14th Floor, Centre Tower
3300 Bloor Street West
Toronto, ON M8X 2X4
Tel.: 416.734.3300

www.tssa.org

Submission Guidelines

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, ON M8X 2X4
Tel.: 416.734.3300

www.tssa.org

Design Submission

A design submission must include:

(a) an Application,
(b) a Document Transmittal and Engineers Statement,
(c) a specification sheet
(d) an "Application for a Variance" form if required
(e) drawings and other attachments prepared as required by the specification sheet, and
(f) other documents if requested by the Technical Standards and Safety Authority.

All documents, forming a design submission, except the application must be listed on the "Document Transmittal and Engineers Statement". The application must be signed by an officer of the submitter's company. Electronic forms and guidelines are available for downloading at www.tssa.org.

Copies

Design submission may be submitted electronically or on paper. **Electronic submissions are preferred**. When submitting paper submissions, only one copy of the documents are required unless the submission includes oversized drawings. Oversized drawings are drawings that are not legible when printed on 11" x 17" paper. (ED Engineers and Inspectors rely on 11x17 reprints for review and inspection. Therefore, drawings must be legible at this scale.) Submissions with oversized drawings must include four copies and electronic media which contain the oversized drawings saved as a PDF or Image file such as jpeg or tiff. Photocopies are acceptable, but at least one set of documents must bear original signatures and stamps.

Multiple Installations

The specification may cover multiple installations, up to a maximum of ten elevators, provided that generally, the elevators are of the same class, capacity, speed, operation, (and travel if hydraulic), if they utilize a common machine room and are to be installed simultaneously. See specifications sheets for exceptions to these restrictions.

Where the specification covers more than one installation, each elevator shall be identified as in item 140 of the Application Form. This ID must be shown in the plan view of the hoistway and machine room in the attached drawings.

Entries and boxes in the Form

All boxes must be filled in, unless otherwise permitted in the guidelines (see Major Alteration, Standard Design/Component Filing). N/A shall be used where an item is not applicable, however in all cases, the items in the 'General' and 'Building' section must be completed in full, N/A is not permitted for boxes 110 to 590. If the submission is for an alteration, N/C must be used where a parameter is not changing, do no use N/A for these boxes. The Elevating Device Make and Model may be entered as "Unknown" if they are not known. Where the provided box cannot accommodate all data, box 4000 may be used or additional pages may be enclosed, bearing the reference number of respective boxes. The entries in this specification are legally binding and shall prevail in the case of discrepancy with any other documents in the submission. Please note that it is an offence to knowingly make a false statement in any document required by Ontario's Technical Standards and Safety Act or the regulation.

Units and Abbreviations in the Form

Numbers in brackets e.g. [2.4.3] or [Table 2.23.4.3.1] or [Fig. 2.23.4.1] mean a clause, table or figure in CSA Standard B44 to which a designer should refer for clarification of the terminology used, or of the expected entry. Sample Exceptions are box 670 (reference to OBC - Ontario Building Code). All entries shall be expressed in metric units. Where a "model" of an elevator part is required to be specified, it will mean any designation: e.g. name, number, etc., which is specific to that particular part model and which enables any person and the original manufacturer to identify the part.

Additional Specification Data

This specification requires only data on some common components and characteristics of an elevator. However, the submitting engineer should, if he/she considers it necessary, forward additional specification data TSSA in order to ensure that the balance of the elevator parts and features, comply with the Code.

Major Alteration

In the case of major alterations, the specifications and drawings must contain full information related to all components and features being altered, added, changed or replaced, as well as data related to components and features that may be affected by the alteration, regardless of the fact that part of the proposed work may not fall under "major alteration" designation. See Director's Order 226/07.

The remaining specification forms sections must be marked as no change (N/C) or not applicable (N/A), except that items 110 to 590 and 4000 must be filled in for any alteration. If the feature or requirement identified on the specification sheet is applicable to the device being altered but is not being altered and the data is not required to demonstrate compliance enter N/C. If the feature or requirement is not applicable to the device being altered enter N/A.

For further details regarding Major Alterations see Director's Order 251/11-r2

Standard Design

For standard design submissions consult with TSSA. Depending on scope of standard design certain specification items will be unchangeable while others will be permitted to be variable.

Component Filing

When the specification forms or a guideline requires a specific document to be repetitively attached to the design submission, the submitter can apply for "filing" of the document with TSSA. After the filing by TSSA, the submitter would be required to state in the spec sheet the filing number in lieu of the document. This would apply to:

(a) Certified components under 8.3 of B44, including
- oil buffers (spec item 1240/1250)
- interlocks & contacts (720)
- hydraulic overspeed valve (1650)
- safety nut (1340)

Note: This does not apply to components bearing the CSA mark of certification in compliance with the B44 Code, because TSSA has access to the records on all CSA certified components.

(b) Other components – e.g. Manufacturer's data sheet for contractors/ relays(required in Part C of this spec) , safety retainers(700)

Electronic Submissions

The preferred method for submitting completed forms is electronic via email. Completed design submissions may be emailed to eddesignsubmittal@tssa.org. The "APPLICATON" and the "TRANSMITTAL" sheets should be printed, signed and sealed and then scanned or signatures and seals can be applied electronically and the documents converted to an electronic format. PDF files are preferred for these documents. A copy of the "Master – Specifications Sheet.xls" file must be left in its native (excel) format and be included in the electronic submission. TSSA will extract data electronically from the excel file. The relevant "SPEC SHEET" tab must be converted to PDF format and included with the submission along with the .xls file. Only one .pdf file and one .xls file should be included electronic submission.

Form Customization

The forms have been locked to ensure that data can be extracted electronically by TSSA. The cells for data entry are not protected. The area of each work book to the right of the form has also been left unprotected to allow customization by the user. A separate worksheet call "VALIDATION DATA" is used to provide many of the drop down lists used in the form. On this worksheet, cells highlighted in gray are unprotected and new values may be added to the various drop down lists by entering data in these cells. If the user would like data added permanently to the drop down lists or to lists that do not have unprotected cells, please send an email with your request to eddesignsubmittal@tssa.org. Your request will be reviewed and if accepted, the forms will be updated.

The Application and Transmittal sheets are protected without a password. The sheets can be unprotected to allow electronic signatures and stamps to be added. These pages can then be printed as .pdf files for transmittal to TSSA. The excel versions of these pages must also be included in the electronic files but the electronic signatures and stamps are not required on the excel versions of these pages.

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, ON M8X 2X4
Tel.: 416.734.3300

www.tssa.org

Application

Application of the form

This form is to accompany all Design Submission for Elevating Devices to TSSA except for 'Notification for Minor "B" Alterations' and standalone Variance Applications. The purpose of this form is to identify the submitter, the location of the elevating device, the Engineer who prepared or approved the submission, the contractor responsible for the elevating device's installation or alteration and the applicable fees. The form may also be used to register a revision to a previously registered design.

Guidelines to Application	
Design Submission	
100	Submitter means a company that applies to TSSA for the registration of a design submission. Where the submitter is a registered contractor, the company address may be omitted, but contractor's registration number must be indicated, in which case the entry will be: eg, "LONDON LIFT - REG. NO 717".
110	Enter the type of design submission: New Installation Major Alteration to Installation No(s). Minor Type 'A' Alteration to Installation No(s). Preliminary Assessment Standard Design Component Filing New Installation - Based on Standard Design No. Major Alteration - Based on Standard Design No. For interpretation of the terms refer to the Regulation. Where an "Alteration" is being proposed, the installation number for the elevating device being altered must also be indicated. If this is a revision to a previous design submission, check the box indicating so and include the previous design submission number.
120	A unique identifier may be provided by the submitter as a reference number to identify this design submission. If the billing for this design submission must reference a unique purchase order it may be included here after the submitter's specification number. Please separate the two numbers with a "/".
130	Enter the elevating device class for this design submission. Please refer to the Regulation for the definition of each class. (The number preceding the device class is for reference only and does not need to be included) 1. Elevators 2. Dumbwaiters 3. Escalators 4. Moving Walks 5. Material Lifts / Freight Platform Lifts 6. Lifts for Persons with Physical Disabilities 7. Manlifts 8. Passenger Ropeways 9. Construction Hoists 10. Incline Lifts 11. Stage Lifts 12. Parking Garage Lifts 13. Special Elevating Device 14. Components 15. Miscellaneous Elevating Device 16. Preliminary Assessments
130	Enter the elevating device type for this design submission. The Regulation defines the elevating device type for each class. The reference numbers below correspond to the device class number included in item 130 above and do not need to be included. 1.i. Freight Elevator

	1.ii. Freight Elevator-P 1.iii. Hand-Powered Freight Elevator 1.iv. Observation 1.v. Passenger Elevator 1.vi. Sidewalk Elevator 1.vii Temporary for Construction 1.viii LULA Elevator 2.i. Dumbwaiter 2.ii. Hand-Powered Dumbwaiter 3.i. Escalator 4.i. Moving Walk - Pallet 4.ii. Moving Walk - Belt 5.i. Type - A 5.ii. Type - B 6.i. Stairchair Lift 6.ii. Enclosed Stair Platform Lift 6.iii Unenclosed Stair Platform Lift 6.iv. Enclosed Vertical Platform Lift 6.v. Unenclosed Vertical Platform Lift 7.i. Counter-Balanced Manlift 7.ii. Endless Belt Type Manlift 7.iii. Power Type Manlift 8.i. Chair Lift 8.ii Gondola Lift 8.iii. Aerial Tramway 8.iv. Bar Lift 8.v. Tube Tow 8.vi. Conveyors 9.i. Material Construction Hoist 9.ii. Workmen Rail-Guided Construction Hoist 9.iii Workmen Rope-Guided Construction Hoist 10.i. Inclined Elevator 10.ii Inclined Dumbwaiter 10.iii. Inclined Manlift 10.iv. Inclined Construction Hoist 10.v. Inclined Material Lift 10.vi. Funicular Railway 13.i. PGL, Simple 13.ii. PGL, Complex 13.iii., PGL Transfer Area Wind Turbine Tower Elevator
140	State the unique designations, allocated by the submitter, to each Elevating Device in the specification sheet that is covered by this application. (e.g. E1, E2 etc) If the application covers only one ED and there is no other ED in the same building or inter-related building complex, or area under same ownership, the identification is not required.
160	Indicate whether there is any variance from the Code Adoption Documents proposed. If there is a previously approved variance for this installation a copy of the "Notification of Variance Assessment" must be included with the submission.
Building and Premises	
180	Building means the actual location of the proposed Elevating Device installation, including postal code.
190	Enter the building function. Select from the following list. If the building function is not listed indicate other and describe the function. Indicate if the building is classified as a high building under the Ontario Building Code by checking the appropriate check box. If the building is a federal building or other non-regulated building such as an embassy or First Nations Reservation building, indicate this using the check box provided. Rental Condominium

