

SECTION 07 42 43 · 2026

CORE CONNECT®

Aluminum Composite Metal (ACM) Wall Panel Specification with etalbond® ACM

HOW TO USE THIS SPEC *Optional text is indicated by square brackets []. Delete unwanted items and the square brackets in the final specification.*

PART 1 — GENERAL

1.1 SECTION INCLUDES

- .1 Aluminum Composite Material (ACM) **[drain & back-ventilated]** **[wet-seal]** **[dry-seal]** panels.
- .2 **[Supply only]** **[Supply and install]**.
- .3 Accessories including Aluminum Shadow Girts, hat bars, roof caps, drip flashing, jamb flashing, through-wall flashing, and all other architectural trims.

SPEC NOTE *Re 1.1.3 — items listed are available at extra cost and are not included with the basic panel package.*

.4 Standards for Consideration & Supporting Evidence.

- .1 Carter Architectural Panels, Inc. is recognized as a leading ACM/MCM attachment-system designer and distributor. Through rigorous testing, Carter obtained **AAMA 509-22** for drained and back-ventilated rain-screen systems, and **ASTM E330/E330M-14** for structural performance — referred to as AAMA 509-22 / ASTM E330-14 hereafter.
- .2 **AAMA 509-22 / ASTM E330-14** addresses compliance with the following test methods:
 - **ASTM E283** — Air Infiltration at Reduced Static Pressure
 - **ASTM E331** — Static Water Penetration
 - **AAMA 501.1** — Dynamic Water Test
 - **ASTM E330 / E330M (2021)** — Structural Loading
 - Carter panel systems may be used on buildings of **Type I, II, III, or IV** construction for installations greater than 40 ft above grade.
- .3 Relevance of **AAMA 509-22 / ASTM E330-14**:
 - The tested panel was one complete fabricated unit, evaluated on the basis-of-design for real-world use.

- The tested assembly includes both the outer ACM plank material and the extruded aluminum joint “placeholders” and structural screws required to secure the finished wall panel to the sub-structure — including, but not limited to, Aluminum Shadow Girts.

1.2 RELATED REQUIREMENTS BY OTHERS

- [Section 06 10 00 — Rough Carpentry]
- [Section 07 21 00 — Thermal Insulation]
- [Section 07 27 00 — Air Barrier]
- [Section 07 92 00 — Joint Sealants]

1.3 REFERENCE STANDARDS

.1 ACM Panels

- .1 AAMA 2605 — Voluntary Specification, Performance Requirements and Test Procedures for Superior-Performing Organic Coatings on Aluminum Extrusions and Panels.
- .2 ASTM B209 — Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

.2 Panel Attachment System

- .1 See 1.6 Design & Performance Requirements and 1.8 Technical Data — utilizing the proprietary **CORE Connect® extrusion system**.

1.4 PRE-INSTALLATION MEETINGS

- .1 Coordinate products, techniques, and sequencing of related work with Section [01 31 19 — Project Meeting] [and] [01 31 19.33 — Pre-Installation Meetings].

1.5 SUBMITTALS

- .1 Under the provisions of [Section 01 33 00], provide the following:
 - .1 **Product Data:** Manufacturer's printed sheets illustrating the products to be incorporated into the project.
 - .2 **Shop Drawings:** Detail drawings showing openings, components, panel profile, dimensions, and details of each condition and attachment — such as treatment at edges, terminations, and flashings.
 - .3 **Product Samples:** 150 mm × 150 mm (6" × 6") showing the specified finish for each location.
 - .4 **Product Test Reports:** Indicate compliance with product requirements from a qualified independent testing agency (**AAMA**; **ASTM**).
 - .5 **Manufacturer's Instructions:** Indicate installation requirements, rough-in dimensions, and special procedures.
 - .6 **Sample Warranty:** As specified in this Section.
 - .7 **Maintenance Data:** Panel-replacement instructions and cleaning information.
 - .8 **LEED Credits:** Conform to [Section 01 81 13 — Sustainable Design Requirements] for documentation of LEED credits re: certification of project under LEED [**CAGBC**] [**USGBC**] 2026 Rating System.

