



HUBER ENGINEERED WOODS, LLC
10925 David Taylor Drive, Suite 300
Charlotte, NC 28262
800-933-9220

www.huberwood.com

ZIP SYSTEM® WALL SHEATHING

CSI Sections:

- 06 16 00 Sheathing
- 07 25 00 Water Resistive Barriers/Weather Barriers
- 07 27 00 Air Barriers

1.0 RECOGNITION

Huber Engineered Woods ZIP System® Wall Sheathing recognized in this report has been evaluated for use as a Water Resistive Barrier and Air Barrier. The water resistance and air resistance properties of the ZIP System® Wall Sheathing complies with the intent of the provisions of the following codes and regulations:

- 2021, 2018, 2015, and 2012 International Building Code® (IBC)
- 2021, 2018, 2015, and 2012 International Residential Code® (IRC)
- 2021, 2018, 2015, and 2012 International Energy Conservation Code® (IECC)
- 2023 and 2020 Florida Building Code, Building (FBC, Building—supplement attached)
- 2023 and 2020 Florida Building Code, Residential (FBC, Residential) – supplement attached
- 2023 and 2020 Florida Building Code, Energy (FBC, Energy) – supplement attached
- 2022 California Building Code (CBC)-supplement attached
- 2022 California Residential Code (CRC) – supplement attached
- 2023 City of Los Angeles Building Code (LABC) – supplement attached
- 2023 City of Los Angeles Residential Code (LARC) – supplement attached

2.0 LIMITATIONS

Use of ZIP System® Wall Sheathing recognized in this report is subject to the following limitations:

2.1 ZIP System® Wall Sheathing shall be installed in accordance with the applicable code, the manufacturer's published installation instructions, and this report. Where there is a conflict, the most restrictive requirements shall govern.

2.2 ZIP System® Wall Sheathing panels are limited to code approved structural use for wood structural panels with a 24/16, 32/16, or 40/20 span rating, depending on the panel thickness.

2.3 Building envelope performance verification shall be performed as defined in Section C402.5.1.5 of the 2021 IECC, when the 2021 IECC is applicable.

2.4 ZIP System® Wall Sheathing is manufactured in Crystal Hill, VA; Commerce, GA; Broken Bow, OK; Easton, ME; Spring City, TN; and Shawinigan, QC.

3.0 PRODUCT USE

3.1 General: ZIP System® Wall Sheathing panels are used as wall sheathing in accordance with Section 2303.1.5 of the 2021, 2018, and 2015 IBC, and Section R602.1.8 of the 2021, 2018, and 2015 IRC. The panels are also used as a water-resistive barrier in accordance with Chapter 14 of the IBC and Chapter 7 of the IRC and as the water-resistive barrier required in accordance with IBC Section 2510.6. The sheathing is recognized for use in Type V construction in the IBC and buildings and structures constructed under the IRC.

3.2 Installation:

3.2.1 Installation General: Installation of the ZIP System® Wall Sheathing panels shall comply with the applicable code listed in Section 1.0 of this report, this report, and the manufacturer's published installation instructions. The installation instructions shall be available at the job site during installation. If there are any conflicts between the manufacturer's published instructions and this report, the more stringent requirements shall govern.

3.2.2 Installation of Sheathing Panel: The ZIP System® Wall Sheathing shall be installed with the laminated moisture barrier surface overlay facing the exterior. The panels shall be attached to the framing in accordance with the applicable code listed in Section 1.0 of this report for PS-2 wood structural panels, as applicable. Tongue-and-groove and machined edges are designed to provide the correct gap between panels during installation. Square-edged panels shall be spaced with a 1/8-inch (3.2 mm) minimum gap.

All ZIP System® Wall Sheathing seams shall be sealed with ZIP System™ Flexible Flashing Tape, a self-adhering sheet-type membrane consisting of acrylic adhesive laminated to a polyolefin backing, or ZIP System™ liquid flash. The ZIP System™ flashing products are outside the scope of recognition of this report and documentation demonstrating code compliance shall be provided to the building official for approval upon request. All penetrations of the sheathing surface overlay such as cracking, openings, etc., caused by

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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handling or construction work, also shall be sealed. Panel surfaces shall be dry and free from any significant presence of particles, sawdust or other debris, or protrusions prior to sealing. The tape is available in rolls of varying lengths and widths and, when used for sealing panel seams, shall be a minimum of 3¾ inches (95 mm) wide. The tape shall be centered within ± ½ inch (12.7 mm) of all panel edge seam centers and shall extend a minimum of 1 inch (25.4 mm) past the panel edge T-joint intersections. Wrinkles in the ZIP System™ Flexible Flashing Tape are acceptable unless they create a leak path to the panel seam. If using ZIP System™ liquid flash in lieu of ZIP System™ Flexible Flashing Tape, a minimum of 1-inch of liquid flashing material shall be applied to each panel edge across the seams and T-joint intersections. ZIP System™ liquid flash shall be installed to a minimum thickness of 12 mils (0.305 mm).

