

# SECTION 13221

## ALUMINUM LAUNDER COVERS

Revision 1.0 — April 2026

**PROJECT TEMPLATE:** This document is provided as a specification template. Contact RPS Engineering at 847-931-1950 to work with our team on completing project-specific requirements and specifications for your facility.

### PART 1 — GENERAL

#### 1.1 DESCRIPTION

- A. Provide aluminum launder covers and appurtenances for wastewater treatment clarifier applications as indicated and specified. All materials shall be suitable for continuous exposure to hydrogen sulfide (H<sub>2</sub>S) gas and other corrosive byproducts of wastewater treatment environments.
- B. Please list all tanks where covers are required and clearly identify on the contract drawings provided:
  - 1. Tank 1: \_\_\_\_\_
  - 2. Tank 2: \_\_\_\_\_
  - 3. Tank 3: \_\_\_\_\_
  - 4. Tank 4: \_\_\_\_\_
- C. Launder covers shall be the product of one manufacturer.

#### 1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM) Publications:
  - 1. ASTM B209 — Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
  - 2. ASTM B221 — Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes and Tubes.
  - 3. ASTM F593 — Standard Specifications for Stainless Steel Bolts, Hex Cap Screws and Studs.
  - 4. ASTM F594 — Standard Specification for Stainless Steel Nuts.
- B. ASCE 7-22 — Minimum Design Loads and Associated Criteria for Buildings and Other Structures.
- C. International Building Code (IBC) 2021.

#### 1.3 SEISMIC DESIGN REQUIREMENTS

- A. The Contractor shall conform to the seismic design requirements for this project and for the work of this specification section.
- B. Provide all equipment bases, anchorage, supports, and foundations designed in accordance with the seismic requirements indicated and specified.

- C. Seismic design parameters shall be per project location and jurisdiction in accordance with ASCE 7-22 and IBC 2021.
- D. Additionally, provide a certification for all equipment signed by a registered structural engineer licensed in the state where covers are installed, stating that computations were performed and that all components have been sized for the seismic forces specified and indicated. This certification is provided in the Manufacturer's Equipment Certification.

## 1.4 SUBMITTALS

- A. Submit the following in accordance with submittal procedures:
  - 1. Certified shop and erection drawings. Contractor shall submit electronic files of the proposed equipment in the capacity, size, and arrangement as indicated and specified.
    - a. Electronic files shall conform to the following minimum requirements:
      - A. Electronic Files: AutoCAD latest version, drawn to scale.
      - B. Submit electronic files as part of the Shop Drawing submittal.
      - C. Drawings shall include plan views, sectional views, title block, tag numbers, parts list (identifying each component), dimensions, connection sizes and types, and all details of all related items. Where certain information is proprietary and omitted, provide a statement indicating that the information is proprietary.
      - D. Drawings shall be in conformance with all other requirements as specified.
        - 1. Method of attachment, size of fasteners, and weights of each section.
        - 2. Shop drawing data for accessory items.
        - 3. Certified setting plans, with tolerances, for anchor bolts.
        - 4. Listing of reference installations with contact names and telephone numbers.
        - 5. Shop and field inspection reports.
        - 6. Shop test results: Certified test reports of the physical and mechanical properties as specified herein.
        - 7. Recommendations for short and long-term storage.
        - 8. Special tools.
        - 9. The latest ISO 9001 series certification or quality system plan.

## 1.5 QUALITY CONTROL

- A. Covers shall be the product of one manufacturer.
- B. Covers shall be manufacturer's standard cataloged product, modified to provide compliance with the drawings, specifications, and the service conditions specified and indicated.
- C. Shop tests as specified.
- D. Warranty: Provide a one (1) year warranty for material and workmanship defects.
- E. Coordination: Cover manufacturer shall coordinate the fabrication of covers with the contractor and clarifier manufacturer regarding the clarifier mechanism, scum collection, and launder and channel configurations.
- F. Provide the following certificates related to the supply, installation, and operation of the equipment specified herein in accordance with manufacturer's certificates:
  - 1. Manufacturer's Equipment Certification.
  - 2. Equipment Installation Certification.

3. Equipment Operation Warranty.

## 1.6 DELIVERY, STORAGE AND HANDLING

- A. Provide in accordance with manufacturer's requirements.
- B. Shipping:
  1. All systems, sub-systems, and structures shall be shop fabricated and assembled into the largest practical size suitable for transporting.

## 1.7 OPERATION AND MAINTENANCE MANUALS

- A. Submit Operation and Maintenance Manuals as specified in closeout submittal.

## PART 2 — PRODUCTS

---

### 2.1 MANUFACTURERS

- A. RPS Engineering
  1. 1300 Crispin Drive, Elgin, IL 60123
  2. Phone: 847-931-1950 | Fax: 847-931-4274
  3. [www.rpsengineering.com](http://www.rpsengineering.com)
  4. Woman-Owned Business

### 2.2 COVERS

- A. Provide laundry covers consisting of a system of extruded aluminum panels that are attached together to form a continuous cover over the laundry trough, weir, and scum baffle within the tank.
  1. Provide the cover extending over the trough and weir to a point immediately inside the scum baffle so long as the cover does not interfere with the sweep arm.
  2. Individual sections: fitted to follow the curvature of the tank.
- B. Provide the cover designed such that adjacent panels fit together and the completed cover, when installed, forms a rigid structure.
- C. Provide covers designed and manufactured to inhibit incident sunlight from striking the surfaces of the laundry and weir.
- D. Covers shall have an integrated bi-directional slip-resistant surface. This surface should not be achieved using paint or adhesive tape.
- E. Covers shall allow for thermal expansion and contraction.
- F. Provide the cover designed to open away from or toward the operator as shown on the contract drawings.
- G. Cover weight shall not exceed 75 lbs. per panel. Each panel shall be easy to lift with the lifting force no greater than the dead weight of the panel.
- H. Design deflection of all structural members and cover panels shall be limited to L/240 with L equal to the short span of the components when supporting the total dead and live load conditions.

- I. Provide a means of limiting the travel of the hinged cover section in the form of a Type 316 stainless steel cable restraint.
- J. Covers with inspection hatches or cleanout doors are not acceptable.
- K. Provide covers supported such that panels are held in place, with panels hinged to provide access to the launder and weir for inspection and maintenance.
- L. Where the circumference of the trough is interrupted by a bridge support or another obstacle, provide a fixed panel(s) over the trough beneath the support such that the surface of the cover is continuous around the entire tank.
- M. Provide the cover system designed to withstand wind and snow loads for the plant location per ASCE 7-22, and to support a 250 lb. person when a walkable cover is required.

## 2.3 MATERIALS

- A. Aluminum Launder Cover — All materials shall be resistant to hydrogen sulfide (H<sub>2</sub>S) and corrosive gases typical of wastewater treatment environments.
  - 1. Structural frame/support: ASTM B221 6061-T6 aluminum.
  - 2. Cover panels/hatches: ASTM B209 aluminum, 6061-T6 or 6063-T6 aluminum or equal.
- B. Fasteners: Type 316 or 304 stainless steel. ASTM F593, ASTM F594.
- C. Expansion Anchor Bolts: Type 316 or 304 stainless steel. ASTM F593, ASTM F594.

## PART 3 — EXECUTION

### 3.1 INSTALLATION

- A. Install items in accordance with approved shop drawings, manufacturer's printed instructions, and as indicated.
- B. Contractor to field verify dimensions prior to installing the covers.
- C. Provide a mechanical and replaceable seal to isolate the cover perimeter and aluminum supports from the concrete wall.
- D. Bare aluminum shall not be installed against existing concrete.
- E. Coat surfaces in contact with dissimilar materials.
- F. Provide adjacent baffle panels fastened together using ¼-inch bolts, 2 flat washers, lock washer, and hex nut. All hardware Type 316 stainless steel.
- G. The covers shall extend completely around the tank and shall be level, rigid, and free of sway that could work anchors loose or cause undue wear.

### 3.2 CONTRACT CLOSEOUT

- A. Provide in accordance with Section \_\_\_\_\_ CLOSEOUT PROCEDURES.

---

**END OF SECTION 13221**