



# Addendum No. 1

November 6, 2009

**HANO Scattered Site Block 6  
Interior and Exterior Repairs**  
for the  
**Housing Authority of New Orleans**  
4100 Touro Street  
New Orleans, Louisiana 70112-3143  
SMA Project Number: 0914  
**HANO IFB# 09-130-09-19**

This Addendum forms a part of the Bidding Documents/Contract Documents and modifies and amends the original documents dated August 28, 2009 for this Project. Bidders shall acknowledge receipt of this Addendum on the Bid Form. Failure to do so may subject the Bidder to disqualification.

The following revisions are hereby made a part of the Bidding Documents/Contract Documents as if written therein:

## A. Project Manual

### 1. Extension of Due Date

**The bid due date for this project has been changed. The due date has been extended three (3) days.** Bids will be received until 2:00 p.m., Friday, November 13, 2009 in lieu of November 10 as indicated.

### 2. Table of Contents

- a. Delete the term "Color Coded" as it refers to HANO Forms.
- b. Replace Specification Section 08400 Vinyl Windows with Specification Section 08400 Aluminum Windows

### 3. HANO Form: Index of Submittal Documents

- a. Delete the term "Color Coded" as it refers to HANO Forms.

### 4. HANO Form: Section 3 Annual Family Income Limits 2008

- a. Delete "2008 and Insert "2009"

### 5. HANO Form: DBE/WBE/Section 3 SUBCONTRACTORS SUPPLIERS, CONSULTANTS – LETTER OF INTENT

- a. Delete the forwarding address on Senate Street and insert:

Housing Authority of New Orleans  
Contracts and Compliance Department  
4100 Touro Street Building B  
New Orleans, LA 70122  
Attn: Compliance Officer

Tele 504.896.2000  
Fax 504.896.2220  
3642 MAGAZINE ST  
NEW ORLEANS LA  
70115 - 2554  
scaironomartinez.com



**6. Specification Section 08400 Vinyl Windows**

- a. Replace with Specification Section 08400 Aluminum Windows (attached)

**7. Specification Section 08700 Door Hardware**

**a. Delete paragraph 108.A and Replace with the following:**

Contractor shall call a conference for the Architect, Owner, and hardware supplier's AHC to establish a keying system as required by the Owner.

- 1. A grand master or master key system shall be established.
- 2. All locks shall be construction master keyed. No permanent keys are to be sent to jobsite until so directed.

**8. Specification Section 09250 Gypsum Board**

- a. Delete all references to 1/2" Gypsum Board and replace with 5/8" Gypsum Board

**9. Specification Section 08400 Vinyl Windows**

- a. Replace with Specification Section 08400 Aluminum Windows (attached)

**B. Drawings**

**1. General**

- a. Delete any reference to "Vinyl Windows" and provide Aluminum Windows in accordance with the attached Specification Section 08400.
- b. Delete all drawings dated August 28, 2009 and replace with drawings dated August 28, 2009 and revised October 30, 2009.

*The primary revision is deletion of the Cambronne Street and Royal Street buildings from the Scope of Work. The Work is limited to 616 France Street.*

**C. Clarification**

- 1. This project will comply with the American Recovery and Reinvestment Act (AARA) – Refer to specifications for requirements. Certification of materials will be required as a part of the submittal process.
- 2. The Buildings will be vacated prior to commencement of construction.
- 3. Regarding tax exemption: Refer to **Form R 1020 Designation of Construction Contractor as Agent of a Governmental Entity and Exemption** Certificate within specification.



4. Excerpt from Prebid Conference minutes including questions from bidders and responses by HANO:

Q1: On the Employment and Contracting requirements, there were 30 and 20. So 50 percent of the work being done should be done by people that live in the communities where the work being done is. Right?

A1: HANO's goals are 20% DBE, 10% Section 3 and 5% WBE insofar as subcontract awards are concerned or 35% total. In addition, 30% of all new hires shall be Section 3 residents.

Q2: If an existing company has at least 30 percent employees that earn less than and qualify under the Section 3 requirements then you -- I may be a Section 3 company. Is that what you're saying?

A2: If 30% or more of your employees fall under any one of the following categories, then you may qualify as a Section 3 Business Concern:

- 1) Residents of HANO housing site where work is taking place
- 2) Residents of any HANO housing site
- 3) Participants in HUD Youthbuild Program in Orleans Parish
- 4) A low or very low-income resident of Orleans Parish

Q3: And if I bid as a general and meet those requirements, then I've also met the 10 percent requirement?

A3: Yes. You will have met that goal. However, as a Section 3/DBE General Contractor you must still meet those other goals.

Q4: And I'm trying to confirm if I qualify as a Section 3 but bid it as a general, then have I met the Section 3 requirements?

A4: Yes.

#### **D. Attachments**

1. This Addendum No. 1 has the following attachments, enclosures and exhibits:

b. Drawings: NOTE: Drawings will be available at the same location and in the same format as the originals documents or will be emailed to bidders upon request. Request for email shall be sent to [ron@scaironmartinez.com](mailto:ron@scaironmartinez.com)

A 0.1	Cover Sheet and Notes
A 1.2	France Street Site Plan
A 1.3	Site Details
A 1.4	Site Details
A 2.4	France Street Typical Unit Floor Plan
A 3.4	France Street Bldg Floor Plan/Exterior Elevations
A 3.5	France Street Bldg Floor Plan/Exterior Elevations
A 5.2	Door Details
A 5.2	Window Details
P 0.1	Sheet Index, Legend, Schedules & Specs
P 0.2	Specifications Continued
P 2.4	616 France Street First Site Plumbing Plan
P 2.5	616 France Street Second Site Plumbing Plan



P 2.6	616 France Street Typical First and Second Floor Plumbing Plan
P 4.1	Details
M 0.1	Sheet Index, Legend, Details & Specs
M 0.2	Mechanical Specifications
M 0.3	Mechanical Specifications and Details
M 2.4	France Street Mechanical Plan
E 1.0	Notes, Schedules, Legend, and Sheet Index
E 2.0	Specifications
E 6.0	616 France Street First Floor Electrical Plan
E 7.0	616 France Street Second Floor Electrical Plan
E 8.0	Schedule and Details
E 10.0	616 Riser Diagrams
E 11.0	Panel Schedules

c. Specification Section 08400

END OF ADDENDUM NO. 1

## SECTION 08400

### ALUMINUM WINDOWS

#### 1.0 GENERAL

##### 1.01 SUMMARY

- A. All labor, materials, supplies, transportation, handling, storage, tools, services, safety programs and precautions, supervision, project management, quality assurance, quality control, equipment, supplies, consumables, accessories and incidentals necessary to complete all:
1. Extruded aluminum windows with fixed sash and operating sash.
  2. Factory glazing.
  3. Operating hardware.
  4. Insect screen.
- B. Related Sections:
1. Section 01700 - Executed Requirements: Final Cleaning of Glass.
  2. Section 07600 - Sheet Metal Flashing and Trim
  3. Section 07900 - Joint Sealers: Perimeter sealant and back-up materials

##### 1.02 REFERENCES

- A. Reference Standards: See Section 01400. Comply with following:
1. AAMA/NWWDA 101/I.S.2 - Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors; American Architectural Manufacturers Association; 1997 with revisions contained in "reprinting" of 12/99.
  2. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels; 1998.
  3. AAMA CW-10-Care and Handling of Architectural Aluminum from Shop to Site; American Architectural Manufacturers Association; 1997.
  4. ASCE 7 - Minimum Design Loads for Buildings and Other Structures; American Society of Civil Engineers; 1998 (Pub. 2000).
  5. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2000.
  6. 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; 1991 (Reapproved 1999).
  7. ASTM E 330- Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference; 1997.
  8. ASTM E 1105 - Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference; 2000.
  9. GANA (GM) - GANA Glazing Manual; 1997.

##### 1.03. SYSTEM DESCRIPTION

- A. Performance Requirements: As specified in PART 2, with the following additional requirements:

- B. Design and size windows to withstand the following load requirements, when tested in accordance with ASTM E 330 using test loads equal to 1.5 times the design wind loads with 10 second duration of maximum load:
1. Design Wind Loads: Comply with requirements of ASCE 7 for 130+ mph wind load.
  2. Residential Buildings: Minimum Design Pressure: +65 lbf/sq ft., -70 lbf/sq ft
  3. Residential Buildings: Structural Test Pressure: +97.5 lbf/sq ft., -105 lbf/sq ft
- C. Deflection: Not to exceed 1/175 of unsupported spans, when tested in accordance with ASTM E 330 using test loads equal to 1.5 times the design wind loads with 10 second duration of maximum load, and must be without permanent deformation of any component, glass breakage or anchorage failure.
1. Member Deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials.
- D. Movement: Accommodate movement between window and perimeter framing and deflection of lintel, without damage to components or deterioration of seals.
- E. Air Infiltration: Limit air infiltration through assembly to 0.3 cu ft/min/sq ft of wall area, measured at a reference differential pressure across assembly of 1.57 psf as measured in accordance with ASTM E 283.
1. Perform infiltration test on dry window immediately following operating force test. Mount interior vacuum chamber against perimeter edges of window sub-framing and sill flashing.
- F. Water Leakage: None, measured in accordance with AAMA/NWDA 101/I.S.2, water resistance test methods at test pressure equaling 15 percent of positive design pressure, but not less than 2.86 lbf/sq ft or more than 12 lbf/sq ft.
1. Perform water leakage test immediately following air infiltration test. Mount interior vacuum chamber against perimeter edges of sub-framing and sill flashing.
  2. Prior to installing window frames in wall opening in the field for first three test units, plug exterior sill track weep holes and fill sill track with water to top of inboard water retaining leg. After 15 minutes of ponding, check for leakage at frame corners. Correct or replace and retest until no leakage occurs. Unplug weep holes and allow track to drain.
  3. Water Leakage: As defined in ASTM standards, except it shall also include water dripping or running across interior face of glass or any water on interior trim. Ensure water spray in field covers perimeter sealant joints and adjacent surrounding substrate. If retesting is necessary, allow unit to drain until no water runs from weep holes; do not use differential pressure to purge system.
- G. Air and Vapor Seal: Maintain continuous air barrier and vapor retarder throughout assembly.
1. Vapor Seal: No vapor seal failure at interior static pressure of 1 inch, 72 degrees F, and 40 percent relative humidity.
- H. System Internal Drainage: Drain to exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, or migrating moisture occurring within system.
- I. Operating Force: Maximum 30 pounds.
- J. Label units at factory certifying compliance with performance requirements.

- K. All components of the window unit shall be designed, detailed and manufactured as required to resist 130 mph wind load without failure, damage or compromise. Install, fasten and secure all window units as required to resist 130 mph wind load without failure, damage or compromise.
- L. Glazing in all window units shall be large missile impact resistant as required by IRC 2006 R301.2.1.2. Glazing shall resist windborne debris in accordance with ASTM E 1996 Large Missile Test and ASTM E 1886 referenced therein.

#### 1.04 SUBMITTALS

- A. See Section 01340. Submit following for review:
  - 1. Product Data: Provide component dimensions, information on glass and glazing, internal drainage details, and descriptions of hardware and accessories.
  - 2. Shop Drawings: Indicate opening dimensions, elevations of different types, framed opening tolerances, method for achieving air and vapor barrier seal to adjacent construction, anchorage locations, and installation requirements.
- B. Quality Assurance/Control Submittals: Submit following for Project record. Architect's response is not required.
  - 1. Calculations: Submit calculations, bearing seal of professional engineer registered in Louisiana. Indicate adequacy of window perimeter anchors and attachments, stiffness of meeting stile, rigidity of sash rail, and adequacy of components not verified by testing.
  - 2. Test Reports: Independent testing agency reports demonstrating compliance with specified requirements.
    - a. Test windows in sizes required for specified performance classes. Test reports submitted for lesser performance classes will be rejected.
  - 3. Certificates: Certify that windows meet or exceed specified requirements.
    - a. List any areas in which proposed units will not meet or will vary from specified requirements.
  - 4. Commitment to Warranty: Before starting work of this Section, submit with Shop Drawings and Product Data, manufacturer's signed statement that design and specifications for windows are correct for this Project, and that when product is installed as specified manufacturer's warranty will be enforceable.
  - 5. Manufacturer's Installation Instructions: Include complete preparation, coordination and sequence of work of other trades, installation, and cleaning requirements.
- C. Contract Closeout Submittals: Submit warranty in accordance with Sections 01300 and 01780. Ensure that forms have been completed in Owner's name and registered with manufacturer.

#### 1.05 QUALITY ASSURANCE

- A. Regulatory Requirements: Meet all code egress requirements for location installed.
- B. Comply with requirements of AAMA 101 Designation R.
- C. Manufacturer and Installer: Company specializing in fabrication of residential aluminum windows of types required, with not fewer than five years of experience.

- D. Sequence affected trades including installation of flashing and sealants to ensure continuity of airtight and watertight installation.
- E. All components of the window unit shall be designed, detailed and manufactured as required to resist 130 mph wind load without failure, damage or compromise. Install, fasten and secure all window units as required to resist 130 mph wind load without failure, damage or compromise.
- F. Glazing in all window units shall be large missile impact resistant as required by IRC 2006 R301.2.1.2. Glazing shall resist windborne debris in accordance with ASTM E 1996 Large Missile Test and ASTM E 1886 referenced therein.

#### 1.06 DELIVERY, STORAGE, AND PROTECTION

- A. Comply with requirements of AAMA CW-10.
- B. Delivery: Schedule delivery to minimize handling on site.
  - 1. Inspect frames for damage, including finish damage and fracture of thermal breaks or frame corner seals.
- C. Storage: Store in areas least subject to traffic or falling objects. Provide space around frames and keep storage area clean, dry and well-ventilated to avoid condensation and other moisture-induced damage to frame finish.
- D. Handling: Stack individual units on edge leaned slightly against upright supports with separators between each.
- E. Protect finished surfaces with wrapping paper or strippable coating during installation. Do not use adhesive papers or sprayed coatings that bond to substrate when exposed to sunlight or weather.

#### 1.07 PROJECT CONDITIONS

- A. Environmental Requirements:
  - 1. Do not install sealants when ambient temperature is less than 40 degrees F.
    - a. Maintain this minimum temperature during and 24 hours after installation of sealants.

#### 1.08 WARRANTY

- A. See Section 01740 for additional warranty requirements.
  - 1. Correct defective Work within a five year period after Date of Substantial Completion.
  - 2. Provide five year manufacturer warranty against failure of glass seal on insulating glass units, including interpane dusting or misting. Include provision for replacement of failed units.
  - 3. Provide five year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

### 2.0 PRODUCTS

#### 2.01 WINDOWS

- A. Windows: Tubular extruded aluminum sections, factory fabricated, factory finished, factory glazed, vision glass, related flashings, anchorage and attachment devices.
  - 1. Atrium Companies or approved equal, Tilt Sash Insulated Single Hung Windows, half screens in removable panels, lite patterns as per drawings, clear glass insulated unit, large missile impact resistant glass.
- B. Fixed, Non-Operable Type:
  - 1. Residential Buildings: Performance Requirements: AAMA 101/I.S.2 DP-+65. -70.
  - 2. Community Building: Performance Requirements: AAMA 101/I.S.2 DP-+65. -70.
  - 3. Provide with muntin grids as indicated on Drawings.
  - 4. Glazing: Double; clear; transparent, large missile impact resist per ASTM E 1996.
- C. Operable Type:
  - 1. Residential Buildings: Performance Requirements: AAMA 101/I.S.2 DP-+65. -70.
  - 2. Community Building: Performance Requirements: AAMA 101/I.S.2 DP-+65. -70.
  - 3. Provide with muntin grids as indicated on Drawings.
  - 4. Provide screens.
  - 5. Glazing: Double; clear; transparent, large missile impact resist per ASTM E 1996.

## 2.02 COMPONENTS

- A. Frames: Profile as indicated, applied glass stops of snap-on type.
  - 1. Sills: Extruded aluminum; sloped for positive wash; extended as detailed; one piece full width of opening with jamb angles to terminate sill end.
  - 2. Residential Buildings: Provide with extruded aluminum attachment fin; as detailed and required for attachment to wall structure at head, jamb and sill.
- B. Insect Screen Frame: Rolled aluminum frame of rectangular sections; fit with adjustable hardware, nominal size similar to operable glazed unit.
  - 1. Provide for each operable exterior sash or ventilator.
  - 2. Design windows and hardware to accommodate screens in a tight-fitting, removable arrangement, with minimum exposed fasteners and latches. Fit screen within window frame, allowing clear access to operating hardware without removal or opening of screen or wickets.
  - 3. Insect Screens: Woven glass fiber mesh; 14/18 mesh size, black color.
- C. Operable Sash Weather-stripping: Nylon pile; permanently resilient, profiled to achieve effective weather seal.
- D. Sealant and Backing Materials: As specified in Section 07900.

