USE THIS SECTION WHEN SPECIFYING C.R. LAURENCE ARCHITECTURAL COLUMN COVERS. COLUMN COVERS ARE AVAILABLE IN THREE (3) SYSTEMS; STANDARD WET SYSTEM, DELUXE FULL FRAMED WET SYSTEM, AND PREMIER DRY SYSTEM. COLUMN COVERS ARE AVAILABLE IN TWO (2) PANEL, THREE (3) PANEL, AND FOUR (4) PANEL CONFIGURATIONS, IN ROUND, SQUARE, AND ELLIPTICAL SHAPES, DEPENDING ON DESIGN CRITERIA. COLUMN COVERS ARE AVAILABLE IN ALUMINUM COMPOSITE MATERIAL (ACM), METAL COMPOSITE MATERIAL (MCM), AND SOLID METAL MATERIAL, IN A VARIETY OF COLORS AND FINISHES.

THIS SPECIFICATION SECTION IS A MANUFACTURER SPECIFIC PRODUCT SPECIFICATION USING THE PROPRIETARY METHOD OF SPECIFYING APPLICABLE TO PROJECT SPECIFICATIONS AND MASTER GUIDE SPECIFICATIONS. THIS SPECIFICATION SECTION SHOULD BE EDITED TO MEET SPECIFIC PROJECT DESIGN CRITERIA BY A KNOWLEDGEABLE CONSTRUCTION SPECIFIER. OPTIONS ARE SHOWN IN BRACKETS []. CHOOSE OPTIONS THAT MEET DESIGN CRITERIA, AND REMOVE BRACKETS AND UNUSED OPTIONS BEFORE PRINTING.

PART 1  GENERAL

1.01 SECTION INCLUDES

A. Manufactured architectural column covers.

1.02 RELATED REQUIREMENTS

A. Section 05 40 00 - Cold-Formed Metal Framing: Steel angles for attachment to structural column.

B. Section 07 90 05 - Joint Sealers.

1.03 REFERENCE STANDARDS


C. ASTM A 36 - Carbon Structural Steel; 2005.


F. ASTM A 276 - Stainless Steel Bars and Shapes; 2006.

G. ASTM A 240 - Stainless Steel Sheet and Plate; 2007.

H. ASTM A 480 - General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip; 2006b.

I. ASTM A 666 - Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2003.


K. ASTM B 209 - Aluminum and Aluminum-Alloy Sheet and Plate.
1.04 SUBMITTALS

A. Column cover manufacturer qualifications.

B. Product Data: Column cover manufacturer's data sheets on each product to be used, including thickness, physical characteristics, and finish, and:
   1. Finish manufacturer's data sheet showing physical and performance characteristics.
   2. Storage and handling requirements and recommendations.
   3. Fabrication instructions and recommendations.
   4. Specimen warranty for finish, as specified herein.

C. Shop Drawings: Show layout and elevations, dimensions and thickness of column cover material, finishes and textures, connections, details and location of joints, sealants and gaskets, method of anchorage, number of anchors, supports, reinforcements, and accessories.
   1. Indicate column cover numbering system if applicable.
   2. Differentiate between shop and field fabrication.
   3. Indicate substrates and adjacent work with which the column covers must be coordinated.

D. Samples: Submit [_____] selection and verification samples of column cover, [_____] inch by [_____] inch in size illustrating finish color, sheen, and texture.

E. Installer’s Qualifications: Include a minimum of three (3) projects with similar types of exterior [interior] [exterior and interior] column covers, with facility contact information.

F. Certificate: Certify that the work results of this section meet or exceed specified requirements.

G. Manufacturer's installation instructions.

H. Manufacturer's Field Reports: Provide within 48 hours of field review. State what was observed and what changes, if any, were requested or required.

I. Maintenance Data: Care of finishes and warranty requirements.

J. Executed Warranty: Submit warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
Specifier's note: Article below to include qualifications, prerequisites, standards, limitations, and criteria to establish the requirements for the level of quality for products and workmanship for the work of this section. Coordinate Article with Division 1 Quality Assurance Section.

1.05 QUALITY ASSURANCE
   A. Field Measurements: Verify actual dimensions by field measurement before fabrication; show recorded measurements on shop drawings.
   B. Column cover manufacturer qualifications: Company specializing in manufacturing products specified in this section.
   C. Installer Qualifications: Experienced in performing work of the type specified in this section.
      1. With minimum 3 years of documented experience in installation of metal column cover similar to the work of this section.
      2. Approved by column cover manufacturer.

Specifier's note: Retain paragraph below if mock-up assemblies; erected either on-site, or off-site, are required. Mock-ups can be used to establish standards of quality for workmanship, review of construction sequence/operation, and coordination of work of related sections. Coordinate with Division 1 Quality Control Section; Mock-up requirements.

