

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MONDAY, OCTOBER 7, 2013
FROM:	JOHN BRAAM, P.ENG MANAGING DIRECTOR - ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER
SUBJECT	LOCAL IMPROVEMENT INITIATION HYDE PARK INDUSTRIAL SUBDIVISION

RECOMMENDATION

That on the recommendation of the Managing Director - Environmental & Engineering Services & City Engineer, the following actions **BE TAKEN** with respect to the construction of a sanitary sewer and watermain as part of the Local Improvement Program, on initiation, for the Hyde Park Industrial Subdivision:

- (a) the attached Local Improvement Report (Appendix A) dated Monday October 7, 2013 for the construction, on initiation, of a Sanitary Sewer at the said location **BE ADOPTED**;
- (b) the City Clerk **BE AUTHORIZED** to proceed under the provisions of The Municipal Act, 2001, Ontario Regulation 119/03 with the publishing and the serving of Notice of Municipal Council's intention to undertake these works in accordance with the following:

Location	Owners' Share	Corporation's Share	Gross Cost
Hyde Park Industrial	\$372,226.09	\$ 123,220.23	\$495,486.32
Subdivision			

- (c) the attached Local Improvement Report (Appendix B) dated Monday October 7, 2013 for the construction, on initiation, of a watermain at the said location **BE ADOPTED**;
- (d) the City Clerk **BE AUTHORIZED** to proceed under the provisions of The Municipal Act, 2001, Ontario Regulation 119/03 with the publishing and the serving of Notice of Municipal Council's intention to undertake these works in accordance with the following:

Location	Owners' Share	Corporation's Share	Gross Cost
Hyde Park Industrial	\$211,572.08	\$ 165,111.91	\$376,638.99

(e) all administrative acts necessary for the implementation of this project **BE AUTHORIZED** subject to approval of financing where required.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

None

BACKGROUND

Purpose:

The purpose of the report is to seek approval from the Municipal Council to initiate two Local Improvements for the construction of a sanitary sewer and watermain within the Hyde Park Industrial Subdivision. These works are being considered in conjunction with planned road works for this project area. Local improvement reports (Appendix A and B), location map (Appendix C) and estimated cost breakdowns (Appendix D and E) are included for review. If Municipal Council authorizes the Civic Administration to proceed with the initiation of a local improvement for the sanitary sewers and watermains in this project area, staff will prepare the notices and circulate petitions to the abutting property owners for their consideration.

Context:

The City is proposing to reconstruct the Hyde Park industrial subdivision in 2014. A series of letters, a public meeting, and numerous individual meetings have taken place to assess the interest of the property owners to contribute towards servicing the subdivision with water mains and sewers. Mark Henderson, Director of Business Liaison, was the primary point of contact to



engage owners in the business decisions about upgrading their properties. Of the 26 owners, approximately 83% have indicated interest in adding municipal servicing to this subdivision noting the official assessment of interest is conducted through the Local Improvement process.

Discussion:

The reconstruction of this subdivision is necessary immediately from a road condition and flooding perspective. It is cost effective to include sewer and water servicing with the road reconstruction as it saves the City and the owner's considerable restoration costs. During the engagement of Owners, it was noted that numerous properties have failing septic beds, unsafe or poor quality water, and surface flooding.

The general cost sharing is proposed as follows, based on previous infrastructure projects:

Road, boulevards, restoration	100% City cost
Curb and gutter	100% City cost
Storm sewer	100% City cost
Watermain	75% owner cost, 25% City cost
Sanitary sewer and private drain to property line	75% owner cost, 25% City cost
Water service to property line	100% owner cost
Water and sanitary connections on private property	100% owner cost
Internal plumbing, decommissioning well	100% owner cost

The Local Improvement process is strictly laid out by the Municipal Act. After the Local Improvement is initiated by Council, individual letters with estimated costs will be sent to the owners. If 50% of the Owners representing a minimum of 50% of the assessed value petition against the works, then the City will proceed with a reconstruction of the road only in 2014. Future servicing of the subdivision would be at 100% owner cost.

