# Part 1 General

# Section Includes

## Ultimate Wood Bi-Fold door top hung system and frame complete with hardware, glazing, weather strip, grilles-between-the-glass, simulated divided lite, raised/flat panels, trim, attachments, and accessories

# Construction Specification Institute (CSI) MasterFormat Numbers and Titles

## Section 01 33 00 – Submittal Procedures: Shop Drawings, Product Data, and Samples

## Section 01 62 00 – Product Options

## Section 01 63 00 – Product Substitution Procedures

## Section 01 65 00 – Product Delivery

## Section 01 66 00 – Product Storage and Handling Requirements

## Section 01 71 00 – Examination and Preparation

## Section 01 73 00 - Execution

## Section 01 74 00 – Cleaning and Waste Management

## Section 01 75 00 – Starting and Adjusting

## Section 01 76 00 – Protecting Installed Construction

## Section 06 22 00 – Millwork: Wood trim other than furnished by door and frame manufacturer

## Section 07 92 00 – Joint Sealants: Sill sealant and perimeter caulking

## Section 08 71 00 – Door Hardware: Hardware other than furnished by door and frame manufacturer

## Section 09 90 00 – Paints and Coatings: Paint and stain other than finish

# References

## American Society for Testing and Materials (ASTM):

### E2190: Specification for Sealed Insulated Glass Units

### C1036: Standard Specification for Flat Glass

### E2112: Standard Practice for Installation of Exterior Windows, Doors, and Skylights

## American Architectural Manufacturer’s Association / Window and Door Manufacturer’s Association (AAMA / WDMA/CSA):

## WDMA I.S.4: Industry Standard for Water Repellent Preservative Treatment for Millwork

## Sealed Insulating Glass Manufacturer’s Association / Insulating Glass Certification Council (SIGMA/IGCC)

# System Description

## Design and Performance Requirements: Non-Rated, Non-Certified

# Submittals

## Shop Drawings: Submit shop drawings under provision of CSI MasterFormat Section 01 33 00.

## Product Data: Submit product data for certified options under provision of CSI MasterFormat Section 01 33 00. Product performance rating information may be provided via quote, performance rating summary (NFRC Data), or certified performance grade summary (WDMA Hallmark data).

## Samples:

### Submit corner section under provision of CSI MasterFormat Section 01 33 00.

### Specified performance and design requirements under provisions of CSI MasterFormat Section 01 33 00.

# Quality Assurance

## Requirements: consult local code for IBC [International Building Code] and IRC [International Residential Code] adoption year and pertinent revisions

# Delivery

## Comply with provisions of CSI MasterFormat Section 01 65 00

## Deliver in original packaging and protect from weather

# Storage and Handling

## Prime and seal wood surfaces, including to be concealed by wall construction, if more than thirty (30) days will expire between delivery and installation. Seal unfinished top and bottom edges of door panels if panels are stored at the job site more than one (1) week.

## Store door panels flat on a level surface in a clean and dry storage area above ground to protect from weather under provision of CSI MasterFormat Section 01660

## Condition doors to local average humidity before hanging

# Warranty

# **Complete and current warranty information is available at marvin.com/warranty. The following summary is subject to the terms, conditions, limitations and exclusions set forth in the Marvin Windows and Door Limited Warranty and Products in Coastal Environments Limited Warranty Supplement:**

## Clear insulating glass with stainless steel spacers is warranted against seal failure caused by manufacturing defects and resulting in visible obstruction through the glass for twenty (20) years from the original date of purchase. Glass is warranted against stress cracks caused by manufacturing defects from ten (10) years from the original date of purchase.

## Interior finish is warranted to be free from finish defects for a period of five (5) years from the original date of purchase.

## Hardware another non-glass components are warranted to be free from manufacturing defects for ten (10) years from the original date of purchase.

# Part 2 Products

# Manufactured Units

## Description: Ultimate Wood Bi-Fold Door/s, as manufactured by Marvin, Ripley, Tennessee.

### 1 to 16 panel options

### 81 configurations including: Left, right, or center operation

### Some configurations include an access panel like traditional swinging door

# Frame Description

## Frame consists of jamb(s), head jamb, and sill – Constructed of finger-joined, edge-glued core with clear pine to the interior and extruded aluminum to the exterior. Finger-joint material may be used on header lengths over 12’. Alternative wood species include Mahogany, and Vertical Grain Douglas Fir. Standard frame head and jambs are pine core with alternate species veneer.

### Kiln-dried to moisture content no greater than twelve (12) percent at time of fabrication

### Water repellant, preservative treated in accordance with WDMA I.S.4.

## Jamb depth: 5 9/16” (142mm)

## Interior frame thickness: 1 1/16” (27mm)

## Sills

### Performance Sill is glass-filled polyurethane (beige or bronze). Extruded aluminum sill insert. 6 21/32” (169mm) wide x 2 5/32” (55mm) high

### Low profile aluminum (separated by thermal break) sill: 6 21/32” (169mm) wide x 1 7/64” (55mm) high – no performance warranty for air/water infiltration

### Floor channel: Extruded aluminum; 1 49/64” (45mm) wide x 1 7/64” (28mm) high – no performance warranty for air/water infiltration

# Panel Description

## Constructed of finger-jointed, edge-glued core with clear pine to the interior and extruded aluminum to the exterior.

### Kiln-dried to moisture content no greater than twelve (12) percent at time of fabrication

### Water repellant, preservative treated in accordance with WDMA I.S.4.

## Panel thickness: 2 1/4” (57)

## Standard interior wood cope sticking: Ogee (with the option of Square)

## Top and bottom rail height and stile width: 4 ¾” (121) – For top and bottom rail material: Finger-join core is used for Pine, Vertical Grain Douglas Fir, Mahogany and Cherry. LVL is used for White Oak. For stiles material: LVL is used for all species.

## Panel corners glued and fastened with 5/8” x 4” (16mm by 102mm) fluted hardwood dowels. Removable interior vinyl glazing stops with non finger-jointed wood covers. No visible fasteners.

# Glazing

## Select quality complying with ASTM C 1036. Shall comply with 16 CFR 1201 Safety Standard for Architectural Glazing Materials.

## Glazing Method: Tempered insulating glass (altitude adjusted)

## Glass fill: Air with capillary tubes, Argon

## Optional glazing: Clear, Bronze, Gray, Reflective Bronze, Tempered, Obscure, Laminated, Low E2, Low E3, Low E1, Low E2/ERS, Low E3/ERS

## Tri-pane glass(TG): Tripane Low E1, Tripane Low E2, Tripane Low E3.

## This glass type is dependent on sash thickness and availability. Consult ADM or OMS for availability

## Glazing Seal: Silicone bedding exterior

# Finish

## Interior/Exterior Finish Options:

### Prime: Factory-applied water-borne acrylic primer. Meets WDMA TM-11 requirements.

### Painted Interior Finish. Factory-applied water-borne acrylic enamel. Available on Pine product only. Available in White or Designer Black. Meets WDMA TM-14 requirements.

### Factory-applied water-borne acrylic enamel clear coat. Applied in two separate coats with light sanding between coats. Available on Pine, Mahogany, Vertical Grain Douglas Fir, Mixed Grain Douglas Fir (frame only), Cherry, White Oak. Meets WDMA TM-14 requirements.

### Factory-applied water-borne stain. Stain applied over a wood (stain) conditioner. A water-borne acrylic enamel clear coat applied in two separate coats, with light sanding coats, applied over the stain. Available on Pine, Mahogany, Vertical Grain Douglas Fir, Mixed Grain Douglas Fir (frame only), Cherry, White Oak. Colors available: Wheat, Honey, Hazelnut, Leather, Cabernet, or Espresso. Meets WDMA TM-14 requirements.

# Hardware

## Hinges

### Includes pivot, hinge, offset hinge, end carrier and intermediate sets

### Material: Aluminum hinge leaves with stainless steel carriers

### Painted finish: White, Satin Nickel, Dark Bronze

### Anodized finish: Matte Black

### Optional mixed finishes available

## End carrier: Top end carrier and bottom end guide

## Intermediate carrier set: Intermediate carrier, concealed intermediate guide

## Handle set (Consumer Choice): Contemporary default, Optional Traditional handle set

## Multi-point locking system applied to active panel(s)

### 2 3/8” (61mm) backset with latch engagement

### 3 locking points: deadbolt, sill bolt, and head bolt

### Contemporary handle set finish options (Default) – available in Painted finishes (Matte Black, Dark Bronze) and Metal finishes (Oil Rubbed Bronze PVD, Satin Nickle PVD). Architectural Hardware available in all finishes except brass.

### Traditional handle set finish options (Optional) – available in Painted finishes (White, Dark Bronze, Matte Black) and Metal finishes (Oil Rubbed Bronze, Oil Rubbed Bronze PVD, Satin Nickle PVD). Architectural Hardware available in all finishes except brass.

## Folding Panel Handle

### Interior Active pull – Low profile mounted handle provides a 90-degree rotational action that engages/disengages the locking points on the panel. Handles are non-handed

### Material: Zinc.

### Available colors: Painted: Matte Black, Dark Bronze, White, or Plated: Satin Nickel

## Magnetic door catch assembly: Field applied only

### Housing available in Stone White, Bronze or Black, with black magnet

# Insect Screen

## Scenic Door Ultimate Sliding Screen is optional

### Interior application only.

## Frame Colors

### Available in four standard colors: White, Bronze, Black, and clear anodized. Options: Screen Sill will default to the screen frame color, but screen sill can be any of the three colors.

### Handle pull colors: Black or White

## Mesh

### Material: Vinyl-coated polyester

### Color: Charcoal

## Sill: Aluminum sill with Rubber Insert

## Size and Configurations

### Uni-Directional, opens from left to right or right to left. Screen is handed and dependent on installation method. Maximum Screen Frame OM Width is 152 17/64” (3868mm).

### Bi-Parting, two screens open from each side and meet together. Maximum Screen Frame OM Width is 296 17/64” (7524 mm). Maximum Screen Frame OM Height for all configurations is 125 5/32” (3179mm).

# Weather Strip

## All units are constructed with vinyl weather strip at all panel perimeter joins. Weather strip exposed to the exterior will be a UV (ultraviolet) resistant materials

## Sill weather strip – foam-filled leaf. Available colors: Beige for beige sill, Black for bronze sill

## Jamb and Head Jamb weather strip – foam-filled leaf. Available colors: Beige or Black

## Panel weather strip:

### Bottom rail cap weather strip – foam-filled leaf. Available colors: Beige (for beige performance sills), Beige (for clear anodized low profile sill), Black (for bronze sills)

### Top rail cap weather strip – Bulb. Available colors: Beige or Black.

### Stile weather strip – Bulb (bi-parting swinging panel), Foam-filled bulb (exterior), Foam-filled leaf (exterior), Foam-filled leaf (interior), Rigid vinyl (bi-parting inactive panel). Available colors: Beige or Black.

## Astragal weather strip – Bulb. Available colors: Beige or Black)

# Simulated Divided Lites (SDL)

## 5/8” (15mm) wide, 7/8” (22mm) wide, 1 1/8” (29mm) wide, 1 15/16” (49mm) wide

## With or without spacer bars

## Finish: Match panel finish

## Sticking

### Standard: Ogee

### Optional: Square

## Pattern: Rectangular, Custom lite layout

## Muntins: Pine, Mixed Grain Douglas Fir, White Oak, Cherry, Mahogany, Vertical Grain Douglas Fir

## Muntins adhere to glass with double coated acrylic foam tape

# Grilles-Between-the–Glass (GBG)

## 23/32” contoured aluminum bar

### Exterior Colors: Stone White. The use of different types of glazing may alter the exterior GBG color appearance

### Interior Color: Stone White is the default. Optional colors: Bronze, Pebble Gray, Sierra White, Ebony (only available with Ebony exterior).

## Optional flat aluminum bar

### Contact your Marvin representative

## Pattern: Rectangular, cottage, custom lite layout

#  Raised or Flat Panels

## Extira® panel for wood exterior or interior. Constructed of medium density fiberboard (MDF) core with laminate veneer to interior and exterior. Available bare wood or selected interior finish.

## Utilizes 4 ¾” intermediate rail. Visible panel height is 12 1/64” (305mm).

## Raised and Flat panels are only available with traditional (8 1/8”) bottom rail.

# Accessories and Trim

## Installation: Product specific installation instructions shall be provided with each unit

## Exterior Casings

### Standard Brick mould casing,

### Optional flat casing.

# Part 3 Execution

# Examination

## Verification of Condition: Before installation, verify openings are plumb, square and of proper dimensions as required in CSI MasterFormat Section 01 71 00. Report frame defects or unsuitable conditions to the General contractor before proceeding.

## Acceptance of Condition: Beginning on installation confirms acceptance of existing conditions.

# Installation

## Comply with CSI MasterFormat Section 01 73 00.

## Assemble and install window/door unit(s) according to manufacturer’s instruction and reviewed shop drawing.

## Install sealant and related backing materials at perimeter of unit or assembly in accordance with CSI MasterFormat Section 07 92 00 Joint Sealants. Do not use expansive foam sealant.

## Install accessory items as required.

## Use finish nails to apply wood trim and mouldings.

# Field Quality Control

## Remove visible labels and adhesive residue according to the manufacturer’s instruction.

## Unless otherwise specified, air leakage resistance tests shall be conducted at a uniform static pressure of 75 Pa (~1.57 psf). The maximum allowable rate of air leakage shall not exceed 2.3 L/sm2 (~0.45 cfm/ft2).

## Unless otherwise specified, water penetration resistance testing shall be conducted per AAMA 502 and ASTM E1105 at 2/3 of the fenestration products design pressure (DP) rating using “Procedure B” – cyclic static air pressure difference. Water penetration shall be defined in accordance with the test method(s) applied.

# Cleaning

## Remove visible labels and adhesive residue according to manufacturer’s instruction.

## Leave windows and glass in a clean condition. Final cleaning as required in CSI MasterFormat Section 01 74 00.

# Protecting Installed Construction

## Comply with CSI MasterFormat Section 07 76 00.

## Protecting windows from damage by chemicals, solvents, paint or other construction operations that may cause damage.

End of Section