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Text for sustainable design requirements, such as LEED, is highlighted in green thusly. Retain or delete as required.

Revise this Section by adding, changing, and deleting text to meet Project-specific requirements.

Release No.	Release Date	Release Title "Released for…."	Description of [Development][Changes]
1	9/7/23	Initial review	Three new sections
2	2/12/24	Second review	
3			

SECTION 07 42 13.26 - DECORATIVE EXTRUDED ALUMINUM BATTEN WALL PANELS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section includes panelized extruded aluminum battens for [**walls**] [**and**] [**ceilings**] [**soffits**] with supporting extrusions and clips.

1.03 REFERENCES

A. Reference Standards: Perform Work according to standards specified and as follows unless modified by requirements in the Contract Documents.

1. [**Make available via internet access**] [**Maintain on site**] a copy of each standard affecting the Work of this Section.

2. Publication Dates: Comply with standards [**in effect as of date of the Contract Documents**], unless otherwise indicated.

3. American Architectural Manufacturers Association (AAMA):
   a. AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum (Combined Document).
   b. AAMA CW-10 - Care and Handling of Architectural Aluminum From Shop to Site.

4. ASTM International (ASTM):

   a. ASTM A 153/A153M: Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
   b. ASTM A653/A653M: Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
   c. ASTM B117: Standard Practice for Operating Salt Spray (Fog) Apparatus.
   d. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
   e. ASTM B633: Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel.
   f. ASTM B695: Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel.
   g. ASTM C754: Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
   h. ASTM C954: Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness.
   i. ASTM D2244: Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.
   j. ASTM D4214: Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.
   k. ASTM E84: Test Method for Surface Burning Characteristics of Building Materials.
   l. ASTM E136: Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750 °C
   m. ASTM G87: Standard Practice for Conducting Moist SO2 Tests.

5. Deutsches Institut für Normung (DIN):

   a. DIN 50018: Sulfur Dioxide Corrosion Testing In A Saturated Atmosphere.

6. National Fire Protection Association (NFPA):

a. NFPA 285: Standard Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components.

7. U.S. Green Building Council (USGBC) - Leadership in Energy and Environmental Design (LEED) (http://www.usgbc.org/):
403561720) USGBC-LEED [**v4**] [**v4.1**] for [**Building Design and Construction (BD+C)**] [**Residential Design and Construction**] Reference Guide.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meetings: Conduct at [**Project site**] <**Insert location**>.

1. Attendees: Contractor and its superintendent, batten system installer, representatives of batten manufacturer, and other parties involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow. Advise Architect, Owner, Owner's insurer if applicable of scheduled meeting dates.
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. Inspect and discuss condition of substrate and support conditions including alignment, and other preparatory work performed by other trades.
4. Review methods and procedures related to batten installation, including manufacturer's written instructions.
5. Review structural load limitations.
6. Review special details, penetrations, openings, and condition of other construction that affect battens.
7. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions.
8. Review preparation, sequence of operations, and other requirements for installing work of this Section.
9. Discuss and agree upon quality control procedures.
10. Review coordination required with other Sections.
11. Review protection and repair requirements for completed work.
12. Record significant proceedings and decisions in minutes including agreements and disagreements, and required corrective measures and actions. Distribute meeting minutes to parties in attendance and others affected by proceedings and decisions made.

1.05 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for batten [**wall**] [**and**] [**ceiling**] [**soffit**] system.

B. Shop Drawings:

1. Indicate layout, profiles and product components including dimensions, wall openings, and finish colors and textures.
2. Include details showing the various system parts, fastening, accessories, anchoring methods, and location and configuration of movement joints.

C. Samples: For each exposed product and for each color and texture specified, [4 inches (102 mm)] <**Insert dimensions**> in length. Include batten manufacturer's color charts showing full range of standard colors and finishes.

D. Samples for Initial Selection: For each type of exposed finish required.

1. Size: [**Manufacturer's standard.**] [4 inches (102 mm)] [6 inches (152 mm)] <**Insert dimensions**> long.

E. Samples for Verification: For each type of exposed finish required.

1. Size: [12 inches **long.**] <**Insert dimensions**>
2. Include samples of each type bracket, fastener, end cap, and other accessories.

1.06 INFORMATIONAL SUBMITTALS

A. Sustainable Design [**LEED**] Submittals:

1. **<insert requirements or reference to Division 01 Sections as required>**

B. Sample Warranty: For manufacturer's warranty.

C. Qualification Data: For Installer [**and manufacturer**] <**Insert entity or specialist**>.

1.07 CLOSEOUT SUBMITTALS

A. Maintenance Data: For batten system to include in maintenance manuals.

B. Executed warranties.

1.08 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum [**5**] <**insert number**> years experience[**under current organizational structure**].

