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Message: *Hope this works for you?*



Schult Homes Corporation
 P.O. Box 151
 Middlebury, Indiana 46540

SCHULT

1983'

MULTI-WIDE INSTALLATION INSTRUCTIONS

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INTRODUCTION

This Schult home was engineered, constructed and inspected for conformance to the Federal Mobile Home Construction and Safety Standards in effect on the date of manufacture. This National Standard sets forth comprehensive requirements for design construction, fire safety, plumbing, heating systems and electrical systems for factory built homes designed to be used as dwellings.

Consult with building officials in your area to determine necessary permits, licenses and inspections required for installation of this home.

The step-by-step instructions which are required for the correct installation of a Schult home are presented in this booklet.

Before attempting to install the Schult home, these instructions must be carefully read and understood.

The drawings contained in these instructions are intended to be representative of the product. Designs and specifications are subject to change without notice.

NOTE: This manual is intended to instruct and to assist already qualified personnel in the proper installation of a Schult home. It is not intended to enable someone unfamiliar with home set-up to perform the installation.

SITE PREPARATION

The selected home site must be graded and sloped to provide proper drainage.

NOTE: The area under the home must be sloped to prevent water accumulation. This is to prevent excessive humidity in the home.

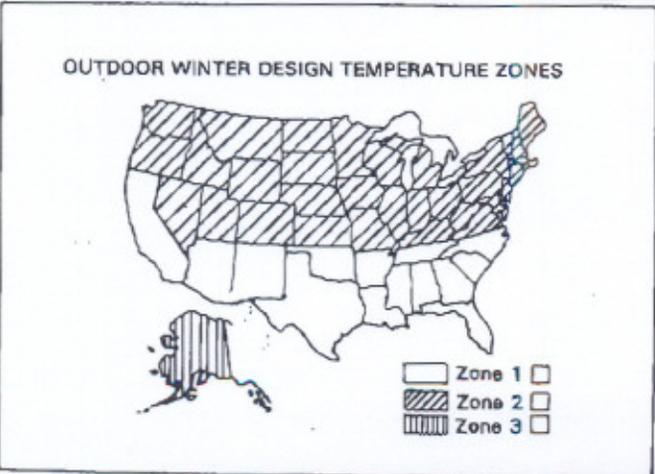
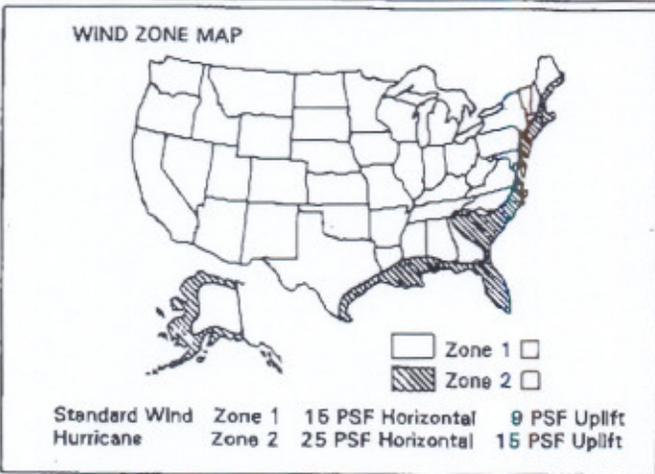
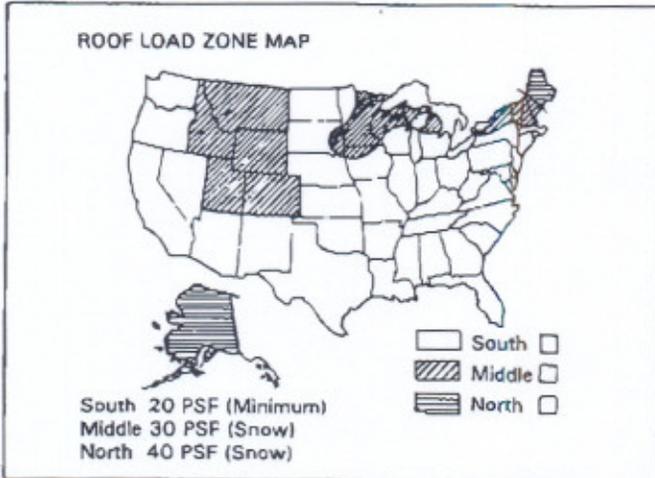
NOTE: If skirting is to be installed, the entire area under the home must be covered with a blanket of Visqueen. This is to prevent excessive humidity in the home. The Visqueen must be a minimum of 6 mil thick and be overlapped 6" at all joints.

ZONE MAPS

The following Zone Maps will help you make installation decisions with regard to prevailing weather in the zone where the home is to be located:

NOTE: Do not install your home in a zone that requires greater loads or greater climate zone requirements than those on the Compliance Certificate. You may, however, install a home in a zone requiring lesser loads or climate requirements.

1. From the following maps, determine and mark the zones where the Schult home is to be located. This information will be required to determine information from other charts and tables in this manual.



PIER AND FOOTING SELECTION

The piers used must have a capacity great enough to transmit the vertical load, which includes the weight of the home, its furnishings, and temporary roof loading to the foundation surface below it. If the load imposed is greater than the capacity of the pier, then two or more piers may be used. The total capacity of the piers must be equal to or greater than the load to be transmitted.

Complete the following steps to determine the pier and footing requirements for the home.

1. Determine pier height to be used based on site conditions.
2. Determine main beam pier spacing (10'-0" max.).
3. Using the preceding information, determine the required main beam pier capacity from the following tables.

NOTE: All multi-wide homes require additional supports under the mating line of the home. These supports must be at the pier location straps on the home or at the specific locations shown on the foundation plan for the model home being set up.

4. Using the preceding information determine the required mating line pier capacity from the following tables.

NOTE: 32' wide homes require additional supports under the perimeter rim joists of the home.

5. Determine 32' wide rim joist pier spacing (20'-0" max.).
6. Using the preceding information determine the required rim joist pier capacity from the following tables.

MAIN BEAM PIER CAPACITY TABLE (LBS.)

ROOF ZONE PIER SPACING	Pier Height & Width of Home								
	up to 2'-6"			2'-7" to 3'-0"			3'-1" to 4'-0"		
	24'	28'	32'	24'	28'	32'	24'	28'	32'
SOUTH									
8'-0"	3400	3900	2200	3700	4200	2500	4100	4300	2600
9'-0"	3800	4300	2500	4100	4600	2800	4400	4700	2900
10'-0"	4200	4900	2700	4500	5200	3000	4900	5300	3100
MIDDLE									
8'-0"	3900	4400	2200	4200	4700	2500	4300	4800	2500
9'-0"	4300	4900	2500	4600	5200	2800	4700	5300	2900
10'-0"	4800	5500	2700	5100	5800	3000	5200	5900	3100
NORTH									
8'-0"	4300	4900	—	4600	5200	—	4700	5300	—
9'-0"	4700	5200	—	5000	5500	—	5100	5600	—
10'-0"	5200	6100	—	5500	6400	—	5600	6500	—

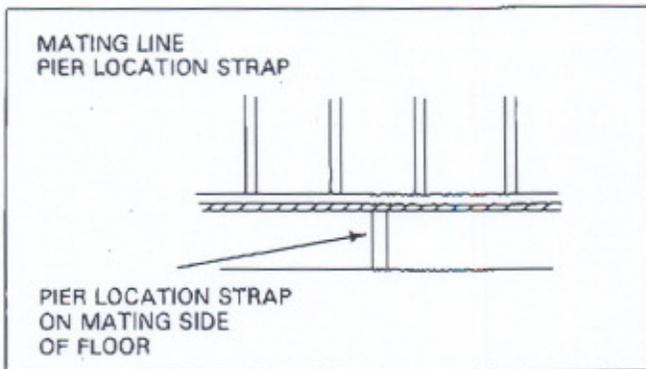
MATING LINE PIER CAPACITY TABLE

ZONE	24 WIDE	28 WIDE	32 WIDE
SOUTH	7100	8100	9300
MIDDLE	9500	10,800	12,400
NORTH	11,800	13,500	—

32' WIDE RIM JOIST PIER CAPACITY TABLE

Roof Zone	Pier Spacing	Capacity
SOUTH	12'-0"	4200
	16'-0"	5500
	20'-0"	6900
MIDDLE	12'-0"	5100
	16'-0"	6800
	20'-0"	8400





7. Determine soil bearing capacity from the following table.

TYPICAL SOIL BEARING CAPACITY	
CLASS OF MATERIALS	ALLOW FOUNDATION PRESSURE (PSF)
Massive Crystalline Bedrock	4000
Sedimentary and Foliated Rock	2000
Sandy Gravel and/or Gravel (GW and GP)	2000
Sand, Silty Sand, Clayey Sand, Silty Gravel and Clayey Gravel (SW, SP, SM, SC, GM and GC)	1500
Clay, Sandy Clay, Silty Clay and Clayey Silt (CL, ML, MH and CH)	1000

8. Using the preceding information, you can select a concrete footing size from the following table.

FOOTING SIZE TABLE (MINIMUM)						
SOIL BEARING CAPACITY						
	1000	1500	2000	3000	4000 & OVER	FOOTING SIZE
REQUIRED PIER CAPACITY (LBS.)	-	-	-	0001-2600	0001-3500	16x8x4
	-	-	0001-2500	2601-3900	3501-5200	16x12x4
	-	0001-2500	2601-3400	3901-5200	5201-7000	16x16x4
	-	2501-3200	3401-4300	5201-6500	7001-8700	20x16x4
	-	3201-3800	4301-5200	6501-7800	8701-10500	24x16x4
	0001-2500	3801-3900	5201-5300	7801-8100	10501-10900	20x20x6
	2501-3000	3901-4700	5301-6400	8101-9700	10901-13100	24x20x6
	3001-3600	4701-5600	6401-7500	9701-11600	13101-15600	24x24x8
	3601-4500	5601-7000	7601-9500	11601-14500		30x24x8
	4501-5400	7001-8400	9501-11400			36x24x8
	5401-6700	8401-10500	11401-14200			36x30x8
	6701-7900	10501-12400				36x36x10
	7901-9200	12401-14400				42x36x10
	9201-10700					42x42x10
	10701-12300					48x42x10
	12301-14000					48x48x10

NOTE: FOOTING CONCRETE MUST BE 3000 P.S.I. IN 28 DAYS.

