

FORTIFIED Commercial™– 2025 Wind New Construction & New Additions Form

This form captures the specific construction details for new construction and new additions to existing buildings. Qualifications for additions are listed in section 3.1.1.2 of the FORTIFIED Commercial–2025 Wind standard.

This form is to be filled out by the project architect, a licensed structural engineer, and the general contractor and/or roofer. It confirms the requirements for the selected FORTIFIED level have been included in the building documents and the contractor and/or roofer is aware of these requirements.

Fill out only the applicable sections. For example, if a low-sloped roof is the only type of roof on the project, do not fill out the steep-slope section—mark the section as not applicable (N/A). Additionally, some portions pertain to only Hurricane or High Wind—fill out accordingly depending on your building’s exposure.

Compliance Agreement

I, the DESIGNER COMPLETING THIS CHECKLIST, understand and agree that:

1. The *FORTIFIED Commercial– 2025 Wind New Construction & New Additions Form* must be completed FULLY and CORRECTLY for the applicable hazards.
2. I will provide engineered plans (and all other necessary documentation) that verify the structure meets FORTIFIED design criteria BEFORE construction starts. These plans and documents must be:
 - Legible
 - Complete
 - Certified by the Professional of Record
 - Included with this document
3. The plans submitted will comply with all local building codes and with the FORTIFIED Commercial criteria as detailed in the FORTIFIED Commercial– 2025 Wind standard.

Full Name: _____

License/Registration Number: _____

Signature: _____

Date: _____

Hazard and FORTIFIED Level

Select the site-specific hazard¹: Hurricane High Wind

Select the FORTIFIED Commercial Wind level being pursued:

- FORTIFIED Roof™**—Enhanced roof performance
- FORTIFIED Silver™**—FORTIFIED Roof requirements plus building envelope protection and reduction of business operations downtime
- FORTIFIED Gold™**—FORTIFIED Silver requirements plus enhanced structural performance and maintaining business operations

¹ Hurricane-prone regions are areas vulnerable to hurricanes as defined in ASCE 7. See section 1.4 of the FORTIFIED Commercial– 2025 Wind standard for more information.

Building Overview

Street Address: _____

City: _____

State: _____

Zip Code: _____

Please select the option which best describes the building’s proximity to saltwater:

- Within 300 ft
- More than 300 ft but less than 1,000 ft
- More than 1,000 ft but less than 3,000 ft
- More than 3,000 ft

Corrosion protection requirements outlined in section 3.1.4 of the FORTIFIED Commercial–2025 Wind standard have been implemented.

- Yes No

Project Status

Tentative Start Date: _____

Tentative Completion Date: _____

Select the option(s) which best describe the building:

- Stand-Alone New Construction
- Addition(s) to Existing Buildings²
 - Extension to existing roof—connected roof structure*
Existing conditions will need to be verified by the engineer of record. The following verification/calculations shall be submitted with this form:
 - Existing structural deck and framing members
 - Structural deck attachments
 - Structural interaction between the addition and existing structure.

²Commercial buildings seeking a level other than FORTIFIED Roof may require additional calculations, existing conditions reports/testing, and other information that is outlined in FORTIFIED Silver and/or FORTIFIED Gold.

- Extension to existing roof—expansion joint*
Existing conditions will need to be verified by the engineer of record. The following verification/ calculations shall be submitted with this form:
 - FORTIFIED Commercial– 2025 Wind, Existing Construction form(s)
 - Existing structural deck and framing members
 - Structural deck attachments
- Additional roof at a different elevation*
Existing conditions will need to be verified by the engineer of record. The following verification/ calculations shall be submitted with this form:
 - FORTIFIED Commercial– 2025 Wind, Existing Construction form(s)
 - Existing structural deck and framing members
 - Structural deck attachments

General Building Characteristic

- Number of Stories: _____
- Roof Slope: _____
- Gross Square Footage (sft): _____
- Building Dimensions (ft):
- Length: _____
- Width: _____
- Height: _____
- Occupancy Type: _____
- Wall/Framing (gravity system) [select all that apply]:
- Concrete Masonry
 - Steel Light Gauge
 - Wood
 - Other: _____
- Lateral System [select all that apply]:
- Moment Frames or Braced Frames
 - Shear Walls
 - Other: _____

Recommended Protection

Flood—Recommended Whole-Building Protection (Not Required)

While protecting electrical and mechanical systems from flood is a requirement of FORTIFIED Silver, whole-building protection against the flood hazard is not be required under FORTIFIED Commercial.

First finished floor elevation (ft): _____

FEMA-designated flood zone³: _____

If located in a FEMA-designated flood zone (V, A, B, D, and X-shaded), please select one of the following options:

- The building’s first finished floor is located above the 500-year flood level.
 - 500-year flood level (ft): _____
- The building’s first finished floors is located 3 ft above the base flood elevation.
 - Flood level (ft): _____
- Dry flood protection such as flood gates, walls, or doors, inflatable barriers, sand bags, or similar devices are readily available on site to help mitigate water intrusion.
- Not applicable (N/A)

Hail—Recommended Protection (Not Required)

Are you seeking the Hail Supplement? Yes No

If yes, select one of the following options for the installed roof cover:

- Roof covers for low-sloped roofs ($\leq 10^\circ$ or less than 2/12 pitch):
 - FM Approval Standard 4470 with a Class 1-SH or 1-VSH
 - UL 2218 Class 4
 - Not Applicable
- Roof covers for steep-sloped roofs ($> 10^\circ$ or greater than 2/12 pitch):
 - FM Approval Standard 4473 Class 4
 - UL 2218 Class 4
 - Not Applicable

Building Design Parameters

Code Specification

Select the applicable code and fill out the corresponding information:

- ASCE 7-10
 - Risk Category II
 - Risk Category III
 - Risk Category IV
 - Design wind speed (V_{ult}): _____ mph
- ASCE 7-16
 - Risk Category II
 - Risk Category III
 - Risk Category IV
 - Design wind speed (V_{ult}): _____ mph

³Flood zone as defined by FEMA.

