SECTION 08 5 213.20

ALUMINUM-CLAD WOOD WINDOWS AND PATIO DOORS

JELD-WEN Custom Series

Display hidden notes to specifier. (Don't know how? [Click Here](http://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* JELD-WEN, Inc.; Aluminum-Clad Wood windows and patio doors.  
This section is based on the products of JELD-WEN, Inc., which is located at:  
2645 Silver Crescent Dr. Suite 400  
Charlotte, NC 28273   
Toll Free Tel: 800-535-3936  
Tel: 541-850-2606  
Fax: 541-851-4333  
Email: [request info (Architectural\_Inquiries@jeld-wen.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=JELD-WEN,+Inc.&coid=33445&rep=&fax=541-851-4333&message=RE:%20Spec%20Question%20(08554jwe):%20%20&mf=)  
Web: [www.jeld-wen.com](http://www.jeld-wen.com)   
 [ [Click Here](http://www.arcat.com/arcatcos/cos33/arc33445.html) ] for additional information.  
As a JELD-WEN customer, you can count on us to provide reliable products and service. We are a comprehensive source for dependable wood, vinyl and aluminum windows; wood and wood composite interior doors; and wood, steel, engineered wood and fiberglass exterior doors.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Wood Windows and Patio Doors: (Custom Series)
       1. Awning windows.
       2. Casement windows.
       3. Double-hung windows.
       4. Horizontal sliding windows.
       5. Radius and geometric windows.

\*\* NOTE TO SPECIFIER \*\* Direct-Set windows are fixed. In-Sash windows are fixed or operable and come with hardware and screen options.

* + - * 1. Direct-Set
        2. In-Sash
      1. In-swing patio doors.
      2. Out-swing patio doors.
      3. Sliding patio doors.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. Window and Door Manufacturers Association (WDMA):
       1. AAMA/WDMA/CSA 101/I.S.2/A440 North American Fenestration Standard / Specification for windows, doors, and skylights (NAFS)
    2. ASTM International (ASTM):
       1. ASTM E 1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
       2. ASTM E 1996 - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.
    3. National Fenestration Rating Council (NFRC):
       1. NFRC 100 - Procedure for Determining Fenestration Thermal Properties.
       2. NFRC 200 - Solar Heat Gain Coefficient and Visible Transmittance.
    4. Window and Door Manufacturers Association (WDMA): WDMA I.S.4; Water Repellent Preservative Non-Pressure treatment for Millwork
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
     3. Shop Drawings: Submit shop drawings indicating details of construction, flashings and relationship with adjacent construction.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each factory-finished product specified, two complete sets of color chips representing manufacturer's full range of available finishes.
    2. Verification Samples: For each factory-finished product specified, two samples, minimum size 6 inches (150 mm) square, representing actual finishes.

\*\* NOTE TO SPECIFIER \*\* Delete Design Data, Test Reports submittal requirements when a propriety specification is used and can be held. Retain Design Data, Test Reports submittal requirement when other products may be submitted as substitution.

* + 1. Quality Assurance Submittals:
       1. Design Data, Test Reports: Provide manufacturer test reports indicating product compliance with indicated requirements.
       2. WDMA Hallmark certification.
    2. Closeout Submittals: Refer to Section 01 70 00 - Execution and Closeout Requirements Closeout Submittals.
  1. QUALITY ASSURANCE
     1. Installer Qualifications: Minimum 2 years installing similar assemblies.
     2. Certifications: WDMA Hallmark certification label indicating assemblies meet the design requirements.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of installation techniques and workmanship.
       1. Mock-ups shall incorporate surrounding construction, including wall assembly fasteners, flashing, and other related accessories installed in accordance with manufacturer's approved installation methods.
       2. Do not proceed with remaining work until workmanship is approved by Architect.
       3. Modify mock-up as required to produce acceptable work.

\*\* NOTE TO SPECIFIER \*\* Delete one of the two following subparagraphs.

* + - 1. At Substantial Completion, approved mockups may become part of completed Work.
      2. Demolish mockups and remove from site.
    1. Pre-installation Meeting: Conduct pre-installation meeting on site two weeks prior to commencement of installation.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards.
     2. Deliver and store assembly materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact. Protect from damage.
  2. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  3. WARRANTY
     1. Manufacturer's Standard Warranty: Assemblies will be free from defects in materials and workmanship from the date of Manufacture for the time periods indicated below:

\*\* NOTE TO SPECIFIER \*\* Delete product types not required.

* + - 1. Patio Door Units: 20 years.
      2. Window Units: 20 years.
      3. Clad Finishes: 20 years against peeling, checking, cracking caulk or color change.
      4. Pine Wood Products: Lifetime against wood decay and termites.

\*\* NOTE TO SPECIFIER \*\* Specialty glazing includes patterned and textured glass. Insulated glass that incorporates a specialty glass may be eligible for an extended warranty, but requires input from the manufacturer. Contact a JELD-WEN representative to discuss design options and their effect on the warranty. Delete glass types not required.

* + - 1. Glazing:
         1. Insulated Glass: 20 years against seal breakage.
         2. Laminated Glass: 5 years against delamination.
         3. Hurricane Glass: 5 years against delamination.
         4. Specialty Glazing: 5 years against delamination.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: JELD-WEN, Inc., which is located at: 2645 Silver Crescent Dr. Suite 400; Charlotte, NC 28273 ; Toll Free Tel: 800-535-3936; Tel: 541-850-2606; Fax: 541-851-4333; Email: [request info (Architectural\_Inquiries@jeld-wen.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=JELD-WEN,+Inc.&coid=33445&rep=&fax=541-851-4333&message=RE:%20Spec%20Question%20(08554jwe):%20%20&mf=); Web: [www.jeld-wen.com](http://www.jeld-wen.com)

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. ALUMINUM-CLAD WOOD WINDOWS AND PATIO DOORS - GENERAL
     1. Design Requirements:
        1. Compliance: Provide assemblies capable of complying with requirements indicated, based on testing manufacturer's window that are representative of those specified.

\*\* NOTE TO SPECIFIER \*\* The following subparagraph applies only to windows. Delete if not required.

* + - 1. Test Size: In compliance with requirements of AAMA/WDMA/CSA 101/ I.S.2/A440 (NAFS).

\*\* NOTE TO SPECIFIER \*\* Include patio door design pressure (DP) ratings as part of the performance requirements. Required DP will vary dependent on project site, the location in the building and door size. Coordinate DP with the Structural Engineer. DP ratings and related patio door size and style are available at www.jeld-wen.com or by contacting a JELD-WEN representative. Insert value or refer to drawing information.