Proper support for the home must allow for soil conditions in the immediate area. Pier footings must be placed on firm undisturbed soil (not loose fill) or soil which has been compacted to at least 90 per cent of its maximum relative density. Pier supports may also be placed directly on concrete slabs designed for the home's placement.

Climate conditions must also be taken into account. If footings are placed on a frost-susceptible soil, such as clay or silt, heaving and/or settlement may occur. In areas where temperatures go below freezing, it is important that the pier footings be located below the frost line.

PERMANENT FOUNDATIONS

In the event you are considering a permanent foundation for the home, Schult Homes Corp. has a system available that would be acceptable in most areas. Drawings may be obtained by contacting the Schult Homes Corporation.

Once obtained, the drawings must be submitted to the local jurisdiction for permission, soil conditions, type of foundation construction allowed and other requirements relative to the installation.

PIER AND FOOTING CONSTRUCTION

1. Construct footings and piers as shown in the following illustrations.

FROM GRADE TO MAIN BEAM UP TO 30" HIGH
NOT FOR USE AT MATING LINE

FROM GRADE TO MAIN BEAM UP TO 48" HIGH
FROM GRADE TO MATING LINE UP TO 48" HIGH

1. Footing — solid concrete below frost line.
2. Pier — concrete blocks 8" x 8" x 16" (Cells vertical.)
3. Cap Block — 16" x 16" x 4", solid concrete.
4. Wood Plate — 1" x 8" x 16".
5. Hardwood Shims — to be driven in tightly and not to occupy more than 1" vertical space; used to level the unit.
6. Main Frame.
7. Cap Block — 8" x 16" x 4", solid concrete.

NOTES:

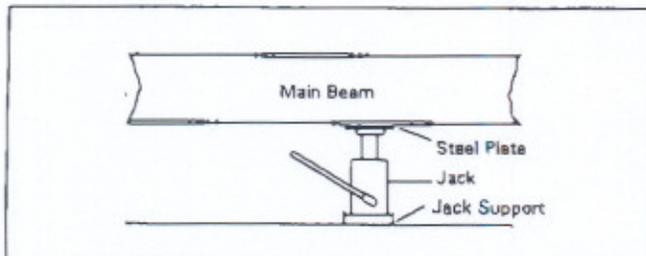
- A. Pier foundation to be placed on stable soil.
- B. If over 48" in height (from Grade to bottom of Main Frame), pier to be designed by a qualified architect or engineer.)
- C. 2" x 8" x 16" solid concrete blocks may be used in combination with item 2 above.

ALTERNATE METHODS AND MATERIALS MAY BE USED; HOWEVER, SCHULT HOMES CORP. DECLINES ANY RESPONSIBILITY AND REQUIRES THAT A QUALIFIED ARCHITECT OR ENGINEER APPROVE THE SYSTEM DESIGN.

BLOCKING AND LEVELING

The following equipment will be required:

- A. Two jacks with a minimum 10 ton rating.
- B. Two steel plates with a minimum size of 3/8 x 2½ x 5" to use between the jack and the main beams. This will distribute concentrated loads and prevent damage to the beams.



Position the first section to be set up and follow this step-by-step procedure to avoid placing undue stress on structural members of the home:

1. Level the section from front to rear by means of the hitch jack.
2. Place one jack just forward of the front spring hanger and another just behind the rear spring hanger under one of the main beams.
3. Operating the two jacks simultaneously, raise the section and install footings and piers next to the jacks.
4. Jack up the front & rear end of the main beam, under which you have just installed two piers, to a level position and install a footing and pier 1'0" from each end. The section should now be near level from front to rear along the first main beam.

5. Repeat the preceding three steps on the other main beam, bringing the section level crosswise and lengthwise.
6. Place the remaining footings and piers along the main beams taking care not to exceed the maximum pier spacing from the capacity table, and that the end piers are 1'0" maximum from the ends of the main beams.

If over-the-roof ties are to be used, piers should be located as close as possible to them.

If over-the-roof ties are used, especially in areas subject to "frost heave," Schult recommends that additional piers be placed directly under the perimeter of the home at each over-the-roof tie. This will prevent the exterior walls from being pulled downward should the main beam piers heave upward due to climatic conditions.

7. Install 32 Wide Rim Joist Blocking as follows:

- A. Install a footing & pier 1'-0" from each end of the home. Place the remaining footings & piers along the perimeter taking care not to exceed the maximum spacing from the rim joist pier capacity table. Piers should be located as close as possible to the over-the-roof ties.
- B. Additional footings & piers are required at both ends of any opening in the sidewall over 4'-0" in length.
8. Complete the leveling procedure with a 6 ft. level, adjusting pier heights with shims.
9. Check to make sure that all doors and windows operate properly.

MATING PROCEDURE

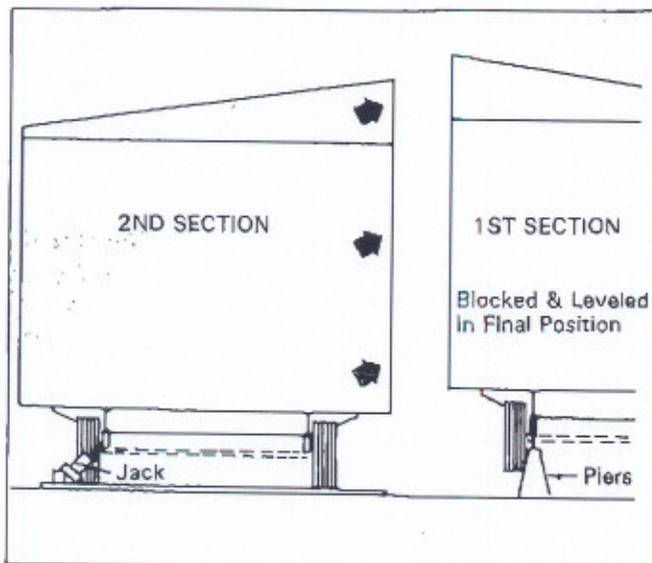
1. Remove the temporary closure material from all sections of the home.
2. Move the second section into position approximately 6" to 8" from the first section.

NOTE: Greased boards or aluminum sheets under the tires and hitch will aid in sliding the second section.

3. To insure tight fitting joints, install strips of insulation around the mating line on the roof, end walls and floor. Do not install the insulation over any openings in the mating line provided for heating, cooling or air return ducts.

NOTE: Special care must be taken to ensure that this marriage line joint is tight to resist air infiltration and condensation.

4. If the home has heating, cooling or air return ducts passing through the mating line, be sure that any required connection seals are in place.
5. Draw the two sections together using jacks set at an angle, under the main beams and winches (come-alongs) connected to the main beams.



6. With the two sections together, but with no fasteners installed, check the alignment of the end walls, interior walls, roof, and floor. Determine if the walls and/or the roof of either section must move backward or forward with respect to the floor. Any correction required can be accomplished during the leveling of the second section.

NOTE: The interior walls are one good indication of roof position. The walls should run straight from one section to the other when the sections are correctly positioned. If the walls require only a small correction, procedure Step 7 is suggested. In more difficult cases, use procedure Step 8.

7. Alignment procedure is as follows:

- A. Position the second section to bring the floor seams flush, keeping the roof slightly apart and the end walls aligned at the floor. At this time place piers only on the inside main beam.
- B. Close the gap in the ceiling by raising the outside main beam using two hydraulic jacks—placed ahead of and behind the wheels.
- C. IF THE TOP MUST BE MOVED FORWARD . . . With the frame support beams evenly supported, carefully raise the outside rear corner of the second section (and lower the outside front corner) with the hydraulic jacks. The roof should shift forward until the end walls align evenly at the top. When the walls are even, raise the outside support frame beam evenly to close the gap.
- D. IF THE TOP MUST BE MOVED BACK . . . With the frame support beams evenly supported, carefully raise the outside front corner of the second section (and lower the outside rear corner) with the hydraulic jacks. The roof should shift back until the end walls align evenly at the top. When the walls are even, raise the outside frame support beam evenly at the front and rear to close the gap.
- E. Fasten the top of the ridge beam together as specified. When the top and walls are aligned, secure the floor with one of the approved methods described in this manual.

8. Alternate Alignment Procedure:

- A. Position the second section so that the floors are together, but not lined up, and the roof together and lined up at the end walls and interior walls.
- B. With the ceiling positioned and the ridge beam halves tight together, fasten the top of the ridge beam together as specified.
- C. With the roof securely fastened, attach a winch (come-along) between spring shackles of each section. Shift the floor and lower end of the walls into alignment by tightening the winch.
- D. When the floors and walls are even, fasten the floors and end walls together as specified and tighten, as required, to hold the floors in position when the hand winch is released.

9. Block and level the second section starting with the inside main beam and following the same procedure as used for the first section.

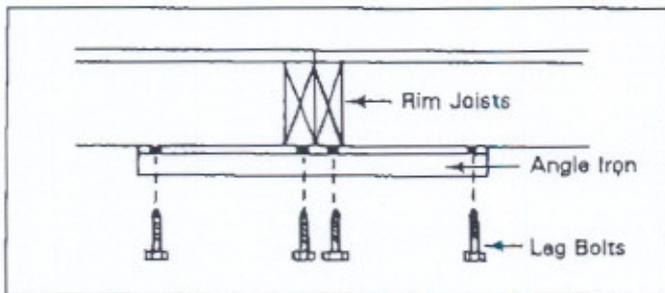
STRUCTURAL CONNECTIONS

A. Floor Connections

The floors must be fastened together by one of the following methods.

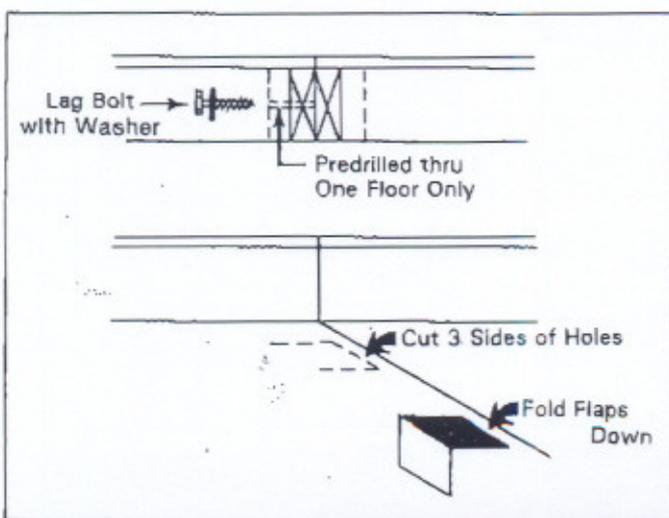
Method #1

1. Secure floors together with angle irons ($1\frac{1}{4} \times 1\frac{1}{8} \times 18''$) spaced 48'' O.C. End pieces may be a maximum of 48'' in from ends of floors.
2. Secure each angle iron to the floors with four $\frac{3}{8}'' \times 3''$ lag bolts.
3. Two lag bolts go in the floor of each section, one in the rim joist and one in the floor joist.



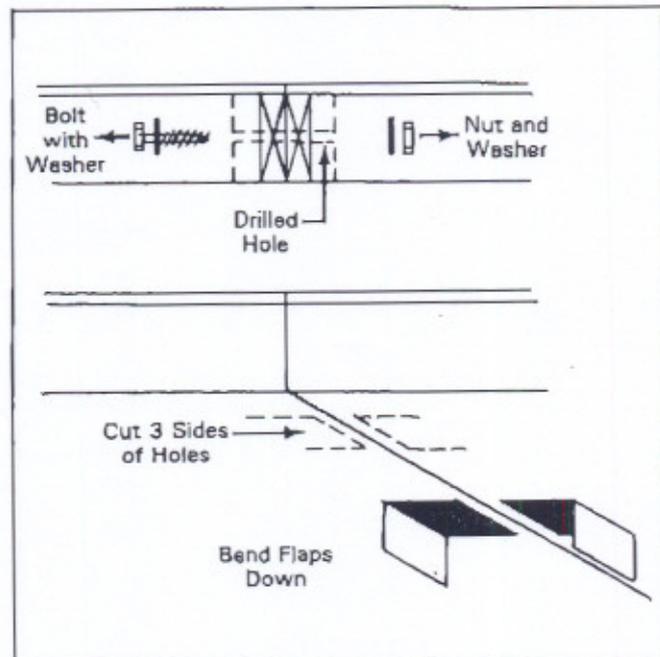
Method #2

1. Secure floors together with $\frac{3}{8}''$ lag bolts spaced 48'' O.C. End lag bolts may be a maximum of 40'' in from ends of floors.
2. Lag bolt sizes are as follows:
Single rim joists — $\frac{3}{8} \times 3''$
Double rim joists — $\frac{3}{8} \times 7''$
3. Washers must be used on all lag bolts.
4. Cut 3 sides of a $16'' \times 16''$ hole at mating line of either section at the locations for the bolt holes. Bend the bottom board flaps out of the way.
5. Pre-drill $\frac{3}{8}''$ holes in rim joist(s) of the section with holes in bottom board.
6. Install bolts and tighten securely.
7. Replace insulation if removed for installation of bolts.
8. Repair bottom board as specified in "Bottom Board Patching" section of this manual.



Method #3

1. Secure floors together with $\frac{3}{8}''$ bolts spaced 48'' O.C. End bolts may be a maximum of 40'' in from ends of floors.
2. Bolt sizes are as follows:
Single rim joists — $\frac{3}{8}'' \times 5''$
Double rim joists — $\frac{3}{8}'' \times 8''$
3. Washers must be used on both ends of all bolts.
4. Cut 3 sides of a $16'' \times 16''$ hole at mating line of both sections at the locations for the bolt holes. Bend the bottom board flaps out of the way.
5. Drill $\frac{3}{8}''$ holes through both floors.
6. Install bolts and tighten securely.
7. Replace insulation if removed for installation of bolts.
8. Repair bottom board as specified in "Bottom Board Patching" section of this manual.

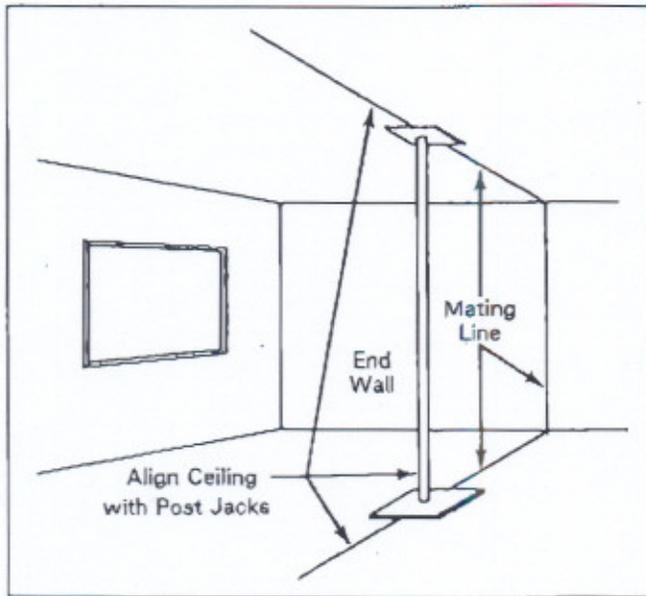


B. Endwall Connections

1. Fasten endwalls of the home together with either of the following methods:
A. #8 x 3'' screws 12'' O.C.
B. 16d nails 8'' O.C.
2. Fasteners may be installed at an angle if more than one stud is used at mating line.
3. Fasteners may be installed from outside or inside the house, depending on the method of close-up used.

C. Exterior Roof Connections

NOTE: It is important to have the ceilings flush below each rafter before the roof is fastened. One man should work inside to raise the low side, as required. By jacking under a wood post or section of steel pipe with a wood or metal pad at the top, place the base of the jack across the floor seam to distribute the load to both sections. Jack against the ceiling only in areas to be covered later with trim molding.



NOTE: Some homes have a temporary shipping wall to support the ridge beam during transportation. Before this wall is removed the ridge beam must be secured together in the area of the temporary wall using 3/8" bolts as shown below in methods #1, 2, or 3 of the exterior roof fastening.

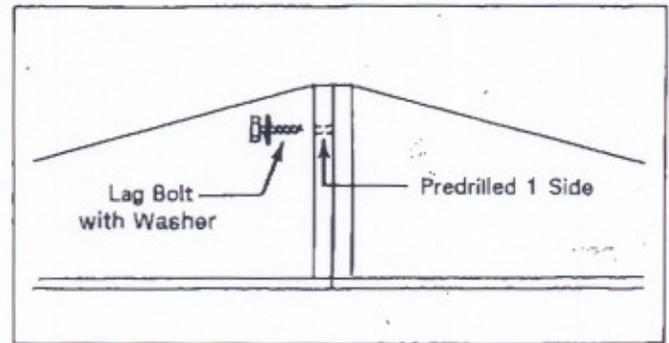
These bolts must be in addition to the standard fastening requirements. The number of additional bolts required is as follows:

- South Zone — 2
- Middle Zone — 3
- North Zone — 4

The exterior of the roofs must be fastened together by one of the following methods.

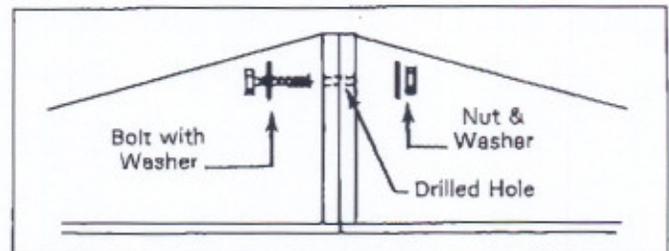
Method #1

1. Secure roofs together with 3/8" x 4" lag bolts spaced as needed for roof zone home is located in.
2. Spacing of lag bolts is as follows:
 - South Zone — 24" O.C.
 - Middle Zone — 16" O.C.
 - North Zone — 12" O.C.
3. Washers must be used on all lag bolts.
4. Pre-drill 3/8" holes in ridge beam on one section of home.
5. Install bolts and tighten securely.



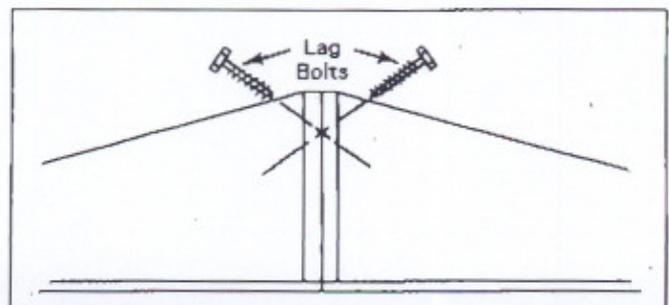
Method #2

1. Secure roofs together with 3/8" x 6" bolts spaced as needed for roof zone home is located in.
2. Spacing of bolts is as follows:
 - South Zone — 30" O.C.
 - Middle Zone — 24" O.C.
 - North Zone — 16" O.C.
3. Washers must be used on both ends of all bolts.
4. Drill 3/8" holes through both ridge beams.
5. Install bolts and tighten securely.



Method #3

1. Secure roofs together with 3/8" x 5" lag bolts spaced as needed for roof zone home is located in.
2. Spacing of fasteners is as follows:
 - South Zone — 24" O.C. on both sides
 - Middle Zone — 16" O.C. on both sides
 - North Zone — 12" O.C. on both sides
3. Install lag bolts at 45° angles and tighten securely.

