SECTION 08 52 00

WOOD WINDOWS

(ANDERSEN® WOODWRIGHT® FULL FRAME DOUBLE-HUNG, PICTURE AND TRANSOM WINDOWS)

PART 1 - GENERAL

SPECIFIER NOTE: DATA CONTAINED IN THIS GUIDE SPEC IS ACCURATE AS OF AUGUST 2007. 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 WINDOW TYPE BELOW. DELETE TYPES NOT REQUIRED.

1. Double-Hung windows.
2. Archtop Double-Hung windows.
3. Unequal Leg Arch Double-Hung windows.
4. Single-Hung windows.
5. Picture windows.
6. Transom windows.

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.

1.2 SYSTEM DESCRIPTION

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 ANSI/AAMA/NWWDA 101/I.S.2.
   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/NWWDA 101/I.S.2/NAFS, 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.>

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.

1.3 SUBMITTALS

A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 01 Submittal Procedures Section.

B. Product Data: Submit manufacturer's product data and installation guides.

C. Shop Drawings: Provide drawings indicating direction of operable parts, typical jamb, head and sill conditions, and special mullion reinforcement details.

D. Color Samples: Submit selection and verification samples, including the following:
   1. Hardware: Submit samples indicating typical finish on window hardware.
   2. Vinyl Cladding: Submit color Samples of vinyl cladding.

E. Contract Closeout Submittals: Submit the following:
   1. Warranty documents specified herein.

F. 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.

1.4 QUALITY ASSURANCE

A. 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.

B. Regulatory Requirements and Approvals: <Specify applicable requirements of regulatory agencies.>

C. Certifications:
   1. 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.

2. 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 or ASTM E2190.

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

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

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

E. Preinstallation Meetings: <Specify requirements for preinstallation meeting.>

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.

1.5 DELIVERY, STORAGE, AND HANDLING

A. General: Comply with Division 01 Product Requirements Section.

B. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

C. Delivery: Deliver materials in manufacturer's original unopened, undamaged containers with identification labels intact.

D. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

E. Store materials and accessories off ground, under cover, and protected from weather and construction activities.

1.6 PROJECT 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 in accordance with 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 OF BOND COVERING THE WORK OF THIS SECTION.

1.7 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 Windows, Inc.
2. 100 4th Ave. N.
3. Bayport, MN 55003-1096.
4. Phone: (800) 299-9029.
5. Fax: (800) 752-9230.
6. E-mail: technicalsupport@andersenwindows.com.
7. www.andersenwindows.com.
8. Local Contact: <Specify contact information provided by local Andersen representative.>

2.2 MANUFACTURED UNITS

A. Proprietary Products/Systems: Vinyl clad, double-hung tilting wood windows, including the following:

SPECIFIER NOTE: DELETE ANY OF THE FOLLOWING SUBPARAGRAPHS NOT REQUIRED FOR PROJECT.

1. Andersen® Woodwright® Full Frame Double-Hung Windows.
2. Andersen® Archtop Double-Hung Wood windows.
3. Andersen® Unequal Leg Arch Double-Hung Wood windows.
4. Andersen® Springline™ Single-Hung Wood windows
5. Andersen® Woodwright® Picture Window.
6. Andersen® Woodwright® Transom Window.

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.

7. 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.

2.3 MATERIALS

A. Frame: Fabricated from a wood species approved in WDMA I.S.4.

B. Double-Hung Exterior Frame Members: Vinyl wrapped wood (PVC) complying with the requirements of ASTM D4216. Provide units in the following color:

SPECIFIER NOTE: RETAIN PARAGRAPH ABOVE FOR RECTANGULAR DOUBLE-HUNG PRODUCTS. SELECT PARAGRAPHS BELOW FOR ARCHTOP, UNEQUAL LEG ARCH AND SPRINGLINE™ UNITS.

C. Archtop, Unequal Leg Arch Double-Hung Exterior Frame Members: Fibrex® material extrusion finished with the following color capping:

D. Springline™ Single-hung Exterior Frame Members: Fibrex® material extrusion finished with the following color capping:

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

1. Color: White.
2. Color: Sandtone.
3. Color: Terratone®.
4. Color: Forest Green.

SPECIFIER NOTE: WOODWRIGHT® WINDOWS CAN BE ORDERED WITH A SASH COLOR DIFFERENT FROM THE FRAME COLOR. DELETE THE COLOR OPTIONS IF THE FRAME AND SASH COLORS ARE TO MATCH.

