SECTION 08560

SERIES 320R HORIZONTAL SLIDING VINYL WINDOWS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Replacement Windows.

1. Horizontal Sliding windows

1.2 RELATED SECTIONS

A. Section 05450: Cold Formed Metal Framing.

B. Section 06100: Rough Carpentry.

C. Section 06200: Finish Carpentry.

D. Section 07460: Siding.

E. Section 07920: Joint Sealants.

1.3 REFERENCES

A. ANSI/AAMA/NWWDA 101/I.S.2; 97 and current A-440-05 - Voluntary Specification for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors with revisions contained in "reprinting" of 12/99.

B. AAMA 902 - Voluntary Specification for Sash Balances.

C. ASTM E 283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen.

D. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.

E. ASTM E 2190 - Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units.

F. NFRC 100/200 – Procedure for Determining Fenestration Product U-Factors and Solar Heat Gain.

1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Submit the following documents for each type of window.
1. Manufacturer's technical data, product descriptions and installation guides.
2. Elevation for each style window specified indicating its size, glazing type, muntin type and design.

3. Manufacturer's head, jamb and sill details for each window type specified.

C. Verification Samples: Provide operating units of each style window specified.
1. Verification samples may be operating scaled-down mock-ups of actual-size units.
2. Operating hardware such as balances, sash locks and weather-stripping.
3. Verification samples will be returned to manufacturer's representative at project closeout.

D. Test Reports: Submit certified independent testing agency reports indicating window units meet or exceed specified performance requirements.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum ten (10) years producing vinyl (PVC) windows.

B. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size.

C. Provide window units independently tested and found to be in compliance with ANSI/AAMA/NWWDA 101/I.S.2-97 and current A440-05 performance standards listed above.

D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish areas designated by Architect.
2. Do not proceed with remaining work until workmanship and color are approved by Architect.
3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver windows to project site in undamaged condition; handle windows to prevent damage to components and to finishes.

B. Store products in manufacturer's unopened packaging, out of direct sunlight or high temperature locations, until ready for installation.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 WARRANTY

A. Submit manufacturer's standard warranty against defects in workmanship and materials.
1. Limited Lifetime Limited Transferable warranty on extruded solid vinyl member and component parts. Insulated glass is warranted against material obstruction of transparency resulting from film formation or dust collection on the interior glass surfaces for a period of twenty (20) years. Consult warranty for complete details.
2. The warranty period for commercial project work such as apartments, housing authorities and other buildings not used by individual homeowners is 10 years, covering all vinyl, glass and component parts. Consult warranty for complete

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Crystal Window & Door Systems located at: 31-10 Whitestone Expressway, Flushing, NY 11354; Tel: 718.961.7300; Fax: 718.460.4594; Email: marketing@crystalwindows.com ; Web: www.crystalwindows.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

D. Substitutions must be submitted to Architect two weeks prior to bid opening.

2.2 HORIZONTAL SLIDER - CRYSTAL SERIES 320R-2 (Two-Lite) & CRYSTAL SERIES 320R-3 (Three-Lite) (Replacement)

A. Performance:
1. Structural Rating: HS-R25 (DP 25) - Test Size: 63 inches x 44 inches in accordance with ANSI/AAMA/NWWDA 101/I.S.2 /A440-05.
2. Air Test Performance Requirements:
   a. Air infiltration maximum 0.30 cfm per square foot at 1.6 psf pressure differential when tested in accordance with ASTM E283 for sliding sealed products.
3. Water Test Performance Requirements:
   a. No uncontrolled water leakage at 3.76 psf static pressure differential when tested in accordance with ASTM E331 and ASTM E547.
4. Forced Entry: Grade 10 in accordance with ÅSTM F 588.
5. Thermal Transmittance: The following values are in accordance with NFRC 100 and NFRC 200.
   a. With Low-E / Argon: U-Factor - 0.32
   b. With SB70 & Duralite: U-Factor - 0.29

B. Operation: Right sash (from inside) of two-lite slider, left and right sashes of three-lite slider shall move left and right. The fixed lite of two-lite slider and the middle sash of three-lite slider shall be glazed directly into the frame. All movable sashes shall lift out for easy cleaning or re-glazing.

