

SECTION 085313

WINDOW REPLACEMENT

PART 1 – GENERAL

1.1 Scope of Work:

- A. Removal of existing windows and associated exterior and interior trim and drywall where required. Existing Hurricane Shutters and associated accessories shall not to be removed or damaged.
- B. Replacement of existing windows including installation of all flashing, metal receptor system, waterproofing, accessories and caulk/sealants as required to provide a complete watertight installation.

1.2 Permits, Fees and Insurance:

- A. The Owner and/or their contractor shall coordinate all approvals through the Association Board and the Architectural Review Board, as applicable.
- B. Contractor shall secure all necessary permits prior to commencement of the work.
- C. Contractor shall procure and maintain in force until the completion of work the following insurances in the amounts required by the Owner and the Association Board: general liability insurance, employer's liability insurance, automobile insurance and worker compensation. Contractor shall insure that current insurance certificates are on file with the management company.

1.3 Quality Assurance:

- A. Manufacturer's Qualifications: Company specializing in the manufacture of products for a minimum of 5 years. Company shall be a member of the American Architectural Manufacturers Association (AAMA).
- B. Installer Qualifications: Company specializing in the performance of the work for a minimum of 5 years.
- C. All work shall be performed in accordance with the manufacturer's recommended installation instructions and details.
- D. Contractor may substitute other equal products as approved by the Owner, Association Board, and the owner's representative.
- E. Contractor shall perform a mock up of the complete window installation at a first floor unit prior to production work to confirm the constructability, performance, and aesthetic appearance of the work satisfies the owner and engineer's criteria.

1.4 Warranty:

- A. Manufacture: Provide manufacturer's standard warranty. Warranty shall include replacement of assemblies due to coating failure within five years of installation.

- B. Installer: Provide all labor and materials required to repair work that fails to perform for five (5) years following the date of substantial completion.

1.5 System Performance Requirements:

- A. General: Provide aluminum window units that comply with performance requirements specified, as demonstrated by testing the manufacturer's corresponding stock systems. Test each type and size of required window unit through a recognized independent testing laboratory or agency using the tests & test procedures specified below, and in accordance with procedures specified in AAMA 101, including requirements of AAMA 101, Section 3, "Optional Performance Classes." All assemblies shall be in accordance with the current Building Code.
- B. Design Pressure Requirements (Components and Cladding): -90/+70 psf in the corner zones and -70/+70 psf in the field. A fenestration is considered to be in a corner zone if any portion of the fenestration is within 5 feet of a primary building corner.
- C. Uniform Load Structural and Deflection Tests: Test in accordance with ASTM E 330 at 150 percent of the design pressure. After each specified loading there shall be no glass breakage, permanent damage to fasteners, hardware parts, support arms or actuating mechanisms or any other damage which causes the window to be inoperable. No member shall deflect more than 1/175 of its span under load, and there shall be no permanent deformation of any main frame, sash, pane, or ventilator member in excess of 0.2 percent of its span.
- D. Water Penetration: Test in accordance with ASTM E331, at 11 psf and ASTM E 547 at 11 psf. There shall be no water penetration as defined in the test method. The AMMA permitted 1/3 reduction in passing criteria for testing of field installations shall NOT be allowed.
- E. Impact Resistance: Provide window units and glazing that have been tested to pass the large and small missile impact test per ASTM E 1886.
- F. Air infiltration: Test in accordance with ASTM E 283 at 6.24 lbf/ft<sup>2</sup>. Air infiltration rate shall not exceed 0.03 cfm/ft<sup>2</sup>.
- G. Forced-Entry Resistance: Provide windows units that comply with requirements for Performance Level 10 when tested in accordance with AAMA 1302.5-76 Test A through G.
- H. Condensation Resistance Factor (CRF): Provide windows with a minimum CRF of 16 per AAMA 1503.
- I. Energy Performance: Provide windows units with a maximum thermal transmittance (u-value) of 0.72 (to achieve an Energy Star Rating) when tested in accordance with AAMA 1503.1, latest edition.
- J. Solar Heat Gain Coefficient (SHGC): Provide windows with SHGC <0.35 (to achieve an Energy Star Rating).

