SECTION 08 52 13

METAL-CLAD WOOD WINDOWS AND PATIO DOORS

(Tradition Plus 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.; metal-clad wood windows and patio doors.
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This section is based on the products of JELD-WEN, Inc., which is located at:
440 South Church Street, Suite 400
Charlotte, NC 28202
Toll Free Tel: 800-535-3936
Tel: 541-850-2606
Fax: 541-851-4333
Email: [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(08556jwi):%20%20&mf=)
Web: <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, wood composite and fiberglass exterior doors.

1. GENERAL
	1. SECTION INCLUDES

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

* + 1. Metal-Clad Wood Windows and Patio Doors: (Tradition Plus Series)
			1. Casement windows.
			2. Double-hung windows.
			3. Horizontal sliding windows.
			4. Radius and geometric windows.
			5. In-swing patio doors.
			6. Out-swing patio doors.
			7. 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. American Architectural Manufacturer Association (AAMA):
			1. AAMA 1304: Voluntary Specification for Forced-Entry Resistance of Side-Hinged Door Systems.
			2. AAMA 2603: Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings an Aluminum Extrusions and Panels.
			3. ANSI/AAMA/NWWDA 101/I.S.2 /NAFS - Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.
		2. ASTM International (ASTM):

\*\* NOTE TO SPECIFIER \*\* In applications where hurricane resistance is not required, Delete ASTM E 1886 and E 1996 references.

* + - 1. ASTM E 283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
			2. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference
		1. National Fenestration Rating Council (NFRC):
			1. NFRC 100 - Procedure for Determining Fenestration Thermal Properties.
			2. NFRC 200 - Solar Heat Gain Coefficient and Visible Transmittance.
		2. 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.
		3. Quality Assurance Submittals:

\*\* 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. Design Data, Test Reports: Provide manufacturer test reports indicating product compliance with indicated requirements.
			2. WDMA Hallmark certification.
		1. 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. Rework 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 Substantial Completion for the time periods indicated below:

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

* + - 1. Patio Door Units: 20 years.
			2. Window Units: 20 years.
			3. Clad Finishes: 10 years against peeling, checking, cracking caulk or color change.

\*\* 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 options for products not required.

* + - 1. Glazing:
				1. Insulated Glass: 20 years against seal breakage.
				2. Specialty Glazing: 5 years against delamination.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: JELD-WEN, Inc.; 440 South Church Street, Suite 400, Charlotte, NC 28202; Toll Free Tel: 800-535-3936; Tel: 541-850-2606; Fax: 541-851-4333; Email: [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); Web: <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. METAL-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 patio doors that are representative of those specified.

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

* + - 1. Test Size: In compliance with requirements of ANSI/AAMA/NWWDA 101 I.S.2/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 Grade: As indicated on drawings.
				2. 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 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. 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 \*\* Insert product and manufacturer in blank below or delete line as applicable. Delete options for sealants not required.

* + - 1. Sealants: \_\_\_\_\_\_\_\_.
			2. Sealants: Refer to Section 07 91 26 - Joint Fillers.
			3. Sealants: Provide manufacturer recommended sealants maintain watertight conditions.
		1. Materials:
			1. Exterior Cladding: Roll formed and extruded aluminum.

\*\* 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. Exterior Wood: Western Pine, preservative treated with AuraLast by JELD-WEN, Inc. in accordance with WDMA I.S.4.
			2. Interior Wood:

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

* + - * 1. Material: Standard, Western Pine.
				2. Material: Knotty Alder.
				3. Material: Mahogany.
				4. Material: Vertical Grain Douglas Fir.
				5. Material: Reclaimed Fir.
				6. Material: Red Oak.
				7. Material: Walnut.
				8. Material: Cherry.
		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: Provide optional primed finish.
				3. Finish: Provide optional pre-finished with white paint.
				4. Finish: Provide optional pre-finished stain finish.

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

Color: Cider.

Color: Fruitwood.

* + - * 1. Finish: Provide optional pre-finished clear lacquer finish.
			1. Exterior Finishes for Windows: 3-coat finish in accordance with AAMA 2603.

