

SPECIFICATIONS FOR VINYL REPLACEMENT WINDOWS

1. **SCOPE:**

The Contractor shall furnish and deliver vinyl replacement windows of the type(s) and size(s) shown with all necessary hardware, anchors, and equipment shown in the plans and specifications herein, with installation, to the point of delivery as ordered by the Public Housing Agency. It is the Contractor's responsibility to provide the product that meets all requirements of local and international building codes.

All prices are F.O.B. destination, installed.

2. **REFERENCE STANDARDS.** The following standards and specifications are part of this specification where referenced.

AAMA (American Architectural Manufacturer's Association)

- A. AAMA/NWWDA 101/I.S.2-97 Voluntary Specifications for Aluminum and Poly (vinyl chloride) (PVC) and wood windows and glass doors.
- B. NFRC 100 (National----- Rating Council).

3. **MATERIALS.**

- 3.1 Window Members. All window members shall be of vinyl (PVC). Secondary members such as friction shoes, filler track in sill of horizontal sliding windows, weather-stripping guides if made of suitable and compatible material(s) shall comply with AAMA/NWWDA, 101/I.S.2-97. 3.2 Trim material shall be vinyl coated aluminum (.019") in matching color.

4. **CONSTRUCTION:**

- 4.1 Assembly. Windows shall be assembled in a secure and workmanlike manner to perform as hereinafter specified and to assure neat, weather tight construction. A permanent watertight joint shall be made of the junctions of sill and jamb members. All corners of frames and sash shall be welded and welding or brazing flux shall be completely removed immediately upon completion of welding or brazing operation.
- 4.2 Hardware. Hardware shall be designed to perform the functions for which it is intended and shall be securely attached to the window.
- 4.3 Mullions or other Structural Members. When mullion units occur, whether they are joined by integral mullions, independent mullions or by a combination of frame members, the resulting member shall be capable of withstanding the load outlined in Section 13.
- 4.4 Fin Trim. Installation fins or fin trim shall be aluminum, vinyl or other suitable material compatible with vinyl and of sufficient strength and thickness to assure a satisfactory installation. Nailing grooves and/or break off score lines in extrusions are acceptable.

Applied fins or fin trim may be assembled to window by interlocking with frame members or with fasteners located on centers not exceeding 16".
- 4.5 Tolerances. Tolerances of wall thickness, cross-sectional size and overall size shall be in accordance with AAMA/NWWDA 101/I.S.2-97.
- 4.6 Size and Size Terminology shall be in accordance with AAMA/NWWDA 101/I.S.2-97. Contractor shall be responsible for field measuring for the basic bid and for final sizing of windows for proper installation.

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5. FINISH.

5.1 Windows furnished under this specification shall have an integral finish. Exposed surfaces of all vinyl members shall be clean and free from serious surface blemishes. If exposed welded joints are used, they shall be dressed and finished.

6. SCREENS.

6.1 Screens shall be provided when specified and be of manufacturer's standard approved design, applicable to specific windows for which they are intended.

6.2 Screens shall have extruded aluminum frames of suitable alloy. Frames shall be of sufficient rigidity, cross-braced as required, to prevent excessive bow in frame members and in sag screening.

6.3 Frame corners shall be firmly jointed in a secure and workmanlike manner.

6.4 Insect screening shall be of material compatible with vinyl and shall meet industry standards for the intended use.

6.5 Screens shall be provided with fastening devices, suited particularly for application to specific windows for which type are intended, made of aluminum or material(s) compatible with vinyl and of sufficient strength to perform satisfactorily.

7. OPTIONS:

7.1 Heavy Duty Screen (Optional)

7.1.1 Screen frames shall be .062" minimum aluminum extruded 6063T5 alloy.
A/C screens shall be hinged & provided with method of storing hinged section in place.

7.1.2 Screen material shall be of 12x12 or 18x18 mesh stainless steel with a wire diameter of .023 inch. Material shall be alloy 304 stainless steel. See option for .028" wire.

7.1.3 Screens shall be provided with fastening devices for application to specific windows for which they are intended of sufficient strength to perform satisfactorily. All exposed mounting screws shall be tamper resistant.

8. DRAWINGS AND INSTALLATION DETAILS.

CPC Contractor shall furnish shop drawings (if required) showing installation of windows in existing conditions.

9. ERECTION AND CAULKING.

Erection contractor shall securely anchor windows in place in straight, plumb, and level condition, without distortion of windows, in accordance with drawings and installation details specified in Section 8.0 and make final adjustments for proper operation of sash and/or ventilators after glazing.

Windows shall be caulked with compound meeting AAMA 808.3-92 to accomplish weathertight installation around exterior perimeter of window frame or trim and wall opening.

