

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 42 43—Composite Wall Panels

REPORT HOLDER:

GRANDVIEW EA BUILDING SYSTEMS CORP.

EVALUATION SUBJECT:

GRANDVIEW RAINSCREEN PRESSURE EQUALIZED SERIES 35 SYSTEM

1.0 EVALUATION SCOPE

Compliance with the following codes:

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

For evaluation for compliance with codes adopted by Los Angeles Department of Building and Safety (LADBS), see [ESR-4261 LABC Supplement](#).

For evaluation for compliance with codes adopted by the California Office of Statewide Health Planning and Development (OSHPD) and Division of the State Architect (DSA), see [ESR-4261 CBC Supplement](#).

Property evaluated:

- Structural
- Interior Finish
- Fire Performance (Types I – IV Construction)

2.0 USES

The Grandview Rainscreen Pressure Equalized Series 35 system is composed of aluminum composite panels complying with 2018 IBC Section 1406 (2015 and 2012 IBC Section 1407) for metal composite materials (MCM) and is used as nonload-bearing exterior wall panels in accordance with Section 1406 of the IBC (2015 and 2012 IBC Section 1407). Additionally, the Series 35 wall panel system is used as an interior wall finish in accordance with IBC Section 803. For installation on exterior walls of Type I, II, III and IV construction, the Grandview Rainscreen Pressure Equalized panels must be installed as a component of exterior wall assemblies constructed in accordance with Section 4.3 of this report. For installation on exterior fire-resistance-rated walls, the wall assemblies must be constructed in accordance with IBC Section 1406.8 (2015 and 2012 IBC Section 1407.8).

3.0 DESCRIPTION

3.1 Panels:

The Series 35 Grandview Rainscreen Pressure Equalized panels are metal composite material (MCM) sandwich panels consisting of a thermoplastic core bonded to aluminum facers. The Series 35 panels feature rout-return edges. The exterior facing material is 0.020-inch-thick (0.50 mm) ASTM B209 3003-H16 aluminum alloy [minimum tensile yield strength of 21 ksi (145 MPa)]. The interior facing material is 0.020 inch-thick (0.50 mm) ASTM B209 3003-H16 aluminum alloy [minimum tensile yield strength of 21 ksi (145 MPa)]. The core has a nominal thickness of 0.12 inches (3.05 mm) or 0.20 inches (5.0 mm) and nominal density of 98 pounds per cubic foot (1570 kg/m³). The panel is produced in two overall thicknesses, 4 mm (0.157 inches) or 6 mm (0.236 inches) and is available in a maximum width of 62 inches (1524 mm) and a maximum length of 196 inches (4978 mm). The panels are prefinished and have a Class A classification in accordance with IBC Section 803 with a maximum flame-spread index of less than 25 and a maximum smoke-developed index of less than 450 when tested in accordance with ASTM E84.

3.2 Panel Stiffeners and Attachment Accessories:

Installation of the Grandview Rainscreen Pressure Equalized Series 35 cladding system requires perimeter extrusions, J-track extrusions, and 2-inch clips supplied by the MCM system fabricator. The accessories are manufactured from ASTM B221 6005A-T6 aluminum alloy. The perimeter extrusions also have a panel bulb seal manufactured from EPDM rubber affixed to the edge. The Series 35 Grandview Rainscreen Pressure Equalized panels also require 1/16 inch (1.6 mm) thick 7/8-by-7/8 inch (22.5 x 22.5 mm) square tube stiffeners manufactured from ASTM B221 6063-T5 aluminum. The stiffeners are factory-applied to the interior face of the panels with double-sided tape and silicone sealant/adhesive as specified in the approved quality documentation. Stiffeners are spaced a maximum of 24-inches (61 cm) on center. The fabricators install the ASTM B221 6005A-T6 aluminum perimeter extrusions along the return edges of the panels with a minimum of two 3/16-inch (4.8 mm) diameter aluminum pop-rivets spaced 15³/₄ inches (400 mm) on center per extrusion.

4.0 DESIGN AND INSTALLATION

4.1 Design:

The maximum allowable design wind pressure for the Grandview Rainscreen Pressure Equalized Series 35 wall

cladding system when installed in accordance with Section 4.2 of this report is included in Table 1 of this report. Support framing and the attachment of the system to the support framing, such as wall studs, must be designed in accordance with the applicable code to be adequate for these loadings. Design of the support framing and attachment of the system to the support framing must be submitted to and approved by the code official for each project and is outside of the scope of this report.

4.2 Installation:

The panels must be attached to the exterior walls of the building by use of attachment accessories described in Section 3.2. The MCM systems are assembled in fabrication facilities; field fabrication is limited to minor adjustments / repairs and cutting the MCM splines, which fit between panels at horizontal and vertical joints, as necessary. The appropriate installation procedures must be followed for each system. The manufacturer's instructions must be available on the jobsite during installation.

