River Birch Homes, Inc.

Quality Value Service

400 River Birch Drive • Hackleburg, AL 35564 • (205) 935-1997 • Fax (205) 935-3218

DATE:11/18/2002

To Whom It May Concern:

River Birch Homes approves the following as alternative tiedown systems for all HUD code homes when installed by the systems instructions approved by our DAPIA. Systems are to be installed only in the approved Wind Zones. DAPIA approved instructions provided when requested.

(1) Tie Down Engineering's XI Foundation System
(2) Minuteman Anchors Longitudinal And Lateral Bracing System Model LLBS
(3) Vector Dynamic's Foundation System
(4) Oliver Technologies All Steel Foundation System Models: 1100 I, 1100 IL, 1100 IT, 1100 I"V", 1100 IT "V", 1100 I C"V", 1100 I LC"V", 1100 I TC"V", 1100 II"V", 1100 II-L"V", 1100 II C"V", 1100 II LC"V", 1100 II TC"V"

Sincerely,

Delmo Payne
General Manager

River Birch Homes, Inc.

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# OLIVER TECHNOLOGIES
# ALL STEEL FOUNDATION SYSTEM
# INSTALLATION INSTRUCTIONS

THESE INSTRUCTIONS ARE NOT PART OF THE REGULAR INSTALLATION MANUAL AND IS PROVIDED SEPARATELY WHEN REQUESTED.

APPROVED #2
PFS Corporation-Dallas, TX

AUG 15 2001

HUD Manufactured Home
Construction and Safety Standard

REF: CA-1.11.X

MF-13

ENGINEERS STAMP

**OLIVER TECHNOLOGIES, INC.**
**INSTALLATION INSTRUCTIONS FOR THE**
**MODEL 1100 I "V" SERIES WIND ZONE I**
**ALL STEEL FOUNDATION SYSTEM** PATENT PENDING
**MODEL 1100 I "V" (STEPS 1-12)**
***MODEL 1100 I T "V" TRANSVERSE ONLY:***
***FOLLOW INSTRUCTIONS 1-3 , 9-12***


1. SPECIAL CIRCUMSTANCES: If the following conditions occur - *STOP! Contact Oliver Technologies at 1-800-284-7437* : a) System height exceeds 48" b) Length of home exceeds 76 d) Roof eaves exceeds 6" d) Sidewall height exceed 96" e) Roof Pitch greater than 4.37/12 (20 degrees) f) Location is within 1,500 feet of coast g) Footing to surface area exceeds 3 square feet h) Soil conditions less than 4B

## INSTALLATION OF GROUND PAN

2. Remove weeds and debris in an approximate two foot square to expose firm, level undisturbed soil or controlled fill for each ground pan (C) . Ground pan must be installed at or below frost line or per local jurisdiction.

3. Place ground pan (C) directly below chassis I-beam . Press or drive pan firmly into soil until flush with or below soil. **SPECIAL 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 one-half inch (1/2") before home is lowered completely on to piers, complete items 4 through 8 below or drive frame bracket (F) toward center of pan.

## INSTALLATION OF LONGITUDINAL "V" BRACE SYSTEM

**NOTE: USE OF THIS SYSTEM ELIMINATES ALL LONGITUDINAL ANCHORS, STABILIZER PLATES, AND FRAME TIES. THE HOME MUST BE INSTALLED ACCORDING TO THE HOME MANUFACTURERS INSTRUCTIONS.**

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

| PIER HEIGHT (Approx. 40 - 60 degrees Max.) | 1.50" Tube Length |
|---|---|
| 7 3/4" to 25" | 25" |
| 24 3/4" to 32 1/4" | 32" |
| 33" to 41" | 44" |
| 40" to 48" | 54" |

**FOR STATE OF ALABAMA ONLY:** 1. Maximum pier height is limited to 32" with pier defined in the Alabama Regulation as " that portion of the support system between the top of the footing and the bottom of the pier cap." 2. The State of Alabama limits the use of this system to H.U.D labeled homes.

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

6. Place I-beam connector (F) loosley on the bottom flange of the I-beam.

7. Attach the selected 1.5" tubes (E) to the I-beam connectors (F) and fasten loosely with bolts and nuts. Note: The angle is not to exceed 60 degrees and not less than 40 degrees. The V bracket (J) is stamped with the angles to verify correct degree. Use proper length tube or cut and drill tube to achieve proper length.

