

SECTION 081400

WOOD DOORS

(ANDERSEN® A-SERIES HINGED INSWING AND OUTSWING WOOD PATIO DOORS, SIDELIGHTS AND TRANSOMS)

PART 1 - GENERAL

SPECIFIER NOTE: DATA CONTAINED IN THIS GUIDE SPEC IS ACCURATE AS OF NOVEMBER 2010. DUE TO ONGOING PRODUCT CHANGES, THIS DATA MAY CHANGE OVER TIME. CONSULT MANUFACTURER FOR COMPLETE PRODUCT DETAILS.

1.1 SUMMARY

A. Section Includes:

SPECIFIER NOTE: RETAIN PROJECT-REQUIRED ITEMS TYPE BELOW. DELETE ITEMS NOT REQUIRED.

1. Inswing wood patio doors.
2. Outswing wood patio doors.
3. Sidelights.
4. Transoms.

SPECIFIER NOTE: ARTICLE BELOW INCLUDES SUBMITTAL OF RELEVANT DATA TO BE FURNISHED BY CONTRACTOR BEFORE, DURING OR AFTER CONSTRUCTION. COORDINATE THIS ARTICLE WITH THE ARCHITECT'S AND CONTRACTOR'S DUTIES AND RESPONSIBILITIES IN CONDITIONS OF THE CONTRACT AND DIVISION 01 SUBMITTAL PROCEDURES SECTION.

1.2 ACTION SUBMITTALS

- A. Product Data: Manufacturer's product data and installation guides.
- B. Sustainable Building Submittals:

SPECIFIERS NOTE: RETAIN SUBPARAGRAPH BELOW AND ENERGY PERFORMANCE CERTIFICATION PARAGRAPH IN QUALITY ASSURANCE ARTICLE IF WOOD DOORS ARE REQUIRED TO BE CERTIFIED.

1. Energy Performance:
 - a. Provide NFRC 100 Certified performance values meeting or exceeding values specified in Performance Criteria Article.

SPECIFIERS NOTE: RETAIN SUBPARAGRAPH BELOW AND RECYCLED CONTENT CERTIFICATION PARAGRAPH AND "FOREST CERTIFICATION" PARAGRAPH IN QUALITY ASSURANCE ARTICLE IF WOOD DOORS ARE REQUIRED TO BE CERTIFIED.

2. Recycled Content.
 - a. Provide third party certified values in percent by weight of recycled content per ISO 14021 Standard for each product specified.
 - b. Provide statement indicating total cost for each product containing recycled content.

SPECIFIERS NOTE: RETAIN SUBPARAGRAPH BELOW IF WOOD DOORS ARE REQUIRED TO BE CERTIFIED FOR CERTIFIED WOOD COMPLIANCE.

1. Certified Wood:
 - a. Provide wood door manufacturer's and third party chain of custody certificates indicating products comply with forest certification and chain of custody requirements.
 - b. Provide statement indicating cost for each product and fraction by weight of certified wood in product.

SPECIFIERS NOTE: RETAIN SUBPARAGRAPH BELOW IF WOOD DOORS ARE REQUIRED TO BE QUALIFIED FOR REGIONAL MATERIALS.

2. Regional Materials.
 - a. Provide door manufacturer's Product Data for regional materials within [500] miles of project location, indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material.
 - b. Provide statement indicating cost for each product containing regional material and the fraction by weight that is considered regional material.

SPECIFIERS NOTE: RETAIN PARAGRAPH BELOW IF DOORS ARE REQUIRED TO BE CERTIFIED FOR INDOOR AIR QUALITY.

3. Indoor Environmental Quality.
 - a. Provide third party certification that door materials used on project, including factory applied finishes, meet indoor air quality standards for low emitting materials under California CA Section 01350 Specifications.

- C. Shop Drawings: Drawings indicating direction of operable parts, typical jamb, head and sill conditions, and special mullion reinforcement details.
- D. Color Samples: Selection and verification samples, including the following:
 1. Hardware: Samples indicating typical finish on door hardware.

1.3 INFORMATIONAL SUBMITTALS

- A. Quality Assurance/Control Submittals:
 1. Performance Data: Manufacturer's published performance data for specified products.

1.4 CLOSEOUT SUBMITTALS

- A. Warranty documents specified herein.
- B. Owner's Manual: Bound manual clearly identified with project name, location, and completion date. Identify type and size of units installed. Provide recommendations for periodic inspections, care, and maintenance. Identify common causes of damage with instructions for temporary repair.

SPECIFIER NOTE: ARTICLE BELOW SHOULD INCLUDE STATEMENTS OF PREREQUISITES, STANDARDS, LIMITATIONS AND CRITERIA THAT ESTABLISH AN OVERALL LEVEL OF QUALITY FOR PRODUCTS AND WORKMANSHIP FOR THIS SECTION. COORDINATE ARTICLE BELOW WITH DIVISION 01 QUALITY ASSURANCE SECTION.

1.5 QUALITY ASSURANCE

SPECIFIERS NOTE: RETAIN OPTION IN MANUFACTURER QUALIFICATIONS PARAGRAPH BELOW IF REQUIRED FOR PROJECT OR MEETING FSC CERTIFICATION IS A REQUIREMENT. ANDERSEN CORPORATION HAS SUPPORTING DOCUMENTATION AVAILABLE UPON REQUEST.

- A. Manufacturer Qualifications: A manufacturer capable of fabricating wood doors that meet or exceed Performance Criteria indicated and of documenting this performance by inclusion in lists and by labels, test reports, and calculations [**and who is certified for chain-of-custody by an FSC accredited certification body**].

SPECIFIERS NOTE: IF RETAINING OPTION IN MANUFACTURER QUALIFICATIONS PARAGRAPH ABOVE, ALSO RETAIN VENDOR QUALIFICATIONS PARAGRAPH BELOW.

- B. Vendor Qualifications: A vendor that is certified for chain of custody by an FSC accredited certification body.

- C. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.

SPECIFIER NOTE: PARAGRAPH BELOW SHOULD LIST OBLIGATIONS FOR COMPLIANCE WITH SPECIFIC CODE REQUIREMENTS PARTICULAR TO THIS SECTION. GENERAL STATEMENTS TO COMPLY WITH A PARTICULAR CODE ARE TYPICALLY ADDRESSED IN CONDITIONS OF THE CONTRACT AND DIVISION 01 REGULATORY REQUIREMENTS SECTIONS. REPETITIVE STATEMENTS SHOULD BE AVOIDED.