3.2.3 Substrate Preparation for Application of Cement Plaster or Adhered Masonry Veneer: In two-layer water-resistive barrier (WRB) applications as required by IBC Section 2510.6 and IRC Section R703.7.3 (2012 IRC Section R703.6.3) for cement plaster and adhered masonry veneer [in accordance with IBC Section 1404.10.1.1 (2015 and 2012 IBC Section 1405.10.1.1) and 2021 and 2018 IRC Section R703.12], ZIP System® Wall Sheathing performs as the first WRB layer, and a second independent WRB layer shall be provided over the ZIP System® panels. The second layer shall have performance at least equivalent to Grade D paper or ASTM E2556, Type I WRB, as applicable in accordance with the code, and any flashing intended to drain to the WRB shall be directed between the layers. When installed in accordance with the 2021 IBC or IRC in moist or marine climates, drainage shall be provided in accordance with IBC Section 2510.6.2 #1 or IRC Section R703.7.3.2 #1. When installed in accordance with the 2018 IBC in Climate Zones 1A, 2A, and 3A, a ventilated air space shall be provided between the stucco or adhered veneer and the WRB (see Figures 1, 2, and 3 of this report).

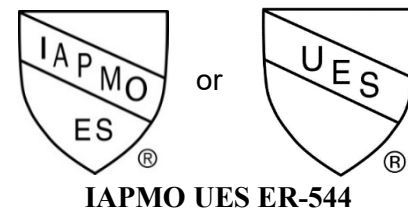
3.3 Air Permeability: A code compliant air barrier assembly is provided by ZIP System® Wall Sheathing panels installed with minimum nominally 2x4 wood studs spaced at a maximum of 24 inches (610 mm) on center and sheathed with minimum 7/16-inch-thick (11.1 mm) ZIP System® Wall Sheathing panels fastened with 2-inch-long (51 mm) 6d common nails spaced at 6 inches (152 mm) on center at the perimeter and 12 inches (305 mm) on center in the field. The joints between the panels shall be sealed with ZIP System™ Flexible Flashing Tape. The air barrier assembly has an air leakage rate of infiltration of 0.006 cfm/ft² (0.0294 L/s·m²) and exfiltration of 0.0061cfm/ft² (0.0305 L/s·m²) under a pressure differential of 0.3-inch water gauge (75 Pa) when tested in accordance with ASTM E2357. The assembly meets the requirements for an air barrier assembly in accordance with Section C402.5 of the 2021, 2018, and 2015 IECC (C402.4 of the 2012 IECC).

4.0 PRODUCT DESCRIPTION

4.1 ZIP System® Wall Sheathing Panels. The ZIP System® Wall Sheathing panels are wood structural panels with a moisture barrier surface laminated on the exterior side. The panels are installed with ZIP System™ Flexible Flashing Tape sealing all seams, which allows the panels to be used to meet the water-resistive barrier requirements in Chapter 14 and Section 2510.6 of the IBC and Section R703.7.3 of the IRC (Section R703.6.3 of the 2012 IRC). The wood structural panel substrate complies with US DOC PS-2, as applicable. The moisture barrier surface on the wood structural panel is a medium density phenolic-impregnated overlay. The standard-size panels are nominally 4 feet by 8 feet (1219 mm by 2438 mm). Panels longer than 8 feet (2438 mm) in length are also produced. The panels are available in 7/16-, 15/32-, 1/2-, and 5/8-inch performance categories (11.1 mm, 11.9 mm, 12.7 mm, and 15.9 mm) with either a self-spacing or square edge profile, and with a tongue-and-groove edge profile also available for the 5/8-inch-thick (15.9 mm) panels.

