

10/8/93

# HOLLY PARK

*A Heritage Company*

## **SET UP INSTRUCTION MANUAL**

**For Double Wide Homes**

**KEEP THIS MANUAL  
WITH YOUR HOME**

APPROVED BY



IM-2.1

# SET UP INSTRUCTIONS FOR DOUBLEWIDE HOMES

NEW HOLLY PARK

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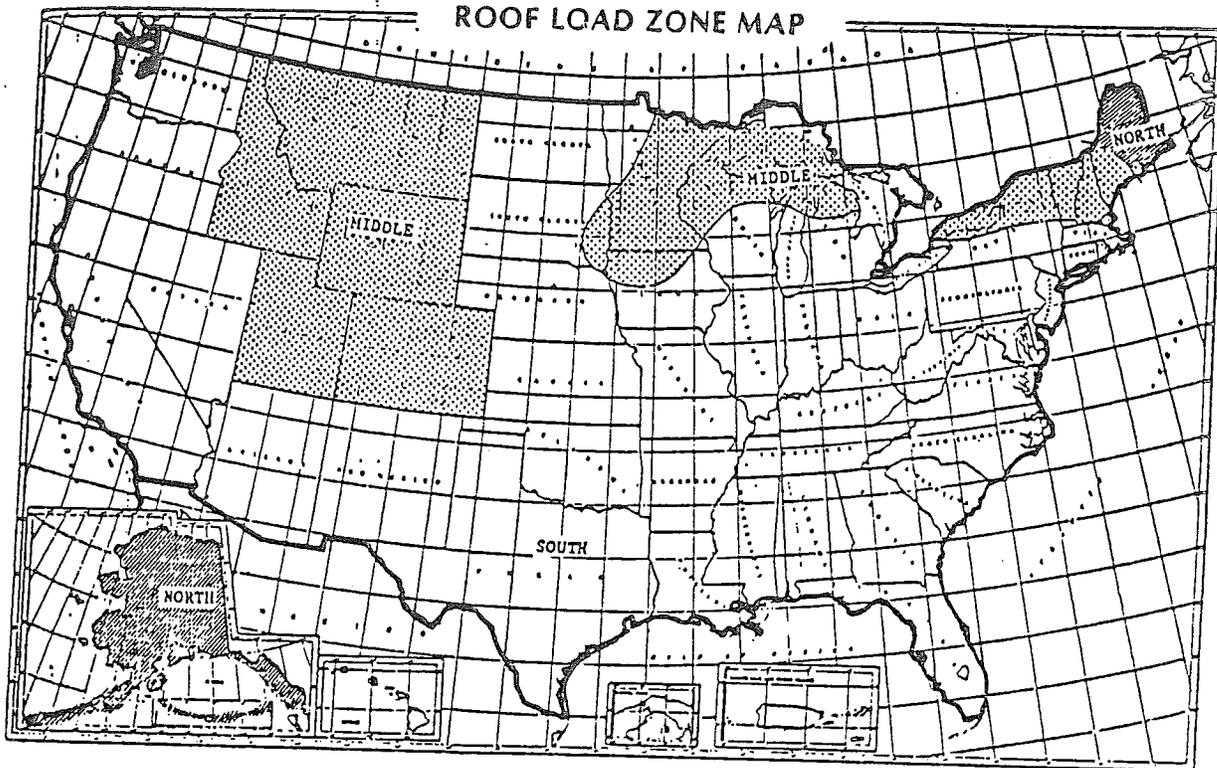
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 JUL 1 3 1994  
FEDERAL MANUFACTURED HOME  
CONSTRUCTION AND SAFETY STANDARDS

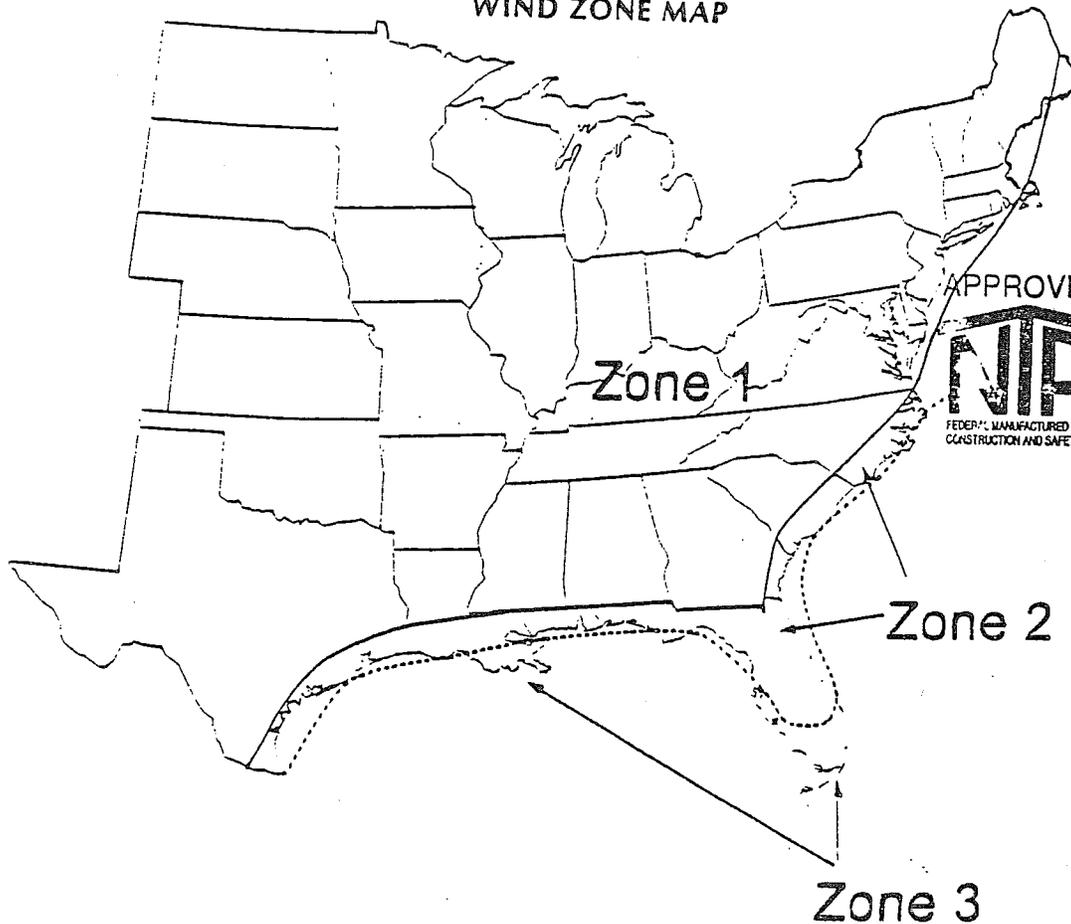
Your Holly Park home has been thoroughly inspected and bears the label which indicates that all systems including structural, plumbing, heating, electrical, fire safety, and planning considerations are in compliance with the Federal Manufactured Home Construction and Safety Standards. We suggest that you contact the local building officials having jurisdiction in the area of your desired homesite to obtain information on necessary permits for set up.

# NEW HOLLY PARK

## ROOF LOAD ZONE MAP



## WIND ZONE MAP



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NOTE: ALL MAINLAND STATES NOT SHOWN ARE WIND ZONE 1

# NEW HOLLY PARK

## SITE PREPARATION

Proper site preparation is essential to the set up and performance of the manufactured home. The site should be free of all grasses and organic matter and should be graded to the minimum slope required for storm drainage away from the home. A vapor barrier should be installed on the ground directly beneath the home.

**NOTE:** The area under the home must be graded 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 vapor barrier, such as Visqueen. This is to prevent excessive humidity in the home. The Visqueen must be a minimum of 6 mil thick and overlapped 6" at the joints.

### IT IS EXTREMELY IMPORTANT TO PROPERLY SET, BLOCK AND LEVEL YOUR HOME

It is best to have your home prepared for occupancy by a knowledgeable and experienced home set up firm. Such people should have the expertise to properly set up and block your home so that it is level and remains so. If your home is not properly set up and blocked on appropriate foundations, it may undergo unnatural structural strains, which could result in:

1. buckling and/or loosening of walls, partitions, siding, ceilings, doors, floors, linoleum, carpeting, insulation, wiring, sinks, tubs, toilets, weather stripping and miscellaneous fixed original fixtures of the home.
2. leaking windows, doors, roof, ceiling, walls, floor, seams and junctures in general.
3. improper closing, binding and sagging of windows, cabinets and inside and outside doors.
4. malfunctioning of plumbing, water outlets, lighting fixtures, electrical, heating and air conditioning systems.

The home set up firm selected should guarantee their work for a reasonable period and you should arrange to have them relevel your home after 90 days, if necessary.

The recommended set up procedure is presented in this manual.

**CAUTION:** Before performing any digging work or installation of anchors be sure to avoid any underground utilities.

### ADDENDUM TO SET-UP MANUAL

In accordance with the FMHCSS effective July 13, 1994, the following anchorage requirements for ALL wind zones are in addition to any requirements covered under the previous wind standard:

- > THE DESIGN OF ANCHORS SHOULD BE CERTIFIED FOR THEIR INSTALLATION BY A PROFESSIONAL ENGINEER OR A NATIONALLY RECOGNIZED TESTING LABORATORY AS TO THEIR RESISTANCE BASED ON THE INSTALLED ANGLE OF DIAGONAL TIE AND/OR VERTICAL TIE LOADING AND TYPE OF SOIL IN WHICH THE ANCHOR IS TO BE INSTALLED.
- > GROUND ANCHORS SHOULD BE EMBEDDED BELOW THE FROST LINE AND BE AT LEAST 12" ABOVE THE WATER TABLE AND SHOULD BE INSTALLED TO THEIR FULL DEPTH AND STABILIZER PLATES SHOULD BE INSTALLED TO PROVIDE ADDED RESISTANCE TO OVERTURNING OR SLIDING FORCES
- > ANCHORING EQUIPMENT SHOULD BE CERTIFIED BY A REGISTERED ENGINEER OR ARCHITECT TO RESIST THESE SPECIFIED FORCES IN ACCORDANCE WITH TESTING PROCEDURES IN ASTM SPECIFICATION D3953-81, "STANDARD SPECIFICATION FOR STRAPPING, FLAT STEEL, AND SEALS." TIEDOWNS MUST START NO MORE THAN 2'-0" FROM EACH END OF UNIT (i.e. OPEN END ANCHORAGE).
- PROTECTION SHALL BE PROVIDED AT SHARP CORNERS WHERE THE ANCHORING SYSTEM REQUIRES EXTERNAL STRAPS OR CABLES.

## FOUNDATION REQUIREMENTS

It is important that your home have adequate support to give it proper and lasting stability.

1. Footings for piers or continuous foundation walls must be installed on firm, undisturbed soil or the soil must be compacted to at least 90% of it's maximum relative density.

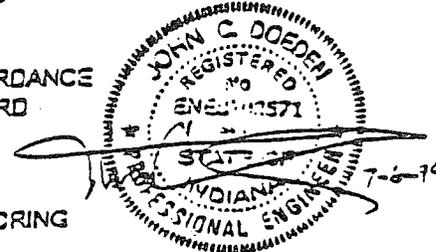
2. The bottom of footings must be below frost line or as required by state or local codes.

3. Poured concrete footings must have a minimum compressive strength of 2500 PSI @ 28 days. Footings other than poured concrete may be used provided that all applicable building codes and load bearing capacities are met.

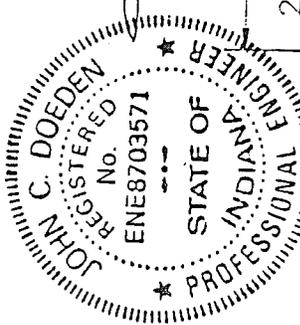
4. A 16" minimum pier height (under the I-beam) is recommended to allow clearance for all utility and crossover connections.

The following pages show typical design requirements for a mainrail pier set and a perimeter foundation set. Included in the close-up kit of your home is a PIER LOCATOR drawing with the IMPORTANT information required for YOUR SPECIFIC model of home to be properly supported at certain critical locations. Use this specific PIER LOCATOR drawing in conjunction with this set-up manual to assure proper support for your home. If you are unable to locate this pier locator drawing please contact your dealer or Holly Park for a new copy.

