ICC-ES Evaluation Report

ESR-5265

Reissued April 2025

Subject to renewal April 2026

This report also contains:

- **City of LA Supplement**
- **CA Supplement**
- **FL Supplement**

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES Section: 06 05 23—Wood, Plastic and Composite Fastenings	REPORT HOLDER: OMG, INC	EVALUATION SUBJECT: MVP MULTIPURPOSE WOOD SCREW	

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018 and 2015 *International Building Code*® (IBC)
- 2021, 2018 and 2015 *International Residential Code*® (IRC)

Properties evaluated:

- Structural
- Corrosion resistance

2.0 USES

The MVP Multipurpose Wood Screw is used in wood-to-wood connections that are designed in accordance with the IBC. For structures regulated under the IRC, the screws may be used where an engineered design is submitted in accordance with IRC Section R301.1.3. The screws are intended for use in the Exposure Conditions shown in Table 6.

3.0 DESCRIPTION

3.1 General:

The MVP Multipurpose Wood Screw is a proprietary dowel-type threaded fastener designed to be installed in wood without a predrilled hole. The screw is partially threaded. Screw lengths of 2 inches (51 mm) or greater have a reamer knurl between the thread and the smooth shank. The screw tip has a double thread. See Table 1 for product dimensions and Figure 1 for an image of the screw.

3.2 Material:

The MVP Multipurpose Wood Screw is formed from carbon steel wire complying with the specifications in the manufacturer's quality documentation. The screw is coated with a proprietary coating system, designated as ProjectLife™ Coating, and is black in color.

4.0 DESIGN AND INSTALLATION

4.1 Design:

The design values in this report are intended to aid the designer in meeting the requirements of IBC Section 1604.2. For connections not completely described in this report, determination of the suitability of the MVP Multipurpose Wood Screw for the specific application is the responsibility of the designer and is outside the

scope of this report. The designer is responsible for determining the available strengths for the connection, considering all applicable limit states, and for considering serviceability issues.

4.1.1 Screw Strength: Allowable screw shear and tension strengths (ASD), design screw shear and tension strengths (LRFD) and measured bending yield strength for the screws are shown in Table 2.

4.1.2 Reference Withdrawal and Pull-through Design Values: Reference withdrawal (W) design values (ASD) in pounds per inch of thread penetration for screws installed perpendicular to the grain of the wood member and reference head pull-through (W_H) design values (ASD) are shown in Table 3.

4.1.3 Two-member Lateral Wood-to-wood Connections Based on Testing: Reference lateral design values (ASD) for two-member wood-to-wood connections based on testing are shown in Table 4.

4.1.4 Adjustments to Reference Design Values: The reference design values must be adjusted in accordance with the requirements for dowel-type fasteners in Section 11.3 of the NDS, to determine allowable loads for use with ASD and/or design loads for use with LRFD. The reference design values must also be adjusted in accordance with Section 12.5 of the NDS, as applicable. When the capacity of a connection is controlled by the fastener strength, the allowable connection strength must not be increased by the adjustment factors specified in the NDS.

4.1.5 Governing Design Values: The allowable lateral load for a two-member, single-screw connection is the lesser of: (a) the reference lateral design value given in Table 4, adjusted by all applicable adjustment factors, and (b) the allowable screw shear strength given in Table 2. The allowable load for a two-member, single-screw connection in which the screw is subject to tension is the least of: (a) the reference withdrawal design load value given in Table 3, multiplied by the embedded thread length, and adjusted by all applicable adjustment factors; (b) the reference head pull-through design value given in Table 3, adjusted by all applicable factors; and (c) the allowable screw tension strength given in Table 2.

4.1.6 Connections with Multiple Screws: Connections made with multiple screws must be designed in accordance with Sections 11.2.2 and 12.6 of the NDS.

4.1.7 Combined Loading: Where the screws are subjected to combined lateral and withdrawal loads, connections shall be designed in accordance with Section 12.4.1 of the NDS.

4.1.8 Capacity Requirements for Wood Members: When designing a connection, the structural members must be checked for load-carrying capacity in accordance with Section 11.1.2 of the NDS, and local stresses within multiple-fastener connections must be checked against Appendix E of the NDS to ensure the capacity of the connection and fastener group.

