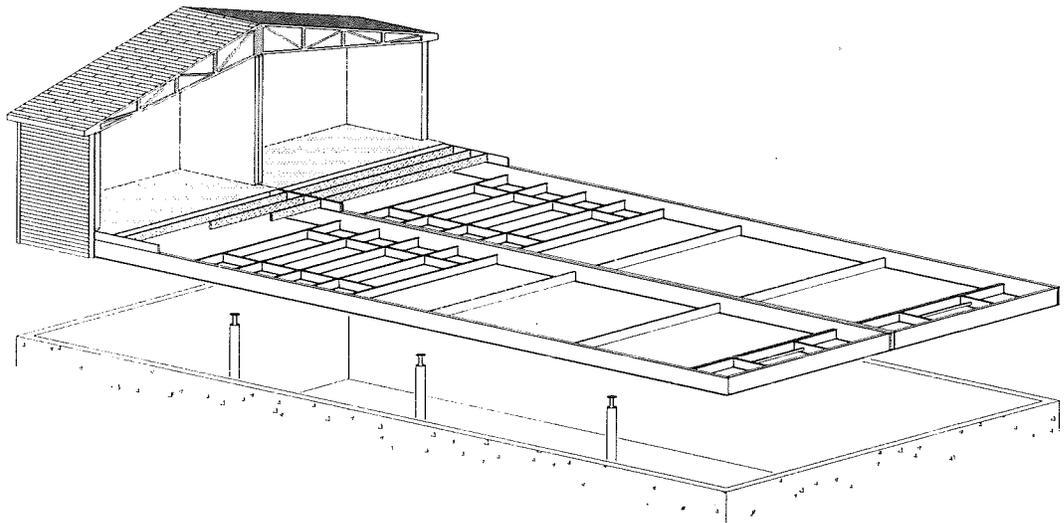


Basement/Crawl Space Foundation Installation for homes with **PERIMETER FRAME**

Supplement to the standard
"Installation Instruction Manual"

**FILE
COPY**



A copy of this Manual must remain with the home
for reference by the homeowner



Issued: 01 November 2000

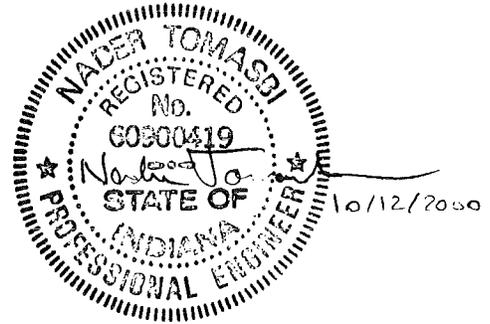
Preface

The technical content of this manual has been reviewed by NTA, Inc. to assure compliance with the Federal Manufactured Home Construction and Safety Standard, 24 CFR Part 3280.

APPROVED BY

NTA INC. OCT 13 2000

FEDERAL MANUFACTURED HOME
CONSTRUCTION AND SAFETY STANDARD®



All information contained in this manual is proprietary to Liberty Homes, Inc. No unauthorized copying or distribution is permitted without written consent. Due to constant product improvement, some specifications are subject to change.

Who is this manual for?

This manual is designed to be used to assist qualified personnel before, during, and after the setup of a Liberty Manufactured Home.

The old adage, "A home is only as good as its foundation" is true to the letter. Therefore, construction of a foundation should be left to the professionals.

Reference Material Required

There is absolutely no point in continuing until all the proper materials are present, including:

- Soil bearing information for the site
- Proper building permits
- Manufacturer-supplied foundation plan (specific to this home - see page 6)
- Installation Instruction Manual (supplied with the home)

Foundation/Home Installation Steps

1. Site preparation
2. Construction of basement or crawl space
 - 2a. Accommodating for home options such as porches or recessed entries
3. Positioning and securing the home
4. Construction of stairs (if applicable)

Glossary

Some terms used in this manual, while common inside the industry, may not be familiar to a contractor accustomed to site-built housing.

Bottom Board: The black plastic material covering the floor joists.

Crossmember: Any steel member spanning from main beam to main beam.

Hitch End: The end of a section where the towing hitch resides.

Longitudinal: Parallel to the direction the home is moved down the road.

Main beam: The main frame I-beam running fore and aft.

Marriage Line: The line formed where the sections of a home join together.

Outrigger: Triangular shaped steel member attached to main beam.

