

54" 1350mm				60" 1500mm				66" 1650mm				72" 1800mm				78" 1950mm				84" 2100mm				90" 2250mm				96" 2400mm			
Grade	Q	V		Q	V			Q	V			Q	V			Q	V			Q	V			Q	V			Q	V		
0.20	2.3870	1.6676	3.1613	1.7889	4.0761	1.9063	5.1406	2.0201	6.3638	2.1309	7.7542	2.2388	9.3206	2.3442	11.071	2.4472	0.20														
0.25	2.6687	1.8644	3.5344	2.0001	4.5572	2.1313	5.7474	2.2586	7.1149	2.3824	8.6695	2.5030	10.421	2.6208	12.378	2.7361	0.25														
0.30	2.9234	2.0424	3.8718	2.1910	4.9922	2.3347	6.2959	2.4741	7.7940	2.6098	9.4970	2.7419	11.415	2.8710	13.559	2.9972	0.30														
0.35	3.1576	2.2060	4.1820	2.3665	5.3922	2.5218	6.8004	2.6724	8.4185	2.8189	10.258	2.9616	12.330	3.1010	14.645	3.2374	0.35														
0.40	3.3757	2.3583	4.4707	2.5299	5.7645	2.6959	7.2699	2.8569	8.9997	3.0135	10.966	3.1661	13.181	3.3151	15.657	3.4609	0.40														
0.42	3.4590	2.4166	4.5812	2.5924	5.9068	2.7625	7.4495	2.9275	9.2220	3.0879	11.237	3.2443	13.507	3.3970	16.043	3.5464	0.42														
0.44	3.5404	2.4734	4.6890	2.6534	6.0458	2.8275	7.6248	2.9963	9.4390	3.1606	11.501	3.3206	13.825	3.4769	16.421	3.6298	0.44														
0.46	3.6200	2.5290	4.7943	2.7130	6.1817	2.8910	7.7961	3.0637	9.6511	3.2316	11.760	3.3953	14.135	3.5551	16.790	3.7114	0.46														
0.48	3.6979	2.5834	4.8975	2.7714	6.3147	2.9532	7.9638	3.1296	9.8587	3.3011	12.013	3.4683	14.439	3.6316	17.151	3.7912	0.48														
0.50	3.7741	2.6367	4.9984	2.8285	6.4449	3.0141	8.1280	3.1941	10.062	3.3692	12.261	3.5398	14.737	3.7064	17.505	3.8694	0.50														
0.52	3.8489	2.6889	5.0974	2.8846	6.5725	3.0738	8.2890	3.2574	10.261	3.4359	12.503	3.6099	15.029	3.7798	17.851	3.9460	0.52														
0.54	3.9222	2.7401	5.1945	2.9395	6.6977	3.1323	8.4469	3.3194	10.457	3.5014	12.742	3.6787	15.315	3.8518	18.191	4.0212	0.54														
0.56	3.9941	2.7904	5.2899	2.9934	6.8206	3.1898	8.6019	3.3803	10.649	3.5656	12.975	3.7462	15.596	3.9225	18.525	4.0950	0.56														
0.58	4.0648	2.8398	5.3835	3.0464	6.9414	3.2463	8.7541	3.4402	10.837	3.6287	13.205	3.8125	15.872	3.9920	18.853	4.1675	0.58														
0.60	4.1343	2.8883	5.4755	3.0985	7.0600	3.3018	8.9038	3.4990	11.022	3.6908	13.431	3.8777	16.144	4.0602	19.175	4.2387	0.60														
0.62	4.2027	2.9361	5.5660	3.1497	7.1767	3.3564	9.0510	3.5568	11.205	3.7518	13.653	3.9418	16.411	4.1273	19.492	4.3088	0.62														
0.64	4.2699	2.9831	5.6551	3.2001	7.2916	3.4101	9.1958	3.6137	11.384	3.8118	13.871	4.0048	16.673	4.1934	19.804	4.3777	0.64														
0.66	4.3361	3.0293	5.7428	3.2497	7.4046	3.4629	9.3384	3.6698	11.560	3.8709	14.086	4.0669	16.932	4.2584	20.111	4.4456	0.66														
0.68	4.4013	3.0749	5.8291	3.2986	7.5160	3.5150	9.4788	3.7249	11.734	3.9291	14.298	4.1281	17.186	4.3224	20.414	4.5124	0.68														
0.70	4.4656	3.1198	5.9142	3.3468	7.6257	3.5663	9.6172	3.7793	11.906	3.9865	14.507	4.1884	17.437	4.3855	20.712	4.5783	0.70														
