BENZIE COUNTY BUILDING SAFETY and CODE ENFORCEMENT DEPARTMENT

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Modular and Mobile Home Requirements

These are general requirements for the placement or settings of Modular or Mobile Homes in Benzie County.

Treated or Masonry footings and foundations are both acceptable for these homes as the following information will provide.

Soils have a big play in how your footings and foundations are placed.

Mono slabs are permitted and have to be frost protected with a R-10 insulation 24 inches below grade, from the top of the slab.

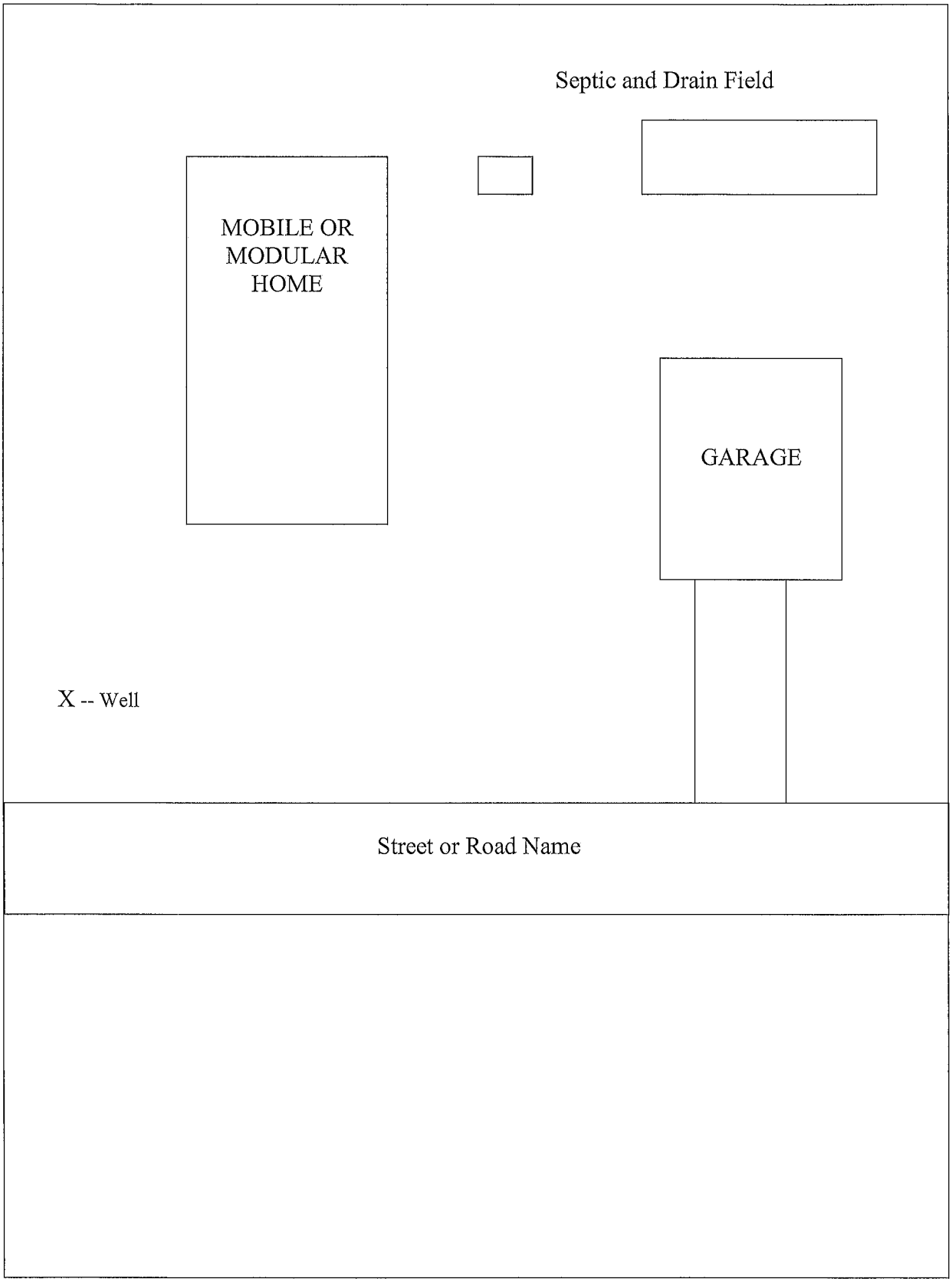
All homes are required to have a 6 mil vapor retarder in the crawl space or under the slab.

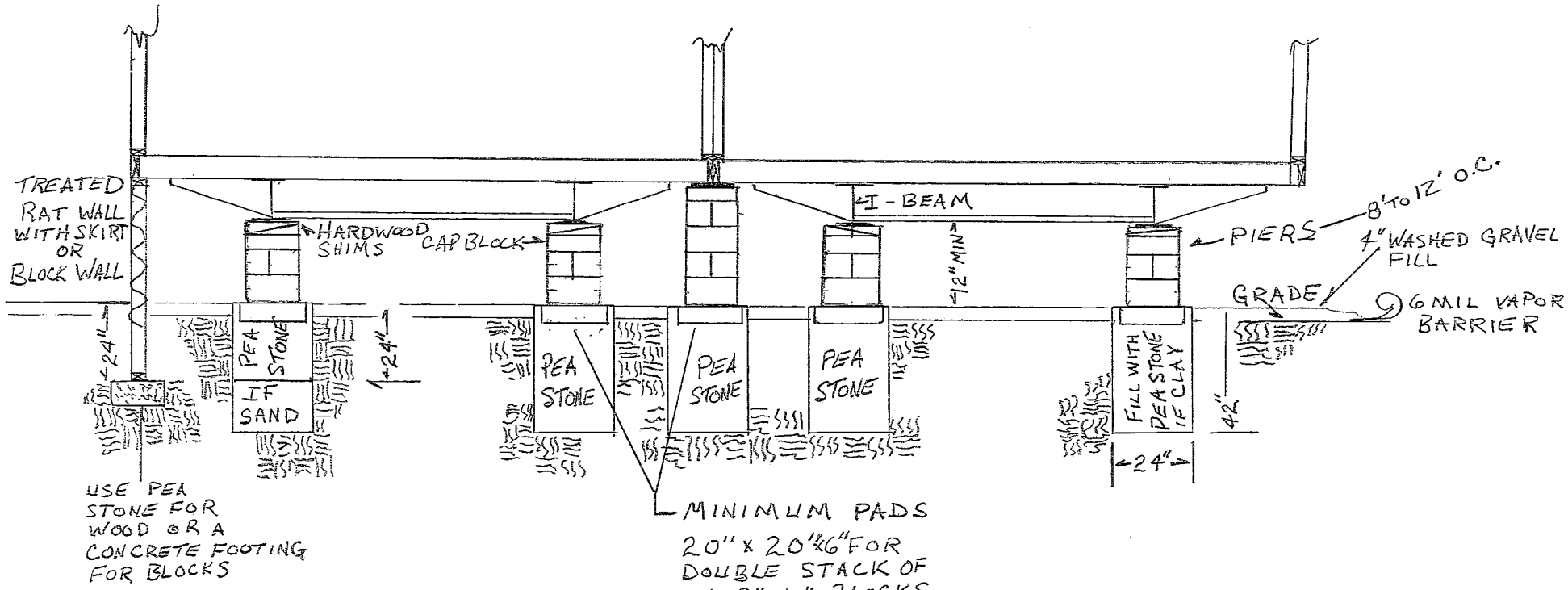
Generally you need to have Building, Electrical, Mechanical, and Plumbing permits when installing a Mobile or Modular Home.

In Mobile Home Parks a Licensed installer can pull all permits, except for the Electrical. The electrical permit must be pulled by a Licensed Electrician.

All permits must be submitted with a site plan.

