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RESOLUTION #38

MANUFACTURED HOUSING INSTALLATIONS

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).

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RULES AND REGULATIONS

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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 ~~prior to use as a residence,~~ 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 ~~Occupancy~~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 ~~of~~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 ~~currently~~as to be approved as 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

130 | adopted by the Housing Board and designed to be installed on a permanent foundation. This does not
131 | include homes constructed to the federal manufactured home construction and safety standards nor
132 | does this include any home designated as a mobile home.

134 | “Insignia” means a certificate of installation issued by the Division of Housing to indicate
135 | compliance with the manufactured home installation regulations established by the State Housing
136 | Board.

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

142 | “Installer” means any person ~~that attaches the manufactured unit sections together and ties the home~~
143 | ~~to its foundation support and anchoring system~~ who performs the installation of a manufactured
144 | home.

146 | “Installation Authorization” means a notice when posted on the site of an installation that the
147 | installer has made application to install a manufactured home and has received authorization to
148 | install. ~~The installer’s certificate shall be referred to as the Installation Authorization.~~

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

158 | “Manufacturer” means any entity that constructs or assembles a manufactured home in a factory or
159 | other off-site location.

161 | “Mobile Home” means a manufactured home built prior to the adoption of the federal act.

163 | “Modular Home” means a factory-built residential structure.

165 | “Owner” means the owner of a manufactured home or property.

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

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

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173
174 “Registered Installer” means an installer who has registered with the division and has been approved
175 by the Division to perform installations, but is not a “Certified Installer”.
176

177
178 ~~“Registered Installer” means an installer who has registered with the Division and is in compliance~~
179 ~~with the manufactured home installation program requirements.~~
180
181

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.

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

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227 (c) Pass a Division approved installation test; and
228
229 (d) After January 1, 2009, furnish written evidence of completion of 8-hours of Division approved
230 education; and
231
232
233 (e) Carry and provide proof of contractor's liability insurance in an amount not less than one
234 million dollars (\$1,000,000.00). The insurance policy shall contain a provision for the
235 immediate notification of the Division upon cancellation; and
236
237 (f) A letter of credit, certificate of deposit issued by a licensed financial institution, or surety bond
238 issued by an authorized insurer in the amount of ten thousand dollars (\$10,000.00) for the
239 performance of installations pursuant to the manufacturer's instructions or standards
240 promulgated by the Division. A provision shall be included for the immediate notification of
241 the Division upon cancellation.
242

243 Persons employed by a registered or certified installer, as well as persons employed by a legal or
244 commercial entity employing a registered or certified installer, when performing installation
245 functions under the direct on-site supervision of such installers are not required to register. The
246 registered installer shall be responsible for supervising all employees and for the proper and
247 competent performance of all employees working under his or her supervision.
248

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

255
256 RENEWAL: Any registered or certified installer seeking to renew registration shall, at the time of
257 applying for renewal, provide proof of eight hours of Division approved education completed within
258 the last 12 months, liability insurance and letter of credit, certificate of deposit, or surety bond.
259

260 The Division, or a Certified Inspector at the request of the Division, ~~may~~ shall at the Division's sole
261 discretion, inspect the installation of any manufactured home performed by the Registered Installer.
262 The inspection shall be paid for by the party that requested the inspection unless during the
263 inspection it is found that the installation does not comply with the manufacturer's installation
264 instructions or standards adopted by the Division, in which case the installer shall reimburse the
265 Division for the cost of the inspection and shall also pay for any subsequent repairs and inspections
266 of those repairs to bring the installation into compliance.
267

268 |
269

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, ~~may~~shall at the Division's sole discretion, inspect the installation of any manufactured home performed by a ~~Ce~~certified ~~I~~nstaller. 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.

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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 ~~eight~~ 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, ~~that governmental body~~ 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 ~~his~~ 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 ~~his~~ 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, ~~may~~ 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

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356 enforcement of the installation of manufactured homes.

357
358 A local government unit ~~may~~shall not adopt less stringent standards for the installation of a
359 manufactured home than those adopted by the Division. A local government unit ~~may~~shall not,
360 without express consent by the Division, adopt different standards than the standards adopted by the
361 Division for the installation of a manufactured home. Nothing in this section shall preclude a local
362 government unit from enacting standards for manufactured homes concerning unique public safety
363 requirements, such as weight restrictions for snow loads or wind shear factors, as otherwise
364 permitted by law.

365
366 Any installation of a manufactured home in this state shall be performed in strict accordance with
367 the applicable manufacturer's installation instructions. When the allowable bearing capacity of
368 the soil the home will rest on is determined to be other than 1,500 psf the value shall be recorded
369 by the installer on the Authorization form or other approved form and justification for higher
370 values shall also be provided.

