SECTION 10 73 00

PROTECTIVE COVERS

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\*\* NOTE TO SPECIFIER \*\* Ballew's Aluminum Products, Inc.; canopies, walkway covers carports.
This section is based on the products of Ballew's Aluminum Products, Inc., which is located at:

367 Mayfield Rd
Duncan, SC 29334
Toll Free Tel: 800-231-6666
Tel: 864-272-4453
Fax: 864-272-4456
Email: [request info (mary@ballews.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Ballews+Aluminum+Products,+Inc.&coid=30797&rep=&fax=864-272-4456&message=RE:%2520Spec%2520Question%2520(10730blw):%2520%2520&mf=)
Web: <https://www.ballews.com>

 [ [Click Here](https://arcat.com/company/ballews-aluminum-products-inc-30797) ] for additional information.
Ballew's Aluminum Products, Inc. is a family owned business which was founded on quality and service in 1958. Though Ballew's started as a retail awning company, it has grown into a leading manufacturer of residential, commercial, and industrial canopies and walkway covers, as well as stepdown awning materials, three styles of screen rooms, mobile home roof-over systems, carports, patio covers, and insulated rooms.
Ballew's manufacturing facilities are located in Manheim Pennsylvania, Duncan South Carolina, Southaven, Mississippi, and Oklahoma City, Oklahoma. These locations make it possible to deliver in a vast area with Ballew's own delivery trucks. By maintaining consistent delivery routes, Ballew's is able to limit material damage and guarantee the same quality and service upon which the company was founded.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Pre-Fabricated, Custom Designed Fixed Protective Canopies and Covers: Extruded and roll-formed for walkways, entrances, patios, overhead marquees, windows, parking lots, etc.
			1. Design scope includes but is not limited to the following.
				1. Overhead canopies.
				2. Extruded covers.
				3. Flat pan covers.
				4. W-pan covers.
				5. Insulated covers.
				6. Commercial patio covers.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
		2. Section 07 71 23 - Manufactured Gutters and Downspouts.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM International (ASTM):
			1. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.
			2. ASTM A792 - Standard Specification for Steel Sheet, 55 percent Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
			3. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
			4. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
			5. ASTM E2950 - Standard Specification for Metal Canopy Systems.
		2. American Society of Civil Engineers (ASCE):
			1. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures.
		3. American Welding Society (AWS):
			1. AWS D1.1 - Structural Welding Code..
		4. American Architectural Manufacturer's Association
			1. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix).
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data:
			1. Manufacturer's data sheets on each product to be used.
			2. Preparation instructions and recommendations.
			3. Storage and handling requirements and recommendations.
			4. Typical installation methods.
			5. Include information for factory finish, accessories and other required components.
			6. Include color charts for finish indicating manufacturer's standard colors available for selection.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Samples of Aluminum finishes for roof panels and all support structures will be provided as needed.
		2. Drawings: Details of materials, construction and finish. Include relationship with adjacent construction. Layout of each canopy or shelter, showing location of supporting members. Include elevations and details.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.

\*\* NOTE TO SPECIFIER \*\* Engineering data is available from Ballew's Aluminum Products, Inc. Engineering data includes to 100 psf. Design live load and snow load charts, includes design wind loads of 100 - 180 MPH. Compliance with local codes can be verified through Ballew's Aluminum Products.

* + - 1. Designer Qualifications: Engineer experienced in design of this type of work and licensed in State in which Project is located.
				1. Comply with applicable code for submission of design calculations, reviewed shop and erection drawings, and \_\_\_\_\_\_\_\_ as required for acquiring permits.
				2. Cooperate with regulatory agency or authorities having jurisdiction, and provide data as requested.
		1. Installer Qualifications: Company specializing in performing Work of this section with minimum three years documented experience with projects of similar scope and complexity.
		2. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.
	1. PRE-INSTALLATION CONFERENCE
		1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Deliver materials to project site ready for installation whenever possible.
		2. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
		3. Protect from damage due to weather, excessive temperature, and construction operations.
	3. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
	4. WARRANTIES
		1. Manufacturer's standard limited warranty. Correct defective work within a three year period after Date of Substantial Completion.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Ballew's Aluminum Products, Inc., which is located at: 367 Mayfield Rd; Duncan, SC 29334; Toll Free Tel: 800-231-6666; Tel: 864-272-4453; Fax: 864-272-4456; Email: [request info](http://admin.arcat.com/users.pl?action=UserEmail&company=Ballews+Aluminum+Products,+Inc.&coid=30797&rep=&fax=864-272-4456&message=RE:%2520Spec%2520Question%2520(10730blw):%2520%2520&mf=); Web: <http://www.ballews.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
	1. PERFORMANCE AND DESIGN REQUIREMENTS
		1. Pre-Engineered Metal Protective Covers.
			1. Standards compliance: Pre-engineered system complying with ASTM E2950 and in accordance with ASCE 7.

