



Henderson County Capital Projects

100 North King Street, Suite 206
Hendersonville, North Carolina 28792

Memorandum To: Interested Qualified Bidders

*From: Thad Ninnemann
Henderson County Capital Projects Project Manager*

*Subject: Addendum #1
Replace Glazing, Gaskets, Caps, and Perimeter Sheet Metal on the
Existing Skylight System @ the Henderson County 95 Courthouse*

Date: February 26, 2020

Please see attached:

- 1. Glass Specifications**
- 2. Paint Specifications**

Note to Specifiers:

The specifications below are suggested as desirable inclusions in glass and glazing specifications (section 08 81 00), but are not intended to be complete. An appropriate and qualified Architect or Engineer must verify suitability of a particular product for use in a particular application as well as review final specifications. Oldcastle BuildingEnvelope® assumes no responsibility or liability for the information included or not included in these specifications.

PRODUCTS

Approved Glass Fabricator	Oldcastle BuildingEnvelope®
Glass Description	FLOAT GLASS
	<p>1. USA - Annealed float glass shall comply with ASTM C1036, Type I, Class 1 (clear), Class 2 (tinted), Quality-Q3. Canada - Annealed float glass shall comply with CAN/CGSB-12.3-M, Quality-Glazing.</p> <p>2. USA- Heat-strengthened float glass shall comply with ASTM C1048, Type I, Class 1 (clear), Class 2 (tinted), Quality Q3, Kind HS. Canada - Heat-strengthened float glass shall comply with CAN/CGSB-12.9-M, Type 2-Heat-Strengthened Glass, Class A-Float Glass.</p> <p>3. USA - Tempered float glass shall comply with ASTM C1048, Type I, Class 1 (clear), Class 2 (tinted), Quality Q3, Kind FT. Canada - Tempered float glass shall comply with CAN/CGSB-12.1-M, Type 2-Tempered Glass, Class B-Float Glass.</p> <p>4. USA - Laminated glass to comply with ASTM C1172. Canada - Laminated glass to comply with CAN/CGSB-12.1-M, Type 1-Laminated Glass, Class B-Float Glass.</p> <p>5. Glass shall be annealed, heat-strengthened or tempered as required by codes, or as required to meet thermal stress and wind loads.</p>



Sealed Insulating Glass (IG) Vision Glass (Vertical)	GENERAL
	<p>1. IG units consist of glass lites separated by a dehydrated airspace that is hermetically dual sealed with a primary seal of polyisobutylene (PIB) and a secondary seal of silicone or an organic sealant depending on the application.</p> <p>2. USA - Insulating glass units are certified through the Insulating Glass Certification Council (IGCC) to ASTM E2190. Canada - Insulating Glass units are certified through the Insulating Glass Manufacturers Alliance (IGMA) to either the IGMAC certification program to CAN/CGSB-12.8, or through the IGMA program to ASTM E2190.</p>

IG VISION UNIT PERFORMANCE CHARACTERISTICS

1. Exterior Lite
1/4" PPG Solarban® R100 on Clear Neutral Reflective Low-E #2
2. Interior Lite
5/16" Laminate - 1/8" Clear - 0.060" Clear PVB - 1/8" Clear
3. 1/2" Cavity
1/2 inch (Air Fill)

Heat Strengthened

4. Performance Characteristics

Thermal		Optical	
Winter U-factor/U-value:	0.29	Visible Light Transmittance:	41%
Summer U-factor/U-value:	0.27	Visible Light Reflectance (outside):	32%
Solar Heat Gain Coefficient:	0.23	Visible Light Reflectance (inside):	13%
Shading Coefficient:	0.27	Total Solar Transmittance:	18%
Relative Heat Gain (Btu/hr-ft²):	57	Total Solar Reflectance (outside):	41%
Light to Solar Gain:	1.78	Ultraviolet Transmittance:	<1%

Contact Oldcastle BuildingEnvelope® at 866-Oldcastle (653-2278) for samples or additional information concerning performance, strength, deflection, thermal stress or application guidelines. GlasSelect® calculates center of glass performance data using the Lawrence Berkeley National Laboratory (LBNL) Window 7.4 program (version 7.4.8.0) with Environmental Conditions set at NFRC 100-2010. Gas Library ID#1 (Air) is used for Insulating Glass units with air. Gas Library ID#9 (10% Air/90% Argon) is used for Insulating Glass units with argon. Monolithic glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 53.0; 2. Vendor supplied spectral data files. Laminated glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 53.0; 2. LBNL Optics 6 (version 6.0 Maintenance Pack 1); 3. Vendor supplied spectral data files; 4. Vendor supplied data. 5. Based on vendor testing, clear acid-etched glass performance data is estimated using regular clear glass of equivalent thickness. Thermal values are in Imperial units.

AAMA PAINT SPECIFICATIONS

South Florida Weathering	AAMA 2605	AAMA 2604	AAMA 2603
Color Retention	10 yrs - fade = 5 Delta E	5 yrs - fade = 5 Delta E	1yr - "slight" fade
Gloss Retention	10 yrs - 50% retention	5 yrs - 30% retention	No specification
Erosion Resistance	10 yrs -10% loss	5 yrs -10% loss	No specification
Chalk Resistance	10 yrs - chalk = 8	5 yrs - chalk = 8	1 yr -"slight" chalk
Accelerated Testing	AAMA 2605	AAMA 2604	AAMA 2603
Salt Spray	4,000 hours	3,000 hours	1,500 hours
Humidity	4,000 hours	3,000 hours	1,500 hours
Compliant Systems	AAMA 2605	AAMA 2604	AAMA 2603
	70% Kynar 500® PVDF	50% Kynar® PVDF	Baked Enamel
	70% Hylar 5000® PVDF	70% Hylar® PVDF	