- A. Code and Regulatory Requirements and Approvals: <Specify applicable requirements of regulatory agencies.>
- B. Certifications:
 - 1. National Fenestration Rating Council (NFRC). Products shall be certified and labeled for U-Factor, Solar Heat Gain Coefficient (SHGC), and Visible Transmittance per NFRC 100 and 200 Procedures. Unique glass types that are special ordered may not apply, check with Manufacturer.
 - 2. Window and Door Manufacturers Association (WDMA). Products shall be certified and labeled per WDMA Hallmark Certification Program to the AAMA/WDMA/CSA 101/I.S.2/A440 industry standard.
 - 3. Insulating Glass Units: Provide insulating glass units permanently marked with certification label of Insulating Glass Certification Council (IGCC) indicating compliance.

SPECIFIER NOTE: RETAIN CERTIFICATION LABEL REQUIREMENTS PARAGRAPH ABOVE OR BELOW.

- 4. Insulating Glass Units: Provide insulating glass units permanently marked with certification label of Insulating Glass Manufacturers Association of Canada (IGMAC) indicating compliance with CAN/CGSB.

SPECIFIER NOTE: RETAIN PARAGRAPH BELOW IF IMPACT RESISTANT PRODUCTS ARE REQUIRED.

- C. Windborne-Debris Resistance: Provide glazed units capable of resisting impact from windborne debris, based on pass/fail criteria as determined from testing glazed units per ASTM E1886 and ASTM E1996.

SPECIFIER NOTE: RETAIN PARAGRAPH BELOW IF PREINSTALLATION MEETING IS REQUIRED.

- D. Pre-Installation Meetings: Pre-Installation Meetings: Conduct meeting at Project site to comply with requirements in Division 01 Section – Project Management and Coordination.

SPECIFIER NOTE: ARTICLE BELOW SHOULD INCLUDE SPECIFIC PROTECTION AND ENVIRONMENTAL CONDITIONS REQUIRED DURING STORAGE. COORDINATE ARTICLE BELOW WITH DIVISION 01 PRODUCT REQUIREMENTS SECTION.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- B. Delivery: Deliver materials in manufacturer's original unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
- D. Store materials and accessories off ground, under cover, and protected from weather and construction activities.

SPECIFIER NOTE: IN ARTICLE BELOW, STATE PHYSICAL OR ENVIRONMENTAL LIMITATIONS OR CRITERIA FOR INSTALLATION SUCH AS WEATHER, TEMPERATURE, HUMIDITY, VENTILATION OR ILLUMINATION REQUIRED FOR PROPER INSTALLATION OR APPLICATION.

1.7 SITE CONDITIONS

- A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication. Record measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.
- B. Install units per manufacturer's safety and weather requirements.

SPECIFIER NOTE: COORDINATE ARTICLE BELOW WITH CONDITIONS OF THE CONTRACT AND WITH DIVISION 01 CLOSEOUT SUBMITTALS (WARRANTY) SECTION. USE THIS ARTICLE TO REQUIRE SPECIAL OR EXTENDED WARRANTY OR BOND COVERING THE WORK OF THIS SECTION.

1.8 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project Warranty provisions.

SPECIFIER NOTE: COORDINATE ARTICLE BELOW WITH MANUFACTURER'S WARRANTY REQUIREMENTS. VISIT THE ANDERSEN WEBSITE FOR A COMPLETE DESCRIPTION OF THE STANDARD LIMITED WARRANTY INCLUDING EXCLUSIONS AND LIMITATIONS.

- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard limited warranty document. Manufacturer's limited warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.

PART 2 - PRODUCTS

SPECIFIER NOTE: RETAIN ARTICLE BELOW FOR PROPRIETARY METHOD SPECIFICATION. ADD PRODUCT ATTRIBUTES, PERFORMANCE CHARACTERISTICS, MATERIAL STANDARDS, AND DESCRIPTIONS AS APPLICABLE. USE OF SUCH PHRASES AS "OR EQUAL" OR "OR APPROVED EQUAL" OR SIMILAR PHRASES MAY CAUSE AMBIGUITY IN SPECIFICATIONS. SUCH PHRASES REQUIRE VERIFICATION (PROCEDURAL, LEGAL AND REGULATORY) AND ASSIGNMENT OF RESPONSIBILITY FOR DETERMINING "OR EQUAL" PRODUCTS.

2.1 MANUFACTURER

- A. Provide products from the following manufacturer:
 - 1. Andersen Corporation
100 4th Ave. N.
Bayport, MN 55003-1096.
Phone: (800) 299-9029.
Fax: (800) 752-9230.
E-mail: technicalsupport@andersenwindows.com.
www.andersenwindows.com.
Local Contact: <[Specify contact information provided by local Andersen representative.](#)>

SPECIFIER NOTE: ARTICLE BELOW SHOULD BE RESTRICTED TO STATEMENTS DESCRIBING DESIGN OF PERFORMANCE REQUIREMENTS AND FUNCTIONAL (NOT DIMENSIONAL) TOLERANCES OF A COMPLETE SYSTEM. LIMIT DESCRIPTIONS FOR COMPOSITE AND OPERATIONAL PROPERTIES REQUIRED TO LINK COMPONENTS OF A SYSTEM TOGETHER AND TO INTERFACE WITH OTHER SYSTEMS.

2.2 PERFORMANCE CRITERIA

SPECIFIER NOTE: MANUFACTURER RECOMMENDS REFERRING TO WEBSITE FOR MOST CURRENT PRODUCT PERFORMANCE DATA. RETAIN, EDIT, OR DELETE LANGUAGE BELOW TO SUIT PROJECT REQUIREMENTS. REFER TO WWW.ANDERSENWINDOWS.COM FOR PERFORMANCE INFORMATION.

