SECTION 10 75 00
FLAGPOLES

SPEC WRITER NOTE:
1. Use this section only for NCA projects.
2. Delete between //----// if not applicable to project. Also delete any other item or paragraph not applicable in the section and renumber the paragraphs.

PART 1 - GENERAL

1.1 DESCRIPTION
This section specifies materials, shipping and delivery protection, storage, handling, and installation of flagpoles to be installed in the project area indicated. Flagpoles shall be deluxe internal halyard fixed high dimensional, ground set, cone tapered, seamless tube flagpoles together with concealed halyard, revolving truck, finial ball, flashing collar, anchors, fittings, and accessories.

1.2 RELATED WORK
A. Excavation and backfill: Section 31 20 00, EARTH MOVING.
B. Concrete for ground set flagpole: Section 03 30 53, SHORT FORM CAST-IN-PLACE CONCRETE.

1.3 SUBMITTALS
A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
B. Shop Drawings: Flagpole details of all parts & accessories, and list of all materials, including but not limited to: base with support plate and grounding spike, lightning kit, pole, flash collar, revolving truck, internal halyard, cable assembly, winch detail w/lock, hooks, beaded retainer ring, counterweight, winch handle and finial ball, along with construction and installation details. Flagpole components shall match those for the main pole.
C. Manufacturer's Literature and Data: Flagpole, base and all parts and accessories.

1.4 APPLICABLE PUBLICATIONS
A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
B. American Society for Testing and Materials (ASTM):
   A167-99 (R2004) ........ Stainless and Heat-resisting Chromium-Nickel Steel Plate, Sheet and Strip
   B209-07 ............... Aluminum and Aluminum Alloy-Sheet and Plate
   B241/B241M-02 ........ Aluminum and Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube

1.5 QUALITY ASSURANCE

A. Manufacturer’s Qualifications: Firms regularly engaged in the manufacture of metal flagpoles and accessories, of types, size and configurations required, whose products have been is satisfactory use in similar service for not less than 5 years.

B. Installer’s Qualifications: Firm with at least 3 years of successful installation experience on projects having flagpole installation work similar to that required for this project.

SPEC WRITER NOTE: Modify the following paragraph to describe the various flagpoles for this project. Provide the size, wind speeds, flag size and wall thickness for each flagpole size to be provided. Wind speed shall be the minimum specified in the wind speed chart for the project location.

C. Design Criteria: Flagpole //and anchorage// shall be designed to withstand the wind speeds and conditions indicated herein for the specific flagpole and flag sizes indicated. The //7.6 m//(/25// foot) flag pole shall be designed based upon a minimum sustained 160 kmph (/100// mph) wind velocity and minimum wind gust velocity of 210 kmph (/130// mph) when flying a flag 1.5m x 6.5m (/5’ x 8’//) in size in accordance with ANSI/NAAMM 1001-97, with the pole wall thickness being in conformance with the design standards but with a minimum wall thickness of 5mm (/0.188// inches), whichever causes the stronger flagpole.

1.6 PROTECTION AND SHIPPING

Package flagpole for shipping with spiral wrap protective covering and pack in shipping tubes acceptable to owner’s designated representative and per manufacturer’s recommendations.

PART 2 - PRODUCTS

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.

2.1 MATERIALS

B. Aluminum, Plate and Sheet: ASTM B209, alloy 1100.
C. Stainless Steel: ASTM A167, Class 302 or 304.

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2.2 FABRICATION

A. Fabricate flagpole of seamless extruded aluminum tube, uniform conical taper of approximately 1 in 70, one centimeter in seventy centimeters (one inch in every 6 feet). Taper shall not exceed 50 percent of outside diameter of pole. When flagpoles are shipped in more than one section, provide self-aligning sleeves for field joint.

B. Base: Aluminum plate or stainless steel, of stock design similar to that shown.

C. Finial Ball: 2 mm (0.0747 inch) thick spun aluminum sphere, with seams of ball welded flush and watertight. Mount ball on threaded rod to fit truck. Diameter of ball shall be approximately same as pole butt diameter.

D. Truck: Equip pole with extra heavy, revolving, non-fouling, ball bearing type truck with cast aluminum body and designed to accept an ornament on top.

E. Halyards: Internal type cable assemblies. 1/8" and/or 3/16" stainless steel aircraft cable incorporating a stainless steel swivel, upper cable section, and flag arrangement with cable and two stainless steel quick links and two stainless steel swivel snaps. The cable assemblies shall be constructed to fit the flagpole size and flag size specified.

F. Beaded Retainer Ring and Counterweights: Provide as recommended by manufacturer based on the pole size, flag size and design wind velocity. Provide recommended connection accessories.

G. Internal Halyard Accessories: Furnish and install a gearless, self-locking at any point, direct drive winch that does not require welding for installation and does not require monthly application of lubrication and is attached to the pole with one stainless steel bolt on the back side of the pole. The unit shall be silver in color. Provide locking mechanism and two keys. Provide a winch handle designed for the unit. Pole shall be reinforced through the area of the winch opening by the manufacturer's standard reinforcement method.

H. Foundation Tube: hot dipped galvanized corrugated steel tube. Tube shall have a steel base plate and centering wedges and support plate for connection of lightening kit. Bottom plate shall be a minimum of 3/16" thickness.

I. Lightning Kit: Shall be as recommended by the pole manufacturer for use on the pole selected.

2.3 FINISH

A. Finish exposed surfaces of flagpoles.

B. Flagpole shaft: Satin brushed aluminum, then heavily waxed.

C. Finial ball: Gold anodized aluminum, then heavily waxed.
D. Base and cleats: Finish to match flagpole.

//E. Stainless Steel (base): As recommended by flagpole manufacturer.//

PART 3 - EXECUTION

3.1 INSPECTION
A. Verify that concrete foundation work is correctly sized and positioned.
B. Repair or replace defective foundation work as directed by owner’s designated representative.

3.2 PREPARATION
Coat portions of flagpole below grade and in surfaces in contact with dissimilar metals with black asphaltum paint, as recommended by manufacturer.

3.3 INSTALLATION
A. Install galvanized, corrugated steel sleeve or tube of detailed length, welded to steel base plates for installation in concrete. Set base plate and Lightning Kit in place before concrete is placed.
B. Install foundation plate and centering wedges for flagpole base in concrete base and fasten.
C. Install concrete foundation work to dimensions indicated in accordance with Section 033053, SHORT FORM CAST-IN-PLACE CONCRETE.
D. Wrap top of sleeve with two layers of asphalt felt for distance of 600 mm (2 feet) down.
E. Install flagpole in accordance with manufacturers written installation instructions. Install pole plumb using centering wedges.
F. Backfill and compact excavation around flagpole base in accordance with Section 312000, EARTH MOVING.
G. Fill and thoroughly compact dry fine sand into the space between pole and steel sleeve and tamp to within 2 inches of top of sleeve.
H. Remove temporary wood positioning wedges and fill upper 2 inch space between pole and steel sleeve with specified or manufacturer recommended waterproofing compound.
I. Install fittings in accordance with manufacturer’s written installation instructions.
J. Check and adjust installed fittings for smooth operation of halyards.

3.2 LIGHTNING ROD
Weld lightning ground rod of 19 mm (3/4-inch) diameter galvanized steel to base plate at bottom of sleeve or tube, and to steel support plate at grade.

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