B. Installer Qualifications: [**An entity that employs installers** [**and supervisors**] **who are trained and approved by manufacturer**] [**An authorized representative who is trained and**

approved by manufacturer] with a minimum of five years experience, who has completed systems similar in material, design, and extent to that indicated for Project and with record of successful performance.

C. Mockups: Build mockups [**to verify selections made under Sample submittals**] [**to demonstrate aesthetic effects**] [**to set quality standards for materials and execution**] [**to set quality standards for fabrication and installation**] [**for preconstruction testing**].

1. Build mockup of typical batten system [**as shown on Drawings**] <**Insert size**>, including [**external corner,**] [**internal corner,**] [**external and internal corners,**] [**ceiling,**] [**soffit,**] supports, attachments, and accessories.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.09 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials and components in manufacturers' unopened containers or bundles, fully identified by name, brand, type and grade. Prevent damage during unloading, storing and installation.

B. Store, protect and handle materials and components in accordance with manufacturer's recommendations to prevent twisting, bending, mechanical damage, contamination and deterioration.

C. Store materials off ground on clean pallets and keep clean, dry, flat, and free of dirt and other foreign matter.

D. Do not expose battens with strippable film to direct sunlight or extreme heat.

E. Handle products of this section in accordance with AAMA CW-10.

1.10 FIELD CONDITIONS

A. Ambient Conditions: Proceed with installation only when existing and forecasted weather conditions permit assembly of batten system to be performed according to manufacturers' written instructions and warranty requirements.

1.11 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of batten systems that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Structural failures including rupturing, cracking, puncturing, or excessive deflection.
b. Deterioration of metals and other materials beyond normal weathering.

2. Warranty Period: [**15**] <**Insert number**> years from date of Substantial Completion.

B. Special Warranty on Batten Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace battens that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Batten Finish: Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Hunter units when tested according to ASTM D2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal except for slight crazing or cracking as may occur on tightly roll-formed edges or brake bends at time of forming

2. Finish Warranty Period: [**15**] <**Insert number**> years from date of Substantial Completion.

C. Special Warranty: Furnish installer's [**2**] year labor warranty from [**date of Owner's acceptance of completed work**] to cover repair of materials found to be defective as a result of installation errors.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Basis-of-Design Product: Provide AL13 Batten System by AL13® Architectural Systems, a subsidiary of Anenda Systems Inc., Tel: 855-438-2513, Info@AL13.com, www.AL13.com.

1. Substitutions [**will**] [**will not**] be considered.

B. Source Limitations: Obtain batten system materials from single source from single manufacturer.

1. Obtain secondary and incidental components from same manufacturer as batten system or manufacturer approved by batten system manufacturer.

2.02 SYSTEM DESCRIPTION

A. Extruded aluminum batten system consists of the following:

1. Extruded aluminum battens coated with high performance PVDF powder-coat fluorocarbon finish with simulated woodgrain pattern .

2. Galvanized steel brackets.
3. End closure plugs.

2.03 PERFORMANCE REQUIREMENTS

A. Structural Performance Requirements: Provide extruded aluminum batten wall [**and soffit**] system, including anchorages, capable of withstanding, without failure, the effects of gravity loads and the following loads and stresses within limits and under conditions indicated, determined per the following code requirements:

1. Design Wind Loads: [**As indicated on Drawings.**] <**insert as required**>
2. Deflection Normal to Wall Plane: For continuous aluminum members, total load deflection shall not exceed L/180 of clear span.

B. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Smoke Developed: 0
2. Flame Spread: 0

C. Fire Propagation Characteristics: Batten system passes NFPA 285 testing.
1. Combustibility - ASTM E136 Option A: passed

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: [120 deg F (67 deg C)**, ambient;** 180 deg F (100 deg C)**, material surfaces**] <**Insert temperature change**>.

