

City of Jefferson

Department of Public Works
320 E. McCarty St.
Jefferson City, MO 65101



Carrie Tergin, Mayor

Matt Morasch, P.E., Director
Phone: 573-634-6410
Fax: 573-634-6562

RECEIVED

JUN 18 2015

WATER PROTECTION PROGRAM

June 16, 2015

Missouri Department of Natural Resources
Water Protection Program
P.O. Box 176
Jefferson City MO 65102-0176
Attn: Emily Carpenter

RE: Response to letter received May 18, 2015 regarding sewer permit authority
MO-0094846 & MO-0044300

Dear Ms. Carpenter:

The following is a response to the review letter provided. The numbered responses correspond to the numbered comments.

Deviation request:

The Jefferson City service area features hilly terrain so there are many drop connections in the current system and proposed each year. We also feel validated to our approach as Metropolitan St. Louis Sewer District uses a similar concept (detail attached).

The reason that a drop connection backfilled in crushed aggregate is more successful than one encased in concrete is that the rest of the excavated areas are generally not compacted optimally. Aggregate can transfer weight and fill voids in the surrounding area, while the poorly supported concrete can only move as a complete unit into settled areas a void creates.

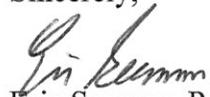
The aggregate is also more resilient to variable water table. If concrete is poured in a wet condition, it will move toward settlement if the trench later dries out.

Since 2007 there have been over 53 drop manholes installed using crushed aggregate to support the drop and there have been no failures. From 1979-2007 there were over 15 drop connections that failed, prompting us to use the aggregate supported method.

Requirements:

1. The citation has been corrected in SS 4.3.h.
2. This has been added to section SS 4.3.i..
3. The revised Specifications are attached.
4. It is the legal opinion of the City Counselor that State Law only requires City Council approval if there is not a full time engineer on staff. As we have multiple full time engineers on staff, Council approval is not required.

Sincerely,

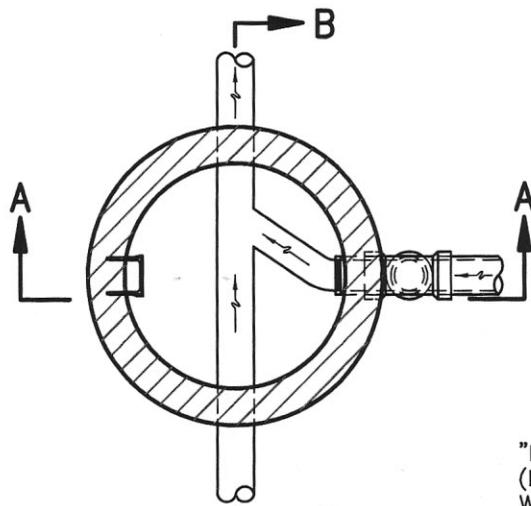


Eric Seaman, P.E.

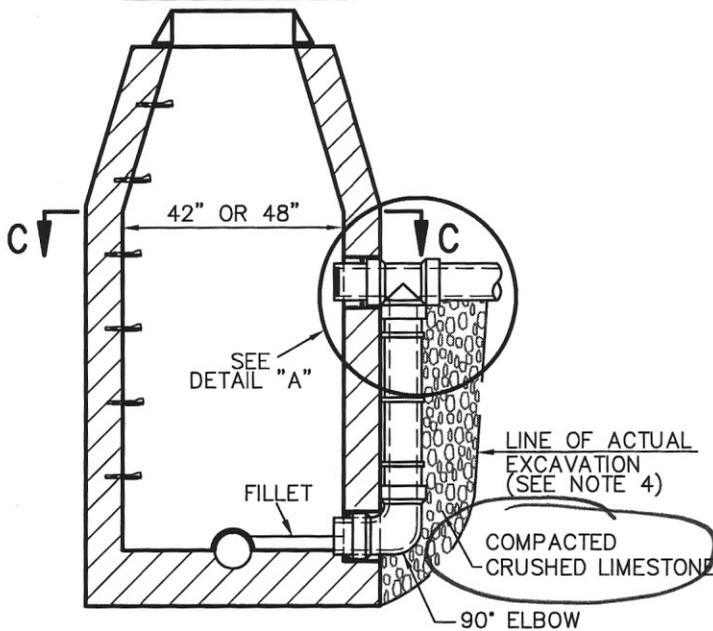
Wastewater Division Director

CC: Drew Hilpert, City Counselor
Shane Wade, P.E., Plan Review Engineer
David Bange, P.E., City Engineer