ASCE 7-22

Risk Category II

Risk Category III

Risk Category IV

Design wind speed (V_{ult}): _____ mph

Select the applicable building code:

IBC 2000

IBC 2012

IBC 2003

IBC 2015

IBC 2006

IBC 2018

IBC 2009

IBC 2021

Exposure Category and Classification

The exposure category per ASCE 7 is:

C

D

In accordance with the code selected in the above section, please identify the building exposure classification:

Partially enclosed

Enclosed

Open

Minimum Required Factor of Safety

Please select the minimum factor of safety that was applied to the building design pressures. See section 3.1.1.3 of the FORTIFIED Commercial– 2025 Wind standard.

- ASCE 7-10 ASD Method: Calculated ASD wind load x 2 (Minimum Required Factor of Safety)
- ASCE 7-10 LRFD Method: Calculated LRFD wind load x 0.6 x 2 (Minimum Required Factor of Safety)
- ASCE 7-16 ASD Method: Calculated ASD wind load x 1.67 (Minimum Required Factor of Safety)
- ASCE 7-16 LRFD Method: Calculated LRFD wind load
- ASCE 7-22 ASD Method: Calculated ASD wind load x 1.67 (Minimum Required Factor of Safety)
- ASCE 7-22 LRFD Method: Calculated LRFD wind load

⁴Roof geometry refers to the ASCE 7 profile designation such as mono-sloped (low-sloped), mono-sloped (steep-sloped), hip roof, gable roof, and flat roof. For more roof geometries, see ASCE 7.

⁵ Please use the table to describe the different wind zones of the roof. ASCE 7-16 has implemented new wind zone designations so please denote which roofing geometry was used to obtain base pressures.

Wind Design Pressures

Select and fill out the appropriate wind pressure table. The base pressure shall be directly calculated from corresponding ASCE 7 edition and the additional factor of safety as outlined in section 3.1.1.3 of the FORTIFIED Commercial– 2025 Wind standard.

ASCE 7-10 design pressures (psf) using minimum terrain Exposure C or D

Please select the method used to obtain base pressures:

ASD

LRFD

Roof Geometry⁴: _____

Zone ⁵	Base Design Pressure (psf)	Minimum F.O.S. ⁶	Pressure with F.O.S. (psf)
	Effective Wind Area: 10 sft		
Field (Zone 1)			
Perimeter (Zone 2)			
Perimeter Overhang (Zone 2OH)			
Corner (Zone 3)			
Corner Overhang (Zone 3OH)			

ASCE 7-16 and 7-22 design pressures (psf) using minimum terrain Exposure C or D

Please select the method used to obtain base pressures:

ASD

LRFD

Roof Geometry⁵: _____

Zone ⁶	Base Design Pressure (psf)	Minimum F.O.S. ⁷	Pressure with F.O.S. (psf)
	Effective Wind Area: 10 sft		

⁶For more information, see section 3.1.1.3.2 of the FORTIFIED Commercial– 2025 Wind standard.

FORTIFIED Roof

Roof Configuration

Does the building have more than one roof type? Yes No

If **yes**, fill out the “Low-Sloped System” or “Steep Slope System” section for the corresponding quantity of roof systems⁷.
Number of different roof types are _____.

Does the building have roofs at multiple heights? Yes No

If **yes**, are the heights different enough that roof systems with different wind ratings are specified? Yes No

If **yes**, fill out the “Low-Sloped System” or “Steep Slope System” section for each roof system with a different wind rating.⁸

General Information

Roof Type Number: _____ Out of: _____

Roof Slope (degrees): _____

Average Roof Height (ft): _____

ASCE 7 Roof Dimension “a” (ft): _____

Is there a continuous structural parapet⁹? Yes No

Parapet Height (ft): _____

Low-Sloped ($\leq 10^\circ$) System

Yes N/A

If “N/A” was selected, please continue to the next section for steep-sloped roofing ($>10^\circ$).

Roof System Type

Select the roofing system type:

- Architectural Metal Panels (attached to wood deck)⁹
- Built-up Roofing
 - Gravel fully embedded in asphalt
 - Loose-laid gravel on low-sloped (**High-Wind-Prone Regions Only**)
- Modified Bitumen
- Single-ply Membrane¹⁰
 - TPO
 - PVC
 - EPDM
- Structural Metal Panels
- Vegetative Roof Systems (**High-Wind-Prone Regions Only**)

⁷Fill out section 4.1 or 4.2 (depending on the roof slope) for as many different roof covers as are on the project.

⁸If the parapet is equal to or greater than 3 ft from the top of the roofing structure, it must be adequately braced per ASCE 7 for lateral wind loading

⁹If selected, skip “Roof System Detail Breakdown” and fill out the information in the “Architectural/Structural Metal Roof Panel Systems” section.

Approved Low-Sloped System

Material substitutions and deviations from the approved system’s design criteria are not acceptable. The entire system must be installed in accordance with the Approval or Product Evaluation description and meets the specified design and limitations for use of the product as well as specified installation methods. Yes

Please select and complete one of the following low-sloped approved roofing systems:

Florida Product Approval (FPA)

Note: The design team must submit a copy of the FPA Evaluation Report for each approved system to the FORTIFIED Commercial Evaluator. FPA Evaluation Reports can be found by using the search tool located: www.floridabuilding.org/pr/pr_app_srch.aspx

Multiple Systems

▪ **Field**

Uplift Resistance (psf): _____

FL Number: _____

▪ **Perimeter**

Uplift Resistance (psf): _____

FL Number: _____

▪ **Corner**

Uplift Resistance (psf): _____

FL Number: _____

Single System

Uplift Resistance (psf): _____

FL Number: _____

Single System—Enhanced Fastening¹¹

Uplift Resistance (psf): _____

FL Number: _____

Describe the enhancements: _____

Enhancements have been designed for the component and cladding wind pressures and provide uplift resistance with a minimum factor of safety of 2.0 (1.67 for ASCE 7-16 ASD loads) in the field, perimeter, and corners of the roof as described in section Roof Design Load Requirement. Yes

¹⁰See “Additional Single-ply Membrane Requirements” section.

¹¹In some instances, FPA does permit edge (perimeter/corner) enhancements. Enhancements must follow provisions stated in corresponding active FPA Evaluation Report.

FM Approved with a current and active [RoofNav](#) Assembly Number

Note: The design team must submit a copy of the FM Assembly Report highlighting the selected assembly details for each approved system to the FORTIFIED Commercial Evaluator. FM Approved roof assemblies can be found by using the RoofNav® search tool located at www.roofnav.com.

- Multiple Systems
 - **Field**
FM Rating: _____
Roof Nav Assembly #: _____
 - **Perimeter**
FM Rating: _____
Roof Nav Assembly #: _____
 - **Corner**
FM Rating: _____
Roof Nav Assembly #: _____
- Single System
FM Rating: _____
Roof Nav Assembly #: _____

ICC Evaluation Service (ICC-ES)

Note: The design team must also submit a copy of the ICC-ES Report for each approved system to the FORTIFIED Commercial Evaluator. ICC-ES Approved roof assemblies can be found by using the search tool located at www.icc-es.org/evaluation-report-program/reports-directory.

- Multiple Systems
 - **Field**
ESR Report Number: _____
Division Number: _____
Section Number: _____
Table and System Number: _____
Uplift Resistance(psf): _____
 - **Perimeter**
ESR Report Number: _____
Division Number: _____
Section Number: _____
Table and System Number: _____
Uplift Resistance (psf): _____
 - **Corner**
ESR Report Number: _____
Division Number: _____
Section Number: _____
Table and System Number: _____
Uplift Resistance (psf): _____

- Single System
ESR Report Number: _____
Division Number: _____
Section Number: _____
Table and System Number: _____
Uplift Resistance(psf): _____

Miami-Dade County (MDCA) with current and active Notice of Acceptance (NOA)

- Multiple Systems
 - **Field**
NOA: _____
Uplift Resistance: _____
 - **Perimeter**
NOA: _____
Uplift Resistance: _____
 - **Corner**
NOA: _____
Uplift Resistance: _____

- Single System
NOA: _____
Uplift Resistance: _____

- Single System with Edge (Perimeter/Corner) Enhancements
 - **Field**
NOA: _____
Uplift Resistance: _____

Note: Perimeter and corner enhancements can be made in accordance with the Miami-Dade County Notice of Acceptance.

Describe the enhancements and how they were obtained for both the perimeter and corner:

Texas Department of Insurance (TDI)

Note: The design team must also submit a copy of the TDI Product Evaluation Report for each approved system to the FORTIFIED Commercial Evaluator. TDI Approved roof assemblies can be found by using the search tool located at www.tdi.texas.gov/wind/prod/indexrc.html.

- Multiple Systems

- **Field**
 TDI Evaluation ID: _____
 Assembly Number: _____
 Uplift Resistance Range: _____
- **Perimeter**
 TDI Evaluation ID: _____
 Assembly Number: _____
 Uplift Resistance Range: _____
- **Corner**
 TDI Evaluation ID: _____
 Assembly Number: _____
 Uplift Resistance Range: _____
- Single System**
 TDI Evaluation ID: _____
 Assembly Number: _____
 Uplift Resistance Range: _____

UL Rated

Note: The design team must submit a copy of the UL Product Specification Report for each approved system to the FORTIFIED Commercial Evaluator. Product Specification Reports can be found by using the UL search tool located at <http://productspec.ul.com/index.php>.

- Multiple Systems**
 - **Field**
 UL Product Number: _____
 Option Number: _____
 Uplift Resistance (psf): _____
 - **Perimeter**
 UL Product Number: _____
 Option Number: _____
 Uplift Resistance (psf): _____
 - **Corner**
 UL Product Number: _____
 Option Number: _____
 Uplift Resistance (psf): _____
- Single System**
 UL Product Number: _____
 Option Number: _____
 Uplift Resistance (psf): _____

Roof System Detail Breakdown

Fill in the correct information for the individual parts of the approved system. If it does not apply to the selected approved system, please select N/A.

For architectural and structural metal roof panel systems, do not fill out the information in this section—rather, fill out the information in the “Architectural/Structural Metal Roof Panel Systems” section.

Cover/Cap Sheet Yes N/A

Cover/Cap Sheet Type: _____

Manufacturer: _____

Trade Name: _____

Cover/Cap Sheet Attachment Yes N/A

Adhered
 Manufacturer: _____
 Trade Name: _____
 Adhesion Rate: _____

Mechanically Fastened
 Sheet Width (in.): _____
 Fastener:
 Manufacturer: _____
 Type: _____
 Plate:
 Manufacturer: _____
 Type: _____
 Fastener Spacing (in.):
 Field: _____
 Perimeter: _____
 Corner: _____
 Fastener Spacing Along Laps (in.):
 Field: _____
 Perimeter: _____
 Corner: _____

Cover Board Yes N/A

Select the cover board type:

- Polyisocyanurate
- Perlite
- Fiberglass
- Wood Fiber
- Other: _____

Manufacturer: _____

Trade Name: _____

Thickness (in.): _____

Cover Board Attachment:

Adhered Mechanically Fastened

Details: _____

Insulation Yes N/A

Select the insulation board(s) type:

- Isocyanurate
- Perlite
- Fiberglass
- Wood Fiber
- Other: _____

Manufacturer: _____

Trade Name: _____

Board Thickness (in.): _____

Number of boards: _____

Is the insulation board tapered? Yes NO

Intermediate Layers Yes N/A

Select the intermediate layer type:

- Isocyanurate
- Perlite
- Fiberglass
- Wood Fiber
- Other: _____

Manufacturer: _____

Trade Type: _____

Thickness (in.): _____

Insulation Board Fasteners Yes N/A

Select the attachment method:

Adhered

Manufacturer: _____

Trade Name: _____

Application Type¹²: _____

Adhesion Rate: _____

Mechanically Fastened

Fastener:

Trade Name: _____

Diameter (in): _____

Length (in): _____

Plate:

Plate Name: _____

Plate Material:

Metal Plastic

Other: _____

Plate Diameter (in): _____

Fastening Pattern¹³:

Field: _____

¹²Refers to the application; fully adhered, strips, ribbons, etc. For example, securement of insulation to concrete deck with an adhesive applied was installed in a serpentine method with a ribbon width of 0.75 in.

