

## **DEPARTMENT OF LOCAL AFFAIRS**

### **Division of Housing**

#### **RESOLUTION NO. 38 – MANUFACTURED HOUSING INSTALLATIONS**

##### **8 CCR 1302-7**

*[Editor's Notes follow the text of the rules at the end of this CCR Document.]*

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#### **BE IT RESOLVED BY THE STATE HOUSING BOARD OF THE STATE OF COLORADO;**

THAT PURSUANT TO '24-32-3301 et seq C.R.S. as amended, the State Housing Board of the State of Colorado (the "Housing Board") repeals and readopts Resolution #38, Manufactured Housing Installations; and

THAT PURSUANT TO '24-32-3301 et seq C.R.S. as amended, the State Housing Board adopts the nationally recognized codes as cited in SCHEDULE "B" as the "Colorado Manufactured Housing Installation Code" that are the Division of Housing responsibility; and

THAT PURSUANT TO '24-32-3301 et seq C.R.S. as amended the State Housing Board states the basis and purpose of these rule changes is to update the current minimum construction and safety code for "Manufactured Housing Installations"; and

THAT PURSUANT TO '24-32-3301 et seq C.R.S. as amended, the State Housing Board establishes standards, to the extent allowed by the state constitution, Article 50 of the "State Personnel System Act", and the rules promulgated by the Personnel Board, for private inspection and certification entities to perform the Colorado Division of Housing' certification and inspection of Manufactured Housing Installations; and

THAT PURSUANT TO '24-32-3301 et seq C.R.S. as amended, the State Housing Board states that "Manufactured Housing Installation" installers shall have the option to contract with the Colorado Division of Housing or an authorized inspection agency to perform inspection and certification functions where a local jurisdiction does not have exclusive inspection agency rights; and

THAT PURSUANT TO '24-32-3301 et seq C.R.S. as amended, the State Housing Board establishes minimum training standards for installers and inspectors; and

The Colorado Housing Board repeals and readopts these rules and regulations to be administered and enforced by the Colorado Division of Housing (Division).

#### **SECTION 1: SCOPE**

Every manufactured home installed after the effective date of these regulations that is installed in a temporary or permanent location and is designed and commonly used for occupancy by persons for residential purposes, must display an insignia issued by the Division of Housing, certifying that the unit is installed in compliance with the standards adopted in Schedule "B" which is incorporated herein and made a part of these Rules and Regulations by reference, and all other requirements set forth by this resolution.

Temporary installations for the purpose of home display prior to use as a residence which will be relocated to another location are exempted from these rules and regulations provided these installations are for display use only with no type of occupancy.

The State Housing Board states that the Program Manager, Housing Technology and Standards Section, Colorado Division of Housing, 1313 Sherman Street, Room 321, Denver, Colorado, 80203, will provide information regarding how the codes adopted in Schedule "B" may be obtained or examined. Incorporated material may also be examined at any state publications depository library.

## **SECTION 2: DEFINITIONS**

"Certificate of Installation" means a certificate issued by the Division of Housing for the installation of a manufactured home that is in compliance with the manufactured home installation requirements. The certificate of installation shall be referred to as the "Insignia".

"Certified Inspector" means a local jurisdiction, individual, private firm, housing inspector, Colorado licensed engineer or architect who has been approved by the Division to perform or enforce installation inspections.

"Certified Installer" means an installer of manufactured homes who is registered with the Division of Housing, has installed at least five manufactured homes in compliance with the manufacturer's instructions or standards created by the Division of Housing and is approved to be a certified installer by the Division.

"Conflict of Interest" means when there is personal or private interest(s) sufficient to influence or appear to influence the proper exercise of duties and/or responsibilities.

"Division" means the Division of Housing.

"Factory-Built Residential Structure" means a manufactured home constructed to the building codes adopted by the Housing Board and designed to be installed on a permanent foundation. This does not include homes constructed to the federal manufactured home construction and safety standards nor does this include any home designated as a mobile home.

"Insignia" means a certificate of installation issued by the Division of Housing to indicate compliance with the manufactured home installation regulations established by the State Housing Board.

"Installation" means the placement of a manufactured home on a permanent or temporary foundation system. Such term includes, without limitation, supporting, blocking, leveling, securing and anchoring such home and connecting multiple sections of such home.

"Installer" means any person who performs the installation of a manufactured home.

"Installation Authorization" means a notice when posted on the site of an installation that the installer has made application to install a manufactured home and has received authorization to install.

"Manufactured Home" means any pre-constructed building unit or combination of pre-constructed building units, without motive power, where such unit or units are manufactured in a factory or at a location other than the residential site of the completed home, which is designed and commonly used for the occupancy by persons for residential purposes, in either temporary or permanent locations and which unit or units are not licensed as a vehicle. Manufactured home includes mobile homes, manufactured homes built to the HUD standards, and factory-built residential structures built to the building code standards adopted by the Division.

"Manufacturer" means any entity that constructs or assembles a manufactured home in a factory or other off-site location.

"Mobile Home" means a manufactured home built prior to the adoption of the federal act.

"Modular Home" means a factory-built residential structure.

"Owner" means the owner of a manufactured home or property.

"Participating Jurisdiction" means a local governmental entity which has agreed to administer and inspect manufactured housing installations within the legal boundaries of the jurisdiction.

"Red Tag Notice" is a physical identification that a particular unit has a violation of these rules and regulations. Units posted with this notice cannot be sold, offered for sale or have occupancy in Colorado.

"Registered Installer" means an installer who has registered with the division and has been approved by the Division to perform installations, but is not a "Certified Installer".

### **SECTION 3: INSTALLERS OF MANUFACTURED HOMES - REGISTRATION**

Manufactured Home installers in this state shall first register with the Division. The installer shall be responsible for supervising all employees and for the proper and competent performance of all employees working under his or her supervision.

#### **Installation by Owners**

A person who owns the manufactured home or the real property where the home is to be installed, is not required to register as an installer with the Division but shall comply with all provisions of these regulations other than registration provisions.

A person who installs more than one manufactured home in any twelve-month period either owned or on real property owned by such person must register as an installer and shall comply with all registration provisions.

#### **Registered Installers**

In order to be registered as a manufactured home installer, an applicant shall be at least eighteen years of age.

An application for registration or certification as a manufactured home installer, whether initial or renewal, shall be submitted on a form provided by the Division and shall be notarized and verified by a declaration signed under penalty of perjury by the applicant. The Division shall make the application and declaration available for public inspection.

At the same time that an application for registration is filed, the following must be submitted:

- (a) Proof in the form of a copy of a valid drivers license or certificate of birth that the applicant is at least eighteen years of age; and
- (b) Furnish written evidence of a minimum twelve months of installation experience under direct supervision of a registered or certified installer; or equivalent training; or experience as determined by the Division; and
- (c) Pass a Division approved installation test; and
- (d) After January 1, 2009, furnish written evidence of completion of 8-hours of Division approved education; and

- (e) Carry and provide proof of contractor's liability insurance in an amount not less than one million dollars (\$1,000,000.00). The insurance policy shall contain a provision for the immediate notification of the Division upon cancellation; and
- (f) A letter of credit, certificate of deposit issued by a licensed financial institution, or surety bond issued by an authorized insurer in the amount of ten thousand dollars (\$10,000.00) for the performance of installations pursuant to the manufacturer's instructions or standards promulgated by the Division. A provision shall be included for the immediate notification of the Division upon cancellation.

Persons employed by a registered or certified installer, as well as persons employed by a legal or commercial entity employing a registered or certified installer, when performing installation functions under the direct on site supervision of such installers are not required to register. The registered installer shall be responsible for supervising all employees and for the proper and competent performance of all employees working under his or her supervision.

A registration issued pursuant to this section shall be valid for one year from the date of issuance and shall not be transferred nor assigned to another person. If any of the application information for the registered installer changes after the issuance of a registration, the registered installer shall notify the Division in writing within thirty days from the date of the change. The Division may suspend, revoke, or deny renewal of a registration if the registered installer fails to notify the Division of any change in the application.

**RENEWAL:** Any registered or certified installer seeking to renew registration shall, at the time of applying for renewal, provide proof of eight hours of Division approved education completed within the last 12 months, liability insurance and letter of credit, certificate of deposit, or surety bond.