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

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

379
380 Upon written request, the Division will consider modifications to the standards and/or alternate
381 materials and methods of construction. The Division will require that sufficient evidence or proof be
382 submitted to support and substantiate the modification and/or alternate request. The Division may
383 approve any such modification and/or alternate, provided the Division finds that the proposed
384 modification and/or alternate conforms with the intent and purpose of the standards and is equivalent
385 in suitability, strength, effectiveness, durability, safety, and sanitation. The approval of any
386 modification and/or alternate by the Division will be made in writing and is required prior to
387 commencing the work in question.

388
389 The Division will, as necessary, coordinate inspections by certified inspectors, maintain accurate
390 record keeping and promote a statewide standard for inspections of manufactured home installations.
391 -From time to time, the Division may issue interpretations to be followed during the course of
392 manufactured home installations and inspections.

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395
396 **SECTION 7: INSPECTION PROCEDURES**

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

402
403 Prior to beginning the installation of a manufactured home, the owner, registered or certified installer
404 of a manufactured home shall make an application for an Installation Authorization from the
405 Division, participating jurisdiction, or certified installation inspector.

406
407 Owners, registered, and certified installers shall display an Installation Authorization at the site of the
408 manufactured home to be installed until a certification insignia is attached to the ~~manufactured~~
409 ~~home~~ manufactured home certifying compliance. Each authorization for installation will contain the
410 identity of the installer and owner as well as phone number and contact person and identify the
411 installer as owner, registered or certified. The certificate will also include the name, address and
412 telephone number of the agency ~~y~~ issuing the Installation Authorization.

413
414 A copy of the manufacturer's instructions shall be available at the time of installation and inspection
415 of ~~each~~ new manufactured home. The installer shall be responsible to maintain a copy of the
416 manufacturer's instructions at the installation site. ~~Whenever the applicable standard~~
417 (manufacturer's instructions, ~~ANSI A225.1-1994~~ NFPA 225, etc.) for the installation of the
418 manufactured home is not present at the time of the inspection, the inspector may fail the inspection
419 and require a re-inspection of the installation. All costs of the inspection and any following re-
420 inspection will be borne by the installer. ~~Where the manufactured home is used or is being relocated,~~
421 the manufacturer's instructions will be used if available. If the manufacturer's instructions are not
422 available, the applicable adopted alternate standard listed in Schedule "B" here in will be used for the
423 installation.

424
425 The owner, installer, manufacturer, or retailer shall have the right to be present at any inspection.

426
427 All manufactured homes that are found to be in compliance shall have an insignia of installation
428 completed and permanently attached by the inspector making the inspection. Installations made by a
429 certified installer may be inspected and certified by the installer. Such installations do not require
430 inspection by the division or certified inspector. The certified installer shall complete and
431 permanently attach an insignia when the installation is complete and make Insignia Reports to the
432 division as required.

433
434 Application of the Certificate of Installation insignia is evidence that permanent utility service may
435 be established. Permanent Certificate of Installation insignia application is required prior to
436 occupancy of the home.

437
438 When a manufactured home installation is not found in compliance with the applicable
439 manufacturer's instructions or ~~the installation~~ other applicable standard or approved plans, the
440 installer and/or manufacturer shall be notified in writing by the inspector. Determination of the

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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 Notification to prevent occupancy.

~~If the home fails the installation inspection because of conditions that do not endanger the health or safety of the occupant, the manufactured home may be occupied pending the correction of those defects or deficiencies that served as the basis of the failed inspection.~~

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

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.

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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

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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

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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

572 installer.

573

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

576

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

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

583

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

586

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

590

591

592

593

594

595 **SECTION 11: REVOCATIONS, SUSPENSION AND APPEAL** 596 **PROCESS**

597

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

600

601 Judicial review of the certification or registration revocation actions shall be governed by Section 24-
602 4-106, C.R.S.

603

604

605 **SECTION 12: ~~INSTALLATION~~ CERTIFICATE OF INSTALLATION ~~ION~~ INSIGNIA**

606

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

610

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

614

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

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

621
622 The possession of unattached insignias is limited to the Division, participating jurisdictions, certified
623 inspectors and certified installers. ~~Participating jurisdictions, certified inspectors, and certified~~
624 installers may purchase installation insignias from the Division. Insignias must be kept secure.

625
626
627 ~~**SECTION 13: INSTALLATION REPAIR PERIOD**~~

628
629 ~~Reference State of Colorado, Division of Housing, Rule #1.~~

630
631
632
633
634 **SECTION 134: PROCEDURES, RECORDS AND DATA KEEPING**

635
636 The Division will establish and maintain a system of databases and procedures for manufactured
637 home installation and inspection necessary for the implementation of these rules and regulations.

638
639 The Division will maintain the program rules and regulations in electronic format. Where feasible,
640 the Division will make use of a web page to distribute information, make available forms and
641 applications, and list participating jurisdictions, registered installers, certified installers, and certified
642 independent inspectors.

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655 **ATTEST:**

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664 | ~~Kathi Williams~~Pat Coyle, Director
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David Zucker~~XX~~ Theo
Colorado State Housing Board
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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.

