

Area Covered										Page									
Sewer Line										Existing Pipe Details and Capacity									
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement
112	111	1.00	0.61	49	8.0	150	13.6	25	0.3	5217%	OK	25	0.3	5217%	OK	25	0.3	5217%	OK
111	110	0.61	0.35	53	4.9	150	10.7	25	0.3	4096%	OK	25	0.3	4096%	OK	25	0.3	4096%	OK
110	109	0.35	0.05	51	5.9	150	11.7	25	0.3	4485%	OK	25	0.3	4485%	OK	25	0.3	4485%	OK
109	108	0.05	-0.44	76	6.4	150	12.2	25	0.3	4696%	OK	25	0.3	4696%	OK	25	0.3	4696%	OK
108	1	-0.44	-0.65	23	9.1	150	14.6	25	0.3	5588%	OK	25	0.3	5588%	OK	25	0.3	5588%	OK
130	129	0.55	0.47	59	1.4	150	5.6	25	0.3	2153%	OK	25	0.3	2153%	OK	25	0.3	2153%	OK
129	1	0.47	-0.65	60	18.7	150	20.8	25	0.3	7990%	OK	25	0.3	7990%	OK	25	0.3	7990%	OK
1	PS	0.65	-1.00	17	97.1	150	47.4	2716	28.3	168%	OK	4018	41.9	113%	OK	4780	49.8	95%	NG
		-0.65	-1.00	17	20.6	250	85.3	2666	27.8	307%	New	3968	41.3	266%	New	4730	49.3	173%	New
Konedobu																			
210	209	107.90	106.80	95	11.6	150	16.4	86	0.9	1829%	OK	106	1.1	1484%	OK	119	1.2	1322%	OK
209	208	106.80	100.94	96	61.0	150	37.6	86	0.9	4200%	OK	106	1.1	3408%	OK	119	1.2	3035%	OK
208	163	100.94	90.98	81	123.0	150	53.4	86	0.9	5961%	OK	106	1.1	4837%	OK	119	1.2	4308%	OK
163	159	90.98	82.45	95	89.8	150	45.6	86	0.9	5094%	OK	106	1.1	4133%	OK	119	1.2	3681%	OK
162A	160	90.89	87.75	370	8.2	200	29.7	85	0.9	3354%	New	106	1.1	2690%	New	119	1.2	2396%	New
162	161	87.75	87.03	85	8.5	150	14.0	85	0.9	1583%	OK	106	1.1	1269%	OK	119	1.2	1131%	OK
161	160	87.03	86.55	63	7.6	150	13.3	85	0.9	1501%	OK	106	1.1	1204%	OK	119	1.2	1072%	OK
160	159	86.55	82.45	37	110.8	150	50.7	85	0.9	5726%	OK	106	1.1	4591%	OK	119	1.2	4090%	OK
159	158	82.45	73.53	43	207.4	150	69.4	215	2.2	3097%	OK	263	2.7	2532%	OK	293	3.1	2273%	OK
158	157	73.53	65.52	56	143.0	150	57.6	215	2.2	2572%	OK	263	2.7	2102%	OK	293	3.1	1887%	OK
157	156	65.52	62.65	45	63.8	150	38.5	215	2.2	1717%	OK	263	2.7	1404%	OK	293	3.1	1260%	OK
156	155	62.65	61.78	35	24.9	150	24.0	215	2.2	1072%	OK	263	2.7	876%	OK	293	3.1	787%	OK
155	149	61.78	57.38	55	80.0	150	43.1	215	2.2	1923%	OK	263	2.7	1572%	OK	293	3.1	1411%	OK
154	153	74.15	73.76	38	10.3	150	15.4	44	0.5	3366%	OK	51	0.5	2904%	OK	55	0.6	2693%	OK
153	151	73.76	65.84	37	214.1	150	70.5	44	0.5	15373%	OK	51	0.5	13263%	OK	55	0.6	12299%	OK

Area Covered				MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
UN MH No	DN MH No	UN IL	DN IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Q2=P.H.F. in L/s	Contributing Popn	Q1/Q2 (%)	Judgement	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement			
152	151	68.58	65.84	32	85.6	150	44.6	0.5	44	9723%	OK	0.5	8389%	OK	51	0.6	7778%	OK			
151	150	65.84	63.40	16	152.5	150	59.5	1.7	163	3503%	OK	2.3	2549%	OK	224	2.8	2130%	OK			
150	149	63.40	57.38	50	120.4	150	52.8	1.7	163	3112%	OK	2.3	2265%	OK	224	2.8	1893%	OK			
149	146	57.38	49.99	80	92.4	150	46.3	3.9	378	1176%	OK	5.1	912%	OK	487	5.8	792%	OK			
148A	148	62.36	57.36	20	250.0	150	76.1	0.8	75	9747%	OK	1.3	5992%	OK	122	1.6	4627%	OK			
148	147A	57.36	53.92	28	122.9	150	53.4	0.8	75	6833%	OK	1.3	4200%	OK	122	1.6	3243%	OK			
147A	147	53.92	51.94	25	79.2	150	42.9	0.8	75	5486%	OK	1.3	3373%	OK	122	1.6	2604%	OK			
147	146	51.94	49.99	31	62.9	150	38.2	0.8	75	4889%	OK	1.3	3006%	OK	122	1.6	2321%	OK			
146	143	49.99	47.85	26	82.3	150	43.7	4.7	453	926%	OK	6.3	689%	OK	609	7.5	583%	OK			
145	144	49.99	48.44	60	25.8	150	24.5	0.6	54	4352%	OK	0.9	2640%	OK	89	1.2	2008%	OK			
144	143	48.44	47.85	10	59.0	150	37.0	0.6	54	6576%	OK	0.9	3990%	OK	89	1.2	3035%	OK			
143	140	47.85	45.26	34	76.2	150	42.0	5.3	507	796%	OK	7.3	578%	OK	698	8.7	483%	OK			
142	141	47.19	46.33	9	95.6	150	47.1	0.6	54	8369%	OK	0.9	5078%	OK	89	1.2	3863%	OK			
141	140	46.33	45.26	12	89.2	150	45.5	0.6	54	8085%	OK	0.9	4905%	OK	89	1.2	3731%	OK			
140	139	45.26	39.93	29	183.8	150	65.3	6.2	597	1050%	OK	8.7	754%	OK	831	10.4	626%	OK			
139	138	39.93	37.03	38	76.3	150	42.1	6.2	597	677%	OK	8.7	486%	OK	831	10.4	403%	OK			
138	137	37.03	30.48	68	96.3	150	47.3	6.2	597	760%	OK	8.7	546%	OK	831	10.4	453%	OK			
137	132	30.48	27.43	53	57.5	150	36.5	6.2	597	587%	OK	8.7	422%	OK	831	10.4	350%	OK			
136	134	48.01	32.38	73	214.1	150	70.5	0.8	75	9020%	OK	1.3	5545%	OK	122	1.6	4282%	OK			
135	134	33.88	32.38	43	34.9	150	28.4	0.8	75	3641%	OK	1.3	2238%	OK	122	1.6	1728%	OK			
134	133	32.38	29.95	18	135.0	150	56.0	1.9	186	2888%	OK	3.0	1865%	OK	288	3.8	1472%	OK			

Sewer Line		MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement
133	132	29.95	27.43	22	114.5	150	51.5	186	1.9	2660%	OK	288	3.0	1718%	OK	365	3.8	1356%	OK
132	118	27.43	17.68	59	165.3	150	61.9	819	8.5	726%	OK	1163	12.1	511%	OK	1416	14.8	420%	OK
125	123A	53.79	49.87	51	76.9	150	42.2	16	0.2	25333%	OK	19	0.2	21333%	OK	21	0.2	19302%	OK
123A	123	49.87	49.27	29	20.7	150	21.9	16	0.2	13144%	OK	19	0.2	11068%	OK	21	0.2	10014%	OK
124	123	50.36	49.27	30	36.3	150	29.0	16	0.2	17418%	OK	19	0.2	14667%	OK	21	0.2	13271%	OK
123	122	49.27	48.03	18	68.9	150	40.0	68	0.7	5643%	OK	82	0.9	4680%	OK	91	0.9	4217%	OK
122	121	48.03	30.04	94	191.4	150	66.6	68	0.7	9406%	OK	82	0.9	7800%	OK	91	0.9	7029%	OK
121	120	30.04	28.35	17	99.4	150	48.0	68	0.7	6779%	OK	82	0.9	5622%	OK	91	0.9	5066%	OK
131	130	49.80	49.47	29	11.4	150	16.2	16	0.2	9747%	OK	19	0.2	8208%	OK	21	0.2	7427%	OK
130	129	49.47	49.41	13	4.6	150	10.3	16	0.2	6208%	OK	19	0.2	5228%	OK	21	0.2	4730%	OK
129	128	49.41	45.97	18	191.1	150	66.6	52	0.5	12291%	OK	63	0.7	10145%	OK	70	0.7	9131%	OK
128	127	45.97	39.83	29	211.7	150	70.1	52	0.5	12937%	OK	63	0.7	10678%	OK	70	0.7	9610%	OK
127	126	39.83	35.18	38	122.4	150	53.3	52	0.5	9835%	OK	63	0.7	8118%	OK	70	0.7	7306%	OK
126	120	35.18	28.35	71	96.2	150	47.2	52	0.5	8720%	OK	63	0.7	7198%	OK	70	0.7	6478%	OK
120	119	28.35	21.49	64	107.2	150	49.9	156	1.6	3068%	OK	189	2.0	2533%	OK	210	2.2	2279%	OK
119	118	21.49	17.68	38	100.3	150	48.2	156	1.6	2968%	OK	189	2.0	2449%	OK	210	2.2	2204%	OK
118	117	17.68	13.12	56	81.4	150	43.5	1011	10.5	413%	OK	1396	14.5	299%	OK	1675	17.4	249%	OK
117	112	13.12	9.33	74	51.2	150	34.5	1227	12.8	270%	OK	1839	19.2	180%	OK	2118	22.1	156%	OK
116	115A	39.41	36.99	28	86.4	150	44.8	75	0.8	5731%	OK	122	1.3	3523%	OK	158	1.6	2720%	OK
115A	115	36.99	32.45	34	133.5	150	55.7	75	0.8	7123%	OK	122	1.3	4379%	OK	158	1.6	3381%	OK
115	114	32.45	24.87	51	148.6	150	58.7	75	0.8	7515%	OK	122	1.3	4620%	OK	158	1.6	3567%	OK
114	113	24.87	16.08	16	549.4	150	112.9	75	0.8	14449%	OK	122	1.3	8882%	OK	158	1.6	6859%	OK
113	112	16.08	9.33	79	85.4	150	44.5	75	0.8	5698%	OK	122	1.3	3503%	OK	158	1.6	2705%	OK

Sewer Line	US MH No	DS MH No	MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
			US IL	DS IL	Length in m	Gradient (0/00)	Dia in mm	Q1=Capacity (L/s)	Contributing Pipes	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement
112	111		9.33	7.62	43	39.8	150	30.4	1341	14.0	217%	OK	2018	21.0	144%	OK	2339	24.4	125%	OK
111	110		7.62	5.33	58	39.5	150	30.3	1341	14.0	217%	OK	2018	21.0	144%	OK	2339	24.4	124%	OK
110	109		5.33	3.85	73	20.3	150	21.7	1341	14.0	155%	OK	2018	21.0	103%	OK	2339	24.4	89%	NG
			5.33	3.85	73	20.3	200	46.7	1341	14.0	334%	New	2018	21.0	222%	New	2339	24.4	192%	New
164A	163A		62.36	62.20	72	2.2	150	7.2	39	0.4	1767%	OK	52	0.5	1325%	OK	62	0.6	1112%	OK
163A	162A		62.20	61.00	71	16.9	150	19.8	39	0.4	4874%	OK	52	0.5	3655%	OK	62	0.6	3066%	OK
162A	109		61.00	3.85	17	3361.8	150	279.2	39	0.4	68734%	OK	52	0.5	51551%	OK	62	0.6	43236%	OK
109	108		3.85	2.13	47	36.6	150	29.1	1419	14.8	197%	OK	2122	22.1	132%	OK	2463	25.7	114%	OK
202	201A		9.60	9.51	95	0.9	150	4.7	216	2.3	208%	OK	443	4.6	102%	OK	443	4.6	102%	OK
201A	201		9.51	9.44	89	0.8	150	4.3	216	2.3	190%	OK	443	4.6	93%	NG	443	4.6	93%	NG
201	200		9.44	9.20	72	3.3	150	8.8	261	2.7	323%	OK	494	5.1	171%	OK	494	5.1	171%	OK
170	169		52.01	50.08	72	26.8	150	24.9	16	0.2	14961%	OK	19	0.2	12598%	OK	21	0.2	11398%	OK
169	168		50.08	36.66	30	447.3	150	101.9	16	0.2	61115%	OK	19	0.2	51466%	OK	21	0.2	46564%	OK
168	167		36.66	26.78	30	329.3	150	87.4	16	0.2	52439%	OK	19	0.2	44159%	OK	21	0.2	39953%	OK
167	166		26.78	21.38	21	257.1	150	77.2	16	0.2	46336%	OK	19	0.2	39020%	OK	21	0.2	35304%	OK
166	165		21.38	15.69	24	237.1	150	74.2	16	0.2	44492%	OK	19	0.2	37467%	OK	21	0.2	33899%	OK
165	200		15.69	9.20	50	129.8	150	54.9	61	0.6	8635%	OK	70	0.7	7525%	OK	72	0.8	7316%	OK
200	199		9.20	8.99	29	7.2	150	13.0	367	3.8	339%	OK	615	6.4	202%	OK	617	6.4	202%	OK
199	198		8.99	5.48	32	109.7	150	50.4	367	3.8	1319%	OK	615	6.4	787%	OK	617	6.4	785%	OK
198	197		5.48	5.11	14	26.4	150	24.8	367	3.8	643%	OK	615	6.4	386%	OK	617	6.4	385%	OK
197	108		5.11	2.13	37	80.5	150	43.2	367	3.8	1131%	OK	615	6.4	675%	OK	617	6.4	672%	OK
108	107		2.13	0.41	104	16.5	150	19.6	1825	19.0	103%	OK	2789	29.1	67%	NG	3142	32.7	60%	NG
			2.13	0.41	104	16.5	200	42.2	1825	19.0	222%	New	2789	29.1	145%	New	3142	32.7	129%	New
107	103		0.41	0.13	61	4.6	150	10.3	1825	19.0	54%	NG	2789	29.1	36%	NG	3142	32.7	32%	NG
			0.41	0.13	61	4.6	250	40.3	1825	19.0	212%	New	2789	29.1	139%	New	3142	32.7	123%	New

Area Covered				Page										Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
Sewer Line		MH IL		Existing Pipe Details and Capacity					Pipe adequacy for 1995			Pipe adequacy for 2005			Pipe adequacy for 2015										
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0.001)	Dia in mm	Q1a Capacity (L/s)	Contributing Pops	Q1/Q2 (%)	Q2a P.H.F. in L/s	Judgement	Contributing Pops	Q2a P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2a P.H.F. in L/s	Q1/Q2 (%)	Judgement						
87	86	33.65	21.77	100	118.8	150	52.5	77	0.8	6544%	OK	122	1.3	4131%	OK	161	1.7	3130%	OK						
86	85	21.77	18.89	45	64.0	150	38.5	77	0.8	4803%	OK	122	1.3	3032%	OK	161	1.7	2297%	OK						
85	71	18.89	16.79	43	48.8	150	33.7	77	0.8	4196%	OK	122	1.3	2648%	OK	161	1.7	2007%	OK						
71	80	16.79	14.44	42	56.0	150	36.0	77	0.8	4491%	OK	122	1.3	2835%	OK	161	1.7	2148%	OK						
80	78	14.44	14.10	48	7.1	150	12.8	77	0.8	1598%	OK	122	1.3	1009%	OK	161	1.7	764%	OK						
79	78	14.50	14.10	26	15.4	150	18.9	48	0.5	3778%	OK	65	0.7	2790%	OK	76	0.8	2386%	OK						
78	77	14.10	12.76	34	39.4	150	30.2	125	1.3	2322%	OK	187	1.9	1552%	OK	237	2.5	1225%	OK						
77A	77	18.36	12.76	280	20.0	200	46.4	780	8.1	571%	New	1008	10.5	442%	New	1167	12.2	382%	New						
77	76	12.76	10.59	55	39.5	150	30.3	905	9.4	321%	OK	1195	12.4	243%	OK	1404	14.6	207%	OK						
76	75	10.59	10.01	42	13.8	150	17.9	905	9.4	190%	OK	1195	12.4	144%	OK	1404	14.6	122%	OK						
75	74	10.01	8.62	98	14.2	150	18.1	905	9.4	192%	OK	1195	12.4	146%	OK	1404	14.6	124%	OK						
74	73	8.62	7.84	47	16.6	150	19.6	905	9.4	208%	OK	1195	12.4	158%	OK	1404	14.6	134%	OK						
74	73	8.62	7.84	47	16.6	150	19.6	905	9.4	208%	OK	1195	12.4	158%	OK	1404	14.6	134%	OK						
73	72A	7.84	7.25	15	39.3	150	30.2	905	9.4	320%	OK	1195	12.4	243%	OK	1404	14.6	207%	OK						
72A	72B	7.25	6.20	58	18.1	150	20.5	953	9.9	206%	OK	1260	13.1	156%	OK	1480	15.4	133%	OK						
72B	72	6.20	6.06	10	14.0	150	18.0	953	9.9	182%	OK	1260	13.1	137%	OK	1480	15.4	117%	OK						
72	319	6.06		10	606.0	150	118.6	953	9.9	1194%	OK	1260	13.1	903%	OK	1480	15.4	769%	OK						
319	318			12	0.0	150	0.0	953	9.9	0%	NG	1260	13.1	0%	NG	1480	15.4	0%	NG						
318	317			58	0.0	150	0.0	953	9.9	0%	NG	1260	13.1	0%	NG	1480	15.4	0%	NG						
317	316			68	0.0	150	0.0	953	9.9	0%	NG	1260	13.1	0%	NG	1480	15.4	0%	NG						
316	7		5.21	15	347.3	150	89.8	953	9.9	904%	OK	1260	13.1	684%	OK	1480	15.4	582%	OK						
21	20			37	0.0	150	0.0	48	0.5	0%	NG	65	0.7	0%	NG	76	0.8	0%	NG						
20	19			36	0.0	150	0.0	48	0.5	0%	NG	65	0.7	0%	NG	76	0.8	0%	NG						
19	18			41	0.0	150	0.0	48	0.5	0%	NG	65	0.7	0%	NG	76	0.8	0%	NG						
22	18			27	0.0	150	0.0	48	0.5	0%	NG	65	0.7	0%	NG	76	0.8	0%	NG						