The Division, or a Certified Inspector at the request of the Division, shall at the Division's sole discretion, inspect the installation of any manufactured home performed by the Registered Installer. The inspection shall be paid for by the party that requested the inspection unless during the inspection it is found that the installation does not comply with the manufacturer's installation instructions or standards adopted by the Division, in which case the installer shall reimburse the Division for the cost of the inspection and shall also pay for any subsequent repairs and inspections of those repairs to bring the installation into compliance.

#### **SECTION 4: CERTIFIED INSTALLERS**

Any registered installer who has performed five installations that have passed inspection by the Division or certified inspectors may apply to the Division for certification. The Division shall not charge a fee for certification of installers. The Division may certify any installer who provides evidence of five or more installations of manufactured homes performed by such installer. The installation evidence shall include differing types of installations, i.e. HUD, single wide, multi-box, Factory Built, Factory Built-AC. Evidence of installation shall include copies of all inspection reports made for each installation made by the Division or a certified installation inspector. If in the judgment of the Division, such installer has demonstrated the ability to successfully complete installations of manufactured homes in accordance with the requirements, a certification inspection will be scheduled. Certification will be granted if the installation is approved.

If the review of the evidence of the installations does not clearly demonstrate the ability to successfully complete installations in compliance with the requirements, the division may require additional installations to be performed and reviewed prior to granting certification.

A certified installer may purchase from the Division, manufactured home installation certification insignias. These insignias will be completed by the certified installer upon completion of the installation of the manufactured homes and attached to the manufactured home in compliance with Section 11 of this Resolution. The certified installer shall make required insignia reports to the Division.

A certified installer shall be authorized to purchase insignias, to post certified installer installation authorization on the installation site, and to affix insignias after the installation is complete. Installations by a certified installer do not require an inspection by the division or a certified inspector. The Division or certified inspector at the request of the Division, shall at the Division's sole discretion, inspect the installation of any manufactured home performed by a Certified Installer. The inspection shall be paid for by the party that requested the inspection unless during the inspection it is found that the installation does not comply with the manufacturer's installation instructions or standards adopted by the Division, in which case the installer shall reimburse the Division for the cost of the inspection and shall also pay for any subsequent repairs and inspections of those repairs to bring the installation into compliance.

A certified installer shall renew registration with the Division as outlined in **SECTION 3**.

## **SECTION 5: CERTIFIED INSTALLATION INSPECTORS**

The Division may authorize independent contractors to perform inspections and enforcement of proper installation of manufactured homes. Enforcement shall include issuance of installation authorizations and permanent attachment of insignias signifying compliance with the manufactured home installation regulations. The Division may provide training for independent contractors. All independent contractors shall be certified to perform installation inspections by the division.

Applicants for certified installation inspector shall furnish written evidence of a minimum twelve months manufactured housing inspection experience; or equivalent training; or related experience acceptable to the Division; or State of Colorado professional licensing in engineering or related construction fields. As of July 1, 2008, a new inspector must pass a Division-approved installation exam.

Inspector certifications will remain valid for three years and must be renewed. For renewals after January 1, 2009, inspectors must furnish written evidence of completion of either twelve hours of Division approved installation education and twelve hours of International Code Council Education or twenty-four hours of Division approved installation education within the previous three years.

### **Participating Jurisdiction**

Where a jurisdiction has established a building department, the building official or other approved authority may make a written request to be the exclusive independent installation inspection agency within their legal boundaries. When granted, all manufactured home installation inspections will be made by that participating jurisdiction's certified installation inspectors or by certified installation inspector under contract to the jurisdiction. Division inspectors or Division designated independent inspectors shall make inspections within the jurisdiction in response to a complaint.

A certified inspector shall not make inspections where the inspector has a conflict of interest that may impair their ability to make fair and impartial inspections.

The division may revoke the certification of any inspector who fails to maintain the minimum requirements for the certification, has a conflict of interest impairing their ability to make impartial inspections or if investigation of complaints by the division reveals that the inspector has repeatedly failed to enforce the requirements of the program. The Division, or a Certified Inspector at the request of the Division, shall at the Division's sole discretion, inspect the installation of any manufactured home inspected by the Certified Inspector. The inspection shall be paid for by the party that requested the inspection unless during the inspection it is found that the installation does not comply with the manufacturer's installation instructions or standards adopted by the Division, in which case the inspector shall reimburse the Division for the cost of the inspection. The installer shall pay for any subsequent repairs and inspections of those repairs to bring the installation into compliance.

## **SECTION 6: STANDARDS**

The Division shall adopt standards to be used state wide for the installation, inspection and enforcement of the installation of manufactured homes.

A local government unit shall not adopt less stringent standards for the installation of a manufactured home than those adopted by the Division. A local government unit shall not, without express consent by the Division, adopt different standards than the standards adopted by the Division for the installation of a manufactured home. Nothing in this section shall preclude a local government unit from enacting standards for manufactured homes concerning unique public safety requirements, such as weight restrictions for snow loads or wind shear factors, as otherwise permitted by law.

Any installation of a manufactured home in this state shall be performed in strict accordance with the applicable manufacturer's installation instructions. When the allowable bearing capacity of the soil the home will rest on is determined to be other than 1,500 psf the value shall be recorded by the installer on the Authorization form or other approved form and justification for higher values shall also be provided.

Where the manufacturer's instructions are not available, installation shall be in accordance with the alternate standards adopted by the Division.

Factory Built Residential units shall be installed on a permanent foundation approved thru the local jurisdiction. In areas where no building codes have been adopted the foundation shall be designed and approved by a State of Colorado licensed engineer unless plans are approved by the Division as in compliance with the Division adopted IRC foundation prescriptive requirements.

Upon written request, the Division will consider modifications to the standards and/or alternate materials and methods of construction. The Division will require that sufficient evidence or proof be submitted to support and substantiate the modification and/or alternate request. The Division may approve any such modification and/or alternate, provided the Division finds that the proposed modification and/or alternate conforms with the intent and purpose of the standards and is equivalent in suitability, strength, effectiveness, durability, safety, and sanitation. The approval of any modification and/or alternate by the Division will be made in writing and is required prior to commencing the work in question.

The Division will, as necessary, coordinate inspections by certified inspectors, maintain accurate record keeping and promote a statewide standard for inspections of manufactured home installations. From time to time, the Division may issue interpretations to be followed during the course of manufactured home installations and inspections.

## **SECTION 7: INSPECTION PROCEDURES**

The Division shall adopt a standard Installation Authorization to be used statewide by the Division and certified inspectors, a standard inspection form, and minimum inspection form requirements. Inspection forms shall be maintained a minimum three years from the date of the attachment of the insignia.

Prior to beginning the installation of a manufactured home, the owner, registered or certified installer of a manufactured home shall make an application for an Installation Authorization from the Division or certified installation inspector.

Owners, registered, and certified installers shall display an Installation Authorization at the site of the manufactured home to be installed until a certification insignia is attached to the manufactured home certifying compliance. Each authorization for installation will contain the identity of the installer and owner as well as phone number and contact person and identify the installer as owner, registered or certified. The certificate will also include the name, address and telephone number of the agency issuing the Installation Authorization.

A copy of the manufacturer's instructions shall be available at the time of installation and inspection of each new manufactured home. The installer shall be responsible to maintain a copy of the manufacturer's instructions at the installation site. Whenever the applicable standard (manufacturer's instructions, NFPA 225, etc.) for the installation of the manufactured home is not present at the time of the inspection, the inspector may fail the inspection and require a re-inspection of the installation. All costs of the inspection and any following re-inspection will be borne by the installer. Where the manufactured home is used or is being relocated, the manufacturer's instructions will be used if available. If the manufacturer's instructions are not available, the applicable adopted alternate standard listed in Schedule "B" here in will be used for the installation.

The owner, installer, manufacturer, or retailer shall have the right to be present at any inspection.

All manufactured homes that are found to be in compliance shall have an insignia of installation completed and permanently attached by the inspector making the inspection. Installations made by a certified installer may be inspected and certified by the installer. Such installations do not require inspection by the division or certified inspector. The certified installer shall complete and permanently attach an insignia when the installation is complete and make Insignia Reports to the division as required.

Application of the Certificate of Installation insignia is evidence that permanent utility service may be established. Permanent Certificate of Installation insignia application is required prior to occupancy of the home.

