

#TornadoStrong
Annual Survey
Results & Comparison
2025 vs. 2024



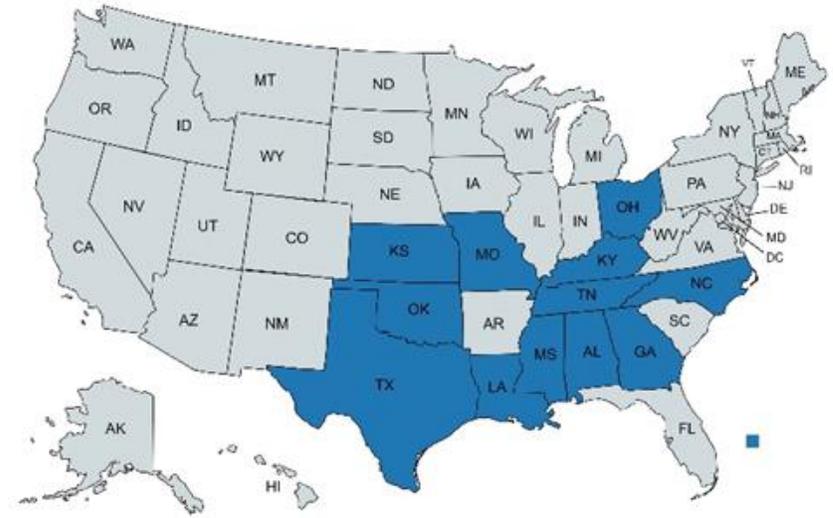
Background & Methodology

Background

The [Federal Alliance for Safe Homes \(FLASH\)](#)[®] surveyed consumers in February 2025 to measure awareness and understanding of tornado weather, safety, and protection. The survey identified opportunities to increase consumer safety through improved knowledge of meteorological terms, safe and unsafe behaviors during tornadoes, and information about tornado safe rooms and storm shelters.

Methodology

The survey sampled 500 respondents ranging in age from 18-24 (3%), 25-34 (8%), 35-44 (18%), 45-54 (21%), and 55-64 (22%), 65-74 (19%), >97 (9%). The respondents were 56% female and 44% male and resided in one of 12 tornado-prone states.



Alabama	6%
Georgia	11%
Kansas	3%
Kentucky	4%
Louisiana	5%
Mississippi	1%
Missouri	9%
North Carolina	10%
Ohio	21%
Oklahoma	4%
Tennessee	8%
Texas	20%

Top Survey Findings

1. Improved Understanding of Tornado Alerts

- Confidence in distinguishing between a Tornado Watch and a Tornado Warning is increasing, with 71% and 82% correctly identifying them, respectively.
- The steady rise in correct responses over the past four years suggests that awareness efforts are making a positive impact.

2. Tornado Watch Frequency vs. Public Awareness

- Despite 94.5% of U.S. counties experiencing a Tornado Watch in the past five years, many people underestimate how often these alerts occur.
- This highlights the need for broader tornado safety education, even in areas not traditionally considered high-risk.

3. Sheltering Behavior and Safety Messaging

- A 10% increase in people using designated safe rooms and a 14% rise in those sheltering in small interior rooms suggest that safety messaging is effectively influencing behavior.
- However, awareness of the role of garage doors in protecting homes remains a knowledge gap, with 14% more people unaware of its impact on structural integrity.

4. Public Willingness to Invest in Protection

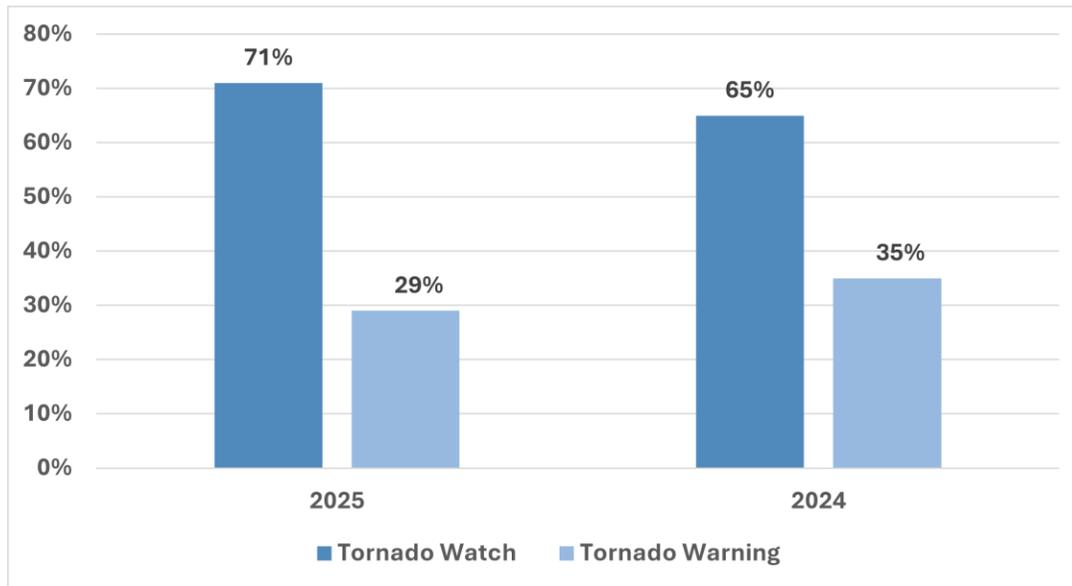
- Willingness to spend up to \$500 on garage door upgrades increased by 12%, while interest in higher-cost upgrades declined.
- Clearer communication on cost-effective options is needed to encourage investment in storm-resistant infrastructure.