   D. Mock-Up: Provide a mock-up for evaluation of fabrication workmanship.
      1. Locate on project site [at an off-site location].
      2. Provide panels finished as specified.
      3. Mock-up may remain as part of the Work.

1.06 DELIVERY, STORAGE, AND HANDLING
   A. Deliver products in manufacturer's original, unopened, undamaged containers with identification labels intact.
      1. Protect finishes by applying heavy duty removable plastic film during production.
      2. Package for protection against transportation damage.
      3. Provide markings to identify components consistently with drawings.
      4. Exercise care in unloading, storing and installing column covers to prevent bending, warping, twisting and surface damage.
   B. Store products protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.

1.07 WARRANTY
   A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
   B. See manufacturer for additional information on extended warranty periods for high performance coatings.

PART 2 PRODUCTS

2.01 MANUFACTURERS
   A. C.R. Laurence Co., Inc., P.O. Box 58923, Los Angeles, CA 90058-0923; Tel: (800) 421-6144 or (323) 588-1281 Ext. 7770; Fax: (866) 921-0532 or (323) 584-5226; Email: archmetals@crlaurence.com.
B. Substitutions: No substitutions are permitted.

2.02 MANUFACTURED COLUMN COVERS

A. Column cover: Standard Wet System [Deluxe Full Framed Wet System] [Premier Dry System] preformed and prefinished architectural column cover; round [square] [elliptical], two panel opposing [three panel staggered] [four panel opposing] [four panel staggered], aluminum composite [metal composite] [solid metal] material, size as indicated on drawings.

Specifier's note: Fill in length of column covers in paragraph below. Column covers can be fabricated up to 156 inches in length, after that intermediate seams are required. 16 ga. Stainless Steel: Up to 120 inches in length. 14 ga. Stainless Steel: Up to 144 inches in length. 1/8 inch aluminum: Up to 144 inches in length.

1. Length of column covers [_____] inches.
2. Length of column covers as indicated on Drawings.

Specifier's note: Fill in dimensions of round column covers in paragraph below. Round column covers in 2 panels opposing configuration have a minimum diameter of 14 inches and a maximum diameter of 38 inches; 4 panel opposing configuration have a minimum diameter of 36 inches and a maximum diameter of 78 inches; 3 panel staggered configuration have a minimum diameter of 14 inches and a maximum diameter 58 inches.

3. Size of round column covers [_____] inches.
4. Size of round column covers as indicated on Drawings.

Specifier's note: Fill in dimensions of square column covers in paragraph below. Square column covers in 2 panels opposing configuration have a minimum 8 x 8 inches and maximum 30 x 30 inches; 4 panel opposing configuration have a minimum 24 x 24 inches and a maximum 60 x 60 inches; 4 panel staggered have a minimum 24 x 24 inches and a maximum 48 x 48 inches.

5. Size of square column covers [_____] inches.
6. Size of square column covers as indicated on Drawings.

Specifier's note: Fill in dimensions of elliptical column covers in paragraph below. Elliptical in 2 panels opposing configuration have a minimum 20 x 10 inches and maximum of 48 x 24 inches; 4 panel opposing configuration have a minimum of 30 x 48 inches and a maximum 96 x 48 inches; 4 panel staggered have a minimum 30 x 48 inches and a maximum 78 x 39 inches.

7. Size of elliptical column cover [_____] inches.
8. Size of elliptical column covers as indicated on Drawings.

Specifier's note: Select materials from paragraphs below suited for design requirements. Delete materials that are not used.

2.03 MATERIALS
A. Precoated Aluminum Sheet: ASTM B 209, 5052-H32 smooth surface texture; continuous-coil-coated on exposed surfaces with specified finish coating and on panel back with specified panel back coating.
   1. Thickness: 1/8 inch thick.
   2. Finish:
      a. Satin anodized.
      b. Dark bronze anodized.
      c. High Performance PVDF coating. Duranar contains 70% Kynar 500 or Hylar 5000 fluoropolymer resin; exceeds the performance requirements of AAMA 2605.
      d. High performance powder coating. Spraylat Newlar thermosetting powder coating; exceeds the performance requirements of AAMA 2605. Corrosion protection: Meets 4000 hr. salt spray when tested in accordance with ASTM B117.
      e. Powder coated aluminum.

