

SAFETY AND STRUCTURAL GUIDELINES

Due to the nature of Boat Shows there are several safety and booth configuration concerns which regularly repeat themselves at each year's show. By addressing these issues prior to the show, when planning your exhibit, you can save your organization valuable time on-site (you will not spend your time fixing any infractions required by the designated safety inspector). Please read through the following list which outlines the most common of such infractions. The safety guidelines are only a summary of the basic requirements of the Ontario Building Code and should not be construed as the Code itself. Each design will be inspected individually for safety. If you have any questions or concerns about your display that is not listed please feel free to contact us.

1 PLATFORMS AND STAIRS

There are three types of structures which are very common at the Toronto International Boat Show. These are:

1. Platforms with an area of 10 m² (107.6 ft²) or greater
2. Platforms with an area less than 10 m² (107.6 ft²)
3. Stand-alone stairs used to access a boat

Each type of structure is outlined below

1.1 PLATFORMS WITH AN AREA OF 10 M² OR GREATER

All platforms at the Toronto International Boat Show that are 10 m² (107.6 ft²) or larger are designated as structures and are required to be designed to the requirements of the 2012 Ontario Building Code, as amended for Assembly Occupancy. These structures are subject to the approval of the City of Toronto, Urban Planning and Development Services and the Department of Buildings and Inspections. This is mandatory and exceptions cannot be made. **The City's Building Inspector for the show has zero tolerance when applying the Building Code. If you have not followed the code in the past and have had no issues on-site, please do not assume this will be the case for the 2019 show – all exhibits will be carefully reviewed and the code will be enforced.**

To avoid individual exhibitors having to apply for their own building permits with the City of Toronto each year, the Toronto Boat Show is permitted to obtain a general permit for the show floor and designates an engineer to inspect all exhibits under this permit during construction and/or once they are set-up (prior to opening). All exhibits must comply with the safety guidelines and the 2012 Ontario Building Code, as amended. Any exhibit not conforming may be denied public access, or be required to have adjustments made on-site.

It is incumbent upon the Exhibitor to ensure that the requirements of the Ontario Building Code and Toronto Urban Planning and Development Services – Buildings and Inspections are met.

1.1.1 Platform Design Criteria

- Platforms are required to be rated for an occupant load of 4.8 kPa (100 lb per square foot (psf)).
- The perimeter of all wooden platforms must be constructed with a double header to support guardrails and or stairs.
- Guards (or guardrails) are required on **all platforms** higher than 600 mm (23 5/8").
- Guards (guardrails) shall be able to withstand a minimum horizontal load, applied inward or outward, at the top of 50 lb/ft or 225 lb point load, whichever produces the maximum load effect.
- Individual elements within the guard, including solid panels and pickets, shall be designed for a concentrated load of 113 lb at any point in the element.
- Guard (guardrail) height must be at least 1070 mm/ 42" (3'6") high.
- Guards must be vertically spaced with a maximum opening of 99 mm (3-7/8") between vertical pickets. Guards may also be solid using safety glass (safety glass either laminated, tempered or wired with a minimum thickness of 1/4" thick) or other continuous materials providing the backup structure is strong enough to act as a guard (with a horizontal load rating as stated above) and does not facilitate climbing (i.e. horizontal rungs, large netting, etc. are not permitted.)
- Guards shall be continuous from 100 mm (4") through 1070 mm (3'-6" (42")). (Refer to Figure 1 below)
- **No rope or piano wire permitted as guards**
- **Combustible materials (i.e. cardboard, paper, paint, resins, etc.) may not be stored under platforms**

Prefabricated Platform/Docks/Decking Systems:

Manufacturers' information/technical specifications for the platform/docks/decking systems shall be READILY AVAILABLE on-site. Prefabricated systems should be designed for an occupant load for 4.8 kPa (100 lb per square foot (psf)).

Minimum Size of Loadbearing Elements	
Post	4"x4" nominal
Top Rail	2"x4" nominal
Bottom Rail	2"x4" nominal
Picket / Baluster	1 9/32"x1 9/32"

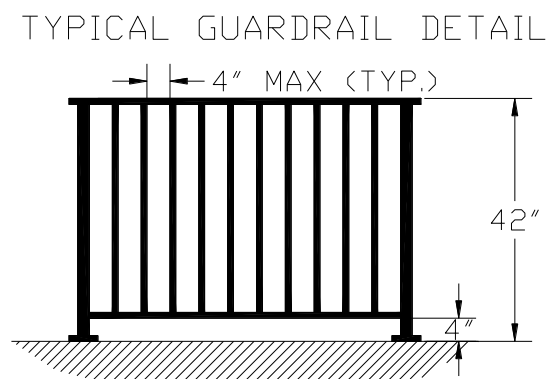


Figure 1: Platform Guard (Guardrail) Requirements

Additional provisions would apply for platforms higher than 10 m (32 ft. 10 in.). Please refer to the Ontario Building Code. Larger platforms of this height would require a building permit. Two story or greater platforms also require a building permit.

