

# NORTH EAST WINDOWS USA, INC. COMPUTER SIMULATION REPORT

**SCOPE OF WORK**

900 DOUBLE HUNG - NFRC 100/200/500

**REPORT NUMBER**

J8170.04-116-45 R0

**TEST DATE**

09/05/19

**ISSUE DATE**

11/15/21

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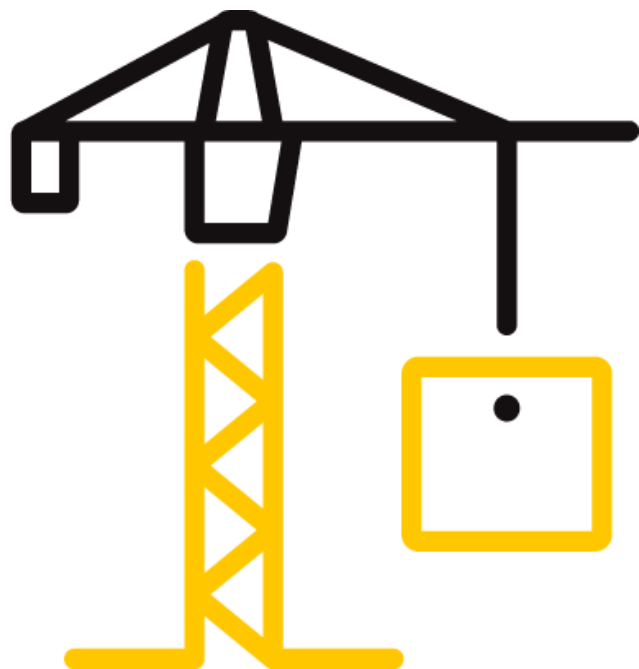
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**TEST REPORT FOR NORTH EAST WINDOWS USA, INC.**

Report No: J8170.04-116-45 R0

Date: 11/15/21

**REPORT ISSUED TO**

**NORTH EAST WINDOWS USA, INC.**

One Kes Place

P.O. Box 159

Merrick, New York 11566

**SECTION 1**

**SUMMARY**

**SERIES/MODEL: 900 Double Hung**

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted to perform U-Factor, Solar Heat Gain Coefficient, Visible Transmittance and Condensation Resistance simulations in accordance with the National Fenestration Rating Council (NFRC).

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends five years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

FOR INTERTEK B&C:

**COMPLETED BY:** Dale C. White  
**TITLE:** Simulation Technician  
NFRC Certified Simulator  
**SIGNATURE:**  
**DATE:** 11/15/21

**REVIEWED BY:** Eric S. Leitner  
**TITLE:** Manager - Simulations  
and Thermal Testing, SIRC  
**SIGNATURE:**  
**DATE:** 11/15/21

DCW:dcw

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**TEST REPORT FOR NORTH EAST WINDOWS USA, INC.**

Report No: J8170.04-116-45 R0

Date: 11/15/21

**SECTION 2**

**TEST METHODS**

The products were evaluated in accordance with the following:

***ANSI/NFRC 100-2020, Procedure for Determining Fenestration Product U-Factors***

***ANSI/NFRC 200-2020, Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence***

***NFRC 500-2017, Procedure for Determining Fenestration Product Condensation Resistance Values***

*\*Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening.*

Ratings values included in this report are for submittals to an NFRC-licensed IA and are not meant to be used directly for labeling purposes. Only those values identified on a valid Certificate of Authorization (CA) by an NFRC accredited Inspection Agency (IA) are to be used for labeling purposes. The ratings values were rounded in accordance with NFRC 601, NFRC Unit and Measurement Policy.

Intertek B&C is an NFRC accredited simulation laboratory and all simulations were conducted in full compliance with NFRC approved procedures and specifications. The values included in this report are not considered in compliance with ANSI/NFRC 100, ANSI/NFRC 200, and/or NFRC 500 unless the associated validation test requirements have been satisfied, as applicable.

**TEST REPORT FOR NORTH EAST WINDOWS USA, INC.**

Report No: J8170.04-116-45 R0

Date: 11/15/21

**SECTION 3**

**TEST PROCEDURE**

The total product, including specific frame, spacer, and glass details, was modeled using NFRC approved software.

|                                   |               |
|-----------------------------------|---------------|
| <b>FRAME AND EDGE MODELING</b>    | THERM 7.4.4   |
| <b>CENTER-OF-GLASS MODELING</b>   | WINDOW 7.4.14 |
| <b>TOTAL PRODUCT CALCULATIONS</b> | WINDOW 7.4.14 |
| <b>SPECTRAL DATA LIBRARY</b>      | IGDB 82.0     |

**Modeling Assumptions / Technical Interpretations**

Any modeling assumptions and technical interpretations required to model this product are listed below.

- 1) To prevent air infiltration, tape was applied to all interior sash crack locations.
- 2) The 3213 Sills were grouped for simulation purposes according to ANSI/NFRC
- 3) 100-2017 Seciton 4.2.1:

**SECTION 4**

**SIMULATION SPECIMEN DESCRIPTION**

|                       |                              |
|-----------------------|------------------------------|
| <b>SERIES/MODEL</b>   | 900 Double Hung              |
| <b>PRODUCT TYPE</b>   | Vertical Slider, Double Hung |
| <b>FRAME MATERIAL</b> | VY - Vinyl                   |
| <b>SASH MATERIAL</b>  | VY - Vinyl                   |
| <b>STANDARD SIZE</b>  | 1200mm x 1500mm              |

## TEST REPORT FOR NORTH EAST WINDOWS USA, INC.

Report No: J8170.04-116-45 R0

Date: 11/15/21

### SECTION 4 (Continued)

#### SIMULATION SPECIMEN DESCRIPTION

| SPACER OPTIONS         |               |                |      |
|------------------------|---------------|----------------|------|
| TYPE                   | PRIMARY SEAL  | SECONDARY SEAL | CODE |
| Quanex Duralite Spacer | Butyl 761-71X | None           | P1-S |

| GRID OPTIONS    |                                     |               |
|-----------------|-------------------------------------|---------------|
| GRID SIZE       | GRID TYPE                           | GRID PATTERN  |
| 0.188" x 0.625" | Aluminum Rectangular Grid (Painted) | NFRC Standard |

| REINFORCEMENT OPTIONS |          |
|-----------------------|----------|
| LOCATION              | MATERIAL |
| None                  | -        |

| GAS FILLING TECHNIQUE |              |
|-----------------------|--------------|
| FILL TYPE             | METHOD       |
| 90% Argon             | Single probe |

| EDGE-OF-GLASS CONSTRUCTION |  |
|----------------------------|--|
| <b>INTERIOR CONDITION</b>  | Silicone between sash leg and glass                      |
| <b>EXTERIOR CONDITION</b>  | PVC glazing bead with flexible vinyl strip against glass |

| WEATHERSTRIPPING  |          |                           |
|-------------------|----------|---------------------------|
| TYPE              | QUANTITY | LOCATION                  |
| Finpile           | 2 rows   | Stiles, keeper rail       |
| Finpile           | 1 row    | Top rail, sill, lock rail |
| Vinyl bulb gasket | 1 row    | Bottom rail               |

| FRAME/SASH MATERIALS FINISH |       |
|-----------------------------|-------|
| <b>INTERIOR</b>             | Vinyl |
| <b>EXTERIOR</b>             | Vinyl |

| VALIDATION MATRIX* |               |
|--------------------|---------------|
| PRODUCT LINE       | REPORT NUMBER |
| None               | -             |

\*These products are part of a validation matrix. Only one is required for validation testing.

**TEST REPORT FOR NORTH EAST WINDOWS USA, INC.**

Report No: J8170.04-116-45 R0

Date: 11/15/21

**SECTION 5**

**SPECIALTY PRODUCTS TABLE**

The specialty products method allows the manufacturer to determine the overall product SHGC and VT for any glazing option. The center of glass SHGC and/or VT must be determined using WINDOW 7.4.14. The method calculates overall product SHGC and VT indexed on center of glass properties. All values used in the calculations are truncated to six decimal place precision.

|              | No Dividers | Dividers < 1 | Dividers > 1 |
|--------------|-------------|--------------|--------------|
| <b>SHGC0</b> | 0.003932    | 0.006637     | 0.009182     |
| <b>SHGC1</b> | 0.743471    | 0.663941     | 0.589091     |
| <b>VT0</b>   | 0.000000    | 0.000000     | 0.000000     |
| <b>VT1</b>   | 0.739539    | 0.657305     | 0.579909     |

