SECTION 07 4213
METAL WALL PANELS

USE THIS SECTION WHEN SPECIFYING C.R. LAURENCE EWS SERIES 100 STANDARD WET SEAL WALL PANEL SYSTEM.

THIS SPECIFICATION SECTION IS A MANUFACTURER SPECIFIC PRODUCT SPECIFICATION USING THE PROPRIETARY METHOD OF SPECIFYING APPLICABLE TO PROJECT SPECIFICATIONS AND MASTER GUIDE SPECIFICATIONS. OPTIONAL TEXT IS INDICATED BY [ ]; DELETE OPTIONAL TEXT IN FINAL COPY OF SPECIFICATION SECTION. SECTION INCLUDES INTERIOR AND EXTERIOR WALL PANELS FORMED USING ALUMINUM SHEET. WALL PANELS FABRICATED FROM STAINLESS STEEL, AND COPPER, AND OTHER BRASS METALS ARE ALSO AVAILABLE.

PART 1  GENERAL

1.01  SECTION INCLUDES

A. Manufactured metal panels for walls and soffits, with related flashings, and accessory components.

1.02  RELATED REQUIREMENTS

A. Section 05 4000 - Cold-Formed Metal Framing: Wall panel substrate.
B. Section 05 4000 - Cold-Formed Metal Framing: Water-resistive barrier under wall panels.
C. Section 06 1000 - Rough Carpentry: Wall panel substrate.
D. Section 06 1000 - Rough Carpentry: Water-resistive barrier under wall panels.
E. Section 07 2100 - Thermal Insulation.
F. Section 07 2500 - Weather Barriers: Weather barrier under wall panels.
G. Section 07 9005 - Joint Sealers.
H. Section 09 2116 - Gypsum Board Assemblies: Wall panel substrate.
I. Section 09 2116 - Gypsum Board Assemblies: Water-resistive barrier under wall panels.

1.03  REFERENCE STANDARDS

E. ASTM A 666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2003.
SPECIFIER'S NOTE: ARTICLE BELOW INCLUDES SUBMITTAL OF RELEVANT DATA TO BE FURNISHED BY CONTRACTOR BEFORE, DURING AND AFTER CONSTRUCTION. COORDINATE THIS ARTICLE WITH ARCHITECT'S AND CONTRACTOR'S DUTIES AND RESPONSIBILITIES IN CONDITIONS OF THE CONTRACT AND DIVISION 1 SUBMITTAL PROCEDURES SECTION.

1.04 SUBMITTALS

A. Wall System Manufacturer Qualifications.

B. Product Data: Wall Panel 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 panels, finishes and textures, connections, details and location of joints, sealants and gaskets, method of anchorage, number of anchors, supports, reinforcement, trim, flashings, and accessories.
   1. Indicate panel numbering system.
   2. Differentiate between shop and field fabrication.
   3. Indicate substrates and adjacent work with which the wall system must be coordinated.

D. Samples: Submit ______ selection and verification samples of wall panel, _____ inch (____ mm) by ____ inch (____ mm) in size illustrating finish color, sheen, and texture.
   1. Selection samples: Manufacturer's color charts or chips illustrating full range of colors, finishes and textures available with factory-applied finishes.
   2. Verification samples:
      a. Structural: 24 inch by 24 inch sample wall panel assembly, including intersection of 4 wall panels, in thickness specified, including Z-clips, stiffeners, substrate supports, and sealant for assembly approval.
      b. Include separate samples with factory applied finish on 6 inch by 6 inch of each color and finish selected for project.

E. Installer’s Qualifications: Include a minimum of three (3) projects with similar types of exterior wall panels, 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 CRL'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. Wall System Manufacturer Qualifications: Company specializing in manufacturing products specified in this section.
   1. Approved by MCM sheet manufacturer.

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 wall wall panel system similar to the work of this section.
   2. Approved by wall system manufacturer.

D. Design Engineer's Qualifications: When required by building authority having jurisdiction, Design structural supports and anchorages under direct supervision of a Structural Engineer experienced in design of this type of Work and licensed in [insert job specific state, or location].

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.

E. 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 panels 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 7800 - Closeout Submittals, for additional warranty requirements.

B. See manufacturer for additional information on extended warranty periods for high performance coatings for aluminum wall panels.

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
B. Substitutions: No substitutions are permitted.

2.02 MANUFACTURED METAL PANELS

A. Wall Panel System: EWS 100 Series Standard Economy Wet Seal Metal Panel System; preformed and prefinished metal panel system of horizontal ________ profile; site assembled; with subgirt framing assembly.

B. Exterior panel: Aluminum
1. 1/8 inch ( ) thick, ASTM B209, 5052-H32 alloy.
2. Panel size: 4 ft by 12 ft maximum
3. Exterior finish:
   a. EWS100CSA - Satin anodized.
   b. EWS100CDU - Dark bronze anodized.
   c. EWS100CKN - High Performance PVDF coating. Duranar contains 70% Kynar 500 or Hylar 5000 fluoropolymer resin; exceeds the performance requirements of AAMA 2605.
   d. EWS100CNL - 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. EWS100CPT - Powder coated aluminum.

