

MANUFACTURING COMPLIANCE CERTIFICATION PROGRAM

for

Connectors for Cold-Formed
Steel Construction

November 2013

Implemented by:
The Steel Framing Industry Association (SFIA)
Members and Associate Members



DISCLAIMER

A concerted effort has been made to select appropriate standards and to develop a reliable *Manufacturing Compliance Certification Program*. The Steel Framing Industry Association makes no representation, warranty or guarantee in connection with the standards or the *Manufacturing Compliance Certification Program*, and expressly disclaims any liability or responsibility for loss or damage resulting from participation; for any violation of federal, state, 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.

No patent rights are implied by participation in the *Manufacturing Compliance Certification Program*. Nothing contained in the *Manufacturing Compliance Certification Program* is to be construed as granting any rights, by implication or otherwise, for the manufacture, sale, or use in connection with any method, apparatus or product covered by letters patent, nor as insuring anyone against liability for infringement of letters patent.

PREFACE

The Steel Framing Industry Association (SFIA) developed the *Manufacturing Compliance Certification Program* to verify that products produced by SFIA member and associate member companies meet certain minimum standards for manufacturing quality.

The use of steel framing products in building construction is an intelligent choice with benefits to the contractor, designer, owner and environment. The SFIA is dedicated to helping all stakeholders in our industry to be more successful by unifying the industry and expanding the market for the use of cold-formed steel framing systems through promotion, advocacy, education and innovation.

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A. General

A1 Scope

The *program requirements* listed herein are part of a *Manufacturing Compliance Certification Program* developed by the Steel Framing Industry Association (SFIA) for connectors of *structural* and *non-structural* cold-formed steel framing. These *program requirements* are *verified* by a third party, the Program Administrator (*Administrator*), and enforced by the *Compliance Committee*, made up of SFIA members. This *Compliance Program* forms part of an agreement between participating SFIA member manufacturers (*Licensees*), the Steel Framing Industry Association (*Association*) and the *Administrator*.

Under the *Manufacturing Compliance Certification Program*, a *Licensee* certifies that the connectors it produces meet or exceed its documented manufacturing requirements. The *Administrator* *validates* the *Licensee's* certification by first reviewing the *Licensee's Product* and manufacturing practices and next performing appropriate testing and inspection.

Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in any specific case, different sections of this document specify different requirements, the most restrictive shall govern.

A2 Ownership

The Steel Framing Industry Association (SFIA) owns this *Manufacturing Compliance Certification Program*. The *Administrator* is contracted by the *Association* to perform services as outlined within the *program requirements*. The *Administrator* shall seek written approval from the *Association* before performing any other services determined necessary to administer the *Manufacturing Compliance Certification Program*.

A3 Eligibility

All *Association Connector & Accessory Manufacturer* members are required to participate within the *program requirements*. For *Licensees* with more than one manufacturing plant or facility, each plant or facility producing *products* must participate in the *Manufacturing Compliance Certification Program* independently. Each participating manufacturing facility shall be subject to audits as outlined in the *program requirements* herein. *Association Manufacturer Members* producing connectors for cold-formed steel *structural* and/or *non-structural* framing may also elect to participate in the program.

A4 Definitions

Where the following terms appear in this program in italics, they shall have the meaning indicated herein. For terms not specifically defined in Section A4, the definitions in AISI S200, AISI S100, or commonly accepted meanings within the context for which

they are intended shall govern. A definition in this document supersedes all other definitions.

Acceptance Criteria. Criteria developed by ICC-ES for the evaluation of *Products* related to an *Applicable Building Code*.

Action Item. Minor issue of non-compliance with the *Program* requiring correction or resolution.

Administrator. Entity contracted by the Steel Framing Industry Association to carry out the *Administrator* functions of this *Manufacturing Compliance Certification Program*. The *Administrator* shall be accredited in accordance with ISO/IEC 17020.

Applicable Building Codes. The IRC for one- and two-family dwellings or the IBC for all other building structures.

Applicable Standards. Standards referenced in Section A5.

Approved. Approved by the *Administrator* and/or *Compliance Committee*.

Association. Steel Framing Industry Association.

Attest. Determine that the activity or condition conforms to specified requirements.

Auditor. *Administrator's* agent who physically conducts facility audits and submits his findings to the *Administrator*.

Base Steel Thickness. The thickness of the bare steel, exclusive of all coatings.

Certification Label. The *Association*-owned identifier developed for this *Manufacturing Compliance Certification Program*. The design and information in the *Certification Label* is determined by the *Compliance Committee* in conjunction with the *Administrator*.

Certified Production Facilities List. A listing of facilities that have been inspected and are authorized by the *Administrator* to produce *Certified Products*. The *Certified Production Facilities List* is maintained by the *Administrator* and made available through the *Administrator's* and *Association's* websites.

Certified Products. *Products* manufactured by the *Licensee* which are certified to meet the *Program* requirements.

Manufacturing Compliance Certification Program. The *Program* described herein.

Compliance Certification. Documentation issued by the *Administrator* allowing the *Licensee* to state that the referenced *Product* meets the requirements of the *Compliance Program*.

