RULES OF

Department of Commerce and Insurance

Division 4240—Public Service Commission

Chapter 124—Manufactured Home Tie-Down Systems

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TITLE 20 — DEPARTMENT OF COMMERCE AND INSURANCE
Division 4240 — Public Service Commission
Chapter 124 — Manufactured Home Tie-Down Systems

20 CSR 4240-124.010 Definitions

PURPOSE: This rule defines the terms used in this chapter.

(1) The following definitions, as well as those set out in section 700.010, RSMo, and 20 CSR 4240-127, apply to this chapter:

(A) Approval means a written approval of a manufactured home tie-down system issued by the commission under section 700.080, RSMo;

(B) Anchoring standards means the manufactured home tie-down systems standards adopted by the commission under section 700.076, RSMo.

AUTHORITY: section 700.076, RSMo 2016. This rule originally filed as 4 CSR 240-124.010. Original rule filed Nov. 12, 1976, effective Feb. 11, 1977. Emergency rule filed Dec. 7, 1976, effective Dec. 17, 1976, expired April 16, 1977. Amended: Filed Oct. 12, 1982, effective Jan. 13, 1983. Amended: Filed June 12, 2001, effective Jan. 30, 2002. Amended: Filed July 6, 2017, effective March 30, 2018. Moved to 20 CSR 4240-124.010, effective Aug. 28, 2019. Amended: Filed April 29, 2026, effective Nov. 30, 2026.*

**Original authority: 700.076, RSMo 1976, amended 1978, 1982.*

20 CSR 4240-124.020 Administration and Enforcement

PURPOSE: This rule delegates the responsibility for administering and enforcing this chapter and Chapter 700, RSMo (1986), as it relates to manufactured home tiedown systems.

(1) The following commission powers and responsibilities under Chapter 700, RSMo, with respect to manufactured home tie-down systems are delegated to the manager:

(A) The ability to approve, prior to being sold, being offered for sale, or being installed, any anchor or tie-down system designed and intended for manufactured homes; and

(B) The authority to seek sanctions in the form of a complaint against parties in violation of rules and regulations promulgated under Chapter 700, RSMo, or commission rules 20 CSR 4240-124.

AUTHORITY: section 700.076, RSMo 2016. This rule originally filed as 4 CSR 240-124.020. Original rule filed Nov. 12, 1976, effective Feb. 11, 1977. Emergency rule filed Dec. 7, 1976, effective Dec. 17, 1976, expired April 16, 1977. Amended: Filed Oct. 12, 1982, effective Jan. 13, 1983. Amended: Filed July 6, 2017, effective March 30, 2018. Moved to 20 CSR 4240-124.020, effective Aug. 28, 2019. Amended: Filed April 29, 2026, effective Nov. 30, 2026.*

**Original authority: 700.076, RSMo 1976, amended 1978, 1982.*

20 CSR 4240-124.030 Determination of Applicable Manufactured Home Systems Standards

PURPOSE: This rule describes how to determine which standards apply to a particular manufactured home.

(1) All manufactured homes located in this state, subject to the exceptions set out in sections 700.076 and 700.085, RSMo shall be tied down in accordance with applicable anchoring standards.

(2) A manufactured home located in this state which entered the first stage of production before November 23, 1976 shall be tied down in accordance with the anchoring standards in effect on November 23, 1976.

(3) A manufactured home located in this state which entered the first stage of production after November 22, 1976 shall be tied down in accordance with the anchoring standards in effect at the time it entered the first stage of production.

AUTHORITY: section 700.076, RSMo 2016. This rule originally filed as 4 CSR 240-124.030. Original rule filed Nov. 12, 1976, effective Feb. 11, 1977. Emergency rule filed Dec. 7, 1976, effective Dec. 17, 1976, expired April 16, 1977. Amended: Filed Oct. 12, 1982, effective Jan. 13, 1983. Amended: Filed July 6, 2017, effective March 30, 2018. Moved to 20 CSR 4240-124.030, effective Aug. 28, 2019.*

**Original authority: 700.076, RSMo 1976, amended 1978, 1982.*

20 CSR 4240-124.040 Commission Approval of Manufactured Home Tie-Down Systems

PURPOSE: This rule describes the manner in which an approval of manufactured home tie-down systems may be obtained.

(1) No person may sell, offer for sale, or as a business install or cause to be installed a manufactured home tie-down system unless the system has been approved in writing by the manager and the original or duplicate original of such approval is prominently displayed at the location where the system is sold, offered for sale, or offered for installation.

(2) Applications for an approval shall be submitted to the manager and shall be executed by the owner or seller of the system on forms that shall be provided by the manager upon request. To be complete, the applications shall include:

(A) The name and address of the applicant;

(B) The name and address of all places of business which will be authorized by the applicant to sell or offer for sale, or install or offer to install the system for which the approval is sought;

(C) The name and address of the manufacturer of the system for which the approval is sought;

(D) A brief description of the legal organization of the manufacturer who will use the program, whether a Missouri corporation, foreign corporation, partnership, proprietorship, or other business organization;

(E) If manufacturer is a corporation, a Certificate of Good Standing from the secretary of state and a copy of the corporation's articles of incorporation and bylaws;

(F) If manufacturer does business under a fictitious name, a copy of the fictitious name registration filed with the secretary of state;

(G) If manufacturer has submitted the applicable information as set forth in subsections (2)(A)–(F) of this rule in a previous request for approval of manufacturing program, a statement that the information was previously submitted and remains unchanged;

(H) If the information in subsections (2)(A)–(F) above is not available, or not applicable, a statement as to the reason the

information is not submitted. The manager, in consult with staff counsel, shall determine if the request for approval can be processed without the required information;

(I) A copy of the plans and specifications of the system for which the approval is sought.