- A. Performance Requirements: Provide products/systems that have been manufactured, fabricated, and installed to the following performance criteria:

1. Comply with AAMA/WDMA/CSA 101/I.S.2/A440.
2. Performance Class: <Specify performance class.>
3. Performance Grade: <Specify performance grade.>
4. U-Factor (NFRC 100): <Specify U-Factor.>
5. Solar Heat Gain Coefficient (SHGC) (NFRC 200): <Specify SHGC.>
6. Outdoor Indoor Transmission Class (OITC) (ASTM E90): <Specify OITC.>
7. Sound Transmission Class (STC) (ASTM E90): <Specify STC. >

SPECIFIER NOTE: MANUFACTURER RECOMMENDS REFERRING TO WEBSITE DESIGN PRESSURE ESTIMATOR FOR ADDITIONAL WIND LOAD INFORMATION. RETAIN, EDIT, OR DELETE LANGUAGE BELOW TO SUIT PROJECT REQUIREMENTS

- B. Structural Requirements: Provide products/systems capable of withstanding wind loads based on testing units representative of those indicated for Project that pass AAMA/WDMA/CSA 101/I.S.2/A440, Uniform Structural Load Test:
 1. Design Wind Loads: Determine design wind loads applicable to Product from basic wind speed indicated in miles per hour (meters per second) at 33 feet (10 meters) above grade, according to ASCE, Section 6, based upon mean roof heights indicated on Drawings.
 - a. Basic Wind Speed: <Specify wind speed.>
 - b. Importance Factor: <Specify importance factor.>
 - c. Exposure Category: <Specify exposure category.>
 - d. Wind Load Requirement: <Specify design pressure requirement.>
- C. Large Missile Impact: Provide glazing systems capable of withstanding large missile impact and air pressure cycling without failure as required by the Large Missile Test for ASTM E 1996 or comparable test acceptable to authorities have jurisdiction.

2.3 MANUFACTURED UNITS

- A. Proprietary Products/Systems:
 1. Andersen® A-Series Hinged Patio Doors.
 2. Andersen® A-Series Outswing Patio Doors.
 3. Andersen® A-Series Patio Door Sidelights.
 4. Andersen® A-Series Patio Door Transoms.

SPECIFIER NOTE: EDIT ARTICLE BELOW TO SUIT PROJECT REQUIREMENTS. IF SUBSTITUTIONS ARE PERMITTED, EDIT TEXT BELOW. ADD TEST TO REFER TO DIVISION 01 PROJECT REQUIREMENTS (PRODUCT SUBSTITUTIONS PROCEDURES) SECTION.

5. Substitutions: No substitutions permitted.

SPECIFIER NOTE: SPECIFY MATERIALS TO BE FURNISHED. THIS ARTICLE MAY BE OMITTED AND THE MATERIALS CAN BE INCLUDED WITH THE DESCRIPTION OF A MANUFACTURED UNIT, EQUIPMENT, COMPONENT, OR ACCESSORY.

2.4 MATERIALS

SPECIFIERS NOTE: RETAIN CERTIFIED WOOD PARAGRAPH BELOW IF WOOD DOORS ARE REQUIRED TO BE CERTIFIED FOR LEED OR PROJECT IS BEING DESIGNED WITH SUSTAINABLE PRACTICES.

- A. Certified Wood: Doors shall be certified as "FSC Mixed Credit" per FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship," and FSC STD-40-004, "FSC Standard for Chain of Custody Certification."
- B. Wood Members: Fabricated from wood species approved in WDMA I.S.4.
- C. Reinforced engineered plastic fiberglass frame cover: Comply with ASTM D3647.

- D. Urethane Coating: Durable coating conforming to color uniformity, chemical resistance, detergent resistance, and weather resistance requirements of AAMA 2603.
- E. Weatherstripping: Continuous, flexible, compressible bulb type with welded corners.
- F. Sill: Reinforced engineered plastic fiberglass.

2.5 GLAZING

- A. General: Tempered insulating glass units certified through the Insulating Glass Certification Council as conforming to the requirements of IGCC. Provide dual sealed units consisting of polyisobutylene primary seal and silicone secondary seal. Provide metal spacers with bent or soldered corners.

SPECIFIER NOTE: RETAIN CERTIFICATION REQUIREMENTS PARAGRAPH ABOVE OR BELOW.

- B. General: Tempered insulating glass units certified through the Insulating Glass Manufacturers Association of Canada (IGMAC) conforming to the requirements of Canadian General Standards Board CAN/CGSB 12.8 or ASTM E2190. Provide dual sealed units consisting of polyisobutylene primary seal and silicone secondary seal. Provide metal spacers with bent or soldered corners.
- C. Impact Resistant Glazing: Provide impact resistant glazing that has been tested per ASTM E1996 large missile impact requirements.

SPECIFIER NOTE: SELECT BETWEEN THE FOLLOWING STANDARD GLAZING OPTIONS. CONSULT ANDERSEN CORPORATION FOR ADDITIONAL GLAZING OPTIONS. CONSULT ANDERSEN CORPORATION FOR ASSISTANCE IN SELECTING APPROPRIATE GLAZING TYPE.

- D. High-Performance™ Low-E4® Argon Gas Blend Filled Insulating Glass Units:
 1. Glass: Tempered insulating glass units consisting of an outboard and inboard lite of clear tempered glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind FT.
 2. Magnetron sputtering vapor deposition (MSVD) TiO2 coating applied to the No. 1 surface.
 3. High-Performance Low-E4 Glass Coating: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to the No. 2 surface.
 4. Filling: Fill space between glass lites with argon gas blend.
 5. Protective removable polyolefin film applied to glass surfaces No. 1 and No. 4.
- E. High-Performance Low-E4 Sun Glass, Low SHGC, Argon Gas Blend Filled Insulating Glass Units:
 1. Glass: Tempered insulating glass units consisting of an outboard and inboard lite of clear tempered glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind FT.
 2. Magnetron sputtering vapor deposition (MSVD) TiO2 coating applied to the No. 1 surface.
 3. High-Performance Low-E4 Sun Glass Coating: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to the No. 2 surface.
 4. Filling: Fill space between glass lites with argon gas blend.
 5. Protective removable polyolefin film applied to glass surfaces No. 1 and No. 4.
- F. SmartSun™ Low-E Glass, Low SHGC, Argon Gas Blend Filled Insulating Glass Units:
 1. Glass: Tempered insulating glass units consisting of an outboard and inboard lite of clear tempered glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind FT.

SPECIFIER NOTE: WHERE PATTERNED GLASS IS REQUIRED FOR PROJECT, DELETE PARAGRAPH ABOVE AND RETAIN PARAGRAPH BELOW WITH APPROPRIATE PATTERNED GLASS TYPE. DELETE TYPES NOT REQUIRED FOR PROJECT.

