

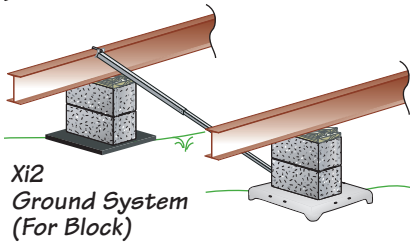


# **Ground Foundation System**

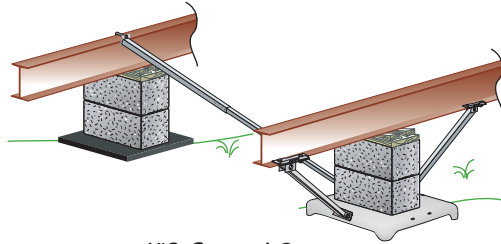
## **Installation Instructions for Wind Zone I, II & III**

### **Except Florida and California**

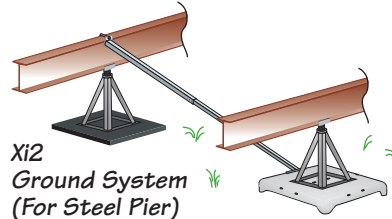
### **By Tie Down**



**Xi2  
Ground System  
(For Block)**



**Xi2 Ground System  
with Longitudinal Stabilization**  
(One Longitudinal Strut for Wind Zone I  
Two Longitudinal Struts for  
Wind Zones II & III, [Shown Above])



**Xi2  
Ground System  
(For Steel Pier)**

#### **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 the location of the system to the end of home. For all other piers use the manufacturers set up instructions.
- Wind zones II & III (100+ mph) require vertical sidewall anchorage for uplift, check local regulatory agency or manufacturer's instructions for requirements.
- Maximum vertical projection at sidewall is 9' wall and roof rim (9' wall and 12" eave). Higher walls may be used, when possible for design loads to be adjusted accordingly.
- Longitudinal strut angles need to be no more than 50 degrees and no less than 25 degrees. See page 4.
- The Xi2 ground pad is installed under, and serves as the footer for one of the piers required by the home manufacturer installations instructions. No other pad needed at this location.
- Two systems designed to work with each other must be placed as evenly as possible. Measuring from the center of the block/pier on ground pad, systems are to be placed a minimum of 2' and a recommended maximum of 10' (when needed may be a maximum of ¼ the length of the home) from each end of the home as shown on pier placement chart. Additional systems per instructions, see page 4. Components of the Xi2 System such as the longitudinal strut and connecting hardware, may extend beyond pier location.
- For roof slopes greater than 20 degrees, (4.37" in 12" Pitch) see page 4.
- This System only replaces normal lateral frame tie and or longitudinal end tie anchorage. The home manufacturer may require additional vertical anchor ties that are unique to a home's design. These locations may include shear walls, marriage line ridge beam supports, and rim plates. Check the manufacturer's installation instructions for set-up requirements.

Xi2 components exceed HUD code 3280.306 g "Anchoring equipment exposed to weathering shall have a resistance to weather deterioration at least equivalent to that provided by a coating of zinc on steel of not less than 0.30 ounces per square foot of surface coated." The Xi2 System complies with 24 CFR Part 3285 when installed in accordance with instructions provided by Tie Down.



**WARNING:** This product can expose you to chemicals including Nickel, which is known to the State of California to cause cancer. For more information go to: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

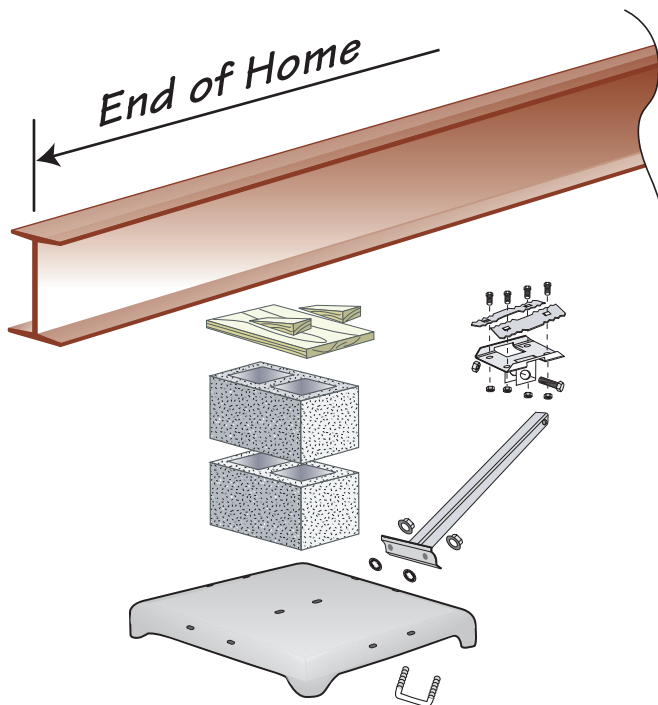
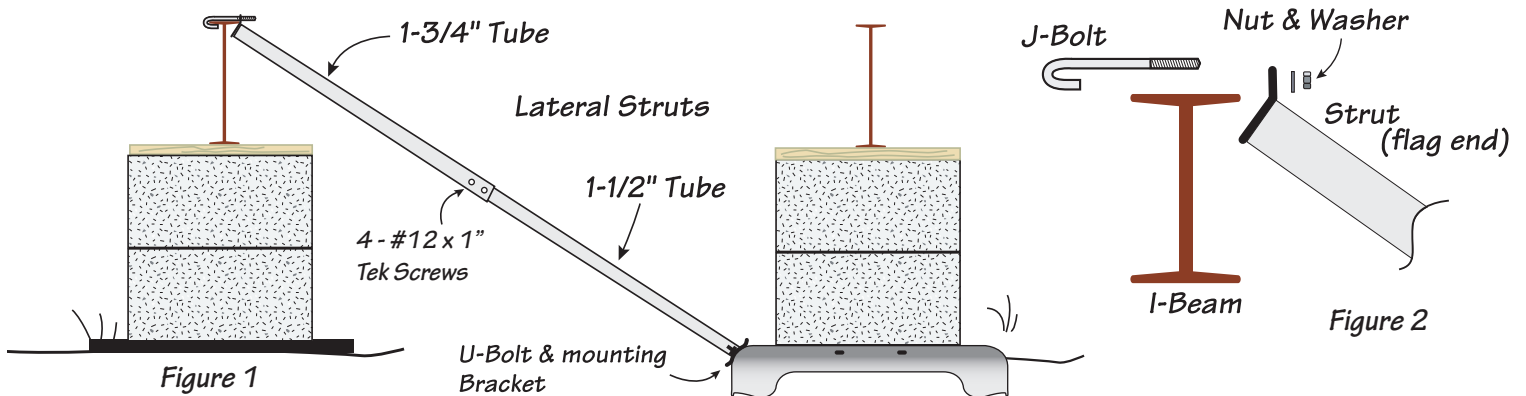
Instruction #08108 - D975, Rev. 12/2/2021

**TIE DOWN**  
MANUFACTURING INGENUITY

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## Xi2 Ground System Installation

1. Identify the number of systems to be used on the home using the chart provided.
2. Identify the location where the systems will be installed.
3. Clear all organic matter and debris from pad site. Approx. 2" below grade or frost line.
4. A. For Zone I, Place u-bolt for lateral strut through holes in pad facing under home and perpendicular to the I beam, attach lock washers on u-bolt on top side of pad. Install longitudinal u-bolt in the same manner so it is facing parallel to the I beam.  
B. For Zones II & III, Place u-bolt for lateral strut through holes in pad facing under home and perpendicular to the I-beam, attach lock washers to top side of pad. Install double longitudinal placing u-bolts on both sides of pad facing parallel to the I beam.
5. Place pad centered under beam with the lateral strut bracket towards the inside of home.
6. Press or drive pad into the ground until top is level and flush with prepared surface, holes in the center of pad let you see if it is flush with ground.
7. Build pier according to State, local or manufacturer guidelines. (Figure 1)
8. Attach the telescoping lateral tube with the smaller and foot bracket to the u-bolt in the pad with nuts provided, then attach the larger flag end to the opposite I-beam using the "J" bolt over the top of the I-beam with nut & washer provided. (Figure 2)
9. Install a minimum of four (#14 x 1" tek screws) self-tapping screws into the holes provided in the lateral strut so that the two tubes are connected together with a minimum overlap of 4" to 6" (Figure 1)



## Installation of Longitudinal System

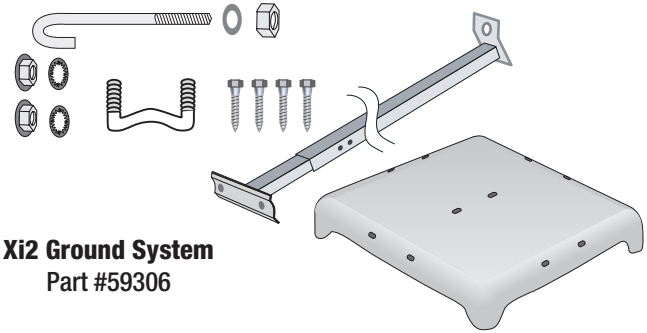
10. Install frame bracket clamps to I-beam on inside of block / pier. Do not tighten nuts at this time.
11. A. For Zone I, Attach longitudinal strut to u-bolt with foot against pad using nuts and bolts provided.  
B. For Zones II & III, Attach longitudinal Struts to u-bolts with foot against pad using nuts and bolts provided.
12. Insert square end of strut in frame bracket clamp and attach with nut and bolt provided. Do not tighten at this time.
13. Pull the frame bracket clamp with fastened strut outward to remove any slack.
14. Tighten all nuts and bolts on struts and beam clamps.

