Missouri Public Service Commission
Manufactured Housing & Modular Units Department

MANUFACTURED HOUSING NEW DEALER REQUIREMENTS

www.psc.mo.gov; Manufactured Housing tab

An annual registration is REQUIRED with the Missouri Secretary of State's Office for all Corporations, LLC's, or LP's affiliated with a Dealer, who is doing business in the state of Missouri, prior to being registered with this department. A Fictitious Name registration is REQUIRED to be filed with that office if the Dealership is doing business under a different name than the Corporation, LLC or LP. To obtain this registration, contact their department @ 573-751-4153 or visit their website @ www.sos.mo.gov. NOTE: The name of the Dealer, Corporation, LLC, or LP listed on the renewal application must coincide with the name listed on the documents filed with the Missouri Secretary of State's Office.

REGISTRATION REQUIREMENTS

- **Application for Dealer Registration** – This form must be completed in full, signed and dated.
- **Fee** – Please submit a check or money order in the amount of $200 made out to the ***Missouri Director of Revenue***. Each dealer lot must be registered separately each paying a separate $200 fee.
- **Statement of No Taxes Due** – a Statement of No Taxes Due must be submitted with each application. To obtain a copy from the Missouri Department of Revenue, call 573-751-9268. If you have a Missouri Tax ID number, you need to submit this document. If not, you must submit an Affidavit in lieu of the Statement. Contact the department at 800-819-3180 to obtain this document.
- **Certificate of Good Standing** – Corporations, LLC's & Partnerships must submit a Certificate of Good Standing obtained from the Missouri Secretary of State at 573-751-4153.
- **Articles of Incorporation** – All corporations must submit a copy of their Articles of Incorporation for the initial registration only. It is not necessary to resubmit these documents for renewals unless changes have been made to the documentation.
- **Corporations** Only – All corporations must submit a copy of By-Laws and Articles of Incorporation for the initial registration. It is not necessary to resubmit these documents for renewals unless changes have been made to the documentation.

FORM INFORMATION

- **Dealer Monthly Sales Report Form** – This form must be completed and submitted to the Missouri Public Service Commission by the 10th day of each month to report the number of new and used homes delivered to consumers (sold) during the previous month. This report needs to be submitted every month, even if no homes were delivered to consumers (sold) during the previous month. Also, when submitting reports, DO NOT combine reports. Each month must be reported on a separate form. Please request or make additional copies as needed.
- **Property Locator Form** – Property locator must be completed and faxed or emailed within 5 days of delivery date to avoid being subject to a $50.00 inspection fee. Fax: 573-522-2509, Email: mhreports@psc.mo.gov
- **Anchor Approval Letters** – These are anchoring systems that have been approved by the Missouri Public Service Commission. The anchor approval letter of the particular system being used must be prominently displayed at each place of business that is selling, offering for sale, or installing the anchoring system. A copy of this letter shall also be furnished to each person purchasing the anchor or tie-down system. Please request or make additional copies as needed. To review all anchor approval letters, visit our website at www.psc.mo.gov.
- **Application for Permission to Alter a Manufactured Home or Modular Unit** – A dealer must submit this form prior to altering a manufactured home or Modular Unit. Pursuant to Chapter 700.025 "No dealer, manufacturer or their representative shall alter or cause to be altered any new manufactured home or modular unit or used modular unit used for educational purposes to which a seal has been affixed, if such alteration or conversion causes the manufactured home or modular unit to be in violation of the code."
- **For Your Information** - This form outlines some of the dealer's responsibilities and provides helpful information regarding the operation of a dealership.

Revised: 02/28/17

Missouri Public Service Commission

Application for Manufactured Home or Modular Unit Certificate of Dealer Registration

Transmittal Number (PSC Office Use Only)	Check Number (PSC Office Use Only)	Check Amount (PSC Office Use Only)
☐ New Application ☐ Renewal	If Renewal, Registration Number:	Check Box: ☐ Manufactured (HUD) Home Dealer ☐ Modular Dealer

DEALERSHIP INFORMATION				CORPORATION / LLC / PARTNERSHIP INFORMATION			
Dealership Name				Corporate / LLC / Partnership Name			
Street Address of Business (Physical Location)				Address			
City	State	Zip Code	County	City	State	Zip Code	
Phone	Fax			Phone	Fax	FEIN	
Dealership E-mail				Corporate E-mail			
Dealer Mailing Address, if different than above				Corporate / LLC / Partnership Mailing Address, if different than above			
City	State	Zip Code	County	City	State	Zip Code	

PREVIOUS DEALERSHIP INFO - Have you previously owned a dealership under a name other than what is listed above? ☐ No ☐ Yes
If yes, please list previously owned dealership(s) name & address:

Type of Ownership (Check One)	If a Corporation, State of Incorporation
☐Individual/Sole Proprietorships ☐Partnership ☐Corporation ☐ LLC Company	

DEALER REGISTRATION REQUIREMENTS:

1. Complete entire application, including signature and date (Required)
2. Provide "Certificate of No Tax Due" – Call the Missouri Department of Revenue @ 1-573-751-9268 or visit: https://dor.mo.gov/business/sales/notaxdue/ (Required) (If the dealer does not have a Missouri Tax ID Number subject to Missouri Sales Tax under Chapter 144 RSMo, complete and notarize the enclosed affidavit in lieu of "Certificate of No Tax Due.")
3. Provide "Certificate of Good Standing" - Call the Missouri Secretary of State Office at 573-751-4153 or visit: https://www.sos.mo.gov/business/corporations/generalInfo#goodStanding (Required - ONLY for a Corporation, LLC, or Partnership) (If, the Dealer is doing business under a different name than the Corporation, LLC or Partnership a "Fictitious Name" registration is also REQUIRED to be filed with the Missouri Secretary of State Office.)
4. Provide a copy of "Articles of Incorporation" and "Company By-Laws" (Required – ONLY for a Corporation's INITIAL registration, NOT for renewal)
5. Registration Fee: $200, made payable to: Missouri Director of Revenue (Required)
6. MAIL: Application, Supporting Documents, and Registration Fee to: Department of Manufactured Housing, PO Box 360, Jefferson City, MO 65102

LIST OWNERS BELOW — If a Partnership or LLC, list name/address of each partner. If a Corporation, list names/addresses/titles of principal officers.

Owner(s) Name (Last, First, MI)	Mailing Address	City	State	Zip Code	Title

INSTALLERS – List Name(s) and License Number(s) of Certified Installer(s) performing your new HUD home installations:

FELONY INFORMATION (Check Box)

Has owner (or any partner, if partnership, or officer, if corporation) within the preceding ten (10) years been convicted in any Federal or State court of a felony relating to the acquisition or transfer of a manufactured home or any other form of property? ☐ No ☐ Yes

If yes, provide the following	Date	Court	Conviction	Sentence

MISDEMEANOR INFORMATION (Check Box)

Has owner (or any partner, if partnership, or officer, if corporation) within the preceding five (5) years been convicted in any Federal or State court of a misdemeanor relating to the acquisition or transfer of a manufactured home or any other form of property? ☐ No ☐ Yes

If yes, provide the following	Date	Court	Conviction	Sentence

CERTIFICATION

I CERTIFY that all statements and information furnished regarding this application are true, complete and correct to the best of my knowledge and belief, and are made in good faith. I understand that statements or information furnished on this form are subject to verification by the program director and I agree to furnish supporting documents or information when so requested. I do solemnly affirm and verify that the concern named herein is a bona fide dealer and I have the authority to make the statements contained herein and to sign this application.

Signature of Owner, Partner, LLC, or Corporation Officer	Date

Mailing Address: Manufactured Housing Department, P.O. Box 360, Jefferson City, MO 65102 or Physical Address: 200 Madison St, 5th Floor, Jefferson City, MO 65101
Phone: 800-819-3180 • Fax: 573-522-2509 • Email: mhreports@psc.mo.gov

Missouri Public Service Commission

Manufactured Housing & Modular Units Program

AFFIDAVIT

(In Lieu of Statement of No Taxes Due)

I _____, of _____

(Owner or Authorized Agent of Dealership) (Dealership Name)

do hereby certify that as a licensed Missouri Manufactured Home Dealer pursuant to Chapter 700 of the Missouri Statues, I do not have a Missouri Tax ID Number subject to Missouri Sales Tax under Chapter 144 RSMo.

Signed:

_____ _____

Owner or Authorized Agent Date

Subscribed and sworn to before me this ___ day of _____, _____

Day Month Year

_____

Notary Public

Office Use Only:

Dealer Registration No.: _____

MISSOURI PUBLIC SERVICE COMMISSION
MANUFACTURED HOME & MODULAR UNIT PROGRAM
DEALER'S MONTHLY SALES REPORT

Reporting Period
(Month when the home was delivered)

Remit To: Manufactured Housing & Modular Unit Program
P.O. Box 360 Jefferson City, MO 65102
FAX 573-522-2509 Email MHReports@psc.mo.gov

Instructions:

Questions? Call 1-800-819-3180

- This report must be submitted before the 10th of each month following the month for which sales are reported.
- All homes delivered to consumers (sold) both new & used manufactured homes and modular units must be reported. If no deliveries (sales) are made for a particular month, enter "No Sales".
- This report must be completed in full and signed or it will be rejected.
- A separate form must be submitted for each month's sales.
- Please attach additional sheets as necessary.

Dealer Registration Number (The number on your Dealer Certificate)	Dealership Name (Please enter the name as it appears on your Dealer Certificate)	Telephone Number (Please include area code)

Dealer Lot Address	City, State, Zip Code

DELIVERY DATE	MANUFACTURER'S NAME & REGISTRATION #	YEAR	SIZE	COMPLETE SERIAL NUMBER	HUD HOME			MODULAR UNIT		SALES PRICE
					NEW	INSTALLER NAME & LIC #	USED	NEW	USED	

As an officer, partner or owner of the dealership, I hereby state that the above statements are true and correct to my best knowledge and belief.

SIGNATURE: **TITLE:** **DATE:**

MISSOURI PUBLIC SERVICE COMMISSION

MANUFACTURED HOUSING AND MODULAR UNITS PROGRAM

http://www.psc.mo.gov/ManufacturedHousing

PROPERTY LOCATOR FORM

FOR: NEW HUD and NEW MODULAR UNITS and Classrooms NEW and USED

Property locator must be completed and faxed or emailed within 5 days of delivery date to avoid being subject to a $50.00 inspection fee. Fax: 573-522-2509 Email: mhreports@psc.mo.gov

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Dealer: _____ Phone: _____/_____ Registration: _____

City: _____State: _____ Delivery Date: _____

Date of delivery is when the home (first section of a multi-section) leaves the dealer sales lot or manufacturer's facility if shipped directly to consumer's site.

Primary Installer - HUD units only: _____ License: _____

Installation (choose one): Pier _____ Slab _____ Footings _____ Runners _____Crawlspace _____ Basement _____

Consumer Name:* _____ Phone:* _____/_____

Delivery Address: _____

City: _____ State: _____ Zip Code: _____County: _____

Manufacturer: _____ Registration Number: _____

City/State: _____ Date Manufactured: _____

Complete Serial Number/s: _____

Type of Unit/s: HUD_____ HUD Labels: _____

Modular: ____ Model: _____ MO Seal/s: _____

Modular classroom: _____ Number of units: _____ Size of unit/s: _____

Directions from dealer sales lot to installation site (may submit on separate sheet):

_____

_____

_____

Completed by: _____ Title: _____

**Consumer information provided to the Missouri Public Service Commission for inspection purposes. All consumer information is highly confidential.*

MISSOURI PUBLIC SERVICE COMMISSION
MANUFACTURED HOUSING PROGRAM
APPROVED ANCHOR PRODUCTS

HOME PRIDE 800-759-5910

MODEL	MARK	DESCRIPTION	TEST VALUE ANCHOR PROBE (inch lbs.)
HP-3	HP-3	Double 4" Helix 3/4" x 30" Auger Anchor w/HP32 Stab. Plate	350 inch lbs. & above
HP-3	HP-3 *	Double 4" Helix 3/4" x 30" Auger Anchor w/HP30 Stab. Plate	350 inch lbs. & above
HP-3	HP-3	Double 4" Helix 3/4" x 30" Auger Anchor w/HP34 Stab. Plate	380 inch lbs. & above
HP-4	HP-4 *	6" Helix 5/8" x 48" Auger Anchor w/ HP30 Stab. Plate	240 inch lbs. & above
HP-5	HP-5 *	6" Helix 3/4" x 48" w/ HP30 Stab. Plate	240 inch lbs. & above
HP-10	HP-10 *	36" Cross Drive Rock Anchor	Solid Rock Only
HP-11	HP-11 *	48" Cross Drive Rock Anchor	Solid Rock Only
HP-17	HP-17	4" & 6" Helix 3/4" x 36" w/HP32 Stab. Plate	300 inch lbs. & above
HP-17	HP-17 *	4" & 6" Helix 3/4" x 36" w/HP30 Stab. Plate	275 inch lbs. & above
HP-17	HP-17	4"/6" Helix 3/4" x 36" w/HP34 Stab. Plate	275 inch lbs. & above
HP-13	HP-13 *	J Hook Concrete Anchor	Concrete Only
HP-14	HP-14 *	J Hook Concrete Anchor w/Swivel Head	Concrete Only
HP-12-LS	HP-12 *	Steel Expansion Concrete Anchor	Concrete Only
HP-20	HP-20	Double-Slot Buckle Frame Tie	
HP-21	HP-21	Single-Slot Buckle Frame Tie	
HP-22	HP-22	Frame Tie w/Hook	
HP-30	HP-30	Stabilizer Plate	
HP-32	HP-32	Stabilizer Plate	
HP-34	HP-34	Stabilizer Plate	
HPAB	Home Pride, Inc.	AB Anchor Bolt	
HPSS	Home Pride, Inc.	Strap Splice Seal	
	Home Pride, Inc.	Galvanized Steel Strapping	

* These anchors are approved for vertical pull.

STANDARDS FOR INSTALLATION:

1. Anchors and all components must be installed per manufacturer's instructions.
2. Anchors are approved for designated soil per test value in inch pounds.
3. Consult manufactured home set up instructions for number of frame tie downs, over the roof tie downs, and tie down spacing.
4. Systems must be approved for use by the home manufacturer.

All single section homes require an approved anchor for the soil within two feet of each corner.

MUST BE A LICENSED INSTALLER WITH THE PUBLIC SERVICE COMMISSION
TO ANCHOR NEW HUD HOMES PURSUANT TO 700.656

Revision Date: September, 2013

MISSOURI PUBLIC SERVICE COMMISSION
MANUFACTURED HOUSING PROGRAM
APPROVED ANCHOR PRODUCTS

MINUTE-MAN ANCHORS, INC. 800-438-7277

MODEL	MARK	DESCRIPTION	TEST VALUE ANCHOR PROBE (inch lbs.)
650-DH 5/8" *	MMA-2	50" Double Head Auger Anchor	350 inch lbs. & above
650-DH 3/4" *	MMA-4	50" Double Head Auger Anchor	350 inch lbs. & above
636-DH 3/4" *	MMA-28	36" Double Head Auger Anchor	400 inch lbs. & above
860-DH 3/4" *	MMA-85	60" Long, 8" Disc Double Head Anchor	175 inch lb. & above
4430-DH 5/8" *	MMA-30	30" Double Head/Disc Auger Anchor	400 inch lbs. & above
4430-DH 3/4" *	MMA-6	30" Double Head/Disc Auger Anchor	400 inch lbs. & above
4430-DH ¾" *	MMA-6	30" Double Head with NC 1 Stabilizer Cap	400 inch lb. & above
4430-EZDH 3/4" *	MMA-92	32" Double Head/Double Disc Auger Anchor / No Comp. Disc	525 inch lb. & above
4450-DH 3/4" *	MMA-55	50" Long (2) 4" Disc Double Head Anchor	300 inch lb. & above
4636-DH ¾" *	MMA-52	36" Double Head/4" and 6" Helix	300 inch lb. & above
4636-EZDH 3/4 *	MMA-93	36" Double Head/4"and 6" helix	300 inch lb. & above
36-XDH *	MMA-35	36" Double Head Cross Drive Anchor	Solid Rock Only
48-XDH	MMA-8	48" Double Head Cross Drive Anchor	Solid Rock Only
GW 2 *	GW2-18	18" w/4" Helix/NC2 Stabilizer/Two 32" Rods	450 inch lb. & above
GW1	GW1	Rock Anchor w/NC2 Stabilizer/Two 16" Rods	Solid Rock Only
THDH *	MMA-18	Double Tension Head	Concrete
210-PDH *	MMA-14	Double Head Tension Device for Concrete	Concrete
210-JDH *	MMA-42	Swivel Double Head Anchor with Base	Concrete
	NC 1	Nu-Concept Stabilizer Cap	
	NC 2	Stabilizer Cap for GW series anchors	
	MMA-29	Frame Strap with Clamp	
	MMA-32	Frame Buckle with Strap	
MMA-33 Frame Clamp	MMA-33	Locking Frame Clamp II	
		Galvanized Steel Strapping	
	MMA	Strap Extending Seals	
MILL BOLT		Anchor Tension Bolt	
SLOT BOLT		Anchor Tension Bolt	
44-RB & 66-RB		Roof Brackets	
MMA-SD2A		Anchor Stabilizing Device	260 inch lbs. & above
MMA LLBS	SD3	Longitudinal & Lateral Bracing System	250 inch lbs. & above
MMALLBS	FT	LLBS Wet/Dry Concrete Application	Concrete

* These anchors are approved for vertical pull.

STANDARDS FOR INSTALLATION:

1. Anchors and all components must be installed per manufacturer's instructions.
2. Anchors are approved for designated soil per test value in inch pounds.
3. Consult manufactured home set up instructions for number of frame tie downs, over the roof tie downs, and tie down spacing.
4. Systems must be approved for use by the home manufacturer.

All single section homes require an approved anchor for the soil within two feet of each corner.

MUST BE A LICENSED INSTALLER WITH THE PUBLIC SERVICE COMMISSION TO ANCHOR NEW HUD HOMES PURSUANT TO 700.656

Revision Date: September. 2013

MISSOURI PUBLIC SERVICE COMMISSION

MANUFACTURED HOUSING PROGRAM

APPROVED ANCHOR PRODUCTS

OLIVER TECHNOLOGIES, INC. 800-284-7437

MODEL MARK	DESCRIPTION	TEST VALUE ANCHOR PROBE (INCH LBS)
OTFTI	Auger anchor frame tie strap	
OTMSP2	Auger anchor 12" stabilizer plate	
OTCAPI	Auger anchor stabilizer cap	
OT36CDP	30" cross drive anchor	Solid rock only
OTCAWP *	Wet set concrete anchor	Concrete only
OTCADP *	Dry set concrete anchor	Concrete only
OT3044AP (5/8)	5/8"X30"/ double 4" helix / with 12"stabilizing plate	400 inch lbs. and above
OT3044BP (3/4) *	3/4'"X30"/ double 4" helix / with 12"stabilizing plate (OTMSP2)	400 inch lbs. and above
OT3044BP (3/4)	3/4"X30"/ double 4" helix / with stabilizing cap (OTCAP I)	475 inch lbs. and above
OT3646BP (3/4) *	3/4"X36"/ 4" and 6" helix / with stabilizing cap (OTCAP I)	300 inch lbs. and above
OT486AP (5/8)	5/8"X48"/ 6" helix / with 12" stabilizing plate (OTMSP2)	300 inch lbs. and above
OT486BP (3/4)	3/4"X48" /6" helix / with 12" stabilizing plate (OTMSP2)	300 inch lbs. and above
OT607B (3/4)	3/4"X60" with 7" helix / Vertical or Lateral with Stabilizer	225 inch lbs. and above
II 00 I "V" System	Lateral / Longitudinal Foundation System	Per MFR Instructions
II 00 IT "V" System	Lateral Foundation System	Per MFR Instructions
II 00 IC "V" System	Lateral Longitudinal Foundation System for wet/dry concrete	Concrete Only
II 00 ITC "V" System	Lateral Foundation System for wet/dry concrete ..	Concrete Only
OTSFT	Swivel Frame Tie	
OTLT	Longitudinal Beam Clamp	
OT3646BPC Cap Anchor	3/4" X 36" Auger Anchor with (I) 4" Disc and (I) 6" Disc	320 inch lbs. and above
OT3646BPZ Cap Anchor with Compression Disc	3/4" X 36" Auger Anchor with (I) 4" Disc and (I) 6" Disc & (I) 4" Compression Disc	320 inch lbs. and above
OT4244BP Auger Anchor	3/4" X 42" Auger Anchor with (2) 4" Disc and with a OTMSBP2 (II" Stabilizer Plate)	320 inch lbs. and above
OT3044BPC Cap Anchor	3/4" X 30" Auger Anchor with (2) 4" Disc	449 inch lbs. and above
OT3044BPZ Cap Anchor with Compression Disc	3/4" X 30" Auger Anchor with (2) 4" Disc & (I) 4" Compression Disc	449 inch lbs. and above

* These anchors are approved for vertical pull.

Standards For Installation:

I . Anchors and all components must be installed per manufacturer's instructions.
2. Anchors are approved for designated soil per test value in inch pounds.
3. Consult manufactured home set up instructions for number of frame tie downs, over the roof tie downs, and tie down spacing.
4. Systems must be approved for use by the home manufacturer.

All single section homes require an approved anchor for the soil probe test value within two feet of each corner.

MUST BE A LICENSED INSTALLER WITH THE PUBLIC SERVICE COMMISSION

TO ANCHOR NEW HUD HOMES PURSUANT TO 700.656

Revision Date: August 2015

MISSOURI PUBLIC SERVICE COMMISSION
MANUFACTURED HOUSING PROGRAM
APPROVED ANCHOR PRODUCTS

TIE DOWN ENGINEERING 800-241-1806

MODEL/MARK	DESCRIPTION	TEST VALUE ANCHOR PROBE (INCH LBS)
M607 (part # 59099) *	3/4" x 60" w/7" Helix	225 inch lbs. & above
MI2H *	5/8" X 48" Double Head Anchor w/6" Helix	230 inch lbs. & above
MI2H *	3/4" X 48" Double Head Anchor w/6" Helix	230 inch lbs. & above
59092	3/4" X 36" Deep Set Stabilizer Anchor w/6" & 4" Helix	350 inch lbs. & above
MI22 *	5/8" X 30" Double Head Anchor w/2 4" Helix	525 inch lbs. & above
MI22 *	3/4" X 30" Double Head Anchor w/2 4" Helix	525 inch lbs. & above
MIT2 *	3/4" Double Head Threaded Rod Patio Anchor	Concrete
MIJ2 *	5/8" x 12" Double Head J-Rod Slab Anchor	Concrete
MICS2 *	Patio Anchor with Expansion Bolt	Concrete
59091	Deep-Set Plate with 30" auger anchor with double 4" Helix	525 inch lbs. and above
59291	Quik-Set Plate with 30" auger anchor with double 4" Helix	525 inch lbs. and above
59002	Swivel Strap Connector	
59003	3" Swivel Strap Frame Connector	
59004	4" Swivel Strap Frame Connector	
59005	Adjustable Swivel Strap Frame Connector	
59292	Lateral Stabilizer Plate	
MGRB	Galvanized Roof Bracket	
BCS	Crimping Seal for 1 1/4" Strap	
MBU	Galvanized Strap Buckle	
MBUS	Special Galvanized Strap Buckle	
BISB	Slotted Bolt and Nut	
MS33,35,37,42,60,600	1 1/4" Galvanized Strap	
MHT6, 7, 8, 10, 12, 15	1 1/4" Frame Tie with Hook	
MBU6, 7, 8, 10, 12, 15	1 1/4" Frame Tie with Buckle	
LBC 59011	8 Bolt Gator Beam Clamp Longitudinal Beam Clamp	
LBC 58999	4 Bolt Gator Beam Clamp Longitudinal Beam Clamp	
Xi FOUNDATION SYSTEM		175 inch lbs. & above
Xi 2 Lateral Stabilization (Foundation) System (Requires anchors within 2 ft. of each corner of the home)		Per MFR Instructions
Xi 2 Longitudinal Stabilization Foundation) System (Requires anchors within 2 ft. of each corner of the home)		Per MFR Instructions
VECTOR DYNAMICS FOUNDATION SYSTEM		Per MFR Instructions
VECTOR DYNAMICS FOUNDATION SYSTEM		Concrete
VECTOR DYNAMICS FOUNDATION SYSTEM FOR MULTI SECTION - FOR POURED CONCRETE - PER INSTALLATION INSTRUCTIONS		Concrete
VECTOR DYNAMICS FOUNDATION SYSTEM FOR SINGLE SECTIONS - FOR POURED CONCRETE - PER INSTALLATION INSTRUCTIONS		175 inch lbs. & above
VECTOR DYNAMICS FOUNDATION SYSTEM FOR SINGLE SECTIONS - FOR POURED CONCRETE - PER INSTALLATION INSTRUCTIONS		Concrete

* These anchors are approved for vertical pull.

STANDARDS FOR INSTALLATION:

1) Anchors and all components must be installed per manufacturer's instructions.
2) Anchors are approved for designated soil per test value in inch pounds.
3) Consult manufactured home set up instructions for number of frame tie downs, over the roof tie downs, and tie down spacing.
4) Systems must be approved for use by the home manufacturer.

All single section homes require an approved anchor for the soil within two feet of each corner.

MUST BE A LICENSED INSTALLER WITH THE PUBLIC SERVICE COMMISSION
TO ANCHOR NEW HUD HOMES PURSUANT TO 700.656
Revision Date: September, 2013

Missouri Public Service Commission
Manufactured Housing & Modular Units Program

Application for Permission to Alter a Manufactured Home or Modular Unit

Application required pursuant to Chapter 700.025

DEALER INFORMATION	
Dealer Name:	
Dealer Contact Name:	
Dealer Address:	
Dealer Phone:	Dealer Fax:
MANUFACTURER INFORMATION	
Manufacturer Name:	
Manufacturer Contact Name:	
Manufacturer Address:	
Manufacturer Phone:	Manufacturer Fax:
HOME INFORMATION	
Model Name:	HUD Label #:
Serial #:	or
Date of Manufacture:	Modular Seal #:

ALTERATION SPECIFICATIONS – **Describe the alteration you are seeking permission to make. (Attach additional sheet(s) if necessary.)**

REQUIREMENTS – This application **will not be approved** unless all of the following items are submitted:

1. Manufacturer's written instructions and/or approved method must be submitted.
2. An affidavit signed before a notary public indicating that the applicant will ensure that all alterations will comply with the required code must accompany this application. This affidavit must identify the specific make, model and serial number of the home to be altered.
3. If the applicant is a corporation, a written statement from a corporate officer indicating that the person filling out this application has actual authority to do so must accompany this application.

NOTES - (Please read.)

Chapter 700.025 states "No dealer, manufacturer or their representative shall alter or cause to be altered any new manufactured home or modular unit or used modular unit used for educational purposes to which a seal has been affixed, if such alteration or conversion causes the manufactured home or modular unit to be in violation of the code."

SIGNATURE - (Required)

Signed	Date

Missouri Public Service Commission, Manufactured Housing Department, P.O. Box 360, Jefferson City, MO 65102, Phone: 800-819-3180 Fax: 573-522-2509

FOR YOUR INFORMATION

Missouri Public Service Commission, Manufactured Housing Department
P.O. Box 360, Jefferson City, Missouri 65102

In an on-going effort to help inform the manufactured housing retailers of current laws and regulations, the Manufactured Housing Department of the Missouri Public Service Commission offers the following information. Please call 800-819-3180, if you have questions.

1. "Dealer" means any person, other than a manufacturer, who sells or offers for sale four (4) or more used homes or one (1) or more new manufactured homes or one (1) or more new modular units in any consecutive 12-month period.

2. It is a misdemeanor for a manufacturer or dealer to manufacture, rent, lease, sell or offer to sell any manufactured home or modular unit after January 1, 1977, unless they are registered with the commission.

3. It is a misdemeanor to rent, lease, sell or offer to sell a new manufactured home, modular unit, or a unit used for education purposes manufactured after January 1, 1974, which does not bear a seal as required by the provisions of Section 700.010 to 700.115, RSMo.

4. It is a misdemeanor to alter a new manufactured home or modular unit in a manner prohibited by the provisions of Sections 700.010 to 700.115, RSMo.

5. No certified new manufactured home which entered the first stage of production after November 22, 1976, on which an alteration has been made, shall be rented, leased or sold, or offered for rent, lease, or sale in the state unless the alteration has been approved in writing by the Manager of the Manufactured Housing & Modular Units Program.

6. Approval of alterations must be requested by written application executed on a form provided by the Manufactured Housing Program upon request. The person or entity that owns the new manufactured home that is being altered must submit the application.

7. Manufactured homes are built to comply with the Federal Manufactured Home Construction and Safety Standards (commonly known as the HUD code). Effective March 31, 2011, Modular units are to be built to comply with other standards as adopted by the Commission using the criteria set forth by the 2009 International Building Code, the 2009 International Plumbing Code, the 2009 International Mechanical Code, the 2009 International Residential Code, 2009 International Fuel Gas Code, and the 2008 National Electric Code NFPA.

8. Effective January 1, 2011, every dealer or manufacturer who sells a modular home to be placed in Missouri is required to have the purchaser of the modular unit sign and date an acknowledgement/waiver that the dealer or manufacturer has offered the fire sprinkler system in conjunction with the sale of the home. The acknowledgement/waiver must be signed by both the purchaser and the dealer or manufacturer or his/her legal representative. The purchaser is responsible for the cost of the fire sprinkler system being installed in the home.

9. Modular units include residential, commercial, educational, and industrial units.

10. It is a misdemeanor to fail to correct a code violation in a new manufactured home or new modular unit owned, manufactured, or sold within a reasonable time, not to exceed 90 days after being ordered to do so in writing by an authorized representative of the commission.

11. Dealers cannot require purchasers to purchase any type of insurance from that dealer as a condition of sale.

12. Effective July 1, 2005, all <u>new</u> manufactured HUD built homes must be installed by a Certified Licensed Installer who has obtained a license from the commission.

13. The commission has determined that manufactured homes and modular units must be set up according to the manufacturer's installation manual. Installation manuals will contain instructions on all phases of assembly. Some of the more important factors are as follows:

    a. For proper blocking these factors must be considered; the size of the home, the load bearing capacity of each pier, the load bearing capacity of the soil, the spacing required between each pier, if the home requires perimeter blocks at the doors, windows, etc., and the maximum and minimum height a home can be blocked, etc.

    b. If, as part of the sale, the dealer includes installing skirting on a manufactured home, it must be properly vented. Refer to the installation manual for the proper amount of venting required.

    c. The installation manual will indicate the type and thickness of the vapor barrier that is to be installed under the home. A vapor barrier must be installed under every home.

    d. Drain lines that are installed on site are required to be strapped and supported every four (4) feet with the proper strapping. Other critical drain line instructions are presented in the manual.

    e. All shipping plastic must be removed from the end walls and the marriage line wall of a manufactured home before assembly.

    f. Air conditioner wiring must be installed inside the bottom board, or secured in conduit and supported to the floor joist or chassis every four (4) feet.

    g. Refer to installation manual for correct marriage line fastening, and vinyl siding installation, etc.