2. Glass: Tempered insulating glass units consisting of an outboard lite of clear tempered glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind FT and the following patterned glass:
3. Inboard Pattern Glass Lite:

- a. Cascade.
- b. Fern.
- c. Obscure.
- d. Reed.
- 4. Air Space: 3/4 inch (75 mm).
- 5. SmartSun™ Low-E Glass Coating: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to the No. 2 surface.
- 6. Filling: Fill space between glass lites with argon gas blend.
- G. High-Performance™ Low-E4® SmartSun Glass, Low SHGC, Argon Gas Blend Filled Insulating Glass Units:
 - 1. Glass: Tempered insulating glass units consisting of an outboard and inboard lite of clear tempered glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind FT.

SPECIFIER NOTE: WHERE PATTERNED GLASS IS REQUIRED FOR PROJECT, DELETE PARAGRAPH ABOVE AND RETAIN PARAGRAPH BELOW WITH APPROPRIATE PATTERNED GLASS TYPE. DELETE TYPES NOT REQUIRED FOR PROJECT.

- 2. Glass: Tempered insulating glass units consisting of an outboard lite of clear tempered glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind FT and the following patterned glass:
- 3. Inboard Pattern Glass Lite:
 - a. Cascade.
 - b. Fern.
 - c. Obscure.
 - d. Reed.
- 4. Air Space: 3/4 inch (75 mm).
- 5. Magnetron sputtering vapor deposition (MSVD) TiO2 coating applied to the No. 1 surface.
- 6. High-Performance Low-E4 Sun Glass Coating: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to the No. 2 surface.
- 7. Filling: Fill space between glass lites with argon gas blend.
- 8. Protective removable polyolefin film applied to glass surfaces No. 1 and No. 4.

SPECIFIER NOTE: SELECT BETWEEN THE TWO IMPACT RESISTANT GLASS TYPES IF IMPACT RESISTANT GLAZING REQUIRED.

- H. Monolithic Impact Glass:
 - 1. Glass: Impact resistant glass consisting of two (2) lites of clear annealed glass conforming to ASTM C1036, Type 1, Class 1, q3, Kind LA, laminated with 0.090 inch (2.3 mm) polyvinyl butyral interlayer in the following color:
 - a. Color: Clear.
 - b. Color: Gray tinted.
 - 2. Protective removable polyolefin film applied to glass surfaces No. 1 and No. 2.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED COLOR BELOW. DELETE COLORS NOT REQUIRED.

- I. Insulating Impact Resistant Glass:
 - 1. Glass: Insulating glass units consisting of an outboard lite of clear tempered glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind FT, and a laminated inboard lite of cleared annealed glass conforming to ASTM C1036, Type 1, Class 1, q3, Kind LA, laminate with a 0.090 inch (2.3 mm) polyvinyl butyral interlayer.
 - 2. Magnetron sputtering vapor deposition (MSVD) TiO2 coating applied to the No. 1 surface.
 - 3. High-Performance Low-E4 Coating: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to the No. 2 surface.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH ABOVE FOR STANDARD LOW-E COATING. RETAIN SUBPARAGRAPH BELOW FOR SUN LOW-E COATING.

4. High-Performance™ Low-E4® Sun Glass: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to the No. 2 surface.
5. Filling: Fill space between glass lites with argon gas blend.
6. Protective removable polyolefin film applied to glass surfaces No. 1 and No. 4.

2.6 HARDWARE

- A. Hinges: Ball bearing, adjustable, captured hinge design with cover plate. Hinges allow vertical and rack panel adjustment, in the following finish to match lock trim:

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE LOCK COLORS BELOW. DELETE COLORS NOT REQUIRED.

1. Finish: Bright Brass.
 2. Finish: Antique Brass.
 3. Finish: Polished Chrome.
 4. Finish: Brushed Chrome.
 5. Finish: Oil Rubbed Bronze.
 6. Finish: Satin Nickel.
 7. Finish: Distressed Bronze.
 8. Finish: Distressed Nickel.
 9. Finish: Gold Dust.
 10. Finish: Black.
- B. Hinges for Doors with Prefinished White Interior: Prefinished White zinc die cast.
1. Other interior finished or unfinished doors will default to Gold Dust colored hinges, steel adjustable, captured hinge design with ball bearing pivots.
- C. Locks: Stainless steel locking mechanism consisting of lever handle operated latch and 3-point deadbolt lock mechanism. 3-point locking mechanism consists of thumb turn operated 0.787 inch (20 mm) metal deadbolt, which when projected, locks 2 additional hook bolts engaging active panel.
1. Provide 6-pin keyed cylinder and thumb turn at interior.
- D. Coastal Upgrade for AP/PA Units: 5-point stainless steel lock.
- E. Lever Handle Trim: Provide the following trim style and finish where indicated:

SPECIFIER NOTE: SELECT BETWEEN THE FOLLOWING HARDWARE STYLES.

1. Newbury® Hardware: Forged brass thumb turn and operating handle pull with the following finish:

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE LOCK FINISHES BELOW. DELETE FINISHES NOT REQUIRED.

- a. Finish: Bright Brass.
 - b. Finish: Antique Brass.
 - c. Finish: Polished Chrome.
 - d. Finish: Brushed Chrome.
 - e. Finish: Oil Rubbed Bronze.
 - f. Finish: Satin Nickel.
2. Covington™ Hardware: Forged brass thumb turn and operating handle pull with the following finish:

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE FINISHES BELOW. DELETE FINISHES NOT REQUIRED.

- a. Finish: Bright Brass.
- b. Finish: Antique Brass.
- c. Finish: Oil Rubbed Bronze.
3. Encino® Hardware: Forged brass thumb turn and operating handle pull with the following finish:

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE FINISHES BELOW. DELETE FINISHES NOT REQUIRED.

- a. Finish: Distressed Bronze.
- b. Finish: Distressed Nickel.
4. Yuma® Hardware: Forged brass thumb turn and operating handle pull with the following finish:

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE FINISHES BELOW. DELETE FINISHES NOT REQUIRED.

- a. Finish: Distressed Bronze.
- b. Finish: Distressed Nickel.
5. Anvers® Hardware: Forged brass thumb turn and operating handle pull with the following finish:

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE FINISHES BELOW. DELETE COLORS NOT REQUIRED.

- a. Finish: Bright Brass.
- b. Finish: Oil Rubbed Bronze.
- c. Finish: Satin Nickel.
6. Whitmore®: Forged brass thumb turn and operating handle pull with the following finish:

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE FINISHES BELOW. DELETE FINISHES NOT REQUIRED.