$$SHGC = SHGC0 + SHGCc (SHGC1 - SHGC0)$$

$$VT = VT0 + VTc (VT1 - VT0)$$

## TEST REPORT FOR NORTH EAST WINDOWS USA, INC.

Report No: J8170.04-116-45 R0

Date: 11/15/21

### SECTION 6

### SIMULATION RESULTS

| TOTAL PRODUCT CALCULATIONS (900 Double Hung) |   |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|--|---|------------------|-----------------------|--|-----------------------|------------------|-----------------------|--|-------------------|------------------------------|--------|-----------|
| Option Number                                | Pane Thickness 1 (in)                               | Gap Width 1 (in) | Pane Thickness 2 (in) | Gap Width 2 (in)   | Pane Thickness 3 (in) | Gap Width 3 (in) | Pane Thickness 4 (in) | Gap Fill   | Low-e (Surface #) | Tint                         | Spacer | Grid Type |
|  | U-Factor (Btu/Hr-Ft2-F)                             |                  |                       | Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1) |                       |                  |                       | Visible Transmittance (VT) Grids (None / <1 / >=1) |                   | Condensation Resistance (CR) |        |           |
| 1  | NO FOAM: clr / air / clr (SS/SS) - 7/8" IG          |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|  | 0.090   | 0.688            | 0.090                 |  |                       |                  |                       | AIR  |                   | CL                           | P1-S   | N,G       |
|  | U-Factor 0.45                                       |                  |                       | SHGC(N/<1) 0.60 / 0.53                                     |                       |                  |                       | VT(N/<1) 0.61 / 0.54                               |                   | CR 46                        |        |           |
| 2  | NO FOAM: clr / air / clr (DS/DS) - 7/8" IG          |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|  | 0.117   | 0.625            | 0.117                 |  |                       |                  |                       | AIR  |                   | CL                           | P1-S   | N,G       |
|  | U-Factor 0.45                                       |                  |                       | SHGC(N/<1) 0.59 / 0.52                                     |                       |                  |                       | VT(N/<1) 0.61 / 0.54                               |                   | CR 46                        |        |           |
| 3  | NO FOAM: 70/36 / air / clr (SS/SS) - 7/8" IG        |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|  | 0.090   | 0.688            | 0.090                 |  |                       |                  |                       | AIR  | 0.036(#2)         | CL                           | P1-S   | N,G       |
|  | U-Factor 0.32                                       |                  |                       | SHGC(N/<1) 0.29 / 0.26                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                   | CR 56                        |        |           |
|  | NO FOAM: clr / air / 70/36 (#3) (SS/SS) - 7/8" IG   |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|  | 0.090   | 0.688            | 0.090                 |  |                       |                  |                       | AIR  | 0.036(#3)         | CL                           | P1-S   | N,G       |
|  | U-Factor 0.32                                       |                  |                       | SHGC(N/<1) 0.37 / 0.33                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                   | CR 56                        |        |           |
| 4  | NO FOAM: 70/36 / air / clr (DS/DS) - 7/8" IG        |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|  | 0.117   | 0.625            | 0.117                 |  |                       |                  |                       | AIR  | 0.036(#2)         | CL                           | P1-S   | N,G       |
|  | U-Factor 0.32                                       |                  |                       | SHGC(N/<1) 0.29 / 0.26                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                   | CR 59                        |        |           |
|  | NO FOAM: clr / air / 70/36 (#3) (DS/DS) - 7/8" IG   |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|  | 0.117   | 0.625            | 0.117                 |  |                       |                  |                       | AIR  | 0.036(#3)         | CL                           | P1-S   | N,G       |
|  | U-Factor 0.32                                       |                  |                       | SHGC(N/<1) 0.36 / 0.33                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                   | CR 59                        |        |           |
| 5  | NO FOAM: 70/36 / arg90 / clr (SS/SS) - 7/8" IG      |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|  | 0.090   | 0.688            | 0.090                 |  |                       |                  |                       | ARG90  | 0.036(#2)         | CL                           | P1-S   | N,G       |
|  | U-Factor 0.29                                       |                  |                       | SHGC(N/<1) 0.29 / 0.26                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                   | CR 60                        |        |           |
|  | NO FOAM: clr / arg90 / 70/36 (#3) (SS/SS) - 7/8" IG |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|  | 0.090   | 0.688            | 0.090                 |  |                       |                  |                       | ARG90  | 0.036(#3)         | CL                           | P1-S   | N,G       |
|  | U-Factor 0.29                                       |                  |                       | SHGC(N/<1) 0.37 / 0.33                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                   | CR 60                        |        |           |
| 6  | NO FOAM: 70/36 / arg90 / clr (DS/DS) - 7/8" IG      |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|  | 0.117   | 0.625            | 0.117                 |  |                       |                  |                       | ARG90  | 0.036(#2)         | CL                           | P1-S   | N,G       |
|  | U-Factor 0.28                                       |                  |                       | SHGC(N/<1) 0.29 / 0.26                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                   | CR 63                        |        |           |
|  | NO FOAM: clr / arg90 / 70/36 (#3) (DS/DS) - 7/8" IG |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|  | 0.117   | 0.625            | 0.117                 |  |                       |                  |                       | ARG90  | 0.036(#3)         | CL                           | P1-S   | N,G       |
|  | U-Factor 0.28                                       |                  |                       | SHGC(N/<1) 0.36 / 0.33                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                   | CR 63                        |        |           |

## TEST REPORT FOR NORTH EAST WINDOWS USA, INC.

Report No: J8170.04-116-45 R0

Date: 11/15/21

### SECTION 6 (Continued)

### SIMULATION RESULTS

| TOTAL PRODUCT CALCULATIONS (900 Double Hung) |  |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|--|--|------------------|-----------------------|--|-----------------------|------------------|-----------------------|--|-----------------------|------------------------------|--------|-----------|
| Option Number                                | Pane Thickness 1 (in)                          | Gap Width 1 (in) | Pane Thickness 2 (in) | Gap Width 2 (in)   | Pane Thickness 3 (in) | Gap Width 3 (in) | Pane Thickness 4 (in) | Gap Fill   | Low-e (Surface #)     | Tint                         | Spacer | Grid Type |
|  | U-Factor (Btu/Hr-Ft2-F)                        |                  |                       | Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1) |                       |                  |                       | Visible Transmittance (VT) Grids (None / <1 / >=1) |                       | Condensation Resistance (CR) |        |           |
| 7  | NO FOAM: CS28 / air / clr (SS/SS) - 7/8" IG    |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.087  | 0.688            | 0.086                 |  |                       |                  |                       | AIR  | 0.023(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.32                                  |                  |                       | SHGC(N/<1) 0.21 / 0.19                                     |                       |                  |                       | VT(N/<1) 0.47 / 0.42                               |                       | CR 56                        |        |           |
| 8  | NO FOAM: CS28 / air / clr (DS/DS) - 7/8" IG    |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.125  | 0.625            | 0.123                 |  |                       |                  |                       | AIR  | 0.021(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.31                                  |                  |                       | SHGC(N/<1) 0.22 / 0.19                                     |                       |                  |                       | VT(N/<1) 0.47 / 0.42                               |                       | CR 59                        |        |           |
| 9  | NO FOAM: CS28 / arg90 / clr (SS/SS) - 7/8" IG  |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.087  | 0.688            | 0.086                 |  |                       |                  |                       | ARG90  | 0.023(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.28                                  |                  |                       | SHGC(N/<1) 0.21 / 0.19                                     |                       |                  |                       | VT(N/<1) 0.47 / 0.42                               |                       | CR 60                        |        |           |
| 10   | NO FOAM: CS28 / arg90 / clr (DS/DS) - 7/8" IG  |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.125  | 0.625            | 0.123                 |  |                       |                  |                       | ARG90  | 0.021(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.28                                  |                  |                       | SHGC(N/<1) 0.21 / 0.19                                     |                       |                  |                       | VT(N/<1) 0.47 / 0.42                               |                       | CR 63                        |        |           |
| 11   | NO FOAM: CS28 / air / CS73 (SS/SS) - 7/8" IG   |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.087  | 0.688            | 0.087                 |  |                       |                  |                       | AIR  | 0.023(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.27                                  |                  |                       | SHGC(N/<1) 0.20 / 0.18                                     |                       |                  |                       | VT(N/<1) 0.44 / 0.39                               |                       | CR 48                        |        |           |
| 12   | NO FOAM: CS28 / air / CS73 (DS/DS) - 7/8" IG   |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.125  | 0.625            | 0.123                 |  |                       |                  |                       | AIR  | 0.021(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.27                                  |                  |                       | SHGC(N/<1) 0.20 / 0.18                                     |                       |                  |                       | VT(N/<1) 0.42 / 0.38                               |                       | CR 47                        |        |           |
| 13   | NO FOAM: CS28 / arg90 / CS73 (SS/SS) - 7/8" IG |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.087  | 0.688            | 0.087                 |  |                       |                  |                       | ARG90  | 0.023(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.24                                  |                  |                       | SHGC(N/<1) 0.20 / 0.18                                     |                       |                  |                       | VT(N/<1) 0.44 / 0.39                               |                       | CR 49                        |        |           |
| 14   | NO FOAM: CS28 / arg90 / CS73 (DS/DS) - 7/8" IG |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.125  | 0.625            | 0.123                 |  |                       |                  |                       | ARG90  | 0.021(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.24                                  |                  |                       | SHGC(N/<1) 0.20 / 0.18                                     |                       |                  |                       | VT(N/<1) 0.42 / 0.38                               |                       | CR 51                        |        |           |
| 15   | NO FOAM: E366 / arg90 / CS73 (SS/SS) - 7/8" IG |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.087  | 0.688            | 0.087                 |  |                       |                  |                       | ARG90  | 0.020(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.24                                  |                  |                       | SHGC(N/<1) 0.20 / 0.18                                     |                       |                  |                       | VT(N/<1) 0.45 / 0.40                               |                       | CR 49                        |        |           |
| 16   | NO FOAM: E366 / arg90 / CS73 (DS/DS) - 7/8" IG |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.118  | 0.625            | 0.123                 |  |                       |                  |                       | ARG90  | 0.020(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.24                                  |                  |                       | SHGC(N/<1) 0.19 / 0.17                                     |                       |                  |                       | VT(N/<1) 0.43 / 0.38                               |                       | CR 51                        |        |           |



## TEST REPORT FOR NORTH EAST WINDOWS USA, INC.

Report No: J8170.04-116-45 R0

Date: 11/15/21

### SECTION 6 (Continued)

### SIMULATION RESULTS

| TOTAL PRODUCT CALCULATIONS (900 Double Hung) |  |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|--|--|------------------|-----------------------|--|-----------------------|------------------|-----------------------|--|-----------------------|------------------------------|--------|-----------|
| Option Number                                | Pane Thickness 1 (in)                            | Gap Width 1 (in) | Pane Thickness 2 (in) | Gap Width 2 (in)   | Pane Thickness 3 (in) | Gap Width 3 (in) | Pane Thickness 4 (in) | Gap Fill   | Low-e (Surface #)     | Tint                         | Spacer | Grid Type |
|  | U-Factor (Btu/Hr-Ft2-F)                          |                  |                       | Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1) |                       |                  |                       | Visible Transmittance (VT) Grids (None / <1 / >=1) |                       | Condensation Resistance (CR) |        |           |
| 17   | NO FOAM: SB70XL / arg90 / CS73 (SS/SS) - 7/8" IG |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.089  | 0.688            | 0.087                 |  |                       |                  |                       | ARG90  | 0.018(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.24                                    |                  |                       | SHGC(N/<1) 0.19 / 0.17                                     |                       |                  |                       | VT(N/<1) 0.44 / 0.39                               |                       | CR 49                        |        |           |
| 18   | NO FOAM: SB70XL / arg90 / CS73 (DS/DS) - 7/8" IG |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.129  | 0.625            | 0.123                 |  |                       |                  |                       | ARG90  | 0.018(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.24                                    |                  |                       | SHGC(N/<1) 0.19 / 0.17                                     |                       |                  |                       | VT(N/<1) 0.42 / 0.38                               |                       | CR 51                        |        |           |
| 19   | FOAM: clr / air / clr (SS/SS) - 7/8" IG          |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.090  | 0.688            | 0.090                 |  |                       |                  |                       | AIR  |                       | CL                           | P1-S   | N,G       |
|  | U-Factor 0.43                                    |                  |                       | SHGC(N/<1) 0.60 / 0.53                                     |                       |                  |                       | VT(N/<1) 0.61 / 0.54                               |                       | CR 47                        |        |           |
| 20   | FOAM: clr / air / clr (DS/DS) - 7/8" IG          |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.117  | 0.625            | 0.117                 |  |                       |                  |                       | AIR  |                       | CL                           | P1-S   | N,G       |
|  | U-Factor 0.43                                    |                  |                       | SHGC(N/<1) 0.59 / 0.52                                     |                       |                  |                       | VT(N/<1) 0.61 / 0.54                               |                       | CR 46                        |        |           |
| 21   | FOAM: 70/36 / air / clr (SS/SS) - 7/8" IG        |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.090  | 0.688            | 0.090                 |  |                       |                  |                       | AIR  | 0.036(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.30                                    |                  |                       | SHGC(N/<1) 0.29 / 0.26                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                       | CR 56                        |        |           |
|  | FOAM: clr / air / 70/36 (#3) (SS/SS) - 7/8" IG   |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.090  | 0.688            | 0.090                 |  |                       |                  |                       | AIR  | 0.036(#3)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.30                                    |                  |                       | SHGC(N/<1) 0.37 / 0.33                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                       | CR 56                        |        |           |
| 22   | FOAM: 70/36 / air / clr (DS/DS) - 7/8" IG        |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.117  | 0.625            | 0.117                 |  |                       |                  |                       | AIR  | 0.036(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.29                                    |                  |                       | SHGC(N/<1) 0.29 / 0.26                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                       | CR 59                        |        |           |
|  | FOAM: clr / air / 70/36 (#3) (DS/DS) - 7/8" IG   |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.117  | 0.625            | 0.117                 |  |                       |                  |                       | AIR  | 0.036(#3)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.29                                    |                  |                       | SHGC(N/<1) 0.36 / 0.33                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                       | CR 59                        |        |           |
| 23   | FOAM: 70/36 / arg90 / clr (SS/SS) - 7/8" IG      |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.090  | 0.688            | 0.090                 |  |                       |                  |                       | ARG90  | 0.036(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.26                                    |                  |                       | SHGC(N/<1) 0.29 / 0.26                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                       | CR 60                        |        |           |
|  | FOAM: clr / arg90 / 70/36 (#3) (SS/SS) - 7/8" IG |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.090  | 0.688            | 0.090                 |  |                       |                  |                       | ARG90  | 0.036(#3)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.26                                    |                  |                       | SHGC(N/<1) 0.37 / 0.33                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                       | CR 60                        |        |           |