14. Each manufacturer shall provide a homeowner's manual with each manufactured home. No dealer or distributor may interfere with the distribution of homeowner's manual. Where necessary, the dealer or distributor shall take any appropriate steps to ensure that the purchaser receives a homeowner's manual.

15. A dealer cannot require any person to arrange financing or utilize the services of any particular financing service as a condition to purchasing any manufactured home or modular unit, provided, however, the registered manufacturer or dealer may reserve the right to establish reasonable conditions for the approval of any financing source.

16. The books, records, inventory and premises of dealers of new and used manufactured homes and modular units shall from time to time, during normal business hours, be subject to an inspection by the Director to ascertain if a manufacturer or dealer is complying with Chapter 700, RSMo. (1986), and all applicable federal laws as they relate to new and used manufactured homes and modular units.

17. A dealer is required to forward to the manufacturer every complaint and other information that may indicate the existence of an imminent safety hazard, serious defect, defect, or noncompliance in a home, whether the dealer provides the service work or not. Sources of information include consumer complaints, transportation inspection reports, dealer lot inspections, etc.

18. A dealer is required to complete and send back to the manufacturer the homeowner information card. This card should be in the homeowner's manual. If the information card is not available, the dealer should obtain the information which the card would require and send it to the manufacturer in an appropriate format and notify the manufacturer of this problem.

19. A dealer is required to maintain complete records of all corrections authorized by the manufacturer. Also, maintain complete records of alterations if it is discovered that the alterations have caused a failure to conform or an imminent safety hazard.

20. The Formaldehyde Notice must not be removed until the sales transaction has been completed, and when all the goods and services agreed upon in the contract have been provided.

21. All manufactured homes and modular units located in this state shall be anchored and tied down in accordance with the standards promulgated by the commission pursuant to the provisions of Sections 700.010 to 700.115. If the dealer includes anchoring the home as part of the sale it must be in compliance with the code and all new HUD homes must be anchored by a licensed installer. All homes manufactured after June 15, 1976 must have a set up manual that will indicate the proper location for the anchors.

22. The commission shall approve or have approved, prior to being sold, being offered for sale or being installed, any anchor or tie-down system designed and intended for manufactured or modular homes. Before any such system shall be sold, offered for sale, or installed, a letter of approval from the commission or its authorized agent approving the particular system or complying with the Missouri standards shall be prominently displayed at each place of business selling, offering for sale, or installing such system, and a copy shall be furnished to each person purchasing the anchor or tie-down system. Refer to: www.psc.mo.gov click on the Manufactured Housing tab, Anchoring Information for a complete list of approved anchoring systems.

23. Following are some important factors a dealer and licensed installer should know before anchoring a home:

    a. Refer to the manufacturer's installation instructions to determine anchor spacing, and the distance from each end the first anchors are to be installed.

    b. The anchor installer must know the soil classification to ensure that the proper anchor is being installed.

    c. The anchor strap must wrap the frame and come off the top of the frame at a forty to fifty degree angle to the anchor, unless an approved frame bracket is used.

    d. Anchors are to be installed in line with the strap or have a concrete collar or a stabilizing device installed.

    e. The anchor is to be installed to the full depth (i.e.; the anchor head must rest on the ground).

    f. Make sure frame anchors are at the right distance from the frame to allow the proper strap angle as required in the installation manual.

    g. If two straps are used on one anchor, the anchor must be approved for dual straps. Refer to the anchor approval letter to find this information.

    h. Beginning October 20, 2008, all anchors must meet the new HUD standards under HUD code 3285.402(b) which requires galvanization protection.

9/5/2025

To Whom it May Concern

Following the recommendation of the Alabama Manufactured Housing Installation Task Force, along with a growing consensus among industry professionals, vertical anchorage for uplift resistance is recognized as a safety enhancement to any home installation.

Effective September 17, 2025, aligning with the updates to the HUD Code and supported by Industry professionals, alternative foundation designs will now exceed HUD Code requirements and include specific uplift protection for all homes being placed in Wind Zone I.

To support a smooth transition and allow distributors and installers to familiarize themselves with this change and align inventories of product, we will allow a grace period through November 3, 2025. During this time, both the prior and updated instructions will be accepted.

Installers and inspectors should refer to the updated installation instructions provided by the anchor system manufacturers to ensure full compliance with the revised standards by November 3, 2025.

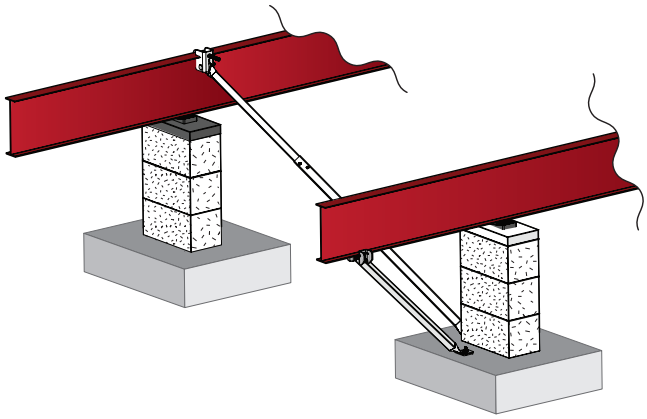
Contact your local supplier for updated manufacturer's installation instruction updates or questions regarding this change.

TIE DOWN
MANUFACTURING INGENUITY

Xi2-24 Concrete Foundation System Installation Instructions for Wind Zone I, II & III Except Florida and California

Effective November 3, 2025 US Patent No.11,898,318

The Xi2-24 System Instructions use the lateral and longitudinal struts to replace normal lateral frame tie and longitudinal end tie anchorage and stabilizer plates. In addition the system requires a minimum amount of uplift anchors in Zone I for enhanced wind protection. Check zone charts for details



Installation Requirements

- Install in any type soil, 4B (175-275 lbs.) or better.
- Main rail spacing must be 75.5” – 99.5”, 112” exception with proper strut.
- Maximum pier height at system 48”, with 6” maximum rise from location of system to end of home. For all other piers use the home manufacturers set up instructions.
- Maximum vertical projection at sidewall is 9’ wall and roof rim (9’ wall and 12” eave). Higher walls may be used, when possible for de sign loads to be adjusted accordingly. For 10’ walls, check with Tie Down.
- Longitudinal strut angle no more than 50 degrees and no less than 25 degrees. The longitudinal component of the Xi2 system replaces end frame ties. Check manufacturers requirements.
- For roof slopes greater than 20 degrees, (4.37” in 12” pitch) see page 3.
- Two systems designed to work with each other must be placed as evenly as possible. Measuring from the center of the block/pier, systems are to be placed a minimum of 2’ to a recommended maximum of 10’ (when needed may be a maximum of 1/4 the length of the home) from each end of home as shown on pier placement chart. Components of the Xi2 system such as the longitudinal strut and connecting hardware, may extend beyond pier location and can face in or out as long as both systems share the same direction, both either facing in or both facing out.
- This System only replaces normal lateral frame tie and or longitudinal end tie anchorage, with minimum uplift anchorage for Wind Zone I. Wind Zones II & III (100+ mph) require additional vertical sidewall anchorage for high wind areas. The home manufacturer may require additional vertical anchor ties that are unique to the home’s design. These locations may include shear walls, marriage line ridge beam supports, and rim plates. Check the Manufacturers installation instructions for set-up requirements.
- **Footer Requirement:** Must be large enough for the pier load at that location and be a minimum of 22” wide by 6” deep with anchor wedge bolts a minimum of 4” from any edge or 18” wide by 12” deep with anchor wedge bolts a minimum of 1-1/2” from edge. Strip footings minimum of 18” wide by 14’ long by 6” deep or 27” wide by 14’ long by 4” deep.
- Poured concrete must be 2,500 PSI minimum at 28 days. Bottom of footers must be below the frost line or a minimum of 4” below finished grade. Check with authorities for local requirements (LAHJ).

MADE IN THE USA

Up To Date Concrete Installation Manual

Instruction #08462 (D2043 - Rev. 9/23/25)

TIE DOWN
MANUFACTURING INGENUITY

404-344-0000 • www.tiedown.com
605 Stonehill Drive SW, Atlanta, GA 30336
sales@tiedown.com

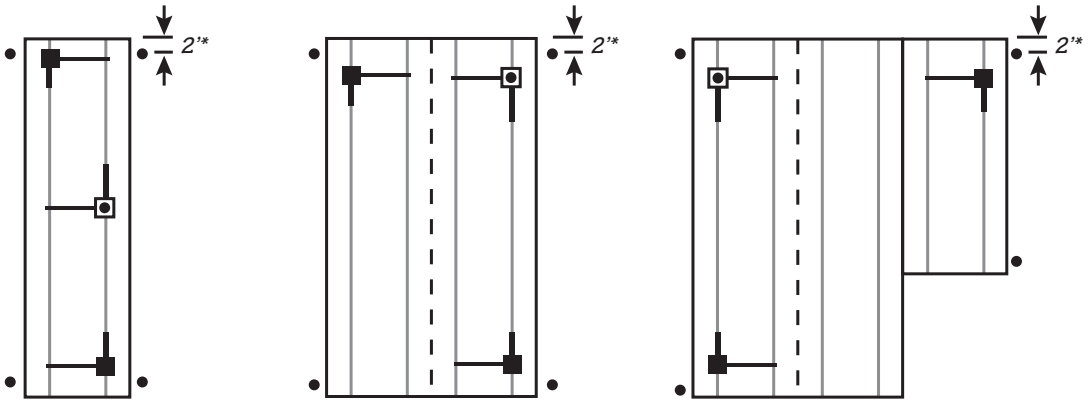
Xi2 Lateral Stabilization

● *Approved Anchors must begin within 2' of the end of home*.*

Xi2 System Placement

3rd System for placement

**See anchor chart below*



	Single Section Home	Double Section Home	Triple Section Home
Wind Zones I & II	0 - 76' Box 2 Xi2 Systems Over 76' Box 3 Xi2 Systems	0 - 76' Box 2 Xi2 Systems Over 76' Box 3 Xi2 Systems	0 - 76' Box 2 Xi2 Systems Over 76' Box 3 Xi2 Systems
Wind Zones III	0 - 64' Box 2 Xi2 Systems Over 64' Box 3 Xi2 Systems	0 - 64' Box 2 Xi2 Systems Over 64' Box 3 Xi2 Systems	0 - 64' Box 2 Xi2 Systems Over 64' Box 3 Xi2 Systems

Wind Zone I Uplift Anchors Chart

Home Section	Home Width	4:12 Home Length	4:12 Anchors Per Side	5:12 Home Length	5:12 Anchors Per Side	6:12-7:12 Home Length	6:12-7:12 Anchors Per Side
Single	12 ft. up to 140 in.	up to 63 ft.	3	up to 55 ft.	4	up to 45 ft.	4
		64 ft. to 90 ft.	4	56 ft. to 74 ft.	5	46 ft. to 62 ft.	5
				75 ft. to 90 ft.	6	63 ft. to 78 ft.	6
						79 ft. to 90 ft.	7
	14 ft.-18 ft. 156 in. to 210 in.	up to 73 ft.	3	up to 58 ft.	4	up to 47 ft.	4
		74 ft. to 90 ft.	4	59 ft. to 78 ft.	5	48 ft. to 64 ft.	5
				79 ft. to 90 ft.	6	65 ft. to 81 ft.	6
						82 ft. to 90'	7
Double	20 ft. to 32 ft. 2 x 118 in. to 2 x 186 in.	up to 90 ft.	2				
		up to 90 ft.	2				
	20' (2 x 118 in.)			up to 90 ft.	3	up to 90 ft.	4
	24 ft. to 32 ft. 2 x 140 in. to 2 x 186 in			up to 90 ft.	2	up to 90 ft.	3
Triple	36 ft. to 48 ft. 3 x 140 in. to 3 x 186 in.	up to 90 ft.	2	up to 90 ft.	2	up to 90 ft.	2

IMPORTANT: System Uplift Anchors are to be installed to the bottom of the rim joist with 3150lb. bracket and lag bolts, not I-beam. The corner anchors should be installed within 2' of the end of the home and any additional anchors installed as evenly as possible per side.

Note: In the event that the home has a solid foundation wall at the sidewall, instead of a bracket at the sidewall as described previously, the bracket can be relocated to a floor joist a maximum of 10" from the sidewall and connected with a vertical strap to a ground anchor, as long as the following limitations to the regular anchor spacings are observed.

Single Sections: 5/12 Max roof slope -add one bracket and anchor, evenly spaced per side.
7/12 Max roof slope -add two brackets/anchors evenly spaced per side.

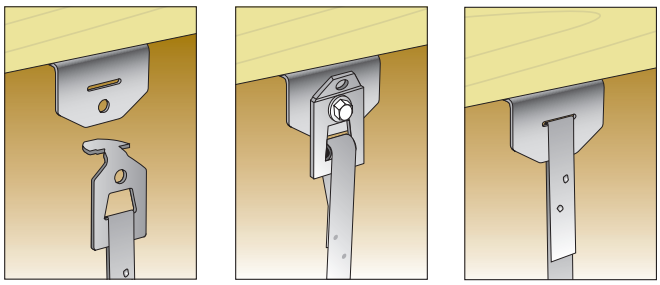
Doubles and Triple sections – no additional anchors required.

Alternative Concrete Footing Anchor method:
Anchors can be installed in the poured footings a minimum of 18"x18"x48" or 24"x24"x36" deep. Required uplift anchors would be installed in the footings with straps installed vertically to the I beam.

Uplift Rim Joist Bracket

Bracket attaches to the bottom of rim joist with (2) 1/2"-3.25" lag bolts with minimum 3" threads. Bracket can face inward or outward.
Install lag bolts into 2 pre drilled 5/16" holes.

Strap can either be bolted with swivel to end of bracket, slid through swivel connector or through the slot in the bracket and crimped to fit. Strap angle must be 75 deg. to 90 deg.



Xi2-24 System Requirements for Roof Pitches Higher than 20 degrees

Additional Systems:
On a single section home, the 3rd system is placed in the middle of the home. When using 3 or 4 systems (double and triple sections), install on opposite corners. If needed, a 5th system would be in the center of the unit on either side.

Length (Feet)	Wind Zone I				Wind Zone II				Wind Zone III			
	5:12	6:12	7:12	9:12	5:12	6:12	7:12	9:12	5:12	6:12	7:12	9:12
34	2	2	2	2	2	2	2	2	2	2	3	3
36	2	2	2	2	2	2	2	3	2	2	3	3
38	2	2	2	3	2	2	2	3	2	3	3	3
40	2	2	2	3	2	2	2	3	3	3	3	3
42	2	2	3	3	2	2	3	3	3	3	3	3
44	2	2	3	3	2	2	3	3	3	3	3	3
46	2	3	3	3	2	3	3	3	3	3	3	4
48	2	3	3	3	3	3	3	3	3	3	3	4
50	3	3	3	3	3	3	3	3	3	3	3	4
52	3	3	3	3	3	3	3	3	3	3	4	4
54	3	3	3	3	3	3	3	3	3	3	4	4
56	3	3	3	3	3	3	3	3	3	3	4	4
58	3	3	3	3	3	3	3	3	3	3	4	4
60	3	3	3	3	3	3	3	3	3	3	4	5
62	3	3	3	3	3	3	3	3	4	4	4	5
64	3	3	4	4	3	3	4	4	4	4	4	5
66	3	3	4	4	3	3	4	4	4	4	4	5
68	3	4	4	4	3	4	4	4	4	4	5	5
70	3	4	4	4	3	4	4	4	4	4	5	5
72	3	4	4	4	4	4	4	5	4	4	5	5
74	4	4	4	5	4	4	4	5	4	5	5	5
76	4	4	4	5	4	4	4	5	4	5	5	6
78	4	4	4	5	4	4	4	5	4	5	5	6
80	4	4	4	5	4	4	4	5	4	5	5	6

Xi2 Longitudinal Stabilization for Wind Zones II & III

When using longitudinal stabilization only, in higher wind zones, Systems must be spaced as evenly as possible, no more than 10' from the end of the home. Longitudinal Struts DO NOT replace anchors on single section homes.
NOTE: (2) Longitudinal struts required on each end for Wind Zones II & III.
NOTE: On triple section homes in Wind Zones II & III an additional longitudinal system is required. It should be installed on the center section.