- a. Finish: Bright Brass.
- b. Finish: Antique Brass.
- c. Finish: Oil Rubbed Bronze.
- d. Finish: Satin Nickel.
7. Tribeca® Hardware: Cast zinc dichromate thumb turn and lever handle trim with powder coated painted finish in the following color:

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE COLORS BELOW. DELETE COLORS NOT REQUIRED.

- a. Color: White.
- b. Color: Stone.

2.7 JOINING SYSTEMS

SPECIFIER NOTE: ANDERSEN WINDOWS STRONGLY RECOMMENDS CONSULTATION WITH AN EXPERIENCED STRUCTURAL ENGINEER, ARCHITECT, OR CONTRACTOR AND A LOCAL ANDERSEN REPRESENTATIVE WHEN SPECIFYING ANDERSEN JOINING SYSTEMS. CONSULT AN ANDERSEN REPRESENTATIVE FOR JOINING OPTIONS WHEN JOINING IMPACT RESISTANT WINDOW PRODUCTS.

SPECIFIER NOTE: IF REQUIRED FOR PROJECT, RETAIN ONE OF THE 1-WAY OR 2-WAY COMBINATIONS BELOW AND RELATED SUBPARAGRAPH. DELETE COMBINATIONS NOT REQUIRED FOR PROJECT.

- A. LVL Reinforced Joining - 1-way Combination: Provide 4-9/16 inch (116 mm) by 3/4 inch (19 mm) laminated veneer lumber (LVL) joining with extruded anodized aluminum trim receptor end cap.
 1. Provide corrosion resistant screws and bolts for fastening reinforcement members to wood frame and fastening end brackets to reinforcement members.
- B. LVL Reinforced Joining - 1-way Combination: Provide 6-9/16 inch (167 mm) by 3/4 inch (19 mm) laminated veneer lumber (LVL) joining with extruded anodized aluminum trim receptor end cap.

1. Provide corrosion resistant screws and bolts for fastening reinforcement members to wood frame and fastening end brackets to reinforcement members.
- C. LVL Reinforced Joining - 2-way Combination: Provide 4-9/16 inch (116 mm) by 3/4 inch (19 mm) laminated veneer lumber (LVL) joining with extruded anodized aluminum trim receptor end cap.
 1. Provide corrosion resistant screws and bolts for fastening reinforcement members to wood frame and fastening end brackets to reinforcement members.
- D. LVL Reinforced Joining - 2-way Combination: Provide 6-9/16 inch (167 mm) by 3/4 inch (19 mm) laminated veneer lumber (LVL) joining with extruded anodized aluminum trim receptor end cap.
 1. Provide corrosion resistant screws and bolts for fastening reinforcement members to wood frame and fastening end brackets to reinforcement members.
- E. Gusset Plates: Galvanized steel plates as recommended by door manufacturer for specific application.
- F. Head Flashing: 6 inch (152 mm) long sheet vinyl.
 1. Color: Match door exterior color.
- G. Sealant: As recommended by door manufacturer.
- H. Exterior Vinyl Trim Strips: Provide for each joining method used.
 1. Color: Match door exterior color.

SPECIFIER NOTE: SPECIFY SUBORDINATE OR SECONDARY ITEMS THAT AID AND ASSIST PRIMARY PRODUCTS SPECIFIED ABOVE OR ARE NECESSARY FOR PREPARATION OR INSTALLATION OF THOSE ITEMS.

2.8 ACCESSORIES

- A. Exterior Trim and Casing: Where indicated on Drawings, provide vinyl sheathed plywood in the following thickness, conforming to NIST Voluntary Product Standards P.S.1 and rigid vinyl channels.
 1. Thickness: 1/2 inch (12.7 mm).

SPECIFIER NOTE: RETAIN THICKNESS ABOVE OR BELOW.

2. Thickness: 3/4 inch (19 mm).
3. Color: Match door framing.
4. Vinyl Trim Board: 0.043 inch (1.09 mm) thick vinyl with lightly textured surface laminated with adhesive to 3/4 inch (19 mm) thick plywood.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH ABOVE FOR ANDERSEN® VINYL TRIM BOARD. RETAIN SUBPARAGRAPH BELOW FOR VINYL LAMINATED BOARD.

5. Vinyl Laminated Board: 0.045 inch (1.14 mm) thick vinyl with smooth surface laminated with adhesive to 1/2 inch (12.7 mm) thick plywood.
6. Trim Channels: Rigid vinyl extrusions furnished by door manufacturer for use on same product line.
7. Jamb Depth:
 - a. Inswing 4-9/16 inch and 6 9/16 inch (116 mm).
 - b. Outswing 4-9/16 inch (116 mm).
 - c. Sidelights and Transoms 4-9/16 inch (116 mm).
- B. Interior Extension Jamb: Solid or veneered wood in the following species and depths:

SPECIFIER NOTE: RETAIN PROJECT REQUIRED SPECIES SUBPARAGRAPH BELOW AND DELETE SUBPARAGRAPHS NOT REQUIRED.

1. Species: Maple.

2. Species: Pine.
3. Species: Oak.
4. Species: Prefinished Pine.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED JAMB WIDTH SUBPARAGRAPH BELOW AND DELETE SUBPARAGRAPHS NOT REQUIRED.

5. Jamb Width: Available in 1/16 inch (1.6 mm) depths up to 7-1/8 inch (181 mm):

- C. A-Series Outswing Door Panel Stop: Provide panel stops fabricated from the following species:

SPECIFIER NOTE: RETAIN PROJECT REQUIRED COLOR SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

1. Species: Pine.
2. Species: Oak.
3. Species: Maple.
4. Species: Painted.

- D. A-Series Hinged Inswing and Outswing Door Threshold: Provide threshold fabricated from the following species:

1. Species: Oak.

SPECIFIER NOTE: RETAIN SPECIES ABOVE OR BELOW.

2. Species: Mahogany.

- E. Exterior Keyed Lock: 6-pin keyed lock system.

- F. Support Mullion Trim: 2 inch (51 mm) wide wood filler and vinyl trim strip.

1. Color: Match door unit exterior color.

- G. Provide wood interior extension jamb members machined from clear or veneered, finger joined clear material approved in ANSI/AAMA/NWWDA 101/I.S.2. Pre-drill extension jambs for application.

