PARALLEL SEPARATION BETWEEN A WATER MAIN AND SEWER/STORM MANHOLE

The sewer/storm drain manhole is treated the same as a sewer/storm drain line with regard to water and sewer/storm drain separations based on the following:

• A sewer or storm drain main back-up may fill the manhole with liquid whereby the manhole becomes an extension of the main.
• Per NAC 445A.6715.1 (b), a sewer main includes "any unidentified conduit with a diameter that exceeds 6 inches".
• NAC 445A.6639 "Sewer line" defined. (NR S 445A.860) "Sewer line" means a pipe or conduit and any appurtenances, including catch basins and manholes, used to convey wastewater or surface drainage. (Added to NAC by Bd. of Health, eff. 2-20-97)
• Per UDACS 2.22.03.A (2), a separation of four (4) feet from a water lateral to the exterior of a manhole is the same as the separation requirement from a water lateral to a sewer lateral.

I. Water mains shall be installed ten (10) feet from center of a sewer or storm drain manhole similar to requirement of UDACS 2.22.01.A (1).

II. When a manhole is less than 10’ but at least 6’ from a water main, UDACS 2.22.01.B (2) must be satisfied. To comply the following shall be satisfied:

A. To protect against corrosion, the sewer manhole will be installed in accordance with DCSWCS 2.2.10.i or Agency approved "Raven Lining System" or Agency approved equal. (Sewer Manhole only)
B. To help ensure water tightness, the manhole will be constructed as follows:
   1. Use of full-strength grout per DCSWCS standards.
   2. Watertight joints using Agency-approved seals at manhole sections and grade rings per DCSWCS standards.
C. One of the following options as approved by Wastewater Agency:
   1. The water line (main) shall be installed per UDACS 2.22.02.B.3 (b) in a sleeve of water quality pipe or installed per UDACS 2.22.02.B.3 (d) encased with cement slurry given Agency approval.
   2. Encasement of manhole with a minimum of four inches of cement slurry (300 psi +/-). The slurry will extend from six inches above the joint where the cone meets the top barrel to a depth of at least one 12 inches below the invert of the water main per UDACS 2.22.01.B.2.c (2). ¹
   OR
   Water tight Manhole per Wastewater Agency & SNHD accepted method including but not limited to:
   • Warren Environmental lining systems
   • Raven lining system

III. When a manhole is less than 6’ from a water main, parts A, B, C1 and C2 above apply. Manholes shall be tested for leakage.

For a storm drain manhole, the above applies except for omitting part A regarding corrosion protection.

UDACS - "Uniform Design and Construction Standards for Potable Water Systems" - 2010
DCSWCS - "Design and Construction Standards for Wastewater Collection Systems" - 2009

¹ COLV Sewer Agency does NOT allow.