SITE PLAN

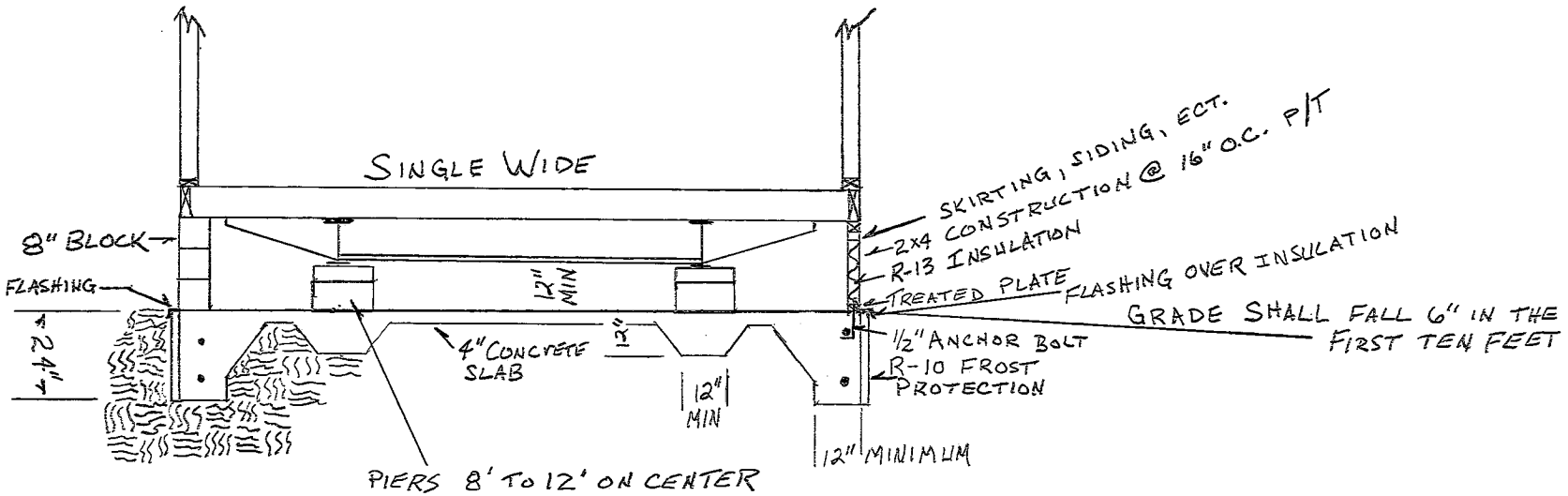

Septic and Drain Field
MOBILE OR MODULAR HOME
GARAGE
X -- Well
Street or Road Name



NOTES:
THE FOOTING SIZES MAY VARY DUE TO SOIL BEARING CAPACITY.
FOOTING MUST EXTEND BELOW FROST LINE OR BE FROST PROTECTED

BLOCKING DETAILS

1/4" = 1'