	Student Residence Group Home Hotel Hospital Assemblies Learning Institutions Open to Public Office Office (Restricted access) Mercantile Industrial Mass Transportation Outdoor Recreation Area Other Functions
200	Examples of common reference to building are: First Canadian Place, Union Station, Red Peak Golf Club … State N/A, where there is no common reference.
Professional Engineer	
210 –230	Engineer means a professional engineer registered in the Province of Ontario who signed and sealed the enclosed design submission.
Contractor, Fees and Remarks	
240 – 250	State 'Submitter' or if other specify. The contractor must be registered for the elevating device class specified in item 130 at the time of the submission of this application.
260	Indicate the required level of service required.
270	If direct billing is requested (no payment cheque attached) and the billing address is other than submitter's (box 100), enter the TSSA Contractors Account No. for the alternate billing location.
280 – 300	For fee schedule see submission fee schedule at www.tssa.org.
Installation Statement	
310 – 340	The application must be signed by the person attesting on behalf of the installer that the device will be installed per the design submission.

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, ON M8X 2X4
Tel.: 416.734.3300

www.tssa.org

Document Transmittal and Engineers Statement

Application of the form

This form is to accompany all Design Submissions to TSSA except for 'Notification for Minor "B" Alterations' and standalone Variance Applications. The purpose of the form is to clearly identify all documents being submitted to TSSA that are part of the design submission. When this form is used, TSSA does NOT require the documents identified on the form to be sealed by the submitting Engineer. Only this form must be sealed. The intent is to ease the transition to electronic submission as all other documents can easily be converted directly to an electronic format for submission without the requirement to printing and rescanning after sealing.

Guidelines to Document Transmittal and Engineers Statement	
Submitters Spec No. – Submitters' specification number may be a job or contract number or any manufacturer's or submitter's number unique to that particular elevator installation. When using the electronic version of this form, the value will be populated automatically using the information entered on the application.	
Transmittal Page – Identify the page number of each "Document Transmittal & Engineers Statement" page and indicate the total number of "Document Transmittal & Engineers Statement" pages included with the submission.	
Supporting Documents	
400	Enter the number of each document. Use the check box at the right side of the Document Name box to indicate that you are submitting pages that replace pages already submitted to TSSA for the same submission.
410	Enter the revision date of the document. In the case of a form provided by TSSA, this is the date that you revised the data on the form. Please record the revision date on the form so that different revisions of forms containing data can be easily identified. In the case of a drawing, enter the date of the last revision to the drawing. This date should also be clearly identified on the drawing. All documents must have a revision date.
420	Enter the revision identifier for each document where applicable. Drawings usually have sequential alpha or numeric identifiers used to identify the items revised at each revision.
430	Enter the total number of pages for each document.
440	If you are submitting a revised page that replaces a page already submitted to TSSA for the same submission and it is not obvious what has changed, use the notes box to identify the changed information on the documents.
Professional Engineer's Statement	
450	Qualifying Amendment – Use this box to note any qualifying amendments to the Engineers statement. Eg. If another engineer has prepared a portion of the submission and the submitter is relying on the work of the other engineering to ensure the design is in compliance with the TSS Act and Regulations, this should be identified. Date – Enter the date the Document Transmittal & Engineers Statement was prepared. Signature – The Document Transmittal & Engineers Statement must be signed by the submitting Engineer.
460	The Document Transmittal & Engineers Statement must be seal by the submitting Engineer. The submitting Engineer must be licensed by the PEO to practice engineering in Ontario.

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, ON M8X 2X4
Tel.: 416.734.3300

www.tssa.org

Specification Sheets

Application of the forms

The Master Specification Sheet excel file contains specification sheets for the following device classes:

a) Elevators
b) Dumbwaiters
c) Material Lifts
d) PGLs (Parking Garage Lifts)
e) Handicapped Lifts

For classes of elevating devices other than those specified above and for new installations or major alterations based on a standard design, request other forms

The specification sheets may be used for the following types of design submissions:

(i) New Installations (not based on a previously registered standard design),
(ii) Major alterations (not based on a previously registered standard design), to installation No(s) ...,
(iii) Standard design of an elevator or part thereof,
(iv) Component Filing [example: component filing for a controller]
(v) Preliminary assessments
(vi) Revisions to a registered design submission for a new installation or a major alteration,
(vii) Revisions to a registered standard design,

The Abridged from may also be used for revisions or for Minor type 'A' alterations [up to a maximum of 6 specification items]

For a Minor type 'B' Alteration, use "Notification for Minor Type 'B' Alteration".

Subcontracted Cab Work

This section describes workflow where the (primary) elevator contractor is submitting for elevator work but is not completing the cab or does not know what the final finishes are. In this scenario the primary contractor is aware of pending (or subcontracted) cab work and has made allowances for cab work as identified in the Primary design submission.

The final cab work will be undertaken by a registered cab contractor. In the event that a flooring contractor is used for flooring only, a registered elevator contractor shall assume all responsibilities for the submission and flooring work. If this work scope has been allowed for in the primary submission, then a Notification of Minor B will be permitted as a secondary submission to complete the submission documentation regardless of the 115kg / 5% threshold typical for Minor B's cab alterations.

Primary Submission

- may identify interior finishes, and interior finish weights as TBD (to be determined).
- Includes the maximum flame ratings.
- includes the weight (xx kg) that has been allowed for in the subcontracted cab work
- includes the weight of the elevator car
  - submission notes clearly indicate if interior finish weights are included or excluded
  - if the weights are included they are an accurate reflection what will be added by the cab/flooring contractor, and the crosshead data tag will reflect the final weight

Secondary Submission

- the secondary Minor B submission must utilizes the current Minor B cab finishes template
- all weights, finishes and flame ratings must be stated
- if finish weights where not included in the total car weight on the primary submission, an auxiliary crosshead data tag will be required

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, ON M8X 2X4
Tel.: 416.734.3300

www.tssa.org

Registration of Secondary Minor B Submissions

Secondary Minor B submissions will require registration; however different process flows exist depending on when the secondary Minor B submission is received. A secondary minor B submission must clearly reference the primary submission and the permissions for add on weight.

Prior to Registration:
If TSSA receives both submissions prior to registration and has been advised these submissions are related, they will be processed under the primary submission and only the primary submission fee will apply. If TSSA receives and process these submissions separately they will be charged separately.

After Registration but Prior to Inspection:
If a secondary minor B notification is received prior to inspection it will be processed, charged. The contractor must ensure a copy is available to the inspector at the time of initial inspection.

At time of Inspection:
If a secondary minor B notification is received at the inspection, the inspector may complete the inspection but will issue an order to submit a copy of the secondary minor B submission to TSSA for final registration. The secondary minor B notification will be processed and charged but a re-inspection is not required.

Multiple Cars with only Minor Differences

One specification sheet may be used for multiple cars even if there are minor differences that are not allowed for on the forms. Enter or select "See Part F" in the box that requires multiple values. Use Part F box 4000 to list the various values for each car. Each value should identify the box number and the car number. Submissions of this type should be limited to not more than five items.

Guidelines to Specification Sheets	
Enter the revision date for the specification sheets at the top of the page.	
Enter a revision identifier for the specification sheets at the top of the page.	
PART A	
General	
110	The possible types of the design submission, for which this form may be used, and required entries, are listed in Application box 110
120	Submitter's specification number may be a job or contract number or any manufacturer's or submitter's number unique to that particular elevator installation.
130 130	State one of the elevator classes and types listed in the guideline to the application.
140	Where more than one elevator installation is covered with this specification refer to General Guideline 4.
500	In the case of a major alteration, where a contractor installs equipment of a different make the submitter is expected to enter the make of the original equipment in this box. If impossible to identify, state so by entering Unknown.
510	State N/A if the elevator manufacturer has no specific designation for the elevator models covered in this specification.
520	Enter the capacity in kg. All cars must be the same.
530	Enter the capacity in persons.
540	Specify the rated speed in m/s. For hydraulic devices this is the speed in the up direction
550	For hydraulic devices specify the rated speed in the down direction.
560	If this is a freight elevator, enter: Class A – General Freight Loading, Class B – Motor Vehicle Loading, Class C1 – Truck Loading, Class C2 – Truck Loading, Class C3 – Heavy Concentrations, otherwise enter N/A. See B44 section 2.16.2.2
570	If the elevating device license is not to be located in the car specify the remote location.

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, ON M8X 2X4
Tel.: 416.734.3300

www.tssa.org

Building	
180	The address of the building or premises in which the proposed elevator will be located. If the full address is not known at time of submission, describe the location as exactly as possible (.e., SW corner of "A" street and "B" avenue intersection). At least the first three digits of the postal code should be provided if the full postal code is not available at the time of application.
580	Enter the number of levels served by each elevating device.
590	Enter the distance bottom level to the top level served by each elevating device
PART B1	
Provide drawings that include layout, plan and elevation views of the elevating device and/or parts thereof, showing all pertinent information necessary to demonstrate conformance with the Regulation and applied codes. The drawings must include the information required by B44 sections 2.28.1 or 3.28.1 as applicable and the information required by the submission guidelines. If the elevating device is hydraulic, a hydraulic schematic is also required that clearly indicates all of the components required by B44 sections 3.18, 3.19 and 3.24.	
PART B2	
Vertical Clearances	
600	Enter 900 mm or specify if less. A designer may specify for "maximum CWT bottom runby" an amount which is less than maximum permitted by code in order to ensure that "the minimum top car clearance" as specified in line 71, conforms to the code or that requirement in clause 2.4.11 is satisfied. Refer to clause 2.4.5 for a mandatory sign in the pit.
610	Critical Distance: Calculate and enter the critical distance according to the following formula: Traction -> (max. CWT runby) + (buffer stroke) + a + 100 mm. Hydraulic -> car top runby + 100 mm. • CWT run-by is the value declared in box 600 • Buffer stroke is the actual amount by which the counterweight buffer can be compressed as declared in box 1270, • "a" is a half of the gravity stopping distance obtained as per B44 section 8.2.4, or the distance as per 2.4.6.2 if a compensation tie-down device is provided. • See 3.4.2 for car top runby • 100mm is per 2.4.7.1(c)(2) – no equipment closer than this dimension
620	Minimum Car Top Clearance: Specify the minimum car top clearance according to the following formula: Traction -> (max. CWT runby) + (buffer stroke) + a + 'X' Hydraulic - > car top runby + 'X' • Max. CWT runby as declared in box 600, • Counter weight buffer stroke as declared in box 1270 • "a" is a half of the gravity stopping distance obtained as per B44 section 8.2.4, or the distance as per 2.4.6.2 if a compensation tie-down device is provided. • See 3.4.2 for car top runby • 'X' is the dimension from 2.4.7.1(a) or (b), which is the 600mm or greater value if crosshead is over the car top or 300mm if crosshead is adjacent to the car enclosure top
630	Minimum Refuge Measurement: Traction -> (max. CWT runby) + (buffer stroke) + a + 'Y' Hydraulic -> car top runby + 'Y' • Max. CWT runby as declared in box 600, • Counter weight buffer stroke as declared in box 1270 • "a" is a half of the gravity stopping distance obtained as per B44 section 8.2.4, or the distance as per 2.4.6.2 if rope tie-down device is provided. • See 3.4.2 for car top runby • 'Y' is the dimension from B44 section 2..4.7.1 (1100mm)
640	Enter: Yes or No. If car jump prevention is provided enter the amount that the jump is limited to in Part F.

Hoistway	
650	Enter: Yes or No
Entrances	
660	Specify the manufacturer of the landing door assembly with model designation.
670	Enter fire rating for hoistway entrance which must comply with table 3.5.3A of Ontario Building Code. Where OBC does not require fire rating of the hoistway, enter N/A.
680 690	Enter one of the following: HSSS - (horizontally sliding, single-section) HSCO - (horizontally sliding, centre opening) HS2 - (horizontally sliding, two-speed) HS2C - (horizontally sliding, two-speed, centre opening) HWSS - horizontally swinging, single-section) HWCO - (horizontally swinging, centre opening) CHSS - (combination horizontally sliding and swinging) VSBC - (vertically sliding, bi-parting, counterbalanced) VSDC - (vertically sliding down-to-open, counterbalanced) VSUC - (vertically sliding up-to-open, counterbalanced)
700	Specify whether: • a drawing is attached to show retainer and clearance details, or • specify the retainer number or ID marking as stamped on the part for field verification.
Interlocks	
710	Enter: "Interlock" or "Mechanical Lock and Contact," as defined in B44. The engineer sealing this spec should not rely on the designation (interlock or lock and contact) given by the parts manufacturer nor on the designation listed in the CSA List of Certified Electrical Equipment. Instead, the engineer must ensure that the door locking device make and mode, as specified in 101 and as installed on a particular door, conforms to B44 section 2.12.2 (if interlock) or 2.12.3 (if lock and contact).
720	Specify the manufacturer and the designated model for the device in item 710. If the device is certified [see B44 section 2.12.4.3(b)] by organization other than CSA attach certification documents
730	For interlocks certified to B44 by certification laboratories other than CSA indicate: • Lab and File Number
Power Door Operator	
740 750	Enter door operator manufacturer and model. State 'N/A' or 'manual' where the door or gate is manually operated.
760 770	Enter the type of door reopening device provided: • Electronic – Smoke Sensitive • Electronic – Not Smoke Sensitive • Mechanical State N/A if a reopening device is not provided.
780 790	This item relates to kinetic energy of landing doors. The entry must include the masses of all components being moved horizontally in the process of door closing – such as: landing doors, car door panels, vanes, hardware, as well as the equivalent translating masses of rotating components. Eg. Door operator
800 810	This item relates to kinetic energy of landing doors on Normal Closing. Specify the door closing time which will ensure that the kinetic energy of the closing doors does not exceed B44 section 2.13.4.2.1(b)
820 830	This item relates to kinetic energy of landing doors on Reduced speed Closing. Specify the door closing time which will ensure that the kinetic energy of the closing doors does not exceed B44 section 2.13.4.2.1(c)

Car Doors and Enclosure	
840 850	Specify the door width in mm.
860 870	Specify the car door type. See box 680.
880 900 920	Give details for cab lining materials. When no lining is provided, give details for the enclosure. Specify material and flame spread ratings following the requirements in CAD 2.14.2.1 and/or B44 section 2.14.3.1. If the data is not available when submitting see the notes regarding Subcontracted Cab Work (see page 9)
890 910 930	Enter flame spread ratings see CAD 2.14.2.1.
940	Specify which cars, if any, are designated as firefighter's elevators.
Weight	
945	Enter the car weight as per the original crosshead data tag before any alteration (in the absence of the data tag, calculated original car weight before any alteration). See crosshead data plate requirement in B44 section 2.16.3.2 or section 3.16.3(b) for hydraulic elevator. Note: plunger weight not to be included for hydraulic elevator.
950	Enter the weight of the car after the alteration. Enter N/A if this is a new installation. Note: Box 950 shall include the weight specified in box 960
960	Enter the weight in kg that was added to the car resulting from this alteration. If no weight added enter N/A
Safeties	
970 980	Enter the manufacturer and model number for the car and counterweight safety
990 1000	Indicate Type A, B or C as defined in B44 section 2.17.5, if other specify (see B44 sections 4.1.9, 4.2.11, 4.2.12, 4.3.15).
1010 1020	Enter the force required to activate the car safety.
Governor	
1030 1040	Specify manufacturer and model of the car and counterweight governor.
1050 1060	Enter the force required to cause the governor rope to slip through the governor.
Emergency Brake	
1070 1080	Enter the manufacturer, type and model of the emergency brake used for ACO and UCM protection. Eg. Hollister Whitney / Rope Gripper, #624
Suspension	
1090	Enter the number of ropes
1100	Enter the rope grade: Traction or Extra High Strength
1110	Enter the rope diameter (in mm)
1120	Enter the calculated factor of safety for the ropes
1130	Enter the rope construction eg 8x19, 8x21, 8x25, 6x19, 6x25 etc..
1140	Enter the rope strand construction: Warrington, Seale, Filler Wire, Aircraft, etc.
1150	Enter the roping ratio
Counterweight and Compensation	
1160 1170	Enter the minimum and maximum overbalance value expected.
1180	Enter the number of compensating ropes
1190	Enter the number of compensating chains

1200	Enter the diameter of the compensating ropes
1210	Enter the weight per meter per rope or chain in kg/m.
Buffers	
1220 1230	Enter solid, spring, oils, or equivalent: If equivalent, attach detailed information on the buffer to demonstrate equivalency with oil or spring buffers.
1240 1250	Specify manufacturer of the oil buffer and model designation as per laboratory listing. Applicable to oil buffer only. If the oil buffer does not bear CSA certification mark (see B44 section 2.22.4.11) submit certificate per B44 section 8.3.1.3.1
1260 1270	Specify the buffer stroke. In the case of spring buffers, indicate the amount the spring can be compressed until solid or until a fixed stop is reached.
1280	Specify the TOTAL maximum load rating in kilograms of all buffer assemblies used under the car.
1290	Specify the TOTAL maximum load rating in kilograms of all buffer assemblies used under the CWT.
Guides	
1300 1320	If other than standard rails (B44 Table 2.23.3) are used, specify moments of inertia about the x-x and y-y axis of the rail using Part F
1310 1330	Specify designed maximum bracket spacing for this installation in compliance with B44 section 2.23.4.
Machine	
1340	Enter: Geared Traction, Gearless Traction, Winding Drum, Rack and Pinion, Screw-Column, Hydraulic, or Roped Hydraulic
1350	Specify the manufacturer and model number of the machine. If the machine is hydraulic specify the pump manufacturer and model, or pump with motor assembly manufacturer and model, if supplied as one unit.
1360	Specify the motor maximum full load current and voltage.
1370	Specify the location of the driving machine. Eg. Overhead machine room, top of hoistway, basement machine room, etc
Control	
1380	Enter: Automatic, Car-Switch Operation, Continuous-Pressure Operation, Preregister Operation, Signal Operation or Continuous-Pressure Floor Selective Operation [see definitions in B44].
1390	Enter: AC Single Speed, AC Two Speed, Generator Field, VVVF Variable Voltage Variable Frequency, VVAC Variable Voltage AC, SCR Dual Bridge Thyristor Convertor.
1400	Specify the controller manufacturer and model designation as shown on the certifying organizations records.
1410	If the control used has been registered with TSSA as a standard design, enter the corresponding TSSA file number. Note: Completion of the electrical specifications pages & electrical tests are still required – however electrical schematics are not required to be included with the submission package. Conformance documents and acceptance test filing numbers can be entered in boxes 2010 and 2110.
Emergency Operation	
1420	Enter Yes if emergency power is provided for the various cars
1430	Enter: All at Once, or One at a Time, 1 or 2 or 3 etc…
1435	Enter Y if the scope of the Alteration includes upgrading fire service
1440	Enter Yes if FEO has been provided otherwise enter NO
1450	Specify how phase I is initiated: • Automatic • Manual
1470	If machine room smoke or fire detectors have been provided enter Yes
Seismic	
1480	If the elevator equipment has been designed for a seismic risk zone of 2 or greater enter Yes. See B44 section 8.4
1490	If the elevator equipment has been designed for a seismic risk zone of 2 or greater, enter the number corresponding to the Seismic Risk Zone. Eg 2 or >= 3. See B44 section 8.4.13.2
Safeties (Hydraulic only)	
1500	Hydraulic Only: specify yes if a plunger gripper is used.

1510	Hydraulic Only: specify the method of overspeed detection, either: • Electrically • Hydraulic • Governor • Other, details in an attachment
Hydraulic Cylinder	
1520	Enter: One or Two
1530	Enter: Single stage, Two Stage, or Three Stage
1540	Enter: Upright, or Inverted
1550	Enter: Direct, or Roped 1:2
1560	Enter: Internal Guide, or External Guide
1570 1590	Specify the outside diameter of all plunger sections and the corresponding wall thickness of the sections.
1580	Specify the free length of each plunger. See B44 section 8.2.8.1
1600	Enter: Safety Bulkhead, or Double cylinder
1610	Enter the total weight of the plunger or plungers. This is the same weight that is recorded on the data plate. See B44 section 3.16.3(b)
1620	Select an acceptable method of corrosion protection such as: PVC Liner, Immune Cylinder Material, Cathodic Protection, Not Buried OR Select 'Other', identify the other means in Part F and provide attestation to B44 section 3.18.3.8.3(d)
Valve	
1630	Enter the manufacture and model number of the hydraulic control valve.
1640	Specify certificate number issued by the laboratory that carried out the engineering tests in accordance with B44 section 8.3.5
1650	Enter the overspeed valve manufacturer and model number.
1660	Provide engineering test reports in accordance with B44 section 8.3.9 or indicate TSSA file number if engineering test are already on record & filed with TSSA. If the overspeed valve is field adjustable, provide a procedure for adjusting the valve to meet the requirements of B44 section 3.19.4.7.5.
1670	Specify the rated working pressure of the hydraulic system as installed, taking into consideration the weakest component (pipes, valves, mufflers, fittings) This must be equal to or greater than the working pressure as defined in the B44 section 1.3.
PART C1	
Provide an electrical schematic drawing indicating conformance with B44 sections 2.19, 2.25, 2.26 & 2.27 for electric elevators or indicating conformance with B44 sections 3.25, 3.26 & 3.27 for hydraulic elevators. Schematics must also meet the requirements of B44 section 8.6.1.6.3(a). Contactors and relays used in critical operating circuits shall be clearly identified (see 2.26.3)	
PART C2	
In addition to the schematic, provide a written conformance document to explain how compliance with the listed electrical requirements is met if it is not possible to demonstrate compliance in the schematic. Conformance documents can be filed with TSSA to simplify the submission process and minimize the number of documents submitted.	
2000	Indicate whether conformance documents are attached, on file or if this submission is for an alteration that is not affecting any of the listed electrical requirements indicate N/A,
2010	Enter the TSSA filing number for the conformance documents if filed.
PART D1	
Indicate which of the listed operating, safety devices, and/or electrical protective devices have been provided by entering either Provided or N/A in the box adjacent to each item.	
PART D2	

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, ON M8X 2X4
Tel.: 416.734.3300

www.tssa.org

Provide a written test procedure for each of the items listed in Part D2 as well as all of the items circled in Part C2 and Part D1. Also, include a written test procedure for any of the tests listed in B44 section 8.10.2 and/or 8.10.3 that cannot be easily demonstrated in the field or for those tests that require specify test instructions to demonstrate compliance. The procedure should follow the same sequence of the tests in 8.10. Test procedures can be filed with TSSA to simplify the submission process and minimize the number of documents submitted.	
2100	Indicate whether test procedures are attached, on file or if this submission is for an alteration that is not affecting any of the listed electrical requirements indicate N/A,
2110	Enter the TSSA filing number for the test procedures if filed.

PART E

Codes and Standards	
3000	Enter the title of the applicable safety code.
3010	Specify the code version that is applicable. Eg B44-07
3020	Enter the building code that is applicable to this installation. Eg. O.Reg. 350/06 or 2012
3030	Enter the Ontario Electrical Safety Code applicable to this installation. eg. 2012
3040	Enter any other codes that have been applied to this installation.
3070	This question relates to all elevator components for which the B44 and CAD requires that the welding as well as the qualifications of contractors performing the welding must conform to the CSA or equivalent standards. (see B44 sections 2.9.3.4, 2.15.7, 2.19.3. 2.23.9.2.1(c), 3.18.5, 3.19.6.1, 3.24.4, 5.2.1.30, 5.5.1.28, 7.5.14 and CAD section 3) State CSA-W59 or name other standard applied, in that case make a statement in Part F that you have assessed the compatibility of the applied standard with the CSA standard and that you have found it equivalent.
3080 3100	State CSA-W47.1 or name other standard to which the fabricator is qualified, in that case make a statement in Part F that you have assessed the compatibility of the applied standard with the CSA standard and that you have found it equivalent.
3090 3110	State the name of the company that is certified to the indicated welding standard.
Orders / Bulletins	
3110	Indicate any Director's Orders that are applicable to this submission. Eg CAD 261/13-r1
3120	Indicate any manufacturer's bulletins that are applicable to this submission.

PART F

Additional	
4000	This space is provided for a description of special elevator features and for a description of the scope of alteration. Some examples of special elevator features are: • An LCD display panel in the car for commercial and/or safety messaging; • A means of emergency evacuation, other than top emergency exit, typically on elevators with partially enclosed hoistways. • Automatic rescue means for traction elevators (eg. MRL) For alterations, provide a complete list the components or features being altered, replaced or added. A copy of the alteration checklist (See Director's Order 226/07) must also be attached.

Guidelines to Drawings

The following are general guidelines applicable to all drawing. Drawings shall:

1. be identified by a number or other designation unique to that drawing;
2. bear a date (of completion and last revision);
3. set out the address of the building or premises where the elevator will be installed (see item 180 in the form);
4. set out the elevator class, maximum capacity and rated speed;
5. include layout, plan and elevation views of the elevator and/or parts thereof, showing all pertinent information necessary to demonstrate conformance with the Regulation and applied codes;
6. include electrical schematics
7. include hydraulic schematics if the device is a hydraulic elevator
8. include drawings, certificates and other documents where required in the regulations or TSSA / ED Director's Rulings;
9. be listed on the TSSA Document Transmittal and Engineers Statement that bears the signature and seal of the professional engineer identified on the Application
10. include a legend or reference to a relevant code for all symbols used in the drawings;
11. be prepared in accordance with good engineering and drafting practices, and be accurate and complete.