1. Detailed drawings and the manufacturer's installation manual of each type of anchor system and for each type of component for which approval is sought must accompany the submittal.

A. Each drawing shall show model identification, all dimensions, types of welds or fastening, types of material, methods of securing strap, methods of attachment, orientation after installation in soil, direction(s) of applied load(s), and location of model number on the system and each component.

B. Each drawing shall bear the seal of a registered professional engineer, registered in the state of Missouri.

2. Each anchor system model must be tested and certified by an authorized testing agency to be in conformance with the following anchoring standards and accepted engineering practice:

A. Pullout tests shall be performed on three (3) samples of each anchor system model and the failure load for all three (3) tests must equal or exceed four thousand seven hundred twenty-five (4,725) pounds. The manager must certify that three (3) pullout tests were performed on each anchor system model. The anchor shall be installed with the specified tie attached in a soil type for which the anchor is designed and pulled at an angle between forty degrees (40°) and fifty degrees (50°). The anchor will be approved for all soil test probe values at or above the soil test probe value in which the anchor is tested. The device shall be set up as required by the manufacturer's installation manual. The test report shall include a photograph or drawing of the anchor demonstrating it is fully set up as required. The load at failure and the type of failure shall be described. The anchoring system must be capable of meeting or exceeding the Zone 1 wind load requirements of the Federal Manufactured Home Construction and Safety Standards 24 CFR section 3280.306;

B. Failure and ultimate load capacity tests shall be performed on three (3) samples of each component part and must also be witnessed by the manager;

C. Laboratory destruction tests shall be performed on each anchor system model and the failure load must equal or exceed four thousand seven hundred twenty-five (4,725) pounds. These tests are needed to establish the required strengths of the components and component connections of an anchor.

3. The result from each test will indicate —

A. Point and mode of failure;

B. Force required for failure;

C. Description of test procedure;

D. Test equipment used.

4. The report of the results of the test in specified soil or rock groups will also include:

A. Method of installation;

B. Date of installation;

C. Date of test;

D. Soil profile description and soil test probe values.

5. The anchor manufacturer shall furnish and ship with each anchoring system, information on the types of soil in which the anchor has been tested and certified for installation, instructions on the method of installation, and procedure for identifying soil types. A copy of the manufacturer's installation manual must be submitted to the manager. The manager shall maintain a copy of the most recent revision of the manufacturer's installation manual.

6. The manager, upon receipt of new or additional information relating to the performance of any anchoring system, or a similar anchoring system, may request from the manufacturer of that anchoring system, additional testing or supplemental information;

(J) The location in this state where the system for which the approval is sought may be inspected by the manager; and

(K) An affidavit of the applicant or the applicant's agent if the applicant is a corporation, that the system for which the approval is sought will be manufactured in accordance with the plans and specifications submitted with the application and that as such it complies with the standards.

(3) Within fifteen (15) working days after the receipt of a complete application for an approval the manager shall inspect for compliance with the standards the manufactured home tie-down system for which the approval is sought. An approval or a refusal to grant an approval shall be issued in writing. A notice of a refusal to grant an approval shall specify the reason for the refusal. If through no fault of the applicant such inspection is not conducted within the prescribed time, the approval shall be issued if no basis for refusal is found on the face of the application.

(4) No person, without the manager's authorization, may copy or otherwise duplicate an approval unless the word "copy" appears in at least thirty-six- (36-) point type down the left and right margins of such approval.

(5) Any person who purchases a manufactured home tie-down system shall be furnished by the seller with a copy of the approval for the system purchased.

(6) The manager shall issue an original approval for each place of business at which an applicant or his/her authorized agent sells, offers for sale, or offers to install an approved manufactured home tie-down system.

AUTHORITY: section 700.076, RSMo 2016. This rule originally filed as 4 CSR 240-124.040. Original rule filed Nov. 12, 1976, effective Feb. 11, 1977. Emergency rule filed Dec. 7, 1976, effective Dec. 17, 1976, expired April 16, 1977. Amended: Filed Oct. 12, 1982, effective Jan. 13, 1983. Amended: Filed June 12, 2001, effective Jan. 30, 2002. Amended: Filed July 6, 2017, effective March 30, 2018. Moved to 20 CSR 4240-124.040, effective Aug. 28, 2019.*

**Original authority: 700.076, RSMo 1976, amended 1978, 1982.*

20 CSR 4240-124.045 Anchoring Standards

PURPOSE: This rule applies to the anchoring of any manufactured home purchased or relocated on or after the effective date of this rule. This rule shall not be applicable to any manufactured home which has previously been anchored at its existing location and which has not been relocated subsequent to the effective date of this rule.

