Intro to FORTIFIED Construction in Louisiana

Smart Home America is a 501 c(3) not-for-profit

SMART HOME AMERICA

Welcome

Instructor

Julie Shiyou-Woodard

President and CEO

SMART HOME AMERICA

Instructor

Alex Cary

Market Development Manager

Insurance Institute for Business & Home Safety®

Instructor

Sonja Sheffield

Technical Outreach Director

SMART HOME AMERICA

Take Note

- You will need to sign in at the door and attend the entire course to receive CE credit
- To receive CE credit for this class please ensure that your name and license number are correct on your sign in
- Special thanks to IBHS for providing slide material

Disclaimer:

This course does not make you an official FORTIFIED Wise™ Roof Contractor.

Please see the IBHS FORTIFIED Roofer course at: https://www.fortifiedwise.com/

This course is an introduction to FORTIFIED Roofing™ and does satisfy the Alabama specific requirement.

Class Goals

Demonstrate the need for beyond code construction.

Overview of the levels of FORTIFIED Home™.

Introduce terminology, processes, and principles of beyond code construction.

Discuss value to homeowners and benefits of 3rd party verification.

SMART HOME

SMART HOME
AMERICA


Home Builders
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IBHS RESEARCH CENTER
WIND
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WILDFIRE

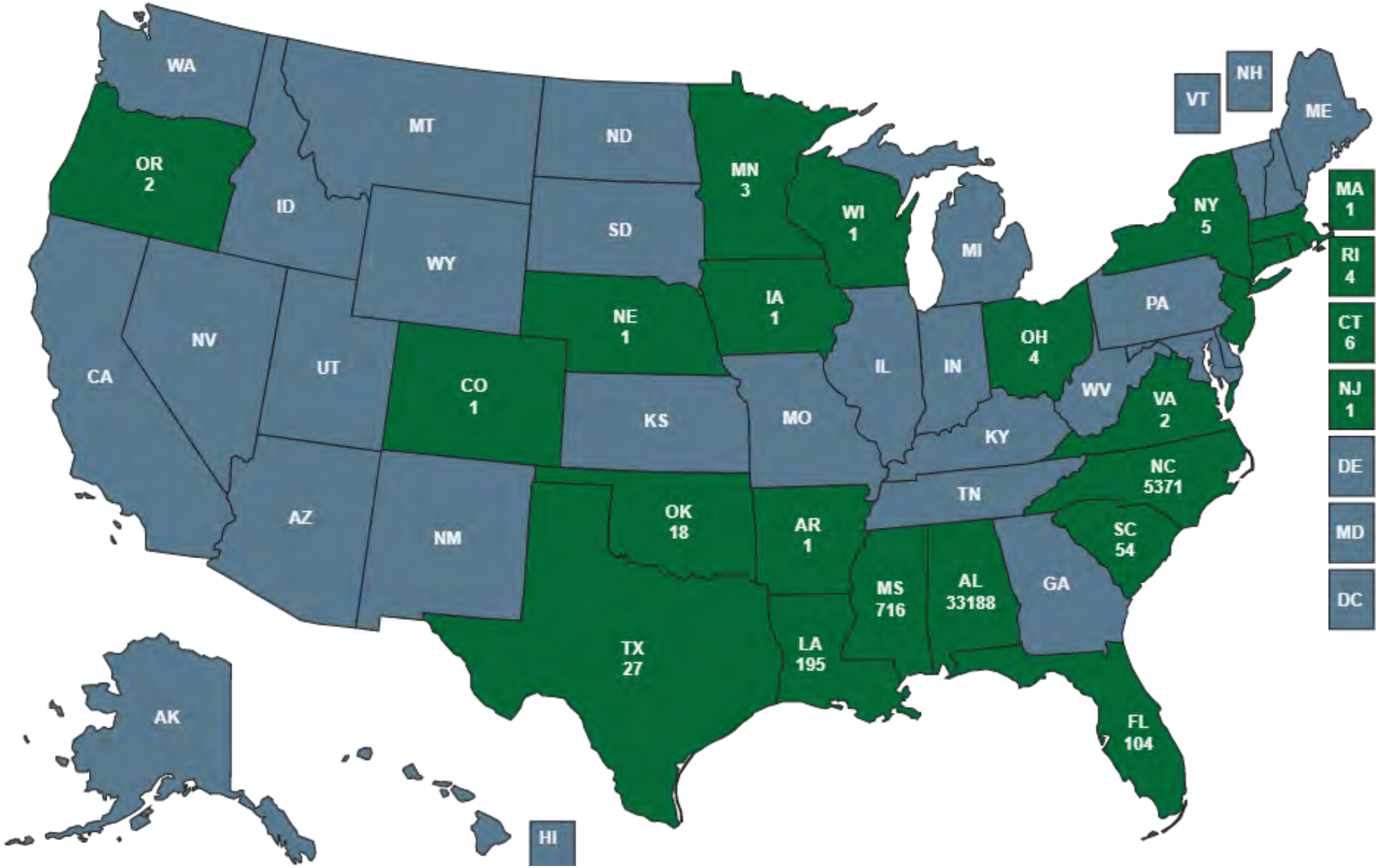

Insurance
Institute for
Business &
Home
Safety®


Lab Tested &
Real World Results

Insurance Institute for Business & Home Safety®

A PROGRAM OF IBHS
FORTIFIED HOME™

SMART HOME AMERICA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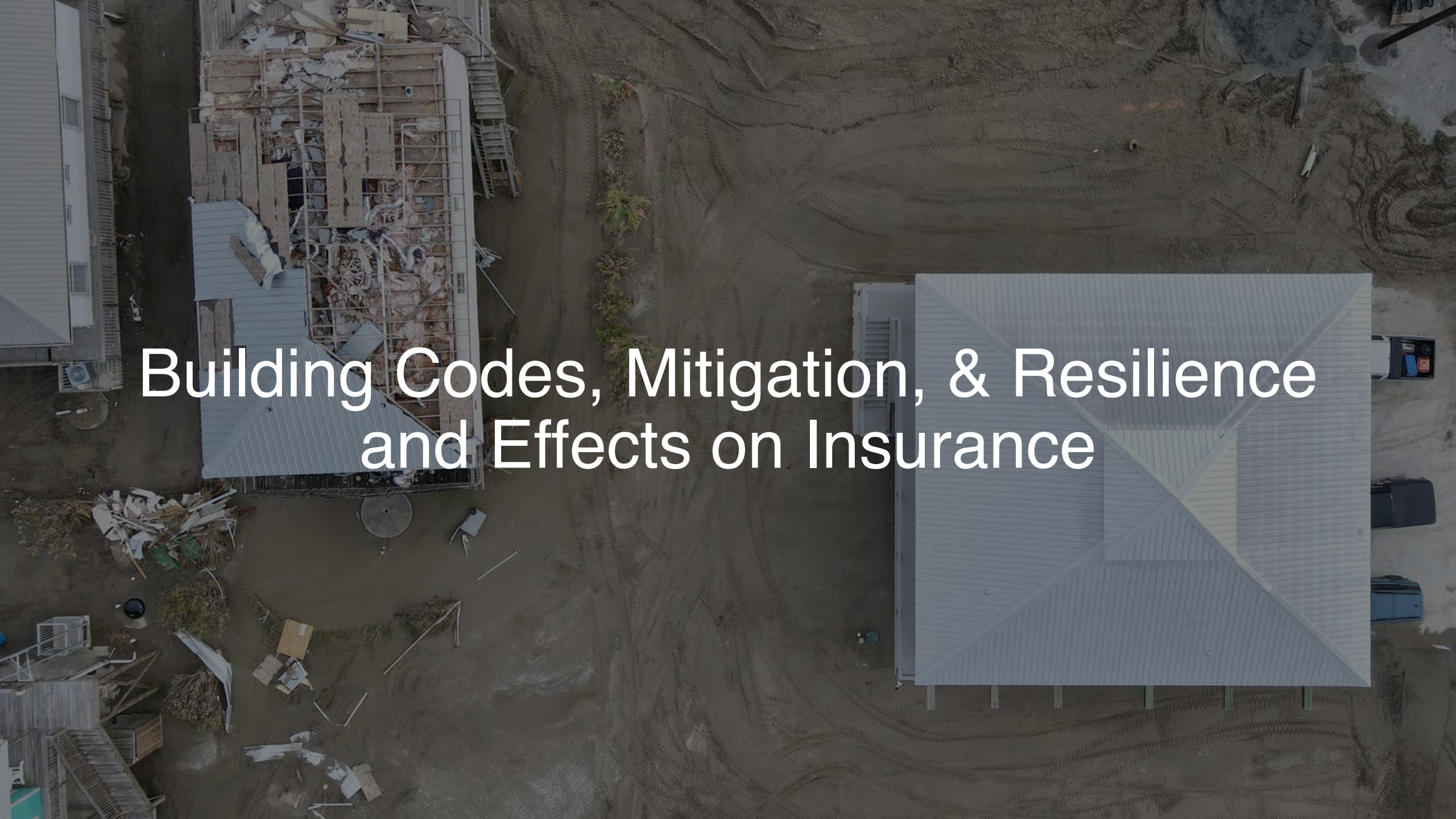
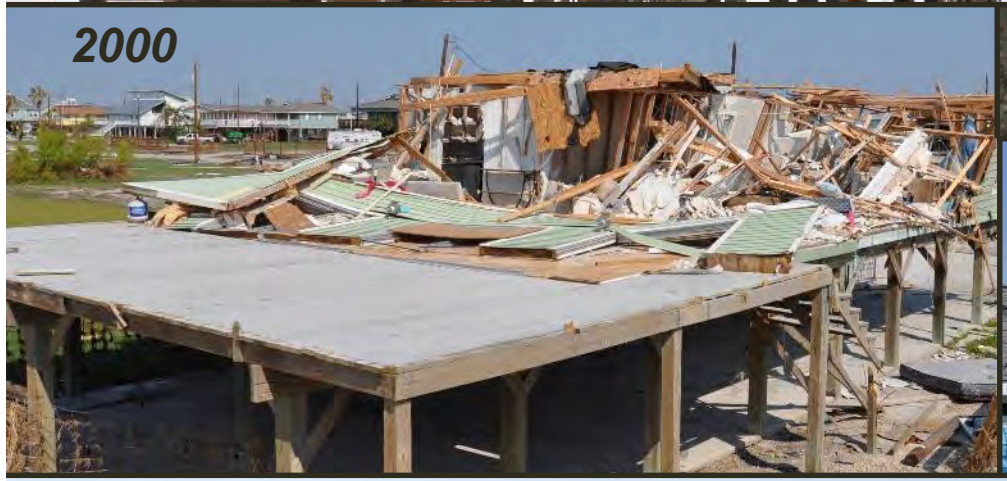


Building Codes, Mitigation, & Resilience and Effects on Insurance



SMART HOME AMERICA

Our Vision

Stronger, Sustainable, More Resilient Communities

Water Intrusion

Insurance Institute for Business & Home Safety

Traditional

Minimum Standard

Focus:
Life Safety

Make building able to survive a severe event

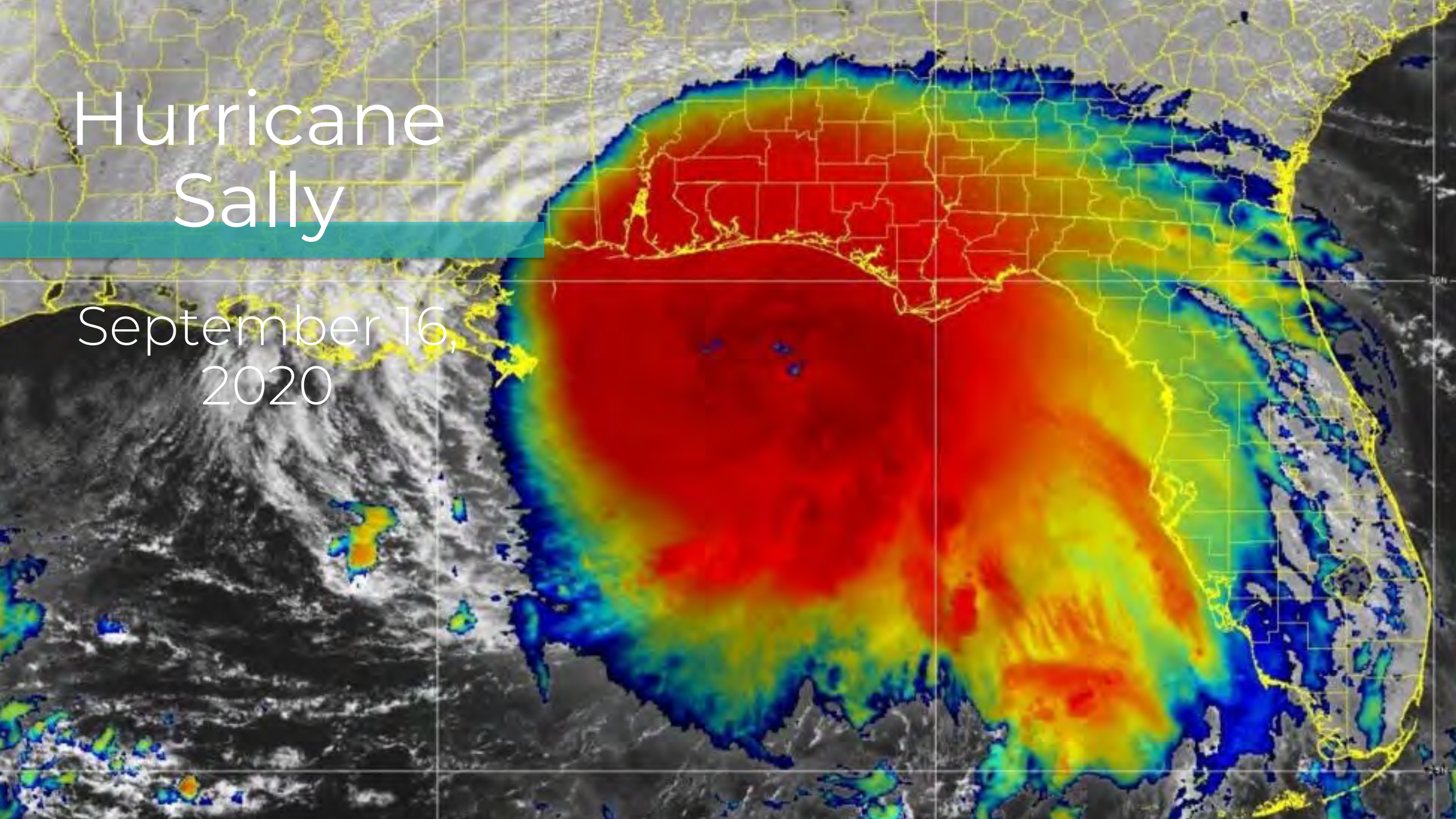
FORTIFIED

Beyond-Code Standard

Focus:
Life Safety
Property Protection

Make building able to survive a severe event & useable in a short period of time.

SMART HOME AMERICA


Hurricane
Sally
September 16,
2020

In total, nearly

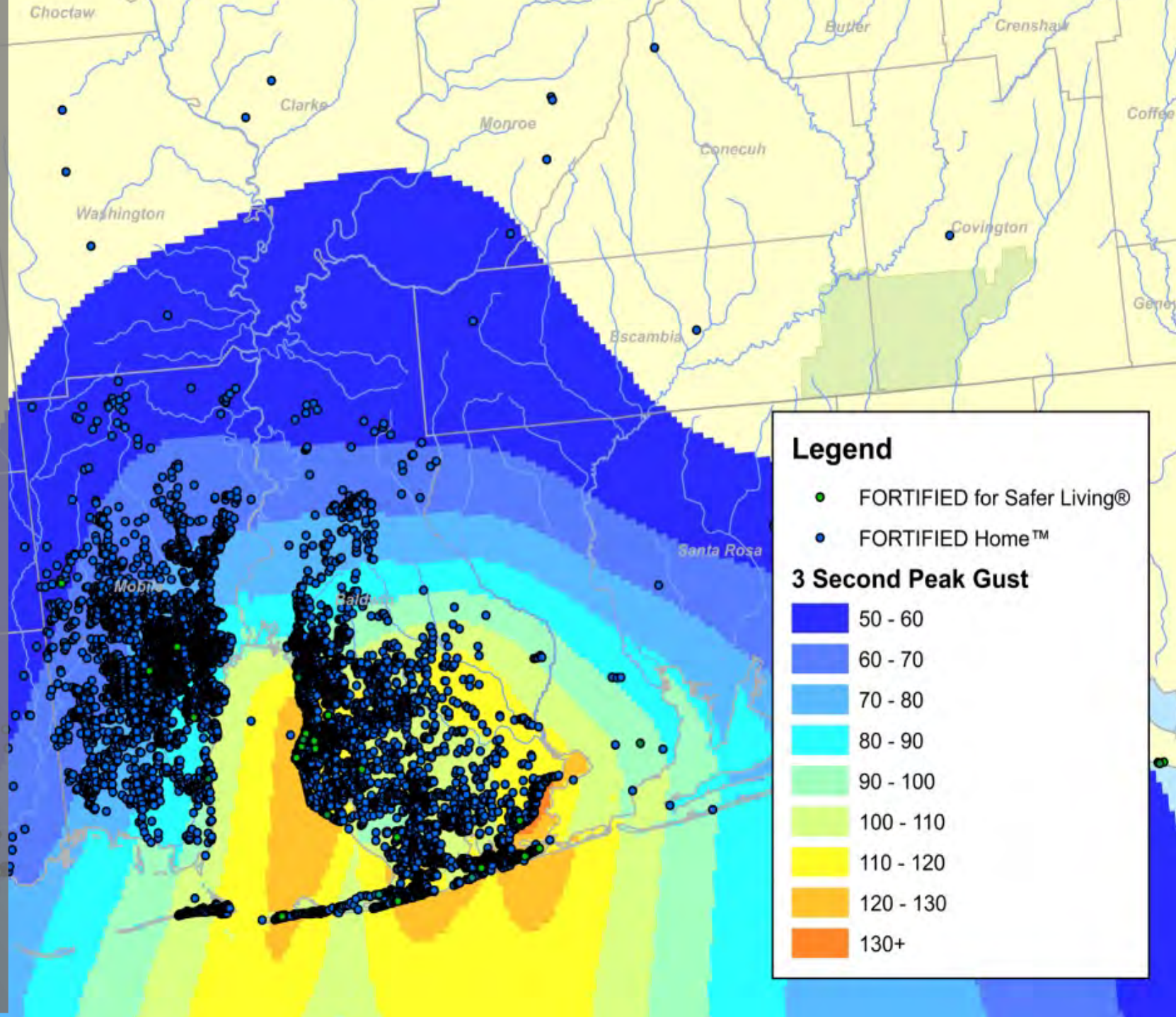
17,000

FORTIFIED Homes Threatened

Approximately

95%

Had Little or No Damage



Hurricane Sally


FORTIFIED
A PROGRAM OF IBHS
NOT FORTIFIED


Video: Matt FORTIFIED Testimony
Click Here
MAKOS

Ben Murphy Company, an award-winning FORTIFIED-Wise™ Roofing and Construction Company, received over 800 messages in just three days because people wanted a FORTIFIED Roof™ like their neighbor.

Testimonial

How are you buddy?

I want to tell you, I didn't even lose a shingle! You guys did amazing on my home and I've made sure to tell everyone I know needing work! BMC NO QUESTIONS!

Aaron Greene

bmc
ROOFING
251.943.7144


“We built over 2,000 houses that were in the path of Hurricane Sally and did not have a single call back.”
– Tom Stokes
Alabama Division President
TH
TRULAND HOMES

Hurricane Ida

A PROGRAM OF IBHS

FORTIFIED HOME™

Hurricane Ida

Brian Emfinger @brianemfinger

Grant Ethridge Construction, http://www.gchp.net

The Difference Beyond-Code Makes: Real World Numbers




Some observed sources of loss preventable by using FORTIFIED....

