



## ICC-ES Listing Report ESL-1510

Issued September 2024

This listing is subject to renewal in September 2025.

**CSI:** DIVISION: 13 00 00—SPECIAL CONSTRUCTION  
Section: 13 26 00—Fabricated Rooms

### Product Certification System:

The ICC-ES product-certification system includes evaluating reports of tests of standard manufactured product, prepared by an accredited testing laboratory, and provided by the listee, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

**Product:** 14X42 ABOVE GROUND STORM SHELTER

**Listee:** SCC SOLUTIONS LLC

**Evaluation:** The 14X42 Storm Shelter is a community tornado shelter consisting of 1/4-inch thick (6.3 mm) ASTM A36 steel wall and roof panels, C3x5 ASTM A36 steel channels for wall and roof bracing, 4x4x3/8-inch (51x51x6.4 mm) ASTM A36 steel angles at roof and floor perimeters, and 1/4 x 3.59-inch (6.3 x 91.2 mm) ASTM A36 steel plates that are bent to form angles covering vertical wall edges. Internal framing members are strengthened with 3x3x1/4-inch (76.2x76.2x6.3 mm) square HSS ASTM A36 steel braces at the corners as shown in Figure 1. Storm shelter vents are protected with a 4 1/4x12 1/4x17 1/2-inch (108.0x311.2x444.5 mm) cover that is made from 1/4-inch thick (6.3 mm) ASTM A36 steel plate. Each storm shelter includes a manual operated steel door with three – 1-inch diameter (25.4 mm) horizontal Type 304 stainless steel locking pins. The door's bracing members are C4x5.4 ASTM A36 steel channels, which support its 1/4-inch thick (6.3 mm) ASTM A36 steel panel. See Table 1 and Figure 1 for main components and details. The 14X42 Storm Shelter was evaluated to the following standards:

- ICC 500-2023, ICC/NSSA Standard for the Design and Construction of Storm Shelters, International Code Council and National Storm Shelter Association.
- ASTM E330-14(2021), Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference, ASTM International.
- ASTM E1886-19, Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials, ASTM International.

**Findings:** The 14X42 Storm Shelter, at tabulated sizes indicated in Table 1, have met the test requirements detailed in Table 2 for an above-ground, community tornado shelter when tested in accordance with ICC 500, as referenced in the applicable sections of the following code editions:

- 2024 *International Building Code*®  
Applicable Section: 423, 1031.2 Exception 4, 1604.5.1 Exception, and 1604.10.
- 2024 *International Residential Code*®  
Applicable Section: R307 and R319.1 Exception 2.

### Identification:

1. The ICC-ES mark of conformity, electronic labeling, or the listing report number (ICC-ES ESL-1509) along with the name, registered trademark, or registered logo of the listee (SCC Solutions LLC) must be included in the product label.

2. In addition, the product label includes the manufacturer’s address; the product name (14X42 Above Ground Storm Shelter), manufacturer’s lot number; Hazard use – Tornado; Missile Weight [15-pounds (6.8 kg)] and Speed (100 mph Vertical Surfaces & 67 mph Horizontal Surfaces); Design Wind Pressure, Design Tornado Pressure, or both (to be determined by a registered design professional); and the phrase “2023 edition of ICC 500”.
3. The report holder’s contact information is the following:

**SCC SOLUTIONS LLC**  
**PO BOX 1072**  
**PELL CITY, ALABAMA 35128**  
**(205) 886-7223**  
[paul@sccsolutions.org](mailto:paul@sccsolutions.org)

**Installation:** The product must be installed in accordance with the SCC Solutions LLC published installation instructions and applicable codes. Connection of the 14X42 Storm Shelter to an existing concrete foundation or slab must meet the design and installation requirements in Section 307 of ICC 500.