- K. Light emission: Provide window units with inside-to-outside visible light transmittance (VLT) value of 45% or less to comply with Florida Statute 161.163 and Florida Administrative Code Rule 62B-55 or other local ordinance requirements for light emission for the protection of sea turtle nesting when required.

1.6 Work Performance Field Verification:

- A. Watertight performance of all work is required.
- B. All newly installed windows may be subjected to a visual inspection, operation test, an AAMA 501.2 hose test (for fixed windows), and an AAMA 502 Sill Dam Test following completed installation and prior to the installation of interior trim components. The owner will bear the cost of testing and inspection, as determined necessary.
- C. At the owner's option, installed assemblies may be tested in accordance with ASTM E 1105 at 15% of the structural design pressure rating. There shall be no water penetration as defined in the test method. The AMMA permitted 1/3 reduction in passing criteria for testing of field installations shall NOT be allowed.
- D. New windows that do not pass water testing shall be repaired or replaced per the owner's representative's discretion.

PART 2 - SUBMITTALS

2.1 General:

- A. Contractor shall submit proof of employer's liability insurance, general liability insurance, automobile insurance and workman's compensation.
- B. Contractor shall submit names and addresses for all suppliers and all subcontractors providing materials and/or labor on project.
- C. For substitutions, Contractor shall submit proof data to demonstrate that substitutions are equal in performance and durability to materials specified. Data shall include but not be limited to Florida Building Code Approval, Miami Dade NOA, and complete installation instructions.
- D. Contractor shall submit 4 copies of all requested submittal materials to the Association Board for approval prior to commencement of the work. Contractor shall indicate Owner's approval on submittal cover sheet.

2.2 Windows:

- A. Product Data: Contractor shall submit manufacturer's product literature for all products and accessories furnished.
- B. Installation Instructions: Contractor shall submit manufacturer's installation instruction sheets for all products and accessories furnished.

- C. Contract Closeout Submittals: Contractor shall submit to the owner bound manual clearly identified with project name, location and completion date. Identify type and size of new windows installed. Provide recommendations for periodic inspections, care and maintenance.
- 2.3 Contractor shall provide manufacturer's product literature, installation instructions and color samples (exposed materials only) for the following:
- A. Waterproofing membrane
  - B. Joint sealant & backing materials
  - C. Elastomeric coating materials
  - D. Metal flashing materials

### PART 3 - MATERIALS

#### 3.1 Windows:

- A. Type: Coated Aluminum
- B. Manufacturer: Windoor Inc. or approved equivalent
- C. Model: WinDoor 3000 Series Fixed, WinDoor 4000 Series Single Hung or approved equals.
- D. Frame: No fin
- E. Style: Fixed, to match appearance of the existing (w/exception of operable center sash – to be replaced with fixed sash.)
- F. Glass: Double pane insulated clear glass.
- G. Hardware: As selected by the owner, All components shall be stainless steel or equivalent corrosion resistance.
- H. Color: White. Exterior window panel and frame to be approved by the owner.
- I. Coating: Suitable for aggressive chloride rich environment.

#### 3.2 Receptor System:

- A. Dimensions:
  - a. Sill Component
    - i. Vertical: Equivalent to the height of the fenestration back dam minus 1/4-inch or compliant with height requirements of Table A3.1 of ASTM E 2112. Applicable to back dam and end dams
    - ii. Horizontal: width of sill component shall fit the full width of the rough opening so that the base of the vertical perimeter sealant joints are captured within the sill component.
    - iii. Lateral: sill component and integral end dams shall project beyond the exterior plane of the window frame. The leading horizontal edge of the sill component shall contain a down turned leg of a minimum of 3/8-inch.
    - iv. End Dam Terminations: Shall extend beyond the jamb's perimeter sealant joint.
    - v. Slope: continuous, firmly supported, 1/8":1'-0" toward the exterior.
  - b. Head and Jamb Components:
    - i. Interior return: Interior back leg shall extend 1". Exterior front leg shall extend 1/2".

