

## STAIRS, LANDINGS, HANDRAILS, AND GUARDS

- This handout is intended only as a guide. It shall not be considered a complete set of requirements.
- Materials and installation must comply with the current Minnesota State Building Code and the manufacturers' installation specifications for each product.
- A building permit is required for any stairway serving any part of a dwelling or accessory structure. This includes exterior stairs from a dwelling or garage to grade, as well as stairs serving decks, porches, balconies, sun rooms, and similar structures.

### **BUILDING Permit Submittal shall include:**

- Building Permit Application**, completed in its entirety, including signature and valuation.
- SUPPLEMENTAL WORKSHEET FOR DECKS** (included in this handout).
- One set of plans** (drawn to scale) showing the proposed design, and including:
  - Plan and elevation views
  - Rise and run dimension
  - Riser size and species
  - Location in relation to property lines for exterior stairs.
  - List what construction materials are to be used.
  - Stringer size and species
  - Tread size and species
  - Stringer to landing connection
- For exterior stairs, **A site plan** (or **Certificate of Survey** if required by municipality) drawn to scale and dimensioned, identifying proposed stairway dimensions with measurements from the adjacent lot lines; as well as all lot lines, setbacks, easements, adjacent street names, and all structures on the property. **Check with your municipality to determine setback requirements for the property.**
- Additional information may be required by the plan reviewer.

### **PERMIT CARD AND APPROVED PLANS (throughout the project) shall be:**

**POSTED** prior to start of work - **VISIBLE** from street or driveway - **ACCESSIBLE** to the inspector

### **INSPECTION REQUIREMENTS:**

Inspections **MUST** be scheduled during office hours **AT LEAST** one business day prior to inspection. If a specific date and time is required, additional notice may be needed. Failure to cancel a scheduled inspection may result in a reinspection fee.

- **Office Hours:** Monday - Friday • 8:00 a.m. - 4:30 p.m.
- **Phone:** (952) 442-7520 or (888) 446-1801

**Inspections:** (Refer to your permit card regarding project-specific inspections)

- **Footings:** After holes are dug, but **PRIOR TO POURING CONCRETE.**
- **Framing:** Before covering.
- **Final:** After project is complete.

**NOTICE:** Construction or work for which a permit is required shall be subject to inspection by the Building Official, and such **construction or work shall remain accessible and exposed for inspection purposes until approved.** It is the responsibility of the permit applicant to be in attendance on site and provide access to the Building Official for all required inspections. If work is concealed and/or work is not complete at time of inspection, an additional inspection is required and a **reinspection fee may apply.**

**Note:** The State of Minnesota requires all residential building contractors, remodelers, roofers, plumbers, and electricians to obtain a state license, unless they qualify for a specific exemption. Any person claiming an exemption must provide a copy of a Certificate of Exemption from the Department of Labor & Industry to the Municipality before a permit will be issued.

**Note:** To determine contractor requirements, or to check the licensing status of a contractor, please call the Minnesota Department of Labor & Industry at 651-284-5065 or toll free 1-800-342-5354.

**Note:** For specific code requirements, contact the Building Inspection Department at 952-442-7520 or 888-446-1801 or e-mail: [infoMN@safebuilt.com](mailto:infoMN@safebuilt.com).

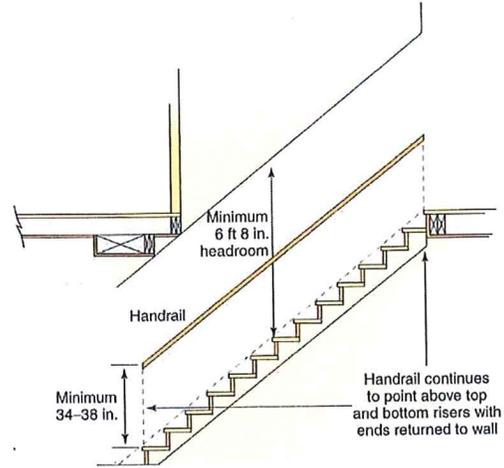
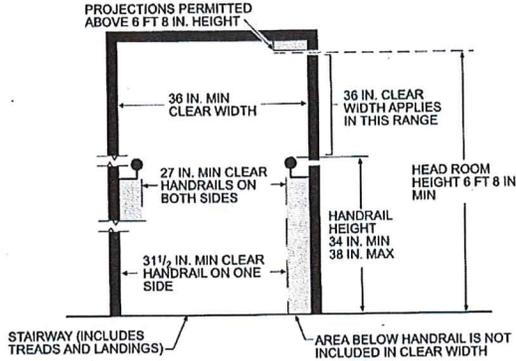
## PROJECT INFORMATION:

The following is a guideline to assist in compliance with the requirements of the MN State Building Code.

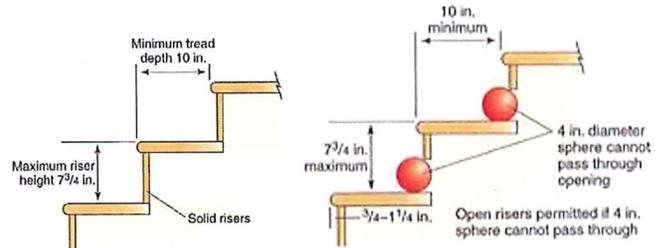
- Before you build, check required setbacks established by your municipality.
- BEFORE DIGGING, CALL "GOPHER STATE ONE CALL" AT 811. The person doing the excavation is responsible for verifying that there are no conflicts with utilities, both public and private.