## 2.03 MATERIALS

- A. Extruded Aluminum: ASTM B 221 (ASTM B 221M), 6063 alloy, T6 temper.
- B. Fastener materials: AISI Type 302 stainless steel.
- C. Sealants: Compatible with perimeter joint caulking. Seals with double-faced tape not allowed.

## 2.04 HARDWARE

- A. General: Provide manufacturer's standard hardware fabricated from aluminum or stainless steel complying with AAMA 907, or other corrosion-resistant material compatible with aluminum; designed to smoothly operate, tightly close, and securely lock aluminum windows and sized to accommodate sash or ventilator weight and dimensions. Do not use aluminum in frictional contact with other metals.
1. Sash Lock: Lever handle with cam lock.
  2. Special Hinge for Exit: Provide minimum clear opening width where windows are required exits.
  3. Pulls: Manufacturer's standard type.
  4. Limit Stops: Resilient rubber.

## 2.05 FABRICATION

- A. Fabricate components with smallest possible clearances and shim spacing around perimeter of assembly that will enable window installation and dynamic movement of perimeter seal.
1. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof.
  2. Prepare components to receive anchor devices
  3. Arrange fasteners and attachments to ensure concealment from view.
  4. Prepare components with internal reinforcement for operating hardware.
  5. Provide steel internal reinforcement in mullions as required to meet loading requirements.
- B. Provide internal drainage of glazing spaces to exterior through weep holes.
1. Construct and install sub-frame/receptor system and window so that any joints or overlaps in the system are not against the flow of water.
  2. Base of Weeps in Vertical Surfaces: Minimum 1 1/2 inches long, and flush with intersecting horizontal surface to avoid ponding water.
  3. Slope horizontal bar in transom and horizontal mullion/muntin members down to exterior and weep.
  4. Weep framing at window heads to drain any water that may accumulate.
  5. Weep each sash (operable and fixed) glazing pocket and sill frame. Locate all weeps at lowest drainage point of section to drain all water from section. At each sash, provide three weep holes/slots (beyond and between setting blocks) of minimum cross-section dimension of 3/8 inch.
  6. Do not install foam baffles or similar obstructers at weep slots. Do not use weep flaps/baffles.
- C. Perimeter Seals: provide inner and outer head and jamb perimeter seals, as well as a through-sill flashing.
1. Do not penetrate or interrupt continuity of perimeter seals.
- D. Frame Perimeter Anchorage: Arrange for concealed frame attachment to structural substrate as required to meet Performance Requirements. Do not anchor through or to finishes.
1. Perimeter anchors or brackets shall not penetrate sealant joints.
- E. Assemble insect screen frames with mitered and reinforced corners. Secure wire mesh tautly in frame. Fit frame with four, spring loaded steel pin retainers.
- F. Double weather-strip operable units.

1. Install weather-stripping continuously around opening and butt together tightly at corners. Discontinuities in backing retainer grooves at intersections shall not exceed 1/8 inch.
2. Secure weather-stripping to prevent slippage when operating sash and to prevent other displacement.
3. Weather-stripping. Replaceable without disassembly of sash or unit frame or removal of unit frame from opening.

G. Match components to ensure continuity of line.

## 2.06 FINISHES

- A. High Performance Organic Finish: AAMA 2604; multiple coats, thermally cured fluoropolymer system; color as selected from manufacturer's standard colors.
- B. Apply 1 coat of bituminous coating to concealed aluminum and steel surfaces in contact with dissimilar materials.

