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### HARDY FALL PROTECTION SYSTEMS,

INC. 4288 Clubhouse Drive Somis, California 93066 805-404-5196 http://www.hardyfps.com garylhardy1@gmail.com

# HARDY TIE BACK DEVICES, HARDY TIE BACK SADDLES, AND HARDY OUTRIGGER SYSTEMS

**CSI Sections:** 

05 50 00 Metal Fabrications 06 05 23 Wood, Plastic, and Composite Fastenings 11 81 29 Facility Fall Protection

#### **1.0 RECOGNITION**

The Hardy Fall Protection Systems, Inc. Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger Systems, recognized in this report have been evaluated for use as roof-level tie-back systems and scaffolding supports. The structural and durability properties of the Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger Systems comply with the intent of the provisions of the following codes and regulations:

- 2021, 2018, 2015, and 2012 International Building Code<sup>®</sup> (IBC)
- 2021, 2018, 2015, and 2012 International Residential Code<sup>®</sup> (IRC)
- Code of Federal Regulations Title 29, Subtitle B, ٠ Chapter XVII, Part 1926, August 30, 1996
- 2022 California Building Code (CBC) attached • Supplement
- 2022 California Residential Code (CRC) attached Supplement
- 2023 City of Los Angeles Building Code (LABC) attached Supplement
- 2023 City of Los Angeles Residential Code (LARC) attached Supplement

#### 2.0 LIMITATIONS

Use of the Hardy Tie Back Devices, Hardy Tie Back Saddles and Hardy Outrigger Systems recognized in this report are subject to the following limitations:

**2.1** The Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger Systems shall be manufactured, identified, and installed in accordance with the manufacturer's published installation instructions and this report. A copy of the instructions shall be available at the jobsite continuously during installation. If there is a conflict between this report and the manufacturer's published installation instructions, the more restrictive prevails.

**2.2** Calculations showing compliance with this report shall be submitted to the building official. The calculations shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

2.3 The Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger Systems shall be designed for installation on a specific building roof framing system by a registered design professional and approved by the building official.

2.4 Connected wood members and fasteners shall comply with Sections 4.2.2 and 4.2.3 of this report, respectively.

2.5 The Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger Systems shall not be used simultaneously for two different setups.

2.6 Each Hardy Tie Back Device and Hardy Tie Back Saddle shall be designed to support one worker only.

2.7 Use of Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger Systems with fire-retardant-treated or preservative-treated lumber shall be in accordance with Section 4.2.1 of this report. The use of fasteners with fireretardant-treated or preservative-treated lumber shall be in accordance with Section 4.2.3 of this report.

**2.8** The Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger Systems are fabricated in Santa Ana, California.

#### **3.0 PRODUCT USE**

#### 3.1 Hardy Tie Back Devices and Hardy Tie Back Saddles

3.1.1 General: The Hardy Tie Back Devices and Hardy Tie Back Saddles are roof tie backs for anchoring workers or suspended scaffolding when access to the building's exterior façade is necessary or required for maintenance. Buildings constructed three stories or 36 feet (10.9 m) or more in height above the grade plane shall have eyebolts installed at the roof level for securing or tying back suspended scaffold hooks or clamps and safety lines. Each system consists of devices and fasteners. The device is fastened to wood members. Fasteners include screws or bolts placed through the device holes into the supporting structure.



The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.

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#### 3.1.2 Design:

**3.1.2.1 Capacity:** When installed in accordance with this report, the Hardy Tie Back Devices and Hardy Tie Back Saddles achieve a 5,000-pound (22.2 kN) peak load without permanent deformation, in the vertical and horizontal directions. This result complies with ASME A120.1-2014, Safety Requirements for Powered Platforms and Traveling Ladders and Gantries for Building Maintenance Section 5.1, Window Cleaning Safety Section 9.1, and the Code of Federal Regulations Title 29, Subtitle B, Chapter XVII, Part 1910.140(c)(13)(i).

