City of
Santa Rosa

# SANITARY SEWER
# STANDARD SPECIFICATIONS

**Adopted by the Santa Rosa City Council**
**Resolution No. RES-2017-177**
**September 5, 2017**

# SANITARY SEWER SYSTEM DESIGN STANDARDS

## I. PURPOSE:

To provide guidelines for design of sewer utilities projects and thereby reduce the time required for processing the plans. These guidelines do not include, but may reference, additional conditions which may be promulgated by all other pertinent ordinances, codes and official policy set forth by the Water Department, other departments of the City of Santa Rosa, or other government agencies. These guidelines establish minimum acceptable design criteria. More stringent requirements may be imposed by the Director of Santa Rosa Water based on specific project conditions.

Wherever the approval, discretion or opinion of the Water Department Director, or any other City staff, is called for herein, the project applicant shall submit a written request for the same. Variance requests must clearly identify the unusual circumstance that would warrant an exemption or waiver from the standards or specifications. The project applicant shall be responsible for providing any calculations or studies needed to support the proposal and for resolving specific design problems with the appropriate agencies, departments or divisions. Any final decision by City staff may be appealed pursuant to the City Code, but may be first directed to the Board of Public Utilities for a recommendation.

## II. REQUIREMENTS FOR IMPROVEMENT PLANS AND SUBDIVISION MAPS

K. Provide a detailed utility plan showing onsite and offsite sewer systems, and their connections to existing City maintained sewer facilities. Show any septic systems existing or to be abandoned.

B. For subdivisions, annotate the local agency information sheet of the Subdivision Map with information that is needed to notify property owners of requirements for connection to City Sewer System. These include, but are not limited to:

1. payment of fees prior to issuance of Building Permits;
2. lots requiring installation of sewer backflow protection;
3. private sewage grinder pumps; and
4. public sewer access requirements, such as gates or access roads.

The appropriate information may be obtained from the City of Santa Rosa Planning & Economic Development Department.

C. It is common for a project on one property to be dependent on the construction of sewer by another project or phase of the same project. Sewer system designs shall incorporate any off-site sewer that is required for the connection to an existing public main.

## III. SANITARY SEWER MAINS – GENERAL

A. Sewer systems shall be designed in public streets whenever possible. When not in public streets, the following conditions shall be met:

1. Ductile iron pipe shall be used from manhole to manhole when outside of roadways;
2. In general, lateral connections shall not be allowed in easements, but where necessary, in the opinion of the Water Department Director, shall be easy to locate, and accessible to maintenance personnel and equipment;
3. Bolt-down lids are required on all manholes located in easements, on school grounds, through parks, and on any trunk sewers 24" in diameter and larger.

B. Private sanitary sewer systems vs. public sanitary sewer systems:

In general, public sewer shall be used only when they serve multiple lots and suitable access can be provided for maintenance reasons. Private sewer systems shall only be used when they serve single lots or when they serve multiple lots and adequate access cannot be provided for public maintenance purposes. (See the City of Santa Rosa Sewer and Water Utility Maintenance Policy adopted by City Council Resolution No. 14853 in Water Distribution System Design Standards Appendix "B")

C. Extent of sewer main improvements shall be as follows:

1. Any offsite, downstream sewer system improvements needed to serve the project shall be shown on the improvement plans, including upgrades to existing mains that may be required as a result of an approved capacity study or modeling effort.
2. In general, sewer mains shall be designed at least across one-half of the property frontage or to the most upstream service connection, whichever is greater; or
3. Where the project is required to provide new street improvements over the sewer alignment and the sewer shall serve properties upstream of the project, the sewer main shall be designed across the full property frontage or to the limits of the street improvements, whichever is greater.
4. When a sewer main extension ends at a manhole and the sewer shall be extended further in the future, include in the design a 3' long stub out of the manhole with a watertight plug or cap for future connection.

D. Streets with both water and sewer mains shall be at least 20 feet wide, face-of-curb to face-of-curb; one utility only: at least 16 feet wide; no water or sewer mains in alleys.

## IV. CONNECTION TO AN EXISTING PUBLIC SANITARY SEWER MAIN.

A. Connect new mains to existing at existing manholes or by constructing a new manhole over the point of connection.

H. Private sewer mains shall connect to the public main at a manhole.

I. Standard drop manhole installations are required when the difference in elevation between the incoming and outgoing sewer is greater than 2 feet. While not encouraged, drop manholes may be required because of some physical restraints. They may not however, be used to merely avoid extra depth of trenching unless unusual circumstances exist. Upstream slope changes should be used to avoid the need for a drop manhole.

J. Drops installed outside of manholes are not allowed.

K. When one drop connection is required, use a 60" diameter manhole. When two or more drop connections are required, use a 72" diameter manhole.

L. Minimize the number of drop manholes.

## XI. SANITARY SEWER LATERALS

A. Provide a separate lateral for each lot.

B. Two way cleanouts shall be installed on all service laterals per Standard 513A unless otherwise specified or unable due to field conditions and Standard's requirements.

C. The minimum sewer lateral size is 4".

D. Sewer laterals shall be sized as determined by the Design Engineer, in accordance with the requirements of the Uniform Plumbing Code (UPC), any amendments in the California Plumbing Code (CPC) and/or the City's Design and Constructions Standards, and per final approval from the Engineer.

E. Sewer laterals shall be located on the property frontage, defined as either the front or side boundary line of a parcel which abuts on a street.

F. Laterals shall not be located in easements when gravity service can be provided to the property frontage.

G. When reasonable public vehicular access cannot be achieved, multiple lots may be served by a private main, providing approval by the Chief Building Official is received and appropriate maintenance agreements are approved by the City of Santa Rosa Planning & Economic Development Department.

H. The minimum slope of sewer laterals shall be 2% or 1/4" per foot for 4" laterals and 1% or 1/8" per foot for 6" laterals unless otherwise approved by the Building Department, and shall be designed at a depth sufficient to serve the entire building envelope of the parcel. Any Building Department approved slope, along with related depths, that vary from those specified shall be shown on the plans.

I. All sewer laterals, from property line or edge of easement to the point of connection with the main line or a manhole, shall be perpendicular to the curb alignment or easement unless otherwise approved. At no time shall any sewer lateral have an angle of intersection with the downstream section of sewer less than 90 degrees. No lateral alignments adverse to the flow of the main shall be permitted.