If the Local Improvement is successful, all owners would be required to pay their share of the sewers and watermains on their taxes starting in the year following construction. Although owners must pay their Local Improvement charges, there is no requirement to immediately connect their water and sanitary services. Owners can arrange for and pay for their water service at the time of construction by providing a letter committing to connecting their water within 12 months. If the property owner is not willing to pay and connect to the watermain with 12 months, then the City will not build the water service to avoid leaving stagnant water in that service which leads to water quality concerns. All sewer connections will be installed and left capped at the property line for future connection by owners. When the owners wish to connect to either sewer or water, they are required to get a building permit.

Acknowledgements:

This report was prepared by a team consisting of Mark Henderson, Brian Calhoun, and Justin Lawrence. If the Local Improvement is successful there will be future minor costs associated to maintain new sections of sewer and watermain.

SUBMITTED BY:	SUBMITTED BY:
Justin IAWRENCE	hAll
JUSTIN LAWRENCE, P. ENG.	MARK HENDERSON
DIVISION MANAGER	DIRECTOR OF BUSINESSS LIAISON
CONSTRUCTION ADMINISTRATION	
REVIEWED & CONCURRED BY:	RECOMMENDED BY:
JOHN LUCAS, P.ENG. DIRECTOR – WATER, WASTEWATER & TREATMENT	JOHN BRAAM, P.ENG. MANAGING DIRECTOR – ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER



APPENDIX "A" LOCAL IMPROVEMENT REPORT – SANITARY SEWER

Date: October 7, 2013

SUBJECT: Hyde Park Industrial Subdivision Sewer Local Improvement

Mallard Road from Fanshawe Park Road to Woodcock Street Blue Heron Drive from Mallard Road to 95m south of Woodcock Street Woodcock Street from Blue Heron Drive to 98m west of Mallard Road

1. INTRODUCTION

In accordance with the provisions of *The Municipal Act*, the following report is presented for the construction of a sanitary sewer on **Mallard Road**, **Blue Heron Drive and Woodcock Street**.

2. LIMITS OF WORK

Mallard Road from Fanshawe Park Road to Woodcock Street, Blue Heron Drive from Mallard Road to 95m south of Woodcock Street, Woodcock Street from Blue Heron Drive to 98m west of Mallard Road. Approximately 1220m of sewer will be constructed which will service 2888.770 metres of property frontage currently unserviced. The frontages are the actual frontage in accordance with the latest assessment information. This is in accordance with the provisions of *The Municipal Act*.

3. COST

Sanitary sewer to service 2888.770 meters of frontage at: **\$171.52 per meter**

\$495,486.32

\$495,486.32

4. ASSESSMENT

The frontage rate to be assessed is **\$171.52 per meter of frontage** for the Sanitary Sewer.

5. FRONTAGES

TOTAL ESTIMATED GROSS COST

The frontages are adjusted based or (as detailed in the next section) in ac of <i>The Municipal Act</i> .	n exemptions and reductions cordance with the provisions	
Flankage Exer	nptions	460.568 meters
Frontage Exer	nptions	75.977 meters
Intersection & Fronta	ge Reductions	181.850 meters
TOTAL EXEMPTIONS AND REDUCTIONS	718.395 metres	\$123,220.23
OWNERS SHARE OF THE COST 2170.375 m of assessable frontage a	at \$171.52 per meter	\$372,226.09
CORPORATIONS SHARE OF THE	COST	\$123,220.23



6. EXEMPTIONS AND REDUCTIONS

The following exemptions and reductions are recommended in accordance with the provisions of *The Municipal Act*:

FLANKAGE EXEMPTIONS		
1510 Fanshawe Park Road	45.720	
2040 Blue Heron Drive	45.720	
1960 Blue Heron Drive	45.720	
1900/1910 Blue Heron Drive/ 1525 Woodcock Street	45.720	
1510 Woodcock Street	168.548	
1917 Mallard Road	45.720	
1922 Mallard Road	63.420	
TOTAL FLANKAGE EXEMPTIONS		460.568
FRONTAGE EXEMPTIONS		
1510 Woodcock Street	75.977	
TOTAL FRONTAGE EXEMPTIONS		75.977
INTERSECTION EXEMPTIONS		
Seagull Road	26.213	
Mallard Road	15.241	
Mallard Road	10.058	
Woodcock Street	20.117	
Blue Heron Drive	26.213	
Woodcock Street	10.058	
Woodcock Street	10.058	
Blue Heron Drive	13.106	
Mallard Road	20.117	
Woodcock Place	30.669	
TOTAL INTERSECTION EXEMPTIONS		181.850
		0
		U
TOTAL EXEMPTIONS AND REDUCTIONS		718.395
	1	

7. ANNUAL CHARGES

The lifetime of the work is estimated to be at least twenty (20) years.

The special assessment which is chargeable with respect the owners' portion of the cost may be paid in the annual installments. The recommended term for repayment is ten equal annual installments with interest estimated at four and one half percent (4.50%) which works out to \$21.68 per meter per year.



APPENDIX "B" LOCAL IMPROVEMENT REPORT – WATERMAIN

Date: October 7, 2013

SUBJECT: Hyde Park Industrial Subdivision Watermain Local Improvement

Mallard Road from Fanshawe Park Road to Woodcock Street Blue Heron Drive from Mallard Road to Seagull Road Woodcock Street from Blue Heron Drive to Mallard Road Fanshawe Park Road from 148m east of Mallard Road to 152m west of Mallard Road

1. INTRODUCTION

In accordance with the provisions of *The Municipal Act*, the following report is presented for the construction of a watermain on **Mallard Road**, **Blue Heron Drive**, **Woodcock Street and Fanshawe Park Road**.

2. LIMITS OF WORK

Mallard Road from Fanshawe Park Road to Woodcock Street, Blue Heron Drive from Mallard Road to Seagull Road, Woodcock Street from Blue Heron Drive to Mallard Road, Fanshawe Park Road from 148 east of Mallard Road to 152m west of Mallard Road. Approximately 1269m of watermain will be constructed which will service 2728.255 metres of property frontage currently unserviced. The frontages are in the actual frontage in accordance with the latest assessment information. This is in accordance with the provisions of *The Municipal Act*.

3. COST

Watermain to service 2728.255 meters of frontage at: **\$138.05 per meter**

\$376,638.99

4. ASSESSMENT

The frontage rate to be assessed is **\$138.05 per meter of frontage** for the Watermain.

5. FRONTAGES

The frontages are adjusted based or (as detailed in the next section) in ac of <i>The Municipal Act</i> .	n exemptions and reductions coordance with the provisions	
Flankage Exer	mptions	528.620 meters
Frontage Exer	mptions	516.219 meters
Intersection & Fronta	ge Reductions	151.180 meters
TOTAL EXEMPTIONS AND REDUCTIONS	1196.019 metres	\$165,111.91
OWNERS SHARE OF THE COST		\$211.527.08

1532.236 m of assessable frontage at \$138.05 per meter	\$211,527.08
CORPORATIONS SHARE OF THE COST	\$165,111.91
TOTAL ESTIMATED GROSS COST	\$376,638.99



6. EXEMPTIONS AND REDUCTIONS

The following exemptions and reductions are recommended in accordance with the provisions of *The Municipal Act*:

FLANKAGE EXEMPTIONS		
1510 Fanshawe Park Road	45.720	
2040 Blue Heron Drive	45.720	
1960 Blue Heron Drive	60.320	
1900/1910 Blue Heron Drive/ 1525 Woodcock Street	78.995	
1510 Woodcock Street	168.548	
1917 Mallard Road	45.720	
1922 Mallard Road	83.597	
TOTAL FLANKAGE EXEMPTIONS		528.620
FRONTAGE EXEMPTIONS		
1867 Blue Heron Drive	51.054	
1885 Blue Heron Drive	48.768	
1895 Blue Heron Drive	48.768	
1917 Blue Heron Drive	48.768	
1478 Blue Heron Drive	46.107	
1930 Blue Heron Drive	30.000	
1920 Blue Heron Drive	30.000	
1900/1910 Blue Heron Drive/1525 Woodcock Street	76.291	
1910 Woodcock Street	75.977	
1568 Woodcock Street	60.486	
		516.219
INTERSECTION EXEMPTIONS		
Seagull Road	26.213	
Mallard Road	15.241	
Mallard Road	10.058	
Woodcock Street	20.117	
Blue Heron Drive	26.213	
Woodcock Street	10.058	
Woodcock Street	10.058	
Blue Heron Drive	13.106	
Mallard Road	20.117	
		151.180
FRONTAGE REDUCTIONS		
TOTAL FRONTAGE REDUCTION		
TOTAL EXEMPTIONS AND REDUCTIONS		1196.019

7. ANNUAL CHARGES

The lifetime of the work is estimated to be at least twenty (20) years. The special assessment which is chargeable with respect the owners' portion of the cost may be paid in the annual installments. The recommended term for repayment is ten equal annual installments with interest estimated at four and one half percent (4.50%) which works out to \$17.45 per meter per year.