5. Tornado Safe Room Awareness and Affordability

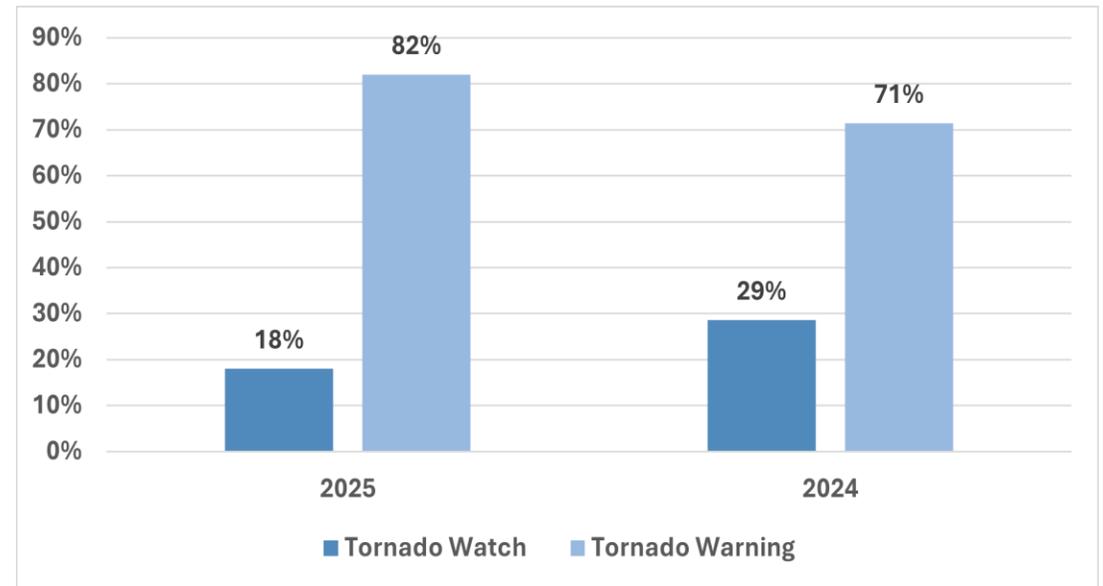
- Many people remain unaware of the critical protection provided by tornado safe rooms meeting FEMA and ICC/NSSA 500 standards.
- Affordable options, such as Twister Pods (\$3,000–\$5,000), exist but require greater public education to increase adoption.



1) The National Weather Service weather alert “tornadoes are possible in and near the watch area” indicates which of the following:



2) The National Weather Service weather alert “a tornado has been sighted or indicated by weather radar” indicates which of the following:



Insights from Questions #1 and #2: Survey respondents expressed confidence in understanding the difference between a Tornado Watch and a Tornado Warning. When tested with specific definitions, 71% correctly identified a Tornado Watch, while 82% correctly identified a Tornado Warning. Notably, the percentage of respondents accurately identifying a Tornado Watch has steadily increased over the past four years, indicating a growing base knowledge of severe weather alerts among individuals. This trend suggests that awareness efforts are having a positive impact, but continued education remains essential to ensure widespread understanding and preparedness.

3) How do you receive tornado watches or warnings?

(2025)

		RESPONDENTS(%)	ANSWERS(%)	COUNT	STRATIFIED RESPONDENTS(%)	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	Smartphone App	66.00%	30.50%	330	66.07%	29.95%	330.35
A2	NOAA Weather Radio	21.80%	10.07%	109	22.41%	10.16%	112.03
A3	Social Media	22.20%	10.26%	111	24.28%	11.00%	121.38
A4	TV or Radio News	71.60%	33.09%	358	69.38%	31.45%	346.88
A5	Friends or Family	29.60%	13.68%	148	32.23%	14.61%	161.13
A6	Other	5.20%	2.40%	26	6.27%	2.84%	31.34

(2024)

		RESPONDENTS(%)	ANSWERS(%)	COUNT	STRATIFIED RESPONDENTS(%)	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	Smartphone App	66.00%	26.94%	330	65.35%	26.65%	326.76
A2	NOAA Weather Radio	30.20%	12.33%	151	29.51%	12.03%	147.54
A3	Social Media	31.60%	12.90%	158	32.38%	13.20%	161.88
A4	TV or Radio News	74.00%	30.20%	370	73.84%	30.11%	369.22
A5	Friends or Family	37.40%	15.27%	187	37.77%	15.40%	188.87
A6	Other	5.80%	2.37%	29	6.36%	2.60%	31.82

4) Please select the precautions you would take if you came under a Tornado Watch. Check all that apply.

(2025)

		RESPONDENTS(%)	ANSWERS(%)	COUNT	STRATIFIED RESPONDENTS(%)	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	Monitor your NOAA weather radio, alerting app, and local media	94.20%	58.88%	471	94.30%	59.23%	471.48
A2	Open your windows	7.40%	4.62%	37	7.28%	4.57%	36.39
A3	Keep an eye on the sky	58.40%	36.50%	292	57.62%	36.20%	288.12

