Stage Lift Guidelines

GENERAL GUIDELINES

1. Application of the form.
   This form may be used for a stage lift on the following types of submissions:
   i) New installation (not based on a previously registered standard design);
   ii) Alteration (not based on a previously registered standard design);
   iii) Standard design

   N.B. for other classes of elevating devices or other types of design submissions, consult TSSA for details and forms.

2. Design submission.
   A design submission forwarded to TSSA for registration must include the following:
   a) APPLICATION on TSSA form ID-29400;
   b) This specification sheet;
   c) Drawings prepared in accordance with guidelines #200, and
   d) Other documents if requested by TSSA.

   All documents forming a design submission must be signed and sealed by a professional engineer registered in the province of Ontario, except the APPLICATION may be signed by an officer of the submitter's company.

3. Copies.
   All documents composing a design submission must be submitted in four copies, or in the case of a 'standard design submission', in two copies.

   Photocopies are acceptable, but at least in one set of document, all required signatures and stamps must be original.

   All blanks must be filled in. 'N/A' entry may be used where an item is not applicable.
   • Entries must reflect actual design figures (not code limits). 'Per code' as an entry is not acceptable.
   • Where there are check boxes for a specification item, put a cross to select the applicable boxes.

5. Units & Abbreviations in the form.
   Measurements units must be expressed in metric units in accordance with CSA Standard CAN-Z234, 'Canadian Metric Practice Guide'.

6. Applied code clause references.
   They appear after the caption of most items. Submitting engineer should refer to the designated clause of the applied code in item #192 for clauses regarding terminology used, and/or of the expected entry.

   For examples: A 4.1.6, which denotes Ontario Building Code (code A in #192) clause 4.21.6, that deals with floor loading; or B. 3.10.8.4, which denotes CSA B44 (code B in #192), clause 3.10.8.4 that deals with requirements for brake adjustment and verification methods.
GUIDELINES TO THE FORM

2.1 Enter the maximum load in kilograms which the lift is designed to carry in the up direction at the rated speed (item #18.1).

12 Submitter's Specification No. may be a job or contract number unique to this particular installation.

19 The Owner must ensure that attendants or operators are stationed at appropriate locations in or about the stage lift.

30 Put a cross ('x') in the box of drive type used. Furthermore for:
   a) Hydraulic drive, complete items #33 through 38;
   b) Rack-and-pinion drive, complete items #39 through 42;
   c) Screw drive, complete items #42, 44 and 45;
   d) For other drive type, complete item #50.

31.2 In the case of machine having multiple driving units, check 'inherent in design' if synchronization of the drives is achieved through positive means inherent to the design. E.g., single hydraulic pump driving through manifold to multiple jacks, double screw columns driven by a common output shaft of a gear reducer.

   If other means of synchronization is used (electrical, electro-mechanical), check 'see description in #189', and give details re principle and method.

   Note: This item may be considered in connection with #177, 'Platform level equalization mechanism'.

112 Provide adequate protection to eliminate potential shearing/crashing hazards, see sketch below for some crucial areas.
Free fall protection must be provided where the lift is suspended by wire ropes.

Give details of the safety device used. For types of safeties, see cl.3.7.6 of B44 code. Indicate the maximum mass (at least equal to the stage with its attachment and the greater of items 2.1 or 2.2) which the safety device as installed, is capable to stop and sustain.

Where the platform is not suspended by wire ropes, free fall protection is not mandatory (see B.3.16.1.1). When free fall protection is not provided, the submitting engineer must complete and sign "Professional Engineer's Declaration".

This space is provided for description of special stage features, or in the case of an alteration, the scope of alteration.

Where variances from the designated code clauses are proposed, they must be delineated in this section, the proposal must include:
   a) An outline of the reason for such variances;
   b) Assessment of how these variances may affect the safety of the installation, and
   c) Recommended safety compensation or mitigation, if applicable.
Otherwise, this entry will be 'No variance proposed'.

Designated code A denotes Ontario Building Code; B denotes CSA B44, Safety Code for Elevators; C denotes Ontario Hydro Electrical Safety Code; etc.

N.B. B44 code is not originally intended to apply to stage or orchestra lifts (see section 1.1(h)), however, the Director considers B44 may be applied selectively to provide rational guiding criteria for clearances, major equipment/components and electrical design. The referred clauses are selected by TSSA as relevant and appropriate.

In making this statement, the professional engineer may relay on the opinion or information obtained from another professional engineer or an architect; and he/she may indicate in what respect he/she is relying.

If the engineer wishes to indicate what his/her reliance depends upon, he/she will check the 'Yes' box, and attach an 'Amendment to the Professional Engineer's Statement' (on a separate letterhead) indicating in what area he/she is relying on another professional's opinion or assessment.

GUIDELINES FOR DRAWINGS

Drawings composing a design submission shall:

1. Be identifiable by a number;
2. Bear a date (of completion, last revision or approved);
3. Set out the address of the building where this stage lift is installed;
4. Set out the model number, maximum capacities, rated speed;
5. Include layout, plan and elevation views of the lift, and its parts related to the building components; showing all pertinent information, particularly protection and guarding details, necessary to demonstrate conformance with the Regulation and designated clauses of the applied code;
6. Include electrical and/or hydraulic schematic diagrams;
7. Include certificates and other documents where required;
8. Bear the signature and seal of the professional engineer referred in guideline #192;
9. Be prepared in accordance with good engineering and drafting practice, and be accurate and complete.