When a manufactured home installation is not found in compliance with the applicable manufacturer's instructions or other applicable standard or approved plans, the installer and/or manufacturer shall be notified in writing by the inspector. Determination of the responsible party shall be to the best of the inspector's knowledge. Documentation shall be provided to the inspector for changing a responsible party. Where the responsible party is not clear or unknown the responsibility shall fall to the installer. The inspector may at the time of the inspection, include in the inspection report instructions for the installer to call for re-inspection at any stage to prevent cover up of any part of the installation requiring re-inspection by the inspector.

The installer shall pay for any repairs required to bring the installation into compliance. The installer will pay for any subsequent inspections required by the Division or certified inspector.

If a vacant manufactured home fails the installation inspection because of conditions that endanger the health or safety of the occupant, the manufactured home shall not be occupied. The manufactured home shall be visibly posted with a Red Tag Notice to prevent occupancy.

If an installation or subsequent repair of an installation by an installer fails to meet the instructions or standards within the time limit allowed by the inspector, the inspector shall notify the installer that the installation is in default. The installer shall be given ten working days after notification of default to bring the installation into compliance. Any independent inspector that knows of an installation that is in default and has not been corrected by subsequent repair shall request that the Division investigate the installation. The Division may revoke, suspend, or fail to renew the registration or certification of the installer and cause the forfeiture of the installer's surety bond on behalf of the owner of the manufactured home for failing to comply with the Division's standards regarding installation of a manufactured home.

## **SECTION 8: INSTALLATION EDUCATION**

The Division will review all educational courses submitted and will grant course approval in writing. The Division may audit courses and may request from each entity offering a Division approved course, all instructional material and attendance records as may be necessary for an investigation. Failure to comply may result in the withdrawal of Division approval of the course.

All continuing education courses must contain at the minimum the following instructional material:

1. Blueprint reading and comprehension.
2. Discussion of structural issues. For example: hinged roofs, cape cod roofs, marriage line fastening and support, foundation sizing, etc.
3. A review of Colorado Law, program rules and/or policies as they pertain to the technical issues being discussed at the training.

All continuing education courses may be offered and completed by distance learning.

The following course format and administrative requirements apply to all Colorado continuing installation education for installers and inspectors:

- (a) Courses must be at least one hour in length and contain at least 50 instructional minutes per course hour.
- (b) A maximum of 8-hours of credit may be earned per day.
- (c) No course may be repeated for credit in the same registration period.
- (d) Instructors may receive credit for classroom teaching hours once per course taught per year.
- (e) Hours in excess of the required amount may not be carried forward to satisfy a subsequent renewal requirement.
- (f) No school/provider may waive, excuse completion of, or award partial credit for the full number of course hours.

Each Colorado installer or inspector is responsible for securing from the provider evidence of course completion in the form of an affidavit or certificate of attendance. For distance learning an affidavit of completion signed under penalty of perjury is the only acceptable proof. In person courses may have a certificate signed by the instructor at the end of the course. Said documentation must be in sufficient detail to show the name of the licensee, course subject, content, duration, date(s), and contain the authentication of the provider. Installers and inspectors must retain proof of continuing education completion for three years, and provide said proof to the Division upon request.

Each approved education provider must retain copies of course outlines or syllabi and complete attendance records for a period of three years.

Continuing education providers must submit an application form along with the following information at least 30-days prior to the proposed class dates:

- (a) Detailed course outline or syllabus, including the intended learning outcomes, the course objectives, and the approximate time allocated for each topic.
- (b) A copy of the course exam(s) and instructor answer sheet if applicable. In the absence of an exam, the criteria used in evaluating a person's successful completion of the course objectives
- (c) Copy of instructor teaching credential; if none, a resume showing education and experience which evidence the mastery of the material to be presented
- (d) A copy of advertising or promotional material used to announce the offering.



- (e) Upon Division request, a copy of textbook, manual, audio, videotapes, or other instructional materials.

By offering installation continuing education in Colorado, each provider agrees to comply with relevant statutes and rules and to permit Division audit of said courses at any time and at no cost.

## **SECTION 9: INVESTIGATIONS OF CONSUMER COMPLAINTS**

The Division may investigate complaints filed by owners, occupants, dealers, manufacturers or other parties relating to the installation of manufactured homes as necessary to enforce and administer these regulations.

In addition to the required inspections, the Division may inspect the installation of a manufactured home upon written complaint filed by the owner installer, manufacturer, or dealer of a manufactured home. The requesting party prior to the inspection shall pay for the inspection.

A certified inspector or participating jurisdiction shall file a written complaint with the Division against an installer who has been notified that the installation is in default.

If the installation of a manufactured home by an installer has failed the requested compliant inspection, the installer shall reimburse the Division for the cost of the failed inspection. The installer shall also pay for any subsequent repairs necessary to bring the installation into compliance with the manufacturer's instructions or standards. The installer shall also pay for any subsequent inspections required by the Division or the certified inspector. Failure of the installer to pay for any inspections or subsequent repairs deemed necessary by the Division or the independent contractor shall result in the revocation of registration and/or forfeiture of the installer's performance bond on behalf of the owner of the manufactured home.

The Division may designate a certified inspector to make inspection on behalf of the Division to aid in the investigation of consumer complaints.

## **SECTION 10: SUSPENSION OR REVOCATION**

The Division may suspend or revoke the registration or certification of an installer if the person fails to:

- File with the Division and keep in force a letter of credit, certificate of deposit, or surety bond as required; and

- File with the Division and keep in force required liability insurance; and

- Pay assessed inspection costs; and

- Make any subsequent repairs that are necessary to bring the installation into compliance with the manufacturer's instructions or the standards promulgated by the Division.

If within a time period established by the Division, the installer has not corrected any defects or deficiencies in the installation, the Division may revoke the certification or registration of any installer.

The division may temporarily suspend a registration or certification if proof of insurance or surety bond has expired.

The Division may revoke the certification of a Certified Installer and replace it, at its discretion, with the status of Registered Installer. All unused installation insignias must be returned to the Division immediately and the installer will lose the right to purchase and install insignias.

When, in the judgment of the Division, the installer has performed installations of a manufactured home in violation of the program requirements, the Division may revoke or suspend the installer's certification or registration.

When the Division revokes a registration or certification, the installer may reapply as a registered or certified installer one year after the date of the revocation.

Installers whose registration or certification has been revoked or suspended may appeal the Division's decision to the State Housing Board, Technical Review Committee for a hearing.

## **SECTION 11: REVOCATIONS, SUSPENSION AND APPEAL PROCESS**

The Division of Housing may revoke or suspend a certification or registration after notice and hearing pursuant to Section 24-4-104 and 24-4-105, C.R.S.

Judicial review of the certification or registration revocation actions shall be governed by Section 24-4-106, C.R.S.

## **SECTION 12: CERTIFICATE OF INSTALLATION INSIGNIA**

The Division shall adopt a standard Insignia to be used statewide as a certificate of installation certifying that the manufactured home was installed in compliance with the provisions of this regulation.

The Insignia shall include, but not be limited to, the name, address, and telephone number of the Division, date the installation was completed, and name, address, telephone number, and registration number of the installer who performed the installation.

Insignias shall remain the property of the state of Colorado and are not subject to refunds.

The insignia shall be permanently attached to the exterior, within 30 inches of the electrical service entrance of the manufactured home that they certify and the insignia is not transferable. When there is no exterior electrical service equipment on the home, the insignia shall be affixed to the exterior of the home near the HUD label or other readily visible location.

The possession of unattached insignias is limited to the Division, participating jurisdictions, certified inspectors and certified installers. Participating jurisdictions, certified inspectors, and certified installers may purchase installation insignias from the Division. Insignias must be kept secure.

## **SECTION 13: PROCEDURES, RECORDS AND DATA KEEPING**

The Division will establish and maintain a system of databases and procedures for manufactured home installation and inspection necessary for the implementation of these rules and regulations.

The Division will maintain the program rules and regulations in electronic format. Where feasible, the Division will make use of a web page to distribute information, make available forms and applications, and list participating jurisdictions, registered installers, certified installers, and certified independent inspectors.

## **SCHEDULE "A"          INSTALLATION PROGRAM FEES**

All fees except certain inspection fees are due in advance and must accompany the application. Fees shall not be subject to refund.