Compliance Committee. A committee comprised of five (5) *Association* members

appointed by the *Association's* Board of Directors. The committee shall be comprised of three (3) Connector / Accessory Manufacturer members, one contractor member and one distributor member.

Component. Cut washers, plate washers, screws, bolts, nuts, rivets, stiffeners, cold-formed steel elements, or other parts or elements that comprise a connector.

Connection. Combination of structural elements and joints used to transmit forces between two or more members.

Connector. A finished good offered for sale by a manufacturer and defined as a device comprised of one or more *Components* to transmit forces between a cold-formed steel structural member and its support.

Corrective Action. Measures taken to remedy items of non-compliance.

Day or Days. For purposes of this program's requirements, the term refers to calendar (not business) days.

Design Thickness. The steel thickness used in design, exclusive of coating. The design thickness is used to calculate physical properties and performance, except where AISI S100 indicates otherwise.

Documentation. The data furnished to substantiate a claim.

Designated Products: Specific products manufactured or assembled at each facility that are identified by the *Licensee* as those covered by the *Compliance Program* and eligible for sampling and verification of compliance. Upon verification of compliance of the *Designated Products*, they become *Certified Products*.

Exterior Application: For the purposes of this document, an *Exterior Application* is one that utilizes structural members that are installed in the exterior walls, roofs, or other similar framing applications of an enclosed building or structure.

Grade. The designation of the minimum yield strength.

IAS. International Accreditation Service is a division of the International Code Conference (ICC).

Interior Application: For the purposes of this document, an *Interior Application* is defined as one that utilizes *Structural or Non-Structural Members* that are installed inside of an enclosed building or structure.

Licensee. A manufacturer of *Products* who signs license agreements with the *Association* and the *Administrator* that permit the manufacturer to participate in the *Compliance Program*.

Mark or Marking. Identification on individual *Product* or groups of like *Products* to meet the requirements of Section D.

Material Specification Sheet. A quality document that indicates the required material specifications for a *Connector* or component.

Metallic Coating. A property of a coating applied to a cold-formed steel described as the content of metal in percentage of dry film weight.

Mil. A unit of measurement equal to 1/1000 inch.

Non-Structural Connector. A non-load rated connector in a steel framed system which is limited to a transverse (out-of-plane) load of not more than 10 lb/ft² (240 Pa), a superimposed axial load, exclusive of sheathing materials, of not more than 100 lb/ft (1460 N/m), or a superimposed axial load of not more than 200 lbs (890 N).

Notice of Non-Compliance. A report from the *Administrator* to the *Licensee* indicating that a *Product* or process is significantly out of compliance with the *Program Requirements*.

Notify/Notice or Notification. Written (hard copies) correspondence (or the act of) that is physically or electronically transferred between parties.

Product. A *Connector* or component.

Product Specification Sheet (PSS). Typically used for buyout items, this is a document and/or drawing that defines the acceptable requirements for a *Connector* or a component.

Production Drawing. A drawing that indicates the acceptable geometric configuration, dimensional tolerances, material, surface condition, and labeling requirements of the *Connector* or component.

Program Requirements. The requirements of this *Compliance Program*, as specified herein.

Quality Manual. For the purposes of this document, the *Quality Manual* shall be taken to define either a single document, or a collection of documents that represent the means and methods that the company uses for its quality program. The *Quality Manual* shall be in compliance with Section 2 of ICC-ES AC10.

Revocation of Compliance Certification. A notification by the *Administrator* that a *Product* manufactured at a particular manufacturing facility fails to meet the *Program Requirements*. The result of the revocation is that the *Licensee* no longer has the authority to certify *Products* at that plant.

SKU. Stock keeping unit. A code number, typically used as a machine-readable bar code, assigned to a single item of inventory. As part of a system for inventory control, the SKU represents the smallest unit of a product that can

be sold from inventory, purchased, or added to inventory.

Standard Coating. Any coating listed in Table 1 of ASTM A 1003/A 1003M.

Structural Connector. A load rated connector that resists design loads [factored loads] as required by the *Applicable Building Code*, except when defined as a *Non-Structural Connector*.

Substantiate. The process by which the *Administrator* determines that a *Licensee's* certification meets the *Program Requirements*.

Unit. A package of like or similar *Products*.

Work Instruction. A document or drawing that indicates the means and methods of component production or final assembly requirements for a connector as applicable.

A5 Referenced Standards

The following standards, or portions thereof, are referenced within this compliance program and shall be considered part of the requirements of this program.

1. American Iron and Steel Institute (AISI), 1140 Connecticut Avenue, NW, Washington, DC 20036.

AISI S100-07, North American Specification for the Design of Cold-Formed Steel Structural Members.© 2010, American Iron and Steel Institute.

AISI S200-07, Standard for Cold-Formed Steel Framing - General Provisions, 2007 edition.© 2007, American Iron and Steel Institute.

AISI S201-07, Standard for Cold-Formed Steel Framing – Product Data, 2007 edition.© 2007, American Iron and Steel Institute.

2. American Society for Testing and Materials International (ASTM), 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959.

ASTM A 90/A 90M-11, Standard Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings. © 2011, ASTM International.