## Xi2 Ground Parts Detail

### Xi2 Ground System

Part #59306

Includes: 5' Strut, pad & hardware.  
Longer struts available.



### Longitudinal Stabilization Hardware Kit

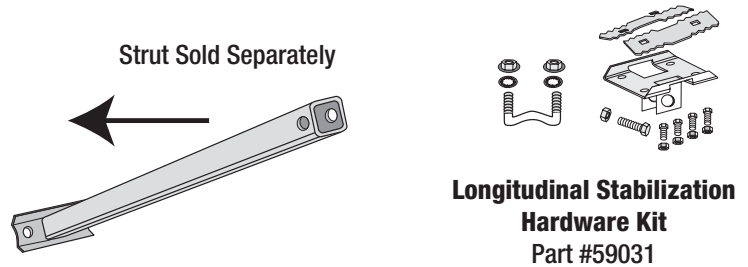
Part #59031

Includes: 1 I-beam bracket & 1 U-bolt  
with all nuts and bolts.

### Struts for Longitudinal Stabilization

Part No. Strut Length Pier Height Up To:

59330-30	30"	2 Blocks or 18"
59330-39	39"	3 Blocks or 24"
59330-44	44"	4 Blocks or 32"
59330-53	53"	5 Blocks or 40"
59330-65	65"	6 Blocks or 48"



Longer lateral struts and double beam hardware also available.

## Xi2 Lateral Stabilization

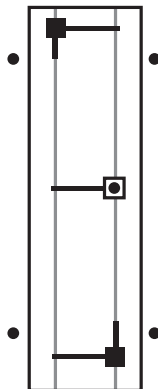
Approved Anchor\*  
with strap from  
45 to 90 degrees



Xi2 Pier  
Placement

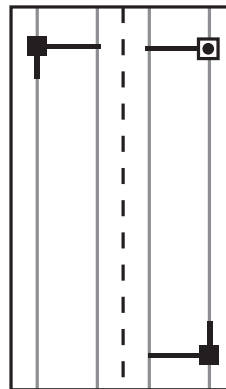


3rd System  
for Placement



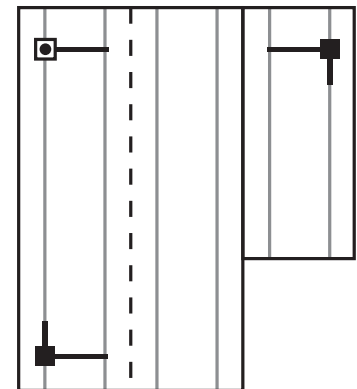
#### Single Section Home

0 - 76' Box 2 Xi2 Systems  
Over 76' Box 3 Xi2 Systems



#### Double Section Home

0 - 76' Box 2 Xi2 Systems  
Over 76' Box 3 Xi2 Systems



#### Triple Section Home

0 - 76' Box 2 Xi2 Systems  
Over 76' Box 3 Xi2 Systems

Wind Zones  
I & II

Wind Zones  
III

#### Single Section Home

0 - 64' Box 2 Xi2 Systems  
Over 64' Box 3 Xi2 Systems

#### Double Section Home

0 - 64' Box 2 Xi2 Systems  
Over 64' Box 3 Xi2 Systems

#### Triple Section Home

0 - 64' Box 2 Xi2 Systems  
Over 64' Box 3 Xi2 Systems

*For additional systems see the last page.*

\* For Wind Zone I - approved uplift anchor and strap from 45 to 90 degrees, within 10' of end of home on single sections.

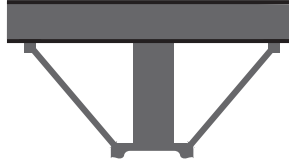
NOTE: Diagram represents single section up to 16' width, double section up to 32' width, and triple section homes up to 48' width.

## Xi2 Longitudinal Stabilization for Wind Zone I, II & III

When using longitudinal stabilization only, systems must be as evenly spaced as possible, no more than 10' from the end of the home. Longitudinal struts do not replace anchors on single section homes.



Use One Strut (per end)  
For WZ I



Use Two Struts (per end)  
For WZ II & III

**NOTE:** On triple section homes in WZII & III an additional longitudinal system is required. It should be installed on the center section.

## Xi2 System Requirements for Roof Pitches Higher than 20 degrees

Module 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

### 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.

### Strut Angles:

Need to be no more than 50 degrees and not less than 25 degrees. If needed, tube can be cut to proper length and a new hole drilled according to chart on below.

