

**NFRC U-FACTOR, SHGC, VT, &  
CONDENSATION RESISTANCE  
COMPUTER SIMULATION REPORT**

**Rendered to:  
AMERICAN WINDOW ALLIANCE, INC.**

**SERIES/MODEL:  
Windgate/Belmont/Hawthorne Fixed**

**Report Number: G6285.02-116-45  
Report Date: 05/09/17**



## NFRC U-FACTOR, SHGC, VT, & CONDENSATION RESISTANCE COMPUTER SIMULATION REPORT

Rendered to:  
AMERICAN WINDOW ALLIANCE, INC.  
6750 Belt Circle Drive  
Bedford Park, Illinois 60638

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Simulation Date: 05/09/17  
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### Project Summary:

Architectural Testing, Inc., an Intertek Company (Intertek-ATI) was contracted to perform U-Factor, Solar Heat Gain Coefficient, Visible Transmittance, and Condensation Resistance\* computer simulations in accordance with the National Fenestration Rating Council (NFRC). The products were evaluated in full compliance with NFRC requirements to the standards listed

*\*NFRC's Condensation Resistance rating is NOT equivalent to a Condensation Resistance Factor (CRF) determined in accordance with AAMA 1503.*

### Standards:

*ANSI/NFRC 100-2014: Procedure for Determining Fenestration Product U-Factors*

*ANSI/NFRC 200-2014: Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence*

*NFRC 500-2014: Procedure for Determining Fenestration Product Condensation Resistance Values*

### Software:

**Frame and Edge Modeling:** THERM 7.4.3  
**Center-of-Glass Modeling:** WINDOW 7.4.8  
**Total Product Calculations:** WINDOW 7.4.8  
**Spectral Data Library:** IGDB 53.0

### Simulations Specimen Description:

**Series/Model:** Windgate/Belmont/Hawthorne Fixed  
**Type:** Fixed, 4-Sided  
**Frame Material:** VY Vinyl  
**Sash Material:** VY Vinyl  
**Standard Size:** 1200mm x 1500mm

**Modeling Assumptions/Technical Interpretations:**

- 1) To prevent air infiltration, tape was applied to all interior sash crack locations.
- 2) The 148 and 194 sash were grouped for simulation purposes according to ANSI/NFRC Section 4.2.1.D, J.ii. The 194 was the group leader (3/4" IG only).
- 3) All grids were grouped for simulation purposes according to ANSI/NFRC Section 4.2.4.1.D. The 5.5mm x 18mm Contour was the group leader.
- 4) The 5473, 5600, 8127 and 8134 glazine beads were grouped for simulation purposes according to ANSI/NFRC Section 4.2.1.D. 8127 was the group leader.

**Specialty Products Table:**

The specialty products method allow 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 7.4.8. The method gives 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
SHGC0	0.003074	0.005930	0.008627
SHGC1	0.824217	0.740330	0.661122
VT0	0.000000	0.000000	0.000000
VT1	0.821142	0.734399	0.652495

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

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

**Validation Matrix:**

The following products are part of a validation matrix. Only one is required for validation testing.

<i>Product Line</i>	<i>Report Number</i>
Windgate/Belmont/Hawthorne/Stormgate Casement	G6281.02-116-45
Windgate/Belmont/Hawthorne/Stormgate Awning	G6284.02-116-45
Windgate/Belmont/Hawthorne Fixed	G6285.02-116-45

**Spacer Option Description**

<i>Spacer Type</i>	<i>Sealant</i>		<i>Code</i>
	<i>Primary</i>	<i>Secondary</i>	
Quanex Duralite Spacer	Butyl 761-71X	None	P1-S
Cardinal Endur Spacer	Royal PIB	Silicone	SS-D
Technoform I-Spacer	PIB	Silicone	TS-D

**Grid Option Description**

<i>Grid Size</i>	<i>Grid Type</i>	<i>Grid Pattern</i>
3/16" x 5/8"	Aluminum Rectangular Grid (Painted)	NFRC Standard
5.9mm x 8mm	Aluminum Pencil Bar( Painted)	NFRC Standard
5.5mm x 18mm	Aluminum Contour Grid (Painted)	NFRC Standard
3/16" x 5/8"	Decralite Applied SDL	---

**Reinforcement Option Description**

<i>Location</i>	<i>Material</i>
None	-

**Gas Filling Technique Description**

<i>Fill Type</i>	<i>Method</i>
90% Argon	Single probe

**Edge-of-Glass Construction**

<i>Interior Condition</i>	Foam tape between sash leg and glass
<i>Exterior Condition</i>	PVC glazing bead with flexibe vinyl strip against glass

**Weatherstripping**

<i>Type</i>	<i>Quantity</i>	<i>Location</i>
Foam bulb gasket	1 row	Sash perimeter
Co-extruded vinyl bulb gasket	1 row	Sash perimeter
Co-extruded vinyl flap gasket	1 row	Sash perimeter

**Frame/Sash Materials Finish**

<i>Interior</i>	Vinyl
<i>Exterior</i>	Vinyl

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
1	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR		CL	P1-S	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.65 / 0.59				VT (N / <1) 0.68 / 0.61			CR 45	
2	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR		CL	P1-S	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.64 / 0.58				VT (N / <1) 0.68 / 0.60			CR 44	
3	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr (5mm/DS) 3/4" IG											
	0.185	0.438	0.118					AIR		CL	P1-S	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.67 / 0.60			CR 44	
4	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr (5mm/DS) 3/4" IG											
	0.185	0.438	0.118					AIR		CL	P1-S	G
	U-Factor 0.45			SHGC (<1) 0.56				VT (<1) 0.60			CR 44	
5	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					AIR		CL	P1-S	N,S
	U-Factor 0.45			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.66 / 0.59			CR 43	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					AIR		CL	P1-S	N,S
	U-Factor 0.45			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.66 / 0.59			CR 43	
6	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					AIR		CL	P1-S	G,S
	U-Factor 0.46			SHGC (<1) 0.53				VT (<1) 0.59			CR 43	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					AIR		CL	P1-S	G,S
	U-Factor 0.46			SHGC (<1) 0.56				VT (<1) 0.59			CR 43	
7	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			AIR		CL	P1-S	N,S
	U-Factor 0.36			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.63 / 0.56			CR 52	
8	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			AIR		CL	P1-S	G,S
	U-Factor 0.37			SHGC (<1) 0.53				VT (<1) 0.56			CR 52	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
9	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / air / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 57	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / E270 (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR 57	
10	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / arg / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 61	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / E270 (SS/SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.38 / 0.35				VT (N / <1) 0.58 / 0.52			CR 61	
11	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / air / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 57	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / E270 (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR 57	
12	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / arg / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					ARG90	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 61	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / E270 (DS/DS) 3/4" IG											
	0.118	0.500	0.118					ARG90	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR 61	
13	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / E270 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					ARG90	0.037(#3)	CL	P1-S	N,S
	U-Factor 0.27			SHGC (N / <1) 0.36 / 0.33				VT (N / <1) 0.57 / 0.51			CR 59	
	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					ARG90	0.037(#2)	CL	P1-S	N,S
	U-Factor 0.27			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.57 / 0.51			CR 59	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
14	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / E270 (DS 090 DS DS) 3/4" IG											
	0.264	0.345	0.118					ARG90	0.037(#3)	CL	P1-S	G,S
	U-Factor 0.29			SHGC (<1) 0.33				VT (<1) 0.51			CR 59	
	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / arg / lami (DS DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					ARG90	0.037(#2)	CL	P1-S	G,S
	U-Factor 0.29			SHGC (<1) 0.28				VT (<1) 0.51			CR 59	
15	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS SS SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	P1-S	N,S
	U-Factor 0.21			SHGC (N / <1) 0.26 / 0.24				VT (N / <1) 0.45 / 0.41			CR 67	
16	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS SS SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	P1-S	G,S
	U-Factor 0.22			SHGC (<1) 0.24				VT (<1) 0.41			CR 67	
17	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / air / clr (SS SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR 58	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / E366 (SS SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.54 / 0.48			CR 58	
18	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / arg / clr (SS SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR 62	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / E366 (SS SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.54 / 0.48			CR 62	
19	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / air / clr (DS DS) 3/4" IG											
	0.117	0.500	0.118					AIR	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 57	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / E366 (DS DS) 3/4" IG											
	0.118	0.500	0.117					AIR	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 57	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
20	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / arg / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.118					ARG90	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 61	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / E366 (DS/DS) 3/4" IG											
	0.118	0.500	0.117					ARG90	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 61	
21	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / E366 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.022(#3)	CL	P1-S	N,S
	U-Factor 0.27			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.52 / 0.47			CR 59	
	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.022(#2)	CL	P1-S	N,S
	U-Factor 0.27			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.52 / 0.47			CR 59	
22	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / E366 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.022(#3)	CL	P1-S	G,S
	U-Factor 0.28			SHGC (<1) 0.28				VT (<1) 0.47			CR 59	
	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.022(#2)	CL	P1-S	G,S
	U-Factor 0.28			SHGC (<1) 0.21				VT (<1) 0.47			CR 59	
23	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	P1-S	N,S
	U-Factor 0.21			SHGC (N / <1) 0.20 / 0.18				VT (N / <1) 0.39 / 0.35			CR 67	
24	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	P1-S	G,S
	U-Factor 0.22			SHGC (<1) 0.18				VT (<1) 0.35			CR 67	
25	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / air / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 58	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / 70/36 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 58	



**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
26	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 61	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / 70/36 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.41 / 0.37				VT (N / <1) 0.58 / 0.52			CR 61	
27	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / air / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 57	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / 70/36 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 57	
28	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 61	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / 70/36 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 61	
29	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / 70/36 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.036(#3)	CL	P1-S	N,S
	U-Factor 0.27			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.57 / 0.51			CR 59	
	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.036(#2)	CL	P1-S	N,S
	U-Factor 0.27			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.57 / 0.51			CR 59	
30	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / 70/36 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.036(#3)	CL	P1-S	G,S
	U-Factor 0.29			SHGC (<1) 0.34				VT (<1) 0.51			CR 59	
	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.036(#2)	CL	P1-S	G,S
	U-Factor 0.29			SHGC (<1) 0.29				VT (<1) 0.51			CR 59	

**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
31	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	P1-S	N,S
	U-Factor 0.21			SHGC (N / <1) 0.28 / 0.25				VT (N / <1) 0.45 / 0.40			CR 67	
32	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	P1-S	G,S
	U-Factor 0.22			SHGC (<1) 0.25				VT (<1) 0.40			CR 67	
33	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / air / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR 56	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / 80/70 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR 56	
34	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR 60	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / 80/70 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR 60	
35	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / air / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR 55	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / 80/70 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR 55	
36	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR 59	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / 80/70 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR 59	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
37	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / 80/70 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.095(#3)	CL	P1-S	N,S
	U-Factor 0.29			SHGC (N / <1) 0.53 / 0.48				VT (N / <1) 0.65 / 0.59			CR 57	
	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.095(#2)	CL	P1-S	N,S
	U-Factor 0.29			SHGC (N / <1) 0.54 / 0.48				VT (N / <1) 0.65 / 0.59			CR 57	
38	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / 80/70 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.095(#3)	CL	P1-S	G,S
	U-Factor 0.30			SHGC (<1) 0.48				VT (<1) 0.59			CR 57	
	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.095(#2)	CL	P1-S	G,S
	U-Factor 0.30			SHGC (<1) 0.48				VT (<1) 0.59			CR 57	
39	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	P1-S	N,S
	U-Factor 0.22			SHGC (N / <1) 0.49 / 0.44				VT (N / <1) 0.60 / 0.54			CR 66	
40	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	P1-S	G,S
	U-Factor 0.23			SHGC (<1) 0.44				VT (<1) 0.54			CR 66	
41	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR		CL	P1-S	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.65 / 0.59				VT (N / <1) 0.68 / 0.61			CR 45	
42	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr (DS/DS) 7/8" IG											
	0.118	0.625	0.118					AIR		CL	P1-S	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.64 / 0.58				VT (N / <1) 0.68 / 0.60			CR 45	
43	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr (5mm/DS) 7/8" IG											
	0.185	0.563	0.118					AIR		CL	P1-S	N,G,S
	U-Factor 0.43			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.67 / 0.60			CR 45	
44	141.148 / Opt 1 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.118					AIR		CL	P1-S	N,G,S
	U-Factor 0.43			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.66 / 0.59			CR 45	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / lami (DS/DS/090)DS) 7/8" IG											
	0.118	0.470	0.264					AIR		CL	P1-S	N,G,S
	U-Factor 0.43			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.66 / 0.59			CR 45	
45	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			AIR		CL	P1-S	N,S
	U-Factor 0.34			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.63 / 0.56			CR 54	
46	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			AIR		CL	P1-S	G,S
	U-Factor 0.35			SHGC (<1) 0.53				VT (<1) 0.56			CR 54	
47	141.148 / Opt 1 (No Refo, No Foam): E270 / air / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 58	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / E270 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.38 / 0.35				VT (N / <1) 0.58 / 0.52			CR 58	
48	141.148 / Opt 1 (No Refo, No Foam): E270 / arg / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 62	
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / E270 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.39 / 0.35				VT (N / <1) 0.58 / 0.52			CR 62	
49	141.148 / Opt 1 (No Refo, No Foam): E270 / air / clr (DS/DS) 7/8" IG											
	0.118	0.625	0.118					AIR	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 58	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / E270 (DS/DS) 7/8" IG											
	0.118	0.625	0.118					AIR	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR 58	
50	141.148 / Opt 1 (No Refo, No Foam): E270 / arg / clr (DS/DS) 7/8" IG											
	0.118	0.625	0.118					ARG90	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.30 / 0.28				VT (N / <1) 0.58 / 0.52			CR 62	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / E270 (DS/DS) 7/8" IG											
	0.118	0.625	0.118					ARG90	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR 62	
51	141.148 / Opt 1 (No Refo, No Foam): E270 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.118	0.470	0.264					ARG90	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.30 / 0.27				VT (N / <1) 0.57 / 0.51			CR 60	
	141.148 / Opt 1 (No Refo, No Foam): lami / arg / E270 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.118					ARG90	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.36 / 0.33				VT (N / <1) 0.57 / 0.51			CR 60	
52	141.148 / Opt 1 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	P1-S	N,S
	U-Factor 0.19			SHGC (N / <1) 0.26 / 0.24				VT (N / <1) 0.45 / 0.41			CR 70	
53	141.148 / Opt 1 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	P1-S	G,S
	U-Factor 0.20			SHGC (<1) 0.24				VT (<1) 0.41			CR 70	
54	141.148 / Opt 1 (No Refo, No Foam): E366 / air / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR 58	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / E366 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.54 / 0.48			CR 58	
55	141.148 / Opt 1 (No Refo, No Foam): E366 / arg / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR 62	
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / E366 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.33 / 0.30				VT (N / <1) 0.54 / 0.48			CR 62	
56	141.148 / Opt 1 (No Refo, No Foam): E366 / air / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.118					AIR	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 58	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / E366 (DS/DS) 7/8" IG											
	0.118	0.625	0.117					AIR	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 58	
57	141.148 / Opt 1 (No Refo, No Foam): E366 / arg / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.118					ARG90	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 62	
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / E366 (DS/DS) 7/8" IG											
	0.118	0.625	0.117					ARG90	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 62	
58	141.148 / Opt 1 (No Refo, No Foam): E366 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.117	0.470	0.264					ARG90	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.24			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.52 / 0.47			CR 61	
	141.148 / Opt 1 (No Refo, No Foam): lami / arg / E366 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.117					ARG90	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.24			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.52 / 0.47			CR 61	
59	141.148 / Opt 1 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	P1-S	N,S
	U-Factor 0.19			SHGC (N / <1) 0.20 / 0.18				VT (N / <1) 0.39 / 0.35			CR 71	
60	141.148 / Opt 1 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	P1-S	G,S
	U-Factor 0.19			SHGC (<1) 0.18				VT (<1) 0.35			CR 71	
61	141.148 / Opt 1 (No Refo, 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,S
	U-Factor 0.30			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 58	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / 70/36 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 58	
62	141.148 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 62	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / 70/36 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.41 / 0.37				VT (N / <1) 0.58 / 0.52			CR	62
63	141.148 / Opt 1 (No Refo, 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,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR	58
	141.148 / Opt 1 (No Refo, No Foam): clr / air / 70/36 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR	58
64	141.148 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR	62
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / 70/36 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR	62
65	141.148 / Opt 1 (No Refo, No Foam): 70/36 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.117	0.470	0.264					ARG90	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.57 / 0.51			CR	60
	141.148 / Opt 1 (No Refo, No Foam): lami / arg / 70/36 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.117					ARG90	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.57 / 0.51			CR	60
66	141.148 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	P1-S	N,S
	U-Factor 0.19			SHGC (N / <1) 0.28 / 0.25				VT (N / <1) 0.45 / 0.40			CR	70
67	141.148 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	P1-S	G,S
	U-Factor 0.20			SHGC (<1) 0.25				VT (<1) 0.40			CR	70
68	141.148 / Opt 1 (No Refo, No Foam): 80/70 / air / clr (SS/SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR	56

**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / 80/70 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR	56
69	141.148 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR	60
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / 80/70 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR	60
70	141.148 / Opt 1 (No Refo, No Foam): 80/70 / air / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR	56
	141.148 / Opt 1 (No Refo, No Foam): clr / air / 80/70 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR	56
71	141.148 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR	60
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / 80/70 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR	60
72	141.148 / Opt 1 (No Refo, No Foam): 80/70 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.117	0.470	0.264					ARG90	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.54 / 0.49				VT (N / <1) 0.65 / 0.59			CR	59
	141.148 / Opt 1 (No Refo, No Foam): lami / arg / 80/70 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.117					ARG90	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.53 / 0.48				VT (N / <1) 0.65 / 0.59			CR	59
73	141.148 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	P1-S	N,S
	U-Factor 0.20			SHGC (N / <1) 0.49 / 0.44				VT (N / <1) 0.60 / 0.54			CR	69



**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
74	141.148 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	P1-S	G,S
	U-Factor 0.21			SHGC (<1) 0.44				VT (<1) 0.54			CR 69	
75	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR		CL	SS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.65 / 0.59				VT (N / <1) 0.68 / 0.61			CR 43	
76	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR		CL	SS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.64 / 0.58				VT (N / <1) 0.68 / 0.60			CR 43	
77	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr (5mm/DS) 3/4" IG											
	0.185	0.438	0.118					AIR		CL	SS-D	N,G,S
	U-Factor 0.45			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.67 / 0.60			CR 43	
78	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr (5mm/DS) 3/4" IG											
	0.185	0.438	0.118					AIR		CL	SS-D	G
	U-Factor 0.45			SHGC (<1) 0.56				VT (<1) 0.60			CR 43	
79	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					AIR		CL	SS-D	N,S
	U-Factor 0.46			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.66 / 0.59			CR 42	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					AIR		CL	SS-D	N,S
	U-Factor 0.46			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.66 / 0.59			CR 42	
80	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					AIR		CL	SS-D	G,S
	U-Factor 0.47			SHGC (<1) 0.53				VT (<1) 0.59			CR 42	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					AIR		CL	SS-D	G,S
	U-Factor 0.47			SHGC (<1) 0.56				VT (<1) 0.59			CR 42	
81	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 3/4" IG (SS-D)											
	0.087	0.266	0.087	0.266	0.087			AIR		CL	SS-D	N,S
	U-Factor 0.35			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.63 / 0.56			CR 51	

**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
82	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 3/4" IG (SS-D)											
	0.087	0.266	0.087	0.266	0.087			AIR		CL	SS-D	G,S
	U-Factor 0.36			SHGC (<1) 0.53				VT (<1) 0.56			CR 51	
83	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / air / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 55	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / E270 (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR 55	
84	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / arg / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 59	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / E270 (SS/SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.38 / 0.35				VT (N / <1) 0.58 / 0.52			CR 59	
85	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / air / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 55	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / E270 (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR 55	
86	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / arg / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					ARG90	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 58	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / E270 (DS/DS) 3/4" IG											
	0.118	0.500	0.118					ARG90	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR 58	
87	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / E270 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					ARG90	0.037(#3)	CL	SS-D	N,S
	U-Factor 0.28			SHGC (N / <1) 0.36 / 0.33				VT (N / <1) 0.57 / 0.51			CR 56	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					ARG90	0.037(#2)	CL	SS-D	N,S
	U-Factor 0.28			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.57 / 0.51			CR 56	
88	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / E270 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					ARG90	0.037(#3)	CL	SS-D	G,S
	U-Factor 0.29			SHGC (<1) 0.33				VT (<1) 0.51			CR 56	
	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					ARG90	0.037(#2)	CL	SS-D	G,S
	U-Factor 0.29			SHGC (<1) 0.28				VT (<1) 0.51			CR 56	
89	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS/SS/SS) 3/4" IG (SS-D)											
	0.087	0.266	0.087	0.266	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	SS-D	N,S
	U-Factor 0.21			SHGC (N / <1) 0.26 / 0.24				VT (N / <1) 0.45 / 0.41			CR 65	
90	141.148/141.194 / Opt 1 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS/SS/SS) 3/4" IG (SS-D)											
	0.087	0.266	0.087	0.266	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	SS-D	G,S
	U-Factor 0.22			SHGC (<1) 0.24				VT (<1) 0.41			CR 65	
91	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / air / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR 55	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / E366 (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.54 / 0.48			CR 55	
92	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / arg / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR 59	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / E366 (SS/SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.54 / 0.48			CR 59	
93	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / air / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.118					AIR	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 55	