ASTM A 370-12, Standard Test Methods and Definitions for Mechanical Testing of Steel Products.© 2012, ASTM International.

ASTM A 428/A 428M-06, Test Method for Weight [Mass] of Coating on Aluminum-Coated Iron or Steel Articles. © 2006, ASTM International.

A653/A653M-11 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process. © 2011, ASTM International.

ASTM A 1003/A 1003M-12, *Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members*. © 2010, ASTM International.

3. American Welding Society (AWS), 550 N.W. LeJeune Road, Miami, FL 33126.

AWSD1.1, *Structural Welding Code-Steel*. © 2010, American Welding Society.

AWS D1.3, *Structural Welding Code-Sheet Steel*. © 2008, American Welding Society.

4. International Code Council, Inc. (ICC), 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001.

2012 International Building Code® (IBC). ©2012, International Code Council. June 2012.

2012 International Residential Code® (IRC). © 2012, International Code Council. May 2012.

5. ICC Evaluation Service (ICC-ES), 5360 Workman Mill Road, Whittier, CA 90601.

ICC-ES AC10-12, Acceptance Criteria for Quality Documentation (AC10), December 2012 © 2012, ICC Evaluation Service.

ICC-ES AC261-10, Acceptance Criteria for Connectors used with Cold-Formed Steel Structural Members. Effective October 1, 2011. © 2011, ICC Evaluation Service.

A6 Administrator Roles and Responsibilities

A6.1 Licensee Application

Upon receipt of an application from a potential *Licensee*, the *Administrator* shall review and respond within thirty (30) *days* of receipt of the application. The *Administrator's* response shall acknowledge receipt of the application and any documents that accompany it, including the required *Quality Manual* and list of *Designated Products* and shall indicate whether additional information is required. After review and approval of the applicant's documents, an initial announced audit shall be scheduled by the *Administrator*. The *Administrator* shall conduct the initial, announced audit of the *Licensee's* manufacturing facility within ninety (90) *days* after receiving a satisfactory application and shall verify that the quality control program in use at the manufacturing facility is the same as is represented by the *approved Quality Manual*.

A6.2 Designated Products

The *Licensee* shall provide the *Administrator* with a list of *Designated Products* manufactured at each facility to be covered by the *Certification Program* when applying for the *Program* and at the beginning of each calendar year. *Designated Products* will be identified by model/part number and include the list of *components*, if applicable.

Changes to the list of *Designated Products* at any point during the year shall be provided to the *Administrator* in a timely manner.

A6.3 Certification

The *Administrator* shall execute a License Agreement with *Association* members. The Agreement authorizes a manufacturer to use the *Certification Label* or *Mark*, provided the manufacturer continues to demonstrate compliance with the *Program Requirements*. Compliance shall be verified by the *Administrator* by conducting manufacturing facility audits, described in Section A6.4, to validate the *Licensees'* certification. The *Administrator* shall control the use of the *Association's Certification Labels* or *Marks* and shall maintain a *Certified Production Facilities List* on the *Administrator's* website.

A6.4 Notification

The *Administrator* shall *Notify Licensees*, in writing, concerning audit results and any required *Corrective Actions*. The *Administrator* shall *Notify Licensees* within thirty (30) *days* of any changes to the *Manufacturing Compliance Certification Program* that were approved by the *Compliance Committee*.

A6.5 Audits

The initial facility audit will be an announced audit while subsequent audits will be unannounced. Subsequent audits will be conducted annually by the *Auditor* and whenever possible shall be timed so that they coincide with other audits that the *Administrator* may be conducting at the facility. Audits shall be performed during regular business hours. The *Licensee* shall be responsible for providing the *Administrator* with a list of a plant's normal business hours, including a schedule of all plant or facility closings and shutdowns, for the *Administrator* to use in scheduling plant audits. The *Administrator* shall be *Notified* of all emergency or unscheduled closings as soon as possible. The *Licensee* shall be liable for all expenses incurred by the *Administrator* for rescheduled audits due to emergency or unscheduled closings. The *Licensee* shall be responsible for any charges an *Auditor* incurs if he arrives for an unannounced visit when the plant or facility is closed and he has not been notified.

A designated contact of the *Licensee* will be responsible for working with the *Auditor* during in-facility audits. The *Licensee* shall appoint at least one secondary contact in the event that the primary audit contact is not available when the *Auditor* arrives. If neither audit contact is available, the *Auditor* will work with the *Licensee's* available knowledgeable personnel to conduct the audit. If the audit cannot be completed, a re-audit will be conducted. The audit contact should be familiar with all production and quality control processes at the plant and shall provide full access to all areas as requested by the *Auditor*.