E. Sash:
1. Exterior Components: Fibrex® material extrusion finished with the following color capping:

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

a. Capping Color: White.
b. Capping Color: Sandtone.
c. Capping Color: Terratone®.
d. Capping Color: Forest Green.

2. Interior Components: Provide the following water repellant wood preservative treated wood interior per WDMA I.S.4.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED WOOD TYPE BELOW. DELETE WOOD TYPES NOT REQUIRED.

a. Pine.
b. Oak.
c. Maple.
d. Prefinished white.
e. Adhesively bond exterior and interior sash components.

F. Picture and Transom Sash Members:
1. Exterior Components: Provide Fibrex® material extrusion finished with the following color capping:

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

a. Capping Color: White.
b. Capping Color: Sandtone.
c. Capping Color: Terratone®.
d. Capping Color: Forest Green.

2. Interior Components: Provide the following water repellant wood preservative treated wood interior per WDMA I.S.4.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED WOOD TYPE BELOW. DELETE WOOD TYPES NOT REQUIRED.

a. Pine.
b. Oak.
c. Maple.
d. Prefinished white.
e. Clip-fasten interior components to exterior components.

G. Double-Hung and Picture Sill: Provide Fibrex® material sill cover over a wood species approved in ANSI/AAMA/NWWDA 101/I.S.2

H. Double-Hung Weatherstripping:
   1. Provide continuous bulb type weatherstrip at upper sash head.
   2. Provide continuous PVC scissors type interlock with an integral leaf located on the lower sash at unit check rail.
   3. Provide compressible bulb with fin weatherstrip at lower sash sill.
   4. Provide spring-tensioned PVC profiles installed in side jamb liners contacting sash edges.

I. Double-Hung Window Hardware:
   1. Sash Locks and Keepers: Provide one (1) sash lock and keeper.

SPECIFIER NOTE: SELECT BETWEEN THE FOLLOWING SASH LOCK OPTIONS. ESTATE™ HARDWARE LOCKS ARE FIELD APPLIED.

   2. Classic Series™ Hardware Locks: Injection molded, glass reinforced polyester sash locks in the following integral color.
      a. Color: Stone.

SPECIFIER NOTE: RETAIN HARDWARE LOCK COLOR ABOVE OR BELOW.

      b. Color: White.
   3. Estate™ Hardware Locks: Solid forged brass handle and base with glass reinforced polyester locking cam with the following finish.

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE LOCK COLORS BELOW. DELETE COLORS 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.
      g. Finish: Distressed Bronze.
      h. Finish: Distressed Nickel.
   4. Sash Lift: Provide one (1) hand lift per window unit.

SPECIFIER NOTE: IF OPTIONAL SASH LIFTS ARE REQUIRED, RETAIN SUBPARAGRAPH ABOVE OR BELOW.

   5. Sash Lift: Provide two (2) finger lifts per window unit.

SPECIFIER NOTE: IF OPTIONAL SASH LIFTS ARE SELECTED ABOVE, RETAIN REQUIRED SUBPARAGRAPHS BELOW FOR RELATED TYPE AND COLOR OR FINISH AND DELETE SUBPARAGRAPHS NOT REQUIRED.

   6. Hand Lift: Classic Series™ hardware, zinc die cast with baked powder coated finish on chromate protective coating in the following color:

SPECIFIER NOTE: DELETE COLOR BELOW NOT REQUIRED FOR PROJECT.

      a. Color: Stone.
      b. Color: White.
   7. Hand Lift: Estate™ hardware, solid brass with the following finish:

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE LOCK COLORS BELOW. DELETE COLORS 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.
g. Finish: Distressed Bronze.
h. Finish: Distressed Nickel.

8. Finger Lift: Classic Series™ hardware, zinc cast with baked, powder coated finish on chromate protective coating in the following color:

SPECIFIER NOTE: DELETE COLOR BELOW NOT REQUIRED FOR PROJECT.

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

9. Finger Lift: Estate™ hardware, solid brass with the following finish:

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE LOCK COLORS BELOW. DELETE COLORS 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.
g. Finish: Distressed Bronze.
h. Finish: Distressed Nickel.

10. Tilt-Wash Hardware:
    a. Lock and Keeper: Solid brass hardware with the following finish:

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.

SPECIFIER NOTE: RETAIN THE PARAGRAPH BELOW IF DESIGN PRESSURE UPGRADE IS REQUIRED.

b. Performance Upgrade: DP50 Upgrade.