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

* + - * 1. Finish: Brilliant White.
				2. Finish: Chestnut Bronze.
				3. Finish: Desert Sand.
				4. Finish: French Vanilla.
				5. Finish: Hartford Green.
				6. Finish: Mesa Red.
				7. Finish: Black.
				8. Finish: Arctic Silver.
				9. Finish: Dark Chocolate.
			1. Interior Finishes for Patio Doors:

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

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

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

Color: Extra White.

Color: White.

Color: Natural Choice.

* + - * 1. Finish: Provide optional pre-finished stain finish.

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

Color: Cider.

Color: Cordovan.

Color: Fruitwood.

* + - * 1. Finish: Provide optional pre-finished clear lacquer finish.
			1. Exterior Finishes for Patio Doors: 3-coat finish in accordance with AAMA 2603.

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

* + - * 1. Finish: Brilliant White.
				2. Finish: Chestnut Bronze.
				3. Finish: Desert Sand.
				4. Finish: French Vanilla.
				5. Finish: Hartford Green.
				6. Finish: Mesa Red.
				7. Finish: Black.
				8. Finish: Arctic Silver.
				9. Finish: Dark Chocolate.

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

* 1. METAL-CLAD WOOD WINDOW ASSEMBLlES
		1. Basis of Design: Tradition Plus Series metal-clad wood windows 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.

\*\* NOTE TO SPECIFIER \*\* Direct-Set windows are fixed. In-Sash windows are fixed or operable and come with hardware and screen options. Delete type not required.

* + - 1. Construction: Direct-set, sashless with glazing direct set to frame.
			2. 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 over injected glass filled nylon corner key.
				2. Sash: Corner joints mortised and tenoned with 45 degree miter ship lap cladding.
				3. Glass: Mounted using silicone glazing compound on exterior and acrylic sealant on interior, secured with interior applied profiled wood stops.
			2. Window Type: Casement windows.
				1. Frame: Corner joints mechanically fastened over injected glass filled nylon corner key.
				2. Sash: Corner joints mortised and tenoned with 45 degree miter ship lap cladding.
				3. Glass: Mounted using silicone glazing compound on exterior and acrylic sealant on interior, secured with interior applied profiled wood stops.
			3. Window Type: Double-hung windows.
				1. Frame: Corner joints mechanically fastened over injected glass filled nylon corner key.
				2. Sash: Corner joints mortised and tenoned with 45 miter ship lap cladding, glued and nailed from interior.
				3. Glass: Mounted using silicone glazing compound on exterior and acrylic sealant on interior, secured with interior applied profiled wood stops.
			4. Window Type: Horizontal sliding windows.
				1. Frame: Corner joints mechanically fastened over injected glass filled nylon corner key.
				2. Sash: Corner joints mortised and tenoned with 45 miter ship lap cladding, glued and nailed from interior.
				3. Glass: Mounted using silicone glazing compound on exterior and acrylic sealant on interior, secured with interior applied profiled wood stops.
			5. Window Type: Radius and geometric direct set windows.
				1. Frame: Corner joints mechanically fastened over injected glass filled nylon corner key.
				2. Glass: Mounted using silicone glazing compound on exterior then secured with interior applied profiled wood stops.
			6. Window Type: Radius and geometric in-sash windows.
				1. Frame: Corner joints mechanically fastened over injected glass filled nylon corner key.

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

* + - * 1. Sash: Standard size units with 45 degree miter ship lap cladding.
				2. Sash: Custom size units with 45 degree miter ship lap cladding.
				3. Glass: Mounted using silicone glazing compound on exterior and acrylic sealant on interior, secured with interior applied profiled wood stops.
		1. Frames:
			1. Material: Select kiln-dried pine AuraLast treated wood.
			2. Cladding: 0.050 inch to .055 (1.27 mm to 1.397 mm) extruded aluminum.
			3. Jambs:

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

* + - * 1. Width For Casement and Awning Windows: 2-1/2 inches (63.5 mm)
				2. Width For Double Hung Windows: 4-9/16 inches (155.89 mm)
		1. Sashes: Select kiln-dried pine AuraLast treated wood.
		2. Exterior Trim:

\*\* NOTE TO SPECIFIER \*\* Integral fin is not available on horizontal sliding windows. Delete integral fin when only horizontal units are specified.