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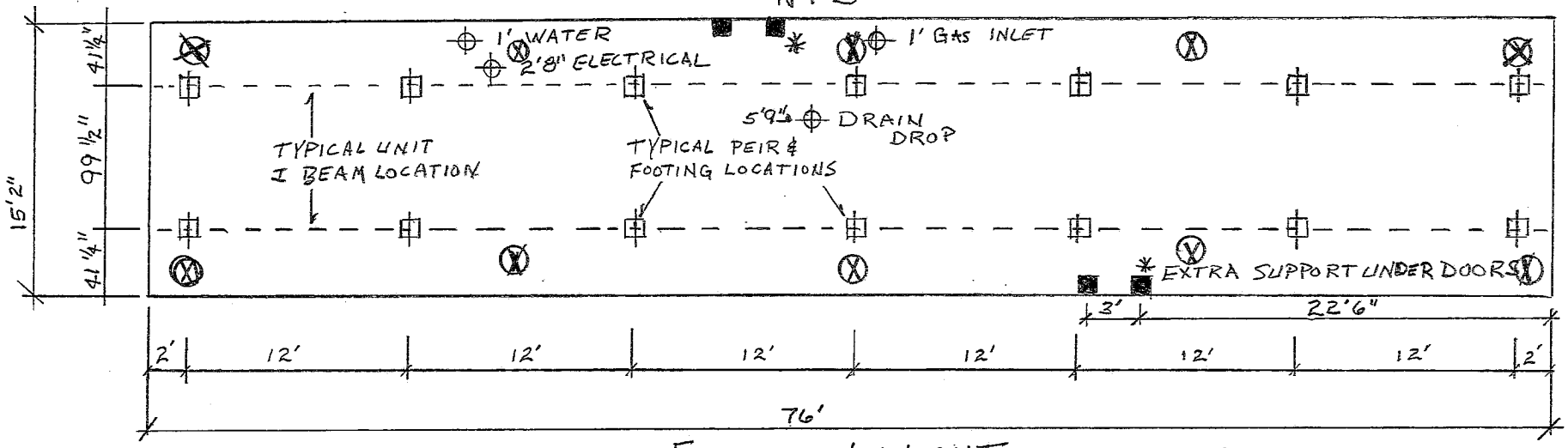
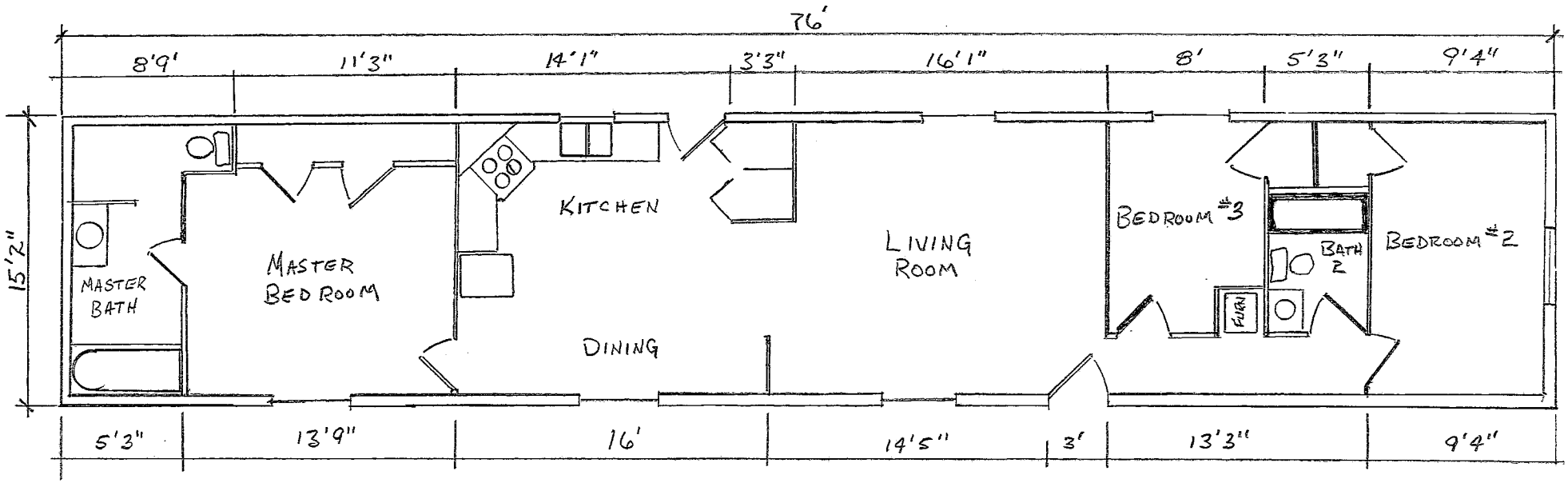
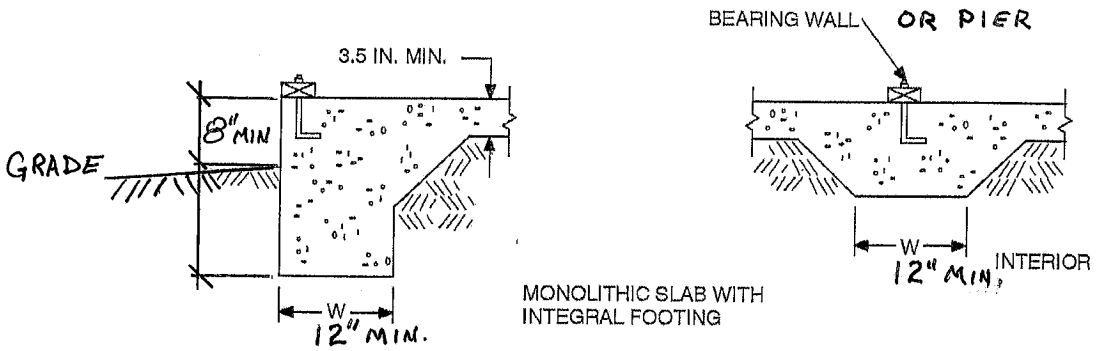
"NTS"



