DOUBLE WIDE INSTRUCTION MANUAL

Superior Homes, LLC
715 21st Street SW
Watertown, SD 57201
Phone: (605) 886-3270

Dear Dealer:

Here is your NEW Superior Homes LLC double wide. Over 30 years of continuously successful mobile home manufacturing experience has gone onto the design, quality of material and workmanship of the Double Wide.

It is now your responsibility to see that this same quality construction is passed on to the retail customer. In order to help you set up the Superior Homes LLC promptly and correctly, we have prepared these set up instructions.

Please ask your serviceman to read these instructions thoroughly before starting to set up the Superior Homes LLC. All of the larger materials required for set-up are located in the living room and/or family room. The smaller items required such as screws, nails, nuts and bolts are located in a carton marked "Double Wide Set-up Material". Should you require further information please contact us.

The Superior Homes LLC has been designed to meet or exceed THE NATIONAL MANUFACTURED HOUSING SONCTRUCTION AND SAFETY STANDARDS; therefore, these instructions must be followed carefully in order to maintain compliance with THE NATIONAL MANUFACTURED HOUSING CONSTRUCTION AND SAFETY STANDARDS ACT.

SITE PREPARATION

The site selected to place the home should be properly graded to prevent the accumulation of water under the home. Enclosed crawl spaces shall be cross ventilated with a free air space of at least 1/150 of the floor area. Internal moisture control is the responsibility of the home owner by controlling the humidity levels in the home. (See Condensation Control information provided in the warranty information).

WARRANTY INFORMATION

Refer to manufacturers warranty information included in the warranty package for periodic maintenance and general upkeep information on items such as exterior siding, shingles, appliances, windows, doors, floor coverings, etc.....

CUT CEILING OPENING

WARNING

Disconnect all electrical power to the mobile home at the main electrical panel before cutting into the roof and ceiling cavity.

Contact with hot electrical wires could cause equipment damage, fire, personal injury or death.

When cutting into roof and ceiling area extreme care should be taken not to damage any electrical wiring that may be hidden underneath the roof or behind the ceiling.

If alternate source of power is not available, use battery powered or hand tools to cut openings.

An opening in the ceiling must be cut to accommodate the flex duct and control wiring harness.

1. Scribe a 6–7" dia. circle in the ceiling approximately centered above the damper tube assembly. The ceiling hole location may have to be adjusted to miss ceiling joist or other obstructions in the roof cavity.
2. Once the location has been selected, cut the opening in the ceiling.

NOTE: If the Deluxe Blend Air II system is being installed during the construction of the home, avoid dropping sawdust, wood particles or insulation on top of the furnace. The operation of gas and oil furnaces can be affected by contamination within the roof jack openings.

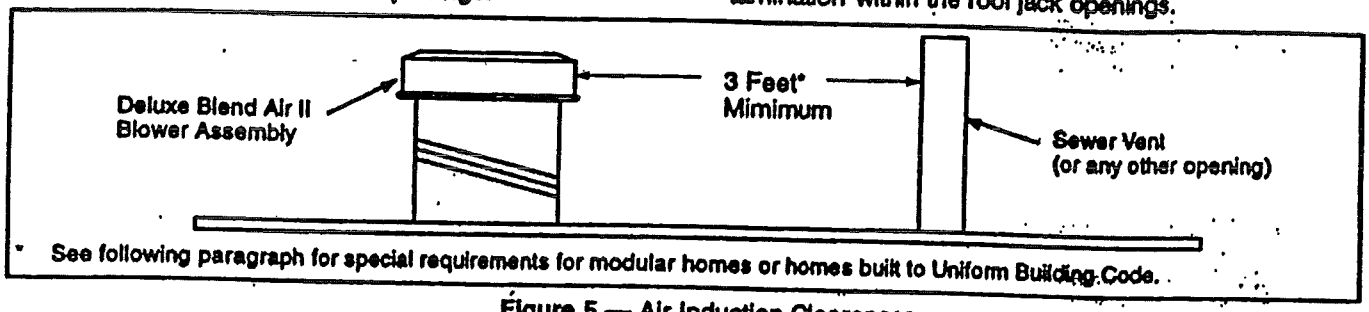


Figure 5 — Air Induction Clearances

CUT AIR INDUCTION OPENING

1. Homes built in accordance with H.U.D. standards: H.U.D. requires that the fresh air intakes on the roof are located at least three (3) feet away form any roof opening, i.e., roof jack, sewer vent, bathroom exhaust, etc.
2. For optimum operation, the induction opening is recommended to be located no less than 1/3 length of the house toward centers. However, the air delivery requirement is still met if placed less than the recommended.

   NOTE: For double wide models with continuous sheathing between the marriage wall, Air Induction should be located so that one end of air outlet expels air toward the minimum 100 square inches opening.

   The opening should be located between rafters and away from the bedroom below.
3. Mark the selected location. Cut an 11 inch diameter hole through the roof and into the roof cavity.

ROUTE FLEX DUCT AND CONTROL CABLE

1. Route the flex duct from the opening in the roof, through the attic area, into the furnace compartment, passing through the 6-7" diameter opening in the ceiling.
2. Route the low voltage control cable in the same fashion. Pass control cable through the 7/8" hole in furnace top and use the plastic strain relief (provided in small parts package) to protect the cable assembly.
3. Install inner flex duct to damper tube assembly using one large wire tie, as shown in Figure 6. Pull down insulation and outer flex duct. (Avoid overtightening of strap.)
4. Observe approved methods of fire-stop requirements for flex duct where it passes through the ceiling. Accessory ceiling rings (P/N 7660-2841) are approved for this purpose.

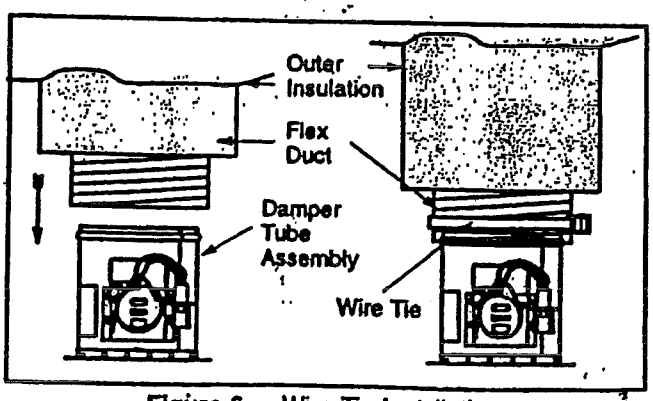


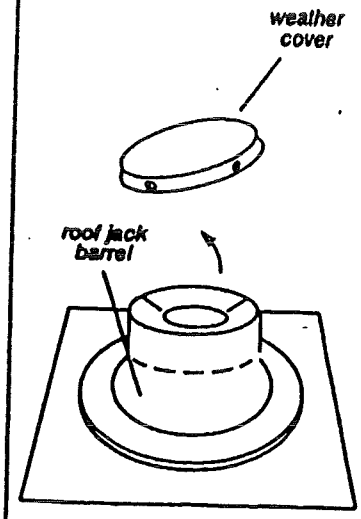
Figure 6 — Wire Tie Installation

BLEND AIR

Install the cap with the screws provided. Turn cap with lower end of seam facing peak of home. Caulk base and seam with butyl caulk.

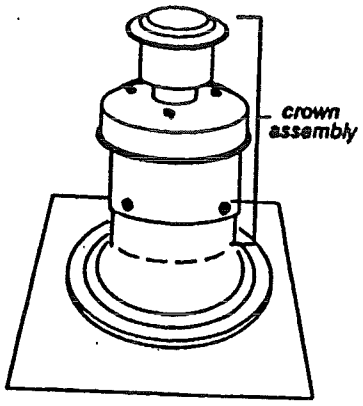
INSTALLATION OF EXTERIOR ROOF JACK EXTENSION ON 4000–7XXX SERIES ROOF JACK, AND REMOVABLE CROWN 4000–8XXX SERIES ROOF JACKS

STEP 1: Remove Weather Cover.



Remove the 3 screws that secure the *weather cover* to the roof jack barrel Remove and discard the cover

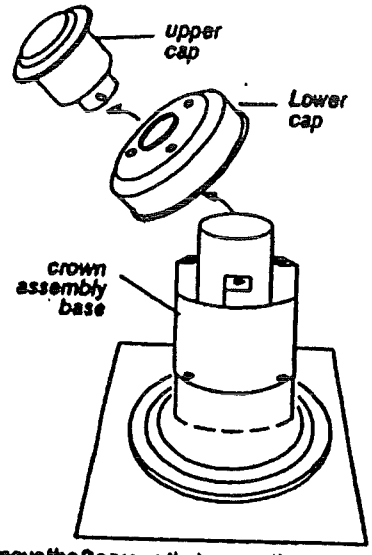
STEP 2: Install Crown Assembly.



Slide the *crown assembly* over the roof jack barrel Secure with the 3 screws previously removed from the weather cap, using the pre–punched holes as guides

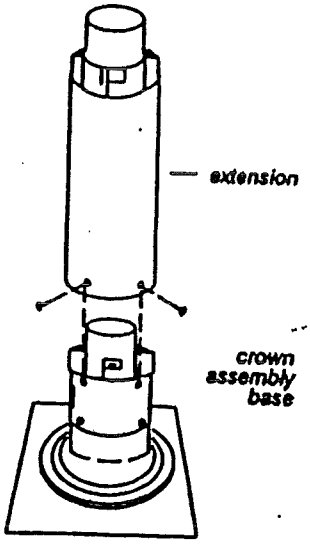
STEP 3: Remove Upper & Lower Caps.

Start here if 4000–7XXX is used.



Remove the 2 screws that secure the *upper cap* to the *crown assembly base* and remove the *upper cap*. Next, remove the 3 screws that secure the *lower cap* to the crown assembly base Set both caps aside for later use

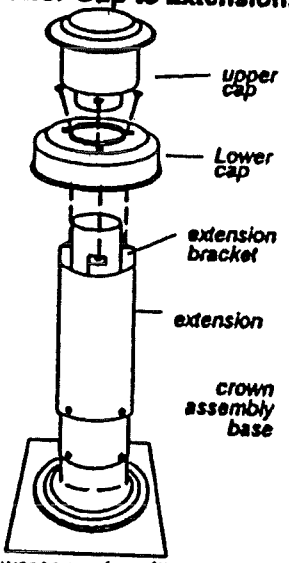
STEP 4: Install Extension



Place the *roof jack extension* on top of the crown assembly base, pushing down firmly to assure a snug fit **IMPORTANT: Make sure that the pipes are connected.**

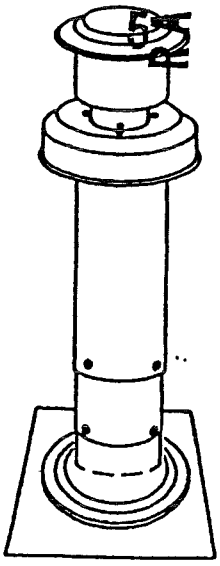
Using the 4 holes at the base of the extension as a guide, drill 4 holes 1/8" diameter into the crown assembly base Secure the extension to the crown assembly base with the 4 screws provided

STEP 5: Reinstall Upper & Lower Cap to Extension.



Install the *lower cap* on top of the *extension* so that the center pipe sticks through the hole in the lower cap Using the 3 screws removed in step 3, attach the lower cap to the extension bracket Install the *upper cap* over the center pipe of the extension Using the 2 holes located at the base of the upper cap as guides, drill 2 holes 1/8" diameter into the center pipe Finally, attach the *upper cap* to the center pipe using the 2 screws removed in step 3 to the center pipe.

STEP 6: Assembly Complete!



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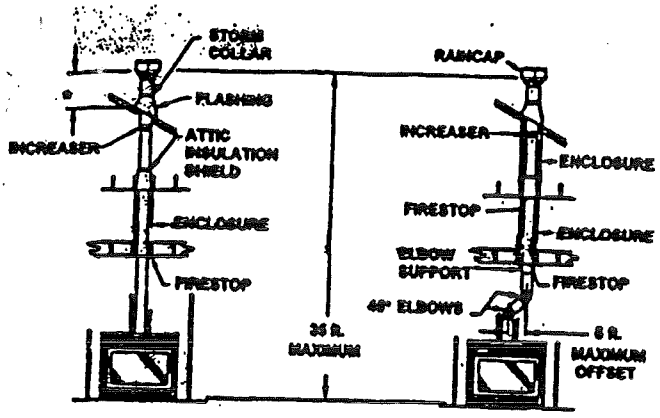
WATERTOWN, SOUTH DAKOTA



Steps For Installation of Vertical

STEP 1: Locate the fireplace.

* - REFER TO VERTICAL TERMINATION LOCATION CHART

STEP 2: Mark ceiling above unit where flex will come through.

STEP 3: Ceiling opening should be a minimum of 9.5" x 9.5" (242mm x 242mm) and framed to that size.

STEP 4: Mark opening in roof and cut a hole minimum 10.5" x 10.5" (267mm x 267mm) and frame to that size.

STEP 5: Place fireplace in proper location and secure to the floor.

STEP 6: Install firestops and/or a firestop thimble assembly at the ceiling level(s) as follows:

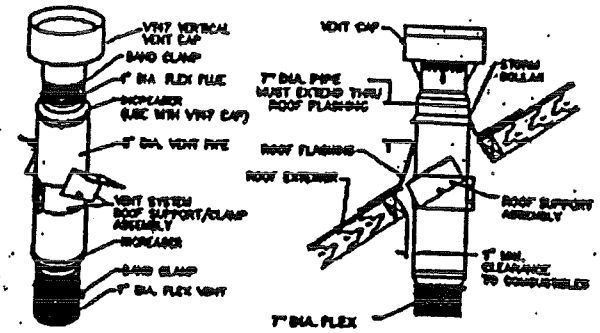
(a) If a room is located above the ceiling, a standard firestop should be secured to the underside of the ceiling joists.

(b) If an attic space (insulated or not) is located above the ceiling, a combination firestop/thimble assembly such as a GFSH7 or equivalent must be used. This should be secured to the underside of the ceiling joists as well.

Note: If offset is required, the upper 45° bend (elbow) must be supported with an offset support. Support flex every 3 feet when vertical venting.

STEP 7: Rigid pipe section included with vertical termination must be used in conjunction with the roof support so that the termination is secure in winds. Attach increaser to the bottom of rigid section.

Install roof support, rigid section of pipe and flashing. Make sure vent cap will be in accordance with the vertical termination location chart above the roof, and the flashing below the shingles.



STEP 8: Install storm collar and caulk around the pipe.

STEP 9: Install flex at unit and bring up to termination. It will be necessary to remove 30 inches of flex from the 7" outer to make up for the rigid piece. Attach 4" flue to termination (clamp). Screw termination to rigid pipe. Clamp flex to rigid pipe.

Unit Adjustment & Maintenance

Once installed, the unit should be operated at least 3 times to ensure that all is in working order. Note: Manufacturing oils will smoke during initial firing of appliance. Open windows for ventilation.

Unit Adjustment

Before leaving, the installer should make the following checks:

(a) BTU Input/Gas pressure
The fireplace input is marked on the Rating Plate. The gas valve comes factory preset to the proper rated pressure and adjustment should not be necessary. If there is any question of input, then it may be necessary to check manifold pressure.

Manifold pressure can be measured by using a 5/16" I.D. hose. In the right hand side of the valve and connecting a manometer.

Two test gage ports are accessible for test gage connection:

(i) Tap on the left side of the valve will give inlet supply pressure.

(ii) Tap on the right side of the valve will give manifold pressure.

Loosen screw in test port 1/2 turn to measure pressure. Tighten screw when measurement is complete.

