Appendix A

Repair Requirements

2018 Sewer Renewals by CIPP Lining, Contract 6, Bid Opportunity 183-2019

Appendix A - Repair Requirements

Sewer Details

#	DWG	Sheet	Sewer Asset	Street Name	Location	Manholes Upstream	Depth	Manholes Downstream	Depth	Length	Size Height	Size Width	Shape	Flow Type	Material
1	12071	1	S-MA50004238	DUBUC ST	MH AT CHAMPLAIN ST TO MH AT GENTHON ST (W PL)	S-MH70063574	5.90	S-MH70063591	5.75	99.3	450		CIRCULAR	COMBINED	VC-VITRIFIED CLAY
2	12072	2	S-CL50004370	EASEMENT (N OF NIVERVILLE AV)	1ST CB W OF TRAVERE AV TO NODE AT TRAVERSE AV	S-CB50003732	1.00	S-MH70069675	2.46	43.3	250		CIRCULAR	STORM	CO-CONCRETE
3	12073	3	S-MA50004037	CRAWFORD AV (CL)	1ST MH N OF LYNDALE DR TO 2ND MH N OF LYNDALE DR	S-MH50003503	3.11	S-MH50003504	3.21	80.4	300		CIRCULAR	COMBINED	VC-VITRIFIED CLAY
4	12074	4	S-MA50007290	HAIG AVE	1ST MH W OF EGERTON RD - MH @ EGERTON RD	S-MH50006243	2.52	S-MH50006244	3.11	22.7	300		CIRCULAR	COMBINED	CO-CONCRETE
5	12075	5	S-MA50013419	VIVIAN AV	1ST MH WOF DES MEURONS ST TO MH@ DES MEURONS ST	S-MH50006249	4.38	S-MH50010781	4.63	112.6	450		CIRCULAR	COMBINED	PVC-POLYVINYL CHLORIDE
6	12076	6	S-MA50013162	IMPERIAL AV	MH AT DES MEURONS ST-1ST MH W OF DES MEURONS ST	S-MH50010577	4.54	S-MH50010578	4.81	142.5	375		CIRCULAR	SANITARY	VC-VITRIFIED CLAY
7	12077	7	S-MA50015663	ST MARK'S PL	1ST MH E OF MAGER DR W TO 2ND MH E OF MAGER DR W	S-MH50012527	3.75	S-MH50012528	4.47	82.5	300		CIRCULAR	COMBINED	VC-VITRIFIED CLAY
8	12078	8	S-MA50014352	ELM PARK RD	2ND MH E OF KILLARNEY ST-3RDMH E OF KILLARNEY ST	S-MH50011473	4.30	S-MH50011474	4.77	112.4	300		CIRCULAR	COMBINED	VC-VITRIFIED CLAY
9	12079	9	S-MA50014340	SPRINGSIDE DR	1ST MH E OF KILLARNEY S TO 2ND MH E OF KILLARNEY	S-MH50011462	3.97	S-MH50011464	4.25	109.6	375		CIRCULAR	COMBINED	VC-VITRIFIED CLAY
10	12080	10	S-MA60013612	CHURCHILL DR	2ND MH W OF MONTGOMERY TO 1ST MH W OF MONTGOMERY	S-MH60011704	2.83	S-MH60011709	3.50	98.4	300		CIRCULAR	COMBINED	VC-VITRIFIED CLAY
11	12081	11	S-MA50001855	KINGSTON CR (SLEG)	1ST MH E OF RIVERDALE AVE- 2NDMHE OF RIVERDALE	S-MH50001622	2.55	S-MH50001623	2.91	121.4	300		CIRCULAR	COMBINED	VC-VITRIFIED CLAY
12	12082	12	S-MA50014823	ARDEN AVE(N CURB)	1ST MH E OF DARWIN ST-2ND MH E OF DARWIN ST.	S-MH50011920	1.70	S-MH50011921	2.15	86.5	375*		CIRCULAR	STORM	CO-CONCRETE
13	12083	13	S-MA50006015	ARGONNE BAY (N LEG)	MH @ DRAKE BV- 1ST MH W DRAKE BV	S-MH50005111	1.76	S-MH50005112	2.66	39.1	375		CIRCULAR	STORM	CO-CONCRETE
14	12084	14	S-MA50005811	AUTUMNWOOD DR	1ST MH E OF BARBERRY RD (E LEG) TO MH AT DE BOURMONT BY (W LEG)	S-MH50004932	3.60	S-MH50004889	4.96	121.6	200		CIRCULAR	SANITARY	CO-CONCRETE
15	12085	15	S-MA50005817	AUTUMNWOOD DR (S OF CL)	1ST MH W OF BARBERRY RD (E LEG) TO MH AT FRONTENAC BY (W LEG)	S-MH50004937	2.65	S-MH50004936	3.95	49.8	250*		CIRCULAR	SANITARY	CO-CONCRETE
16	12086	16	S-MA50005818	AUTUMNWOOD DR (S OF CL)	MH AT FRONTENAC BY (W LEG) TO 1ST MH W OF FRONTENAC BY (W LEG)	S-MH50004936	3.95	S-MH50004938	4.45	90.5	250		CIRCULAR	SANITARY	CO-CONCRETE
17	12087	17	S-MA50005852	AUTUMNWOOD DR	1ST MH W OF FRONTENAC BY (W LEG) TO MH AT DRAKE BV	S-MH50004938	4.45	S-MH50004958	4.64	89.6	250		CIRCULAR	SANITARY	CO-CONCRETE
18	12088	18	S-MA50005850	AUTUMNWOOD DR	2ND MH W OF DRAKE BV TO 1ST MH W OF DRAKE BV	S-MH50004963	2.62	S-MH50004964	2.95	88.8	200		CIRCULAR	SANITARY	CO-CONCRETE
19	12089	19	S-MA50005849	BARBERRY RD (S LEG)	1ST MH W OF BARBERRY RD (E LEG) TO MH AT DRAKE BV	S-MH50004962	6.05	S-MH50004959	4.43	106.9	250		CIRCULAR	SANITARY	CO-CONCRETE
20	12090	20	S-MA50005857	BLUEBERRY BY (S LEG)	1ST MH E OF BLUEBERRY BY (W LEG) TO MH AT DRAKE BV	S-MH50004968	3.30	S-MH50004960	6.35	24.6	200		CIRCULAR	SANITARY	CO-CONCRETE
21	12091	21	S-MA50005863	DRAKE BV	MH AT BURNING BUSH BY (N LEG) TO MH AT BURNING BUSH BY (S LEG - N OF CL)	S-MH50004973	5.12	S-MH50004974	5.61	76.4	375		CIRCULAR	SANITARY	CO-CONCRETE
22	12092	22	S-MA50005731	ECHO BY (W LEG)	MH AT ECHO BY (N LEG) TO MH AT ECHO BY (S LEG)	S-MH50004871	2.75	S-MH50004872	3.21	75.0	200		CIRCULAR	SANITARY	CO-CONCRETE
23	12093	23	S-MA50005715	WINAKWA RD	1ST MH W OF SPEERS RD TO MH AT HEATHER RD	S-MH50004856	3.47	S-MH50004857	5.10	121.9	200		CIRCULAR	SANITARY	CO-CONCRETE

Pre-Lining Inspection