Area Covered			Page				Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
Sewer Line	US MH No	DS IL	MH IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement				
	18	17		15	0.0	150	0.0	1.44	1.5	0%	NG	195	2.0	0%	NG	228	2.4	0%	NG			
	17	12		48	0.0	150	0.0	1.44	1.5	0%	NG	195	2.0	0%	NG	228	2.4	0%	NG			
	16	13		47	0.0	150	0.0	48	0.5	0%	NG	65	0.7	0%	NG	76	0.8	0%	NG			
	15	14		49	0.0	150	0.0	48	0.5	0%	NG	65	0.7	0%	NG	76	0.8	0%	NG			
	14	13		40	0.0	150	0.0	48	0.5	0%	NG	65	0.7	0%	NG	76	0.8	0%	NG			
	13	12		38	0.0	150	0.0	144	1.5	0%	NG	195	2.0	0%	NG	228	2.4	0%	NG			
	12	81	9.97	70				336	3.5	0%	NG	455	4.7	0%	NG	532	5.5	0%	NG			
	173	172	15.21	47	18.7	150	20.8	401	4.2	499%	OK	418	4.4	479%	OK	429	4.5	466%	OK			
	172	82	14.33	19	144.2	150	57.8	401	4.2	1385%	OK	418	4.4	1328%	OK	429	4.5	1294%	OK			
	82	81	11.59	77	21.0	150	22.1	401	4.2	529%	OK	418	4.4	507%	OK	429	4.5	494%	OK			
	81	8	9.97				0.0	785	8.2	0%	NG	938	9.8	0%	NG	1037	10.8	0%	NG			
	10	9		42	0.0	150	0.0	48	0.5	0%	NG	65	0.7	0%	NG	76	0.8	0%	NG			
	9	8	9.32	28	332.9	150	87.9	48	0.5	17573%	OK	65	0.7	12977%	OK	76	0.8	11099%	OK			
	8	7	9.32	74	55.5	150	35.9	881	9.2	391%	OK	1068	11.1	323%	OK	1189	12.4	290%	OK			
	7	6	5.21	92	56.6	150	36.2	1873	19.5	186%	OK	2380	24.8	146%	OK	2731	28.4	127%	OK			
	6	68		58	0.0	150	0.0	1873	19.5	0%	NG	2380	24.8	0%	NG	2731	28.4	0%	NG			
	84	69		17	0.0	150	0.0	45	0.5	0%	NG	94	1.0	0%	NG	120	1.3	0%	NG			
	69	68		9	0.0	150	0.0	45	0.5	0%	NG	94	1.0	0%	NG	120	1.3	0%	NG			
	68	106A		10	0.0	150	0.0	1963	20.4	0%	NG	2568	26.8	0%	NG	2971	30.9	0%	NG			
	106A	106	1.26	13	96.9	150	47.4	1963	20.4	232%	OK	2568	26.8	177%	OK	2971	30.9	153%	OK			

Area Covered		Existing Pipe Details and Capacity										Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
Sewer Line	US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1-Capacity (L/s)	Contributing Popn	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement			
	106	105	1.26	0.60	59	11.2	150	16.1	1963	20.4	79%	NG	2568	26.8	60%	NG	2971	30.9	52%	NG			
	105	104	0.60	0.41	40	4.8	150	10.5	1963	20.4	51%	NG	2568	26.8	39%	NG	2971	30.9	34%	NG			
	104	104A	0.41		40	10.3	150	15.4	1963	20.4	75%	NG	2568	26.8	58%	NG	2971	30.9	50%	NG			
	104A	104B			13	0.0	150	0.0	1963	20.4	0%	NG	2568	26.8	0%	NG	2971	30.9	0%	NG			
	104B	103	0.13	0.13	61	2.1	150	7.0	1963	20.4	34%	NG	2568	26.8	26%	NG	2971	30.9	23%	NG			
	103	101	0.13	0.11	120	0.2	150	2.0	3788	39.5	5%	NG	5357	50.2	4%	NG	6113	57.3	3%	NG			
	53	52	43.70	43.01	41	16.8	150	19.8	25	0.3	7587%	OK	25	0.3	7587%	OK	25	0.3	7587%	OK			
	52	50	43.01	41.23	31	57.4	150	36.5	375	3.9	934%	OK	375	3.9	934%	OK	375	3.9	934%	OK			
	51	50	42.50	41.23	10	127.0	150	54.3	25	0.3	20841%	OK	25	0.3	20841%	OK	25	0.3	20841%	OK			
	50	49	41.23	36.19	27	186.7	150	65.8	425	4.4	1486%	OK	425	4.4	1486%	OK	425	4.4	1486%	OK			
	49	48	36.19	33.66	46	55.0	150	35.7	425	4.4	807%	OK	425	4.4	807%	OK	425	4.4	807%	OK			
	48	87	33.66	33.65	41	0.2	150	2.4	425	4.4	54%	NG	425	4.4	54%	NG	425	4.4	54%	NG			
	174	211	37.80	35.34	37	66.5	150	39.3	25	0.3	15079%	OK	25	0.3	15079%	OK	25	0.3	15079%	OK			
	211	89	35.34	34.36	10	98.0	150	47.7	25	0.3	18307%	OK	25	0.3	18307%	OK	25	0.3	18307%	OK			
	89	88	34.36	32.46	39	48.7	150	33.6	25	0.3	12908%	OK	25	0.3	12908%	OK	25	0.3	12908%	OK			
	88	87	32.46	33.65	12	99.2	150	48.0	25	0.3	18416%	OK	25	0.3	18416%	OK	25	0.3	18416%	OK			
	87	47	33.65	29.10	18	252.8	150	76.6	475	4.9	1547%	OK	475	4.9	1547%	OK	475	4.9	1547%	OK			
	47	44	29.10	27.45	51	32.4	150	27.4	475	4.9	554%	OK	475	4.9	554%	OK	475	4.9	554%	OK			
	46	45	37.55	36.63	55	16.7	150	19.7	25	0.3	7564%	OK	25	0.3	7564%	OK	25	0.3	7564%	OK			
	45	44	36.63	27.45	47	195.3	150	67.3	25	0.3	25846%	OK	25	0.3	25846%	OK	25	0.3	25846%	OK			
	44	43	27.45	22.34	98	52.1	150	34.8	525	5.5	636%	OK	525	5.5	636%	OK	525	5.5	636%	OK			
	43	42	22.34	17.04	67	79.1	150	42.8	525	5.5	783%	OK	525	5.5	783%	OK	525	5.5	783%	OK			
	42	41	17.04		33	516.4	150	109.4	525	5.5	2001%	OK	525	5.5	2001%	OK	525	5.5	2001%	OK			
	41	36			77	0.0	150	0.0	525	5.5	0%	NG	550	5.7	0%	NG	553	5.8	0%	NG			

Area Covered		Page										Pipe adequacy for 1995					Pipe adequacy for 2005					Pipe adequacy for 2015				
Sewer Line	US MH No	DS MH No	MH IL		Existing Pipe Details and Capacity					Pipe adequacy for 1995					Pipe adequacy for 2005					Pipe adequacy for 2015						
			US IL	DS IL	Length in m	Gradient (ft/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement						
218	217		44.75	44.55	30	6.7	150	12.4	25	0.3	4775%	OK	25	0.3	4775%	OK	30	0.3	3979%	OK						
217	216		44.55	44.42	17	7.6	150	13.3	25	0.3	5114%	OK	25	0.3	5114%	OK	30	0.3	4262%	OK						
216	195		44.42	40.29	30	137.7	150	56.5	25	0.3	21698%	OK	25	0.3	21698%	OK	30	0.3	18082%	OK						
195	194		40.29	35.28	55	91.1	150	46.0	618	6.4	714%	OK	1183	12.3	373%	OK	1693	17.6	261%	OK						
194	193		35.28	24.05	36	311.9	150	85.1	618	6.4	1321%	OK	1183	12.3	690%	OK	1693	17.6	482%	OK						
193	40		24.05		23	1045.7	150	155.7	618	6.4	2419%	OK	1183	12.3	1264%	OK	1693	17.6	883%	OK						
40	98			22.77	69	330.0	150	87.5	618	6.4	1359%	OK	1183	12.3	710%	OK	1693	17.6	496%	OK						
98	39		22.77		13	1751.5	150	201.6	618	6.4	3131%	OK	1183	12.3	1636%	OK	1693	17.6	1143%	OK						
39	38				39	0.0	150	0.0	618	6.4	0%	NG	1183	12.3	0%	NG	1693	17.6	0%	NG						
38	37				33	0.0	150	0.0	618	6.4	0%	NG	1183	12.3	0%	NG	1693	17.6	0%	NG						
54	37				46	0.0	150	0.0	21	0.2	0%	NG	25	0.3	0%	NG	28	0.3	0%	NG						
37	36				34	0.0	150	0.0	660	6.9	0%	NG	1233	12.8	0%	NG	1749	18.2	0%	NG						
36	31				99	0.0	150	0.0	1206	12.6	0%	NG	1808	18.8	0%	NG	2330	24.3	0%	NG						
35	34				92	0.0	150	0.0	21	0.2	0%	NG	25	0.3	0%	NG	28	0.3	0%	NG						
34	33				21	0.0	150	0.0	21	0.2	0%	NG	25	0.3	0%	NG	28	0.3	0%	NG						
33	32				14	0.0	150	0.0	21	0.2	0%	NG	25	0.3	0%	NG	28	0.3	0%	NG						
32	31				62	0.0	150	0.0	21	0.2	0%	NG	25	0.3	0%	NG	28	0.3	0%	NG						
31	30			9.21		23	400.4	150	96.4	1252	13.0	739%	OK	1858	19.4	498%	OK	2383	24.8	388%	OK					
30	26		9.21	8.25	17	56.5	150	36.2	1252	13.0	277%	OK	1858	19.4	187%	OK	2383	24.8	146%	OK						
97	29		15.25	12.17	74	41.6	150	31.1	34	0.4	8773%	OK	34	0.4	8773%	OK	34	0.4	8773%	OK						
29	28		12.17	11.31	71	12.1	150	16.8	34	0.4	4733%	OK	34	0.4	4733%	OK	34	0.4	4733%	OK						
28	27		11.31	10.83	38	12.6	150	17.1	34	0.4	4833%	OK	34	0.4	4833%	OK	34	0.4	4833%	OK						
27	26		10.83	8.25	93	27.7	150	25.4	34	0.4	7162%	OK	34	0.4	7162%	OK	34	0.4	7162%	OK						
26	25		8.25	6.54	68	25.1	150	24.2	1311	13.7	177%	OK	1917	20.0	121%	OK	2442	25.4	95%	NG						

Sewer Line			MH IL			Existing Pipe Details and Capacity			Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
US MH No	DS MH No		US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1a Capacity (L/s)	Contributing Pops	Q2a P.H.P. in L/s	Q1/Q2 (%)	Judgment	Contributing Pops	Q2a P.H.P. in L/s	Q1/Q2 (%)	Judgment	Contributing Pops	Q2a P.H.P. in L/s	Q1/Q2 (%)	Judgment
23	22		2.80		70	40.0	150	30.5	1682	17.5	174%	OK	2589	27.0	113%	OK	3262	34.0	90%	NG
83	67				16	0.0	150	0.0	45	0.5	0%	NG	94	1.0	0%	NG	120	1.3	0%	NG
67	66				9	0.0	150	0.0	45	0.5	0%	NG	94	1.0	0%	NG	120	1.3	0%	NG
5	66				17	0.0	150	0.0	45	0.5	0%	NG	94	1.0	0%	NG	120	1.3	0%	NG
66	4				28	0.0	150	0.0	135	1.4	0%	NG	282	2.9	0%	NG	360	3.8	0%	NG
4	3				103	0.0	150	0.0	135	1.4	0%	NG	282	2.9	0%	NG	360	3.8	0%	NG
3	2				16	0.0	150	0.0	135	1.4	0%	NG	282	2.9	0%	NG	360	3.8	0%	NG
58	57				13	0.0	150	0.0	45	0.5	0%	NG	94	1.0	0%	NG	120	1.3	0%	NG
57	56				11	0.0	150	0.0	45	0.5	0%	NG	94	1.0	0%	NG	120	1.3	0%	NG
56	55				49	0.0	150	0.0	45	0.5	0%	NG	94	1.0	0%	NG	120	1.3	0%	NG
55	2				44	0.0	150	0.0	45	0.5	0%	NG	94	1.0	0%	NG	120	1.3	0%	NG
2	1				36	0.0	150	0.0	225	2.3	0%	NG	470	4.9	0%	NG	600	6.3	0%	NG
1	22				25	0.0	150	0.0	225	2.3	0%	NG	470	4.9	0%	NG	600	6.3	0%	NG
22	101			0.11	110	1.0	150	4.8	1952	20.3	24%	NG	3153	32.8	15%	NG	2526	26.3	18%	NG
103	101								3788			New	5357			New	6113			New
101	PS								5740			New	8510			New	8639			New
206	205		30.83	27.67	105	30.1	150	26.4	45	0.5	5636%	OK	51	0.5	4973%	OK	51	0.5	4973%	OK
205	204		27.67	20.99	16	417.5	150	98.4	45	0.5	20923%	OK	51	0.5	18523%	OK	51	0.5	18523%	OK
204	203		20.99	16.25	29	163.4	150	61.6	45	0.5	13135%	OK	51	0.5	11590%	OK	51	0.5	11590%	OK
207	203		17.78	16.25	100	15.3	150	18.8	45	0.5	4019%	OK	51	0.5	3546%	OK	51	0.5	3546%	OK

Area Covered			Page																		
Sewer Line			MH IL		Existing Pipe Details and Capacity					Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
US MH No	DS MH No		US IL	DS IL	Length in m	Gradient (000)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=P.H.F in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F in L/s	Q1/Q2 (%)	Judgement	
203	220		16.25	1.59	33	444.2	150	101.5	135	1.4	7218%	OK	153	1.6	6369%	OK	153	1.6	6369%	OK	
223	222				36	0.0	150	0.0	48	0.5	0%	NG	58	0.6	0%	NG	58	0.6	0%	NG	
222	221			1.89	39	48.5	150	33.5	48	0.5	6705%	OK	58	0.6	5549%	OK	58	0.6	5549%	OK	
221	220		1.89	1.59	43	7.0	150	12.7	48	0.5	2544%	OK	58	0.6	2105%	OK	58	0.6	2105%	OK	
220	PS					140.0	200		228			New	262			New	262			New	
83	82		124.80	119.00	56	103.6	150	49.0	18	0.2	26140%	OK	34	0.4	13839%	OK	47	0.5	10011%	OK	
82	81		118.96	118.80	8	20.0	150	21.5	18	0.2	11487%	OK	34	0.4	6081%	OK	47	0.5	4399%	OK	
81	80		118.78	105.76	25	520.8	150	109.9	18	0.2	58616%	OK	34	0.4	31032%	OK	47	0.5	22449%	OK	
80	79		105.75	101.63	15	274.7	150	79.8	18	0.2	42568%	OK	34	0.4	22536%	OK	47	0.5	16303%	OK	
IS	86		109.55	103.85	17	335.3	150	88.2	18	0.2	47032%	OK	34	0.4	24899%	OK	47	0.5	18012%	OK	
86	79		103.84	101.63	16	138.1	150	56.6	18	0.2	30187%	OK	34	0.4	15981%	OK	47	0.5	11561%	OK	
IS	85		109.35	107.38	32	61.6	150	37.8	18	0.2	20153%	OK	34	0.4	10669%	OK	47	0.5	7718%	OK	
85	84		107.38	102.65	18	262.8	150	78.1	18	0.2	41637%	OK	34	0.4	22043%	OK	47	0.5	15946%	OK	
84	79		102.64	101.63	10	101.0	150	48.4	18	0.2	25813%	OK	34	0.4	13666%	OK	47	0.5	9886%	OK	
79	78		101.59	95.71	21	280.0	150	80.6	72	0.8	10745%	OK	136	1.4	5688%	OK	188	2.0	4115%	OK	
78	77		95.70	94.81	10	89.0	150	45.4	72	0.8	6058%	OK	136	1.4	3207%	OK	188	2.0	2320%	OK	
77	76		94.80	88.80	7	857.1	150	141.0	72	0.8	18800%	OK	136	1.4	9953%	OK	188	2.0	7200%	OK	
76	70		87.40	86.15	8	156.3	150	60.2	72	0.8	8027%	OK	136	1.4	4249%	OK	188	2.0	3074%	OK	
74	73		97.50	94.24	17	191.8	150	66.7	18	0.2	35569%	OK	34	0.4	18830%	OK	47	0.5	13622%	OK	
73	72		94.22	90.67	18	197.2	150	67.6	18	0.2	36071%	OK	34	0.4	19096%	OK	47	0.5	13814%	OK	
72	71		90.10	88.85	56	22.3	150	22.8	18	0.2	12135%	OK	34	0.4	6424%	OK	47	0.5	4647%	OK	
71	70		88.84	86.15	42	64.0	150	38.5	18	0.2	20556%	OK	34	0.4	10882%	OK	47	0.5	7872%	OK	
70	69		86.10	85.90	10	20.0	150	21.5	108	1.1	1914%	OK	204	2.1	1014%	OK	282	2.9	733%	OK	

Area Covered			Page										Existing Pipe Details and Capacity										Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
Sewer Line	US MH No	DS MH No	US IL	MH IL	Length in m	Gradient (0000)	Dis in mm	Q1-Capacity (L/s)	Contributing Pipes	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement										
	75	69	92.80	85.90	48	143.8	150	57.7	18	0.2	30795%	OK	34	0.4	16303%	OK	47	0.5	11794%	OK														
	69	68	85.86	85.71	12	12.5	150	17.0	144	1.5	1135%	OK	272	2.8	601%	OK	376	3.9	435%	OK														
	68	67	85.70	81.00	10	470.0	150	104.4	144	1.5	6961%	OK	272	2.8	3685%	OK	376	3.9	2666%	OK														
	67	50	80.00	66.80	47	280.9	150	80.7	144	1.5	5381%	OK	272	2.8	2849%	OK	376	3.9	2061%	OK														
	IS	51	70.28	69.90	32	11.9	150	16.6	18	0.2	8851%	OK	34	0.4	4686%	OK	47	0.5	3390%	OK														
	51	50	69.90	66.80	35	88.6	150	45.3	18	0.2	24173%	OK	34	0.4	12797%	OK	47	0.5	9258%	OK														
	50	49	65.76	55.40	37	280.0	150	80.6	178	1.9	4346%	OK	325	3.4	2380%	OK	444	4.6	1742%	OK														
	49	48	54.47	47.98	26	249.6	150	76.1	178	1.9	4104%	OK	325	3.4	2248%	OK	444	4.6	1645%	OK														
	IS	66	93.20	89.95	26	125.0	150	53.8	18	0.2	28717%	OK	39	0.4	13254%	OK	49	0.5	10549%	OK														
	66	65	89.00	82.30	29	231.0	150	73.2	18	0.2	39041%	OK	39	0.4	18019%	OK	49	0.5	14342%	OK														
	65	64	82.30	71.04	68	165.6	150	62.0	18	0.2	33052%	OK	39	0.4	15255%	OK	49	0.5	12142%	OK														
	64	63	71.04	61.01	42	238.8	150	74.4	34	0.4	21014%	OK	58	0.6	12318%	OK	70	0.7	10207%	OK														
	63	59	61.01	56.20	7	687.1	150	126.2	34	0.4	35645%	OK	58	0.6	20895%	OK	70	0.7	17313%	OK														
	62	61	66.00	63.30	37	73.0	150	41.1	23	0.2	17171%	OK	23	0.2	17171%	OK	23	0.2	17171%	OK														
	61	60	63.30	60.40	45	64.4	150	38.7	23	0.2	16137%	OK	23	0.2	16137%	OK	23	0.2	16137%	OK														
	60	59	60.40	56.20	76	55.3	150	35.8	23	0.2	14943%	OK	23	0.2	14943%	OK	23	0.2	14943%	OK														
	59	58	56.16	49.01	82	87.2	150	45.0	73	0.8	5914%	OK	100	1.0	4317%	OK	114	1.2	3787%	OK														
	58	57	49.01	48.73	26	10.8	150	15.8	73	0.8	2078%	OK	100	1.0	1517%	OK	114	1.2	1331%	OK														
	57	48	48.73	47.98	49	15.3	150	18.8	73	0.8	2478%	OK	100	1.0	1809%	OK	114	1.2	1587%	OK														
	48	47	47.98	47.78	15	13.3	150	17.6	267	2.8	632%	OK	444	4.6	380%	OK	579	6.0	292%	OK														
	54	53	51.90	49.54	57	41.4	150	31.0	16	0.2	18593%	OK	19	0.2	15657%	OK	21	0.2	14166%	OK														
	53	52	49.50	48.43	45	23.8	150	23.5	16	0.2	14090%	OK	19	0.2	11866%	OK	21	0.2	10735%	OK														
	IS	56	70.15	67.40	11	250.0	150	76.1	16	0.2	45688%	OK	19	0.2	38474%	OK	21	0.2	34310%	OK														

Area Covered			Page																		
Sewer Line			MH IL		Existing Pipe Details and Capacity					Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
US MH No	DS MH No		US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Pipes	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	
56	55		67.45	51.45	34	470.6	150	104.5	16	0.2	62684%	OK	19	0.2	52786%	OK	21	0.2	47759%	OK	
55	52		49.50	48.43	4	267.5	150	78.8	16	0.2	47260%	OK	19	0.2	39798%	OK	21	0.2	36008%	OK	
52	47		48.39	47.78	30	20.3	150	21.7	48	0.5	4343%	OK	57	0.6	3657%	OK	63	0.7	3309%	OK	
47	46		47.74	47.64	7	14.3	150	18.2	348	3.6	502%	OK	547	5.7	319%	OK	697	7.3	251%	OK	
46	45		47.63	40.00	21	363.3	150	91.8	348	3.6	2532%	OK	547	5.7	1611%	OK	697	7.3	1264%	OK	
45	44		39.99	32.76	28	258.2	150	77.4	348	3.6	2135%	OK	547	5.7	1358%	OK	697	7.3	1066%	OK	
44	43		32.74	27.93	28	171.8	150	63.1	348	3.6	1741%	OK	547	5.7	1108%	OK	697	7.3	869%	OK	
43	42		27.89	20.70	45	159.8	150	60.9	348	3.6	1679%	OK	547	5.7	1068%	OK	697	7.3	838%	OK	
42	6		20.66	14.20	40	161.5	150	61.2	348	3.6	1688%	OK	547	5.7	1074%	OK	697	7.3	843%	OK	
11	8		9.32		34	274.1	150	79.7	33	0.3	23196%	OK	39	0.4	19627%	OK	47	0.5	16286%	OK	
10	9				29	0.0	150	0.0	33	0.3	0%	NG	39	0.4	0%	NG	47	0.5	0%	NG	
9	8		9.32		15	621.3	150	120.0	33	0.3	34922%	OK	39	0.4	29550%	OK	47	0.5	24520%	OK	
8	7		9.32	5.21	35	117.4	150	52.2	99	1.0	5061%	OK	117	1.2	4282%	OK	141	1.5	3553%	OK	
13	12				15	0.0	150	0.0	33	0.3	0%	NG	39	0.4	0%	NG	47	0.5	0%	NG	
12	7		5.21		13	400.8	150	96.4	33	0.3	28047%	OK	39	0.4	23732%	OK	47	0.5	19693%	OK	
7	6		5.21		20	260.5	150	77.7	33	0.3	22612%	OK	39	0.4	19133%	OK	47	0.5	15877%	OK	
6	5				19	0.0	150	0.0	381	4.0	0%	NG	586	6.1	0%	NG	744	7.8	0%	NG	
IS	41		48.00	47.15	5	170.0	150	62.8	33	0.3	18267%	OK	39	0.4	15457%	OK	47	0.5	12826%	OK	
41	40		46.20	40.75	56	97.3	150	47.5	33	0.3	13821%	OK	39	0.4	11695%	OK	47	0.5	9704%	OK	
40	39		40.74	40.10	30	21.3	150	22.2	33	0.3	6471%	OK	39	0.4	5475%	OK	47	0.5	4543%	OK	
39	38		40.08	36.36	16	232.5	150	73.4	33	0.3	21362%	OK	39	0.4	18076%	OK	47	0.5	14999%	OK	
38	37		36.35	34.90	30	48.3	150	33.5	33	0.3	9740%	OK	39	0.4	8242%	OK	47	0.5	6839%	OK	
37	36		34.50	20.50	38	368.4	150	92.4	33	0.3	26891%	OK	39	0.4	22754%	OK	47	0.5	18881%	OK	

C.1.2-40

Area Covered										Page		Existing Pipe Details and Capacity										Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Sewer Line		MH IL		Length in m				Gradient (000)	Dia in mm	Q1=Capacity (L/s)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing 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Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing 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Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Contributing Pops

Area Covered		Pipe										Pipe adequacy for 2015				
Sewer Line		Existing Pipe Details and Capacity										Pipe adequacy for 2005				
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q ₁ Capacity (L/s)	Contributing Popn	Q ₂ P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q ₂ P.H.F. in L/s	Q1/Q2 (%)	Judgement	Q1/Q2 (%)
15	C1	-1.04	-1.15	17	6.5	150	12.3	299	3.1	393%	OK	299	3.1	393%	OK	393%
Tatana 3-P/S																
C1	PS	-5.51	-5.91	400	4.0	300	61.2	4371	45.5	134%	OK	5615	52.6	116%	OK	101%
PS	C2	-5.91	1.20	450		300		4371	45.5			5615	52.6			New
20	19					150	Existing	36	0.4			76	0.8			
19	18					150	Existing	36	0.4			76	0.8			
18	17					150	Existing	36	0.4			76	0.8			
17	16					150	Existing	186	1.9			226	2.4			
16	15					150	Existing	186	1.9			226	2.4			
15	14					150	Existing	186	1.9			226	2.4			
14	13					150	Existing	186	1.9			226	2.4			
13	12					150	Existing	186	1.9			226	2.4			
12	11					150	Existing	186	1.9			226	2.4			
11	4					150	Existing	186	1.9			226	2.4			
10	9					150	Existing	100	1.0			100	1.0			
9	8					150	Existing	100	1.0			100	1.0			
8	6					150	Existing	100	1.0			100	1.0			
7	6					150	Existing	49	0.5			49	0.5			
6	5					150	Existing	149	1.6			149	1.6			
5	4					150	Existing	149	1.6			149	1.6			
4	3					150	Existing	335	3.5			375	3.9			
3	C2					150	Existing	335	3.5			375	3.9			
Kantabada 1 - P/S																
C2	PS	1.20	0.45	250	3.0	350	79.9	6097	57.2	140%	OK	7391	69.3	115%	OK	New
PS	C3	8.00	-0.20	130	63.1	300	242.9	6097	57.2	425%	OK	7391	69.3	351%	OK	New

Area Covered										Page									
Sewer Line										Existing Pipe Details and Capacity									
US MH No	DS MH No	US IL	DS IL	Length (m)	Gradient (0/100)	Dia in mm	Q1-Capacity (L/s)	Contributing Pipes	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement
C3	C4	-0.20	-0.65	150	3.0	400	114.1	7097	66.5	171%	OK	8391	78.7	145%	OK	9264	86.9	131%	New
C5	C4	-0.20	-0.65	150	3.0	200	18.0	445	4.6	388%	OK	457	4.8	377%	OK	463	4.8	372%	New
C4	C41	-0.65	-1.55	300	3.0	450	156.2	8042	75.4	207%	OK	9348	87.6	178%	OK	10227	85.2	183%	New
Hanuabada 2- P/S																			
C41	PS	-1.55	-2.60	350	3.0	450	156.2	10743	89.5	174%	OK	12525	104.4	150%	OK	13696	114.1	137%	New
C6	C8	21.00	12.50	130	65.4	200	83.9	73	0.8	11029%	OK	73	0.8	11029%	OK	73	0.8	11029%	New
C7	C8	13.00	12.50	80	6.3	200	25.9	73	0.8	3410%	OK	73	0.8	3410%	OK	73	0.8	3410%	New
C8	C10	12.50	10.80	230	7.4	200	28.2	219	2.3	1236%	OK	219	2.3	1236%	OK	219	2.3	1236%	New
C9	C10	19.50	10.80	320	27.2	200	54.1	77	0.8	6742%	OK	77	0.8	6742%	OK	77	0.8	6742%	New
C10	C12	10.80	4.50	170	37.1	200	63.1	363	3.8	1670%	OK	363	3.8	1670%	OK	363	3.8	1670%	New
C11	C12	18.50	4.50	260	53.8	200	76.1	73	0.8	10009%	OK	73	0.8	10009%	OK	73	0.8	10009%	New
Hanuabada 2- P/S																			
C12	PS	4.50	0.30	80	52.5	200	75.2	736	7.7	980%	OK	736	7.7	980%	OK	789	8.2	914%	New
Treasury																			
6	5	17.15	11.09	52	116.5	150	52.0	141	1.5	3540%	OK	178	1.9	2804%	OK	193	2.0	2586%	OK
5	4	11.09	11.01	75	1.1	150	5.0	141	1.5	339%	OK	178	1.9	268%	OK	193	2.0	247%	OK
4	3	11.01	7.47	36	98.3	150	47.8	141	1.5	3252%	OK	178	1.9	2576%	OK	193	2.0	2375%	OK
3	2	7.47	6.77	36	19.4	150	21.2	141	1.5	1445%	OK	178	1.9	1145%	OK	193	2.0	1056%	OK
2	1	6.77	6.25	22	23.6	150	23.4	141	1.5	1594%	OK	178	1.9	1263%	OK	193	2.0	1165%	OK
1	C14	6.25	6.00	10	25.0	150	24.1	141	1.5	1639%	OK	178	1.9	1299%	OK	193	2.0	1198%	OK
C14	C141	6.00	5.45	90	6.1	200	25.5	141	1.5	1746%	New	178	1.9	1383%	New	193	2.0	1275%	New
C142	C141	18.90	5.45	180	74.7	200	89.7	550	5.7	1565%	New	850	8.9	1013%	New	1050	10.9	820%	New
C141	C13	5.45	0.40	150	33.7	200	60.2	691	7.2	836%	New	1028	10.7	562%	New	1243	12.9	465%	New
308	307A	20.04	19.51	45	11.8	150	16.5	126	1.3	1259%	OK	126	1.3	1259%	OK	126	1.3	1259%	OK
307A	306	19.51	18.33	49	24.1	150	23.6	126	1.3	1801%	OK	126	1.3	1801%	OK	126	1.3	1801%	OK
306	305	18.33	17.79	33	16.4	150	19.5	126	1.3	1484%	OK	126	1.3	1484%	OK	126	1.3	1484%	OK

Area Covered																Page2
Sewer Line		MH IL		Existing Pipe Details and Capacity			Pipe adequacy for 1995			Pipe adequacy for 2005			Pipe adequacy for 2015			
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Pipes	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	
305	304	17.79	13.28	60	75.2	150	41.8	126	1.3	3181%	OK	126	1.3	3181%	OK	
304	303A	13.28	7.06	49	126.9	150	54.3	126	1.3	4134%	OK	126	1.3	4134%	OK	
303A	303	7.06	5.76	23	56.5	150	36.2	126	1.3	2759%	OK	126	1.3	2759%	OK	
303	302	5.76	1.97	34	111.5	150	50.8	126	1.3	3874%	OK	126	1.3	3874%	OK	
302	301	1.97	0.74	58	21.2	150	22.2	126	1.3	1690%	OK	126	1.3	1690%	OK	
311	310	17.79	16.33	14	104.3	150	49.2	100	1.0	4721%	OK	100	1.0	4721%	OK	
310	309	16.33	11.30	63	79.8	150	43.0	100	1.0	4131%	OK	100	1.0	4131%	OK	
309	301	11.30	0.74	69	153.0	150	59.6	100	1.0	5720%	OK	100	1.0	5720%	OK	
301	C13	0.74	0.40	10	34.0	150	28.1	226	2.4	1193%	OK	226	2.4	1193%	OK	
C13	C131	0.40	0.10	60	5.0	200	23.2	917	9.6	243%	New	1254	13.1	178%	New	
C132	C131	18.35	0.10	200	91.3	200	99.1	866	9.0	1098%	New	1287	13.4	739%	New	
Hanabad 2- P/S																
C131	PS	-0.40	-0.70	100	3.0	250	32.6	1783	18.6	175%	OK	2541	26.5	123%	OK	
Konedobu P/S																
PS1000	PS							13262	110.5			15802	131.7			
PS101	PS							5740				8510				
220	PS							228				262				
4	PS							546				775				
PS	389						#DIV/0!	19776	164.8	#DIV/0!	#DIV/0!	25349	198.0	#DIV/0!	#DIV/0!	
389	388	11.00	10.70	73	4.1	225	28.8	19801	165.0	17%	NG	25374	198.2	15%	NG	
		11.00	10.70	73	4.1	500	242.1	19801	165.0	147%	New	25374	198.2	122%	New	
388	387	10.70	10.38	78	4.1	225	28.8	19801	165.0	17%	NG	25374	198.2	15%	NG	
		10.70	10.38	78	4.1	500	241.9	19801	165.0	147%	New	25374	198.2	122%	New	
387	386	10.38	10.16	55	4.0	2225	12794.3	19801	165.0	7754%	OK	25374	198.2	6454%	OK	
		10.38	10.16	55	4.0	500	238.8	19801	165.0	145%	New	25374	198.2	120%	New	

Area Covered		Page										Page									
Sewer Line		MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015					
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (000)	Dia in mm	Q _{at} Capacity (L/s)	Contributing Popn	Q _{at-P-HLF} in L/s	Q _{UQ2} (%)	Judgement	Contributing Popn	Q _{at-P-HLF} in L/s	Q _{UQ2} (%)	Judgement	Contributing Popn	Q _{at-P-HLF} in L/s	Q _{UQ2} (%)	Judgement		
386	385	10.16	9.79	92	4.0	225	28.5	19801	165.0	17%	NG	25374	198.2	14%	NG	27355	213.7	13%	NG		
		10.16	9.79	92	4.0	500	239.5	19801	165.0	145%	New	25374	198.2	121%	New	27355	213.7	112%	New		
385	384	9.79	9.66	33	3.9	225	28.2	19801	165.0	17%	NG	25374	198.2	14%	NG	27355	213.7	13%	NG		
		9.79	9.66	33	3.9	500	237.0	19801	165.0	144%	New	25374	198.2	120%	New	27355	213.7	111%	New		
384	101	9.66	-0.33	30	333.0	225	259.1	19801	165.0	157%	OK	25374	198.2	131%	OK	27355	213.7	121%	OK		
		9.66	-0.33	30	333.0	500	2179.0	19801	165.0	1321%	New	25374	198.2	1099%	New	27355	213.7	1020%	New		
107	106	6.43	1.00	44	123.4	150	53.5	25	0.3	20544%	OK	25	0.3	20544%	OK	25	0.3	20544%	OK		
106	105	1.00	0.83	15	11.3	150	16.2	25	0.3	6226%	OK	25	0.3	6226%	OK	25	0.3	6226%	OK		
105	103	0.83	0.36	73	6.4	150	12.2	25	0.3	4692%	OK	25	0.3	4692%	OK	25	0.3	4692%	OK		
103	102	0.36	-0.12	95	5.1	150	10.8	25	0.3	4157%	OK	25	0.3	4157%	OK	25	0.3	4157%	OK		
102	101	-0.12	-0.33	37	5.7	150	11.5	25	0.3	4406%	OK	25	0.3	4406%	OK	25	0.3	4406%	OK		
101	PS	-0.33	-0.44	27	4.1	225	28.7	19826	165.2	17%	NG	25399	198.4	14%	NG	27380	213.9	13%	NG		
		-0.33	-0.44	27	4.1	450	182.0	19826	165.2	110%	OK	25399	198.4	92%	NG	27380	213.9	85%	New		
Stanley Explanade P/S																					
PS	231	-0.44	15.81	303	53.6	200	76.0	22542	176.1	43%	NG	29417	229.8	33%	NG	32160	251.3	30%	NG		
		-0.44	15.81	303	53.6	500	874.4	22542	176.1	497%	OK	29417	229.8	380%	OK	32160	251.3	348%	New		
356	355	24.89	23.55	55	24.4	150	23.8	32	0.3	7131%	OK	32	0.3	7131%	OK	32	0.3	7131%	OK		
355	232	23.55	22.39	21	55.2	150	35.8	32	0.3	10738%	OK	32	0.3	10738%	OK	32	0.3	10738%	OK		
232	232A	22.39	17.31	39	130.3	150	55.0	32	0.3	16489%	OK	32	0.3	16489%	OK	32	0.3	16489%	OK		
232A	231	17.31	15.81	40	37.5	150	29.5	32	0.3	8847%	OK	32	0.3	8847%	OK	32	0.3	8847%	OK		
231	230	15.81	11.70	95	43.3	225	93.4	22606	176.6	53%	NG	29481	230.3	41%	NG	32224	251.8	37%	NG		
		15.81	11.70	95	43.3	500	785.4	22606	176.6	445%	OK	29481	230.3	341%	OK	32224	251.8	312%	New		
230	229	11.70	10.53	15	78.0	225	125.4	22606	176.6	71%	NG	29481	230.3	54%	NG	32224	251.8	50%	NG		
		11.70	10.53	15	78.0	500	1054.6	22606	176.6	597%	OK	29481	230.3	458%	OK	32224	251.8	419%	New		
229	226	10.53	2.10	69	122.2	225	156.9	22606	176.6	89%	NG	29481	230.3	68%	NG	32224	251.8	62%	NG		
		10.53	2.10	69	122.2	500	1319.8	22606	176.6	747%	OK	29481	230.3	573%	OK	32224	251.8	524%	New		

