SECTION 08 14 23

ALUMINUM AND WOOD COMPOSITE OUT-SWING DOORS

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\*\* NOTE TO SPECIFIER \*\* H Window Company; Aluminum/Wood Composite Out-Swing Doors.
This section is based on the products of H Window Company, which is located at:401 17th Ave. W.Ashland, WI 54806Toll Free Tel: 800-843-4929Tel: 715-685-2793Fax: 715-685-9441Email: [request info ()](https://arcat.com/rfi?action=email&company=H%252BWindow%252BCompany&message=RE%253A%2520Spec%2520Question%2520(08142hwn)%253A%2520&coid=32903&spec=08142hwn&rep=&fax=715-685-9441)
Web: <http://www.hwindow.com>
 [ [Click Here](https://arcat.com/company/h-window-company-32903) ] for additional information.
Beautiful. Enduring. Revolutionary.
The beauty of H Windows arises from exceptional materials in the hands of skilled craftsmen. The elegant aesthetics of our windows and doors are rooted in highly intentional engineering that has made us the provider of choice for architects and building owners throughout the United States.
The robust engineering behind our windows and doors has resulted in unmatched thermal and structural performance. We believe longevity is sustainability and the material durability and ease of maintenance ensures our products will last through the harshest environments.
Each of our products contains innovative features allowing us to achieve possibilities once thought out of reach. Our team of experts is well equipped to partner with owners, architects, and builders to push the boundaries and drive new levels of design achievement.

1. GENERAL
	1. SECTION INCLUDES

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

* + 1. Out-swing doors, Series 204.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Applicable Division 01 Sections.
		2. Section 06 10 00 - Rough Carpentry.
		3. Section 07 27 00 - Air Barriers.
		4. Section 07 92 00 - Joint Sealers.
		5. Section 08 32 19 - Aluminum/Wood Composite Lift & Slide Doors.
		6. Section 08 44 11 - Glazed Timber Curtain Walls.
		7. Section 08 52 00 - Aluminum/Wood Composite Windows.
		8. Section 08 80 00 - Glazing.
		9. Section 08 71 00 - Door Hardware.
		10. Section 09 90 00 - Paints and Coatings.
	1. REFERENCES