#	Sewer Services	Lump Sum Anulus Grouting per Location: Anulus Grouting	Description	Patching: Patch Tender <=1m	Patch Tender >=1m	Description	Removal of Intruding Connections: Intrud Conn Tender	Description	Removal Roots and Grease: Root Tender	Description	Solid Debris Cutting / Other: Tender 1st 3m	Tender >3m (m)	Tender at Joints	Description	Sewer Service Grouting - Man Entry for Sewers >750mm: Service Grouting	Description	External Point Repair (EPR) by Others: Distance	Description
1	15						9	2.1M CNI @ 11 DS; 2.4M CNI @ 11 DS; 16.5 CNI @ 11 DS; 20.3M CNI @ 2 DS; 32.1 CNI @ 12 DS; 46.6M CNI @ 12 DS; 51.4 CNI @ 2 DS; 66.3M CNI @ 2 DS; 18.2M CNI @ 11 US;			1		17	9.8M ELJ @ 8-3 DS; 11.3M ELJ @ 8-4 DS; 12.1M EMJ @ 8-4 DS; 14.4 ELJ @ 9-11 DS; 15.3 ELJ @ 8 DS; 16.4M EM(CN) @8-12 DS; 18.8M EL(CN) @ 8-9 DS; 20.1M EM(CN) @ 2-4 DS; 32.1 EM(CN) @9-11 DS; 46.8 EL(CN) @ 8-12 DS; 73.0 ELJ @ 2-4 DS; 75.2 ELJ @ 1-4 DS; 77.3 EM(CN) @ 8-11 DS; 3.0M ELJ @ 8-10 US; 13.2M ELJ @ 8-2 US; 14.2 EL @ 9, 3 US; 18.2M EM(CN) @ 8-3 US; 20.1M EM (CN) @ 3 US;				
2	0								1.0	0.0M RFJ @ 4-6 DS: 2.5M RFJ @ 7 DS; 13.5M RFJ @ 5 DS; 14.3M RFJ @ 7 DS; 15.1M RFJ @ 5, 8 DS; 23.5M RF @ 1-3 DS;	1		3	16.6M ELJ @ 6-7 DS; 17.4M ELJ @ 3-6 DS; 38.2M ELJ @ 8 DS;				
3	7								1.0	20.4M RM(CN) @ 3 DS; 23.0M RFJ @ 3 DS; 23.8M RMJ @ 4-8 DS; 24.6M RFJ @ 4 DS; 44.3M RFJ @ 5-7 DS; 49.9M EFJ @ 5 DS; 53.0M RFJ @ 4 DS; 53.8M RFJ @ 10 DS; 55.4M RFJ @ 10 DS; 56.3M RM(CN) @ 3 DS; 57.6M RFJ @ 1-3 DS; 59.0M RFJ @ 10 DS; 59.9M RMJ @ 8-10 DS; 60.7M RMJ @ 2-5, 8-10 DS; 61.5M RMJ @ 8-12, 3-5 DS; 62.2M RMJ @ 10, 3 DS; 63.0M RMJ @ 2-4, 9-11 DS; 63.9M RMJ @ 2-4, 8-10 DS; 65.3M RMJ @ 2-4, 9-11 DS; 66.1 RFJ @ 10-3 DS; 66.9M RMJ @ 2-5, 9 DS; 67.6M RFJ @ 3, 8 DS; 68.5M RMJ @ 2-5 DS; 69.3M RFJ @ 9 DS; 70.7M RFJ @ 4, 11 DS; 71.8M RM(CN) @ 3 DS; 72.4M RFJ @ 10 DS; 73.1M RMJ @ 7-10 DS; 73.9M RMJ @ 4 DS; 74.4M RF @ 10 DS; 74.7M RFJ @ 8-1 DS; 75.4M RMJ @ 7-10 DS; 76.3M RMJ @ 7-11 DS; 77.0M RFJ @ 1-5, 8-10 DS; 77.9M RFJ @ 2-4 DS; 78.6M RFJ @ 2-4 DS;79.3M RFJ @ 2-4, 9 DS;	1		27	4.7M ELJ @ 4-8 DS; 7.1M ELJ @ 5-8 DS; 8.6M ELJ @ 7 DS; 10.2M ELJ @ 5 DS; 11.0M ELJ @ 5-8 DS; 11.8M ELJ @ 3 DS; 13.4M ELJ @ 9 DS; 14.2M ELJ @ 4 DS; 14.9 ELJ @ 4, 9 DS; 16.4M ELJ @ 9-10 DS; 17.2M ELJ @ 4, 7-9 DS; 18.0M ELJ @ 3 DS; 18.8M ELJ @ 9 DS; 20.2M ELJ @ 3, 9 DS; 20.9M ELJ @ 4 DS; 22.3M ELJ @ 2-4 DS; 23.0M ELJ @ 3-5, 8 DS; 25.4M ELJ @ 4 DS; 26.2M ELJ @ 9 DS; 39.9M ELJ @ 8 DS; 41.2M ELJ @ 7 DS; 43.5M ELJ @ 5 DS; 45.2 ELJ @ 4, 8 DS; 48.3M ELJ @ 9 DS; 53.0 ELJ @ 9 DS; 68.5M ELJ @ 9 DS; 73.1M ELJ @ 11 DS;				
4	0								1.0	8.2M RTJ @ 8 DS;	1		4	5.7M ELJ @ 6 DS; 9.1M EL @ 7-9 DS; 12.2M EL @ 4 DS; 14.2M EL @ 6 DS; 16.7M ELJ @ 7 DS; 18.0M ELJ @ 7 DS; 18.8M ELJ @ 6-9 DS;				
5	20						2	34.0M CNI @ 11 DS; 34.7M CNI @ 2 DS;	1.0	0.2M RFJ @ 9 DS; 12.8M RTJ @ 3 DS; 65.7M RF (CN) @ 2 DS; 111.2M RF(CN) @ 2 DS;	1		11	23.7M ELJ @ 3-4 DS; 33.8M EL (CN) @ 8-10 DS; 42.6M ELJ @ 11-4 DS; 43.8M ELJ @ 2-6 DS; 48.3M ELJ @ 4, 9 DS; 50.8M EL(CN) @ 3 DS; 54.9M EL @ 8-4 DS; 55.8M ELJ @ 9-12 DS; 57.3M ELJ @ 2-5 DS; 57.9M ELJ @ 9 DS; 62.2M ELJ @ 9-10 DS; 69.2M EL @ 3 DS; 70.1M ELJ @ 1-4 DS;				
6	22						7	11.7M CNI @ 1 DS; 14.3M CNI @ 11 DS; 15.6M CNI @ 1 DS; 48.6M CNI @ 1 DS; 121.6M CNI @ 11 DS; 122.3M CNI @ 1 DS; 141.7M CNI @ 2 DS;			1		47	1.2M EL @ 5 DS; 2.1M ELJ @ 4, 8 DS; 3.0M ELJ @ 4 DS; 3.7M ELJ @ 8-11, 2-3 DS; 4.6M ELJ @ 10 DS; 5.2M ELJ @ 8 DS; 9.1M ELJ @ 7-11, 1-5 DS; 10.0M ELJ @ 2-4 DS; 10.8M ELJ @ 12 DS; 21.7M ELJ @ 3-4, 8-9 DS; 23.2M ELJ @ 9 DS; 29.9M EL(CN) @ 8-11 DS; 34.8M ELJ @ 12-4 DS; 41.1M ELJ @ 4, 7 DS; 43.6M ELJ @ 8 DS; 44.2M ELJ @ 7-10 DS; 46.6M ELJ @ 3-10 DS; 49.8M ELJ @ 1-4 DS; 50.4M ELJ @ 8 DS; 52.0M ELJ @ 9 DS; 55.3M ELJ @ 1-4, 8-11 DS; 56.0M ELJ @ 1-3, 8-10 DS; 56.7M ELJ @ 2-4 DS; 58.9M ELJ @ 1-4, 8 DS; 65.2M ELJ @ 2-3, 9 DS; 66.0M ELJ @ 8-3 DS; 66.8M ELJ @ 8-3 DS; 67.5M ELJ @ 8 DS; 68.4M ELJ @ 9-11 DS; 69.0M ELJ @ 8 DS;70.1M EL(CN) @ 7-10 DS; 72.3M ELJ @ 8-11 DS; 73.7M ELJ @ 12-4, 8-10 DS; 74.5M ELJ @ 4, 8-10 DS; 81.6M ELJ @ 7 DS; 86.2M ELJ @ 8-2 DS; 87.0M ELJ @ 8 DS; 90.9M ELJ @ 3-5 DS; 97.2M ELJ @ 2-4, 8 DS; 97.9M ELJ @ 1-4 DS; 103.4 ELJ @2-4 DS; 105.0M ELJ @ 5 DS; 120.6M ELJ @ 1-3, 8-11 DS; 121.3M ELJ @ 1-4, 9-11 DS; 122.3M EL(CN) @ 10-3 DS; 132.4M EL(CN) @ 8-10 DS; 137.6M ELJ @ 3 DS; 138.5M ELJ @ 2-5 DS;				
7	11						3	24.8M CNI @ 2 DS; 65.9M CNI @ 10 DS; 71.7M CNI @ 1 DS;	1.0	17.2M RFJ @ 11 DS; 24.8M RF(CN) @ 3 DS; 41.4M RF(CN) @ 2 DS; 79.9M RFJ @ 9 DS; 80.8M RFJ @ 12 DS; 81.5M RFJ @ 4, 8 DS;	1		13	7.6M ELJ @ 1-5 DS; 14.1M ELJ @ 8 DS; 16.7M EL(CN) @ 2 DS; 20.2M ELJ @ 4 DS; 21.0M ELJ @ 4, 7-9 DS; 21.7M ELJ @ 7-9 DS; 24.1M EL(CN) @ 8 DS; 27.0M ELJ @ 8 DS; 29.0M EL @ 1-2 DS; 29.6M ELJ @ 8-4 DS; 41.4M ELJ @ 4 DS; 58.6M OBJ (PLASTIC) @ 5 DS; 73.8M ELJ @ 3 DS; 75.4M ELJ @ 4, 8 DS;				
