

Window Refurbishing Specifications

Double Hung Windows with Glass Replacement

Part I: General

1.1 Intent

1. Replace sash balances & complete a general refurbishing of existing windows to improve their operation, and energy efficiency.
2. Replace failed/fogged glass units with glass units meeting the energy and aesthetic specifications determined by the awarding authority.
3. Contractor will take note that the major work includes, but is not limited to the replacement of the window sash balances.

1.2 Submittals

1. **Product Data:** Submit samples of materials to be used with manufacturer's product literature for all replacement components to be installed in existing windows demonstrating compliance with specified requirement.
2. **Mock-up:** Prior to contract awarding, the contractor of choice will be asked to do a mock-up of one window based on the contract documents. The test mock-up will be used as a basis of acceptability of quality of workmanship and the ability of the balance system to perform.

1.3 Quality Assurance

Qualifications: Pre-qualifications for window repair contractors. Contractors seeking to submit bids on this project must specialize in the window repair industry, and shall have the following minimum qualifications:

1. Contractors must have a minimum of ten years experience in window balance replacement and calibration.
2. Contractors must have a minimum of ten years experience in aluminum window glazing systems.
3. Contractors to submit a list of ten completed projects of similar scope complete with names, addresses, phone numbers, and contact people.

1.4 Project Conditions

1. **Field verification:** Check all existing windows by field survey prior to ordering materials. Submit field survey report to show existing condition and specific repair method.

1.5 Warranty

1. **Class 5 Sash Balances - Balance Manufacturer:**
 - A. Submit written manufacturer's warranty of class 5 balances, agreeing to replace units that fail in materials or manufacture for 5 years, from substantial completion of contract.
2. **Glass: Glass Manufacturer:**
 - A. Submit written manufacturer's warranty of insulated glass units, agreeing to replace

units that fail in materials or manufacture for a minimum of 10 years from substantial completion of contract.

3. Repair Warranty – Contractor:

- A. Submit written and signed warranty covering complete window repair processes for one year from date of substantial completion of contract, stating that repair of window accessories conform to standards specified in this section.
- B. Any corrective work required during a warranty period to correct failures will conform to specifications and shall be performed by contractor at no additional cost to Awarding Authority.

Part II: Products

2.1 Manufacturers And Products

Window Balances: Provide Ultra-Lift Balances by Caldwell Mfg., Rochester, NY, or approved equal.

Glass: Insulating glass units (*awarding authority to determine energy specifications and aesthetics.*)

Silicone: Dow Corning 995 Structural Silicone Adhesive (or adhesive of similar quality)

Small Joint Sealant: Acryl-R small joint sealant manufactured by Schnee-Moorehead, product # SM5700 (or adhesive of similar quality)

2.2 Components

- A. Accessory components: Include carrier assemblies, sash caps and locking hardware as recommended by manufacturer for existing windows – or improved alternative as specified and/or approved by awarding authority.

2.3 Materials

A. Balances:

- 1. Balances shall be of appropriate size and capacity to hold sash in position with no movement.
- 2. Balances shall be high performance sash balances that are tested in accordance with AAMA 902192 Voluntary Specification for sash balances.
- 3. Balances shall meet all minimum Class 5 requirements with a minimum .30 Manually Applied Force Ration (MAF).
- 4. Compliance to 902.92 Class 5 and MAF ratio shall be verified by a test report from an AAMA accredited laboratory.

B. Glass: *(Energy rating and aesthetics as specified by awarding authority.)*

PART III: Execution

1. Refurbish windows as follows:
 - a. Remove sash
 - b. Remove existing block & tackle balances (lower sash only)
 - c. Install Caldwell Ultra-Lift Balance Systems or similar (lower sash only)
 - d. Adjust interlocks as needed
 - e. Inspect all weather stripping and replace as needed (existing type or better)
 - f. Clean and lubricate jamb channels
 - g. Reinstall sash
 - h. Secure top sash in closed position
 - i. Inspect all locking hardware and replace locking hardware as needed for proper operation & locking
 - j. Replace plastic sash stops with aluminum bar stops
 - k. Install four guides on the face of the lower sash to prevent lateral movement

2. Furnish and install (*X number*) insulated glass units as follows with the materials and components specified previously in the above section entitled "Specifications." Work to be completed as follows:
 - a. Remove sash from window frame
 - b. Remove existing failed glass unit from sash
 - c. Inspect glazing channel and replace as needed
 - d. Install new insulating glass unit in sash
 - e. Seal glazing channel at exterior corners and channel seam with silicone as noted above
 - f. Seal sash joinery as needed with small joint sealant as noted above
 - g. Reinstall sash in window frame

3. Remove and dispose all debris.

4. Return the building and adjacent areas affected by the work to their original condition.

5. Submit a completed work log to the awarding authority in a commonly acceptable electronic format.