4.2.1 Series 35 Panel Fabrication: The MCM systems are prefabricated by Grandview EA Building Systems Corp. The Series 35 panels are flat MCM panels with rout-return edges. The return edge is formed by folding the edges at a right angle to create 1.38 inch (35 mm) return legs. The perimeter extrusions constructed of ASTM B221 6005A-T6 aluminum are factory-attached to the return legs along the perimeter of the interior panel face using $3/16$ -inch (4.8 mm) diameter aluminum pop-rivets spaced $15\frac{3}{4}$ inches (400 mm) on center. The perimeter extrusions are utilized with the attachment accessories referenced in Section 3.2 for the attachment of the panels to the building substrate. For panels larger than 25 inches (635 mm) in both the horizontal and vertical measurement, aluminum stiffeners are installed vertically on the back of the panels. Stiffeners are positioned vertically 5 inches (12.7 mm) from the top and bottom perimeter extrusions at a maximum horizontal spacing of 24 inches (610 mm) on center using adhesives described in Section 3.2.

4.2.2 Fastening systems: The Series 35 system arrives to the jobsite pre-assembled with perimeter extrusions and stiffeners. The perimeter extrusions and stiffeners are affixed to the panels as noted in Section 4.2.1 at the factory. The J-track and 2-inch clips described in Section 3.2 are provided by Grandview EA Building Systems Corp. and are field-attached to the factory preassembled panels in order to attach the MCM panel system to the structural framing. Aluminum Composite Material (ACM) splines made from MCM panels described in Section 3.1, are placed into the gasketed slots within the perimeter extrusions between panels to fill the gaps between panels at the horizontal and vertical joints.

4.3 Exterior Walls of Buildings of any Height in Type I, II, III and IV Construction (2018 IBC Section 1406.10 and 2015 and 2012 IBC Section 1407.10):

Where exterior walls are required to be noncombustible construction, the walls with the Series 35 wall panels must be constructed as follows:

1. Wall framing: $3\frac{5}{8}$ -inch deep (92.1 mm), 18-gauge galvanized steel studs, spaced at 24 inches (610 mm) on center.
2. Interior Cladding: The interior side of the wall must be covered with one layer of minimum $\frac{5}{8}$ -inch thick (15.9 mm) Type X gypsum wallboard with the long dimension installed parallel to the wall framing. The gypsum board must be attached to the wall framing using fasteners spaced 8 inches (203 mm) on center at the edges and 12 inches (305 mm) on center in the field. The interior wallboard joints and fastener heads

must be finished and taped in accordance with ASTM C840 or GA216.

3. Safing: 4-inch thick (101.6 mm) 4 pcf (16 kg/m³) mineral wool fire safing installed within the stud cavity at the intersection of the floor level slab and the exterior wall framing system.
4. The exterior side of the wall must be covered with one layer of $\frac{1}{2}$ -inch thick (12.7 mm), Georgia-Pacific DensGlass® Gold exterior sheathing. The sheathing must be installed using fasteners spaced 8 inches (203 mm) on center at the edges and 12 inches (305 mm) on center in the field.
5. Water-resistive barrier: Henry Blueskin SA water-resistive barrier is applied using a coat of Henry Blueskin rubber based adhesive primer applied over the exterior sheathing. Laps of the Henry Blueskin SA barrier are 2 inches wide (51 mm).
6. Supporting Substructure: 18-gauge galvanized steel $1\frac{1}{2}$ -by-2-by- $1\frac{1}{2}$ -inch (38.1 x 50.8 x 38.1 mm) "Z" sub-girts are installed horizontally at panel joint locations and attached to the wall studs using one #14-by- $1\frac{1}{2}$ -inch (38.1 mm) HWH self-drilling screw. Aluminum J-tracks are attached horizontally to the sub-girts at window headers and along the base of the wall using #12-by-1-inch (25.4 mm) pancake head self-drilling screws spaced 16 inches (406 mm) on center. Aluminum J-tracks are also installed vertically at the ends of walls and along window jambs using two #12-by-1-inch (25.4 mm) pancake head self-drilling screws at each sub-girt.
7. Window openings: Once the exterior cladding is installed, window openings are flashed with 0.040-inch thick (.0016 mm) flat sheets of aluminum flashing spanning from the interior gypsum cladding to the exterior DensGlass® sheathing. A separate piece of .040-inch thick (.0016 mm) aluminum thru-wall flashing is affixed to the exterior DensGlass® sheathing and extends beyond the face of the exterior MCM cladding.
8. Exterior Insulation: Roxul® 2-inch thick (50.8 mm) 8 pcf (32 kg/m³) mineral wool insulation is placed over the exterior DensGlass® sheathing and is friction set into the cavity. Each section of insulation must be fastened to the wall assembly to fill the cavities created by the sub-girts with at least one #8-by-3-inch (76.2 mm) coarse thread drywall screw and $\frac{1}{4}$ -by- $1\frac{1}{4}$ -inch stainless steel washer.
9. Exterior Cladding: The bottom perimeter extrusions on the backs of the bottom row of MCM panels are affixed to the J-track extrusions. The 2-inch aluminum clips are attached to the perimeter extrusions along the top and sides of the interior faces of the panels. The 2-inch aluminum clips are placed 16 inches (406 mm) on center along the tops of the panels and are fastened to the horizontal sub-girts using one #12-by-1-inch (25.4 mm) pancake head self-drilling screw. The 2-inch aluminum clips on the sides of the panels are fastened to the horizontal sub-girts with one #12-by-1-inch (25.4 mm) pancake head self-drilling screw at vertical panel joint locations. The ACM splines are placed in accordance with Section 4.2 above. The bottoms of successive rows of panels are affixed to the tops of the ACM slides placed in the horizontal joints of the previous row.

