Sewerteks Inc.

McINTOSH PERRY

COMBINED LATERAL SEWER CCTV INSPECTION

JOB LOCATION:

637 CUMMINGS AVENUE
OTTAWA, ONTARIO

JOB DATE:

Tuesday, May 17, 2022

Sewerteks Inc.

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PROJECT SUMMARY

The following is the result from the camera inspections of the combined sewer located as shown in the map of this report at the premises of 637 Commings Avenue Ottawa, Ontario.

PLR AND REPORT NAVIGATION

Each inspected pipe segment has a unique identification ID. This unique ID is the Pipe Line Reference ID or PLR. All the IDs are labeled in the map.
The PLR is used to navigate this report. It's a link to the video inspection and video file.
You can jump from the Summary to the actual inspection details by clicking the PLR link.
The report also has a table of content that are also link to each section of the report.
In addition, the report has a link to re-direct you to the table of content in every page.

CLEANING

The lines were not cleaned prior to the CCTV condition assessment.

ADDITIONAL INFORMATION

No access was found for the storm lateral main pipe that lead to the city's main line. A camera was introduced in one of the roof drain as shown in the map of this report. The camera was traced to the stack located in the electrical room as shown in the map. And the stack lead to the hallway floor CO1. These observations indicate that the sytem in the building is combinedand leads to the city's sanitary main line.

STRUCTURAL AND OPERATIONAL DEFECTS

The following table#1 below describes the structural and operational defects of each individual pipe segment inspected identified by its unique ID or PipeLine Reference ID. The comments depict any additional information about each segment inspected.

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Table#1 below describes the structural and operational defects of each individual sanitary pipe segment inspected identified by its unique ID or PipeLine Reference ID.

PIPELINE REF. ID (PLR)	STRUCTURAL DEFECTS	OPERATIONAL DEFETCS	COMMENTS
SAN1	JDL, JDM, SWL	DE, DEG, EL	The cast iron pipe segment has severe surface wear large due to corrosion. The transite pipe has light encrustation due to infiltration at some joints. Debris ragging, sediment, grease and water level changes from 5 to 10 percent were visible. There are two angular displaced joints near the main line. The inspection ended at the city main line at 40.0 meters from the top of the Hallway CO.

Sewerteks Inc.

Date	5/17/2022	**Sewer Type**	COMBINED	**Pipe Size (mm)**	100/150MM
Client	McINTOSH PERRY			**Work order**	471
Contact	CURTIS MELANSON			**Pipe Material**	CAST IRON/TRANSITE/PVC
Start	LOWER LEVEL HALLWAY FLOOR CO			**Camera Direction**	WITH FLOW
End	CITY MAIN LINE			**DVD#/USB#**	1
Further Location Details	THE FLOOR CO IS LOCATED IN THE LOWER LEVEL HALLWAY OF THE BULDING BESIDE THE LAUNDRY ROOM			**Video name (PLR)**	SAN1.mpg
				Report No	1
Job Address	637 CUMMINGS AVENUE OTTAWA, ONTARIO			**Operator**	SAUL CERNA
Comments	The cast iron pipe segment has severe surface wear large due to corrosion. Pockets of debris ragging and sediment and water level changes from 5 to 10 percent were visible. The inspection ended at the city main line at 40.0 meters from the top of the Hallway FCO.				

DISTANCE (m)	CODE DESCRIPTION	%	SIZE (mm)	LENGTH (m)	CLOCK FROM	CLOCK TO	REMARKS
0.0	Start of inspection						Start at access point HALLWAY FLOOR CO
0.0	Line deviates down			0.6			Drop into the line.
0.6	Water Level	5					
0.6	Surface Wear Large			24.4	7	5	
0.6	Debris Grease	5		24.4	4	5	
0.6	Debris Grease	5		24.4	7	8	
5.6	General observation						Roughness in the pipe walls and grease
8.2	General observation						Pipe wall falling apart.
8.4	Water Level	10					
9.8	Debris	10					Ragging
10.0	Dimesion of Sewer Changes		150				
10.2	Connection		100		12		
10.4	Connection		75		12		Live
12.0	Connection		50		12		live
16.4	Connection		150		12		
19.6	Connection		100		12		live