**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / E366 (DS/DS) 3/4" IG											
	0.118	0.500	0.117					AIR	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 55	
94	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / arg / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.118					ARG90	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 59	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / E366 (DS/DS) 3/4" IG											
	0.118	0.500	0.117					ARG90	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 59	
95	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / E366 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.022(#3)	CL	SS-D	N,S
	U-Factor 0.27			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.52 / 0.47			CR 57	
	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.022(#2)	CL	SS-D	N,S
	U-Factor 0.27			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.52 / 0.47			CR 57	
96	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / E366 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.022(#3)	CL	SS-D	G,S
	U-Factor 0.29			SHGC (<1) 0.28				VT (<1) 0.47			CR 57	
	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.022(#2)	CL	SS-D	G,S
	U-Factor 0.29			SHGC (<1) 0.21				VT (<1) 0.47			CR 57	
97	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 3/4" IG (SS-D)											
	0.087	0.266	0.087	0.266	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	SS-D	N,S
	U-Factor 0.21			SHGC (N / <1) 0.20 / 0.18				VT (N / <1) 0.39 / 0.35			CR 65	
98	141.148/141.194 / Opt 1 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 3/4" IG (SS-D)											
	0.087	0.266	0.087	0.266	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	SS-D	G,S
	U-Factor 0.22			SHGC (<1) 0.18				VT (<1) 0.35			CR 65	
99	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR		CL	SS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.65 / 0.59				VT (N / <1) 0.68 / 0.61			CR 44	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
100	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr (DS/DS) 7/8" IG											
	0.118	0.625	0.118					AIR		CL	SS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.64 / 0.58				VT (N / <1) 0.68 / 0.60			CR 44	
101	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr (5mm/DS) 7/8" IG											
	0.185	0.563	0.118					AIR		CL	SS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.67 / 0.60			CR 44	
102	141.148 / Opt 1 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.118					AIR		CL	SS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.66 / 0.59			CR 44	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 7/8" IG											
	0.118	0.470	0.264					AIR		CL	SS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.66 / 0.59			CR 44	
103	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			AIR		CL	SS-D	N,S
	U-Factor 0.34			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.63 / 0.56			CR 53	
104	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			AIR		CL	SS-D	G,S
	U-Factor 0.35			SHGC (<1) 0.53				VT (<1) 0.56			CR 53	
105	141.148 / Opt 1 (No Refo, No Foam): E270 / air / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 56	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / E270 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.38 / 0.35				VT (N / <1) 0.58 / 0.52			CR 56	
106	141.148 / Opt 1 (No Refo, No Foam): E270 / arg / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 59	
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / E270 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.39 / 0.35				VT (N / <1) 0.58 / 0.52			CR 59	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
107	141.148 / Opt 1 (No Refo, No Foam): E270 / air / clr (DS/DS) 7/8" IG											
	0.118	0.625	0.118					AIR	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 55	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / E270 (DS/DS) 7/8" IG											
	0.118	0.625	0.118					AIR	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR 55	
108	141.148 / Opt 1 (No Refo, No Foam): E270 / arg / clr (DS/DS) 7/8" IG											
	0.118	0.625	0.118					ARG90	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.30 / 0.28				VT (N / <1) 0.58 / 0.52			CR 59	
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / E270 (DS/DS) 7/8" IG											
	0.118	0.625	0.118					ARG90	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR 59	
109	141.148 / Opt 1 (No Refo, No Foam): E270 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.118	0.470	0.264					ARG90	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.30 / 0.27				VT (N / <1) 0.57 / 0.51			CR 58	
	141.148 / Opt 1 (No Refo, No Foam): lami / arg / E270 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.118					ARG90	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.36 / 0.33				VT (N / <1) 0.57 / 0.51			CR 58	
110	141.148 / Opt 1 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	SS-D	N,S
	U-Factor 0.20			SHGC (N / <1) 0.26 / 0.24				VT (N / <1) 0.45 / 0.41			CR 67	
111	141.148 / Opt 1 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	SS-D	G,S
	U-Factor 0.20			SHGC (<1) 0.24				VT (<1) 0.41			CR 67	
112	141.148 / Opt 1 (No Refo, No Foam): E366 / air / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR 56	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / E366 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.54 / 0.48			CR 56	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
113	141.148 / Opt 1 (No Refo, No Foam): E366 / arg / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR	60
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / E366 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.33 / 0.30				VT (N / <1) 0.54 / 0.48			CR	60
114	141.148 / Opt 1 (No Refo, No Foam): E366 / air / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.118					AIR	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR	55
	141.148 / Opt 1 (No Refo, No Foam): clr / air / E366 (DS/DS) 7/8" IG											
	0.118	0.625	0.117					AIR	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR	55
115	141.148 / Opt 1 (No Refo, No Foam): E366 / arg / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.118					ARG90	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR	59
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / E366 (DS/DS) 7/8" IG											
	0.118	0.625	0.117					ARG90	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR	59
116	141.148 / Opt 1 (No Refo, No Foam): E366 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.117	0.470	0.264					ARG90	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.52 / 0.47			CR	58
	141.148 / Opt 1 (No Refo, No Foam): lami / arg / E366 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.117					ARG90	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.52 / 0.47			CR	58
117	141.148 / Opt 1 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	SS-D	N,S
	U-Factor 0.20			SHGC (N / <1) 0.20 / 0.18				VT (N / <1) 0.39 / 0.35			CR	67
118	141.148 / Opt 1 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	SS-D	G,S
	U-Factor 0.20			SHGC (<1) 0.18				VT (<1) 0.35			CR	67

**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
119	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR		CL	TS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.65 / 0.59				VT (N / <1) 0.68 / 0.61			CR 43	
120	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR		CL	TS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.64 / 0.58				VT (N / <1) 0.68 / 0.60			CR 42	
121	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr (5mm/DS) 3/4" IG											
	0.185	0.438	0.118					AIR		CL	TS-D	N,G,S
	U-Factor 0.45			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.67 / 0.60			CR 42	
122	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr (5mm/DS) 3/4" IG											
	0.185	0.438	0.118					AIR		CL	TS-D	G
	U-Factor 0.45			SHGC (<1) 0.56				VT (<1) 0.60			CR 42	
123	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					AIR		CL	TS-D	N,S
	U-Factor 0.46			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.66 / 0.59			CR 41	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					AIR		CL	TS-D	N,S
	U-Factor 0.46			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.66 / 0.59			CR 41	
124	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					AIR		CL	TS-D	G,S
	U-Factor 0.47			SHGC (<1) 0.53				VT (<1) 0.59			CR 41	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					AIR		CL	TS-D	G,S
	U-Factor 0.47			SHGC (<1) 0.56				VT (<1) 0.59			CR 41	
125	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			AIR		CL	TS-D	N,S
	U-Factor 0.36			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.63 / 0.56			CR 50	
126	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			AIR		CL	TS-D	G,S
	U-Factor 0.37			SHGC (<1) 0.53				VT (<1) 0.56			CR 50	



**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
127	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / air / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 54	
128	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / 70/36 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 54	
128	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 58	
128	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / 70/36 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.41 / 0.37				VT (N / <1) 0.58 / 0.52			CR 58	
129	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / air / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 53	
129	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / 70/36 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 53	
130	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 57	
130	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / 70/36 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 57	
131	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / 70/36 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.036(#3)	CL	TS-D	N,S
	U-Factor 0.28			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.57 / 0.51			CR 55	
131	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.036(#2)	CL	TS-D	N,S
	U-Factor 0.28			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.57 / 0.51			CR 55	

**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
132	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / 70/36 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.036(#3)	CL	TS-D	G,S
	U-Factor 0.30			SHGC (<1) 0.34				VT (<1) 0.51			CR 55	
	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.036(#2)	CL	TS-D	G,S
	U-Factor 0.30			SHGC (<1) 0.29				VT (<1) 0.51			CR 55	
133	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	TS-D	N,S
	U-Factor 0.22			SHGC (N / <1) 0.28 / 0.25				VT (N / <1) 0.45 / 0.40			CR 63	
134	141.148/141.194 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	TS-D	G,S
	U-Factor 0.23			SHGC (<1) 0.25				VT (<1) 0.40			CR 63	
135	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / air / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.32			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR 53	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / 80/70 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.32			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR 53	
136	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR 56	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / 80/70 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR 56	
137	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / air / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR 52	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / air / 80/70 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR 52	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
138	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR 55	
	141.148/141.194 / Opt 1 (No Refo, No Foam): clr / arg / 80/70 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR 55	
139	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / 80/70 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.095(#3)	CL	TS-D	N,S
	U-Factor 0.30			SHGC (N / <1) 0.53 / 0.48				VT (N / <1) 0.65 / 0.59			CR 54	
	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.095(#2)	CL	TS-D	N,S
	U-Factor 0.30			SHGC (N / <1) 0.54 / 0.48				VT (N / <1) 0.65 / 0.59			CR 54	
140	141.148/141.194 / Opt 1 (No Refo, No Foam): lami / arg / 80/70 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.095(#3)	CL	TS-D	G,S
	U-Factor 0.31			SHGC (<1) 0.48				VT (<1) 0.59			CR 54	
	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.095(#2)	CL	TS-D	G,S
	U-Factor 0.31			SHGC (<1) 0.48				VT (<1) 0.59			CR 54	
141	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	TS-D	N,S
	U-Factor 0.23			SHGC (N / <1) 0.49 / 0.44				VT (N / <1) 0.60 / 0.54			CR 62	
142	141.148/141.194 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	TS-D	G,S
	U-Factor 0.24			SHGC (<1) 0.44				VT (<1) 0.54			CR 62	
143	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR		CL	TS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.65 / 0.59				VT (N / <1) 0.68 / 0.61			CR 44	
144	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr (DS/DS) 7/8" IG											
	0.118	0.625	0.118					AIR		CL	TS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.64 / 0.58				VT (N / <1) 0.68 / 0.60			CR 43	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
145	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr (5mm/DS) 7/8" IG											
	0.185	0.563	0.118					AIR		CL	TS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.67 / 0.60			CR 43	
146	141.148 / Opt 1 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.118					AIR		CL	TS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.66 / 0.59			CR 43	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 7/8" IG											
	0.118	0.470	0.264					AIR		CL	TS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.66 / 0.59			CR 43	
147	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			AIR		CL	TS-D	N,S
	U-Factor 0.35			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.63 / 0.56			CR 52	
148	141.148 / Opt 1 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			AIR		CL	TS-D	G,S
	U-Factor 0.35			SHGC (<1) 0.53				VT (<1) 0.56			CR 52	
149	141.148 / Opt 1 (No Refo, No Foam): 70/36 / air / clr (SS/SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 55	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / 70/36 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 55	
150	141.148 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 58	
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / 70/36 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.41 / 0.37				VT (N / <1) 0.58 / 0.52			CR 58	
151	141.148 / Opt 1 (No Refo, No Foam): 70/36 / air / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 54	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148 / Opt 1 (No Refo, No Foam): clr / air / 70/36 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR	54
152	141.148 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR	57
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / 70/36 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR	57
153	141.148 / Opt 1 (No Refo, No Foam): 70/36 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.117	0.470	0.264					ARG90	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.57 / 0.51			CR	56
	141.148 / Opt 1 (No Refo, No Foam): lami / arg / 70/36 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.117					ARG90	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.57 / 0.51			CR	56
154	141.148 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	TS-D	N,S
	U-Factor 0.20			SHGC (N / <1) 0.28 / 0.25				VT (N / <1) 0.45 / 0.40			CR	65
155	141.148 / Opt 1 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	TS-D	G,S
	U-Factor 0.21			SHGC (<1) 0.25				VT (<1) 0.40			CR	65
156	141.148 / Opt 1 (No Refo, No Foam): 80/70 / air / clr (SS/SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.32			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR	54
	141.148 / Opt 1 (No Refo, No Foam): clr / air / 80/70 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.32			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR	54
157	141.148 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR	57

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / 80/70 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR	57
158	141.148 / Opt 1 (No Refo, No Foam): 80/70 / air / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.32			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR	53
	141.148 / Opt 1 (No Refo, No Foam): clr / air / 80/70 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.32			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR	53
159	141.148 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR	56
	141.148 / Opt 1 (No Refo, No Foam): clr / arg / 80/70 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR	56
160	141.148 / Opt 1 (No Refo, No Foam): 80/70 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.117	0.470	0.264					ARG90	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.54 / 0.49				VT (N / <1) 0.65 / 0.59			CR	55
	141.148 / Opt 1 (No Refo, No Foam): lami / arg / 80/70 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.117					ARG90	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.53 / 0.48				VT (N / <1) 0.65 / 0.59			CR	55
161	141.148 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	TS-D	N,S
	U-Factor 0.21			SHGC (N / <1) 0.49 / 0.44				VT (N / <1) 0.60 / 0.54			CR	64
162	141.148 / Opt 1 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	TS-D	G,S
	U-Factor 0.22			SHGC (<1) 0.44				VT (<1) 0.54			CR	64
163	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR		CL	P1-S	N,G,S
	U-Factor 0.43			SHGC (N / <1) 0.65 / 0.59				VT (N / <1) 0.68 / 0.61			CR	45

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
164	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR		CL	P1-S	N,G,S
	U-Factor 0.43			SHGC (N / <1) 0.64 / 0.58				VT (N / <1) 0.68 / 0.60			CR 44	
165	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr (5mm/DS) 3/4" IG											
	0.185	0.438	0.118					AIR		CL	P1-S	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.67 / 0.60			CR 44	
166	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr (5mm/DS) 3/4" IG											
	0.185	0.438	0.118					AIR		CL	P1-S	G
	U-Factor 0.44			SHGC (<1) 0.56				VT (<1) 0.60			CR 44	
167	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					AIR		CL	P1-S	N,S
	U-Factor 0.45			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.66 / 0.59			CR 43	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					AIR		CL	P1-S	N,S
	U-Factor 0.45			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.66 / 0.59			CR 43	
168	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					AIR		CL	P1-S	G,S
	U-Factor 0.46			SHGC (<1) 0.53				VT (<1) 0.59			CR 43	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					AIR		CL	P1-S	G,S
	U-Factor 0.46			SHGC (<1) 0.56				VT (<1) 0.59			CR 43	
169	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			AIR		CL	P1-S	N,S
	U-Factor 0.35			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.63 / 0.56			CR 52	
170	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			AIR		CL	P1-S	G,S
	U-Factor 0.36			SHGC (<1) 0.53				VT (<1) 0.56			CR 52	
171	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / air / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 57	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / E270 (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR	57
172	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / arg / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR	61
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / E270 (SS/SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.38 / 0.35				VT (N / <1) 0.58 / 0.52			CR	61
173	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / air / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR	57
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / E270 (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR	57
174	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / arg / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					ARG90	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR	61
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / E270 (DS/DS) 3/4" IG											
	0.118	0.500	0.118					ARG90	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR	61
175	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / E270 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					ARG90	0.037(#3)	CL	P1-S	N,S
	U-Factor 0.27			SHGC (N / <1) 0.36 / 0.33				VT (N / <1) 0.57 / 0.51			CR	59
	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					ARG90	0.037(#2)	CL	P1-S	N,S
	U-Factor 0.27			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.57 / 0.51			CR	59
176	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / E270 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					ARG90	0.037(#3)	CL	P1-S	G,S
	U-Factor 0.28			SHGC (<1) 0.33				VT (<1) 0.51			CR	59



**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					ARG90	0.037(#2)	CL	P1-S	G,S
	U-Factor 0.28			SHGC (<1) 0.28				VT (<1) 0.51			CR 59	
177	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	P1-S	N,S
	U-Factor 0.21			SHGC (N / <1) 0.26 / 0.24				VT (N / <1) 0.45 / 0.41			CR 67	
178	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	P1-S	G,S
	U-Factor 0.22			SHGC (<1) 0.24				VT (<1) 0.41			CR 67	
179	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / air / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR 58	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / E366 (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.54 / 0.48			CR 58	
180	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / arg / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR 62	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / E366 (SS/SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.54 / 0.48			CR 62	
181	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / air / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.118					AIR	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 57	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / E366 (DS/DS) 3/4" IG											
	0.118	0.500	0.117					AIR	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 57	
182	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / arg / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.118					ARG90	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.24			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 61	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / E366 (DS/DS) 3/4" IG											
	0.118	0.500	0.117					ARG90	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.24			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 61	
183	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / E366 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.022(#3)	CL	P1-S	N,S
	U-Factor 0.26			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.52 / 0.47			CR 59	
	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.022(#2)	CL	P1-S	N,S
	U-Factor 0.26			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.52 / 0.47			CR 59	
184	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / E366 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.022(#3)	CL	P1-S	G,S
	U-Factor 0.28			SHGC (<1) 0.28				VT (<1) 0.47			CR 59	
	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.022(#2)	CL	P1-S	G,S
	U-Factor 0.28			SHGC (<1) 0.21				VT (<1) 0.47			CR 59	
185	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	P1-S	N,S
	U-Factor 0.21			SHGC (N / <1) 0.20 / 0.18				VT (N / <1) 0.39 / 0.35			CR 67	
186	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	P1-S	G,S
	U-Factor 0.22			SHGC (<1) 0.18				VT (<1) 0.35			CR 67	
187	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / air / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 57	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / 70/36 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 57	
188	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 61	

### NFRC 100/200/500 Summary Sheet Windgate/Belmont/Hawthorne Fixed

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / 70/36 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.41 / 0.37				VT (N / <1) 0.58 / 0.52			CR 61	
189	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / air / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 57	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / 70/36 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 57	
190	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 61	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / 70/36 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 61	
191	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / 70/36 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.036(#3)	CL	P1-S	N,S
	U-Factor 0.27			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.57 / 0.51			CR 59	
	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.036(#2)	CL	P1-S	N,S
	U-Factor 0.27			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.57 / 0.51			CR 59	
192	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / 70/36 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.036(#3)	CL	P1-S	G,S
	U-Factor 0.28			SHGC (<1) 0.34				VT (<1) 0.51			CR 59	
	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.036(#2)	CL	P1-S	G,S
	U-Factor 0.28			SHGC (<1) 0.29				VT (<1) 0.51			CR 59	
193	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	P1-S	N,S
	U-Factor 0.21			SHGC (N / <1) 0.28 / 0.25				VT (N / <1) 0.45 / 0.40			CR 67	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
194	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.036(#2) / 0.036(#5)		CL	P1-S, G,S
	U-Factor 0.22			SHGC (<1) 0.25				VT (<1) 0.40			CR 67	
195	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / air / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.095(#2)		CL	P1-S, N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR 56	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / 80/70 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.095(#3)		CL	P1-S, N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR 56	
196	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.095(#2)		CL	P1-S, N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR 60	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / 80/70 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.095(#3)		CL	P1-S, N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR 60	
197	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / air / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.095(#2)		CL	P1-S, N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR 55	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / 80/70 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.095(#3)		CL	P1-S, N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR 55	
198	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.095(#2)		CL	P1-S, N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR 59	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / 80/70 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.095(#3)		CL	P1-S, N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR 59	
199	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / 80/70 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.095(#3)		CL	P1-S, N,S
	U-Factor 0.29			SHGC (N / <1) 0.53 / 0.48				VT (N / <1) 0.65 / 0.59			CR 57	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Width 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance		
	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / arg / lami (DS/DS 090 DS) 3/4" IG												
	0.117	0.345	0.264						ARG90	0.095(#2)	CL	P1-S	N,S
	U-Factor 0.29			SHGC (N / <1) 0.54 / 0.48				VT (N / <1) 0.65 / 0.59			CR 57		
200	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / 80/70 (DS 090 DS/DS) 3/4" IG												
	0.264	0.345	0.117						ARG90	0.095(#3)	CL	P1-S	G,S
	U-Factor 0.30			SHGC (<1) 0.48				VT (<1) 0.59			CR 57		
	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / arg / lami (DS/DS 090 DS) 3/4" IG												
	0.117	0.345	0.264						ARG90	0.095(#2)	CL	P1-S	G,S
	U-Factor 0.30			SHGC (<1) 0.48				VT (<1) 0.59			CR 57		
201	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 3/4" IG												
	0.090	0.250	0.090	0.250	0.090				ARG90	0.095(#2) / 0.095(#5)	CL	P1-S	N,S
	U-Factor 0.22			SHGC (N / <1) 0.49 / 0.44				VT (N / <1) 0.60 / 0.54			CR 66		
202	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 3/4" IG												
	0.090	0.250	0.090	0.250	0.090				ARG90	0.095(#2) / 0.095(#5)	CL	P1-S	G,S
	U-Factor 0.23			SHGC (<1) 0.44				VT (<1) 0.54			CR 66		
203	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr (SS/SS) 7/8" IG												
	0.087	0.688	0.087						AIR		CL	P1-S	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.65 / 0.59				VT (N / <1) 0.68 / 0.61			CR 45		
204	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr (DS/DS) 7/8" IG												
	0.118	0.625	0.118						AIR		CL	P1-S	N,G,S
	U-Factor 0.43			SHGC (N / <1) 0.64 / 0.58				VT (N / <1) 0.68 / 0.60			CR 45		
205	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr (5mm/DS) 7/8" IG												
	0.185	0.563	0.118						AIR		CL	P1-S	N,G,S
	U-Factor 0.43			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.67 / 0.60			CR 45		
206	141.148 / Opt 2 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 7/8" IG												
	0.264	0.470	0.118						AIR		CL	P1-S	N,G,S
	U-Factor 0.43			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.66 / 0.59			CR 45		
	141.148 / Opt 2 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 7/8" IG												
	0.118	0.470	0.264						AIR		CL	P1-S	N,G,S
	U-Factor 0.43			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.66 / 0.59			CR 45		