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|----|---|-----------|
| 1. | Installer Registration (1-year):              | \$100.00  |
| 2. | Independent Inspector Registration (3-years): | \$300.00  |
| 3. | Installer Certification:                      | No Charge |
| 4. | Inspector Certification:                      | No Charge |
| 5. | Insignia Fees:                                | \$40.00   |
| 6. | Red Tag Fee:                                  | \$250.00  |
| 7. | Inspection Fees:                              |           |
- A. Rough or Final Installation Inspection Fees: \$175.00
- B. Reinspection Fee for Red Tag Removal: \$175.00
8. Waiver of Fees for Government Assisted Housing; with State Housing Board concurrence, the Division of Housing may waive inspection and insignia fees for units to be subsidized under local, state or federal housing programs for low-income households.
9. Double inspection fees shall apply when an installation has been called for re-inspection and corrections have not been completed.

## **SCHEDULE "B"**

The State Housing Board hereby adopts and incorporates by reference, the following standards and national recognized codes as the "Colorado Manufactured Housing Installation Code". Materials incorporated by reference are those in existence as of the date of this resolution and do not include later amendments. Materials incorporated by reference is available for public inspection during regular business hours at the Division of Housing, 1313 Sherman Street, Room 321; Denver, Colorado 80203; or may be examined at any state publications depository library. Parties wishing to inspect these materials may contact the Program Manager, Housing Technology and Standards Section, located at the offices of the Division of Housing.

### **Colorado Manufactured Housing Installation Codes shall be:**

1. Primary Standard (Required for new homes):
  - A. The current Home Manufacturer's written Installation Instructions.
  - B. Local requirements approved in advanced by the Division.
2. Alternate Standards (Factory Built Units):
  - A. Structural attachment requirements approved by a State of Colorado licensed engineer.
  - B. Current version of the International Residential Code as adopted by the Housing Board.
3. Alternate Standards (Mobile and HUD homes):
  - A. NFPA 225, Model Manufactured Home Installation Standard 2013 Edition.

#### **Other references:**

24 CFR Part 3285, Model Manufactured Home Installation Standards, April 1, 2009 or most recent version.

24 CFR Part 3280, Manufactured Home Construction and Safety Standards, April 1, 2009 or most recent version.

Permanent Foundations Guide for Manufactured Housing (HUD-7584), September 1996 Edition, published by the United States Department of Housing and Urban Development or most recent version.

Guide to Foundation and Support Systems for Manufactured Homes, March 2002, U.S. Department of Housing and Urban Development or most recent version.

4. Amendments

- A. The following Amendments by addition, deletion, revision, and exception are made to NFPA 225 – 2013

**AMENDMENTS Model Manufactured Home Installation Standard NFPA 225-2013**

Section 4.4.4. revise as follows:

**4.4.4 Site suitability with home design.**

The installer shall verify data plates provided with a HUD home prior to installation in the State of Colorado. The data plate shall be matched to the home (serial numbers). The data plate shall indicate the following minimums:

Wind Zone: I

Thermal Zone: III

Roof Load: Middle (30 PSF)

If any data does not meet these requirements the installer shall not set the home. Contact the Division of Housing for further instructions.

Section 5.3. revise as follows:

**Fire Separation Distance.** Fire separation distances shall comply with local rules or regulations. In their absence, the most current version of the International Residential Code as adopted by the Housing Board, shall apply.

Section 5.5.2. revise as follows:

Soil that supports footings and foundations shall be capable of accommodating all loads required by this standard. To help prevent settling or sagging the foundation must be constructed on firm, undisturbed soil or 90% compacted fill. The design bearing capacity of the soil shall be determined in accordance with Section 5.6.

Section 5.6. revise as follows:

**Investigation and Bearing Capacity of Soil.**

Soils that appear to be composed of peat, organic clays, uncompacted fill, expansive or other unusual conditions shall have a registered engineer determine the classification and maximum allowable soil bearing capacity.

Otherwise the bearing capacity of the soil shall be assumed to be 1,500 psf.

A larger bearing capacity for the soil may be used as follows provided the class of soil is known:

Sandy gravel and/or gravel, very dense or cemented sands (GW, GP, SW, SP, GM, SM) -----  
-- 2,000 psf

Sedimentary and foliated rock----- 4,000 psf

When a value other than 1,500 psf is determined for the soil bearing capacity it shall be recorded by the installer on the Authorization form or other approved form and justification for higher values shall also be provided.

Section 5.8.1 revise as follows:

**Vapor retarder.** If the space under the home is to be enclosed with skirting or other material, a vapor retarder that keeps ground moisture out of the home shall be installed unless specifically allowed to be omitted by the authority having jurisdiction.

Section 5.8.3.2 revise as follows:

The vapor retarder may be placed directly beneath footings, or otherwise installed around or over footings placed at grade, and around anchors or other obstructions. Any voids or tears in the vapor retarder must be repaired.

Section 6.2.3.1.2. Delete this section.

Section 6.2.3.1.3.1 revise as follows:

Table 6.2.3.1.3(a), 6.2.3.1.3(b), 6.2.3.1.3(c) for pier capacities shall be used when the manufacturer's installation instructions are not available.

Section 6.2.3.1.3.2 revise as follows:

Manufactured piers shall be rated at least to the capacities given in Tables 6.2.3.1.3(a), 6.2.3.1.3(b), 6.2.3.1.3(c) and locally constructed piers shall be designed to transmit these loads safely as required by 6.2.3.2.

Tables 6.2.3.1.2(a) and (b) are replaced with the following tables.

Table 6.2.3.1.3(a)

Single and Multi Section Pier Loads Without Perimeter blocking  
 (at both I beams, in Lbs)  
 See section 6.2.5.5 for required perimeter blocking at side wall openings  
 See Table 6.2.3.1.3(c) for piers required under marriage line openings

Roof snow load (PSF)	Section Width (feet)	Maximum pier spacing			
		4'	6'	8'	10'
30	10	2360	3390	4420	5450
	12	2704	3906	5108	6310
	14	3048	4422	5796	7170
	16	3392	4938	6484	8030
40	10	2600	3750	4900	6050
	12	2984	4326	5668	7010
	14	3368	4902	6436	7970
	16	3752	5478	7204	8930
60	10	3080	4470	5860	7250
	12	3544	5166	6788	8410
	14	4008	5862	7716	9570
	16	4472	6558	8644	10730
80	10	3560	5190	6820	8450
	12	4104	6006	7908	9810
	14	4648	6822	8996	11170
	16	5192	7638	10084	12530
100	10	4040	5910	7780	9650
	12	4664	6846	9028	11210
	14	5288	7782	10276	12770
	16	5912	8718	11524	14330

Notes:

1. See Table 6.3.3 for footing design using the noted loads
2. This Table is based on the following design assumptions:  
 Nominal width is used, 12" eave, 20plf chassis dead load, 300 lbs. Pier dead load,  
 35 plf wall dead load, 10psf roof dead load and 6 psf floor dead load
3. Interpolation for other pier spacing is permitted
4. These loadings are not for flood or seismic conditions.

**Table 6.2.3.1.3(b)**

Single and Multi Section Pier Loads With Perimeter blocking

( Lbs)

See section 6.2.5.5 for required perimeter blocking at side wall openings

See Table 6.2.3.1.3(c) for piers required under marriage line openings

Roof snow load (PSF)	Section Width (ft)	Frame				Exterior wall				Marriage wall			
		Maximum pier spacing				Maximum pier spacing				Maximum pier spacing			
		4'	6'	8'	10'	4'	6'	8'	10'	4'	6'	8'	10'
30	10	1400	1950	2500	3050	1400	1950	2500	3050	2480	3420	4360	5300
	12	1584	2226	2868	3510	1560	2190	2820	3450	2800	3900	5000	6100
	14	1768	2502	3236	3970	1720	2430	3140	3850	3120	4380	5640	6900
	16	1952	2778	3604	4430	1880	2670	3460	4250	3440	4860	6280	7700
40	10	1400	1950	2500	3050	1640	2310	2980	3650	2880	4020	5160	6300
	12	1584	2226	2868	3510	1840	2610	3380	4150	3280	4620	5960	7300
	14	1768	2502	3236	3970	2040	2910	3780	4650	3680	5220	6760	8300
	16	1952	2778	3604	4430	2240	3210	4180	5150	4080	5820	7560	9300
60	10	1400	1950	2500	3050	2120	3030	3940	4850	3680	5220	6760	8300
	12	1584	2226	2868	3510	2400	3450	4500	5550	4240	6060	7880	9700
	14	1768	2502	3236	3970	2680	3870	5060	6250	4800	6900	9000	11100
	16	1952	2778	3604	4430	2960	4290	5620	6950	5360	7740	10120	12500
80	10	1400	1950	2500	3050	2600	3750	4900	6050	4480	6420	8360	10300
	12	1584	2226	2868	3510	2960	4290	5620	6950	5200	7500	9800	12100
	14	1768	2502	3236	3970	3320	4830	6340	7850	5920	8580	11240	13900
	16	1952	2778	3604	4430	3680	5370	7060	8750	6640	9660	12680	15700
100	10	1400	1950	2500	3050	3080	4470	5860	7250	5280	7620	9960	12300
	12	1584	2226	2868	3510	3520	5130	6740	8350	6160	8940	11720	14500
	14	1768	2502	3236	3970	3960	5790	7620	9450	7040	10260	13480	16700
	16	1952	2778	3604	4430	4400	6450	8500	10550	7920	11580	15240	18900

Notes:

1. See Table 6.3.3 for footing design using the noted loads
2. This Table is based on the following design assumptions:  
Nominal width is used, 12" eave, 20plf chassis dead load, 300 lbs. Pier dead load, 35 plf wall dead load, 10psf roof dead load and 6 psf floor dead load
3. Interpolation for other pier spacing is permitted
4. These loadings are not for flood or seismic conditions.