1. Installer Registration (~~3~~1-years~~s~~): ~~_____~~ \$100.00
2. Independent Inspector Registration (~~3~~1-years~~s~~): \$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. ~~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.

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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 518321; Denver, Colorado 80203; or may be examined at any state publications depository library. Parties wishing to inspect these materials ~~should~~may contact the Program Manager, Housing Technology and Standards Section, located at the ~~o~~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.

A.
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.

~~These alternate standards are listed in hierarchal order.~~

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.

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~~24 CFR Part 3280, Manufactured Home Construction and Safety Standards, April 1, 2009 or most recent version.~~
~~A. 24 CFR Part 3285, Model Manufactured Home Installation Standards, April 1, 2009 or most recent version.~~
~~B. Permanent Foundations Guide for Manufactured Housing (HUD 7584), September 1996 Edition, published by the United States Department of Housing and Urban Development.~~
~~NFPA 225, Model Manufactured Home Installation Standard 2009 Edition or most recent version~~
~~B. NCSBCS/ANSI A225.1—1994, 1999 Edition, published by the National Conference of States of Building Codes and Standards, Inc.~~
~~D. Guide to Foundation and Support Systems for Manufactured Homes, March 2002, U.S. Department of Housing and Urban Development.~~
~~C. Local requirements approved in advance by the Division.~~

43. Amendments

~~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—A_f&g (sq.ft.), should be divided by 2.~~

~~E.A. The following Amendments by addition, deletion, revision, and exception are made to NCSBCS/ANSI A225.1 NFPA 225 – 1994, 2013~~

AMENDMENTS

~~MANUFACTURED HOME INSTALLATIONS~~ Model Manufactured Home Installation Standard ANSI A225.1—1994 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

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Comment [RH1]: Reference newer NFPA
- what about all these amendments?

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792 Thermal Zone: III

793 Roof Load: Middle (30 PSF)

794 If any data does not meet these requirements the installer shall not set the home.

795 Contact the Division of Housing for further instructions.

796 Section 5.3. revise as follows:

797 **Fire Separation Distance.** Fire separation distances shall comply with local rules or

798 regulations. In their absence, the most current version of the International Residential

799 Code as adopted by the Housing Board, shall apply.

800 Section 5.5.2. revise as follows:

801 Soil that supports footings and foundations shall be capable of accommodating all

802 loads required by this standard. To help prevent settling or sagging the foundation

803 must be constructed on firm, undisturbed soil or 90% compacted fill. The design

804 bearing capacity of the soil shall be determined in accordance with Section 5.6.

805 Section 5.6. revise as follows:

806 **Investigation and Bearing Capacity of Soil.**

807 Soils that appear to be composed of peat, organic clays, uncompacted fill, expansive

808 or other unusual conditions shall have a registered engineer determine the

809 classification and maximum allowable soil bearing capacity.

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

811 A larger bearing capacity for the soil may be used as follows provided the class of

812 soil is known:

813

814 Sandy gravel and/or gravel, very dense or cemented sands (GW, GP, SW, SP, GM,

815 SM) ----- 2,000 psf

816

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

818

819 When a value other than 1,500 psf is determined for the soil bearing capacity it shall

820 be recorded by the installer on the Authorization form or other approved form and

821 justification for higher values shall also be provided.

822 Section 5.8.1 revise as follows:

823 **Vapor retarder.** If the space under the home is to be enclosed with skirting or

824 other material, a vapor retarder that keeps ground moisture out of the home shall

825 be installed unless specifically allowed to be omitted by the authority having

826 jurisdiction.

827 Section 5.8.3.2 revise as follows:

828 The vapor retarder may be placed directly beneath footings, or otherwise installed

829 around or over footings placed at grade, and around anchors or other obstructions.

830 Any voids or tears in the vapor retarder must be repaired.

831 Section 6.2.3.1.2. Delete this section.

832 Section 6.2.3.1.3.1 revise as follows:

833 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

834 manufacturer's installation instructions are not available.

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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.

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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.

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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:

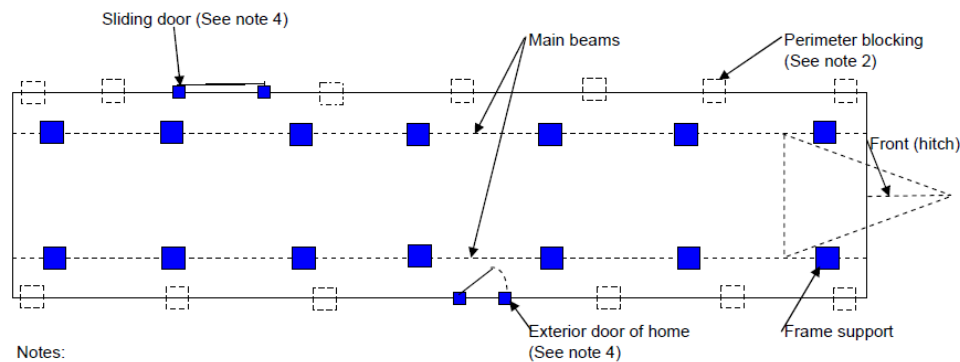
1. See Table 6.3.3 for footing design using the noted loads
2. This Table is based on the following design assumptions:
Nominal width is used, 300 lbs. Pier dead load,
10psf roof dead load
3. Interpolation for other pier spacing is permitted
4. For piers supporting two adjacent openings, the required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

