

Planning For A Rainy Day

Maximizing Your Facilities Roof Investments

Your Presenters:

Robert Pina | Property Claims Manager - TASB

Josh Ziegler | Construction Consultant – Cavalry Construction

Chad Fuller | Vice President – Cavalry Construction



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Introduction

- Welcome to our session on protecting and maximizing your school's infrastructure investments.
- Today, we'll navigate through simple yet critical steps to ensure your facilities are well-maintained and cost-efficient.
- Learn the importance of informed decisions on roof and rooftop HVAC unit maintenance for the longevity of your facilities.

DID YOU KNOW?

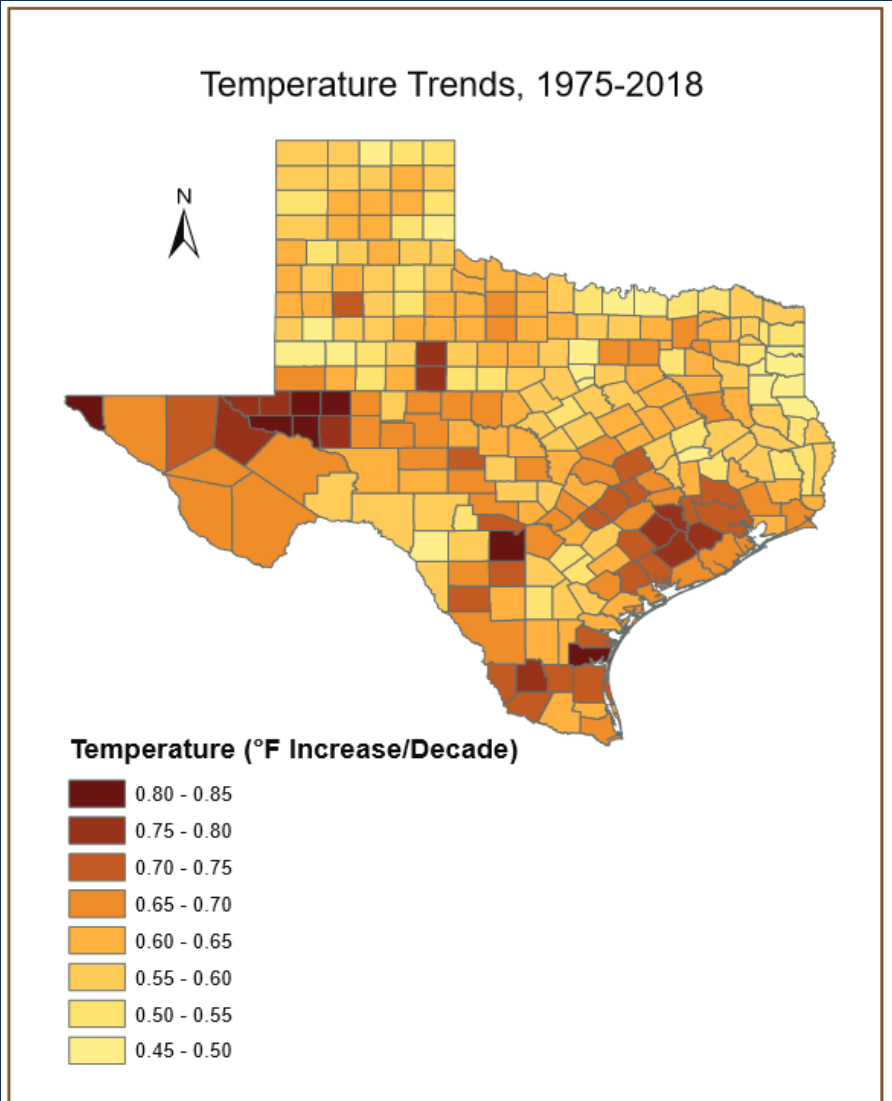
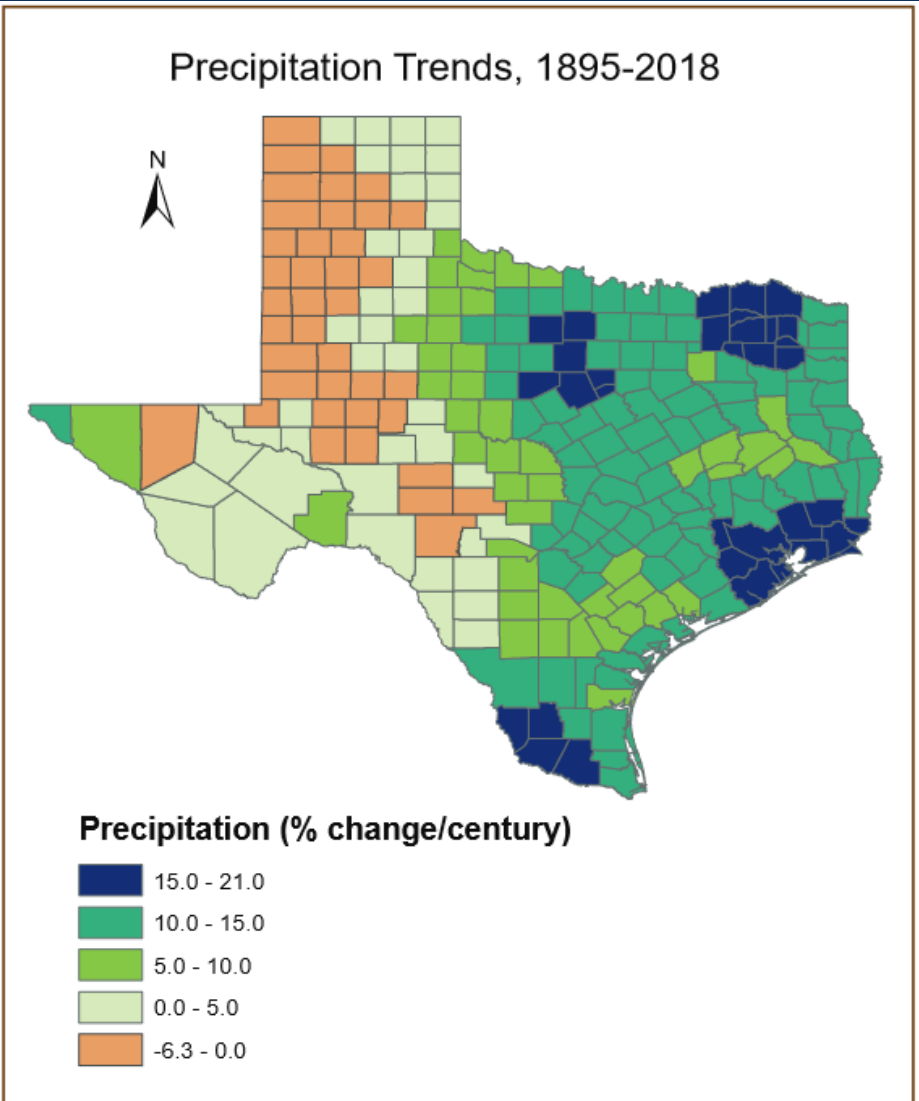
Routine & preventative maintenance can extend the life of major building components by 25%



