

Manufacturer:

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GUIDE SPECIFICATION

# SECTION 07 42 13.23

**METAL COMPOSITE MATERIAL WALL PANELS**

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Edit entire master to suit project requirements. Modify or add items as necessary. Delete items which are not appli- cable. Words and sentences within brackets [ ] reflect a choice to be made regarding inclusion or exclusion of a particular item or statement. This section may include performance, proprietary, and descriptive type specifications. Edit to avoid conflicting requirements. Editor notes to guide the specifier are included between lines of asterisks to assist in choices to be made. Remove these notes before final printing of specification.

This guide specification is written around the Construction Specifications Institute (CSI), Section Format standards references to section names and numbers are based on MasterFormat 2020.

For specification assistance on specific product applications, please contact our offices above or any of our 50 local service centers throughout the country.

Lumabuilt reserves the right to modify these guide specifications at any time. Updates to this guide specification will be posted to the manufacturer=s web site and/or in printed matter as they occur. Lumabuilt makes no expressed or implied warranties regarding content, errors, or omissions in the information presented.

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# PART 1 - GENERAL

## SUMMARY

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joints, but is shed to the exterior by a concealed moisture barrier, weeps, and flashings.

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* + 1. Section includes metal composite material panels for use for [walls] [soffits] [parapet copings] [column wraps], and including panel mounting system, fasteners, flashing, and trim.
    2. Panel frame options:
       1. [drain back ventilated rainscreen – dry joint panel system as exposed fastener]
       2. [drain back ventilated rainscreen system -- dry joint panel system with concealed fasteners]
       3. [drain back ventilated rain screen system -- wet seal system].
  1. PREINSTALLATION MEETINGS
     1. Preinstallation Conference: Conduct conference at Project site.
        1. Meet with Contractor, Architect, metal composite material panel installer, structural-support installer, and installers whose work interfaces with or affects metal composite material panels, including installers of doors, windows, and louvers.
        2. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
        3. Review methods and procedures related to metal composite material panel installation, including manufacturer's written instructions.
        4. Examine support conditions for compliance with requirements, including alignment between and attachment to structural members.
        5. Review flashings, special siding details, wall penetrations, openings, and condition of other construction that affect metal composite material panels.
        6. Review governing regulations and requirements for insurance, certificates, and tests and inspections if applicable.
        7. Review temporary protection requirements for metal composite material panel assembly during and after installation.
        8. Review procedures for repair of panels damaged after installation.
        9. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

## ACTION SUBMITTALS

* + 1. Product Data:
       1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.
       2. Provide certificate verifying material meets requirements specified.
       3. Code Compliance: Provide document(s) showing product compliance with the national and/or local building code(s) and shall include, but not limited.
       4. to, appropriate Evaluation Reports and/or Test Report supporting the use of the product.
    2. Shop Drawings:
       1. Delegated Design: Provide shop drawings signed and sealed by a professional engineer.

practice in the location of the project, as required, indicating ability of system and attachment to supporting construction to resist code required loads.

* + - 1. Include fabrication and installation layouts of metal composite material panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment assembly, trim, flashings, closures, and accessories; and special details.
      2. Accessories: Include details of the flashing, trim and anchorage, at a scale of not less than 1-1/2 inches per 12 inches (1:10).
    1. Samples for Verification: For each type of exposed finish required, prepare on Samples of size indicated below.
       1. Selection Color Sample: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns (typical 3”x6”)(76 mm x 152mm).
       2. Metal Composite Material Panels (assembly): 12 inches (305 mm) square; include fasteners, closures, and other metal composite material panel accessories.

## INFORMATION SUBMITTALS

## Submit sustainability documentation for recycled content and other pertinent attributes in support of project sustainability goals, such as industry average EPD document for “Aluminum Extrusions – Mill Finished, Painted and Anodized.”

* + 1. Sample Warranties: For special warranties.