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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:

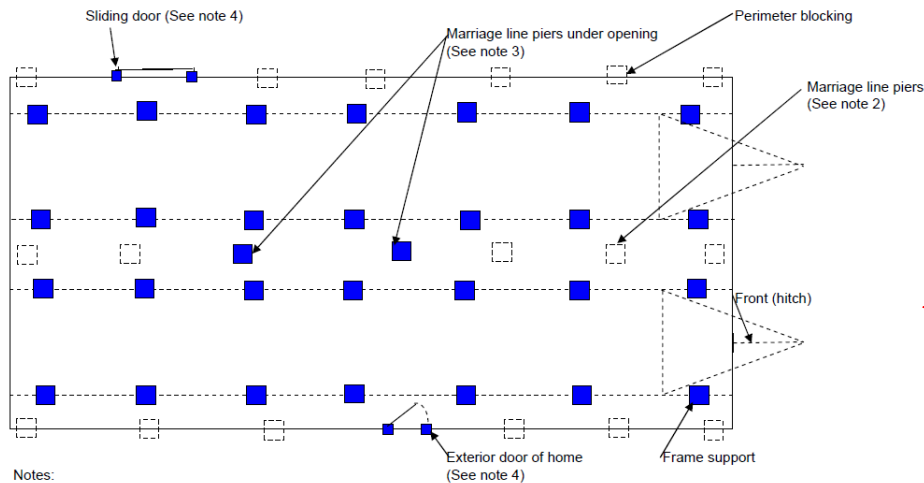
1. Refer to Table 6.2.3.1.3(a) when frame blocking only is required.
2. Refer to Table 6.2.3.1.3(b) when perimeter blocking is required.
3. Locate piers a maximum of 24 inches from both ends.
4. **All homes:** Place piers on both sides of sidewall exterior doors, patio doors, and sliding glass doors: 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.

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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

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904 10" apart with 3" minimum edge margin. Slab footings shall be reinforced with a
905 minimum 10 gauge, 6x6 wire welded mesh.
906 Section 6.3.1.2.2. Delete this section.
907 Section 6.3.2.1.1. Footings shall be placed at or below frost line or otherwise protected from
908 frost heave.
909 Section 6.5.2. Delete this section.
910 Section 7.2. revise as follows:
911 The home shall be installed and leveled by installation personnel approved by the
912 State of Colorado to install manufactured homes.
913 Section 7.3. revise as follows:
914 The interconnection of multisection homes shall be completed in accordance with
915 the manufacturer's installation instructions. When the manufacturer's installation
916 instructions are not available, the interconnection of multisection homes shall be
917 in accordance with Table 7.3 or per the requirements approved by a State of
918 Colorado licensed professional.
919 Section 7.5 Anchoring Instructions. revise as follows:
920 Section 7.5.1 Security against the wind.
921 7.5.1.1 After blocking and leveling, the installer shall secure the manufactured
922 home against wind per Section 7.5.2 or Section 7.5.3. Anchorage shall be for
923 Wind Zone I. Homes that are designed for Wind Zone II and III must be anchored
924 per the Manufacturers Installation Instructions or the requirements of a
925 professional engineer.
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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

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provided by a coating of zinc on steel of not less than 0.30 oz/ft² 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).

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FIGURE 7.5.3.2.1(a) Anchor spacing and location

