CSSBI

Canadian Sheet Steel Building Institute

A division of the Canadian Institute of Steel Construction

CSSBI 61:21
Cold Formed Steel Framing Members

cisc icca

CANADIAN INSTITUTE OF STEEL CONSTRUCTION
INSTITUT CANADIEN DE LA CONSTRUCTION EN ACIER

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CSSBI 61:21 Cold-Formed Steel Framing Members

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1. SCOPE AND APPLICATION

1.1 This *Certification Program* is written by the Canadian Sheet Steel Building Institute (CSSBI), a division of the Canadian Institute of Steel Construction (CISC) and administered by the CISC for non-structural and structural cold formed steel framing members. The Canadian Institute of Steel Construction is the owner, certification body, and administrator of this Certification Program.

1.2 CSSBI 61:21 replaces all previous versions of the *Program*. CSSBI 61 certificates, issued for prior versions of CSSBI 61 (CSSBI 61-2018 or older), will expire at the end of April 2022.

1.3 Only CSSBI 61 certificates issued by the CISC shall be deemed valid.

1.4 Under the CSSBI 61:21 *Certification Program*, a participating *Manufacturer* certifies that the designated structural and non-structural cold formed steel (CFS) framing members it produces meets or exceeds the ASTM International (ASTM), Canadian Standards Association (CSA) and American Iron and Steel Institute (AISI) standard requirements listed in Section 3. The *Manufacturer's Product* certification is *Validated* by the *Administrator* through review of the *Manufacturer's Product* and production practices, appropriate testing, and inspection.

1.5 Under the CSSBI 61:21 *Certification Program*, a participating Manufacturer shall provide a list of all *Products* that will be covered in the *Scope of Certification*.

1.6 The *Certification Program* applies to certain *Product*s manufactured in Canada, for sale in Canada, and that fall within the range of standard sizes specified by CSSBI 61:21.

1.7 The *Certification Program* does not restrict the *Manufacturer* from producing other products or non-standard sizes (for export or for sale in Canada), that are not covered by CSSBI 61:21. The use of CSSBI 61:21 markings, stamps, or other labeling are not permitted on products not specifically covered by the *Scope of Certification*.

1.8 The *Manufacturer* shall not use any CISC or CSSBI organizational/company logos of the CISC or CSSBI on its products, website or other material.

1.9 The list of *Products* and associated properties listed within this Standard are intended to apply to the requirements of the National Building Code of Canada.

1.10 A diligent effort has been made to develop a responsible *Certification Program*. However, the CSSBI and the CISC make no representation, warranty, or guarantee in connection with the standards or the program, and expressly disclaims any liability or responsibility for loss or damage resulting from participation; for any violation of federal, provincial, or municipal regulation with which the underlying standards may conflict; or for the infringement of any patent from the use of the code-referenced standards.

1.11 The *Manufacturer* assumes full responsibility for non-compliant manufactured *Product.*

2. REFERENCE DOCUMENTS

The publication dates for the listed reference documents are for reference only. The most recent applicable published version of the standards (referenced by the governing Building Code(s) and product Standard(s)) is to be used by the *Manufacturer*. It is the responsibility of the *Manufacturer* to be compliant to the applicable governing Building Code.

2.1 American Society for Testing and Materials (ASTM)

ASTM A370, Standard Test Methods and Definitions for Mechanical Testing of Steel Products

ASTM A653/A653M, Standard Specification for Steel Sheet Zinc-Coated (Galvanized) or Zinc-Iron Alloy- Coated (Galvannealed) by the Hot-Dip Process

ASTM A792/A792M, Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot- Dip Process

ASTM A924/A924M, Standard Specification for General Requirements for Sheet Steel, Metallic Coated by the Hot-Dip Process

ASTM C645, Standard Specification for Nonstructural Steel Framing Members

ASTM C754, Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products

ASTM C955, Standard Specification for Cold-Formed Steel Structural Framing Members

2.2 Canadian Standards Association (CSA)

CAN/CSA-S136-2016, North American Specification for the Design of Cold-Formed Steel Structural Members

2.3 American Iron and Steel Institute (AISI)

S220-2020, North American Standard for Cold-Formed Steel Framing – Nonstructural Members

S240-2020, North American Standard for Cold-Formed Steel Framing – Structural Members

2.4 ICC Evaluation Service

ICC-ES-AC86, Acceptance Criteria for Cold-Formed Steel Framing Members – Interior Non load-Bearing Wall Assemblies, May 2012

2.5 National Research Council (NRC)
National Building Code of Canada, 2015

3. DEFINITIONS

3.1 *Administrator*: The Canadian Institute of Steel Construction (CISC), is the certification authority and administrator of this certification program.

3.2 *Annual Audit:* The planned and scheduled audit verifying conformance to this Standard

3.3 *Auditor*: The *Administrator*'s approved auditing agent that physically conducts facility audits and submits their recommendations to the *Administrator*.

3.4 *Certification Program*: The program described by these *Certification Program* requirements.

3.5 *Compliance Label*: A permanent sticker or label affixed to the certified *Products* to identify them as meeting the requirements of this *Certification Program*. (See Appendix A10)

3.6 *Compliance Marking:* A permanent marking (etched, stenciled, printed, engraved or embossed) on certified Products to identify them as meeting the requirements of this Certification Program. (See Appendix A10)

3.7 *Intermediate Audit:* The mid-year audit to which only a short notice period is given.

