

Submittal Requirements for Product Evaluation Curtain Wall and Storefront Systems

The information and product requirements requested below will be used by the Texas Department of Insurance (TDI) to develop a product evaluation report for use in the designated catastrophe areas along the Texas Gulf Coast.

1.0 Building Code Requirements for Products

- 1.1 Products will be evaluated by TDI in accordance with the wind load criteria of Chapter 3 of the 2018 International Residential Code (IRC); the wind load criteria of Chapter 16 of the 2018 International Building Code (IBC); test standards and performance criteria specified in the IRC and the IBC; and nationally recognized test standards or procedures.
- 1.2 **Basic Design Wind Speed Requirements:** The basic windspeed requirements for the windstorm program area are as defined in the IRC and the IBC. Contact TDI for more information regarding the basic wind speed requirements.
- 1.3 **Design Pressure Requirements:** Refer to Chapter 3 of the IRC or to ASCE 7-16 for design wind pressure requirements based on the basic wind speeds that are required for the TDI windstorm program area. The manufacturer should consider that different Exposure conditions can occur for all structures that are located within the TDI windstorm program area. Contact TDI for more information regarding design pressure requirements.
- 1.4 **Windborne Debris Requirements:** Protection from windborne debris is a requirement within the TDI windstorm program area. NOTE: It is not a requirement that the product be impact resistant in order for TDI to develop an evaluation report for the product. Contact TDI for specific windborne debris requirements for the TDI windstorm program area.

2.0 Product Applicability and Limitations of Evaluation Report

- 2.1 Evaluation of a product does not constitute approval of the product for use on all structures. The design pressure rating of the product (as reported in the TDI evaluation report) must exceed the required design pressure required for the specific structure. In addition, the windborne debris resistance rating for the product (as reported in the TDI evaluation report) must comply with the required windborne debris criteria for the specific structure.
- 2.2 TDI will develop the product evaluation report based on the way the product was tested. This includes the attachment of the product to the test buck and the material used for the test buck. **NOTE:** Products should be tested as they would be installed in the field. Products should be tested with a test buck or framing utilizing common framing materials and be attached to the test buck or framing with readily available, commonly used fasteners.
- 2.3 **Fastener Analysis for Alternative Fasteners and Substrates:** Fastener analysis is permitted and must be submitted to TDI. Products must be tested as required by ASTM E 330, TAS 201, TAS 202,

and TAS 203, and ASTM E 1886 and ASTM E 1996. At least one specimen must be tested in accordance with the desired anchoring method. For alternative fasteners and substrates, the spacing of the alternative fasteners must not exceed the spacing of the fasteners in the tested assembly for the desired anchoring method. The fastener analysis must include the following:

- The fastener type, size, and spacing along the frame.
- The minimum requirements for the substrate.
- The minimum penetration of the fastener into the substrate.
- The minimum edge distance for cast-in-place and precast concrete and for concrete block.
- Compliance with the 2018 IRC and the 2018 IBC
- The analysis must be signed, sealed, and dated by a Texas licensed professional engineer.

2.4 **Acceptance of Other Window Assemblies:**

2.4.1 Multiple window panels may be stacked side by side (separated by a vertical mullion) as long as the rectilinear dimensions of the daylight opening sizes of the tested window panels is not exceeded, at least three window panels joined with a vertical mullion have been tested, and the linear dimension of the vertical mullion in the tested assembly is not exceeded.

2.4.2 Multiple window panels may be stacked vertically (separated by a horizontal mullion) as long as the rectilinear dimensions of the daylight opening sizes of the tested window panels is not exceeded, at least two window panels joined with a horizontal mullion have been tested, the linear dimension of the horizontal mullion in the tested assembly is not exceeded, and the linear dimension of the vertical mullion in the tested assembly is not exceeded.

2.4.3 **Doors.** Separate evaluation reports will be developed for door and window assemblies. Evaluation reports and their associated design drawings for window assemblies can reference evaluation reports for door assemblies (statement such as "Under Separate Evaluation Report") so that they can be utilized together. Design drawings must indicate how the window and door assemblies are joined, are secured to the substrate, and the design pressure limitations.

2.5 **Fabrication and Assembly:** Curtain wall and storefront assemblies are fabricated in a factory and assembled and glazed at the jobsite. As such, a label from an inspection agency (such as AAMA, WDMA, NAMI, or Keystone) for compliance with AAMA/WDMA/CSA 101/I.S.2/A440 is not required. Labels required for identification and performance will be developed by the manufacturer and applied to the assembly by the product manufacturer at the jobsite.