Xi2-24 Foundation System Installation for Concrete

Step 1 – Concrete Footer

- Build footer according to State Local, or Home Manufacturer's guidelines.
- **For Dry Set:** Depending on depth of footer, measure 1 1/2"from edge or 4" from edge of footer and drill a 1/2" x 3" hole on the side of the block under the beam for longitudinal and a hole at the end of the block for the lateral going across to the other beam. Place a nut and washer on the very top of anchor wedge bolt leaving no threads showing. Using a hammer, tap the bolts until snug in the hole, remove nut and washer and attach strut and pan washer to anchor bolt, followed by the washer and nut. Tighten wedge bolt to slab.
  Note: Once the wedge bolts are set, proceed with standard installation steps.
- **For Wet Set:** Follow steps for dry set except instead of drilling a hole in the footing insert the J bolt into the wet concrete up to the bottom of the threads at the proper placement and allow to dry.

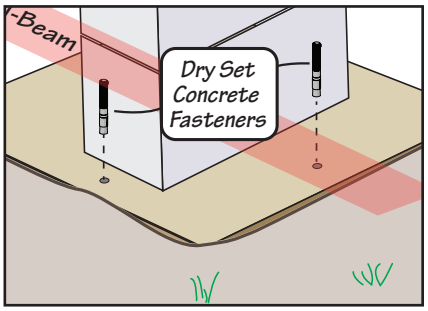


Fig. 3-2

Step 2 – Longitudinal Beam Strut Attachment

- Position Longitudinal beam clamps on both sides of the I-beam. The I-beam frame will slide into the slot on the clamp
- Extend the top of Extend the top of the longitudinal strut (smaller, pressed flat) upward and position it between the two beam brackets as shown in Fig.3-3
  Note: The fully extended longitudinal strut must maintain a minimum of 6" to 8" overlap between inner and outer tubes.
- Insert a 4" carriage bolt into the bracket and insert the spacers on each side of the strut before sliding bolt all the way through.
- Attach a flange nut to the carriage bolt. Note: The two "loose" beam clamps will appear to be out of alignment with the frame.
- Do Not tighten beam clamps.

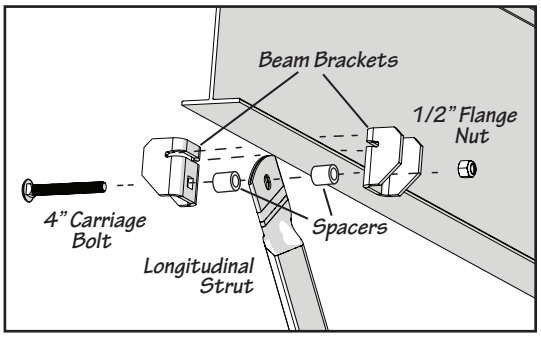


Fig. 3-3

Step 3 – Longitudinal Base Strut Attachment

- Slide the bottom of the longitudinal strut (larger, bent end) over the concrete wedge bolt on the footer.
- Slide a pan washer over the wedge bolt and install a flange nut over the wedge bolt as shown right in Fig.4-1
- Using a 3/4" deep socket/impact driver, tighten the flange nut on the footer.
- Using a 3/4" deep socket/impact driver, tighten the flange nut on the beam clamp.

Step 4 – Strut Fasteners

- Secure the extended Longitudinal Strut by installing 4 self tapping screws in the 4 holes in the outer longitudinal tube as shown in Fig 4-4. Attach 2 screws per side.

Step 5 - Longitudinal Strut

- Slide the end of the longitudinal strut over the wedge bolt on the footer.
- Slide a pan washer over the wedge bolt, install a flange nut over the wedge bolt as show right in Fig. 4-1
- Using a 3/4" deep socket/impact driver, tighten the flange nut on the footer.
- Pull outward on the longitudinal beam clamp removing any slack between the clamp and ground pad.
- Using a 3/4" deep socket/impact driver, tighten the flange nut on the beam clamp.
  Note: As the bolt/nut tighten, the two beam clamps with begin to crimp the I-beam.

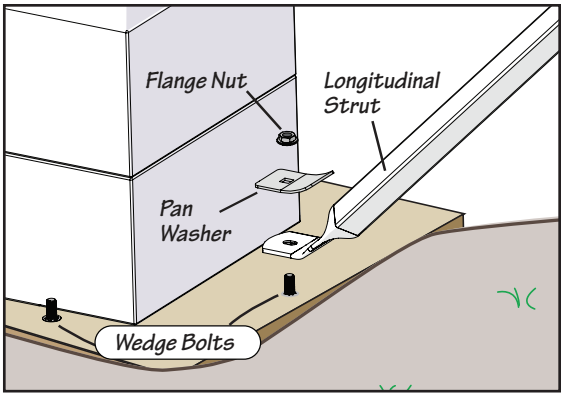


Fig. 4-1

Step 6 - Lateral Strut Beam Attachment

- Extend the lateral strut outward to the opposite side I-beam.
  NOTE: The fully extended strut must maintain a minimum 6" to 8" overlap between inner and outer tubes.
- Slide the "J" bolt over the I-beam and between the home frame.
- Slide the beam clamp over the "J" bolt end passing through the top of the beam clamp and slide the clamp over the i-beam frame as shown in Fig. 4-2. Attach flange nut over the "J" bolt and loosely tighten nut.
- Align/insert the lateral strut end in the mounting slot on the bottom of the beam clamp as shown in Fig. 4-2.
- Pass a carriage bolt through the beam clamp and lateral strut coming out the opposite side beam clamp. Loosely tighten flange nut. Do not tighten nut.
- Slide the assembled beam clamp with the mounted lateral strut left or right aligning the strut perpendicular to the pad.
- Once the beam clamp/strut attachment is in its final location, tighten the two flange nuts.

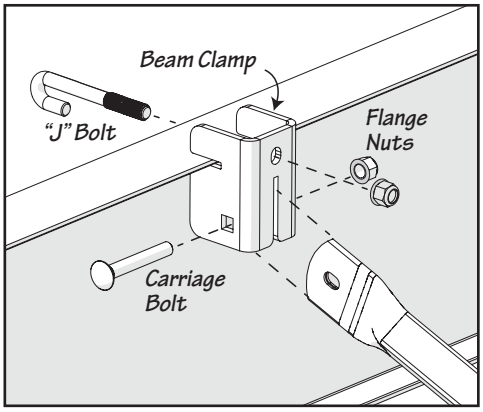


Fig. 4-2

Step 7 - Lateral Strut Base Attachment

- Slide the end of the lateral strut over the carriage bolt on the ground pad.
- Slide a pan washer over the carriage bolt/lateral strut, install a flange nut over the carriage bolt as show right in Fig. 4-3.
- Using a 3/4" deep socket/impact driver, tighten the flange nut on the ground pad.
- Using a 3/4" deep socket/impact driver, tighten the flange nut on the beam clamp.

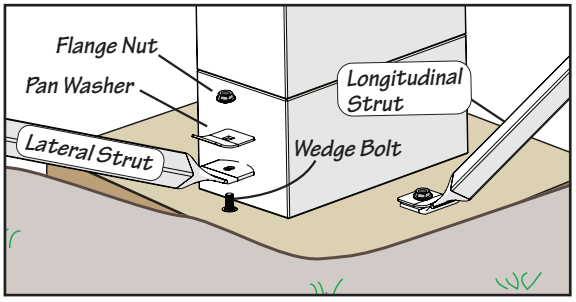


Fig. 4-3

Step 8 - Strut Fasteners

- Secure the extended lateral strut by mounting 4 self tapping screws in the 4 holes in the outer lateral tube as shown in Fig. 4-4. Attach two screws per side.

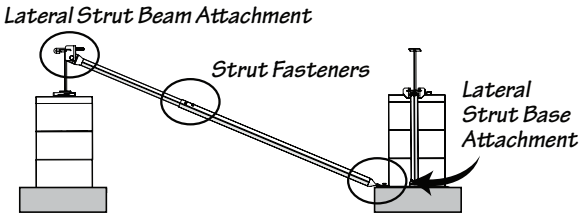


Fig. 4-4

TIE DOWN
MANUFACTURING INGENUITY

Manufactured Housing Division
605 Stonehill Drive SW, Atlanta, Georgia 30336
800-241-1806 • 404-344-0000 • www.tiedown.com
ISO 9001:2015 Certification

Instruction #08462 (D2043 Rev. 9/23/25)

467 Swan Ave. Hohenwald, TN 38462
Phone: (800) 284-7437
Fax: (931) 796-8811
olivertechnologies.com

OLIVER TECHNOLOGIES, INC.
Installation Instructions for 1100 Series All Steel Foundation System
Wind Zones I & II

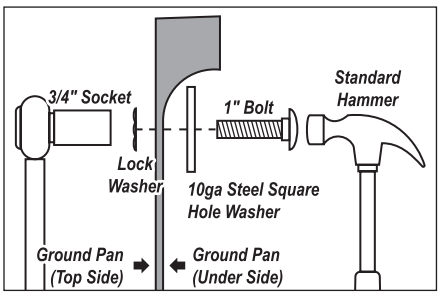
SPECIAL CIRCUMSTANCES: If the following conditions occur – STOP! Contact Oliver Technologies at 1-800-284-7437

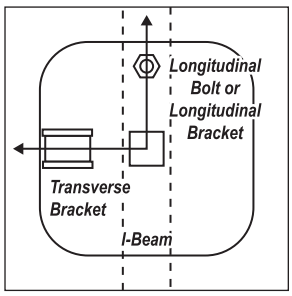
- Any frame pier height exceeds 48"
- Soil conditions less than 4B
- Roof eaves exceed 16"
- Roof pitch greater than 7/12
- Location is within 1,500' of coastline
- Sidewall height exceeds 9' (108")

The 1100 series ASFS Offers 3 packages:

1. **1100ITV** (1 Arm/Brace– Lateral) see 1,3, 9-12
2. **1100IV** (3 Arm/Brace– Lateral and Longitudinal- Replaces Pier) 1,3, 4a-8a, 9-12
3. **1100 SOLO** (2 Arm/Brace– Lateral and Longitudinal) 1-3, 4b-9b, 9-12

INSTALLATION OF GROUND PAN FOR DIRT SET





Bracket & Bolt Placement on Ground Pan

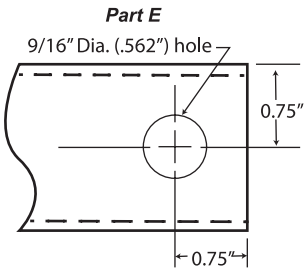
1. Remove weeds and debris in an approximate 3' square to expose firm, level undisturbed soil or controlled fill for each ground pan. The 1100 Pan is equivalent to a 21" x 21" footing. Top of ground pan (C) must be installed at ground level or per local jurisdiction. Ground pan can be installed below grade and backfilled as long as a distance between top of ground pan and bottom of frame does not exceed 48".
2. If using the SOLO longitudinal brace, ensure the longitudinal HW is installed on the correct side. Hold lock washer flush to pan, hand tighten bolt and washer to lock washer. Hammer bolt head until washer and bolt are flush with pan. Refer to Diagram 1A.
3. Place center ground pan (C) directly below chassis I-Beam. Press or drive pan completely into soil until flush with or below soil.

INSTALLATION OF LONGITUDINAL "V" BRACE SYSTEM

4a. Select the correct square tube brace (E) length for set-up (pier) height at support location.

5a. Install end of the 1.50" square tubes (E) into the "U" bracket (J), insert carriage bolt and leave nut loose for final adjustment.

6a. Place both longitudinal I-Beam connector (F) loosely on the bottom flange of the I-Beam.



PIER HEIGHT (40° MIN. - 60° MAX.)	1.50" TUBE LENGTH
14" - 18"	20"
18" - 25"	28"
24" - 35"	39"
30" - 40"	44"
36" - 48"	54"

PIER HEIGHT = The dimension from the top of the pan to the bottom of the I-Beam
*Vertical pier load should not exceed 4,800lbs

7a. Attach the selected 1.5" tubes (E) to the I-Beam connectors (F) and fasten loosely with bolts and nuts.
NOTE: The ground pan must be level in both directions to ensure the angle markings on the center point connector are correct from the horizontal plane of the pan. The angle is not to exceed 60° and not less than 40°. The "V" bracket is stamped with angle marks to use as a guide. Use an Angle Finder to verify proper angle. Use proper length tube or cut and drill tube to achieve proper length. (The tube may be cut using any appropriate steel cutting method such as reciprocating saw, band saw etc. New holes must be drilled to the dimension and at the location as shown for part (E).

8a. Using standard hand tools, tighten all nuts and bolts. When connecting the brace tube to the model 1100-10-P I-Beam connector bracket, tighten at least one and a half to two full turns past hand tight.

NOTE: The longitudinal "V" brace system serves as a pier under the home and should be loaded as any other pier. It is recommended that after leveling piers, and 1/2" before home is lowered completely onto piers, refer to diagram 1B.

INSTALLATION OF 1100 SOLO LONGITUDINAL BRACE

4b. Determine the correct length of the longitudinal brace (K) to be installed based on pier height.

5b. Make sure the longitudinal bolt (L) is centered under the I-Beam.
NOTE: It is required that each longitudinal brace is installed in opposite directions underneath the home.

6b. Place the flattened end of the longitudinal brace over the bolt (L) on the ground pan and loosely secure with provided nut and washer.

7b. Place both longitudinal I-Beam connectors (F) loosely on the bottom flange of the I-Beam.

PIER HEIGHT (15° MIN. - 45° MAX.)	LONGITUDINAL BRACE LENGTH
12" - 24"	39"
12" - 32"	44"
12" - 40"	54"
12" - 48"	65"

PIER HEIGHT = The dimension from the top of the pan to the bottom of the I-Beam

8b. Attach the opposite end of the longitudinal brace to the bottom flange of the I-Beam using the longitudinal I-Beam connectors (F) with bolt and nut. Using standard hand tools, tighten all nuts and bolts.

NOTE: Angle of longitudinal brace must be between 15° and 45° from horizontal plane.

INSTALLATION OF (LATERAL) TELESCOPING TRANSVERSE BRACE SYSTEM (1100 ITV)

9. Select the correct transverse brace (H). The 60" sections are standard. The 72" sections are used on frame widths greater than 99.5".

10. Install the 1.5" transverse brace (H) to the ground pan connector (D) with the bolt and nut.

11. Slide 1.25" transverse brace into the 1.5" brace and attach to adjacent lateral I-Beam connector (I) with bolt and nut.

12. Secure 1.5" transverse brace to 1.25" transverse brace using four (4) 1/4" - 14 x 3/4" self-tapping screws in pre-drilled pilot holes.
NOTE: Installation drill speed should not exceed 1800 rpm.

INSTALLATION USING CONCRETE (ICV)

The concrete footer, runner or slab that has a minimum of 2900 cu. in., with a minimum depth of 6" at each system location. The surface of the footing shall be large enough to support the pier load and allow at least 4" from the concrete bolt to the edge of the concrete (ie. 22" x 22" x 6" footer). The concrete shall be a minimum of 2500 psi mix (pre-blended sacked concrete mix is acceptable). Special inspection of footing is not required. If the 1100ITC Transverse system is to be installed without the use of a longitudinal system, it MUST be installed on same footing within 18" of pier. Provide a minimum spacing of 4" center-to-center between wedge bolt installations, and maintain a minimum distance of 4" from any concrete edge to the centerline of the wedge bolt.

LONGITUDINAL (V)

When using the 1100 wet set bracket, simply install the bracket in runner/footer OR when installing in cured concrete, use the 1100 dry set bracket. The 1100 dry set bracket is attached to the concrete using (2) 1/2" X 3" concrete wedge bolts. Center bracket under I-Beam in desired location. Mark bolt hole locations, then using a 1/2" masonry bit, drill a hole to a minimum depth of 3". Be sure all dust is blown out of the holes. Place wedge bolts into drilled holes, then place 1100 bracket onto wedge bolts and start wedge bolt nuts. Take a hammer and lightly drive the wedge bolts down by hitting the nut (Do not hit the top of threads on bolt). Complete by tightening the nuts.

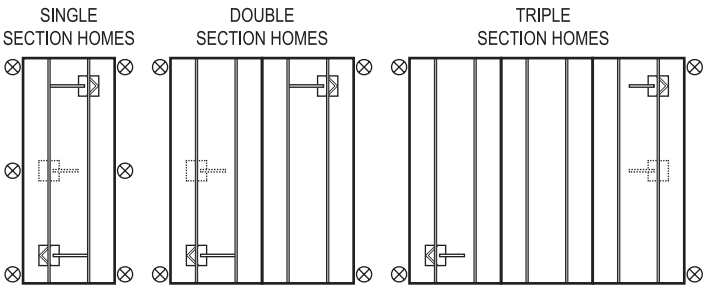
LONGITUDINAL (SOLO)– Dry Concrete Only

Position longitudinal concrete bolt for installation and drill ½" hole. 3" deep into concrete. Make sure that the Longitudinal bolt is centered under the I-Beam. Be sure all dust is blown out of the holes. Place wedge bolt into drilled hole. Make sure starter nut is threaded onto wedge bolt. Then, lightly hammer wedge bolt into concrete. Leave approximately 1" of wedge bolt threads above surface. Remove starter nut from wedge bolt and follow applicable instructions based on system being installed.

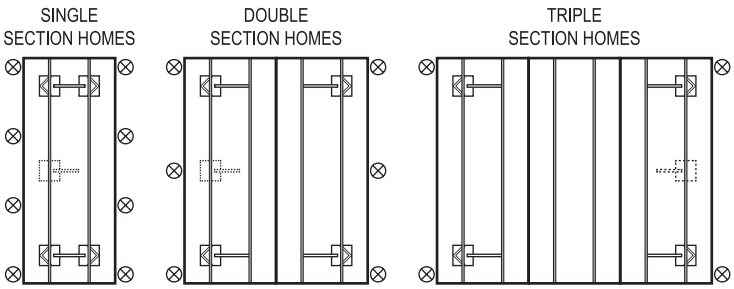
LATERAL (Transverse Brace)

For wet set installation set the transverse connector bracket into runner/footer at desired location. For dry set installations, the transverse connector bracket is attached to the concrete using (2) 1/2" X 3" concrete wedge bolts. Mark bolt hole locations, then using a 1/2" masonry bit, drill a hole to a minimum depth of 3". Be sure all dust is blown out of the holes. Place wedge bolts into drilled holes,then place transverse connector bracket onto wedge bolts and start wedge bolt nuts. Take a hammer and lightly drive the wedge bolts down by hitting the nut (do not hit the top of threads on bolt.) Complete by tightening the nuts.

REQUIRED NUMBER AND LOCATION OF MODEL 1100 SERIES BRACES FOR 4/12 & 5/12



REQUIRED NUMBER AND LOCATION OF MODEL 1100 SERIES BRACES FOR 6/12 & 7/12



LEGEND

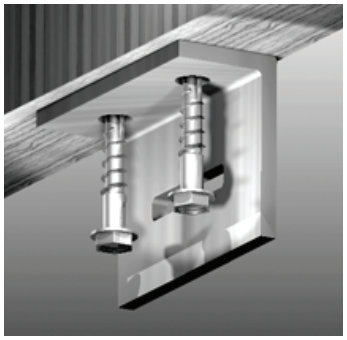
1. Location of ASF Model 1100 (Lateral and Longitudinal Bracing) or 1100 T (Lateral only) up to 76'.
2. Location of additional ASF Model 1100 T System (Lateral only) for homes exceeding 76' in length or with roof pitch between 4.37/12 (20°) and 5/12, the additional system is to be installed at approximately the midpoint of the house and may be installed at either exterior beam.
3. ⊗ Installation on all homes require a minimum number of uplift anchors in WZ I for enhanced wind protection. Strap angle 75-90°. Check anchor tables for details.

Wind Zone I Vertical Anchor Table

		4:12 Roof Pitch		5:12 Roof Pitch		6:12/7:12 Roof Pitch	
Home Section	**Home Width**	**Act. Box Size**	**Anchors Per Side**	**Act. Box Size**	**Anchors Per Side**	**Act. Box Size**	**Anchors Per Side**
Single	12'	up to 63'	3	up to 55'	4	up to 45'	4
	140" +	64'-90'	4	56'-74'	5	46'-62'	5
				75'-90'	6	63'-78'	6
						79'-90'	7
	14'-18'	up to 73'	3	up to 58'	4	up to 47'	4
	156" to 210"	74'-90'	4	59'-78'	5	48'-64'	5
				79'-90'	6	65'-81'	6
						82'-90'	7
Double	20' (2)118"	up to 90'	2	up to 90'	3	up to 90'	4
	24'-32' (2)140" to (2)186"	up to 90'	2	up to 90'	2	up to 85'	3
						86'-90'	4
Triple	36'-48' (3)140" to (3)186"	up to 90'	2	up to 90'	2	up to 90'	2

IMPORTANT: System Uplift Anchors are to be installed to the bottom of the rim joist with a 3150 lb. rated bracket and lag bolts, not to the I-Beam. Corner anchors should be installed within 2' of the end of the home and any additional anchors installed as evenly as possible per side.

NOTE: Brackets can be moved in 10" to a floor joist if they interfere with block skirting. One additional vertical anchor per side is required on single sections with a roof pitch of 5/12 and two additional vertical anchors per side are required on roof pitches of 7/12. Single section homes with a pitch of 4/12 and below, double sections and triple sections require no additional anchors when relocating brackets.



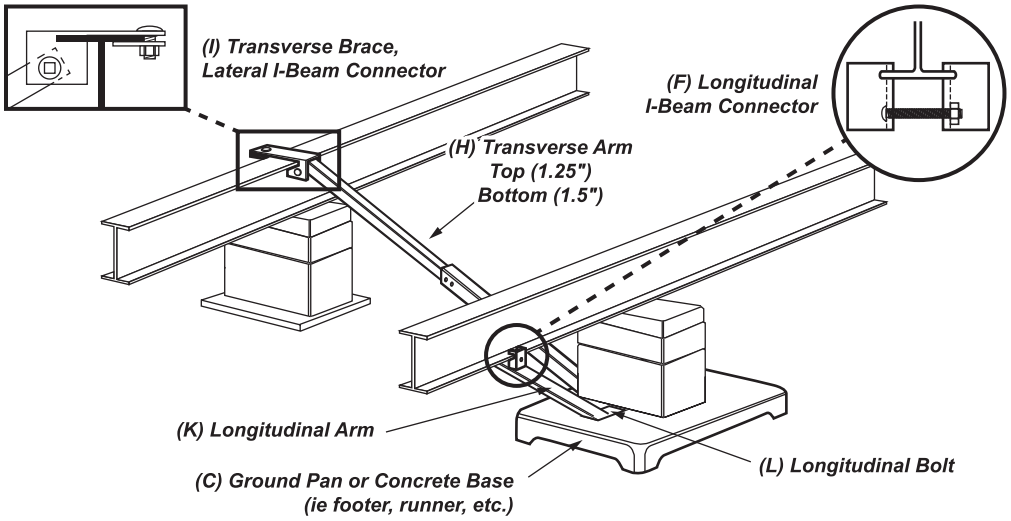
INSTALLATION OF THE OT SWB SIDEWALL BRACKET

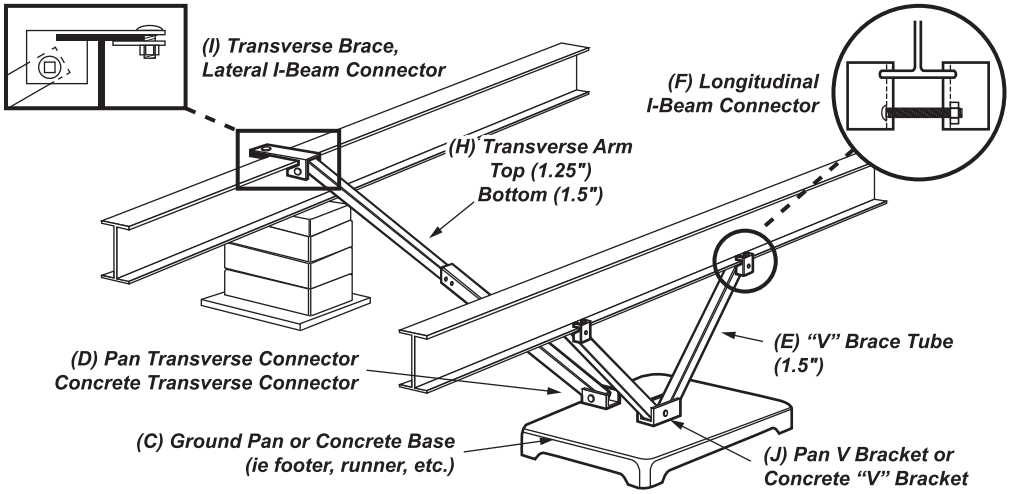
1. Locate the desired location under home, on underside of the rim or floor joist.
2. Position sidewall bracket with two holes centered on joist. Orientation of sidewall bracket does not affect performance.
3. Mark the center of both holes and pre-drill two pilot holes using a 15/64" drill bit.
4. Install (2) two lag bolts into pre-drilled holes to secure sidewall bracket.
   Minimum size: 3/8"-7 x 3 1/2" with a minimum of 3 1/4" threads.
5. Refer to anchor and strapping installation instructions for proper installation of anchor and strap.
   NOTE: The OT SWB sidewall bracket can be used in place of any sidewall or marriage line bracket that is rated at or below 3150 lbs. working load.

NOTE:

A. Installation of the longitudinal system eliminates the need for all longitudinal anchors.
B. Installation of the transverse system eliminates the need for all lateral anchors, diagonal frame ties and stabilization plates except when noted. (Note C)
C. All other home manufacturer's instructions for installation of stabilizing devices must be followed, including installation of vertical tie-down anchors, and mating line column, shear wall or center-line tie-down anchors. NOTE WIND ZONE II: ALL VERTICAL ANCHORS (NOT TO EXCEED 8' SPACING) MUST BE INSTALLED PER MANUFACTURERS INSTALLATION INSTRUCTIONS!
D. If the home manufacturer's installation instructions are not available, the home must be installed in accordance with any state promulgated rules or as required by the authority having jurisdiction.
E. When the length of home exceeds 76', sidewall height exceeds 96" or the roof pitch is between 4.37/12 (20°) and 5/12, add 1 transverse system (see location diagrams above) 6/12: a total of 4 Transverse & 3 Longitudinal systems are needed & 7/12: a total of 5 Transverse & 3 Longitudinal systems are needed. (Longitudinal portion only required when longitudinal bracing is required by home manufacturer).
F. An alternative method using the 1100 CVD anchors (dry set) or 1100 CVW (wet set) may be used on a footing size of 16" diameter x 24" depth. These brackets are designed for lateral and longitudinal protection.
G. It is recommended that the systems be installed at the 2nd pier in from each end of the house. However, they may be installed at any location at least 2', but not more than ¼ the house length, in from the ends of the home.

STATE OF MICHIGAN ONLY: As required by Section 1805.2 of the 200 Michigan Building Code, the depth of the footer shall be a minimum depth of
42" below grade, except that the authority having jurisdiction may approve a lesser depth based on known prevailing soil and weather conditions, or as provided by the exception under Section 1805.2.1 of the Code.
STATE OF NORTH CAROLINA ONLY: Tubing must be galvanized and, when the manufacturer's installation instructions are not available, vertical wall tie-downs must be installed not to exceed 8' on center. (Wind Zone II)
STATE OF NORTH IDAHO ONLY: Concrete must be a minimum of 8" in depth.
STATE OF CALIFORNIA ONLY: Refer to specific CA instructions for proper installation.





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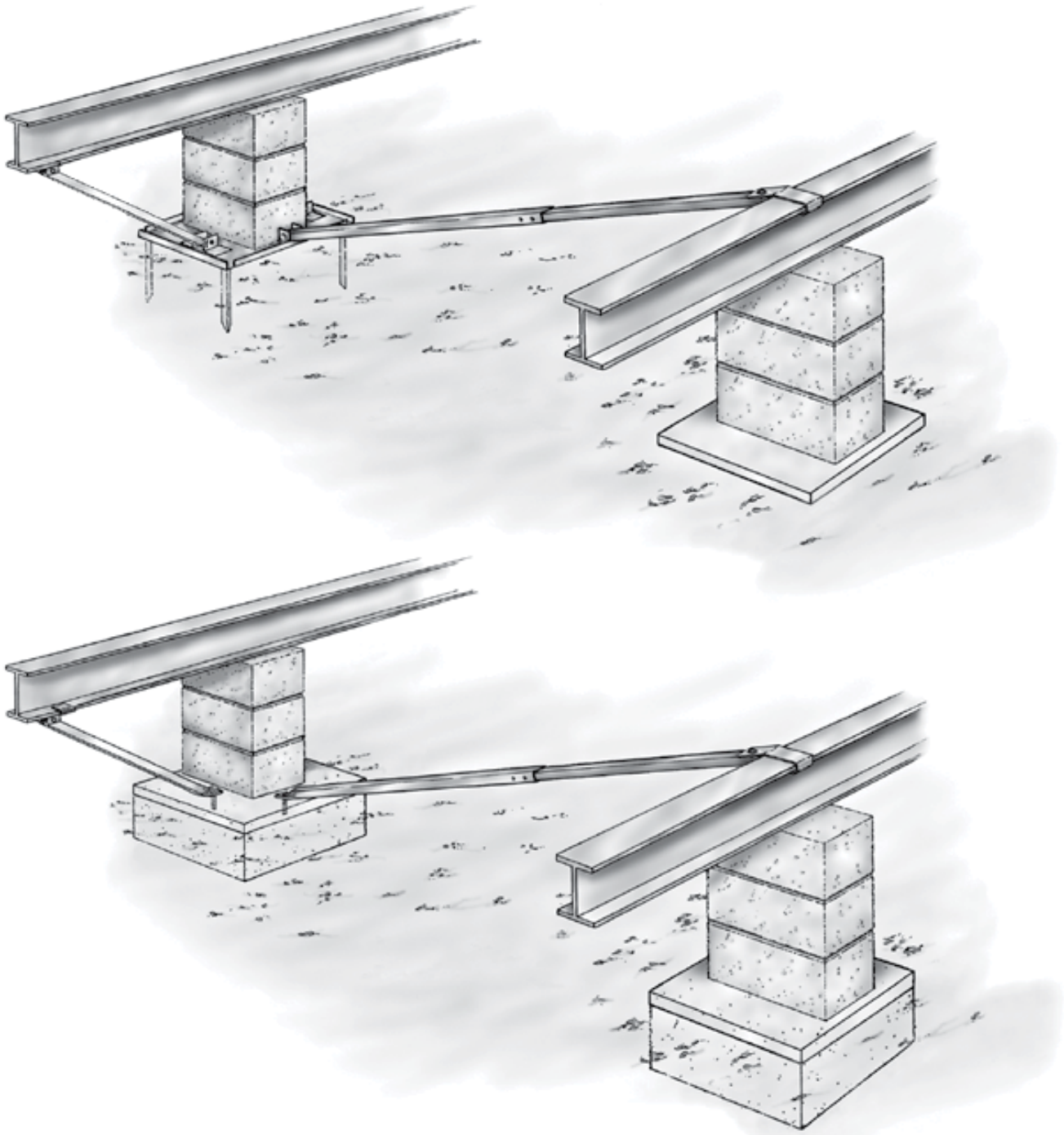
olivertechnologies.com