11. Balancers: Fit top and bottom sash with concealed sash mounted balancers. Design balancers to allow easy operation of double-hung units.
12. Wash Assists: Provide two (2) wash assists mounted in interior pocket of side jamb liners.
13. Wash Assist Stops: Provide two (2) wash assist stops at side jamb liner center pockets.

2.4 GLAZING

A. General: 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: 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.

SPECIFIER NOTE: SELECT BETWEEN THE FOLLOWING STANDARD GLAZING OPTIONS. CONSULT AN ANDERSEN REPRESENTATIVE FOR ADDITIONAL GLAZING OPTIONS. IN ADDITION TO COMPLYING WITH SAFETY GLAZING REQUIREMENTS, TEMPERED GLASS MAY BE REQUIRED BECAUSE OF WINDOW SIZE AND WIND LOAD. CONSULT ANDERSEN CORPORATION FOR ASSISTANCE IN SPECIFYING THE APPROPRIATE GLAZING TYPE.

C. High-Performance™ Low-E4™ Glass, Argon Blend Filled Insulating Glass Units:
   1. Glass: Insulating glass units consisting of an outboard lite of clear annealed glass conforming to ASTM C1036, Type 1, Class 1, q3 and an inboard lite of clear annealed glass conforming to ASTM C1036, Type 1, Class 1, q3.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH ABOVE FOR NON-TEMPERED INSULATING GLASS UNITS. SELECT SUBPARAGRAPH BELOW FOR TEMPERED INSULATING GLASS UNITS.

   2. 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.
   3. Magnetron sputtering vapor deposition (MSVD) TiO2 coating applied to the No. 1 surface.
   4. High-Performance™ Low-E4™ Coating: 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.

D. High-Performance™ Low-E4™ Sun Glass, Low SHGC, Argon Blend Filled Insulating Glass Units:
   1. Glass: Insulating glass units consisting of an outboard lite of clear annealed glass conforming to ASTM C1036, Type 1, Class 1, q3 and an inboard lite of clear annealed glass conforming to ASTM C1036, Type 1, Class 1, q3.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH ABOVE FOR NON-TEMPERED INSULATING GLASS UNITS. SELECT SUBPARAGRAPH BELOW FOR TEMPERED INSULATING GLASS UNITS.

   2. 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.
   3. Magnetron sputtering vapor deposition (MSVD) TiO2 coating applied to the No. 1 surface.
   4. High-Performance™ Low-E4™ Sun Glass Coating: 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.

2.5 JOINING SYSTEMS

SPECIFIER NOTE: ANDERSEN STRONGLY RECOMMENDS CONSULTATION WITH AN EXPERIENCED STRUCTURAL ENGINEER, ARCHITECT OR CONTRACTOR AND A LOCAL ANDERSEN REPRESENTATIVE WHEN SPECIFYING ANDERSEN JOINING SYSTEMS.

A. Wood Non-Reinforced Joining:
   1. Joining Clips (Non-reinforced? Mull Interior).
   2. Gusset Plates: Galvanized gusset plates.
      a. Flat Gusset Plat at Head and Jamb: 0.028 inch (0.71 mm).
      b. Preformed Sill Gusset Plate: 0.031 inch (0.79 mm).

3. Head Flashing: 6 inch (152 mm) long sheet vinyl.
   a. Color: Match window unit exterior color.
4. Silicone Sealant: Silicone sealant recommended by window manufacturer.
5. Vinyl Outside Trim Strips: As recommended by window manufacturer for each joining method used.
   a. Color: Match window unit exterior color.

B. Steel Reinforced Joining:
1. Reinforcing: Provide 4 inch by 3/16 inch (100 mm by 4.8 mm) thick hot rolled steel plate conforming to ASTM A36 with zinc plating and yellow chromate conversion coat. Pre-drill holes for attachment to window frames and end brackets.
2. End Brackets: 16 gage (1.6 mm) galvanized bent metal gusset plates.
3. Provide corrosion resistant coating as recommended by window manufacturer and provided by window installer for treating cut end and drilled holes at steel reinforcement members.