C. Materials: All vinyl extrusions shall be rigid 100% virgin PVC. Jambs and sash rails shall have a main wall thickness of 0.062”. Frame profile shall have five tubular hollows for strength and thermal efficiency. Sash profiles shall be tubular extruded.

D. Frame construction: Frame shall be fitted with head expander and sill extension. All corners shall be mitered and fusion welded. Frame depth shall be 2.625”.

E. Sash construction: All sash corners shall be mitered and fusion welded. There shall be integral interlock at the meeting rails. Heights over 40” shall have internal metal reinforcements at meeting rails. Movable sash shall have a snap-in pull handle that will be

the full height of sash. Movable keeper rail for dry wall transfer into building.

F. Glazing: Sash shall utilize 7/8” thick insulating glass consisting of two sheets of 3/32” thick argon filled Low-E glass with a metal spacer system (Intercept) equipped with desiccant. A butyl sealant shall be extruded around the entire perimeter of the spacer to achieve a seal. The fixed lite shall be interior glazed, and the movable sash shall be exterior glazed. All glass lites shall be back bedded with silicone, and utilize snap-in glazing beads.

G. Screen construction: The screen frame shall be rollformed of aluminum with all corners keyed. For two-lite slider, standard screen shall be a half screen. For three-lite slider, screen shall be either a full screen or two pieces that cover the two movable sashes area. There shall be with a full-length handle on left or right rail that can be used to take out the screen. The screen mesh shall be charcoal fiberglass held-in-place with a flexible spline. Two stainless steel spring clips shall be applied at the opposed side of handle rail.

H. Hardware: Sash lock shall be cam type and finished to match the vinyl extrusion color. Sash lock shall be fastened at the lock rail by two sheet-metal color matched screws. Double locks will be standard on window over 24” in height. Two tandem Nylon roller sets shall be recessed into each bottom rail of the movable sash.

I. Weatherstripping: High-density woven pile shall be used in combination with continuous polyethylene rigid seal to minimize air infiltration.

J. Finish: Shall be solid vinyl in off white or beige.

K. Options: Grids – Colonial, Georgian, Applied, Prairie (Flat) and Diamond aluminum in-glass in white, beige or two tone colors are available. Glazing – Duralite spacer glass units, obscure wire, clear wire, obscure, clear annealed, and tempered glass can be used. Field mulled or factory mulled units, and oriel windows are available.

PART 3 EXECUTION

3.1 EXAMINATION

A. Contractor must verify rough opening size is of sufficient size to receive window unit and complies with manufacturer's requirements for opening clearances.

B. Confirm that sill plate is level.

C. Architect must be notified of unacceptable conditions before proceeding with installation.

3.2 INSTALLATION

3.3 Contractor must install window unit in accordance with manufacturer's printed instructions.

A. Apply sealant around perimeter of window unit between nail fin and exterior sheathing of wall.

B. Install window unit level and plumb. Center window unit in opening and secure window unit by nailing through nail fin and screw through jambs as indicated in manufacturer's instructions.

C. Flash window in accordance with AAMA's "Standard Practice for Installation of Windows with a Mounting Flange in Stud Frame Construction".

D. Insulate between window frame and rough opening with suitable insulation.

3.4 ADJUSTING

A. Installer must adjust units for smooth operation without binding or racking.

B. Installer must adjust sash locks and screens for smooth operation.

3.5 CLEANING

A. Clean soiled surfaces and glass prior to substantial completion.

3.6 PROTECTION

A. Protect window unit from damage until substantial completion. Repair or replace damaged units.

END OF SECTION