Perimeter: _____

Corner: _____

Base Sheet Yes N/A

Base sheet general information:

Base Sheet Manufacturer: _____

Thickness (in): _____

Base sheet attachment:

Self-Adhered

Mechanically Attached

Fastener:

Trade Name: _____

Fastener Type:

Split Shank

Other: _____

Diameter (in): _____

Length (in): _____

Plate (if differs from trade name above):

Plate Name: _____

Plate Material:

Metal Plastic

Other: _____

Plate Diameter (in): _____

Fastening Pattern¹³:

Field: _____

Perimeter: _____

Corner: _____

Additional Single-Ply Membrane Requirements Yes N/A

Single-ply roof covers have a perimeter peel stop with a termination bar or similar located 1–2 ft from the roof edge. Yes N/A

Mechanically Attached Single-Ply Membrane on Steel Decks—Sheets and fasteners are installed PERPENDICULAR to the steel deck ribs.

Yes N/A

Ballasted, roof pavers, and pedestal systems are NOT being used.

Yes

Vegetative Roof Systems (High-Wind-Prone Regions Only)

Yes N/A

¹³Fastening pattern rate shall be in terms of square footage (sq ft) per (1) fastener.

Vegetative roof systems are permitted only in high-wind-prone regions. Structural calculations, uplift tests, and/or additional documentation may be requested by the FORTIFIED Commercial Evaluator.

Select the system:

- Extensive
- Simple Intensive (Semi-Intensive)

Provide the appropriate approval rating and number:

- FM RoofNav Number: _____
- Miami-Dade NOA: _____

Architectural/Structural Metal Roof Panel

Yes N/A

Please indicate the roof system:

- Non-structural architectural metal panel roofs on solid wood sheathing
- Structural metal panel roof systems on open framing members
 - Structural Standing Seam
 - Through-Fastened (Lap Seam)

Purlin spacing:

Field: _____

Perimeter: _____

Corner: _____

Approved System:

- FM Approval Standard 4470 or FM4471

FM RoofNav: _____
- Miami-Dade County Approved

NOA: _____

Attachment:

- Clip Spacing (in.):

Field: _____

Perimeter: _____

Corner: _____

Number of screws per clip: _____

Total screw pull out value (lb): _____
- Other (i.e., through-fastened with wood screw):

Describe: _____

Field: _____

Perimeter: _____

Corner: _____

Lap Seam Fasteners:

Field: _____

Perimeter: _____

Corner: _____

- Attachments include a minimum 2.0 safety factor as described in section 3.1.1.3 of the FORTIFIED Commercial– 2025 Wind standard.

Structural Roof Deck

- Structural roof deck resists the loads and load combinations specified in ASCE 7 as outlined in section 3.1.1.3.1 of the FORTIFIED Commercial– 2025 Wind standard.

- Structural roof deck attachment capacity meets the pressures outlined in section 3.1.1.3 of the FORTIFIED Commercial– 2025 Wind standard.

Select the deck type and specify construction:

- Cast-in-place structural concrete with lightweight insulating concrete (LWIC) above structural concrete
- Cast-in-place structural concrete without LWIC
- Poured concrete on steel form deck with LWIC
- Poured concrete on steel form deck without LWIC
- Precast concrete “tees”

Panel width (in.): _____

- Gypsum on bulb “tees”

Panel width (in.): _____

Clip trade name: _____

Clip spacing (in.):

Field: _____

Perimeter: _____

Corner: _____

- Cementitious wood fiber

Panel width (in.): _____

Clip trade name: _____

Clip spacing (in.):

Field: _____

Perimeter: _____

Corner: _____

- LWIC poured on steel form (fill out steel deck information below)

- Steel deck

Specify the details listed below:

Deck gauge: _____

Deck attachment method:

Weld

Weld size (in.): _____

Weld spacing (in.): _____

Field: _____

Perimeter: _____

Corner: _____

Screw or Rivet

Size: _____

Head diameter (in.): _____

Spacing (in.): _____

Field: _____

Perimeter: _____

Corner: _____

Other: _____

Spacing (in.): _____

Field: _____

Perimeter: _____

Corner: _____

Joist or Beam Spacing (in.):

Field: _____

Perimeter: _____

Corner: _____

Manufacturer: _____

Model: _____

Type/size: _____

Wood Deck

Deck Type:

Plywood

Oriented strand board (OSB) plank

Other: _____

Deck Thickness (in.): _____

Deck Attachment Method:

Screw ring-shank nail

Spiral nail

Smooth nail

Fastener size: _____

Fastener spacing (in.): _____

Structural Framing Members:

Wood joists

Wood beams

Glulam beams

Cross laminated timber

Other: _____

Structural Framing Member Spacing (in.): _____

Field: _____

Perimeter: _____

Corner: _____

Roof Edge Flashing, Coping, and Counter Flashing Yes N/A

All flashing is designed in accordance with ANSI/SPRI/FM 4435/ES-1 for the ASCE 7 design wind pressures as outlined in section 3.1.1.3.1 of the FORTIFIED Commercial– 2025 Wind standard.

Wood Nailers

Yes N/A

Wood nailers comply with the guidance found in section 2.2.2 of the FM Data Sheet 1-49.

Wood Nailer:

Wood Species: _____

Width: _____

Thickness(in): _____

Wood Nailer Securement:

Nail/Bolt Size: _____

Corrosion Resistance:

Hot-dipper galvanized steel

Stainless steel

Other: _____

Wood nailers have been secured with two rows of staggered fasteners.

Gutters Systems Yes N/A

Select the option which best describes the gutter system.

ANSI-SPRI GD-1 (2010) with the adjustments outlined in section 3.1.1.3 of the FORTIFIED Commercial– 2025 Wind standard.

ANSI-SPRI GT-1 (2016) with the adjustments outlined in section 3.1.1.3 of the FORTIFIED Commercial– 2025 Wind standard.

Steep-Sloped (>10°) System

Yes N/A

Asphalt Shingles and Architectural Metal Panel

Select either asphalt shingles or architectural metal panels and fill out the corresponding information.

Asphalt Shingles Yes N/A

Buildings with Exposure Category D or with a mean roof height greater than 60' must use ASTM D3161(Class F).

SELECTION	WIND SPEED (V _{asd})	WIND SPEED (V _{ult})	SHINGLE TESTING STANDARD/ CLASSIFICATION
<input type="checkbox"/>	100 MPH	129 MPH	ASTM D3161 (Class F) or ASTM D7158 (Class G or H)
<input type="checkbox"/>	110 MPH	142 MPH	
<input type="checkbox"/>	120 MPH	155 MPH	
<input type="checkbox"/>	130 MPH	168 MPH	
<input type="checkbox"/>	140 MPH	180 MPH	
<input type="checkbox"/>	150 MPH	194 MPH	

Manufacturer name: _____

Number of nails used to install shingles for high wind rating (per shingle tab)¹⁴: _____

Shingles are installed at eaves using (check one):

- Option 1: 8-in.-wide x ½-in.-thick bed of flashing cement
- Option 2: Shingle manufacturer approved ASTM D1970

fully adhered starter strip

Shingles are installed at rakes/gable edges using (check one):

- Option 1: 8-in.-wide x ½-in.-thick bed of flashing cement
- Option 2: Manufacturer approved starter strip set in an 8-in.-wide x ½-in.-thick bed of flashing cement
- Option 3: Shingle manufacturer approved ASTM D1970 fully adhered starter strip

Shingles installed at intersections and valleys:

- 8-in.-wide x ½-in.-thick bed of flashing cement
- Not applicable

¹⁴6 nails per shingle are usually required by shingle manufacturers for high wind installation.

Architectural Metal Panels Yes N/A

Select architectural metal panel system approval:

- Florida Product Approval
- ICC-ES
- Miami-Dade
- TDI
- UL

Provide the documentation number associated with the approved system (i.e., FL Number for FPA):

Multiple systems

Single system: _____

Enhancements (describe):

A check in the box beside each requirement indicates that the architectural metal panel installation is in accordance with the standard.

The architectural metal panels were designed to meet the design wind pressures of ASCE 7 for the building specific parameters as outlined in section 3.1.1.3.1 of the FORTIFIED Commercial– 2025 Wind standard.

The panel attachments were designed for the wind pressures as defined in section 3.1.1.3 of the FORTIFIED Commercial– 2025 Wind standard.

Attachments are installed per the manufacturer's guidelines.

Sealed Roof Deck Options for Asphalt Shingles and Metal Roof Covers

Select one of the following options to indicate how the roof deck is sealed:

- OPTION 1: FLASHING TAPE AND UNDERLAYMENT-**
Tape the seams between roof sheathing that forms the roof deck and add an approved underlayment.
 - 4" wide ASTM D1970 self-adhering polymer-modified bitumen flashing tape.
 - AAMA 711-13, Level 3 self adhering flashing tape.

And apply a code compliant underlayment options over the self adhering tape:

- ASTM D226 Type II (#30)
- ASTM D4869 Type III or Type IV(#30)
- ASTM D6757 (for asphalt shingles only)
- Reinforced synthetic roof underlayment which has an ICC approval as an alternative to ASTM D226 Type II felt paper with a minimum tear strength of 15lbf in accordance with ASTM D4533 and a minimum tensile strength of 20 lbf.in. in accordance with ASTM D5035.

OPTION 2: SELF ADHERED MEMBRANE- Cover the entire roof deck with a full layer of self-adhering polymer-modified bitumen membrane meeting ASTM D1970 requirements.

OPTION 3: TWO LAYERS OF FELT UNDERLAYMENT- Install two (2) layers of one of the following code-compliant underlayment options:

- ASTM D226 Type II (#30)
- ASTM D4869 Type III or Type IV (#30)
- ASTM D6757 (for asphalt shingles only)

OPTION 4: 2-PLY SYNTHETIC UNDERLAYMENT- Install two (2) layers of one of the following code-compliant synthetic underlayment options:

- ASTM D8257 – Mechanically Attached Polymeric Roof Underlayment Used in Steep Slope Roofing.
- Reinforced synthetic roof underlayment which has a current ICC, AC 188 approval as an alternate to ASTM D226 Type II felt paper. The synthetic underlayment must have a minimum tear strength of 15 lbf in accordance with ASTM D4533, a minimum tensile strength of 20 lbf/in. in accordance with ASTM D5035 and pass the ASTM D4869 liquid water transmission test.

Mortar-set tile or mortar-set hip and ridge tiles are not used.

Hip and ridge boards or metal must be attached to the roof framing to resist the uplift pressure for the site design wind speed and exposure or in accordance with the tile manufacturer’s product approval.

Hip and ridge tiles must be secured to the hip and ridge boards or metal with mechanical fasteners and/or an approved roof tile adhesive.

Concrete and Clay Tile Sealed Roof Deck

Select one of the following options to indicate how the roof deck is sealed:

OPTION 1: FLASHING TAPE AND UNDERLAYMENT- Tape the seams between roof sheathing that forms the roof deck and add an approved underlayment.

4” wide ASTM D1970 self-adhering polymer-modified bitumen flashing tape.

AAMA 711-13, Level 3 self adhering flashing tape.

And apply a #30 ASTM D226 Type II underlayment/anchor sheet over the self-adhering tape. Then apply an approved self-adhering polymer-modified bitumen roof tile cap sheet that complies with ASTM D1970 and meets the site design wind speeds over this underlayment or hot-mop an approved tile underlayment over the underlayment/anchor sheet using hot asphalt.

OPTION 2: SELF ADHERED MEMBRANE- Cover the entire roof deck with a full layer of self-adhering polymer-modified bitumen membrane meeting ASTM D1970 requirements.

Note: Some local building departments prohibit the use of this system. Check with the local building department for restrictions. Manufacturers emphasize the need for adequate attic ventilation when this type of membrane is applied over the entire roof.

Concrete and Clay Tile

Yes N/A

Concrete and Clay Tile Material and Installation

A check in the box beside each requirement indicates that the tile installation is in accordance with the standard.

