

# ICC-ES Evaluation Report

**ESR-4555**

Reissued June 2024


This report also contains:

Subject to renewal April 2025

- LABC Supplement
- CBC Supplement
- FBC Supplement

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<p><b>DIVISION: 07 00 00— THERMAL AND MOISTURE PROTECTION</b></p> <p><b>Section: 07 42 00— Wall Panels</b></p> <p><b>Section: 07 44 16— Porcelain Enameled Faced Panels</b></p>	<p><b>REPORT HOLDER: PORCELANOSA USA</b></p>	<p><b>EVALUATION SUBJECT: XTONE PORCELAIN FAÇADE SYSTEM</b></p>	
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## 1.0 EVALUATION SCOPE

**Compliance with the following codes:**

- 2021, 2018 and 2015 [International Building Code® \(IBC\)](#)
- 2021, 2018 and 2015 [International Residential Code \(IRC\)](#)

For evaluation for compliance with codes adopted by [Los Angeles Department of Building and Safety \(LADBS\)](#), see [ESR-ESR-4555 LABC and LARC Supplement](#).

For evaluation for compliance with codes adopted by the [California Office of Statewide Health Planning and Development \(OSHPD\) AKA: California Department of Health Care Access and Information \(HCAI\)](#), see [ESR-4555 CBC and CRC Supplement](#).

**Properties evaluated:**

- Weather resistance
- Surface burning characteristics
- Wind resistance
- Interior finish
- Types I, II, III and IV construction

## 2.0 USES

The Xtone Porcelain Façade System is used as a nonload-bearing exterior wall façade on nonfire-resistance-rated buildings of any type of construction. The system may be used as a nonload-bearing exterior wall covering on nonfire-rated buildings of Type I, II, III and IV construction when installed in accordance with Section 4.4. The system may also be used for interior applications as part of a Class A interior wall finish.

## 3.0 DESCRIPTION

### 3.1 General:

Xtone Porcelain Façade System is an open jointed cladding system of porcelain panels with a substructure that allows air to circulate between the panels and the exterior face of the installed water-resistive barrier. The

panels are mounted on to the supporting aluminum substructure using the supplied fixing clips and Keil anchors.

### 3.2 Components:

**3.2.1 Porcelain Panels:** The porcelain panels comply with the requirements for rectified and porcelain panels in ANSI A137.1. The panels contain 24 predrilled holes for the installation of the C-bolt clips and Keil anchors. See [Figure 4](#). The panels measure nominally 4.9 feet wide by 10<sup>1</sup>/<sub>2</sub> feet long (1494 mm by 3060 mm) and are nominally 12 mm thick (0.47-inch-thick). The panels have a nominal weight of 328.5 lbs(149 kg).

The panels have a flame spread index of less than 25 and a smoke developed index of less than 450 when tested in accordance with ASTM E84 and are classified as noncombustible in accordance with ASTM E136.

**3.2.2 Substructure:** Panel clips in accordance with Section 3.2.3 shall be attached to an aluminum substructure. The aluminum substructure is a system of T-profiles (vertical rails), and angle brackets (L-brackets) and C-profiles (horizontal rails). See [Figure 3](#) for substructure layout.

**3.2.3 Concealed Fastening System:** The panels are attached to the aluminum substructure using the provided C-bolt fixing clips. The fixing clips come in two configurations; the C-bolt leveling clip used on the top row and the C-bolt fixed clip. See [Figure 1](#). The clips are attached to the panels through the pre-drilled holes in the panel with the supplied Keil anchors, shown in [Figure 2](#), provided with the system.

## 4.0 DESIGN AND INSTALLATION

### 4.1 General:

The Xtone Porcelain Façade System must be installed in accordance with the manufacturer's published installation instructions, the project-specific structural calculations and details, and this report. A copy of the installation instructions must be available on the jobsite during construction.

### 4.2 Design:

The allowable wind loads for the Xtone Porcelain Façade System given in [Table 1](#), are for the attachment of the substructure to the underlying wall and must equal or exceed the design uniform transverse wind loads determined in accordance with IBC Chapter 16. The attachment of the brackets to the supporting structure or exterior wall framing to withstand gravity and transverse forces must be designed by a licensed design professional in accordance with the IBC, and the details must be submitted to the code official for approval. The allowable loads must be reduced to the capacity of the attachment system connections if these are less than the allowable load values in [Table 1](#) for the wall cladding system.

### 4.3 Installation:

The Xtone Porcelain Façade System must be installed in accordance with the manufacturer's published installation instructions, the project specific structural calculations and details and this report. A copy of the manufacturer's installation instructions must be available at the jobsite at all times during constructions.

The façade system must be installed over wall assemblies complying with 2021 and 2018 IBC Section 1402.3 (2015 IBC Section 1403.3), capable of supporting the imposed loads, including, but not limited to, transverse wind loads. The substructure L-brackets must be securely fastened to the supporting wall with corrosion-resistant fasteners that are compatible with the substructure materials and wall assembly substrate. See [Figures 3](#) and [4](#) for typical installation.

Exterior wall assemblies on which the system is to be installed must include flashing, a water-resistive barrier, a means of draining water, and protection against condensation in accordance with 2021 and 2018 IBC Section 1402.2 (2015 IBC Section 1403.2), using the substructure systems and attachments described in Section 3.2.2 and 3.2.3 of this report.

### 4.4 Types I, II, III and IV (Noncombustible) Construction:

The Xtone Porcelain Façade panels have been tested in accordance with ASTM E136 and comply with 2021 IBC Section 703.3 (2018 and 2015 IBC Section 703.5). The panels are classified as noncombustible building construction material and may be installed on buildings of Types I, II, III and IV construction. When the wall panels are used on exterior wall assemblies and the wall assembly consists of a combustible water-resistive barrier, the building height is limited to 40 feet (12.2 m) above grade, unless used with a combustible water-resistive barrier complying with Exception 2 of the 2021 and 2018 IBC Section 1402.5 (2015 IBC Section 1403.5).

## 5.0 CONDITIONS OF USE:

The Xtone Porcelain Façade System 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 Installation must comply with this report, the manufacturer's published installation instructions and applicable code. If there is a conflict between the manufacturer's published installation instructions and this report, this report governs.
- 5.2 The underlying substructure and wall must be adequate to resist the positive and negative transverse wind loads shown in [Table 1](#).
- 5.3 Drawings, design details and calculations verifying compliance with this report and adequacy of the connections to the substrate must be submitted to the code official for approval. The drawings and calculations must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.
- 5.4 The maximum allowable wind pressures for the Xtone Porcelain Façade System are shown in [Table 1](#). The capacity of the supporting wall and substrate, and the capacity of the connections used to attach the system to the wall, must be equal to or exceed the design wind pressure and gravity loads.
- 5.5 A water-resistive barrier complying with 2021 and 2018 IBC Section 1402.2. (2015 IBC Section 1403.2) must be installed behind the façade system.
- 5.6 When installed on interior walls as a Class A interior finish, the system must be installed over a substrate having a Class A finish.
- 5.7 Use of the Xtone Porcelain Façade System on exterior walls of Types I, II, III and IV construction which contain combustible materials or are greater than 40 feet in height (12.2 m) is outside the scope of this report except when installed in accordance with Section 4.4.
- 5.8 The Xtone Porcelain Façade System is manufactured under a quality control program with inspections by ICC-ES.

## 6.0 EVIDENCE SUBMITTED

Data in accordance with the [ICC-ES Acceptance Criteria for Façade and Wall Cladding Systems with Porcelain, Ceramic or Terra Cotta Panels \(AC504\)](#), dated October 2018 (editorially revised March 2021).

## 7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-4555) along with the name, registered trademark, or registered logo of the report holder [and/or listee] must be included in the product label.
- 7.2 In addition, the Porcelanosa Xtone Porcelain Façade System Panels are labeled with the manufacturer's name (Porcelanosa USA), the product name (Xtone Porcelain Façade System), the panel batch number, and the evaluation report number (ESR-4555).

The Xtone Porcelain fixing clips, Keil anchors, T-profiles, and angle brackets are packed in cartons that are labeled with the Porcelanosa company logo, product identification number, product description, and evaluation report number (ESR-4555).

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

**PORCELANOSA USA**  
**600 STATE ROUTE 17**  
**RAMSEY, NEW JERSEY 07446**  
**(201) 995-1310**  
[www.porcelanosa-usa.com](http://www.porcelanosa-usa.com)

TABLE 1 – MAXIMUM SPACING AND ALLOWABLE TRANSVERSE LOAD

MAXIMUM VERTICAL PROFILE (T-profile) SPACING (inches)	KEIL ANCHOR ATTACHMENT		ALLOWABLE TRANSVERSE LOAD <sup>1</sup> (psf)	
	Horizontal Spacing (inches)	Vertical Spacing (inches)	Positive	Negative
24	17	24	60	41.9

For SI: 1 inch = 25.4 mm; 1 psf = 47.88 Pa

<sup>1</sup>Maximum transverse wind load capacity determined using ASTM E330 testing procedure. Th transverse wind loads are based on the average values of tested ultimate loads with an applied Factor of Safety of 3.0. Design of the attachment to the building structure must be in accordance with Section 4.3 of this report.

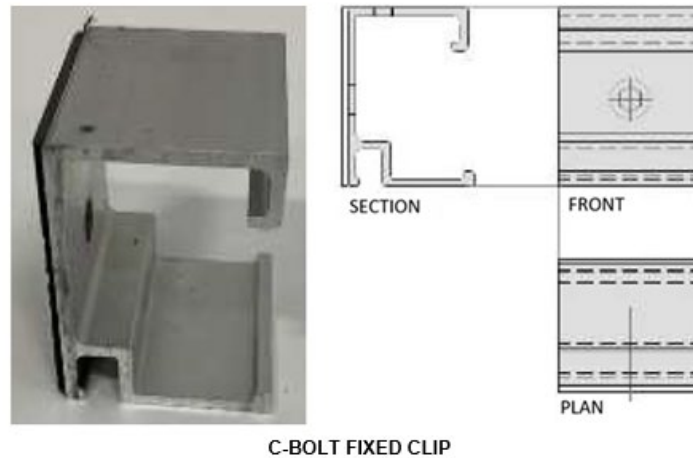
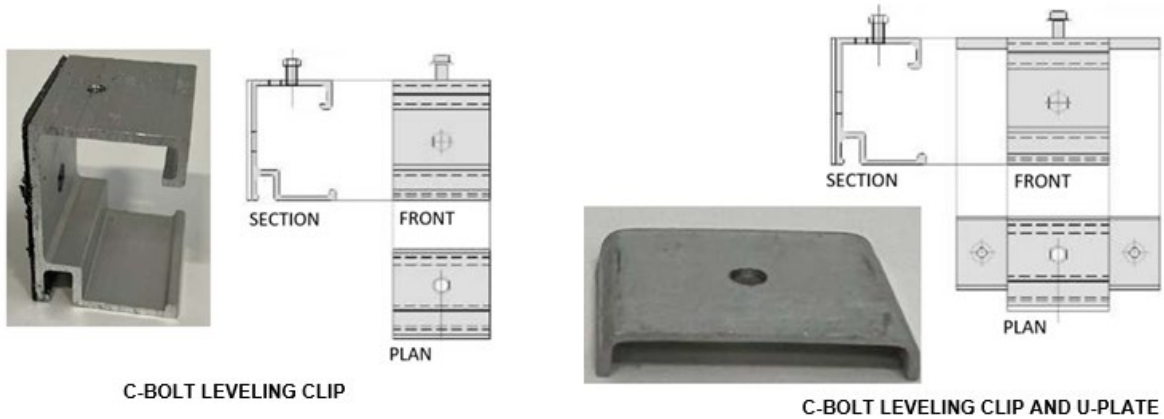


FIGURE 1 – FIXING CLIPS



FIGURE 2 – FASTENERS

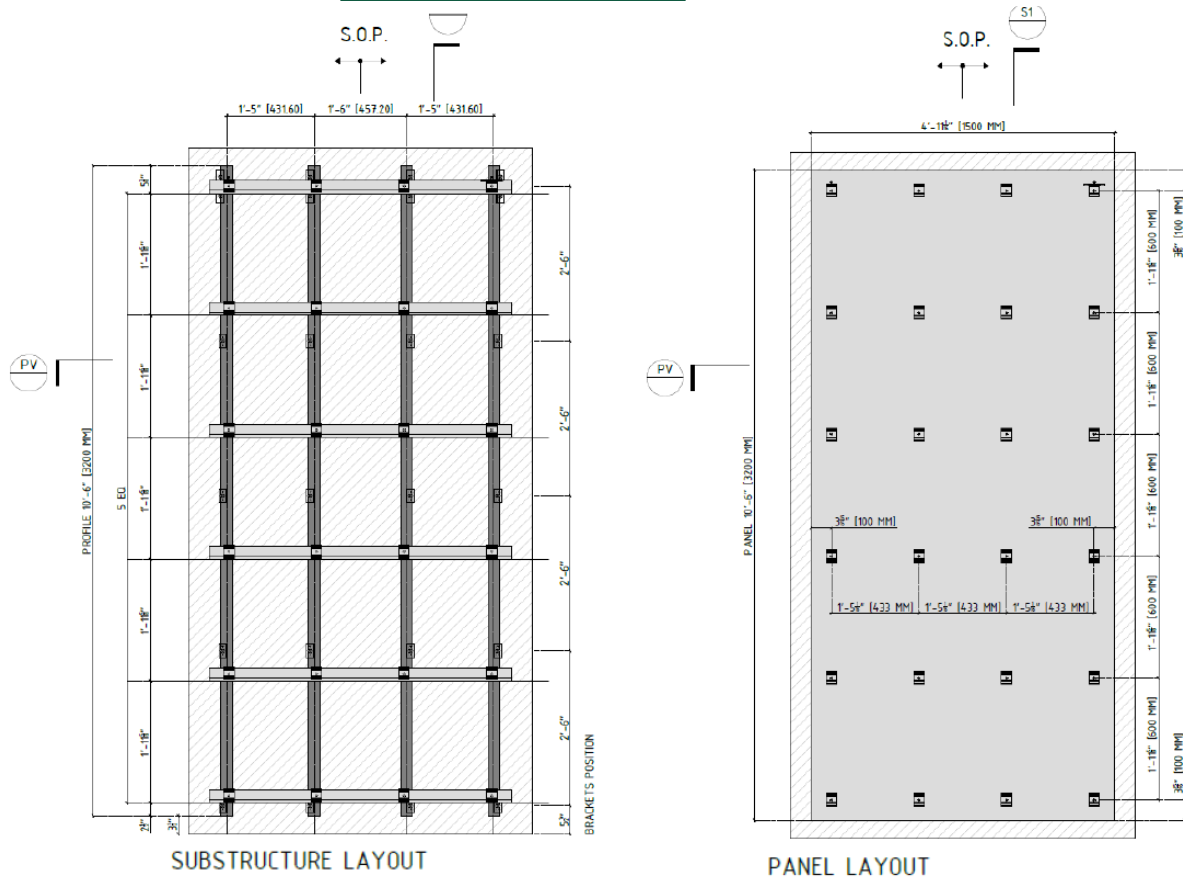
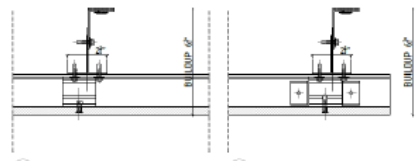
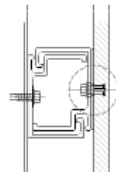


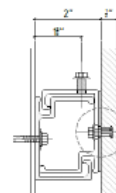
FIGURE 3 — XTONE SUBSTRUCTURE AND PANEL LAYOUT



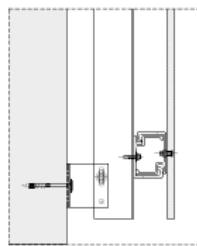
Plan View Assembly Detail



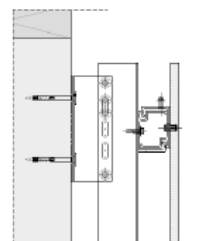
Fixed C-Bolt Bracket



Adjustable C-Bolt Bracket



Section View Bottom of System



Section View Top of System

FIGURE 4 — TYPICAL INSTALLATION

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION  
Section: 07 42 00—Wall Panels  
Section: 07 44 16—Porcelain Enameled Faced Panels

**REPORT HOLDER:**

PORCELANOSA USA

**EVALUATION SUBJECT:**

XTONE PORCELAIN FAÇADE SYSTEM

**1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that the Xtone Porcelain Façade System, described in ICC-ES evaluation report [ESR-4555](#), has 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 Xtone Porcelain Façade System, described in Sections 2.0 through 7.0 of the evaluation report [ESR-4555](#), complies with the LABC Section 703.5 and Chapter 14, and the LARC, and is subject to the conditions of use described in this supplement.

**3.0 CONDITIONS OF USE**

The Xtone Porcelain Façade System described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-4555](#).
- The design, installation, conditions of use and identification of the Xtone Porcelain Façade system is in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report [ESR-4555](#).
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 14, 16 and 17 and LARC Chapters 3 and 7, as applicable.

This supplement expires concurrently with the evaluation report reissued June 2024.



**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION****Section: 07 42 00—Wall Panels****Section: 07 44 16—Porcelain Enameled Faced Panels****REPORT HOLDER:****PORCELANOSA USA****EVALUATION SUBJECT:****XTONE PORCELAIN FAÇADE SYSTEM****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that Xtone Porcelain Façade System, described in ICC-ES evaluation report ESR-4555, has also been evaluated for compliance with the codes noted below.

**Applicable code edition(s):**■ *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 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 Xtone Porcelain Façade System, described in Sections 2.0 through 7.0 of the evaluation report ESR-4555, complies with CBC Chapters 7, 8 and 14, 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 14, 16 and 17, as applicable.

**2.1.1 OSHPD:**

The Xtone Porcelain Façade System, described in Sections 2.0 through 7.0 of the evaluation report ESR-4555, complies with CBC amended Chapters 7, 8, 14, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the following requirements:

1. Additional requirements of CBC Section 1404.1.1 [OSHPD 1, 1R, 2, 4 and 5], as applicable.
2. Additional requirements of CBC Chapter 16A and Section 1705A.12.3 and 1705A.13.5 [OSHPD 1 and 4], and Chapter 16 and Section 1705.12.3 and 1705.13.5 [OSHPD 1R and 5], as applicable.

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

The Xtone Porcelain Façade System, described in Sections 2.0 through 7.0 of the evaluation report ESR-4555, complies with CBC amended Chapters 7, 8, 14, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the following requirements:

1. Additional requirements of CBC Section 1404.1.1 [DSA-SS & DSA-SS/CC], as applicable.
2. Additional requirements of CBC Chapter 16A [DSA-SS], Chapter 16 [DSA-SS/CC] and Section 1705A.12.3 and 1705A.13.5 [DSA-SS & DSA-SS/CC], as applicable.

**2.2 CRC:**

The Xtone Porcelain Façade System, described in Sections 2.0 through 7.0 of the evaluation report ESR-4555, complies with CRC Chapter 7, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report.

This supplement expires concurrently with the evaluation report reissued June 2024.

**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**  
**Section: 07 42 00—Wall Panels**  
**Section: 07 44 16—Porcelain Enameled Faced Panels**

**REPORT HOLDER:**

**PORCELANOSA USA**

**EVALUATION SUBJECT:**

**XTONE PORCELAIN FAÇADE SYSTEM**

**1.0 REPORT PURPOSE AND SCOPE**

**Purpose:**

The purpose of this evaluation report supplement is to indicate that the Xtone Porcelain Façade System, described in ICC-ES evaluation report ESR-4555, has 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 Xtone Porcelain Façade System, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-4555, complies with the *Florida Building Code-Building* or the *Florida Building Code-Residential*. The design requirements shall be determined in accordance with the *Florida Building Code-Building* or the *Florida Building Code-Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-4555 for the 2018 *International Building Code*® meet the requirements of the *Florida Building Code-Building* or the *Florida Building Code-Residential*, as applicable.

Use of the Xtone Porcelain Façade System for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code-Building* or the *Florida Building Code-Residential* has not been evaluated, and is outside the scope of this supplemental 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 June 2024.