Pressure ranges are as listed below:

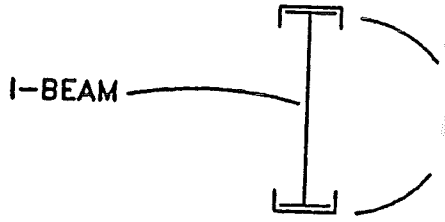
Gas Supply Pressure (inches w.c.)

	Minimum	Normal	Maximum
Natural Gas	4.5	7.0	14.0
L.P. (Propane)	10.8	11.0	14.0

Manifold Pressure (inches w.c.)

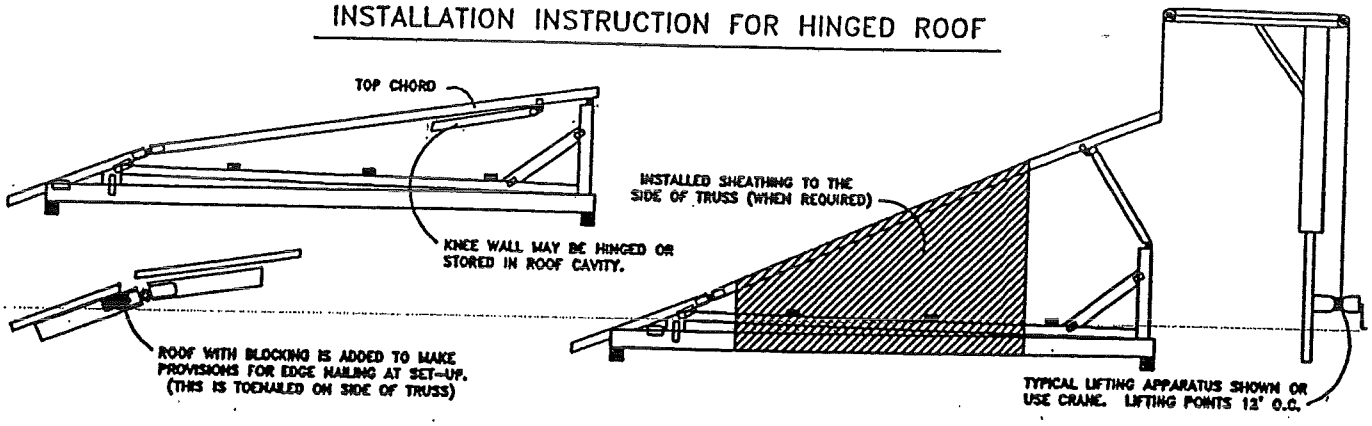
	Normal (HI)	(LOW)
Natural Gas	3.5	1.6
L.P. (Propane)	10.0	6.3

PROTECTION OF TIE-DOWN STRAPS AT I-BEAM LOCATIONS

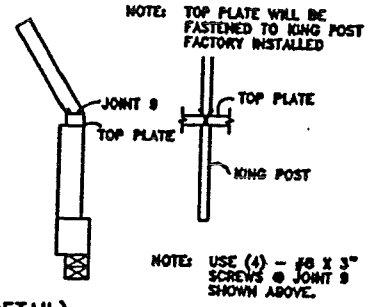


SCRAP PIECES OF TIE-DOWN STRAP BENT OVER FLANGES OF I-BEAM BEFORE TIE-DOWN IS PLACED AROUND BEAM. (SEE THE FOLLOWING PAGES FOR APPLICATION OF TIE-DOWN)

INSTALLATION INSTRUCTION FOR HINGED ROOF



TYPICAL HINGED ROOF SETUP



NOTES:

1. REMOVE ALL SHIPPING MATERIALS FROM ROOF AND MARRIAGE WALL
2. ROOF MUST BE RAISED SIMULTANEOUSLY INTO POSITION TO ALLOW THE KNEE WALL OR KING POST INSTALLATION. LIFTING POINT TO BE 12' APART THE LENGTH OF HOME. DO NOT OVER RAISE THE ROOF
3. TO SECURE THE KING POST AT SPLICE, USE (4) - #8 X 3" WOOD SCREWS PLACING (2) ON EACH SIDE AT AN ANGLE (SEE NOTE DESIGN ON JOINT 9)
4. TO SECURE THE ROOF SHEATHING AT THE HINGE SEAM WITH EDGE NAILING, INSTALL 1 1/2" X 16 GA. STAPLES AT 4" O.C. (SEE HINGE DETAIL)
5. THE END RAFTER OF THE HOME WILL NEED TO HAVE A PRE BUILT KNEE WALL INSTALLED. THE WALL ARE PROVIDED WITH THE SET-UP. USING #8, 3 INCH SCREWS. SECURE THE WALL TO THE TOP AND BOTTOM CORD OF EACH END RAFTER. THE SCREWS ARE TO BE PLACED AT 6 INCHES O.C. SHIMS MUST BE INSTALLED IF THERE IS A GAP BETWEEN THE WALL AND RAFTER. INSTALL THE PRE CUT 3/8" MIN. APA SHEATHING FOR THE END RAFTER. (USING #8 2-1/2" NAILS). NAIL THE PANEL EDGES 2" O.C. AND 12" O.C. IN THE FIELD TO THE END RAFTER.
6. ONE ROW OF SINGLES WILL NEED TO BE INSTALLED ONCE THE HOUSE IS SET. PUT A LAYER OF TAR ALONG THE ROOF WHERE THE STATIONARY AND HINGED PORTIONS OF THE ROOF MEET. INSTALL THE ROW OF SHINGLES THAT ARE SHIPPED LOOSE PER MANUFACTURES INSTRUCTIONS. RENAIL THE ROW OF SHINGLES ABOVE PER MANUFACTURERS INSTRUCTIONS.
7. FOLLOW SUPERIOR HOMES,LLC INSTALLATION INSTRUCTION FOR ALL OTHER REQUIREMENTS.
8. SEE SECTION S-74D FOR OPTIONS ON INSTALLING ROOF DECKING

Manufacturer (&/or) Testing Agency	Sheeting Material	Allowable Shearwall Load [PLF]			
		No Straps	One (1) Strap	Two (2) Straps	Three (3) Straps
Georgia Pacific, U.S.G., National Gypsum	5/16" Gypsum (1-Sided, Glued)**	146	165	***	***
H.P.M.A.	3.6 mm Luan (1-Sided, PVA Glued)	280	317	***	***
H.P.M.A.	3.6 mm Luan (2-Sided, PVA Glued)	280	606	632	***
A.P.A.	3/8" OSB (1-Sided, No Glued Required) 1 3/8"x15ga. Staples 4" o.c. @ Panel Edges 12" o.c. in field.	255	***	***	***
A.P.A.	3/8" OSB (1-Sided, No Glue Required) 1 3/8"x15ga. Staples 2.0"o.c. @ Panel Edges 12" o.c. in field.	280	337	395	431

*** Denotes allowable [plf] for the sheathing material has been exceeded. Therefore, using additional straps is unnecessary.

FEDERAL MANUFACTURED HOUSING CONSTRUCTION & SAFETY STANDARDS

RADCO

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Superior Homes, LLC
Watertown, South Dakota

OPTIONAL ROOF DECKING

ROOFING DECKING AT THE TOP OF THE ROOF WILL NEED TO BE INSTALLED ONCE THE RAFTERS ARE RAISED AND SET INTO POSITION. INSTALL A 2 X 4 BETWEEN THE RAFTERS AT THE PANEL EDGES. THE 2 X 4 MAY BE INSTALLED VERTICALLY OR FLAT AND FIRMLY ATTACHED TO THE RAFTERS WITH 16 PENNY NAILS. INSTALLED ROOFING PAPER OVER THE DECKING, MAKING SURE THERE IS AT LEAST A 2 INCH OVER LAP. INSTALL THE SHINGLES PER MANUFACTURE'S INSTRUCTION.

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SET-UP INSTRUCTIONS DOUBLE WIDE-SUPERIOR HOME

1. Remove weather protective covering from attic area, doorways, electrical and plumbing, crossover areas, and any other possible areas, which need access on both halves of the home.

2. Cut out the 1 x 3 inner sidewall bottom plates within door openings.

3. Level and block Unit A of Double Wide, blocking points every 8 feet on center or less on main I-beam members of chassis. (See Blocking Instructions attached for additional required blocking).

4. Before moving Unit B into position, cut 3-3/4" wide strips of fiberglass insulation from roll of fiberglass supplied and attach to the marriage wall at floor, end walls and the top plate of marriage wall. See figure 1.

NOT A GASKETING MATERIAL

5. Move Unit B of Double Wide into position beside Unit A. (Approximately 6" apart)

6. Locate and connect all snap together electrical splices of like markings on each half. Make connections and secure connectors per manufactures installation instructions on page s-24b & s-24c. (With opt. junction boxes, guide wires into boxes at this time and connect per step #21). When snap together connectors are used, skip parts C & D of step #21.

7. Connect the unions in the water lines at floor level opening and adjust flexible tubing to permit the units to move together. (Hot water lines are marked).

8. Draw the two floors together with jacks or winches (come-a-longs). Be sure come-a-longs are attached to the I-beam in undercarriage area, where reinforcement plate is welded to bottom flange, as close to a center member as possible. Next, insert 3/8" x 3" bolts in the mating bars at the end of the front cross members. (See figure 2). Next, attach washers and nuts, but leave loose. DO NOT TIGHTEN until marriage walls are properly aligned, both vertically and horizontally. (Premature tightening of these bolts tends to pull the top apart when it is not yet secured as well as interfere with the alignment of floors and openings). Check the alignment of openings in the halves, and adjust accordingly. *SEE PAGES S-25 (FIGURE 4) FOR OPTIONAL LAG BOLTS IN LIEU OF MATING BARS.

9. Close the gap at the center ridge beam of the roof by raising the outside (door side) of Unit B. Install 2"x8" galvanized straps over peaks of joining trusses. Nail with galvanized roofing nails 2"- 5 ea. Truss end. At this time, install galvanized straps approximately every 12 feet to secure top in position while double-checking again to assure proper alignment throughout, of both halves.

10. If all is ok, then snug up nuts on 3/8" bolts through mating bars. If alignment is perfect, then install a pair of Mating Bars 6'-4" O.C. for 24'wides or 8'-6" for 28' wides. (See figure 2 Pg. S-).

11. Install galvanized straps, approximately 2"x 8", every four (4) feet on every third truss. (See figure 2 Pg. S-).

12. Using four (4) galvanized roofing nails per shingle, install top row of shingles on Unit A and allow shingles to overlap Unit B. Install top of shingles on Unit B and to overlap Unit A. (See figure 2 Pg. S-).

13. Use 12" x 12" individual shingles obtained by cutting shingles into thirds. Place a bead of shingle cement 4" down from the peak of each side of ridge. Shingle the ridge. Bend shingles over the ridge 6" on each side. Expose 5" to the weather and nail each side 6" in from the exposed edge so that the overlapping shingle will conceal the galvanized roofing nails. Warm shingles in cold weather so they will not crack. (See figure 2 Pg. S-).

14. USING CARPENTER OR PIPE CLAMPS, clamp together the framing members of the door and archway openings and nail 3" x 6" GALVANIZED METAL PIECES—using 4-penny nails-3 metal pieces on each side of the door opening or six per opening. Install jambs in openings. Use 6-penny finish nails as required. Install trim on both sides of jamb using #17 x 1-1/4" brads. Install doors and striker plates for door.

15. Hook up exterior drains and test water and drain systems for leaks.

16. Install 6"fascia board to overhang with color coated nails, cutting it to fit at the peak of each end.

17. On the underside of overhang cover seam with 6" x 11" piece of matching trim, securing it with color coated nails.

INSTALLATION INSTRUCTIONS FOR SMOKE ALARM

When installing an alarm, connect the white wire to the white neutral wire in the junction box. Connect the black wire to the hot wire in the junction box. Tuck the orange wire into the junction box. When multiple alarms are installed, connect white to white (neutral wire), black to black (hot wire) and the orange wire to the inner connect wire (usually red in color). Repeat this process at each alarm. At no time are the different colored wires interchanged. Plug the power connector to the smoke detector. Position the base of the smoke alarm over the mounting bracket and turn. Turn the unit clockwise (right) until the unit is in place.

TESTING THE SMOKE ALARM

To test the smoke alarm, press and hold the test button until the alarm sounds. If there are multiple alarms in the home then each alarm must be tested individually. Each of the other alarms on the circuit must be checked to make sure they sound as each alarm is tested. If any of the alarms do not function correctly, TURN OFF THE POWER and recheck all connections. Restore power to the circuit and if the alarm still is not working, replace it immediately and retest the alarms.

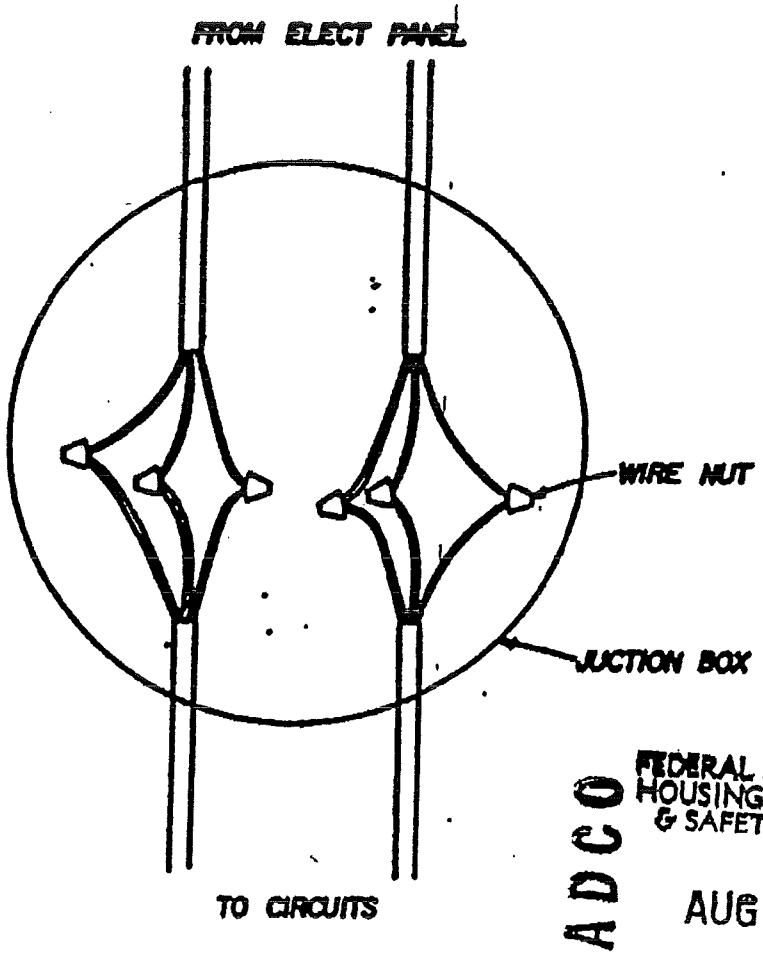
The maintenance of the alarm should be done on a weekly and monthly basis. Test the alarms weekly. Gently vacuum of any dust on the cover at east once a month using your vacuum's soft brush attachment. Test the unit after cleaning. Do not use water or cleaning solvents to clean the alarm because this may damage the unit. (For added information, see user's manual provided with this home).

22. If the home has gas plumbing on each half a "Quick Disconnect" device will be installed near the rear of home. Remove the dust caps and from the "Quick Disconnect and make the connection making sure to keep the flexible line free from kinks.