SPECIFIER NOTE: INTERIOR GRILLES CAN BE FIXED OR PERMANENTLY APPLIED FIBREX® MATERIAL OR WOOD AS SELECTED BELOW. FIXED INTERIOR GRILLES MUST BE USED IN CONJUNCTION WITH FIXED EXTERIOR GRILLES. CONSULT SPECIFICATIONS FOR GRILLE MATERIAL OF ADJACENT UNIT FOR JOINED UNITS OF DIFFERENT TYPES. CONSULT AN ANDERSEN REPRESENTATIVE FOR ADDITIONAL GRILLE OPTIONS

2.9 GRILLES

SPECIFIER NOTE: COORDINATE SPECIFICATIONS FOR GRILLE MATERIAL OF ADJACENT UNIT FOR JOINED UNITS OF DIFFERENT TYPES. REFER TO *ANDERSEN® DIVIDED LIGHT PATTERN GUIDE* FOR AVAILABLE DIVIDED LIGHT PATTERNS AND DETAILS. EXTERIOR AND INTERIOR COLORS CAN BE DIFFERENT COLORS. RETAIN PROJECT REQUIRED GRILLE PATTERN SUBPARAGRAPH BELOW AND DELETE SUBPARAGRAPHS NOT REQUIRED. FULL DIVIDED LIGHT AND FINELIGHT GRILLES ARE NOT AVAILABLE FOR IMPACT RESISTANT GLAZED PRODUCTS.

- A. Full Divided Light Grilles: Fixed exterior and interior grilles with an anodized aluminum muntin bar, 1/2 inch (13 mm) wide, to match spacer within insulated glass unit where indicated on Drawings.

1. Exterior Grille: Provide Fibrex® material exterior grilles where indicated on Drawings. Install grilles on exterior of glass with adhesive tape to simulate true divided light muntin bars in the following color:
 - a. Color: White.
 - b. Color: Stone.
 - c. Color: Sandtone.
 - d. Color: Forest Green.
 - e. Color: Black.

- f. Color: Coco Bean.
 - g. Color: Dove Grey.
 - h. Color: Canvas.
 - i. Color: Red Rock.
 - j. Color: Prairie Grass.
2. Interior grille: Provide profiled wood grilles applied with adhesive tape to interior glass surface.
- a. Grille Type: Unfinished Maple.
 - b. Grille Type: Unfinished Oak.
 - c. Grille Type: Unfinished Pine.
 - d. Grille Type: White Fibrex® material.
 - e. Grille Type: Finished Oak, Pine, Maple.
 - 1) Color: Clear Coat.
 - 2) Color: Honey Stain.
 - 3) Color: Cinnamon Stain.
 - 4) Color: Russet Stain.
 - 5) Color: Mocha Stain.
 - 6) Color: Espresso Stain.
 - 7) Color: Andersen White Paint.
 - 8) Color: Birch Bark Paint.
 - 9) Color: Primed.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED GRILLE WIDTH SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

- f. Width: 3/4 inch (19.1 mm).
 - g. Width: 7/8 inch (22 mm).
 - h. Width: 1-1/8 inch (29 mm).
 - i. Width: 2-1/4 inch (57mm)
 - j. Pattern as indicated on Drawings.
- B. Simulated Divided Light Grilles: Fixed exterior grilles with fixed or removable interior grilles where indicated on Drawings.
1. Exterior Grille: Provide Fibrex® material exterior grilles where indicated on Drawings. Install grilles on exterior of glass with continuous adhesive tape to simulate true divided light muntin bars in the following color:
- a. Color: White.
 - b. Color: Terratone®.
 - c. Color: Sandtone.
 - d. Color: Black.
 - e. Color: Coco Bean.
 - f. Color: Dove Grey.
 - g. Color: Canvas.
 - h. Color: Red Rock.
 - i. Color: Prairie Grass.
 - j. Color: Forest Green.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED INTERIOR GRILLE SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

2. Fixed Interior Grille: Provide profiled wood grilles applied with adhesive tape to interior glass surface.

- a. Grille Type: Unfinished Maple.
 - b. Grille Type: Unfinished Oak.
 - c. Grille Type: Unfinished Pine.
 - d. Grille Type: White Fibrex® material.
 - e. Grille Type: Finished Oak, Pine, Maple.
 - 1) Color: Clear Coat.
 - 2) Color: Honey Stain.
 - 3) Color: Cinnamon Stain.
 - 4) Color: Russet Stain.
 - 5) Color: Mocha Stain.
 - 6) Color: Espresso Stain.
 - 7) Color: Andersen White Paint.
 - 8) Color: Birch Bark Paint.
 - 9) Color: Primed.
3. Removable Interior Grilles: Provide removable, hardwood maple divided light grilles where indicated on Drawings. Install removable grilles against interior glass, attached with metal fasteners or integral tabs to sash.
- a. Grille Type: Unfinished Maple.
 - b. Grille Type: Unfinished Oak.
 - c. Grille Type: Prefinished Maple.
 - 1) Color: White.
 - 2) Color: Terratone®.
 - 3) Color: Sandtone.
 - 4) Color: Forest Green.
 - 5) Color: Black.
 - 6) Color: Coco Bean.
 - 7) Color: Dove Grey.
 - 8) Color: Canvas.
 - 9) Color: Red Rock.
 - 10) Color: Prairie Grass.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED GRILLE WIDTH SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

- 4. Width: 3/4 inch (19 mm).
- 5. Width: 7/8 inch (22 mm).
- 6. Width: 1-1/8 inch (29 mm).
- 7. Width: 2-1/4 inch (57mm)
- 8. Pattern as indicated on Drawings.

- C. Removable Interior Grilles: Provide removable, hardwood maple divided light grilles where indicated on Drawings. Install removable grilles against interior glass, attached with metal fasteners or integral tabs to sash. Provide dual face profile to give muntin bar appearance from both interior and exterior.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED EXTERIOR FACING SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

- 1. Exterior Facing: Maple grille with White color painted finish.
- 2. Exterior Facing: Maple grille with Sandtone color painted finish.
- 3. Exterior Facing: Maple grille with Terratone® color painted finish.
- 4. Exterior Facing: Maple grille with Forest Green color painted finish.