* + - 1. Structural Requirements: Provide assemblies complying with requirements indicated:
         1. Performance Class: As indicated on drawings.
         2. Performance Class: \_\_\_\_\_\_\_\_\_.
         3. Performance Grade: As indicated on drawings.
         4. Performance Grade: \_\_\_\_\_\_\_\_.

. \*\* NOTE TO SPECIFIER \*\* Include NFRC ratings as part of the performance requirements. NFRC ratings qualifying for the Energy Star program are based on the performance of whole assembly. Qualifying assemblies vary to fit the needs of different regions throughout the country. NFRC ratings and related JELD-WEN size and styles are available at www.jeld-wen.com or by contacting a JELD-WEN representative. Insert values or the phrase ' As scheduled and indicated on Drawings' as applicable. The following subparagraph applies only to windows. Delete if not required.

* + - 1. NFRC Requirements: Provide assemblies complying with the following total window ratings:
         1. U-Factor: \_\_\_\_\_\_\_\_ in accordance with NFRC 100.
         2. Solar Heat Gain Coefficient (SHGC): \_\_\_\_\_\_\_\_ in accordance with NFRC 200.
         3. Visible Transmittance (VT): \_\_\_\_\_\_\_\_ in accordance with NFRC 200.
    1. Materials:
       1. Exterior Cladding: Extruded aluminum.
       2. Interior Wood:

\*\* NOTE TO SPECIFIER \*\* Delete materials not required.

* + - * 1. Material: Standard, Western Pine.

\*\* NOTE TO SPECIFIER \*\* AuraLast® is a trademark preservative treatment by JELD-WEN and is distinguished from traditional preservation methods by its minimum treatment penetration of 92 percent.

* + - * 1. Material: Mahogany.
        2. Material: Vertical Grain Douglas Fir.
    1. Installation Accessories:

\*\* NOTE TO SPECIFIER \*\* Accessories compatible with windows, patio doors and required installation may be specified in this section or in related sections. Coordinate with related sections so as not to duplicate information.

* + - 1. Flashing: Refer to Section 07 60 00 - Flashing and Sheet Metal.

\*\* NOTE TO SPECIFIER \*\* Delete options for sealants not required.

* + - 1. Sealants: OSI Sealants by Henkel Corporation.
      2. Sealants: Refer to Section 07 91 26 - Joint Fillers.
      3. Sealants: Manufacturer recommended sealants to maintain watertight conditions.
    1. Finishes:

\*\* NOTE TO SPECIFIER \*\* Delete options for finishes not required.

* + - 1. Interior Finishes for Windows:

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. Finish: Standard, unfinished.
        2. Finish: Optional, primed finish.
        3. Finish: Optional, pre-finished paint finish.

\*\* NOTE TO SPECIFIER \*\* Delete colors not required.

Color: As Selected by Architect

Color: Brilliant White,

Color: Desert Sand.

Color: Ivory.

* + - * 1. Finish: Optional, pre-finished stain finish.

\*\* NOTE TO SPECIFIER \*\* Delete colors not required.

Color: As Selected by Architect.

Color: Cider

Color: Cordovan.

Color: Fruitwood.

Color: Wheat.

Color: Walnut.

* + - * 1. Finish: Optional, pre-finished clear lacquer finish.
      1. Exterior Finishes for Windows:

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. 0.050 thick extruded aluminum cladding with finish in accordance with AAMA 2605.
        2. AAMA 2605 Standard Colors.

Color: As selected by Architect

Color: Brilliant White

Color: Desert Sand

Color: Chestnut Bronze

Color: French Vanilla

Color: Hartford Green

Color: Mesa Red

Color: Arctic Silver

Color: Dark Chocolate

Color: Black Licorice

* + - * 1. AAMA 2605 Optional Colors:

Color: As selected by Architect

Color: Hunter Green

Color: Redwood

Color: Heirloom White

Color: Sage Brown

Color: Smoke

Color: Bone White

Color: Cascade Blue

Color: Dark Buckskin

Color: Ivory

Color: Luxury Bronze

Color: Mocha Cream

Color: Seafoam

Color: Steele Gray

Color: Luxury White

Color: Luxury Champagne

Color: Luxury Cambridge

Color: Black Emerald

Color: Capri Blue

Color: Clover Mist

Color: Light Buckskin

Color: Dark Ivy

Color: Deep Summer

Color: Garnet

Color: Haverstraw

Color: Hudson Blue

Color: Ivy

Color: Liberty Blue

Color: Mosaic Green

Color: Pueblo Tan

Color: Rosewood

Color: Scarlet Haze

Color: Teal

Color: Wedgewood

* + - * 1. Pre-Finished Clad Sash Only Color: As Selected by Architect.
        2. Pre-Finished Clad Sash Only Color: Natural Copper.
        3. Pre-Finished Clad Sash Only Color: Speckled Patina Copper.
        4. Pre-Finished Clad Sash Only Color: Hand Rubbed Copper.
      1. Interior Finishes for Patio Doors:

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. Finish: Standard, unfinished.
        2. Finish: Optional, primed finish.
        3. Finish: Optional, pre-finished paint finish.

\*\* NOTE TO SPECIFIER \*\* Delete colors not required.

Color: As Selected by Architect

Color: Brilliant White,

Color: Desert Sand.

Color: Ivory.

* + - * 1. Finish: Optional, pre-finished stain finish.

\*\* NOTE TO SPECIFIER \*\* Delete colors not required.

Color: As Selected by Architect.

Color: Cider

Color: Cordovan.

Color: Fruitwood.

Color: Wheat.

Color: Walnut.

* + - * 1. Finish: Optional, pre-finished clear lacquer finish.
      1. Exterior Finishes for Patio Doors:

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. AAMA 2605 Standard Colors:

Color: As selected by Architect

Color: Brilliant White

Color: Desert Sand

Color: Chestnut Bronze

Color: French Vanilla

Color: Hartford Green

Color: Mesa Red

Color: Arctic Silver

Color: Dark Chocolate

Color: Black Licorice

* + - * 1. AAMA 2605 Optional Colors:

Color: As selected by Architect.