Perimeter Frame: An "outrigger-less" frame design where the main beams run the perimeter of each home section.

Rim joist: The floor joist located at the very perimeter of the home section.

Transverse: Perpendicular to the direction the home is moved down the road.

WARNING

This manual only addresses those steps necessary for the installation of a home equipped with a "Perimeter" or "Integral" Frame ONLY.

Foundation installation and setup are completely different than that of a "standard" frame equipped with outriggers.

Also, these instructions apply only to a home sited in wind zone 1.

Site Preparation

Keys To A Successful Site Prep:

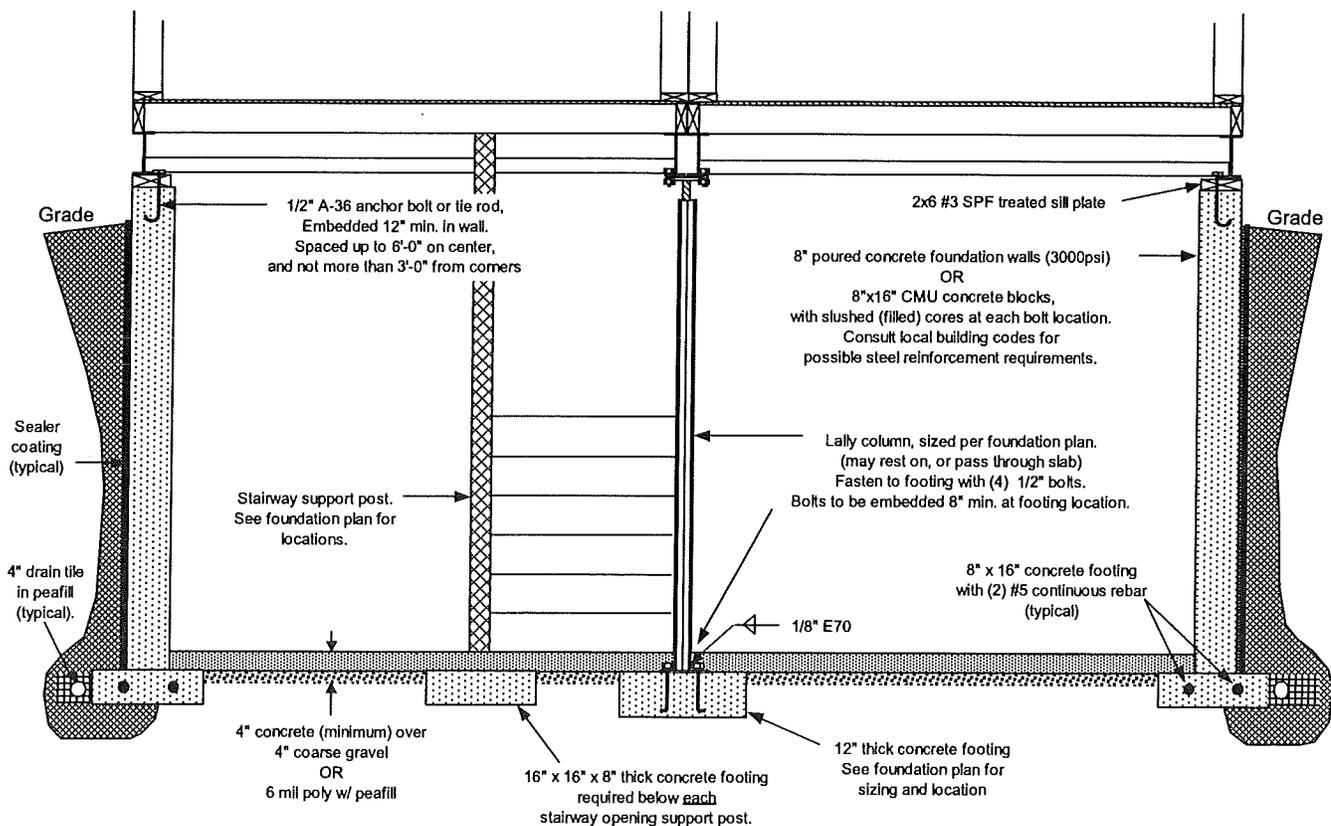
1. Obtaining a Soil Bearing Information (must show a minimum of 2500PSF).
2. Staking location of home on the site so that water will naturally drain away from the home's foundation.
3. Obtaining the proper location, water, and septic permits.
4. Preserving topsoil independent from fill soil for later use.
5. Excavating only to the required depth, and no more.
6. Properly setting foundation wall height compared to final finish grade.
7. Providing for adequate footer drainage.