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Date	5/17/2022	**Sewer Type**	COMBINED	**Pipe Size (mm)**	100/150MM
Client	McINTOSH PERRY			**Work order**	471
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Further Location Details	THE FLOOR CO IS LOCATED IN THE LOWER LEVEL HALLWAY OF THE BULDING BESIDE THE LAUNDRY ROOM			**Video name (PLR)**	SAN1.mpg
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DISTANCE (m)	CODE DESCRIPTION	%	SIZE (mm)	LENGTH (m)	CLOCK FROM	CLOCK TO	REMARKS
20.0	Line Deviates Right						
22.8	Line Deviates Left						
23.2	Connection		150		12		
25.0	Material Change	10					Asbestos cement
25.0	Debris	10		0.3			Sediment and ragging
30.0	Line deviates down						Gradually
31.2	Joint Displace Large						
31.2	Material Change						PVC
39.8	Joint Displace Medium						Angular
39.6	Material Change						Asbestos cement
40.0	Debris	10					Sediment and ragging
41.0	Encrustation Light			2.0			At joints
43.0	Finish Survey						End at CITY MAIN LINE.

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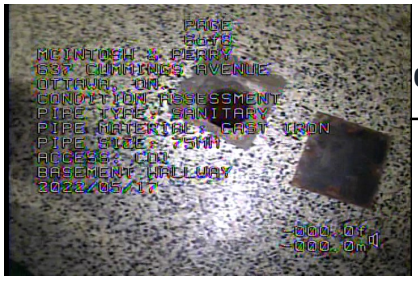
SAN1

Figure#1: Start of inspection at access point HALLWAY FLOOR CO

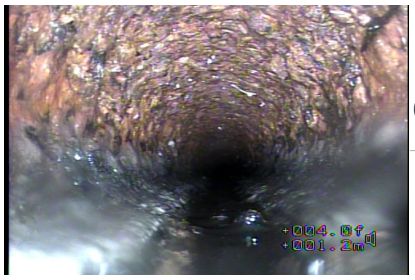


0.0 m

Figure#2: A view to the line deviation downwards at 0.0 meters. Notice the rough suface in the pipe wall.

0.0 m

Figure#3: A view to the 0% water level, grease and surface wear large due to corrosion at 1.2 meters.

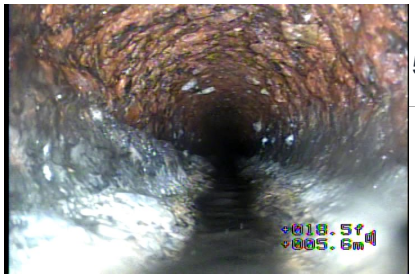


0.6 m

Figure#4: A view to the Surface Wear Large due to corrosion and grease at 1.6 meters from the top of of the floor CO.

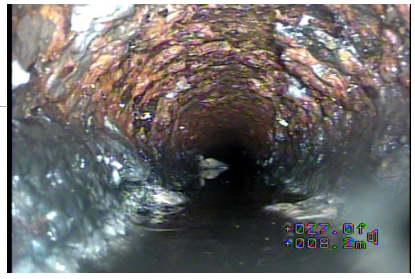
1.6 m

Figure#5: A view to the Roughness in the pipe walls and grease at 5.6 meters from the top of HALLWAY FLOOR CO.