Color: Hunter Green

Color: Redwood

Color: Bone White

Color: Heirloom White

Color: Sage Brown

Color: Smoke

Color: Cascade Blue

Color: Dark Buckskin

Color: Ivory

Color: Luxury Bronze

Color: Mocha Cream

Color: Sea Foam

Color: Steele Gray

Color: Luxury White

Color: Luxury Champagne

Color: Luxury Cambridge

Color: Black Emerald

Color: Capri Blue

Color: Clover Mist

Color: Light Buckskin

Color: Dark Ivy

Color: Deep Summer

Color: Garnet

Color: Haverstraw

Color: Hudson Blue

Color: Ivy

Color: Liberty Blue

Color: Mosaic Green

Color: Pueblo Tan

Color: Rosewood

Color: Scarlet Haze

Color: Teal

Color: Wedgewood

* + - * 1. Pre-Finished Clad Sash Only Color: As selected by Architect.
        2. Pre-Finished Clad Sash Only Color: Natural Copper.
        3. Pre-Finished Clad Sash Only Color: Speckled Patina Copper.
        4. Pre-Finished Clad Sash Only Color: Hand Rubbed Copper.

\*\* NOTE TO SPECIFIER \*\* Delete if not required. Also delete options in Part 1 and 3 of this section corresponding to products selected.

* 1. ALUMINUM CLAD WOOD WINDOW ASSEMBLIES
     1. Basis of Design: Custom Series Clad wood window assemblies as manufactured by JELD-WEN, Inc.

\*\* NOTE TO SPECIFIER \*\* Delete options for window type not required. Also delete options in the following paragraphs corresponding to window type selection, as described in the notes to specifier.

* + - 1. Window Type: Awning windows.
      2. Window Type: Casement windows.
      3. Window Type: Double-hung windows.
      4. Window Type: Horizontal sliding windows.
      5. Window Type: Radius and geometric windows.
      6. Construction: Direct-set, sashless with glazing direct set to frame.
      7. Construction: In-sash, sash fixed or operable with hardware and accessories as specified herein, scheduled and indicated on Drawings.
    1. Window Fabrication:

\*\* NOTE TO SPECIFIER \*\* Delete options for fabrication corresponding to window types not required.

* + - 1. Window Type: Awning windows.
         1. Frame: Corner joints mechanically fastened.
         2. Sash: Corner joints mortised and tenoned.
         3. Glass: Mounted using silicone glazing compound on exterior and acrylic sealant on interior, secured with interior applied profiled wood stops.

Glazing Bead: Traditional Beveled.

Glazing Bead: Contemporary Squared.

* + - 1. Window Type: Casement windows.
         1. Frame: Corner joints mechanically fastened.
         2. Sash: Corner joints mortised and tenoned.
         3. Glass: Mounted using silicone glazing compound on exterior and acrylic sealant on interior, secured with interior applied profiled wood stops.

Glazing Bead: Traditional Beveled.

Glazing Bead: Contemporary Squared.

* + - 1. Window Type: Double-hung windows.
         1. Frame: Corner joints mechanically fastened.
         2. Sash: Corner joints mortised and tenoned, glued and nailed from interior.
         3. Glass: Mounted using silicone glazing compound on exterior, secured with interior applied profiled wood stops.

Glazing Bead: Traditional Beveled.

Glazing Bead: Contemporary Squared.

Glazing Bead: Flush

* + - 1. Window Type: Horizontal sliding windows.
         1. Frame: Corner joints mechanically fastened.
         2. Sash: Corner joints mortised and tenoned, glued and nailed from interior.
         3. Glass: Mounted using silicone glazing compound on exterior, secured with interior applied profiled wood stops.

Glazing Bead: Traditional Beveled.

Glazing Bead: Contemporary Squared.

Glazing Bead: Flush

* + - 1. Window Type: Radius and geometric direct set windows.
         1. Frame: Corner joints are mechanically fastened.
         2. Glass: Mounted using silicone glazing compound on exterior then secured with interior applied profiled wood stops.

Glazing Bead: None

* + - 1. Window Type: Radius and geometric in-sash windows.
         1. Frame: Corner joints mechanically fastened.
         2. Sash: Standard size units with corner joints mortised and tenoned.
         3. Sash: Custom size units with mitered corner joints.
         4. Glass: Mounted using silicone glazing compound on exterior and acrylic sealant on interior, secured with interior applied profiled wood stops.

Glazing Bead: Traditional Beveled.

Glazing Bead: Contemporary Squared.

* + 1. Frames:
       1. Material: Select kiln-dried pine AuraLast treated wood.
       2. Cladding: 0.050 inch (1.27mm) extruded aluminum.
       3. Jamb Width: Casement, Awning and Geometric units: 3-3/8 inches (85.7 mm).
       4. Jamb Width: Double-Hung and Gliding units: 4-9/16 inches (116 mm).
    2. Sashes: Select kiln-dried pine AuraLast treated wood.
       1. Cladding: 0.019 inch (0.438mm) roll-formed aluminum.

\*\* NOTE TO SPECIFIER \*\* Delete sash thicknesses for units not project specific.

* + - 1. Sash Thickness for Awning Windows: 2-3/32 inches (53.2 mm).
      2. Sash Thickness for Casement Windows: 2-3/32 inches (53.2 mm).
      3. Sash Thickness for Double-Hung Windows: 1-7/16 inches (36.5 mm).
      4. Sash Thickness for Horizontal Sliding Windows: 1-7/16 inches (36.5 mm).
      5. Sash Thickness for Radius and Geometric In-Sash Windows: 2-3/32 inches (53.2 mm).
    1. Exterior Trim:

\*\* NOTE TO SPECIFIER \*\* Select casing options when construction conditions or aesthetics require inclusion. Utilize the following trims for indicated applications - Brickmould in conjunction with masonry veneers, Flat Casing for narrow, Adams Casing for medium, and Manchester casing for widest aesthetic conditions. Delete casing not required.

* + - 1. As selected from Manufacturer's standard offering
      2. Casing: Standard, Extruded Aluminum Brickmould
      3. Casing: Optional, 3-1/2 inches (88.9 mm) Flat Casing.
      4. Casing: Optional, Adams Casing.
      5. Casing: Optional, Manchester Casing.
      6. Casing: Optional, Pendleton Casing.

\*\* NOTE TO SPECIFIER \*\* Delete options for sill nosings not required.

* + - 1. Sills: Standard, sill nose
      2. Sills: Optional, extended sill nose
    1. Factory Applied Extension Jambs: Provide at all four sides of frame interior.

\*\* NOTE TO SPECIFIER \*\* Delete configuration not required.