## TEST REPORT FOR NORTH EAST WINDOWS USA, INC.

Report No: J8170.04-116-45 R0

Date: 11/15/21

### SECTION 6 (Continued)

### SIMULATION RESULTS

| TOTAL PRODUCT CALCULATIONS (900 Double Hung) |  |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|--|--|------------------|-----------------------|--|-----------------------|------------------|-----------------------|--|-----------------------|------------------------------|--------|-----------|
| Option Number                                | Pane Thickness 1 (in)                            | Gap Width 1 (in) | Pane Thickness 2 (in) | Gap Width 2 (in)   | Pane Thickness 3 (in) | Gap Width 3 (in) | Pane Thickness 4 (in) | Gap Fill   | Low-e (Surface #)     | Tint                         | Spacer | Grid Type |
|  | U-Factor (Btu/Hr-Ft <sup>2</sup> -F)             |                  |                       | Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1) |                       |                  |                       | Visible Transmittance (VT) Grids (None / <1 / >=1) |                       | Condensation Resistance (CR) |        |           |
| 24   | FOAM: 70/36 / arg90 / clr (DS/DS) - 7/8" IG      |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.117  | 0.625            | 0.117                 |  |                       |                  |                       | ARG90  | 0.036(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.26                                    |                  |                       | SHGC(N/<1) 0.29 / 0.26                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                       | CR 63                        |        |           |
|  | FOAM: clr / arg90 / 70/36 (#3) (DS/DS) - 7/8" IG |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.117  | 0.625            | 0.117                 |  |                       |                  |                       | ARG90  | 0.036(#3)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.26                                    |                  |                       | SHGC(N/<1) 0.36 / 0.33                                     |                       |                  |                       | VT(N/<1) 0.52 / 0.46                               |                       | CR 63                        |        |           |
| 25   | FOAM: CS28 / air / clr (SS/SS) - 7/8" IG         |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.087  | 0.688            | 0.086                 |  |                       |                  |                       | AIR  | 0.023(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.29                                    |                  |                       | SHGC(N/<1) 0.21 / 0.19                                     |                       |                  |                       | VT(N/<1) 0.47 / 0.42                               |                       | CR 57                        |        |           |
| 26   | FOAM: CS28 / air / clr (DS/DS) - 7/8" IG         |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.125  | 0.625            | 0.123                 |  |                       |                  |                       | AIR  | 0.021(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.29                                    |                  |                       | SHGC(N/<1) 0.22 / 0.19                                     |                       |                  |                       | VT(N/<1) 0.47 / 0.42                               |                       | CR 59                        |        |           |
| 27   | FOAM: CS28 / arg90 / clr (SS/SS) - 7/8" IG       |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.087  | 0.688            | 0.086                 |  |                       |                  |                       | ARG90  | 0.023(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.26                                    |                  |                       | SHGC(N/<1) 0.21 / 0.19                                     |                       |                  |                       | VT(N/<1) 0.47 / 0.42                               |                       | CR 60                        |        |           |
| 28   | FOAM: CS28 / arg90 / clr (DS/DS) - 7/8" IG       |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.125  | 0.625            | 0.123                 |  |                       |                  |                       | ARG90  | 0.021(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.26                                    |                  |                       | SHGC(N/<1) 0.21 / 0.19                                     |                       |                  |                       | VT(N/<1) 0.47 / 0.42                               |                       | CR 63                        |        |           |
| 29   | FOAM: CS28 / air / CS73 (SS/SS) - 7/8" IG        |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.087  | 0.688            | 0.087                 |  |                       |                  |                       | AIR  | 0.023(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.24                                    |                  |                       | SHGC(N/<1) 0.20 / 0.18                                     |                       |                  |                       | VT(N/<1) 0.44 / 0.39                               |                       | CR 48                        |        |           |
| 30   | FOAM: CS28 / air / CS73 (DS/DS) - 7/8" IG        |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.125  | 0.625            | 0.123                 |  |                       |                  |                       | AIR  | 0.021(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.24                                    |                  |                       | SHGC(N/<1) 0.20 / 0.18                                     |                       |                  |                       | VT(N/<1) 0.42 / 0.38                               |                       | CR 47                        |        |           |
| 31   | FOAM: CS28 / arg90 / CS73 (SS/SS) - 7/8" IG      |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.087  | 0.688            | 0.087                 |  |                       |                  |                       | ARG90  | 0.023(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.22                                    |                  |                       | SHGC(N/<1) 0.20 / 0.18                                     |                       |                  |                       | VT(N/<1) 0.44 / 0.39                               |                       | CR 49                        |        |           |
| 32   | FOAM: CS28 / arg90 / CS73 (DS/DS) - 7/8" IG      |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.125  | 0.625            | 0.123                 |  |                       |                  |                       | ARG90  | 0.021(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.22                                    |                  |                       | SHGC(N/<1) 0.20 / 0.18                                     |                       |                  |                       | VT(N/<1) 0.42 / 0.38                               |                       | CR 51                        |        |           |

## TEST REPORT FOR NORTH EAST WINDOWS USA, INC.

Report No: J8170.04-116-45 R0

Date: 11/15/21

### SECTION 6 (Continued)

### SIMULATION RESULTS

| TOTAL PRODUCT CALCULATIONS (900 Double Hung) |   |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|--|---|------------------|-----------------------|--|-----------------------|------------------|-----------------------|--|-----------------------|------------------------------|--------|-----------|
| Option Number                                | Pane Thickness 1 (in)                         | Gap Width 1 (in) | Pane Thickness 2 (in) | Gap Width 2 (in)   | Pane Thickness 3 (in) | Gap Width 3 (in) | Pane Thickness 4 (in) | Gap Fill   | Low-e (Surface #)     | Tint                         | Spacer | Grid Type |
|  | U-Factor (Btu/Hr-Ft <sup>2</sup> -F)          |                  |                       | Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1) |                       |                  |                       | Visible Transmittance (VT) Grids (None / <1 / >=1) |                       | Condensation Resistance (CR) |        |           |
| 33   | FOAM: E366 / arg90 / CS73 (SS/SS) - 7/8" IG   |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.087   | 0.688            | 0.087                 |  |                       |                  |                       | ARG90  | 0.020(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.22                                 |                  |                       | SHGC(N/<1) 0.20 / 0.18                                     |                       |                  |                       | VT(N/<1) 0.45 / 0.40                               |                       | CR 49                        |        |           |
| 34   | FOAM: E366 / arg90 / CS73 (DS/DS) - 7/8" IG   |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.118   | 0.625            | 0.123                 |  |                       |                  |                       | ARG90  | 0.020(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.22                                 |                  |                       | SHGC(N/<1) 0.19 / 0.17                                     |                       |                  |                       | VT(N/<1) 0.43 / 0.38                               |                       | CR 51                        |        |           |
| 35   | FOAM: SB70XL / arg90 / CS73 (SS/SS) - 7/8" IG |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.089   | 0.688            | 0.087                 |  |                       |                  |                       | ARG90  | 0.018(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.22                                 |                  |                       | SHGC(N/<1) 0.19 / 0.17                                     |                       |                  |                       | VT(N/<1) 0.44 / 0.39                               |                       | CR 49                        |        |           |
| 36   | FOAM: SB70XL / arg90 / CS73 (DS/DS) - 7/8" IG |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.129   | 0.625            | 0.123                 |  |                       |                  |                       | ARG90  | 0.018(#2) / 0.148(#4) | CL                           | P1-S   | N,G       |
|  | U-Factor 0.22                                 |                  |                       | SHGC(N/<1) 0.19 / 0.17                                     |                       |                  |                       | VT(N/<1) 0.42 / 0.38                               |                       | CR 52                        |        |           |
| 37   | NO FOAM: CS36 / arg90 / clr (SS/SS) - 7/8" IG |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.090   | 0.688            | 0.086                 |  |                       |                  |                       | ARG90  | 0.027(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.28                                 |                  |                       | SHGC(N/<1) 0.27 / 0.24                                     |                       |                  |                       | VT(N/<1) 0.50 / 0.44                               |                       | CR 60                        |        |           |
| 38   | FOAM: CS36 / arg90 / clr (SS/SS) - 7/8" IG    |                  |                       |  |                       |                  |                       |  |                       |                              |        |           |
|  | 0.090   | 0.688            | 0.086                 |  |                       |                  |                       | ARG90  | 0.027(#2)             | CL                           | P1-S   | N,G       |
|  | U-Factor 0.26                                 |                  |                       | SHGC(N/<1) 0.27 / 0.24                                     |                       |                  |                       | VT(N/<1) 0.50 / 0.44                               |                       | CR 60                        |        |           |



Total Quality. Assured.

130 Derry Court  
York, Pennsylvania 17406

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Facsimile: 717-764-4129  
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**TEST REPORT FOR NORTH EAST WINDOWS USA, INC.**