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
207	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			AIR		CL	P1-S	N,S
	U-Factor 0.34			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.63 / 0.56			CR	54
208	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			AIR		CL	P1-S	G,S
	U-Factor 0.34			SHGC (<1) 0.53				VT (<1) 0.56			CR	54
209	141.148 / Opt 2 (No Refo, No Foam): E270 / air / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR	58
	141.148 / Opt 2 (No Refo, No Foam): clr / air / E270 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.38 / 0.35				VT (N / <1) 0.58 / 0.52			CR	58
210	141.148 / Opt 2 (No Refo, No Foam): E270 / arg / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR	62
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / E270 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.39 / 0.35				VT (N / <1) 0.58 / 0.52			CR	62
211	141.148 / Opt 2 (No Refo, No Foam): E270 / air / clr (DS/DS) 7/8" IG											
	0.118	0.625	0.118					AIR	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR	58
	141.148 / Opt 2 (No Refo, No Foam): clr / air / E270 (DS/DS) 7/8" IG											
	0.118	0.625	0.118					AIR	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR	58
212	141.148 / Opt 2 (No Refo, No Foam): E270 / arg / clr (DS/DS) 7/8" IG											
	0.118	0.625	0.118					ARG90	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.30 / 0.28				VT (N / <1) 0.58 / 0.52			CR	61
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / E270 (DS/DS) 7/8" IG											
	0.118	0.625	0.118					ARG90	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR	61

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
213	141.148 / Opt 2 (No Refo, No Foam): E270 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.118	0.470	0.264					ARG90	0.037(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.30 / 0.27				VT (N / <1) 0.57 / 0.51			CR 60	
	141.148 / Opt 2 (No Refo, No Foam): lami / arg / E270 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.118					ARG90	0.037(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.36 / 0.33				VT (N / <1) 0.57 / 0.51			CR 60	
214	141.148 / Opt 2 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	P1-S	N,S
	U-Factor 0.19			SHGC (N / <1) 0.26 / 0.24				VT (N / <1) 0.45 / 0.41			CR 70	
215	141.148 / Opt 2 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	P1-S	G,S
	U-Factor 0.19			SHGC (<1) 0.24				VT (<1) 0.41			CR 70	
216	141.148 / Opt 2 (No Refo, No Foam): E366 / air / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR 58	
	141.148 / Opt 2 (No Refo, No Foam): clr / air / E366 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.54 / 0.48			CR 58	
217	141.148 / Opt 2 (No Refo, No Foam): E366 / arg / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR 62	
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / E366 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.33 / 0.30				VT (N / <1) 0.54 / 0.48			CR 62	
218	141.148 / Opt 2 (No Refo, No Foam): E366 / air / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.118					AIR	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 58	
	141.148 / Opt 2 (No Refo, No Foam): clr / air / E366 (DS/DS) 7/8" IG											
	0.118	0.625	0.117					AIR	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 58	



**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
219	141.148 / Opt 2 (No Refo, No Foam): E366 / arg / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.118					ARG90	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 62	
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / E366 (DS/DS) 7/8" IG											
	0.118	0.625	0.117					ARG90	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 62	
220	141.148 / Opt 2 (No Refo, No Foam): E366 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.117	0.470	0.264					ARG90	0.022(#2)	CL	P1-S	N,G,S
	U-Factor 0.24			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.52 / 0.47			CR 61	
	141.148 / Opt 2 (No Refo, No Foam): lami / arg / E366 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.117					ARG90	0.022(#3)	CL	P1-S	N,G,S
	U-Factor 0.24			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.52 / 0.47			CR 61	
221	141.148 / Opt 2 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	P1-S	N,S
	U-Factor 0.19			SHGC (N / <1) 0.20 / 0.18				VT (N / <1) 0.39 / 0.35			CR 71	
222	141.148 / Opt 2 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	P1-S	G,S
	U-Factor 0.19			SHGC (<1) 0.18				VT (<1) 0.35			CR 71	
223	141.148 / Opt 2 (No Refo, 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,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 58	
	141.148 / Opt 2 (No Refo, No Foam): clr / air / 70/36 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 58	
224	141.148 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 62	
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / 70/36 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.41 / 0.37				VT (N / <1) 0.58 / 0.52			CR 62	



**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
225	141.148 / Opt 2 (No Refo, 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,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR	58
	141.148 / Opt 2 (No Refo, No Foam): clr / air / 70/36 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR	58
226	141.148 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR	61
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / 70/36 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR	61
227	141.148 / Opt 2 (No Refo, No Foam): 70/36 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.117	0.470	0.264					ARG90	0.036(#2)	CL	P1-S	N,G,S
	U-Factor 0.24			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.57 / 0.51			CR	60
	141.148 / Opt 2 (No Refo, No Foam): lami / arg / 70/36 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.117					ARG90	0.036(#3)	CL	P1-S	N,G,S
	U-Factor 0.24			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.57 / 0.51			CR	60
228	141.148 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	P1-S	N,S
	U-Factor 0.19			SHGC (N / <1) 0.28 / 0.25				VT (N / <1) 0.45 / 0.40			CR	70
229	141.148 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	P1-S	G,S
	U-Factor 0.19			SHGC (<1) 0.25				VT (<1) 0.40			CR	70
230	141.148 / Opt 2 (No Refo, No Foam): 80/70 / air / clr (SS/SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR	56
	141.148 / Opt 2 (No Refo, No Foam): clr / air / 80/70 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR	56

**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
231	141.148 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR	60
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / 80/70 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR	60
232	141.148 / Opt 2 (No Refo, No Foam): 80/70 / air / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR	56
	141.148 / Opt 2 (No Refo, No Foam): clr / air / 80/70 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR	56
233	141.148 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR	60
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / 80/70 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR	60
234	141.148 / Opt 2 (No Refo, No Foam): 80/70 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.117	0.470	0.264					ARG90	0.095(#2)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.54 / 0.49				VT (N / <1) 0.65 / 0.59			CR	59
	141.148 / Opt 2 (No Refo, No Foam): lami / arg / 80/70 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.117					ARG90	0.095(#3)	CL	P1-S	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.53 / 0.48				VT (N / <1) 0.65 / 0.59			CR	59
235	141.148 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	P1-S	N,S
	U-Factor 0.20			SHGC (N / <1) 0.49 / 0.44				VT (N / <1) 0.60 / 0.54			CR	69
236	141.148 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	P1-S	G,S
	U-Factor 0.21			SHGC (<1) 0.44				VT (<1) 0.54			CR	69

**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
237	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR		CL	SS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.65 / 0.59				VT (N / <1) 0.68 / 0.61			CR 43	
238	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR		CL	SS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.64 / 0.58				VT (N / <1) 0.68 / 0.60			CR 43	
239	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr (5mm/DS) 3/4" IG											
	0.185	0.438	0.118					AIR		CL	SS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.67 / 0.60			CR 43	
240	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr (5mm/DS) 3/4" IG											
	0.185	0.438	0.118					AIR		CL	SS-D	G
	U-Factor 0.45			SHGC (<1) 0.56				VT (<1) 0.60			CR 43	
241	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					AIR		CL	SS-D	N,S
	U-Factor 0.45			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.66 / 0.59			CR 42	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					AIR		CL	SS-D	N,S
	U-Factor 0.45			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.66 / 0.59			CR 42	
242	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					AIR		CL	SS-D	G,S
	U-Factor 0.46			SHGC (<1) 0.53				VT (<1) 0.59			CR 42	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					AIR		CL	SS-D	G,S
	U-Factor 0.46			SHGC (<1) 0.56				VT (<1) 0.59			CR 42	
243	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 3/4" IG (SS-D)											
	0.087	0.266	0.087	0.266	0.087			AIR		CL	SS-D	N,S
	U-Factor 0.35			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.63 / 0.56			CR 51	
244	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 3/4" IG (SS-D)											
	0.087	0.266	0.087	0.266	0.087			AIR		CL	SS-D	G,S
	U-Factor 0.36			SHGC (<1) 0.53				VT (<1) 0.56			CR 51	

**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
245	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / air / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 55	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / E270 (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR 55	
246	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / arg / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 59	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / E270 (SS/SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.38 / 0.35				VT (N / <1) 0.58 / 0.52			CR 59	
247	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / air / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 55	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / E270 (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR 55	
248	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / arg / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					ARG90	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 58	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / E270 (DS/DS) 3/4" IG											
	0.118	0.500	0.118					ARG90	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR 58	
249	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / E270 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					ARG90	0.037(#3)	CL	SS-D	N,S
	U-Factor 0.27			SHGC (N / <1) 0.36 / 0.33				VT (N / <1) 0.57 / 0.51			CR 56	
	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					ARG90	0.037(#2)	CL	SS-D	N,S
	U-Factor 0.27			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.57 / 0.51			CR 56	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
250	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / E270 (DS 090 DS DS) 3/4" IG											
	0.264	0.345	0.118					ARG90	0.037(#3)	CL	SS-D	G,S
	U-Factor 0.29			SHGC (<1) 0.33				VT (<1) 0.51			CR 56	
	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / arg / lami (DS DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					ARG90	0.037(#2)	CL	SS-D	G,S
	U-Factor 0.29			SHGC (<1) 0.28				VT (<1) 0.51			CR 56	
251	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS SS SS) 3/4" IG (SS-D)											
	0.087	0.266	0.087	0.266	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	SS-D	N,S
	U-Factor 0.21			SHGC (N / <1) 0.26 / 0.24				VT (N / <1) 0.45 / 0.41			CR 65	
252	141.148/141.194 / Opt 2 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS SS SS) 3/4" IG (SS-D)											
	0.087	0.266	0.087	0.266	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	SS-D	G,S
	U-Factor 0.22			SHGC (<1) 0.24				VT (<1) 0.41			CR 65	
253	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / air / clr (SS SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR 55	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / E366 (SS SS) 3/4" IG											
	0.087	0.563	0.087					AIR	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.54 / 0.48			CR 55	
254	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / arg / clr (SS SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR 59	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / E366 (SS SS) 3/4" IG											
	0.087	0.563	0.087					ARG90	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.54 / 0.48			CR 59	
255	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / air / clr (DS DS) 3/4" IG											
	0.117	0.500	0.118					AIR	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 55	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / E366 (DS DS) 3/4" IG											
	0.118	0.500	0.117					AIR	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 55	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
256	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / arg / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.118					ARG90	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 58	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / E366 (DS/DS) 3/4" IG											
	0.118	0.500	0.117					ARG90	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 58	
257	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / E366 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.022(#3)	CL	SS-D	N,S
	U-Factor 0.27			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.52 / 0.47			CR 56	
	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.022(#2)	CL	SS-D	N,S
	U-Factor 0.27			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.52 / 0.47			CR 56	
258	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / E366 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.022(#3)	CL	SS-D	G,S
	U-Factor 0.29			SHGC (<1) 0.28				VT (<1) 0.47			CR 56	
	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.022(#2)	CL	SS-D	G,S
	U-Factor 0.29			SHGC (<1) 0.21				VT (<1) 0.47			CR 56	
259	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 3/4" IG (SS-D)											
	0.087	0.266	0.087	0.266	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	SS-D	N,S
	U-Factor 0.21			SHGC (N / <1) 0.20 / 0.18				VT (N / <1) 0.39 / 0.35			CR 65	
260	141.148/141.194 / Opt 2 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 3/4" IG (SS-D)											
	0.087	0.266	0.087	0.266	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	SS-D	G,S
	U-Factor 0.21			SHGC (<1) 0.18				VT (<1) 0.35			CR 65	
261	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR		CL	SS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.65 / 0.59				VT (N / <1) 0.68 / 0.61			CR 44	
262	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr (DS/DS) 7/8" IG											
	0.118	0.625	0.118					AIR		CL	SS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.64 / 0.58				VT (N / <1) 0.68 / 0.60			CR 44	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
263	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr (5mm/DS) 7/8" IG											
	0.185	0.563	0.118					AIR		CL	SS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.67 / 0.60			CR 43	
264	141.148 / Opt 2 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.118					AIR		CL	SS-D	N,G,S
	U-Factor 0.43			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.66 / 0.59			CR 44	
	141.148 / Opt 2 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 7/8" IG											
	0.118	0.470	0.264					AIR		CL	SS-D	N,G,S
	U-Factor 0.43			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.66 / 0.59			CR 44	
265	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			AIR		CL	SS-D	N,S
	U-Factor 0.34			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.63 / 0.56			CR 53	
266	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			AIR		CL	SS-D	G,S
	U-Factor 0.35			SHGC (<1) 0.53				VT (<1) 0.56			CR 53	
267	141.148 / Opt 2 (No Refo, No Foam): E270 / air / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 56	
	141.148 / Opt 2 (No Refo, No Foam): clr / air / E270 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.38 / 0.35				VT (N / <1) 0.58 / 0.52			CR 56	
268	141.148 / Opt 2 (No Refo, No Foam): E270 / arg / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 59	
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / E270 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.39 / 0.35				VT (N / <1) 0.58 / 0.52			CR 59	
269	141.148 / Opt 2 (No Refo, No Foam): E270 / air / clr (DS/DS) 7/8" IG											
	0.118	0.625	0.118					AIR	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.58 / 0.52			CR 55	



**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148 / Opt 2 (No Refo, No Foam): clr / air / E270 (DS/DS) 7/8" IG											
	0.118	0.625	0.118					AIR	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR	55
270	141.148 / Opt 2 (No Refo, No Foam): E270 / arg / clr (DS/DS) 7/8" IG											
	0.118	0.625	0.118					ARG90	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.30 / 0.28				VT (N / <1) 0.58 / 0.52			CR	58
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / E270 (DS/DS) 7/8" IG											
	0.118	0.625	0.118					ARG90	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.58 / 0.52			CR	58
271	141.148 / Opt 2 (No Refo, No Foam): E270 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.118	0.470	0.264					ARG90	0.037(#2)	CL	SS-D	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.30 / 0.27				VT (N / <1) 0.57 / 0.51			CR	57
	141.148 / Opt 2 (No Refo, No Foam): lami / arg / E270 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.118					ARG90	0.037(#3)	CL	SS-D	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.36 / 0.33				VT (N / <1) 0.57 / 0.51			CR	57
272	141.148 / Opt 2 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	SS-D	N,S
	U-Factor 0.20			SHGC (N / <1) 0.26 / 0.24				VT (N / <1) 0.45 / 0.41			CR	67
273	141.148 / Opt 2 (No Refo, No Foam): E270 / arg / clr / arg / E270 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.037(#2) / 0.037(#5)	CL	SS-D	G,S
	U-Factor 0.20			SHGC (<1) 0.24				VT (<1) 0.41			CR	67
274	141.148 / Opt 2 (No Refo, No Foam): E366 / air / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR	56
	141.148 / Opt 2 (No Refo, No Foam): clr / air / E366 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.54 / 0.48			CR	56
275	141.148 / Opt 2 (No Refo, No Foam): E366 / arg / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.54 / 0.48			CR	60



**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / E366 (SS/SS) 7/8" IG											
	0.087	0.688	0.087					ARG90	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.33 / 0.30				VT (N / <1) 0.54 / 0.48			CR 60	
276	141.148 / Opt 2 (No Refo, No Foam): E366 / air / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.118					AIR	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 55	
	141.148 / Opt 2 (No Refo, No Foam): clr / air / E366 (DS/DS) 7/8" IG											
	0.118	0.625	0.117					AIR	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 55	
277	141.148 / Opt 2 (No Refo, No Foam): E366 / arg / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.118					ARG90	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.53 / 0.48			CR 59	
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / E366 (DS/DS) 7/8" IG											
	0.118	0.625	0.117					ARG90	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.53 / 0.48			CR 59	
278	141.148 / Opt 2 (No Refo, No Foam): E366 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.117	0.470	0.264					ARG90	0.022(#2)	CL	SS-D	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.23 / 0.21				VT (N / <1) 0.52 / 0.47			CR 58	
	141.148 / Opt 2 (No Refo, No Foam): lami / arg / E366 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.117					ARG90	0.022(#3)	CL	SS-D	N,G,S
	U-Factor 0.25			SHGC (N / <1) 0.31 / 0.28				VT (N / <1) 0.52 / 0.47			CR 58	
279	141.148 / Opt 2 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	SS-D	N,S
	U-Factor 0.19			SHGC (N / <1) 0.20 / 0.18				VT (N / <1) 0.39 / 0.35			CR 67	
280	141.148 / Opt 2 (No Refo, No Foam): E366 / arg / clr / arg / E366 (SS/SS/SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			ARG90	0.022(#2) / 0.022(#5)	CL	SS-D	G,S
	U-Factor 0.20			SHGC (<1) 0.18				VT (<1) 0.35			CR 67	
281	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr (SS/SS) 3/4" IG											
	0.087	0.563	0.087					AIR		CL	TS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.65 / 0.59				VT (N / <1) 0.68 / 0.61			CR 43	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
282	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr (DS/DS) 3/4" IG											
	0.118	0.500	0.118					AIR		CL	TS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.64 / 0.58				VT (N / <1) 0.68 / 0.60			CR 42	
283	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr (5mm/DS) 3/4" IG											
	0.185	0.438	0.118					AIR		CL	TS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.67 / 0.60			CR 42	
284	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr (5mm/DS) 3/4" IG											
	0.185	0.438	0.118					AIR		CL	TS-D	G
	U-Factor 0.45			SHGC (<1) 0.56				VT (<1) 0.60			CR 42	
285	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					AIR		CL	TS-D	N,S
	U-Factor 0.46			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.66 / 0.59			CR 41	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					AIR		CL	TS-D	N,S
	U-Factor 0.46			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.66 / 0.59			CR 41	
286	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / air / clr (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.118					AIR		CL	TS-D	G,S
	U-Factor 0.47			SHGC (<1) 0.53				VT (<1) 0.59			CR 41	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / lami (DS/DS 090 DS) 3/4" IG											
	0.118	0.345	0.264					AIR		CL	TS-D	G,S
	U-Factor 0.47			SHGC (<1) 0.56				VT (<1) 0.59			CR 41	
287	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			AIR		CL	TS-D	N,S
	U-Factor 0.36			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.63 / 0.56			CR 50	
288	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / clr / air / clr (SS/SS/SS) 3/4" IG (P1-S)											
	0.087	0.250	0.087	0.250	0.087			AIR		CL	TS-D	G,S
	U-Factor 0.37			SHGC (<1) 0.53				VT (<1) 0.56			CR 50	
289	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / air / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 54	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / 70/36 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 54	
290	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 57	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / 70/36 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.41 / 0.37				VT (N / <1) 0.58 / 0.52			CR 57	
291	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / air / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 53	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / 70/36 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.29			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 53	
292	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 57	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / 70/36 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 57	
293	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / 70/36 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.036(#3)	CL	TS-D	N,S
	U-Factor 0.28			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.57 / 0.51			CR 55	
	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.036(#2)	CL	TS-D	N,S
	U-Factor 0.28			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.57 / 0.51			CR 55	
294	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / 70/36 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.036(#3)	CL	TS-D	G,S
	U-Factor 0.29			SHGC (<1) 0.34				VT (<1) 0.51			CR 55	

**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.036(#2)	CL	TS-D	G,S
	U-Factor 0.29			SHGC (<1) 0.29				VT (<1) 0.51			CR 55	
295	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	TS-D	N,S
	U-Factor 0.22			SHGC (N / <1) 0.28 / 0.25				VT (N / <1) 0.45 / 0.40			CR 63	
296	141.148/141.194 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	TS-D	G,S
	U-Factor 0.23			SHGC (<1) 0.25				VT (<1) 0.40			CR 63	
297	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / air / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR 53	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / 80/70 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					AIR	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR 53	
298	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR 56	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / 80/70 (SS/SS) 3/4" IG											
	0.090	0.563	0.090					ARG90	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR 56	
299	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / air / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR 52	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / air / 80/70 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					AIR	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.31			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR 52	
300	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR 55	

**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
	141.148/141.194 / Opt 2 (No Refo, No Foam): clr / arg / 80/70 (DS/DS) 3/4" IG											
	0.117	0.500	0.117					ARG90	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR 55	
301	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / 80/70 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.095(#3)	CL	TS-D	N,S
	U-Factor 0.29			SHGC (N / <1) 0.53 / 0.48				VT (N / <1) 0.65 / 0.59			CR 54	
	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.095(#2)	CL	TS-D	N,S
	U-Factor 0.29			SHGC (N / <1) 0.54 / 0.48				VT (N / <1) 0.65 / 0.59			CR 54	
302	141.148/141.194 / Opt 2 (No Refo, No Foam): lami / arg / 80/70 (DS 090 DS/DS) 3/4" IG											
	0.264	0.345	0.117					ARG90	0.095(#3)	CL	TS-D	G,S
	U-Factor 0.31			SHGC (<1) 0.48				VT (<1) 0.59			CR 54	
	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / arg / lami (DS/DS 090 DS) 3/4" IG											
	0.117	0.345	0.264					ARG90	0.095(#2)	CL	TS-D	G,S
	U-Factor 0.31			SHGC (<1) 0.48				VT (<1) 0.59			CR 54	
303	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	TS-D	N,S
	U-Factor 0.23			SHGC (N / <1) 0.49 / 0.44				VT (N / <1) 0.60 / 0.54			CR 62	
304	141.148/141.194 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 3/4" IG											
	0.090	0.250	0.090	0.250	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	TS-D	G,S
	U-Factor 0.24			SHGC (<1) 0.44				VT (<1) 0.54			CR 62	
305	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr (SS/SS) 7/8" IG											
	0.087	0.688	0.087					AIR		CL	TS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.65 / 0.59				VT (N / <1) 0.68 / 0.61			CR 43	
306	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr (DS/DS) 7/8" IG											
	0.118	0.625	0.118					AIR		CL	TS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.64 / 0.58				VT (N / <1) 0.68 / 0.60			CR 43	
307	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr (5mm/DS) 7/8" IG											
	0.185	0.563	0.118					AIR		CL	TS-D	N,G,S
	U-Factor 0.44			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.67 / 0.60			CR 43	

**NFRC 100/200/500 Summary Sheet**  
**Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
308	141.148 / Opt 2 (No Refo, No Foam): lami / air / clr (DS 090 DS DS) 7/8" IG											
	0.264	0.470	0.118					AIR		CL	TS-D	N,G,S
	U-Factor 0.43			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.66 / 0.59			CR 43	
	141.148 / Opt 2 (No Refo, No Foam): clr / air / lami (DS DS 090 DS) 7/8" IG											
	0.118	0.470	0.264					AIR		CL	TS-D	N,G,S
	U-Factor 0.43			SHGC (N / <1) 0.62 / 0.56				VT (N / <1) 0.66 / 0.59			CR 43	
309	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr / air / clr (SS SS SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			AIR		CL	TS-D	N,S
	U-Factor 0.34			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.63 / 0.56			CR 52	
310	141.148 / Opt 2 (No Refo, No Foam): clr / air / clr / air / clr (SS SS SS) 7/8" IG											
	0.087	0.297	0.087	0.297	0.087			AIR		CL	TS-D	G,S
	U-Factor 0.35			SHGC (<1) 0.53				VT (<1) 0.56			CR 52	
311	141.148 / Opt 2 (No Refo, No Foam): 70/36 / air / clr (SS SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 55	
	141.148 / Opt 2 (No Refo, No Foam): clr / air / 70/36 (SS SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 55	
312	141.148 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr (SS SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 58	
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / 70/36 (SS SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.41 / 0.37				VT (N / <1) 0.58 / 0.52			CR 58	
313	141.148 / Opt 2 (No Refo, No Foam): 70/36 / air / clr (DS DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 54	
	141.148 / Opt 2 (No Refo, No Foam): clr / air / 70/36 (DS DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.30			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 54	

**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
314	141.148 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.58 / 0.52			CR 57	
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / 70/36 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.40 / 0.36				VT (N / <1) 0.58 / 0.52			CR 57	
315	141.148 / Opt 2 (No Refo, No Foam): 70/36 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.117	0.470	0.264					ARG90	0.036(#2)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.32 / 0.29				VT (N / <1) 0.57 / 0.51			CR 56	
	141.148 / Opt 2 (No Refo, No Foam): lami / arg / 70/36 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.117					ARG90	0.036(#3)	CL	TS-D	N,G,S
	U-Factor 0.26			SHGC (N / <1) 0.38 / 0.34				VT (N / <1) 0.57 / 0.51			CR 56	
316	141.148 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	TS-D	N,S
	U-Factor 0.20			SHGC (N / <1) 0.28 / 0.25				VT (N / <1) 0.45 / 0.40			CR 65	
317	141.148 / Opt 2 (No Refo, No Foam): 70/36 / arg / clr / arg / 70/36 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.036(#2) / 0.036(#5)	CL	TS-D	G,S
	U-Factor 0.20			SHGC (<1) 0.25				VT (<1) 0.40			CR 65	
318	141.148 / Opt 2 (No Refo, No Foam): 80/70 / air / clr (SS/SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.32			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR 53	
	141.148 / Opt 2 (No Refo, No Foam): clr / air / 80/70 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					AIR	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.32			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR 53	
319	141.148 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.55 / 0.50				VT (N / <1) 0.67 / 0.60			CR 57	
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / 80/70 (SS/SS) 7/8" IG											
	0.090	0.688	0.090					ARG90	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.59 / 0.53				VT (N / <1) 0.67 / 0.60			CR 57	

**NFRC 100/200/500 Summary Sheet  
Windgate/Belmont/Hawthorne Fixed**

ID	Pane Thickness 1	Gap Width 1	Pane Thickness 2	Gap Width 2	Pane Thickness 3	Gap Width 3	Pane Thickness 4	Gap Fill	Low-e (Surface#)	Tint	Spacer	Grid Type
	U-Factor			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)			Condensation Resistance	
320	141.148 / Opt 2 (No Refo, No Foam): 80/70 / air / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.32			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR	53
	141.148 / Opt 2 (No Refo, No Foam): clr / air / 80/70 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					AIR	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.32			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR	53
321	141.148 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.55 / 0.49				VT (N / <1) 0.67 / 0.59			CR	56
	141.148 / Opt 2 (No Refo, No Foam): clr / arg / 80/70 (DS/DS) 7/8" IG											
	0.117	0.625	0.117					ARG90	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.28			SHGC (N / <1) 0.58 / 0.52				VT (N / <1) 0.67 / 0.59			CR	56
322	141.148 / Opt 2 (No Refo, No Foam): 80/70 / arg / lami (DS/DS 090 DS) 7/8" IG											
	0.117	0.470	0.264					ARG90	0.095(#2)	CL	TS-D	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.54 / 0.49				VT (N / <1) 0.65 / 0.59			CR	55
	141.148 / Opt 2 (No Refo, No Foam): lami / arg / 80/70 (DS 090 DS/DS) 7/8" IG											
	0.264	0.470	0.117					ARG90	0.095(#3)	CL	TS-D	N,G,S
	U-Factor 0.27			SHGC (N / <1) 0.53 / 0.48				VT (N / <1) 0.65 / 0.59			CR	55
323	141.148 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	TS-D	N,S
	U-Factor 0.21			SHGC (N / <1) 0.49 / 0.44				VT (N / <1) 0.60 / 0.54			CR	64
324	141.148 / Opt 2 (No Refo, No Foam): 80/70 / arg / clr / arg / 80/70 (SS/SS/SS) 7/8" IG											
	0.090	0.297	0.090	0.297	0.090			ARG90	0.095(#2) / 0.095(#5)	CL	TS-D	G,S
	U-Factor 0.22			SHGC (<1) 0.44				VT (<1) 0.54			CR	64



The 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 Certification Authorization Report (CAR) by an NFRC accredited Inspection Agency (IA) are to be used for labeling purposes. The ratings values were rounded in accordance to NFRC 601, NFRC Unit and Measurement Policy.

Intertek-ATI 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.

This report is reissued in the name of American Window Alliance, Inc. through written authorization of Deceuninck North America, LLC, to whom the original report was rendered. The original Deceuninck North America, LLC report number is G6284.01-116-45.

Intertek-ATI will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Intertek-ATI for the entire test record retention period. The test record retention end date for this report is May 9, 2022.

Results obtained are simulated values and were secured by using the designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the product simulated. This report may not be reproduced, except in full, without the written approval of Intertek-ATI

For INTERTEK-ATI:

SIMULATED BY:

REVIEWED BY:

---

Eric S. Leitner  
Simulation Technician Team Leader  
NFRC Certified Simulator

---

Kristen L. Louder  
Senior Simulation Technician  
Simulator-In-Responsible-Charge

ESL:esl  
G6285.02-116-45

Attachments (pages):                      This report is complete only when all attachments listed are included.  
Appendix A: Drawings and Bills of Material (22)

**Revision Log**

<b><u>Rev. #</u></b>	<b><u>Date</u></b>	<b><u>Page(s)</u></b>	<b><u>Revision(s)</u></b>
.01R0	05/09/17	All	- Original report issued to Deceuninck North America, LLC
.02R0	05/09/17	All	- Reissue report in the name of American Window Alliance, Inc.

All drawings and Bills of Material used to simulate this product are enclosed in this Appendix  
Some drawings may be omitted at the extruder's request.

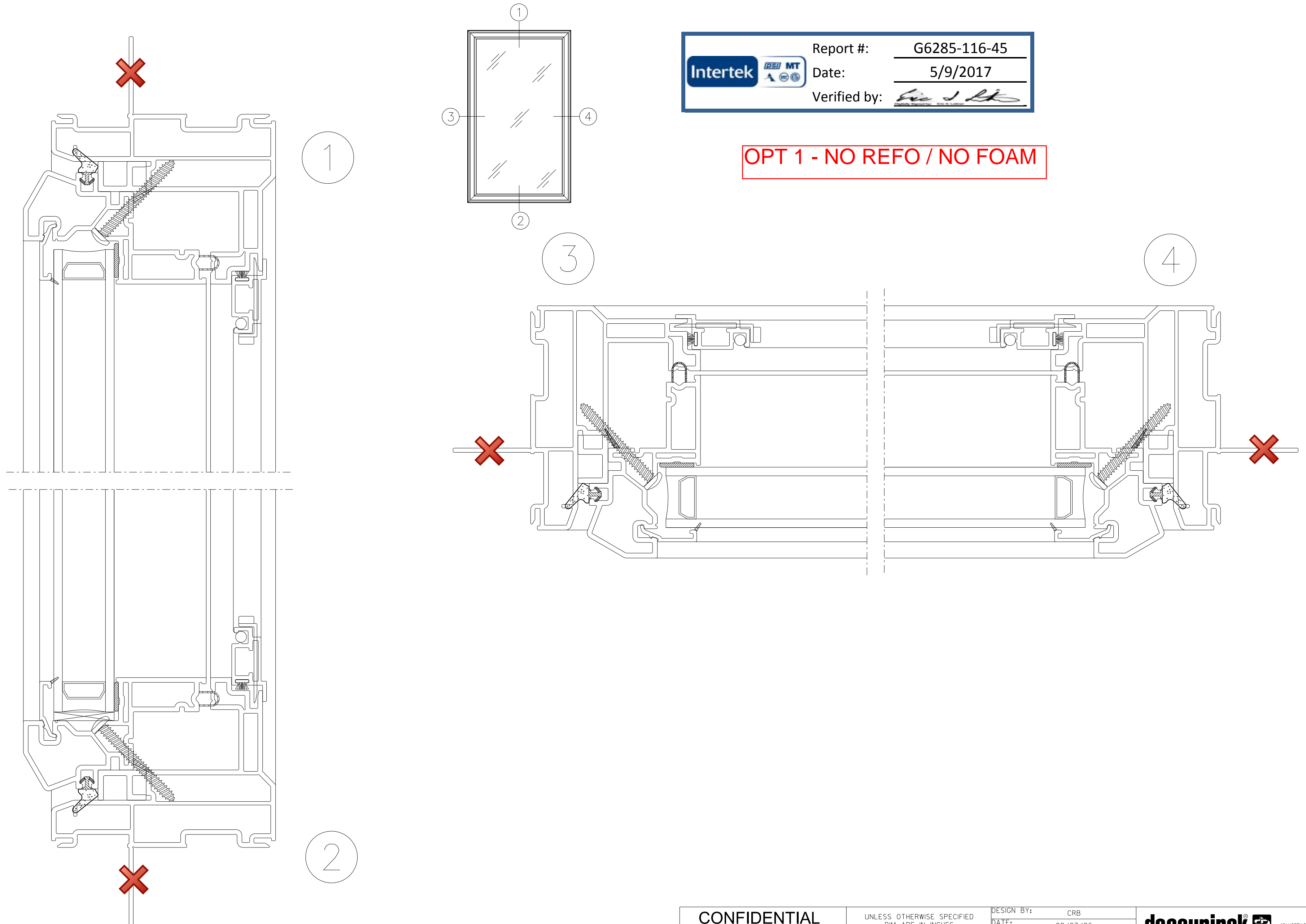
## **Appendix A**



G6285.02-116-45

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.


 Report #: G6285-116-45  
 Date: 5/9/2017  
 Verified by: *[Signature]*

**OPT 1 - NO REFO / NO FOAM**



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	THIRD ANGLE PROJECTION 		

7/31/2013

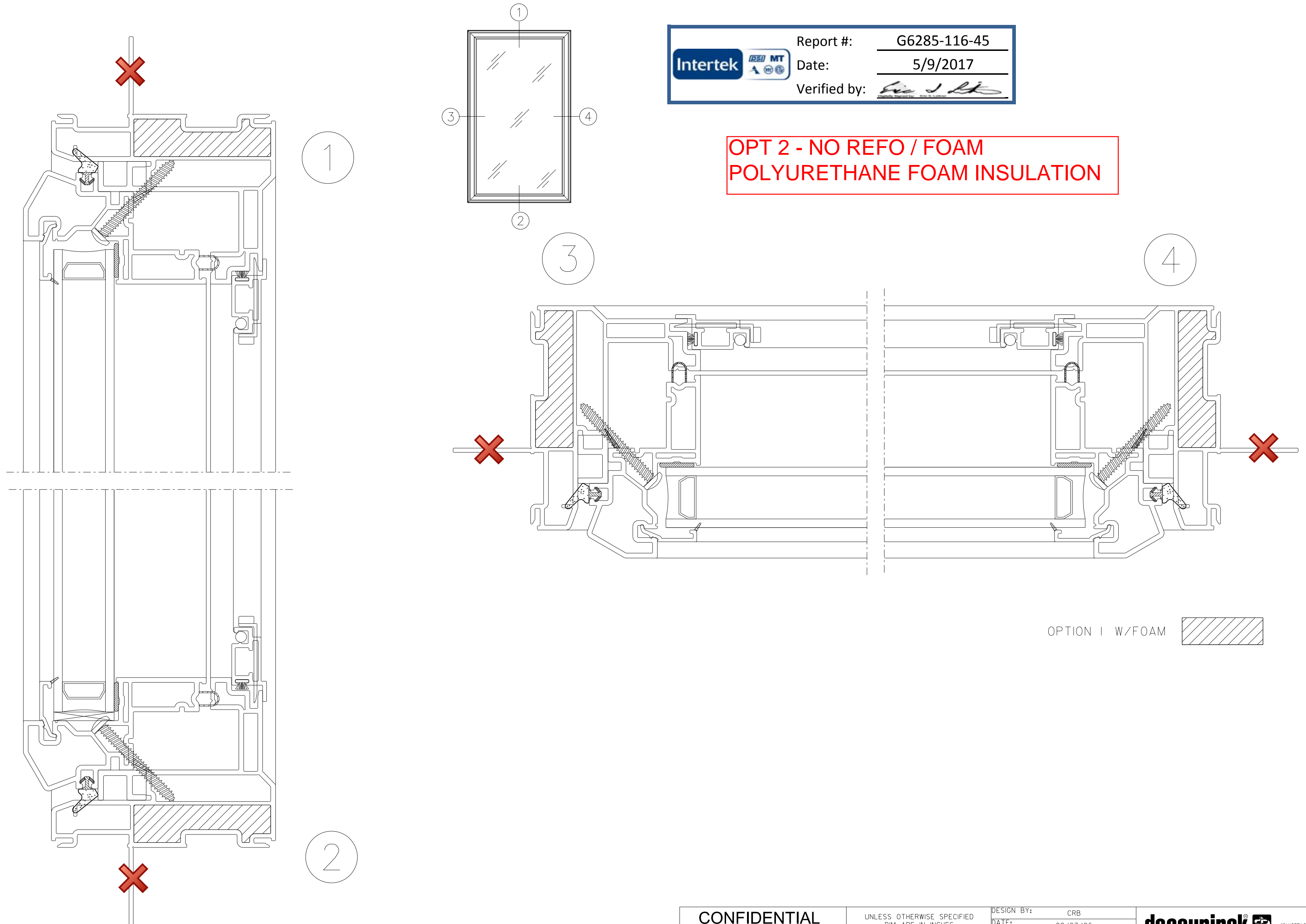
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
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CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.


 Report #: G6285-116-45  
 Date: 5/9/2017  
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**OPT 2 - NO REFO / FOAM  
POLYURETHANE FOAM INSULATION**



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	THIRD ANGLE PROJECTION 	NAME: 141148 CA FIXED LITE - 001 SIZE DWG. NO: 141148CAFL-001 SCALE: 1:1 (LBS/FT.) SHEET:	REV. NEW

7/31/2013 usbsq \\monstrv01\dectech\data\dgn\84808.DGN



Report #: G6285-116-45  
 Date: 5/9/2017  
 Verified by: *[Signature]*

## 141.148 FL - 001 - BILL OF MATERIALS

ITEM NO.	DESCRIPTION	QUANTITY	PART NO.	FAB DWG. NO	SOURCE
1	HEAD	1	10008056	P8056F07	A
2	SILL	1	10008056	P8056F07	A
3	LOCK JAMB	2	10008056	P8056F07	A
4					
5	TOP RAIL	1	10005432	P5484F07	A
6	BOTTOM RAIL	1	10005432	P5484F08	A
7	KEEPER STILE	1	10005432	P5484F07	A
8	HINGE STILE	1	10005432	P5484F07	A
9	GLAZING BEAD	4	10005473	P5473F01	A
10					
11	FIXED LITE SPACER	4	10001200	P1200001	A
12	FIXED LITE FASTENERS	AS REQ'D	#8 x 1-3/4" PFH		TBD
13					
14	3/4" INSULATED GLASS	1	REFER TO APPLICABLE TEST REPORT		TBD
15	GLAZING TAPE	AS REQ'D	REFER TO APPLICABLE TEST REPORT		TBD
16	SETTING BLOCKS (REFER TO IG SUPPLIER GUIDELINES)	AS REQ'D	REFER TO APPLICABLE TEST REPORT		TBD
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

Rev	Date	Description	By	
				CONFIDENTIAL UNPUBLISHED WORK © 2009 DECEUNINCK NORTH AMERICA

MONROE, OH		COPYRIGHT 2009	
NAME:	141.148 FL - 001		
DWN BY:	JGM	3/10/2009	
CHKD BY:			
DWG NO:	141148FL-001		

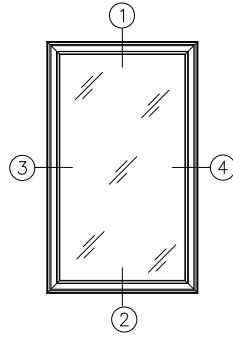
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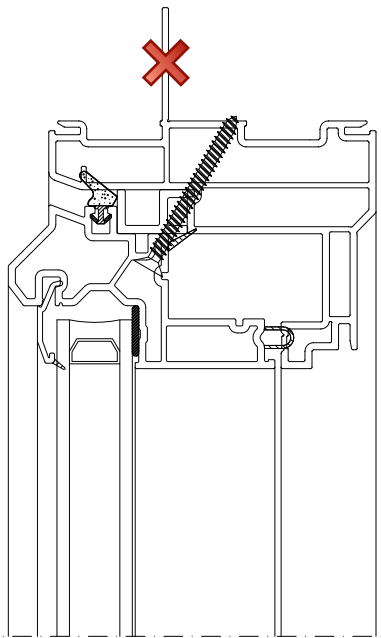
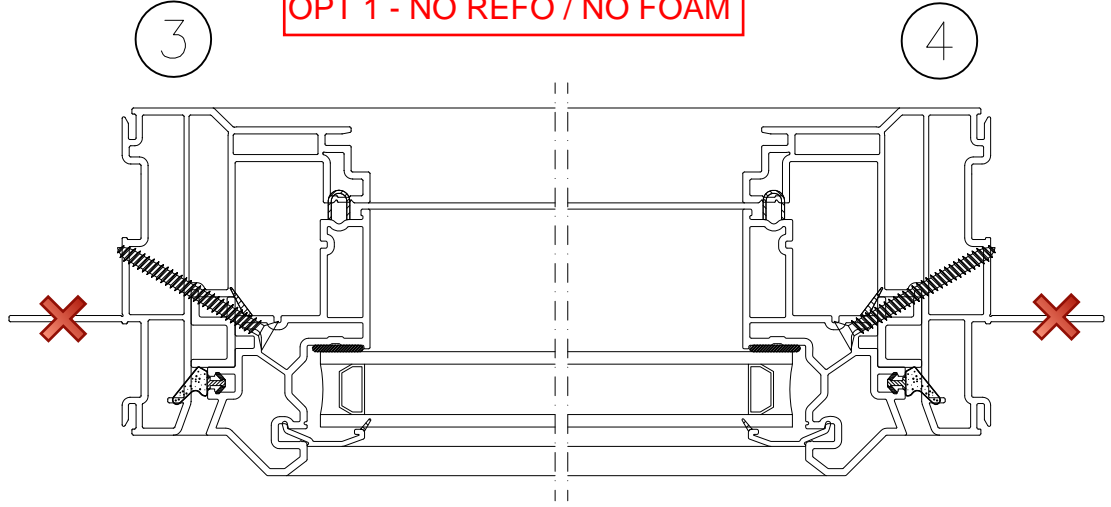
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REV	DESCRIPTION	DATE	APPROVED
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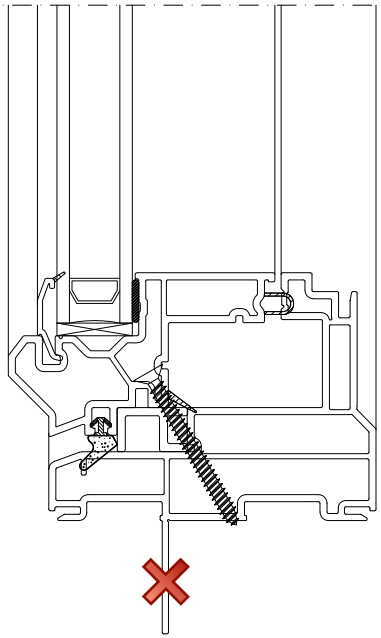
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 Date: 5/9/2017  
 Verified by: [Signature]





**OPT 1 - NO REFO / NO FOAM**



1



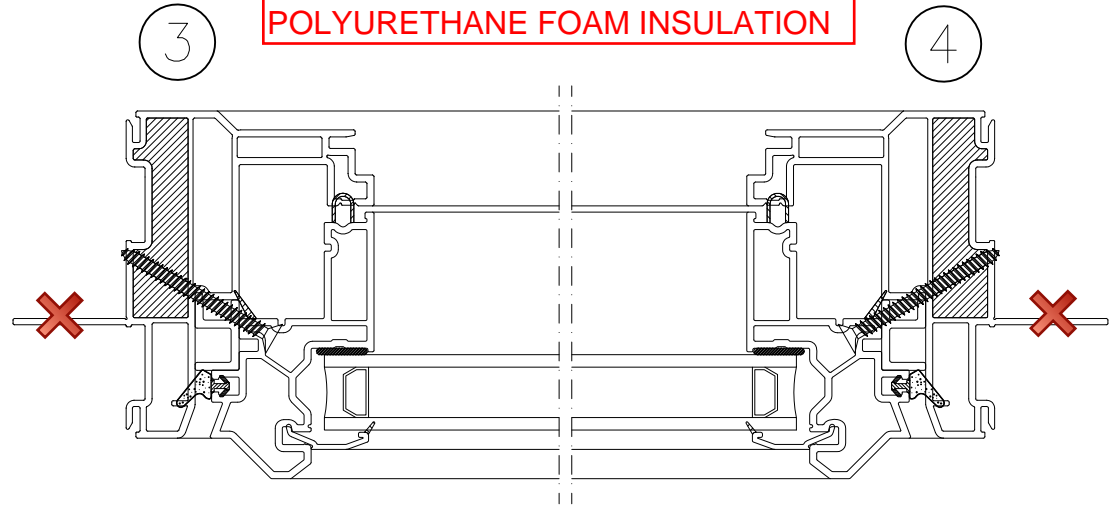
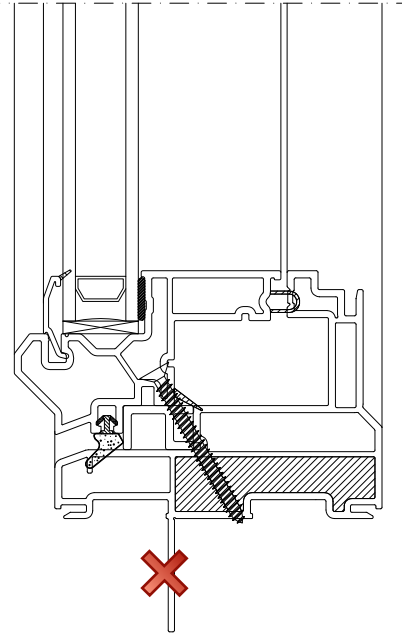
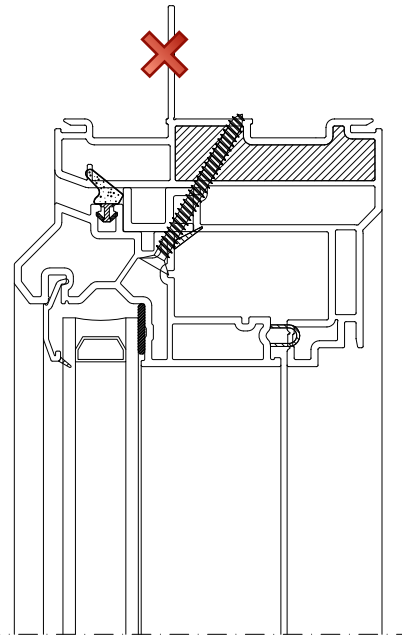
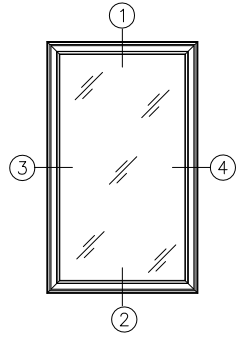
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	THIRD ANGLE PROJECTION 	NAME: 141.194 FL - 002 SIZE DWG. NO: 141194FL-002 SCALE: 1 : 1 (LBS/FT.) SHEET: 1 OF 1	REV. NEW

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
0	MODIFY SCREEN TRACK	08/04/04	DBF

Report #: G6285-116-45  
 Date: 5/9/2017  
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**OPT 2 - NO REFO / FOAM  
 POLYURETHANE FOAM INSULATION**



OPTION 1 - W/ FOAM


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	THIRD ANGLE PROJECTION 	FILENAME: 140960	



 	Report #:	G6285-116-45
	Date:	5/9/2017
	Verified by:	

## 141.194 FL - 001 - BILL OF MATERIALS

ITEM NO.	DESCRIPTION	QUANTITY	PART NO.	FAB DWG. NO	SOURCE
1	HEAD	1	10008056	P8056F07	A
2	SILL	1	10008056	P8056F07	A
3	LOCK JAMB	2	10008056	P8056F07	A
4					
5	TOP RAIL	1	10005484	P5484F07	A
6	BOTTOM RAIL	1	10005484	P5484F08	A
7	KEEPER STILE	1	10005484	P5484F07	A
8	HINGE STILE	1	10005484	P5484F07	A
9	GLAZING BEAD	4	10005473	P5473F01	A
10					
11	FIXED LITE SPACER	4	10001200	P1200001	A
12	FIXED LITE FASTENERS	AS REQ'D	#8 x 1-3/4" PFH		TBD
13					
14	3/4" INSULATED GLASS	1	REFER TO APPLICABLE TEST REPORT		TBD
15	GLAZING TAPE	AS REQ'D	REFER TO APPLICABLE TEST REPORT		TBD
16	SETTING BLOCKS (REFER TO IG SUPPLIER GUIDELINES)	AS REQ'D	REFER TO APPLICABLE TEST REPORT		TBD
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

<b>Rev</b>	<b>Date</b>	<b>Description</b>	<b>By</b>	 NORTH AMERICA MONROE, OH CONFIDENTIAL UNPUBLISHED WORK © 2009 DECEUNINCK NORTH AMERICA
				MONROE, OH NAME: 141.194 FL - 001 DWN BY: JGM CHKD BY: DWG NO: 141194FL-001 COPYRIGHT 2009 3/10/2009

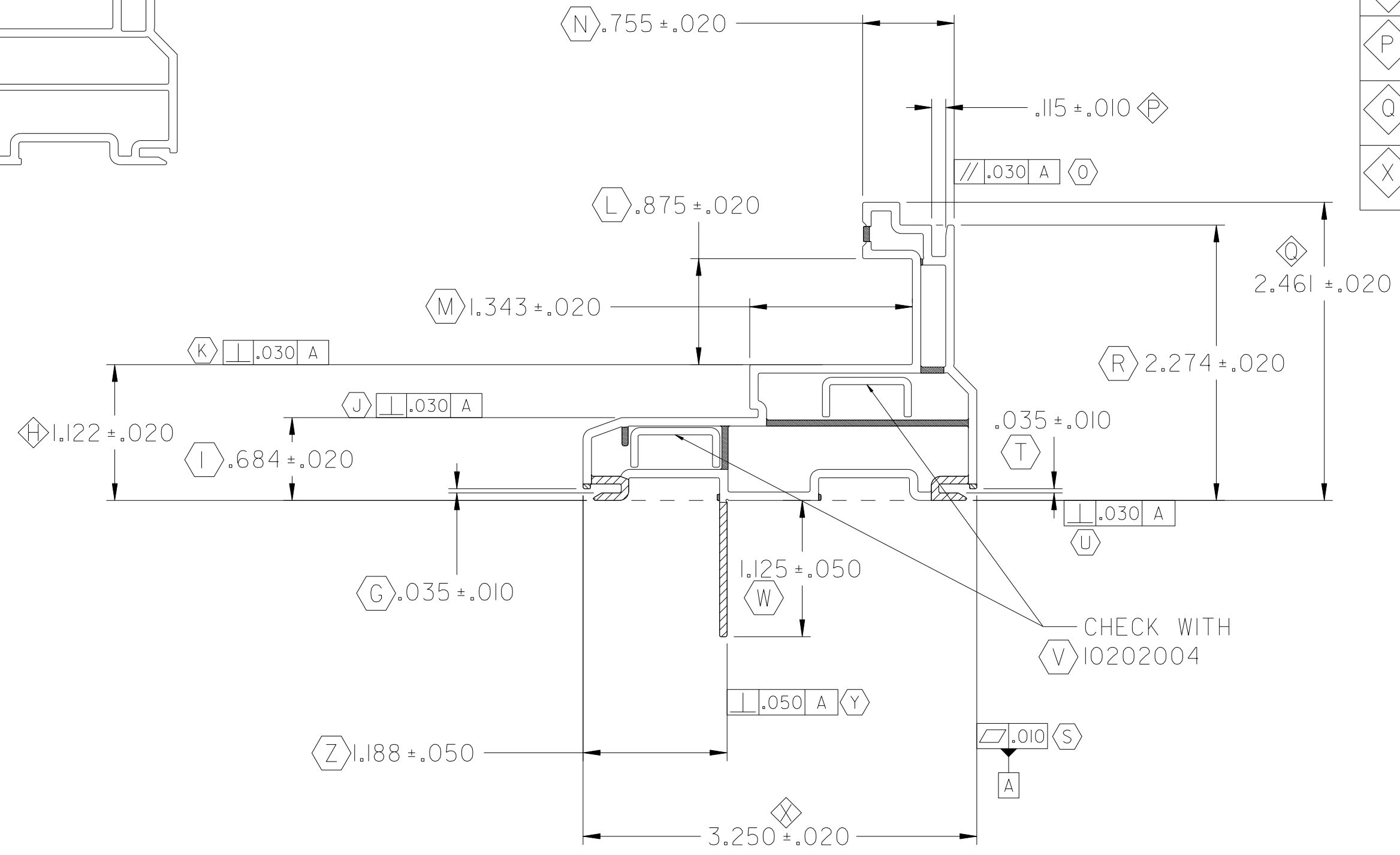
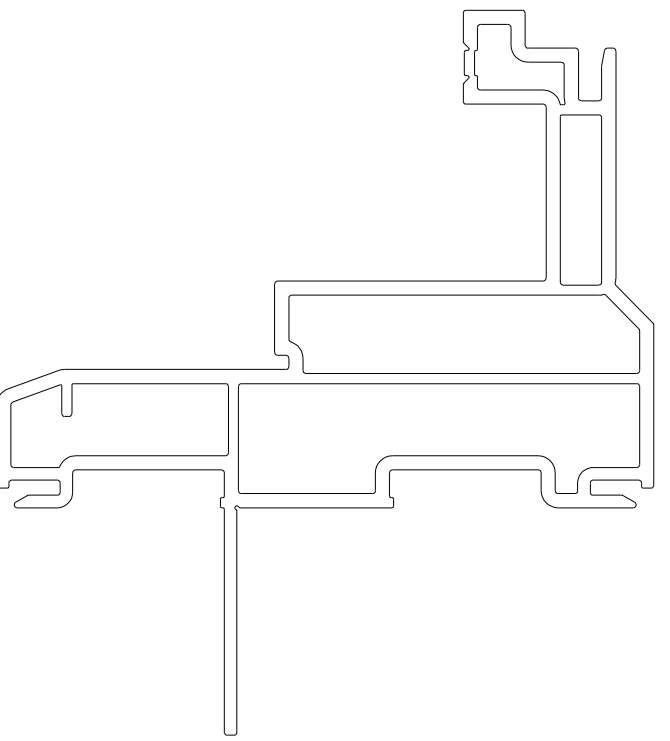
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Report #: **G6285-116-45**  
 Date: **5/9/2017**  
 Verified by: *[Signature]*

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
H	MOVED DATUM TO THE SIDE	10/11/23	BWB

KEY PRODUCT CHARACTERISTICS	
<b>H</b>	DIMENSION 1.102 - 1.142
<b>P</b>	DIMENSION .105 - .125
<b>Q</b>	DIMENSION 2.441 - 2.481
<b>X</b>	DIMENSION 3.230 - 3.270



WALL THICKNESS

.070 -	[White Box]
.062 -	[Diagonal Hatching]
.060 -	[Cross-hatching]
.050 -	[Solid Grey]

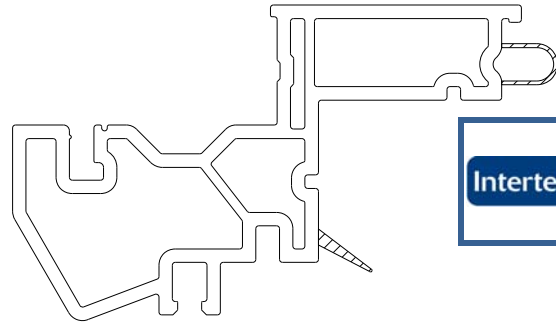
- NOTES:
- 'STD00013' STRAIGHTNESS CLASS A AND LENGTH TOLERANCES APPLY (A)
  - INTERPRET ALL TOLERANCE APPLICATIONS PER STD0013 (B)
  - UNSPECIFIED EXTERNAL RADII = .XXX +.010 / -.005 (C)
  - UNSPECIFIED INTERNAL RADII = .XXX +.020 / -.005 (D)
  - UNSPECIFIED EXTERNAL WALL THICKNESS = .XXX +/- 10% (E)
  - UNSPECIFIED INTERNAL WALL THICKNESS = .XXX +/- 20% (F)

<b>CONFIDENTIAL</b> UNPUBLISHED WORK © 2010 DECEUNINCK NORTH AMERICA	UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES TOL ON ANGLES ± 1° 2 PL: ± 0.010" 3 PL: ± 0.005" INTERPRET DIM AND TOL PER ASME Y14.5M - 1994	DESIGN BY: RH DATE: 99/07/19 DRAWN BY: RH DATE: 99/07/19 AUTH: DATE: AUTH: DATE: AUTH: DATE: FILENAME: \$FILE NAME\$	 351 NORTH GARVER ROAD MONROE, OHIO 45050 NORTH AMERICA
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\$PLUTDATES\$

\$USERS\$

\$FILE\$

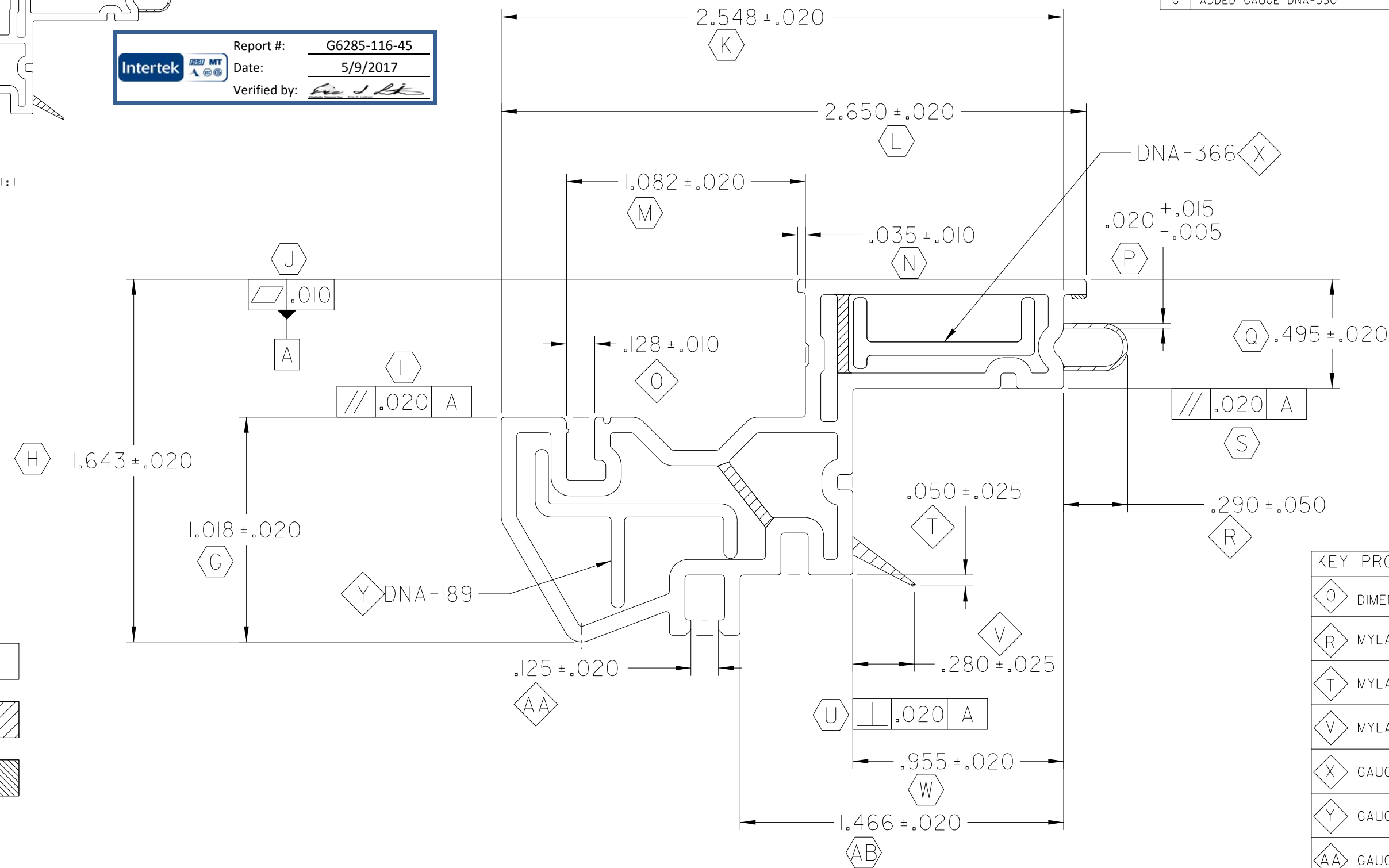


SCALE 1:1

Report #: G6285-116-45  
 Date: 5/9/2017  
 Verified by: *[Signature]*

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
G	ADDED GAUGE DNA-350	13/02/14	BWB



WALL THICKNESS

.070 -	[White Box]
.050 -	[Diagonal Hatching]
.065 -	[Cross-hatching]

KEY PRODUCT CHARACTERISTICS	
(O)	DIMENSION .118 - .138
(R)	MYLAR P54320P-I
(T)	MYLAR P54320P-I
(V)	MYLAR P54320P-I
(X)	GAUGE DNA-366
(Y)	GAUGE DNA-189
(AA)	GAUGE DNA-350

- NOTES:
- 'STD00013' STRAIGHTNESS CLASS A AND LENGTH TOLERANCES APPLY (A)
  - INTERPRET ALL TOLERANCE APPLICATIONS PER STD0013
  - UNSPECIFIED EXTERNAL RADII = .XXX +.010 / -.005
  - UNSPECIFIED INTERNAL RADII = .XXX +.020 / -.005
  - UNSPECIFIED EXTERNAL WALL THICKNESS = .XXX +/- 10%
  - UNSPECIFIED INTERNAL WALL THICKNESS = .XXX +/- 20%

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UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES  
 TOL ON ANGLES ± 1°  
 2 PL: ± 0.010" 3 PL: ± 0.005"  
 INTERPRET DIM AND TOL PER ASME Y14.5M - 1994