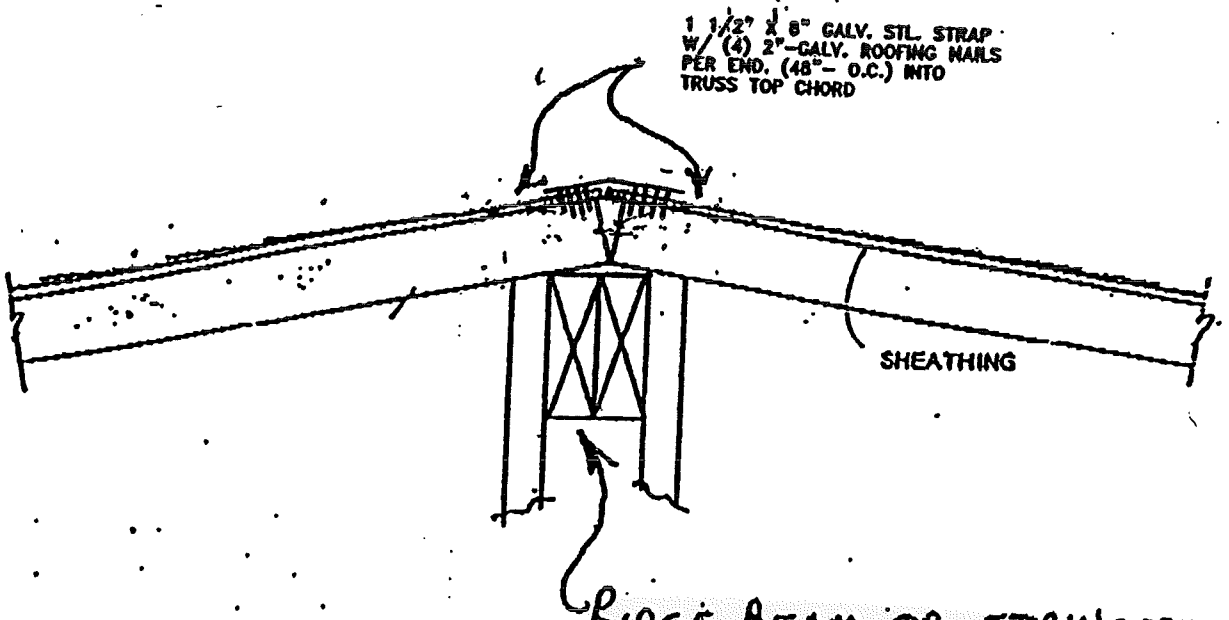
In lieu of a quick disconnect device a shut-off valve w/ a flexible connector may be present at gas line crossover. Remove dust caps and connect flexible connecter to gas pipe on opposite half, keeping flexible connector free from kinks. Turn on shut-off valve and follow testing procedures outlined in these instructions.

23. Install all exterior extensions and roof caps according to manufactures instructions.
24. The gas system of this home has been tested for leaks before leaving the factory. However, prior to turning on the gas, another test must be made to insure the gas system is free from leaks after the home has been set up. The test should consist of pumping 5 ounces of air pressure of ten minutes with no drop pressure. Gas utility companies generally require this test and are equipped to perform this test for you before the gas service is turned off.

25. Remove and store detachable hitches provided.
26. To insure grounding of frames—at front cross member below mating bar (fig. 2) find grounding wire attached one side-loosen screw on grounding lug on opposite half insert wire and securely tighten.



MARRIAGE WALL CONNECTION AT PEAK



SEE PAGE 5-25 FOR ADDITIONAL FASTENING AND FINISHING METHOD.

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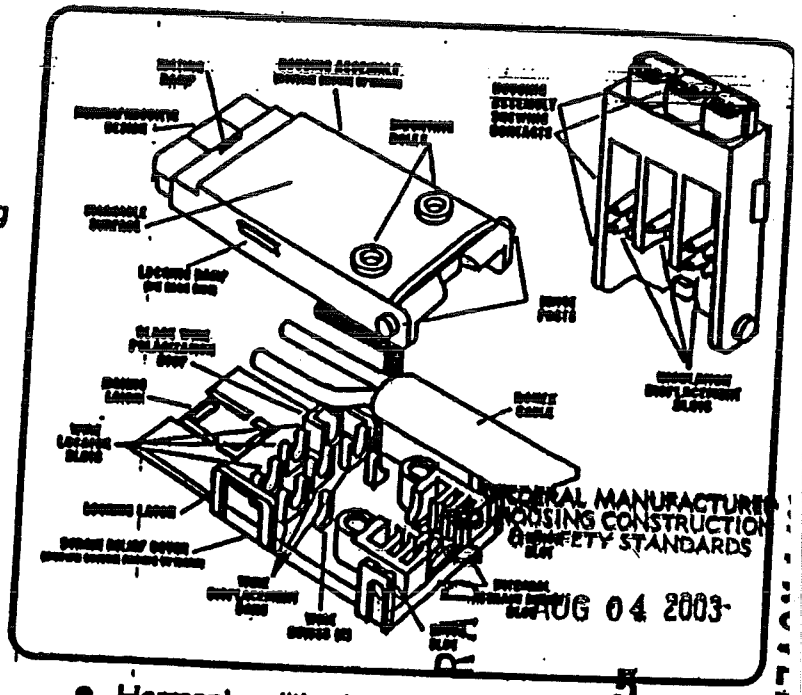
Self Contained Power Connector

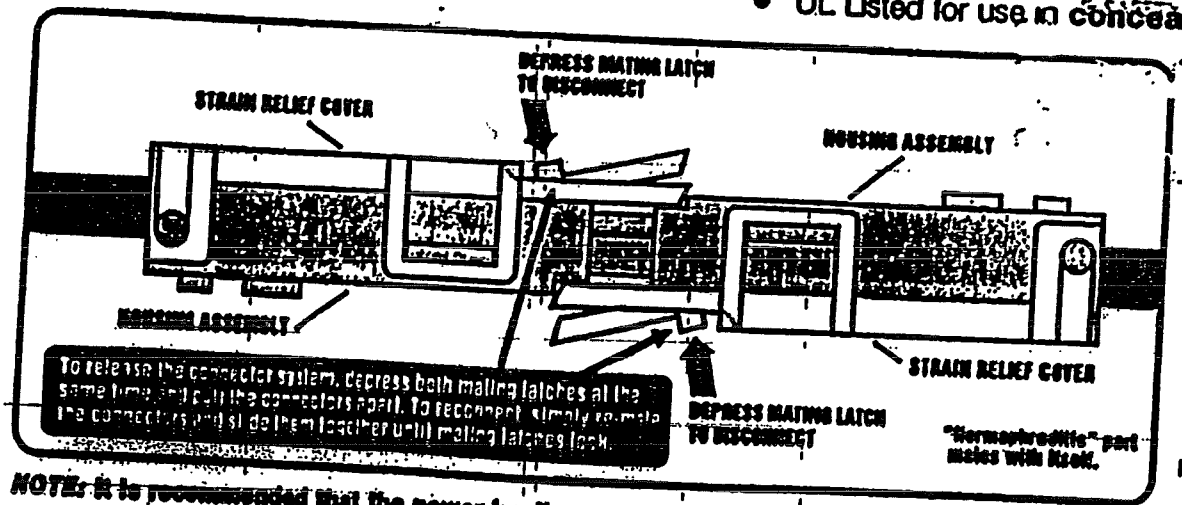
A Modular Connector System

The Self Contained Power Connector makes *splicing* non-metallic sheathed cable (Romex) quick, easy, and reliable.

- UL Listed, CSA Certified
- **Re-mateable!** Double latching system provides positive connection security when required, but is fully releasable so connector can be mated and re-mated as needed during the manufacturing process and dealer display.
- **Integral Strain Relief** has no screws or human factors to worry about. Once the connector is closed, the strain relief is automatically set into place.
- **Large markable surface** area on housing allows for easy circuit identification, eliminating crossover circuit mix-up.
- Double Insulation Displacement Contacts provide maximum **conductivity** and **reduces voltage drop** to a bare minimum.
- High impact, crystal clear strain relief cover provides durability and complete **visual inspection.**
- **No special tools** required - just pliers!
- **Accepts 14/2 and 12/2 AWG** with ground cable (Romex).



- Hermaphroditic design provides only **one part** to order and inventory.
- Rating: 300 Volts, **20 Amps.**
- Size: approx. 1-1/2" W x 2-1/2" L x 1/2" H.
- Dual **mounting holes** accept screws or nails.
- UL Listed to be connected and disconnected **while under load.**
- UL Listed for use in **concealed** areas.



molex

MOLEX
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NOTE: It is recommended that the power be disconnected before mating and unmating connector.

1. Strip and pre-form the wires to the configuration as shown in **Figure 1.**

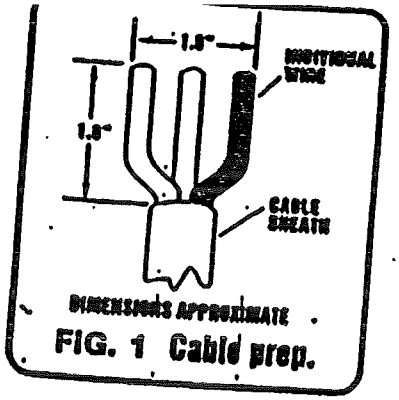


FIG. 1 Cable prep.

2. Hold clear strain relief cover with bottom facing upward as shown in **Figure 2.**

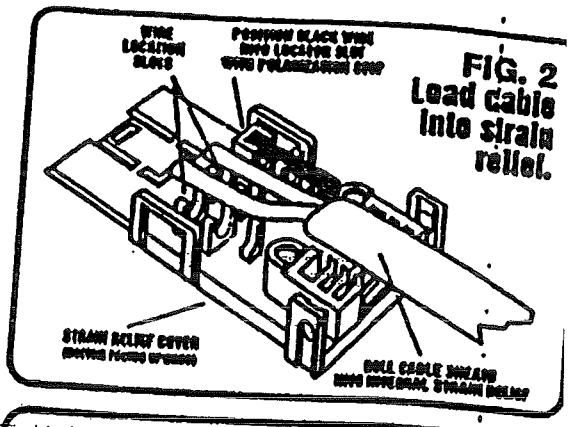


FIG. 2 Lead cable into strain relief.

3. Lay wire into locator slots, making sure black wire is placed into locator slot with the polarization step as shown in **Figure 2.** As the wires are laid in place, the cable sheath is rolled into the integral strain relief slot as shown in **Figure 2.**

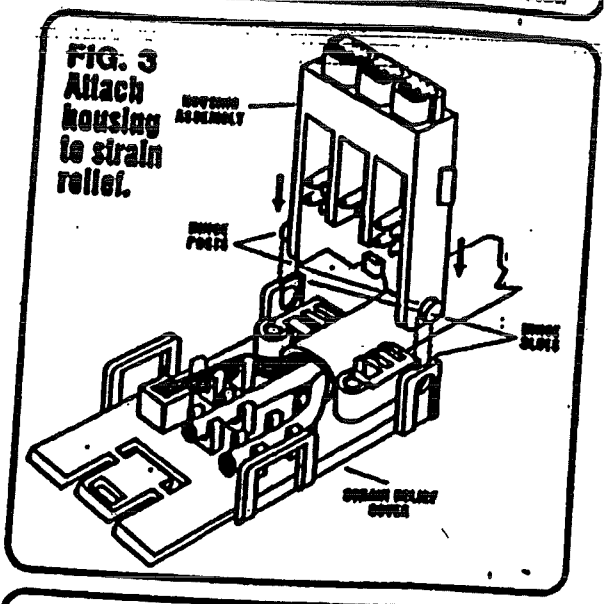


FIG. 3 Attach housing to strain relief.

4. While holding the loaded strain relief cover, take the housing and position the hinge posts into the hinge slots and push down until both posts lock into place as shown in **Figure 3.**

5. Close the strain relief cover and housing together as much as possible by hand as shown in **Figure 4.1,** then with pliers, grip the strain relief cover and housing on one side by the locking latches. Squeeze the plier handle until the locking latch snaps over the ramp into the locked position. See **Figure 4.2.** Repeat this process on the other side of the connector. Connector is now complete and ready for inspection.

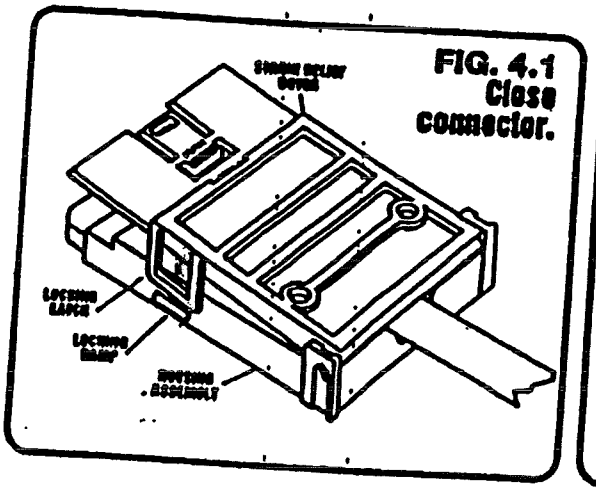


FIG. 4.1 Close connector.

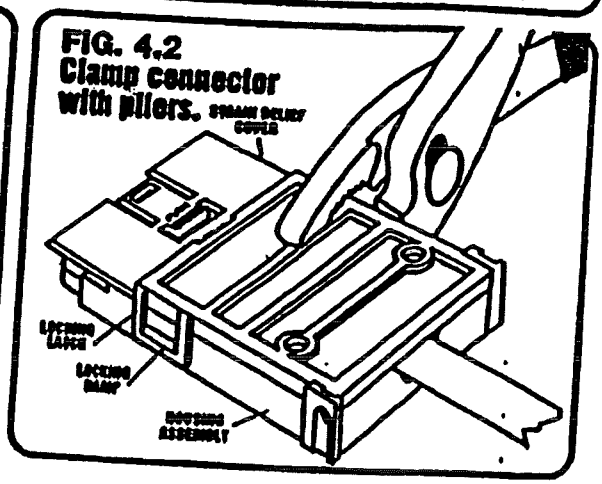
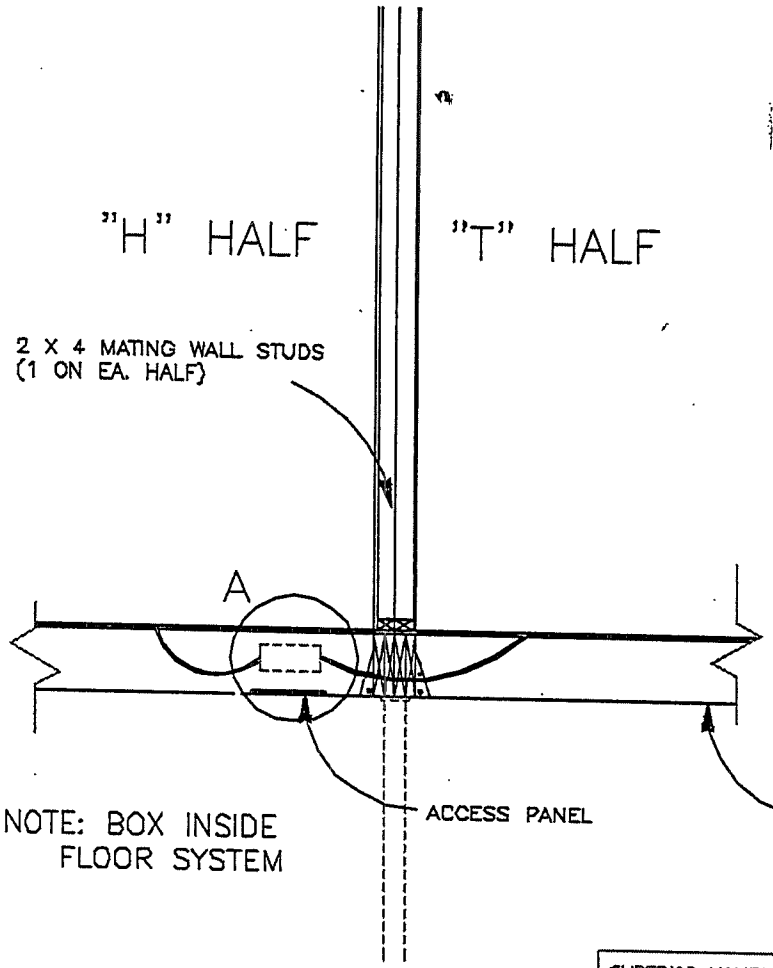


FIG. 4.2 Clamp connector with pliers.

