

**Administration and Inspection Activities for
Closed-Circuit Television Inspection of Pipelines**

409.01 SCOPE

This CAIS covers the construction administration and inspection requirements for new and existing storm and sanitary sewers, watermains, pipe culverts or other accessible conduits by closed-circuit television (CCTV) as specified in OPSS 409, November 2017~~20~~24.

409.02 REFERENCES

The references listed in OPSS 409 shall apply to this CAIS, in addition to the following standards, specifications, forms, or publications:

Ontario Provincial Standard Specifications, Construction:

OPSS 409 Construction Specification for Closed-Circuit Television (CCTV) Inspection of Pipelines

409.03 DEFINITIONS

For the purpose of this CAIS, the definitions shall be as specified in OPSS 409.

409.04 DESIGN AND SUBMISSION REQUIREMENTS

409.04.01 Submission Requirements

Administrative Activities:

1	M	2 weeks <u>10 Business Days</u> prior to the CCTV inspection operations by the Contractor, r <u>R</u> Receive and c <u>C</u> heck the submissions as specified in OPSS 409.	-
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409.05 MATERIALS

Inspection Activities:

1	-	Check the materials are as specified in OPSS 409 and the Contract Documents.	<u>25%</u>
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409.06 EQUIPMENT

409.06.01 General

Inspection Activities:

<u>1</u>	-	<u>Check the materials are as specified in OPSS 409 and the Contract Documents.</u>	<u>25%</u>
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409.06.023 Inspection Survey Equipment

Inspection Activities:

1	-	Check the survey equipment is and make sure as specified in OPSS 409.	<u>25%</u>
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Administrative Activities:

1	M	Notify the Contractor if the Work in a work shift can commence.	-
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409.06.03 Inspection Vehicle

Inspection Activities:

<u>1</u>	-	<u>Check the inspection vehicle is as specified in OPSS 409.</u>	<u>25%</u>
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409.06.043 Video Equipment Quality

Inspection Activities:

1	-	Check the video equipment as specified in OPSS 409.	<u>25%</u>
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Administrative Activities:

1	M	<u>Check the measuring device is replaced if the accuracy test fails. Notify the Contractor if the video equipment is approved. the lengths of pipeline first inspected with the original measuring device to be reinspected using the new measuring device</u>	<u>25%-</u>
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409.07 CONSTRUCTION

09.07.01 Certified CCTV Operator

Administrative Activities:

<u>1</u>	<u>M</u>	<u>Check the CCTV inspection is performed by a person holding a NASSCO certification.</u>	<u>100%</u>
<u>2</u>	<u>M</u>	<u>Check that operators failing to meet the coding accuracy requirements on two occasions are not permitted to code on the remainder of the Contract as per OPSS 409.</u>	<u>25%</u>

409.07.021 Pipeline Cleaning

Inspection Activities:

1	M	Check the pipelines are clean and flushed <u>according to OPSS 411</u> immediately prior to CCTV inspection.	<u>5100</u> %
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409.07.032 Resolution of Videotape and Digital MPEG Video Recordings

Inspection Activities:

1	-	Check the resolution of digital MPEG video playback for each camera as specified.	-
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Administrative Activities:

<u>42</u>	M	Notify the Contractor if the resolution chart is approved.	-
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409.07.043 Coding Accuracy

Administrative Activities:

1	M	Receive and Check the formal coding accuracy verification system.	-
2	M	Prior to commencement of the CCTV inspection, Notify the Contractor if the formal coding accuracy verification system is approved.	-
3	<u>M</u>	Receive and check the coding accuracy checks and corresponding video recording.	-

409.07.054 CCTV Inspection

409.07.05.01 General

Administrative Activities:

1	M	Prior to commencement of the CCTV inspection, ensure that the CCTV operator is certified, trained, and competent to operate the inspection equipment and code the inspection. Check the work does not commence until Contract Administrator is satisfied that all items of the inspection equipment have been provided and are in full working order.	<u>25%-</u>
<u>2</u>	<u>M</u>	Ensure defects in each pipeline length are coded according to the standards specified in OPSS 409.	-
<u>3</u>		Receive and Check the flow control measures.	-

4	M	Notify the Contractor if the flow control measures are approved.	-
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Inspection Activities:

4 <u>5</u>	-	Check the viewing monitor at the start of each maintenance hole or pipe length to make sure the data generator electronically generates and clearly display a record of data as specified in OPSS 409.	-
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409.07.05.02 Camera

409.07.05.02.01 General

Administrative Activities:

1	M	Check the CCTV camera inspections are carried out according to the pipe condition coding practices as outlined in the MSCC or the Pipeline Assessment and Certification Program (PACP®).	25%
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409.07.054.02.03 Camera Travel Speed

Administrative Activities:

4	M	Check the camera's for travelling speed and make sure it is suitable for the pipeline diameter. <u>is as specified in OPSS 409.</u>	25%
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409.07.054.02.024 Camera Position Meter-Reading Device

Inspection-Administrative Activities:

1	-	Check the <u>camera position is as specified in OPSS 409, meter-reading device.</u>	25%
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409.07.05.02.03 Camera Travel Speed

Administrative Activities:

<u>1</u>	<u>M</u>	<u>Check the camera's travelling speed is as specified in OPSS 409.</u>	<u>25%</u>
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409.07.05.03 Inspection

1	-	Check and approve the flow control measures.	25%
2	-	Check the inspection is performed according to OPSS 409.	100%

409.07.05.04 Digital Video Recorder

1	-	Check that all inspections are recorded in color.	25%
2	-	Check the video recording is performed and saved according to OPSS 409.	25%

409.07.065 Final Documentation**409.07.065.01 InspectionSurvey Reporting**

Administrative Activities:

1	M	Receive and c Check the survey reports in the formats as specified in OPSS 409 within 10 B business D days of the fieldwork.	-
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409.07.065.02 Drawings

Administrative Activities:

1	-	Receive and c Check the drawings as specified in OPSS 409.	-
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409.07.076 Management of Excess Material~~As according to the Contract Documents.~~

Administrative Activities:

1	-	Check and approve the method of disposal of excess material <u>is according to Contract Documents.</u>	-
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409.08 QUALITY ASSURANCE**409.08.01 Acceptance**

Administrative Activities:

1	M	Check the submittals are as specified in OPSS 409 and in compliance with the Contract Documents.	-
2	M	Within 10 Business Days of submission, Notify the Contractor if the submittals are accepted.	-
3	M	Review non-compliant submissions returned for corrections within 5 Business Days.	-

409.09 MEASUREMENT FOR PAYMENT

Administrative Activities:

1	-	Measurement for payment shall be as specified in OPSS 409.	-
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409.10 BASIS FOR PAYMENT

Administrative Activities:

1	-	Payment shall be as specified in OPSS 409.	-
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WARRANT: Always with OPSS 409, Construction Specification for Closed-Circuit Television (CCTV) Inspection of Pipelines