2.04 EXTRUDED ALUMINUM BATTENS

A. Extruded Aluminum Batten System: Factory-extruded and field-cut and assembled.

1. Aluminum Batten Material: ASTM B209, ANSI H35.1 alloy designation 6063 T5 tension leveled, aluminum

2. Batten Width: **[**1 inches (25.4 mm)] **[**2 inches (50.8 mm)].
3. Batten Depth: **[**1 inches (25.4 mm)] **[**2 inches (50.8 mm)] **[**4 inches (101.6 mm)] **[**5 inches (127 mm)] **[**6 inches (152.4 mm)].
4. Batten Length: [8 feet (2 438 mm)] [12 feet (3 658 mm)] **<As indicated on Drawings>** <**Insert length**>.
5. Minimum Batten Thickness: **[**0.063 inch (1.60 mm)**]**.
6. Profile: [**Square**] [**Rectangular**].
7. Exterior Finish: Two-coat fluoropolymer with simulated woodgrain pattern.

a. Color: [**As indicated by manufacturer's designations**] [**Match Architect's sample**] [**As selected by Architect from full range of** [**manufacturer's standard**] [**available industry**] colors].

B. End Plugs: Polyethylene finished to match battens.

2.05 ATTACHMENT FRAMING

A. Brackets: ASTM A653, Grade 230 cold-formed, metallic-coated steel sheet, minimum 0.0516 inch (1.27 mm) thick, with ASTM A653/A653M, G90 (Z275 hot-dip galvanized) coating designation, 12 to 12-1/2 inch (304.8 to 317.5 mm) nominal length; powder-coated black.

1. Assembled Gap Between Battens: [1 inches (25.4 mm)] [9/16 inches (9.525 mm)] [2 inches (50.8 mm)] [6 inches (152.4 mm)].

B. Girts and Subgirts: ASTM A653, Grade 230 cold-formed, metallic-coated steel sheet, minimum 0.0516 inch (1.27 mm) thick, with ASTM A653/A653M, G90 (Z275 hot-dip galvanized) coating designation, finished to match battens where visible in finished work.

1. Subgirts: Adjustable double-angle profile as indicated to accept batten with structural attachment to building frame.

2.06 ACCESSORIES

A. Bracket to Batten Fasteners: Corrosion-resistant-coated, self-drilling screws designed to withstand design loads of size of type as recommended in writing by batten manufacturer. Provide EPDM or PVC sealing washers for exposed fasteners with heads matching color of Battens by means of plastic caps or factory-applied coating.

1. Screws for attachment to steel framing: ASTM C954; corrosion resistant, hex-head, self-drilling self-tapping type with EPDM composite washers, minimum No. 10 diameter by length required to penetrate steel and aluminum with not less than three exposed threads, zinc-coated steel as specified below.

a. Acceptable Product: AL13 Hex-Head Fastener, #10-16 x 3/4.

B. Fasteners for Brackets to Supporting Substrate: Corrosion-resistant-coated, self-drilling screws designed to withstand design loads of size of type as recommended in writing by batten manufacturer. Provide EPDM or PVC sealing washers for exposed fasteners with heads matching color of Battens by means of plastic caps or factory-applied coating.

1. Screws for attachment to steel framing: ASTM C954; corrosion resistant, hex-head, self-drilling self-tapping type, minimum No. 10 diameter by length required to penetrate steel with not less than three exposed threads, zinc-coated steel as specified below.

a. Acceptable Product: AL13 Hex-Head Fastener, #10-16 x 3/4.

2. Screws for attachment to wood substrates: ASTM C954; corrosion resistant, hex-head, self-drilling type with EPDM composite washers, minimum No. 12 diameter by length required to penetrate not less than 1-1/4 inch (32 mm) into wood, coated steel as specified below.

a. Acceptable Product: AL13 Hex-Head Fastener, #12-14 x 1-1/2.

3. Screws for attachment to concrete and masonry: Alternating high-low thread form type, hex-head, self-cutting threads with matched tolerance drill bit, minimum No. 11 diameter

by length required to penetrate not less than 1-1/4 inch (32 mm) into concrete, stainless steel as specified below.

a. Acceptable Product: AL13 Hex-Head Fastener, 1/4 x 1-1/2 inch.

4. Material by Location:

a. Screws in contact with concrete and masonry: 300 Series (304, 305, or 316) stainless steel.
b. Screws in contact with [**preservative-treated wood**] [**or**] [**fire-retardant-treated wood**] in exterior applications or wet or damp locations: ASTM A 153 or ASTM F2329 hot-dipped zinc-coated galvanized steel or stainless steel.
c. Other Screws: Zinc-plated carbon steel per ASTM B695 or ASTM B633 with polymer-coating able to withstand salt-spray resistance to red rust of more than 1,700 hours per ASTM B117, 18 cycles of ASTM G87 (DIN 50018) SO2 Kesternich testing with not more than 15 percent red rust or stainless steel.

C. Air/Vapor Retarder: As specified in [**Division 07**] Section [**07 27 13**] "Air Barriers."

D. Bituminous Paint: Cold-applied asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos, formulated for 30-mil thickness per coat.

