

# ***Building Permit Guidelines for*** **Manufactured Homes**

## **In the Regional District of Nanaimo Electoral Areas**

Manufactured homes, sometimes referred to as mobile or modular homes, are an economical housing solution that have evolved from trailers and are now longer, heavier and more rigidly constructed. Because they are seldom moved once placed on a property, as much planning should go into the installation of a manufactured home as would be needed for a site built home.

All manufactured homes produced in Canada are required to carry a Canadian Standards Association Certification; either CSA Z240 for mobile homes, or CSA A277 for modular homes.

Manufactured homes used as residences on all properties within the Regional District of Nanaimo must bear a valid CSA certification decal, to be approved for use as a dwelling unit. The decal is usually found affixed to the cladding just to the left of the main entrance. When making non-structural changes to the exterior of a manufactured home, do not remove or deface the CSA decal.

Manufactured homes are required to be set up in a manner that meets or exceeds the BC Building Code, CSA standards and manufacturer's instructions for site preparations, foundations and anchorage.

This guide has been prepared to provide convenient information to assist owners in obtaining building permits for the placement of manufactured homes. It is not a legal document nor is it intended to replace current bylaws and legislation, or relieve the owner from complying with all applicable regulations and standards.



*Drawings used in this guide are with the permission of the Canadian Standards Association.*

*Updated May 2015*

## **PERMIT APPLICATION REQUIREMENTS**

Please ensure you have all the following required documents and information before applying for your permit. Only complete applications will be accepted for processing.

- Name, address and contact information (telephone and email) of the property owner and contractor.
- Name, address and contact information (telephone and email) of the registered owner of the manufactured home, if different than the property owner.
- Legal description and address (if existing) of the property.
- Site plan showing the location and dimensions of the proposed manufactured home. (Setback requirements are to be measured from building extremities). The location of all other structures on the property must be shown.
- Floor plan of the manufactured home showing all dimensions.
- Make, model, CSA registration number and Provincial Manufactured Home Registry number.
- Accurate foundation plan, drawn to scale ( $\frac{1}{4}$ " to 1'). Please refer to the attached examples of foundation plans.
- Stair and landing details drawn to scale ( $\frac{1}{4}$ " to 1')
- Proof of Filing for Sewerage System with Island Health Authority (if applicable)
- Applicable permit processing fee

