

Montgomery County Public Schools Facilities Guide
DIVISION 8 - DOORS AND WINDOWS

SECTION 08800

GLASS & GLAZING

PART 1 GENERAL

1.01 GUIDE INCLUDES

- A. Glass and glazing including:
 - 1. Window.
 - 2. Storefront.
 - 3. Doors.

1.02 SUBMITTALS

- A. Sizes of glass panels, type of coatings and tints installed shall be recorded and submitted by contractor as part of the Operations, Maintenance, and Product Data Manuals.
- B. Submit location of manufacture and extraction of primary raw materials.
- C. Submit product data indicating thermal and visible light transmittance properties.
- D. Provide manufacturer's certification that glazing sealants applied on building interior meet testing and product requirements of California Department of Health Services Standard Practice for The Testing Of Volatile Organic Emissions From Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.
- E. Submit MSDS for any applicable products used.

PART 2 PRODUCTS

2.01 SAFETY GLASS

- A. 1/4 inch clear laminated tempered safety glass.
- B. Manufacturers:
 - 1. Herculite by PPG Industries, Inc.
 - 2. Tuf-flex by Pilkington
 - 3. AFG Industries, Inc.
 - 4. Guardian Industries Corp.

2.02 CLEAR AND TINTED FLOAT GLASS

- A. Thickness as required by ASTM C 1300 and with building code wind loads.
- B. Manufacturers (subject to compliance with requirements, give preference to products manufactured within a 500-mile radius of the project site):
 - 1. AFG Industries, Inc.
 - 2. PPG Industries, Inc.
 - 3. Guardian Industries Corp.
 - 4. Pilkington
- C. Provide glazing such that total window, entrance and storefront systems have following performance values, as labeled by NFRC and U.S. EPA Energy Star:
 - 1. Max U-value: 0.38
 - 2. Max SHGC: 0.55
 - 3. Min Tvis: 0.70
- D. LEED projects shall improve upon above values as determined by design and energy modeling process

Comment [M1]: As determined in Montgomery County Energy Design Guidelines

2.03 FIRE-RATED GLASS

- A. Manufacturer:
 - 1. Anemostat Products Div.
 - 2. Vetrotech Sain-Gobain in North America
 - 3. Technical Glass Products
 - 4. Pilkington

2.04 INSULATING GLASS

- A. 1 inch thick double glazing units composed of airtight hermetically sealed assembly of one of following (ASTM E774:Class A):
 - 1. Two (2) panes of 1/4 inch clear polished float glass separated by a factory sealed 1/2 inch airspace.
 - 2. Two (2) panes of 1/8 inch clear polished tempered glass separated by a factory sealed 3/4 inch airspace.
- B. Exterior glass shall be Low E.
- C. Sealing System: Dual seal; primary sealant- polyisobutylene, secondary sealant- silicone.
 - 1. Glazing sealants applied on building interior meet testing and product requirements of California Department of Health Services Standard Practice for The Testing Of Volatile Organic Emissions From Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.
 - a. At minimum, products need to comply with VOC limits specified in LEED-for Schools if alternatives tested to CA protocol are not available.
- D. Spacer Material: aluminum (color - standard color as selected by architect)
- E. Manufactures:
 - 1. Guardian
 - 2. Viracon
 - 3. Oldcastle
 - 4. Pilkington
 - 5. Berkowitz

2.05 INSULATED POLYCARBONATE GLASS

- A. Use for greenhouses.

2.06 GLAZING MATERIALS AND ACCESSORIES

- A. Sealants and glazing tapes shall be of type and systems recommended by GANA glazing manual and glass manufacturer for type of installation shown.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install glazing in accordance with GANA and glass Manufacturer's recommendation.
- B. Protections - Protect glass from breakage. Glass which becomes broken, chipped, abraded or cracked by Contractor, shall be removed and replaced prior to completion.
- C. Cleaning - Wash glass on both faces, not more than 4 days prior to date scheduled for Substantial Completion. Wash glass by method recommended by glass manufacturer.

END OF SECTION