UNDERSTANDING TEXAS CLIMATE

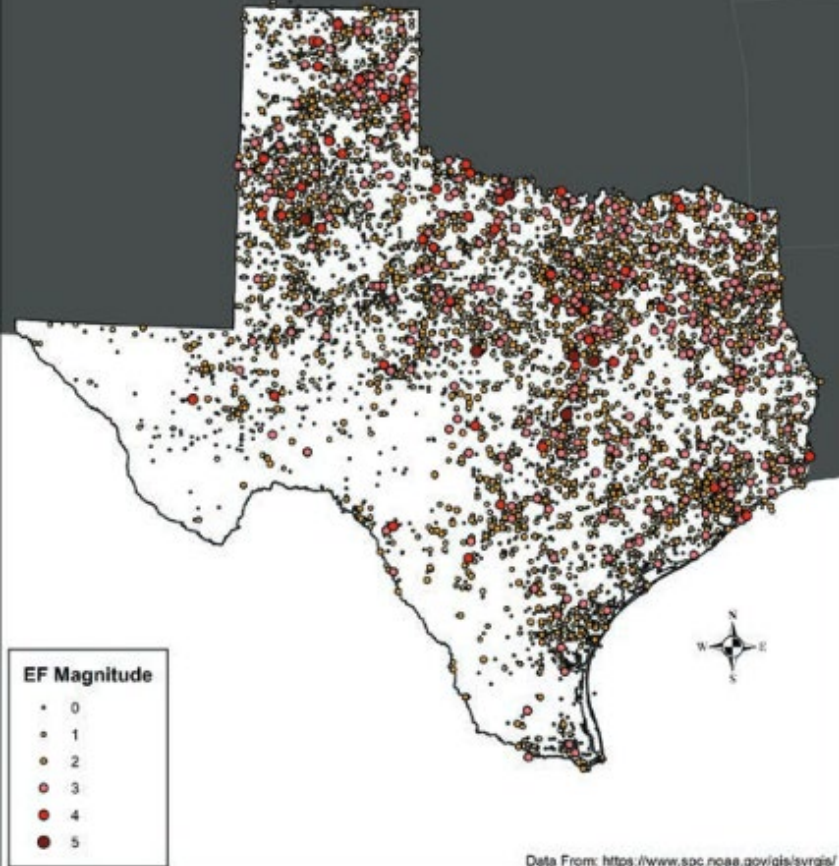


Precipitation and Temperature Trends

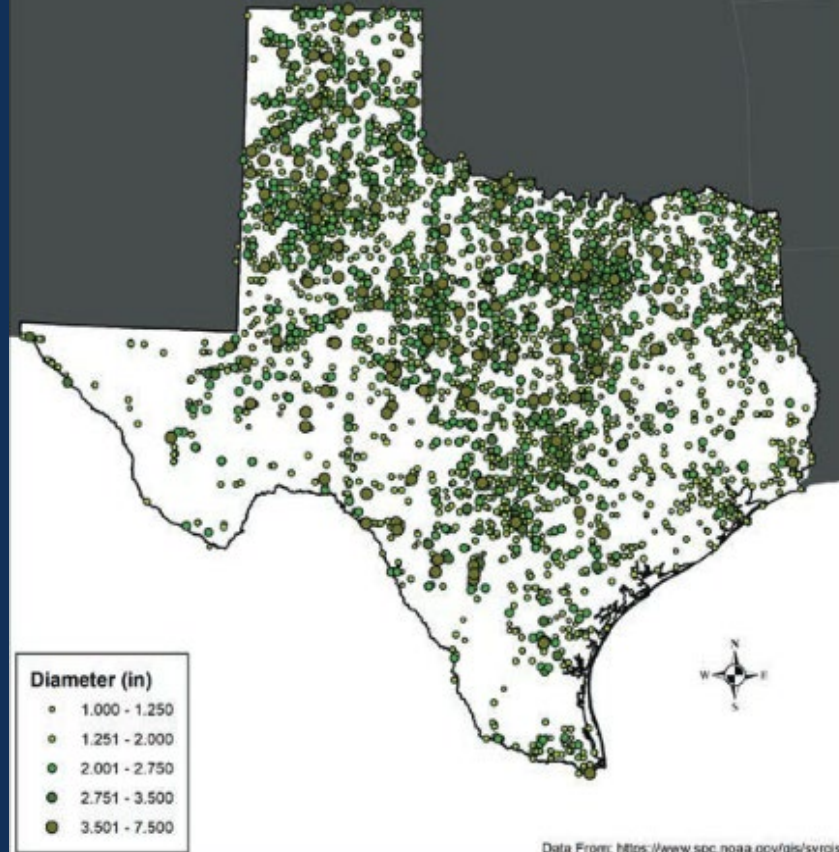


Severe Weather Trends

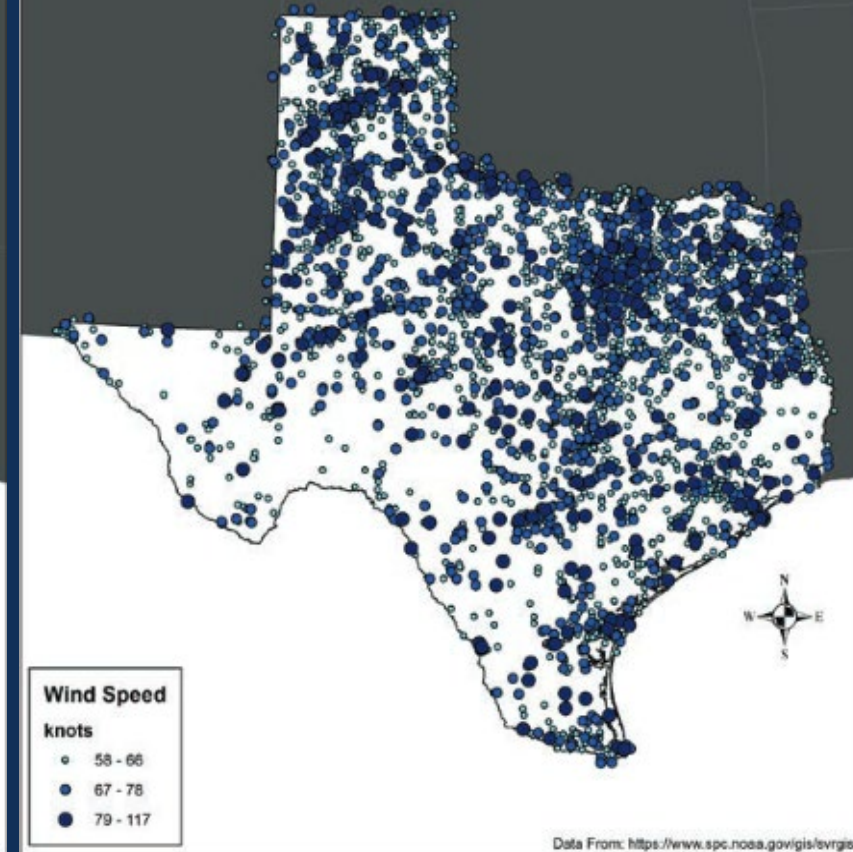
Tornadoes 1950-2017



Texas Hail 1955-2017



Severe Thunderstorm Winds 1955-2017



TEXAS CLIMATE

Challenges for Commercial Roofs



Intense Summers:

Expansion, contraction



Freezing Winters:

Brittle, cracking



Heavy Rains & Flash Floods:

Flashing, drainage, scuppers



Erratic Storms:

Punctures, tears, blisters



Takeaway: Texas' unique climate demands robust roofing choices and proactive maintenance strategies.

TEXAS CLIMATE

Challenges for Commercial Rooftop HVAC Units



Heavy rains and flooding: Curb heights, flashing, unit housing, condensate drains

High winds and storms: HVAC secured to curb or roof, dirty or bent coil fins

Variable temperatures: High-efficiency models, sizing

Intense heat and sun exposure: Covers or white coatings

Hail: Coil Guards, Coil Guards, Coil Guards! DEMAND THEY BE INCLUDED IN PURCHASE



MAINTENANCE IS KEY

Roofing



The chart below represents the building systems and associated deficiency costs.

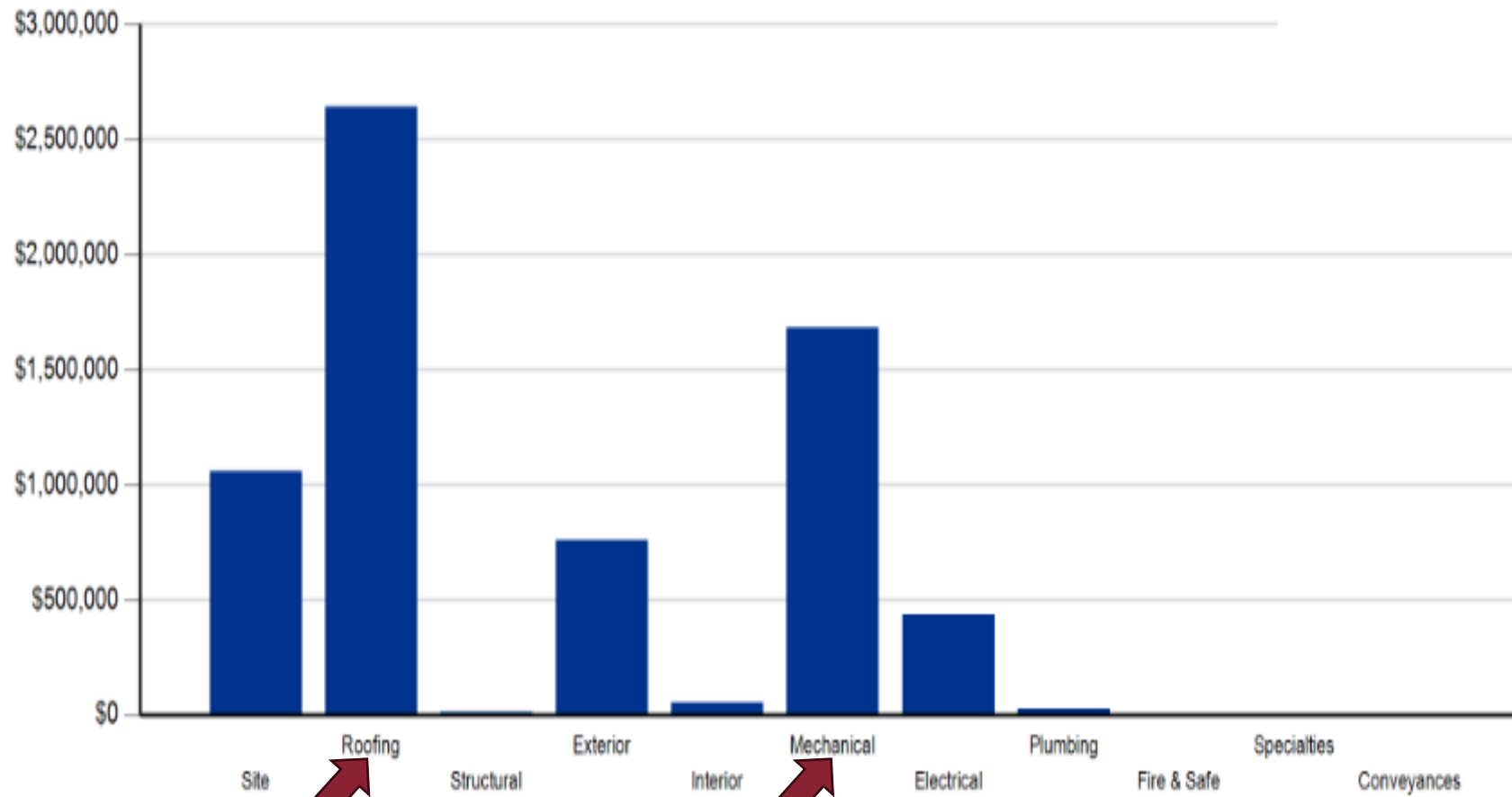


Figure 1: System Deficiencies

Early Detection:

Regular inspections prevent minor issues from becoming major.



