- Daily weather conditions
- All written or verbal communications with spray applied polyurethane foam roof assembly manufacturer relating to the application
- A list of all accessory products used within the Roof Assembly; and,
- All material safety data sheets