APPENDIX "C" LOCATION MAP

October 7, 2013



Hyde I	Park Industi	rial Su	bdivisi	on - S	anitary \$	Sewer					
		Frontage	Flankage	Frontage	Flankage	Exempt	ions and R	teductions		Frontage	Estimated Cost
Lot #	Address	(feet)	(feet)	(metres)	(metres)	Frontage	Flankage	Intersection	Notes	(metres)	to Owner
	External Properties										
Pt Lts 25 & 26	1579 Fanshawe Pk Rd 1640 Fanshawe Pk Rd	225.00		68.580 173.736						68.580 1 73.736	\$11,762.95 \$29 799 47
Pt BIK P	0 Woodcock St	426.00		129.845					33R4659 Part 14	129.845	\$22,271.22
	nternal - Blue Heron D	<u> </u>									
Pt BIK F	1867 Blue Heron Dr	167.50		51.054					33R-6729 Part 4&5	51.054	\$8,756.86
	1885 Blue Heron Dr	160.00		48.768 10 76 0					33R-6729 Part 3	48.768 40 760	\$8,364.76 ©0 264.76
	1917 Blue Heron Dr	160.00		40.700					33R-6729 Part 1	40.700	\$8.364.76
Pt BIK F	1478 Seagull Rd	151.27		46.107	0.000				33R-6675 Part 1 Flankage exemption	46.107	\$7,908.34
	Seagull Rd	86.00		26.213				26.213	Road Allowance	0.000	\$0.00
Pt BIK C	1955 Blue Heron Dr	169.63		51.703 70.005	0.000				Flankage exemption	51.703	\$8,868.18 #10.555.65
	1510 Fanshawe Pk Rd	239.56	569.25	73.018	173.507		45.720		33R-4659 Parts 1-4 Flankage exemption	200.805	\$34,442.39
	Mallard Road	50.00		15.241				15.241	Road Allowance	0.000	\$0.00
	Mallard Road	33.00 127.26	273 70	10.058 38 789	83 424		45 720	10.058	Road Allowance 338-7288 Dart 1 Flankare evemntion	0.000 76.493	\$0.00 \$13.120.20
Pt Blk J	2026 Blue Heron Dr	137.50	0	41.910			24		33R-7288 Part 2	41.910	\$7,188.47
BIK I	1960 Blue Heron Dr	247.81	487.38	75.532	148.553		45.720		Flankage exemption	178.365	\$30,593.44
	1930 Blue Heron Dr	98.43 00.42		30.000					33R14192 Part 1	30.000	\$5,145.65 ©E 145.65
Pt BIK H	Blue Heron Dr. 1525 We	30.43 250.30	259.17	76.291	78.995		45.720		33R14192 Part 3 Flankage exemption	30.000 109.566	\$18,792.93
	Woodcock Street	66.00		20.117				20.117	Road Allowance	0.000	\$0.00
BIK G	1510 Woodcock St	249.27	552.98	75.977	168.548	75.977	168.548		exempt - existing sanitary sewer outlet	0.000	\$0.00
	Internal - Mallard										
	Blue Heron Drive	86.00		26.213				26.213	Road Allowance	0.000	\$0.00
Pt Blk J	1971 Mallard	114.14		34.790					33R6863 Part 3	34.790	\$5,967.23 25 -25 - 25
Pt BIK J	1959 Mallard	105.69		32.214					33R6863 Part 4	32.214	\$5,525.40 \$10.373.28
Pt Bik K	1917 Mallard	211.64	363.99	64.508	110.944		45.720		33R6974 Part 1 Flankage exemption	00.470 129.732	\$22.251.83
	Woodcock Street	33.00		10.058				10.058	Road Allowance	0.000	\$0.00
	Woodcock Street	33.00		10.058				10.058	Road Allowance	0.000	\$0.00
	1922 Mallard	129.27	274.27	39.401	83.597		63.420		33R8154 Part 2 Flankage exemptions	59.578	\$10,218.91 ©0 022 10
	1956 Mallard	154.00		21.499 46.939					33R5640 Part 1	21.499 46.939	\$8.051.05
Pt BIK M	1970 Mallard	153.87		46.900					33R4867 Part 1	46.900	\$8,044.36
Pt BIK N	1984 Mallard	111.16		33.882					33R6275 Part 2	33.882	\$5,811.49
Pt BIK N	1994 Mallard	117.53		35.823					33R7641 Part 2	35.823	\$6,144.42
Pt BIK N	2018 Mallard	249.99		76.197					33R7641 Part 1	76.197	\$13,069.43
PT BIK N	2034 Mallard	156.18		47.604					33K66U8 Part 1	47.604	\$8, 165. 11
	Internal - Woodcock										
	Blue Heron Drive	43.00		13.106				13.106	Road Allowance	0.000	\$0.00
Part Blk L	1568 Woodcock St	351.66		107.186				20.117	33R4659 Parts 10 & 11	0.000 107.186	\$18.384.71
	Woodcock Place	100.62		30.669				30.669	Road Allowance	0.000	\$0.00
	Column Totals			2 041 202	847 568	76 077	AGO 568	181 850	Totals	Metres	Dollars
	(metres)			202.1 10,2	0000	10.01	000.004	000-101	0000-	00000	
	(00,0011)			A	ß	U		ш	1 - Frontage plus Flankage (A+B)	2.888.770	\$495.486.32
								l	2 - Exemptions and Reductions (C+D+E)	718.395	\$123,220.23
									(1) - (2)	2,170.375	\$372,266.09
				Frontage	Flankage	Exempt	ions and R	teductions			
	Local Improvement Calc	culations			Sanitary						
	Total Contract Estimate	.07	\$3, 146, 678.60		Estimated Cost	25% Subsidy	Owners Share	Total Frontage(m)	Estimated Cost / m frontage		
	Sanitary Cost Estimate	including PD(C's		\$554,055.10	\$138,513.78	\$415,541.33	2888.770	\$143.85		
	Total Estimated Water C	mate - Sanitai Cost /m	y related		\$100,593.33	\$Z0,048.33	\$495,486.32	2888.770	\$27.567 \$171.52		