**3.1.2.2** Allowable Stress Design (ASD): In compliance with 2021 IBC Section 1607.11.4, 2018 IBC Section 1607.10.4, 2015 IBC Section 1607.9.4, and Section 4.6.5 of ASCE/SEI 7-16, the ASD level strength for the Hardy Tie Back Device and Hardy Tie Back Saddle is 3,100 pounds (13.8 kN) maximum in the horizontal and vertical directions. The eyebolt shall be oriented parallel or perpendicular to the horizontal load. When placed on and fastened to the structural supports, the device shall be designed to develop the 3,100 pounds (13.8 kN) ASD strength. Fastening to wood is based on  $C_D = 1.5$  for a 30-minute duration of load as recommended by the US Occupational Safety and Health Administration (OSHA) in accordance with the ANSI/AWC National Design Specification for Wood Construction (NDS). The design shall comply with IBC Chapter 23 and ANSI/AWC NDS.

#### 3.1.3 Installation:

3.1.3.1 General: The Hardy Tie Back Devices and Hardy Tie Back Saddles shall be installed in accordance with this report, the IBC or IRC, ASME A120.1-14, and the manufacturer's installation instructions. Where conflicts occur, the more restrictive shall govern. Installation shall be performed only by qualified installers approved by Hardy Fall Protection Systems, Inc. The eyelet shall be oriented to be perpendicular to the structural framing and parallel to the blocking framing. The Hardy Tie Back Devices and Hardy Tie Back Saddles shall be placed a minimum of six feet (1829 mm) from the edge of the roof to minimize the angle on the device except as otherwise determined by a registered design professional. In addition, placing the device at the center of the roof allows it to be used from each side of the roof. The Hardy Tie Back (HTB) devices are available with post heights from 4 inches (102 mm) to 32 inches (813 mm). The installation requirements for intermediate post heights shall be based on the next highest post height shown in Table 1 of this report.

**3.1.3.2 Existing Construction:** Existing wood framing and decking shall be repaired or replaced if damaged. Where portions of the roofing are altered to allow installation of the Hardy Tie Back Devices or Hardy Tie Back Saddles, these areas shall be repaired. Wood species and grade shall be verified as complying with provisions in Section 4.2.2 and Table 1 or Table 2 of this report.

**3.1.3.3 Fastening:** The Hardy Tie Back Device and Hardy Tie Back Saddle shall be fastened either by screws or bolts directly to the supporting wood framing. Table 1 or Table 2 of this report provides fastening to wood framing schedule. Fastener installation shall conform to Section 11.1 of the ANSI/AWC National Design Specification for Wood Construction (NDS) and, as applicable, the evaluation report for the fastener.

#### 3.2 Hardy Outrigger System

**3.2.1 General:** The Hardy Outrigger System consists of inboard and outboard saddle bases, two post extensions, and a horizontal beam. The system is used singly or in pairs for suspending working platforms or scaffolding from a building as necessary for maintenance. Building heights are limited to 130 feet (39.6 m) maximum above the grade plane. The saddle bases are fastened to wood members. Fasteners include screws or bolts placed through the base holes into the supporting structure.

#### 3.2.2 Design:

**3.2.2.1 Capacity:** When installed in accordance with this report, the Hardy Outrigger System achieves a 5,000-pound (22.2 kN) peak load applied at the end of the beam without permanent deformation, in the vertical downward directions when installed on a level plane and a maximum three percent slope. This result complies with ASME A120.1-2014, Safety Requirements for Powered Platforms and Traveling Ladders and Gantries for Building Maintenance Section 5.1.1, and Code of Federal Regulations Title 29, Subtitle B, Chapter XVII, Part 1910.140(c)(13)(i). The Hardy Outrigger System resists a 1,250 pounds (5.6 kN) peak lateral load applied to the inward and outward posts.