**Conditions of listing:**

1. The listing addresses only conformance with the standards and code sections noted in this document.
2. Approval of the product’s use is the sole responsibility of the local code official.
3. The listing applies only to the materials tested and as submitted for review by ICC-ES.
4. Complete plans verifying compliance with the listing must be submitted to the code official for each project at the time of permit application. The drawings must be prepared and sealed by a registered design professional, when required by the statutes of the jurisdiction in which the project is to be constructed.
4. The 14X42 Storm Shelters are manufactured under a quality control program with inspections by ICC-ES.

**TABLE 1—SCC SOLUTIONS LLC STORM SHELTER COMPONENTS**

STORM SHELTER	WALL		ROOF		VENT COVER
	Panels	Bracing / Framing	Panels	Bracing / Framing	
14 X 42 ft	<p>Eight 125<sup>1</sup>/<sub>2</sub>-in. wide x 94<sup>3</sup>/<sub>4</sub>-in. tall x <sup>1</sup>/<sub>4</sub>-in. thick panels that are welded to form the 8x42-ft side walls. Each panel has 10x10-in opening for vent.</p> <p>Two 166<sup>13</sup>/<sub>16</sub>-in. wide x 94<sup>3</sup>/<sub>4</sub>-in. tall x <sup>1</sup>/<sub>4</sub>-in. thick end panels with a 38<sup>1</sup>/<sub>2</sub>x82<sup>1</sup>/<sub>2</sub>-in. door opening in each.</p> <p>Two 37-in. wide x 82-in. tall x <sup>1</sup>/<sub>4</sub>-in. thick door panels, which fit in the inside of the storm shelter and have a 10x10-in opening for vent (each).</p>	<p>C3x5 steel channels with max. horizontal spacings of 24 and 41<sup>1</sup>/<sub>2</sub> in., measured along the 42 and 14 ft sides, respectively. The maximum vertical spacing is 24 in.</p> <p>Door panel has 2 vertical and 5 horizontal C4x5.4 steel channels.</p>	<p>Four 125<sup>1</sup>/<sub>2</sub> x 167<sup>7</sup>/<sub>16</sub> x <sup>1</sup>/<sub>4</sub> in. that are welded to form the 14X42-ft roof panel.</p>	<p>Four 4x4x3/8-in. steel angles for perimeter framing and C3x5 steel channels for field framing with maximum spacings of 24 and 41<sup>1</sup>/<sub>2</sub> in., measured along the 42 and 14 ft sides, respectively.</p> <p>36 of 3x3x<sup>1</sup>/<sub>4</sub>-in. square HSS steel braces at the corners.</p>	<p>Ten (2 in doors and 8 in side walls) 4<sup>1</sup>/<sub>4</sub>x12<sup>1</sup>/<sub>4</sub>x17<sup>1</sup>/<sub>2</sub>-in. covers (opened at the bottom) for the doors and side walls 10x10-in vents.</p>

For SI Units: 1 inch = 25.4 mm.

TABLE 2—ICC 500 REQUIREMENTS<sup>1</sup>

ICC 500 SECTION(S)	TEST METHOD	REQUIREMENT	EVALUATED MODELS / COMPONENT	RESULT
305.1, 305.2, Table 305.1.1, 306.1, and 803	Impact test requirements – ASTM E1886	All storm shelters components (wall and roof panels and doors) shall meet wind-borne debris and impact test requirements at the 250-mph design wind speed.	14 X 42 Storm Shelter and All of its Components	Pass
805	Static and cyclic pressure requirements – ASTM E330	All storm shelter components (wall and roof panels and doors) shall be static pressure tested to 1.2 times the design wind pressure.	Only Door Assembly and its attachment to the wall panel in the 14 X 42 Storm Shelter were evaluated.	Pass for the following pressures: Design Wind Pressure Load (LRFD) = ±105.4 psf. Test Static Pressure Load = ±126.5 psf

<sup>1</sup> Design for tornado loads and wind loads in accordance with Section 304 of ICC500 is outside the scope of this listing and must be determined by a registered design professional.