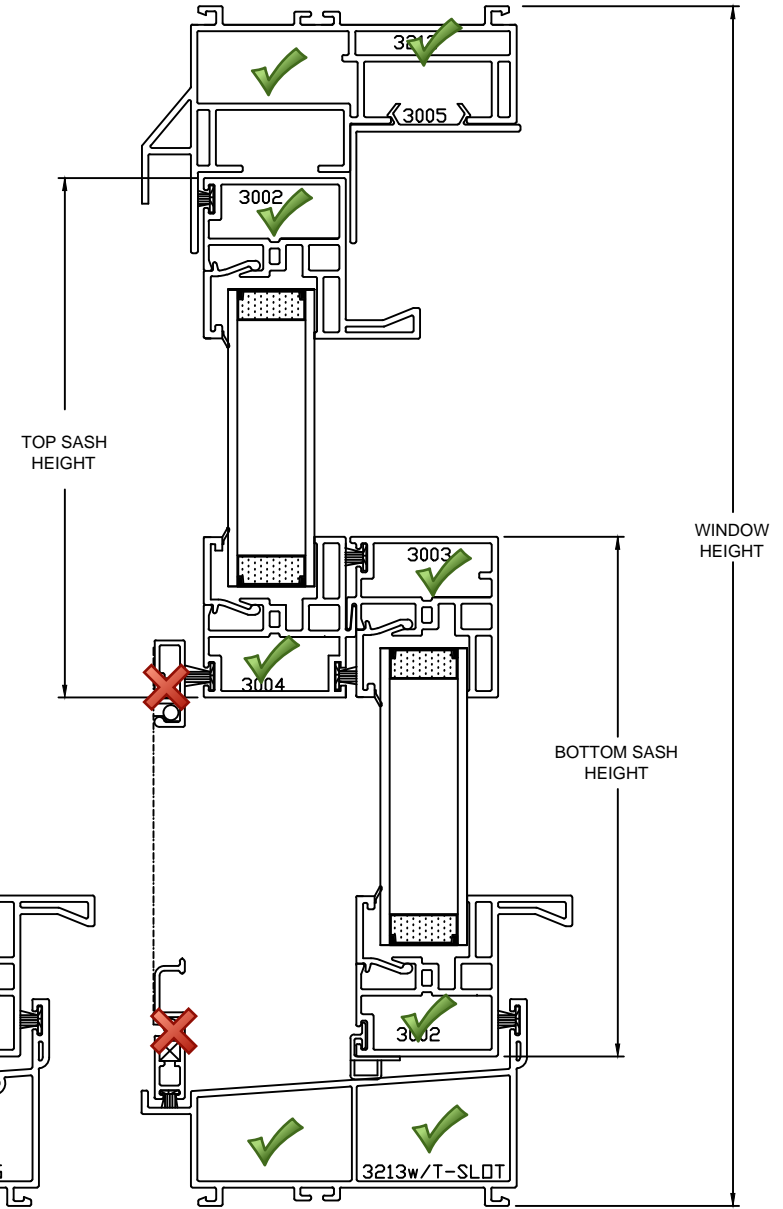
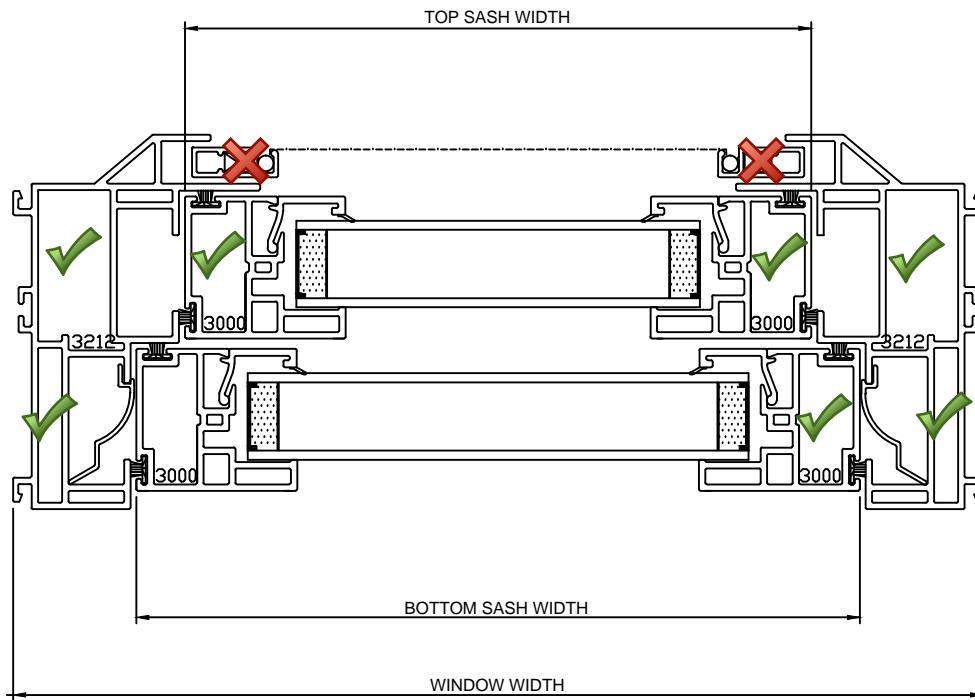
Report No: J8170.04-116-45 R0

Date: 11/15/21

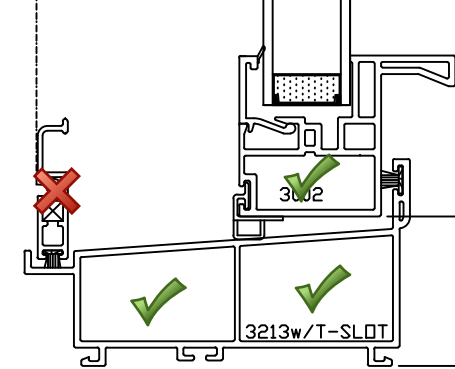
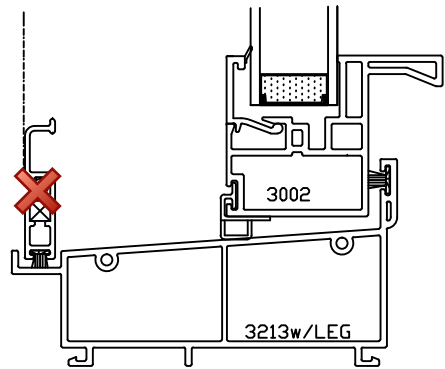
**SECTION 7**

**DRAWINGS / BILL OF MATERIALS**

The drawings which follow have been reviewed by Intertek B&C and are representative of the simulation results reported herein. Any deviations are documented herein or on the drawings.



✓ POLYURETHANE FOAM



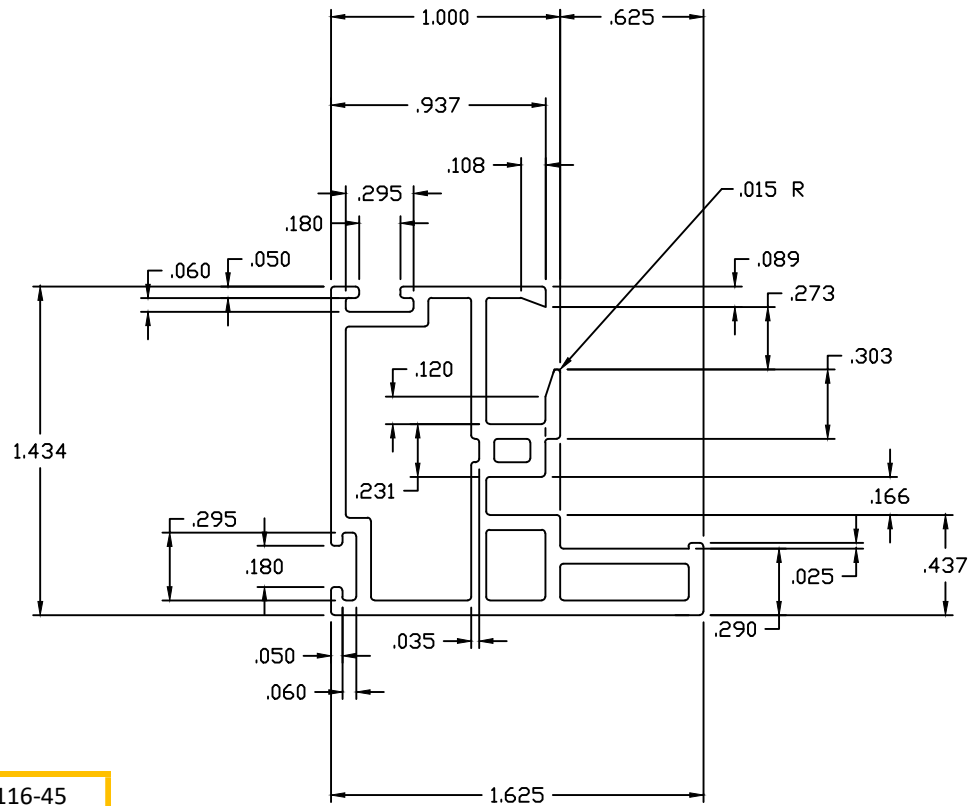
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Date: 6/12/2019  
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|---|--|---|
| <p>BY DDS DESIGNS</p> <p>"OUR NAME SAYS IT ALL"</p> | <p>1) MATERIAL RIGID PVC</p> <p>2) CAPSTOCK </p> <p>3) UNSPECIFIED WALLS</p> <p>4) BREAK ALL CORNERS .015R</p> <p>5) AREA SQ. IN.</p> <p>6) WT/FT LBS/FT</p> | <p>TITLE SERIES 900-DOUBLE HUNG w/DPT MF<br/>WELDED MAIN FRAME / WELDED SASH</p> <p>DWN BY DDS    SCALE    DATE 11/28/11    CHKD BY    APPD BY</p> <p>COMPUTER NO</p> <p>DWG NO C-900 DH CROSS SECTIONw/DPT .MF</p> |
|   | <p>LOCATION FOR IMPACT TEST SPECIFICATION-LENGTHS TO 3/8"</p> <p>ALLOWABLE BOW MAX. 1" PER 14' ANGULARITY TO BE ± 1/2°</p>                                   | <p>DO NOT SCALE DRAWING</p>   |



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Report #: J8170-116-45  
Date: 6/12/2019  
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☒ LOCATION FOR IMPACT TEST  
SPECIFICATION—LENGTHS TO 3/8"

ALLOWABLE BOW MAX. 1" PER 14'  
ANGULARITY TO BE ± 1/2

DRAWN FOR

BY **DDS** DESIGNS  
"OUR NAME SAYS IT ALL"

- 1) MATERIAL RIGID PVC
- 2) CAPSTOCK ~~.....~~
- 3) UNSPECIFIED WALLS .065
- 4) BREAK ALL CORNERS .015 R
- 5) AREA .509 SQ.IN.
- 6) WT/FT .320 LBS/FT

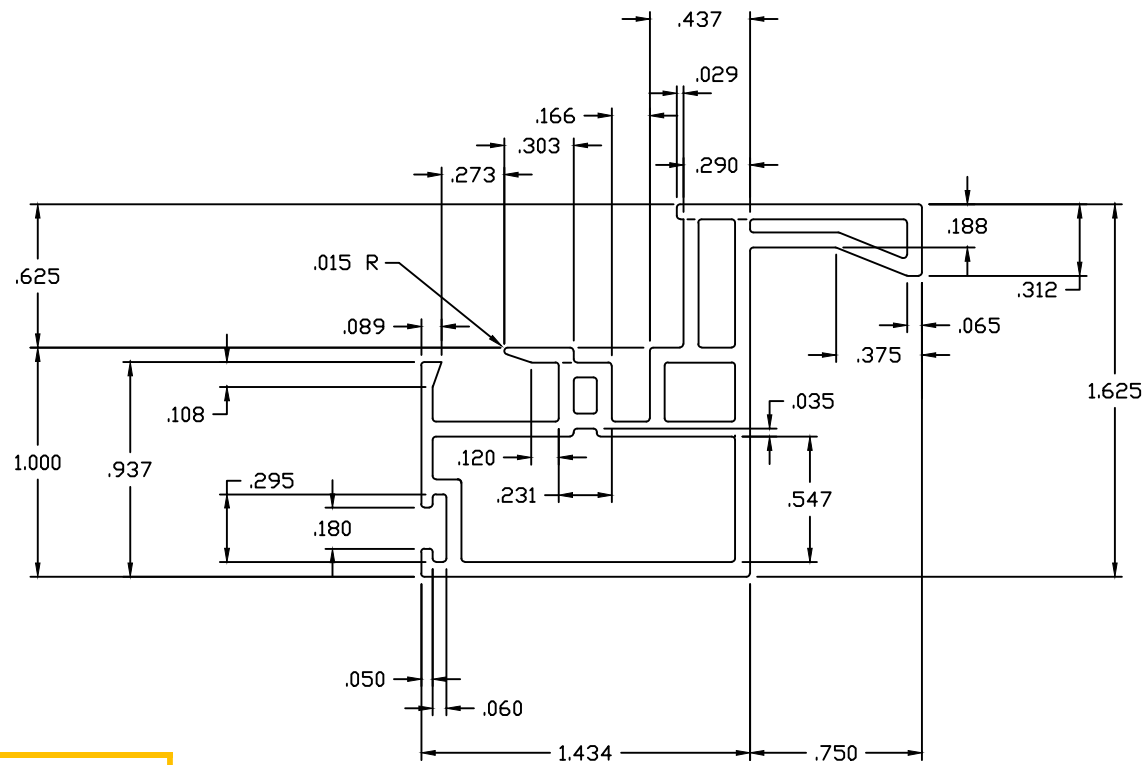
TITLE WELDED DOUBLE HUNG  
REGULAR SASH

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COMPUTER NO

DWG NO 3000


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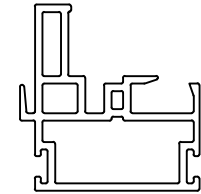
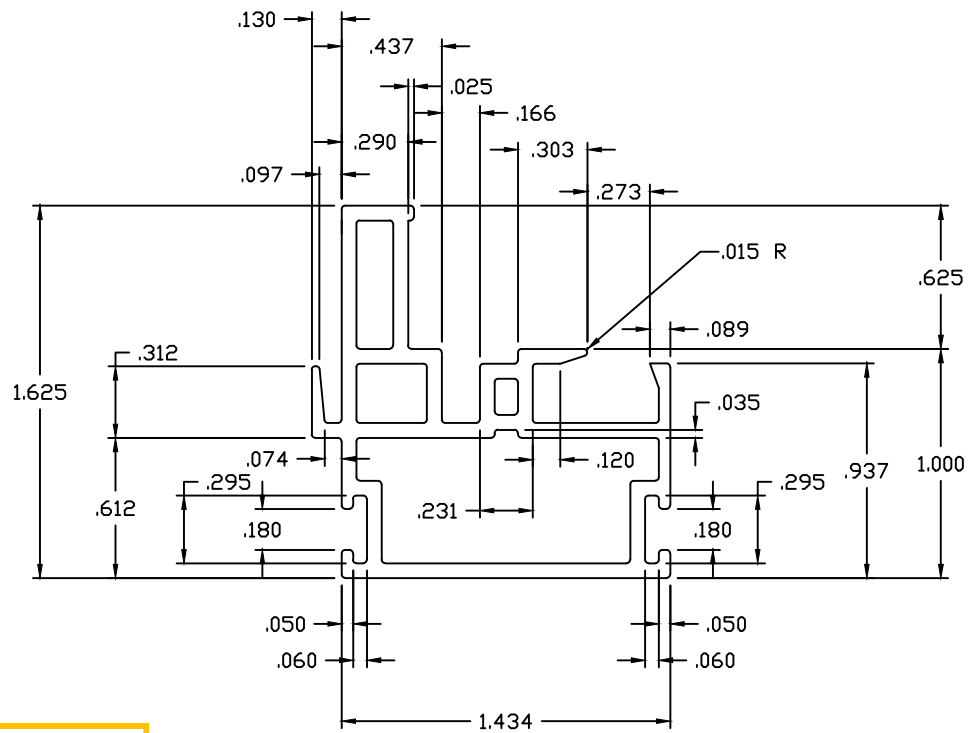
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| DRAWN FOR<br><br>BY DDS<br>DESIGNS<br>"OUR NAME SAYS IT ALL" | 1) MATERIAL RIGID PVC<br>2) CAPSTOCK <del>XXXXXXXXXX</del><br>3) UNSPECIFIED WALLS .065<br>4) BREAK ALL CORNERS .015 R<br>5) AREA .607 SQ.IN.<br>6) WT/FT .378 LBS/FT |   | DWN BY | SCALE                                   | DATE     |
|  |   |   | DDS    | 2:1                                     | 11/13/02 |
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☒ LOCATION FOR IMPACT TEST  
 SPECIFICATION—LENGTHS TO 3/8"

ALLOWABLE BOW MAX. 1" PER 14'  
 ANGULARITY TO BE ± 1/2"

DRAWN FOR

BY DDS  
 DESIGNS  
 "OUR NAME SAYS IT ALL"

- 1) MATERIAL RIGID PVC
- 2) CAPSTOCK ~~.....~~
- 3) UNSPECIFIED WALLS .065
- 4) BREAK ALL CORNERS .015 R
- 5) AREA 528 SQ.IN.
- 6) WT/FT 332 LBS/FT

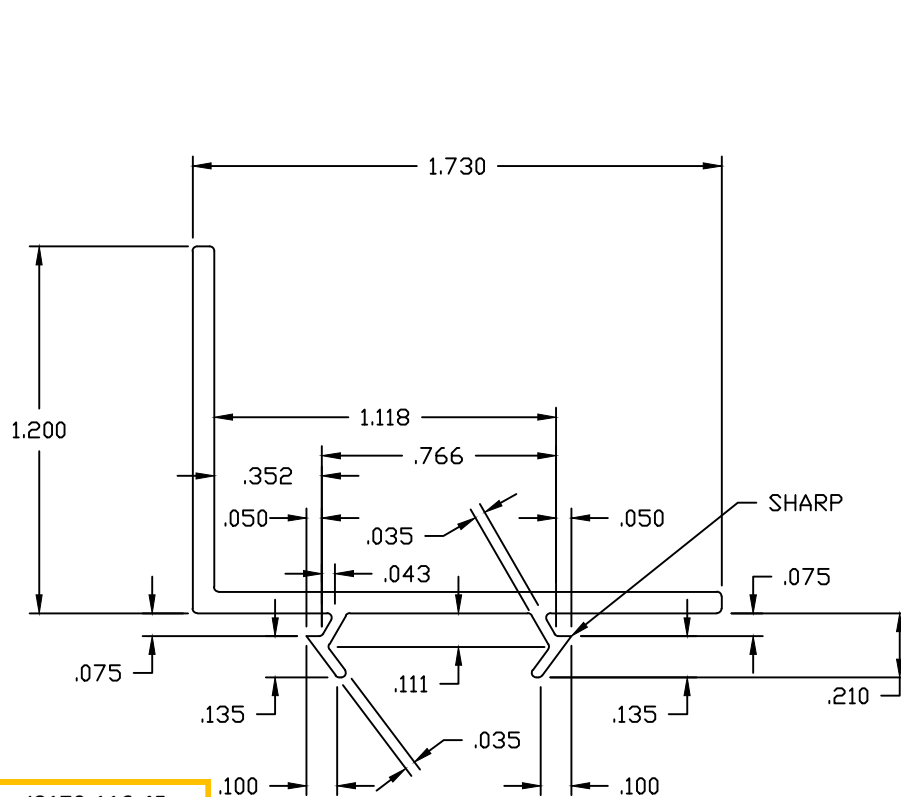
TITLE WELDED DOUBLE HUNG  
 MALE

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DO NOT SCALE DRAWING

LOCATION FOR IMPACT TEST  
 SPECIFICATION—LENGTHS TO 3/8"

ALLOWABLE BOW MAX. 1" PER 14'  
 ANGULARITY TO BE ± 1/2"

DRAWN FOR

BY **DDS DESIGNS**  
 "OUR NAME SAYS IT ALL"

- 1) MATERIAL RIGID PVC
- 2) CAPSTOCK ~~0.065~~
- 3) UNSPECIFIED WALLS .065
- 4) BREAK ALL CORNERS .015 R
- 5) AREA .219 SQ.IN.
- 6) WT/FT .138 LBS/FT

TITLE WELDED DOUBLE HUNG  
 HEAD ADAPTER

|               |               |                  |         |         |
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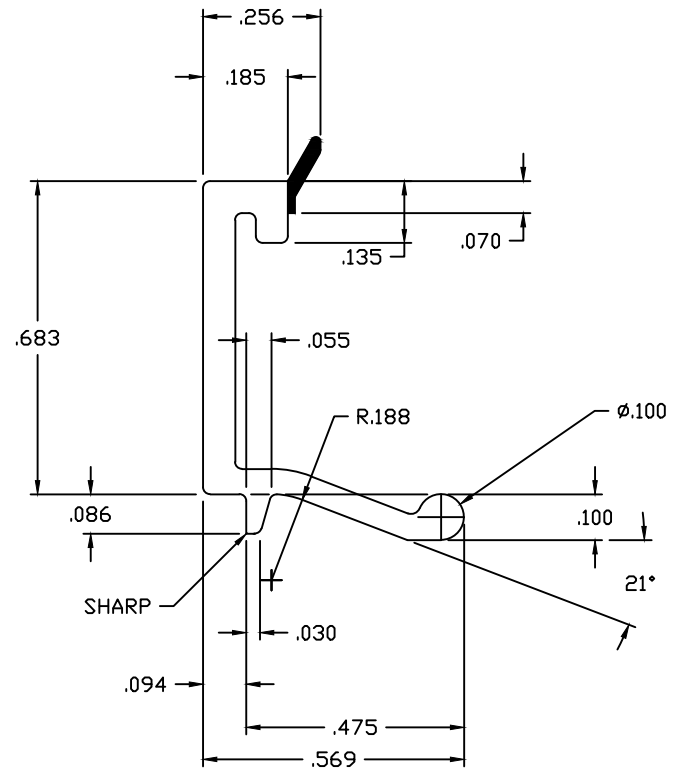
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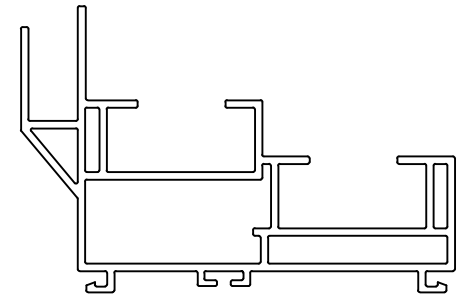
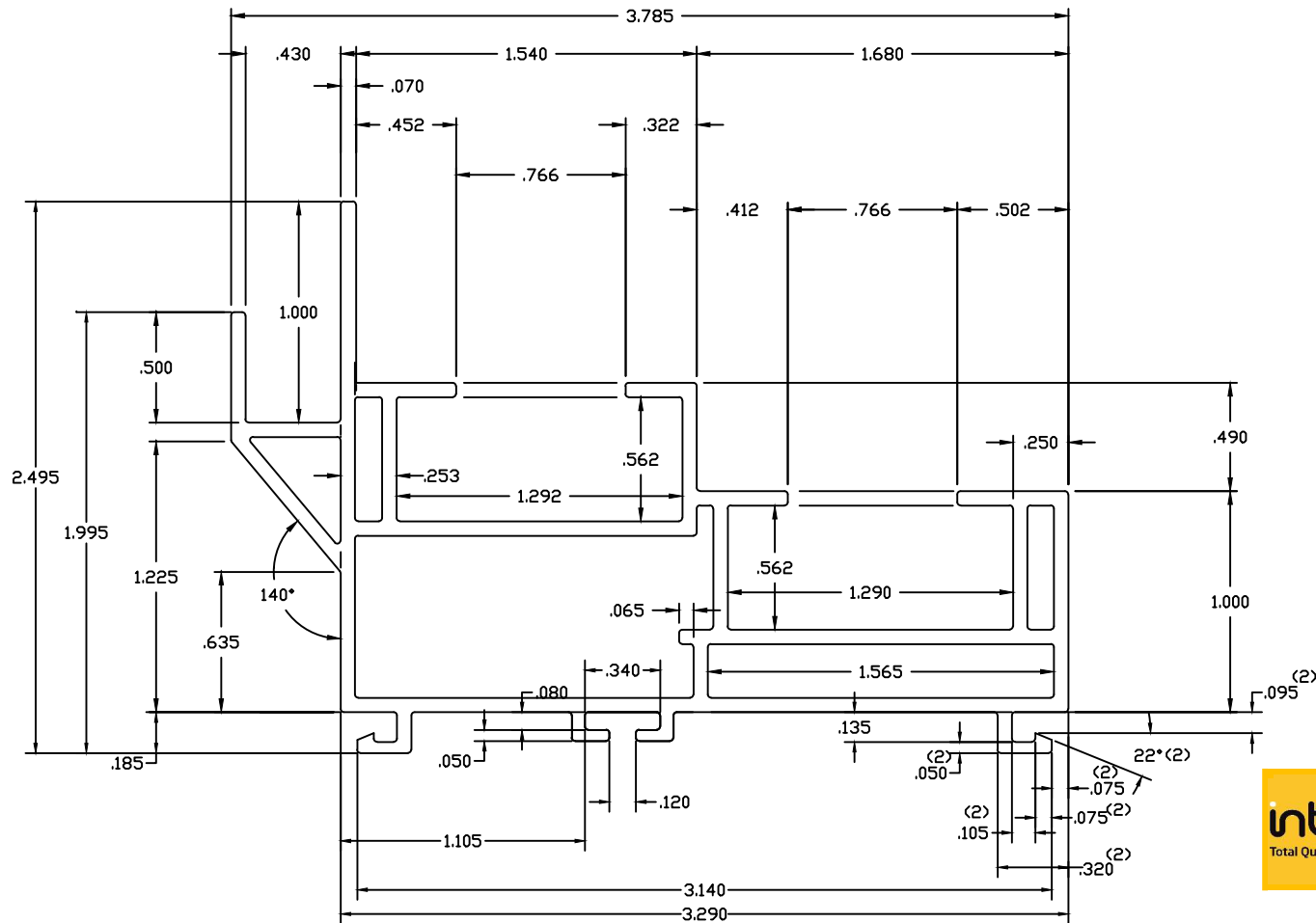