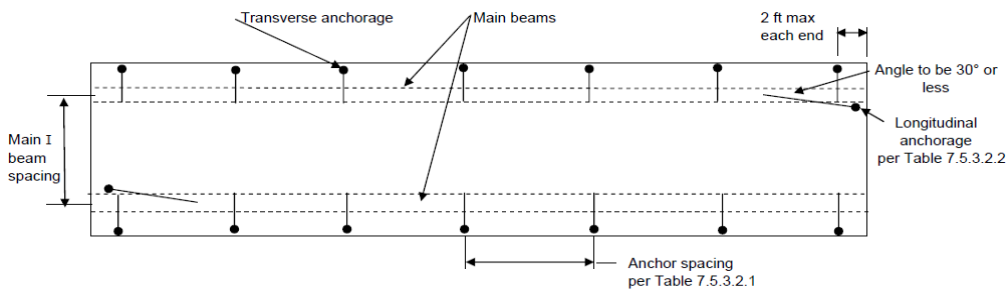


FIGURE 7.5.3.2.1(b) Anchor position using diagonal straps

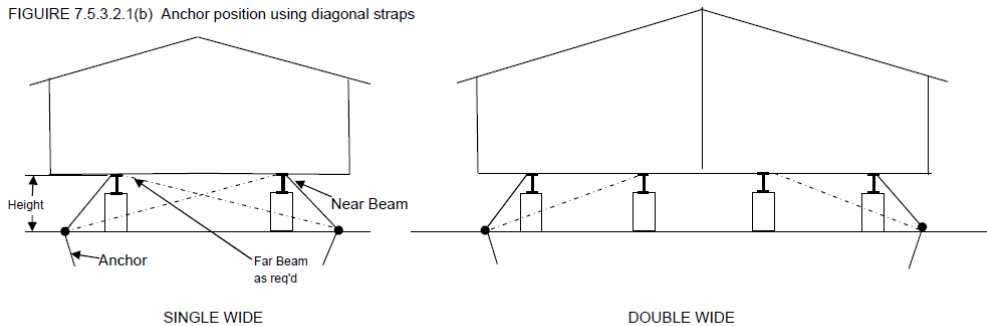


Table 7.5.3.2.1 Number and Location of Ground Anchors

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

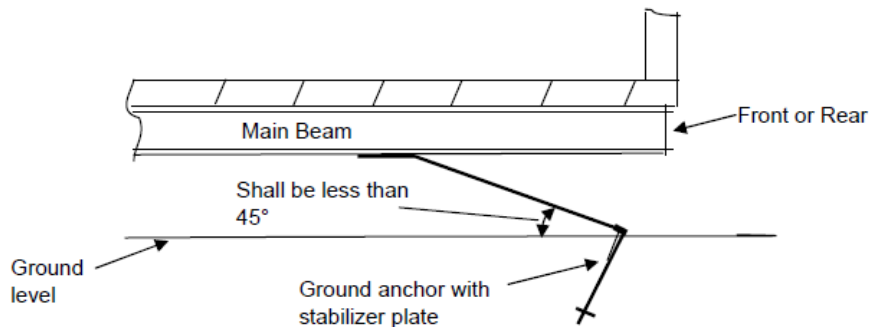
the longitudinal direction shall conform to the manufacturer's installation instructions. When relocating the home or when the manufacturer's installation instructions are not available, the number and location of longitudinal anchors and anchor straps shall conform to Table 7.5.3.2.2 and Figure 7.5.3.2.1 (a).

Table 7.5.3.2.2 Longitudinal Anchorage

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

Footnote¹ 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.



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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

979 and the ground anchor manufacturer installation instructions. Unless the
980 foundation system is frost-protected to prevent the effects of frost heave, the
981 ground anchors shall be installed below the frost line. Ground anchor stabilizer
982 plates shall be installed in accordance with the anchor and plate manufacturer
983 installation instructions.
984 Section 7.5.3.2.4 **Side wall or over the roof straps.** If sidewall, over-the-roof, mate-line,
985 or shear wall straps are installed on the home, they must be connected to an
986 anchoring assembly.
987 Section 7.6.3 **Expanding Rooms.** revise section as follows: Expanding rooms shall be
988 installed in accordance with the manufacturer's instructions. When the
989 manufacturer's instructions are not available, perimeter blocking shall be installed
990 in accordance with Table 6.2.3.1.3(b) and anchors shall be installed in accordance
991 with Section 7.5.3.2.
992 Section 7.7.4.2. Revise (2)
993 (2) Walls-200.
994 Section 8.1 **Installation of Site-Installed Features.** revise entire section as follows:
995 Carports, awnings, porches, roof covers, and other similar attachments or
996 additions shall not be supported by a manufactured home unless the home was
997 specifically designed to accommodate such attachments or the attachment is
998 designed by a registered professional engineer. Non-structural connections for
999 flashings and coverings at the junction are acceptable.
1000 Section 8.4 Delete.
1001 Section 8.8.3 revise as follows:
1002 Access opening(s) not less than 18 inches in width and 24 inches in height must
1003 be provided and located so that any utility connections are accessible.
1004 Section 8.9. **Telephone and Cable TV.** revise as follows.
1005 Telephone, cable TV and similar wiring shall be installed per the AHJ
1006 requirements and the National Electric Code.
1007 Section 9.4. **Range, Cooktop, Oven Venting and Other Fixtures or Appliances**
1008 Add new Section 9.4.3
1009 If other fixtures or appliances are to be site-installed, follow the manufacturer's
1010 installation instructions. Use only products listed for manufactured homes and
1011 follow all applicable local codes.
1012 Add new section 9.7. **Furnace, Water Heater and all other fuel fired appliances.**
1013 Verify appliance is installed per the manufacturer's installation instructions
1014 including any combustion air requirements. Verify flues are in place and are
1015 properly connected and extend through the roof with flashings and caps.
1016 Section 10.4.2 **Orifices and Regulators.** revise as follows:
1017 Before making any connection to the site supply, the inlet orifices of all gas-
1018 burning appliances shall be checked to ensure they are correctly set-up for the type
1019 of gas to be supplied and are sized correctly for the altitude above sea level where
1020 the home is set. The manufacturer's installation instructions for the appliance
1021 shall be followed.