5.0 IDENTIFICATION

Huber Engineered Woods ZIP System® Wall Sheathing is identified by the Huber Engineered Woods name and trademark, the product name, the evaluation report number (ER-544), and the DOC required certification mark for wood structural panels. Either IAPMO Uniform Evaluation Service Mark of Conformity may also be used as shown below:



6.0 SUBSTANTIATING DATA

6.1 ICC-ES Acceptance Criteria for Water-resistive Membranes Factory-bonded to Wood-based structural Sheathing, Used as Water Resistive Barriers (AC310) Approved May 2008, Editorially Revised February 2021.

6.2 Reports of Hygrothermal Analyses.

6.3 Report of air leakage rate testing in accordance with ASTM E2357.

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

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Huber Engineered Woods ZIP System® Wall Sheathing to assess conformance to the codes shown in Section 1.0 of this report



and serves as documentation of the product certification. Huber Engineered Woods ZIP System Wall Sheathing is produced at locations noted in Section 2.4 of this report under

a quality control program with periodic inspection under the supervision of IAPMO UES.

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

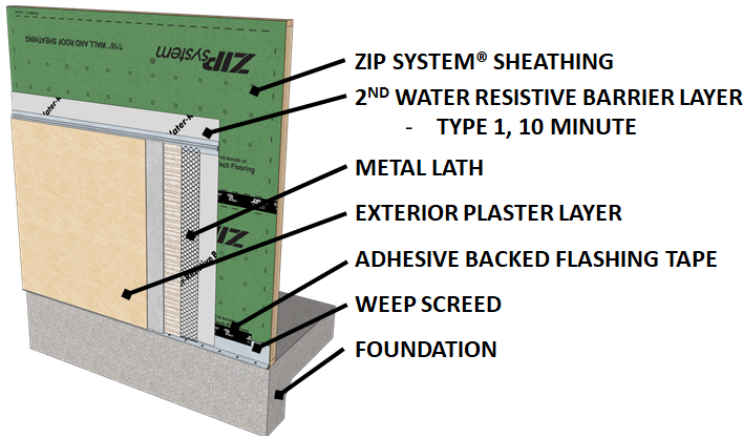


FIGURE 1
ZIP System® Sheathing for use with Exterior Plaster under the 2018 and Older Versions of the IRC, and 2015 and Older Versions of the IBC

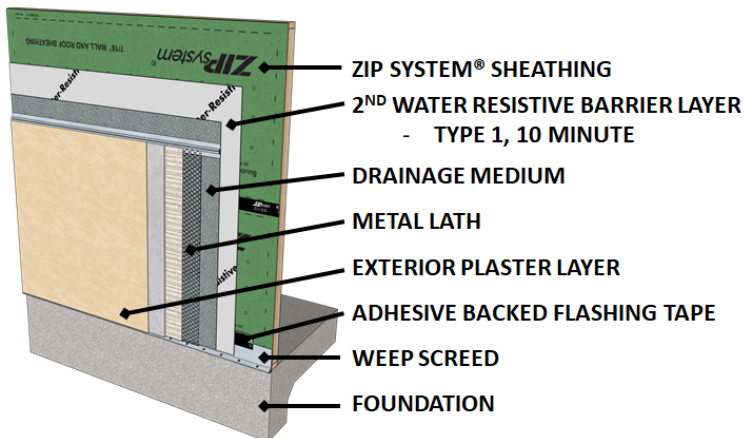


FIGURE 2
ZIP System® Sheathing for use with Exterior Plaster in Climate Zones 1A, 2A, OR 3A under the 2018 IBC

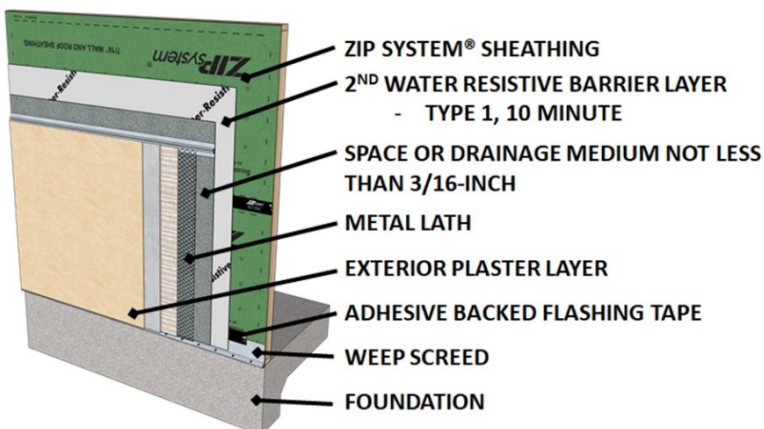


FIGURE 3
ZIP System® Sheathing for use with Exterior Plaster under 2021 IBC Section 2510.6.2 #1 or 2021 IRC Section R703.7.3.2 #1 in Moist or Marine Climates