5. Exterior Facing. Maple grille with Black color painted finish.
6. Exterior Facing. Maple grille with Dove Grey color painted finish.
7. Exterior Facing. Maple grille with Coco Bean color painted finish.
8. Exterior Facing. Maple grille with Canvas color painted finish.
9. Exterior Facing. Maple grille with Prairie Grass color painted finish.
10. Exterior Facing. Maple grille with Red Rock color painted finish.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED INTERIOR FACING SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

11. Interior Facing: Unfinished Maple.
12. Interior Facing: Andersen White Painted maple interior.
13. Interior Facing: Birch Bark Painted maple interior.
14. Interior Facing: Prime Painted maple interior.
15. Interior Facing: Painted maple interior.
16. Interior Facing: Clear Coat stain maple interior.
17. Interior Facing: Honey stain maple interior.
18. Interior Facing: Cinnamon stain maple interior.
19. Interior Facing: Russet stain maple interior.
20. Interior Facing: Mocha stain maple interior.
21. Interior Facing: Espresso stain maple interior.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED GRILLE WIDTH SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

22. Width: 3/4 inch (19 mm).
 23. Width: 7/8 inch (22 mm).
 24. Width: 1-1/8 inch (29 mm).
 25. Pattern as indicated on Drawings.
- D. Finelight™ Grilles: Provide contour profile aluminum muntin bars permanently mounted within insulating glass unit where indicated on Drawings.
1. Grille Intersections: ABS concealed plastic connectors with nylon end keepers.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED FINISH SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED. SPECIFY IF INTERIOR COLOR IS DIFFERENT THAN EXTERIOR COLOR.

2. Exterior and Interior Surface: White color painted finish.
3. Exterior and Interior Surface: Sandtone color painted finish.
4. Exterior and Interior Surface: Terratone® color painted finish.
5. Exterior and Interior Surface: Forest Green color painted finish.
6. Width: 3/4 inch (19 mm).

SPECIFIER NOTE: RETAIN REQUIRED GRILLE WIDTH ABOVE OR BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

7. Width: 1 inch (25 mm).
8. Pattern as indicated on Drawings.

2.10 INSECT SCREENS

- A. Hinged Door Insect Screens: Provide hinged patio doors with an insect screen installed on exterior.
1. Insect Screen Door Frame: 0.040 inch (1.02 mm) roll formed aluminum frame with chromate conversion coating.

2. Hinged Insect Screen Door Frame for Single Panel and Active Passive Units: 0.040 inch (1.02 mm) extruded aluminum frame with chromate conversion coating. Provide hinged insect screen doors complete with hinges, closers, and latches.
3. Double-Hinged Insect Screen: 0.040 inch (1.02 mm) aluminum frame with chromate conversion coating.
 - a. Perma-Clean® Top Hung Gliding Insect Screens: Provide Inswing hinged patio doors with gliding insect screen installed on exterior for Active Stationary or 3 panel configurations.
4. Insect Screen Cloth: 18 by 16 glass fiber mesh, charcoal color finish.
5. Frame Finish:

SPECIFIER NOTE: RETAIN PROJECT REQUIRED COLOR SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

- a. Color: White.
- b. Color: Sandtone.
- c. Color: Terratone®.
- d. Color: Forest Green.
- e. Color: Cocoa Bean.
- f. Color: Red Rock.
- g. Color: Black.
- h. Color: Prairie Grass.
- i. Color: Canvas.
- j. Color: Dove Grey.
6. Rollers: Insect screen doors operate on injection molded bottom rollers with self contained leveling adjusters engaged in sill track.
7. Operating Handles: Polycarbonate operating handles to receive locking mechanism in the following color.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED COLOR SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED. "POLANE" IS A REGISTERED TRADEMARK OF THE SHERWIN-WILLIAMS COMPANY.

- a. Color: White.
 - b. Color: Stone.
 - c. Color: Forest Green.
 - d. Color: Cocoa Bean.
 - e. Color: Red Rock.
 - f. Color: Black.
 - g. Color: Prairie Grass.
 - h. Color: Canvas.
 - i. Color: Dove Grey.
 8. Polane® coating, 6063 aluminum extrusion with corner locks and drive rivet fastening system.
 9. Color: Match patio door unit exterior color.
- B. Outswing Door Insect Screens: Provide outswing hinged patio doors with retractable insect screen installed on interior jamb.
1. Retractable Insect Screen Housing Assembly: Aluminum with white painted finish.
 2. Insect Screen Cloth: 18 by 16 glass fiber mesh, charcoal color finish.

SPECIFIER NOTE: DESCRIBE ITEMS THAT MUST BE SHOP MANUFACTURED, FABRICATED, OR ASSEMBLED BEFORE BEING DELIVERED TO THE SITE.

2.11 FABRICATION

- A. Preservative Treatment: Treat wood frame and door panel wood members after machining with water repellent preservative per WDMA I.S.4.
- B. Frame Components:
 - 1. Attach reinforced engineered plastic frame cover to wood frame.
 - 2. Factory-applied urethane coating (2.6 mil minimum dry film thickness) to exterior exposed surfaces of sensitized, reinforced, engineered plastic frame cover.
- C. Door Panels:
 - 1. Stiles and Top Rails: Finger joined and edge glued wood core or LVL, 1-3/4 inches (44 mm) thick before milling. Provide solid wood edge strips, phenolic interior and exterior outer substrate, and veneered interior surface.
 - 2. Bottom Rails: Laminated construction consisting of veneer interior surface over laminated veneer lumber core with phenolic overlay interior and exterior outer substrate.
 - 3. Corner Fastening:
 - a. Door Units: Joint/corners are secured with hardwood dowels and water-resistant structural adhesive.
 - b. Sidelight and Transom Units: Multi-surface butt joint with adhesive, silicone and 2 wood screws.
 - 4. Door Panel Finish:

SPECIFIER NOTE: RETAIN APPROPRIATE OPTION BELOW OR CHANGE TO CHANGE TO PROJECT STAINING SECTION.

- a. Interior: Unfinished, natural clear veneer of the following species to receive paint or stain finish as specified in Section [099000] [099123] [099300] or pre finished

SPECIFIER NOTE: RETAIN PROJECT REQUIRED VENEER SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

- 1) Species: Oak.
- 2) Species: Maple.
- 3) Species: Pine.
- 4) Finish Type: Prefinished water based Painted or Stained interior.
 - a) Prefinished Painted White Pine interior.
 - b) Prefinished Painted Birch Bark interior.
 - c) Prefinished Painted Prime interior.
 - d) Prefinished stained clear coat interior.
 - e) Prefinished stained Honey interior.
 - f) Prefinished stained Cinnamon interior.
 - g) Prefinished stained Russet interior.
 - h) Prefinished stained Mocha interior.
 - i) Prefinished stained Espresso interior.
- b. Exterior: Factory-applied, high durability, urethane coating in the following color:

SPECIFIER NOTE: RETAIN PROJECT REQUIRED COLOR SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

- 1) Color: White.
- 2) Color: Sandtone.
- 3) Color: Terratone®.
- 4) Color: Forest Green.
- 5) Color: Cocoa Bean.
- 6) Color: Red Rock.