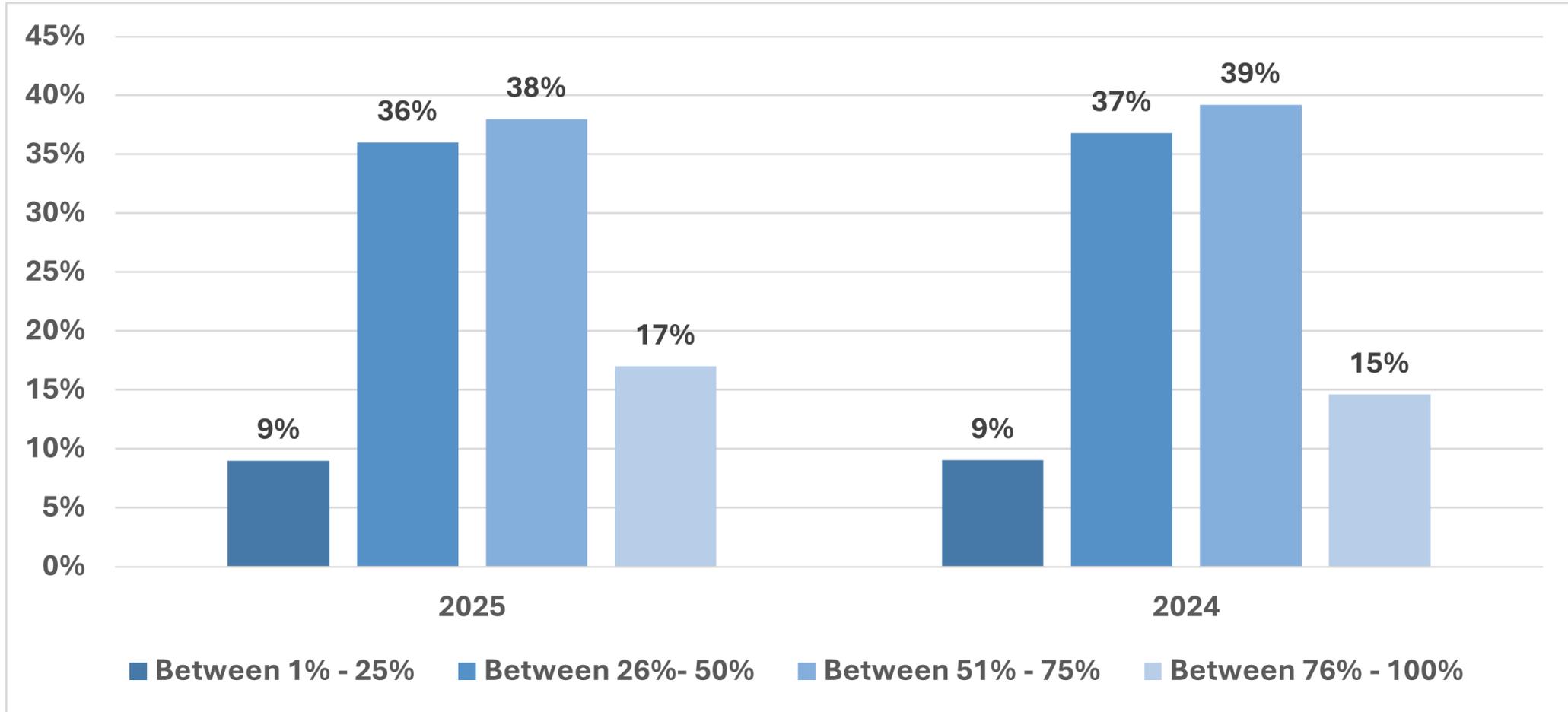
COMPLETES 500

(2024)

		RESPONDENTS(%)	ANSWERS(%)	COUNT	STRATIFIED RESPONDENTS(%)	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	Monitor your NOAA weather radio, alerting app, and local media	91.40%	54.40%	457	90.50%	54.06%	452.5
A2	Open your windows	20.60%	12.26%	103	20.62%	12.32%	103.11
A3	Keep an eye on the sky	56.00%	33.33%	280	56.28%	33.62%	281.41

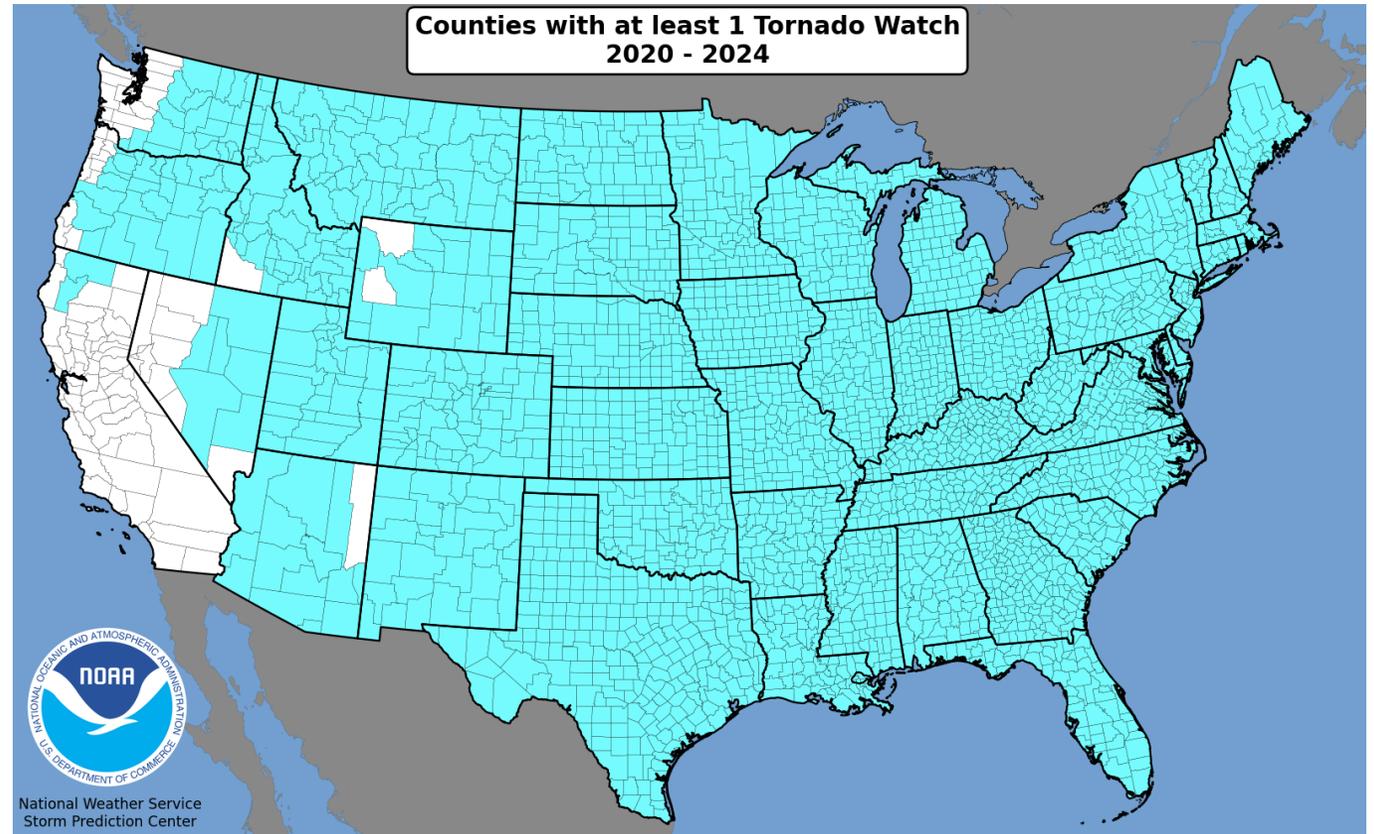
COMPLETES 500

5) How many U.S. counties do you believe have been under a Tornado Watch during the past five years?