Table 6.2.3.1.3(c)

Multi Section Pier Loads Under Marriage Line Openings  
(Under each end of opening in Lbs)  
See section 6.2.5.5 for required perimeter blocking at side wall openings

Roof snow load (PSF)	Section Width (ft)	Marriage wall opening width									
		5'	8'	10'	12'	14'	16'	18'	20'	25'	30'
30	10	1300	1900	2300	2700	3100	3500	3900	4300	5300	6300
	12	1500	2220	2700	3180	3660	4140	4620	5100	6300	7500
	14	1700	2540	3100	3660	4220	4780	5340	5900	7300	8700
	16	1900	2860	3500	4140	4780	5420	6060	6700	8300	9900
40	10	1550	2300	2800	3300	3800	4300	4800	5300	6550	7800
	12	1800	2700	3300	3900	4500	5100	5700	6300	7800	9300
	14	2050	3100	3800	4500	5200	5900	6600	7300	9050	10800
	16	2300	3500	4300	5100	5900	6700	7500	8300	10300	12300
60	10	2050	3100	3800	4500	5200	5900	6600	7300	9050	10800
	12	2400	3660	4500	5340	6180	7020	7860	8700	10800	12900
	14	2750	4220	5200	6180	7160	8140	9120	10100	12550	15000
	16	3100	4780	5900	7020	8140	9260	10380	11500	14300	17100
80	10	2550	3900	4800	5700	6600	7500	8400	9300	11550	13800
	12	3000	4620	5700	6780	7860	8940	10020	11100	13800	16500
	14	3450	5340	6600	7860	9120	10380	11640	12900	16050	19200
	16	3900	6060	7500	8940	10380	11820	13260	14700	18300	21900
100	10	3050	4700	5800	6900	8000	9100	10200	11300	14050	16800
	12	3600	5580	6900	8220	9540	10860	12180	13500	16800	20100
	14	4150	6460	8000	9540	11080	12620	14160	15700	19550	23400
	16	4700	7340	9100	10860	12620	14380	16140	17900	22300	26700

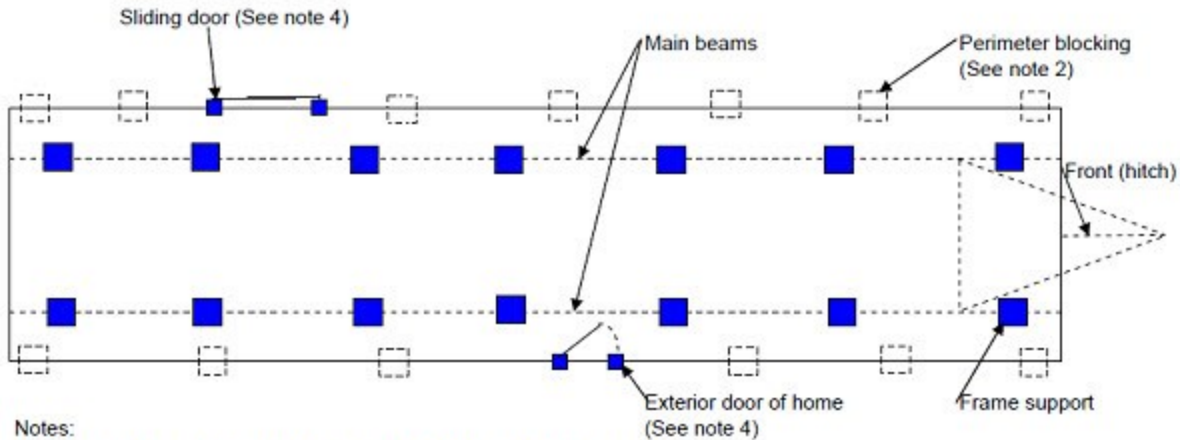
Notes:

1. See Table 6.3.3 for footing design using the noted loads
2. This Table is based on the following design assumptions:  
Nominal width is used, 300 lbs. Pier dead load,  
10psf roof dead load
3. Interpolation for other pier spacing is permitted
4. For piers supporting two adjacent openings, the required capacity is the sum of the loading from each opening.
5. These loadings are not for flood or seismic conditions.

Figures 6.2.5.3 and 6.2.5.4 are replaced with the following figures.



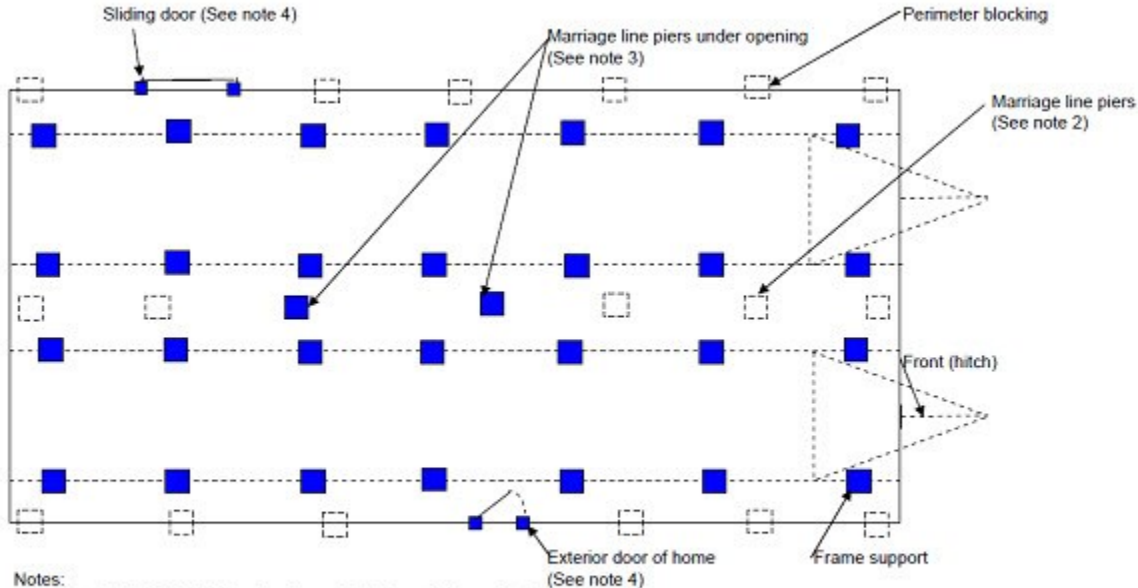
FIGURE 6.2.5.3 Typical blocking Diagram for a Single Section



Notes:

1. Refer to Table 6.2.3.1.3(a) when frame blocking only is required.
2. Refer to Table 6.2.3.1.3(b) when perimeter blocking is required.
3. Locate piers a maximum of 24 inches from both ends.
4. **All homes:** Place piers on both sides of sidewall exterior doors, patio doors, and sliding glass doors; under porch posts, factory-installed fireplaces, and fireplace stoves; under jamb studs at multiple window openings; and at any other sidewall openings 48 inches or greater in width.

FIGURE 6.2.5.4 Typical blocking Diagram for a Multi-section home



Notes:

1. Refer to Table 6.2.3.1.3(a) when frame blocking only is required.
2. Refer to Table 6.2.3.1.3(b) when perimeter blocking is required.
3. Refer to Table 6.2.3.1.3(c) for piers under marriage line wall openings
4. Locate piers a maximum of 24 inches from both ends.
5. **All homes:** Place piers on both sides of sidewall exterior doors, patio doors, and sliding glass doors; under porch posts, factory-installed fireplaces, and fireplace stoves; under jamb studs at multiple window openings; and at any other sidewall openings 48 inches or greater in width.