Construction of the foundation

Please note that local codes or laws may take precedence over the details shown in this section. Also, certain site conditions may require some adjustments on the part of the foundation contractor.

Keys to Constructing The Foundation:

1. Verify that you have the correct foundation plan for the home.
2. Carefully construct the foundation according to the provided plan and details.
3. Apply a moisture resistant sealer to the walls below grade.
4. Install insulation as required.
5. Backfill only after home is set and anchored in place OR provide substantial temporary support for the foundation walls prior to backfilling.
6. Gradually slope final grade away from home for at least 10'-0".



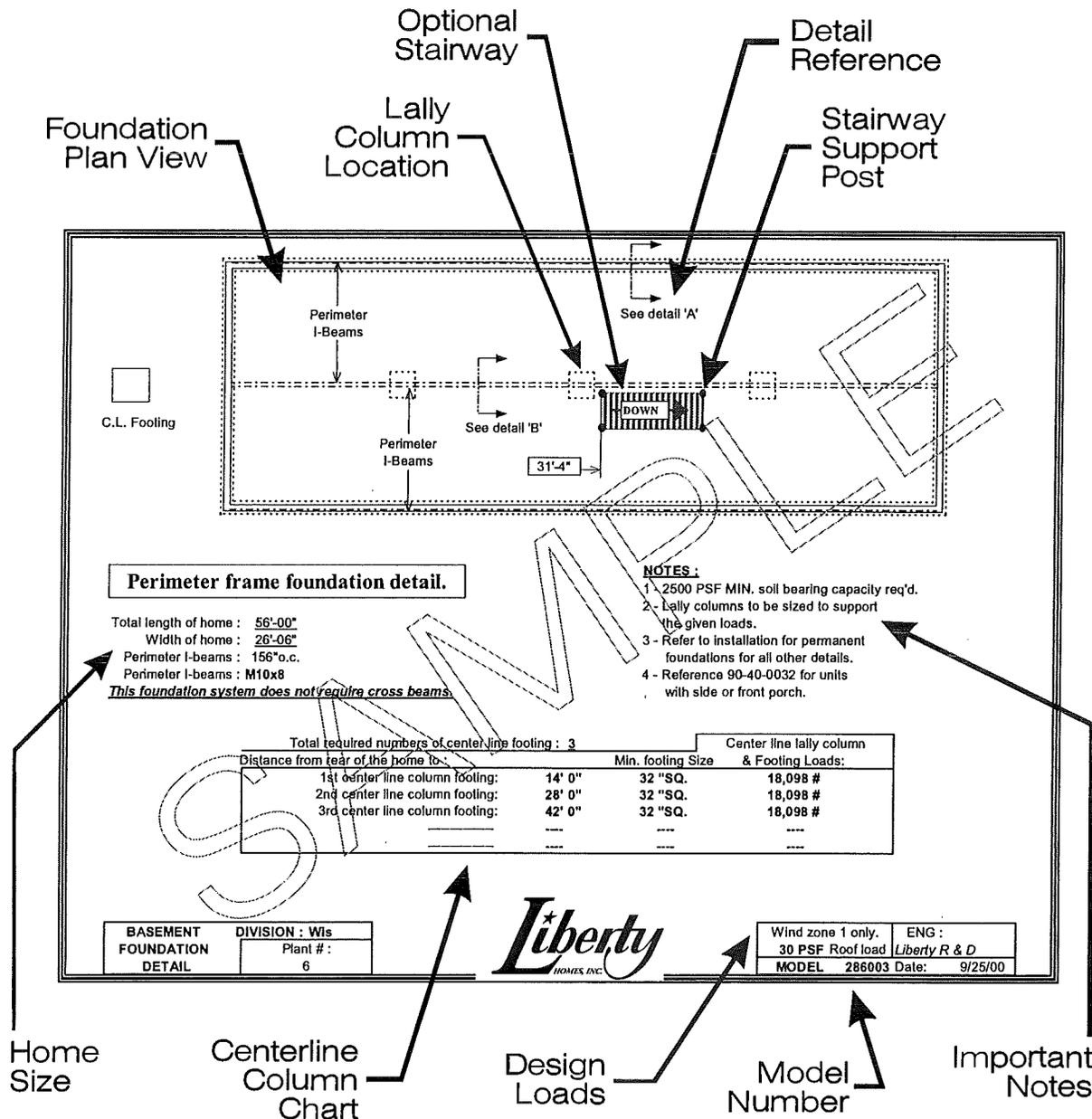
See foundation plan for additional information

Foundation plan

Below is a SAMPLE of a typical foundation plan for a home with a Perimeter frame, similar to the one on the following page, which is specific to your home.