* + - 1. For Awning Windows: 4/4 for up to 7-15/16 inch (202 mm).
      2. For Awning Windows: 5/4 up to 12-1/2 inch (317 mm).
      3. For Awning Windows: 5/4 to 4/4 Reveal for up to 9-1/8 inch (232 mm).
      4. For Casement Windows: 4/4 up to 7-15/16 inch (202 mm).
      5. For Casement Windows: 5/4 for up to 12-1/2 inch (317 mm).
      6. For Casement Windows: 5/4 to 4/4 Reveal for up to 9-1/8 inch (232 mm)
      7. For Double-Hung Windows: 4/4 up to 9-1/8 inch (231.8 mm).
      8. For Horizontal Sliding Windows: 4/4 up to 9-1/8 inches (231.8 mm).
      9. For Radius and Geometric Windows: 4/4 for up to 7-15/16 inch (202 mm).
      10. For Radius and Geometric Windows: 5/4 up to 12-1/2 inch (317 mm).
      11. For Radius and Geometric Windows: 5/4 to 4/4 Reveal for up to 9-1/8 inch (232 mm).
    1. Weatherstripping:

\*\* NOTE TO SPECIFIER \*\* Delete options for weatherstripping for window styles not project specific.

* + - 1. Awning Windows: Foam lined bulb seal between sash interior and frame with secondary leaf seal between sash edge and frame.
      2. Casement Windows: Foam lined bulb seal between sash interior and frame with secondary leaf seal between sash edge and frame.
      3. Double-Hung Windows: Concealed non-compression jamb liner forming compression seal with dual durometer bulb seal against sash stiles and between top and bottom rails of sash and frame, bulb seal between top rail and header and between sash meeting rails.
      4. Horizontal Sliding Windows: Compression bulb seal at sash and foam filled vinyl at exterior sides and head jamb.
      5. Radius and Geometric Windows: Foam lined bulb seal between sash interior and frame with secondary leaf seal between sash edge and frame.

\*\* NOTE TO SPECIFIER \*\* In applications where both operable and non-operable casement or awning windows are desired, to maintain the aesthetic profile specify "stationary" awning or casement units.

* + 1. Window Hardware:

\*\* NOTE TO SPECIFIER \*\* Specifier needs to carefully select desired options, many have nested options throughout. Due to corrosive nature of coastal environments, SPECIFY stainless steel hardware (coastal option) for installations located within 2 miles of the coast.

* + - 1. Awning Windows:
         1. Hinges: Standard, corrosion resistant steel.
         2. Hinges: Optional, Stainless steel.
         3. Operator: Standard, lever lock.
         4. Operator: Steel roto gear with heavy gauge scissor operating arm.
         5. Operator: Stainless steel roto gear with heavy gauge scissor operating arm.
         6. Locks: Concealed.

\*\* NOTE TO SPECIFIER \*\* Delete handle profiles not required.

* + - * 1. Handle Profile: Standard handle, manual folding crank.
        2. Handle Profile: Optional, round handle.
        3. Handle Profile: None

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. Finish: As Selected by Architect.
        2. Finish: Standard, Chestnut Bronze finish.
        3. Finish: Standard, Desert Sand finish.
        4. Finish: Standard, White finish.
        5. Finish: Optional, Antique Brass finish.
        6. Finish: Optional, Brushed Chrome finish.
        7. Finish: Optional, Satin Nickel finish.
        8. Finish: Optional, Polished Brass finish.
        9. Finish: Optional, Polished Chrome finish.
        10. Finish: Optional, Oil-Rubbed Bronze finish.
        11. Finish: Optional, Black Powder Coat finish.
      1. Casement Windows:
         1. Hinges: Standard, Stainless steel.
         2. Operator: Hardened stainless steel worm gears and dual action heavy gauge stainless steel operating arm.
         3. Locks: Concealed.

\*\* NOTE TO SPECIFIER \*\* Delete handle profiles not required.

* + - * 1. Handle Profile: Standard handle, manual folding crank.
        2. Handle Profile: Optional handle manual crank, round handle.
        3. Handle Profile: No Handle

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. Finish: As Selected by Architect.
        2. Finish: Standard, Chestnut Bronze finish.
        3. Finish: Standard, Desert Sand finish.
        4. Finish: Standard, White finish.
        5. Finish: Optional, Antique Brass finish.
        6. Finish: Optional, Brushed Chrome finish.
        7. Finish: Optional, Satin Nickel finish.
        8. Finish: Optional, Polished Brass finish.
        9. Finish: Optional, Polished Chrome finish.
        10. Finish: Optional, Oil-Rubbed Bronze finish.
        11. Finish: Optional, Black Powder Coat finish.
      1. Double-Hung Windows:
         1. Balances: Concealed block and tackle.
         2. Sash Retainers: Recessed top sash, concealed bottom sash

\*\* NOTE TO SPECIFIER \*\* Delete locks not required.

* + - * 1. Locks: Standard, Cam action. (One lock controls bottom sash retainers)
        2. Locks: Optional, Deluxe cam lock with concealed tilt latch
        3. Locks: Optional, Keyed cam lock
        4. Locks: Interior sash lift.

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. Finish: As Selected by Architect.
        2. Finish: Standard, Chestnut Bronze finish.
        3. Finish: Standard, Desert Sand finish.
        4. Finish: Standard, White finish.
        5. Finish: Optional, Antique Brass finish.
        6. Finish: Optional, Brushed Chrome finish.
        7. Finish: Optional, Satin Nickel finish.
        8. Finish: Optional, Polished Brass finish.
        9. Finish: Optional, Polished Chrome finish.
        10. Finish: Optional, Oil-Rubbed Bronze finish.
        11. Finish: Optional, Black Powder Coat finish.
      1. Horizontal Sliding Windows:
         1. Sliding System: Vinyl track and sash reduced friction buttons.
         2. Sash Pull: Surface mounted.
         3. Sash Lock: Surface mounted, cam action.
         4. Sash Lock: Surface Mounted, keyed cam action.

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. Finish: As Selected by Architect.
        2. Finish: Standard, Chestnut Bronze finish.
        3. Finish: Standard, Desert Sand finish.
        4. Finish: Standard, White finish.
        5. Finish: Optional, Antique Brass finish.
        6. Finish: Optional, Brushed Chrome finish.
        7. Finish: Optional, Satin Nickel finish.
        8. Finish: Optional, Polished Brass finish.
        9. Finish: Optional, Polished Chrome finish.
        10. Finish: Optional, Oil-Rubbed Bronze finish.
        11. Finish: Optional, Black Powder Coat finish.
      1. Radius and Geometric In-Sash Windows
         1. Hinges: Standard, Stainless steel.
         2. Operating Sash: Stainless steel leaf.
         3. Operator: Hardened steel worm gears and heavy gauge steel arm.

