

SECTION 085203

CERTIFIED WOOD WINDOWS

CSI 3-PART **SHORT-FORM** GUIDE SPECIFICATION:
USE FOR OUTLINE OR DD SPECIFICATION ISSUES.
EDIT TO SUIT PROJECT

PART 1 - GENERAL

1.1 SUMMARY

- A. Work of this Section includes wood window assemblies, and includes but is not limited to the following:
1. Wood window frames
 - a. Hung Windows
 - 1). Single hung
 - 2). Double hung
 - 3). Triple hung
 - b. Sliding Windows
 - c. Fixed Windows
 - d. Casement Windows
 - 1). Out-swing
 - 2). In-swing
 - e. Awning Windows
 - f. Hopper Windows
 - g. Tilt & Turn Windows
 - h. Pivot Windows
 - i. Folding Windows: (Bi-Fold, Tri-Fold)
 - j. Combination Window Units

NOTE: Edit items below to suit project and delete items not chosen. Coordinate if items are provided by the Window Manufacturer or are supplied by other SECTIONS.

2. Glazing
 3. Hardware
 4. Accessories
 - a. Weatherstrip
 - b. Insect Screen
 - c. Removable grille
 - d. Grille between glass
 - e. Simulated divided lites
 - f. Jamb extension
- B. Related Documents and Sections: Examine Contract Documents for requirements that directly affect or are affected by Work of this Section. A list of those Documents and Sections include, but is not limited to the following:
1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and DIVISION 01 General Requirements, Specification Sections, apply to this Section.

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's printed descriptions of materials, components, adhesives, fasteners, and treatment systems; performance criteria; use limitations; preparation instructions and recommendations; storage and handling requirements and recommendations; and installation methods.
- B. Shop Drawings: Submit location plan, along with elevation, section, and detail drawings showing extent of wood window assembly, with keyed detail drawings indicating expansion, material transition, specific attachments and attachment requirements including Field Measurements.
- C. Window Schedule: Indicating each window in project, referencing each unit to a specific elevation and style.
- D. Samples:
 - 1. Initial for Selection: Submit printed color charts or sample chains indicating manufacturer's complete range for each type of material finish exposed to view that is not yet selected by Architect or specified.
 - 2. Final Selection: Submit minimum 6 inch (150mm) long samples of each different profile (grain and species for clear finish) with proposed finishes, and fasteners.
- E. Quality Assurance Submittals: Certificates of Grade and kiln drying (KD); Test and Evaluation Reports for wood treatments; and Qualification Statements.

NOTE: Edit LEED Requirements below to suit project.

- F. Sustainable Design (USGBC [LEED®](#)) Submittals:
 - 1. LEED Credit MR, Materials & Resources. Submit completed LEED 2009-NC v.3 Submittal Templates, product data, and other required paperwork as follows:
 - a. MR 4.1, 10% Recycled Content
 - b. MR 4.2, 20% Recycled Content
 - c. MR 5.1, 10% Regional Materials
 - d. MR 5.2, 20% Regional Materials
 - e. MR 6, Rapidly Renewable Materials
 - f. MR 7, FSC Certified Wood: Submit chain-of-custody certificates
 - 2. LEED Credit IEQ, Indoor Environmental Quality. Submit completed LEED 2009-NC v.3 Submittal Templates, and required paperwork as follows:
 - a. IEQ 4.1, Low Emitting Materials, Adhesives & Sealants: Submit VOC Data
 - b. IEQ 4.2: Low Emitting Materials, Paints & Coatings, VOC Data
 - c. IEQ 4.4: Low Emitting Materials, Indoor Composite Wood & Agrifiber, No Added Urea-Formaldehyde Content
- G. Closeout Submittals: Operation and Maintenance Data, and Record Documents.

NOTE: Edit LEED Requirements below to suit project.

- 1. Sustainable Design Closeout Documentation: Submit completed USGBC LEED® [Worksheet Templates](#) for the following credits:
 - a. MR 4.1, MR 4.2, MR 5.1, MR 5.2, MR 6, MR 7
 - b. IEQ 4.1, IEQ 4.2, IEQ 4.4

1.3 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Window Manufacturer/Fabricator: A firm experienced a minimum ten (10) years in producing

products similar to those indicated and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- a. Manufacturer/Fabricator/Supplier shall be capable of providing Third Party Certification that wood materials were legally harvested from sustainably managed forests.
2. Testing Agency: An independent testing agency with the experience and capability to conduct the testing indicated, meeting requirements of ISO/IEC Standard 17025 or ASTM E699 and ASTM E329.

B. Certifications:

1. Provide Manufactured composite wood products sourced from sustainably managed forests as certified by one of the following independent third-party agents SmartWood, SCS, SGS, BVC, SFI, ATFS, CSA, or VFF, and displaying the FSC, PEFC, PEFC member, or VFF label.
2. Provide window units rated for air infiltration, water penetration and structural performance per AAMA/NWWDA 101/1.S.2/A440-05 and as certified by an independent third-party agent.
3. Provide window units rated and certified for thermal performance by NFRC, and for seal integrity of insulating glass seal.
4. Provide third-party certification that window meets or exceeds ASTM E1886 and ASTM E1996 Impact Resistant ratings.

NOTE: Edit source limits paragraph below to suit manufacturers. Most companies do not fabricate glazing like Woodstone windows does.

- C. Source Limitations: Obtain woodwork, fabricated glazing, accessories and window assembly through one source from a single manufacturer.

D. Sustainability Standards and Certifications:

NOTE: Edit sustainability standards and certifications below to suit project.

1. Adhesive and Sealant VOC Limits: According to South Coast Air Quality Management District [Rule 1168](#) and [GS-36](#) for aerosols.
2. VOC Limits: As tested using U.S. EPA Reference Test Method 24 and as defined by
 - a. South Coast Air Quality Management District Rules: In areas where exposure to freeze/thaw conditions and direct exposure to moisture will not occur.
 - 1). SCAQMD [Rule 1113](#), Architectural Coatings
 - 2). SCAQMD [Rule 1168](#), Adhesive and Sealant Applications
 - b. Bay Area Air Quality Management District Regulation: For containers larger than 16 oz., for areas where freeze/thaw conditions do exist or direct exposure to moisture can occur.
 - 1). BAAQMD [Regulation 8, Rule 51](#)
 - c. California Air Resources Board: For areas where freeze/thaw conditions do exist or direct exposure to moisture can occur.
 - 1). CARB for containers 16 oz. or less.
 - d. Green Seal Standards:
 - 1). [GS-11](#), Low Odor or Low VOC Paint
 - 2). [GC-03](#), Anti-Corrosive Paints, Second Edition, January 7, 1997
3. Certified Wood Materials: According to [FSC-STD-40-004 CoC](#) requirements.

- E. Prototypes: Provide window material components or assemblies of each window unit type for review and approval prior to manufacturing or fabrication production.

NOTE: Delete Mockups article below if an independent assembly testing is not required.

- F. Mockups: Provide mockup window assemblies of each different unit type to be lab tested, either in the field or off-site as directed by the Architect.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Delivery, Storage and Handling per manufacturer's or fabricator's written recommendations, industry standards, and DIVISION 01 requirements.

1.5 FIELD CONDITIONS

- A. Conditions and Measurements: Visit jobsite to verify installation conditions and rough or masonry opening measurements.

1.6 WARRANTY

- A. Manufacturer Warranty: Submit a written materials and workmanship warranties, executed by the window manufacturer, agreeing to repair or replace window units that fail in materials or workmanship within three (3) years for Woodwork, ten (10) years for Insulating Glass and Limited Lifetime or three (3) years for Hardware, all beginning on the date of Substantial Completion

PART 2 - PRODUCTS

2.1 MANUFACTURERS / FABRICATORS

- A. Vermont Window Manufacturers / Fabricators: Subject to compliance with requirements, provide window assembly products by one of the following:
 1. Green Mountain Window & Door Company, 92 Park Street, Rutland, VT 05701; 802.747.6915; www.greenmountainwindow.com
 2. H. Hirschmann Ltd. (1980), 467 Sheldon Ave., Rutland, VT 05777; 802.438.4447; www.hhirschmannltd.com
 3. J. S. Benson Woodworking & Design, LLC, 118 Birge Street, Brattleboro, VT 05301; 802.254.3515; www.jsbensonwoodworking.com
 4. The Woodstone Company (1978), 17 Morse Brook Road, Westminster, VT 05158; 800.682.8223; www.woodstone.com
- B. Substitution Limitations: Manufacturers of equivalent products beyond those listed above shall be considered when submitted per DIVISION 01, using CSI Substitution Request Form 1.5C (During the Bidding Phase) or Form 13.1 (After the Bidding Phase.) [link](#)
- C. Product Options

NOTE: Select from items below to suit project and delete items not chosen.

1. Window Unit Type:
 - a. Combination
 - b. Awning
 - c. Casement (Out-Swing)
 - d. Casement (In-Swing)
 - e. Hopper: (Recommended In-Swing Only)
 - f. Tilt & Turn: (In-Swing only)
 - g. Hung: Single, Double and Triple Hung Windows
 - h. Pivot:
 - i. Folding: (Bi-fold, Tri-fold, etc.)
 - j. Sliding
 - k. Fixed Sash

2. Operational Options: Dual, combination, swing-range limiting devices
3. Accessory Options: Screens, storm windows, shutters, wall pockets
4. Wood Species Options: Third-party certified, and per SECTION 060530
5. Finish Options: Factory and/or field; clear, stained, opaque

2.2 DESCRIPTION

A. Regulatory Requirements

1. Window Grade Quality per ANSI/NWWDA I.S. – 2: Grade 60 (Heavy Commercial)
2. Window Frame: AWI Grade 1, plain sawn with AWI Premium Grade Assembly for joinery, sanding, and tolerance deviation.
3. Glazing Standards: Per [GANA Glazing Manual](#)
4. Safety Glass: Per ANSI Z97.1, 16 CFR Part 1201, Category II, and marked with SGCC certification label
5. Insulating Glass Certification: Per IGCC and SIGMA

B. Sustainability Characteristics

NOTE. Finger-jointed lumber provides an efficient use of the timber resource allowing mills to combine shorter pieces of wood into dimensional, structural lumber.

1. [USGBC](#) LEED® Rating: Comply with project requirements intended to achieve the following Rating, as measured and documented according to the USGBC LEED® Green Building [Rating and Version](#) indicated:

NOTE: Each LEED Version requires a different credit total to achieve the desired LEED Rating.

NOTE. Select one of the following Ratings and edit the Version listed to suit your project:

- a. Rating: Certified, Silver, Gold, or Platinum
- b. Version: [LEED 2009-NC](#) v. 3 (New Construction)
2. Applicable LEED Credits: Performance requirements of the following LEED Categories and Credits apply to this Section and shall be met:
 - a. MR: 4.1, 4.2, 5.1, 5.2, 6, 7
 - b. IEQ: 4.1, 4.2, 4.4

2.3 ACCESSORIES

- A. Window Hardware: Manufacturer's recommended hardware as selected by the Architect to operate, tightly close and securely lock windows so as to comply with requirements.
- B. Window Construction Adhesive: Non-HAP formulation complying with ASTM D5751 and/or ASTM D5572 recommended for indicated use by adhesive manufacturer.
- C. Wood Treatment: Lumber for window frame system shall be water-repellent preservative treated after machining; or made from a naturally rot-resistant wood species.
- D. Glazing: Per window frame manufacturer, and per SECTION 088000
- E. Fasteners: Corrosion-resistant of appropriate type, length and durability for wood product used to securely fasten to the substrate for the intended life and use of the unit.

PART 3 - EXECUTION

3.1 EXAMINATION, PREPARATION AND INSTALLATION

- A. Examination, preparation and installation per manufacturer's current written instructions, industry standards, and DIVISION 01 requirements.

1. Proceed with installation only after unsatisfactory conditions have been corrected and installation area properly prepared.
2. Install wood framing per ANSI / AF&PA [NDS-2005](#), and SECTION 061003
 - a. Install wood windows level and plumb, securely anchored into prepared openings.
 - b. Fasten or anchor materials and units in a concealed manner with fasteners appropriate to use and anticipated durability.
3. Seal spaces between openings and window frame, and tie window flashings into wall flashings to drain properly.
 - a. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated, and as required by AHJ.
4. Provide fasteners, anchors, sealants, flashings, insulation, and other accessory materials required to successfully complete the window installation that are not specified and supplied by the Window Manufacturer.

3.2 FIELD QUALITY CONTROL

A. Site Tests and Inspections per DIVISION 01:

1. Field water spray test of Architect selected installed window(s) for leaks per ASTM E547.
2. Field blower door testing per ASTM E779 or CGSB Standard 149.

NOTE: Coordinate and edit below to Project requirements.

- a. Air-Leakage Rate: Equal to or less than 0.15 cfm/sf (0.0456 m³min/m²) of building shell at 4.935 atmospheres (50 Pascal) as adjusted for temperature (ΔT)
- b. Locate and repair leaks identified during field-testing. Re-test and reseal until tests pass.

3.3 CLEANING, MAINTENANCE AND PROTECTION

- A. Provide Progress Cleaning, Waste Management, and Provide Final Cleaning per DIVISION 01 requirements.
- B. Provide Initial Maintenance per manufacturer's recommendations.

3.4 CLOSEOUT ACTIVITIES

- A. Substantial Completion Requirements per DIVISION 01.

END OF SECTION

NOTE: Please [contact us](#) with comments, additions and deletions about this GuideSpec so we can make it better.

VERMONT SUSTAINABLE JOBS FUND

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RED NOTE: Be sure to obtain the latest version of this Guide Specification.

This Guide Specification is not a completed document ready for use. It must be edited deleting, adding, or modifying text, as required to suit project requirements.

The professional stamping and the contracting parties of the Contract Documents are responsible for the accuracy of issued project specifications, including any use of this Guide Specification.

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