- ii. Horizontal: Width of receptor shall fit the rough opening to sit inside the sill component and end dams
    - iii. Lateral: Receptor members shall project beyond the exterior plane of the window frame with sufficient geometry to meet the existing EIFS banding as per the project documents.
  - c. See drawings for profiles
- B. Type: Aluminum 0.032 thickness. Coated product containing a minimum of 70% Polyvinylidene Fluoride (PVDF) or *Kynar* or approved equivalent.
- C. Joints:
  - a. Integral component joints: Welded or soldered
  - b. Component to component: Approved silicone sealant.
- D. Sealing:
  - a. Installation: Receptor components shall be set in (3) parallel generously applied continuous beads of sealant along its length and at the corners of the rough opening.
  - b. Interior: The back legs of the receptor components shall be continuously sealed to the window frame to prevent passage of air from outside to inside.
  - c. Exterior: The underside of the receptors shall be continuously sealed to the walls at the jamb and/or header.

### 3.3 Joint Sealants:

- A. Sealants:
  - a. Metal to EIFS: Dow 795 or approved Silicone equivalent.
  - b. Metal to Metal: Dow 795 or approved Silicone equivalent
  - c. Prosoco R-Guard FastFlash
- B. Backing Materials
  - a. Backer Rod: Round, closed-cell, polyethylene foam rod compatible with sealant; oversized 30 to 50 percent larger than joint width.
  - b. Bond Breaker Tape: Adhesive backed polyethylene tape with slick-surfaced facing by Pecora or approved equivalent. Width sized to suit joint.
- C. Primer:
  - a. As required by the manufacture to achieve bond to substrate.
- D. Profile:
  - a. Adhesive face and profile compliant with Dow Installation Handbook: 3/8" minimum adhesive face.

- 3.4 Fasteners: All components shall be installed using Series 300 stainless steel screws and anchors.

## PART 4 – EXECUTION

### 4.1 General:

- A. All work shall be coordinated with the unit Owner, the Association Board and the owner's representative.

4.2 Removal:

- A. All exterior trim, existing caulk, flashing, etc. shall be removed.
  - A. Existing windows shall be removed and legally disposed.
  - B. Remove all miscellaneous materials, fasteners, sealants, etc. Clean all surfaces to produce a smooth finish, suitable for reinstallation.
  - C. Remove interior accessories, wood blocking, drywall, interior trim, etc. as required to install new window.
  - D. Existing Hurricane Shutters and associated accessories shall not to be removed or damaged. Contractor is responsible for repair of all damage to shutter assemblies, if occurs during the course of the work.
  - E. Contractor shall notify owner's representative of any existing shutter damage noted prior to commencement of the work on that window unit.
  - F. Prior to cutting drywall, contractor shall mark work using straight and true cut lines.
  - G. Cuts shall not be made into the exterior sheathing or wall framing.

4.3 Examination:

- A. Contractor shall request a field review involving the Contractor and a representative of the Association Board to assess the condition of the opening where the window has been removed. All parties present shall conduct an examination of the existing conditions documenting any deteriorated or damaged wall framing, stucco, drywall or miscellaneous work needing repair.
- B. Contractor shall identify, in writing, conditions that will prevent proceeding with the work. If the Contractor fails to document the adverse conditions and/or proceeds with work without repairing unsatisfactory conditions, the sole responsibility for any and all replacement or repair work shall be that of the Contractor.

4.4 Installation:

- A. Contractor to verify that new windows are sized to match existing windows.
- B. New windows shall be installed in accordance with applicable portions of ASTM E 2112, the manufacturer's installation instructions, provided details, and project documents.
- C. Set window units plumb, level, and true to line, without warp or rack of frames or sash. Provide proper support and anchor securely in place.
- D. Flashings, receptor system, and sealants shall be installed as shown in the details of the project documents, as specified above, and in strict accordance with the manufacturer's installation instructions.


