

#### COVER:

Manhole frame and cover shall have a 24" clear opening and a sealed blind pickhole (SBF-1900 or approved equal). The cover shall be lettered "STORM SEWER". The inside of the frame shall be grouted with non-shrink grout.

## **ADJUSTMENT TO GRADE:**

Adjust to grade per Engineering Standard 6040.

## **COLLAR:**

Collar shall be constructed per Engineering Standard 6040.

#### CONE:

Cone shall be eccentric and conform to the requirements for risers.

# **MANHOLE RISERS:**

Manhole risers shall be precast concrete conforming to ASTM C-478 and shall have a 6" minimum wall thickness with minimal reinforcements. Manholes shall be 4' in diameter unless the size and/or number of inlet(s) and outlet(s) warrants the use of a 5' diameter manhole.

## JOINTS:

Joints shall be set with butyl rubber sealant (RUB'R-NEK). Inside of joints shall be grouted with non-shrink grout.

## BASE:

Manhole base shall be precast reinforced Class 2 concrete with extended base and shall conform to the requirements for manhole risers. Base may be square or round with key for risers. All pipe connections shall be cored by the manufacturer to fit the O.D. of the pipe plus 2". The precast base shall be bedded on a minimum of 6" of well graded crushed rock (see Standard Specifications) over native material that is either undisturbed or compacted to 95%. Pipe is to be centered in the core and concrete collars poured around pipe. Concrete shall be worked into the voids around the pipe and smoothed on the interior.

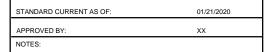
# STEPS:

Steps shall be included if manhole depth exceeds 4'. Steps shall be steel reinforced polypropylene. Steps shall be placed in the wall with no laterals, or the wall with the smallest lateral such that a continuous vertical alignment of steps may be achieved. The cone shall also align to this end.

#### INVERT:

Invert shall be completed in a single pour using Class 3 concrete with steel trowel finish. Any change in direction shall be a fixed radius curve extending from the inlet wall to the outlet wall. Inside surface of invert and area between pipe connection and channel shall be free from gaps, holes and sharp edges. All inlets shall be designed and installed such that the top of pipe elevations match as much as possible.

SCALE: N.T.S.





# PRECAST STORM DRAIN MANHOLE

UP TO 3' O.D. PIPE SIZE