Section 6.2.3.2.2.2 revise as follows: Caps shall be of solid masonry of at least 4 in. (100 mm) nominal thickness, or of treated or hardwood dimensional lumber at least 2 in. (50mm) nominal thickness, or of steel.

Section 6.2.3.2.3.1 revise as follows: Nominal 4 in. x 6in. (100mmx 150mm) hardwood shims shall be used to level the home and fill any gaps between the base of the I-beam and the top of the pier cap. Any of the following hardwood species may be used: Ash, Beech, Birch, Hickory, Oak, Rock Elm, Black or Red Maple, Sweetgum

Section 6.2.5.5 revise as follows:

**All homes.** Supports shall be placed on both sides of side wall exterior doors and any other side wall openings greater than 48 in. (such as entry and sliding glass doors), and under porch posts, factory installed fireplaces and wood stoves. Size perimeter piers under openings based on table 6.2.3.1.3(b) "Exterior wall" where the actual side wall opening shall be less than or equal to the spacing selected from the table.

**Homes requiring perimeter blocking.** Refer to Figure 6.2.5.3 and Figure 6.2.5.4 and Table 6.2.3.1.3(b) for homes requiring perimeter blocking in addition to sidewall opening blocking described above.

Section 6.3.1.1(2) revise as follows:

6 in. nominal poured in place concrete pads, slabs or ribbons with at least a 28-day compressive strength of 3000 psi. Ribbon footings shall be a minimum 18" wide, reinforced with two #4 horizontal rebar centered vertically in the footing spaced 10" apart with 3" minimum edge margin. Slab footings shall be reinforced with a minimum 10 gauge, 6x6 wire welded mesh.

Section 6.3.1.2.2. Delete this section.

Section 6.3.2.1.1. Footings shall be placed at or below frost line or otherwise protected from frost heave.

Section 6.5.2. Delete this section.

Section 7.2. revise as follows:

The home shall be installed and leveled by installation personnel approved by the State of Colorado to install manufactured homes.

Section 7.3. revise as follows:

The interconnection of multisection homes shall be completed in accordance with the manufacturer's installation instructions. When the manufacturer's installation instructions are not available, the interconnection of multisection homes shall be in accordance with Table 7.3 or per the requirements approved by a State of Colorado licensed engineer.

Section 7.5 **Anchoring Instructions.** revise as follows:

Section 7.5.1 **Security against the wind.**

7.5.1.1 After blocking and leveling, the installer shall secure the manufactured home against wind per Section 7.5.2 or Section 7.5.3. Anchorage shall be for Wind Zone I. Homes that are designed for Wind Zone II and III must be anchored per the Manufacturers Installation Instructions or the requirements of a professional engineer.

**Table 7.3 Connections of Multi-Box Home**

Shim any gaps between structural elements prior to connection with dimensional lumber up to one inch. If gaps exceed one inch, re-position home to eliminate gapping condition.

CONNECTOR LOCATION	CONNECTOR SIZE	FASTENER ANGLE	FASTENER SPACING
Roof support beam at ridge or ceiling line	1/2 inch carriage bolts	90 degrees	48 inches on center
Roof ridge beam or ridge rail	3/8 inch lag screws with washers	Approx 45 degrees	24 inches on center each side and staggered
Roof rafter connection	4x12 inch 18 gauge galv strap centered on truss and peak	90 degrees into truss	48 inches on center for straps, 5-10d nails each side of ridge
or	8 inch continuous 18 gauge galv metal sheet centered on peak	90 degrees into roof sheathing/beams/truss	8D nails at 6 inches on center each side of ridge
Floor rim joist connection	3/8 inch lag screws with washers	Approx 45 degrees	24 inches on center each side and staggered
End wall and interior wall connection	#8 wood screws	Approx 45 degrees	18 inches on center

Notes:

1. Fastener length shall be adjusted as required to obtain full penetration into all structural members being connected on both sides of the marriage line.
2. 3/8" lag screws are to be piloted with 1/4" dia. holes prior to installation.
3. When the support post for a roof support beam can only be located on one side of the marriage line, install eight 1/2" cluster bolts with washers, spaced 4" on center, centered on the post, to connect the roof support beams together.

### Section 7.5.2 Proprietary Anchorage Systems

A proprietary anchorage system may be used to resist overturning and lateral movement (sliding) caused by wind as long as it complies with all of the following:

1. The system shall be listed by a nationally recognized third-party agency for anchoring manufactured homes.
2. The system shall be evaluated and approved by a licensed professional engineer.
3. The system shall be recognized as acceptable for use by CDOH.
4. The installer shall follow the requirements in the anchorage system installation instructions.

### Section 7.5.3 Ground Anchor System

#### Section 7.5.3.1 Specifications for Tie-Down Straps and Anchors

Straps and anchors are to have corrosion protection at least equivalent to that provided by a coating of zinc on steel of not less than 0.30 oz/ft<sup>2</sup> of surface coated. Straps and anchoring equipment must be capable of resisting a minimum ultimate load of 4,725 Lbs and a working load of 3,150 Lbs as installed determined by a registered professional engineer, architect or tested by a nationally recognized third-party agency. Straps are to be 1.25"x0.035" or larger steel strapping conforming to ASTM D 3953, Type 1, Grade 1, Finish B. Anchors are to be installed in accordance with their listing or certification to their full depth.

### Section 7.5.3.2 Number and Location of Anchors

Section 7.5.3.2.1 **Transverse Anchorage.** The number and location of anchors and anchor straps for securing single-section and multisection manufactured homes in the transverse direction shall conform to the manufacturer's installation instructions. When relocating the home or when the manufacturer's installation instructions are not available, the number and location of anchors and anchor straps shall conform to Table 7.5.3.2.1 and Figure 7.5.3.2.1 (a) and 7.5.3.2.1(b).