- E. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials by complying with the requirements specified under paragraph "Dissimilar Materials" in the Appendix to AAMA 101.
- F. Where damaged, install EIFS in accordance with EIMA requirements and coat with same coating type and color currently applied per the manufacturer's instructions. If color does not match, entire peripheral area shall be coated to the next wall interruption.
- G. Interior finishes, where damaged or affected by window installation shall be repaired or replaced to match the existing appearance.

4.5 Storage and Clean-Up

- A. All new window assemblies shall be stored and transported in such a manner to prevent scratching, deformation, or racking of the frames. It is the right of the owner or the owner's representative to require replacement of any units containing such damage.
- B. Contractor shall remove all removed and unused materials from the project site.
- C. All surfaces shall be swept clean daily.
- D. Contractor shall final clean all replacement windows per manufacturer's instructions.

END OF SECTION

CERTIFICATE OF AUTHORIZATION NO. 86753  
CONSTRUCTION SOLUTIONS, INC.  
ENGINEERING • TESTING  
PROJECT MANAGEMENT  
1417 AVERY ROAD, STE 100  
AMELIA ISLAND, FLORIDA 32034

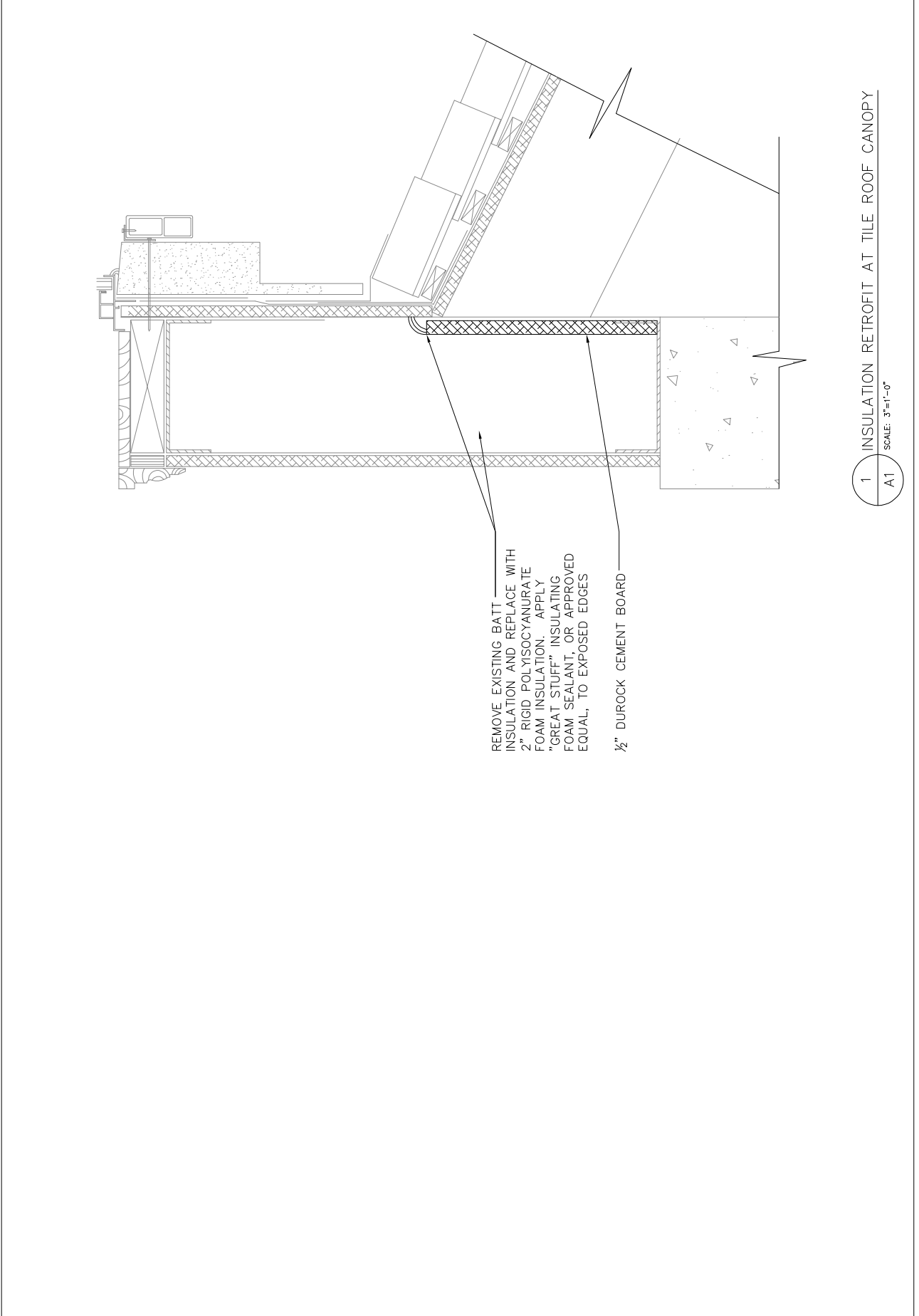


INSULATION RETROFIT  
FOR  
PIPER DUNES VILLAS  
AMELIA ISLAND, FLORIDA

REV.	DATE	DISC.

BRETT D. NEWKIRK  
FL PE 02470

DRAWING SHEET:  
**A-1**



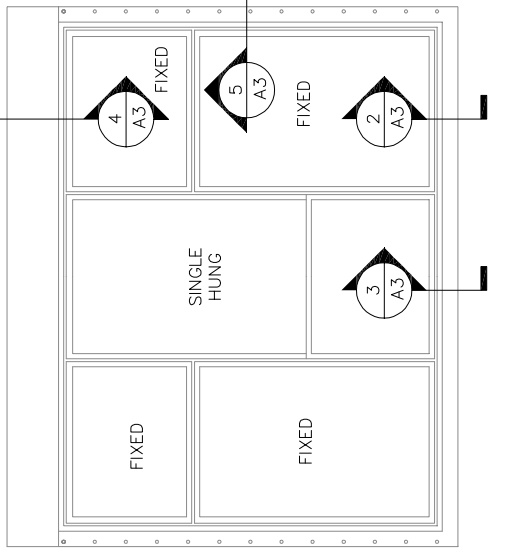
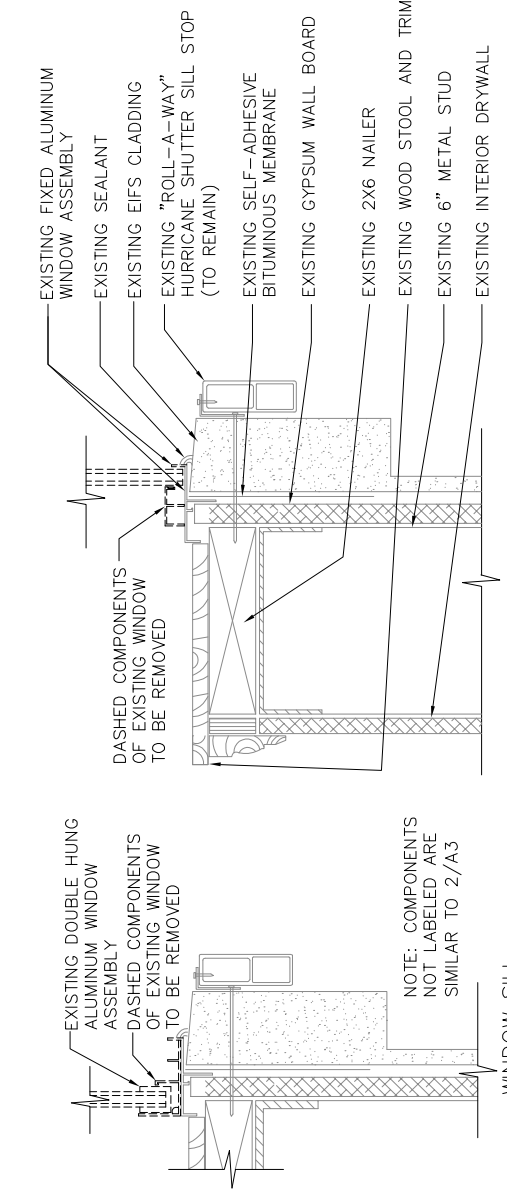