Insights from Question #5: How many U.S. counties do you believe have been under a Tornado Watch during the past five years?

- Data from the National Weather Service reveals that nearly 94.5% of U.S. counties have been under a tornado watch at some point in the past five years.
- Despite this widespread occurrence, many people remain unaware of how frequently tornado watches are issued.
- This highlights the urgent need for comprehensive tornado safety education, not only for residents in traditionally high-risk areas but also for communities across the entire country.



6) Please select the steps that you would take if you came under a tornado warning. Check all that apply.

(2025)

		RESPONDENTS(%)	ANSWERS(%)	COUNT	STRATIFIED RESPONDENTS(%)	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	Go to a safe room, basement, or storm cellar	89.20%	28.03%	446	90.00%	28.85%	449.98
A2	Get to a small interior room on the lowest level	83.80%	26.34%	419	81.67%	26.18%	408.35
A3	Stay away from windows, doors, and outside walls	89.80%	28.22%	449	88.76%	28.46%	443.79
A4	If outdoors, do not get under an overpass or bridge	41.00%	12.88%	205	38.29%	12.28%	191.45
A5	Open your windows	12.80%	4.02%	64	11.53%	3.70%	57.64

(2024)

		RESPONDENTS(%)	ANSWERS(%)	COUNT	STRATIFIED RESPONDENTS(%)	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	Go to a safe room, basement, or storm cellar	80.00%	26.94%	400	79.93%	27.14%	399.65
A2	Get to a small interior room on the lowest level	69.60%	23.43%	348	68.94%	23.41%	344.7
A3	Stay away from windows, doors, and outside walls	84.40%	28.42%	422	83.58%	28.38%	417.92
A4	If outdoors, do not get under an overpass or bridge	40.80%	13.74%	204	40.46%	13.74%	202.31
A5	Open your windows	19.00%	6.40%	95	18.24%	6.19%	91.19
A6		3.20%	1.08%	16	3.34%	1.13%	16.68

Insight from Question #6: Please select the steps that you would take if you came under a tornado warning.

- The increase of nearly 10% in people choosing to go into a safe room during a tornado warning, along with a 14% rise in those opting for a small interior room, suggests that messaging about tornado safe rooms and sheltering strategies is effectively reaching and influencing the public.



7) Has your home or community experienced damage from a tornado?

(2025)

		ANSWERS(%)	COUNT	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	Yes	37.60%	188	37.88%	189.4
A2	No	62.40%	312	62.12%	310.6

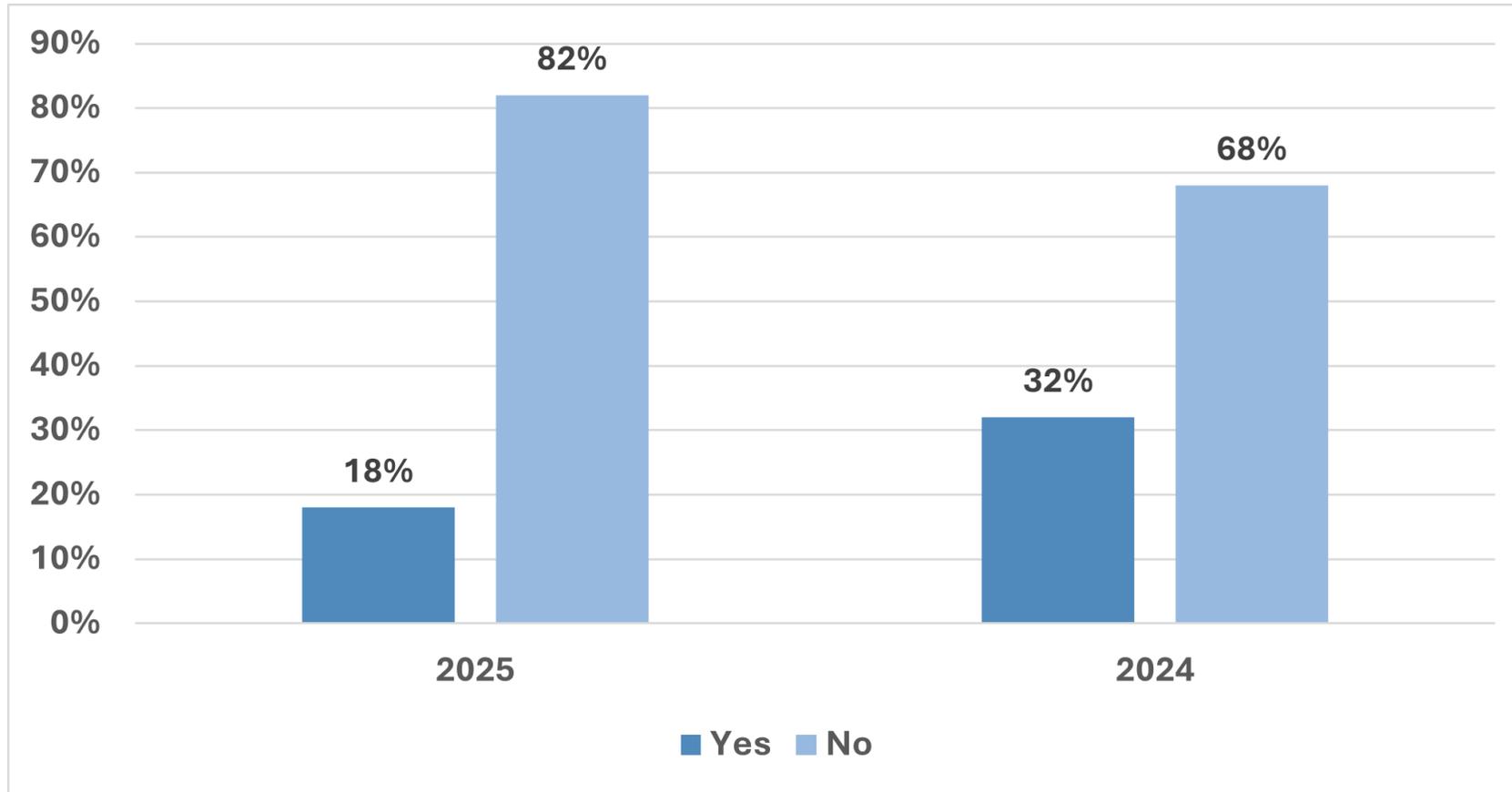
COMPLETES 500

(2024)

		ANSWERS(%)	COUNT	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	Yes	38.20%	191	39.12%	195.62
A2	No	61.80%	309	60.88%	304.38

COMPLETES 500

8) Did you know that keeping your garage door intact during a 135 mph or lower windspeed tornado can prevent roof and/or wall damage? (Note: 89% of tornadoes occur at 135 mph or lower.)

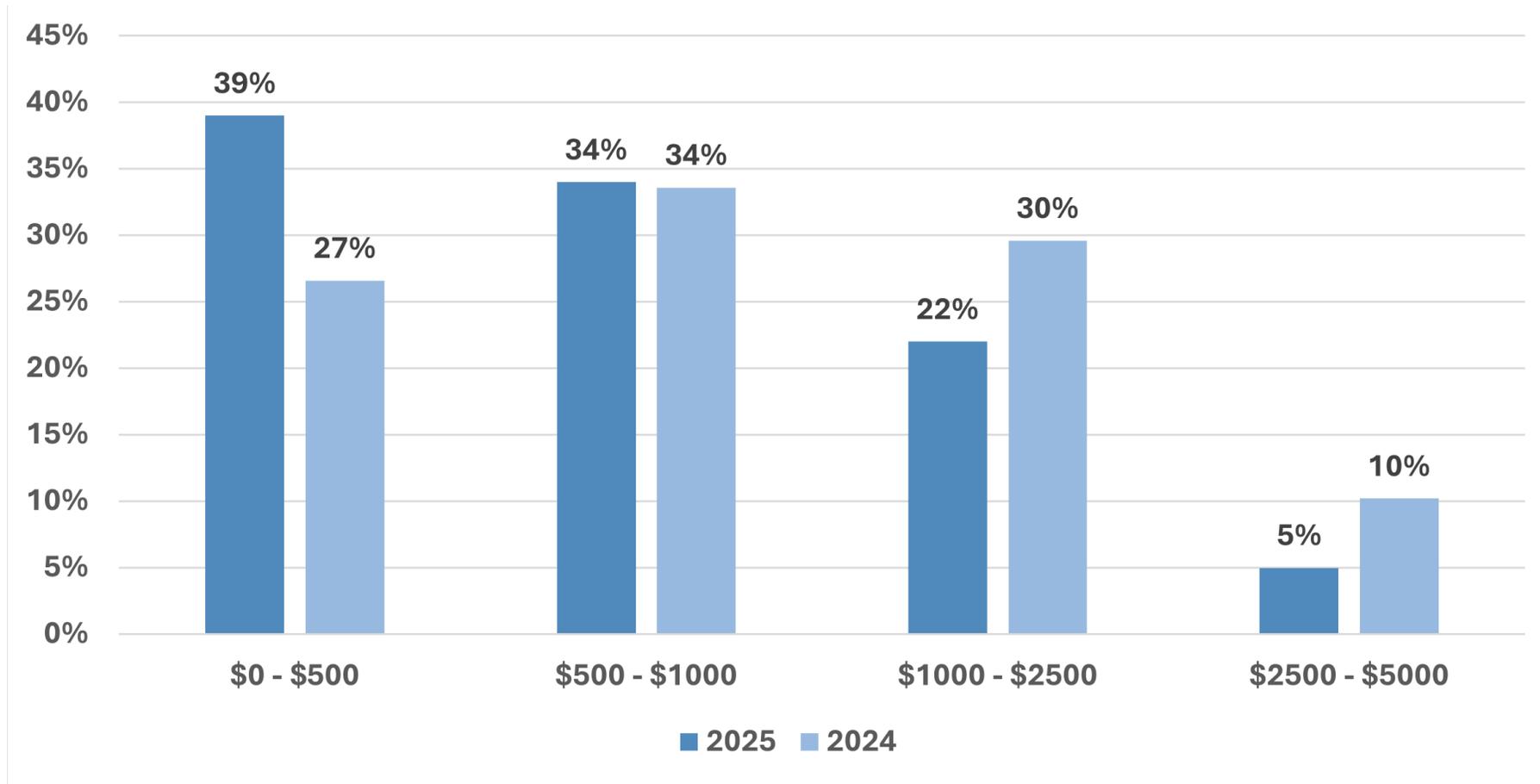


Insights from Question #8: Did you know that keeping your garage door intact during a 135 mph or lower windspeed tornado can prevent roof and/or wall damage? (Note: 89% of tornadoes occur at 135 mph or lower.)

- The survey reflected a 14% increase in people who **DID NOT** know that keeping a garage door intact could prevent roof or wall damage.
- This knowledge gap underscores the need for increased public education on the role of a strong garage door in preventing wind pressurization that exerts pressure on roofs and adjacent walls that can lead to progressive structural failure.
- Awareness levels remained consistently high throughout the tornado and hurricane seasonal messaging period but declined afterward. This trend underscores the importance of ongoing and reinforced communication to emphasize the garage doors as key to overall building strength in high wind events.