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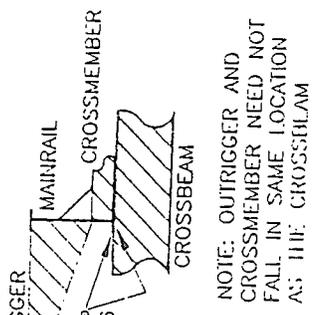
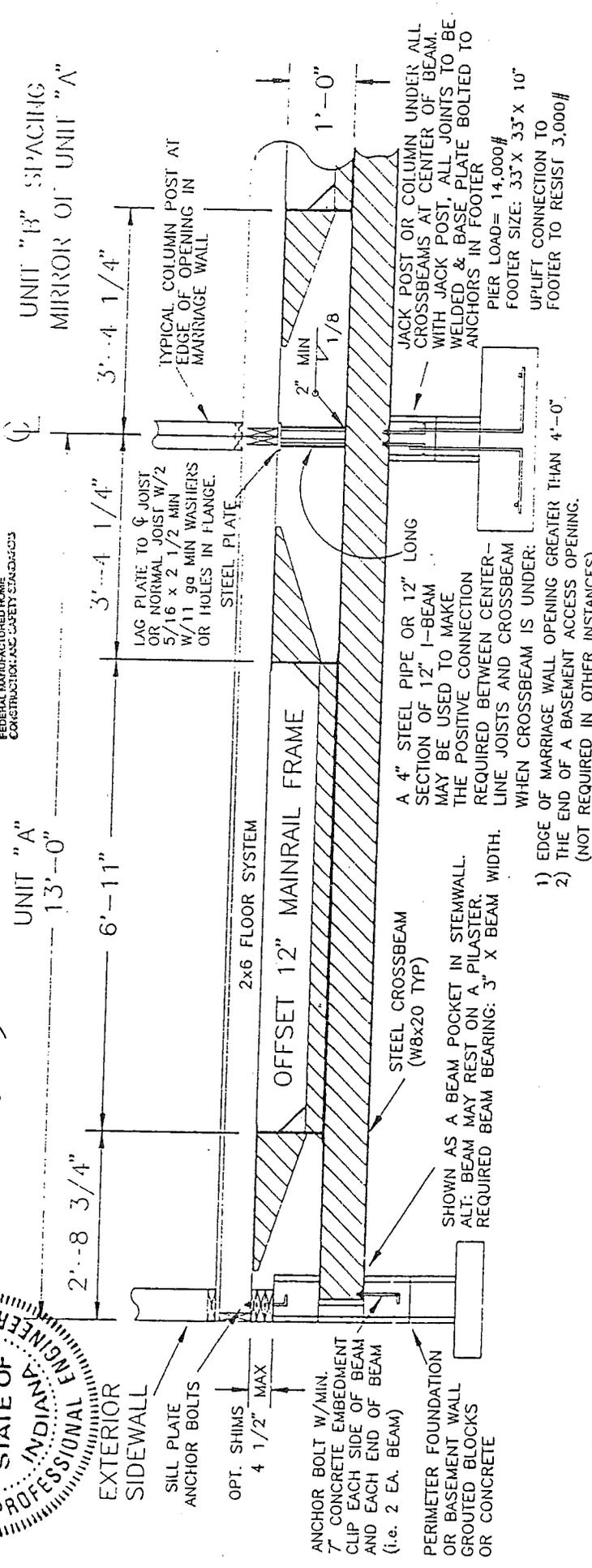


John C. Joerden, P.E.



*John C. Doeden*  
7-20-93

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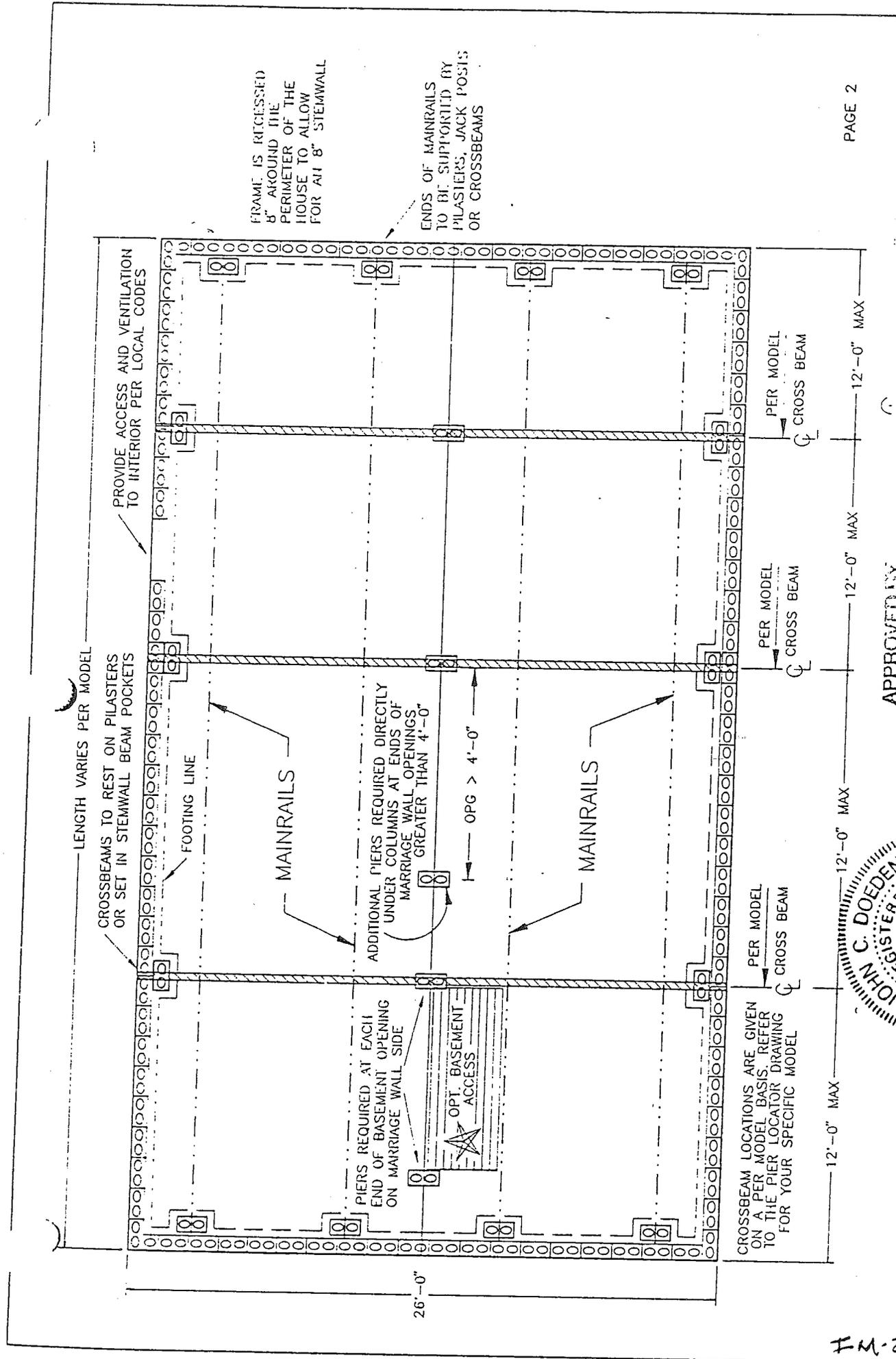
NOTE: OUTRIGGER AND CROSSMEMBER NEED NOT FALL IN SAME LOCATION AS THE CROSSBEAM

SOIL BEARING CAPACITY / SQ FT	STANDARD PIER 16" X 16" X 4"	STANDARD PIER 20" X 20" X 4"	STANDARD PIER 24" X 24" X 4"
1,000	1,778	2,778	4,000
1,500	2,667	4,167	6,000
2,000	3,556	5,555	8,000
3,000	5,334	8,333	12,000
4,000	7,112	11,111	15,600

FOOTING SIZE: 'X'x'X'x'D'  
APPLICABLE FOR:  
20# & 30# ROOF LOADS



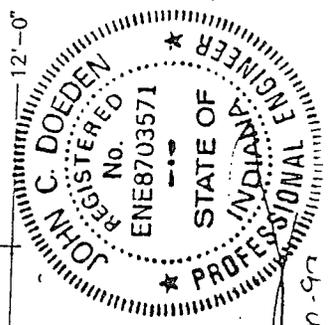
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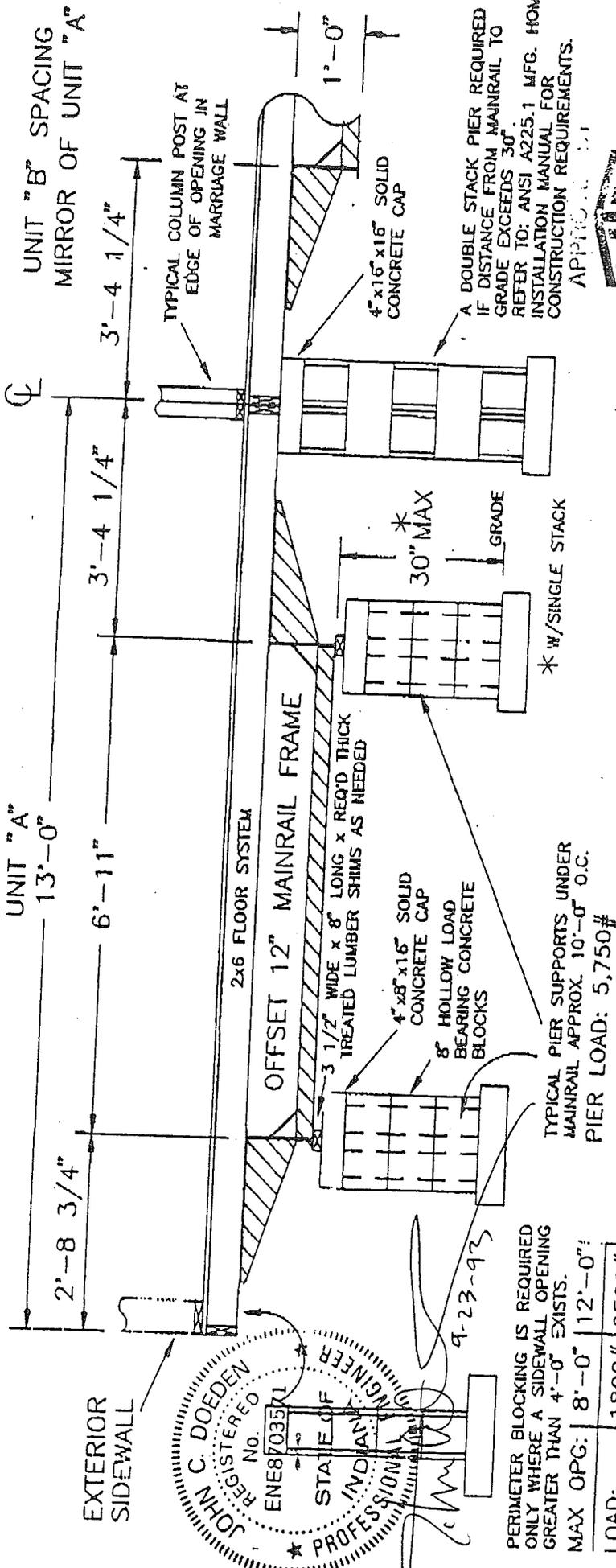
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THE NEW HOLLY PARK, INC.  
 P.O. BOX 250  
 0925N STATE ROAD 5  
 SHIPSHEWANA, IN 46565

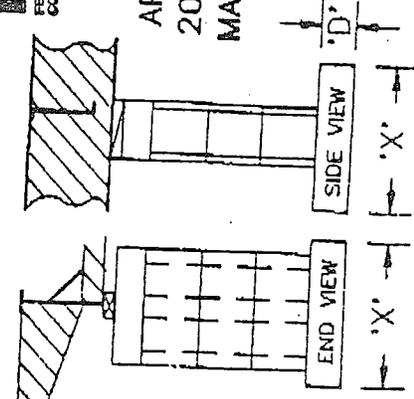


*John C. Doeden* 7.20.92



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APPLICABLE FOR:  
 20# ROOF LOADS  
 MAINRAIL PIER SET



SOIL BEARING CAPACITY / SQ FT	STANDARD PIER 16" X 16" X 4"	STANDARD PIER 20" X 20" X 4"	STANDARD PIER 24" X 24" X 4"
1,000	1,778	2,778	4,000
1,500	2,667	4,167	6,000
2,000	3,556	5,555	8,000
3,000	5,334	8,333	12,000
4,000	7,112	11,111	15,600

FOOTING SIZE: 'X'x'X'x'D'  
 PIER AND FOOTER CAPACITY

PERIMETER BLOCKING IS REQUIRED ONLY WHERE A SIDEWALL OPENING GREATER THAN 4'-0" EXISTS.  
 MAX OPG: 8'-0" | 12'-0"  
 LOAD: 1800# | 2500#  
 BLOCK EACH SIDE OF PATIO DOOR AND BAY WINDOW OPENINGS.