\*\* NOTE TO SPECIFIER \*\* Delete or edit performance and design requirements options not required.

* + - * 1. Loading: As indicated on Drawings and in compliance with local authorities having jurisdiction.
				2. Live Load: \_\_\_\_ lbs per sq ft ( \_\_\_\_ kPa).
				3. Live Load: 20 lbs per sq ft ( 0.96 kPa).
				4. Live Load: 30 lbs per sq ft ( 1.43 kPa).
				5. Live Load: 40 lbs per sq ft (1.91 kPa).
				6. Wind Speed: \_\_\_\_ mph (\_\_\_\_ kph).
				7. Wind Speed: 80 mph (129 kph).
				8. Wind Speed: 90 mph (14511 kph).
				9. Wind Speed: 100 mph (161 kph).
				10. Wind Speed: 110 mph (177 kph).
				11. Wind Speed: 120 mph (193 kph).
				12. Wind Speed: 130 mph (209 kph).
				13. Wind Speed: 140 mph (225 kph).
				14. Snow: \_\_\_ psf (\_\_\_ kPa); minimum.
				15. Seismic Load: Zone: 0-1.
				16. Seismic Load: Zone: 2.
				17. Seismic Load: Zone: 3.
				18. Seismic Load: Zone: 4.
				19. Deflection Limit: L/120 of span.
			1. Thermal Movement: No buckling, joint seal failure, fastener failure, or component failure.
				1. Ambient Temperature Range: Up to 120 degrees F (49 degrees C)
				2. Surface Temperature Range: Up to 180 degrees F (82 degrees C)
			2. Shop fabricate to the greatest extent possible; disassemble if necessary for shipping.
				1. Complete system ready for erection at project site.
				2. Perform welding in accordance with AWS D1.1.
		1. Covering:
			1. Sheet Metal Decking: Interlocking metal panels.
			2. Flat-panel Size (Depth x Width): 3 x 12 inches (406 x 76 mm).
				1. Aluminum: 0.025 inch (0.63 mm) thick.
				2. Aluminum: 0.032 inch (0.81 mm) thick.
				3. Aluminum: 0.040 inch (1.02 mm) thick..
				4. Galvanized Sheet Steel: 26 ga; 0.0217 inch (0.551 mm).
			3. W-panel Size (Depth x Width): 2-1/2 x 12 inches (406 x 76 mm).
				1. Aluminum: 0.025 inch (0.63 mm) thick.
				2. Aluminum: 0.032 inch (0.81 mm) thick.
				3. Aluminum: 0.040 inch (1.02 mm) thick.
				4. Galvanized Sheet Steel: 26 ga; 0.0217 inch (0.551 mm).
			4. Material: ASTM A653, G40 galvanized according to ASTM A924.
			5. Material: ASTM A792 aluminum-zinc alloy coated to AZ50.
			6. Canopy manufacturer's standard clip type fasteners for attaching covering to structural beams.
		2. Roll-Formed Canopy Components:
			1. Sheet Metal Decking Panels: Interlocking metal panels
				1. Flat Panel (Depth x Width): 3 x 12 inch (76 x 305 mm) section.
				2. Aluminum: 0.025 inch (0.63 mm) thick.
				3. Aluminum: 0.032 inch (0.81 mm) thick.
				4. Aluminum: 0.040 inch (1.02 mm) thick.
				5. Galvanized Sheet Steel: 26 ga; 0.0217 inch (0.551 mm).
				6. Galvanized Sheet Steel: 26 ga; 0.0217 inch (0.551 mm).
				7. W-panel (Depth x Width): 2.5 x 12 inch (64 x 305 mm) section.
				8. Aluminum: 0.025 inch (0.63 mm) thick.
				9. Aluminum: 0.032 inch (0.81 mm) thick.
				10. Aluminum: 0.040 inch (1.02 mm) thick.
				11. Galvanized Sheet Steel: 26 ga; 0.0217 inch (0.551 mm).
			2. Roll Formed Fascia/Gutter (Width x Height): 3.00 x 6.90 inch (76 x 175 mm)
				1. Aluminum: 0.050 inch (1.27 mm) thick.
			3. Extruded Fascia/Gutter (Width x Height x Thickness): 3.00 x 6.375 inches (76 x 162 mm).
				1. Aluminum: 0.080 inch (2.03 mm) wall thickness.
			4. Extruded Fascia/Gutter (Width x Height x Thickness): 4.00 x 8 inches (102 x 203 mm).
				1. Aluminum: 0.125 inch (3.00 mm) wall thickness.
		3. Extruded Aluminum Canopy Components:
			1. Decking: 3 inch (76 mm) extruded aluminum deck with grooves on 1/3 points.
				1. Wall Thickness: 0.060 inch (1.52 mm).
				2. Section (Depth x Width): 2-15/16 x 6 inch (75 x 152 mm).
			2. Interlocking Seam Caps (Depth x Width): 3/4 x 6 inch (19 x 152 mm); 0.060 inch (1.52 mm) thick.
		4. Beams and Columns:
			1. Roll-Formed Cloverleaf Column: 3 x 3 inch (76 x 76 mm).
				1. Galvanized Sheet Steel: 18 ga; 0.0516 inch (1.31 mm).
			2. Extruded Beams: "I" or "C" beams and "U" (drain) beams.
				1. Drain Beams:
				2. Dimensions (Width x Height): 4 x 6 inch (102 x 152 mm).

Web Thickness: 0.125 inch (3.18 mm).

Flange Thickness: 0.190 inch (4.83 mm).

* + - * 1. I Beams:
				2. 10 inch (254 mm).

Flange Thickness: 0.165 inch (4.19 mm)

Web Thickness: 0.125 inch (3.18 mm)

* + - * 1. 7 inch (178 mm).

Flange Thickness: 0.110 inch (2.79 mm)

Web Thickness: 0.125 inch (3.18 mm)

* + - * 1. C Beams:
				2. 10 inch (254 mm).

Flange Thickness: 0.153 inch ( mm)

Web Thickness: 0.157 inch (3.99 mm)

* + - * 1. 7 inch (178 mm).

Flange Thickness: 0.110 inch (2.79 mm)

Web Thickness: 0.110 inch (2.79 mm)

* + - * 1. Tilt Beams: 2 x 4 inch (mm) Wall thickness: 0.060 inch (1.52 mm)
				2. Lap Beams: 2 x 4 inches (51 x 102 mm)
				3. Lap Beams: 2 x 7 inches(51 x 178 mm)
				4. Lap Beams: 2 x 9 inches (51 x 229 mm)
			1. Extruded Aluminum Tube Column; 6005-T5 alloy.
				1. Dimensions (Width x Depth x Wall Thickness): 3 x 3 x 0.110 inch (76 x 76 x 2.79 mm).
				2. Dimensions (Width x Depth x Wall Thickness): 4 x 4 x 0.125 inch (102 x 102 x 3.18 mm).
				3. Dimensions (Width x Depth x Wall Thickness): 6 x 6 x 0.188 inch (152 x 152 x 3.18 mm).
			2. Overhead Hangers: Extruded aluminum tubing 6005-T5 alloy.
				1. Dimensions (Width x Depth x Wall Thickness): 1-1/2 x 1-1/2 x 0.125 inch (38 x 38 x 3.18 mm).
		1. Material:
			1. Smooth aluminum:
				1. Extrusions: Meeting requirements of ASTM B221, alloy 6061-T6, 6063-T5, or 6063-T6.
				2. Sheets: Meeting requirements of ASTM B209, alloy 3105-H28 or 3004-H34.
			2. Sealants: Single component clear 100 percent silicone.
			3. Accessories: Flashings, brackets, and other items as necessary for complete system.
			4. Fasteners: Non-structural:
				1. Stainless steel. ASTM F593.
				2. Carbon steel. ASTM A307.
		2. Anchorage Devices, Clips and Fasteners: Manufacturer's standard type, compatible with materials being secured, of size and spacing sufficient to resist indicated loads.
			1. Above roof deck, utilize fasteners with neoprene washers.
			2. Anchor Bolts: ASTM A307 or ASTM A572.
			3. Provide nuts and washers as required for column leveling and plumbing.
		3. Concrete Footings: See Section 03 30 00 - Cast-in-Place Concrete for details.
		4. Exposed Gutters and Downspouts: Aluminum with baked enamel finish, color to match canopy covering, manufacturer's recommended size for canopy specified.
	1. FABRICATION
		1. Roof Panels: Roll-formed or extruded panels with interlocking seams.
		2. Fascias, columns and beams: Extrusions and roll formed sections.
			1. Fabricated, bored and notched for mechanical connection.
			2. Provide notches, cut out, and internal deflectors in members as noted to act as internal water drainage system.
	2. FINISHES
		1. Factory Applied Polyester Paint Finish: Comply with AAMA 2603, chemically cleaned, conversion coated primer, followed by factory applied baked polyester enamel coating.
			1. Color: As selected from manufacturer's standard colors.
		2. Clear anodized.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly constructed and prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions approved submittals and in proper relationship with adjacent construction.
			1. Install members plumb and square, free from warp or twist, securely anchored to substrates with appropriate fasteners and accessories.
			2. Maintain dimensional tolerances and alignment with adjacent work.
			3. Ensure joints are hairline tight and surfaces flush with adjacent components.
	4. FIELD QUALITY CONTROL
		1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
	1. CLEANING AND PROTECTION
		1. Clean products in accordance with the manufacturers recommendations.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION