



ICC-ES Evaluation Report ESR-4545

Issued February 2024

This report is subject to renewal February 2025.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 42 13—Metal Wall Panels

REPORT HOLDER:

PAN URANIA SPA

EVALUATION SUBJECT:

PAN URANIA WALL PANELS

1.0 EVALUATION SCOPE

Compliance with the following codes:

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

Properties evaluated:

- Structural
- Surface Burning Characteristics
- Types I, II, III, IV (Noncombustible) or V Construction

2.0 USES

Pan Urania Wall Panels are used as interior or exterior nonload-bearing wall panels in nonfire-resistance-rated, Type I, II, III, IV (noncombustible), or V building construction, as permitted by the IBC. When installed in Types I, II, III or IV (Noncombustible) construction, the panels must be installed in accordance with Section 4.3 of this report.

3.0 DESCRIPTION

3.1 General:

The Pan Urania Wall Panels are factory-assembled sandwich panels with galvanized steel facers and a self-adhering continuously foamed-in-place polyurethane plastic foam core. The panels are manufactured with various panel facer profiles and a tongue and groove configuration on the long sides of panels. The magnesium oxide (MgO) profiles are installed inside the tongue and groove to seal the panels edges. Cold-formed steel profiles are also included at the top and bottom of the panels. The panels are available in a nominal thickness of 4 inches (100 mm actual), widths up to 59 inches (1500 mm actual), and lengths of up to 12 feet (3658 mm actual). The panels must be installed in the vertical orientation. See Figure 1 for panel profiles.

3.2 Material:

3.2.1 Panel Facers: Panel facings are fabricated from No. 27 gage [0.017-inch (0.43 mm) base metal thickness] EN 10346 Grade S250GD hot-dip zinc coated steel having a

minimum tensile yield strength of 36 ksi (250 MPa) and a minimum tensile strength of 48 ksi (330 MPa), with a Z100 galvanization rating. The panel facings are available with various coating finishes, as specified in the manufacturer's quality documentation.

3.2.2 Cold Formed Steel Profiles: The Pan Urania wall panels are manufactured with steel top and bottom profiles, having the shapes and properties as noted in the following sections:

3.2.2.1 Panel Top Profile: The panel top profile is u-shaped, cold formed from No. 28 gage steel having a base metal thickness of 0.016 inches (0.4 mm), complying with EN 10346 Grade S250GD with a minimum tensile yield strength of 36 ksi (250 MPa) and a minimum tensile strength of 48 ksi (330 MPa), with a Z100 galvanization rating. See Figure 1 for dimensions of the panel top profile.

3.2.2.2 Panel Bottom Profile: The panel bottom profile is W-shaped, cold formed from 19 gage steel having a base metal thickness of 0.047 inches (1.2 mm), complying with EN 10346, Grade S250GD with a minimum tensile yield strength of 36 ksi (250 MPa) and a minimum tensile strength of 48 ksi (330 MPa), and with a Z100 galvanization rating. See Figure 1 for dimensions of the panel bottom profile.

3.2.3 Panel Cores: The foam plastic core of the panels is polyurethane foam plastic core with a nominal density of 2.4 pounds per cubic foot (39 kg/m³). The panel core has a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 at 4 inches (102 mm). The panel core is continuously formed in place during the panel fabrication and is listed in ICC-ES Listing Report ESL-1426.

3.2.4 Sealants: Non-skinning butyl sealants must conform to AAMA Voluntary Specification and Test Methods for Non-drying Sealants (AAMA 809.2-92). The sealants must be applied to clean and dry surfaces at temperatures as recommended by the sealant manufacturers.

3.2.5 Flashing: Flashing material, when used around wall panel openings and penetrations, must be corrosion-resistance metal having the same gage as the panel facers, and installed in accordance with Section 4.2 of this report.

4.0 DESIGN AND INSTALLATION

4.1 Design:

The allowable positive and negative out-of-plane transverse loads for panels, determined based on the panel thickness and strength is 30 psf (1.44 kPa) at a maximum span of 96 inches (2438 mm). The construction documents

prepared or reviewed by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed specifying the wall panels must indicate compliance with this evaluation report and applicable codes and must be submitted to the code official for approval. The construction documents submitted to the code official must demonstrate that the maximum spans, project-specific fasteners and structural framing members provide a complete load path capable of transferring all loads and forces from their point of origin to load-resisting elements. The fastener capacity in the applicable substrate is outside of the scope of this report.

4.2 Installation:

The wall panels must be installed in a vertical orientation over one span and must be interlocked at the panel sides through the tongue (male edge) and groove (female edge) profiles. The panels may be installed from either right to left or from left to right with the male edge leading along the wall line. The minimum bearing length on the panel face at the top must be 2 inches (50 mm). A mating cold-form steel profile matching the W-shaped profile must be used at the bottom of the panel. The attachments at the top and bottom of wall panels to the supporting structures and the connections between wall panels and columns at the corners of the walls must be designed by a registered design professional and installed in accordance with the manufacturer's published installation instructions.

A weather-resistive barrier in accordance with 2021 and 2018 IBC Section 1404 (2015 IBC Section 1405) is not required as Pan Urania wall panels have been tested in accordance with ASTM E331 and the conditions specified in IBC Section 1402.2, Exception 2. The Pan Urania wall panels must be installed with the minimum of $\frac{3}{8}$ -inch-diameter (9.5 mm) bead size sealant as specified in Section 3.2.4 of this report and applied on both sides of the tongue at the panel joints.

Wall openings and penetrations must be flashed using the flashing materials complying with Section 3.2.5 of this report. The flashing must be placed in accordance with 2021 and 2018 IBC Section 1404.4 (2015 IBC Section 1405.4) and the manufacturers published installation instructions on both ends of the panels when installation is at the building's base, and at eaves, openings, and horizontal and vertical corners.

4.3 Type I, II, III or IV (Noncombustible) Construction:

When installed in buildings of Type I, II, III, or IV construction in accordance with IBC Section 2603.5, the panels must be installed in accordance with IBC Section 2603.4.1.4.

5.0 CONDITIONS OF USE

The Pan Urania wall panels described in this report comply with, or are 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 Pan Urania wall panels must be installed in accordance with this report and the manufacturer's published installation instructions. A copy of manufacturer's published installation instructions must be available at the jobsite. In the event of a conflict between this report and the manufacturer's published installation instructions, the more restrictive governs.

5.2 The construction documents prepared or reviewed by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed specifying the Pan Urania wall panels must indicate compliance with this evaluation report and applicable codes and must be submitted to the code official for approval.

5.3 The Pan Urania wall panels must be limited to nonload-bearing applications.

5.4 Remaining portions of the structure, other than Pan Urania wall panels, must be designed and constructed in accordance with the code.

5.5 Use of Pan Urania wall panels in areas where the probability of termite infestation is "very heavy" must be in accordance with IBC Section 2603.8.

5.6 The Pan Urania wall panels described in this report have been justified for installation without a code approved thermal barrier, as required by IBC Section 2603.4

5.7 The Pan Urania wall panels must be fabricated under a quality program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Sandwich Panels (AC04), dated June 2019 (editorially revised December 2020).

6.2 Data in accordance with the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12), dated June 2015 (editorially revised December 2020).

6.3 Reports of testing in accordance with ASTM E331 and NFPA 286.

7.0 IDENTIFICATION

7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-4545) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.

7.2 In addition, each Pan Urania wall panel described in this report is identified by a product label on the panel bearing the product designation or name and production date.

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

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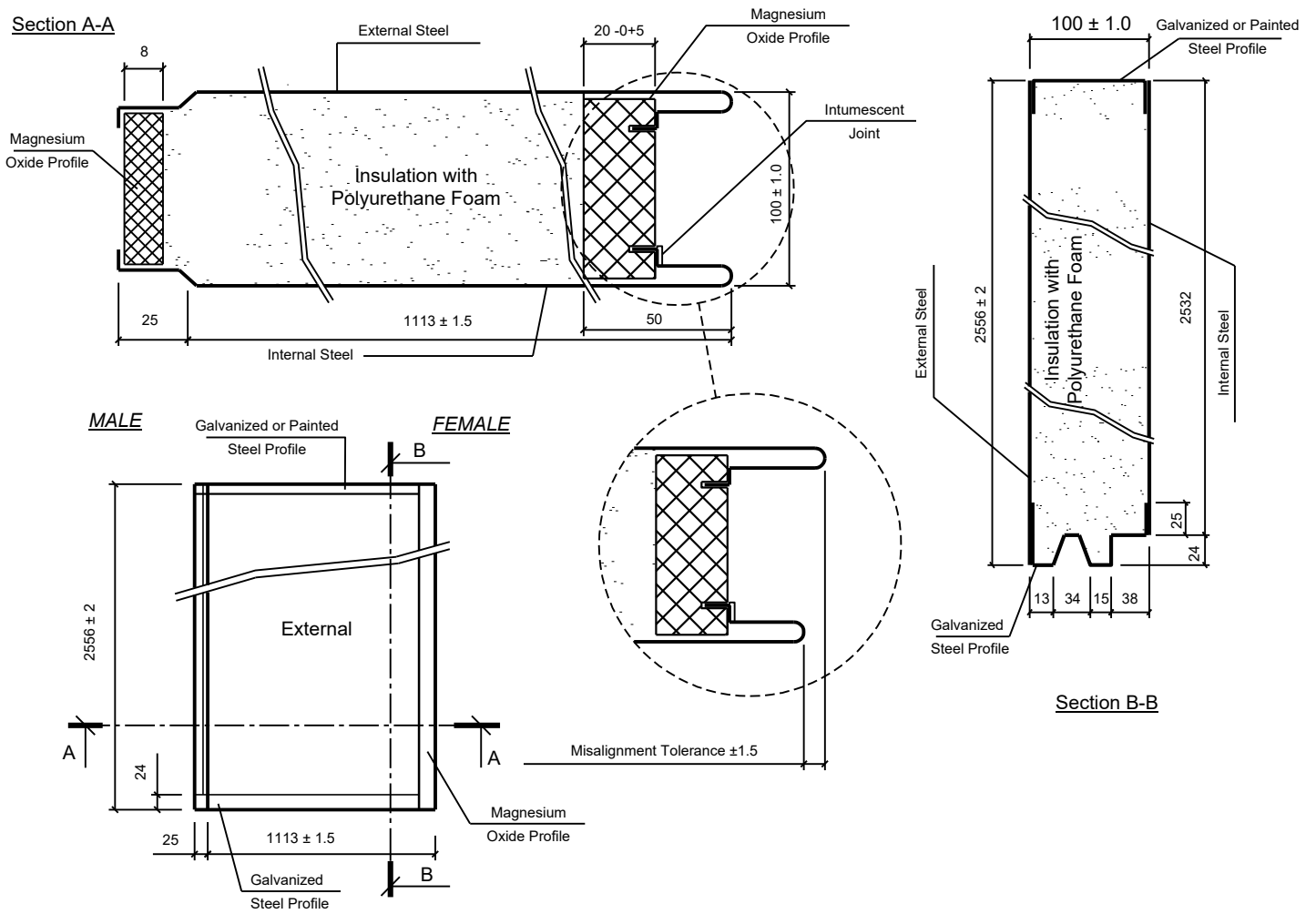


**FIGURE 1—PAN URANIA WALL PANEL AND EDGE DETAILS
(NOT TO SCALE)**

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Section: 07 42 13—Metal Wall Panels

REPORT HOLDER:

PAN URANIA SPA

EVALUATION SUBJECT:

URAN WALL PANEL

1.0 REPORT PURPOSE AND SCOPE**Purpose:**

The purpose of this evaluation report supplement is to indicate that the Uran wall panel, described in ICC-ES evaluation report ESR-4545, has also been evaluated for compliance with the code noted below.

Applicable code edition:

- 2023 Florida Building Code—Building

2.0 CONCLUSIONS

The Uran wall panel, described in Sections 2.0 through 7.0 of the evaluation report ESR-4545, complies with the *Florida Building Code—Building*. The design requirements must be determined in accordance with the *Florida Building Code—Building*. The installation requirements noted in ICC-ES Evaluation Report ESR-4545 for the 2021 *International Building Code*® (IBC) meet the requirements of the *Florida Building Code—Building*, and under the following condition:

- Installation of the foam plastic in areas subject to damage from termites must meet the requirements of Sections 1403.8 and 2603.8 of the *Florida Building Code—Building*.

Use of the Uran wall panel for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* 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, issued February 2024.