2.07 FABRICATION

A. General: Extrude and finish battens and accessories to indicated profiles at the factory, by manufacturer's standard procedures and processes. Field cut battens to length within dimensional tolerances.

B. Field Measurements: Verify location of structural members and openings in substrates by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work

C. Fabrication Tolerances:

1. Batten bow shall not exceed 1/8 inch in 8 feet (3.175 mm in 2 438 mm).
2. Batten surfaces shall be free of scratches or marks caused during fabrication or installation.

2.08 FINISHES

A. High-Performance Organic PVDF Extrusion Finish: 2-coat polyester or polyurethane powder-coated color finish with simulated woodgrain pattern heat-transfered by sublimation process. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating manufacturers' written instructions.

1. Basis of Design Product: Decoral Process by Decoral System USA Corp.
2. Color: [**As** [**indicated**] [**or, if not indicated, as**]selected from manufacturer's full range.] [**Match Architect's sample.**]

B. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verification of Conditions:

1. Examine substrates, areas, and conditions[**, with installer present,**] for compliance with requirements for installation tolerances, operational clearances, and other conditions affecting performance of the Work.
2. Examine wall sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by batten manufacturer.

a. Verify that air- or water-resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.

3. Examine roughing-in for components and assemblies penetrating battens to verify actual locations of penetrations relative to joint and seam locations of battens.
4. Examine battens before installation. Reject components that are marred, damaged, or deteriorated beyond ability to be touched up as specified below.
5. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Miscellaneous Supports: Install girt [**and subgirt**] framing, and other miscellaneous batten support members and anchorages according to ASTM C754 and batten manufacturer's written recommendations.

B. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

C. Assemble batten to brackets in panelized sections as indicated on Drawings.

3.03 INSTALLATION

A. Comply with batten manufacturer's written installation instructions and recommendations [**and approved submittals**].

1. Adjust assembly to secure brackets safely to wall while allowing for expansion and contraction of components.

B. Do not cut, trim, weld, or braze component parts during installation in manner which would damage finish, decrease strength, or result in visual imperfection or failure in performance. Return component parts which require alteration to shop for further fabrication, if possible, or for replacement with new parts.

[Is below meant to be on top of the battens or underneath to conceal the backup wall? A detail would be helpful.]

C. Do not span brackets across control and expansion joints.

D. Erection Tolerances: Comply with the following non-accumulating maximum tolerances:

1. Level: Variation from plane or location shown on shop drawings: 0.4 inches in 33 feet (10 mm in 10 m) length to maximum of 0.79 inches in 328 feet (20 mm over 100 m).
2. Plumb: Deviation of vertical and horizontal members: 0.12 inches in 28-feet (3 mm maximum in 8.5 m) run.
3. Alignment:

    a. Where surfaces abut in line or are separated by reveal or protruding element up to 1/2 inch (12.5 mm) wide, limit offset from true alignment to 1/16 inch (1.6 mm).
    b. Where surfaces are separated by reveal or protruding element from 1/2 to 1 inch (12.5 to 25 mm) wide, limit offset from true alignment to 1/8 inch (3.2 mm).
    c. Where surfaces are separated by reveal or protruding element of 1 inch (25 mm) wide or more, limit offset from true alignment to 1/4 inch (6.4 mm).

4. Location: Limit variation from plane to 1/4 inch in 20 feet (6.4 mm in 6 m); 1/2 inch (12.5 mm) over total length.

3.04 REPAIR

A. Repairing Damaged Finishes: Immediately after installation, repair areas where coatings or finishes are marred, abraded, deteriorated, or otherwise damaged.

1. Factory-Finished Surfaces: Clean abraded areas and repair with same material used for factory finish per manufacturer's written instructions.

    a. Use only materials and procedures recommended or furnished by batten manufacturer.
    b. Touch Up: Repair marred, damaged, or deteriorated surfaces to blend inconspicuously with adjacent unrepaired surface so touchup is not visible from a distance of 48 inches (1219 mm) as viewed by Architect. Apply with an artist brush or by spray to provide a minimum 2.0-mil (0.058 mm) dry film thickness.
    c. Replace components that cannot be restored to factory-finished appearance [**or that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures**] and that cannot be repaired to Architect's and Owner's satisfaction.

3.05 CLEANING

A. Remove protective film from battens within 60 days after installation is complete.

B. Aluminum Surfaces: Upon completion of installation, thoroughly clean aluminum surfaces in accordance with AAMA 609 & 610.

END OF SECTION 07 42 13.23