



ICC-ES Evaluation Report

ESR-1689

Reissued July 2022

This report is subject to renewal July 2023.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 24 00—Exterior Insulation and Finish Systems

Section: 07 24 19—Water-Drainage Exterior Insulation and Finish System

REPORT HOLDER:

PAREX USA, INC.

EVALUATION SUBJECT:

PAREX USA WATERMASTER LCR SYSTEM, LAHABRA WATERMASTER LCR AND EL REY WATERMASTER LCR SYSTEMS

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)

Properties evaluated:

PROPERTY	IBC CHAPTER	IRC CHAPTER
Weather resistance	14	R7
Structural – transverse wind load resistance	16	R6
Fire-resistance-rated construction	7	R3
Exterior insulation and finish systems (EIFS)	14	R7
Surface burning characteristics	26	R3

2.0 USES

The Parex USA WaterMaster LCR system, LaHabra WaterMaster LCR system and El Rey WaterMaster LCR system are exterior insulation and finish systems (EIFS) complying with 2018 IBC Section 1407 [2015, 2012 and 2009 IBC Section 1408] and IRC Section R703.9. The systems comply as an EIFS with drainage in accordance with 2018 IBC Section 1407.4.1 [2015, 2012 and 2009 IBC Section 1408.4.1] and IRC Section R703.9.

The systems may be used in fire-resistance-rated, Type V construction when installed in accordance with Section 4.5 of this report.

3.0 DESCRIPTION

3.1 System Components:

See Table 1.

3.2 Insulation Board:

Insulation boards must be one of the following:

- a. Parex WaterMaster Insulation Board, LaHabra WaterMaster Insulation Board and El Rey WaterMaster Insulation Board, which are expanded polystyrene (EPS) complying with ASTM C578, Type I, and ASTM E2430. The boards are produced by a molder who participates in an approved third-party quality assurance program, and are labeled in accordance with Section 7.0 of this report. The boards include 1/4-inch-deep-by-1 1/2-inch-wide (3.2 mm by 38 mm) corrugations across their width.
- b. Flat EPS insulation board from a molder with a current evaluation report showing conformance to ASTM E2430. The board must be labeled in accordance with the applicable report.
- c. Flat EPS insulation board that complies with ASTM C578, Type I, and ASTM E2430. The board is produced by a molder who participates in an approved third-party quality assurance program, and is labeled in accordance with the applicable code.

3.3 Substrates:

- Gypsum sheathing complying with ASTM C1396 or ASTM C1177
- Fiber cement panels complying with ASTM C1186 and with the ICC-ES Acceptance Criteria for Fiber Cement Siding Used as Exterior Wall Siding (AC90)
- Fiber cement panels complying with ASTM C1325 and with the ICC-ES Acceptance Criteria for Reinforced Cementitious Sheets Used as Wall and Ceiling Sheathing and Floor Underlayment (AC376)
- Concrete-masonry complying with the code
- Concrete complying with the code
- Exposure 1 wood structural panels complying with DOC PS-1 or PS-2
- Brick masonry complying with the code

3.4 Water-resistive Barrier:

The barrier must be one of the following:

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3.4.1 Parex, El Rey and LaHabra WaterMaster House Wrap 366: A kraft building paper that conforms to the Grade D requirements of AC38 and has a 60-minute water-resistance rating.

3.4.2 Building Paper: Building paper must comply with ASTM D226, Type I asphalt-saturated felt.

3.4.3 Tyvek StuccoWrap: Tyvek StuccoWrap as described in ICC-ES report [ESR-2375](#).

3.5 Sealants:

Sealants must comply with ASTM C902, Type S or M, minimum Grade NS, minimum Class 25 and Use O.

4.0 DESIGN AND INSTALLATION

4.1 General:

Parex USA Systems must be installed in accordance with the manufacturer's installation instructions, specifications and details. These are available at www.parexusa.com.

4.2 Drainage Options:

- Parex WaterMaster Insulation Board, LaHabra WaterMaster Insulation Board and El Rey WaterMaster Insulation Board, installed over a water-resistive barrier as described in either Section 3.4.1 or 3.4.2
- Flat Insulation Board or WaterMaster Insulation Board, LaHabra WaterMaster Insulation Board and El Rey WaterMaster Insulation Board, installed over Tyvek StuccoWrap described in Section 3.4.3

4.3 Wind Design (See Table 2):

Table 2 presents specific assemblies for which test data has been submitted. Other assemblies may be considered for approval by code officials based on testing and/or calculations by a qualified design professional.

4.4 Weather Protection:

The Parex USA WaterMaster LCR system, LaHabra WaterMaster LCR system and El Rey WaterMaster LCR system comply with 2018 IBC Section 1402.2 [2015, 2012 and 2009 IBC Section 1403.2] and IRC Section R703.1.1.

4.5 Fire-resistance-rated Construction:

In Type V construction, the Parex USA WaterMaster LCR system, LaHabra WaterMaster LCR system and El Rey WaterMaster LCR system may be attached to the surface of combustible exterior fire-resistance-rated assemblies described in 2018, 2015 and 2012 IBC Table 721.1(2) [2009 IBC Table 720.1(2)] without changing the assigned hourly rating of the assembly. The exterior wall must have a minimum 10-foot (3048 mm) separation distance from adjacent construction.

5.0 CONDITIONS OF USE

The Parex USA WaterMaster LCR system, LaHabra WaterMaster LCR system and El Rey WaterMaster LCR system described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Installation must comply with this report, the manufacturer's published installation instructions and the applicable code. In the event of a conflict between the manufacturer's instructions and this report, this report governs.

5.2 The insulation board must be separated from the building interior by a thermal barrier complying with the applicable code.

5.3 Installation must be by applicators acceptable to Parex USA, Inc.

5.4 Termination of the systems must not be less than 6 inches (152 mm) above finished grade, in accordance with 2018, 2015 and 2009 IBC Section 2603.8 (2012 IBC Section 2603.9) and IRC Section R318.4.

5.5 Adequacy of fasteners for concrete, masonry, brick or portland cement plaster substrates must be demonstrated to the satisfaction of the code official by a proof-load test program consisting of fastener withdrawal from the wall. The average withdrawal strength, in pounds, must be six times the required fastener load.

6.0 EVIDENCE SUBMITTED

6.1 Reports of tests in accordance with ASTM E2568 and ASTM E2273.

6.2 Data in accordance with the ICC-ES Acceptance Criteria for EIFS Clad Drainage Wall Assemblies (AC235), dated January 2015 (editorially revised April 2018).

6.3 Data in accordance with the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12), dated June 2015 (editorially revised October 2017).

6.4 Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Barriers (AC38), dated August 2016 (editorially revised April 2018).

7.0 IDENTIFICATION

7.1 Each container or package of coating or reinforcing mesh used as part of the Parex USA WaterMaster LCR system, LaHabra WaterMaster LCR system and El Rey WaterMaster LCR system must be labeled with the Parex USA, Inc., name and address; the product name; lot or batch number; quantity of material; storage instructions; pot life; expiration date; and the evaluation report number (ESR-1689).

Parex WaterMaster Insulation Boards, LaHabra WaterMaster Insulation Board and El Rey WaterMaster Insulation Board must be labeled on the edge of each board with the Parex USA, Inc., name, the plant identification number, and the evaluation report number (ESR-1689). Other foam plastic insulation must be labeled in accordance with the current ICC-ES evaluation report in which it is recognized, or must be labeled as noted in Section 3.2.