## QUALITY ASSURANCE

* + 1. Composite Panel Manufacturer/Fabricator/Installer shall fabricate finished ACM systems in compliance with 2012 and 2009 International Building Code® section 803, 1407, 1609 and ICC-ES Acceptance Criteria for Metal Composite Material (AC-25), dated October 2010 (editorially revised August 2014) – CCRR-1061. [Lumabuilt Visage ACM ICC- Evaluation Service Report number is ESR-5448.]
    2. Composite Panel Manufacturer shall be solely responsible for panel manufacture and application of the finish.
    3. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by the manufacturer and have a minimum 5 years’ experience of metal panel work similar in scope and size to this project.
    4. [Mockups]: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standard for fabrication and installation, as required.
       1. Build mockup of typical metal composite material panel assembly as directed by Architect, including corner, supports, attachments and accessories.
       2. Approval of mockup(s) does not constitute approval of deviations from the Contract Documents contained in mockup(s) unless Architect specifically approves such deviations in writing.
       3. Subject to compliance with requirements, approved mockup(s) may become part of the completed Work if undisturbed at time of Substantial Completion.
    5. Field measurements must be taken prior to the completion of shop fabrication. Coordinate fabrication schedule with construction progress as directed by the Contractor to avoid delay of work. Field fabrication may be allowed to ensure proper fit. However, field fabrication shall be kept to an absolute minimum with the majority of the fabrication being done under controlled shop conditions.
    6. Panel fabricator/installer shall assume undivided responsibility for all components of the exterior panel system including, but not limited to attachment to sub-construction, panel to panel joinery, panel to dissimilar material joinery, and joint seal associated with the panel system.

## DELIVERY, STORAGE, AND HANDLING

* + 1. Deliver components, metal composite material panels, and other manufactured items so as not to be damaged or deformed. Package metal composite material panels for protection during transportation and handling.
    2. Unload, store, and erect metal composite material panels in a manner to prevent bending, warping, twisting, and surface damage.
    3. Stack metal composite material panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal composite material panels to ensure dryness, with positive slope for drainage of water. Do not store metal composite material panels in contact with other materials that might cause staining, denting, or other surface damage.
    4. Retain strippable protective covering on metal composite material panels during installation.

## FIELD CONDITIONS

* + 1. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal composite material panels to be performed according to manufacturers' written instructions and warranty requirements.

## COORDINATION

* + 1. Coordinate metal composite material panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.
  1. WARRANTY
     1. PANEL WARRANTY: Manufacturer warrants that Metal Composite Material panel(s) are, at the time of shipment, free form defects in material and workmanship. Manufacturer agrees to repair or replace said materials if they are documented in writing and presented to the Manufacture with 48 hours of delivery.
        1. Failures include, but are not limited to: Delamination, rupturing, Cracking or Puncturing.
     2. FINISH WARRANTY: Manufacturer warrants responsibility of repairing finish or replacing metal composite material panels that show evidence of deterioration of factory applied finishes for a warranty period of 15 years when 2-costs applied, from the date of substantial completion and following manufacturer’s recommended installation and storage guidelines.
        1. A 20-year warranty is available when 3-coats are applied, from the date of substantial completion and following the Manufacturer recommended installation and storage guidelines. Specifications to meet or exceed AAMA 2605.
        2. Exposed Panel Finish: Deterioration includes, but is not limited, the following:
           1. Color fading to be not more than 5∆E Units (Hunter) units of color change, calculated in accordance with ASTM D2244 when comparing measurements on the acid-exposed painted surface and the unexposed surface.
           2. Chalking shall be no more than that represented by a No. 8 rating for colors, No. 6 for whites, based on ASTM D4214, Test Method A (Method D 659) after test site exposure (per Section 7.9.1.1) for ten years. Chalking shall be measured on an exposed, unwashed painted surface.
           3. Gloss retention shall be a minimum of 50% after the 10-year exposure test per Section 7.9.1.1, using a 60-degree gloss meter and in accordance with ASTM D523.
           4. Coatings shall be visibly free from flow line, streaks, blisters, or other surface imperfections in the dry-film state on exposed surfaces when observed at a distance of 3 meters (10 ft) from the metal surface and inspected at an angle of 90 degrees to the surface.
           5. There shall be no evidence of deleterious effects in the organic coating such as staining, coating separation, lifting, discoloration, or loss of adhesion of the coating from the substrate.

