

NFRC 700-2024^[E0A24]

Product Certification Program

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FOREWORD

The National Fenestration Rating Council, Incorporated (NFRC) has developed and operates a uniform rating system for energy and energy-related performance of fenestration products. The Rating System determines the U-factor, Solar Heat Gain Coefficient (SHGC) and Visible Transmittance (VT) of a product, which are mandatory ratings for labeling NFRC certified products, are mandatory ratings for inclusion on label certificates, and are supplemented by procedures for voluntary ratings of products for Air Leakage (AL), and Condensation Resistance. Together, these rating procedures, as set forth in documents published by NFRC, are known as the NFRC Rating System.

The NFRC Rating System employs computer simulation and physical testing by NFRC-accredited laboratories to establish energy and related performance ratings for fenestration product types. The NFRC Rating System is reinforced by a certification program under which NFRC-licensed responsible parties claiming NFRC product certification shall label and certify fenestration products to indicate those energy and related performance ratings, provided the ratings are authorized for certification by an NFRC-licensed certification and Inspection Agency (IA).

The requirements of the rating, certification, and labeling program (Certification Program) are set forth in the most recent versions of the following as amended, updated, or interpreted from time to time:

- NFRC 700 Product Certification Program (PCP).
- NFRC 705 Component Modeling Approach (CMA), Product Certification Program (CMA-PCP).

Through the Certification Program and the most recent versions of its companion programs as amended, updated, or interpreted from time to time:

- The laboratory accreditation program (Accreditation Program), as set forth in the NFRC 701 Laboratory Accreditation Program (LAP).
- The IA licensing program (IA Program), as set forth in NFRC 702 Certification Agency Program (CAP).
- The CMA Approved Calculation Entity (ACE) licensing program (ACE Program), as set forth in the NFRC 708 Calculation Entity Approval Program (CEAP).

NFRC intends to ensure the integrity and uniformity of NFRC ratings, certification, and labeling by ensuring that responsible parties, testing and simulation laboratories, and IAs adhere to strict NFRC requirements.

In order to participate in the Certification Program, a Manufacturer/Responsible Party shall rate a product whose energy and energy-related performance characteristics are to be certified in accordance with mandatory NFRC rating procedures. At present, a Manufacturer/Responsible Party may elect to rate products for U-factor, SHGC, VT, AL, Condensation Resistance, or any other procedure adopted by NFRC, and to include those ratings on the NFRC temporary label affixed to its products, or on the NFRC Label Certificate. U-factor, SHGC and VT, AL, and Condensation Resistance rating reports shall be obtained from a laboratory that has been accredited by NFRC in accordance with the requirements of the NFRC 701.

The rating shall then be reviewed by an IA which has been licensed by NFRC in accordance with the requirements of the NFRC 702. NFRC-licensed IAs also review label format and content, conduct in-plant inspections for quality assurance in accordance with the requirements of the NFRC 702, and issue a product Certification Authorization Report (CAR), or approve for issuance an NFRC Label Certificate for site-built or CMA products and attachment products. The IA is also responsible for the investigation of potential violations (prohibited activities) as set forth in the NFRC 707 Compliance and Monitoring Program (CAMP).

Ratings for products that are labeled with the NFRC Temporary and Permanent Label, or products that are listed on an NFRC Label Certificate in accordance with NFRC requirements, are considered to be NFRC-certified. NFRC maintains a Certified Products Directory (CPD), listing product lines and individual products selected by the manufacturer/responsible party for which certification authorization has been granted.

NFRC manages the Rating System and regulates the Product Certification Program (PCP), Laboratory Accreditation Program (LAP) and Certification Agency Program (CAP) in accordance with the NFRC 700 (PCP), the NFRC 701 (LAP), the NFRC 702 (CAP), the NFRC 705 (CMA-PCP), and the NFRC 708 (CEAP) procedures, and conducts compliance activities under all these programs as well as the NFRC 707 (CAMP). NFRC continues to develop the Rating System and each of the programs.

NFRC owns all rights in and to each of the NFRC 700, NFRC 701, NFRC 702, NFRC 705, NFRC 707, NFRC 708 and each procedure, which is a component of the Rating System, as well as each of its registration marks, trade names, and other intellectual property.

The structure of the NFRC program and relationships among participants are shown in Figure 1, Figure 2, and Figure 3. For additional information on the roles of the IAs and laboratories and operation of the IA Program and Accreditation Program, see the NFRC 700 (PCP), NFRC 701 (LAP), and NFRC 702 (CAP) respectively.

Figure 1

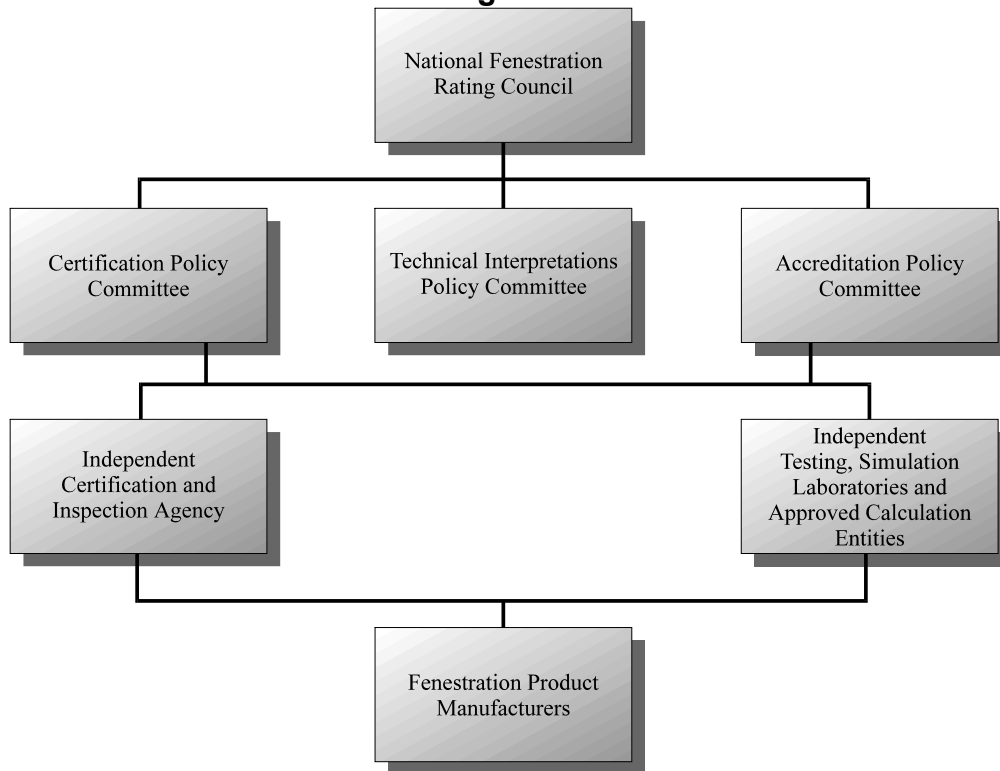


Figure 2

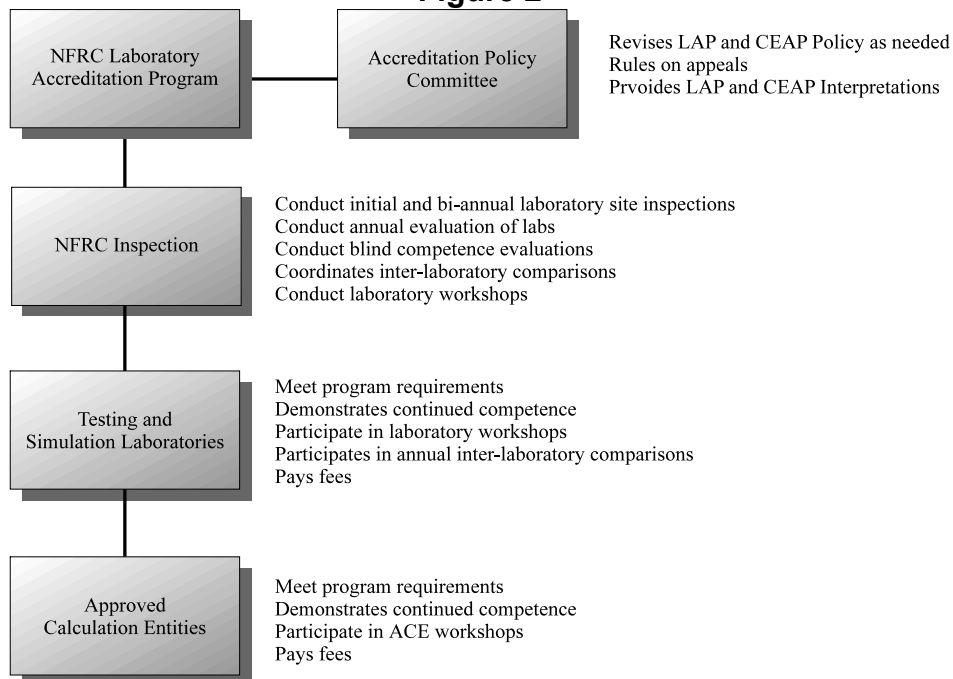
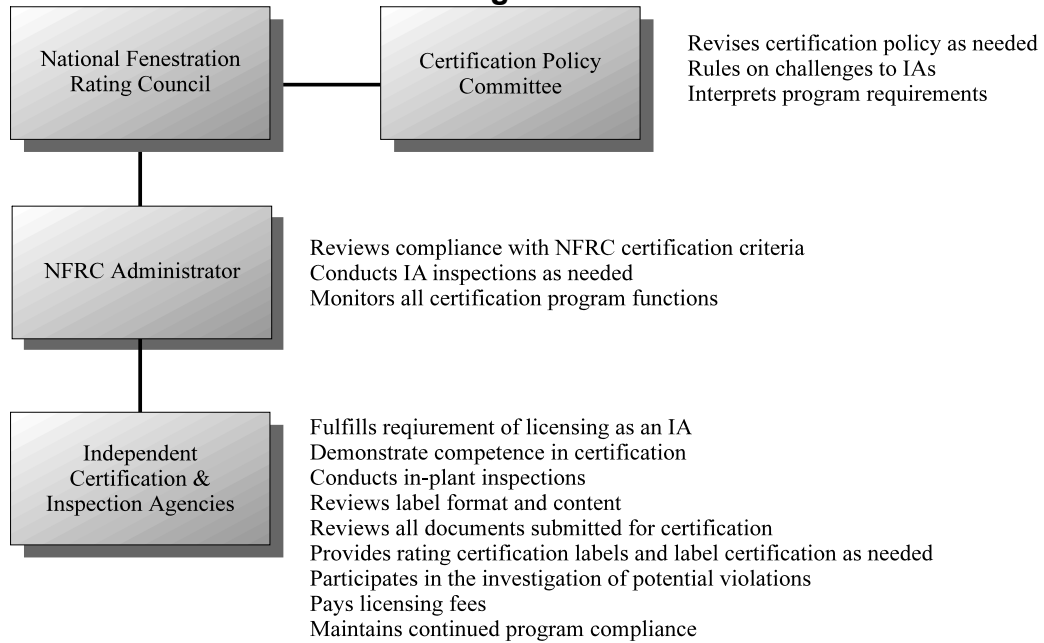


Figure 3



Questions on the use of this procedure should be addressed to:

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DISCLAIMER

NFRC certification is the authorized act of a Manufacturer/Responsible Party in: (a) labeling a fenestration or related attachment product with an NFRC Permanent Label and NFRC Temporary Label, or (b) generating a site built or CMA label certificate, either of which bears one or more energy performance ratings reported by NFRC-accredited simulation and testing laboratories and authorized for certification by an NFRC-licensed IA. Each of these participants acts independently to report, authorize certification, and certify the energy-related ratings of fenestration and related attachment products.

NFRC does not certify a product and certification does not constitute a warranty of NFRC regarding any characteristic of a fenestration or fenestration-related attachment product. Certification is not an endorsement of or recommendation for any product or product line or any attribute of a product or product line. NFRC is not a merchant in the business of selling fenestration products or fenestration-related products, and therefore cannot warrant products as to their merchantability or fitness for a particular use.

NFRC THEREFORE DISCLAIMS ANY AND ALL LIABILITY THAT MAY ARISE FROM OR IN CONNECTION WITH SERVICES PROVIDED BY, DECISIONS MADE BY OR REPORTS OR CERTIFICATIONS ISSUED OR GRANTED BY ANY NFRC-ACCREDITED LABORATORY, NFRC-LICENSED IA OR ANY PRODUCT MANUFACTURER/RESPONSIBLE PARTY; RELIANCE ON ANY NFRC PRODUCT DESCRIPTION, SPECIFICATION, RATING, TEST OR CERTIFICATION, WHETHER APPEARING IN A REPORT, A PRODUCT CERTIFICATION AUTHORIZATION OR A PRINTED OR ELECTRONIC DIRECTORY, OR ON A LABEL, OR ON A LABEL CERTIFICATE; OR THE SALE OR USE OF ANY NFRC-RATED OR CERTIFIED PRODUCT OR PRODUCT LINE; INCLUDING BUT NOT LIMITED TO DAMAGES FOR PERSONAL OR OTHER INJURY, LOST PROFITS, LOST SAVINGS OR OTHER CONSEQUENTIAL OR INCIDENTAL DAMAGES.

NFRC program participants are required to indemnify NFRC from and against such liability.



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1. INTRODUCTION

1.1 Scope of Program

Any Licensee seeking product certification under this Product Certification Program (PCP or Certification Program) shall provide an NFRC-Accredited simulation laboratory of its choice with product drawings for each product line to be rated and certified, so that a computer simulation report on a product's energy performance ratings can be prepared in accordance with applicable approved NFRC rating procedures. The computer simulation report is then submitted, at the Licensee's direction, to an NFRC-Licensed Certification and Inspection Agency (IA) selected by the Licensee.

The Licensee fabricates a baseline product for validation or a production line sample as applicable and as identified in the simulation report having U-factors within the allowable ranges as specified in ANSI/NFRC 100. The Licensee arranges to have the product physically tested by an NFRC-Accredited Testing Laboratory in accordance with the NFRC 102. The test reports are delivered to the Licensee, who may then direct the testing laboratory to deliver the reports to the IA. The simulation and testing sequence is performed at the Licensee's discretion.

The IA then reviews the reports and compares the physical test results with the computer simulation results for validation. If the IA determines that the simulated and tested values are within the tolerances required by ANSI/NFRC 100, and that all requirements for product certification have been met, the IA authorizes product certification and issues a Certificate of Authorization (CA), which gives the Licensee permission to label the product in accordance with the Certification Program. Products to which the NFRC labels are affixed are NFRC-certified products. Products authorized for certification and selected by the Licensee are listed in the online Certified Products Directory (CPD) on the NFRC website.

1.1.1 Role of NFRC

NFRC has established and will sponsor and operate the Certification Program. Under the Certification Program, NFRC:

- A. Establishes and periodically reviews Certification Program requirements, including rating and certification criteria, and a system for challenges and appeals;
- B. Manages the Certification Program in accordance with the NFRC PCP, Laboratory Accreditation Program (LAP), Certification Agency Program (CAP), and Compliance

and Monitoring Program (CAMP), as well as ANSI/NFRC 100, and other NFRC rating procedures;

- C. Licenses IAs to provide NFRC product certification services;
- D. Accredits simulation and testing laboratories to provide NFRC ratings services;
- E. Maintains a system under which temporary and permanent labels, Site-Built Certificates, and Fenestration Manufacturer Certificates (FMC) are issued to or produced by Licensees to be placed on fenestration products authorized for certification;
- F. Maintains an online, real-time listing of products and their energy performance ratings authorized for certification referred to as the CPD;
- G. Periodically conducts educational workshops for IAs, laboratories, and others to ensure continuing competence and uniform application of the Certification Program;
- H. Through its Certification Policy Committee (CPC), hears challenges, reviews policy, and acts on appeals pertaining to the Certification Program and the IA Program;
- I. Through its Accreditation Policy Committee (APC), hears challenges, reviews policy, and acts on appeals pertaining to the Accreditation Program; and
- J. Maintains a listing of Participating IG Certification Programs as described in NFRC 706.

1.1.2 Role of Licensee

- A. Under the Certification Program, an NFRC fenestration Licensee is responsible for meeting the requirements in the PCP including, but not limited to, the following functions:
 - i. Arranging with one or more NFRC-licensed IAs to obtain NFRC certification authorization for one or more product lines;
 - ii. Arranging with one or more NFRC-accredited simulation laboratories for the purposes of conducting simulations and developing the matrix required for rating the Licensee's product lines;

- iii. Arranging with one or more NFRC-accredited testing laboratories for the conducting of thermal tests required for rating the Licensee's products;
- iv. Authorizing testing and simulation laboratories to provide an IA with copies of simulation and testing results and necessary support data for the purpose of determining compliance with Certification Program requirements;
- v. Maintaining an in-plant quality control program to assure consistent quality as it relates to energy performance characteristics of products authorized for certification;
- vi. Cooperating with in-plant inspections of manufacturing facilities to determine continued compliance with the Certification Program requirements;
- vii. Entering into a license agreement with NFRC authorizing the Licensee to use the NFRC registered mark on certified products and in advertising;
- viii. Labeling products to indicate certification; and
- ix. Shall have all Insulating Glass Unit (IGU) used in NFRC Certified Products certified in accordance with a Participating IG Certification Program as described in NFRC 706.

B. A Licensee may:

- i. Participate in the NFRC Certification Program with more than one IA; and
- ii. Participate in other product certification programs not related to energy performance referencing NFRC procedures.

C. Additional requirements may be established by NFRC as necessary to assure continued program credibility.

1.1.3 Role of the IA

- A. Under the Certification Program and the IA Program, NFRC-licensed IAs are responsible for meeting the requirements in the NFRC 700 (PCP) and the NFRC 702 (CAP) including, but not limited to, the following functions:

- i. Establishing written procedures and policies consistent with the requirements of the Certification Program for participation in the NFRC Certification Program;
- ii. Implementing the NFRC requirements and procedures regarding product rating and certification;
- iii. Conducting in-plant inspections of manufacturing facilities to determine continued compliance with Certification Program requirements;
- iv. Reviewing simulation uploads and spreadsheets, as well as simulation and test reports to determine compliance with NFRC rating procedures, and then accepting the data into the Certified Products Database;
- v. Authorizing certification of products by issuing a CA;
- vi. Distributing or authorizing the production of the following for products that are authorized for certification:
 - (a) Temporary and permanent labels to be placed on fenestration products,
 - (b) An FMC representing fenestration products performance,
 - (c) Labels on the box/packaging containing attachment products,
 - (d) Issuing Label Certificates for site-built products or construction projects more than three stories above grade and with a minimum fenestration area of 930 square meters (10,000 square feet), and
 - (e) Label Certificates for attachment products;
- vii. Participating in the investigation of potential violations (prohibited activities) as set forth in the NFRC 707, CAMP; and
- viii. Verifying that all IGUs used in NFRC Certified Products are certified in accordance with a Participating IG Certification Program as described in NFRC 706.

- B. Additional information regarding the role of the IA in the NFRC Certification Program may be found in the NFRC CAP.
- C. In the event there are no NFRC-licensed IAs available to perform the services provided by an IA, any such service may be provided by NFRC or NFRC's subcontractor. In the event there are no NFRC-licensed IAs, the word "IA," as used herein, shall mean NFRC or NFRC's subcontractor.

1.1.4 Role of Laboratory

Licensees participating in the NFRC Certification Program shall use testing and simulation laboratories that are accredited under NFRC's Laboratory Accreditation Program. For information on the Laboratory Accreditation Program, see NFRC 701 (LAP).

Exception: For purposes of Air Leakage (AL) rating and labeling per ANSI/NFRC 400, values from laboratories recognized in accordance with the NFRC 701.11 and on the NFRC Recognized Air Leakage (RAL) list shall be acceptable.

1.1.5 Fees

- A. The NFRC 704, Fee Schedule includes NFRC fees for participating in the Product Certification Program (PCP or Certification Program), the Certification Agency Program (CAP or IA Program) and the Laboratory Accreditation Program (LAP or Accreditation Program). The schedule is a stand-alone document that is maintained on the NFRC website (www.nfrc.org).
- B. NFRC fees for participating in the Certification Program are separate and apart from fees incurred by PCP participants for services provided by NFRC-licensed Certification and Inspection Agencies (IAs), NFRC approved IG Certification Programs, and NFRC-accredited laboratories.

1.1.6 Property Rights

NFRC owns all rights to the Certification Program, the Accreditation Program, the IA Program, Compliance and Monitoring Program, ANSI/NFRC 100, NFRC 101, NFRC 102, ANSI/NFRC 200, NFRC 201, NFRC 300, NFRC 301, NFRC 302, ANSI/NFRC 400, NFRC 500, ANSI/NFRC 500, NFRC 501-2017, NFRC 501-2024, and any other documents and procedures approved by the NFRC Board of Directors.

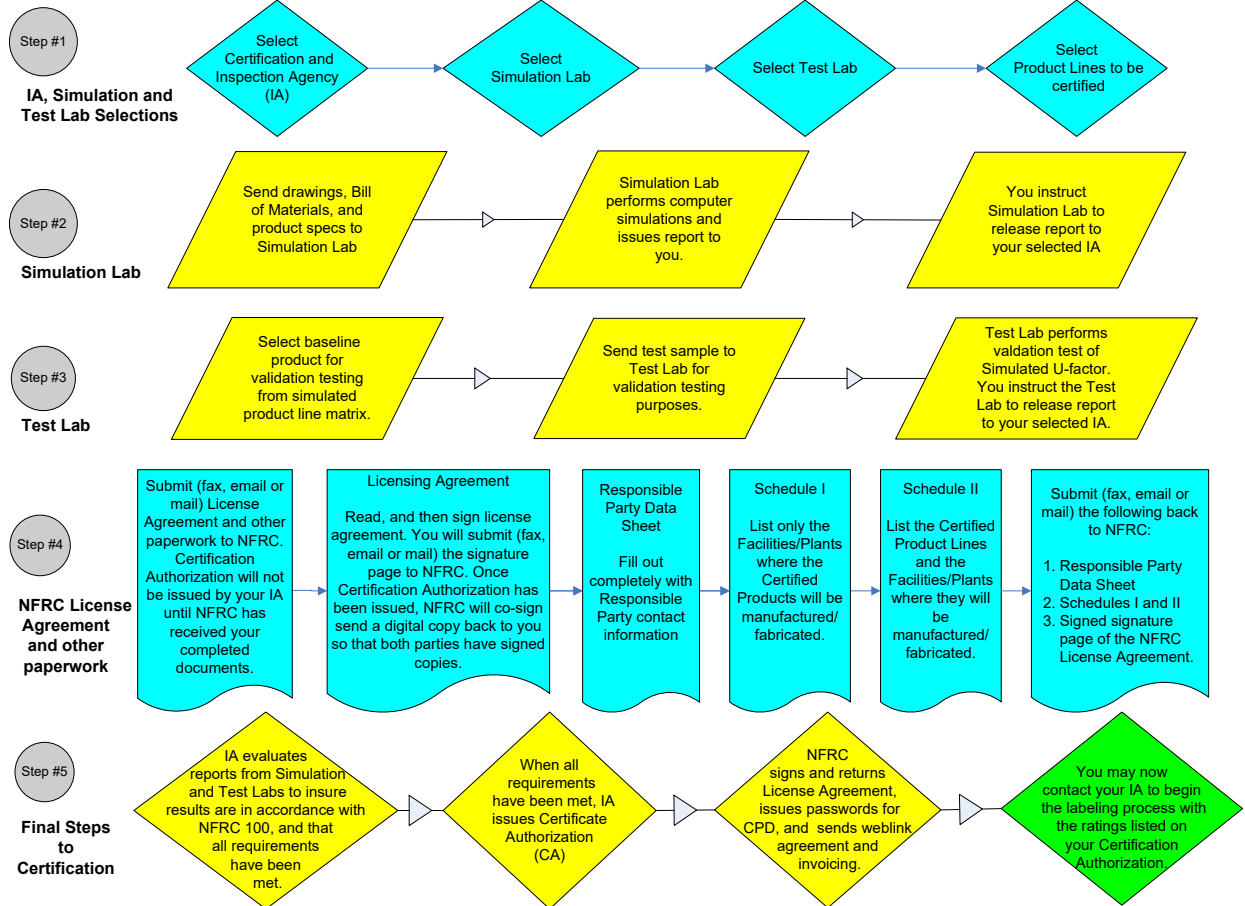
1.1.7 Liability Disclaimer

- A. NFRC certification is the authorized act of a Licensee in labeling a fenestration product, or the box/packaging containing an attachment product, with an NFRC permanent label and an NFRC temporary label, which bears one or more energy performance ratings reported by NFRC-accredited simulation and testing laboratories and authorized for certification by an NFRC-licensed IA. Each of these participants acts independently to report ratings, authorize ratings for certification, and certify a product.
- B. NFRC does not certify a product and certification does not constitute a warranty of NFRC regarding any characteristic of a product. Certification is not an endorsement of or recommendation for any product or product line or any attribute of a product or product line. NFRC is not a merchant in the business of selling products and therefore cannot warrant products as to their merchantability or fitness for a particular use.
- C. NFRC therefore disclaims any and all liability that may arise from or in connection with services provided by, decisions made by, or reports or certifications issued or granted by any NFRC-accredited laboratory, NFRC-licensed IA, or any product Licensee; reliance on any NFRC product description, specification, rating, test or certification, whether appearing in a report, a product certification authorization, or a printed or electronic directory, or on a label or certificate; or the sale or use of any NFRC-rated or -certified product or product line, including but not limited to damages for personal or other injury, lost profits, lost savings, or other consequential or incidental damages.
- D. NFRC program participants are required to indemnify NFRC from and against such liability.

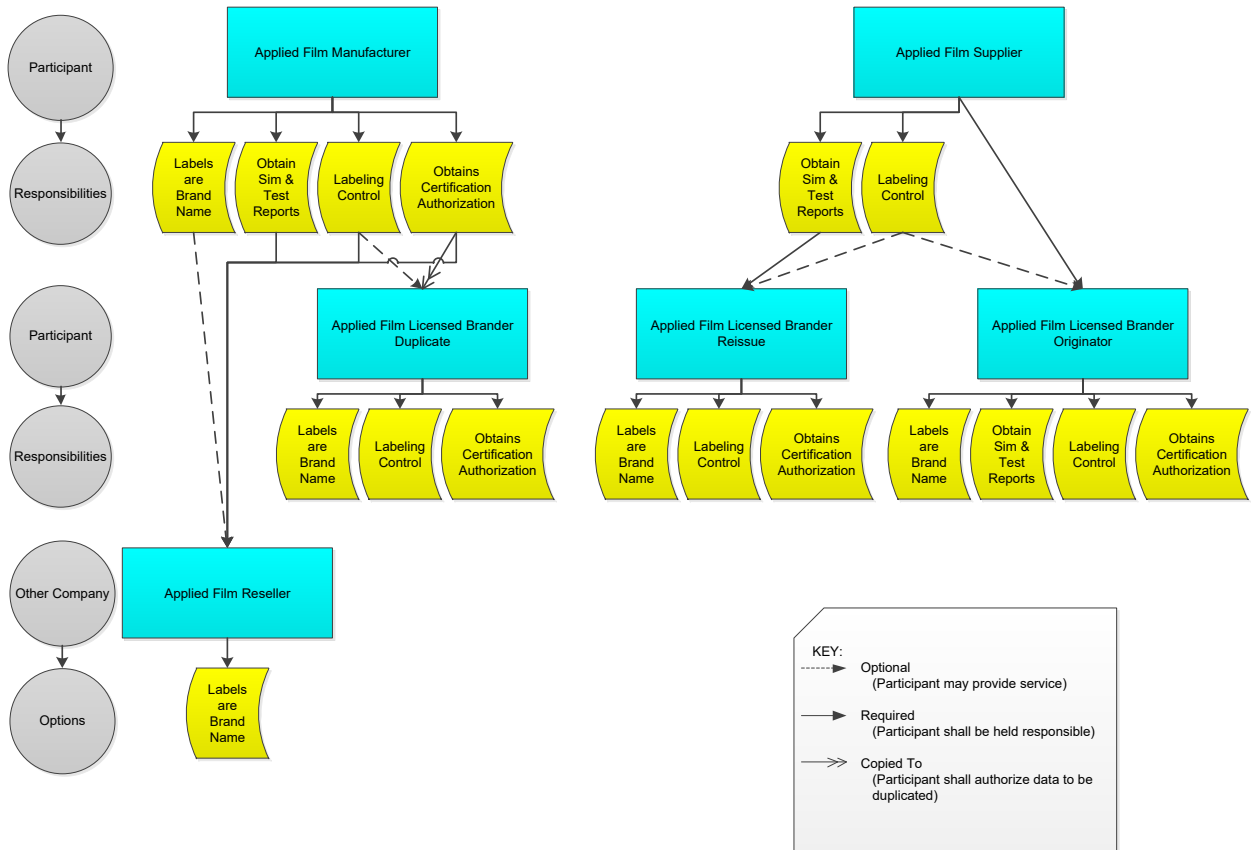
1.1.8 Confidentiality

NFRC certification authorization, simulation, and test reports shall be considered confidential.

