

1350.2800 ANCHORING EQUIPMENT.

Subpart 1. **Load requirements.** Anchoring equipment, when installed, shall be capable of resisting an allowable working load equal to or exceeding 3,150 pounds and shall be capable of withstanding a 50 percent overload (4,725 pounds total) without failure of either the anchoring equipment or the attachment point on the manufactured home. When the stabilizing system is designed by a qualified registered professional engineer, alternative working load may be used providing the anchoring equipment is capable of withstanding a 50 percent overload.

Subp. 2. **Resistance to weather deterioration.** Anchoring equipment exposed to weathering shall have a resistance to weather deterioration at least equivalent to that provided by a coating of paint or zinc on steel of not less than 0.625 ounces per square foot on each side of the surface coated as determined by ASTM Standard Methods of Test for Weight of Coating on Zinc-coated (galvanized) Iron or Steel Articles (ASTM A90-69). Note: Slit or cut edges of zinc-coated steel strapping do not need to be zinc coated.

Subp. 3. **Permanency of connections.** Anchoring equipment shall be designed to prevent self-disconnection when ties are slack. Hook ends shall not be used in any part of the anchoring system.

Subp. 4. **Tensioning device design.** Tensioning devices such as turnbuckles or yoke-type fasteners shall be ended with clevis or forged or welded eyes.

Subp. 5. **Ties; materials and tension.** Cable or strapping or other approved methods or materials shall be used for ties. All ties shall be fastened to ground anchors and drawn tight with turnbuckles or other adjustable tensioning devices or devices listed with the ground anchor.

Subp. 6. **Tie strength.** Tie materials shall be capable of resisting an allowable working load of 3,150 pounds with no more than two percent elongation and shall withstand a 50 percent overload (4,725 pounds total). Ties shall comply with the weathering requirements of subpart 2. Note: Type 1, Class B, Grade 1 steel strapping, 1-1/4 inches wide and 0.035 inch thick, conforming with ASTM Standard Specification D3953-91, Standard Specification for Strapping, Flat Steel, and Seals, is capable of meeting the working load and 50 percent overload specified in this part.

Subp. 7. **Tie connections.** Ties shall connect the ground anchor and the main structural steel frame (I-beam or other shape) which runs lengthwise under the manufactured home. Ties shall not connect to steel outrigger beams which fasten to and intersect the main structural frame unless specifically stated in the manufacturer's installation instructions.

Connection of the cable frame tie to the manufactured home I-beam or equivalent main structural frame member shall be by a 5/8-inch drop forged closed eye bolt through a

hole drilled in the center of the I-beam web or other approved methods. The web shall be reinforced if necessary to maintain the I-beam strength.

Cable ends shall be secured with at least three U-bolt type cable clamps with the U portion of the clamp installed on the short (dead) end of the cable to ensure strength at least equal to that required by subpart 6.

Statutory Authority: *MS s 326B.02; 326B.101; 326B.106; 326B.13; 327.32; 327.33; 327B.01 to 327B.12*

History: *24 SR 1846; 34 SR 866*

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