FIGURE 7.5.3.2.1(a) Anchor spacing and location

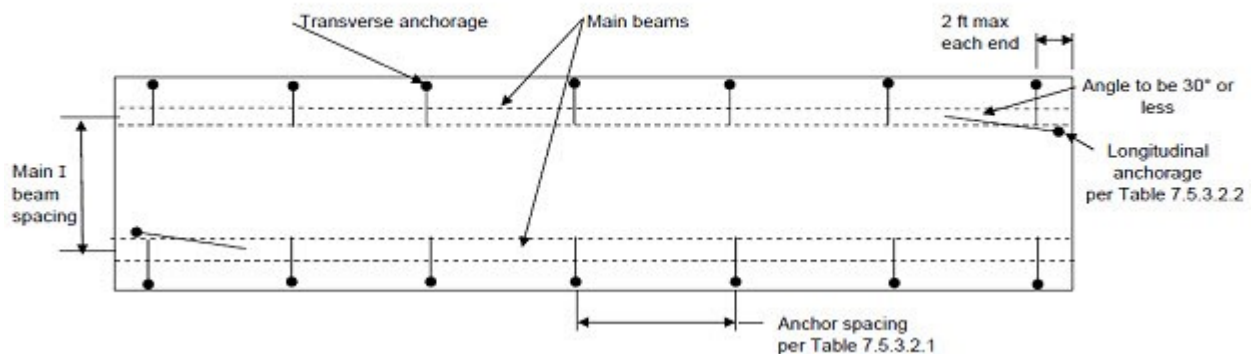


FIGURE 7.5.3.2.1(b) Anchor position using diagonal straps

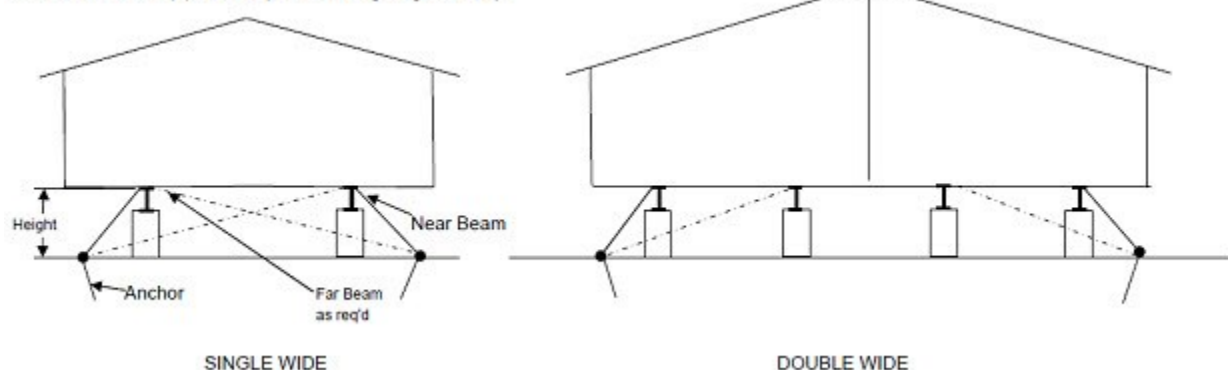




Table 7.5.3.2.1 Number and Location of Ground Anchors

Section Floor Width	Main I-Beam spacing (in)	Max height from ground to strap attachment (in)	Anchor Spacing (ft)	Angle
10 ft 20 ft double wide	82.5	25	9	59 1/2
		33	12	18 1/2
		46	12	25 1/2
		67	11 1/2	34 1/2
	99.5	25	12	13 1/2
		33	12	17 1/2
		46	12	23 1/2
		67	11 1/2	32 1/2
12 ft 24 ft double wide	82.5	25	12	43
		33	10 1/2	51
		46	7 1/2	60
		67	11 1/2	31 1/2
	99.5	25	10	54
		33	12	15 1/2
		46	12	21 1/2
		67	11 1/2	29 1/2
14 ft 28 ft double wide	82.5	25	12	33
		33	12	40 1/2
		46	9 1/2	50
		67	6 1/2	60
	99.5	25	12	39 1/2
		33	11	47 1/2
		46	8	56 1/2
		67	11 1/2	27 1/2
16 ft 32 ft double wide	82.5	25	N/A	26
		33	12	33
		46	10 1/2	42
		67	8	53
	99.5	25	12	30 1/2
		33	12 1/2	38
		46	10	47 1/2
		67	7	58

Notes:

1. See Figures 7.5.3.2.1(a) and (b).
2. This Table is based on the following design assumptions:  
8' wall height, 4/12 roof pitch, 4 inch anchor inset from home edge, 12' max anchor spacing
3. Main beam spacing outside those shown may be used provided the inside strap angle from the ground to the strap is less than the angle shown and is between 30 and 60 degrees or connection is provided to both the near and far beam. Choose spacing from values shown.
4. FAR BEAM. Spacings shown with FAR BEAM require connection to **both** the near and far beam. This also applies to other main I beam spacing. See note 3.
5. Anchors must have a 3150 lbs working load capacity and be installed within 2' of each end of the home.
6. These spacings are not for flood or seismic conditions.

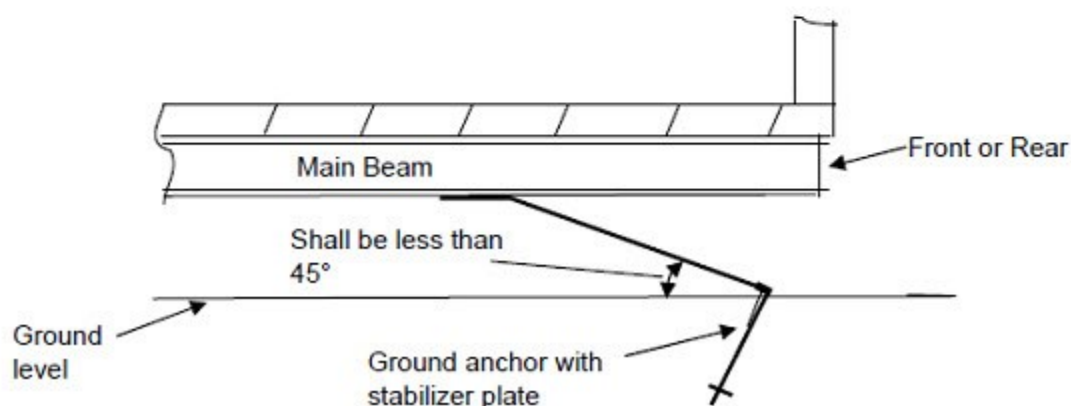
Section 7.5.3.2.2 **Longitudinal Anchorage.** The number and location of anchors and anchor straps for securing single-section and multisection manufactured homes in the longitudinal direction shall conform to the manufacturer's installation instructions. When relocating the home or when the manufacturer's installation instructions are not available, the number and location of longitudinal anchors and anchor straps shall conform to Table 7.5.3.2.2 and Figure 7.5.3.2.1 (a).

**Table 7.5.3.2.2 Longitudinal Anchorage**

NUMBER OF STRAPS REQUIRED AT <u>EACH</u> END OF THE HOME				
Number of Sections	Max Section Width (feet)			
	10	12	14	16
SINGLE WIDE	1	1	1	1
DOUBLE WIDE <sup>1</sup>	2	2	2	3

Footnote<sup>1</sup> Number of anchors may be reduced by 1 for homes greater than 60 feet in length

Notes: 1. Longitudinal straps shall be attached to the home's main frame as specified by the manufacturer's installation instructions.



Section 7.5.3.2.3 **Anchor Installation.** The installed ground anchor type and size/length must be listed for use in the soil class at the site and for the minimum and maximum angle permitted between the diagonal strap and the ground and all ground anchors must be installed in accordance with their listing or certification and the ground anchor manufacturer installation instructions. Unless the foundation system is frost-protected to prevent the effects of frost heave, the ground anchors shall be installed below the frost line. Ground anchor stabilizer plates shall be installed in accordance with the anchor and plate manufacturer installation instructions.

Section 7.5.3.2.4 **Side wall or over the roof straps.** If sidewall, over-the-roof, mate-line, or shear wall straps are installed on the home, they must be connected to an anchoring assembly.

Section 7.6.3 **Expanding Rooms.** revise section as follows: Expanding rooms shall be installed in accordance with the manufacturer's instructions. When the manufacturer's instructions are not available, perimeter blocking shall be installed in accordance with Table 6.2.3.1.3(b) and anchors shall be installed in accordance with Section 7.5.3.2.

Section 7.7.4.2. Revise (2)

(2) Walls-200.

Section 8.1 **Installation of Site-Installed Features.** revise entire section as follows:

Carports, awnings, porches, roof covers, and other similar attachments or additions shall not be supported by a manufactured home unless the home was specifically designed to accommodate such attachments or the attachment is designed by a registered professional engineer. Non-structural connections for flashings and coverings at the junction are acceptable.

Section 8.4 Delete.

Section 8.8.3 revise as follows:

Access opening(s) not less than 18 inches in width and 24 inches in height must be provided and located so that any utility connections are accessible.

Section 8.9. **Telephone and Cable TV.** revise as follows.

Telephone, cable TV and similar wiring shall be installed per the AHJ requirements and the National Electric Code.

Section 9.4. **Range, Cooktop, Oven Venting and Other Fixtures or Appliances**

Add new Section 9.4.3

If other fixtures or appliances are to be site-installed, follow the manufacturer's installation instructions. Use only products listed for manufactured homes and follow all applicable local codes.

Add new section 9.7. **Furnace, Water Heater and all other fuel fired appliances.**

Verify appliance is installed per the manufacturer's installation instructions including any combustion air requirements. Verify flues are in place and are properly connected and extend through the roof with flashings and caps.

Section 10.4.2 **Orifices and Regulators.** revise as follows:

Before making any connection to the site supply, the inlet orifices of all gas-burning appliances shall be checked to ensure they are correctly set-up for the type of gas to be supplied and are sized correctly for the altitude above sea level where the home is set. The manufacturer's installation instructions for the appliance shall be followed.

**Chapter 11 Life Safety Features** ; revise as follows:

**11.1 Smoke Alarms.** Verify smoke alarms are installed to protect the living area, rooms designed for sleeping, on upper levels and in the basement for homes installed over a basement. Verify smoke alarms are installed and operating properly to meet the requirements of 24 CFR 3280

**11.2 Carbon Monoxide Alarms.** An approved carbon monoxide alarm shall be installed outside of each separate sleeping area within 15 feet of the entrance to the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.

**11.3 Fire Separation Distances.** Fire separation distances shall comply with local rules or regulations. In their absence, the most current version of the International Residential Code as adopted by the Housing Board, shall apply.

B. The following Amendments by addition, deletion, revision, and exception are made to the Permanent Foundations Guide for Manufactured Housing (HUD-7584), September 1996 Edition:

## **APPENDIX B – FOUNDATION DESIGN LOAD TABLES**


In the multi-section tables under the marriage wall opening width (ft.), the values given for required effective footing area – Af&g (sq.ft.), shall be divided by 2.

### **5. DOH Manufactured Home Installation Inspection Checklist**

The Division of Housing Manufactured Home Installation Inspection Checklist shall be used by Division of Housing Inspectors, Certified Inspectors, Registered Installers, and Homeowners as the required on-site form to ensure a complete installation. The Checklist is to be used as a starting basis for the installation inspection. Refer to the applicable standards listed in Schedule "B" for specific details.



### DOH Manufactured Home Installation Inspection Checklist

Info	PROJECT INFO	
	Project ID/Address	Use installation manual for HUD's or NFPA 325 if no manual
	Length	
	Width	
	Exterior wall height	
	I-beam spacing	
	Roof pitch	
	Marriage line opening dimensions	
	Marriage line support spacing	
		Use installation manual, plans and IRC for FB modules
Confirmed	Criteria	Reference
	<b>ACCEPTANCE OF UNIT</b>	NFPA typically shown, Use IRC for FB Modular
	Manufacturer Name: _____	
	<b>New Home</b>	
	Manufacturer's installation instructions available on-site	4.4.1
	<b>Used Home</b>	
	Manufacturer's installation instructions available on-site	4.4.1
	Alternative standard used and available on-site	Resolution 38
	<b>All Homes</b>	
	DOH MHIP Authorization has been posted	Resolution 38
	HUD or Factory-Built label has not been damaged, removed, or covered	
	No transportation damage is noted	Annex B.2
	Data Plate indicates correct wind zone (1), thermal zone (3), and roof load (30#-middle)*, FB CDOH label indicates correct wind speed and roof load for local jurisdiction requirements	4.4.4/HUD 3280.5
	* If minimum requirements are not met, do not set home, contact DOH.	Resolution 34
	<b>SITE PREPARATION</b>	
	Soil density from a soils report and load capacity is documented on-site* 1500 PSF default	5.5.2
	* Penetrometer readings may be substituted if a soils report is not available	
	Completed site grading allows water to drain away from the home (site is crowned below home)	5.7
	Foundation drainage system installed when site conditions require	
	Vapor barrier installed when underfloor area is enclosed	5.8
	<b>BLOCKING, FOOTINGS, PIERS</b>	
	Organic material is removed from under the home	5.5.1
	Footings are of correct size and construction for soil and climate conditions	6.3
	Pier spacing and construction is completed to the Manufacturer's Installation instructions or NFPA amendments	6.2
	Shims, when required, are of an acceptable material and correctly installed	6.2.3.2.3
	Perimeter, marriage line, and other required blocking is installed to the Manufacturer's Instructions or NFPA amendments	6.2
	<b>ANCHORING</b>	
	<b>Temporary Set</b>	
	Confirm anchoring components/system is listed for manufactured homes and allowed for Colorado use, and is installed to the Anchor and Home Manufacturer's Instructions* or NFPA amendments	7.5
	* Includes number & location and correct angles, # of wraps, tensions and tightness against the stabilizer plates.	
	<b>Permanent Set</b>	
	Foundation walls meet all local codes, ordinances and covenants	Local requirements or engineer requirements
	Sill plate is designed and installed based on approved design	Approved plan
	Sill bolt anchors are installed correctly including: spacing, tightness, and hole size	Approved plan
	Engineered foundations are installed to the design specifications	Approved plan
	<b>STRUCTURAL CONNECTIONS</b>	
	Ridge beam is installed securely in accordance with the Manufacturer's Instructions	7.3
	Floors, walls, ceilings are correctly aligned, level, secure	7.3
	Hinged roof mechanisms are installed to the Manufacturer's Instructions	7.3
	<b>EXTERIOR</b>	
	Bottom board material is intact and repaired as necessary to prevent tears/rips	7.7.5
	Exterior siding damage is repaired and site installed siding is correctly installed	7.7.2
	Required gaskets between boxes are installed to Manufacturer's Instructions	7.7.1.3

**DOH Manufactured Home Installation Inspection Checklist**

<b>EXTERIOR Continued</b>	
Completed roof is installed to Manufacturer's Instructions	8.2
Gutter and downspouts when installed, divert water away from home	5.7.4
Windows and doors operate and seal properly	HUD-3280 103, 105, 106 IRC-R310, R311, R612
Skirting (where installed) is installed in accordance with the Manufacturer's Instructions	8.8
Roof penetrations from shipping strap attachment are repaired	7.7.1.2
<b>WATER SUPPLY</b>	
Water supply lines are the correct listed material & size, and are properly connected, supported, insulated & protected from freezing. Water heater drain and T/P valve are properly completed and routed to exterior	10.2, 10.3
Main water supply shut-off and pressure reducing device (if required by locals) are installed correctly	10.2.2.1 & 10.2.1
Required water supply tests are confirmed through on-site documentation	10.2.4
<b>SANITARY CONNECTION</b>	
Sewer connection lines are the correct listed material & size and are properly sloped, connected, and supported	10.3
Positive connection between home and site sewer connection	10.3.3
Required sewer connections tests are confirmed through on-site documentation	10.3.5
<b>GAS SUPPLY</b>	
Gas supply lines are the correct listed material & size and are properly connected and supported	10.4
Gas supplied to home is compatible with the installed furnace, water heater, and/or kitchen range	10.4.1
Flexible gas supply connectors used to connect gas supply between home sections, the home and the site connection, and installed appliances are the correct listed material, size and are properly connected, supported and accessible	10.4.4.1
Low pressure gas supply line test completed	10.4.3
High pressure gas supply line test completed	10.4.3
<b>ELECTRICAL SUPPLY</b>	
Electrical supply lines are the correct listed material & size and are properly connected, supported and provide the correct polarity, continuity, arc fault and circuit size	10.6
Electrical supply connectors used to connect electrical supplies between home sections and the home and the site are the correct listed material, size and are properly connected, supported and accessible	10.6.2
Shipped loose electrical fixtures are installed or electrical boxes have been covered	8.5
Home sections and the electrical supply are properly grounded	10.6.2
Bonding wire correctly installed between home and gas line between chassis	10.6.3.1(1)
Installed electrical appliances are correctly connected to the electrical systems	10.6.3.1(2)
<b>MECHANICAL SYSTEMS</b>	
Water heater and furnace are listed for the correct use and site gas type	
Mechanical systems are operational within the manufacturer's specifications	
Combustion air systems are identified for correct size, location, and free air-flow to exterior of home	9.3.7, 9.7 IRC G2407
Orifice(s) have been adjusted as necessary to provide the correct gas supply for altitude and gas type of the installed furnace, water heater and/or kitchen range	10.4.2
Mechanical system vents are of the correct size, distance to combustibles, and termination location/height	9.3, 9.7
Clothes dryer vent is attached to the appliance and terminates at the exterior of the home using a listed material of the correct size	9.1/8.8.4
Crossover ductwork is of the correct listed material & size and is properly connected, supported (duct not restricted & not touching ground), and insulated	7.4.2
<b>ENERGY</b>	
Factory Built Units constructed to the 2012 IECC. Blower Door test completed and less than 3 air changes per hour. Whole House mechanical ventilation provided and working.	IECC R402.4.1.2. IRC R303.4
<b>LIFE/SAFETY</b>	
Smoke detectors are operational and installed correctly	11.1
Carbon monoxide detectors are operational and installed correctly	
<b>OTHER</b>	
<b>INSTALLATION SEAL</b>	
Installation seal has been issued and installed only after confirmation of above criteria, applicable standards and codes and approved plans	DOH

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**Editor's Notes****History**

Entire rule eff. 11/30/2008.

Entire rule eff. 09/03/2013.

Section 12 eff. 05/30/2014.

**Annotations**

See *Leader Federal Bank for Savings v. Saunders*, 929 P.2d 1343 (1997).

Section 3, Registered Installer, paragraph beginning "RENEWAL: Any registered or certified installer ..."; Section 5, paragraph beginning "Inspector certifications will remain valid for three years ..."; Section 9, paragraph beginning "In addition to the required inspections ..."; (adopted 10/14/2008) were not extended by House Bill 09-1292 and therefore expired 05/15/2009.