Extending Roof Lifespan:

Maintenance adds years to your roof's service life.



Safeguard Operations:

Preventing leaks ensures smooth business continuity.

Preserve Property Value & Energy Efficiency:

A well-maintained roof enhances property value and contributes to energy savings.



Action Plan:

Implement a set inspection schedule to tackle Texas weather's diverse challenges head on. Repair critical issues NOW.

- Leaks
- Ponding Water
- Lack of Maintenance
- Shrinkage
- Ridging
- Poor Workmanship
- Flashings
- Debris in Drains



Image source: Cavalry Construction



Image source: Cavalry Construction



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Image source: Cavalry Construction







Image source: Cavalry Construction



Image source: Cavalry Construction



MAINTENANCE IS KEY

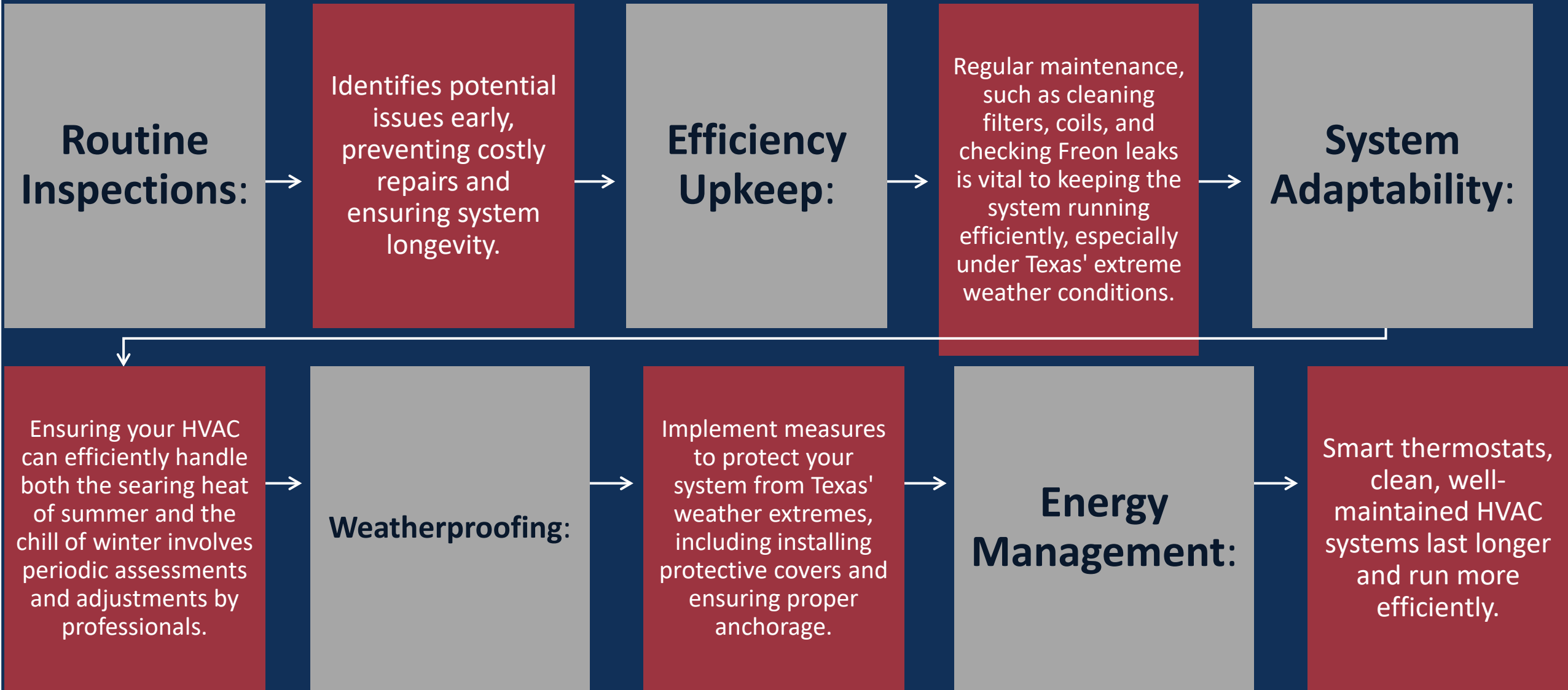
Rooftop HVAC Units

Service and Inspect



Image source: Cavalry Construction





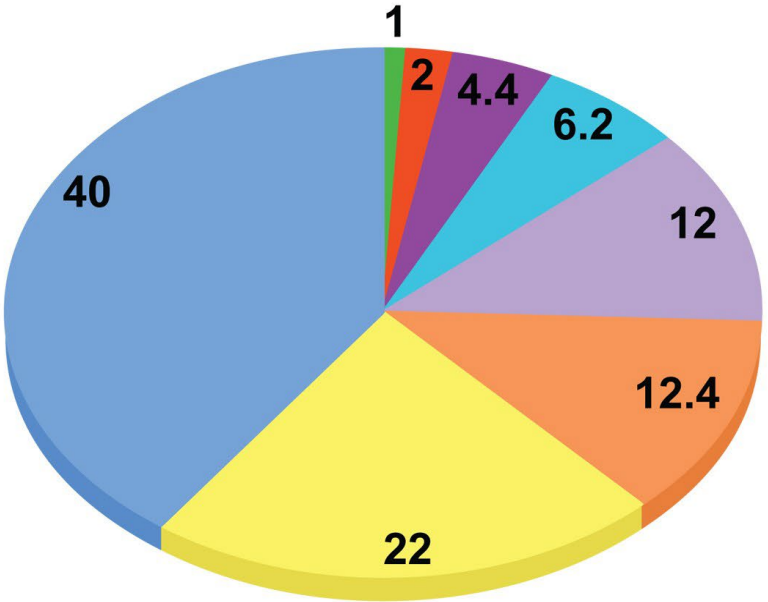


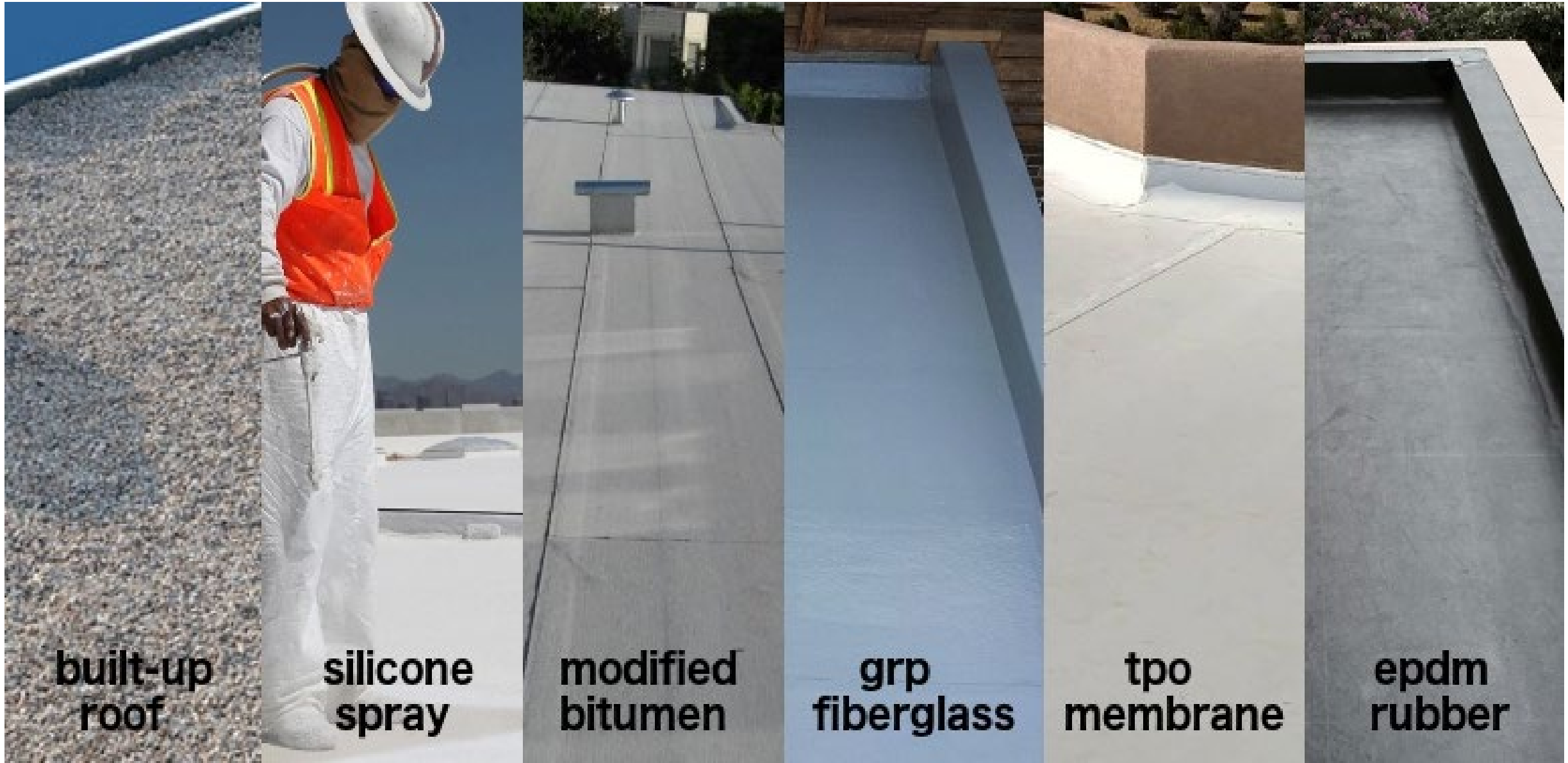
CHOOSING THE RIGHT PRODUCT

Hail-Rated Roofing Assemblies

- Rated to sustain large hail stones
- FM Approval
 - Severe hail: greater than 1.75 inches and less than 2 inches
 - Very severe hail: greater than or equal to 2 inches
- UL 2218
 - Class 4 Impact Rating
- Add these standards to bid specs on roof replacements and new construction