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

* + 1. ASTM International (ASTM):
			1. ASTM A386 - Standard Specification or Zinc Hot-Dip Galvanized Coatings on Iron and Steel Products.
			2. ASTM E283-04 - Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors.
			3. ASTM E330-02 - Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
			4. ASTM E331-00 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Door by Uniform Static Air Pressure Difference.
			5. ASTM F588-07 - Forced Entry Resistance Test Grade 40.
		2. American Architectural Manufacturers Association (AAMA):
			1. AAMA 502-08 - Voluntary Specifications for Field Testing of Windows and Sliding Glass Doors.
			2. AAMA 910-93 - Voluntary Life Cycle Specifications and Test Methods for Architectural Grade Windows and Sliding Glass Doors.
			3. AAMA 2604/2605 - Specifications for High Performance Organic Coatings on Architectural Extrusions.
		3. AAMA/WDMA/CSA 101/I.S.2/A440-08 - Standard Specification for Windows, Doors, and Unit Skylights.
		4. Refer to the Fenestration and Glazing Industry Alliance (FGIA) Glossary Document AAMA AG-13 for industry standard terminology and definitions.
		5. National Fenestration Rating Council (NFRC).
		6. American National Standards Institute (ANSI).
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00.
		2. Product Data:
			1. Manufacturer's data sheets on each product to be used.
			2. Preparation instructions and recommendations.
			3. Storage and handling requirements and recommendations.
			4. Manufacturer's installation instructions.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each material type, pattern, and color.
		2. Shop Drawings: Include elevation drawings with rough opening dimensions, cross section details of doors, details of materials, installation details with rough opening requirements, air and vapor barrier seal, component anchorage, location of caulking, door locations, installation methods, materials, and finish. Include relationship with adjacent construction.
		3. Warranty: Manufacturer's standard warranty issued in Owner's name.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum of five years documented experience.
		2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
		3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.
		4. Pre-Installation Door Test: Owner reserves the right to select one door, at time of delivery, and submit it to an independent testing laboratory for testing. Testing will verify compliance of production run with these specifications. Cost for pre-installation testing will be paid by the Owner.
			1. Door deficiencies discovered by testing, including similar models used in the Project, will be corrected by the Contractor at no cost to the Owner.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up 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: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
			1. The intent of a mock-up is to demonstrate quality of workmanship and visual appearance.
			2. If the mock-up is not acceptable, rebuild the mock-up until satisfactory results are achieved.
			3. Retain mock-up during construction as a standard for comparison with completed work.
			4. Do not alter or remove mock-up until work is completed or removal is authorized.
	1. PRE-INSTALLATION CONFERENCE
		1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Delivery, store, protect and handle in strict compliance with manufacturer's written instructions and recommendations, and under provision of Section 01 60 00.
		2. Securely store door units upright.
		3. Protect from damage due to weather, excessive temperature, and construction operations.
		4. Protect materials and finishes during handling and installation.
	3. PROJECT CONDITIONS
		1. Maintain environmental temperature, humidity and ventilation conditions within limits recommended by manufacturer. Do not install products under environmental conditions outside manufacturer's recommended limits.
	4. WARRANTY
		1. Door Warranty: Written warranty executed by the door manufacturer against defects in material and workmanship of the doors under normal use.
			1. Glazing: Coverage as provided by original manufacturer.
			2. Hardware: Hinges and Handles: 5 years from date of manufacture.
			3. Exterior Anodized Finishes: 10 years from date of manufacture.
			4. Exterior Powder Coat Finishes: 10 years from date of manufacture.
			5. Exterior PVDF Finishes: 10 years from date of manufacture.
			6. Interior Factory Applied Finishes: 1 year from date of manufacture.
			7. Materials and Workmanship: 10 years from date of manufacture.
1. PRODUCTS
	1. MANUFACTURERS
		1. Basis of Design: H Window which is located at; 401 17th Ave. W; Ashland, WI 54806; ASD Toll Free Tel: 800-843-4929; Tel: 715-685-2793; Email: sales@hwindow.com; Web: www.hwindow.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 the provisions of Section 01 60 00.
	1. PERFORMANCE AND DESIGN REQUIREMENTS
		1. General: Aluminum and wood composite out-swing door units that meet or exceed performance requirements specified:
			1. AAMA/WDMA/CSA 101/I.S. 2/A440-08. Rating: CW-PG40.
				1. Comply with structural performance, air infiltration, and water penetration indicated for type, grade, and performance class of door units.
			2. Testing: Test each type of required door unit through a recognized independent testing laboratory or agency in accordance with ASTM E283 for air infiltration, and ASTM E331 for water penetration.
				1. Air Infiltration: ASTM E283-04. Exterior doors will not exceed 0.10 cfm/sq ft (0.5 l/s/sq m) at a uniform pressure of 1.57 psf. (75 Pa).
				2. Water Resistance: ASTM E331-00. No water leakage occurrence at a static pressure equaling 20 percent of the specified design pressure up to a maximum of 6.00 psf. (300 Pa).
				3. Forced Entry: ASTM F588, Grade 40.
				4. Uniform Structural Load: ASTM E330-02. Unit tested at 1.5 times design wind pressure, both positive and negative at 127.5 psf. (6120 Pa). There must be no glass breakage, permanent damage to fasteners, hardware parts, or any other damage that makes door inoperable. There must be no permanent deformation of any main frame or leaf member in excess of 2 percent of its span.

\*\*NOTE TO SPECIFIER\*\* Delete condensation resistance factor and thermal U-Factor not required based on glazing composition and performance requirements selected for the Project.

* + - * 1. Condensation Resistance : NFRC 500-2017. Glazing Composition: 1-3/8 inches (34.9 mm) insulating glass units using three, 0.118 inches (3 mm) lites of clear glass with low-e at number 2 and 5 surfaces, 90 percent argon fill, and warm edge spacer..

CR minimum of 58 for both frame and glass overall.

* + - * 1. Condensation Resistance: NFRC 500-2017. Glazing Composition: 1 inch (24.8 mm) insulating glass units using two0.0154 inches (4 mm) lites of clear glass with low-e at number 2 surface, 90 percent argon fill, and warm edge spacer.

CR Minimum: 56.

* + - * 1. Thermal U-Factor (without kick panel): NFRC 100-2023. Glazing Composition: 1-3/8 inches (34.9 mm) insulating glass units using three 0.118 inches (3 mm) lites of clear glass with low-e at number 2 and 5 surfaces, 90 percent argon fill, and warm edge spacer.

U-Factor maximum of 0.26 Btu / hr.sq ft.F(1.476 W/sq m.K).

* + - * 1. Thermal U-Factor (without kick panel): NFRC 100-2023. Glazing Composition: 1 inch (24.8 mm) insulating glass units using two 0.154 inches (4 mm) lites of clear glass with low-e at number 2 surface, 90 percent argon fill, and warm edge spacer.

U-Factor Maximum: 0.35 Btu/hr.sq ft.F (1.987 W/sq m.K).

\*\* NOTE TO SPECIFIER \*\* Delete article if not required. Roll-formed aluminum is not acceptable. ADA doors are not required to meet performance requirements of this specification.

* 1. PRODUCT TYPES
		1. Basis of Design: Nordic Outswing Door, Series 204; as supplied by H Window.
			1. Materials:
				1. Insulating Glazing: Refer to Section 08 80 00 Glazing.
				2. Weather Stripping: Full perimeter high performance weather gasket.