4.2 Corrosion Resistance:

The MVP Multipurpose Wood Screw may be used in wood treated with waterborne alkaline copper quaternary, type D (ACQ-D) preservatives with a maximum retention of 0.40 pcf (6.4 kg/m³), when subject to the limitations described in Table 6.

4.3 Installation:

The MVP Multipurpose Wood Screw must be installed in accordance with the report holder's published installation instructions and this report. The screws must be installed perpendicular to the grain of the wood member. Screws must be installed with the minimum spacing, end distances, and edge distances needed to prevent splitting of the wood or as noted in Table 5, whichever is more restrictive. The top of the screw head must be flush with the surface of the wood side member. Screws must not be overdriven. Installation must be performed without predrilling. The screws must be installed by turning with a power driver, not by driving with a hammer.

5.0 CONDITIONS OF USE:

The MVP Multipurpose Wood Screw described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 The screws must be installed in accordance with the report holder's published installation instructions and this report. In the case of a conflict between this report and the report holder's instructions, this report governs.

5.2 Calculations and details demonstrating compliance with this report must be submitted to the code official. The calculations and details must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.3 The screws have only been evaluated for design values for use in dry service applications. Design values for use in wet service conditions is outside the scope of this report.

5.4 Use of fasteners in locations exposed to saltwater or saltwater spray is outside the scope of this evaluation report.

5.5 The screws are manufactured under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Dowel-type Threaded Fasteners Used in Wood (AC233), dated February 2022.

6.2 Data in accordance with the ICC-ES Acceptance Criteria for Corrosion-resistant Fasteners and Evaluation of Corrosion Effects of Wood Treatments (AC257), dated October 2009 (editorially revised January 2021).

7.0 IDENTIFICATION

7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-5265) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.

7.2 In addition, the packaging for the screws is labeled with the product name, the fastener designation, the nominal fastener size and length and the coating designation.

7.3 The report holder's contact information is the following:

OMG, INC
153 BOWLES ROAD
AGAWAM, MASSACHUSETTS 01001
(413) 789-0252
www.fastenmaster.com

D = Outside thread diameter
D_H = Diameter of fastener head or integral washer
D_r = Minor thread (root) diameter
D_s = Unthreaded shank diameter
$F_{yb,test}$ = Average specified bending yield strength seen in testing
L = Fastener length measured from the top of the head to the tip
$L_{emb,l}$ = Minimum required embedded thread length, including tip, applicable to tabulated lateral values
$L_{emb,w}$ = Minimum required embedded thread length, including tip, applicable to tabulated withdrawal values
$L_{min,l}$ = Minimum screw length applicable to tabulated lateral design values
L_{thread} = Length of thread, including tip
L_{tip} = Length of tip
N_a = Allowable tension strength of the fastener for use in ASD
N_u = Design tension strength of the fastener, for use in LRFD
SG_{NDS} = Assigned specific gravity in accordance with Table 12.3.3A of the NDS
$t_{s,w}$ = Thickness of wood side member
V_a = Allowable shear strength of the fastener for use in ASD
V_u = Design shear strength of the fastener, for use in LRFD
W = Reference withdrawal design value
W_H = Reference head pull-through design value
Z = Reference lateral design value

TABLE 1—MVP MULTIPURPOSE WOOD SCREW DIMENSIONS

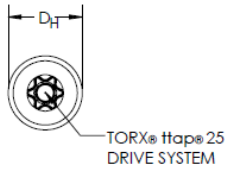
FASTENER DESIGNATION	D_s (inch)	D (inch)	D_r (inch)	D_H (inch)	HEAD RECESS TYPE AND SIZE	L (inch)	L_{thread} (inch)	L_{tip} (inch)
MVP112	0.145	0.195	0.128	0.370	TORX® ttap® 25	1.50	1.00	0.275
MVP002						2.00	1.00	
MVP212						2.50	1.38	
MVP003						3.00	1.38	
MVP312						3.50	1.75	
MVP004						4.00	2.00	

For SI: 1 inch = 25.4mm

TABLE 2— MVP MULTIPURPOSE WOOD SCREW STEEL STRENGTHS

FASTENER DESIGNATION	F_{yb} (psi)	ALLOWABLE STEEL STRENGTHS (ASD) (lbf)		DESIGN STEEL STRENGTHS (LRFD) (lbf)	
		N_a	V_a	N_u	V_u
MVP	157,700	827	483	1,241	724

For SI: 1 lbf = 4.45 N, 1 psi = 6.89 kN,



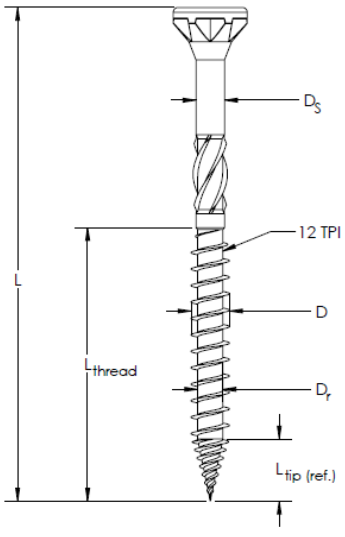


FIGURE 1—TYPICAL MVP MULTIPURPOSE WOOD SCREW

TABLE 3— REFERENCE WITHDRAWAL (W) AND PULL-THROUGH (W_H) DESIGN VALUES

FASTENER DESIGNATION	$L_{emb,w}$ (inches)	W for SG_{NDS} of:[1,2] (lbf/inch)			$t_{s,w}$ (inches)	W_H for SG_{NDS} of: (lbf)		
		0.42	0.50	0.55		0.42	0.50	0.55
MVP	1.38	110	143	175	1 1/2	132	179	185

For SI: 1 inch = 25.4 mm, 1 lbf = 4.45 N, 1 lbf/inch = 175 N/m.

[1]The unit reference withdrawal capacity must be multiplied by the embedded thread length, including the tip.
[2]Tabulated values are applicable to screws installed perpendicular to the grain of the main member.

TABLE 4— REFERENCE LATERAL DESIGN VALUES (Z) FOR SINGLE SHEAR (TWO-MEMBER) WOOD-TO-WOOD CONNECTIONS[1]

FASTENER DESIGNATION	$L_{min,l}$ (inches)	$t_{s,w}$ (inches)	$L_{emb,l}$ (inches)	REFERENCE LATERAL DESIGN VALUE PARALLEL TO GRAIN ($Z_{\parallel}$) FOR SG_{NDS} OF: (lbf)		
				0.42	0.50	0.55
MVP	2	3/4	1 1/4	103	121	139
	3	1 1/2	1 1/2	133	162	162

For SI: 1 inch = 25.4 mm, 1 lbf = 4.45 N.

[1]Tabulated values apply to connections where both members have the same SG_{NDS}.

TABLE 5—CONNECTION GEOMETRY REQUIREMENTS FOR FASTENERS INSTALLED PERPENDICULAR TO THE GRAIN OF WOOD MEMBERS AND INCLINED FASTENERS[1,2]

CONDITION		MINIMUM DISTANCE OR SPACING	
		SG_{NDS} < 0.50	SG_{NDS} ≥ 0.50
End distance (see Figure 2)	Loading toward end, $a_{end,1}$	15D	20D
	Loading perpendicular to grain or away from end, $a_{end,2}$	10D	15D
	Axial loading, $a_{end,2}$	10D	10D
Edge distance (see Figure 2)	Loading toward edge, $a_{edge,1}$	10D	12D
	Loading parallel to grain or away from edge, $a_{edge,2}$	5D	7D
	Axial Loading, $a_{edge,2}$	4D	4D
Spacing between fasteners, parallel to grain (see Figure 3)	Loading parallel to grain, a_1	15D	15D
	Loading perpendicular to grain, a_1	5D	7D
	Axial loading, a_1	7D	7D
Spacing between fasteners, perpendicular to grain (see Figure 3)	Lateral loading, a_2	5D	7D
	Axial loading, a_2	4D	4D

[1]End distances, edge distances and fastener spacing must be sufficient to prevent splitting of the wood, or as required by this table, whichever is the more restrictive.
[2]Wood member stresses must be checked in accordance with Section 11.1.2 and Appendix E of the NDS, and end distances, edge distances and fastener spacing may need to be increased accordingly.

TABLE 6—APPLICABLE EXPOSURE CONDITIONS[1]

EXPOSURE CONDITION	TYPICAL APPLICATIONS	LIMITATIONS
1	Treated wood in dry use applications	Limited to use where equilibrium moisture content of the chemically treated wood meets the dry service conditions as described in the NDS.
3	General construction	Limited to freshwater and chemically treated wood exposure, i.e., no saltwater exposure.

[1]Treated wood refers to the specific wood treatment and retention level described in Section 4.2.

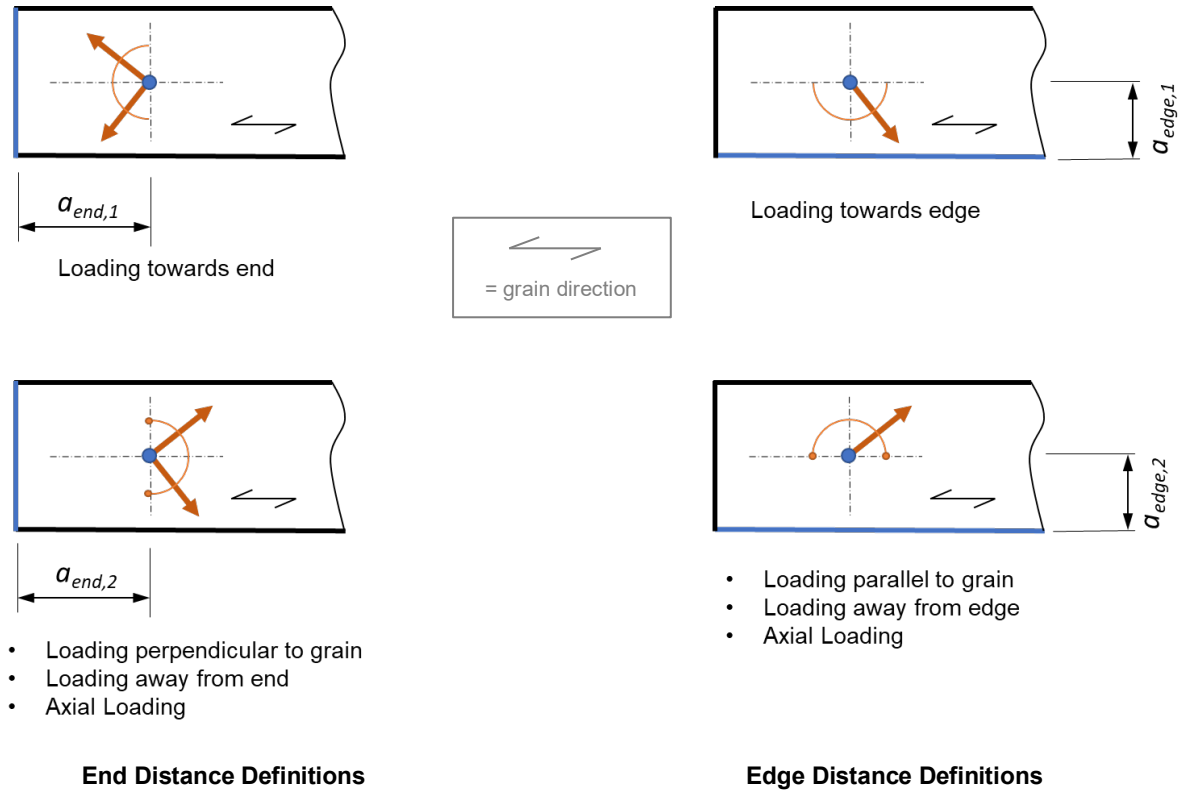


FIGURE 2—END AND EDGE DISTANCE DEFINITIONS FOR SCREWS INSTALLED PERPENDICULAR TO GRAIN

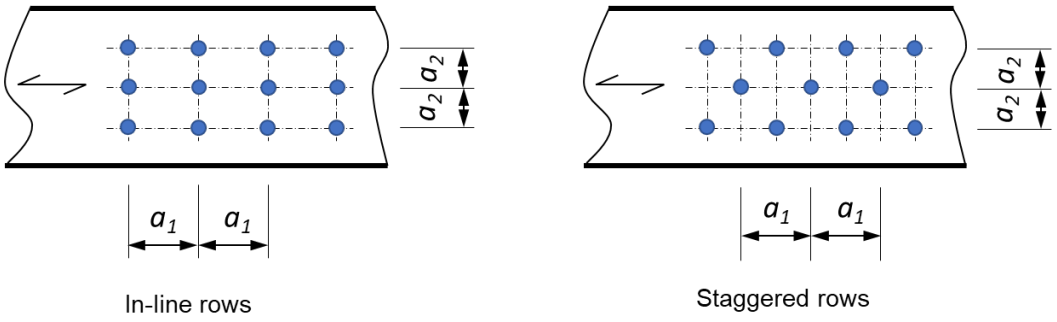


FIGURE 3—SPACING DEFINITIONS FOR SCREWS INSTALLED PERPENDICULAR TO GRAIN

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 05 23—Wood, Plastic, and Composite Fastenings

REPORT HOLDER:

OMG, INC.

EVALUATION SUBJECT:

MVP MULTIPURPOSE WOOD SCREW

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the MVP Multipurpose Wood Screws, described in ICC-ES evaluation report ESR-5265, have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2023 *City of Los Angeles Building Code (LABC)*
- 2023 *City of Los Angeles Residential Code (LARC)*

2.0 CONCLUSIONS

The MVP Multipurpose Wood Screws, described in Sections 2.0 through 7.0 of the evaluation report ESR-5265, comply with the LABC Chapter 23, and the LARC, and are subjected to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The MVP Multipurpose Wood Screws described in this evaluation report must comply with all of the following conditions:

- All applicable sections in the evaluation report ESR-5265.
- The design, installation, conditions of use and identification of the MVP Multipurpose Wood Screws are in accordance with the 2021 *International Building Code®* (IBC)provisions noted in the evaluation report ESR-5265.
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16, 17, and 23, as applicable.
- The screws are not approved for installations in contact with fire-retardant treated lumber in exterior applications.
- Under the LARC, an engineered design in accordance with LARC Section R301.1.3 must be submitted.

This supplement expires concurrently with the evaluation report, reissued April 2025.

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 05 23—Wood, Plastic and Composite Fastenings

REPORT HOLDER:

OMG, INC