FORTIFIED
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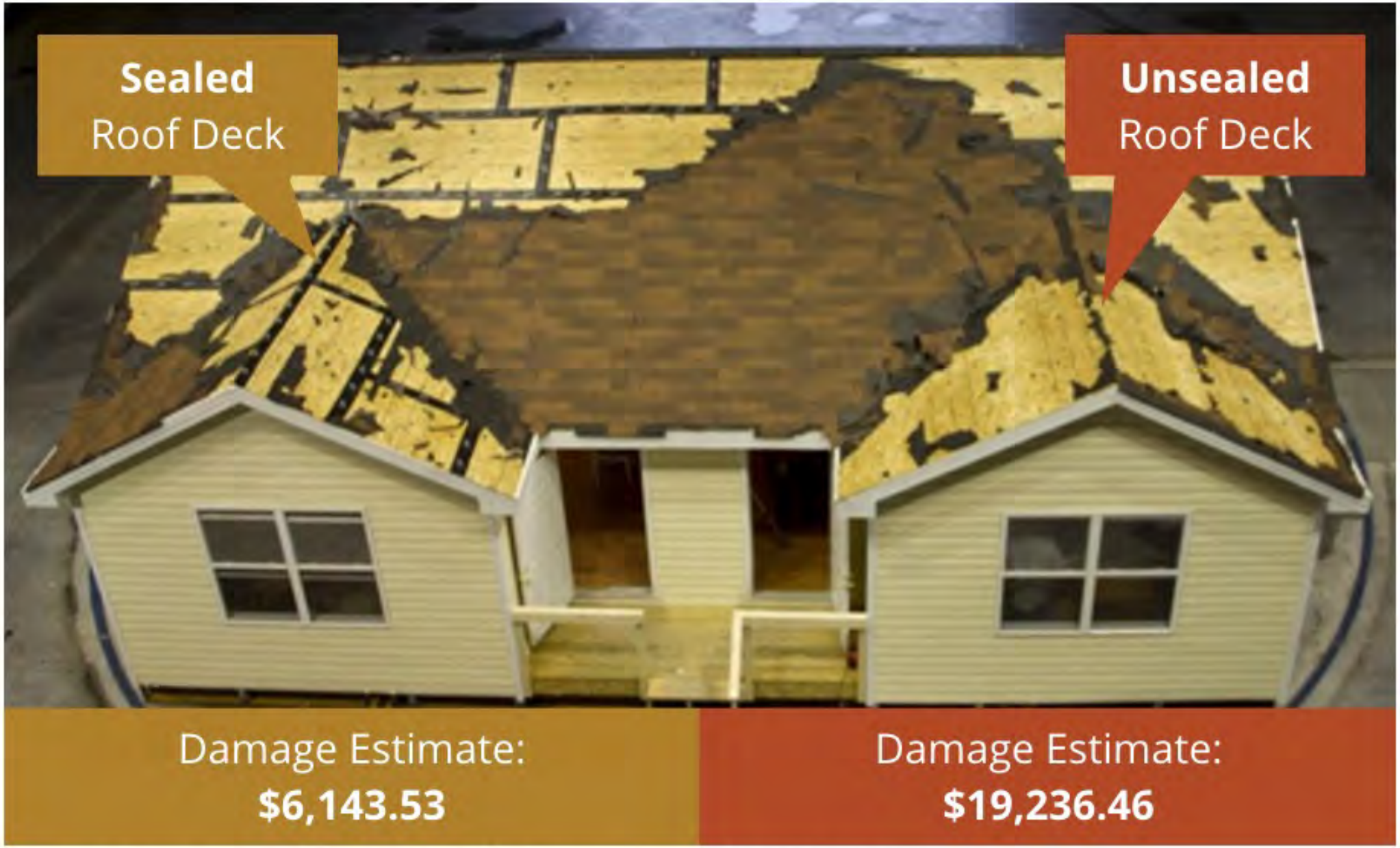
IBHS

Video: Water Intrusion Demo Highlights
Click Here

Water Intrusion Demo at the IBHS Research Center

Insurance Institute for Business & Home Safety®

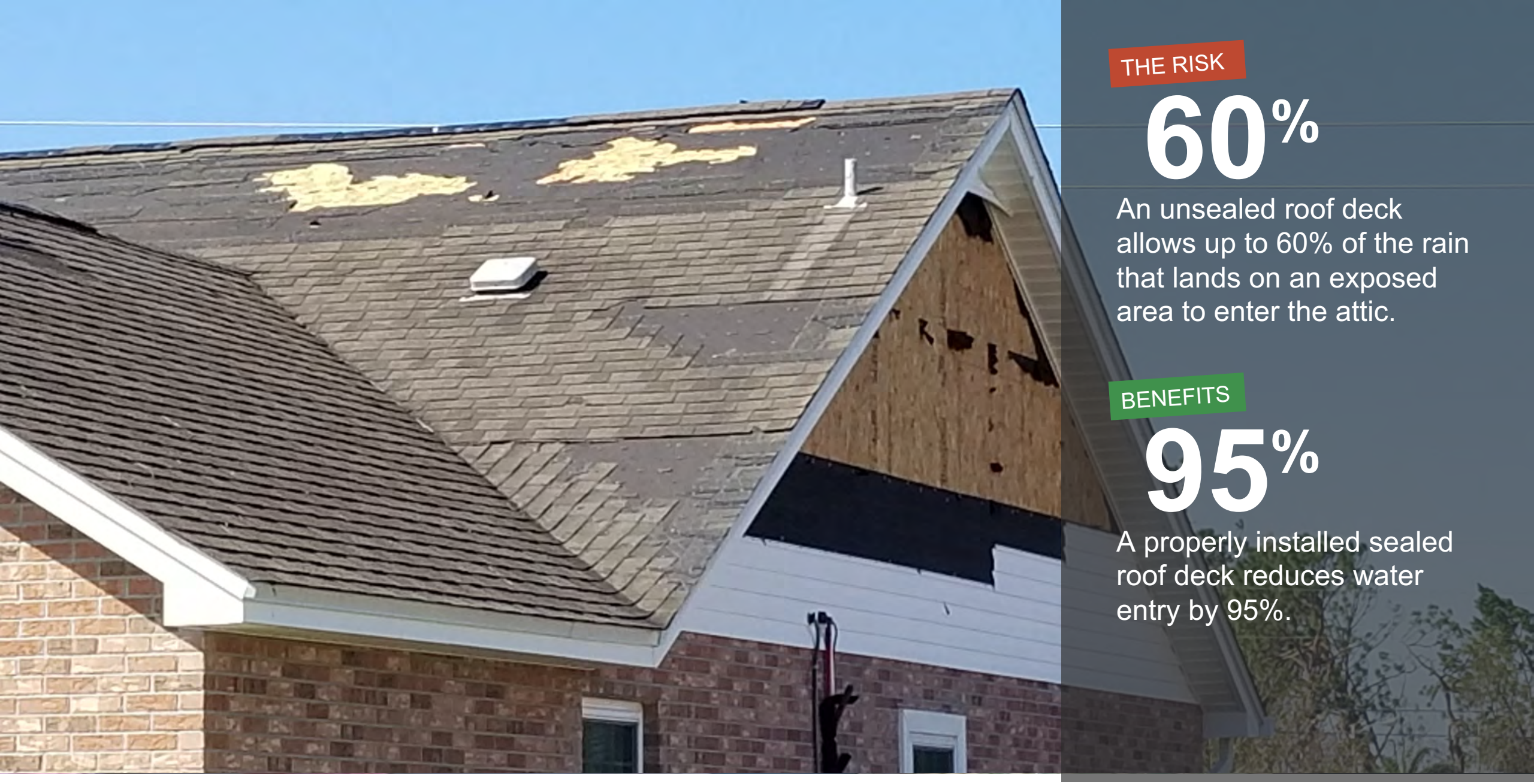


Comparison shows estimates in 2011 dollars adjusted for 2020 inflation

Insurance Institute for Business & Home Safety®


THE PROBLEM
UNSEALED ROOF DECK
Damage Estimate
$16,935
SEALED ROOF DECK
Damage Estimate
$5,408


FORTIFIED
ROOF
TM



THE RISK

60%

An unsealed roof deck allows up to 60% of the rain that lands on an exposed area to enter the attic.

BENEFITS

95%

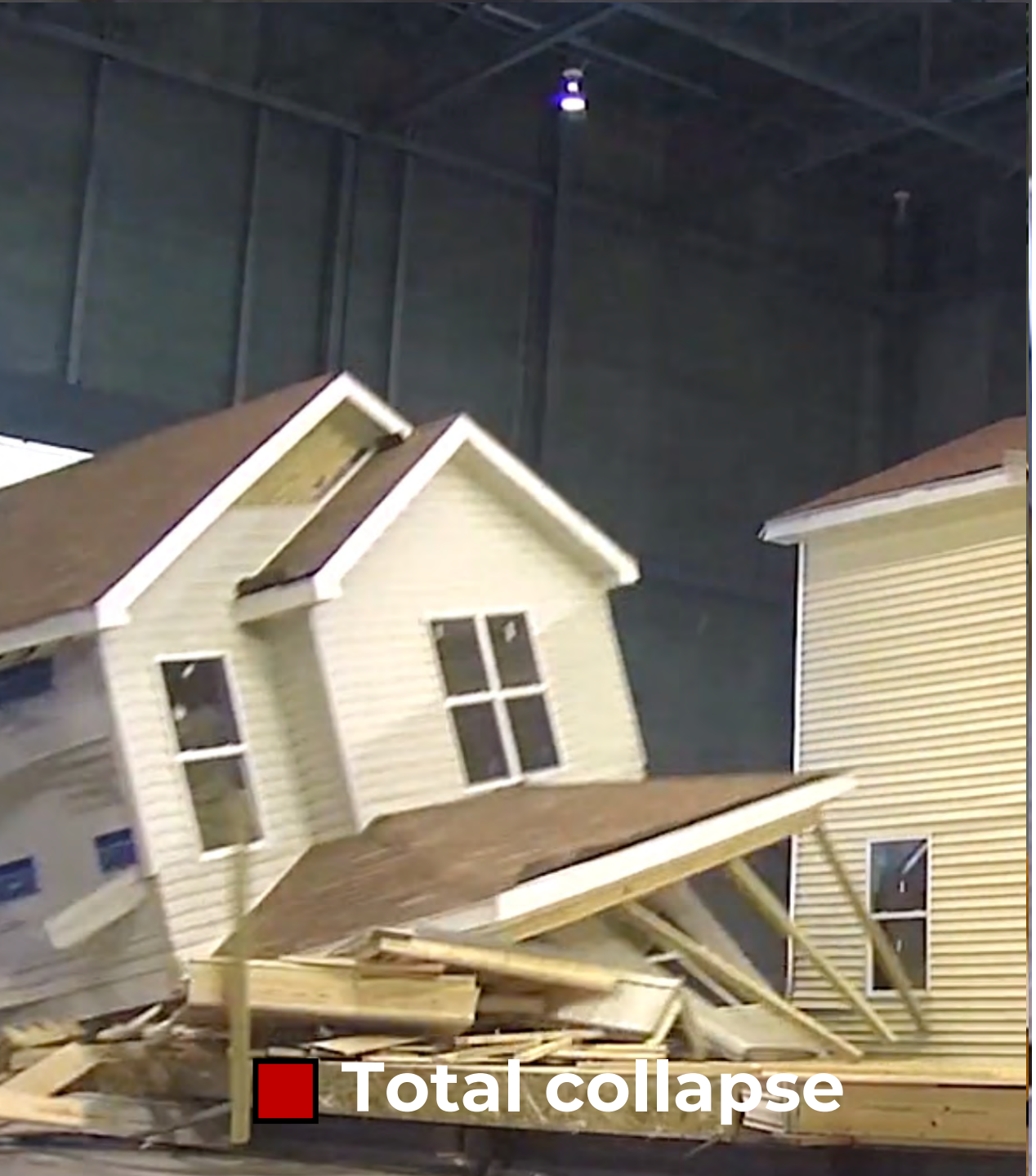
A properly installed sealed roof deck reduces water entry by 95%.

THE PROBLEM

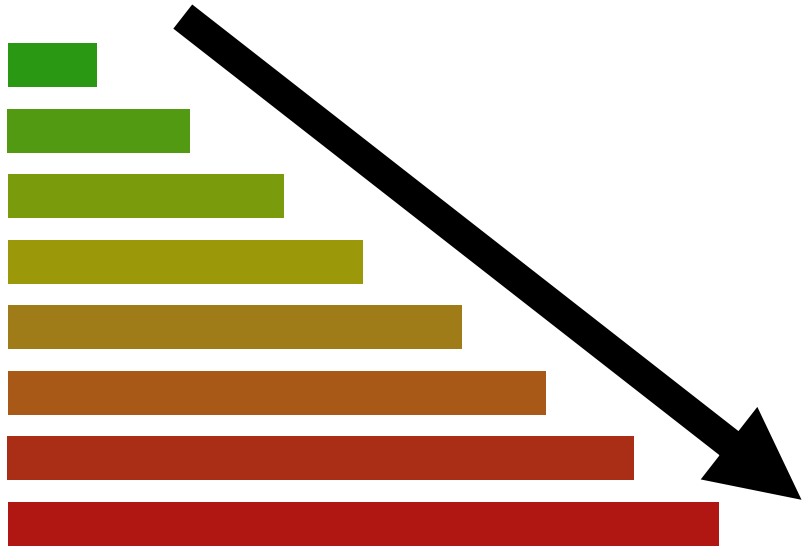
90% Of Losses

Roof-related damage is responsible for 70–90 percent of total losses.

Roofs routinely experience mild to severe damage during high wind and hail events



- Roof cover, soffits, facia
- Wall cover
- Roof sheathing
- Roof structure
- Total collapse




Video: Narrow the Path
Click Here

Video: What is FORTIFIED? Click Here

WHAT IS FORTIFIED?

- FORTIFIED is a **voluntary** program that contractors/builders can participate in and offer their homebuyers 3rd party validated protection against severe weather that goes beyond the standard building code.

- FORTIFIED has **geographically appropriate** standards for both high wind (inland) and hurricane (coastal) and offers **3 levels of durability**: Roof, Silver and Gold.

- Each of these levels builds on the lower levels so that the customer's desired level of protection can be **achieved** really **at any price point**.

- **Over 35,000 homeowners are enjoying the peace of mind** that comes with living in FORTIFIED homes.

Eligible Dwellings

- New and existing homes
- Single-family detached homes
- Duplexes
- Townhouses
- Manufactured homes

Non-Eligible Dwellings

- Any home on a dry-stack foundation
- Mixed-use buildings and commercial buildings
- Multi-unit residential condos and apartments

	FORTIFIED Home™ Hurricane	FORTIFIED Home™ High Wind
FORTIFIED Roof™	Roof and Attic Ventilation System	Roof System
FORTIFIED Silver™	Openings, Gables, Attached Structures, Garage Doors and Chimneys	Gables, Attached Structures, Garage Doors and Chimneys
FORTIFIED Gold™	Structure (CLP) and Design Pressure Rating for Openings	Structure (CLP)

Location and Design Wind Speed are key determining factors in deciding which standard(s) apply.

Keep the roof on, water out.
Reduce damage amplifiers:
Strengthen gable walls
Strengthen garage door openings.
Secure chimney to house structure.
Anchor attached structures – porches and carports.
Protect openings against debris impact

FORTIFIED SILVER

Keep the roof on and water out.
Enhanced by a sealed roof deck and a high performing wind rated roof cover.

FORTIFIED GOLD

Keep the roof on, water out
Reduce damage amplifiers
Keep the entire building intact with a continuous load path & protect openings against high pressures

FORTIFIED HOME™ HURRICANE

*HAIL SUPPLEMENT

Adds impact rated roof cover.

*Must meet the **Good** or **Excellent** rating by IBHS.

FORTIFIED HOME

FORTIFIED Home™ Hurricane

FORTIFIED Home™ High Wind

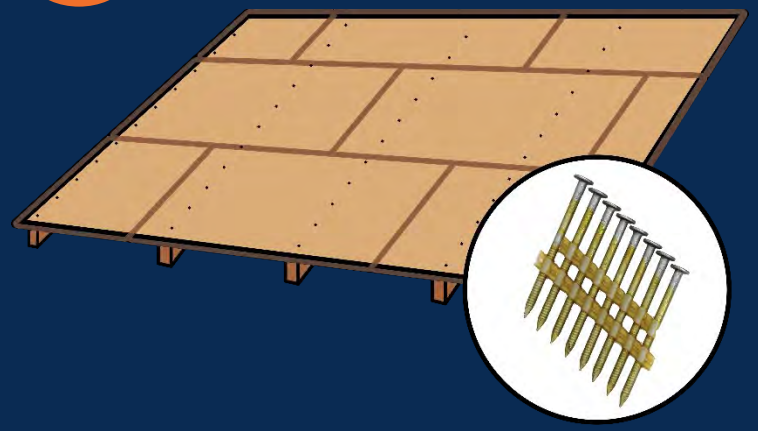
FORTIFIED Roof™

Roof and Attic Ventilation System	Roof System

Location and Design Wind Speed are key determining factors in deciding which standard(s) apply.

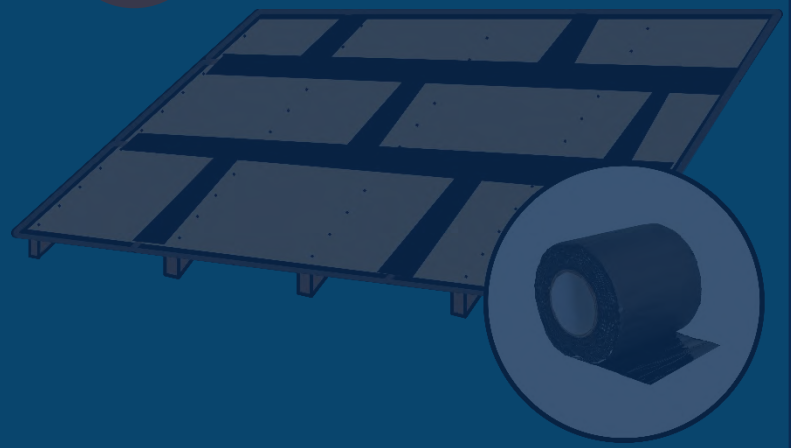
3 KEYS TO ROOF DURABILITY

1 Nail it down.



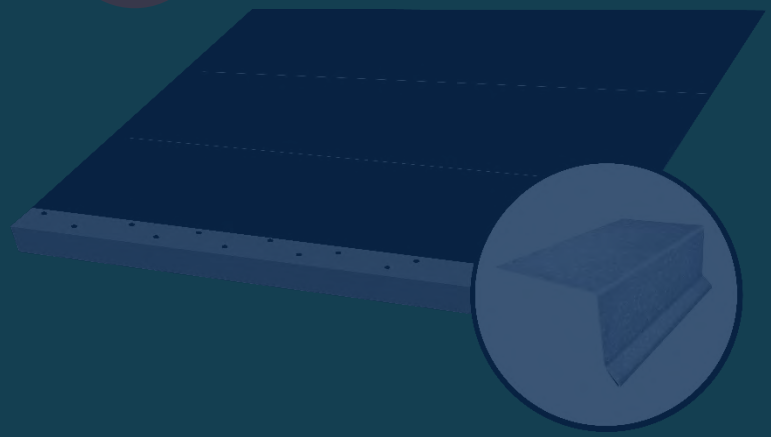
KEEP THE ROOF ON.

2 Seal it up.



KEEP THE WATER OUT.

3 Lock it in.



KEEP THE WIND OUT.

Roof Deck Attachment

GENERAL NOTES:

1. REFER TO APPLICABLE FORTIFIED HOME STANDARDS FOR ADDITIONAL INFORMATION.
2. TO BE ELIGIBLE FOR GOLD DESIGNATION, ROOF MEMBERS MUST BE DESIGNED FOR MINIMUM Vult = 130 MPH DESIGN WIND LOADS AND TERRAIN EXPOSURE C.
3. FORTIFIED HOME STANDARDS ARE TO BE APPLIED IN CONJUNCTION WITH FEDERAL, STATE, AND LOCAL CODES, ORDINANCES AND REGULATIONS IN ADDITION TO THE STRUCTURAL DESIGN WHICH IS BY OTHERS. IN CASE OF A CONFLICT BETWEEN PROVISIONS, USE WHICHEVER IS MORE STRINGENT.

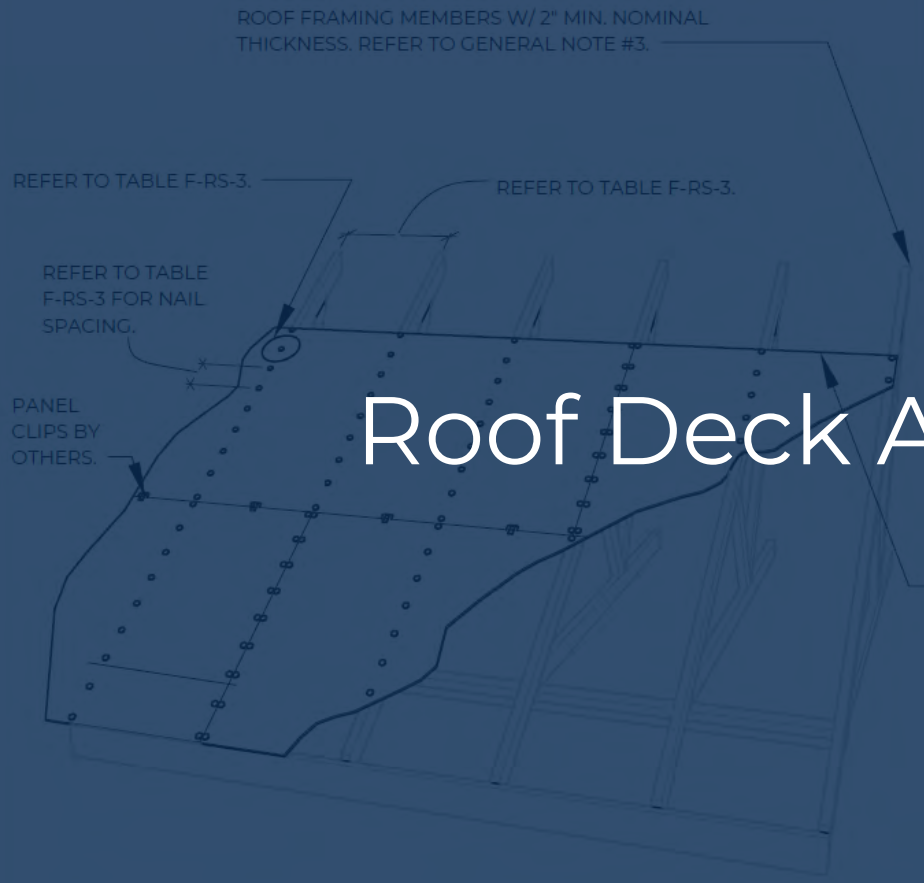


Table F-RS-3: MINIMUM REQUIREMENTS FOR ROOF SHEATHING THICKNESS AND FASTENING

ASCE Edition	Minimum Roof Sheathing Thickness[1,2,3]				Minimum Nail Size/Type[1,4]	Maximum Nail Spacing (All Roof Areas)[1]
	Roof members @ 16" O.C. Max.		Roof Members @ 24" O.C. Max.			
	FORIFIED Levels: Roof and Silver	FORTIFIED Level: Gold	FORIFIED Levels: Roof and Silver	FORTIFIED Level: Gold		
ASCE 7-10	3/8" *See Notes 1, 2, 3*	7/16" *See Notes 1, 2, 3*	7/16" *See Notes 1, 2, 3*	7/16" *See Notes 1, 2, 3*	RSRS-01; 0.113" dia. x 2-3/8" Roof Sheathing Ring Shank Nail	6" O.C.
					8d Common Nail; 0.131" dia. X 2-1/2"	4" O.C.
ASCE 7-16	3/8" *See Notes 1, 2, 3*	7/16" *See Notes 1, 2, 3*	15/32" *See Notes 1, 3*	15/32" *See Notes 1, 3*	RSRS-01; 0.113" dia. x 2-3/8" Roof Sheathing Ring Shank Nail	4" O.C.
					Common Nails Not an Option	*N/A*

Notes:

1. Local building code requirements for sheathing thickness and/or nail size/attachment spacing may be more stringent based on site conditions.
2. For concrete and clay tile roof covers, minimum required sheathing thickness is 15/32".
3. For metal roof covers, verify manufacturer's sheathing thickness requirements are met.
4. All round head Ø; No clipped-head nails, common nails or staples shall be allowed. Refer to Figure 1.

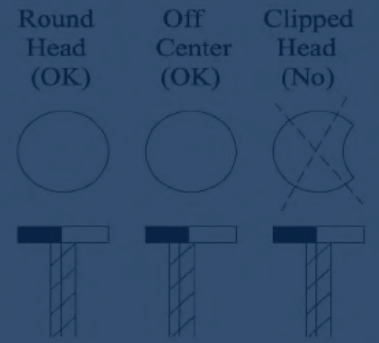
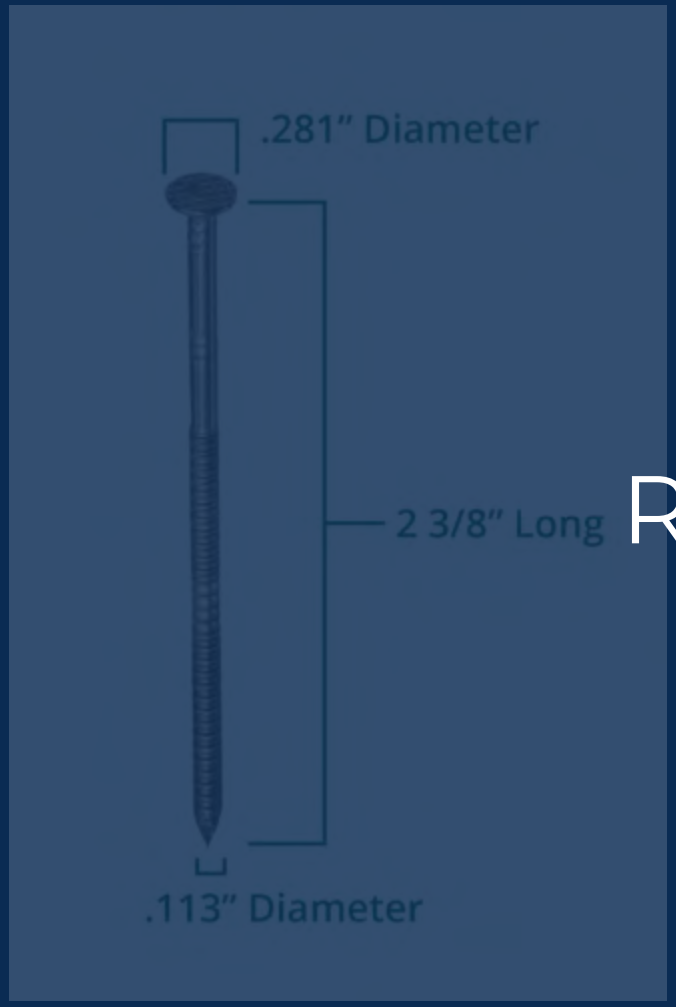
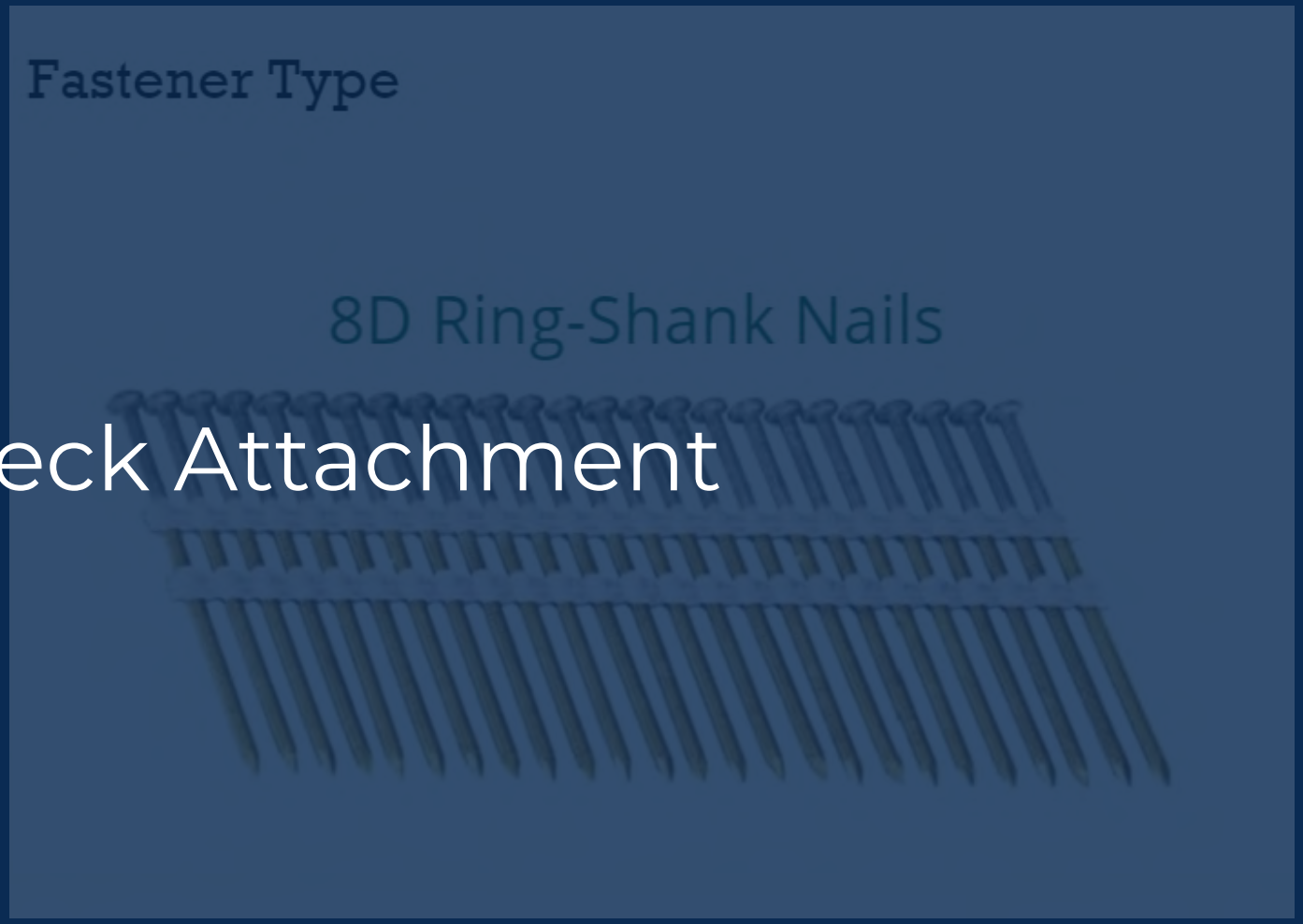


FIGURE 1.

APPLICABLE STANDARDS:	DESCRIPTION:	DRAWING #:
FORTIFIED HOME™ - HIGH WIND (2020)	HIGH WIND - NEW CONSTRUCTION ROOF DECK ATTACHMENT - STRUCTURAL WOOD PANELS	F-RS-3
		DATE: 11/01/2020



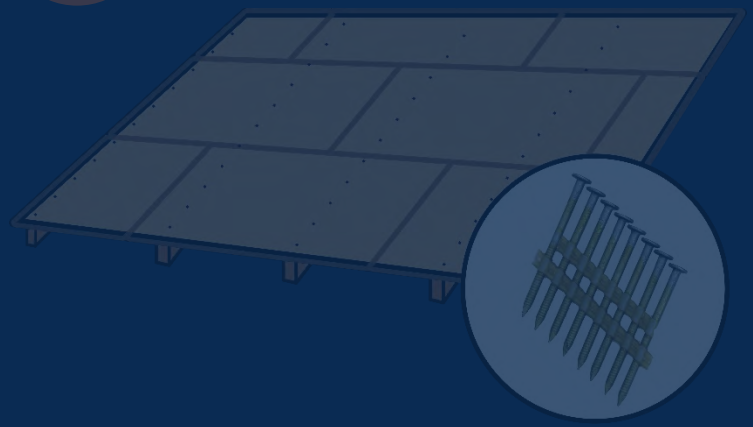
Roof Deck Attachment



Deck and underlayment

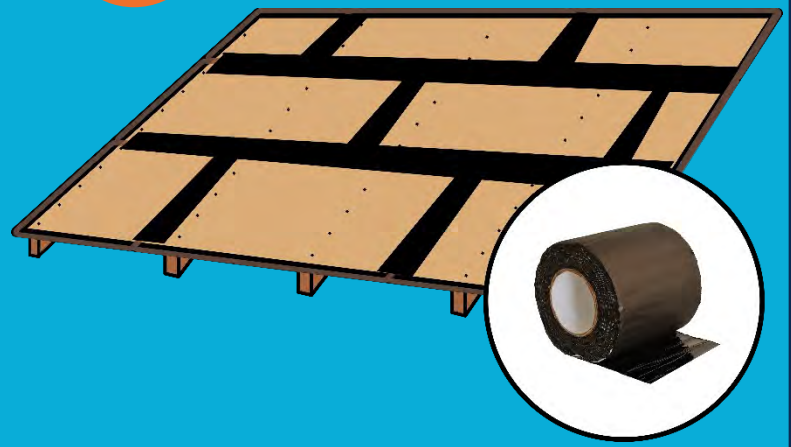
3 KEYS TO ROOF DURABILITY

1 Nail it down.



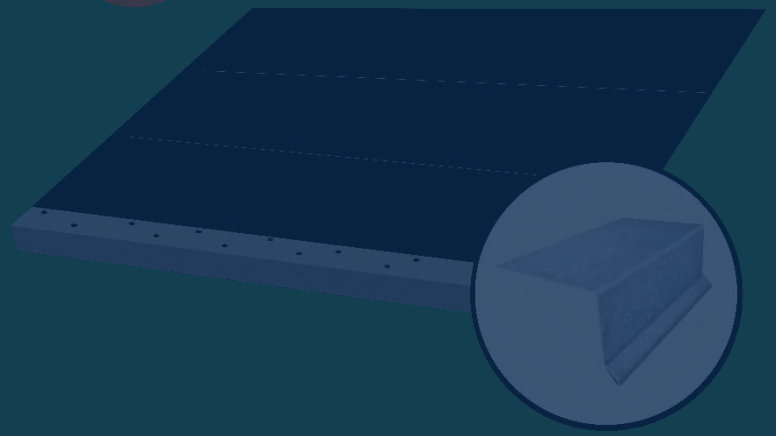
KEEP THE ROOF ON.

2 Seal it up.



KEEP THE WATER OUT.

3 Lock it in.



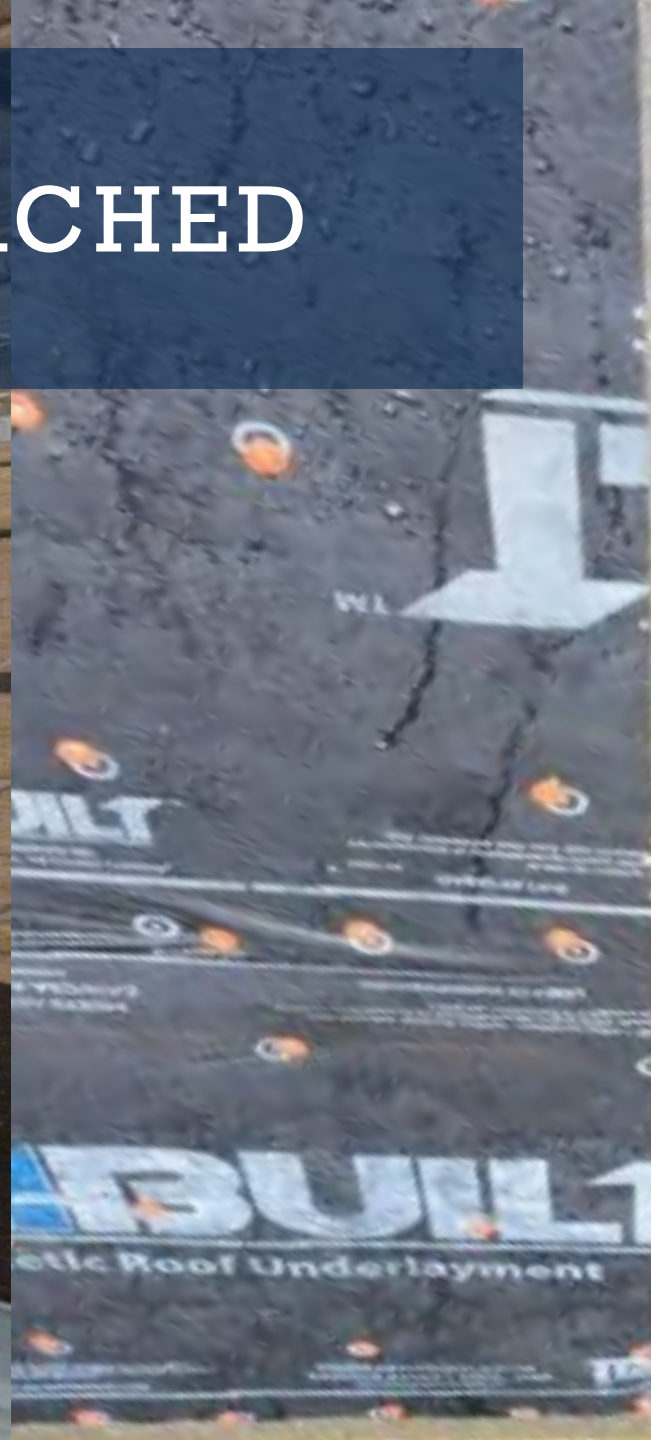
KEEP THE WIND OUT.

2-LAYER SYSTEM: TAPE W/MECHANICALLY ATTACHED UNDERLAYMENT

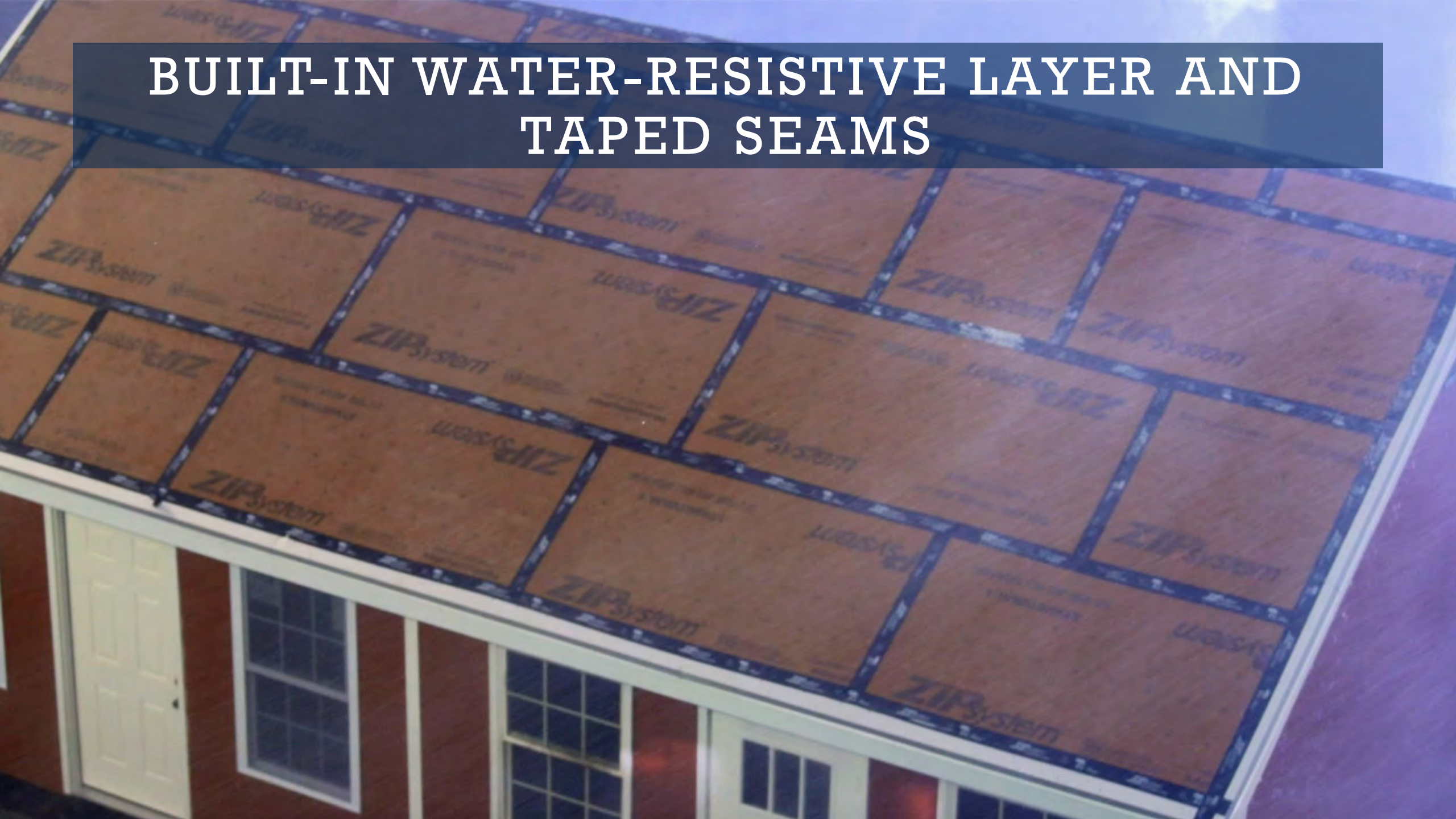
What are Pressure Sensitive Adhesives?*

Low- to no-solvent-based tapes that work best when applied with pressure to the substrate. Heat typically helps the adhesive strength. Adhesion may be decreased if applied in wet or cold environments. Use of a primer may be required when applying to substrates such as OSB.

