Janzen, Heather

From:City CouncilSubject:FW: Email - Communication - Carey Blatchford - Housing Accelerator Fund - CK 750-1Attachments:June 24th HAF.docx; gt_PipeLogix Report.pdf

From: Web NoReply <web-noreply@Saskatoon.ca>
Sent: Monday, June 24, 2024 4:26 PM
To: City Council <City.Council@Saskatoon.ca>
Subject: Email - Communication - Carey Blatchford - Housing Accelerator Fund - CK 750-1

--- Replies to this email will go to

Submitted on Monday, June 24, 2024 - 16:24

Submitted by user:

Submitted values are:

I have read and understand the above statements.: Yes

I do not want my comments placed on a public agenda. They will be shared with members of Council through their online repository.: No

I only want my comments shared with the Mayor or my Ward Councillor .: No

Date: Monday, June 24, 2024

To: His Worship the Mayor and Members of City Council

Pronouns: She/her/hers

First Name: Carey

Last Name: Blatchford

Phonetic spelling of first and/or last name:

Email:

I live outside of Saskatoon: No

Saskatoon Address and Ward: Address: Kirk Cres Ward: Ward 8

What do you wish to do ?: Submit Comments

What meeting do you wish to speak/submit comments ? (if known):: HAF Public Hearing

Comments:

Please see attached letter and supporting sewage infrastructure documents as to why I oppose the HAF proposal.

Attachments:

- June 24th HAF.docx14.35 KB
- gt PipeLogix Report.pdf332.63 KB

Will you be submitting a video to be vetted prior to council meeting?: No

June 24th

To City Council,

I live in Greystone Heights neighborhood, and we have many issues with the current sewage infrastructure. The Planning and Development Committee shared that they had a high-level analysis completed to determine that sewage infrastructure could handle densification. While I'm pleased to see that an analysis had been completed in 2022, I am disappointed to see that Development and Planning has lied to you and us when they stated that there was nothing to report and everything is good to go.

In general, the infrastructure of the 64-year-old pipes is in ok shape... if you consider multiple cracks, fractures, and breaks a high-quality standard capable of withstanding densification.

Upon further review of the analysis, the survey between 7746 and 7747 indicates an offset pipe which is a significant concern and will cause major problems. There has been no indication that these pipes have been repaired to date. Considering that this is just a review of one Crescent's sewage infrastructure I would surmise that there are many issues in the HAF proposed development areas that are also in disrepair and be reported upon. Furthermore, has the Planning and Development Committee taken into consideration that these pipes may not be able to handle additional flow from rainwater that ends up in the sewer causing issues in backflow? Reviewing these reports, I would doubt it.

Even if the sewage infrastructure was top notch according to 2011 Urban planning of sewer infrastructure research report by Roux, Mur, Risch & Boutin "Among the various parameters that affect the environmental performances of the sewer network, the housing density is indeed the main one, up to a factor of about 10 between a dense city and a scattered one." In reviewing previous minutes of the SPC Environment, Utilities and Corporate Services meetings, I could not find one discussion that considered the current sewage infrastructure, and the possible negative environmental impacts densifying Saskatoon has on Saskatchewan rivers, streams and lakes. Is it appropriate to maybe decrease our carbon footprint (as you will see in my next point) while increasing the pollution of our waters?

You need to leave Kirk Crescent and Greystone Heights out of the densification plans.

Respectfully,

Carey Blatchford Kirk Crescent

Tabular Re					1	for	Ci	ty o	of S		katoo				
Setup 47	Su	urveyor	AP	Certifica	ite# U	-0620-	7030)96	22	S	ystem	Owner C of	S		
Drainage			Survey Custo	meı CofS											
P/O #			Date 2022/11/25	Time 10:	40	Str	eet	ĸ	ürk (Cres	5				
City Sa	skatoor	า	Further	location de	tails		-								
Up 7747			Rim	to invert		(Grad	e to	o in	vert		Rim	to grade)	М
Down 3089			Rim	to invert		C	Grad	e to	o in	vert		Rim	to grade	1	м
Use Sanitar			Direction			Flow			-				edia No		
Shape Circu				200 Width		mm			cle	an			Cleaned		
Material Cla			-											yec 108.0	
	ay me		•	Joint length		Year			-		M 0			yet 100.0	IV
Lining				Year laid		rear	ren	api	iitat	ec		Weath			
Purpose					Cat								Press		
Additional in	fo	Coun	ter reading 108m Should	d be 86m.						uctu		0 & M	Co	nstructiona	al
Location								L	Mis	cell	aneous				
Project S	anitary	CCTV									Wo	rk Order			
Northing				East	ing						El	evation			
Coordinate S	System	1							0	SPS	Accur	асу			
Count Video	CD	Code			n1	In2	%	Int	FFr	То	Im Ref	Remarks			7
		ST	Start of Survey				/0		1	10		Nemarka			_
0.0		AMH	Manhole									7747			-
0.0		MWL	Water Level				0								+
3.7	_	MMC	Material change				-					VCT			+
3.9	_	CS	Crack Spiral					J	05	08					+
5.6		DAE	Deposits Attached Eng	rustation			5	J	08	04					+
6.5		MWL	Water Level	usiduon			5								╡
6.6		DAE	Deposits Attached Eng	rustation			5	J	07	œ					+
9.2		CS	Crack Spiral	dotadom				J	10	12					+
9.3		FC	Fracture Circumferentia	al					01	11					+
9.4		TBI	Tap Break-in Intruding		100	10			12						+
10.1		DAE	Deposits Attached End	rustation			5	J	08	œ					7
12.6		MGO	General Observation									occasional bli	string		1
17.3		DAE	Deposits Attached Enc	rustation			5	J	12	03					1
18.7		SSS	Surface Spalling						07	0 8					\neg
20.6		CL	Crack Longitudinal			_		J	12						
20.6		CL	Crack Longitudinal					J	0 6						
20.8		TBI	Tap Break-in Intruding		100	10		J	12						
21.3		TBI	Tap Break-in Intruding		100	25			12						
21.8		DAE	Deposits Attached Enc	rustation			5	J	09	03					
22.9		DAE	Deposits Attached Enc				10	J	09	03					
26.6		DAE	Deposits Attached Enc				10	J	09	03					\downarrow
27.8		DAE	Deposits Attached Enc				10	J	0 8	04					\downarrow
31.3		DAE	Deposits Attached End	rustation			15	J	07	04					\downarrow
31.4		CS	Crack Spiral				-	J	11	12					\downarrow
36.9		DAE	Deposits Attached End				5	J	07	10					\downarrow
38.1		DAE	Deposits Attached End	rustation			15	J	07	04					\downarrow
38.5		MMC	Material change				<u> </u>					PVC			\dashv
38.6		JOM	Joint Offset Medium				<u> </u>					appoore that		o inc	\dashv
40.4	_	MGO	General Observation		400				10			appears that	a pvc pipe	# S INS	\rightarrow
40.6		TS	Tap Saddle		100			J	12						



Tabul	ar Rep	ort of	PSR	8823		for	Ci	ty (of S	as	katoo	on			
Setup	47	Su	irveyor	AP C	Certificate#	U-0620	-7030	96	22	S	ystem	Owner C	of S		
Draina	age			Survey Customer	C of S										
P/O #				Date 2022/11/25	Fime 10:40	St	reet	ĸ	(irk	Cres					
City	Sas	katoon	1	Further loca	tion details		-								
Up	7747			Rim to	invert		Grad	e to	o in	vert		Rii	m to grade	I	M
Down	3089			Rim to	invert		Grad	e to	o in	vert		Rir	n to grade	1	M
Use	Sanitary			Direction Do	wn	Flow	, con	tro					Media No		-
	e Circula	ar		Height 200	Width	mm		Pre	cle	an .		Date	Cleaned		
	ial Clay			-	t length						, 0 M		ngth Surve	vec 108.0	
		/ Tile			ar laid 1960		rreh		-			Weat	-	yec 100.0	
Lining	-			Te		Tea	rren	abi	intai	ec		weat			
Purpo				· · · · · · · · · · · · · · · · · · ·	Cat								Press		-
	ional inf	0	Cour	nter reading 108m Should be	86m.					uctu		0 & M	Co	nstructiona	A.
Locat	ion							L	IVIS	cell	aneous	5			_
Proje	ct Sa	initary	CCTV								Wo	rk Order			
North	ing				Easting						EI	evation			
Coord	dinate Sy	∕stem							C	SP S	Accu	racy			
Count	Video	CD	Code		ln1	In2	%	Jn	tFr	То	Im Ref	Remarks	5		
41.5			TSA	Tap Saddle Active	100				12						
41.9			MMC	Material change								VCT			
63.2		S01	FM	Fracture Multiple				J	12	12					
64.4		F01	FM	Fracture Multiple				J	12	12					
64.4			MMC	Material change								PVC			
64.7			TS	Tap Saddle	100				12						
65.0			TSA	Tap Saddle Active	100		_		12						
67.2			MMC	Material change								VCT			
67.2			MWL	Water Level			20								
69.2			MWL	Water Level		_	10	<u> </u>		_					
84.2			DAE	Deposits Attached Encrusta	ation		5	J	08						
87.0		<u> </u>	FM	Fracture Multiple	400	40		J		11					
87.2			TBI	Tap Break-in Intruding	100		_	J	10						
87.4			TB	Tap Break-in	100			-	01						
93.9			MWL	Water Level			20	-							
94.4			MWL	Water Level			30 20	-							
96.7			MWL	Water Level			10	-							_
102.2			MWL	Water Level		_	10	J	12	12					_
107.5			FM	Fracture Multiple				J		12					_
107.5		-	B	Broken			_	J		<u>uz</u>		3089			
108.0			AMH				_	\vdash	-			3009			
108.0			FH	End of Survey	I										_

108.0 M Total Length Surveyed

Scores	Structural:	Pipe Rating	Pipe Ratings Inde>	Quick Rating
	O&M:	Pipe Rating	Pipe Ratings Inde>	Quick Rating
	Overall	Pipe Rating	Pipe Ratings Inde>	Quick Rating



Tabula	r Repo	ort of	PSR	8824		for	Cit	ty o	of S	as	katoo	n				
Setup	58	Su	irveyor	НТ	Certificate# \	J-915-07	70R(002	67	S	ystem	Owner	City of	Saskato	on	
Drainag	ge			Survey Custo	mei City of Saskat	oon										
P/O #				Date 2022/12/12	Time 15:22	Stre	et	ĸ	irk (Cr						
City	Sas	katoon	n	Further	location details											
Up	7746			Rim	n to invert	G	Grad	e to	in	vert			Rim to	grade		М
Down	7747			Rim	n to invert	G	ad	e to	in	vert			Rim te	o grade		м
Use S				Direction	n Down						tered u	sina J		dia No		
Shape		r			200 Width	mm				an J		0		eaned 2	022/12/	09
Materia				-							, D M			n Survey		
Lining	a Guy	nic			Year laid 1960	Year			-				eather		00.2	
-		outin o	A			Tear	i e ii	aun	ILat	et		**	Callici			
Purpos			Assessi	ment	Cat				C1-			0.01		Pressu		
	onal info	D								uctu colk	rai aneous	0 & I	М	Con	structio	nai
Locatio								L	IVIS	CCIR						
Project	: 22-	0375									Wo	rk Orde	r			
Northin	ng				Easting						Ele	evation				
Coordi	inate Sy	stem							G	SPS	Accur	acy				
Count V	/ideo	CD	Code		In1	In2	%	Jnt	Fr	То	Im Ref	Rema	rks			
0.0			ST	Start of Survey												
0.0			AMH	Manhole								7746				
0.0		ļ	MWL	Water Level			0									
0.3			В	Broken					11							
23			CM	Crack Multiple				J	12	12						
25			TB	Tap Break-in	100				11							
29			TB	Tap Break-in	100		5		01							
3.2			MWL	Water Level			5						a al bliat	oring		
3.9			MGO		100				11			occasio	Iai Diisi	ening		_
19.2			TB	Tap Break-in	100			J	12	m						
19.6 19.7			CM TB	Crack Multiple	100			J	01	<u>uz</u>						
35.3			CS	Tap Break-in	100			•	10	12						
35.4			TB	Crack Spiral Tap Break-in	100			J	10	12						
35.7			CM	Crack Multiple	100			J	01	02						
35.9			TB	Tap Break-in	100			-	01							
50.8			CM	Crack Multiple				J	11	12						
50.9			TBA	Tap Break-in Active	100				12							
51.4			TBA	Tap Break-in Active	100				12							
54.3			MWL	Water Level			20									
54.7		İ	MWL	Water Level			40									
57.8			MWL	Water Level			30									
59.1			MWL	Water Level			10									
		1	MSA													

60.2 M Total Length Surveyed

Scores	Structural:	Pipe Rating	Pipe Ratings Index	Quick Rating
	O&M:	Pipe Rating	Pipe Ratings Inde>	Quick Rating
	Overall	Pipe Rating	Pipe Ratings Index	Quick Rating



Tabula						for		-			katoo			
Setup	57	Su	irveyor		cate # U		70R(002	67	S	System	Owner City of Sas	katoon	
Drainag	je			Survey Customer City o	fSaskat	oon								
P/O #				Date 2022/12/12 Time 1	3:26	Stre	eet	ĸ	(irk (Сг				
City	Sas	katoon	1	Further location d	letails									
Up	7741			Rim to invert		C	Grad	e to	o in	vert		Rim to gr	ade M	М
Down	7746			Rim to invert		C	Grad	e to	o in	vert		Rim to gr	ade M	М
Use S	anitary			Direction Down		Flow	cont	trol	De	-Wa	itered u	sing J Medial	No	
Shape	Circula	r		Height 200 Widt	th	mm		Pre	cle	an .	J	Date Clean	ed 2022/12/09)
Materia	I Clay	Tile		Joint leng	th I	м т	otal	len	gth	88.	6 M	Length Su	rveyed 88.0	N
Lining				Yearlaid	1960	Year	reh	abi	litat	ed		Weather		
- Purpos	e R	outine	Assessr	ment	Cat							Pr	essure	
Additio									Str	uctu	ral	0 & M	Constructional	
Locatio											aneous		Constructional	1
		0075						L						
Project		0375		_								rk Order		
Northin	-			Ea	sting							evation		
Coordi	nate Sy	stem							0	3P S	Accur	асу		
Count V	ideo	CD	Code		ln1	ln2	%	Jnt	tFr	То	Im Ref	Remarks		
0.0			ST	Start of Survey										
0.0			AMH	Manhole								7741		
0.0			MWL	Water Level			0							
0.0			СМ	Crack Multiple				J	0 4	0 9				
1.4			CS	Crack Spiral				J	12	01				
21			MGO	General Observation								occasional blister		
2.7			CL	Crack Longitudinal				J	02					
4.6			TB	Tap Break-in	100				10					
4.6			FM	Fracture Multiple					12	12				
7.0			CL	Crack Longitudinal				J	02					\square
8.7			MMC	Material change			_					PVC		\downarrow
9.8			MWL	Water Level			5							4
10.5			MMC	Material change					-			VCP		\dashv
12.4			RFJ	Roots Fine Joint				J	09	0				\dashv
13.5			RFJ	Roots Fine Joint				J	02	03				\dashv
14.6			CL	Crack Longitudinal				J	02	09				\dashv
14.7			RFC	Roots Fine Connection				J	10					\dashv
14.7			FM	Fracture Multiple	100		<u> </u>	5	10	0.0				+
14.8 18.1			TB	Tap Break-in Water Level	100		10		10					\dashv
18.1 24.7			CM	Water Level Crack Multiple			10	-	01	02				+
24.7 25.0			TB	Tap Break-in	100				02	- SE				\dashv
25.0			RFC	Roots Fine Connection				-	03					+
25.3			RFJ	Roots Fine Joint	1		+	J	12					\neg
25.5			CM	Crack Multiple	1			J	07	09				+
			DAE	Deposits Attached Encrustation			50		08			in lateral		\dashv
			TBD	Tap Break-in Defective	100	1			10			calcium in lateral		+
25.5						-	+	J	11	12				+
25.5 25.6			RFJ	Roots Fine Joint				J		12				
25.5			RFJ RFJ	Roots Fine Joint Roots Fine Joint				J	08					\dashv
25.5 25.6 28.5			-	Roots Fine Joint Roots Fine Joint Roots Fine Joint				<u> </u>	<u> </u>	01				-



Tabular Rep	ort of PSR	8825	1	for (City o	of S	as	katoo	n		
Setup 57	Surveyor		Certificate#U		R002	67	S	ystem	Owner City of	of Saskatoon	
Drainage		Survey Custome	City of Saskate	oon							
P/O #		Date 2022/12/12	Time 13:26	Stree	t 🛛 K	Girk C	r				
City Sas	katoon	Further loca	ation details								
Up 7741		Rim to	invert	Gra	ade to	o inv	ert		Rim	to grade	М
Down 7746		Rim to	invert	Gra	ade to	o inv	ert		Rim	to grade	М
Use Sanitary		Direction Do	wn	Flow co	ontro	De-	Wa	tered us	singJ Mo	edia No	
Shape Circula	ar	Height 200	Width	mm	Pre	clea	ın J	J	Date C	leaned 2022/1	2/09
Material Clay	/ Tile	Joir	nt length I	M Tot	al len	gth	88.(6 M	Leng	th Surveyed 88	3.0 N
Lining		Ye	earlaid 1960	Yearre	habi	- litate	ed		Weath		
-	outine Assess	ment	Cat							Pressure	
Additional info						Stru	ctu	ral	0 & M	Construct	tional
Location								aneous	0 um	construct	
	-0375				L				k Order		
-	-0373		Frating						vation		
Northing			Easting			_					
Coordinate Sy Count Video	CD Code		la 4	1-0 0	/ In			Accur	acy Remarks		
	1 1	Desta Esta Isiat	In1	<u>In2</u> %	<mark>6 Jn</mark> ∣J		04	imrei	Remarks		
32.8	RFJ	Roots Fine Joint			J		04 04				
33.8	RFJ	Roots Fine Joint			J	+	04				
38.3	RFJ	Roots Fine Joint			J		03				
39.3 41.7	RFJ	Roots Fine Joint Roots Fine Connection					11				
41.7	RFC FM	Fracture Multiple			J		09				
41.7	TB	Tap Break-in	100		ľ	10	~				
42.1	CM	Crack Multiple			-		04				
42.2	RFC	Roots Fine Connection			-		03				
42.3	TB	Tap Break-in	100		+	02					
42.5	RFJ	Roots Fine Joint			J	04					
43.6	RFJ	Roots Fine Joint			J	09	03				
45.7	RFJ	Roots Fine Joint			J	09	10				
46.9	FM	Fracture Multiple			J	0 6	12				
51.1	RFJ	Roots Fine Joint			J	10	01				
51.2	CS	Crack Spiral			J	12	01				
56.5	RFJ	Roots Fine Joint			J		12				
57.6	RFJ	Roots Fine Joint			J	<mark>0</mark> 3					
58.7	FS	Fracture Spiral			J	11	01				
58.9	TB	Tap Break-in	100			02					
58.9	CM	Crack Multiple			J	12					
62.9	CS	Crack Spiral			J	10	11				
73.8	CL	Crack Longitudinal			J	11					
74.0	TB	Tap Break-in	100		<u> </u>	11	40				
74.0	CS	Crack Spiral	400	└───┤	J		10				
74.6	TB	Tap Break-in	100			01	0				
74.9	B	Broken			J		05 10				
87.8	B	Broken			J	02	IU		7746		
88.0 88.0	AMH FH	Manhole End of Survey							140		
88.00	I I HH	HDD OT SULVOV									

88.0 M Total Length Surveyed



Tabular Repor	t of PSR	8825			for	City of	Saskat	oon		
Setup 57	Surveyor	нт	c	ertificate#	U-915-0	70R00267	Syste	em Ownei (City of Saskatoon	
Drainage		S	Survey Customer	City of Saska	atoon					
P/O #		Date 20	22/12/12 1	ime 13:26	Str	eet Kirk	Cr			
City Saskat	oon		Further loca	tion details		_				
Up 7741			Rim to i	invert	(Grade to i	nvert	I	Rim to grade	М
Down 7746			Rim to i	nverl		Grade to i	nvert	1	Rim to grade	М
Use Sanitary			Direction Dov	wn	Flow	control D	e-Watere	d using J	MediaNo	
Shape Circular			Height 200	Width	mm	Precl	ean J	Da	te Cleaned 2022/12/	09
Material Clay T	ile		Join	t length	М	Fotal lengt	h88.6 M	и г	ength Surveyec 88.0) M
Lining			Ye	ar laid 1960	Yea	r rehabilita	ate d	We	ather	
Purpose Rou	tine Assess	ment		Cat					Pressure	
Additional info						S	tructural	O & N	1 Constructio	nal
Location						M	iscellaneo	ous		
Project 22-03	75						V	Nork Order		
Northing				Easting				Elevation		
Coordinate Syst	em			_			GPS Acc	curacy		
Soor		tructural:	Pipe Rating		Pine	Ratings In	dev		Quick Rating	
Scor	cs 3		Pipe Rating			Ratings In			Quick Rating	
		Overall	Pipe Rating			Ratings In			Quick Rating	



Tabul	ar Rep	ort of	PSR	8834	t	for	Cit	ty o	of S	as	katoo	on			
Setup	5 6	Su	irveyor	HT Certifi	cate # U	1915-0	70R(002	67	S	ystem	Owne ı City o	of Saskat	oon	
Drain	age			Survey Customer City of	of Saskat	oon									
P/O #				Date 2022/12/12 Time	12:44	Stre	eet	ĸ	ürk (Cr					
City	Sas	katoon	1	Further location	details										
Up	7741			Rim to invert		Ģ	Grad	e to	o in	vert		Rim	to grade)	м
Down				Rim to invert			Grad						to grade		м
	Sanitary			Direction Down							tered u		edia No	, 	
	e Circula	-		Height 200 Wid	4 b					an .				2022/12/0	0
				•		mm									-
	ial Clay	Tile		Joint leng					-		7 M	-		eyec 42.7	IVI
Linin	-			Year lai		Year	ren	abi	litat	ec		Weathe			
Purpo			Assessi	ment	Cat								Press		
Addit	ional info	D								uctu		0 & M	Co	nstruction	al
Locat	ion							L	Mis	cell	aneous	;			
Proje	ct 22-	0375									Wo	rk Order			
North	ing			Ea	sting						El	evation			
Coor	dinate Sy	stem							G	SP S	Accur	racy			
Count	Video	CD	Code		In1	In2	%	.Inf	Fr	То	Im Ref	Remarks			\neg
0.0	Thatte		ST	Start of Survey						10		Tomarko			
0.0			AMH	Manhole	_			-	-			7741			-
0.0			MWL	Water Level			0								-+
0.0			CM	Crack Multiple				J	11	01					
0.6			CM	Crack Multiple	-			J	12						
0.0			RFC	Roots Fine Connection					02	03					-
1.0			TB	Tap Break-in	100				02						-
1.0			CM	Crack Multiple					02	01					\neg
28			RFJ	Roots Fine Joint				J	07	04					\neg
3.3			MGO	General Observation	-							occassional b	lister		\neg
3.6			RFJ	Roots Fine Joint				J	09	04					-
4.3			RFJ	Roots Fine Joint				J	12	08					\neg
5.4			CM	Crack Multiple				J	07	12					-
11.7			CS	Crack Spiral				J	01	02					
12.9			RFJ	Roots Fine Joint				J	01	02					
13.5			RFC	Roots Fine Connection					01	03					
13.6			TB	Tap Break-in	100				02						
15.0			RFJ	Roots Fine Joint				J	0 8	02					
16.1			RFJ	Roots Fine Joint				J	09						
17.2			RFJ	Roots Fine Joint				J	08						
19.4			RFJ	Roots Fine Joint				J	10						
20.5			RFJ	Roots Fine Joint				J	09	02					
22.5			RFJ	Roots Fine Joint				J	12	04					
26.9			RFJ	Roots Fine Joint				J	08	œ					
29.0			RFJ	Roots Fine Joint				J	12						
30.1			RFJ	Roots Fine Joint				J	08						
30.3			RFC	Roots Fine Connection					01	02					
30.4			TB	Tap Break-in	100				02	40					\square
31.1			RFJ	Roots Fine Joint	_		-	J	09						$ \rightarrow $
32.2			RFJ	Roots Fine Joint				J	08	ß					\rightarrow
34.4			RFJ	Roots Fine Joint			1	J	0 8						



[abul	ar I	Repo	ort of	PSR	8834				for	Ci	ty c	of S	Sas	katoo	on		
Setup		56	Su	irveyor	нт		C	ertificate#	U-91	5-070R	002	67	S	ystem	n Owner City	of Saskatoon	
Draina	age					Survey Cus	tomei	City of Sask	atoon								
P/O #					Date	2022/12/12	T	Time 12:44		Street	ĸ	irk (Сг				
City		Sask	atoor	1		Furthe	er loca	tion details									
Up	7	741				R	im to i	invert		Grad	le to) in	vert		Rim	to grade	М
Down	7	743				R	im to i	invert		Grad	le to	in	vert		Rim	to grade	м
Use	San	itary				Directi	on Dov	wn	Flo	w con	tro	De	-Wa	tered u		edia No	
Shape	c	ircula	r			Heigh	t 200	Width	mn	n	Pre	cle	an .	J	Date	Cleaned 2022/12/0	9
Mater								t length	м	Tota	llen	ath	43	7 M	Leng	th Surveyed 42.7	
Lining		olay						ar laid 196		arreh		-			Weath		
Purpo		R	outine	Assess	ment			Cat								Pressure	
Additi												Str	uctu	ral	0 & M	Construction	al
Locati														aneous		Contra dollar	
Projec		22	0375								L			Wo	rk Order		
North		22-	515					Easting							evation		
								Lasting									
Coord Count				Code				In1	In2	%	Int			Accu Im Pet	racy F Remarks		
35.4	viu		00	RFJ	Pooto	Fine Joint				/0	J		10		Remarks		
36.5				RFJ		Fine Joint					J	12					
39.8				RFJ		Fine Joint					J	09					
41.9				RFJ		Fine Joint					J	08					
41.5				AMH	Manh						-				7743		
42.7				FH		of Survey							-				
42.7				enath Su				I			-	I					

42.7 M Total Length Surveyed

Scores	Structural:	Pipe Rating	Pipe Ratings Inde>	Quick Rating
	O&M:	Pipe Rating	Pipe Ratings Inde>	Quick Rating
	Overall	Pipe Rating	Pipe Ratings Inde>	Quick Rating



	ar Repo				ficate # U			_			katoo		of Cackateon	
Setup		Su	rveyor				URU	020	01	5	ystem	Owner City	of Saskatoon	
Draina	ge			Survey Customer City										
P/O #					12:03	Stre	et	K	irk ()r				
City	Sas	katoon		Further location	details									
Up	7742			Rim to inve	rt	G	rade	e to	in	vert		Rim	to grade	М
Down	7743			Rim to inve	rt	G	rade	e to	inv	vert		Rim	to grade	Μ
Use S	Sanitary			Direction Down		Flow o	onti	rol	De-	Wa	tered u	singJ Mo	edia No	
Shape	Circula	ar		Height 200 Wi	dth	mm	F	re	clea	an .	J	Date C	cleaned 2022/12/0)9
Materi	al Clay	/ Tile		Joint len	gth I	И То	otal I	eng	gth	40.	0 M	Leng	th Surveyed 40.0	N
Lining	-			Yearla	id 1960	Yearı	reha	bil	itat	ed		Weath	er	
Purpos		outine	Assessr	nent	Cat								Pressure	
•	onal info		1000001						Str	ıctu	ral	0 & M	Construction	nal
Locati		•									aneous		Construction	
		0275						L						
Projec		-0375			.							rk Order		
Northi	-			E	asting							evation		
Coord	inate Sy	stem							G	SP S	Accur	асу		
Count \	/ideo	CD	Code		ln1	ln2	%、	Jnt	Fr	То	Im Ref	Remarks		
0.0			ST	Start of Survey										
0.0			AMH	Manhole								7742		
0.0			MWL	Water Level			0							
0.0			CS	Crack Spiral					0 6					
0.1			CS	Crack Spiral					05					
0.1			CS	Crack Spiral						05				
0.6			FS	Fracture Spiral					09	12				
0.6			RFJ	Roots Fine Joint				J	0 8	09				
0.9			TB	Tap Break-in	100				10					
0.9			RFC	Roots Fine Connection					09	10				
1.0			FS	Fracture Spiral					01	09				
1.0			CS	Crack Spiral				_	10	11				-+
1.7			RFJ	Roots Fine Joint					10					
6.0			RFJ	Roots Fine Joint					02	10				_
13.1			RFC	Roots Fine Connection	100				07 10	10				_
13.2			TB	Tap Break-in	100					10				-+
23.2			RFJ	Roots Fine Joint					09 09					-+
28.6				Roots Fine Joint					09					_
29.6			RFJ	Roots Fine Joint	100				10	11				-+
30.2 30.2			TB RFC	Tap Break-in	100		\vdash	I	09	12	\vdash			-+
30.2 30.6				Roots Fine Connection			5		~	12				
30.0			MWL RFJ	Water Level Roots Fine Joint			_	J	09	02				-+
32.7			CL	Crack Longitudinal	_				12					\neg
32.9			RFJ	Roots Fine Joint					01	03				\rightarrow
			CL	Crack Longitudinal					08					-+
			RFJ	Roots Fine Joint					09	03				\neg
34.0							10	-						-+
34.0 36.1				Water Level										
34.0 36.1 36.8			MWL RFJ	Water Level Roots Fine Joint				J	10	œ				\neg
34.0 36.1			RFJ RFJ	Roots Fine Joint Roots Fine Joint					10 10					



Tabula	r Re	epo	rt of	f PSR	8833				for	Ci	ty of	Sas	katoo	on		
Setup	Ę	55	Su	irveyor	нт		C	ertificate#	U-915	-070R	00267	S	ysten	n Owner City of	Saskatoon	
Drainag	je					Survey C	ustomei	City of Sask	atoon							
P/O #					Date	2022/12/12	1	ime 12:03	s	treet	Kirk	Cr				
City	5	Saska	atoor	n		Fur	ther loca	tion details		•						
Up	774	12					Rim to	nvert		Grad	le to in	vert		Rim to	grade	М
Down	774	13					Rim to	nvert		Grad	le to in	vert		Rim to	grade	М
Use S	anita	ary				Dire	ction Dov	wn	Flo	w con	trol De	e-Wa	tered u	using J Med	lia No	
Shape	Circ	cular				Hei	ight 200	Width	mm		Precle	an .	J	Date Cl	eaned 2022/12/0	9
Materia	d (Clay	Tile				Join	t length	м	Total	lengti	h 40.	0 M	Length	Surveyed 40.0	I
Lining							Ye	ar laid 1960) Ye	ar reh	abilita	te d		Weather		
Purpos	e	Ro	utine	Assess	ment			Cat							Pressure	
Additio	nal	info									St	ructu	ral	O & M	Construction	al
Locatio	n										Mi	scell	aneous	5		
Project		22-0)375										Wo	ork Order		
Northin	ng							Easting					E	levation		
Coordi	nate	e Sys	stem									GPS	Accu	racy		
Count V	ideo	2	CD	Code				In1	In2	%	JntFr	То	Im Re	f Remarks		
39.4				RFJ	Roots	Fine Joint					J 08	04				
40.0				AMH	Manh	ole								7743		
40.0				FH	End o	of Survey										

Scores	Structural:	Pipe Rating	Pipe Ratings Index	Quick Rating
	O&M:	Pipe Rating	Pipe Ratings Index	Quick Rating
	Overall	Pipe Rating	Pipe Ratings Index	Quick Rating



Tabular	Repo	ort of	PSR	8828	1	for	Ci	ty o	of S	as	katoo	n		
Setup	54	Su	rveyor	HT Certi	ficate # U	-915-07	70R	002	67	S	ystem	Owner City o	of Saskatoon	
Drainage	e			Survey Customer City	of Saskate	oon								
P/O #				Date 2022/12/09 Time	11:27	Stre	et	ĸ	(irk (Cr				
City	Sask	atoon		Further location	details									
Up	3092			Rim to inve	rt	0	Grad	e to	o in	vert		Rim	to grade	М
Down	7742			Rim to inve	rt	G	Grad	e to	o in	vert		Rim	to grade	м
Use Sa	nitary			Direction Down		Flow	con	tro	De	Wa	tered u		edia No	
Shape		r		Height 200 Wi	dth	mm			cle				leaned 2022/12/0	9
Material				Joint len							8 M		th Surveyed 94.9	
Lining	0.43				aid 1960	Year			-		•	Weathe	2	
Purpose	. D/	outino	Assessr		Cat	rear	ren	abi	ma	eu		Weathe	Pressure	
			A556251	nem	Gal				~			0.01		
Addition)								uctu	rai aneous	0 & M	Construction	al
Location								L	IVIIS	Cell				
Project	22-	0375									Wo	rk Order		
Northing	9			E	Easting						El	evation		
Coordin	ate Sy	stem							0	SPS	Accu	acy		
Count Vie	deo	CD	Code		In1	In2	%	Jn	tFr	То	Im Ref	Remarks		
0.0			ST	Start of Survey										
0.0			AMH	Manhole								3092		
0.0			MWL	Water Level			5							
0.3			FC	Fracture Circumferential				İ	12	12				
0.5			MGO	General Observation								occasional blis	ters	
1.1			RFJ	Roots Fine Joint				J	07	04				
1.5			тв	Tap Break-in	100				02					
1.5			RFC	Roots Fine Connection					01	03				
1.8			RFC	Roots Fine Connection					0 9	11				
1.9			ТВ	Tap Break-in	100				10					
2.2		S01	RFJ	Roots Fine Joint				J	07	03				
10.8		F01	RFJ	Roots Fine Joint				J	07	03				
15.1			RFJ	Roots Fine Joint				J	08	01				
17.3			RFJ	Roots Fine Joint				J	0 8	04				
18.6			TB	Tap Break-in	100				02					
18.6			RFC	Roots Fine Connection					03					
18.8			RMC	Roots Medium Connection			40		07	10				
18.9			TBD	Tap Break-in Defective	100		<u> </u>		10	000				\square
19.4			RFJ	Roots Fine Joint	400		-	J	08	02				-
35.2			TB	Tap Break-in	100		-	J	10 02					-+
35.5			CL	Crack Longitudinal			-	J	02	02				-+
35.8 35.9			HSV	Hole Soil Visible	100		+	-	02	02				-+
			TB	Tap Break-in	100		+	-	102					-+
51.4 51.4			TB CL	Tap Break-in Crack Longitudinal	100		+	-	10					-+
52.3			TB	Tap Break-in	100		+		02					-+
52.3 52.3			RFC	Roots Fine Connection	100		\vdash	-	02					\neg
52.5 61.4			RFJ	Roots Fine Joint			+	J	09	03				\neg
62.5			RFJ	Roots Fine Joint			\vdash	J	10	12				\neg
64.7			RFJ	Roots Fine Joint			\square	J	01	02				\neg
65.7		<u> </u>	RFJ	Roots Fine Joint			\vdash	J	09	10				\neg
00.1			RF J	NOOLS FILLE JOINL			1	9	00	10				



Tabular Re	oort of	PSR	8828			for	Ci	ty (of S	Sas	katoo	on			
Setup 54	Su	rveyor	HT		Certificate#	U-915-	-070R	002	267	S	System	n Owner City	of Sas	katoon	
Drainage				Survey Custon	nei City of Saska	atoon									
P/O #			Date	2022/12/09	Time 11:27	S	treet	k	Cirk	Cr					
City Sa	skatoon			Further lo	cation details		-								
Up 3092				Rim	to invert		Grad	e to	o in	vert		Rim	to gr	ade	Μ
Down 7742				Rim	to invert		Grad	e to	o in	vert			1 to gr		М
Use Sanitar	/			Direction	Down	Flo	w con	tro	De	-Wa	atered u	ising J N	/ledial	No	
Shape Circu				Height 2	00 Width	mm				an .			Clean	ed 2022/12/0)9
Material Cla				•	pint length	M					8 M	len	ath Su	rveyed 94.9) N
Lining	ay mo				Year laid 1960		arreh		•			Weat	-		
-	Routine	٨٥٥٥٥٢	mont		Cat	10	arren	abi	inca					essure	
•		133633	Ineni		Cat				Ctr	t	rol	0.014	FI		
Additional in	10										rai aneous	0 & M		Construction	a
Location								L	IVES	SCEII					
	2-0375											rk Order			
Northing					Easting							evation			
Coordinate \$	•										Accur				
Count Video	CD	Code			In1	In2	%				Im Ref	Remarks			
67.9		RFJ	Roots	Fine Joint		_		J		03					
69.2		TBD	-	Break-in Defective	100	_			10						
69.2	_	RFC		Fine Connection	100	_			09	11					
69.6		TBD		Break-in Defective	100				02						$ \rightarrow $
69.6		RFC		Fine Connection				ļ.,	01						-+
70.1	_	RFJ		Fine Joint				J		03					\square
70.1	_	CS		k Spiral	100			J	09 03	_					\dashv
70.7		TB		Break-in	100			<u> </u>	01						-+
70.7		RFC		Fine Connection				J	09						\rightarrow
73.6		RFJ		Fine Joint				J	09						\dashv
76.9		RFJ TB		s Fine Joint Break-in	100				10	-					\rightarrow
76.9		RFC		Fine Connection	100			-	10						-+
78.7		RFJ		Fine Joint		+		J	12						\dashv
79.7	-	RFJ		Fine Joint				J	09						\dashv
82.0		RFJ		Fine Joint				J	09	-					-+
84.1		RFJ		Fine Joint				J		03					\neg
84.1		FM		ure Multiple				J		02					\neg
84.8	S02			r Level Sag			50		1	1					\neg
86.1	F02			r Level Sag			50	İ	1	1					\neg
87.2		RFJ		Fine Joint				J		03					\neg
87.2		FM	Fract	ure Multiple				J	10	02					
92.2		RFC	Roots	Fine Connection					09						
92.3		ТВ	Tap E	Break-in	100				10						
93.8		RFJ	Roots	Fine Joint				J							
94.5		FS	Fract	ure Spiral					02	11					
94.9		AMH	Manh	ole								7742			\square
94.9		FH	End o	of Survey											

94.9 M Total Length Surveyed



Fabular Report of	PSR 8828			for	City of	Saskatoo	n		
Setup 54 Su	irveyor HT	c	ertificate#	U-915-0	70R00267	System	Owner City of	Saskatoon	
Drainage	s	urve y Customei	City of Sask	atoon					
P/O #	Date 202	22/12/09 T	ime 11:27	Str	eet Kirk	Cr			
City Saskatoon	1	Further loca	tion details		-				
Up 3092		Rim to i	nvert		Grade to in	vert	Rim to	grade	М
Down 7742		Rim to i	nvert		Grade to in	vert	Rim to	grade	М
Use Sanitary		Direction Dov	vn	Flow	control De	-Watered us	singJ Med	lia No	
Shape Circular		Height 200	Width	mm	Precle	an J	Date Cle	eaned 2022/12/	09
Material Clay Tile		Join	t length	M 1	Fotal length	94.8 M	Length	Surveyed 94.9) M
Lining		Ye	arlaid 1960) Yea	r rehabilita	te c	Weather	-	
Purpose Routine	Assessment		Cat					Pressure	
Additional info					St	uctural	0 & M	Constructio	nal
Location					Mis	cellaneous			
Project 22-0375						Wor	k Order		
Northing			Easting			Ele	vation		
Coordinate System						GPS Accur	асу		
Scores	Structural:	Pipe Rating		Pipe	Ratings Inc	e)	Quid	k Rating	_
000163	O&M:	Pipe Rating			Ratings Inc			k Rating	
	Overall	Pipe Rating		Pipe	Ratings Inc	e)	Quid	k Rating	



Tabula	ar Repo	ort of	PSR	8827	1	for	Cit	y c	of S	as	katoo	n			
Setup	53	Su	irveyor	HT Certifi	cate # U	L915-07	70R0	02	67	S	system	Owner City	of Sask	atoon	
Draina	ge			Survey Customer City of	f Saskat	oon									
P/O #				Date 2022/12/09 Time	10:30	Stre	et	K	jrk (Cr					
City	Sas	katoon	I	Further location of	letails										
Up	3093			Rim to invert		G	Grade	e to	o in	vert		Rim	to gra	de	М
Down	3092			Rim to invert		G	Grade	e to	o in	vert		Rim	to gra	de	М
Use	Sanitary			Direction Down		Flow	cont	rol	De	Wa	tered u	singJ M	ledia N	0	
	Circula	r		Height 200 Wid	th	mm		Pre	cle	an .	J	Date	Cleane	d 2022/12/	09
-	al Clay			Joint leng	th I	м т	otal	len	ath	95	6 M	Lend	ath Sur	veyed 141	.8 M
Lining	-			Yearlai		Year			-			Weath	-		
Purpo		outine	Assessr		Cat									ssure	
· · ·	onal info			section is 96.6m long not 140m	out			Т	Str	uctu	ral	0 & M		Constructio	nal
Locati			1115	Socions to on honghor 1-on							aneous			Jonstructio	
Projec		0375						L				rk Order			
-		0515		F-	a tin -										
Northi	-	-		Ea	sting							evation			
	linate Sy										Accu	-			
Count	Video	CD	Code		In1	In2	%	Jnt	Fr	То	ImRef	Remarks			
0.0			ST	Start of Survey											
0.0			AMH	Manhole		<u> </u>			ļ			3093			
0.0			MWL	Water Level	_		0		~	04					
0.0			FM	Fracture Multiple	_			J	0 9						
0.1			B	Broken	-			J	09 09						
0.9			B	Broken			5	J	09	U					\rightarrow
4.9 7.9			MWL RFC	Water Level			J		01	02				-	\rightarrow
8.0			TB	Roots Fine Connection Tap Break-in	100				01	<u>uz</u>					
9.7			CL	CrackLongitudinal	100			J	10						
9.9			TB	Tap Break-in	100			J	10						
10.4			TB	Tap Break-in	100			-	02						
13.8			a	CrackLongitudinal	-			J	07						
31.0			ТВ	Tap Break-in	100				01						
31.1			RFC	Roots Fine Connection					01	02					
31.5			RFC	Roots Fine Connection					08	11					
31.5			ISSR⊢	Intruding Sealing Ring Hanging			5		0 8	12					
31.6			TS	Tap Saddle	100				09						
57.4			CS	CrackSpiral						09					
59.7			CM	Crack Multiple		ļ			02						
59.7			SSS	Surface Spalling	400				01	02					
60.0			TB	Tap Break-in	100	ļ		J	01						
60.0			RFC	Roots Fine Connection					12						
60.2			FS	Fracture Spiral	100				12 10	12					$ \rightarrow $
60.6			TBD	Tap Break-in Defective	100		100		10	11					
60.6			RBL	Roots Ball Lateral			100		09						-+
60.7 82.2			RFC	Roots Fine Connection			$\left - \right $	J	12	U					-+
82.2 90.3			RFJ FS	Roots Fine Joint Fracture Spiral				J		02					
90.5			TB	Tap Break-in	100		$\left - \right $	J	01						\rightarrow
90.5			RFC	Roots Fine Connection			$\left \right $	-	12	01					\rightarrow
50.5			N°C		1	1			12						



Setup	53	Sur	veyor	HT	Certifi	cate # l	J-915-	070R	0026	57	Syste	em	Owner City	of Saskat	toon	
Drainage	e		-	Survey Cust	omeı City o	of Saskat	toon				-					
P/O #				Date 2022/12/09	Time			reet	Ki	rk Ci	r					
City	Sask	atoon		Further	location o	letails										
	3093			Rin	n to invert			Grad	e to	inv	ərf		Rim	to grade	•	м
Down					n to invert			Grad						to grade		м
Use Sa				Directio							Vatere	due		edia No	-	141
Shape					200 Wid	4h	mm		Pred			uus			2022/12/	00
•				neight												
Material	Clay	Tile			Joint leng						£5.6 N	VI			eyec 141	.8
Lining	_				Year lai	-	Yea	rreh	abili	tate	C		Weath			
Purpose		outine A				Cat								Press		
Addition			This	section is 96.6m long no	ot 140m						tural		O & M	Co	onstructio	nal
Locatior	n									Misc	ellaneo	ous				
Project	22-0	0375									V	Nor	k Order			
Northing	9				Ea	sting						Ele	vation			
Coordin	ate Sys	stem								G	S Ace	cura	acy			
Count Vie	deo	CD C	ode			In1	In2	%	Int	Fr 1		Dof	Remarks			
							1112	/0	JIII		0 1111	Nei				
90.7			FS	Fracture Spiral				70		01 (9 					
90.7 91.1			FS TBD	Fracture Spiral Tap Break-in Defective	e	100		70		01 (10	9					
										01 (10						
91.1 91.1			TBD	Tap Break-in Defective		100		10		01 (10 07 1	9					
91.1 91.1 113.6 114.2			tbd RFC	Tap Break-in Defective Roots Fine Connection		100				01 (10 07 1 02	9					
91.1 91.1 113.6 114.2 114.6			TBD RFC MWL TB TB	Tap Break-in Defective Roots Fine Connection Water Level Tap Break-in Tap Break-in		100				01 (10 07 1 02 10)9 2 					
91.1 91.1 113.6 114.2 114.6 115.3			TBD RFC MWL TB TB FM	Tap Break-in Defective Roots Fine Connection Water Level Tap Break-in Tap Break-in Fracture Multiple		100			J	01 (10 07 1 02 10 12 (09 2 06					
91.1 91.1 113.6 114.2 114.6 115.3 121.7			TBD RFC MWL TB TB TB FM RFJ	Tap Break-in Defective Roots Fine Connection Water Level Tap Break-in Tap Break-in Fracture Multiple Roots Fine Joint		100			J	01 (10 10 10 10 10 10 10 10 10 10 10 10 10 1	19 12 16 16					
91.1 91.1 113.6 114.2 114.6 115.3 121.7 123.1			TBD RFC MWL TB TB FM RFJ RFJ	Tap Break-in Defective Roots Fine Connection Water Level Tap Break-in Tap Break-in Fracture Multiple Roots Fine Joint Roots Fine Joint		100			J J	01 (10 07 1 02 10 12 (09 (09 1	09 12 12 10 10					
91.1 91.1 113.6 114.2 114.6 115.3 121.7 123.1 124.7			TBD RFC MWL TB TB FM RFJ RFJ RFJ	Tap Break-in Defective Roots Fine Connection Water Level Tap Break-in Tap Break-in Fracture Multiple Roots Fine Joint		100 100 100			J J J J	01 (10 07 1 02 10 12 (09 (09 1 08 (19 12 16 16					
91.1 91.1 113.6 114.2 114.6 115.3 121.7 123.1 123.1 124.7 125.2			TBD RFC MWL TB TB TB RFJ RFJ RFJ TS	Tap Break-in Defective Roots Fine Connection Water Level Tap Break-in Tap Break-in Fracture Multiple Roots Fine Joint Roots Fine Joint Roots Fine Joint Tap Saddle		100			J J J J J	01 (10 07 1 02 10 12 (09 (09 (09 (09 (09 (09 (09 12 12 10 10 14					
91.1 91.1 113.6 114.2 114.6 115.3 121.7 123.1 124.7 125.2 127.7			TBD RFC MWL TB TB FM RFJ RFJ RFJ TS RFJ	Tap Break-in Defective Roots Fine Connection Water Level Tap Break-in Tap Break-in Fracture Multiple Roots Fine Joint Roots Fine Joint Roots Fine Joint Tap Saddle Roots Fine Joint		100 100 100			J J J J J	01 (10 07 10 07 10 10 12 (09 (09 (09 (09 (09 (09 (09 (09 (09 (09 (09 (09 (09 (09 (09 (09 (00 (0) (09 12 12 16 10 14 13					
91.1 91.1 113.6 114.2 114.6 115.3 121.7 123.1 124.7 125.2 127.7 129.1			TBD RFC MWL TB TB RFJ RFJ RFJ RFJ RFJ RFJ	Tap Break-in Defective Roots Fine Connection Water Level Tap Break-in Tap Break-in Fracture Multiple Roots Fine Joint Roots Fine Joint Roots Fine Joint Tap Saddle Roots Fine Joint		100 100 100		10	J J J J J	01 (10 07 10 10 10 10 12 (09 (09 (08 (09 (09 (09 (09 (09 (09 (09 (09 (09 (09 (00 (0) (09 12 12 10 10 14					
91.1 91.1 113.6 114.2 114.6 115.3 121.7 123.1 124.7 125.2 127.7 129.1 129.4			TBD RFC MWL TB TB RFJ RFJ RFJ RFJ RFJ RFJ MWL	Tap Break-in Defective Roots Fine Connection Water Level Tap Break-in Tap Break-in Fracture Multiple Roots Fine Joint Roots Fine Joint Tap Saddle Roots Fine Joint Roots Fine Joint Tap Saddle Roots Fine Joint Wots Fine Joint Wots Fine Joint Water Level		100 100 100			U U U U U U U U U U U U U U U	01 (10 10 10 10 10 10 10 10 10 10 10 10 10 1	9 12 12 16 172 10 14 13 14					
91.1 91.1 113.6 114.2 114.6 115.3 121.7 123.1 124.7 125.2 127.7 129.1 129.4 130.6			TBD RFC MWL TB TB RFJ RFJ RFJ RFJ RFJ RFJ RFJ RFJ RFJ RFJ	Tap Break-in Defective Roots Fine Connection Water Level Tap Break-in Tap Break-in Fracture Multiple Roots Fine Joint Roots Fine Joint Roots Fine Joint Tap Saddle Roots Fine Joint Water Level Roots Fine Joint		100 100 100		10	J J J J J J J J J J J J J J J	01 (10 10 10 10 10 10 10 10 10 10 10 10 10 1	9 12 12 10 10 14 13 14 11					
91.1 91.1 113.6 114.2 114.6 115.3 121.7 123.1 124.7 125.2 127.7 129.1 129.4 130.6 138.3			TBD RFC MWL TB TB RFJ RFJ RFJ RFJ RFJ RFJ RFJ RFJ RFJ RFJ	Tap Break-in Defective Roots Fine Connection Water Level Tap Break-in Tap Break-in Fracture Multiple Roots Fine Joint Roots Fine Joint Roots Fine Joint Tap Saddle Roots Fine Joint Roots Fine Joint		100 100 100		10	J J J J J J J J J J J J J J J J J J J	01 (10 10 10 10 10 10 10 10 10 10 10 10 10 1	12 12 12 12 12 12 12 10 14 13 14 13 14 13 14 13 14 13 14 14 15 14					
91.1 91.1 113.6 114.2			TBD RFC MWL TB TB RFJ RFJ RFJ RFJ RFJ RFJ RFJ RFJ RFJ RFJ	Tap Break-in Defective Roots Fine Connection Water Level Tap Break-in Tap Break-in Fracture Multiple Roots Fine Joint Roots Fine Joint Roots Fine Joint Tap Saddle Roots Fine Joint Water Level Roots Fine Joint		100 100 100		10	J J J J J J J J J J J J J J J J J J J	01 (10 10 10 10 10 10 10 10 10 10 10 10 10 1	9 12 12 10 10 14 13 14 11		092			

Scores	Structural	Pipe Rating	Pipe Ratings Inde>	Quick Rating
	O&M:	Pipe Rating	Pipe Ratings Inde>	Quick Rating
	Overall	Pipe Rating	Pipe Ratings Inde>	Quick Rating



Tabula	ar Rep	ort of	f PSR	8826			for	Cit	ty o	of S	as	katoo	n		
Setup	51	S	urveyor	AP	Certif	icate# L	J-0620-	7030	962	22	S	ystem	Owner		
Draina	ge			Survey C	Customer C of	S									
P/O #				Date 2022/11/25	5 Time	13:26	Str	eet	ĸ	jrk ()r				
City	Sas	katoor	า	Fui	rther location	details		_							
Up	3088				Rim to inver	t		Grad	e to	in in	vert		Rim	to grade	М
Down	3093				Rim to inver	t		Grad	e to	in in	vert		Rim	to grade	м
Use :	Sanitary			Dire	ection Down		Flow	con	trol	De	Wa	tered us		edia No	
	Circula	ar		He	eight 200 Wid	lth	mm				an .		_	leaned 2022/1	1/25
	al Clay				Joint leng							3.0 M		th Surveyed 1	
Lining		, me			Year lai	-		rreh		-		.0 1	Weathe		05.0 1
-					Tearia		rea	ren	api	inat	ec		weathe		
Purpo		_				Cat				01			0.011	Pressure	£
	onal inf	0									uctu	ral aneous	0 & M	Construc	tional
Locati									L	IVIS	Celli				
Projec		initary	CCTV									Wor	k Order		
Northi	ng				E	asting						Ele	vation		
Coord	linate Sy	∕stem								0	PS	Accur	асу		
Count	Video	CD	Code			In1	In2	%	Jnt			Im Ref	Remarks		
0.0			CM	Crack Multiple					J	11	0 6				
0.0			ST	Start of Survey											
0.0			AMH	Manhole									3088		
0.0			MWL	Water Level				0							
0.5			HSV	Hole Soil Visible							05				
0.5			В	Broken				_			09				
0.6			FC	Fracture Circumf	erential					07					
0.6			CM	Crack Multiple		_				08					
0.9			В	Broken		400		_	J	12	01				
13.5			TB	Tap Break-in		100				10	40				
34.7			CM	Crack Multiple		400			J	09	10				
34.9		-	TB	Tap Break-in		100		_		10					
53.6			TB	Tap Break-in		100		_	1	11 10					
54.2			CL	Crack Longitudin				10	J	10 07	05				
55.1		-	DAE	Deposits Attache	a Encrustation				J	07					
57.0			CM	Crack Multiple		100			J	12	w				
71.4			TB	Tap Break-in		100				12					
89.5			TB	Tap Break-in		100		_	J	05	08				
93.1			RFJ	Roots Fine Joint				_	J	09	00				
97.2 102.2			RFJ HSV	Roots Fine Joint				_	J	08					
102.2		+	MSA	Hole Soil Visible	01				•	~	<u></u>		offset		
103.0				Abandoned Surve	еу										

103.0 M Total Length Surveyed

Scores	Structural:	Pipe Rating	Pipe Ratings Inde>	Quick Rating
	O&M:	Pipe Rating	Pipe Ratings Index	Quick Rating
	Overall	Pipe Rating	Pipe Ratings Index	Quick Rating



abular I						for		-			katoo			
Setup	49	Sur	veyor	AP Certif	icate# (J-0620-	7030	962	22	S	ystem	owner		
Drainage				Survey Customer C of	S									
P/O #				Date 2022/11/25 Time	12:24	Stre	et	Kir	k C	r				
City	Saskat	oon		Further location	details									
Up 30	089			Rim to inver	1	C	Grad	e to	o in	vert		Rim t	to grade	Μ
Down 30	088			Rim to inver	1	c	Grad	e to	o in	vert		Rim t	to grade	М
Use San	itary			Direction Down		Flow	con	trol	De	Wa	tered u	ısing J Me	dia No	
Shape C	ircular			Height 200 Wid	ith	mm		Pre	cle	an .	J	Date C	leaned 2022/1	1/25
Material	Clay Ti	ile		Joint len		м т	otal	len	gth	84.	3 M	Lengt	h Surveyed 82	.8 M
Lining				Yearla	- id 1960	Year			-			Weathe	-	
Purpose					Cat								Pressure	
Additiona	linfo								Sta	Jctu	ral	0 & M	Construct	ional
Location											aneous		Construct	Unai
	0.1	~	OTV					L	11115	COM				
Project	Sanita	ary C	CIV	_								rk Order		
Northing				E	asting						EI	evation		
Coordina	te Syste	em							G	SP S	Accu	racy		
ount Vide	eo (CD (Code		In1	In2	%	Jnt	tFr	То	Im Ref	Remarks		
0.0			СМ	Crack Multiple				J	12	12				
0.0			ST	Start of Survey										
0.0			AMH	Manhole								3089		
0.0			MWL	Water Level			5							
0.4			FM	Fracture Multiple						12				
0.7			В	Broken				J	04					
0.9			FS	Fracture Spiral				J	0 9	04				
2.2			MWL	Water Level			10						-	
24		_	MGO	General Observation								occasional blis	ters	
3.5			MWL	Water Level	_		20							
4.8			MWL	Water Level			30							
4.9			MWL	Water Level			40							
6.0		_	MWL	Water Level	_		30 50							
8.8			MWL	Water Level	_	+	50							
9.1			MCU	Camera Underwater			50							
9.7		-+	MWL	Water Level			30							
9.9		-	MWL	Water Level			40	-						
11.3 11.9		-+	MWL	Water Level Water Level		-	30							
12.3		-	MWL	Water Level		-	10							
12.3			MWL	Water Level			20							
12.2		-	MWL	Water Level		+	30							
13.2	1		MWL	Water Level	-		40							
13.5			1717 FL	FRANCE LOTON			50		\vdash					
13.5 13.9		-+	MWI	Water Level				1	1	—				
13.5 13.9 14.5			MWL	Water Level Camera Underwater										
13.5 13.9 14.5 14.9			MCU	Camera Underwater			40							
13.5 13.9 14.5 14.9 16.1							40 20							
13.5 13.9 14.5 14.9			MCU MWL	Camera Underwater Water Level										
13.5 13.9 14.5 14.9 16.1 16.2			MCU MWL MWL	Camera Underwater Water Level Water Level			20	J	08	03				
13.5 13.9 14.5 14.9 16.1 16.2 16.7			MCU MWL MWL MWL	Camera Underwater Water Level Water Level Water Level			20 10	<u> </u>	L	<u> </u>				



Tabular Re	port of PSR	8830	for	Ci	ty of	Sa	skatoo	n		
Setup 49	Surveyor	AP Certificate	# U-062	0-7030)9622	2	System	Owner		
Drainage		Survey Customer C of S								
P/O #		Date 2022/11/25 Time 12:24	S	treet	Kirk	Cr				
City Sa	skatoon	Further location detai	٤	-	•					
Up 3089		Rim to invert		Grad	e to i	nver	1	Rim	to grade	М
Down 3088		Rim to invert		Grad	e to i	nver	1	Rim	to grade	М
Use Sanitar	/	Direction Down	Flo	w con	trol [)e-W	atered u	sina J M	edia No	
Shape Circu	·	Height 200 Width	mm		Prec				leaned 2022/11/2	25
Material Cla		Joint length	м				.3 M		th Surveyed 82.8	
Lining		Year laid 19		arreh	-			Weath	•	, m
Purpose		Ca			abiiit	alec		Weath	Pressure	
Additional in	fo.				6	truct	urol	0 & M	Construction	nal
Location							llaneous		Construction	Idi
-	Sanitary CCTV							rk Order		
Northing		Eastin	9					evation		
Coordinate S	-						S Accur	-		
Count Video	CD Code	In1	In2	<u>%</u>		r io 8 03		Remarks		
39.4	DAE			10		8 03				
43.7 45.8	DAE			10		8 01				
40.8	DAE			5						
74.9	DAE			5		8 11				_
76.7	MWL			20		-				
77.1	DAE	Deposits Attached Encrustation		5	JO	9 03				
77.2	CS	Crack Spiral			J 1	0 02	!			
78.7	SSS	Surface Spalling			1	2	1 1			
		Water Level		30						
78.7	MWL									
78.7 80.3	MVL MVL	Water Level		40						
		Water Level		40 10						

82.8 M Total Length Surveyed

Scores	Structural	Pipe Rating	Pipe Ratings Inde>	Quick Rating
	O&M:	Pipe Rating	Pipe Ratings Index	Quick Rating
	Overall	Pipe Rating	Pipe Ratings Index	Quick Rating