0.72	4.5289	3.1640	5.9981	3.3942	7.7339	3.6169	9.7536	3.8329	12.074	4.0430	14.713	4.2478	17.685	4.4477	21.006	4.6433	0.72														
0.74	4.5914	3.2077	6.0809	3.4411	7.8405	3.6668	9.8882	3.8858	12.241	4.0988	14.916	4.3064	17.928	4.5091	21.295	4.7073	0.74														
0.76	4.6530	3.2507	6.1625	3.4873	7.9458	3.7160	10.021	3.9380	12.405	4.1538	15.116	4.3642	18.169	4.5696	21.581	4.7705	0.76														
0.78	4.7139	3.2932	6.2431	3.5328	8.0497	3.7646	10.152	3.9894	12.567	4.2081	15.313	4.4212	18.407	4.6293	21.863	4.8329	0.78														
0.80	4.7739	3.3352	6.3226	3.5779	8.1522	3.8126	10.281	4.0403	12.728	4.2617	15.508	4.4776	18.641	4.6883	22.142	4.8944	0.80														
0.82	4.8332	3.3766	6.4011	3.6223	8.2535	3.8599	10.409	4.0905	12.886	4.3147	15.701	4.5332	18.873	4.7466	22.417	4.9552	0.82														
0.84	4.8918	3.4175	6.4787	3.6662	8.3535	3.9067	10.535	4.1400	13.042	4.3670	15.891	4.5881	19.101	4.8041	22.689	5.0153	0.84														
0.86	4.9497	3.4580	6.5554	3.7096	8.4524	3.9530	10.660	4.1890	13.196	4.4186	16.080	4.6424	19.328	4.8609			0.86														
0.88	5.0069	3.4980	6.6312	3.7525	8.5501	3.9987	10.783	4.2375	13.349	4.4697	16.265	4.6961	19.551	4.9171			0.88														
0.90	5.0635	3.5375	6.7061	3.7949	8.6467	4.0438	10.905	4.2853	13.500	4.5202	16.449	4.7492	19.772	4.9727			0.90														
0.92	5.1195	3.5766	6.7802	3.8368	8.7423	4.0885	11.025	4.3327	13.649	4.5702	16.631	4.8016	19.990	5.0277			0.92														
0.94	5.1748	3.6152	6.8535	3.8783	8.8368	4.1327	11.145	4.3795	13.796	4.6196	16.811	4.8536					0.94														
0.96	5.2296	3.6535	6.9260	3.9193	8.9303	4.1765	11.263	4.4259	13.942	4.6685	16.989	4.9049					0.96														
0.98	5.2838	3.6914	6.9978	3.9600	9.0228	4.2197	11.379	4.4718	14.087	4.7169	17.165	4.9557					0.98														
1.00	5.3374	3.7288	7.0689	4.0002	9.1144	4.2626	11.495	4.5172	14.230	4.7647	17.339	5.0061					1.00														
1.10	5.5979	3.9108	7.4139	4.1954	9.5593	4.4706	12.056	4.7376	14.924	4.9973							1.10														
1.20	5.8468	4.0847	7.7436	4.3820	9.9844	4.6694	12.592	4.9483	15.588	5.2195							1.20														
1.30	6.0856	4.2515	8.0597	4.5609	10.392	4.8601	13.106	5.1503									1.30														
1.40	6.3153	4.4120	8.3640	4.7331	10.784	5.0436											1.40														
1.50	6.5370	4.5669	8.6576	4.8992													1.50														
1.60	6.7513	4.7166	8.9415	5.0598													1.60														
1.70	6.9591	4.8618															1.70														
1.80	7.1609	5.0027															1.80														
1.90																	1.90														
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City of Pickering		Engineering Services Department	
DRAWN P. NEUMAN	DISCHARGE & VELOCITY FOR CIRCULAR PIPES 1350mm to 2400mm (n=0.013)	REVISION NO.	1
APPROVED R. W. HOLBORN		DATE	FEB, 1997
DATE JANUARY 1993		P-507	