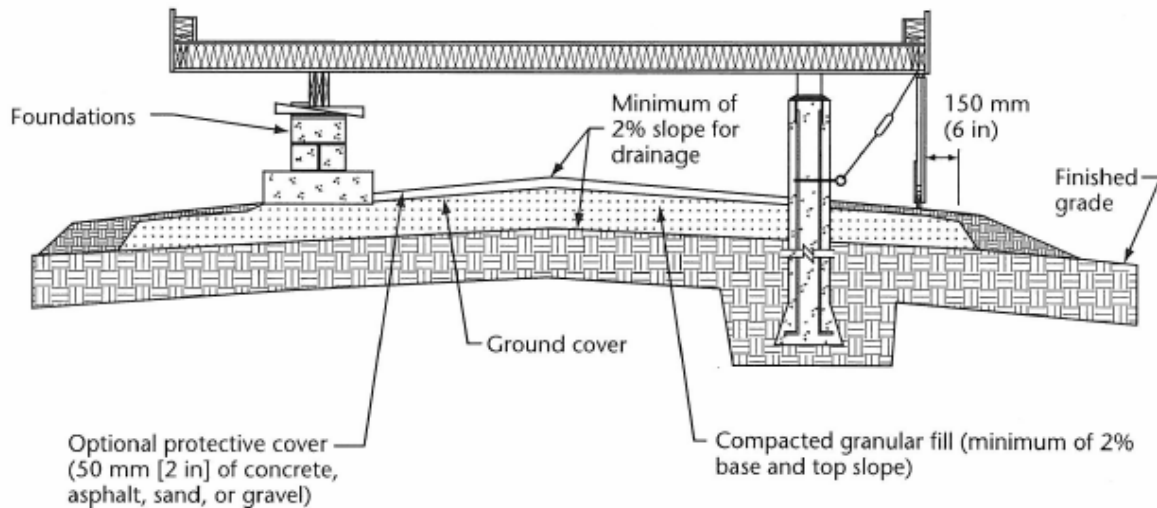
## PLACEMENT PROCEDURES

- Remove topsoil from the site below the proposed manufactured home location. All concrete footings are to be placed on undisturbed soil, or with the approval of the building inspector, on machine compacted granular fill. The fill must be sloped from the center to the outside to prevent water accumulation under the manufactured home. (See attached site preparation example).
- When granular fill is used beneath footings, the building inspector may require certification of such compacting by a professional engineer.
- Permanent foundations are required to support all manufactured homes. Foundations shall be constructed in accordance with manufacturer's instructions, CSA standards, and the BC Building Code (see attached examples). Other foundation designs may require the services of a professional engineer.
- A suitable ground cover shall be placed over the entire area below the manufactured home. The provisions of the BC Building Code apply to the crawlspaces beneath manufactured homes.
- All concrete is to have a minimum compressive strength of 15 MPa after 28 days
- The top of all concrete and block columns must be level.
- Where a manufactured home is comprised of more than one section, the sections shall be joined so that the integrity of the air and vapour barriers, external cladding and structure is maintained at the interface.
- Manufactured homes must be tied down in a manner sufficient to maintain the structural integrity of the box between main frame and foundation. (See attached examples)
- Skirting shall be installed promptly and must be corrosion resistant or pressure treated when in contact with the ground (See attached examples).
- The crawl space shall be ventilated (1 square foot for each 500 square feet of floor area, evenly distributed).
- Landings, stairs and guardrails must be provided at ALL exterior doors in accordance with BC Building Code requirements.
- Perimeter drainage to be directed to a location approved by the building inspector.
- All plumbing work to be completed in accordance with the BC Plumbing Code.

## Site Preparation

### A.1 General

A typical example of site preparation for concrete pile or surface pier foundation systems is shown in Figure A.1.