(1) Definitions. The following definitions, as well as those set out in section 700.010, RSMo apply to this chapter:

(A) Anchor means any device designed to transfer wind loads imposed on a manufactured home to the ground;

(B) Anchoring equipment means straps, seals, cables, turnbuckles, and tensioning devices, which are used to secure a

manufactured home to anchors;

(C) Anchoring systems means a combination of ties, anchoring equipment, and anchors that will, when properly designed and installed, resist overturning and lateral movement of the manufactured home from wind forces;

(D) Classified soil means soil that has been evaluated through the use of a standard soil torque probe or other approved method to determine anchor-holding capacity;

(E) Installed means the arrangement and assembly at the occupancy site of all portions of an anchoring system, in accordance with the manufacturer's design, that renders the anchoring system fit for its intended use;

(F) Stabilizing device means a lateral support device such as a steel plate or a concrete collar used in connection with an anchor to limit lateral movement of the anchor;

(G) Tie means straps, cable, or securing devices used to connect the manufactured home to the anchor; and

(H) Unclassified soil means soils that have not been evaluated to determine anchor-holding capacity.

(2) Anchoring System. Each manufactured home installed after the effective date of the rule must be anchored in accordance with the minimum standards specified in the rule. At a minimum, each anchoring system must also meet or exceed the design wind load requirements for Wind Zone 1, as defined in 3280.305 in the Federal Manufactured Home Construction and Safety Standards.

(3) Anchoring Equipment.

(A) Load. Anchoring equipment, when installed, must be capable of resisting an allowable working load equal to or exceeding three thousand one hundred fifty (3,150) pounds and must be capable of withstanding a fifty percent (50%) overload (four thousand seven hundred twenty-five (4,725) pounds total) without failure of either the anchoring equipment or the attachment point on the manufactured home.

(B) Resistance to Weather Deterioration. Anchoring equipment exposed to weathering shall have a coating that is resistant to weather deterioration at least equivalent to that provided by a coating of zinc on steel of not less than 0.30 ounces per square foot of surface (.0005 inch in thickness), and in accordance with the following:

1. Slit or cut edges of zinc-coated steel strapping do not need to be zinc coated;

2. Flat steel strapping shall be Type 1, Heavy Duty, Finish B, Grade 1, 1 1/4 inches wide and 0.035 inch in thickness, certified by a registered professional engineer as conforming with ASTM Standard Specification D3953-91, Standard Specification for strapping, flat steel, and seals; and

3. Seals shall be Class H, Heavy Duty, Finish B, Grade 1, for steel strapping, certified by the manufacturer as conforming with ASTM Standard Specification D3953-91.

(C) Permanency of Connections. Anchoring equipment shall be designed and installed to prevent self-disconnection when ties are slack.

(4) Tensioning Devices. Tensioning devices such as turnbuckles or yoke-type fasteners shall be ended with clevis or forged or welded eyes.

(5) Ties.

(A) Material.

1. Flat steel strapping and seals or other approved methods or materials shall be used for ties. All ties shall be fastened to anchors and drawn tight with turnbuckles or other adjustable tensioning devices or devices approved for use with the anchor.

2. Tie materials shall be either as described in (3)(B)2. of this standard or other approved material capable of resisting an allowable working load of three thousand one hundred fifty (3,150) pounds with no more than twelve percent (12%) elongation and shall withstand a fifty percent (50%) overload (four thousand seven hundred twenty-five (4,725) pounds total).

(B) Attachment.

1. Ties shall connect the anchor and the main structural steel frame that runs lengthwise under the manufactured home. Ties shall not connect to steel outrigger or cross beams that fasten to and intersect the main structural frame. Tie-down straps shall be routed from the anchor to the top of the main structural steel frame.

2. Tie-down straps shall be attached to the anchor in accordance with the anchor manufacturer's instructions. A permanently attached strap that has been cut off may be spliced, provided an approved splicing device is used.

(C) Vertical Ties. Vertical ties are not required in Wind Zone 1, as defined in 3280.305 in the Federal Manufactured Home Construction and Safety Standards.

(6) Anchors.

(A) Each anchor, when installed in classified soil, must be capable of resisting a minimum allowable working load of three thousand one hundred fifty (3,150) pounds in the direction of the tie, plus a fifty percent (50%) overload (four thousand seven hundred twenty-five (4,725) pounds total) without failure. Failure shall be considered to have occurred when the head of the anchor moves more than two inches (2") vertically or three inches horizontally when pulled at an angle of between forty degrees (40°) and fifty degrees (50°) under a force of four thousand seven hundred twenty-five (4,725) pounds.

(B) Each manufactured anchor shall be tested and installed in accordance with the terms of its specified testing procedures and the anchor manufacturer's instructions. Each anchor shall be installed and pre-tensioned until it is flush with the stabilizer plate. The slotted bolt must have a minimum of four (4) wraps of the strap after installation.

(C) Spacing and Location.

1. Classified soil.

A. All anchors shall be installed at the intervals and in the locations specified by the manufactured home manufacturer's installation instructions, and in the correct soil class for which they are approved.