10. GLASS AND GLAZING.

10.1 Glass. Glass installed in windows shall meet ASTM-C 1036-91 and be not less than "B" quality. Plate and float glass shall be glazing quality. Standard factory glazing shall be "DSB", 3/16", or

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1/4" as specified or as size required (based on glass table in appendix of AAMA/NWWDA 101/I.S.2-97).

Safety glazing materials, where used, shall meet ANSI Z97.1-1984. Tempered glass, where used, shall also meet ASTM C 1048-91 (Kind FT).

10.2 Glazing methods for factory installation.

10.2.1 Glazing Beads. Glazing beads or retainers of any material compatible with vinyl may be used, if required to retain the glass, shall be of sufficient strength and fixation to serve this purpose. Thickness of glazing beads is optional except as otherwise specified in a particular product specification herein. Rigid vinyl glazing beads shall be produced from a compound conforming to ASTM D4216-91. Wet glazing (silicone) or dry glazing (tape) may be used.

11. PROTECTION.

Window contractor shall be responsible for protection of windows during course of construction.

12. CERTIFICATION.

All windows specified shall meet or exceed all the performance requirements of AAMA/NWWDA 101/I.S.2-97 for aluminum and vinyl (PVC) prime windows as well as all reference standards listed in Section 2.0 of this specification. Bidder shall submit test reports and proof of certification by a third-party certification organization in compliance with CFR 200.935. Each test report and certification must be labeled with the CPC item number it covers (represents). Expired test reports and/or certifications will not be accepted.

Windows tested for the DP35 and DP45 rating must be of Gateway test size as required in AAMA/NWWDA 101/I.S.2-97. Test reports for down sized windows will be rejected.

12.1 Double and single hung windows covered by this specification shall meet or exceed all the performance requirements of AAMA/NWWDA 101/I.S.2-97 for DP-45. Single sliding windows shall meet or exceed DP-35 requirements of AAMA/NWWDA.

12.2 Insulating glass shall be tested and certified in accordance with ASTM E774-88, "C" level performance. Insulating glass shall be warranted from visual obstruction due to internal moisture for a period of ten (10) years.

13. GENERAL. – Thermal Requirements

13.1 See pricing page No.4 of 6 for additional pricing for low E glass. This item may be added for the purpose of meeting international code requirements for energy performance.

13.2 All thermally improved windows shall be tested in accordance with NFRC 100 and shall perform in accordance with "Eligible Building Components" under Section 25c of the International Building Code, as amended by the American and Recovery Reinvestment Act of 2009. Requirements are: U-Value of .30 or lower and solar heat gain coefficient (SHGC) of .30 or lower.

14. PERFORMANCE OF WORK, CLEAN UP AND DAMAGES.

14.1 The work shall be conducted efficiently at the least inconvenience to the residents in occupied dwelling units.

14.2 The contractor shall keep the premises free of debris and construction materials resulting from the installation work. All debris and such materials shall be removed from the premises at the end of each workday.

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- 14.3 Any damage to grounds, plantings, buildings and any other facilities or property shall be the Contractor's exclusive responsibility. Their repair or replacement shall be paid in full by the Contractor.
- 14.4 Contractor shall remove all excess materials such as factory-applied stickers, caulking, smudges from vinyl and glass at the time of installation. Final glass cleaning is not required.

GUARANTEES

The Contractor guarantees that all installed materials and equipment are new and free of defects and were installed in a professional manner.

In the case of any defects in materials or workmanship occurring within one year subsequent to the final acceptance of this construction by the PHA, the Contractor agrees to repair and/or replace the defective item without cost to the PHA. Note the requirement for ten (10) year warranty on insulating glass in base.

BID/SUMMARY PRICE SHEET FOR VINYL REPLACEMENT WINDOWS

CPC Bid Number: _____ **Bid Date:** _____
(Available on Invitation to Bid)

Name of Firm: _____ **Contact:** _____

Address: _____

Email: _____ **Phone:** _____

Manufacturer: _____ **Model No. / Name:** _____

Item 1. DP35 – Slider - INSTALLED

<u>Window Size UI*</u>	<u>Price Per Unit</u>		
	<u>10-500 Units</u>	<u>501-1000 Units</u>	<u>Over 1000 Units</u>
0-70	_____	_____	_____
71-80	_____	_____	_____
81-90	_____	_____	_____
91-103	_____	_____	_____

*UI (United Inch) Is Defined as Sum of One Frame Width Added to One Frame Height.

Delivery: _____ **Terms:** _____

1. All Windows F.O.B. Destination and Installed.
2. Applied Trim is Not Part of U.I. Measurement.
3. Vinyl Windows Shall be Furnished with DSB Thermal Glazing, Anchoring and Miscellaneous Angles, Channels, Etc., Including Exterior Screens at Operable Sash. See Additional Pricing for Options.