8. Tighten all bolts. With standard hand tools.

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## INSTALLATION OF LATERAL TELESCOPING TRANSVERSE ARM SYSTEM

**NOTE: THE MODEL 1100 I T "V" (LATERAL PROTECTION) ELIMINATES THE NEED FOR MOST ANCHORS, STABILIZER PLATES & FRAME TIES.**

9. Select the correct square tube brace (H) length for set-up lateral transverse at support location. The lengths come in either 60" or 72" lengths. (With the 1.50" tube as the bottom tube, and the 1.25" tube as the inserted tube.)

10. Install the 1.50 transverse brace (H) to the ground pan connector (D) with bolt and nut.

11. Slide 1.25" transverse brace into the 1.50" brace and attach to adjacent I-beam connector ( I ) with bolt and nut.

12. Secure 1.50" transverse arm to 1.25" transverse arm using four (4) 1/4" - 14 x 3/4" self-tapping screws in pre-drilled holes.

REF: CA-I.14.X
CA-I.18.X

MANUFACTURED HOUSING FOUNDATION SYSTEMS
**A DIVISION OF OLIVER TECHNOLOGIES, INC.**
**1-800-284-7437**

Telephone: 931-796-4555
Fax: 931-796-8811
www.olivertechnologies.com

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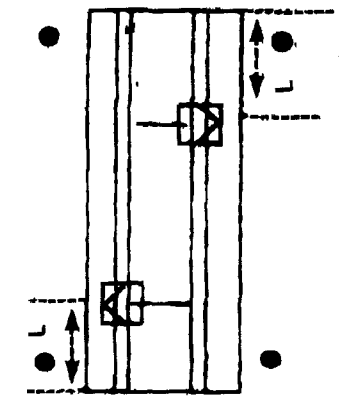
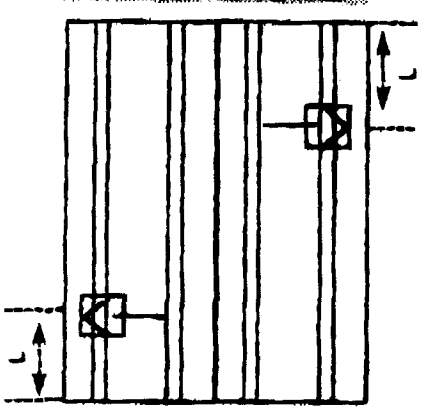
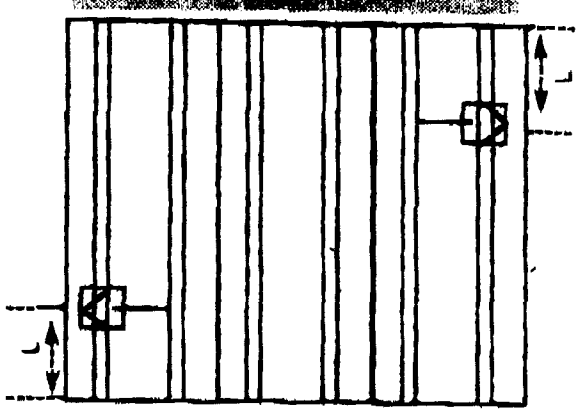
# REQUIRED NUMBER AND LOCATION OF MODEL 1100 I "V" BRACES WIND ZONE I



SINGLE SECTION ALL WIDTHS UP TO 76'



DOUBLE WIDES ALL WIDTHS UP TO 76'

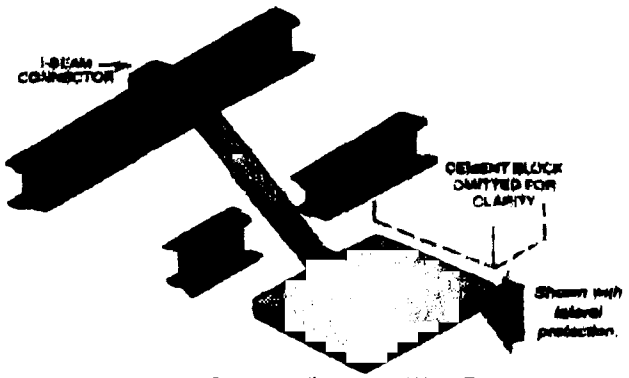


TRIPLE WIDES ALL WIDTHS UP TO 76'

[illegible] be installed at 2nd set in from [illegible] exceed the 3rd [illegible]