For Operable Octagon-Shaped Window: Single arm pull scissor with roto handle.

* + - * 1. Locks: Concealed.

\*\* NOTE TO SPECIFIER \*\* Delete handle profiles not required.

* + - * 1. Handle Profile: Standard handle, manual folding crank.
        2. Handle Profile: Optional, manual crank, round handle.
        3. Handle Profile: Optional, No Handle.

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. Finish: As selected by Architect.
        2. Finish: Standard, Chestnut Bronze finish.
        3. Finish: Standard, Desert Sand finish.
        4. Finish: Standard, White finish.
        5. Finish: Optional, Antique Brass finish.
        6. Finish: Optional, Brushed Chrome finish.
        7. Finish: Optional, Satin Nickel finish.
        8. Finish: Optional, Polished Brass finish.
        9. Finish: Optional, Polished Chrome finish.
        10. Finish: Optional, Oil-Rubbed Bronze finish.
        11. Finish: Optional, Black Powder Coat finish.
      1. Radius and Geometric Direct Set Windows: None

\*\* NOTE TO SPECIFIER \*\* Various types of glass are available. The most common types have been included here. Contact a JELD-WEN representative when other options are required. Reflective glare from glazing has been found to affect the beach nesting of turtles in coastal environments. Some governing authorities require the use of turtle glass which uses tinted glass to achieve an industry-approved, inside-to-outside visible light transmittance value of 45 percent or less (visible spectrum = 400 to 700 nanometers). Verify the requirements for turtle glass with local authorities in coastal environments. Laminated glass uses a vinyl interlayer to provide added security against impact, comfort with higher STC ratings.

* + 1. Glazing for Windows:

\*\* NOTE TO SPECIFIER \*\* Delete options for strength not required.

* + - 1. Strength: Standard, tempered glass.
      2. Strength: Optional, laminated glass.

\*\* NOTE TO SPECIFIER \*\* Delete options for glazing type and associated subparagraphs not required.

* + - 1. Glazing Type: Insulated glass.
         1. Description: Two panes of glass utilizing continuous roll formed stainless steel spacer and dual seal sealants.
         2. Overall Nominal Thickness: Awning, Casement, Radius and Geometric In-Sash: 15/16 inch (23.8 mm).
         3. Overall Nominal Thickness: Double-Hung, Horizontal Sliding and Geometric and Radius Direct-Set: 3/4 inch (19 mm).

\*\*\* NOTE TO SPECIFIER \*\* Delete type not required.

* + - * 1. Glass Coating: Standard, Low-E 366.
        2. Glass Type: Optional, Low-E.
        3. Glass Coating: Optional, Low-E 180.
        4. Glass Coating: Optional, Low-E EC.
        5. Glass Coating: Optional, Low-E 366 EC.
        6. Glass Protection: Plastic preserve film on interior and exterior of glass.

\*\* NOTE TO SPECIFIER \*\* Argon option is only available with Low-E coating and cannot be used with capillary tubes. Delete air space gas not required. Installations at elevations above 4,000 feet Mean Sea Level require glazing known as High Altitude glazing with capillary tubes to equalize environmental stress.

* + - * 1. Air Space: Standard, Argon-filled airspace.
        2. Air Space: Optional, air-filled airspace with capillary tubes.
      1. Glazing Type: Triple Glazing.
         1. Overall Nominal Thickness: 1/8 inch (3 mm).
         2. Overall Nominal Thickness: 3/16 inch (7 mm).

\*\*\* NOTE TO SPECIFIER \*\* Delete type not required.

* + - * 1. Glass Coating: Standard, Low-E.
        2. Glass Coating: Optional, Low-E Obscure.
        3. Glass Coating: Optional, Low-E Rain.
        4. Glass Coating: Optional, Low-E Glue Chip.
        5. Glass Coating: Optional, Low-E Seedy Reamy.

\*\* NOTE TO SPECIFIER \*\* Exterior insect screens are available for double-hung and horizontal sliding windows. Delete if not required.

* + 1. Exterior Insect Screens:
       1. Material: Charcoal fiberglass screen cloth (18 by 16 mesh) set in painted roll formed aluminum frame.

\*\* NOTE TO SPECIFIER \*\* Delete frame colors not required.

* + - 1. Frame Color: As selected by Architect.
      2. Frame Color: Black Licorice.
      3. Frame Color: Brilliant White.
      4. Frame Color: Chestnut Bronze.
      5. Frame Color: Desert Sand.
      6. Frame Color: French Vanilla.
      7. Frame Color: Hartford Green.
      8. Frame Color: Heirloom White.
      9. Frame Color: Hunter Green.
      10. Frame Color: Mesa Red.
      11. Frame Color: Redwood.
      12. Frame Color: Sage Brown.
      13. Frame Color: Smoke.
      14. Frame Color: Matched Custom Color.

\*\* NOTE TO SPECIFIER \*\* Interior insect screens are available for awning, casement and radius and geometric windows. Delete if not required.

* + 1. Interior Insect Screens:

\*\* NOTE TO SPECIFIER \*\* Delete option for material not required.

* + - 1. Material: Charcoal fiberglass screen cloth (18 by 16 mesh) set in painted roll formed aluminum frame.

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. Finish: As selected by Architect.
        2. Finish: Brilliant White
        3. Finish: Desert Sand.
        4. Finish: Chestnut Bronze
        5. Finish: Arctic Silver
        6. Finish: Black Licorice
      1. Material: Charcoal fiberglass screen cloth (18 by 16 mesh) set in wood veneer roll formed aluminum frame.

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. Finish: As selected by Architect.
        2. Finish: Western Pine
        3. Finish: Mahogany.
        4. Finish: Vertical Grain Douglas Fir.
      1. Material: Charcoal fiberglass screen cloth (18 by 16 mesh) set in painted roll formed aluminum frame - enclosed in solid wood frame (swinging screens). Push-out casement only.

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. Finish: As selected by Architect.
        2. Finish: Western Pine.
        3. Finish: Mahogany Pine.
        4. Finish: Vertical Grain Douglas Fir.

\*\* NOTE TO SPECIFIER \*\* SDL Grilles are not available for textured glass. Select grilles, profiles and widths based on the desired aesthetic appearance of the window. Delete if not required.

* + 1. Grilles:

\*\* NOTE TO SPECIFIER \*\* Delete types not required.

* + - 1. Type: Simulated Divided Lites (SDL).
         1. Exterior Muntins:

Material: Extruded aluminum permanently applied to exterior of insulating glass unit.

Profiles: Beaded stop profiles.

\*\* NOTE TO SPECIFIER \*\* Delete widths not required.

Profile Width: 5/8 inch (15.9 mm).

Profile Width: 7/8 inch (22 mm).

Profile Width: 1-1/8 inches (28.5 mm).

Profile Width: 1-3/8 inches (34.9 mm).

Profile Width: 2-5/16 inches (59 mm) for simulated double-hung checkrail.

Profiles: Putty profiles.

\*\* NOTE TO SPECIFIER \*\* Delete widths not required.

Profile Width: 5/8 inch (15.9 mm).

Profile Width: 7/8 inch (22 mm).

Profile Width: 1-1/8 inches (28.5 mm).

Profile Width: 1 inch (25.4 mm) copper.

Profile Width: 1-3/8 inches (34.9 mm).

Profile Width: 2-5/16 inches (58.7 mm)

Pattern: As scheduled and indicated on Drawings.

Finish:

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

Color: As Selected by Architect:

\*\* NOTE TO SPECIFIER \*\* Internal shadow bar will give the appearance of a true divided lite and is standard on all SDL units. Internal shadow bar may be deleted at the design professional's option. Delete internal shadow bar if not required.

* + - * 1. Internal Shadow Bar:

Standard: Light Bronze finish.

Optional: Silver finish.

\*\* NOTE TO SPECIFIER \*\* Delete types not required.

* + - * 1. Interior Spacer Bars:

Standard: Steel

Optional: Black

Optional: Gray

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - * 1. Interior Muntins:

Material: Clear pine permanently bonded to interior of insulating glass unit.

Material: Optional Alder permanently bonded to interior of insulating glass unit.

Material: Optional Fir permanently bonded to interior of insulating glass unit.

Material: Optional Mahogany permanently bonded to interior of insulating glass unit.

Profile: Match exterior muntin.

* + - 1. Type: Full Surround Wood Grilles.
         1. Material: Unfinished clear pine.
         2. Profile: Modified OGEE.
         3. Pattern: As scheduled and indicated on Drawings.
         4. Size: 7/8 inch (22 mm).

\*\* NOTE TO SPECIFIER \*\* Delete sizes not required.

* + - * 1. Size: 1-1/8 inches (28.5 mm).
        2. Size: 1-3/8 inches (34.9 mm).
      1. Type: Grilles Between the Glass (GBG).
         1. Material: Made of roll formed aluminum suspended within the air cavity.

\*\* NOTE TO SPECIFIER \*\* Utilize flat for a narrow aesthetic and a contour profile for a wider aesthetic. Delete profile not required.

* + - * 1. Profile: Flat.

Profile Width: Flat profile 5/8 inch (15.9 mm).

* + - * 1. Profile: Contour.

\*\* NOTE TO SPECIFIER \*\* Delete width not required.

Profile Width: Contour profile, 23/32 inch (18.25 mm).

Profile Width: Contour profile, 1 inch (25.4 mm).

* + - * 1. Pattern: As scheduled and indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete finish not required.

* + - * 1. Finish: As selected by Architect.
        2. Finish: Brilliant White.
        3. Finish: Chestnut Brown.
        4. Finish: Desert Sand.
        5. Finish: French Vanilla.
        6. Finish: Hartford Green.
        7. Finish: Mesa Red.
  1. WOOD PATIO DOOR ASSEMBLIES
     1. Basis of Design: Custom Series aluminum-clad-wood patio door assemblies as manufactured by JELD-WEN, Inc.

\*\* NOTE TO SPECIFIER \*\* Delete options for patio door type not required. Also delete options in the following paragraphs corresponding to patio door type selection, as described in the notes to specifier.

* + - 1. Patio Door Type: In-swing patio doors, wood construction
      2. Patio Door Type: Out-swing patio doors, wood construction.
      3. Patio Door Type: Sliding patio doors, wood construction.
    1. Patio Door Fabrication:
       1. Frame: Top and bottom rails are solid pine veneer laminated to kiln dried edge-and-end-glued core. Stiles are same veneer laminated to Timberstrand core.
       2. Glass: Mounted using silicone glazing compound on exterior and acrylic sealant on interior.
       3. Cladding: Aluminum corners are jointed and sealed.
    2. Frames:
       1. Material: Select kiln-dried pine AuraLast treated wood.
       2. Jamb Width: 4-9/16 inches (116 mm).
       3. Cladding: 0.055 inch (1.27 mm) extruded aluminum
       4. Radius Frames: 90 inch (2286 mm).
       5. Radius Frames: 31-5/16 inch (795.3 mm).
       6. Radius Frames: 37-5/16 inch (948.8 mm).

\*\* NOTE TO SPECIFIER \*\* Delete if no swinging door panels.

* + 1. Swinging Door Panels:
       1. Material: Select kiln-dried pine AuraLast treated wood and Timberstrand engineered wood substrate.
       2. Cladding: 0.024 inch (0.61 mm)
       3. Thickness: 1-23/32 inch (43.7 mm).
       4. Stiles and Rail:
          1. 4-5/8 inch (117.5 mm) top rail and stiles, 6-5/8 inch (168.3 mm) bottom rails.

\*\* NOTE TO SPECIFIER \*\* Delete if no sliding door panels.

* + 1. Sliding Door Panels:
       1. Material: Select kiln-dried pine AuraLast treated wood and Timberstrand engineered wood substrate.
       2. Cladding: 0.055 inch (1.4 mm) extruded aluminum
       3. Thickness: 1-23/32 inch (43.7 mm).
       4. Stiles and Rail:

\*\* NOTE TO SPECIFIER \*\* Delete type not required.

* + - * 1. Narrow: 2-3/4 inch (69.6 mm) stiles and rails.
        2. Wide: 4-5/8 inch (117.5 mm) top rail and stiles, 6-5/8 inch (168.3 mm) bottom rails.
    1. Exterior Trim:
       1. As selected from Manufacturer's standard offering.