3.8 *Manufacturer*: A company that manufactures cold formed steel framing members.

3.9 *Non-Structural Member*: A member in a steel-framed system that complies with ASTM C645 and AISI S220 that is not part of the gravity load-resisting system, lateral force-resisting system or building envelope.

3.10 *Product*: *Non-Structural* and *Structural* cold formed steel framing products.

3.11 *Scope of Certification:* the list of products, from those defined in this Standard, to which the Manufacturer wishes to have certified.

3.12 *Structural Member*: A member that complies with ASTM C955 and AISI S240 that resists factored loads, as required by the applicable building code, except when defined as a *Non-Structural Member*.

3.13 *Validate*: The process by which a separate determination is made that a *Manufacturer*'s certification is in accordance with the *Certification Program* requirements.

3.14 Verify: Determine that the activity or condition conforms to specified Certification Program requirements.

4. ELIGIBILITY

4.1 This *Certification Program* is restricted to CSSBI Members, and CSSBI Member applicants once approved.

4.2 This *Certification Program* is plant location specific. For *Manufacturers* with more than one manufacturing plant or facility, each plant or facility producing *Products* must participate in the *Certification Program* independently for the products covered.

4.3 Each participating manufacturing facility shall be subject to audits as outlined in these *Certification Program* requirements.

5. PRODUCT REQUIREMENTS

5.1 The *Manufacturer* may include one or all *Products* listed in Appendix A into their Scope of Certification.

5.2 The *Manufacturer* may request an addition to their Scope of Certification. Additions to Scope of Certification require an audit of the *Manufacturer.*

5.3 The *Manufacturer* shall immediately notify the *Auditor* and *Administrator* of *Products* that have been discontinued, or no longer to be included in the *Program*.

5.4 *Products* shall comply with the grades, yield stress, dimensions, tolerances and marking requirements given in Appendix A.

6. QUALITY MANAGEMENT SYSTEM AND REQUIREMENTS

6.1 Participating *Manufacturers* are required to document their quality control program in a quality management system that meets the following requirements.

6.1.1 A quality manual is required for each manufacturing facility that will be manufacturing *Products*.

6.1.2 The quality manual shall be signed and dated by an authorized representative of the *Manufacturer*.

6.1.3 The quality manual shall clearly state the facility name of the manufacturing location, the street address and telephone number, and the name of the contact person at the facility.

6.1.4 There shall be provisions for the quality manual to be reviewed at least annually. A record of revisions shall be maintained.

6.1.5 The quality management system shall indicate how the recognized *Product* is to be identified in the field.

6.1.6 The quality management system shall provide a means to trace finished *Product* back to the production and quality control records at the manufacturing facility and to the mill test certificates.

6.1.7 The quality management system shall include a description of the duties and responsibilities assigned to key positions in the quality program.

6.1.8 The quality management system shall describe the process whereby (1) records are kept of all significant complaints about the *Product*(s) covered by the listing or evaluation report; (2) appropriate action is taken with respect to such complaints; and (3) the actions taken are documented.

6.2 The quality management system shall include detail drawings of all *Product*s.

6.3 Tests shall Verify the following: Steel thickness, yield stress, tensile strength, total elongation, coating type and coating mass. Where required by Section A3.2 of CSA-S136, verification of ductility shall be included.

6.3.1 For steel specified as complying with one of the steel specifications noted in Section A3.1 of CSA-S136, verification for each incoming steel coil shall be in the form of mill certificates or independent laboratory tests.

6.3.2 For steel permitted under Section A3.2 of CSA-S136, test data for each incoming steel coil shall be from independent laboratory tests.

6.3.3 For steel without a mill certificate identifying a published steel specification, the values for yield stress (F_y) and tensile strength (F_u) shall be verified in accordance with Section A3.2 of CSA-S136.

6.3.4 Records of all mill certificates, independent laboratory tests and in-house tests shall be accessible by the *Manufacturer* for a minimum of two years.

6.4 Coils without Mill Certification:

6.4.1 Material without mill certification requires periodic measurement of material base steel thickness (uncoated). The base steel thickness can be determined from measuring the coated thickness and deducting the following metallic coating thickness:

Coating Designation (Imperial)	Coating Designation (Metric)	Coating Thickness (in)	Coating Thickness (mm)
G40*	Z120*	0.0007	0.017
G60	Z180	0.0010	0.025
G90	Z275	0.0015	0.039
AZ50	AZM150	0.0016	0.040
AZ55	AZM165	0.0017	0.044

Note: * G40 coating only for non-structural (NS) (refer to AISI 220-20)

6.4.2 Measurements of material thickness shall be performed with calibrated equipment, either in-house or by an independent laboratory.

6.4.3 Measure each slit coil at two locations: the beginning, and the end.

6.4.4 Quality control tests for yield stress, tensile strength, and elongation shall be conducted in accordance with ASTM A370. Testing for the metallic coating shall be conducted in accordance with ASTM A924/A924M.

6.4.5 In addition to the tests listed in this Section, the documentation shall include the following:

- Minimum yield stress used in design.
- Minimum base steel thickness (uncoated) allowed for each designation thickness. Minimum base steel thickness shall not be less than 95 percent of the design thickness.

6.5 Incoming Materials: The quality management system shall include procedures regarding inspections or tests that are conducted on incoming materials, or other means used to determine that the materials meet specifications (for example, mill test reports, certificates of analysis, certificates of compliance, etc.). If incoming material requiring a certificate at the time of receipt does not carry such a certificate, then the documentation shall contain provisions for the material to be segregated until it has been appropriately tested or inspected, or the certificate is received.

6.6 Process Quality Control: The quality management system shall describe the process quality control procedures, including how manufacturing processes are monitored to ensure that the *Product* is consistently manufactured within the allowable tolerances and any final inspections and/or tests that are conducted before the *Product* bundle is labeled and shipped.

6.7 Nonconforming Materials: The quality management system shall specify how nonconforming materials, incoming materials, materials in production, and finished materials are segregated from production until a decision is made as to their disposition.

6.8 Measuring and Test Equipment:

6.8.1 The quality management system shall identify the measuring and test equipment that is used to determine whether *Product*s and materials meet minimum specifications.

6.8.2 As regards the equipment addressed in cl. 6.8.1, the quality management system shall note the frequency of equipment calibration, and the means of determining the traceability of measurements to national standards.

6.9 **Inspection and Test Records**: As regards any forms, checklists, reports, etc., used by in-house personnel to document tests, inspections, and other quality control procedures:

6.9.1 The quality management system shall identify these documents.

6.9.2 The quality management system shall describe how the completed documents are approved by responsible personnel.

6.9.3 The quality management system shall contain a statement committing the *Manufacturer* to retaining the completed forms, checklists, and reports for a minimum of two years. (In cases where third-party inspections are required, the statement shall also say that the resulting inspection reports will be accessible for at least two years.)

7. ADMINISTRATOR REVIEW OF APPLICATIONS

7.1 The prospective *Manufacturer* submits all required application documents including the list of products to be covered by this Standard, to the *Administrator*.

7.2 The *Administrator* shall review the application, and if deemed acceptable, shall assign an *Auditor* to the *Manufacturer*.

7.3 The *Manufacturer* shall submit their quality documents to the *Auditor*. The *Auditor* shall review the *Manufacturer's* quality documents and shall indicate whether additional information is required.

7.4 After approval by the *Auditor* of the quality documents, an initial announced audit (agreed upon date) shall be scheduled by the *Auditor*. During the initial audit, the *Auditor* shall *Verify* that the quality management system in use is the same as represented by the approved quality manual.

8. COMPLIANCE AND QUALITY ASSURANCE CERTIFICATION AUTHORIZATION

8.1 Compliance and quality assurance certification certificate and authorization shall be the responsibility of the *Administrator*. Authorization shall be based upon receipt of an approved quality manual, the list of products to be within the *Scope of Certification*, the satisfactory completion of the manufacturing facility audit, and other information necessary to demonstrate compliance with the *Certification Program* requirements.

8.2 When the *Administrator* determines that the *Certification Program* requirements are satisfied, it shall issue a compliance and quality assurance certification authorization and add the *Manufacturer*'s facility to the certified manufacturing facilities list. The authorization shall be valid for a maximum of one year.

8.3 The compliance and quality assurance certification certificate and authorization shall be sent to the *Manufacturer* with the following information:

8.3.1 The date on which certification authorization has been granted for the manufacturing facility.
8.3.2 *Manufacturer*'s name and manufacturing location
8.3.3 *Manufacturer*'s approved unique manufacturer's identification code
8.3.4 *Manufacturer*'s *Scope of Certification*
8.3.5 The date of expiry.

8.4 Upon receipt of a compliance and quality assurance certification authorization, the *Manufacturer* is permitted to use the *Compliance Label*.

8.5 The *Manufacturer* shall notify the Auditor and Administrator if additions or reductions to its *Manufacturer's Scope of Certification* are required.

9. NOTICE OF FAILURE TO QUALIFY

9.1 If the application or initial manufacturing facility audit does not demonstrate compliance with all the *Certification Program* requirements, the *Manufacturer* shall be issued a report and action items by the *Auditor*, as per Sections 14 and 15. Only after successful resolution of the action items, to the satisfaction of the *Auditor and Administrator*, shall compliance and quality certification authorization be granted.

9.2 The notice shall include:

9.2.1 *Manufacturer*'s name and plant location.
9.2.2 The specific issue(s) on which failure to qualify is based.

10. OFFICIAL LIST OF CERTIFICATION PROGRAM PARTICIPANTS

10.1 When a compliance and quality assurance certification authorization is issued, the *Manufacturer* is entered into the certified manufacturing facilities list which is accessible via the Internet.

10.2 The certified manufacturing facilities list shall contain the following:

10.2.1 Each *Manufacturer*'s name and plant location.
10.2.2 Optional hyperlink to the *Manufacturer*'s web site.

10.3 The *Administrator* shall post all certified companies. When there is a disagreement between the certificate and the website listing, the website listing shall be used.

11. CHANGE IN MANUFACTURING LOCATION

11.1 If a manufacturing facility producing *Certified Products* under this *Certification Program* is moved from one location to another, it is required to undergo an evaluation as a new plant.

12. FIELD TESTING OF PRODUCT

12.1 Any *Manufacturer,* or stakeholder, may submit samples and proof of non-compliant product to the *Administrator*, identified by date and location of collected sample.

12.2 If the field samples, as per cl. 12.1, are found to be non-compliant, the *Auditor* may conduct an unannounced audit of the *Manufacturer*. No prior notice or warning of an audit will be required. The non-conformity shall also be audited (or re-audited) at the next audit.

13. AUDIT OF MANUFACTURING PLANTS OR FACILITIES

13.1 The *Auditor* shall conduct an initial and subsequent annual audits of the *Manufacturer*'s facility. Annual audits will be planned and announced. Audits will proceed after receipt of satisfactory application, documentation, and other requirements as directed by the *Administrator.* Annual audits shall cover the *Manufacturer's* QMS and *Product* verification.

13.2 Intermediate (mid-year) "short-notice" audits shall be conducted between annual audits (one per year). The first intermediate audit shall be conducted within 3 months of initial certification. The *Auditor* will contact the *Manufacturer* to confirm if the first or secondary contact is available. Once confirmed, the *Auditor* will visit the company during that day and perform the audit. Intermediate audits are for the primary purpose of product verification sampling and for QMS conformity issues/non-conformity follow-up/validation. CAR's may be issued at intermediate audits for any discovered non-conformity. It shall be the responsibility of the *Manufacturer* to have their plant available for audited.

13.3 In the event of repeated gross non-conformity, unannounced audits may be conducted by the Auditor (refer to cl.12.2).

13.4 The *Manufacturer* shall designate an audit contact to be responsible for working with the *Auditor* during the in-plant or in-facility audits.

13.4.1 The audit contact shall be familiar with all production and quality control processes at that plant and be able to provide full access to all areas as requested by the *Auditor*.

13.4.2 It is required that at least one secondary contact be available that can work with the *Auditor* in the event the primary audit contact is not available when the *Auditor* arrives.

13.4.3 If a knowledgeable person is not available, the audit will be rescheduled.

13.4.4 If a knowledgeable person is not available in an audit related to clause 13, then a company guide shall be provided by the *Manufacturer* for the *Auditor.*

13.5 During the audit, the *Auditor* shall have copies of the *Certification Program* requirements, the *Manufacturer*'s quality manual, and other information submitted by the *Manufacturer* to support approval for participation.

13.6 During the manufacturing facility audits, the *Auditor* shall *Verify* that:

13.6.1 The manufacturing facility quality management system used in practice is in compliance with the quality management system approved by the *Administrator* for participation in the *Certification Program*.

13.6.2 The *Products* being produced are consistent with those approved for participation in the *Certification Program*.

13.7 At the initial audit, all product sizes designated by the *Manufacturer*, in their desired *Scope of Certification,* shall be evaluated. At subsequent annual audits, the auditor shall randomly evaluate a minimum of 15% of the structural and 15% of the nonstructural products included in the *Manufacturer's Scope of Certification (as applicable).* All designated *Products* within the *Manufacturer's Scope of Certification* must be tested at least once every 5 years in order for that *Product* to remain in the Scope of Certification. It is the responsibility of the manufacturer to ensure the testing requirements for each *Product* is completed in the prescribed period. The evaluation will verify the following properties:

13.7.1 *Product* shape, dimensions & thickness: The samples shall be evaluated for compliance with Appendix A.

13.7.2 Marking: The samples shall be evaluated for compliance with Appendix A10.

14. AUDIT REPORT

14.1 Following each audit of the *Manufacturer*'s manufacturing facility the *Auditor* shall submit a comprehensive report of the *Auditor*'s findings to the participating *Manufacturer*.

14.2 The *Auditor* shall discuss all findings with the audit contact or company representative at the time of the on-site audit and shall be done at a closing meeting following completion of the audit. The *Auditor's report shall be issued to the Manufacturer's* designated representative within 3 days of the date of audit.

14.3 The audit report shall contain all official comments, or decisions with respect to conformity or non-conformity (CAR's) with the *Certification Program* requirements. The report shall also outline any matters requiring clarification, or any other required action on the part of the *Manufacturer*, with associated deadlines for response.

14.4 The audit report shall be confidential between the *Auditor* and *Administrator*.

15. CORRECTIVE ACTIONS

15.1 Issues of non-conformity with the *Certification Program* requirements shall result in the issuance of a Corrective Action Request (CAR) as part of the audit report. The *Manufacturer* shall respond to all CARs within the time frame stipulated in the audit report. CAR items represent non-conformity and may include, but are not limited to, the following:

15.1.1 Inconsistencies between the approved quality control manual and actual practice that do not affect *Product* compliance with the *Certification Program* performance requirements.
15.1.2 Lack of records providing traceability from finished *Product* to quality control records.
15.1.3 Improper use of *Compliance Labels or Markings*.
15.1.4 Illegible marking. This may include, but is not limited to, any of the following: intermittent marking illegibility, intermittent skips of ink, improper spacing of marking, and intermittent mis-marking of *Product* description due to operator error.
15.1.5 Disregard of marking requirements (e.g. not including all of the required items).

16. NOTICE OF NON-CONFORMITY

16.1 Issues of non-conformity with the Certification Program shall result in the issuance of a Notice of Non-Conformity by the *Auditor*. Issues of non-conformity include, but are not limited to, the following:

(a) Failure to respond to audit report CARs within 30 days of receipt of the audit report.
(b) Failure to follow through with CAR resolutions.
(c) Labeling *Products* not included in the *Certification Program*.

(d) Intentional labeling of *Product*s fabricated from material that does not comply with *Certification Program* requirements.
(e) Intentional labeling of *Product*s not meeting the dimensional requirements for certified *Products*.
(f) Non-conformity of sample(s) evaluated during the audit.
(g) Intentional use of *Compliance Labels* in a manner not permitted by the *Certification Program*.
(h) Failure to have *Product* available for inspection and sampling at each audit.

16.2 The Notice of Non-Conformity shall state:
(a) The reason for issuance of the Notice of Non-Conformity.
(b) Instruction for responding to the *Auditor.*
(c) A deadline within which a response must be received by the *Auditor* to avoid a revocation of compliance certificate and authorization.

17. MANUFACTURER'S RESPONSE TO CORRECTIVE ACTION REQUESTS AND NOTICES OF NON-CONFORMITY

17.1 The *Manufacturer* shall be given a period of 30 days from the date of receipt of the audit report to address action CARs to the satisfaction of the *Auditor*.

17.2 In the event a Notice of Non-Conformity has been issued, the *Manufacturer* shall be required to respond to the Notice of Non-Conformity within 10 days of receipt with an action plan that outlines a proposal to resolve the non-conformities. The *Auditor* shall either accept the action plan as submitted or work with the *Manufacturer* to revise the plan to their satisfaction. Following approval of the action plan by the *Auditor*, the *Manufacturer* shall have 30 days from receipt of approval to implement the plan. The *Auditor* shall conduct a follow-up audit to *Verify* implementation.

18. REVOCATION OF COMPLIANCE CERTIFICATION AND AUTHORIZATION

18.1 When a revocation of compliance authorization is issued, the manufacturing facility is removed from the certified manufacturing facilities list.

18.2 The following issues shall result in issuance of a revocation of compliance authorization:
(a) Failure to respond to a Notice of Non-Conformity with an action plan.
(b) Failure to implement an approved action plan.
(c) Repeat observations, occurrences, or substantiated reports of non-conforming product.
(d) Lack of an effective quality management system

18.3 When a *Manufacturer* is issued a revocation of compliance authorization for a specific manufacturing facility, the *Manufacturer* shall immediately discontinue use of *Compliance Labels or Compliance Markings* at that facility.

18.3.1 All references to participation on the CSSBI *Certification Program* for *Products* shall cease for that location.

18.3.2 All affected *Products* within the *Manufacturer*'s control shall have the *Compliance Labels* obliterated or removed.

18.4 The *Certification Program* is structured to allow revocation of compliance authorization for *Products* produced at a particular facility. *Manufacturers* that produce the same *Product* at multiple facilities may continue to mark or label compliant *Products* produced at facilities not listed in the *Administrator*'s notice of revocation of compliance authorization. However, when doing so *Manufacturers* shall market such compliant *Products* in a manner that does not result in confusion or deception to consumers, distributors or others.

18.5 Once a notice of revocation of compliance authorization is issued for a manufacturing location, a new notice of compliance authorization may only be applied for after satisfying the compliance requirements of the *Certification Program*.

19. COMPLIANCE LABEL OR MARKING

19.1 *Manufacturers* must use the official *Compliance Label or Marking* on *Products* to identify all compliant *Products* and may use the *Compliance Label* on *Product* literature and/or *Products* to identify compliant *Products*.

19.2 The *Administrator* shall have sole authority to authorize application of *Compliance Labels or Marking* at the request of the *Manufacturer*.

19.3 *Compliance Labels or Markings* shall be permanently affixed or marked to each *Product* at a maximum spacing of 96" (2440mm) on centre, and as described in Appendix A10.

19.4 Other manufacturer's product information may be added to the member but shall be placed no closer than 12" (310mm) before or after the certification markings. The certification marking must follow the order of information shown in Appendix A10.

19.5 By applying *Compliance Labels*, the *Manufacturer* is certifying that the *Products* bearing the label comply with the *Certification Program* requirements.

19.6 Only *Compliance Labels or Markings* developed and approved by the *Administrator* may be applied.

19.7 *Compliance Labels or Markings* on *Products* shall be applied at the time and place of manufacture.

19.8 The *Compliance Label or Marking* shall be used in its entirety and may not be modified by the *Manufacturer* without written consent from the *Administrator*.

19.9 The *Compliance Label or Marking* shall not be used or placed in such a manner as to imply any other endorsements or certifications by the *Administrator*.

19.10 *Manufacturers* may use the *Compliance Label or Marking* in literature when it appears in direct connection with references to this *Certification Program* and only on pages where all *Products* are certified.

19.11 The use of *Compliance Label*s and any other reference to this *Program* in literature, website, stationery, or other medium is not permitted by a non-certified company or one that has had their certification revoked.

19.12 The original *Label or Marking* shall not be covered, relabeled, modified, or removed.

19.13 The Administrator may post, without notice and for public safety reasons, the names of un-certified companies that are improperly using or referencing either CISC or CSSBI labels, logos, brands.

20. QUESTIONS RELATED TO THE CSSBI CERTIFICATION PROGRAM

20.1 Questions about the CSSBI *Certification Program* or applicability of specific sections of the *Certification Program* shall be asked of the *Administrator*.

APPENDIX A: PRODUCT SIZES AND SPECIFICATIONS

A1. Base Steel Thickness

Products shall be cold-formed to shape from sheet steel with a steel thickness listed in Table A1-1. *Product* thickness shall be referenced to the corresponding designation thickness. *Manufacturers* of *non-structural* members (NS) who can show third-party testing in accordance with ICC-ES AC86 (Approved May 2012), and conform to the limiting height tables in ASTM C754, need not meet the minimum base steel thickness limitation set forth in Table A1-1.

Table A1-1: Thickness

Designation Thickness	Minimum Base Steel Thickness		Design Thickness	
	(inch)	(mm)	(inch)	(mm)
NS	95% of Design Thickness		By Manufacturer	
18*	0.0179	0.455	0.0188	0.478
33	0.0329	0.836	0.0346	0.879
43	0.0428	1.087	0.0451	1.146
54	0.0538	1.367	0.0566	1.438
68	0.0677	1.720	0.0713	1.811
97	0.0966	2.454	0.1017	2.583

Note: * Non-structural (NS) thickness

A2. Material Specification

Products shall be cold-formed to shape from sheet steel in compliance with the requirements AISI S220 or AISI S240 (and supplements) as applicable in compliance with ASTM A653/A653M Type SS or ASTM A792/A792M Type SS. The design yield stress of the material shall be related to the thickness as listed in Table A2-1. The applicable yield stress (metric or imperial units) is based on how the *Manufacturer* orders steel from the steel supplier. *Non-Structural* (NS) members may have a design yield stress greater than 33 ksi (230 MPa) if the *Product* satisfies the applicable requirements of ASTM C645.

Table A2-1: Design Yield Stress		
Designation Thickness	Design Yield Stress (ksi)	(MPa)
NS	By Manufacturer	
18	33	230
33	33	230
43	33	230
54	50	345
68	50	345
97	50	345

A3. Product Designator

Products shall comply with the minimum metallic coating weight [mass] requirements shown in Table A3-1.

Table A3-1: Coating Weight [Mass] Requirements (Metallic Coatings)	
Member Type	Coating Designation
Structural	G60 [Z180][A] AZ50 [AZM150][B]
Non-Structural	G40 [Z120][A] AZ50 [AZM150][B]

[A] Zinc-coated steel sheet as described in ASTM Specification A653/A653M.

[B] 55% aluminum-zinc alloy-coated steel sheet as described in ASTM Specification A792/A792M.

A4. Product Designator

References to *Structural* and *Non-Structural Product*s shall use a four-part *Product* designator that identifies the size (both web depth and flange width), style, and thickness. The standard designator as described (i.e., based on Imperial units) shall be used for either Imperial or SI Metric units. The *Product* designator shall consist of the following sequential codes:

A three- or four-digit numeral indicating member web depth in 1/100 inch.

A letter indicating:

S = Stud or joist framing member which has lips
T = Track section

A three-digit numeral indicating flange width in 1/100 inch, followed by a dash, and a two- or three-digit numeral indicating designation thickness.

A5. Product Sizes

The standard shapes for *Products* are listed in Tables A5-1 through A5-3. *Structural* members have a thickness of 33 to 97 mils. *Non-Structural* members are identified as NS.

Table A5-1: Wall Stud Sizes

Designation	Thickness (mils)					
	NS/18	33	43	54	68	97
162S125	X					
250S125	X					
362S125	X	X	X	X		
362S162		X	X	X	X	X
362S200		X	X	X	X	X
362S250		X	X	X	X	X
362S300		X	X	X	X	X
400S125	X	X	X	X		
400S162		X	X	X	X	X
400S200		X	X	X	X	X
400S250		X	X	X	X	X
400S300		X	X	X	X	X
600S125	X	X	X	X		
600S162		X	X	X	X	X
600S200		X	X	X	X	X
600S250		X	X	X	X	X
600S300		X	X	X	X	X
800S162			X	X	X	X
800S200			X	X	X	X
800S250			X	X	X	X
800S300			X	X	X	X

Table A5-2: Floor Joist Sizes				
Designation	Thickness (mils)			
	43	54	68	97
600S162	X	X	X	X
600S200	X	X	X	X
600S250	X	X	X	X
600S300	X	X	X	X
800S162	X	X	X	X
800S200	X	X	X	X
800S250	X	X	X	X
800S300	X	X	X	X
1000S162		X	X	X
1000S200		X	X	X
1000S250		X	X	X
1000S300		X	X	X
1200S162			X	X
1200S200			X	X
1200S250			X	X
1200S300			X	X
1400S162			X	X
1400S200			X	X
1400S250			X	X
1400S300			X	X

Table A5-3: Track Sizes						
Designation	Thickness (mils)					
	NS/18	33	43	54	68	97
162T125	X					
250T125	X					
362T125	X	X	X	X	X	X
362T200		X	X	X	X	X
362T300		X	X	X	X	X
400T125	X	X	X	X	X	X
400T200		X	X	X	X	X
400T300		X	X	X	X	X
600T125	X	X	X	X	X	X
600T200		X	X	X	X	X
600T300		X	X	X	X	X
800T125			X	X	X	X
800T200			X	X	X	X
800T300			X	X	X	X
1000T125				X	X	X
1000T200				X	X	X
1000T300				X	X	X
1200T125					X	X
1200T200					X	X
1200T300					X	X
1400T125					X	X
1400T200					X	X
1400T300					X	X

A6. Tolerances

Structural members shall comply with the manufacturing tolerances in AISI S240 (listed in Table A6-1, and illustrated in Figure A6-1). *Non-Structural members* shall comply with the manufacturing tolerances in AISI S220 (listed in Table A6-2, and illustrated in Figure A6-1). All measurements shall be taken not less than 1 ft (305 mm) from the end of the member.