3.2.2.2 Allowable Stress Design (ASD): In compliance with Code of Federal Regulations Title 29, Subtitle B, Chapter XVII, Part 1926, Subpart L, Section 1926.451(d)(1), the maximum rated load for the hoist supported by the Hardy Outrigger System is 1,250 pounds (5.6 kN) in the vertically downward direction, based on a safety factor of four and the maximum stall load of the hoist is 3,100 pounds (13.8 kN). These loads comply with IBC Section 1607.11.3. When placed on and fastened to the structural supports, the outboard base shall be designed to develop a minimum 5,210 pounds (23.2 kN) downward ASD strength, and the inboard base shall be designed for a minimum 2,080 pounds (9.3 kN) downward load and a minimum 2,080 pounds (9.3 kN) upward load. Fastening to wood is based on  $C_D = 1.5$  for a 30-minute duration of load as recommended by the US Occupational Safety and Health Administration (OSHA). in accordance with the ANSI/AWC NDS. The design shall comply with IBC Chapter 23 and ANSI/AWC NDS. The beam shall be either aluminum and designed in accordance with Chapter 20 of the IBC or steel and designed in accordance with Chapter 22 of the IBC. The beam shall be supplied by others and designed by a design professional to develop the required strengths, subject to approval by the



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building official. The beam connections to the work platform or scaffolding and supporting members are beyond the scope of this report and shall be approved by the building official.

#### 3.2.3 Installation:

B

3.2.3.1 General: The Hardy Outrigger System shall be installed in accordance with this report, the IBC or IRC, ASME A120.1-14, and the manufacturer's installation instructions. Where conflicts occur, the more restrictive shall govern. Installation shall be performed only by qualified installers approved by Hardy Fall Protection Systems, Inc. Beam projections beyond the face of the outboard base are limited to six feet (1828.8 mm) maximum. The distance between the inboard base and the outboard beam segment shall be at least  $1\frac{1}{2}$  times the beam projection length from the outboard base. Each base shall be connected to the structure in accordance with the approved plans. Available postextension heights range from 14 inches (355.6 mm) to 66 inches (1676.4 mm). Each post extension shall be inserted over the tube element of the saddle base to line up the bolt holes and a <sup>3</sup>/<sub>4</sub> inch (19 mm) diameter bolt shall be inserted into the hole and secured with a nut torqued to finger-tight. The horizontal beam is then inserted through the openings in the post extensions and secured in place in accordance with the approved plans. The work platform or scaffolding connections shall comply with approved plans.

**3.2.3.2 Existing Construction:** Existing wood framing and decking shall be repaired or replaced if damaged. Where portions of the roofing are altered to allow installation of the Hardy Outrigger System, these areas shall be repaired. Wood species and grade shall be verified as complying with provisions in Section 4.2.2 and Table 1 or Table 2 of this report.

**3.2.3.3 Fastening:** The Hardy Outrigger System shall be fastened either by screws or bolts directly to the supporting wood framing. Tables 1 and 2 of this report provide fastening to wood framing schedule. Fastener installation shall conform to Section 11.1 of the ANSI/AWC National Design Specification for Wood Construction (NDS) and, as applicable, the evaluation report for the fastener.

**3.3 Periodic Inspection and Testing:** Where required by the building official or structural designer in accordance with IBC Section 1705.1.1, a program for annual inspection and on-site proof loading at intervals as determined by the structural designer, including after any major modification to the equipment, and after any damage has occurred shall be prepared and conform to the following minimum requirements:

- 1. Frequency of inspection and proof loading.
- 2. Proof test procedures shall be prescribed by a registered design professional.
- 3. In-situ tests shall be performed by an approved agency under the direction of the registered design professional and in accordance with IBC Section 1708.

- 4. Proof loads shall be 2,500 pounds (11.1 kN) and maintained for a minimum period of five minutes.
- 5. Proof loads shall be in vertical or horizontal directions.
- 6. A certification record shall be kept for each inspection and test.
- 7. In the event of failure to achieve proof load, the device shall be removed from service.

#### 4.0 PRODUCT DESCRIPTION

**4.1 General:** The Hardy Tie Back Devices (HTB) described in this report are available in five different types. The Hardy Tie Back Saddles (HTB-S) described in this report are available in three different types.