Select the Concrete and Clay Tile approval:

- Florida Product Approval
- ICC-ES
- Miami-Dade
- TDI

Clay and concrete tiles are installed over a minimum ¹⁵/₃₂-in.-thick plywood.

Other Roof Coverings

Yes N/A

Roof type: _____

Manufacturer: _____

Describe how the roof covering meets the design pressures as outline in section 3.1.1.3 and that the attachments meet the design pressures as outline in section 3.1.1.3.1.

If applicable, please describe the sealed roof deck method:

Structural Roof Deck and Attachment

Select the appropriate structural roof deck and fill out the corresponding information.

Plywood and oriented strand board (OSB) Yes N/A

Select the structural deck:

Plywood OSB

Check the box beside each requirement to indicate that the tile installation is in accordance with the standard.

Roof sheathing can resist the loads and load combinations specified in ASCE 7 as outlines section 3.1.1.3.1 of the FORTIFIED Commercial– 2025 Wind standard.

Wood structural panel thickness is not less than 7/16 in. and no less than 15/32 in. for the installation of new clay or concrete roof tiles.

Sheathing Fastening:

Roof member spacing (in.)¹⁵: _____

Sheathing thickness (in.): _____

Fastener type

8d ring-shank nails

10d ring-shank nails

Other (engineer of record must provide calculations)

Note: Smooth-shank nails are not permitted.

Fastener spacing:

Field: 4 in o.c. Other: _____

Perimeter: 4 in. o.c. Other: _____

Corner: 4 in. o.c. Other: _____

¹⁵For mean roof height less than 30 ft, the maximum allowed roof member spacing is 24 in. o.c. unless calculations are provided by the engineer of record.

Sawn Lumber or Wood Boards

Yes N/A

Check the box beside each requirement to indicate that the sawn lumber or wood boards are in accordance with the standard. Fill out requested information where indicated.

Sawn lumber or wood board roof deck can resist the loads and load combinations specified in ASCE 7 as outlines section 3.1.1.3.1 of the FORTIFIED Commercial– 2025 Wind standard.

Manufacturer: _____

Dimensions:

Width (in): _____

Thickness (in): _____

Roof member spacing (in.)¹⁶: _____

Sawn lumber or wood board roof deck attachments can resist the loads and load combinations specified in ASCE 7 as outlines section 3.1.1.3 of the FORTIFIED Commercial– 2025 Wind standard.

Describe the attachment detail:

Structural Steel Decks

Yes N/A

Check the box beside each requirement to indicate that the sawn lumber or wood boards are in accordance with the standard. Fill out requested information where indicated.

Structural steel deck can resist the loads and load combinations specified in ASCE 7 as outlines section 3.1.1.3.1 of the FORTIFIED Commercial– 2025 Wind standard.

Manufacturer: _____

Gauge: _____

Profile: _____

Roof member spacing (in.): _____

Structural steel deck attachments can resist the loads and load combinations specified in ASCE 7 as outlines section 3.1.1.3 of the FORTIFIED Commercial– 2025 Wind standard.

Describe the attachment details:

¹⁶Measured from centerline to centerline in inches.

Drip Edge (Edge Flashing) Yes N/A

A check in the box beside each requirement indicates that the drip edge is in accordance with the standard. Fill out requested information where indicated.

- Minimum 26 gauge
- Joints are overlapped a minimum of 3 in.
- Drip edge extends ½ in. below sheathing and extends back on the roof a minimum of 2 in.
- Mechanically fastened at 4 in. o.c. and fasteners are alternating (staggered)
- Drip edge is installed **over** the underlayment

Flashing (All Non-Edge Flashing Applications)

Yes N/A

Check the box beside each requirement to indicate that the flashing is in accordance with the standard. Fill out requested information where indicated.

- Meets the 2018 IBC
- Meets the manufacturer's installation guidelines

Ridge and Off Ridge Vents Yes N/A

Check the box beside each requirement to indicate that the ridge and off ridge vents are in accordance with the standard. Fill out requested information where indicated.

- Ridge and off ridge vents are TAS 100(A) rated for resisting water intrusion in high winds.
- Attached to the roof per the manufacturer's installation guidelines.

Gable End Vents Yes N/A

IBHS recommends against including gable end vents in new commercial buildings built in hurricane-prone regions. If they must be used to meet code they must meet:

- Gable end vents are TAS 100(A) rated for resisting water intrusion in high winds.
- Attached to the roof per the manufacturer's installation guidelines.

Skylight Yes N/A

Check the box beside each requirement to indicate that the skylights are in accordance with the FORTIFIED Commercial– 2025 Wind standard.

Skylights and their attachments are designed and detailed for the ASCE 7 wind loads and provide an uplift resistance as defined in section 3.1.1.3.1.

Skylights must be tested and approved at a minimum to (check one that applies):

- AAMA/WDMA/CSA 101/ CSA 101/ A440, ASTM E330
- The Florida Building Code Testing Application Standard TAS 202

Installation meets the air and water infiltration requirements of ASTM E330 and ASTM E331.

The curb is designed to meet the minimum required uplift requirements with additional factor of safety as defined in section 3.1.1.3.

Hurricane-Prone Regions Only:

Skylights shall conform to one of the following:

- ASTM E1886 cyclic pressure test requirements and ASTM E1996 large missile impact rated "C" or "D"
- FM Approved per ANSI FM 4431 and FM 4350 with large missile impact rating.
- Miami-Dade County Approved (TAS 201 and TAS203), with large missile impact rating.

Roof-Mounted Structures and Equipment (RME) Yes N/A

Check the box beside each requirement to indicate that the RME are in accordance with the FORTIFIED Commercial– 2025 Wind standard.

Ballasted systems are NOT used.

All RME and their attachments have been designed with a minimum factor of safety as defined in section 3.1.1.3 of the FORTIFIED Commercial– 2025 Wind standard.