FLORIDA SUPPLEMENT

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ZIP SYSTEM® WALL SHEATHING

CSI Sections:

06 16 00 Sheathing

07 25 00 Water Resistive Barriers/Weather Barriers

07 27 00 Air Barriers

1.0 RECOGNITION

Huber Engineered Woods ZIP System® Wall Sheathing described in IAPMO UES Evaluation Report ER-544 is a satisfactory alternative to the sheathing prescribed in the following codes:

- 2023 and 2020 Florida Building Code, Building (FBC, Building)
- 2023 and 2020 Florida Building Code, Residential (FBC, Residential)
- 2023 and 2020 Florida Building Code, Energy (FBC, Energy)

2.0 LIMITATIONS

Use of the ZIP System® Wall Sheathing recognized in this report supplement is subject to the following limitations:

2.1 Installation shall be in accordance with the 2021 and 2018 International Building Code and the 2021 and 2018 International Residential Code, as applicable, as noted in ER-544, and the manufacturer's published installation instructions.

2.2 Use of the ZIP System® Wall Sheathing for compliance with the high-velocity hurricane zone provisions of the FBC, Building, and FBC, Residential, has not been evaluated and is outside the scope of this evaluation report.

2.3 Flashing shall comply with Section 1405.4 of the FBC, Building, and Section 703.4 of the FBC, Residential, codes, as applicable.

2.4 For products falling under Section (5)(d) of Florida Rule 61G20-3.008, verification is required that the report holder's quality assurance program is audited by a quality assurance entity, approved by the Florida Building Commission (or the building official when the report holder does not possess an approval by the Commission), to provide oversight and determine that the products are being manufactured as described in this evaluation report to establish continual product performance.

2.5 This supplement expires concurrently with ER-544.

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



CALIFORNIA SUPPLEMENT

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ZIP SYSTEM® WALL SHEATHING

CSI Section:

06 12 00 Structural Panels

06 16 00 Sheathing

07 25 00 Water Resistive Barriers/Weather Barriers

07 27 00 Air Barriers

1.0 RECOGNITION

Huber Engineered Woods ZIP System® Wall Sheathing described in IAPMO UES Evaluation Report ER-544 is a satisfactory alternative to the sheathing prescribed in the following codes:

- 2022 California Building Code (CBC)
- 2022 California Residential Code (CRC)

2.0 LIMITATIONS

Use of the ZIP System® Wall Sheathing recognized in this report supplement is subject to the following limitations:

2.1 Use and installation shall be in accordance with ER-544, the manufacturer's published installation instructions, and the California Building Code or California Residential Code, as applicable.

2.2 The site-specific design criteria for wind speed, exposure category, and seismic design category shall be determined in accordance with Chapter 16 of the CBC or Section R301 of the CRC, as applicable.

2.3 Special Inspections, where required for use of ZIP System® Wall Sheathing, shall be in accordance with CBC Chapter 17 or Chapter 17A, as applicable for the building application in accordance with the Matrix Adoption Tables of the CBC, including special inspections for light frame construction where required by the code.

2.4 This supplement expires concurrently with ER-544.

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CITY OF LOS ANGELES SUPPLEMENT

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1.0 RECOGNITION

Huber Engineered Woods ZIP System® Wall Sheathing, described in IAPMO UES Evaluation Report ER-544 and this LABC and LARC Supplement, has been evaluated for water resistance and air leakage in accordance with the LABC and LARC. ZIP System® Wall Sheathing is recognized for use under the following codes:

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

2.0 LIMITATIONS

Use of the ZIP System® Wall Sheathing recognized in this report supplement is subject to the following limitations:

2.1 Use and installation shall be in accordance with the California Supplement to ER-544, the manufacturer's published installation instructions, and the City of Los Angeles Building and Residential Codes, as applicable. A copy of the manufacturer's installation instructions shall be available on-site for Registered Deputy Inspectors. Where conflicts occur, the more restrictive shall govern.

2.2 Design criteria shall be determined in accordance with 2023 LABC Chapter 16 or 2023 LARC Section R301, as applicable.

2.3 Special inspections, where required, shall be in accordance with 2023 LABC Chapter 17, as applicable.

2.4 This supplement expires concurrently with ER-544.

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