**SECTION \_\_\_\_\_\_\_\_\_\_\_ TELESCOPIC VALVES**

 GENERAL

1. The rising stem telescopic valves for this project shall be provided as specified and as shown in the Contract Documents.

SUBMITTALS

1. Submittals shall include, at a minimum, detailed custom drawings of the telescopic valve 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 telescopic valves is the Model RW7000-S as manufactured by RW Gate Company of Troy, New York.
2. All valves shall be shop inspected for proper operation prior to shipment.
3. Welds shall be performed by welders with ASME Section IX certification.
4. The valve manufacturer shall be ISO 9001:2015 certified.

MATERIALS OF CONSTRUCTION

1. All stainless steel referenced in this specification shall be Type (304)(316) or Type (304L)(316L), ASTM A240 or ASTM A276 unless otherwise indicated herein.
	1. All welded stainless steel components shall be constructed of Type (304L)(316L) stainless steel.
	2. All non-welded stainless steel components, excluding anchor bolts and assembly bolts, shall be Type (304)(316) or Type (304L)(316L) stainless steel.
	3. Anchor bolts and assembly bolts shall be Type 316 stainless steel.

SLIP TUBE

1. The slip tube shall be designed to slide into the inside diameter of the receiving pipe.
	1. The slip tube shall be constructed of seamless Schedule 10 stainless steel pipe and provided with a straight top, v-notch top or u-notch top as shown on the Contract Drawings.
	2. The slip tube shall be outfitted with a stainless steel bail connect to the operating stem.
	3. Stainless steel baffles shall be provided if shown on the Contract Drawings.

SEAL

1. The seal system shall consist of a resilient seal that mounts on the flange of the receiving pipe and seals at the interface between the slip tube and receiving pipe.
	1. The seal shall be sufficiently rigid to bolt directly to the flange of the receiving pipe or shall be contained by a minimum ¼-inch thick Type 304L stainless steel companion flange.
	2. Seal attachment bolts shall be provided in sufficient quantity to ensure proper operation and proper sealing.

OPERATING STEM

1. The operating stem shall be of stainless steel and shall be designed to transmit in compression at least 2 times the rated output of the manual operating mechanism with an 80 lbs effort.
2. The stem shall have a slenderness ratio (L/r) less than 200.
3. The threaded portion of the stem shall have a minimum diameter of 1-1/2 inches.
	1. The threads shall have machine rolled, full depth ACME threads.
	2. Stub threads are not acceptable.
4. Stems provided in multiple pieces shall be provided with couplings.
	1. Couplings shall be bronze or stainless steel and shall be internally threaded and keyed or bolted.
5. Stem guides shall be constructed of stainless steel with UHMWPE bushings.
6. Valves shall be provided with a clear plastic stem cover.
	1. The stem cover shall be lexan or butyrate and shall have a cap and condensation vents.
	2. Clear mylar indicating tape shall be provided for field application after the valve has been installed and positioned.
7. Stop collars shall be provided to limit the downward travel on valves with manual operating mechanisms.
	1. Stop collars shall be bronze and shall be internally threaded and provided with set screws.

OPERATING MECHANISM

1. Operating mechanisms shall be provided by the valve manufacturer.
2. Manual operators shall be floorstand unless otherwise shown on the Contract Documents.
	1. Manual operators shall be of the bevel gear type suitable for operation with a portable operator.
	2. Gear ratios shall be selected by the valve manufacturer to ensure that the maximum operating effort is 25 lbs at the design head.
	3. Minimum gear ratio shall be 2:1.
	4. Gearboxes shall have a cast iron or ductile iron housing, a bronze lift nut, steel gears and a stainless steel input shaft.
	5. Ball or roller bearings shall support the lift nut and input shaft.
	6. The housing shall be grease lubricated and permanently sealed.
	7. Handwheels shall be provided.
3. Electric motor operators shall be provided a described in Section \_\_\_\_\_.

FLOORSTANDS AND WALL BRACKETS

1. Floorstands shall be mounted to the concrete or mounted to a wall bracket unless otherwise shown on the Contract Drawings.
2. All floorstands and wall brackets shall be fabricated from stainless steel.
	1. The base plate, adaptor plate and gussets shall be minimum 1/2-inch thick.

ANCHORAGE

1. Anchor bolts and wall thimble studs 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 heat tint and slag from the welding process shall be passivated in accordance with ASTM A380.
2. All ferrous components shall be suitably prepared and then shop coated with primer. Finish coating shall be applied by the Contractor. The ductile iron operator housing shall be finish coated by the Contractor with a suitable paint that complies with the Painting section.

INSTALLATION

1. Installation shall be performed in accordance with the valve manufacturer’s installation instructions and the approved installation drawings.
2. Installation instructions and installation drawings shall be found in the O&M manual.