

Porch Handout

City of Willmar Building Department

Building permits are required for all new three and four season porches and for conversion of a three season porch into a four season porch. The Minnesota State Building Code requires porches that are to be heated (four season porches) comply with the State Energy Code in addition to other provisions of the code for construction of heated structures. You will need to provide a completed permit application, site plan or survey with specific setback information, building plans including foundation and floor plans, section views, elevation drawings and energy calculations if the space is to be heated.

Porches are required to meet the land use requirements as outlined in the Zoning Ordinance. Zoning questions should be directed to the Zoning Office at 320-235-8311. This is an important first step in the planning of your porch project.

PERMIT FEES

Building fees are established by the municipality. The plan review is done by the building inspector in order to spot potential problems or pitfalls that may arise. The inspector may make notes on the plan for your use. The plan review and inspections are done to provide a reasonable degree of review and observation so the project will be successful, safe, and long lasting. 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 district your home is located in. Some communities have other zoning provisions which may include, lot coverage or screening. Contact the Building or Planning Department in your community for the requirements in your location. This is an important first step in the planning for any porch project.

Your Building Inspector will need:

- Application for permit.
- Site plan or survey.
- Foundation plan
- Floor plan.
- Section view.
- Building elevations.
- Truss drawings.
- Energy calculation work sheet (required if the porch is to be heated.)

REQUIRED INSPECTIONS

Footings: After the holes are dug, but prior to the pouring of concrete.

Framing: To be made after all framing, blocking, and bracing are in place and prior to covering the construction so as to make it inaccessible for inspection. (This inspection can be completed at the time of the final inspection if all parts of the framing will be visible and accessible at the final inspection.)

Final: To be made upon completion of the porch and finish grading.

Other inspections: In addition to the three inspections above, the inspector may make or require other inspections to ascertain compliance with the provisions of the code or to assist you with your questions or concerns during the construction process. These additional inspections would typically come into play for a heated room addition.

GENERAL BUILDING CODE REQUIREMENTS

Footings must extend a minimum of 42 inches below finished grade and located at the extremities of the deck 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 or posts in contact with the ground or embedded in concrete or masonry must be of pressure treated wood approved for ground contact.

If a stairway is to be provided, it must not be less than 36 inches in width. Stairways may be constructed having a $7\frac{3}{4}$ inch maximum rise (height) and a 10 inch minimum run (length) measured nosing to nosing. The largest tread rise and tread run within any flight of stairs may not exceed the smallest corresponding tread rise or run by more than $\frac{3}{8}$ inch. Stairway illumination is required by code. Open risers are permitted provided the openings between the treads does not allow a 4 inch diameter sphere to pass through.

All porches, balconies, decks, or open sides of landings which are more than 30 inches above grade or a floor below must be protected by a guard not less than 36 inches in height with intermediate rails or an ornamental pattern such that a sphere 4 inches in diameter cannot pass through.

Handrails are required on all stairways having four or more risers. Handrails must be installed not less than 34 inches nor more than 38 inches above the finished nosing (front edge) of treads or ramp surfaces and they must be returned to a wall or newel post. Open stair railings require intermediate rails or an ornamental pattern such that a sphere $4\frac{3}{8}$ inches in diameter cannot pass through.

Exceptions:

- 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 in diameter can not pass through.
- Openings for required guards on the sides of stair treads shall not allow a sphere $4\frac{3}{8}$ inches in diameter to pass through.
- 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 $1\frac{1}{4}$ inches and not greater than 2 inches. If the handrail is not circular it shall have a perimeter dimension of at least 4 inches and not greater than $6\frac{1}{4}$ inches with a maximum cross section dimension of $2\frac{1}{4}$ inches.

Type II. Handrails with a circular perimeter greater than $6\frac{1}{4}$ inches shall provide a graspable finger recess on both sides of the profile. The finger recess shall begin within a distance of $\frac{3}{4}$ inch measured vertically from the tallest portion of the profile and achieve a depth of at least $\frac{5}{16}$ inch within $\frac{7}{8}$ inch below the widest portion of the profile. This required depth shall continue for at least $\frac{3}{8}$ inch to a level that is not less than $1\frac{3}{4}$ inches below the tallest portion of the profile. The minimum width of the handrail above the recess shall be $1\frac{1}{4}$ inches to a maximum of $2\frac{3}{4}$ inches. Edges shall have a minimum radius of 0.01 inch.

All exterior construction members exposed to the weather must be of approved wood of natural resistance to decay such as cedar, redwood, treated wood or an approved alternate.

Wall Framing: Studs must be placed with their wide side perpendicular to the wall, and not less than three studs must be installed at each corner of an exterior wall. The minimum stud size is 2"x4" and spaced not more than 24 inches on center.

Top Plate: Bearing and exterior walls 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 manufacturers specifications.

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. This barrier must extend from the roof eave to a minimum of 24 inches past the exterior wall line.

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 to carry a minimum snow load of 35 per square foot plus the dead loads of the materials that are to be applied (provide truss drawings from the truss manufacturer).

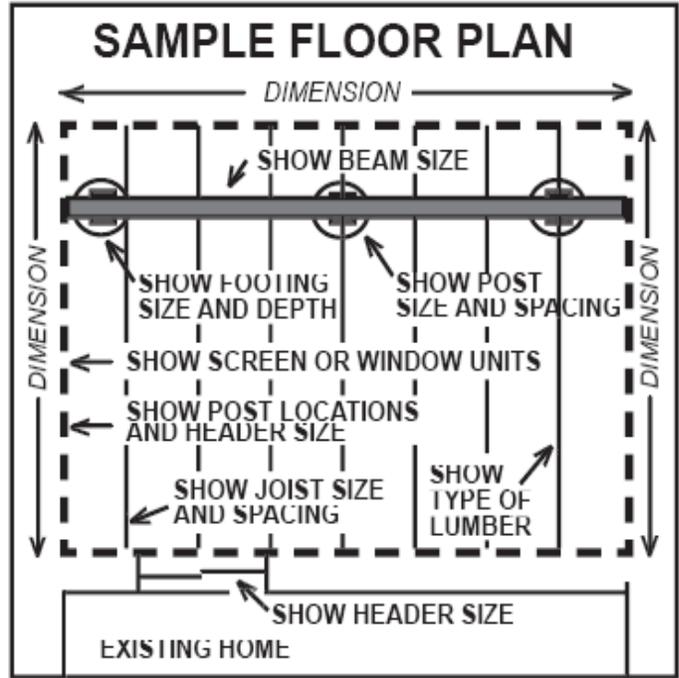
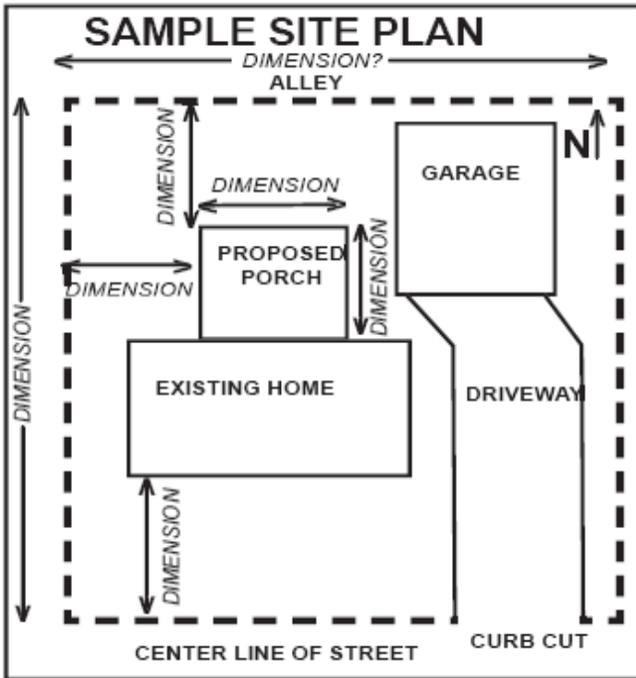
Exterior windows and doors: A pan flashing shall be provided under all exterior windows and doors. Pan flashing shall be sloped to drain water to the exterior surface of a weather resistive barrier or flat with a sealed back dam and side dams to prevent re entry of water into the wall cavity or onto interior finishes, and also maintain the thermal envelope of the building. Pan flashing made from metal must be thermally isolated from interior surfaces. (2015 MSBC Sec. R703.8.1)

Plans: Site, Floor, and Section Views: The following text and sample drawings show the minimum detail expected so the permit process can proceed smoothly. Plans do not need to be professionally drawn. However, plans should include all of the information requested. Submit two copies of a certificate of survey or site plan drawn to scale indicating lot dimensions, the location and size of both existing and the proposed structures. Indicate the setbacks from property lines of the existing and proposed structures as well as the location of the well and septic systems.

Floor plans showing proposed design and materials.

1. Proposed size of the porch
2. Location and size of the windows
3. Size of headers over all doors and window openings.
4. Size, spacing, and direction of rafter materials.
5. Size and spacing of floor joists.
6. Size, location, and spacing of posts.

7. Type (grade and species) of the lumber to be used.



SECTION PLAN

1. Height of the structure from grade
2. Size and depth of the footings.
3. Guardrail height and spacing (if any).
4. Stairway rise/run and handrail height (if any).
5. Clearance of overhead wires (if any).

Note: Open stairway risers are permitted provided the openings between the treads does not allow a 4 inch diameter sphere to pass through.

