



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

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CERTIFIED MAIL: 7009 2250 0000 0886 5790
RETURN RECEIPT REQUESTED

June 18, 2014

Mr. David Brock, Public Works Director
City of Republic
221 North Main
Republic, MO 65738

RE: City of Republic, MO – Construction Specifications for Public Improvements, Standard Sewer Specifications and Details Comments

Dear Mr. Brock:

The Missouri Department of Natural Resources' Water Protection Program has finalized the review of the Construction Specifications for Public Improvements the April 2013 Edition. We expect a response to the following requirements and recommendations below within 30 days receipt of this letter:

REQUIREMENTS:

The following items are required to be in compliance with 10 CSR 20-8. The Construction Specifications for Public Improvements must be updated to incorporate the following requirements.

1. Provide steep slope protection in accordance with 10 CSR 20-8.120(5)(D)6.
2. Incorporate curvilinear alignment of sewers consistent with 10 CSR 20-8.120(5)(E)2.
3. "Ledge rock, boulders, and large stones shall be removed to provide a minimum clearance of four inches (4") (10 cm) below and on each side of all pipe(s)", per 10 CSR 20-8.120(5)(H)2.C.
4. Address the bedding, haunching, and initial backfill of plastic pipe and composite pipe according to 10 CSR 20-8.120(5)(H)3.C and 10 CSR 20-8.120(5)(H)3.D respectively.

5. Update the deflection test requirements to specify that the mandrel must have diameter not less than 95 percent (95%) of the inside diameter of the pipe and nine (9) or more odd number of flutes or points in accordance with 10 CSR 20-8.120(5)(H)5.C.
6. "When using precast manholes, drop connections must not enter the manhole at a joint," per 10 CSR 20-8.120(6)(B)3. Include this requirement for all drop type manholes.
7. Incorporate the bench requirements of manholes according to 10 CSR 20-8.120(6)(E).
8. Provide corrosion protection for manholes consistent with 10 CSR 20-8.120(6)(H).
9. Per 10 CSR 20-8.120(8)(A)3, manholes shall be located so they do not interfere with the free discharge of flood flows of a stream. Specify this requirement with stream crossings.
10. Provide the appropriate construction materials for stream crossings in accordance with 10 CSR 20-8.120(8)(B)1.
11. Address the siltation and erosion with stream crossings according to 10 CSR 20-8.120(8)(B)2.
12. Incorporate the aerial stream crossings requirements consistent with 10 CSR 20-8.120(9).

RECOMMENDATIONS:

The Department is providing the following recommendations to improve the provided standard specifications and details. These recommendations are not required actions, but will allow for a more well-rounded standard specifications and details.

1. Recommend the addition of high velocity protection of pipes in accordance with 10 CSR 20-8.120(5)(D)5.
2. Details can clearly demonstrate what the expectation is in certain instances often better than words. The following details are a suggested addition:
 - a. Doghouse manhole;
 - b. Concrete anchor;
 - c. Typical bore detail;
 - d. Stream crossing;
 - e. Aerial crossing; and
 - f. Standard water & sewer separation.

Mr. David Brock, Public Works Director
June 18, 2014
Page 3

Construction, installation, expansion or modification of any collection system or wastewater treatment facility is prohibited until a construction permit is issued by the Department, per 10 CSR 20-6.010(4)(A).

If you have any questions concerning this matter, please contact Mrs. Emily Carpenter, of the Water Protection Program, at 573-751-6569, emily.carpenter@dnr.mo.gov, or Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you.

Sincerely,

WATER PROTECTION PROGRAM



Byron F. Shaw, Jr., P.E., SRF Engineering Unit Chief
Financial Assistance Center

BFS:ecc

c: Southwest Regional Office
Mr. Refaat Mefrakis, P.E., Water Protection Program, Engineering Section
Mrs. Emily Carpenter, Water Protection Program, Financial Assistance Center