New Installations





**built-up
roof**

**silicone
spray**

**modified
bitumen**

**grp
fiberglass**

**tpo
membrane**

**epdm
rubber**

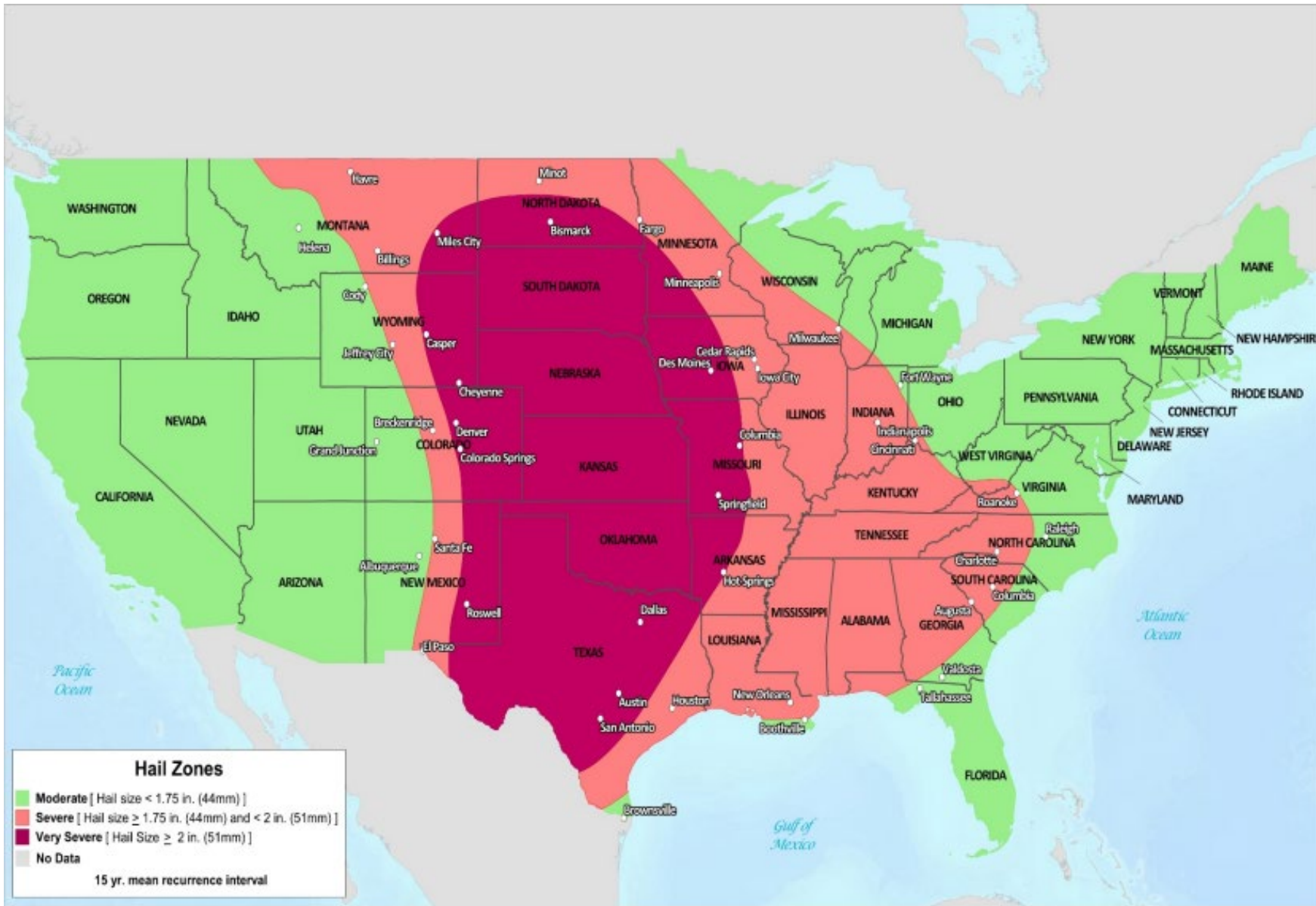


Image source: FM Global Property Loss Prevention Data Sheet 1-34 (Hail Damage)

Roof Life

Location, Location, Location

Coastal: Wind

West Texas : Wind/Hail

East Texas: Hail (Less Severe)

North Texas: Wind/Hail

South Texas: Wind/Hail

- **Architectural asphalt shingles:** 30 years
- **Three-tab asphalt shingles:** 20 years
- **Built-up roofing (BUR):** 30 years
- **Clay tiles:** 100+ years
- **Concrete:** 100+ years
- **Copper:** 70+ years
- **EPDM rubber:** 15-25 years
- **Fiber cement:** 25 years
- **Green (vegetation-covered):** 5-40 years
- **Metal:** 40-80 years
- **Modified bitumen:** 20 years
- **Synthetic (simulated slate):** 10-35 years
- **Slate:** 60-150 years
- **TPO rubber:** 7-20 years
- **Wood:** 40-50 years

PROCUREMENT



tasbrmf.org/resources/insights



Nail Your Roof Inspections

Facility roofs are among your biggest investments. Follow these steps to inspect them, address damage, and reduce the risk of costly repairs or replacements.

[Learn How](#) →



Let FM Approvals Guide Your Roof Purchasing Process

FM Approvals' standards and RoofNav tool can ensure school staff purchase roofs that will stand up to the climate in their region.

[Learn How](#) →



8 Steps to a Preventative Maintenance Program

Preventative maintenance can save money for schools and minimize operational disruptions by extending the lifecycles of roofs, boilers, and other property.

[See Steps](#) →

Smart Procurement Strategies

Emergency Readiness

- **Key Point:** Implementing smart contracts and contingency planning ensures readiness for unforeseen events.
- **Detail:** Develop flexible contracts for rapid response to emergency repairs, minimizing downtime and protecting assets.

Fair Bidding Practices