Product Certification Program Flow Chart



Applied Film Program Flow Chart



2. GLOSSARY

2.1 Glossary of Terms

See NFRC 600: Glossary and Terminology for additional terms.

Accreditation:

Official authorization, approval, or recognition accorded by NFRC to a laboratory based upon specific NFRC qualifications.

Accreditation Policy Committee (APC):

A standing committee whose members are appointed by the NFRC Board of Directors to manage the NFRC Laboratory Accreditation Program (LAP). See the NFRC 710: Operating Policies Manual for further details.

Accreditation Program:

The NFRC program administering the Laboratory Accreditation Program (LAP) as set forth in NFRC 701.

Accredited Laboratory:

A computer simulation or testing laboratory that has met NFRC Laboratory Accreditation Program (LAP) requirements, has entered into a NFRC laboratory License Agreement, and received a NFRC Certificate of Accreditation, none of which has been revoked.

Air Leakage (AL):

The volume of air flowing per unit time per unit area through a fenestration system due to air pressure or temperature difference between the outdoor and indoor environment.

Air Mass (AM):

The ratio of the mass of atmosphere along the actual observer-to-sun line to the mass that would exist if the observer was at sea level, at standard barometric pressure, and if the sun was directly overhead (at the zenith).

Applied Film:

Fenestration attachment products which consist of a flexible adhesive-backed polymer film which may be applied to the interior or exterior surface of an existing glazing system. See Fenestration Attachment.

Applied Film Manufacturer:

Produces applied film products from raw materials and participates in and certifies at least one applied film in the NFRC PCP and has the option of providing the qualifying certification authorizations to their Applied Film Licensed Brander Duplicate customers.

Applied Film Reseller:

A distributor of applied film products that are manufactured and certified by their own company or by another company. A reseller may not repackage product or apply / modify NFRC labeling.

Applied Film Supplier:

A distributor of applied film products that are manufactured and certified by their own company or by another company. A reseller may not repackage product or apply / modify NFRC labeling.

Applied Film Licensed Brander:

A company that markets / distributes applied film products under their own brand name that are manufactured by an Applied Film Manufacturer or an Applied Film Supplier.

An added (Originator) suffix indicates the Licensed Brander initiated the NFRC rating of the products and owns the resultant qualifying simulation reports.

An added (Duplicate) suffix indicates the Licensed Brander employed certification authorization report initiated and owned by their Manufacturer.

An added (Reissue) suffix indicates the Licensed Brander employed their Supplier's qualifying NFRC simulation reports.

Assembler:

Any person who completes the final assembly of a product authorized for certification from fabricated parts, components, and accessories as supplied by a manufacturer/responsible party in accordance with the product certification, and who is authorized by that manufacturer/responsible party to attach the appropriate temporary labels when necessary. An assembler retains the right to become an NFRC-certified manufacturer/responsible party at a future date.

Attachment:

See "Dynamic Attachment" or "Fenestration Attachment."

Attachment Product:

A device (such as, but not limited to, shades or blinds) designed to be physically attached to, incorporated with, or covering a fenestration product.

Baseline Product:

Within a product line, the individual product selected for validation testing.

Bead:

(1) A strip used around the periphery of the glazing to secure it in a frame or sash (also referred to as a “stop”); (2) A strip of sealant, such as caulking or glazing compound.

Certification:

The affixing by a licensed Responsible Party of an NFRC label on a fenestration product, or on a box/package containing an attachment product, or the distribution of an NFRC Label Certificate, for which Certification Authorization has been granted.

Certification Agency Program (CAP):

Set of rules and procedures by which an independent certification and inspection agency becomes licensed and operates.

Certificate of Authorization (CA):

Certificate that is issued by an NFRC Licensed IA granting the licensee the authority to affix NFRC labels on a fenestration product or on the box/package containing an attachment product, or to obtain an NFRC Label Certificate, upon PCP compliance by the licensee.

Certification Authorization Report (CAR):

Certificate listing performance values of NFRC-rated products that is issued by an NFRC-Licensed IA granting the licensee the authority to affix NFRC Labels on a fenestration product or on the box/package containing an attachment product, or to obtain an NFRC Label Certificate, upon PCP compliance by the licensee.

Certification Cycle:

The amount of time certification authorization is granted for the product line from initial certification and between recertifications.

Certification Mark:

The distinctive logotype "sun flake" incorporating the initials NFRC in the center and the word "CERTIFIED" appearing at the base that has been registered with the United States Trademark Office and is intended to appear as a component of an NFRC Label or Label Certificate indicating the fenestration product has met the PCP or CMA PCP requirements as applicable.

Certification Policy Committee (CPC):

A standing committee whose members are appointed by the NFRC Board of Directors to manage the NFRC Certification Agency Program (CAP) and to provide interpretations for the NFRC Product Certification Program (PCP). See the NFRC 710: Operating Policies Manual for further details.

Certified Program:

A term often used to the Product Certification Program (PCP or CMA PCP)

Certified Product:

A fenestration product for which product certification authorization has been granted by a licensed IA, and which is properly labeled in accordance with the requirements of the certification program.

Certified Products Database:

A database of information for products for which certification authorization has been granted by a licensed Inspection Agency (IA), for each participant in the Certification Program.

Certified Products Directory (CPD):

A directory of fenestration products in electronic form, listing fenestration products and their performance ratings, for which product certification authorization has been granted by a licensed IA, and can be searched by the public.

Composite Unit:

A fenestration product consisting of two or more sash, leaves, lites, or sliding door panels within a single frame utilizing an integral mullion. (Not to be confused with products made from composite materials.)

Compliance and Monitoring Program:

A program that establishes activities that are prohibited by law and/or contract, and fines associated with such activities.

Computer Simulation:

The process by which a product is analyzed for energy performance characteristics utilizing NFRC-approved computer software and manufacturer supplied product specifications and drawings, in accordance with the requirements of the NFRC Rating System.

Condensation Index:

A relative indicator of a fenestration product's ability to resist the potential for condensation at a specific set of environmental conditions. The higher the Condensation Index value the greater the resistance to the potential of condensation.

Condensation Resistance:

A relative indicator of a fenestration product's ability to resist the formation of condensation at a specific set of environmental conditions. The higher the Condensation Resistance value the greater the resistance to the formation of condensation.

Curtain Wall, Curtain Wall System:

An external non-load bearing wall that consists of any combination of framing materials, fixed glazing, opaque glazing, operable windows, or other in-fill materials. See "Storefront," "Window Wall."

Dynamic Attachment:

Any Fenestration Attachment that incorporates Dynamic Glazing.

Dynamic Glazing:

Any Glazing System/Glazing In-fill that has the fully reversible ability to change its performance properties, including U-factor, SHGC, or VT. This includes, but is not limited to, shading systems between the glazing layers and chromogenic glazing.

Dynamic Glazing Product:

Any Fenestration Product that incorporated Dynamic Glazing.

Emissivity (ϵ):

The relative ability of a surface to reflect or emit heat by radiation. Emissivity ranges from 0.00 to 1.00 (Blackbody emissivity is 1.0).

Fabricator:

Any entity (may include a site-built manufacturer or glazing contractor) that receives reissued simulation and validation test reports that are authorized by a lineal supplier to be reissued for certification authorization.

Fenestration:

Products that fill openings in a building envelope, such as windows, doors, skylights, curtain walls, etc., designed to permit or limit the passage of air, light, vehicles, or people.

Fenestration Attachment:

A device (such as, but not limited to, shades, films, or blinds) designed to be physically attached to, incorporated with, or covering a fenestration product.

Frame:

The enclosing structure of a window, door, or skylight which fits into the wall or roof opening and receives either, glazing, sash, or vents.

Gas-fill:

The process of adding gas between glazing panes. Term typically used to indicate gases other than air, such as argon and krypton.

Glass:

An inorganic, amorphous substance, usually transparent, composed of silica (sand), soda (sodium carbonate), and lime (calcium carbonate) with small quantities of other materials.

Glazing:

The act of installing the glazing system/glazing in-fill; (n.) The transparent or semi-transparent in-fill material in a glazing system.

Glazing Contractor:

An entity that performs and completes the final assembly of a component system authorized for certification from fabricated parts, components, glazing, and accessories as supplied by a manufacturer, lineal supplier, or fabricator in accordance with approved assembly instructions.

Head:

The horizontal member forming the top of the fenestration product frame.

Independent Certification and Inspection Agency (IA):

An organization or person authorized by license to conduct specified services for the Certification Program.

Individual Product:

Any one specific fenestration product within a product line, specific to weather seals, glazing method, hardware, opening/non-opening configurations, ventilators, weep systems, and sills.

Insulating Glass Unit (IGU), Sealed Insulating Glass Unit:

A preassembled unit comprising lites of glass, which are sealed at the edges and separated by dehydrated space(s). The unit is normally used for windows, window walls, picture windows, sliding doors, patio doors, or other types of fenestration.

Jamb:

The vertical members of a fenestration product frame.

Knocked Down Product (KD):

A fenestration product supplied by a licensed manufacturer/responsible party in an unassembled or partially assembled state, which requires further assembly at the jobsite.

Label:

Permanent and/or temporary marker or device applied to a fenestration product, listing rating information and indicating compliance with certification requirements.

Label Certificate:

A document used in lieu of an NFRC Temporary Label specific to certain products that have received certification authorization (see NFRC 705).

Laboratory Accreditation Program (LAP):

Set of rules and procedures by which a laboratory becomes accredited and operates.

License Agreement:

A written agreement entered into between licensing parties where they agree to comply with all applicable program requirements (e.g., CAP, LAP, and PCP).

Licensee:

Any entity entering into an NFRC License Agreement and meeting the NFRC PCP requirements.

Lineal Supplier:

A company/responsible party that manufactures lineals (i.e., frame/sash profile components made from vinyl, aluminum, wood, fiberglass, or other materials) and supplies those lineals to a fabricator.

Manufacturer Code:

A unique alpha code assigned to the licensee by NFRC.

New Products:

Products not in production that may be submitted for validation testing in support of initial certification authorization.

Notice of Revocation:

A written notice issued by NFRC withdrawing the grant to an NFRC-licensed entity of its NFRC License and its rights under its License Agreement, including but not limited to, the rights to participate in the Licensing Program; the right to issue test or simulation reports; the right to issue product certification authorization; and the right to utilize NFRC's name, trade names and certification marks. Issuance of a notice of revocation requires immediate cessation of all NFRC-related activities by the recipient.

Notice of Suspension:

A written notice issued by NFRC advising an NFRC licensee that its license has been suspended by NFRC for a certain duration until remedial action is taken. If remedial action is not taken within the timeframe required, a Notice of Revocation may be issued.

Operator Type, Product Type:

A designation used to distinguish among fenestration products based on mode of operation, and the intended use of the installed product as defined by the manufacturer.

Panel Area (A_p):

The projected area of all decorative panels of uniform thickness and extending from a point 25 mm (1 in) of uniform thickness, in a plane parallel to the door core surface.

Parent Company:

A licensee meeting PCP requirements who has signed an NFRC License Agreement to participate in the Certification Program. The licensee lists on its Schedule I more than one plant (or fabricator) for which the licensee is responsible.

Private Labeler:

An entity that contracts with a fenestration product manufacturer to have a product manufactured under the private labeler's brand name for distribution in the marketplace. A private labeler may or may not participate as an NFRC licensee.

Product Certification Authorization:

The authority granted by an NFRC-Licensed IA to an NFRC Licensee to affix NFRC Labels, or obtain an NFRC Label Certificate, evidenced by a Certification Authorization Report (CAR) or Label Certificate issued by the IA.

Product Certification Program (PCP):

The NFRC program for granting of authorization to licensees to label products under the NFRC energy rating system.

Product Line:

A series of individual fenestration products of the same operator type, manufactured from the same profiles. Individual variations such as glazing, spacer, or small variations in frame profiles are considered individual products within product lines.

Quality Control Auditor:

A manufacturer's representative(s) who is (are) responsible for implementing and maintaining all provisions of the Quality Control Manual.

Rating:

Performance values obtained using NFRC-approved procedures used for comparative purposes only (i.e., U-factor, SHGC, VT, CI, etc.).

Rating System:

A system that consists of NFRC simulation and test procedures for determining comparative fenestration product energy performance characteristics, as supported by the Certification Program.

Registered Mark:

The distinctive NFRC logo, which has been registered with the United States Trademark Office and is intended to appear as a component of the label to indicate that the fenestration product to which the label is affixed has met the requirements of the NFRC Product Certification Program.

Responsible Party:

The entity (manufacturer, fabricator, lineal supplier, building owner, architect, door distributor, or other party) that signs an NFRC License Agreement. The responsible party agrees to comply with all applicable program requirements.

Sash:

The portion of a fenestration assembly that is installed in a frame and includes the glazing, stiles, and rails. A sash may be operable or fixed.

Sill:

The bottom horizontal member in a fenestration product frame.

Site-Built Products:

Fenestration products that are designed to be field glazed or field assembled and are comprised of specified framing and glazing components.

Slab:

Part of a hinged door system, glazed or unglazed, surrounded by a frame. Slabs may be fixed or operable.

Solar (adj):

(1) Referring to radiometric quantities, indicating that the radiant flux involved has the sun as its source or has the relative spectral distribution of solar flux; (2) referring to an optical property, having as its weighting function a standard solar spectral irradiance distribution.

Solar Heat Gain (SHG):

The quantity of incident solar energy passing through a fenestration system. Included are both directly transmitted solar radiation as well as solar energy absorbed by the fenestration system and re-transmitted into the inside space.

Solar Heat Gain Coefficient (SHGC):

The ratio of the solar heat gain entering the space through the fenestration product to the incident solar radiation. NFRC rates SHGC at normal incidence.

Spacer:

The component that separates and maintains the space between the glazing surfaces of an insulating glass unit (IGU), excluding any sealants.

Thermal Opening Area:

The area of the TDD product at the interior-most plane of the building's thermal envelope.

Threshold:

See Sill.

Transmittance:

The ratio of the transmitted radiant flux to the incident radiant flux.

Tubular Daylighting Device (TDD):

A non-operable device primarily designed to transmit daylight from a roof surface to an interior ceiling surface via a tubular conduit. The device consists of an exterior glazed weathering surface, a light transmitting tube with a reflective inside surface and an interior sealing device, such as a translucent ceiling panel.

Visible Transmittance (VT):

The ratio of visible radiation entering the space through the fenestration product to the incident visible radiation, determined as the spectral transmittance of the total fenestration system, weighted by the photopic response of the eye, and integrated into a single dimensionless value. Weighted by a standard solar spectrum.

Window:

An assembled unit consisting of a frame/sash component holding one or more pieces of glazing functioning to admit light and/or air to an enclosure.

3. NFRC LICENSE AGREEMENT REQUIREMENTS

3.1 General Requirements

License agreements shall be executed by NFRC when the IA issues certification authorization by means of a Certificate of Authorization (CA) to the Licensee.

3.1.1 License Agreement

NFRC shall deliver to the pending Licensee a License agreement, with schedules for identifying the products authorized for certification and the manufacturing facilities approved for production of such products.

- A. The license agreement shall be in the form applicable to the Licensee category:
 - i. Manufacturer - (Schedules I, II, & V: if applicable)
 - ii. Fabricator - (Schedule I & Schedule II)
 - iii. Site-Built Responsible Party - (Schedules I, II, & IV)
 - iv. Door Distributor/Dealer - (Schedules I & II)
 - v. Door Manufacturer/Pre-Hanger - (Schedules I & II)
 - vi. Door Manufacturer/Lineal Supplier - (Schedule III)
 - vii. Attachments Manufacturer - (Schedule I & Schedule II)
 - viii. Applied Film Manufacturer – (Schedule I & Schedule II)
 - ix. Applied Film Supplier – (Schedule III)
 - x. Applied Film Licensed Brander (Reissue & Originator) – (Schedule I, II, and VI); and for Licensed Brander (Duplicate) – (Schedule I, II, and V)
 - xi. Private Labeler – (Schedule I, II, V, and VI)
- B. The pending Licensee shall sign and return the signature page of the license agreement and associated Schedules to NFRC that shall take effect on the date of execution by NFRC. These documents can be e-mailed (preferred), faxed, or mailed to NFRC. The license agreement remains in effect until terminated by either the Licensee or NFRC.

- C. Upon execution of the NFRC license agreement, a Licensee shall be licensed by NFRC to affix the NFRC registered mark, by means of NFRC-approved labels, both temporary and permanent, a Site-Built Certificate, and an FMC, to products set forth on Schedule II and/or V (if applicable) of the NFRC license agreement, provided that such labels and certificates conform with PCP labeling requirements and requirements of the NFRC license agreement.
- D. Any additional products, or additional energy performance ratings, authorized for certification shall be set forth in amended schedules completed online by the Licensee in the NFRC Certified Products Database. The Licensee shall amend, within 30 calendar days, any change to applicable Schedules (I, II, III, IV, V), and shall notify their IA and the NFRC of the change.

3.1.2 Required Schedules

- A. The NFRC License Agreement requires that the Licensee complete and include applicable schedules prior to certification authorization, whose information falls under the agreement:
 - i. Schedule I – a listing of the manufacturing facilities where products for which certification authorization is requested are manufactured or fabricated, and the NFRC-approved IG Certification Program(s) in which the Licensee is participating for each facility is listed.
 - ii. Schedule II – a listing of the product lines for which certification authorization is in the process of being or has been granted, and the location(s) where each of those products listed are to be manufactured or fabricated.
 - iii. Schedule III – a listing of the Fabricator facilities under a Door Manufacturer/Lineal Supplier license agreement with NFRC where products that have obtained certification authorization are fabricated. A listing of the Applied Film Licensed Brander (Reissue or Originator) facilities/distribution centers under an Applied Film Supplier license agreement with NFRC where products that have obtained certification authorization are fabricated or labeled.

- iv. Schedule IV – a site-built project’s location and contact information.
 - v. Schedule V - a listing of the Manufacturer’s/Applied Film Manufacturer’s product line information; i.e., Manufacturer’s CPD Number and Series/model name, and corresponding Private Labeler/Applied Film Licensed Brander (Duplicate) CPD Number and Series/model name.
 - vi. Schedule VI - a listing of the Private Labeler/Applied Film Licensed Brander location(s) where the NFRC temporary and permanent labels are applied, or Applied Film Product Label Certificates are obtained.
- B. Additional documents provided to the Licensee during the initial application process to the Certification Program:
- i. Responsible Party Datasheet – A datasheet to be completed by the Licensee and submitted to NFRC along with the license agreement and schedules. The datasheet requests primary and billing contact information, along with simulation, testing, and IA information.
 - ii. Web Link Agreement – A license agreement between a Certification Program participant and NFRC used for establishing a participant website link from NFRC’s website.
 - iii. Membership Application – Application for NFRC membership. Membership is optional and is separate and apart from participating in the Product Certification Program.

3.2 Lineal Supplier Requirements

3.2.1 Simulation and Test Reports

- A. A Lineal Supplier may contract for simulations and tests on product lines for NFRC ratings on behalf of one or more Fabricators. Should a Fabricator wish to participate in the NFRC Product Certification Program, it shall meet all of the requirements in the NFRC 700 applicable to a Fabricator.
- B. A Lineal Supplier obtaining NFRC simulation and test reports on behalf of a Fabricator shall authorize the simulation and test laboratory to reissue the reports in the

name of the Fabricator. If a simulation or test report is issued to a Lineal Supplier, all reissues of these reports shall be identified as stated in NFRC 701.

3.3 Fabricator License Agreement Requirements

3.3.1 Fabricator License Agreement

- A. A Fabricator receives simulation and test reports from a Lineal Supplier for product lines the Fabricator manufactures or fabricates. The Lineal Supplier reports are reissued in the Fabricator's name by the laboratory per authorization of the Lineal Supplier. The Fabricator is responsible for obtaining and maintaining certification authorization for these product lines.
- B. The Fabricator enters into a Fabricator License Agreement with NFRC and is responsible for completing and maintaining a Schedule I and Schedule II for that license agreement.

3.4 Door Distributor/Dealer License Agreement Requirements

3.4.1 Door Distributor/Dealer License Agreement

- A. The Door Distributor/Purchaser or Dealer/Pre-hanger of doors receives testing and simulation reports from a Door Manufacturer/Pre-hanger or Door Manufacturer/Lineal Supplier, and is the Responsible Party in this license agreement with NFRC. The Licensee distributes complete or component parts for door fenestration products that have been supplied by an NFRC Door Manufacturer/Pre-hanger or Door Manufacturer/Lineal Supplier.
- B. The Licensee obtains product certification authorization by using simulation and validation test reports reissued from the NFRC Door Manufacturer or Lineal Supplier in order to certify door products with NFRC performance ratings in accordance with NFRC rating and certification requirements. The Licensee agrees to be the Responsible Party for ensuring that completed door products comply with NFRC procedures and are properly labeled with the NFRC label.
- C. The Door Distributor/Dealer enters into an NFRC Door Distributor/Dealer License Agreement and is responsible for completing and maintaining a Schedule I and Schedule II for this agreement.

3.5 Door Manufacturer/Pre-Hanger Licensing Requirements

3.5.1 Door Manufacturer/Pre-Hanger License Agreement

- A. The Door Manufacturer/Pre-Hanger is the Responsible Party who manufactures, glazes, and pre-hangs a door product (includes slab, jamb, header, and threshold). The Licensee obtains certification authorization for their door products in accordance with NFRC rating and certification requirements. Having met these requirements, the Licensee is authorized to label their NFRC-certified doors.
- B. The Door Manufacturer/Pre-hanger enters into an NFRC Door Manufacturer/Pre-Hanger License Agreement and is responsible for completing and maintaining a Schedule I and Schedule II for this agreement.

3.6 Door Manufacturer/Lineal Supplier Licensing Requirements

3.6.1 Door Manufacturer/Lineal Supplier License Agreement

- A. The Door Manufacturer/Lineal Supplier is the Responsible Party and door component/slab manufacturer who supplies simulation and validation test reports to a Door Distributor/Dealer or Door Manufacturer/Pre-hanger who shall be listed on the Schedule III of this licensing agreement.
- B. The Licensee is not responsible for the finished glazing on the door. The Licensee obtains simulation and test reports done in accordance with NFRC rating requirements and authorizes their re-issuance to a Door Distributor/Dealer or Door Manufacturer/Pre-hanger.
- C. The Licensee is not authorized to label products.
- D. The Door Manufacturer/Lineal Supplier shall enter into an NFRC Door Manufacturer/Lineal Supplier License Agreement and is responsible for completing and maintaining a Schedule III for this agreement.

3.7 Site-Built License Agreement Requirements

3.7.1 Site-Built License Agreement

- A. The Site-Built Licensee is the party responsible for ensuring that specific fenestration site-built products identified in Schedule II of the license agreement comply with NFRC rating and certification requirements.

- B. Any curtain wall Manufacturer, Lineal Supplier, glazing contractor, architect, or other party may choose to be the Responsible Party to the NFRC Site-Built License Agreement. The Site-Built Responsible Party specifies, assembles, fabricates, or installs site-built fenestration products. The Licensee also arranges to have a site-built product simulated and physically tested by an NFRC-accredited laboratory.
- C. The Licensee is authorized to be issued a Label Certificate(s) by its designated IA, and can submit this certificate to a building office or have it posted on the job site where the product is to be installed.
- D. The Site-Built Licensee enters into an NFRC Site-Built License Agreement and is responsible for completing and maintaining Schedules I, II, and IV for this agreement. Schedules for this agreement shall be updated by the Licensee for each new site-built project (Schedule IV), and for each new product obtaining or terminating certification authorization.

3.8 Attachment Product Manufacturing License Agreement Requirements

3.8.1 Attachment Product License Agreement

- A. The Attachment Product Licensee manufactures attachment products for fenestration products, and seeks to obtain product certification authorization for its attachment products pursuant to NFRC rating and certification requirements.
- B. The Licensee is authorized to label the box/packaging containing an attachment product with an NFRC permanent and temporary label, and obtain a Label Certificate for the box/packaging containing an attachment product.
- C. The Attachment Product Licensee enters into an Attachment Product Manufacturer License Agreement and is responsible for completing and maintaining Schedules I and II for this agreement

3.9 Applied Film Manufacturing License Agreement Requirements

3.9.1 Applied Film Manufacturer License Agreement

- A. The Applied Film Manufacturer Licensee manufactures applied film products for fenestration products, and seeks

to obtain product certification authorization for its applied film products pursuant to NFRC rating and certification requirements.

- B. The Licensee is authorized to label the box/packaging containing an applied film product with an NFRC temporary label or obtain a Label Certificate for the box/packaging containing an applied film product.
- C. The Applied Film Manufacturer Licensee enters into an Applied Film Manufacturer License Agreement and is responsible for completing and maintaining Schedules I and II for this agreement. Distribution locations which re-package and/or re-label shall be listed on Schedule I.

3.9.2 Applied Film Reseller

- A. Branding of Manufacturer:
An Applied Film Manufacturer Licensee may supply NFRC Certified (labeled) finished film to any reseller. The Applied Film Manufacturer Licensee is the Responsible Party and shall label the box/packaging containing an applied film product with an NFRC temporary label or obtain a Label Certificate for the box/packaging containing an applied film product. The reseller may not modify the product, the box/packaging, nor may the NFRC temporary label be customized or re-printed.
- B. Branding of Reseller:
An Applied Film Manufacturer Licensee may supply NFRC Certified (labeled) finished film to any reseller who has requested re-branding from the manufacturer. The Applied Film Manufacturer Licensee is the Responsible Party and shall label the box/packaging containing an applied film product with an NFRC temporary label or obtain a Label Certificate for the box/packaging containing an applied film product. The reseller may not modify the product, the box/packaging, nor may the NFRC temporary label be customized or re-printed.

3.10 Applied Film Supplier License Agreement Requirements

3.10.1 Applied Film Supplier License Agreement

- A. The Applied Film Supplier Licensee is the Responsible Party and manufactures applied film for fenestration products, may supply simulation reports to an Applied Film Licensed Brander Reissue or supplies finished

product to an Applied Film Licensed Brander Originator who shall be listed on the Schedule III of this licensing agreement.

- B. The Licensee shall obtain simulation reports done in accordance with NFRC rating requirements and authorize their re-issuance to an Applied Film Licensed Brander (Reissue). If the Licensee does not obtain simulation reports, an Applied Film Licensed Brander (Originator) shall obtain product certification as required in the Applied Film Licensed Brander (Originator) License Agreement.
- C. The Licensee if selected by the Applied Film Licensed Brander (Reissue or Originator) as the labeler is the Responsible party and authorized to label the box/packaging containing an applied film product with an NFRC temporary label, or obtain an Applied Film Label Certificate for the box/packaging containing an applied film product, and shall be identified on the Applied Film Licensed Brander (Reissue or Originator) Schedule III.
- D. The Applied Film Supplier Licensee enters into an Applied Film Supplier License Agreement and is responsible for completing and maintaining Schedule III.