The attached basement foundation plan will also work for a crawl-space foundation, provided there is no stairwell shown.

The foundation plan and details should be followed to the letter, unless they conflict with local codes.



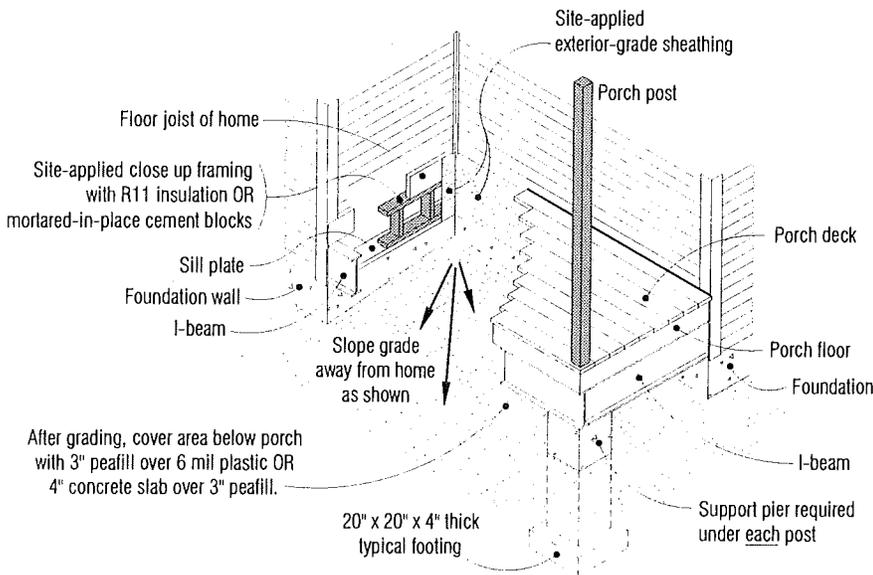
Appropriate foundation plan
should be attached here.

Contact your dealer or Plant of
Manufacture if this plan is not attached.

Optional Foundation Features

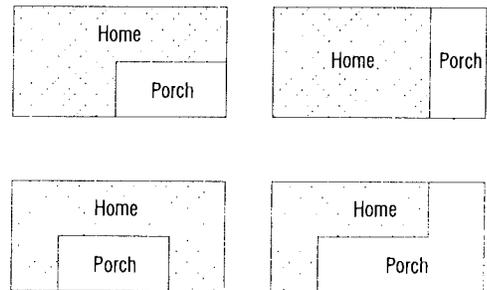
Porch/Deck/Recessed Entry

1. Note that basement area does not extend under porch area(s), therefore ensuring proper drainage out from under porch area(s) is critical.
2. Verify that porch steps do not prevent proper drainage out from under porch.
3. Locate a support pier directly under each porch post. See foundation plan for more specific location requirements.
4. Frame and insulate the space between foundation wall and floor joist(s) as shown in the detail below.



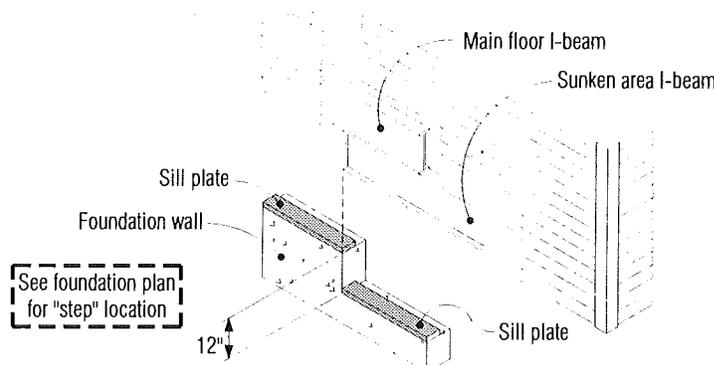
Note About Porch Configurations

Although Porches, Decks, and Recessed Entries are available in many different configurations, the same guidelines apply to all.