VIEW PRODUCTS ONLINE

Minute Man Anchors

Installation Instructions for LLBS Longitudinal and Lateral Bracing System



Thank you for using Minute Man Anchors. If you have any questions, please call us at: (800) 438-7277 • (828) 692-0256, info@minutemanproducts.com

MADE IN THE USA

Minute Man Anchors

LIMITED WARRANTY

Minute Man Anchors warrants its product is free from defects in materials and Workmanship at the time of installation when properly installed in accordance with the Installation instructions. THE FOREGOING WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, WHETHER EXPRESS OR IMPLIED, WRITTEN OR ORAL, INCLUDING ANY WARRANT OF MERCHANTIABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ANY LIABILITY IS EXPRESSLY LIMITED TO AN AMOUNT EQUAL TO THE PURCHASE PRICE PAID, AND ALL CLAIMS FOR SPECIAL, INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE HEREBY EXCLUDED. Minute Man does not assume any other liability or obligation in connection with the sale or use of this product.

If the product is defective at the time of delivery or installation and you give prompt notice to Minute Man no later than thirty (30) days of attempted installation of the defect, Minute Man, at its option, will replace the product at no cost or refund the full amount of the purchase price, provided the defective product is returned to Minute Man with proof of purchase at the address set forth below. PRODUCT REPLACEMENT OR REFUND IS YOUR SOLE AND EXCLUSIVE REMEDY.

This warranty extends only to the distributor and original installer of the product and does not cover a defect resulting from abuse, misuse, neglect, repairs, any use not in conformity with the printed instructions or installation by unauthorized personnel.

This warranty gives you speci c legal rights, and you may also have other legal rights which vary from state to state. Some states do not allow limitations on implied warranties or special, incidental or consequential damages, so the foregoing limitations may not apply to you.

If you have a claim under this warranty, please contact our CUSTOMER SERVICE department (have model and type numbers available):

CUSTOMER SERVICE
Toll Free in the U.S. 1-800-438-7277
1-828-692-0256

OR WRITE TO:
Minute Man-Customer Service
305 West King Street
East Flat Rock, NC 28726

To our knowledge, the information provided in and by the independent, profession engineers' reports and certifications and obtained from other independent sources contained in the installation instructions and product manuals is accurate. However, Minute Man Anchors cannot assume any liability whatsoever for the accuracy or completeness thereof. Final determination of the suitability of any information or material for the use contemplated is the sole responsibility of the user. Specifications are subject to change without notice. The load ratings established in the report are not valid in any application where the use of the product would overload any structural member of the home of foundation.

Minute Man Anchors

LLBS Longitudinal and Lateral Bracing System engineering certification for Wind Zones I, II & III, ground and concrete applications.

Contact Minute Man Anchors for any needed State Engineer Sealed Documents.

Phone: 800-438-7277 or 828-692-0256

e-mail: info@minutemanproducts.com
Or go to: www.minutemanproducts.com

Notes

Minute Man Anchors

Wind Zone I

Patent# 6622439 12/1/09

Installation Instructions for Model LLBS Longitudinal and Lateral Bracing System Zones I

The LLBS is not designed to be used as a supporting pier.

Note: Your set must be designed by a Registered Professional Engineer if the following conditions occur:

Location is within 1,500 feet of Coast
Pier Height exceeds 48"
Sidewall height exceeds 96"
Roof eaves exceeds 16"
Main beam spacing exceeds 99.5"

1. Refer to the Home Manufacturer Installation Instructions for pier locations. Refer to the home manufacturer installation instructions for required footing size and pier spacing. Note: SD3 pad is 2.8 sq. Ft. Vertical Sidewall and Marriage wall anchors may be required by the home manufacturer when using the MMA LLBS systems. See Manufacturer's instructions.* Max Pier Height 48"

2. Refer to the Systems Placement Plans for the location of Longitudinal Lateral Bracing System. **(See Attached)**

3. Remove turf to expose firm soil at each SD3 pad location. Install SD3 pad to manufacturer, state, local codes, and frost line guidelines as it may apply. For extremely hard or rocky soil. mark four [4) slots and pre-drill soil with a 3/4 x 12" masonry drill.

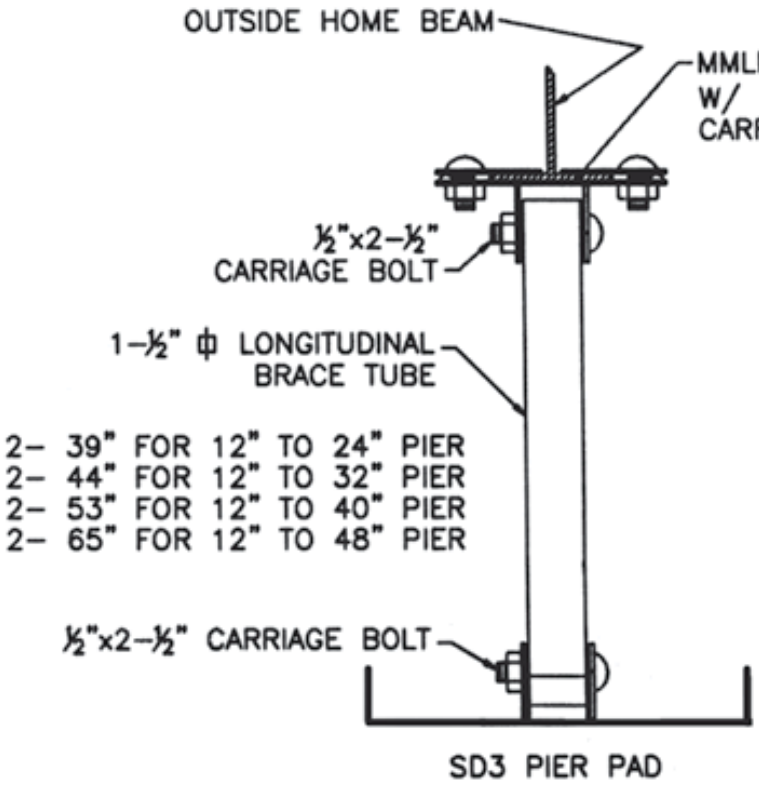
4. Attach tube clip to SD3 pier pads (see Detail Assembly Drawing) center pad under beam, level pad. Angle Drive Pins may be driven vertically through four (4) slots in SD3 pier pad now or after home is totally set. Angle drive pins may be driven up to ten degrees (10) off of vertical. If you choose to drive pins after home is set, do not cover slots in pier pad.

5. Level home on concrete blocks or steel pier by Minute Man.

6. Install Longitudinal and Lateral Bracing in accordance with System Placement Plan and Detail Assembly Drawing. **(1 longitudinal brace tube per system in Wind Zone I only)**.

7. Approved uplift anchors with strap installed 75 to 90 degrees are required when using the MMLLB system. Reference uplift anchor chart for number of required anchors.

LONGITUDINAL BRACE DETAIL FOR SD3 PIER PAD



NOTES

MAXIMUM PIER HEIGHT 48"

MAX. SIDEWALL HEIGHT 96"

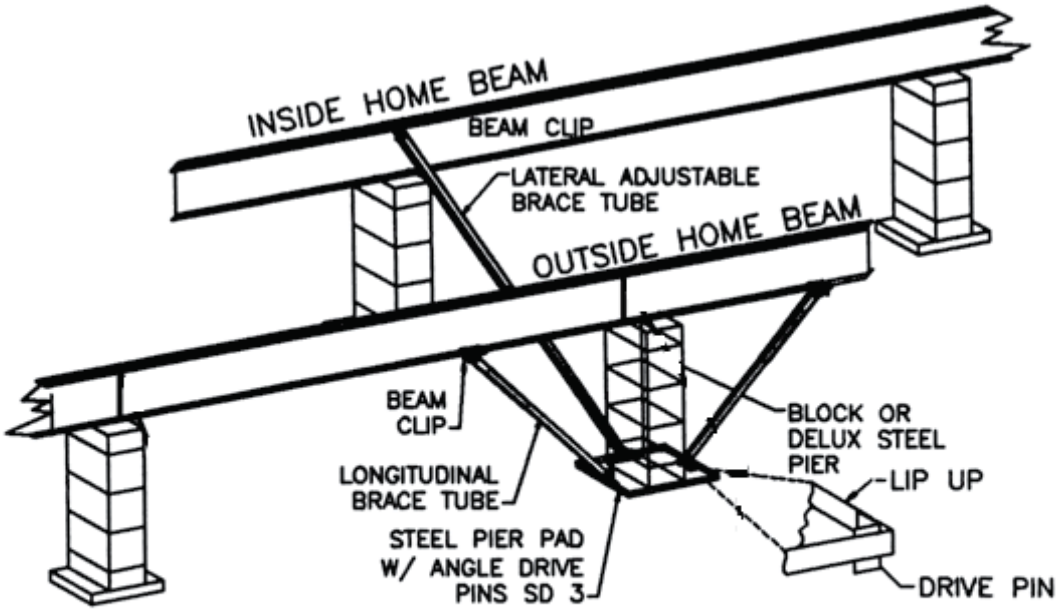
MAX. BEAM SPACING 99.5"

MAX ROOF EAVES 16"

NOTE: 1/2" BOLTS ARE GRADE 5

WHEN USING LONGITUDINAL BRACES, 2ND PIER IN FROM THE END OF THE HOME MAY BE USED TO MAKE ROOM FOR BRACE TUBES.

LONGITUDINAL & LATERAL BRACING SYSTEM DETAIL ASSEMBLY DRAWING



The Minute Man Anchors LLBS Bracing System was tested for Wind Zones I, II, & III

Tested 10/10/01
Rev. 3/6/02
Rev. 7/14/04
Rev. 2/1/10
Rev. 1/1/15
Rev. 9/6/24

Minute Man Anchors

ALTERNATE CONCRETE APPLICATION INSTRUCTIONS FOR MODEL LLBS LONGITUDINAL AND LATERAL BRACING SYSTEM FLEX TUBES WITH ADAPTER USING CONCRETE BLOCK PIERS OR STEEL PIERS

Refer to *Minute Man Anchors Installation Instructions* for LLBS Wind Zones I, II, III for the following information.

- The required number and locations of LLBS Systems.
- Home Manufactures anchor requirements where called for.
- LLBS System detail assembly drawing.

The Longitudinal and Lateral Bracing tubes are engineered to attach directly to ***cast in place concrete*** slabs, runners, square footers and round footers. Refer to HUD Code 3285.312(a)(I,ii} and HUD Code Part 32885.312(b)(1,2,3) for additional information.

Poured Concrete must be a minimum of 3,000 PSI at 28 days.

Concrete Runner at system LLBS locations must be a minimum of 26" wide by 6" deep with 3,000 psi concrete with a minimum 8 linear feet of runner surface per LLBS System location.

Concrete Slab must be a minimum of 6" deep 3,000 psi □ber mesh concrete with 16 sq. feet of slab per LLBS system location. Example 4'-0" x 4'-0".

Shallow Square Concrete Footers at LLBS system locations must be a minimum of 26" x 26" x 8" deep.

Concrete Pile Footers at LLBS systems locations must be a minimum of:

- 18" round or square x 14" deep for Class II soils
- 18" round or square x 18" deep for Class III soils
- 18" round or square x 24" deep for Class IV soils

Instructions

1. Place concrete block or steel pier on the centerline of footer and home's I beam.
2. Attach Flex Tube adapter to square end of *Lateral Brace Tube* and *Longitudinal Brace Tubes.*
3. For *Lateral Brace Tube*, loosely attach tube and hook to top flange of opposite I-beam. Extend flat bottom end of tube to desired location near the base of the pier and mark pilot hole for drilling.
4. For *Longitudinal Brace Tubes*, loosely attach beam clips to bottom flange of overhead I-beam. Slide flat bottom end of tubes to desired location near the base of pier and mark pilot holes for drilling.
5. **THE CENTERLINE OF THE HOLES FOR THE ANCHOR BOLTS MUST BE A MINIMUM OF 4" IN FROM THE EDGE OF THE CONCRETE FOOTING AND 4" FROM OTHER WEDGE BOLTS.**
6. Move flat bottom of Lateral and Longitudinal tubes to the side and drill pilot holes. Drill 5/8 x 3-1/2 holes for 5/8 x 3" wedge anchor. Clean dust from holes and insert wedge anchors full length of "wedge sleeve."

6b. For wet set anchor: align L shaped anchor with leg submerged completely in concrete with only threads extending upright above concrete surface.

7. Place tubes over embedded wedge anchors and tighten nuts (do not use washers). Bend tube to desired angle (when needed), attach top hook or beam clip. Tighten nuts on remaining system connections. All bolts to be tensioned 65 to 70 in. ft. lbs.