6. By looking through the crystal clear strain relief cover you can now make a thorough inspection of the finished connector and determine if a correct wire displacement has occurred.

- Correctly displaced wires will be fully displaced in their correct wire location slots and have no significant bow in the strain relief cover.
- A significant bow in the strain relief cover would indicate the wires are not fully displaced and/or misaligned.
- If the wires are not fully displaced but properly aligned (bow in strain relief cover), squeeze the connector cover at each wire contact location again until wires are fully displaced and bow in strain relief cover is gone.

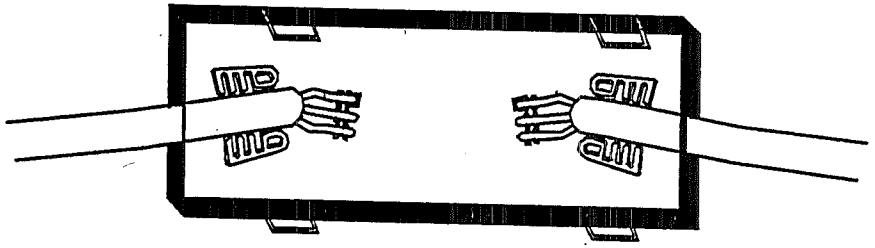


NOTE: BOX INSIDE FLOOR SYSTEM

A

"H" HALF CONNECTORS

"T" HALF CONNECTORS



NOTE: VIEW INSIDE CONNECTOR BOX OF AN ELECTRICAL JUNCTION

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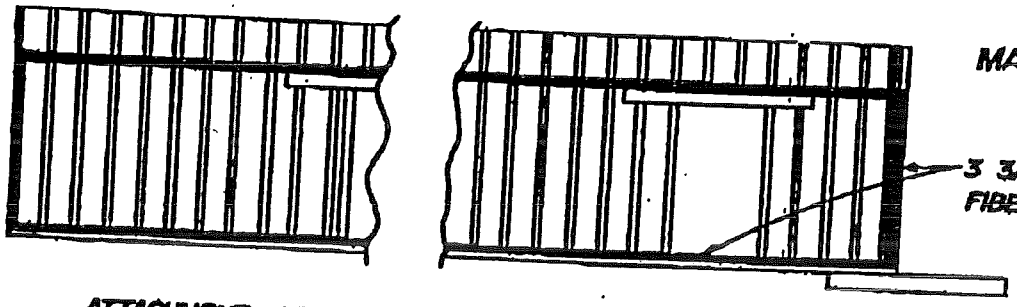
SECTION: S PAGE: 24D

SUPERIOR HOMES CUSTOMER: REF: PROJECT NO: DATE: 8-1-2006 CAD DWG FILE: 1806-1.DWG REV. BY: DRAWN BY: AV	SUPERIOR HOMES, LLC 715 21 St. SW WATERTOWN, SD 57201 605-886-3270	SHEET TITLE ELECTRICAL JUNCTION PROJECT CONNECTOR BOX DRAWING 1

FIGURE 1.



ATTACHMENT OF FIBERGLASS INSULATION

FIGURE 2.

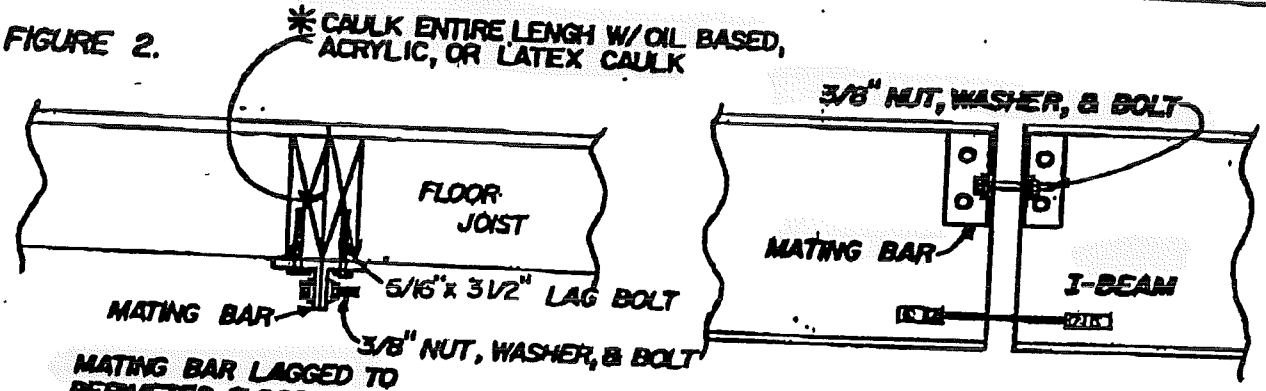


FIGURE 3.

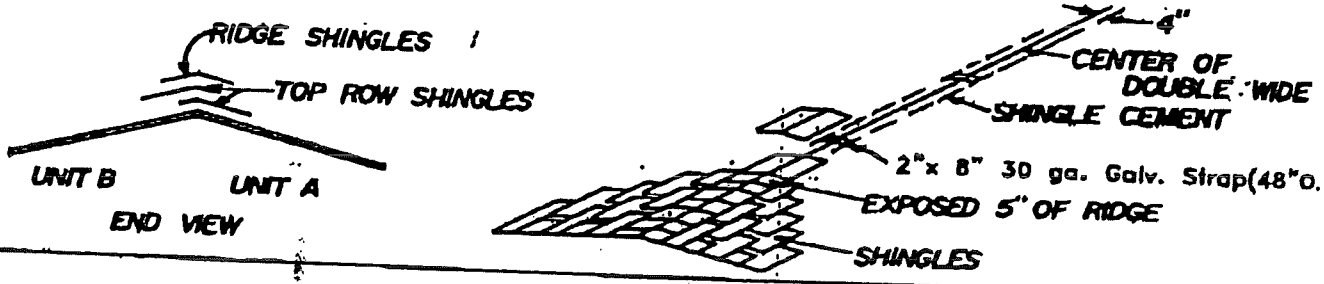
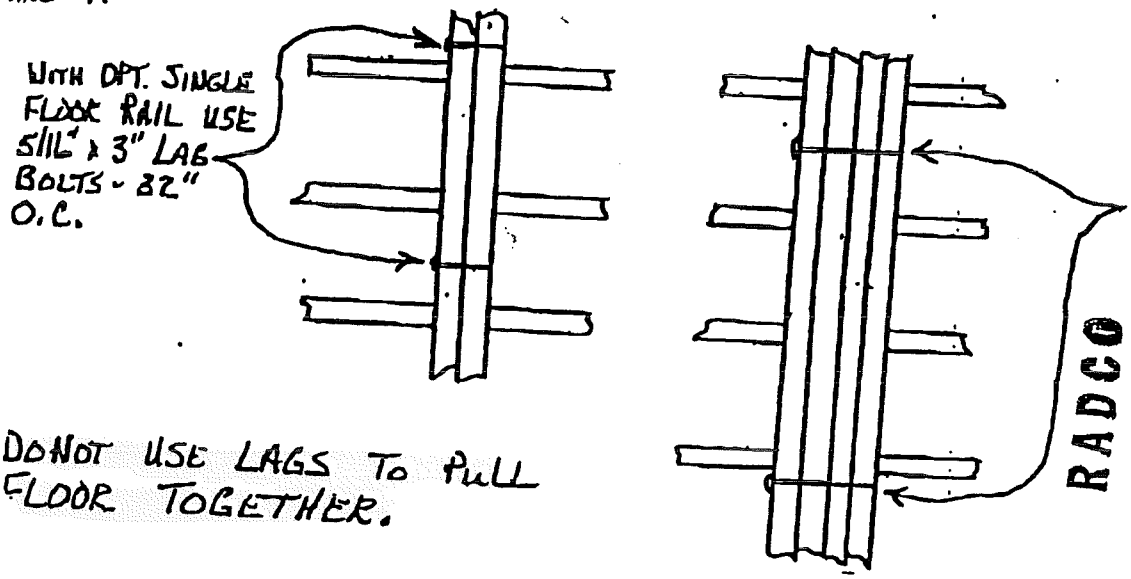


FIGURE 4.



DO NOT USE LAGS TO PULL FLOOR TOGETHER.

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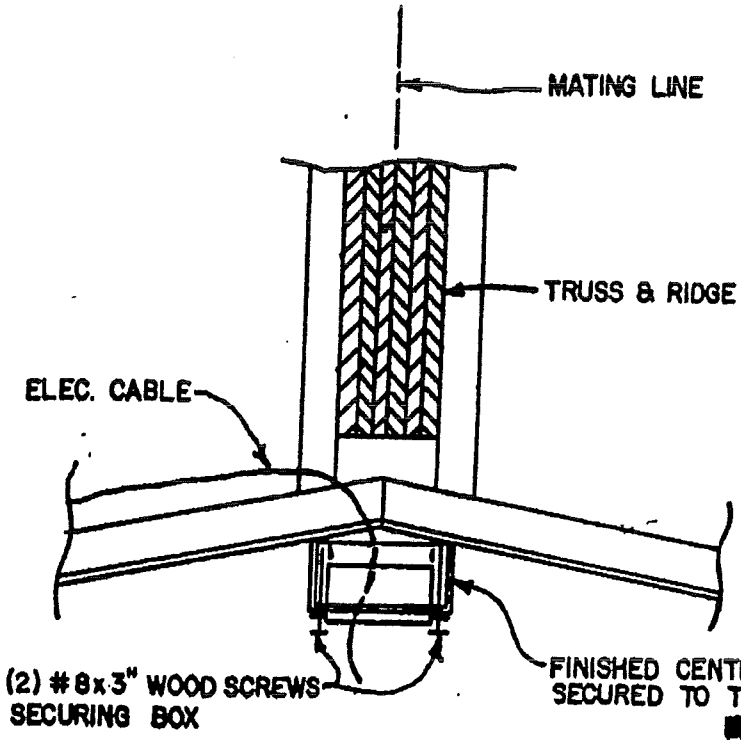
RELOCATING CEILING FAN BOX AT MATING LINE

The optional factory installed box for a ceiling fan at the mating line of the home has been only temporarily positioned and must be relocated after final set-up.

All electrical installations and connections should be performed by a qualified electrician. Make sure the electrical power to the box is turned off.

Approximately 2' of extra cable has been left for relocation of box to the center beam of the home. The box should be removed from its temporary mounting while the home is being set. Upon installation of the center beam the exact location of the box should be determined and a 4" diameter hole should be removed from its temporary mounting while the home is being set. Upon installation of the center beam the exact location of the box should be determined and a 4" diameter hole should be cut for the box. The electrical cable should then be fed down thru this hole and through the hole in the box. The cable should then be resecured with 12" of the box and clamped to the box itself with the provided clamps. The box is then secured to the center beam with 2-# 8x3" wood screws. Cable may now be cut to desired length and stripped to make connections to actual fan. Note that ground wire should be reconnected to box with screw provided. Read and follow all installation instructions provided with ceiling fan for proper installation of fan itself.

TYPICAL INSTALLATION



DRAIN LINE FIELD INSTALLATION

Some units with plumbing in each half will require field installation of drain piping to compete the waste drainage system of the home. Refer to drain line schematic addendum to these instructions to determine proper lay-out, fittings and pipe sizes to make connection.

All drain lines shall be installed in a professional manner with ¼ ' per foot slope towards the outlet.

PIPE & FITTING ASSEMBLY:

1. Square cut pipe and remove all dirt and burrs.
2. Check dry fit of pipe and fitting. Pipe should easily go into fitting ¼ to ¾ of the way.
3. Apply thin coat of ABS cement to fitting; avoid puddling inside.
4. Apply liberal coat of ABS cement to pipe; leave no void areas.
5. Assemble quickly while cement is still wet.
6. Push pipe into fitting using ¼ turn motion until pipe bottoms out.
7. Hold pipe and fitting together for 30 seconds, wipe excess glue off of collar.
8. Allow 15 minutes for good handling strength.
9. Allow joint 24 to 48 hours before applying pressure.

CLEARANCE AT DRAIN OUTLET:

The drain outlet shall be provided with a minimum clearance of 3 inches in any direction from all parts of the structure or appurtenances and with not less than 18 inches unrestricted clearance directly in front of the drain outlet.

CLEANOUTS:

Cleanouts shall be accessible through an unobstructed minimum clearance of 12 inches directly in front of the opening.

SUPPORT AND SECUREMENT OF DRAIN PIPE:

Drain lines shall be supported 4'-0 o.c. Support to be provided with plumber strapping supplied in set-up materials. Secure one end to the strap to floor framing with either nails or screws, wrap strapping around pipe and secure other end of strap again to floor framing. Be sure to maintain ¼ " per foot slope towards outlet.

TESTING OF DRAINLINE SYSTEM

The home shall be in a level position, all fixtures shall be connected, and the entire system shall be filled with water to the rim of the toilet bowl. (Tub and shower drains shall be plugged). After all trapped air has been released; the test shall be sustained for not less than 15 min., without evidence of leaks. The system shall than be unplugged and emptied. The waste plumbing above the level of the toilet rim has been tested at the factory.

BLOCKING AND LEVELING INSTRUCTIONS

WARNING: LIMITED WARRANTY on your mobile home is partially NULL & VOID, if not properly blocked. Steel frame is not to be removed.
The footing on which blocks are placed must be on FIRM ground to assure minimum settling poured concrete, at least 4" thick, is recommended.

Concrete blocks, placed with walls vertical, must not be more than 8 feet apart, must not be more than two feet from both front and rear ends of the home. Each block support must be capable of holding at least 4,000 lbs. without failure.

Proper blocking and leveling on firm footing will prevent settling and much unnecessary trouble, such as: boding sagging, doors dragging, windows binding, interior and/or exterior paneling buckling, floor seams, out of square conditions, etc.

The drawing below shows recommended blocking of a typical DOUBLE WIDE mobile home. Wood shims are recommended to be used above blocks for precision leveling.

Make sure to place leveling jacks directly under center of I beams, floor joists and/or perimeter rails—do not place leveling jacks under axles, outriggers or other brake formed members.

Always place a piece of 2"x6" lumber or equivalent between leveling jack and frame member to avoid damage to frame.

Blocks must be placed under rails of floor frame as shown, ½" from outer edge of exterior walls, under front and rear exit doors, sliding glass doors each side of sidewall openings 2' or larger, if any, at points indicated by white marks painted on surface of sub floor, along longitudinal perimeter floor rails, and 12' O.C. along remaining perimeter of home. Refer Detail A.

If HURRICANE TIE-DOWN STRAPS (over body type) are used, a set of blocks **MUST** be placed just inside each TIE-DOWN STRAP, directly under Rails of floor frame to prevent body sags at those points. Refer Detail A.

When Walk-A-Bay is located in sidewall, at least 2 piers must be located under edge rail-walk-a-bay joint.

BLOCKING AND LEVELING INSTRUCTIONS

WARNING – LIMITED WARRANTY on your mobile home is partially NULL & VOID, of not properly blocked, steel frame is not to be removed. All footings shall be extended below frost line per local jurisdiction.

Concrete blocks, placed with walls vertical, must no be more than 8 feet apart, must not be more than two feet from both front and rear ends of the home. Each block support must be capable of holding at least 4,000 lbs. without failure.

Proper blocking an leveling on firm footing will prevent settling and much unnecessary trouble, such as: body sagging, doors dragging, windows binding, interior and/or exterior paneling buckling, floor seams, out of square conditions, etc.

The drawing below shows recommended blocking of a typical DOUBLE WIDE mobile home. Wood shims are recommended to be used above blocks for precision leveling.

Make sure to place leveling jacks directly under center of I beams, floor joists and/or perimeter rails – do not place leveling jacks under axles, outriggers or other brake formed members.

Always place a piece of 2"x6" lumber or equivalent between leveling jack and frame member to avoid damage to frame.

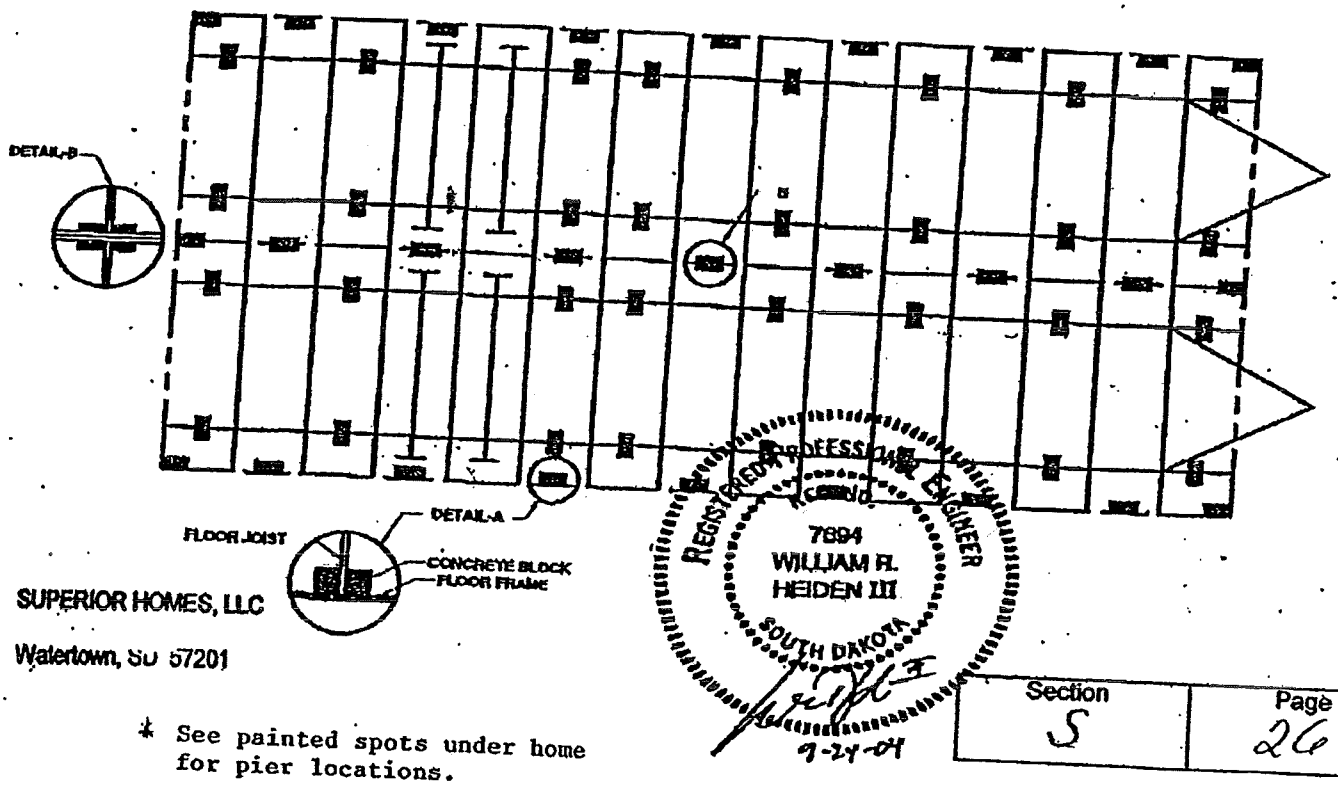
Blocks must be placed under Rails of floor frame as shown, ½" from outer edge of exterior walls, under front and rear exit doors, sliding glass doors each side of sidewall openings 2" or larger, if any, at points indicated by white marks painted on surface of subfloor, along longitudinal perimeter floor rails, and 12' O.C. along remaining perimeter of home. Refer Detail A.

If HURRICANE TIE-DOWN STRAPS (over body type) are used, a set of blocks must be placed just inside each TIE-DOWN STRAP, directly under Rails of floor frame to prevent body sags at those points. Refer Detail A.

When Walk-A-Bay is located in sidewall, at least 2 piers must be located under edgerail-walk-a-bay joint.

NOTE: If (4) or (5) axles are used, add one (1) set of concrete blocks under longitudinal perimeter floor rails on each side of mobile home approximately centered with undercarriage (axle cluster).

For required footing size chart page S-40.
Required Anchor spacing page S-41.
Required footing size for column at ridge beam chart page S-42.



SUPERIOR HOMES, LLC

Watertown, SD 57201

REGISTERED PROFESSIONAL ENGINEER
7894
WILLIAM R.
HEIDEN III
SOUTH DAKOTA
9-24-04

* See painted spots under home for pier locations.

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OPTIONAL BLOCKING INSTRUCTIONS FOR 2"X 10" FLOORS ONLY

WARNING!! LIMITED WARRANTY on your manufactured home is partially NULL & VOID in not properly blocked. STEEL FRAME IN NOT TO BE MOVED.

The footing on which blocks are placed must be on firm ground to assure minimum settling; poured concrete at least 4" thick is recommended.

Concrete blocks, placed with walls vertical, must not be more than 8 feet apart, center to center, and must be within 4 feet of both front and rear ends of the home.

Proper blocking and leveling of firm footings will prevent settling and much unnecessary trouble, such as, body sagging, doors dragging, windows binding, interior and/or exterior paneling buckling, and other out of square conditions.

The drawing shows the required blocking for a typical DOUBLE WIDE home. Wood shims are recommended to be used above blocks for precision leveling.

Make sure to place leveling jacks directly under center of I beams, floor joists and/or perimeter rails—DO NOT place leveling jacks under axles or other brake formed members. Always place a piece of 2" x 6" lumber or equivalent between leveling jack and frame member to avoid damage to frame.

Blocks must be placed under perimeter rails of the floor framing, 1/2" from outer edge of exterior walls, at the front and rear exit doors, sliding glass or French doors, and at points indicated by while marks painted on the surface of the sub floor covering material.

Blocks must be placed along mating line at support columns (multiple studs) and 11"-0"o.c. with 30 PSF roof load or 6'-3" o.c. with opt 45 PSF roof load. (Note: 45 PSF roof load built with 2"x 10" floor joist see S26C for blocking instructions.)

When a WALK-A-BAY is located in the sidewall, piers must be located under the edge rail and walk-in-bay joints.

If HURRICANE TIE-DOWN STRAPS (over body type) are used, a set of piers must be placed just inside of each TIE DOWN STRAP, directly under perimeter rail of floor to prevent body sags at those points.

OPTIONAL BLOCKING INSTRUCTIONS FOR 2"X10" FLOORS ONLY

WARNING! – LIMITED WARRANTY on your manufactured home is partially NULL & VOID if not properly blocked. Steel frame is not to be removed.

All footing shall be extended below the frost line per local jurisdiction.

Concrete blocks, placed with walls vertical, must not be more than 8 feet apart, center to center, and must be within 4 feet of both front and rear ends of the home.

Proper blocking leveling of footings will prevent settling and much unnecessary trouble, such as: body sagging, doors dragging, windows binding, interior and/or exterior paneling buckling, and other out of square conditions.

The drawing shows the required blocking for a typical DOUBLE WIDE home. Wood shims are recommended to be used above blocks for precision leveling.

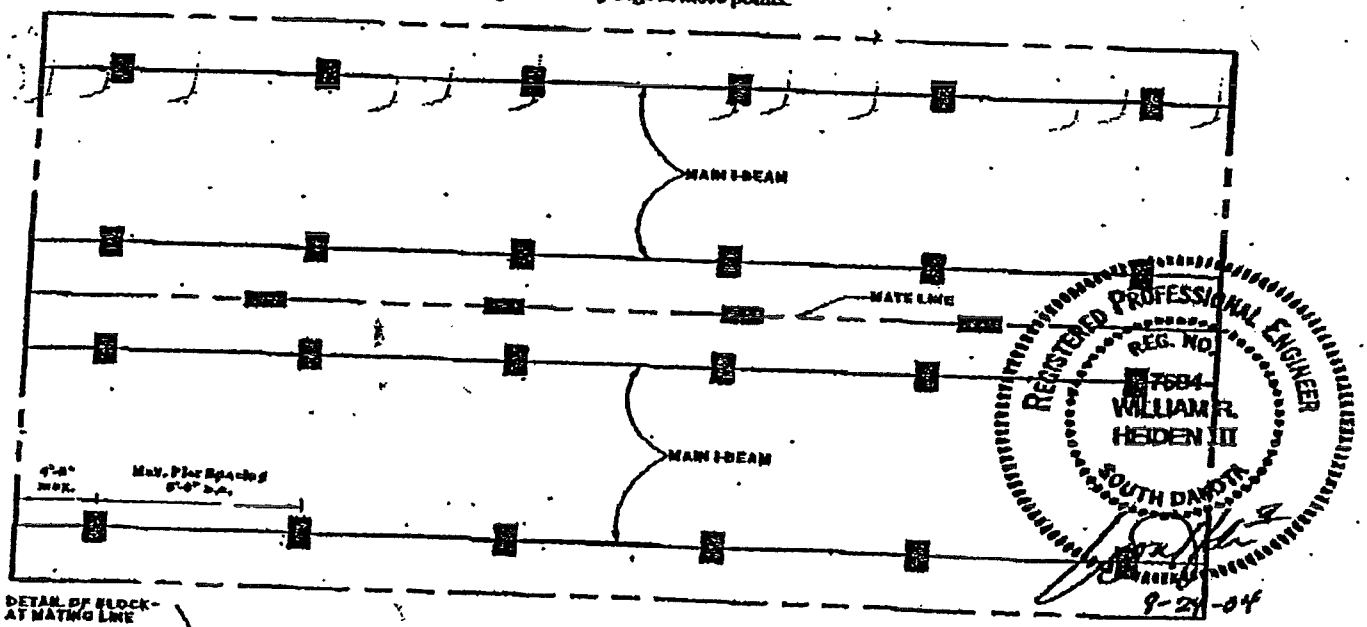
Make sure to place leveling jacks directly under center of I beams, floor joists and/or perimeter rails – DO NOT place leveling jacks under axles or other brake formed members. Always place a piece of 2" x 6" lumber or equivalent between leveling jack and frame member to avoid damage to frame.

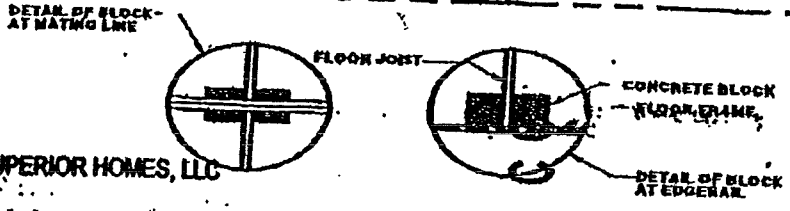
Blocks must be placed under perimeter rails of the floor framing, ½" from outer edge of exterior walls, at the front and rear exit doors, sliding glass or French doors, and at points indicated by white marks painted on the surface of the sub floor covering material.

Blocks must be placed along mating line at support columns (multiple ends) and 11'-0" o.c. with 30 PSF roof load or 6'-3" o.c. with opt 45 PSF roof load. (Note: 45 PSF roof load built with 2" x 10" floor joist see S26C for blocking instructions.)

When a WALK-IN-BAY is located in the sidewall, piers must be located under the edge rail and walk-in-bay joints.

IF HURRICANE TIE-DOWN STRAPS (over body type) are used, a set of piers must be placed just inside of each TIE DOWN STRAP, directly under perimeter rail of floor to prevent body sags at those points.





Refer to page S-26B for footing size chart.

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Watertown, SD 57201

* See painted spots under home for pier locations.

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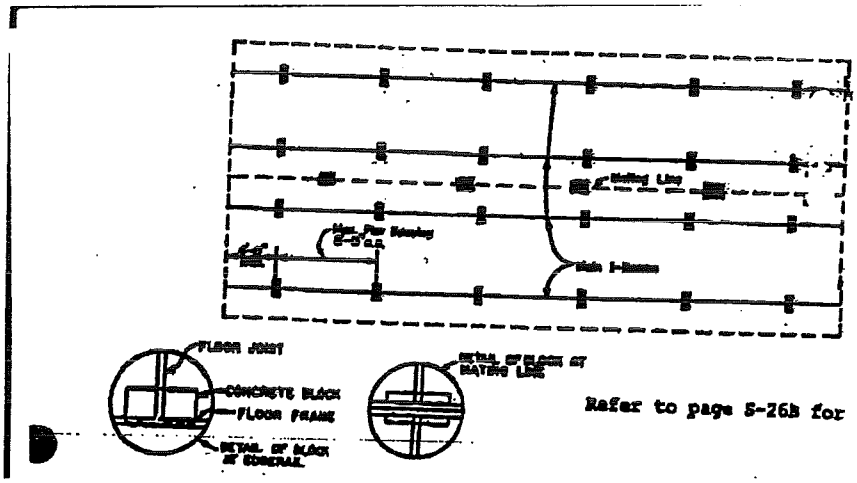

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Refer to page S-26b for footing size chart.

PIER PAD LOADS FOR 2 X 10 FLOORS-PADS SPACED 8'-0" O.C.

UNIT WIDTH	ROOF LOAD	PIER PAD LOADS (LBS)
24'	30 PSF	4547
24'	50 PSF	5653
28'	30 PSF	5267
28'	50 PSF	6533
32'	30 PSF	5747
32'	50 PSF	7120

For required footing size, see chart page S-42

Required anchor spacing see page S-41.

BLOCKING INSTRUCTIONS FOR OPT. 45 PSF ROOF LOAD HOMES

WARNING !! LIMITED WARRANTY on your manufactured home is partially NULL & VOID if not properly blocked.
STEEL FRAME IS NOT TO BE REMOVED!

Proper blocking and leveling on firm footing sill prevent settling and unnecessary trouble.

Concrete blocks are to be placed 8'-0" o.c. on main I-beams with 4'-0" of each end of home, and 10'-0 o.c. around entire perimeter (including matting line.) and within 5'-0" of each end of home. Additional blocking is required at exterior doors, on either side of openings in the sidewall larger than 6'-0" and at mating line support columns (multiple studs.) Refer to page S-42 for loads on mating line support columns based on the opening size.

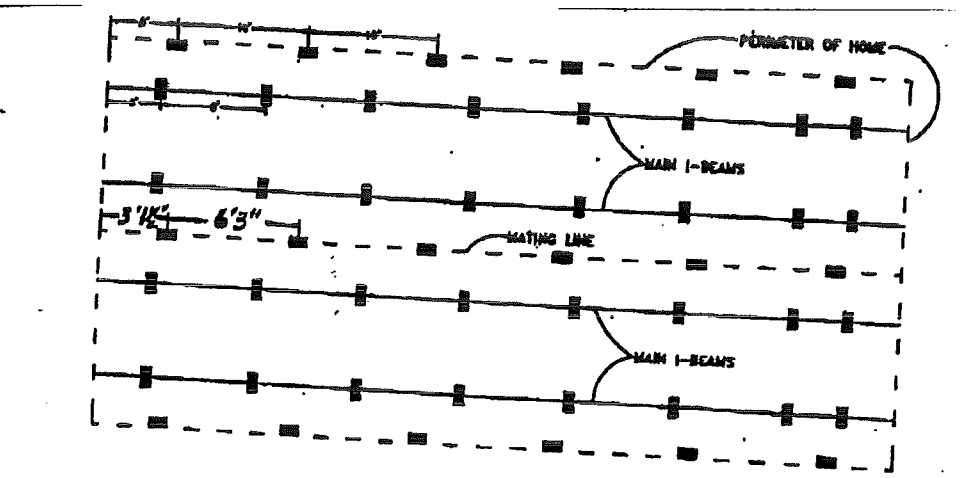
Refer to page S-26B for footing loads and page S-42 for footing size charts.