All RME and their attachments are in accordance with one of the following:

- ASCE 7-10 Section 29.5.1 (h≤60ft)
- ASCE 7-16 Section 29.4

Photovoltaic Systems

Yes N/A

Photovoltaic (PV) systems and their attachments are designed with a minimum factor of safety outlined in section 3.1.1.3 of the FORTIFIED Commercial– 2025 Wind standard and in accordance with (select one):

- ASCE 7-16
- ASCE 7-22
- SEAOC PV2
- Model-scale wind tunnel study that meets the requirements of ASCE 49-12 (documentation must be submitted)

Lightning Protection Yes N/A

Check the box beside each requirement to indicate that the lightning protection system is in accordance with the FORTIFIED Commercial– 2025 Wind standard.

- The system is designed and installed in accordance with FEMA-Rooftop Attached Lightning Protection Systems in High-Wind Regions.
- Looped conductor connections were used in lieu of pronged connectors.
- Bolted splice connectors were used in lieu of pronged connectors.

Low-Sloped ($\leq 10^\circ$) Roof-Mounted Safety Rails Yes N/A

Check the box beside each requirement to indicate that the Low-Sloped ($\leq 10^\circ$) Roof-Mounted Safety Rails are in accordance with the FORTIFIED Commercial– 2025 Wind standard.

- Rails and their connections were designed in accordance with IBC 2015/2018 and ASCE 7-10/16.
- A calculation set by the engineer of record must be submitted with this document including all wind design parameters, member selection and design, connection details and capacity verification, and the supporting structural member calculations.

Low- Sloped ($\leq 10^\circ$) Roof Equipment Screens Yes N/A

Check the box beside each requirement to indicate that the Low-Sloped ($\leq 10^\circ$) Roof Equipment Screens are in accordance with the FORTIFIED Commercial– 2025 Wind standard.

- Roof equipment screens and their connections were designed to the parameters of section 3.1.1.3.1 of the FORTIFIED Commercial– 2025 Wind standard.

FORTIFIED SILVER

All FORTIFIED Roof requirements must be satisfied.

For this section, check the box beside each requirement or respond to the item to indicate that items are in accordance with the FORTIFIED Commercial– 2025 Wind standard.

Opening Protection

Wall Design Pressures

Provide select and fill out the appropriate wind pressures.

- ASCE 7-10 design pressures (psf) using minimum terrain Exposure C or D and effective wind area of 10 sq ft

Please select the method used to obtain base pressures:

- ASD LRFD

Specify the wind pressures (psf):

Zone 4: _____

Zone 5: _____

- ASCE 7-16/22 design pressures (psf) using minimum terrain Exposure C or D and effective wind area of 10 sq ft

Please select the method used to obtain base pressures:

- ASD LRFD

Specify the wind pressures (psf):

Zone 4: _____

Zone 5: _____

Windows and Glazed Openings

Yes N/A

Select the type(s) of window system:

- Single-pane
- Double-pane
- Laminated glass
- Impact-rated laminated window and frame system
- Triple-pane impact-rated laminated window and frame system

Check the box beside each requirement or respond to the item to indicate that the windows are in accordance with the FORTIFIED Commercial– 2025 Wind standard.

- Windows and glazed openings are designed for the load combinations outlined in section 3.1.1.3.1 of the FORTIFIED Commercial– 2025 Wind standard.

Hurricane-Prone Regions: Fill out the following if you are located in a hurricane-prone region. If you are not located in a hurricane-prone region, continue to high-wind-prone region.

- Labels verifying the impact rating and pressure capacity are visible on the installed windows.

Windows, glazed openings, curtain walls meet (select one of the following):

- AAMA/WDMA/CSA 101/ CSA 101/ A440, ASTM E330
- The Florida Building Code Testing Application Standard TAS 202

Impact Protection:

Within 30 Feet of Grade: Windows, glazed openings, curtain walls meet (select one of the following):

- Large Missile Level D (9 lb 2x4 impacting end on at 50 ft/sec) as defined in ASTM E1996 and ASTM E1886 and AAMA 506
- The Florida Building Code Testing Application Standards TAS 201 and TAS 203

30 Feet or Higher: Windows, glazed openings, curtain walls meet:

- ASTM E1886 cyclic pressure and Small Missile Level A as defined in ASTM E1996, ASTM E1886 and AAMA 506.

Large Commercial Doors

Yes N/A

All large commercial doors including roll-up, overhead, and sectional (garage doors) are designed for the load combinations defined in section 3.1.1.3.1 of the FORTIFIED Commercial– 2025 Wind standard.

Large commercial doors meet (select one of the following):

- AAMA/WDMA/CSA 101/ CSA 101/ A440, ASTM E330
- ANSIDASMA 108
- The Florida Building Code Testing Application Standard TAS 202

Impact Protection:

Large commercial doors meet (select one of the following):

- Large Missile D (9 lb 2x4 impacting end on at 50 ft/sec) as defined in ASTM E1996 and ASTM E1886 and AAMA 506
- ANSI/DASMA 115 Standard Method for Testing Sectional Doors, Rolling Doors, and Flexible Doors: Determination of Structural Performance Under Missile Impact and Cyclic Wind Pressure
- The Florida Building Code TAS 201 (Impact Test Procedures), 202 (Criteria for Testing Impact & Nonimpact Resistant Building Envelope Components Using Uniform Static Air Pressure), and 203 (Criteria for Testing Products Subject to Cyclic Wind Pressure Loading)

Exterior Personnel Doors

Yes N/A

All personnel doors are designed for the load combinations outlined in section 3.1.1.3.1 of the FORTIFIED Commercial– 2025 Wind standard.

Hurricane-Prone Regions: Fill out the following if you are located in a hurricane-prone region.

Exterior personnel doors meet (select one of the following):

- AAMA/WDMA/CSA 101/ CSA 101/ A440, ASTM E330
- The Florida Building Code Testing Application Standard TAS 202

Exterior Walls and Wall Protection

Wall systems are designed for the load combinations outlined in section 3.1.1.3.1 of the FORTIFIED Commercial– 2025 Wind standard.

Hurricane-Prone Regions: Fill out the following if you are located in a hurricane-prone region.

- Wall impact resistance meets the requirements of ASTM E1886 and ASTM E1996 for the impact of a 9-lb nominal 2x4 lumber missile impacting end on at 34 mph (50ft/s) (large missile impact level D).

Wall Types

Select all that apply; for hurricane-prone regions, exterior walls must be impact rated (denoted as “IR” below).

- Reinforced concrete block (IR)
- Precast concrete/tilt up panels (IR)
- Cast-in-place concrete (IR)
- Brick veneer over wood or metal frame
- Brick with concrete block backing (IR)
- Metal walls
 - Metal wall systems are designed and tested for resistance in accordance with ASTM E1592. Each assembly shall be tested for a load equal to 1.5 times the design pressure.
- Insulated concrete form
- Sandwich panel wall systems

¹⁷ For all existing EIFS that meet these criteria, a qualified professional with an active AWCIEIFS Inspectors certification shall inspect the EIFS and provide supporting documentation regarding its condition. EIFS that are not visibly damaged, deteriorated, chipped, or cracked, that have structurally sound horizontal and vertical seals including around windows and penetrations, are free of leaks, and have at least 5 years of useful life remaining are eligible for a FORTIFIED Silver designation. EIFS that do not meet these conditions

Meets the International Code Council (ICC) Evaluation Service – Acceptance Criteria for Sandwich Panels AC04. Any adhesives used shall comply with ASTM D2559 or the ICC Acceptance Criteria for Sandwich Panel Adhesives AC05.

Exterior insulating finishing systems (EIFS) ¹⁷

For all new construction applications, EIFS systems shall be installed by a qualified professional with an active Association of the Wall and Ceiling Industry (AWCI)- EIFS Mechanics certification.

Hurricane-Prone Regions Only: EIFS Installed on a metal or wood frame are not permitted unless they are a Miami-Dade County Approved system.

Solid insulated concrete forms / ¾-in. plywood/ ≥7/16-in. wood structural panel sheathing with one of the following finishes:

- ½-in. stucco (IR)
- ½-in.-thick wood (IR)
- ½-in. fiber-cement-based planking (IR)

≥¾-in.-thick wood structural panel sheathing with vinyl or aluminum siding (IR)

Other walls

Describe “other” wall system:

Wall systems are designed for the load combinations outlined in section 3.1.1.3.1 of the FORTIFIED Commercial– 2025 Wind standard.

Hurricane-Prone Regions: Fill out the following if you are located in a hurricane-prone region.

- Wall impact resistance meets the requirements of ASTM E1886 and ASTM E1996 for the impact of a 9-lb nominal 2x4 lumber missile impacting end on at 34 mph (50ft/s) (large missile impact level D).

and/or do not have at least 5 years of useful life remaining will require repairs or replacement to be eligible for a FORTIFIED Silver designation.

For a national registry of AWC certified professionals visit:
<https://www.awci.org/education/doing-it-right/eifs-doing-it-right#registry>

Parapets Yes N/A

Is the parapet taller than 3 ft from base connection to free end?

Yes NO

If yes, is structural bracing (internal or external) provided and does it meet the minimum ASCE 7 standards?

Yes NO

Gable Ends

Yes N/A

Gable end walls are designed in accordance with ASCE 7 as defined in section 3.1.1.3.1.

Gable end wall sheathing has sufficient strength and fastening to resist wall design wind pressures specified in ASCE 7 as outlined in Section 3.1.1.3.1.

Gable end bracing is designed by the structural engineer of record to meet the minimum design wind pressures specified in ASCE 7 as outlined in Section 3.1.1.3.1. and the engineer addressed the bending capacity of the gable wall, bracing of the gable wall at its top and bottom, and connection of the bottom of the gable wall to the wall below.

Gable end overhangs are constructed and attached to gable framing to resist the site-specific wind pressures specified in ASCE 7 as outlined in Section 3.1.1.3.1. Gable end overhangs greater than 12 inches should be designed as an outlooker by the structural engineer of record and calculations must be provided to the FORTIFIED Commercial Evaluator.

Hurricane Prone Regions:

Gable end rake soffits are unvented.

Chimneys

Yes N/A

Chimneys have adequate load path members and connections capable of resisting the loads and load combinations specified in ASCE 7 as outlined in section 3.1.1.3.1.

Electrical/ Mechanical Systems

Flood Protection

All electrical and mechanical equipment and connections necessary to operate critical systems are located above the 500-year flood level if known, or at least 3 ft above the known base flood elevation (100-year flood level) or advisory flood elevation.

Yes N/A

Since the building is located out of a 500-year and 100-year flood zone, all electrical and mechanical equipment and connections necessary to operate critical systems are not exposed to flood waters.

Yes N/A

Electrical Connections for Backup Power

Yes N/A

Hurricane-Prone Regions: Fill out the following if you are located in a hurricane-prone region.

High-Wind-Prone Regions: Recommended—not required

Transfer switch or docking station (sometimes referred to as a storm switch), that support connection of a generator capable of powering, at a minimum, the critical systems needed to provide continuity of operation.

All electrical connections for backup power are located above the 500-year flood level if known, or at least 3 ft above the known base flood elevation (100-year flood level) or advisory flood elevation.

Yes N/A

FORTIFIED Gold

All FORTIFIED Silver requirements must be satisfied.

For this section, check the box beside each requirement or respond to the item to indicate that items are in accordance with the FORTIFIED Commercial– 2025 Wind standard.

Continuous Load Path

A continuous and adequate load path from the roof to the foundation of the building exist. The building has positive connections from the roof to foundation as a means to transmit wind uplift and lateral loads safely to the ground. This includes providing roof-to-wall connection hardware (e.g., hurricane straps for wood) with the required roof uplift resistance as determined by the designer or specified in the prescriptive method being used.

Inter-story connections in multi-story structures have a continuous load path through the wall to the foundation.

Attached and Accessory Structures

Yes N/A

Convenience store canopies, carports, porte cocheres or any other vehicle-type drive-through structures will have adequate load path members and connections to resist the loads and load combinations specified in ASCE 7 as outlined in section 3.1.1.3.1.

Backup Power

Backup power shall be available and capable of powering critical electrical and mechanical systems that maintain vital business operations. All equipment shall be installed in accordance with the requirements of Electrical Systems (Flood) described in section 3.2.3.