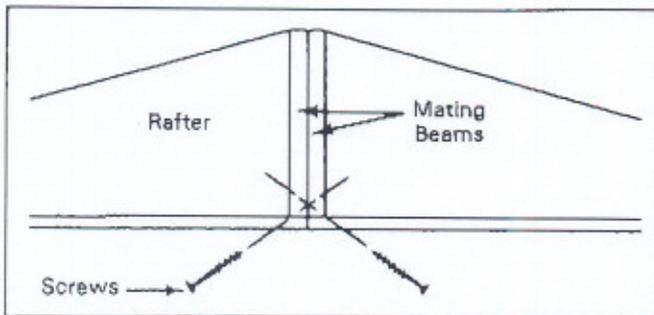


D. Interior Roof Connections

Interior: The interior of the roofs must be fastened together by one of the following methods.

Method #1

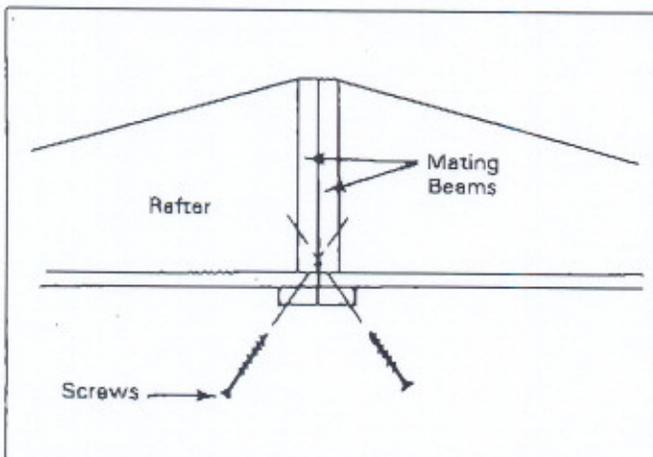
1. On each side of the ceiling mating line at each rafter location (16" O.C.), drill a pilot hole at 35° toward the opposite side. Counter sink a #10x5" screw in each pilot hole.



2. Where there is a mating wall on one side of the home this must be done on the exposed side.
3. No interior fastening is required where there are two mating walls.

Method #2

1. If the home has 1x3 members installed at the factory, on each side of the mating line at each rafter location (16" O.C.), drill a pilot hole at 45° toward the opposite side. Countersink a #10x5" screw in each pilot hole.



2. Where there is a mating wall on one side of the home this must be done on the exposed side.
3. No interior fastening is required where there are two mating walls.

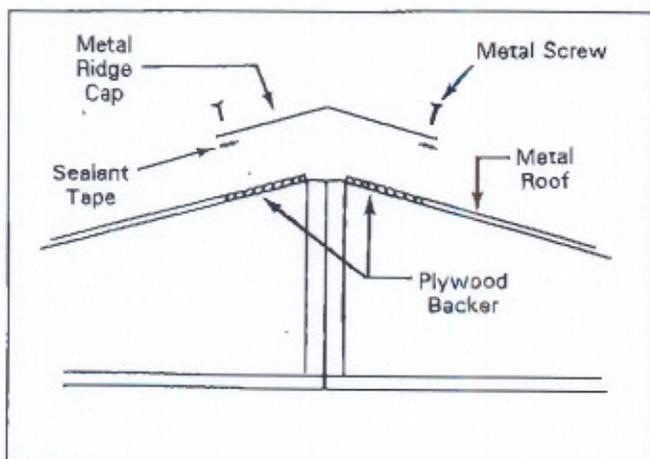
EXTERIOR CLOSE-UP

A. Floors

Staple 3" wide strip of bottom board, the full length of the home, bridging the bottom edges of the mating rim joists.

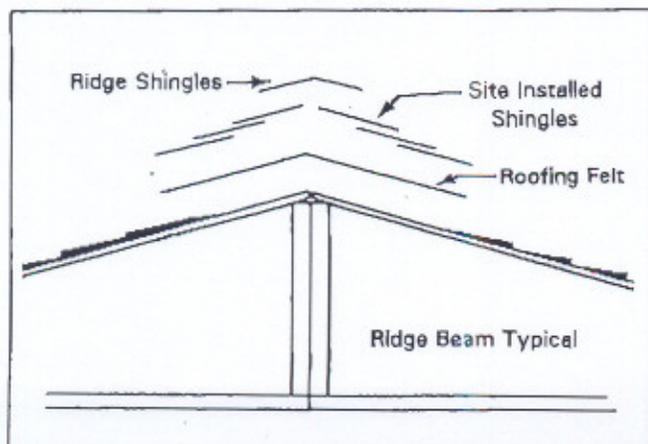
B. Metal Roof

1. Apply sealant tape to outer edges of ridge cap.
2. Position cap on roof and fasten with #8x $\frac{3}{4}$ " screws 3" O.C. Screws must compress sealant tape and penetrate wood backing under metal roof.
3. Lap ridge cap joints 3" to 4". Caulk and screw all joints.
4. Apply roof sealant along edges of ridge cap, at joints and over all screws.



C. Shingled Roof

1. Install plywood sheathing at the peak (if left off for ridge beam connections), using #6 nails in each rafter at top and bottom edges of sheathing.
2. Install roofing felt centered over peak of roof to cover any exposed sheathing.
3. Complete installation of shingles to the peak.
4. Cut shingle for ridge lap. Overlay the ridge shingles with open end of tabs away from prevailing winds.



D. End Wall (Vertical Metal)

1. Install bottom starter at mating line to match starter on home.
2. Install vertical panels by snapping the sides into the factory installed S-locks on the home.
3. Install fascia and soffit material to match the home.
4. Use putty tape and caulking or sealant materials in appropriate places to ensure weatherproofing.

E. End Wall (Lap Siding)

1. Install starter strip at bottom of walls even with siding on the sides of the home.
2. Install lap siding on end walls starting at the bottom.
3. Install fascia and soffit material to match the home.
4. Use putty tape and caulking or sealant materials in appropriate places to ensure weatherproofing.

F. End Wall (Hardboard Siding)

1. Install horizontal trim at bottom of home and at ceiling height to match trim on sides of home.
2. Install vertical piece over mating line to match the siding on the home.
3. Install fascia and soffit material to match the home.
4. Install freeze board (trim piece at top of peak against soffit).
5. Caulk top edge of all horizontal trim pieces.
6. Caulk both sides of vertical piece covering mating line.
7. Use corrosion resistant nails provided for installing hardboard.

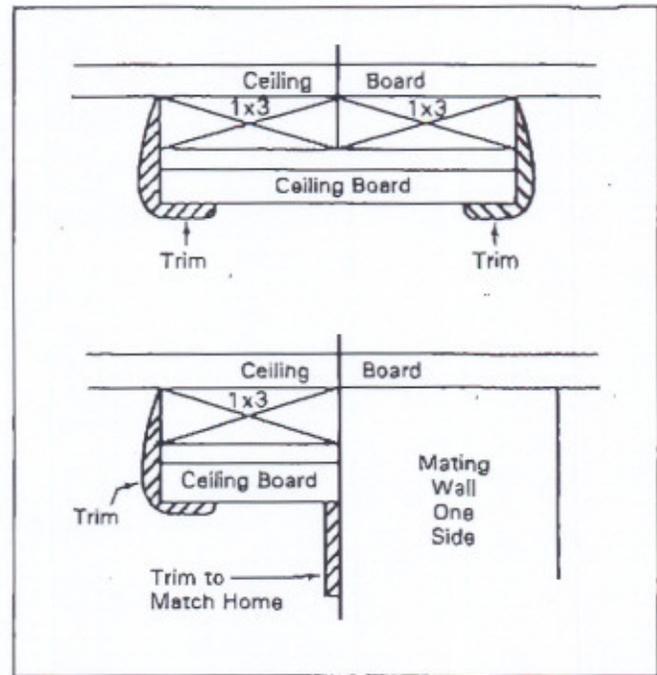
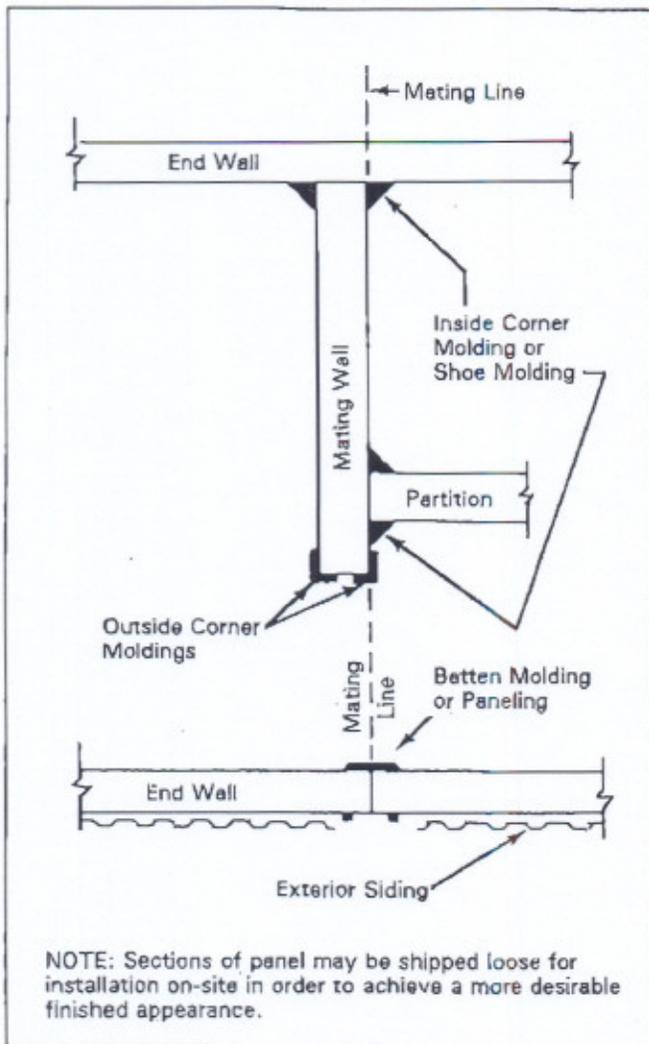
INTERIOR CLOSE-UP

A. Walls

All the materials necessary to trim out the interior of the home are shipped with each home and can be easily identified by matching the moldings or paneling with the materials installed in the home.