"Sunken" Areas

In order to maintain acceptable basement headroom, 12" of additional height must be added to the non-sunken area foundation walls.

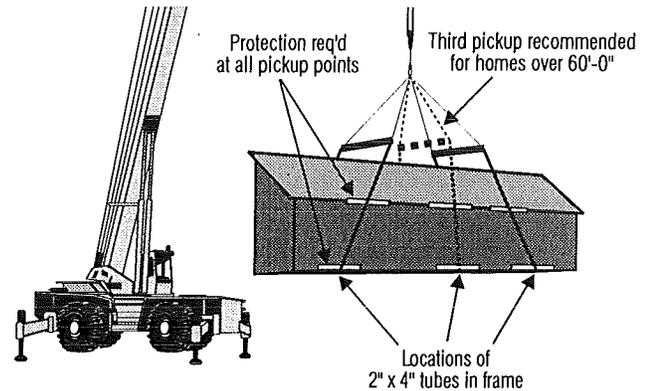


Positioning the home

OPTION 1: Set using a crane

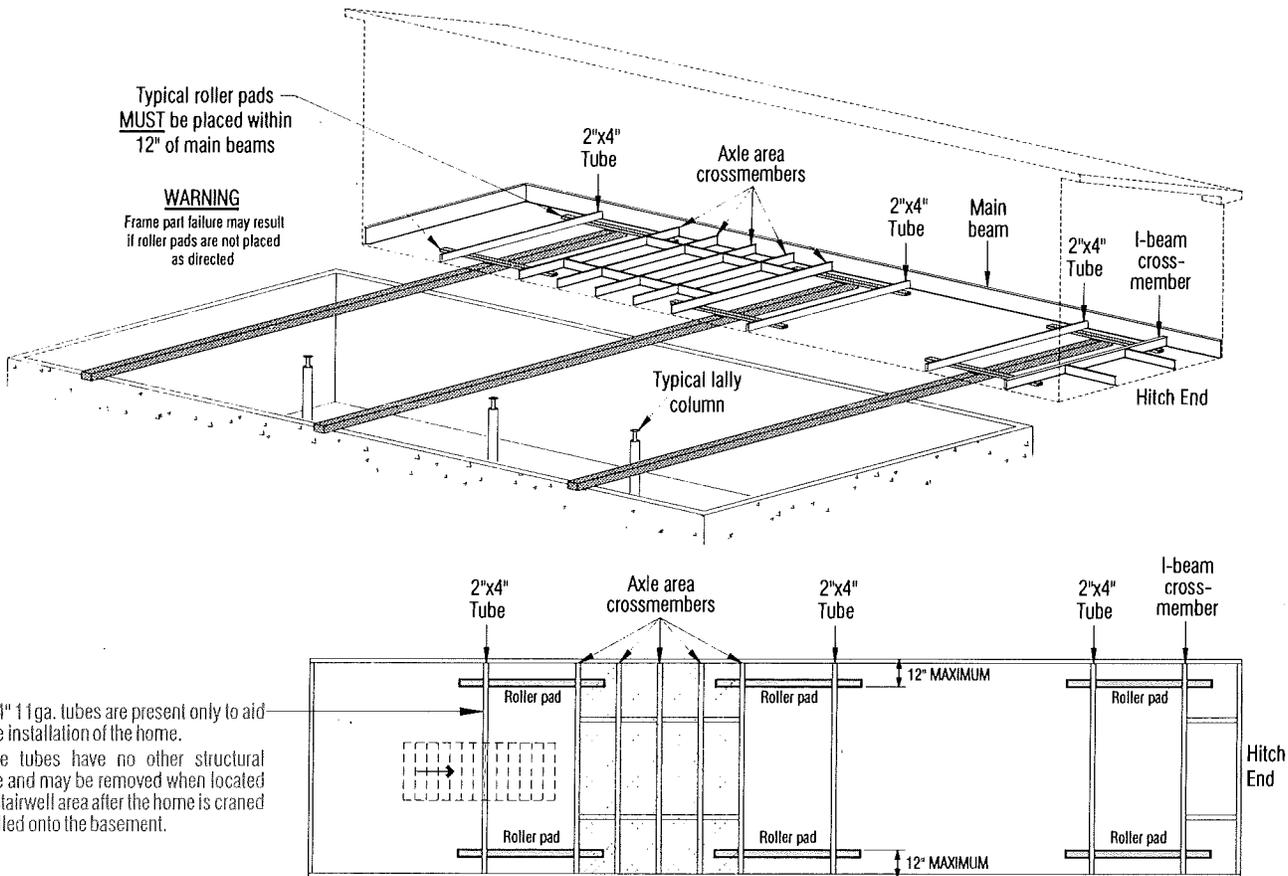
1. Pick up the home ONLY where the 2x4 tube crossmembers in the frame are located. Failure to do so may result in frame part failure.