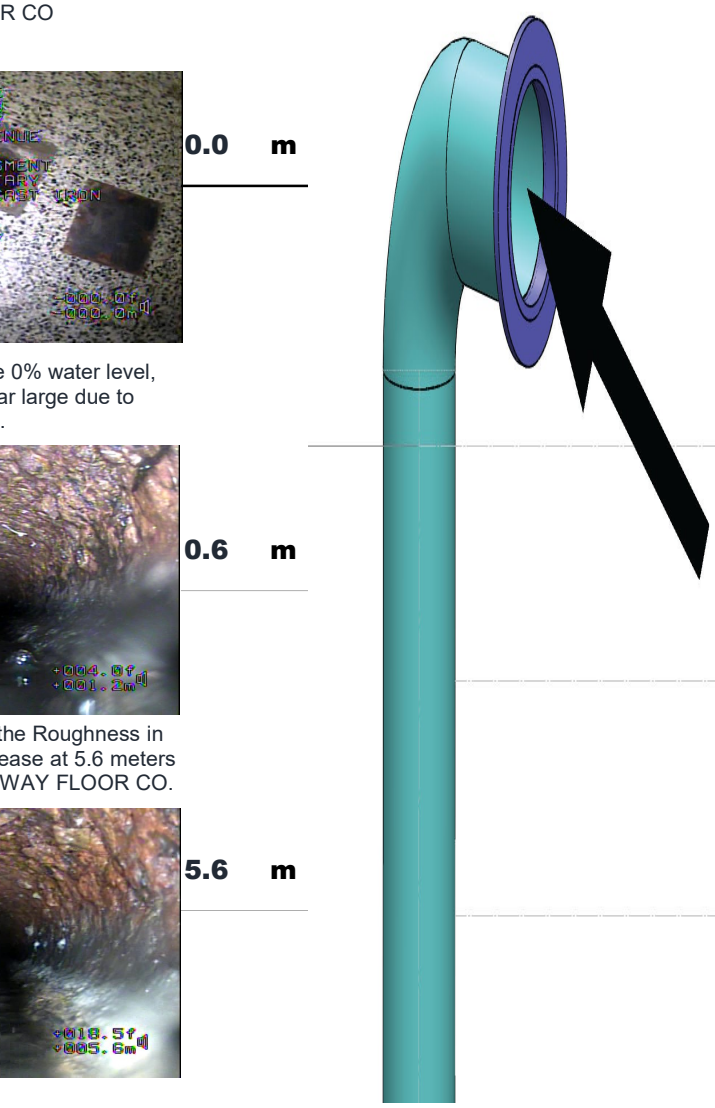


5.6 m

Figure#6: A view to the Pipe wall falling apart due to surface wear large at 8.2 meters from the top of the floor CO.



8.2 m



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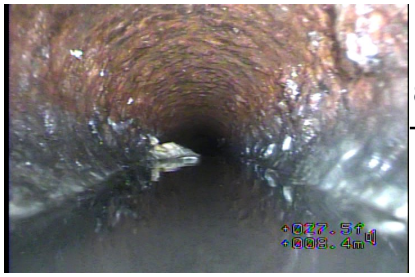
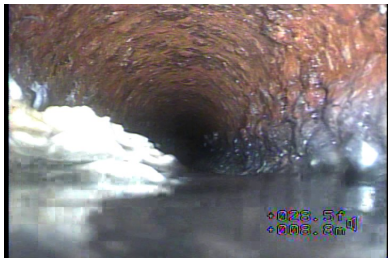
Figure#7: A view to the 10% water level and debris ragging at 8.4 meters from the top of HALLWAY FLOOR CO.



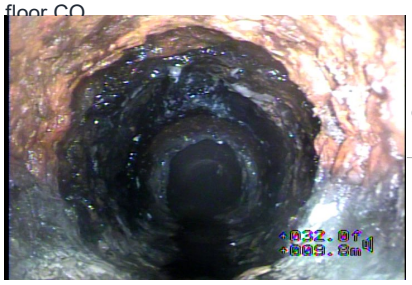
8.4 m

Figure#8: A view to the 10 % Debris ragging at 9.8 meters from the top of HALLWAY FLOOR CO.

9.8 m



Figure#9: A view to the diameter change to 150mm and 12 o'clock connection at 9.8 meters from the top of floor CO.

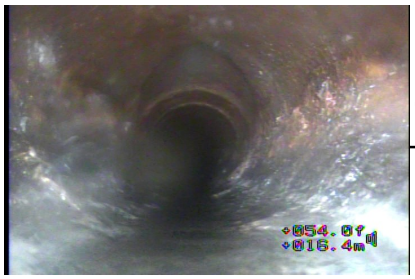


9.8 m

Figure#10: A view to the 50mm 12 o'clock connection at 11.8 meters from the top HALLWAY FLOOR CO.

11.8 m

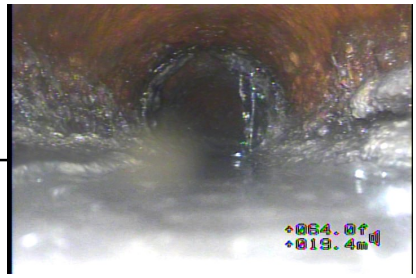
Figure#11: A view to the 150mm 12 o'clock connection at 16.4 meters from the top HALLWAY FLOOR CO.



16.4 m

Figure#12: A view to the 100mm 12 o'clock connection at 19.4 meters from the top HALLWAY FLOOR CO.

19.4 m



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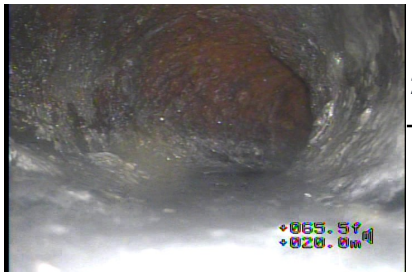
Figure#13: A view to the right line deviation at 20.0 meters from the top of HALLWAY FLOOR CO.

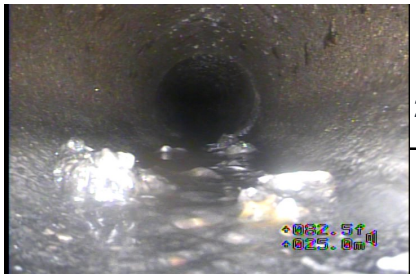


20.0 m

Figure#14: A view to the left line deviation at 22.6 meters from the top of HALLWAY FLOOR CO.

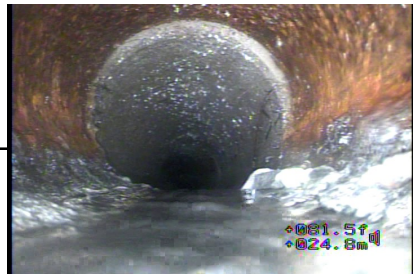
22.6 m

Figure#15: A view to the 150mm 12 o'clock connection at 25.0 meters from the top HALLWAY FLOOR CO.



25.0 m

Figure#16: A view to the material change to Asbestos cement at 24.8 meters from the top of HALLWAY



24.8 m

Figure#17: A view to the 10 % Debris ragging and sediment at 25.0 meters from the top of HALLWAY FLOOR CO.

25.0 m

Figure#18: A view to the line deviation downwards at 30.0 meters from the top of HALLWAY FLOOR CO. Angular

30.0 m

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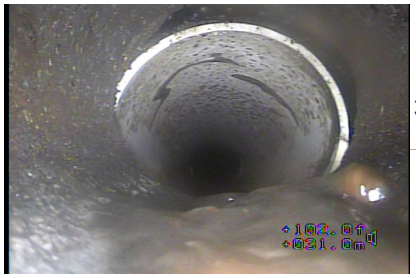
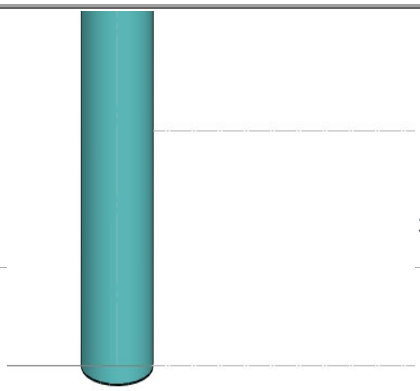
Figure#19: A view to the joint displaced large (angular offset) at 31.0 meters from the top of HALLWAY FLOOR CO.



31.0 m



31.2 m

Figure#20: A view to the material change to PVC at 31.2 meters from the top of HALLWAY FLOOR CO.

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Observations

Problem

Structural Condition - Brickwork

DB – Displaced Bricks
DI – Dropped Invert
MB – Missing Bricks

Structural Condition – Mortar Missing

MM - Mortar missing medium
MS – Mortar missing slight
MT – Mortar missing total

Structural Condition – Surface damage

SSL - Spalling large
SSM - Spalling medium
SSS – Spalling slight
SWL – Wear large
SWM – Wear medium
SWS – Wear slight

Structural Condition – Joint Displaced

JDL – Joint Displaced Large
JDM – Joint Displaced Medium

Structural Condition – Open Joint

OJL – Open Joint Large
OJM – Open Joint Medium

Structural Condition – Cracked

CC – Crack Circumferential
CL – Crack Longitudinal
CM – Crack multiple

Structural Condition – Fractured

FC – Fracture Circumferential
FL – Fracture Longitudinal
FM – Fracture Multiple

Structural Condition – Broken (pipe sewers)

B- Broken
H – Hole

Structural Condition – Deformed

D – Deformed Sewer

Structural Condition – Collapsed

X – Collapsed

Construction Features – Connection

CN – Connection
CNI – Connection intruding
CX – Connection defective
CXI – Connection defective intruding
WYE - End point connection / End of a line

Construction Features – Junction

JN – Junction
JX – Junction Defective

Construction Features – Lining defect

LN – Lining defect

Construction Features – Major branch

BR – Branch major

Construction Features – Manhole/node

MH – Manhole/Node

Miscellaneous Features

CU – Camera underwater
DC – Dimension of sewers changes
GO – General Observation
GP – General Photograph
LC – Lining Change
MC – Material change
PC – Pipe length change
SC – Shape change
V – Vermin (rats and/or mice)
WL – Water Level

Service Defects – Roots

RF – Roots fine
RFJ – Roots fine at joint
RM – Roots mass
RMJ – roots mass at joint
RT – Roots tap
RJ – Roots tap at joint

Service Defects – Infiltration

ID – Infiltration dripper
IDJ – Infiltration dripper at joint
IG – Infiltration gusher
IGJ – Infiltration gusher at joint
IR – Infiltration runner
IRJ – Infiltration runner at joint
IS – Infiltration seeper
ISJ – Infiltration seeper at joint

Service Defects – Encrustation

EH – Encrustation heavy
EHJ – Encrustation heavy at joint
EL – Encrustation light
ELJ – Encrustation light at joint
EM – Encrustation medium
EMJ – Encrustation medium at joint

Service Defects – Debris

DE – Debris
DEG – Debris grease
DES – Debris silt

Service Defects – Line

LD – Line deviates down
LL – Line deviates left
LR – Line deviates right
LU – Line deviates up

Service Defects – Obstruction

OB – Debris grease

Other Codes

Inspections

CID – Continue inspection downstream
CIU – Continue inspection upstream
FH – Finish Survey
SA – Survey abandoned
ST – Start of Survey

Weather

1- Dry
2- Heavy Rain
3- Light Rain
4- Showers
5- Snow

Reasons & Purpose

A- Structural or service condition defects
B- Infiltration
C- Assessment of complete remedial or renovation works
D- Pre-adoption
E- Pre-acceptance
F- Sample survey to determine asset condition
G- Associated with future capital scheme including drainage area planning
H- Resurvey for any reason
X- Other
Z- Not known

Surface Type & Location

A- Main road (urban)
B- Main road (suburban/rural)
C- Light road
D- Footpath or verge (within the highway boundary)
E- Fields (farmland and public open space)
F- Gardens (within private property)
G- Woodland
X- Difficult access (motorway, railway, watercourse, inside building)

Pipe Type

AC – Alkathene
AK – Alkathene
BR – Brick
CC – Concrete box culvert
CI – Cast Iron
CO – Concrete
CSB – Concrete segments (bolted)
CSU – Concrete segments (unbolted)
DI – Ductile Iron
GRC – Glass reinforced cement
GRP – Glass reinforced plastic
MAC – Masonry (in regular courses)
MAR – Masonry (randomly coursed)
PE – Polyethylene
PF – Pitch fibre
PP – Polypropylene
PSC – Plastic/steel composite
PVC – Polyvinyl chloride
RPM – Reinforced plastic matrix
SI – Spun (grey) iron
ST – Steel
TRA - Transite
VC – Vitrified clay
XXX – Other
ZZZ – Not known

Pipe Shape

A- Arched (with flat bottom)
B- Barrel
C- Circular
E- Egg shaped
H- Horseshoe
O- Oval
R- Rectangular
S- Square
T- Trapezoidal
U- U-shaped with flat top
X- Other

Use of Sewer

A- Combined
F- Foul
S- Surface water
T- Trade effluent
W- Watercourse (culverted)
X- Other
Z- Not known

Lining Method

BL – Bitumen
CL – Cement
CPP – Cured in place
IS – Soft inversion type liner
PL – Plastic
RL – Resin
XXX – Other
ZZ – Not known

Pre-Cleaning

N- No pre-cleaning
Y- Pre-cleaning was carried out
Z- Not known