- **Key Point:** Ensure a transparent and equal opportunity bidding process.
- **Detail:** Use clear, comprehensive Requests for Proposal (RFPs) that outline project scope and requirements. Employ transparent evaluation criteria that all bidders are aware of, promoting fairness. More bidders, more competitive pricing.

Choosing the Right Partners

- **Key Point:** Value beyond price - Experience, reliability, and support matter.
- **Detail:** Evaluate their track record, capacity for after-service support, reliability, not just cost. Prioritize vendors who offer solid warranties, responsive service, ensuring long-term benefits.



PLANNING FOR THE FUTURE



Planning for the Future: Roof/HVAC

Know what you have!

- Quarterly inspections
- Maintenance repair budget
- Life expectancy (How old are my roofs and HVACs?)
- Cost of current system vs. new system
- Latest tech

TECHNOLOGY

*Leveraging Technology
for HVAC Efficiency*



IoT Internet of Things

Software intelligently monitors and controls:

- Preventative maintenance
- Energy efficiency
- Remote system monitoring
- Regulatory compliance
- Recurring service plans
- Reserves for new equipment as life expires

In the first 16 months after launching its product, it connected over 2,000 A/C systems, caught 500 issues, and collected 600 million data points.



UNDERSTANDING COVERAGE IMPLICATIONS

- Preventative maintenance = lower risk
- Strategic planning for future uncertainties
- Claims reduction through education and quality investments
- Know your coverage limits, deductibles, exclusions, and perks
- Supplemental insurance needs
- Funding budgets
- Find resources:
 - tasbrmf.org
 - RoofNav.com

QUESTIONS & DISCUSSION

Contact Us!

Robert Pina:

(P) 512-350-6372

(E) Robert.Pina@tasb.org

Chad Fuller:

(P) 817-403-7548

(E) ChadF@CavalryConstruction.com

Josh Ziegler:

(P) 940-636-9114

(E) Jziegler@CavalryConstruction.com



**Thank
You!**

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1HJM

