

Pipe Cleaning and CCTV Survey Report

ALCo Property

Schenectady, NY

December 2010

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December 28, 2010

Mr. Paul LaFond
Deputy Director, Water and Wastewater
Department of Engineering and Public Works
City of Schenectady, NY
105 Jay Street, Room 205
Schenectady, NY 12305

RE: Pipe Cleaning and CCTV Project – ALCo Property

Dear Paul,

Veolia Water North America – Asset Management Group is pleased to submit the results of the stormwater pipe cleaning and CCTV project conducted on the ALCo Property in Schenectady, NY during the month of November 2010.

Methodology

The sections of stormwater pipe that were focused on were first jetted using a high velocity combination jet/vac unit. The pipes were then CCTV'd using a closed circuit television recording system (CCTV) to identify any structural defects. The Veolia UGAM crews utilized electronic handheld devices to record the work completed via a field data acquisition software program, which would then be uploaded to the InfoNet asset management database program each day. Quality control measures were then executed on the collected data to ensure accuracy and the following report was generated directly from InfoNet, which includes defect photos and summaries.

Report Layout

The report is divided into two sections. First is the CCTV Survey report information. The second section of the report highlights the defects that were discovered during the CCTV Surveys.

Summary

In this phase of work, Veolia field crews completed 1,535 linear feet of pipe cleaning and 1,057 linear feet of CCTV Inspections during the month of November 2010.

Summary of Pipe Cleaning:

Date	Location	Job Description	Passes
November 3, 2010	ALCo Property	Jetted 500 ft of 18" VCP storm pipe	4
November 11, 2010	ALCo Property	Jetted 110 ft of 10" VCP storm pipe	4
November 12, 2010	ALCo Property	Jetted 300 ft of 20" VCP storm pipe	4
		Jetted 100 ft of 20" VCP storm pipe	4
		Jetted 300 ft of 20" VCP storm pipe	4
		Jetted 225 ft of 20" VCP storm pipe	4

Summary of CCTV Work:

Date	Location	Description	Survey Length (ft)
November 5, 2010	ALCo Property	Overflow Gate to Access Drain	335
November 9, 2010	ALCo Property	Outfall Mohawk R. to Drain Gate Access	716
November 12, 2010	ALCo Property	Drain Manhole in Bldg 320 to Unknown	6 ft

Defects Found

Defect	Count
Break	1
Fracture	3
Crack	1
Obstacle	13
Intruding Tap	17
Infiltration	6
Missing Brick	4
Missing Mortar	2



Veolia Water North America

If you have any questions or require additional information, please do not hesitate to contact me at (508) 821-0576. Veolia Water North America UGAM group looks forward to continuing our valued partnership with the City of Schenectady.

Sincerely,

Jonathan Mongie
Director, Asset management
Veolia Water North America – Northeast LLC

CC: Farzin Kiani – VP of Operations, Veolia Water
Andrew Coppola – Project Manager, Veolia Water
Steve Luciano – Property Manager, Galesi Management Corporation



I. CCTV Survey Report

CCTV Survey Report

Network: Schenectady, NY

ALCo Property

PACP Standard

Summary of CCTV Survey:

Number of Surveys: 3

Total Length of Surveyed Pipes(ft): 1057.00

Total Length of Survey(ft): 1057.00

Upstream MH	Downstream MH	Inspection ID	Sewer Use	Height (in)	Total Length (ft)	Survey Length (ft)	Structure Ratings Index	Additional Info
OVERFLOW GATE MH	ACCESS DRAIN	OVERFLOW GATE MH_ACCESS DRAIN_D_11/5/201	SW	108.0	335.000	335.000	3.500000	-
DMH IN BLDG 320	UNKNOWN	UNKNOWN_D MH IN BLDG 320_U_11/12/2010	SW	18.0	6.000	6.000	4.000000	-
OUTFALL MOHAWK R.	DRAIN GRATE ACCESS	DRAIN GRATE ACCESS_OUTF ALL MOHAWK R. U_1	SW	108.0	716.000	716.000	3.670000	-

Survey Report

Date: 02:52 05 Nov 2010	Drainage Area: -	Weather: 3 (Light Rain)	Operator: NELSON	Job No: 20237	Inspection ID: OVERFLOW GATE MH_ACCESS DRAIN_D_11/5/20 1
Location Code: D			City: SCHENECTADY,NY		
Location Details: -			Road Name: ALCo PROPERTY		
Upstream MH: OVERFLOW GATE MH		Rim to Grade(U) (ft): -		Total Length (ft): 335.000	
Downstream MH: ACCESS DRAIN		Rim to Grade(D) (ft): -		Length Surveyed (ft): 335.000	
Sewer Use: SW	Direction of Survey: D (Downstream)	Height (in): 108.0	Shape: R	Material: -	Lining Method: -
Structure Rating: 14		O&M Rating: 98		Overall Rating: 112	
Structure Ratings Index: 3.500000		O&M Ratings Index: 2.130000		Overall Ratings Index: 2.240000	
Structure Quick Rating: 4232		O&M Quick Rating: 432G		Overall Quick Rating: 4532	
Comment: -					

Actual Duration: -	Actual Cost (\$): -
Estimated Duration: -	Estimated Cost (\$): -

Schedule Number: -	Completed: Y
Date/Time Planned: -	Task Status: -
Estimated Completion Date: -	Date/Time Started: -
Repeat Period: -	Date Completed: -
Team Leader: -	Repeat Schedule Number: -
Contractor: -	


Video	Photo	Distance (ft)	%	Value 1st Dim	Value 2nd Dim	CD	Clock At	Clock To	Code	Remarks
128.0		0.00							AMH	.
462.0		2.00							MGO	CULVERT STARTS OUT AS RECTANGULAR RCP
128.0		2.00	5						MWL	
128.0		5.00		10			8		TB	
171.0		8.00					3		IR	
287.0		24.80					3		FL	


285.0		24.80					2		IR	
350.0	Picture OVER FLOW GATE MH_A CCES S DRAIN 03401 9_051 12010 _A.JP G	31.70		48	48.00				MSC	
480.0		38.00				S01	3	9	IW	
462.0		46.00		4	5.00		10		TBI	
692.0		67.60	20						LL	
928.0		104.00							MGO	ACCESS POINT PLATED OVER
948.0	Picture OVER FLOW GATE MH_A CCES S DRAIN 04021 4_051 12010 _A.JP G	106.00	5				10	2	OBP	
1094.0	Picture OVER FLOW GATE MH_A CCES S DRAIN 04044 0_051 12010 _A.JP G	133.50	5				10	2	OBP	
1235.0		145.20		10			4		TB	
1279.0	Picture OVER FLOW GATE MH_A CCES S DRAIN 04092 7_051 12010	147.90	5				10	2	OBP	

	_A.JP G									
1427.0		151.50				S02	11	1	CM	
1320.0		151.50		12			10		TB	
1521.0		157.60		3	6.00		1		TBI	
1598.0		176.00		6			2		TBA	
1682.0		181.60		12			8		TB	
1794.0		187.20					3	5	IR	
1801.0		187.20		8			3		TB	
1883.0		193.90				F01	3	9	IW	
1886.0		193.90							MMC	ZZZ, STONE
1903.0		193.90		8			3		TB	
2009.0		201.80		8			10		TBA	
1989.0		201.80		12	3.00		8		TBI	
2058.0	Picture OVER FLOW GATE MH_A CCES S DRAIN 04275 4_051 12010 _A.JP G	211.50	5				10	2	OBP	
2214.0		218.20							MGO	DRAIN GRATE BURIED
2359.0		248.00					12		MB	
2375.0		248.00	5				10	2	OBP	
2481.0		261.60		6			2		TBA	
2760.0		274.80							MGO	BURIED DRAIN GRATE
2843.0		292.40		10	4.00		8		TBI	
2920.0		305.30		10			10		TBA	
3009.0	Picture OVER FLOW GATE MH_A CCES S DRAIN 04493 4_051 12010 _A.JP G	308.20					11	12	MB	
2949.0		308.20	5				10	2	OBP	

3172.0		330.00		15			4		TBA	
3172.0		330.00		10	6.00		8		TBI	
3172.0		335.00							AMH	.

Defect Photos

	<p>Photo Number: Picture\OVERFLOW GATE MH_ACCESS DRAIN034019_0511201 0_A.JPG</p>
	<p>ID: OVERFLOW GATE MH_ACCESS DRAIN_D_11/5/201</p>
	<p>Distance (ft): 31.70</p>
	<p>Size (in): 108.0</p>
	<p>Comments:</p>

	<p>Photo Number: Picture\OVERFLOW GATE MH_ACCESS DRAIN040214_0511201 0_A.JPG</p>
	<p>ID: OVERFLOW GATE MH_ACCESS DRAIN_D_11/5/201</p>
	<p>Distance (ft): 106.00</p>
	<p>Size (in): 108.0</p>
	<p>Comments:</p>

Defect Photos



Photo Number:
 Picture\OVERFLOW
 GATE MH_ACCESS
 DRAIN040440_0511201
 0_A.JPG

ID: OVERFLOW GATE
 MH_ACCESS
 DRAIN_D_11/5/201

Distance (ft): 133.50

Size (in): 108.0

Comments:



Photo Number:
 Picture\OVERFLOW
 GATE MH_ACCESS
 DRAIN040927_0511201
 0_A.JPG

ID: OVERFLOW GATE
 MH_ACCESS
 DRAIN_D_11/5/201

Distance (ft): 147.90

Size (in): 108.0

Comments:

Defect Photos



Photo Number:

Picture\OVERFLOW GATE MH_ACCESS DRAIN042754_0511201 0_A.JPG

ID: OVERFLOW GATE MH_ACCESS DRAIN_D_11/5/201

Distance (ft): 211.50

Size (in): 108.0

Comments:



Photo Number:

Picture\OVERFLOW GATE MH_ACCESS DRAIN044934_0511201 0_A.JPG

ID: OVERFLOW GATE MH_ACCESS DRAIN_D_11/5/201

Distance (ft): 308.20

Size (in): 108.0

Comments:

Survey Report

Date: 09:51 12 Nov 2010	Drainage Area: -	Weather: 1 (Dry)	Operator: NELSON	Job No: 20237	Inspection ID: UNKNOWN_DMH IN BLDG 320_U_11/12/2010
Location Code: D			City: SCHENECTADY,NY		
Location Details: -			Road Name: ALCo PROP.		
Upstream MH: DMH IN BLDG 320		Rim to Grade(U) (ft): -		Total Length (ft): 6.000	
Downstream MH: UNKNOWN		Rim to Grade(D) (ft): -		Length Surveyed (ft): 6.000	
Sewer Use: SW	Direction of Survey: U (Upstream)	Height (in): 18.0	Shape: C	Material: VCP (Vitrified Clay Pipe)	Lining Method: -
Structure Rating: 4		O&M Rating: 4		Overall Rating: 8	
Structure Ratings Index: 4.000000		O&M Ratings Index: 4.000000		Overall Ratings Index: 4.000000	
Structure Quick Rating: 4100		O&M Quick Rating: 4100		Overall Quick Rating: 4200	
Comment: -					

Actual Duration: -	Actual Cost (\$): -
Estimated Duration: -	Estimated Cost (\$): -

Schedule Number: -	Completed: Y
Date/Time Planned: -	Task Status: -
Estimated Completion Date: -	Date/Time Started: -
Repeat Period: -	Date Completed: -
Team Leader: -	Repeat Schedule Number: -
Contractor: -	

Video	Photo	Distance (ft)	%	Value 1st Dim	Value 2nd Dim	CD	Clock At	Clock To	Code	Remarks
0.0		0.00							AMH	
76.0		4.00							MCU	
75.0	Picture UNKN OWN_ DMH_ IN BLDG 32010 0246_ 12112 010_A. JPG	6.00					12	12	B	
77.0		6.00							MSA	

Defect Photos



Photo Number:

Picture\UNKNOWN_DM
H IN BLDG
320100246_12112010_
A.JPG

ID:

UNKNOWN_DMH IN
BLDG
320_U_11/12/2010

Distance (ft):

6.00

Size (in):

18.0

Comments:

Survey Report

Date: 02:32 09 Nov 2010	Drainage Area: -	Weather: 1 (Dry)	Operator: NELSON	Job No: 20237	Inspection ID: DRAIN GRATE ACCESS_OUTFAL L MOHAWK R_U_1
Location Code: D			City: SCHENECTADY,NY		
Location Details: -			Road Name: ALCo PROPERTY		
Upstream MH: OUTFALL MOHAWK R.		Rim to Grade(U) (ft): -		Total Length (ft): 716.000	
Downstream MH: DRAIN GRATE ACCESS		Rim to Grade(D) (ft): -		Length Surveyed (ft): 716.000	
Sewer Use: SW	Direction of Survey: U (Upstream)	Height (in): 108.0	Shape: A	Material: -	Lining Method: -
Structure Rating: 22		O&M Rating: 50		Overall Rating: 72	
Structure Ratings Index: 3.670000		O&M Ratings Index: 2.080000		Overall Ratings Index: 2.400000	
Structure Quick Rating: 4432		O&M Quick Rating: 322C		Overall Quick Rating: 4434	
Comment: -					

Actual Duration: -	Actual Cost (\$): -
Estimated Duration: -	Estimated Cost (\$): -

Schedule Number: -	Completed: Y
Date/Time Planned: -	Task Status: -
Estimated Completion Date: -	Date/Time Started: -
Repeat Period: -	Date Completed: -
Team Leader: -	Repeat Schedule Number: -
Contractor: -	

Video	Photo	Distance (ft)	%	Value 1st Dim	Value 2nd Dim	CD	Clock At	Clock To	Code	Remarks
0.0		0.00							AMH	
84.0		8.00	10						MWL	
178.0		32.10	15						LL	
348.0	Picture DRAIN GRATE ACCESS_ OUTFALL MOHA	47.10					8	10	FM	

	WK R.0243 07_09 11201 0_A.JP G								
449.0		67.00				8	4	FM	
560.0		81.90		12		10		TB	
646.0		106.70		8		12		TB	
713.0		120.60						MMC	ZZZSTONE
805.0		138.80				8		MB	
882.0		152.90		10		10		TB	
1007.0	Picture DRAIN GRATE ACCESS OUTFALL MOHAWK WK R.0256 09_09 11201 0_A.JP G	158.50				7	8	MML	
1117.0		187.90		10	8.00	2		TBI	
1199.0		213.70				12	2	ID	
1277.0		213.70		8		10		TB	
1205.0		213.70		8		1		TB	
1278.0	Picture DRAIN GRATE ACCESS OUTFALL MOHAWK WK R.0303 49_09 11201 0_A.JP G	216.10	5			11	1	OBP	
1419.0		230.50		8		2		TB	
1471.0		255.40		18	2.00	8		TBI	
1513.0		267.70		4	3.00	10		TBI	
1574.0		287.20						MGO	BURIED

										ACCESS POINT	
1632.0		303.30		8	3.00		8			TBI	
1682.0		303.40		6			12			TB	
1650.0		306.20		8			12			TB	
1708.0		313.90		6			9			TB	
1780.0		332.30					2			MB	
1778.0		332.30		6			2			TB	
1837.0		346.10		6			10			TB	
1869.0		348.60		4			12			TB	
1870.0		349.00		4			12			TB	
1872.0		350.00		4			12			TB	
1903.0		355.00		6			2			TBA	
1959.0		369.00		4	6.00		12			TBI	
1994.0		380.00		4	8.00		10			TBI	
2055.0		394.30								MGO	DRAIN GRATE PAVED OVER
2092.0		404.50					3	5		ID	
2097.0		404.60					3	5		MMM	
2155.0		423.40		12			8			TB	
2192.0		426.00		15			8			TBA	
2232.0		435.30		4	5.00		12			TBI	
2234.0		439.00		5	8.00		2			TBI	
2234.0		514.00		4	8.00		10			TBI	
2234.0		568.60		4	6.00		10			TBI	
2234.0		574.00		3	6.00		2			TBI	
2234.0		575.00		4	6.00		2			TBI	
2234.0		579.00								MGO	OPENING FOR CHAMBER 9 O' CLOCK
2234.0		580.00								MGO	BURIED DRAIN GATE
2234.0	Picture DRAIN GRATE ACCESS UTFALL MOHAWK R.1159 02_09 11201 0_A.jp	586.00	10				10	2		OBP	PIPE PASSING THROUGH

	g								
2234.0		587.00		6			10		TB
2234.0		618.00	5				10	2	OBP
2234.0		619.00		15			8		TBA
2234.0		637.00		8			3		TBA
2234.0		648.00		8			3		TBA
2234.0		669.00	5				10	2	OBP
2234.0		672.00	5				10	2	OBP
2234.0		690.00		4	6.00		2		TBI
2234.0		699.00		20			2		TB
2234.0		709.00	5				10	2	OBP
2234.0		709.00		8	4.00		1		TBI
2234.0		710.60	5				10	2	OBP
2234.0		716.00							AMH

Defect Photos



Photo Number:
 Picture\DRAIN GRATE
 ACCESS_OUTFALL
 MOHAWK
 R.024307_09112010_A.
 JPG

ID: DRAIN GRATE
 ACCESS_OUTFALL
 MOHAWK R. U 1

Distance (ft): 47.10

Size (in): 108.0

Comments:

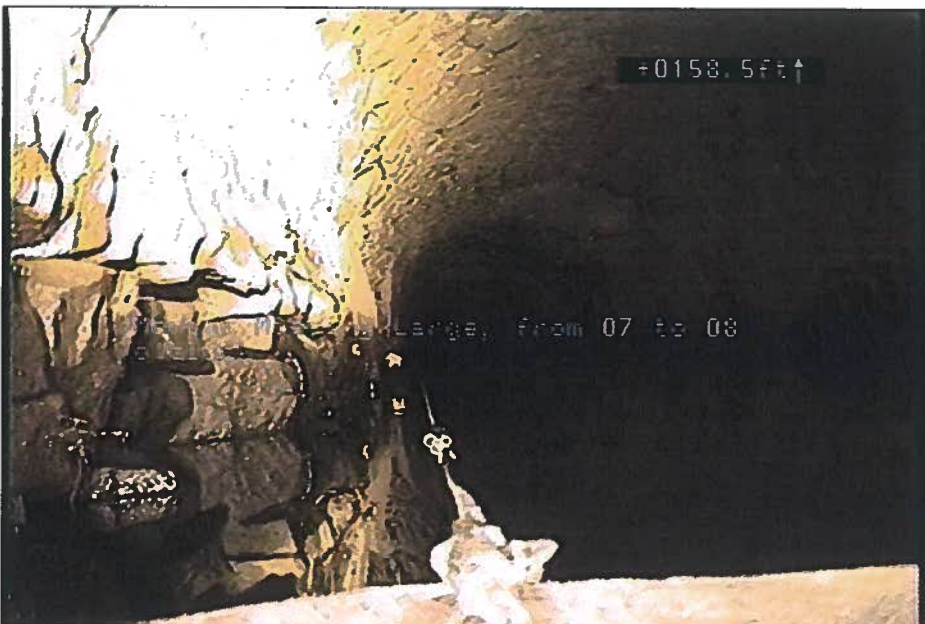


Photo Number:
 Picture\DRAIN GRATE
 ACCESS_OUTFALL
 MOHAWK
 R.025609_09112010_A.
 JPG

ID: DRAIN GRATE
 ACCESS_OUTFALL
 MOHAWK R. U 1

Distance (ft): 158.50

Size (in): 108.0

Comments:

Defect Photos



Photo Number:
 Picture\DRAIN GRATE
 ACCESS_OUTFALL
 MOHAWK
 R.030349_09112010_A.
 JPG

ID: DRAIN GRATE
 ACCESS_OUTFALL
 MOHAWK R. U_1

Distance (ft): 216.10

Size (in): 108.0

Comments:



Photo Number:
 Picture\DRAIN GRATE
 ACCESS_OUTFALL
 MOHAWK
 R.115902_09112010_A.j
 pg

ID: DRAIN GRATE
 ACCESS_OUTFALL
 MOHAWK R. U_1

Distance (ft): 586.00

Size (in): 108.0

Comments:

PIPE PASSING
 THROUGH

II. Defect Report: Defect Images

Segment: Overflow Gate_Access
Drain

Height: 108 in **Width:** 84 in

Material: RCP

Street: ALCo Property

Defect: Infiltration Runner

Defect Location: 8.0 ft downstream of the
Overflow Gate



Defect: Infiltration Runner

Defect Location: 24.8 ft downstream of the Overflow Gate



Defect: Infiltration Weeper

Defect Location: 38.0 ft downstream of the Overflow Gate, continuous for 156 ft



Defect: Tap Break-In Intruding

Defect Location: 46.0 ft downstream of the Overflow Gate



Defect: Obstacle External Pipe or Cable (5%)
Defect Location: 106.0 ft downstream of the Overflow Gate



Defect: Obstacle External Pipe or Cable (5%)
Defect Location: 133.5 ft downstream of the Overflow Gate



Defect: Obstacle External Pipe or Cable
Defect Location: 147.9 ft downstream of the Overflow Gate



Defect: Crack Multiple

Defect Location: 151.5 ft downstream of the Overflow Gate



Defect: Tap Break-In Intruding

Defect Location: 157.6 ft downstream of the Overflow Gate



Defect: Infiltration Runner

Defect Location: 187.2 ft downstream of the Overflow Gate



Defect: Tap Break-In Intruding
Defect Location: 201.8 ft downstream of the Overflow Gate



Defect: Obstacle External Pipe or Cable
Defect Location: 211.5 ft downstream of the Overflow Gate



Defect: Missing Brick
Defect Location: 248.0 ft downstream of the Overflow Gate



Defect: Obstacle External Pipe or Cable
Defect Location: 248.0 ft downstream of the Overflow Gate



Defect: Tap Break-In Intruding
Defect Location: 292.4 ft downstream of the Overflow Gate



Defect: Obstacle External Pipe or Cable
Defect Location: 308.2 ft downstream of the Overflow Gate



Defect: Missing Brick

Defect Location: 308.2 ft downstream of the Overflow Gate



Defect: Tap Break-In Intruding

Defect Location: 330.0 ft downstream of the Overflow Gate



Segment: Unknown_DMH in Building 320
Height: 18 in
Material: VCP
Street: ALCo Property

Defect: Break
Defect Location: 6.0 ft upstream of the DMH in Building 320 (abandoned survey)



Segment: Drain Gate
Access_Outfall Mohawk
Height: 108 in **Width:** 84 in
Material: RCP
Street: ALCo Property

Defect: Fracture Multiple
Defect Location: 47.1 ft upstream of the
Outfall



Defect: Fracture Multiple
Defect Location: 67.0 ft upstream of the
Outfall



Defect: Missing Brick

Defect Location: 138.8 ft upstream of the Outfall



Defect: Mortar Missing Large

Defect Location: 158.5 ft upstream of the Outfall



Defect: Tap Break-In Intruding

Defect Location: 187.9 ft upstream of the Outfall



Defect: Infiltration Dripper
Defect Location: 213.7 ft upstream of the Outfall



Defect: Obstacle External Pipe or Cable (5%)
Defect Location: 216.1 ft upstream of the Outfall



Defect: Tap Break-In Intruding
Defect Location: 255.4 ft upstream of the Outfall



Defect: Tap Break-In Intruding
Defect Location: 267.7 ft upstream of the Outfall



Defect: Tap Break-In Intruding
Defect Location: 303.3 ft upstream of the Outfall



Defect: Missing Brick
Defect Location: 332.3 ft upstream of the Outfall



Defect: Tap Break-In Intruding
Defect Location: 369.0 ft upstream of the Outfall



Defect: Tap Break-In Intruding
Defect Location: 380.0 ft upstream of the Outfall



Defect: Infiltration Dripper
Defect Location: 404.5 ft upstream of the Outfall



Defect: Missing Mortar Medium
Defect Location: 404.6 ft upstream of the Outfall



Defect: Tap Break-In Intruding
Defect Location: 435.3 ft upstream of the Outfall



Defect: Tap Break-In Intruding
Defect Location: 568.6 ft upstream of the Outfall



Defect: Tap Break-In Intruding
Defect Location: 574 ft upstream of the Outfall



Defect: Tap Break-In Intruding
Defect Location: 575.0 ft upstream of the Outfall



Defect: Obstacle External Pipe or Cable (10%)
Defect Location: 586.0 ft upstream of the Outfall



Defect: Tap Break-In Intruding
Defect Location: 690.0 ft upstream of the Outfall



Defect: Obstacle External Pipe or Cable
Defect Location: 709.0 ft upstream of the Outfall



Defect: Tap Break-In Intruding
Defect Location: 709.0 ft upstream of the Outfall



Defect: Obstacle External Pipe or Cable
Defect Location: 710.6 ft upstream of the
Outfall