1.1.2 Stair Design Criteria

- All stairs/steps require a hand rail (refer to requirements under “Handrails”).
- Stairs higher than higher than 600 mm (23 5/8”) also require a guard (guardrail). A guardrail may be combined with a handrail provided the height of the handrail is between 920 mm and 965 mm (36 in to 38 in)
- The guidelines for platform guards also apply for stairs. No horizontal guards/rungs are permitted. Vertical pickets, with a maximum opening of 99 mm (3-7/8”) between vertical pickets, or a solid structure is required.
- Both the tread and rise of the stairs must be consistent from step to step. The treads must be between 255-355 mm (10”-14”) wide and the rise 125-200 mm (4 7/8” – 7 7/8”) high
- Stairs shall have a contrasting colour on the vertical and horizontal edges of each stair nosing.

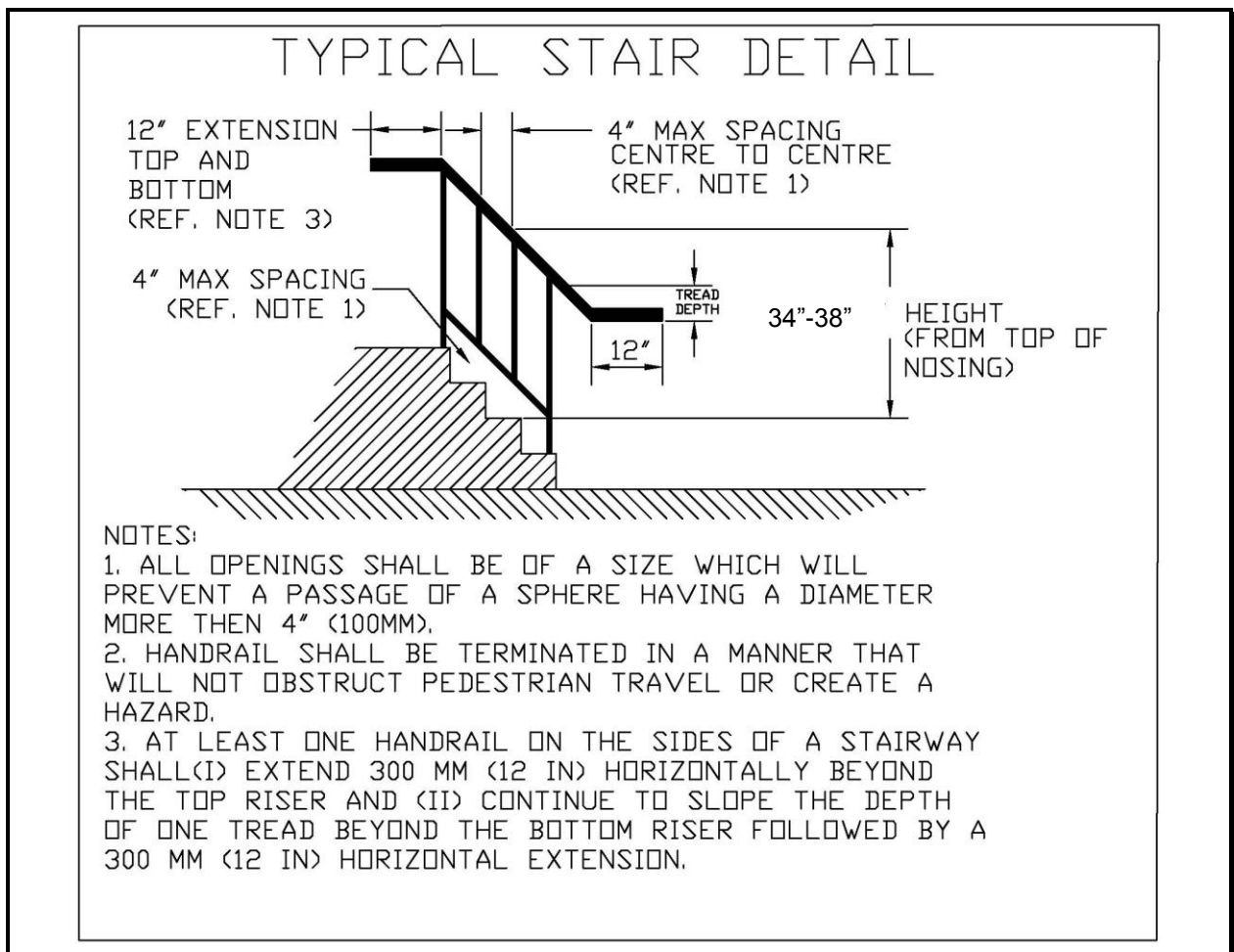


Figure 2: Typical Stair Detail (Side View)
(Refer to Figure 3 for Additional Information)

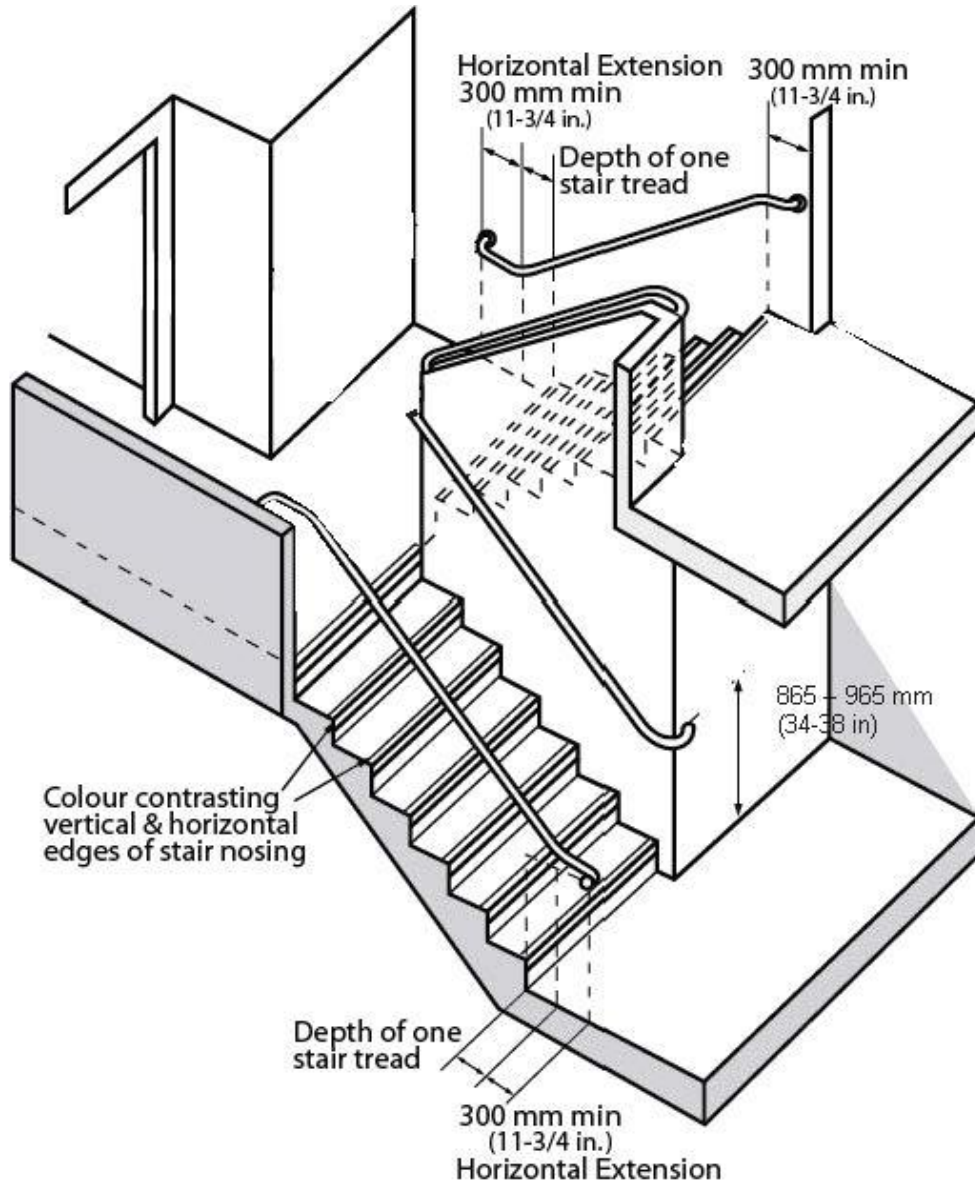


Figure 3: Typical Stair and Handrail Design

1.1.3 HANDRAILS

- A stairway shall have a handrail on at least one side, and if 1 100 mm (43") or more in width, shall have handrails on both sides.
- If the required width of a ramp or flight of stairs is more than 2 200 mm (86 ½"), one or more intermediate handrails continuous between landings shall be provided, and located so that there will be not more than 1 650 mm (65") between handrails.