FOOTING LAY OUT ⊗ TIE DOWNS

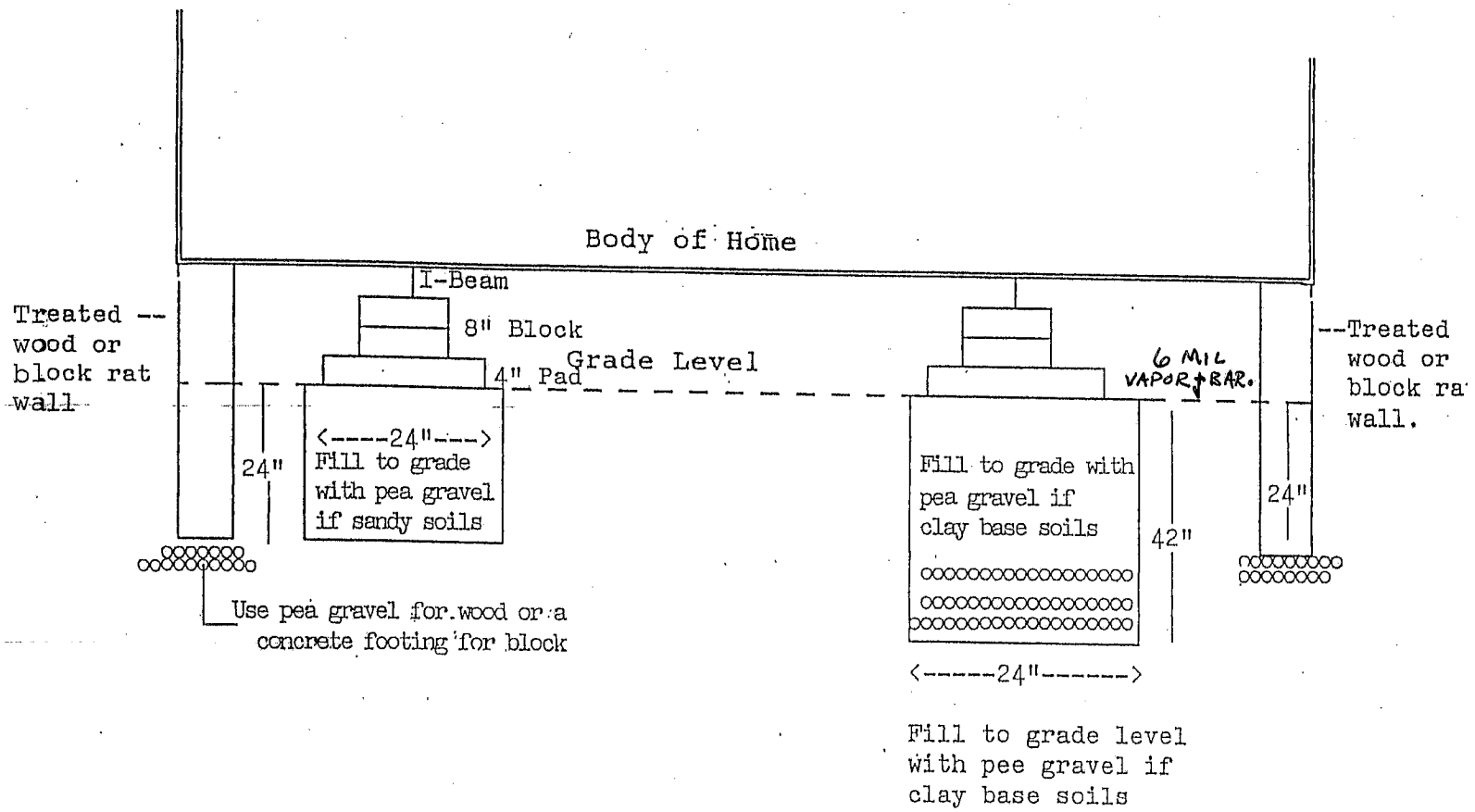


FLOOR PLAN NTS

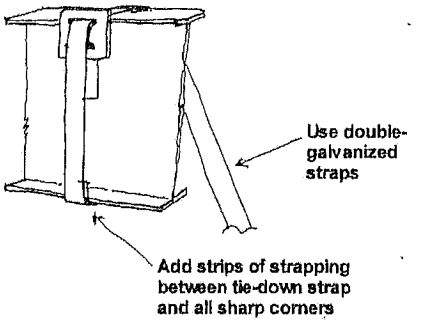


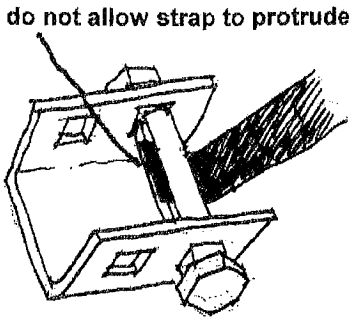
MONOLITHIC SLAB WITH INTEGRAL FOOTING

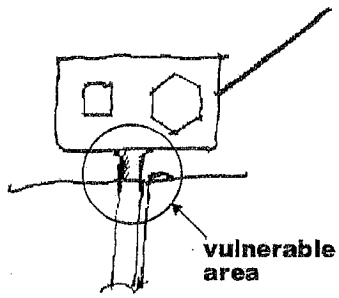
*Mobile Home Setup Requirements



Recommended Practice: Choosing and Using Anchor Straps

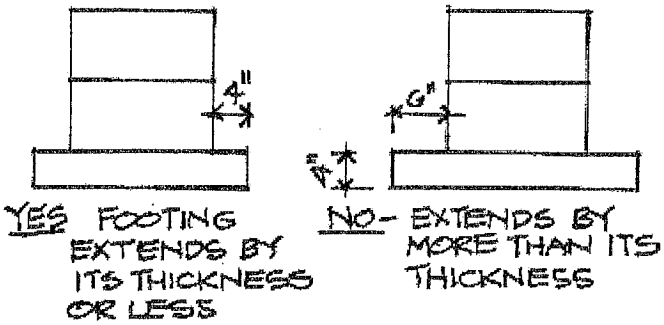


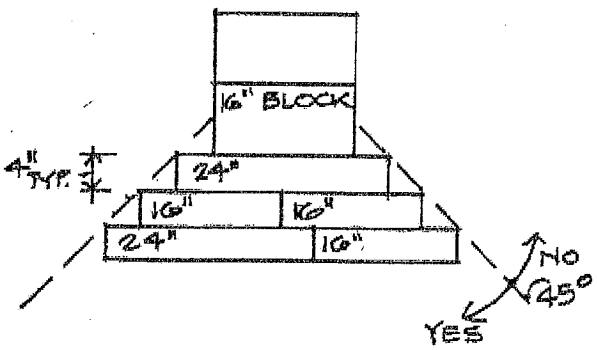


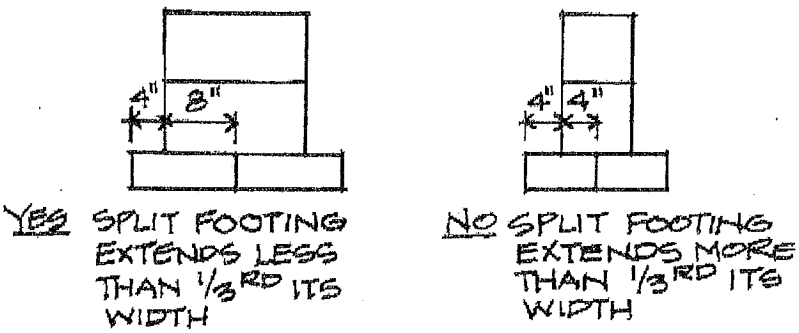


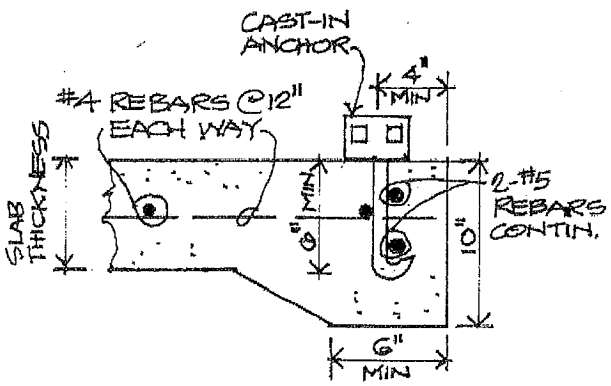
To avoid trouble with anchor straps, follow these recommendations:

- *Protect the strap with pads made of short strips of metal at all sharp corners.*
- *Do not let the end of the strap extend out of the split in the anchor-head bolt.*
- *Use only straps galvanized with 1.2 ounces of zinc per sf.*
- *Use only straps that are stamped as meeting the ASTM D3953 standard.*
- *Attach the strap only to the top of the chassis beam, not to clips at the bottom.*
- *The first strap must be within 2' of the end of the section, per HUD Code.*
- *Space the straps evenly along the length of the home.*
- *If in doubt, install the straps at close to a 45 ° angle with the ground.*
- *The HUD Code requires a vertical tie at each angled tie, in Wind Zones II and III.*