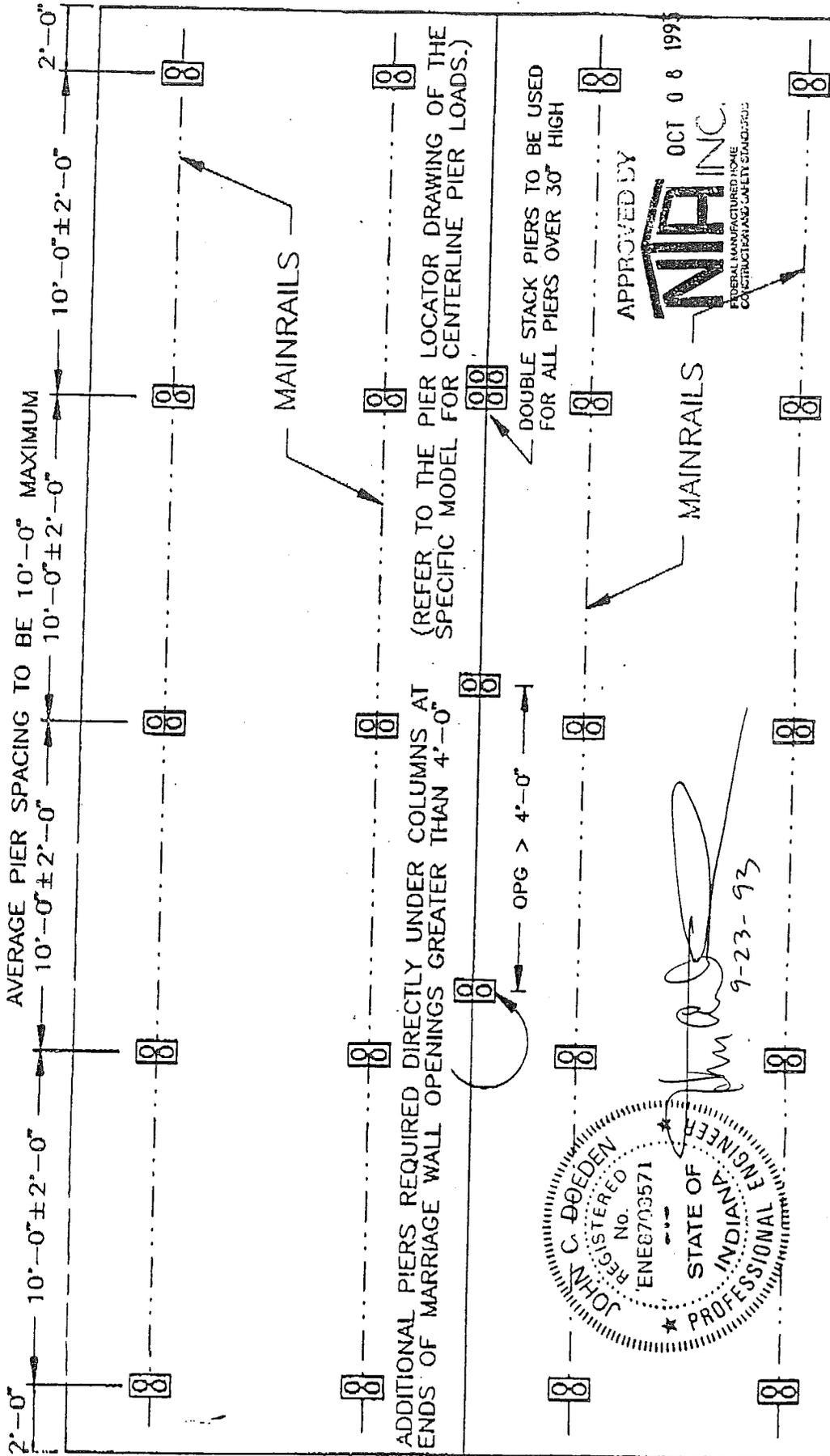
TYPICAL PIER SUPPORTS UNDER MAINRAIL APPROX. 10'-0" O.C.  
 PIER LOAD: 5,750#

A DOUBLE STACK PIER REQUIRED IF DISTANCE FROM MAINRAIL TO GRADE EXCEEDS 30".  
 REFER TO: ANSI A225.1 MFG. HOME INSTALLATION MANUAL FOR CONSTRUCTION REQUIREMENTS.

JOHN C. DOEDEN  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF INDIANA  
 No. ENE8703571  
 9-23-93

THE NEW HOLLY PARK, INC.  
 Stephensburg, Indiana 45888  
 91M2-1-1 P/TOM V.M. REV. 2-23-93  
 TITLE 28-WIDE  
 SHEET NO. PAGE 1

THE NEW HOLLY PARK, INC.  
 P.O. BOX 250  
 0925N STATE ROAD 5  
 SHIPSHAWANA, IN 46565

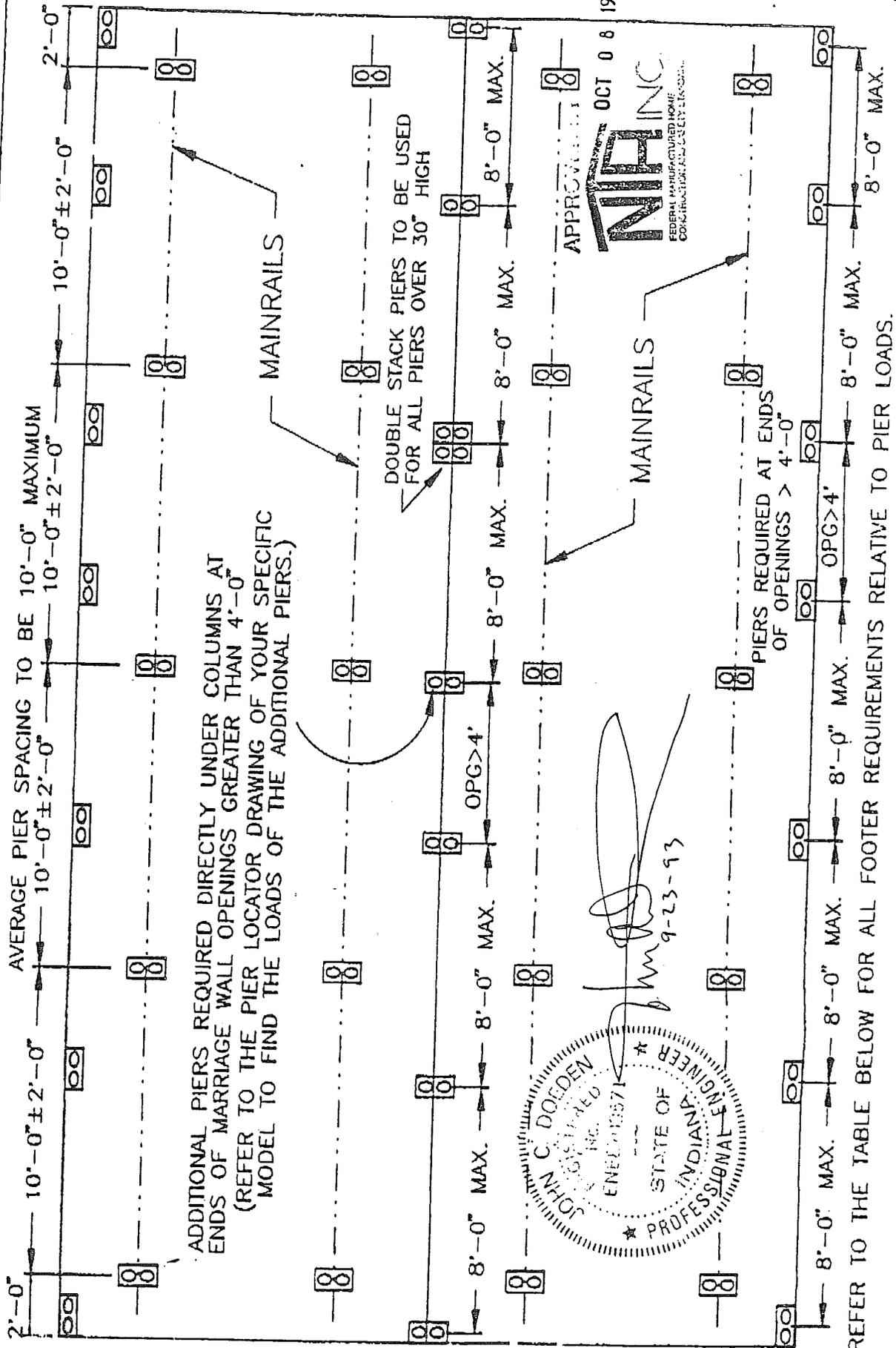


REFER TO THE TABLE BELOW FOR ALL FOOTER REQUIREMENTS RELATIVE TO PIER LOADS.

ADDITIONAL PIERS REQUIRED AT ENDS OF OPENINGS IN SIDEWALL GREATER THAN 4'-0" (PERIMETER OPENING PIER LOADS: 2,500#)

1M-2.4.1.2





1993

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 FEDERAL MANUFACTURED HOME  
 CONSTRUCTION SAFETY DIVISION

JOHN C. DOEDEN  
 INCORPORATED  
 ENGINEER  
 STATE OF INDIANA  
 PROFESSIONAL ENGINEER  
 9-23-93

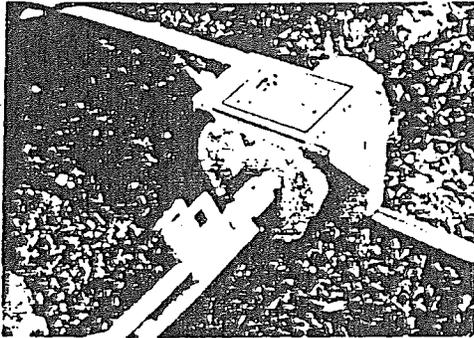
## INSTALLATION OF ANCHORS

There are two basic methods of installing anchors, each equally effective in properly securing mobile homes to the ground.

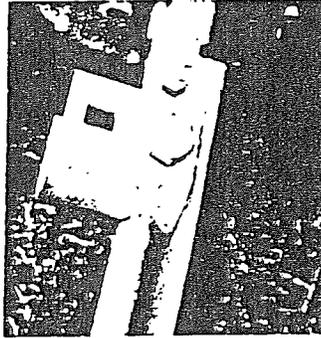
### Machine Installation

In this method, the anchor is turned the **full depth** of four feet into the ground by an anchor drive machine.

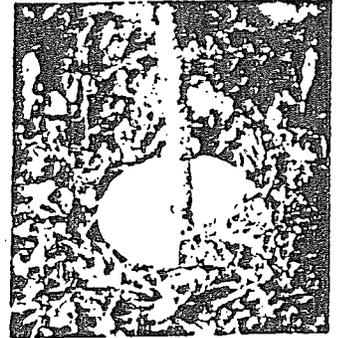
**WARNING:** Be careful to avoid underground water lines, phone lines and power lines.



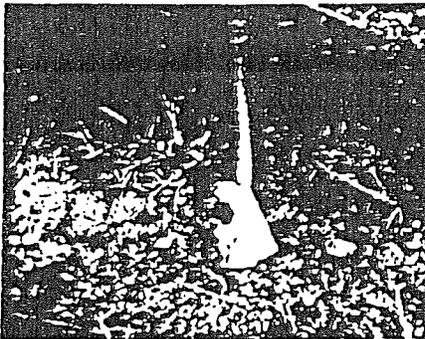
1. Anchor head is attached to drive machine.



2. With double head anchors, use bolt hole in line with anchor shaft.



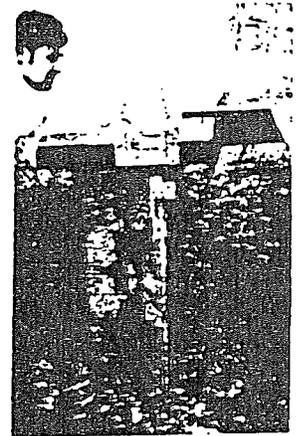
3. Auger is placed in proper position in line with strap, and machine started.



4. Auger begins to turn into the earth.



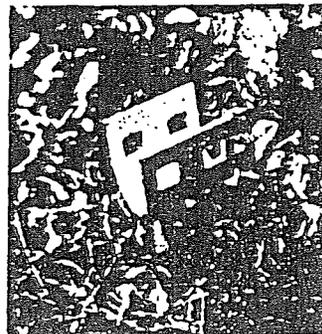
5. Anchor should be installed at a slight angle as shown to assure head being positioned behind future skirting.



6. Adequate pressure should be kept on machine to prevent damage to home.



7. It is of utmost importance that anchor be turned to full depth to be effective.



8. Anchor head should be in proper alignment for over-the-roof tie and frame tie. Anchor is now ready for strap tensioning.

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## Installation with Manual or Mechanical Post Hole Digger

In this method, anchors can be installed with equipment available to the average home owner.

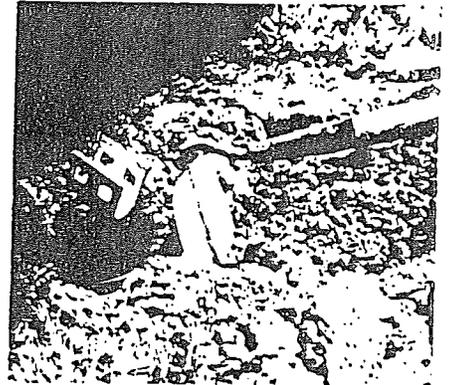
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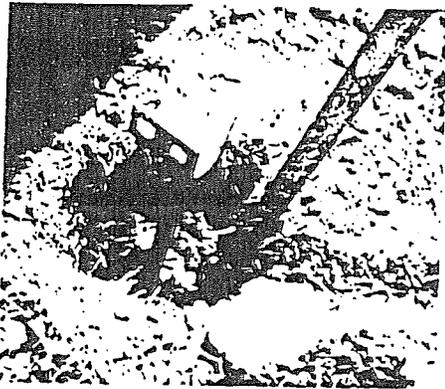
1. A hole is dug to a depth of approximately two feet in the proper position as explained under machine installation.