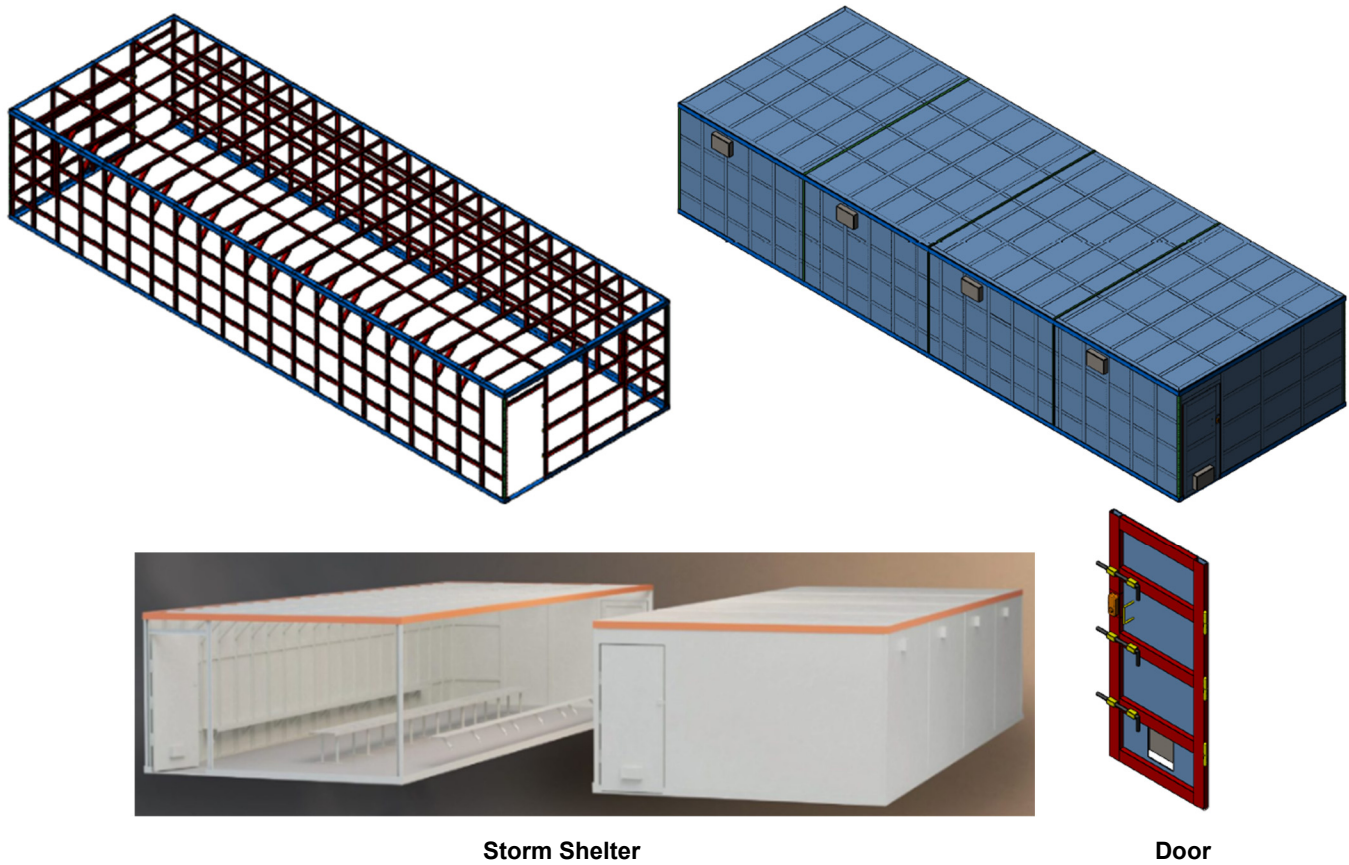


FIGURE 1—SCC SOLUTIONS LLC 14X42 ABOVE GROUND STORM SHELTER