When performing audits, the *Auditor* shall have copies of the *Manufacturing Compliance Certification Program*, referenced documents, the *Licensee's* quality control manual, and any other information submitted by the *Licensee* to support approval. During manufacturing facility audits, the *Auditor* shall *Verify* the following:

- a. That the manufacturing facility utilizes the quality control program approved by the *Administrator* for participation in the *Manufacturing Compliance Certification Program*.
- b. That the *Certified Products* being produced are in compliance with the material requirements of Section B, and the final product requirements of Section C.
- c. That *Products* are being marked in accordance with Section D.
- d. That *Product* sampling shall comply with the following procedures:
 - i. Three individual connectors, each of a different SKU, shall be randomly selected from inventory.
 - ii. Only Designated Products are eligible for selection.
 - iii. In the unlikely event that there is no inventory in stock, the auditor shall select at least three different connectors that are randomly chosen from any stage of production.
 - iv. When applicable, cold-formed steel components that are intended for use with Designated Products, or completed cold-formed steel products that are purchased from a third-party supplier, shall be sampled and tested.

When applicable, non-cold-formed steel components or products shall be checked for compliance with Section 2.2 of ICC-ES AC10.

Failure to meet the *Program Requirements* for audit samples with respect to yield, tensile, elongation, coating, and/or thickness shall require that a Notice of Non-compliance be issued and that an action plan be submitted within 10 days to the *Administrator*. The *Administrator* shall either accept the Action Plan or work with the *Licensee* to revise the plan to his satisfaction. Following approval of the action plan by the *Administrator*, the *Licensee* shall have 30 days from receipt of approval to implement the plan. The *Administrator* shall conduct a follow-up audit within 30 days after implementation of the plan to verify compliance and choose three samples of the product that failed. Failure to meet the *Program Requirements* for the three re-sampled products with respect to yield, tensile, elongation, coating, and/or thickness on a follow-up audit shall result in issuance of an additional Notice of Non-compliance per Section A6.11.

A6.6 Cold-Formed Steel Component Testing

Independent quality control testing shall be performed on randomly selected samples of cold-formed steel components chosen by the *Auditor* at the *Licensee's* facility. One such component shall be taken from each of the 3 boxes or cartons as described in A6.4 (d). The *Auditor* shall select and appropriately *Mark* the samples so he can identify origin and *Verify* that they are prepared for testing without alteration as set forth in this section. The *Licensee* shall package the selected samples for shipment to the accredited laboratory. The *Auditor* will witness the packaging and ship the samples. Samples must be shipped to and tested at the IAS-accredited independent laboratory designated by the *Administrator*. The *Licensee* shall be liable for all expenses incurred

for quality control testing in conjunction with the audits. Tests shall be conducted on samples selected during the audit and returned to the *Administrator* for evaluation of the following properties:

- a. Base Steel Thickness – The samples shall be evaluated for compliance with Section B1.2. The coating shall be removed from the samples as specified in ASTM A90/A90M. The quality documents shall indicate the acceptable minimum bare steel thickness as well as a minimum coated thickness. In addition, if during manufacturing the steel thickness is altered, then the quality documents shall indicate the finished part minimum bare steel thickness, and the location on the part where the thickness is to be measured.
- b. Mechanical Properties – Since *Connectors* often have a geometry, shape, or size that will not permit sampling via a tensile coupon, mechanical properties shall be verified by tracing the box, container, or the smallest packaging unit back to the master coil.
- c. Coatings – The samples shall be evaluated for compliance with Section B2. Standard zinc/zinc alloy coatings shall be evaluated by weight following the procedures specified in ASTM A90/A90M. Standard aluminum/aluminum alloy coatings shall be evaluated by weight following the procedures specified in ASTM A428/A428M.
- d. Product Shape – The samples shall be evaluated for compliance with Section C.
- e. Marking – *Products* manufactured at the *Licensee's* facility, including *Products* from which the samples were taken, shall be evaluated for compliance with Section D.

A6.7 Reporting

The *Administrator* shall submit a comprehensive report of the *Auditor's* findings to the *Licensee* following each audit of the *Licensee's* manufacturing facilities. All findings of the *Auditor* shall be discussed with the audit contact or company representative at the time of the on-site audit. The *Auditor* shall leave behind written, signed notes about the audit. The *Administrator* shall issue an audit report which contains all official comments and decisions with respect to compliance or non-compliance with the *Manufacturing Compliance Certification Program*. The report shall outline any matters requiring clarification or corrective action, or any other required action on the part of the *Licensee*, with deadlines for response. The *Auditor's* report detailing the manufacturing facility audit results shall be considered confidential and shall be issued to the *Licensee's* designated representative through the *Administrator's* office.

The *Administrator* shall prepare reports about the status of the *Compliance Program* as requested by the *Compliance Committee*.

A.6.8 Action Items

Any non-compliance with the *Program Requirements* resulting from an audit will result in the issuance of an *Action Item* as part of the audit report. *Licensees* must respond to a *Notice of Action Items* within the time frame stipulated in the audit report. Examples of *Action Items* may include but are not limited to the following:

- a. Discrepancies and/or inconsistencies between the approved quality control manual and the actual practices observed by the *Auditor* that do not affect *Certified Product* compliance with the program performance requirements.
- b. Lack of records that trace finished goods back to a master coil or a group of master coils used in their manufacture.
- c. Failure to follow requirements for Application of *Certified Labels* or *Marks*
 - i. On *Products* not included as part of the *Manufacturing Compliance Certification Program*.
 - ii. On *Products* fabricated from material that does not comply with the *Program Requirements*.
 - iii. On *Products* that do not comply with the dimensional requirements for *Certified Products*.
 - iv. On *Certification Labels* or *Marks* used in a manner not permitted by the *Program*.
 - v. Illegible *Markings*.
 - vi. Disregard of *Marking* requirements (e.g: not including all of the required items, such as manufacturer's identification).

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Unresolved *Action Items* will result in issuance of a *Notice of Non-Compliance* in accordance with Section A6.11.

A6.9 Certification of Compliance

Association members must apply for *Manufacturing Compliance Certification Authorization* for each manufacturing facility which manufactures *Products* within 120 days of

- the date when the Association notifies members that the program is open for enrollment and makes available requisite agreement documents,
- of joining the association, or
- the opening of a new facility that manufactures *Products*.

The *Administrator* shall be responsible for *Compliance Certification*. To receive *Compliance Certification*, a potential *Licensee* must deliver an approved quality manual, submit to the initial manufacturing facility audit, and comply with any other specifications necessary to demonstrate compliance with the *Program Requirements*. When the *Administrator* determines that the *Program Requirements* have been satisfied, he shall issue a *Compliance Certification* and add that manufacturer's facility and *Certified Products* to the *Production Facilities List*. The *Compliance Certification* shall include the certification date, *Licensee's* name and facility location, and shall be sent to the *Licensee*

and to the *Association*. The *Licensee*, upon receiving a *Compliance Certification*, is permitted to use the *Certification Label* as approved in writing by the *Administrator* (see Section entitled *Certification Labels*).

When a *Manufacturing Compliance Certification Authorization* is issued to a *Licensee*, the *Licensee* is included on the *Certified Production Facilities List* which is accessible via the Internet on the *Administrator's* website. The *Certified Production Facilities List* shall contain the following information: the *Licensee's* name, facility address and contact information, and list of *Certified Products* for that facility. Hyperlinks to the *Licensee's* website may also be included at the *Licensee's* option. Maintenance of the *Certified Production Facilities List* shall be the responsibility of the *Administrator*.

A6.10 Notice of Failure

The *Licensee* shall be sent a *Notification* of failure if the initial application or initial manufacturing facility audit does not demonstrate compliance with all the *Program Requirements*. The *Notification* shall be sent via next day delivery service. The *Notice* of failure shall include the *Licensee's* name, facility location and the reason the applicant did not qualify under the *Program Requirements*. A list of corrective actions that are required shall also be included.

A6.11 Non-compliance

A *Notice of Non-Compliance* with the *Program Requirements* shall be issued to the *Licensee* by the *Administrator* where issues of significant non-compliance exist. Examples of issues of significant non-compliance may include, but are not necessarily limited to, the following:

- a. Failure to respond satisfactorily with an itemized action plan within 30 days of receipt of the *Notice of Action Item* to satisfy the minor deficiencies resulting from an audit report.
- b. Failure to meet the *Program Requirements* for audit samples with respect to yield, tensile, elongation, coating, and/or thickness from an audit, including a follow-up audit.
- c. Failure to have *Connectors* available for inspection and sampling for an *Auditor* when requested during an audit.
- d. Failure to permit *Auditor* to enter manufacturing facility and conduct an audit within 15 minutes of arrival request.

The *Notice of Non-Compliance* issued to the *Licensee* by the *Administrator* shall state the reason(s) for issuance of the *Notice of Non-Compliance*, the required action(s) that must be taken by the *Licensee* to correct the items found not to be in compliance, instructions for responding to the *Administrator*, and a time frame within which an action plan addressing each item of noncompliance must be received by the *Administrator* in order to avoid the issuance of a *Revocation of Compliance Certification*.

A6.12 Licensee's Response

Licensee shall be given a period of 10 days from the date of receipt of the audit report to address failures for audit samples with respect to yield, tensile, elongation, coating, and/or thickness; and 30 days from the date of receipt of the audit report to address all other Action Items listed in the audit report to the satisfaction of the *Administrator*.

The *Administrator* shall either accept the Action Plan for product failure or for a *Notice of Non-compliance*, or work with the *Licensee* to revise the plan to his satisfaction. Following approval of the action plan by the *Administrator*, the *Licensee* shall have 30 days from receipt of approval to implement the plan. The *Administrator* shall conduct a follow-up audit within 30 days after implementation of the plan to verify compliance.

A6.13 Revocation of Compliance Certification

A manufacturing facility shall be removed from the *Production Facilities List* maintained by the *Administrator* when a *Revocation of Compliance Certification* is issued. The following shall be cause for a *Revocation of Compliance Certification*:

- a. Failure of the *Licensee* to respond with an Action Plan to a *Notice of Non-Compliance* after an unannounced audit.
- b. Failure to implement an approved Action Plan once it has been submitted and approved by the *Administrator*.
- c. Issuance of a *Notice of Non-Compliance*, including a non-compliance following a follow-up audit on three separate occasions within one twelve-month period.

A *Revocation of Compliance Certification* issued for a specific manufacturing facility shall affect only that facility and shall not impact the status of other manufacturing facilities operated by the same *Licensee*. Upon receipt of a *Revocation of Compliance Certification* for a facility, the *Licensee* shall immediately:

- a. Discontinue use of *Certification Labels* or *Marks* for all products made at that facility.
- b. Cease all references to participation in the *Compliance Program* for that facility.
- c. Remove all *Certification Labels* or *Marks* from *Products* within the *Licensee's* possession for that facility.

Continued use of *Certification Labels* or *Marks* after *Revocation of Compliance Certification*, or false claims of certification will result in suspension/termination of the *Licensee's Association* membership.

A *Revocation of Compliance Certification* for *Products* produced at a particular facility only applies to that particular facility. The *Licensees'* other facilities that produce *Certified Products* may continue to market *Certified Products* produced at those facilities

not listed in the *Administrator's Notice of Revocation of Compliance Certification*. However, when doing so, *Licensees* shall market such *Certified Products* in such a way that they do not confuse or deceive consumers, distributors or others. A *Licensee* may apply for a new *Notice of Compliance Certification* as soon as the required *Corrective Actions* have been taken to remedy any action items listed in the *Notice of Non-Compliance*. Once the *Licensee's* application is received by the *Administrator*, an unannounced audit will be conducted within 30 days to verify that *Corrective Actions* have sufficiently addressed issue(s) of *Non-Compliance*. *Certification Labels* or *Marks* are not allowed to be used until a new *Compliance Certification* is issued. The *Licensee* may appeal a *Revocation of Compliance Certification* to the *Compliance Committee*.

A6.14 Certification Label

The official *Certification Label* or *Mark* shall be used by *Licensees* to identify all *Certified Products*. It shall also be used on product literature to identify *Certified Products*. The *Administrator* shall have sole authority to authorize use of *Certification Labels* or *Marks* on *Products* or literature.

By applying *Certification Labels* or *Marks*, the *Licensee* is certifying that the *Products* bearing the label or mark comply with the *Program Requirements*, and have been manufactured as good-faith reproductions of *Products* listed on the *Association* website in design, construction and fabrication.

Only *Certification Labels* and *Marks* developed and approved by the *Compliance Committee* in conjunction with the *Administrator* may be applied. *Certification Labels* or *Marks* produced or printed by the *Licensee* must conform to the design specified by the *Compliance Committee*, and must be approved by the *Administrator* prior to use. *Licensees* also have the option of ordering labels from the printer identified by the *Association*, and the *Licensee* must submit a copy of the *Compliance Certificate* with the order. *Certification Labels* shall be applied at the time and place of manufacture and may be added to other required markings. The *Certification Label* or *Mark* may not be modified by the *Licensee* without written consent from the *Compliance Committee*. The *Certification Label* or *Mark* may not be used or placed in such a manner as to imply any other endorsements or certifications by the *Association* or the *Administrator*. Only *Products* approved for certification shall be permitted to have *Certification Labels* or *Marks* applied to them.

A6.15 Communications

When changes to the referenced standards take place and are incorporated into the *Compliance Program*, the *Administrator* shall notify *Licensees* in writing. *Notification* shall include instructions detailing the process required to maintain *Certification* approval based upon use of the updated standards.

A6.16 Questions

Questions about the *Compliance Program* or applicability of specific sections of the *Program* shall be addressed to the *Administrator*. If the *Compliance Program* is not clear on the issue, the *Administrator* or the *Licensee* may refer the matter in writing to the *Compliance Committee* for a written interpretation.

A7 Membership

A manufacturer is required to sign License Agreements with the *Association* and the *Administrator* in order to participate in the *Manufacturing Compliance Certification Program*. The manufacturer agrees to abide by the *Program Requirements* as set forth in these *Program Requirements* and other referenced *Program* documents. The License Agreements shall automatically renew annually provided that the *Licensee* continues to comply with the *Program Requirements* as set forth in these *Program Requirements*, and continues to pay all applicable fees. Failure to comply with the *Program Requirements* shall constitute a breach of the License Agreements, and may result in *Revocation of Compliance Certification*.

A8 Licensee Roles and Responsibilities

The participating *Licensee* is a manufacturer of *Products* who certifies that *Certified Products* included in the *Manufacturing Compliance Certification Program* comply with the *Program Requirements*. The *Licensee* shall have the following duties and responsibilities:

- a. Continuously manufacture *Certified Products* in compliance with the requirements of the *Manufacturing Compliance Certification Program*.
- b. Maintain an adequate quality control program or programs to ensure that certified structural and non-structural cold-formed connectors used with steel framing *Products* are manufactured in accordance with the *Program Requirements*. (Minimum quality control requirements for participation in this *Program* are specified in Section A11.)
- c. Provide the *Administrator* with an annual schedule of plant or facility closings and notify the *Administrator* of any changes when they occur.
- d. Notify the *Administrator* immediately of any changes in location, or the addition or deletion of plants or facilities that manufacture or assemble *Certified Products*.
- e. Notify the *Administrator* of any changes to the list of *Designated Products*.
- f. Permit free access during normal working hours for the *Administrator's Auditor* within 15 minutes of his arrival at the facility, and allow him access into the manufacturing areas, warehouse areas, material storage facility areas, and provide the *Administrator's Auditor* with any requested quality control records that validate the certification process.
- g. Provide a primary and secondary audit contact at each manufacturing plant or facility who will be available to accompany the *Auditor* throughout the audit process and who has the authority to sign the appropriate audit form.
- h. Address all *Notices of Non-compliance* assigned as a result of the audit process and document *Corrective Actions*, in writing, to the *Administrator* within the prescribed timeframes.

- i. Apply *Certification Labels* only as authorized by the *Manufacturing Compliance Certification Program*.
- j. Comply with all marking and labeling requirements.
- k. Pay all applicable fees due the *Association* or the *Administrator*, as well as any other costs due as described in the underlying Agreement or in the *Manufacturing Compliance Certification Program*. Failure to pay fees on a timely basis shall subject *Licensee* to *Revocation of Compliance Certification* and may exclude *Licensee* from the *Manufacturing Compliance Certification Program*.

A8.1 Marketing

Licensees may use the *Certification Label* or *Mark* in marketing when it appears to directly relate to the *Manufacturing Compliance Certification Program*. The use of the *Certification Label* or *Mark* may only be used on pages where all *Products* represented on that page are *Certified*. As an alternative, if not all *Products* on a page are *Certified*, then a manufacturer is permitted to footnote or otherwise indicate which *Products* are *Certified*, and the *Certification Label* or *Mark* is not permitted to be broadly displayed on the page. Wherever the *Manufacturing Compliance Certification Program* is used or referenced in marketing, the *Licensee* shall include the statement "Check the updated list of *Certified Production Facilities and Products* at [Administrator's] website. *Licensees* may not use the *Certification Label* or *Mark* until all appropriate agreements between the manufacturer, the *Association* and the *Administrator* are executed, and the *Products* are qualified under this *Program* and a *Compliance Certification* has been issued. Appropriate clarifications, highlights, footnotes, etc. must be used to ensure clarity about which products are qualified under the *Compliance Program* and which are not.

No *Licensee* shall be permitted to use *Certification Labels* or *Marks* in future literature if it has received a *Revocation of Compliance Certification* and has not had all relevant facilities re-certified. The *Certification Label* or *Mark* shall not be used to indicate that the *Association* or the *Administrator* in any way endorses the *Licensee* or its *Certified Products*. The *Administrator* shall be responsible to review all *Product* literature and *Product* websites of each *Licensee* at the time of the unannounced audits to verify compliance with the *Program Requirements*.

A8.2 Communications

All official communication with the Administration and/or *Compliance Committee* shall be in writing or by electronic submission. Verbal communications are considered to be not official. All communications concerning the *Compliance Certification Program* shall be done through the *Administrator*.

A9 Compliance Committee

A9.1 Roles and Responsibilities

The *Association's Compliance Committee* shall be responsible for the maintenance and oversight of the *Manufacturing Compliance Certification Program*, including but not limited to the following duties:

- a. Contract with the *Administrator* and review periodically the *Administrator's* performance.
- b. Monitor the *Administrator's* records.
- c. Formulate general policy to ensure the uniformity and equity of the *Compliance Program's* administration.
- d. Monitor all *Applicable Building Codes* and *Applicable Standards*, and update the *Manufacturing Compliance Certification Program* as deemed necessary.

The *Compliance Committee* shall receive periodic reports from the *Administrator* about the status of the *Manufacturing Compliance Certification Program*. All reports from the *Administrator* are to be aggregated and generic to protect the confidentiality of the *Licensee*, except where required to rule on an appeal. The *Compliance Committee* shall respond to requests for technical interpretations posed by the *Administrator* or *Licensees*. The *Compliance Committee* shall review appeals from *Licensees* relative to the *Program Requirements* or *Administrator's* decisions.

A9.2 Revisions to Standards

The *Compliance Committee* shall stay apprised of changes to building codes and standards. The *Compliance Committee* will implement changes to this program as deemed appropriate.

A9.3 Review of Appeals

The *Administrator* is responsible for the execution of the functions described in these *Program Requirements*. However, any *Licensee* may appeal *Revocation of Compliance Certification* decisions made by the *Administrator* by sending a written appeal to the *Compliance Committee* Chairperson, and sending the *Administrator* a copy within 30 days of receipt of a written notice of *Revocation of Compliance Certification*. The appeal shall state the reason(s) that the *Licensee* is seeking review of the *Administrator's* determination.

The *Licensee's* written appeal shall contain sufficient information and/or documentation to accurately identify the factual background, the nature of the dispute and the decision or desired outcome sought. The *Administrator* shall submit materials to the *Compliance Committee* supporting his determination within 10 days of the *Licensee's* appeal.

The *Compliance Committee* shall rule on the appeal within fourteen (14) days of receiving the *Licensee's* appeal and the *Administrator's* materials. In its review of the *Licensee's* appeal, the *Compliance Committee* shall consider input from the appealing *Licensee* and the *Administrator*, and may seek and consider input from the *Association's* technical staff and legal counsel. Input may also be requested from other qualified individuals or organizations with pertinent laboratory, technical or industry experience.