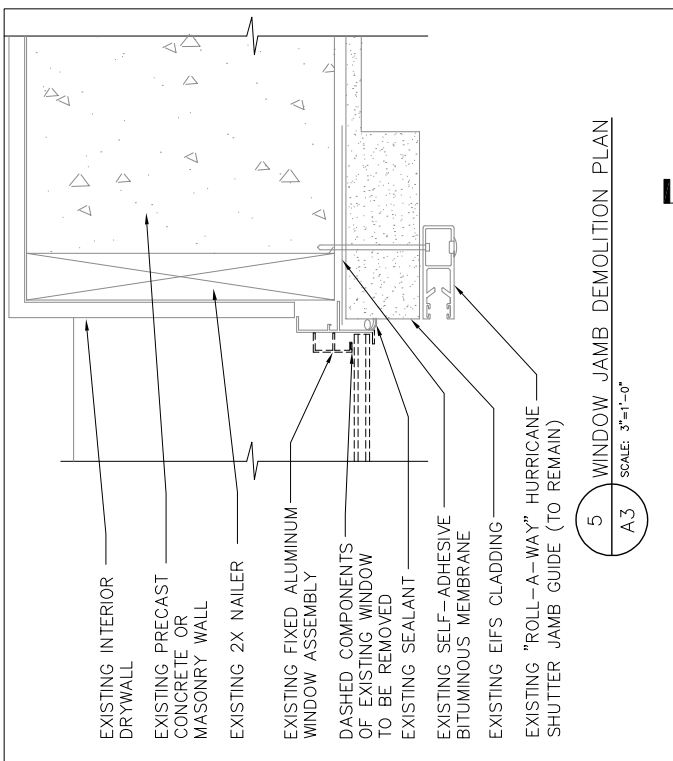
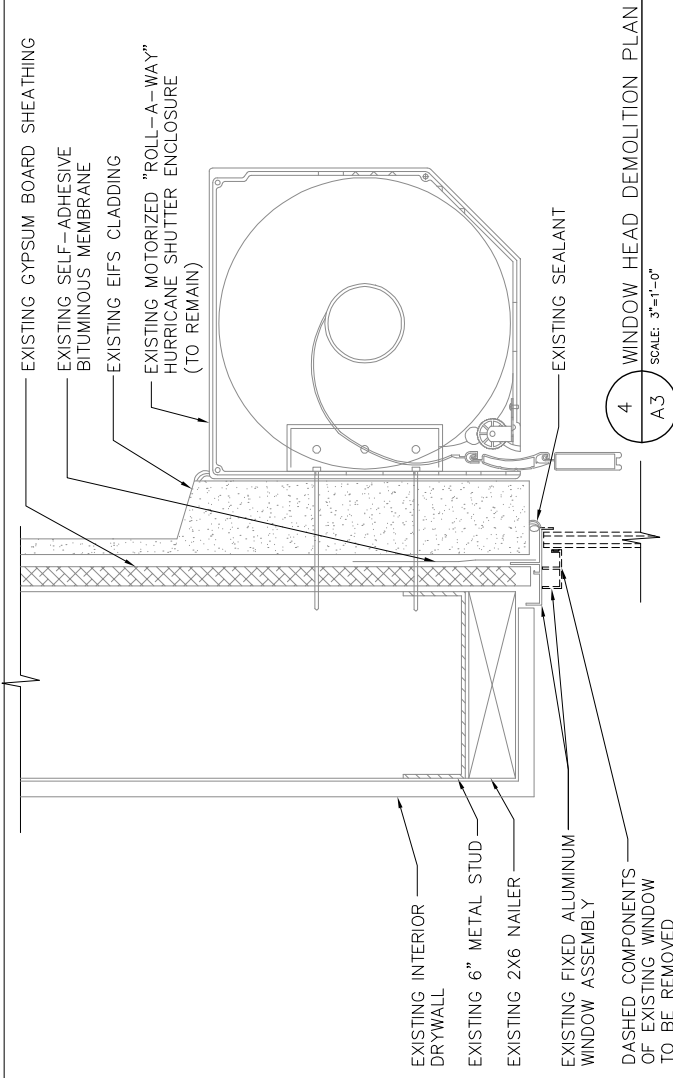
1 INSULATION RETROFIT AT TILE ROOF CANOPY  
A1 SCALE: 3"=1'-0"