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1022 **Chapter 11 Life Safety Features;** revise as follows:

1023 **11.1 Smoke Alarms.** Verify smoke alarms are installed to protect the living area,

1024 rooms designed for sleeping, on upper levels and in the basement for homes

1025 installed over a basement. Verify smoke alarms are installed and operating

1026 properly to meet the requirements of 24 CFR 3280

1027 **11.2 Carbon Monoxide Alarms.** An approved carbon monoxide alarm shall be

1028 installed outside of each separate sleeping area within 15 feet of the entrance to

1029 the bedrooms in dwelling units within which fuel-fired appliances are installed

1030 and in dwelling units that have attached garages.

1031 **11.3 Fire Separation Distances.** Fire separation distances shall comply with local

1032 rules or regulations. In their absence, the most current version of the International

1033 Residential Code as adopted by the Housing Board, shall apply.

1034 ~~2 Definitions~~

1035

1036 ~~Architect: A State of Colorado Licensed Professional Architect.~~

1037

1038 ~~Carport: An awning or shade structure for a vehicle(s) that is freestanding and entirely open~~

1039 ~~on two or more sides, and not structurally attached to a Manufactured Home.~~

1040

1041 ~~Engineer: A State of Colorado Licensed Professional Engineer.~~

1042

1043 ~~Geologist: A State of Colorado Licensed Professional Geologist or Engineer.~~

1044

1045 ~~3.1.4 Fire separation distance~~

1046

1047 ~~The distance a home must be sited from other structures depends on its fire resistance rating~~

1048 ~~and on local requirements. Contact the home's manufacturer or the inspection agency~~

1049 ~~identified on the data plate for fire resistance rating information. In addition, contact the~~

1050 ~~authority having jurisdiction for minimum fire separation distances.~~

1051

1052 ~~3.2.3 Soil~~

1053

1054 ~~Use a pocket penetrometer or other methods acceptable to the local jurisdiction having~~

1055 ~~authority. The proper penetrometer reading must be taken in moist soil, after removing all~~

1056 ~~organic material to undisturbed earth, at the foundation bearing level. The installer is~~

1057 ~~responsible for documenting soil types and bearing capacities.~~

1058

1059 ~~3.4.4 Gutters and downspouts~~

1060

1061 ~~When gutters downspouts are installed, direct the run off away from the home. Splash~~

1062 ~~blocks and downspout extensions will enhance drainage away from the home.~~

1063

1064 ~~4.0.1 Foundation Requirements~~

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Widow/Orphan control

1065
1066 All exterior walls, marriage walls, marriage wall posts, columns, and piers must be supported
1067 on an acceptable foundation system that must be of sufficient design to support safely, the
1068 loads imposed, as determined by the character of the soil.

1069
1070 ~~4.0.2 Height Above Grade~~

1071
1072 Foundation walls shall extend at least 6" above the adjacent finished grade.

1073
1074 ~~4.0.3 Minimum Foundation Wall and Wall Footing Thickness~~

1075
1076 The minimum concrete or masonry foundation wall width shall be 6 inches. The minimum
1077 reinforced concrete footing thickness shall be 3 1/2 inches or 1 1/2 times the length of the
1078 footing projection from the foundation wall, whichever is greater.

1079
1080 ~~4.0.4 Crawl Space Requirements (Basementless Spaces)~~

1081
1082 ~~4.0.4.1 Height Requirement~~

1083
1084 Ground level must be at least 18 inches below the bottom of wood floor joists and 12 inches
1085 below the bottom of the chassis beams. (See 4.1.3.3).

1086
1087 ~~4.0.4.2 Interior vs. Exterior Ground Level~~

1088
1089 The interior ground level must be above the outside finish grade with a minimum 2% slope
1090 to the exterior unless:

1091
1092 1. Adequate gravity drainage to a positive out fall is provided, or

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1093
1094 2. A Professional Engineer or Architect certifies the permeability of the soil and the water
1095 table is such that water will not collect in the crawl space, or

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1096
1097 3. A full perimeter foundation drain and sump pit is provided.

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1098
1099 ~~4.1.3.1 Load Bearing Capacity~~

1100
1101 Replace Table 4.1 and 4.2 with Table A, Table B, and Table C.

1102
1103 ~~4.1.3.2 Configuration~~

1104 B. The following Amendments by addition, deletion, revision, and exception are made to the
1105 Permanent Foundations Guide for Manufactured Housing (HUD-7584), September 1996
1106 Edition:

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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.