1.6 DESIGN & PERFORMANCE REQUIREMENTS

- .1 **Design**, fabricate, and install an Aluminum Composite Material (ACM) drained and back-ventilated (DBV) rain-screen system in **[fire-rated (FR)]** core, to the following standards & requirements:
 - .1 The ACM panel attachment system **MUST** be the CORE Connect® design. All place-holding extrusion hardware must be painted black, using the same Kynar / PVDF paint technology as the coil-coated ACM, provided by the manufacturer.
 - .2 Only a Progressive System (independent panel, one from another) that is face-fastened through the ACM directly into Aluminum Shadow Girts. This design must allow a single panel to be independently removed and re-installed.
 - .3 Any ACM panel attachment system not meeting the standards above (1.6.1.1; 1.6.1.2) is **NOT** considered equal or comparable in design or performance to the CORE Connect® architectural panel system.
 - .4 Review and evaluate the product test reports made available by the manufacturer to ensure performance expectations can be met. See www.carterpanels.com.
- .2 **Structural Performance** — the CORE Connect® ACM panel system withstands the following loads, based on testing to **ASTM E330-14**:

PROPERTY	RESULT
Wind Load — Maximum Pressure Achieved	6,045 Pa (126.3 lbs/ft²) — equivalent to 223 mph / 359 km/h per the Ensewiler formula
Specified Design Load	5,760 Pa (120.0 lbs/ft²)
Positive Loading Net Deflection (+5,760 Pa)	0.610 in (15.5 mm)
Negative Loading Net Deflection (–5,760 Pa)	0.602 in (15.3 mm)

¹ The cladding system did not disengage from the wall assembly. The CORE Connect® panel system did not fail at 6,045 Pa (223 mph).

- .3 **Thermal Movements** — the CORE Connect® system accommodates vertical and horizontal thermal movement of components, preventing buckling, joint opening, and other detrimental effects when subjected to seasonal temperature cycles.
 - .1 Temperature Change (Range): **[120 °F / 67 °C ambient; 180 °F / 100 °C material surface]**.

1.7 QUALITY ASSURANCE

- .1 Metal Wall Panel Manufacturer Qualifications: minimum 5 years' experience in metal fabrication and supplying metal wall-panel systems, and a Carter Architectural Panels Inc.–approved CORE Connect® manufacturer.
- .2 Metal Wall Panel Installer Qualifications: minimum 5 years' experience installing commercial metal wall-panel systems.
- .3 Manufacturers must be an approved CORE Connect® fabricator and must manufacture CORE Connect® architectural panels to the tolerances and attributes established by Carter Architectural Panels, Inc. North America.

1.8 TECHNICAL DATA

Applicable standards for the ACM component of the CORE Connect® architectural panel system:

CATEGORY	STANDARDS
Air / Water / Wind Performance	ASTM E283 · ASTM E331 · ASTM E330 · ASTM E330M-14 · AAMA 509-22 · AAMA 501.1

1.9 MOCK-UP

SPEC NOTE *A mock-up is specified only for special or large projects, and only upon request.*

- 1 Provide a mock-up on the building consisting of the complete cladding system — including, but not limited to, Shadow Girts, metal furring, panels, securement devices, sealants, and moldings — for approval. Cladding finish and moldings to be the finish and color designated by the **[Architect]**.
- 2 Location of mock-up as directed by the **[Architect]**. Size to be four panels minimum, in a 2-over-2 configuration.
- 3 Modify the mock-up as necessary for **[Architect]** approval. Mock-up **[may]** **[may not]** remain in place as part of the completed work, and shall represent the standard for completed work.

1.10 DELIVERY, STORAGE & HANDLING

- 1 Handle and store products to prevent damage and soiling, in accordance with the manufacturer's instructions.
- 2 Store packaged or bundled products in original, undamaged crates with manufacturer's seals and labels intact. Do not remove from packaging or crates until required for installation.

1.11 PACKAGING WASTE MANAGEMENT

- 1 Return undamaged pallets and crates to the systems manufacturer. All other plastics, packaging foam, banding, and fasteners are to be disposed of by the panel installer.

1.12 WARRANTY

COMPONENT	WARRANTY
ACM Panels	Manufacturer's standard [1 year] [2 year] warranty against panel integrity.
Finish Coating Performance	Manufacturer's standard [20 year] warranty against fading, color change, chalking, peeling, cracking, or delamination of the coating system.

PART 2 — PRODUCTS

2.1 MANUFACTURERS

- .1 Aluminum Composite Metal panels to be obtained as single-source from Carter Architectural Panels—approved CORE Connect® manufacturers.
- .2 CORE Connect® extrusion system to be obtained from Carter Architectural Panels Inc. — Brampton, ON L6T 5H9 (905.487.1684); Canton, GA 30114 (770.345.9550); Mesa, AZ 85212 (480.899.3955).