THIRD ANGLE PROJECTION

DESIGN BY:	CRB
DATE:	01/10/29
DRAWN BY:	CRB
DATE:	01/10/29
AUTH:	DATE:
AUTH:	DATE:
AUTH:	DATE:
FILENAME:	135669

**deceuninck** NORTH AMERICA  
 351 NORTH GARVER ROAD  
 MONROE, OHIO 45050

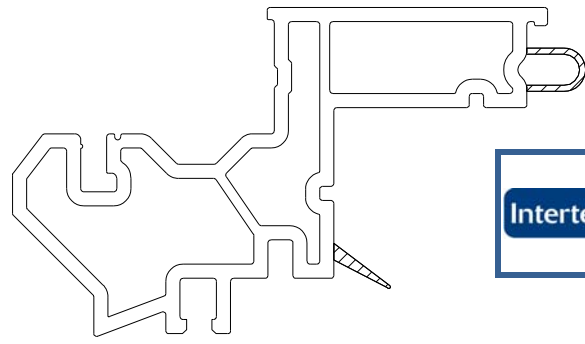
NAME: MAIN SASH - CA

SIZE DWG. NO: 10005432\_SH  
 SCALE: 2:1 (LBS/FT.) .469 SHEET: 1 OF 1

4/17/2013  
usbwb  
\\monsr01\deceun\data\dgn\135669.DGN

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
J	ADDED MYLAR	10/03/17	BWB

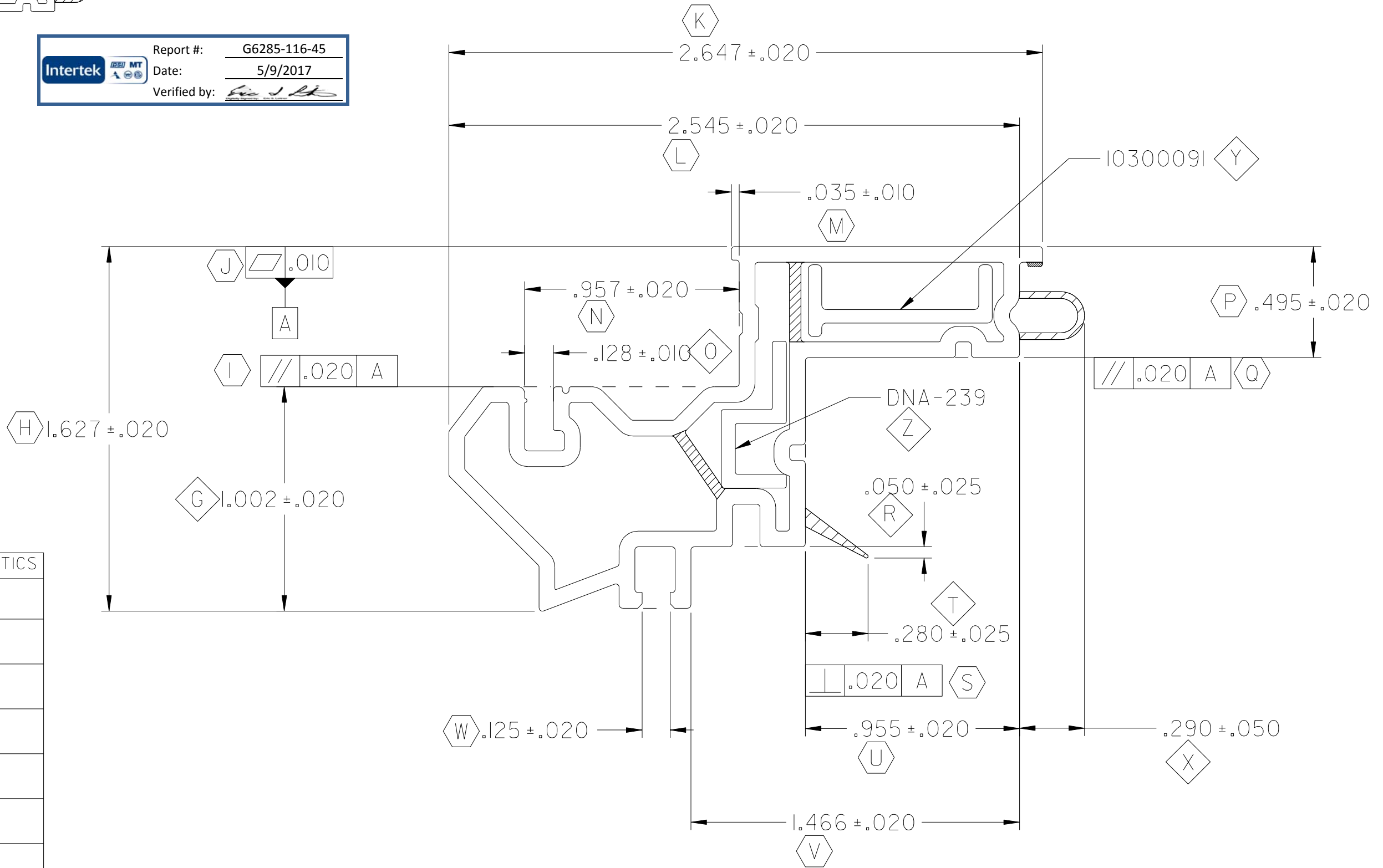


SCALE 1:1

Report #: G6285-116-45  
 Date: 5/9/2017  
 Verified by: [Signature]

WALL THICKNESS

.070 -	[Hatched Pattern]
.050 -	[Hatched Pattern]
.065 -	[Hatched Pattern]



KEY PRODUCT CHARACTERISTICS

G	DIMENSION .982 - 1.022
O	DIMENSION .118 - .138
R	MYLAR 10005484_OP REV E
T	MYLAR 10005484_OP REV E
X	MYLAR 10005484_OP REV E
Y	ALUM INSERT 10300091
Z	GAUGE DNA-239

- NOTES:
- 'STD00013' STRAIGHTNESS CLASS A AND LENGTH TOLERANCES APPLY (A)
  - INTERPRET ALL TOLERANCE APPLICATIONS PER STD0013
  - UNSPECIFIED EXTERNAL RADII = .XXX +.010 / -.005
  - UNSPECIFIED INTERNAL RADII = .XXX +.020 / -.005
  - UNSPECIFIED EXTERNAL WALL THICKNESS = .XXX +/- 10%
  - UNSPECIFIED INTERNAL WALL THICKNESS = .XXX +/- 20%

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UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES  
 TOL ON ANGLES ± 1°  
 2 PL: ± 0.010" 3 PL: ± 0.005"  
 INTERPRET DIM AND TOL PER ASME Y14.5M - 1994

THIRD ANGLE PROJECTION

DESIGN BY:	RH
DATE:	99/7/19
DRAWN BY:	RH
DATE:	99/7/19
AUTH:	DATE:
AUTH:	DATE:
AUTH:	DATE:
FILENAME:	\$FILE NAME\$

**deceuninck** NORTH AMERICA 351 NORTH GARVER ROAD MONROE, OHIO 45050

NAME: MAIN SASH - CA

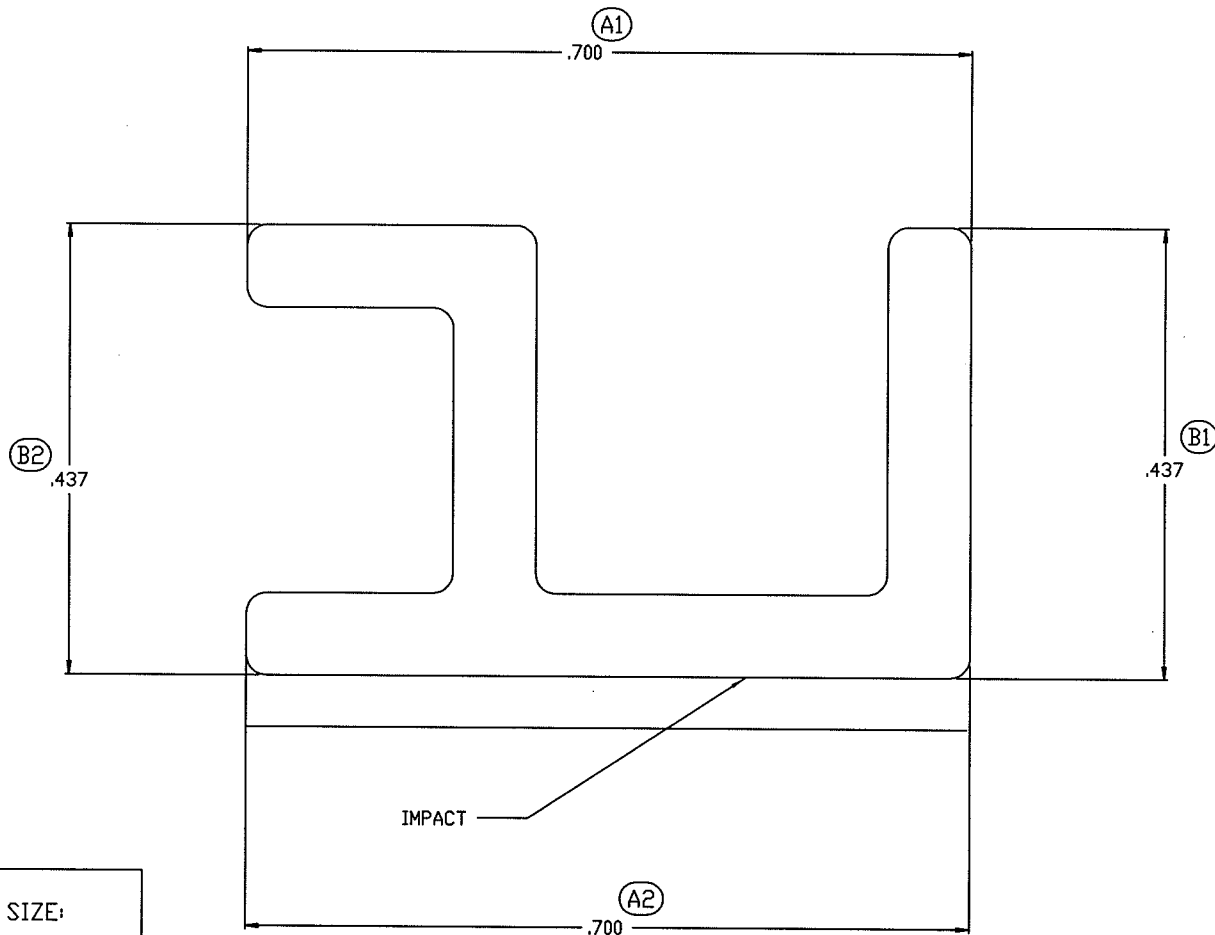
SIZE DWG. NO: B 10005484 REV. J

SCALE: 2 : 1 (LBS/FT.) .463 SHEET: 1 OF 1

\$USERS\$ \$PLOTDATE\$ \$FILE\$

UNLESS OTHERWISE NOTED THE FOLLOWING TOLERANCES APPLY  
 .01 - .100 ± .005    1.001 - 1.500 ± .020  
 .101 - .500 ± .010    1.501 - 2.000 ± .025  
 .501 - 1.000 ± .015    2.001 - & UP ± .030  
 UNSPECIFIED ANGLES ± 1° - WOODGRAIN SURFACES ADD .007

—— = EXPOSED SURFACE    ——— = WOODGRAIN SURFACE



ACTUAL SIZE:



REV.	DATE	DESCRIPTION	BY
A	9/28/95	NEW TITLE BLOCK	CRB

FITS WITH: N/A

BOW CLASS: B    IMPACT AREA: NOTED

**CONTROL DIMENSIONS**

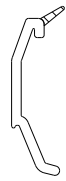
DIM	METH	MIN	ENG	MAX	DIM	METH	MIN	ENG	MAX
A	C-D	.670	.700	.730	X				
B	C-D	.422	.437	.452	Y				
C					Z				
D					AA				
E					BB				
F					CC				
G					DD				
H					EE				
I					FF				
J					GG				
K					HH				
L					II				
M					JJ				
N					KK				
O					LL				
P					MM				
Q					NN				
R					OO				
S					PP				
T					QQ				
U					RR				
V					SS				
W					TT				

Part Wt. (Lbs/Ft)	Rigid	Cap	Flex	Alum	Total
.081	----	----	----	----	.081
----	----	----	----	----	----

**DAYTON TECHNOLOGIES**

MONROE, OHIO    AN ALCOA COMPANY    Copyright 1995

NAME: CASEMENT WINDOW SPACER	
DRAWN BY: MTC	DATE: 2/14/90
CHECKED BY:	DATE:
SCALE: 8 : 1 "B"	COLOR: <input type="checkbox"/> WH <input type="checkbox"/> BS <input type="checkbox"/> EB <input type="checkbox"/> EV <input type="checkbox"/> DH
CUST. PART NO: 1200	PART DVG. NO: P1200-A

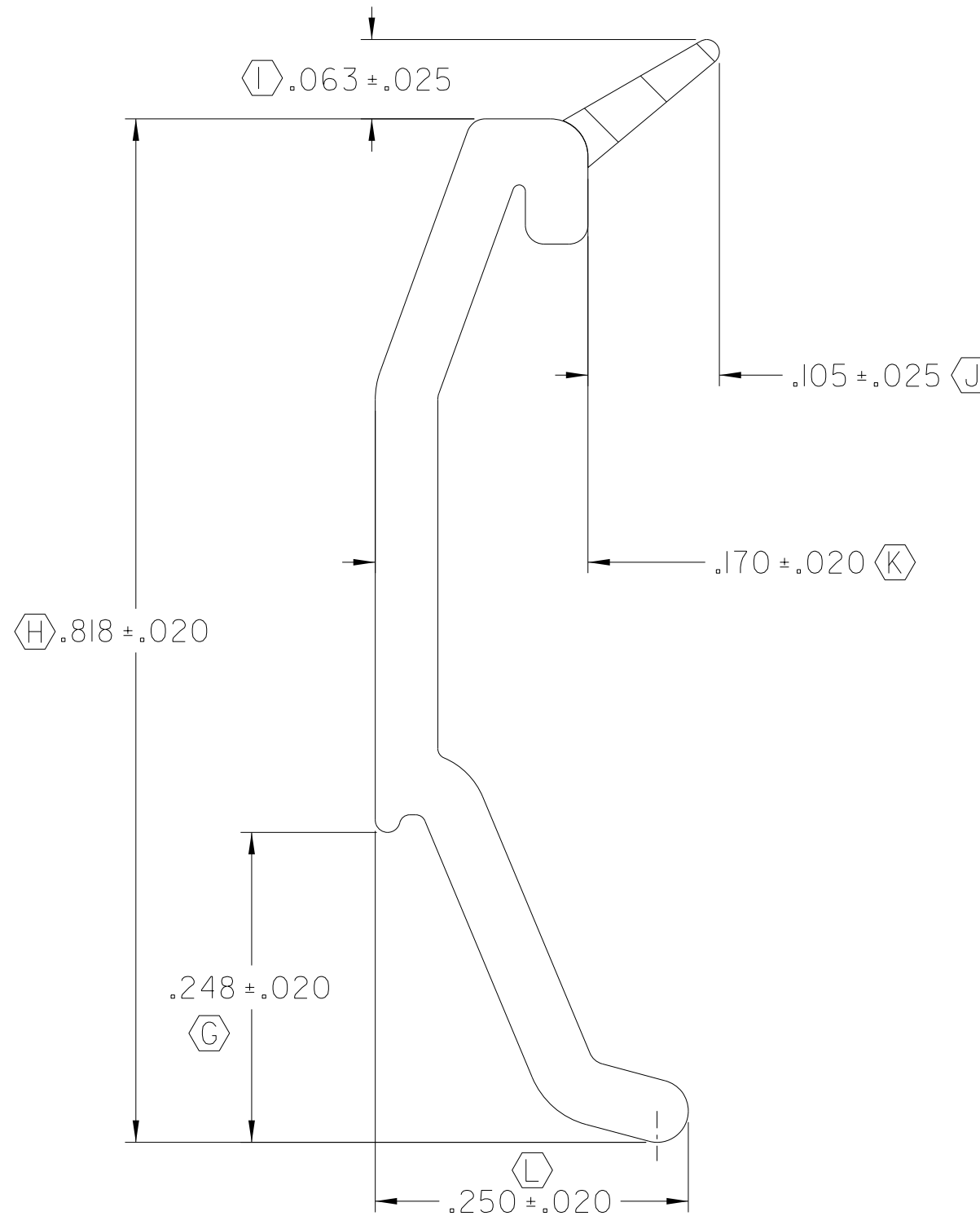


SCALE 1:1

Report #: G6285-116-45  
 Date: 5/9/2017  
 Verified by: *[Signature]*

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
E	UPDATED TO CURRENT STNDS	11/01/06	BWB



WALL THICKNESS

.050 -

USE MYLAR 10005473-D

NOTES:

- 'STD00013' STRAIGHTNESS CLASS E AND LENGTH TOLERANCES APPLY (A)
- INTERPRET ALL TOLERANCE APPLICATIONS PER STD0013 (B)
- UNSPECIFIED EXTERNAL RADII = .XXX +.010 / -.005 (C)
- UNSPECIFIED INTERNAL RADII = .XXX +.020 / -.005 (D)
- UNSPECIFIED EXTERNAL WALL THICKNESS = .XXX +/- 10% (E)
- UNSPECIFIED INTERNAL WALL THICKNESS = .XXX +/- 20% (F)

**CONFIDENTIAL**

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UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES TOL ON ANGLES ± 1° 2 PL: + 0.010° 3 PL: + 0.005° INTERPRET DIM AND TOL PER ASME Y14.5M - 1994

THIRD ANGLE PROJECTION



DESIGN BY:	PJA
DATE:	99/06/25
DRAWN BY:	PJA
DATE:	99/06/25
AUTH:	DATE:
AUTH:	DATE:
AUTH:	DATE:
FILENAME:	106609

**deceuninck** NORTH AMERICA  
 351 NORTH GARVER ROAD  
 MONROE, OHIO 45050

NAME: GLAZING BEAD

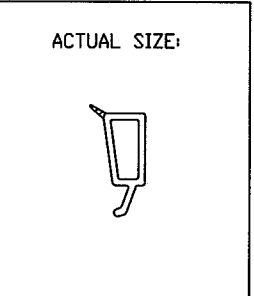
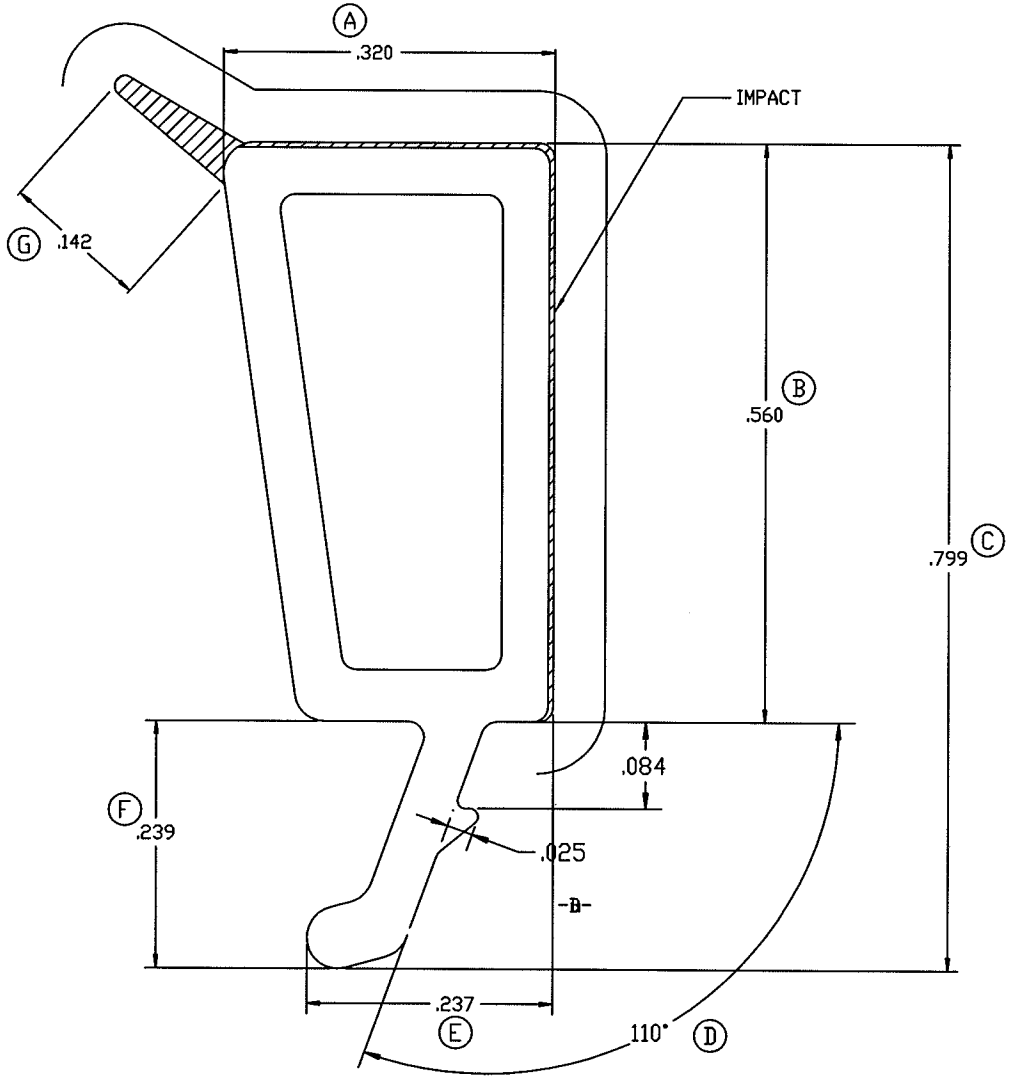
SIZE	DWG. NO:	REV.
B	10005473_SH	E
SCALE:	8 : 1 (LBS/FT.)	.034
SHEET:	1 OF 1	

10/28/2011  
usbwb  
\\monsr01\dectech\data\dgn\106609.DGN

UNLESS OTHERWISE NOTED THE FOLLOWING TOLERANCES APPLY  
 .001 - .100 ± .005    1.001 - 1.500 ± .020  
 .101 - .500 ± .010    1.501 - 2.000 ± .025  
 .501 - 1.000 ± .015    2.001 - & UP ± .030  
 UNSPECIFIED ANGLES ± 1° - WOODGRAIN SURFACES ADD .007

NOTES:  
 1. WALL THICKNESS TO BE .050 UNLESS OTHERWISE NOTED.  
 2. PART TO BE SNAPPED INTO 5480 & 5510 USING GAUGE II-7 ( 3/4 GLASS GAUGE ).  
 MAKE SURE TO USE GLAZING TAPE.

—— = EXPOSED SURFACE    ——— = WOODGRAIN SURFACE



REV.	DATE	DESCRIPTION	BY
A	10/27/95	NEW TITLE BLOCK & RELABLED DIM.	CRB
B	06/28/96	ADJUSTED TOLERANCE ON DIM. 'B & E'	CRB

FITS WITH: 5480, 5510  
 BOW CLASS: B    IMPACT AREA: NOTED

CONTROL DIMENSIONS									
DIM	METH	MIN	ENG	MAX	DIM	METH	MIN	ENG	MAX
A	DC	.310	.320	.330	X				
B	C-D	.538	.560	.580	Y				
C	C-D	.784	.799	.814	Z				
D	DC	108°	110°	112°	AA				
E	DC	.225	.237	.247	BB				
F	DC	.230	.239	.255	CC				
G	DC	.105	.142	.145	DD				
H					EE				
I					FF				
J					GG				
K					HH				
L					II				
M					JJ				
N					KK				
O					LL				
P					MM				
Q					NN				
R					OO				
S					PP				
T					QQ				
U					RR				
V					SS				
W					TT				

Part Wt. (Lbs/Ft)	Rigid	Cap	Flex	Alum	Total
	.055	.003	.002	----	.060
	----	----	----	----	----

**DAYTON TECHNOLOGIES**  
 AN ALCOA COMPANY  
 MONROE, OHIO    Copyright 1995

NAME: SERIES 4000 3/4 GLAZING BEAD  
 DRAWN BY: ASD    DATE: 3/13/89  
 CHECKED BY:    DATE:  
 SCALE: 8 : 1 "B"    COLOR:  WH  DS  EB  EV  OTH  
 CUST. PART NO: 5600    PART DWG. NO: P5600-B

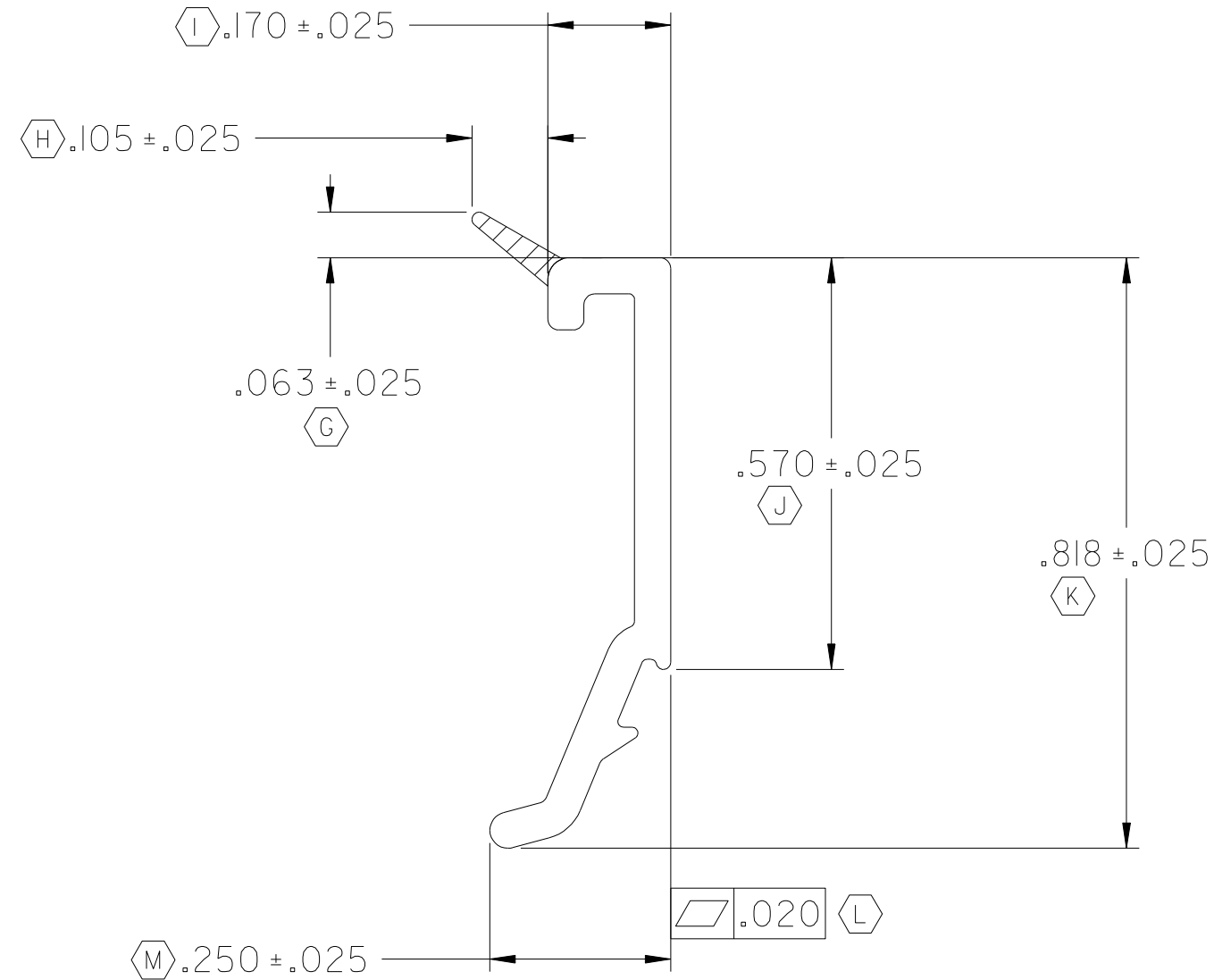


SCALE 1:1

Report #: G6285-116-45  
 Date: 5/9/2017  
 Verified by: [Signature]

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
R	GD&T 3 UPDATE	08/04/16	KED



WALL THICKNESS

.050 -

NOTES:

- 'STD00013' STRAIGHTNESS CLASS E AND LENGTH TOLERANCES APPLY (A)
- INTERPRET ALL TOLERANCE APPLICATIONS PER STD0013 (B)
- UNSPECIFIED EXTERNAL RADII = .XXX +.010 / -.005 (C)
- UNSPECIFIED INTERNAL RADII = .XXX +.020 / -.005 (D)
- UNSPECIFIED EXTERNAL WALL THICKNESS = .XXX +/- 10% (E)
- UNSPECIFIED INTERNAL WALL THICKNESS = .XXX +/- 20% (F)

<b>CONFIDENTIAL</b> UNPUBLISHED WORK © 2008 DECEUNINCK NORTH AMERICA	UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES TOL ON ANGLES ± 1° 2 PL: ± 0.010" 3 PL: ± 0.005" INTERPRET DIM AND TOL PER ASME Y14.5M - 1994	DESIGN BY: ASD,PGM DATE: 90/10/19 DRAWN BY: CRB DATE: 02/11/22 AUTH: DATE: AUTH: DATE: AUTH: DATE: FILENAME: 69488	 351 NORTH GARVER ROAD MONROE, OHIO 45050 NAME: GLAZING BEAD SIZE DWG. NO: 10008127_SH SCALE: 4:1 (LBS/FT.) .036 SHEET: 1 OF 1
	THIS DOCUMENT CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION. DO NOT COPY OR DISCLOSE THIS INFORMATION WITHOUT THE EXPRESS WRITTEN CONSENT OF DECEUNINCK NORTH AMERICA. DECEUNINCK NORTH AMERICA RESERVES THE RIGHT TO CHANGE THIS DRAWING AND ANY ASSOCIATED DOCUMENTS.	THIRD ANGLE PROJECTION	

\$PL0T\$DATES

\$USERS\$

\$FILEL\$



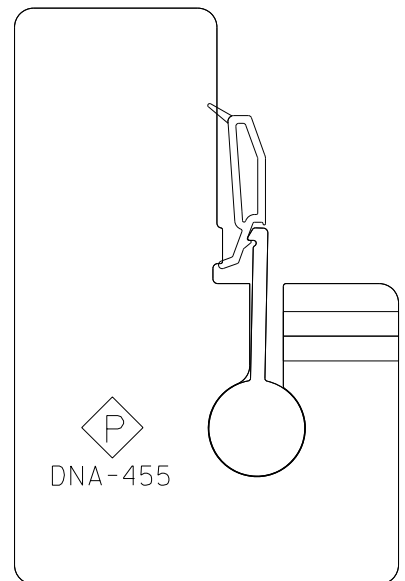


SCALE 1:1

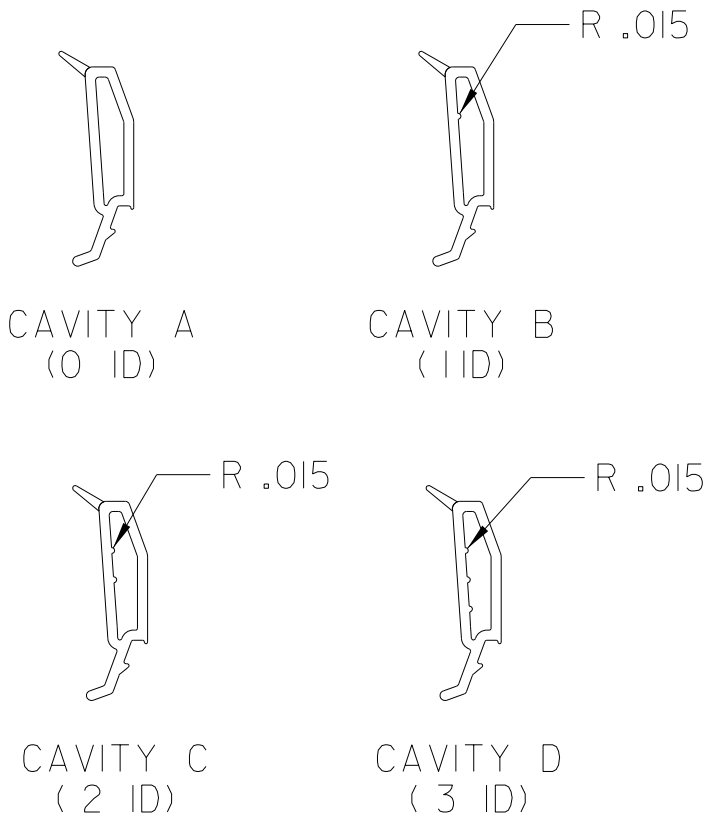
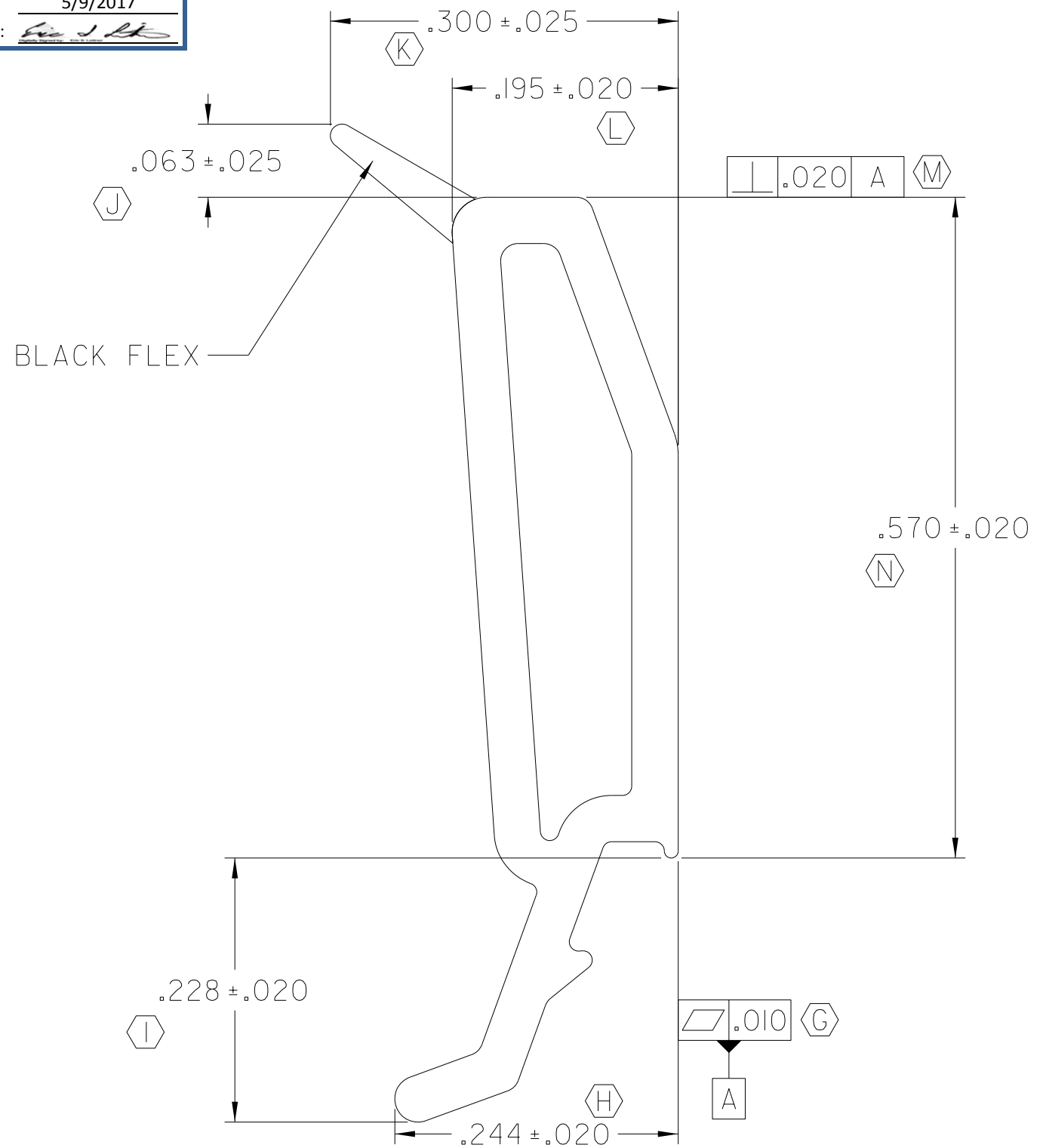
	Report #:	G6285-116-45
	Date:	5/9/2017
	Verified by:	<i>[Signature]</i>

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
A	ADDED GAUGE DNA-455 ADDED ID MARKS	15/6/10	SMW
B	UPDATED DNA-455 GAUGE	15/7/27	SMW



PART MUST SNAP IN AND NOT SLIDE IN GAUGE

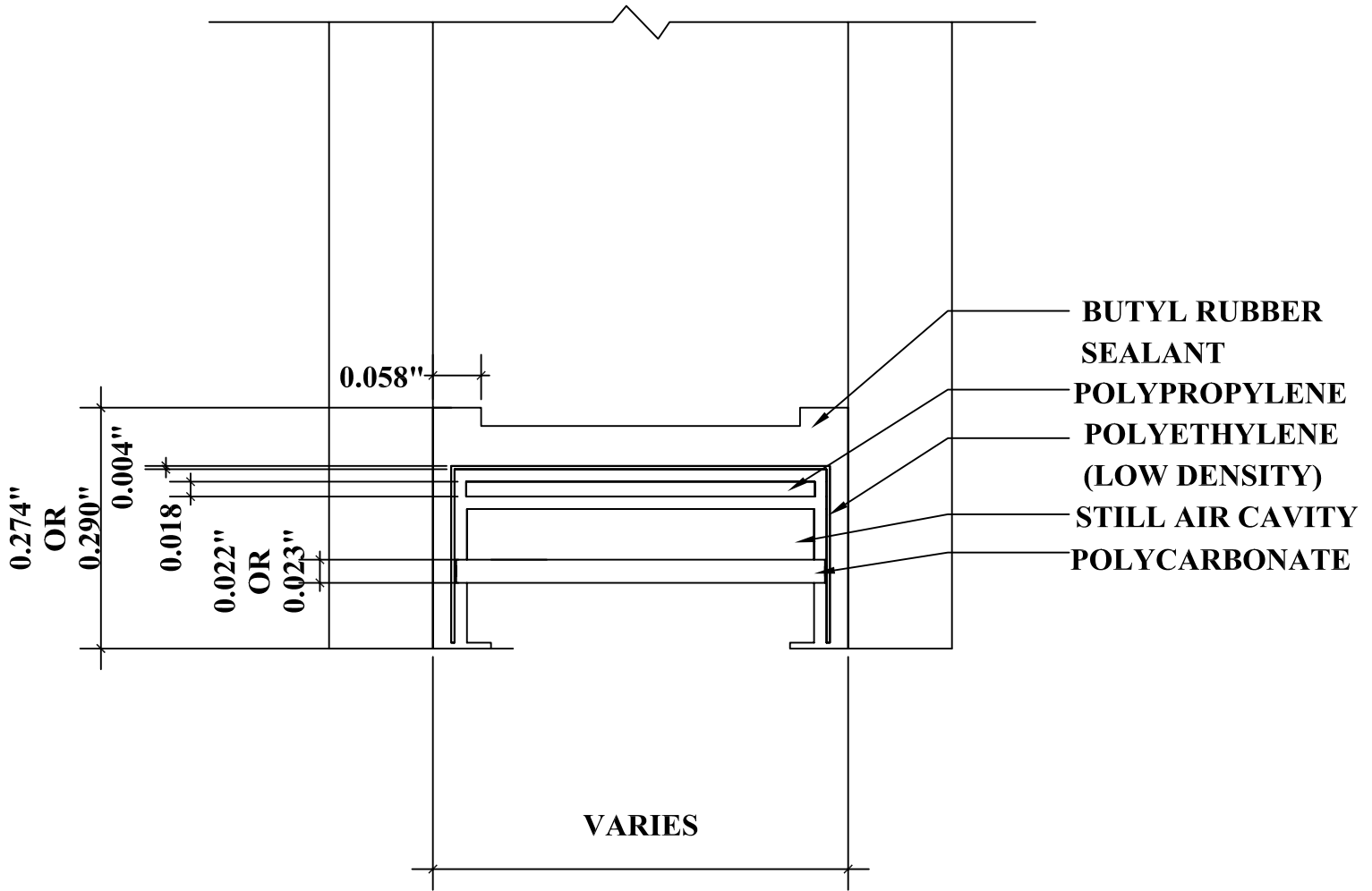


WALL THICKNESS  
.040 -

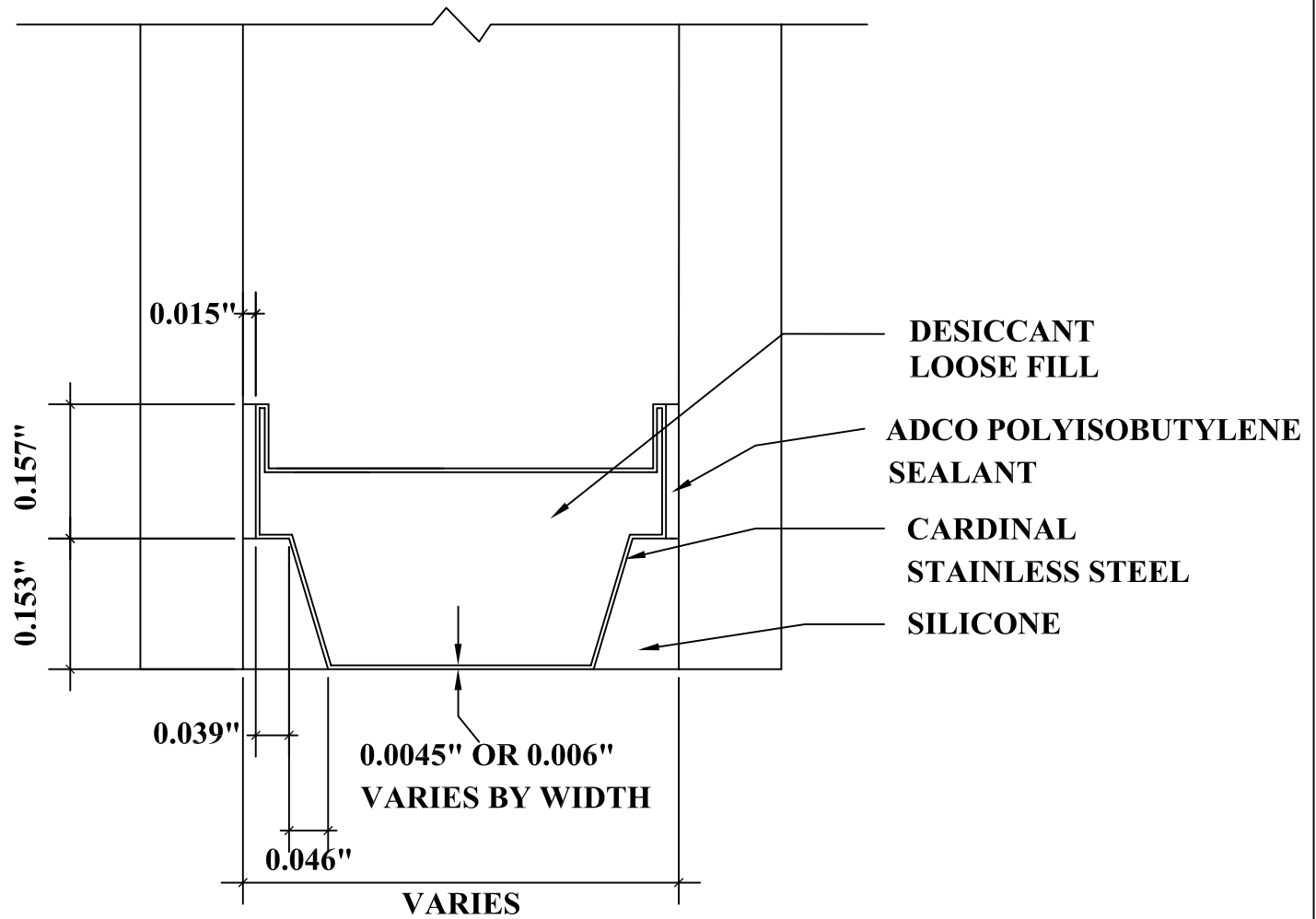
- NOTES:
- 'STD00013' STRAIGHTNESS CLASS E AND LENGTH TOLERANCES APPLY (A)
  - INTERPRET ALL TOLERANCE APPLICATIONS PER STD0013 (B)
  - UNSPECIFIED EXTERNAL RADII = .XXX +.010 / -.005 (C)
  - UNSPECIFIED INTERNAL RADII = .XXX +.020 / -.005 (D)
  - UNSPECIFIED EXTERNAL WALL THICKNESS = .XXX +/- 10% (E)
  - UNSPECIFIED INTERNAL WALL THICKNESS = .XXX +/- 20% (F)