The Series 35 panels must be installed on the exterior side of the wall in accordance with Section 4.2 of this report.

4.4 Exterior Walls of Buildings up to 40 feet in Height of Type I, II, III, or IV Construction (2018 IBC Section 1406.11.1 and 2015 and 2012 IBC Section 1407.11.1):

When the Series 35 panels are not installed in accordance with Section 4.3 of this report, they must not be installed more than 40 feet (12.2 m) in height above grade where installed as follows:

- Where the fire separation distance is 5 feet (1524 mm) or less, the area of MCM must not exceed 10 percent of the exterior wall surfaces.
- Where the fire separation distance is greater than 5 feet (1524 mm), there is no limit on the area of exterior wall surfacing using MCM.

4.5 Interior Wall Covering:

The Grandview Rainscreen Pressure Equalized panels may be used as an interior wall finish in compliance with IBC Chapter 8. The panels must be installed on the interior side of the wall in accordance with Section 4.2 above. The panels have a Class A interior finish classification.

5.0 CONDITIONS OF USE

The Grandview Rainscreen Pressure Equalized Series 35 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, the applicable code and approved plans. If there are any conflicts between this report and the manufacturer’s installation instruction, this report governs.
- 5.2** The allowable transverse load capacity for the MCM panels and the interlock of the perimeter extrusions with the attachment accessories must be submitted to and approved by the code official for each project. The panel dimensions and allowable transverse load capacity shown in Table 1 must equal or exceed the design wind loads for the building determined in accordance with Chapter 16 of the IBC.
- 5.3** The design of the MCM system, vapor retarders (2018, 2015, and 2012 IBC), framing members, connections, and curtain wall framing members must be submitted to and approved by the code official for each project.
- 5.4** Grandview EA Building Systems Corp. must provide a certificate of compliance to the code official attesting that the MCM system fabrication includes the use of adhesives approved for use, that the adhesive application complies with the adhesive manufacturer’s installation guidelines, and that the MCM system fabrication complies with approved construction documents.

5.5 Where Grandview Rainscreen Pressure Equalized wall panels are installed on exterior walls of buildings of Types I, II, III and IV construction, the walls must be constructed in accordance with Section 4.3 or 4.4 of this report, as applicable.

5.6 A water-resistive barrier must be installed in accordance with the applicable code. Evidence of weather tightness of the wall cladding system in accordance with Section 1406.6 of the 2018 IBC (Section 1407.6 of the 2015 and 2012 IBC) must be submitted to the code official.

5.7 Installation of Grandview Rainscreen Pressure Equalized wall panel assembly onto a fire-resistance-rated exterior wall are permitted when the assembly attachments do not penetrate through the entire exterior wall assembly.

5.8 For MCM systems used on exterior walls of Types I, II, III, or IV construction in accordance with 2018 IBC Section 1406.10 (2015, 2012, 2009 and 2006 IBC Section 1407.10), an approved thermal barrier must be installed to separate the MCM from the interior of the building as specified in 2018 IBC Section 1406.10.2 (2015, 2012, 2009 and 2006 IBC Section 1407.10.2), except when the MCM is an element of a balcony or similar projection, such as architectural trim or embellishments.

5.9 The MCM system is fabricated in Gyeonggi-do, South Korea under a quality control program with inspections conducted by ICC-ES.

5.10 The MCM panels are manufactured in Chungcheongbuk-do, South Korea, under a quality control program with inspections conducted by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Metal Composite Material (MCM) (AC25), dated October 2010 (editorially revised April 2018), including NFPA 285.

7.0 IDENTIFICATION

7.1 The panels are identified by a label or stamp noting the company name (Grandview EA Building Systems Corp.) and address, product name, thickness, flame-spread index, and the evaluation report number (ESR-4261).

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

GRANDVIEW EA BUILDING SYSTEMS CORP.
570-999 WEST BROADWAY
VANCOUVER, BRITISH COLUMBIA V5Z 1K5
CANADA
(604) 670-8828
www.grandvieweas.com

TABLE 1—ALLOWABLE¹ WIND LOAD DESIGN VALUES

| GRAND VIEW DISTRIBUTION SYSTEM | MAXIMUM PANEL DIMENSION | PANEL STIFFENER SPACING (MAX) | 2-INCH CLIP SPACING AT HORIZONTAL JOINTS (MAX) | 2-INCH CLIP SPACING AT VERTICAL JOINTS (MAX) | POSITIVE PRESSURE (PSF) | NEGATIVE PRESSURE (PSF) |
|---------------------------------------|--------------------------------|--------------------------------------|---|---|--------------------------------|--------------------------------|
| Series 35 | 48 inches (1219 mm) | 24 inches (610 mm) | 16 inches (406 mm) | 16 inches (406 mm) | 32 psf | 32 psf |

¹Allowable wind load values in Table 1 include a factor of safety of 3.

DIVISION: 07 00 00—THERMAL AND MOISTURE

Section: 07 42 43—Composite Wall Panels

REPORT HOLDER:

GRANDVIEW EA BUILDING SYSTEMS CORP.

EVALUATION SUBJECT:

GRANDVIEW RAINSCREEN PRESSURE EQUALIZED SERIES 35 SYSTEM

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the Grandview Rainscreen Pressure Equalized Series 35 system, described in ICC-ES evaluation report [ESR-4261](#), 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:

- 2020 *City of Los Angeles Building Code* (LABC)

2.0 CONCLUSIONS

The Grandview Rainscreen Pressure Equalized Series 35 system, described in Sections 2.0 through 7.0 of the evaluation report [ESR-4261](#), complies with the LABC Chapter 14, and is subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Grandview Rainscreen Pressure Equalized Series 35 system described in this evaluation report supplement must comply with the following conditions:

- All applicable sections in the evaluation report [ESR-4261](#).
- The design, installation, conditions of use and identification of the Grandview Rainscreen Pressure Equalized Series 35 system is in accordance with the 2018 *International Building Code*® (2018 IBC) provisions noted in the master evaluation report [ESR-4261](#).
- The design is in accordance with additional requirements of LABC Chapter 16, as applicable.
- The Grandview Rainscreen Pressure Equalized Series 35 system has not been evaluated under the LABC Chapter 7A for use in the exterior design and construction of new buildings located in any fire Hazard Severity Zone within State responsibility Areas or any Wildland-Urban Interface Area.

This supplement expires concurrently with the evaluation report, dated March 2020.

DIVISION: 07 00 00—THERMAL AND MOISTURE
Section: 07 42 43—Composite Wall Panels

REPORT HOLDER:

GRANDVIEW EA BUILDING SYSTEMS CORP.

EVALUATION SUBJECT:

GRANDVIEW RAINSCREEN PRESSURE EQUALIZED SERIES 35 SYSTEM

1.0 REPORT PURPOSE AND SCOPE**Purpose:**

The purpose of this evaluation report supplement is to indicate that the Grandview Rainscreen Pressure Equalized Series 35 system, recognized in ICC-ES evaluation report ESR-4261, has also been evaluated for compliance with the code(s) 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) and Division of State Architect (DSA), see Sections 2.1. and 2.2 below.

2.0 CONCLUSIONS

The Grandview Rainscreen Pressure Equalized Series 35 system, described in Sections 2.0 through 7.0 of the evaluation report ESR-4261, complies with CBC Chapters 7, 8 and 14, 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 the CBC Chapter 14, 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 OSHPD:

The Grandview Rainscreen Pressure Equalized Series 35 system, described in Section 2.0 through 7.0 of the evaluation report ESR-4261, complies with Chapter 7 [OSHPD 1, 1R, 2, 4 and 5], Chapter 8 [OSHPD 1, 1R, 2, 4 and 5], Chapter 14 [OSHPD 2] and Chapter 14 as amended [OSHPD 1, 1R, 4 and 5], 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 7, 8 and 14 as applicable.

2.2 DSA:

The Grandview Rainscreen Pressure Equalized Series 35 system, described in Section 2.0 through 7.0 of the evaluation report ESR-4261, complies with Chapter 7 [DSA-SS, DSA-SS/CC], Chapter 8 [DSA-SS, DSA-SS/CC] and Chapter 14 as amended [DSA-SS, DSA-SS/CC], 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 7, 8 and 14 as applicable.

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

This supplement expires concurrently with the evaluation report, issued March 2020.