**PSA, self-adhesive, self-stick*



BUILT-IN WATER-RESISTIVE LAYER AND TAPED SEAMS



Modified Bitumen (Meets ASTM D1970)

- Thicker, modified asphalt tape
- Service temperature range of 35°F–150°F
- Compatible with asphalt products
- Inexpensive
- May require primer

Product Manufacturers

- MFM Roof Deck Tape
- Tite Seal Roof Deck Seam Tape
- Protecto Wrap Protecto Flex
- IKO Goldseam

Butyl (Meets AAMA 711, Level 3)

- Rubber core, adds flexibility/water resistance
- Service temperature range of -4°F–200°F
- Maintains tack at lower temperatures, but may take longer to initiate
- Less likely to ooze at higher temperatures
- Low to no volatile organic compounds (VOC)

Product Manufacturers

- Tite Seal Butyl Ultra
- Protecto Wrap BT25XL
- DuPont Tyvek FlexWrap
- Polyken 627-35

Tapes that meet this criteria include, but are not limited to, the products listed Product availability may change.

Acrylic (Meets AAMA 711, Level 3)

- Uses acrylic adhesive to help create an airtight seal
- Service temperature range of -4°F–200°F
- Bonds to many substrates
- UV and water resistant
- No VOCs

Product Manufacturers

- Huber ZIP System
- 3M Scotch 8067
- Dow Weathermate
- Protecto Super Stick Building Tape

FULLY ADHERED MEMBRANE

2-PLY #30 METHOD

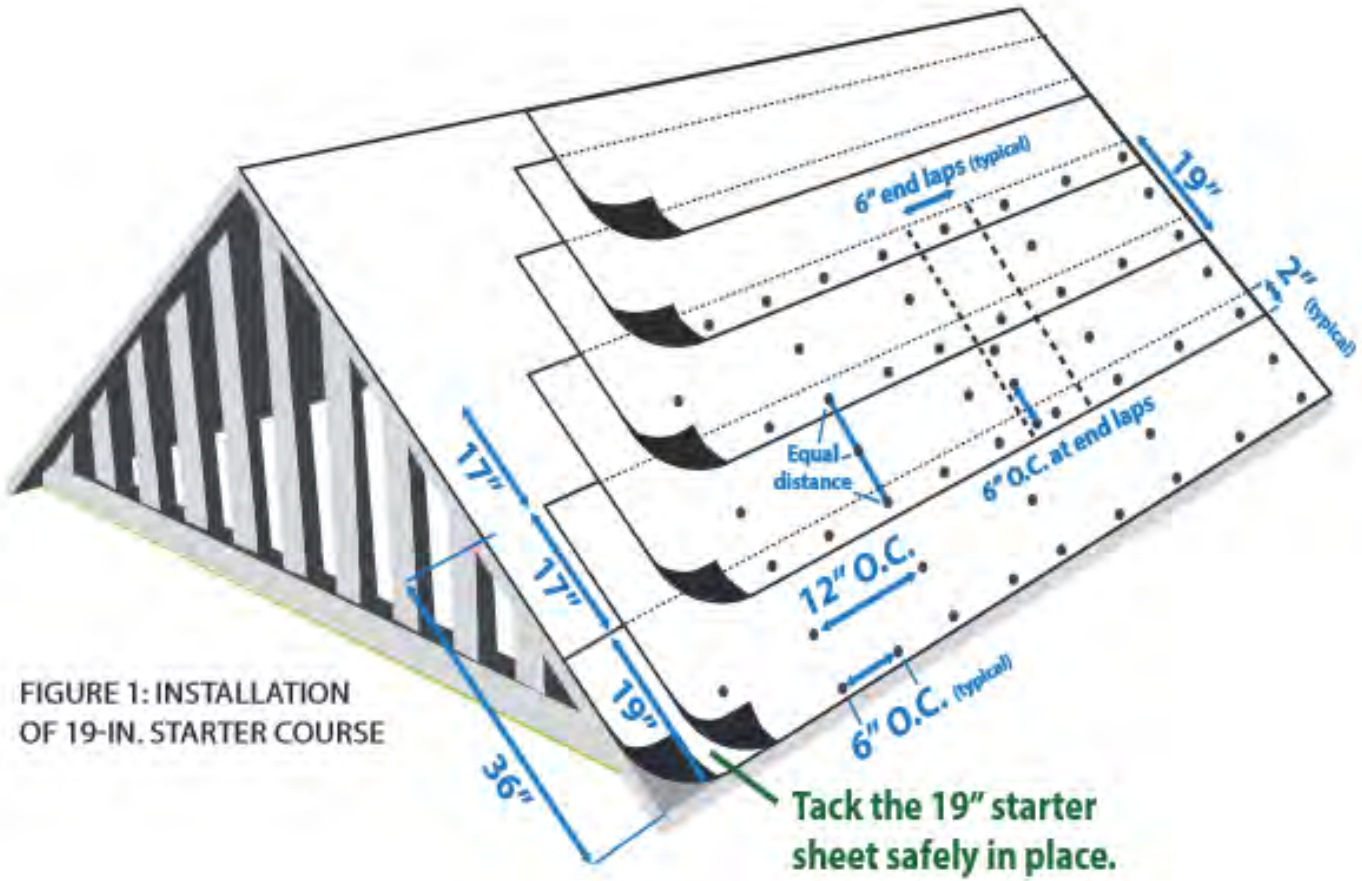
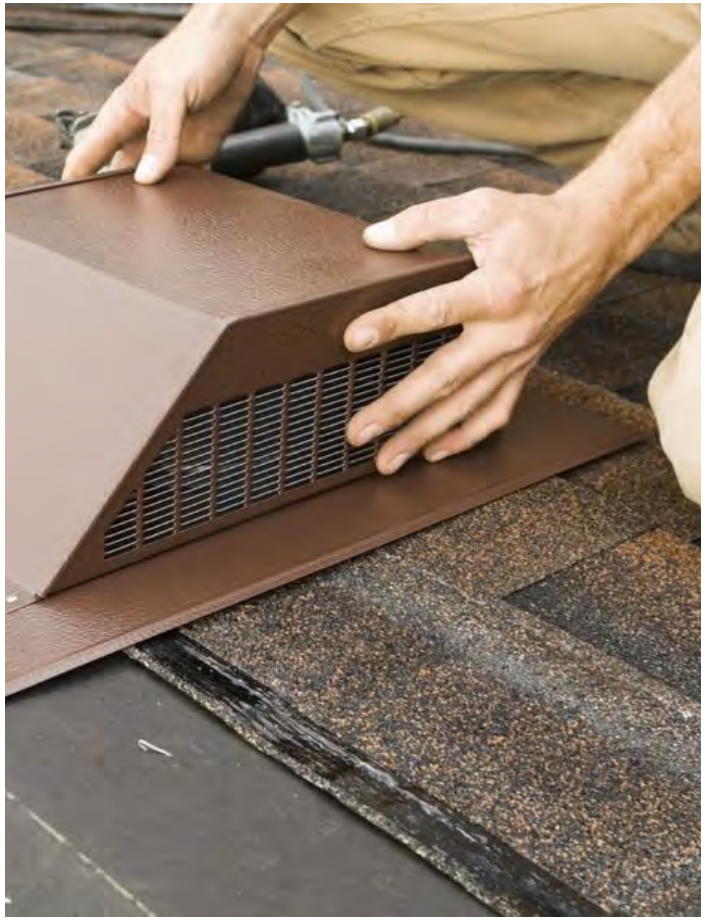


FIGURE 1: INSTALLATION OF 19-IN. STARTER COURSE

Roof-Mounted Vents



Roof-mounted vents must meet the requirements of Test Application Standard TAS 100 (A)

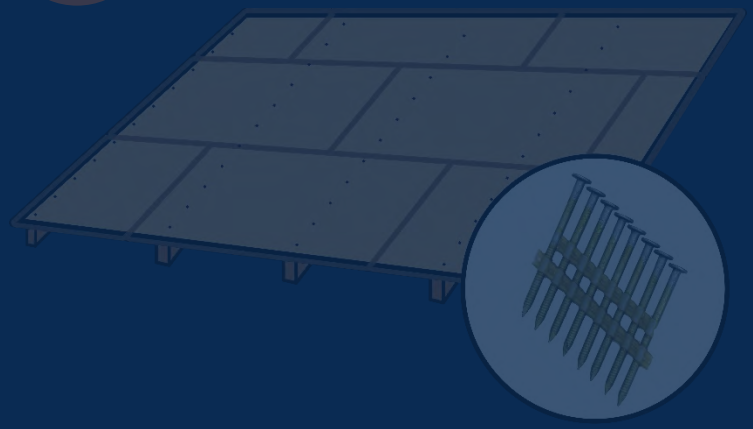
Gable End Wall Vent Protection

Permanent anchors must be installed.

Plywood is one option to cover vent.

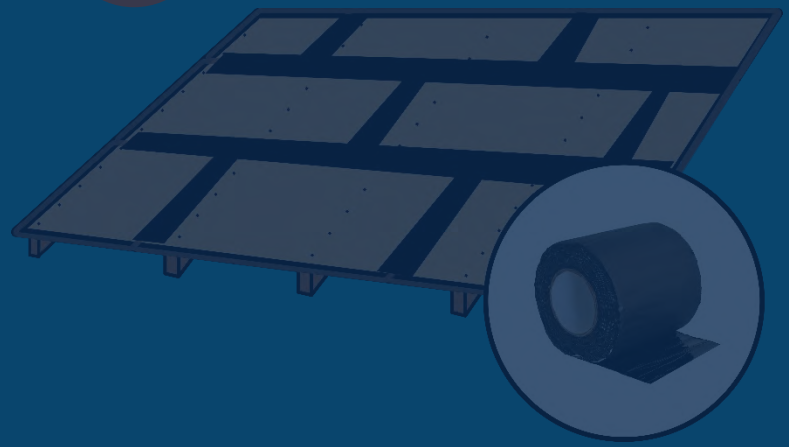
3 KEYS TO ROOF DURABILITY

1 Nail it down.



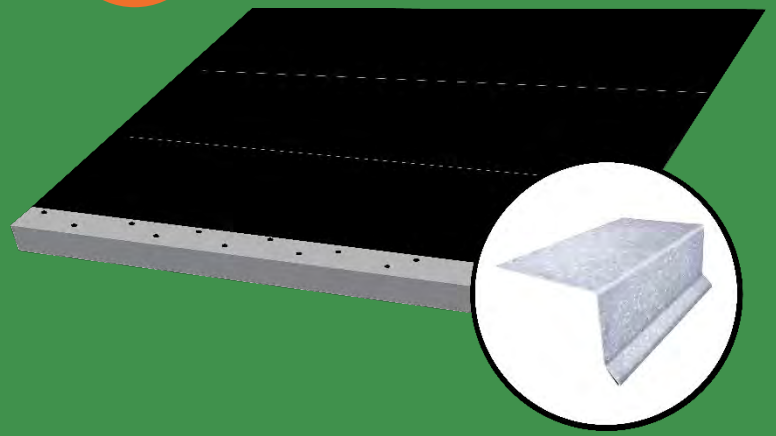
KEEP THE ROOF ON.

2 Seal it up.



KEEP THE WATER OUT.

3 Lock it in.



KEEP THE WIND OUT.

CAUTION!

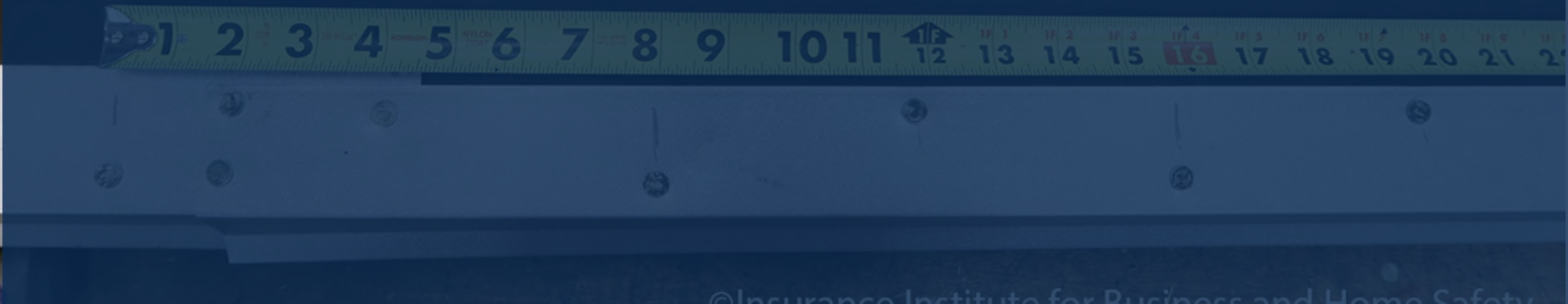
Roofs with MORE than 1 layer of roof cover are NOT eligible for FORTIFIED.

*Current building codes permit 2 layers.

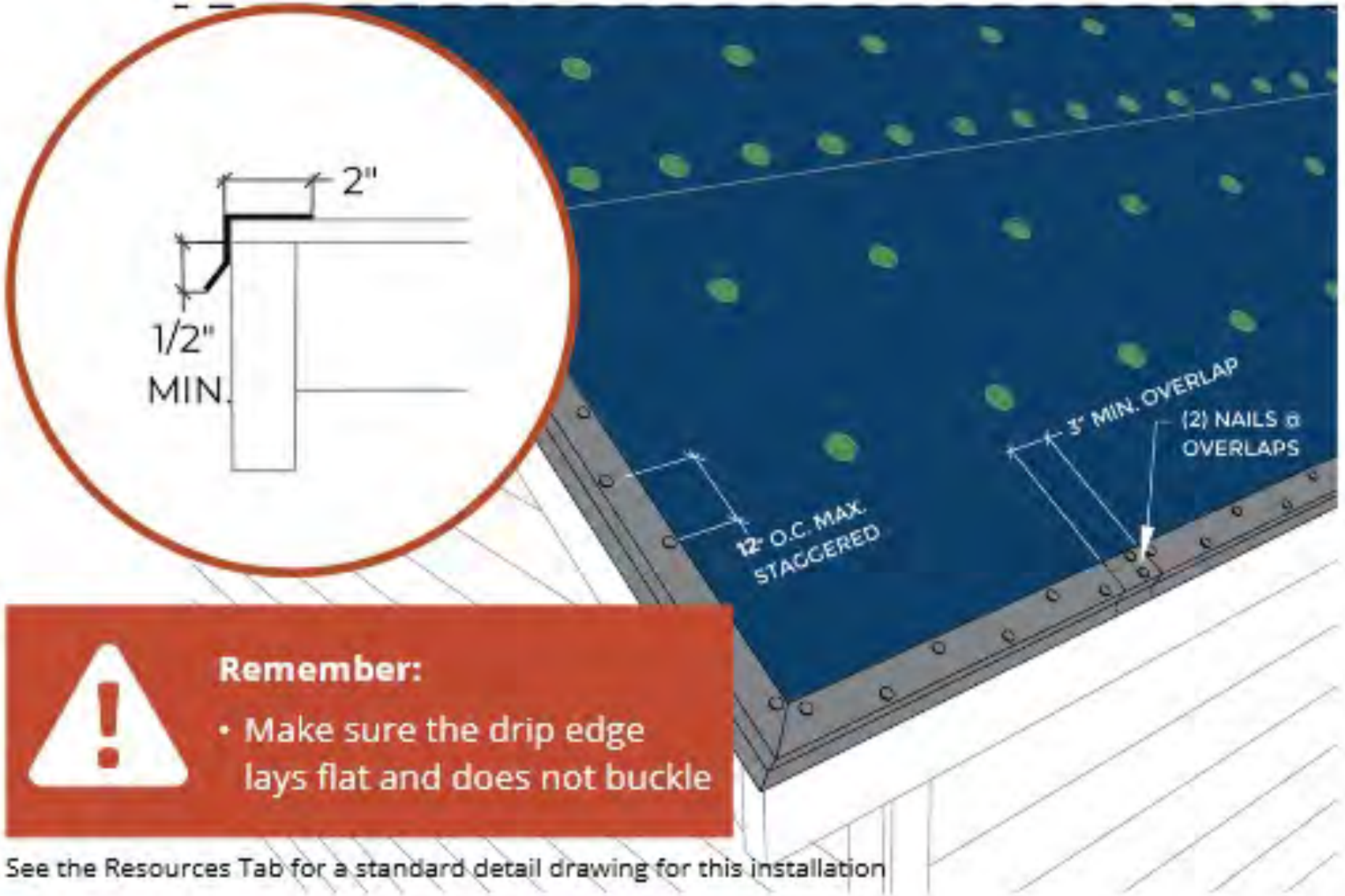
DRIP EDGE

- Holds sealed roof deck underlayment in place
- Becomes an anchoring point at the edge for the roof cover

Edge Metal and the Importance of Edge Details



Installation: Drip Edges

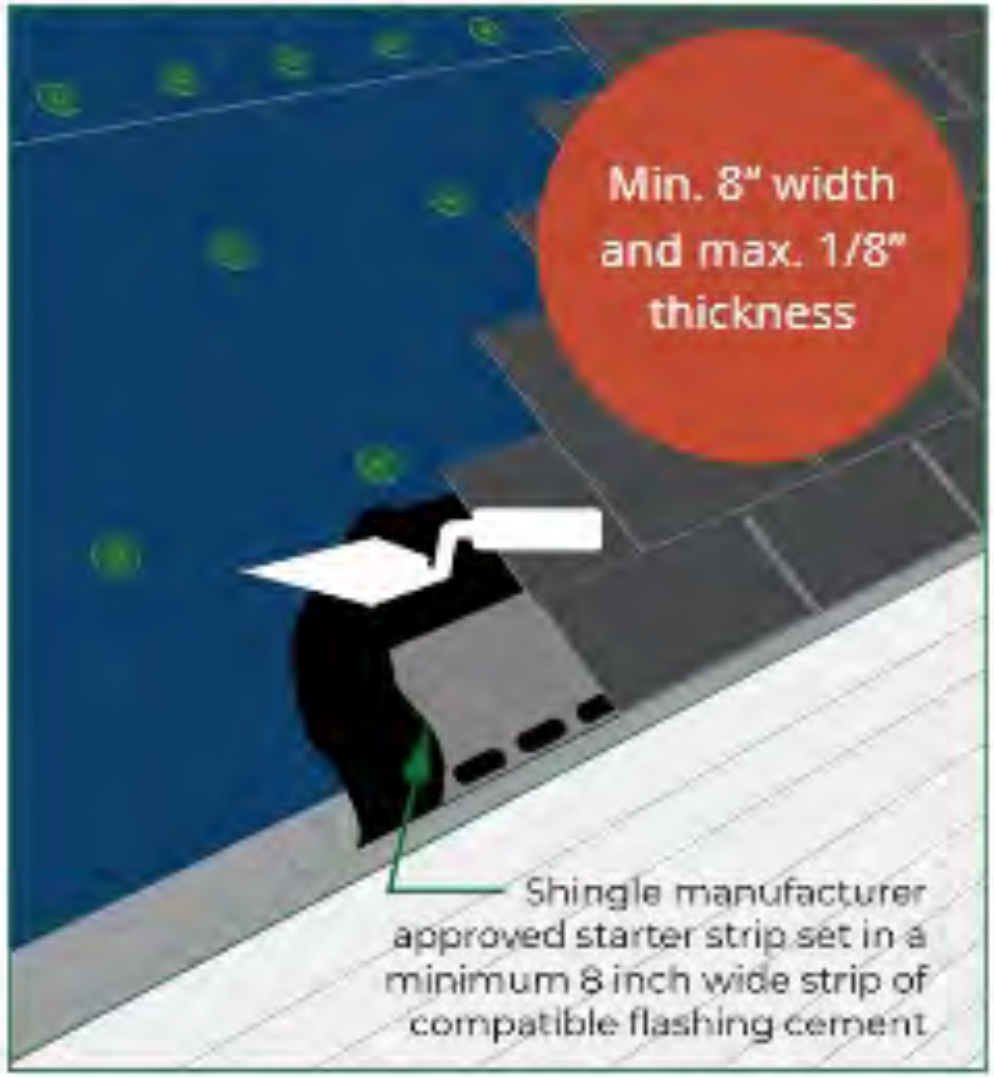


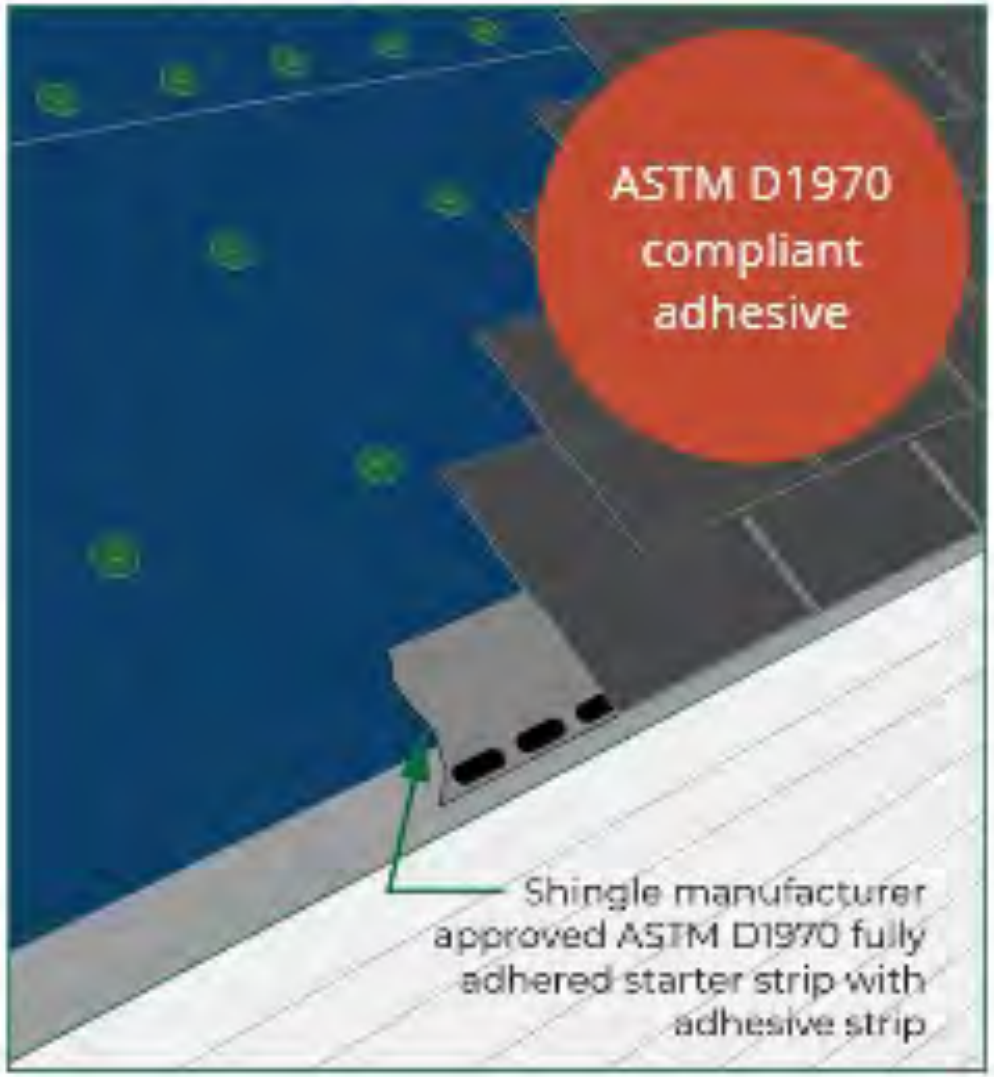
Remember:

- Make sure the drip edge lays flat and does not buckle

See the Resources Tab for a standard detail drawing for this installation


General Installation
Sealed roof deck underlayment
+
Drip edge
+
Starter strip and the roof shingle
= Load path for the roof cover


Min. 8" width and max. 1/8" thickness
Shingle manufacturer approved starter strip set in a minimum 8 inch wide strip of compatible flashing cement


ASTM D1970 compliant adhesive
Shingle manufacturer approved ASTM D1970 fully adhered starter strip with adhesive strip

Asphalt Shingle Classification

Acceptable shingle classifications include:

- ASTM D3161 Class F
- ASTM D7158 Class H

OTHER ROOF COVER

- Must be installed to resist design uplift pressures of the site
- Must have independent third-party testing to determine the design pressure limitations

CERTIFIED PRODUCT EVALUATION REPORTS

Use design pressures listed in certified product evaluation reports:

Must apply a 2 to 1 margin of safety to the tested pressure

The International Code Council Evaluation Service Report	Florida Building Code Product Approval
Miami-Dade Notice of Acceptance	Texas Department of Insurance Product Evaluation

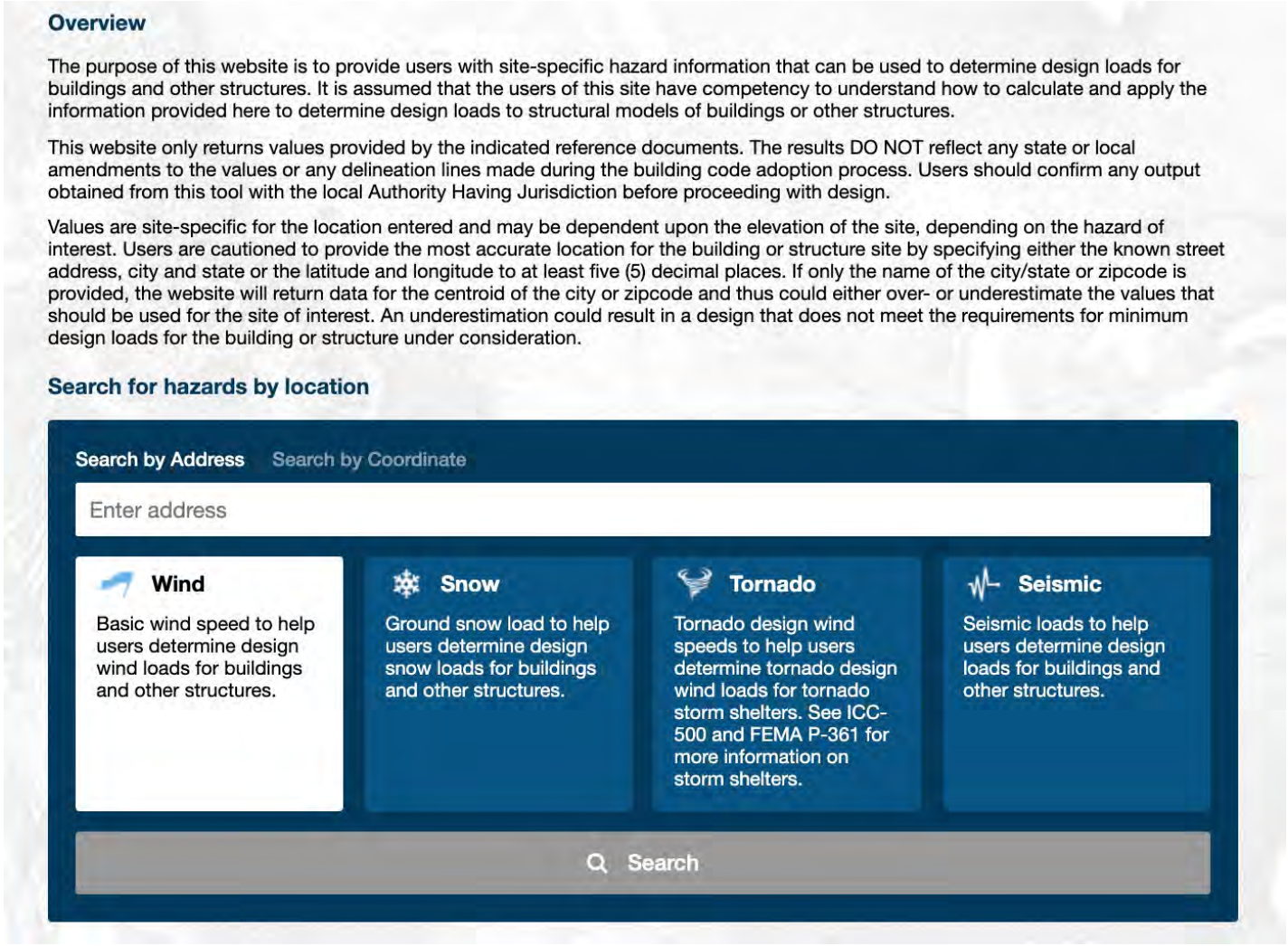
DESIGN PRESSURES

Wind Speed or Wind Pressure?

Which matters most when designing or building a home?

- Wind pressures or wind loads are the most important
- There are 3 types of pressures to be considered
  - Positive: pushing against building and its components
  - Negative: pulling on building and its components as wind moves around and over building
  - Cycling: changes from positive to negative in rapid succession

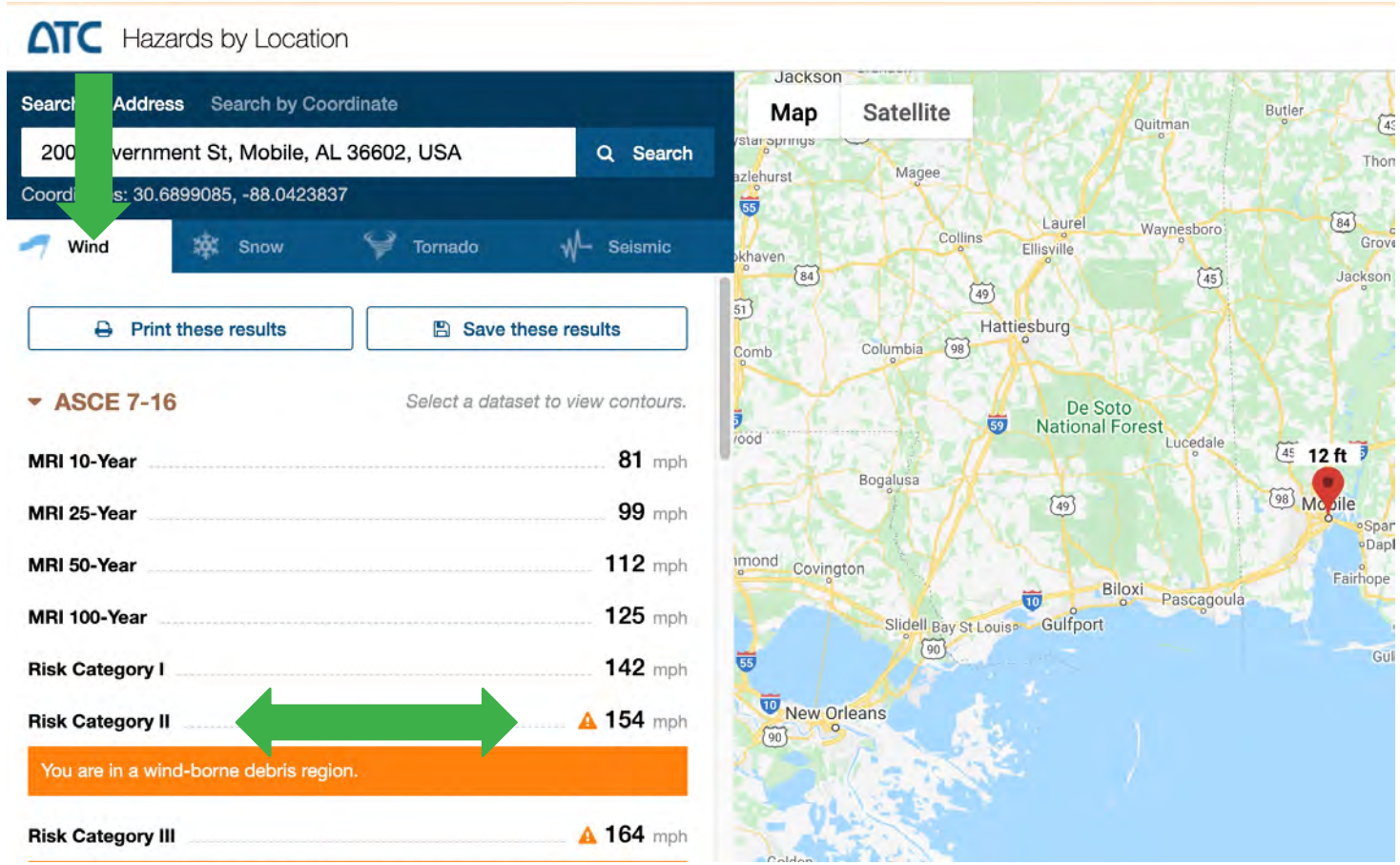
ATC Website



- Enter address, click “Search”

https://hazards.atcouncil.org/

ATC Website results



- Choose the "Wind" tab.
- "Risk Category II" is residential

EXPOSURE CATAGORY

Exposure B

Area with closely spaced obstructions such as trees, homes and other terrain

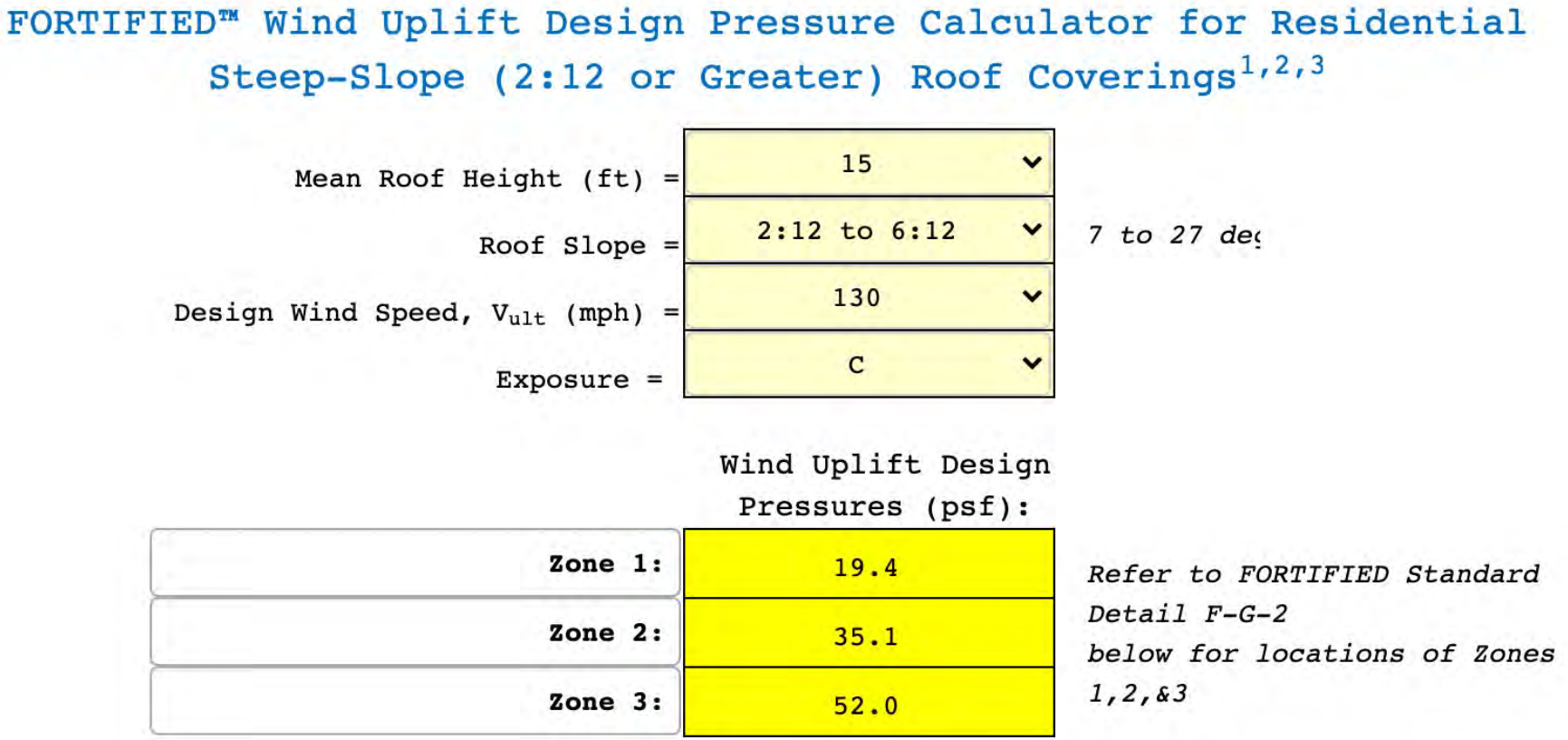
Exposure C

Open terrain with scattered obstructions extending more than 1500 feet

Exposure D

Unobstructed areas exposed to wind moving over open water for at least a mile.

ATC Website



FORTIFIED™ Wind Uplift Design Pressure Calculator for Residential Steep-Slope (2:12 or Greater) Roof Coverings[1,2,3]

Mean Roof Height (ft) =	15
Roof Slope =	2:12 to 6:12
Design Wind Speed, V_{ult} (mph) =	130
Exposure =	C

7 to 27 deg

	Wind Uplift Design Pressures (psf):
Zone 1:	19.4
Zone 2:	35.1
Zone 3:	52.0

Refer to FORTIFIED Standard Detail F-G-2 below for locations of Zones 1,2,&3

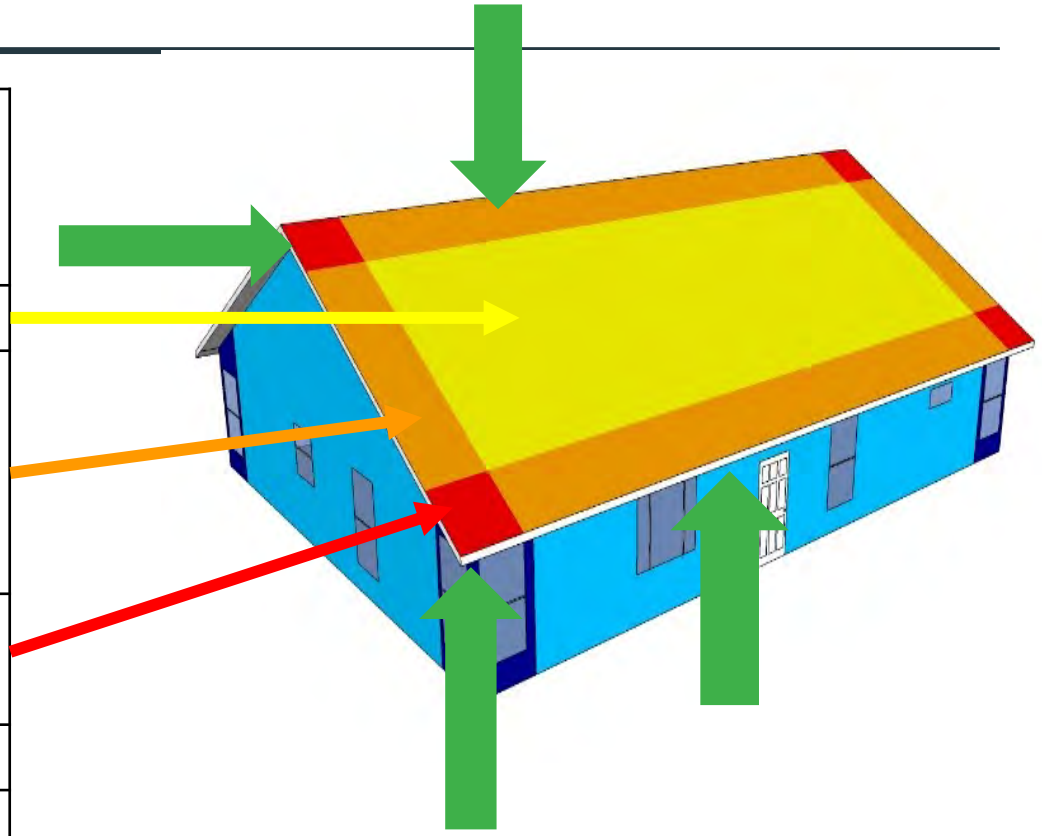
- Select the roof height, and slope
- Choose the wind speed that you determined at the ATC website
- Enter the exposure

https://fortifiedhome.org/fortified-wind-uplift-design-pressure-calculator/

SMART HOME AMERICA

Wind Zones

Wind Zone	Pressure Relative to Zone 1	Location	Color
1	=	Roof Interior	Yellow
2	+++ Higher than highest on walls	Roof Edge	Orange
3	++++ Highest house	Roof Corner	Red
4	+	Wall Interior	Light Blue
5	++ Highest on Wall	Wall Corner	Dark Blue



HAIL SUPPLEMENT


Hail Requirements
Steep-slope impact-rated roof covering
Low-slope impact-rated roof covering
Impact-rated skylights
Impact-rated photovoltaic systems

SHINGLE RATINGS

Requirements:

Asphalt shingles:

- Excellent or Good by IBHS Impact Resistance Test Protocol for Asphalt Shingles

https://ibhs.org/hail/shingle-performance-ratings/

STEEP SLOPE ROOF IMPACT RATINGS

Requirements:

Asphalt shingles:

- Excellent or Good by IBHS Impact Resistance Test Protocol for Asphalt Shingles

Clay and concrete roof tiles:

- FM 4473 Class 4

Metal panels:

- UL 2218 Class 4

All other roof coverings: Either UL 2218 Class 4 or FM 4473 Class 4

FORTIFIED Home™ Hurricane	FORTIFIED Home™ High Wind
FORTIFIED Roof™	
Roof and Attic Ventilation System	Roof System
FORTIFIED Silver™	
Gables, Attached Structures, Garage Doors, Chimneys, and Opening protection	Gables, Attached Structures, Garage Doors and Chimneys

Location and Design Wind Speed are key determining factors in deciding which standard(s) apply.

SILVER SYSTEMS

CATASTROPHIC FAILURE

GABLE END WALL SHEATHING AND BRACING

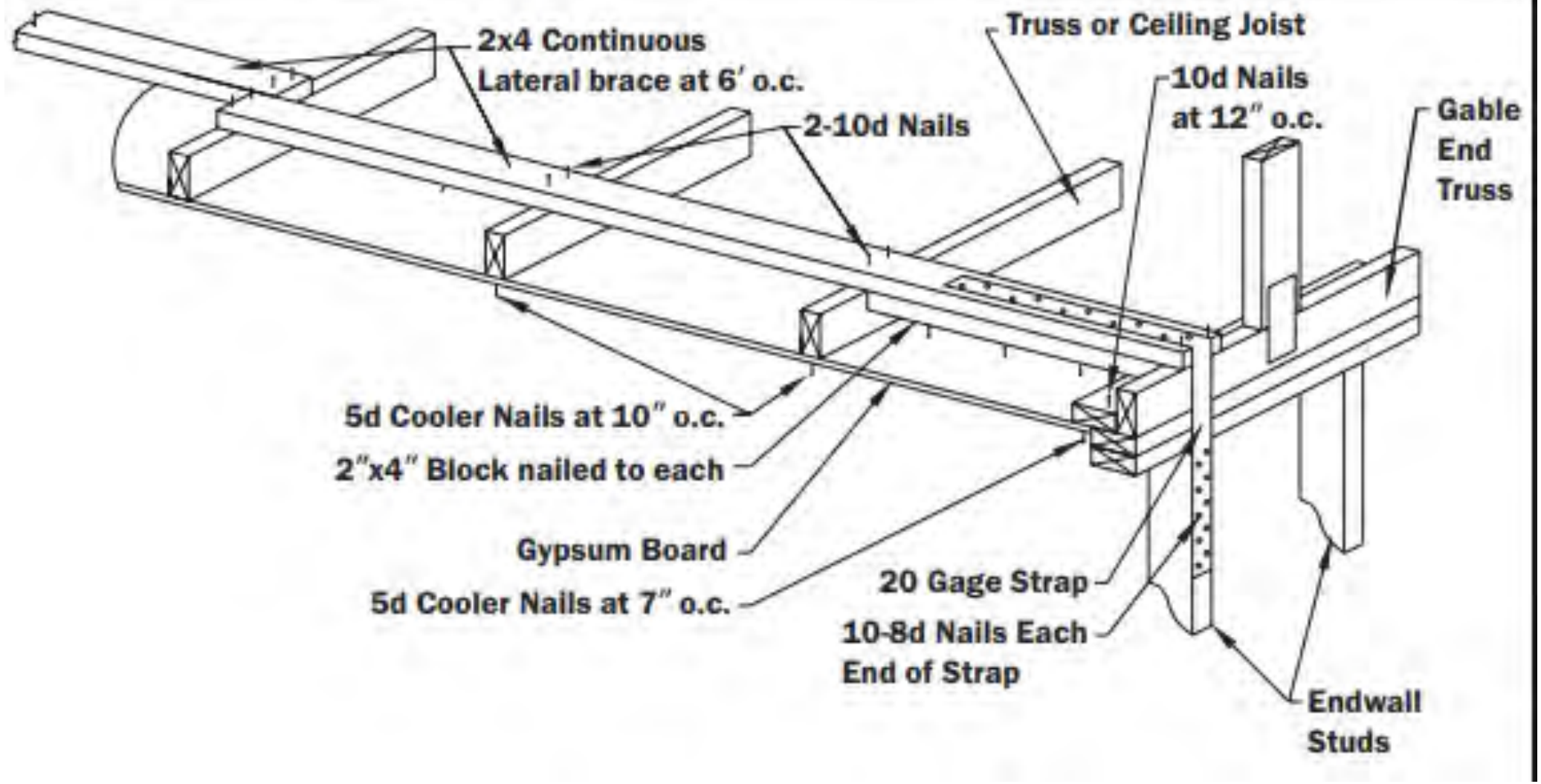
WHY IS SHEATHING IMPORTANT?

STRUCTURAL SHEATHING REQUIREMENT

WHY IS BRACING IMPORTANT?

BRACING FOR GABLES LARGER THAN 36”

Figure 3.7a Ceiling Bracing Gable Endwall



GABLE END BRACING REQUIREMENTS

ATTACHED STRUCTURES

Video: American Modern Manufactured Home High Wind Testing at the IBHS Research Center
Click Here

ATTACHED STRUCTURE REQUIREMENTS

Connection Types:

These connections allow the attached structure to **resist the loads that try to tear it apart** and **minimize the chances that they will become flying debris**

SOFFITS

SOFFITS

Soffits covered with vinyl or aluminum, greater than 12 inches deep, must be braced at mid-span

CHIMNEYS

CHIMNEY NOT ANCHORED

CHIMNEY TOENAILED TO ROOF

CHIMNEY REQUIREMENTS

Chimney Requirements

Framed chimneys
(<5 ft above the roof)

Eligible for FORTIFIED prescriptive design and anchorage details

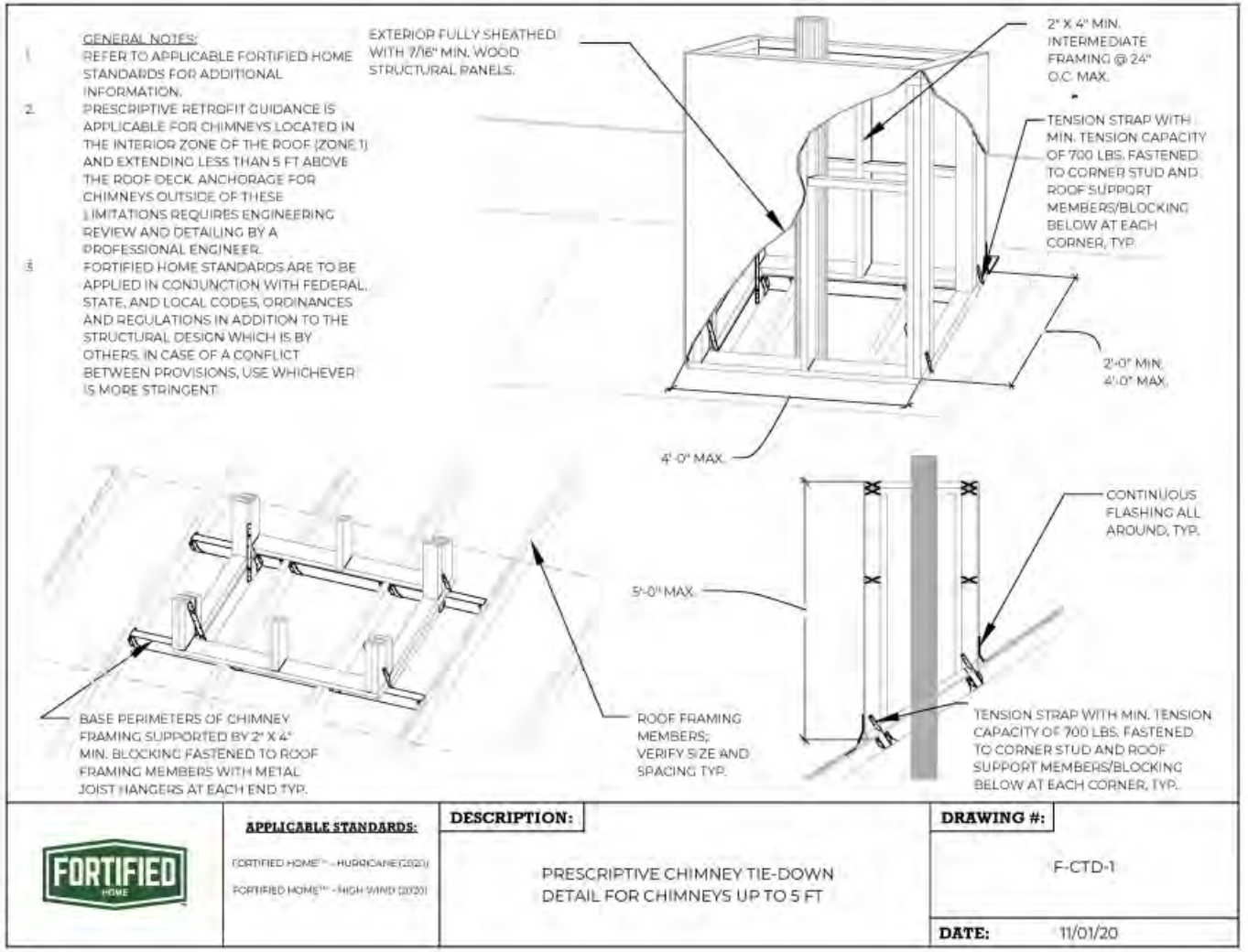
Framed chimneys
(>5 ft above the roof)

Must be designed by a professional engineer

Other Chimneys
(precast masonry)

Must be installed per the manufacturer installation requirements

Chimney Tie-Down



F-CTD-1

Insurance Institute for Business & Home Safety®

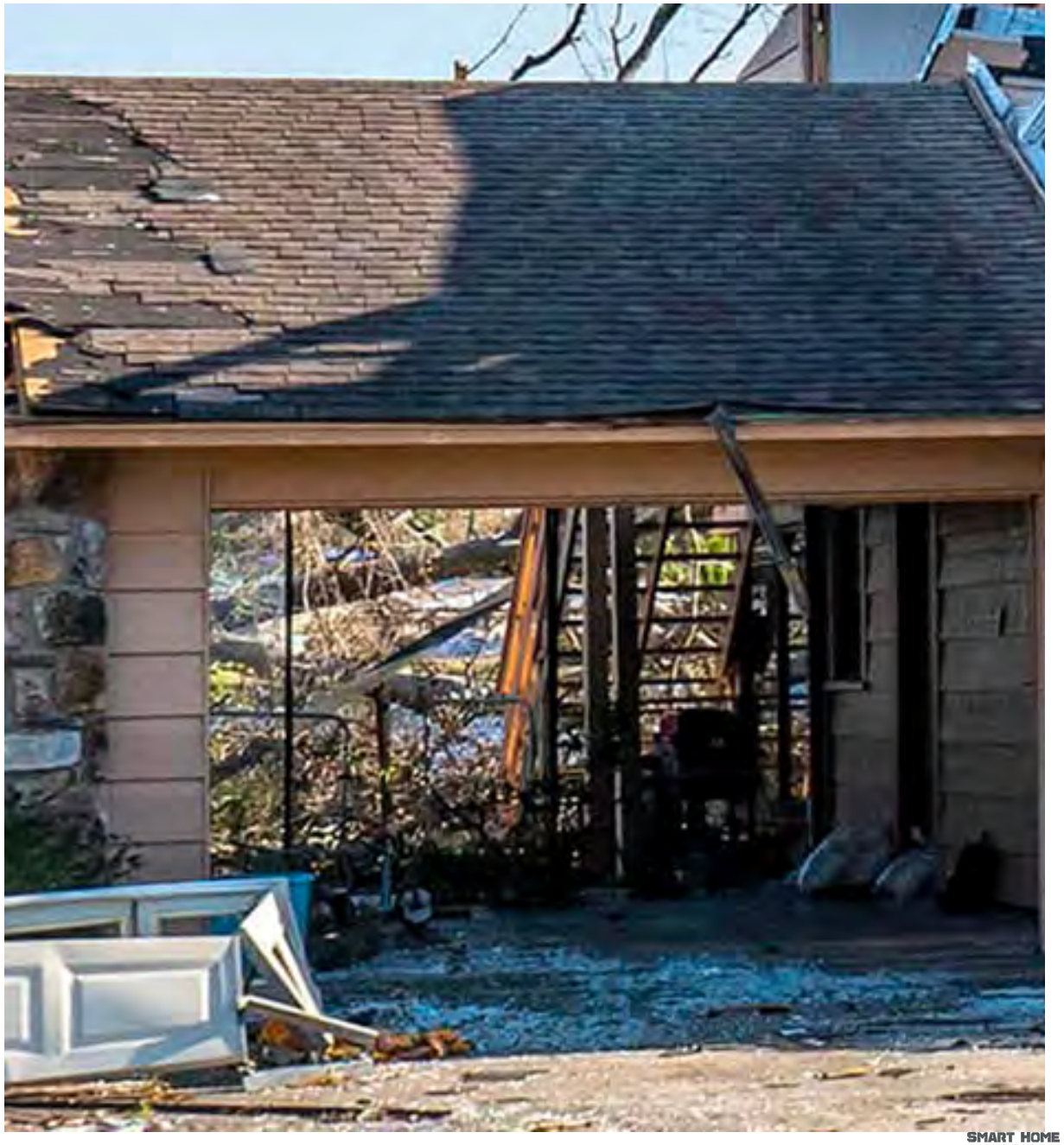
GARAGE DOORS

Insurance Institute for Business & Home Safety®

PROTECT YOUR HOME

WHY YOUR GARAGE DOOR MATTERS

DISASTERSAFETY.ORG/GARAGEDOOR



Video: Why Your Garage Door Matters
Click Here

GARAGE DOOR FAILURE CAN LEAD TO…

DESIGN PRESSURE RATING REQUIREMENTS

HURRICANE PROTECTION

Hurricane Standard only

WINDBORNE DEBRIS & IMPACT DAMAGE

Figure 4-44

FORTIFIED Home™ Hurricane	FORTIFIED Home™ High Wind
FORTIFIED Roof™	
Roof and Attic Ventilation System	Roof System
FORTIFIED Silver™	
Gables, Attached Structures, Garage Doors, Chimneys, and Opening protection	Gables, Attached Structures, Garage Doors and Chimneys
FORTIFIED Gold™	
Engineered Load Path (CLP) and Design Pressure Rating for Openings	Structure (CLP)

Location and Design Wind Speed are key determining factors in deciding which standard(s) apply.

CONTINUOUS LOAD PATH

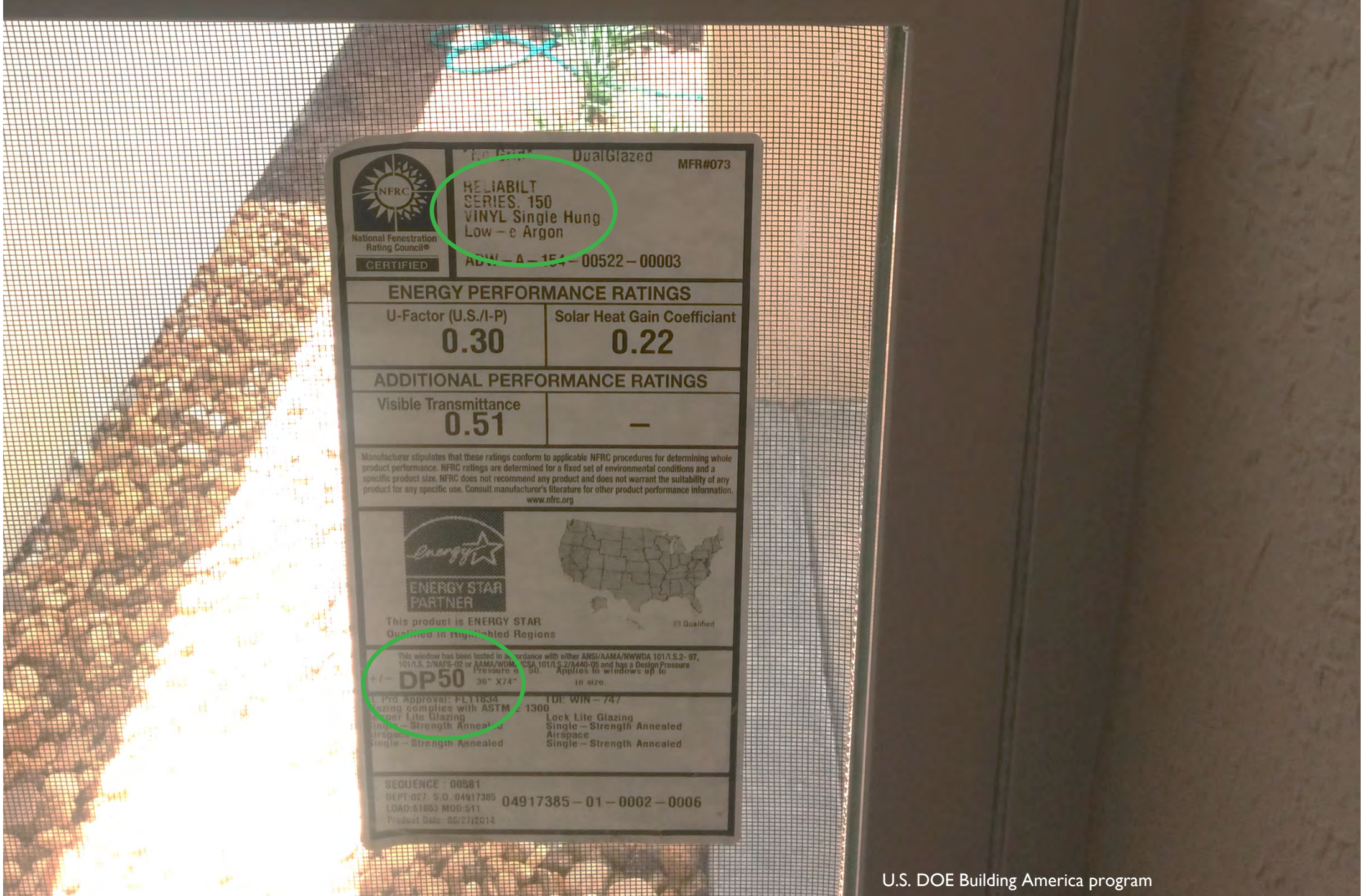
ENGINEER MUST BE INVOLVED IN DESIGN


Video:IBHS High Wind Damage - August 2017
Click Here
© Insurance Institute for Business & Home Safety

Video: FORTIFIED Animation: Hurricane - Continuous Load Path Click Here

DESIGN PRESSURE OF OPENINGS

Hurricane Standard



U.S. DOE Building America program

SMART HOME AMERICA


Untested Doors

IBHS FORTIFIED Programs

The National Standard for Resilient Construction

Typical Occupancies

- Franchises (e.g., quick-service restaurants)
- Hotels
- Convenience stores/gas stations
- Pharmacies/retail stores
- Business services
- Manufacturing (low-moderate hazard)
- Residential/habitational buildings/ Places of Worship
- Schools / municipal buildings / Offices

- Apartments
- Condominiums
- Dormitories

- Detached single family homes
- Townhomes

FORTIFIEDCommercial.org

FORTIFIED COMMERCIAL

Commercial Demonstration

Up to

90%

of post-cat claims include damage to the roof

Systems Evaluated by the FORTIFIED Programs

	FORTIFIED COMMERCIAL	FORTIFIED MULTIFAMILY
Roof 	Roof (keep the water out and the roof deck on) Roof mounted Equipment	
Silver 	Building Envelope • Walls • Windows • Doors (personnel and large commercial) Electrical connections for backup power	
Gold 	Key structural load paths • Roof to wall connections • Floor to floor load transfer On site back up power for critical utilities	

1

Nail it Down

Keep the Roof On

2

Seal it Up

Keep the Water Out

3

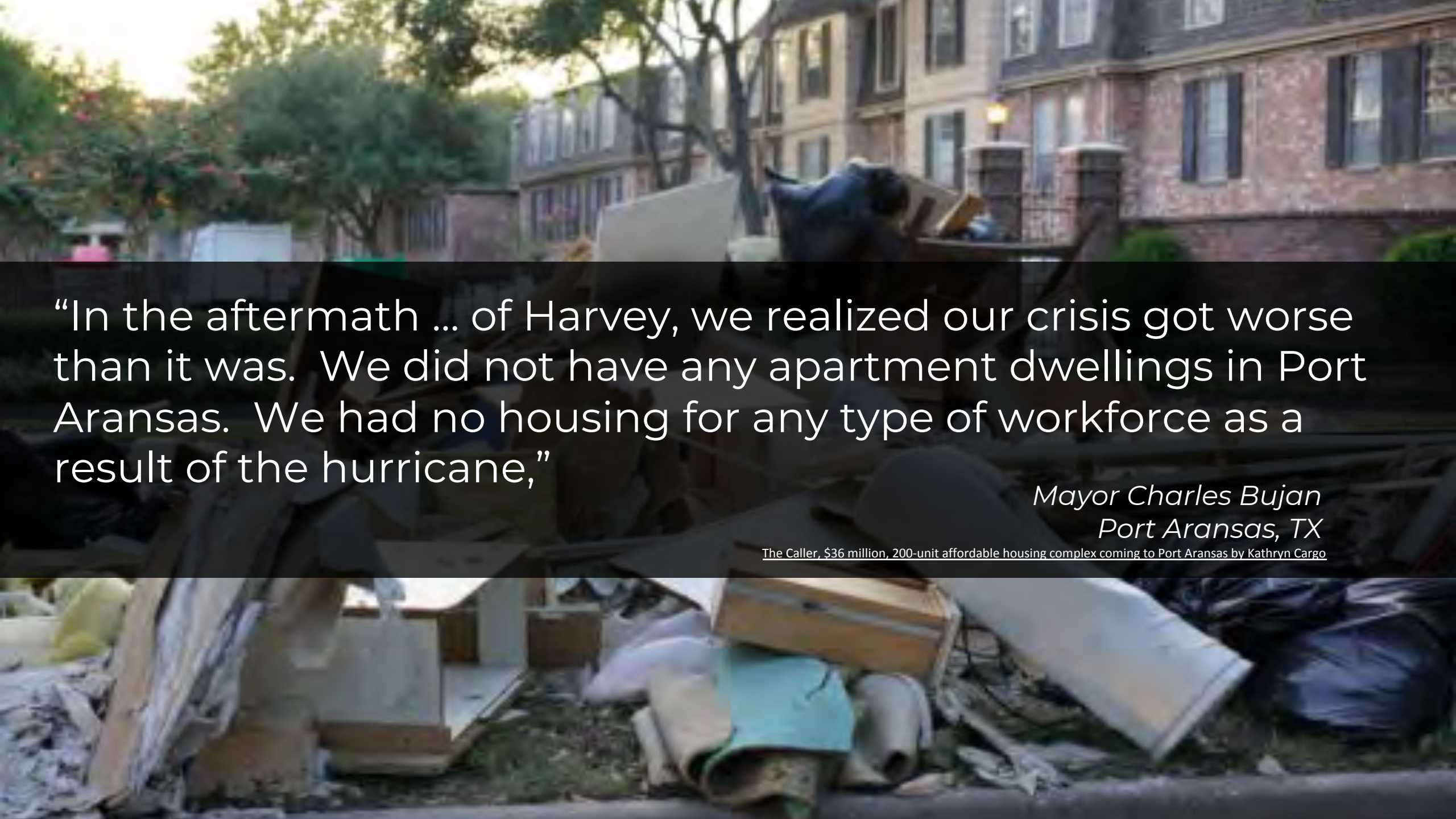
Lock it In

Keep the Wind Out


FORTIFIED
SILVER
Windows & Doors
Exterior Walls & Finishes
Gable End Bracing
(*where applicable*)

Continuous Load Path and Attached Structures


FORTIFIED
MULTIFAMILY
Every Family Deserves
a FORTIFIED© Home
Insurance
Institute for
Business &
Home
Safety



“In the aftermath … of Harvey, we realized our crisis got worse than it was. We did not have any apartment dwellings in Port Aransas. We had no housing for any type of workforce as a result of the hurricane,”

Mayor Charles Bujan
Port Aransas, TX

The Caller, $36 million, 200-unit affordable housing complex coming to Port Aransas by Kathryn Cargo

Families
want to be
prepared
when
severe weather
strikes

FORTIFIED
provides
a way to
avoid significant
storm damage

Critical Success Factors for Commercial and Multifamily

1. Engage IBHS third party evaluator early
    1. All members of design team need to understand standards and process.
2. Include FC in all bidding documents.
3. Educate bidding contractors, especially roofing contractors.
4. Photovoltaic (PV) units attached to roof in hurricane prone regions are acceptable, **not recommended.**
    1. PV systems are complex and challenging to verify load path adequacy
    2. Suggest alternative placement on the ground
5. After compliance letter is issued, any changes or additions to building may void its compliance with FC standards. (i.e. satellite dishes)

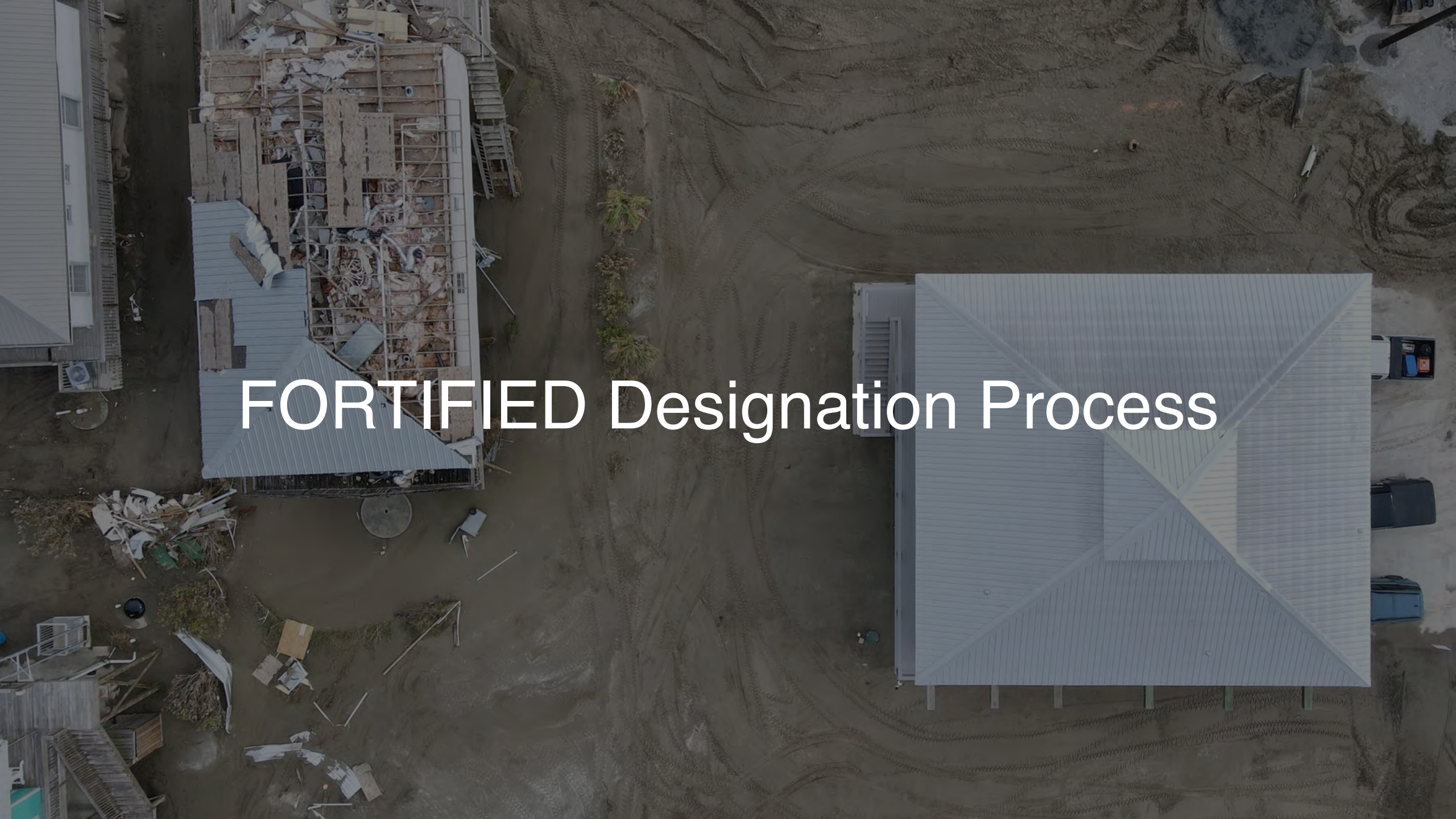
Wind Insurance Discounts

Table 2: Average Expected Insurance Premium Reductions from FORTIFIED

FORTIFIED Program	Wind zone	Expected loss	Risk load	Premium			Discount	
				Standard	Roof	Gold	Roof	Gold
Hurricane	>140	$5,327	$10,653	$15,980	$14,694	$9,858	$1,286	$6,122
Hurricane	≤140	2,170	4,340	6,511	5,598	4,254	913	2,256
HWH	<115	2,002	2,002	4,003	3,197	2,784	806	1,219

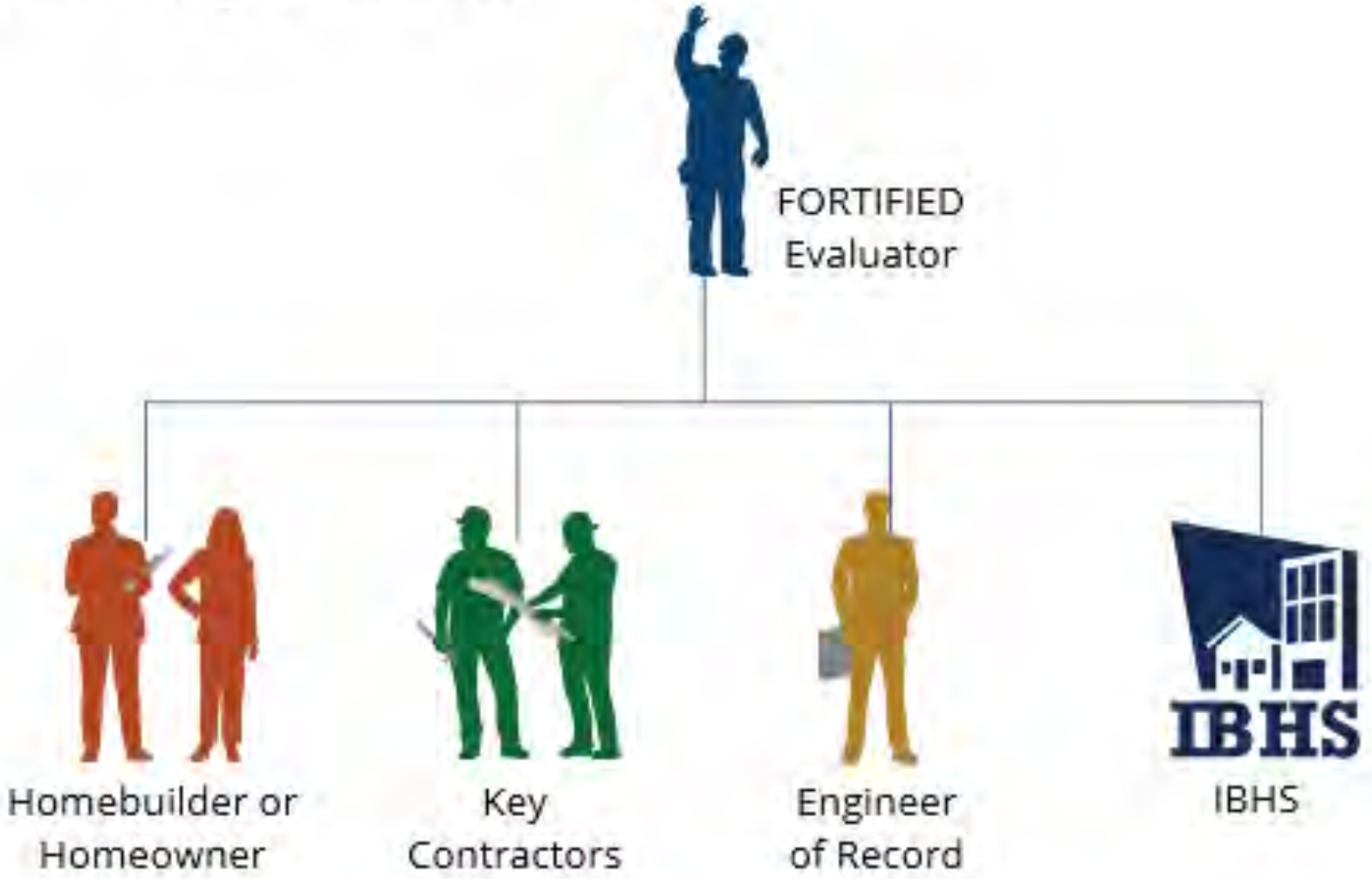
Benefit /cost analysis

	Hurricane Roof >140	Hurricane Gold > 140	Hurricane Roof 115-140	Hurricane Gold 115-140	HWH Roof	HWH Gold
1 Loss/insurance savings	$1,286	$6,122	$913	$2,256	$806	$1,219
2 Increased demand	2,160	2,160	2,160	2,160	1,080	1,080
3 Annual benefit	3,446	8,282	3,073	4,416	1,886	2,299
4 Cost	7,000	7,000	6,600	38,000	16,900	16,900
5 Payback period (years)	2.03	0.85	2.15	8.61	8.96	7.35
6 Internal rate of return	49%	118%	47%	10%	9%	12%



FORTIFIED Designation Process

The Project Team



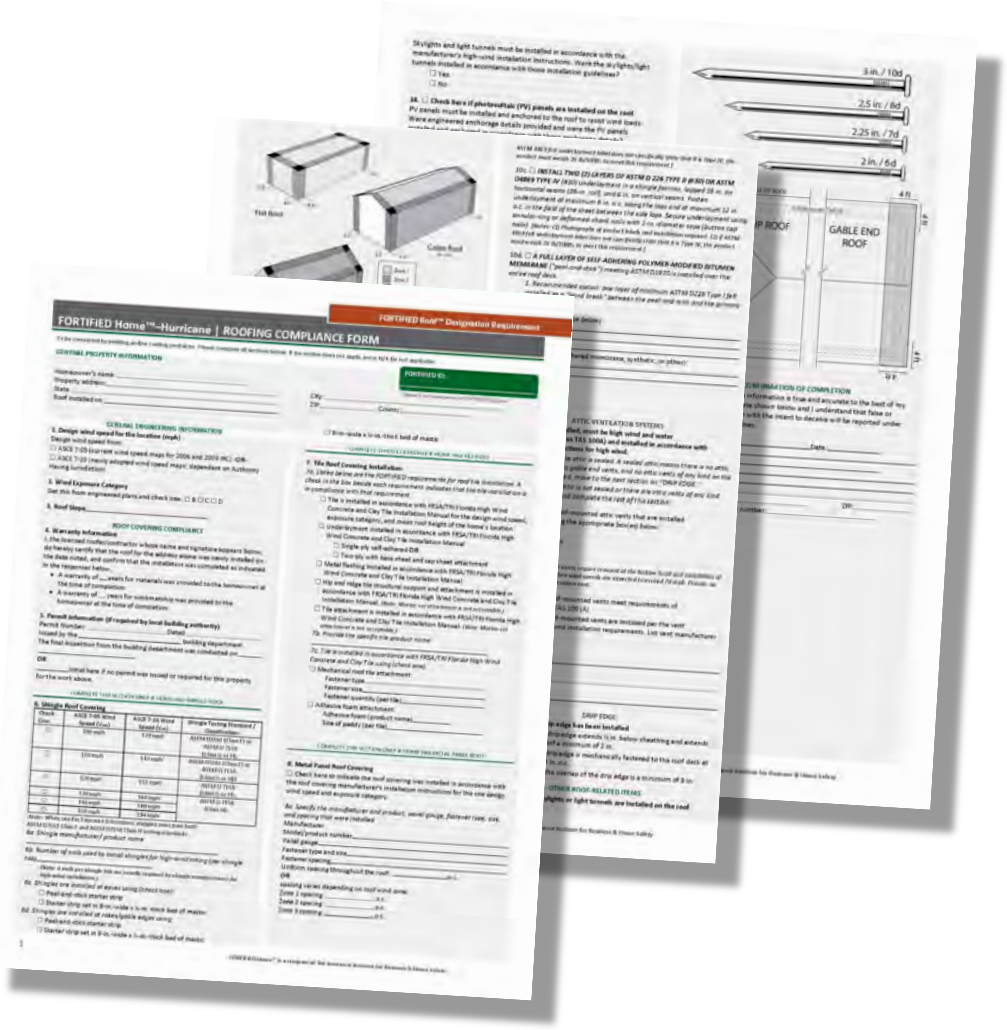
Obtain relevant contact information for the key team members.

Designation Process

1. Contact an Evaluator
2. Choose a Roofer/Builder
3. Re-Roof or Build
4. Get Evaluated
5. Verify Retrofits/Build

Critical for Success – FORTIFIED Home

- Documentation
- Photos
- Product information
  - Labels, data sheets, testing reports
- Compliance forms



Components required by FORTIFIED are verified and documented

IBHS reviews documentation & issues a FORTIFIED designation

Repairs and Reroofing

- Homeowner contacts Evaluator and Certified FORTIFIED Roofer
- Roofer does the work
- Evaluator collects documentation
- IBHS Reviews the repair or reroof documentation and issues a designation

SMART HOME AMERICA

Redesignation Process

1. Receive 5 yr. Reminder
2. Contact an Evaluator
3. Document Home for any Changes or Modifications
4. Get Evaluated
5. Verify and Designate

What makes a home ineligible? Redesignation taboos

- Additions constructed without an evaluator involved
  - Includes enclosing or adding porches or carports
- Reroofing or repairing without an evaluator
- Installing solar panels without an evaluator
- Replacing Doors or Windows
- Adding a doggie door

Who Can Do the Work?