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

PAREX USA, INC.
2150 EASTRIDGE AVENUE
RIVERSIDE, CALIFORNIA 92507
(714) 333-3269
www.parexusa.com

TABLE 1—SYSTEM COMPONENTS

SYSTEM	WATER-RESISTIVE BARRIER	INSULATION BOARD	BASE COATS	REINFORCING MESH	FINISH
Parex WaterMaster LCR	Described in Section 3.4.1 or 3.4.2	WaterMaster Insulation Board	Parex 121, or Parex 301	Standard Reinforcing Mesh, 4.5 oz/yd ² , minimum	DPR Acrylic Finish 300 Series, or DPR Acrylic Finish 500 Series, or DPR Optimum Finish
	Described in Section 3.4.3	Flat Insulation Board			
El Rey WaterMaster LCR or LaHabra WaterMaster LCR	Described in Section 3.4.1	WaterMaster Insulation Board	Insul-Bond	Standard Reinforcing Mesh, 4.5 oz/yd ² , minimum	LaHabra Perma-Finish 300, El-Rey Perma-Flex DPR
	Described in Section 3.4.3	Flat Insulation Board			

TABLE 2—WIND LOAD DESIGN

FRAMING ⁴		SUBSTRATE	EPS		
Type	Spacing (inch)		Minimum Thickness (inch)	Attachment	Allowable Wind Load ^{2,3} (psf)
2x4 Wood ¹	16	Any sheathing described in Section 3.3, attached per code	1	2-inch-diameter Wind Devil Plates; Wind Lock WTI, No. 6 bugle head screws to framing; must penetrate 1-inch into wood framing or through steel framing; Pattern B	29
No. 18 gage-steel					
2x4 Wood ¹	16	Min. 7/16-inch wood structural panel, attached per code	1	2-inch-diameter Wind Devil Plates; No. 8 Type W bugle head screws; must penetrate 1/2-inch through sheathing; Pattern A ⁵	18
3 ⁵ / ₈ -inch-by-No. 18 gage-steel					
N/A	N/A	Concrete, concrete-masonry, or brick masonry	1	Wind Lock MT Screws; 2-inch-diameter Wind Devil 2 Plates; must penetrate substrate 1-inch; Pattern B	29
2x4 Wood ¹	16	7/16-inch wood structural panel, attached per code	1 1/2	W-3 Wind Devil screws and plates; must penetrate 1/2-inch through sheathing; Pattern A ⁵	29
2x4 Wood ¹	16	7/16-inch wood structural panel, attached per code	1 1/4	2 ³ / ₄ -inch Type W screws and Wind Devil II plates; Pattern A ⁵	31

For SI: 1 inch = 25.4 mm; 1 psf = 0.0479 kPa.

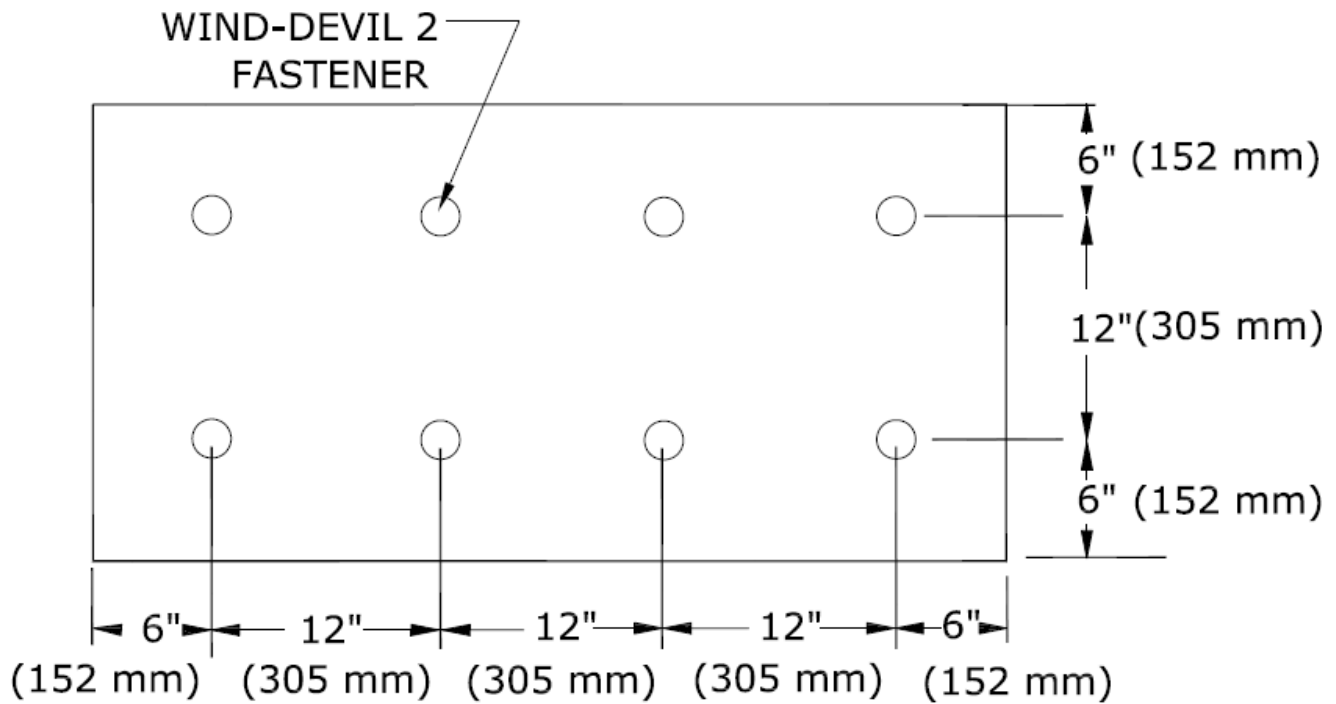
¹Minimum 2x4 wood framing, minimum specific gravity 0.42

²Maximum positive pressure is limited to the capacity of the framing and structural sheathing, or concrete, brick, masonry or Portland cement plaster substrate, determined in accordance with the applicable code.

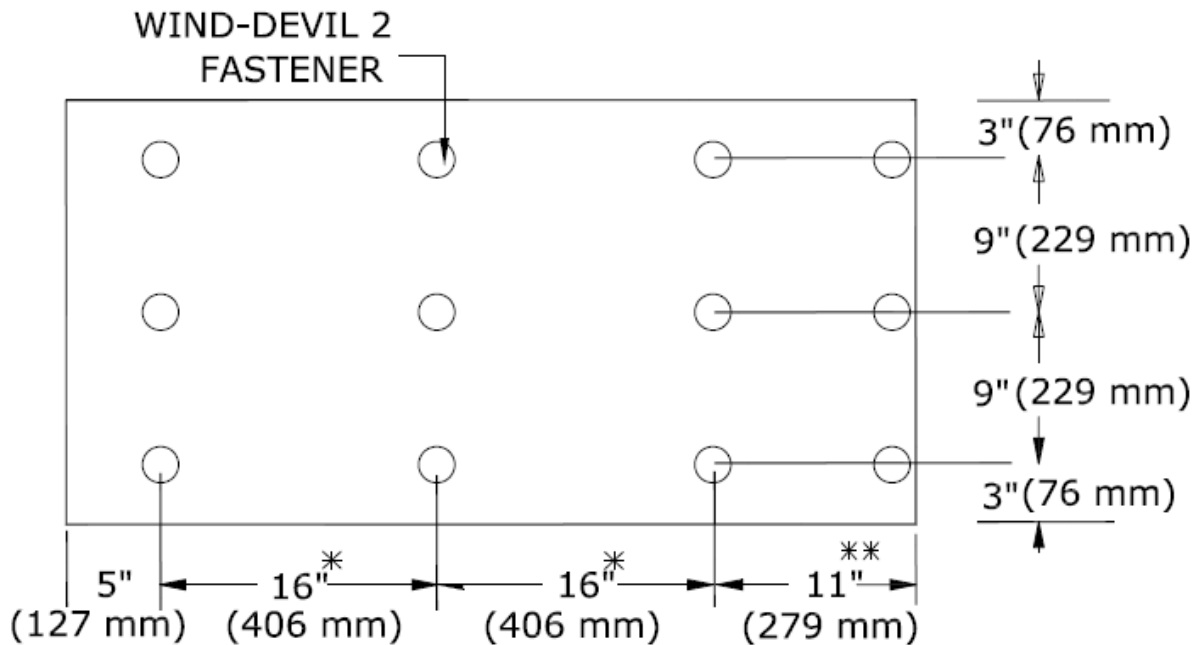
³Maximum positive pressure is limited to 55 psf (2.63 kPa) for gypsum sheathing complying with ASTM C1396, and is limited to 41 psf (1.96 kPa) for gypsum sheathing complying with ASTM C1177, or to the capacity of the framing, whichever is lower.

⁴The framing members must be designed to resist all positive and negative transverse design loads with a maximum allowable deflection of 1/240 of the span.

⁵Penetration into studs is not required for Pattern A.



FASTENING PATTERN A



FASTENING PATTERN B

FIGURE 1—FASTENING PATTERNS

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REPORT HOLDER:

PAREX USA, INC.

EVALUATION SUBJECT:

PAREX USA WATERMASTER LCR SYSTEM, LA HABRA WATERMASTER LCR AND EL REY WATERMASTER LCR SYSTEMS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Parex USA WaterMaster LCR System, La Habra WaterMaster LCR System and El Rey WaterMaster LCR System, described in ICC-ES evaluation report ESR-1689, have also been evaluated for compliance with the codes noted below.

Applicable code edition(s):

- 2019 *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.

- 2019 *California Residential Code* (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Parex USA WaterMaster LCR System, LaHabra WaterMaster LCR System and El Rey WaterMaster LCR System, described in Sections 2.0 through 7.0 of the evaluation report ESR-1689, comply with CBC Chapter 14 and 26, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 14, 16 and 26, as applicable.

The products have not been evaluated under Chapter 7A for use in the exterior design and construction of new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or any Wildland–Urban Interface Fire Area.

2.1.1 OSHPD:

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

2.1.2 DSA:

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

2.2 CRC:

The Parex USA WaterMaster LCR System, LaHabra WaterMaster LCR System and El Rey WaterMaster LCR System, described in Sections 2.0 through 7.0 of the evaluation report ESR-1689, comply with CRC Chapters 3 and 7, provided the design and installation are in accordance with the 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report.

The products have not been evaluated under CRC Section R337 for use in the exterior design and construction of new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or any Wildland–Urban Interface Fire Area.

The products described in this supplement have not been evaluated for compliance with the *International Wildland–Urban Interface Code*®.

This supplement expires concurrently with the evaluation report, reissued July 2022.

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PAREX USA, INC.

EVALUATION SUBJECT:

PAREX USA WATERMASTER LCR SYSTEM, LAHABRA WATERMASTER LCR AND EL REY WATERMASTER LCR SYSTEMS

1.0 REPORT PURPOSE AND SCOPE**Purpose:**

The purpose of this evaluation report supplement is to indicate that the Parex USA WaterMaster LCR system, LaHabra WaterMaster LCR system and El Rey WaterMaster LCR system, recognized in ICC-ES master report ESR-1689, 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 Parex USA WaterMaster LCR system, Parex Standard WaterMaster system, LaHabra WaterMaster LCR system and El Rey WaterMaster LCR system, described in Sections 2.0 through 7.0 of the master evaluation report ESR-1689, comply with the *Florida Building Code—Building* and the *Florida Building Code—Residential*, provided the design and installation are in accordance with the 2018 *International Building Code*® and the 2018 *International Residential Code*® provisions noted in the master report and the following condition apply:

1. Design wind loads must be based on Section 1609 of the *Florida Building Code—Building* or Section R301.2.1 of the *Florida Building Code—Residential*, as applicable.
2. Installation must meet the requirements of Section 1403.8 of the *Florida Building Code—Building* or Section R318.7 of *Florida Building Code—Residential*, as applicable.

Use of the Parex USA WaterMaster LCR system, LaHabra WaterMaster LCR system and El Rey WaterMaster LCR system 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 9N-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).

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