Area Covered																								
Sewer Line		Existing Pipe Details and Capacity										Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015				
US MH No.	DS MH No.	US IL	DS IL	MH IL	Length in m	Gradient (ft/100)	Dia in mm	Q1-Capacity (L/s)	Contributing Pops	Q2-P.H.P. in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2-P.H.P. in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2-P.H.P. in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2-P.H.P. in L/s	Q1/Q2 (%)	Judgement
227	226	3.06	2.10	2.10	69	13.9	150	18.0	32	0.3	5389%	OK	32	0.3	5389%	OK	32	0.3	5389%	OK	32	0.3	5389%	OK
226	367	2.10	1.80	1.80	47	6.4	225	35.9	22670	177.1	20%	NG	29545	230.8	16%	NG	32288	252.3	14%	NG	32288	252.3	14%	NG
367	366	2.10	1.80	1.80	47	6.4	500	301.7	22670	177.1	170%	OK	29545	230.8	131%	OK	32288	252.3	120%	New	32288	252.3	120%	New
		1.80	1.60	1.60	16	12.5	225	50.2	22670	177.1	28%	NG	29545	230.8	22%	NG	32288	252.3	20%	NG	32288	252.3	20%	NG
		1.80	1.60	1.60	16	12.5	500	422.2	22670	177.1	238%	OK	29545	230.8	183%	OK	32288	252.3	167%	New	32288	252.3	167%	New
268	267	15.21	14.44	14.44	26	29.6	150	26.2	15	0.2	16773%	OK	19	0.2	13242%	OK	21	0.2	11981%	OK	21	0.2	11981%	OK
267	225	14.44	11.31	11.31	31	101.0	150	48.4	15	0.2	30971%	OK	19	0.2	24451%	OK	21	0.2	22122%	OK	21	0.2	22122%	OK
225	224	11.31	9.96	9.96	34	39.7	150	30.3	15	0.2	19422%	OK	19	0.2	15333%	OK	21	0.2	13873%	OK	21	0.2	13873%	OK
224	219	9.96	5.53	5.53	29	152.8	150	59.5	15	0.2	38095%	OK	19	0.2	30075%	OK	21	0.2	27211%	OK	21	0.2	27211%	OK
219	213A	5.53	2.95	2.95	50	51.6	150	34.6	15	0.2	22141%	OK	19	0.2	17479%	OK	21	0.2	15815%	OK	21	0.2	15815%	OK
223	222	22.26	19.40	19.40	21	136.2	150	56.2	15	0.2	35970%	OK	19	0.2	28397%	OK	21	0.2	25693%	OK	21	0.2	25693%	OK
222	221	19.40	11.03	11.03	30	279.0	150	80.4	15	0.2	51483%	OK	19	0.2	40645%	OK	21	0.2	36774%	OK	21	0.2	36774%	OK
221	221A	11.03	10.21	10.21	12	68.3	150	39.8	15	0.2	25479%	OK	19	0.2	20115%	OK	21	0.2	18199%	OK	21	0.2	18199%	OK
221A	220	10.21	6.21	6.21	31	129.0	150	54.7	15	0.2	35012%	OK	19	0.2	27641%	OK	21	0.2	25008%	OK	21	0.2	25008%	OK
220	220B	6.21	4.01	4.01	11	200.0	150	68.1	15	0.2	43589%	OK	19	0.2	34412%	OK	21	0.2	31135%	OK	21	0.2	31135%	OK
220B	220A	4.01	3.58	3.58	14	30.7	150	26.7	15	0.2	17082%	OK	19	0.2	13486%	OK	21	0.2	12201%	OK	21	0.2	12201%	OK
220A	213A	3.58	2.95	2.95	40	15.8	150	19.1	15	0.2	12232%	OK	19	0.2	9657%	OK	21	0.2	8737%	OK	21	0.2	8737%	OK
213A	213C	2.95	1.05	1.05	29	65.5	150	39.0	45	0.5	8316%	OK	53	0.6	7061%	OK	57	0.6	6565%	OK	57	0.6	6565%	OK
42	218	49.10	48.82	48.82	29	9.7	150	15.0	15	0.2	9577%	OK	19	0.2	7561%	OK	21	0.2	6841%	OK	21	0.2	6841%	OK
218	217	48.82	39.43	39.43	73	128.6	150	54.6	15	0.2	34957%	OK	19	0.2	27598%	OK	21	0.2	24969%	OK	21	0.2	24969%	OK
217	216	39.43	39.00	39.00	15	28.7	150	25.8	15	0.2	16503%	OK	19	0.2	13028%	OK	21	0.2	11788%	OK	21	0.2	11788%	OK
216	215	39.00	18.30	18.30	55	376.4	150	93.4	15	0.2	59795%	OK	19	0.2	47207%	OK	21	0.2	42711%	OK	21	0.2	42711%	OK
215	214	18.30	2.15	2.15	20	807.5	150	136.9	15	0.2	87586%	OK	19	0.2	69147%	OK	21	0.2	62561%	OK	21	0.2	62561%	OK
214	213	2.15	1.57	1.57	18	32.2	150	27.3	15	0.2	17496%	OK	19	0.2	13813%	OK	21	0.2	12497%	OK	21	0.2	12497%	OK
213	213C	1.57	1.05	1.05	38	13.7	150	17.8	15	0.2	11402%	OK	19	0.2	9001%	OK	21	0.2	8144%	OK	21	0.2	8144%	OK
213C	366				35	0.0	150	0.0	60	0.6	0%	NG	72	0.8	0%	NG	78	0.8	0%	NG	78	0.8	0%	NG

Area Covered		Page										Pipe adequacy for 2015									
Sewer Line		Existing Pipe Details and Capacity										Pipe adequacy for 2005									
US MH No	DS MH No	MH IL		Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Pipe adequacy for 1995			Pipe adequacy for 2005			Pipe adequacy for 2015			Judgement	Q1/Q2 (%)	Q2=P.H.F. in L/s	Contributing Popo	Judgement
		US IL	DS IL					Q1/Q2 (%)	Q2=P.H.F. in L/s	Contributing Popo	Q1/Q2 (%)	Q2=P.H.F. in L/s	Contributing Popo	Q1/Q2 (%)	Q2=P.H.F. in L/s	Contributing Popo					
366	365			86	0.0	500	0.0	22730	177.6	0%	NG	231.4	0%	NG	231.4	252.9	0%	0%	32366	252.9	New
365	364	4.67	2.87	66	27.3	225	74.2	22730	177.6	42%	NG	231.4	32%	NG	231.4	252.9	29%	29%	32366	252.9	NG
		4.67	2.87	66	27.3	500	623.6	22730	177.6	351%	New	231.4	270%	New	231.4	252.9	247%	247%	32366	252.9	New
364	363	2.87	1.53	71	18.9	225	61.7	22730	177.6	35%	NG	231.4	27%	NG	231.4	252.9	24%	24%	32366	252.9	NG
		2.87	1.53	71	18.9	500	518.7	22730	177.6	292%	New	231.4	224%	New	231.4	252.9	205%	205%	32366	252.9	New
363	362	1.53	0.97	89	6.3	225	35.6	22858	178.6	20%	NG	232.7	15%	NG	232.7	254.1	14%	14%	32531	254.1	NG
		1.53	0.97	89	6.3	500	299.5	22858	178.6	168%	New	232.7	129%	New	232.7	254.1	118%	118%	32531	254.1	New
362	361	0.97	0.69	45	6.2	225	35.4	22858	178.6	20%	NG	232.7	15%	NG	232.7	254.1	14%	14%	32531	254.1	NG
		0.97	0.69	45	6.2	500	297.9	22858	178.6	167%	New	232.7	128%	New	232.7	254.1	117%	117%	32531	254.1	New
361	360	0.69	0.23	73	6.3	225	35.6	22858	178.6	20%	NG	232.7	15%	NG	232.7	254.1	14%	14%	32531	254.1	NG
		0.69	0.23	73	6.3	500	299.7	22858	178.6	168%	New	232.7	129%	New	232.7	254.1	118%	118%	32531	254.1	New
360	205	0.23	0.10	21	6.2	225	35.3	22858	178.6	20%	NG	232.7	15%	NG	232.7	254.1	14%	14%	32531	254.1	NG
		0.23	0.10	21	6.2	500	297.1	22858	178.6	166%	New	232.7	128%	New	232.7	254.1	117%	117%	32531	254.1	New
205	204	0.10	-0.40	88	5.7	225	33.8	22858	178.6	19%	NG	232.7	15%	NG	232.7	254.1	13%	13%	32531	254.1	NG
		0.10	-0.40	88	5.7	500	284.6	22858	178.6	159%	New	232.7	122%	New	232.7	254.1	112%	112%	32531	254.1	New
204	358	-0.40	-0.47	12	5.8	225	34.3	22858	178.6	19%	NG	232.7	15%	NG	232.7	254.1	13%	13%	32531	254.1	NG
		-0.40	-0.47	12	5.8	500	288.4	22858	178.6	161%	New	232.7	124%	New	232.7	254.1	113%	113%	32531	254.1	New
358	PS	-0.47	-1.40	17	54.7	600	1436.1	24961	195.0	736%	OK	252.4	569%	OK	252.4	276.4	520%	520%	35384	276.4	OK

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popo = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Koki, Bodili																										
Area Covered			Existing Pipe Details and Capacity															Pipe adequacy for 1995			Pipe adequacy for 2005			Pipe adequacy for 2015		
US MH No	DS MH No	MH IL	Length in m	Gradient (0/100)	Dia in mm	Q1-Capacity (L/s)	Contributing Pipes	Q2=PHF in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2=PHF in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2=PHF in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2=PHF in L/s	Q1/Q2 (%)	Judgement				
Koki																										
/	55	38.70	38.25	38	11.8	150	16.6	36	0.4	4419%	OK	36	0.4	4419%	OK	36	0.4	4419%	OK	36	0.4	4419%	OK			
55	54	38.25	38.00	33	7.6	150	13.3	36	0.4	3535%	OK	36	0.4	3535%	OK	36	0.4	3535%	OK	36	0.4	3535%	OK			
54	53	38.00	36.22	41	43.4	150	31.7	36	0.4	8462%	OK	36	0.4	8462%	OK	36	0.4	8462%	OK	36	0.4	8462%	OK			
/	53	36.40	36.22	34	5.3	150	11.1	33	0.3	3224%	OK	33	0.3	3224%	OK	33	0.3	3224%	OK	33	0.3	3224%	OK			
53	43	36.22	32.86	65	51.7	150	34.6	102	1.1	3259%	OK	102	1.1	3259%	OK	102	1.1	3259%	OK	102	1.1	3259%	OK			
43	42	32.86	21.26	66	175.8	150	63.8	102	1.1	6009%	OK	102	1.1	6009%	OK	102	1.1	6009%	OK	102	1.1	6009%	OK			
42	41	21.26	12.65	64	134.5	150	55.9	263	2.7	2039%	OK	263	2.7	2039%	OK	263	2.7	2039%	OK	263	2.7	2039%	OK			
41	38	12.65	10.43	49	45.3	150	32.4	263	2.7	1183%	OK	263	2.7	1183%	OK	263	2.7	1183%	OK	263	2.7	1183%	OK			
38	31	10.43	8.98	60	24.2	150	23.7	263	2.7	864%	OK	263	2.7	864%	OK	263	2.7	864%	OK	263	2.7	864%	OK			
56	40	34.25	25.76	63	134.8	150	55.9	33	0.3	16264%	OK	33	0.3	16264%	OK	33	0.3	16264%	OK	33	0.3	16264%	OK			
40	39	25.76	11.85	52	267.5	150	78.8	33	0.3	22914%	OK	33	0.3	22914%	OK	33	0.3	22914%	OK	33	0.3	22914%	OK			
39	31	11.85	8.98	50	57.4	150	36.5	33	0.3	10614%	OK	33	0.3	10614%	OK	33	0.3	10614%	OK	33	0.3	10614%	OK			
31	28	8.98	6.94	27	75.6	150	41.9	329	3.4	1221%	OK	329	3.4	1221%	OK	329	3.4	1221%	OK	329	3.4	1221%	OK			
30	29	10.23	9.31	58	15.9	150	19.2	33	0.3	5580%	OK	33	0.3	5580%	OK	33	0.3	5580%	OK	33	0.3	5580%	OK			
29	28	9.31	6.94	26	91.2	150	46.0	33	0.3	13376%	OK	33	0.3	13376%	OK	33	0.3	13376%	OK	33	0.3	13376%	OK			
28	27	6.94	6.42	28	18.6	150	20.8	395	4.1	504%	OK	395	4.1	504%	OK	395	4.1	504%	OK	395	4.1	504%	OK			
27	26	6.42	6.15	67	4.0	150	9.7	557	5.8	167%	OK	557	5.8	167%	OK	557	5.8	167%	OK	557	5.8	167%	OK			
26	7	16.15	4.15	64	187.5	150	65.9	557	5.8	1137%	OK	557	5.8	1137%	OK	557	5.8	1137%	OK	557	5.8	1137%	OK			
7	6	4.15	3.54	65	9.4	150	14.8	686	7.1	206%	OK	686	7.1	206%	OK	686	7.1	206%	OK	686	7.1	206%	OK			
6	4	3.54	2.70	23	36.5	150	29.1	686	7.1	407%	OK	686	7.1	407%	OK	686	7.1	407%	OK	686	7.1	407%	OK			
11	10	17.35	14.70	21	126.2	150	54.1	111	1.2	4679%	OK	245	2.6	2120%	OK	245	2.6	2120%	OK	245	2.6	2120%	OK			
10	9	14.70	11.27	20	171.5	150	63.1	111	1.2	5455%	OK	245	2.6	2471%	OK	245	2.6	2471%	OK	245	2.6	2471%	OK			
9	8	11.27	8.60	36	74.2	150	41.5	111	1.2	3587%	OK	245	2.6	1625%	OK	245	2.6	1625%	OK	245	2.6	1625%	OK			

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered Koldi, Badli

Sewer Line	MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
	US MH No	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q _{max} Capacity (L/s)	Contributing Popn	Q ₁ /Q ₂ in L/s	Q ₁ /Q ₂ (%)	Judgement	Contributing Popn	Q ₁ /Q ₂ in L/s	Q ₁ /Q ₂ (%)	Judgement	Contributing Popn	Q ₁ /Q ₂ in L/s	Q ₁ /Q ₂ (%)	Judgement
8	5	8.60	6.00	49.1	150	33.7	196	2.0	1652%	OK	458	4.8	707%	OK	458	4.8	707%	OK
5	4	6.00	2.70	66.0	150	39.1	196	2.0	1918%	OK	458	4.8	820%	OK	458	4.8	820%	OK
4	3	2.70	0.83	26.7	150	24.9	1096	11.4	218%	OK	1642	17.1	146%	OK	1642	17.1	146%	OK
3	2	0.83	0.30	11.5	150	16.3	1096	11.4	143%	OK	1642	17.1	96%	NG	1642	17.1	96%	NG
2	1	0.30	-0.60	11.5	200	35.2	1096		308%	New	1642		206%	New	1642		206%	New
35	34	28.42	28.04	23.8	150	23.5	123	1.3	1832%	OK	235	2.4	959%	OK	332	3.5	679%	OK
34	33	28.04	27.24	40.0	150	30.5	123	1.3	2377%	OK	235	2.4	1244%	OK	332	3.5	881%	OK
33	32	27.24	24.77	145.3	150	58.1	123	1.3	4531%	OK	235	2.4	2371%	OK	332	3.5	1679%	OK
32	25	24.77	24.22	28.9	150	25.9	123	1.3	2022%	OK	235	2.4	1059%	OK	332	3.5	749%	OK
25	24	24.22	23.73	10.7	150	15.7	123	1.3	1227%	OK	235	2.4	642%	OK	332	3.5	455%	OK
24	23	23.73	22.55	51.3	150	34.5	123	1.3	2692%	OK	235	2.4	1409%	OK	332	3.5	997%	OK
23	22	22.55	18.54	93.3	150	46.5	123	1.3	3030%	OK	235	2.4	1900%	OK	332	3.5	1345%	OK
22	21	18.54	16.06	68.9	150	40.0	123	1.3	3120%	OK	235	2.4	1633%	OK	332	3.5	1156%	OK
21	20	16.06	15.05	36.1	150	28.9	123	1.3	2258%	OK	235	2.4	1182%	OK	332	3.5	836%	OK
20	19	15.05	14.50	7.5	150	13.2	123	1.3	1032%	OK	235	2.4	540%	OK	332	3.5	382%	OK
52	51	102.65	97.80	173.2	150	63.4	123	1.3	4947%	OK	234	2.4	2600%	OK	332	3.5	1833%	OK
51	50	97.80	96.60	24.5	150	23.8	123	1.3	1860%	OK	234	2.4	978%	OK	332	3.5	689%	OK
50	49	96.60	75.65	523.8	150	110.2	123	1.3	8602%	OK	234	2.4	4522%	OK	332	3.5	3187%	OK
49	48	75.65	75.23	6.1	150	11.9	123	1.3	927%	OK	234	2.4	487%	OK	332	3.5	344%	OK
48	47	75.23	60.58	187.8	150	66.0	123	1.3	5151%	OK	234	2.4	2708%	OK	332	3.5	1908%	OK
47	46	60.58	45.81	360.2	150	91.4	123	1.3	7134%	OK	234	2.4	3750%	OK	332	3.5	2643%	OK
46	45	45.81	25.09	460.4	150	103.3	123	1.3	8066%	OK	234	2.4	4240%	OK	332	3.5	2988%	OK
45	44	25.09	14.65	222.1	150	71.8	123	1.3	5602%	OK	234	2.4	2945%	OK	332	3.5	2075%	OK
44	19	14.65	14.50	6.5	150	12.3	123	1.3	960%	OK	234	2.4	505%	OK	332	3.5	356%	OK
19	18	14.50	10.90	32.7	150	27.6	369	3.8	717%	OK	703	7.3	376%	OK	996	10.4	266%	OK
18	15	10.90	4.30	85.7	150	44.6	369	3.8	1160%	OK	703	7.3	609%	OK	996	10.4	430%	OK

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered Koki, Badli

Area Covered		Kokil Badli																	
Sewer Line		MH IL		Existing Pipe Details and Capacity			Pipe adequacy for 1995			Pipe adequacy for 2005			Pipe adequacy for 2015						
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement
17	16	9.28	5.85	98	35.0	150	28.5	128	1.3	2137%	OK	207	2.2	1321%	OK	207	2.2	1321%	OK
16	15	5.85	4.30	26	59.6	150	37.2	128	1.3	2789%	OK	207	2.2	1725%	OK	207	2.2	1725%	OK
15	14	4.30	1.26	42	72.4	150	41.0	625	6.5	629%	OK	1117	11.6	352%	OK	1410	14.7	279%	OK
14	13	1.26	-0.12	76	18.2	150	20.5	625	6.5	315%	OK	1117	11.6	176%	OK	1410	14.7	140%	OK
13	1	-0.12	-0.60	56	8.6	150	14.1	625	6.5	217%	OK	1117	11.6	121%	OK	1410	14.7	96%	NG
		-0.12	-0.60	56	8.6	200	30.4	625		466%	New	1117		261%	New	1410		207%	New
12	1	3.03	-0.60	73	49.7	150	34.0	86	0.9	3791%	OK	215	2.2	1516%	OK	215	2.2	1516%	OK
1	PS	-0.60	-2.57	20	98.5	150	47.8	2490	25.9	184%	OK	3657	38.1	125%	OK	3950	41.1	116%	OK
71	70	0.93	-0.04	32	30.3	150	26.5	684	7.1	372%	OK	684	7.1	372%	OK	684	7.1	372%	OK
70	PS	-0.06	-2.57	63	39.8	150	30.4	684	7.1	427%	OK	684	7.1	427%	OK	684	7.1	427%	OK
PS	109	0.33	7.90	168	45.1	300		3174	33.1			4341	45.2			4634	48.3		
S	69	-1.48	-1.50	14	1.4	300	36.5	684	7.1	513%	OK	684	7.1	513%	OK	684	7.1	513%	OK
C	69	-1.29	-1.33	19	2.1	300	44.4	684	7.1	623%	OK	684	7.1	623%	OK	684	7.1	623%	OK
69	PS69	-1.55	-1.58	4	7.5	300	83.7	2052	21.4	392%	OK	2052	21.4	392%	OK	2052	21.4	392%	OK
PS69	109	-0.21	7.95	336	-24.3	300		2052	21.4			2052	21.4			2052	21.4		
109	110	7.90	7.86	32	1.3	600	217.1	5312	49.8	436%	OK	6608	62.0	350%	OK	6901	64.7	336%	OK
110	111	7.85	2.83	18	278.9	600	3242.6	5312	49.8	6511%	OK	6608	62.0	5234%	OK	6901	64.7	5012%	OK
D11	111	29.00	2.83	480	54.5	150	35.6	114	1.2	2995%	OK	248	2.6	1377%	OK	248	2.6	1377%	OK
111	112	2.82	-0.19	18	167.2	600	2510.9	5426	50.9	4936%	OK	6856	64.3	3906%	OK	7149	67.0	3746%	OK