EVALUATION SUBJECT:

MVP MULTIPURPOSE WOOD SCREW

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the MVP Multipurpose Wood Screw, described in ICC-ES evaluation report ESR-5265, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- *2022 California Building Code* (CBC)

For evaluation of applicable Chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- *2022 California Residential Code* (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The MVP Multipurpose Wood Screw, described in Sections 2.0 through 7.0 of the evaluation report ESR-5265, complies with CBC Chapter 23, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 16, 17 and 23, as applicable.

2.1.1 OSHPD:

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

2.2 CRC:

The MVP Multipurpose Wood Screw, described in Sections 2.0 through 7.0 of the evaluation report ESR-5265, complies with CRC Chapter 3, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of CRC Chapter 3, as applicable.

This supplement expires concurrently with the evaluation report, reissued April 2025.

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 05 23—Wood, Plastic, and Composite Fastenings

REPORT HOLDER:

OMG, INC.

EVALUATION SUBJECT:

MVP MULTIPURPOSE WOOD SCREW

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that MVP Multipurpose fasteners, described in ICC-ES evaluation report ESR-5265, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2020 *Florida Building Code—Building*
- 2020 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The MVP Multipurpose fasteners, described in Sections 2.0 through 7.0 of the evaluation report ESR-5265, comply with the *Florida Building Code—Building* and the *Florida Building Code—Residential*. The design requirements must be determined in accordance with the *Florida Building Code—Building* and the *Florida Building Code—Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-5265 for the 2018 *International Building Code®* meet the requirements of the *Florida Building Code—Building* and the *Florida Building Code—Residential*, as applicable.

Use of the MVP Multipurpose fasteners for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and the *Florida Building Code—Residential* has not been evaluated, and is outside the scope of this evaluation report.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report, reissued April 2025.