# PART 2 - PRODUCTS

## PERFORMANCE REQUIREMENTS

* + 1. Structural Performance: Provide metal composite material panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 330.
       1. Deflection limit for ACM panel is L/60. Deflection limit for AC panel perimeter farming is L/175.
       2. Wind Loads: As indicated on Drawings or as required to meet applicable building code.
       3. Other Design Loads: As indicated on Drawings.
    2. Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft. (0.3 L/s per sq. m) when tested according to ASTM E 283 at the following test-pressure difference:
       1. Test-Pressure Difference: 1.57 lbf/sq. ft. (75 Pa).
    3. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 331 at the following test-pressure difference:
       1. Test-Pressure Difference: 12.11 lbf/sq. ft. (580 Pa).
    4. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
       1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
    5. Fire-Resistance Ratings:
       1. Comply with ASTM E84: Maximum flame spread of 0; maximum smoke development 105.
       2. Indicate design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.
    6. Fire Propagation Characteristics: Metal composite material wall panel system passes NFPA 285 testing for intermediate scale.

## METAL COMPOSITE MATERIAL WALL PANELS

* + 1. Metal Composite Material Wall Panel Systems: Provide factory-formed and assembled, metal composite material wall panels fabricated from two metal facings that are bonded to a solid, extruded thermoplastic core; formed into profile for installation method indicated. Include attachment assembly components, panel stiffeners, and accessories required for weathertight system.
       1. Products: Subject to compliance with requirements, provide the following:
          1. Lumabuilt ACM FR Wall Panel System (Aluminum Composite Material - Fire Rated Core) [www.lumabuilt.com](http://www.lumabuilt.com) as:

A1000 - [drain back ventilated rainscreen – dry joint panel system as exposed fastener]

A1000 NF - [drain back ventilated rainscreen system -- dry joint concealed fasteners]

A2000 - [drain back ventilated rain screen system -- wet seal system].

* + - * 1. Substitutions: Submit in accordance with Section 01 60 00.
        2. [Lumabuilt Visage ACM ICC- Evaluation Service Report number ESR-5448].
      1. Aluminum-Faced Composite Wall Panels:
         1. Formed with 0.020-inch- (0.50-mm-) thick, coil-coated aluminum sheet facings.
         2. Panel Thickness: [0.157 inch (4 mm)] or [0.236 inch (6 mm)].
         3. Core: Fire retardant.
         4. Lumabuilt Visage ACM Sheet – Basis of Design [www.lumabuilt.com](http://www.lumabuilt.com)
         5. [Optional or As Equal ACM Sheet, such as Alpolic, Alucobond, or Reynobond].
    1. Attachment Assembly Components: Formed from extruded aluminum.
    2. Attachment Assembly: Manufacturer's standard for installation system specified.
    3. Extrusions, formed members, sheet, and plate shall conform with ASTM B 209 and the recommendations of the manufacturer.

## MISCELLANEOUS MATERIALS

* + 1. Miscellaneous Metal Subframing and Furring: ASTM C 645, cold-formed, metallic-coated steel sheet ASTM A 653/A 653M, G90 (Z275 hot-dip galvanized) coating designation or ASTM A 792/A 792M, Class AZ50 (Class AZM150) aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal composite material panel system.
    2. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fascia, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal composite material panels unless otherwise indicated.
    3. Flashing and Trim: Provide flashing and trim formed from similar material as metal composite material panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, corners, endwalls, framed openings, rakes, fascia, parapet caps, soffits, reveals, and fillers. Finish flashing and trim with same finish system adjacent metal composite material panels.
    4. Panel Fasteners: Self-tapping screws designed to withstand design loads. Do not expose fasteners except where unavoidable. Provide exposed stainless-steel fasteners or with heads matching color of metal composite material panels by means of factory-applied coating.
    5. Panel Sealants: ASTM C 920; elastomeric silicone sealant; of type, grade, class, and use classifications required to seal joints in wet seal metal composite panel assemblies and remain weathertight.
    6. Panel stiffeners, if required, shall be structurally secured to the rear face of the composite panel with silicone and/or VHB tape, of sufficient size and strength to maintain panel flatness. Stiffener material and/or finish shall be compatible with the silicone.

## FABRICATION

* + 1. General: Fabricate and finish metal composite material panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
    2. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.
       1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
       2. Sealed Joints: Form non-expansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
       3. Conceal fasteners and expansion provisions where possible.
       4. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.
          1. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal wall panel manufacturer for application but not less than thickness of metal being secured.
    3. Tolerances:
       1. Panel Bow: Maximum 0.5% (5mm/m).
       2. Panel Dimensions: +/-2 mm. Field fabrication shall be allowed where necessary but shall be kept to an absolute minimum. All fabrication shall be done under controlled shop conditions when possible.
       3. Panel Squareness: +/-3 mm. Panel lines, breaks, and angles shall be sharp, true, and surfaces free from warp and buckle.
       4. Panel Flatness: 5% of the Panel Width (Non-accumulative - No Oil Canning)
    4. System Characteristics:
       1. System must not have any visible fasteners, telegraphing or fastening on the panel faces or any other compromise of a neat and flat appearance.
       2. System shall comply with the applicable provisions of the “Curtain Wall Design Guide Manual”, AAMA CW-DG-1-96.
       3. Fabricate panel system so that no restraints can be placed on the panel, which might result in compressive skin stresses. The installation detailing shall be such that the panels remain flat regardless of temperature change.
       4. The finish side of the panel shall have a removable plastic masking applied prior to fabrication, which shall remain on the panel during fabrication, shipping, and erection to protect the surface from damage.
    5. Approved ACM Fabricators:

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## FINISHES

* + 1. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

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* + 1. Aluminum Panels and Accessories:
       1. Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
          1. Color: [ ].
       2. Three-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
          1. Color: [ ].
       3. Mica Fluoropolymer: AAMA 2605. Two-coat fluoropolymer finish with suspended mica flakes containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
          1. Color: [ ].
       4. Metallic Fluoropolymer: AAMA 2605. Three-coat fluoropolymer finish with suspended metallic flakes containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
          1. Color: [ ].
       5. FEVE Fluoropolymer: AAMA 2605. Two-coat fluoropolymer finish containing 100 percent fluorinated ethylene vinyl ether resin in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
          1. Color: [ ].

# PART 3 - EXECUTION

## EXAMINATION

* + 1. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal composite material panel supports, and other conditions affecting performance of the Work.
       1. Examine wall sheathing (or other substrates indicated) to verify that sheathing joints are supported by framing or blocking, and that installation is within flatness tolerances required by metal composite material wall panel manufacturer.
          1. Verify that air and water-resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration, and system has been tested for continuity of membrane and is acceptable to panel fabricator.
    2. Examine rough-in for components and assemblies penetrating metal composite material panels to verify actual locations of penetrations relative to seam locations of metal composite material panels before installation.
    3. Proceed with installation only after unsatisfactory conditions have been corrected.

## PREPARATION

* + 1. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal composite material panel manufacturer's written recommendations.

## METAL COMPOSITE MATERIAL PANEL INSTALLATION

* + 1. General: Install metal composite material panels according to manufacturer's written instructions in orientation, sizes, and locations indicated on Drawings. Install panels perpendicular to support(s) unless otherwise indicated. Anchor metal composite material panels and other components of the Work securely in place, with provisions for thermal and structural movement.
       1. Erect panels plumb, level, and true.
       2. Attachment system shall allow for the free and noiseless vertical and horizontal thermal movement due to expansion and contraction for a material temperature range of -20°F to +180°F (-29°C to

+82°C). Buckling of panels, opening of joints, undue stress on fasteners, failure of sealants or any other detrimental effects due to thermal movement will not be permitted.

* + - 1. Fabrication, assembly, and erection procedure shall account for the ambient temperature at the time of the respective operation.
      2. Panels shall be erected in accordance with an approved set of shop drawings.
      3. Anchor panels securely per engineering recommendations and in accordance with approved shop drawings to allow for necessary thermal movement and structural support.
      4. Conform to panel fabricator's instructions for installation of concealed fasteners.
      5. Do not install component parts that are observed to be defective, including warped, bowed, dented, abrased, and broken members.
      6. Do not cut, trim, weld, or braze component parts during erection in a manner which would damage the finish, decrease strength, or result in visual imperfection or a failure in performance. Return component parts which require alteration to shop for refabrication, if possible, or for replacement with new parts.
      7. Separate dissimilar metals and use gasketed fasteners where needed to eliminate the possibility of corrosive or electrolytic action between metals.
      8. Shim or otherwise plumb substrates receiving metal composite material panels.
      9. Flash and seal metal composite material panels at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal composite material panels are installed.
      10. Install screw fasteners in predrilled holes.
      11. Locate and space fastenings in uniform vertical and horizontal alignment.
      12. Install flashing and trim as metal composite material panel work proceeds.
      13. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
      14. Align bottoms of metal composite material panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
      15. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.
    1. Fasteners:
       1. Aluminum Panels: Use aluminum or stainless-steel fasteners for surfaces exposed to the exterior; use aluminum or galvanized-steel fasteners for surfaces exposed to the interior.
    2. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal composite material panel manufacturer.
    3. Attachment Assembly, General: Install attachment assembly required to support metal composite material wall panels and to provide a complete weathertight wall system, including subgirts, perimeter extrusions, tracks, drainage channels, panel clips, and anchor channels.
       1. Include attachment to supports, panel-to-panel joinery, panel-to-dissimilar-material joinery, and panel-system joint seals.

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In E below, select desired method of installation.

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* + 1. Installation: Attach metal composite materials wall panels to supports at locations, spacings, and with fasteners recommended by manufacturer to achieve performance requirements specified.
       1. [Rainscreen System: Do not apply sealants to joints unless otherwise indicated.]
       2. [Route and Return Wet Seal System: Seal horizontal and vertical joins between adjacent

metal composite material wall panes with sealant backing and sealant. Install sealant backing

and sealant according to requirements specific in Section 07 92 00 “Joint Sealants:]

* + 1. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting and

provide for thermal expansion. Coordinate installation with flashings and other components.

* + - 1. Install components required for a complete metal composite material panel assembly including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items. Provide types indicated by metal composite material panel manufacturer; or, if not indicated, provide types recommended in writing by metal composite material panel manufacturer.
    1. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible and set units true to line and level as indicated. Install work with laps, joints, and seams that are permanently watertight.
       1. Install exposed flashing and trim that is without buckling and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof performance.
       2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (605 mm) of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).

## ERECTION TOLERANCES

* + 1. Installation Tolerances: Shim and align metal composite material wall panel units within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m), non-accumulative, on level, plumb, and location lines as indicated, and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

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## FIELD QUALITY CONTROL

* + 1. Testing Agency: Engage a qualified independent testing agency to perform field tests and inspections.
    2. Water-Spray Test: After installation, test area of assembly as directed by Architect for water penetration according to AAMA 501.2. Conduct tests in not less than [5] locations and no less than [3] test cycles, recommended.
    3. Field Testing Service: Engage a certified testing laboratory with onsite testing capabilities to test and inspect completed metal composite material wall panel installation, including accessories.
    4. The installed assembly of the wall panel system will be considered defective if it does not pass test and inspections.
    5. Additional tests and inspections, at Contractor's expense, are performed to determine compliance of replaced or additional work with specified requirements.
    6. Prepare test and inspection reports.

## CLEANING AND PROTECTION

* + 1. Remove temporary protective coverings and strippable films, if any, as metal composite material panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal composite material panel installation, clean finished surfaces as recommended by metal composite material panel manufacturer. Maintain a clean condition during construction.
    2. After metal composite material panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.
    3. Replace metal composite material panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

**END OF SECTION 07 42 13.13**