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Pops = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered Koki, Badli

Sewer Line	MH IL		Existing Pipe Details and Capacity			Pipe adequacy for 1995			Pipe adequacy for 2005			Pipe adequacy for 2015		
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (000)	Dia in mm	Q1-Capacity (L/s)	Contributing Pops	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2-P.H.F. in L/s	Q1/Q2 (%)
112	113	-0.20	-0.25	36	1.4	600	228.8	5540	51.9	441%	OK	7397	69.3	330%
113	114	-0.25	-0.29	28	1.4	600	232.1	5540	51.9	447%	OK	7397	69.3	335%
114	115	-0.30	-0.38	56	1.4	600	232.1	5540	51.9	447%	OK	7397	69.3	335%
115	116	-0.39	-0.49	70	1.4	600	232.1	5540	51.9	447%	OK	7397	69.3	335%
116	117	-0.50	-0.58	52	1.5	600	240.8	5540	51.9	464%	OK	7397	69.3	347%
117	118	-0.59	-0.66	46	1.5	600	239.5	5540	51.9	461%	OK	7397	69.3	345%
118	119	-0.68	-1.22	17	31.8	600	1094.3	5540	51.9	2107%	OK	7397	69.3	1578%
Badli														
92	91	29.78	24.44	65	82.2	150	43.7	244	2.5	1717%	OK	280	2.9	577%
91	90	24.44	20.78	77	47.5	150	33.2	244	2.5	1306%	OK	307	3.2	1038%
90	85A	20.78	18.46	14	165.7	150	62.0	244	2.5	2439%	OK	307	3.2	1939%
86A	85A	22.26	18.46	16	237.5	150	74.2	25	0.3	28500%	OK	25	0.3	28500%
85A	84A	18.46	13.81	75	62.0	150	37.9	294	3.1	1238%	OK	357	3.7	1020%
84A	83A	13.81	13.28	74	7.2	150	12.9	294	3.1	421%	OK	357	3.7	347%
22	21	22.13	16.11	91	66.2	150	39.2	25	0.3	15042%	OK	25	0.3	15042%
21	83A	16.11	13.28	53	53.4	150	35.2	25	0.3	13514%	OK	25	0.3	13514%
83A	20	13.28	12.36	22	41.8	150	31.1	344	3.6	869%	OK	407	4.2	735%
20	19	12.36	11.50	69	12.5	150	17.0	344	3.6	474%	OK	407	4.2	401%
95	94	37.55	29.72	63	124.3	150	53.7	1190	12.4	433%	OK	1898	19.8	272%
94	93	29.72	22.52	66	109.1	150	50.3	1215	12.7	397%	OK	1923	20.0	251%
93	19	22.52	11.50	49	224.9	150	72.2	1215	12.7	571%	OK	1923	20.0	361%
19	18	11.50	10.58	89	10.3	150	15.5	1584	16.5	94%	NG	2355	24.5	63%
		11.50	10.58	89	10.3	200	33.3	1584		202%	New	2355		136%

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Pops = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Koko, Badili

Area Covered

Area Covered		Koki, Badli										Pipe adequacy for 1995										Pipe adequacy for 2005				Pipe adequacy for 2015			
Sewer Line		MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015													
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=P.H.F in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F in L/s	Q1/Q2 (%)	Judgement										
D1	D2	95.00	40.00	520	105.8	200	106.7	216	2.3	4741%	New	283	2.9	3618%	New	283	2.9	3618%	New										
D3	D2	65.00	40.00	180	138.9	200	122.2	703	7.3	1669%	New	806	8.4	1456%	New	868	9.0	1352%	New										
D2	D4	40.00	30.00	130	76.9	200	91.0	1135	11.8	769%	New	1372	14.3	637%	New	1434	14.9	609%	New										
D5	D4	90.00	30.00	770	77.9	200	91.6	1406	14.6	625%	New	2182	22.7	403%	New	2182	22.7	403%	New										
D4	D6	30.00	23.00	160	43.8	200	68.6	2757	28.7	239%	New	3837	40.0	172%	New	3999	40.6	169%	New										
D7	D6	57.00	23.00	590	57.6	200	78.7	216	2.3	3499%	New	283	2.9	2671%	New	283	2.9	2671%	New										
D6	18	23.00	10.58	270	46.0	200	70.3	2973	31.0	227%	New	4120	42.9	164%	New	4182	43.6	161%	New										
18	14	10.58	9.26	57	23.2	150	23.2	4618	48.1	48%	NG	6536	61.3	38%	NG	6600	61.9	37%	NG										
		10.58	9.26	57	23.2	250	90.5	4618	188%	New	6536		148%	New	6600		146%	New											
17	16	20.85	14.06	95	71.5	150	40.7	61	0.6	6408%	OK	62	0.6	6304%	OK	62	0.6	6304%	OK										
16	15	14.06	10.41	90	40.6	150	30.7	61	0.6	4827%	OK	62	0.6	4749%	OK	62	0.6	4749%	OK										
15	14	10.41	9.26	43	26.7	150	24.9	61	0.6	3920%	OK	62	0.6	3856%	OK	62	0.6	3856%	OK										
14	11A	9.26	7.69	68	23.1	150	23.1	4740	49.4	47%	NG	6660	62.4	37%	NG	6724	63.0	37%	NG										
		9.26	7.69	68	23.1	250	90.4	4740	183%	New	6660		145%	New	6724		143%	New											
13	12	13.66	10.55	64	48.6	150	33.6	61	0.6	5283%	OK	62	0.6	5198%	OK	62	0.6	5198%	OK										
12	11	10.55	7.81	81	33.8	150	28.0	61	0.6	4408%	OK	62	0.6	4337%	OK	62	0.6	4337%	OK										
11	11A	7.81	7.69	23	5.2	150	11.0	61	0.6	1731%	OK	62	0.6	1703%	OK	62	0.6	1703%	OK										
11A	10	7.69	6.21	73	20.3	150	21.7	4915	51.2	42%	NG	6970	65.3	33%	NG	7034	65.9	33%	NG										
		7.69	6.21	73	20.3	250	84.7	4915	165%	New	6970		130%	New	7034		128%	New											

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered Koki, Badili

Sewer Line	US MH No	MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
		US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement
10	7	6.21	5.63	32	18.1	150	20.5	4915	51.2	40%	NG	6970	65.3	31%	NG	7034	65.9	31%	NG
		6.21	5.63	32	18.1	250	80.1	4915		156%	New	6970		123%	New	7034		121%	New
9	8	8.01	6.93	47	23.0	150	23.1	114	1.2	1944%	OK	248	2.6	894%	OK	248	2.6	894%	OK
8	7	6.93	5.63	54	24.1	150	23.6	114	1.2	1990%	OK	248	2.6	915%	OK	248	2.6	915%	OK
7	6	5.63	4.22	72	19.6	225	62.8	5143	48.2	130%	OK	7466	70.0	90%	NG	7530	70.6	89%	NG
		5.63	4.22	72	19.6	250	83.2	5143		173%	New	7466		119%	New	7530		118%	New
6	5	4.22	2.77	59	24.6	225	70.4	5177	48.5	145%	OK	7499	70.3	100%	OK	7566	70.9	99%	NG
		4.22	2.77	59	24.6	250	93.2	5177		192%	New	7499		133%	New	7566		131%	New
5	4	2.77	1.43	55	24.4	225	70.1	5177	48.5	144%	OK	7499	70.3	100%	NG	7566	70.9	99%	NG
		2.77	1.43	55	24.4	250	92.8	5177		191%	New	7499		132%	New	7566		131%	New
4	3	1.43	0.84	59	10.0	225	44.9	5177	48.5	93%	NG	7499	70.3	64%	NG	7566	70.9	63%	NG
		1.43	0.84	59	10.0	300	96.7	5177		199%	New	7499		138%	New	7566		136%	New
3	2	0.84	0.61	52	4.4	225	29.9	5177	48.5	62%	NG	7499	70.3	42%	NG	7566	70.9	42%	NG
		0.84	0.61	52	4.4	350	97.0	5177		200%	New	7499		138%	New	7566		137%	New
2	ST2	0.61	-0.70	4	327.5	225	257.0	5317	49.8	515%	OK	7639	71.6	359%	OK	7706	72.2	356%	OK
ST2	1198	-0.70	-0.85	1	150.0	300	374.5	5317	49.8	751%	OK	7639	71.6	523%	OK	7706	72.2	518%	OK
1	103	80.00	79.55	55	8.2	150	13.8	530	5.5	250%	OK	530	5.5	250%	OK	530	5.5	250%	OK
103	102	79.55	77.26	38	60.3	150	37.4	530	5.5	677%	OK	530	5.5	677%	OK	530	5.5	677%	OK
102	79	77.26	67.40	32	308.1	150	84.5	530	5.5	1531%	OK	530	5.5	1531%	OK	530	5.5	1531%	OK
79	75	67.40	63.70	50	74.0	150	41.4	620	6.5	641%	OK	684	7.1	581%	OK	684	7.1	581%	OK
88	77	85.59	80.11	51	107.5	150	49.9	88	0.9	5446%	OK	152	1.6	3153%	OK	152	1.6	3153%	OK
78	78	84.50	84.03	33	14.2	150	18.2	88	0.9	1983%	OK	152	1.6	1148%	OK	152	1.6	1148%	OK
78	77	84.03	80.11	65	60.3	150	37.4	88	0.9	4080%	OK	152	1.6	2362%	OK	152	1.6	2362%	OK
77	76	80.11	78.35	18	97.8	150	47.6	264	2.8	1732%	OK	456	4.8	1003%	OK	456	4.8	1003%	OK
76	75	78.35	63.70	52	281.7	150	80.8	264	2.8	2939%	OK	456	4.8	1702%	OK	456	4.8	1702%	OK

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered				Koki, Badili																		
Sewer Line		MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015						
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1-Capacity (L/s)	Contributing Pipes	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pipes	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement			
75	74	63.70	62.95	32	23.4	150	23.3	972	10.1	230%	OK	1292	13.5	173%	OK	1292	13.5	173%	OK			
74	73	62.95	55.96	41	170.5	150	62.9	972	10.1	621%	OK	1292	13.5	467%	OK	1292	13.5	467%	OK			
73	72	55.96	55.71	27	9.3	150	14.7	972	10.1	145%	OK	1292	13.5	109%	OK	1292	13.5	109%	OK			
82	81	85.17	76.61	48	178.3	150	64.3	169	1.8	3653%	OK	233	2.4	2650%	OK	233	2.4	2650%	OK			
81	80	76.61	71.92	50	93.8	150	46.6	169	1.8	2650%	OK	233	2.4	1922%	OK	233	2.4	1922%	OK			
80	72	71.92	55.71	58	279.5	150	80.5	169	1.8	4573%	OK	233	2.4	3317%	OK	233	2.4	3317%	OK			
72	71	55.71	55.00	19	37.4	150	29.4	1229	12.8	230%	OK	1677	17.5	169%	OK	1677	17.5	169%	OK			
71	70	55.00	33.53	23	933.5	150	147.1	1229	12.8	1149%	OK	1677	17.5	842%	OK	1677	17.5	842%	OK			
70	69	33.53	29.11	45	98.2	150	47.7	1229	12.8	373%	OK	1677	17.5	273%	OK	1677	17.5	273%	OK			
69	68	29.11	24.24	94	51.8	150	34.7	1229	12.8	271%	OK	1677	17.5	198%	OK	1677	17.5	198%	OK			
D8	68	33.00	24.24	210	41.7	200	67.0	544	5.7	1182%	New	544	5.7	1182%	New	544	5.7	1182%	New			
68	67	24.24	23.16	31	34.8	150	28.4	1787	18.6	153%	OK	2235	23.3	122%	OK	2235	23.3	122%	OK			
67	66	23.16	21.28	31	60.6	150	37.5	1787	18.6	201%	OK	2235	23.3	161%	OK	2235	23.3	161%	OK			
66	65	21.28	19.39	85	22.2	150	22.7	1787	18.6	122%	OK	2235	23.3	98%	NG	2235	23.3	98%	NG			
		21.28	19.39	85	22.2	200	48.9	1787		263%	New	2235		210%	New	2235		210%	New			
65	64	26.62	24.87	35	50.0	150	34.1	14	0.1	23351%	OK	14	0.1	23351%	OK	14	0.1	23351%	OK			
64	63	24.87	19.39	63	87.0	150	44.9	14	0.1	30800%	OK	14	0.1	30800%	OK	14	0.1	30800%	OK			
63	62	19.39	18.05	55	24.4	150	23.8	1815	18.9	126%	OK	2263	23.6	101%	OK	2263	23.6	101%	OK			
62	61	18.05	16.68	62	22.1	150	22.6	1815	18.9	120%	OK	2263	23.6	96%	NG	2263	23.6	96%	NG			
		18.05	16.68	62	22.1	200	48.8	1815		258%	New	2263		207%	New	2263		207%	New			
112	89	23.00	22.66	19	17.9	150	20.4	14	0.1	13970%	OK	14	0.1	13970%	OK	14	0.1	13970%	OK			
89	59	22.66	21.28	16	86.2	150	44.7	14	0.1	30669%	OK	14	0.1	30669%	OK	14	0.1	30669%	OK			

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered

Kokki, Badili

Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
Sewer Line	US MH No	DS IL	Length in m	Gradient (000)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=PHF in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=PHF in L/s	Q1/Q2 (%)	Judgement	Judgement
D9	60	30.00	25.50	32.1	200	58.8	14	0.1	40322%	New	14	0.1	40322%	New	New
60	59	25.50	21.28	89.8	150	45.6	14	0.1	31292%	OK	14	0.1	31292%	OK	OK
59	58	21.28	19.94	15.4	150	18.9	42	0.4	4320%	OK	42	0.4	4320%	OK	OK
58	61	19.94	16.68	55.3	150	35.8	83	0.9	4141%	OK	99	1.0	3471%	OK	OK
61	52	16.68	10.78	85.5	150	44.5	1950	20.3	219%	OK	2434	25.4	176%	OK	OK
111	110	73.00	72.00	52.6	150	34.9	56	0.6	5989%	OK	56	0.6	5989%	OK	OK
7	110	73.00	72.00	50.0	150	34.1	57	0.6	5735%	OK	57	0.6	5735%	OK	OK
110	104	72.00	71.00	38.5	150	29.9	170	1.8	1687%	OK	170	1.8	1687%	OK	OK
109	105	77.00	74.00	65.2	150	38.9	139	1.4	2686%	OK	139	1.4	2686%	OK	OK
105	104	74.00	71.00	100.0	150	48.2	139	1.4	3326%	OK	139	1.4	3326%	OK	OK
104	101	71.00	63.04	497.5	150	107.4	588	6.1	1754%	OK	672	7.0	1535%	OK	OK
101	100	63.04	59.85	199.4	150	68.0	588	6.1	1110%	OK	672	7.0	971%	OK	OK
100	99	59.85	52.82	439.4	150	100.9	588	6.1	1648%	OK	672	7.0	1442%	OK	OK
99	98	52.82	49.41	200.6	150	68.2	588	6.1	1114%	OK	672	7.0	974%	OK	OK
98	97	49.41	27.12	454.9	150	102.7	588	6.1	1677%	OK	672	7.0	1467%	OK	OK
97	96	27.12	21.59	108.4	150	50.1	588	6.1	819%	OK	672	7.0	716%	OK	OK
96	54	21.59	19.55	34.0	150	28.1	602	6.3	448%	OK	686	7.1	393%	OK	OK
54	53	19.55	14.16	64.9	150	38.8	602	6.3	619%	OK	686	7.1	543%	OK	OK
108	53	16.40	14.16	74.7	150	41.6	32	0.3	12484%	OK	36	0.4	11097%	OK	OK
53	52	14.16	10.78	42.3	150	31.3	648	6.8	464%	OK	736	7.7	408%	OK	OK
107	52	14.26	10.78	59.0	150	37.0	32	0.3	11096%	OK	36	0.4	9863%	OK	OK

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Koko, Badili

Area Covered

Sewer Line	US MH No	DS MH No	Existing Pipe Details and Capacity			Pipe adequacy for 1995			Pipe adequacy for 2005			Pipe adequacy for 2015		
			Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q1/Q2 (%)	Contributing Popn	Q1/Q2 (%)	Judgment	Contributing Popn	Q1/Q2 (%)	Judgment
	52		80	26.4	150	24.7	2668	89%	3264	73%	NG	3380	35.2	70% NG
			80	26.4	200	53.3	2668	192%	3264	151%	New	3380		151% New
	106	51	67	11.3	150	16.2	32	4866%	36	4325%	OK	38	0.4	4098% OK
	51	50	72	11.7	150	16.4	2738	58%	3358	47%	NG	3492	36.4	45% NG
			72	11.7	250	64.2	2738	225%	3358	184%	New	3492		177% New
	50	27	86	7.0	150	12.7	2738	45%	3358	36%	NG	3492	36.4	35% NG
			86	7.0	250	49.7	2738	174%	3358	142%	New	3492		137% New
	87	86	51	34.5	150	28.3	176	1543%	176	1543%	OK	176	1.8	1543% OK
	86	85	56	17.0	150	19.8	176	1082%	176	1082%	OK	176	1.8	1082% OK
	85	84	13	41.5	150	31.0	176	1693%	176	1693%	OK	176	1.8	1693% OK
	D10	84	110	18.2	200	44.2	176	2412%	176	2412%	New	176	1.8	2412% New
	84	83	58	82.6	150	43.8	528	796%	528	796%	OK	528	5.5	796% OK
	83	32	103	31.6	150	27.1	528	492%	528	492%	OK	528	5.5	492% OK
	34	33	27	40.7	150	30.7	176	1677%	176	1677%	OK	176	1.8	1677% OK
	33	32	73	82.5	150	43.7	176	2385%	176	2385%	OK	176	1.8	2385% OK
	32	31	77	64.3	150	38.6	742	7.7	762	486%	OK	778	8.1	476% OK
	31	30	36	71.7	150	40.8	742	7.7	762	514%	OK	778	8.1	503% OK
	30	29	42	27.1	150	25.1	742	7.7	762	316%	OK	778	8.1	310% OK
	29	28	23	49.1	150	33.8	742	7.7	762	425%	OK	778	8.1	417% OK
	28	27	100	29.3	150	26.1	742	7.7	762	328%	OK	778	8.1	322% OK
	27	26	94	6.6	225	36.5	3518	100%	4178	84%	NG	4344	45.3	81% NG
			94	6.6	250	48.3	3518	132%	4178	111%	New	4344		107% New

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered		Kokri, Badli										Pipe adequacy for 1995					Pipe adequacy for 2005					Pipe adequacy for 2015				
Sewer Line	US MH No	MH IL		Existing Pipe Details and Capacity						Pipe adequacy for 1995					Pipe adequacy for 2005					Pipe adequacy for 2015						
		US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Pops	Q2=P.H.F in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2=P.H.F in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2=P.H.F in L/s	Q1/Q2 (%)	Judgement							
26	25	6.61	6.06	92	6.0	225	34.7	3518	36.6	95%	NG	4178	43.5	80%	NG	4344	45.3	77%	NG							
		6.61	6.06	92	6.0	250	46.0	3518		125%	New	4178		106%	New	4344		102%	New							
57	56	15.66	10.68	89	56.0	150	36.0	38	0.4	9101%	OK	58	0.6	5963%	OK	74	0.8	4674%	OK							
56	55	10.68	8.48	59	37.3	150	29.4	38	0.4	7429%	OK	58	0.6	4868%	OK	74	0.8	3815%	OK							
55	25	8.48	6.06	82	29.5	150	26.2	38	0.4	6610%	OK	58	0.6	4330%	OK	74	0.8	3394%	OK							
25	24	6.06	2.80	103	31.7	225	79.9	3588	37.4	214%	OK	4272	44.5	180%	OK	4456	46.4	172%	OK							
36	35	5.44	4.72	41	17.6	150	20.2	32	0.3	6055%	OK	36	0.4	5382%	OK	38	0.4	5099%	OK							
35	24	4.72	2.80	35	54.9	150	35.7	32	0.3	10701%	OK	36	0.4	9512%	OK	38	0.4	9011%	OK							
24	23	2.80	1.60	79	15.2	225	55.5	3652	38.0	145%	OK	4344	45.3	122%	OK	4532	47.2	117%	OK							
23	49	1.60	1.41	72	2.6	225	23.1	3652	38.0	61%	NG	4344	45.3	51%	NG	4532	47.2	49%	NG							
49	48	1.60	1.41	72	2.6	300	49.7	3652		131%	New	4344		110%	New	4532		105%	New							
		1.41	1.27	25	5.6	225	33.6	3652	38.0	88%	NG	4344	45.3	74%	NG	4532	47.2	71%	NG							
48	47	1.27	0.72	39	14.1	225	72.4	3652		190%	New	4344		160%	New	4532		153%	New							
47	ST47	0.72	-0.70	42	33.8	225	53.3	3652	38.0	140%	OK	4344	45.3	118%	OK	4532	47.2	113%	OK							
ST47	119B	-0.70	-0.85	1	150.0	300	82.6	3793	39.5	209%	OK	4485	46.7	177%	OK	4673	48.7	170%	OK							
							374.5	3793	39.5	948%	OK	4485	46.7	802%	OK	4673	48.7	769%	OK							
119B	119A	-0.85	-1.08	11	20.9	450	412.3	9110	85.4	483%	OK	12124	101.0	408%	OK	12379	103.2	400%	OK							
119A	119	-1.08	-1.22	7	20.0	450	403.2	9110	85.4	472%	OK	12124	101.0	399%	OK	12379	103.2	391%	OK							
119	PS	-1.22	-1.27	2	25.0	600	970.8	14650	122.1	795%	OK	19228	160.2	606%	OK	19776	164.8	589%	OK							
D12	PS	12.00	-1.27	340	39.0	200	64.8	572	6.0	1087%	New	572	6.0	1087%	New	572	6.0	1087%	New							
PS	D13	-1.27	25.00	1160	-22.6	450		15222	126.9		New	19800	165.0		New	20348	159.0		New							

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Pops = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered Koki, Badili

Sewer Line		MH IL		Existing Pipe Details and Capacity		Pipe adequacy for 1995			Pipe adequacy for 2005			Pipe adequacy for 2015		
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/00)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=P.H.F in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F in L/s	Q1/Q2 (%)

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered		Kila Kila														Pipe adequacy for 2015									
Sewer Line		MH IL		Existing Pipe Details and Capacity					Pipe adequacy for 1995					Pipe adequacy for 2005					Pipe adequacy for 2015						
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Q2=PHF in L/s	Contributing Popn	Q1/Q2 (%)	Judgement	Q2=PHF in L/s	Contributing Popn	Q1/Q2 (%)	Judgement	Q2=PHF in L/s	Contributing Popn	Q1/Q2 (%)	Judgement						
	D13	PS	25.00	18.66	140	45.3	600	1306.6	15222	126.9	1030%	New	19800	165.0	792%	New	20348	159.0	822%	New					
229	77		19.05	18.66	69	5.7	150	11.4	45	0.5	2443%	OK	50	0.5	2198%	OK	53	0.6	2074%	OK					
77	76		18.66	16.88	61	29.2	150	26.0	324	3.4	771%	OK	413	4.3	605%	OK	479	5.0	521%	OK					
217	76		22.10	16.88	69	75.7	150	41.9	48	0.5	8378%	OK	48	0.5	8378%	OK	48	0.5	8378%	OK					
76	75		16.88	15.81	59	18.1	150	20.5	420	4.4	469%	OK	509	5.3	387%	OK	575	6.0	342%	OK					
75	74		15.81	15.07	48	15.4	150	18.9	420	4.4	432%	OK	509	5.3	357%	OK	575	6.0	316%	OK					
91			34.03	30.34	30	123.0	150	53.4	48	0.5	10682%	OK	48	0.5	10682%	OK	48	0.5	10682%	OK					
92	91		31.08	30.34	73	10.1	150	15.3	48	0.5	3067%	OK	48	0.5	3067%	OK	48	0.5	3067%	OK					
91	90		30.34	26.58	29	129.7	150	54.8	144	1.5	3656%	OK	144	1.5	3656%	OK	144	1.5	3656%	OK					
93	90		27.20	26.58	68	9.1	150	14.5	48	0.5	2908%	OK	48	0.5	2908%	OK	48	0.5	2908%	OK					
90	89		26.58	23.20	40	84.5	150	44.3	240	2.5	1771%	OK	240	2.5	1771%	OK	240	2.5	1771%	OK					
94	89		24.14	23.20	77	12.2	150	16.8	48	0.5	3365%	OK	48	0.5	3365%	OK	48	0.5	3365%	OK					
89																									
88	74		17.32	15.07	45	50.0	150	34.1	336	3.5	973%	OK	336	3.5	973%	OK	336	3.5	973%	OK					
74	73		15.07	14.85	29	7.6	150	13.3	893	9.3	143%	OK	893	9.3	143%	OK	959	10.0	133%	OK					
308	307		126.00	98.50	300	91.7	200	99.3	1222	12.7	780%	New	1222	12.7	780%	New	1222	12.7	780%	New					
307	305		98.50	53.50	500	90.0	200	98.4	2158	22.5	438%	New	2158	22.5	438%	New	2158	22.5	438%	New					
306	305		54.50	53.50	80	12.5	200	36.7	279	2.9	1262%	New	279	2.9	1262%	New	316	3.3	1114%	New					

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered

Kila Kila

Area Covered			MH IL		Existing Pipe Details and Capacity					Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
US MH No	DS MH No		US IL	DS IL	Length in m	Gradient (0/00)	Pipe in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=PHF in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=PHF in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=PHF in L/s	Q1/Q2 (%)	Judgement	
305	301		53.50	44.00	140	67.9	200	85.4	2527	26.3	325%	New	2632	27.4	312%	New	2669	27.8	307%	New	
304	302		60.00	45.00	190	78.9	200	92.2	407	4.2	2174%	New	474	4.9	1866%	New	511	5.3	1731%	New	
303	302		68.00	45.00	210	109.5	200	108.5	596	6.2	1748%	New	611	6.4	1705%	New	611	6.4	1705%	New	
302	301		45.00	44.00	85	11.8	200	35.6	1183	12.3	289%	New	1280	13.3	267%	New	1317	13.7	259%	New	
301	73		44.00	14.85	300	97.2	200	102.2	3710	38.6	265%	New	3912	40.8	251%	New	3986	41.5	246%	New	
73	72		14.85	14.58	37	7.3	150	13.0	4562	47.5	27%	NG	4853	50.6	26%	NG	4993	52.0	25%	NG	
			14.85	14.58	37	7.3	300	82.6	4562		174%	New	4853		163%	New	4993		159%	New	
83	82		38.67	35.57	55	56.4	150	36.2	49	0.5	7084%	OK	49	0.5	7084%	OK	49	0.5	7084%	OK	
82	81		35.57	34.09	57	26.0	150	24.5	49	0.5	4808%	OK	49	0.5	4808%	OK	49	0.5	4808%	OK	
81	80		34.09	25.90	29	282.4	150	80.9	49	0.5	15856%	OK	49	0.5	15856%	OK	49	0.5	15856%	OK	
85	84		35.73	27.75	58	137.6	150	56.5	49	0.5	11067%	OK	49	0.5	11067%	OK	49	0.5	11067%	OK	
84	80		27.75	25.90	60	30.8	150	26.7	49	0.5	5239%	OK	49	0.5	5239%	OK	49	0.5	5239%	OK	
80	79		25.90	23.90	38	52.6	150	34.9	146	1.5	2297%	OK	146	1.5	2297%	OK	146	1.5	2297%	OK	
79	78		23.90	20.46	29	118.6	150	52.5	146	1.5	3449%	OK	146	1.5	3449%	OK	146	1.5	3449%	OK	
87	86		31.55	28.85	22	122.7	150	53.4	49	0.5	10453%	OK	49	0.5	10453%	OK	49	0.5	10453%	OK	
86	78		28.85	20.46	49	171.2	150	63.0	49	0.5	12346%	OK	49	0.5	12346%	OK	49	0.5	12346%	OK	
78	72		20.46	14.58	50	117.6	150	52.2	243	2.5	2063%	OK	243	2.5	2063%	OK	243	2.5	2063%	OK	
72	71		14.58	13.89	58	11.9	150	16.6	4853	50.6	33%	NG	5144	48.2	34%	NG	5284	49.5	34%	NG	
			14.58	13.89	58	11.9	250	64.9	4853		128%	New	5144		134%	New	5284		131%	New	
71	70		13.89	13.40	67	7.3	150	13.0	4853	50.6	26%	NG	5144	48.2	27%	NG	5284	49.5	26%	NG	

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Area Covered		Kila Kila										Pipe adequacy for 1995					Pipe adequacy for 2005					Pipe adequacy for 2015				
US MH No	DS MH No	MH IL		Existing Pipe Details and Capacity					Pipe adequacy for 1995					Pipe adequacy for 2005					Pipe adequacy for 2015							
		US IL	DS IL	Length in m	Gradient (0000)	Dia in mm	Q1=Capacity (L/s)	Contributing Pops	Q2=PHF in L/s	Q1/Q2 (%)	Judgment	Contributing Pops	Q2=PHF in L/s	Q1/Q2 (%)	Judgment	Contributing Pops	Q2=PHF in L/s	Q1/Q2 (%)	Judgment							
		13.89	13.40	67	7.3	250	50.9	4853		101%	New	5144		105%	New	5284		103%	New							
70	48	13.40	13.00	61	6.6	150	12.3	4934	51.4	24%	NG	5225	49.0	25%	NG	5365	50.3	25%	NG							
		13.40	13.00	61	6.6	300	78.3	4934		152%	New	5225		160%	New	5365		156%	New							
66	65	44.60	43.62	14	70.0	150	40.3	81	0.8	4775%	OK	81	0.8	4775%	OK	81	0.8	4775%	OK							
65	64	43.62	36.90	39	172.3	150	63.2	81	0.8	7492%	OK	81	0.8	7492%	OK	81	0.8	7492%	OK							
64	63	36.90	36.58	21	15.2	150	18.8	81	0.8	2228%	OK	81	0.8	2228%	OK	81	0.8	2228%	OK							
67	63	39.75	36.58	38	83.4	150	44.0	81	0.8	5213%	OK	81	0.8	5213%	OK	81	0.8	5213%	OK							
63	62	36.58	33.35	26	124.2	150	53.7	243	2.5	2121%	OK	243	2.5	2121%	OK	243	2.5	2121%	OK							
68	62	34.04	33.35	50	13.8	150	17.9	81	0.8	2120%	OK	81	0.8	2120%	OK	81	0.8	2120%	OK							
62	59	33.35	31.01	18	130.0	150	54.9	405	4.2	1302%	OK	405	4.2	1302%	OK	405	4.2	1302%	OK							
61	60	37.06	34.34	19	143.2	150	57.6	81	0.8	6829%	OK	81	0.8	6829%	OK	81	0.8	6829%	OK							
60	59	34.34	31.01	21	158.6	150	60.6	81	0.8	7188%	OK	81	0.8	7188%	OK	81	0.8	7188%	OK							
59	58	31.01	26.17	43	112.6	150	51.1	567	5.9	865%	OK	567	5.9	865%	OK	567	5.9	865%	OK							
58	50	26.17	22.50	101	36.3	150	29.0	567	5.9	492%	OK	567	5.9	492%	OK	567	5.9	492%	OK							
57	56	50.39	48.09	44	52.3	150	34.8	118	1.2	2833%	OK	130	1.4	2571%	OK	139	1.4	2405%	OK							
56	55	48.09	42.86	38	137.6	150	56.5	118	1.2	4597%	OK	130	1.4	4172%	OK	139	1.4	3902%	OK							
55	54	42.86	42.33	14	37.9	150	29.6	118	1.2	2411%	OK	130	1.4	2188%	OK	139	1.4	2047%	OK							
54	53	42.33	41.51	30	27.3	150	25.2	199	2.1	1215%	OK	211	2.2	1146%	OK	220	2.3	1099%	OK							
53	52	41.51	39.62	82	23.0	150	23.1	199	2.1	1115%	OK	211	2.2	1052%	OK	220	2.3	1009%	OK							
52	51	39.62	31.67	49	162.2	150	61.3	199	2.1	2959%	OK	211	2.2	2791%	OK	220	2.3	2677%	OK							
51	50	31.67	22.50	69	132.9	150	55.5	199	2.1	2678%	OK	211	2.2	2526%	OK	220	2.3	2423%	OK							
50	49	22.50	18.11	32	137.2	150	56.4	847	8.8	639%	OK	859	8.9	630%	OK	868	9.0	624%	OK							

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Area Covered Kila Kila

Area Covered				MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Pops	Q2=PHF in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2=PHF in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2=PHF in L/s	Q1/Q2 (%)	Judgement		
69	49	21.74	18.11	99	36.7	150	29.2	81	0.8	3456%	OK	81	0.8	3456%	OK	81	0.8	3456%	OK		
49	48	18.11	13.00	46	111.1	150	50.8	1009	10.5	483%	OK	1021	10.6	477%	OK	1030	10.7	473%	OK		
48	PS	13.00	11.50	44	34.1	150	28.1	6024	56.5	50%	NG	6327	59.3	47%	NG	6476	60.7	46%	NG		
		13.00	11.50	44	34.1	250	109.8	6024		194%	New	6327		185%	New	6476		181%	New		
41	40	49.99	44.63	28	191.4	150	66.6	118	1.2	5421%	OK	130	1.4	4921%	OK	139	1.4	4602%	OK		
402	401	46.70	46.00	80	8.8	200	30.7	499	5.2	590%	New	702	7.3	420%	New	702	7.3	420%	New		
401	40	46.00	44.63	220	6.2	200	25.9	616	6.4	403%	New	833	8.7	298%	New	841	8.8	295%	New		
40	39	44.63	42.59	25	81.6	150	43.5	734	7.6	569%	OK	963	10.0	434%	OK	980	10.2	426%	OK		
39	38	42.59	35.53	69	102.3	150	48.7	830	8.6	563%	OK	1121	11.7	417%	OK	1138	11.9	411%	OK		
42	38	39.26	35.53	31	120.3	150	52.8	81	0.8	6261%	OK	81	0.8	6261%	OK	81	0.8	6261%	OK		
38	37	35.53	30.96	51	89.6	150	45.6	1007	10.5	435%	OK	1360	14.2	322%	OK	1377	14.3	318%	OK		
37	36	30.96	27.35	57	63.3	150	38.3	1007	10.5	365%	OK	1360	14.2	271%	OK	1377	14.3	267%	OK		
36	35	27.35	20.50	81	84.6	150	44.3	1007	10.5	422%	OK	1360	14.2	313%	OK	1377	14.3	309%	OK		
35	34	20.50	19.98	85	6.1	150	11.9	1088	11.3	105%	OK	1441	15.0	79%	NG	1458	15.2	78%	NG		
		20.50	19.98	85	6.1	200	25.7	1088		226%	New	1441		171%	New	1458		169%	New		
34	33	19.98	14.96	64	78.4	150	42.7	1088	11.3	376%	OK	1441	15.0	284%	OK	1458	15.2	281%	OK		
33	32	14.96	13.36	43	37.2	150	29.4	1088	11.3	259%	OK	1441	15.0	196%	OK	1458	15.2	193%	OK		
47	46	29.40	29.29	33	3.3	150	8.8	81	0.8	1042%	OK	81	0.8	1042%	OK	81	0.8	1042%	OK		
46	45	29.29	28.41	68	12.9	150	17.3	81	0.8	2053%	OK	81	0.8	2053%	OK	81	0.8	2053%	OK		
45	44	28.41	24.90	55	63.8	150	38.5	81	0.8	4560%	OK	81	0.8	4560%	OK	81	0.8	4560%	OK		
44	43	24.90	17.41	39	192.1	150	66.7	81	0.8	7910%	OK	81	0.8	7910%	OK	81	0.8	7910%	OK		
43	32	17.41	13.36	33	122.7	150	53.4	81	0.8	6323%	OK	81	0.8	6323%	OK	81	0.8	6323%	OK		
32	PS	13.36	11.50	13	143.1	150	57.6	1242	12.9	445%	OK	1595	16.6	347%	OK	1612	16.8	343%	OK		

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Area Covered

Kila Kila

Sewer Line	MH IL				Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
	US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgment	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgment	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgment
	19	18	15.24	13.46	105	17.0	150	19.8	1020	10.6	187%	OK	1692	17.6	113%	OK	1736	18.1	110%	OK
	18	F2	13.46	13.20	5	52.0	200	74.8	1020	10.6	704%	New	1692	17.6	424%	New	1736	18.1	414%	New
	F2	F3	13.20	13.00	5	40.0	600	1228.0	23508	183.7	669%	New	29414	229.8	534%	New	30172	235.7	521%	New
	F3	F4	13.00	3.50	280	33.9	600	1131.0	23508	183.7	616%	New	29414	229.8	492%	New	30172	235.7	480%	New
	17	16	11.67	10.19	71	20.8	150	22.0	64	0.7	3298%	OK	110	1.1	1919%	OK	149	1.6	1417%	OK
	97	96	19.01	14.72	89	48.2	150	33.4	64	0.7	5015%	OK	110	1.1	2918%	OK	154	1.6	2084%	OK
	96	95	14.72	12.20	42	60.0	150	37.3	64	0.7	5596%	OK	110	1.1	3256%	OK	154	1.6	2325%	OK
	95	16	12.20	10.19	45	44.7	150	32.2	64	0.7	4828%	OK	110	1.1	2809%	OK	154	1.6	2006%	OK
	16	15	10.19	8.39	81	22.2	150	22.7	192	2.0	1135%	OK	330	3.4	660%	OK	457	4.8	477%	OK
	226	225	16.52	15.36	34	34.1	150	28.1	64	0.7	4220%	OK	110	1.1	2455%	OK	154	1.6	1754%	OK
	225	99	15.36	14.11	102	12.3	150	16.9	64	0.7	2529%	OK	110	1.1	1471%	OK	154	1.6	1051%	OK
	211	210	21.71	19.12	38	68.2	150	39.8	64	0.7	5964%	OK	110	1.1	3470%	OK	154	1.6	2479%	OK
	210	99	19.12	14.11	62	80.8	150	43.3	64	0.7	6494%	OK	110	1.1	3778%	OK	154	1.6	2699%	OK
	99	98	14.11	9.48	38	121.8	150	53.2	192	2.0	2658%	OK	330	3.4	1546%	OK	462	4.8	1105%	OK
	214	213	14.84	12.77	79	26.2	150	24.7	62	0.6	3817%	OK	113	1.2	2094%	OK	154	1.6	1537%	OK
	213	212	12.77	11.59	73	16.2	150	19.4	62	0.6	2998%	OK	113	1.2	1645%	OK	154	1.6	1207%	OK
	212	98	11.59	9.48	76	27.8	150	25.4	62	0.6	3929%	OK	113	1.2	2156%	OK	154	1.6	1582%	OK
	98	15	9.48	8.39	50	21.8	150	22.5	318	3.3	679%	OK	553	5.8	390%	OK	770	8.0	280%	OK
	15	14	8.39	6.71	83	20.2	150	21.7	574	6.0	362%	OK	993	10.3	209%	OK	1381	14.4	151%	OK
	14	13	6.71	5.18	103	14.9	150	18.6	574	6.0	310%	OK	993	10.3	179%	OK	1381	14.4	129%	OK
	13	12	5.18	3.61	91	17.3	150	20.0	574	6.0	335%	OK	993	10.3	193%	OK	1381	14.4	139%	OK