8	17						2	20.1M CNI @ 2 DS; 21.0M CNI @ 11 DS;	1.0	8.4M RFJ @ 12 DS; 10.8M RFJ @ 4 DS; 12.3M RFJ @ 12 DS; 13.1M RFJ @ 11-1 DS; 13.9M RFJ @ 12-3 DS; 14.7M RFJ @ 11 DS; 15.4M RFJ @ 11-1 DS; 16.2M RFJ @ 9 DS; 17.8M RFJ @ 9 DS; 18.6M RFJ @ 10, 3 DS; 21.7M RFJ @ 4 DS; 23.3M RFJ @ 3 DS; 23.6M RF (CN) @ 1 DS; 27.9, RFJ @ 12 DS; 28.8M RFJ @ 12 DS; 30.3M RFJ @ 11 DS; 31.1M RFJ @ 10, 2 DS; 32.6M RFJ @ 11 DS; 34.9M RFJ @ 2 DS; 35.7M RFJ @ 9 DS; 37.2M RFJ @ 9 DS; 38.0M RFJ @ 9 DS; 39.8M DEG @ 10 DS; 45.7M RFJ @ 4 DS; 54.3M RFJ @ 2 DS; 56.5M RFJ @ 12 DS; 58.4M RF(CN) @ 9 DS; 58.8M RFJ @ 9-3 DS; 59.6M RFJ @ 2-4 DS; 60.1M DEG @ 2 DS; 60.4M RFJ @ 10-2 DS; 61.2M RFJ @ 9-3 DS; 61.9M RFJ @ 9, 12 DS; 62.8M RFJ @ 10-12 DS; 63.5M RFJ @ 1 DS; 64.3M RFJ @ 9-3 DS; 65.1M RFJ @ 9-2 DS; 65.9M RFJ @ 12, 3 DS; 66.7M RFJ @ 3 DS; 67.5M RFJ @ 9-4 DS; 68.3M RFJ @ 8-12, 3 DS; 69.0M RFJ @ 11-1 DS; 69.4M RF(CN) @ 2 DS; 69.7M RFJ @ 10, 2 DS; 72.1M RFJ @ 2-4 DS; 72.9M RFJ @ 1-3 DS; 73.7M RFJ @ 10-12, 3 DS; 74.7M RFJ @ 2 DS; 76.8M RFJ @ 9-2 DS; 77.6M RFJ @ 10, 2 DS; 78.4M RFJ @ 10, 4 RD; 79.3M RFJ @ 10-3 DS; 81.0M RFJ @ 8-10 DS; 82.8M RFJ @ 3 DS; 84.3M RFJ @ 8-10 DS; 86.0M RFJ @ 9 DS; 89.6M RFJ @ 9 DS; 90.5M RFJ @ 12 DS; 91.0 M RF(CN) @ 10 DS; 97.6M RFJ @ 11 DS; 105.1M RF(CN) @ 10 DS;	1		4	32.6M DE @ 6 DS; 51.4M DE @ 6 DS; 57.3M ELJ @ 12 DS; 61.0M EL @ 3 DS; 71.4M ELJ @ 5 DS;			0.7	EPR FROM 90.5-91.2m DS
9	15						2	19.2M CNI @ 11 DS; 36.1M CNI @ 10 DS;	1.0	53.7M RF(CN) @ 9 DS; 73.4M DEG @ 10, 2 DS; 74.9-76.1M DEG @ 10, 2 DS; 76.2-79.3M DEG @ 2 DS; 79.7M DEG @ 1 DS; 99.7M DEG @ 9, 3 DS; 101.4M DEG @ 3 DS; 103.5M DEG @ 9 DS; 105.1-106.7M DEG @ 3 DS; 107.3M DEG @ 3 DS;	1		1	36.1M EL(CN) @ 7-10 DS;				
10	7						1	76.3M CNI @ 10 DS;			1	0.4	10	1.5M ELJ @ 5-7 DS; 2.4M ELJ @ 7 DS; 3.2M ELJ @ 8 DS; 3.9M ELJ @ 7-8 DS; 7.0-10.4M EL @ 6 DS; 14.0M ELJ @ 14 DS; 26.5M ELJ @ 7 DS; 27.3M ELJ @ 4 DS; 49.8M ELJ @ 5, 7 DS; 59.0M ELJ @12 DS; 69.1M ELJ @ 4 DS;				
11	18						2	53.3M CNI @ 3 DS; 100.0M CNI @ 3 DS;	1.0	24.0M RF(CN) @ 3-4 DS; 26.7M RFJ @ 2 DS; 29.1M RFJ @ 8 DS; 30.6M RFJ @ 4, 8 DS; 31.4M RFJ @ 3, 8 DS; 32.1M RFJ @ 4, 8 DS; 32.9M RFJ @ 4, 8 DS; 33.7M RFJ @ 4 DS; 34.5M RFJ @ 4, 8 DS; 35.3M RFJ @ 8 DS; 36.1M RFJ @ 8 DS; 36.8M RFJ @ 3 DS; 37.0M RF(CN) @ 3 DS; 47.1M DEG @ 12 DS; 60.7M RFJ @ 12, 4 DS; 62.3M RFJ @ 2-4, 8-10 DS; 63.1M RFJ @ 9-11, 3 DS; 63.8M RFJ @ 11, 3 DS; 64.7M RFJ @ 8-11, 4 DS; 65.4M RFJ @ 9-3 DS; 66.2M RFJ @ 9-3 DS; 66.9M RFJ @ 9, 3 DS; 67.7M RFJ @ 10 DS; 68.5M RFJ @ 9-11, 2-4 DS; 68.7M RF(CN) @ 10 DS; 69.3M RMJ @ 8-11, 2-4 DS; 70.1M RFJ @ 10, 2 DS; 71.6M RFJ @ 11-1 DS; 72.4M RFJ @ 10-2 DS; 73.2M RFJ @ 8-10, 1-3 DS; 73.9M RMJ @ 7-12 DS; 74.7M RFJ @ 10, 2-3 DS; 75.5M RMJ @ 10-4 DS; 76.3M RFJ @ 8-3 DS; 76.5M RF(CN) @ 7-10 DS; 77.8M RFJ @ 8-2 DS; 78.7M RMJ @ 6-4 DS; 79.4M RMJ @ 8-5 DS; 80.2M RMJ @ 8-4 DS; 81.0M RMJ @ 8-10, 2-5 DS; 81.7M RFJ @ 8-10, 3 DS; 82.5M RFJ @ 8 DS; 83.2M RFJ @ 4, 9 DS; 84.1M RFJ @ 1-4 DS; 84.8M RFJ @ 3, 9 DS; 85.6M RFJ @ 10 DS; 86.3M RFJ @ 8-11 DS; 87.1M RFJ @ 10-3 DS; 87.8M RFJ @ 12 DS; 89.4M RFJ @ 10, 2-4 DS; 90.2M RFJ @ 9-3 DS; 91.0M RFJ @ 8-11, 1-5 DS; 91.4M RF(CN) @ 8-10 DS; 91.8M RMJ @ 2-4, 7-11 DS; 92.5M RFJ @ 9-12 DS; 93.3M RFJ @ 9-3 DS; 94.1M RFJ @ 9-3 DS; 94.8M RMJ @ 9-5 DS; 95.6M RFJ @ 8-5 DS; 96.4M RFJ @ 8-3 DS; 96.5M DEG @ 12 DS; 97.1M RFJ @ 8-3 DS; 98.0M RFJ @ 9-4 DS; 98.7M RFJ @ 8-4 DS; 99.5M RMJ @ 11, 1-5 DS; 100.3M RFJ @ 8-11, 2-4 DS; 100.7M DEG @ 12 DS; 101.0M RFJ @ 11-4 DS; 101.7M RMJ @ 9-5 DS; 102.5M RFJ @ 8-4 DS; 103.4M RMJ @ 7-4 DS; 104.9M RFJ @ 8-4 DS; 105.6M RFJ @ 8-2 DS; 106.4M RMJ @ 8-2 DS; 107.2M RMJ @ 8-2 DS; 107.6M RM(CN) @ 2-4 DS; 108.0M RFJ @ 9-4 DS; 108.7M RFJ @ 9-3 DS; 109.5M RFJ @ 8-3 DS; 110.2M RFJ @ 9-1 DS; 111.0M RFJ @ 9 DS; 111.8M RFJ @ 9 DS; 112.6M RFJ @ 8-3 DS; 113.4M RFJ @ 8-3 DS; 114.2M RFJ @ 8-11, 2 DS; 114.4M RF(CN) @ 10 DS; 115.0M RFJ @ 11-4 DS; 115.7M RFJ @ 11-3 DS; 116.6M RFJ @ 10-4 DS; 117.2M RFJ @10, 12-4 DS; 118.0M RFJ @ 8-4 DS; 118.8M RFJ @ 2-4 DS; 119.6M RFJ @ 9, 2-4 DS; 120.4M RFJ @ 9, 1-3 DS;	1		2	26.7M ELJ @ 8 DS; 53.3M EL(CN) @ 4 DS;				
12	2						1	85.8M CNI @ 2 US;	1.0	69.2M RFJ @ 8 US; 71.0M RFJ @ 8 US; 72.9M RFJ @ 3 US; 74.6M RFJ @ 4, 9 US; 76.5M RFJ @ 3-5 US; 78.3M RFJ @ 3-5 US; 80.2M RFJ @ 9 US; 81.9M RFJ @ 5 US;	1			87.2-88.5m DE @ 6:00 US;				
13	0								1.0	0.0M RMJ @ 5-8 DS; 4.4M RFJ @ 4 DS; 8.3M RFJ @ 4 DS; 9.1M RFJ @ 4 DS; 9.8M RMJ @ 3-6 DS; 10.6M RFJ @ 4-8 DS; 12.1M RFJ @5 DS; 13.6M RFJ @ 4-6 DS; 30.0M RTJ @ 4 DS;							3.2	EPR FROM 0.0-3.2m DS
14	6						5	11.8M CNI @ 12 DS; 27.0M CNI @ 12 DS; 41.3M CNI @ 12 DS; 59.0M CNI @ 2 DS; 109.5M CNI @ 11 DS;	1.0	11.3M RFJ @ 8 DS; 11.8M RM(CN) @ 8-1 DS; 12.8M RFJ @ 8 DS; 17.9M RFJ @ 4 DS; 23.0 RFJ @ 12, 4 DS; 23.7M RFJ @ 4, 7 DS; 23.9M RF @ 8, 12 DS; 24.5M RFJ @ 7-12, 5 DS; 24.9M RF @ 9 DS; 26.0 RFJ @ 9 DS; 27.0M RM(CN) @ 7-5 DS; 27.6M RFJ @ 8, 1 DS; 28.1M RF @ 12 DS; 28.4M RFJ @ 8-2 DS; 29.1M RFJ @ 7-1 DS; 30.0 RFJ @ 12 DS; 30.7M RFJ @ 8 DS; 32.3M RFJ @ 8, 3 DS; 33.0 RFJ @ 8-3 DS; 33.8M RFJ @ 10-3 DS; 34.6M RFJ @ 2-4 DS; 35.4M RFJ @ 12, 4 DS; 37.8M RFJ @ 9 DS; 38.5M RFJ @ 9-3 DS; 39.3M RFJ @ 9-2 DS; 40.1M RFJ @ 9-12 DS; 41.3M RM(CN) @ 8-3 DS; 43.1M RFJ @ 9-3 DS; 43.9M RFJ @ 2 DS; 44.7M RFJ @ 1-3 DS; 