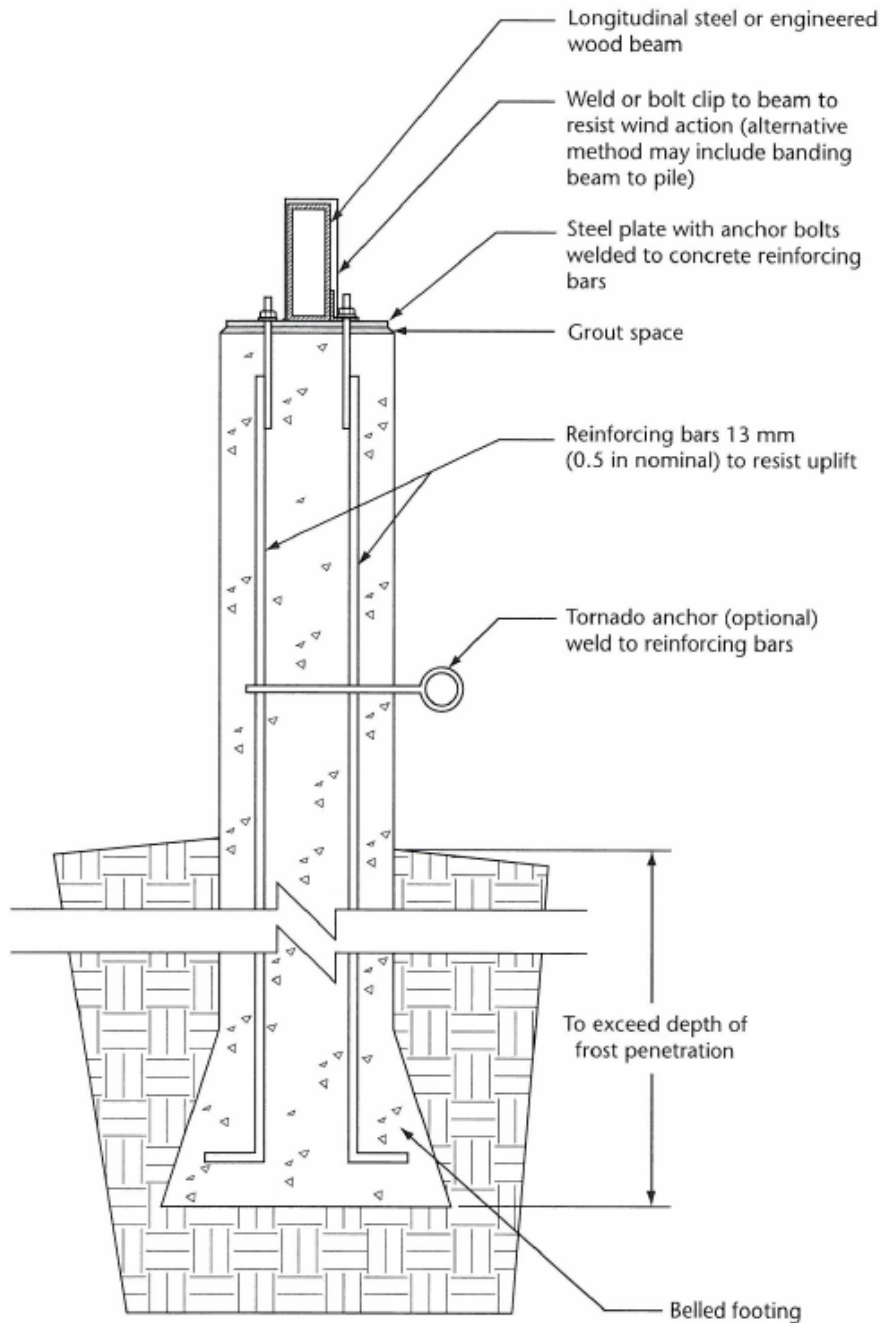


**Notes:**

- (1) The ground cover extends at least 150 mm (6 in) past the sides of the manufactured home.
- (2) The backfill base and ground cover are graded centre to outside or from side to side with a minimum slope of 2%.
- (3) The surrounding finished grade slopes away from the home.

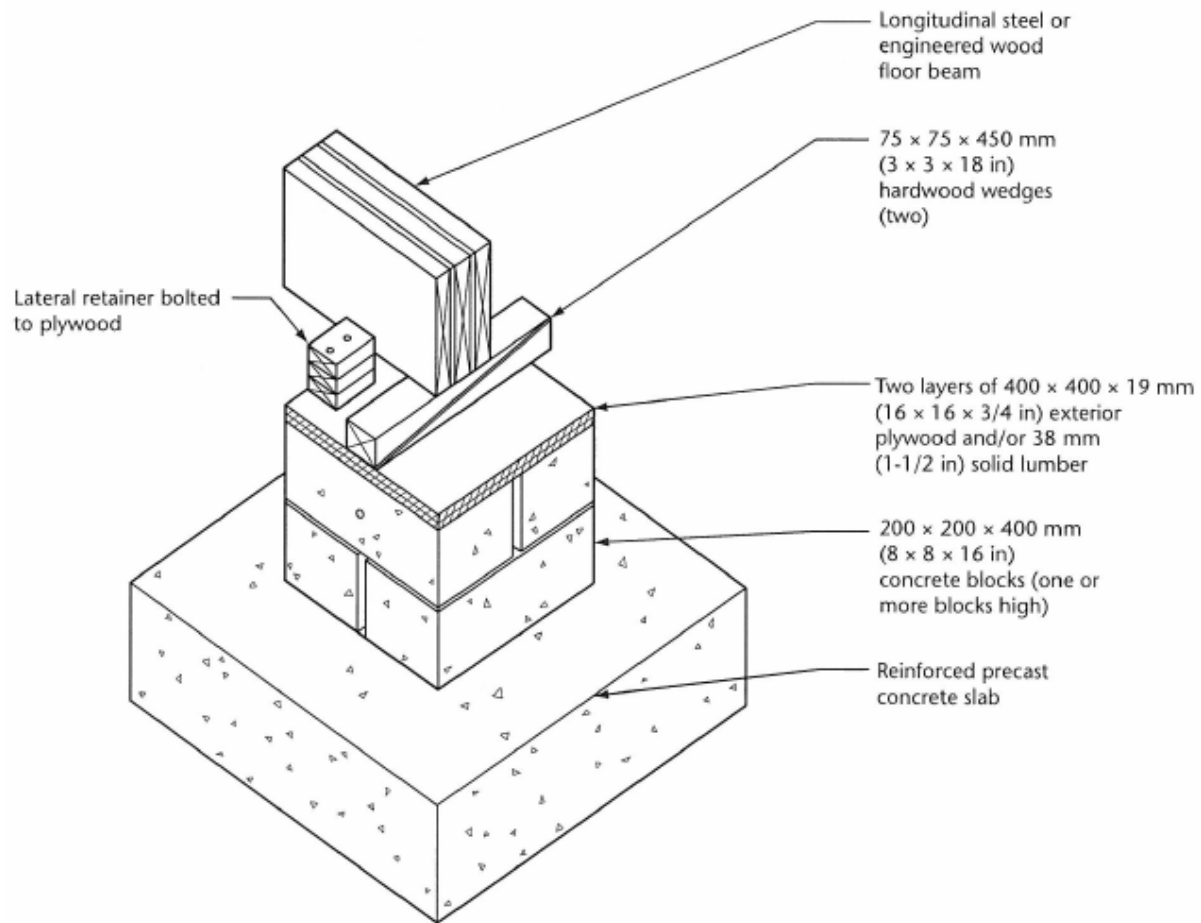
**Figure A.1**  
**Site preparation**  
(See Clauses 5.1.2 and A.1.)