AREA OF RIGID PVC = .096  
 AREA OF SOFT PVC = .004  
 WT/FT OF RIGID PVC = .060  
 WT/FT OF SOFT PVC = .003

DO NOT SCALE DRAWING

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| <input checked="" type="checkbox"/> LOCATION FOR IMPACT TEST<br>SPECIFICATION—LENGTHS TO 3/8" |   | ALLOWABLE BOW MAX. 1" PER 14'<br>ANGULARITY TO BE ± 1/2 |  |
| DRAWN FOR<br>   | 1) MATERIAL RIGID PVC<br>2) CAPSTOCK<br>3) UNSPECIFIED WALLS .070<br>4) BREAK ALL CORNERS .015 R<br>5) AREA .100 SQ.IN.<br>6) WT/FT .063 LBS/FT |   | TITLE WELDED DOUBLE HUNG<br>GLAZING BEAD |
|   | BY DDS<br>DESIGNS<br>"OUR NAME SAYS IT ALL"   | DWN BY<br>DDS   | SCALE<br>4:1                             |
|   |   | CHKD BY   | APPD BY                                  |
|   |   | COMPUTER NO   |  |
|   |   | DWG NO 3008   |  |

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FULL SCALE

**intertek** Total Quality. Assured.

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 Date: 6/12/2019  
 Verified by: *[Signature]*

DO NOT SCALE DRAWING

☑ LOCATION FOR IMPACT TEST SPECIFICATION—LENGTHS TO 3/8" ALLOWABLE BOW MAX. 1" PER 14' ANGULARITY TO BE ± 1/2

DRAWN FOR

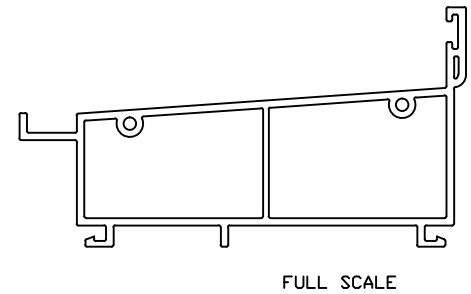
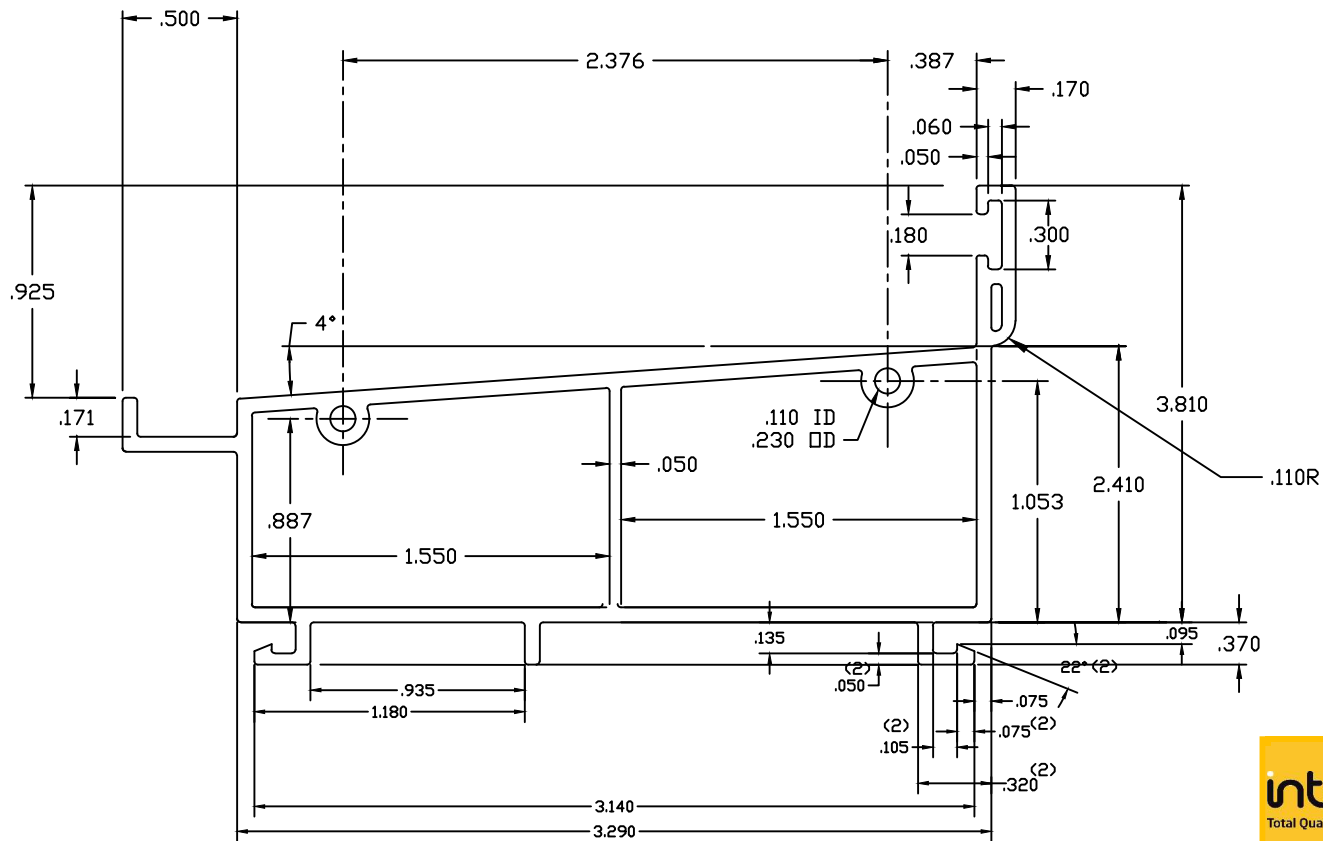
BY **DDS** DESIGNS

"OUR NAME SAYS IT ALL"

- 1) MATERIAL RIGID PVC
- 2) CAPSTOCK
- 3) UNSPECIFIED WALLS .065
- 4) BREAK ALL CORNERS .015R
- 5) AREA 1,109 SQ.IN.
- 6) WT/FT .698 LBS/FT

|   |       |          |         |         |
|---|-------|----------|---------|---------|
| TITLE WELDED DOUBLE HUNG JAMB NO FIN NO J |       |          |         |         |
| DWN BY                                    | SCALE | DATE     | CHKD BY | APPD BY |
| DDS                                       | 2:1   | 11-05-10 |         |         |
| COMPUTER NO                               |       |          |         |         |
| DWG NO 3212                               |       |          |         |         |

|     |                     |     |          |
|-----|---------------------|-----|----------|
|     |                     |     |          |
|     |                     |     |          |
|     |                     |     |          |
| A   | REVISED TO "T" SLOT | DDS | 11/28/11 |
| NO. | REVISION            | BY  | DATE     |




**intertek** Report #: J8170-116-45  
 Total Quality. Assured. Date: 6/12/2019  
 Verified by: *[Signature]*

DO NOT SCALE DRAWING

☒ LOCATION FOR IMPACT TEST SPECIFICATION—LENGTHS TO 3/8"

ALLOWABLE BOW MAX. 1" PER 14' ANGULARITY TO BE ± 1/2

DRAWN FOR  BY  DDS DESIGNS  
 "OUR NAME SAYS IT ALL"

- 1) MATERIAL RIGID PVC
- 2) CAPSTOCK 
- 3) UNSPECIFIED WALLS .065
- 4) BREAK ALL CORNERS .015R
- 5) AREA .835 SQ. IN.
- 6) WT/FT .520 LBS/FT

