

SECTION 05582
ENTRANCE BOLLARDS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes:
 - 1. Stainless steel entrance bollards for housing power door operator controls.
- B. Related Sections:
 - 1. Power door operator push plate: Section 08710.

1.2 PERFORMANCE REQUIREMENTS

- A. Corrosion Control: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1.3 SUBMITTALS

- A. Product Data: Submit product data for paint finish.
- B. Shop Drawings: Detail fabrication and installation of entrance bollards. Include plans, elevations, sections, and details of components and their connections. Show anchorage and accessory items.
- C. Samples for Verification: For exposed finish required, prepared on 6-inch- square samples of metal of same thickness and material indicated for the Work. If finishes involve normal color and texture variations, include sample sets showing the full range of variations expected.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver finished entrance bollards wrapped in protective coverings. Remove protective coverings before they stain or bond to finished surfaces.

1.5 PROJECT CONDITIONS

- A. Templates: Provide hardware templates to fabricator of entrance bollards. Entrance bollards shall be factory-prepared for the installation of controls. Check shop drawings of such work, to confirm that adequate provisions are made for proper location and installation of operator controls.
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the work, establish dimensions and proceed with fabricating entrance bollards without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions.

PART 2 - PRODUCTS

2.1 METAL

- A. Provide metal to view without pitting, seam marks, roller marks, stains, discolorations, or other imperfections where exposed to view on finished units.
- B. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666, Type 304L.
- C. Stainless-Steel Bars and Shapes: ASTM A 276, Type 304L.
- D. Steel Tubing: ASTM A 500, cold-formed steel tubing.

- E. Gaskets, Joint Fillers, and Sealants: Permanent gaskets, joint fillers, and sealants, suitable for sealing joints watertight.

2.2 MISCELLANEOUS MATERIALS

- A. Joint Sealants for Concealed Joints: One-part, nonsag, solvent-release-curing, polymerized butyl sealant complying with ASTM C 1085 and formulated with minimum of 75 percent solids.
- B. Shims: Provide plastic shims.

2.3 FASTENERS AND ANCHORS

- A. Provide Type 316 stainless-steel fasteners for exterior use. Select fasteners for type, grade, and class required.
 - 1. Stainless Steel Machine Screws: Flat head machine screws. ASME B18.6.3.
- B. Expansion Anchors: Anchor bolt and sleeve assembly with capability to sustain, without failure, a load equal to four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.
 - 1. Material for Anchors in Exterior Locations: Alloy Group 1 stainless-steel bolts complying with ASTM F 593 and nuts complying with ASTM F 594.
- C. Anchors: Provide anchors of type, size, and material necessary for type of load and installation indicated, as recommended by the manufacturer from options listed below. Use nonferrous-metal or hot-dip galvanized anchors for exterior installations.
 - 1. Powder-actuated fasteners.
 - 2. Metal expansion sleeve anchors.

2.4 PAINT

- A. Bituminous Paint: Cold-applied asphalt mastic complying with SSPC-Paint 12, except containing no asbestos fibers, or cold-applied asphalt emulsion complying with ASTM D 1187.

2.5 FABRICATION, GENERAL

- A. Shop Assembly: Preassemble entrance bollards in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
- B. Fabricate entrance bollards to designs, sizes and thicknesses indicated.
 - 1. Conceal fasteners.
 - 2. Make provisions to weep penetrating water.
 - 3. Fit joints accurately and secure rigidly; maintain accurate relation of planes and angles with hairline fit of contacting members.
 - 4. Perform fabrication operations, including cutting, fitting, forming, drilling and grinding of metal work to prevent damage to exposed finish surfaces.
- C. Build in straps, plates, and brackets as needed to support and anchor fabricated items to adjoining construction. Reinforce formed-metal units as needed to attach and support other construction.

2.6 ENTRANCE BOLLARDS

- A. Form entrance bollards to shapes indicated from metal of type and thickness indicated below. Return vertical edges and bend to form hook that will engage continuous mounting clips.
 - 1. Satin Stainless Steel: 0.125 inch thick wall tubing.
 - 2. Fabricate entrance bollards in one piece without joints.

2.7 STAINLESS-STEEL FINISHES

- A. Remove tool and die marks and stretch lines or blend into finish.

- B. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.
- C. Dull Satin Finish: No. 6.
- D. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Locate and place entrance bollards level, plumb, and in alignment with adjacent construction.
- B. Use concealed anchorages.
- C. Form tight joints with exposed connections accurately fitted together. Provide reveals and openings for sealants and joint fillers as indicated.
- D. Install concealed gaskets, joint fillers, as the Work progresses, to make entrance bollards watertight.
- E. Corrosion Protection: Coat concealed surfaces of metals that will come into contact with grout, concrete, masonry, wood, or dissimilar metals with a heavy coat of bituminous paint.

3.2 ADJUSTING

- A. Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit or provide new units.

3.3 PROTECTION

- A. Protect finishes of entrance bollards from damage during construction period. Remove temporary protective coverings at time of Substantial Completion.

END OF SECTION 05582