DEMOLITION DETAILS	
REV:	
DATE:	3/18/10
DISC:	REVIEW

BRETT D. NEWKIRK  
 FL PE 02476

DRAWING SHEET:  
**A-3**



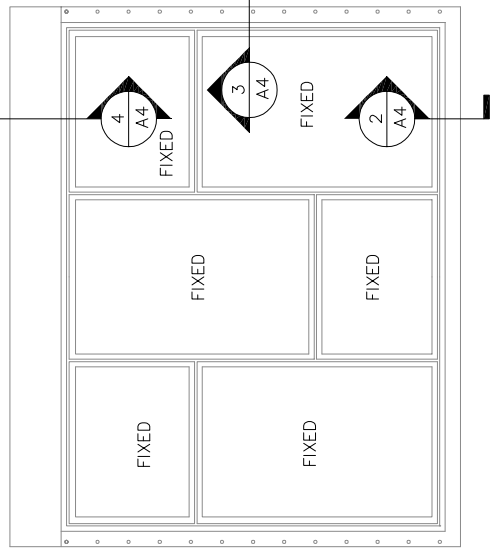
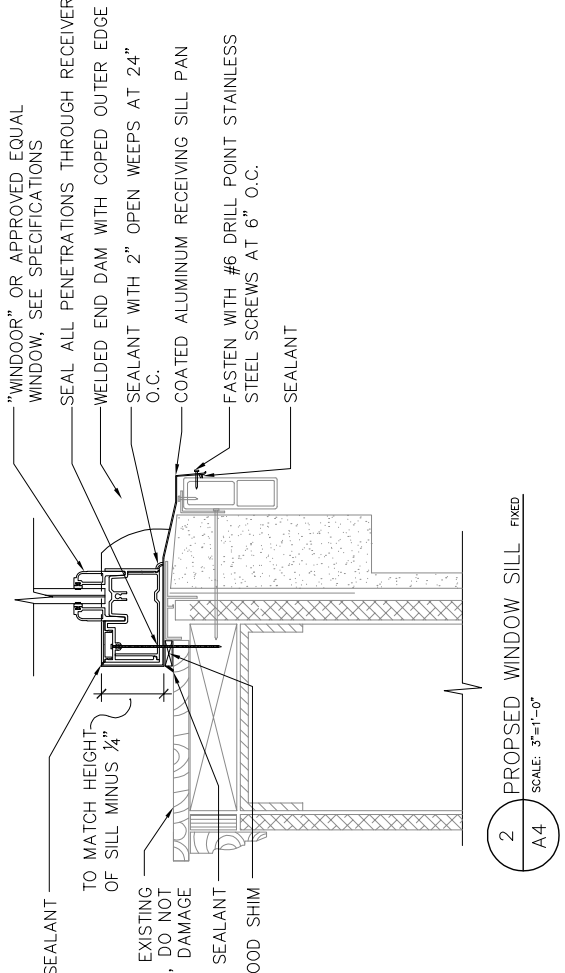
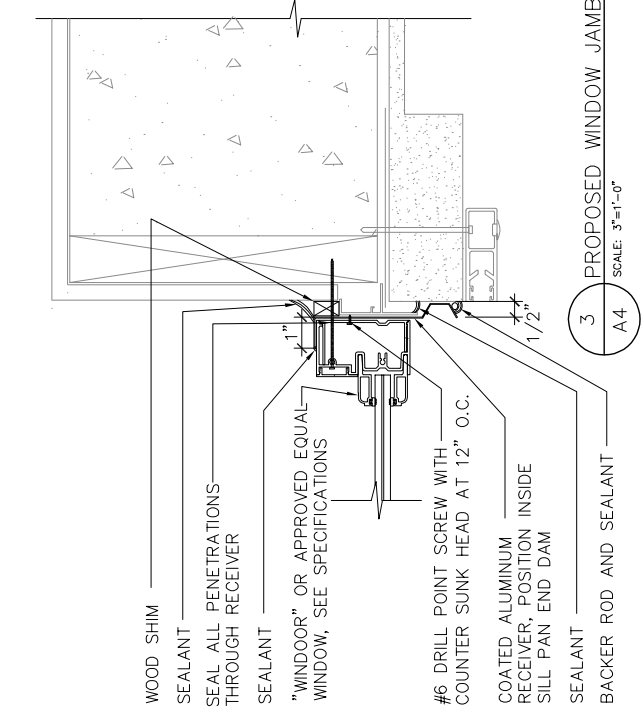
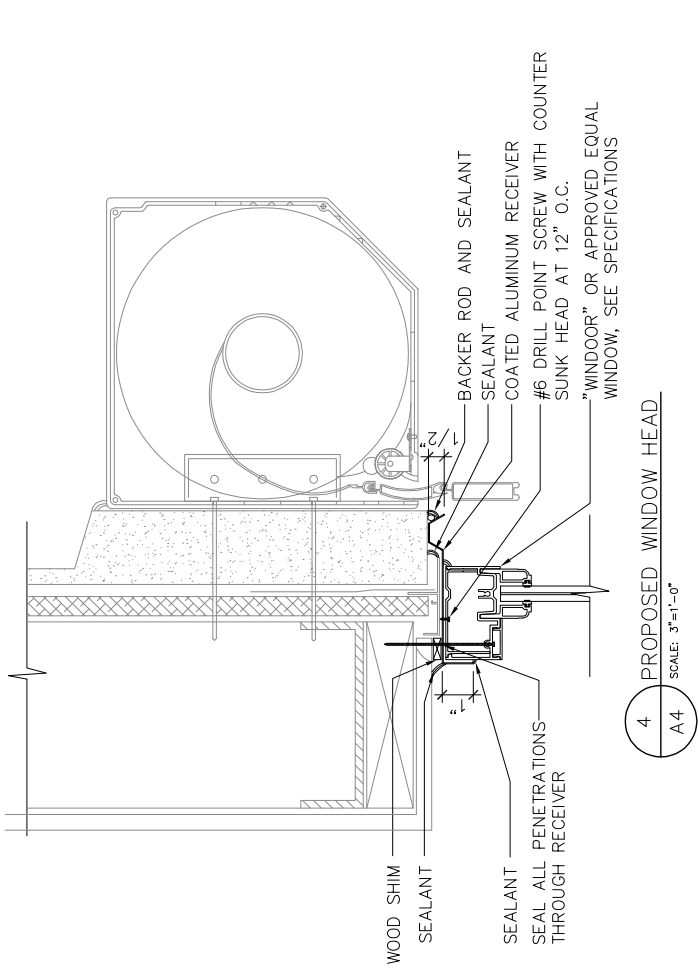
2 WINDOW SILL DEMOLITION PLAN FIXED  
 SCALE: 3"=1'-0"

3 WINDOW SILL DEMOLITION PLAN SINGLE HUNG  
 SCALE: 3"=1'-0"

INSTALLATION DETAILS	
REV:	
DATE:	3/18/10
DISC:	REVIEW

BRETT D. NEWKIRK  
 FL PE 02470

DRAWING SHEET:  
**A-4**



**1 PROPOSED MASTER BEDROOM WINDOW ELEVATION**  
 A4 SCALE: 1/2"=1'-0"