## Foundation Details



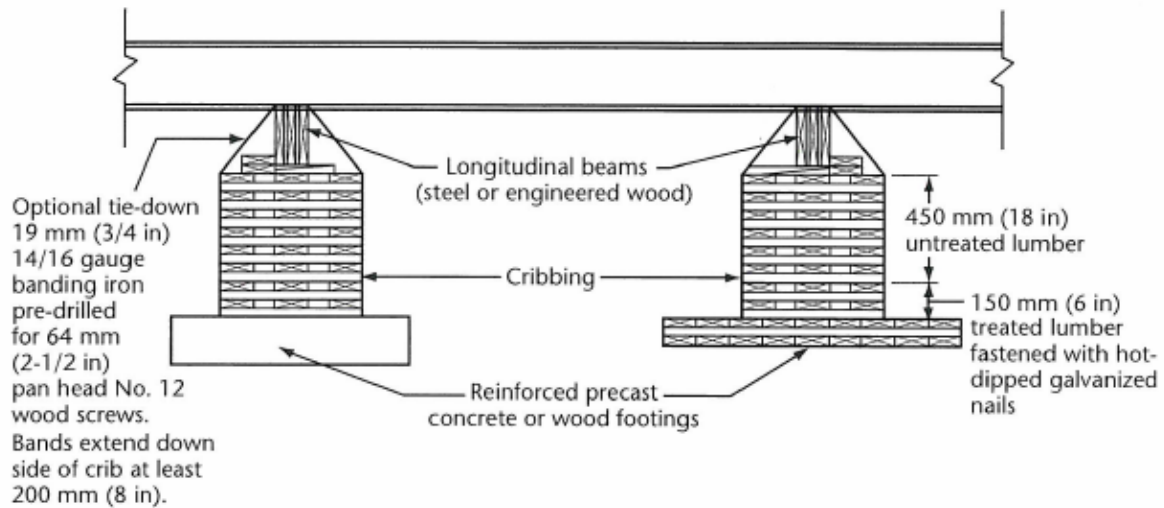
**Figure B.3**  
**Reinforced concrete pile designed to resist uplift**  
(See [Clause B.6.](#))

## Foundation Details



**Figure B.4**  
**Concrete block surface foundation system**  
(See Clause B.6.)

## Foundation Details



**Figure B.5**  
**Wood-crib pier foundation**  
(See [Clauses 6.4.2, 6.4.6, and B.6.](#))

The image contains two sets of technical drawings for a crib structure. The top set shows a standard orientation with a 3D view of a 600 mm (24 in) x 600 mm (24 in) x 600 mm (24 in) cube and an exploded view of the components. A note states: "Note: Use same construction for top and bottom layers." The bottom set shows an alternative diagonal orientation with a 3D view of a cube and a detailed cross-section of the crib assembly.

**Standard Orientation Dimensions:**

- Top layer: 600 mm (24 in) x 600 mm (24 in)
- Side layer: 600 mm (24 in) x 600 mm (24 in)
- Height: 600 mm (24 in)
- Bottom layer: 600 mm (24 in) x 600 mm (24 in)

**Alternative Diagonal Crib Orientation Dimensions:**

- Top layer: 600 mm (24 in) x 600 mm (24 in)
- Side layer: 600 mm (24 in) x 600 mm (24 in)
- Height: 600 mm (24 in)
- Bottom layer: 600 mm (24 in) x 600 mm (24 in)
- Diagonal orientation: 141 mm (5-1/2 in) x 849 mm (34 in)
- Diagonal orientation: 300 mm (12 in) x 300 mm (12 in)
- Diagonal orientation: 300 mm (12 in) x 300 mm (12 in)
- Diagonal orientation: 300 mm (12 in) x 300 mm (12 in)

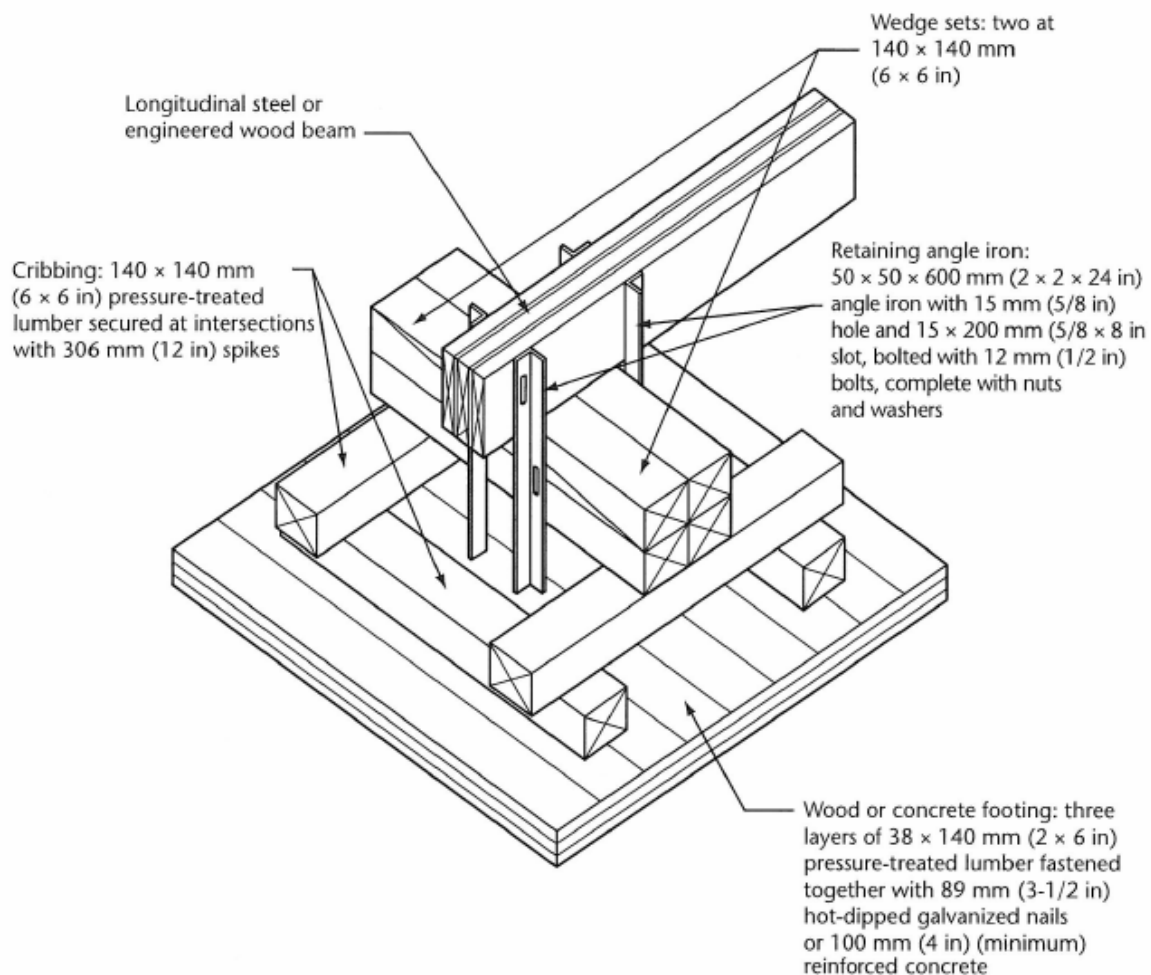
**Notes:**

- Note: Use same construction for top and bottom layers.
- 38 x 89 mm (2 x 4 in) or 38 x 140 mm (2 x 6 in) construction with 89 mm (3-1/2 in) ardox nails
- 38 x 89 mm (2 x 4 in) lateral retainer fastened to crib with three 89 mm (3-1/2 in) lag bolts or 89 mm (3-1/2 in) spiral ardox nails

