**SECTION \_\_\_\_\_\_\_\_\_\_\_ ALUMINUM STOP GATES**

GENERAL

1. The hand-pull stop gates for this project shall be provided as specified and as shown in the Contract Documents.

PERFORMANCE REQUIREMENTS

1. Leakage for the hand-pull stop gates shall be restricted to 0.1 gpm/ft or less of the seal perimeter at the design seating head and the design unseating head.

SUBMITTALS

1. Submittals shall include, at a minimum, detailed custom drawings of the gate assembly with dimensional and mounting information and a listing of the materials of construction. General arrangement drawings and cut sheets are not considered acceptable drawings.

QUALITY ASSURANCE

1. The basis for the design of the stop gates is the Model RW4000-A as manufactured by RW Gate Company, Troy, NY.
2. All gates shall be shop inspected for proper operation prior to shipment.
3. Welds shall be performed by welders with ASME Section IX or AWS D1.2 certification.
4. The gate manufacturer shall be ISO 9001:2015 certified.

MATERIALS OF CONSTRUCTION

1. All aluminum referenced in this specification shall be alloy 6061-T6, ASTM B308/308M.
2. All stainless steel referenced in this specification shall be Type 304 or Type 304L, ASTM A240 or ASTM A276 unless otherwise indicated herein.
   1. All non-welded stainless steel components, excluding anchor bolts and assembly bolts, shall be Type 304 stainless steel.
   2. Anchor bolts and assembly bolts shall be Type 316 stainless steel.

SLIDE

1. The slide shall consist of an aluminum plate that is reinforced with stiffeners to withstand the specified head conditions. The slide shall engage the frame a minimum of 1-inch on each side.
   1. The slide plate and stiffeners shall have a minimum material thickness of 1/4-inch.
   2. The slide shall be reinforced with plates or channel shaped members to restrict deflection to 1/16-inch or less at the design head.
   3. The stiffeners shall be welded to the slide.
   4. Dual lifting handles shall be provided on slides with opening widths in excess of24 inches.
      1. Lifting handles shall be formed from round bar or shall be lifting slots in the top of the stop plate as shown on the Contract Drawings.

FRAME

1. The frame shall be constructed of extruded aluminum and shall be reinforced to withstand the specified operating conditions.
   1. Frames shall have a minimum material thickness of 3/8-inch.
   2. Frames shall have a minimum weight of 4 lbs/ft.
   3. The mounting style shall be of the configuration as shown in the Contract Drawings.

SEALS

1. The seal system shall consist of UHMWPE side seals and an EPDM invert seal.
   1. The UHMWPE seals shall be arranged to ensure that there is no metal-to-metal contact between the slide and frame.
   2. Rubber side seals such as J-bulb seals, P-seals and D-seals are not acceptable in lieu of UHMWPE seals.
   3. The invert seal shall use a compressible EPDM seal located on the bottom of the slide or in the invert of the frame.
      1. The invert seal shall be of a flush bottom arrangement.
      2. The invert seal shall be mechanically fastened with stainless steel bolts.
      3. Invert seals attached solely by the use of adhesives are not acceptable.
   4. All seals shall be secured with assembly bolts. All seals shall be field removable and field replaceable without the need to remove the gate frame from the wall.

ANCHORAGE

1. Anchor bolts shall be 316 stainless steel, fully threaded and shall have a minimum diameter of 1/2-inch.
   1. Anchor bolts shall be of the epoxy type.

FINISH

1. All aluminum shall be mill finish.
2. Aluminum in contact with concrete shall be field coated with a heavy coat of bitumastic paint field applied by the Contractor.

INSTALLATION

1. Installation shall be performed in accordance with the gate manufacturer’s installation instructions and the approved installation drawings.
2. Installation instructions and installation drawings shall be found in the O&M manual.
3. Non-shrink grout or a resilient gasket shall be applied, by the Contractor, between the gate frame and the wall to ensure that there is no leakage around the gate.