B. In the event that the manufacturer's installation instructions are unavailable, all anchors shall be installed in accordance with Tables (A) through (C) of this standard included herein, and in the correct soil class for which they are approved.

2. Unclassified soil. All anchors installed in unclassified soil shall be in accordance with Tables (A) through (C) of this standard, included herein. A thirty-inch (30") double four-inch (4") helix anchor with a twelve-inch (12") stabilizer shall be used in unclassified soil.

3. Spacing.

A. Spacing shall be as even as practicable along the entire length of the home with the first anchor on each end no more than two feet (2') from the end of the home.

(D) Soil Testing. A determination for soil classification should be made at each anchor location through the use of a standard torque probe, as described in ASTM Standard D2573-94, or equivalent method. If no soil classification test is performed for the anchor location, then the soil at the location shall be considered as unclassified.

(7) Diagonal Tie-Down Strap Spacing. Strap spacing for anchors is illustrated in the following tables.

(A) Tables (A) through (C), included herein, illustrate the strap spacing for single section and multi-section homes with anchors located in classified and unclassified soils.

1. Note that the maximum vertical distance is measured from the anchor head to the top of the I-beam (i.e., bottom of the floor).

2. The maximum distance to the first tie-down strap at each end of the home shall be two feet (2'0").

3. Strap spacing calculations are based on the fact that single disk anchors and double disk anchors have the same holding capacity if installed in accordance with the anchor manufacturer's installation instructions and in the proper soil classification.

4. Anchors shall be installed just inside the skirting line in order to maintain the angles identified in each table.

5. Anchor strap attachments to the home must be in accordance with the anchor manufacturer's methods.

(B) Tables (D) and (E), included herein, illustrate the criss-cross strapping system for elevated single and multi-section homes (or portion thereof) to be used in lieu of diagonal tie-down strap spacing tables; and

(C) Table (F), included herein, illustrates approved methods of ground anchor installation.

(8) Spacing For Federal Manufactured Home Construction and Safety Standards Wind Zone 1 Conditions.

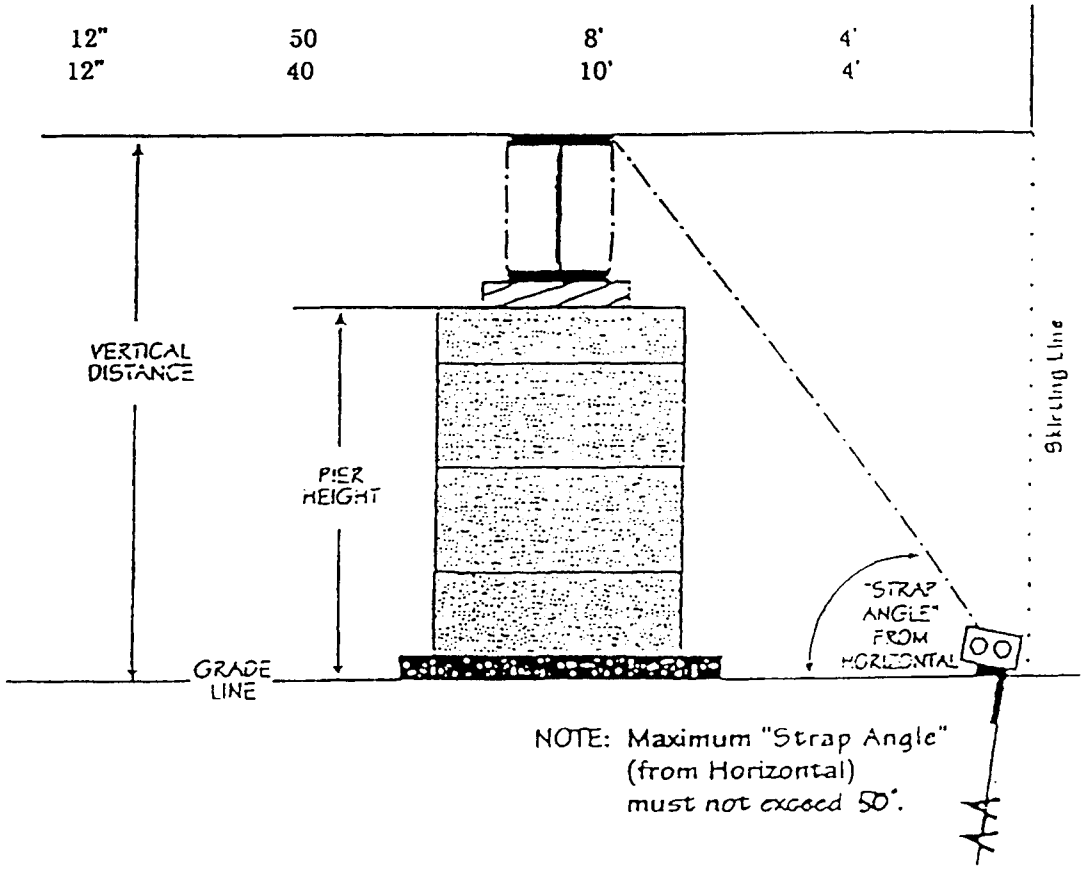
(A) If the floor width is one hundred sixty-six inches (166") (typical fourteen (14)-wide), with I-beam spacing ninety-five inches (95") or greater center to center and the distance from the top of the footer to the top of the I-beam is no higher than sixty-four inches (64"), anchors shall be spaced eight feet (8') apart for classified soil, or five feet (5') apart for unclassified soil.

(B) If the floor width is one hundred forty-one inches (141") (typical twelve (12)-wide), with I-beam spacing seventy-five and one-half inches (75.5") or greater center to center and the distance from the top of the footer to the top of the I-beam is no higher than fifty-two inches (52"), anchors shall be spaced six feet (6') apart for classified soil, or four feet (4') apart for unclassified soil.

(C) Anchors must be installed just inside the skirting line, or as close to the skirting line as possible.

TABLE (A)
DIAGONAL TIE DOWN STRAP SPACING FOR SINGLE SECTION AND MULTI-SECTION HOMES TYPICAL 12' WIDE

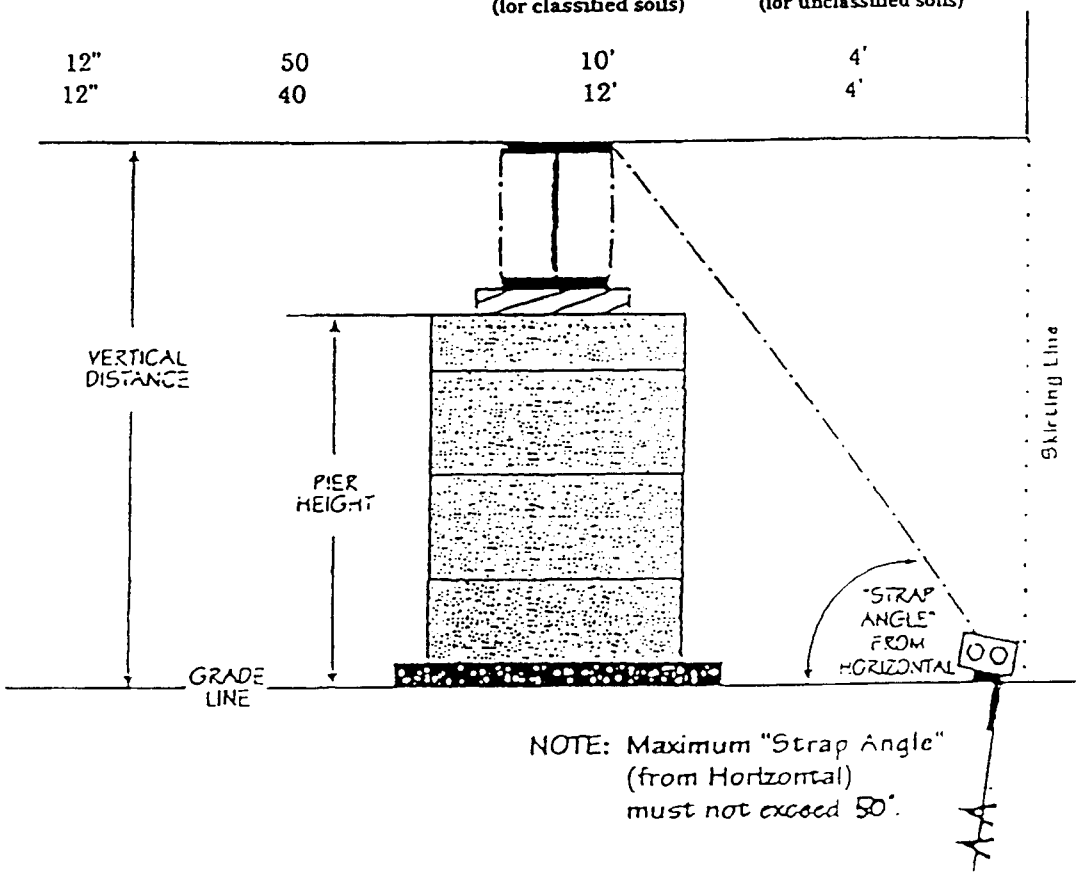
Minimum Pier Height	Maximum Strap Angle (From Horiz.)	Maximum Strap Spacing (for classified soils)	Max Strap S (for unclassified soils)
12"	50	8'	4'
12"	40	10'	4'



- Classified soil is soil that has been evaluated through the use of a standard torque probe, or other approved method to determine anchor-holding capacity. Each anchor location must be probed to confirm ground anchor models to be installed are consistent with soil classification.
- Unclassified soil is soil that has not been evaluated to determine anchor-holding capacity. At a minimum, a 30" double 4" helix anchor with a 12" stabilizing plate shall be used in unclassified soils.
- Anchors must be installed just inside the skirting line or as close to the skirting line as possible.

TABLE (B)
DIAGONAL TIE DOWN STRAP SPACING FOR SINGLE SECTION AND MULTI-SECTION HOMES TYPICAL 14' WIDE

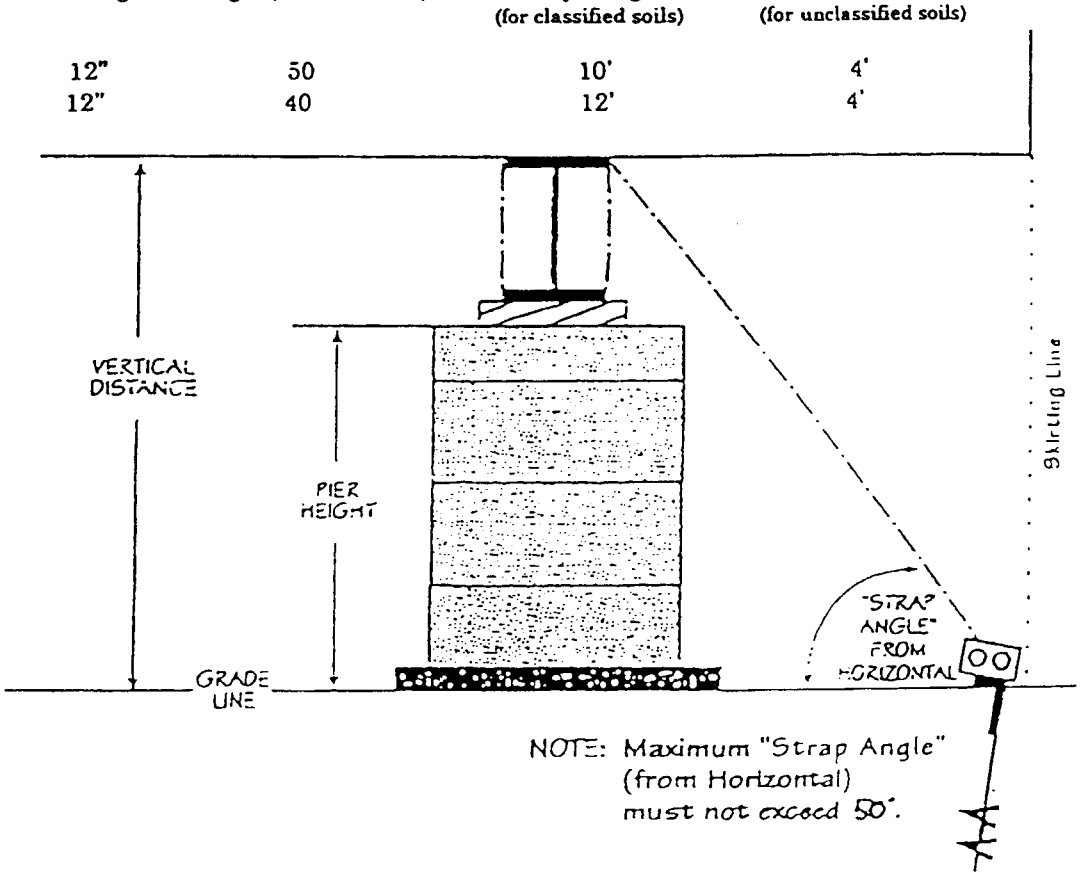
Minimum Pier Height	Maximum Strap Angle (From Horiz.)	Maximum Strap Spacing (for classified soils)	Maximum Strap Spacing (for unclassified soils)
12"	50	10'	4'
12"	40	12'	4'



- Classified soil is soil that has been evaluated through the use of a standard torque probe, or other approved method to determine anchor-holding capacity. Each anchor location must be probed to confirm ground anchor models to be installed are consistent with soil classification.
- Unclassified soil is soil that has not been evaluated to determine anchor-holding capacity. At a minimum, a 30" double 4" helix anchor with a 12" stabilizing plate shall be used in unclassified soils.
- Anchors must be installed just inside the skirting line or as close to the skirting line as possible.

TABLE (C)
DIAGONAL TIE DOWN STRAP SPACING FOR SINGLE SECTION AND MULTI-SECTION HOMES TYPICAL 16' WIDE

Minimum Pier Height	Maximum Strap Angle (From Horiz.)	Maximum Strap Spacing (for classified soils)	Maximum Strap Spacing (for unclassified soils)
12"	50	10'	4'
12"	40	12'	4'



- Classified soil is soil that has been evaluated through the use of a standard torque probe, or other approved method to determine anchor-holding capacity. Each anchor location must be probed to confirm ground anchor models to be installed are consistent with soil classification.
- Unclassified soil is soil that has not been evaluated to determine anchor-holding capacity. At a minimum, a 30" double 4" helix anchor with a 12" stabilizing plate shall be used in unclassified soils.
- Anchors must be installed just inside the skirting line or as close to the skirting line as possible.

