

SECTION 02752

TELEVISION INSPECTION OF SEWERS

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. This section shall apply to all extensions to the public sewer system and covers the internal inspection of all the sewers by a closed-circuit television camera to observe the conditions in the sewer lines. The Sewer Inspection Contractor shall furnish all necessary material, labor, equipment, and services required for the internal inspection of 100% of the sewer lines, including but not limited to, all recording and playback equipment, material, and supplies. Inspections shall be performed in the presence of the Engineer and/or Resident Project Representative (RPR).

1.02 RELATED WORK

- A. Preparatory Cleaning of Sewers as specified in Section 02751.
- B. Sewer Flow Control as specified in Section 02753.

1.03 GENERAL

- A. The Contractor shall determine by internal inspection the location, condition, and estimated flow rate for each source of infiltration and/or inflow within each sewer section. During the inspection, all the infiltration and/or inflow sources, structural defects, service connections, abnormal conditions, and other pertinent observations shall be recorded.
- B. All inspections will be witnessed by the Engineer or his Representative and performed one manhole section at a time. The flow in the section being inspected will be controlled, as specified in Section 02753.

1.04 EQUIPMENT

- A. The television camera used for the inspection shall be one specifically designed and constructed for such inspection. Lighting for the camera shall be suitable to allow a clear picture for the entire periphery of the pipe. The camera shall be of a 360-degree radial view design capable of operating in 100 percent humidity conditions. The camera, television monitor, and other components of the video system shall be capable of producing a minimum 700-line resolution video picture. Picture quality and definition shall be to the satisfaction of the Engineer's representative and if unsatisfactory, shall be re-televised at the contractor's expense.
- B. All videotapes used shall be either Sony or TDK Brand in VHS format.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 PROCEDURE

- A. The camera shall be moved through the line in either direction at a uniform rate stopping when necessary to insure proper documentation of the sewer's condition but in no case will the television camera be pulled 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 interface with proper documentation of the sewer conditions shall be used to move the camera through the sewer line. If, during the inspection operation the television camera will not pass through the entire manhole section, the Contractor shall re-setup his equipment in a manner so that the inspection can be performed from the opposite manhole.
- B. Whenever non-remote powered and controlled winches are used to pull the television camera through the line, telephones, or other suitable means of communication shall be set up between the two manholes of the section being inspected to insure good communications between members.
- C. Movement of the television camera shall be temporarily halted at each visible point of interest (service line, defects, etc.) so that the radial view camera may better examine each object.

3.02 RECORDING OF FIELD OBSERVATIONS

- A. Television Inspection Logs:
 - 1. Information obtained shall be recorded on internal inspection logs with a format furnished or approved by the Engineer. The following information shall be recorded for each reach inspected:
 - a. Location and length of reach
 - b. Pipe size and material
 - c. Location and descriptions of service connections
 - d. Locations and descriptions of defects such as obstructions, intrusions, offset joints, hole, breaks, cracks, collapses, bends, or dips in alignment, protruding service connections, etc.
 - e. Items video-taped and/or photographed
- B. Photographs
 - 1. Instant developing, 35mm or other standard size photographs of the television monitor or problem areas shall be taken by the Contractor upon the request of the Engineer or his Representative to document unusual, questionable, or severe conditions found during the course of the work.

C. Video Tape Recording

1. The purpose of tape recording shall be to supply a visual and audio record of problem areas of the lines that may be replayed both daily and at future presentations by the Owner. All video tape recordings shall be made at standard speed (SP) for maximum clarity. Slow motion or stop motion play back features shall be supplied at the option of the Contractor. All video tapes and logs are considered property of the Owner and shall be submitted prior to release of retainage. The Owner may at their own expense perform selected or all warranty inspection prior to the end of the warranty period. The contractor shall be responsible for all the repairs necessary at that time.

- D. The Engineer or his Project Representative to insure acceptability of work and record-keeping procedures of the Contractor shall witness all television inspection. The Engineer or his Representative shall verify preparatory cleaning records.

END OF DOCUMENT