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CPC Bid Number: _____ **Bid Date:** _____
(Available on Invitation to Bid)

Name of Firm: _____ **Contact:** _____

Address: _____

Email: _____ **Phone:** _____

Manufacturer: _____ **Model No. / Name:** _____

Item 2. DP45 – Single Hung - INSTALLED

<u>Window Size UI*</u>	<u>Price Per Unit</u>		
	<u>10-500 Units</u>	<u>501-1000 Units</u>	<u>Over 1000 Units</u>
0-70	_____	_____	_____
71-80	_____	_____	_____
81-90	_____	_____	_____
91-120	_____	_____	_____

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3. Vinyl Windows Shall be Furnished with DSB Thermal Glazing, Anchoring and Miscellaneous Angles, Channels, Etc., Including Exterior Screens at Operable Sash. See Additional Pricing for Options.

BID/SUMMARY PRICE SHEET FOR VINYL REPLACEMENT WINDOWS

CPC Bid Number: _____ **Bid Date:** _____
(Available on Invitation to Bid)

Name of Firm: _____ **Contact:** _____

Address: _____

Email: _____ **Phone:** _____

Manufacturer: _____ **Model No. / Name:** _____

Item 3. DP45 – Double Hung - INSTALLED

<u>Window Size UI*</u>	<u>Price Per Unit</u>		
	<u>10-500 Units</u>	<u>501-1000 Units</u>	<u>Over 1000 Units</u>
0-70	_____	_____	_____
71-80	_____	_____	_____
81-90	_____	_____	_____
91-103	_____	_____	_____

*UI (United Inch) Is Defined as Sum of One Frame Width Added to One Frame Height.

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2. Applied Trim is Not Part of U.I. Measurement.
3. Vinyl Windows Shall be Furnished with DSB Thermal Glazing, Anchoring and Miscellaneous Angles, Channels, Etc., Including Exterior Screens at Operable Sash. See Additional Pricing for Options.

**BID/SUMMARY PRICE SHEET FOR
VINYL REPLACEMENT WINDOWS**

CPC Bid Number: _____ **Bid Date:** _____
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Name of Firm: _____ **Contact:** _____

Address: _____

Email: _____ **Phone:** _____

Manufacturer: _____ **Model No. / Name:** _____

INSULATING GLASS EXTRAS

(Minimum of 1/4" dead air space) Double Strength (DSB)

Low-E Coating Add _____ Per S.F.

Obscure Glass Add _____ Per S.F.

Solar Bronze-Solar Gray Add _____ Per S.F.

GRIDS (Between the Glass) Add _____ Per S.F.

Other Glazing

Tempered Glass 1/8" Sq. Ft. 3/16" Sq. Ft. 1/4" Sq. Ft.

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Name of Firm: _____ **Contact:** _____

Address: _____

Email: _____ **Phone:** _____

Manufacturer: _____ **Model No. / Name:** _____

ADDITIONAL WINDOW CHARGES

Windows Installed Above Fourth Floor Where Scaffolding is Required And/or Elevators are Not Present,
Add \$ _____ Per Window Per Floor for Labor.

Mull Two Windows Together in One Opening, Add \$ _____ Per Mullion.

Remove and Replace Existing Shade Brackets, Add \$ _____ Per Opening.

Install Batt Insulation Between New and Existing, Add \$ _____ Per L.F.

ADDITIONAL SCREENING

Add Heavy-Duty Screen (.023") \$ _____ Per U.I. (See Spec. 7.1)

Add Heavy-Duty Screen (.028") \$ _____ Per U.I. (See Spec. 7.1)

Additional to Provide Hinging for Air Conditioner Screen \$ _____ Per Screen (See Spec. 7.1)

Add for Aluminum Screening \$ _____ Per Screen

Note: Heavy-Duty Screen Prices Should be Net After Deleting Amount Included in Bid for Regular Screens.

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Email: _____ **Phone:** _____

Manufacturer: _____ **Model No. / Name:** _____

Aluminum Trim

Add Exterior or Interior Break Metal up to 2 ½" \$ _____ For greater than 2 ½"

Add \$ _____ Per Foot/Inch of Width Change.

Interior Snap-on Trim – Add to Include Interior Trim up to 2 ½"*. For Trim Greater than 2 ½"*

Add \$ _____ Per Foot/Inch of Width Change.

In Lieu of Trim, Caulk Window to Interior Using Interior Acrylic Material Add \$ _____

****Total of Width and Depth***

Mullions to Join Windows – Additional \$ _____ Per L.F.

Mullion Covers

Wide (Greater than 2 ½") _____ Per Foot

Narrow (Less than 2 ½") _____ Per Foot

Casing Extenders: _____ Per Foot

L Angle

Size _____ Per Foot

_____ Per Foot