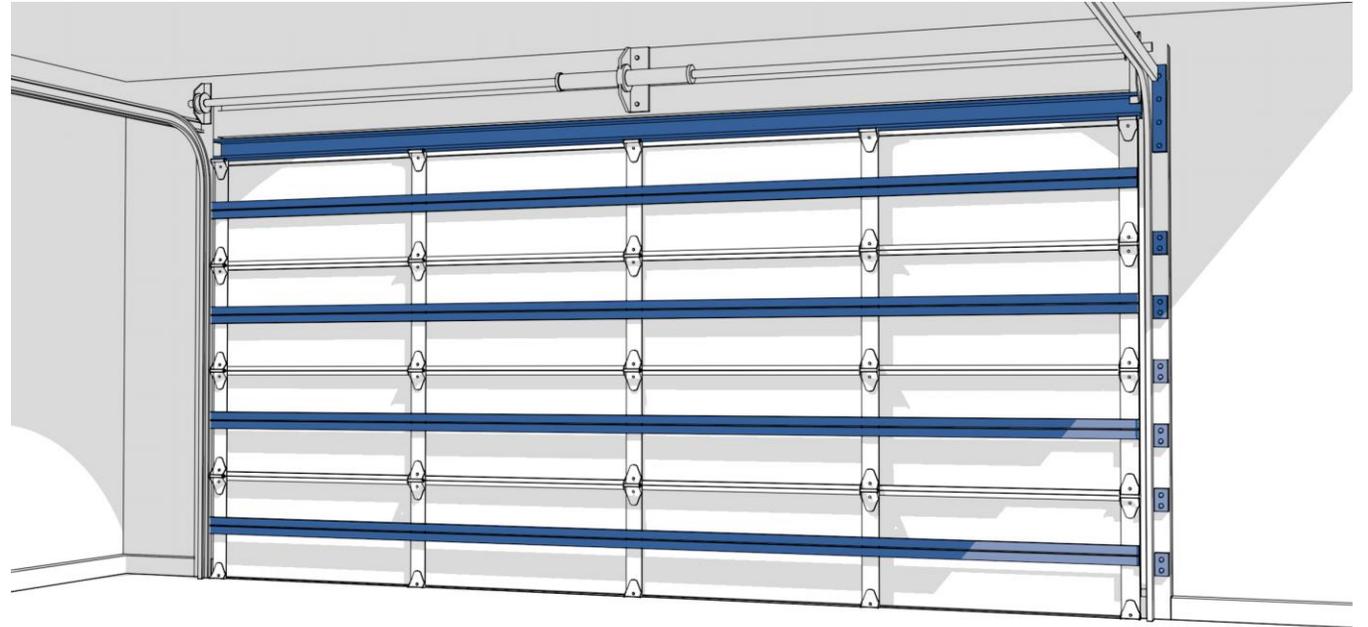


9) Bearing in mind that strong garage doors can prevent roof or wall damage in most tornadoes, how much would you be willing to spend to upgrade your garage door?



Insights from Question #9: Bearing in mind that strong garage doors can prevent roof or wall damage in most tornadoes, how much would you be willing to spend to upgrade your garage door?

- The survey reflected a 12% increase in people willing to spend up to \$500 to upgrade their garage door, while the number of those willing to spend \$500-\$1,000 remained nearly unchanged.
- Willingness to spend more than \$1,000 decreased, indicating the importance of clear communication on cost differences vs. overall pricing of garage doors.



10) Tornadoes kill more people per year in the U.S. than hurricanes and earthquakes combined.

(2025)

		ANSWERS(%)	COUNT	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	True	80.80%	404	76.16%	380.82
A2	False	19.20%	96	23.84%	119.18

COMPLETES 500

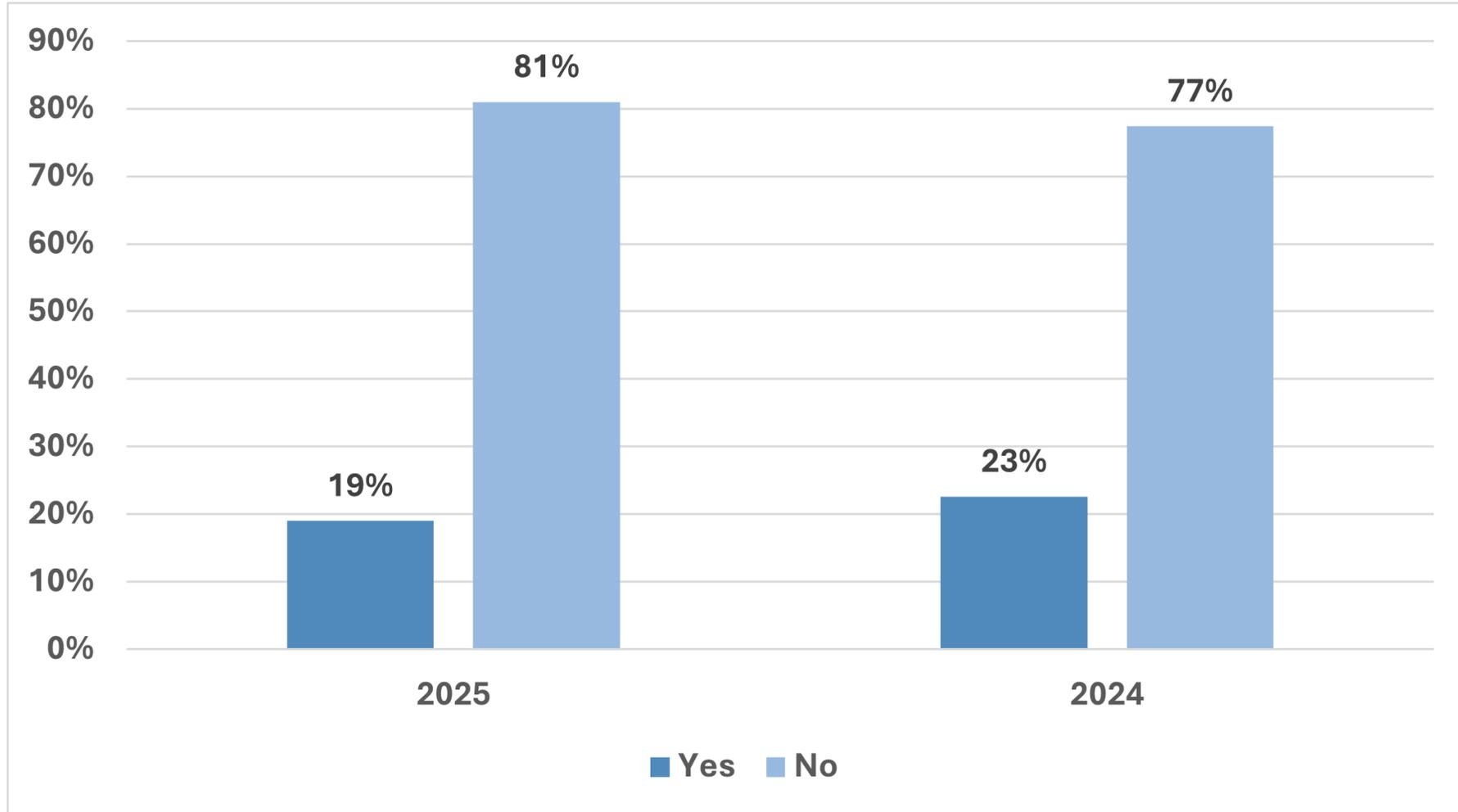
(2024)