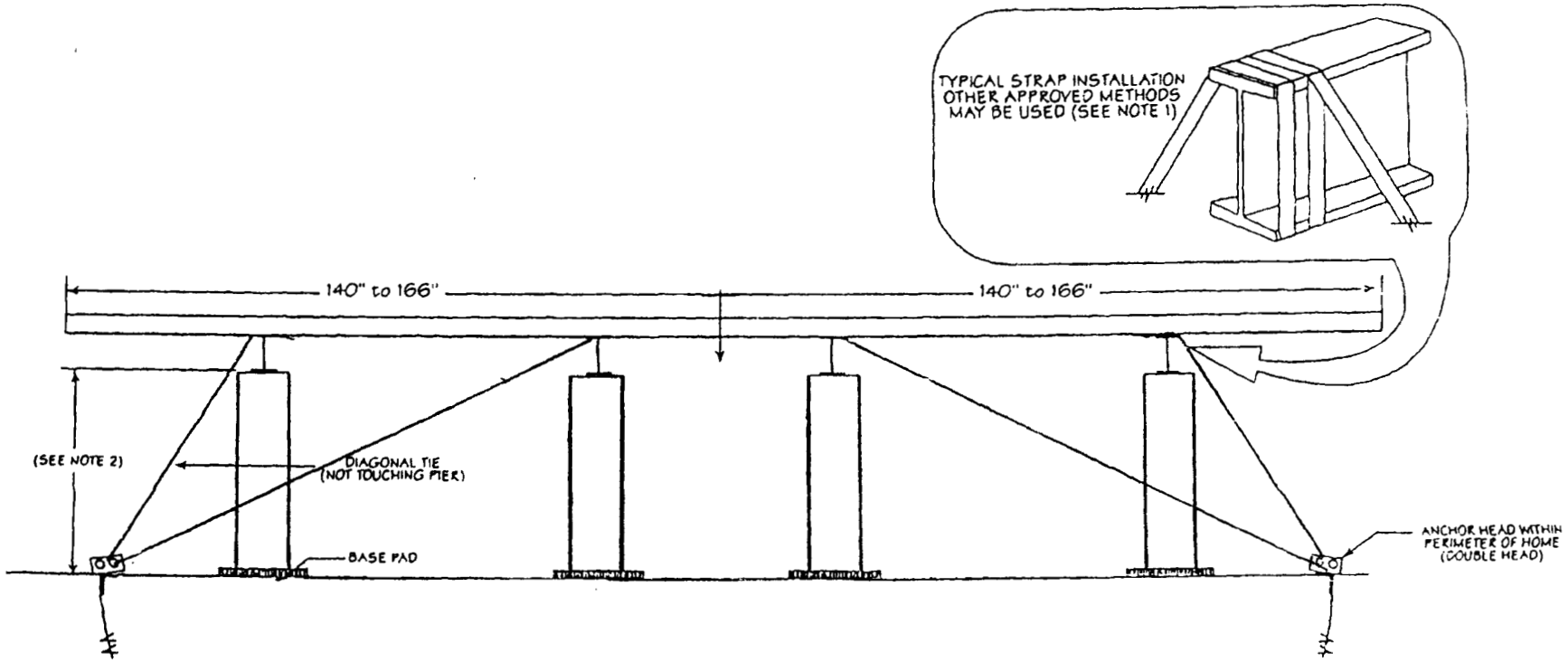
TABLE (D)
ALTERNATIVE STRAPING SYSTEM FOR SINGLE SECTION HOMES
For use in lieu of diagonal tie down strap spacing in circumstances where 40 degree to 50 degree strap angle cannot be achieved

NOTES:
1. Inset drawing shows typical strap installation. All anchors, devices, and tiedown straps to be rated for a 3150 lbs. working load (4725 lbs. overload capacity), in classified soils.
2. Pier height is measured from the top of the ground to the top of the I-Beam. Pier heights exceeding 80" must have piers and tiedowns designed by a Professional Engineer. Minimum pier height is 12"

TABLE (E)

ALTERNATIVE STRAPING SYSTEM FOR MULTI-SECTION HOMES

For use in lieu of diagonal tie down strap spacing in circumstances where 40 degree to 50 degree strap angle cannot be achieved

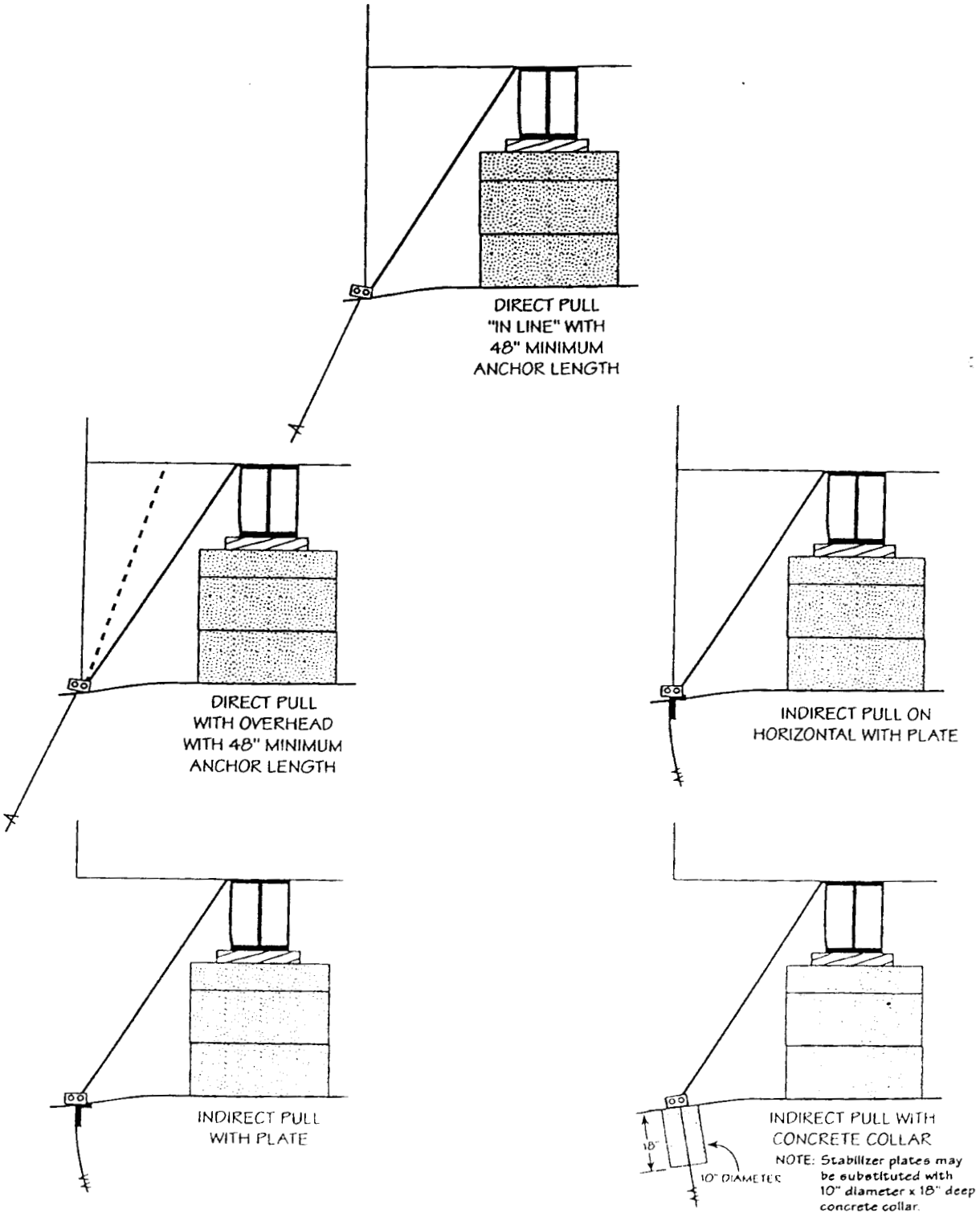


NOTES:

1. Inset drawing shows typical strap installation. All anchors, devices, and tiedown straps to be rated for a 3150 lbs. working load (4725 lbs. overload capacity), in classified soils.

2. Pier height is measured from the top of the ground to the top of the I-Beam. Pier heights exceeding 80" must have piers and tiedowns designed by a Professional Engineer. Minimum pier height is 12".

TABLE (F)
APPROVED METHODS OF GROUND ANCHOR INSTALLAION



AUTHORITY: section 700.076, RSMo 2000. This rule originally filed as 4 CSR 240-124.045. Original rule filed June 12, 2001, effective Jan. 30, 2002. Moved to 20 CSR 4240-124.045, effective Aug. 28, 2019.*

**Original authority: 700.076, RSMo 1976, amended 1978, 1982.*

20 CSR 4240-124.050 Standards

PURPOSE: This rule establishes the manufactured home tiedown systems standards for manufactured homes located in this state which entered the first stage of production after November 22, 1976.

(1) The federal standards set forth in 24 CFR section 3280.306 constitute the manufactured home tie-down systems standards for manufactured homes located in this state which entered the first stage of production after November 22, 1976.

AUTHORITY: section 700.076, RSMo 2016. This rule originally filed as 4 CSR 240-124.050. Original rule filed Nov. 12, 1976, effective Feb. 11, 1977. Emergency rule filed Dec. 7, 1976, effective Dec. 17, 1976, expired April 16, 1977. Amended: Filed Oct. 12, 1982, effective Jan. 13, 1983. Amended: Filed July 6, 2017, effective March 30, 2018. Moved to 20 CSR 4240-124.050, effective Aug. 28, 2019.*

**Original authority: 700.076, RSMo 1976, amended 1978, 1982.*

20 CSR 4240-124.060 Complaints

PURPOSE: This rule provides for the manner in which complaints may be filed and the procedure by which commission review of the decisions, directives, and interpretations of the manager may be obtained.

(1) Any person aggrieved by a violation of this chapter or Chapter 700, RSMo, as it relates to manufactured home tie-down systems and the manufacturer of those systems may file a formal or informal complaint under 20 CSR 4240-2.070.

(2) Any person aggrieved by the manager's decisions, directives, and interpretations of the standards, this chapter, or Chapter 700, RSMo, as they relate to manufactured home tie-down systems may file a written formal or informal complaint under 20 CSR 4240-2.070. In such a complaint, the manager shall be denominated as the respondent.

AUTHORITY: section 700.076, RSMo 2016. This rule originally filed as 4 CSR 240-124.060. Original rule filed Nov. 12, 1976, effective Feb. 11, 1977. Emergency rule filed Dec. 7, 1976, effective Dec. 17, 1976, expired April 16, 1977. Amended: Filed Oct. 12, 1982, effective Jan. 13, 1983. Amended: Filed July 6, 2017, effective March 30, 2018. Moved to 20 CSR 4240-124.060, effective Aug. 28, 2019. Amended: Filed April 29, 2026, effective Nov. 30, 2026.*

**Original authority: 700.076, RSMo 1976, amended 1978, 1982.*