- Licensed Contractors, Home Builders, Roofers
- Find certified roofers on the IBHS or Smart Home America websites

Find FORTIFIED Wise Professionals

smarthomeamerica.org/services

FORTIFIED online training.

www.fortifiedwise.com

PREVIEW MODULES

Certification Tests Evaluator Free Courses Roofing Contractors

Free Courses

FORTIFIED Home™ Fundamentals

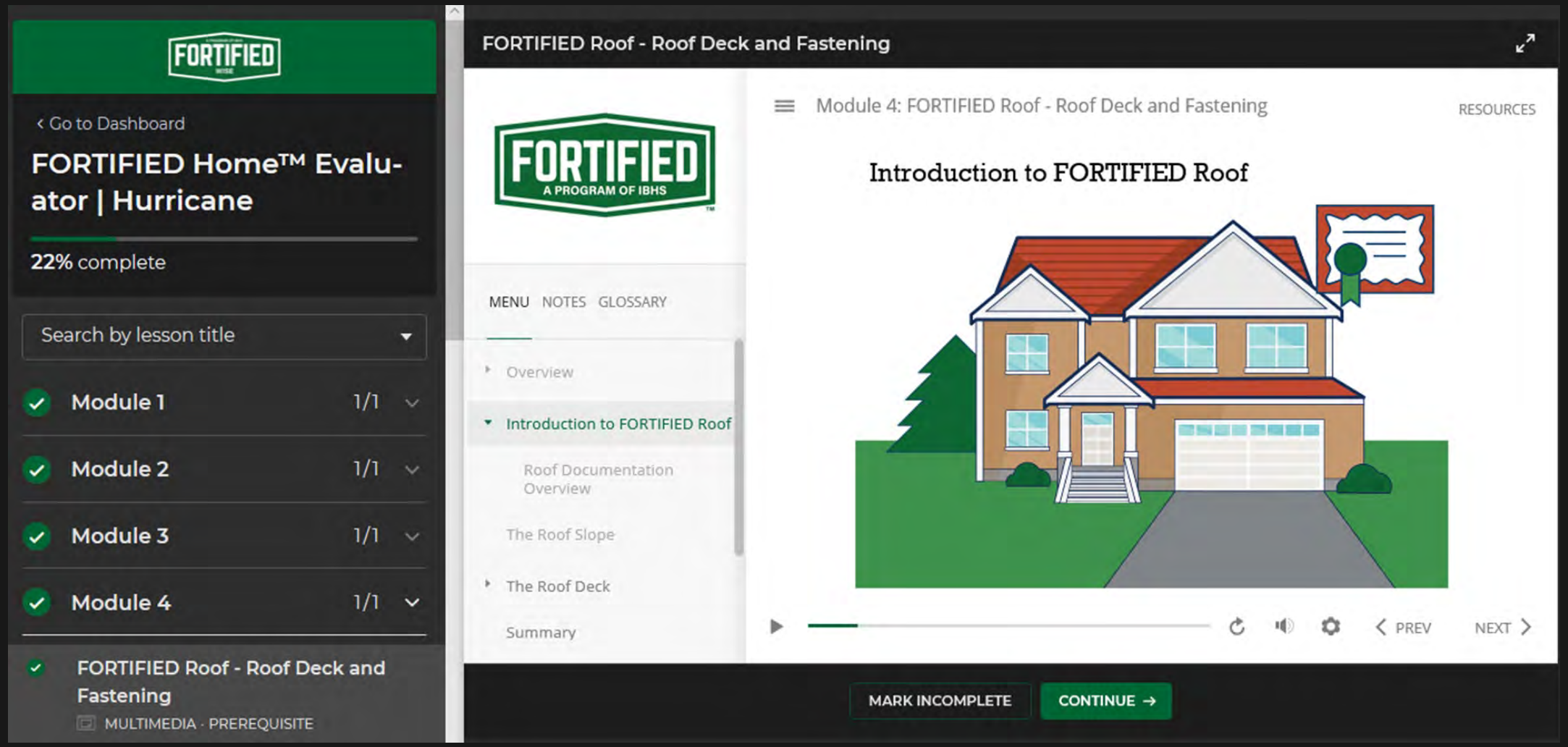
3 Lessons Free

Free Courses

FORTIFIED Training Preview

2 Lessons Free

CERTIFIED EVALUATOR COURSE



FORTIFIED WISE ROOF CONTRACTOR

FORTIFIED WISE

ALL COURSES MY DASHBOARD ALEXANDRA C

Certification Tests Evaluator Free Courses Roofing Contractors

Search

Roofing Contractors

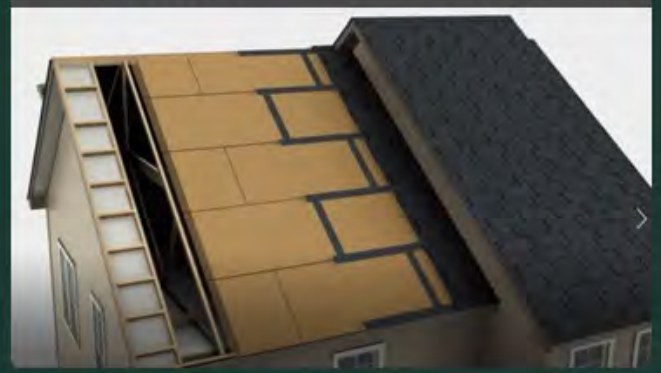
FORTIFIED Wise™ Roofing Contractor | Hurricane

12 Lessons $100.00

Roofing Contractors

FORTIFIED Wise™ Roofing Contractor | High Wind & Hail

12 Lessons $100.00



Roofing Contractors

FORTIFIED Wise Roof Contractor–Hurricane + Exam

$150.00

FORTIFIED WISE PROFESSIONAL

FORTIFIED WISE

ALL COURSES MY DASHBOARD SONJA S

FORTIFIED Professional

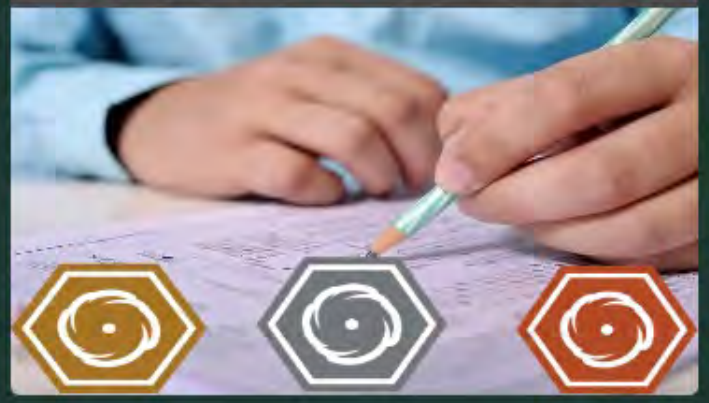
FORTIFIED Home™ Professional – Hurricane

29 Lessons | $300.00

Certification Tests, FORTIFIED Professional

FORTIFIED Professional – Hurricane Exam

1 Lessons | $100.00



FORTIFIED Professional

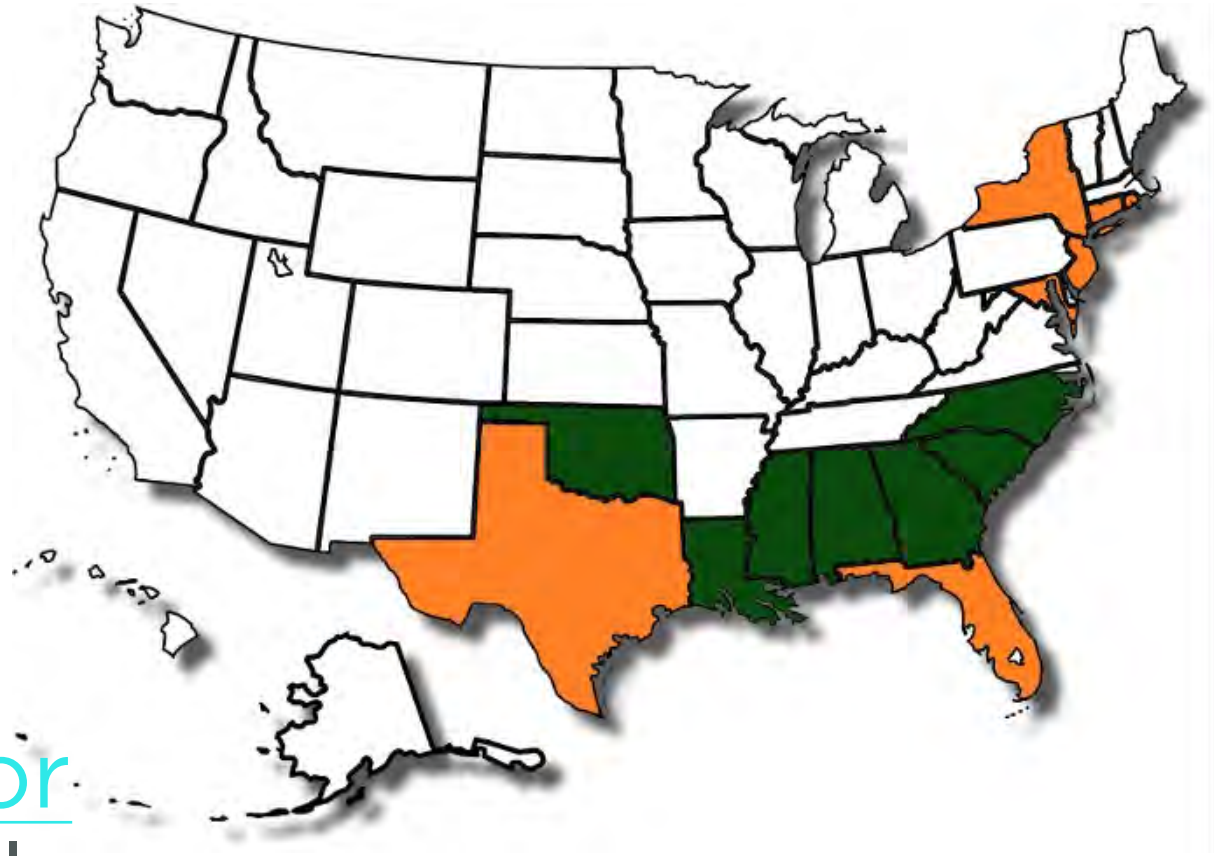
FORTIFIED Home™ Professional – High Wind & Hail

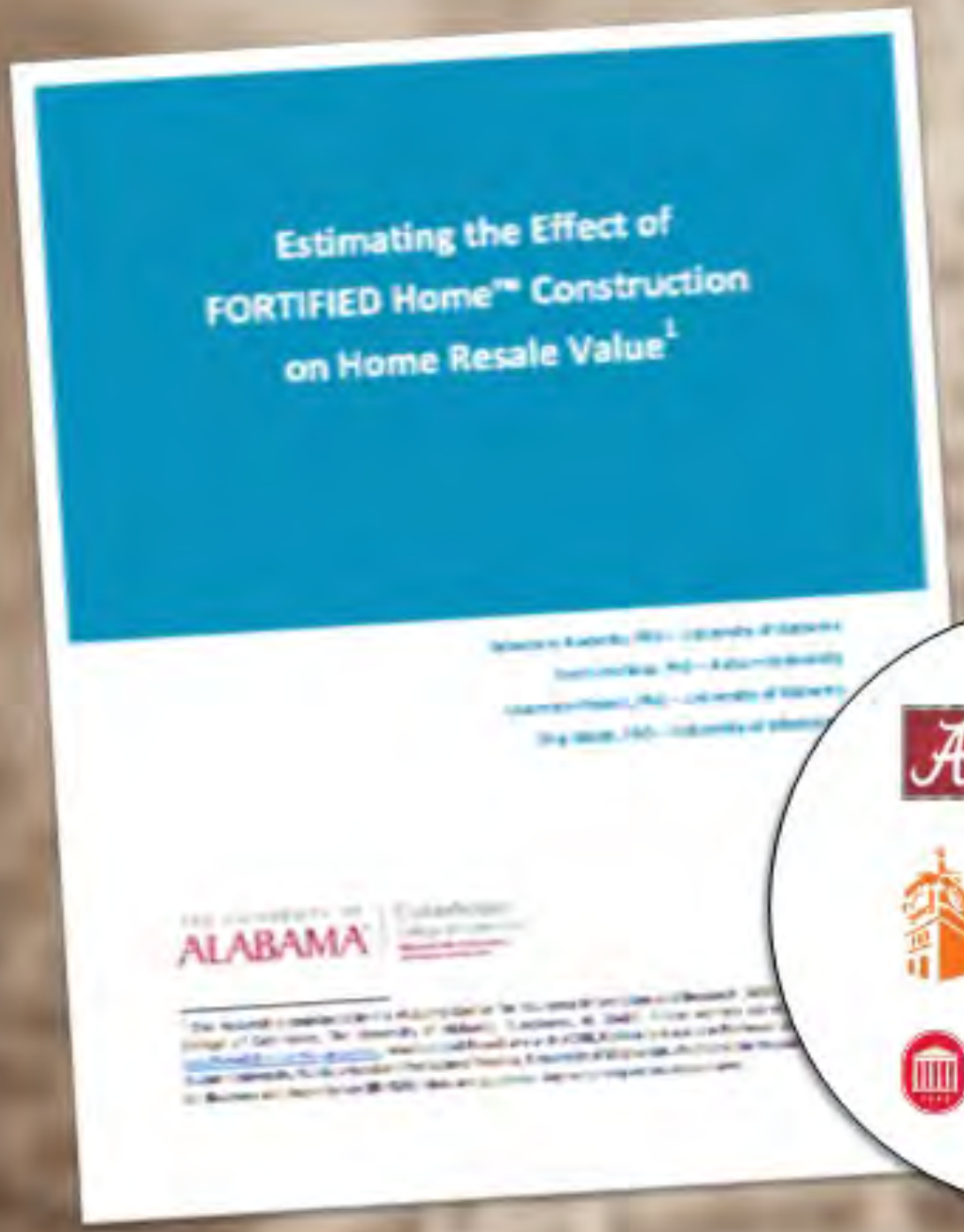
24 Lessons | $300.00

Mitigation Incentives

FORTIFIED Incentives

- Insurance discounts
- Tax credits or deductions
- Mitigation credits
- Grant programs
- Visit https://fortifiedhome.org/incentives/ for details





Having a FORTIFIED Designation

Increases Home Value

by nearly **7%**

THE UNIVERSITY OF ALABAMA

AUBURN UNIVERSITY

THE UNIVERSITY of MISSISSIPPI

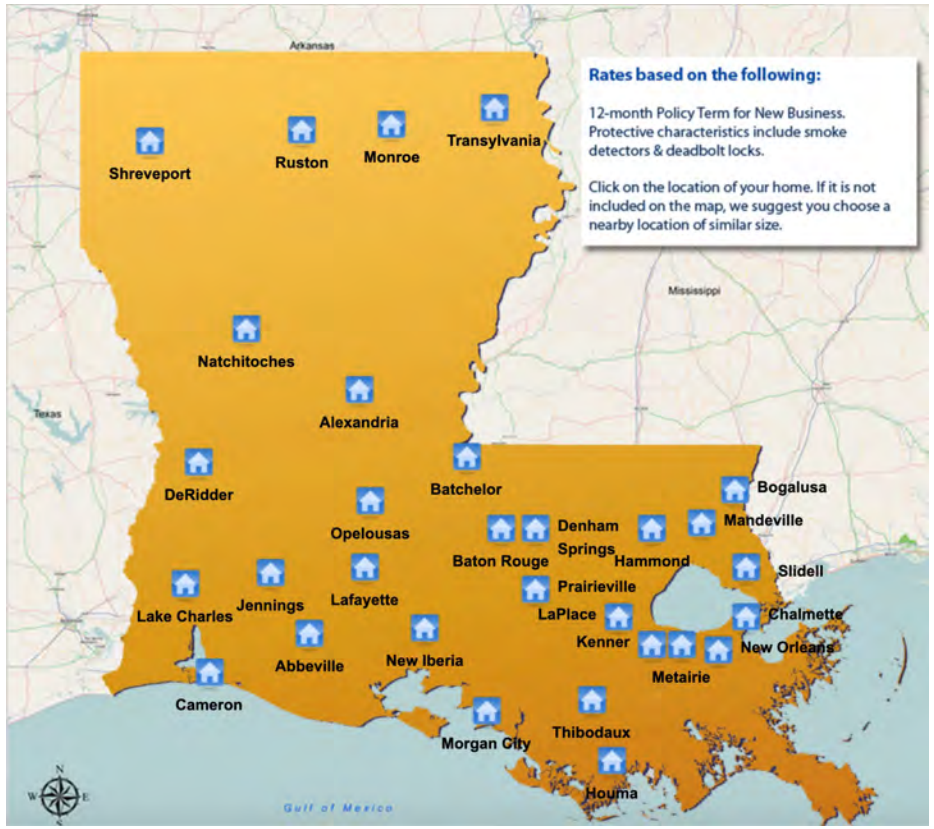
According to a study by
The University of Alabama
Auburn University &
The University of Mississippi

Louisiana Mitigation Incentives

- HB 451 /Act 30 (July 2022)

  FORTIFIED Insurance Discounts
- Current Mitigation Incentives
- Mitigation Tax Deductions

Louisiana Mitigation Incentives



- Incentives through the Department of Insurance
- *Average savings in Houma = $1,039*
- Tax deduction up to $5000.00

https://www.ldi.la.gov/online-services/shop-your-rates/homeowners-compvarison-guide

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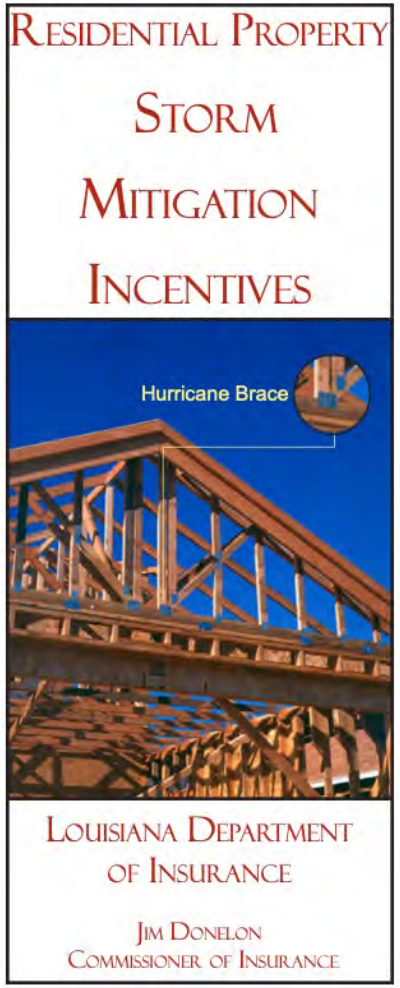
Mitigation Tax Deduction (up to $5,000)



- Tax deductions for voluntarily retrofitting an existing residential property
- Equal to 50 percent of the cost paid or incurred for the retrofit
- Must claim the homestead exemption
- No more than $5,000

https://www.ldi.la.gov/docs/defaultsource/documents/publicaffairs/consumerpublications/residential_property_storm_mitigation.pdf?sfvrsn=bf947c52_26

SMART HOME AMERICA

Different by Design……

SMART HOME AMERICA

Louisiana HB451 2021 (Act 30)

Effective July 1st, 2022

- Building or retrofitting to the FORTIFIED Home™ or FORTIFIED Commercial™ standards **will qualify for a reduced rate or discount on hazard insurance**.

- Homeowners receiving mitigation credits/insurance discounts may continue receiving discounts as long as they meet requirements.

- Insurance discounts are also available for meeting the Louisiana State Uniform Building Code.

SMART HOME AMERICA

FEMA

USDA

SBA

U.S. Small Business Administration

II.A.2.a. Alignment with mitigation plans. Grantees must ensure that the mitigation measures identified in their action plan **will align with existing hazard mitigation plans** submitted to the Federal Emergency Management Agency (FEMA) under section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5165) or other state, local, or tribal hazard mitigation plans.

II.A.2.b. Mitigation measures. Grantees must incorporate mitigation measures when carrying out activities to construct, reconstruct, or rehabilitate residential or non-residential structures with CDBG-DR funds as part of activities eligible under 42 U.S.C. 5305(a) (including activities authorized by waiver and alternative requirement). To meet this alternative requirement, grantees **must demonstrate that they have incorporated mitigation measures** into CDBG-DR activities as a construction standard to create communities that are more resilient to the impacts of recurring natural disasters and the impacts of climate change. When determining which mitigation measures to incorporate, grantees should design and construct structures to withstand existing and future climate impacts expected to occur over the service life of the project.

II.A.2.c. Resilience **performance metrics**. Before carrying out CDBG-DR funded activities to construct, reconstruct, or rehabilitate residential or non-residential structures, the grantee must establish resilience performance metrics for the activity, including: (1) an estimate of the projected risk to the completed activity from natural hazards, including those hazards that are influenced by climate change (e.g., high winds destroying newly built homes), (2) **identification of the mitigation measures that will address the projected risk**s (e.g., using building materials that are able to withstand high winds), and (3) an assessment of the benefit of the grantee's measures through verifiable data (e.g., 10 newly built homes will withstand high winds up to 100 m[illegible].

Questions?

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sonja@smarthomeamerica.org

SMART HOME AMERICA

SmartHomeAmerica.org

DontGoof.org

FORTIFIED.org

https://www.smarthomeamerica.org/home-builder-resources