2. As an alternative, 2x4 11 ga. steel tubes or 6x6 wooden crossmembers may be added for pickup points, provided they are securely fastened in place.



OPTION 2: Set using a Binkley-type "roll-on" system

- Carefully study the diagrams below.
- While jacking up the home, make sure it stays level.
- Make sure the roller pads are positioned within 12" of the main beams.



Typical Perimeter Frame, showing proper positioning of Roller Pads

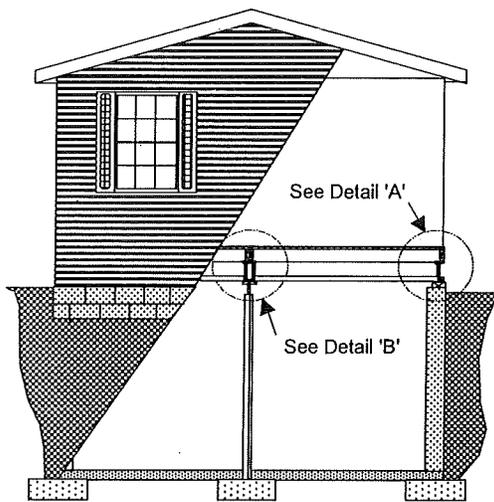
WARNING: Frame part failure may result if roller pads are not placed as directed

Securing the home

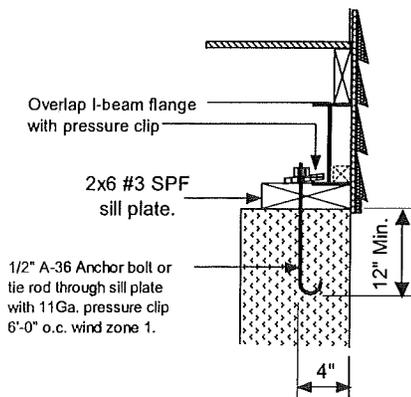
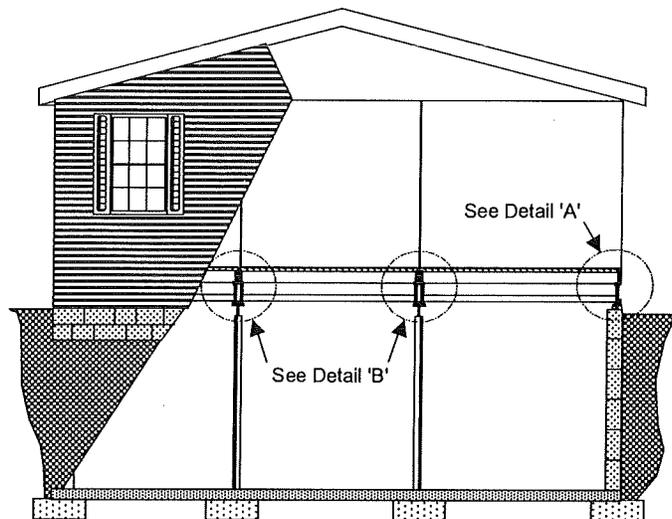
Steps for properly securing the home:

1. Carefully study the details below.
2. When jacking the home down onto the foundation, take care not to "twist" or "bend" the home.
3. When adjusting lally columns, use the floor inside the home to gauge level, not the main I-beams.

Double-Section Home

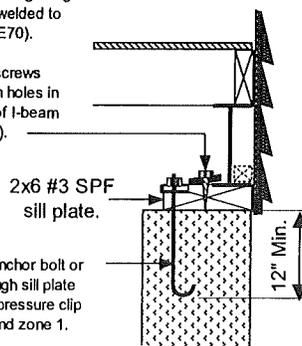


Triple-Section Home



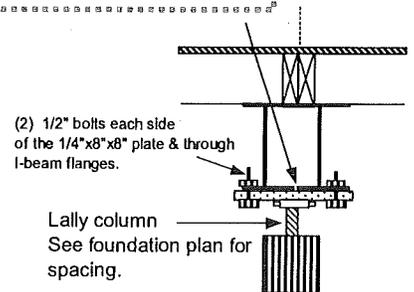
DETAIL 'A'
Connection at
foundation wall

Apply screws through 11ga. Pressure clips welded to I-beams (1/8" E70).
-- OR --
Apply #8x1.5" screws 22" o.c. through holes in bottom flange of I-beam (when provided).