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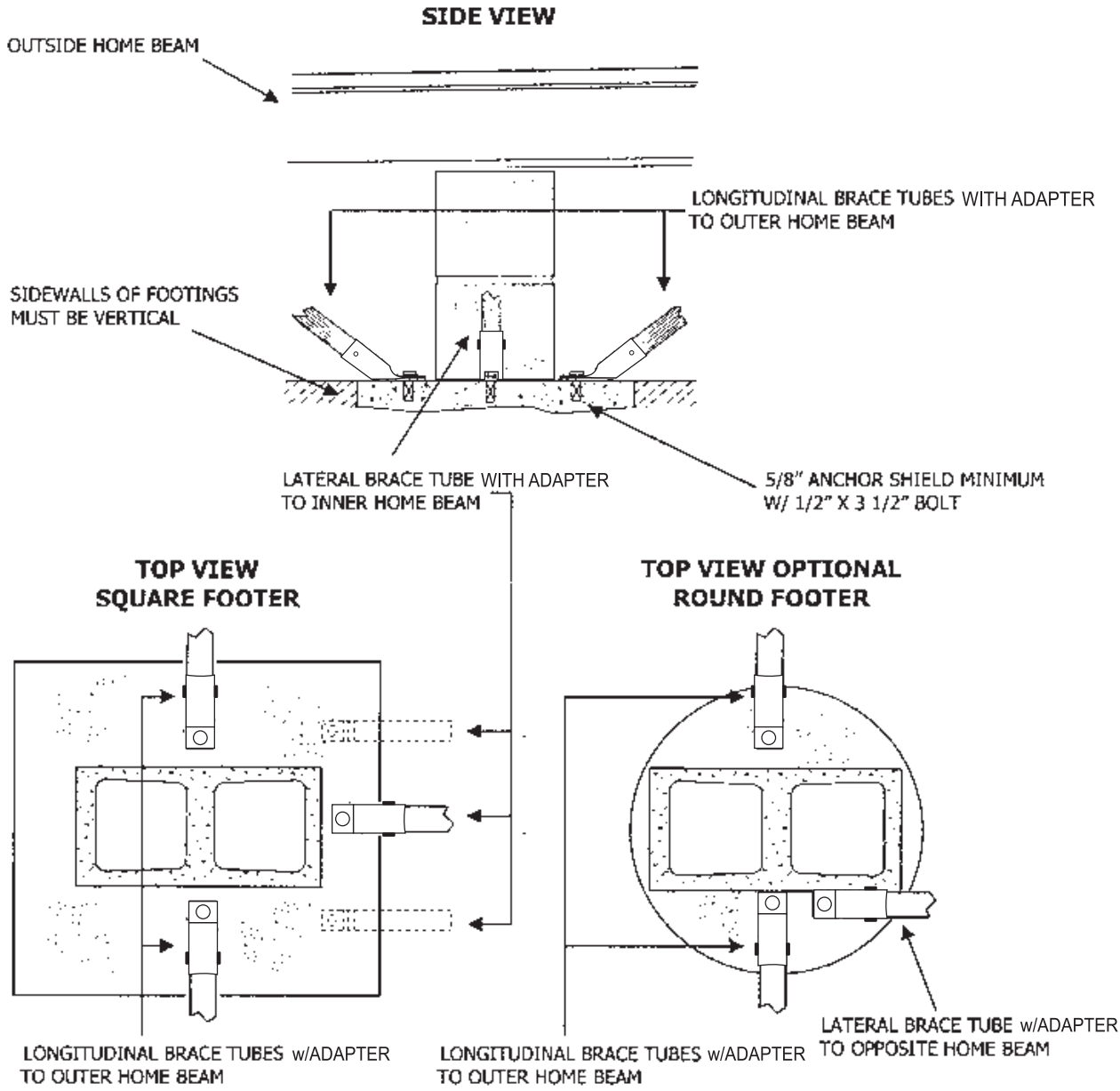
LLBS FLEX TUBES WITH ADAPTER

SAMPLE CONCRETE APPLICATION ILLUSTRATION WITH CONCRETE BLOCK OR STEEL PIER



Conventional footings must be placed below frost line depth for the site unless an insulated foundation or monolithic slab is used.
See HUD CODE part 3285.312(a)(i,ii) and part 3285.312(b)(1,2,3)

CENTERLINE OF HOLES FOR WEDGE ANCHORS MUST BE MINIMUM OF 4" IN FROM THE EDGE OF THE CONCRETE AND 4" FROM OTHER WEDGE ANCHORS.

DO NOT USE ANCHOR WASHER ON BRACE TUBES.

POURED CONCRETE MUST BE A MINIMUM OF 3,000 PSI AT 28 DAYS.

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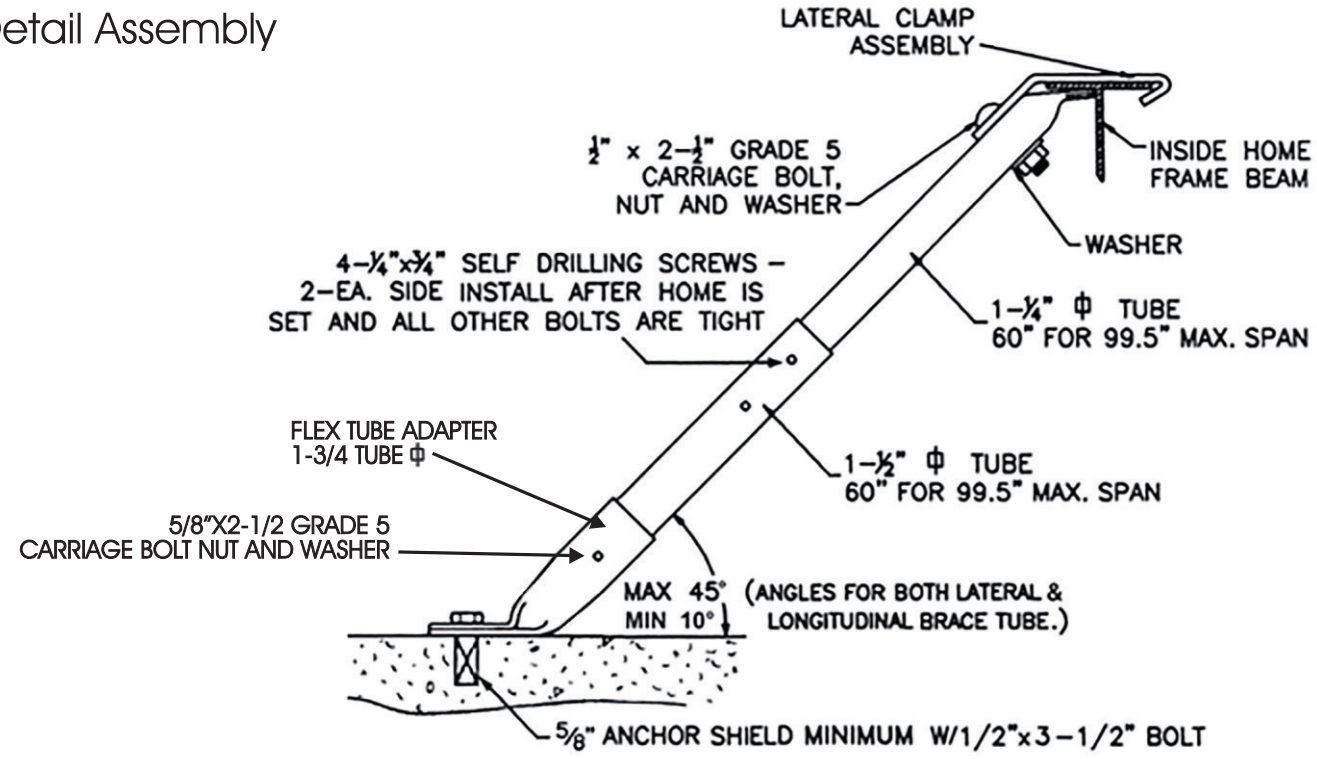
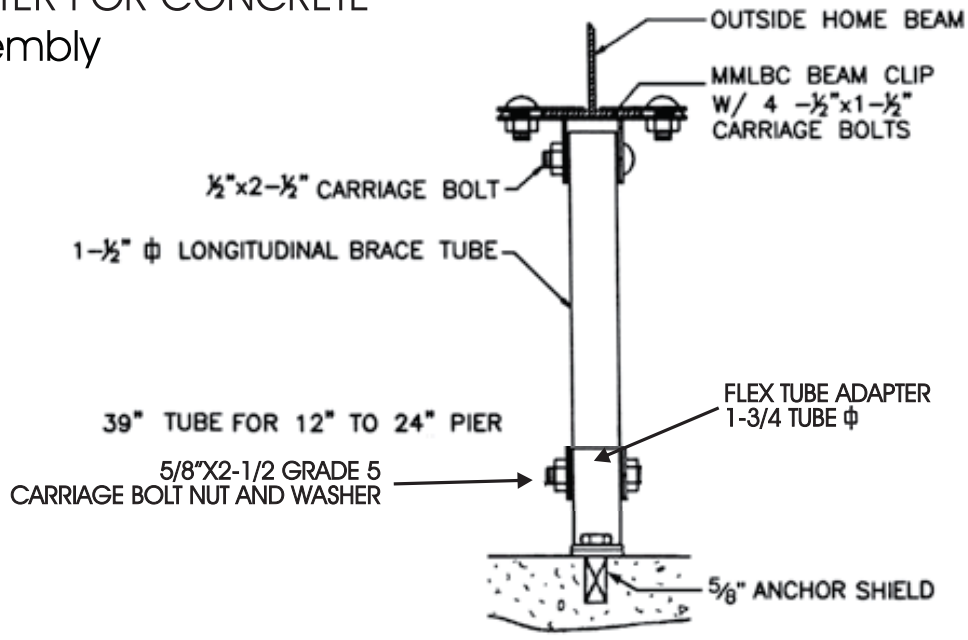
LATERAL BRACE
FLEX ADAPTER FOR CONCRETE
Detail Assembly



LONGITUDINAL BRACE
FLEX ADAPTER FOR CONCRETE
Detail Assembly



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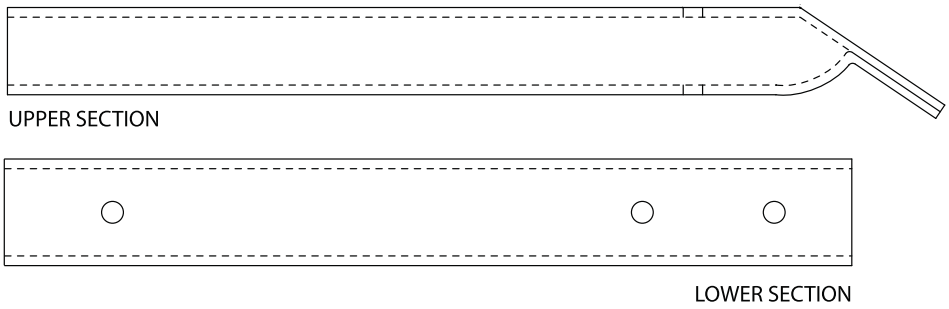
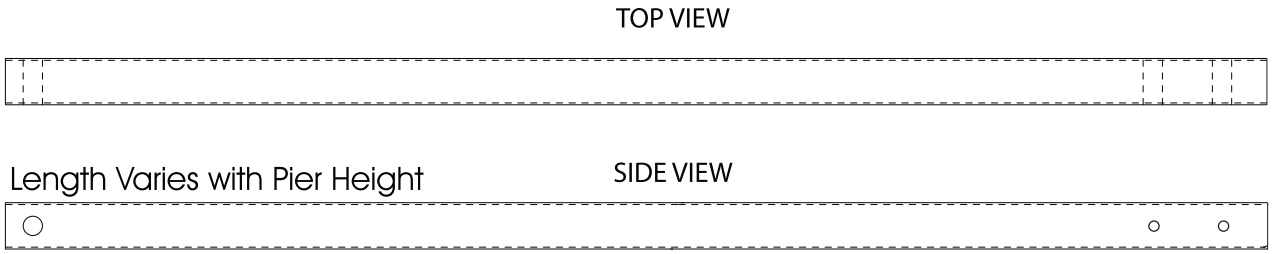
LATERAL BRACE TUBES FOR CONCRETE

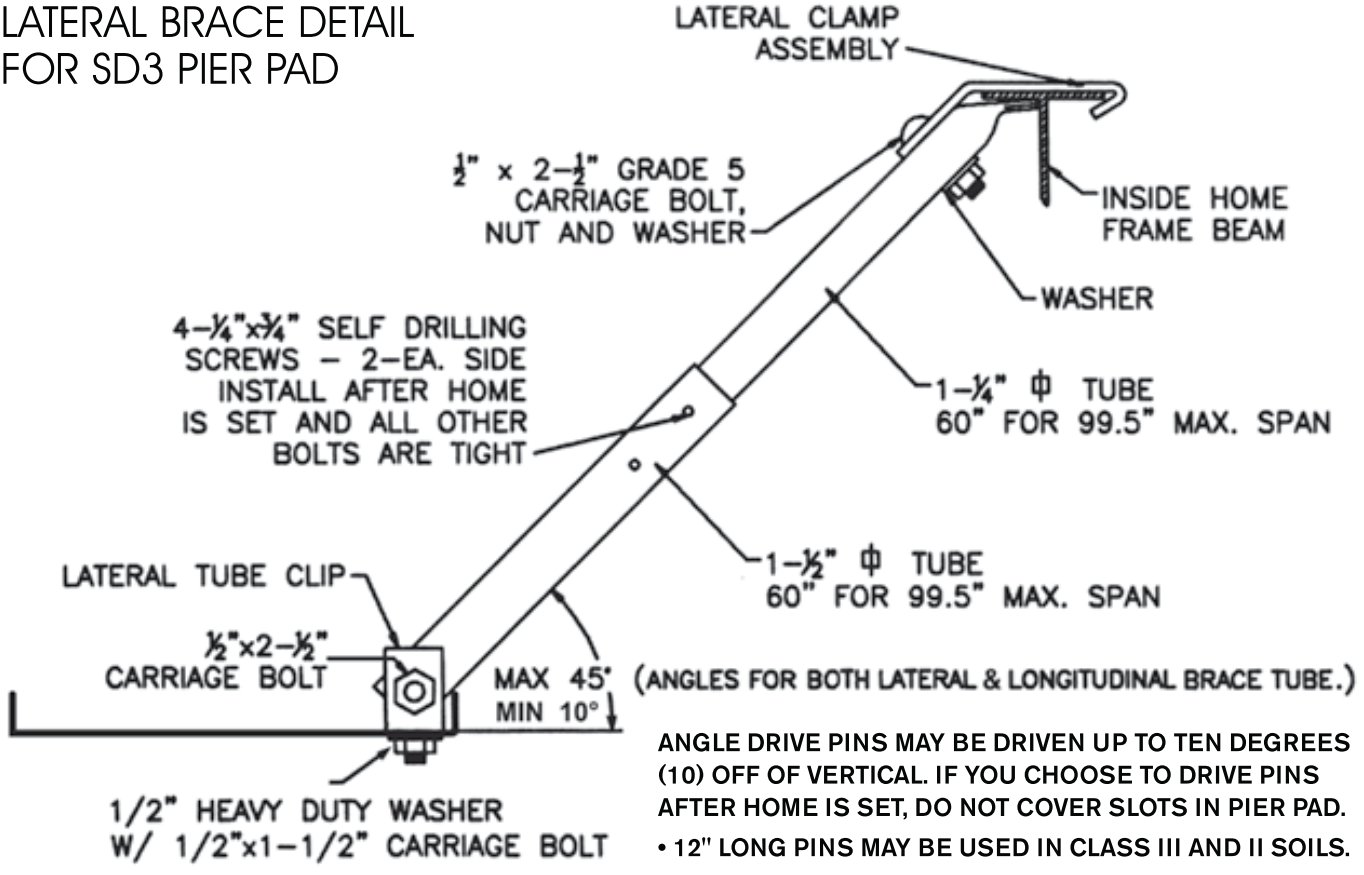


LONGITUDINAL BRACE TUBES FOR CONCRETE



FLEX TUBES ADAPTER

LATERAL BRACE DETAIL FOR SD3 PIER PAD



ANGLE DRIVE PINS MAY BE DRIVEN UP TO TEN DEGREES (10) OFF OF VERTICAL. IF YOU CHOOSE TO DRIVE PINS AFTER HOME IS SET, DO NOT COVER SLOTS IN PIER PAD.