During the appeal process, the *Licensee* may not use *Certification Labels* or *Marks on Products*. If the *Administrator's* decision is sustained by the *Compliance Committee*, *Revocation of Compliance Certification* shall continue as per Section A6.13.

A10 Communications

The *Licensee* and the *Administrator* shall not make any public comments, including statements at *Association* meetings, on the status of any particular *Product* or *Licensee* except to refer all inquiries to the *Certified Manufacturing Facilities List*. The *Association*, *Licensee* and the *Administrator* are obliged to maintain the confidentiality of proprietary information received from participating companies. This obligation is detailed in the formal agreement between the *Association* and the *Administrator*, and in the individual agreements between the *Licensee*, *Administrator* and *Association*. The *Administrator* shall maintain the *Certified Manufacturing Facilities List* on its servers. The servers shall be accessible through a seamless link from the SFIA website.

A11 Quality Documentation

All *Licensees* are required to submit a Quality Control Manual to the *Administrator*. The Quality Control Manual should document how the *Licensee's* quality control program and procedures meet the requirements of Section 2 of ICC-ES AC10. The prospective *Licensee* shall forward a copy of the Quality Control Manual to the *Administrator* before the *Program* applicant is approved as a *Licensee*. Each of the *Licensee's* manufacturing facilities capable of producing *Products* shall have on file a physical copy of the Quality Control Manual, Referenced Documents and the *Compliance Program*.

B. Materials

B1 Properties

B1.1 Mechanical and Chemical Properties for Cold-Formed Steel Components

Cold-formed steel components must be manufactured from steel having mechanical and chemical properties suitable for the application and manufacturing requirements, and must be in accordance with a Published Specification as defined by AISI S100. Other components shall be in compliance with applicable ASTM standards.

The thickness of cold-formed steel components shall be suitable for the application and manufacturing requirements. The minimum base steel thickness of any cold-formed steel component shall not be less than 95% of the design thickness.

B1.2 Mechanical and Chemical Properties for Non-Cold-Formed Steel Components

Manufacturers are required to establish and document minimum acceptable mechanical and chemical characteristics for non-cold-formed steel components essential for their safe and proper use. Manufacturers are also required to establish, document, and implement inspection or other activities necessary to insure that non-cold-formed steel components meet the established mechanical and chemical characteristics or, where applicable, the specified purchase requirements.

B2 Corrosion Protection

B2.1 Cold-Formed Steel Components with a Minimum Thickness of 97 mils and Less

At a minimum, cold-formed steel components shall be manufactured from steel having a zinc coating that complies with the requirements of ASTM A653/A653M G90 [Z275] for exterior applications and G60 [Z180] for interior applications.

B2.2 Non-Cold-Formed Steel Components and Cold-Formed Steel Components with a Minimum Thickness Greater than 97 mils.

For non-cold-formed steel components and cold-formed steel components with a minimum thickness greater than 97 mils, manufacturers are required to establish and document minimum acceptable corrosion resisting characteristics that are essential for their safe and proper use. Manufacturers are also required to establish, document, and implement inspection or other activities necessary for ensuring that such components meet the established corrosion resisting characteristics, or, where applicable, the specified purchase requirements.

C. Final Product

C1 Dimensions

For *Connectors* consisting of multiple components, a *Product Specification Sheet* or *Production Drawing* shall be provided for each component as applicable. Component dimensions shall be given on the *Product Specification Sheet* or *Production Drawing*.

C2 Manufacturing Tolerances

Dimensional tolerances of components shall be given on the *Production Drawing* or *Product Specification Sheet* as applicable. Where applicable, tolerances shall comply with appropriate ASTM standards.

C3 Plant Assembly and Site Installation

Work Instructions shall be provided for final plant assembly of the *Connector*. When applicable, welding shall comply with AISI S100, AWS D1.1, or AWS D1.3 as is appropriate. Manufacturers are also required to provide installation instructions for *Connectors*. Installation instructions may be given in the product literature or may be included within the final packaging of the *Connector*.

C4 Materials

Material requirements for components or *Connectors* shall be included in the *Production Drawing*, the *Product Specification Sheet*, or the *Material Specification Sheet* as applicable.

D. Product Identification

D1 Nomenclature

No specific *Product* nomenclature is required for *Connectors*.

D2 Product Marking

D2.1 Connectors

Individual *Connectors* shall have a legible label, stencil, stamp or embossment with the following minimum information:

1. Manufacturer's identification (that is, name, logo, or initials)
2. Manufacturer's *Product* name and/or number that can be referenced back to the manufacturer's load tables or literature.
3. For custom *Connectors* that cannot be referenced back to the manufacturer's load tables or literature, the *Connector* shall be appropriately *Marked* so that it can be referenced back to the order documents.

D2.2 Non-Cold-Formed Steel Components

The Licensee must clearly *Mark* the vendor identification and batch/lot identification, at a minimum, on the master carton or container, but preferably on the smallest packaging unit as well.

D2.3 Packaging Units

Boxes, containers, or the smallest packaging unit should be appropriately *Marked* so that cold-formed steel components can be traced back to the master coil.