3.10.2 Simulation Reports

An Applied Film Supplier obtaining NFRC simulation reports on behalf of an Applied Film Licensed Brander (Reissue) shall authorize the simulation laboratory to reissue the reports in the name of the Applied Film Licensed Brander (Reissue).

3.11 Applied Film Licensed Brander License Agreement Requirements

3.11.1 General Requirements for Applied Film Licensed Brander License Agreement

- A. The Applied Film Licensed Brander Licensee is the Responsible Party whose name and NFRC identification code is reflected on the NFRC Temporary Label of an applied film product box/packing, and whose name is listed in the NFRC Attachment Products Directory.
- B. The Applied Film Licensed Brander is the Responsible Party and shall complete and maintain Schedules I and II and is authorized to apply the NFRC temporary label on the box/packaging, or obtain an Applied Film Label Certificate for the box/packaging containing an applied

film product at his/her location (reflected on the Schedule VI) or may arrange for the Applied Film Manufacturer Licensee or Applied Film Supplier Licensee to apply the Applied Film Licensed Brander Licensee's labels at the place of manufacturer (reflected on the Schedule II).

- C. The Applied Film Licensed Brander enters into Applied Film Licensed Brander License Agreement with NFRC.
- D. The Applied Film Licensed Brander Licensee shall sign a license agreement with an Inspection Agency. The Applied Film Licensed Brander Licensee is not required to use the same IA as the Applied Film Manufacturer Licensee or Applied Film Supplier Licensee.

3.11.2 Applied Film Licensed Brander (Duplicate)

- A. The Applied Film Licensed Brander (Duplicate) obtains product certification authorization by requesting an Applied Film Manufacturer's product lines to be copied into their name and Film Attachment's Directory (APD) record in order to certify applied film products with NFRC performance ratings in accordance with NFRC rating and certification requirements. The Applied Film Manufacturer Licensee obtains and maintains certification authorization for the authorized product line in accordance with rating and certification requirements.
- B. The Applied Film Licensed Brander (Duplicate) is responsible for completing and maintaining Schedules V for this agreement.

3.11.3 Applied Film Licensed Brander (Reissue)

- A. The Applied Film Licensed Brander (Reissue) Licensee obtains product certification authorization by using simulation reports reissued from the NFRC Applied Film Supplier in order to certify applied film products with NFRC performance ratings in accordance with NFRC rating and certification requirements.
- B. The Applied Film Licensed Brander (Reissue) Licensee shall be listed on the Applied Film Supplier Licensee's Schedule III.

3.11.4 Applied Film Licensed Brander (Originator)

- A. The Applied Film Licensed Brander (Originator) Licensee obtains product certification authorization as the Responsible Party who is supplied finished product by

the NFRC Applied Film Supplier Licensee in order to certify applied film products with NFRC performance ratings in accordance with NFRC rating and certification requirements.

- B. The Applied Film Licensed Brander (Originator) Licensee shall be listed on the Applied Film Supplier Licensee's Schedule III.

3.12 Private Labeler License Agreement Requirements

3.12.1 Private Labeler License Agreement

- A. The Private Labeler Licensee is the Responsible Party whose name and identification code is reflected on the NFRC Label of a fenestration product, and whose name is listed in the NFRC Certified Products Directory.
- B. The Private Labeler Licensee is responsible for the proper labeling of the fenestration product while the fenestration product Manufacturer obtains and maintains certification authorization for the authorized product line in accordance with rating and certification requirements. The Private Labeler Licensee may apply the NFRC temporary and permanent label on the fenestration product at his/her location (reflected on the Schedule VI) or may arrange for the Manufacturer to apply the Licensee's labels at the place of manufacture (reflected on the Schedule II).
- C. A Door Manufacturer/Pre-Hanger participating as a Private Labeler who is modifying the fenestration product shall apply an NFRC temporary and permanent label on the fenestration product at their location as reflected on the Schedule VI.
- D. The Licensee enters into a Private Labeler License Agreement with NFRC and is responsible for completing and maintaining a Schedule I, II, and V for that license agreement. The Private Labeler shall also complete a Schedule VI if NFRC labels are to be applied or FMCs generated at the Private Labeler location.
- E. The Private Labeler Licensee shall sign a license agreement with an Inspection Agency. The Private Labeler Licensee is not required to use the same IA as the Manufacturer.

4. PRODUCT EVALUATION

Under the Certification Program, products may be authorized for certification only if they have been rated in accordance with NFRC-approved procedures, computer programs, and test methods.

4.1 Required Ratings

4.1.1 Certification Program Ratings

- A. For certification authorization, except as indicated in Section 4.3.4, a Licensee shall obtain ratings for U-factor, Solar Heat Gain Coefficient (SHGC), and Visible Transmittance (VT).
- B. If there are no technical procedures available for obtaining a required rating for a particular product at the time of certification authorization, the product is exempt from the rating requirement.

4.2 Optional Ratings

Optional performance ratings available to Licensees for certification authorization are Air Leakage (AL), Condensation Resistance, and Condensation Index (CI).

4.2.1 Air Leakage

An air leakage test report in accordance with NFRC 400 may be used for the initial NFRC certification authorization, and the same air leakage test report may be used for subsequent NFRC re-certification authorizations for that product line. The reported date of the test shall be no more than 10 years prior to the date of submission for certification authorization.

4.2.2 Condensation Ratings

See Section 4.3.4 for Special Cases regarding Condensation ratings.

4.3 NFRC Accredited Laboratories

4.3.1 Simulations and Testing

- A. NFRC accredits simulation laboratories and testing laboratories to conduct computer simulations and physical testing of fenestration and attachment products. A current contact listing of accredited labs is maintained on the NFRC website.

- B. The results of simulations and tests conducted by NFRC-accredited laboratories are reported to the Licensee and to the NFRC-licensed Certification and Inspection Agency (IA) selected by the Manufacturer.

4.3.2 Product Evaluation

A Licensee shall obtain from an NFRC-accredited laboratory NFRC required ratings for each product to be authorized for certification. Such ratings shall be obtained by complying either with the Validated Computational Procedure, Computational Procedure, or Testing Alternative.

4.3.2.1 Validated Computational Procedure

- A. This procedure is used for obtaining U-factor ratings. The Licensee shall obtain a simulation report from an NFRC-accredited simulation laboratory for each product line to be authorized for certification.
- B. The Licensee shall then obtain a physical test report from an NFRC-accredited test laboratory. The test report shall contain the test results of the baseline product (the representative product of the product line) chosen by the Licensee in order to validate the simulations conducted for the product line.

4.3.2.2 Computational Procedure

This procedure is used for obtaining SHGC, VT, Condensation Resistance, and CI ratings. Under this procedure, the Licensee shall obtain a simulation report from an NFRC-accredited simulation laboratory for each product line to be authorized for certification. The Testing Alternative procedure for these ratings is to be used only if the product cannot be simulated.

4.3.2.3 Testing Alternative

- A. This procedure is used for products that cannot be simulated and/or for ratings that can only be obtained through physical testing. The Licensee shall request that the simulation laboratory provide written confirmation to the IA that the product line cannot be simulated.

- B. The Licensee shall select products for testing, which shall be test samples in the sizes set forth by applicable NFRC technical procedures.
- C. As in validation testing, the Licensee shall supply the test laboratory with product drawings and other applicable information as required. The Licensee shall authorize the testing laboratory to deliver a copy of the test report, along with copies of supporting data, to the selected IA.
- D. Air Leakage ratings can only be obtained using the Testing Alternative method of evaluation; there are no procedures for the simulation or computation of air leakage ratings.

4.3.2.4 Procedures for Simulation

- A. For each product line to be rated, the Licensee shall deliver bill of materials, product assembly drawings, detailed dimension die drawings, and all individual product options within the product line to an NFRC-accredited simulation laboratory. Individual products to be rated shall meet the requirements set forth in NFRC rating procedures.
- B. The Licensee shall direct the simulation laboratory to conduct computer simulations of each individual product in accordance with applicable NFRC rating procedures (ANSI/NFRC 100, ANSI/NFRC 200, NFRC 500, and ANSI/NFRC 500) and to develop a matrix of individual products.
- C. The Licensee shall direct the simulation laboratory to deliver the matrix and simulation report, together with copies of the complete supporting data to an NFRC-licensed IA selected by the Licensee (See NFRC 701 supplemental documents).
- D. A Lineal Supplier shall authorize each Fabricator to obtain the Lineal Supplier's simulation report by authorizing the simulation laboratory to reissue the report to the Fabricator. The report shall include all individual product options authorized for certification.

4.3.2.5 Procedures for Testing

- A. Where applicable, a Licensee shall obtain a physical test report from an NFRC-accredited test laboratory for each product line to be authorized for certification.
- B. Test Samples: All test samples submitted for initial certification authorization shall be either new products or production line units. These test samples serve two purposes: validation of the baseline product and plant qualification.
- C. The sample submitted for initial certification shall be the baseline product.

4.3.2.6 Validation (test procedure for obtaining U-factor computational validation)

- A. The Licensee shall manufacture and deliver one representative test sample to a selected NFRC-accredited testing laboratory. The representative sample shall be the baseline product and the sample used for testing may be either a production line unit or a new product (prototype).
- B. The Licensee shall also deliver to the testing laboratory a copy of the product drawings, bill of materials, NFRC 'Submittal Form for Test Samples' in Appendix C, and other applicable information as is necessary to accurately define the representative sample to be physically tested.
 - i. If the sample is being tested for validation of a product line that is simulated using thermophysical property values from Appendix B of NFRC 101, then the licensee shall provide the testing laboratory with the same product drawings and/or material specifications that were provided to the simulation laboratory as specified in Section 4.1 of NFRC 101.

NOTE: If a product line(s) is a member of a Validation Text Matrix in accordance with ANSI/NFRC 100, then the validation test conducted validates all product lines within

the Validation Test Matrix.

- C. The Licensee shall direct the testing laboratory to physically test the representative sample in accordance with NFRC 102.
- D. The Licensee shall direct the testing laboratory to deliver a copy of the test report (electronically and/or hardcopy), together with copies of completed submittal form and complete support data as required by provisions of NFRC 701, to the NFRC-licensed IA selected by the Licensee.
- E. A Lineal Supplier shall authorize each Fabricator Lineal Supplier to obtain the Lineal Supplier's test report by authorizing the test laboratory to reissue the report to the Fabricator.
- F. The product matrix simulated shall be considered validated if the results of the physical test meet the equivalence criteria set forth in the ANSI/NFRC 100.

4.3.3 Plant Qualification

- A. Each plant or Fabricator location of a Licensee listed on the Schedule I or a Door Manufacturer/Lineal Supplier Schedule III of an NFRC license agreement shall test at least one production line unit every five years; the Licensee may submit the production line unit at any time during the certification cycle.
- B. The production line test results shall be compared with the equivalent individual product in the simulation matrix and shall be considered validated if the results of the test meet the equivalence criteria of ANSI/NFRC 100. The validation of the production line test results shall meet plant qualification requirements.
- C. The production line unit can be any individual product within a product line manufactured at a plant or Fabricator location listed on the Schedule I or Door Manufacturer/Lineal Supplier Schedule III of the NFRC license agreement.
- D. If the number of NFRC-certified product lines to be tested during the five-year certification cycle is greater than the number of plants or Fabricator locations, each plant shall

be required to test a different production line unit within the five-year certification cycle.

- E. When the number of plant or Fabricator locations exceed the number of authorized product lines, additional tests of the same product line shall be required.
- F. Each plant or Fabricator location added to the Schedule I or a Door Manufacturer/Lineal Supplier Schedule III of the NFRC license agreement that manufactures a product line(s) in a given five-year certification cycle shall submit a representative production line test unit for plant qualification purposes within six months of inclusion on a Schedule I or III.

4.3.4 Special Cases

4.3.4.1 This Section is Intentionally Left Blank

4.3.4.2 Tubular Daylighting Devices(All Types)

Tubular Daylighting Devices (TDD) use “test only” procedures for rating ~~U-factor per the NFRC 102,~~ SHGC per the NFRC 201, and VT_{annual} ratings per the NFRC 203. TDDs are exempt from obtaining a U-factor rating until a procedure is available.

4.3.4.3 Fenestration Attachment Products

- A. Required ratings for certification authorization of interior applied films shall be U-factor, SHGC, and VT obtained per ANSI/NFRC 100 and ANSI/NFRC 200; and required ratings for certification authorization of exterior applied films shall be SHGC and VT obtained per ANSI/NFRC 200. Other NFRC ratings are not available for applied films.
- B. Required ratings for certification authorization of Dynamic Attachments for Swinging Doors shall be U-factor, SHGC, and VT, obtained at the attachment product’s Fully OPEN and Fully CLOSED Positions, per ANSI/NFRC 100 and ANSI/NFRC 200. Other NFRC ratings are not available for these attachment products.
- C. NFRC ratings are not presently available for any other Fenestration Attachment Products. At such time that rating procedures are approved for other Fenestration Attachment

Products, appropriate updates will be made to this and other applicable NFRC documents.

4.3.4.4 Dynamic Glazing Products

- A. Required ratings for certification authorization of Dynamic Glazing Products shall be U-factor, SHGC, and VT, obtained per ANSI/NFRC 100 and ANSI/NFRC 200. The licensee shall have the option of either:
- i. Utilizing these ratings at the product's Fully ON/CLOSED and Fully OFF/OPEN Positions, and utilizing the temporary label for Dynamic Glazing Products as indicated in Figure A-12; or
 - ii. Utilizing these ratings at only the product's Fully OFF/OPEN Position and utilizing the applicable temporary label from Appendix A for non-Dynamic Glazing Products.

B. If certification authorization is sought for Condensation Resistance or Condensation Index (CI) ratings for Dynamic Glazing Products such Condensation Resistance shall be obtained per NFRC 500 and CI ratings shall be obtained per ANSI/NFRC 500. The Licensee shall utilize the same option for the CI rating as is selected for U-factor, SHGC, and VT in Section 4.3.4.4.A.

C. Ratings for products with slatted blinds between glass generated at -45° and +45° slat tilt angle positions (See Figure 4-2 in ANSI/NFRC 100) shall be permitted in the CPD but shall not be displayed on the temporary label.

~~B.~~ NOTE: The label can indicate the availability of the additional rated values for slatted blinds by using the arrow and word *Variable* as defined in Section 6.5.4.B(i)(d) and Figure A-12.

4.3.4.5 Translucent Panels

- A. For Products that will be utilizing Translucent Panels, the Center-of-Glass (COG) U-factor,

SHGC, and VT values shall be obtained by the licensee per ANSI/NFRC 100, 102, 201, and 202.

- i. If no COG values exist for U-factor, SHGC and VT all three test shall be performed using identical samples and submitted to one or more NFRC accredited testing laboratories.
- ii. If the licensee has conducted COG values for U-factor and/or SGHC, an identical sample constructed of the same process and materials shall be submitted for VT testing to an NFRC accredited testing laboratory.

4.3.5 Modifications to a Product Line

Prior to the adoption of a modification in the design or construction of an NFRC-certified product line, the Licensee shall comply with the following:

- A. If the modification to the product line is within the rules as defined in ANSI/NFRC 100 and 200, appropriate and sufficient documentation proving the compliance with NFRC procedures shall be submitted to the IA for approval, or
- B. If the modification to the product line is outside the rules as defined in ANSI/NFRC 100 and 200, the manufacturer may request an exemption from NFRC, or
- C. The Licensee shall obtain new NFRC ratings and product certification authorization.

If the product line is test only and the modification requires the listing of additional product(s) in the product line, the new individual product shall only be added to the product line upon completion of tests for all required ratings and IA approval. The expiration date of the product line shall not change based on the addition of a new product.

- D. Product additions to an existing product line that utilizes component testing values shall not change the expiration date of the product line.

5. CERTIFICATION AUTHORIZATION

Except as indicated in Section 4.3.4, the Licensee shall seek product certification authorization for required ratings: U-factor, SHGC, and VT. Additionally, a Licensee may seek certification authorization for optional ratings: Air Leakage (AL) and either Condensation Resistance or Condensation Index (CI).

5.1 Granting of Certification Authorization

- A. The Licensee is given authorization to label a product and generate an FMC as NFRC-certified only when the IA issues product certification authorization.
- B. Products not authorized for NFRC Certification, even when rated following NFRC rating procedures, may not be advertised as NFRC-Certified and may not be labeled or have an FMC generated as such.
- C. Initial certification authorization shall expire five years from the physical test date.

Exception: For products that do not require validation testing, the initial certification authorization shall expire five years from the simulation report date.

- D. Any product line that has been voluntarily withdrawn from the Certification Program by the Licensee may be re-instated prior to certification authorization expiration upon review and approval of the IA. The certification authorization expiration date remains as previously established.

Test only product lines shall only be granted certification authorization upon completion of tests for all required ratings. The expiration date for test only product lines that require multiple tests shall be five years from the latest test date of all tests for required ratings.

- E. For products utilizing component testing values, component values shall be permitted to be used provided the component test report is not more than 10 years past the initial test date.

5.2 IA Review of Simulation and Test Reports for Validation

- A. The NFRC-licensed IA is responsible for reviewing both simulation and test laboratory reports prepared by NFRC-accredited laboratories, which shall also include reviewing NFRC-approved computer software files and information documented in the NFRC 701 and supplemental document reporting requirements.

- B. The Licensee shall select and then direct an NFRC-licensed IA to review simulation and test results/reports to determine whether the products rated meet certification authorization requirements. A current contact listing of licensed IAs is maintained on the NFRC website.
- C. The NFRC licensed-IA shall review the reports to determine whether:
 - i. The physical test results for the baseline product within the product line, when compared with the simulation results for that product, fall within the range variation permitted under the requirements of ANSI/NFRC 100,
 - ii. The physical test results for test-only products meet the Testing Alternative requirements of ANSI/NFRC 100, or
 - iii. Any thermophysical property values that were obtained from Appendix B of NFRC 101 are substantiated with product drawings and/or material specifications as specified in Section 4.1 of NFRC 101.

5.3 IA Initial In-Plant Inspection

- A. In connection with the Licensee's initial product certification authorization, the Licensee shall submit to an in-plant inspection by the IA in accordance with the procedures governing inspections set forth in this document.
- B. The initial in-plant inspection may occur after initial product certification authorization is granted, at the sole discretion of the IA, but shall occur not later than six months after the date of notification by the IA of initial product certification authorization.
- C. In the event the IA is unable to conduct an initial in-plant inspection in order to determine compliance at the time of initial product certification authorization, such authorization may be granted contingent upon subsequent completion of such inspection.

Exception: The requirement of initial inspection shall be waived for site-built product certification authorization; an inspection of the Site-Built Licensee's facility shall be conducted by the IA within one year of the issuance of an NFRC Label Certificate.

- D. If the results of the initial inspection in connection with initial product certification authorization indicate compliance with all requirements for product certification authorization, and certification authorization has been issued, the Licensee shall be entitled to become NFRC-licensed.

5.4 IA Issuance of Certification Authorization

Product certification authorization shall be granted with respect to any one or more of the performance ratings for any product for which the IA has determined that the Licensee has fulfilled all certification requirements.

5.4.1 Certificate of Authorization

Certification authorization shall be issued in the form of a Certificate of Authorization (CA). The designated IA shall send a copy of the CA to the Licensee by mail and/or electronically.

5.4.2 Certification Authorization Report

In addition to the CA, the Licensee may request a Certification Authorization Report (CAR). The designated IA shall send a copy of the CAR to the Licensee by mail and/or electronically.

5.4.3 Energy Performance Ratings

The energy performance ratings that are permitted to be displayed on the NFRC Temporary Label, Label Certificate, or FMC shall be obtained from the NFRC CPD.

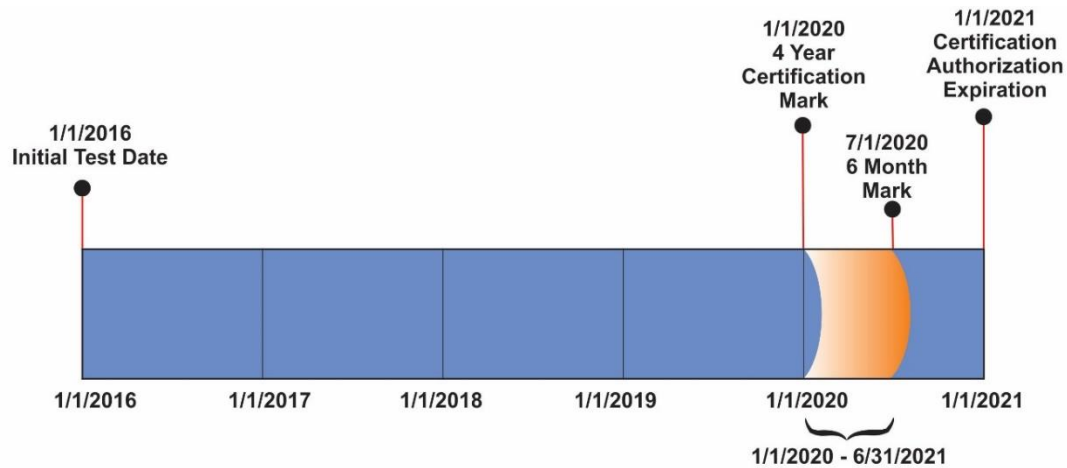
5.5 IA Denial of Certification Authorization or Licensee License Agreement

- A. If the results of the initial inspection do not reflect compliance with inspection requirements, the Licensee shall have 15 business days from the date of the inspection report in which to comply or correct the non-compliance issue(s). Otherwise, initial product certification authorization and/or the Licensee's license agreement shall be denied.
- B. In such an event, the IA shall deliver a Notice of Denial to the Licensee with a copy to NFRC.
- C. The Licensee may appeal the denial of certification authorization and/or the license agreement pursuant to the appeals procedures set forth in this document. Costs related to re-inspection necessitated by a failure to meet requirements in the first review shall be borne by the Licensee.

5.6 Recertification

- A. Products which have obtained certification authorization shall be subject to recertification prior to the product line expiration date listed on the CA.
- B. Recertification may occur at any time within the certification cycle.

- i. If recertification occurs earlier than 6 months prior to the certification expiration date, the new certification expiration date shall be five years from the recertification test date.

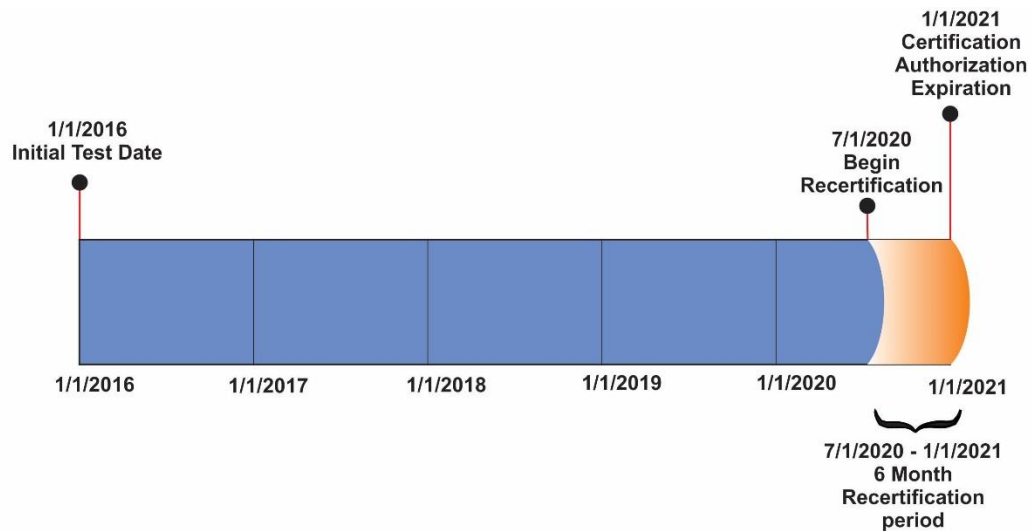


- (a) Exception: For products that do not require validation testing, the certification authorization shall expire five years from the recertification simulation report date.

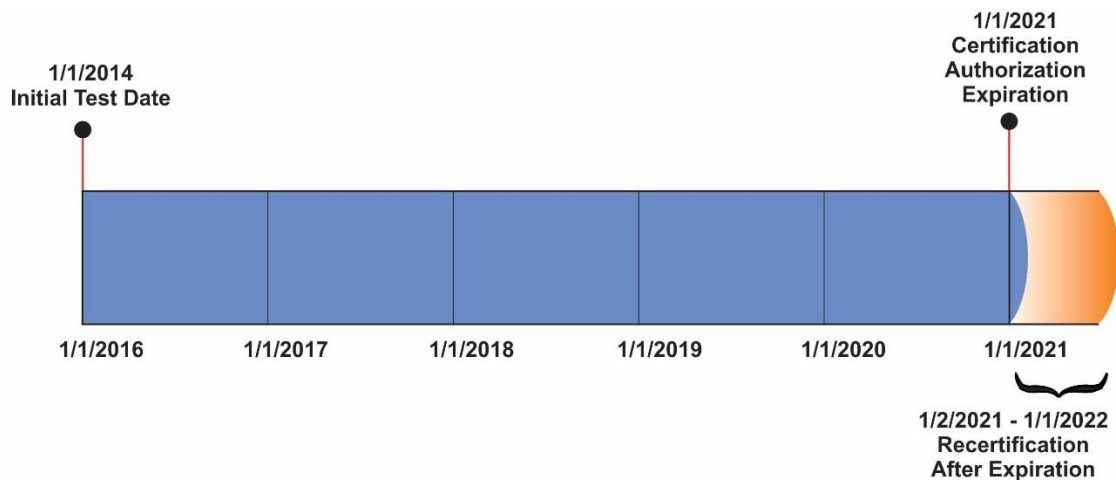
- (b) Exception: For test only product lines, the certification authorization shall expire five years from the latest test date for a test of a required rating.

(b) NOTE: TDDs are exempt from expiration for U-factor until July 1, 2028. Refer to PCP Bulletin 2024-03 for additional information.

- ii. If recertification occurs within six months prior to the certification expiration date, the new certification expiration date shall be five years from the previous expiration date.



- C. The Licensee may request a six-month extension of certification authorization.
 - i. The extension request shall be sent in writing to the IA before the expiration of the five-year certification cycle.
 - ii. If recertification is completed before the six-month extension is expired, the new certification expiration date shall be five years from the previous certification expiration date.
 - iii. If recertification is not completed during this extension, certification authorization shall expire for that product line.
- D. If recertification occurs more than six months after the certification expiration date, the new certification expiration date shall be five years from the recertification test date.



- i. Exception: For products that do not require validation testing, the certification authorization shall expire five years from the recertification simulation report date.
- ii. Exception: For test only product lines, the certification authorization shall expire five years from the latest test date for a test of a required rating.

ii. NOTE: For TDDs, the certification authorization for U-factor shall be extended until July 1, 2028. Refer to PCP Bulletin 2024-03 for additional information.

5.6.1 Recertification Procedures

- A. A Licensee shall designate each individual product within a product line, for which an authorized rating is desired, to be simulated by an NFRC-accredited simulation laboratory using simulation procedures in effect at the time recertification is requested.
- B. The Licensee shall select one individual product from within the product line matrix for physical testing and submit the selected test specimen to an NFRC-accredited test laboratory for physical testing in accordance with NFRC 102. For Special Cases, as specified in Section 4.3.4, other NFRC test procedures may apply.

The product simulation matrix shall be considered validated if the results of the test meet the equivalence criteria of ANSI/NFRC 100 or, in the case of Special Cases as specified in Section 4.3.4, all other applicable NFRC procedures. All test samples shall be production line units.

- C. For products utilizing component testing values, previously obtained component values shall be permitted to be reused provided the component or the test method has not changed.

A component test report shall not be more than 10 years past the initial test date at the time of recertification authorization.

NOTE: Determination that any test methods have changed shall be the purview of the NFRC Technical Committee.

- D. For test only product lines, all individual products in the product line shall be tested for all required ratings.

~~D.~~ Exception: TDDs are exempt from re-certification and are reapproved for U-factor until July 1, 2028. Refer to PCP Bulletin 2024-03 for additional information.

6. PRODUCT LABELING

Window, door, and skylight products shall not be NFRC-certified unless they have a permanent label and a temporary label. Applied films and other attachment products shall not be NFRC-certified unless it has a label affixed to the box/packaging.

6.1 Overview

- A. Products not authorized for NFRC certification, even if rated following NFRC procedures, may not be advertised as NFRC-certified.
- B. An NFRC Licensee shall assure that only products for which it has obtained NFRC product certification authorization shall be labeled with an NFRC permanent label and a NFRC temporary label. An individual product option that is not listed in the CPD (such as a special order product request) shall not contain any logo or mark, the NFRC CPD number, or the NFRC disclaimer.
- C. A Licensee shall not affix or cause to be affixed to a fenestration product, or to the box/packaging containing an attachment product, an NFRC permanent label and NFRC temporary label when the Licensee knows or should know that such label sets forth a performance rating that is false, inaccurate, or misleading to a reader, consumer, the public, or a government agency, or that indicates conformance with the Rating System

or Certification Program when such product does not so conform.

- D. A Licensee shall withdraw from the market any products determined by NFRC to have affixed upon it, or to the box/packaging containing an attachment product, a label, or FMC purporting to be an NFRC label that is inaccurate, false, or misleading.
- E. In the event that an NFRC label, label certificate, or FMC is inaccurate, false, misleading, or is not authorized for certification, whether inadvertently or not, a Licensee shall not sell or offer for sale such product until the label has been removed from all such products, or the box/packaging containing the attachment product, or the FMC has been corrected and re-issued. Removal of the label shall take place at the Licensee's manufacturing facilities or wholesale and retail distribution system. NFRC may publish a notice that such a product is not a certified product. The Licensee shall cease any advertising or promotion of such product as an NFRC-certified product upon notification.
- F. Labels shall not be affixed to any product, nor to the box/packaging containing an attachment product, nor FMC generated for which product certification authorization or Licensee's license agreement is suspended or revoked. Unused labels for a product for which product certification authorization has been suspended or revoked shall be shipped freight prepaid to the Licensee's IA not later than seven calendar days after the date of the Notice of Suspension, or if no appeal is taken, the Notice of Revocation.
- G. If an appeal of suspension is not requested and revocation is issued, the labels for that product(s) shall be destroyed by the IA not later than 90 calendar days after the date of revocation.

6.2 Individual Responsible for Proper Labeling

An NFRC Licensee shall designate one or more individuals to be responsible for proper labeling and generation of FMCs of NFRC-certified products.

6.3 General Requirements for Labeling

- A. A Licensee shall use for windows, doors, and skylights a permanent label and a temporary label. Applied films and other attachment products shall place a label on the box/packaging. Labels shall include ratings only for which product certification authorization has been granted by the IA for products

manufactured at the plant(s) registered with the IA and listed on the Schedule I and II of the NFRC license agreement.

- B. Labels shall enable tracing of the product bearing the labels to a product line listed in the CPD.
- C. Label designs shall be reviewed and approved by the Licensee's IA prior to use to ensure compliance with all labeling requirements.
- D. Fenestration products and the box/packaging containing attachment products bearing NFRC labels shall bear both permanent and temporary labels at the point of manufacture. Applied Film products shall have temporary labels applied at the point of manufacture or the designated Licensed Brander location.
 - i. Exception: Door slabs may leave the plant with only the permanent label; temporary labels for glazed doors shall be applied at the time and place of glazing installation.
 - ii. Exception: TDDs may leave the plant with only the permanent label applied. Temporary labels for bulk shipped TDDs shall be applied, or made available for inspection, at the time and place of final assembly. The TDD licensees who have given authorization to designated assemblers to use either or both of the matrix labels shown in Figures A-18 or A-19, shall maintain a list of all designated assemblers and documentation that each assembler has been properly trained. The licensee is responsible for each applied label.
- E. An FMC shall enable tracing of the product via the product's permanent label to the product line's listing in the CPD.
- F. An FMC design shall be reviewed and approved by the Licensee's IA prior to use to ensure compliance with all labeling requirements, as shown in Appendix B, Figure B-3.
- G. NFRC labels and FMCs may be purchased from an IA or the IA may authorize the Licensee to produce NFRC labels and FMCs in-house or through a vendor. The cost of unused NFRC labels and FMCs are not refundable.
- H. Labels placed on products in production shall reflect current product ratings within 120 calendar days of reissuance of a CA or CAR. Extensions shall be allowed upon authorization from the IA.

The extension request shall be sent in writing to the IA prior to the end of the 120 calendar days.

Note: Licensees are expected to put forth a good faith effort to update label ratings in a reasonable time frame.

6.3.1 Composite Unit Labeling

A participant shall use one of the following labeling requirements for composite units:

- A. Multiple labels applied to a Composite Unit:

The NFRC Permanent and Temporary labels for each product type in the composite unit shall be applied to the product type it represents. Product type shall be as defined in ANSI/NFRC 100, table 4-3.
- B. Single NFRC Temporary label applied to a Composite Unit
 - i. The NFRC Temporary label, which includes all required ratings for the product type in the composite unit with the highest U-factor shall be applied to the composite unit.
 - ii. The NFRC Permanent label shall be applied using one of the following options:
 - (a) A single label corresponding to the product type used for the temporary label; or
 - (b) A label corresponding to each product type in the composite unit.

6.4 Permanent Certification Labels

- A. Permanent certification labels shall be of sufficient size to contain all required information as set forth in this section.
- B. The permanent label may be in the form of a
 - i. Label – A series of stand-alone labels which, alone or together, show all required permanent label information;
 - ii. Tab – An extension or tab on an existing permanent certification label being used by the Licensee; or
 - iii. Series of marks or etchings – A series of marks, etchings, or other indelible marks on the product which, alone or together, show all required permanent label information and which are affixed or located on the product so as to be visible after installation.
- C. Required information on the permanent label shall be:
 - i. NFRC identification in the form of the “NFRC” wordmark or registered NFRC logo;

- ii. Licensee's identification – Examples include but are not limited to manufacturer name, trademark, logo, or NFRC Licensee code; and
 - iii. Product line identification number as assigned by the IA, or the Manufacturer's product code. Bar coding may be included but may not be used in lieu of the alpha or numeric identification code.
- D. Optional information on the permanent label may be:
 - i. IA identification;
 - ii. Product name or model number as identified in the CPD.

- E. The permanent label shall be visible from the interior after product installation, or alternatively in a consistent location as identified by the Manufacturer in the NFRC CPD.

NOTE: This location shall be accessible by the building occupants or service provider.

- F. The permanent label shall be affixed to products in a manner intended to assure that the label remains attached to the product. The permanent label shall be located on a portion of the frame, glazing, spacer, glazing bead, stop, other surface, or combination thereof. Alternatively, the permanent label may be placed underneath a removable element such as but not limited to, a sash stop, glazing bead, or jamb liner. The permanent label shall be located on a surface (such as the underside of a window head or door head) not subject to direct sunlight and precipitation.

Exception: Applied film products do not require permanent labels.

- G. The permanent label shall be applied at the time and place of final product fabrication and prior to shipment.

Exception: For Private Labeler Licensees, the permanent label may be applied at the Private Labeler location identified on Schedule VI.

6.5 Temporary Certification Labels

- A. Temporary Labels shall be of the size, format, and content set forth in this section unless otherwise specified. Subject to the exemptions noted, the label shall include ratings for U-factor, SHGC, and VT. Only performance ratings with Certification Authorization may be placed on the label.

- i. Temporary labels shall meet the following size requirements:
 - (a) Label width and/or height shall not be less than 3.75 in (95.25 mm).
 - (b) The width shall be no greater than the height.
- ii. All temporary labels shall include the NFRC certified logo with registered mark as shown:

Figure 6.5A: NFRC Certified Logo with Registered Mark (®)



- iii. Energy Performance Ratings authorized to be certified shall be shown as follows and appear in the order listed. For ratings less than 1, a leading "0" shall be used. For labeling exceptions, refer to Section 4.3.4.
 - (a) U-factor ratings to two (0.00) decimal places for I-P or SI units.
 - (b) Solar Heat Gain Coefficient (SHGC) ratings to two (0.00) decimal places.
 - (c) Visible Transmittance (VT) ratings to two (0.00) decimal places.
 - (d) Air Leakage ratings, if printed on the label:
 - (i) For Windows, Skylights and Sliding Doors, the only text allowed to be printed on the label shall be:
 - (1) " ≤ 0.3 " where U.S./I-P ratings are printed.
 - (2) " ≤ 1.5 " where Metric/SI ratings are printed.
 - (ii) For Swinging Doors, the only text allowed to be printed on the label shall be:

- (1) “≤ 0.3” or “≤ 0.5” where U.S./I-P ratings are printed.
 - (2) “≤ 1.5” or “≤ 2.5” where Metric/SI ratings are printed.
- (e) Condensation Resistance or Condensation Index (CI) rating, if printed on the label, as a two-digit (00) whole number.
- (f) The following statements shall be added below the product ratings information:

Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult Manufacturer's literature for other product performance information. www.nfrc.org

B. Printing and Additional Information

- i. NFRC labels may be printed on larger labels that include other, non-NFRC related information; however, the label area designated for NFRC certification shall contain only the NFRC-specific information as required by Section 6.
- ii. All information required may be printed directly or stamped on the label. Specific information required by items in Sections 6.5.A.iii 6.5.H, and 6.5.1 may be printed on a secondary label and applied to the primary label in the space provided. Secondary labels shall not be applied over any printing or stamping on the primary label.
- iii. There are no requirements for font size for any portion of the temporary label, but the label information shall be printed in black or other dark color on a white or other light-colored background to ensure a high degree of legibility.

- C. The temporary label shall be affixed to fenestration products, or to the box/packaging containing attachment products, at or prior to the point of final assembly. Applied film products shall have temporary labels applied at the point of manufacture or the designated Licensed Brander location.

- D. The temporary label shall be affixed to fenestration products in a manner to provide a clear and unobstructed view of the rating information and is intended to remain attached throughout product installation and building codes inspection.
- E. At the licensee's discretion, it shall be permitted to display an exact replica of the temporary label for the fenestration product on the box/packaging for that product. If the licensee chooses this option, the replica of the temporary label shall meet the following conditions:
 - i. Shall not replace the permanent and temporary certification labels required on the product, and
 - ii. Shall not be transferable/removable.
- F. Re-prints of the temporary label shall only be allowed if all of the following conditions are met:
 - i. The temporary label was removed prior to inspection.
 - ii. The label is required for code or regulatory compliance.
 - iii. The manufacturer is able to accurately identify the product line and specific glazing option installed.

NOTE: For labeling non-compliance issues see section 9.1.4.
- G. Temporary labels shall contain the following information:
 - i. Manufacturer name or identification code shall appear in the space provided.
 Examples:

World's Best or XYZ or 001
Window Co.

 - (a) The name on the Product Information section of the label can be different from the Licensee name.
 - ii. Frame Type.
 Examples: Vinyl-Clad Wood Frame
 Aluminum Frame
 - iii. Product Type.
 Examples: Casement
 Vertical Slider
 - iv. Full Certified Products Directory (CPD).
 Examples: XYZ-X-1-00001-00001 or XYZ-X-1-00001

	MFR ID	IA Code	Product Line #	Individual Product ID	Individual SHGC ID
Alpha Code	XYZ	X	1	00001	00001
Numerical Code	001	X	1	00001	00001

Example of Mandatory Elements

World's Best Window Co.

Vinyl-Clad Wood Frame

Casement

XYZ-X-1-00001-00001

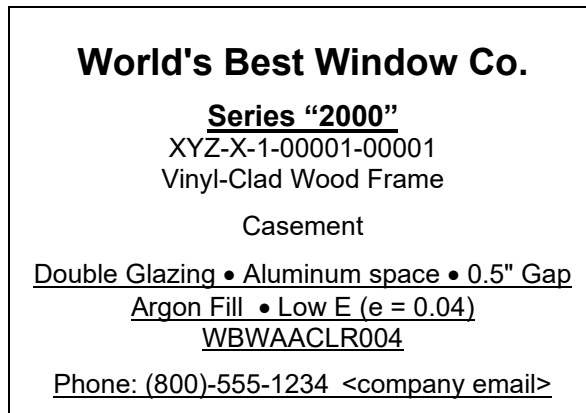
- H. Temporary labels may contain the following information:
- i. Manufacturer Series Name/Model Number
Example: Series "2000"
 - ii. Air Space width
Examples: 0.5" (IP units only)
12.7 mm (0.5") (Metric and IP)
 - iii. Coating Emissivity
Examples: e=0.04
 - iv. Spacer type – generic material type or spacer code from Certified Products Directory only
Examples: Aluminum Spacer or A1
 - v. Manufacturers own product identification – up to 25 alpha numeric characters or barcodes, both linear and matrix 2D styles are permissible.
Examples: WBWAACLR004
 - vi. Glazing description, including gas fill, low-e, number of glazing layers, glazing tint or reflective coating, if present. A Licensee that owns proprietary rights to a specific Low Emissivity coating trade name, may print the proprietary trade name of the coated glass on the temporary label. The trade name of the Low-E product owned by the Low-E manufacturer shall only be printed on the temporary label with written permission from the Low-E manufacturer.

Examples: Double-glazing
Double-glazing with low-E
Low E glazing with argon fill
Green, Reflective, or GY

- vii. Presence of dividers if applicable
- viii. Manufacturer contact information

Examples: Phone number, Web address, etc.

Example of Optional Elements



Optional elements are underlined but should not be underlined on actual product label.

I. Additional Labeling Options

i. Additional performance ratings

Additional performance ratings shall be added to the label in alphabetical order, moving left to right. In the event that a label contains a box without a rating (for ratings other than U-factor, SHGC, and VT which are mandatory), the box shall be left blank except for a dash. Selected examples are shown in Figures A-2 and A-3.

ii. Placeholders for additional ratings

- (a) Dashes shall be inserted for mandatory ratings only when a technical and rating procedure is not available as shown in Figure A-4.
- (b) Dashes shall be inserted into blank cells under additional performance ratings that have not been authorized for certification as shown in Figure A-4.

iii. Use of metric units

- (a) SI units may be used on the label, but only if ratings are also provided in IP units. SI and IP

units shall be displayed on the label as shown in Figure A-4.

- (b) The two-decimal U-factor shall be determined in the following manner in order to maintain a consistent conversion when converting the ratings listed on the label from IP to SI and then from SI to IP.
 - (i) Round the IP rating to two decimals from the NFRC CPD;
 - (ii) Multiplied by 5.678263; and
 - (iii) Display the final SI rating rounded to two decimals.

iv. Translations to languages other than English

- (a) All NFRC temporary certification labels shall be printed in English as the primary language. In addition to English, labels shall also be permitted to be printed in other languages for which the translation has been authorized by NFRC.
- (b) NFRC makes no claims as to the accuracy of any translation to a language other than English. In the event of a conflict, the English label shall be regarded as the standard.
- (c) Once a specific translation has been authorized by NFRC, that authorized translation shall be the only translation that shall be permitted to be used when a label utilizes that language.
- (d) Figure A-6 represents an example label printed in English. Figure A-7 represents the NFRC-authorized French translation of the label in Figure A-6. Figure A-8 represents the NFRC-authorized Spanish translations of the label in Figure A-6. Translations to other languages shall be permitted to be authorized if and when they are proposed to NFRC.
- (e) The labels depicted in Figure A-6, Figure A-7, and A-8 are examples only and are intended to illustrate all information that is permitted to be printed on the label. Labels printed in a language other than English shall be subject to the same limitations and options as English labels, as indicated in Section 6 of this document.

- (f) At the Manufacturer's discretion, it shall be permitted to either:
 - (i) Print an English-only label and a separate translated label or labels.
 - (ii) Combine the English and translated information onto one label, provided the size and the legibility requirements of Section 6.5 are met.
- (g) The label shown in Figure A-9 is an example of English and Spanish combined onto one label with English text in black and the Spanish text in red. This is for illustrative purposes only. For actual product labels, there shall be no requirement for English text and non-English text to be in different colors.

6.5.1 Fenestration Products

Window, door, and skylight labels shall conform to the general format and content shown in Appendix A., Section A.1.

6.5.2 Knocked Down Fenestration Products

- A. Temporary labels shall be obtained from the Licensee, or the Licensee may authorize the assembler to produce the labels.
- B. Temporary labels shall be applied to the interior surface of the glazing component(s), or otherwise made available for inspection, at the time and place of final assembly.
- C. The Licensee shall specify a matrix for each product. This matrix shall be supplied to the assembler for their use in attaching the appropriate temporary label.

6.5.3 Applied Films

- A. Temporary labels shall conform to the general format and content shown in Figures A-10 and A-11.
- B. Temporary labels may be applied to the interior surface of the glazing component at the time and place of final installation of the applied films, in addition to the box/package containing the applied film.
- C. Temporary labels shall be provided by the Applied Film Licensee to the installer. The Applied Film Licensee shall provide the installer with instructions as to the proper application of the temporary labels.

- D. The temporary label shall indicate whether the applied film rating information on the label is for an applied film product applied to either the “interior” or “exterior” surface of the glazing unit.
- E. The interior temporary label shall include whole product ratings for U-factor, SHGC and VT. The exterior applied film temporary label shall include whole product ratings for SHGC and VT. These ratings shall reflect whole product ratings simulated “with” film for the following default window systems:
 - i. Two default window types, both fixed (residential) and curtain-wall (non-residential),
 - ii. In an aluminum default frame,
 - iii. With default single and double glazing (single-glazed 3 mm clear, single-glazed 6 mm clear and grey, double-glazed 3 mm clear with 13 mm air gap, and double-glazed 6 mm clear and grey with 7 mm air gap).

6.5.4 Dynamic Glazing Products and Dynamic Attachments for Swinging Doors

- A. Temporary labels for Dynamic Glazing Products and Dynamic Attachments for Swinging Doors shall include the ratings indicated in Section 4.3.4.
- B. Temporary labels for Dynamic Glazing Products shall conform to the general format content shown in Figure A-12.
 - i. The Figures A-12 and A-13 example labels shall display ratings in accordance with the following criteria:
 - (a) Low value (left) to high value (right)
 - (b) For Dynamic Glazing Products that utilize a shading or diffusing system, and for which the licensee chooses to utilize this label as indicated in Section 4.3.4.4, ratings shall reflect Fully CLOSED and Fully OPEN Positions as defined in NFRC 600. The terms “On/Closed” and “Off/Open” in Figure A-12 and A-13 shall be replaced with either:
 - (i) “OPEN” and “CLOSED”; or

- (ii) “SHADE OPEN” and “SHADE CLOSED”; or
 - (iii) “BLIND OPEN” and “BLIND CLOSED”.
 - (c) For other Dynamic Glazing Products for which the licensee chooses to utilize this label as indicated in Section 4.3.4.4, ratings shall reflect Fully ON and Fully OFF Positions as defined in NFRC 600. The terms “On/Closed” and “Off/Open” in Figure A-12 and A-13 shall be replaced with “ON” and “OFF.”
 - (d) Use an arrow and the word “variable” if the product has the ability to operate in intermediate states.
 - (e) See Section 4.3.4 for additional details.
- C. The Temporary Labels for Dynamic Attachments for Swinging Doors shall conform to the general format and content shown in Figure A-14.

The label shall indicate the modeled Reference Product it is attached to as well as “Interior” or “Exterior” location of the attachment.

6.5.5 TDD Products

- A. Temporary labels for TDD products shall include the ratings indicated in Section 4.3.4.
- B. TDD product labels shall conform to the format and content layout shown in Appendix A, Section A.5
 - i. The label shall display ratings in accordance with the following criteria:
 - (a) TDD label requires specification of insulation location with “Insulation at roof” value to the left and “Insulation at ceiling” value to the right.
 - (b) If the product is tested with insulation in only one location, the other location’s placeholder is not required, and the label shall conform to the format and content layout shown in Figure A-17 and A-19.
 - (c) TDD label must include the Thermal Opening Area of the tested assembly

represented by the ratings as required by NFRC 100. Multiple areas may be necessary for matrix labels.

“Thermal Opening Area = X.XX m²”
(Metric/SI size)

- (d) If installed by the licensee, the Licensee’s designated individual responsible for proper labeling of the product shall identify the option in the matrix that represents the assembled product by either circling or highlighting applicable values within the matrix.
- (e) The matrix label shall be used only for components shipped in bulk packaging.

6.5.6 This Section is Intentionally Left Blank

6.5.7 Private Labeler Licensee Products

For Private Labeler Licensees, the temporary label may be applied at the Private Labeler’s location, which is identified on Schedule VI. The fenestration product Manufacturer shall ensure that the required individual product information for labeling is provided for the Private Labeler’s use in applying the correct label.

6.6 Label Certificates

6.6.1 General

- A. Label Certificates shall be a stand-alone document of the size, format, and content set forth herein.
 - i. Label Certificate width shall be 8.5 in. (or A4 size) within 0.5 in.
 - ii. Label Certificate height shall be 11 in. (or A4 size) within 0.5 in.
- B. The Label Certificate shall be available on the jobsite no later than the time of product installation and shall be placed in a conspicuous job site location site that shall ensure accessibility, legibility, and visibility.
- C. The Label Certificate shall, by itself, permit compliance with both permanent and temporary label requirements as long as the Label Certificate is a part of the permanent record of the project specifications and will be readily

accessible during the construction phase of the job and upon job completion.

- D. The Label Certificate shall be specific to each individual product both receiving an NFRC CA and being installed on the job site, with the certificate also complying with all labeling requirements.

6.6.2 Label Certificates for Site-Built Products

- A. An NFRC Label Certificate for site-built products may be used in lieu of the temporary and permanent label for site-built products, and shall be issued by the designated IA. Each site-built product shall have an NFRC Label Certificate, which shall act in the capacity of an NFRC label.
- B. The Label Certificate shall identify each system option, including the glazing type and operator type employed in the construction of the project. Each individual product shall have its own unique Label Certificate.
- C. The Label Certificate shall follow the format below:
 - i. Label Certificates shall conform to the content and layout in Figure B-1.
 - ii. Label Certificates shall contain (in the upper right-hand corner) the NFRC Temporary label from Appendix A. The NFRC Temporary Label portion of the Label Certificate shall be of the size specified in Section 6.5, shall contain all of the information required in Section 6.5, and shall be subject to the limitations in Section 6.5.
 - iii. Label Certificates shall contain all the NFRC Permanent Label information required in Section 6.4 and shall be subject to the limitations in Section 6.4.
 - iv. Label Certificates shall contain the following project information:
 - (a) Street Address
 - (b) City, state, zip code
 - (c) Project name (optional)
 - (d) Designer (optional)
 - v. Label Certificates shall contain the following product line information:

- (a) Operator type
- (b) Product line identification number
- (c) Individual product identification number
- (d) Number of individual products in the project (building)
- (e) Location of the individual products in the project (building)
- (f) Elevation page location in the architectural drawings
- (g) Fenestration (window and door) schedule page in the architectural drawings
- vi. Label Certificates shall contain the following information for the frame material supplier, the glazing material supplier, and the glazing contractor/installer:
 - (a) Company name
 - (b) Street address
 - (c) City, state, zip code
 - (d) Number of contact person with phone and facsimile number
- vii. Label Certificates shall contain the name of the Independent Certification and Inspection Agency (IA) and the date that the Certification Authorization is issued and shall be signed in accordance with Section 6.
- viii. Optionally, the Label Certificate may also include a size matrix specific to the Individual Product identified on the Label Certificate. The size matrix shall be determined in accordance with the procedures outlined in Appendix A of ANSI/NFRC 100.

6.6.3 Label Certificate for Fenestration Products

An NFRC Label Certificate in the format set forth in Appendix B, Figure B-1 may be issued by an IA to a Licensee for fenestration products and systems in lieu of the temporary labels when specified for use in buildings more than 3 stories above grade and with a minimum fenestration area of 930 square meters (10,000 square feet) that has been authorized for certification. The Label Certificate is subject to the same

requirements as given in Section 6.6.2.C.

6.6.4 Label Certificate for Attachment Products and Applied Film Products

- A. A NFRC Label Certificate for Attachment Products or Applied Film Products shall be issued by the IA at the request of the attachment or applied film products Licensee.
- B. The IA shall complete the attachment product or applied film information section of the Label Certificate when the certificate is generated.
- C. Upon request from a homeowner or building project manager, an attachment or applied film products Licensee may deliver a completed Label Certificate to the individual requesting it.
- D. The Licensee shall complete the Project Location and Attachment or Applied Film Contractor/Installer sections of the Label Certificate prior to delivering the certificate to the individual who has requested it.
- E. The Licensee shall maintain a record or log of Label Certificates that have been completed and delivered to the requester.
- F. The Label Certificate shall follow the format below:
 - i. Label Certificates shall conform to the content and layout in Figure B-2.
 - ii. Label Certificates shall contain (in the upper right-hand corner) the NFRC Temporary Label from Appendix A. The NFRC Temporary Label portion of the Label Certificate shall contain all of the information required in Section 6.5 and be subject to the limitations in Section 6.5.
 - iii. Label Certificates shall contain all of the NFRC Permanent Label information required in Section 6.4 and shall be subject to the limitations in Section 6.4.
 - iv. Label Certificates shall contain the following project information:
 - (a) Street address,
 - (b) City, state, zip code
 - (c) Project name (optional), and

- (d) Designer (optional);
- v. Label Certificates shall contain the following Attachment or Applied Film Contractor/Installer information:
 - (a) Company Name,
 - (b) Street address,
 - (c) City, state, zip code,
 - (d) Company contact, and
 - (e) Phone and Fax number;
- vi. Label Certificates shall contain the following Attachment or Applied Film Product information:
 - (a) Product square footage and
 - (b) Building location;
- vii. Label Certificates shall contain the name of the IA, the date that the Certification Authorization is issued, and shall be signed in accordance with Section 6.

6.6.5 Fenestration Manufacturer Certificate (FMC)

In the event that a properly applied NFRC temporary label has been removed, or at the manufacturer's discretion upon request from a building code official, builder, homeowner, or similar entity, an FMC shall be permitted to be used in the following conditions:

- A. For products that were properly labeled with NFRC Permanent and Temporary Labels at the manufacturing site, and
- B. When the manufacturer can accurately identify the product and glazing option that will be listed on the FMC in accordance with this section.
- C. The FMC shall follow the format below:
 - i. FMC shall conform to the content and layout in Figure B-3
 - ii. FMC shall contain the following Manufacturer information:
 - (a) Company contact
 - (b) Street address
 - (c) City, state, zip code

- iii. FMC may contain the following optional project information:
 - (a) Street address
 - (b) City, state, zip code
- iv. FMC shall contain the following product line and rating information:
 - Information as listed in Sections 6.5.A.iii and 6.5.G.
- v. FMC may contain the following optional product line and rating information:
 - Information as listed in Section 6.5.H.

7. CERTIFIED PRODUCTS DATABASE AND DIRECTORY

7.1 Certified Products Database

- A. Licensees are responsible for updating and monitoring their Manufacturer and product information contained in the NFRC Certified Products Database. (Refer to NFRC's Manufacturer's Certified Products Database User Manual located on the NFRC website [www.nfrc.org].)
- B. Licensee responsibilities include:
 - i. Ensuring that the Licensee data is current (i.e., company name, address, telephone, e-mail, contact person(s), plant information, etc.);
 - ii. Updating applicable Schedules to the NFRC License Agreement;
 - iii. Reviewing current product line ratings;
 - iv. Reviewing the status of current product lines to ensure the certification status of those product lines is accurately reflected in the application/directory;
 - v. Monitoring active products to ensure there are no lapses in certification;
 - vi. Reporting to NFRC or the designated IA other required changes that cannot be made directly by the Licensee; and
 - vii. May request the product line ID number prior to the issuance of the CA.

