

**SECTION 10 75 00
FLAGPOLES**

SPEC WRITER NOTE: Delete text between
// _____ // not applicable to project.
Edit remaining text to suit project.

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fixed high dimensional, ground set, uniform conical taper, seamless tube flag pole.

1.2 RELATED REQUIREMENTS

SPEC WRITER NOTE: Update and retain
references only when specified elsewhere
in this section.

- A. Concrete for Ground Set Flagpole: Section 03 30 00, CAST-IN-PLACE CONCRETE.
- B. Flagpole Finish Color: Section 09 06 00, SCHEDULE FOR FINISHES.
- C. Excavation and Backfill: Section 31 20 00, EARTHWORK.

1.3 APPLICABLE PUBLICATIONS

- A. Comply with references to extent specified in this section.
- B. American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI):
 1. 7-10 - Minimum Design Loads for Buildings and Other Structures.
- C. ASTM International (ASTM):
 1. A240/A240M-15b - Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
 2. B209-14 - Aluminum and Aluminum-Alloy Sheet and Plate.
 3. B209M-14 - Aluminum and Aluminum-Alloy Sheet and Plate (Metric).
 4. B241/B241M-12e1 - Aluminum and Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube.
 5. C33/C33M-13 - Concrete Aggregates.
 6. C920-14a - Elastomeric Joint Sealants.
- D. Master Painters Institute (MPI):
 1. No. 35 - Bituminous Coating.
- E. National Architectural Metal Manufacturers (NAAMM):
 1. AMP 500-06 - Metal Finishes Manual.
 2. FP 1001-07 - Guide Specifications for the Design of Metal Flagpoles.

1.4 SUBMITTALS

- A. Submittal Procedures: Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Submittal Drawings:
 - 1. Show size and installation details for flagpole, base, and finial ball.
- C. Manufacturer's Literature and Data:
 - 1. Description of each product.
 - 2. Installation instructions.
- D. Qualifications: Substantiate qualifications comply with specifications.
 - 1. Installer // with project experience list //.
- E. Delegated Design Drawings and Calculations: Signed and sealed by responsible design professional.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications:
 - 1. Installed specified products with satisfactory service on five similar installations for minimum five years.
 - a. // Project Experience List: Provide contact names and addresses for completed projects. //

1.6 DELIVERY

- A. Deliver products in manufacturer's original sealed packaging.
- B. Before installation, return or dispose of products within distorted, damaged, or opened packaging.

1.7 WARRANTY

SPEC WRITER NOTE: Always retain construction warranty. FAR includes Contractor's one year labor and material warranty.

- A. Construction Warranty: FAR clause 52.246-21, "Warranty of Construction."

PART 2 - PRODUCTS

2.1 SYSTEM PERFORMANCE

- A. Delegated Design: Prepare submittal documents including design calculations and drawings signed and sealed by registered design professional, licensed in state where work is located.
- B. Design flagpole assemblies complying with specified performance:

1. Wind Loads: NAAMM FP 1001.
2. Seismic Loads: ASCE/SEI 7.

SPEC WRITER NOTE: Make material requirements agree with applicable requirements specified in the referenced Applicable Publications. Update and specify only that which applies to the project.

2.2 MATERIALS

- A. Aluminum, Extruded: ASTM B241/B241M, Alloy 6063 - T6.
- B. Aluminum, Plate and Sheet: // ASTM B209M // ASTM B209 //, Alloy 1100.
- C. Stainless Steel: ASTM A240/A240M, Type 304.

2.3 PRODUCTS - GENERAL

- A. Basis of Design: Section 09 06 00, SCHEDULE FOR FINISHES.

2.4 FABRICATION

SPEC WRITER NOTE: Coordinate flagpole height with the number of sections required for fabrication and shipping. Between 9 m and 12 m (30 feet and 40 feet), flagpoles can be one or two pieces. Two-pieces are easier to ship but there may be a preference for one piece. Over 12 m (40 feet), flagpoles are two pieces and over 15 m (50 feet), they are three pieces.

- A. Fabricate flagpole of seamless extruded aluminum tube, uniform conical taper of approximately 1 in 70 (1 inch in every 72 inches).
 1. Maximum Taper: 50 percent of flagpole outside base diameter.
 2. Sectional Flagpoles: Provide self-aligning sleeves for field joint.
- B. Base: Aluminum plate or stainless steel, of stock design as indicated on drawings.
- C. Finial Ball: 2 mm (0.08 inch) thick spun aluminum sphere, with seams welded flush and watertight. Mount ball on threaded rod to fit truck.
 1. Ball Diameter: Match flagpole butt diameter.

SPEC WRITER NOTE: Truck, halyards, and cleats in the following paragraphs are for an external system, which is most common.

- D. Truck: Equip pole with extra heavy, revolving, non-fouling, ball bearing type truck with cast aluminum body. Fit truck with two cast aluminum, nylon bushed sheaves on stainless steel axles.
- E. Halyards: Two sets of 9 mm (3/8 inch) diameter, nylon braided rope with minimum two bronze swivel snaps for each halyard.
- F. Cleats: Two aluminum cleats minimum 225 mm (9 inches) long. Secure cleats to pole with two 9 mm (3/8 inch) flat head aluminum machine screws.
- G. Foundation Sleeve: Galvanized, corrugated steel, length as indicated on drawings, welded to steel base plate.
 - 1. Weld lightning ground rod of 19 mm (3/4 inch) diameter galvanized steel to base plate at bottom of sleeve.
- H. Flashing Collar: Material and finish to match flagpole.

2.5 FINISHES

- A. Finish flagpole exposed surfaces.
- B. Stainless Steel: NAAMM AMP 500; No. 4 polished finish.
- C. Aluminum Anodized Finish: NAAMM AMP 500.
 - 1. Color Anodized Finish: AA-C22A42 or AA-C22A44; Class I Architectural, 0.018 mm (0.7 mil) thick.
- D. Aluminum Satin Finish: NAAMM AMP 500.
 - 1. Mechanical Finish: AA-M323 Directional Textured, Coarse Satin and AA-M20, Buffed.
- E. Flagpole Shaft: Satin aluminum finish, then heavily waxed.
- F. Finial Ball: Gold color anodized aluminum, then heavily waxed.
- G. Base and Cleats: Finish to match flagpole.

2.6 ACCESSORIES

- A. Sand: ASTM C33/C33M.
- B. Sealant: ASTM C920, elastomeric type recommended by flagpole manufacturer.
- C. Bituminous Paint: MPI No. 35.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Examine and verify substrate suitability for product installation.

- B. Excavate flagpole foundations as specified in Section 31 20 00, EARTHWORK.
- C. Provide foundation tube for installation as work of Section 03 30 00, CAST-IN-PLACE CONCRETE for installation in flagpole footing.
- D. Place concrete as specified in Section 03 30 00, CAST-IN-PLACE CONCRETE.

3.2 INSTALLATION

- A. Install products according to manufacturer's instructions // and approved submittal drawings //.
 - 1. When manufacturer's instructions deviate from specifications, submit proposed resolution for Contracting Officer's Representative consideration.
- B. Coat flagpole section within foundation sleeve with bituminous paint.
- C. Install flagpoles centered in foundation sleeve.
- D. Fill space between pole and metal sleeve to within 50 mm (2 inches) of top with sand and compact.
- E. Fill remainder of space with sealant and install flashing collar as indicated on drawings.

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