* + - 1. Integral Fin: Extruded aluminum on all four sides of frame.

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

* + - 1. Casing: Standard, Aluminum Brickmould.
			2. Casing: Provide optional aluminum 3-1/2 inches (88.9 mm) Flat Casing.
			3. Casing: Provide optional Aluminum Adams Casing.

\*\* NOTE TO SPECIFIER \*\* Delete Clad Mull Cap when window layout does not require units to be joined (mulled) together at the factory.

* + - 1. Mull Caps: 5/16 inch(7.94 mm)
		1. Factory Applied Extension Jambs: Provide at all four sides of frame interior.

\*\* NOTE TO SPECIFIER \*\* Delete Factory Applied Extensions Jambs for window styles not required or when construction does not require extension jambs. Delete options for extension jambs corresponding to window types not required.

* + - 1. Awning Windows: 9/16 inch (14.3 mm). From 2-1/2 inches (63.5 mm) to 10-9/16 inches (268.3 mm) in length.
			2. Casement Windows: 9/16 inch (14.3 mm). From 2-1/2 inches (63.5 mm) to 10-9/16 inches (268.3 mm) in length.
			3. Double-Hung Windows: 9/16 inch (14.3 mm). From 4-9/16 inches (115.9 mm) to 10-9/16 inches (268.3 mm) in length
			4. Horizontal Sliding Windows: 9/16 inch (14.3 mm). From 4-9/16 inches (115.9 mm) to 10-9/16 inches (268.3 mm) in length
			5. Radius and Geometric Windows:
				1. Casement: 9/16 inch (14.3 mm). From 2-1/2 inches (63.5 mm) to 10-9/16 inches (268.3 mm) in length.
				2. Double Hung: 9/16 inch (14.3 mm). From 4-9/16 inches (115.9 mm) to 10-9/16 inches (268.3 mm) in length

\*\* 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. Delete options for hardware corresponding to patio door types not required..

* + - 1. For Awning Windows:
				1. Hinges: Stainless steel.
				2. Operators: Stainless steel roto gear with heavy gauge scissor operating arm.
				3. Locks: Concealed.

\*\* NOTE TO SPECIFIER \*\* Select a handle profile or an electric option to control operation of window. When operator is to be controlled electrically, coordinate electrical requirements with other disciplines. Delete controls not required.

* + - * 1. Operation: Standard handle, manual folding crank.
				2. Operation: Provide optional electrical hardwired motor.
				3. Operation: Provide optional electrical remote control.

\*\* NOTE TO SPECIFIER \*\* Additional options are available only for the electrical operators. Delete options if not electrically operated or options are not desired.

* + - * 1. Features: Provide optional product features listed below.

Built-in thermostats.

Rain sensors.

Accessories inputs.

Settings memory.

Synchronous motors.

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

* + - * 1. Finish: Standard, Chestnut Bronze finish.
				2. Finish: Standard, Desert Sand finish.
				3. Finish: Standard, White finish.
				4. Finish: Provide optional Antique Brass finish.
				5. Finish: Provide optional Brushed Chrome finish.
				6. Finish: Provide optional Polished Brass finish.
				7. Finish: Provide optional Oil Rubbed Bronze finish.
			1. For Casement Windows:
				1. Hinges: Stainless steel.
				2. Operators: Hardened stainless steel worm gears and dual action heavy gauge stainless steel operating arm.
				3. Locks: Concealed.

\*\* NOTE TO SPECIFIER \*\* Select a handle profile or an electric option to control operation of window. When operator is to be controlled electrically, coordinate electrical requirements with other disciplines. Delete controls not required.

* + - * 1. Operation: Standard, manual nested folding center crank.
				2. Operation: Provide optional electrical hardwired motor.
				3. Operation: Provide optional electrical remote control.

\*\* NOTE TO SPECIFIER \*\* Additional options are available only for the electrical operators. Delete options if not electrically operated or options are not desired.

* + - * 1. Features: Provide optional product features listed below.

Built-in thermostats.

Rain sensors.

Accessories inputs.

Settings memory.

Synchronous motors.

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

* + - * 1. Finish: Standard, Chestnut Bronze finish.
				2. Finish: Standard, Desert Sand finish.
				3. Finish: Standard, White finish.
				4. Finish: Provide optional Antique Brass finish.
				5. Finish: Provide optional Brushed Chrome finish.
				6. Finish: Provide optional Polished Brass finish.
				7. Finish: Provide optional Oil Rubbed Bronze finish.
			1. For Double-Hung Windows:
				1. Balances: Concealed block and tackle.
				2. Sash Retainers: Recessed top and bottom.
				3. Locks: Cam action.
				4. Operation: Interior sash lift.

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

* + - * 1. Finish: Standard, Chestnut Bronze finish.
				2. Finish: Standard, Desert Sand finish.
				3. Finish: Standard, White finish.
				4. Finish: Provide optional Antique Brass finish.
				5. Finish: Provide optional Brushed Chrome finish.
				6. Finish: Provide optional Polished Brass finish.
				7. Finish: Provide optional Oil Rubbed Bronze finish.
			1. For Horizontal Sliding Windows:
				1. Sliding System: Vinyl track and sash reduced friction buttons.
				2. Sash Pull: Surface mounted.
				3. Sash Lock: Surface mounted.

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

* + - * 1. Finish: Standard, Chestnut Bronze finish.
				2. Finish: Standard, Desert Sand finish.
				3. Finish: Standard, White finish.
				4. Finish: Provide optional Antique Brass finish.
				5. Finish: Provide optional Brushed Chrome finish.
				6. Finish: Provide optional Polished Brass finish.
				7. Finish: Provide optional Oil Rubbed Bronze finish.
			1. For Radius and Geometric In-Sash Windows
				1. Hinges: Stainless steel.
				2. Operating Sash: Stainless steel leaf.
				3. Operator: Hardened steel worm gears and heavy gauge steel arm.

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

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

* + - * 1. Locks: Concealed.

\*\* NOTE TO SPECIFIER \*\* Select a handle profile or an electric option to control operation of window. When operator is to be controlled electrically, coordinate electrical requirements with other disciplines. Delete controls not required.

* + - * 1. Operation: Standard, handle manual folding crank.
				2. Operation: Provide optional electrical hardwired motor.
				3. Operation: Provide optional electrical remote control.

\*\* NOTE TO SPECIFIER \*\* Additional options are available only for the electrical operators. Delete options if not electrically operated or options are not desired.

* + - * 1. Features: Provide optional product features listed below.

Built-in thermostats.

Rain sensors.

Accessories inputs.

Settings memory.

Synchronous motors.

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

* + - * 1. Finish: Standard, Chestnut Bronze finish.
				2. Finish: Standard, Desert Sand finish.
				3. Finish: Standard, White finish.
				4. Finish: Provide optional Antique Brass finish.
				5. Finish: Provide optional Brushed Chrome finish.
				6. Finish: Provide optional Polished Brass finish.
				7. Finish: Provide optional Oil Rubbed Bronze finish.

\*\* 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, annealed glass.
			2. Strength: Provide optional tempered 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.

\*\* NOTE TO SPECIFIER \*\* 15/16 inch (23.8 mm) thickness is for awning, casement, and radius and geometric direct-set windows. 3/4 inch (19 mm) thickness is for double-hung, horizontal sliding, and radius and geometric in-sash. Delete overall thickness not required.

* + - * 1. Overall Nominal Thickness: 15/16 inch (23.8 mm).
				2. Overall Nominal Thickness: 3/4 inch (19 mm).

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

* + - * 1. Glass Type: Standard, Type 1 - Clear.
				2. Glass Type: Provide optional Type 2 - Tinted Bronze.
				3. Glass Type: Provide optional Type 2 - Tinted Gray.
				4. Glass Type: Provide optional Type 2 - Tinted Green.
				5. Glass Type: Provide optional Specialty Glass - Obscure.
				6. Glass Type: Provide optional Specialty Glass - Glue Chip.
				7. Glass Type: Provide optional Specialty Glass - Narrow Reed.
				8. Glass Type: Provide optional Specialty Glass - Rain.
				9. Glass Type: Provide optional Specialty Glass - Reflective Bronze.
				10. Glass Type: Provide optional Specialty Glass - Reflective Gray.