**4.1.1 HTB-16:** The HTB-16 Hardy Tie Back Device is depicted in Figure 1 of this report.

**4.1.2 HTB-24:** The HTB-24 Hardy Tie Back Device is depicted in Figure 2A of this report.

**4.1.3 HTB-24 New:** The HTB-24 New Hardy Tie Back Device is depicted in Figure 2B of this report.

**4.1.4 HTB T24:** The HTB-T24 Hardy Tie Back Device is depicted in Figure 2C of this report.

**4.1.5 HTB-32:** The HTB-32 Hardy Tie Back Device is depicted in Figure 3 of this report.

**4.1.6 HTB-S12:** The HTB-S12 Hardy Tie Back Saddle is depicted in Figure 4 of this report.

**4.1.7 HTB-S18:** The HTB-S18 Hardy Tie Back Saddle is depicted in Figure 5 of this report.

**4.1.8 HTB-S24:** The HTB-S24 Hardy Tie Back Saddle is depicted in Figure 6 of this report.

**4.1.9 HTB-ADJ/CM 6:** The HTB-ADJ/CM 6 Hardy Tie Back Saddle is depicted in Figure 7 of this report.

**4.1.10 ALT HTB-ORB-1:** The ALT HTB-ORB-1 base is depicted in Figure 8 of this report.

**4.1.11 ALT HTB-ORB-2:** The ALT HTB-ORB-2 base is depicted in Figure 9 of this report.

**4.1.12 ALT HTB-SORB-1:** The ALT HTB-SORB-1 base is depicted in Figure 10 of this report.

**4.1.13 ALT HTB-SORB-2:** The ALT HTB-SORB-2 base is depicted in Figure 11 of this report.

**4.1.14 HTB SORB Posts**: The ORX-1 and ORX-2 posts are depicted in Figure 12 of this report. The post slot sizes may be varied to match the beam size.



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**4.1.15 Aluminum or Steel I-Beam:** The beams are supplied by others and may vary in size per the design requirements. The aluminum I-beams shall comply with Chapter 20 of the IBC. The steel I-beams shall comply with Chapter 22 of the IBC.

## 4.2 Materials

**4.2.1 Steel:** The HTB-16, HTB-24, HTB-24 New, and HTB-T24 Hardy Tie Back Devices, and the HTB-S12, HTB-S18, HTB-S24 and HTB-ADJ/CM 6 Hardy Tie Back Saddles described in this report are manufactured from plain steel plates complying with ASTM A36, and plain steel extra strong pipe complying with ASTM A53.

The HTB32 Hardy Tie Back Device described in this report is manufactured from plain steel plates complying with ASTM A36, and round HSS tube plain complying with ASTM A500.

The ALT HTB-ORB-1, ALT HTB-ORB-2, ALT HTB-SORB-1, and ALT HTB-SORB-2 bases described in this report are manufactured from plain steel plates complying with ASTM A36 and plain steel round and rectangular HSS tube complying with ASTM A500 Grade B and extra strong pipe complying with ASTM A53 Grade B.

The ORX-1 and ORX-2 posts described in this report are manufactured from plain steel round and rectangular HSS tubes complying with ASTM A500 Grade B.

The aluminum outrigger I-beams described in this report shall be structural shapes complying with ASTM B209 Alloy 6061-T6.

The steel outrigger I-beams described in this report shall be plain steel structural shapes complying with ASTM A992.

The steel assemblages are provided with a batch hot-dipped galvanized coating in accordance with ASTM A123, with a minimum G60 coating total for both sides for the exposed post, pipe, eye bolt, and cap plate components. Alternatively, a powder coating system may be provided, subject to the approval of the building official. The unexposed plates and skirts are provided with a paint system.

The holder of this report (Hardy Fall Protection Systems, Inc.) or lumber treater shall be contacted for recommendations on minimum corrosion resistance of steel in contact with specific proprietary preservative-treated or fire-retardant-treated lumber.

**4.2.2 Wood:** Wood members to which the Hardy Tie Back Devices and Hardy Tie Back Saddles are connected shall be either sawn lumber or engineered lumber complying with ANSI/AWC National Design Specification for Wood Construction and its Supplement (NDS). Sawn Lumber shall be minimum 0.42 specific gravity and engineered lumber shall be of equivalent specific gravity for bolting or 0.50 for

SDS screws. Lumber receiving screws or bolts shall be a minimum 4 by 10. The thickness (depth) of the wood main member shall be equal to or greater than the length of the fasteners specified by the calculations unless the reduced penetration effect on the load calculation in accordance with the NDS is considered, or as required by the wood member design, whichever is greater.

**4.2.3 Fasteners:** SDS screws shall comply with ICC-ES ESR-2236.

Bolts shall comply with ANSI/ASME B18.2.1 and ASTM A307 when used with the Hardy Roof Tie Back System described in this report and shall have a  $\frac{7}{8}$  inch (22.2 mm) shank diameter, and a  $\frac{3}{4}$  inch (19.1 mm) diameter for the outrigger base to post connection.

Fasteners used in contact with fire-retardant-treated or preservative-treated lumber shall comply with 2021 IBC Section 2304.10.6, 2018 or 2015 IBC Section 2304.10.5, 2012 IBC Section 2304.9.5, or IRC Section R317.3, as applicable. The report holder or lumber treater shall be contacted for recommendations on minimum corrosion resistance and connection capacities of fasteners used with the specific proprietary preservative-treated or fire-retardanttreated lumber.

#### 5.0 IDENTIFICATION

The Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy ORX Posts are color-coded according to height and identified by the Hardy Fall Protection Systems, Inc. name and trademark, product name, the number of bolts and screws, and the evaluation report number (ER-461). In addition to the above, each unit will be labeled with the serialized label that will also include the IAPMO ER-461 evaluation report number. The Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy ORX Posts identification may also use the IAPMO Uniform Evaluation Service Mark of Conformity as shown below:



IAPMO UES ER-461

#### 6.0 SUBSTANTIATING DATA

**6.1** Manufacturer's descriptive literature and installation instructions.

6.2 Reports of physical and mechanical property testing.

**6.3** Reports of load tests.



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**6.4** Test reports are from laboratories in compliance with ISO/IEC 17025.

6.5 Engineering calculations.

6.6 Quality documentation.

#### 7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on the Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger System to assess their conformance to the codes shown in Section 1.0 of this report and documents the product's certification. Products are manufactured at the location noted in Section 2.8 of this report under a quality control program with periodic inspections under the surveillance of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org

Device	Fastener	Fastener Diameter (inch)	Minimum Fastener Length <sup>2</sup>	No. of Fasteners per opposing skirt (total)	Minimum wood member size (nominal)	Minimum Lumber Specific Gravity	Minimum Edge Distance (inch) <sup>3, 5</sup>	Minimum End Distance (inch) <sup>3, 4,6</sup>	
								Т	I
HTB-16	Bolt <sup>7</sup>	7/8	Footnote 2	2(4)	4 by 10 or 2- 2 by 10	0.42	2018 and 2015 NDS Table 12.5.1C	2018 and 2015 NDS Table 12.5.1A	2018 and 2015 NDS Table 12.5.1A
	SDS Screw <sup>8</sup>	0.185	3	6 (12)	4 by 10 or 2- 2 by 10	0.50	1½	3	4
HTB-24	Bolt <sup>7</sup>	7/8	Footnote 2	4 (8)	4 by 10 or 2- 2 by 10	0.42	2018 and 2015 NDS Table 12.5.1C	2018 and 2015 NDS Table 12.5.1A	2018 and 2015 NDS Table 12.5.1A
	SDS Screw <sup>8</sup>	0.185	3	8 (16)	4 by 10 or 2- 2 by 10	0.50	1½	3	4
ALT HTB-24, ALT HTB ORB1, and ALT HTB ORB2	SDS Screw <sup>8</sup>	0.185	3	16 (32)	4 by 10 or 2- 2 by 10	0.50	11/2	3	4
HTB-T24	SDS Screw <sup>8</sup>	0.185	3	16 (32)	4 by 10 or 2- 2 by 10	0.50	1½	3	4
НТВ-32	Bolt <sup>7</sup>	7⁄8	Footnote 2	4(8)	4 by 10 or 2- 2 by 10	0.42	2018 and 2015 NDS Table 12.5.1C	2018 and 2015 NDS Table 12.5.1A	2018 and 2015 NDS Table 12.5.1A
	SDS Screw <sup>8</sup>	0.185	3	10 (20)	4 by 10 or 2- 2 by 10	0.50	11/2	3	4
HTB- ADJ/CM6	SDS Screws	0.185	3	8 (16)	4 x or 2.2 x	0.50	1-1/2	3	4

# TABLE 1 HTB– Fastening Requirements<sup>1</sup>

For SI: 1 inch = 25.4 mm

<sup>1.</sup> The HTB Devices shall be placed between structural framing with eyelet oriented perpendicular and fastened to the framing through the skirt. Wood blocking shall be installed perpendicular to the structural framing adjacent to the device (Figures 1, 2, and 3 of this report).

<sup>2.</sup> Bolts shall be long enough for a minimum thread protrusion of one full thread beyond the face of the nut.

<sup>3.</sup> Edge distances and end distances may need to be increased, as applicable, to prevent wood splitting.

<sup>4.</sup> The end distance is for loading perpendicular to grain ( $\perp$ ) or parallel to grain ( $\parallel$ ).

<sup>5.</sup> Minimum bolt edge distance shall comply with Table 11.5.1C of the 2012 NDS as applicable.

<sup>6</sup> Minimum bolt end distance for loading perpendicular to grain (⊥) or parallel to grain (∥) shall comply with Table 11.5.1A of the NDS, as applicable.

<sup>7.</sup> Bolted connection only resists the 3,100 pounds (13.8 kN) ASD strength as referenced in Section 3.2.2 of this report.

<sup>8</sup> SDS screw connection only resists the 3,100 pounds (13.8 kN) ASD strength as referenced in Section 3.2.2 of this report.



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Device	Fastener	Fastener Diameter (inch)	Minimum Fastener Length (inch)	No. of Fasteners per opposing skirt (total)	Minimum wood member size (nominal) <sup>5</sup>	Minimum Lumber Specific Gravity	Minimum Edge Distance (inch) <sup>2</sup>	Minimum End Distance <sup>2,3</sup>	
								Т	=
HTB-S12	SDS Screw <sup>4</sup>	0.185	2 1/2	16 (32)	6 by 10	0.50	11/2	3	4
HTB-S18	SDS Screw <sup>4</sup>	0.185	2 1/2	20 (40)	6 by 10	0.50	11/2	3	4
HTB-S24, HTB SORB-1, and SORB-2	SDS Screw <sup>4</sup>	0.185	2 1/2	26 (52)	6 by 10	0.50	11/2	3	4

#### TABLE 2 HTB-S- Fastening Requirements<sup>1</sup>

For SI: 1 inch = 25.4 mm

<sup>1.</sup> HTB-S Saddles shall be placed upon a 6x10 minimum structural framing with eyelet oriented perpendicular or parallel and fastened to the framing through the saddle. Wood blocking shall be installed adjacent to the structural framing adjacent to the device. Wood blocking shall be installed perpendicular to the structural framing (Figures 4, 5, and 6 of this report).

<sup>2.</sup> Edge distances and end distances may need to be increased, as applicable, to prevent wood splitting.

<sup>3.</sup> End distance is for loading perpendicular to grain ( $\perp$ ) or parallel to grain ( $\parallel$ ).

<sup>4.</sup> SDS screw connection resists the 3,100 pounds (13.8 kN) ASD strength as referenced in Section 3.2.2 of this report.

<sup>5.</sup> The saddles are available for wood beams from  $5\frac{1}{4}$  to 12 inches wide.



FIGURE 1—HTB-16 Device

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FIGURE 3—HTB-32 Device

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FIGURE 8 – ALT HTB-ORB-1



FIGURE 9 – ALT HTB-ORB-2



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# **EVALUATION REPORT**

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10"

MA

7∕<sub>16</sub>ø

MC - 5" OD. × .375 WALL

NOTE 1

LENGTH VARIES

27<sub>/8</sub>"

5"

1/4

MC - 5" OD. × .375 WALL

7∕8Ø NET\_HOLES

THRU. BOLT

5"



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NOTE 1

MA

NOTE



FOR USE WITH: HTB-SORB-1 NOTE 1: POST SLOT DIMENSIONS VARY WITH THE SIZE OF THE BEAM ORX-2 FOR USE WITH: HTB-SORB-2

5"

FIGURE 12 – ORX-1 and ORX-2 Posts



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# **CALIFORNIA SUPPLEMENT**

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# HARDY TIE BACK SYSTEMS

**CSI Sections:** 

05 50 00 Metal Fabrications 06 05 23 Wood, Plastic, and Composite Fastenings 11 81 29 Facility Fall Protection

#### **1.0 RECOGNITION**

The Hardy Fall Protection Systems, Inc. Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger Systems, as evaluated and represented in IAPMO UES Evaluation Report ER-461 and with changes as noted in this supplement, are satisfactory alternatives for use in buildings built under the following codes and regulations:

- 2022 California Building Code (CBC)
- 2022 California Residential Code (CRC)
- California Code of Regulations Title 8, dated July 21, 2021

#### 2.0 LIMITATIONS

Use of the Hardy Fall Protection Systems, Inc. Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger Systems recognized in this report is subject to the following limitations:

**2.1** Hardy Fall Protection Systems, Inc. Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger Systems shall comply with the provisions in IAPMO UES ER-461 applicable to either the 2021 IBC or IRC for the 2022 CBC or CRC.

**2.2** Loadings described in Section 3.1.2.1 of ER-461 comply with Sections 1607.11.4 and 1607A.11.4 of the 2022 CBC and the California Code of Regulations Title 8, Chapter 4, Subchapter 7, Article 5, Section 3291 (f) (2) (C).

**2.3** In addition to the provisions of Sections 3.1.3 of ER-461, installations shall comply with the CBC or CRC, and the California Code of Regulations Title 8, Chapter 4, Subchapter 7, Article 5, Section 3291 (f).

**2.4** Loadings described in Sections 3.2.2.1 and 3.2.2.2 of ER-461 comply with Sections 1607.11.3 and 1607A.11.3 of the 2022 CBC and the California Code of Regulations Title 8, Chapter 4, Subchapter 7, Article 5, Sections 3291 (f) (2) (C) and 3291 (d) (1).

**2.5** In addition to the provisions of Sections 3.3 of ER-461, periodic testing and inspection shall be provided in accordance with the California Code of Regulations, Title 8, Chapter 4, Article 6, Section 3296(b).

**2.6** This supplement expires concurrently with ER-461.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org

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# **CITY OF LOS ANGELES** SUPPLEMENT

## HARDY FALL PROTECTION SYSTEMS, INC. 4288 Clubhouse Drive Somis, California 93066 805-404-5196 http://www.hardyfps.com garylhardy1@gmail.com

# HARDY TIE BACK SYSTEMS

**CSI Sections:** 

05 50 00 Metal Fabrications 06 05 23 Wood, Plastic, and Composite Fastenings 11 81 29 Facility Fall Protection

#### **1.0 RECOGNITION**

The Hardy Fall Protection Systems, Inc. Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger Systems, as evaluated and represented in IAPMO UES Evaluation Report ER-461 and with changes as noted in this supplement, are satisfactory alternatives for use in buildings built under the following codes (and regulations):

- 2023 City of Los Angeles Building Code (LABC) Supplement to this evaluation report
- 2023 City of Los Angeles Residential Code (LARC) -Supplement to this evaluation report

#### 2.0 LIMITATIONS

Use of the Hardy Fall Protection Systems, Inc. Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger Systems recognized in this report is subject to the following limitations:

2.1 Hardy Fall Protection Systems, Inc. Hardy Tie Back Devices, Hardy Tie Back Saddles, and Hardy Outrigger Systems shall comply with the provisions applicable to the 2021 IBC or 2021 IRC in IAPMO UES ER-461 and the 2022 CBC or 2022 CRC in the California Supplement.

2.2 Computations and details shall be submitted to the Department of Building and Safety for approval. In accordance with LABC Section 106.3.3.2, computations and drawings shall be prepared, stamped, and signed by a California registered design professional except as otherwise permitted by the Department of Building and Safety.

2.3 Design, installation, and inspection shall be in accordance with Chapters 16 and 17 of the LABC, as applicable, due to local amendments to these chapters.

**2.4** This supplement expires concurrently with ER-461.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org