

**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 2024.

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	10 Business Days prior to the CCTV inspection operations by the Contractor, receive and check 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.	25%
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409.06 EQUIPMENT

409.06.01 General

Inspection Activities:

1	-	Check the materials are as specified in OPSS 409 and the Contract Documents.	25%
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409.06.02 Inspection Equipment

Inspection Activities:

1	-	Check the survey equipment is as specified in OPSS 409.	25%
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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:

1	-	Check the inspection vehicle is as specified in OPSS 409.	25%
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409.06.04 Video Equipment Quality

Inspection Activities:

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

1	-	Check the measuring device is replaced if the accuracy test fails. Notify the Contractor if the lengths of pipeline first inspected with the original measuring device to be reinspected using the new measuring device	25%
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409.07 CONSTRUCTION

409.07.01 Certified CCTV Operator

Administrative Activities:

1	M	Check the CCTV inspection is performed by a person holding a NASSCO certification.	100%
2	M	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.	25%

409.07.02 Pipeline Cleaning

Inspection Activities:

1	M	Check the pipelines are clean and flushed according to OPSS 411 immediately prior to CCTV inspection.	100%
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409.07.03 Resolution and Digital MPEG Video Recordings

Inspection Activities:

1	-	Check the resolution of digital MPEG video playback for each camera as specified.	-
2	M	Notify the Contractor if the resolution chart is approved.	-

409.07.04 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	M	Receive and check the coding accuracy checks and corresponding video recording.	-

409.07.05 CCTV Inspection**409.07.05.01 General**

Administrative Activities:

1	M	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.	25%
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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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409.07.05.02.02 Camera Position

Administrative Activities:

1	-	Check the camera position is as specified in OPSS 409.	25%
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409.07.05.02.03 Camera Travel Speed

Administrative Activities:

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

1	M	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%

409.07.06 Final Documentation

409.07.06.01 Inspection Reporting

Administrative Activities:

1	M	Receive and check the survey reports in the formats as specified in OPSS 409 within 10 Business Days of the fieldwork.	-
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409.07.06.02 Drawings

Administrative Activities:

1	-	Receive and check the drawings as specified in OPSS 409.	-
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409.07.07 Management of Excess Material

Administrative Activities:

1	-	Check the method of disposal of excess material is according to Contract Documents.	-
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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