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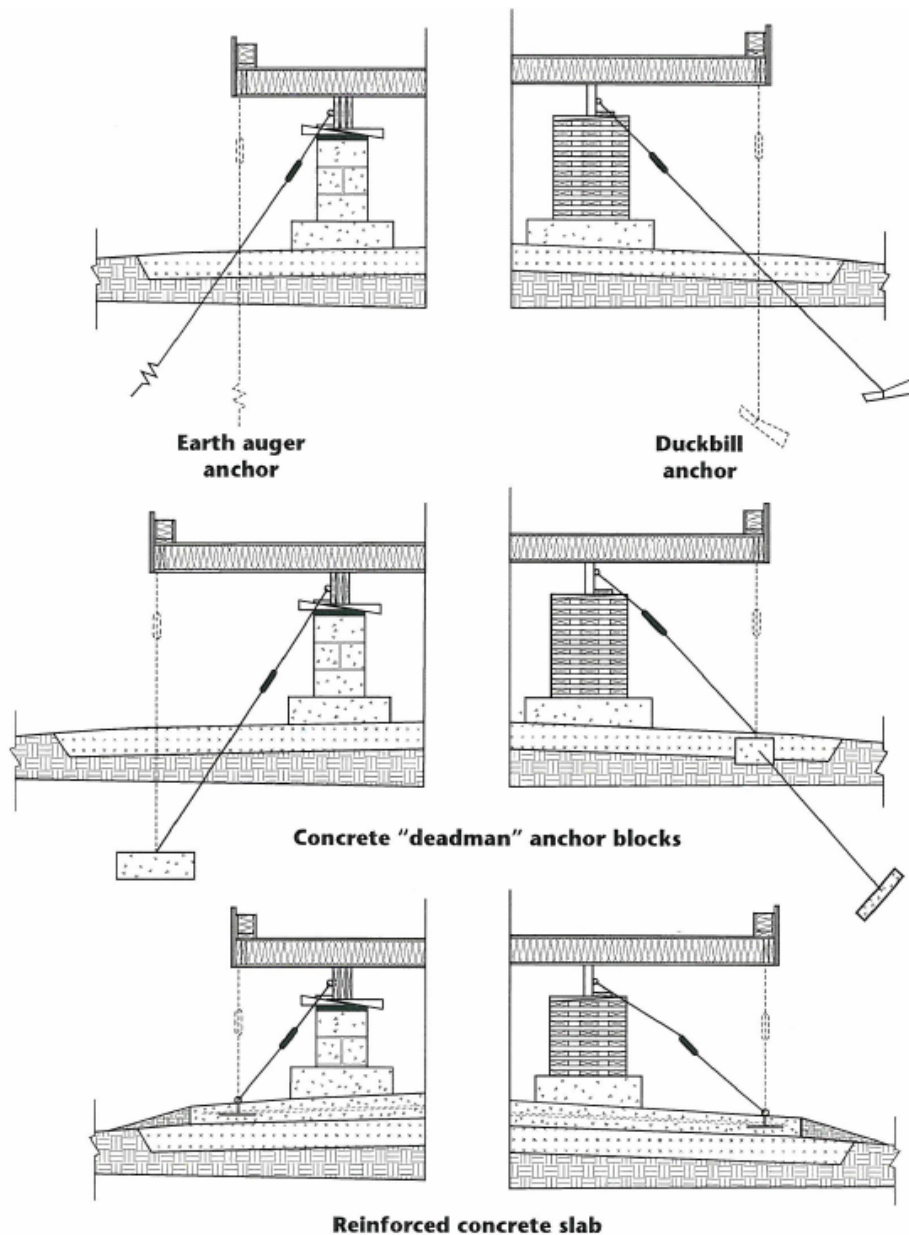


## Foundation Details



**Figure B.7**  
**Alternative wood-crib construction**  
(See Clause B.6.)

## Anchorage Details



**Notes:**

- (1) Diagonal tie-downs are effective in limiting lateral sliding on foundation piers.
- (2) Vertical tie-downs directly connected to the wall studs provide the most effective resistance to uplift and overturning forces and should be considered for use at high-wind-load sites, particularly on the prevailing windward sides of an installation.

**Figure C.4**  
**Typical anchorage system arrangements**  
(See [Clause C.3.](#))

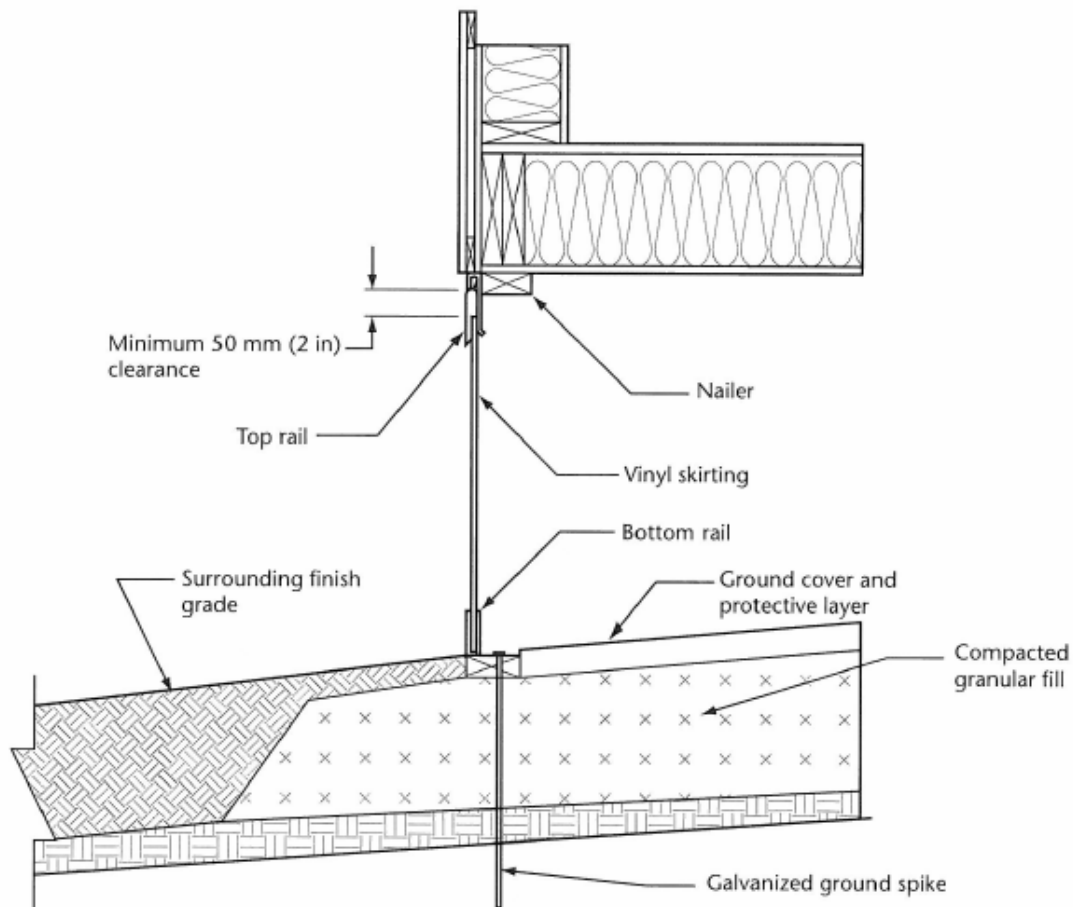
## Skirting Details

### E.1 General

Skirting helps keep debris from accumulating under a home and should be used. Skirting also helps prevent penetration of cold air; however, it should not be considered adequate protection for exposed waterlines.

### E.2 Designs

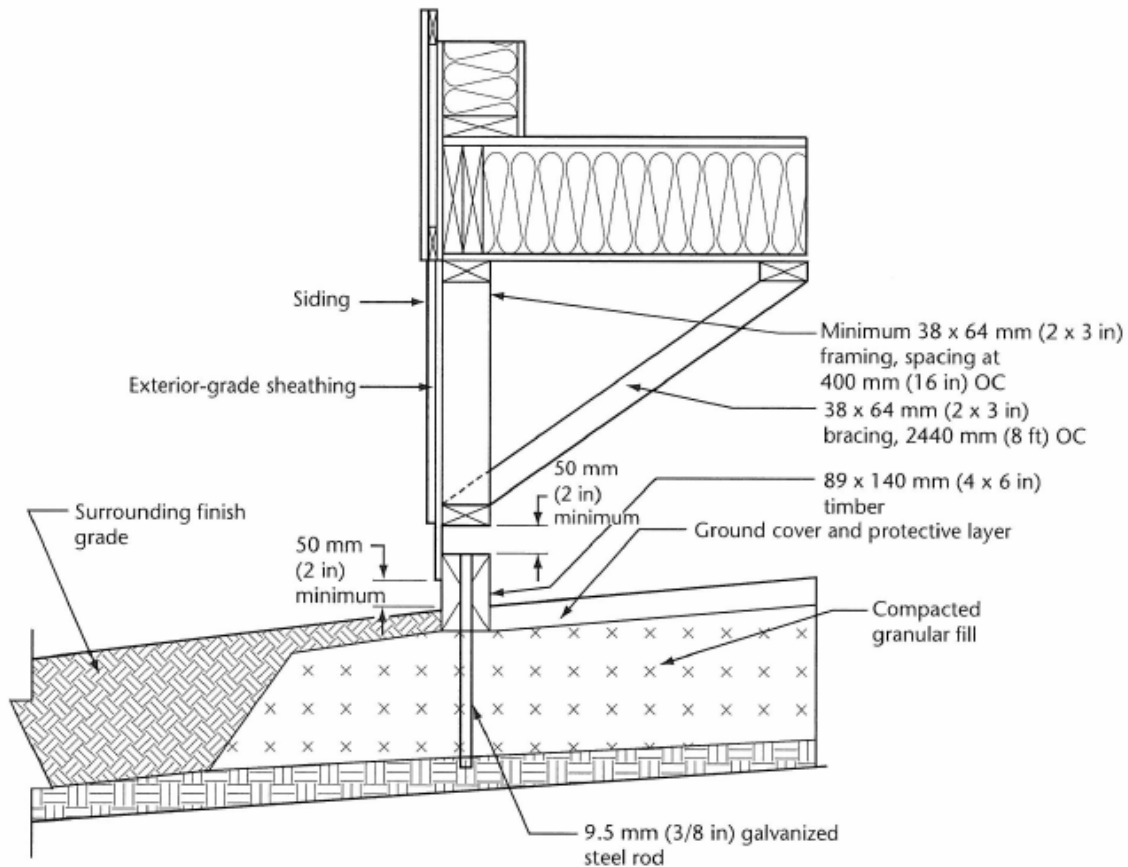
Skirting designs vary depending on the skirting material, lot contours, and foundation system. Some skirting systems include channels and take-up devices. Typical systems are shown in Figures E.1 to E.3.



