

AGRICULTURAL GUIDE

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Wood foundations

Permanent wood foundations for homes and buildings

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What are wood foundations?

Wood foundations are a structure form cooperatively developed by the American Wood Preservers Institutes, the Economics and Marketing Division of the U.S. Forest Service and the National Forest Products Association. Stated simply, the Permanent Wood Foundation (PWF) (see Figure 1) is a stud wall structure with a plywood skin (sheathing) (see Figure 2). All wood members (lumber and plywood) are treated with a water-borne preservative* to a specified minimum retention of the solution. † A system of moisture control featuring a 4-inch layer of rock ballast under the entire foundation is an integral part of the PWF (see Figures 2 and 3). The entire basement is enclosed in a 6-mil polyethylene plastic cover.

Won't a wood basement leak excessively?

When properly constructed, a wood basement will be dry and less humid than a concrete basement. The PWF is an engineered structure and is accepted by all model building codes.

What protects the wood from decay or termite attack?

Because all the wood parts are pressure-preservative treated with ACA, CCA or ACZA, they are protected from deterioration for a long time. Fifty years is a conservative estimate.

*ACA—Ammoniacal Copper Arsenate

CCA—Chromated Copper Arsenate

or

ACZA—Ammoniacal Copper Zinc Arsenate

† All lumber and plywood treated to the proper retention levels (0.6 lbs/ft³) will be marked FDN on the treater's certification stamp.

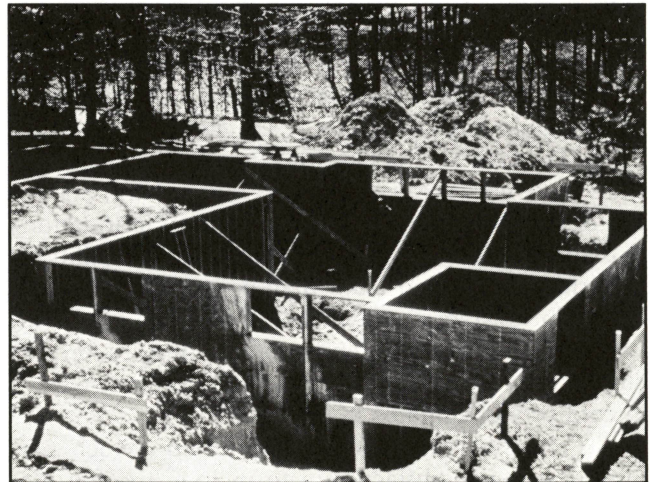


Figure 1. The PWF is a stud wall structure.



Figure 2. Plywood sheathing covers the PWF.

Are wood basements more expensive than conventional block or poured concrete basements?

No. Experience often shows the PWF is less expensive. Wood basements are dry, warm and available as prime living space (for living room, bedroom or kitchen, for example). Concrete foundations require added cost to convert a raw basement into a habitable area. If you take this into account, the PWF is less expensive.

Have many PWFs been built?

More than 100,000 housing units with PWFs were in place at the end of 1985. Buyer and builder acceptance is increasing yearly.

What are the advantages of a PWF?

1. The relatively warm, dry, easily insulated and easily finished basement is a decided advantage in below-grade areas.

2. The cost savings are proving significant, especially in remote areas where cost of labor and materials for constructing concrete or masonry foundations is disproportionately high and where availability of materials and skilled labor may be scarce.

3. The system can be installed under most weather conditions, which extends the building season and eliminates costly delays caused by inclement weather in cold or wet climates.

4. The system can be prefabricated, which permits housing manufacturers to include the foundation as part of the package, increasing their profit and control over the total building process.

5. The wood framing of the PWF makes it easy to install batt insulation.

6. The PWF is easier to finish inside than conventional foundations because the nailable studs are already in place. Plumbing and wiring are simpler and concealed. No furring is needed to install insulation and gypsum board or paneling.

7. PWFs provide more actual living space in basements than concrete or masonry foundations in houses of the same dimensions. The wood foundation walls don't need to be as thick as concrete or masonry so you get more room for your money.

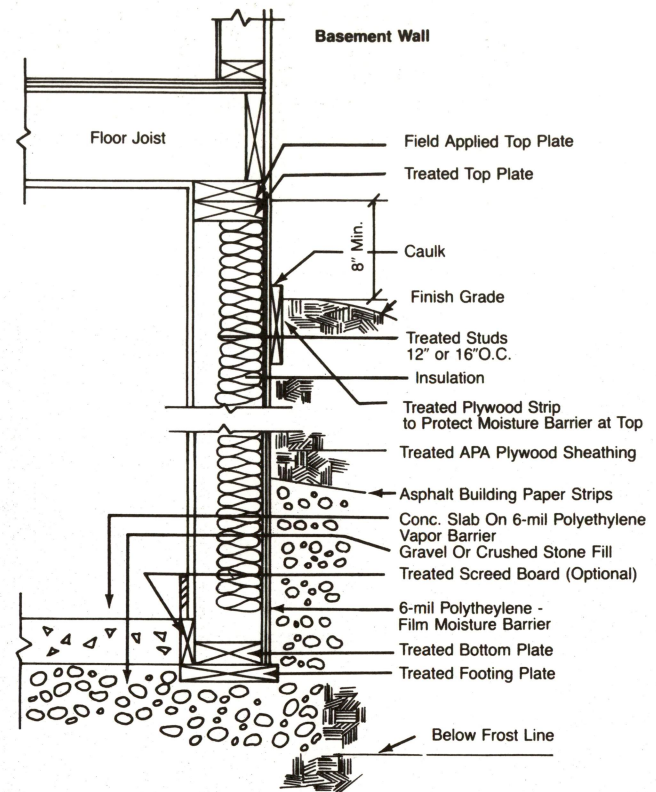


Figure 3. Cross-section of a PWF.

8. PWFs can be used in both single- and multi-story structures and for both site-built and manufactured homes.

9. PWFs are easy to remodel or modify. You can cut out window or door openings or add rooms. You can hang finishing touches, such as shelves or pictures, without special tools or fasteners.

What problems might I encounter?

It might be difficult to get properly treated and certified lumber and plywood, especially in small towns and outlying areas.

You might also have difficulty finding a contractor who is experienced in erecting wood foundations. It might be hard to find a contractor who is even willing to try to build one.

The construction procedure, however, is practically the same as conventional wall framing. With careful explanation, you and your contractor can probably overcome any obstacles.

Where can I get more information?

Order the *All Weather Wood Foundation System Manual* from:

The National Forest Products Association
1619 Massachusetts Avenue N.W.
Washington, D.C. 20036

The manual was designed and written to be complete and easily understood. At this writing, the manual costs \$10 per copy.

For information about purchasing treated and certified lumber and plywood, contact:

American Plywood Association

P.O. Box 11700

Tacoma, WA 98411

Telephone: (206) 565-6600

Literature will be sent free of charge upon request.

You can also contact:

American Wood Preservers Bureau

P.O. Box 6085

2772 Randolph Street

Arlington, VA 22206

Telephone: (703) 931-8180

or

Society of American Wood Preservers, Inc.

7297 Lee Highway (Unit P)

Falls Church, VA 22042

Telephone: (703) 237-0900

or

Southern Forest Products Association

P.O. Box 52468

New Orleans, LA 70152

Telephone: (504) 443-4464