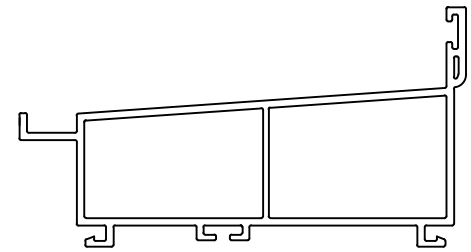
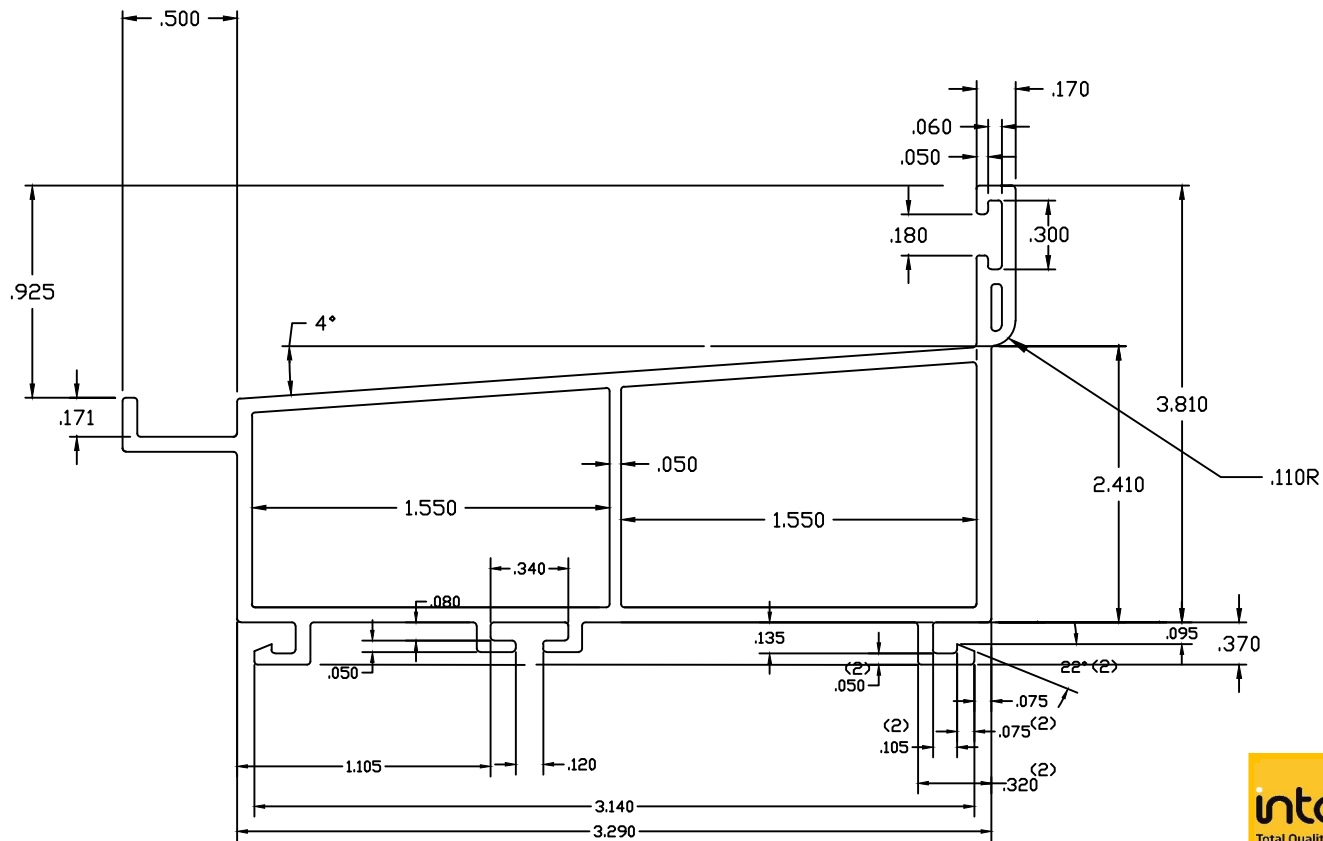
TITLE WELDED DOUBLE HUNG SILL

|               |              |                  |         |         |
|---------------|--------------|------------------|---------|---------|
| DWN BY<br>DDS | SCALE<br>2:1 | DATE<br>11-05-10 | CHKD BY | APPD BY |
|---------------|--------------|------------------|---------|---------|

COMPUTER NO

DWG NO 3213

| NO. | REVISION | BY | DATE |
|-----|----------|----|------|
|     |          |    |      |
|     |          |    |      |
|     |          |    |      |
|     |          |    |      |
|     |          |    |      |



FULL SCALE

**intertek** Report #: J8170-116-45  
 Total Quality. Assured. Date: 6/12/2019  
 Verified by: *[Signature]*

DO NOT SCALE DRAWING

☒ LOCATION FOR IMPACT TEST  
 SPECIFICATION—LENGTHS TO 3/8"

ALLOWABLE BOW MAX. 1" PER 14'  
 ANGULARITY TO BE ± 1/2

DRAWN FOR  
  
 QUALITY LINEALS  
 BY DDS  
 DESIGNS  
 "OUR NAME SAYS IT ALL"

- 1) MATERIAL RIGID PVC
- 2) CAPSTOCK
- 3) UNSPECIFIED WALLS .065
- 4) BREAK ALL CORNERS .015R
- 5) AREA .815 SQ.IN.
- 6) WT/FT .512 LBS/FT

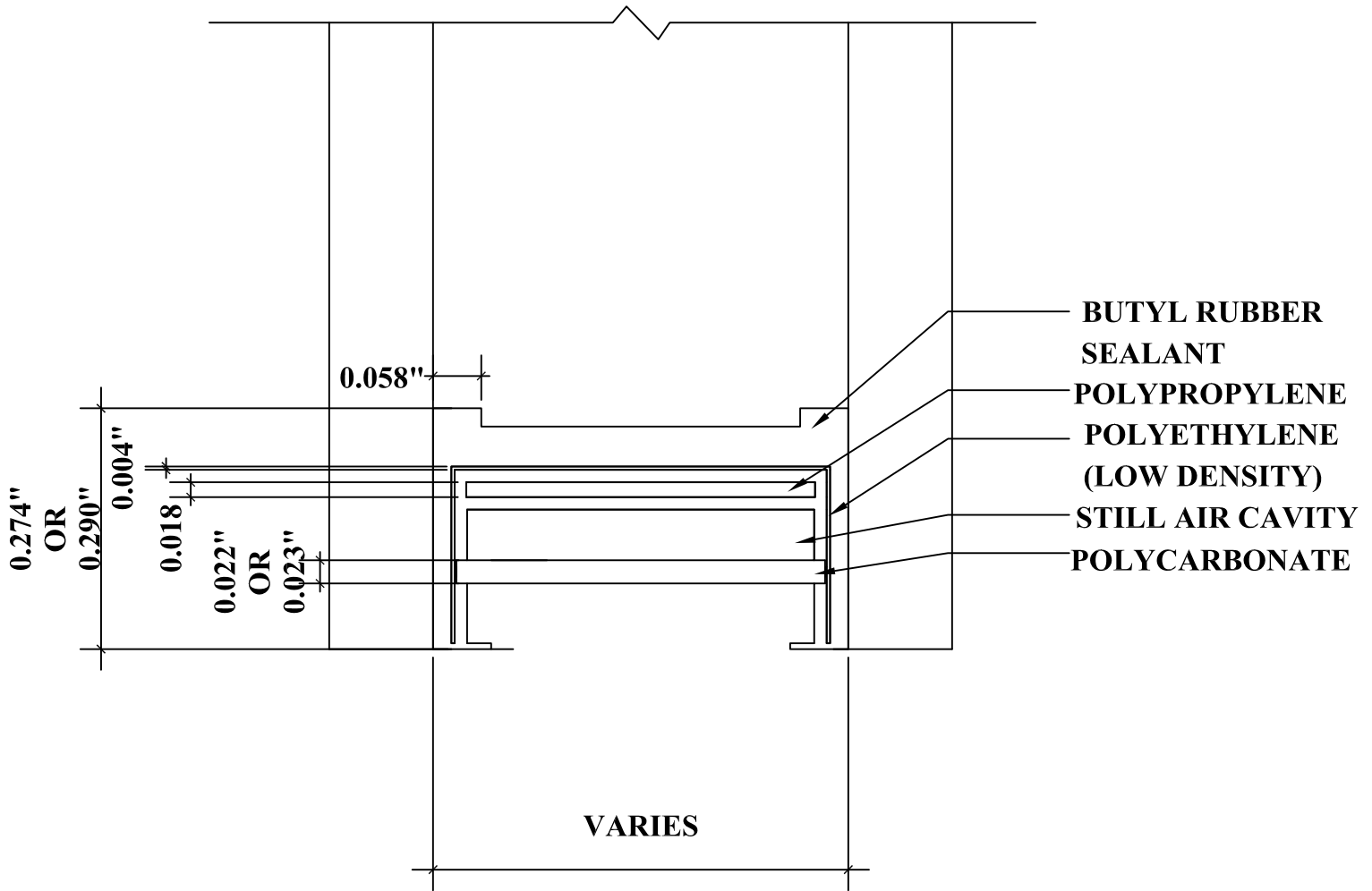
TITLE WELDED DOUBLE HUNG SILL

|               |              |                  |         |         |
|---------------|--------------|------------------|---------|---------|
| DWN BY<br>DDS | SCALE<br>2:1 | DATE<br>11-05-10 | CHKD BY | APPD BY |
|---------------|--------------|------------------|---------|---------|

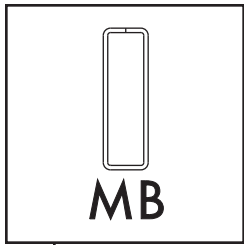
COMPUTER NO

DWG NO 3213

|     |                                      |     |          |
|-----|--------------------------------------|-----|----------|
|     |                                      |     |          |
| A   | REMOVED SCREW BOSSES; ADDED "T" SLOT | DDS | 11/28/11 |
| NO. | REVISION                             | BY  | DATE     |

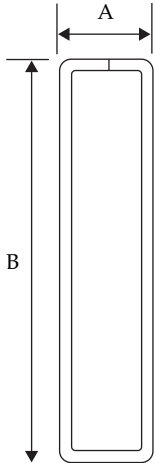


DETAIL FOR THERMAL MODELING OF  
QUANEX DURALITE SPACER (P1-S)



## Muntin Bar

Aluminum: Painted, Mill Finish, Clear & Color In™ Anodized



### TOLERANCE

A, ± .005 (.127mm)

B, ± .005 (.127mm)



Report #: J8170-116-45

Date: 6/12/2019

Verified by: *[Signature]*

### SPECIAL NOTICE

#### Cleaning and Handling of Muntin Bar

We recommend muntin bar to be wiped clean before installation into an insulating glass unit. A household grade liquid cleaner may be used for this purpose.

To avoid breakdown of painted surfaces, do not use M.E.K., Triethane, Alcohol or like substances for the cleaning of painted muntin bar.

When machining and processing muntin bar in your plant, keep saw tables and work areas free of saw cut filings to avoid scratching the painted surfaces.