\*\* NOTE TO SPECIFIER \*\* Low E 366 is standard on all patio door units but may be deleted at the design professional's option. Low E 366 has three coats of Low E on surface 2 and a 66% visible light transmission. Neat Glass is a layer of titanium dioxide on the exterior which reacts chemically with the sun's UV rays causing organic materials that are on glass to decompose Delete coatings if not required.

* + - * 1. Coating on No. Surface: Standard, Low E.
				2. Coating on No. Surface: Provide optional Low E 366.
				3. Coating on No. Surface: Provide optional Neat 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: Provide optional air-filled airspace.
				3. Air Space: Provide optional air-filled airspace with capillary tubes.
			1. Glazing Type: Monolithic glass.

\*\* NOTE TO SPECIFIER \*\* Fill in blank below with value between 1/8 inch (3 mm) and 1/4 inch (6.4 mm) or insert the phrase ' As scheduled and indicated on Drawings'.

* + - * 1. Overall Nominal Thickness: \_\_\_\_\_\_\_\_.

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

* + - * 1. Glass Type: Standard, Type 1 - Clear.
				2. Glass Type: Provide optional Type 2 - Tinted Bronze.
				3. Glass Type: Provide optional Type 2 - Tinted Gray.
				4. Glass Type: Provide optional Type 2 - Tinted Green.
				5. Glass Type: Provide optional Specialty Glass - Obscure.
				6. Glass Type: Provide optional Specialty Glass - Glue Chip.
				7. Glass Type: Provide optional Specialty Glass - Narrow Reed.
				8. Glass Type: Provide optional Specialty Glass - Rain.

\*\* 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 set in painted roll formed aluminum frame.

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

* + - 1. Frame Color: Brilliant White.
			2. Frame Color: Chestnut Bronze.
			3. Frame Color: Desert Sand.
			4. Frame Color: French Vanilla.
			5. Frame Color: Hartford Green.
			6. Frame Color: Heirloom White.
			7. Frame Color: Mesa Red.
			8. Frame Color: Arctic Silver.
			9. Frame Color: Dark Chocolate.
			10. 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:
			1. Material: Charcoal fiberglass screen cloth set in painted roll formed aluminum frame.

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

* + - * 1. Finish: Chestnut Bronze.
				2. Finish: Desert Sand.
				3. Finish: White.

\*\* NOTE TO SPECIFIER \*\* SDL Grilles are not available for textured glass. Grilles between the glass are not available on monolithic 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: Standard, extruded aluminum permanently applied to exterior of insulating glass unit.

Profiles: Bead stop profiles.

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

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

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

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

Pattern: As scheduled and indicated on Drawings.

Finish: Match exterior finish.

\*\* 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: Silver finish.
				2. Interior Muntins

Materials: Western Pine.

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).
			2. 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.

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

* + - * 1. Profile: Contour.

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

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

Contour 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: Brilliant White.
				2. Finish: Chestnut Brown.
				3. Finish: Desert Sand.
				4. Finish: French Vanilla.
				5. Finish: Hartford Green.
				6. Finish: Mesa Red.
				7. Finish: Black.
				8. Finish: Arctic Silver
				9. Finish: Dark Chocolate.

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

* 1. METAL-CLAD WOOD PATIO DOOR ASSEMBLlES
		1. Basis of Design: Tradition Plus Series metal-clad 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.
			4. Patio Door Type: Types as scheduled and indicated on Drawings.
		1. Patio Door Fabrication:
			1. Panels: 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 applied profiled wood stops on the interior.
			3. Cladding: Aluminum cladding folded and locked at corners.
		2. Frames:
			1. Materials: Select kiln-dried pine AuraLast treated wood.
			2. Cladding: 0.050 inch to .055 inch (1.27 mm to 1.397 mm) extruded aluminum.

\*\* NOTE TO SPECIFIER \*\* Number of panels per patio door unit varies by door size. Include number of panels under "Size" in Part 3 Schedule Article.