[NOTE: Manufacturer must have an active CA prior to labeling product. (Reference Section 5.1)]

7.2 Certified Products Directory

- A. The database is directly linked to the CPD, an on-line directory available to the general public, which lists authorized Licensees and their products authorized for NFRC Certification.
- B. Every authorized product listed in the directory is designated with a CPD number.
- C. Both the database and directory are located on the NFRC website (www.nfrc.org).

8. MAINTAINING CERTIFICATION AUTHORIZATION

To obtain or maintain product certification authorization and NFRC license agreement, a Licensee shall meet all of the applicable conditions and criteria of this section.

8.1 Product Consistency

- A. Each Licensee shall ensure that the products it markets as NFRC-certified are described in product literature using product descriptions that are consistent with those submitted to the NFRC-accredited simulation laboratory for computer simulation.
- B. Any change in and/or removal of the value of a component and/or material shall not require any revisions to existing NFRC simulations that were performed prior to the publication of the amended values of the component and/or material. Any NFRC simulations that are performed after the publication of the amended values shall be based on the amended values with the exception of the SHGC/VT 0.0 and 1.0 Tables. The initial SHGC/VT 0.0 and 1.0 Tables shall be used for the entire certification cycle. Published NFRC Certification Authorization Reports shall remain authorized for the life of the certification cycle.

8.2 Quality Control System

- A. An NFRC Licensee shall establish and maintain a documented in-plant quality control system acceptable to the IA to assure accuracy and consistency as it relates to NFRC energy performance characteristics of rated products. The Licensee's quality control system is subject to IA approval for licensing and certification authorization and shall be reviewed by the IA at the time of each inspection.
- B. The documented in-plant quality control system shall contain the minimum following requirements:
 - i. Audit of incoming material
A process to ensure consistency with Manufacturer's specifications and drawings used for NFRC-certification, (e.g.: material types, wall thickness, profile dimensions, open cavities, stiffeners, etc.)
 - ii. Audit of in-process material
A process to ensure consistency with Manufacturer's specifications and drawings used for NFRC-certification, (e.g.: weather-stripping, hardware, stiffeners, sealant

- applied to sash, etc.)
- iii. Identify critical in-house inspection requirements including but not limited to the following periodic inspection of a fully assembled product:
 - (a) Proper labeling;
 - (b) Product is built in accordance with certification authorization.
 - iv. Method for identifying, isolating, and disposition of material or products with non-conformities; and
 - v. Current organizational chart by position applicable to their NFRC License Agreement.
- C. The Licensee's documented quality control system shall be kept current including all modifications and revision dates.
- D. An NFRC Licensee shall establish, document, and maintain a quality system to ensure product conformance to the Licensee's specified design requirements. An NFRC Licensee shall retain all quality control records in Section 8.2.B for a minimum of five years.
- E. An NFRC Licensee shall designate properly trained and experienced personnel to ensure quality control; such duties include:
- i. Direction and maintenance of the Licensee's quality control system;
 - ii. That production of the assembled product meets thermal performance ratings for which certification authorization has been granted;
 - iii. Provide direction to ensure products are properly labeled as NFRC-certified;
 - iv. The Licensee's quality control system shall identify this role.
- F. An NFRC Licensee shall designate properly trained and experienced personnel to supervise production at each manufacturing facility. The Licensee's quality control system shall identify this role.
- G. An NFRC Licensee shall designate no less than one properly trained employee to the task of quality control auditor at each manufacturing facility. The Licensee's quality control auditor is responsible for

- i. Supervision of production to ensure products meet the thermal performance rating for which certification authorization has been granted;
 - ii. Regular audits of NFRC-certified product so that there is correlation between the fully assembled product and what is described on the label; and
 - iii. The Licensee's quality control system shall identify this role.
- H. All quality control records shall be filed in a Licensee-designated central location, and shall be made available to the IA and to the Licensee's quality control auditor as needed.

8.2.1 Quality Control System Components

The Licensee shall define and document how the requirements for quality control will be met. This documentation shall define the requirements of the Licensee's entire quality control system and shall outline the structure for all quality control documentation. Required documentation shall include procedures for review and revision of the Licensee's entire quality control system and shall define the frequency of such review.

8.2.1.1 Procedures for Correcting Non-Compliance

- A. The Licensee's quality control plan shall define and document procedures to be taken to investigate and correct the cause of product non-conformities.
- B. An NFRC Licensee shall establish, perform, and maintain procedures for the control of non-conforming products. The procedures shall define criteria for action taken for all non-conforming products. The action taken on non-conforming products may be:
 - i. Re-work to meet the Licensee's specified requirements,
 - ii. Re-grade for alternative applications, or
 - iii. Reject or scrap.
- C. An NFRC Licensee shall establish and maintain documented procedures for implementing corrective procedures in the event of non-conforming products including:

- i. Investigating the cause of non-conformities and recording the results;
- ii. Determining corrective action needed to eliminate the cause(s) of non-conformities;
- iii. Application(s) of controls ensuring corrective action has been effectively taken; and
- iv. Effective handling of customer complaints and reports of product non-conformities.

8.2.1.2 Procedures for Product Inspection and Testing

The Licensee shall perform inspection and testing of NFRC-certified products as required by the quality control plan. The Licensee shall define and establish records that provide evidence of inspection and testing according to the Licensee's defined acceptance criteria.

8.2.1.3 Procedures for Maintaining Testing Equipment

The Licensee shall establish and maintain documented procedures to control, calibrate, and maintain inspection, measuring and testing equipment used by personnel to demonstrate the conformance of products to the Licensee's specified requirements. These requirements shall make reference to and define:

- A. Inspection and testing of equipment used in Manufacturer's/ Responsible Party's product conformance assessments,
- B. Procedures that clearly describe the use of all inspection and test equipment, and
- C. Required frequency of conformance assessments.

8.2.1.4 Documented Evidence of Internal Quality Audits

At least annually, a company representative trained to perform audits shall perform and document an internal audit of the licensee's quality management system. The audit shall review the licensee's forms used and the records kept of the licensee's ongoing compliance with Section 8.2, 8.2.1.1, 8.2.1.2, and

8.2.1.3 of this document.

8.2.1.5 Documented Evidence of External Quality Audits

An NFRC Licensee who bulk-ships TDD component parts for field assembly and elects to use one or more of the matrix labels shown in Figures A-18 or A-19 for such shipments shall establish and maintain a system of records containing the following information:

- A. Evidence to show that the authorized assembler's kits consisting of bulk TDD component parts, including the temporary label, have been inspected according to the quality control plan,
- B. Evidence to show whether the product passed or failed the Licensee-specified inspection,
- C. Identification of the Licensee inspection authority responsible for verifying the proper assembly and labeling of the product, and
- D. Listing of the authorized assemblers and documentation that each assembler has been properly trained by the Licensee.

8.3 Compliance with NFRC License Agreement

- A. A Licensee shall abide by the provisions of its license agreement with NFRC.
- B. A Licensee shall obtain prior written permission to utilize the NFRC registered logo on printed materials or in advertising or promotion of certified products, in accordance with the license agreement with NFRC.

8.3.1 Maintaining Current Schedules

- A. A Licensee shall update the Schedules to the NFRC license agreement as needed within 30 calendar days of any change or modification to product lines or plant locations.
- B. Schedules shall be updated in the Certified Products Database by the Licensee; a hard-copy submission of the applicable schedules may be used in lieu of utilizing the database if the Licensee is unable to access the database:

- i. Additions and deletions of facilities shall be reflected in the Schedule I and reported to NFRC and the designated IA.
- ii. Additions and deletions of NFRC-certified products shall be reflected in the Schedule II and reported to NFRC and the designated IA.
- iii. Additions and deletions of Fabricator locations shall be reflected in the Schedule III of the Door Manufacturer/Lineal Supplier agreement and reported to NFRC and the designated IA.
- iv. Additional site-built projects shall be reflected in the Schedule IV of the Site-Built Agreement and reported to NFRC and the designated IA.
- v. Additions and deletions of the Manufacturer's NFRC-certified products and corresponding Private Labeler products shall be reflected in the Schedule V of the Private Labeler license agreement and reported to NFRC and the designated IA.
- vi. Additions and deletions of Private Labeler locations shall be reflected in the Schedule VI of the Private Labeler license agreement, and reported to NFRC and the designated IA.

8.4 Payment of Certification Program Fees

A Licensee shall be responsible for the timely remittance of all fees associated with the NFRC PCP, which includes all fees associated with simulation, testing, and IA services.

8.5 Licensee Transfer Notification Protocol

When transferring to a new IA or transferring to a parent company, and thereby transferring NFRC-certified product lines, a Licensee shall utilize the following protocol:

8.5.1 IA Transfer

- A. When transferring to a new IA, the Licensee retains its NFRC license agreement, but signs a new license agreement or contract with the new IA. The Licensee shall notify in writing the new IA, the current IA, and NFRC of their intent to transfer agencies.
- B. When a Licensee transfers IAs and incorporates a company name change at the same time, the Licensee shall execute a new NFRC license agreement.

8.5.2 Transfer to Parent Company

- A. A Licensee that elects to be listed on the Schedule I of a parent company (as in umbrella arrangements and mergers) shall terminate its NFRC license agreement, transfer any product lines to be assumed by the parent company, and shall be listed on the Schedule I and II of the parent company.
- B. The Licensee shall notify in writing the current IA and NFRC of its intent to terminate its licenses with NFRC and the IA and transfer products.
- C. A Licensee that elects to be listed on the Schedule I of a parent company, but still intends to maintain a portion or all of its currently certified product lines, maintains its NFRC license, transfers any products lines to be assumed by the parent company, and is listed on the Schedule I and II of that parent company.

8.5.3 Product Line Transfers

- A. Product line transfer periods shall be for no more than 120 calendar days.
- B. During this time period the following shall take place:
 - i. All products remain authorized by the current IA;
 - ii. The current IA informs NFRC staff of any outstanding fees owed by the Licensee.
[NOTE: all outstanding fees must be paid in full prior to any transfer.]
 - iii. NFRC staff will not complete the transfer until the current IA releases the Licensee from its fiduciary responsibility;
 - iv. If there is a new IA, the Licensee shall request that the current IA deliver its simulation and test reports to the new IA, or have the laboratory forward copies of the reports for all certified product lines;
 - v. When the reports are received by the new IA, the IA shall review the reports before accepting the product lines.
- C. Upon the new IA's acceptance of the product lines, a new CPD number shall be issued for the product lines. The new CPD number may reflect a new IA code,

Manufacturer code, or both, depending upon the circumstances for the transfer.

- D. New permanent and temporary labels are created during the 120-day period to be used when the product lines are activated again with the new CPD number.

8.5.4 Mergers, Splits, and Umbrella Arrangements in the NFRC Certification Program

- A. Mergers of companies do not require a new license agreement if the Licensee adds the merged facility to its Schedule I. However, a new license agreement shall be required if the Licensee is not licensed with NFRC or if the merger results in a name change. If the merged facility had been previously licensed with NFRC, it shall terminate its NFRC license agreement prior to being added to the Schedule I of the Licensee.
- B. Splits of companies involve a Licensee maintaining their NFRC license agreement but amending its Schedules, and the new company emerging from the split entering into a license agreement with NFRC.
- C. Umbrellas are arranged either under the Door Manufacturer/Lineal Supplier license agreement and the Schedule III or the Manufacturer license agreement and the Schedule I.
 - i. Under the Door Manufacturer/Lineal Supplier arrangement a Door Manufacturer/Lineal Supplier lists Fabricators on the Schedule III that fabricate product lines of the supplier. The Fabricator is issued simulation and test reports in their name, enters into a license agreement with NFRC, and is responsible for obtaining certification authorization of the fabricated products listed on the Schedule II of the Fabricator Agreement.
 - ii. Under the Manufacturer arrangement, one company assumes the role of the Licensee, and several companies are then listed under this parent company on the Schedule I of the NFRC license agreement.
- D. The parent company is responsible for obtaining certification authorization of the products that are listed on the Schedule II of the NFRC license agreement.

8.5.5 Transfer to Private Labeler

- A. The Licensee shall notify in writing the current IA and NFRC of its intent to transfer a product line(s) to a Private Labeler Licensee.
- B. The Private Labeler shall have entered into a license agreement with NFRC prior to the product line transfer.
- C. Procedures for transferring product lines pursuant to Section 8.6.3 shall apply, excluding subsections 8.6.3.B.iv and v, when the Private Labeler signs a license agreement with the Manufacturer's IA. In cases where the Private Labeler signs a license agreement with an IA different than the Manufacturers, the Manufacturer shall authorize their IA to provide "copies" of the original and all subsequent reports to the Private Labeler IA.
- D. Additions and deletions of individual options in a Manufacturer's NFRC-certified product line that correspond to a Private Labeler products as reflected in the Schedule V shall be reported to the designated Private Labeler IA.

8.6 Annual Plant Inspections

- A. Not less than once in each year, a Licensee's designated IA shall conduct an inspection of each Licensee's production facility to ensure continuing compliance with the requirements of this section.
- B. If the results of the annual inspection indicate compliance with the requirements of this section, and all other applicable requirements are met, the Licensee's License agreement shall continue in effect.
- C. When the results of the annual inspection indicate that a Licensee is not in compliance, the IA shall notify the Licensee in writing of the specified deficiencies and shall require that the specified corrective action be taken not later than 15 business days from the date of such notification.

To determine whether the deficiencies have been remedied, the IA may conduct a re-inspection. Costs related to re-inspection necessitated by a failure to meet requirement in the first review shall be borne by the Licensee and shall not be borne by NFRC.

8.6.1 In-Plant Inspection Process (for initial and annual inspections)

- A. A Licensee shall grant the IA's representative access to the Licensee's place or places of manufacture, assembly, or shipment at any time during normal daytime working hours. Advance notice of up to 48 hours may be given to the Licensee's designated representative.
- B. The IA's representative shall be accompanied by the Licensee's designated representative at all times while at the Licensee's facilities. The IA's representative shall have access to such quality control records, products, and product components as necessary to allow the IA to perform all required inspections in order to determine compliance with NFRC product certification authorization and Manufacturer/Responsible Party license requirements.
- C. A Licensee's refusal, without good cause, to permit access to places essential to the inspection(s) required as set forth in this document shall be due cause for denial of product certification authorization or termination of initial product certification authorization and license agreement pursuant to Section 5, or issuance of a Notice of Suspension of the Licensee's License agreement and product certification authorization.

8.6.1.1 Fenestration Product Inspection

- A. During any Licensee inspection, the Licensee's designated IA shall select random samples from the finished production of the Licensee's certified product line to which the NFRC label has been affixed for a detailed assessment and compliance verification to assure that the randomly-selected products meet the performance ratings indicated on the temporary label or an FMC.
- B. The product inspection shall include a direct comparison of the randomly selected products to original drawings supplied during the NFRC certification authorization process. Inspection of fabricated parts or components may also be conducted as required.
- C. The product inspection shall include verification that any IGU used in an NFRC Certified Product is certified in accordance with a Participating IG Certification Program.

- D. The Licensee shall, upon the request by the IA, provide a record of use of any FMCs that have been completed and delivered to a Responsible Party.
- E. If the simulation report for a product line chosen for inspection utilizes any thermophysical property values from Appendix B of NFRC 101, the product inspection shall include a review of purchasing agreements, shipping invoices, or shipping receipts to verify that those materials are being regularly received by the manufacturer.

8.6.1.2 Fenestration Product Inspection Failure

Annual inspections performed at each plant location (as listed on a Licensee's Schedule I or a Door Manufacturer/Lineal Supplier's Schedule III) shall conform to the following requirements:

- A. An inspection failure due to specific in-plant processes shall decertify that plant location as identified on Schedule I or Fabricator location on a Door Manufacturer/Lineal Supplier Schedule III only;
- B. An inspection failure due to material compliance issues could decertify all other plant locations as identified on Schedule I or a Door Manufacturer/Lineal Supplier Schedule III using the same materials; and
- C. Should the inspection failure for a product line be identified as a material issue in a lineal extrusion that is supplied by a Door Manufacturer/Lineal Supplier company, the non-compliance issue may be applied to all Fabricators listed on the Door Manufacturer/Lineal Supplier company Schedule III, with the possibility of decertifying the product line at all Fabricator locations.
- D. Except as provided for in Section 8.7, an inspection failure due to a Licensee's usage of an IGU that is not certified in accordance with a Participating IG Certification Program shall result in the issuance of a Notice of Suspension for that product, and potentially a

Notice of Revocation for that product, in accordance with Section 9.1.2.

8.6.1.3 Attachment Product and Applied Film Inspections

During an in-plant inspection, the IA shall review and verify:

- A. All components used in the production of the attachment or applied film product;
- B. The labeled box/packaging, if applicable, and the trace ability of the materials contained therein;
- C. The installation of both the temporary and permanent NFRC labels, and the accuracy of the applied labels on the box/packaging for attachment products; or
- D. The installation of the temporary NFRC labels, and the accuracy of the applied labels on the box/packaging for applied film products to include all Licensed Branders' products, if applicable; and
- E. The record or log of Attachment or Applied Film Product Label Certificates completed and delivered by request year-to-date, if applicable.

NOTE: See Section 3.9 for applicability of requirements.

8.6.1.4 Inspection Reports

- A. Not later than 15 business days after the plant inspection, the IA shall deliver to the Licensee, a report indicating the results of the inspection, including any of the following, to the extent applicable:
 - i. An indication as to whether the product complies with all requirements necessary to perform to the performance rating claimed on the applied label or authorized certificate(s).
 - ii. If the product does not comply with all requirements necessary, then:
 - (a) An indication that minor deviations from the performance rating claimed on the applied

label or authorized certificate(s) were found and have been corrected by the Licensee;

- (b) An indication that minor deviations from the performance rating claimed on the applied label or authorized certificate(s) were found and that the Licensee is required to correct the deviations and submit an example of the corrected label or certificate to the IA for review; or
- (c) An indication that serious non-compliance with requirements necessary for the product to perform to the performance rating claimed was found, identifying the failures. "Serious non-compliance" shall mean performance ratings that do not meet NFRC rating standards.

- B. In the event that a Licensee receives a report indicating a non-compliance, the Licensee shall:

Correct the failures and provide a written response detailing the corrective actions taken not later than 15 business days after the date of the IA's report;

- C. To fully resolve the non-conformity the Licensee shall, if deemed necessary by the IA, or as requested by NFRC, allow re-inspection as required or submit the product at issue for testing in accordance with Section 8.6.1.5.

8.6.1.5 Fenestration Product Non-Compliance Testing

- A. The Licensee's designated IA shall select a random sample of the product from finished production products to which the NFRC label has been applied and shall apply a tamper-proof identification mark.
- B. The Licensee shall immediately ship the sample to an NFRC-accredited laboratory

designated by the IA for testing in accordance with ANSI/NFRC 100.

- C. The NFRC-accredited testing laboratory shall be directed to conduct the test in accordance with ANSI/NFRC 100 and to deliver the tests report to the IA, with a copy to NFRC.
- D. In the event that the test report indicates compliance with the product's original thermal performance rating, the Licensee's product certification authorization shall continue in effect. -The party requesting the retest shall pay the laboratory's charges for the testing.
- E. In the event that the test report indicates non-compliance with the product's original thermal performance rating, the Licensee's right to use NFRC labels or FMCs for that product and related product line shall be suspended immediately by issuance of a Notice of Suspension by NFRC. NFRC shall have the right to suspend the Licensee's license agreement if the product certification authorization is material to the Licensee's licensing. The licensee shall pay the laboratory's charges for the testing.
- F. The Licensee may also voluntarily terminate NFRC certification authorization of the product and related product line found to be in serious non-compliance.

8.6.1.6 Private Labeler and Applied Film Licensed Brander Inspections

- A. Licensee Applying Labels
 - i. The Licensee's designated IA shall conduct an inspection of the Licensee's location(s) listed on Schedule VI within six months of the labeler's Schedule VI submission, at which time the Licensee's designated IA shall verify that the Licensed Brander's manufacturing location(s) listed on Schedule I are NFRC Licensed and subject to annual inspection by a NFRC Licensed IA.

- ii. The Licensee shall maintain a quality control system to ensure proper product ordering, receipt, and labeling.
 - iii. IA Requirements
 - (a) During the Licensee inspection, the designated IA shall review the labeling and/or FMC generating quality control system and shall inspect randomly selected products to ascertain whether the authorized product(s) are properly labeled or a FMC is properly generated.
 - (b) A designated IA shall inspect a Door Manufacturer/Pre-Hanger, who is modifying the fenestration product and participating as a private labeler, in a manner consistent with the inspection requirements of a whole product manufacturer.
- B. Manufacturer Applying Labels for Licensee
- i. The Licensee's designated IA shall verify that an inspection has been conducted of the Manufacturer location(s) listed on Schedule VI within six months of the licensee's Schedule VI submission.
 - ii. The Licensee's designated IA shall verify that the Licensed Brander's manufacturing location(s) listed on Schedule I are NFRC Licensed and subject to annual inspection by a NFRC Licensed IA.

8.6.1.7 Site-Built Inspections

- A. Upon completion of a signed license agreement, a Site-Built Responsible Party's designated IA shall conduct an inspection of the NFRC-licensed Responsible Party's facility within one year of the issuance of an NFRC Label Certificate.

- B. During the inspection, the designated IA shall review the files of the Responsible Party and conduct a random inspection of all pertinent information related to all NFRC Label Certificates for at least one particular project.
- C. This inspection shall include review and verification of NFRC Label Certificates for all project products; the NFRC Label Certificates in the Responsible Party's files are compared with like versions in the IA files.
- D. The inspection shall include review and verification of specific data on each NFRC Label Certificate:
 - i. Project Location information: compare with approved building permit drawings;
 - ii. Product Line information: compare with purchase orders and delivery receipts for framing, glass, spacer, gas-fill, and other materials noting the correct vendor and products purchased: compare with fenestration schedule and elevations on the approved building permit drawings; and
 - iii. Frame Material Supplier, Glazing Material Supplier, and Glazing Contactor/Installer information: compare with purchase orders and delivery receipts.
- E. The inspection shall include review and verification of certification authorization information in comparison with versions in the IAs files.
- F. The IA shall verify the availability of the NFRC Label Certificate on the jobsite. The designated IA will check transmittal memos to determine the date the NFRC Label Certificate was delivered to the jobsite and where it was placed. The IA will evaluate compliance with Label Certificate requirements and will review the Responsible Party's quality assurance program.
- G. If the Responsible Party is also a Lineal Supplier, the designated IA shall inspect the

facilities of the Lineal Supplier and randomly compare product drawings (extrusions) to fabricated parts and/or dies covered under the License Agreement and authorized Label Certificate.

8.7 Usage of Certified IGU

As indicated in Section 1.1.2.A.ix, all NFRC Licensees shall be responsible for assuring that all IGU used in NFRC certified fenestration products are certified in accordance with a Participating IG Certification Program.

8.7.1 Voluntary Transfer of Certified IGU to another NFRC Participating IG Certification Program

In the event that a previously certified IGU is voluntarily transferred to another Participating IG Certification Program for any reason, any affected Licensee's responsibility of complying with all applicable requirements of the PCP shall remain in full effect at all times before, during, and after said transfer.

8.7.2 Conditional IGU Certification

- A. Conditional IGU Certification is a time period of temporary certification authorized by an IG certification program as an extension of existing or new IGU certification.
- B. A Licensee shall be permitted a maximum of nine months of conditional IGU certification granted by one or more Participating IG Certification Program(s) including voluntary transfers from one IGC Program to another.

8.7.3 Delisting of a Participating IG Certification Program

- A. In the event that a previously listed Participating IG Certification Program becomes delisted by NFRC for any reason, NFRC shall send written or electronic notice of said delisting to all its Licensees no later than 10 business days after the date of delisting of the program.
- B. All Licensees who are using IGU that was certified in accordance with the delisted program in any NFRC certified fenestration product shall reply in writing to NFRC no later than 10 business days after receipt of the notice from NFRC. The Licensee's reply shall confirm their receipt of NFRC's notice and shall also indicate the Licensee's intent to comply with the provisions of this Section 8.8.2.

- C. The Licensee shall again provide written reply to NFRC within 60 calendar days of receipt of NFRC's delisting notice indicating the new Participating IG Certification Program the Licensee has chosen.
- D. All affected Licensees shall be permitted a grace period of 12 months after receipt of the notice from NFRC to re-establish the usage of IGU that is certified in accordance with an approved Participating IG Certification Program. The grace period may be extended beyond 12 months upon approval by the NFRC Board of Directors.
- E. During the grace period, all affected IGU shall be permitted to continue to be used in NFRC-certified fenestration products.
- F. Upon completion of the grace period, any affected IGU for which certification has not been re-established shall not be permitted to be used in any NFRC certified fenestration products until such time that said IGU are again certified in accordance with a Participating IG Certification Program.

9. NON-COMPLIANCE

An NFRC Licensee's compliance to all of the criteria and conditions of the Certification Program may be reviewed by NFRC and an NFRC-licensed IA at any time and shall be reviewed by the NFRC-licensed IA not less than once a year in connection with the plant inspection and review required by Section 8. This section addresses issues of non-compliance, as well as procedures used, and actions taken to resolve those non-compliances.

9.1 Non-Compliance

9.1.1 Non-Validation

The first non-validation test for a product line shall not result in immediate decertification of a product line previously authorized for certification. If an individual product does not validate, the following procedure shall be followed:

- A. The IA shall notify the simulation laboratory, the Manufacturer/Responsible Party, and the testing laboratory of the non-validation. These parties shall attempt to establish reasons for the non-validation. These parties shall have 10 calendar days to identify the reason(s) for the non-validation.

- B. If errors in workmanship or product materials are identified, one re-test is allowed at the expense of the Licensee.
- C. If the error is identified as a material issue directly related to a lineal extrusion that is supplied by a Lineal Supplier company, one re-test is allowed at the expense of the Lineal Supplier.
- D. If no resolution is reached within the 10-calendar day period, the IA shall notify NFRC staff within 1 business day for assistance.
- E. If all documentation and product specifications are deemed correct, the non-validation may be a program problem, in which case, it may not be the responsibility of the Licensee. If the non-validation is proven to be a program problem, the Licensee shall not be responsible.
- F. If the product does not comply with the certified product's specifications, established NFRC non-conformance rules shall apply.

9.1.2 Annual Inspection Deficiencies

- A. In the event that any of the deficiencies noted by the IA at the time of annual inspection have not been remedied within the 15 business day notice of the non-compliance, a Notice of Suspension of NFRC product certification authorization and Licensee's licensing shall be immediately issued by the IA. The Notice of Suspension may be appealed in accordance with the appeals procedures of this section. A suspension shall be withdrawn by the IA upon a re-inspection or receipt of other evidence acceptable to the IA showing that the deficiencies cited at the time of inspection have been remedied.
- B. In the event of a suspension of product certification authorization and Licensee's license agreement, and in the further event that the Licensee does not take corrective action sufficient to permit the Licensee to remove deficiencies not later than 30 calendar days after the date of the Notice of Suspension, then NFRC will issue a Notice of Revocation. The revocation may be appealed in accordance with the appeals procedures set forth in this section.

9.1.3 Labeling Discrepancies During In-Plant Inspection

- A. Labeling discrepancies cited during an in-plant inspection shall be corrected by the Licensee within 15 business days of the notice of non-compliance.
- B. Labeling discrepancies may include, but not be limited to:
 - i. The mislabeling of authorized products;
 - ii. Incomplete labeling (i.e., a permanent or temporary label is missing);
 - iii. Incorrect labeling format;
 - iv. Incorrect completion of an FMC; or
 - v. Incorrect performance ratings on the authorized product labeled.