45.5M RFJ @ 9-11 DS; 46.3M RFJ @ 9, 2-3 DS; 46.4M RF(CN) @ 8 DS; 47.8M RFJ @ 10-4 DS; 48.6M RFJ @ 8-10, 2-4 DS; 49.4M RMJ @ 1-5 DS; 50.2M RFJ @ 2-4 DS; 50.9M RFJ @ 9-12 DS; 51.7M RFJ @ 9-12 DS; 52.5M RFJ @ 9, 3 DS; 53.3M RFJ @ 10-3 DS; 54.1M RFJ @ 8-10, 4 DS; 54.8M @ 9-4 DS; 55.6M RMJ @ 7-10, 2-5 DS; 55.9M RF @ 8 DS; 56.4M RFJ @ 8-10, 12 DS; 56.6M RF @ 3 DS; 57.2M RTJ @ 2 DS; 57.3M RM(CN) @ 10-4 DS; 57.9M RFJ @ 4 DS; 58.7M RFJ @ 8-3 DS; 59.0M RM(CN) @ 2 DS; 59.0M RF @ 8-10 DS; 59.5M RFJ @ 8, 2 DS; 60.2M RFJ @ 8, 4 DS; 61.0M RFJ @ 8-10, 2-4 DS; 61.8M RFJ @ 7-9, 2-4 DS; 63.4M RFJ @ 3-5 DS; 64.3M RF @ 9 DS;	1	11.5	57	4.5M EL(CN) @ 8 DS; 5.1M ELJ @ 2-4 DS; 5.4M EL @ 8-11 DS; 6.6M ELJ @ 4 DS; 7.3M ELJ @ 8 DS; 9.9M ELJ @ 8 DS; 10.1M ELJ @ 4 DS; 11.8M ELJ @ 3-4 DS; 13.6M ELJ @ 3-5, 8-10 DS; 15.1M ELJ @ 7-10 DS; 16.7 ELJ @ 1-4, 8-9 DS; 17.5M ELJ @ 4, 8 DS; 17.9M ELJ @ 4 DS; 18.3M ELJ @ 2-4 DS; 19.0 ELJ @ 7-5 DS; 19.8M ELJ @ 7-9, 4 DS; 20.3M EMJ @ 7-5 DS; 21.4M ELJ @ 7-10 DS; 22.2M ELJ @ 8-12 DS; 23.7M EMJ @ 7-5 DS; 24.9M EL @ 8-10 DS; 25.3M ELJ @ 8-11 DS; 26.0M ELJ @ 7-5 DS; 26.5M EL @ 9 DS; 27.0M EL(CN) @ 2-5 DS; 27.6M ELJ @ 12-4 DS; 28.4M ELJ @ 8-4 DS; 29.1M ELJ @ 7-11 DS; 30.7M ELJ @ 3 DS; 32.5M EL(CN) @ 8 DS; 33.0 ELJ @ 2-4 DS; 34.6M ELJ @ 8-11 DS; 37.4-39.7M EL@ 8, 4 DS; 39.8-41.3M EM @ 8, 4 DS; 42.5M EL @ 9, 3 DS; 43.6M EL @ 4, 9 DS; 43.9M ELJ @ 9-12 DS; 50.2M ELJ @ 2 DS; 50.8-52.4M EL @ 4, 8 DS; 52.5M ELJ @ 9-4 DS; 54.1M ELJ @ 9-11 DS; 57.3M EL(CN) @ 2-4 DS; 61.2M ELJ @ 7-9 DS; 64.1M ELJ @ 8 DS; 65.7M ELJ @ 8-4 DS; 68.1M ELJ @ 2-4 DS; 70.4M ELJ @ 8-3 DS; 71.9M ELJ @ 5-7 DS; 77.6M EL(CN) @ 7-9 DS; 82.9M EMJ @ 4-5, 7-10 DS; 84.1M EL @ 8-10 DS; 84.4M ELJ @ 8-4 DS; 85.2M ELJ @ 12-5 DS; 86.7M ELJ @ 8-4 DS; 89.9M ELJ @ 8-4 DS; 90.9M EL @ 12 DS; 91.0M EL @ 1-3 DS; 91.4M ELJ @ 8-4 DS; 92.2M ELJ @ 8-11 DS; 92.7M EL @ 12-3 DS; 94.6M ELJ @ 2-4 DS; 101.6M ELJ @ 8-12 DS; 109.5M EL(CN) @ 9 DS; 112.5M ELJ @ 8-10, 2 DS; 114.1M ELJ @ 8-4 DS; 114.8M ELJ @ 4, 9-11 DS; 115.6M ELJ @ 8-2 DS; 116.4M ELJ @ 2 DS; 117.6M ELJ @ 8-4 DS;				
15	5						1	47.1M CNI @ 9 DS;	1.0	9.6M RFJ @ 4 DS; 11.2M RFJ @ 4, 8 DS; 11.9, RFJ @ 4, 8 DS; 17.4M RFJ @ 9-3 DS; 17.5M RM(CN) @ 7-11 DS; 46.8M RF @ 8 DS; 47.5M RM(CN) @ 9 DS; 2.2M RM @ 1-5 DS;							1.2	EPR FROM 47.0-48.2m DS
16	8						2	13.4M CNI @ 10 DS; 88.0M CNI @ 10 DS;	1.0	1.5M RFJ @ 11 DS; 2.0-3.2M EM @ 10, 2 DS; 3.3-4.8M EM @ 9-3 DS; 4.9M ELJ @ 8, 12-2 DS; 7.1M EL @ 12 DS; 29.5M RM(CN) @ 10 DS; 36.5M RF(CN) @ 10 DS; 53.8M RF(CN) @ 11 DS; 68.5M RF(CN) @ 10 DS; 68.9M RFJ @ 2 DS;	1		4	36.5M EL(CN) @ 12-3 DS; 53.8M EL(CN) @ 12-4 DS; 68.5M EL(CN) @ 8-10 DS; 89.3M EMJ @ 8-4 DS;				
17	12						1	25.7M CNI @ 2 DS;			1		13	0.5M EL @ 9-1 DS; 11.4M ELJ @ 11 DS; 18.5M ELJ @ 11 DS; 20.9M ELJ @ 11 DS; 25.7M EM(CN) @ 3-6 DS; 38.8M ELJ @ 3 DS; 39.5M ELJ @ 8-12, 4 DS; 52.1M ELJ @ 9 DS; 54.4M ELJ @ 8-12 DS; 58.4-60.0M ELJ @ 9-3 DS; 60.7M ELJ @ 10 DS; 61.5M ELJ @ 8 DS; 64.6M ELJ @9-3 DS; 65.1M EL @ 10, 2 DS; 77.8M ELJ @ 8-11 DS;			1.6	EPR FROM 58.4-60.0m DS
18	11						2	48.2M CNI @ 2 DS; 60.5M CNI @ 10 DS;	1.0	39.9M RFJ @ 8-4 DS; 40.6M RFJ @ 1-4 DS; 41.0M RF(CN) @ 9-12 DS; 42.2M RFJ @ 1-4, 8 DS; 43.0M RFJ @ 11-1 DS; 43.8M RFJ @ 3 DS; 48.2M RF(CN) @ 1 DS; 49.2M RFJ @ 8, 1-4 DS;	1		48	2.9M ELJ @ 9-11 DS; 3.6M ELJ @ 8 DS; 4.4M ELJ @ 9-3 DS; 5.9M ELJ @ 7-11 DS; 6.7M ELJ @ 7-5 DS; 7.6M ELJ @ 8-11 DS; 8.4M EM(CN) @ 7-10 DS; 11.4M ELJ @ 8 DS; 12.2M ELJ @ 8-11 DS; 13.0M ELJ @ 8 DS; 16.9M ELJ @ 8 DS; 17.7 ELJ @ 8-11 DS; 18.5M ELJ @ 7-10 DS; 19.3M ELJ @ 8-10 DS; 20.8M ELJ @ 4 DS; 21.6M ELJ @ 7-5 DS; 22.1M ELJ @ 3-4 DS; 22.9M ELJ @ 8-11 DS; 23.7M ELJ @ 12-4 DS; 24.5M ELJ @ 2-4, 8 DS; 25.2M ELJ @ 4, 8 DS; 26.0M ELJ @ 3-4, 9 DS; 26.8M ELJ @ 2-3, 7-10 DS; 29.3M EL @ 8-3 DS; 30.5M ELJ @ 4, 8 DS; 31.2M ELJ @ 8-4 DS; 36.7M ELJ @ 8 DS; 37.5M ELJ @ 4, 8 DS; 38.3M ELJ @ 1-5, 7-10 DS; 39.1M ELJ @ 7-9 DS; 40.6M ELJ @7 DS; 41.0 EL(CN) @ 2-5, 7-9 DS; 41.4M ELJ @ 4 DS; 42.2M ELJ @ 4 DS; 42.9M ELJ @ 8 DS; 43.6M EL @ 1-4 DS; 43.8M ELJ @ 5, 7 DS; 44.6M ELJ @ 4, 8 DS; 44.8M EL(CN) @ 8 DS; 45.3M ELJ @ 5, 7-9 DS; 46.1M ELJ @ 5, 7-9 DS; 46.8M ELJ @ 8 DS; 52.3M ELJ @ 8 DS; 53.1M ELJ @ 5, 7-9 DS; 53.9M ELJ @ 4 DS; 59.6M EL(CN) @ 8 DS; 60.6M EL(CN) @ 12-5 DS; 60.9M ELJ @ 8-4 DS; 63.2M ELJ @ 8 DS; 85.3M EL(CN) @ 7-9 DS;			1.5	EPR FROM 0.5-2.0m DS