Attachments



SECTION C-C

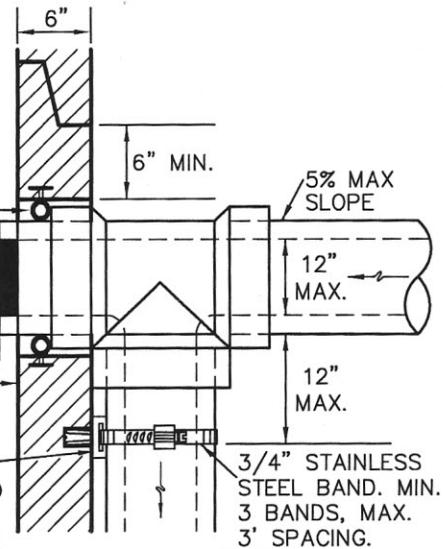


SECTION A-A

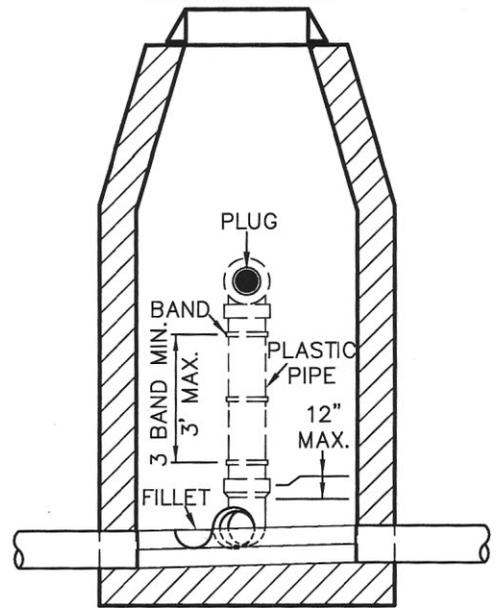
APPROVED PATENTED COMPRESSION TYPE JOINT FOR PRECAST MANHOLE AND WATER STOP FOR BRICK MANHOLE.

REMOVABLE WATERTIGHT PLUG.

"FLARED-LEG BRACK-IT" (DO21 OR EQUAL) ATTACHED WITH 3/8" x 3" STAINLESS STEEL BOLT WITH APPROVED ANCHOR. (NOT THRU JOINT)



DETAIL "A"



SECTION B-B

NOTES:

- 1) THE MINIMUM INSIDE DIAMETER FOR THE BASE AND RISER SECTIONS SHALL BE 42" FOR 8" DIAMETER SANITARY SEWERS AND A MINIMUM INSIDE DIAMETER OF 48" FOR ALL SANITARY AND COMBINED SEWERS LARGER THAN 8" DIAMETER.
- 2) NEW OUTSIDE DROP ON EXISTING MANHOLE REQUIRES THAT THE FLOWLINE OF THE NEW DROP PIPE ELBOW BE CONSTRUCTED AT THE SAME ELEVATION AS THE SPRINGLINE OF THE EXISTING SEWER MAIN AT THE CENTER OF THE EXISTING MANHOLE. A CLASS "A" CONCRETE FILLET AND INVERT SHALL BE CONSTRUCTED FOR DROP PIPE.
- 3) DIAMETER OF DROP PIPE FOR COMBINED SEWERS AND SANITARY SEWERS IS SAME AS INCOMING 8", 10" OR 12" PIPE SEWER UNLESS OTHERWISE SHOWN ON PROJECT PLANS. FOR SEWERS 15" THROUGH 24", A DROP IS NOT TO BE USED. RATHER, CONNECT TO MANHOLE AT OR WITHIN 24" ABOVE IT'S FLOWLINE.
- 4) IF EXCAVATED SPACE OUTSIDE OF DROP PIPE EXCEEDS ONE (1) FOOT, PROVIDE 6" CLASS "A" CONCRETE ENCASEMENT ON INCOMING LINE, FROM WALL OF MANHOLE TO A MINIMUM OF TWO (2) FEET INTO UNDISTURBED EARTH WITH A MINIMUM OF 4-#4 REBARS FOR LENGTH OF ENCASEMENT OR INSTALL ONE (1) LENGTH OF D.I.P. FROM "TEE" FITTING INTO UNDISTURBED EARTH.

**OUTSIDE FOULWATER
DROP MANHOLE**

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. S.A.M.
Ch. P.W.S.

2009

SHEET 16