2.2 MATERIALS

SPEC NOTE *Delete items not required.*

.1 ACM Wall Panels

- .1 CORE Connect® **[Drain & Back-Ventilated] [wet-seal] [dry-seal]** wall-cladding system.
- .2 Thickness: **[3 mm (0.118")] [4 mm (0.157")]**.
- .3 Panel Depth: 4 mm (0.250") from sub-wall to face of panel.
- .4 Core: Fire-Rated (FR).
- .5 Aluminum Composite Material: etalbond® by Elval Colour, 4 mm [FR] core.
- .6 Manufacturer's standard, as shown on drawings, and as follows:
 - **Shadow Girt:** [.100"] extruded aluminum, 6063-T6 alloy-temper, painted.
 - **Aluminum Extrusions:** CORE Connect® extrusions, mill finish (6063-T6).
 - **Structural Screw:** Carter CORE Connect® structural screw.

2.3 FABRICATION

SPEC NOTE *See Quality Assurance (1.7.1 through .3 above) for manufacturer qualifications & criteria.*

- .1 ACM / MCM wall-panel fabrication must be in accordance with the approved local building plans.
 - .1 **[ACM Panel:** comprised of a fire-retardant / non-combustible extruded core sandwiched between two nominal 0.020" coil-coated 3105 H24 aluminum skins.]
 - .2 **[FR Core ACM Formed Panel:** comprised of an 80% mineral-filled, fire-resistant / non-combustible extruded core sandwiched between two nominal 0.020" coil-coated 3105 H24 aluminum skins.]
- .2 **Fabrication Method:** shear, route, or cut ACM panel sheet to desired face-panel dimensions. Prepare CORE Connect® extrusions for securing to the ACM panel per the manufacturer's written instructions and AAMA 509-22.

.3 Fabricated Panel Tolerances:

DIMENSION	TOLERANCE
Length	+ 1.6 mm (0.062 in)
Width	+ 1.6 mm (0.062 in)
Depth	± 0.2 mm (0.008 in)
Panel Bow	0.8% maximum of panel length or width
Squareness	5 mm (0.2 in) maximum

.4 Rain-screen Panels: provide positive drainage of condensation and water entering at joints to the exterior face of the wall per [NRC "Rain-Screen Principles"].

SPEC NOTE *Finish below is shown as an example only. Specify the actual finish(es) per the ACM coil manufacturer.*

.5 Finishes: PPG, Sherwin-Williams, or Beckers (PVDF) fluoropolymer containing 70% Kynar 500 / Hylar 5000 resins to AAMA 620, [color].

PART 3 — EXECUTION

3.1 EXAMINATION

- .1 Verify that substrate conditions are acceptable prior to installation. Commencement of work indicates acceptance of the prepared substrates.
- .2 Surfaces to receive the panel-system barrier must be sound, dry, clean, and free of oil, grease, dirt, excess mortar, and other contaminants. Fill spalled areas to provide an even plane.

3.2 PREPARATION

- .1 Protect adjacent work areas and finished surfaces from damage by this Section of the work.

3.3 INSTALLATION

- .1 See Carter Architectural Panels, Inc. installation instructions — www.carterpanels.com.
- .2 **ACM Panels:**
 - .1 Install panels plumb, level, and true, in accordance with the manufacturer's written instructions.
 - .2 Anchor panels securely in place in accordance with the fabricator's approved shop drawings.
 - .3 Installation Tolerances: maximum deviation from horizontal and vertical alignment of installed panels not to exceed 6.4 mm (0.25") in 6.1 m (20 ft), non-cumulative.

3.4 SITE QUALITY CONTROL

- .1 Upon the Owner's request, provide the wall-panel fabricator's site service or periodic site visit to inspect product installation in accordance with the fabricator's instructions.

3.5 ADJUSTING

- .1 Repair panels with minor damage so that repairs are not discernible at a distance of 3.1 m (10'-0").
- .2 Remove and replace panels damaged beyond repair.
- .3 Remove protective film within 30 days of completion of panel installation and prior to application of any joint sealants.

3.6 CLEANING

- .1 Clean installed products in accordance with the manufacturer's instructions prior to the Owner's acceptance.

3.7 WASTE MANAGEMENT

- .1 Remove from site all damaged panels, packaging, temporary coverings, protective film, and other debris resulting from the work of this Section.

3.8 PROTECTION

- .1 Protect installed panel finishes from damage during construction.
 - .2 Provide protective measures as required to ensure installed panels are not damaged by the work of other trades.
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END OF SECTION



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