

# TRUMBULL

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## Specifications for Composite Manhole Frames & Covers

**Materials** - Manhole frames and covers shall be molded of a molded reinforced composite polymer. The covers shall be black in color and have the words SANITARY SEWER molded into the lid in 1-3/4" raised letters. The covers shall be secured to the frames with four type 316 socket head cap screws. The cap screws shall be coated with a resin-bonded, thermally cured, dry-film lubricant, black in color. The coating shall be 1 mil thick and have a coefficient of friction of 0.05 - 0.10. Cap screws shall be retained to cover by type 316 stainless tooth-lock washers. The frames will be molded with four stainless threaded inserts to receive the coated stainless steel cap screws. Products relying on springs to secure frames and covers together are not acceptable.

The frame will have a groove for a Fin-Type Seal. The Seal will be of EPDM. The cover shall contain a minimum of one pick bar. The pick bar shall be type 316 stainless and retained with four type 316 socket head cap screws.

**Load Rating** – All covers shall be capable of withstanding a minimum traffic load of 40,000 lbs., tested in accordance with AASHTO M-306. The Supplier of covers shall submit a test report from an accredited independent testing laboratory. The test report shall document a successful proof load test of 40,000 lbs. for 60 seconds using a 9" x 9" plate. There shall be no cracks or permanent deformation greater than 1/8". The test report shall fully disclose the AASHTO M-306 test procedures and type of test equipment used and be illustrated with pictures showing the test plate, equipment used and pictures of the top and bottom of the lid.

**Resistance to Fatigue** – All covers shall be capable of withstanding a fatigue analysis in accordance with EN 124-1: 2015 for a C250 rating. The Supplier shall submit a test report from an independent testing laboratory which shall be accredited by the American Association for Laboratory Accreditation. The test report shall document no cracks being present after subjected to 100,000 cycles of 20,682 lbs. (92KN), applied by a 9" x 9" square plate.

**Water Infiltration** - All covers shall be capable of passing a water infiltration test in accordance with FACTA Specification for Fabricated Access Covers (2013). The Supplier of covers shall submit a test report from an accredited independent testing laboratory. The cover should be tested in a specially designed fixture where it is face-down with 3.94in (100mm) of water above it for 24 hrs. After the test period, leakage shall not exceed 0.169 oz./minute (5ml/minute).

Frames and covers shall be manufactured by Trumbull Industries, Youngstown, Ohio.

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