B. Stainless steel
   1. 16 ga [14 ga] thick cold rolled stainless steel sheet; ASTM A240, type 304 [316].
   2. Finish:
      a. Hairline finish
      b. Polished # 8 finish
      c. Non-directional finish

C. Aluminum-faced Composite Material (ACM) [Metal Composite Material (MCM)] Sheet: Two sheets of aluminum [stainless steel] [copper] [titanium with stainless steel backer sheet] sandwiching a solid core of extruded [fire resistive Alpolic/fr] thermoplastic material formed in a continuous process with no glues or adhesives between dissimilar materials; core material free of voids and spaces; no foamed insulation material content.
   1. Overall Sheet Thickness: 4 mm [3mm thickness available upon request].
   2. Face Sheet: Aluminum alloy 3105 H14, 0.020 inches, minimum [Titanium 0.3 mm and 0.3 mm stainless steel backer sheet].
   3. Panel size: As indicated on Drawings; 4 ft by x 15 ft maximum panel size.
   4. Bond strength: 1500 psi (10.3 MPa) minimum when tested in accordance with ASTM C297.
   5. Peel Strength: No adhesive failure of the bond between the core and the skin nor cohesive failure of the core itself below 22.4 inch-pound/inch with no degradation in bond performance, when tested in accordance with ASTM D 1781, simulating resistance to panel delamination, after 8 hours of submersion in boiling water and after 21 days of immersion in water at 70 degrees F.
   6. Fire performance: Flame spread; 0, maximum; smoke developed; 10 maximum; when tested in accordance with ASTM E 84. [Fire resistive Alpolic/fr core has higher flash point and ignition temperature than standard core, and has been tested to UBC 26-9 Intermediate Scale Multi Story Apparatus Test - Passed (4 and 6 mm thickness), and UBC 26-3 Room Corner Test - Passed (4 mm thickness.)]
   7. Surface flammability (Modified ASTM E108): Passed.
   8. Factory Finish: One coat fluoropolymer resin coating, approved by the coating manufacturer for the length of warranty specified for the project, and applied by coil manufacturing facility that specializes in coil applied finishes. Meets or exceeds values expressed in AAMA 2605 for coil coatings.
      a. Basis of Design: _____ fluoropolymer resin coating as manufactured by ______.
      c. Long-Term Performance: Not less than that specified under WARRANTY in PART 1.
   9. Color/Texture: As selected from manufacturer's standard color selections below. Custom colors available upon request.
      a. Aluminum Series:
         1) EWS100CBW Composite - Bone White
         2) EWS100CCM Composite - Champagne Metallic
         3) EWS100CMP Composite - Mica Platinum
         4) EWS100CSM Composite - Silver Metallic
         5) Custom colors available upon request]
b. Stone Series:
   1) EWS100CBG  Composite - Black Granite
   2) EWS100CWM  Composite - White Marble Exotic

c. Metals Series:
   1) EWS100CCP  Composite - Copper
   2) EWS100CBS  Composite - Stainless Steel
   3) EWS100CT   Composite - Titanium

10. ACM [MCM] sheet production tolerances:
   a. Width: plus or minus 0.04 inch in 3 feet (1mm in 1m).
   b. Length: plus or minus 0.04 inch in 3 feet (1mm in 1m).
   c. Thickness (4 mm sheet): plus or minus 0.008 inch (0.2 mm).
   d. Bow: Maximum 0.5% length or width.
   e. Squareness: Maximum 0.2 inch (5.1mm).
   f. Edges of sheet shall be square and trimmed with no displacement of aluminum sheets or protrusion of core material.

Specifier's note: Select from the three (3) paragraphs below for metal framing members based on standard wet seal, deluxe wet seal, or premier dry seal system.

For standard wet seal system select the following paragraph. Steel angles for mounting to structural column can be provided by CRL upon request.

D. Metal Framing Members: Angles, channels, z-clips, hat-shaped and furring channels, provided under Section 05 40 00 - Cold-Formed Metal Framing. [11 gage galv. steel angles, continuous length full height of column. Select size of angle best suited to size of structural column, and diameter of column cover.]

E. Attachment clips: Aluminum extrusions: ASTM B 221, 6063-T6 alloy, with mill finish as recommended by manufacturer.
   1. Provide material strength, dimensions, configuration as required to meet the applied loads applied and in compliance with applicable building code.

F. Anchors, Clips and Accessories:
   1. Stainless steel complying with ASTM A 480/A480M, ASTM A 276 or ASTM A 666.
   2. Steel complying with ASTM A 36/A 36M and hot-dipped galvanized to ASTM A153/A153M.

G. Fasteners: Self-drilling stainless steel screws as recommended by manufacturer.

For deluxe wet seal system select the following paragraph. Steel angles for mounting to structural column can be provided by CRL upon request.

H. Metal Framing Members: Angles, channels, z-clips, hat-shaped and furring channels, provided under Section 05 40 00 - Cold-Formed Metal Framing. [11 gage galv. steel angles, continuous length full height of column. Select size of angle best suited to size of structural column, and diameter of column cover.]

I. Attachment channel: Aluminum extrusions: ASTM B 221, 6063-T6 alloy, with mill finish as recommended by manufacturer. Full length aluminum extrusion.
   1. Provide material strength, dimensions, configuration as required to meet the applied loads applied and in compliance with applicable building code.
J. Anchors, Clips and Accessories:
   1. Stainless steel complying with ASTM A 480/A480M, ASTM A 276 or ASTM A 666.
   2. Steel complying with ASTM A 36/A 36M and hot-dipped galvanized to ASTM A153/A153M.

K. Fasteners: Self-drilling stainless steel screws as recommended by manufacturer.

For premier dry seal system select the following paragraph. Steel angles for mounting to structural column can be provided by CRL upon request.

L. Metal Framing Members: Angles, channels, z-clips, hat-shaped and furring channels, provided under Section 05 40 00 - Cold-Formed Metal Framing. [11 gage galv. steel angles, continuous length full height of column. Select size of angle best suited to size of structural column, and diameter of column cover.]

M. Anchors, Clips and Accessories: As recommended by manufacturer.

N. Fasteners: Self-drilling stainless steel screws as recommended by manufacturer.

Delete sealants from ACCESSORIES article below when specifying the premier dry seal system

2.04 ACCESSORIES

   A. Sealants: Specified in Section 07 90 05. Single component, low modulus, neutral cure silicone. Manufacturer’s standard type suitable for use with installation of system; non-staining; color as selected.

   B. Field Touch-up Paint: As recommended by column cover manufacturer.

2.05 FABRICATION

   A. Form column cover sections true to shape, accurate in size, square, and free from distortion or defects.

   B. Form pieces in longest practicable lengths.

   C. Stiffeners are fabricated from same material as column cover.

   D. Return seams on column covers are bent using press brake machine.

   E. Curve forming of column covers is by plate roller.

   F. Form returns at vertical joints to provide uniform reveal as indicated on shop drawings.

   G. Fabricate column covers to allow for thermal movement without sealant failure, buckling, or other deformation of column cover appearance.

Use following paragraph when specifying premier dry seal system only. Delete following paragraph when specifying other other systems.

   H. Premier dry system: Form seam at vertical joints with keyhole slot and stainless steel shoulder screw attachment to provide a tight (no reveal) dry joint as indicated on shop drawings.
PART 3 EXECUTION

3.01 EXAMINATION

A. Verify dimensions, tolerances, and interfaces with other work are acceptable for column covers installation.
B. Verify substrate on-site to determine that conditions are acceptable for column cover installation in accordance with manufacturers written instructions.
C. Notify Architect [Owner] in writing of conditions detrimental to proper and timely completion of work. Do not proceed with erection until unsatisfactory conditions have been corrected.
D. Verify that metal framing members specified under related Sections including; angles, channels, attachment clips, or other attachments to structure are installed in accordance with Drawings, shop drawings, and in accordance with column cover manufacturer's installation instructions.

3.02 PREPARATION

A. Protect adjacent work areas and finish surfaces from damage during installation.

3.03 INSTALLATION

A. Do not install products that are defective, including warped, bowed, dented, and broken members, and members with damaged finishes.
B. Comply with instructions and recommendations of column cover manufacturer, as well as with approved shop drawings.
C. Fasten column covers to metal framing members; aligned, level, and plumb.
D. Use concealed fasteners unless otherwise approved by manufacturer.
E. Do not cut, trim, weld, braze, rout, bend, or otherwise form column covers during erection in a manner that would result in damage to finish, decrease structural integrity of column cover, or result in visual imperfections. Return damaged components to manufacturer's fabrication site.
F. Separate dissimilar metals; use gasket fasteners, isolation shims, or isolation tape where needed to eliminate possibility of electrolytic action between metals.
G. Where joints are designed for field applied sealant, seal joints completely with specified sealant.
H. Install square, plumb, straight, and true, accurately fitted, with tight joints and intersections.
I. Replace damaged products.

3.04 TOLERANCES

A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16 inch.
B. Maximum Variation from Plane or Location Indicated on Drawings: 1/8 inch.

3.05 CLEANING

A. Remove site cuttings from finish surfaces.
B. Clean and wash prefinished surfaces with mild soap and water; rinse with clean water.
C. Clean aluminum surfaces in accordance with recommendations found in AAMA 609 and 610. Do not use aggressive alkaline, TSP, acid cleaners, or abrasive cleaners on aluminum surfaces.
D. Clean stainless steel surfaces with non-abrasive detergents, soap, ammonia and warm water; rinse with clean water.

END OF SECTION