~~Select manufactured pier heights so that the adjustable risers do not extend more than 2 inches when finally positioned.~~

~~All piers must rest on footings (see 4.2) that extend below the frost line (see 4.2.2 for exceptions to placement) and are placed on either undisturbed soil or compacted fill except for interior heated areas, which may bear above frost line on undisturbed soil or compacted fill.~~

~~4.1.4 Design Procedures~~

~~Pier height is to be measured from top of the footing.~~

~~4.3 Permanent Foundations~~

~~Permanent foundations shall be designed, permitted, constructed, and inspected in accordance with the local building department requirements.~~

~~For those areas of the State of Colorado without an adopted building code, foundations shall be constructed in accordance with a professional engineered design, or the Permanent Foundations Guide for Manufactured Housing September 1996, and shall be inspected and certified by the foundation designer.~~

~~4.4.2 Severe Wind Areas~~

~~Consult the authority having jurisdiction or a Professional Engineer or Architect.~~

~~5.3 Interconnection of multi-section homes~~

~~Table 5-1 Normal Home Installations (Single Or Multi section Homes)~~

~~Piers Ground anchors:~~

~~The manufactured home rests on piers of concrete block; formed in place concrete; permanent wood; or steel pedestals on permanent wood, crushed stone, approved ABS, or concrete footers. The ground anchors are embedded at an angle in the soil to act as dead men to resist the horizontal and vertical wind forces. Straps are tied to the frame, with or without over the top straps.~~

~~5.5 Anchoring Instructions~~

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~~After blocking and leveling, the installer shall secure the manufactured home against the wind. The type of installation is the determining factor in deciding how this should be done, as is described in the following sections.~~

~~5.5.1.1 Number and location of anchors~~

~~The home must be anchored to the ground in order to resist overturning and lateral movement (sliding) of the home caused by the forces imposed by the wind. The Tie Down Anchoring System described in this section is one acceptable method of anchoring the home to withstand its wind load.~~

~~Unless otherwise noted, all Tie Down and Anchoring Instructions are for homes with roof pitches, which do not exceed 20 degrees (4.3 inches in 12 inches).~~

~~A Registered Colorado Professional Engineer, Architect or a nationally recognized testing laboratory shall certify the Tie Down Anchoring Devices. They must be capable of resisting an allowable working load equal to or exceeding 3,150 pounds and shall be capable of withstanding a 50 percent overload (4,725 pounds total) at an angle of 45 degrees from the vertical. Ground anchors must be installed as specified by the Anchor Manufacturer.~~

~~Anchoring Equipment exposed to weather shall have a resistance to weather deterioration at least equivalent to that provided by a coating of zinc on steel of not less than 0.3 ounces per square foot of surface coated. Slit or cut edges of zinc coated strapping do not need to be zinc coated.~~

~~Straps shall be Type 1, Finish B, Grade 1 steel strapping, 1 1/4 inches wide and 0.035 inches in thickness, certified by a Registered Professional Engineer or Architect, or listed as conforming to ASTM Standard Specification D3953-91, Standard Specification for Strapping, Flat Steel and Seals.~~

~~The home must be in its final position with sections fastened together prior to installing Tie-Down Equipment.~~

~~5.5.1.2 Ground Anchors~~

~~Replace figure 5-2 with Table D.~~

~~Before Ground Anchor Installation, determine that the Anchors will not be close to any underground utility lines.~~

~~The Ground Anchor Spacing and Installation Method were developed by Manufactured Housing Research Alliance.~~

~~Ground Anchors shall be installed in accordance with the manufacturer's written instructions. The following is one example: Install the anchors at the locations selected from Table D when the home manufacturer's installation instructions are not available.~~

~~5.5.1.3 Steps for Proper Ground Anchor Installation~~

~~These steps must be followed to use Table D:~~

- ~~1. Place the Anchors approximately four inches to the inside of the exterior wall line of the home or a sufficient distance to avoid interference with the skirting (See Diagram).~~
- ~~2. Hold the Anchor at an angle of approximately 15 degrees off of vertical so that the head of the Anchor is just outside the sidewall (See Diagram).~~
- ~~3. Install the Anchor to a depth of approximately one third (1/3) the Anchor length.~~
- ~~4. Place a Stabilizer Plate (all lateral loaded Ground Anchor must have Stabilizer Plates) of the size indicated on the chart to the inside of the Anchor Shaft (side of Shaft toward center of house) and two inches from the shaft (See Diagram).~~
- ~~6. Drive the Stabilizer Plate into the ground until the top of the Plate is flush with the surface of the ground.~~
- ~~7. Install the Anchor to its full depth.~~
- ~~8. Attach the Anchor Head to the chassis main rail with approved strapping and connection hardware in accordance with the Strap Manufacturer's Instructions.~~
- ~~9. Pretension the Anchor by pulling it up to the Stabilizer Plate. Pull the Anchor approximately 1/2 inch more while it is in contact with the Plate using the Strap and take up bolt to move the Anchor Head.~~
- ~~10. After all Anchors have been installed and pretensioned, recheck all Anchor Straps to assure that they are tight and that the Anchor Shafts have remained in contact with the Stabilizer Plate.~~

~~5.5.1.5 Important Notes about the Anchor Spacing Selector~~

- ~~1. For homes with 8 foot sidewalls, reduce the Anchor Spacing by 1/2 foot.~~

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1237 2. ~~Do not use this chart for homes with roof slopes greater than 20 degrees (approximately~~
1238 ~~4 in 12).~~

1239
1240 3. ~~Anchors are required within two feet of each end wall.~~

1241
1242 ~~6.8 Skirting~~

1243
1244 Skirting, if used or required, shall be of durable materials suitable for exterior exposures.
1245 Skirting must not be attached in a manner that can cause water to be trapped between the
1246 siding or trim to which it is attached. Most local codes do not permit wood, including
1247 lumber and all wood siding used for skirting, to be used within 6 inches of the ground unless
1248 it is pressure treated to prevent decay and termite infestations. Other materials and products
1249 may be used in accordance with the manufacturer's listing and written instructions.