C. Exterior Panel: Stainless steel
1. 16 ga [ 11 ga] thick cold rolled stainless steel sheet; ASTM A240, type 304 [ 316].
2. Panel size: 4 ft by 12 ft maximum.
3. Exterior finish:
   a. EWS100CBS - HAIRLINE STAINLESS FINISH
   b. EWS100CPS - POLISHED #8 STAINLESS FINISH
   c. EWS100CNDS - NON-DIRECTIONAL STAINLESS FINISH
4. Interlocking edges, fitted with continuous gaskets.

D. Liner Panel:
1. Color: As selected from panel manufacturer's standard colors.

E. Stiffeners: Fabricated from same material as panels.

F. Internal and External Corners: Same material, thickness, and finish as exterior sheets; ________ profile to suit system; shop cut and factory mitered, and welded to required angles. Mitered internal corners to be back braced with ___ gage (___ mm thick) precoated sheet stock to maintain continuity of profile.

G. Expansion Joints: Same material, thickness and finish as exterior sheets; ___ gage (___ mm thick); manufacturer's standard brake formed type, of profile to suit system.

H. Trim and Closure Pieces: Same material, thickness and finish as exterior sheets; brake formed to required profiles.

I. Anchors: Aluminum or Stainless steel.

J.

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.

B. Interior Finish Coating: Panel manufacturer's standard polyester top coat, over recommended primer.
C. Metal Framing Members: Include zee-clips, base and sill angles and channels, hat-shaped and rigid channels, and furring channels required for complete installation.
   1. Aluminum extrusions: ASTM B 221, 6063-T6 alloy, with mill finish. Z-clips, stiffeners and angles as recommended by manufacturer.
   2. Provide material strength, dimensions, configuration as required to meet the applied loads applied and in compliance with applicable building code.
   3. Stainless Steel Sheet Components: ASTM A 480/A 480M.

2.04 ACCESSORIES
A. Gaskets: Manufacturer's standard type suitable for use with system, permanently resilient; ultraviolet and ozone resistant.
B. Sealants: Specified in Section 07 9005. Manufacturer's standard type suitable for use with installation of system; non-staining; color as selected.
C. Fasteners: Manufacturer's standard type to suit application; with soft neoprene washers, stainless steel. Fastener cap same color as exterior panel.

2.05 FABRICATION
A. Form 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 panel.
D. Panels are cut by laser cutting method for panel size 10 ft or less in length. Waterjet cutting method is used for panel size greater than 10 ft in length.
E. Return seams on panels are bent using press brake machine.
F. Curve forming of panels is by plate roller.

PART 3 EXECUTION
3.01 EXAMINATION
A. Verify dimensions, tolerances, and interfaces with other work are acceptable for metal wall panel installation.
B. Verify substrate on-site to determine that conditions are acceptable for product installation in accordance with manufacturer's written instructions.
C. Notify in writing of conditions detrimental to proper and timely completion of work. Do not proceed with erection until unsatisfactory conditions have been corrected.

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 metal panel manufacturer and wall system manufacturer, as well as with approved shop drawings.
C. Fasten panels to structural supports; aligned, level, and plumb.
D. Use concealed fasteners unless otherwise approved by manufacturer.
E. Do not rout, bend, or otherwise form panels in field unless required by wall system manufacturer and approved by the ; comply with metal panel manufacturer's instructions and recommendations for field forming.
F. Separate dissimilar metals; use gasket fasteners, isolation shims, or isolation tape where needed to eliminate possibility of electrolytic action between metals.

G. Provide expansion joints where indicated.

H. Where joints are designed for field applied sealant, seal joints completely with specified sealant.

I. Install square, plumb, straight, and true, accurately fitted, with tight joints and intersections maintaining the following installation tolerances:
   1. Variation From Plane or Location: 1/2 inch in 30 feet (10 mm in 10 m) of length and up to 3/4 inch in 300 feet (20 mm in 100 m), maximum.
   2. Deviation of horizontal and vertical alignment of installed metal panels: 0.25 inch in 20 feet (6.4 mm in 6.1 m), noncumulative.
   3. Offset From True Alignment Between Two Adjacent Members Abutting End To End, In Line: 0.03 inch (0.75 mm), maximum.

J. Replace damaged products.

### 3.04 INSTALLATION

A. Install panels on walls and soffits in accordance with manufacturer's instructions.

B. Protect surfaces in contact with cementitious materials and dissimilar metals with bituminous paint. Allow to dry prior to installation.

C. Fasten panels to structural supports; aligned, level, and plumb.

D. Locate joints over supports. Lap panel ends minimum 2 inches (50 mm).

E. Provide expansion joints where indicated.

F. Use concealed fasteners unless otherwise approved by manufacturer.

G. Seal and place gaskets to prevent weather penetration. Maintain neat appearance.

### 3.05 TOLERANCES

A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16 inch (1.6 mm).

B. Maximum Variation from Plane or Location Indicated on Drawings: 1/8 inch (3 mm).

### 3.06 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**