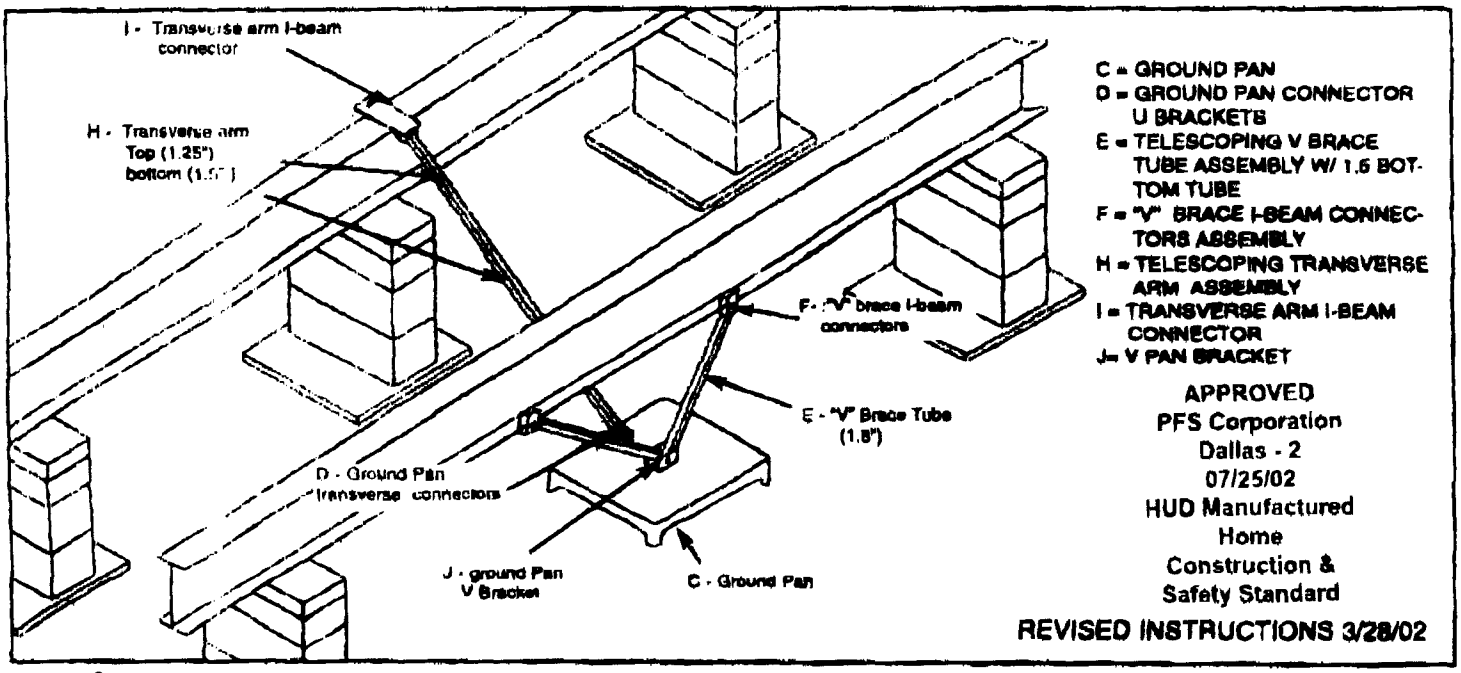
NOTES:

1. LENGTH OF HOUSE IS THE ACTUAL *BOX SIZE*
2. L = APPROXIMATE LOCATION OF THE SYSTEM ( SEE RECOMMENDATION)
3.  = LOCATION OF ASF MODEL 1100 I "V" (LATERAL & LONGITUDINAL BRACING). OR 1100 IT (LATERAL ONLY)
4. ● = INSTALLATION OF SINGLE WIDE HOMES REQUIRE 2 ANCHORS PER SIDE . (WITH A MINIMUM OF 3150 LOAD RATING)




Pan With 6' Arm (for Wind Zone 1 Only)

**Model # 1100 IT "V"**




C = GROUND PAN
D = GROUND PAN CONNECTOR U BRACKETS
E = TELESCOPING V BRACE TUBE ASSEMBLY W/ 1.5 BOTTOM TUBE
F = "V" BRACE I-BEAM CONNECTORS ASSEMBLY
H = TELESCOPING TRANSVERSE ARM ASSEMBLY
I = TRANSVERSE ARM I-BEAM CONNECTOR
J = V PAN BRACKET

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HUD Manufactured Home Construction & Safety Standard

REVISED INSTRUCTIONS 3/28/02

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