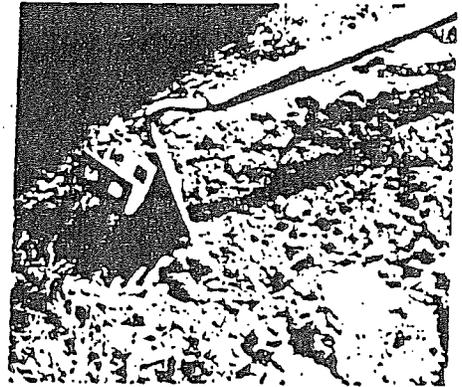
2. After the hole is dug to 24" depth, the anchor is turned into the ground by hand, using a rod or length of pipe for leverage.



3. After anchor is installed to full depth, earth is repacked, six inches at a time.



4. It is very important that the earth is firmly tamped after each six inch fill.



5. Continue filling in six inch increments.

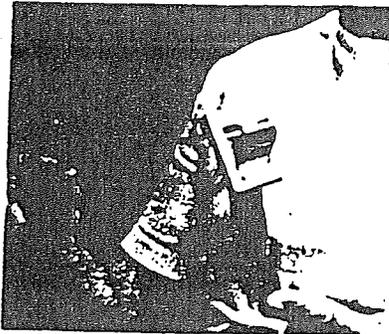


6. Be sure ground is fully tamped for proper holding power.

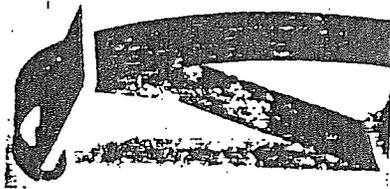
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7. Anchor head in position and in line for attachment to home.

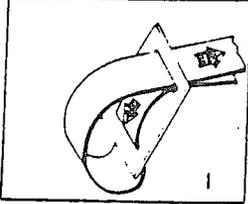


1. Insert strap in position through buckle.

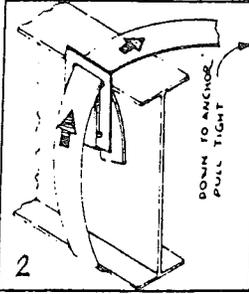


3. Strap should be through buckle in this configuration before installation on frame.

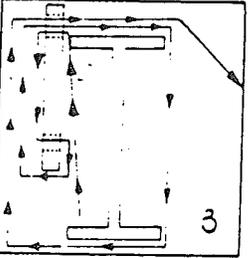
**FRAME TIE INSTALLATION INSTRUCTIONS**



1



2



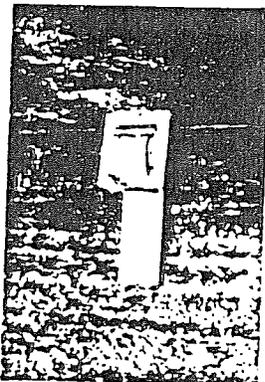
3

1 Thread 7" length of frame tie strap through buckle as shown

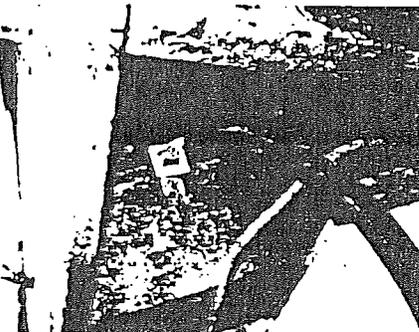
2 Next, thread long end of strap between frame and floor of home. Bring strap through buckle as shown in diagram and fasten to anchor head

3 Diagram showing strap in position around frame and through buckle. It is important to remove all slack from system

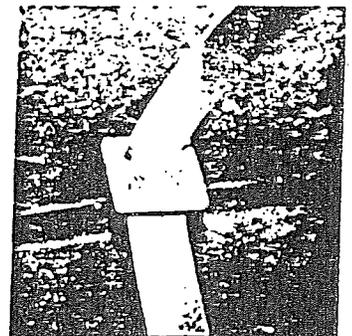
2. See step one in installation instructions.



4. Strap should be passed over frame from inside, and buckle pulled into position as shown.



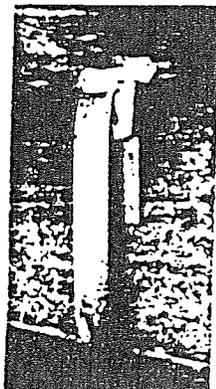
5. Strap should encircle frame and pass through buckle for the second time and over the frame.



6. Close-up view of previous step.



7. Strap is pulled tight from outside, or anchor side, of frame.



8. Inside of frame tie, properly installed.

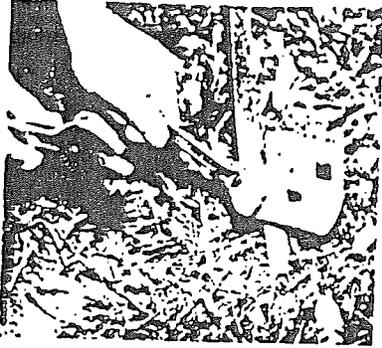


9. For assurance that strap is of proper quality, it should be identified as shown.

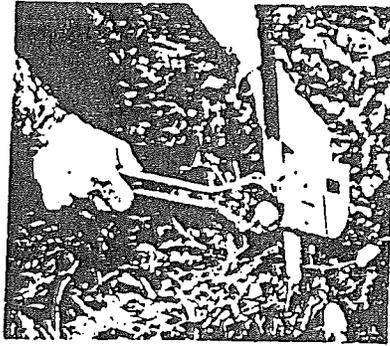
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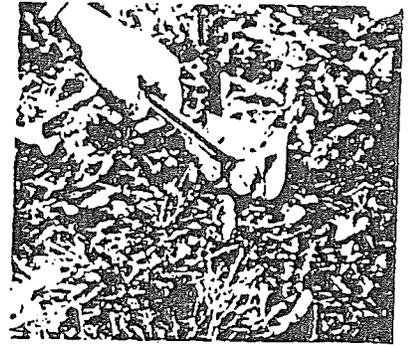
# ATTACHMENT OF STRAP TO ANCHOR NEW HOLLY PARK



1. When using a double head anchor, always attach the vertical or over-the-roof strap to the anchor first. This must be in the bolt in line with the shaft.



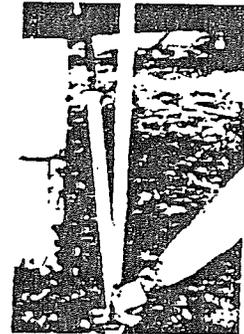
2. Tension strap as shown on next page.



3. Attach frame tie to second bolt.

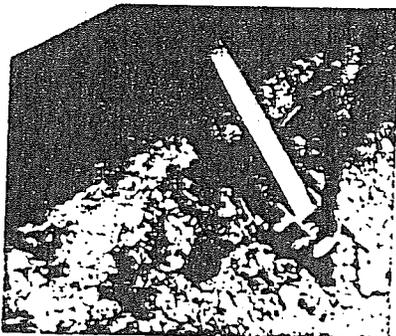


4. Tension as with vertical tie.



5. Properly installed vertical and diagonal tie.

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6. Another view of double head anchor.

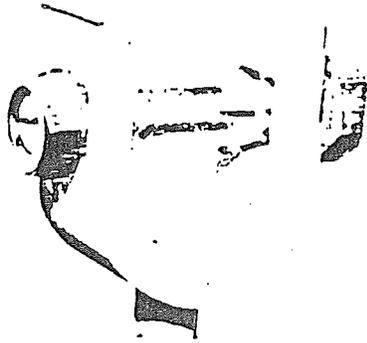


7. Anchors with frame ties may deflect laterally without weakening system.

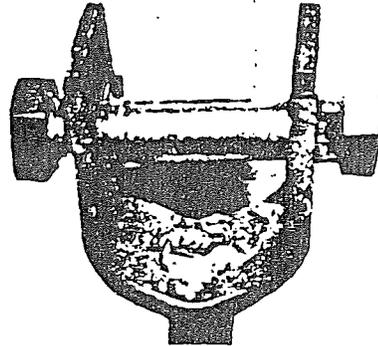
## PROPER TENSIONING OF STRAP TO ANCHOR HEAD

**NOTE:** The tensioning bolt can be inserted in the head from either side. For clarity, single head anchor shown, double head works the same with one or two bolts.

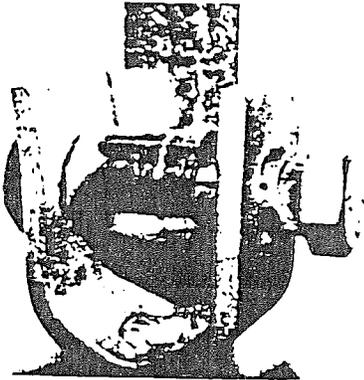
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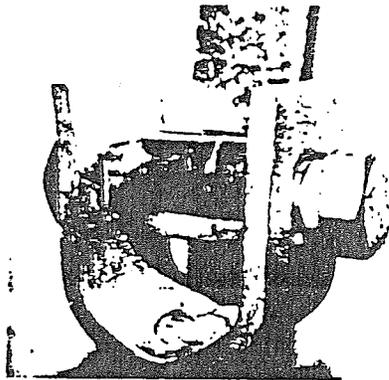
1. Insert bolt into head; attach nut loosely.



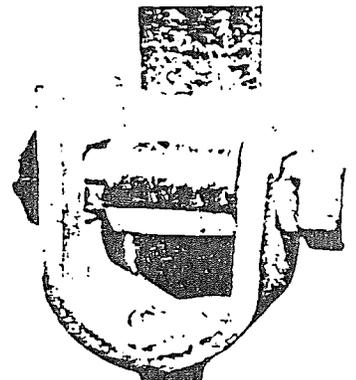
2. Insert strap in slot of bolt  $\frac{1}{8}$ ", or until strap is flush with far side of bolt.



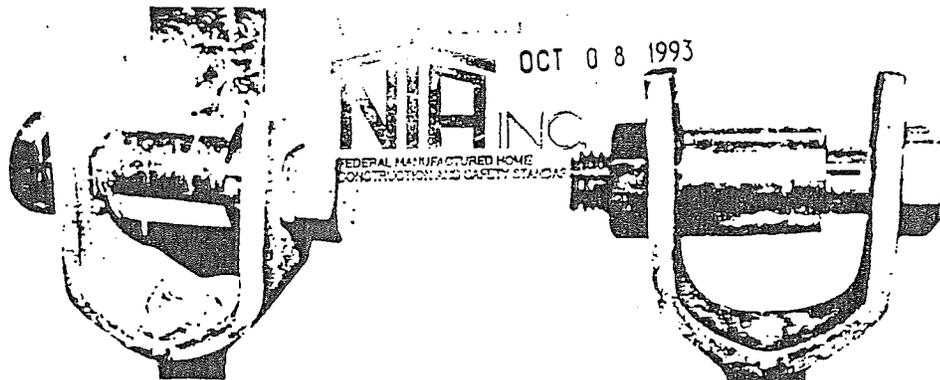
3. Bend strap 90° and take at least four complete turns on bolt until strap is taut.



4. Align square shoulders of bolt with square hole in anchor head.



5. Holding hex head of bolt in position, tighten nut to draw square shoulders into square hole.

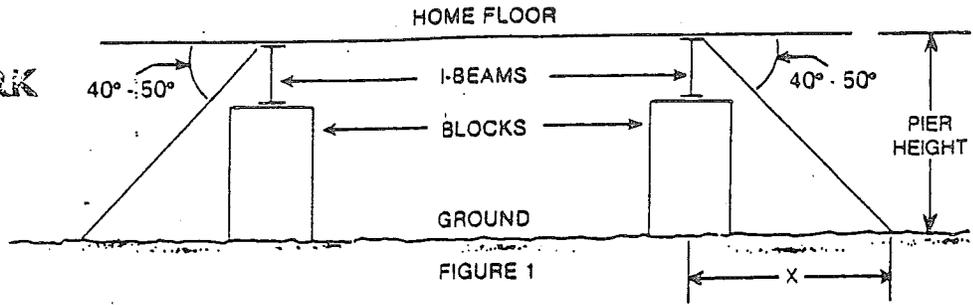


6. Shoulders are now in locking position; continue to tighten nut.

7. Tensioning device is now in locked, secure position.

**NOTICE:** In areas of severe cold weather where possible damage could occur from frost heave, the homeowner should release some of the tension from the vertical tie each fall.

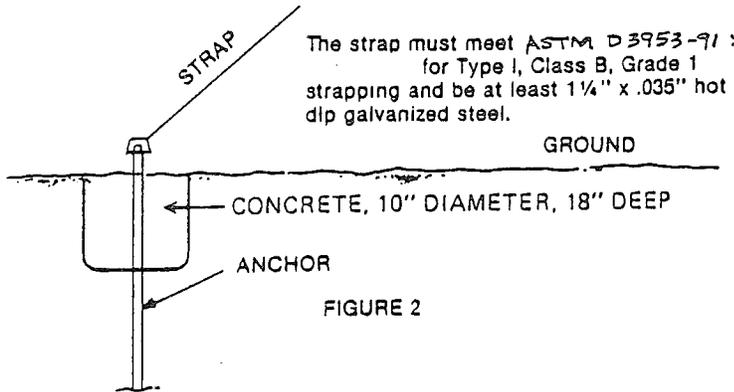
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**NOTE: STRAP-ANCHOR SPACING ALONG LENGTH OF BEAMS IS: 11'-0" MAX. AND 2'-0" MAX. FROM EACH END OF THE HOME.**

**ANCHOR DISTANCE FROM PIER: WIND ZONE 1 & 2**

PIER HEIGHT	"X" MIN.	"X" MAX.
34"	29"	41"
38"	32"	46"
42"	35"	50"
46"	39"	59"



The strap must meet ASTM D 3953-91 for Type I, Class B, Grade 1 strapping and be at least 1 1/4" x .035" hot dip galvanized steel.