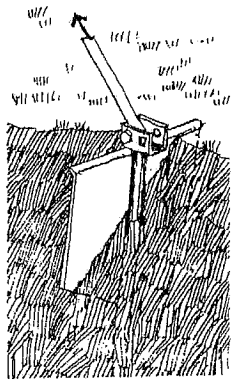


Area of slab needed to resist pull from each anchor:

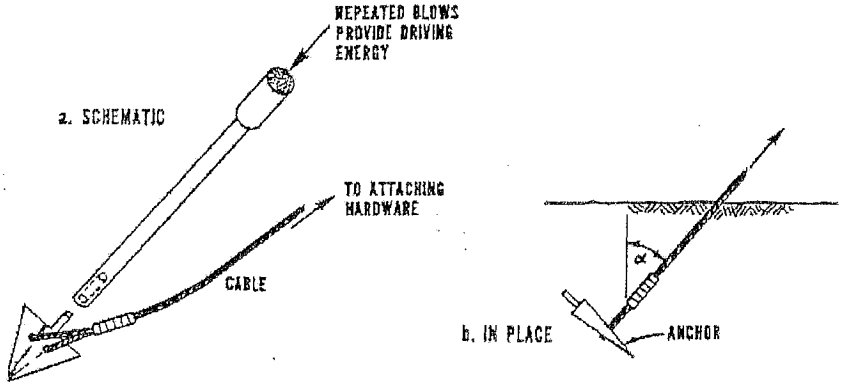
4" slab - 95 sf
6" slab - 65 sf
8" slab - 48 sf

Recommended Practice: Helical Ground Anchors

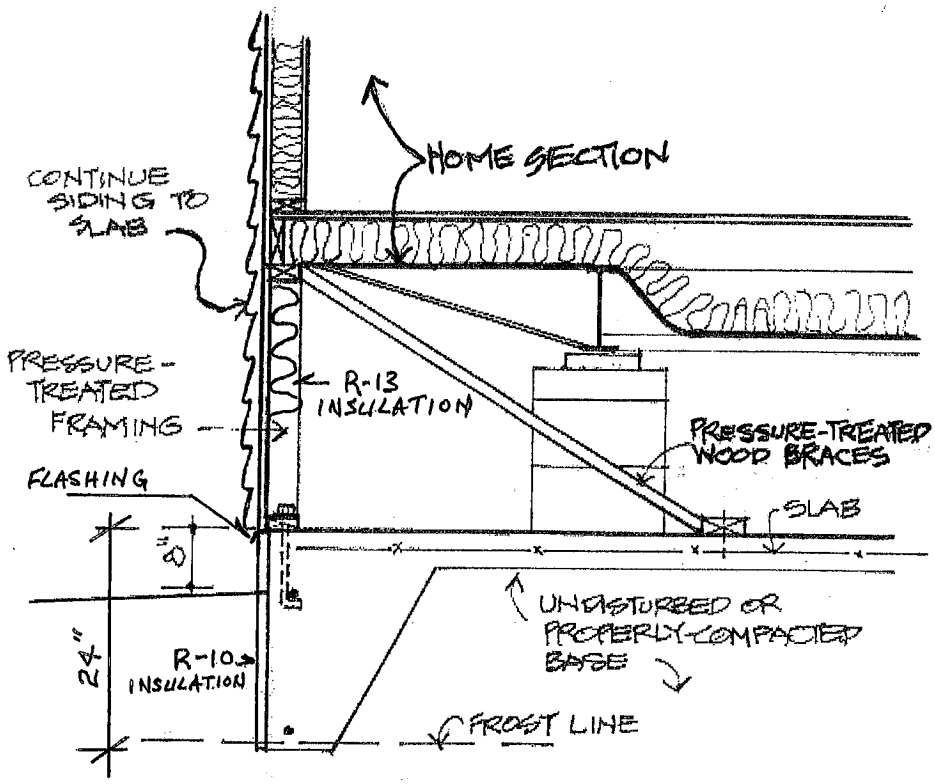
- ◊ *Do not use in soil that can become saturated.*
- ◊ *Make sure test data was performed in wet soil.*
- ◊ *When side-loading, use a large stabilizer plate or a properly engineered masonry or concrete collar.*
- ◊ *When in doubt, use a longer anchor.*
- ◊ *Do not substitute a short double-helix anchor for a long single-helix anchor.*
- ◊ *Make sure the anchor head is flush with the ground.*
- ◊ *Whenever possible, load the anchor directly in line with its shaft.*
- ◊ *Periodically inspect the portion of the anchor at ground level, and repaint when appropriate.*