### STAIRWAYS

- Minimum stairway width measured above handrail-36"



- Headroom-minimum 6'-8"
- Riser height-maximum 7 3/4"
- Tread depth-minimum 10"
- Maximum 3/8" between tallest and shortest riser
- Maximum 3/8" between greatest and smallest tread
- Open risers must prevent passage of 4" sphere
- Nosing projection-minimum 3/4", maximum 1 1/4"

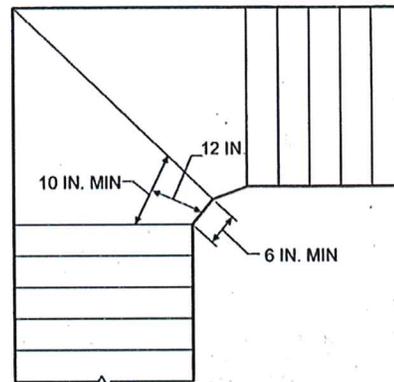


### Winding stairs

- Walkline concentric to & 12" from narrow side
- Tread depth-minimum 6" at narrow side
- Tread depth-minimum 10" at walkline
- Dimensional uniformity required at walkline

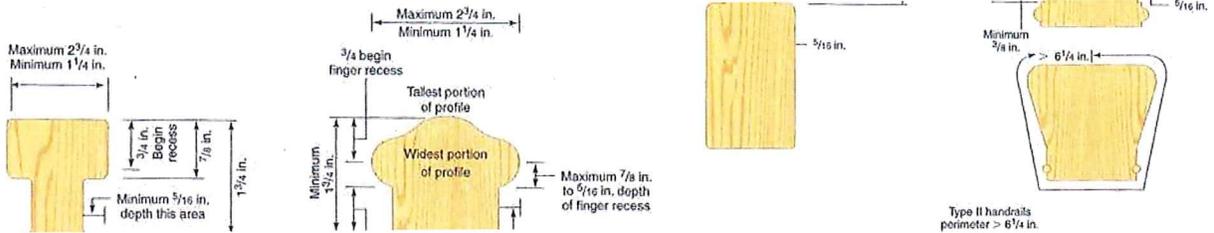
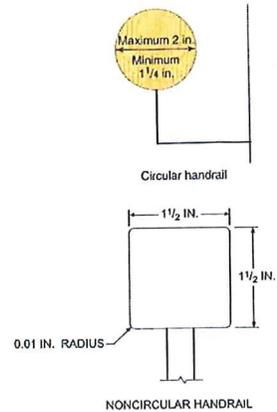
### LANDINGS AT STAIRWAYS

- Minimum width no less than the width of the flight served
- Minimum 36" deep landing required at top & bottom of each stair flight
- Max vertical rise between floors or landings-151"



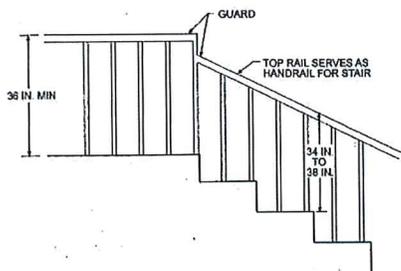
## HANDRAILS

- Required on at least one side of flights of stairs with four or more risers
- Top of handrail 34"-38" above line connecting nosing of stairs
  - Volute, turnout, or starting easing OK over lowest tread
  - Fitting or bending OK to exceed maximum height at continuous transition between flights, start of flight, or from handrail to guard
- Ends must return to wall, post or safety terminal
- Minimum 1 1/2" space between handrail and wall
- Handrail must be continuous from top riser to bottom riser
  - Maybe interrupted by post at the turn
- Round handrails minimum 1 1/4"-maximum 2" diameter
- Non-round Type I handrails perimeter 4"-6 1/4"
- If perimeter is greater than 6 1/4", grippable finger recess required on both sides of profile



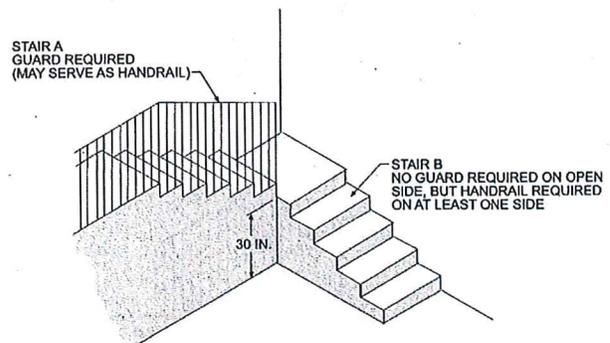
## Guardrails

- Required for open-sided walking surface, including stairs, greater than 30" above floor or grade below
- Minimum 36" in height (34" acceptable on open side of stairs)
- Guard acting as handrail 34"-38" above line connecting nosing of treads
- Openings must prevent passage of 4" sphere
  - 6" at triangular opening of riser, tread, & bottom rail
  - 4 3/8" at open sides of stairs



For SI: 1 inch = 25.4 mm.

Figure R312.1(1)  
STAIRWAY GUARD



For SI: 1 inch = 25.4 mm.

Figure R312.1(2)  
STAIRWAY GUARD

## Illumination

- All interior and exterior stairways shall be provided with a means to illuminate the stairs, landings, and treads.
- **Interior stairways**
  - Artificial light source located in the immediate vicinity of each landing of the stairway
  - Capable of illuminating treads and landings not less than 1 foot candle (11 lux)
  - Wall switch required at each floor level, where stairway has six or more risers
- **Exterior stairways**
  - Artificial light source required in the immediate vicinity of the top landing of the stairway
  - Artificial light source located in the immediate vicinity of the bottom landing if the exterior stairway provides access to a basement from the outside grade level
  - Illumination is expected to be controlled from inside the dwelling unit