**Note:** Movement should be provided for in soils susceptible to frost heave.

**Figure E.1**  
**Skirting system (Example 1)**  
(See Clauses 9.1 and E.2.)

## Skirting Details

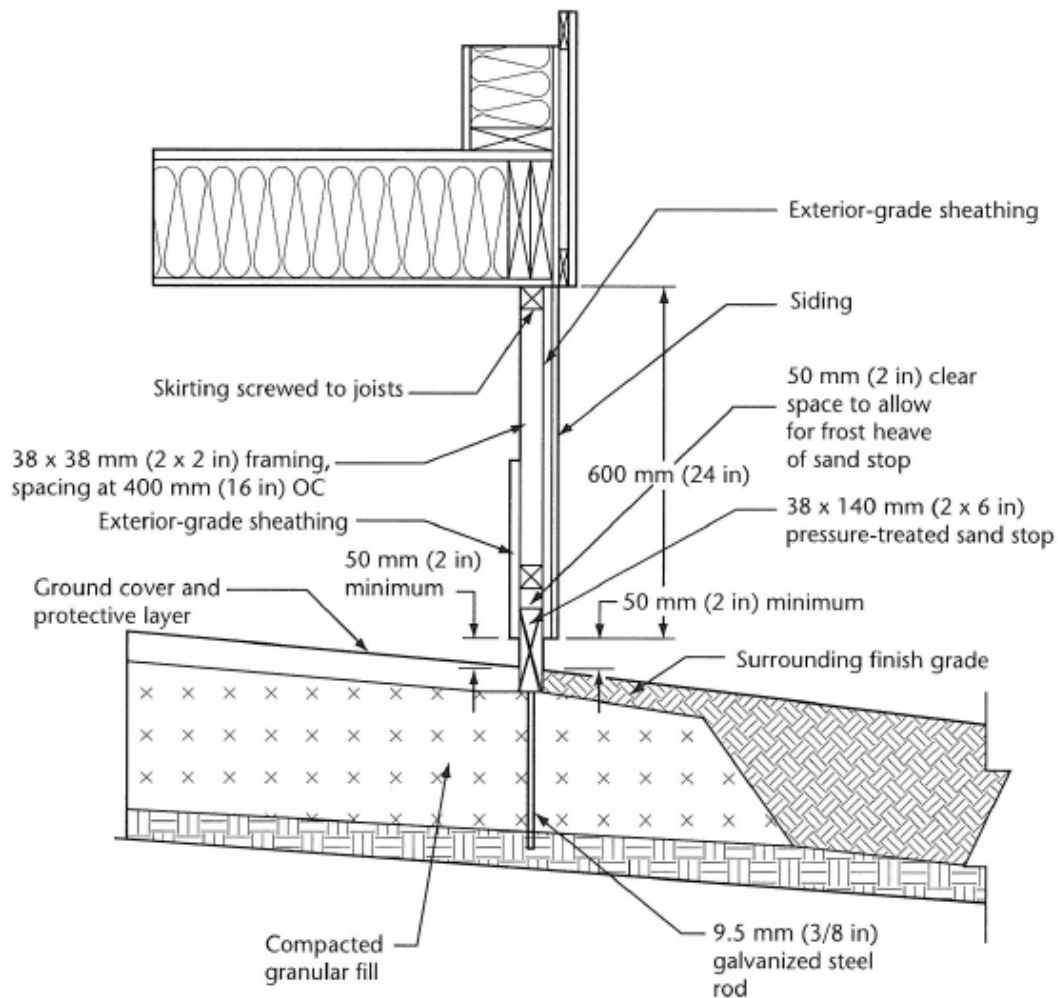


**Notes:**

- (1) Movement should be provided for in soils susceptible to frost heave.
- (2) Wood in contact with the ground should be treated with a pressure preservative.

**Figure E.2**  
**Skirting system (Example 2)**  
(See Clauses 9.1 and E.2.)

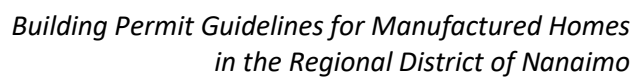
## Skirting Details



**Notes:**

- (1) Movement should be provided for in soils susceptible to frost heave.
- (2) Wood in contact with the ground should be treated with a pressure preservative.

**Figure E.3**  
**Skirting (Example 3)**  
(See Clauses 9.1 and E.2.)

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