FIGURE 2

The anchor type to be used depends on the type of soil at the home site. The following Minute Man components should be used for the indicated soil:

Mark	Model	Description	Use in Soil Type*
MMA-1	650-S	Single Head, Earth Auger Anchor 3/8" Shaft	2, 3, 4
MMA-2	650-DH-S	Double Head, Earth Auger Anchor 3/8" Shaft	2, 3, 4
MMA-3	650-H-S	Single Head, Earth Auger Anchor 1/4" Shaft	2, 3, 4
MMA-4	650-H-DH-S	Double Head, Earth Auger Anchor 1/4" Shaft	2, 3, 4
MMA-5	4436-S	Single Head, Double Disk, Earth Auger Anchor 3/8" Shaft	2
MMA-6	4436-DH-S	Double Head, Double Disk, Earth Auger Anchor 3/8" Shaft	2
MMA-7	48-X-S	Single Head Drive Anchor	2
MMA-8	48-X-DH-S	Double Head Drive Anchor	2
MMA-9	36-S	Single Head Coral Anchor	CORAL
MMA-10	36-DH-S	Double Head Coral Anchor	CORAL
MMA-11	210-S	Single Head Tension Device for Slab	SLAB
MMA-12	210-DH-S	Double Head Tension Device for Slab	SLAB
MMA-13	210-P-S	Single Head Tension Device for Concrete	SLAB
MMA-14	210-P-DH-S	Double Head Tension Device for Concrete	SLAB
MMA-15	30-ER-S	Single Head Expand Rock Anchor	1
MMA-16	30-ER-DH-S	Double Head Expand Rock Anchor	1
MMA-17	TH-S	Single Tension Head	SLAB
MMA-18	TH-DH-S	Double Tension Head	SLAB
MMA-21	100-S	Single Head Tension Device Adapter	CONNECT
MMA-22	100-DH-S	Double Head Tension Device Adapter	CONNECT

**\*SOIL TYPE**

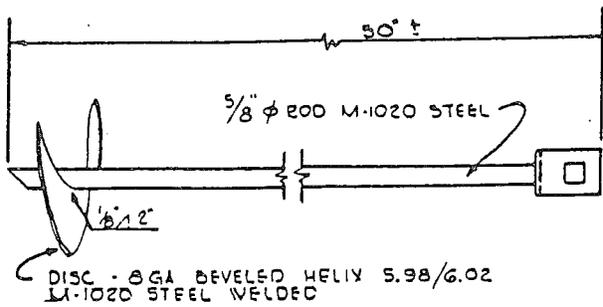
1. Sound hard rock.
2. Very dense and/or cemented sands, coarse gravel and cobbles, preloaded silts, clays and corals. (Probe torque value range — greater than 550 inch pounds.)
3. Medium-dense coarse sands, sandy gravels, very stiff silts and clays. (Probe torque value range 350-550 inch pounds.)
4. Loose to medium dense sands, firm to stiff clays and silts, alluvial fill. (Probe torque value range — 200-349 inch pounds.)

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 JUL 16 1994

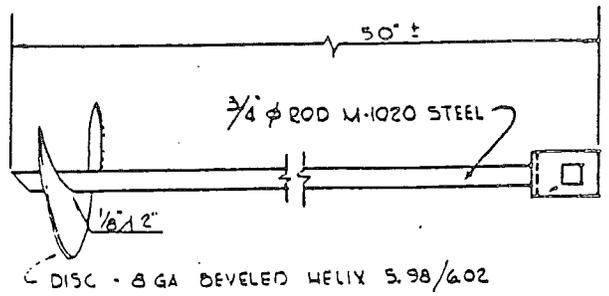
JOHN C. DOEDEN  
 REGISTERED  
 No. ENE8703571  
 STATE OF INDIANA  
 PROFESSIONAL ENGINEER

*John C. Doeden*

IM 2-11

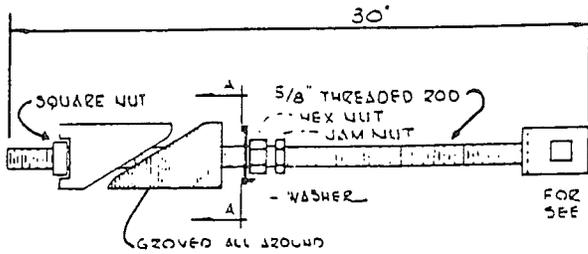


650-S



650H-S

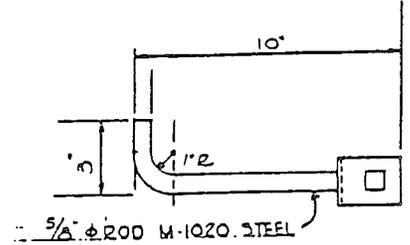
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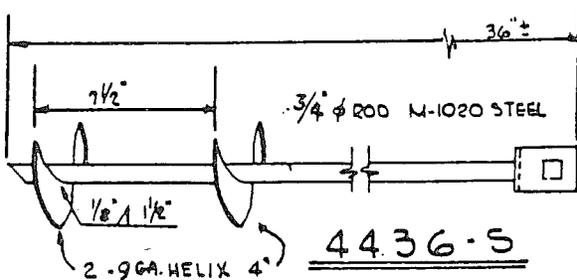
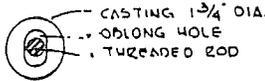
FOR HEAD DETAIL  
SEE DWG. MMA-SH

CASTINGS 25,000 PSI  
SEMI. STEEL 134-15  
ALL STEEL USED IN ANCHOR ASSEMBLY  
CONFORMS TO ASTM A-36

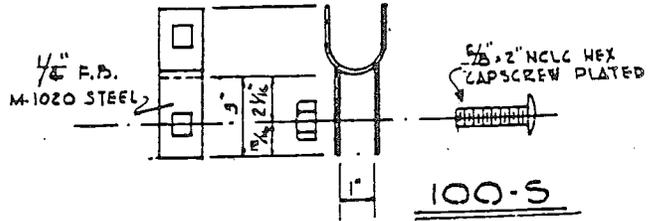
30-ER-S



210-P-S

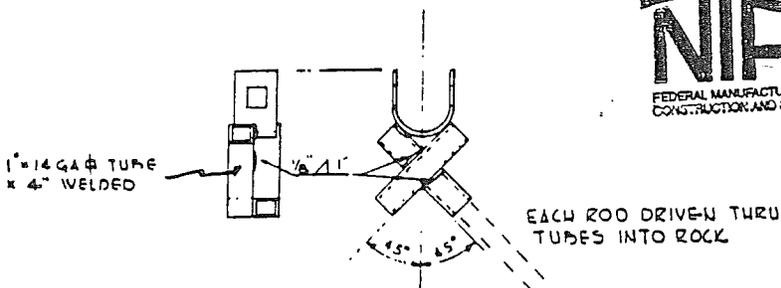


4436-S

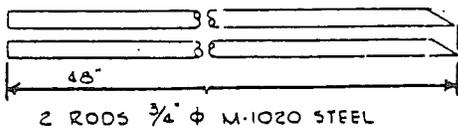


100-S

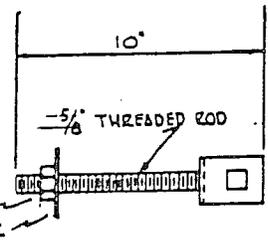
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CONSTRUCTION AND SAFETY STANDARDS



ALL STEEL USED IN ANCHOR ASSEMBLY  
CONFORMS TO A.S.T.M. A-36



48X-S



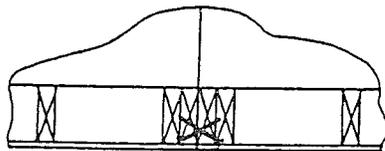
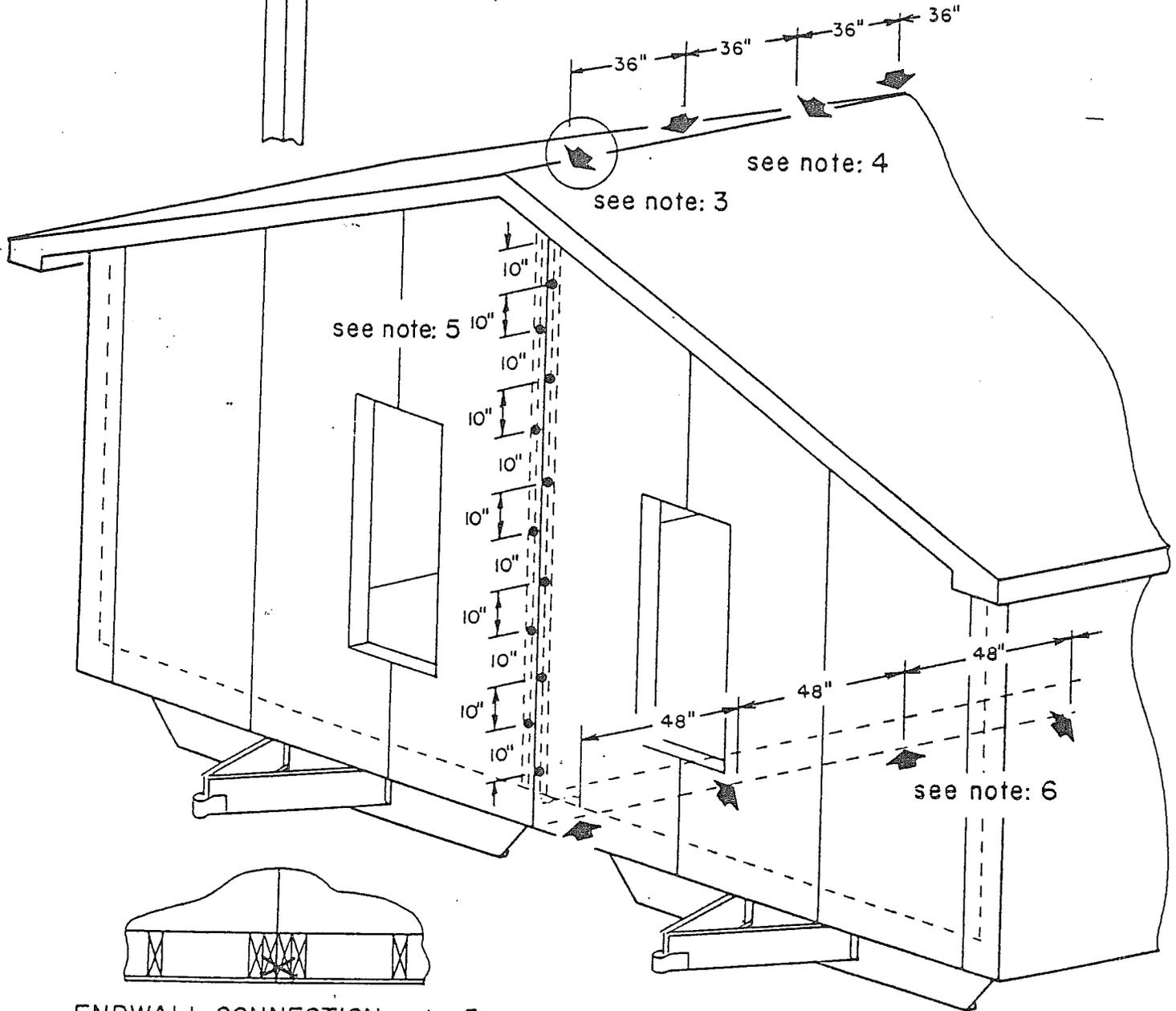
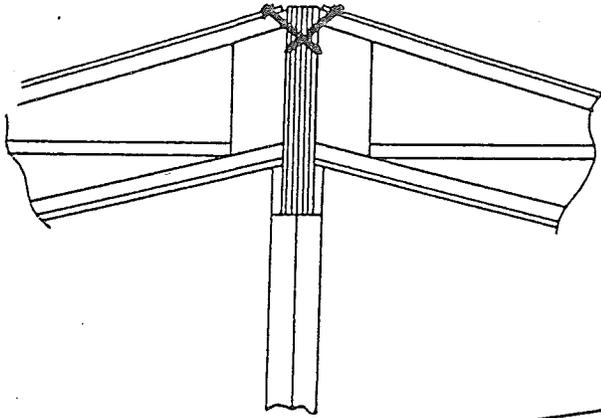
210-S

ALL ANCHORS & ADAPTERS ALSO  
AVAILABLE WITH DOUBLE HEADS

*Minute Maxanchors®*

RIDGEBEAM CONNECTION notes: 3 & 4

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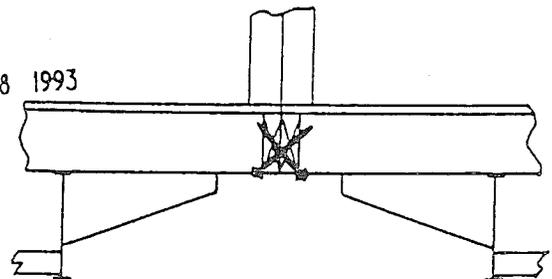
ENDWALL CONNECTION note: 5

