

Bliss Nor-Am Windows & Doors

"W-20 FIRE RATED" steel windows

PART 1 - GENERAL

1.01 Description

- A. Work Included: Furnish all labor and materials to complete the fabrication of windows as shown on architect's drawings and as specified herein. All windows covered by this specification shall be fabricated by Bliss Nor-Am Steel Windows & Doors. Other bidders must be approved by the architect at least ten days prior to the bid date, through submission of samples and evidence showing that the bidder has been fabricating window products of this type and quality for at least five years. All work shall include, but not be limited to, the following:
1. Fixed windows
 2. Mullions, covers and trim.
 3. Factory applied finishes.
- B. Related work specified elsewhere:
1. Glass, glazing and glazing materials, Section _____
 2. Perimeter caulking, Section _____
 3. Miscellaneous structural items, Section _____

1.02 Quality Assurance

- A. Manufacturer shall have not less than five years experience in fabrication of heavy intermediate steel windows.
- B. Windows shall be installed by experienced installers.
- C. Allowable tolerances: Size dimensions $\pm 1/16$ th inch.
- D. Source quality control:
1. Fire test report
 2. Upon request, the window manufacturer shall provide a test report from a qualified independent testing laboratory regularly engaged in testing windows to verify that their products conform to these test requirements.

1.03 Submittals

- A. Samples (as requested by architect):
1. Typical sash corner.
 2. Typical muntin section.
 3. Color sample of Finish.
- B. Shop drawings and manufacturers literature:
1. Submit for approval shop drawings showing sash and installation details, including anchorage, fastening and sealing methods.
 2. The manufacturer shall not commence any work until shop drawings have been approved.
 3. Color charts of standard finishes.

1.04 Product Storage and Handling

- A. The General Contractor shall be responsible for the protection and storage of the windows after delivery to the site.
- B. Store in designated areas as close as possible to point of installation.

1.05 Guarantee

- A. Guarantee all materials and workmanship furnished and installed to be free from defects for a period of 12 months from the date of final acceptance or from date of substantial completion, whichever may be earlier. Repair or replace, at manufacturers option and expense, any materials or workmanship found to be defective under conditions of normal use during this period.

PART 2 - PRODUCT

2.01 Materials

- A. Fire rated steel sections, manufactured from solid hot rolled steel shapes.
1. Sections made from new billet steel with flanges rolled integral at the mill.
 2. Perimeter frames shall have glazing rebates providing an unobstructed glazing surface of at least 1/2" in height.
 3. Weight of frame shall be a minimum of 1.55 pounds per linear foot.
- B. Muntins
1. Steel Tee Muntins
 - a. Muntins shall be solid hot rolled from new billet steel with flanges rolled integral at the mill.
 - b. 1 1/8" tee shall weigh .957 pounds per lineal foot.

2.02 Fabrication

- A. Fabricate steel windows in accordance with approved shop drawings.
- B. Corners of frame shall be mitered then flash welded. Exposed and contact surfaces shall be finished smooth flush with adjacent surfaces.
- C. Steel tee muntins shall be tenoned and welded to the perimeter frame. Muntin intersections shall be slotted and cross-notched and shall extend continuous from jamb to jamb and head to sill. All joints shall all be face welded and exposed surfaces shall be finished smooth flush with adjacent surfaces.
- D. Glazing
1. All sash shall be designed for interior glazing.
 2. Provide continuous steel screw-on glazing bead to suit 1/4" Georgian wire glass or other rated material.

2.03 Factory Finishing

- A. After fabrication, steel windows, mullions, covers and trim shall receive a Grey Oxide primer finish.
- B. (Optional) After fabrication steel windows, mullions, covers and trim shall receive one or both of the following finishes:
1. Hot-Dipped Galvanizing
 2. Duracron or Duranar (Kynar) baked on enamel. Color shall be as selected by the architect from manufactures standard colors. (Custom colors are also available, consult Bliss Nor-Am.)

PART 3 - EXECUTION

3.01 Inspection

- A. Window openings shall conform to details, dimensions and tolerances shown on the window manufacturers approved shop drawings.
- B. Conditions which may adversely affect the window installation must be corrected before installation commences.

3.02 Installation

- A. Windows specified under this section shall be installed by experienced personnel.
- B. Install windows in openings in strict accordance with approved shop drawings.
 - 1. Cut to size and insert mineral wool as noted on the shop drawings.
 - 2. Set units plumb, level and true to line, without warp or rack of frames.
 - 3. Anchor units securely to surrounding construction with approved fasteners.
 - 4. The exterior joints between the sash, trim and mullions shall be properly sealed watertight with an approved sealant and neatly pointed.
- C. Repair any abraded areas of the factory finish with supplied touch-up paint.

3.03 Cleaning

- A. Window installer shall leave window surfaces clean after installation and ready to receive glass and glazing. The window installer will not be responsible for final cleaning.