APPENDIX "D" ESTIMATED COST BREAKDOWN- SANITARY SEWER

October 7, 2013

Hyde P	ark Industr	ial Sub	divisio	n - Wati	ermain						
		Frontage	Flankage	Frontage	Flankage	Exempt	ions and Re	ductions		Frontage	Estimated Cost
Lot #	Address	(feet)	(feet)	(metres)	(metres)	Frontage	Flankage	Intersection	Notes	(metres)	to Owner
Pt Lts 25 & 26	External Properties	225.00		68.580						68.580	\$9,467.55
	1640 Fanshawe Pk Rd	570.00		173.736						173.736	\$23,984.47
	nternal - Blue Heron D										
Pt BIK F	1867 Blue Heron Dr	167.50		51.054		51.054			33R-6729 Part 4&5 W/M existing exempt	0.000	\$0.00
Pt BIK F	1885 Blue Heron Dr 1895 Blue Heron Dr	160.00		48.768 48.768		48.768 48.768			33R-6729 Part 3 W/M existing exempt 33R-6729 Part 2 W/M existing exempt	0.000	\$0.00 \$0.00
Pt BIK F	1917 Blue Heron Dr	160.00		48.768		48.768			33R-6729 Part 1 W/M existing exempt	0.000	\$0.00
Pt BIK F	1478 Seagull Rd	151.27		46.107		46.107			33R-6675 Part 1 W/M existing exempt	0.000	\$0.00
Pt BIK C	Seagull Rd 1955 Blue Heron Dr	86.00 169.63		51.703				26.213	Road Allowance	0.000	\$0.00 \$7.137.66
Pt BIK C	1985 Blue Heron Dr	239.78		73.085					33R-2196 Parts 1-3	73.085	\$10,089.47
BIK A	1510 Fanshawe Pk Rd	239.56	569.25	73.018	173.507		45.720		33R-4659 Parts 1-4 Flankage exemption	200.805	\$27,721.38
	Mallard Road	50.00		15.240				15.240	Road Allowance	0.000	\$0.00
Pt BIK J	2040 Blue Heron Dr	33.00 127.26	273.70	38.789	83.424		45.720	8CU.UI	33R-7288 Part 1 Flankage exemption	0.000 76.493	\$10.559.95
Pt BIK J	2026 Blue Heron Dr	137.50		41.910					33R-7288 Part 2	41.910	\$5,785.73
BIK I	1960 Blue Heron Dr	247.81	487.38	75.532	148.553		60.320		Partial W/M existing and flankage exemption	163.765	\$22,607.96
Pt BIK H	1920 Blue Heron Dr	90.43 98.43		30.000		30.000			33R14192 Part 2 W/M existing exempt	0.000	\$0.00
0+ EF	1910,1920 Blue Heron	250.20	760.17	76 201	70.005	76 201	78.005		23D11102 Dort 3 1 E Conct ov W/M cvomet		00
	MI, 1929 M 000000 01	200.002	203.1	0.23	0.990	10.231	10.330			0000	00.00
	Woodcock Street	66.00		20.117				20.117	Road Allowance	0.000	\$0.00
BkG	1510 Woodcock St	249.27	552.98	75.977	168.548	75.977	168.548		Constructed existing W/M - exempt	0.000	\$0.00
	Internal - Mallard										
	Blue Heron Drive	86.00		26.213				26.213	Road Allowance	0.000	\$0.00
Pt Blk J	1971 Mallard	114.14		34.790					33R6863 Part 3	34.790	\$4,802.80
	1959 Mallard 1041 Mallard	105.69		32.214 60.478					33K6863 Part 4 33R6074 Part 2	32.214 60.478	\$4,447.18 \$8 340 06
Pt BIK K	1917 Mallard	211.64	363.99	64.508	110.944		45.720		33R6974 Part 1 Flankage exemption	129.732	\$17,909.66
	Woodcock Street	33.00		10.058				10.058	Road Allowance	0.000	\$0.00
	Woodcock Street	33.00		10.058				10.058	Road Allowance	0.000	\$0.00 #1 400 00
	1922 Mallard	129.27	214.21	39.401 F1 100	83.597		83.597		33K8154 Par Z No W/IVI along ilankage	39.401 51 100	\$5,439.30 \$7,100.50
Pt Blk M	1956 Mallard	154.00		46.939					33R5640 Part 1	46.939	\$6,479.99
Pt BIK M	1970 Mallard	153.87		46.900					33R4867 Part 1	46.900	\$6,474.60
Pt BIK N	1984 Mallard	111.16		33.882					33R6275 Part 2	33.882	\$4,677.45
	2018 Mallard	11/.53 240.00		35.823 76 107					33K7641 Part 2 33D7641 Dart 1	35.823 76 107	\$4,945.41 \$10 510 00
Pt Blk N	2034 Mallard	156.18		47.604					33R6608 Part 1	47.604	\$6,571.79
	Jonaboo M. Tourotu									0.000	
	Blue Heron Drive	43.00		13.106				13.106	Road Allowance	0.000	\$0.00
	Mallard Road	66.00		20.117				20.117	Road Allowance	0.000	\$0.00
Part BIk L	1568 Woodcock St	351.66		107.186		60.486			33R4659 Parts 10 & 11 Partial W/M const.	46.700	\$6,446.99
	Column Totals			1,880.687	847.568	516.219	528.620	151.180	Totals	Metres	Dollars
	(metres)										
				٩	ф	υ	۵	ш	1 - Frontage plus Flankage (A+B)	2,728.255	\$376,638.99
									2 - Exemptions and Reductions (C+D+E) (1) - (2)	1,196.019 1,532.236	\$165,111.91 \$211,527.08
				Frontage	Flankage	Exempt	ions and Re	ductions			
Local Improvem	ent Calculations										
Total Contract E	stimate	\$3,146,678.60		Watermain Estimated Cost	25% Subsidy 0	Owners Share T	otal Frontage(m)	Estimated Cost / m frontage			
Watermain Cost	t Estimate	100		\$414,780.00 © 07 405 30	\$103,695.00 \$21 851 22	\$311,085.00	2728.255	\$114.02			
Total Estimated	Water Cost /m	area		\$00,400.3Z	QC.100,12¢	\$376.638.99	007.0717	\$138.05			

APPENDIX "E" **ESTIMATED COST BREAKDOWN – WATERMAIN**

October 7, 2013