(Alternate) DETAIL 'A'
Connection at
foundation wall

Bottom flanges of I-beams may not meet perfectly together. This is not a defect or problem, as each home section is designed to be self-supporting.

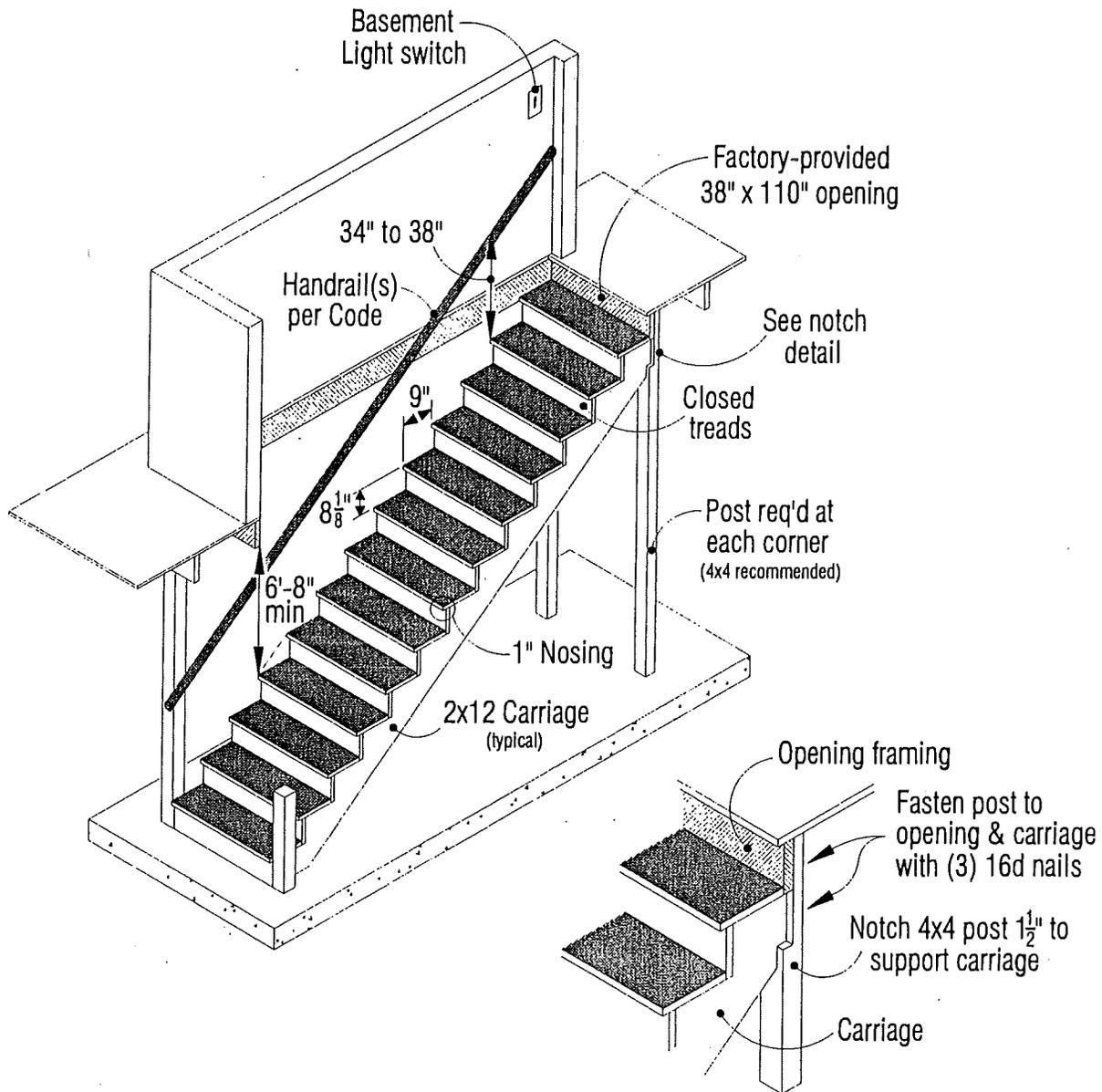


DETAIL 'B'
Connection at
marriage line

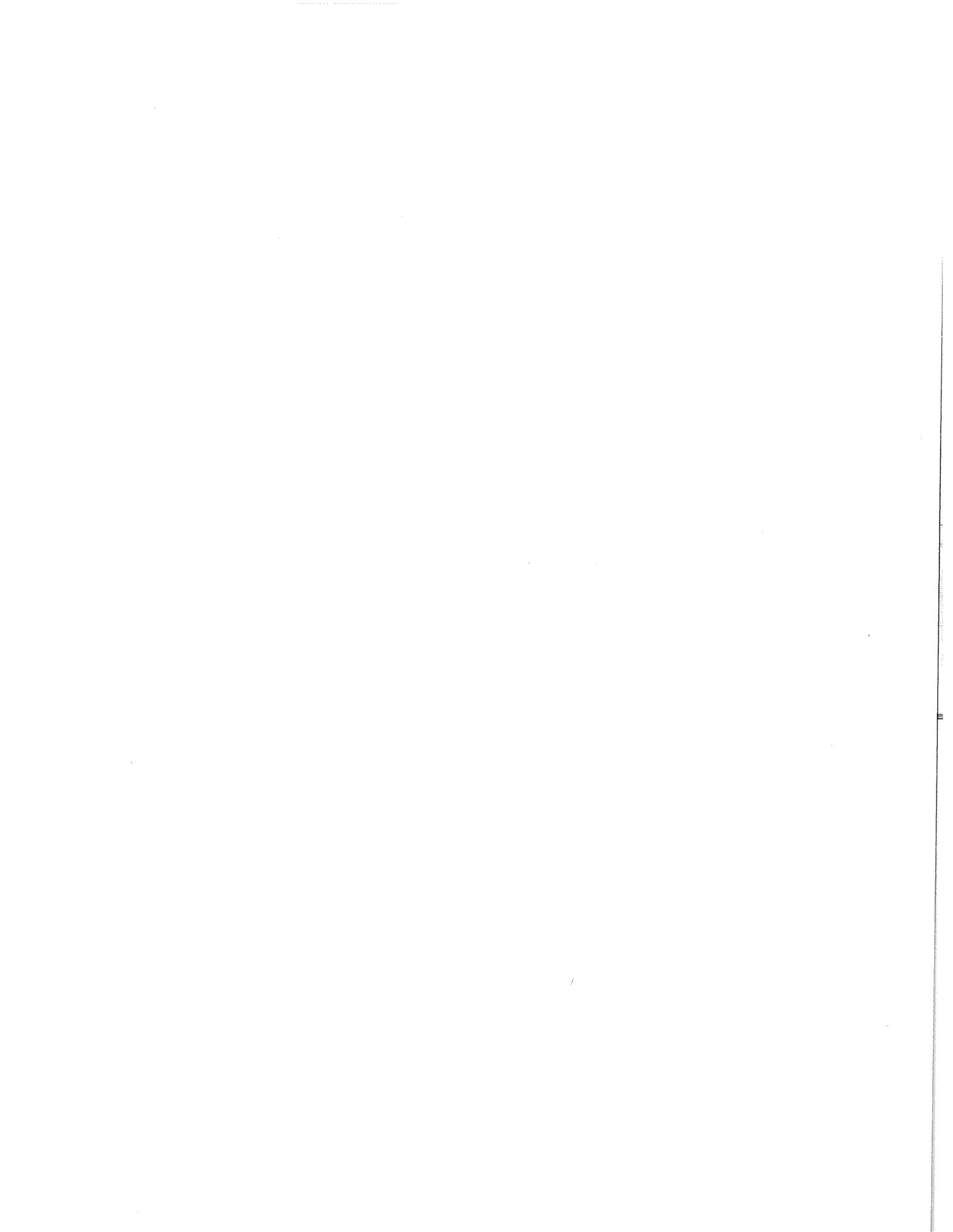
Construction of the stairs

"Steps" To Stair Construction:

1. Install temporary safety handrail thru door opening during stair construction.
2. Remove factory-provided temporary framing at stairwell.
3. Construct stairs as shown below, paying particular attention to the rise and run. Failure to do so will result in inadequate headroom clearance.



NOTCH DETAIL



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