\*\* NOTE TO SPECIFIER \*\* Select optional casing when construction conditions or aesthetics require inclusion. Utilize the following trims for indicated applications: Brickmould in conjunction with masonry veneers, Flat Casings for narrow, and Adams Casing for wider aesthetic conditions. Delete casing not required.

* + - 1. Casing: Standard, Extruded Aluminum Brickmould
      2. Casing: Optional, 3-1/2 inches (88.9 mm) Flat Casing.
      3. Casing: Optional, Adams Casing.
      4. Casing: Optional, Manchester Casing.
      5. Casing: Optional, Pendleton Casing.
    1. Extension Jambs: Factory applied on all four sides of frame interior, in wall depths up to 6-9/16 inch (166.7 mm).
    2. Weatherstripping:
       1. Sliding Patio Door:
          1. Foam filled vinyl wrapped strips at head and side jambs, polypropylene pile-sealing strip at bottom of operating panel, vinyl interlocks and compressible foam filled bulbs at meeting stiles.
       2. Out-Swing Patio Door:
          1. Continuous dual foam filled bulb seal compressed between exterior of panel and all four sides of frame.
       3. In-Swing Patio Door:
          1. Continuous dual foam filled bulb seal compressed between exterior of panel and all three sides of frame.
    3. Hardware:

\*\* NOTE TO SPECIFIER \*\* Delete options for sliding doors not required.

* + - 1. Sliding Patio Doors:
         1. Sliding System: Steel ball bearing tandem rollers in heavy duty housing with cam type slip proof height adjustment.

\*\* NOTE TO SPECIFIER \*\* Delete options for locks not required.

* + - * 1. Locks: Standard, single point mortise.
        2. Locks: Optional, automatically activated multipoint system.
        3. Handle Set: Standard, Premium Handle
        4. Handle Set: Optional, Contemporary Handle
        5. Handle Set: Optional, Legacy Handle
        6. Handle Set: Optional, No Handle

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. Finish: As selected by Architect.
        2. Finish: As selected from manufacturer's standard offering.

\*\* NOTE TO SPECIFIER \*\* Delete options for sills not required.

* + - * 1. Sill: Standard, Tan colored pultruded fiberglass with solid oak interior trim and stainless steel track cap.
        2. Sill: Optional, Dark Bronze colored pultruded fiberglass with solid oak interior trim and stainless steel track cap.
      1. Out-Swing Doors:

\*\* NOTE TO SPECIFIER \*\* Delete hinges not required.

* + - * 1. Hinges: Standard, Optional, adjustable 4x4 heavy gauge solid brass with stainless steel pins.
        2. Hinges: Optional, Ball bearing hinge.
        3. Hinges: Optional, 4 1/2 inch ball bearing hinge with square corners.

\*\* NOTE TO SPECIFIER \*\* Delete locks not required.

* + - * 1. Locks: Standard, multi-point mortise with lever handle and thumb turn dead bolt.
        2. Locks: Optional, manually activated multipoint system.

\*\* NOTE TO SPECIFIER \*\* Delete handle sets not required.

* + - * 1. Handle Set: Standard, Traditional Handle.
        2. Handle Set: Optional, Contemporary Handle.
        3. Handle Set: Optional, Rustic Handle.
        4. Handle Set: Optional, No Handle
        5. Finish: As selected by Architect.
        6. Finish: As selected from manufacturer's standard offering.
        7. Sill: Dark bronze anodized aluminum with interior oak trim and vinyl fin-and-bulb door sweep.

Compliance: Optional, 1/2 inch (12.7 mm) maximum height to meet ADA requirements.

* + - 1. In-Swing Doors:

\*\* NOTE TO SPECIFIER \*\* Delete hinges not required.

* + - * 1. Hinges: Standard, Optional, adjustable 4x4 heavy gauge solid brass with stainless steel pins.
        2. Hinges: Optional, Ball bearing hinge.
        3. Hinges: Optional, 4 1/2 inch ball bearing hinge with square corners.

\*\* NOTE TO SPECIFIER \*\* Delete locks not required.

* + - * 1. Locks: Standard, multi-point mortise with lever handle and thumb turn dead bolt.
        2. Locks: Optional, manually activated multipoint system.

\*\* NOTE TO SPECIFIER \*\* Delete handle sets not required.

* + - * 1. Handle Set: Standard, Traditional Handle.
        2. Handle Set: Optional, Contemporary Handle.
        3. Handle Set: Optional, Rustic Handle.
        4. Handle Set: Optional, No Handle

\*\* NOTE TO SPECIFIER \*\* Delete finishes not required.

* + - * 1. Finish: As selected by Architect.
        2. Finish: As selected from manufacturer's standard offering.
        3. Sill: Dark bronze anodized aluminum with interior oak trim and adjustable oak threshold in combination with vinyl fin-and-bulb door sweep.

Compliance: Optional, 1/2 inch (12.7 mm) maximum height to meet ADA requirements.

\*\* NOTE TO SPECIFIER \*\* Various types of glass are available. The most common types have been included here. Contact a JELD-WEN representative when other options are required. Reflective glare from glazing has been found to affect the beach nesting of turtles in coastal environments. Some governing authorities require the use of turtle glass which uses tinted glass to achieve an industry-approved, inside-to-outside visible light transmittance value of 45 percent or less (visible spectrum = 400 to 700 nanometers). Verify the requirements for turtle glass with local authorities in coastal environments.

* + 1. Glazing for Patio Doors:
       1. Strength: Standard, tempered glass.
       2. Strength: Optional, laminated glass.

\*\* NOTE TO SPECIFIER \*\* Delete options for glazing type and associated subparagraphs not required.

* + - 1. Glazing Type: Insulated glass.
         1. Description: Two panes of glass utilizing continuous roll formed stainless steel spacer and dual seal sealants.
         2. Overall Nominal Thickness: 3/4 inch (19 mm).

\*\* NOTE TO SPECIFIER \*\* Delete type not required.

* + - * 1. Glass Coating: Standard, Low-E 366 Tempered.
        2. Glass Coating: Optional, Low-E Tempered.
        3. Glass Coating: Optional, Low-E 180 Tempered.
        4. Glass Coating: Optional, Low-E EC Tempered.
        5. Glass Coating: Optional, Low-E EC 366 Tempered.
        6. Glass Coating: Optional, As selected by Architect.
        7. Glass Protection: Plastic preserve film on interior and exterior of glass.