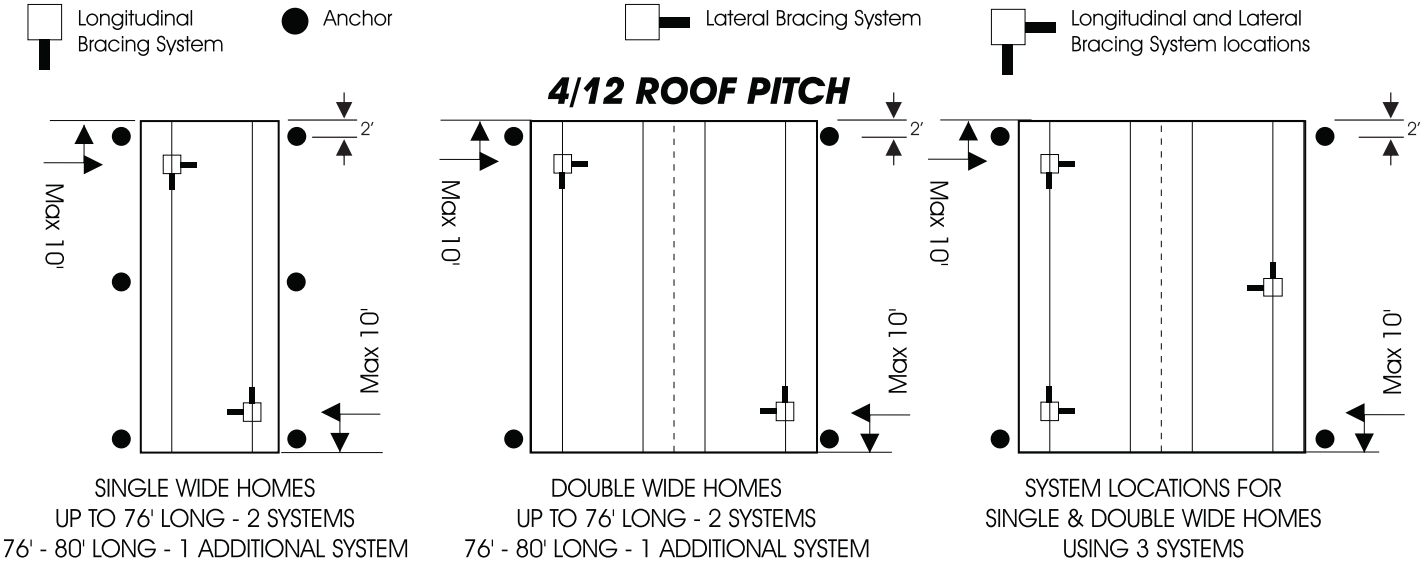
- **12" LONG PINS MAY BE USED IN CLASS III AND II SOILS.**
- **16" PINS ARE REQUIRED IN CLASS 4 SOILS.**

ZONE I LONGITUDINAL AND LATERAL BRACING SYSTEMS PLACEMENT

Approved uplift anchors with strap installed 75 to 90 degrees are required when using the MMA LLBS system. All anchors must have a working load of 3,150 lbs. Systems must be as equally spaced as possible. Triple wide and tag units require 2 additional systems. Place additional systems at the corner ends of the exposed side of the home.

HOME DIMENSIONS REPRESENT BOX SIZE- FOR HOMES OVER 80' CALL MMA

Minimum uplift anchors required. Reference uplift anchor chart for additional required anchors.



SINGLE WIDE HOMES
UP TO 76' LONG - 2 SYSTEMS
76' - 80' LONG - 1 ADDITIONAL SYSTEM

DOUBLE WIDE HOMES
UP TO 76' LONG - 2 SYSTEMS
76' - 80' LONG - 1 ADDITIONAL SYSTEM

SYSTEM LOCATIONS FOR
SINGLE & DOUBLE WIDE HOMES
USING 3 SYSTEMS

LLBS System Requirements for roof pitches over 20° with 8' Sidewalls

Home's Length ft.	Roof Pitch/Degree of Slope				
	5:12	6:12	7:12	8:12	9:12
	22.62°	26.57°	30.26°	33.69°	36.87°
34'	2	2	2	2	2
36'	2	2	2	2	2
38'	2	2	2	2	2
40'	2	2	2	2	2
42'	2	2	2	2	3
44'	2	2	2	3	3
46'	2	2	2	3	3
48'	2	2	3	3	3
50'	2	3	3	3	3
52'	2	3	3	3	3
54'	3	3	3	3	3
56'	3	3	3	3	3

Home's Length ft.	Roof Pitch/Degree of Slope				
	5:12	6:12	7:12	8:12	9:12
	22.62°	26.57°	30.26°	33.69°	36.87°
58'	3	3	3	3	3
60'	3	3	3	3	3
62'	3	3	3	3	3
64'	3	3	3	3	4
66'	3	3	3	4	4
68'	3	3	3	4	4
70'	3	3	4	4	4
72'	3	3	4	4	4
74'	3	3	4	4	4
76'	3	4	4	4	4
78'	3	4	4	4	4
80'	3	4	4	4	4

Call Minute Man Products for system requirements on homes with 9' Sidewalls

Requred Anchors
HUD Wind Zone I
9' max. Sidewalls, 4:12 max Roof Slope Using Sidewall Anchor Brackets (3)

Home Sections	Home Widths	Home Length (1)	Anchors per Side (2)
Single	12' (up to 140")	up to 71'	3
		72' to 90'	4
	14' to 18' (156" to 210")	up to 81'	3
		82' to 90'	4
Double	20' to 32' (2x118" to 2x186")	up to 90'	2
Triple	36' to 48' (3x140" to 3x186")	up to 90'	2

Notes -
(1) Home length refers to the size of the structure.
(2) Anchors should be placed 2' from each end of the home and evenly spaced.
(3) Brackets to be rated at 3150 lbs. min. allowable.

Requred Anchors
HUD Wind Zone I
9' max. Sidewalls, 5:12 max Roof Slope Using Sidewall Anchor Brackets (3)

Home Sections	Home Widths	Home Length (1)	Anchors per Side (2)
Single	12' (up to 140")	up to 63'	4
		64' to 82'	5
		83' to 90'	6
	14' to 18' (156" to 210")	up to 66'	4
		67' to 86'	5
		87' to 90'	6
Double	20' (2x118")	up to 90'	3
	24' to 32' (2x140" to 2x186")	up to 90'	2
Triple	36' to 48' (3x140" to 3x186")	up to 90'	2

Notes -
(1) Home length refers to the size of the structure.
(2) Anchors should be placed 2' from each end of the home and evenly spaced.
(3) Brackets to be rated at 3150 lbs. min. allowable.

Requred Anchors
HUD Wind Zone I
9' max. Sidewalls, 7:12 max Roof Slope . Using Sidewall Anchor Brackets (3)

Home Sections	Home Widths	Home Length (1)	Anchors per Side (2)
Single	12' (up to 140")	up to 53'	4
		54' to 70'	5
		71' to 86'	6
		87' to 90'	7
	14' to 18' (156" to 210")	up to 55'	4
		56' to 72'	5
		74' to 90'	6
Double	20' (2x118")	up to 90'	4
	24' to 32' (2x140" to 2x186")	up to 90'	3
Triple	36' to 48' (3x140" to 3x186")	up to 90'	2

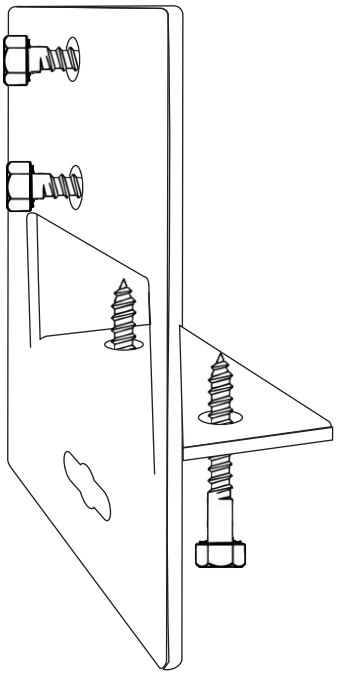
Notes -
(1) Home length refers to the size of the structure.
(2) Anchors should be placed 2' from each end of the home and evenly spaced.
(3) Brackets to be rated at 3150 lbs. min. allowable.

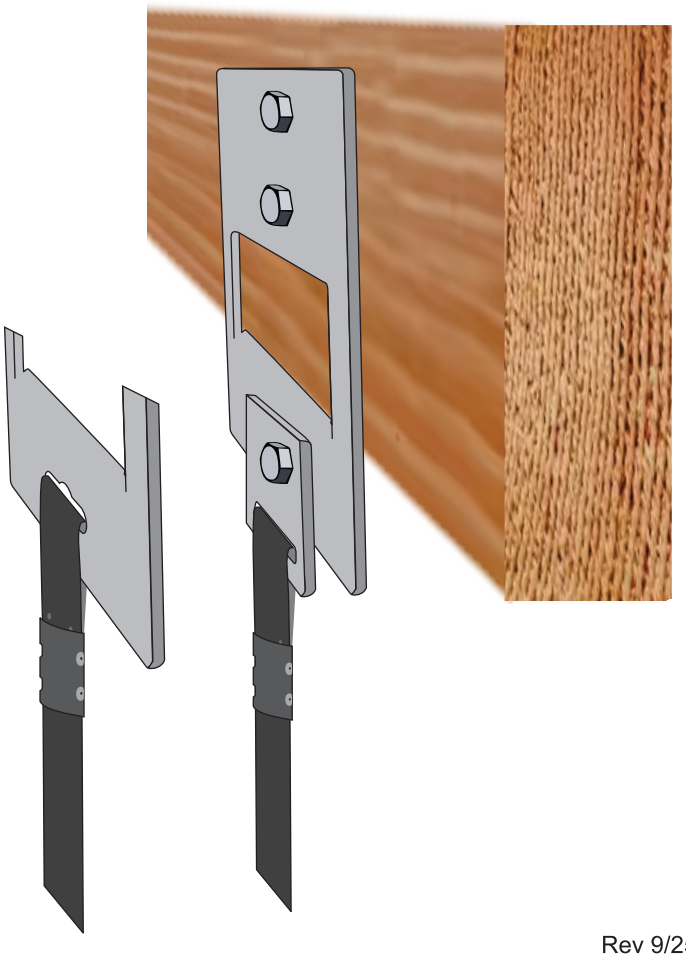
Side Wall Bracket Installation

Position bracket to the bottom of rim joist.
Use (2) 3/8 x 3 1/2 lags, (2) 5/16 x 1 1/4 lags

Strap Installation

Through slot and crimp or 5/8 bolt on pivot clip





Rev 9/25

Minute Man Anchors

Patent Number
6622439

Installation Instructions for Model LLBS Longitudinal and Lateral Bracing System Zone II

Note: Your set must be designed by a Registered Professional Engineer if all or one of the following conditions occur:

- Location is within 1,500 feet of Coast
- Pier Height exceeds 48"
- Sidewall height exceeds 96"
- Roof eaves exceeds 16"
- Main beam spacing exceeds 99.5"

1. Refer to the Home Manufacturer Installation Instructions for pier locations. Note: SD3 pad is 2.8 square foot. Vertical tie anchors are required in accordance with home manufacturer. Vertical ties must be used at all connection points furnished by the home manufacturer. Marriage wall anchors are required in accordance with the Home Manufacturer Instructions.

2. Refer to the Systems Placement Plans for the location of Longitudinal Lateral Bracing System. **(See Attached)**

3. Remove turf to expose firm soil at each SD3 pad location. Install SD3 pad to manufacturer, state, local codes, and frost line guidelines as it may apply. For extremely hard or rocky soil, mark four (4) slots and pre-drill soil with a 3/4 x 12" masonry drill bit.

4. Attach tube clip to SD3 pier pads (see Detail Assembly Drawing) center pad under beam, level pad. Angle Drive Pins may be driven vertically through four (4) slots in SD3 pier pad now or after home is totally set. Angle drive pins may be driven up to ten degrees (10) off of vertical. If you choose to drive pins after home is set, do not cover slots in pier pad.

5. Level home on concrete blocks or steel pier by Minute Man.

6. Install Longitudinal and Lateral Bracing in accordance with Systems Placement Plan and Detail Assembly Drawing. **(2 longitudinal brace tubes per system in Wind Zone II & III).**

7. Anchors with an allowable working load equal to or exceeding 3,150 lbs. and are capable of withstanding a 50% overload (4,725 lbs. total). Stabilizer devices must be used with anchors when anchors are used to resist horizontal forces. HUD Part 3280.506(f).

ZONE II LONGITUDINAL AND LATERAL BRACING SYSTEMS PLACEMENT

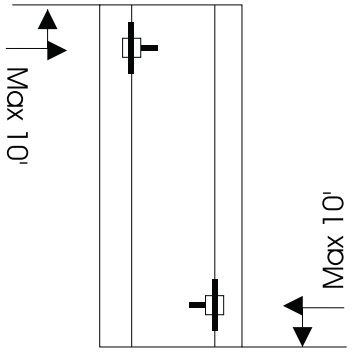
No frame ties or stabilizer plates required. ***Vertical tie anchors are required in accordance with home manufacturer instructions.***

2 longitudinal brace tubes per-system required in Wind Zone II.

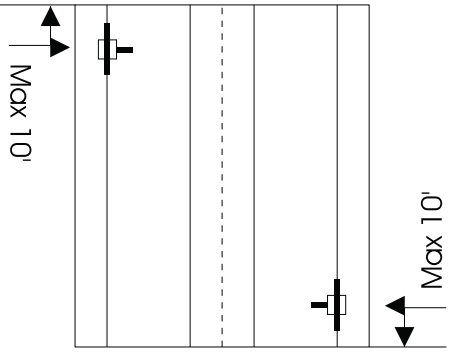
LEGEND Longitudinal and Lateral Bracing System Lateral Bracing System

HOME DIMENSIONS REPRESENT BOX SIZE- FOR HOMES OVER 80' CALL MMA

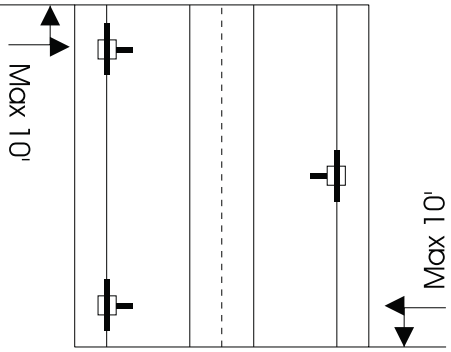
4/12 ROOF PITCH



SINGLE WIDE HOMES
UP TO 76' LONG - 2 SYSTEMS
76' - 80' LONG - 1 ADDITIONAL SYSTEM



DOUBLE WIDE HOMES
UP TO 76' LONG - 2 SYSTEMS
76' - 80' LONG - 1 ADDITIONAL SYSTEM



SYSTEM LOCATIONS FOR
SINGLE & DOUBLE WIDE HOMES
USING 3 SYSTEMS

Home's Length ft.	Roof Pitch/Degree of Slope				
	5:12	6:12	7:12	8:12	9:12
	22.62°	26.57°	30.26°	33.69°	36.87°
34'	2	2	2	2	2
36'	2	2	2	2	2
38'	2	2	2	2	2
40'	2	2	2	2	2
42'	2	2	2	2	3
44'	2	2	2	3	3
46'	2	2	2	3	3
48'	2	2	3	3	3
50'	2	3	3	3	3
52'	2	3	3	3	3
54'	3	3	3	3	3
56'	3	3	3	3	3

Home's Length ft.	Roof Pitch/Degree of Slope				
	5:12	6:12	7:12	8:12	9:12
	22.62°	26.57°	30.26°	33.69°	36.87°
58'	3	3	3	3	3
60'	3	3	3	3	3
62'	3	3	3	3	3
64'	3	3	3	3	4
66'	3	3	3	4	4
68'	3	3	3	4	4
70'	3	3	4	4	4
72'	3	3	4	4	4
74'	3	3	4	4	4
76'	3	4	4	4	4
78'	3	4	4	4	4
80'	3	4	4	4	4

Call Minute Man Anchors for system requirements on homes with 9' Sidewalls