\*\* NOTE TO SPECIFIER \*\* Delete, grill, simulated divided lite and egress options not required.

* + - * 1. Exterior Grilles: 1 inch (25 mm) wide taped-on extruded aluminum.
				2. Interior Grilles: 1 inch (25 mm) wide taped-on wood grilles.

Finishes: To match door frame and leaf.

* + - * 1. Simulated Divided Lite: Spacers in IGU aligning with grilles.
			1. Door Type:

\*\* NOTE TO SPECIFIER \*\* Delete door types and widths and heights not required. Widths of paired swing-out doors can be uneven. Delete sidelite and kick panel if not required.

* + - * 1. Single Out-Swing Doors: Leaf with center slam-shut latch and three-point locking hardware, locking in position anywhere in its 160-degree swing by lifting handle.

Minimum Width: 24 inches (610 mm) without wind brake.

Minimum Height: 78 inches (1981 mm).

Standard Height:

80 inches (2032 mm).

82 inches (2083 mm).

95-1/2 inches (2426 mm).

Maximum Width: 42 inches (1067 mm).

Maximum Width: 48 inches (1219 mm) with continuous gear hinge.

Maximum Height: 120 inches (3048 mm).

Maximum Area: 28 sq ft (2.601 sq m).

* + - * 1. Paired Swing-Out Doors:

Minimum Width: 36 inches 914 mm).

Minimum Height: 78 inches (1981 mm).

Standard Height:

80 inches (2032 mm).

82 inches (2083 mm).

95-1/2 inches (2426 mm).

Maximum Width: 76 inches (1930 m) with continuous gear hinge.

Maximum Height: 120 inches (3048 mm).

Maximum Area: 57 sq ft (5.3 sq m).

* + - * 1. Fixed Sidelites: Field mulled for single and paired doors, sized up to 60 sq ft (5.6 sq m), and not to exceed 96 inches (2438 mm) in both directions.

Direct Set window Series 204 or Fixed window Series 204 may be substituted as a fixed sidelight.

Refer to Section 08 52 00 - Aluminum/Wood Composite Windows for products and requirements.

* + - * 1. Kick Panels: Where indicated on Drawings.
				2. ADA Doors: ADA compliant door with low profile, thermally broken aluminum sill.

Federal and Local Code for Door Clearance: \_\_\_\_\_\_\_\_.

* + - * 1. Configure doors as indicated on Drawings.
				2. Egress Dimensions:

Clear Width: 43-1/2 inches (1105 mm) rough opening with 36 inches (914 mm) clear width.

Clear Width: 39-1/2 inches (1003 mm) rough opening with 32 inches (813 mm) clear width.

Clear Height: 82-1/2 inches (2096 mm) rough opening with 80 inches (2032 mm) clear height.

* + - 1. Hardware:

\*\* NOTE TO SPECIFIER \*\* Delete hardware styles and finishes not required. For commercial hardware by others, specify components for narrow stile door construction.

* + - * 1. Hinges: Zinc alloy on steel.

Finish: Chrome.

Finish: Black.

* + - * 1. Commercial Hardware: Hardware must be for narrow stile and rail doors, as specified in Section 08 71 00 Door Hardware.
				2. Residential Operating Hardware: Hoppe door hardware, as follows:

Dallas: Black.

Dallas: Satin Nickel.

Verona: Black.

Verona: Oil Rubbed Bronze.

Verona: Satin Nickel.

Verona: Brushed Chrome.

Verona: Polished Chrome.

Verona: Polished Brass.

Munchen: Black.

Munchen: Oil Rubbed Bronze.

Munchen: Rustic Umber.

Munchen: Satin Nickel.

Munchen: Brushed Chrome.

Munchen: Polished Chrome.

Munchen: Polished Brass.

* + - 1. Residential Locks: Hoppe full cylinder lock with locks being keyed alike or locks with a thumb turn on the interior only. Satin Nickle cylinder. Escutcheon plate finish to match door handle hardware. Combined handle and lock backplate standard for Dallas hardware.
			2. Residential Espagnolette: Full height espagnolette on active door leaf, with center slam shut latch; locks at three points by lifting door handle and engaging deadbolt.
			3. Residential Wind Brake: Wind brake installed at head of active door leaf, allowing door to be locked in any position through its 120 degree swing; engaged by lifting door handle.
		1. Fabrication:
			1. Corner Joinery: Leaf and Frame:
				1. Wood Fabrication: Mortise and tenor joints. Glued, stapled, and caulked.
				2. Aluminum Fabrication:

Leaf: 45 degree mitered corners, double crimped to extruded aluminum corner keys.

Frame: Butt jointed corners sealed with silicone.

* + - 1. Composite Frame Construction: Fabricate door units with a continuous butyl tape or closed cell foam thermal-moisture barrier located between exterior aluminum and interior wood. Aluminum is nailed to wood with stainless steel ring-shanked nails on 6 inches (152 mm). spacing around perimeter of frame and leaf.
			2. Weep Holes: Processed into each leaf sill for water drainage to exterior.
			3. Insulated Glazing: Factory-installed.
			4. Bituminous Coating: Apply one coat to concealed aluminum and steel surfaces in contact with cementitious or dissimilar materials.
			5. Concealed Steel Items: ANSI/ASTM A386, galvanized to 2.0 oz/sq ft (0.06 L/304.8 sq mm) or primed with iron oxide paint.
		1. Accessories:

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

* + - 1. Positioning Fin: Vinyl, attached with pre-punched holes.
			2. Mull Covers: Exterior aluminum in same finish as aluminum frame, interior wood in same finish as wood frame.
			3. Extension Jambs: Factory-applied, wood extension jambs at depth indicated on the Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete species options not required.

* + - * 1. Species: Pine.
				2. Species: Poplar.
				3. Species: Alder (Superior Grade).
				4. Species: American Cherry (90 percent Heartwood).
				5. Species: Brazilian Cherry.
				6. Species: Hickory.
				7. Species: White Ash.
				8. Species: Birch.
				9. Species: Hard Maple.
				10. Species: Douglas Fir.
				11. Species: Mahogany.
				12. Species: Cedar.
				13. Species: Walnut (90 percent Heartwood).
				14. Species: White Oak.
				15. Species: Red Oak.
				16. Species: Laminated Bamboo (Lamboo).
				17. Species: FSC Certified Mixed Credit Pine.
				18. Species: FSC Certified Mixed Credit Poplar.
				19. Species: FSC Certified Mixed Credit Alder (Superior Grade).
				20. Species: FSC Certified Mixed Credit American Cherry (90 percent Heartwood).
				21. Species: FSC Certified Mixed Credit Brazilian Cherry.
				22. Species: FSC Certified Mixed Credit Hickory.
				23. Species: FSC Certified Mixed Credit White Ash.
				24. Species: FSC Certified Mixed Credit Birch.
				25. Species: FSC Certified Mixed Credit Hard Maple.
				26. Species: FSC Certified Mixed Credit Douglas Fir.
				27. Species: FSC Certified Mixed Credit Mahogany.
				28. Species: FSC Certified Mixed Credit Cedar.
				29. Species: FSC Certified Mixed Credit Walnut (90 percent Heartwood).
				30. Species: FSC Certified Mixed Credit White Oak.
				31. Species: FSC Certified Mixed Credit Red Oak.
				32. Species: FSC Certified Mixed Credit Laminated Bamboo (Lamboo).
1. EXECUTION
	1. EXAMINATION
		1. Remodel: Bidder must visit job site and make complete survey of Project prior to bid and measure all door openings for sizing of new doors. Failure to do so does not relieve Successful Bidder from furnishing all materials required in accordance with specifications without additional cost to the Owner.
		2. New Construction: Verify wall openings and adjoining air and vapor seal materials are clean, dry, and ready to receive Work of this Section. Verify rough openings are correct and sill plate is level.
		3. Do not begin installation until the substrates have been properly constructed and prepared.
		4. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Remove new doors from crating and packaging. Verify all parts and accessories are included.
		2. Remove old doors and accessories from door openings. Scrape and remove existing sealants from openings which will interfere with installation of new doors.
		3. Clean surfaces thoroughly prior to installation.
		4. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
		5. For liners and blocking install preservative treated lumber only. Shim space must be of adequate depth to shim the entire depth of the new door frame.
	3. INSTALLATION
		1. Install door frames, glazing and reinforcement in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
			1. Align door frame plumb and level, free of warp or twist. Maintain dimensional tolerances, aligning with adjacent work.
			2. Coordinate attachment and seal of air and vapor barrier materials. Install under sill and sill brake metal flashings if applicable.
			3. Use low expanding foam intended for window and door installation, or pack fibrous insulation in shim spaces at perimeter to maintain continuity of thermal barrier.
			4. Install vapor barrier, perimeter sealant and backing materials in compliance with Section 07 90 00.
	4. FIELD QUALITY CONTROL
		1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection, or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
	1. ADJUSTING, CLEANING AND PROTECTION
		1. Remove protective material from pre-finished aluminum surfaces.
		2. Wash exposed surfaces with mild detergent in warm water applied with a soft, clean cloth. Remove soil from corners and remove door label.
		3. Remove excess sealant by moderate use of solvent acceptable to sealant manufacturer.
		4. Protect exterior finishes until cleaning of exterior building is completed.
		5. Adjust operable hardware for smooth operation and tight fit of leaf.
		6. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION