

**COUNTY OF SAN MATEO**

**COUNTY SANITATION/SEWER MAINTENANCE DISTRICTS**

**SPECIAL PROVISIONS FOR**

**CLOSED CIRCUIT TELEVISION INSPECTION OF SANITARY SEWER MAINS**

Closed circuit television (CCTV) inspection of the sanitary sewer mains shall be performed by the Applicant/Contractor in conformance with the following provisions and the directions of the District.

1. CCTV inspection shall be from manhole-to-manhole, and sanitary sewer service shall be maintained at all times during cleaning and CCTV inspection of the sewer lines.
2. Prior to CCTV inspection, the Contractor shall remove all debris and foreign objects inside the sanitary sewer lines and manholes where work was performed, and then flush and clean all parts of the system, and remove all accumulated construction debris, gravel, silt and other foreign material from the sanitary sewer system at or near the closest downstream manhole using mechanical rodding, flushing, or bucketing equipment, if necessary.
3. The Contractor shall furnish all materials, tools, equipment and labor required to perform CCTV inspection; and CCTV inspection equipment shall be approved by the District.
4. Videos must clearly show the area surrounding the manhole before the camera enters the manhole.
5. Video equipment shall include a television camera in color format specifically designed and constructed for operation in connection with sewer inspection and for operation in sewers under 100% humidity conditions. The camera shall have a minimum capability of 350 lines of resolution and should be of the “articulating head” type to allow laterals and defects to be viewed directly. Lighting and camera quality shall produce a clear, in-focus picture of the entire periphery of the pipe for a minimum distance of six feet (6’). The camera shall be moved through the line, preferably in the direction of the sewage flow, at a moderate rate, stopping at joints, lateral connections and when necessary to permit proper documentation of the sewer’s condition. In no case shall the television camera be operated at a speed greater than 30 feet per minute. Manual winches, power winches, TV cable, and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line.
6. The CCTV inspection shall be continuous color digital recording in MPEG 4 format for each pipe segment inspected. The inspection video shall be either configured for viewing using the latest version of Windows Media Player, or the appropriate viewing software must be submitted on each USB thumb drive or DVD. USB thumb drives or DVDs shall

be submitted to the District with a typed log of the inspection for review and acceptance. All USB thumb drives or DVDs shall become the property of the County. If, in the opinion of the District, the submitted USB thumb drives or DVDs are of poor quality such the District is unable to evaluate the condition of the sewer lines, the District may reject the USB thumb drives or DVDs and require the CCTV inspection to be repeated and new USB thumb drives or DVDs submitted to the District for review and acceptance.

7. Submitted USB thumb drives or DVDs, when replayed on a monitor, shall be clear and in-focus, and shall include a continuous on-screen display containing, at a minimum, the date of video inspection and identification of the sanitary sewer line and segment (street location, upstream and downstream manhole numbers) of the line being viewed, and footage. The number designations for existing sanitary sewer manholes shall be as shown on the District maps.
8. If, upon the District's review of the CCTV inspection, any debris or foreign matter is still present in the sanitary sewer system, the Contractor shall re-flush and clean, and re-CCTV inspect those sections and portions of the sanitary sewer lines and manholes, as required and as directed by the District. This process shall be repeated until CCTV inspection indicates that the sanitary sewer lines have been satisfactorily cleaned.
9. Any damage to the existing sanitary sewer main caused by the Contractor's operations shall be repaired by the Contractor, to the satisfaction of the District.
10. Any damage to either public or private facilities (due to, for example, a sanitary sewer mainline backup) as a result of the Contractor's CCTV inspection operations, as described above, shall be repaired or corrected by the Contractor to the satisfaction of the District.