Engineering Express®
Product Evaluation Report

April 28, 2022

Application Number:	FL 29520.4-R10
EX Project Number:	20-32267
Product Manufacturer:	Crawford Tracey Corporation
Manufacturer Address:	3301 SW 13 drive Deerfield Beach, FL 33442-810
Product Name & Description:	Series Pro-Tech 45SG Aluminum Structurally Glazed Curtain Wall System - L.M.I. & S.M.I. (Missile Level "D" & "E")

Scope of Evaluation:

This Product Evaluation Report is being issued in accordance with the requirements of the Florida Department of Business and Professional Regulation (Florida Building Commission) Rule Chapter 61G20-3.005, F.A.C., for statewide acceptance per Method 1 (d). The product noted above has been tested and/or evaluated as summarized herein to show compliance with standard ASCE 7-16 (ASD) and Florida Building Code Seventh Edition (2020) and is, for the purpose intended, at least equivalent to that required by the Standard and Code. Re-evaluation of this product shall be required following pertinent Florida Building Code or ASCE Standard modifications or revisions.

Substantiating Data:

- **PRODUCT EVALUATION DOCUMENTS**

EX Installation Drawing #20-29241 titled "Pro-Tech 45SG Aluminum Curtain Wall System-L.M.I. & S.M.I. (Missile Level "D" & "E")", prepared by Engineering Express, Inc., signed & sealed by Frank Bennardo, P.E. is an integral part of this Evaluation Report, pages 1 through 33.

- **TEST REPORTS**

Uniform static structural performance has been tested in accordance with TAS 202 test standards per the test report(s) by American Test Lab of South Florida, report(s) number: # 0120.01-09, 0310.01-05 & 0717.01-03 Signed and Sealed by William R. Mehner,P.E. & Henry Hattem,P.E. # 0923.01-19,0919.01-18 & 0923.01-19 Signed and Sealed by Stephen W. Warter, PE & # 0512.01-08 Signed and Sealed by Henry Hattem,P.E.

Large & Small missile impact performance and cyclic loading performance have been tested in accordance with TAS-201 and TAS-203 test standards per the test report(s) by American Test Lab of South Florida, report(s) number: # 0120.01-09, 0310.01-05 & 0717.01-03 Signed and Sealed by William R. Mehner,P.E. & Henry Hattem,P.E. # 0923.01-19,0919.01-18 & 0923.01-19 Signed and Sealed by Stephen W. Warter, PE & # 0512.01-08 Signed and Sealed by Henry Hattem,P.E.

- **STRUCTURAL ENGINEERING CALCULATIONS**

Structural engineering calculations have been prepared which evaluate the product based on comparative and/or rational analysis to qualify the following design criteria:

1. Glass Capacity
2. Maximum Allowable Size/Pressure Combinations
3. Clip Configuration and Anchor Spacing
4. Anchor Capacity for Various Substrates

No 33% increase in allowable stress has been used in the design of this product.

Series Pro-Tech 45SG Aluminum Structurally Glazed Curtain Wall System-L.M.I. & S.M.I. (Missile Level "D" & "E") - Crawford Tracey Corporation

The following are approved for use in the HVHZ as specified in their corresponding NOAs:

- Saflex Interlayer by Eastman Chemical Company (NOA# 's: 21-0216.01 & 20-0622.03)
- SentryGlas Interlayer by Kuraray America, Inc. (NOA #: 21-0324.06)
- Trosifol Interlayer by Kuraray America, Inc. (NOA #: 20-0915.22)

Impact Resistance:

Large Missile & Small Missile Impact Resistance has been demonstrated as evidenced in previously listed test reports and is accounted for in the engineering design of this product.

Wind Load Resistance

This product has been designed to resist wind loads as indicated on its respective Product Evaluation Document (i.e. engineering document).

Installation

The product listed above shall be installed in strict compliance with the Product Evaluation Document (i.e. engineering document), along with all components noted therein.

The product components shall be of the material specified in the Product Evaluation Document (i.e. engineering document).

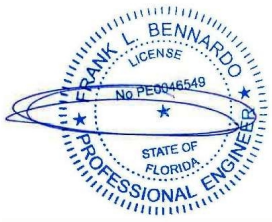
Limitations & Conditions of Use:

Use of each product shall be in strict accordance with its respective Product Evaluation Document (i.e. engineering document) as noted herein.

All supporting host structures shall be designed to resist all superimposed loads and shall be of a material listed in each product's respective anchor schedule. Host structure conditions which are not accounted for in each product's respective anchor schedule shall be designed for on a site-specific basis by a registered professional engineer.

All components which are permanently installed shall be protected against corrosion, contamination, and other such damage at all times. Any alteration to the respective Product Evaluation Document will invalidate it. This product has been designed for use inside and outside of the High Velocity Hurricane Zone (HVHZ).

Respectfully,



04/28/22

Frank Bennardo, PE
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