9.1.4 Labeling or FMC Discrepancies in the Field

Labeling or FMC discrepancies in the field consist of any product claiming to be NFRC-certified, but which is not in compliance with the labeling requirements of Section 6. Examples include those instances where:

- A. A permanent label, temporary label, or FMC is missing or illegible;
- B. A label creates a situation whereby the validity of the permanent label, temporary label, or FMC is in question; or
- C. Labeling compliance may also exist when glazing breakage occurs during transport or installation.

9.1.4.1 Corrective Actions On-Site

Product labeling non-compliance issues may be corrected on-site, provided that the following criterion is met (these are minimum requirements -- other information may be requested by the IA with a description of corrective action taken to prevent recurrence):

- A. Licensee identifies the condition that created the labeling discrepancy and provides the IA with a description of corrective action taken to prevent recurrence.
- B. Licensee provides the IA with documentation acceptable to the IA supporting the on-site

correction, and shall keep on file the following documentation:

- i. Production control records identifying the product and glazing option;
 - ii. Quality assurance records related to the product in question, when applicable;
 - iii. A report of an on-site product inspection by the Licensee's employee or authorized agent attesting to the validity of the correction; and
 - iv. In those instances concerning broken glazing, documentation on replacement glass so as to assure the IA and end-user that the correct glazing option was used in replacement. A production control order identifying the type of glazing manufactured will suffice for such assurance.
- C. NFRC may request copies of all documents provided to the IA regarding each field labeling correction.
- D. Only products manufactured at a plant registered with the IA may bear certification labels or a FMC, and only Licensee's employee or authorized agent shall be authorized to affix labels on-site or provide a FMC.

9.2 NFRC Actions

NFRC and/or NFRC-licensed IAs have the authority pursuant to the procedures set forth in this document to deny, terminate, suspend, or revoke product certification authorization or Licensee license agreement.

9.2.1 Consequences of Suspension or Revocation

- A. Upon suspension or revocation of product certification authorization by NFRC, any and all rights of a Licensee to use the NFRC name, mark, ratings, certification, label, or FMC shall immediately cease with respect to the product or products suspended.
- B. Upon suspension or revocation of a Licensee license agreement, any and all rights of a product Licensee to

use the NFRC name, mark, ratings, certification, label, or FMC shall immediately cease.

- C. If the product Licensee fails to discontinue use of the NFRC name, mark, ratings, certification, or label, NFRC shall have the right to obtain an immediate temporary injunction restraining the product Licensee from any and all further use of or reference to the NFRC name, mark, ratings, certification, label, or FMC and to the award of damages for harm to NFRC's name and reputation.

9.2.2 Grounds for Denial

- A. Denial of either product certification or license agreement may be taken by the Licensee's designated IA.
- B. Grounds for denial include:
 - i. Product line non-validation,
 - ii. The Manufacturer refusing to allow the initial in-plant inspection, or
 - iii. The failure to meet compliance requirements cited at the initial in-plant inspection.
- C. The IA shall send a notice of the denial to the Licensee with a copy to NFRC. The notice shall be sent by certified mail or other method which provides evidence of and a receipt for delivery.

9.2.3 Grounds for Suspension

- A. Suspension of product certification and Manufacturer licensing may be taken by either the designated IA or by NFRC.
- B. Grounds for suspension include:
 - i. Refusing to allow the IA to conduct the annual in-plant inspection;
 - ii. Failure to remedy any discrepancies cited at the time of plant inspection and noted on the IA's 15-day Notice of Non-Compliance;
 - iii. Failure to comply with NFRC certification requirements set forth in Section 8;
 - iv. A determination rendered by NFRC in an Administrative Action; or
 - v. A Challenge decision.

- C. The Notice of the Suspension shall be sent to the Licensee by certified mail or other method which provides evidence of and a receipt for delivery.

9.2.4 Grounds for Revocation

- A. Revocation of certification authorization or license agreement is the responsibility of the NFRC.
- B. Grounds for revocation include:
 - i. A failure of the Licensee to remedy a Notice of Suspension,
 - ii. A Licensee having three suspensions in one year, or
 - iii. The rejection of an appeal of suspension.
- C. In addition, the Certification Policy Committee may revoke the certification authorization or license agreement of a Licensee who has acted in such a manner as to impair the objectivity or integrity of the Certification Program or to harm the reputation of NFRC, including but not limited to:
 - i. Submission of false information to NFRC or failure to submit to NFRC any material information required to be submitted by the Licensee in connection with obtaining or maintaining an NFRC license,
 - ii. Knowingly or negligently affixing an NFRC label to a product or generating an FMC that fails to meet all of the requirements for labeling,
 - iii. Misrepresentation by a Licensee in advertising or promotional materials of its license status, or
 - iv. Loss by a Licensee of product certification authorization for three or more products suspended in a Challenge Decision by the IA or Challenge Board.
- D. The Notice of Revocation shall be sent to the Licensee by certified mail or other method which provides evidence of and a receipt for delivery.
- E. If a Licensee subject to revocation does not appeal the revocation within 15 business days of receipt of the Notice of Revocation, the revocation shall be deemed final.

9.2.5 Request for Reinstatement

- A. A Licensee whose license and certification authorization has been revoked, may request reinstatement of licensure and certification authorization at any time after revocation is final.
- B. The request for reinstatement shall be made in writing to the CPC or, in the case of a revocation that is rendered by the CPC, the NFRC Board of Directors, by certified mail or other method which provides evidence of and a receipt for delivery to the NFRC.
- C. The Licensee must submit in its request, evidence of corrective actions taken as the basis for reinstatement.
- D. A decision based on the request for reinstatement shall be made by the CPC or the Board of Directors within 45 calendar days of receipt of the request.

9.2.5.1 Reinstatement

Upon reinstatement of certification authorization and licensure, the Licensee shall be required to re-apply for certification authorization by:

- A. Entering into a new license agreement with NFRC;
- B. Submitting required product information to an NFRC-accredited simulation laboratory and testing laboratory for products to be authorized for certification; and
- C. Selecting and contracting with an NFRC-licensed IA for product evaluation and certification authorization.

9.3 Appeals Procedures

- A. In the event that an NFRC license is denied or suspended, the Licensee shall have the right, for a period of 45 calendar days after the date of the NFRC Notice of Denial or Suspension, to appeal the denial or suspension to the NFRC CPC.
- B. In the event that an NFRC license is suspended due to an administrative action or challenge, the Licensee shall have the right, for a period of 45 calendar days after the date of the NFRC suspension, to appeal the suspension to the NFRC Board of Directors.
- C. In the event that a Licensee's product certification authorization or license is revoked following the expiration of the period to

appeal a suspension, in the absence of an appeal having been taken, the Licensee shall have the right, for a period of 15 business days after the date of the Notice of Revocation, to appeal the revocation to the NFRC Certification Policy Committee.

- D. In the event that a Licensee's product certification authorization or license is revoked by a decision of the NFRC Certification Policy Committee, the Licensee shall have the right, for a period of 15 business days after the date of the Notice of Revocation, to appeal the revocation to the NFRC Board of Directors.

9.3.1 Notice of Appeal

- A. An appeal, whether from a Notice of Denial, Notice of Suspension, or Notice of Revocation, shall be noticed in writing and shall be sent by certified mail or other method which provides evidence of delivery to the Chairperson of the CPC or the Board of Directors, as the case may be, with a copy to the NFRC Certification Program Manager, and shall specify the basis for the appeal.
- B. The appealing Licensee may, at the time of submitting the appeal, request in writing a hearing by
- i. The CPC, in the case of an appeal from a denial or suspension, or of an appeal of revocation based on a suspension from which an appeal was not taken, or
 - ii. The Board of Directors, in the case of an appeal from a suspension ordered by the CPC or a revocation based on a suspension ordered by the CPC upon an appeal from a suspension.
- C. In such an event, the CPC or the Board of Directors shall, not later than 7 calendar days after the filing of the notice of appeal, notify the appealing Licensee of the date of the hearing, which shall be held as expeditiously as possible, but not later than 30 calendar days after the receipt of the notice of appeal.

9.3.2 Appeal Hearing

- A. Not later than 14 calendar days prior to the hearing, the NFRC Certification Program Manager shall file with the Certification Policy Committee, or the Certification Policy Committee shall file with the Board of Directors, with a copy to the appealing Licensee, all written information and electronic data on which the denial, suspension, or

revocation was based, and the appellant may file such evidence as the appellant believes will assist the CPC or the Board of Directors in making its determination.

- B. At the hearing, NFRC shall present at least one witness to sponsor the information described in the appeal and to explain the initial denial, suspension, or revocation decision. The appealing Licensee may, but is not required to, be represented by legal counsel and to present evidence and witnesses on its behalf. Either party may cross-examine witnesses of the other party.
- C. Not later than 30 calendar days after the hearing, the CPC or the Board of Directors, as the case may be, shall issue a written decision on behalf of NFRC. The decision shall be based solely on the record except as otherwise permitted under the appeals procedures set forth in this section or under state law, the decision of the CPC or the Board of Directors is final and binding.
- D. In any decision made by either the CPC or the Board of Directors, any individual who has any financial, family, or organizational affiliation with the appellant or an entity or person who operates in direct competition with the appellant, shall not participate in a determination of that body regarding the appealing Licensee.

9.4 Administrative Actions

9.4.1 Administrative Request

Any person shall have the right to submit to NFRC a request (an "Administrative Request") that NFRC take administrative action with respect to an act or omission of any other person, which act or omission is a prohibited activity as defined in the NFRC 707, CAMP or results in a failure to comply with any provision of any other NFRC program document.

9.4.2 Administrative Request Procedure

- A. An Administrative Request shall be in writing and shall provide sufficient information and supporting documentation to identify the act or omission, which is the subject of the request.
- B. An Administrative Request shall be delivered to NFRC by certified mail, return receipt requested or other method which provides evidence of and a receipt for delivery.

9.4.3 NFRC Administrative Action

- A. Upon receipt by NFRC of an Administrative Request, NFRC shall make a determination as to whether NFRC action is mandated or authorized by any provision of the NFRC 707, CAMP or other NFRC program document, and shall, if NFRC action is determined to be mandated or authorized, promptly commence taking such action.
- B. NFRC shall make a determination not later than 45 calendar days following the date of receipt of the Administrative Request and shall advise the person making such request of the determination in writing.

9.4.4 Challenges

- A. Any person making the administrative request may challenge the NFRC determination regarding the request.
- B. A challenge may be brought not later than 30 calendar days following the notification date of NFRC's determination (administrative action).
- C. Challenge procedures are set forth in Appendix D.

9.5 Compliance and Monitoring Program (CAMP)

NFRC has adopted and enforces a Compliance and Monitoring Program (CAMP) pursuant to which NFRC may impose fines and require corrective action by Certification Program Licensees and other persons who fail to comply with the requirements of the Certification Program, License Agreement, or certain legal requirements. Requirements for this program are set forth in NFRC 707, "Compliance and Monitoring Program Manual." Each NFRC Licensee shall comply with the provisions of the NFRC 707, CAMP.

9.6 Challenge and Appeals Procedure for Individual Components

NFRC administers a Challenge and Appeals Procedure for challenges made by any person or entity to any thermophysical property or spectral data value of a component used in NFRC Approved Software Programs. Spectral Data is published in the NFRC Spectral Data Library (also known as the IGDB – International Glazing Database), and thermophysical properties are listed in the Appendices to NFRC 101, "Procedure for Determining Thermophysical Properties of Materials". The procedures for challenges and appeals are set forth in NFRC 714, "Challenge and Appeals Procedure" program document.

APPENDIX A

LAYOUT AND DESIGN FORMATS FOR NFRC
TEMPORARY CERTIFICATION LABELS

This Appendix is to be used as a supplement to Section 6.

A.1 General NFRC Temporary Label Examples

Figure A-1: Minimum Required Label Information and Format for Windows, Doors, and Skylights (2011)

	World's Best Window Co. Series "2000" Casement Vinyl Clad Wood Frame Double Glazing • Argon Fill • Low E XYZ-X-1-00001-00001	
ENERGY PERFORMANCE RATINGS		
U-Factor (U.S. / I-P)	Solar Heat Gain Coefficient	
0.35	0.32	
ADDITIONAL PERFORMANCE RATINGS		
Visible Transmittance		
0.51	—	
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org		

Figure A-2: Air Leakage (2013)

 World's Best Window Co. Series "2000" Casement Vinyl Clad Wood Frame Double Glazing•Argon Fill•Low E XYZ-X-1-00001-00001	
ENERGY PERFORMANCE RATINGS	
U-Factor (U.S. / I-P) 0.35	Solar Heat Gain Coefficient 0.32
ADDITIONAL PERFORMANCE RATINGS	
Visible Transmittance 0.51	Air Leakage (U.S. / I-P) ≤0.3
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org	

Figure A-3a: Air Leakage and Condensation Index (2023)

	World's Best Window Co. Series "2000" Casement Vinyl Clad Wood Frame Double Glazing•Argon Fill•Low E XYZ-X-1-00001-00001	
ENERGY PERFORMANCE RATINGS		
U-Factor (U.S. / I-P)	Solar Heat Gain Coefficient	
0.35	0.32	
ADDITIONAL PERFORMANCE RATINGS		
Visible Transmittance	Air Leakage (U.S. / I-P)	
0.51	≤ 0.3	
Condensation Index	—	
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org		

Figure A-3b: Air Leakage and Condensation Resistance (2013)

	World's Best Window Co. Series "2000" Casement Vinyl Clad Wood Frame Double Glazing•Argon Fill•Low E XYZ-X-1-00001-00001	
ENERGY PERFORMANCE RATINGS		
U-Factor (U.S. / I-P)	Solar Heat Gain Coefficient	
0.35	0.32	
ADDITIONAL PERFORMANCE RATINGS		
Visible Transmittance	Air Leakage (U.S. / I-P)	
0.51	≤0.3	
Condensation Resistance		
51	—	
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org		

Figure A-4: Placeholders for Additional Ratings (2011)

		World's Best Window Co. Series "2000" Casement Vinyl Clad Wood Frame Double Glazing•Argon Fill•Low E XYZ-X-1-00001-00001	
ENERGY PERFORMANCE RATINGS			
U-Factor (U.S. / I-P)		Solar Heat Gain Coefficient	
0.35		0.32	
ADDITIONAL PERFORMANCE RATINGS			
Note 1	Visible Transmittance		Note 2
	—	—	
Note 2			Note 2
	—	—	
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org			

Note 1: Dashes shall be inserted for mandatory ratings only when a technical and rating procedure is not available.

Note 2: Dashes shall be inserted into blank cells under additional performance ratings that have not been authorized for certification.

Figure A-5a: The Use of Metric Units with Condensation Index (2023)

	World's Best Window Co. Series "2000" Casement Vinyl Clad Wood Frame Double Glazing • Argon Fill • Low E XYZ-X-1-00001-00001		
ENERGY PERFORMANCE RATINGS			
U-Factor		Solar Heat Gain Coefficient	
0.35 (U.S./I-P)		0.32	
1.99 (Metric/SI)			
ADDITIONAL PERFORMANCE RATINGS			
Visible Transmittance		Air Leakage	
0.51		≤ 0.3 (U.S./I-P)	
		≤ 1.5 (Metric/SI)	
Condensation Index			
51		—	
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org			

Figure A-5b: The Use of Metric Units with Condensation Resistance (2013)

	World's Best Window Co. Series "2000" Casement Vinyl Clad Wood Frame Double Glazing•Argon Fill•Low E XYZ-X-1-00001-00001		
ENERGY PERFORMANCE RATINGS			
U-Factor 0.35 (U.S./I-P)		1.99 (Metric/SI)	Solar Heat Gain Coefficient 0.32
ADDITIONAL PERFORMANCE RATINGS			
Visible Transmittance 0.51		Air Leakage ≤ 0.3 ≤ 1.5 (U.S./I-P) (Metric/SI)	
Condensation Resistance 51		—	
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org			

SI units may be used on the label, but only if ratings are also provided in IP units. SI and IP units shall be displayed on the label as shown above.

The two-decimal U-factor value was obtained in the following manner in order to maintain a consistent conversion when converting the ratings listed on the label from IP to SI and then from SI to IP.

- IP rating is rounded to two decimals from the NFRC CPD;
- Multiplied by 5.678263; and
- Final displayed SI rating is rounded to two decimals.

A.2 Translations of NFRC Temporary Label Examples

Figure A-6a: English Label with Condensation Index (2023)

	World's Best Window Co. Series "2000" Casement Vinyl Clad Wood Frame Double Glazing•Argon Fill•Low E XYZ-X-1-00001-00001		
ENERGY PERFORMANCE RATINGS			
U-Factor 0.35 (U.S./I-P)		1.99 (Metric/SI)	Solar Heat Gain Coefficient 0.32
ADDITIONAL PERFORMANCE RATINGS			
Visible Transmittance 0.51		Air Leakage ≤ 0.3 (U.S./I-P) ≤ 1.5 (Metric/SI)	
Condensation Index 51		—	
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org			

Figure A-6b: English Label with Condensation Index (2013)

	World's Best Window Co. Series "2000" Casement Vinyl Clad Wood Frame Double Glazing•Argon Fill•Low E XYZ-X-1-00001-00001		
ENERGY PERFORMANCE RATINGS			
U-Factor 0.35 (U.S./I-P)		1.99 (Metric/SI)	Solar Heat Gain Coefficient 0.32
ADDITIONAL PERFORMANCE RATINGS			
Visible Transmittance 0.51		Air Leakage ≤ 0.3 ≤ 1.5 (U.S./I-P) (Metric/SI)	
Condensation Resistance 51		—	
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org			

Figure A-7a: Authorized French Translation with Condensation Index (2023)

	Entreprise de bon fenêtres Ltée Série 2000 Battant Armature en bois avec recouvrement de vinyle Double vitrage • faible émissivité • remplissage d'argon XYZ-X-1-00001-00001	
ÉVALUATION DES PROPRIÉTÉS ÉNERGÉTIQUES		
Facteur-U 0,35 1,99 (É.U./P-L) (SI)	Coefficient de gain de chaleur solaire (CGSC) 0,32	
ÉVALUATION SUPPLÉMENTAIRE DES PROPRIÉTÉS		
Transmission Visible 0,51	Infiltration d' Air ≤ 0,3 ≤ 1,5 (É.U./P-L) (SI)	
Indicé de Condensation 51	—	
Le fabricant convient que ces cotes respectent les procédures applicables du NFRC en vue de déterminer le rendement de l'ensemble du produit. Les cotes du NFRC sont déterminées selon une série de conditions environnementales établies et une taille de produit spécifique. Le NFRC ne recommande aucun produit et ne garantit pas le recours à un produit particulier en vue d'une utilisation déterminée. Veuillez consulter les documents d'information du fabricant afin d'obtenir d'autres renseignements sur le rendement du produit en question. www.nfrc.org		

**Figure A-7b: Authorized French Translation
with Condensation Resistance (2013)**

 NFRC National Fenestration Rating Council® CERTIFIED	Entreprise de bon fenêtres Ltée Série 2000 Battant Armature en bois avec recouvrement de vinyle Double vitrage • faible émissivité • remplissage d'argon XYZ-X-1-00001-00001	
ÉVALUATION DES PROPRIÉTÉS ÉNERGÉTIQUES		
Facteur-U 0,35 (É.U./P-L)	1,99 (SI)	Coefficient de gain de chaleur solaire (CGSC) 0,32
ÉVALUATION SUPPLÉMENTAIRE DES PROPRIÉTÉS		
Transmission Visible 0,51	Infiltration d' Air ≤ 0,3 ≤ 1,5 (É.U./P-L) (SI)	
Résistance à la Condensation 51	—	
Le fabricant convient que ces cotes respectent les procédures applicables du NFRC en vue de déterminer le rendement de l'ensemble du produit. Les cotes du NFRC sont déterminées selon une série de conditions environnementales établies et une taille de produit spécifique. Le NFRC ne recommande aucun produit et ne garantit pas le recours à un produit particulier en vue d'une utilisation déterminée. Veuillez consulter les documents d'information du fabricant afin d'obtenir d'autres renseignements sur le rendement du produit en question. www.nfrc.org		

Figure A-8a: Authorized Spanish Translation with Condensation Index (2023)

	Entreprise de bon fenêtres Ltée Série 2000 Battant Armature en bois avec recouvrement de vinyle Double vitrage • faible émissivité • remplissage d'argon XYZ-X-1-00001-00001		
ÉVALUATION DES PROPRIÉTÉS ÉNERGÉTIQUES			
Facteur-U 0,35 1,99 (É.U./P-L) (SI)		Coefficient de gain de chaleur solaire (CGSC) 0,32	
ÉVALUATION SUPPLÉMENTAIRE DES PROPRIÉTÉS			
Transmission Visible 0,51		Infiltration d' Air ≤ 0,3 ≤ 1,5 (É.U./P-L) (SI)	
Indicé de Condensation 51		—	
Le fabricant convient que ces cotes respectent les procédures applicables du NFRC en vue de déterminer le rendement de l'ensemble du produit. Les cotes du NFRC sont déterminées selon une série de conditions environnementales établies et une taille de produit spécifique. Le NFRC ne recommande aucun produit et ne garantit pas le recours à un produit particulier en vue d'une utilisation déterminée. Veuillez consulter les documents d'information du fabricant afin d'obtenir d'autres renseignements sur le rendement du produit en question. www.nfrc.org			

**Figure A-8a: Authorized Spanish Translation
with Condensation Resistance (2013)**

 National Fenestration Rating Council® CERTIFIED	World's Best Window Co. Series "2000" Casement Marco de Madera Cubierto de Vinyl Vidrio Doble Insulado • De Baja Emisividad • Con Gas Argon XYZ-X-1-00001-00001	
EVALUACION DE RENDIMIENTO ENERGETICO		
Factor-U 0.35 (U.S./I-P)	1.99 (Metrico/SI)	Coeficiente: Ganancia de Energia Solar 0.32
EVALUACION SUPLEMENTARIA DE RENDIMIENTO		
Transmision de Luz Visible 0.51	Infiltracion de Aire ≤ 0.3 ≤ 1.5 (U.S./I-P) (Metrico/SI)	
Resistencia de Condensacion 51	—	
Este fabricante estipula que estos valores cumplen con los procedimientos aplicables de NFRC para determinar el rendimiento total del producto. Los valores usados por NFRC son determinados por un conjunto fijo de condiciones ambientales y n tamaño de producto específico. NFRC no recomienda ningun producto y no garantiza que el producto sea adecuado para un uso específico. Consulte con el folleto del fabricante para el uso apropiado de este producto. www.nfrc.org		

Figure A-9a: Example English-Spanish Combined Label with Condensation Index (2023)

 NFRC National Fenestration Rating Council® CERTIFIED	World's Best Window Co. Series "2000" Vinyl Clad Wood Frame • Double Glazing • Argon Fill • Low E Product Type: Vertical Slider Series "2000" Marco de Madera Cubierto de Vinyl Vidrio Doble Insulado • De Baja Emisividad • Con Gas Argon Tipo de Producto: Deslizante Vertical XYZ-X-1-00001-00001					
	ENERGY PERFORMANCE RATINGS EVALUACION DE RENDIMIENTO ENERGETICO <table border="1"> <tr> <td> U-Factor Factor-U 0.35 (U.S./I-P) </td> <td> Solar Heat Gain Coefficient Coeficiente: Ganancia de Energia Solar 0.32 </td> </tr> </table>		U-Factor Factor-U 0.35 (U.S./I-P)	Solar Heat Gain Coefficient Coeficiente: Ganancia de Energia Solar 0.32		
U-Factor Factor-U 0.35 (U.S./I-P)	Solar Heat Gain Coefficient Coeficiente: Ganancia de Energia Solar 0.32					
ADDITIONAL PERFORMANCE RATINGS EVALUACION SUPLEMENTARIA DE RENDIMIENTO <table border="1"> <tr> <td> Visible Transmittance Transmision de Luz Visible 0.51 </td> <td> Air Leakage Infiltracion de Aire ≤ 0.3 (U.S./I-P) ≤ 1.5 (Metrico/SI) </td> </tr> <tr> <td> Condensation Index Indice de condensación 51 </td> <td> — </td> </tr> </table>			Visible Transmittance Transmision de Luz Visible 0.51	Air Leakage Infiltracion de Aire ≤ 0.3 (U.S./I-P) ≤ 1.5 (Metrico/SI)	Condensation Index Indice de condensación 51	—
Visible Transmittance Transmision de Luz Visible 0.51	Air Leakage Infiltracion de Aire ≤ 0.3 (U.S./I-P) ≤ 1.5 (Metrico/SI)					
Condensation Index Indice de condensación 51	—					
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org Este fabricante estipula que estos valores cumplen con los procedimientos aplicables de NFRC para determinar el rendimiento total del producto. Los valores usados por NFRC son determinados por un conjunto fijo de condiciones ambientales y n tamaño de producto específico. NFRC no recomienda ningún producto y no garantiza que el producto sea adecuado para un uso específico. Consulte con el folleto del fabricante para el uso apropiado de este producto. www.nfrc.org						

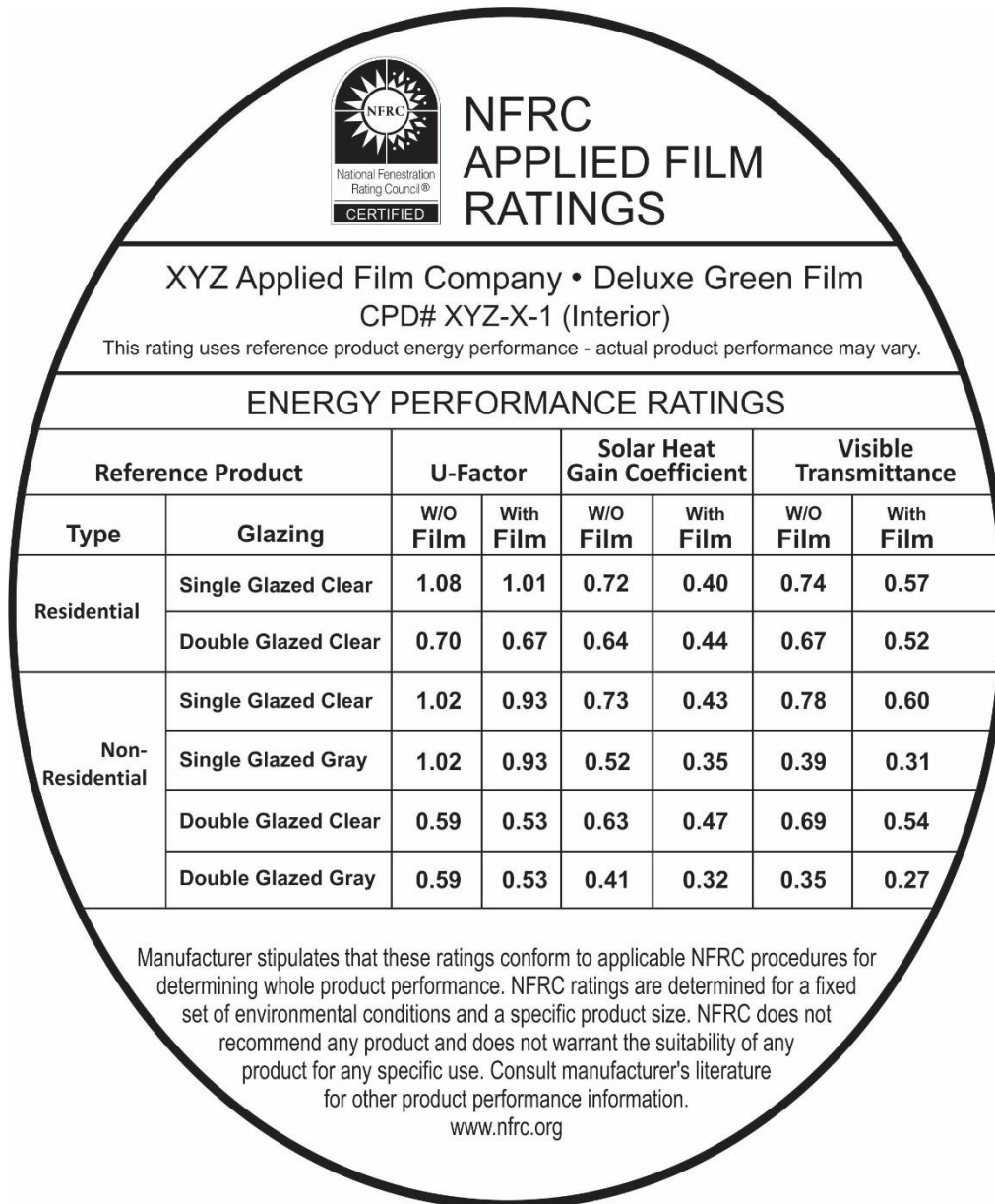
**Figure A-9b: Example English-Spanish Combined Label
with Condensation Resistance (2013)**

 National Fenestration Rating Council® CERTIFIED	World's Best Window Co. Series "2000" Vinyl Clad Wood Frame • Double Glazing • Argon Fill • Low E Product Type: Vertical Slider Series "2000" Marco de Madera Cubierto de Vinyl Vidrio Doble Insulado • De Baja Emisividad • Con Gas Argon Tipo de Producto: Deslizante Vertical XYZ-X-1-00001-00001					
	ENERGY PERFORMANCE RATINGS EVALUACION DE RENDIMIENTO ENERGETICO <table border="1"> <tr> <td> U-Factor Factor-U 0.35 (U.S./I-P) </td> <td> 1.99 (Metrico/SI) </td> <td> Solar Heat Gain Coefficient Coeficiente: Ganancia de Energia Solar 0.32 </td> </tr> </table>		U-Factor Factor-U 0.35 (U.S./I-P)	1.99 (Metrico/SI)	Solar Heat Gain Coefficient Coeficiente: Ganancia de Energia Solar 0.32	
U-Factor Factor-U 0.35 (U.S./I-P)	1.99 (Metrico/SI)	Solar Heat Gain Coefficient Coeficiente: Ganancia de Energia Solar 0.32				
ADDITIONAL PERFORMANCE RATINGS EVALUACION SUPLEMENTARIA DE RENDIMIENTO <table border="1"> <tr> <td> Visible Transmittance Transmision de Luz Visible 0.51 </td> <td> Air Leakage Infiltracion de Aire ≤ 0.3 (U.S./I-P) ≤ 1.5 (Metrico/SI) </td> </tr> <tr> <td> Condensation Resistance Resistencia de Condensacion 51 </td> <td> — </td> </tr> </table>			Visible Transmittance Transmision de Luz Visible 0.51	Air Leakage Infiltracion de Aire ≤ 0.3 (U.S./I-P) ≤ 1.5 (Metrico/SI)	Condensation Resistance Resistencia de Condensacion 51	—
Visible Transmittance Transmision de Luz Visible 0.51	Air Leakage Infiltracion de Aire ≤ 0.3 (U.S./I-P) ≤ 1.5 (Metrico/SI)					
Condensation Resistance Resistencia de Condensacion 51	—					
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org Este fabricante estipula que estos valores cumplen con los procedimientos aplicables de NFRC para determinar el rendimiento total del producto. Los valores usados por NFRC son determinados por un conjunto fijo de condiciones ambientales y n tamaño de producto específico. NFRC no recomienda ningún producto y no garantiza que el producto sea adecuado para un uso específico. Consulte con el folleto del fabricante para el uso apropiado de este producto. www.nfrc.org						

NOTE: The label in Figure A-9a and A-9b displays the English text in black and the Spanish text in red. This is for illustrative purposes only. For actual product labels, there shall be no requirement for English text and non-English text to be in different colors.

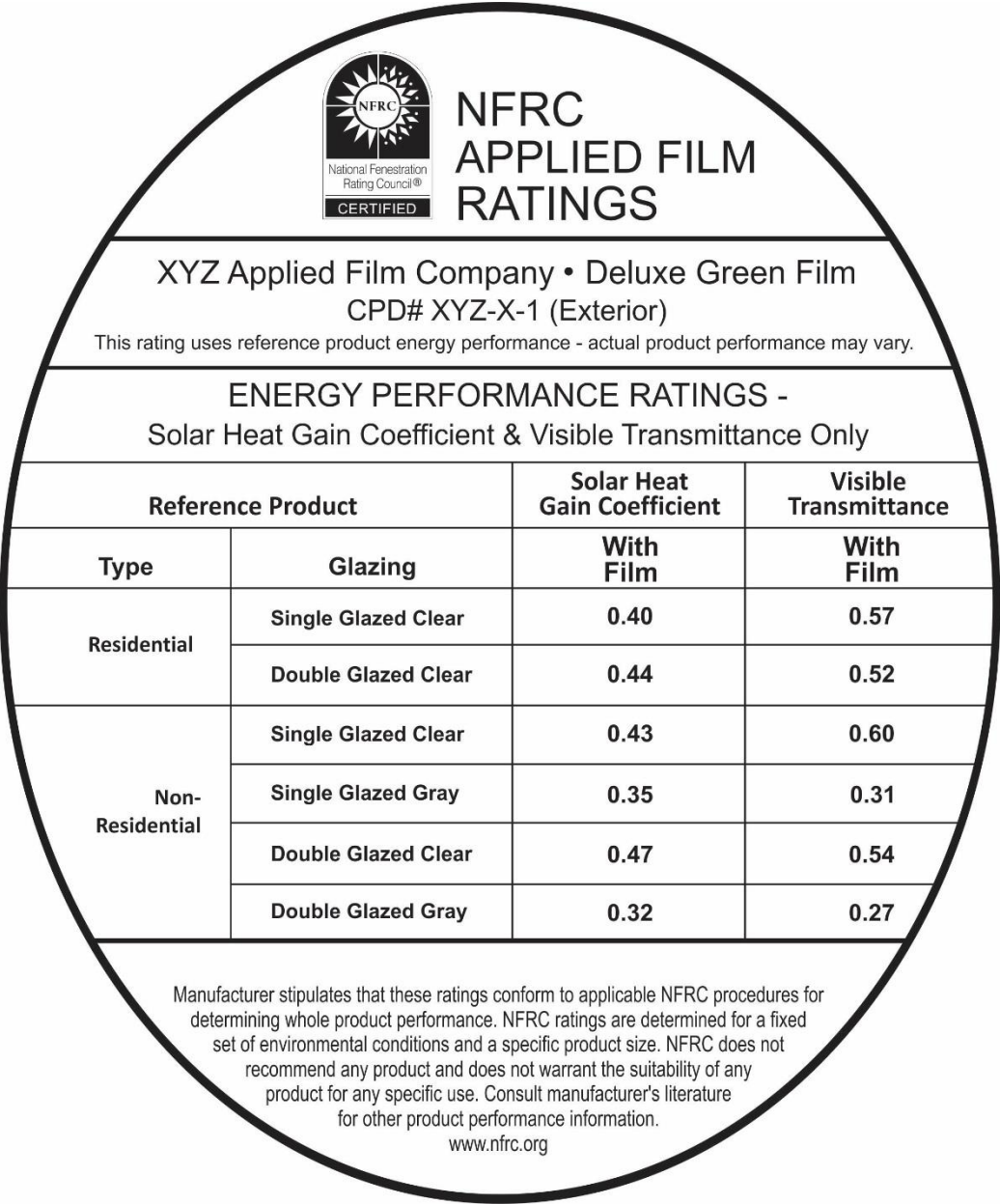
A.3 Attachments NFRC Temporary Label Examples

Figure A-10: Sample Temporary Label for “Interior” Applied Film Products (2015)



The applied film label shall indicate, as in Figure A-10 and A-11, whether the applied film rating information on the label is for an applied film product applied to the “Interior” or “Exterior” surface of a glazing unit.

Figure A-11: Sample Temporary Label for “Exterior” Applied Film Products (2015)



The applied film label shall indicate, as in Figure A-10 and A-11, whether the applied film rating information on the label is for an applied film product applied to the “Interior” or “Exterior” surface of a glazing unit.

A.4 Dynamic Products NFRC Temporary Label Examples

The Dynamic Glazing Product labels, A-12 and A-13 shall display ratings in accordance with the following criteria:

- A. Low value (left) to high value (right)
- B. For Dynamic Glazing Products that utilize a shading or diffusing system, and for which the licensee chooses to utilize this label as indicated in Section 4.3.4.4, ratings shall reflect Fully CLOSED and Fully OPEN Positions as defined in NFRC 600. The terms “On/Closed” and “Off/Open” in the following sample labels shall be replaced with either:
 - i. “OPEN” and “CLOSED”; or
 - ii. “SHADE OPEN” and “SHADE CLOSED”; or
 - iii. “BLIND OPEN” and “BLIND CLOSED.”
- C. For other Dynamic Glazing Products for which the licensee chooses to utilize this label as indicated in Section 4.3.4.4, ratings shall reflect Fully ON and Fully OFF Positions as defined in NFRC 600. The terms “On/Closed” and “Off/Open” in the following sample labels shall be replaced with “ON” and “OFF.”
- D. Use an arrow and the word “variable” if the product has the ability to operate in intermediate states.

See Section 4.3.4. and 6.5.4 for additional details.

Figure A-12: Sample Temporary Label for Dynamic Glazing Products (2014)

	World's Best Window Co. Series "2000" Casement Vinyl Clad Wood Frame Double Glazing • Dynamic Glazing • Argon Fill • Low E XYZ-X-1-00001-00001, -00002-00001	
ENERGY PERFORMANCE RATINGS		
U-Factor (U.S. / I-P)		Solar Heat Gain Coefficient
0.30 ↔ 0.40 On / Closed Off / Open		0.10 ↔ 0.50 On / Closed Off / Open
ADDITIONAL PERFORMANCE RATINGS		
Visible Transmittance		Air Leakage (U.S. / I-P)
0.03 ↔ 0.65 On / Closed Off / Open		≤ 0.3
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org		

Figure A-13: Sample Temporary Label for Dynamic Glazing Products with Metric Units, & English-French Combined (2014)

 National Fenestration Rating Council® CERTIFIED	World's Best Window Co. Casement Series "2000" Vinyl Clad Wood Frame Double Glazing • Dynamic Glazing • Argon Fill • Low E Série 2000 Battant Armature en bois avec recouvrement de vinyle Double vitrage • (Dynamic) • faible émissivité • remplissage d'argon XYZ-X-1-00001-00001, -00002-00001		
	ENERGY PERFORMANCE RATINGS ÉVALUATION DES PROPRIÉTÉS ÉNERGÉTIQUES		
<table border="1"><tr><td>U-Factor (U.S. / I-P) Facteur-U Variable (U.S. / I-P) 0,29 ↔ 0,43 (Metric / SI) 1,63 ↔ 2,46 On / Closed Off / Open</td><td>Solar Heat Gain Coefficient Coefficient de gain de chaleur solaire Variable 0,10 ↔ 0,50 On / Closed Off / Open</td></tr></table>		U-Factor (U.S. / I-P) Facteur-U Variable (U.S. / I-P) 0,29 ↔ 0,43 (Metric / SI) 1,63 ↔ 2,46 On / Closed Off / Open	Solar Heat Gain Coefficient Coefficient de gain de chaleur solaire Variable 0,10 ↔ 0,50 On / Closed Off / Open
U-Factor (U.S. / I-P) Facteur-U Variable (U.S. / I-P) 0,29 ↔ 0,43 (Metric / SI) 1,63 ↔ 2,46 On / Closed Off / Open	Solar Heat Gain Coefficient Coefficient de gain de chaleur solaire Variable 0,10 ↔ 0,50 On / Closed Off / Open		
ADDITIONAL PERFORMANCE RATINGS ÉVALUATION SUPPLÉMENTAIRE DES PROPRIÉTÉS			
<table border="1"><tr><td>Visible Transmittance Transmission Visible Variable 0,03 ↔ 0,65 On / Closed Off / Open</td><td>Air Leakage Infiltration d' Air ≤ 0,3 ≤ 1,5 (É.U./P-L) (SI)</td></tr></table>		Visible Transmittance Transmission Visible Variable 0,03 ↔ 0,65 On / Closed Off / Open	Air Leakage Infiltration d' Air ≤ 0,3 ≤ 1,5 (É.U./P-L) (SI)
Visible Transmittance Transmission Visible Variable 0,03 ↔ 0,65 On / Closed Off / Open	Air Leakage Infiltration d' Air ≤ 0,3 ≤ 1,5 (É.U./P-L) (SI)		
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org Le fabricant convient que ces cotes respectent les procédures applicables du NFRC en vue de déterminer le rendement de l'ensemble du produit. Les cotes du NFRC sont déterminées selon une série de conditions environnementales établies et une taille de produit spécifique. Le NFRC ne recommande aucun produit et ne garantit pas le recours à un produit particulier en vue d'une utilisation déterminée. Veuillez consulter les documents d'information du fabricant afin d'obtenir d'autres renseignements sur le rendement du produit en question. www.nfrc.org			

US/Metric Units: SI units may be used on the label, but only if ratings are also provided in IP units. SI and IP units shall be displayed on the label as shown above.

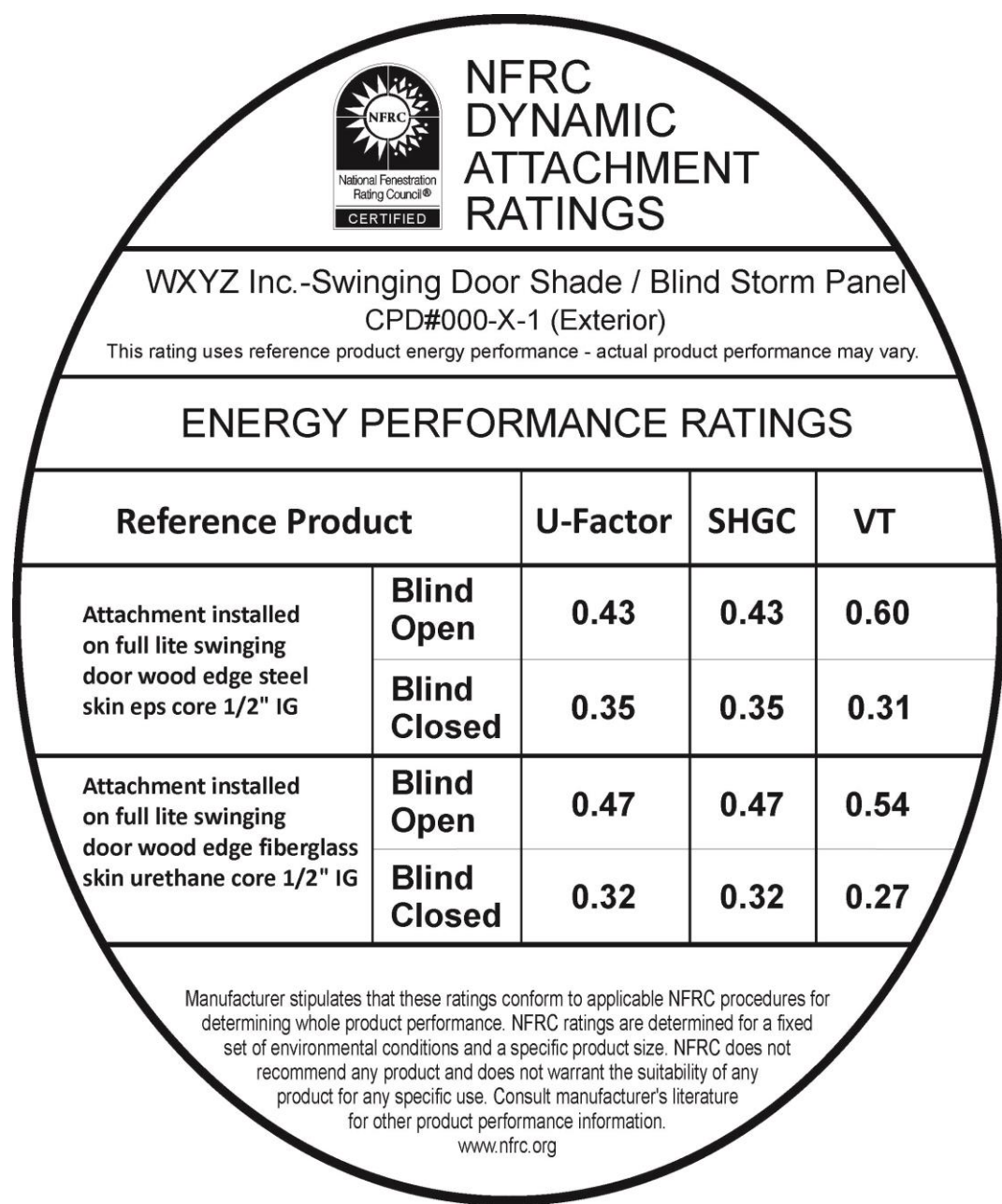
The two-decimal U-factor value was obtained in the following manner in order to maintain a consistent conversion when converting the ratings listed on the label from IP to SI and then from SI to IP.

- IP rating is rounded to two decimals from the NFRC CPD;
- Multiplied by 5.678263; and

Final displayed SI rating is rounded to two decimals.

English-French Combined: The label in Figure A-13 shows the English text in black and the French text in red. This is for illustrative purposes only. For actual product labels, there shall be no requirement for English text and non-English text to be in different colors.

Figure A-14: Sample Temporary Label for Dynamic Attachment Product



The Dynamic Attachment label shall indicate (as shown in Figure A-14) the Reference Product it is attached to as well as “Interior” or “Exterior” location of the attachment

A.5 TDD NFRC Temporary Label Examples

Figure A-15: Sample Temporary Label for TDD (2015)

		World's Best TDD Co. Series "TDD 2000+" Tubular Daylighting Device Plastic Single Dome Dual Diffuse Glazing Thermal Opening Area = 0.10 m ² XYZ-X-1*	
ENERGY PERFORMANCE RATINGS			
U-Factor (U.S. / I-P)		Solar Heat Gain Coefficient	
Insulation at Roof 00001-00001	Insulation at Ceiling 00002-00001		
0.30	0.32	0.40	
ADDITIONAL PERFORMANCE RATINGS			
Visible Transmittance, Annual		Air Leakage (U.S. / I-P)	
0.51		≤0.3	
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org * Numbers below the performance ratings are referenced in the NFRC Certified Products Directory (e.g., XYZ-X-1-00001-00001 or 860-X-1-00001-00001)			

The label shall display ratings in accordance with the following criteria:

- Specification of Thermal Opening Area and insulation location are required.
- "Insulation at roof" value (left); "Insulation at ceiling" value (right), when both are used.
- If product is designed for insulation in only one location, the other location's placeholder is not required (see Figures A-17 and A-19)
- If installed by the licensee, the Licensee's designated individual responsible for proper labeling of the product shall identify the option in the matrix that represents the assembled product by either circling or highlighting applicable values within the matrix.

Figure A-16: Minimum Required Label Information for TDD for Both Insulation Cases (2015)

		World's Best TDD Co. Series "TDD 2000+" Tubular Daylighting Device Plastic Single Dome Dual Diffuse Glazing Thermal Opening Area = 0.10 m ² XYZ-X-1*	
ENERGY PERFORMANCE RATINGS			
U-Factor (U.S. / I-P)		Solar Heat Gain Coefficient	
Insulation at Roof 00001-00001	Insulation at Ceiling 00002-00001		
0.30	0.32	0.40	
ADDITIONAL PERFORMANCE RATINGS			
Visible Transmittance, Annual			
0.51		—	
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org * Numbers below the performance ratings are referenced in the NFRC Certified Products Directory (e.g., XYZ-X-1-00001-00001 or 860-X-1-00001-00001)			

(See Figure A-15 for notes)

Figure A-17: Minimum Required Label Information for TDD (Single Insulation Shown) (2015)

 National Fenestration Rating Council® CERTIFIED	World's Best TDD Co. Series "TDD 2000+" Tubular Daylighting Device Plastic Single Dome Dual Diffuse Glazing Thermal Opening Area = 0.10 m ² Insulation at ** XYZ-X-1-00001-00001	
ENERGY PERFORMANCE RATINGS		
U-Factor (U.S. / I-P)	Solar Heat Gain Coefficient	
0.30	0.40	
ADDITIONAL PERFORMANCE RATINGS		
Visible Transmittance, Annual	—	
0.51		
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information.		
www.nfrc.org		

** Either ceiling or roof insulation type shall be listed.
Thermal Opening Area shall be listed.

Figure A-18: Sample Temporary TDD Matrix Label for Both Insulation Cases (2015)

World's Best TDD Co.

Series "TDD 2000+" Tubular Daylighting Device Plastic Single Dome Dual Diffuser Glazing XYZ-X-1*

ENERGY PERFORMANCE RATINGS

Product Description	Insulation at Roof			Insulation at Ceiling		
	U-Factor (US / IP)	SHGC	VT _{annual}	U-Factor (US / IP)	SHGC	VT _{annual}
	Thermal Opening Area (SI)			Thermal Opening Area (SI)		
	Individual Option Number			Individual Option Number		
Dome A Diffuser A	0.30	0.40	0.45	0.32	0.40	0.45
	0.10 m ²			0.14 m ²		
	00001-00001			00001-00002		
Dome A Diffuser B	0.29	0.38	0.42	0.31	0.38	0.42
	0.10 m ²			0.14 m ²		
	00002-00001			00002-00002		
Dome B Diffuser A	0.34	0.44	0.49	0.36	0.44	0.49
	0.10 m ²			0.14 m ²		
	00003-00001			00003-00002		
Dome B Diffuser B	0.33	0.43	0.46	0.35	0.43	0.46
	0.10 m ²			0.14 m ²		
	00004-00001			00004-00002		
Dome C Diffuser A	0.38	0.49	0.54	0.39	0.49	0.54
	0.10 m ²			0.14 m ²		
	00005-00001			00005-00002		

Air Leakage ≤ 0.3 cfm/ft²

Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information.

* Numbers below the performance ratings are referenced in the NFRC Certified Products Directory (e.g., XYZ-X-1-00001-00001 or 860-X-1-00001-00001)

www.nfrc.org

The Licensee or the Licensee's designated individual responsible for proper labeling of the product shall identify the option in the matrix that represents the assembled product by either circling or highlighting applicable values within the matrix.

This matrix label shall be used only for components shipped in bulk packaging.

Figure A-19: Sample Temporary TDD Matrix Label for Single Insulation Case (2015)

		World's Best TDD Co. Series "TDD 2000+" Tubular Daylighting Device Plastic Single Dome Dual Diffuse Glazing XYZ-X-1*	
ENERGY PERFORMANCE RATINGS			
Product Description	Insulation at **		
	U-Factor (US / IP)	Solar Heat Gain Coefficient (SHGC)	VT _{annual}
	Thermal Opening Area (SI)		
	Individual Option Number		
Dome A Diffuser A	0.30	0.40	0.45
	0.10 m ²		
	00001-00001		
Dome A Diffuser B	0.29	0.38	0.42
	0.10 m ²		
	00002-00001		
Dome B Diffuser A	0.34	0.44	0.49
	0.10 m ²		
	00003-00001		
Dome B Diffuser B	0.33	0.43	0.47
	0.10 m ²		
	00004-00001		
Dome C Diffuser A	0.38	0.49	0.54
	0.10 m ²		
	00005-00001		
Air Leakage ≤ 0.3 cfm/ft ²			
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information.			
* Numbers below the performance ratings are referenced in the NFRC Certified Products Directory (e.g., XYZ-X-1-00001-00001 or 860-X-1-00001-00001)			
www.nfrc.org			

** Either ceiling or roof insulation type, and Thermal Opening Area shall be listed.

The Licensee or the Licensee's designated individual responsible for proper labeling of the product shall identify the option in the matrix that represents the assembled product by either circling or highlighting applicable values within the matrix.

This matrix label shall be used only for components shipped in bulk packaging.

APPENDIX B LAYOUT AND DESIGN FORMATS FOR NFRC LABEL CERTIFICATES

This Appendix is to be used as a supplement to Section 6.

Figure B-1 – Site-Built Label Certificate (2005)

NFRC Product Certification Program

NFRC Label Certificate for Site-Built Products

Project Location

Street Address: _____

City: _____ State: _____ Zip Code: _____

Project Name (Optional): _____ Designer (Optional): _____

Product Line Information

Operator Type (per Table 4-3 of ANSI/NFRC 100) _____

Product Line ID No. _____ Individual Product ID No. _____

How many of this individual product (sq. ft.) _____ Location in building _____

Elevation drawing page _____ Fenestration (window & door) schedule page _____

Frame Material Supplier Company name: _____

City: _____ State: _____ Zip Code: _____

Street Address: _____

Contact: _____ Phone: _____ Fax: _____

Glazing Material Supplier Company name: _____

City: _____ State: _____ Zip Code: _____

Street Address: _____

Contact: _____ Phone: _____ Fax: _____

Glazing Contractor/Installer Company name: _____

City: _____ State: _____ Zip Code: _____

Street Address: _____

Contact: _____ Phone: _____ Fax: _____

Certification Authorization

Date Certificate Issued: _____

Independent Certification & Inspection Agency (IA): _____

Individual-in-Responsible-Charge (signature): _____

 NFRC Certified	World's Best Window Co. Series "2000" Casement Vinyl Clad Wood Frame Double Glazing+Argon Fill+Low E XYZ-X-1-00001-00001	
	ENERGY PERFORMANCE RATINGS	
	U-Factor (U.S. / I-P) 0.35	Solar Heat Gain Coefficient 0.32
	ADDITIONAL PERFORMANCE RATINGS	
Visible Transmittance 0.51	Air Leakage (U.S. / I-P) ≤0.3	
Manufacturer certifies that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org		

Figure B-2 – NFRC Attachment and Applied Film Label Certificate

NFRC Product Certification Program

NFRC Applied Film Label Certificate

Project Location

Street Address: _____

City: _____ State: _____ Zip Code: _____

Project Name (Optional): _____ Designer (Optional): _____

Applied Film Contractor/Installer Comp. name: _____

City: _____ State: _____ Zip Code: _____

Street Address: _____

Contact: _____ Phone: _____ Fax: _____

Applied Film Product Information

How many of this individual product (sq. ft.) _____ Location in building: _____

FOR IA USE ONLY

Product Line ID No. _____

Date Certification Authorization Issued: _____

Independent Certification & Inspection Agency (IA): _____

Individual-in-Responsible-Charge (signature) _____



NFRC
APPLIED FILM
RATINGS

XYZ Applied Film Company • Deluxe Green Film
CPD# XYZ-X-1 (Interior)

This rating uses reference product energy performance - actual product performance may vary.

ENERGY PERFORMANCE RATINGS

Reference Product	U-Factor	Solar Heat Gain Coefficient				Visible Transmittance	
		W/O Film	W/ Film	W/O Film	W/ Film	W/O Film	W/ Film
Residential	Single Glazed Clear	1.08	1.01	0.72	0.40	0.74	0.57
	Double Glazed Clear	0.70	0.67	0.84	0.44	0.67	0.52
	Single Glazed Clear	1.02	0.93	0.73	0.43	0.78	0.60
Non-Residential	Single Glazed Gray	1.02	0.93	0.52	0.35	0.39	0.31
	Double Glazed Clear	0.59	0.53	0.63	0.47	0.69	0.54
	Double Glazed Gray	0.59	0.53	0.41	0.32	0.35	0.27

Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information.

www.nfrc.org

**Figure B-3 – Fenestration Manufacturer Certificate
with Condensation Index (2023)**



NFRC FENESTRATION MANUFACTURER CERTIFICATE

NFRC Manufacturer: _____

Contact: _____ Phone: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Project / Location Information (Name Optional):

Address: _____

City: _____ State: _____ Zip Code: _____

ENERGY PERFORMANCE RATINGS		ENERGY PERFORMANCE RATINGS	
U-Factor (U.S. / I-P)	Solar Heat Gain Coefficient	U-Factor (U.S. / I-P)	Solar Heat Gain Coefficient
ADDITIONAL PERFORMANCE RATINGS		ADDITIONAL PERFORMANCE RATINGS	
Visual Transmittance	Air Leakage (U.S. / I-P)	Visual Transmittance	Air Leakage (U.S. / I-P)
Condensation Index		Condensation Index	

ENERGY PERFORMANCE RATINGS		ENERGY PERFORMANCE RATINGS	
U-Factor (U.S. / I-P)	Solar Heat Gain Coefficient	U-Factor (U.S. / I-P)	Solar Heat Gain Coefficient
ADDITIONAL PERFORMANCE RATINGS		ADDITIONAL PERFORMANCE RATINGS	
Visual Transmittance	Air Leakage (U.S. / I-P)	Visual Transmittance	Air Leakage (U.S. / I-P)
Condensation Index		Condensation Index	

Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult Manufacturer's literature for other product performance information. www.nfrc.org

Use as many sheets as necessary for each project / location **Sheet** _____ **of** _____



NFRC
National Fenestration
Rating Council®
CERTIFIED

APPENDIX C NFRC PRODUCT CERTIFICATION PROGRAM

Submittal Form for Test Samples

For Use by Manufacturers, Lineal Suppliers and Fabricators



1. Information on Production of the Test Sample (complete **ALL** fields):

Manufacturer: _____ Date of sample manufacture: _____

Plant Address where manufactured: _____

City: _____ State: _____ Zip Code: _____

Name of IA: _____ Phone: _____ Fax: _____

2. Product Information (complete **APPLICABLE** fields):

Product/Operator Type
(Table 4-3 of ANSI/NFRC
100): _____

Existing Product Line ID (CPD) No.: _____

Series/Model: _____

3. Test sample is being submitted for (select **ONE**):

- a. ☐ Validation for Initial Certification (prototype only) no plant qualification
- b. ☐ Validation for Initial Certification or Recertification (production line unit) & plant qualification
- c. ☐ Plant Qualification Only (production line unit)
- d. ☐ Test Only Alternative (production line unit) & plant qualification

I, _____, as the designated agent for _____
do hereby attest that the foregoing information is true to the best of my information, knowledge, and belief.
Further, if the unit is identified in Section 3 as a production line unit, I hereby authorize the NFRC-accredited
testing laboratory to send a copy of the test report to the IA identified above for plant qualification purposes
pursuant to the NFRC Product Certification Program.

Signature: _____ Date: _____

For Laboratory Use Only

- 1. Laboratory: _____
- 2. Date Sample Received: _____ Test Report #: _____
- 3. Date Sample Tested: _____ By: _____
- 4. Modifications made: _____

APPENDIX D NFRC CHALLENGE PROCEDURES

D.1 Right to Challenge NFRC Product Rating and Certification

- A. Any person (Challenger) shall have the right to challenge the accuracy of any NFRC product rating or NFRC product certification authorization of a fenestration product (Challenge).
- B. A Challenge may be brought with respect to such a product rating or product certification authorization as set forth in:
 - i. An NFRC Certified Products Directory (CPD);
 - ii. An NFRC certificate or applied label;
 - iii. Any test or simulation report issued by an NFRC-accredited laboratory, upon which a product certification authorization is based;
 - iv. Any product certification authorization issued by an NFRC-licensed IA; or
 - v. Any promotional material or advertising relating to a fenestration product.
- C. A Challenge may not be brought if the Challenger has not exhausted the remedy available in an Administrative Request. In the event that the Challenger has exhausted the remedy available in an Administrative Request, a Challenge may be commenced, provided that it is commenced not later than 30 calendar days following the date of NFRC's notification of its determination (administrative action) in the administrative request.
- D. A Challenge may not be brought with respect to any simulation or test report, or product certification authorization issued, product labeled, or authorized certificate(s) more than five years prior to the date the Challenge is delivered to the IA. However, in the case of a simulation or test report or product certification authorization, product label, or authorized certificate(s) which is alleged to be fraudulent, the five-year certification cycle shall not commence until the date such alleged fraud is discovered by the Challenger.

D.2 Procedure for Challenge to NFRC Product Rating or Certification

- A. A Challenge may be brought by delivering two originals of a written "Statement of Challenge" in a form prescribed by NFRC to the NFRC-licensed IA that was used by the Licensee of the product to be challenged.

- B. The Statement of Challenge shall be delivered by certified mail, return receipt requested or other method that provides evidence of and a receipt for delivery.

D.3 Requirements for Statement of Challenge

- A. The Statement of Challenge shall contain a simple but complete statement of the Challenger's claim.
- B. Each original of the Statement of Challenge shall be signed by the Challenger, which signature shall constitute a certification that the signer has read the submission and that to the best of the signer's information and belief after reasonable inquiry, the submission is well-grounded in fact and that it is not submitted for any improper purpose, in accordance with and subject to the remedies set forth in these Challenge procedures.
- C. The commencement of the Challenge shall otherwise comply with procedures and requirements established by the IA, which procedures and requirements shall be in writing, shall assure due process, and may provide for an escrow deposit from the Challenger in an amount not to exceed \$1,000 per Challenge and for payment of costs.
- D. In any case where the requirements of the IA's written procedure are in conflict with any provision of the NFRC CAP or PCP, as amended or interpreted from time to time, the NFRC program provision shall govern.
- E. Not later than four business days following receipt by the IA of the Statement of Challenge, the IA shall deliver a copy of the Statement of Challenge to NFRC by certified mail, return receipt requested, or other method which provides evidence of and a receipt for delivery.
- F. The parties to a Challenge shall be the Challenger, the Licensee of the product to which the Challenge relates and, if applicable, the simulation and/or test laboratories which issued the test reports upon which the product certification authorization is based.

D.4 Challenge Decision

- A. The IA shall render a decision (Challenge Decision) as to the accuracy of the product rating or product certification authorization which has been challenged, as the case may be.
- B. The Challenge Decision shall be set forth in a written report which shall indicate whether or not such rating or authorization is accurate and state in detail, the basis for the decision.

- C. The IA shall render the Challenge Decision not later than 30 business days following the date of receipt of the Statement of Challenge and shall notify NFRC and each party to the Challenge of the Challenge Decision by e-mail or Fax on the date it is rendered.
- D. Not later than 10 business days following the date the IA renders the Challenge Decision, the IA shall deliver to NFRC a copy of its written report on the Challenge Decision.
- E. In the event the Challenge Decision states that a rating or authorization is not accurate, the IA shall issue a written, dated notice to the Licensee suspending the Licensee's product certification authorization with respect to the product subject to the Challenge. Such suspension shall take effect immediately upon its issuance and shall have the consequences set forth in this section. NFRC may take any action necessary to affect such suspension and may notify the public of the suspension.
- F. Upon request by NFRC the IA shall deliver to NFRC a complete record of the Challenge, including all documents filed by the parties and all documents developed by the IA in rendering its decision and preparing the written Challenge Decision.
- G. Product certification authorization shall remain valid during the IA's consideration of the Challenge.
- H. In the event the Challenge Decision states that a rating or authorization is not accurate, the Licensee shall pay all of the expenses of the Challenger related to conducting the Challenge, including but not limited to testing, simulation, shipping, reasonable travel, and other related expenses. The IA shall refund all or part of any escrow deposit received from the Challenger that is over and above the costs incurred by the IA for the Challenge.
- I. In the event that the Challenge Decision states that a rating or authorization is accurate, the Challenger shall pay all of the expenses related to conducting the Challenge, including but not limited to testing, simulation, shipping, reasonable travel, and other related expenses.

D.5 Right to Appeal Challenge Decision

Any person who was a party to a Challenge (Appellant) shall have the right to commence an appeal (Challenge Appeal) of the Challenge Decision rendered by the IA.

D.6 Procedure for Appeal of Challenge Decision

A Challenge Appeal may be commenced by the delivery to NFRC at its principal place of business of 4 originals of a Notice of Challenge Appeal with a copy of the original Statement of Challenge attached, not later than 20 business days following the date the IA issues the Challenge Decision, by certified mail, return receipt requested, or other method which provides evidence of and a receipt for delivery.

D.7 Challenge Appeal Requirements

- A. The Notice of Challenge Appeal shall be in a form established by NFRC.
- B. The Notice of Challenge Appeal shall state the basis for the Challenge Appeal and shall be accompanied by detailed evidence upon which Appellant's appeal is based. No additional evidence may be submitted by the Appellant except as required by party submissions or at the request of NFRC pursuant to the provisions of these challenge procedures.
- C. The Notice of Challenge Appeal shall be signed by the Appellant, whose signature shall constitute a certification that the signer has read the submission and that to the best of the signer's information and belief after reasonable inquiry, the submission is well-grounded in fact and that it is not submitted for any improper purpose, in accordance with and subject to the remedies set forth in these procedures.
- D. The address of each party set forth in the records of NFRC shall be considered as the correct address of such person for the purpose of all subsequent notices in the Challenge Appeal unless a party notifies NFRC and each other in writing of a change in such address.
- E. The Notice of Challenge Appeal shall be typed and shall be in a legible format on 8.5 in x 11 in white paper.
- F. The Notice of Challenge Appeal shall be accompanied by a payment in the amount of \$1,000, which shall not be refundable.

D.8 Filing Date of Challenge Appeal Notice

The date of filing of a Notice of Challenge Appeal shall be the date of receipt by NFRC.

D.9 NFRC Consideration of Challenge Appeal

- A. Not later than 10 business days after the date of the filing of the Notice of Challenge Appeal, NFRC staff shall screen the Notice of Challenge Appeal and supporting evidence, and shall determine whether the Notice of Challenge Appeal will be

accepted and will commence, provided, however, that in the event that a Notice of Challenge Appeal is received at the offices of NFRC during a period when an NFRC General Session meeting or other meeting of NFRC members are being held, the period of time set forth herein shall be extended by 7 calendar days.

- B. No Notice of Challenge Appeal shall be accepted for filing and no Challenge Appeal shall be deemed to have been commenced if, in the sole determination of NFRC staff:
- i. Any of the requirements of Challenge Appeal has not been met, including but not limited to, the requirement that evidence to support the Appellant's claim be submitted;
 - ii. The Notice of Challenge Appeal makes a claim that cannot be supported under published and generally-accepted scientific principles, such as those adopted by recognized engineering or standards bodies, or that cannot be supported by data supplied, when such data is compared with NFRC's database for products of similar characteristics;
 - iii. The issues raised by the Notice of Challenge Appeal do not come within the jurisdiction of NFRC;
 - iv. The issues raised by the Notice of Challenge Appeal have been previously resolved by NFRC; or
 - v. The commencement of the Challenge with respect to which the Notice of the Challenge Appeal is filed was not preceded by the filing of an Administrative Request.

D.10 Rejection of Challenge Appeal

- A. In the event that NFRC staff determines that the Notice of Challenge Appeal shall not be accepted for filing based on the criteria set forth in the requirements for Challenge Appeal, NFRC shall return the materials submitted to the Appellant with a written statement indicating the reason that the Notice was not accepted for filing. Such written statement and materials shall be returned by certified mail or other method which provides evidence of and a receipt for delivery.
- B. Appellant may resubmit a Notice of Challenge Appeal to NFRC not later than 10 business days following the date that NFRC delivers the written statement to the delivery service to correct any deficiencies indicated by NFRC in such written statement. A notice may be resubmitted for filing only once.

D.11 Commencement of the Challenge Appeal

- A. In the event that NFRC staff determines that the Notice of Challenge Appeal will be accepted for decision based on the criteria set forth in the requirements for Challenge Appeal, the Challenge Appeal shall commence as of the date of such acceptance (Commencement Date).
- B. The Challenge Appeal shall be consecutively numbered with the year and a number beginning with one (e.g. 2005-01).
- C. On the Commencement Date, NFRC shall send a Notice of Commencement of Challenge Appeal together with the Notice of Challenge Appeal by certified mail or other method which provides evidence of and a receipt for delivery to each party to the Challenge Appeal.

D.12 Parties to Challenge

The parties to a Challenge Appeal shall be the Challenger, the Manufacturer/Responsible Party of the fenestration product to which the Challenge Appeal relates, the simulation and test laboratories which issued the test reports upon which the product certification authorization is based, and the IA that issued the product certification authorization for the fenestration product. The Appellant may be any one or more of these parties.

D.13 Submissions by Parties

Not later than 10 business days after the Commencement Date, and without further notice than that afforded by this subsection, each of the parties to the Challenge Appeal designated in this subsection shall deliver to NFRC at its principal place of business, the information specified for such party as follows:

A. **Simulation Laboratory**

A written report summarizing a review and verification or revision of the rating set forth in the simulation report upon which product certification authorization was granted for the product subject to challenge, including a detailed statement of the basis for any revision, for the purpose of determining whether the original simulation report was accurate and to make any revisions necessary in order to assure the accuracy of the rating.

B. **Testing Laboratory**

A written report summarizing a review and verification or revision of the rating set forth in the test report upon which product certification authorization was granted for the product

subject to challenge, including a detailed statement of the basis for any revision, for the purpose of determining whether the original test report was accurate and to make any revisions necessary in order to assure the accuracy of the rating.

- C. Independent Certification and Inspection Agency
- D. A copy of the complete record of the Challenge, including all documents filed by the parties and all documents developed by the IA in rendering its decision and preparing the written Challenge Decision.
- E. If the Challenge was brought with respect to the product rating only, a written report reviewing and verifying or revising the grant of product certification authorization for the product subject to challenge, including a detailed statement of the basis for any revision, for the purpose of determining whether the original grant was correct and to make any revisions necessary in order to assure the accuracy of the rating for which product certification authorization was granted.
- F. Following the conclusion of the submission period, NFRC shall have the right to request and receive from each of the parties to the Challenge Appeal the information specified below for such party. The NFRC request shall be made in writing delivered by Fax and overnight delivery service, not later than 20 business days after the Commencement Date. Such information shall be delivered to NFRC not later than 10 business days following the date of delivery of the request by NFRC to such party.

D.14 Simulation Laboratory Submissions

- A. Copies of original simulation reports for the product subject to challenge.
- B. Data, drawings, and other materials submitted in connection with product simulation.
- C. Information regarding the credentials of persons conducting any simulation.
- D. Copies of reports of any re-simulations of the product subject to challenge that have been conducted.

D.15 Testing Laboratory Submissions

- A. Original test reports for the product subject to challenge data, drawings, and other materials submitted in connection with product testing.
- B. Information regarding the credentials of persons conducting tests of the product subject to challenge.

- C. Any test reports that may have been issued with respect to a random sample or market sample of the product subject to the challenge.
- D. Original test specimens or the remains thereof utilized in connection with each test conducted on a specimen of the product subject to challenge if the test report is less than five years old.

D.16 Independent Certification and Inspection Agency (IA) Submissions

- A. Product certification authorizations relating to the challenged product.
- B. Materials upon which such authorizations were granted.
- C. Records indicating the authorizations to print labels or FMCs for the product subject to challenge.
- D. In-plant inspection reports for the Licensee of the product subject to challenge.
- E. Product descriptions and product drawings of the product subject to challenge.
- F. Any other file information related to product certification authorizations for the product subject to challenge.
- G. Information relating to procedural matters in connection with the Challenge and Challenge Decision rendered by the IA.

D.17 Licensee Submissions

- A. A production line sample of the product subject to challenge, which shall be shipped, freight prepaid, to an NFRC-accredited laboratory selected by NFRC staff, which laboratory shall not be the same laboratory that issued the rating upon which product certification authorization was based. Such sample shall be tested at a laboratory selected by NFRC staff by lottery and the test results may, at the discretion of NFRC, become a part of the NFRC report required pursuant to these Challenge procedures. Payment of the costs of such a test shall be assessed and allocated by the Challenge Board.
- B. Product drawings and all other information necessary to conduct a simulation of the product subject to challenge, which shall be delivered to an NFRC-accredited simulation laboratory selected by NFRC staff, which laboratory shall not be the same laboratory that issued the rating upon which product certification authorization was based. Such simulation shall be conducted at a laboratory selected by NFRC staff by lottery and the

simulation results may, at the discretion of NFRC, become a part of the NFRC report required pursuant to these Challenge procedures. Payment of the costs of such simulation shall be assessed and allocated by the Challenge Board.

- C. Bills of materials for the product subject to challenge.
- D. Records indicating the number of units of the product subject to challenge distributed with NFRC labels or authorized certificate(s).
- E. Records indicating the date that labeling of the product subject to challenge began.

D.18 Challenger Submissions

- A. Reports, data, and other information upon which the Challenge was based.
- B. Information relating to procedural matters in connection with the Challenge and Challenge Decision rendered by the IA.
- C. In addition to the complete record of the Challenge, any party to a Challenge Appeal, except the Appellant, may, not later than 10 business days after the date that NFRC sends the Notice of Challenge Appeal and Notice of Commencement of Challenge Appeal, submit such additional evidence to NFRC at its principal place of business for delivery to the Challenge Board for consideration in connection with its determination.
- D. All submissions made to NFRC by any party to a Challenge Appeal shall be held confidential and shall be used only for purposes relating to the Challenge Appeal unless a party has previously waived its privilege of confidentiality.
- E. Any reports of simulations or testing conducted on a random sample or market sample of the product subject to the Challenge Appeal submitted as evidence shall be prepared by an NFRC-accredited laboratory which is not the laboratory that prepared the original reports upon which product certification authorization was based.
- F. Submissions with respect to procedural matters are discouraged and shall be considered by the Challenge Board in connection with its determination on the Challenge Appeal.
- G. All submissions shall be captioned to indicate the title of the Challenge Appeal and file number and shall be simple and concise.
- H. All submissions made to NFRC by any party to a Challenge Appeal shall be signed by the party or by an authorized

representative of a party and such signature shall constitute a certification by the signer that the signer has read the submission and that, to the best of the signer's information and belief after reasonable inquiry, the submission is well-grounded in fact and that it is not submitted for any improper purpose, such as to harass or to cause unnecessary delay or to needlessly increase the costs of NFRC or any other party. If a submission is signed in violation of this provision, the Challenge Board, upon its own initiative, shall impose upon the person who signed it, a represented party or both, an appropriate sanction which may include an order to pay to the other party or parties the amount of the reasonable expenses incurred because of the submission, including reasonable attorney's fees.

- I. All submissions shall be delivered by certified mail, return receipt requested, or other method which provides evidence of and a receipt for delivery.
- J. Failure of a party to make the submissions required in a timely manner pursuant to this provision shall result in imposition of fines pursuant to the NFRC 707, CAMP, if applicable, and possible suspension of accreditation or licensing in accordance with the License Agreement signed by the party. In the event a Licensee, which is a party but is not the Challenger, fails to make a submission required by this, product certification authorization for the product subject to the Challenge Appeal shall be immediately suspended by NFRC.

D.19 Certification Validity During Challenge

Product certification authorization for the fenestration product subject to the Challenge Appeal shall remain valid during consideration of the Challenge Appeal only if the Challenge Decision rendered by the IA found the product rating or product certification authorization, as the case may be, to be accurate, and a Notice of Suspension was not issued.

D.20 NFRC Analysis and Report

Not later than 45 calendar days after the Commencement Date, NFRC staff shall conduct such analyses as it deems necessary of the records, data, and other material submitted by any party in support of, defense against, or otherwise relevant to the Challenge Appeal, and of records, data, and other material developed by NFRC staff in connection with the operation of NFRC programs and shall submit a report to the Challenge Board, making a recommendation as to a determination with respect to the Challenge Appeal; provided, however, that the Challenge Board may, in its discretion upon written application by NFRC, grant an extension of not more than 15 additional

business days for NFRC staff to complete the analysis and report required hereunder.

D.21 Discovery on Initiative of NFRC

Notwithstanding the submission requirements set forth in these Challenge Appeal procedures, NFRC may elicit from any party to the Challenge Appeal such additional evidence as it deems necessary and reasonable to issue its report and recommendation required hereunder.

A. Discovery Methods

NFRC may obtain discovery by one or more of the following methods: interviews, written questions, production of documents or things, or requests for permission to enter upon land or other property, and requests for inspection.

B. Deadlines

Any party, from which discovery is elicited, shall provide the material requested by NFRC not later than five business days following the date the request is delivered to the party by an overnight delivery service and such material shall be delivered to the principal place of business of NFRC by an overnight delivery service which provides evidence of and a receipt for delivery.

C. Failure to Respond

Failure of a party to respond to any NFRC discovery request in a timely manner shall result in the imposition of fines pursuant to the NFRC 707, CAMP, and possible suspension of accreditation or licensing in accordance with the License Agreement signed by the party.

D.22 NFRC Challenge Board

A. The Challenge Board shall be comprised of three individuals appointed by the NFRC Board of Directors who shall serve for a term of one year. The Challenge Board shall include the individual designated as the Public Interest representative on the NFRC Board of Directors and two additional individuals who shall be familiar with NFRC procedures and programs or with scientific or regulatory matters.

B. No person may serve on the Challenge Board with respect to any Challenge Appeal if such person has or may have a conflict of interest with respect to the subject of the Challenge Appeal or any party to the Challenge Appeal.

- C. Subject to the right of a member of the Challenge Board to decline to serve with respect to a particular Challenge Appeal, the determination as to whether an individual has or may have a conflict of interest in any particular Challenge Appeal shall be made by the Board of Directors and shall be binding on all parties.
- D. In the event that a member of the Challenge Board is unable or unwilling to serve with respect to a particular Challenge Appeal, the Board of Directors shall appoint an individual with credentials similar to those of the individual who is unable or unwilling to serve on the Challenge Board for that particular Challenge Appeal.

D.23 Challenge Appeal Decision and Entry of Determination

- A. Procedure for Decision
 - i. The Challenge Board shall make the decision as to the disposition of a Challenge Appeal. The vote of a majority of all members of the Challenge Board shall constitute the decision of the Challenge Board.
 - ii. A decision with respect to a Challenge Appeal shall be made upon the written record only and no hearing shall be set.
 - iii. Not later than 15 business days after the submission to the Challenge Board of the NFRC staff report the Challenge Board shall render a decision (Challenge Appeal Decision) as to the disposition of the Challenge Appeal. The Challenge Appeal Decision shall address all matters raised in connection with the Challenge Appeal and may assign responsibility for any inaccurate rating or product certification authorization to any party or parties.
 - iv. A written report of the Challenge Appeal Decision shall be prepared, and a copy thereof shall be delivered to each party to the Challenge Appeal not later than 10 business days after the date the Challenge Appeal Decision is rendered. The written report shall be delivered by certified mail, return receipt requested, or other means which provides evidence of and a receipt for delivery. The date the decision is delivered to the delivery service shall be the date that commences the period for appeal of the Challenge Appeal Decision.
- B. Standard for Decision

The Challenge Board shall determine that a fenestration product rating asserted by a Licensee, which is the subject of the

Challenge Appeal, is inaccurate if such rating deviates from the rating determined by the Challenge Board to be the correct rating by an amount greater than the tolerance permitted under the applicable NFRC rating system; provided, however, that the Challenge Board may, in its sole discretion, determine that a rating is inaccurate based on any other reasonable criteria.

C. Implementation of Decision

- i. In the event that the Challenge Board determines that the product rating or product certification authorization of the product subject to the Challenge Appeal, as the case may be, meets NFRC requirements, and a Notice of Suspension has not previously been issued by the IA in connection with the Challenge, product certification authorization shall continue in effect for the period of its original grant. If a Notice of Suspension was issued by the IA in connection with the Challenge, NFRC shall direct the IA to withdraw such notice.
- ii. In the event that the Challenge Board determines that the product rating or product certification authorization of the product subject to the Challenge Appeal is inaccurate:
 - (a) NFRC shall direct the IA to issue a Notice of Suspension of product certification authorization with respect to the product subject to the Challenge Appeal. The Notice of Suspension shall be delivered to the Licensee with the written report required and shall become effective immediately on the date of the delivery of the Notice of Suspension to the delivery service;
 - (b) NFRC shall impose such fines on any party as may be applicable under the NFRC 707, CAMP; and
 - (c) NFRC shall, subject to the Licensee's right to appeal the suspension, promptly issue a press release and publish a notice in the NFRC CPD, a Certification Bulletin, or any other medium, identifying the product(s) subject to suspension of product certification authorization, the date that the product was granted product certification authorization, the date of the suspension, and other information deemed necessary by NFRC.
- iii. The Challenge Board may, but is not required to, assist NFRC in making a decision as to the applicability of any fines required to be paid by any party to the Challenge

Appeal under the NFRC 707, CAMP as a consequence of the Challenge Board's decision in connection with a Challenge Appeal.

- iv. Any fines payable to NFRC in connection with a decision of a Challenge Appeal shall be in addition to, and not in lieu of, any rights NFRC may have under any other provision of any NFRC program.

D.24 Rules for Conciliation

- A. The Challenge Board shall hold itself ready to conciliate the differences of the parties to any Challenge Appeal. The Challenge Board may at its discretion waive or reduce fees or require them to be deposited in advance with NFRC and may make a decision as to appropriate remedies and allocation of expenses.
- B. The Challenge Board shall have the authority to grant waivers of or extensions to any time limit imposed by these procedures for a reasonable time necessary to permit conciliation discussions to proceed.
- C. In the event that such conciliation discussions do not result in an agreement acceptable to each party, NFRC staff shall notify each party in writing (sent simultaneously to each such person by certified mail or other method that provides evidence of and a receipt for delivery), that the Challenge Appeal shall proceed on terms established by the Challenge Board so as to comply with the purpose of the provisions of these procedures.

D.25 Consequences of Suspension by IA or NFRC Challenge Board

In the event of a Challenge Decision by an IA in connection with a Challenge or a Challenge Appeal Decision by the NFRC Challenge Board in connection with a Challenge Appeal, that a Notice of Suspension of product certification authorization for a product subject to challenge shall be issued, the following consequences shall result:

- A. Any and all rights of the product Licensee whose product is subject to the Notice of Suspension to use the NFRC name, registered certification mark, certification mark, service mark, rating, product certification authorization, NFRC label, or authorized certificate(s) shall immediately cease with respect to the product subject to suspension;
- B. Such product Licensee shall immediately remove NFRC labels from all units of the product and/or shall immediately disassociate NFRC authorized certificate(s) subject to the Notice of Suspension which are then in the

Manufacturer's/Responsible Parties production facilities or distribution system;

- C. Such product Licensee shall cease advertising NFRC licensing or certification with respect to the product subject to the Notice of Suspension;
- D. Such Licensee shall cease labeling and/or use of authorized certificate(s) for the product subject to the Notice of Suspension with any NFRC label, or authorized certificate(s).

D.26 NFRC Legal Rights

If the product Licensee fails to discontinue use of the NFRC name, registered certification mark, certification mark, service mark, rating, product certification authorization, label, or authorized certificate(s), NFRC shall have the right to an immediate temporary injunction restraining the product Licensee from any and all further use of or reference to the NFRC name, any mark, rating, product certification authorization, label, or authorized certificate(s); to the award of damages for harm to NFRC's name and reputation and to the recovery of any fines that may be assessable under the NFRC 707. CAMP; and to any other remedies that may be available, whether under any NFRC program or under law.

D.27 Licensee Right to Appeal

At any time during the period commencing on the date of delivery of the Notice of Suspension to a delivery service and for 45 calendar days thereafter, a Licensee may appeal the suspension of product certification authorization in accordance with the Appeals Procedures set forth in this document. If a product Licensee does not appeal a suspension following the delivery of the Notice of Suspension or does not (within the 45 day period for appeal), take such action as is necessary to reinstate product certification authorization, NFRC shall issue a Notice of Revocation of the Licensee's product certification authorization with respect to the product subject to Challenge Appeal.

D.28 Revocation Based on Three Suspensions

In the event that a Licensee's products are successfully challenged pursuant to these challenge procedures so that such Licensee's products are subject to three suspensions in any year, the Board of Directors may revoke the Licensee's NFRC licensing. A Licensee may appeal such a revocation in accordance with the provisions of the appeals procedures set forth in this document.

APPENDIX E RECERTIFICATION FLOWCHART