		ANSWERS(%)	COUNT	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	True	77.00%	385	76.31%	381.55
A2	False	23.00%	115	23.69%	118.45

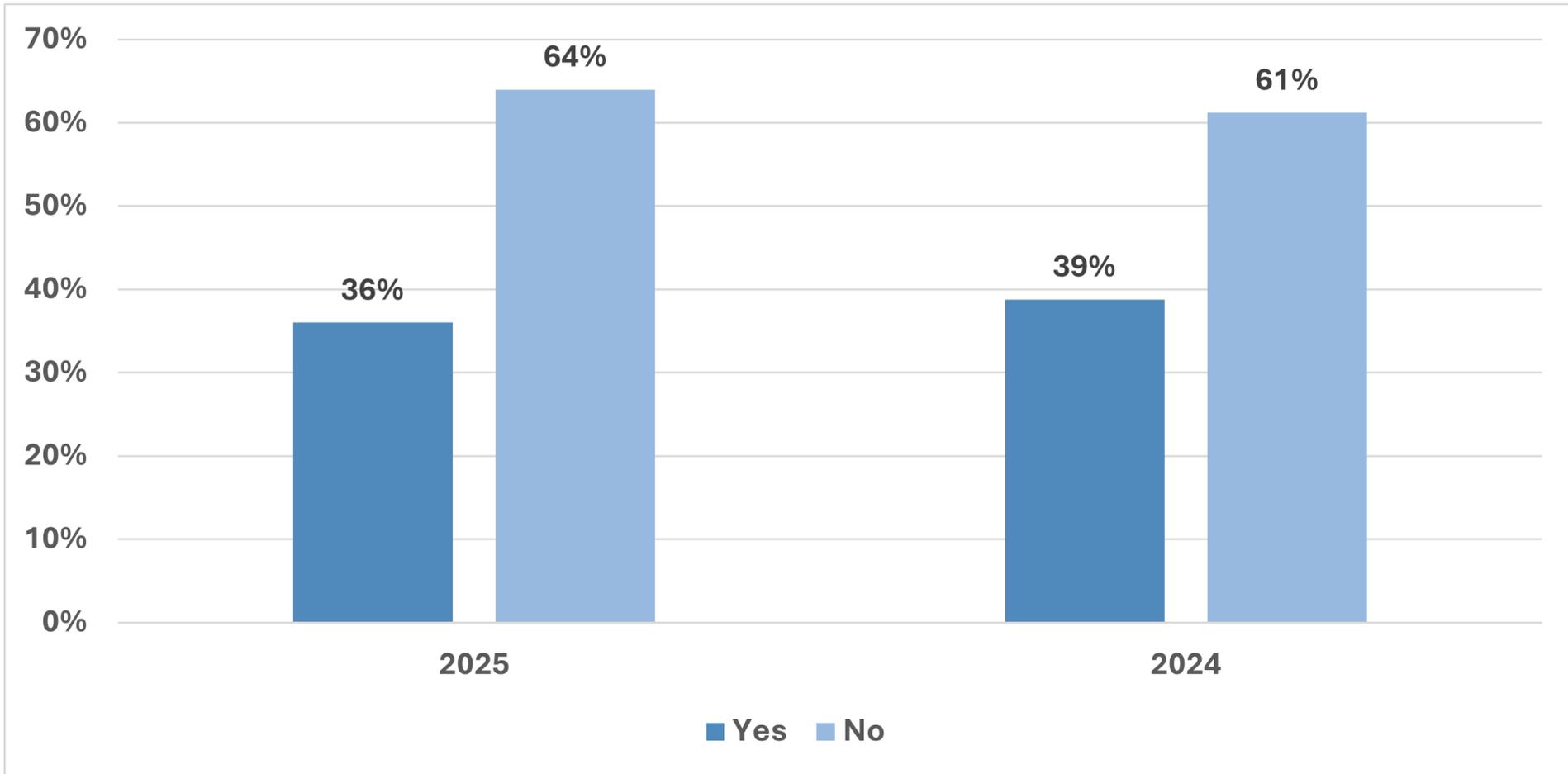
COMPLETES 500

Insight from Question #10: 81% of people correctly recognized that tornadoes kill more people per year on average in the U.S. than hurricanes and earthquakes.

11) Do you have a tornado safe room constructed consistent with FEMA guidance or a shelter tested and approved to meet the International Code Council/National Storm Shelter Association 500 standard?



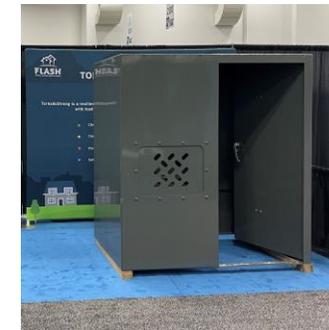
12) Are you aware that a tornado safe room constructed consistent with FEMA guidance or a shelter tested and approved to meet the International Code Council/National Storm Shelter Association 500 standard can provide near-absolute protection in tornadoes up to 250 miles-per-hour?



Insights from Question #12: Are you aware that a tornado safe room constructed consistent with FEMA guidance or a shelter tested and approved to meet the International Code Council/National Storm Shelter Association 500 standard can provide near-absolute protection in tornadoes up to 250 miles-per-hour? Many people are unaware of the critical role tornado safe rooms play in protecting lives during severe storms. The survey shows that public awareness of safe rooms remains low, highlighting the need for more education and outreach.

There are six types of above-ground tornado safe rooms that meet the International Code Council/National Storm Shelter Association 500 standard and/or FEMA 320/361 guidance and provide near-absolute protection in tornadoes. Videos and information for all six are available online at Tornado-Strong.org.

- [Cast-in-Place Concrete](#)
- [Insulating Concrete Forms \(ICFs\)](#)
- [Concrete Masonry](#)
- [Precast Concrete](#)
- [Prefabricated Above-Ground Steel Safe Rooms](#)
- [Wood Frame with Steel Sheathing](#)



Note: FLASH provides free tornado safe room B-Roll upon request.

13) How much does a tornado safe room constructed consistent with FEMA guidance or a shelter tested and approved to meet the International Code Council/National Storm Shelter Association 500 standard typically cost?

(2025)

		ANSWERS(%)	COUNT	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	Between \$3,000 and \$5,000	36.40%	182	33.50%	167.51
A2	Between \$5,000 and \$10,000	48.20%	241	50.53%	252.65
A3	More than \$10,000	15.40%	77	15.97%	79.84

COMPLETES 500

(2024)

		ANSWERS(%)	COUNT	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	Between \$3,000 and \$5,000	28.00%	140	27.24%	136.21
A2	Between \$5,000 and \$10,000	49.00%	245	49.66%	248.3
A3	More than \$10,000	23.00%	115	23.10%	115.49

COMPLETES 500

Insight from Question #13: How much does a tornado safe room constructed consistent with FEMA guidance or a shelter tested and approved to meet the International Code Council/National Storm Shelter Association 500 standard typically cost?

- It is important to note that a Twister Pod, which falls within the \$3,000 to \$5,000 range, is an affordable option for a safe room that many people might still be unaware of. This highlights the need for increased education and awareness about affordable tornado saferooms consistent with FEMA guidance or a shelter tested and approved to meet the International Code Council/National Storm Shelter Association 500.



[Survive-a-Storm Shelters](#)

\$3,849.00

- Twister Pod: 4 ft. x 6 ft. Tornado Storm Shelter

14) Are you aware that single-family homes can be affordably built to withstand most tornadoes?

(2025)

		ANSWERS(%)	COUNT	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	Yes	47.00%	235	46.11%	230.55
A2	No	53.00%	265	53.89%	269.45

COMPLETES 500

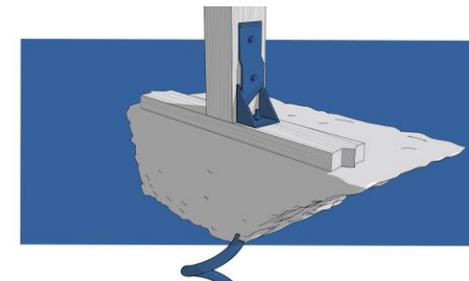
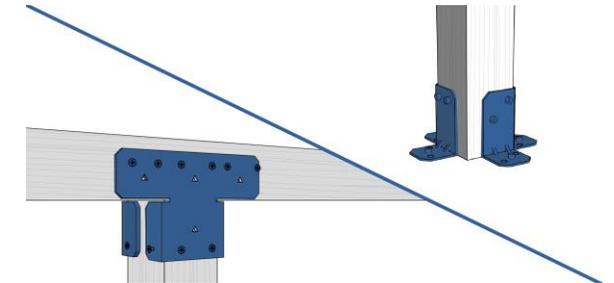
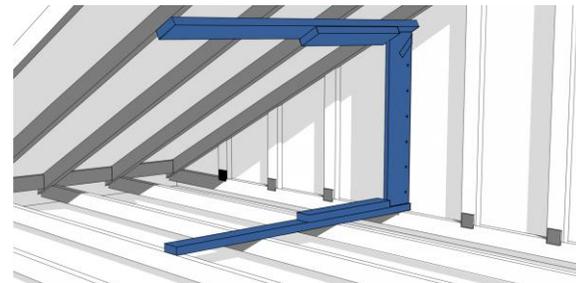
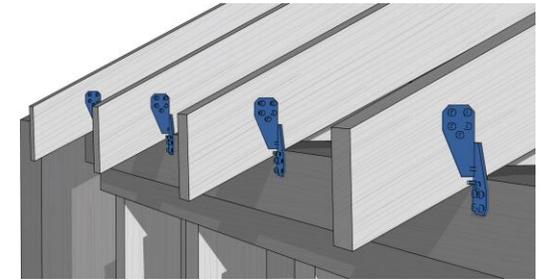
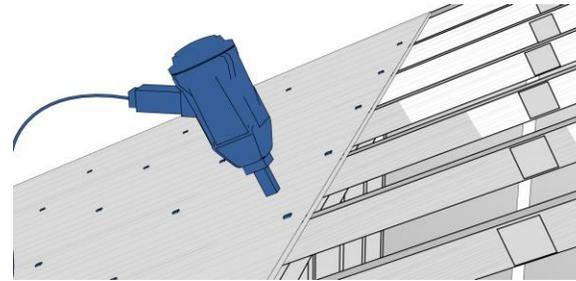
(2024)

		ANSWERS(%)	COUNT	STRATIFIED ANSWERS(%)	STRATIFIED COUNT
A1	Yes	47.00%	235	48.25%	241.23
A2	No	53.00%	265	51.75%	258.77

COMPLETES 500

Insights from Question #14: Are you aware that single-family homes can be affordably built to withstand most tornadoes?

- The fact that 53% of people remain unaware that homes can be affordably built to withstand tornadoes, with no change from last year, suggests the need for continued or revised messaging to better inform homeowners about cost-effective resilient building options.
- **Fact:** Even if a tornado outbreak includes winds at EF-4 or EF-5, 95 percent of the overall damage pattern typically reflects windspeeds at EF-3 and below. This means that the minimal construction standards required by building codes can make a significant difference if they are adopted and enforced. Moreover, since 90 percent of all tornadoes never exceed EF-2 (135 mph), wind-resistant building practices, such as those included in modern model structural codes, can dramatically improve building performance in tornado outbreaks.
- This insight highlights a crucial communication opportunity that can significantly enhance public safety awareness. Even in the absence of a designated tornado safe room, most homes can be constructed to withstand wind speeds of up to maximum EF-2 (135 mph) intensity due to lessons learned about resilient construction in hurricane zones. If they understand this resilience opportunity, individuals can make informed decisions regarding home design, construction, and renovations that can withstand severe weather events.



Learn More & Share These Resources

- FLASH.org
- TornadoStrong.org
- Inspect2Protect.org
- HurricaneStrong.org