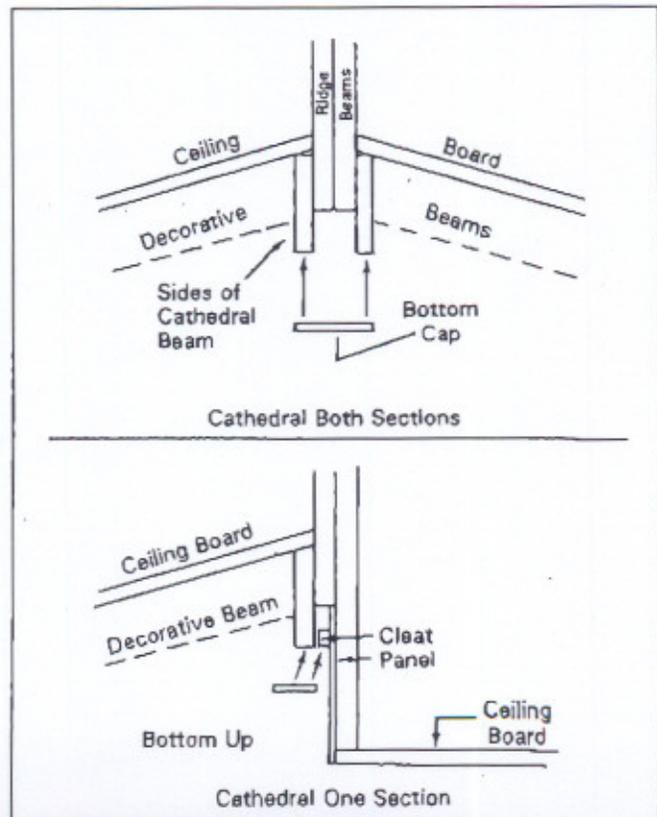
Before installing moldings, fill all gaps with insulation.

The illustrations below are typical molding installations for trimming out the various mating wall joints.



Method #2 — Cathedral Ceiling

1. Install cap on bottom of cathedral beam. Material for cap will be sent to match the sides of the beam.



B. Ceiling

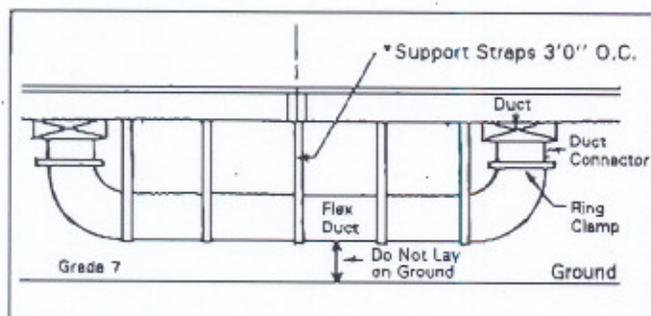
Method #1 — Flat Ceiling

1. The 1x3 strips and trim on one side may be installed at the factory.
2. Insert the "floating" strip of ceiling board and attach the second piece of trim.

CROSSOVER UTILITY CONNECTIONS

A. Heat Duct Crossover

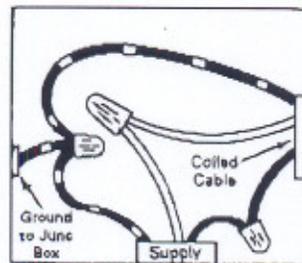
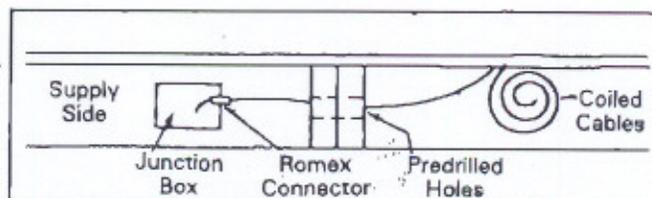
1. Connect each end of the insulated flexible duct to the metal duct connectors on each half of the home by sliding the duct over the collars. Secure duct to connectors with the ring clamps provided.
2. Tape each connection with duct tape to assure an air tight seal.
3. Support duct with metal straps as shown below. Straps should be secured to a wood frame member.



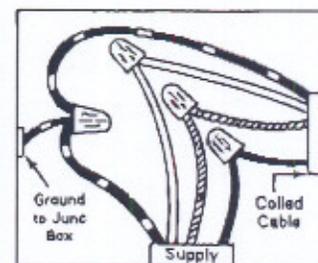
B. Electrical Crossover

Electrical crossover connections are located on the underside of the floor at the rear of the home.

1. Remove the access covers from both sections of the home.
2. The junction box is located on the supply section of the home; the second section has cables coiled up in the floor.
3. If electric service has been run to the home, check to see that the main breaker in the distribution panel is turned off.
4. Remove the cover from the junction box on the supply section.
5. Route the coiled up cables to the junction box through the holes predrilled in the floors.
6. Install Romex connectors where the cables enter the junction box.
7. Depending on the number of circuits required, more than one junction box may be used.
8. Connect the coded wires with the connectors provided in the junction box.
9. Replace junction box cover.
10. Secure cables within 12" of the junction box.
11. Replace any insulation that was removed to make the connections.
12. Replace access covers on both sections of the home.



Typical 115 Volt Connection
For 15 AMP or 20 AMP
Circuit



Typical 230 Volt Connection
For 30 AMP or Larger
Circuit

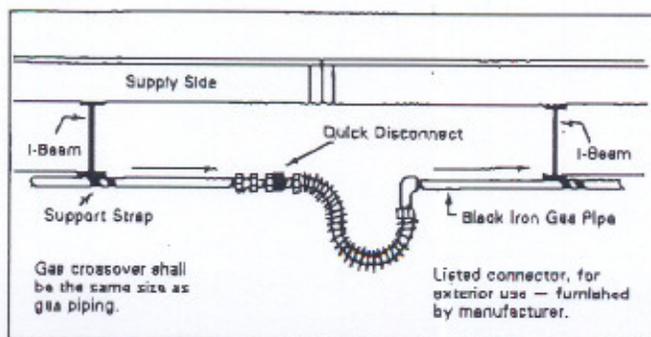
C. Water Line Crossover

Water line crossover connections are located on the underside of the floor at the mating line of the home.

1. Remove the access covers from both sections of the home.
2. Feed water lines through the holes predrilled in the floors.
3. Connect the water lines between sections with the fittings provided.
4. Replace any insulation that was removed to make the connections.
5. Replace access covers on both sections of the home.

D. Gas Line Crossover

1. Remove the protective caps from the gas line and connectors.
2. Attach the quick disconnect to the supply side and the connector to the other half.
3. The crossover must be readily accessible from the exterior of the home.
4. Do not use tools to separate the "Quick Disconnect" device.



TIE-DOWN INSTRUCTIONS

After blocking and leveling, the home must be made secure from overturning due to wind. This is accomplished by installing frame ties supplied by the owner or installer. These straps are wrapped around the frame I-beams and anchored to the ground.

The number of frame ties required varies depending on the wind zone and the strapping method selected.

The following instructions are for installing tie-downs on the Schult home. Construct the tie-down system with adjustable devices in order that the strap tension may be periodically adjusted to compensate for heaving and settling.

1. From the chart and details below, select either the single or double strap method.

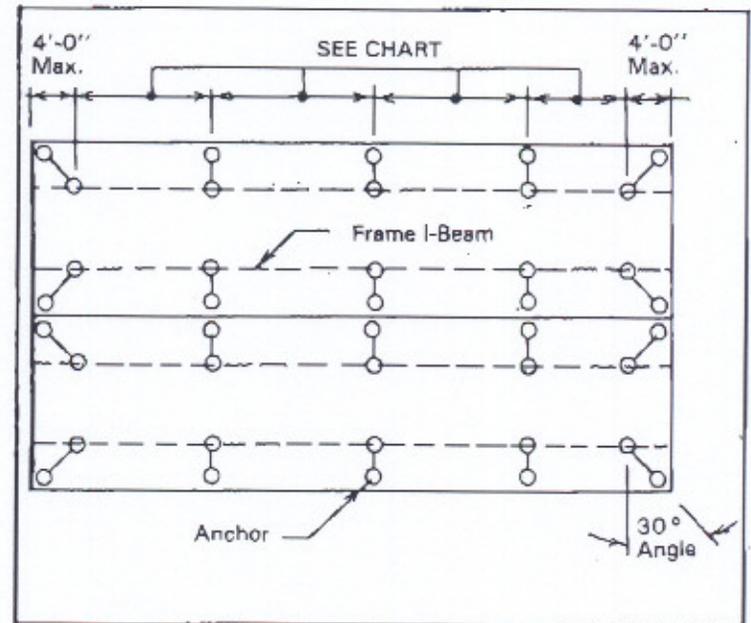
STRAP METHOD	ANCHOR MIN. ULT. LOAD CAPACITY	MAX. ANCHOR SPACING	
		ZONE I	ZONE II
Single	4725 lbs.	11'-0"	6'-0"
Double	9450 lbs.	22'-0"	13'-0"

Be sure to use ground anchors equal to or stronger than the minimum load capacities listed in the chart for the method selected.

2. Install ground anchors at the required locations per the details shown below. Anchors are to be either:
 - A) Installed at the same angle as the strap being connected (approximately 45 degrees), or,
 - B) Embedded in a 10" wide by 18" deep minimum concrete collar installed vertically in the ground.

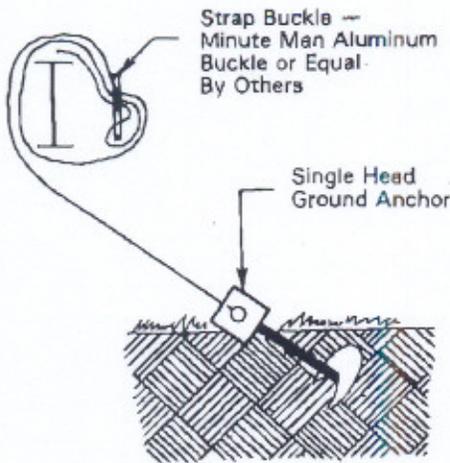
Install single head ground anchors at all "frame-tie-only" locations when using the single strap method. Install double head ground anchors at all "frame-tie-only" locations when using the double strap method. Install single head ground anchors at all over-the-roof tie locations.

