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## **Certificate of Design and Manufacturing Conformance with NBC, 2005**

This Certificate is to affirm that all components of the Steel Building System described below, to be supplied by the named Manufacturer certified in accordance with CSA-A660, have been or will be designed and fabricated in accordance with the following Standards to carry the loads and load combinations specified.

### **1. DESCRIPTION**

Manufacturer's Name and Address \_\_\_\_\_  
\_\_\_\_\_  
Manufacturer's Certificate No. under CSA A660 \_\_\_\_\_  
\_\_\_\_\_  
Customer Order Number \_\_\_\_\_  
\_\_\_\_\_  
Building Type and Size \_\_\_\_\_  
\_\_\_\_\_  
Intended Use and Occupancy \_\_\_\_\_  
\_\_\_\_\_  
Importance Category (*NBC, Sentence 4.1.2.1(3)*) \_\_\_\_\_  
Site Location \_\_\_\_\_  
Applicable Building Code \_\_\_\_\_  
Builder's Name and Address \_\_\_\_\_  
Owner's Name and Address \_\_\_\_\_

### **2. DESIGN STANDARDS**

**Engineer's Initials\***  
\_\_\_\_\_

*National Building Code of Canada 2005, Part 4: Structural Design*  
CAN/CSA-S16-01, *Limit States Design of Steel Structures*  
CAN/CSA-S136-01, *North American Specification for the Design of Cold-Formed Steel Structural Members*  
Other (specify) \_\_\_\_\_ dated \_\_\_\_\_

### **3. MANUFACTURING STANDARDS**

- (a) Fabrication has been, or will be, in accordance with CAN/CSA-S16 and CAN/CSA-S136, as applicable.
- (b) Welding has been or will be performed in accordance with CSA-W59 and CAN/CSA-S136, as applicable.
- (c) The Manufacturer has been certified in accordance with CSA-W47.1, for Division 1 or 2 and/or CSA-W55.3 if applicable.
- (d) Welders have been qualified in accordance with CSA-W47.1.

### **4. PURLIN STABILITY**

Purlin braces are provided in accordance with CAN/CSA-S136, Clause D3 and Appendix B, Clause D3.2.3. In particular, for a standing seam roof supported on movable clips, braces providing lateral support to both top and bottom purlin flange have been or will be provided. The number of rows is determined by analysis but in no case is less than 1 for spans up to 7m inclusive or less than 2 for spans greater than 7m.

### **5. LOADS**

#### **(a) Snow and Rain Load**

1-in-50 year ground snow load,  $S_s$ , \_\_\_\_\_ (kPa)  
1-in-50 year associated rain load,  $S_r$ , \_\_\_\_\_ (kPa)  
Wind exposure factor,  $C_w$ , \_\_\_\_\_  
Basic roof snow load factor,  $C_b$ , \_\_\_\_\_  
Importance factor,  $I_s$ , \_\_\_\_\_  
Roof snow load,  $S$ , \_\_\_\_\_ (kPa)  
Drift load considered (*NBC Sub-section 4.1.6.2.8*) refer to drawing of specific building  
Specified rain load (*NBC, Article 4.1.6.4*) \_\_\_\_\_ (mm)

*\*Initial each true statement. Mark N/A if statement does not apply.*

(Continued)

Engineer's Initials\*  
\_\_\_\_\_

**(b) Full and Partial Snow Load**

- (i) Applied on any one and any two adjacent spans of continuous purlins.
- (ii) Applied on any one and any two adjacent spans of modular rigid frames with continuous roof beams.
- (iii) Applied as described for the building geometry in *NBC*, Part 4, and in the User's Guide – *NBC 2005 Structural Commentaries (Part 4), Commentary G: Snow Loads*.

**(c) Wind Load**

1-in-50 year reference velocity pressure \_\_\_\_\_ (kPa)  
 Importance factor,  $I_w$ , \_\_\_\_\_

**(d) Wind Load Application**

- (i) Applied as per *NBC*, Part 4, Sub-section 4.1.7.
- (ii) Pressure coefficients as per User's Guide – *NBC 2005 Structural Commentaries (Part 4), Commentary I: Wind Loads*, Figures I3 thru I12.
- (iii) Building internal pressure Category \_\_\_\_ per User's Guide – *NBC 2005 Structural Commentaries (Part 4), Commentary I: Wind Loads*.

**(e) Crane Loads (where applicable)**

Type \_\_\_\_\_ (top-running) (under-running) (jib)  
 Capacity \_\_\_\_\_ (tonnes)  
 Wheel base \_\_\_\_\_ (m)  
 Maximum static, vertical wheel load \_\_\_\_\_ (kN)  
 Vertical impact factor \_\_\_\_\_  
 Lateral factor \_\_\_\_\_ (%) lateral wheel load \_\_\_\_\_ (kN)  
 Longitudinal factor \_\_\_\_\_ (%) maximum longitudinal load \_\_\_\_\_ (kN/side)

**(f) Mezzanine Live Load** \_\_\_\_\_ (kPa)

**(g) Seismic Load**

Applied as per *NBC*, Part 4, Sub-section 4.1.8  
 $S_a(0.2)$  \_\_\_\_\_  $S_a(0.5)$  \_\_\_\_\_  $S_a(1.0)$  \_\_\_\_\_  $S_a(2.0)$  \_\_\_\_\_  $F_a$  \_\_\_\_\_  $F_v$  \_\_\_\_\_  $I_E$  \_\_\_\_\_  
 Site Class \_\_\_\_\_

**(h) Other Live Loads** (specify)  
\_\_\_\_\_

**(i) Dead Loads**

Dead load of building components is incorporated in the design  
 Collateral load (mechanical, electrical, ceiling, sprinklers, etc) \_\_\_\_\_ (kPa)  
 Mezzanine \_\_\_\_\_ (kPa)  
 Other (specify) \_\_\_\_\_ ( )

**(j) Load Combinations**

Applied in accordance with *NBC*, Part 4 Section 4.1.

**6. GENERAL REVIEW DURING CONSTRUCTION**

The Manufacturer does not provide general review during construction for regulatory purposes.

\* Initial each section. Mark N/A if statement or section does not apply.

**7. CERTIFICATION BY ENGINEER**

I \_\_\_\_\_, a Professional Engineer registered or licensed to practice in the Province or Territory of \_\_\_\_\_, hereby certify that I have reviewed the design and manufacturing process for the steel building system described. I certify that the foregoing statements, initialed by me, are true.

Name \_\_\_\_\_ Signature \_\_\_\_\_  
 Title \_\_\_\_\_  
 Affiliation \_\_\_\_\_ Date \_\_\_\_\_

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