

City of Ottawa CCTV Requirements - Residential Protective Plumbing Program (RPPP)

Equipment

1. Camera Specifications

- a. The camera used for the inspection shall be a self-leveling, colour Closed Circuit Television (CCTV) camera specifically designed and constructed for such inspection. The CCTV camera shall operate in 100% humidity or submerged conditions.
- b. Camera equipment shall consist of a self-contained, closed-circuit colour television camera (high resolution, minimum 350 TV line (TVL) image) and a monitoring unit connected by a co-axial cable.
- c. The co-axial cable shall be of a single length. Joining cables will not be permitted. The camera unit shall be capable of passing through a 75 mm diameter pipe.
- d. The camera's picture resolution shall, at the discretion of the municipality, be confirmed using a RS resolution chart (retina type) or other method.

2. Lighting Specifications

- a. Lighting for the camera shall be suitable to allow a clear picture of the entire periphery of the pipe.
- b. The unit shall have a self-contained lighting system capable of providing a clear monitor picture, and lighting the periphery of the pipe of a minimum illumination level of 100 foot candles over a minimum distance of 2 meters.

3. Recording Equipment

- a. Recording equipment shall allow direct capture of the inspection video image in digital form to an accompanying computer. File format shall be MPG.
- b. Linear measure in metric through private sewer connections must be accurate to
- c. $\pm 5\%$.
- d. While video recording is in progress, information on private sewer connection conditions, diameter changes, and material changes, shall be collected and recorded in the digital format specified herein.

Inspection Procedure

1. The video shall be of quality that all minor defects (hairline cracks, etc) are clearly visible and the colour of the private sewer connection inspected is true to the actual conditions.
2. The applicant shall be required to re-submit the video(s), if the video(s) does not meet the quality requirements as determined by the City or its authorized representative.
3. The video shall record a maximum of one (1) civic address per CCTV file submittal and clearly identify the private sewer connection as sanitary, combined or storm.
4. A title page for the video image is to be provided identifying the date, the civic address of the private sewer connection inspected and the RPPP file number.
5. Each individual inspection recording must be a continuous recording.
6. The camera lens shall be kept clean at all times. No video inspection shall proceed while the camera lens is dirty.
7. The maximum camera speed during the inspection shall be five (5) metres per minute, while advancing and retracting the camera in/from the private sewer connection.
8. All video inspection work shall proceed from the stack, where possible, to the main sewer. The videotape shall include removal of the camera from the private sewer connection.
9. The inspection video shall have a continuous chainage in meters indicated on the screen. The chainage indicator shall be adjusted to indicate the chainage from the stack to the main sewer.
10. All changes in private sewer connection diameter and material will be recorded.
11. If water levels in the line(s) do not permit a full view of the private sewer connection due to sumps or dips, the report will indicate the start and end of each sump.

12. The inside wall of the City's sanitary, combined or storm sewer main(s) shall be clearly visible at the end of the inspection videotape.
13. The CCTV digital file shall be named for each video inspection: it must clearly indicate title, date and the civic address of the building line(s) inspected as per the following convention:

Street Name House # - YYYYMMDD-Title – RPPP - XXXXX

Inspection Report

The softcopy of the inspection report is to be submitted with the CCTV file. The report must be in Microsoft Word 2007 or Adobe Acrobat PDF file format. File to be submitted via [FTP site](#) (<https://www.dropbox.com/request/AEzyKMNmYf8jRpOYTqkq>).

At a minimum, the CCTV report is to include:

1. Municipal address;
2. Date of inspection;
3. RPPP number;
4. Continuous chainage in meters;
5. A record of all locations where the private sewer connection changes material and/or material;
6. A record of the main stack location including its diameter, the distance from the stack to the foundation facing the street, and if its accessible;
7. Topographic recording of surrounding area prior to entry into the stack to identify if cleanouts or backwater valves are present;
8. Using current WRc coding/description, a record of any and all findings such as damage, roots, grease, obstruction etc, description must include:
 - a. type of finding(s);
 - b. "pasted" still images of the finding(s);
 - c. distance from the stack to the finding(s);
9. A record of the total distance of private sewer connection inspected.



10. The name of the equipment operator and the person who prepared the report:
The report file is to be titled according to the following convention:

Street Name House # – YYYYMMDD – Title - RPPP - XXXXXX

e.g. Wellington 12 – 20160120 - Inspection Report - RPPP - 123456