- Handrails shall be continuously graspable along their entire length and shall have:
 - a) a circular cross-section with an outside diameter not less than 30 mm (1-3/16 in) and not more than 43 mm (1-11/16 in), or
 - b) any non-circular shape with a graspable portion that has a perimeter not less than 100 mm (3-15/16 in) and not more than 125 mm (4-7/8") and whose largest cross-sectional dimension is not more than 45 mm (1-3/4").
- The height of handrails on stairs and ramps shall be measured vertically from the top of the handrail to,
 - a) a straight line drawn tangent to the tread nosing of the stair served by the handrail, or
 - b) the surface of the ramp, floor or landing served by the handrail.
- Except as noted below the height of handrails on stairs and ramps shall be,
 - a) not less than 865 mm (34 in), and
 - b) not more than 965 mm (38 in).
- Where guards are required, handrails required on landings shall be not more than 1 070 mm (42 in) in height.
- Except where interrupted by doorways or newel posts at changes in direction, at least one handrail shall be continuous throughout the length of a stairway or ramp, including landings.
- Handrails shall be terminated in a manner that will not obstruct pedestrian travel or create a hazard.
- At least one handrail shall,
 - (a) in the case of a stair,
 - (i) extend horizontally at the required height, not less than 300 mm beyond the top riser, and
 - (ii) continue to slope for a depth of one tread beyond the bottom riser followed by a 300 mm horizontal extension, and
 - (b) in the case of a ramp, extend horizontally at the required height, not less than 300 mm beyond the top and bottom edges of the incline.
- The clearance between a handrail and any surface behind it shall be not less than 50 mm.
- Handrails and their supports shall be designed and constructed to withstand the loading values obtained from the separate application of each of,
 - (a) a concentrated load not less than 0.9 kN (200 lb) applied at any point and in any direction for all handrails, and
 - (b) a uniform load not less than 0.7 kN/m (47 lb.ft) applied in any direction to handrails

1.1.4 RAMPS

The following criteria apply to any platform ramps:

- The maximum gradient of ramp is 1 in 12.
- For “barrier free” (wheelchair accessible) ramps – refer to the Ontario Building Code.
- Ramps require a level area at the top and bottom of at least 4’11” long by at least the same width as the ramp. Ramp length between the two level areas must not exceed 29’6”
- Guards are required on both sides unless ramp is against a wall
- The guidelines for platform guards also apply for ramps. No horizontal guards/rungs are permitted. Vertical pickets, with a maximum of 4” spacing, or a solid structure are required. Guards must be at least 42” high.
- Handrails are required on both sides (see “Handrails” above)
- Ramps shall be provided with a curb at least 2” high on any side of ramp.
- Ramps shall have either a colour contrast or a distinctive pattern to demarcate the beginning and end of a ramp.

1.2 PLATFORMS WITH AN AREA LESS THAN 10 M²

Platforms with an area less than 10 m² (107.6 ft²) are not required to have a building permit. It is the **recommendation** of the Toronto International Boat Show, that the platforms with an area less than 10 m² (107.6 ft²) meet the requirements as outlined in Section 1.1

1.3 STAND-ALONE STAIRS

Stand-alone stairs are not required to have a building permit. It is the **recommendation** of the Toronto International Boat Show, that stand-alone stairs meet the requirements as outlined in Sections 1.1.2 and 1.1.3.

2 BUILDING PERMITS – OTHER STRUCTURES

If you are planning to make a significant change to your platform dimensions or are unsure whether a permit is required, we suggest that you contact show management as soon as possible to determine if permitting will be necessary – this will save you unnecessary time and stress on-site during your set-up. Exhibitors that are undertaking any work, which requires a building permit, are required to provide the following to Show Management and the Enercare Centre Operations Department.

1. A copy of the building permit application, including Field Review commitment letter from your engineer. (Please submit two months prior to the scheduled opening day of the event).

