PORCHES

GUIDELINES FOR PLANNING THE CONSTRUCTION OF A PORCH

Minnesota Department of Labor and Industry

PERMITS

Building permits are required for construction of all new porches. Porches that are heated may need to conform to the Minnesota State Energy Code. Porches must also meet the land-use requirements of the community's zoning code. Zoning questions for setbacks from property lines should be directed to the local planning and zoning department.

PERMIT FEES, PLAN REVIEW, INSPECTIONS

Building fees are established by the municipality. The plan review is completed by the building official in order to spot potential problems. The building official may make notes on the plan for your use. Inspections are performed at various stages of construction to verify code compliance. Actual permit costs can be obtained by calling your local building inspection department with your estimated construction value.

Note: Setbacks from property lines vary depending upon the city and zoning districts. Other zoning provisions may include lot coverage or screening.

The building inspector will need:

- application for permit
- site plan or survey
- foundation plan
- floor plan
- section
- elevation
- energy calculation worksheet if required

REQUIRED INSPECTIONS

- **Footings:** After excavation, but prior to the pouring of concrete.
- **Framing:** Inspected after framing is complete and construction is accessible for building inspection and other required rough-in inspections are completed and approved.
- **Energy:** Energy efficiency inspection.
- **Final:** The project is inspected upon completion.
- **Other:** The inspector may require other inspections to ensure code compliance or to assist with any questions.

GENERAL BUILDING CODE REQUIREMENTS

The 2015 Minnesota Residential Code adopts the 2012 International Residential Code (2012 IRC).

- Footings must be extended to frost depth and located at extremities of the porch or engineering may be required.
- Wood joists 18 inches or closer to grade or wood beams 12 inches or closer to grade and their supports must be of an approved treated wood or wood with natural resistance to decay (heartwood of cedar or redwood.)
- Columns and posts in contact with the ground or embedded in concrete or masonry must be of pressure-treated wood approved for ground contact.
- All porches, balconies or decks, open sides of landings and stairs that are more than 30 inches above grade or a floor below must be protected by a guard not less than 36 inches in height. Required guards on open sides of stairways, raised floor areas, balconies and porches shall have intermediate rails or ornamental closures which do not allow passage of a sphere 4 inches (102mm) or more in diameter (R312.1).

Exception:
The triangular openings formed by the riser, tread and bottom rail of a guard at the open side of a stairway

are permitted to be of such a size that a sphere 6 inches (152 mm) cannot pass through.

- Openings for required guards on the sides of stair treads shall not allow a sphere 4 3/8 inches (107 mm) to pass through.
- If a stairway is provided, it must be not less than 36 inches in width. Stairways may be constructed having a 7 3/4-inch-maximum rise (height) and a 10-inch-minimum run (length). The largest tread rise and tread run may not exceed the smallest corresponding tread rise or run by more than 3/8 inch. Stairway illumination is required by code.
- Open risers are permitted, provided the opening between the treads does not permit the passage of a four-inch-diameter sphere
- Handrails are required on all stairways having four or more risers. Handrail grip size shall be of the following types or provide equivalent graspability.

Type I. Handrails with a circular cross section shall have an outside diameter of at least 1 1/4 inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6 1/4 inches (160 mm) with a maximum cross section of dimension of 2 1/4 inches (57 mm).

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Type II. Handrails with a perimeter greater than 6 1/4 inches (160 mm) shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3/4 inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth must continue for at least 3/8 inch (10 mm) to a level that is not less than 1 3/4 inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1 1/4 inches (32 mm) to a maximum of 2 3/4 inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm) (R311.7.8.3).

Handrails must be installed not less than 34 inches nor more than 38 inches above the nosing (front edge) of treads and they is two inches by four inches and spaced not more than 24 inches on center.

- All exterior members exposed to the weather shall be of approved wood of natural resistance to decay, such as cedar, redwood or treated wood.
- Wall framing: Studs must be placed with their wide dimension perpendicular to the wall and not less than three studs must be installed at each corner of an exterior wall. Minimum stud size is two inches by four inches and spaced not more than 24 inches on center.
- Top plate: Bearing- and exterior-wall studs need to be capped with double-top plates installed to provide overlapping at corners and at intersections with other partitions. End joints in double top plates must be offset at least 24 inches.
- Sheathing, roofing and siding: Approved wall sheathing, siding, roof sheathing and roof coverings must be installed according to the manufacturer's instructions.
- Ice and water barrier: Two layers of 15-pound roofing felt solidly mopped together or one of the approved ice and water shield underlayment materials must be installed on all roofs over porches.
- Roof framing: Size and spacing of conventional lumber used for roof framing depends upon the roof pitch, span, the type of material being used and the loading characteristics being imposed.

Porches must be designed for the snow load required locally. Contact your local inspection department for details.

Rafters need to be framed directly opposite each other at the ridge. A ridge board at least 1 inch (nominal) thickness and not less in depth than the (plumb) cut end of the rafter is required for hand-framed roofs.

At all valleys and hips, there also needs to be a single valley or hip rafter not less than two inches (nominal) thickness and not less in depth than the cut of the rafter. Rafters must be nailed to the adjacent ceiling joist to form a continuous tie between exterior walls when the joists are parallel to the rafters.

A properly sized and supported ridge beam may be used as an alternative to a ridge board with ties for a vaulted ceiling (see sample). If manufactured trusses are to be used, submit one copy of truss plans signed by a registered engineer.

- Outside meters, wells and septic systems: If relocation is needed, redesign may be necessary.

PLANS: SITE, FLOOR AND ELEVATION SECTION

The text and sample drawings display the minimum detail expected to ensure the permit process can proceed smoothly.

Plans do not need to be professionally drawn. However, plans should be drawn to scale and include all of the information requested.

The application for permit can be filled out at the time you drop off your plans.

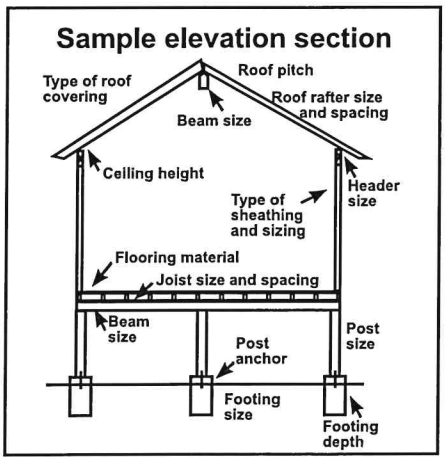
Submit two copies of a certificate of survey or site plan and building plan drawn to scale indicating the lot dimensions, the location and size of the existing structure(s), and the location and a size of the proposed structure. Indicate the setbacks from property lines of the existing and proposed structure(s). Include the septic-system location and wells if applicable.

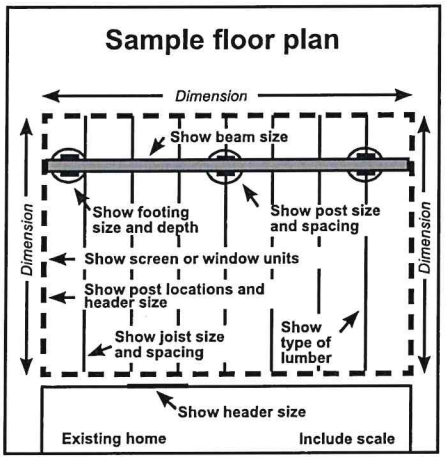
FLOOR PLANS SHOWING PROPOSED DESIGN, MATERIALS

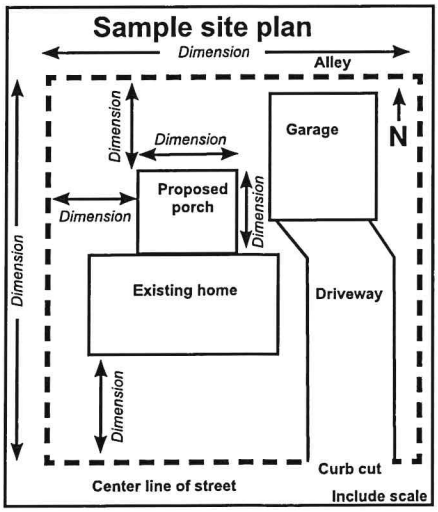
At minimum, plans submitted for permits should include:

- Proposed size of porch.
- Location and size of windows.
- Size of headers over all doors and window openings.
- Size, spacing and direction of rafter (roof) materials.
- Size and spacing of floor joists.
- Size, location and spacing of posts or applicable foundation details.
- Type (grade and species) of lumber to be used.

Additional information, such as a sectional drawing or elevations, may be required.







Be sure your scale site plan includes:

- lot dimensions,
- location and size of existing structures,
- location and size of the proposed structure,
- setbacks from property lines of proposed and existing structures,
- septic-system area and wells if applicable.

MINNESOTA DEPARTMENT OF LABOR & INDUSTRY

Construction Codes and Licensing Division
Web: www.dli.mn.gov/ccld/CCLDcontactus.asp
Phone: (651) 284-5012 or 1-800-657-3944

This flier is an overview of guidelines for planning the construction of a porch and can be provided in different forms, such as large print, Braille or audio, by calling (651) 284-5012 or 1-800-657-3944.