* + 1. Panels: Select kiln-dried pine AuraLast treated wood.
		2. Exterior Trim:

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

* + - 1. Casing: Standard, Aluminum Brickmould.
			2. Casing: Provide optional aluminum 3-1/2 inches (88.9 mm) Flat Casing.
			3. Casing: Provide optional Aluminum Adams Casing.
			4. Nailing Fins and Drip Caps: Standard.
		1. Extension Jambs: Factory applied on all four sides of frame interior, in wall depths up to 7-9/16 inch (192.1 mm).

\*\* NOTE TO SPECIFIER \*\* Delete options for sills corresponding to patio door types not required.

* + 1. Sills for In-Swing Patio Doors: Anodized aluminum.

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

* + - 1. Compliance: Provide optional 1/2 inch (12.7 mm) maximum height to meet ADA requirements.
		1. Sills for Out-Swing Patio Door: Anodized aluminum.

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

* + - 1. Compliance: Provide optional 1/2 inch (12.7 mm) maximum height to meet ADA requirements.
		1. Sills for Sliding Patio Door: Tan colored pultruded fiberglass with solid oak interior trim and stainless steel track cap.

\*\* NOTE TO SPECIFIER \*\* Delete options for hardware corresponding to patio door types not required.

* + 1. Hardware for In-Swing Doors:
			1. Hinges: Standard, 4x4 heavy gauge solid brass with stainless steel pins.
			2. Locks: Standard, single point mortise with lever handle and thumb turn dead bolt.

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

* + - 1. Finish: Standard, Polished Brass finish.
			2. Finish: Provide optional Antique Brass finish.
			3. Finish: Provide optional Brushed Chrome finish.
			4. Finish: Provide optional Brushed Nickel finish.
			5. Finish: Provide optional Polished Chrome finish.
			6. Finish: Provide optional Oil Rubbed Bronze finish.
			7. Finish: Provide optional Satin Nickel finish.
			8. Finish: Provide optional White finish.
		1. Hardware for Out-Swing Doors:
			1. Hinges: Standard, 4x4 heavy gauge solid brass with stainless steel pins.
			2. Locks: Standard, single point mortise with lever handle and thumb turn dead bolt.

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

* + - 1. Finish: Standard, Polished Brass finish.
			2. Finish: Provide optional Antique Brass finish.
			3. Finish: Provide optional Brushed Chrome finish.
			4. Finish: Provide optional Brushed Nickel finish.
			5. Finish: Provide optional Polished Chrome finish.
			6. Finish: Provide optional Oil Rubbed Bronze finish.
			7. Finish: Provide optional Satin Nickel finish.
			8. Finish: Provide optional White finish.
		1. Hardware for Sliding Patio Doors:
			1. Sliding System: Steel ball bearing tandem rollers in heavy duty housing.
			2. Locks: Single point mortise.

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

* + - 1. Finish: Standard, Polished Brass finish.
			2. Finish: Provide optional Antique Brass finish.
			3. Finish: Provide optional Brushed Chrome finish.
			4. Finish: Provide optional Brushed Nickel finish.
			5. Finish: Provide optional Polished Chrome finish.
			6. Finish: Provide optional Oil Rubbed Bronze finish.
			7. Finish: Provide optional Satin Nickel finish.
			8. Finish: Provide optional White finish.

\*\* 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 Patio Doors:

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

* + - 1. Strength: Standard, tempered glass.
			2. Strength: Provide 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 Type: Standard, Type 1 - Clear.
				2. Glass Type: Provide optional Type 2 - Tinted Bronze.
				3. Glass Type: Provide optional Type 2 - Tinted Gray.
				4. Glass Type: Provide optional Type 2 - Tinted Green.
				5. Glass Type: Provide optional Specialty Glass - Obscure.
				6. Glass Type: Provide optional Specialty Glass - Glue Chip.
				7. Glass Type: Provide optional Specialty Glass - Narrow Reed.
				8. Glass Type: Provide optional Specialty Glass - Reflective Bronze.
				9. Glass Type: Provide optional Specialty Glass - Reflective Gray.

\*\* NOTE TO SPECIFIER \*\* Low E 366 is standard on all patio door units but may be deleted at the design professional's option. Low E 366 has three coats of Low E on surface 2 and a 66% visible light transmission. Neat Glass is a layer of titanium dioxide on the exterior which reacts chemically with the sun's UV rays causing organic materials that are on glass to decompose Delete coatings if not required.

* + - * 1. Coating on No. Surface: Standard, Low E.
				2. Coating on No. Surface: Provide optional Low E 366.
				3. Coating on No. Surface: Provide optional Neat 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: Provide optional air-filled airspace.
				3. Air Space: Provide optional air-filled airspace with capillary tubes.

\*\* NOTE TO SPECIFIER \*\* Exterior sliding insect screens are available on in-swing and sliding patio door units only. Delete if only out-swing patio doors are specified.

* + 1. Exterior Sliding Insect Screens:
			1. Material: Charcoal fiberglass mesh set in extruded aluminum frame.

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

* + - 1. Frame Color: Black.
			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: Mesa Red.
			8. Frame Color: Arctic Silver.
			9. Frame Color: Dark Chocolate.
			10. Frame Color: Matched Custom Color.

\*\* NOTE TO SPECIFIER \*\* SDL Grilles are not available for textured glass. Grilles between the glass are not available on monolithic 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:

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

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

Profiles: Bead stop profiles.

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

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

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

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

Finish: Match exterior cladding.

Pattern: As scheduled and indicated on Drawings.

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

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

* + - * 1. Profile: Contour.

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

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

Contour 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: Brilliant White.
				2. Finish: Chestnut Bronze.
				3. Finish: Desert Sand.
				4. Finish: French Vanilla.
				5. Finish: Hartford Green.
				6. Finish: Mesa Red.
				7. Finish: Black.
				8. Finish: Arctic Silver.
				9. Finish: Dark Chocolate.
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 fin holes around entire window.
			4. Test and adjust for smooth operation of window.

\*\* NOTE TO SPECIFIER \*\* The following paragraph is for use without window units with nailing fins. Delete if not required.

* + 1. Installation of Windows Without Nailing Fins: Insert windows into rough opening.
			1. Shim side jambs straight.
			2. Inspect window for square, level and plumb.
			3. Fasten window through jamb, shim and into rough opening jamb.
			4. Test and adjust for smooth operation of window.
			5. Ensure seal between sill pan and inside face of windowsill.
			6. Install backer rod and sealant at exterior jambs and head.
			7. Apply backer rod and sealant on exterior below sill. Leave gaps for drainage.
			8. Seal interior joints between rough opening and jambs with backer rod and sealant.

\*\* 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 fin holes around entire patio door.
			4. Test and adjust for smooth operation of patio door.

\*\* NOTE TO SPECIFIER \*\* The following paragraph is for use with patio door units without nailing fins. Delete if not required.

* + 1. Installation of Patio Doors Without 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 jamb, shim and into rough opening jamb.
			4. Test and adjust for smooth operation of patio door.
			5. Ensure seal between sill pan and inside face of patio doorsill
			6. Install backer rod and sealant at exterior jambs and head.
			7. Apply backer rod and sealant on exterior below sill. Leave gaps for drainage
			8. Seal interior joints between rough opening and jambs with backer rod and sealant.
	1. FIELD QUALITY CONTROL
		1. Manufacturers' Field Services: Field inspections.
	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.

\*\* NOTE TO SPECIFIER \*\* Sample schedules are set below. When a single type of window or patio door is utilized on a project, specifier may elect to delete the schedule in its entirety. When schedules are included on the Drawings, schedules should be deleted from the specifications.

* 1. SCHEDULES
		1. Window Type A:
			1. Style:
			2. Operation:
			3. Size:
			4. Exterior Finish:
			5. Interior Wood:
			6. Interior Finish:
			7. Exterior Trim:
			8. Extension Jamb:
			9. Hardware:
			10. Hardware Finish:
			11. Glazing:
			12. Grilles:
			13. Insect Screen:
			14. Screen Frame Finish:
		2. Patio Door Type A:
			1. Style:
			2. Operation:
			3. Size:
			4. Exterior Finish:
			5. Interior Finish:
			6. Panel Layout:
			7. Exterior Trim:
			8. Mull Cap:
			9. Sill:
			10. Hardware:
			11. Hardware Finish:
			12. Glazing:
			13. Grilles:
			14. Screen Frame Color:

END OF SECTION