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Area Covered Kila Kila

Sewer Line	Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
	US MH No	DS MH No	MH IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Pops	Q2=PHF in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2=PHF in L/s	Q1/Q2 (%)	Judgement	Q1/Q2 (%)
	12	F4	3.61	90	1.2	200	11.5	618	6.4	178%	New	1102	11.5	100%	NG	72%
	F4	F5	3.50	40	12.5	600	686.5	24126	188.5	364%	New	30516	238.4	288%	New	277%
	901	F5	16.50	290	46.6	200	70.8	523	5.4	1299%	New	523	5.4	1299%	New	1299%
	F5	F6	3.00	50	15.8	600	771.8	24649	192.6	401%	New	31039	242.5	318%	New	307%
	130	129	71.01	44	108.0	150	50.0	21	0.2	22875%	OK	42	0.4	11437%	OK	11437%
	129	128	66.26	38	337.1	150	88.4	21	0.2	40422%	OK	42	0.4	20211%	OK	20211%
	128	127	53.45	36	45.8	150	32.6	21	0.2	14905%	OK	42	0.4	7452%	OK	7452%
	174	127	62.93	38	292.9	150	82.4	21	0.2	37678%	OK	42	0.4	18839%	OK	18839%
	127	126	51.80	32	7.2	150	12.9	62	0.6	1999%	OK	125	1.3	992%	OK	992%
	173	126	63.79	49	249.4	150	76.1	21	0.2	34767%	OK	42	0.4	17384%	OK	17384%
	126	125	51.57	29	282.4	150	80.9	103	1.1	7543%	OK	208	2.2	3735%	OK	3735%
	/	172	68.38	10	8.0	150	13.6	20	0.2	6538%	OK	41	0.4	3189%	OK	3189%
	/	172	68.40	15	6.7	150	12.4	20	0.2	5969%	OK	41	0.4	2912%	OK	2912%
	172	169	68.30	19	232.1	150	73.4	61	0.6	11547%	OK	124	1.3	5680%	OK	5680%
	171	170	75.76	29	76.6	150	42.1	21	0.2	19263%	OK	42	0.4	9631%	OK	9631%
	170	169	73.54	35	275.7	150	80.0	21	0.2	36557%	OK	42	0.4	18278%	OK	18278%
	169	168	63.89	16	395.6	150	95.8	103	1.1	8928%	OK	208	2.2	4421%	OK	4421%
	168	125	57.56	59	240.3	150	74.7	103	1.1	6959%	OK	208	2.2	3446%	OK	3446%

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Pops = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered

Kila Kila

Sewer Line		MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement
125	124	43.38	41.25	32	66.6	150	39.3	226	2.4	1669%	OK	457	4.8	825%	OK	457	4.8	825%	OK
/	167	47.80	47.57	16	14.4	150	18.3	21	0.2	8347%	OK	42	0.4	4174%	OK	42	0.4	4174%	OK
167	124	47.57	41.25	29	217.9	150	71.1	21	0.2	32501%	OK	42	0.4	16250%	OK	42	0.4	16250%	OK
124	123	41.25	37.44	32	119.1	150	52.5	267	2.8	1889%	OK	540	5.6	934%	OK	540	5.6	934%	OK
166	165	70.07	46.62	78	300.6	150	83.5	21	0.2	38173%	OK	42	0.4	19087%	OK	42	0.4	19087%	OK
165	123	46.62	37.44	40	229.5	150	73.0	21	0.2	33352%	OK	42	0.4	16676%	OK	42	0.4	16676%	OK
123	122	37.44	32.86	32	143.1	150	57.6	308	3.2	1796%	OK	623	6.5	888%	OK	623	6.5	888%	OK
164	122	41.12	32.86	32	258.1	150	77.4	21	0.2	35371%	OK	42	0.4	17686%	OK	42	0.4	17686%	OK
122	121	32.86	30.45	35	68.9	150	40.0	349	3.6	1099%	OK	706	7.4	543%	OK	706	7.4	543%	OK
163	121	38.93	30.45	30	282.7	150	81.0	21	0.2	37015%	OK	42	0.4	18507%	OK	42	0.4	18507%	OK
121	120	30.45	27.65	30	93.3	150	46.5	390	4.1	1145%	OK	789	8.2	566%	OK	789	8.2	566%	OK
162	120	33.26	27.65	35	160.3	150	61.0	21	0.2	27873%	OK	42	0.4	13936%	OK	42	0.4	13936%	OK
120	119	27.65	25.54	36	58.6	150	36.9	431	4.5	821%	OK	872	9.1	406%	OK	872	9.1	406%	OK
/	161	65.97	65.69	16	17.5	150	20.1	20	0.2	9670%	OK	41	0.4	4717%	OK	41	0.4	4717%	OK
161	160	65.69	56.35	49	190.6	150	66.5	20	0.2	31915%	OK	41	0.4	15568%	OK	41	0.4	15568%	OK
/	160	56.80	56.35	21	21.4	150	22.3	21	0.2	10191%	OK	42	0.4	5096%	OK	42	0.4	5096%	OK
160	159	56.35	26.86	86	342.9	150	89.2	62	0.6	13809%	OK	125	1.3	6849%	OK	125	1.3	6849%	OK
159	119	26.86	25.54	19	69.5	150	40.1	62	0.6	6215%	OK	125	1.3	3083%	OK	125	1.3	3083%	OK

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered										Kila Kila									
Sewer Line										Existing Pipe Details and Capacity									
US MH No	DS MH No	MH IL		Length in m	Gradient (000)	Dia in mm	Q1-Capacity (L/s)	Contributing Pops	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement	Pipe adequacy for 1995				Pipe adequacy for 2005			
		US IL	DS IL																
119	118	25.54	24.44	36	30.6	150	26.6	514	5.4	497%	OK	1023	10.7	250%	OK	1027	10.7	249%	OK
118	117	24.44	22.41	35	58.0	150	36.7	514	5.4	685%	OK	1023	10.7	344%	OK	1027	10.7	343%	OK
157	156	76.63	64.68	94	127.1	150	54.3	21	0.2	24823%	OK	42	0.4	12412%	OK	42	0.4	12412%	OK
156	155	64.68	54.75	81	122.6	150	53.3	42	0.4	12188%	OK	68	0.7	7528%	OK	72	0.8	7110%	OK
155	154	54.75	45.13	35	274.9	150	79.8	42	0.4	18250%	OK	68	0.7	11272%	OK	72	0.8	10646%	OK
/	158	50.50	50.09	20	20.5	150	21.8	15	0.2	13955%	OK	25	0.3	8373%	OK	28	0.3	7476%	OK
/	158	50.40	50.09	17	18.2	150	20.6	21	0.2	9401%	OK	26	0.3	7593%	OK	30	0.3	6581%	OK
158	154	50.09	45.13	34	145.9	150	58.2	57	0.6	9797%	OK	77	0.8	7252%	OK	88	0.9	6346%	OK
154	153	45.13	24.83	59	344.1	150	89.3	120	1.3	7147%	OK	171	1.8	5015%	OK	190	2.0	4514%	OK
153	117	24.83	22.41	32	75.6	150	41.9	120	1.3	3350%	OK	171	1.8	2351%	OK	190	2.0	2116%	OK
117	116	22.41	20.86	37	41.9	150	31.2	655	6.8	457%	OK	1220	12.7	245%	OK	1247	13.0	240%	OK
152	151	47.82	25.47	71	314.8	150	85.4	21	0.2	39061%	OK	26	0.3	31549%	OK	30	0.3	27343%	OK
151	116	25.47	20.86	33	139.7	150	56.9	21	0.2	26021%	OK	26	0.3	21017%	OK	30	0.3	18215%	OK
116	115	20.86	19.27	29	54.8	150	35.7	697	7.3	491%	OK	1272	13.3	269%	OK	1307	13.6	262%	OK
150	149	45.27	22.90	52	430.2	150	99.9	21	0.2	45663%	OK	26	0.3	36882%	OK	30	0.3	31964%	OK
149	115	22.90	19.27	54	67.2	150	39.5	21	0.2	18051%	OK	26	0.3	14579%	OK	30	0.3	12635%	OK
115	114	19.27	18.12	35	32.9	150	27.6	739	7.7	359%	OK	1324	13.8	200%	OK	1367	14.2	194%	OK
148	147	44.79	29.30	51	303.7	150	83.9	21	0.2	38369%	OK	26	0.3	30990%	OK	30	0.3	26858%	OK
147	114	29.30	18.12	54	207.0	150	69.3	21	0.2	31678%	OK	26	0.3	25586%	OK	30	0.3	22175%	OK
114	113	18.12	17.33	62	12.7	150	17.2	781	8.1	211%	OK	1376	14.3	120%	OK	1427	14.9	116%	OK

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Pops = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered

Kila Kila

Sewer Line	DS MH No	US IL	MH IL	Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
				Length in m	Gradient (000)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement
146	113	33.39	17.33	68	236.2	150	74.0	82	0.9	8665%	OK	125	1.3	5684%	OK	125	1.3	5684%	OK
113	112	17.33	15.13	33	66.7	150	39.3	952	9.9	397%	OK	1619	16.9	233%	OK	1670	17.4	226%	OK
4435	4434	111.50	109.50	53	37.7	150	29.6	26	0.3	10923%	OK	37	0.4	7676%	OK	46	0.5	6174%	OK
4434	4433	109.50	108.50	31	32.3	150	27.4	26	0.3	10100%	OK	37	0.4	7097%	OK	46	0.5	5708%	OK
4433	4432	108.50	106.50	63	31.7	150	27.1	26	0.3	10019%	OK	37	0.4	7040%	OK	46	0.5	5663%	OK
4432	4431	106.50	101.00	64	85.9	150	44.6	26	0.3	16484%	OK	37	0.4	11584%	OK	46	0.5	9317%	OK
4431	4430	101.00	99.00	32	62.5	150	38.1	26	0.3	14058%	OK	37	0.4	9879%	OK	46	0.5	7946%	OK
4430	4429	99.00	97.00	34	58.8	150	36.9	26	0.3	13638%	OK	37	0.4	9584%	OK	46	0.5	7709%	OK
4429	4428	97.00	95.00	28	71.4	150	40.7	39	0.4	10019%	OK	50	0.5	7815%	OK	59	0.6	6623%	OK
4437	4428	97.00	95.00	48	41.7	150	31.1	13	0.1	22956%	OK	13	0.1	22956%	OK	13	0.1	22956%	OK
4428	4415	95.00	68.00	75	360.0	150	91.4	78	0.8	11246%	OK	100	1.0	8772%	OK	118	1.2	7434%	OK
4427	4426	92.00	90.50	44	34.1	150	28.1	26	0.3	10382%	OK	37	0.4	7296%	OK	46	0.5	5868%	OK
4426	4425	90.50	86.50	25	160.0	150	60.9	26	0.3	22493%	OK	37	0.4	15806%	OK	46	0.5	12713%	OK
4425	4424	86.50	82.00	27	166.7	150	62.2	26	0.3	22956%	OK	37	0.4	16132%	OK	46	0.5	12975%	OK
4453	4424	85.00	82.00	58	51.7	150	34.6	26	0.3	12789%	OK	37	0.4	8987%	OK	46	0.5	7228%	OK
4424	4419	82.00	77.50	20	225.0	150	72.2	78	0.8	8891%	OK	111	1.2	6248%	OK	138	1.4	5025%	OK
4423	4422	82.00	81.00	27	37.0	150	29.3	13	0.1	21644%	OK	13	0.1	21644%	OK	13	0.1	21644%	OK
4422	4421	81.00	80.50	35	14.3	150	18.2	13	0.1	13442%	OK	13	0.1	13442%	OK	13	0.1	13442%	OK
4421	4420	80.50	79.50	25	40.0	150	30.5	13	0.1	22493%	OK	13	0.1	22493%	OK	13	0.1	22493%	OK
4420	4419	79.50	77.50	60	33.3	150	27.8	13	0.1	20533%	OK	13	0.1	20533%	OK	13	0.1	20533%	OK
4419	4418	77.50	76.00	23	65.2	150	38.9	117	1.2	3191%	OK	161	1.7	2319%	OK	197	2.1	1895%	OK
4418	4417	76.00	74.00	20	100.0	150	48.2	117	1.2	3952%	OK	161	1.7	2872%	OK	197	2.1	2347%	OK

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered		Kila Kila										Pipe adequacy for 2015				
Sewer Line	US MH No	DS MH No	MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005			
			US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q ₁₀ Capacity (L/s)	Contributing Pops	Q ₁₀ /Q ₂ (%)	Judgement	Contributing Pops	Q ₁₀ /Q ₂ (%)	Judgement	Contributing Pops	Q ₁₀ /Q ₂ (%)
4417	4416		74.00	71.00	22	136.4	150	56.2	117	1.2	4614%	OK	161	1.7	3353%	OK
4416	4415		71.00	68.00	27	111.1	150	50.8	117	1.2	4165%	OK	161	1.7	3027%	OK
4415	4414		68.00	66.00	33	60.6	150	37.5	208	2.2	1730%	OK	274	2.9	1314%	OK
4414	4413		66.00	64.50	17	88.2	150	45.2	208	2.2	2088%	OK	274	2.9	1585%	OK
4413	4412		64.50	62.50	23	87.0	150	44.9	208	2.2	2073%	OK	274	2.9	1573%	OK
4412	4411		62.50	61.00	21	71.4	150	40.7	208	2.2	1879%	OK	274	2.9	1426%	OK
4411	4410		61.00	58.00	53	56.6	150	36.2	208	2.2	1672%	OK	274	2.9	1269%	OK
4455	4454		67.00	63.00	65	61.5	150	37.8	28	0.3	12953%	OK	38	0.4	9544%	OK
4454	4445		63.00	60.50	42	59.5	150	37.2	28	0.3	12739%	OK	38	0.4	9387%	OK
4456	4445		62.00	60.50	28	53.6	150	35.2	26	0.3	13015%	OK	37	0.4	9146%	OK
4445	4410		60.50	58.00	16	156.3	150	60.2	65	0.7	8891%	OK	86	0.9	6720%	OK
4410	4409		58.00	47.00	28	392.9	150	95.5	286	3.0	3204%	OK	373	3.9	2457%	OK
4409	4408		47.00	45.00	75	26.7	150	24.9	286	3.0	835%	OK	373	3.9	640%	OK
4408	4444		45.00	43.90	20	55.0	150	35.7	286	3.0	1199%	OK	373	3.9	919%	OK
4444	209		43.90	43.59	15	20.7	150	21.9	308	3.2	682%	OK	395	4.1	532%	OK
209	208		43.59	38.95	44	105.5	150	49.5	308	3.2	1541%	OK	395	4.1	1202%	OK
208	185		38.95	33.55	27	200.0	150	68.1	308	3.2	2123%	OK	395	4.1	1655%	OK
4458	4457		58.00	50.80	42	171.4	150	63.1	25	0.3	24213%	OK	25	0.3	24213%	OK
4457	188		50.80	50.08	21	34.3	150	28.2	25	0.3	10829%	OK	25	0.3	10829%	OK
188	187		50.08	41.00	59	153.9	150	59.7	25	0.3	22942%	OK	25	0.3	22942%	OK
187	186		41.00	36.78	37	114.1	150	51.4	25	0.3	19750%	OK	25	0.3	19750%	OK
/	186		38.00	36.78	30	40.7	150	30.7	22	0.2	13401%	OK	22	0.2	13401%	OK
186	185		36.78	33.55	38	85.0	150	44.4	69	0.7	6178%	OK	69	0.7	6178%	OK

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Pops = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered				Kila Kila															
Sewer Line		MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0000)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement
207	206	41.50	34.02	42	178.1	150	64.3	22	0.2	28045%	OK	22	0.2	28045%	OK	22	0.2	28045%	OK
206	185	34.02	33.55	14	33.6	150	27.9	22	0.2	12176%	OK	22	0.2	12176%	OK	22	0.2	12176%	OK
185	184	33.55	31.19	40	59.0	150	37.0	421	4.4	844%	OK	508	5.3	699%	OK	577	6.0	615%	OK
/	205	33.10	32.68	23	18.3	150	20.6	22	0.2	8980%	OK	22	0.2	8980%	OK	22	0.2	8980%	OK
205	184	32.68	31.19	41	36.3	150	29.0	22	0.2	12669%	OK	22	0.2	12669%	OK	22	0.2	12669%	OK
184	183	31.19	27.09	39	105.1	150	49.4	465	4.8	1019%	OK	552	5.8	859%	OK	621	6.5	763%	OK
204	203	31.92	29.39	40	63.3	150	38.3	22	0.2	16713%	OK	22	0.2	16713%	OK	22	0.2	16713%	OK
203	183	29.39	27.09	21	109.5	150	50.4	22	0.2	21993%	OK	22	0.2	21993%	OK	22	0.2	21993%	OK
183	182	27.09	25.94	33	34.8	150	28.4	509	5.3	536%	OK	596	6.2	458%	OK	665	6.9	410%	OK
202	201	29.39	27.22	32	67.8	150	39.7	22	0.2	17306%	OK	22	0.2	17306%	OK	22	0.2	17306%	OK
201	182	27.22	25.94	18	71.1	150	40.6	22	0.2	17722%	OK	22	0.2	17722%	OK	22	0.2	17722%	OK
182	181	25.94	24.92	35	29.1	150	26.0	553	5.8	451%	OK	640	6.7	390%	OK	709	7.4	352%	OK
/	181	26.00	24.92	31	34.8	150	28.4	22	0.2	12404%	OK	22	0.2	12404%	OK	22	0.2	12404%	OK
181	180	24.92	20.15	81	58.9	150	37.0	597	6.2	594%	OK	684	7.1	519%	OK	753	7.8	471%	OK
/	197	27.30	26.72	20	29.0	150	25.9	22	0.2	11317%	OK	22	0.2	11317%	OK	22	0.2	11317%	OK
197	196	26.72	23.34	79	42.8	150	31.5	22	0.2	13746%	OK	22	0.2	13746%	OK	22	0.2	13746%	OK
196	195	23.34	20.40	24	122.5	150	53.3	22	0.2	23259%	OK	22	0.2	23259%	OK	22	0.2	23259%	OK
199	195	25.29	20.40	81	60.4	150	37.4	22	0.2	16328%	OK	22	0.2	16328%	OK	22	0.2	16328%	OK
195	180	20.40	20.15	13	19.2	150	21.1	66	0.7	3072%	OK	66	0.7	3072%	OK	66	0.7	3072%	OK

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered				Kila Kila										Pipe adequacy for 2005						Pipe adequacy for 2015					
Sewer Line		MH IL		Existing Pipe Details and Capacity						Pipe adequacy for 1995			Pipe adequacy for 2005			Pipe adequacy for 2015									
US MH No.	DS MH No.	US IL	DS IL	Length in m	Gradient (0000)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=P.H.P. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.P. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.P. in L/s	Q1/Q2 (%)	Judgement						
180	179	20.15	18.39	53	33.2	150	27.8	685	7.1	389%	OK	772	8.0	345%	OK	841	8.8	317%	OK						
179	178	18.39	18.10	13	22.3	150	22.7	685	7.1	319%	OK	772	8.0	283%	OK	841	8.8	260%	OK						
/	194	23.40	21.96	33	43.6	150	31.8	22	0.2	13882%	OK	22	0.2	13882%	OK	22	0.2	13882%	OK						
194	178	21.96	18.10	29	133.1	150	55.6	22	0.2	24245%	OK	22	0.2	24245%	OK	22	0.2	24245%	OK						
/	178	19.70	18.10	31	51.6	150	34.6	22	0.2	15098%	OK	22	0.2	15098%	OK	22	0.2	15098%	OK						
178	177	18.10	17.54	44	12.7	150	17.2	751	7.8	220%	OK	838	8.7	197%	OK	907	9.4	182%	OK						
177	176	17.54	16.92	62	10.0	150	15.2	751	7.8	195%	OK	838	8.7	174%	OK	907	9.4	161%	OK						
176	175	16.92	16.22	45	15.6	150	19.0	751	7.8	243%	OK	838	8.7	218%	OK	907	9.4	201%	OK						
/	193	31.90	31.60	13	23.1	150	23.1	22	0.2	10095%	OK	22	0.2	10095%	OK	22	0.2	10095%	OK						
193	192	31.60	29.87	20	86.5	150	44.8	22	0.2	19545%	OK	22	0.2	19545%	OK	22	0.2	19545%	OK						
192	191	29.87	23.99	23	255.7	150	77.0	22	0.2	33601%	OK	22	0.2	33601%	OK	22	0.2	33601%	OK						
191	190	23.99	21.76	33	67.6	150	39.6	22	0.2	17275%	OK	22	0.2	17275%	OK	22	0.2	17275%	OK						
501	190	55.00	21.76	250	133.0	200	119.6	393	4.1	2921%	New	1188	12.4	966%	New	1789	18.6	642%	New						
190	189	21.76	16.62	62	82.9	150	43.8	437	4.6	963%	OK	1232	12.8	342%	OK	1833	19.1	230%	OK						
189	175	16.62	16.22	60	6.7	150	12.4	437	4.6	273%	OK	1232	12.8	97%	NG	1833	19.1	65%	NG						
		16.62	16.22	60	6.7	200	26.8	437		588%	New	1232		209%	New	1833		140%	New						
175	112	16.22	15.13	29	37.6	150	29.5	1210	12.6	234%	OK	2092	21.8	135%	OK	2762	28.8	103%	OK						
145	112	24.45	15.13	47	198.3	150	67.8	89	0.9	7315%	OK	118	1.2	5517%	OK	118	1.2	5517%	OK						
112	111	15.13	14.07	79	13.4	150	17.6	2340	24.4	72%	NG	3947	41.1	43%	NG	4668	48.6	36%	NG						
		15.13	14.07	79	13.4	250	68.9	2340		283%	New	3947		168%	New	4668		142%	New						
111	110	14.07	12.59	37	40.0	150	30.5	2340	24.4	125%	OK	3947	41.1	74%	NG	4668	48.6	63%	NG						
		14.07	12.59	37	40.0	250	118.9	2340		488%	New	3947		289%	New	4668		245%	New						
110	109	12.59	11.89	37	18.9	150	20.9	2340	24.4	86%	NG	3947	41.1	51%	NG	4668	48.6	43%	NG						

LEGEND: DS = Downstream, Dia = Diameter, Dia = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, P.H.P. = Probable High Flow, Q = Quantity, US = Upstream

Area Covered

Kila Kila

Sewer Line		MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2015			
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0000)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement
		12.59	11.89	37	18.9	250	81.8	2340		336%	New	3947		199%	New
144	143	29.23	17.18	61	197.5	150	67.7	89	0.9	7301%	OK	118	1.2	5507%	OK
143	109	17.18	11.89	54	98.0	150	47.7	89	0.9	5142%	OK	118	1.2	3878%	OK
109	108	11.89	10.14	34	51.5	150	34.6	2518	26.2	132%	OK	4183	43.6	79%	NG
		11.89	10.14	34	51.5	250	134.9	2518		514%	New	4183		310%	New
142	141	33.91	27.04	34	202.1	150	68.5	89	0.9	7304%	OK	118	1.2	5569%	OK
141	140	27.04	17.88	32	286.3	150	81.5	89	0.9	8789%	OK	118	1.2	6629%	OK
140	108	17.88	10.14	39	198.5	150	67.8	89	0.9	7318%	OK	118	1.2	5520%	OK
108	107	10.14	8.86	36	35.6	150	28.7	2696	28.1	102%	OK	4419	46.0	62%	NG
		10.14	8.86	36	35.6	250	112.1	2696		399%	New	4419		244%	New
601	107	22.00	8.86	600	21.9	200	48.5	286	3.0	1629%	New	866	9.0	538%	New
602	107	19.00	8.86	750	13.5	200	38.1	573	6.0	639%	New	573	6.0	639%	New
107	105	8.86	5.86	92	32.6	150	27.5	3599	37.5	73%	NG	5967	55.9	49%	NG
		8.86	5.86	92	32.6	250	107.4	3599		286%	New	5967		192%	New
137	136	48.24	47.81	36	11.9	150	16.6	89	0.9	1795%	OK	118	1.2	1354%	OK
136	135	47.81	40.68	68	104.9	150	49.3	89	0.9	5319%	OK	118	1.2	4012%	OK
135	134	40.68	32.83	17	461.8	150	103.5	89	0.9	11163%	OK	118	1.2	8419%	OK
/	134	33.60	32.83	33	23.3	150	23.3	89	0.9	2509%	OK	118	1.2	1893%	OK
134	133	32.83	31.16	64	26.1	150	24.6	267	2.8	885%	OK	354	3.7	667%	OK
133	132	31.16	18.94	75	162.9	150	61.5	267	2.8	2210%	OK	354	3.7	1667%	OK
139	138	34.19	21.12	60	217.8	150	71.1	89	0.9	7667%	OK	118	1.2	5783%	OK
138	132	21.12	18.94	28	77.9	150	42.5	89	0.9	4584%	OK	118	1.2	3457%	OK

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered Kila Kila

Area Covered		Kila Kila																	
Sewer Line		MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
UN MH No	DS MH No	US IL	DS IL	Length in m	Gradient (000)	Dia in mm	Q1=Capacity (L/s)	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Pops	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement
132	105	18.94	5.86	82	159.5	150	60.8	445	4.6	1312%	OK	590	6.1	990%	OK	590	6.1	990%	OK
105	101	5.86	2.48	58	58.3	150	36.8	4088	42.6	86%	NG	6666	62.5	59%	NG	7916	74.2	50%	NG
		5.86	2.43	58	58.3	250	143.6	4088		337%	New	6666		230%	New	7916		193%	New
228	227	7.86	4.42	108	31.9	150	27.2	44	0.5	5930%	OK	109	1.1	2394%	OK	154	1.6	1694%	OK
227	104	4.42	4.00	52	8.1	150	13.7	44	0.5	2986%	OK	109	1.1	1205%	OK	154	1.6	853%	OK
104	103	4.00	3.60	44	9.1	150	14.5	44	0.5	3168%	OK	109	1.1	1279%	OK	154	1.6	905%	OK
103	222	3.60	3.49	29	3.8	150	9.4	44	0.5	2046%	OK	109	1.1	826%	OK	154	1.6	585%	OK
223	222	6.61	3.49	106	29.4	150	26.1	44	0.5	5701%	OK	109	1.1	2301%	OK	154	1.6	1629%	OK
222	102	3.49	2.78	44	16.1	150	19.3	132	1.4	1407%	OK	327	3.4	568%	OK	462	4.8	402%	OK
102	101	2.78	2.48	74	4.1	150	9.7	132	1.4	705%	OK	327	3.4	285%	OK	462	4.8	201%	OK
101	100	2.48	2.24	72	3.3	150	8.8	4264	44.4	20%	NG	7102	66.6	13%	NG	8532	80.0	11%	NG
		2.48	2.24	72	3.3	350	84.2	4264		190%	New	7102		126%	New	8532		105%	New
235	234	3.67	2.85	84	9.8	150	15.0	89	0.9	1623%	OK	118	1.2	1224%	OK	118	1.2	1224%	OK
234	233	2.85	2.61	74	3.2	150	8.7	89	0.9	936%	OK	118	1.2	706%	OK	118	1.2	706%	OK
233	232	2.61	2.59	63	0.3	150	2.7	89	0.9	293%	OK	118	1.2	221%	OK	118	1.2	221%	OK
232	231	2.59	2.39	60	3.3	150	8.8	89	0.9	948%	OK	118	1.2	715%	OK	118	1.2	715%	OK
/	231	2.50	2.39	18	6.1	150	11.9	89	0.9	1284%	OK	118	1.2	969%	OK	118	1.2	969%	OK
231	230	2.39	2.26	25	5.2	150	11.0	222	2.3	475%	OK	345	3.6	306%	OK	390	4.1	270%	OK
230	100	2.26	2.24	82	0.2	150	2.4	222	2.3	103%	OK	345	3.6	66%	NG	390	4.1	59%	NG
		2.26	2.24	82	0.2	200	5.1	222		222%	New	345		143%	New	390		126%	New
100	F6	2.24	2.21	52	0.6	150	3.7	4530	47.2	8%	NG	7556	70.8	5%	NG	9076	85.1	4%	NG
		2.24	2.21	52	0.6	500	90.7	4530		192%	New	7556		123%	New	9076		107%	New

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Pops = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered		Kila Kila																	
Sewer Line	MH IL	Existing Pipe Details and Capacity					Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015				
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia In mm	Q1=Capacity (L/s)	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement
F6	703	2.21	1.40	80	10.1	600	617.8	29344	229.3	270%	New	38760	302.8	204%	New	41471	324.0	191%	New
221	220	4.35	3.65	137	5.1	150	10.9	44	0.5	2375%	OK	109	1.1	959%	OK	154	1.6	679%	OK
220	219	3.65	2.54	106	10.5	150	15.6	44	0.5	3400%	OK	109	1.1	1373%	OK	154	1.6	971%	OK
219	703	2.54	1.40	35	32.6	200	59.2	44	0.5	12915%	New	109	1.1	5213%	New	154	1.6	3690%	New
805	803	17.50	2.00	220	70.5	200	87.1	439	4.6	1904%	New	603	6.3	1386%	New	603	6.3	1386%	New
804	803	3.80	2.00	270	6.7	200	26.8	709	7.4	363%	New	1078	11.2	238%	New	1078	11.2	238%	New
803	801	2.00	1.50	50	10.0	200	32.8	1766	18.4	178%	New	2502	26.1	126%	New	2502	26.1	126%	New
802	801	5.50	1.50	140	28.6	200	55.4	217	2.3	2453%	New	282	2.9	1887%	New	327	3.4	1628%	New
801	703	1.50	1.40	200	0.5	400	46.6	2634	27.4	170%	New	3711	38.7	120%	New	3794	39.5	118%	New
703	702	1.40	0.50	260	3.5	600	361.3	32189	251.5	144%	New	42747	334.0	108%	New	45586	356.1	101%	New
702	701	0.50	-0.50	240	4.2	600	396.3	32589	254.6	156%	New	43339	338.6	117%	New	46364	362.2	109%	New
718	PSP1	8.50	-3.00	360	31.9	200	58.6	1165	12.1	483%	New	1215	12.7	463%	New	1215	12.7	463%	New
719	PS P1	0.00	-3.00	160	18.8	200	44.9	1165	12.1	370%	New	1215	12.7	355%	New	1215	12.7	355%	New
PS P1	713	-3.00	3.50	3200	-2.0	200		2330	24.3			2430	25.3			2430	25.3		
715	714	12.00	8.50	100	35.0	200	61.4	112	1.2	5259%	New	167	1.7	3527%	New	213	2.2	2766%	New
714	713	8.50	3.50	120	41.7	200	66.9	338	3.5	1902%	New	448	4.7	1435%	New	540	5.6	1190%	New
713	705	3.50	0.00	390	9.0	300	91.6	2771	28.9	317%	New	3026	31.5	291%	New	3118	32.5	282%	New
712	711	20.00	3.00	50	240.0	200	160.7	226	2.4	6825%	New	281	2.9	5489%	New	327	3.4	4717%	New

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered		Kila Kila																	
Sewer Line		MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q=Capa city (L/s)	Contributing Popn	Q=P.H.F in L/s	Q/UQ2 (%)	Judgement	Contributing Popn	Q=P.H.F in L/s	Q/UQ2 (%)	Judgement	Contributing Popn	Q=P.H.F in L/s	Q/UQ2 (%)	Judgement
711	710	8.00	4.00	100	40.0	200	65.6	340	3.5	1852%	New	395	4.1	1594%	New	441	4.6	1428%	New
710	708	4.00	3.00	60	16.7	200	42.3	443	4.6	918%	New	541	5.6	751%	New	587	6.1	692%	New
709	708	17.00	3.00	260	53.8	200	76.1	246	2.6	2970%	New	328	3.4	2228%	New	402	4.2	1818%	New
708	706	3.00	2.50	160	3.1	200	18.3	923	9.6	191%	New	1228	12.8	143%	New	1422	14.8	124%	New
707	706	12.00	2.50	300	31.7	200	58.4	131	1.4	4277%	New	214	2.2	2618%	New	286	3.0	1959%	New
706	705	2.50	0.00	100	25.0	200	51.9	1390	14.5	358%	New	2013	21.0	247%	New	2465	25.7	202%	New
705	701	0.00	-0.50	40	12.5	300	108.1	4497	46.8	231%	New	5610	52.6	206%	New	6340	59.4	182%	New
704	701	3.00	-0.50	170	20.6	200	47.1	232	2.4	1947%	New	426	4.4	1061%	New	612	6.4	738%	New
701	PS	-0.50	-1.63	160	7.1	600	516.0	37588	293.7	176%	New	49688	388.2	133%	New	53629	419.0	123%	New
PS	TP	-1.63	8.00	360	-26.8	800		37588	293.7			49688	388.2			53629	419.0		

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LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Area Covered																
Sewer Line		MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1-Capacity (L/s)	Contributing Popn	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2-P.H.F. in L/s	Q1/Q2 (%)	Judgement	
Koneboda																
	PS1	101	-3.00	15.00	240	-75.0	150	525	5.5		New	999	10.0		New	
	101	PS2	15.00	-1.00	360	44.4	200	830	8.6	800%	New	1650	17.2	402%	New	
Diharofa																
	7	3	14.54	10.36	82	51.0	150	34.4	40	0.4	8252%	OK	69	0.7	4784%	OK
	6	5	15.12	12.50	18	145.6	150	58.1	40	0.4	13945%	OK	69	0.7	8084%	OK
	5	4	12.50	12.19	18	17.2	150	20.0	40	0.4	4797%	OK	69	0.7	2781%	OK
	4	3	12.19	10.36	31	59.0	150	37.0	40	0.4	8881%	OK	69	0.7	5148%	OK
	3	2	10.36	2.22	34	239.4	150	74.5	120	1.3	5961%	OK	207	2.2	3456%	OK
	2	1	2.22	1.32	39	23.1	150	23.1	120	1.3	1851%	OK	207	2.2	1073%	OK
	1	PS2	1.32	-1.00	5	464.0	150	103.7	120	1.3	8299%	New	207	2.2	4811%	New
	PS2	102	-1.00	22.00	120	-191.7	150	1254	13.1		New	2547	26.5		New	
Diharofa																
	4	3	25.45	21.18	22	194.1	150	67.1	210	2.2	3067%	OK	210	2.2	3067%	OK
	3	2	21.18	17.07	64	64.2	150	38.6	210	2.2	1764%	OK	210	2.2	1764%	OK
	2	1	17.07	14.78	46	49.8	150	34.0	210	2.2	1553%	OK	210	2.2	1553%	OK
	5	1	18.75	14.78	32	124.1	150	53.6	210	2.2	2452%	OK	210	2.2	2452%	OK
	1	6	14.78	13.41	18	76.1	150	42.0	629	6.6	641%	OK	629	6.6	641%	OK
	6	7	13.41	8.10	33	160.9	150	61.1	629	6.6	932%	OK	629	6.6	932%	OK
	7	8	8.10	-1.22	62	150.3	150	59.0	629	6.6	901%	OK	629	6.6	901%	OK
	8	PS3	-1.22	-3.00	5	356.0	150	90.9	629	6.6	1387%	New	629	6.6	1387%	New
	PS3	102	-3.00	22.00	320	-78.1	150	629	6.6		New	629	6.6		New	

LEGEND: DS = Downstream, Dia = Diameter, IL = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

Gabutu, Vabukori

Area Covered		Caburui, Vavukoni																	
Sewer Line		MH IL		Existing Pipe Details and Capacity				Pipe adequacy for 1995				Pipe adequacy for 2005				Pipe adequacy for 2015			
US MH No	DS MH No	US IL	DS IL	Length in m	Gradient (0/100)	Dia in mm	Q1=Capacity (L/s)	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement	Contributing Popn	Q2=P.H.F. in L/s	Q1/Q2 (%)	Judgement
102	PS4	22.00	8.00	160	87.5	200	97.0	1883	19.6	495%	New	3176	33.1	293%	New	3297	34.3	282%	New
PS4	103	8.00	14.00	240	-25.0	200		2376	24.8		New	5014	47.0		New	5135	48.1		New
PS5	103	-3.00	14.00	360	-47.2	150		863	9.0		New	1374	14.3		New	1819	18.9		New
103	PS6	14.00	-3.00	640	26.6	300	157.6	4322	45.0	350%	New	8212	77.0	205%	New	9583	89.8	175%	New
PS6	TP	-3.00	8.00	1400	-7.9	300		5465	51.2		New	11760	98.0		New	16511	137.6		New

LEGEND: DS = Downstream, Dia = Diameter, Dia = Invert Level, L/s = Liters per second, MH = Manhole, NG = No Good, Popn = Population, PHF = Probable High Flow, Q = Quantity, US = Upstream

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