### Packaging Information

| Muntin Bar Size          | Part #   | Pieces Per Shipping Carton<br>12' 8" Lengths | Lineal Feet Per Shipping Carton<br>12' 8" Lengths |
|--------------------------|----------|--|---|
| 1/8 x .610               | 219697   | 200  | 2533  |
| 3/16 x 9/16 <sup>†</sup> | 119320   | 150  | 1900  |
| 3/16 x .610 <sup>†</sup> | 119705   | 125  | 1583  |
| 3/16 x 5/8 <sup>†</sup>  | 120874   | 125  | 1583  |
| 3/16 x 3/4               | 122909   | 110  | 1393  |
| 3/16 x 13/16             | 123618   | 110  | 1393  |
| 3/16 x 1                 | 123823   | 85   | 1076  |
| 1/4 x 9/16               | 119427   | 135  | 1710  |
| 1/4 x 5/8 <sup>†</sup>   | 121410   | 120  | 1520  |
| 1/4 x 3/4                | 123063   | 95   | 1203  |
| 1/4 x 13/16              | 215017   | 95   | 1203  |
| 1/4 x 1                  | 123836   | 70   | 887   |
| 1/4 x 1 1/4              | 123856   | 51   | 646   |
| 5/16 x 1                 | 210318   | 60   | 684   |
| 3/8 x 5/8                | 121468   | 90   | 1140  |
| 3/8 x 3/4                | 123088   | 75   | 950   |
| 3/8 x 13/16              | 215016   | 70   | 887   |
| 3/8 x 7/8                | 123797   | 55   | 697   |
| 3/8 x 1                  | 201968   | 55   | 696   |
| 3/8(.375) x 3/8          | 205591   | 140  | 1773  |
| 7/16 x 3/8               | 119016   | 115  | 1457  |
| 7/16 x 3/8               | 216500** | 115  | 1457  |
| 7/16 x 1/2               | 213045   | 88   | 1115  |
| 7/16 x 5/8 <sup>Δ</sup>  | 214621   | 65   | 823   |
| 1/2 x 3/4 <sup>*</sup>   | 201043   | 50   | 633   |
| 1/2 x 1                  | 203710   | 40   | 506   |

### Specification In Inches

| Muntin Bar Size           | A    | B     |
|---------------------------|------|-------|
| 1/8 x .610                | .125 | .610  |
| 3/16 x 9/16 <sup>†</sup>  | .187 | .551  |
| 3/16 x .610 <sup>†</sup>  | .187 | .610  |
| 3/16 x 5/8 <sup>†</sup>   | .187 | .630  |
| 3/16 x 3/4 <sup>†</sup>   | .187 | .775  |
| 3/16 x 13/16 <sup>†</sup> | .187 | .801  |
| 3/16 x 1                  | .187 | 1.000 |
| 1/4 x 9/16                | .235 | .562  |
| 1/4 x 5/8 <sup>†</sup>    | .235 | .625  |
| 1/4 x 3/4                 | .235 | .765  |
| 1/4 x 13/16               | .235 | .801  |
| 1/4 x 1                   | .235 | 1.000 |
| 1/4 x 1 1/4               | .235 | 1.250 |
| 5/16 x 1                  | .312 | 1.000 |
| 3/8 x 5/8 <sup>†</sup>    | .325 | .625  |
| 3/8 x 3/4                 | .325 | .750  |
| 3/8 x 13/16               | .325 | .801  |
| 3/8 x 7/8                 | .325 | .875  |
| 3/8 x 1                   | .325 | 1.000 |
| 3/8(.375) x 3/8           | .375 | .375  |
| 7/16 x 3/8                | .438 | .375  |
| 7/16 x 3/8                | .438 | .375  |
| 7/16 x 1/2                | .438 | .500  |
| 7/16 x 5/8 <sup>Δ</sup>   | .438 | .625  |
| 1/2 x 3/4 <sup>*</sup>    | .500 | .750  |
| 1/2 x 1                   | .500 | 1.000 |

Part numbers shown are standard white color.

Material thickness: .0185

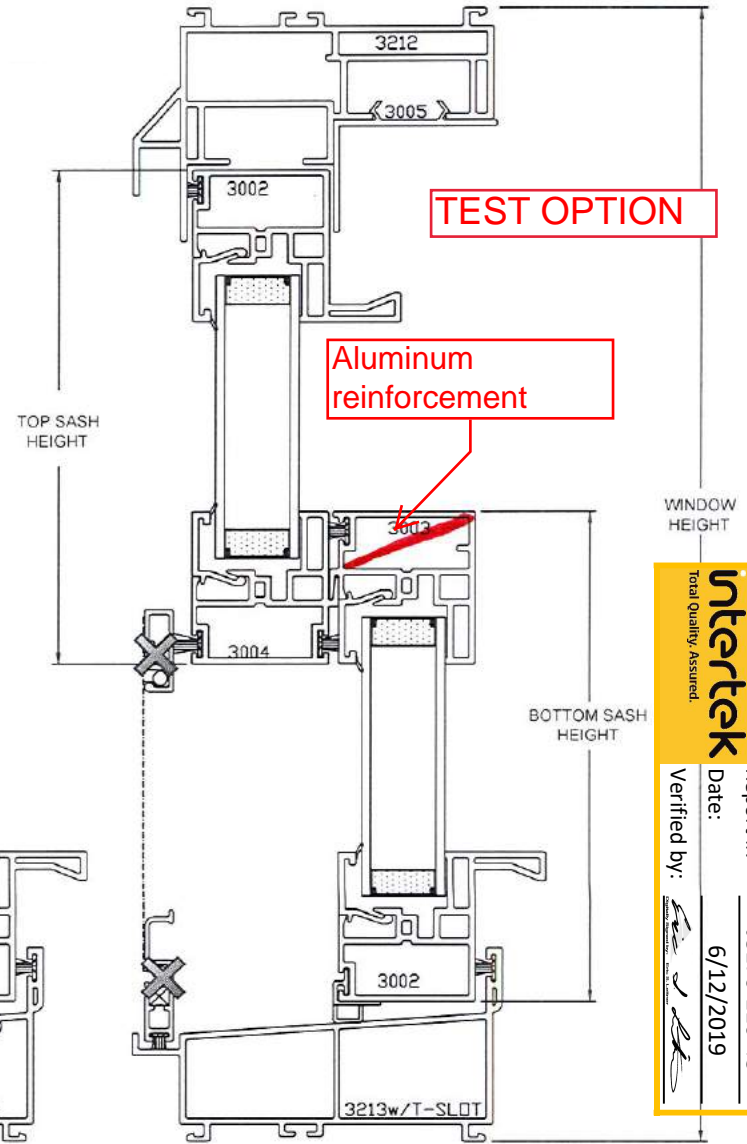
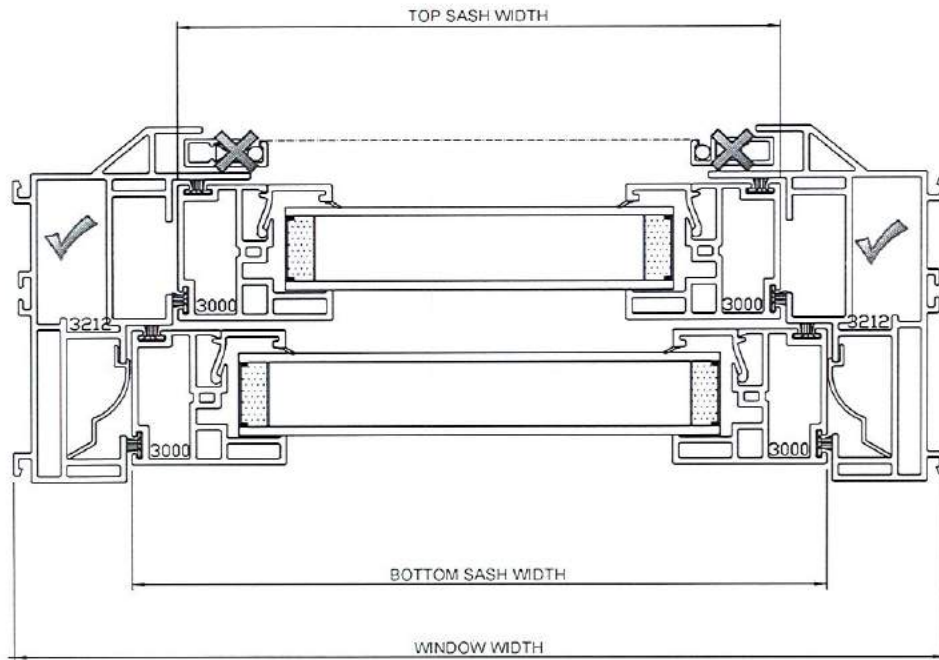
<sup>†</sup> Available in tutone. Please see Color Selection Chart located in front of catalog.

<sup>Δ</sup> Part number shown is Dark Bronze Anodized Color.

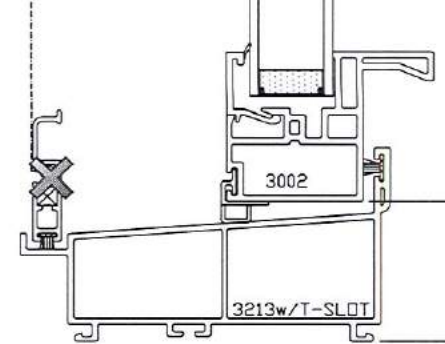
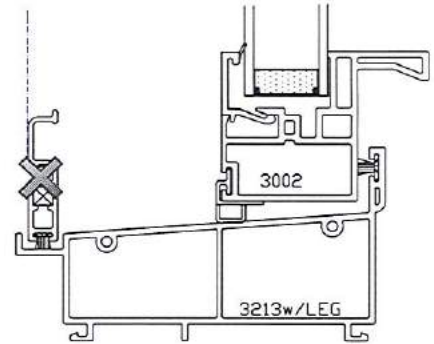
<sup>\*</sup> Part number shown is Clear Anodized. <sup>\*\*</sup>Part number shown is white welded.

Note: Available in pre-cut lengths and pre-notched; tutone and post-painted. Custom colors also available.





✓ EPS FOAM



Intertek  
 Total Quality Assured  
 Report #: J8170-116-45  
 Date: 6/12/2019  
 Verified by: *[Signature]*

DO NOT SCALE DRAWING

| NO | REVISION | BY | DATE |
|----|----------|----|------|
|    |          |    |      |
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|   |   |   |
|---|---|---|
| <p>QUALITY LINEALS<br/>BY DDS DESIGNS</p> | 1) MATERIAL RIGID PVC<br>2) CAPSTOCK<br>3) UNSPECIFIED WALLS<br>4) BREAK ALL CORNERS .015R<br>5) AREA SQ.IN.<br>6) WT/FT LBS/FT | TITLE SERIES 900-DOUBLE HUNG w/DPT MF<br>WELDED MAIN FRAME / WELDED SASH<br>DWN BY: DDS    SCALE:    DATE: 11/29/11    CHKD BY:    APPD BY:<br>COMPUTER NO:<br>DWG NO C-900 DH CROSS SECTIONw/DPT .MF |
|   | LOCATION FOR IMPACT TEST SPECIFICATION-LENGTHS TO 3/8"<br>ALLOWABLE BOW MAX. 1" PER 14' ANGULARITY TO BE ± 1/2°                 | DRAWN FOR:  |

TEST OPTION

0.080"

Aluminum  
Reinforcement

1.25"

1.38"

EPS Foam  
Insulation

0.58"



Total Quality. Assured.

130 Derry Court  
York, Pennsylvania 17406

Telephone: 717-764-7700  
Facsimile: 717-764-4129  
www.intertek.com/building

**TEST REPORT FOR NORTH EAST WINDOWS USA, INC.**

Report No: J8170.04-116-45 R0

Date: 11/15/21

**SECTION 8**

**REVISION LOG**

| <b>REVISION #</b> | <b>DATE</b> | <b>PAGES</b> | <b>REVISION</b>       |
|-------------------|-------------|--------------|-----------------------|
| .01R0             | 09/05/19    | N/A          | Original report Issue |
| .04R0             | 11/15/21    | N/A          | Add options 37-38     |