2. A schedule of the start and completion dates for construction and tear down. (Please submit two months prior to the scheduled opening day of the event).
3. A copy of the issued building permit. By law, this is required prior to the start of any construction. Please submit as soon as the permit is issued, prior to the start of construction.
4. The structure must be inspected and approved by the Building Inspector prior to opening to the public. Failure to comply with these regulations may prevent the structure from being opened to the public during a show or exhibit.
5. A copy of the field review of the completed structure signed and sealed by a licensed Ontario Professional Engineer. This must be completed prior to any public occupancy/use of the structure. Please submit prior to the opening of the show.

3 TENTS

A tent or group of adjacent tents having a floor area greater than 60 m² (645 ft²) or located within 10 m (9 ft. 10 in.) of a structure will require a building permit. (Please refer to building permit section). Notwithstanding all tents greater than 74 m² (800 ft²) shall also have:

- Life Safety Evaluation ensuring all means are taken to provide a safe environment and reasonable fire safety plan.
- Tents may require a sprinkler system if used indoor and larger than 800 ft².
- Smoke alarms within the covered areas.
- ***Sprinkler Systems may be required, subject to the direction of the Enercare Centre.***
- Additional fire extinguishers (minimum 10 lb ABC).
- All tent fabric must be flame proof or treated with a flame-retardant chemical.
- Engineer review and sign-off on the supporting framing structure and anchorage system for the tent.
- It is assumed that tents will be placed indoors only; all tents constructed outdoors will be subject to applicable loading conditions under the Ontario Building Code. All tents greater than 225 m² (2420 ft²) must be designed by a professional engineer.

The following devices are not permitted for use in a tent or within 3 m (9 ft 10 in) outside of a tent:

- a) Open flame devices for heating or cooking, or any other reason.
- b) Cooking involving deep fat frying or grease laden vapours.
- c) Barbecuing using charcoal or propane.
- d) The use of heating devices containing or making use of a flammable liquid.
- e) Lighting devices that use a flame such as candles or lanterns or any flammable liquids or solids.

4 COVERED BOOTHS

All covered booths, including those utilizing a tent structure, require a fire extinguisher. All tents/structures/boats over 800 ft² may be required to have a sprinkler system. Refer also to the Tent Section.

5 GAPS BETWEEN BOATS AND PLATFORMS

There should be no space between boats and platforms. All platforms are required to fit flush with the boats. If a gap is unavoidable, a guard or kickplate must be incorporated into the platform to avoid accidental missteps into voids.

6 SPRINKLER OBSTRUCTIONS

As required by the Ontario Fire Code all building sprinkler heads must be free of any obstruction. Sprinkler heads and water pipes leading to sprinklers are **not** to be used to hang banners or to tie-off booths

7 TRAILER TONGUES, OUTBOARD MOTORS & AISLE OBSTRUCTIONS

No part of any boat and/or trailer is permitted outside of the exhibitors assigned booth space. Trailer tongues, outboard motors and the like should be positioned to eliminate or at least reduce the risk of a trip and/or shear hazard. Plants, signage or other obstacles should be used as a barrier for such hazards.

8 BOOTH MATERIALS

All booth materials including, but not limited to, cut trees, branches, fabrics, styrofoam, plastics and flammable signs must be treated with a flame retardant liquid.

9 FIRE HOSE CABINETS & FIRE EXITS

It is illegal for access to the fire hose cabinets, fire extinguishers and exits to be obstructed at any time during the show. All exhibitors with a fire hose cabinet located within their space are required to leave a minimum 1m (3ft) clearance in front of the cabinet and clear access to the cabinet.

The Enercare safety inspector will require immediate compliance from any exhibitor obstructing any of these safety features.

10 SAFETY ENGINEER

During move-in, Show Management has hired a Safety Engineer to review all platforms under building permit. The Safety Engineer will provide a list to Canadian Boat Shows (CBS) of any items within exhibits that need to be addressed. CBS will advise exhibitors of any safety issues and immediate precautions/adjustments to the display will be required. Exhibitors will be required to comply with the Safety Engineer's instructions.

Nevertheless, it is incumbent upon the Exhibitor to ensure that the requirements of the Ontario Building Code and Toronto Urban Planning and Development Services – Buildings and Inspections are met.

11 UNION LABOUR

The Enercare Centre is a facility which operates under collective agreements between six separate Unions and Exhibition Place. These agreements impact the way in which work needs to be done on site and union labour must be hired when work in your space involves these trades. The collective agreements include labourers (material handling / cleaners / carpet laying), carpenters, painters, plumbers, electricians, and stage / technical services.