3. The end frame ties should be installed within 4'-0" of the ends of the home. Straps should be directed toward ground anchors at a 30 degree angle towards the four corners of the home.

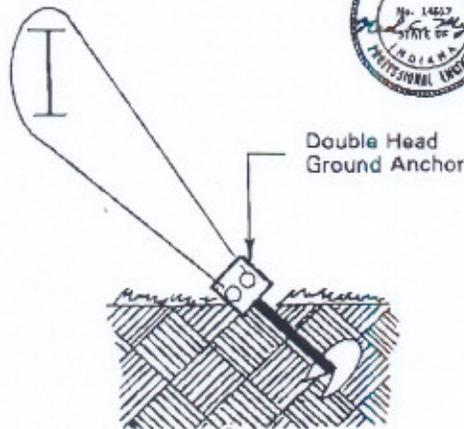


4. Connect frame ties to the frame I-beam of the home at all ground anchors (double and single head) on both sides of the home. If over-the-roof ties are available connect them also to the ground anchors. Straps should not be tight at this point.
5. With one man on each side of the home, start at the front and tighten straps on both sides at the same time. The home could be pulled off its piers if all straps are tightened on one side at a time.

FRAME TIE-DOWN METHODS



SINGLE STRAP METHOD



DOUBLE STRAP METHOD



FRAME TIE STRAPPING REQUIREMENTS

Frame tie strapping material must meet, or exceed, the following specifications: 0.035" x 1.250" Federal Specifications QQ-S-781H Type 1, Class B, Grade 1, 0130 oz/Sq. Ft.

GROUND ANCHOR W/DOUBLE HEAD

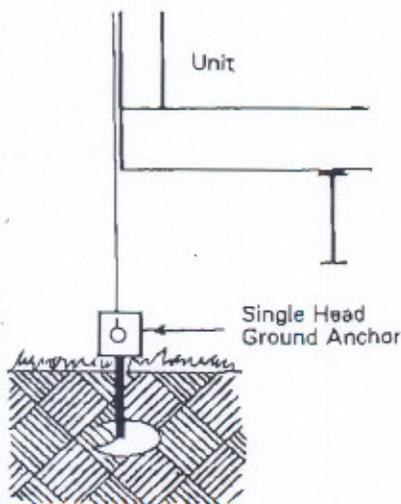


Double-fastening Minute Man Anchor or Equal—by others: Minimum ultimate load capacity — 9,450 lbs.

GROUND ANCHOR W/SINGLE HEAD



Single-fastening Minute Man Anchor or Equal—by others: Minimum ultimate load capacity — 4,725 lbs.



OPTIONAL OVER-THE-ROOF TIE-DOWN

NOTE: Before skirting is installed, the entire area under the home must be covered with a blanket of Visqueen. This is to prevent excessive humidity in the home. The Visqueen must be a minimum of 6 mil thick and be overlapped 6' at all joints.

NOTE: Any skirting around the home must be provided with non-closing vents.

The free air of the vents must be equal to not less than 1/300th of the floor area of the home (divide sq. ft. of home by 300).

The vents must be located to provide cross ventilation to the entire area under the home.

EXHAUST SYSTEMS

1. Visually inspect bathroom & kitchen exhaust vents to see that they are free & clear to the outside of the home & that nothing has been disturbed due to in-transit vibrations.

UTILITY HOOKUP AND TESTING

This section of the manual deals with the connections of the water supply, drainage, gas, oil and electrical systems of the home to the site service.

NOTE: The connection and testing of these systems, on site, are to be made by qualified personnel only.

The information on the following pages will assist in determining the proper connection procedures for which the home was designed and serve as a guide for inspection of the system upon completion.

Upon completion of your utility installation, it is important that access to connections be provided for periodic inspection and possible future service.

WATER SUPPLY HOOKUP & TESTING

NOTE: Water heaters must be by-passed during test. Test involves use of pressurized air which can permanently damage the water heater or may even cause rupture or explosion which could result in serious injury. Water heater is by-passed by disconnecting both the cold water line inlet and the hot water line outlet from the water heater and then connecting the hot and cold water lines together through the use of appropriate connection fittings.

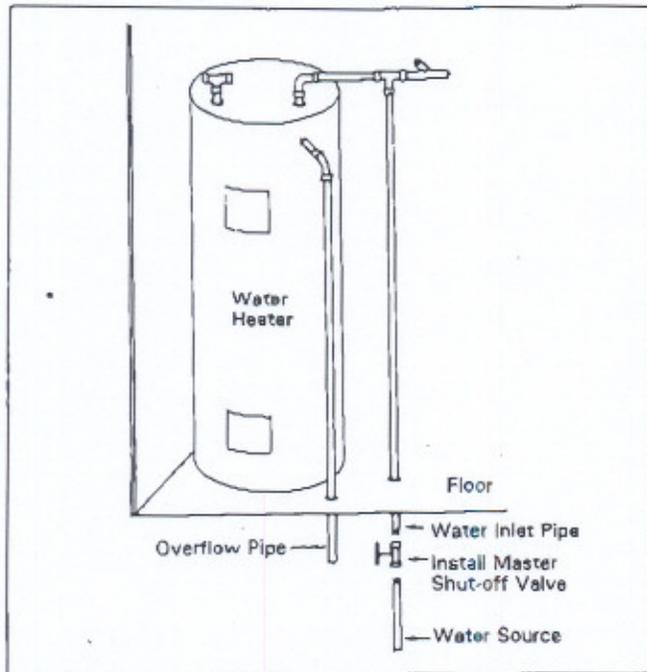
The water system was tested at the factory; however, it is essential that it be rechecked at the site for leaks that may have been caused by in-transit vibrations. Recheck to make sure water supply lines have been connected between sections of the home as previously instructed.

1. Install a master shut-off valve at the bottom of the water inlet pipe (either a full port gate or a full port ball valve, with threaded or solder joints). Install a pressure reducer if site pressure goes over 80 P.S.I. These items to be supplied by the installer or owner.
2. Proceed with test as follows:
 - A. Close all water faucets, spigots and stool tank float valves.
 - B. Pressurize the system to 100 psi.
 - C. Isolate the pressure source from the system.
 - D. The gauge must stand 15 minutes with no drop.

PROTECTION FROM FREEZING

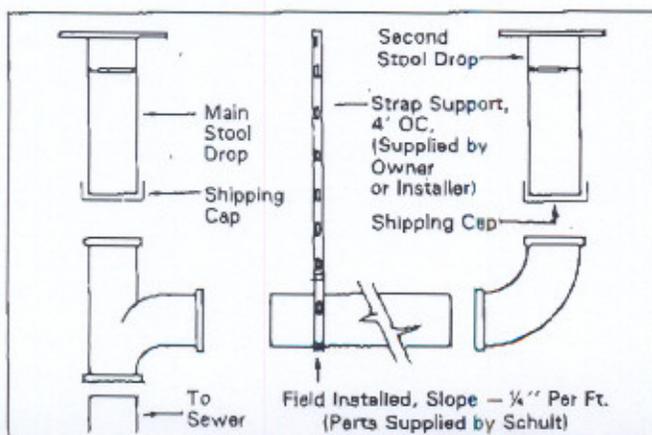
3. If the home is to be left unheated in cold weather, after the above test, it is necessary to drain the water lines and blow them clear with compressed air to prevent damage from freezing.
4. If the home is installed in an area subjected to freezing temperatures, the exposed section of the water supply piping, shut-off valve, and pressure reducer must be protected. The most efficient and recommended means of accomplishing this is by the use of a thermostatically controlled heat tape. For this purpose, Schult homes are equipped at the factory with an electrical receptacle under the home in the vicinity of the water supply inlet.

THE HEAT TAPE USED MUST BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY FOR USE WITH MOBILE HOMES, AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.



DRAIN SYSTEM HOOKUP & TESTING

- The drainage system was checked for leaks at the factory; however, it is essential that it be rechecked at the site for leaks which may have been caused by in-transit vibrations.
 - With the stool drop(s) under the home tightly capped and the tub and shower drains plugged, fill the drainage system until the toilet bowl(s) are full to the rim(s). The water should stand without dropping for fifteen minutes.
 - Fill fixtures which are higher than the toilet bowl (lavatories, sinks, etc.) with water. Check these fixture connections for leaks as you allow the water to flow through the system.
- Make drain line connections between sections of the home and separate bathrooms. Secondary bath stool drops must be connected to the main stool drop with 3" drain lines and fittings. Other fixtures to be connected to the main drain system with the appropriate size drain line and fittings. Drain lines and fittings are shipped loose with the home. These installations are many and varied; the drawing below is typical.



The main drain connection to the sewage system should be made with 3" drain line sloped at 1/4" per foot. This connection material is supplied by the owner or the installer.

NOTE: All site installed drain lines must be supported by straps attached to the home 4' OC maximum.

PROTECTION FROM FREEZING

- Access to fittings in the drainage system subject to freezing, such as P-Traps in the floor, have been protected with insulation by the manufacturer. Insulation must be replaced if removed during the testing.
- If the home is to be left unheated in cold weather after the above tests, it is necessary to drain the entire system to prevent damage from freezing.

P-Traps at all fixtures and stools can be protected by pouring 1/2 cup of antifreeze into each one.

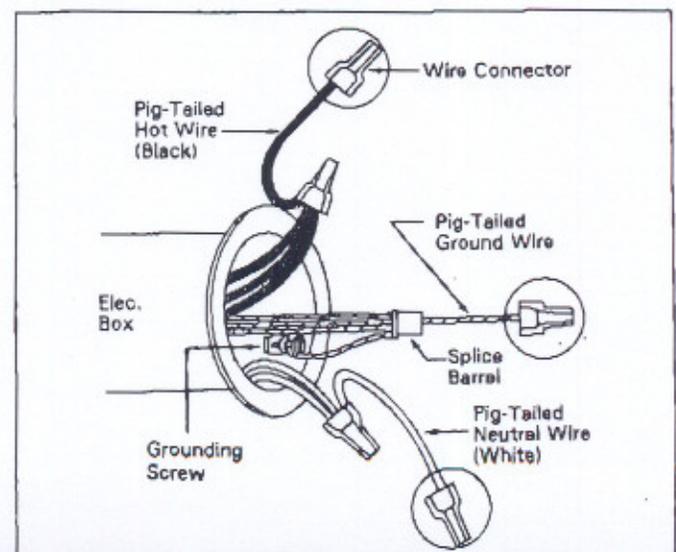
ELECTRICAL SYSTEM HOOKUP & TESTING

NOTE: Electrical tests and connections should be made only by qualified personnel.

The home was tested at the factory, but must be retested after set-up, because of the possibility of connections loosening due to in-transit vibrations. Re-check to make sure electrical wiring connections have been made between sections of the home as previously instructed.

EXTERIOR LIGHT FIXTURES & OTHER 110V APPLIANCES

- Connect wires, black to black, white to white, and ground to ground, using wire nuts. Push wires into box and secure fixture in position. Install the bulb.
- Apply caulking around base of light fixture to insure a water-tight seal to the wall.



CONNECTION OF THE ELECTRICAL SERVICES

- To determine applicable feeder size amperage, see Main Breaker and the label on electrical distribution panel.
- Using this information, determine the required feeder size from the following table.

ELECTRICAL FEEDER AND EQUIPMENT SIZES					
Feeder Size (AMPS)	Maximum Neutral Feeder Load (AMPS)	Minimum Required Junction Box Size (Inches)	Feeder Sizes Based Upon Use of 75°C Insulated Copper Conductors		Conduit (Inside Dia.)
			Black-"Power" Red-"Power" White-"Neutral"	Green or Bare Ground	
50	50	10x10x4	#6 THW (Cu)	#8 (Cu)	1 1/4"
100	100	10x10x4	#3 THW (Cu)	#8 (Cu)	1 1/4"
150	115	12x12x6	#1/0 THW (Cu)	#6 (Cu)	2"
200	130	12x12x6	#3/0 THW (Cu)	#4 (Cu)	2"

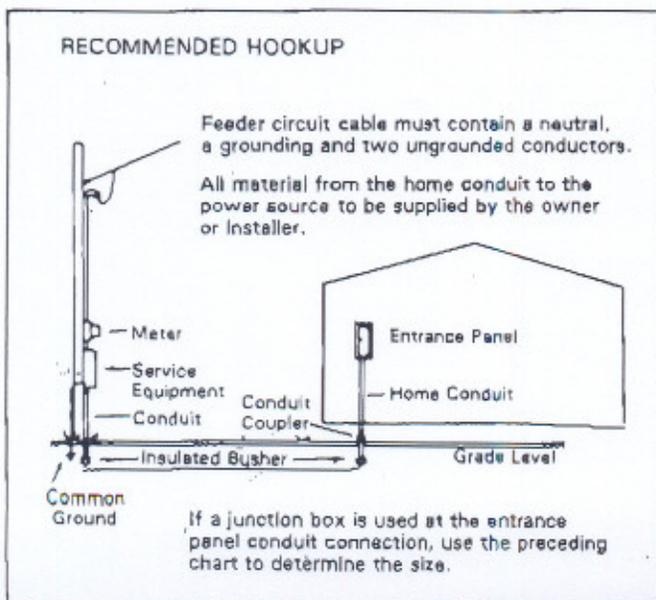
Conductor sizes are in accordance with the National Electric Code, Table 310-16, and do not take voltage drop into consideration. Allowable ampacities are based on ambient temperature of 30°C, 86°F.

CAUTION: If the home has an electric water heater, it must either be filled with water or have the circuit breaker turned "OFF" before energizing the home electrical system or severe damage to the heating element will result.

- With the main panel box circuit breaker and all individual circuit breakers in the home turned off, make electrical service connections. When connections are complete, turn on power at electric meter source. Do not turn on the main panel box circuit breaker in the home until the grounding and continuity testing has been performed.

6. Grounding the Home

NOTE: The grounding bar in the main home electrical distribution panel box must be grounded through the



green colored conductor in the feeder wiring to the service ground in the service entrance equipment, provided by the utility company. If grounding through service equipment is impractical, the green colored conductor must be grounded to an approved grounding rod sunk directly into the earth to a depth as specified by authority having jurisdiction.

GROUNDING AND CONTINUITY TEST

- Perform the following test after all structural assembly, metal and trim installation is finished.

A. Connect one clip of a flashlight continuity tester to a convenient ground (metal skin, window frame on metal skinned units, floor duct riser, screw head on receptacle or switch plate, etc.) and touch the other clip to each light fixture canopy (where the light is mounted to ceiling or wall). The continuity tester should light if each fixture is properly grounded.

B. Using the continuity tester, check every direct-connected appliance or fan. The tester must be hooked to a convenient ground and to the metal frame of the appliance.

C. Using the continuity tester, check the continuity between the following:

- Between one riser of furnace duct and convenient ground.
- Between metal roof and steel frame.
- Between metal skin and steel frame.
- Between metal frame and gas piping. (After making gas connections between sections.)

(NOTE: Continuity to ground is not required on metal inlet of plastic piped water system.)

- Between metal raceway below distribution panel and steel frame.

When plumbing fixtures such as metallic sinks, tubs, faucets and shower risers are connected only to plastic water piping and plastic drain piping, continuity to ground is not required.

- Any loss of grounding continuity found in the above will require investigation and correction.

POLARITY & OPERATIONAL TEST

- Turn on main panel box circuit breaker and then one at a time, turn on the individual home circuit breakers and perform the following test.

Should any breaker trip, this indicates a problem with the circuit that must be located and corrected.

A. Plug an AC receptacle wiring tester into each receptacle in the home to check for reversed polarity, open grounds and shorts.

Any reversed polarity, open grounds or shorts found will require investigation and repair.

B. Install light bulbs and fluorescent tubes in all light fixtures. Make sure each light fixture is operable by turning the appropriate switch to the "ON" position.

C. Repair or replace any defective light fixtures or switches.

NOTE: Do not apply more than the specified pressure as damage to gas valves and/or regulators may result.

Before a test is begun, the temperature of the ambient air must be recorded. The gas piping system must be tested two ways:

A. Piping only — all appliances isolated.

1. Piping only test:

- A. Isolate all appliances from the system by closing valves.
- B. Pressure must be measured with a mercury manometer or slope gauge calibrated in increments of not more than 1/10 pound.
- C. Pressurize the system to 3 p.s.i.
- D. Isolate the pressure source from the system.
- E. The gauge must stand 10 minutes with no drop in pressure.

2. Entire system test:

- 1. 3/8 to 1/2 p.s.i. or
 - 2. 10" to 14" water column
- tions.

NOTE: Prior to making connection to site supply, gas inlet orifices of furnaces, water heaters and appliances must be checked to insure they are set up for type of gas. The gas pressure should not exceed 7" to 14" water column.

Furnace or water heater manufacturers' instructions must be complied with.

Gas appliance vents shall be visually inspected to insure that they have been connected to the appliance, and that they are free from obstructions during in-transit vibrations.

The gas connection to the gas supply should be made by an authorized representative of the gas company.

Oil Piping Hookup & Testing
with a centralized oil distribution system, an oil storage tank of suitable capacity must be installed outside the home in a location accessible for service, and safe from fire and other hazards.

Oil tanks that feed vaporizing type oil furnaces above the level of the furnace or boiler, with the top of the tank is within 8 feet of the oil control level. If the storage tank is left to the discretion of the homeowner. Since the furnace includes a fuel pump, the tank may be installed above or below ground. For tanks installed above grade and a 1 1/4 inch diameter minimum vent pipe extending at least 2 feet above grade must be provided.

Regardless of the type of oil furnace served, or the gradual slope toward the fill end or drain plug (if so equipped) to facilitate pumping or draining of water and sludge.

A shut-off valve must be installed at the oil tank outlet. Additionally it is recommended that a suitable filter be installed in the fuel line near the tank to help trap dirt. **NOTE: All oil storage tank and oil piping installations must meet all applicable local regulations and should be made only by experienced, qualified personnel.**

The installation and supply piping must be checked for leakage. The tank must be filled to capacity with the fuel to be burned and all joints in the system checked visually for leakage.

Below are listed some of the different patching methods which offer the dealer, or home buyer, a means of resealing the bottom board:
tape. Schult Homes Corp. recommends either CS-12 from Shepherd Products of Kalamazoo, Michigan or #620 from First Line Corp. of Valdosta, Georgia.

The outward Flare Tacker is an air operated tool Model LN3045 manufactured by Senco Products, Inc., construction. The patch should first be affixed to the bottom, using an approved tape to secure the perimeter and then fastened near the perimeter at 3" intervals. Use the staples described in Senco Bulletin M-100.

OPTIONAL ITEM INSTRUCTIONS

CAUTION: Schult Homes cannot be responsible for any damage resulting directly or indirectly from installation of accessories, nor any modifications to the home subsequent to shipment from the factory. Such alterations are undertaken at the risk of the installer and/or homeowner.

Local building officials should be consulted prior to making any alterations to the home to insure compliance with all applicable codes and requirements. Your dealer should be consulted as he is a specialist in the proper installation of accessories.

ELECTRIC CLOTHES DRYER VENTING

NOTE: The dryer vent must not exhaust into the skirted area under the home. This is to prevent excessive humidity in the home.

Homes factory equipped with an electric dryer receptacle will also have the moisture-lint exhaust system roughed-in. To complete the moisture-lint exhaust system, the following must be performed:

1. Remove the covers over the vent hole.
2. Check the duct provided to see that it is clear and connect to the dryer in accordance with the dryer manufacturer's instructions.
3. Secure the termination fitting to the outside edge of the floor or wall.
4. Secure the flexible duct to the termination fitting with clamps. (Do not use sheet metal screws or other devices which extend into the interior of the duct.)
5. Seal the hole where the duct goes through the floor or wall with a good grade of caulking or heat duct tape.

Schult Homes Corp. will not be responsible for damage to home resulting directly or indirectly from failure to install the dryer moisture/lint exhaust system in accordance with the instructions presented herein and those of the dryer manufacturer.

The installation of a gas dryer requires substantial modification of the home, including the provision of gas supply piping and adequate venting as specified by the dryer manufacturer.

NOTE: Gas dryer installation must be handled by fully qualified, experienced personnel only. Cutting of major structural elements of home such as rafters or floor joists to facilitate installation is not permissible and any resulting weakening of the structural integrity of the home is not the responsibility of Schult Homes Corp.

FIREPLACE CHIMNEY INSTALLATION

Homes equipped with fireplaces require that the installation of additional section(s) of chimney pipe and a rain cap assembly be made on site.

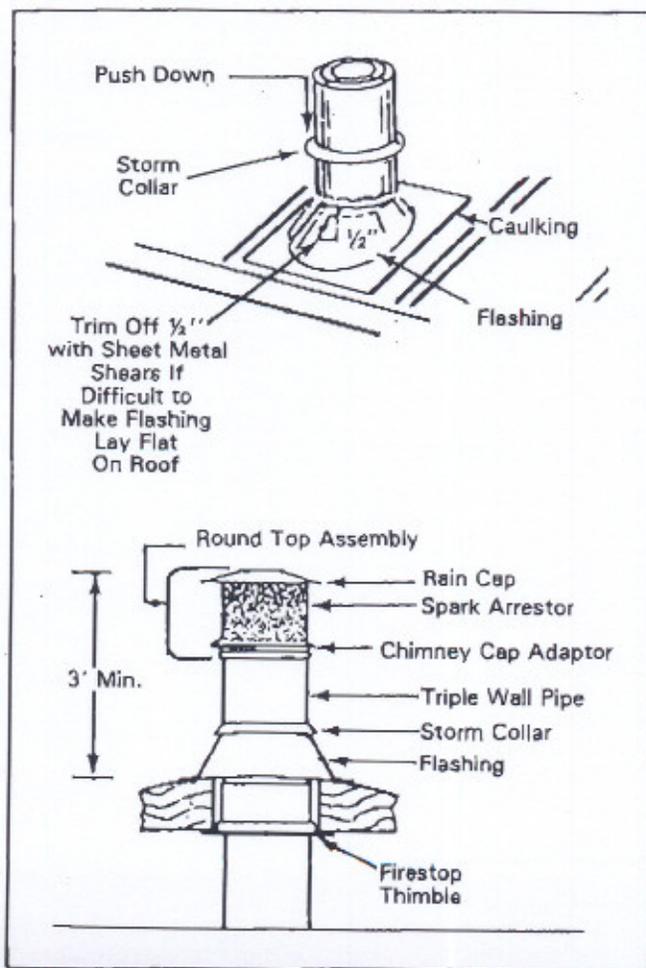
To insure sufficient draft for fireplace, the finished chimney **MUST** extend 3 feet above the highest point where it penetrates the roof and must be at least 2 feet higher than any building or other obstruction located within a horizontal distance of 10 feet.

Parts necessary to complete installation are provided. Note, however, that chimney section(s) provided will be sized of sufficient length to meet the above stated requirement for the home only.

If the site has obstructions extending higher than the home's roof peak within 10 feet of the chimney, an additional section of chimney pipe may have to be provided by installer.

Chimney installation must be made in accordance with fireplace manufacturers' instructions. Typical chimney installation is as follows:

1. Remove transit protective covering from over the chimney.
2. Install additional chimney section(s) provided and secure.
3. Install spark arrestor.
4. Install rain cap assembly.



Schuit Homes Corporation does not recommend the installation of window air conditioning units.

Factory installed circuits for air conditioning are indicated on the electric entrance panel.

The electrical connection is via a circuit terminating in a junction box beneath the home.

The electrical supply, if not factory installed, may have to be from an outside source as electrical equipment within the home may not have been sized for the

The field installation wiring beyond the junction box, must incorporate a fused disconnect (sized in accordance with the condensing unit). The maximum fuse size to be used with the fused disconnect is marked on the condenser data plate. The acceptability of the air conditioning fuse type branch circuit protection, air connections and the equipment are to be determined by the local inspection authority.

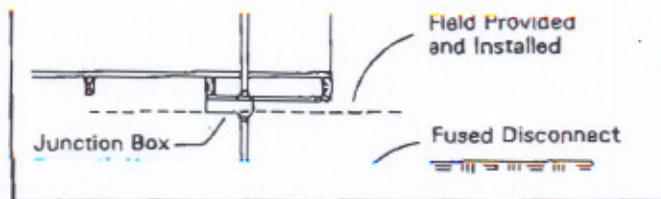
specify the U-Valves necessary to calculate heat gain and the maximum capacity of air conditioning allowable for the home. The equipment you select should pliance certificate.

"A" coil air conditioning units installed must be listed for use with the furnace in the home; for air conditioner.

If a remote air conditioner is to be installed and connected to the heating supply duct the installation cool air from "backing-up" into the furnace during the cooling mode and a damper at the air conditioner supply to prevent heated air from "backing-up" into

It is important when installing the return air system and supply system that no floor joists are cut or damaged. The return air and supply ducts are sized to on center throughout the home.

It is important to replace insulation that may have been removed during the installation — also to seal the bottom board around the duct connections.



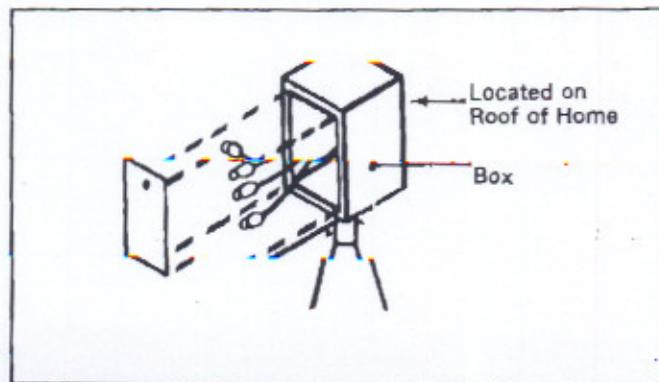
EVAPORATIVE COOLER

by qualified personnel.

1. On models equipped for installation of optional accessories, when installing the roof-mounted cooler coolers without an integral air duct the cooler box shall be lined with .016 in. metal. The factory installed branch circuit for the cooler is sized for a V. AC, 60 Hz.
2. Remove the cover from the roof-mounted junction box and check the connection of the color-coded portion of the installation is now complete.

COLOR CODE

Yellow	Pump
Black	Low Fan
Red	High Fan



HEAT PUMP INSTALLATION

Due to the fact that heat pump designs vary considerably between manufacturers, it is impractical to give detailed installation instructions in this manual. The manufacturer's installation instructions provided with the specific system to be installed must be followed. Necessary information for the correct sizing of the system can be found on the home's Compliance Certificate (Data Plate) located in the area of the electrical power distribution panel and explained in earlier parts of this manual. Installation should be handled by qualified heating/air conditioning professionals.

The following are some general considerations for the installation of heat pumps:

1. If heat pump is not supplied by Schult, the installer is responsible for making all necessary calculations based upon site conditions and information presented on the home's Compliance Certificate (Data Plate) to insure that the unit selected is adequately sized.
2. Equipment selected must meet all applicable codes and be specifically approved for use in mobile homes.
3. Major structural elements of the home, such as wall studs or floor joists, must not be cut to facilitate installation.
4. All necessary electrical modifications and installations must be handled by a qualified electrician.

HITCH AND WHEEL REMOVAL AND STORAGE

If the front hitch used to transport the home is designed to be detachable, for aesthetic purposes it may be removed after set-up. However, the hitch should be retained in the event the home is ever relocated. Common practice is to store the hitch under the home where it will be protected from the elements and concealed by the skirting.

During or after set-up, it is common practice to remove the wheels and tires. The axles and complete suspension system may be removed in some states and localities, but in others they must remain attached as installed. In some states and localities, owners are allowed to dispose of this equipment, while in others they may not. Before removing axles and suspension systems be sure to check carefully with the dealer and/or local authorities.

Although it may be permissible to dispose of the wheels, tires and suspension system, Schult Homes recommends they be retained in the event the home is ever relocated.

This equipment is commonly stored under the home on a waterproof substance, like vinyl sheeting, where it is protected and concealed by the skirting. After wheel removal, hub surfaces should be coated with heavy grease to resist rust and corrosion.

The tires, wheels and suspension systems are designed **ONLY** for use to transport this manufactured home. They are not designed for any other purpose.

SKIRTING

Schult Homes Corporation recommends the use of skirting.

Skirting not only increases the value of the home but has other benefits. Skirting helps keep the floor warmer in the winter, cooler in the summer, and helps prevent plumbing freeze-ups in winter.

NOTE: Before skirting is installed, the entire area under the home must be covered with a blanket of Visqueen. This is to prevent excessive humidity in the home. The Visqueen must be a minimum of 6 mil thick and be overlapped 6" at all joints.

NOTE: The skirting around the home must be provided with non-closing vents.

The free air of the vent must be equal to not less than 1/300th of the floor area of the home. (Divide sq. ft. of home by 300)

The vents must be located to provide cross ventilation to the entire area under the home.

1. If the home is equipped with a fuel burning fire-place or sealed combustion water heater, additional vents in the skirting must be provided adjacent to the intake vents for these appliances. Vents must be sized in accordance with the equipment manufacturer's instructions.
2. A removable panel should be provided in the skirting to allow crawl space access.

CARPORTS AND AWNINGS

Points to remember when selecting and installing carports and/or awnings:

1. Awnings and carports of a self-supporting design should be installed to minimize the possibility of damaging the home.
2. Follow installation instructions of accessory manufacturer.
3. Make sure all connections are to structural members of the home such as floor joists or rafter end rails. All penetrations through siding must be properly sealed and caulked.
4. Exercise extreme caution that no fastener penetrates any electrical cables. It is recommended all power be disconnected during installation and all circuits tested after installation is completed.
5. Insure that fasteners and support railings used are capable of handling the intended loads without damaging the home structure.
6. Insure all seams are properly sealed.