If anchor is pulled to the side, use large (15" to 18") stabilizer plate (ground shown cut-away)



Typical arrowhead anchor



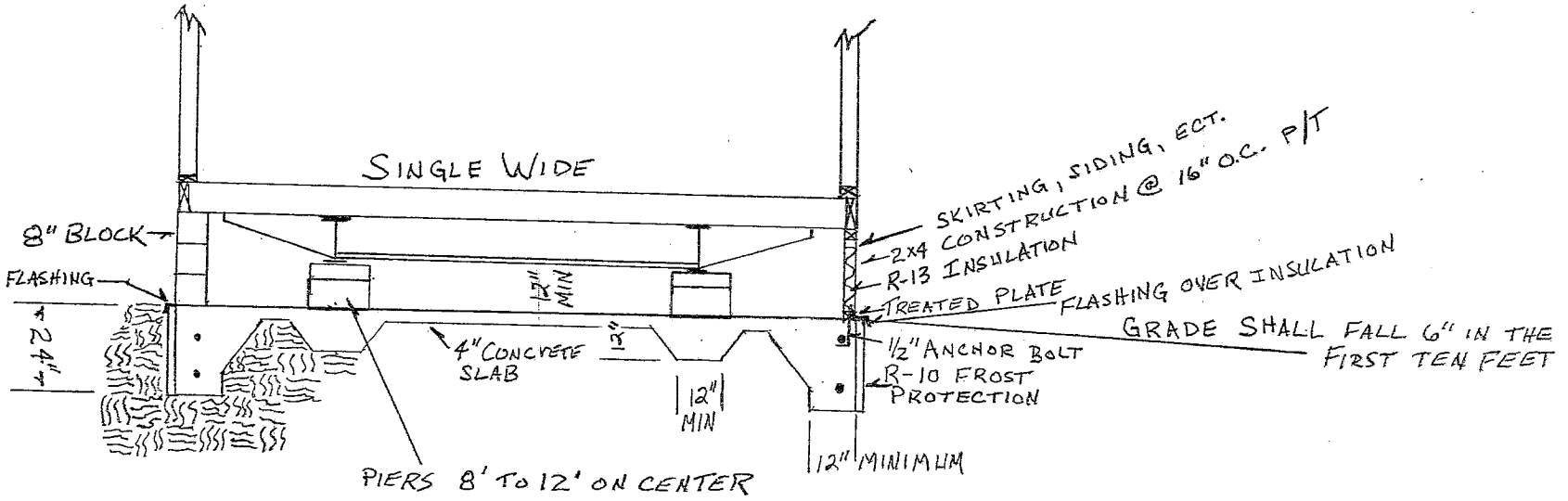
With properly engineered fastenings, anchors, and clips, this design can resist most earthquake and wind loads

Number of Ties Required Per Side of Single Wide[1] Mobile Homes[2]

This table is based on a minimum working load per anchor of 3,150 pounds with a 50 percent over load (4,725 pounds total).

1	2	3	4	5	6	7	8	9
	Hurricane Resistive				Nonhurricane Resistive			
			Alternate Method[4]				Alternate Method[4]	
Length of[3] Mobile Home (Feet)	No. of Vertical Ties	No. of Diagonal Ties[5]	No. of Baling Straps	No. of Diagonal Ties[6]	No. of Vertical Ties	No. of Diagonal Ties[5]	No. of Baling Straps	No. of Diagonal Ties[6]
up to 40	2	4	2	5	2	3	2	3
40–46	2	4	2	6	2	3	2	3
46–49	2	5	2	6	2	3	2	3
49–54	3	5	3	7	2	3	2	3
54–58	3	5	3	7	2	4	2	4
58–64	3	6	3	8	2	4	2	4
64–70	3	6	3	9	2	4	2	5
70–73	3	7	3	9	2	4	2	5
73–84	4	7	4	10	2	5	2	5

[1]Double-wide mobile homes require only the diagonal ties specified in column 3 or 7, and these shall be placed along the outside walls.
[2]Except when the anchoring system is designed and approved by a registered professional engineer or architect.
[3]Length of mobile home (as used in this Table) means length excluding draw bar.
[4]Alternate Method. When this method is used, an approved reinforcement means shall be provided.



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