- 7) Color: Black.
 - 8) Color: Prairie Grass.
 - 9) Color: Canvas.
 - 10) Color: Dove Grey finish.
- D. Sill: Reinforced Engineered Plastic “Fiberglass”.
- E. Weatherstripping: Factory-applied to panel.
- F. Glazing: Factory-glazed with silicone glazing and interior wood glazing stops.

PART 3 - EXECUTION

SPECIFIER NOTE: SPECIFY ACTIONS TO PHYSICALLY DETERMINE THAT CONDITIONS ARE ACCEPTABLE TO RECEIVE PRIMARY PRODUCTS OF THE SECTION.

3.1 EXAMINATION

- A. Site Verification of Conditions: Verify that site conditions are acceptable for installation of units, including the following:
- 1. Concrete surfaces are dry and free of excess mortar, rocks, sand, and other construction debris.
 - 2. Masonry openings are square and dimensions are correct.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH BELOW FOR WOOD FRAMING. RETAIN SUBPARAGRAPH ABOVE FOR MASONRY CONSTRUCTION.

- 3. Rough openings are square and dimensions are correct.
- 4. Sill plates are level.

SPECIFIER NOTE: DELETE THE FOLLOWING SUBPARAGRAPH IS NO WOOD FRAMING ON PROJECT.

- 5. Wood frame walls are dry, clean, sound, and well nailed or glued, free of voids and without offsets at joints.
 - 6. Nail heads are driven flush with surfaces in openings and within 3 inches (75 mm) of rough opening.
- B. Do not proceed with installation of units until unacceptable conditions are corrected.

SPECIFIER NOTE: COORDINATE ARTICLE BELOW WITH MANUFACTURER'S RECOMMENDED INSTALLATION REQUIREMENTS.

3.2 INSTALLATION

- A. General:
- 1. Comply with instructions and recommendations of unit manufacturer.
 - 2. Remove unit components, parts, accessories, and installation guides from carton.
 - 3. Inspect unit components and verify that components are not damaged and that parts are included before disposing of carton.
 - 4. Shop-assemble multiple units before installation per manufacturer's installation guides.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH ABOVE FOR SHOP-ASSEMBLED UNITS. RETAIN SUBPARAGRAPH BELOW FOR FIELD-ASSEMBLED UNITS.

- 5. Field-assemble multiple units before installation per manufacturer's installation guides.
- B. Interface With Other Work:

1. Perform installation per Manufacturer's instructions.
2. Install units plumb, level, square, true to line, without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction. Install drip cap at head of single units and joined assemblies.
3. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.
4. Install insulation in shim space around unit perimeter to maintain continuity of building insulation. Do not overfill.
5. Hold back exterior siding or other finish materials from edge of unit to allow for expansion and contraction and installation of proper joint sealant with backing materials. Seal perimeter of unit after exterior finish is applied per requirements of Section 079200 – Joint Sealants.
6. Finish interior units per requirements specified in related sections. Refer to, and comply with, additional requirements in manufacturer's installation guides.
7. Install optional hardware and unit accessories after cleaning.

SPECIFIER NOTE: SPECIFY ALLOWABLE VARIATIONS BELOW.

C. Site Tolerances:

1. Adjust operation, insect screens, hardware, and accessories for a tight fit at contact points and weatherstrip for smooth operation and weather tight closure.

SPECIFIER NOTE: SPECIFY THE FINAL ACTIONS REQUIRED TO CLEAN INSTALLED EQUIPMENT OR OTHER COMPLETED WORK TO PROPERLY FUNCTION OR PERFORM. COORDINATE ARTICLE BELOW WITH DIVISION 01 EXECUTION REQUIREMENTS (CLEANING) SECTION AND SPECIFIC PROJECT REQUIREMENTS.

3.3 FIELD TESTING

SPECIFIER NOTE: COORDINATE ARTICLE BELOW WITH CONDITIONS OF THE CONTRACT AND WITH DIVISION 01 QUALITY CONTROL. TESTING EQUIPMENT SHALL BE CALIBRATED PER SECTION 9 OF ASTM E1105: 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, WHERE THE WATER TEST PRESSURE SHALL BE RUN AT 2/3 (0.667) OF THE WATER TEST PRESSURE USED TO ACHIEVE THE PRODUCTS RATED DESIGN PRESSURE. THE NUMBERS OF PRODUCTS TESTED SHALL BE AGREED AND WRITTEN IN THE PROJECT SPECIFICATION AND SHALL NOT EXCEED 1 PERCENT OF THE TOTAL NUMBER OF OPENINGS UNLESS AGREED UPON FIELD TESTING.

A. General: If applicable, test units per with the following procedures:

1. Inspect units and verify installation per Manufacturer's instructions.
2. For products installed less than 6 months, comply with AAMA 502-08 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors, Procedure B.
3. For products installed longer than 6 months, comply with AAMA 511-08: Voluntary Guideline for Forensic Water Penetration Testing of Fenestration Products. If test indicates that field testing of units is necessary, test product as indicated in paragraph 1 above.
4. Do not proceed with installation of additional units until unacceptable conditions are corrected.

3.4 CLEANING

- A. Clean units using cleaning material and methods specifically recommended by door manufacturer.
- B. Remove excess sealants, glazing materials, dirt, and other substances.
- C. Avoid damaging protective coatings and finishes.
- D. Protect unit surfaces from masonry cleaning solution that could damage insulated glass panels or hardware.



- E. Remove debris from work site and properly dispose of debris.

SPECIFIER NOTE: SPECIFY PROVISIONS FOR PROTECTING WORK AFTER INSTALLATION BUT PRIOR TO ACCEPTANCE BY THE OWNER. COORDINATE ARTICLE BELOW WITH DIVISION 01 EXECUTION REQUIREMENTS SECTION.

3.5 PROTECTION

- A. Protect installed work from damage due to subsequent construction activity on the site.

END OF SECTION