1250
1251 Except as specifically permitted by the manufacturer, an engineer, or an architect, a uniform
1252 6-mil polyethylene opaque sheet material or other acceptable vapor barrier material shall be
1253 installed on the ground surface beneath the home to further reduce moisture. When installed
1254 the integrity of the vapor barrier shall be maintained. Where an acceptable ground vapor
1255 barrier is installed and one such ventilation opening is within 3 feet of each corner of the
1256 home, the total area of ventilation openings may be reduced to one square foot for every 300
1257 square feet of the home's floor area. Where local codes have minimum ventilation
1258 requirements for crawl spaces, these requirements shall apply to homes with skirting and
1259 continuous foundations.

1260
1261 Dryer vents and air conditioning condensation drains must pass through the skirting to the
1262 outside.

1263
1264 ~~8.1 Proper procedures~~

1265
1266 Consult local, county, and/or state authorities before connecting any utilities. Only qualified
1267 service personnel, familiar with local codes and licensed where required, should make utility
1268 connections and conduct tests.

1269
1270 ~~8.3.4 Testing procedures~~

1271
1272 Even though the drainage system was tested at the factory, it shall be rechecked for leaks after
1273 installation at the site. This shall be accomplished by capping the building drain line, filling it with
1274 water, and holding it 15 minutes. In freezing conditions, add antifreeze to the P-traps.

1275
1276
1277 54. DOH Manufactured Home Installation Inspection Checklist

1278
1279 The Division of Housing Manufactured Home Installation Inspection Checklist shall be used by

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1280 Division of Housing Inspectors, Certified Inspectors, Registered Installers, and Homeowners as the
1281 required on-site form to ensure a complete installation. The Checklist is to be used as a starting basis
1282 for the installation inspection. Refer to the applicable standards listed in Schedule “B” for specific
1283 details. ~~confirm that the manufactured home meets all the applicable standards listed in “Schedule~~
1284 ~~B”.~~
1285
1286

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DOH Manufactured Home Installation Inspection Checklist

A. Unit Acceptance

<u>Confirmed</u>	<u>Criteria</u>	<u>Reference</u>
-	New Home	-
-	<u>Manufacturer's Installation Instructions Available On-Site</u>	D-3285
-	Used Home	-
-	<u>Manufacturer's Installation Instructions Available On-Site</u>	D-3285
-	<u>Alternative Standard Used and Available On-Site</u>	DOH
-	-	-

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DOH Manufactured Home Installation Inspection Checklist

Info	PROJECT INFO	
	Project ID:/Address _____	Use installation manual for HUD's
	Length _____	or NFPA 225 if no manual
	Width _____	
	Exterior wall height _____	Use installation manual, plans
	I-beam spacing _____	and IRC for FB modules
	Roof pitch _____	
	Marriage line opening dimensions _____	
	Marriage line support spacing _____	
Confirmed	Criteria	Reference
	ACCEPTANCE OF UNIT	NFPA typically shown, Use IRC for FB Modular
	Manufacturer Name: _____	
	New Home	
	Manufacturer's installation instructions available on-site	4.4.1
	Used Home	
	Manufacturer's installation instructions available on-site	4.4.1
	Alternative standard used and available on-site	Resolution 38
	All Homes	
	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 Resolution 34
	* If minimum requirements are not met, do not set home, contact DOH.	
	SITE PREPARATION	
	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
	BLOCKING, FOOTINGS, PIERS	
	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
	ANCHORING	
	Temporary Set	
	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.	
	Permanent Set	
	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
	STRUCTURAL CONNECTIONS	
	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
	EXTERIOR	
	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

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DOH Manufactured Home Installation Inspection Checklist

EXTERIOR Continued		
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
WATER SUPPLY		
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
SANITARY CONNECTION		
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
GAS SUPPLY		
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
ELECTRICAL SUPPLY		
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)
MECHANICAL SYSTEMS		
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
ENERGY		
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
LIFE/SAFETY		
Smoke detectors are operational and installed correctly		11.1
Carbon monoxide detectors are operational and installed correctly		
OTHER		
INSTALLATION SEAL		
Installation seal has been issued and installed only after confirmation of above criteria, applicable standards and codes and approved plans		DOH

1293 | ~~To be continued—modeled after the Current Appendix A and Frank’s Inspection Sheet.~~