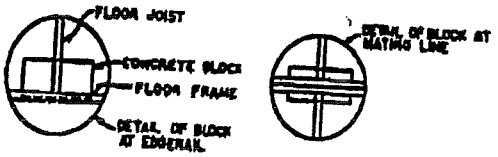
If optional OVER THE ROOF TIE-DOWN STRAPS are used, a set of blocks must be placed just inside of each TIE-DOWN STRAP location directly under perimeter floor rail. To prevent body sags at these points.

The drawing below shows required blocking for a typical DOUBLE WIDE home.

Make sure to place leveling jacks directly under center of I-beams. Do not place jacks under axles or other brake formed members. Always use a piece of 2x6 lumber between jack and I-beam to prevent damage to frame.

NOTE: 45 PSF Roof load homes constructed only with 2 x 10 # 3 SPF floor joist.





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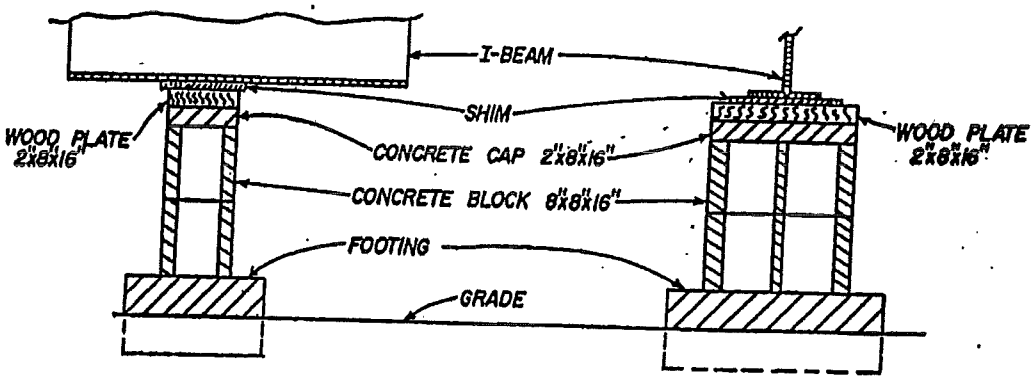
TYPICAL BLOCKING SUPPORT

Illustrated below is a typical footing and concrete blocking arrangement. In areas where ground freezes as well as areas where ground freezes as well as areas where ground support is soft, footings should be extended as necessary in case of soft soil, to a depth of satisfactory bearing subsoil level. All organic material is to be removed from beneath footings.



For soil bearing conditions and required footing size see page S-15.

CHECK WITH LOCAL AUTHORITIES FOR SPECIFIC FOOTING, FROST LINE, SOIL CAPACITY AND OTHER LOCAL REQUIREMENTS

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KEVIN M. FINN
062-043751
REGISTERED ENGINEER
STATE OF ILLINOIS

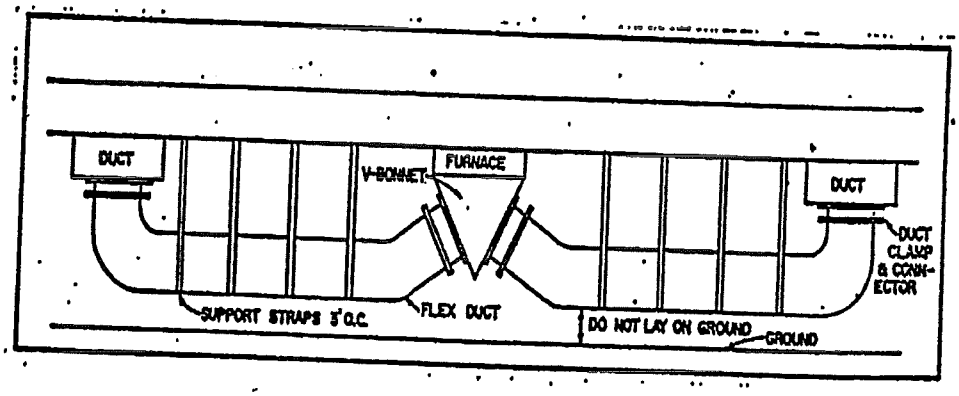
HEAT DUCT CROSSOVER
2 X 6 FLOORS

Remove bottom board, insulation and vapor barrier in plenum area of furnace. Attach V-Bonnet connector up against furnace duct connector and end tabs out and down, secure with sheet metal screws. Install 12" round flex duct to V-bonnet with provided ring clamps, and tape each connection to assure an airtight seal.

Connect each end of the insulated flexible duct to the metal duct connectors on each half of the home by sliding the duct over the collars. Secure duct to connectors with the ring clamps provided.

Tape each connection with duct tape to assure an airtight seal.

Support duct with metal straps as shown below. Straps should be secured to a wood frame member.



Cross-over duct shall have a min insulation value of R-4 with a continuous vapor barrier rated at no more than 1 perm.

IN-FLOOR HEAT DUCT CROSS-OVER SETUP W/OPT. 2 X 10 FLOOR JOISTS

Before placing units together, locate each duct crossover location(s) at floor line on mating walls. Remove 2 x 10 cover at each location. Place 11/2" wide gasket material strips around the perimeter of each duct crossover opening using only enough fasteners to hold material in place. (Note: Gasket is required on both floors).

Now continue with normal set-up procedures and when the floor is placed tightly together an airtight seal on the crossover duct is complete.

EXTERIOR HEAT TAPE RECEPTACLE OUTLET

A 15 AMP receptacle outlet is provided on the exterior of the home, under the water heater compartment, which may be used for heat tape to protect plumbing to avoid freezing.

If heat tape is used, it shall be listed for mobile homes, and must be used in accordance with the heat tape manufacturer's instructions.

INLET WATER PRESSURE

This mobile home is designed for a water inlet pressure of 80 PSI maximum.

When the water pressure exceeds 80 PSI, a pressure-reducing valve shall be installed at the water inlet.

MASTER COLD WATER SHUTOFF

A Master Cold Water Shutoff Full Flow Valve is to be installed in the water supply line adjacent to the home.

The Valve is to provide through flow capability equal to or greater than the minimum required water distribution piping size supplied by the valve.

GAS SUPPLY SYSTEM DESIGN PRESSURE

The design pressure limitation for safe and effective operation of the gas piping system in this mobile home is designed for a pressure not exceeding 14-inch water column and not less than 11-inch water column for L.P. gas and not exceeding 10.5-inch water column and not less than 7-inch water column for natural gas.

DRAINING MAIN WATER LINES

To drain water lines, remove cap from drain location or open faucets and apply air pressure until all water is removed from system.

JUNCTION BOX SIZE

For straight pulls, the length of the box shall not be less than eight times the trade diameter of the largest raceway.

For angle pulls, the distance between each raceway entry inside the box and the opposite wall of the box shall not be less than six times the trade diameter of the largest raceway.

NOTE: For angle, pulls if one of the raceway entries is opposite a cover, the distance between the entry and the cover may be less than indicated above, but shall not be less than given in the following table:

Size of Feeder Conductors To be Installed, Awg or MCM	Distance, Raceway Entry to Cover, IN.
4-3	2
2	2-1/2
1	3
1/0-2/0	3-1/2
3/0-4/0	4
250	4-1/2
300-350	5

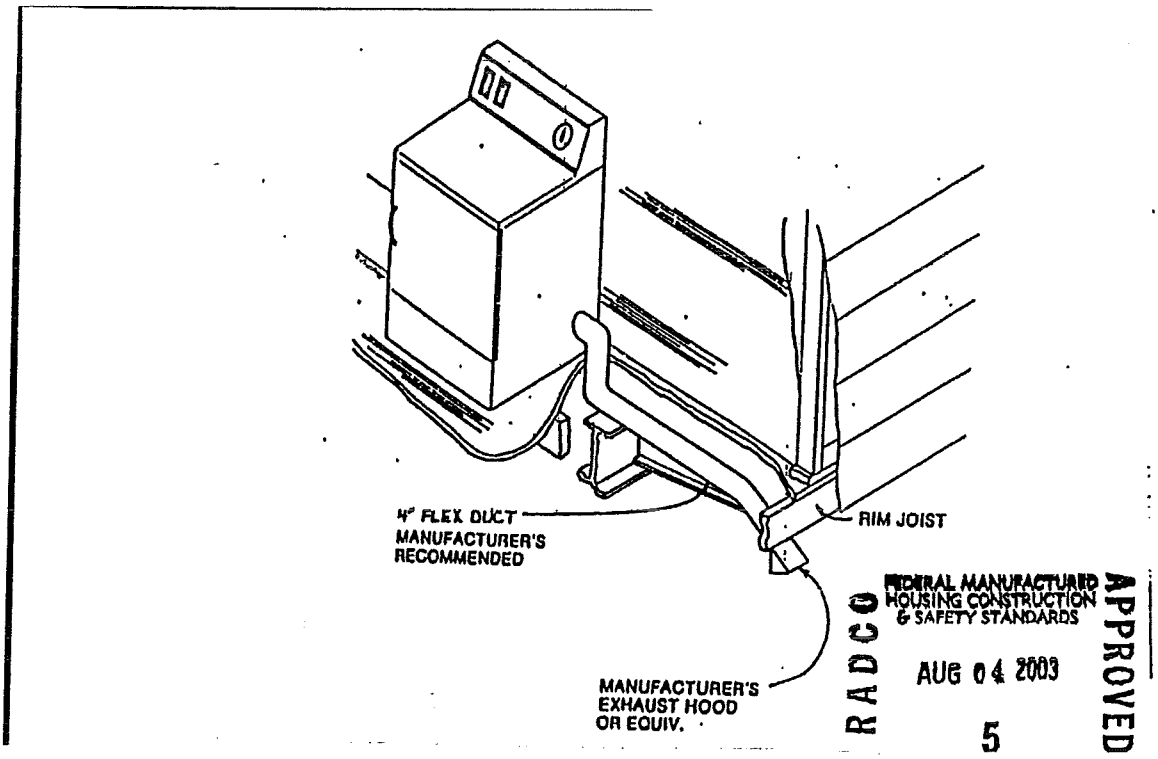
RESIDENTIAL MOBILE HOME FIXED FEEDER SUPPLY (BASED ON 1993 NEC) REQUIRED FEEDER RACEWAY SIZE AND MARKING FOR CONDUCTOR SIZE

When this Mobile Home is equipped with 100 AMP Maximum Load and Main Breaker or fuse, the Feeder Raceway is sized for Copper, 75C rated conductors, Types, RH, RHH, RHW without outer covering, THW or XHHW, size No. 4 AWG. Circuit conductors and size No. 8 AWG. grounding conductors.

When this Mobile Home is equipped with 200 AMP Maximum Load and Main breaker or fuse, the Feeder Raceway is sized for Copper, 75C rated conductors, Types RH, RHH, RHW without outer covering, THW or XHHW, size No. 2/0 AWG. circuit conductors and size No. 6 AWG. grounding conductor.

TYPICAL DRYER VENTILATION

IF DRYER VENT CAP IS INSTALLED THROUGH THE EXTERIOR SIDING OF HOME, IT SHALL BE CAULKED TO PREVENT MOISTURE AND AIR INFILTRATION.



Dryer Installation:

If your home is equipped with a clothes dryer, it must be exhausted to the outside by a moisture-lint exhaust system.

CAUTION: THIS EXHAUST SYSTEM MUST NOT TERMINATE IN THE FLOOR CAVITY OR UNDER THE HOME.

All required components and fittings are provided in the home. An opening in the floor is provided. Typical dryer exhaust connections are shown in Illustration.

If your home is not equipped with a dryer, but an electrical or gas outlet is provided for one, then the opening in the floor or wall is provided. Installation of the exhaust system must be in accordance with the dryer manufacturer's installation instructions.

FINAL (DEALER) ON SITE INSTALLATION INSTRUCTIONS
EXTERIOR DRYER VENT

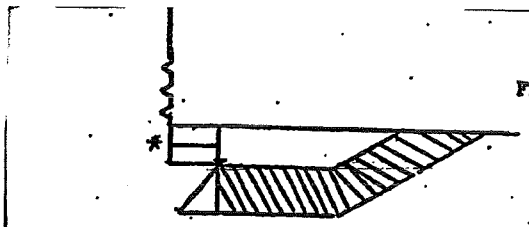


Fig. 1. Remove 2 screws on back side of 2 x 3 x 6 Doubler Vent Block.

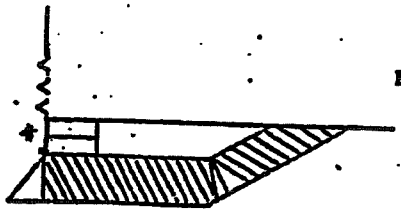


Fig. 2. Extend Dryer Vent beyond 2 x 3 x 6 Doubler Vent Block and resecure to exterior side of mobile home.

STEEL FRAME TOUCH-UP PAINT

The steel frame on this mobile home is painted with an asphaltic base type material in compliance with Federal Mobile Home Construction and Safety standards, Paragraph 280.305.
It is recommended that Mortell #615 Asphalt Frame Paint be used for touch-up purposes.

BOTTOM BOARD MATERIAL PATCHING INSTRUCTIONS

Small cuts or tears may be repaired by using CP-1 pressure sensitive tape or equivalent. For larger holes use additional pieces of Mobile Flex which extend at least 2" beyond the damage areas. Secure the large patch with either a mechanical fastener, CP-1 pressure sensitive tape, High Tack Adhesive 76 manufactured by 3M contact cement of equivalent. When mechanical fasteners are used, the entire perimeter of the patch is to be secured/sealed with either the CP-1 pressure sensitive tape or High Tack Adhesive 76 contact cement, or equivalent.

REQUIRED TIE DOWN SYSTEM FOR FRAME TIES ONLY

Required diagonal frame tie is to be spaced per page S-16 for units located in wind zone1.

See attached "Minute Man Anchors" brochure for suggested tie down system.

Minimum Requirement for Ground Anchors

1. Anchors shall have an ultimate strength of 4725#.
2. Anchors should be certified by a professional engineer, architect, or nationally recognized testing laboratory as to their resistance, based on the maximum angle of diagonal tie and/or vertical tie loading.
3. Angle of anchor installation as recommended by anchor manufacturer.
4. Instructions shall specify types of soil in which anchors are to be installed.
5. Ground anchor should be embedded below the frost line and at least 12" above the water table.
6. Ground anchors should be installed to their full depth.
7. Stabilizer plates should be installed to provide added resistance to overturning or sliding forces.
8. Anchoring equipment should be certified by a registered professional engineer or architect to resist these specified forces in accordance with testing procedures in ASTM Standard Specifications D3953-91, Standard Specifications for Strapping, Flat Steel and Seals.