\*\* NOTE TO SPECIFIER \*\* Argon option is only available with Low-E coating and cannot be used with capillary tubes. Delete air space gas not required. Installations at elevations above 4,000 feet Mean Sea Level require glazing known as High Altitude glazing with capillary tubes to equalize environmental stress.

* + - * 1. Air Space: Standard, Argon-filled airspace.
        2. Air Space: Optional, air-filled airspace with capillary tubes.
    1. Exterior Sliding Insect Screens: (Optional swinging screens for inswing doors)
       1. Material: Charcoal fiberglass mesh (18 by 16 mesh) set in extruded aluminum frame.
          1. Frame Color: As selected by Architect.

\*\* NOTE TO SPECIFIER \*\* Delete frame color not required.

* + - * 1. Frame Color: Black Licorice.
        2. Frame Color: Brilliant White.
        3. Frame Color: Chestnut Bronze.
        4. Frame Color: Desert Sand.
        5. Frame Color: French Vanilla.
        6. Frame Color: Hartford Green.
        7. Frame Color: Heirloom White.
        8. Frame Color: Hunter Green.
        9. Frame Color: Mesa Red.
        10. Frame Color: Redwood.
        11. Frame Color: Sage Brown.
        12. Frame Color: Smoke.
        13. Frame Color: Matched Custom Color.
    1. Grilles:

\*\* NOTE TO SPECIFIER \*\* Delete types not required.

* + - 1. Type: Simulated Divided Lites (SDL).
         1. Exterior Muntins:

\*\* NOTE TO SPECIFIER \*\* Delete materials not required.

Material: Extruded aluminum permanently applied to exterior of insulating glass unit.

Profiles: Beaded stop profiles.

\*\* NOTE TO SPECIFIER \*\* Delete widths not required.

Profile Width: 5/8 inch (15.9 mm).

Profile Width: 7/8 inch (22 mm).

Profile Width: 1-1/8 inches (28.5 mm).

Profile Width: 1-3/8 inches (34.9 mm).

Profiles: Putty profiles.

\*\* NOTE TO SPECIFIER \*\* Delete width not required.

Profile Width: 5/8 inch (15.9 mm).

Profile Width: 7/8 inch (22 mm).

Profile Width: 1-1/8 inches (28.5 mm).

Profile Width: 1-3/8 inches (34.9 mm).

Profile Width: 2-5/16 inches (58.7 mm)

Pattern: As scheduled and indicated on Drawings.

Finish:

As selected by Architect.

\*\* NOTE TO SPECIFIER \*\* Internal shadow bar will give the appearance of a true divided lite and is standard on all SDL units. Internal shadow bar may be deleted at the design professional's option. Delete internal shadow bar if not required.

* + - * 1. Internal Shadow Bar:

Standard, Light Bronze finish.

Optional, Silver finish.

\*\* NOTE TO SPECIFIER \*\* Delete types not required.

* + - * 1. Interior Spacer Bars:

Standard: Steel

Optional: Black

Optional: Gray

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - * 1. Interior Muntins:

Material: Clear pine permanently bonded to interior of insulating glass unit.

Profile: Match exterior muntin.

* + - 1. Type: Full Surround Wood Grilles.
         1. Material: Unfinished clear pine.
         2. Profile: Rectangular.
         3. Pattern: As scheduled and indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete widths not required.

* + - * 1. Size: 7/8 inch (22 mm).
        2. Size: 1-1/8 inches (28.5 mm).
        3. Size: 1-3/8 inches (34.9 mm).
      1. Type: Grilles Between the Glass (GBG).
         1. Material: Made of roll formed aluminum suspended within the air cavity.

\*\* NOTE TO SPECIFIER \*\* Utilize flat for a narrow aesthetic and a contour profile for a wider aesthetic. Delete profile not required.

* + - * 1. Profile: Flat.

Profile Width: Flat profile 5/8 inch (15.9 mm).

* + - * 1. Profile: Contour.

\*\* NOTE TO SPECIFIER \*\* Delete width not required.

Profile Width: Contour profile, 23/32 inch (18.25 mm).

Profile Width: Contour profile, 1 inch (25.4 mm).

* + - * 1. Pattern: As scheduled and indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete finish not required.

* + - * 1. Finish: As selected by Architect:
        2. Finish: Brilliant White.
        3. Finish: Chestnut Brown.
        4. Finish: Desert Sand.
        5. Finish: French Vanilla.
        6. Finish: Hartford Green.
        7. Finish: Mesa Red.

1. EXECUTION
   1. EXAMINATION AND PREPARATION
      1. Inspect and prepare openings and substrates using the methods recommended by the manufacturer for achieving best result for the substrates under project conditions.
         1. Inspect assembly components prior to installation.
         2. Verify rough opening conditions are within recommended tolerances.
         3. Form sheet metal sill pan in accordance with manufacturer's recommendations.
         4. Prepare assembly components for installation in accordance with manufacturer's recommendations.
      2. Do not proceed with installation until openings and substrates have been prepared using the methods recommended by the manufacturer and deviations from manufacturer's recommended tolerances are corrected. Commencement of installation constitutes acceptance of conditions.
      3. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
   2. INSTALLATION
      1. Install assemblies in accordance with manufacturer's installation guidelines and recommendations including the following.

\*\* NOTE TO SPECIFIER \*\* The following paragraph is for use with window units with nailing fins. Delete if not required.

* + 1. Installation of Windows With Nailing Fins: Insert windows into rough opening.
       1. Shim side jambs straight.
       2. Inspect window for square, level and plumb.
       3. Fasten window through nailing fins around entire window.
       4. Test and adjust for smooth operation of window.
       5. Set all nails below wood surface.

\*\* NOTE TO SPECIFIER \*\* The following paragraph is for use with patio door units with nailing fins. Delete if not required.

* + 1. Installation of Patio Doors With Nailing Fins: Insert patio doors into rough opening.
       1. Shim side jambs straight.
       2. Inspect patio door for square, level and plumb.
       3. Fasten patio door through nailing fins around entire patio door.
       4. Test and adjust for smooth operation of patio door.
  1. FIELD QUALITY CONTROL
     1. Manufacturers' Field Services: Perform field inspections as recommended by manufacturer.
  2. CLEANING AND PROTECTION
     1. Clean the exterior surface and glass with mild soap and water.
     2. Protect installed windows from damage.
     3. Remove and dispose of protective film from glass; touch-up, repair or replace damaged components and assemblies before Substantial Completion.

END OF SECTION