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*John C. Doeden*



FLOOR CONNECTION note: 6

IM-2.13

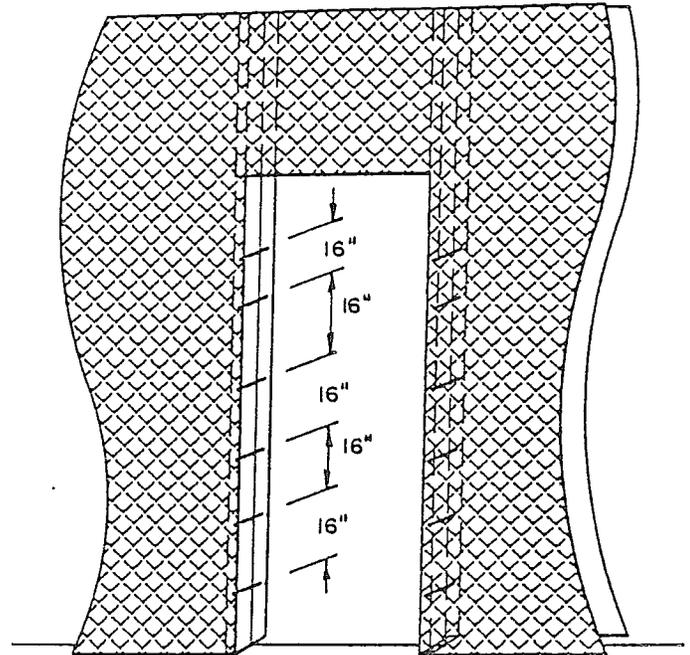
**DOUBLEWIDE SET UP PROCEDURE**

**A. CONNECTION AT CENTERLINE**

The procedure for connecting the two halves together is as follows:

1. Remove factory installed closure materials except for jack studs or false walls bracing the ridge beam. (These braces will be removed after the ridge beams are secured together in Step 4). Temporarily fold back, onto roof surface, roofing felt draped over the ridge beam on both halves of doublewide.
2. Position the halves together in the desired location. Slick sheet metal or greased plywood under the tires may facilitate sliding the halves together. "Come-along" type equipment may also aid in bringing the halves together, but take care not to damage structural members. Deflating the inside tires of the light half may be necessary to mate the ridge beams.
3. Jack at each end of home on inside I beam of light half to align ceiling of light half with that of the heavy half at the front and rear endwalls. Secure ridge beams together at the peak of the roof above ONLY the front and rear endwalls with (2) 3/8" x 5" lags as shown on Page 6.
4. Align ceiling edges at the centerline along the remainder of the home by jacking on the inside I beam of light half. Install 3/8" x 5" lags along the peak at 36" o.c. alternating from one side to the other as shown in Figure 3. The temporary shipping braces under the ridge beam may now be CAREFULLY removed.  
  
To properly align endwalls it may be necessary to pull either floor forward (preferably attaching to hitch). Secure endwalls together with #10 x 5" screws 10" o.c. as shown on Page 6. NOTE: For some models these screws may have to be toe screwed (i.e.; when siding or sheathing is factory installed to the home's centerline).
6. Bring floors of both halves together and in alignment by jacking on the inside I beam of either half as necessary. From underneath the home, toe screw the mating centerline joists together with 3/8" x 5" lags at 48" o.c. as shown on Page 6.

7. At door openings and clearspan openings of double marriage walls, secure the two halves together with #10 x 5" screws at 16" o.c. Screws to be placed so the heads can be concealed by door trim or corner moulding. Toescrewing is permitted.



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## D. EXTERIOR CLOSURE

Closure materials which are provided include shingles, soffit metal for joint at gable ends, and exterior siding for closure of the centerline joint at each endwall. NOTE: Before proceeding with closure of the centerline joint at the front and rear, the local crossover connection must be complete (refer to "Centerline Crossover Connections").

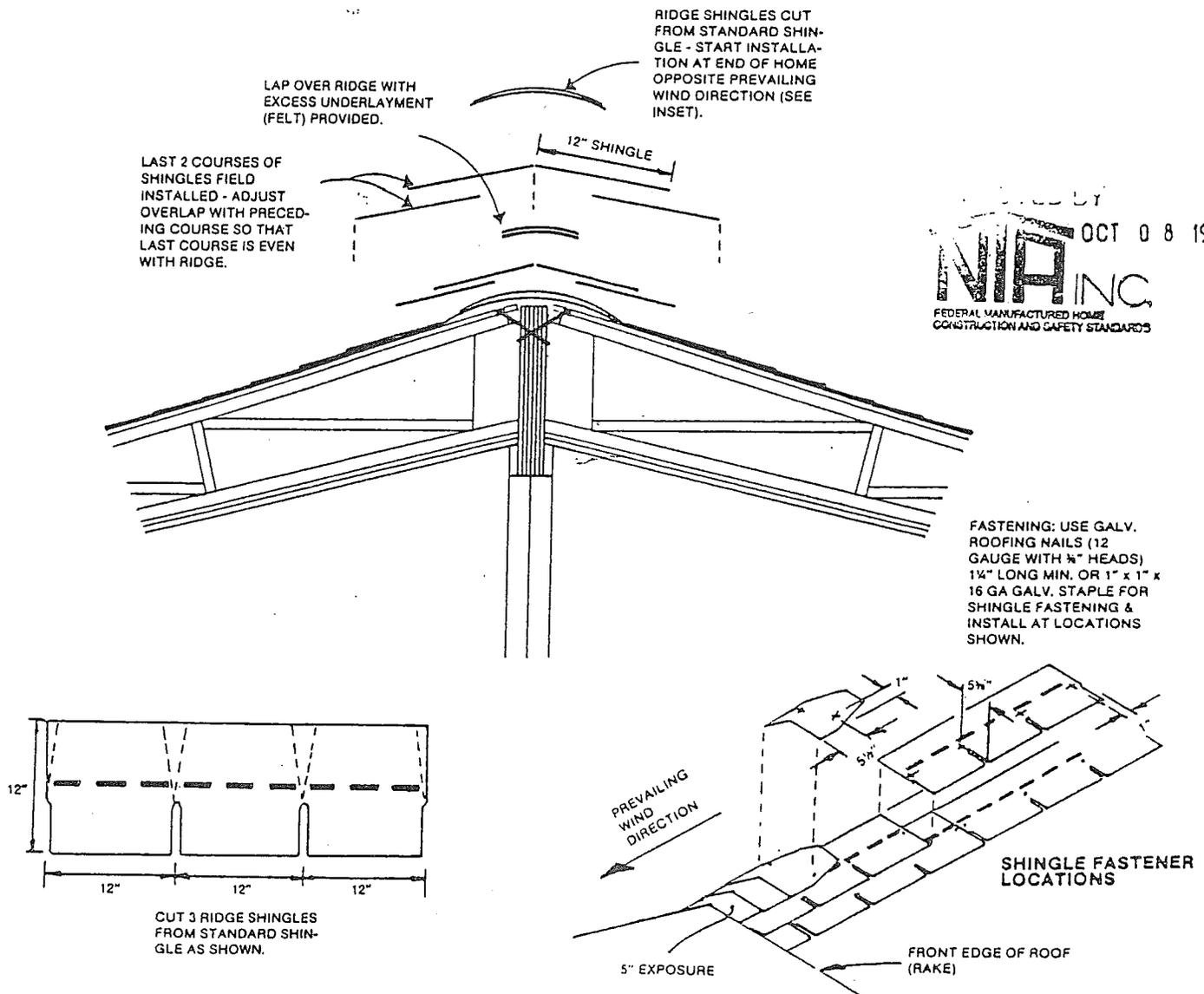
### LAP SIDING:

1. Working from bottom (in line with factory installed bottom edge) fasten the siding to each framing member with a 7/16" x 1 1/2" x 16 gauge aluminum siding staple or a 6d galvanized nail. Interlock each successive course and overlap adjacent panels approximately 1/2". NOTE: If backed siding is used, each end of the backing may need to be trimmed for fit.
2. Trim each lap at doors and windows so that a 1/16" gap for expansion is left between siding and the trim or moulding.
3. With exterior grade caulk, seal joints around each window and door. NOTE: 1/4" bead of butyl-type caulk is recommended.

### SHINGLE ROOF: (Refer to Figure 7)

1. Lay shingle underlayment (previously folded back for centerline connection) flat over ridge and tack down overlapping edge.
2. Install last two courses of shingles each side of ridge per fastening instructions in Figure 7 and shingle manufacturer's instructions. NOTE: Each successive course is started with a shingle 6" shorter than first shingle of preceding course (cut shingle to proper length), or for special shingle application refer to instruction on the back of the bundle.
3. Cut shingles for ridge cap and install away from prevailing wind direction (refer to inset of Figure 7).

FIGURE 7: SHINGLE INSTALLATION (STANDARD SHINGLE APPLICATION)



# NEW HOLLY PARK

## E. INTERIOR FINISH

1. Install wide moulding or beam provided over the centerline joint and over screw heads at cathedral beam inside.
2. Fit and secure carpet over joint at floor using a carpet stretcher. Seams should be properly bonded with heat bond tape and seaming iron.
3. Install wall mouldings, as necessary, for a finished appearance.

## CENTERLINE CROSSOVER CONNECTIONS

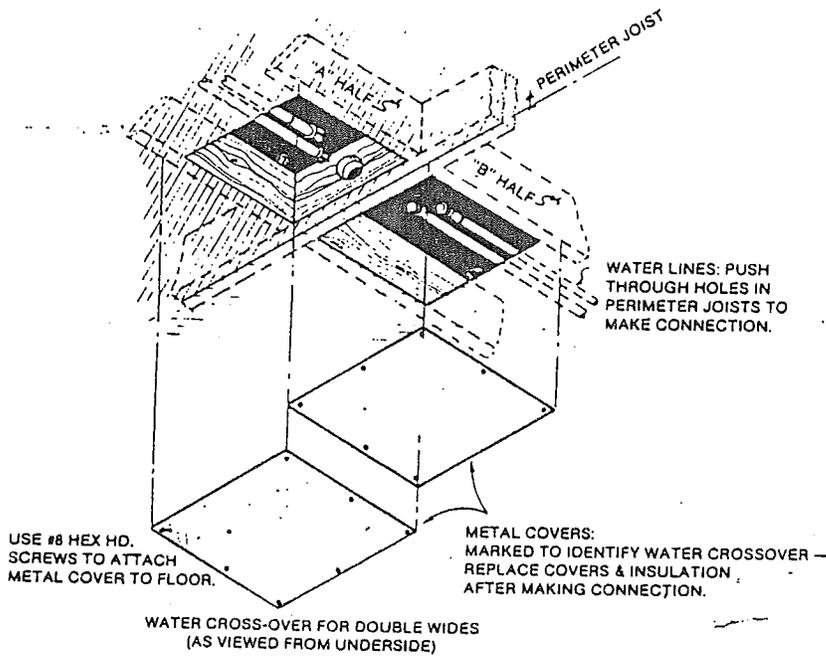
### WATERLINE AND DRAIN LINE CROSSOVER

Crossover connection is ONLY applicable to home designs in which plumbing exists in both halves. For drain line connection follow procedure under "Connecting Utilities — Drain Lines."

Water line procedure:

1. Remove any temporary caps from ends of lines at the unit centerline (both halves).
2. Install the provided connector(s).
3. Check for leaks.
4. Refer to freeze protection recommendations for exposed pipes. See "Fresh Water Supply" under "Connecting Utilities."

FIGURE 8A: PLUMBING DETAILS



## GAS LINE CROSSOVER

Applicable only when gas appliances exist in both halves.

1. Remove protective caps from the connector provided with the home. NOTE: Use only the approved flexible quick disconnect shipped with the home.
2. Connect the quick disconnect. DO NOT USE TOOLS TO CONNECT OR DISCONNECT.
3. Test for leaks with soapy water.

## HEAT DUCT CROSSOVER

A flexible heat duct has been provided to connect the main supply ducts in the home (see Figure 8B):

1. Remove protective covering on the collars of duct connectors under each half.
2. Slip the ends of flexible duct over the collars, each half, and make a secure connection.
3. Tape each connection with two inch wide duct tape all around, ensuring an air tight seal.
4. Support the flexible duct with metal straps 4' o.c. and maintain specified clearance from ground.

## CROSSOVER DUCT INSTRUCTIONS (PICTORIAL)

1) LOCATE DUCT CROSSOVER AREAS UNDER HOME (TO BE EASILY LOCATABLE — LOCATION SHOWN ON PIER LOCATOR DWG.)

2) REMOVE TEMPORARY COVER FROM CROSSOVER LOCATIONS.

3) PUSH UP BOTTOM BOARD THUS EXPOSING DUCT CROSSOVER STARTING COLLAR

5) PUSH 45° ELBOW OVER STARTING COLLAR.

6) PILOT DRILL 3 HOLES IN LAPPING AREA OF ELBOW TO COLLAR AND INSTALL 3 SHEET METAL SCREWS EACH COLLAR.

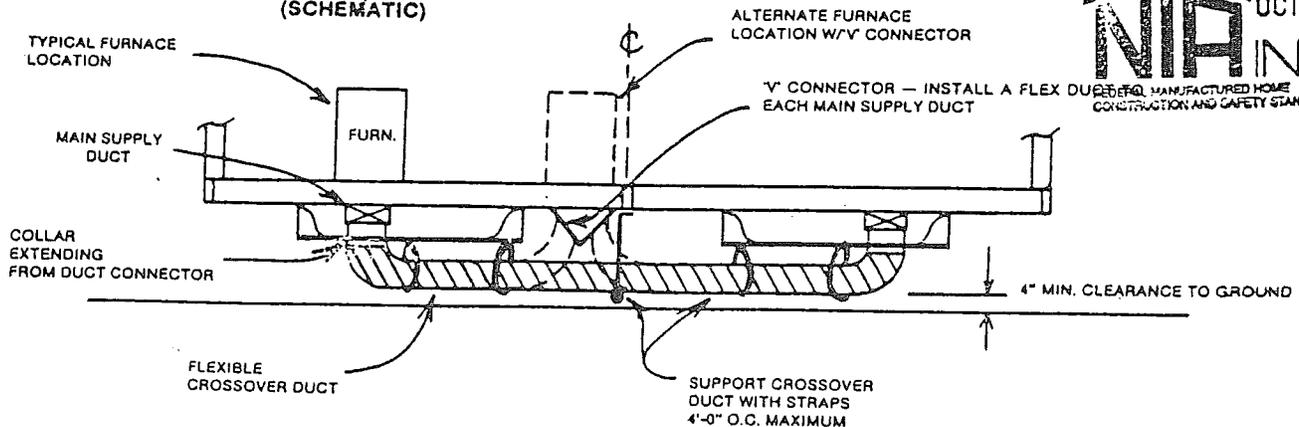
4) ASSURE THAT THE INNER LINER OF FLEX DUCT IS TO BE SECURED OVER THE 45° ELBOW AS FAR AS POSSIBLE WITH ALUM. DUCT TAPE. (ONE ELBOW EACH END)

7) WHILE INSULATION JACKET IS PULLED BACK, TAPE JOINT OF ELBOW TO COLLAR WITH ALUM. OR GREY DUCT TAPE.

8) PULL THE INSULATION JACKET COMPLETELY OVER THE ELBOW AND WIRE-TIE TIGHT AGAINST MAIN DUCT.

9) TAPE BOTTOM BOARD SO IT IS RODENT-PROOF.

FIGURE 8B: CROSSOVER DUCT CONNECTION (SCHEMATIC)



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## ELECTRICAL CROSSOVER CONNECTION

Before proceeding, heed 'CAUTION' notes under "Electrical Connection" in "Connecting Utilities" section.

Various methods by which electrical crossover connections are provided are shown in Figure 9A below. The procedure for interconnection of circuits is as follows:

### METHOD 1 — 15 and 20 amp circuit connection with splicing device:

1. Locate connector ends in each half for splicing appropriate circuits. NOTE: If more than one circuit is to be spliced be sure to match identified circuit connectors.
2. Push A half connector into B half connector until they lock together.

### METHOD 2 — Up to 30 amp connections in wall junction box:

1. Feed wires (shown in A half) through dadoed holes covered by steel wire protectors and insert cable into junction box through a side knockout.

2. Staple cable within 12 inches of box into side (approximately at midpoint) of adjacent stud.
3. Remove inside cover to junction box. Pull inserted cable, allowing at least four inches of free wire in box.
4. Strip approximately one inch of insulation from each wire. With provided wire nuts connect like-colored wires (white to white, black to black, ground to ground, red to red with three wire cable) to appropriate circuit. NOTE: When more than one circuit is fed into junction box, be sure to match identified circuit wires.
5. With all wires properly connected in box, replace the cover.

### METHOD 3 — Below floor circuit connection:

1. Remove box covers and install the provided conduit with cable to box in each half.
2. With provided wire nuts, connect like-colored wires (white to white, black to black, ground to ground, red to red).
3. With all wires properly connected in box, replace the cover.

FIGURE 9A: ELECTRICAL CROSSOVER METHOD

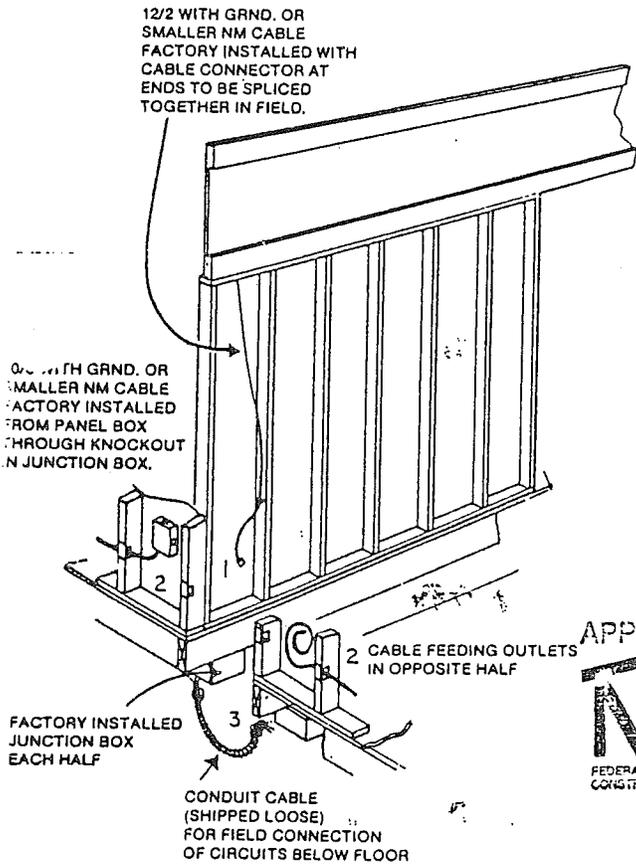
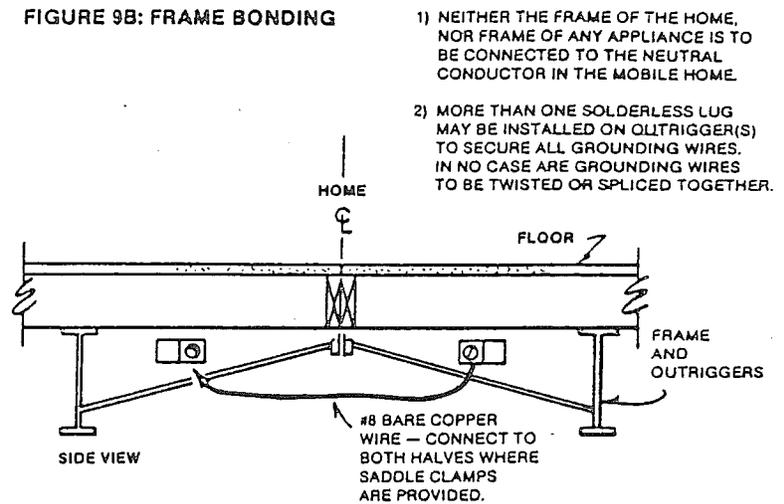
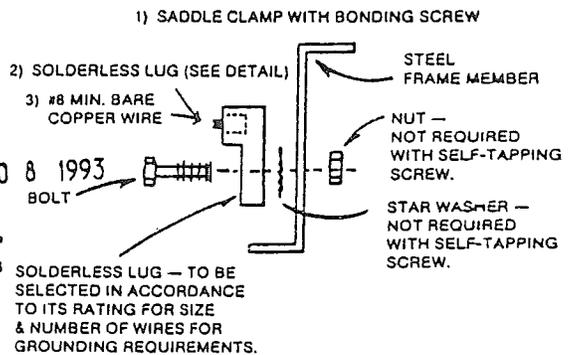


FIGURE 9B: FRAME BONDING



### SOLDERLESS LUG DETAIL — END VIEW

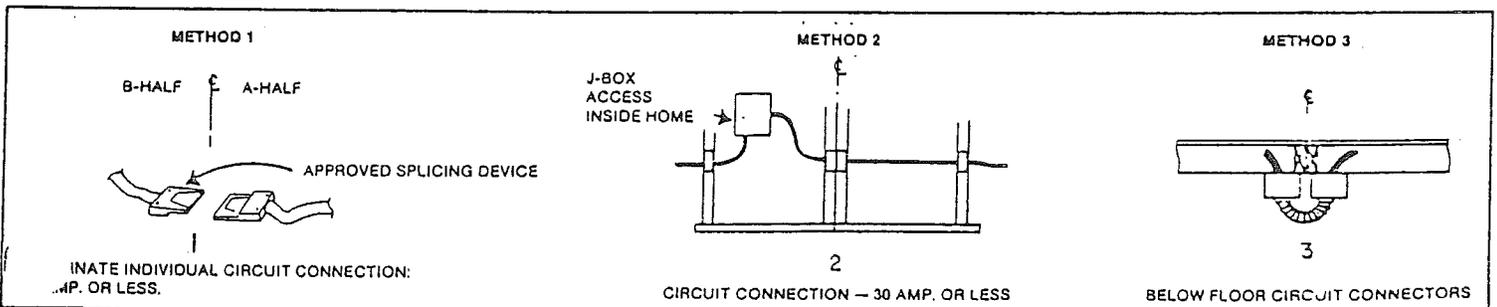


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# NEW HOLLY PARK

## CONNECTING UTILITIES

### WATER SUPPLY

The water inlet is located underneath the home and is marked with a label fastened to the side of the home. You must install a shut-off valve in the supply line, adjacent to the home. Connect the supply line to the water inlet.

**CAUTION** — The water distribution system in this home was designed for a maximum water pressure of 80 pounds per square inch (psi) at the inlet. Pressures in excess of this can cause burst pipes, leaky faucets, etc. If the water pressure exceeds 80 psi, you must install a pressure reducing valve at the inlet. IMMEDIATELY after connecting the water supply and turning the water on you should check the entire home for any possible water leaks which may have occurred. (Over the road vibrations, etc. may have loosened a joint.)

**CAUTION** — Do not start the water heater (either electric or gas) until the water supply has been connected and the water heater has been filled.

If the home is located in an area where pipes may freeze, the exposed water pipe should be wrapped with a heat tape labelled by U.L. for manufactured home use. The heat tape should be installed in accordance with its manufacturer's instructions. An electrical receptacle is located on the underside of the home, near the water inlet, where the heat tape may be plugged in.

### DRAIN LINES

The drain line system in your home terminates in a standard 3" waste connection.

Most of the DWV (Drain, Waste & Venting) system is installed at the manufacturing facility. In some instances, the system must be completed beneath the home after the home is set-up and blocked. All materials needed to complete the system is sent with the home by the manufacturer. A plumbing diagram (as required by Federal Standards and reviewed and approved by an independent engineering firm) depicting the necessary information (fittings, pipe sizes, locations and configuration) necessary to complete this system is included with the close-up kit in your home.

First locate the outlets visible beneath the home. Using the above referenced drawing locate the fittings necessary at each outlet and secure these fittings to the outlets. Note: All connections of fittings shall be done following the instructions printed on the containers of solvent and adhesive.

Standard lengths of pipe are provided. These must be cut to necessary lengths as required by distance between outlets being connected. All cut ends shall be cleaned and de-burred before being joined. Couplings are provided for joining pipe lengths if necessary.

After fittings are installed and pipe sections are completed, assemble the pipe to the fittings between outlets, again per the proper solvent and adhesive instructions.

When installing these drain lines, ensure they are installed with a slope towards the main drain of 1/4" per foot, or if a clean out fitting is located at the upper end of each branch, a min. of 1/8" per foot is acceptable.

All drain lines must be supported every 4'-0" on center to ensure the required slope. If you live in an area that is subject to extreme cold, care must be taken to prevent line freeze by wrapping with insulation.

### ELECTRICAL CONNECTION

The home was completely wired at the factory, up to and including the service panel containing the main circuit breaker and individual branch circuit breakers. The electrical system in the home is 115/230 volt, 3-pole, 4-wire, including ground. Conduit from the service panel to the outside of the home, in which to run the electrical supply wires, has also been installed at the factory. It is very important to properly ground the service panel. Each branch circuit and each non-current carrying conductor (exterior metal, gas lines, heat duct, etc.) is grounded to an electrically isolated grounding bar in the service panel. The neutral (white) wire in the electrical system should never be grounded in the service panel or to the ground (green) wire.

The main electrical supply lines, outside conduit, disconnects, etc. have not been supplied with the home since requirements vary from location to location, and the connection must conform to all local requirements.

The following table shows the proper size wire to be used in connecting the main service panel in your home to the electrical source (proper wire size depends on the type of wire and the electrical demand of the home):

SIZE OF FIXED FEEDER SUPPLY WIRES, AWG OR MCM

Size of Main Circuit Breaker, in Home, in Amperes	75°C Rated Copper, Type RH, RHH, RHW without Outer Covering THW or XHHW	Size of Grounding Wire
100	4	8
150	1	6
200	2/0	6

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The electrical supply wires should be run in conduit from the home to the electrical source. The following table shows the proper size junction box and conduit to use, which depends on the type of wire used and the electrical demand of the home:

**MINIMUM JUNCTION BOX AND CONDUIT SIZE,  
IN INCHES**

Size of Main Circuit Breaker, in Home, in Amperes	75°C Rated Copper, Type RH, RHH, RHW without Outer Covering THW or XHHW	Junction Box
100	1/4	8 x 8 x 4
150	1/2	10 x 10 x 4
200	2	12 x 12 x 4

**CAUTION!** Several things are very important concerning the electrical connection to your home.

- Only a qualified electrician should perform the electrical hook-up, or make any extensions or changes in the electrical system. Unqualified people could cause serious or fatal accidents.
- Be sure that the electrical power supply at your homesite is adequate to supply the electrical demand of your home. Inadequate power supply or wiring supplying electricity to your home can be hazardous.
- It is very important that proper polarity be maintained when the electricity is connected to your home. The white (neutral) wire should NEVER be connected to, or come in contact with, either one of the black or red (positive or "hot") wires. In addition, the white (neutral) wire should NEVER be connected to, or come in contact with, the green (ground) wire.
- The home must be properly grounded, by running a proper sized wire from the grounding bar in the main service panel through the conduit to the outside of the home, and attaching it to a proper copper rod driven full length into the ground.
- Installation of any type of telephone wiring, TV antenna, or other service which includes penetrating the exterior siding and/or exterior side or end wall or interior partitions of the home should only be done by a qualified person, observing the following procedures:
  1. Disconnect the main circuit breaker, in the service panel.
  2. Do not pierce the side or end walls more than 12" from the bottom edge of the home, and do not pierce interior partitions more than 5" from the top of the floor.
  3. After completing the installation, complete a dielectric strength test of the entire electrical system in the home.
  4. Return the main circuit breaker to "On."
  5. Test all light fixtures, electrical receptacles and appliances for proper operation.

## GAS CONNECTION

If your home was built at the factory with a gas burning furnace, range or water heater, the inlet for the gas pipe is located underneath the home and is marked with a label fastened to the side of the home. The gas piping system of the home was tested for leaks at the factory; however, because of over the road vibration, etc., the entire system should again be pressure tested for leaks by a qualified person. The gas piping system for this home has been designed for the following pressures:

Natural gas — pressure of at least 7 inches of water column, but not more than 10½ inches of water column.

LP gas — pressure of at least 11 inches of water column, but not more than 14 inches of water column.

After the system has been determined to be leak free, the gas pipe should be connected to the gas supply, in accordance with local requirements.

**CAUTION!** Several things are important concerning the gas connection to your home.

- If the home has a gas burning hot water heater installed at the factory, with the flue pipe and roof cap NOT installed but furnished with the home, do not operate the water heater until the protective covering has been removed from the roof and the flue pipe and cap have been properly installed in accordance with the water heater manufacturer's instructions. The water heater flue pipe and cap (when not installed, but furnished with the home) was not installed at the factory to prevent possible damage during shipment.
- Only a qualified person should check the system for leaks and connect it to the supply. Unqualified people could cause serious or fatal accidents.
- Install a gas shut off valve outside the home when connecting the system to the supply.
- In most cases, the orifices or settings included in the gas burning appliances (including furnaces and water heaters) at the factory are for NATURAL gas only. If you intend to use LP gas, a qualified person must convert the appliance in accordance with its manufacturer's instructions. Be sure to check all connections for leaks after the appliances have been converted.
- After the supply is connected, the installer should light the pilot light (if any) on each appliance and determine that the appliance is working properly.

## INSTALLING FLUE ON OPTIONAL WOOD BURNING FIREPLACE

**CAUTION!** If the home includes an optional wood burning fireplace installed at the factory, DO NOT START A FIRE IN IT until the protective covering has been removed from the top of the chimney and the remaining sections of the flue pipe and the flue top assembly have been properly installed in accordance with the fireplace manufacturer's installation instructions. The flue pipe and top assembly, which are furnished with the home, were not installed at the factory because of the possibility of damage while in transit.

**CAUTION!** Be sure to use the optional wood burning fireplace only in accordance with the fireplace manufacturer's instructions.



**INSTALLING CENTRAL AIR CONDITIONING**

This home is suitable for installation of a central air conditioner, provided the electrical supply panel and electrical service is large enough to carry the load. A qualified heating/cooling company should be able to determine if the electrical supply is adequate, and by referring to the information on the comfort cooling certificate located in the home, a qualified heating/cooling company can determine the proper sized air conditioner that will be needed.

If a self-contained central air conditioning unit is to be used (separate from the furnace) an automatic damper (to prevent cooled air from blowing up into the furnace) may have to be installed in the furnace base. Depending on the furnace installed in your home, this damper may already have been installed at the factory, or in some cases, the furnace may be of a type which is labeled as suitable for use with air conditioning without such a damper. In addition, the ducts carrying cooled air from the air conditioning unit into the home and return air from the home to the air conditioning unit must contain dampers, or be installed in such a way so that when the furnace runs, heated air does not blow through these ducts into the air conditioning unit.

A combination heating/cooling thermostat will also have to be installed, to prevent simultaneous operation of the furnace and the air conditioner.

The duct carrying cooled air from the air conditioner to the home should be connected to the bottom of the main duct located in the floor of the home. The connection should be located so that an equal number of floor registers are on each side of the connection. The floor joists running crosswise within the floor of the home should not be notched or cut into in any way when installing the air conditioner supply duct.

A duct carrying return air from the home back to the air conditioning unit will probably be necessary. If so, the return air register should be located so that air passage is not restricted, and should be located between the floor joists within the floor. The joists must not be notched or cut into in any way when installing the return air duct.

**INSTALLING A SEPARATE EXTERNAL HEATING AND/OR COOLING DEVICE**

It is possible that the home was manufactured at the factory, with the furnace omitted, if so ordered that way by the dealer. If so, a duct adaptor has been installed at the factory in the duct within the floor, for connecting to the external heating and/or cooling device. In addition, a return air grill, to return air from the home to the external device, has also been installed at the factory. The following items must be complied with in the installation of an external heating and/or cooling device:

- The installation should only be done by a qualified heating/cooling company. The device must be properly sized for the home, and it must be installed in accordance with its manufacturer's instructions. The installer should leave the manufacturer's installation and operating instructions with you.
- A qualified electrician should connect the device in conformity with local requirements, after being sure that the electrical supply is adequate for the load.
- The device should be installed in such a fashion that it is readily accessible for inspection, service, repair and/or replacement.
- The ducts carrying air from the device to the home, and returning air to the device, must be designed and manufactured so as to comply with Section 3280.715 of the Federal Manufactured Home Construction and Safety Standard.
- The installer should complete the appropriate portion of the heating certificate.

**INSTALLING CLOTHES DRYER VENT**

If the home was ordered with optional wiring for an electric clothes dryer, a hole was cut through the floor (and temporarily resealed) at the dryer area, through which the vent tube is to be run. The vent tube was not supplied with the home, unless an electric clothes dryer was installed in the home at the factory. If an electric clothes dryer was installed at the factory, the necessary vent tube and outlet fitting were shipped loose inside the home from the factory, and must be installed when the home is set up. (The vent tube and external fitting were not installed at the factory because of possible damage while the home was being delivered and set up.)

To install the duct, first remove the temporary patches covering the hole in the floor. Push the vent tube into the hole, and attach the end inside the home to the outlet on the rear of the dryer. From underneath the home, pull the vent tube through the floor so it is snug, and extend it to the side of the home. DO NOT allow the vent tube to terminate underneath the home. Fasten the termination fitting to the end of the vent tube, and fasten the fitting at the edge of the home. Support the vent tube as necessary, and seal around the opening in the bottom board (underneath the home) as appropriate.

**WARNING!** Do not use a clothes dryer in this home unless it has been properly vented to the outside. If you use a clothes dryer which is not properly vented, you will introduce a substantial amount of water into the air inside the home, which could cause condensation, which could damage your home.

**WARNING!** If your home was not wired for an electric clothes dryer at the factory, do not install one until a qualified electrician determines that the electrical service is adequate for the increased demand. Any additional wiring should only be done by a qualified electrician. The dryer must be vented in accordance with the foregoing instructions, but you will have to cut the hole for the vent tube in the floor, because this wasn't done at the factory.

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# NEW HOLLY PARK

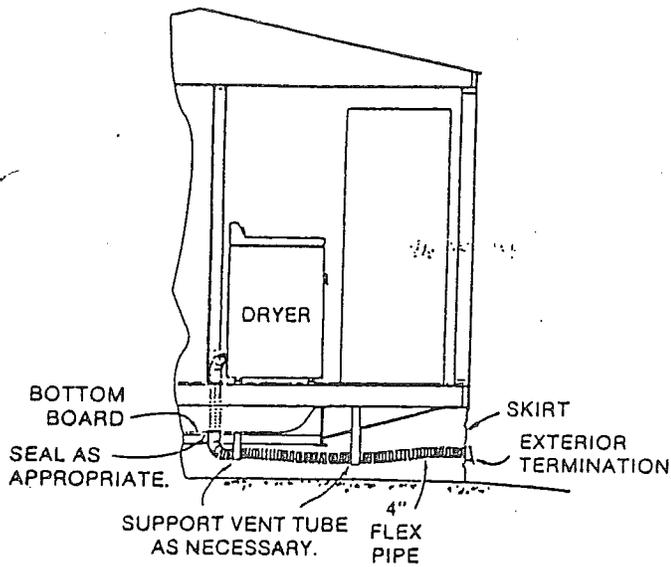
## PATCHING THE BOTTOM COVERING

It is important that any holes, tears, etc. in the bottom covering underneath your home be promptly repaired. Following are three alternative methods for doing this:

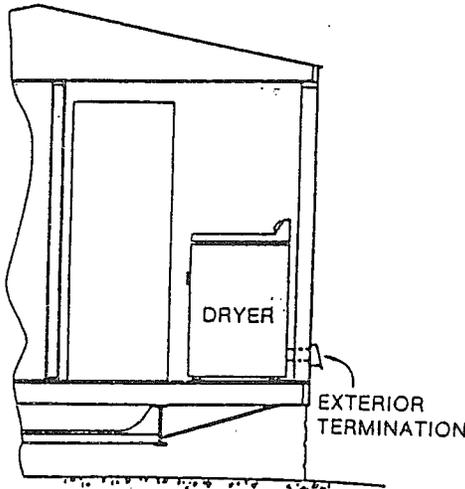
- Cut the patch to size out of any suitable material. Use a double-faced tape (such as 3M No. 950) and affix the sticky side to the patch. Remove the paper from the other side of the tape, and apply the patch to the area under repair.
- Use pressure sensitive tape, such as Tuck No. 91B, to mend occasional small holes, tears or cuts.
- Cut the patch to size out of any suitable material, and tape it in place. Use an air-operated outward flare tacker (Senco Products, Inc. — Model LN 3045) and fasten the perimeter of the patch at 3" intervals.

## INSTALLING SKIRTING AROUND YOUR HOME

Skirting installed around the perimeter of your home will enhance its appearance, and help keep heating costs down in the wintertime. Several types of skirting are available, and may be found in the yellow pages under "Mobile Homes." If you have skirting installed around your home, be sure that the clothes dryer vent (if any) terminates OUTSIDE the skirting. Vents should be installed in the skirting and at least two such vents should be kept open throughout the winter.



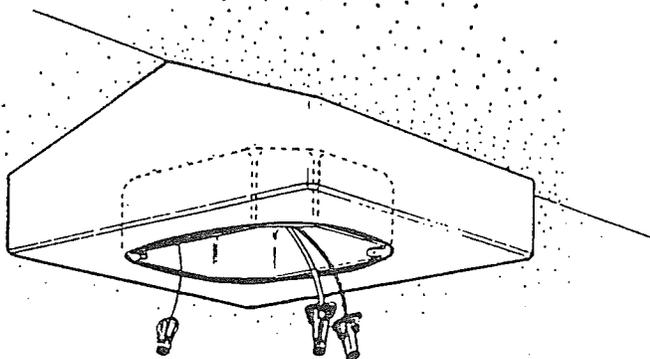
**DRYER INSTALLATION AGAINST INTERIOR WALL**



**DRYER INSTALLATION AGAINST EXTERIOR WALL**

### OPTIONAL CEILING FAN

Fan mounting box shown on Cathedral ceiling  
May be mounted on Flat ceiling or Ridge Beam



Three wires have been provided for Field installation of Ceiling Fan. Typically a Black (Hot), a White (Neutral) and a bare copper ground wire. Installation should be made by qualified Electrician.

Follow Instructions That Came With The Fan To Be Installed

THE WALK-IN-BAY WINDOW INSTALLED IN THE SIDEWALL OF THIS HOME IS TO BE PERIMETER SUPPORTED WITH A PIER AT EACH END OF THE OPENING — SEE RECOMMENDATIONS UNDER FOUNDATION SECTION.



PIER LOAD IS: 1200 LBS. @ SOUTH (20 PSF) ROOF ZONE  
1600 LBS. @ MIDDLE (30 PSF) ROOF ZONE

APPROVED BY  
**NIA INC.** OCT 08 1993  
FEDERAL MANUFACTURED HOME  
CONSTRUCTION AND SAFETY STANDARDS