<p><b>CONFIDENTIAL</b></p> <p>UNPUBLISHED WORK © 2015 DECEUNINCK NORTH AMERICA</p> <p>THIS DOCUMENT CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION. DO NOT COPY OR DISCLOSE THIS INFORMATION WITHOUT THE EXPRESS WRITTEN CONSENT OF DECEUNINCK NORTH AMERICA. DECEUNINCK NORTH AMERICA RESERVES THE RIGHT TO CHANGE THIS DRAWING AND ANY ASSOCIATED DOCUMENTS.</p>	<p>UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES TOL ON ANGLES ± 1° 2 PL: ± 0.010" 3 PL: ± 0.005" INTERPRET DIM AND TOL PER ASME Y14.5M - 1994</p>	<p>DESIGN BY: SMW</p> <p>DATE: 15/3/30</p> <p>DRAWN BY: SMW</p> <p>DATE: 15/7/27</p> <p>AUTH: DATE:</p> <p>AUTH: DATE:</p> <p>AUTH: DATE:</p> <p>FILENAME: 168742</p>	<p><b>deceuninck</b> Deceuninck North America 351 N. Garver Road Monroe, OH 45050</p> <p>NAME: GLAZING BEAD</p> <p>SIZE DWG. NO: 10008134_SH REV. B</p> <p>SCALE: 8 : 1 (LBS/FT.) .0421 SHEET: 1 OF 1</p>
	<p>THIRD ANGLE PROJECTION</p>	<p>USE MYLAR 10008134_OP</p>	

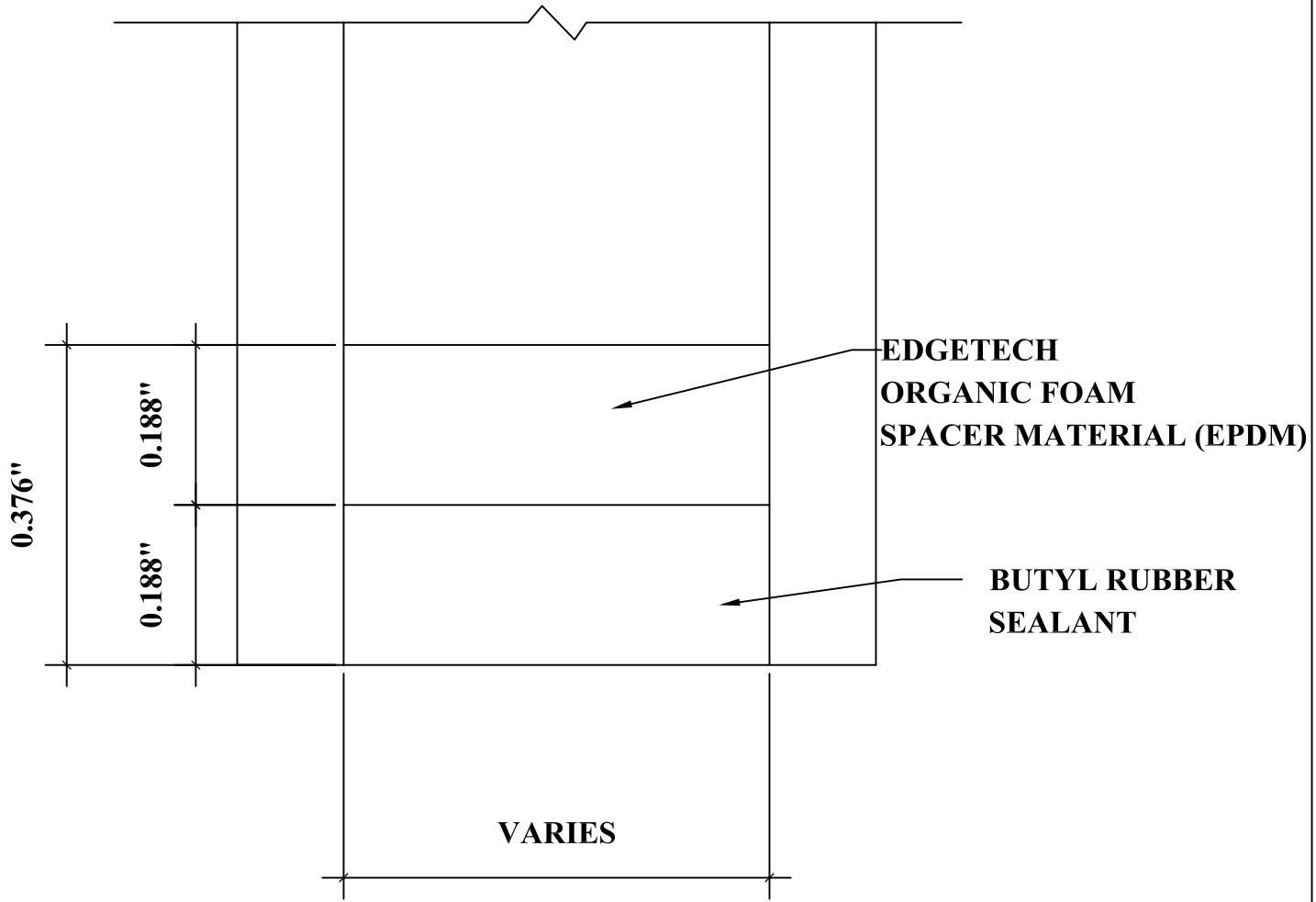
\$PLOTDATE\$ \$USER\$ \$FILE\$



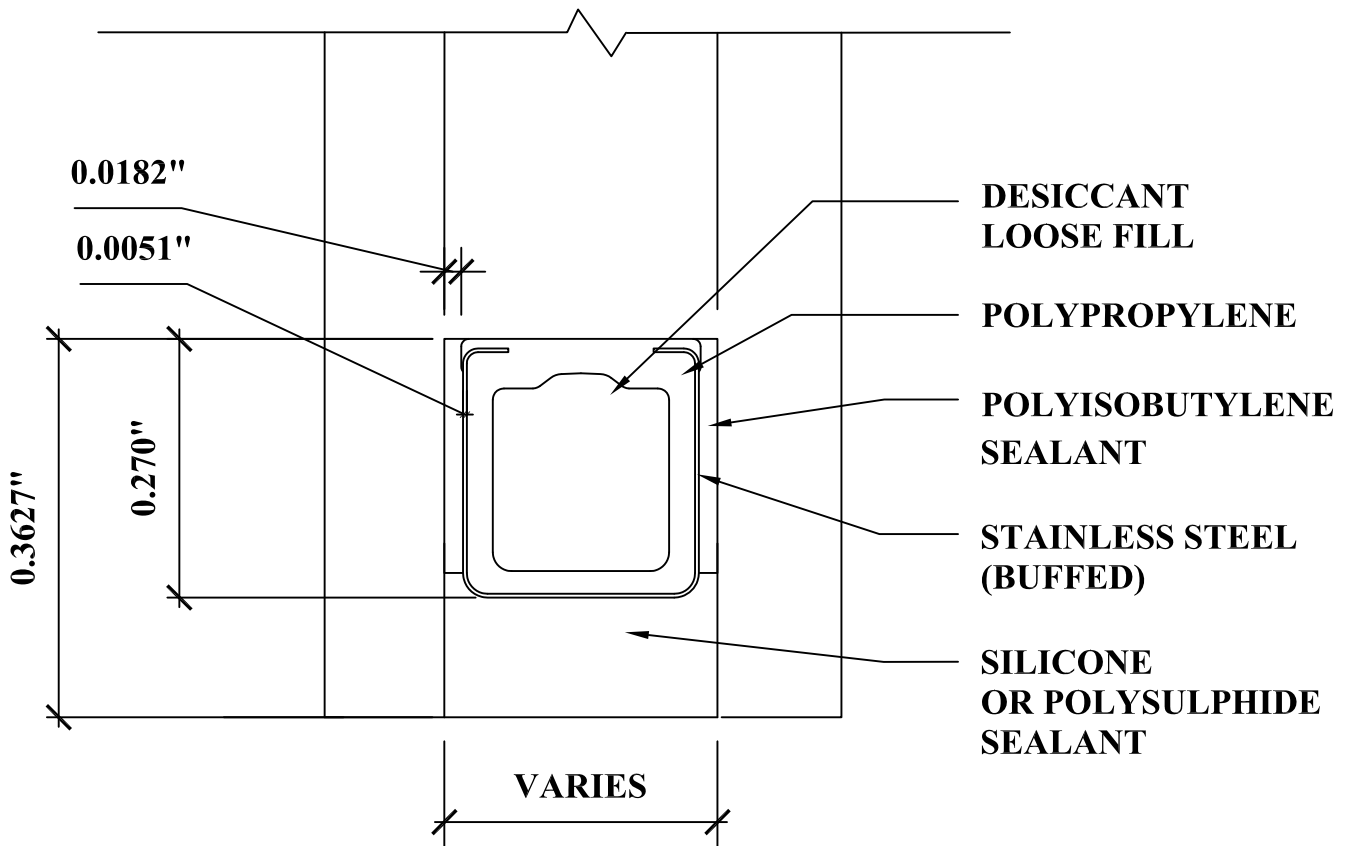
DETAIL FOR THERMAL MODELING OF  
TRUSEAL DURALITE SPACER (P1-S)



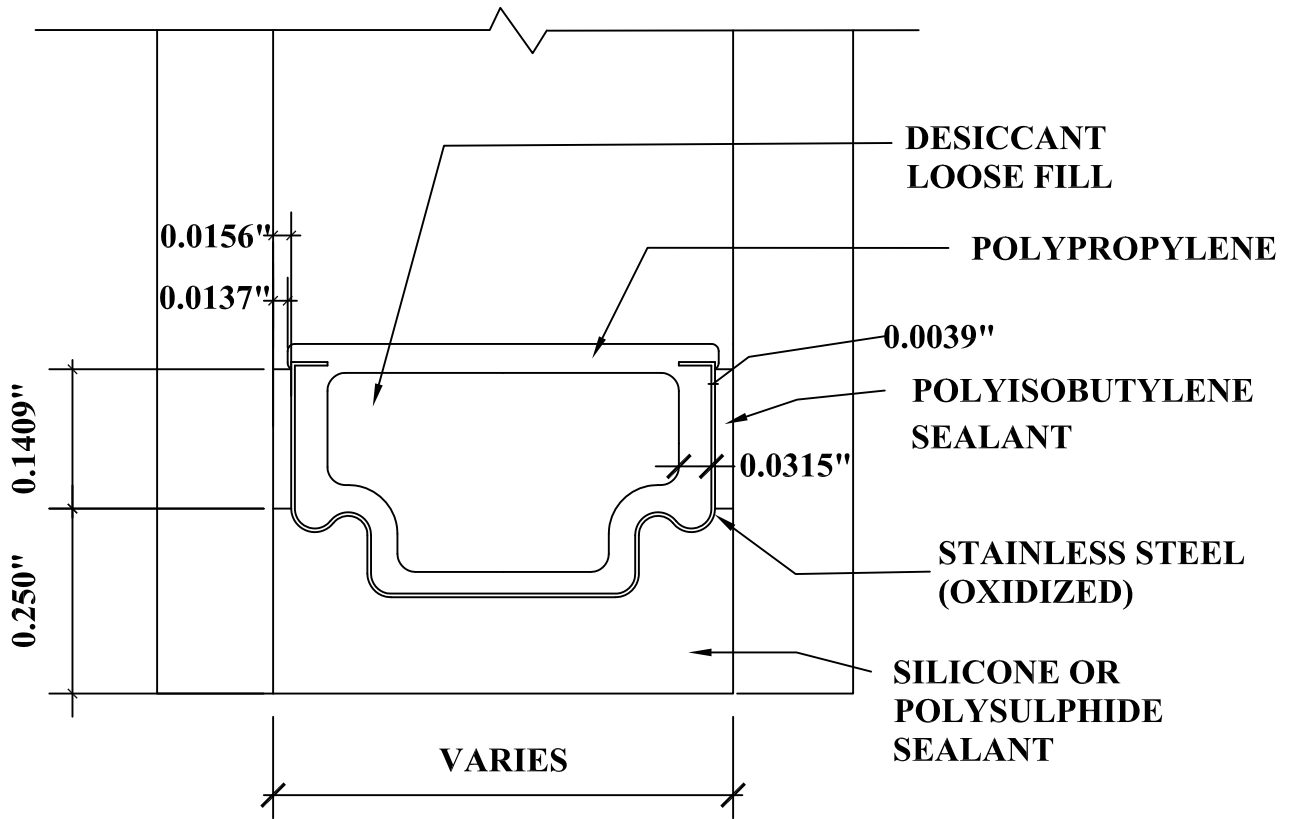
DETAIL FOR THERMAL MODELING OF  
CARDINAL XL EDGE SPACER (SS-D)



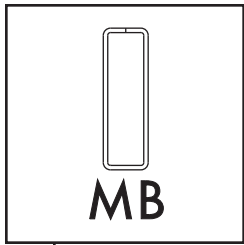
DETAIL FOR THERMAL MODELING OF  
EDGETECH SUPER SPACER STANDARD (OF-S)



DETAIL FOR THERMAL MODELING OF  
TECHNOFORM TGI SPACER - IS (TS-D)

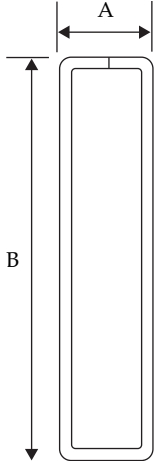


DETAIL FOR THERMAL MODELING OF  
TECHNOFORM TGI SPACER - TIS (TS-D)



## Muntin Bar

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



**TOLERANCE**  
 A, ± .005 (.127mm)  
 B, ± .005 (.127mm)

Intertek	Report #:	G6285-116-45
	Date:	5/9/2017
	Verified by:	<i>[Signature]</i>

**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 12' 8" Lengths	Lineal Feet Per Shipping Carton 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.

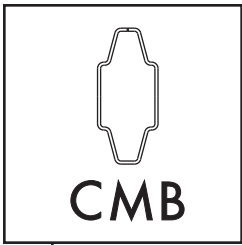
Material thickness: .0185

<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.

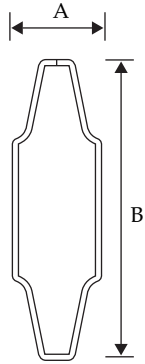
\* Part number shown is Clear Anodized. \*\*Part number shown is white welded.

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



### Contour Muntin Bar

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



**TOLERANCE**  
 A, ± .005 (.127mm)  
 B, ± .005 (.127mm)

**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 Millimeter	Part #	Pieces Per Shipping Carton 12' 8" Lengths	Lineal Feet Per Shipping Carton 12' 8" Lengths
5.5 x 18	124040	170	2153
8 x 18	123911	120	1520
8 x 25	124307	84	1064

Specification In Inches		
Muntin Bar Size Millimeter	A	B
5.5 x 18	.217	.709
8 x 18	.315	.709
8 x 25	.315	.984

**Part numbers shown are standard white color.**  
 Available in solid & tutone colors.  
 Please see Color Selection Chart located in front of catalog.

**Material Thickness:**  
**.016: 5.5 x 18mm and 8 x 18mm.**  
**.0185: 8 x 25mm.**

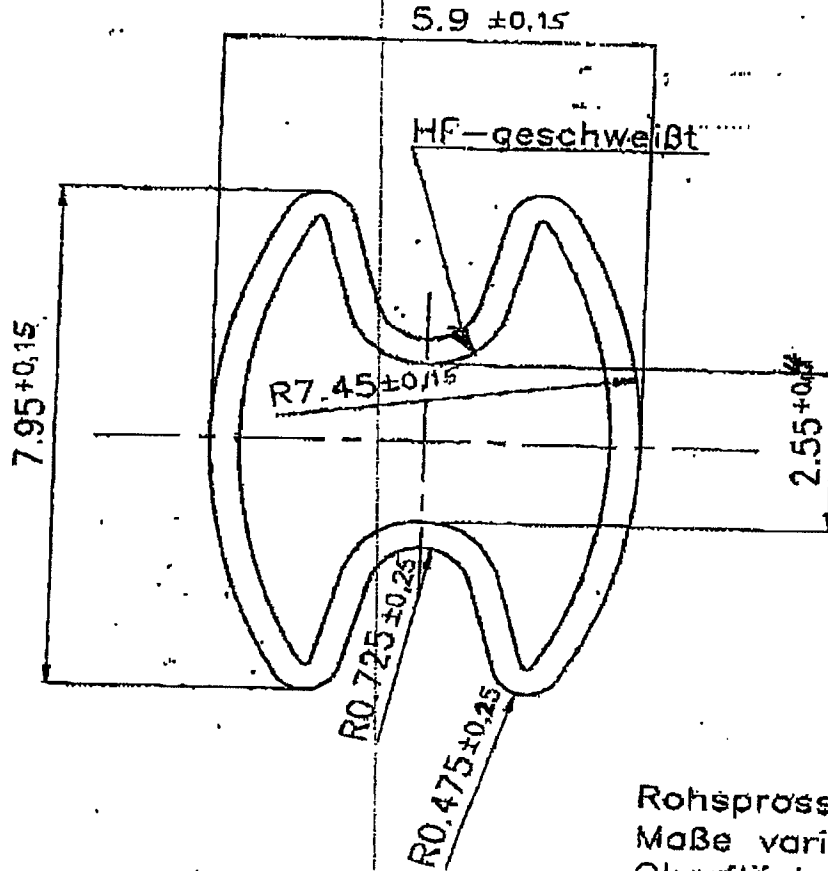
Note: Available in pre-cut lengths and pre-notched; tutone and post-painted. Custom colors also available.  
 Painted seam available in limited colors upon request.

Report #: G6285-116-45

Date: 5/9/2017

Verified by:





Rohsprössel  
 Maße variieren je nach  
 Oberflächenbehandlung

Verteiler: BTL  
 DM3  
 Produktion  
 AV

Intertek ISO 9001 MT A	Report #:	G6285-116-45
	Date:	5/9/2017
	Verified by:	<i>[Signature]</i>

1	Höhe u. Breite geändert	04.07.96	Höf.	
Ä-Nr.	Art der Änderung	Datum	Name	Gepr.

Werkstoff: Bd 0,4 <sup>+0,04</sup>/<sub>-0,03</sub> Al 99,95-ähnlich EN 1085/WN  
 wahlweise EN AW-3003

1996	Tag	Name	Für diese Zeichnung bzw. techn. Unterlage behalten wir uns alle Rechte vor.	Helmut Lingemann GmbH & Co. Aluminium-Press- und Walzwerk Am Deckerschützen 02 43114 Kuppental
Bearb.	24.07.	Höfinghoff		
Gepr.				

Maßstab: 10:1  
 Benennung: Einbausprosse, geschweißt

Zeichnungsnummer: KP 8x1,5G

Maße ohne  
 Tek.-Angabe  
 DIN 7168-m

Erstellt durch:

M1