Table A6-1: Manufacturing Tolerances for Structural Members

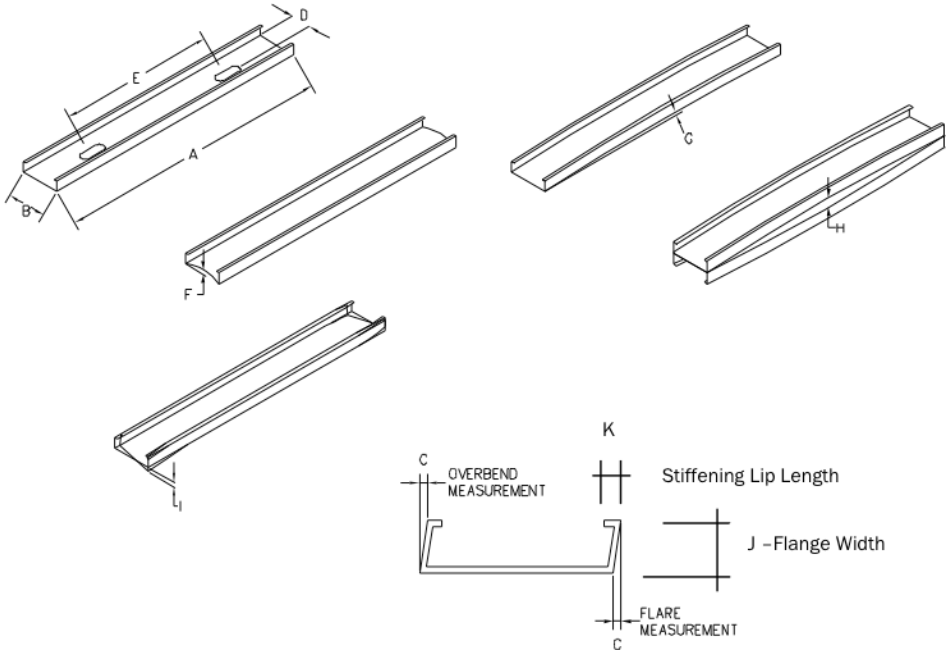
Dimension[1]	Item Checked	Studs, in. (mm)	Tracks, in. (mm)
A	Length	+3/32 (2.38)	+ 1/2 (12.7)
		-3/32 (2.38)	-1/4 (6.35)
B[2]	Web Depth	+1/32 (0.79)	+1/32 (0.79)[4]
		-1/32 (0.79)	+1/8 (3.18)[4]
C	Flare	+1/16 (1.59)	+0 (0)
	Overbend	-1/16 (1.59)	-3/32 (2.38)
D	Hole Center Width	+1/16 (1.59)	NA
		-1/16 (1.59)	NA
E	Hole Center Length	+1/4 (6.35)	NA
		-1/4 (6.35)	NA
F	Crown	+1/16 (1.59)	+1/16 (1.59)
		-1/16 (1.59)	-1/16 (1.59)
G[3]	Camber	1/8 per 10 ft (3.13 per 3 m)	1/32 per ft (2.60 per m)
			1/2 max (12.7)
H[3]	Bow	1/8 per 10 ft (3.13 per 3 m)	1/32 per ft (2.60 per m)
			1/2 max (12.7)
I	Twist	1/32 per ft (2.60 per m)	1/32 per ft (2.60 per m)
		1/2 max (12.7)	1/2 max (12.7)
J	Flange Width	+1/8 (3.18)	+1/4 (6.35)
		-1/16 (1.59)	-1/16 (1.59)
K	Stiffening Lip Length	+1/8 (3.18)	NA
		-1/32 (0.79)	

[1] All measurements are taken not less than 1 ft (305 mm) from the end.
[2] Outside dimension for *stud*; inside for *track*.
[3] 1/8 inch per 10 feet represents L/960 maximum for overall camber and bow. Thus, a 20-foot-long member has 1/4 inch permissible maximum; a 5-foot-long member has 1/16-inch permissible maximum.
[4] The two over-tolerances are needed to ensure the stud depth is never greater than the track depth.

Table A6-2: Manufacturing Tolerances for Non-Structural Members			
Dimension[1]	**Item Checked**	**Studs, in. (mm)**	**Tracks, in. (mm)**
A	Length	+1/8 (3.18)	+ 1(25.40)
		-1/4 (6.35)	-1/4 (6.35)
B[2]	Web Depth	+1/32 (0.79)	+1/8 (3.18)
		-1/32 (0.79)	-0 (0)
C	Flare	+1/16 (1.59)	+0 (0)
	Overbend	-1/16 (1.59)	-3/16 (4.76)
D	Hole Center Width	+1/8 (3.18)	NA
		-1/8 (3.18)	NA
E	Hole Center Length	+1/4 (6.35)	NA
		-1/4 (6.35)	NA
F	Crown	+1/8 (3.18)	+ 1/8 (3.18)
		-1/8 (3.18)	- 1/8 (3.18)
G[3]	Camber	1/32 per ft (2.6 per m)	1/32 per ft (2.6 per m)
		1/2 max (12.7)	1/2 max (12.7)
H[3]	Bow	1/32 per ft (2.6 per m)	1/32 per ft (2.6 per m)
		1/2 max (12.7)	1/2 max (12.7)
I	Twist	1/32 per ft (2.6 per m)	1/32 per ft (2.6 per m)
		1/2 max (12.7)	1/2 max (12.7)
J	Flange Width	+1/8 (3.18)	+1/2 (12.7)
		-1/16 (1.59)	-1/16 (1.59)
K	Stiffening Lip Length	+1/8 (3.18)	NA
		-1/32 (0.79)	

[1] All measurements shall be taken not less than 1 ft (305 mm) from the end.
[2] Outside dimension for *stud*; inside for *track*.
[3] 1/8 inch per 10 feet represents L/960 maximum for overall camber and bow. Thus, a 20-foot-long member has 1/4 inch permissible maximum; a 5-foot-long member has 1/16-inch permissible maximum.