3.0 Testing and Test Reports

3.1 **Testing Facility:** Test reports must be developed by testing facilities that comply with one of the following:

3.1.1 The test facility must be either UL (Underwriters Laboratories) or FM (Factory Mutual);

3.1.2 The test facility must be recognized by the International Code Council Evaluation Service (ICC-ES) as specified in ICC-ES Acceptance Criteria AC85;

3.1.3 The test facility must be accredited by either AAMA or WDMA;

3.1.4 The test facility must be recognized by Miami-Dade County, Florida; or

3.1.5 The test facility must be accepted by TDI. TDI will accept test facilities that are accredited as complying with ISO/IEC Standard 17025 by the International Accreditation Service (IAS) or by any other accreditation body recognized by the International Laboratory Accreditation Cooperative (ILAC) Mutual Recognition Agreement (MRA). The scope of the accreditation must include the type of testing covered in the submitted test reports.

Manufacturer's test facility: If the manufacturer performs in-house testing, then the manufacturer must have the testing conducted under the supervision of an independent testing facility that qualifies under Sections 3.1.1 through 3.1.5. The test report must be prepared by and issued by the supervising party.

TDI reserves the right to request that the testing facility provide documentation to verify compliance with Sections 3.1.1 through 3.1.5.

3.2 **Uniform Static Load Resistance:** The curtain wall and storefront assembly must be tested in accordance with either ASTM E 330 or TAS 202.

3.3 **Windborne Debris Resistance (Optional):** The curtain wall and storefront assembly may also be tested in accordance with either ASTM E 1886 and ASTM E 1996 or TAS 201 and TAS 203.

4.0 Substantiating Information

The following information must be included as part of the submittal package for each product to be listed:

4.1 **Test Reports.** Copies of test reports in accordance with ASTM E 330, ASTM E 1886, and ASTM E 1996 (or TAS-201, TAS-202, TAS-203).

4.2 **Lab Stamped Drawings.** Copies that reference the test report numbers.

4.3 **Fastener Analysis (Optional but Required for Alternative Fasteners and Substrates):** Provide one copy. The analysis must reference the standards used and indicate compliance with the 2018 IRC and

the 2018 IBC. The analysis must be signed, sealed, and dated by a Texas licensed professional engineer.

- 4.4 **Design Drawings:** Provide one copy. The design drawings must include a title block with the drawing number, name of the product, name and address of the manufacturer, the date of the drawing, and the revision date(s) if applicable), dimensioned elevations of the assemblies, design pressure ratings, glazing construction details, substrate requirements, installation requirements, and fabricated components. The design drawings must reference compliance with the 2018 IRC and the 2018 IBC. The design drawings must be signed, sealed, and dated by a Texas licensed professional engineer. TDI will reference the design drawings in the evaluation report and will post the drawings on the TDI website with the product evaluation report.
- 4.5 **Label:** The curtain wall and storefront assembly is required to bear a label. The manufacturer must provide a manufacturer-produced label. The label must include: (1) the name of the product, (2) the name of the product manufacturer; (3) a statement indicating the design pressure rating and allowable dimensions of the assembly are as specified in Drawing XXX (XXX is the drawing no.); and (4) compliance with ASTM E 330-14 (or TAS 202-94). If the product is tested for windborne debris resistance, then the label must also indicate compliance with ASTM E 1886-13a and ASTM E 1996-14a and the Missile Level (A, C, D, or E) or TAS 201-94 and TAS 203-94 and indicate either 'Large Missile Impact Rated' or 'Small Missile Impact Rated.' The information on the label will be referenced in the TDI product evaluation report.

5.0 Expiration and Renewal of Evaluation Reports

- 5.1 TDI will utilize a test report as long as the test report is current, the test standards that the product was tested to have not changed, the test standards for the product required by the building specifications adopted by TDI have not changed, and the product specified in the test report has not changed.
- 5.2 TDI reserves the right to request verification from the product manufacturer that the product specified in the test report has not changed.
- 5.3 If the test report indicates an expiration date and the test report is expired, then the test report must be revised to either (1) remove the expiration date, (2) change the expiration date, or (3) add a record retention date.
- 5.4 If the test report indicates an expiration date and the test report is within six months of expiring, then TDI reserves the right to request that the test report be revised to either (1) remove the expiration date, (2) change the expiration date, or (3) add a record retention date.
- 5.5 For an initial product evaluation, if the test report does not indicate an expiration date or if it specifies a record retention date, then TDI reserves the right to refuse to utilize the test report if the test laboratory is not able to provide information relative to the testing of the product specified in the test report.

- 5.6 For the renewal of an existing product evaluation, if the test report does not indicate an expiration date or if it specifies a record retention date, then TDI may continue to utilize the test report if no changes have occurred in the product.
- 5.7 The evaluation report will be subject to re-evaluation a maximum of four years from the effective date of the evaluation report. The re-evaluation date in the evaluation report could be less than four years from the effective date of the evaluation report if the test report has an expiration date that is less than four years from the effective date of the evaluation report.
- 5.8 The evaluation report will indicate the month and year of the re-evaluation date.