PIER AND PAD SCHEDULE SINGLEWIDE & DOUBLEWIDE
30 PSF

18 Feet Wide

Soil Cap	Pier Location	8 foot O.C. Key'd Pier cap (lbs)	8 foot O.C. Key'd footing sq.ft	8 foot O.C. Key'd footing sq. in	12 foot O.C. Key'd pier cap (lbs)	12 foot O.C. key'd footing sq.ft	12 foot O.C. key'd footing sq.in
1000	Chassis	2779	3.2	460			
	Perimeter				5181	6.0	858
1500	Chassis	2779	2.0	293			
	Perimeter				5181	3.8	547
2000	Chassis	2779	1.5	215			
	Perimeter				5181	2.8	401
2500	Chassis	2779	1.2	170			
	Perimeter				5181	2.2	316
3000	Chassis	2779	1.0	140			
	Perimeter				5181	1.8	251

16 Feet Wide

Soil Cap	Pier Location	8 foot O.C. Key'd Pier cap (lbs)	8 foot O.C. Key'd footing sq.ft.	8 foot O.C. Key'd footing sq.in.	12 foot O.C. Key'd pier cap (lbs)	12 foot O.C. Key'd footing sq.ft	12 foot O.C. Key'd footing sq.in
1000	Chassis	2629	3.0	435			
	Perimeter				4596	5.3	761
1500	Chassis	2629	1.9	278			
	Perimeter				4596	3.4	483
2000	Chassis	2629	1.4	203			
	Perimeter				4596	1.9	281
2500	Chassis	2629	1.1	161			
	Perimeter				4596	1.9	281
3000	Chassis	2629	.9	133			
	Perimeter				4596	1.6	232

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28 Feet Wide (14' Single wide)

Soil Cap	Pier Location	8 foot O.C. Key'd Pier cap (lbs.)	Key'd footing sq.ft.	sq.in	12 foot O.C. Key'd Pier cap (lbs)	Key'd footing sq.ft	sq.in
1000	Chassis	2029	2.3	336			
	Perimeter				4856	5.6	904
1500	Chassis	2029	1.5	214			
	Perimeter				4856	3.6	513
2000	Chassis	2029	1.1	157			
	Perimeter				4856	2.6	376
2500	Chassis	2029	.9	124			
	Perimeter				4856	2.1	297
3000	Chassis	2029	.7	102			
	Perimeter				4856	1.7	245

24 Feet Wide

Soil Cap	Pier Location	8 foot O.C. Key'd Pier cap (lbs)	Key'd footing sq.ft.	sq.in	12 foot O.C. Key'd Pier cap (lbs)	Key'd footing sq.ft	sq.in
1000	Chassis	1829	2.1	303			
	Perimeter				4076	4.7	675
1500	Chassis	1829	1.3	193			
	Perimeter				4076	3.0	430
2000	Chassis	1829	1.0	142			
	Perimeter				4076	2.2	316
2500	Chassis	1829	.8	113			
	Perimeter				4076	1.7	249
3000	Chassis	1829	.6	92			
	Perimeter				4076	1.4	205

PIER AND PAD SCHEDULE SINGLE WIDE AND DOUBLE WIDE 30 Psf

Soil Cap.	Pier Location	18 Feet Wide					
		8 Foot O.C.			12 Foot O.C.		
		Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	sq.in.	Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	sq.in.
1000	Chassis Perimeter	2779	3.2	460	5181	6.0	858
1500	Chassis Perimeter	2779	2.0	293	5181	3.8	547
2000	Chassis Perimeter	2779	1.5	215	5181	2.8	401
2500	Chassis Perimeter	2779	1.2	170	5181	2.2	315
3000	Chassis Perimeter	2779	1.0	140	5181	1.8	251

Soil Cap.	Pier Location	16 Feet Wide					
		8 Foot O.C.			12 Foot O.C.		
		Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	sq.in.	Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	sq.in.
1000	Chassis Perimeter	2629	3.0	425	4596	5.3	7
1500	Chassis Perimeter	2629	1.9	278	4596	3.4	4
2000	Chassis Perimeter	2629	1.4	203	4596	2.5	3
2500	Chassis Perimeter	2629	1.1	161	4596	1.9	28
3000	Chassis Perimeter	2629	.9	132	4596	1.6	22

Soil Cap.	Pier Location	22 Feet Wide (14' Single wide)					
		8 Foot O.C.			12 Foot O.C.		
		Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	sq.in.	Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	sq.in.
1000	Chassis Perimeter	2029	2.3	336	4856	5.5	804
1500	Chassis Perimeter	2029	1.5	214	4856	3.6	513
2000	Chassis Perimeter	2029	1.1	157	4856	2.6	376
2500	Chassis Perimeter	2029	.9	124	4856	2.1	297
3000	Chassis Perimeter	2029	.7	102	4856	1.7	245

Soil Cap.	Pier Location	24 Feet Wide					
		8 Foot O.C.			12 Foot O.C.		
		Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	sq.in.	Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	sq.in.
1000	Chassis Perimeter	1829	2.1	302	4076	4.7	675
1500	Chassis Perimeter	1829	1.3	193	4076	3.0	430
2000	Chassis Perimeter	1829	1.0	142	4076	2.2	316
2500	Chassis Perimeter	1829	.8	113	4076	1.7	249
3000	Chassis Perimeter	1829	.6	92	4076	1.4	203

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REQUIRED ANCHOR SPACING TO PER PIER HEIGHT

18' WIDE

Pier Hght	Zone I
16 in	15 ft
24 in	13 ft
32 in	12 ft
40 in	11 ft
48 in	10 ft

16' WIDE

Pier Hght	Zone I
16 in	14 ft
24 in	12 ft
32 in	10 ft
40 in	9 ft
48 in	8 ft

14' WIDE

Pier Hght	Zone I
16 in	15 ft
24 in	14 ft
32 in	12 ft
40 in	11 ft
48 in	10 ft

Pier Hght	Zone I
16 in	14 ft
24 in	12 ft
32 in	10 ft
40 in	9 ft
48 in	8 ft

(PORCH MODEL)

Pier Hght	Zone I
16 in	14 ft
24 in	12 ft
32 in	10 ft
40 in	9 ft
48 in	8 ft

28' WIDE

Pier Hght	Zone I
16 in	15 ft
24 in	14 ft
32 in	12 ft
40 in	11 ft
48 in	10 ft

28' WIDE
(PORCH MODEL)

Pier Hght	Zone I
16 in	15 ft
24 in	14 ft
32 in	12 ft
40 in	11 ft
48 in	10 ft

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*Pier height to be measured from center of I-beam.

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SECTION S | PAGE 41

MATING LINE COLUMN LOADS

UNIT WIDTH	ROOF LOAD	PIER LOAD BASED ON OPENING SIZES				
		3'	5'	10'	15'	20'
24'	30	3150	5250	10,500	15,750	21,000
24'	50	3849	6415	12,830	19,245	25,660
28'	30	3690	6150	12,300	18,450	24,600
28'	50	4509	7515	15,030	22,545	30,060
32'	30	4050	6750	13,500	20,250	27,000
32'	50	4950	8250	16,500	24,750	33,000

FOOTING SIZES BASED ON SOIL CAPACITIES
(3000 PSI Concrete)

PIER CAP. (LBS)	THICKNESS	SOILS			
		2000 PSF	2500 PSF	3000 PSF	3500 PSF
3500	4"	16" x 16"			
4000	4"	18" x 18"	16" x 16"		
5000	4"	20" x 20"	18" x 18"	16" x 16"	
6000	4"	32" x 32"	19" x 19"	18" x 18"	16" x 16"
7000	6"	23" x 23"	21" x 21"	19" x 19"	18" x 18"
8000	6"	25" x 25"	22" x 22"	20" x 20"	19" x 19"
9000	6"	26" x 26"	24" x 24"	21" x 21"	20" x 20"
10,000	6"	28" x 28"	25" x 25"	23" x 23"	21" x 21"
15,000	6"	34" x 34"	30" x 30"	28" x 28"	26" x 26"
20,000	8"	39" x 39"	35" x 35"	32" x 32"	30" x 30"
25,000	8"	44" x 44"	39" x 39"	36" x 36"	33" x 33"
30,000	10"	48" x 48"	43" x 43"	39" x 39"	36" x 36"
31,000	10"	49" x 49"	44" x 44"	40" x 40"	37" x 37"
33,000	12"	51" x 51"	45" x 45"	41" x 41"	38" x 38"

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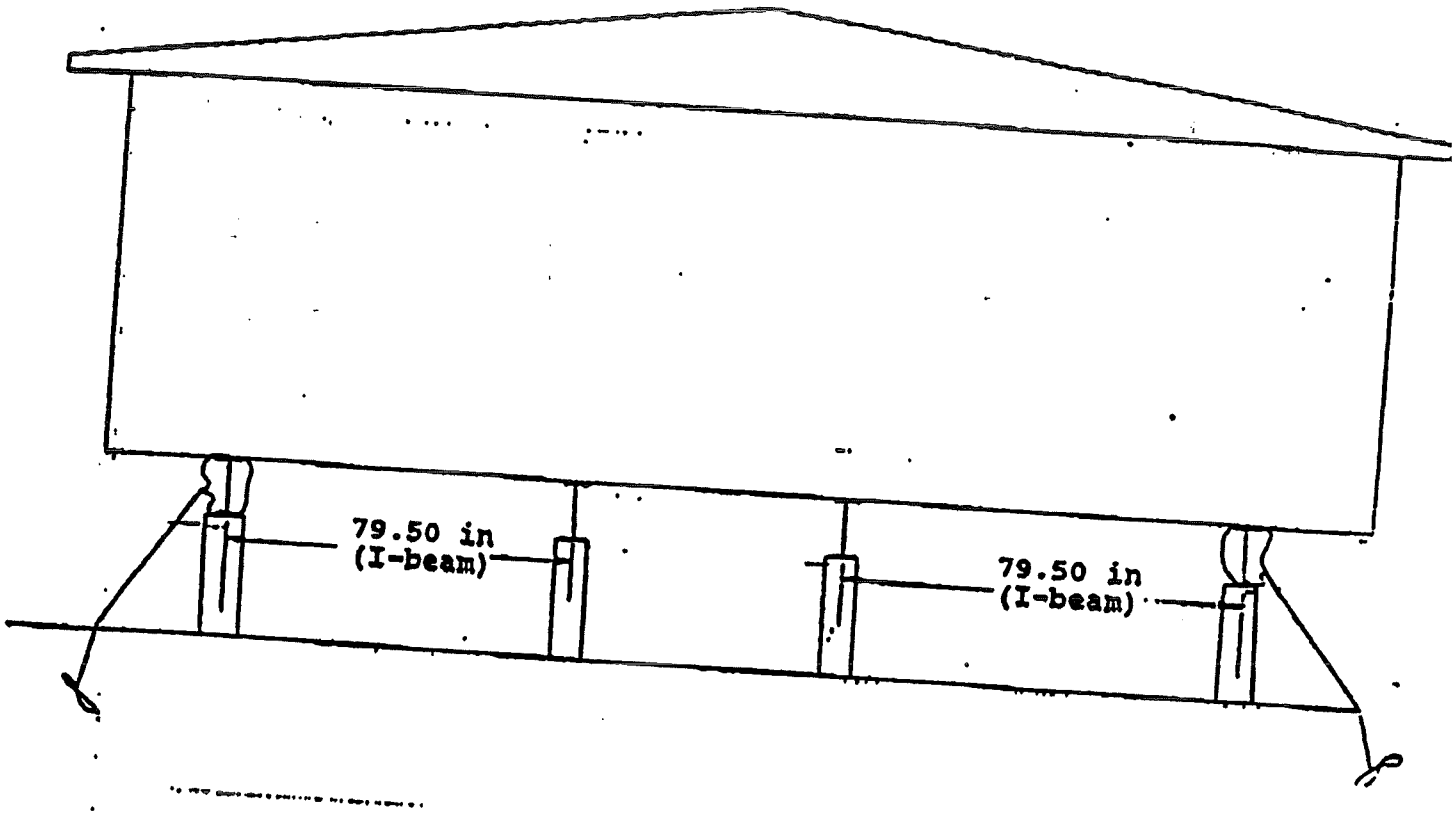
TYPICAL TIE DOWN DOUBLE WIDE



Anchor and anchor head must have an ultimate strength of 4725 lbs.

*Pier height to be measured from center of I-beam.

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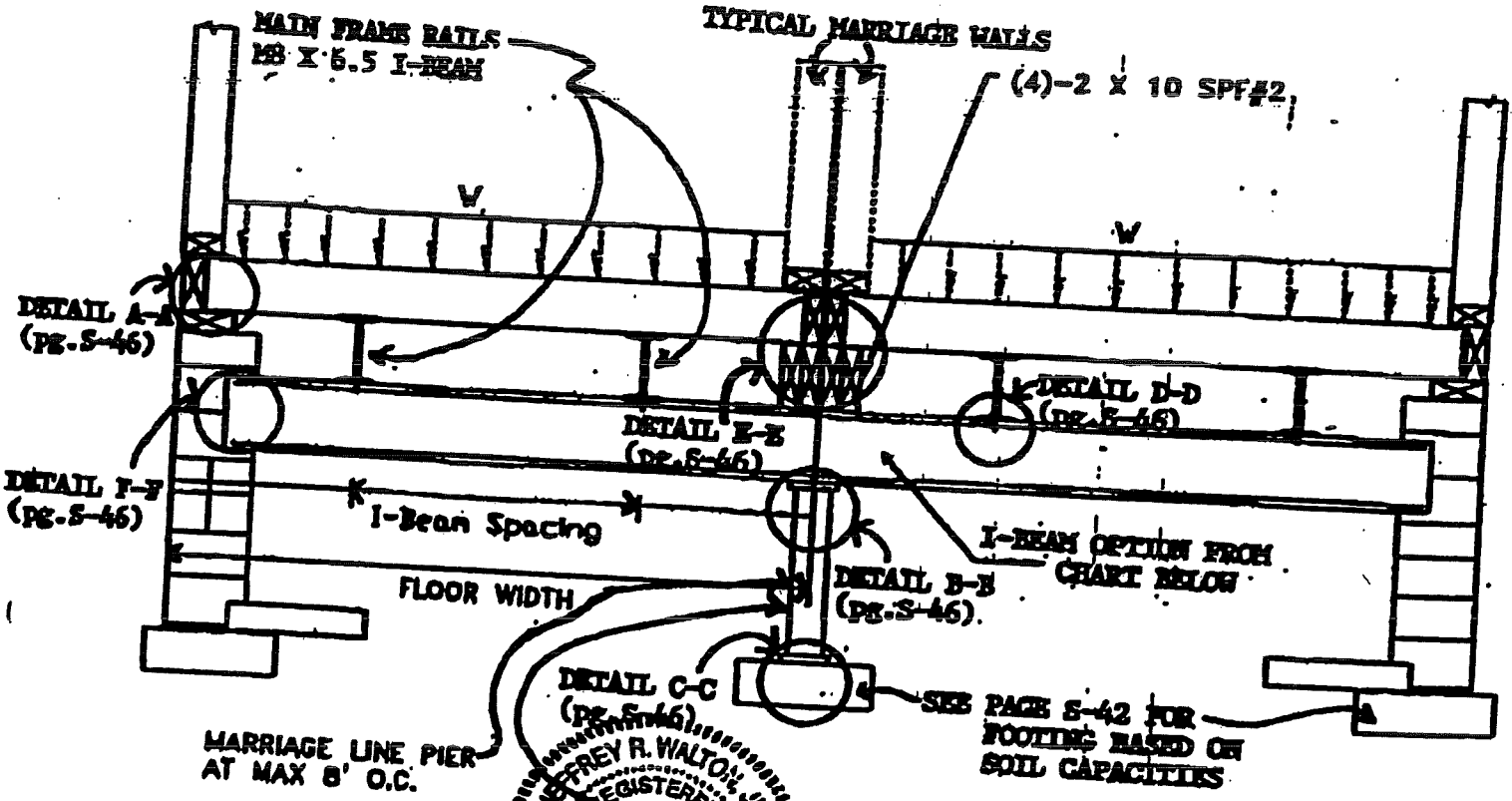
SECTION S PAGE 43

TYPICAL DOUBLE WIDE ON BASEMENT DETAILS (30 PSF L.L. OR 50 PSF L.L.)



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I-BEAM OPTIONS FOR 7" SHIFT, 50 PSF FII					
Unit Width		I-Beam Spacing	8' O.C. I-Beam*	2 x 10 spf #2 (30 psf LL)	2 x 10 spf #2 (50 psf LL)
24 Ft.	140 In.	79.5 In. o.c.	W6 x 9	4	4
		127.5 In o.c.	W6 x 9	4	4
28 Ft.	164 In.	79.5 In. o.c.	W8 x 10	4	4
		127.5 In o.c.	W8 x 10	4	4 **
32 Ft.	180 In.	79.5 In. o.c.	W8 x 13	4	4
		127.5 In o.c.	W8 x 13	4	4 **

** LENGTH OF SPLIT ON WIDE FACE <9-1/4" OR SIZE OF SHAKE <1/2"

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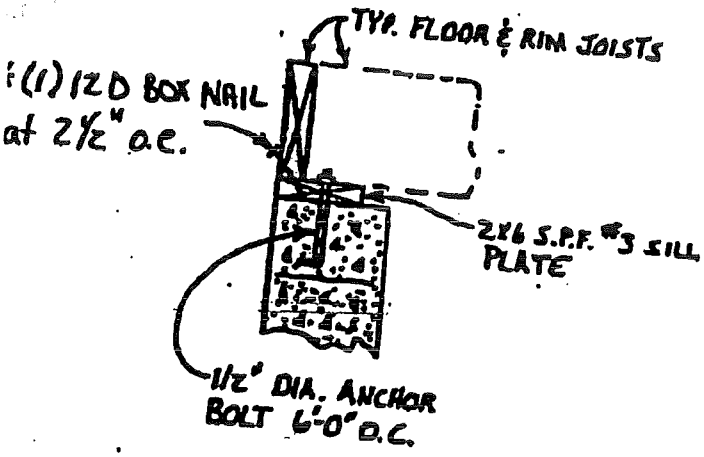
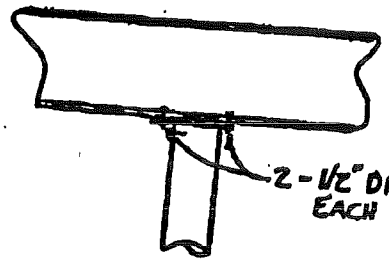
SECTION S PAGE 45

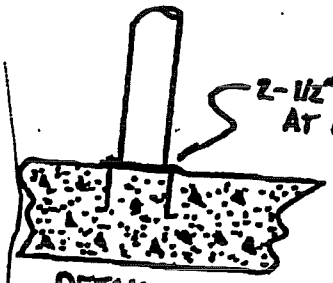
TYPICAL DOUBLE WIDE ON BASEMENT DETAILS



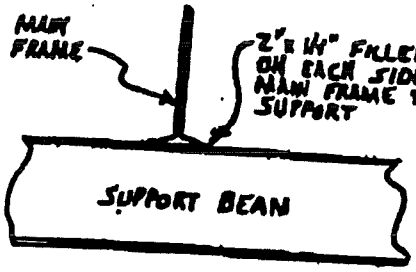
DETAIL A-A



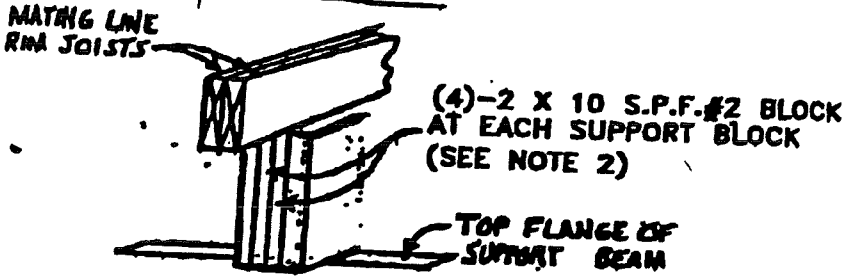
DETAIL B-B



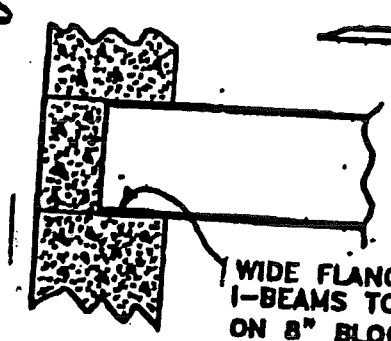
DETAIL C-C



DETAIL D-D



DETAIL E-E



DETAIL F-F

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PROFESSIONAL ENGINEER

OCT 22 2001

NOTES:

1. See set-up instructions for double wide homes, for typical connecting requirements not shown in basement details.
2. (4)-2 X 10 blocks shown in detail E-E to be glued together and fastened with (4)-3/8" x 6" lag screws for glue to bond.
3. Gas, electrical, sewer, water, and heating systems of the home have been designed to serve the home itself. Separate considerations must be made for basement which must conform to any state and local codes.
4. Light and ventilation must be provided for basement to conform to state and local codes.
5. Stair construction to conform to state and local codes.

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PATIO DOOR INSTALLATION (SWINGING OR SLIDING) W/ HARDBOARD SIDING

After the home has been blocked and leveled, remove sheathing from inside home at patio opening; remove siding and any shipping studs from rough opening. Apply Permagum Sealant or equivalent around screw flange on door. Place door in opening and secure with several screws. Check operation of door before installing all of the screws, shimming where necessary (especially at striker plate location.) Apply silicone caulking across top and down sides of the exterior edges of the door. Insulate any gaps around door from the interior side. Cut and install interior trim pieces.

PATIO DOOR INSTALLATION (SWINGING OR SLIDING) W/VINYL SIDING

After the home has been blocked and leveled, remove sheathing from inside home at patio opening; remove siding and any shipping studs from rough opening. Apply Permagum Sealant or equivalent around screw flange on door. Place door in opening and secure with several screws. Check operation of door before installing all of the screws, shimming where necessary (especially at striker plate location.) Apply silicone caulking across top and down sides of the exterior edges of the door. Insulate any gaps around door from the interior side. Cut and install interior trim pieces.

IMPORTANT

When installing vinyl siding, follow the five (5) important application details listed below:

1. Nail or Staple Vinyl Siding Through Center of Slot Only to allow for normal expansion and contraction. Secure panels by stapling into every stud.
2. Do not Drive Nails Tight. Head of nail or fastener should never touch vinyl siding. Siding should be hung on nails allowing for normal expansion and contraction; when nails are driven too tight, it can distort the siding, making it unsightly and difficult to properly lock the succeeding panels.
3. Space Vinyl Panels ¼" from all stops and internal surface of J-channel, window channel and corner post to allow for normal expansion and contraction with changes in temperature. Each vinyl siding piece must be free to move ¼" side to side. Check each piece as it is hung.
4. Lap Vinyl Siding Panels 1" or one-half of the factory pre-notched End. Never overlap the panels more than 1". Always overlap away from point of greatest traffic. For best appearance, stager end laps a minimum of 3 feet so that one is not directly above the other, unless separated by three courses. Caution: Never overlap panels more than 1".
5. Never Force Saw Through vinyl. Cut with a fine tooth blade (2-16 teeth per inch.) Mount blade in reverse position.

REMEMBER : Vinyl expands and contracts with changes in temperature. Check each piece to make certain that it move to allow for expansion.

PATIO DOOR INSTALLATION (SWINGING OR SLIDING) W/CEDAR SIDING OR COLOR LOK SIDING

After the home has been blocked and leveled, remove sheathing from inside home at patio opening; remove siding and any shipping studs from rough opening. Apply Permagum Sealant or equivalent around screw flange on door. Place door in opening and secure with several screws. Check operation of door before installing all of the screws, shimming where necessary (especially at striker plate location.) Apply silicone caulking across top and down sides of the exterior edges of the door. Insulate any gaps around door from the interior side. Cut and install interior trim pieces.

THE 1" PVC IS PROVIDED TO EXTEND FOR OVERFLOW FROM THE WATERHEATER PAN TO THE EXTERIOR OF THE HOME. USE PLUMBER STRAP PROVIDED TO SECURE THE OVERFLOW AND TO BE ABLE TO EXIT AT A DOWNWARD POSITION AWAY FROM THE WATERHEATER PAN.

1 = 1" PVC EXTENDS 6" BELOW
2 = 1" PVC ELBOW
1" PVC EXTENDS TO EXTERIOR OF HOME
3 = PLUMBERS STRAP

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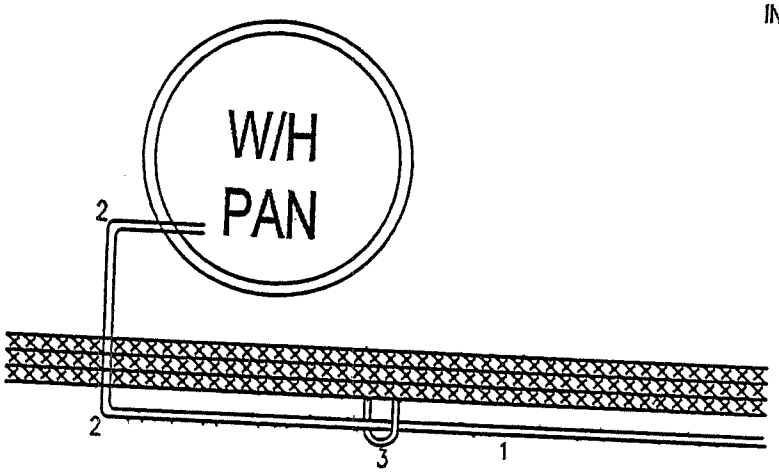
THE WATERHEATER PAN MUST BE LISTED AND INSTALLED PER THE WATERHEATER MANUFACTURE'S INSTALLATION INSTRUCTIONS.



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FEDERAL MANUFACTURED HOUSING CONSTRUCTION & SAFETY STANDARDS
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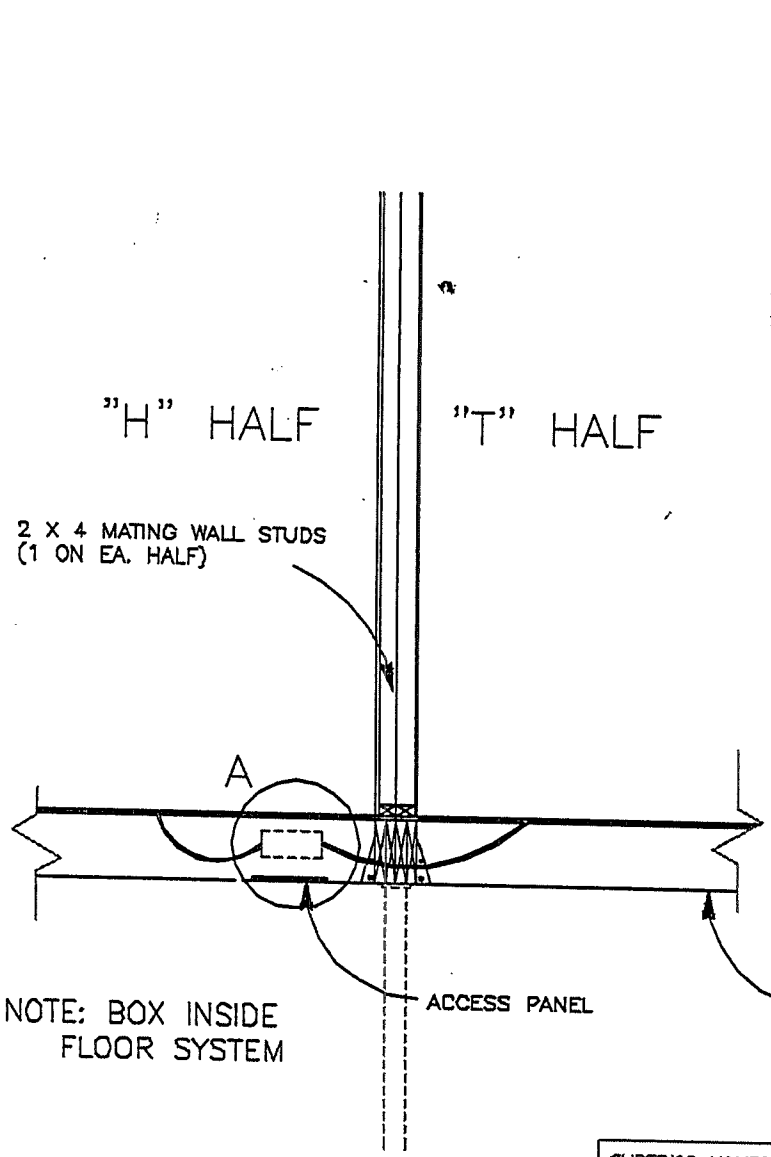
Superior Homes, LLC
Watertown, SD

DEALER:	
CUSTOMER:	
REF:	
PROJECT NO:	
DATE: 7-12-2006	
CAD DWG FILE: WATERHEATER	
REV. BY: DRAIN OUTLET.DWG	
DRAWN BY: AV	

SUPERIOR HOMES, LLC
715 21 St. SW
WATERTOWN, SD 57201
605-886-3270

SHEET TITLE
W/H DRAIN OUTLET

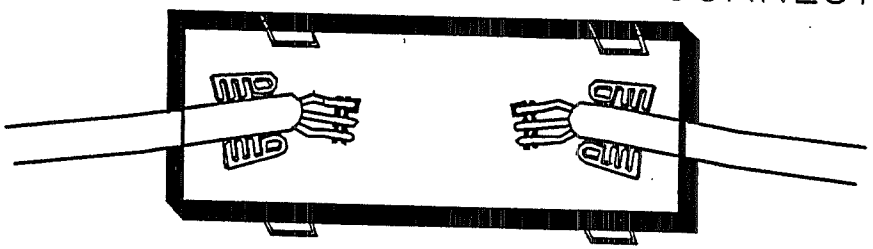
PROJECT Section S | Page 54 | DRAWING B1



NOTE: BOX INSIDE FLOOR SYSTEM

"H" HALF CONNECTORS

"T" HALF CONNECTORS



NOTE: VIEW INSIDE CONNECTOR BOX OF AN ELECTRICAL JUNCTION

R A D C FEDERAL MANUFACTURED HOUSING CONSTRUCTION & SAFETY STANDARDS APPROVED 08/14/2006 05

SECTION: S PAGE: 84A

SUPERIOR HOMES CUSTOMER: REF: PROJECT NO: DATE: 8-1-2006 CAD DWG FILE: 1806-1.DWG REV. BY: DRAWN BY: AV	SUPERIOR HOMES LLC 715 21 St. SW WATERTOWN, SD 57201 605-886-3270	SHEET TITLE ELECTRICAL JUNCTION PROJECT CONNECTOR BOX DRAWING 1

SELF CONTAINED POWER CONNECTOR

A qualified electrician should make the electrical connections between Unit A and Unit B as follows, as well as run the necessary electrical checks:

A. Be certain that the incoming electric-feeder line is not connected to the electric distribution panel.

B. Be certain that all breakers are in the "OFF" position and carefully check all electric connections in the electric distributions panel to be certain they are tightened adequately-the trip from the point of manufacturing to your home's present location may Cause some loosening of the wires.

C. Locate the electrical access panel underneath the home close to the marriage wall.(see drilled holes through rim joist).

D. Remove access panel and feed the electrical connections through the drilled holes (only 2 per hole)

Match up that correspond to each other by number of lines on each wire: one- line to one-line, two-line to two-line etc.

(see S 83 and S 84 for on properly connecting the connector)

Check all circuits for electrical current before reinstalling the access panel.

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08/14/2006
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