Figure A6 1: Tolerance Measurements



A7. Inside Bend Radius

The size of the inside bend radius used for design shall comply with the requirements shown in Table A7-1.

Table A7-1: Design Inside Bend Radius

Designation Thickness	Inside Bend Radius (inch)	Inside Bend Radius (mm)	Tolerance
NS/18	0.0938	2.381	±1/16 in. (± 1.59 mm)
33	0.0764	1.941	-1/16 in. + 3/32 in. (-1.59 mm + 2.38 mm)
43	0.0712	1.808	-1/16 in. + 3/32 in. (-1.59 mm + 2.38 mm)
54	0.0849	2.156	-1/16 in. + 3/32 in. (-1.59 mm + 2.38 mm)
68	0.1069	2.715	- 3/32 in. + 1/16 in. (- 2.38 mm + 1.59 mm)
97	0.1525	3.874	- 3/32 in. + 1/16 in. (- 2.38 mm + 1.59 mm)

A8. Lip Length

The lip length on a stud or joist shall be related to the flange width as listed in Table A8-1.

Table A8-1: Design Lip Length for Studs and Joists

Section	Flange Width		Design Lip Length	
	(inch)	(mm)	(inch)	(mm)
S125	1-1/4	31.8	3/16	4.8
S162	1-5/8	41.3	1/2	12.7
S200	2	50.8	5/8	15.9
S250	2-1/2	63.5	5/8	15.9
S300	3	76.2	5/8	15.9

A9. Punchouts

Unless specified otherwise by the *Manufacturer*, factory punchouts (perforations) shall comply with the following conditions:

1. Punchouts shall be spaced along the centerline of the web of the framing member;
2. Punchouts shall have a center-to-center spacing of not less than 24 inches (610 mm);
3. Punchouts shall have a width not greater than half the member depth or 2-1/2 inches (63.5 mm), whichever is less;
4. Punchouts shall have a length not exceeding 4-1/2 inches (114 mm); and
5. The distance from the center of the last punchout to the end of the member shall not be less than 12 inches (305 mm), unless otherwise specified.

Any configuration or combination of holes that fits within the punchout width and length limitations is permitted.

A10. Compliance Labels and Markings

All individual certified *Products* shall have either a permanent legible compliance label or compliance marking (a legible and permanent label, stencil, stamp, marking, etching, engraving or embossment) on the member. The compliance marking shall not damage the properties of the *Product*. The compliance label or marking shall have the following information (in order):

1. The initials “CSSBI/ICTAB 61”;
2. The Administrator’s approved unique and plant specific manufacturer’s plant identification code (minimum of 2 characters, and maximum of 4 characters followed by unique plant designator for multiple plants, if applicable (max 3 characters);
   Example 1: XYZ identifies a manufacturer’s unique plant
   Example 2: XYZ(XXX) identifies a multiple plant company XYZ with the specific plant location identified as XXX
3. Product Designator (refer to Tables A5-1, A5-2, and A5-3)

4. The designation steel thickness (in mils) exclusive of protective coatings; for non-structural studs less than 18mils the actual thickness in inches shall be used to 4 decimal places (xxxx) (e.g. for 0.0150" the thickness shall be shown as 0150)
5. Non-Structural Designator (marked if applicable): NS
6. Yield Strength of product in ksi (XX ksi)
7. Coating Designation (imperial) (refer to Table A3-1)
8. A reference number identifying the source coil.

CSSBI/ICTAB 61-XYZ(XXX) Product Designator-thickness NS YSksi Coating Coil #

Example 1: "CSSBI/ICTAB 61-XYZ 362T125-33 33ksi G60 ABCD"
A track with designation of 362T125 with a thickness of 33 mils, a yield strength of 33 ksi, with a coating designation of G60, made from coil ABCD and manufactured by the CSSBI 61:21 certified plant XYZ.

Example 2: "CSSBI/ICTAB 61-XXYZ(001) 362S125-54 50ksi AZ50 01234"
A structural steel stud of designation 362S125 with a thickness of 54 mils, a yield strength of 50 ksi, with a coating designation of AZ50, made from coil 01234 and manufactured by the manufacturer XYZ at the CSSB 61:21 certified plant 001.

Example 3: "CSSBI/ICTAB 61-XYZ 250S125-0150 NS 33ksi G40 ABCD"
A non-structural stud that has been engineered and tested by the manufacturer in accordance to ICC-ES AC86 with designation of 250S125 with a thickness of 0.0150 inches, identified as non-structural (NS), a yield strength of 33 ksi, with a coating designation of G40, made from coil ABCD and manufactured by the CSSBI 61:21 certified plant XYZ.