## 2.07 GLAZING INSTALLATION

- A. Conform to latest edition of glazing standards of GANA GM - Glass Association of North America Glazing Manual and GANA SM - Glass Association of North America Sealant Manual.
  1. Glass Thickness: As required to withstand required structural test pressure and to fit frames.
  2. Install glass in fixed and operating units in accordance with manufacturer's recommendations.
  3. Do not allow glass to touch framing system; replace chipped or scratched glass.
  4. Keep glazing rabbet clean and dry during installation of glass.
  5. Place setting blocks at quarter points of sill member without blocking any weep holes.
  6. Set glass centered in opening to allow at least 1/8 inch clearance between sides of glass and anti-walk pads, and to provide at least 1/2 inch bite on glass by glazing stops.
  7. Install glazing in all window units as required to be large missile impact resistant as required by IRC 2006 R301.2.1.2. Glazing and glazing installation shall resist windborne debris in accordance with ASTM E 1996 Large Missile Test and ASTM E 1886 referenced therein.
- B. Exterior Glazing Joints: Wet seal fixed and operable sash with recessed sealant bead at least 1/8 inch deep and 1/8 inch wide. Provide sufficient clearance at operable sash to allow removal from inside for re-glazing.
  1. Use primer if recommended by sealant manufacturer. Allow primer to dry.
  2. Apply exterior wet seal in continuous motion. Tool sealant without use of tooling liquids to thoroughly "wet" contact surface and slope sealant face to promote drainage away from glass.
  3. Edge of wet seal along glass: Continuous, uniform, and not more than 1/8 inch above glazing stop.

## 3.0 EXECUTION

### 3.01 EXAMINATION

- A. Existing Conditions: Examine openings for aluminum windows to ensure that they are proper size plumb, square and level before installation of frames is started.
  - 1. Verify that adjoining air barrier and weather resistant materials are ready to receive aluminum windows.
- B. Immediately before placing into opening, inspect frames for any damage, including finish damage and fracture of thermal breaks or frame corner seals.

### 3.02 PREPARATION

- A. Prepare opening to permit correct installation of unit in conjunction with air and vapor seal.
- B. Clean-down of Masonry: Completed prior to installation of window unit assemblies.
- C. Window Wrap: Install with 12 inch wide self adhesive laminated membrane flashing in following sequence.
  - 1. Install piece at window sill. Extend wrap 8 inches past each side.
  - 2. Install pieces at jambs. Extend wrap 8 inches past head and sill, overlapping wrap at sill.
  - 3. Install piece at window head. Extend wrap 8 inches past each side, overlapping wrap at jambs.
- D. Coat aluminum in direct contact with concrete, masonry, steel, or other non-compatible material with bituminous paint, zinc rich primer, or other suitable insulating material.

### 3.03 INSTALLATION

- A. Securely install windows in accordance with AAMA 101, manufacturer's instructions and accepted shop drawings.
  - 1. Shim frames to perimeter opening to accommodate construction tolerances and other irregularities.
  - 2. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.
  - 3. Maintain relation to established lines and grades indicated on approved shop drawings.
  - 4. Set nailing flange in 3/8 inch continuous bead of butyl sealant.
  - 5. Install, fasten and secure all window units as required to resist 130 mph wind load without failure, damage or compromise.
- B. Use anchorage devices to securely fasten unit assemblies to wall construction without distortion or imposed stresses.
  - 1. Attach through shims directly to wood substrate to meet code required wind load criteria.
  - 2. Use approved means of frame anchorage to allow for thermal expansion and contraction of frames. Fit support angles tightly against sub-frame and sill flashing without gaps and support directly on substrate without shims.
  - 3. Do not penetrate horizontal portion of flashing or active weep areas of unit frame with fasteners. Install frames without use of exterior exposed fasteners.
- C. Provide thermal isolation where components penetrate or disrupt building insulation. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.

- E. Coordinate attachment and seal of perimeter air barrier and vapor retarder materials.
- F. Install operating hardware not pre-installed by manufacturer.
- G. Install perimeter sealant in accordance with requirements specified in Section 07900.
- H. Install perimeter trim and interior closures.

#### 3.04 ERECTION TOLERANCES

- A. Comply with following tolerances:
  - 1. Maximum Variation from Level to Plumb: 1/16 inches every 3 ft non-cumulative or 1/8 inches per 10 ft, whichever is less.
  - 2. Maximum Longitudinal or Diagonal Warp: Plus or minus 1/8 inch from 10 foot straight edge.

#### 3.05. ADJUSTING, CLEANING AND PROTECTION

- A. Adjust hardware for smooth operation and secure weather-tight closure.
- B. Cleaning:
  - 1. Remove protective material from factory finished aluminum surfaces.
  - 2. Wash surfaces by method recommended and acceptable to sealant and window manufacturer, rinse and wipe surfaces clean.
  - 3. Remove excess sealant by moderate use of mineral spirits or other solvent acceptable to sealant and window manufacturer.
- C. Protection: Cover Windows during spray painting, dry-walling or other construction operations that might cause damage.

END OF SECTION