2.6 ACCESSORIES

SPECIFIER NOTE: FIBREX® MATERIAL EXTERIOR GRILLES ARE STANDARD FOR DOUBLE-HUNG UNITS. INTERIOR GRILLES CAN BE FIXED FIBREX® MATERIAL OR WOOD AS SELECTED BELOW. FIXED INTERIOR GRILLES SHALL BE USED IN CONJUNCTION WITH FIXED EXTERIOR GRILLES. CONSULT SPECIFICATIONS FOR GRILLE MATERIAL OF ADJACENT UNIT FOR JOINED UNITS OF DIFFERENT TYPES. HARDWOOD MAPLE GRILLES ARE PROVIDED FOR PICTURE WINDOWS AND ARE AVAILABLE FOR OTHER WINDOW TYPES ON SPECIAL ORDER. CONSULT AN ANDERSEN REPRESENTATIVE FOR ADDITIONAL GRILLE OPTIONS.

A. Grilles:

SPECIFIER NOTE: REFER TO *ANDERSEN® DIVIDED LIGHT PATTERN GUIDE* FOR AVAILABLE DIVIDED LIGHT PATTERNS AND DETAILS. EXTERIOR AND INTERIOR COLORS CAN BE DIFFERENT. 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.

1. Full Divided Light Grilles: Fixed exterior and interior grilles with an anodized aluminum muntin bar, 1/2 inch (12.7 mm) wide, to match spacer within insulated glass unit where indicated on Drawings.
   a. 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:
      1) Color: White.
      2) Color: Stone.
      3) Color: Sandtone.
      4) Color: Forest Green.
   b. Interior grille: Provide profiled wood grilles applied with adhesive tape to interior glass surface.
      1) Grille Type: Unfinished Maple.
      2) Grille Type: Unfinished Oak.
      3) Grille Type: Unfinished Pine
      4) Grille Type: White Fibrex® material.

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

   c. Width: 3/4 inch (19.1 mm).
   d. Width: 7/8 inch (22 mm).
   e. Width: 1-1/8 inch (29 mm).
   f. Pattern as indicated on Drawings.

2. Simulated Divided Light Grilles: Fixed exterior grilles with fixed or removable interior grilles where indicated on Drawings.
   a. 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:
      1) Color: White.
      2) Color: Terratone®
      3) Color: Sandtone.
      4) Color: Forest Green.

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

   b. Fixed Interior Grille: Provide profiled wood grilles applied with adhesive tape to interior glass surface.
      1) Grille Type: Unfinished Maple.
      2) Grille Type: Unfinished Oak.
      3) Grille Type: Unfinished Pine
      4) Grille Type: White Fibrex® material.
   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.
      1) Grille Type: Unfinished Maple.
      2) Grille Type: Unfinished Oak.
      3) Grille Type: Prefinished Maple.
         a) Color: White.
         b) Color: Terratone®
         c) Color: Sandtone.
         d) Color: Forest Green.

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

   d. Width: 3/4 inch (19.1 mm).
   e. Width: 7/8 inch (22 mm).
   f. Width: 1-1/8 inch (29 mm).
   g. Pattern as indicated on Drawings.

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. 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.

   a. Exterior Facing: Maple grille with White color painted finish.
   b. Exterior Facing: Maple grille with Sandtone color painted finish.
   c. Exterior Facing: Maple grille with Terratone® color painted finish.
   d. Exterior Facing: Maple grille with Forest Green color painted finish.

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

e. Interior Facing: Unfinished Maple.
f. Interior Facing: White Painted maple interior.

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

g. Width: 3/4 inch (19.1 mm).
h. Width: 7/8 inch (22 mm).
i. Width: 1-1/8 inch (29 mm).
j. Pattern as indicated on Drawings.

4. Finelight™ Grilles: Provide contour profile aluminum muntin bars permanently mounted within insulating glass unit where indicated on Drawings.
   a. Grille Intersections: ABS concealed plastic connectors with nylon end keepers.

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

b. Exterior and Interior Surface: White color painted finish.
c. Exterior and Interior Surface: Sandtone color painted finish.
d. Exterior and Interior Surface: Terratone® color painted finish.
e. Exterior and Interior Surface: Forest Green painted finish.
f. Width: 3/4 inch (19.1 mm).

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

g. Width: 1 inch (25.4 mm).
h. Pattern as indicated on Drawings.

SPECIFIER NOTE: ADD THE FOLLOWING OPTION IF HIGHER DESIGN PRESSURE UPGRADE IS REQUIRED.

B. High Inside Sill Stop: 1-1/8 inch (29 mm) profiled wood stop in the following color:

SPECIFIER NOTE: RETAIN PROJECT REQUIRED WOOD TYPE BELOW. DELETE WOOD TYPES NOT REQUIRED.

1. Unfinished.
   a. Pine.
   b. Oak.
   c. Maple.
2. Prefinished white.

C. Sill Stool: Wood members machined from clear material or veneered finger joined material approved in ANSI/AAMA/NWWDA 101/I.S.2.

D. Extension Jambs: Wood members machined from clear material or veneered finger joined material. Pre-drill extension jambs for application. Factory-applied extension jambs are available in 1/16 inch (1.6 mm) depth increments ranging from 5-1/4 inch (133 mm) depth to 7-1/8 inch (181 mm) for all Woodwright® products.

E. Picture Unit Interior Accessory Stop: Wood pieces machined from clear material.

F. Exterior Trim:
   1. Exterior Trim and Casing: Where indicated on Drawings, provide 1/2 inch (13 mm) vinyl sheathed plywood conforming to NIST Voluntary Product Standards PS1 and rigid vinyl channels.
      a. Color: Match window framing.

SPECIFIER NOTE: IF EXTERIOR TRIM AND CASING IS REQUIRED FOR PROJECT, RETAIN SUBPARAGRAPH ABOVE FOR 1/2 INCH (13 MM) OR SUBPARAGRAPH BELOW FOR 3/4 INCH (19 MM).

2. Exterior Trim and Casing: Where indicated on Drawings, provide 3/4 inch (19 mm) vinyl sheathed plywood conforming to NIST Voluntary Product Standards PS1 and rigid vinyl channels.
   a. Color: Match window framing.
3. Andersen® vinyl trim board to have 0.043 inch (1.09 mm) thick vinyl with lightly textured surface laminated with adhesive to 3/4 inch (19.1 mm) thick plywood.
   a. Trim Channels: Rigid vinyl extrusions supplied by window manufacturer for use on same product line.

SPECIFIER NOTE: IF TRIM BOARD IS REQUIRED FOR PROJECT, RETAIN PARAGRAPH AND SUBPARAGRAPH ABOVE FOR VINYL TRIM BOARD OR PARAGRAPH AND SUBPARAGRAPH BELOW FOR VINYL LAMINATED BOARD.

4. Vinyl laminated board to have 0.045 inch (1.14 mm) thick vinyl with smooth surface laminated with adhesive to 1/2 inch (13 mm) thick plywood.
   a. Trim Channels: Rigid vinyl extrusions supplied by window manufacturer for use on same product line.
5. Support Mullion Trim: 2 inch (51 mm) wide wood filler and vinyl trim strip.
   a. Color: Match window unit exterior color.

SPECIFIER NOTE: ANDERSEN® BAY WINDOWS CAN BE WALL SUPPORTED OR SUSPENDED. THE CABLE SUPPORT SYSTEM IS REQUIRED WHEN UNITS ARE TO BE SUSPENDED. EACH CABLE IS CAPABLE OF SUPPORTING A MAXIMUM LOAD OF 500 LB (227 KG). ADDITIONAL SUPPORT IS NECESSARY IF THE SECTION OF THE WINDOW UNIT REQUIRING SUPPORT EXCEEDS 500 LB (227 KG). RADIUS TOP WINDOWS CANNOT BE USE AS BAY WINDOWS.

6. Cable Support System: 1/8 inch (3.2 mm) diameter braided steel cable with hardware required for complete installation.

2.7 INSECT SCREENS

SPECIFIER NOTE: SELECT BETWEEN STANDARD ANDERSEN® AND TRUSCENE® INSECT SCREEN OPTIONS

A. Insect Screens: Provide venting sash with an insect screen, including attachment hardware.
   1. Frames: Full height 0.024 inch (0.61 mm) rolled aluminum frame with chromate conversion coating. Provide matching corner locks and latch retainers.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH ABOVE FOR FULL FRAME. RETAIN SUBPARAGRAPH BELOW FOR HALF FRAME.

   2. Frames: Half height 0.024 inch (0.61 mm) rolled aluminum frame with chromate conversion coating. Provide matching corner locks and latch retainers.
      a. Insect Screen Cloth: 18 by 16 (what? mm?) aluminum mesh, gunmetal finish.
      b. Frame Finish: High-bake polyester finish in the following color:

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

         1) Frame Finish: White.
         2) Frame Finish: Sandtone color.
         3) Frame Finish: Terratone® color.
         4) Frame Finish: Forest Green color.

B. TruScene® Insect Screen: Provide venting sash with an insect screen, including attachment hardware.
   1. Frames: Full height 0.024 (0.61 mm) inch rolled aluminum frame with chromate conversion coating and polyester painted finish.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH ABOVE FOR FULL FRAME. RETAIN SUBPARAGRAPH BELOW FOR HALF FRAME.

2. Frames: Half height 0.024 (0.61 mm) inch rolled aluminum frame with chromate conversion coating and polyester painted finish.

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

a. Color: White.
b. Color: Stone.
c. Color: Sandtone.
d. Color: Forest Green.

3. Insect Screen Cloth: 25 by 25 (what? mm?) micro fine stainless steel wire with a polyester non-reflective coating.

2.8 FABRICATION

A. Preservative Treatment: Treat wood sash and frame members after machining with a water repellent preservative in accordance with WDMA I.S.4.

B. Woodwright® (Full-Frame, Inert or both?) Double-Hung Units:

1. Outer Frame: Vinyl wrapped treated wood with corners sealed with silicone and vinyl corner flashing.

SPECIFIER NOTE: RETAIN THE OUTER FRAME PARAGRAPH ABOVE FOR RECTANULAR DOUBLE-HUNG UNITS. SELECT THE OUTER FRAME PARAGRAPH BELOW FOR RADIUS TOP UNITS.

2. Outer Frame: Extruded Fibrex® material adhesively bonded corner keys.
3. Sill: Fibrex® material laminated to wood sub-sill core with PVC end caps.
4. Bond outer frame members and sill cover to wood base frame with adhesive.
5. Fasten inside stops to jambs and sill base.
6. Jamb and Head Liners:
   a. Side Jamb Liner: Pine veneer over 0.060 inch (1.52 mm) thick rigid vinyl extrusion with PVC spring-tensioned weatherstripping.
   b. Head Jamb Liner: Pine veneer over 0.060 inch (1.52 mm) thick rigid vinyl extrusion.

SPECIFIER NOTE: RETAIN THE PARAGRAPH ABOVE OR SELECT BETWEEN THE FOLLOWING TWO PARAGRAPHS FOR ALTERNATIVE WOOD VENEERS

7. Jamb and Head Liners:
   a. Side Jamb Liner: Oak veneer over 0.060 inch (1.52 mm) thick rigid vinyl extrusion with PVC spring-tensioned weatherstripping.
   b. Head Jamb Liner: Oak veneer over 0.060 inch (1.52 mm) thick rigid vinyl extrusion.
8. Jamb and Head Liners:
   a. Side Jamb Liner: Maple veneer over 0.060 inch (1.52 mm) thick rigid vinyl extrusion with PVC spring-tensioned weatherstripping.
   b. Head Jamb Liner: Maple veneer over 0.060 inch (1.52 mm) thick rigid vinyl extrusion.
9. Sash Components:
   a. Exterior Sash: Extruded Fibrex® material with adhesively bonded PVC corner keys.
   b. Interior Sash: Clear wood adhesively applied to exterior sash components.
10. Factory apply weatherstripping.

SPECIFIER NOTE: ADD THE FOLLOWING PARAGRAPH FOR DOUBLE-HUNG PICTURE AND TRANSOMS.

C. Woodwright® Picture and Transom Units:

1. Outer Frame: Provide extruded Fibrex® material with adhesively bonded corner keys.
2. Sill: Provide extruded Fibrex® material with PVC end caps laminated to wood sub-sill core.
3. Interior Sash: Provide clear wood interior sash components clip fastened to exterior sash profile.
4. Provide clear wood stops.
5. Mechanically fasten sill assembly and wood sub frame components. Bond outer frame members to sub-frame with adhesive and mechanical fasteners.

D. Glazing: Factory glaze with high quality glazing sealant.

PART 3 - EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

A. Comply with the instructions and recommendations of the window manufacturer.

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

3.2 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 IF 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.

3.3 INSTALLATION

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

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

4. Field-assemble multiple units before installation in accordance with manufacturer's installation guides.

B. Interface With Other Work:
1. Perform installation in accordance with Manufacturer's instructions.
2. Install units level, plumb, square, true to line, without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.
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 Division 07 "Joint Sealants" Section.
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 weatherstripping for smooth operation and weathertight closure.

D. Extend vapor barrier to interior face of unit frame and attach.

SPECIFIER NOTE: SPECIFY THE FINAL ACTION 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.

3.4 CLEANING

A. Clean units using cleaning material and methods specifically recommended by window 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 insulation 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