19	13						3	20.7M CNI @ 12 DS; 43.5M CNI @ 11 DS; 45.7M CNI @ 2 DS;	1.0	88.3M RFJ @ 9-3 DS; 93.0M RFJ @ 1-4 DS; 93.8M RFJ @ 2-3 DS; 98.7M RF(CN) @ 9 DS; 105.5M RFJ @ 8-10 DS; 106.3M RFJ @ 3 DS;	1		36	0.0M EL @ 8-4 DS; 9.8M EL @ 8 DS; 10.3 ELJ @ 4 DS; 16.7M ELJ @ 4 DS; 17.4M ELJ @ 5 DS; 18.2M ELJ @ 5, 7-10 DS; 19.0M ELJ @ 1-3, 10 DS; 20.5 EM @ 7-5 DS; 25.1M EL(CN) @ 9-11 DS; 27.4M ELJ @ 9-11 DS; 29.2M EL(CN) @ 2-4 DS; 31.4M ELJ @ 8 DS; 33.7M ELJ @ 9 DS; 34.5M ELJ @ 2 DS; 36.1M ELJ @ 3 DS; 36.8M ELJ @ 12 DS; 37.6M ELJ @ 2 DS; 38.4M ELJ @ 9 DS; 45.7M EL(CN) @ 2 DS; 52.4M ELJ @ 2 DS; 53.3M ELJ @ 2 DS; 54.8M ELJ @ 10 DS; 63.6M EL(CN) @ 2 DS; 68.0M ELJ @ 1-4 DS; 68.8M ELJ @ 8-11 DS; 71.9M ELJ @ 3 DS; 72.6M ELJ @ 2-3 DS; 75.1M ELJ @ 9-11 DS; 83.6M ELJ @ 7-11 DS; 86.7M ELJ @ 11, 1-4 DS; 87.5M ELJ @ 9-1 DS; 88.3M ELJ @ 8-3 DS; 89.1M ELJ @ 9-12 DS; 89.9M ELJ @ 10 DS; 90.6M ELJ @ 1-3 DS; 93.0M ELJ @ 10 DS; 93.8M ELJ @ 9 DS; 96.1M ELJ @ 4 DS; 101.8M ELJ @ 4 DS;				
20	2						2	2.0M CNI @ 2 DS; 19.6M CNI @ 2 US;			1		13	1.2M ELJ @ 4, 8-10 DS; 2.0M EL(CN) @ 2 DS; 5.0M ELJ @ 4, 8-10 US; 5.8M ELJ @ 3-4 US; 6.5M ELJ @ 2-5, 8 US; 11.3M ELJ @ 8 US; 12.8M ELJ @ 8-3 US; 13.6M ELJ @ 8-4 US; 14.4M ELJ @ 4, 8-12 US; 15.2M ELJ @ 8, 12-5 US; 17.3M EL @5 US; 17.5M ELJ @ 8-5 US; 18.1M EL(CN) @ 4 DS; 19.6M EL(CN) @ 1-5, 9 US; 21.2M EL @ 12-3 US;				
21	0								1.0	54.9M DEG @ 10-2 DS; 56.3M DEG @ 10-1 DS; 57.8-59.5M DEG @ 11-1 DS; 63.6-66.7M DEG @ 11-1 DS;								
22	6						1	2.0M CNI @ 3 DS;			1	14.0	36	1.5M DE @ 6 DS; 2.1M EL(CN) @ 7-9 DS; 10.1M ELJ @ 4 DS; 11.6M ELJ @ 8-11 DS; 12.4M ELJ @ 9-11 DS; 13.2M ELJ @ 11-1 DS; 16.3M ELJ @ 8 DS; 21.0M ELJ @ 3 DS; 22.5M ELJ @ 9-11 DS; 23.3M ELJ @ 10 DS; 24.1M EMJ @ 9-4 DS; 24.9M ELJ @ 12-3 DS; 28.1M ELJ @ 7-10 DS; 28.8M ELJ @ 4 DS; 31.2M ELJ @ 2-4 DS; 32.7M ELJ @ 2 DS; 34.2M ELJ @ 2-4 DS; 35.1M EL(CN) @ 8-4 DS; 39.7M ELJ @ 11-3 DS; 39.9M EL @ 2 DS; 40.4M ELJ @ 8-4 DS; 41.2M ELJ @ 9 DS; 41.5M EL @ 12-4 DS; 42.0M ELJ @ 8-11 DS; 42.8M ELJ @ 8-4 DS; 43.2M EL @8 DS; 43.4M EL @ 4 DS; 43.6M ELJ @ 3 DS; 43.9M EL @ 3-5, 7 DS; 44.2M ELJ @ 4 DS; 44.4M ELJ @ 12-3 DS; 44.6M EL @ 2-4 DS; 44.9M EL @ 8-2 DS; 45.0M EL @ 4 DS; 45.1M ELJ @ 10-2 DS; 46.0M ELJ @ 10 DS; 46.5M EL @ 5 DS; 46.7M ELJ @ 1-4, 8 DS; 47.0M EL @ 8-11 DS; 47.2M EL @ 1-5 DS; 47.5M ELJ @ 8-2 DS; 47.8M EL @ 10-12 DS; 47.9M EL @ 4 DS; 48.3M ELJ @ 8-4 DS; 49.1M ELJ @ 8-3 SD; 50.1M EL @ 9 DS; 50.7M ELJ @ 8-10 DS; 51.5M ELJ @ 3, 8-10 DS; 51.7M EL @ 12 DS; 59.3M ELJ @ 1-3 DS; 60.9M ELJ @ 1-4 DS; 67.9M ELJ @ 8-2 DS; 74.1M EL @ 4 DS;			0.9	EPR FROM 54.6-55.3m DS
23	3						3	10.3M CNI @ 10 DS; 47.4M CNI @ 11 DS; 92.2M CNI @ 10 DS;	1.0	91.8M DEG @ 9-2M DS; 93.9M DEG @ 10, 2 DS; 97.4-100.2M DEG @ 4, 8 DS; 100.3-102.7M DEG @ 9-3 DS; 104.8M DEG @ 12-2 DS; 117.7M DEG @ 12 DS;	1		19	3.7M ELJ @ 4 DS; 9.9M ELJ @ 9-3 DS; 10.3M EL(CN) @ 7-9 DS; 10.6M ELJ @ 8 DS; 12.8M EL @ 1-4 DS; 13.7M ELJ @ 8-3 DS; 16.1M ELJ @ 8-4 DS; 16.7M EL @ 8-4 DS; 19.0M EL @ 11 DS; 22.3M ELJ @ 10 DS; 23.0M ELJ @ 9 DS; 26.9M ELJ @ 8 DS; 27.7M ELJ @ 2-5, 7-9 DS; 28.4M ELJ @ 4 DS; 30.3M ELJ @ 2-4, 8 DS; 33.9M ELJ @ 7-9 DS; 42.5M ELJ @ 7-9 DS; 44.1M ELJ @ 2-4 DS; 44.9M ELJ @ 8-4 DS; 45.7M ELJ @ 8-4 DS; 47.3M ELJ @ 8-11 DS; 76.1M ELJ @ 8-4 DS;				

2018 Sewer Renewals by CIPP Lining, Contract 6, Bid Opportunity 183-2019

Appendix A - Repair Requirements

	Sewer Details					Manholes					Size					Pre-Lining Inspection	Lump Sum Anulus Grouting per Location		Patching			Removal of Intruding Connections		Removal Roots and Grease		Solid Debris Cutting / Other				Sewer Service Grouting - Man Entry for Sewers >750mm		External Point Repair (EPR) by Others	
	DWG	Sheet	Sewer Asset	Street Name	Location	Upstream	Depth	Downstream	Depth	Length	Height	Width	Shape	Flow Type	Material	Sewer Services	Anulus Grouting	Description	Patch Tender <=1m	Patch Tender >=1m	Description	Intrud Conn Tender	Description	Root Tender	Description	Tender 1st 3m	Tender >3m (m)	Tender at Joints	Description	Service Grouting	Description	Distance	Description
24	12094	24	S-MA50005717	WINAKWA RD	MH AT HEATHER RD TO 1ST MH W OF HEATHER RD	S-MH50004857	5.10	S-MH50004858	5.15	121.6	200		CIRCULAR	SANITARY	CO-CONCRETE	2						2	21.5M CNI @ 10 DS; 49.9M CNI @ 11 DS;	1.0	17.4M DEG @ 8, 4 DS; 18.1M DEG @ 9, 3 DS; 19.6-21.0M DEG @ 10, 2 DS; 26.2M DEG @ 10, 2 DS; 27.3M DEG @ 11-1 DS; 48.2-49.8M DEG @ 8 DS; 78.3M DEG @ 11 DS; 78.9M DEG @ 10-2 DS; 79.8-81.0M DEG @ 8-4 DS; 81.5-83.1M DEG @ 8-1, 2-4 DS; 83.1-85.8M @ 8-4 DS; 86.4-90.8M DEG @ 8-4 DS; 91.1M DEG @ 9, 3 DS; 91.8-95.8M DEG @ 10-2 DS; 95.8M DEG @ 11-1 DS;	1		3	42.4M ELJ @ 2-4 DS; 44.6M ELJ @ 8-11 DS; 65.1M ELJ @ 12-5 DS;				
25	12095	25	S-MA50006265	BETOURNAY ST	MH AT JUBINVILLE BY (W LEG) TO MH AT SPEERS RD	S-MH50005341	5.61	S-MH50004881	5.50	90.9	300		CIRCULAR	SANITARY	CO-CONCRETE	6						1	14.2M CNI @ 12 DS;	1.0	12.5M RFJ @ 8 DS; 48.9M RF(CN) @ 12 DS; 52.4M RFJ @ 8 DS; 53.2M EFJ @ 4, 8 DS; 60.7-62.2M DEG @ 1-2 DS; 67.9-67.9M DEG @ 11-1 DS; 78.7M DEG @ 1 DS; 84.3-85.7M DEG @ 11, 1 DS; 86.7M DEG @ 11, 1 DS;	1		8	21.6M ELJ @ 1-4 DS; 40.1M ELJ @ 8 DS; 41.7M ELJ @ 8 DS; 44.8M EL(CN) @ 3-4 DS; 46.3M ELJ @ 2, 4 DS; 48.9M EL(CN) @ 8-3 DS; 57.5M EL(CN) @ 2-4 DS; 65.7M ELJ @ 4 DS;				
26	12096	26	S-MA50006268	JUBINVILLE BY (W LEG)	1ST MH N OF JUBINVILLE BY (S LEG) TO MH AT BETOURNAY ST	S-MH50005344	4.08	S-MH50005341	5.61	64.0	200		CIRCULAR	SANITARY	CO-CONCRETE	9						5	3.0M CNI @ 2 DS; 4.2M CNI @ 2 DS; 4.4M CNI @ 11 DS; 56.3M CNI @ 2 DS; 59.9M CNI @ 11 DS;	1.0	41.9M RF(CN) @ 12 DS;	1		16	11.0M ELJ @ 4, 8 DS; 15.0M ELJ @ 12-4 DS; 17.3M ELJ @ 8-4 DS; 18.4M EL(CN) @ 4 DS; 29.8M ELJ @ 2-4, 8-10 DS; 30.6M ELJ @ 2-5 DS; 31.5M ELJ @ 5, 7-10 DS; 32.0M EL @ 8-10 DS; 33.7M ELJ @ 7-10, 12-5 DS; 34.5M ELJ @ 8-4 DS; 35.4M EMJ @ 8-4 DS; 36.1M ELJ @ 2-4 DS; 37.7M ELJ @ 4, 8 DS; 41.5M EL @ 12-2 DS; 41.9M EL(CN) @ 9-3 DS; 43.2M ELJ @ 10 DS; 51.1M ELJ @ 10 DS; 56.3M EL(CN) @ 2-4 DS;				
27	12097	27	S-MA50006335	NORTHUMBRIA BY (N LEG)	1ST MH W OF NORTHUMBRIA BY (E LEG) TO MH AT NORTHUMBRIA BY (E LEG)	S-MH50005400	3.00	S-MH50005401	3.20	41.8	250		CIRCULAR	SANITARY	CO-CONCRETE	6								1.0	17.6M RFJ @ 3 DS; 25.9M RFJ @ 8-3 DS;	1		6	4.1M EL(CN) @ 3-5 DS; 17.2M EL @ 1-3 DS; 17.3M EL(CN) @ 2-5 DS; 28.6M EL(CN) @ 8 DS; 29.0M ELJ @ 4, 8 DS; 32.8M EMJ @ 7-5 DS; 39.0M ELJ @ 8-10 DS;				
28	12098	28	S-MA50006393	NEWARK RD	1ST MH N OF COTTONWOOD RD TO MH AT COTTONWOOD RD	S-MH50005451	1.81	S-MH50005452	2.05	75.9	375		CIRCULAR	STORM	CO-CONCRETE	0										1		3	27.1M ELJ @ 5 DS; 28.4M ELJ @ 6 DS; 49.0M ELJ @ 6-7 DS;				
29	12099	29	S-MA50006058	CANBERRA RD (S LEG)	1ST MH W OF CANBERRA RD (E LEG) TO 2ND MH W OF CANBERRA RD (E LEG)	S-MH50004824	3.40	S-MH50004832	3.93	87.2	250		CIRCULAR	SANITARY	CO-CONCRETE	15								1.0	22.5-25.4M DEG @ 8, 4 DS; 25.5-27.0M DEG @ 10, 2 DS; 27.1-29.6M DEG @ 9-3 DS; 30.2M DEG @ 10-2 DS; 32.5M DEG @ 11-1 DS; 81.0M RF(CN) @ 2 DS;	1		25	2.1M ELJ @ 10-3 DS; 4.0M ELJ @ 8-4 DS; 7.6M ELJ @ 4 DS; 11.3M ELJ @ 1-5, 8 DS; 15.0M ELJ @ 7-11 DS; 16.8M ELJ @ 8-4 DS; 18.8M ELJ @ 8-12 DS; 20.5M ELJ @ 1-5 DS; 22.3M ELJ @ 12-4 DS; 26.0M ELJ @ 12-3 DS; 51.8M ELJ @ 10-2 DS; 53.7M ELJ @ 1-4 DS; 55.5M ELJ @ 12-5 DS; 59.1M ELJ @ 4 DS; 61.1M ELJ @ 7-11, 2-5 DS; 62.8M ELJ @ 2-4 DS; 64.6M EMJ @ 7-4 DS; 71.9M ELJ @ 1-4 DS; 72.3M EL(CN) @ 6-9 DS; 73.7M ELJ @ 1-4, 8 DS; 76.3M ELJ @ 7-5 DS; 77.5M ELJ @ 4 DS; 80.6M ELJ @ 2-4 DS; 83.5M ELJ @ 2-4 DS; 84.8M ELJ @ 8-11, 1-4 DS;				
30	12100	30	S-MA50005602	CONIFER CR (W LEG)	1ST MH N OF CONIFER CR (S LEG) TO 2ND MH N OF CONIFER CR (S LEG)	S-MH50004779	4.15	S-MH50004780	4.70	110.1	200		CIRCULAR	SANITARY	CO-CONCRETE	14						1	9.2M CNI @ 11 DS;	1.0	1.8M DEG @ 12 DS; 3.6M DEG @ 12 DS; 6.9M DEG @ 12 DS; 8.3M DEG @ 12 DS; 17.2M DEG @ 11-1 DS; 19.1M DEG @ 12 DS; 57.9M DEG @ 10, 2 DS; 58.9-61.6M DEG @ 9-3 DS; 65.3M DEG @ 10, 2 DS; 67.0M DEG @ 11-1 DS; 73.4M DEG @ 11-1 DS; 74.7M DEG @ 10, 2 DS; 76.6M DEG @ 12-2 DS; 98.2, DEG @ 2 DS; 99.4M DEG @ 11, 1-2 DS;	1		10	6.6M ELJ @ 1-4 DS; 9.2M EL(CN) @ 7-3 DS; 12.9M ELJ @ 7-10 DS; 43.0M ELJ @ 8-10 DS; 43.5M ELJ @ 8-3 DS; 45.3M ELJ @ 1-4 DS; 50.7M ELJ @ 8-2 DS; 94.9M ELJ @ 8-4 DS; 95.8M ELJ @ 10-12 DS; 109.2M ELJ @ 8-4 DS;				
31	12101	31	S-MA50005185	CRESTWOOD CR (W LEG)	2ND MH N OF CRESTWOOD CR (S LEG) TO 3RD MH N OF CRESTWOOD CR (S LEG)	S-MH50004417	4.10	S-MH50004419	4.15	62.9	250		CIRCULAR	SANITARY	CO-CONCRETE	8						2	4.9M CNI @ 2 DS;7.0M CNI @ 10 DS;	1.0	7.0M RF(CN) @ 9 DS; 16.7M RFJ @ 8 DS;	1		24	4.9M EL(CN) @ 4 DS; 7.0M EL(CN) @ 4 DS; 7.4M ELJ @ 8 DS; 11.3M ELJ @ 8-9 DS; 12.0M ELJ @ 3-5, 7-9 DS; 13.7M ELJ @ 8-11 DS; 14.4M ELJ @ 7-10 DS; 16.0M ELJ @ 2-4 DS; 16.7M ELJ @ 2-5 DS; 17.5M ELJ @ 8-5 DS; 19.9M ELJ @ 4 DS; 20.5M ELJ @ 2-4 DS; 23.6M ELJ @ 2-4, 8 DS; 24.3M ELJ @ 5 DS; 26.8M ELJ @ 7-9, 4 DS; 28.3M ELJ @ 3 DS; 31.4M ELJ @ 10 DS; 39.2M ELJ @ 4 DS; 44.6M ELJ @ 3-4 DS; 46.9M ELJ @ 9, 1-4 DS; 50.0M ELJ @ 1-3 DS; 53.2M ELJ @ 8-3 DS; 54.8M ELJ @ 8-4 DS; 56.3M ELJ @ 8-10, 1 DS;				
32	12102	32	S-MA50005170	CRESTWOOD CR (S LEG)	4TH MH E OF CRESTWOOD CR (W LEG) TO MH AT AUTUMNWOOD DR	S-MH50004407	4.85	S-MH50004379	4.90	83.3	250		CIRCULAR	SANITARY	CO-CONCRETE	9						5	1.3M CNI @ 2 DS; 14.9M CNI @ 10 DS; 16.3M CNI @ 2 DS; 47.8M CNI @ 10 DS; 49.1M CNI @ 12 DS;	1.0	46.0-47.3M DEG @ 11-1 DS;	1		28	0.7M ELJ @ 4 DS; 1.3M EL(CN) @ 4 DS; 3.1M ELJ @ 10 DS; 4.8M ELJ @ 8-10 DS; 5.4M ELJ @ 2-4 DS; 6.2M ELJ @ 11-3 DS; 7.0M ELJ @ 11 DS; 7.7M ELJ @ 8-12, 3 DS; 8.5M ELJ @ 11, 1-3 DS; 9.3M ELJ @ 8-10, 1-3 DS; 10.1M ELJ @ 8-4 DS; 10.8M ELJ @ 8-10, 2-4 DS; 12.3M ELJ @ 2-3 DS; 13.1M ELJ @ 10 DS; 16.3M ELJ @ 3 DS; 17.9M ELJ @ 1-4 DS; 18.6M ELJ @ 8-4 DS; 20.3M ELJ @ 11-4 DS; 37.2M ELJ @ 12-3 DS; 38.8M ELJ @ 2-4 DS; 40.4M ELJ @ 4 DS; 43.4M ELJ @ 2 DS; 44.2M ELJ @3 DS; 45.0M ELJ @ 2-4 DS; 55.8M ELJ @ 2 DS; 57.8M EL(CN) @ 10 DS; 62.8M ELJ @ 9-2 DS; 65.2M ELJ @ 9-2 DS;				
33	12103	33	S-MA50005151	CRESTWOOD CR	1ST MH W OF SPEERS RD TO MH AT DURHAM BY (E LEG)	S-MH50004380	3.75	S-MH50004394	4.08	75.1	250		CIRCULAR	SANITARY	CO-CONCRETE	6						1	23.5M CNI @ 11 DS;	1.0	43.9M DEG @ 10 DS;	1		8	3.1M OB(GASKET) @ 9-1 DS; 3.4M EM(CN) @ 3-4 DS; 8.5M ELJ @ 5, 7 DS; 12.2M ELJ @ 7-5 DS; 14.0M EMJ @ 9-4 DS; 15.9M ELJ @ 8-4 DS; 21.4M ELJ @ 10-2 DS; 23.5M OB(CN) @ 6-9 DS;				
34	12104	34	S-MA50002232	EVERGLADE PL	1ST MH N BEAVERHILL(E LEG)TO BEAVERHILL(E LEG)	S-MH50001872	3.45	S-MH50001871	4.75	42.7	250		CIRCULAR	SANITARY	CO-CONCRETE	2								1.0	35.0M RFJ @ 6 DS;	1		3	18.1M ELJ @ 8 DS; 26.7M EL @ 7-5 DS; 33.5M OBJ (TOY) @ 4-6 DS; 42.1M EMJ @ 7-5 DS;				
35	12105	35	S-MA50002194	ROCKCLIFFE RD(E LEG)	2ND S ROCKCLIFFE(N LEG)3RD S ROCKCLIFFE(N LEG)	S-MH50001841	2.70	S-MH50001842	2.83	46.3	250		CIRCULAR	SANITARY	CO-CONCRETE	4										1		4	17.7M EL(CN) @ 8-10 DS; 34.0M EL(CN) @ 4 DS; 34.6M EL(CN) @ 8 DS; 45.5M ELJ @ 8-4 DS;				
36	12106	36	S-MA40005553	CORDITE RD (NPL)	1ST MH W OF LANIGAN ST TO 2ND MH W OF LANIGAN ST	S-MH40005044	3.75	S-MH40005045	4.02	104.5	250		CIRCULAR	SANITARY	CO-CONCRETE	3						1	100.8M CNI @ 2 DS;			1	43.8	14	0.0-13.4M EL @ 4, 8 DS; 13.5M ELJ @ 9-3 DS; 13.6M EL @ 4, 8 DS; 14.7M ELJ @ 8-4 DS; 14.9-30.7M ELJ @ 4, 8-9 DS; 31.5M EL @ 4, 8 DS; 32.4M ELJ @ 7-5 DS; 33.2M ELJ @ 3-5, 7-8 DS; 34.5M ELJ @ 4, 8 DS; 35.6M ELJ @ 8-2 DS; 35.8-37.9M EL @ 4, 8 DS; 38.2-45.4M EL @ 4, 8 DS; 45.4M ELJ @ 8-4 DS; 45.7M EL @ 4, 8 DS; 46.5M EL @ 1-5 DS; 46.8-48.1M EL @ 4, 8 DS; 48.2M EL(CN) @ 4 DS; 48.9M EL @ 4, 8 DS; 52.0M EL @ 8 DS; 59.8M ELJ @ 8-4 DS; 59.9M ELJ @ 8-4 DS; 69.5M ELJ @ 8-10 DS; 71.9M EL @ 3 DS; 75.8M ELJ @ 9-4 DS; 103.8M ELJ @ 8-4 DS;				
37	12107	37	S-MA40005584	VULCAN AV	6TH MH E OF GATEWAY RD TO MH AT BRUNSWICK ST	S-MH40005075	5.50	S-MH40005074	6.62	121.9	250		CIRCULAR	SANITARY	CO-CONCRETE	1										1		6	3.9M ELJ @ 9 DS; 63.5M ELJ @ 8-10 DS; 68.4M ELJ @ 8, 4 DS; 78.9M ELJ @ 8-11, 2-4 DS; 92.9M EL(CN) @ 10-3 DS; 94.1M ELJ @ 9-12 DS; 117.4M EL @ 5, 7 DS;				
38	12108	38	S-MA40002620	IAN PL	MH AT EDISON AV TO 1ST MH S OF EDISION AV	S-MH40002368	2.56	S-MH40005566	2.34	79.1	375		CIRCULAR	COMBINED	CO-CONCRETE	7								1.0	13.0M RFJ @ 2 DS; 14.4M RFJ @ 10-4 DS; 16.8M RFJ @ 4 DS; 20.5M RFJ @ 8 DS; 21.1M RM @ 7-9 DS; 21.7M RFJ @ 9, 2-4 DS; 22.9M RFJ @ 8-3 DS; 24.2M RFJ @ 2 DS; 25.5M RFJ @ 2-4 DS; 26.1M RF @ 12 DS; 26.7M RFJ @ 10-2 DS; 27.9M RFJ @ 11, 2 DS; 29.1M RFJ @ 8-4 DS; 29.7M RF @ 12 DS; 30.4M RFJ @ 10-2 DS; 31.5M RFJ @ 9-3 DS; 32.8M RFJ @ 11-7 DS; 34.0M RFJ @ 7-2, 5 DS;34.8M RFJ @ 12 DS; 35.3M RFJ @ 9-3 DS; 36.5M RFJ @ 2-4, 8 DS; 37.8M RFJ @ 2 DS; 38.4M RF @ 12 DS; 39.0M RFJ @10-2 DS; 40.2M RFJ @ 11-2 DS; 41.4M RFJ @ 2-4, 8 DS; 45.1M RFJ @ 2-4, 10 DS; 46.4M RFJ @ 4, 9 DS;47.1M RF @ 1 DS; 47.6M RFJ @ 9-3 DS; 48.2M RF @ 1 DS; 48.8M RFJ @ 4, 8 DS; 51.3M RFJ @ 9 DS; 52.5M RFJ @ 3, 10 DS; 52.8M RF(CN) @ 10 DS; 71.1M RFJ @ 8 DS; 72.2M RFJ @ 4, 8 DS; 73.5M RFJ @ 9 DS; 74.7M RFJ @ 3, 9 DS; 77.2M RFJ @ 9 DS; 77.6M RF(CN) @ 10 DS;	1	1.0	39	8.0M ELJ @ 9 DS; 11.8M ELJ @ 4 DS; 15.5M ELJ @ 4, 8 DS; 16.8M ELJ @ 4 DS; 20.5M ELJ @ 8 DS; 20.8M EL(CN) @ 10-12 DS; 21.7M ELJ @ 9 DS; 22.9M ELJ @ 3, 8 DS; 24.2M ELJ @ 8, 4 DS; 25.4M ELJ @ 8 DS; 26.7M ELJ @ 4, 7-9 DS; 27.9M ELJ @ 4, 7-9 DS; 29.1M ELJ @ 4, 8 DS; 30.4M ELJ @ 4, 8 DS; 31.5M ELJ @ 5-9 DS; 32.0M DE @ 7 DS; 32.8M ELJ @4-7 DS;34.0M ELJ @ 4-5, 7-9 DS; 35.3M ELJ @ 5-8 DS; 41.4M ELJ @ 4, 8 DS; 46.4M ELJ @ 3, 10 DS; 47.6M ELJ @ 4, 8-10 DS; 48.8M ELJ @ 4, 9-11 DS; 50.0M ELJ @ 10-4 DS; 51.3M ELJ @ 10 DS; 52.5M ELJ @ 10-3 DS; 53.8M ELJ @ 9-3 DS; 54.9M ELJ @ 9-3 DS; 55.6M EL @ 10-1 DS; 56.2M ELJ @ 9-3 DS; 57.5M ELJ @ 9-4 DS; 57.8M EL @ 10-2 DS; 58.7M ELJ @ 9-4 DS; 59.8M ELJ @ 9-3 DS; 61.1M ELJ @ 9-3 DS; 61.4M EL @ 9-3 DS; 62.4M ELJ @ 9-3 DS; 63.6M ELJ @ 9-3 DS; 64.9M ELJ @ 2-3 DS; 66.1M ELJ @ 2-3 DS; 67.4M ELJ @ 10, 3 DS; 74.7M ELJ @ 2-4, 9 DS; 77.2M ELJ @ 4 DS;				
39	12109	39	S-MA40002614	EDISON AV	MH AT IAN PL TO 1ST MH W OF IAN PL	S-MH40002368	2.56	S-MH40002367	2.58	112.2	300		CIRCULAR	COMBINED	CI-CAST IRON	14						1	14.5M CNI @ 2 DS;	1.0	20.1M RF @ 9 DS; 20.9M RFJ @ 9 DS; 25.2M EL(CN) @ 2 DS; 52.0M RFJ @ 9 DS;	1		6	19.8M ELJ @ 3 DS; 23.5M ELJ @ 4 DS; 55.7M ELJ @ 8 DS; 74.6M ELJ @ 3-5 DS; 88.2M EL(CN) @9 DS; 108.0M ELJ @ 4 DS;				
40	12110	40	S-MA40002973	SOUTHWELL RD	MH AT GROUSE PL TO MH AT SOUTHWELL RD NW LEG	S-MH40002686	3.42	S-MH40002685	4.32	88.4	250		CIRCULAR	SANITARY	CO-CONCRETE	11						1	79.6M CNI @ 10 DS;			1		7	20.3M EL(CN) @ 9 DS; 30.2M ELJ @ 8-11 DS; 31.7M ELJ @ 9-11 DS; 33.6M EL(CN) @ 4 DS; 65.6M EL(CN) @ 8 DS; 79.6M EL(CN) @ 3-5, 7-9 DS; 87.9M ELJ @ 8-4 DS;				
41	12111	41	S-MA40002976	SOUTHWELL RD NW LEG	MH AT SOUTHWELL RD SW LEG TO MH AT MANTHORNE AV	S-MH40002685	4.32	S-MH40002760	4.10	117.1	250		CIRCULAR	SANITARY	CO-CONCRETE	9						4	27.1M CNI @ 10 DS; 60.4M CNI @ 10 DS; 75.6M CNI @ 2 DS; 76.4M CNI @ 10 DS;	1.0	52.9M DEG @ 4, 8 DS;	1		10	12.1M EL(CN) @ 8-11 DS; 49.3M ELJ @ 4 DS; 56.1-58.7M EL @ 4, 8 DS; 60.3M EL(CN) @ 8 DS; 67.9M ELJ @ 8-11 DS; 75.6M EL(CN) @ 4, 9 DS; 76.4M EL(CN) @ 9 DS; 80.7M ELJ @ 4, 8 DS; 101.5M ELJ @ 9-3 DS; 109.5M ELJ @ 8-3 DS; 113.4M ELJ @ 8-4 DS;				
42	12112	42	S-MA40003038	MANTHORNE AV	MH AT WYNYARD BY TO MH AT SUNNY HILLS RD	S-MH40002760	4.05	S-MH40002759	4.09	76.3	250		CIRCULAR	SANITARY	CO-CONCRETE	0										1		7	29.7M ELJ @ 8-4 DS; 31.2M ELJ @ 8-4 DS; 32.8M ELJ @ 9-3 DS; 35.2M EL @ 8-11 DS; 41.5M EL @ 11 DS; 42.0M ELJ @ 10 DS; 43.7M ELJ @ 4 DS; 54.4M ELJ @ 10-3 DS; 57.5M ELJ @ 10-4 DS;				
43	12113	43	S-MA40003040	SUNNY HILLS RD NE LEG	MH @ SUNNY HILLS RD SELEG-MH@ SUNNY HILLS NWLEG	S-MH40002766	5.85	S-MH40002764	5.50	96.2	250		CIRCULAR	SANITARY	CO-CONCRETE	6										1		10	3.4M ELJ @ 8-10, 4 DS; 14.2M ELJ @ 9 DS; 15.8M ELJ @ 4 DS; 20.4M ELJ @ 8-4 DS; 21.9M ELJ @ 9 DS; 23.8M EL(CN) @ 9-11 DS; 39.0M EL(CN) @ 9-3 DS; 46.4M OBJ @ 5 DS; 58.6M ELJ @ 9-12 DS; 96.1M ELJ @ 8-4 DS;				
44	12114	44	S-MA40003242	SUN VALLEY DR	MH AT CAPRICORN PL TO 1ST MH NW OF CAPRICORN PL	S-MH40002943	5.60	S-MH40002951	5.65	61.8	250		CIRCULAR	SANITARY	CO-CONCRETE	10								1.0	17.0-20.9M DEG @ 3, 9 DS; 30.2M RF(CN) @ 10 DS;	1		5	3.0M EL(CN) @ 7-10 DS; 12.3M EL(CN) @ 2-4 DS; 25.8M ELJ @ 2-4 DS; 59.9M EL(CN) @ 3 DS; 61.3M ELJ @ 8-10, 2 DS;				
45	12115	45	S-MA40003120	ARBOR GR W LEG	1ST MH S OF ARBOR GR N LEG TO MH AT SUN VALLEY D	S-MH40002830	4.75	S-MH40002840	6.60	75.9	250		CIRCULAR	SANITARY	CO-CONCRETE	12								1.0	11.2M RF(CN) @ 9 DS; 75.1M RFJ @ 4 DS;	1		4	8.0M EL(CN) @ 8-10 DS; 11.2M EL(CN) @ 8-10 DS; 35.3M EL(CN) @ 9 DS; 63.9M ELJ @ 1-4 DS; 68.0M EL @ 9-1 DS;				
46	12116	46	S-MA40001405	RALEIGH ST.	MH AT MCIVOR AV TO MH AT ALGONQUIN AV	S-MH40001281	4.15	S-MH40001280	3.87	79.3	250		CIRCULAR	SANITARY	CO-CONCRETE	0										1	44.0	16	4.5M ELJ @ 7-5 DS; 6.1M ELJ @ 8-4 DS; 7.5M ELJ @ 8-4 DS; 8.7M EL @ 8-10 DS; 9.1M ELJ @ 8-4 DS; 9.5M EL @ 8-11, 1-4 DS; 11.3M EL @ 8-4 DS; 13.1M EL @ 8-11 DS; 13.7 M ELJ @ 1-5 DS; 14.1M EL @ 2-5 DS; 14.7M EL @ 8-4 DS; 16.2M ELJ @ 8-1 DS; 17.4M EL @ 8-4 DS; 18.5-19.9M EL @ 8-10 DS; 20.5M EL @ 8-4 DS; 22.9M EL @ 8-12 DS; 23.8M EL @ 8-4 DS; 25.0M EL @ 11-4 DS; 25.7M EL @ 8-4 DS; 26.5M EL @ 8-11 DS; 29.0M ELJ @ 7-11 DS; 29.7M EL @ 7-1 DS; 30.4M ELJ @ 8-4 DS; 32.0M ELJ @ 2 DS; 32.6M EL @ 8-4 DS; 34.4M EL @ 11-4 DS; 35.1M ELJ @ 8-4 DS; 36.6M ELJ @ 8-4 DS; 37.7-47.2M EL @ 8-4 DS; 47.4-49.0M EL @ 10-2 DS; 49.4-61.3M EL @ 9-3 DS; 62.9-64.4M EL @ 9-3 DS; 66.6-69.7M EL @ 8-10, 3 DS; 71.8M ELJ @ 9-3 DS; 73.5M ELJ @ 1-4 DS; 74.0M EL @ 3 DS; 75.0M ELJ @ 8-4 DS; 76.5M ELJ @ 8-5 DS; 77.1M EL @ 8-10 DS; 78.1M ELJ @ 8-4 DS;				
47	12117	47	S-MA40001158	MORNINGMEAD WK(W LEG)	MH AT MORNINGMEAD(S LEG)MH AT MORNINGMEAD(N LEG)	S-MH40001047	3.66	S-MH40001055	3.79	114.0	250		CIRCULAR	SANITARY	CO-CONCRETE	13								1.0	80.8M DEG @ 1 DS; 81.1-87.7M DEG @ 11-1 DS; 98.5M DEG @ 3 DS; 110.0M DEG @ 12 DS;	1		7	6.8M EL(CN) @ 7-9 DS; 12.9M EL(CN) @ 4 DS; 24.7M ELJ @ 2-4 DS; 40.1M EL(CN) @ 8-11 DS; 44.6M EL(CN) @ 1-5 DS; 53.3M EL @7-10 DS; 67.3M ELJ @ 2-3 DS; 77.1M EL @ 2-4 DS; 77.5M EL @ 8-4 DS; 112.6M ELJ @ 8-4 DS;				
48	12118	48	S-MA40001567	BONNER AV.	4TH MH W OF RALEIGH ST TO MH AT BONNER AV AND JODANNDRA BY	S-MH40001426	4.34	S-MH40001413	5.23	105.3	250		CIRCULAR	SANITARY	CO-CONCRETE	11						5	7.8M CNI @ 11 DS; 15.7M CNI @ 12 DS; 30.2M CNI @ 2 DS; 46.7M CNI @ 2 DS; 87.4M CNI @ 11 DS;	1.0	87.8M DEG @ 10, 2-3 DS; 91.4M DEG @ 11 DS; 92.6M DEG @ 11-1 DS; 95.3M DEG @ 2, 10 DS; 96.5-98.6M DEG @ 11, 1 DS; 102.8M DEG @ 11-1 DS;	1		31	1.6M ELJ @ 8-4 DS; 4.5M ELJ @ 4 DS; 5.8M ELJ @ 8-4 DS; 6.2M ELJ @ 4 DS; 7.8M EL(CN) @ 9 DS; 9.2M ELJ @ 2-4 DS; 10.6M ELJ @ 8-4 DS; 11.2M EL @ 8-4 DS; 12.2M ELJ @ 8-3 DS; 13.8M ELJ @ 8-4 DS; 15.8M EL (CN) @ 10 DS; 20.0M ELJ @ 4 DS; 26.4M EL(CN) @ 8-10 DS; 27.6M ELJ @ 4 DS; 29.3M ELJ @ 4, 8 DS; 30.2M EL(CN) @ 3 DS; 30.8M OB(J) @ 3-4 DS; 36.9M ELJ @ 5 DS; 44.5M ELJ @ 1-3 DS; 46.7M ELJ @ 8-4 DS; 58.4M ELJ @ 8 DS; 58.7M EL @ 4 DS; 64.5M ELJ @ 4 DS; 66.4M EL(CN) @ 7-5 DS; 67.7M ELJ @ 8-4 DS; 70.1M EL(CN) @ 9-11 DS; 73.6M ELJ @ 8-4 DS; 78.3M ELJ @ 1-4 DS; 83.1M ELJ @ 2-5 DS; 86.0M ELJ @ 8-3 DS; 87.3M EL(CN) @ 7-5 DS; 93.7M ELJ @ 9-11 DS; 104.6M ELJ @ 8-4 DS;			1.7	EPR FROM 29.1-30.8m DS
49	12119	49	S-MA40000549	EMERSON AV.	4TH MH W OF MONSON ST TO MH AT DUNDOON ST	S-MH40000492	3.96	S-MH40000493	5.99	17.1	250		CIRCULAR	SANITARY	CO-CONCRETE	0								1.0	14.9-16.6M DEG @ 9-3 DS;	1		3	1.2M EL @ 2-5, 7-10 DS; 2.0M ELJ @ 3-9 DS; 2.9M ELJ @ 3-5, 7-9 DS; 4.7M ELJ @ 3-5 DS;				

* Denotes assumed asset diameter based on discrepencies between GIS and inspection video. Contractor to verify.