General Layout, Plan and Elevation Views

General layout, plan and elevation views shall include but not be limited to the following:

1. Access to machine room from the top storey and also the secondary level, illustrating and, if necessary, describing routes, indicating sizes, clearances, means, and also protection on the roof. [See B44 section 2.7.3.2.2]
2. Machine room and secondary level:
    a) location, size, headroom, material of enclosure, special arrangements [See B44 section 2.7];
    b) entrances – location and size;
    c) temperature and humidity range required by the elevator manufacturer for the machine room [See B44 section 2.7.9.2] to ensure safe operation of the MR equipment;
    d) ventilation – size, construction and location of openings or information needed for the design of mechanical ventilation [See B44 section 2.3.9.2];
    e) heating – details, if provided;
    f) lighting – at least minimum requirements to be fulfilled and also location of the control switch [See B44 section 2.7.9.1];
    g) supporting beams – materials, size and location [See B44 section 2.9.1];
    h) impact loads imposed on machinery and sheave beams, supports, and floors or foundations [See B44 section 2.28.1(e)];
    i) equipment – location and clearances needed for inspection and maintenance of drive machine, (including sheave and flywheel), controller, selector, all disconnecting means, speed governor, motor generator set, reactor and also other equipment and piping planned to be installed near the elevator equipment.
3. Hoistway:
    a) enclosure – size, show clearly whether hoistway is fully or partially enclosed [see B44 section 2.1.1.3], material, including partitions between the hoistway and machine room windows, skylights, vents with protection [see B44 section 2.1];
    b) equipment – location of car, counterweight, guiderails, all sheaves access platforms, governor and access thereto;
    a. counterweight – construction, size, tie-rods [see B44 section 2.21];
    b. guiderails – estimated maximum vertical and horizontal forces [see B44 section 2.28.1(b)]; If other than standard rails are used, (e.g. formed sheet metal rail), provide section modulus of the rail;
    c) Maximum bracket spacing for both car and CWT rails [see B44 section 2.23];
    d) In the case of freight elevators for Class B of C loading [see B44 section 2.16.2.2], the horizontal forces on the guide-rail faces during loading and unloading, and the estimated maximum horizontal forces in a past-wise direction on the guiderail faces on the application of the safeties [see B44 section 2.23];
    e) bottom and top clearances [see B44 section 2.4];
    f) horizontal clearances [see B44 section 2.5];
    g) entrances – location of entrances and emergency exits, and landing sill guards;
    h) horizontal forces on building structures per B44 section 2.11.11.8 and 2.11.11.9 [see B44 section 2.28.1.1(ii)]
4. Hoistway Pit:
    a) enclosure – material and size;
    b) guard between pits – construction, location and size [see B44 section 2.2.3];

c) access – means, location, size [see B44 section 2.2.4];
d) counterweight guards – construction, size location [see B44 section 2.3.2];
e) stop switch – location [see B44 section 2.2.6];
f) buffers – location and overall size [see B44 section 2.22];
g) impact load on buffer supports due to buffer engagement at the max permissible speed and load [see B44 sections 2.28.1(f) and 8.2.3];
h) details of compensation-tie-down and load on its support [see B44 section 2.21.4 and 2.28.1(g)];
i) marking of the pit refuge space if required by B44 section 2.4.1.6

5. Car Assembly:
   a) size and also special features and arrangements, e.g. glass, compartments, access panels;
   b) entrances – location [see B44 sections 2.14.4, 2.14.5, 2.14.1.5 and 2.14.1.10];
   c) top of car guards and marking, location and height [see B44 section 2.14.1.7];
   d) platform guard (apron) size [see B44 section 2.15.9 & O. Reg. 209/01 as amended];
   e) car frame – material, section, number and size of all members for crosshead, uprights (stiles) and plank [see B44 section 2.15] for stiles that are not built up from standard beams but formed from sheet metal specify the moment of inertia about the main axis;
   f) top of car refuge space – outline in plan view [see B44 section 2.4.12.2] if required;

Electrical Schematics

Electrical schematic diagrams shall include, but not be limited to, the following:

1. the primary safety circuit;
2. all operating, safety and electrical protective devices identified in Part D1 of the design submission
3. a legend of symbols including symbols for all switch that have contacts which are positively opened mechanically and all relays employing forcibly guided contacts;
4. all components necessary to demonstrate compliance with B44 sections 2.19,2.25, 2.26, 2.27, 3.25, 3.26 and 3.27, the Regulation, CAD and applicable CAD amendments and any applicable Director's Orders;

Hydraulic Schematics

Hydraulic schematic diagrams shall include, but not be limited to, the following:

1. a legend for symbols or reference to a relevant code for all symbols;
2. show all hydraulic components including the hydraulic tank and the cylinders;
3. identify the manufacture and model number of all valves
4. clearly indicate piping, tubing and flexible hydraulic (hose) connections;
5. identify the grade of piping or hose [see B44 section 3.28.1(e) and 3.19.3.3.1(e)];
6. indicate the design working pressure;